

# TEST REPORT

**Applicant:** SEUIC Technologies Co., Ltd.  
**Address:** NO.15 Xinghuo Road, Nanjing New & High  
Technology Industry Development Zone, 210061,  
Nanjing City, Jiangsu Province, China  
**Equipment Type:** Portable Data Collection Terminal  
**Model Name:** CRUISE2 (refer to section 2.3)  
**Brand Name:** Seuic  
**FCC ID:** 2AC68-CRUISE2U  
**Test Standard:** FCC 47 CFR Part 2.1093  
(refer to section 3.1)  
**Maximum SAR:** Head (1 g@0mm): 1.19 W/kg  
Body-worn (1 g@10mm): 0.29 W/kg  
Hotspot (1 g@10mm): 0.52 W/kg  
Extremity (10 g@0mm): 1.34 W/kg  
**Sample Arrival Date:** Oct. 31, 2023  
**Test Date:** Nov. 05, 2023 - Dec. 31, 2023  
**Date of Issue:** Jan. 12, 2024

**ISSUED BY:**

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Zhang Jiwei**Checked by:** Xu Rui**Approved by:** Tolan Tu  
(Testing Director)Zhang JiweiXu RuiTolan Tu

**Revision History**

| Version        | Issue Date           | Revisions Content    |
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## 1 GENERAL INFORMATION

### 1.1 Test Laboratory

|              |                                                                                                                              |
|--------------|------------------------------------------------------------------------------------------------------------------------------|
| Name         | Shenzhen BALUN Technology Co., Ltd.                                                                                          |
| Address      | Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China |
| Phone Number | +86 755 6685 0100                                                                                                            |

### 1.2 Test Location

|                           |                                                                                                                                                                                                                         |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                      | Shenzhen BALUN Technology Co., Ltd.                                                                                                                                                                                     |
| Location                  | <input checked="" type="checkbox"/> Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China                                                        |
|                           | <input type="checkbox"/> 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China |
| Accreditation Certificate | The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.                                                                                        |

### 1.3 Test Environment Condition

|                           |              |
|---------------------------|--------------|
| Ambient Temperature       | 18°C to 25°C |
| Ambient Relative Humidity | 30% to 70%   |

## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

|           |                                                                                                                            |
|-----------|----------------------------------------------------------------------------------------------------------------------------|
| Applicant | SEUIC Technologies Co., Ltd.                                                                                               |
| Address   | NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, 210061, Nanjing City, Jiangsu Province, China |

### 2.2 Manufacturer Information

|              |                                                                                                                            |
|--------------|----------------------------------------------------------------------------------------------------------------------------|
| Manufacturer | SEUIC Technologies Co., Ltd.                                                                                               |
| Address      | NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, 210061, Nanjing City, Jiangsu Province, China |

### 2.3 General Description for Equipment under Test (EUT)

|                                           |                                                                                                                                                                                     |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EUT Name                                  | Portable Data Collection Terminal                                                                                                                                                   |
| Model Name Under Test                     | CRUISE2                                                                                                                                                                             |
| Series Model Name                         | CRUISE2U, CRUISE2S, CRUISE2C, AUTOID UTouch 2, AUTOID UTouch 2-S, AUTOID UTouch 2-C                                                                                                 |
| Description of Model name differentiation | All models are same with electrical parameters and internal circuit structure, but only differ in model names and appearance colors.<br>(this information provided by the customer) |
| Hardware Version                          | 10110                                                                                                                                                                               |
| Software Version                          | D730_G_V1.2.3                                                                                                                                                                       |
| Dimensions (Approx.)                      | N/A                                                                                                                                                                                 |
| Weight (Approx.)                          | N/A                                                                                                                                                                                 |

## 2.4 Ancillary Equipment

|                       |                      |                 |
|-----------------------|----------------------|-----------------|
| Ancillary Equipment 1 | Battery 1            |                 |
|                       | Brand Name           | N/A             |
|                       | Model No.            | BT01R108UTOUCH2 |
|                       | Serial No.           | N/A             |
|                       | Capacity             | 5000 mAh        |
|                       | Rated Voltage        | 3.85 V          |
|                       | Limit Charge Voltage | 4.40 V          |
| Ancillary Equipment 2 | Battery 2            |                 |
|                       | Brand Name           | N/A             |
|                       | Model No.            | BT02R108UTOUCH2 |
|                       | Serial No.           | N/A             |
|                       | Capacity             | 6300 mAh        |
|                       | Rated Voltage        | 3.60 V          |
|                       | Limit Charge Voltage | 4.20 V          |

## 2.5 Technical Information

|                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network and Wireless connectivity                                                                                                                                                                                                                          | 2G Network GSM/GPRS/EDGE 850/1900 MHz<br>3G Network WCDMA/HSDPA/HSUPA Band 2/4/5<br>4G Network LTE FDD Band 2/4/5/7/12/13/17/25/26/66/71<br>LTE TDD Band 38/41<br>Bluetooth (BR+EDR+BLE)<br>2.4G WIFI 802.11b, 802.11g, 802.11n(HT20), VHT20,<br>802.11ax(HE20)<br>5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80),<br>802.11ax(HE20/40/80)<br>U-NII-1/2A/2C/3, GPS, GLONASS, BDS, AGPS, NFC, RFID |
| <b>Note:</b><br>The EUT is a mobile phone, which supports dual SIM card under the same transceiver. Each SIM supports GSM, WCDMA and LTE, and both SIM share the same transmitting electro circuit, NV parameters, so only SIM1 was tested in this report. |                                                                                                                                                                                                                                                                                                                                                                                                             |

The requirement for the following technical information of the EUT was tested in this report:

| Operating Mode  | GSM, WCDMA, LTE, 2.4G WLAN, 5G WLAN, Bluetooth |                     |                     |
|-----------------|------------------------------------------------|---------------------|---------------------|
| Frequency Range | GSM 850                                        | TX: 824 ~ 849 MHz   | RX: 869 ~ 894 MHz   |
|                 | GSM 1900                                       | TX: 1850 ~ 1910 MHz | RX: 1930 ~ 1990 MHz |
|                 | WCDMA Band 2                                   | TX: 1850 ~ 1910 MHz | RX: 1930 ~ 1990 MHz |
|                 | WCDMA Band 4                                   | TX: 1710 ~ 1755 MHz | RX: 2110 ~ 2155 MHz |
|                 | WCDMA Band 5                                   | TX: 824 ~ 849 MHz   | RX: 869 ~ 894 MHz   |
|                 | LTE Band 2                                     | TX: 1850 ~ 1910 MHz | RX: 1930 ~ 1990 MHz |
|                 | LTE Band 4                                     | TX: 1710 ~ 1755 MHz | RX: 2110 ~ 2155 MHz |
|                 | LTE Band 5                                     | TX: 824 ~ 849 MHz   | RX: 869 ~ 894 MHz   |
|                 | LTE Band 7                                     | TX: 2500 ~ 2570 MHz | RX: 2620 ~ 2690 MHz |
|                 | LTE B12                                        | TX: 699 ~ 716 MHz   | RX: 729 ~ 746 MHz   |
|                 | LTE B13                                        | TX: 777 ~ 787 MHz   | RX: 746 ~ 756 MHz   |
|                 | LTE B17                                        | TX: 704 ~ 716 MHz   | RX: 734 ~ 746 MHz   |
|                 | LTE B25                                        | TX: 1850 ~ 1915 MHz | RX: 1930 ~ 1995 MHz |
|                 | LTE B26                                        | TX: 814 ~ 824 MHz   | RX: 859 ~ 869 MHz   |
|                 |                                                | TX: 824 ~ 849 MHz   | RX: 869 ~ 894 MHz   |
|                 | LTE B66                                        | TX: 1710 ~ 1780 MHz | RX: 2110 ~ 2180 MHz |
|                 | LTE B71                                        | TX: 663 ~ 698 MHz   | RX: 617 ~ 652 MHz   |
|                 | LTE Band 38                                    | TX: 2570 ~ 2620 MHz | RX: 2570 ~ 2620 MHz |
|                 | LTE Band 41                                    | TX: 2496 ~ 2690 MHz | RX: 2496 ~ 2690 MHz |
|                 | 802.11b/g<br>/n(HT20)/VHT20                    | 2412 ~ 2462 MHz     |                     |
|                 | 802.11ax(HE20)                                 | 2412 ~ 2462 MHz     |                     |
|                 | 802.11a/<br>/n(HT20/HT40)<br>/ac(VHT20/VHT40   | 5150 ~ 5250 MHz     |                     |
|                 |                                                | 5250 ~ 5350 MHz     |                     |
|                 |                                                | 5470 ~ 5725 MHz     |                     |

|                   |                                                                                                               |                                              |
|-------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------|
|                   | /VHT80)                                                                                                       | 5725 ~ 5850 MHz                              |
|                   | 802.11ax<br>(HE20/40/80)                                                                                      | 5150 ~ 5250 MHz                              |
|                   |                                                                                                               | 5250 ~ 5350 MHz                              |
|                   |                                                                                                               | 5470 ~ 5725 MHz                              |
|                   |                                                                                                               | 5725 ~ 5850 MHz                              |
|                   | Bluetooth                                                                                                     | 2402 ~ 2480 MHz                              |
|                   | RFID                                                                                                          | 902 ~ 928 MHz                                |
|                   | NFC                                                                                                           | 13.56MHz                                     |
| Antenna Type      | WWAN: PIFA Antenna<br>WLAN: PIFA Antenna<br>Bluetooth: PIFA Antenna<br>NFC: Coil Antenna<br>RFID: PCB Antenna |                                              |
| DTM               | N/A                                                                                                           |                                              |
| Hotspot Function  | Support                                                                                                       |                                              |
| Power Reduction   | Support                                                                                                       |                                              |
| Exposure Category | General Population/Uncontrolled exposure                                                                      |                                              |
| Product Type      | Portable Device                                                                                               |                                              |
| EUT Type          | <input checked="" type="checkbox"/> Production unit                                                           | <input type="checkbox"/> Identical prototype |

### 3 SUMMARY OF TEST RESULT

#### 3.1 Test Standards

| No. | Identity               | Document Title                                                                                                                                                                  |
|-----|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 47 CFR Part 2.1093     | Radiofrequency radiation exposure evaluation: portable devices                                                                                                                  |
| 2   | ANSI C95.1-1992        | IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz                                                      |
| 3   | IEEE Std. 1528-2013    | IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques |
| 4   | KDB 447498 D04 v01     | 447498 D04 Interim General RF Exposure Guidance v01                                                                                                                             |
| 5   | KDB 941225 D01 v03r01  | 3G SAR MEAUREMENT PROCEDURES                                                                                                                                                    |
| 6   | KDB 941225 D05 v02r05  | SAR Evaluation Considerations for LTE Devices                                                                                                                                   |
| 7   | KDB 941225 D05A v01r02 | REL. 10 LTE SAR TEST GUIDANCE AND KDB INQUIRIES                                                                                                                                 |
| 7   | KDB 941225 D06 v02r01  | SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES                                                                                                |
| 8   | KDB 865664 D01 v01r04  | SAR Measurement 100 MHz to 6 GHz                                                                                                                                                |
| 9   | KDB 865664 D02 v01r02  | RF Exposure Reporting                                                                                                                                                           |
| 10  | KDB 648474 D04 v01r03  | SAR EVALUATION CONSIDERATIONS FOR WIRELESS HANDSETS                                                                                                                             |
| 11  | KDB 248227 D01 v02r02  | SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS                                                                                                                               |

### 3.2 Device Category and SAR Limit

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user.

Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

Table of Exposure Limits:

| Body Position                                                                       | SAR Value (W/Kg)                             |                                      |
|-------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------|
|                                                                                     | General Population/<br>Uncontrolled Exposure | Occupational/<br>Controlled Exposure |
| Whole-Body SAR<br>(averaged over the entire body)                                   | 0.08                                         | 0.4                                  |
| Partial-Body SAR<br>(averaged over any 1 gram of tissue)                            | 1.60                                         | 8.0                                  |
| SAR for hands, wrists, feet and<br>ankles<br>(averaged over any 10 grams of tissue) | 4.0                                          | 20.0                                 |

**NOTE:**

**General Population/Uncontrolled Exposure:** Locations where there is the exposure of individuals who have no knowledge or control of their exposure. General population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

**Occupational/Controlled Exposure:** Locations where there is exposure that may be incurred by persons who are aware of the potential for exposure. In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

### 3.3 Test Result Summary

#### 3.3.1 Highest SAR Values

| Equipment Class | Band         | Maximum Scaled SAR (W/kg) |                  |                |                 | Maximum Report SAR (W/kg) |                  |                |                 |
|-----------------|--------------|---------------------------|------------------|----------------|-----------------|---------------------------|------------------|----------------|-----------------|
|                 |              | Head (0mm)                | Body-worn (10mm) | Hotspot (10mm) | Extremity (0mm) | Head (0mm)                | Body-worn (10mm) | Hotspot (10mm) | Extremity (0mm) |
|                 |              | 1g SAR                    |                  |                | 10g SAR         | 1g SAR                    |                  |                | 10g SAR         |
| PCE             | GSM 850      | 0.01                      | 0.06             | 0.08           | 0.24            | 1.19                      | 0.29             | 0.52           | 1.34            |
|                 | GSM 1900     | 0.02                      | 0.11             | 0.14           | 0.44            |                           |                  |                |                 |
|                 | WCDMA Band 2 | 0.18                      | 0.18             | 0.23           | 0.68            |                           |                  |                |                 |
|                 | WCDMA Band 4 | 0.18                      | 0.14             | 0.22           | 0.61            |                           |                  |                |                 |
|                 | WCDMA Band 5 | 0.01                      | 0.05             | 0.07           | 0.18            |                           |                  |                |                 |
|                 | Band 7       | 0.13                      | 0.17             | 0.52           | 1.18            |                           |                  |                |                 |
|                 | Band 12      | 0.01                      | 0.01             | 0.02           | 0.05            |                           |                  |                |                 |
|                 | Band 13      | 0.00                      | 0.00             | 0.01           | 0.04            |                           |                  |                |                 |
|                 | Band 25      | 0.20                      | 0.18             | 0.22           | 0.70            |                           |                  |                |                 |
|                 | Band 26      | 0.07                      | 0.02             | 0.07           | 0.17            |                           |                  |                |                 |
|                 | Band 66      | 0.12                      | 0.10             | 0.17           | 0.46            |                           |                  |                |                 |
|                 | Band 71      | 0.01                      | 0.01             | 0.01           | 0.05            |                           |                  |                |                 |
|                 | Band 41      | 0.17                      | 0.15             | 0.26           | 0.79            |                           |                  |                |                 |
| DTS             | 2.4 G        | 0.89                      | 0.29             | 0.47           | 1.11            |                           |                  |                |                 |
| NII             | 5.2G         | /                         | /                | 0.20           | /               |                           |                  |                |                 |
|                 | 5.3G         | 1.19                      | 0.25             | /              | 0.56            |                           |                  |                |                 |
|                 | 5.6 G        | 1.16                      | 0.28             | /              | 0.52            |                           |                  |                |                 |
|                 | 5.8 G        | 1.11                      | 0.25             | 0.25           | 0.52            |                           |                  |                |                 |
| DSSS            | Bluetooth    | 0.19                      | 0.03             | 0.05           | 0.13            |                           |                  |                |                 |
| RFID            |              | /                         | /                | /              | 1.34            |                           |                  |                |                 |
| Limit (W/kg)    |              | 1.6                       |                  |                | 4.0             | 1.6                       |                  |                | 4.0             |
| Verdict         |              | PASS                      |                  |                |                 |                           |                  |                |                 |

Note: This device supports both LTE Band 2/4/5/17/38 and Band 25/66/26/12/41. Since the supported frequency span for LTE Band 2/4/5/17/38 falls completely within the supports frequency span for LTE Band 25/66/26/12/41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE Band 25/66/26/12/41.

## 3.3.2 Highest Simultaneous Transmission SAR Values

| Equipment Class                                              | Maximum Scaled SAR<br>(W/kg) |                    |                   |                     |
|--------------------------------------------------------------|------------------------------|--------------------|-------------------|---------------------|
|                                                              | Head 1g (0mm)                | Body-worn 1g (0mm) | Hotspot 1g (10mm) | Extremity 10g (0mm) |
| PCE                                                          | 1.57                         | 0.50               | 0.76              | 1.85                |
| DTS                                                          | 1.27                         | 0.50               | 0.76              | 1.85                |
| NII                                                          | 1.57                         | 0.48               | 0.52              | 1.65                |
| DSSS                                                         | 1.57                         | 0.50               | 0.76              | 1.85                |
| Limit (W/Kg)                                                 | 1.60                         | 1.60               | 1.60              | 4.00                |
| Verdict                                                      | Pass                         |                    |                   |                     |
| Note: The highest simultaneous SAR please refer section 12.2 |                              |                    |                   |                     |

### 3.4 Test Uncertainty

According to KDB 865664 D01, When the highest measured 1 g SAR within a frequency band is  $< 1.5$  W/kg, the extensive SAR measurement uncertainty analysis is not required in SAR reports submitted for equipment approval.

The maximum 1 g SAR for the EUT in this report is 1.19 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

The maximum 10 g SAR for the EUT in this report is 1.34 W/kg, which is lower than 3.75 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

## 4 MEASUREMENT SYSTEM

### 4.1 Specific Absorption Rate (SAR) Definition

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density ( $\rho$ ). The equation description is as below:

$$\text{SAR} = \frac{d}{dt} \left( \frac{dW}{dm} \right) = \frac{d}{dt} \left( \frac{dW}{\rho dv} \right)$$

SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

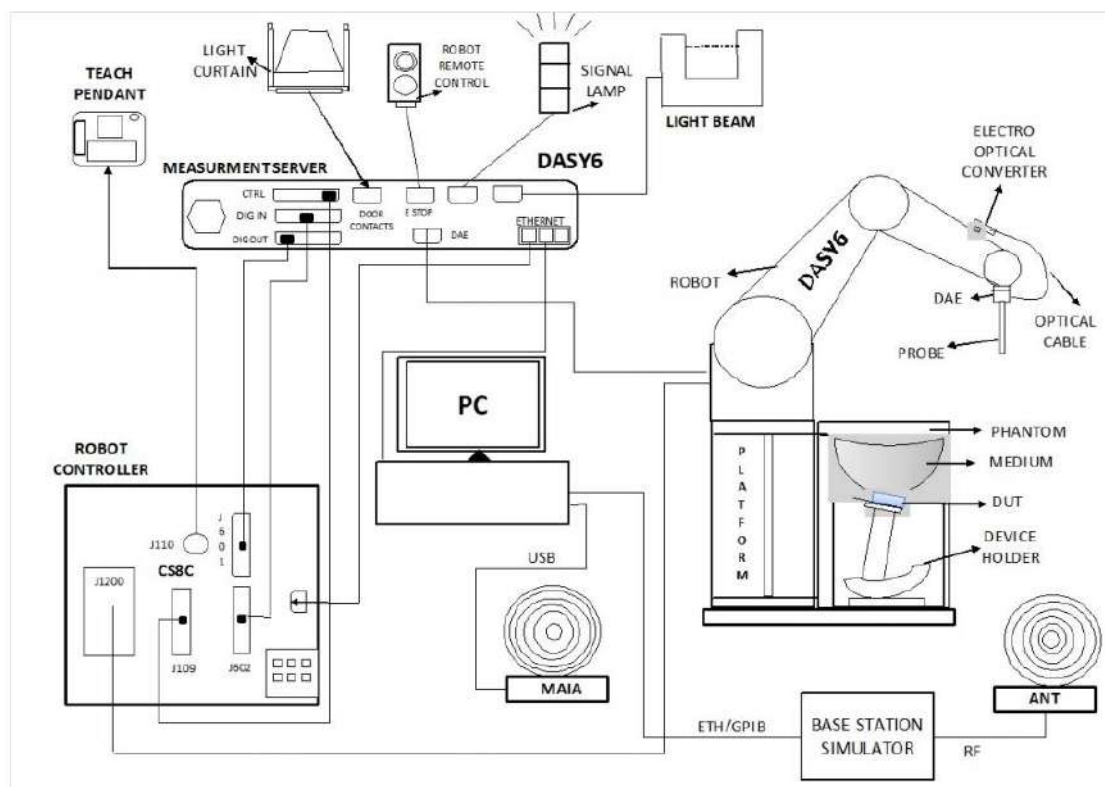
$$\text{SAR} = \frac{\sigma E^2}{\rho}$$

Where:  $\sigma$  is the conductivity of the tissue,

$\rho$  is the mass density of the tissue and E is the RMS electrical field strength.

## 4.2 DASY SAR System

### 4.2.1 DASY SAR System Diagram



The DASY system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. A unit to operate the optical surface detector which is connected to the EOC.
5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
6. The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation.
7. DASY5 software and SEMCAD data evaluation software.
8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
9. The generic twin phantom enabling the testing of left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. System validation dipoles allowing to validate the proper functioning of the system.

#### 4.2.2 Robot

The Dasy SAR system uses the high precision robots. Symmetrical design with triangular core Built-in optical fiber for surface detection system For the 6-axis controller system, Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents). The robot series have many features that are important for our application:



- High precision  
(repeatability  $\pm 0.02$  mm)
- High reliability  
(industrial design)
- Low maintenance costs  
(virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements  
(brush less synchron motors; no stepper motors)
- Low ELF interference  
(motor control \_elds shielded via the closed metallic construction shields)

### 4.2.3 E-Field Probe

The probe is specially designed and calibrated for use in liquids with high permittivities for the measurements the Specific Dosimetric E-Field Probe EX3DV4-SN: 7607 with following specifications is used.

|               |                                                                                                                                                                                                                     |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction  | Symmetrical design with triangular core Built-in optical fiber for surface detection system<br>Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether) |
| Calibration   | ISO/IEC 17025 calibration service available                                                                                                                                                                         |
| Frequency     | 4 MHz to 10 GHz; Linearity: $\pm 0.2$ dB                                                                                                                                                                            |
| Directivity   | $\pm 0.2$ dB in HSL (rotation around probe axis) ; $\pm 0.4$ dB in HSL (rotation normal to probe axis)                                                                                                              |
| Dynamic range | 5 $\mu$ W/g to > 100 mW/g; Linearity: $\pm 0.2$ dB                                                                                                                                                                  |
| Dimensions    | Overall length: 337 mm (Tip: 9 mm) Tip diameter: 2.5 mm (Body: 10 mm) Distance from probe tip to dipole centers: 1.0 mm                                                                                             |
| Application   | General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (EX3DV4)                                                                                              |



### E-Field Probe Calibration Process

Probe calibration is realized, in compliance with IEC/IEEE 62209-1528 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the IEC/IEEE 62209-1528 annexe technique using reference guide at the five frequencies.

#### 4.2.4 Data Acquisition Electronics

The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.



- Input Impedance: 200M $\Omega$ m
- The Inputs: Symmetrical and Floating
- Common Mode Rejection: Above 80dB

#### 4.2.5 Phantoms

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.



- Left head
- Right head
- Flat phantom

**Photo of Phantom SN1859**



| Serial Number | Material                           | Length | Height |
|---------------|------------------------------------|--------|--------|
| SN 1859 SAM2  | Vinylester, glass fiber reinforced | 1000   | 500    |

#### 4.2.6 Device Holder

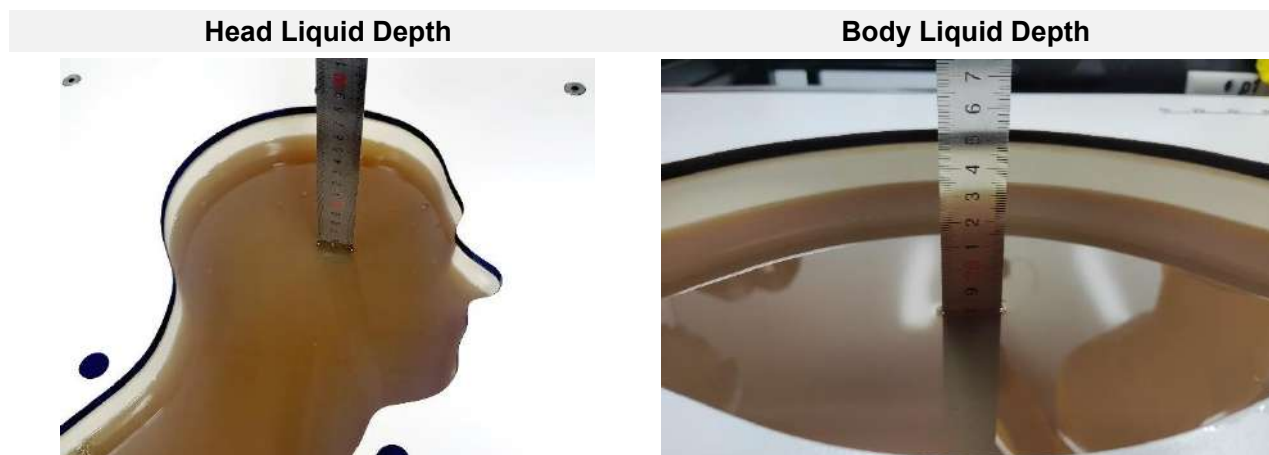
The DASY5 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of  $65^\circ$ . The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. This device holder is used for standard mobile phones or PDA's only. If necessary an additional support of polystyrene material is used. Larger DUT's (e.g. notebooks) cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values. Therefore those devices are normally only tested at the flat part of the SAM.



The positioning system allows obtaining cheek and tilting position with a very good accuracy. Incompliance with CENELEC, the tilt angle uncertainty is lower than  $1^\circ$ .

#### 4.2.7 Simulating Liquid

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5%.



The following table gives the recipes for tissue simulating liquid.

| TSL           | Manufacturer / Model  | Freq Range (MHz) | Main Ingredients                                                                                         |
|---------------|-----------------------|------------------|----------------------------------------------------------------------------------------------------------|
| Head WideBand | SPEAG HBBL600-10000V6 | 600-10000        | Ethanediol, Sodium petroleum sulfonate, Hexylene Glycol / 2-Methyl-pentane-2.4-diol, Alkoxylated alcohol |

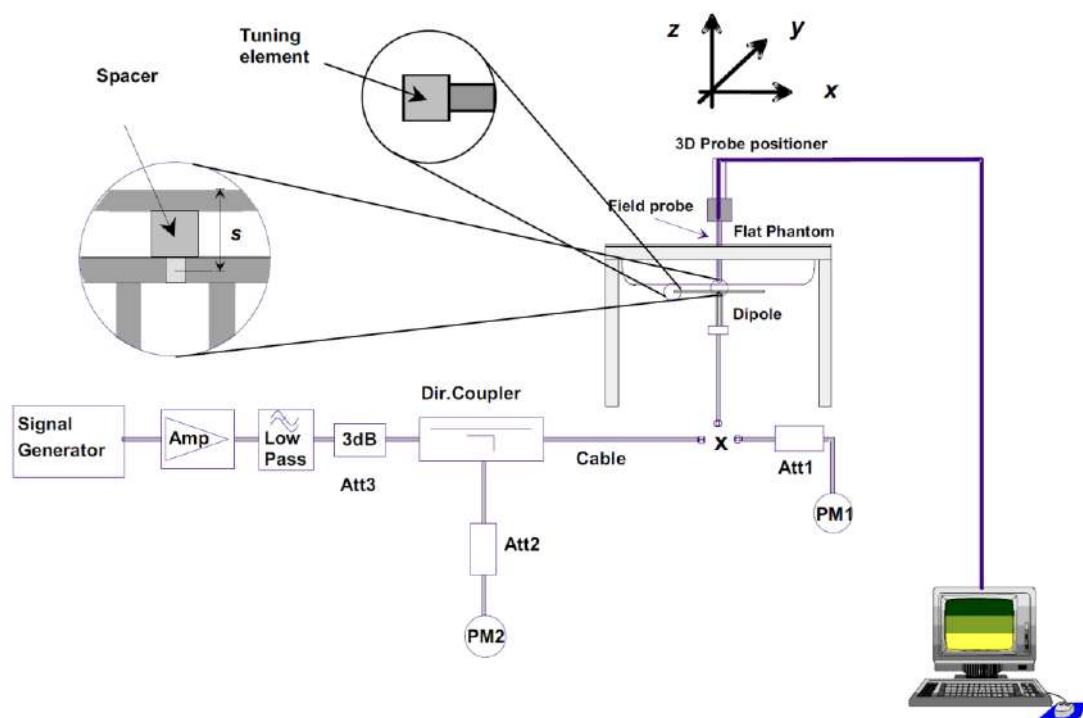
## 5 SYSTEM VERIFICATION

### 5.1 Purpose of System Check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

### 5.2 System Check Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



## 6 TEST POSITION CONFIGURATIONS

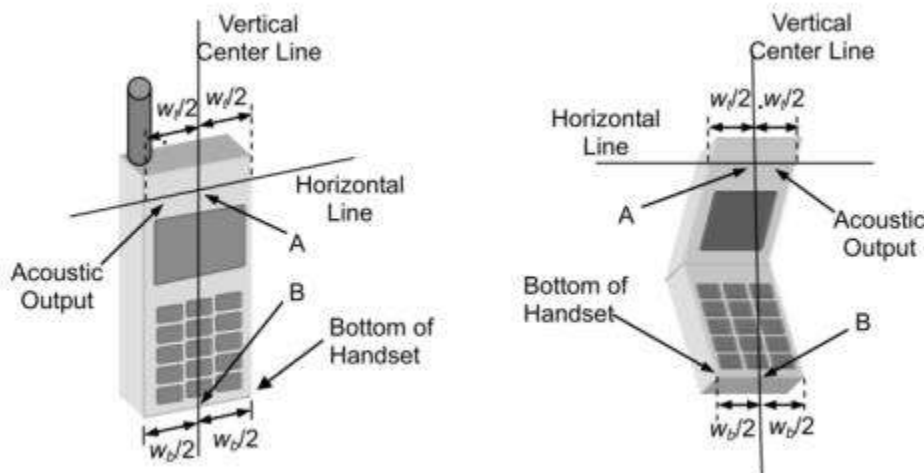
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

### 6.1 Head Exposure Conditions

Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

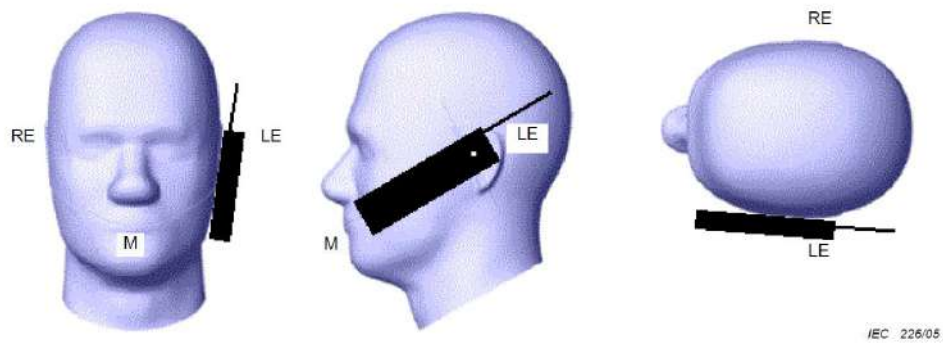
#### 6.1.1 Two Imaginary Lines on the Handset

- The vertical center line passes through two points on the front side of the handset - the midpoint of the width  $w_t$  of the handset at the level of the acoustic output, and the midpoint of the width  $w_b$  of the bottom of the handset.
- The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



#### 6.1.2 Cheek Position

- To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.



### 6.1.3 Tilted Position

- (a) To position the device in the “cheek” position described above.
- (b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

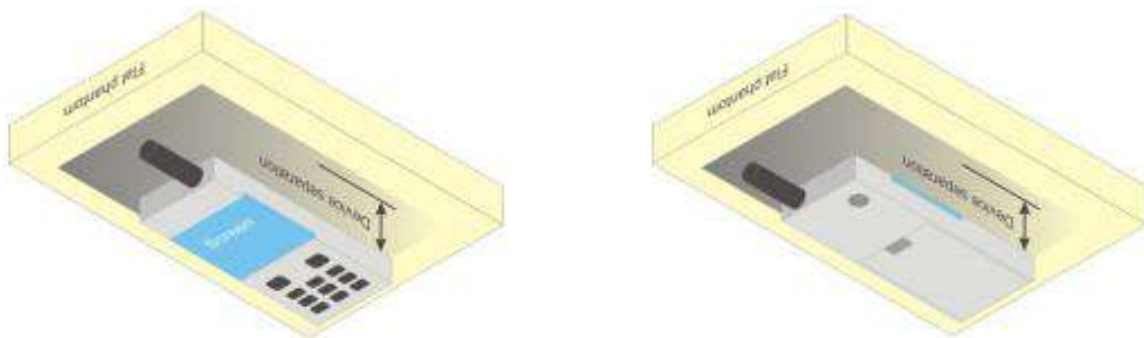


## 6.2 Body-worn Position Conditions

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB 447498 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory.

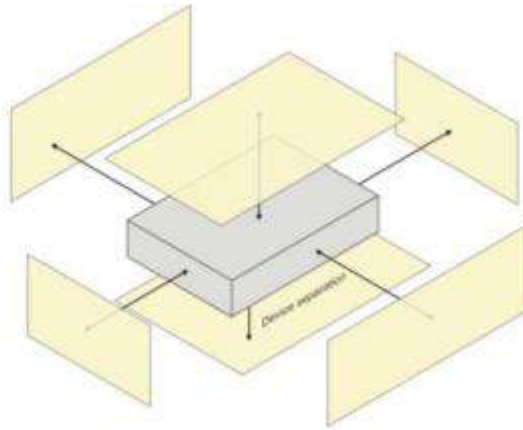
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. All body-worn accessories containing metallic components are tested in conjunction with the host device.

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required. A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance  $\leq 5$  mm to support compliance.



### 6.3 Hotspot Mode Exposure Position Conditions

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing functions, the relevant hand and body exposure conditions are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge. When the form factor of a handset is smaller than 9 cm x 5 cm, a test separation distance of 5 mm (instead of 10 mm) is required for testing hotspot mode. When the separation distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).



### 6.4 Product Specific 10g Exposure Consideration

According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance;

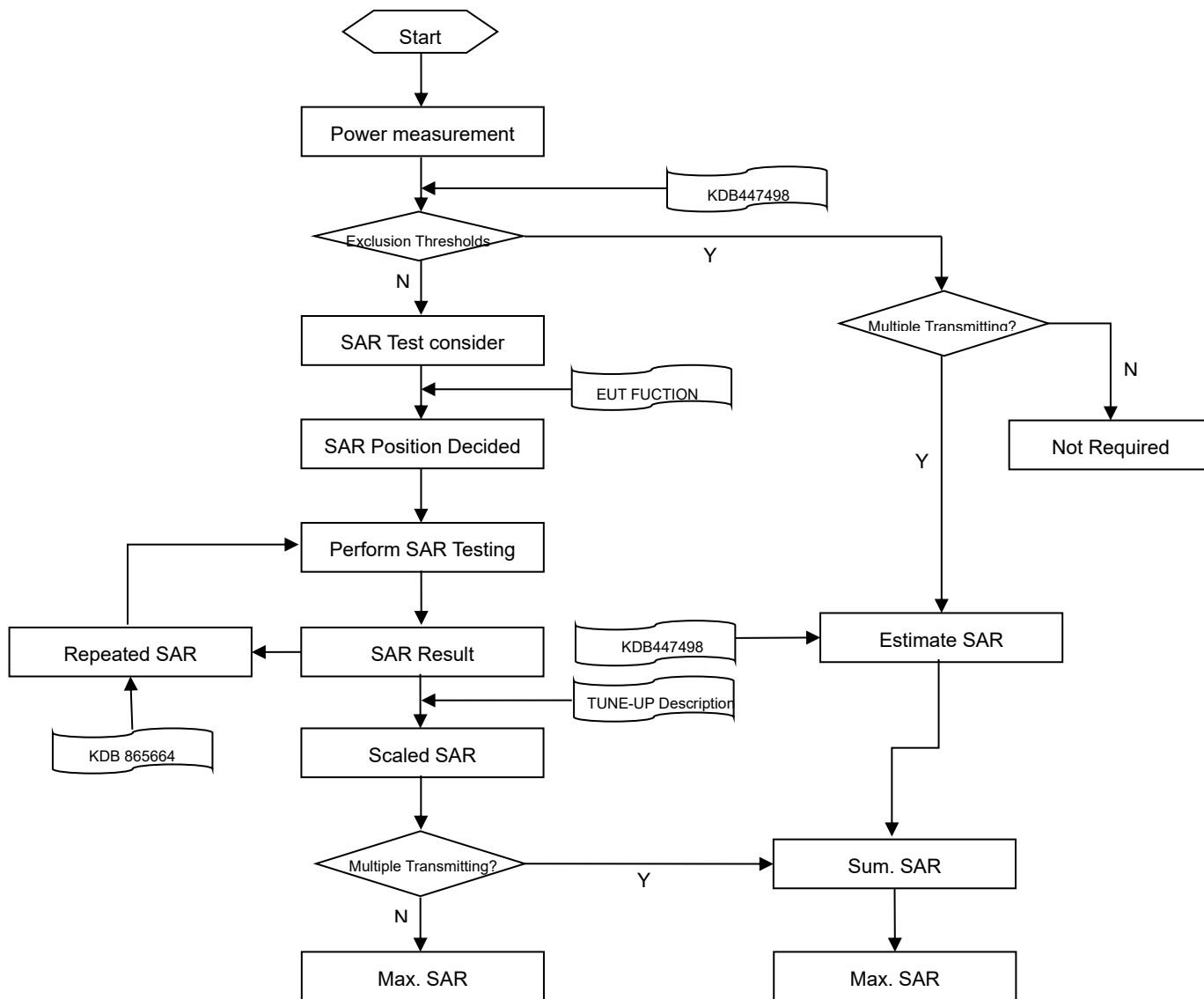
The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at  $\leq 25$  mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

6

6.

## 7 MEASUREMENT PROCEDURE

### 7.1 Measurement Process Diagram



## 7.2 SAR Scan General Requirement

Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1 g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013.

|                                                                                                        |                           |                                                                | ≤3GHz                                                                                                                                                                                                                                                             | >3GHz                                              |
|--------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface |                           |                                                                | 5±1 mm                                                                                                                                                                                                                                                            | $\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm |
| Maximum probe angle from probe axis to phantom surface normal at the measurement location              |                           |                                                                | 30°±1°                                                                                                                                                                                                                                                            | 20°±1°                                             |
| Maximum area scan spatial resolution: Δx Area , Δy Area                                                |                           |                                                                | ≤ 2 GHz: ≤ 15 mm<br>2 – 3 GHz: ≤ 12 mm                                                                                                                                                                                                                            | 3–4 GHz: ≤ 12 mm<br>4 – 6 GHz: ≤ 10 mm             |
|                                                                                                        |                           |                                                                | When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device. |                                                    |
| Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom                                                |                           |                                                                | ≤ 2 GHz: ≤ 8 mm<br>2 –3 GHz: ≤ 5 mm*                                                                                                                                                                                                                              | 3–4 GHz: ≤ 5 mm*<br>4 – 6 GHz: ≤ 4 mm*             |
| Maximum zoom scan spatial resolution, normal to phantom surface                                        | uniform grid: Δz Zoom (n) |                                                                | ≤ 5 mm                                                                                                                                                                                                                                                            | 3–4 GHz: ≤ 4 mm                                    |
|                                                                                                        |                           |                                                                |                                                                                                                                                                                                                                                                   | 4–5 GHz: ≤ 3 mm                                    |
|                                                                                                        |                           |                                                                |                                                                                                                                                                                                                                                                   | 5–6 GHz: ≤ 2 mm                                    |
|                                                                                                        | graded grid               | Δz Zoom (1): between 1st two points closest to phantom surface | ≤ 4 mm                                                                                                                                                                                                                                                            | 3–4 GHz: ≤ 3 mm                                    |
|                                                                                                        |                           |                                                                |                                                                                                                                                                                                                                                                   | 4–5 GHz: ≤ 2.5 mm                                  |
|                                                                                                        |                           | Δz Zoom (n>1): between subsequent points                       | ≤ 1.5·Δz Zoom (n-1)                                                                                                                                                                                                                                               |                                                    |
| Minimum zoom scan volume                                                                               | x, y, z                   |                                                                | ≥30 mm                                                                                                                                                                                                                                                            | 3–4 GHz: ≥ 28 mm                                   |
|                                                                                                        |                           |                                                                |                                                                                                                                                                                                                                                                   | 4–5 GHz: ≥ 25 mm                                   |
|                                                                                                        |                           |                                                                |                                                                                                                                                                                                                                                                   | 5–6 GHz: ≥ 22 mm                                   |

### Note:

1.  $\delta$  is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
2. \* When zoom scan is required and the reported SAR from the area scan based 1 g SAR estimation procedures of KDB 447498 is  $\leq 1.4$  W/kg,  $\leq 8$  mm,  $\leq 7$  mm and  $\leq 5$  mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

## 7.3 Measurement Procedure

The following steps are used for each test position

- a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- c. Measurement of the SAR distribution with a grid of 8 to 16mm \* 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- d. Around this point, a cube of 30 \* 30 \* 30 mm or 32 \* 32 \* 32 mm is assessed by measuring 5 or 8 \* 5 or 8\*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

## 7.4 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

## **8 CONDUCTED RF OUPUT POWER**

### **8.1 GSM**

Please refer the document “BL-SZ23A1194-AP Power List.pdf”.

### **8.2 WCDMA**

Please refer the document “BL-SZ23A1194-AP Power List.pdf”.

### **8.3 LTE**

Please refer the document “BL-SZ23A1194-AP Power List.pdf”.

## 8.4 WIFI

### 8.4.1 2.4G WLAN-Full power-Ant.0

| Band (GHz)          | Mode           | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|---------------------|----------------|---------|-------------|-----------------------|---------------------|-------------------|
| 2.4<br>(2.4~2.4835) | 802.11b        | 1       | 2412        | 17.86                 | 18.50               | Yes               |
|                     |                | 6       | 2437        | 18.21                 | 18.50               | Yes               |
|                     |                | 11      | 2462        | <b>18.40</b>          | 18.50               | Yes               |
|                     | 802.11g        | 1       | 2412        | 16.19                 | 16.50               | No                |
|                     |                | 6       | 2437        | 16.12                 | 16.50               | No                |
|                     |                | 11      | 2462        | 16.25                 | 16.50               | No                |
|                     | 802.11n(HT20)  | 1       | 2412        | 16.14                 | 16.50               | No                |
|                     |                | 6       | 2437        | 16.16                 | 16.50               | No                |
|                     |                | 11      | 2462        | 15.88                 | 16.50               | No                |
|                     | VHT20          | 1       | 2412        | 16.27                 | 16.50               | No                |
|                     |                | 6       | 2437        | 16.12                 | 16.50               | No                |
|                     |                | 11      | 2462        | 15.87                 | 16.50               | No                |
|                     | 802.11ax(HE20) | 1       | 2412        | 16.02                 | 16.50               | No                |
|                     |                | 6       | 2437        | 16.00                 | 16.50               | No                |
|                     |                | 11      | 2462        | 16.21                 | 16.50               | No                |

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

- 1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.
- 2) When multiple transmission modes (802.11b/g/n/VHT/ax) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.
- 3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg, OFDM SAR test is not required.

Adjusted SAR =  $0.885 * (44.67\text{mW}/70.79\text{mW}) = 0.558$  W/Kg, so 2.4G OFDM SAR test is not required.

## 8.4.2 2.4G WLAN-Full power-Ant.1

| Band (GHz)          | Mode           | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|---------------------|----------------|---------|-------------|-----------------------|---------------------|-------------------|
| 2.4<br>(2.4~2.4835) | 802.11b        | 1       | 2412        | <b>17.96</b>          | 18.50               | Yes               |
|                     |                | 6       | 2437        | 17.74                 | 18.50               | No                |
|                     |                | 11      | 2462        | 17.82                 | 18.50               | No                |
|                     | 802.11g        | 1       | 2412        | 15.92                 | 16.50               | No                |
|                     |                | 6       | 2437        | 15.76                 | 16.50               | No                |
|                     |                | 11      | 2462        | 16.13                 | 16.50               | No                |
|                     | 802.11n(HT20)  | 1       | 2412        | 15.93                 | 16.50               | No                |
|                     |                | 6       | 2437        | 16.32                 | 16.50               | No                |
|                     |                | 11      | 2462        | 16.39                 | 16.50               | No                |
|                     | VHT20          | 1       | 2412        | 15.98                 | 16.50               | No                |
|                     |                | 6       | 2437        | 16.22                 | 16.50               | No                |
|                     |                | 11      | 2462        | 16.02                 | 16.50               | No                |
|                     | 802.11ax(HE20) | 1       | 2412        | 16.43                 | 16.50               | No                |
|                     |                | 6       | 2437        | 16.12                 | 16.50               | No                |
|                     |                | 11      | 2462        | 15.95                 | 16.50               | No                |

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.

2) When multiple transmission modes (802.11b/g/n/VHT/ax) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.

3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg, OFDM SAR test is not required.

Adjusted SAR =  $0.001 * (44.67\text{mW}/70.79\text{mW}) = 0.001$  W/Kg, so 2.4G OFDM SAR test is not required.

## 8.4.3 2.4G WLAN-Full power-MIMO

| Band (GHz)          | Mode           | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|---------------------|----------------|---------|-------------|-----------------------|---------------------|-------------------|
| 2.4<br>(2.4~2.4835) | 802.11n(HT20)  | 1       | 2412        | 19.27                 | 19.50               | No                |
|                     |                | 6       | 2437        | <b>19.27</b>          | 19.50               | Yes               |
|                     |                | 11      | 2462        | 19.06                 | 19.50               | No                |
|                     | VHT20          | 1       | 2412        | 19.29                 | 19.50               | No                |
|                     |                | 6       | 2437        | 19.14                 | 19.50               | No                |
|                     |                | 11      | 2462        | 19.05                 | 19.50               | No                |
|                     | 802.11ax(HE20) | 1       | 2412        | 19.16                 | 19.50               | No                |
|                     |                | 6       | 2437        | 19.11                 | 19.50               | No                |
|                     |                | 11      | 2462        | 19.41                 | 19.50               | No                |

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.

2) When multiple transmission modes (802.11b/g/n/VHT/ax) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.

3) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg, OFDM SAR test is not required.

Adjusted SAR =  $0.621 * (44.67\text{mW}/70.79\text{mW}) = 0.392$  W/Kg, so 2.4G OFDM SAR test is not required.

## 8.4.4 5G WLAN-Full power-Ant.0

| Band (GHz)         | Mode            | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|--------------------|-----------------|---------|-------------|-----------------------|---------------------|-------------------|
| 5.2<br>(5.15~5.25) | 802.11a         | 36      | 5180        | 14.84                 | 15.50               | No                |
|                    |                 | 44      | 5220        | 15.11                 | 15.50               | No                |
|                    |                 | 48      | 5240        | 15.38                 | 15.50               | No                |
|                    | 802.11n(HT20)   | 36      | 5180        | 15.10                 | 15.50               | No                |
|                    |                 | 44      | 5220        | 15.28                 | 15.50               | No                |
|                    |                 | 48      | 5240        | 15.11                 | 15.50               | No                |
|                    | 802.11n(HT40)   | 38      | 5190        | 15.10                 | 15.50               | No                |
|                    |                 | 46      | 5230        | 15.32                 | 15.50               | No                |
|                    | 802.11ac(VHT20) | 36      | 5180        | 15.11                 | 15.50               | No                |
|                    |                 | 44      | 5220        | 14.94                 | 15.50               | No                |
|                    |                 | 48      | 5240        | 15.15                 | 15.50               | No                |
|                    | 802.11ac(VHT40) | 38      | 5190        | 15.16                 | 15.50               | No                |
|                    |                 | 46      | 5230        | 15.41                 | 15.50               | No                |
|                    | 802.11ac(VHT80) | 42      | 5210        | <b>15.06</b>          | 15.50               | Yes               |
|                    | 802.11ax(HE20)  | 36      | 5180        | 15.48                 | 15.50               | No                |
|                    |                 | 44      | 5220        | 15.19                 | 15.50               | No                |
|                    |                 | 48      | 5240        | 15.31                 | 15.50               | No                |
|                    | 802.11ax(HE40)  | 38      | 5190        | 15.10                 | 15.50               | No                |
|                    |                 | 46      | 5230        | 15.45                 | 15.50               | No                |
|                    | 802.11ax(HE80)  | 42      | 5210        | 15.15                 | 15.50               | No                |
| 5.3<br>(5.25~5.35) | 802.11a         | 52      | 5260        | 15.28                 | 15.50               | No                |
|                    |                 | 60      | 5300        | 15.12                 | 15.50               | No                |
|                    |                 | 64      | 5320        | 15.27                 | 15.50               | No                |
|                    | 802.11n(HT20)   | 52      | 5260        | 15.06                 | 15.50               | No                |
|                    |                 | 60      | 5300        | 15.27                 | 15.50               | No                |
|                    |                 | 64      | 5320        | 15.05                 | 15.50               | No                |
|                    | 802.11n(HT40)   | 54      | 5270        | 15.40                 | 15.50               | No                |
|                    |                 | 62      | 5310        | 15.10                 | 15.50               | No                |
|                    | 802.11ac(VHT20) | 52      | 5260        | 15.03                 | 15.50               | No                |
|                    |                 | 60      | 5300        | 15.05                 | 15.50               | No                |
|                    |                 | 64      | 5320        | 15.17                 | 15.50               | No                |
|                    | 802.11ac(VHT40) | 54      | 5270        | 15.36                 | 15.50               | No                |
|                    |                 | 62      | 5310        | 14.97                 | 15.50               | No                |
|                    | 802.11ac(VHT80) | 58      | 5290        | <b>15.33</b>          | 15.50               | Yes               |
|                    | 802.11ax(HE20)  | 52      | 5260        | 15.34                 | 15.50               | No                |
|                    |                 | 60      | 5300        | 15.28                 | 15.50               | No                |

|                     |                 |     |      |              |       |     |
|---------------------|-----------------|-----|------|--------------|-------|-----|
|                     |                 | 64  | 5320 | 15.16        | 15.50 | No  |
|                     | 802.11ax(HE40)  | 54  | 5270 | 14.98        | 15.50 | No  |
|                     |                 | 62  | 5310 | 15.16        | 15.50 | No  |
|                     | 802.11ax(HE80)  | 58  | 5290 | 15.09        | 15.50 | No  |
| 5.6<br>(5.47~5.725) | 802.11a         | 100 | 5500 | 15.24        | 15.50 | No  |
|                     |                 | 116 | 5580 | 15.26        | 15.50 | No  |
|                     |                 | 140 | 5700 | 15.06        | 15.50 | No  |
|                     |                 | 144 | 5720 | 15.24        | 15.50 | No  |
|                     | 802.11n(HT20)   | 100 | 5500 | 15.08        | 15.50 | No  |
|                     |                 | 116 | 5580 | 14.92        | 15.50 | No  |
|                     |                 | 140 | 5700 | 15.43        | 15.50 | No  |
|                     |                 | 144 | 5720 | 14.99        | 15.50 | No  |
|                     | 802.11n(HT40)   | 102 | 5510 | 15.11        | 15.50 | No  |
|                     |                 | 118 | 5590 | 15.25        | 15.50 | No  |
|                     |                 | 134 | 5670 | 15.17        | 15.50 | No  |
|                     |                 | 142 | 5710 | 15.17        | 15.50 | No  |
|                     | 802.11ac(VHT20) | 100 | 5500 | 15.20        | 15.50 | No  |
|                     |                 | 116 | 5580 | 15.17        | 15.50 | No  |
|                     |                 | 140 | 5700 | 15.00        | 15.50 | No  |
|                     |                 | 144 | 5720 | 15.07        | 15.50 | No  |
|                     | 802.11ac(VHT40) | 102 | 5510 | 15.10        | 15.50 | No  |
|                     |                 | 118 | 5590 | 15.20        | 15.50 | No  |
|                     |                 | 134 | 5670 | 15.15        | 15.50 | No  |
|                     |                 | 142 | 5710 | 15.22        | 15.50 | No  |
|                     | 802.11ac(VHT80) | 106 | 5530 | <b>15.39</b> | 15.50 | Yes |
|                     |                 | 122 | 5610 | 15.25        | 15.50 | Yes |
|                     |                 | 138 | 5690 | 15.07        | 15.50 | Yes |
|                     | 802.11ax(HE20)  | 100 | 5500 | 15.25        | 15.50 | No  |
|                     |                 | 116 | 5580 | 15.06        | 15.50 | No  |
|                     |                 | 140 | 5700 | 15.05        | 15.50 | No  |
|                     |                 | 144 | 5720 | 15.25        | 15.50 | No  |
|                     | 802.11ax(HE40)  | 102 | 5510 | 15.24        | 15.50 | No  |
|                     |                 | 118 | 5590 | 15.27        | 15.50 | No  |
|                     |                 | 134 | 5670 | 15.26        | 15.50 | No  |
|                     |                 | 142 | 5710 | 15.28        | 15.50 | No  |
|                     | 802.11ax(HE80)  | 106 | 5530 | 15.42        | 15.50 | No  |
|                     |                 | 122 | 5610 | 15.23        | 15.50 | No  |
|                     |                 | 138 | 5690 | 14.90        | 15.50 | No  |
| 5.8                 | 802.11a         | 149 | 5745 | 15.34        | 15.50 | No  |

|               |                 |     |      |              |       |     |
|---------------|-----------------|-----|------|--------------|-------|-----|
| (5.725~5.850) |                 | 157 | 5785 | 15.32        | 15.50 | No  |
|               |                 | 165 | 5825 | 15.35        | 15.50 | No  |
|               | 802.11n(HT20)   | 149 | 5745 | 15.13        | 15.50 | No  |
|               |                 | 157 | 5785 | 14.98        | 15.50 | No  |
|               |                 | 165 | 5825 | 15.20        | 15.50 | No  |
|               | 802.11n(HT40)   | 151 | 5755 | 15.24        | 15.50 | No  |
|               |                 | 159 | 5795 | 15.23        | 15.50 | No  |
|               | 802.11ac(VHT20) | 149 | 5745 | 15.09        | 15.50 | No  |
|               |                 | 157 | 5785 | 15.10        | 15.50 | No  |
|               |                 | 165 | 5825 | 15.18        | 15.50 | No  |
|               | 802.11ac(VHT40) | 151 | 5755 | 15.32        | 15.50 | No  |
|               |                 | 159 | 5795 | 15.43        | 15.50 | No  |
|               | 802.11ac(VHT80) | 155 | 5775 | <b>15.10</b> | 15.50 | Yes |
|               | 802.11ax(HE20)  | 149 | 5745 | 14.98        | 15.50 | No  |
|               |                 | 157 | 5785 | 15.24        | 15.50 | No  |
|               |                 | 165 | 5825 | 15.48        | 15.50 | No  |
|               | 802.11ax(HE40)  | 151 | 5755 | 15.47        | 15.50 | No  |
|               |                 | 159 | 5795 | 15.02        | 15.50 | No  |
|               | 802.11ax(HE80)  | 155 | 5775 | 15.34        | 15.50 | No  |

Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is  $\leq 1.2$  W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.

## 8.4.5 5G WLAN-Full power-Ant.1

| Band (GHz)         | Mode            | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|--------------------|-----------------|---------|-------------|-----------------------|---------------------|-------------------|
| 5.2<br>(5.15~5.25) | 802.11a         | 36      | 5180        | 14.75                 | 15.50               | No                |
|                    |                 | 44      | 5220        | 14.92                 | 15.50               | No                |
|                    |                 | 48      | 5240        | 14.99                 | 15.50               | No                |
|                    | 802.11n(HT20)   | 36      | 5180        | 15.25                 | 15.50               | No                |
|                    |                 | 44      | 5220        | 15.25                 | 15.50               | No                |
|                    |                 | 48      | 5240        | 15.31                 | 15.50               | No                |
|                    | 802.11n(HT40)   | 38      | 5190        | 15.05                 | 15.50               | No                |
|                    |                 | 46      | 5230        | 15.10                 | 15.50               | No                |
|                    | 802.11ac(VHT20) | 36      | 5180        | 15.18                 | 15.50               | No                |
|                    |                 | 44      | 5220        | 15.19                 | 15.50               | No                |
|                    |                 | 48      | 5240        | 15.31                 | 15.50               | No                |
|                    | 802.11ac(VHT40) | 38      | 5190        | 15.18                 | 15.50               | No                |
|                    |                 | 46      | 5230        | 15.17                 | 15.50               | No                |
|                    | 802.11ac(VHT80) | 42      | 5210        | <b>15.18</b>          | 15.50               | Yes               |
|                    | 802.11ax(HE20)  | 36      | 5180        | 15.41                 | 15.50               | No                |
|                    |                 | 44      | 5220        | 15.05                 | 15.50               | No                |
|                    |                 | 48      | 5240        | 15.09                 | 15.50               | No                |
|                    | 802.11ax(HE40)  | 38      | 5190        | 15.25                 | 15.50               | No                |
|                    |                 | 46      | 5230        | 15.25                 | 15.50               | No                |
|                    | 802.11ax(HE80)  | 42      | 5210        | 15.05                 | 15.50               | No                |
| 5.3<br>(5.25~5.35) | 802.11a         | 52      | 5260        | 14.73                 | 15.50               | No                |
|                    |                 | 60      | 5300        | 15.03                 | 15.50               | No                |
|                    |                 | 64      | 5320        | 15.14                 | 15.50               | No                |
|                    | 802.11n(HT20)   | 52      | 5260        | 15.16                 | 15.50               | No                |
|                    |                 | 60      | 5300        | 15.36                 | 15.50               | No                |
|                    |                 | 64      | 5320        | 15.48                 | 15.50               | No                |
|                    | 802.11n(HT40)   | 54      | 5270        | 15.11                 | 15.50               | No                |
|                    |                 | 62      | 5310        | 15.24                 | 15.50               | No                |
|                    | 802.11ac(VHT20) | 52      | 5260        | 15.12                 | 15.50               | No                |
|                    |                 | 60      | 5300        | 15.33                 | 15.50               | No                |
|                    |                 | 64      | 5320        | 15.09                 | 15.50               | No                |
|                    | 802.11ac(VHT40) | 54      | 5270        | 15.11                 | 15.50               | No                |
|                    |                 | 62      | 5310        | 15.34                 | 15.50               | No                |
|                    | 802.11ac(VHT80) | 58      | 5290        | <b>15.07</b>          | 15.50               | Yes               |
|                    | 802.11ax(HE20)  | 52      | 5260        | 15.12                 | 15.50               | No                |
|                    |                 | 60      | 5300        | 15.27                 | 15.50               | No                |

|                     |                 |     |      |              |       |     |
|---------------------|-----------------|-----|------|--------------|-------|-----|
|                     |                 | 64  | 5320 | 15.36        | 15.50 | No  |
|                     | 802.11ax(HE40)  | 54  | 5270 | 15.12        | 15.50 | No  |
|                     |                 | 62  | 5310 | 15.25        | 15.50 | No  |
|                     | 802.11ax(HE80)  | 58  | 5290 | 15.29        | 15.50 | No  |
| 5.6<br>(5.47~5.725) | 802.11a         | 100 | 5500 | 15.02        | 15.50 | No  |
|                     |                 | 116 | 5580 | 15.24        | 15.50 | No  |
|                     |                 | 140 | 5700 | 15.21        | 15.50 | No  |
|                     |                 | 144 | 5720 | 15.38        | 15.50 | No  |
|                     | 802.11n(HT20)   | 100 | 5500 | 15.36        | 15.50 | No  |
|                     |                 | 116 | 5580 | 15.37        | 15.50 | No  |
|                     |                 | 140 | 5700 | 15.48        | 15.50 | No  |
|                     |                 | 144 | 5720 | 15.13        | 15.50 | No  |
|                     | 802.11n(HT40)   | 102 | 5510 | 15.26        | 15.50 | No  |
|                     |                 | 118 | 5590 | 15.16        | 15.50 | No  |
|                     |                 | 134 | 5670 | 15.24        | 15.50 | No  |
|                     |                 | 142 | 5710 | 15.40        | 15.50 | No  |
|                     | 802.11ac(VHT20) | 100 | 5500 | 15.35        | 15.50 | No  |
|                     |                 | 116 | 5580 | 15.46        | 15.50 | No  |
|                     |                 | 140 | 5700 | 15.47        | 15.50 | No  |
|                     |                 | 144 | 5720 | 15.12        | 15.50 | No  |
|                     | 802.11ac(VHT40) | 102 | 5510 | 15.04        | 15.50 | No  |
|                     |                 | 118 | 5590 | 15.20        | 15.50 | No  |
|                     |                 | 134 | 5670 | 15.40        | 15.50 | No  |
|                     |                 | 142 | 5710 | 15.38        | 15.50 | No  |
|                     | 802.11ac(VHT80) | 106 | 5530 | <b>15.35</b> | 15.50 | Yes |
|                     |                 | 122 | 5610 | 15.26        | 15.50 | Yes |
|                     |                 | 138 | 5690 | 15.13        | 15.50 | Yes |
|                     | 802.11ax(HE20)  | 100 | 5500 | 15.12        | 15.50 | No  |
|                     |                 | 116 | 5580 | 15.10        | 15.50 | No  |
|                     |                 | 140 | 5700 | 15.32        | 15.50 | No  |
|                     |                 | 144 | 5720 | 14.89        | 15.50 | No  |
|                     | 802.11ax(HE40)  | 102 | 5510 | 15.02        | 15.50 | No  |
|                     |                 | 118 | 5590 | 15.05        | 15.50 | No  |
|                     |                 | 134 | 5670 | 15.02        | 15.50 | No  |
|                     |                 | 142 | 5710 | 15.14        | 15.50 | No  |
|                     | 802.11ax(HE80)  | 106 | 5530 | 15.47        | 15.50 | No  |
|                     |                 | 122 | 5610 | 15.46        | 15.50 | No  |
|                     |                 | 138 | 5690 | 15.16        | 15.50 | No  |
| 5.8                 | 802.11a         | 149 | 5745 | 15.44        | 15.50 | No  |

|               |                 |     |      |              |       |     |
|---------------|-----------------|-----|------|--------------|-------|-----|
| (5.725~5.850) |                 | 157 | 5785 | 15.10        | 15.50 | No  |
|               |                 | 165 | 5825 | 15.03        | 15.50 | No  |
|               | 802.11n(HT20)   | 149 | 5745 | 15.03        | 15.50 | No  |
|               |                 | 157 | 5785 | 15.37        | 15.50 | No  |
|               |                 | 165 | 5825 | 15.23        | 15.50 | No  |
|               | 802.11n(HT40)   | 151 | 5755 | 15.38        | 15.50 | No  |
|               |                 | 159 | 5795 | 15.18        | 15.50 | No  |
|               | 802.11ac(VHT20) | 149 | 5745 | 15.16        | 15.50 | No  |
|               |                 | 157 | 5785 | 15.33        | 15.50 | No  |
|               |                 | 165 | 5825 | 15.15        | 15.50 | No  |
|               | 802.11ac(VHT40) | 151 | 5755 | 15.47        | 15.50 | No  |
|               |                 | 159 | 5795 | 15.09        | 15.50 | No  |
|               | 802.11ac(VHT80) | 155 | 5775 | <b>15.19</b> | 15.50 | Yes |
|               | 802.11ax(HE20)  | 149 | 5745 | 15.49        | 15.50 | No  |
|               |                 | 157 | 5785 | 15.35        | 15.50 | No  |
|               |                 | 165 | 5825 | 15.22        | 15.50 | No  |
|               | 802.11ax(HE40)  | 151 | 5755 | 14.93        | 15.50 | No  |
|               |                 | 159 | 5795 | 14.86        | 15.50 | No  |
|               | 802.11ax(HE80)  | 155 | 5775 | 15.41        | 15.50 | No  |

Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is  $\leq 1.2$  W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.

## 8.4.6 5G WLAN-Full power-MIMO

| Band (GHz)          | Mode            | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|---------------------|-----------------|---------|-------------|-----------------------|---------------------|-------------------|
| 5.2<br>(5.15~5.25)  | 802.11n(HT20)   | 36      | 5180        | 18.09                 | 18.50               | No                |
|                     |                 | 44      | 5220        | 18.16                 | 18.50               | No                |
|                     |                 | 48      | 5240        | 18.24                 | 18.50               | No                |
|                     | 802.11n(HT40)   | 38      | 5190        | 18.27                 | 18.50               | No                |
|                     |                 | 46      | 5230        | 18.16                 | 18.50               | No                |
|                     | 802.11ac(VHT20) | 36      | 5180        | 18.10                 | 18.50               | No                |
|                     |                 | 44      | 5220        | 18.17                 | 18.50               | No                |
|                     |                 | 48      | 5240        | 18.30                 | 18.50               | No                |
|                     | 802.11ac(VHT40) | 38      | 5190        | 18.32                 | 18.50               | No                |
|                     |                 | 46      | 5230        | 18.01                 | 18.50               | No                |
|                     | 802.11ac(VHT80) | 42      | 5210        | <b>18.22</b>          | 18.50               | Yes               |
|                     | 802.11ax(HE20)  | 36      | 5180        | 18.20                 | 18.50               | No                |
|                     |                 | 44      | 5220        | 18.35                 | 18.50               | No                |
|                     |                 | 48      | 5240        | 18.42                 | 18.50               | No                |
|                     | 802.11ax(HE40)  | 38      | 5190        | 18.16                 | 18.50               | No                |
|                     |                 | 46      | 5230        | 18.10                 | 18.50               | No                |
|                     | 802.11ax(HE80)  | 42      | 5210        | 18.20                 | 18.50               | No                |
| 5.3<br>(5.25~5.35)  | 802.11n(HT20)   | 52      | 5260        | 18.12                 | 18.50               | No                |
|                     |                 | 60      | 5300        | 18.17                 | 18.50               | No                |
|                     |                 | 64      | 5320        | 18.23                 | 18.50               | No                |
|                     | 802.11n(HT40)   | 54      | 5270        | 18.03                 | 18.50               | No                |
|                     |                 | 62      | 5310        | 18.29                 | 18.50               | No                |
|                     | 802.11ac(VHT20) | 52      | 5260        | 18.23                 | 18.50               | No                |
|                     |                 | 60      | 5300        | 18.43                 | 18.50               | No                |
|                     |                 | 64      | 5320        | 18.25                 | 18.50               | No                |
|                     | 802.11ac(VHT40) | 54      | 5270        | 18.09                 | 18.50               | No                |
|                     |                 | 62      | 5310        | 18.21                 | 18.50               | No                |
|                     | 802.11ac(VHT80) | 58      | 5290        | <b>18.16</b>          | 18.50               | Yes               |
|                     | 802.11ax(HE20)  | 52      | 5260        | 18.14                 | 18.50               | No                |
|                     |                 | 60      | 5300        | 18.21                 | 18.50               | No                |
|                     |                 | 64      | 5320        | 18.30                 | 18.50               | No                |
|                     | 802.11ax(HE40)  | 54      | 5270        | 18.26                 | 18.50               | No                |
|                     |                 | 62      | 5310        | 18.37                 | 18.50               | No                |
|                     | 802.11ax(HE80)  | 58      | 5290        | 18.42                 | 18.50               | No                |
| 5.6<br>(5.47~5.725) | 802.11n(HT20)   | 100     | 5500        | 18.13                 | 18.50               | No                |
|                     |                 | 116     | 5580        | 18.35                 | 18.50               | No                |

|                      |                 |     |      |              |       |     |
|----------------------|-----------------|-----|------|--------------|-------|-----|
|                      |                 | 140 | 5700 | 18.24        | 18.50 | No  |
|                      |                 | 144 | 5720 | 18.32        | 18.50 | No  |
|                      | 802.11n(HT40)   | 102 | 5510 | 18.03        | 18.50 | No  |
|                      |                 | 118 | 5590 | 18.07        | 18.50 | No  |
|                      |                 | 134 | 5670 | 18.07        | 18.50 | No  |
|                      |                 | 142 | 5710 | 18.39        | 18.50 | No  |
|                      | 802.11ac(VHT20) | 100 | 5500 | 18.28        | 18.50 | No  |
|                      |                 | 116 | 5580 | 18.19        | 18.50 | No  |
|                      |                 | 140 | 5700 | 18.28        | 18.50 | No  |
|                      |                 | 144 | 5720 | 18.04        | 18.50 | No  |
|                      | 802.11ac(VHT40) | 102 | 5510 | 18.03        | 18.50 | No  |
|                      |                 | 118 | 5590 | 18.18        | 18.50 | No  |
|                      |                 | 134 | 5670 | 18.45        | 18.50 | No  |
|                      |                 | 142 | 5710 | 18.33        | 18.50 | No  |
|                      | 802.11ac(VHT80) | 106 | 5530 | <b>18.20</b> | 18.50 | Yes |
|                      |                 | 122 | 5610 | 18.17        | 18.50 | Yes |
|                      |                 | 138 | 5690 | 18.12        | 18.50 | Yes |
|                      | 802.11ax(HE20)  | 100 | 5500 | 18.27        | 18.50 | No  |
|                      |                 | 116 | 5580 | 18.26        | 18.50 | No  |
|                      |                 | 140 | 5700 | 18.23        | 18.50 | No  |
|                      |                 | 144 | 5720 | 18.22        | 18.50 | No  |
|                      | 802.11ax(HE40)  | 102 | 5510 | 18.11        | 18.50 | No  |
|                      |                 | 118 | 5590 | 18.11        | 18.50 | No  |
|                      |                 | 134 | 5670 | 18.26        | 18.50 | No  |
|                      |                 | 142 | 5710 | 18.37        | 18.50 | No  |
|                      | 802.11ax(HE80)  | 106 | 5530 | 18.26        | 18.50 | No  |
|                      |                 | 122 | 5610 | 18.21        | 18.50 | No  |
|                      |                 | 138 | 5690 | 18.15        | 18.50 | No  |
| 5.8<br>(5.725~5.850) | 802.11n(HT20)   | 149 | 5745 | 18.26        | 18.50 | No  |
|                      |                 | 157 | 5785 | 18.10        | 18.50 | No  |
|                      |                 | 165 | 5825 | 17.98        | 18.50 | No  |
|                      | 802.11n(HT40)   | 151 | 5755 | 18.30        | 18.50 | No  |
|                      |                 | 159 | 5795 | 18.25        | 18.50 | No  |
|                      | 802.11ac(VHT20) | 149 | 5745 | 18.32        | 18.50 | No  |
|                      |                 | 157 | 5785 | 18.13        | 18.50 | No  |
|                      |                 | 165 | 5825 | 18.24        | 18.50 | No  |
|                      | 802.11ac(VHT40) | 151 | 5755 | 18.35        | 18.50 | No  |
|                      |                 | 159 | 5795 | 18.24        | 18.50 | No  |
|                      | 802.11ac(VHT80) | 155 | 5775 | <b>18.37</b> | 18.50 | Yes |

|  |                |     |      |       |       |    |
|--|----------------|-----|------|-------|-------|----|
|  | 802.11ax(HE20) | 149 | 5745 | 18.12 | 18.50 | No |
|  |                | 157 | 5785 | 18.20 | 18.50 | No |
|  |                | 165 | 5825 | 18.14 | 18.50 | No |
|  | 802.11ax(HE40) | 151 | 5755 | 18.39 | 18.50 | No |
|  |                | 159 | 5795 | 18.30 | 18.50 | No |
|  | 802.11ax(HE80) | 155 | 5775 | 18.36 | 18.50 | No |

Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is  $\leq 1.2$  W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.

## 8.5 Bluetooth

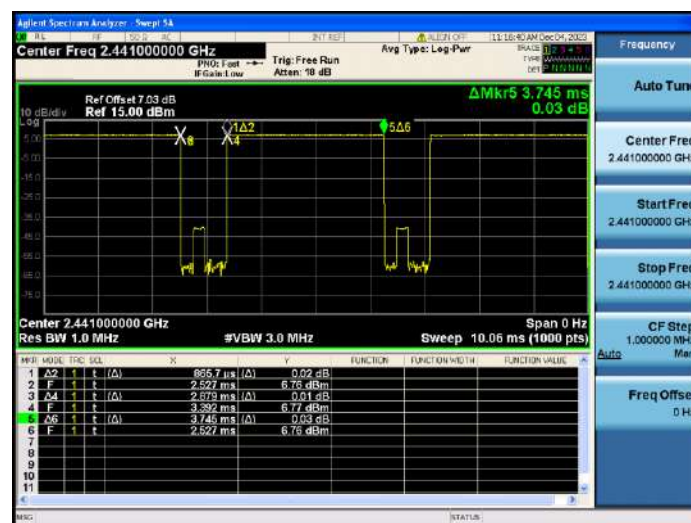
| Mode                 | GFSK        |       |       | $\pi/4$ -DQPSK |       |      |
|----------------------|-------------|-------|-------|----------------|-------|------|
| Channel              | 0           | 39    | 78    | 0              | 39    | 78   |
| Frequency (MHz)      | 2402        | 2441  | 2480  | 2402           | 2441  | 2480 |
| Conducted Power(dBm) | <b>9.18</b> | 7.64  | 8.38  | 8.32           | 9.01  | 7.94 |
| Tune-Up Limit (dBm)  | 10.50       | 9.50  | 10.00 | 10.00          | 10.50 | 9.50 |
| SAR Test Require     | YES         | YES   | YES   | NO             | NO    | NO   |
| Mode                 | 8-DPSK      |       |       | /              |       |      |
| Channel              | 0           | 39    | 78    | /              | /     | /    |
| Frequency (MHz)      | 2402        | 2441  | 2480  | /              | /     | /    |
| Conducted Power(dBm) | 8.50        | 9.23  | 8.33  | /              | /     | /    |
| Tune-Up Limit (dBm)  | 10.50       | 10.50 | 10.00 | /              | /     | /    |
| SAR Test Require     | NO          | NO    | NO    | /              | /     | /    |
| Mode                 | BLE-1Mbps   |       |       | BLE-2Mbps      |       |      |
| Channel              | 0           | 19    | 39    | 1              | 19    | 38   |
| Frequency (MHz)      | 2402        | 2440  | 2480  | 2404           | 2440  | 2478 |
| Conducted Power(dBm) | 7.50        | 6.70  | 7.21  | 7.77           | 7.92  | 8.42 |
| Tune-Up Limit (dBm)  | 9.00        | 8.50  | 9.00  | 9.00           | 9.00  | 9.00 |
| SAR Test Require     | NO          | NO    | NO    | NO             | NO    | NO   |

Note 1: Since bluetooth BR mode is the maximum output power mode, SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode.

The Bluetooth duty cycle is 76.88 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation.

### Duty Cycle

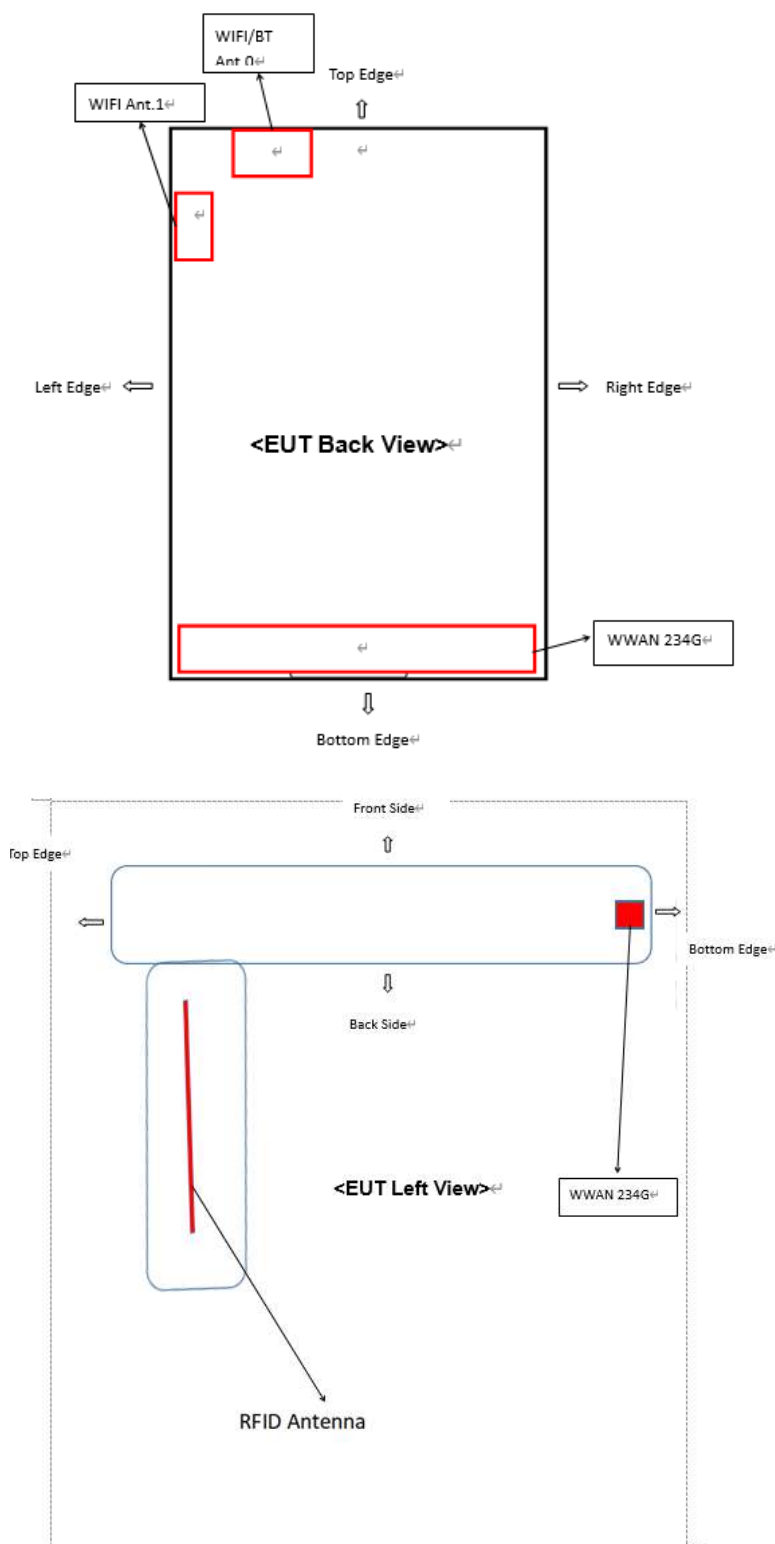
Bluetooth-GFSK



## 8.7 RFID

| Mode | Channel | Freq.  | Conducted Power(dBm ) | Tune-up Power(dBm) | SAR Required |
|------|---------|--------|-----------------------|--------------------|--------------|
| RFID | 1       | 902.75 | 27.17                 | 28.00              | No           |
|      | 2       | 914.75 | 27.08                 | 28.00              | No           |
|      | 3       | 927.25 | <b>27.17</b>          | 28.00              | Yes          |

## 9 TEST EXCLUSION CONSIDERATION



## 9.1 SAR Test Exclusion Consideration Table

| Antenna    | Front Side(mm) | Back Side(mm) | Left Edge(mm) | Right Edge(mm) | Top Edge(mm) | Bottom Edge(mm) |
|------------|----------------|---------------|---------------|----------------|--------------|-----------------|
| WWAN       | <25            | <25           | <25           | <25            | >25          | <25             |
| Bluetooth  | <25            | <25           | <25           | <25            | <25          | >25             |
| WIFI Ant.0 | <25            | <25           | <25           | <25            | <25          | >25             |
| WIFI Ant.1 | <25            | <25           | <25           | <25            | <25          | >25             |

Note: 1.Per KDB 941225 DO6,When the overall length and width of a device is > 9 cm \*5 cm, a test separation distance of 10 mm is required for hotspot mode SAR measurements and hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge.

| RF exposure Position<br>RF exposure scenarios | RF exposure scenarios |
|-----------------------------------------------|-----------------------|
| Front Side                                    | Extremity             |
| Back Side                                     | Extremity             |
| Left Side                                     | Extremity             |
| Right Side                                    | Extremity             |
| Top Side                                      | Extremity             |

| Test Position Configurations | Mode                     | RFID   |
|------------------------------|--------------------------|--------|
| Calculated Frequency(MHz)    |                          | 2480   |
| Front Side                   | Distance to User (mm)    | 25     |
|                              | Max. Peak Power (dBm)    | 28.00  |
|                              | Max. Peak Power (mW)     | 630.96 |
|                              | Exclusion Threshold (mW) | 86.74  |
|                              | SAR Test Required        | Yes    |
| Back Side                    | Distance to User (mm)    | 0      |
|                              | Max. Peak Power (dBm)    | 28.00  |
|                              | Max. Peak Power (mW)     | 630.96 |
|                              | Exclusion Threshold (mW) | 0      |
|                              | SAR Test Required        | Yes    |
| Left Edge                    | Distance to User (mm)    | 0      |
|                              | Max. Peak Power (dBm)    | 28.00  |
|                              | Max. Peak Power (mW)     | 630.96 |
|                              | Exclusion Threshold (mW) | 0      |
|                              | SAR Test Required        | Yes    |
| Right Edge                   | Distance to User (mm)    | 0      |
|                              | Max. Peak Power (dBm)    | 28.00  |
|                              | Max. Peak Power (mW)     | 630.96 |
|                              | Exclusion Threshold (mW) | 0      |
|                              | SAR Test Required        | Yes    |
| Top Edge                     | Distance to User (mm)    | 0      |
|                              | Max. Peak Power (dBm)    | 28.00  |
|                              | Max. Peak Power (mW)     | 630.96 |
|                              | Exclusion Threshold (mW) | 0      |
|                              | SAR Test Required        | Yes    |

# 10 TEST RESULT

## 10.1 GSM 850

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-----|----------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |     |                |                        |                              |                         |                                 |                   |                                |              |
| DATA 3slots                                                                    | Left Cheek  | 0             | 251 | 848.8          | -0.11                  | 0.012                        | 28.31                   | 29.00                           | 1.172             | <b>0.014</b>                   | 1#           |
| DATA 3slots                                                                    | Left Tilt   | 0             | 251 | 848.8          | -0.01                  | 0.001                        | 28.31                   | 29.00                           | 1.172             | 0.001                          | /            |
| DATA 3slots                                                                    | Right Cheek | 0             | 251 | 848.8          | 0.09                   | 0.008                        | 28.31                   | 29.00                           | 1.172             | 0.009                          | /            |
| DATA 3slots                                                                    | Right Tilt  | 0             | 251 | 848.8          | 0.07                   | 0.000                        | 28.31                   | 29.00                           | 1.172             | 0.000                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |     |                |                        |                              |                         |                                 |                   |                                |              |
| DATA 3slots                                                                    | Front Side  | 10            | 251 | 848.8          | 0.10                   | 0.051                        | 28.31                   | 29.00                           | 1.172             | 0.060                          | /            |
| DATA 3slots                                                                    | Back Side   | 10            | 251 | 848.8          | -0.05                  | 0.000                        | 28.31                   | 29.00                           | 1.172             | 0.000                          | /            |
| DATA 3slots                                                                    | Left Edge   | 10            | 251 | 848.8          | -0.10                  | 0.048                        | 28.31                   | 29.00                           | 1.172             | 0.056                          | /            |
| DATA 3slots                                                                    | Right Edge  | 10            | 251 | 848.8          | -0.01                  | 0.055                        | 28.31                   | 29.00                           | 1.172             | 0.064                          | /            |
| DATA 3slots                                                                    | Bottom Edge | 10            | 251 | 848.8          | 0.00                   | 0.065                        | 28.31                   | 29.00                           | 1.172             | <b>0.076</b>                   | 2#           |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |     |                |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-----|----------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |     |                |                        |                               |                         |                                 |                   |                                 |              |
| DATA 3slots                                                                    | Front Side  | 0             | 251 | 848.8          | 0.07                   | 0.102                         | 28.31                   | 29.00                           | 1.172             | 0.120                           | /            |
| DATA 3slots                                                                    | Back Side   | 0             | 251 | 848.8          | -0.10                  | 0.000                         | 28.31                   | 29.00                           | 1.172             | 0.000                           | /            |
| DATA 3slots                                                                    | Left Edge   | 0             | 251 | 848.8          | 0.01                   | 0.049                         | 28.31                   | 29.00                           | 1.172             | 0.057                           | /            |
| DATA 3slots                                                                    | Right Edge  | 0             | 251 | 848.8          | 0.05                   | 0.065                         | 28.31                   | 29.00                           | 1.172             | 0.076                           | /            |
| DATA 3slots                                                                    | Bottom Edge | 0             | 251 | 848.8          | 0.01                   | 0.208                         | 28.31                   | 29.00                           | 1.172             | <b>0.244</b>                    | 3#           |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |     |                |                        |                               |                         |                                 |                   |                                 |              |

## 10.2 GSM 1900

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-----|----------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |     |                |                        |                              |                         |                                 |                   |                                |              |
| DATA 3slots                                                                    | Left Cheek  | 0             | 810 | 1909.8         | 0.14                   | 0.020                        | 26.52                   | 27.00                           | 1.117             | <b>0.022</b>                   | 4#           |
| DATA 3slots                                                                    | Left Tilt   | 0             | 810 | 1909.8         | -0.12                  | 0.005                        | 26.52                   | 27.00                           | 1.117             | 0.006                          | /            |
| DATA 3slots                                                                    | Right Cheek | 0             | 810 | 1909.8         | -0.12                  | 0.012                        | 26.52                   | 27.00                           | 1.117             | 0.013                          | /            |
| DATA 3slots                                                                    | Right Tilt  | 0             | 810 | 1909.8         | 0.10                   | 0.002                        | 26.52                   | 27.00                           | 1.117             | 0.002                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |     |                |                        |                              |                         |                                 |                   |                                |              |
| DATA 3slots                                                                    | Front Side  | 10            | 810 | 1909.8         | 0.06                   | 0.095                        | 26.52                   | 27.00                           | 1.117             | 0.106                          | /            |
| DATA 3slots                                                                    | Back Side   | 10            | 810 | 1909.8         | 0.04                   | 0.000                        | 26.52                   | 27.00                           | 1.117             | 0.000                          | /            |
| DATA 3slots                                                                    | Left Edge   | 10            | 810 | 1909.8         | -0.14                  | 0.047                        | 26.52                   | 27.00                           | 1.117             | 0.052                          | /            |
| DATA 3slots                                                                    | Right Edge  | 10            | 810 | 1909.8         | 0.12                   | 0.120                        | 26.52                   | 27.00                           | 1.117             | 0.134                          | /            |
| DATA 3slots                                                                    | Bottom Edge | 10            | 810 | 1909.8         | 0.00                   | 0.125                        | 26.52                   | 27.00                           | 1.117             | <b>0.140</b>                   | 5#           |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |     |                |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-----|----------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |     |                |                        |                               |                         |                                 |                   |                                 |              |
| DATA 3slots                                                                    | Front Side  | 0             | 810 | 1909.8         | -0.02                  | 0.202                         | 26.52                   | 27.00                           | 1.117             | 0.226                           | /            |
| DATA 3slots                                                                    | Back Side   | 0             | 810 | 1909.8         | 0.13                   | 0.000                         | 26.52                   | 27.00                           | 1.117             | 0.000                           | /            |
| DATA 3slots                                                                    | Left Edge   | 0             | 810 | 1909.8         | 0.12                   | 0.053                         | 26.52                   | 27.00                           | 1.117             | 0.059                           | /            |
| DATA 3slots                                                                    | Right Edge  | 0             | 810 | 1909.8         | -0.06                  | 0.264                         | 26.52                   | 27.00                           | 1.117             | 0.295                           | /            |
| DATA 3slots                                                                    | Bottom Edge | 0             | 810 | 1909.8         | 0.04                   | 0.394                         | 26.52                   | 27.00                           | 1.117             | <b>0.440</b>                    | 6#           |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |     |                |                        |                               |                         |                                 |                   |                                 |              |

## 10.3WCDMA Band 2

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.  | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|------|----------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |
| RMC                                                                            | Left Cheek  | 0             | 9538 | 1907.6         | -0.11                  | 0.160                        | 23.06                   | 23.50                           | 1.107             | <b>0.177</b>                   | 7#           |
| RMC                                                                            | Left Tilt   | 0             | 9538 | 1907.6         | 0.10                   | 0.056                        | 23.06                   | 23.50                           | 1.107             | 0.062                          | /            |
| RMC                                                                            | Right Cheek | 0             | 9538 | 1907.6         | 0.08                   | 0.065                        | 23.06                   | 23.50                           | 1.107             | 0.072                          | /            |
| RMC                                                                            | Right Tilt  | 0             | 9538 | 1907.6         | -0.13                  | 0.042                        | 23.06                   | 23.50                           | 1.107             | 0.046                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |
| RMC                                                                            | Front Side  | 10            | 9538 | 1907.6         | -0.10                  | 0.158                        | 23.06                   | 23.50                           | 1.107             | 0.175                          | /            |
| RMC                                                                            | Back Side   | 10            | 9538 | 1907.6         | 0.06                   | 0.000                        | 23.06                   | 23.50                           | 1.107             | 0.000                          | /            |
| RMC                                                                            | Left Edge   | 10            | 9538 | 1907.6         | 0.06                   | 0.078                        | 23.06                   | 23.50                           | 1.107             | 0.086                          | /            |
| RMC                                                                            | Right Edge  | 10            | 9538 | 1907.6         | 0.09                   | 0.199                        | 23.06                   | 23.50                           | 1.107             | 0.220                          | /            |
| RMC                                                                            | Bottom Edge | 10            | 9538 | 1907.6         | -0.02                  | 0.204                        | 23.06                   | 23.50                           | 1.107             | <b>0.226</b>                   | 8#           |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.  | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|------|----------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |      |                |                        |                               |                         |                                 |                   |                                 |              |
| RMC                                                                            | Front Side  | 0             | 9538 | 1907.6         | 0.05                   | 0.294                         | 23.06                   | 23.50                           | 1.107             | 0.325                           | /            |
| RMC                                                                            | Back Side   | 0             | 9538 | 1907.6         | 0.07                   | 0.000                         | 23.06                   | 23.50                           | 1.107             | 0.000                           | /            |
| RMC                                                                            | Left Edge   | 0             | 9538 | 1907.6         | 0.03                   | 0.077                         | 23.06                   | 23.50                           | 1.107             | 0.085                           | /            |
| RMC                                                                            | Right Edge  | 0             | 9538 | 1907.6         | -0.12                  | 0.394                         | 23.06                   | 23.50                           | 1.107             | 0.436                           | /            |
| RMC                                                                            | Bottom Edge | 0             | 9538 | 1907.6         | 0.01                   | 0.616                         | 23.06                   | 23.50                           | 1.107             | <b>0.682</b>                    | 9#           |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |      |                |                        |                               |                         |                                 |                   |                                 |              |

## 10.4WCDMA Band 4

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.  | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|------|----------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |
| RMC                                                                            | Left Cheek  | 0             | 1412 | 1732.4         | -0.01                  | 0.123                        | 21.90                   | 23.50                           | 1.445             | <b>0.178</b>                   | 10#          |
| RMC                                                                            | Left Tilt   | 0             | 1412 | 1732.4         | -0.07                  | 0.046                        | 21.90                   | 23.50                           | 1.445             | 0.066                          | /            |
| RMC                                                                            | Right Cheek | 0             | 1412 | 1732.4         | 0.06                   | 0.089                        | 21.90                   | 23.50                           | 1.445             | 0.129                          | /            |
| RMC                                                                            | Right Tilt  | 0             | 1412 | 1732.4         | 0.14                   | 0.035                        | 21.90                   | 23.50                           | 1.445             | 0.051                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |
| RMC                                                                            | Front Side  | 10            | 1412 | 1732.4         | 0.13                   | 0.099                        | 21.90                   | 23.50                           | 1.445             | 0.143                          | /            |
| RMC                                                                            | Back Side   | 10            | 1412 | 1732.4         | -0.05                  | 0.000                        | 21.90                   | 23.50                           | 1.445             | 0.000                          | /            |
| RMC                                                                            | Left Edge   | 10            | 1412 | 1732.4         | 0.00                   | 0.057                        | 21.90                   | 23.50                           | 1.445             | 0.082                          | /            |
| RMC                                                                            | Right Edge  | 10            | 1412 | 1732.4         | 0.10                   | 0.133                        | 21.90                   | 23.50                           | 1.445             | 0.192                          | /            |
| RMC                                                                            | Bottom Edge | 10            | 1412 | 1732.4         | 0.01                   | 0.154                        | 21.90                   | 23.50                           | 1.445             | <b>0.223</b>                   | 11#          |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.  | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|------|----------------|------------------------|-------------------------------|-------------------------|-----------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |      |                |                        |                               |                         |                             |                   |                                 |              |
| RMC                                                                            | Front Side  | 0             | 1412 | 1732.4         | 0.01                   | 0.217                         | 21.90                   | 23.50                       | 1.445             | 0.314                           | /            |
| RMC                                                                            | Back Side   | 0             | 1412 | 1732.4         | -0.05                  | 0.000                         | 21.90                   | 23.50                       | 1.445             | 0.000                           | /            |
| RMC                                                                            | Left Edge   | 0             | 1412 | 1732.4         | 0.07                   | 0.058                         | 21.90                   | 23.50                       | 1.445             | 0.084                           | /            |
| RMC                                                                            | Right Edge  | 0             | 1412 | 1732.4         | -0.05                  | 0.290                         | 21.90                   | 23.50                       | 1.445             | 0.419                           | /            |
| RMC                                                                            | Bottom Edge | 0             | 1412 | 1732.4         | 0.01                   | 0.424                         | 21.90                   | 23.50                       | 1.445             | <b>0.613</b>                    | 12#          |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |      |                |                        |                               |                         |                             |                   |                                 |              |

## 10.5WCDMA Band 5

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.  | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|------|----------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |
| RMC                                                                            | Left Cheek  | 0             | 4182 | 836.4          | -0.05                  | 0.012                        | 23.29                   | 23.50                           | 1.050             | <b>0.013</b>                   | 13#          |
| RMC                                                                            | Left Tilt   | 0             | 4182 | 836.4          | -0.08                  | 0.000                        | 23.29                   | 23.50                           | 1.050             | 0.000                          | /            |
| RMC                                                                            | Right Cheek | 0             | 4182 | 836.4          | -0.07                  | 0.009                        | 23.29                   | 23.50                           | 1.050             | 0.009                          | /            |
| RMC                                                                            | Right Tilt  | 0             | 4182 | 836.4          | -0.05                  | 0.000                        | 23.29                   | 23.50                           | 1.050             | 0.000                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |
| RMC                                                                            | Front Side  | 10            | 4182 | 836.4          | 0.04                   | 0.048                        | 23.29                   | 23.50                           | 1.050             | 0.050                          | /            |
| RMC                                                                            | Back Side   | 10            | 4182 | 836.4          | -0.09                  | 0.000                        | 23.29                   | 23.50                           | 1.050             | 0.000                          | /            |
| RMC                                                                            | Left Edge   | 10            | 4182 | 836.4          | -0.14                  | 0.000                        | 23.29                   | 23.50                           | 1.050             | 0.000                          | /            |
| RMC                                                                            | Right Edge  | 10            | 4182 | 836.4          | 0.14                   | 0.055                        | 23.29                   | 23.50                           | 1.050             | 0.058                          | /            |
| RMC                                                                            | Bottom Edge | 10            | 4182 | 836.4          | 0.00                   | 0.065                        | 23.29                   | 23.50                           | 1.050             | <b>0.068</b>                   | 14#          |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |      |                |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.  | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|------|----------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |      |                |                        |                               |                         |                                 |                   |                                 |              |
| RMC                                                                            | Front Side  | 0             | 4182 | 836.4          | 0.00                   | 0.097                         | 23.29                   | 23.50                           | 1.050             | 0.102                           | /            |
| RMC                                                                            | Back Side   | 0             | 4182 | 836.4          | 0.14                   | 0.000                         | 23.29                   | 23.50                           | 1.050             | 0.000                           | /            |
| RMC                                                                            | Left Edge   | 0             | 4182 | 836.4          | 0.08                   | 0.051                         | 23.29                   | 23.50                           | 1.050             | 0.054                           | /            |
| RMC                                                                            | Right Edge  | 0             | 4182 | 836.4          | -0.04                  | 0.069                         | 23.29                   | 23.50                           | 1.050             | 0.072                           | /            |
| RMC                                                                            | Bottom Edge | 0             | 4182 | 836.4          | -0.01                  | 0.169                         | 23.29                   | 23.50                           | 1.050             | <b>0.177</b>                    | 15#          |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |      |                |                        |                               |                         |                                 |                   |                                 |              |

## 10.6LTE Band 7 (20MHz Bandwidth)

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Left Cheek  | 0             | 21100 | 2535           | 1          | Mid         | -0.01                  | 0.115                        | 23.48                   | 24.00                           | 1.127             | <b>0.130</b>                   | 16#          |
| QPSK                                                                           | Left Tilt   | 0             | 21100 | 2535           | 1          | Mid         | 0.17                   | 0.045                        | 23.48                   | 24.00                           | 1.127             | 0.051                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 21100 | 2535           | 1          | Mid         | 0.00                   | 0.068                        | 23.48                   | 24.00                           | 1.127             | 0.077                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 21100 | 2535           | 1          | Mid         | 0.01                   | 0.039                        | 23.48                   | 24.00                           | 1.127             | 0.044                          | /            |
| QPSK                                                                           | Left Cheek  | 0             | 20850 | 2510           | 50         | Low         | -0.08                  | 0.103                        | 22.13                   | 23.00                           | 1.222             | 0.126                          | /            |
| QPSK                                                                           | Left Tilt   | 0             | 20850 | 2510           | 50         | Mid         | 0.07                   | 0.040                        | 22.13                   | 23.00                           | 1.222             | 0.049                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 20850 | 2510           | 50         | Low         | -0.03                  | 0.058                        | 22.13                   | 23.00                           | 1.222             | 0.071                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 20850 | 2510           | 50         | Low         | -0.15                  | 0.030                        | 22.13                   | 23.00                           | 1.222             | 0.037                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 10            | 21100 | 2535           | 1          | Mid         | -0.19                  | 0.148                        | 23.48                   | 24.00                           | 1.127             | 0.167                          | /            |
| QPSK                                                                           | Back Side   | 10            | 21100 | 2535           | 1          | Mid         | -0.16                  | 0.000                        | 23.48                   | 24.00                           | 1.127             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 21100 | 2535           | 1          | Mid         | 0.12                   | 0.061                        | 23.48                   | 24.00                           | 1.127             | 0.069                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 21100 | 2535           | 1          | Mid         | -0.13                  | 0.182                        | 23.48                   | 24.00                           | 1.127             | 0.205                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 21100 | 2535           | 1          | Mid         | 0.00                   | 0.462                        | 23.48                   | 24.00                           | 1.127             | <b>0.521</b>                   | 17#          |
| QPSK                                                                           | Front Side  | 10            | 20850 | 2510           | 50         | Low         | 0.18                   | 0.116                        | 22.13                   | 23.00                           | 1.222             | 0.142                          | /            |
| QPSK                                                                           | Back Side   | 10            | 20850 | 2510           | 50         | Low         | -0.02                  | 0.000                        | 22.13                   | 23.00                           | 1.222             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 20850 | 2510           | 50         | Low         | -0.01                  | 0.045                        | 22.13                   | 23.00                           | 1.222             | 0.055                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 20850 | 2510           | 50         | Low         | 0.03                   | 0.141                        | 22.13                   | 23.00                           | 1.222             | 0.172                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 20850 | 2510           | 50         | Low         | 0.02                   | 0.361                        | 22.13                   | 23.00                           | 1.222             | 0.441                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |
| QPSK                                                                           | Front Side  | 0             | 21100 | 2535           | 1          | Mid         | 0.03                   | 0.550                         | 23.48                   | 24.00                           | 1.127             | 0.620                           | /            |
| QPSK                                                                           | Back Side   | 0             | 21100 | 2535           | 1          | Mid         | -0.01                  | 0.050                         | 23.48                   | 24.00                           | 1.127             | 0.056                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 21100 | 2535           | 1          | Mid         | -0.09                  | 0.121                         | 23.48                   | 24.00                           | 1.127             | 0.136                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 21100 | 2535           | 1          | Mid         | -0.14                  | 0.366                         | 23.48                   | 24.00                           | 1.127             | 0.412                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 21100 | 2535           | 1          | Mid         | 0.01                   | 1.050                         | 23.48                   | 24.00                           | 1.127             | <b>1.183</b>                    | 18#          |
| QPSK                                                                           | Front Side  | 0             | 20850 | 2510           | 50         | Low         | -0.12                  | 0.434                         | 22.13                   | 23.00                           | 1.222             | 0.530                           | /            |
| QPSK                                                                           | Back Side   | 0             | 20850 | 2510           | 50         | Low         | 0.17                   | 0.030                         | 22.13                   | 23.00                           | 1.222             | 0.037                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 20850 | 2510           | 50         | Low         | 0.11                   | 0.099                         | 22.13                   | 23.00                           | 1.222             | 0.121                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 20850 | 2510           | 50         | Low         | -0.19                  | 0.309                         | 22.13                   | 23.00                           | 1.222             | 0.378                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 20850 | 2510           | 50         | Low         | -0.10                  | 0.863                         | 22.13                   | 23.00                           | 1.222             | 1.055                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |

## 10.7LTE Band 12 (10MHz Bandwidth)

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Left Cheek  | 0             | 23095 | 707.5          | 1          | High        | -0.05                  | 0.007                        | 23.65                   | 24.00                           | 1.084             | <b>0.008</b>                   | 19#          |
| QPSK                                                                           | Left Tilt   | 0             | 23095 | 707.5          | 1          | High        | -0.12                  | 0.000                        | 23.65                   | 24.00                           | 1.084             | 0.000                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 23095 | 707.5          | 1          | High        | 0.08                   | 0.004                        | 23.65                   | 24.00                           | 1.084             | 0.004                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 23095 | 707.5          | 1          | High        | 0.12                   | 0.000                        | 23.65                   | 24.00                           | 1.084             | 0.000                          | /            |
| QPSK                                                                           | Left Cheek  | 0             | 23095 | 707.5          | 25         | High        | 0.14                   | 0.001                        | 22.51                   | 23.50                           | 1.256             | 0.001                          | /            |
| QPSK                                                                           | Left Tilt   | 0             | 23095 | 707.5          | 25         | High        | 0.16                   | 0.000                        | 22.51                   | 23.50                           | 1.256             | 0.000                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 23095 | 707.5          | 25         | High        | -0.17                  | 0.000                        | 22.51                   | 23.50                           | 1.256             | 0.000                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 23095 | 707.5          | 25         | High        | 0.01                   | 0.000                        | 22.51                   | 23.50                           | 1.256             | 0.000                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 10            | 23095 | 707.5          | 1          | High        | 0.15                   | 0.005                        | 23.65                   | 24.00                           | 1.084             | 0.005                          | /            |
| QPSK                                                                           | Back Side   | 10            | 23095 | 707.5          | 1          | High        | 0.09                   | 0.000                        | 23.65                   | 24.00                           | 1.084             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 23095 | 707.5          | 1          | High        | 0.15                   | 0.000                        | 23.65                   | 24.00                           | 1.084             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 23095 | 707.5          | 1          | High        | 0.12                   | 0.000                        | 23.65                   | 24.00                           | 1.084             | 0.000                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 23095 | 707.5          | 1          | High        | 0.04                   | 0.014                        | 23.65                   | 24.00                           | 1.084             | <b>0.015</b>                   | 20#          |
| QPSK                                                                           | Front Side  | 10            | 23095 | 707.5          | 25         | High        | 0.11                   | 0.002                        | 22.51                   | 23.50                           | 1.256             | 0.003                          | /            |
| QPSK                                                                           | Back Side   | 10            | 23095 | 707.5          | 25         | High        | -0.10                  | 0.004                        | 22.51                   | 23.50                           | 1.256             | 0.005                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 23095 | 707.5          | 25         | High        | 0.09                   | 0.000                        | 22.51                   | 23.50                           | 1.256             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 23095 | 707.5          | 25         | High        | -0.16                  | 0.000                        | 22.51                   | 23.50                           | 1.256             | 0.000                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 23095 | 707.5          | 25         | High        | 0.18                   | 0.011                        | 22.51                   | 23.50                           | 1.256             | 0.014                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 0             | 23095 | 707.5          | 1          | High        | -0.13                  | 0.010                         | 23.65                   | 24.00                           | 1.084             | 0.011                          | /            |
| QPSK                                                                           | Back Side   | 0             | 23095 | 707.5          | 1          | High        | -0.11                  | 0.000                         | 23.65                   | 24.00                           | 1.084             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 0             | 23095 | 707.5          | 1          | High        | -0.11                  | 0.003                         | 23.65                   | 24.00                           | 1.084             | 0.003                          | /            |
| QPSK                                                                           | Right Edge  | 0             | 23095 | 707.5          | 1          | High        | 0.17                   | 0.003                         | 23.65                   | 24.00                           | 1.084             | 0.003                          | /            |
| QPSK                                                                           | Bottom Edge | 0             | 23095 | 707.5          | 1          | High        | -0.04                  | 0.046                         | 23.65                   | 24.00                           | 1.084             | <b>0.050</b>                   | 21#          |
| QPSK                                                                           | Front Side  | 0             | 23095 | 707.5          | 25         | High        | 0.08                   | 0.008                         | 22.51                   | 23.50                           | 1.256             | 0.010                          | /            |
| QPSK                                                                           | Back Side   | 0             | 23095 | 707.5          | 25         | High        | 0.01                   | 0.014                         | 22.51                   | 23.50                           | 1.256             | 0.018                          | /            |
| QPSK                                                                           | Left Edge   | 0             | 23095 | 707.5          | 25         | High        | -0.03                  | 0.002                         | 22.51                   | 23.50                           | 1.256             | 0.003                          | /            |
| QPSK                                                                           | Right Edge  | 0             | 23095 | 707.5          | 25         | High        | -0.06                  | 0.002                         | 22.51                   | 23.50                           | 1.256             | 0.003                          | /            |
| QPSK                                                                           | Bottom Edge | 0             | 23095 | 707.5          | 25         | High        | -0.13                  | 0.038                         | 22.51                   | 23.50                           | 1.256             | 0.048                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                |              |

## 10.8LTE Band 13 (10MHz Bandwidth)

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Left Cheek  | 0             | 23230 | 782            | 1          | Low         | 0.02                   | 0.004                        | 23.68                   | 24.00                           | 1.076             | <b>0.004</b>                   | 22#          |
| QPSK                                                                           | Left Tilt   | 0             | 23230 | 782            | 1          | Low         | 0.00                   | 0.000                        | 23.68                   | 24.00                           | 1.076             | 0.000                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 23230 | 782            | 1          | Low         | -0.12                  | 0.002                        | 23.68                   | 24.00                           | 1.076             | 0.002                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 23230 | 782            | 1          | Low         | 0.13                   | 0.000                        | 23.68                   | 24.00                           | 1.076             | 0.000                          | /            |
| QPSK                                                                           | Left Cheek  | 0             | 23230 | 782            | 25         | Low         | -0.13                  | 0.001                        | 22.76                   | 23.50                           | 1.186             | 0.001                          | /            |
| QPSK                                                                           | Left Tilt   | 0             | 23230 | 782            | 25         | Low         | 0.04                   | 0.000                        | 22.76                   | 23.50                           | 1.186             | 0.000                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 23230 | 782            | 25         | Low         | 0.00                   | 0.001                        | 22.76                   | 23.50                           | 1.186             | 0.001                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 23230 | 782            | 25         | Low         | -0.19                  | 0.000                        | 22.76                   | 23.50                           | 1.186             | 0.000                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 10            | 23230 | 782            | 1          | Low         | 0.11                   | 0.000                        | 23.68                   | 24.00                           | 1.076             | 0.000                          | /            |
| QPSK                                                                           | Back Side   | 10            | 23230 | 782            | 1          | Low         | -0.13                  | 0.000                        | 23.68                   | 24.00                           | 1.076             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 23230 | 782            | 1          | Low         | 0.03                   | 0.000                        | 23.68                   | 24.00                           | 1.076             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 23230 | 782            | 1          | Low         | 0.02                   | 0.000                        | 23.68                   | 24.00                           | 1.076             | 0.000                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 23230 | 782            | 1          | Low         | 0.05                   | 0.011                        | 23.68                   | 24.00                           | 1.076             | <b>0.012</b>                   | 23#          |
| QPSK                                                                           | Front Side  | 10            | 23230 | 782            | 25         | Low         | -0.17                  | 0.000                        | 22.76                   | 23.50                           | 1.186             | 0.000                          | /            |
| QPSK                                                                           | Back Side   | 10            | 23230 | 782            | 25         | Low         | -0.15                  | 0.000                        | 22.76                   | 23.50                           | 1.186             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 23230 | 782            | 25         | Low         | 0.01                   | 0.000                        | 22.76                   | 23.50                           | 1.186             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 23230 | 782            | 25         | Low         | -0.03                  | 0.000                        | 22.76                   | 23.50                           | 1.186             | 0.000                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 23230 | 782            | 25         | Low         | 0.14                   | 0.005                        | 22.76                   | 23.50                           | 1.186             | 0.006                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |
| QPSK                                                                           | Front Side  | 0             | 23230 | 782            | 1          | Low         | -0.02                  | 0.023                         | 23.68                   | 24.00                           | 1.076             | 0.025                           | /            |
| QPSK                                                                           | Back Side   | 0             | 23230 | 782            | 1          | Low         | -0.15                  | 0.000                         | 23.68                   | 24.00                           | 1.076             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 23230 | 782            | 1          | Low         | -0.19                  | 0.000                         | 23.68                   | 24.00                           | 1.076             | 0.000                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 23230 | 782            | 1          | Low         | 0.14                   | 0.000                         | 23.68                   | 24.00                           | 1.076             | 0.000                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 23230 | 782            | 1          | Low         | 0.01                   | 0.040                         | 23.68                   | 24.00                           | 1.076             | <b>0.043</b>                    | 24#          |
| QPSK                                                                           | Front Side  | 0             | 23230 | 782            | 25         | Low         | 0.16                   | 0.019                         | 22.76                   | 23.50                           | 1.186             | 0.023                           | /            |
| QPSK                                                                           | Back Side   | 0             | 23230 | 782            | 25         | Low         | 0.03                   | 0.000                         | 22.76                   | 23.50                           | 1.186             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 23230 | 782            | 25         | Low         | -0.07                  | 0.000                         | 22.76                   | 23.50                           | 1.186             | 0.000                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 23230 | 782            | 25         | Low         | -0.11                  | 0.000                         | 22.76                   | 23.50                           | 1.186             | 0.000                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 23230 | 782            | 25         | Low         | -0.11                  | 0.030                         | 22.76                   | 23.50                           | 1.186             | 0.036                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |

## 10.9LTE Band 25 (20MHz Bandwidth)

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Left Cheek  | 0             | 26590 | 1905           | 1          | Mid         | -0.08                  | 0.168                        | 23.34                   | 24.00                           | 1.164             | <b>0.196</b>                   | 25#          |
| QPSK                                                                           | Left Tilt   | 0             | 26590 | 1905           | 1          | Mid         | 0.11                   | 0.110                        | 23.34                   | 24.00                           | 1.164             | 0.128                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 26590 | 1905           | 1          | Mid         | 0.15                   | 0.133                        | 23.34                   | 24.00                           | 1.164             | 0.155                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 26590 | 1905           | 1          | Mid         | 0.17                   | 0.097                        | 23.34                   | 24.00                           | 1.164             | 0.113                          | /            |
| QPSK                                                                           | Left Cheek  | 0             | 26590 | 1905           | 50         | Mid         | -0.08                  | 0.125                        | 22.45                   | 23.00                           | 1.135             | 0.142                          | /            |
| QPSK                                                                           | Left Tilt   | 0             | 26590 | 1905           | 50         | Mid         | -0.15                  | 0.089                        | 22.45                   | 23.00                           | 1.135             | 0.101                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 26590 | 1905           | 50         | Mid         | 0.02                   | 0.076                        | 22.45                   | 23.00                           | 1.135             | 0.086                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 26590 | 1905           | 50         | Mid         | -0.12                  | 0.038                        | 22.45                   | 23.00                           | 1.135             | 0.043                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 10            | 26590 | 1905           | 1          | Mid         | 0.13                   | 0.153                        | 23.34                   | 24.00                           | 1.164             | 0.178                          | /            |
| QPSK                                                                           | Back Side   | 10            | 26590 | 1905           | 1          | Mid         | 0.03                   | 0.000                        | 23.34                   | 24.00                           | 1.164             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 26590 | 1905           | 1          | Mid         | 0.03                   | 0.068                        | 23.34                   | 24.00                           | 1.164             | 0.079                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 26590 | 1905           | 1          | Mid         | 0.11                   | 0.179                        | 23.34                   | 24.00                           | 1.164             | 0.208                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 26590 | 1905           | 1          | Mid         | 0.04                   | 0.191                        | 23.34                   | 24.00                           | 1.164             | <b>0.222</b>                   | 26#          |
| QPSK                                                                           | Front Side  | 10            | 26590 | 1905           | 50         | Mid         | 0.17                   | 0.122                        | 22.45                   | 23.00                           | 1.135             | 0.138                          | /            |
| QPSK                                                                           | Back Side   | 10            | 26590 | 1905           | 50         | Mid         | 0.01                   | 0.000                        | 22.45                   | 23.00                           | 1.135             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 26590 | 1905           | 50         | Mid         | -0.11                  | 0.054                        | 22.45                   | 23.00                           | 1.135             | 0.061                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 26590 | 1905           | 50         | Mid         | -0.03                  | 0.154                        | 22.45                   | 23.00                           | 1.135             | 0.175                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 26590 | 1905           | 50         | Mid         | 0.13                   | 0.170                        | 22.45                   | 23.00                           | 1.135             | 0.193                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |
| QPSK                                                                           | Front Side  | 0             | 26590 | 1905           | 1          | Mid         | -0.09                  | 0.353                         | 23.34                   | 24.00                           | 1.164             | 0.411                           | /            |
| QPSK                                                                           | Back Side   | 0             | 26590 | 1905           | 1          | Mid         | 0.03                   | 0.000                         | 23.34                   | 24.00                           | 1.164             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 26590 | 1905           | 1          | Mid         | -0.01                  | 0.081                         | 23.34                   | 24.00                           | 1.164             | 0.094                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 26590 | 1905           | 1          | Mid         | -0.12                  | 0.511                         | 23.34                   | 24.00                           | 1.164             | 0.595                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 26590 | 1905           | 1          | Mid         | -0.07                  | 0.604                         | 23.34                   | 24.00                           | 1.164             | <b>0.703</b>                    | 27#          |
| QPSK                                                                           | Front Side  | 0             | 26590 | 1905           | 50         | Mid         | 0.14                   | 0.275                         | 22.45                   | 23.00                           | 1.135             | 0.312                           | /            |
| QPSK                                                                           | Back Side   | 0             | 26590 | 1905           | 50         | Mid         | -0.19                  | 0.000                         | 22.45                   | 23.00                           | 1.135             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 26590 | 1905           | 50         | Mid         | -0.12                  | 0.065                         | 22.45                   | 23.00                           | 1.135             | 0.074                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 26590 | 1905           | 50         | Mid         | -0.10                  | 0.404                         | 22.45                   | 23.00                           | 1.135             | 0.459                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 26590 | 1905           | 50         | Mid         | 0.07                   | 0.506                         | 22.45                   | 23.00                           | 1.135             | 0.574                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |

## 10.10 LTE Band 26 (15MHz Bandwidth)

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Left Cheek  | 0             | 26965 | 841.5          | 1          | High        | 0.05                   | 0.066                        | 23.98                   | 24.00                           | 1.005             | <b>0.066</b>                   | 28#          |
| QPSK                                                                           | Left Tilt   | 0             | 26965 | 841.5          | 1          | High        | 0.17                   | 0.012                        | 23.98                   | 24.00                           | 1.005             | 0.012                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 26965 | 841.5          | 1          | High        | -0.03                  | 0.034                        | 23.98                   | 24.00                           | 1.005             | 0.034                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 26965 | 841.5          | 1          | High        | -0.14                  | 0.008                        | 23.98                   | 24.00                           | 1.005             | 0.008                          | /            |
| QPSK                                                                           | Left Cheek  | 0             | 26965 | 841.5          | 36         | Low         | -0.12                  | 0.046                        | 22.67                   | 23.00                           | 1.079             | 0.050                          | /            |
| QPSK                                                                           | Left Tilt   | 0             | 26965 | 841.5          | 36         | Low         | 0.03                   | 0.005                        | 22.67                   | 23.00                           | 1.079             | 0.005                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 26965 | 841.5          | 36         | Low         | 0.05                   | 0.021                        | 22.67                   | 23.00                           | 1.079             | 0.023                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 26965 | 841.5          | 36         | Low         | 0.02                   | 0.005                        | 22.67                   | 23.00                           | 1.079             | 0.005                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 10            | 26965 | 841.5          | 1          | High        | 0.04                   | 0.024                        | 23.98                   | 24.00                           | 1.005             | 0.024                          | /            |
| QPSK                                                                           | Back Side   | 10            | 26965 | 841.5          | 1          | High        | -0.12                  | 0.000                        | 23.98                   | 24.00                           | 1.005             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 26965 | 841.5          | 1          | High        | 0.06                   | 0.000                        | 23.98                   | 24.00                           | 1.005             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 26965 | 841.5          | 1          | High        | 0.01                   | 0.000                        | 23.98                   | 24.00                           | 1.005             | 0.000                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 26965 | 841.5          | 1          | High        | -0.01                  | 0.065                        | 23.98                   | 24.00                           | 1.005             | <b>0.065</b>                   | 29#          |
| QPSK                                                                           | Front Side  | 10            | 26965 | 841.5          | 36         | Low         | -0.16                  | 0.015                        | 22.67                   | 23.00                           | 1.079             | 0.016                          | /            |
| QPSK                                                                           | Back Side   | 10            | 26965 | 841.5          | 36         | Low         | -0.05                  | 0.000                        | 22.67                   | 23.00                           | 1.079             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 26965 | 841.5          | 36         | Low         | 0.02                   | 0.000                        | 22.67                   | 23.00                           | 1.079             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 26965 | 841.5          | 36         | Low         | 0.02                   | 0.000                        | 22.67                   | 23.00                           | 1.079             | 0.000                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 26965 | 841.5          | 36         | Low         | 0.07                   | 0.050                        | 22.67                   | 23.00                           | 1.079             | 0.054                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |
| QPSK                                                                           | Front Side  | 0             | 26965 | 841.5          | 1          | High        | 0.09                   | 0.088                         | 23.98                   | 24.00                           | 1.005             | 0.088                           | /            |
| QPSK                                                                           | Back Side   | 0             | 26965 | 841.5          | 1          | High        | 0.08                   | 0.000                         | 23.98                   | 24.00                           | 1.005             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 26965 | 841.5          | 1          | High        | -0.13                  | 0.058                         | 23.98                   | 24.00                           | 1.005             | 0.058                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 26965 | 841.5          | 1          | High        | -0.02                  | 0.086                         | 23.98                   | 24.00                           | 1.005             | 0.086                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 26965 | 841.5          | 1          | High        | 0.00                   | 0.170                         | 23.98                   | 24.00                           | 1.005             | <b>0.171</b>                    | 30#          |
| QPSK                                                                           | Front Side  | 0             | 26965 | 841.5          | 36         | Low         | -0.07                  | 0.061                         | 22.67                   | 23.00                           | 1.079             | 0.066                           | /            |
| QPSK                                                                           | Back Side   | 0             | 26965 | 841.5          | 36         | Low         | 0.05                   | 0.000                         | 22.67                   | 23.00                           | 1.079             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 26965 | 841.5          | 36         | Low         | -0.15                  | 0.047                         | 22.67                   | 23.00                           | 1.079             | 0.051                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 26965 | 841.5          | 36         | Low         | 0.16                   | 0.069                         | 22.67                   | 23.00                           | 1.079             | 0.074                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 26965 | 841.5          | 36         | Low         | -0.05                  | 0.110                         | 22.67                   | 23.00                           | 1.079             | 0.119                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |

## 10.11 LTE Band 66 (20MHz Bandwidth)

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.    | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|--------|----------------|------------|-------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |        |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Left Cheek  | 0             | 132572 | 1770           | 1          | High        | -0.11                  | 0.101                        | 22.23                   | 23.00                           | 1.194             | <b>0.121</b>                   | 31#          |
| QPSK                                                                           | Left Tilt   | 0             | 132572 | 1770           | 1          | High        | -0.05                  | 0.012                        | 22.23                   | 23.00                           | 1.194             | 0.014                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 132572 | 1770           | 1          | High        | 0.14                   | 0.057                        | 22.23                   | 23.00                           | 1.194             | 0.068                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 132572 | 1770           | 1          | High        | 0.08                   | 0.000                        | 22.23                   | 23.00                           | 1.194             | 0.000                          | /            |
| QPSK                                                                           | Left Cheek  | 0             | 132572 | 1770           | 50         | High        | -0.04                  | 0.088                        | 21.05                   | 22.00                           | 1.245             | 0.110                          | /            |
| QPSK                                                                           | Left Tilt   | 0             | 132572 | 1770           | 50         | High        | 0.07                   | 0.000                        | 21.05                   | 22.00                           | 1.245             | 0.000                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 132572 | 1770           | 50         | High        | -0.02                  | 0.043                        | 21.05                   | 22.00                           | 1.245             | 0.054                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 132572 | 1770           | 50         | High        | -0.14                  | 0.000                        | 21.05                   | 22.00                           | 1.245             | 0.000                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |        |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 10            | 132572 | 1770           | 1          | High        | -0.04                  | 0.086                        | 22.23                   | 23.00                           | 1.194             | 0.103                          | /            |
| QPSK                                                                           | Back Side   | 10            | 132572 | 1770           | 1          | High        | 0.06                   | 0.000                        | 22.23                   | 23.00                           | 1.194             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 132572 | 1770           | 1          | High        | -0.05                  | 0.055                        | 22.23                   | 23.00                           | 1.194             | 0.066                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 132572 | 1770           | 1          | High        | 0.06                   | 0.138                        | 22.23                   | 23.00                           | 1.194             | <b>0.165</b>                   | 32#          |
| QPSK                                                                           | Bottom Edge | 10            | 132572 | 1770           | 1          | High        | -0.08                  | 0.127                        | 22.23                   | 23.00                           | 1.194             | 0.152                          | /            |
| QPSK                                                                           | Front Side  | 10            | 132572 | 1770           | 50         | High        | -0.14                  | 0.072                        | 21.05                   | 22.00                           | 1.245             | 0.090                          | /            |
| QPSK                                                                           | Back Side   | 10            | 132572 | 1770           | 50         | High        | 0.12                   | 0.000                        | 21.05                   | 22.00                           | 1.245             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 132572 | 1770           | 50         | High        | -0.11                  | 0.049                        | 21.05                   | 22.00                           | 1.245             | 0.061                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 132572 | 1770           | 50         | High        | 0.03                   | 0.108                        | 21.05                   | 22.00                           | 1.245             | 0.134                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 132572 | 1770           | 50         | High        | -0.02                  | 0.107                        | 21.05                   | 22.00                           | 1.245             | 0.133                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |        |                |            |             |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.    | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|--------|----------------|------------|-------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |        |                |            |             |                        |                               |                         |                                 |                   |                                 |              |
| QPSK                                                                           | Front Side  | 0             | 132572 | 1770           | 1          | High        | 0.05                   | 0.259                         | 22.23                   | 23.00                           | 1.194             | 0.309                           | /            |
| QPSK                                                                           | Back Side   | 0             | 132572 | 1770           | 1          | High        | 0.04                   | 0.000                         | 22.23                   | 23.00                           | 1.194             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 132572 | 1770           | 1          | High        | 0.12                   | 0.067                         | 22.23                   | 23.00                           | 1.194             | 0.080                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 132572 | 1770           | 1          | High        | -0.11                  | 0.345                         | 22.23                   | 23.00                           | 1.194             | 0.412                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 132572 | 1770           | 1          | High        | 0.01                   | 0.386                         | 22.23                   | 23.00                           | 1.194             | <b>0.461</b>                    | 33#          |
| QPSK                                                                           | Front Side  | 0             | 132572 | 1770           | 50         | High        | -0.11                  | 0.219                         | 21.05                   | 22.00                           | 1.245             | 0.273                           | /            |
| QPSK                                                                           | Back Side   | 0             | 132572 | 1770           | 50         | High        | -0.08                  | 0.000                         | 21.05                   | 22.00                           | 1.245             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 132572 | 1770           | 50         | High        | 0.01                   | 0.056                         | 21.05                   | 22.00                           | 1.245             | 0.070                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 132572 | 1770           | 50         | High        | -0.15                  | 0.292                         | 21.05                   | 22.00                           | 1.245             | 0.364                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 132572 | 1770           | 50         | High        | -0.06                  | 0.331                         | 21.05                   | 22.00                           | 1.245             | 0.412                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |        |                |            |             |                        |                               |                         |                                 |                   |                                 |              |

## 10.12 LTE Band 71 (20MHz Bandwidth)

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.    | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|--------|----------------|------------|-------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |        |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Left Cheek  | 0             | 133222 | 673            | 1          | Low         | -0.03                  | 0.007                        | 23.35                   | 24.00                           | 1.161             | <b>0.008</b>                   | 34#          |
| QPSK                                                                           | Left Tilt   | 0             | 133222 | 673            | 1          | Low         | 0.06                   | 0.000                        | 23.35                   | 24.00                           | 1.161             | 0.000                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 133222 | 673            | 1          | Low         | 0.08                   | 0.003                        | 23.35                   | 24.00                           | 1.161             | 0.003                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 133222 | 673            | 1          | Low         | 0.04                   | 0.000                        | 23.35                   | 24.00                           | 1.161             | 0.000                          | /            |
| QPSK                                                                           | Left Cheek  | 0             | 133222 | 673            | 50         | Low         | -0.01                  | 0.005                        | 22.06                   | 23.00                           | 1.242             | 0.006                          | /            |
| QPSK                                                                           | Left Tilt   | 0             | 133222 | 673            | 50         | Low         | 0.05                   | 0.000                        | 22.06                   | 23.00                           | 1.242             | 0.000                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 133222 | 673            | 50         | Low         | 0.01                   | 0.000                        | 22.06                   | 23.00                           | 1.242             | 0.000                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 133222 | 673            | 50         | Low         | -0.01                  | 0.000                        | 22.06                   | 23.00                           | 1.242             | 0.000                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |        |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 10            | 133222 | 673            | 1          | Low         | 0.15                   | 0.009                        | 23.35                   | 24.00                           | 1.161             | 0.010                          | /            |
| QPSK                                                                           | Back Side   | 10            | 133222 | 673            | 1          | Low         | 0.15                   | 0.000                        | 23.35                   | 24.00                           | 1.161             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 133222 | 673            | 1          | Low         | 0.00                   | 0.000                        | 23.35                   | 24.00                           | 1.161             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 133222 | 673            | 1          | Low         | 0.09                   | 0.000                        | 23.35                   | 24.00                           | 1.161             | 0.000                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 133222 | 673            | 1          | Low         | 0.04                   | 0.012                        | 23.35                   | 24.00                           | 1.161             | <b>0.014</b>                   | 35#          |
| QPSK                                                                           | Front Side  | 10            | 133222 | 673            | 50         | Low         | 0.03                   | 0.006                        | 22.06                   | 23.00                           | 1.242             | 0.007                          | /            |
| QPSK                                                                           | Back Side   | 10            | 133222 | 673            | 50         | Low         | -0.03                  | 0.000                        | 22.06                   | 23.00                           | 1.242             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 10            | 133222 | 673            | 50         | Low         | 0.05                   | 0.000                        | 22.06                   | 23.00                           | 1.242             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 10            | 133222 | 673            | 50         | Low         | -0.06                  | 0.000                        | 22.06                   | 23.00                           | 1.242             | 0.000                          | /            |
| QPSK                                                                           | Bottom Edge | 10            | 133222 | 673            | 50         | Low         | 0.16                   | 0.008                        | 22.06                   | 23.00                           | 1.242             | 0.010                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |        |                |            |             |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.    | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|--------|----------------|------------|-------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| Extremity                                                                      |             |               |        |                |            |             |                        |                               |                         |                                 |                   |                                 |              |
| QPSK                                                                           | Front Side  | 0             | 133222 | 673            | 1          | Low         | 0.01                   | 0.023                         | 23.35                   | 24.00                           | 1.161             | 0.027                           | /            |
| QPSK                                                                           | Back Side   | 0             | 133222 | 673            | 1          | Low         | -0.10                  | 0.000                         | 23.35                   | 24.00                           | 1.161             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 133222 | 673            | 1          | Low         | 0.07                   | 0.000                         | 23.35                   | 24.00                           | 1.161             | 0.000                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 133222 | 673            | 1          | Low         | 0.08                   | 0.000                         | 23.35                   | 24.00                           | 1.161             | 0.000                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 133222 | 673            | 1          | Low         | 0.06                   | 0.042                         | 23.35                   | 24.00                           | 1.161             | 0.049                           | 36#          |
| QPSK                                                                           | Front Side  | 0             | 133222 | 673            | 50         | Low         | 0.09                   | 0.015                         | 22.06                   | 23.00                           | 1.242             | 0.019                           | /            |
| QPSK                                                                           | Back Side   | 0             | 133222 | 673            | 50         | Low         | -0.01                  | 0.000                         | 22.06                   | 23.00                           | 1.242             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 133222 | 673            | 50         | Low         | -0.01                  | 0.000                         | 22.06                   | 23.00                           | 1.242             | 0.000                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 133222 | 673            | 50         | Low         | -0.07                  | 0.000                         | 22.06                   | 23.00                           | 1.242             | 0.000                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 133222 | 673            | 50         | Low         | -0.05                  | 0.030                         | 22.06                   | 23.00                           | 1.242             | 0.037                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |        |                |            |             |                        |                               |                         |                                 |                   |                                 |              |

### 10.13 LTE Band 41 (20MHz Bandwidth)

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Left Cheek  | 0             | 39750 | 2506           | 1          | Low         | -0.03                  | 0.160                        | 23.72                   | 24.00                           | 1.067             | <b>0.171</b>                   | 37#          |
| QPSK                                                                           | Left Tilt   | 0             | 39750 | 2506           | 1          | Low         | -0.05                  | 0.087                        | 23.72                   | 24.00                           | 1.067             | 0.093                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 39750 | 2506           | 1          | Low         | 0.12                   | 0.131                        | 23.72                   | 24.00                           | 1.067             | 0.140                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 39750 | 2506           | 1          | Low         | -0.08                  | 0.067                        | 23.72                   | 24.00                           | 1.067             | 0.071                          | /            |
| QPSK                                                                           | Left Cheek  | 0             | 39750 | 2506           | 50         | Low         | 0.03                   | 0.135                        | 22.57                   | 23.00                           | 1.104             | 0.149                          | /            |
| QPSK                                                                           | Left Tilt   | 0             | 39750 | 2506           | 50         | Low         | -0.01                  | 0.062                        | 22.57                   | 23.00                           | 1.104             | 0.068                          | /            |
| QPSK                                                                           | Right Cheek | 0             | 39750 | 2506           | 50         | Low         | 0.07                   | 0.042                        | 22.57                   | 23.00                           | 1.104             | 0.046                          | /            |
| QPSK                                                                           | Right Tilt  | 0             | 39750 | 2506           | 50         | Low         | 0.00                   | 0.012                        | 22.57                   | 23.00                           | 1.104             | 0.013                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |
| QPSK                                                                           | Front Side  | 0             | 39750 | 2506           | 1          | Low         | -0.06                  | 0.138                        | 23.72                   | 24.00                           | 1.067             | 0.147                          | /            |
| QPSK                                                                           | Back Side   | 0             | 39750 | 2506           | 1          | Low         | -0.05                  | 0.000                        | 23.72                   | 24.00                           | 1.067             | 0.000                          | /            |
| QPSK                                                                           | LeftEdge    | 0             | 39750 | 2506           | 1          | Low         | 0.13                   | 0.000                        | 23.72                   | 24.00                           | 1.067             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 0             | 39750 | 2506           | 1          | Low         | 0.01                   | 0.193                        | 23.72                   | 24.00                           | 1.067             | 0.206                          | /            |
| QPSK                                                                           | Bottom Edge | 0             | 39750 | 2506           | 1          | Low         | 0.04                   | 0.246                        | 23.72                   | 24.00                           | 1.067             | <b>0.262</b>                   | 38#          |
| QPSK                                                                           | Front Side  | 0             | 39750 | 2506           | 50         | Low         | 0.01                   | 0.099                        | 22.57                   | 23.00                           | 1.104             | 0.109                          | /            |
| QPSK                                                                           | Back Side   | 0             | 39750 | 2506           | 50         | Low         | 0.04                   | 0.000                        | 22.57                   | 23.00                           | 1.104             | 0.000                          | /            |
| QPSK                                                                           | Left Edge   | 0             | 39750 | 2506           | 50         | Low         | 0.17                   | 0.000                        | 22.57                   | 23.00                           | 1.104             | 0.000                          | /            |
| QPSK                                                                           | Right Edge  | 0             | 39750 | 2506           | 50         | Low         | -0.07                  | 0.147                        | 22.57                   | 23.00                           | 1.104             | 0.162                          | /            |
| QPSK                                                                           | Bottom Edge | 0             | 39750 | 2506           | 50         | Low         | -0.05                  | 0.215                        | 22.57                   | 23.00                           | 1.104             | 0.237                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                              |                         |                                 |                   |                                |              |

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch.   | Freq.<br>(MHz) | RB<br>Num. | RB<br>Start | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-------|----------------|------------|-------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |
| QPSK                                                                           | Front Side  | 0             | 39750 | 2506           | 1          | Low         | -0.14                  | 0.439                         | 23.72                   | 24.00                           | 1.067             | 0.468                           | /            |
| QPSK                                                                           | Back Side   | 0             | 39750 | 2506           | 1          | Low         | 0.08                   | 0.000                         | 23.72                   | 24.00                           | 1.067             | 0.000                           | /            |
| QPSK                                                                           | LeftEdge    | 0             | 39750 | 2506           | 1          | Low         | 0.11                   | 0.066                         | 23.72                   | 24.00                           | 1.067             | 0.070                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 39750 | 2506           | 1          | Low         | -0.05                  | 0.434                         | 23.72                   | 24.00                           | 1.067             | 0.463                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 39750 | 2506           | 1          | Low         | 0.12                   | 0.736                         | 23.72                   | 24.00                           | 1.067             | <b>0.785</b>                    | 39#          |
| QPSK                                                                           | Front Side  | 0             | 39750 | 2506           | 50         | Low         | 0.05                   | 0.336                         | 22.57                   | 23.00                           | 1.104             | 0.371                           | /            |
| QPSK                                                                           | Back Side   | 0             | 39750 | 2506           | 50         | Low         | 0.08                   | 0.000                         | 22.57                   | 23.00                           | 1.104             | 0.000                           | /            |
| QPSK                                                                           | Left Edge   | 0             | 39750 | 2506           | 50         | Low         | 0.12                   | 0.043                         | 22.57                   | 23.00                           | 1.104             | 0.047                           | /            |
| QPSK                                                                           | Right Edge  | 0             | 39750 | 2506           | 50         | Low         | 0.08                   | 0.331                         | 22.57                   | 23.00                           | 1.104             | 0.365                           | /            |
| QPSK                                                                           | Bottom Edge | 0             | 39750 | 2506           | 50         | Low         | 0.05                   | 0.560                         | 22.57                   | 23.00                           | 1.104             | 0.618                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |       |                |            |             |                        |                               |                         |                                 |                   |                                 |              |

## 10.14 WIFI 2.4GHZ

| Antenna                                                                        | Mode          | Position    | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | Duty<br>Cycle<br>(%) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|---------------|-------------|---------------|-----|----------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|----------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |               |             |               |     |                |                        |                              |                         |                                 |                   |                      |                   |                                |              |
| Ant.0                                                                          | 802.11 b      | Left Cheek  | 0             | 11  | 2462           | 0.01                   | 0.847                        | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | <b>0.885</b>                   | 40#          |
|                                                                                | 802.11 b      | Left Tilt   | 0             | 11  | 2462           | 0.14                   | 0.324                        | 18.28                   | 18.50                           | 1.052             | 97.95                | 1.021             | 0.348                          | /            |
|                                                                                | 802.11 b      | Right Cheek | 0             | 11  | 2462           | -0.02                  | 0.237                        | 18.28                   | 18.50                           | 1.052             | 97.95                | 1.021             | 0.255                          | /            |
|                                                                                | 802.11 b      | Right Tilt  | 0             | 11  | 2462           | 0.03                   | 0.122                        | 18.28                   | 18.50                           | 1.052             | 97.95                | 1.021             | 0.131                          | /            |
|                                                                                | 802.11 b      | Left Cheek  | 0             | 1   | 2412           | 0.10                   | 0.609                        | 18.01                   | 18.50                           | 1.119             | 97.95                | 1.021             | 0.696                          | /            |
|                                                                                | 802.11 b      | Left Cheek  | 0             | 6   | 2437           | 0.00                   | 0.511                        | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.534                          | /            |
| Ant.1                                                                          | 802.11 b      | Left Cheek  | 0             | 6   | 2437           | 0.14                   | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
|                                                                                | 802.11 b      | Left Tilt   | 0             | 6   | 2437           | 0.02                   | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
|                                                                                | 802.11 b      | Right Cheek | 0             | 6   | 2437           | -0.12                  | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
|                                                                                | 802.11 b      | Right Tilt  | 0             | 6   | 2437           | -0.12                  | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
| MIMO                                                                           | 802.11 n HT20 | Left Cheek  | 0             | 11  | 2462           | 0.15                   | 0.526                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.621                          | /            |
|                                                                                | 802.11 n HT20 | Left Tilt   | 0             | 11  | 2462           | -0.02                  | 0.350                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.414                          | /            |
|                                                                                | 802.11 n HT20 | Right Cheek | 0             | 11  | 2462           | -0.08                  | 0.291                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.344                          | /            |
|                                                                                | 802.11 n HT20 | Right Tilt  | 0             | 11  | 2462           | 0.00                   | 0.174                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.206                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |               |             |               |     |                |                        |                              |                         |                                 |                   |                      |                   |                                |              |
| Ant.0                                                                          | 802.11 b      | Front Side  | 10            | 11  | 2462           | -0.15                  | 0.277                        | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.289                          | /            |
|                                                                                | 802.11 b      | Back Side   | 10            | 11  | 2462           | -0.03                  | 0.000                        | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.000                          | /            |
|                                                                                | 802.11 b      | Left Edge   | 10            | 11  | 2462           | 0.01                   | 0.445                        | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | <b>0.465</b>                   | 41#          |
|                                                                                | 802.11 b      | Right Edge  | 10            | 11  | 2462           | -0.06                  | 0.000                        | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.000                          | /            |
|                                                                                | 802.11 b      | Top Edge    | 10            | 11  | 2462           | 0.02                   | 0.230                        | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.240                          | /            |
| Ant.1                                                                          | 802.11 b      | Front Side  | 10            | 6   | 2437           | -0.08                  | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
|                                                                                | 802.11 b      | Back Side   | 10            | 6   | 2437           | -0.03                  | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
|                                                                                | 802.11 b      | Left Edge   | 10            | 6   | 2437           | 0.02                   | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
|                                                                                | 802.11 b      | Right Edge  | 10            | 6   | 2437           | -0.06                  | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
|                                                                                | 802.11 b      | Top Edge    | 10            | 6   | 2437           | 0.00                   | 0.001                        | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                          | /            |
| MIMO                                                                           | 802.11 n HT20 | Front Side  | 10            | 11  | 2462           | 0.00                   | 0.120                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.142                          | /            |
|                                                                                | 802.11 n HT20 | Back Side   | 10            | 11  | 2462           | 0.05                   | 0.000                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.000                          | /            |
|                                                                                | 802.11 n HT20 | Left Edge   | 10            | 11  | 2462           | 0.02                   | 0.230                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.272                          | /            |
|                                                                                | 802.11 n HT20 | Right Edge  | 10            | 11  | 2462           | -0.15                  | 0.000                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.000                          | /            |
|                                                                                | 802.11 n HT20 | Top Edge    | 10            | 11  | 2462           | -0.10                  | 0.104                        | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.123                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |               |             |               |     |                |                        |                              |                         |                                 |                   |                      |                   |                                |              |

| Antenna                                                                        | Mode          | Position   | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | Duty<br>Cycle<br>(%) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|---------------|------------|---------------|-----|----------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|----------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |               |            |               |     |                |                        |                               |                         |                                 |                   |                      |                   |                                 |              |
| Ant.0                                                                          | 802.11 b      | Front Side | 0             | 11  | 2462           | 0.08                   | 0.679                         | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.709                           | /            |
|                                                                                | 802.11 b      | Back Side  | 0             | 11  | 2462           | 0.02                   | 0.000                         | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.000                           | /            |
|                                                                                | 802.11 b      | Left Edge  | 0             | 11  | 2462           | 0.02                   | 1.060                         | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | <b>1.107</b>                    | 42#          |
|                                                                                | 802.11 b      | Right Edge | 0             | 11  | 2462           | 0.09                   | 0.005                         | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.005                           | /            |
|                                                                                | 802.11 b      | Top Edge   | 0             | 11  | 2462           | 0.14                   | 0.230                         | 18.40                   | 18.50                           | 1.023             | 97.95                | 1.021             | 0.240                           | /            |
| Ant.1                                                                          | 802.11 b      | Front Side | 0             | 6   | 2437           | 0.05                   | 0.001                         | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                           | /            |
|                                                                                | 802.11 b      | Back Side  | 0             | 6   | 2437           | 0.10                   | 0.001                         | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                           | /            |
|                                                                                | 802.11 b      | Left Edge  | 0             | 6   | 2437           | -0.06                  | 0.001                         | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                           | /            |
|                                                                                | 802.11 b      | Right Edge | 0             | 6   | 2437           | -0.08                  | 0.001                         | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                           | /            |
|                                                                                | 802.11 b      | Top Edge   | 0             | 6   | 2437           | -0.09                  | 0.001                         | 17.96                   | 18.50                           | 1.132             | 97.95                | 1.021             | 0.001                           | /            |
| MIMO                                                                           | 802.11 n HT20 | Front Side | 0             | 6   | 2437           | -0.07                  | 0.485                         | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.573                           | /            |
|                                                                                | 802.11 n HT20 | Back Side  | 0             | 6   | 2437           | 0.04                   | 0.000                         | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.000                           | /            |
|                                                                                | 802.11 n HT20 | Left Edge  | 0             | 6   | 2437           | 0.03                   | 0.636                         | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.751                           | /            |
|                                                                                | 802.11 n HT20 | Right Edge | 0             | 6   | 2437           | 0.08                   | 0.000                         | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.000                           | /            |
|                                                                                | 802.11 n HT20 | Top Edge   | 0             | 6   | 2437           | -0.04                  | 0.157                         | 19.27                   | 19.50                           | 1.054             | 89.23                | 1.121             | 0.186                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |               |            |               |     |                |                        |                               |                         |                                 |                   |                      |                   |                                 |              |

## 10.15 WIFI 5GHz

| Antenna     | Band | Mode            | Position    | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | Duty<br>Cycle<br>(%) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|-------------|------|-----------------|-------------|---------------|-----|----------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|----------------------|-------------------|--------------------------------|--------------|
| <b>Head</b> |      |                 |             |               |     |                |                        |                              |                         |                                 |                   |                      |                   |                                |              |
| Ant.0       | 5.3G | 802.11 ac VHT80 | Left Cheek  | 0             | 58  | 5290           | -0.15                  | 0.893                        | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 1.034                          | /            |
|             | 5.3G | 802.11 ac VHT80 | Left Tilt   | 0             | 58  | 5290           | 0.13                   | 0.571                        | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 0.661                          | /            |
|             | 5.3G | 802.11 ac VHT80 | Right Cheek | 0             | 58  | 5290           | 0.12                   | 0.753                        | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 0.872                          | /            |
|             | 5.3G | 802.11 ac VHT80 | Right Tilt  | 0             | 58  | 5290           | -0.15                  | 0.617                        | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 0.714                          | /            |
| Ant.1       | 5.3G | 802.11 ac VHT80 | Left Cheek  | 0             | 58  | 5290           | -0.06                  | 0.001                        | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                          | /            |
|             | 5.3G | 802.11 ac VHT80 | Left Tilt   | 0             | 58  | 5290           | -0.07                  | 0.001                        | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                          | /            |
|             | 5.3G | 802.11 ac VHT80 | Right Cheek | 0             | 58  | 5290           | 0.12                   | 0.001                        | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                          | /            |
|             | 5.3G | 802.11 ac VHT80 | Right Tilt  | 0             | 58  | 5290           | 0.06                   | 0.001                        | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                          | /            |
| MIMO        | 5.3G | 802.11 ac VHT80 | Left Cheek  | 0             | 58  | 5290           | 0.09                   | 0.991                        | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | <b>1.192</b>                   | 43#          |
|             | 5.3G | 802.11 ac VHT80 | Left Tilt   | 0             | 58  | 5290           | -0.06                  | 0.640                        | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | 0.770                          | /            |
|             | 5.3G | 802.11 ac VHT80 | Right Cheek | 0             | 58  | 5290           | 0.01                   | 0.843                        | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | 1.014                          | /            |
|             | 5.3G | 802.11 ac VHT80 | Right Tilt  | 0             | 58  | 5290           | -0.02                  | 0.691                        | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | 0.831                          | /            |
| Ant.0       | 5.6G | 802.11 ac VHT80 | Left Cheek  | 0             | 106 | 5530           | 0.10                   | 0.865                        | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.988                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Left Tilt   | 0             | 106 | 5530           | -0.02                  | 0.629                        | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.718                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Cheek | 0             | 106 | 5530           | 0.06                   | 0.793                        | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.906                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Tilt  | 0             | 106 | 5530           | -0.13                  | 0.684                        | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.781                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Left Cheek  | 0             | 122 | 5610           | -0.04                  | 0.688                        | 15.25                   | 15.50                           | 1.059             | 89.85                | 1.113             | 0.811                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Left Cheek  | 0             | 138 | 5690           | 0.13                   | 0.905                        | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 1.112                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Cheek | 0             | 122 | 5610           | -0.08                  | 0.613                        | 15.25                   | 15.50                           | 1.059             | 89.85                | 1.113             | 0.723                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Cheek | 0             | 138 | 5690           | 0.07                   | 0.802                        | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.985                          | /            |
| Ant.1       | 5.6G | 802.11 ac VHT80 | Left Cheek  | 0             | 106 | 5530           | 0.11                   | 0.001                        | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Left Tilt   | 0             | 106 | 5530           | -0.13                  | 0.001                        | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Cheek | 0             | 106 | 5530           | 0.05                   | 0.001                        | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Tilt  | 0             | 106 | 5530           | 0.01                   | 0.001                        | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                          | /            |
| MIMO        | 5.6G | 802.11 ac VHT80 | Left Cheek  | 0             | 106 | 5530           | 0.12                   | 0.965                        | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | 1.151                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Left Tilt   | 0             | 106 | 5530           | -0.03                  | 0.634                        | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | 0.756                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Cheek | 0             | 106 | 5530           | 0.01                   | 0.756                        | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | 0.902                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Tilt  | 0             | 106 | 5530           | -0.02                  | 0.668                        | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | 0.797                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Left Cheek  | 0             | 122 | 5610           | 0.03                   | 0.930                        | 18.17                   | 18.50                           | 1.079             | 89.85                | 1.113             | 1.117                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Left Cheek  | 0             | 138 | 5690           | 0.11                   | 0.956                        | 18.12                   | 18.50                           | 1.091             | 89.85                | 1.113             | <b>1.161</b>                   | 44#          |
|             | 5.6G | 802.11 ac VHT80 | Right Cheek | 0             | 122 | 5610           | -0.01                  | 0.734                        | 18.17                   | 18.50                           | 1.079             | 89.85                | 1.113             | 0.881                          | /            |
|             | 5.6G | 802.11 ac VHT80 | Right Cheek | 0             | 138 | 5690           | -0.13                  | 0.769                        | 18.12                   | 18.50                           | 1.091             | 89.85                | 1.113             | 0.934                          | /            |
| Ant.0       | 5.8G | 802.11 ac VHT80 | Left Cheek  | 0             | 155 | 5775           | 0.00                   | 0.866                        | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 1.056                          | /            |
|             | 5.8G | 802.11 ac VHT80 | Left Tilt   | 0             | 155 | 5775           | 0.12                   | 0.597                        | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 0.728                          | /            |
|             | 5.8G | 802.11 ac VHT80 | Right Cheek | 0             | 155 | 5775           | 0.00                   | 0.580                        | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 0.708                          | /            |
|             | 5.8G | 802.11 ac VHT80 | Right Tilt  | 0             | 155 | 5775           | 0.01                   | 0.595                        | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 0.726                          | /            |

|           |      |                 |             |    |     |      |       |       |       |       |       |       |       |              |     |
|-----------|------|-----------------|-------------|----|-----|------|-------|-------|-------|-------|-------|-------|-------|--------------|-----|
| Ant.1     | 5.8G | 802.11 ac VHT80 | Left Cheek  | 0  | 155 | 5775 | 0.05  | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.8G | 802.11 ac VHT80 | Left Tilt   | 0  | 155 | 5775 | -0.13 | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.8G | 802.11 ac VHT80 | Right Cheek | 0  | 155 | 5775 | -0.06 | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.8G | 802.11 ac VHT80 | Right Tilt  | 0  | 155 | 5775 | -0.08 | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
| MIMO      | 5.8G | 802.11 ac VHT80 | Left Cheek  | 0  | 155 | 5775 | 0.02  | 0.970 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | <b>1.112</b> | 45# |
|           | 5.8G | 802.11 ac VHT80 | Left Tilt   | 0  | 155 | 5775 | 0.08  | 0.647 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.742        | /   |
|           | 5.8G | 802.11 ac VHT80 | Right Cheek | 0  | 155 | 5775 | 0.15  | 0.753 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.863        | /   |
|           | 5.8G | 802.11 ac VHT80 | Right Tilt  | 0  | 155 | 5775 | 0.07  | 0.637 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.730        | /   |
| Body-worn |      |                 |             |    |     |      |       |       |       |       |       |       |       |              |     |
| Ant.0     | 5.3G | 802.11 ac VHT80 | Front Side  | 10 | 58  | 5290 | -0.02 | 0.189 | 15.33 | 15.50 | 1.040 | 89.85 | 1.113 | 0.219        | /   |
|           | 5.3G | 802.11 ac VHT80 | Back Side   | 10 | 58  | 5290 | -0.11 | 0.040 | 15.33 | 15.50 | 1.040 | 89.85 | 1.113 | 0.046        | /   |
| Ant.1     | 5.3G | 802.11 ac VHT80 | Front Side  | 10 | 58  | 5290 | 0.02  | 0.001 | 15.07 | 15.50 | 1.104 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.3G | 802.11 ac VHT80 | Back Side   | 10 | 58  | 5290 | -0.15 | 0.001 | 15.07 | 15.50 | 1.104 | 89.85 | 1.113 | 0.001        | /   |
| MIMO      | 5.3G | 802.11 ac VHT80 | Front Side  | 10 | 58  | 5290 | 0.03  | 0.209 | 18.16 | 18.50 | 1.081 | 89.85 | 1.113 | <b>0.251</b> | 46# |
|           | 5.3G | 802.11 ac VHT80 | Back Side   | 10 | 58  | 5290 | -0.06 | 0.051 | 18.16 | 18.50 | 1.081 | 89.85 | 1.113 | 0.061        | /   |
| Ant.0     | 5.6G | 802.11 ac VHT80 | Front Side  | 10 | 106 | 5530 | -0.07 | 0.220 | 15.39 | 15.50 | 1.026 | 89.85 | 1.113 | 0.251        | /   |
|           | 5.6G | 802.11 ac VHT80 | Back Side   | 10 | 106 | 5530 | 0.10  | 0.041 | 15.39 | 15.50 | 1.026 | 89.85 | 1.113 | 0.047        | /   |
| Ant.1     | 5.6G | 802.11 ac VHT80 | Front Side  | 10 | 106 | 5530 | 0.15  | 0.001 | 15.35 | 15.50 | 1.035 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.6G | 802.11 ac VHT80 | Back Side   | 10 | 106 | 5530 | -0.05 | 0.001 | 15.35 | 15.50 | 1.035 | 89.85 | 1.113 | 0.001        | /   |
| MIMO      | 5.6G | 802.11 ac VHT80 | Front Side  | 10 | 106 | 5530 | -0.18 | 0.233 | 18.20 | 18.50 | 1.072 | 89.85 | 1.113 | <b>0.278</b> | 47# |
|           | 5.6G | 802.11 ac VHT80 | Back Side   | 10 | 106 | 5530 | -0.02 | 0.041 | 18.20 | 18.50 | 1.072 | 89.85 | 1.113 | 0.049        | /   |
| Ant.0     | 5.8G | 802.11 ac VHT80 | Front Side  | 10 | 155 | 5775 | 0.12  | 0.197 | 15.10 | 15.50 | 1.096 | 89.85 | 1.113 | 0.240        | /   |
|           | 5.8G | 802.11 ac VHT80 | Back Side   | 10 | 155 | 5775 | -0.02 | 0.034 | 15.10 | 15.50 | 1.096 | 89.85 | 1.113 | 0.041        | /   |
| Ant.1     | 5.8G | 802.11 ac VHT80 | Front Side  | 10 | 155 | 5775 | 0.05  | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.8G | 802.11 ac VHT80 | Back Side   | 10 | 155 | 5775 | 0.02  | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
| MIMO      | 5.8G | 802.11 ac VHT80 | Front Side  | 10 | 155 | 5775 | -0.08 | 0.216 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | <b>0.248</b> | 48# |
|           | 5.8G | 802.11 ac VHT80 | Back Side   | 10 | 155 | 5775 | -0.13 | 0.030 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.034        | /   |
| Hotspot   |      |                 |             |    |     |      |       |       |       |       |       |       |       |              |     |
| Ant.0     | 5.2G | 802.11 ac VHT80 | Front Side  | 10 | 42  | 5210 | -0.15 | 0.162 | 15.06 | 15.50 | 1.107 | 89.85 | 1.113 | 0.200        | /   |
|           | 5.2G | 802.11 ac VHT80 | Back Side   | 10 | 42  | 5210 | 0.04  | 0.029 | 15.06 | 15.50 | 1.107 | 89.85 | 1.113 | 0.036        | /   |
|           | 5.2G | 802.11 ac VHT80 | Left Edge   | 10 | 42  | 5210 | 0.01  | 0.082 | 15.06 | 15.50 | 1.107 | 89.85 | 1.113 | 0.101        | /   |
|           | 5.2G | 802.11 ac VHT80 | Right Edge  | 10 | 42  | 5210 | -0.07 | 0.015 | 15.06 | 15.50 | 1.107 | 89.85 | 1.113 | 0.018        | /   |
|           | 5.2G | 802.11 ac VHT80 | Top Edge    | 10 | 42  | 5210 | 0.04  | 0.116 | 15.06 | 15.50 | 1.107 | 89.85 | 1.113 | 0.143        | /   |
| Ant.1     | 5.2G | 802.11 ac VHT80 | Front Side  | 10 | 42  | 5210 | -0.03 | 0.001 | 15.18 | 15.50 | 1.076 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.2G | 802.11 ac VHT80 | Back Side   | 10 | 42  | 5210 | -0.09 | 0.001 | 15.18 | 15.50 | 1.076 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.2G | 802.11 ac VHT80 | Left Edge   | 10 | 42  | 5210 | 0.08  | 0.001 | 15.18 | 15.50 | 1.076 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.2G | 802.11 ac VHT80 | Right Edge  | 10 | 42  | 5210 | -0.01 | 0.001 | 15.18 | 15.50 | 1.076 | 89.85 | 1.113 | 0.001        | /   |
|           | 5.2G | 802.11 ac VHT80 | Top Edge    | 10 | 42  | 5210 | 0.02  | 0.001 | 15.18 | 15.50 | 1.076 | 89.85 | 1.113 | 0.001        | /   |
| MIMO      | 5.2G | 802.11 ac VHT80 | Front Side  | 10 | 42  | 5210 | -0.06 | 0.170 | 18.22 | 18.50 | 1.067 | 89.85 | 1.113 | <b>0.202</b> | 49# |
|           | 5.2G | 802.11 ac VHT80 | Back Side   | 10 | 42  | 5210 | 0.14  | 0.030 | 18.22 | 18.50 | 1.067 | 89.85 | 1.113 | 0.036        | /   |
|           | 5.2G | 802.11 ac VHT80 | Left Edge   | 10 | 42  | 5210 | 0.11  | 0.083 | 18.22 | 18.50 | 1.067 | 89.85 | 1.113 | 0.099        | /   |
|           | 5.2G | 802.11 ac VHT80 | Right Edge  | 10 | 42  | 5210 | 0.10  | 0.035 | 18.22 | 18.50 | 1.067 | 89.85 | 1.113 | 0.042        | /   |
|           | 5.2G | 802.11 ac VHT80 | Top Edge    | 10 | 42  | 5210 | -0.09 | 0.119 | 18.22 | 18.50 | 1.067 | 89.85 | 1.113 | 0.141        | /   |

|       |      |                 |            |    |     |      |       |       |       |       |       |       |       |              |     |
|-------|------|-----------------|------------|----|-----|------|-------|-------|-------|-------|-------|-------|-------|--------------|-----|
| Ant.0 | 5.8G | 802.11 ac VHT80 | Front Side | 10 | 155 | 5775 | 0.12  | 0.197 | 15.10 | 15.50 | 1.096 | 89.85 | 1.113 | 0.240        | /   |
|       | 5.8G | 802.11 ac VHT80 | Back Side  | 10 | 155 | 5775 | -0.02 | 0.034 | 15.10 | 15.50 | 1.096 | 89.85 | 1.113 | 0.041        | /   |
|       | 5.8G | 802.11 ac VHT80 | Left Edge  | 10 | 155 | 5775 | -0.11 | 0.094 | 15.10 | 15.50 | 1.096 | 89.85 | 1.113 | 0.115        | /   |
|       | 5.8G | 802.11 ac VHT80 | Right Edge | 10 | 155 | 5775 | 0.08  | 0.034 | 15.10 | 15.50 | 1.096 | 89.85 | 1.113 | 0.041        | /   |
|       | 5.8G | 802.11 ac VHT80 | Top Edge   | 10 | 155 | 5775 | -0.11 | 0.124 | 15.10 | 15.50 | 1.096 | 89.85 | 1.113 | 0.151        | /   |
| Ant.1 | 5.8G | 802.11 ac VHT80 | Front Side | 10 | 155 | 5775 | 0.05  | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|       | 5.8G | 802.11 ac VHT80 | Back Side  | 10 | 155 | 5775 | 0.02  | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|       | 5.8G | 802.11 ac VHT80 | Left Edge  | 10 | 155 | 5775 | 0.02  | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|       | 5.8G | 802.11 ac VHT80 | Right Edge | 10 | 155 | 5775 | -0.01 | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|       | 5.8G | 802.11 ac VHT80 | Top Edge   | 10 | 155 | 5775 | 0.00  | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
| MIMO  | 5.8G | 802.11 ac VHT80 | Front Side | 10 | 155 | 5775 | -0.08 | 0.216 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | <b>0.248</b> | 50# |
|       | 5.8G | 802.11 ac VHT80 | Back Side  | 10 | 155 | 5775 | -0.13 | 0.030 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.034        | /   |
|       | 5.8G | 802.11 ac VHT80 | Left Edge  | 10 | 155 | 5775 | -0.13 | 0.115 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.132        | /   |
|       | 5.8G | 802.11 ac VHT80 | Right Edge | 10 | 155 | 5775 | -0.12 | 0.028 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.032        | /   |
|       | 5.8G | 802.11 ac VHT80 | Top Edge   | 10 | 155 | 5775 | -0.03 | 0.130 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.149        | /   |

Note: Refer to ANNEX C for the detailed test data for each test configuration.

| Antenna          | Band | Mode            | Position   | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | Duty<br>Cycle<br>(%) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|------------------|------|-----------------|------------|---------------|-----|----------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|----------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b> |      |                 |            |               |     |                |                        |                               |                         |                                 |                   |                      |                   |                                 |              |
| Ant.0            | 5.3G | 802.11 ac VHT80 | Front Side | 0             | 58  | 5290           | -0.14                  | 0.403                         | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 0.466                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Back Side  | 0             | 58  | 5290           | -0.09                  | 0.029                         | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 0.034                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Left Edge  | 0             | 58  | 5290           | -0.04                  | 0.182                         | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 0.211                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Right Edge | 0             | 58  | 5290           | 0.03                   | 0.022                         | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 0.025                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Top Edge   | 0             | 58  | 5290           | -0.12                  | 0.229                         | 15.33                   | 15.50                           | 1.040             | 89.85                | 1.113             | 0.265                           | /            |
| Ant.1            | 5.3G | 802.11 ac VHT80 | Front Side | 0             | 58  | 5290           | -0.15                  | 0.001                         | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Back Side  | 0             | 58  | 5290           | 0.15                   | 0.001                         | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Left Edge  | 0             | 58  | 5290           | 0.08                   | 0.001                         | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Right Edge | 0             | 58  | 5290           | 0.14                   | 0.001                         | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Top Edge   | 0             | 58  | 5290           | -0.08                  | 0.001                         | 15.07                   | 15.50                           | 1.104             | 89.85                | 1.113             | 0.001                           | /            |
| MIMO             | 5.3G | 802.11 ac VHT80 | Front Side | 0             | 58  | 5290           | 0.07                   | 0.469                         | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | <b>0.564</b>                    | 51#          |
|                  | 5.3G | 802.11 ac VHT80 | Back Side  | 0             | 58  | 5290           | 0.14                   | 0.032                         | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | 0.039                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Left Edge  | 0             | 58  | 5290           | 0.06                   | 0.219                         | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | 0.263                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Right Edge | 0             | 58  | 5290           | 0.00                   | 0.027                         | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | 0.032                           | /            |
|                  | 5.3G | 802.11 ac VHT80 | Top Edge   | 0             | 58  | 5290           | 0.11                   | 0.285                         | 18.16                   | 18.50                           | 1.081             | 89.85                | 1.113             | 0.343                           | /            |
| Ant.0            | 5.6G | 802.11 ac VHT80 | Front Side | 0             | 106 | 5530           | 0.10                   | 0.420                         | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.480                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Back Side  | 0             | 106 | 5530           | 0.04                   | 0.031                         | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.035                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Left Edge  | 0             | 106 | 5530           | -0.13                  | 0.209                         | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.239                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Right Edge | 0             | 106 | 5530           | 0.14                   | 0.026                         | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.030                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Top Edge   | 0             | 106 | 5530           | -0.12                  | 0.297                         | 15.39                   | 15.50                           | 1.026             | 89.85                | 1.113             | 0.339                           | /            |
| Ant.1            | 5.6G | 802.11 ac VHT80 | Front Side | 0             | 106 | 5530           | 0.09                   | 0.001                         | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Back Side  | 0             | 106 | 5530           | 0.01                   | 0.001                         | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Left Edge  | 0             | 106 | 5530           | -0.10                  | 0.001                         | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Right Edge | 0             | 106 | 5530           | -0.04                  | 0.001                         | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Top Edge   | 0             | 106 | 5530           | -0.13                  | 0.001                         | 15.35                   | 15.50                           | 1.035             | 89.85                | 1.113             | 0.001                           | /            |
| MIMO             | 5.6G | 802.11 ac VHT80 | Front Side | 0             | 106 | 5530           | 0.05                   | 0.435                         | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | <b>0.519</b>                    | 52#          |
|                  | 5.6G | 802.11 ac VHT80 | Back Side  | 0             | 106 | 5530           | -0.10                  | 0.029                         | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | 0.035                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Left Edge  | 0             | 106 | 5530           | -0.08                  | 0.199                         | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | 0.237                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Right Edge | 0             | 106 | 5530           | -0.08                  | 0.023                         | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | 0.027                           | /            |
|                  | 5.6G | 802.11 ac VHT80 | Top Edge   | 0             | 106 | 5530           | -0.01                  | 0.267                         | 18.20                   | 18.50                           | 1.072             | 89.85                | 1.113             | 0.319                           | /            |
| Ant.0            | 5.8G | 802.11 ac VHT80 | Front Side | 0             | 155 | 5775           | -0.10                  | 0.421                         | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 0.514                           | /            |
|                  | 5.8G | 802.11 ac VHT80 | Back Side  | 0             | 155 | 5775           | -0.13                  | 0.026                         | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 0.032                           | /            |
|                  | 5.8G | 802.11 ac VHT80 | Left Edge  | 0             | 155 | 5775           | -0.06                  | 0.175                         | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 0.213                           | /            |
|                  | 5.8G | 802.11 ac VHT80 | Right Edge | 0             | 155 | 5775           | -0.04                  | 0.023                         | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 0.028                           | /            |
|                  | 5.8G | 802.11 ac VHT80 | Top Edge   | 0             | 155 | 5775           | 0.10                   | 0.241                         | 15.10                   | 15.50                           | 1.096             | 89.85                | 1.113             | 0.294                           | /            |
| Ant.1            | 5.8G | 802.11 ac VHT80 | Front Side | 0             | 155 | 5775           | -0.02                  | 0.001                         | 15.19                   | 15.50                           | 1.074             | 89.85                | 1.113             | 0.001                           | /            |
|                  | 5.8G | 802.11 ac VHT80 | Back Side  | 0             | 155 | 5775           | -0.05                  | 0.001                         | 15.19                   | 15.50                           | 1.074             | 89.85                | 1.113             | 0.001                           | /            |

|                                                                                |      |                 |            |   |     |      |       |       |       |       |       |       |       |              |     |
|--------------------------------------------------------------------------------|------|-----------------|------------|---|-----|------|-------|-------|-------|-------|-------|-------|-------|--------------|-----|
|                                                                                | 5.8G | 802.11 ac VHT80 | Left Edge  | 0 | 155 | 5775 | -0.01 | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|                                                                                | 5.8G | 802.11 ac VHT80 | Right Edge | 0 | 155 | 5775 | -0.05 | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
|                                                                                | 5.8G | 802.11 ac VHT80 | Top Edge   | 0 | 155 | 5775 | 0.05  | 0.001 | 15.19 | 15.50 | 1.074 | 89.85 | 1.113 | 0.001        | /   |
| MIMO                                                                           | 5.8G | 802.11 ac VHT80 | Front Side | 0 | 155 | 5775 | 0.09  | 0.452 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | <b>0.518</b> | 53# |
|                                                                                | 5.8G | 802.11 ac VHT80 | Back Side  | 0 | 155 | 5775 | -0.15 | 0.031 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.036        | /   |
|                                                                                | 5.8G | 802.11 ac VHT80 | Left Edge  | 0 | 155 | 5775 | 0.12  | 0.209 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.240        | /   |
|                                                                                | 5.8G | 802.11 ac VHT80 | Right Edge | 0 | 155 | 5775 | -0.03 | 0.027 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.031        | /   |
|                                                                                | 5.8G | 802.11 ac VHT80 | Top Edge   | 0 | 155 | 5775 | -0.03 | 0.268 | 18.37 | 18.50 | 1.030 | 89.85 | 1.113 | 0.307        | /   |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |      |                 |            |   |     |      |       |       |       |       |       |       |       |              |     |

## 10.16 Bluetooth

| Mode                                                                           | Position    | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 1 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | Duty<br>Cycle<br>(%) | Scaling<br>Factor | 1 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|-------------|---------------|-----|----------------|------------------------|------------------------------|-------------------------|---------------------------------|-------------------|----------------------|-------------------|--------------------------------|--------------|
| <b>Head</b>                                                                    |             |               |     |                |                        |                              |                         |                                 |                   |                      |                   |                                |              |
| DH5                                                                            | Left Cheek  | 0             | 0   | 2402           | 0.03                   | 0.105                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | <b>0.185</b>                   | 54#          |
| DH5                                                                            | Left Tilt   | 0             | 0   | 2402           | 0.13                   | 0.038                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.067                          | /            |
| DH5                                                                            | Right Cheek | 0             | 0   | 2402           | 0.06                   | 0.027                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.048                          | /            |
| DH5                                                                            | Right Tilt  | 0             | 0   | 2402           | -0.02                  | 0.014                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.025                          | /            |
| <b>Body-Wron&amp;Hotspot</b>                                                   |             |               |     |                |                        |                              |                         |                                 |                   |                      |                   |                                |              |
| DH5                                                                            | Front Side  | 10            | 0   | 2402           | -0.08                  | 0.021                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.028                          | /            |
| DH5                                                                            | Back Side   | 10            | 0   | 2402           | -0.06                  | 0.000                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.000                          | /            |
| DH5                                                                            | Left Edge   | 10            | 0   | 2402           | 0.01                   | 0.036                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | <b>0.049</b>                   | 55#          |
| DH5                                                                            | Right Edge  | 10            | 0   | 2402           | -0.01                  | 0.000                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.000                          | /            |
| DH5                                                                            | Top Edge    | 10            | 0   | 2402           | 0.07                   | 0.019                        | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.026                          | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |             |               |     |                |                        |                              |                         |                                 |                   |                      |                   |                                |              |

| Mode                                                                           | Position   | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10 g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-<br>power<br>(dBm) | Scaling<br>Factor | Duty<br>Cycle<br>(%) | Scaling<br>Factor | 10 g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------|------------|---------------|-----|----------------|------------------------|-------------------------------|-------------------------|---------------------------------|-------------------|----------------------|-------------------|---------------------------------|--------------|
| <b>Extremity</b>                                                               |            |               |     |                |                        |                               |                         |                                 |                   |                      |                   |                                 |              |
| DH5                                                                            | Front Side | 0             | 0   | 2402           | -0.10                  | 0.061                         | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.083                           | /            |
| DH5                                                                            | Back Side  | 0             | 0   | 2402           | -0.04                  | 0.000                         | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.000                           | /            |
| DH5                                                                            | Left Edge  | 0             | 0   | 2402           | 0.03                   | 0.099                         | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | <b>0.134</b>                    | 56#          |
| DH5                                                                            | Right Edge | 0             | 0   | 2402           | -0.10                  | 0.000                         | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.000                           | /            |
| DH5                                                                            | Top Edge   | 0             | 0   | 2402           | 0.06                   | 0.019                         | 9.18                    | 10.50                           | 1.355             | 76.88                | 1.301             | 0.026                           | /            |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. |            |               |     |                |                        |                               |                         |                                 |                   |                      |                   |                                 |              |

## 10.17 RFID

| Mode                                                                                                                                                   | Position   | Dist.<br>(mm) | Ch. | Freq.<br>(MHz) | Power<br>Drift<br>(dB) | 10g<br>Meas<br>SAR<br>(W/kg) | Meas.<br>Power<br>(dBm) | Max.<br>tune-up<br>power<br>(dBm) | Scaling<br>Factor | Duty<br>cycle<br>(%) | Duty<br>cycle<br>Factor | 10g<br>Scaled<br>SAR<br>(W/kg) | Meas.<br>No. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------|-----|----------------|------------------------|------------------------------|-------------------------|-----------------------------------|-------------------|----------------------|-------------------------|--------------------------------|--------------|
| <b>Extremity</b>                                                                                                                                       |            |               |     |                |                        |                              |                         |                                   |                   |                      |                         |                                |              |
| RFID                                                                                                                                                   | Front Side | 0             | 3   | 927.25         | 0.01                   | 0.150                        | 27.17                   | 28.00                             | 1.211             | 46.96                | 2.129                   | 0.387                          | /            |
|                                                                                                                                                        | Back Side  | 0             | 3   | 927.25         | -0.04                  | 0.015                        | 27.17                   | 28.00                             | 1.211             | 46.96                | 2.129                   | 0.039                          | /            |
|                                                                                                                                                        | Left Edge  | 0             | 3   | 927.25         | 0.04                   | 0.182                        | 27.17                   | 28.00                             | 1.211             | 46.96                | 2.129                   | 0.469                          | /            |
|                                                                                                                                                        | Right Edge | 0             | 3   | 927.25         | -0.07                  | 0.185                        | 27.17                   | 28.00                             | 1.211             | 46.96                | 2.129                   | 0.477                          | /            |
|                                                                                                                                                        | Top Edge   | 0             | 3   | 927.25         | 0.03                   | 0.518                        | 27.17                   | 28.00                             | 1.211             | 46.96                | 2.129                   | <b>1.336</b>                   | 57#          |
| Note1: RFID is only available for hand use according to the manual.<br>Note2: Refer to ANNEX C for the detailed test data for each test configuration. |            |               |     |                |                        |                              |                         |                                   |                   |                      |                         |                                |              |

## 10.18 NFC SAR

1. According to the 2022.04 TCBC Workshop meeting, the power threshold is  $\leq 100\text{MHz}$ , refer to P6s.

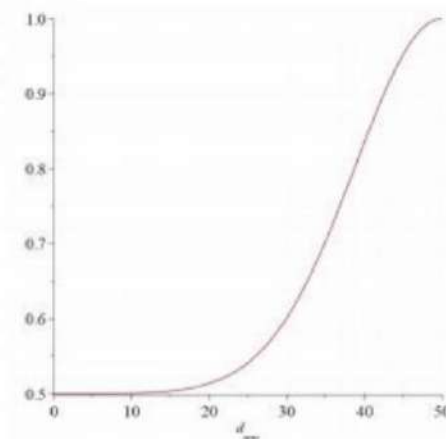
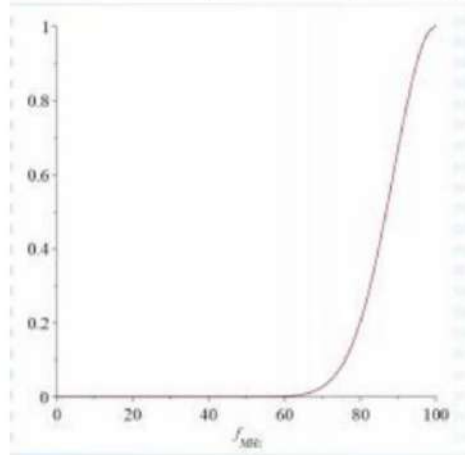
$$P_{7X}(d_{mm}, f_{MHz}) := \begin{cases} P_{6S}(d_{mm}, f_{MHz}) & f_{MHz} \leq 100 \\ P_{6to7}(d_{mm}, f_{MHz}) & 100 < f_{MHz} \leq 300 \\ P_7(d_{mm}, f_{MHz}) & 300 < f_{MHz} \end{cases}$$

2. For portable products, when using a distance of  $\leq 50\text{mm}$ , such as mobile phone NFC, P6s is calculated with the following formula calculate.

$$S_f(f_{MHz}) \cdot P_{431a}(d_{mm}, f_{MHz}) + (1 - S_f(f_{MHz})) \cdot S_d(d_{mm}) P_{431b1}(50., 100.) \cdot \left(1 + \log_{10}\left(\frac{100.}{f_{MHz}}\right)\right) \quad d_{mm} \leq 50 \text{ and } f_{MHz} \leq 100$$

3. The smoothing functions Sf and Sd in P6s calculate the limits based on KDB 447498 V06 and are calculated as follows.

$$S_f(f_{MHz}) := \exp\left(-10 \frac{(f_{MHz} - f_{max})^2}{\Delta f^2}\right) \quad S_d(d_{mm}) := 0.5 + 0.5 \cdot \exp\left(-10 \frac{(d_{mm} - d_{max})^2}{\Delta d^2}\right)$$



| d≤50mm                                                                                         |             |  |                      |            |
|------------------------------------------------------------------------------------------------|-------------|--|----------------------|------------|
| f Max(MHz)                                                                                     | 100         |  | d Max(mm)            | 50         |
| f MHz                                                                                          | 13.56       |  | d(mm)                | 5          |
| △f(MHz)                                                                                        | 100         |  | △d                   | 50         |
| S <sub>f</sub> (f <sub>MHz</sub> )                                                             | 0.000568861 |  | S <sub>d</sub> (dmm) | 0.50015177 |
| P6s(mW)                                                                                        | 443.1257378 |  |                      |            |
| Note: SAR testing is required when the distance is 5mm and the power is greater than 443.13mW. |             |  |                      |            |

#### 4. According to the ANSI C63.10 clause 11.12.2.2:

The value of maximum peak output power is according to the method described in ANSI C63.10 clause 11.12.2.2 General procedure for conducted measurements in restricted bands:

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the ERP level (see guidance on determining the applicable antenna gain)
- c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies  $\leq$  30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies  $>$  1000 MHz).
- d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the ERP of all chains in linear terms (e.g., Watts, mW).
- e) Convert the resultant ERP level to an equivalent electric field strength using the following relationship:  $E = \text{EIRP} - 20\log D + 104.8$

where:

E = electric field strength in dB $\mu$ V/m,

ERP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

| Mode                                                                                                                                                                                         | f (MHz) | Max. E-Field strength (dB $\mu$ V/m) | D (m) | Ground reflection factor (dB) | EIRP (dBm) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------|-------|-------------------------------|------------|
| NFC (13.56MHz)                                                                                                                                                                               | 13.56   | 54.04                                | 10    | 6                             | -24.76     |
| Note:<br>1. Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies $\leq$ 30 MHz).<br>2. EIRP = $54.04 + 20 \cdot \log(10) - 104.8 + 6 = -24.76$ (dBm) |         |                                      |       |                               |            |

According to the FCC KDB 447498 D04

Estimated SAR: SAR test =  $1.6 \cdot P_{\text{ant}} / P_{\text{th}}$  [W/kg]

| Estimated SAR               | $1.6 \cdot P_{\text{ant}} / P_{\text{th}}$ [W/kg] |                         |         |
|-----------------------------|---------------------------------------------------|-------------------------|---------|
| $P_{\text{meas.}}$ (dBm)    | -24.76                                            | $P_{\text{meas.}}$ (mW) | 0.00334 |
| $P_{\text{th}}$ (mW)        | 443.13                                            |                         |         |
| NFC Estimated 1g SAR [W/kg] | <0.001                                            |                         |         |

### 10.18.1 Highest Total Exposure Ratio of Simultaneous Transmission

NFC multi-transmit requires the use of the TER formula:

$$TER = \sum_{k=1}^{N_s} \left( \frac{SAR_k}{SAR_{lim}} \right) + \sum_{k=1}^{N_f} \left( \frac{MPE_{field, k}}{MPE_{field, lim}} \right)^2 + \sum_{k=1}^{N_{PD}} \left( \frac{MPE_{PD, k}}{MPE_{PD, lim}} \right)$$

The maximum 1g SAR value for Simultaneous Transmission is 1.573 [W/kg]. Therefore, the worst TER = (1.573+0.001)/1.6 = 0.984 < 1, the NFC SAR transmit simultaneously Pass.

## 11 SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are  $\leq 1.45$  W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is  $\leq 1.10$ , the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR repeated measurement procedure:

1. When the highest measured SAR is  $< 0.80$  W/kg, repeated measurement is not required.
2. When the highest measured SAR is  $\geq 0.80$  W/kg, repeat that measurement once.
3. If the ratio of largest to smallest SAR for the original and first repeated measurements is  $> 1.20$ , or when the original or repeated measurement is  $\geq 1.45$  W/kg, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ , and the original, first or second repeated measurement is  $\geq 1.5$  W/kg, perform a third repeated measurement.

| Frequency Band (MHz)                                                                                                                                        | Wireless Band   | RF Exposure Conditions | Test Position | Highest Measured SAR (W/kg) | Repeated SAR (Yes/No) | Repeated <sup>1st</sup> Measured SAR (W/kg) | Largest to Smallest SAR Ratio |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|---------------|-----------------------------|-----------------------|---------------------------------------------|-------------------------------|
| 2462                                                                                                                                                        | 802.11 b        | Head                   | Left Cheek    | 0.847                       | Yes                   | 0.830                                       | 1.02                          |
| 5290                                                                                                                                                        | 802.11 ac VHT80 | Head                   | Left Cheek    | 0.991                       | Yes                   | 0.951                                       | 1.04                          |
| 5690                                                                                                                                                        | 802.11 ac VHT80 | Head                   | Left Cheek    | 0.956                       | Yes                   | 0.923                                       | 1.04                          |
| 5775                                                                                                                                                        | 802.11 ac VHT80 | Head                   | Left Cheek    | 0.970                       | Yes                   | 0.945                                       | 1.03                          |
| Note: The ratio of largest to smallest SAR for the original and first repeated measurements is $< 1.20$ , the second repeated measurement. is not required. |                 |                        |               |                             |                       |                                             |                               |

Note: For product specific 10g SAR, the highest measured 10g SAR is  $0.61 < 2.0$  W/kg, repeated measurement is not required.

## 12 SIMULTANEOUS TRANSMISSION

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR 1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR 1g 1.6 W/kg), SAR test exclusion is determined by the SAR to Peak Location Ratio (SPLSR).

### 12.1 Simultaneous Transmission Mode Consider

| No. | Simultaneous Tx Combination     | Head | Body-worn | Hotspot | Extremity |
|-----|---------------------------------|------|-----------|---------|-----------|
| 1   | WLAN 2.4G Antenna1+BT+RFID      | Yes  | Yes       | Yes     | Yes       |
| 2   | WLAN 5G Antenna0+BT+RFID        | Yes  | Yes       | Yes     | Yes       |
| 3   | WLAN 5G Antenna1+BT+RFID        | Yes  | Yes       | Yes     | Yes       |
| 4   | WLAN 5G MIMO+BT+RFID            | Yes  | Yes       | Yes     | Yes       |
| 5   | WWAN+WLAN 2.4G Antenna0+RFID    | Yes  | Yes       | Yes     | Yes       |
| 6   | WWAN+WLAN 2.4G Antenna1+RFID    | Yes  | Yes       | Yes     | Yes       |
| 7   | WWAN+WLAN 2.4G MIMO+RFID        | Yes  | Yes       | Yes     | Yes       |
| 8   | WWAN+WLAN 5G Antenna0+RFID      | Yes  | Yes       | Yes     | Yes       |
| 9   | WWAN+WLAN 5G Antenna1+RFID      | Yes  | Yes       | Yes     | Yes       |
| 10  | WWAN+WLAN 5G MIMO+RFID          | Yes  | Yes       | Yes     | Yes       |
| 11  | WWAN+BT+RFID                    | Yes  | Yes       | Yes     | Yes       |
| 12  | WWAN+RFID                       | Yes  | Yes       | Yes     | Yes       |
| 13  | WWAN+WLAN 2.4G Antenna1+BT+RFID | Yes  | Yes       | Yes     | Yes       |
| 14  | WWAN+WLAN 5G Antenna0+BT+RFID   | Yes  | Yes       | Yes     | Yes       |
| 15  | WWAN+WLAN 5G Antenna1+BT+RFID   | Yes  | Yes       | Yes     | Yes       |
| 16  | WWAN+WLAN 5G MIMO+BT+RFID       | Yes  | Yes       | Yes     | Yes       |

**Note:**

1. WLAN 2.4G and Bluetooth share the same antenna, and can't transmit simultaneously.
2. When stand-alone SAR is not required for a transmitter or antenna, its SAR is considered zero in the SAR summing process to assess Multi-band transmission SAR compliance.
3. The maximum SAR summation is calculated based on the same configuration and test position.
4. The simultaneous transmission combinations of the more antennas contain combinations of less antennas, so only the worst simultaneous transmission combinations is shown in this report.
5. RFID is only available for hand use according to the manual.

## 12.2 Sum SAR of Simultaneous Transmission

### 12.2.1 Head Simultaneous Transmission SAR Evaluation for WWAN Antenna with WLAN and Bluetooth

| Band     | Position    | Stand alone SAR |              |            |           | SUM SAR            |                    |
|----------|-------------|-----------------|--------------|------------|-----------|--------------------|--------------------|
|          |             | 1               | 2            | 3          | 4         | Sum SAR<br>(1+2+4) | Sum SAR<br>(1+3+4) |
|          |             | WWAN            | Max.2.4GWIFI | Max.5GWIFI | Bluetooth |                    |                    |
| GSM850   | Left Cheek  | 0.014           | 0.885        | 1.192      | 0.185     | 1.084              | 1.391              |
|          | Left Tilt   | 0.001           | 0.414        | 0.770      | 0.067     | 0.482              | 0.838              |
|          | Right Cheek | 0.009           | 0.344        | 1.014      | 0.048     | 0.401              | 1.071              |
|          | Right Tilt  | 0.000           | 0.206        | 0.831      | 0.025     | 0.231              | 0.856              |
| GSM1900  | Left Cheek  | 0.022           | 0.885        | 1.192      | 0.185     | 1.092              | 1.399              |
|          | Left Tilt   | 0.006           | 0.414        | 0.770      | 0.067     | 0.487              | 0.843              |
|          | Right Cheek | 0.013           | 0.344        | 1.014      | 0.048     | 0.405              | 1.075              |
|          | Right Tilt  | 0.002           | 0.206        | 0.831      | 0.025     | 0.233              | 0.858              |
| WCDMA B2 | Left Cheek  | 0.177           | 0.885        | 1.192      | 0.185     | 1.247              | 1.554              |
|          | Left Tilt   | 0.062           | 0.414        | 0.770      | 0.067     | 0.543              | 0.899              |
|          | Right Cheek | 0.072           | 0.344        | 1.014      | 0.048     | 0.464              | 1.134              |
|          | Right Tilt  | 0.046           | 0.206        | 0.831      | 0.025     | 0.277              | 0.902              |
| WCDMA B4 | Left Cheek  | 0.178           | 0.885        | 1.192      | 0.185     | 1.248              | 1.555              |
|          | Left Tilt   | 0.066           | 0.414        | 0.770      | 0.067     | 0.547              | 0.903              |
|          | Right Cheek | 0.129           | 0.344        | 1.014      | 0.048     | 0.521              | 1.191              |
|          | Right Tilt  | 0.051           | 0.206        | 0.831      | 0.025     | 0.282              | 0.907              |
| WCDMA B5 | Left Cheek  | 0.013           | 0.885        | 1.192      | 0.185     | 1.083              | 1.390              |
|          | Left Tilt   | 0.000           | 0.414        | 0.770      | 0.067     | 0.481              | 0.837              |
|          | Right Cheek | 0.009           | 0.344        | 1.014      | 0.048     | 0.401              | 1.071              |
|          | Right Tilt  | 0.000           | 0.206        | 0.831      | 0.025     | 0.231              | 0.856              |
| LTE B7   | Left Cheek  | 0.130           | 0.885        | 1.192      | 0.185     | 1.200              | 1.507              |
|          | Left Tilt   | 0.051           | 0.414        | 0.770      | 0.067     | 0.532              | 0.888              |
|          | Right Cheek | 0.077           | 0.344        | 1.014      | 0.048     | 0.469              | 1.139              |
|          | Right Tilt  | 0.044           | 0.206        | 0.831      | 0.025     | 0.275              | 0.900              |
| LTE B12  | Left Cheek  | 0.008           | 0.885        | 1.192      | 0.185     | 1.078              | 1.385              |
|          | Left Tilt   | 0.000           | 0.414        | 0.770      | 0.067     | 0.481              | 0.837              |
|          | Right Cheek | 0.004           | 0.344        | 1.014      | 0.048     | 0.396              | 1.066              |
|          | Right Tilt  | 0.000           | 0.206        | 0.831      | 0.025     | 0.231              | 0.856              |
| LTE B13  | Left Cheek  | 0.004           | 0.885        | 1.192      | 0.185     | 1.074              | 1.381              |
|          | Left Tilt   | 0.000           | 0.414        | 0.770      | 0.067     | 0.481              | 0.837              |
|          | Right Cheek | 0.002           | 0.344        | 1.014      | 0.048     | 0.394              | 1.064              |
|          | Right Tilt  | 0.000           | 0.206        | 0.831      | 0.025     | 0.231              | 0.856              |
| LTE B25  | Left Cheek  | 0.196           | 0.885        | 1.192      | 0.185     | 1.266              | <b>1.573</b>       |
|          | Left Tilt   | 0.128           | 0.414        | 0.770      | 0.067     | 0.609              | 0.965              |
|          | Right Cheek | 0.155           | 0.344        | 1.014      | 0.048     | 0.547              | 1.217              |

|                                                                                                               |             |       |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------------------|-------------|-------|-------|-------|-------|-------|-------|
|                                                                                                               | Right Tilt  | 0.113 | 0.206 | 0.831 | 0.025 | 0.344 | 0.969 |
| LTE B26                                                                                                       | Left Cheek  | 0.066 | 0.885 | 1.192 | 0.185 | 1.136 | 1.443 |
|                                                                                                               | Left Tilt   | 0.012 | 0.414 | 0.770 | 0.067 | 0.493 | 0.849 |
|                                                                                                               | Right Cheek | 0.034 | 0.344 | 1.014 | 0.048 | 0.426 | 1.096 |
|                                                                                                               | Right Tilt  | 0.008 | 0.206 | 0.831 | 0.025 | 0.239 | 0.864 |
| LTE B66                                                                                                       | Left Cheek  | 0.121 | 0.885 | 1.192 | 0.185 | 1.191 | 1.498 |
|                                                                                                               | Left Tilt   | 0.014 | 0.414 | 0.770 | 0.067 | 0.495 | 0.851 |
|                                                                                                               | Right Cheek | 0.068 | 0.344 | 1.014 | 0.048 | 0.460 | 1.130 |
|                                                                                                               | Right Tilt  | 0.000 | 0.206 | 0.831 | 0.025 | 0.231 | 0.856 |
| LTE B71                                                                                                       | Left Cheek  | 0.008 | 0.885 | 1.192 | 0.185 | 1.078 | 1.385 |
|                                                                                                               | Left Tilt   | 0.000 | 0.414 | 0.770 | 0.067 | 0.481 | 0.837 |
|                                                                                                               | Right Cheek | 0.003 | 0.344 | 1.014 | 0.048 | 0.395 | 1.065 |
|                                                                                                               | Right Tilt  | 0.000 | 0.206 | 0.831 | 0.025 | 0.231 | 0.856 |
| LTE B41                                                                                                       | Left Cheek  | 0.171 | 0.885 | 1.192 | 0.185 | 1.241 | 1.548 |
|                                                                                                               | Left Tilt   | 0.093 | 0.414 | 0.770 | 0.067 | 0.574 | 0.930 |
|                                                                                                               | Right Cheek | 0.140 | 0.344 | 1.014 | 0.048 | 0.532 | 1.202 |
|                                                                                                               | Right Tilt  | 0.071 | 0.206 | 0.831 | 0.025 | 0.302 | 0.927 |
| Note:                                                                                                         |             |       |       |       |       |       |       |
| 1: The highest Summed 1g SAR is 1.573 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required. |             |       |       |       |       |       |       |

## 12.2.2 Body-worn&Hotspot Simultaneous Transmission SAR Evaluation for WWAN Antenna with WLAN and Bluetooth

| Band     | Position         | Stand alone SAR |              |            |           | SUM SAR            |                    |
|----------|------------------|-----------------|--------------|------------|-----------|--------------------|--------------------|
|          |                  | 1               | 2            | 3          | 4         | Sum SAR<br>(1+2+4) | Sum SAR<br>(1+3+4) |
|          |                  | WWAN            | Max.2.4GWIFI | Max.5GWIFI | Bluetooth |                    |                    |
| GSM850   | Front Side 10mm  | 0.060           | 0.289        | 0.278      | 0.028     | 0.377              | 0.366              |
|          | Back Side 10mm   | 0.000           | 0.001        | 0.061      | 0.000     | 0.001              | 0.061              |
|          | Left Edge 10mm   | 0.056           | 0.465        | 0.132      | 0.049     | 0.570              | 0.237              |
|          | Right Edge 10mm  | 0.064           | 0.001        | 0.042      | 0.000     | 0.065              | 0.106              |
|          | Bottom Edge 10mm | 0.076           | 0.240        | 0.000      | 0.000     | 0.316              | 0.076              |
| GSM1900  | Front Side 10mm  | 0.106           | 0.289        | 0.278      | 0.028     | 0.423              | 0.412              |
|          | Back Side 10mm   | 0.000           | 0.001        | 0.061      | 0.000     | 0.001              | 0.061              |
|          | Left Edge 10mm   | 0.052           | 0.465        | 0.132      | 0.049     | 0.566              | 0.233              |
|          | Right Edge 10mm  | 0.134           | 0.001        | 0.042      | 0.000     | 0.135              | 0.176              |
|          | Bottom Edge 10mm | 0.140           | 0.240        | 0.000      | 0.000     | 0.380              | 0.140              |
| WCDMA B2 | Front Side 10mm  | 0.175           | 0.289        | 0.278      | 0.028     | 0.492              | 0.481              |
|          | Back Side 10mm   | 0.000           | 0.001        | 0.061      | 0.000     | 0.001              | 0.061              |
|          | Left Edge 10mm   | 0.086           | 0.465        | 0.132      | 0.049     | 0.600              | 0.267              |
|          | Right Edge 10mm  | 0.220           | 0.001        | 0.042      | 0.000     | 0.221              | 0.262              |
|          | Bottom Edge 10mm | 0.226           | 0.240        | 0.000      | 0.000     | 0.466              | 0.226              |
| WCDMA B4 | Front Side 10mm  | 0.143           | 0.289        | 0.278      | 0.028     | 0.460              | 0.449              |
|          | Back Side 10mm   | 0.000           | 0.001        | 0.061      | 0.000     | 0.001              | 0.061              |
|          | Left Edge 10mm   | 0.082           | 0.465        | 0.132      | 0.049     | 0.596              | 0.263              |
|          | Right Edge 10mm  | 0.192           | 0.001        | 0.042      | 0.000     | 0.193              | 0.234              |
|          | Bottom Edge 10mm | 0.223           | 0.240        | 0.000      | 0.000     | 0.463              | 0.223              |
| WCDMA B5 | Front Side 10mm  | 0.050           | 0.289        | 0.278      | 0.028     | 0.367              | 0.356              |
|          | Back Side 10mm   | 0.000           | 0.001        | 0.061      | 0.000     | 0.001              | 0.061              |
|          | Left Edge 10mm   | 0.000           | 0.465        | 0.132      | 0.049     | 0.514              | 0.181              |
|          | Right Edge 10mm  | 0.058           | 0.001        | 0.042      | 0.000     | 0.059              | 0.100              |
|          | Bottom Edge 10mm | 0.068           | 0.240        | 0.000      | 0.000     | 0.308              | 0.068              |
| LTE B7   | Front Side 10mm  | 0.167           | 0.289        | 0.278      | 0.028     | 0.484              | 0.473              |
|          | Back Side 10mm   | 0.000           | 0.001        | 0.061      | 0.000     | 0.001              | 0.061              |
|          | Left Edge 10mm   | 0.069           | 0.465        | 0.132      | 0.049     | 0.583              | 0.250              |
|          | Right Edge 10mm  | 0.205           | 0.001        | 0.042      | 0.000     | 0.206              | 0.247              |
|          | Bottom Edge 10mm | 0.521           | 0.240        | 0.000      | 0.000     | <b>0.761</b>       | 0.521              |
| LTE B12  | Front Side 10mm  | 0.005           | 0.289        | 0.278      | 0.028     | 0.322              | 0.311              |
|          | Back Side 10mm   | 0.000           | 0.001        | 0.061      | 0.000     | 0.001              | 0.061              |
|          | Left Edge 10mm   | 0.000           | 0.465        | 0.132      | 0.049     | 0.514              | 0.181              |
|          | Right Edge 10mm  | 0.000           | 0.001        | 0.042      | 0.000     | 0.001              | 0.042              |
|          | Bottom Edge 10mm | 0.015           | 0.240        | 0.000      | 0.000     | 0.255              | 0.015              |
| LTE B13  | Front Side 10mm  | 0.000           | 0.289        | 0.278      | 0.028     | 0.317              | 0.306              |

|         |                  |       |       |       |       |       |       |
|---------|------------------|-------|-------|-------|-------|-------|-------|
|         | Back Side 10mm   | 0.000 | 0.001 | 0.061 | 0.000 | 0.001 | 0.061 |
|         | Left Edge 10mm   | 0.000 | 0.465 | 0.132 | 0.049 | 0.514 | 0.181 |
|         | Right Edge 10mm  | 0.000 | 0.001 | 0.042 | 0.000 | 0.001 | 0.042 |
|         | Bottom Edge 10mm | 0.012 | 0.240 | 0.000 | 0.000 | 0.252 | 0.012 |
| LTE B25 | Front Side 10mm  | 0.178 | 0.289 | 0.278 | 0.028 | 0.495 | 0.484 |
|         | Back Side 10mm   | 0.000 | 0.001 | 0.061 | 0.000 | 0.001 | 0.061 |
|         | Left Edge 10mm   | 0.079 | 0.465 | 0.132 | 0.049 | 0.593 | 0.260 |
|         | Right Edge 10mm  | 0.208 | 0.001 | 0.042 | 0.000 | 0.209 | 0.250 |
|         | Bottom Edge 10mm | 0.222 | 0.240 | 0.000 | 0.000 | 0.462 | 0.222 |
| LTE B26 | Front Side 10mm  | 0.024 | 0.289 | 0.278 | 0.028 | 0.341 | 0.330 |
|         | Back Side 10mm   | 0.000 | 0.001 | 0.061 | 0.000 | 0.001 | 0.061 |
|         | Left Edge 10mm   | 0.000 | 0.465 | 0.132 | 0.049 | 0.514 | 0.181 |
|         | Right Edge 10mm  | 0.000 | 0.001 | 0.042 | 0.000 | 0.001 | 0.042 |
|         | Bottom Edge 10mm | 0.065 | 0.240 | 0.000 | 0.000 | 0.305 | 0.065 |
| LTE B66 | Front Side 10mm  | 0.103 | 0.289 | 0.278 | 0.028 | 0.420 | 0.409 |
|         | Back Side 10mm   | 0.000 | 0.001 | 0.061 | 0.000 | 0.001 | 0.061 |
|         | Left Edge 10mm   | 0.066 | 0.465 | 0.132 | 0.049 | 0.580 | 0.247 |
|         | Right Edge 10mm  | 0.165 | 0.001 | 0.042 | 0.000 | 0.166 | 0.207 |
|         | Bottom Edge 10mm | 0.152 | 0.240 | 0.000 | 0.000 | 0.392 | 0.152 |
| LTE B71 | Front Side 10mm  | 0.010 | 0.289 | 0.278 | 0.028 | 0.327 | 0.316 |
|         | Back Side 10mm   | 0.000 | 0.001 | 0.061 | 0.000 | 0.001 | 0.061 |
|         | Left Edge 10mm   | 0.000 | 0.465 | 0.132 | 0.049 | 0.514 | 0.181 |
|         | Right Edge 10mm  | 0.000 | 0.001 | 0.042 | 0.000 | 0.001 | 0.042 |
|         | Bottom Edge 10mm | 0.014 | 0.240 | 0.000 | 0.000 | 0.254 | 0.014 |
| LTE B41 | Front Side 10mm  | 0.147 | 0.289 | 0.278 | 0.028 | 0.464 | 0.453 |
|         | Back Side 10mm   | 0.000 | 0.001 | 0.061 | 0.000 | 0.001 | 0.061 |
|         | Left Edge 10mm   | 0.000 | 0.465 | 0.132 | 0.049 | 0.514 | 0.181 |
|         | Right Edge 10mm  | 0.206 | 0.001 | 0.042 | 0.000 | 0.207 | 0.248 |
|         | Bottom Edge 10mm | 0.262 | 0.240 | 0.000 | 0.000 | 0.502 | 0.262 |

Note:

1: The highest Summed 1g SAR is 0.761 W/Kg &lt; 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

### 12.2.3 Extremity Simultaneous Transmission SAR Evaluation for WWAN Antenna with WLAN and Bluetooth

| Band     | Position        | Stand alone SAR |              |            |           |       | SUM SAR            |                    |
|----------|-----------------|-----------------|--------------|------------|-----------|-------|--------------------|--------------------|
|          |                 | 1               | 2            | 3          | 4         | 5     |                    |                    |
|          |                 | WWAN            | Max.2.4GWIFI | Max.5GWIFI | Bluetooth | RFID  | Sum SAR<br>(1+2+4) | Sum SAR<br>(1+3+4) |
| GSM850   | Front Side 0mm  | 0.120           | 0.709        | 0.564      | 0.083     | 0.387 | 1.299              | 1.154              |
|          | Back Side 0mm   | 0.000           | 0.001        | 0.039      | 0.000     | 0.039 | 0.040              | 0.078              |
|          | Left Edge 0mm   | 0.057           | 1.107        | 0.263      | 0.134     | 0.469 | 1.767              | 0.923              |
|          | Right Edge 0mm  | 0.076           | 0.005        | 0.032      | 0.000     | 0.477 | 0.558              | 0.585              |
|          | Bottom Edge 0mm | 0.244           | 0.000        | 0.000      | 0.000     | 0.000 | 0.244              | 0.244              |
| GSM1900  | Front Side 0mm  | 0.226           | 0.709        | 0.564      | 0.083     | 0.387 | 1.405              | 1.260              |
|          | Back Side 0mm   | 0.000           | 0.001        | 0.039      | 0.000     | 0.039 | 0.040              | 0.078              |
|          | Left Edge 0mm   | 0.059           | 1.107        | 0.263      | 0.134     | 0.469 | 1.769              | 0.925              |
|          | Right Edge 0mm  | 0.295           | 0.005        | 0.032      | 0.000     | 0.477 | 0.777              | 0.804              |
|          | Bottom Edge 0mm | 0.440           | 0.000        | 0.000      | 0.000     | 0.000 | 0.440              | 0.440              |
| WCDMA B2 | Front Side 0mm  | 0.325           | 0.709        | 0.564      | 0.083     | 0.387 | 1.504              | 1.359              |
|          | Back Side 0mm   | 0.000           | 0.001        | 0.039      | 0.000     | 0.039 | 0.040              | 0.078              |
|          | Left Edge 0mm   | 0.085           | 1.107        | 0.263      | 0.134     | 0.469 | 1.795              | 0.951              |
|          | Right Edge 0mm  | 0.436           | 0.005        | 0.032      | 0.000     | 0.477 | 0.918              | 0.945              |
|          | Bottom Edge 0mm | 0.682           | 0.000        | 0.000      | 0.000     | 0.000 | 0.682              | 0.682              |
| WCDMA B4 | Front Side 0mm  | 0.314           | 0.709        | 0.564      | 0.083     | 0.387 | 1.493              | 1.348              |
|          | Back Side 0mm   | 0.000           | 0.001        | 0.039      | 0.000     | 0.039 | 0.040              | 0.078              |
|          | Left Edge 0mm   | 0.084           | 1.107        | 0.263      | 0.134     | 0.469 | 1.794              | 0.950              |
|          | Right Edge 0mm  | 0.419           | 0.005        | 0.032      | 0.000     | 0.477 | 0.901              | 0.928              |
|          | Bottom Edge 0mm | 0.613           | 0.000        | 0.000      | 0.000     | 0.000 | 0.613              | 0.613              |
| WCDMA B5 | Front Side 0mm  | 0.102           | 0.709        | 0.564      | 0.083     | 0.387 | 1.281              | 1.136              |
|          | Back Side 0mm   | 0.000           | 0.001        | 0.039      | 0.000     | 0.039 | 0.040              | 0.078              |
|          | Left Edge 0mm   | 0.054           | 1.107        | 0.263      | 0.134     | 0.469 | 1.764              | 0.920              |
|          | Right Edge 0mm  | 0.072           | 0.005        | 0.032      | 0.000     | 0.477 | 0.554              | 0.581              |
|          | Bottom Edge 0mm | 0.177           | 0.000        | 0.000      | 0.000     | 0.000 | 0.177              | 0.177              |
| LTE B7   | Front Side 0mm  | 0.620           | 0.709        | 0.564      | 0.083     | 0.387 | 1.799              | 1.654              |
|          | Back Side 0mm   | 0.056           | 0.001        | 0.039      | 0.000     | 0.039 | 0.096              | 0.134              |
|          | Left Edge 0mm   | 0.136           | 1.107        | 0.263      | 0.134     | 0.469 | <b>1.846</b>       | 1.002              |
|          | Right Edge 0mm  | 0.412           | 0.005        | 0.032      | 0.000     | 0.477 | 0.894              | 0.921              |
|          | Bottom Edge 0mm | 1.183           | 0.000        | 0.000      | 0.000     | 0.000 | 1.183              | 1.183              |
| LTE B12  | Front Side 0mm  | 0.011           | 0.709        | 0.564      | 0.083     | 0.387 | 1.190              | 1.045              |
|          | Back Side 0mm   | 0.000           | 0.001        | 0.039      | 0.000     | 0.039 | 0.040              | 0.078              |
|          | Left Edge 0mm   | 0.003           | 1.107        | 0.263      | 0.134     | 0.469 | 1.713              | 0.869              |
|          | Right Edge 0mm  | 0.003           | 0.005        | 0.032      | 0.000     | 0.477 | 0.485              | 0.512              |
|          | Bottom Edge 0mm | 0.050           | 0.000        | 0.000      | 0.000     | 0.000 | 0.050              | 0.050              |
| LTE B13  | Front Side 0mm  | 0.025           | 0.709        | 0.564      | 0.083     | 0.387 | 1.204              | 1.059              |

|         |                 |       |       |       |       |       |       |       |
|---------|-----------------|-------|-------|-------|-------|-------|-------|-------|
|         | Back Side 0mm   | 0.000 | 0.001 | 0.039 | 0.000 | 0.039 | 0.040 | 0.078 |
|         | Left Edge 0mm   | 0.000 | 1.107 | 0.263 | 0.134 | 0.469 | 1.710 | 0.866 |
|         | Right Edge 0mm  | 0.000 | 0.005 | 0.032 | 0.000 | 0.477 | 0.482 | 0.509 |
|         | Bottom Edge 0mm | 0.043 | 0.000 | 0.000 | 0.000 | 0.000 | 0.043 | 0.043 |
| LTE B25 | Front Side 0mm  | 0.411 | 0.709 | 0.564 | 0.083 | 0.387 | 1.590 | 1.445 |
|         | Back Side 0mm   | 0.000 | 0.001 | 0.039 | 0.000 | 0.039 | 0.040 | 0.078 |
|         | Left Edge 0mm   | 0.094 | 1.107 | 0.263 | 0.134 | 0.469 | 1.804 | 0.960 |
|         | Right Edge 0mm  | 0.595 | 0.005 | 0.032 | 0.000 | 0.477 | 1.077 | 1.104 |
|         | Bottom Edge 0mm | 0.703 | 0.000 | 0.000 | 0.000 | 0.000 | 0.703 | 0.703 |
| LTE B26 | Front Side 0mm  | 0.088 | 0.709 | 0.564 | 0.083 | 0.387 | 1.267 | 1.122 |
|         | Back Side 0mm   | 0.000 | 0.001 | 0.039 | 0.000 | 0.039 | 0.040 | 0.078 |
|         | Left Edge 0mm   | 0.058 | 1.107 | 0.263 | 0.134 | 0.469 | 1.768 | 0.924 |
|         | Right Edge 0mm  | 0.086 | 0.005 | 0.032 | 0.000 | 0.477 | 0.568 | 0.595 |
|         | Bottom Edge 0mm | 0.111 | 0.000 | 0.000 | 0.000 | 0.000 | 0.111 | 0.111 |
| LTE B66 | Front Side 0mm  | 0.309 | 0.709 | 0.564 | 0.083 | 0.387 | 1.488 | 1.343 |
|         | Back Side 0mm   | 0.000 | 0.001 | 0.039 | 0.000 | 0.039 | 0.040 | 0.078 |
|         | Left Edge 0mm   | 0.080 | 1.107 | 0.263 | 0.134 | 0.469 | 1.790 | 0.946 |
|         | Right Edge 0mm  | 0.412 | 0.005 | 0.032 | 0.000 | 0.477 | 0.894 | 0.921 |
|         | Bottom Edge 0mm | 0.461 | 0.000 | 0.000 | 0.000 | 0.000 | 0.461 | 0.461 |
| LTE B71 | Front Side 0mm  | 0.027 | 0.709 | 0.564 | 0.083 | 0.387 | 1.206 | 1.061 |
|         | Back Side 0mm   | 0.000 | 0.001 | 0.039 | 0.000 | 0.039 | 0.040 | 0.078 |
|         | Left Edge 0mm   | 0.000 | 1.107 | 0.263 | 0.134 | 0.469 | 1.710 | 0.866 |
|         | Right Edge 0mm  | 0.000 | 0.005 | 0.032 | 0.000 | 0.477 | 0.482 | 0.509 |
|         | Bottom Edge 0mm | 0.049 | 0.000 | 0.000 | 0.000 | 0.000 | 0.049 | 0.049 |
| LTE B41 | Front Side 0mm  | 0.468 | 0.709 | 0.564 | 0.083 | 0.387 | 1.647 | 1.502 |
|         | Back Side 0mm   | 0.000 | 0.001 | 0.039 | 0.000 | 0.039 | 0.040 | 0.078 |
|         | Left Edge 0mm   | 0.070 | 1.107 | 0.263 | 0.134 | 0.469 | 1.780 | 0.936 |
|         | Right Edge 0mm  | 0.463 | 0.005 | 0.032 | 0.000 | 0.477 | 0.945 | 0.972 |
|         | Bottom Edge 0mm | 0.785 | 0.000 | 0.000 | 0.000 | 0.000 | 0.785 | 0.785 |

Note:

1: The highest Summed 10g SAR is 1.846 W/Kg &lt; 4.0 W/kg, so Simultaneous Transmission SAR test is not required.

## 13 TEST EQUIPMENTS LIST

| Description                     | Manufacturer | Model     | Serial No./Version | Cal. Date  | Cal. Due   |
|---------------------------------|--------------|-----------|--------------------|------------|------------|
| PC                              | Dell         | N/A       | N/A                | N/A        | N/A        |
| Test Software                   | Speag        | DASY6     | 16.0.0.116         | N/A        | N/A        |
| 750MHz Validation Dipole        | Speag        | D750V3    | SN: 1208           | 2021/07/05 | 2024/07/05 |
| 835MHz Validation Dipole        | Speag        | D835V2    | SN: 4d187          | 2021/05/17 | 2024/05/17 |
| 1750MHz Validation Dipole       | Speag        | D1750V2   | SN: 1130           | 2021/05/17 | 2024/05/17 |
| 1900MHz Validation Dipole       | Speag        | D1900V2   | SN: 5d193          | 2021/05/20 | 2024/05/20 |
| 2450MHz Validation Dipole       | Speag        | D2450V2   | SN: 952            | 2021/05/19 | 2024/05/19 |
| 2600MHz Validation Dipole       | Speag        | D2600V2   | SN: 1095           | 2021/05/19 | 2024/05/19 |
| 5GHz Validation Dipole          | Speag        | D5GHzV2   | SN: 1200           | 2021/05/18 | 2024/05/18 |
| E-Field Probe                   | Speag        | EX3DV4    | SN: 7607           | 2023/07/04 | 2024/07/04 |
| Data Acquisition Electronicsr   | Speag        | DAE4      | SN: 878            | 2023/03/23 | 2024/03/23 |
| Signal Generator                | R&S          | SMB100A   | 177746             | 2023/05/10 | 2024/05/10 |
| Signal Generator                | R&S          | SMB100A   | 182396             | 2023/09/05 | 2024/09/05 |
| Power Meter                     | R&S          | NRVD-B2   | 835843/014         | 2023/09/05 | 2024/09/05 |
| Power Sensor                    | R&S          | NRV-Z4    | 100381             | 2023/09/05 | 2024/09/05 |
| Power Sensor                    | R&S          | NRV-Z2    | 100211             | 2023/09/05 | 2024/09/05 |
| Wireless Communication Test Set | Anritsu      | MT8820C   | 6201144551         | 2023/06/29 | 2024/06/29 |
| Network Analyzer                | Agilent      | E5071B    | MY42404001         | 2023/03/26 | 2024/03/26 |
| Thermometer                     | Elitech      | RC-4HC    | EF7225003029       | 2023/07/14 | 2024/07/14 |
| Thermometer                     | Elitech      | RC-4      | EF5238001629       | 2023/10/09 | 2024/10/09 |
| Power Amplifier                 | SATIMO       | 6552B     | 22374              | N/A        | N/A        |
| Dielectric Probe Kit            | Speag        | DAK3.5    | SN: 1312           | N/A        | N/A        |
| Phantom                         | Speag        | SAM       | SN: 1859           | N/A        | N/A        |
| Attenuator                      | COM-MW       | ZA-S1-31  | 1305003187         | N/A        | N/A        |
| Directional coupler             | AA-MCS       | AAMCS-UDC | 000272             | N/A        | N/A        |

Note: For dipole antennas, BALUN has adopted 3 years as calibration intervals, and on annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss in within 20% of calibrated measurement.
4. Impedance (real or imaginary parts) in within 5 Ohms of calibrated measurement.

## ANNEX A SIMULATING LIQUID VERIFICATION RESULT

The dielectric parameters of the liquids were verified prior to the SAR evaluation using a DAK3.5 Dielectric Probe Kit.

Head Liquid

| Date       | Liquid Type | Fre. (MHz) | Temp. (°C) | Meas. Conductivity ( $\sigma$ ) (S/m) | Meas. Permittivity ( $\epsilon$ ) | Target Conductivity ( $\sigma$ ) (S/m) | Target Permittivity ( $\epsilon$ ) | Conductivity Tolerance (%) | Permittivity Tolerance (%) |
|------------|-------------|------------|------------|---------------------------------------|-----------------------------------|----------------------------------------|------------------------------------|----------------------------|----------------------------|
| 2023.11.05 | Head        | 750        | 21.5       | 0.92                                  | 42.46                             | 0.89                                   | 41.94                              | 3.15                       | 1.24                       |
| 2023.11.06 | Head        | 750        | 21.5       | 0.90                                  | 42.53                             | 0.89                                   | 41.94                              | 1.35                       | 1.40                       |
| 2023.11.07 | Head        | 835        | 21.5       | 0.88                                  | 42.81                             | 0.90                                   | 41.50                              | -2.11                      | 3.16                       |
| 2023.11.08 | Head        | 835        | 21.4       | 0.88                                  | 42.53                             | 0.90                                   | 41.50                              | -2.67                      | 2.47                       |
| 2023.11.09 | Head        | 1750       | 21.6       | 1.37                                  | 39.29                             | 1.37                                   | 40.08                              | 0.07                       | -1.98                      |
| 2023.11.10 | Head        | 1900       | 21.3       | 1.38                                  | 40.31                             | 1.40                                   | 40.00                              | -1.14                      | 0.78                       |
| 2023.11.11 | Head        | 1900       | 21.2       | 1.42                                  | 40.67                             | 1.40                                   | 40.00                              | 1.36                       | 1.68                       |
| 2023.12.24 | Head        | 2450       | 21.4       | 1.82                                  | 38.06                             | 1.80                                   | 39.20                              | 1.17                       | -2.92                      |
| 2023.12.25 | Head        | 2450       | 21.6       | 1.81                                  | 38.94                             | 1.80                                   | 39.20                              | 0.28                       | -0.65                      |
| 2023.11.12 | Head        | 2600       | 21.4       | 1.98                                  | 38.06                             | 1.96                                   | 39.01                              | 1.12                       | -2.44                      |
| 2023.12.26 | Head        | 5250       | 21.2       | 4.68                                  | 35.89                             | 4.71                                   | 35.93                              | -0.72                      | -0.12                      |
| 2023.12.27 | Head        | 5250       | 21.5       | 4.71                                  | 35.60                             | 4.71                                   | 35.93                              | -0.02                      | -0.92                      |
| 2023.12.28 | Head        | 5600       | 21.4       | 5.05                                  | 35.84                             | 5.07                                   | 35.53                              | -0.37                      | 0.88                       |
| 2023.12.29 | Head        | 5600       | 21.5       | 5.16                                  | 35.64                             | 5.07                                   | 35.53                              | 1.74                       | 0.32                       |
| 2023.12.30 | Head        | 5750       | 21.3       | 5.15                                  | 35.82                             | 5.22                                   | 35.36                              | -1.42                      | 1.31                       |
| 2023.12.31 | Head        | 5750       | 21.2       | 5.16                                  | 35.69                             | 5.22                                   | 35.36                              | -1.07                      | 0.93                       |

**Note:** The tolerance limit of Conductivity and Permittivity is  $\pm 5\%$ .

## ANNEX B SYSTEM CHECK RESULT

Comparing to the original SAR value provided by SPEAG, the validation data should be within its specification of 10 % (for 1 g).

Head liquid 1g

| Date                                                        | Liquid Type | Freq. (MHz) | Power (mW) | Measured SAR (W/kg) | Normalized SAR (W/kg) | Dipole SAR (W/kg) | Tolerance (%) |
|-------------------------------------------------------------|-------------|-------------|------------|---------------------|-----------------------|-------------------|---------------|
| 2023.11.05                                                  | Head        | 750         | 100        | 0.85                | 8.52                  | 8.29              | 2.77          |
| 2023.11.06                                                  | Head        | 750         | 100        | 0.85                | 8.46                  | 8.29              | 2.05          |
| 2023.11.07                                                  | Head        | 835         | 100        | 0.95                | 9.54                  | 9.76              | -2.25         |
| 2023.11.08                                                  | Head        | 835         | 100        | 0.97                | 9.67                  | 9.76              | -0.92         |
| 2023.11.09                                                  | Head        | 1750        | 100        | 3.68                | 36.80                 | 36.70             | 0.27          |
| 2023.11.10                                                  | Head        | 1900        | 100        | 3.97                | 39.70                 | 40.30             | -1.49         |
| 2023.11.11                                                  | Head        | 1900        | 100        | 3.89                | 38.90                 | 40.30             | -3.47         |
| 2023.12.24                                                  | Head        | 2450        | 100        | 5.34                | 53.40                 | 53.00             | 0.75          |
| 2023.12.25                                                  | Head        | 2450        | 100        | 5.45                | 54.50                 | 53.00             | 2.83          |
| 2023.11.12                                                  | Head        | 2600        | 100        | 5.75                | 57.50                 | 56.80             | 1.23          |
| 2023.12.26                                                  | Head        | 5250        | 100        | 7.76                | 77.60                 | 77.80             | -0.26         |
| 2023.12.27                                                  | Head        | 5250        | 100        | 7.68                | 76.80                 | 77.80             | -1.29         |
| 2023.12.28                                                  | Head        | 5600        | 100        | 8.20                | 82.00                 | 81.20             | 0.99          |
| 2023.12.29                                                  | Head        | 5600        | 100        | 8.27                | 82.70                 | 81.20             | 1.85          |
| 2023.12.30                                                  | Head        | 5750        | 100        | 7.78                | 77.80                 | 77.20             | 0.78          |
| 2023.12.31                                                  | Head        | 5750        | 100        | 7.67                | 76.70                 | 77.20             | -0.65         |
| Note: The tolerance limit of System validation $\pm 10\%$ . |             |             |            |                     |                       |                   |               |

## Head liquid 10g

| Date                                                        | Freq.<br>(MHz) | Power<br>(mW) | Measured<br>SAR (W/kg) | Normalized SAR<br>(W/kg) | Dipole SAR<br>(W/kg) | Tolerance<br>(%) |
|-------------------------------------------------------------|----------------|---------------|------------------------|--------------------------|----------------------|------------------|
| 2023.11.05                                                  | 750            | 100           | 0.55                   | 5.54                     | 5.38                 | 2.97             |
| 2023.11.06                                                  | 750            | 100           | 0.55                   | 5.47                     | 5.38                 | 1.67             |
| 2023.11.07                                                  | 835            | 100           | 0.62                   | 6.19                     | 6.34                 | -2.37            |
| 2023.11.08                                                  | 835            | 100           | 0.62                   | 6.22                     | 6.34                 | -1.89            |
| 2023.11.09                                                  | 1750           | 100           | 1.92                   | 19.20                    | 19.10                | 0.52             |
| 2023.11.10                                                  | 1900           | 100           | 2.06                   | 20.60                    | 20.30                | 1.48             |
| 2023.11.11                                                  | 1900           | 100           | 2.02                   | 20.20                    | 20.30                | -0.49            |
| 2023.12.24                                                  | 2450           | 100           | 2.38                   | 23.80                    | 24.10                | -1.24            |
| 2023.12.25                                                  | 2450           | 100           | 2.40                   | 24.00                    | 24.10                | -0.41            |
| 2023.11.12                                                  | 2600           | 100           | 2.50                   | 25.00                    | 24.80                | 0.81             |
| 2023.12.26                                                  | 5250           | 100           | 2.24                   | 22.40                    | 22.10                | 1.36             |
| 2023.12.27                                                  | 5250           | 100           | 2.18                   | 21.80                    | 22.10                | -1.36            |
| 2023.12.28                                                  | 5600           | 100           | 2.28                   | 22.80                    | 23.10                | -1.30            |
| 2023.12.29                                                  | 5600           | 100           | 2.32                   | 23.20                    | 23.10                | 0.43             |
| 2023.12.30                                                  | 5750           | 100           | 2.18                   | 21.80                    | 21.70                | 0.46             |
| 2023.12.31                                                  | 5750           | 100           | 2.09                   | 20.90                    | 21.70                | -3.69            |
| Note: The tolerance limit of System validation $\pm 10\%$ . |                |               |                        |                          |                      |                  |

# System Performance Check Data (750MHz)

## Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| CD750V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

## Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                             | CD750 | CW, 0--    | 750.0, 100                      | 10.31             | 0.918                  | 42.5             | 22.4                     | 21.5                    |

## Hardware Setup

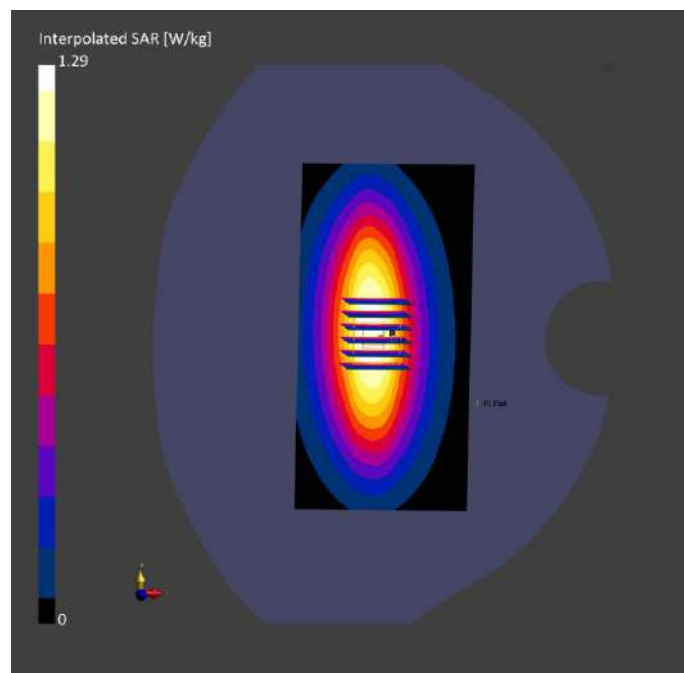
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-11-05 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

## Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 80.0 x 160.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0  | 6.0 x 6.0 x 1.5    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA Surface        | N/A          | N/A                |
| Detection           | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

## Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-05    | 2023-11-05    |
| psSAR1g [W/kg]      | 0.843         | 0.852         |
| psSAR10g [W/kg]     | 0.546         | 0.554         |
| Power Drift [dB]    | -0.03         | -0.01         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 85.7          |
| Dist 3dB Peak [mm]  |               | 20.3          |



# System Performance Check Data (750MHz)

## Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| CD750V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

## Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|---------------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                                       | CD750 | CW, 0--    | 750.0, 100                      | 10.31             | 0.902                  | 42.5             | 22.6                     | 21.5                    |

## Hardware Setup

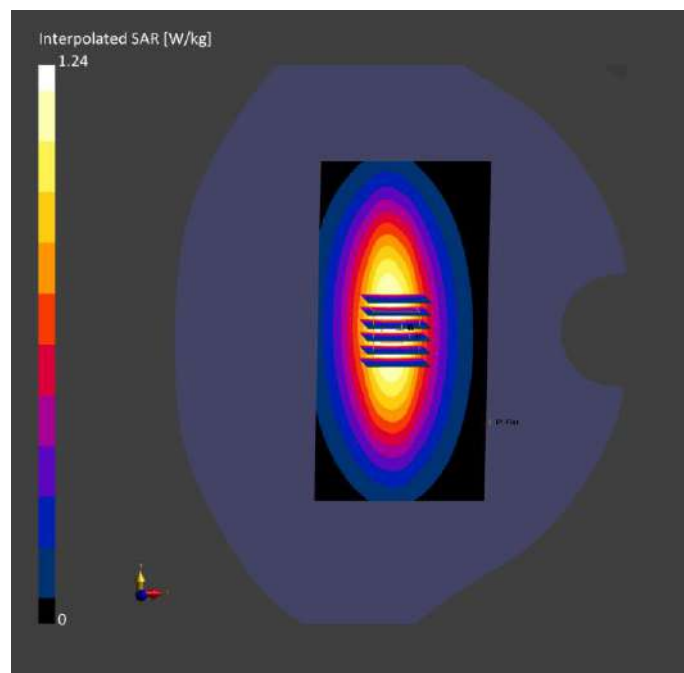
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-11-06 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

## Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 80.0 x 160.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0  | 6.0 x 6.0 x 1.5    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA Surface        | N/A          | N/A                |
| Detection           | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

## Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-06    | 2023-11-06    |
| psSAR1g [W/kg]      | 0.833         | 0.846         |
| psSAR10g [W/kg]     | 0.537         | 0.547         |
| Power Drift [dB]    | 0.06          | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 84.3          |
| Dist 3dB Peak [mm]  |               | 20.1          |



# System Performance Check Data (835MHz)

## Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| CD835V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

## Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                             | CD835 | CW, 0--    | 835.0, 50                       | 9.96              | 0.881                  | 42.8             | 22.4                     | 21.5                    |

## Hardware Setup

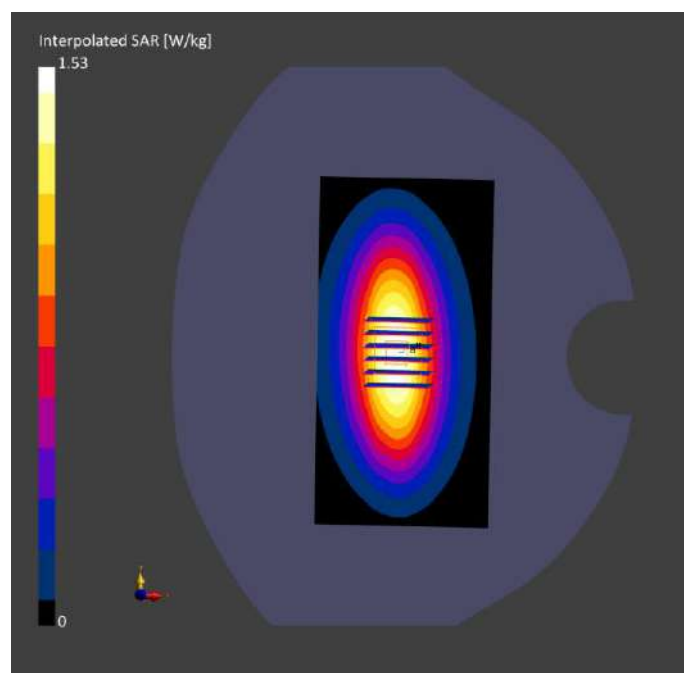
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-11-07 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

## Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 80.0 x 160.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0  | 6.0 x 6.0 x 1.5    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA Surface        | N/A          | N/A                |
| Detection           | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

## Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-07    | 2023-11-07    |
| psSAR1g [W/kg]      | 0.942         | 0.954         |
| psSAR10g [W/kg]     | 0.605         | 0.619         |
| Power Drift [dB]    | -0.02         | -0.01         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 84.7          |
| Dist 3dB Peak [mm]  |               | 13.1          |



# System Performance Check Data (835MHz)

## Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| CD835V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

## Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                             | CD835 | CW, 0--    | 835.0, 50                       | 9.96              | 0.876                  | 42.5             | 22.7                     | 21.4                    |

## Hardware Setup

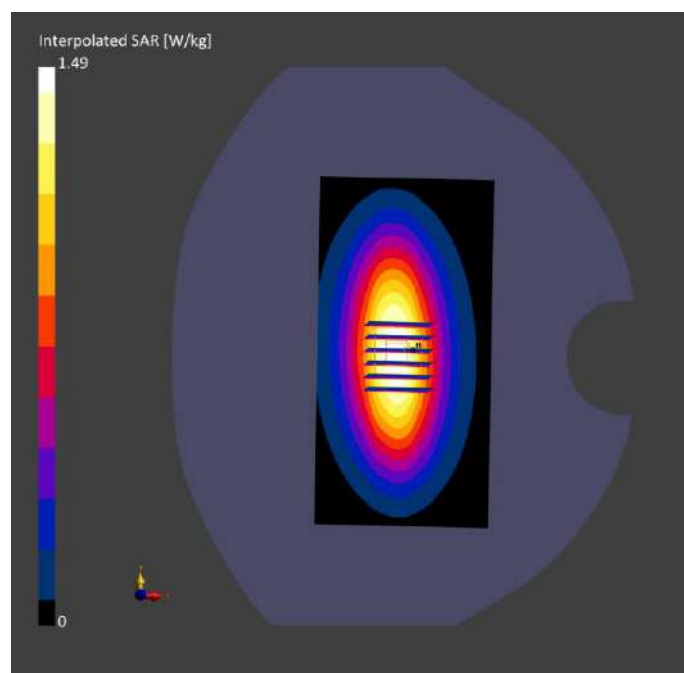
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-11-08 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

## Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 80.0 x 160.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0  | 6.0 x 6.0 x 1.5    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

## Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-08    | 2023-11-08    |
| psSAR1g [W/kg]      | 0.954         | 0.967         |
| psSAR10g [W/kg]     | 0.616         | 0.622         |
| Power Drift [dB]    | 0.03          | 0.05          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 85.1          |
| Dist 3dB Peak [mm]  |               | 13.2          |



System Performance Check Data (1750MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D1750V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                             | D1750 | CW, 0--    | 1750.0, 50                      | 8.52              | 1.37                   | 39.3             | 22.6                     | 21.6                    |

Hardware Setup

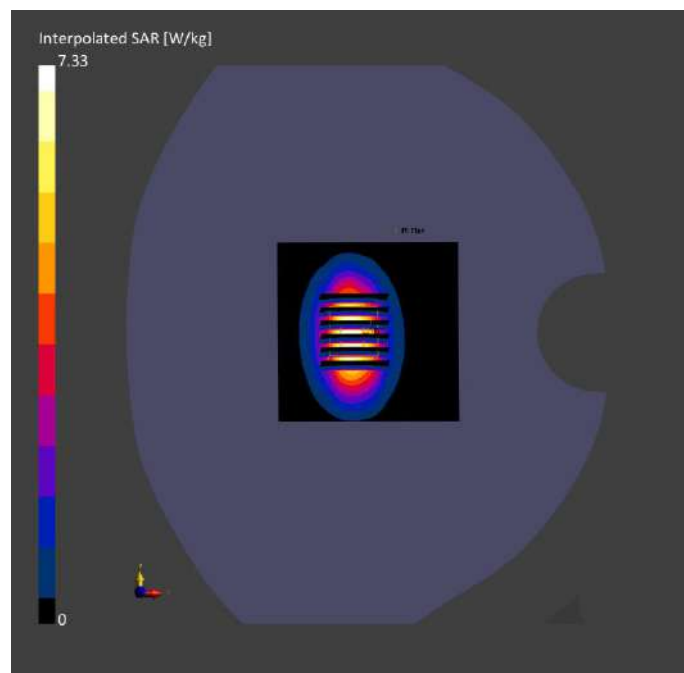
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-11-09 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

Scan Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 80.0 x 80.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0 | 6.0 x 6.0 x 1.5    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | Yes         | Yes                |
| Grading Ratio       | 1.5         | 1.5                |
| MAIA                | N/A         | N/A                |
| Surface             | VMS + 6p    | VMS + 6p           |
| Detection           |             |                    |
| Scan Method         | Measured    | Measured           |

Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-09    | 2023-11-09    |
| psSAR1g [W/kg]      | 3.57          | 3.68          |
| psSAR10g [W/kg]     | 1.84          | 1.92          |
| Power Drift [dB]    | -0.03         | -0.07         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 82.3          |
| Dist 3dB Peak [mm]  |               | 9.9           |



# System Performance Check Data (1900MHz)

## Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D1900V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

## Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|---------------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                                       | D1900 | CW, 0--    | 1900.0, 50                      | 7.98              | 1.38                   | 40.3             | 22.5                     | 21.3                    |

## Hardware Setup

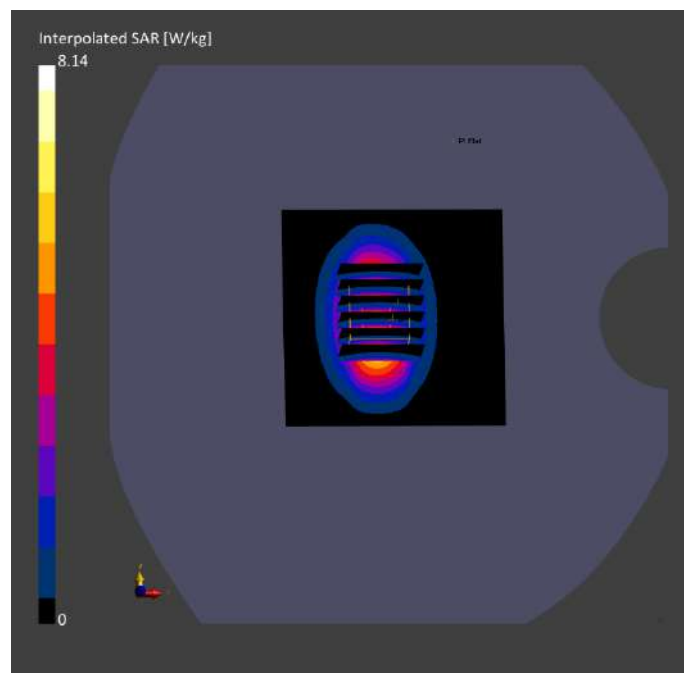
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-11-10 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

## Scan Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 80.0 x 80.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0 | 6.0 x 6.0 x 1.5    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | Yes         | Yes                |
| Grading Ratio       | 1.5         | 1.5                |
| MAIA                | N/A         | N/A                |
| Surface             | VMS + 6p    | VMS + 6p           |
| Detection           |             |                    |
| Scan Method         | Measured    | Measured           |

## Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-10    | 2023-11-10    |
| psSAR1g [W/kg]      | 3.78          | 3.97          |
| psSAR10g [W/kg]     | 2.01          | 2.06          |
| Power Drift [dB]    | -0.01         | 0.03          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 81.1          |
| Dist 3dB Peak [mm]  |               | 9.6           |



System Performance Check Data (1900MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D1900V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|---------------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                                       | D1900 | CW, 0--    | 1900.0, 50                      | 7.98              | 1.42                   | 40.7             | 22.6                     | 21.2                    |

Hardware Setup

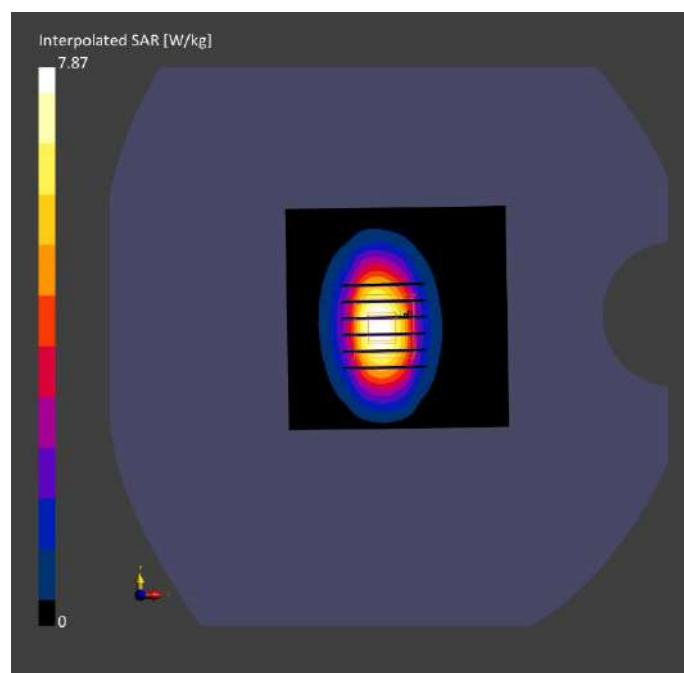
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-11-11 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

Scan Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 80.0 x 80.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0 | 6.0 x 6.0 x 1.5    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | Yes         | Yes                |
| Grading Ratio       | 1.5         | 1.5                |
| MAIA                | N/A         | N/A                |
| Surface             | VMS + 6p    | VMS + 6p           |
| Detection           |             |                    |
| Scan Method         | Measured    | Measured           |

Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-11    | 2023-11-11    |
| psSAR1g [W/kg]      | 3.70          | 3.89          |
| psSAR10g [W/kg]     | 1.89          | 2.02          |
| Power Drift [dB]    | 0.04          | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 80.1          |
| Dist 3dB Peak [mm]  |               | 9.1           |



System Performance Check Data (2600MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| CD2600V3, SPEAG     | 10.0 x 10.0 x 3.0 | Dipole   |

Exposure Conditions

| Phantom<br>Section,<br>TSL | Position, Test<br>Distance [mm] | Band         | Group<br>,<br>UID | Frequency [MHz],<br>Channel<br>Number | Conversion Factor | TSL<br>Conductivity [S/m] | TSL<br>Permittivity | Ambient<br>Temperature<br>[°C] | Liquid<br>Temperature<br>[°C] |
|----------------------------|---------------------------------|--------------|-------------------|---------------------------------------|-------------------|---------------------------|---------------------|--------------------------------|-------------------------------|
| Flat,<br>HSL               |                                 | CD2600V<br>3 | CW,<br>0--        | 2600.0,<br>50                         | 7.41              | 1.98                      | 38.1                | 22.4                           | 21.4                          |

Hardware Setup

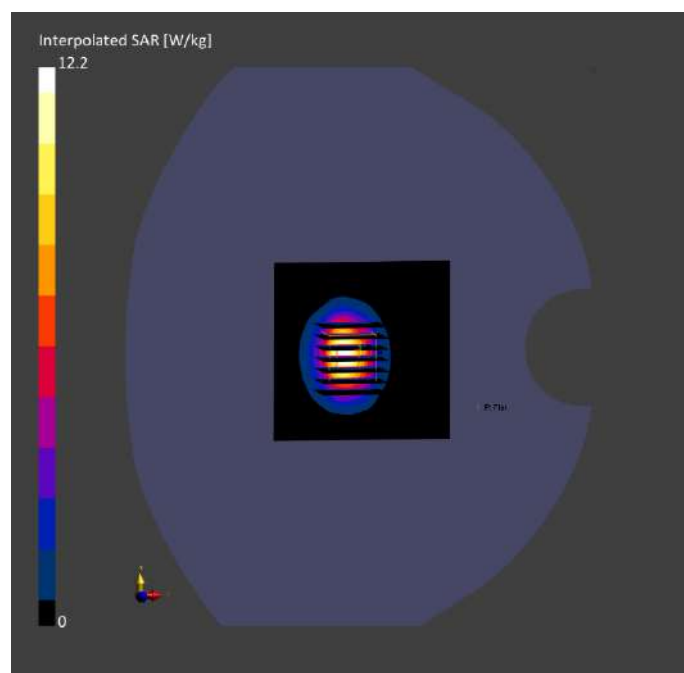
| Phantom                                    | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|--------------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg<br>probe tilt) - 1859 | HBBL-600-10000 2023-11-12 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

Scan Setup

|                        | Area Scan   | Zoom Scan          |
|------------------------|-------------|--------------------|
| Grid Extents<br>[mm]   | 80.0 x 80.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps<br>[mm]     | 10.0 x 10.0 | 5.0 x 5.0 x 1.5    |
| Sensor Surface<br>[mm] | 3.0         | 1.4                |
| Graded Grid            | Yes         | Yes                |
| Grading Ratio          | 1.5         | 1.5                |
| MAIA                   | N/A         | N/A                |
| Surface                | VMS + 6p    | VMS + 6p           |
| Detection              |             |                    |
| Scan Method            | Measured    | Measured           |

Measurement Results

|                        | Area Scan     | Zoom Scan     |
|------------------------|---------------|---------------|
| Date                   | 2023-11-12    | 2023-11-12    |
| psSAR1g<br>[W/kg]      | 5.71          | 5.75          |
| psSAR10g<br>[W/kg]     | 2.46          | 2.50          |
| Power Drift<br>[dB]    | 0.00          | -0.01         |
| Power Scaling          | Disabled      | Disabled      |
| Scaling Factor<br>[dB] |               |               |
| TSL<br>Correction      | No correction | No correction |
| M2/M1 [%]              |               | 79.6          |
| Dist 3dB Peak<br>[mm]  |               | 9.0           |



System Performance Check Data (2450MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D2450V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

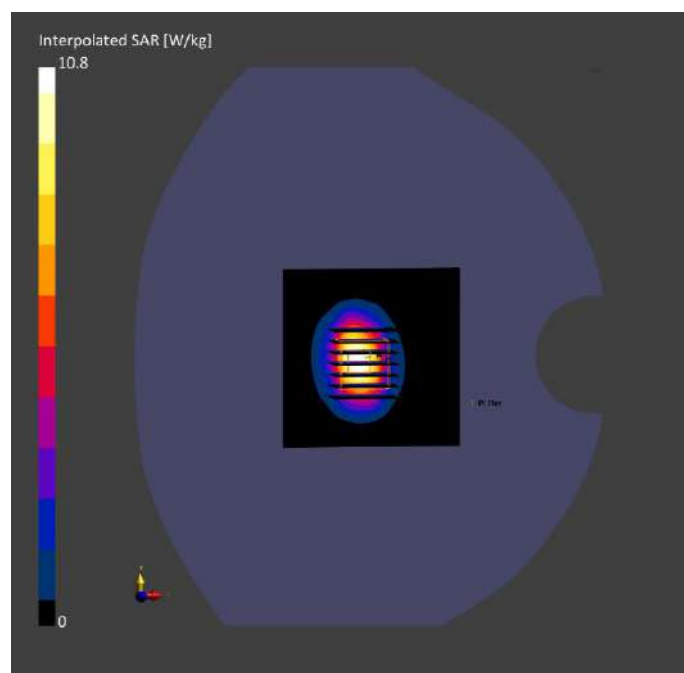
Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|---------------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                                       | D2450 | CW, 0--    | 2450.0, 50                      | 7.47              | 1.82                   | 38.1             | 22.5                     | 21.4                    |

Hardware Setup

| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-12-24 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

| Scan Setup          |             |                    | Measurement Results |               |               |
|---------------------|-------------|--------------------|---------------------|---------------|---------------|
|                     | Area Scan   | Zoom Scan          |                     | Area Scan     | Zoom Scan     |
| Grid Extents [mm]   | 80.0 x 80.0 | 30.0 x 30.0 x 30.0 | Date                | 2023-12-24    | 2023-12-24    |
| Grid Steps [mm]     | 10.0 x 10.0 | 5.0 x 5.0 x 1.5    | psSAR1g [W/kg]      | 5.35          | 5.34          |
| Sensor Surface [mm] | 3.0         | 1.4                | psSAR10g [W/kg]     | 2.31          | 2.38          |
| Graded Grid         | Yes         | Yes                | Power Drift [dB]    | -0.02         | -0.05         |
| Grading Ratio       | 1.5         | 1.5                | Power Scaling       | Disabled      | Disabled      |
| MAIA                | N/A         | N/A                | Scaling Factor [dB] |               |               |
| Surface             | VMS + 6p    | VMS + 6p           | TSL                 | No correction | No correction |
| Detection           |             |                    | Correction          |               |               |
| Scan Method         | Measured    | Measured           | M2/M1 [%]           |               | 80.5          |
|                     |             |                    | Dist 3dB Peak [mm]  |               | 9.0           |



System Performance Check Data (2450MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D2450V2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                             | D2450 | CW, 0--    | 2450.0, 50                      | 7.47              | 1.81                   | 38.9             | 22.7                     | 21.6                    |

Hardware Setup

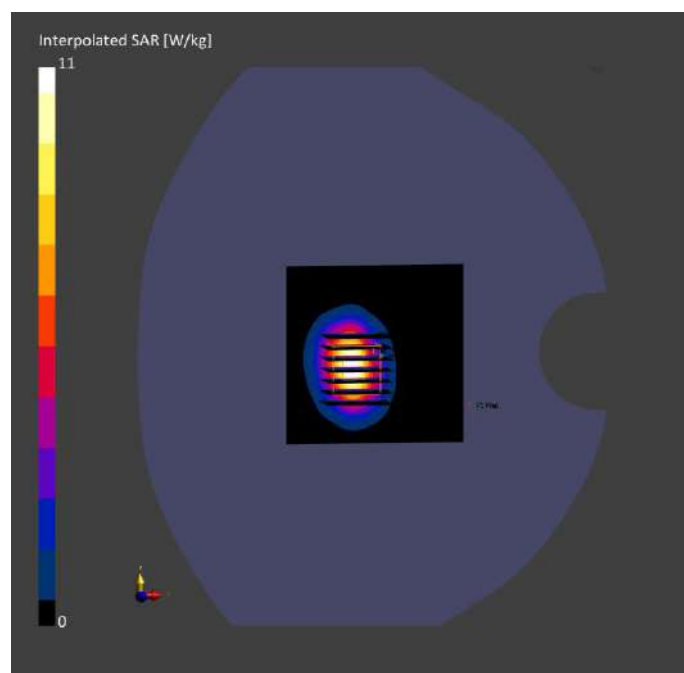
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-12-25 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

Scan Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 80.0 x 80.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 10.0 x 10.0 | 5.0 x 5.0 x 1.5    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | Yes         | Yes                |
| Grading Ratio       | 1.5         | 1.5                |
| MAIA                | N/A         | N/A                |
| Surface             | VMS + 6p    | VMS + 6p           |
| Detection           |             |                    |
| Scan Method         | Measured    | Measured           |

Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-25    | 2023-12-25    |
| psSAR1g [W/kg]      | 5.30          | 5.45          |
| psSAR10g [W/kg]     | 2.31          | 2.40          |
| Power Drift [dB]    | -0.10         | -0.05         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 81.5          |
| Dist 3dB Peak [mm]  |               | 9.3           |



System Performance Check Data (5250MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D5GHZV2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

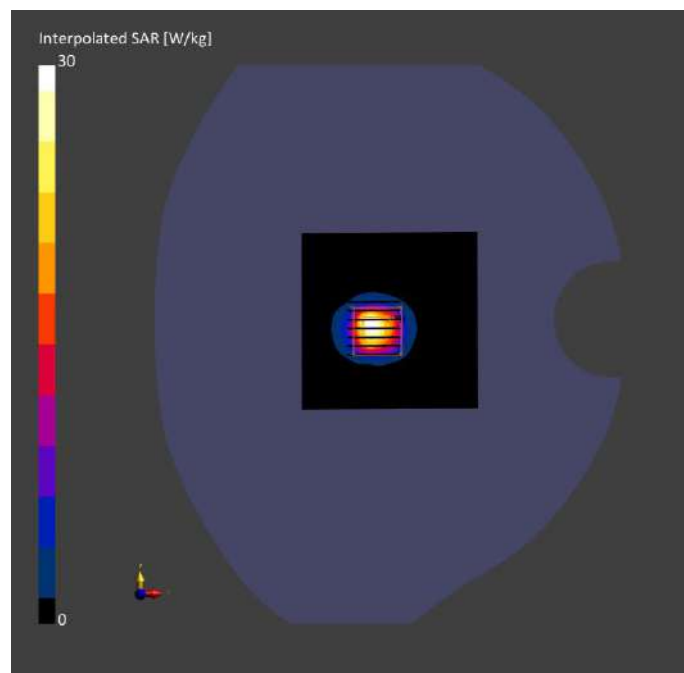
Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|---------------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                                       | D5GHZ | CW, 0--    | 5250.0, 25                      | 5.41              | 4.68                   | 35.9             | 22.3                     | 21.2                    |

Hardware Setup

| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-12-26 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

| Scan Setup          |             |                    | Measurement Results |               |               |
|---------------------|-------------|--------------------|---------------------|---------------|---------------|
|                     | Area Scan   | Zoom Scan          |                     | Area Scan     | Zoom Scan     |
| Grid Extents [mm]   | 80.0 x 80.0 | 22.0 x 22.0 x 22.0 | Date                | 2023-12-26    | 2023-12-26    |
| Grid Steps [mm]     | 10.0 x 10.0 | 4.0 x 4.0 x 1.4    | psSAR1g [W/kg]      | 6.84          | 7.76          |
| Sensor Surface [mm] | 3.0         | 1.4                | psSAR10g [W/kg]     | 2.16          | 2.24          |
| Graded Grid         | Yes         | Yes                | Power Drift [dB]    | -0.04         | 0.01          |
| Grading Ratio       | 1.5         | 1.4                | Power Scaling       | Disabled      | Disabled      |
| MAIA                | N/A         | N/A                | Scaling Factor [dB] |               |               |
| Surface             | VMS + 6p    | VMS + 6p           | TSL                 | No correction | No correction |
| Detection           |             |                    | Correction          |               |               |
| Scan Method         | Measured    | Measured           | M2/M1 [%]           |               | 64.6          |
|                     |             |                    | Dist 3dB Peak [mm]  |               | 6.8           |



System Performance Check Data (5250MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D5GHZV2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|---------------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                                       | D5GHZ | CW, 0--    | 5250.0, 25                      | 5.41              | 4.71                   | 35.6             | 22.4                     | 21.5                    |

Hardware Setup

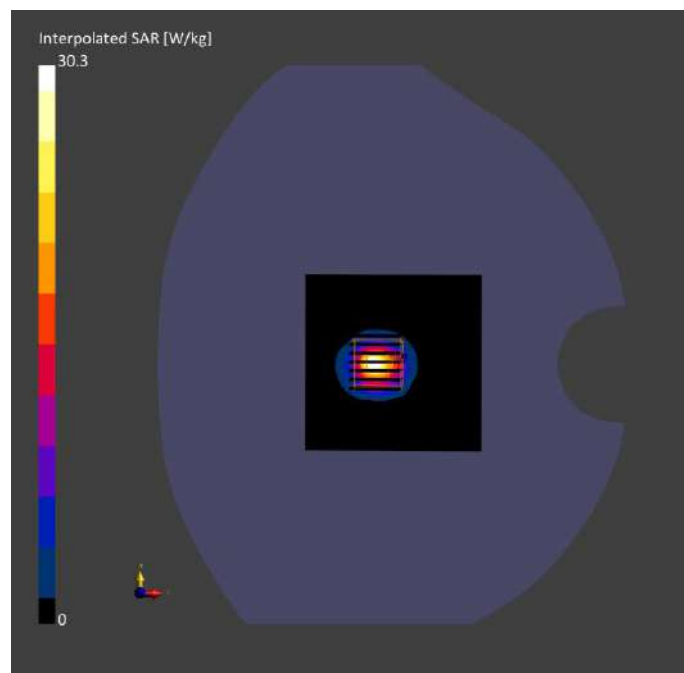
| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-12-27 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

Scan Setup

|                     | Area Scan   | Zoom Scan          |
|---------------------|-------------|--------------------|
| Grid Extents [mm]   | 80.0 x 80.0 | 22.0 x 22.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0 | 4.0 x 4.0 x 1.4    |
| Sensor Surface [mm] | 3.0         | 1.4                |
| Graded Grid         | Yes         | Yes                |
| Grading Ratio       | 1.5         | 1.4                |
| MAIA                | N/A         | N/A                |
| Surface             | VMS + 6p    | VMS + 6p           |
| Detection           |             |                    |
| Scan Method         | Measured    | Measured           |

Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-27    | 2023-12-27    |
| psSAR1g [W/kg]      | 6.94          | 7.68          |
| psSAR10g [W/kg]     | 2.01          | 2.18          |
| Power Drift [dB]    | -0.05         | -0.01         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 64.1          |
| Dist 3dB Peak [mm]  |               | 6.5           |



System Performance Check Data (5600MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D5GHZV2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

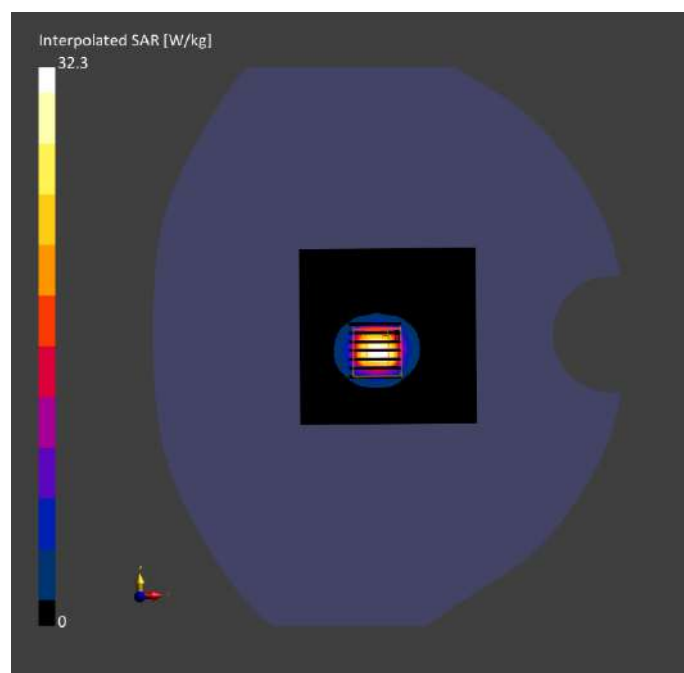
Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                             | D5GHZ | CW, 0--    | 5600.0, 60                      | 4.58              | 5.05                   | 35.8             | 22.4                     | 21.4                    |

Hardware Setup

| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-12-28 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

| Scan Setup          |             |                    | Measurement Results |               |               |
|---------------------|-------------|--------------------|---------------------|---------------|---------------|
|                     | Area Scan   | Zoom Scan          |                     | Area Scan     | Zoom Scan     |
| Grid Extents [mm]   | 80.0 x 80.0 | 22.0 x 22.0 x 22.0 | Date                | 2023-12-28    | 2023-12-28    |
| Grid Steps [mm]     | 10.0 x 10.0 | 4.0 x 4.0 x 1.4    | psSAR1g [W/kg]      | 7.83          | 8.20          |
| Sensor Surface [mm] | 3.0         | 1.4                | psSAR10g [W/kg]     | 2.15          | 2.28          |
| Graded Grid         | Yes         | Yes                | Power Drift [dB]    | -0.01         | 0.01          |
| Grading Ratio       | 1.5         | 1.4                | Power Scaling       | Disabled      | Disabled      |
| MAIA                | N/A         | N/A                | Scaling Factor [dB] |               |               |
| Surface             | VMS + 6p    | VMS + 6p           | TSL                 | No correction | No correction |
| Detection           |             |                    | Correction          |               |               |
| Scan Method         | Measured    | Measured           | M2/M1 [%]           |               | 64.2          |
|                     |             |                    | Dist 3dB Peak [mm]  |               | 7.4           |



System Performance Check Data (5600MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D5GHZV2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

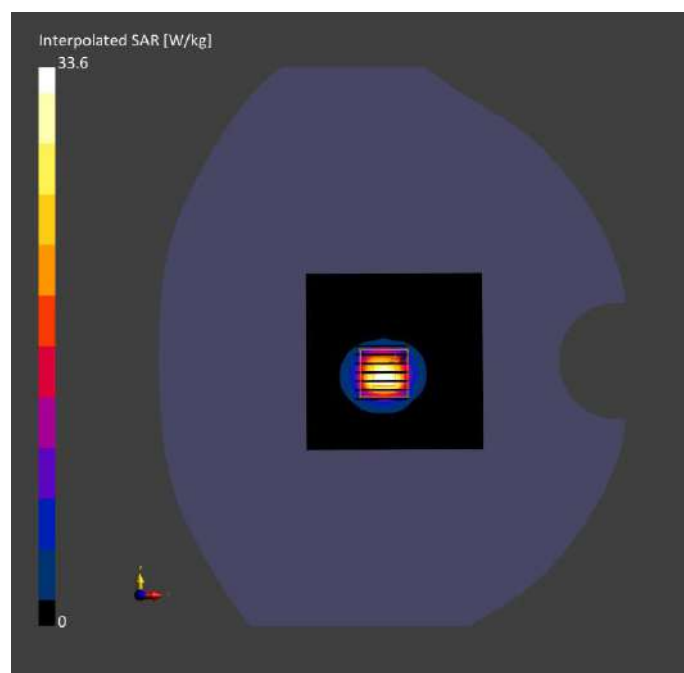
Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|---------------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                                       | D5GHZ | CW, 0--    | 5600.0, 60                      | 4.58              | 5.16                   | 35.6             | 22.3                     | 21.5                    |

Hardware Setup

| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-12-29 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

| Scan Setup          |             |                    | Measurement Results |               |               |
|---------------------|-------------|--------------------|---------------------|---------------|---------------|
|                     | Area Scan   | Zoom Scan          |                     | Area Scan     | Zoom Scan     |
| Grid Extents [mm]   | 80.0 x 80.0 | 22.0 x 22.0 x 22.0 | Date                | 2023-12-29    | 2023-12-29    |
| Grid Steps [mm]     | 10.0 x 10.0 | 4.0 x 4.0 x 1.4    | psSAR1g [W/kg]      | 7.64          | 8.27          |
| Sensor Surface [mm] | 3.0         | 1.4                | psSAR10g [W/kg]     | 2.15          | 2.32          |
| Graded Grid         | Yes         | Yes                | Power Drift [dB]    | -0.02         | -0.01         |
| Grading Ratio       | 1.5         | 1.4                | Power Scaling       | Disabled      | Disabled      |
| MAIA                | N/A         | N/A                | Scaling Factor      |               |               |
| Surface             | VMS + 6p    | VMS + 6p           | [dB]                |               |               |
| Detection           |             |                    | TSL                 | No correction | No correction |
| Scan Method         | Measured    | Measured           | Correction          |               |               |
|                     |             |                    | M2/M1 [%]           |               | 63.2          |
|                     |             |                    | Dist 3dB Peak [mm]  |               | 7.1           |



System Performance Check Data (5750MHz)

Device under Test Properties

| Model, Manufacturer | Dimensions [mm]   | DUT Type |
|---------------------|-------------------|----------|
| D5GHZV2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

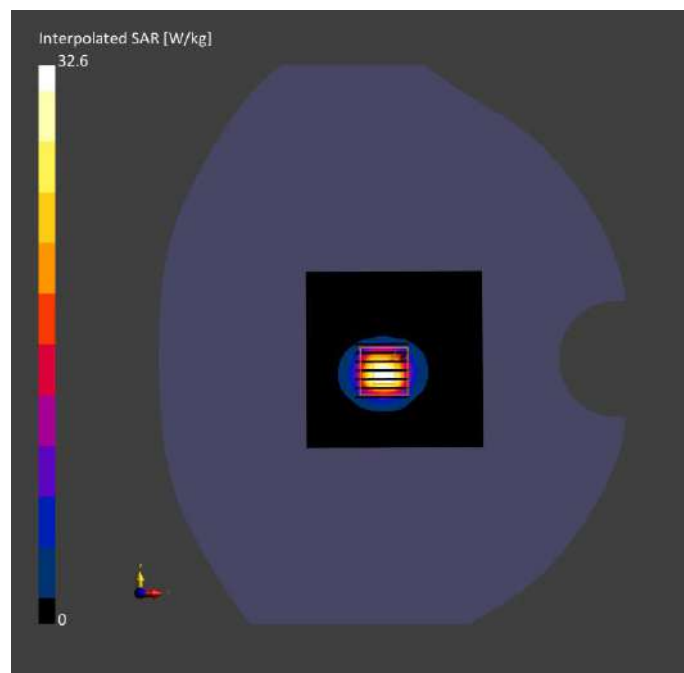
Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band  | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|---------------------------------------|-------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL |                                       | D5GHZ | CW, 0--    | 5750.0, 75                      | 4.78              | 5.15                   | 35.8             | 22.2                     | 21.3                    |

Hardware Setup

| Phantom                                 | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|---------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 2023-12-30 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

| Scan Setup          |             |                    | Measurement Results |               |               |
|---------------------|-------------|--------------------|---------------------|---------------|---------------|
|                     | Area Scan   | Zoom Scan          |                     | Area Scan     | Zoom Scan     |
| Grid Extents [mm]   | 80.0 x 80.0 | 22.0 x 22.0 x 22.0 | Date                | 2023-12-30    | 2023-12-30    |
| Grid Steps [mm]     | 10.0 x 10.0 | 4.0 x 4.0 x 1.4    | psSAR1g [W/kg]      | 6.83          | 7.78          |
| Sensor Surface [mm] | 3.0         | 1.4                | psSAR10g [W/kg]     | 2.10          | 2.18          |
| Graded Grid         | Yes         | Yes                | Power Drift [dB]    | -0.01         | -0.12         |
| Grading Ratio       | 1.5         | 1.4                | Power Scaling       | Disabled      | Disabled      |
| MAIA                | N/A         | N/A                | Scaling Factor [dB] |               |               |
| Surface             | VMS + 6p    | VMS + 6p           | TSL                 | No correction | No correction |
| Detection           |             |                    | Correction          |               |               |
| Scan Method         | Measured    | Measured           | M2/M1 [%]           |               | 61.4          |
|                     |             |                    | Dist 3dB Peak [mm]  |               | 7.4           |



# System Performance Check Data (5750MHz)

## Device under Test Properties

|                     |                   |          |
|---------------------|-------------------|----------|
| Model, Manufacturer | Dimensions [mm]   | DUT Type |
| D5GHZV2, SPEAG      | 10.0 x 10.0 x 3.0 | Dipole   |

## Exposure Conditions

| Phantom<br>Section,<br>TSL | Position,<br>Test<br>Distance<br>[mm] | Band  | Group,<br>UID | Frequency<br>[MHz],<br>Channel<br>Number | Conversion<br>Factor | TSL<br>Conductivity<br>[S/m] | TSL<br>Permittivity | Ambient<br>Temperature<br>[°C] | Liquid<br>Temperature<br>[°C] |
|----------------------------|---------------------------------------|-------|---------------|------------------------------------------|----------------------|------------------------------|---------------------|--------------------------------|-------------------------------|
| Flat,<br>HSL               |                                       | D5GHz | CW,<br>0--    | 5750.0,<br>75                            | 4.78                 | 5.16                         | 35.7                | 22.1                           | 21.2                          |

## Hardware Setup

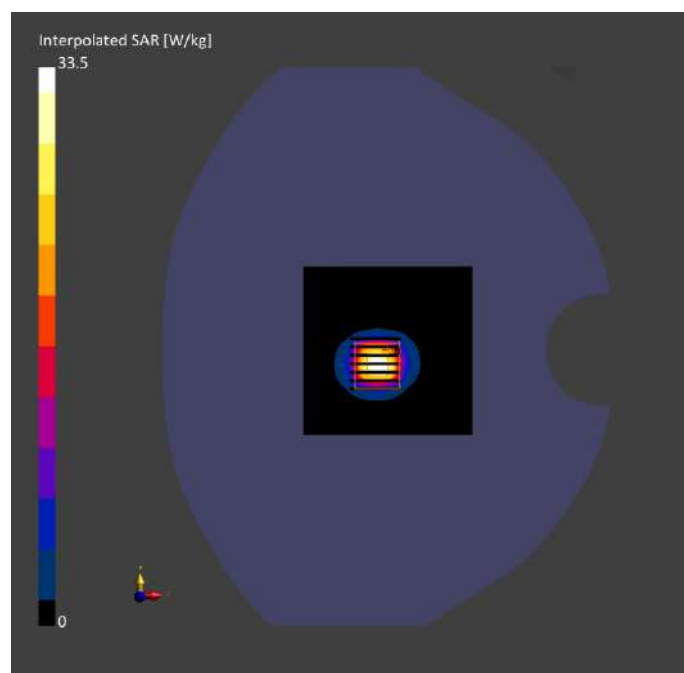
|                                            |                           |                             |                        |
|--------------------------------------------|---------------------------|-----------------------------|------------------------|
| Phantom                                    | TSL, Measured Date        | Probe, Calibration Date     | DAE, Calibration Date  |
| Twin-SAM V5.0 (30deg<br>probe tilt) - 1859 | HBBL-600-10000 2023-12-31 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

## Scan Setup

|                        | Area Scan   | Zoom Scan          |
|------------------------|-------------|--------------------|
| Grid Extents<br>[mm]   | 80.0 x 80.0 | 22.0 x 22.0 x 22.0 |
| Grid Steps [mm]        | 10.0 x 10.0 | 4.0 x 4.0 x 1.4    |
| Sensor Surface<br>[mm] | 3.0         | 1.4                |
| Graded Grid            | Yes         | Yes                |
| Grading Ratio          | 1.5         | 1.4                |
| MAIA                   | N/A         | N/A                |
| Surface                | VMS + 6p    | VMS + 6p           |
| Detection              |             |                    |
| Scan Method            | Measured    | Measured           |

## Measurement Results

|                        | Area Scan     | Zoom Scan     |
|------------------------|---------------|---------------|
| Date                   | 2023-12-31    | 2023-12-31    |
| psSAR1g<br>[W/kg]      | 6.73          | 7.67          |
| psSAR10g<br>[W/kg]     | 2.01          | 2.09          |
| Power Drift [dB]       | 0.01          | -0.01         |
| Power Scaling          | Disabled      | Disabled      |
| Scaling Factor<br>[dB] |               |               |
| TSL Correction         | No correction | No correction |
| M2/M1 [%]              |               | 61.2          |
| Dist 3dB Peak<br>[mm]  |               | 7.1           |



## ANNEX C TEST DATA

### Meas.1 Left Head with Cheek on High Channel in GPRS850 3Slots mode

#### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

#### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band    | Group, UID     | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|----------------------|------------------------------|---------|----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| LeftHead, HSL        | CHEEK, 0.00                  | GSM 850 | GSM, 10028-DAC | 848.8, 251                      | 9.96              | 0.927                  | 40.9             | 22.4                     | 21.5                    |

#### Hardware Setup

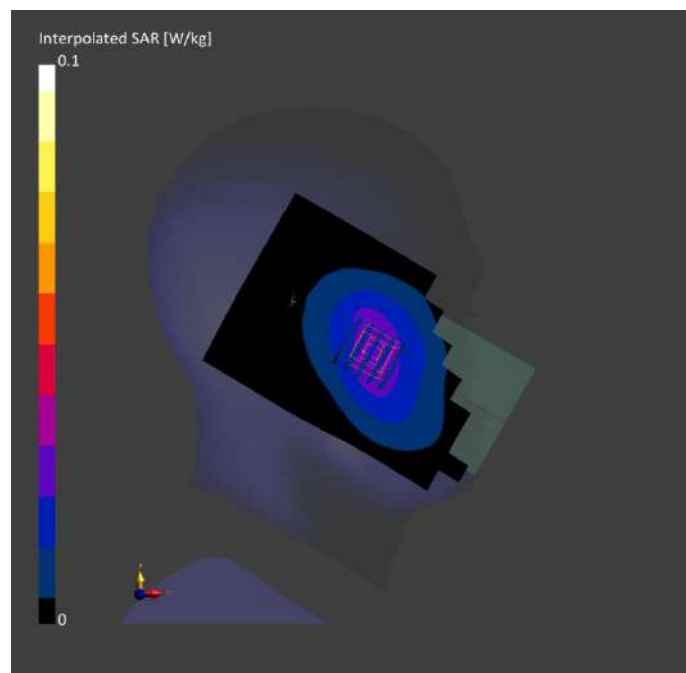
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-07 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

#### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | All points         |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

#### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-07    | 2023-11-07    |
| psSAR1g [W/kg]      | 0.018         | 0.012         |
| psSAR10g [W/kg]     | 0.011         | 0.009         |
| Power Drift [dB]    | -0.10         | -0.11         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 81.2          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.2 Body Plane with Bottom Edge 10mm on High Channel in GPRS850 3Slots mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Distance [mm] | Band     | Group, UID     | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|----------|----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE, BOTTOM, 10.00          | GSM, 850 | GSM, 10024-DAC | 848.8, 251                      | 9.96              | 0.927                  | 40.9             | 22.4                     | 21.5                    |

### Hardware Setup

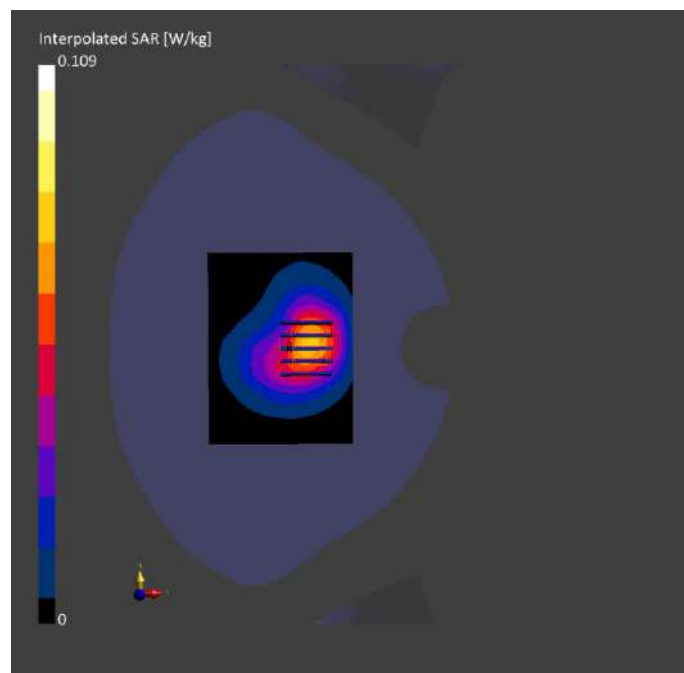
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-07 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | Y                  |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-07    | 2023-11-07    |
| psSAR1g [W/kg]      | 0.062         | 0.065         |
| psSAR10g [W/kg]     | 0.041         | 0.039         |
| Power Drift [dB]    | -0.08         | 0.00          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 58.2          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



### Meas.3 Body Plane with Bottom Edge 0mm on High Channel in GPRS850 3Slots mode

#### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

#### Exposure Conditions

| Phantom   | Position, Test Distance | Band     | Group, UID     | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-------------------------|----------|----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE, BOTTOM            | GSM, 850 | GSM, 10024-DAC | 848.8, 251                      | 9.96              | 0.927                  | 40.9             | 22.4                     | 21.5                    |
|           | 0.00                    |          |                |                                 |                   |                        |                  |                          |                         |

#### Hardware Setup

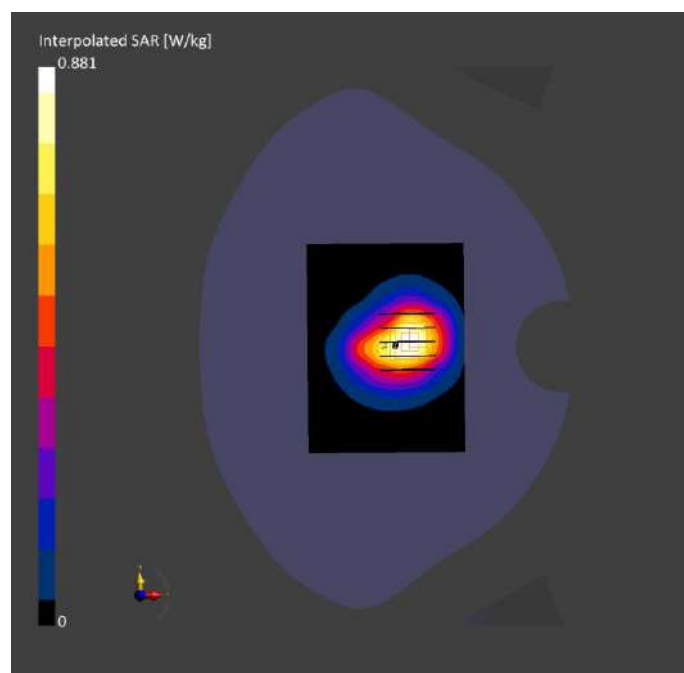
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-07 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

#### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

#### Measurement Results

|                    | Area Scan     | Zoom Scan     |
|--------------------|---------------|---------------|
| Date               | 2023-11-07    | 2023-11-07    |
| psSAR1g [W/kg]     | 0.353         | 0.413         |
| psSAR10g [W/kg]    | 0.225         | 0.208         |
| Power Drift [dB]   | -0.01         | 0.01          |
| Power Scaling      | Disabled      | Disabled      |
| Scaling Factor     |               |               |
| [dB]               |               |               |
| TSL Correction     | No correction | No correction |
| M2/M1 [%]          |               | 43.3          |
| Dist 3dB Peak [mm] |               | 10.7          |



**Meas.4 Left Head with Cheek on High Channel in GPRS1900 3Slots mode****Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom Section, TSL | Position, Test Distance [mm] | Band     | Group, UID     | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|----------------------|------------------------------|----------|----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| LeftHead, HSL        | CHEEK, 0.00                  | PCS 1900 | GSM, 10028-DAC | 1909.8, 810                     | 7.98              | 1.44                   | 39.1             | 22.5                     | 21.3                    |

**Hardware Setup**

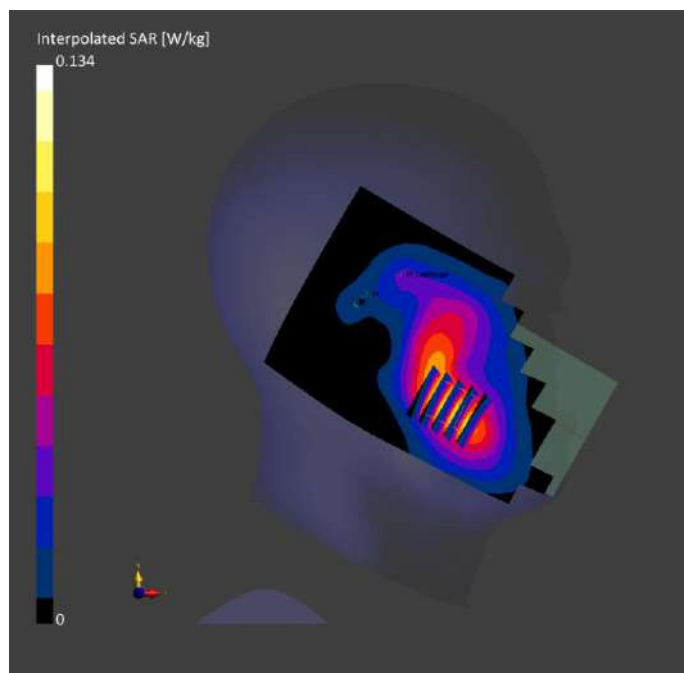
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-10 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | All points         |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

**Measurement Results**

|                    | Area Scan     | Zoom Scan     |
|--------------------|---------------|---------------|
| Date               | 2023-11-10    | 2023-11-10    |
| psSAR1g [W/kg]     | 0.019         | 0.020         |
| psSAR10g [W/kg]    | 0.011         | 0.012         |
| Power Drift [dB]   | 0.12          | 0.14          |
| Power Scaling      | Disabled      | Disabled      |
| Scaling Factor     |               |               |
| [dB]               |               |               |
| TSL Correction     | No correction | No correction |
| M2/M1 [%]          |               | 67.5          |
| Dist 3dB Peak [mm] |               | 15.7          |



**Meas.5 Body Plane with Bottom Edge 10mm on High Channel in GPRS1900 3Slots mode**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom   | Position, Test Distance | Band     | Group, UID     | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|-------------------------|----------|----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | EDGE, BOTTOM, 10.00     | PCS 1900 | GSM, 10024-DAC | 1909.8, 810                     | 7.98              | 1.44                   | 39.1             | 22.5                     | 21.3               |

**Hardware Setup**

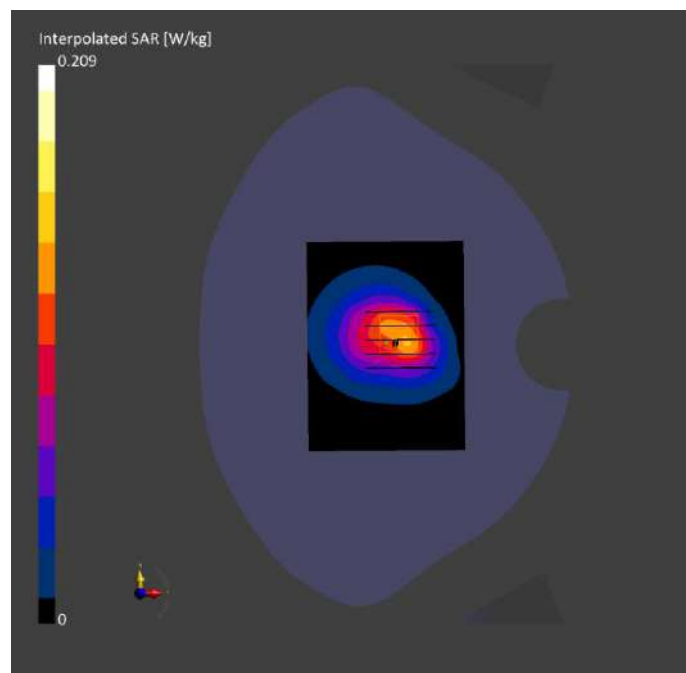
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-10 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | Y                  |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

**Measurement Results**

|                    | Area Scan     | Zoom Scan     |
|--------------------|---------------|---------------|
| Date               | 2023-11-10    | 2023-11-10    |
| psSAR1g [W/kg]     | 0.118         | 0.125         |
| psSAR10g [W/kg]    | 0.069         | 0.073         |
| Power Drift [dB]   | 0.01          | 0.00          |
| Power Scaling      | Disabled      | Disabled      |
| Scaling Factor     |               |               |
| [dB]               |               |               |
| TSL Correction     | No correction | No correction |
| M2/M1 [%]          |               | 57.0          |
| Dist 3dB Peak [mm] |               | 13.6          |



## Meas.6 Body Plane with Bottom Edge 0mm on High Channel in GPRS1900 3Slots mode

### Device under Test Properties

|                     |                     |          |
|---------------------|---------------------|----------|
| Model, Manufacturer | Dimensions [mm]     | DUT Type |
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom<br>Section,<br>TSL | Position,<br>Test<br>Distance<br>[mm] | Band        | Group,<br>UID         | Frequency<br>[MHz],<br>Channel<br>Number | Conversion<br>Factor | TSL<br>Conductivity<br>[S/m] | TSL<br>Permittivity | Ambient<br>Temperature<br>[°C] | Liquid<br>Temperature<br>[°C] |
|----------------------------|---------------------------------------|-------------|-----------------------|------------------------------------------|----------------------|------------------------------|---------------------|--------------------------------|-------------------------------|
| Flat,<br>HSL               | EDGE<br>BOTTOM,<br>0.00               | PCS<br>1900 | GSM,<br>10024-<br>DAC | 1909.8,<br>810                           | 7.98                 | 1.44                         | 39.1                | 22.5                           | 21.3                          |

### Hardware Setup

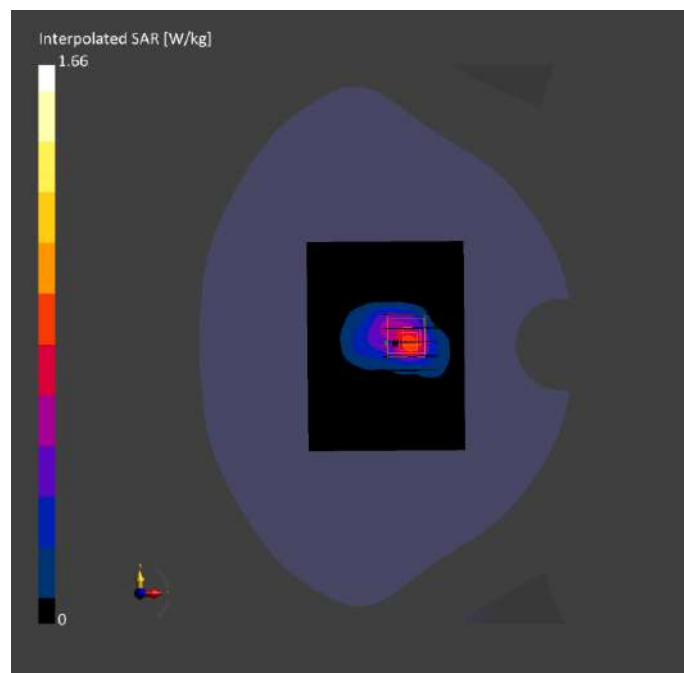
|                                            |                             |                             |                        |
|--------------------------------------------|-----------------------------|-----------------------------|------------------------|
| Phantom                                    | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
| Twin-SAM V5.0 (30deg<br>probe tilt) - 1859 | HBBL-600-10000 , 2023-11-10 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                        | Area Scan    | Zoom Scan          |
|------------------------|--------------|--------------------|
| Grid Extents<br>[mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]        | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface<br>[mm] | 3.0          | 1.4                |
| Graded Grid            | Yes          | Yes                |
| Grading Ratio          | 1.5          | 1.5                |
| MAIA                   | N/A          | N/A                |
| Surface                | VMS + 6p     | VMS + 6p           |
| Detection              |              |                    |
| Scan Method            | Measured     | Measured           |

### Measurement Results

|                       | Area Scan     | Zoom Scan     |
|-----------------------|---------------|---------------|
| Date                  | 2023-11-10    | 2023-11-10    |
| psSAR1g<br>[W/kg]     | 0.731         | 0.840         |
| psSAR10g<br>[W/kg]    | 0.373         | 0.394         |
| Power Drift [dB]      | 0.03          | 0.04          |
| Power Scaling         | Disabled      | Disabled      |
| Scaling Factor        |               |               |
| [dB]                  |               |               |
| TSL Correction        | No correction | No correction |
| M2/M1 [%]             |               | 46.8          |
| Dist 3dB Peak<br>[mm] |               | 8.0           |



## Meas.7 Left Head with Cheek on High Channel in WCDMA Band2 mode

### Device under Test Properties

|                     |                     |          |
|---------------------|---------------------|----------|
| Model, Manufacturer | Dimensions [mm]     | DUT Type |
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom<br>Section,<br>TSL | Position,<br>Test<br>Distance<br>[mm] | Band      | Group,<br>UID           | Frequency<br>[MHz],<br>Channel<br>Number | Conversion<br>Factor | TSL<br>Conductivity<br>[S/m] | TSL<br>Permittivity | Ambient<br>Temperature<br>[°C] | Liquid<br>Temperature<br>[°C] |
|----------------------------|---------------------------------------|-----------|-------------------------|------------------------------------------|----------------------|------------------------------|---------------------|--------------------------------|-------------------------------|
| LeftHead,<br>HSL           | CHEEK,<br>0.00                        | Band<br>2 | WCDMA,<br>10011-<br>CAC | 1907.6,<br>9538                          | 7.98                 | 1.41                         | 39.5                | 22.5                           | 21.3                          |

### Hardware Setup

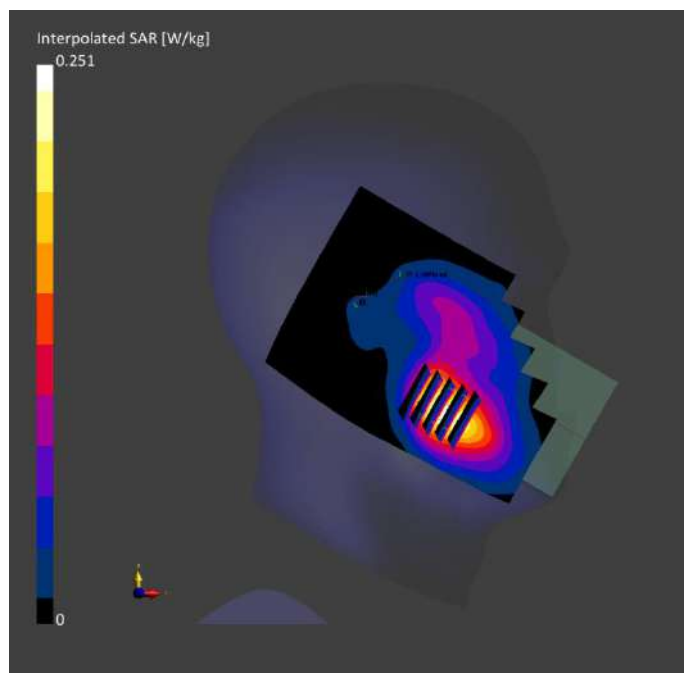
|                                            |                             |                             |                        |
|--------------------------------------------|-----------------------------|-----------------------------|------------------------|
| Phantom                                    | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
| Twin-SAM V5.0 (30deg<br>probe tilt) - 1859 | HBBL-600-10000 , 2023-11-10 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                        | Area Scan     | Zoom Scan          |
|------------------------|---------------|--------------------|
| Grid Extents<br>[mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]        | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface<br>[mm] | 3.0           | 1.4                |
| Graded Grid            | Yes           | Yes                |
| Grading Ratio          | 1.5           | 1.5                |
| MAIA                   | Y             | N/A                |
| Surface                | VMS + 6p      | VMS + 6p           |
| Detection              |               |                    |
| Scan Method            | Measured      | Measured           |

### Measurement Results

|                       | Area Scan     | Zoom Scan     |
|-----------------------|---------------|---------------|
| Date                  | 2023-11-10    | 2023-11-10    |
| psSAR1g<br>[W/kg]     | 0.155         | 0.160         |
| psSAR10g<br>[W/kg]    | 0.089         | 0.099         |
| Power Drift [dB]      | 0.03          | -0.11         |
| Power Scaling         | Disabled      | Disabled      |
| Scaling Factor        |               |               |
| [dB]                  |               |               |
| TSL Correction        | No correction | No correction |
| M2/M1 [%]             |               | 63.5          |
| Dist 3dB Peak<br>[mm] |               | 14.1          |



## Meas.8 Body Plane with Bottom Edge 10mm on High Channel in WCDMA Band2 mode

### Device under Test Properties

|                     |                     |          |
|---------------------|---------------------|----------|
| Model, Manufacturer | Dimensions [mm]     | DUT Type |
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom<br>Section,<br>TSL | Position,<br>Test<br>Distance<br>[mm] | Band      | Group,<br>UID           | Frequency<br>[MHz],<br>Channel<br>Number | Conversion<br>Factor | TSL<br>Conductivity<br>[S/m] | TSL<br>Permittivity | Ambient<br>Temperature<br>[°C] | Liquid<br>Temperature<br>[°C] |
|----------------------------|---------------------------------------|-----------|-------------------------|------------------------------------------|----------------------|------------------------------|---------------------|--------------------------------|-------------------------------|
| Flat,<br>HSL               | EDGE<br>BOTTOM,<br>10.00              | Band<br>2 | WCDMA,<br>10011-<br>CAC | 1907.6,<br>9538                          | 7.98                 | 1.41                         | 39.5                | 22.5                           | 21.3                          |

### Hardware Setup

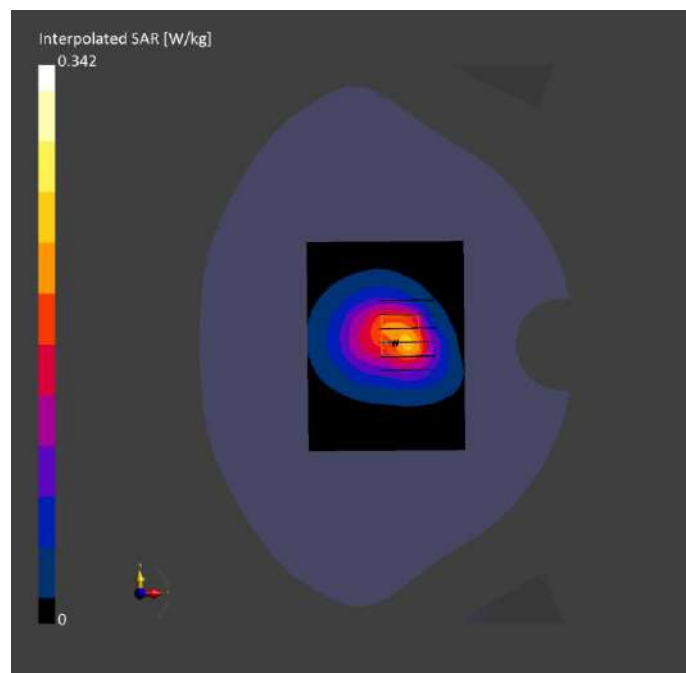
|                                            |                             |                             |                        |
|--------------------------------------------|-----------------------------|-----------------------------|------------------------|
| Phantom                                    | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
| Twin-SAM V5.0 (30deg<br>probe tilt) - 1859 | HBBL-600-10000 , 2023-11-10 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                        | Area Scan    | Zoom Scan          |
|------------------------|--------------|--------------------|
| Grid Extents<br>[mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]        | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface<br>[mm] | 3.0          | 1.4                |
| Graded Grid            | Yes          | Yes                |
| Grading Ratio          | 1.5          | 1.5                |
| MAIA                   | N/A          | N/A                |
| Surface                | VMS + 6p     | VMS + 6p           |
| Detection              |              |                    |
| Scan Method            | Measured     | Measured           |

### Measurement Results

|                       | Area Scan     | Zoom Scan     |
|-----------------------|---------------|---------------|
| Date                  | 2023-11-10    | 2023-11-10    |
| psSAR1g<br>[W/kg]     | 0.196         | 0.204         |
| psSAR10g<br>[W/kg]    | 0.114         | 0.118         |
| Power Drift [dB]      | -0.01         | -0.02         |
| Power Scaling         | Disabled      | Disabled      |
| Scaling Factor        |               |               |
| [dB]                  |               |               |
| TSL Correction        | No correction | No correction |
| M2/M1 [%]             |               | 57.2          |
| Dist 3dB Peak<br>[mm] |               | 12.5          |



## Meas.9 Body Plane with Bottom Edge 0mm on High Channel in WCDMA Band2 mode

### Device under Test Properties

|                     |                     |          |
|---------------------|---------------------|----------|
| Model, Manufacturer | Dimensions [mm]     | DUT Type |
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom Section, TSL | Position, Test Distance [mm] | Band   | Group, UID       | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|----------------------|------------------------------|--------|------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL            | EDGE BOTTOM, 0.00            | Band 2 | WCDMA, 10011-CAC | 1907.6, 9538                    | 7.98              | 1.41                   | 39.5             | 22.5                     | 21.3                    |

### Hardware Setup

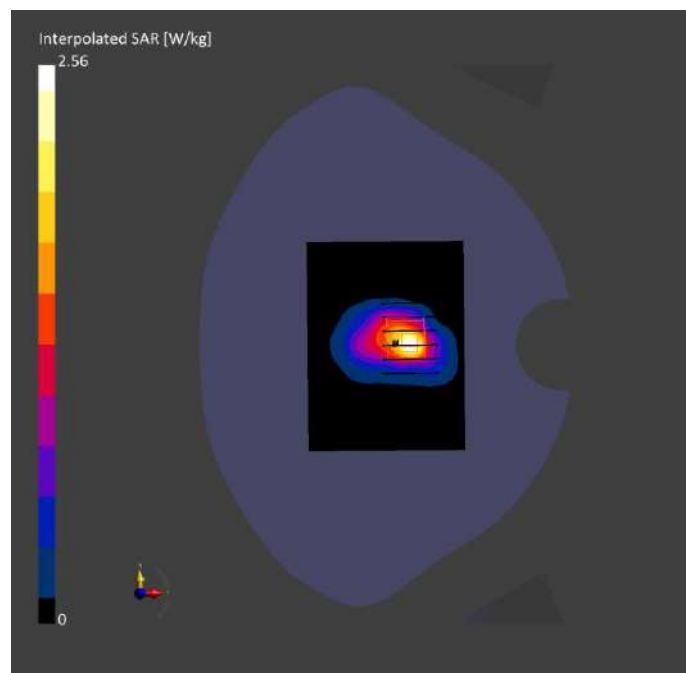
|                                         |                             |                             |                        |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-10 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                    | Area Scan     | Zoom Scan     |
|--------------------|---------------|---------------|
| Date               | 2023-11-10    | 2023-11-10    |
| psSAR1g [W/kg]     | 1.21          | 1.30          |
| psSAR10g [W/kg]    | 0.605         | 0.616         |
| Power Drift [dB]   | 0.00          | 0.01          |
| Power Scaling      | Disabled      | Disabled      |
| Scaling Factor     |               |               |
| [dB]               |               |               |
| TSL Correction     | No correction | No correction |
| M2/M1 [%]          |               | 43.4          |
| Dist 3dB Peak [mm] |               | 8.0           |



## Meas.10 Left Head with Cheek on Middle Channel in WCDMA Band4 mode

### Device under Test Properties

|                     |                     |          |
|---------------------|---------------------|----------|
| Model, Manufacturer | Dimensions [mm]     | DUT Type |
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom<br>Section,<br>TSL | Position,<br>Test<br>Distance<br>[mm] | Band      | Group,<br>UID           | Frequency<br>[MHz],<br>Channel<br>Number | Conversion<br>Factor | TSL<br>Conductivity<br>[S/m] | TSL<br>Permittivity | Ambient<br>Temperature<br>[°C] | Liquid<br>Temperature<br>[°C] |
|----------------------------|---------------------------------------|-----------|-------------------------|------------------------------------------|----------------------|------------------------------|---------------------|--------------------------------|-------------------------------|
| LeftHead,<br>HSL           | CHEEK,<br>0.00                        | Band<br>4 | WCDMA,<br>10011-<br>CAC | 1732.4,<br>1412                          | 8.52                 | 1.34                         | 40.5                | 22.6                           | 21.6                          |

### Hardware Setup

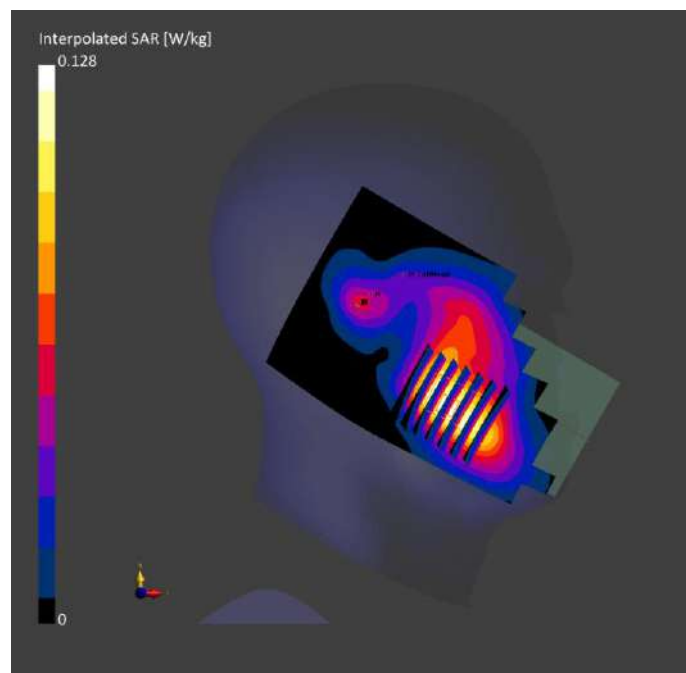
|                                            |                             |                             |                        |
|--------------------------------------------|-----------------------------|-----------------------------|------------------------|
| Phantom                                    | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
| Twin-SAM V5.0 (30deg<br>probe tilt) - 1859 | HBBL-600-10000 , 2023-11-09 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                        | Area Scan     | Zoom Scan          |
|------------------------|---------------|--------------------|
| Grid Extents<br>[mm]   | 120.0 x 210.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]        | 12.0 x 12.0   | 5.0 x 5.0 x 5.0    |
| Sensor Surface<br>[mm] | 3.0           | 1.4                |
| Graded Grid            | Yes           | Yes                |
| Grading Ratio          | 1.5           | 1.5                |
| MAIA                   | Y             | Y                  |
| Surface                | VMS + 6p      | All points         |
| Detection              |               |                    |
| Scan Method            | Measured      | Measured           |

### Measurement Results

|                       | Area Scan     | Zoom Scan     |
|-----------------------|---------------|---------------|
| Date                  | 2023-11-09    | 2023-11-09    |
| psSAR1g<br>[W/kg]     | 0.108         | 0.123         |
| psSAR10g<br>[W/kg]    | 0.064         | 0.078         |
| Power Drift [dB]      | -0.03         | -0.01         |
| Power Scaling         | Disabled      | Disabled      |
| Scaling Factor        |               |               |
| [dB]                  |               |               |
| TSL Correction        | No correction | No correction |
| M2/M1 [%]             |               | 68.0          |
| Dist 3dB Peak<br>[mm] |               | 14.4          |



## Meas.11 Body Plane with Bottom Edge 10mm on Middle Channel in WCDMA Band4 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL  | Band   | Group, UID               | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|--------|--------------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 4 | WCDMA ,<br>10011-<br>CAC | 1732.4,<br>1412                 | 8.52              | 1.34                   | 40.5             | 22.6                     | 21.6                    |

### Hardware Setup

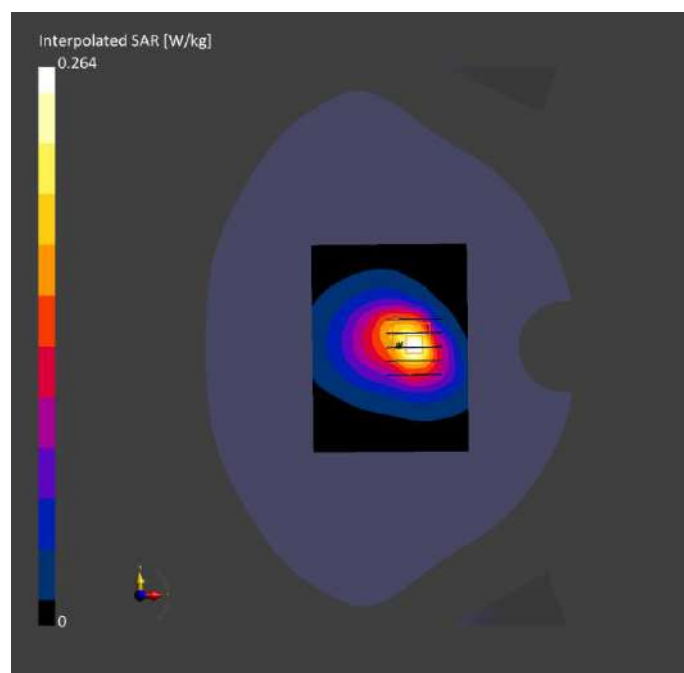
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-09 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-09    | 2023-11-09    |
| psSAR1g [W/kg]      | 0.148         | 0.154         |
| psSAR10g [W/kg]     | 0.082         | 0.086         |
| Power Drift [dB]    | -0.00         | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 55.8          |
| Dist 3dB Peak [mm]  |               | 13.7          |



## Meas.12 Body Plane with Bottom Edge 0mm on Middle Channel in WCDMA Band4 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band   | Group, UID               | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|--------|--------------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00 | Band 4 | WCDMA ,<br>10011-<br>CAC | 1732.4,<br>1412                 | 8.52              | 1.34                   | 40.5             | 22.6                     | 21.6                    |

### Hardware Setup

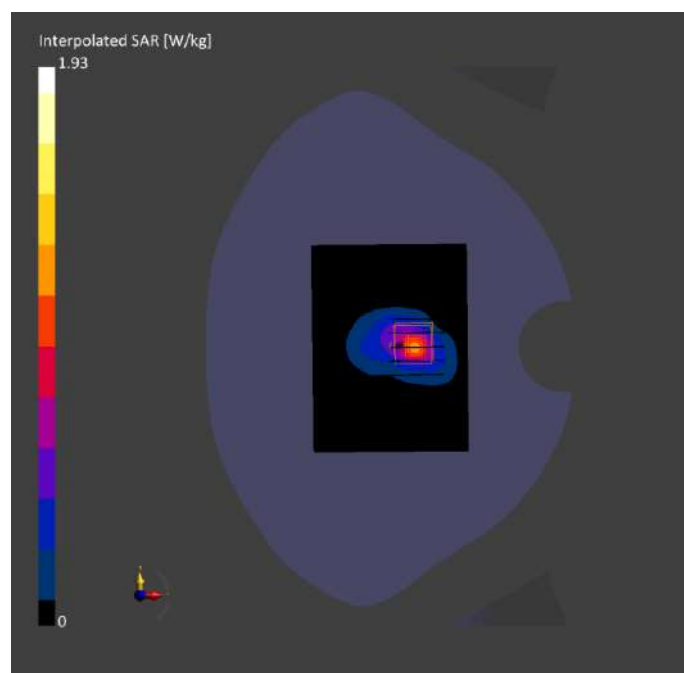
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-09 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-09    | 2023-11-09    |
| psSAR1g [W/kg]      | 0.892         | 0.925         |
| psSAR10g [W/kg]     | 0.434         | 0.424         |
| Power Drift [dB]    | 0.01          | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 44.5          |
| Dist 3dB Peak [mm]  |               | 8.0           |



## Meas.13 Left Head with Cheek on Middle Channel in WCDMA Band5 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Section, TSL | Band   | Group, UID       | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|---------------|-----------------------------|--------|------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| LeftHead, HSL | CHEEK, 0.00                 | Band 5 | WCDMA, 10011-CAC | 836.4, 4182                     | 9.96              | 0.907                  | 42.6             | 22.4                     | 21.5                    |

### Hardware Setup

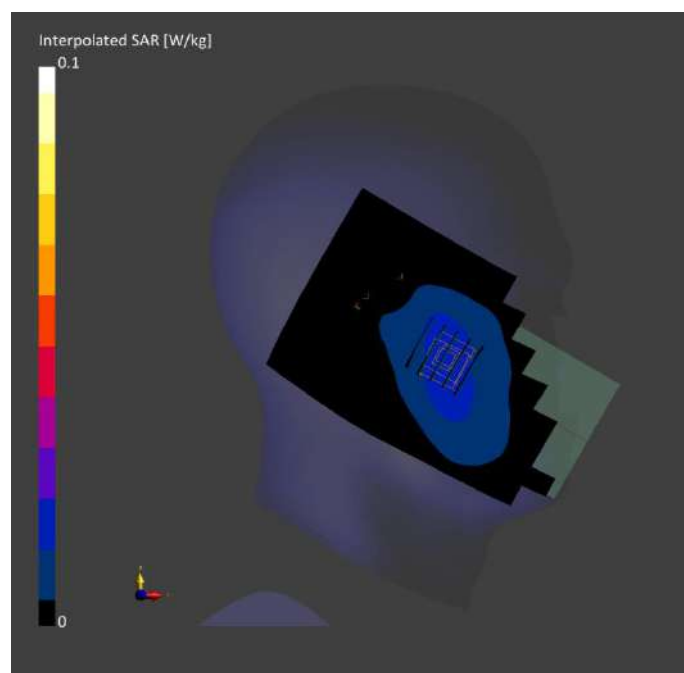
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-07 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | All points         |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-07    | 2023-11-07    |
| psSAR1g [W/kg]      | 0.013         | 0.012         |
| psSAR10g [W/kg]     | 0.009         | 0.009         |
| Power Drift [dB]    | -0.06         | -0.05         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 81.5          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.14 Body Plane with Bottom Edge 10mm on Middle Channel in WCDMA Band5 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL  | Band   | Group, UID                  | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|--------|-----------------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 5 | WCDMA<br>,<br>10011-<br>CAC | 836.4,<br>4182                  | 9.96              | 0.907                  | 42.6             | 22.4                     | 21.5                    |

### Hardware Setup

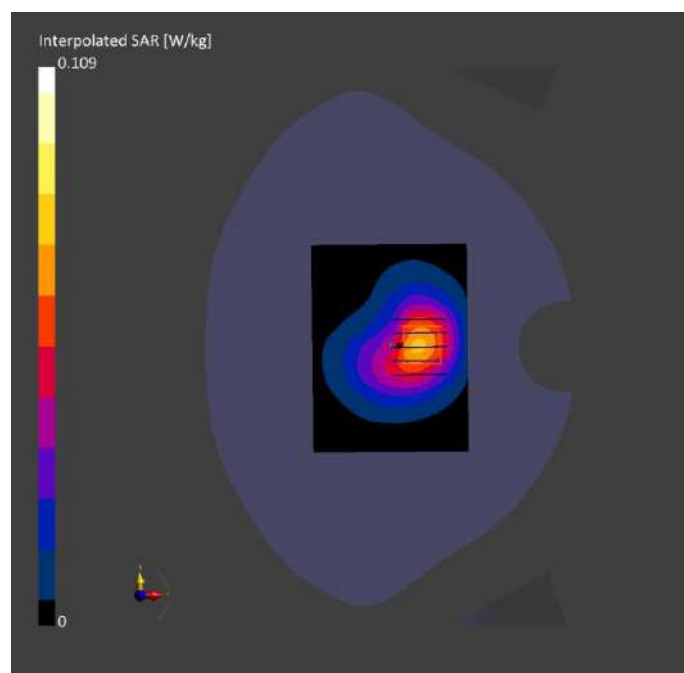
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-07 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | Y                  |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-07    | 2023-11-07    |
| psSAR1g [W/kg]      | 0.060         | 0.065         |
| psSAR10g [W/kg]     | 0.039         | 0.039         |
| Power Drift [dB]    | 0.07          | 0.00          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 57.6          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.15 Body Plane with Bottom Edge 0mm on Middle Channel in WCDMA Band5 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band   | Group, UID                  | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|--------|-----------------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00 | Band 5 | WCDMA<br>,<br>10011-<br>CAC | 836.4,<br>4182                  | 9.96              | 0.907                  | 42.6             | 22.4                     | 21.5                    |

### Hardware Setup

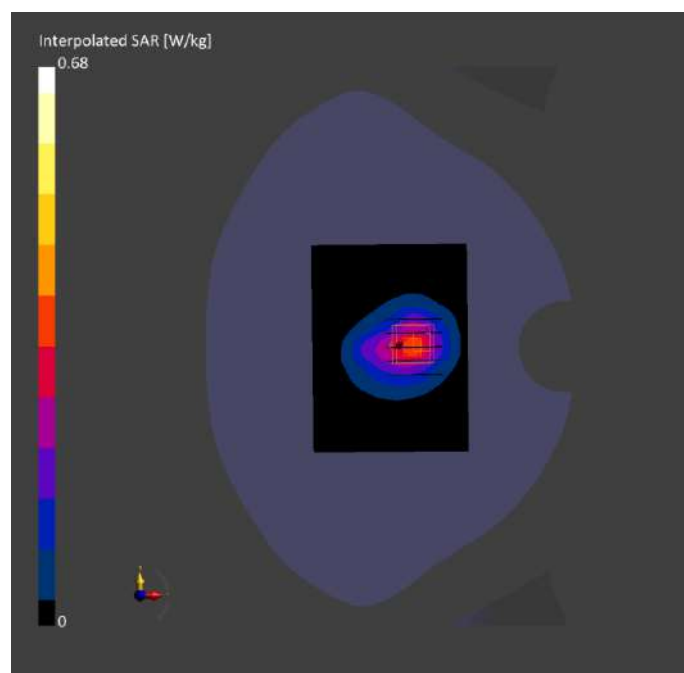
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-07 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-07    | 2023-11-07    |
| psSAR1g [W/kg]      | 0.317         | 0.330         |
| psSAR10g [W/kg]     | 0.193         | 0.169         |
| Power Drift [dB]    | 0.01          | -0.01         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 44.4          |
| Dist 3dB Peak [mm]  |               | 8.6           |



## Meas.16 Left Head with Cheek on Middle Channel in LTE Band7 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Distance [mm] | Band   | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|------------------------------|--------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                  | Band 7 | LTE-FDD, 10169-CAF | 2535.0, 21100                   | 7.41              | 1.90                   | 38.7             | 22.4                     | 21.4               |

### Hardware Setup

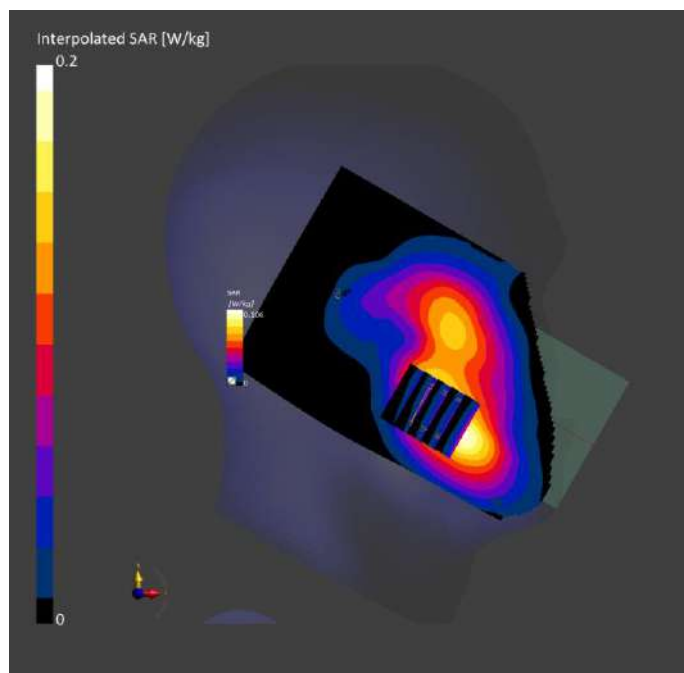
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-12 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0   | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-12    | 2023-11-12    |
| psSAR1g [W/kg]      | 0.114         | 0.115         |
| psSAR10g [W/kg]     | 0.061         | 0.064         |
| Power Drift [dB]    | 0.09          | -0.01         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 57.0          |
| Dist 3dB Peak [mm]  |               | 14.9          |



## Meas.17 Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band7 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL  | Band   | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|--------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 7 | LTE-FDD,<br>10169-CAF | 2535.0, 21100                   | 7.41              | 1.90                   | 38.7             | 22.4                     | 21.4                    |

### Hardware Setup

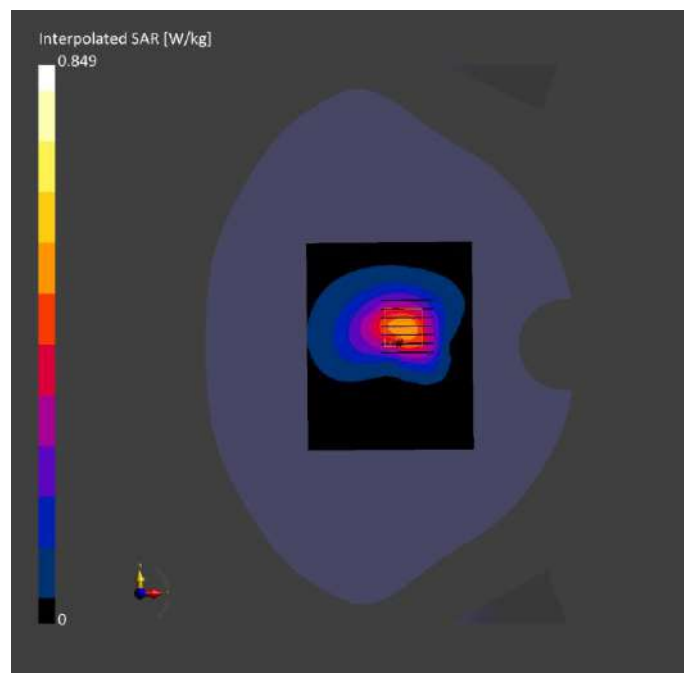
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-12 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 96.0 x 120.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0  | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-12    | 2023-11-12    |
| psSAR1g [W/kg]      | 0.448         | 0.462         |
| psSAR10g [W/kg]     | 0.237         | 0.246         |
| Power Drift [dB]    | 0.02          | 0.00          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 52.8          |
| Dist 3dB Peak [mm]  |               | 13.0          |



## Meas.18 Body Plane with Bottom Edge 0mm on Middle Channel in LTE Band7 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Distance [mm] | Band   | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|--------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00  | Band 7 | LTE-FDD,<br>10169-CAF | 2535.0, 21100                   | 7.41              | 1.90                   | 38.7             | 22.4                     | 21.4                    |

### Hardware Setup

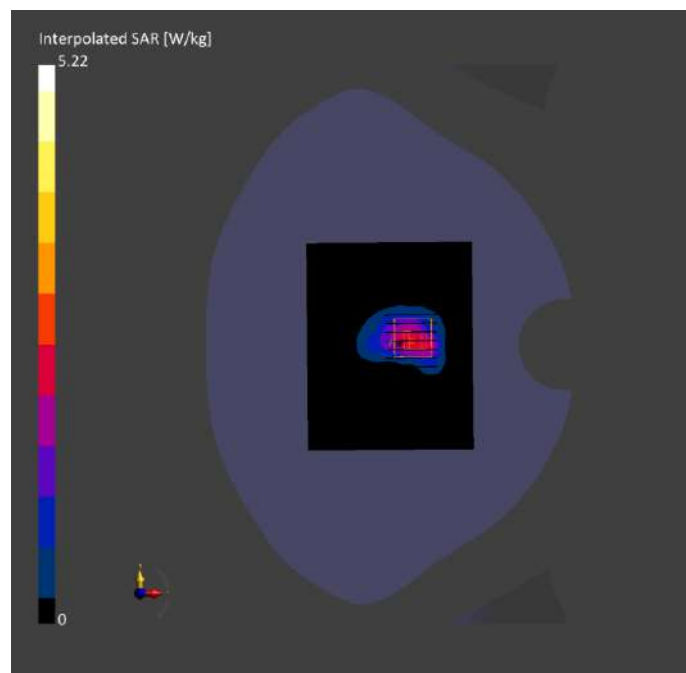
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-12 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 96.0 x 120.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0  | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-12    | 2023-11-12    |
| psSAR1g [W/kg]      | 2.09          | 2.40          |
| psSAR10g [W/kg]     | 0.996         | 1.05          |
| Power Drift [dB]    | -0.00         | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 44.6          |
| Dist 3dB Peak [mm]  |               | 7.6           |



## Meas.19 Left Head with Cheek on Middle Channel in LTE Band12 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Distance [mm] | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                  | Band 12 | LTE-FDD, 10175-CAH | 707.5, 23095                    | 10.31             | 0.901                  | 43.2             | 22.4                     | 21.5               |

### Hardware Setup

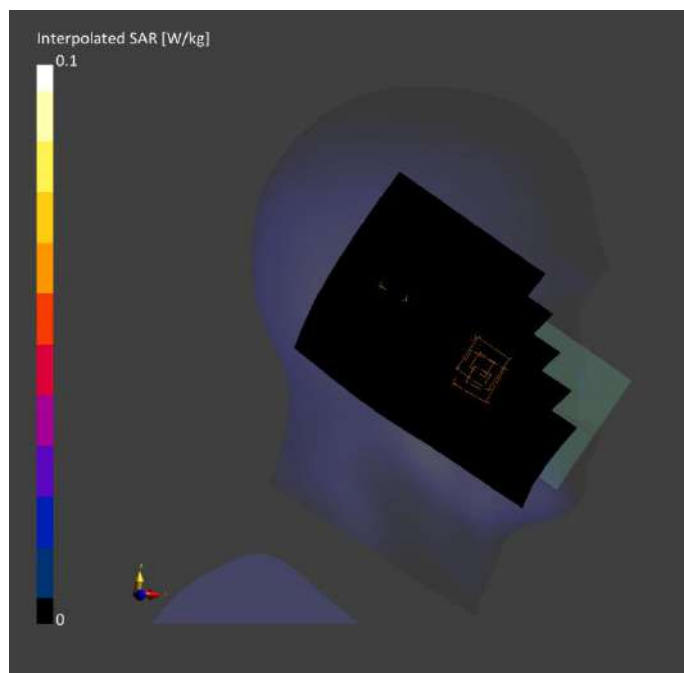
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-05 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface Detection   | VMS + 6p      | VMS + 6p           |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-05    | 2023-11-05    |
| psSAR1g [W/kg]      | 0.007         | 0.007         |
| psSAR10g [W/kg]     | 0.005         | 0.006         |
| Power Drift [dB]    | -0.10         | -0.05         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 83.6          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.20 Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band12 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Distance [mm] | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 12 | LTE-FDD,<br>10175-CAH | 707.5, 23095                    | 10.31             | 0.901                  | 43.2             | 22.4                     | 21.5                    |

### Hardware Setup

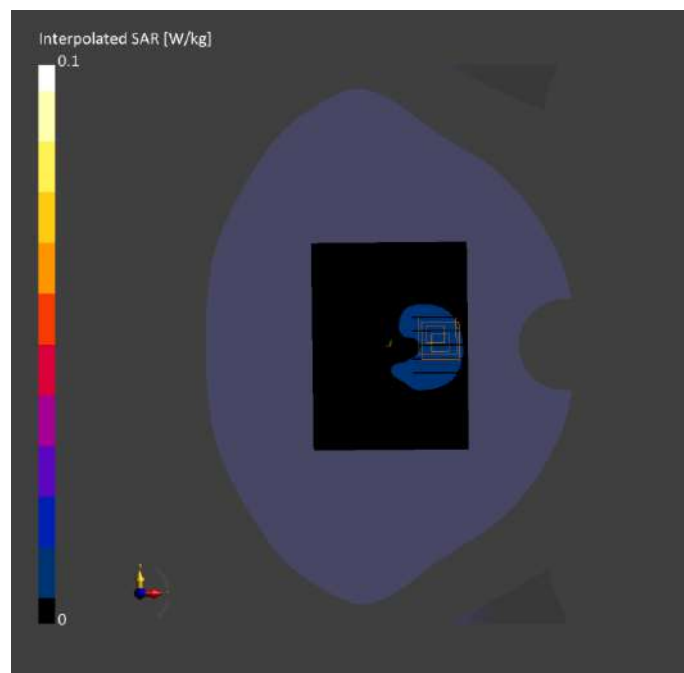
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-05 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | Y                  |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-05    | 2023-11-05    |
| psSAR1g [W/kg]      | 0.013         | 0.014         |
| psSAR10g [W/kg]     | 0.009         | 0.008         |
| Power Drift [dB]    | 0.04          | 0.04          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 50.4          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.21 Body Plane with Bottom Edge 0mm on Middle Channel in LTE Band12 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00 | Band 12 | LTE-FDD,<br>10175-CAH | 707.5, 23095                    | 10.31             | 0.901                  | 43.2             | 22.4                     | 21.5                    |

### Hardware Setup

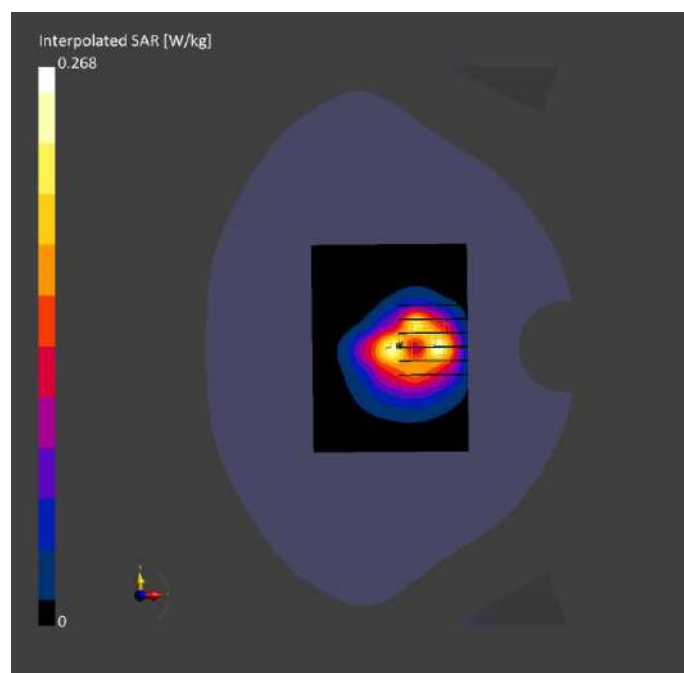
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-05 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-05    | 2023-11-05    |
| psSAR1g [W/kg]      | 0.071         | 0.105         |
| psSAR10g [W/kg]     | 0.044         | 0.046         |
| Power Drift [dB]    | -0.04         | -0.04         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 34.0          |
| Dist 3dB Peak [mm]  |               | 8.0           |



## Meas.22 Left Head with Cheek on Middle Channel in LTE Band13 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Section, TSL | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|-----------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                 | Band 13 | LTE-FDD, 10175-CAH | 782.0, 23230                    | 10.31             | 0.925                  | 41.9             | 22.4                     | 21.5               |

### Hardware Setup

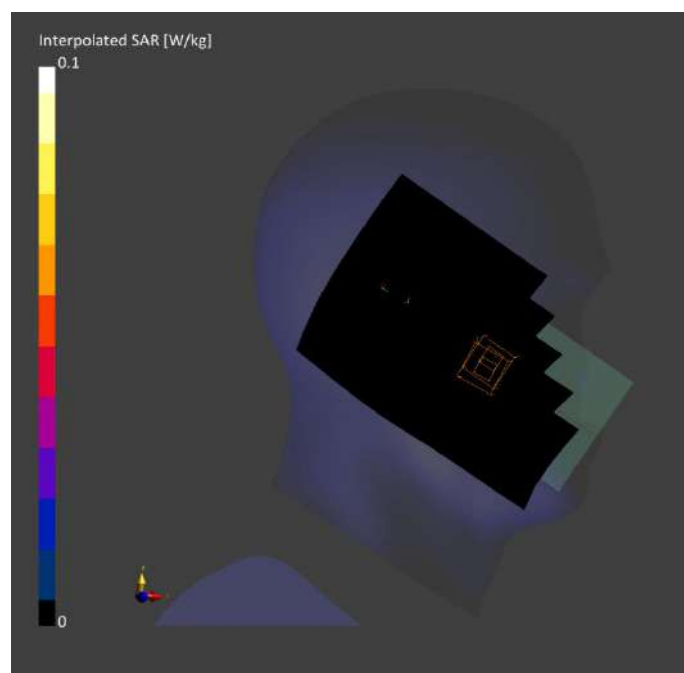
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-05 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-05    | 2023-11-05    |
| psSAR1g [W/kg]      | 0.004         | 0.004         |
| psSAR10g [W/kg]     | 0.003         | 0.003         |
| Power Drift [dB]    | -0.08         | 0.02          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 93.0          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.23 Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band13 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL  | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 13 | LTE-FDD,<br>10175-CAH | 782.0, 23230                    | 10.31             | 0.925                  | 41.9             | 22.4                     | 21.5                    |

### Hardware Setup

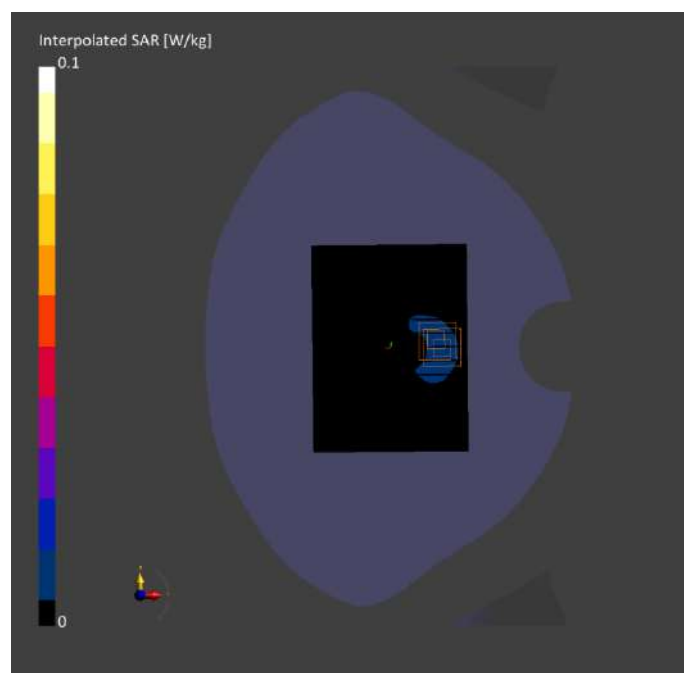
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-05 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | Y                  |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-05    | 2023-11-05    |
| psSAR1g [W/kg]      | 0.011         | 0.011         |
| psSAR10g [W/kg]     | 0.007         | 0.006         |
| Power Drift [dB]    | -0.05         | 0.05          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 49.3          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.24 Body Plane with Bottom Edge 0mm on Middle Channel in LTE Band13 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00 | Band 13 | LTE-FDD,<br>10175-CAH | 782.0, 23230                    | 10.31             | 0.925                  | 41.9             | 22.4                     | 21.5                    |

### Hardware Setup

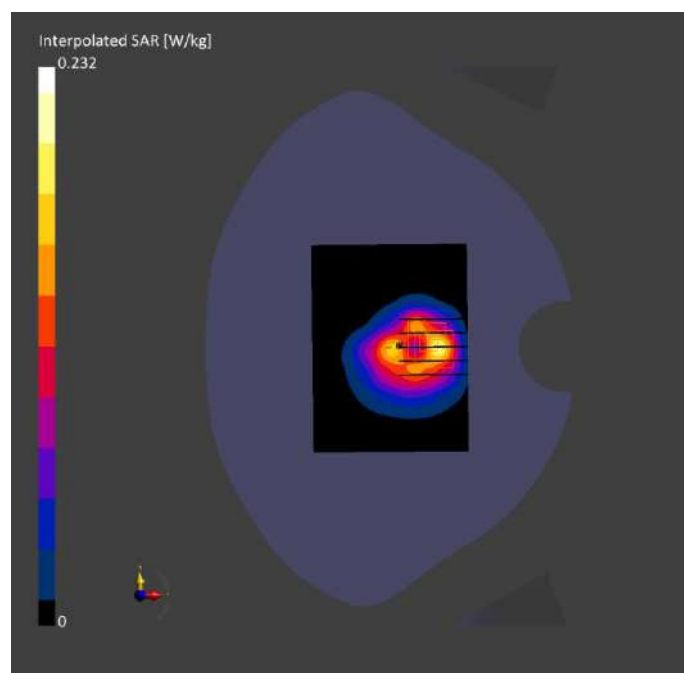
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-05 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-05    | 2023-11-05    |
| psSAR1g [W/kg]      | 0.065         | 0.092         |
| psSAR10g [W/kg]     | 0.039         | 0.040         |
| Power Drift [dB]    | -0.01         | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 28.1          |
| Dist 3dB Peak [mm]  |               | 6.4           |



## Meas.25 Left Head with Cheek on High Channel in LTE Band25 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Distance [mm] | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                  | Band 25 | LTE-FDD, 10169-CAF | 1905.0, 26590                   | 7.98              | 1.44                   | 39.7             | 22.6                     | 21.2               |

### Hardware Setup

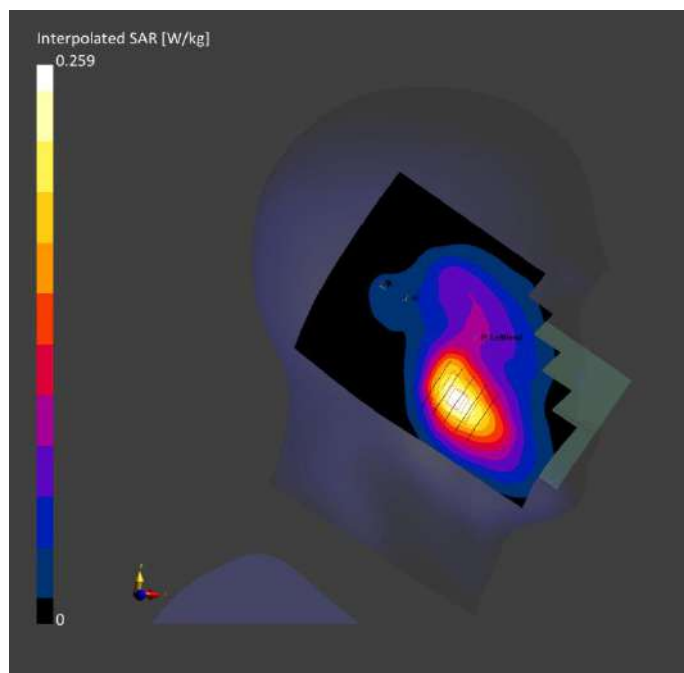
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-11 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-11    | 2023-11-11    |
| psSAR1g [W/kg]      | 0.161         | 0.168         |
| psSAR10g [W/kg]     | 0.092         | 0.104         |
| Power Drift [dB]    | -0.03         | -0.08         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 64.9          |
| Dist 3dB Peak [mm]  |               | 12.6          |



## Meas.26 Body Plane with Bottom Edge 10mm on High Channel in LTE Band25 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL  | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 25 | LTE-FDD,<br>10169-CAF | 1905.0, 26590                   | 7.98              | 1.44                   | 39.7             | 22.6                     | 21.2                    |

### Hardware Setup

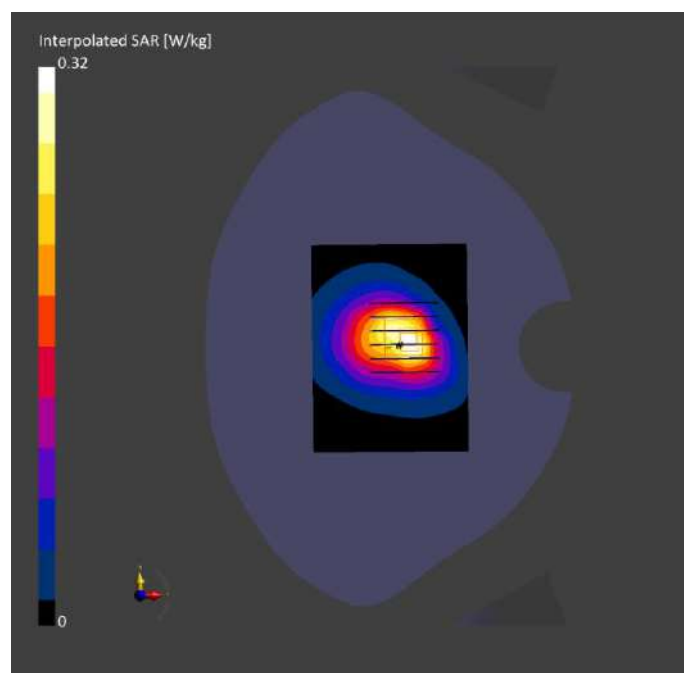
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-11 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-11    | 2023-11-11    |
| psSAR1g [W/kg]      | 0.180         | 0.191         |
| psSAR10g [W/kg]     | 0.104         | 0.110         |
| Power Drift [dB]    | 0.01          | 0.04          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 56.9          |
| Dist 3dB Peak [mm]  |               | 12.5          |



## Meas.27 Body Plane with Bottom Edge 0mm on High Channel in LTE Band25 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Distance [mm] | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00  | Band 25 | LTE-FDD,<br>10169-CAF | 1905.0, 26590                   | 7.98              | 1.44                   | 39.7             | 22.6                     | 21.2                    |

### Hardware Setup

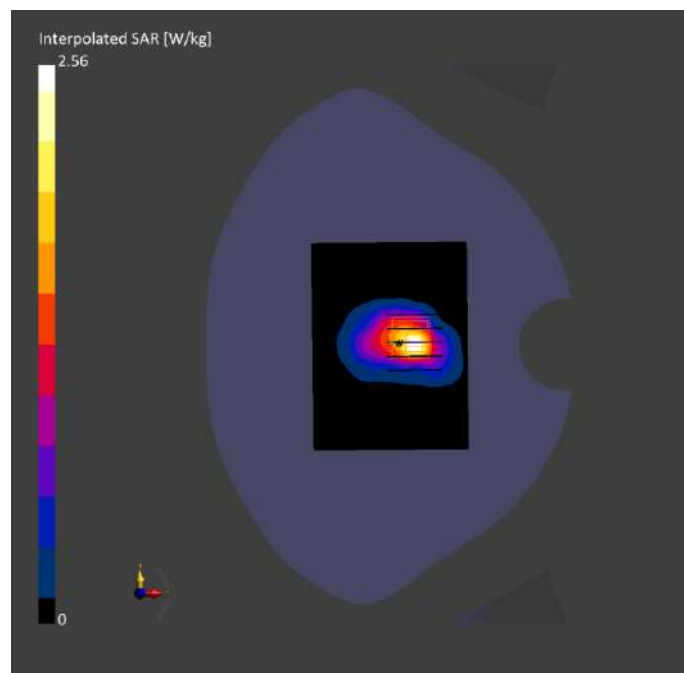
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-11 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-11    | 2023-11-11    |
| psSAR1g [W/kg]      | 1.19          | 1.28          |
| psSAR10g [W/kg]     | 0.597         | 0.604         |
| Power Drift [dB]    | -0.18         | -0.07         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 46.7          |
| Dist 3dB Peak [mm]  |               | 6.6           |



## Meas.28 Left Head with Cheek on High Channel in LTE Band26 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Distance [mm] | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                  | Band 26 | LTE-FDD, 10181-CAF | 841.5, 26965                    | 9.96              | 0.920                  | 41.3             | 22.7                     | 21.4               |

### Hardware Setup

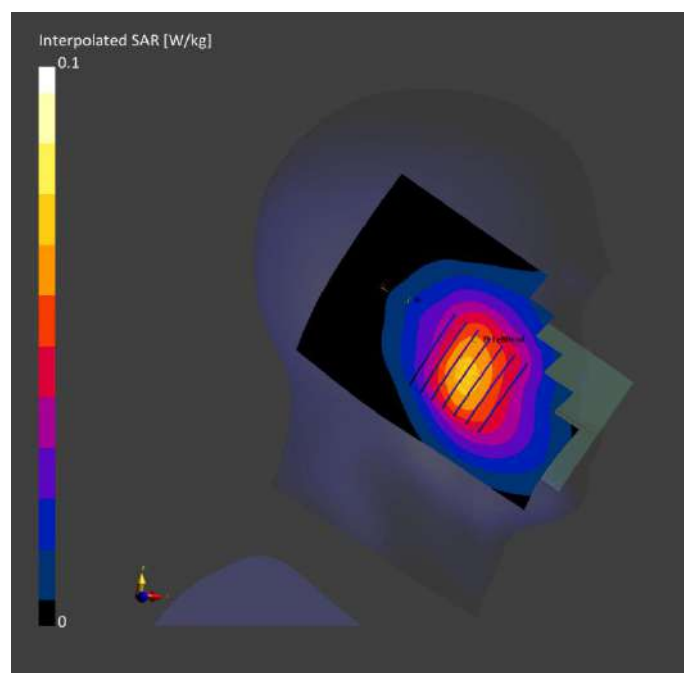
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-08 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-08    | 2023-11-08    |
| psSAR1g [W/kg]      | 0.062         | 0.066         |
| psSAR10g [W/kg]     | 0.042         | 0.050         |
| Power Drift [dB]    | -0.01         | 0.05          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 75.2          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.29 Body Plane with Bottom Edge 10mm on High Channel in LTE Band26 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL  | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 26 | LTE-FDD,<br>10181-CAF | 841.5, 26965                    | 9.96              | 0.920                  | 41.3             | 22.7                     | 21.4                    |

### Hardware Setup

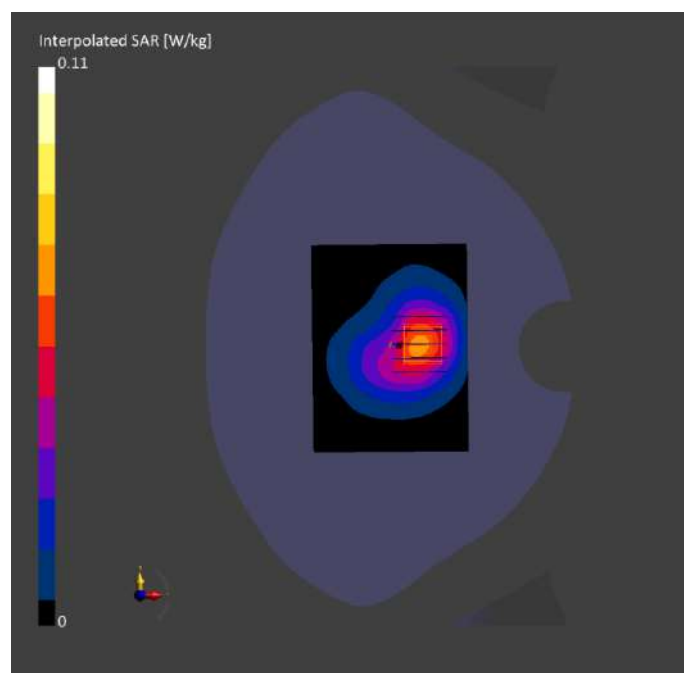
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-08 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | Y                  |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-08    | 2023-11-08    |
| psSAR1g [W/kg]      | 0.059         | 0.065         |
| psSAR10g [W/kg]     | 0.039         | 0.038         |
| Power Drift [dB]    | -0.05         | -0.01         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 56.0          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.30 Body Plane with Bottom Edge 0mm on High Channel in LTE Band26 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Distance [mm] | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00  | Band 26 | LTE-FDD,<br>10181-CAF | 841.5,<br>26965                 | 9.96              | 0.920                  | 41.3             | 22.7                     | 21.4                    |

### Hardware Setup

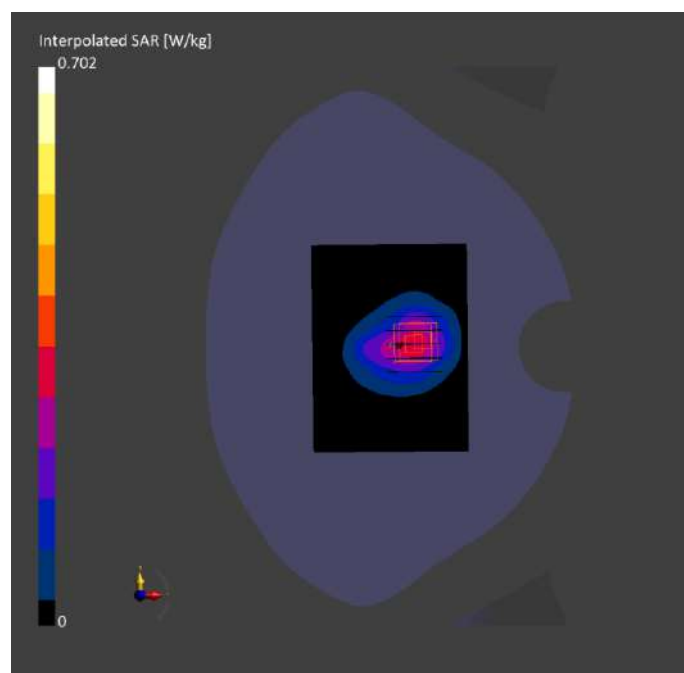
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-08 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-08    | 2023-11-08    |
| psSAR1g [W/kg]      | 0.296         | 0.335         |
| psSAR10g [W/kg]     | 0.185         | 0.170         |
| Power Drift [dB]    | -0.01         | 0.00          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 44.1          |
| Dist 3dB Peak [mm]  |               | 9.3           |



## Meas.31 Left Head with Cheek on High Channel in LTE Band66 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Distance [mm] | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                  | Band 66 | LTE-FDD, 10169-CAF | 1770.0, 132572                  | 8.52              | 1.39                   | 38.9             | 22.6                     | 21.6               |

### Hardware Setup

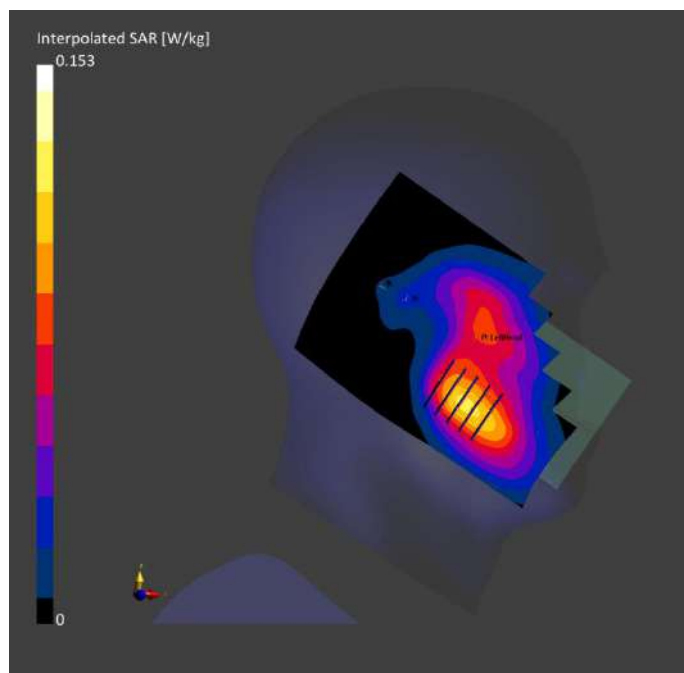
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-09 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-09    | 2023-11-09    |
| psSAR1g [W/kg]      | 0.098         | 0.101         |
| psSAR10g [W/kg]     | 0.059         | 0.066         |
| Power Drift [dB]    | 0.01          | -0.11         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 67.8          |
| Dist 3dB Peak [mm]  |               | 15.7          |



## Meas.32 Body Plane with Right Edge 10mm on High Channel in LTE Band66 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE, RIGHT, 10.00          | Band 66 | LTE-FDD, 10169-CAF | 1770.0, 132572                  | 8.52              | 1.39                   | 38.9             | 22.6                     | 21.6                    |

### Hardware Setup

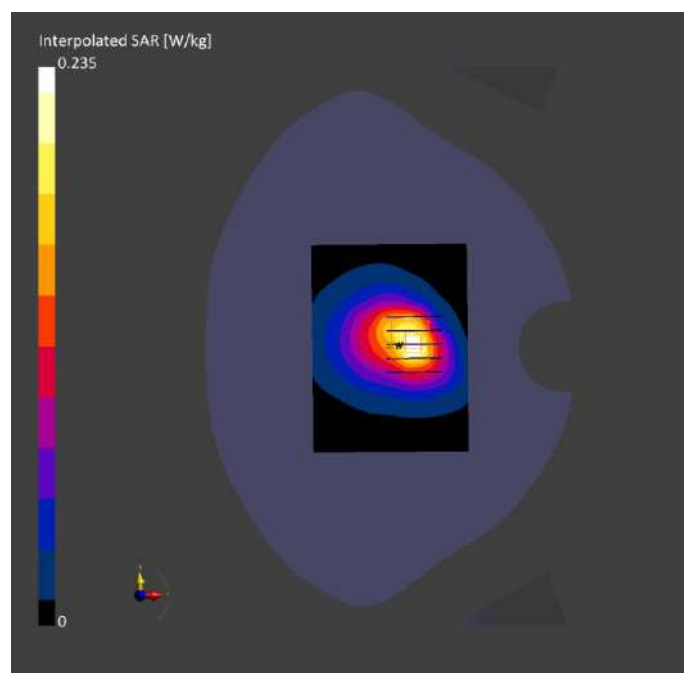
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-09 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-09    | 2023-11-09    |
| psSAR1g [W/kg]      | 0.130         | 0.138         |
| psSAR10g [W/kg]     | 0.074         | 0.077         |
| Power Drift [dB]    | -0.02         | 0.06          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 56.4          |
| Dist 3dB Peak [mm]  |               | 13.7          |



## Meas.33 Body Plane with Bottom Edge 0mm on High Channel in LTE Band66 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Distance [mm] | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00  | Band 66 | LTE-FDD,<br>10169-CAF | 1770.0,<br>132572               | 8.52              | 1.39                   | 38.9             | 22.6                     | 21.6               |

### Hardware Setup

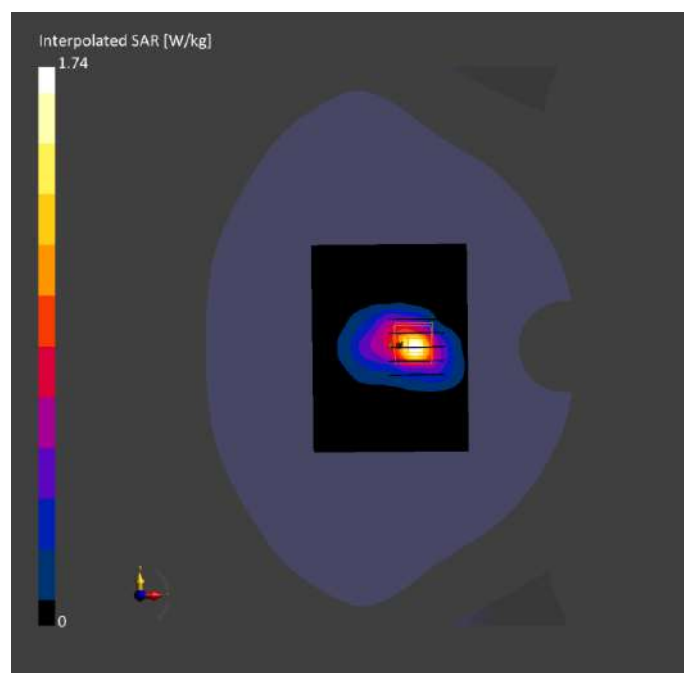
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-09 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-09    | 2023-11-09    |
| psSAR1g [W/kg]      | 0.811         | 0.839         |
| psSAR10g [W/kg]     | 0.396         | 0.386         |
| Power Drift [dB]    | -0.02         | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 45.0          |
| Dist 3dB Peak [mm]  |               | 8.0           |



## Meas.34 Left Head with Cheek on Middle Channel in LTE Band71 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Distance [mm] | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                  | Band 71 | LTE-FDD, 10169-CAF | 673.0, 133222                   | 10.31             | 0.879                  | 43.7             | 22.6                     | 21.5               |

### Hardware Setup

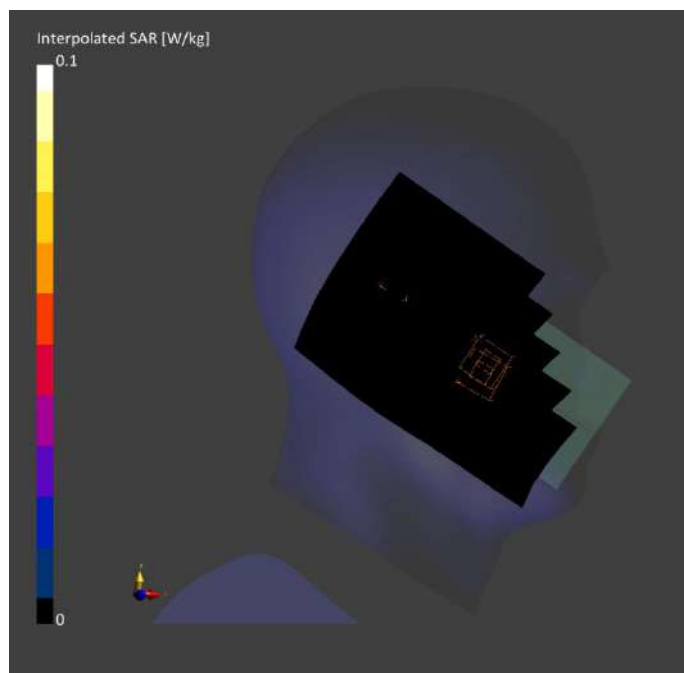
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-06 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-06    | 2023-11-06    |
| psSAR1g [W/kg]      | 0.007         | 0.007         |
| psSAR10g [W/kg]     | 0.005         | 0.005         |
| Power Drift [dB]    | 0.06          | -0.03         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 83.0          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.35 Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band71 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL  | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 71 | LTE-FDD,<br>10169-CAF | 673.0, 133222                   | 10.31             | 0.879                  | 43.7             | 22.6                     | 21.5                    |

### Hardware Setup

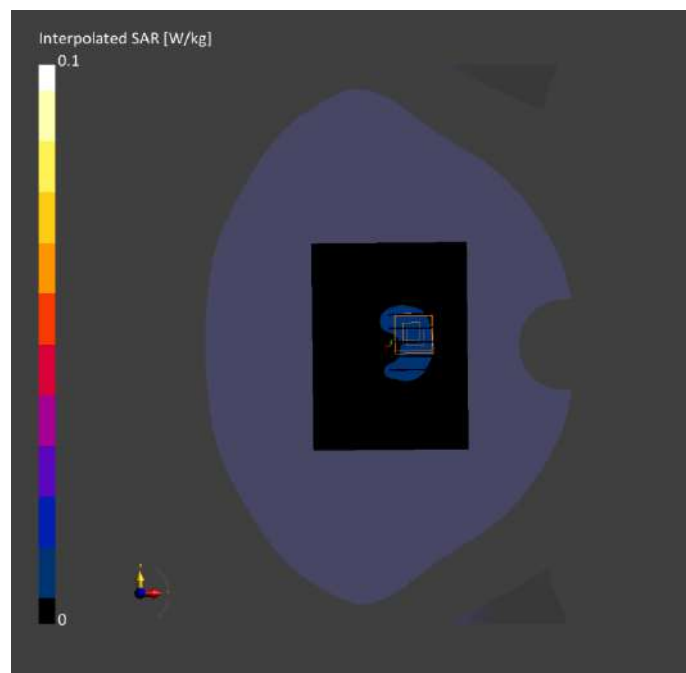
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-06 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | Y                  |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-06    | 2023-11-06    |
| psSAR1g [W/kg]      | 0.012         | 0.012         |
| psSAR10g [W/kg]     | 0.007         | 0.007         |
| Power Drift [dB]    | -0.04         | 0.04          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 54.4          |
| Dist 3dB Peak [mm]  |               | > 16.0        |



## Meas.36 Body Plane with Bottom Edge 0mm on Middle Channel in LTE Band71 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Distance [mm] | Band    | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00  | Band 71 | LTE-FDD,<br>10169-CAF | 673.0,<br>133222                | 10.31             | 0.879                  | 43.7             | 22.6                     | 21.5                    |

### Hardware Setup

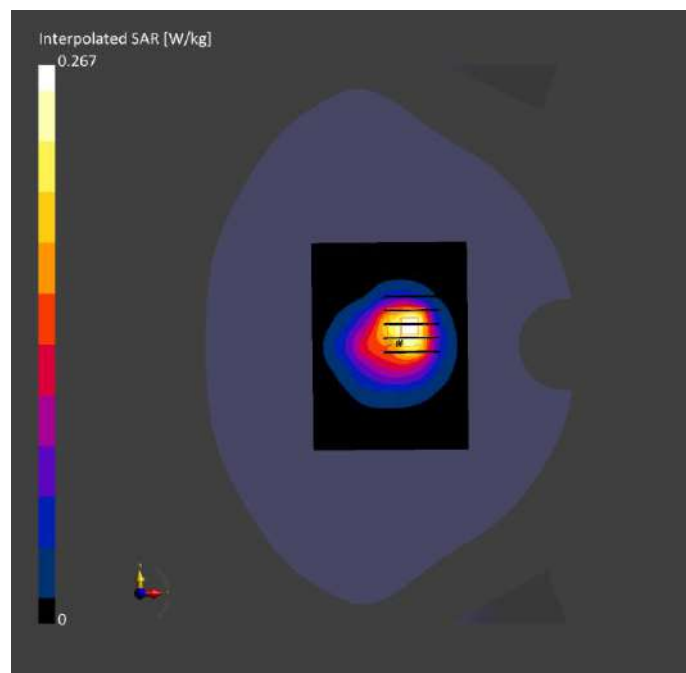
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-06 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 90.0 x 120.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0  | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-06    | 2023-11-06    |
| psSAR1g [W/kg]      | 0.091         | 0.097         |
| psSAR10g [W/kg]     | 0.056         | 0.042         |
| Power Drift [dB]    | -0.01         | 0.06          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 32.4          |
| Dist 3dB Peak [mm]  |               | 6.8           |



## Meas.37 Left Head with Cheek on Low Channel in LTE Band41 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Distance [mm] | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|------------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                  | Band 41 | LTE-TDD, 10172-CAH | 2506.0, 39750                   | 7.41              | 1.82                   | 39.8             | 22.4                     | 21.4               |

### Hardware Setup

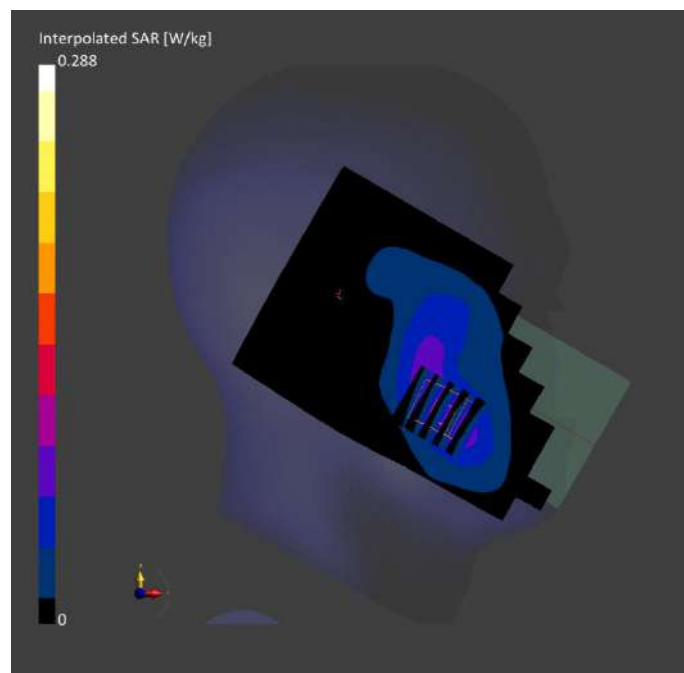
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-11-12 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 210.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0   | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-12    | 2023-11-12    |
| psSAR1g [W/kg]      | 0.154         | 0.160         |
| psSAR10g [W/kg]     | 0.079         | 0.086         |
| Power Drift [dB]    | 0.00          | -0.03         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 52.8          |
| Dist 3dB Peak [mm]  |               | 11.8          |



## Meas.38 Body Plane with Bottom Edge 10mm on Low Channel in LTE Band41 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL  | Band    | Group, UID                    | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|------------------------------|---------|-------------------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>10.00 | Band 41 | LTE-<br>TDD,<br>10172-<br>CAH | 2506.0,<br>39750                | 7.41              | 1.82                   | 39.8             | 22.4                     | 21.4                    |

### Hardware Setup

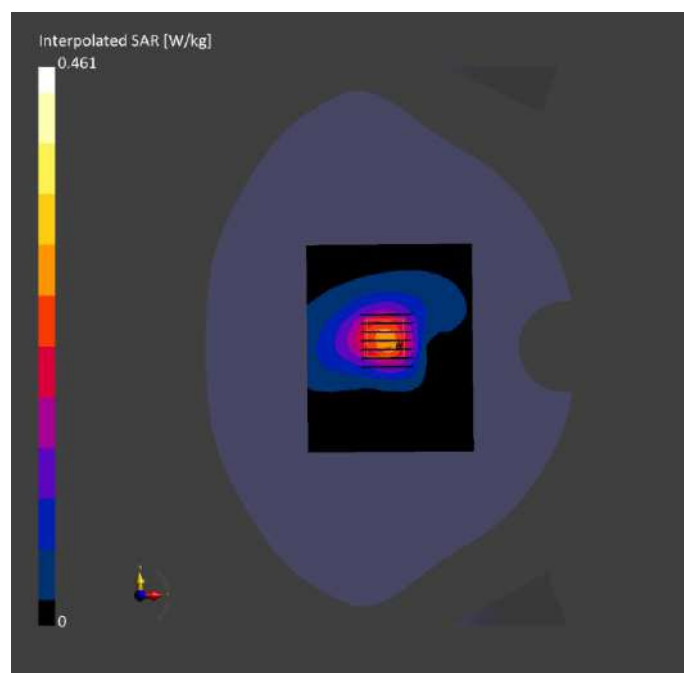
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-12 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 96.0 x 120.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0  | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-12    | 2023-11-12    |
| psSAR1g [W/kg]      | 0.240         | 0.246         |
| psSAR10g [W/kg]     | 0.127         | 0.130         |
| Power Drift [dB]    | 0.01          | 0.04          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 51.0          |
| Dist 3dB Peak [mm]  |               | 14.9          |



## Meas.39 Body Plane with Bottom Edge 0mm on Low Channel in LTE Band41 mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band    | Group, UID                    | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|---------|-------------------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE<br>BOTTOM<br>,<br>0.00 | Band 41 | LTE-<br>TDD,<br>10172-<br>CAH | 2506.0,<br>39750                | 7.41              | 1.82                   | 39.8             | 22.4                     | 21.4                    |

### Hardware Setup

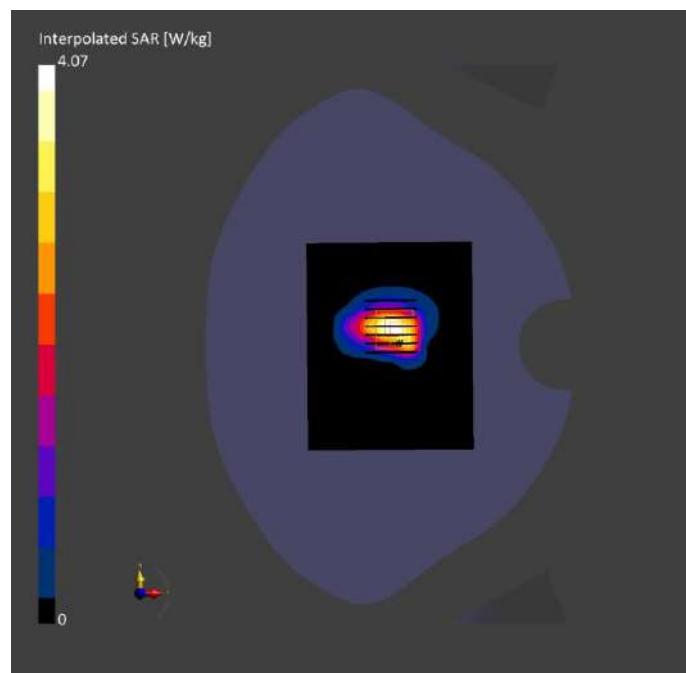
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-12 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 96.0 x 120.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0  | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-12    | 2023-11-12    |
| psSAR1g [W/kg]      | 1.51          | 1.72          |
| psSAR10g [W/kg]     | 0.716         | 0.736         |
| Power Drift [dB]    | 0.00          | 0.12          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 40.4          |
| Dist 3dB Peak [mm]  |               | 7.1           |



**Meas.40 Left Head with Cheek on 11 Channel in IEEE802.11b mode with Antenna.0**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]    | DUT Type |
|---------------------|--------------------|----------|
| AUTOID UTouch2 4G   | 162.0 x 74.0 x 9.0 | Phone    |

**Exposure Conditions**

| Phantom       | Position, Test Section, TSL | Band         | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|-----------------------------|--------------|-----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                 | WLAN, 2.4GHz | WLAN, 10012-CAB | 2462.0, 11                      | 7.47              | 1.84                   | 37.9             | 22.5                     | 21.4               |

**Hardware Setup**

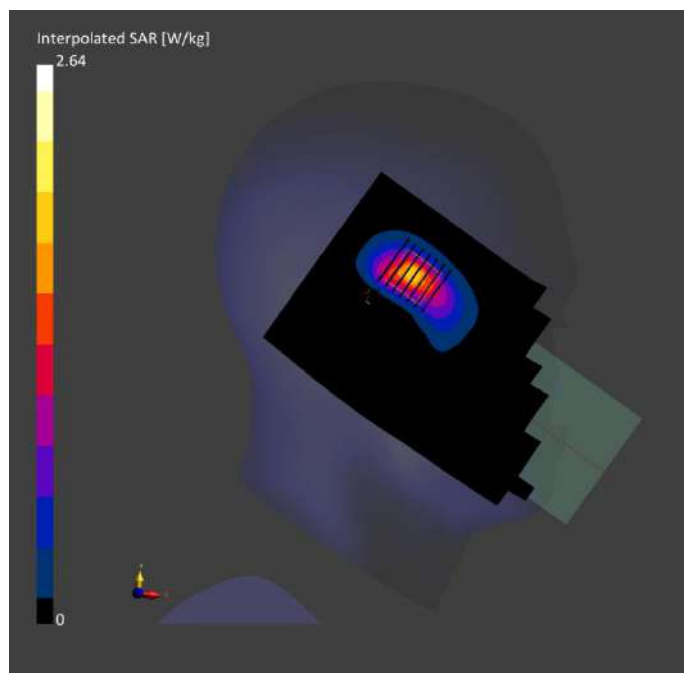
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-24 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 192.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0   | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | N/A           | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

**Measurement Results**

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-24    | 2023-12-24    |
| psSAR1g [W/kg]      | 0.744         | 0.847         |
| psSAR10g [W/kg]     | 0.384         | 0.416         |
| Power Drift [dB]    | -0.01         | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 59.6          |
| Dist 3dB Peak [mm]  |               | 10.4          |



**Meas.41 Body Plane with Left Edge 10mm on 11 Channel in IEEE802.11b mode with Antenna.0**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom   | Position, Test Section, TSL | Band        | Group, UID     | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|-------------|----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE LEFT, 10.00            | WLAN 2.4GHz | WLAN 10012-CAB | 2462.0, 11                      | 7.47              | 1.84                   | 37.9             | 22.5                     | 21.4                    |

**Hardware Setup**

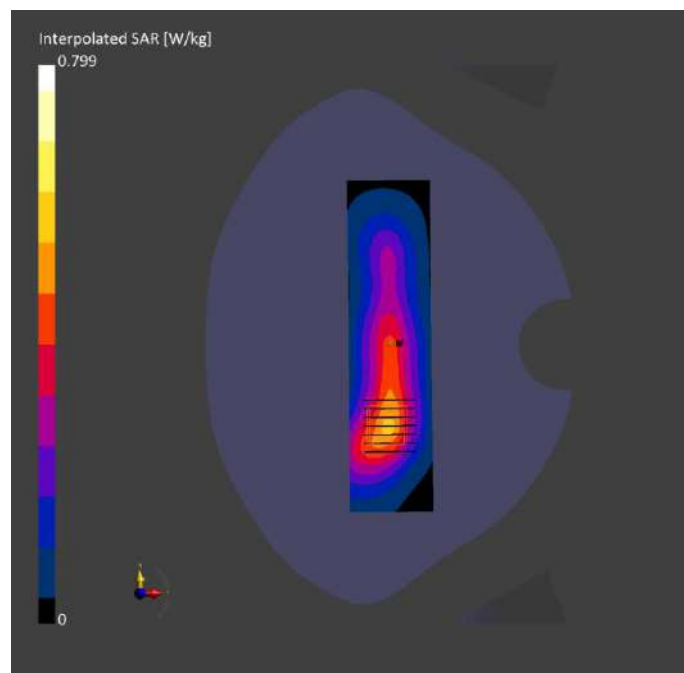
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-24 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 48.0 x 192.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0  | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

**Measurement Results**

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-24    | 2023-12-24    |
| psSAR1g [W/kg]      | 0.447         | 0.445         |
| psSAR10g [W/kg]     | 0.243         | 0.246         |
| Power Drift [dB]    | -0.05         | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 53.9          |
| Dist 3dB Peak [mm]  |               | 14.3          |



**Meas.42 Body Plane with Left Edge 0mm on 11 Channel in IEEE802.11b mode with Antenna.0**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom   | Position, Test Section, TSL | Band        | Group, UID     | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|-------------|----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE LEFT, 0.00             | WLAN 2.4GHz | WLAN 10012-CAB | 2462.0, 11                      | 7.47              | 1.84                   | 37.9             | 22.5                     | 21.4                    |

**Hardware Setup**

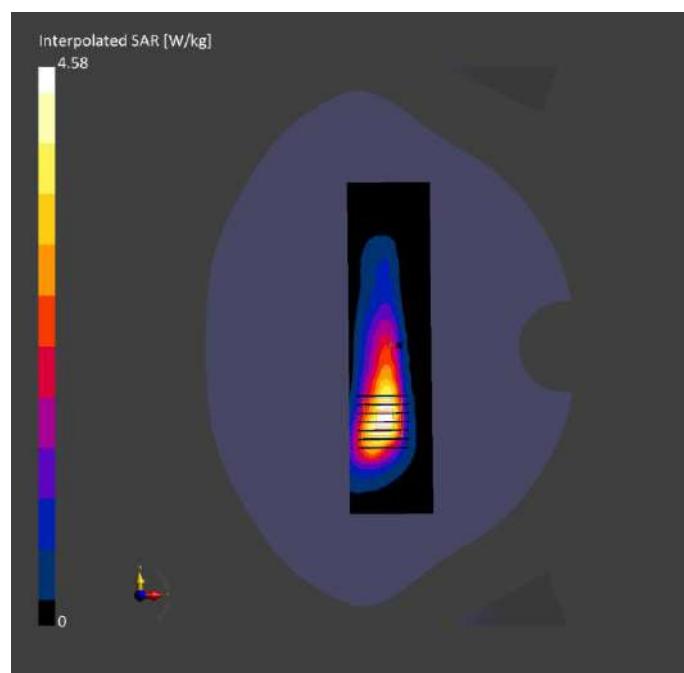
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-24 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 48.0 x 192.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0  | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | N/A          | N/A                |
| Surface Detection   | VMS + 6p     | VMS + 6p           |
| Scan Method         | Measured     | Measured           |

**Measurement Results**

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-24    | 2023-12-24    |
| psSAR1g [W/kg]      | 2.08          | 2.26          |
| psSAR10g [W/kg]     | 1.06          | 1.06          |
| Power Drift [dB]    | -0.14         | 0.02          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 48.1          |
| Dist 3dB Peak [mm]  |               | 8.0           |



## Meas.43 Left Head with Cheek on 58 Channel in IEEE802.11ac80 mode with MIMO

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]    | DUT Type |
|---------------------|--------------------|----------|
| AUTOID UTouch2 4G   | 162.0 x 74.0 x 9.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Section, TSL | Band    | Group, UID       | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|-----------------------------|---------|------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                 | WLAN, N | 5290.0, 10544-58 | 5.41                            | 4.76              | 35.7                   | 22.3             | 21.2                     |                    |

### Hardware Setup

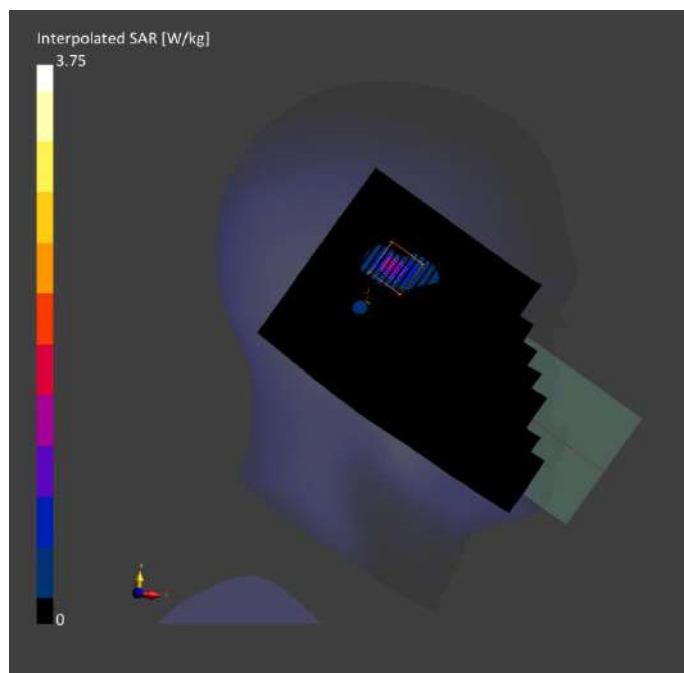
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-26 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | N/A           | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-26    | 2023-12-26    |
| psSAR1g [W/kg]      | 0.844         | 0.991         |
| psSAR10g [W/kg]     | 0.263         | 0.296         |
| Power Drift [dB]    | 0.03          | 0.09          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 55.9          |
| Dist 3dB Peak [mm]  |               | 5.6           |



## Meas.44 Left Head with Cheek on 138 Channel in IEEE802.11ac80 mode with MIMO

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]    | DUT Type |
|---------------------|--------------------|----------|
| AUTOID UTouch2 4G   | 162.0 x 74.0 x 9.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Section, TSL | Band    | Group, UID         | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|---------------|-----------------------------|---------|--------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| LeftHead, HSL | CHEEK, 0.00                 | WLAN, N | 5690.0, 10544-5GHz | 4.78                            | 5.22              | 35.3                   | 22.4             | 21.4                     |                         |

### Hardware Setup

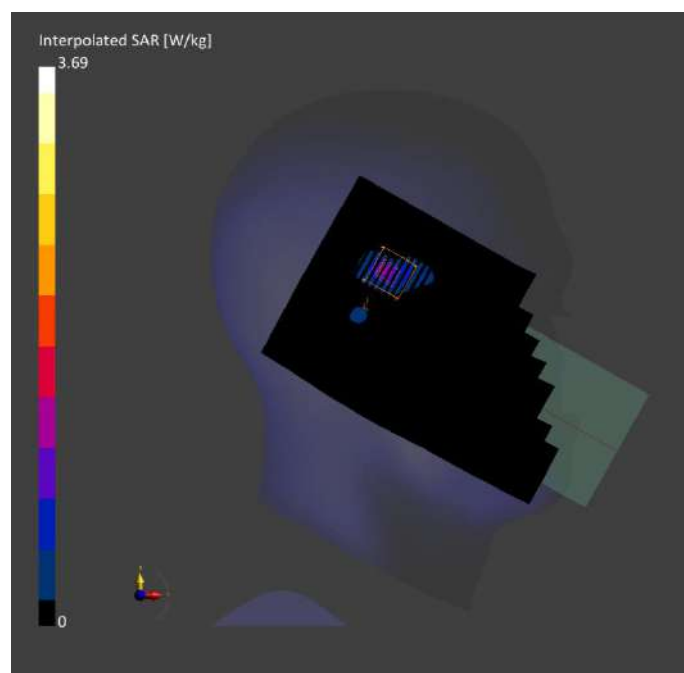
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-28 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | Y             | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-28    | 2023-12-28    |
| psSAR1g [W/kg]      | 0.866         | 0.956         |
| psSAR10g [W/kg]     | 0.267         | 0.299         |
| Power Drift [dB]    | 0.04          | 0.11          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 57.7          |
| Dist 3dB Peak [mm]  |               | 5.4           |



## Meas.45 Left Head with Cheek on 155 Channel in IEEE802.11ac80 mode with MIMO

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]    | DUT Type |
|---------------------|--------------------|----------|
| AUTOID UTouch2 4G   | 162.0 x 74.0 x 9.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Section, Distance [mm] | Band    | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|---------------|---------------------------------------|---------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| LeftHead, HSL | CHEEK, 0.00                           | WLAN, N | 10544-5GHz | 5775.0, 155                     | 4.78              | 5.34                   | 35.4             | 22.2                     | 21.3               |

### Hardware Setup

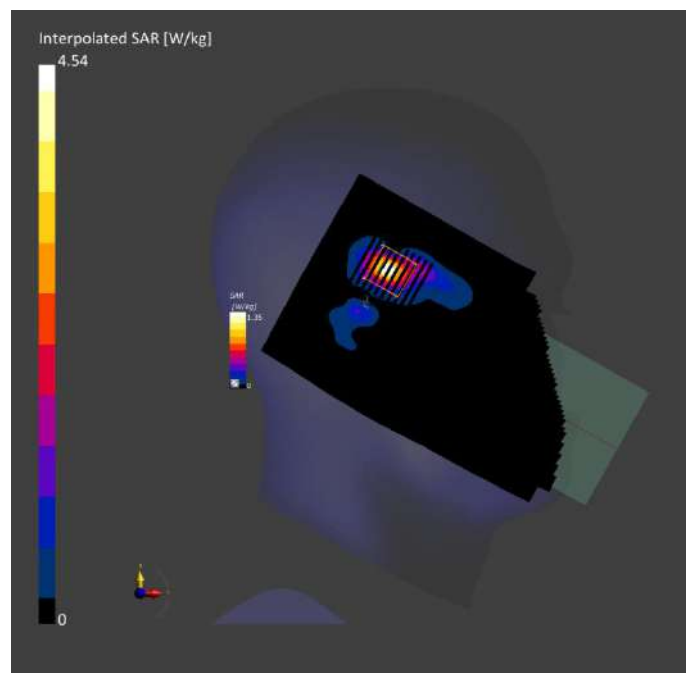
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-30 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | N/A           | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-30    | 2023-12-30    |
| psSAR1g [W/kg]      | 0.958         | 0.970         |
| psSAR10g [W/kg]     | 0.331         | 0.372         |
| Power Drift [dB]    | -0.03         | 0.02          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 57.3          |
| Dist 3dB Peak [mm]  |               | 5.4           |



## Meas.46 Body Plane with Front Side 10mm on 58 Channel in IEEE802.11ac80 mode with MIMO

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band    | Group, UID       | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|---------------------------------------|---------|------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | FRONT, 10.00                          | WLAN, N | 5290.0, 10544-58 | 5.41                            | 4.76              | 35.7                   | 22.3             | 21.2                     |                    |
|           |                                       | 5GHz    | AAC              |                                 |                   |                        |                  |                          |                    |

### Hardware Setup

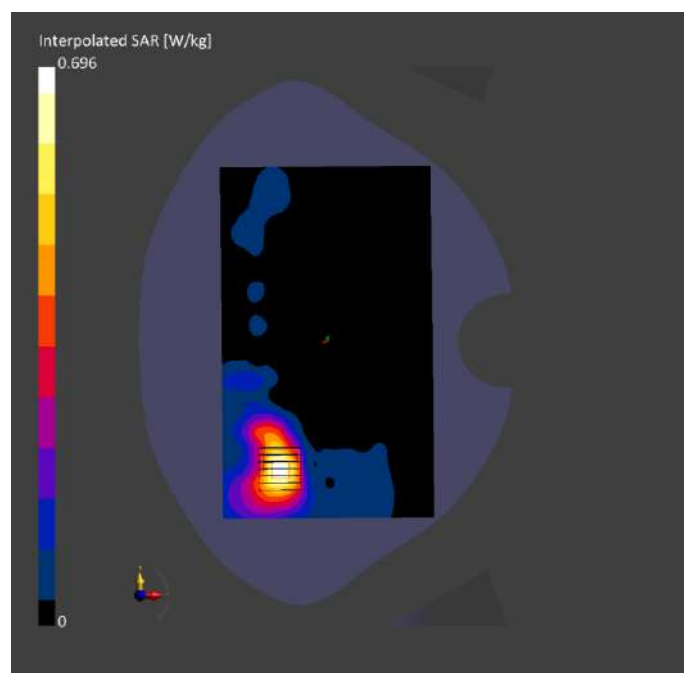
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-26 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-26    | 2023-12-26    |
| psSAR1g [W/kg]      | 0.203         | 0.209         |
| psSAR10g [W/kg]     | 0.080         | 0.079         |
| Power Drift [dB]    | -0.04         | 0.03          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 54.1          |
| Dist 3dB Peak [mm]  |               | 8.8           |



**Meas.47 Body Plane with Front Side 10mm on 106 Channel in IEEE802.11ac80 mode with MIMO**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom   | Position, Test Section, TSL | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|-----------------------------|---------|-----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | FRONT, 0.00                 | WLAN, N | WLAN, 10544-AAC | 5530.0, 106                     | 4.58              | 4.92                   | 36.1             | 22.4                     | 21.4               |

**Hardware Setup**

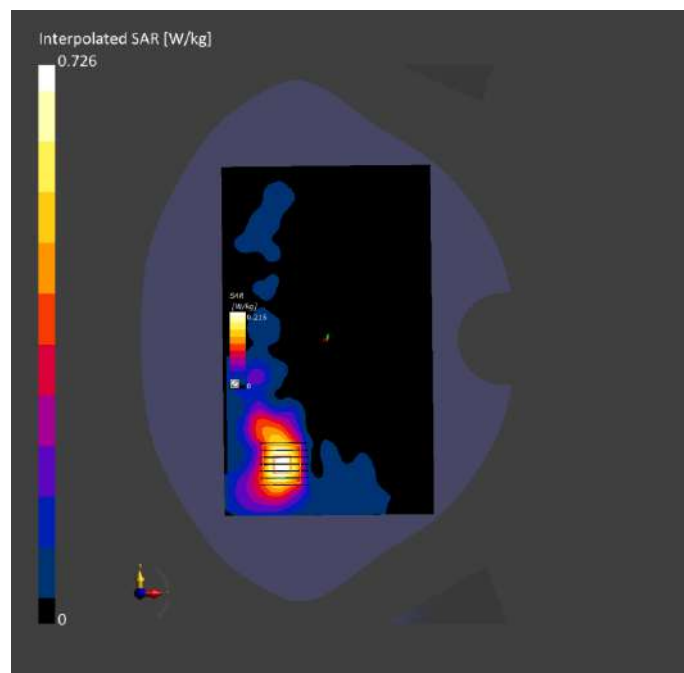
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-28 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

**Measurement Results**

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-28    | 2023-12-28    |
| psSAR1g [W/kg]      | 0.220         | 0.233         |
| psSAR10g [W/kg]     | 0.084         | 0.084         |
| Power Drift [dB]    | 0.07          | -0.18         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 57.4          |
| Dist 3dB Peak [mm]  |               | 8.6           |



## Meas.48 Body Plane with Front Side 10mm on 155 Channel in IEEE802.11ac80 mode with MIMO

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|---------------------------------------|---------|-----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | FRONT, 0.00                           | WLAN, N | WLAN, 10544-AAC | 5775.0, 155                     | 4.78              | 5.34                   | 35.4             | 22.2                     | 21.3               |

### Hardware Setup

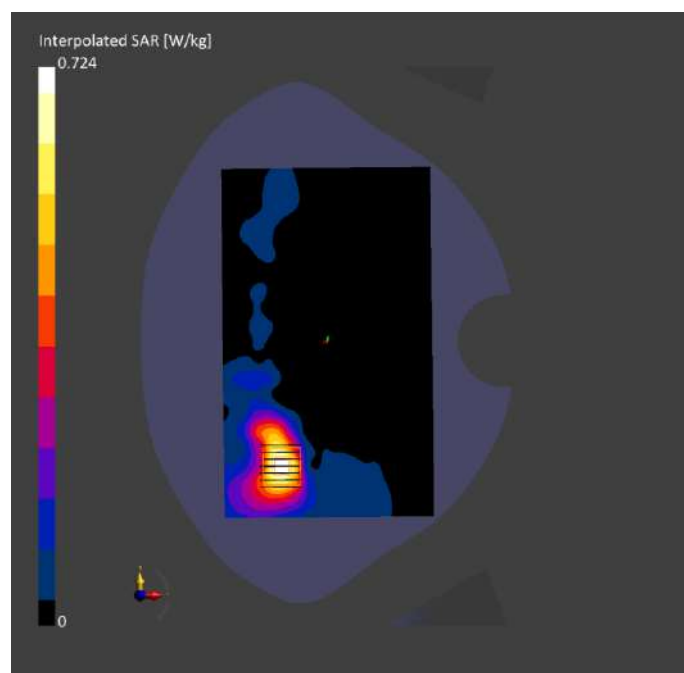
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-30 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-30    | 2023-12-30    |
| psSAR1g [W/kg]      | 0.223         | 0.216         |
| psSAR10g [W/kg]     | 0.085         | 0.082         |
| Power Drift [dB]    | -0.02         | -0.08         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 56.4          |
| Dist 3dB Peak [mm]  |               | 8.6           |



**Meas.49 Body Plane with Front Side 10mm on 42 Channel in IEEE802.11ac80 mode with MIMO**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom   | Position, Test Section, TSL | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|-----------------------------|---------|-----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | FRONT, 10.00                | WLAN, N | WLAN, 10544-AAC | 5210.0, 42                      | 5.41              | 4.61                   | 36.1             | 22.3                     | 21.2               |

**Hardware Setup**

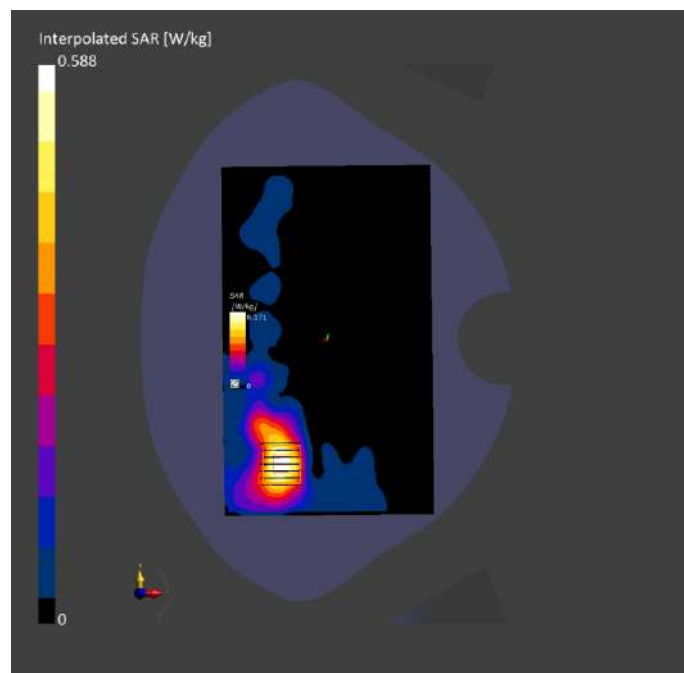
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-26 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

**Measurement Results**

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-26    | 2023-12-26    |
| psSAR1g [W/kg]      | 0.171         | 0.170         |
| psSAR10g [W/kg]     | 0.067         | 0.064         |
| Power Drift [dB]    | -0.01         | -0.06         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 56.1          |
| Dist 3dB Peak [mm]  |               | 8.0           |



**Meas.50 Body Plane with Front Side 10mm on 155 Channel in IEEE802.11ac80 mode with MIMO**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom   | Position, Test Section, Distance [mm] | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|---------------------------------------|---------|-----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | FRONT, 10.00                          | WLAN, N | WLAN, 10544-AAC | 5775.0, 155                     | 4.78              | 5.34                   | 35.4             | 22.2                     | 21.3               |

**Hardware Setup**

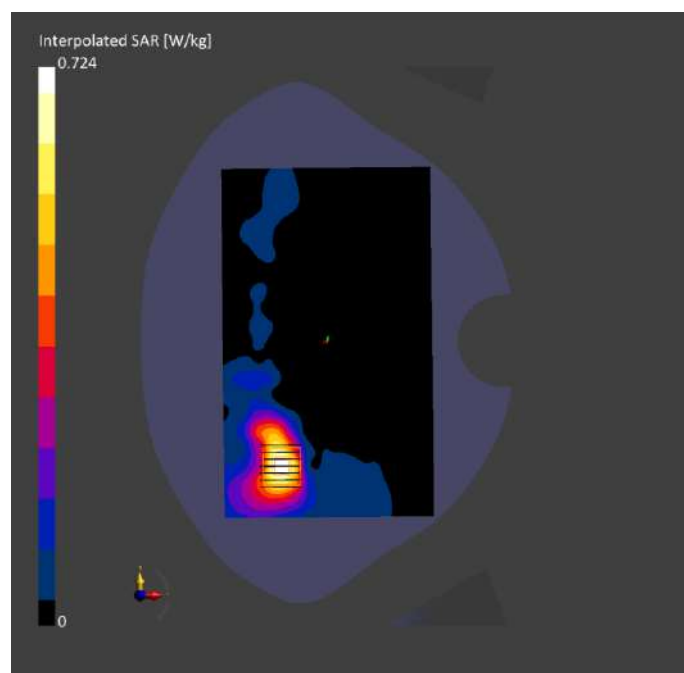
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-30 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

**Measurement Results**

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-30    | 2023-12-30    |
| psSAR1g [W/kg]      | 0.223         | 0.216         |
| psSAR10g [W/kg]     | 0.085         | 0.082         |
| Power Drift [dB]    | -0.02         | -0.08         |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 56.4          |
| Dist 3dB Peak [mm]  |               | 8.6           |



## Meas.51 Body Plane with Front Side 0mm on 58 Channel in IEEE802.11ac80 mode with MIMO

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, Distance [mm] | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|---------------------------------------|---------|-----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | FRONT, 0.00                           | WLAN, N | WLAN, 10544-AAC | 5290.0, 58                      | 5.41              | 4.76                   | 35.7             | 22.3                     | 21.2               |

### Hardware Setup

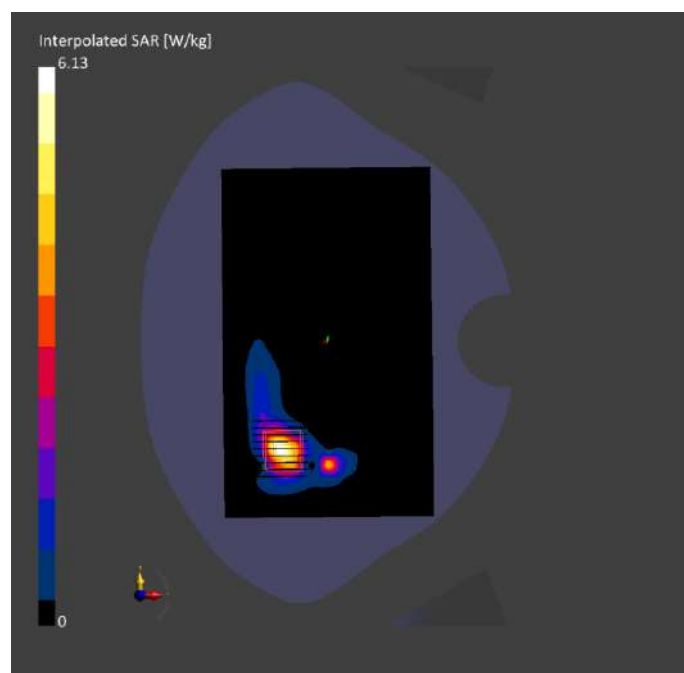
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-26 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | N/A           | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-26    | 2023-12-26    |
| psSAR1g [W/kg]      | 1.33          | 1.57          |
| psSAR10g [W/kg]     | 0.444         | 0.469         |
| Power Drift [dB]    | 0.06          | 0.07          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 54.7          |
| Dist 3dB Peak [mm]  |               | 4.0           |



**Meas.52 Body Plane with Front Side 0mm on 106 Channel in IEEE802.11ac80 mode with MIMO**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom   | Position, Test Section, TSL | Band    | Group, UID       | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|-----------------------------|---------|------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | FRONT, 0.00                 | WLAN, N | WLAN, 10544-5GHz | 5530.0, 106 AAC                 | 4.58              | 4.92                   | 36.1             | 22.4                     | 21.4               |

**Hardware Setup**

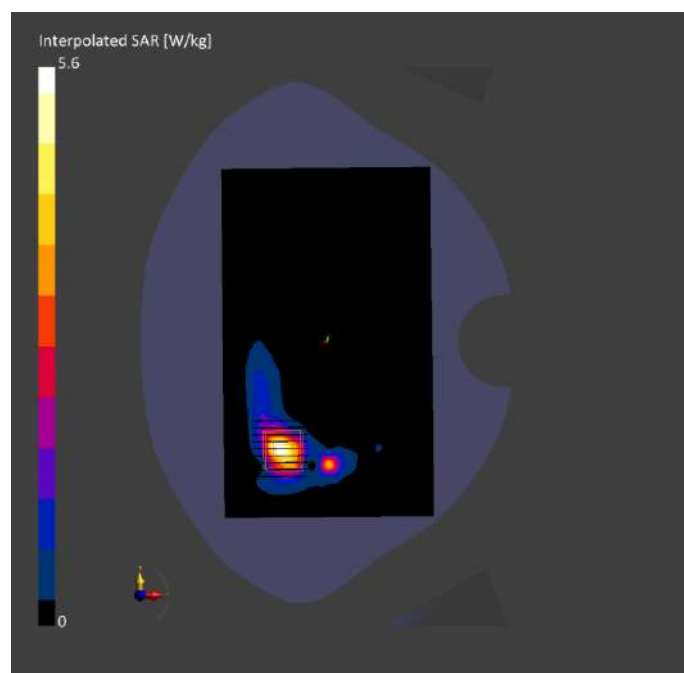
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-28 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | N/A           | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

**Measurement Results**

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-28    | 2023-12-28    |
| psSAR1g [W/kg]      | 1.30          | 1.46          |
| psSAR10g [W/kg]     | 0.427         | 0.435         |
| Power Drift [dB]    | -0.01         | 0.05          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 54.6          |
| Dist 3dB Peak [mm]  |               | 3.2           |



**Meas.53 Body Plane with Front Side 0mm on 155 Channel in IEEE802.11ac80 mode with MIMO**
**Device under Test Properties**

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

**Exposure Conditions**

| Phantom   | Position, Test Section, TSL | Band    | Group, UID      | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|-----------------------------|---------|-----------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | FRONT, 0.00                 | WLAN, N | WLAN, 10544-AAC | 5775.0, 155                     | 4.78              | 5.34                   | 35.4             | 22.2                     | 21.3               |

**Hardware Setup**

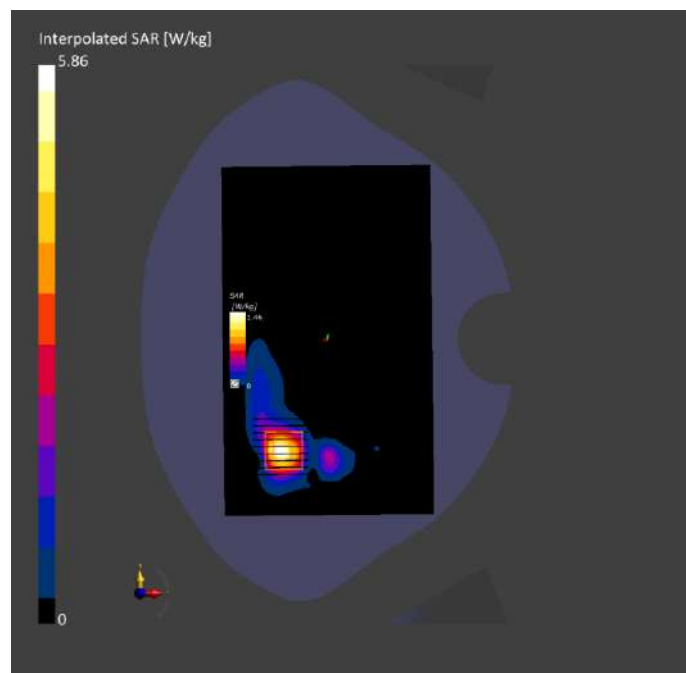
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-30 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

**Scan Setup**

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 200.0 | 24.0 x 24.0 x 22.0 |
| Grid Steps [mm]     | 10.0 x 10.0   | 4.0 x 4.0 x 2.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.4                |
| MAIA                | N/A           | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

**Measurement Results**

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-30    | 2023-12-30    |
| psSAR1g [W/kg]      | 1.34          | 1.54          |
| psSAR10g [W/kg]     | 0.442         | 0.452         |
| Power Drift [dB]    | -0.11         | 0.09          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 53.5          |
| Dist 3dB Peak [mm]  |               | 3.2           |



## Meas.54 Left Head with Cheek on 0 Channel in Bluetooth mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom       | Position, Test Distance [mm] | Band             | Group, UID           | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|---------------|------------------------------|------------------|----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| LeftHead, HSL | CHEEK, 0.00                  | ISM 2.4 GHz Band | Bluetooth, 10032-CAA | 2402.0, 0                       | 7.47              | 1.71                   | 39.7             | 22.5                     | 21.4                    |

### Hardware Setup

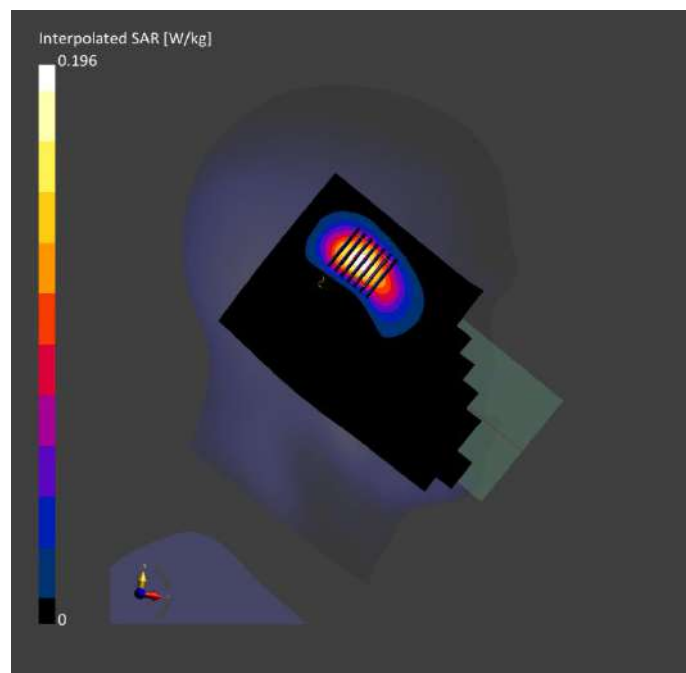
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-24 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 192.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0   | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | Y             | Y                  |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-24    | 2023-12-24    |
| psSAR1g [W/kg]      | 0.098         | 0.105         |
| psSAR10g [W/kg]     | 0.049         | 0.050         |
| Power Drift [dB]    | -0.05         | 0.03          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 55.4          |
| Dist 3dB Peak [mm]  |               | 9.9           |



## Meas.55 Body Plane with Left Edge 10mm on 0 Channel in Bluetooth mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band             | Group, UID           | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|------------------|----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE LEFT, 10.00            | ISM 2.4 GHz Band | Bluetooth, 10032-CAA | 2402.0, 0                       | 7.47              | 1.71                   | 39.7             | 22.5                     | 21.4                    |

### Hardware Setup

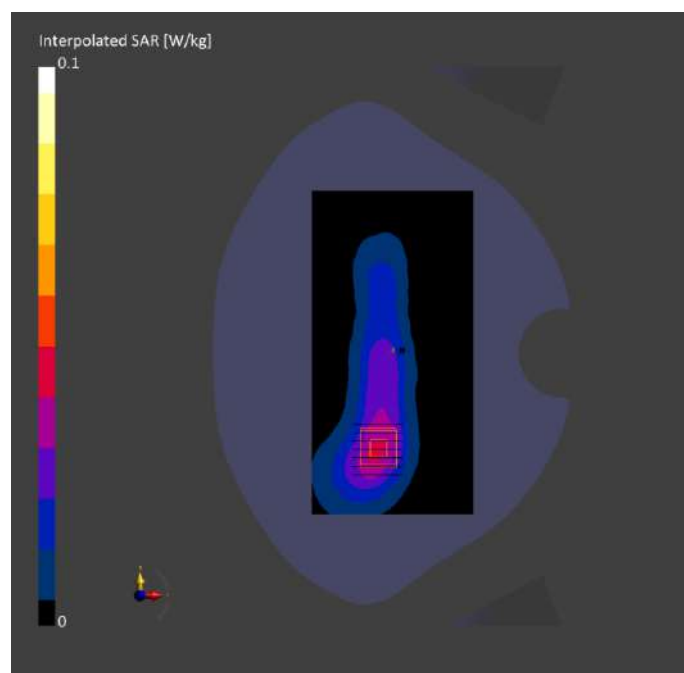
| Phantom                                 | TSL, Measured Date         | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000, 2023-12-24 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 96.0 x 192.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0  | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | Y                  |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-24    | 2023-12-24    |
| psSAR1g [W/kg]      | 0.036         | 0.036         |
| psSAR10g [W/kg]     | 0.020         | 0.020         |
| Power Drift [dB]    | -0.01         | 0.01          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 55.0          |
| Dist 3dB Peak [mm]  |               | > 15.0        |



## Meas.56 Body Plane with Left Edge 0mm on 0 Channel in Bluetooth mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 157.0 x 75.0 x 18.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band             | Group, UID            | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature [°C] |
|-----------|-----------------------------|------------------|-----------------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|-------------------------|
| Flat, HSL | EDGE LEFT, 0.00             | ISM 2.4 GHz Band | Bluetooth , 10032-CAA | 2402.0, 0                       | 7.47              | 1.71                   | 39.7             | 22.5                     | 21.4                    |

### Hardware Setup

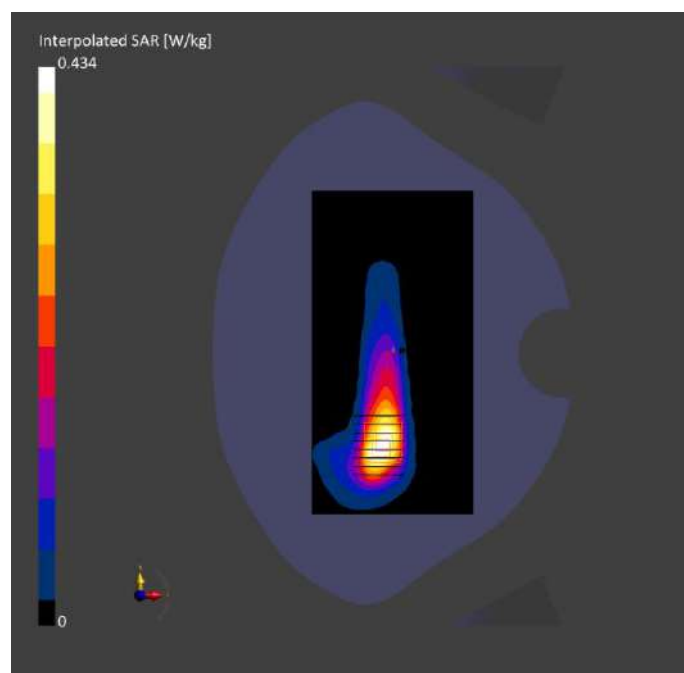
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-12-24 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan    | Zoom Scan          |
|---------------------|--------------|--------------------|
| Grid Extents [mm]   | 96.0 x 192.0 | 30.0 x 30.0 x 30.0 |
| Grid Steps [mm]     | 12.0 x 12.0  | 5.0 x 5.0 x 5.0    |
| Sensor Surface [mm] | 3.0          | 1.4                |
| Graded Grid         | Yes          | Yes                |
| Grading Ratio       | 1.5          | 1.5                |
| MAIA                | Y            | N/A                |
| Surface             | VMS + 6p     | VMS + 6p           |
| Detection           |              |                    |
| Scan Method         | Measured     | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-12-24    | 2023-12-24    |
| psSAR1g [W/kg]      | 0.195         | 0.209         |
| psSAR10g [W/kg]     | 0.10          | 0.099         |
| Power Drift [dB]    | -0.01         | 0.03          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 44.9          |
| Dist 3dB Peak [mm]  |               | 8.0           |



## Meas.57 Body Plane with Top Edge 0mm on 3 Channel in RFID Mode

### Device under Test Properties

| Model, Manufacturer | Dimensions [mm]     | DUT Type |
|---------------------|---------------------|----------|
| AUTOID UTouch2 4G   | 130.0 x 95.0 x 25.0 | Phone    |

### Exposure Conditions

| Phantom   | Position, Test Section, TSL | Band         | Group, UID | Frequency [MHz], Channel Number | Conversion Factor | TSL Conductivity [S/m] | TSL Permittivity | Ambient Temperature [°C] | Liquid Temperature |
|-----------|-----------------------------|--------------|------------|---------------------------------|-------------------|------------------------|------------------|--------------------------|--------------------|
| Flat, HSL | EDGE, TOP, 0.00             | Custo m Band | CW, 0--    | 927.25, 927250                  | 9.96              | 1.01                   | 40.9             | 22.7                     | 21.4               |

### Hardware Setup

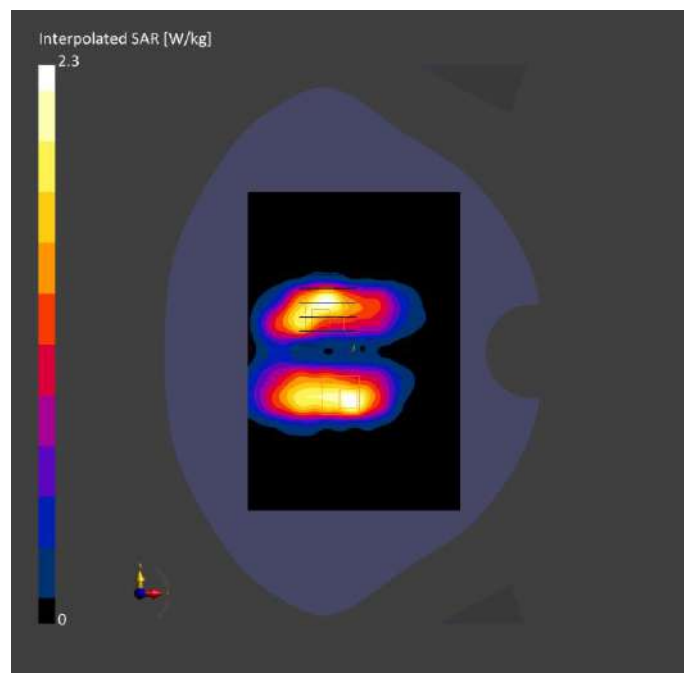
| Phantom                                 | TSL, Measured Date          | Probe, Calibration Date     | DAE, Calibration Date  |
|-----------------------------------------|-----------------------------|-----------------------------|------------------------|
| Twin-SAM V5.0 (30deg probe tilt) - 1859 | HBBL-600-10000 , 2023-11-08 | EX3DV4 - SN7607, 2023-07-04 | DAE4 Sn878, 2023-03-23 |

### Scan Setup

|                     | Area Scan     | Zoom Scan          |
|---------------------|---------------|--------------------|
| Grid Extents [mm]   | 120.0 x 180.0 | 32.0 x 32.0 x 30.0 |
| Grid Steps [mm]     | 15.0 x 15.0   | 8.0 x 8.0 x 5.0    |
| Sensor Surface [mm] | 3.0           | 1.4                |
| Graded Grid         | Yes           | Yes                |
| Grading Ratio       | 1.5           | 1.5                |
| MAIA                | N/A           | N/A                |
| Surface             | VMS + 6p      | VMS + 6p           |
| Detection           |               |                    |
| Scan Method         | Measured      | Measured           |

### Measurement Results

|                     | Area Scan     | Zoom Scan     |
|---------------------|---------------|---------------|
| Date                | 2023-11-08    | 2023-11-08    |
| psSAR1g [W/kg]      | 1.16          | 1.03          |
| psSAR10g [W/kg]     | 0.685         | 0.518         |
| Power Drift [dB]    | 0.07          | 0.03          |
| Power Scaling       | Disabled      | Disabled      |
| Scaling Factor [dB] |               |               |
| TSL Correction      | No correction | No correction |
| M2/M1 [%]           |               | 41.6          |
| Dist 3dB Peak [mm]  |               | 6.6           |



## **ANNEX D EUT EXTERNAL PHOTOS**

Please refer the document “BL-SZ23A1194-AW.pdf”.

## **ANNEX E SAR TEST SETUP PHOTOS**

Please refer the document “BL-SZ23A1194-AS.pdf”.

## **ANNEX F CALIBRATION REPORT**

Please refer the document “BL-SZ23A1194-AC.pdf”.

## **ANNEX G TUNE-UP PROCEDURE**

Please refer the document “BL-SZ23A1194-AT.pdf”.

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