# TEST REPORT

| | |
|---|---|
| **Applicant:** | INFINIX MOBILITY LIMITED |
| **Address:** | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG |
| **Equipment Type:** | Mobile phone |
| **Model Name:** | X6882 |
| **Brand Name:** | Infinix |
| **FCC ID:** | 2AIZN-X6882 |
| **Test Standard:** | FCC 47 CFR Part 2.1093<br>(refer to section 3.1) |
| **Maximum SAR:** | Head (1 g@0mm): 0.99 W/kg<br>Body-worn (1 g@10mm): 0.29 W/kg<br>Hotspot (1 g@10mm): 0.42 W/kg<br>Specific (10 g@0mm): 0.42 W/kg |
| **Sample Arrival Date:** | Jun. 25, 2024 |
| **Test Date:** | Jul. 21, 2024 - Jul. 29, 2024 |
| **Date of Issue:** | Aug. 13, 2024 |

**ISSUED BY:**

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Zhang Jiwei **Checked by:** Xu Rui **Approved by:** Tolan Tu

(Testing Director)

Zhang Jiwei Xu Rui Tolan Tu

**Revision History**

| Version | Issue Date | Revisions Content |
|---|---|---|
| Rev. 01 | Aug. 13, 2024 | Initial Issue |

# TABLE OF CONTENTS


1 GENERAL INFORMATION ..... 5
1.1 Test Laboratory ..... 5
1.2 Test Location ..... 5
1.3 Test Environment Condition ..... 5
2 PRODUCT INFORMATION ..... 6
2.1 Applicant Information ..... 6
2.2 Manufacturer Information ..... 6
2.3 General Description for Equipment under Test (EUT) ..... 6
2.4 Ancillary Equipment ..... 7
2.5 Technical Information ..... 8
3 SUMMARY OF TEST RESULT ..... 10
3.1 Test Standards ..... 10
3.2 Device Category and SAR Limit ..... 11
3.3 Test Result Summary ..... 12
3.4 Test Uncertainty ..... 14
4 MEASUREMENT SYSTEM ..... 15
4.1 Specific Absorption Rate (SAR) Definition ..... 15
4.2 DASY SAR System ..... 16
5 SYSTEM VERIFICATION ..... 23
5.1 Purpose of System Check ..... 23
5.2 System Check Setup ..... 23
6 TEST POSITION CONFIGURATIONS ..... 24
6.1 Head Exposure Conditions ..... 24
6.2 Body-worn Position Conditions ..... 26

6.3 Hotspot Mode Exposure Position Conditions ..... 27
6.4 Product Specific 10g Exposure Consideration ..... 27
7 MEASUREMENT PROCEDURE ..... 28
7.1 Measurement Process Diagram ..... 28
7.2 SAR Scan General Requirement ..... 29
7.3 Measurement Procedure ..... 30
7.4 Area & Zoom Scan Procedure ..... 30
7.5 LTE (TDD) Considerations ..... 31
8 CONDUCTED RF OUPUT POWER ..... 33
8.1 GSM ..... 33
8.2 WCDMA ..... 33
8.3 LTE ..... 33
8.4 Intra-Band Uplink CA Normal Power ..... 33
8.5 WIFI ..... 34
8.6 Bluetooth-ANT12 Full Power ..... 38
8.7 Bluetooth-ANT14 Full Power ..... 39
9 TEST EXCLUSION CONSIDERATION ..... 40
10 TEST RESULT ..... 41
10.1 GSM 850 ..... 41
10.2 GSM 1900 ..... 42
10.3 WCDMA Band 2 ..... 43
10.4 WCDMA Band 4 ..... 44
10.5 WCDMA Band 5 ..... 45
10.6 LTE Band 2 (20MHz Bandwidth) ..... 46
10.7 LTE Band 2 Worse case for CA Test ..... 47
10.8 LTE Band 4 (20MHz Bandwidth) ..... 48
10.9 LTE Band 5 (10MHz Bandwidth) ..... 49
10.10 LTE Band 5 Worse case for CA Test ..... 50
10.11 LTE Band 7 (20MHz Bandwidth) ..... 51
10.12 LTE Band 7 Worse case for CA Test ..... 52

10.13 LTE Band 38 (20MHz Bandwidth) ..... 53
10.14 LTE Band 38 Worse case for CA Test ..... 54
10.15 LTE Band 41 (20MHz Bandwidth) ..... 55
10.16 LTE Band 41 Worse case for CA Test ..... 56
10.17 WIFI 2.4GHz ..... 57
10.18 WIFI 5GHz ..... 58
10.19 Bluetooth ..... 60
10.20 NFC SAR ..... 61
11 SAR Measurement Variability ..... 63
12 SIMULTANEOUS TRANSMISSION ..... 64
12.1 Simultaneous Transmission Mode Consider ..... 64
12.2 Sum SAR of Simultaneous Transmission ..... 65
13 TEST EQUIPMENTS LIST ..... 74
ANNEX A SIMULATING LIQUID VERIFICATION RESULT ..... 75
ANNEX B SYSTEM CHECK RESULT ..... 76
ANNEX C TEST DATA ..... 88
ANNEX D EUT EXTERNAL PHOTOS ..... 123
ANNEX E SAR TEST SETUP PHOTOS ..... 123
ANNEX F CALIBRATION REPORT ..... 123

# 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 | ☐ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China |
| | ☑ 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℃ to 25℃ |
| Ambient Relative Humidity | 30% to 70% |

# 2 PRODUCT INFORMATION

## 2.1 Applicant Information

| | |
|---|---|
| Applicant | INFINIX MOBILITY LIMITED |
| Address | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG |

## 2.2 Manufacturer Information

| | |
|---|---|
| Manufacturer | INFINIX MOBILITY LIMITED |
| Address | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG |

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

| | |
|---|---|
| EUT Name | Mobile phone |
| Model Name Under Test | X6882 |
| Series Model Name | N/A |
| Description of Model name differentiation | N/A |
| Hardware Version | N/A |
| Software Version | N/A |
| Dimensions (Approx.) | N/A |
| Weight (Approx.) | N/A |
| EUT ID | S03, S05 |
| IMEI Number | S03: IMEI1: 359747500009561; IMEI2: 359747500009579 |
| | S05: IMEI1: 359747500009629; IMEI2: 359747500009637 |
| Note1: EUT ID is used to identify the test sample in the lab internally.<br>Note2: It is performed to test SAR with the EUT S05 and conducted power with the EUT S03. | |

## 2.4 Ancillary Equipment

| | | |
|---|---|---|
| Ancillary Equipment 1 | Battery 1 | |
| | Brand Name | N/A |
| | Model No. | BL-5ABX |
| | Serial No. | N/A |
| | Capacity | Rated: 4900mAh/18.97Wh<br>Typical: 5000mAhl/19.35Wh |
| | Rated Voltage | 3.87 V |
| | Limit Charge Voltage | 4.45 V |
| Ancillary Equipment 2 | Headset | |
| | Length (Approx.) | 1.2m |

## 2.5 Technical Information

| | |
|---|---|
| Network and Wireless connectivity | 2G Network GSM/GPRS 850/1900<br>3G Network WCDMA/HSDPA/HSUPA Band 2/4/5<br>4G Network LTE FDD Band 2/4/5/7<br>LTE TDD Band 38/41<br>LTE CA Uplink (UL): CA_2C, CA_5B, CA_7C, CA_38C, CA_41C<br>Bluetooth (BR+EDR+BLE)<br>WIFI 802.11a, 802.11b, 802.11g, 802.11n(HT20/40) and 802.11ac(VHT20/40/80)<br>GPS, GLONASS, BDS, Galileo, SBAS, FM Receiver, NFC |
| Note:<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, WIFI, 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 Band 38 | TX: 2570 ~ 2620 MHz | RX: 2570 ~ 2620 MHz |
| | LTE Band 41 | TX: 2535 ~ 2655 MHz | RX: 2535 ~ 2655 MHz |
| | 802.11b/g /n(HT20) | 2412 ~ 2462 MHz | |
| | 802.11a/ /n(HT20/HT40) /ac(VHT20/VHT40 /VHT80) | 5150 ~ 5250 MHz | |
| | | 5250 ~ 5350 MHz | |
| | | 5470 ~ 5725 MHz | |
| | | 5725 ~ 5850 MHz | |
| | Bluetooth | 2402 ~ 2480 MHz | |
| | NFC | 13.56 MHz | |
| Antenna Type | WWAN: PIFA Antenna<br>WLAN: PIFA Antenna<br>Bluetooth: PIFA Antenna<br>NFC: Coil Antenna | | |
| DTM | N/A | | |
| Hotspot Function | Support | | |
| Power Reduction | Support | | |

| | | |
|---|---|---|
| Exposure Category | General Population/Uncontrolled exposure | |
| Product Type | Portable Device | |
| EUT Type | ☒ Production unit | ☐ 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 |
| 8 | KDB 941225 D06 v02r01 | SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES |
| 9 | KDB 865664 D01 v01r04 | SAR Measurement 100 MHz to 6 GHz |
| 10 | KDB 865664 D02 v01r02 | RF Exposure Reporting |
| 11 | KDB 648474 D04 v01r03 | SAR EVALUATION CONSIDERATIONS FOR WIRELESS HANDSETS |
| 12 | 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/ Uncontrolled Exposure | Occupational/ ControlledExposure |
| Whole-Body SAR (averaged over the entire body) | 0.08 | 0.4 |
| Partial-Body SAR (averaged over any 1 gram of tissue) | 1.60 | 8.0 |
| SAR for hands, wrists, feet and ankles (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) | Specific (0mm) | Head (0mm) | Body-worn (10mm) | Hotspot (10mm) | Specific (0mm) |
| | | 1g SAR | | | 10g SAR | 1g SAR | | | 10g SAR |
| PCE | GSM 850 | 0.97 | **0.29** | 0.29 | / | 0.99 | 0.29 | 0.42 | 0.42 |
| | GSM 1900 | 0.96 | 0.27 | **0.42** | / | | | | |
| | WCDMA Band 2 | 0.61 | 0.18 | 0.21 | / | | | | |
| | WCDMA Band 4 | 0.74 | 0.20 | 0.20 | / | | | | |
| | WCDMA Band 5 | 0.57 | 0.16 | 0.16 | / | | | | |
| | LTE Band 2 | 0.46 | 0.13 | 0.18 | / | | | | |
| | LTE Band 4 | 0.71 | 0.20 | 0.21 | / | | | | |
| | LTE Band 5 | **0.99** | 0.24 | 0.24 | / | | | | |
| | LTE Band 7 | 0.47 | 0.17 | 0.18 | / | | | | |
| | LTE Band 38 | 0.45 | 0.19 | 0.19 | / | | | | |
| | LTE Band 41 | 0.54 | 0.22 | 0.22 | / | | | | |
| DTS | 2.4G WLAN | 0.47 | 0.18 | 0.18 | / | | | | |
| NII | 5.2G WLAN | / | / | 0.11 | / | | | | |
| | 5.3G WLAN | 0.25 | 0.12 | / | 0.37 | | | | |
| | 5.6G WLAN | 0.25 | 0.23 | / | **0.42** | | | | |
| | 5.8G WLAN | 0.21 | 0.17 | 0.17 | / | | | | |
| DSS | Bluetooth | 0.48 | 0.10 | 0.10 | / | | | | |
| Limit (W/kg) | | 1.6 | | | 4.0 | 1.6 | | | 4.0 |
| Verdict | | PASS | | | | | | | |

### 3.3.2 Highest Simultaneous Transmission SAR Values

| Equipment Class | Maximum Scaled SAR (W/kg) | | |
|---|---|---|---|
| | Head 1g (0mm) | Body-worn 1g (10mm) | Hotspot 1g (10mm) |
| PCE | **1.50** | **0.63** | **0.60** |
| DTS | 1.28 | 0.47 | 0.53 |
| NII | **1.50** | **0.63** | **0.60** |
| DSS | **1.50** | **0.63** | **0.60** |
| Limit (W/Kg) | 1.60 | | |
| 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 0.99 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 0.42 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 (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{d}{\mathrm{dt}}\left(\frac{d\mathrm{W}}{\mathrm{dm}}\right) = \frac{d}{\mathrm{dt}}\left(\frac{d\mathrm{W}}{\rho \mathrm{dv}}\right)$$

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

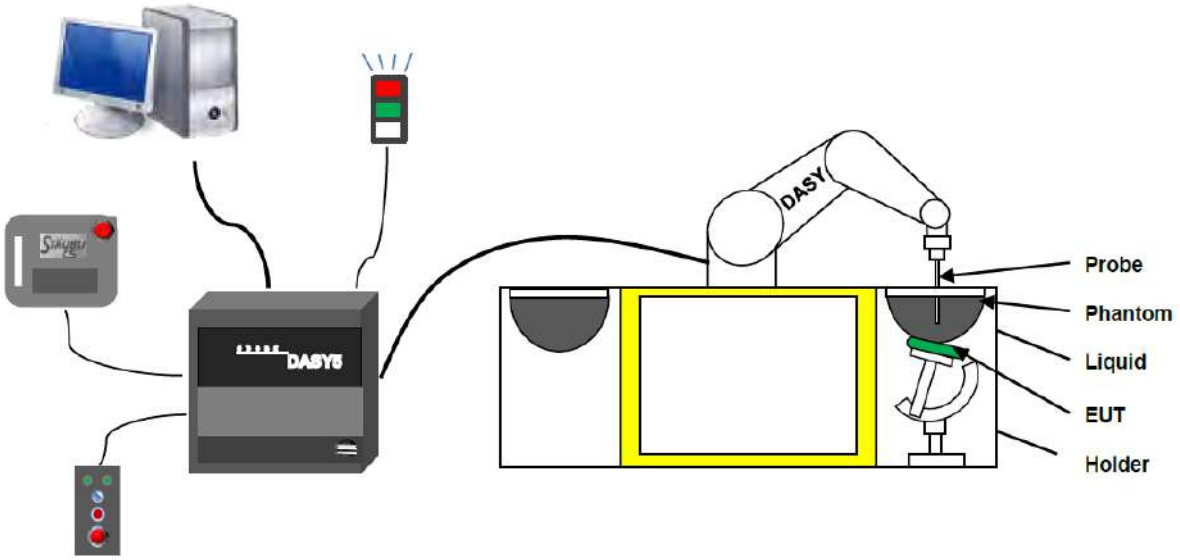
$$\mathbf{SAR} = \frac{\sigma \mathrm{E}^2}{\rho}$$

Where: σ is the conductivity of the tissue,

ρ 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 DASY5 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 ±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:7510&3748 with following specifications is used.

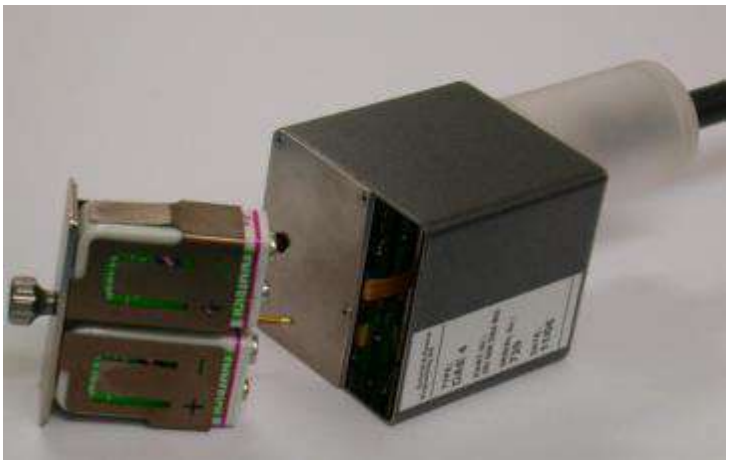
| | |
|---|---|
| Construction | Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether) |
| Calibration | ISO/IEC 17025 calibration service available |
| Frequency | 10 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz) |
| Directivity | ± 0.2 dB in HSL (rotation around probe axis) ; ± 0.4 dB in HSL (rotation normal to probe axis) |
| Dynamic range | 5 μW/g to > 100 mW/g; Linearity: ± 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 CENELEC EN 62209-1/-2 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 62209-1/2 annexe technique using reference guide at the five frequencies.

### 4.2.4 Data Acquisition Electronics

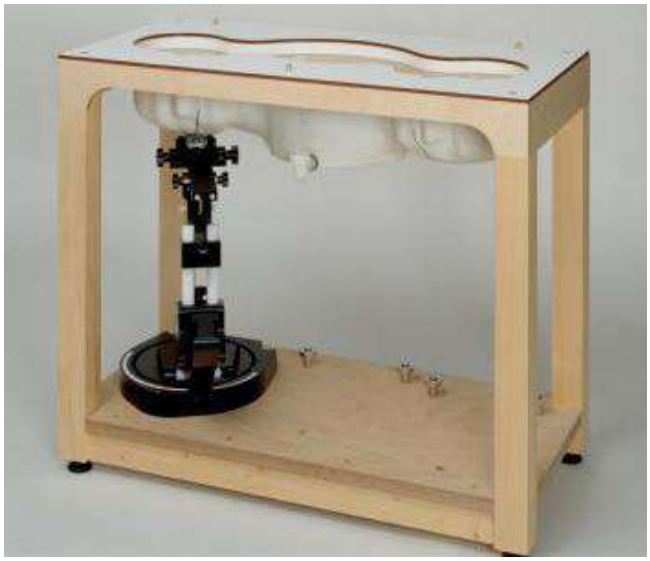
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



- Input Impedance: 200MOhm
- The Inputs: Symmetrical and Floating
- Commom 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 SN1576**

| Serial Number | Material | Length | Height |
|---|---|---|---|
| **SN 1576 SAM1** | Vinylester, glass fiber reinforced | 1000 | 500 |

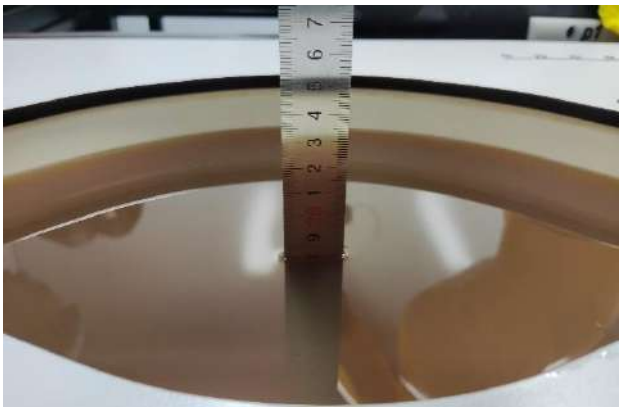
### 4.2.6 Device Holder

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°. 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°.

### 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%.

| Head Liquid Depth | Body Liquid Depth |
|---|---|
| |  |

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 |

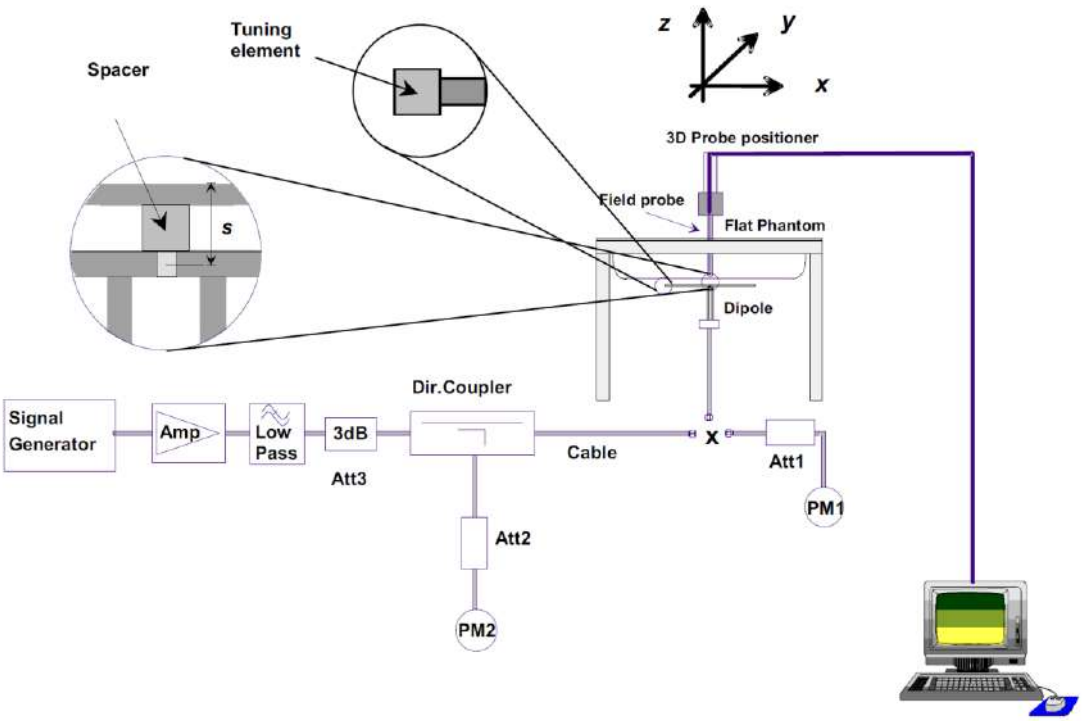
# 5 SYSTEM VERIFICATION

## 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

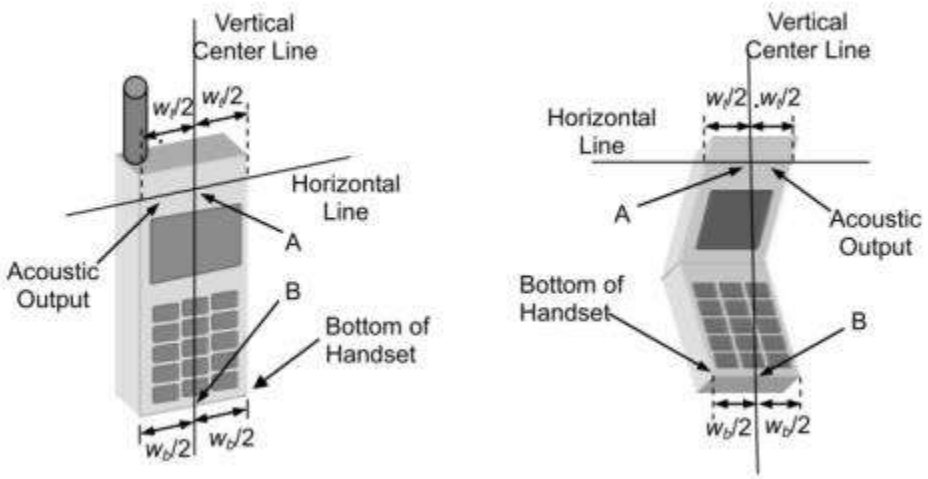
Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

### 6.1.1 Two Imaginary Lines on the Handset

(a) 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.

(b) 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.

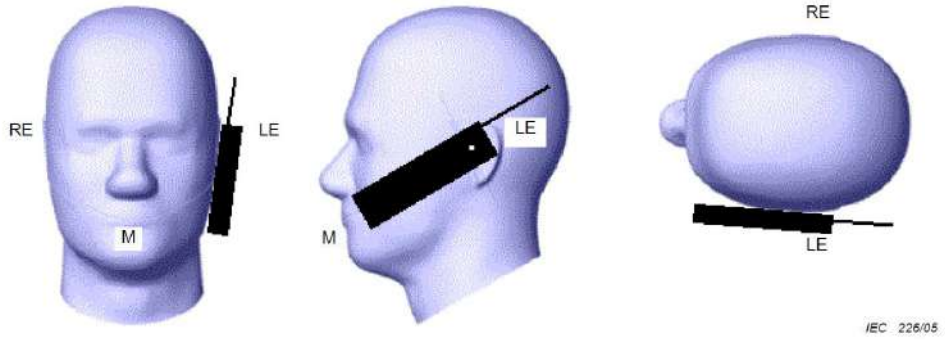
(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.




### 6.1.2 Cheek Position

(a) 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.

(b) 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.

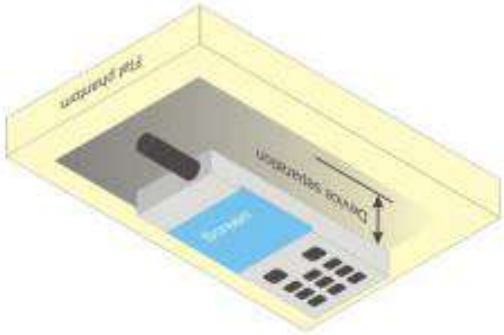
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

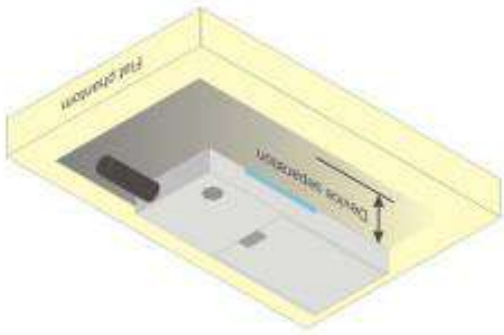
## 6.2 Body-worn Position Conditions

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.

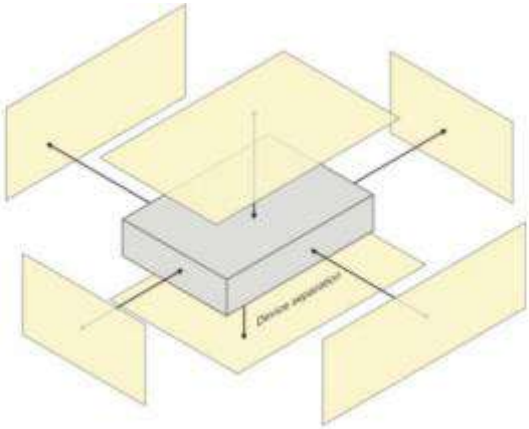
Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice 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 <= 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 ≤ 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.

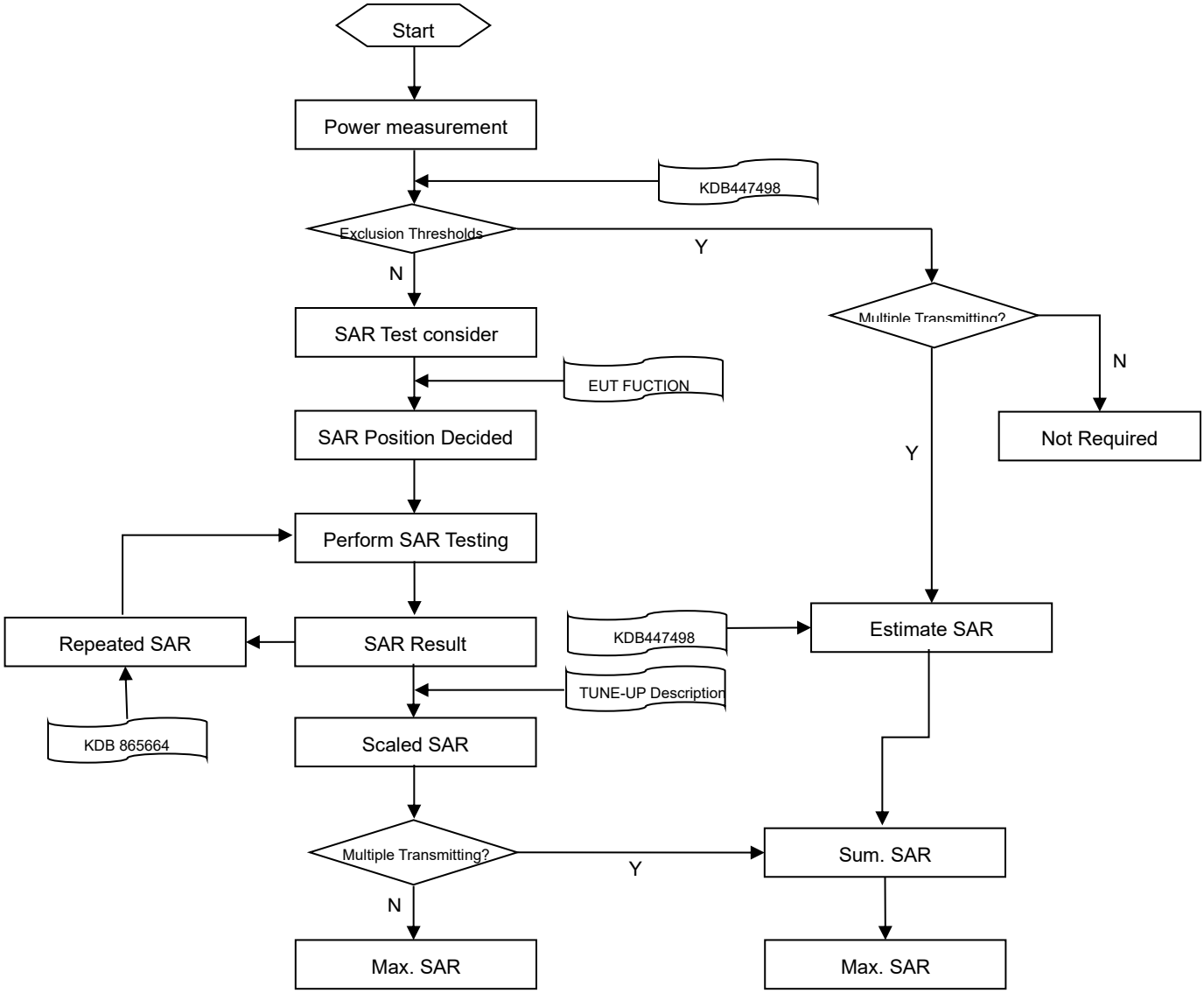
6

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. Boththe 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.

<table>
<tr><th colspan="3"></th><th>≤3GHz</th><th>>3GHz</th></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5±1 mm</td><td>½·δ·ln(2)±0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30°±1°</td><td>20°±1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx Area , Δy Area</td><td>≤ 2 GHz: ≤ 15 mm<br>2 – 3 GHz: ≤ 12 mm</td><td>3–4 GHz: ≤ 12 mm<br>4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom</td><td>≤ 2 GHz: ≤ 8 mm<br>2 –3 GHz: ≤ 5 mm*</td><td>3–4 GHz: ≤ 5 mm*<br>4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="6">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2" rowspan="3">uniform grid: Δz Zoom (n)</td><td rowspan="3">≤ 5 mm</td><td>3–4 GHz: ≤ 4 mm</td></tr>
<tr><td>4–5 GHz: ≤ 3 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="3">graded grid</td><td rowspan="2">Δz Zoom (1): between 1st two points closest to phantom surface</td><td rowspan="3">≤ 4 mm</td><td>3–4 GHz: ≤ 3 mm</td></tr>
<tr><td>4–5 GHz: ≤ 2.5 mm</td></tr>
<tr><td>Δz Zoom (n>1): between subsequent points</td><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td colspan="2">≤ 1.5·Δz Zoom (n-1)</td></tr>
<tr><td rowspan="3">Minimum zoom scan volume</td><td colspan="2" rowspan="3">x, y, z</td><td rowspan="3">≥30 mm</td><td>3–4 GHz: ≥ 28 mm</td></tr>
<tr><td>4–5 GHz: ≥ 25 mm</td></tr>
<tr><td>5–6 GHz: ≥ 22 mm</td></tr>
</table>

Note:

1. δ 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 ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 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

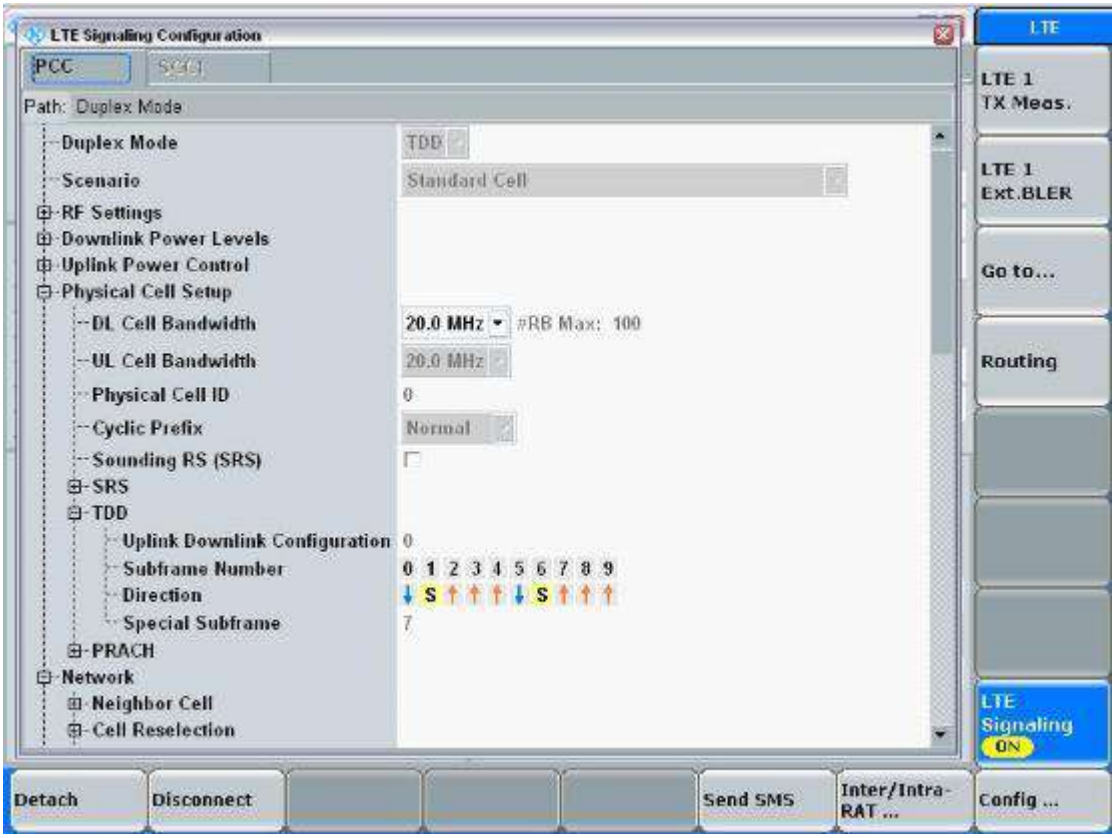
a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
c. Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 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

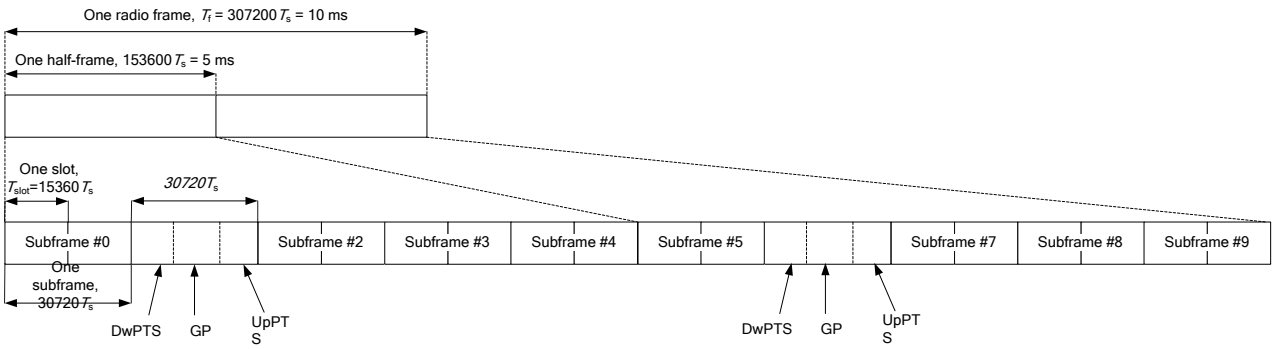
First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan 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.

## 7.5 LTE (TDD) Considerations

F During TDD-LTE SAR testing, the EUT was commanded to transmit on maximum output power and maximum transmitting bandwidth. The uplink and downlink slot configuration as below in one radio frame.




According to 3GPP Per 3GPP TS 36.211. Each radio frame of length (Tf=307200*TS =10ms) of two half-frames of length (153600*TS =5ms). Each half-frame consists of five sub-frames of length (30720*TS =1ms)




And the special sub-frame with the three fields DwPTS, GP and UpPTS.

The length of DwPTS and UpPTS is given by below table subject to the total length of DwPTS, GP and UpPTS being equal to 30720*$T_S$ =1ms.

**Configuration of special sub-frame (lengths of DwPTS/GP/UpPTS)**

<table>
<tr><th rowspan="3">Special sub-frame configuration</th><th colspan="3">Normal cyclic prefix in downlink</th><th colspan="3">Extended cyclic prefix in downlink</th></tr>
<tr><th>DwPTS</th><th colspan="2">UpPTS</th><th>DwPTS</th><th colspan="2">UpPTS</th></tr>
<tr><th></th><th>Normal cyclic prefix in uplink</th><th>Extended cyclic prefix in uplink</th><th></th><th>Normal cyclic prefix in uplink</th><th>Extended cyclic prefix in uplink</th></tr>
<tr><td>0</td><td>6592·$T_s$</td><td rowspan="4">2192·$T_s$</td><td rowspan="4">2560·$T_s$</td><td>7680·$T_s$</td><td rowspan="4">2192·$T_s$</td><td rowspan="4">2560·$T_s$</td></tr>
<tr><td>1</td><td>19760·$T_s$</td><td>20480·$T_s$</td></tr>
<tr><td>2</td><td>21592·$T_s$</td><td>23040·$T_s$</td></tr>
<tr><td>3</td><td>24144·$T_s$</td><td>25600·$T_s$</td></tr>
<tr><td>4</td><td>26336·$T_s$</td><td>7680·$T_s$</td><td rowspan="4">2560·$T_s$</td><td rowspan="4">5120·$T_s$</td></tr>
<tr><td>5</td><td>6592·$T_s$</td><td rowspan="5">4384·$T_s$</td><td rowspan="5">5120·$T_s$</td><td>20480·$T_s$</td></tr>
<tr><td>6</td><td>19760·$T_s$</td><td>23040·$T_s$</td></tr>
<tr><td>7</td><td>21592·$T_s$</td><td>12800·$T_s$</td></tr>
<tr><td>8</td><td>24144·$T_s$</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>9</td><td>13168·$T_s$</td><td>-</td><td>-</td><td>-</td></tr>
</table>

For special sub-frame uplink time we used the largest cyclic prefix for duty cycle calculate;

Maximum uplink time of one special sub-frame=(largest cyclic prefix)/(one sub-frame of length)* time of one sub-frame=5120.Ts/30720.Ts*1ms=0.167ms

One radio frame with 6 uplink sub-frames and two special sub-frame,
there for the maximum Uplink time in one radio frame is: **6*1 ms+2*0.167 ms=6.334ms**
So, the duty cycle for TDD-LTE is: **6.334ms/10ms =1: 1.58**

# 8 CONDUCTED RF OUPUT POWER

## 8.1 GSM

Please refer the document “BL-SZ2461005-AP Power List.pdf”.

## 8.2 WCDMA

Please refer the document “BL-SZ2461005-AP Power List.pdf”.

## 8.3 LTE

Please refer the document “BL-SZ2461005-AP Power List.pdf”.

## 8.4 Intra-Band Uplink CA Normal Power

Note:
1. This devices supports intra-band uplink CA of 2C/5B/7C/38C/41C.
2. For intra-band uplink carrier aggregation power verification and measurement is selected highest PCC and SCC bandwidth combination to do and was according to 3GPP 36.52101 sectino6.2.2A.1 and section 6.2.2A.2 test procedure.
3. For intra-band uplink CA output power was measured high / middle / low channel combination, and for SAR verification is selected highest output power combination with each exposure condition in each frequency band using the highest SAR configuration test in standalone LTE mode.

Please refer the document “BL-SZ2461005-AP Power List.pdf”.

## 8.5 WIFI

### 8.5.1 2.4G WIFI-ANT12-Full power

| Band (GHz) | Mode | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|---|---|---|---|---|---|---|
| 2.4 (2.4~2.4835) | 802.11b | 1 | 2412 | 14.35 | 14.50 | No |
| | | 6 | 2437 | **14.44** | 14.50 | Yes |
| | | 11 | 2462 | 14.31 | 14.50 | No |
| | 802.11g | 1 | 2412 | 14.07 | 14.50 | No |
| | | 6 | 2437 | 14.13 | 14.50 | No |
| | | 11 | 2462 | 13.95 | 14.50 | No |
| | 802.11n(HT20) | 1 | 2412 | 13.97 | 14.50 | No |
| | | 6 | 2437 | 13.99 | 14.50 | No |
| | | 11 | 2462 | 14.10 | 14.50 | 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) 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 ≤ 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = 0.470 * (28.184mW/28.184mW) = 0.470 W/Kg, so 2.4G OFDM SAR test is not required.

### 8.5.2 2.4G WIFI-ANT14-Full power

| Band (GHz) | Mode | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|---|---|---|---|---|---|---|
| 2.4 (2.4~2.4835) | 802.11b | 1 | 2412 | **17.24** | 17.50 | Yes |
| | | 6 | 2437 | 17.08 | 17.50 | No |
| | | 11 | 2462 | 16.99 | 17.50 | No |
| | 802.11g | 1 | 2412 | 15.99 | 17.50 | No |
| | | 6 | 2437 | 15.88 | 17.50 | No |
| | | 11 | 2462 | 15.70 | 17.50 | No |
| | 802.11n(HT20) | 1 | 2412 | 15.54 | 17.50 | No |
| | | 6 | 2437 | 15.74 | 17.50 | No |
| | | 11 | 2462 | 15.56 | 17.50 | 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) 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 ≤ 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = 0.252 * (56.234mW/56.234mW) = 0.252 W/Kg, so 2.4G OFDM SAR test is not required.

### 8.5.3 5G WIFI-ANT12-Full power

| Band (GHz) | Mode | Channel | Freq. (MHz) | Conducted Power (dBm) | Tune-up Limit (dBm) | SAR Test Require. |
|---|---|---|---|---|---|---|
| 5.2 (5.15~5.25) | 802.11a | 36 | 5180 | 13.32 | 13.50 | No |
| | | 44 | 5220 | 13.16 | 13.50 | No |
| | | 48 | 5240 | 13.16 | 13.50 | No |
| | 802.11n(HT20) | 36 | 5180 | 13.10 | 13.50 | No |
| | | 44 | 5220 | 13.45 | 13.50 | No |
| | | 48 | 5240 | 12.85 | 13.50 | No |
| | 802.11n(HT40) | 38 | 5190 | 12.07 | 13.50 | No |
| | | 46 | 5230 | 12.81 | 13.50 | No |
| | 802.11ac(VHT20) | 36 | 5180 | 12.15 | 13.50 | No |
| | | 44 | 5220 | 12.23 | 13.50 | No |
| | | 48 | 5240 | 12.54 | 13.50 | No |
| | 802.11ac(VHT40) | 38 | 5190 | 12.59 | 13.50 | No |
| | | 46 | 5230 | 11.98 | 13.50 | No |
| | 802.11ac(VHT80) | 42 | 5210 | **12.41** | 13.50 | Yes |
| 5.3 (5.25~5.35) | 802.11a | 52 | 5260 | 13.40 | 13.50 | No |
| | | 60 | 5300 | 12.52 | 13.50 | No |
| | | 64 | 5320 | 11.76 | 13.50 | No |
| | 802.11n(HT20) | 52 | 5260 | 13.21 | 13.50 | No |
| | | 60 | 5300 | 12.07 | 13.50 | No |
| | | 64 | 5320 | 12.35 | 13.50 | No |
| | 802.11n(HT40) | 54 | 5270 | 12.69 | 13.50 | No |
| | | 62 | 5310 | 12.08 | 13.50 | No |
| | 802.11ac(VHT20) | 52 | 5260 | 13.32 | 13.50 | No |
| | | 60 | 5300 | 12.61 | 13.50 | No |
| | | 64 | 5320 | 11.66 | 13.50 | No |
| | 802.11ac(VHT40) | 54 | 5270 | 12.29 | 13.50 | No |
| | | 62 | 5310 | 11.79 | 13.50 | No |
| | 802.11ac(VHT80) | 58 | 5290 | **11.83** | 13.50 | Yes |
| 5.6 (5.47~5.725) | 802.11a | 100 | 5500 | 12.77 | 13.50 | No |
| | | 116 | 5580 | 12.84 | 13.50 | No |
| | | 140 | 5700 | 12.19 | 13.50 | No |
| | 802.11n(HT20) | 100 | 5500 | 13.19 | 13.50 | No |
| | | 116 | 5680 | 12.10 | 13.50 | No |
| | | 140 | 5700 | 12.95 | 13.50 | No |
| | 802.11n(HT40) | 102 | 5510 | 12.96 | 13.50 | No |
| | | 118 | 5590 | 12.61 | 13.50 | No |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 134 | 5670 | 12.64 | 13.50 | No |
| | 802.11ac(VHT20) | 100 | 5500 | 13.42 | 13.50 | No |
| | | 116 | 5580 | 12.51 | 13.50 | No |
| | | 140 | 5700 | 12.25 | 13.50 | No |
| | 802.11ac(VHT40) | 102 | 5510 | 12.54 | 13.50 | No |
| | | 118 | 5590 | 12.14 | 13.50 | No |
| | | 134 | 5670 | 12.08 | 13.50 | No |
| | 802.11ac(VHT80) | 106 | 5530 | **12.03** | 13.50 | Yes |
| | | 122 | 5610 | 11.88 | 13.50 | No |
| | | 138 | 5690 | 11.92 | 13.50 | No |
| 5.8 (5.725~5.850) | 802.11a | 149 | 5745 | 12.82 | 13.50 | No |
| | | 157 | 5785 | 12.82 | 13.50 | No |
| | | 165 | 5825 | 12.53 | 13.50 | No |
| | 802.11n(HT20) | 149 | 5745 | 12.70 | 13.50 | No |
| | | 157 | 5785 | 13.10 | 13.50 | No |
| | | 165 | 5825 | 12.79 | 13.50 | No |
| | 802.11n(HT40) | 151 | 5755 | 12.54 | 13.50 | No |
| | | 159 | 5795 | 12.79 | 13.50 | No |
| | 802.11ac(VHT20) | 149 | 5745 | 13.30 | 13.50 | No |
| | | 157 | 5785 | 12.44 | 13.50 | No |
| | | 165 | 5825 | 12.63 | 13.50 | No |
| | 802.11ac(VHT40) | 151 | 5755 | 12.47 | 13.50 | No |
| | | 159 | 5795 | 12.66 | 13.50 | No |
| | 802.11ac(VHT80) | 155 | 5775 | **12.45** | 13.50 | Yes |
| 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 ≤ 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. | | | | | | |

## 8.6 Bluetooth-ANT12 Full Power

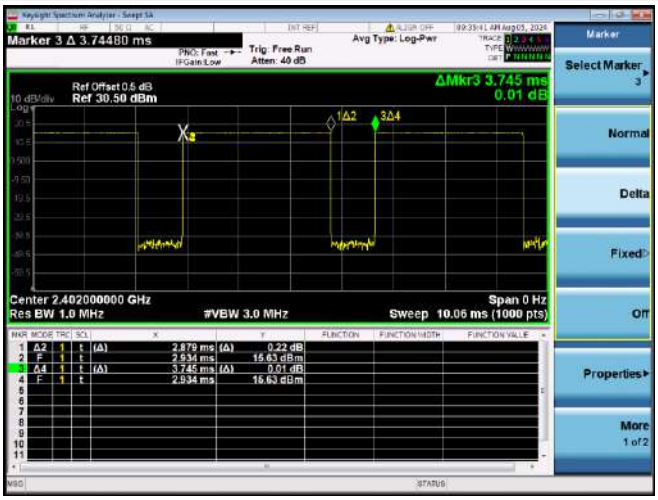
| Mode | GFSK | | | π/4-DQPSK | | |
|---|---|---|---|---|---|---|
| Channel | 0 | 39 | 78 | 0 | 39 | 78 |
| Frequency (MHz) | 2402 | 2441 | 2480 | 2402 | 2441 | 2480 |
| Conducted Power (dBm) | 9.40 | **12.40** | 11.45 | 9.49 | 12.52 | 11.56 |
| Tune-Up Limit (dBm) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| SAR Test Require | NO | YES | NO | NO | NO | NO |
| Mode | 8-DPSK | | | / | | |
| Channel | 0 | 39 | 78 | / | / | / |
| Frequency (MHz) | 2402 | 2441 | 2480 | / | / | / |
| Conducted Power (dBm) | 9.39 | 12.40 | 11.43 | / | / | / |
| Tune-Up Limit (dBm) | 13.50 | 13.50 | 13.50 | / | / | / |
| SAR Test Require | NO | NO | NO | / | / | / |
| Mode | BLE-1Mbps | | | BLE-2Mbps | | |
| Channel | 0 | 39 | 78 | 1 | 19 | 38 |
| Frequency (MHz) | 2402 | 2440 | 2480 | 2404 | 2440 | 2478 |
| Conducted Power (dBm) | -4.12 | -3.93 | -4.47 | -4.87 | -3.86 | -4.53 |
| Tune-Up Limit (dBm) | -2.00 | -2.00 | -2.00 | -2.00 | -2.00 | -2.00 |
| 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 ≤ ¼ dB higher than the primary mode.

The Bluetooth BT DH5 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

GFSK



## 8.7 Bluetooth-ANT14 Full Power

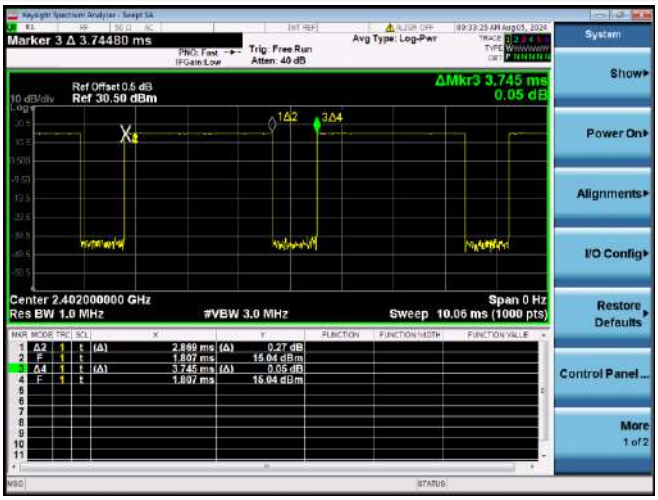
| Mode | GFSK | | | π/4-DQPSK | | |
|---|---|---|---|---|---|---|
| Channel | 0 | 39 | 78 | 0 | 39 | 78 |
| Frequency (MHz) | 2402 | 2441 | 2480 | 2402 | 2441 | 2480 |
| Conducted Power (dBm) | **15.22** | 12.35 | 11.39 | 14.02 | 12.45 | 11.53 |
| Tune-Up Limit (dBm) | 16.50 | 16.50 | 16.50 | 14.50 | 14.50 | 14.50 |
| SAR Test Require | YES | NO | NO | NO | NO | NO |
| Mode | 8-DPSK | | | / | | |
| Channel | 0 | 39 | 78 | / | / | / |
| Frequency (MHz) | 2402 | 2441 | 2480 | / | / | / |
| Conducted Power (dBm) | 13.81 | 12.38 | 11.45 | / | / | / |
| Tune-Up Limit (dBm) | 14.50 | 14.50 | 14.50 | / | / | / |
| 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) | -4.34 | -3.14 | -3.43 | -5.06 | -3.62 | -4.52 |
| Tune-Up Limit (dBm) | -2.00 | -2.00 | -2.00 | -2.00 | -2.00 | -2.00 |
| 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 ≤ ¼ dB higher than the primary mode.

The Bluetooth BT DH5 duty cycle is 76.61 % 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

GFSK



# 9 TEST EXCLUSION CONSIDERATION

For antenna location and support bands please refer the document “BL-SZ2461005-AI EUT internal photo.pdf”.

| Antenna | Description | Support Bands |
|---|---|---|
| Antenna 0 | 2/3/4G LMHB TX Antenna | GSM 850/1900<br>WCDMA Band 2/4/5<br>LTE Band 2/4/5/7/38/41 |
| Antenna 2 | 2/3/4G LMHB TX Antenna | GSM 850/1900<br>WCDMA Band 2/4/5<br>LTE Band 2/4/5/7/38/41 |
| Antenna 12 | WLAN 2.4G TX Antenna<br>WLAN 5G TX Antenna<br>Bluetooth TX Antenna | 2.4G WLAN<br>5G WLAN<br>Bluetooth |
| Antenna 14 | WLAN 2.4G TX Antenna<br>Bluetooth TX Antenna | 2.4G WLAN<br>Bluetooth |
| Note1: Middle and High frequency Band (MHB).<br>Note2: Low frequency Band (LB). | | |

# 10 TEST RESULT

## 10.1 GSM 850

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | |
| Ant.2 | DATA 3slots | Left Cheek | 0 | 190 | 836.6 | -0.13 | 0.463 | 26.92 | 27.60 | 1.169 | 0.541 | / |
| | | Left Tilt | 0 | 190 | 836.6 | 0.10 | 0.441 | 26.92 | 27.60 | 1.169 | 0.516 | / |
| | | Right Cheek | 0 | 190 | 836.6 | -0.05 | 0.831 | 26.92 | 27.60 | 1.169 | **0.971** | 1# |
| | | Right Tilt | 0 | 190 | 836.6 | 0.00 | 0.545 | 26.92 | 27.60 | 1.169 | 0.637 | / |
| | | Right Cheek | 0 | 128 | 824.2 | -0.07 | 0.735 | 26.90 | 27.60 | 1.175 | 0.864 | / |
| | | Right Cheek | 0 | 251 | 848.8 | -0.02 | 0.743 | 26.46 | 27.60 | 1.300 | 0.966 | / |
| Ant.0 | DATA 3slots | Left Cheek | 0 | 190 | 836.6 | -0.01 | 0.123 | 26.34 | 27.60 | 1.337 | 0.164 | / |
| | | Left Tilt | 0 | 190 | 836.6 | 0.08 | 0.068 | 26.34 | 27.60 | 1.337 | 0.091 | / |
| | | Right Cheek | 0 | 190 | 836.6 | 0.11 | 0.150 | 26.34 | 27.60 | 1.337 | 0.201 | / |
| | | Right Tilt | 0 | 190 | 836.6 | 0.01 | 0.079 | 26.34 | 27.60 | 1.337 | 0.106 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | |
| Ant.2 | DATA 3slots | Front Side | 10 | 190 | 836.6 | 0.15 | 0.198 | 26.92 | 27.60 | 1.169 | 0.231 | / |
| | | Back Side | 10 | 190 | 836.6 | -0.08 | 0.250 | 26.92 | 27.60 | 1.169 | **0.292** | 2# |
| | | Right Edge | 10 | 190 | 836.6 | 0.10 | 0.094 | 26.92 | 27.60 | 1.169 | 0.110 | / |
| | | Top Edge | 10 | 190 | 836.6 | 0.15 | 0.213 | 26.92 | 27.60 | 1.169 | 0.249 | / |
| Ant.0 | DATA 3slots | Front Side | 10 | 190 | 836.6 | 0.02 | 0.123 | 26.34 | 27.60 | 1.337 | 0.164 | / |
| | | Back Side | 10 | 190 | 836.6 | -0.02 | 0.203 | 26.34 | 27.60 | 1.337 | 0.271 | / |
| | | Left Edge | 10 | 190 | 836.6 | 0.09 | 0.123 | 26.34 | 27.60 | 1.337 | 0.164 | / |
| | | Right Edge | 10 | 190 | 836.6 | -0.10 | 0.020 | 26.34 | 27.60 | 1.337 | 0.027 | / |
| | | Bottom Edge | 10 | 190 | 836.6 | 0.06 | 0.167 | 26.34 | 27.60 | 1.337 | 0.223 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | |

## 10.2 GSM 1900

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Head | | | | | | | | | | | | |
| Ant.2 | DATA 2slots | Left Cheek | 0 | 810 | 1909.8 | 0.04 | 0.305 | 24.09 | 24.20 | 1.026 | 0.313 | / |
| | | Left Tilt | 0 | 810 | 1909.8 | 0.13 | 0.432 | 24.09 | 24.20 | 1.026 | 0.443 | / |
| | | Right Cheek | 0 | 810 | 1909.8 | -0.04 | 0.684 | 24.09 | 24.20 | 1.026 | 0.702 | / |
| | | Right Tilt | 0 | 810 | 1909.8 | 0.08 | 0.802 | 24.09 | 24.20 | 1.026 | 0.823 | / |
| | | Right Tilt | 0 | 512 | 1850.2 | -0.05 | 0.909 | 23.97 | 24.20 | 1.054 | **0.958** | 3# |
| | | Right Tilt | 0 | 661 | 1880 | 0.07 | 0.861 | 24.02 | 24.20 | 1.042 | 0.897 | / |
| Ant.0 | DATA 2slots | Left Cheek | 0 | 661 | 1880 | -0.15 | 0.081 | 23.76 | 24.20 | 1.107 | 0.090 | / |
| | | Left Tilt | 0 | 661 | 1880 | 0.02 | 0.034 | 23.76 | 24.20 | 1.107 | 0.038 | / |
| | | Right Cheek | 0 | 661 | 1880 | -0.13 | 0.086 | 23.76 | 24.20 | 1.107 | 0.095 | / |
| | | Right Tilt | 0 | 661 | 1880 | -0.12 | 0.056 | 23.76 | 24.20 | 1.107 | 0.062 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | |
| Ant.2 | DATA 2slots | Front Side | 10 | 810 | 1909.8 | 0.01 | 0.141 | 24.09 | 24.20 | 1.026 | 0.145 | / |
| | | Back Side | 10 | 810 | 1909.8 | 0.02 | 0.261 | 24.09 | 24.20 | 1.026 | 0.268 | / |
| | | Right Edge | 10 | 810 | 1909.8 | -0.10 | 0.042 | 24.09 | 24.20 | 1.026 | 0.043 | / |
| | | Top Edge | 10 | 810 | 1909.8 | -0.13 | 0.408 | 24.09 | 24.20 | 1.026 | **0.419** | 4# |
| Ant.0 | DATA 2slots | Front Side | 10 | 661 | 1880 | -0.09 | 0.126 | 23.76 | 24.20 | 1.107 | 0.139 | / |
| | | Back Side | 10 | 661 | 1880 | 0.02 | 0.246 | 23.76 | 24.20 | 1.107 | 0.272 | / |
| | | Left Edge | 10 | 661 | 1880 | -0.01 | 0.004 | 23.76 | 24.20 | 1.107 | 0.004 | / |
| | | Right Edge | 10 | 661 | 1880 | -0.01 | 0.078 | 23.76 | 24.20 | 1.107 | 0.086 | / |
| | | Bottom Edge | 10 | 661 | 1880 | 0.09 | 0.276 | 23.76 | 24.20 | 1.107 | 0.306 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | |

## 10.3WCDMA Band 2

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | |
| Ant.2 | RMC | Left Cheek | 0 | 9538 | 1907.6 | -0.04 | 0.225 | 15.86 | 16.50 | 1.159 | 0.261 | / |
| | | Left Tilt | 0 | 9538 | 1907.6 | 0.15 | 0.296 | 15.86 | 16.50 | 1.159 | 0.343 | / |
| | | Right Cheek | 0 | 9538 | 1907.6 | 0.02 | 0.424 | 15.86 | 16.50 | 1.159 | 0.491 | / |
| | | Right Tilt | 0 | 9538 | 1907.6 | -0.06 | 0.524 | 15.86 | 16.50 | 1.159 | **0.607** | 5# |
| Ant.0 | RMC | Left Cheek | 0 | 9538 | 1907.6 | 0.14 | 0.044 | 15.32 | 16.50 | 1.312 | 0.058 | / |
| | | Left Tilt | 0 | 9538 | 1907.6 | 0.04 | 0.030 | 15.32 | 16.50 | 1.312 | 0.039 | / |
| | | Right Cheek | 0 | 9538 | 1907.6 | -0.11 | 0.043 | 15.32 | 16.50 | 1.312 | 0.056 | / |
| | | Right Tilt | 0 | 9538 | 1907.6 | 0.12 | 0.027 | 15.32 | 16.50 | 1.312 | 0.035 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | |
| Ant.2 | RMC | Front Side | 10 | 9538 | 1907.6 | 0.12 | 0.069 | 15.86 | 16.50 | 1.159 | 0.080 | / |
| | | Back Side | 10 | 9538 | 1907.6 | 0.15 | 0.103 | 15.86 | 16.50 | 1.159 | 0.119 | / |
| | | Right Edge | 10 | 9538 | 1907.6 | 0.06 | 0.017 | 15.86 | 16.50 | 1.159 | 0.020 | / |
| | | Top Edge | 10 | 9538 | 1907.6 | -0.09 | 0.177 | 15.86 | 16.50 | 1.159 | **0.205** | 6# |
| Ant.0 | RMC | Front Side | 10 | 9538 | 1907.6 | -0.03 | 0.076 | 15.32 | 16.50 | 1.312 | 0.100 | / |
| | | Back Side | 10 | 9538 | 1907.6 | 0.09 | 0.139 | 15.32 | 16.50 | 1.312 | 0.182 | / |
| | | Left Edge | 10 | 9538 | 1907.6 | -0.11 | 0.017 | 15.32 | 16.50 | 1.312 | 0.022 | / |
| | | Right Edge | 10 | 9538 | 1907.6 | 0.02 | 0.058 | 15.32 | 16.50 | 1.312 | 0.076 | / |
| | | Bottom Edge | 10 | 9538 | 1907.6 | -0.09 | 0.143 | 15.32 | 16.50 | 1.312 | 0.188 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | |

## 10.4WCDMA Band 4

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | |
| Ant.2 | RMC | Left Cheek | 0 | 1412 | 1732.4 | 0.06 | 0.256 | 15.07 | 16.00 | 1.239 | 0.317 | / |
| | | Left Tilt | 0 | 1412 | 1732.4 | -0.10 | 0.314 | 15.07 | 16.00 | 1.239 | 0.389 | / |
| | | Right Cheek | 0 | 1412 | 1732.4 | 0.12 | 0.528 | 15.07 | 16.00 | 1.239 | 0.654 | / |
| | | Right Tilt | 0 | 1412 | 1732.4 | -0.04 | 0.600 | 15.07 | 16.00 | 1.239 | **0.743** | 7# |
| Ant.0 | RMC | Left Cheek | 0 | 1513 | 1752.6 | 0.04 | 0.014 | 14.66 | 16.00 | 1.361 | 0.019 | / |
| | | Left Tilt | 0 | 1513 | 1752.6 | 0.11 | 0.009 | 14.66 | 16.00 | 1.361 | 0.012 | / |
| | | Right Cheek | 0 | 1513 | 1752.6 | 0.15 | 0.017 | 14.66 | 16.00 | 1.361 | 0.023 | / |
| | | Right Tilt | 0 | 1513 | 1752.6 | 0.09 | 0.013 | 14.66 | 16.00 | 1.361 | 0.018 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | |
| Ant.2 | RMC | Front Side | 10 | 1412 | 1732.4 | -0.07 | 0.114 | 15.07 | 16.00 | 1.239 | 0.141 | / |
| | | Back Side | 10 | 1412 | 1732.4 | 0.12 | 0.159 | 15.07 | 16.00 | 1.239 | 0.197 | / |
| | | Right Edge | 10 | 1412 | 1732.4 | -0.08 | 0.032 | 15.07 | 16.00 | 1.239 | 0.040 | / |
| | | Top Edge | 10 | 1412 | 1732.4 | -0.16 | 0.164 | 15.07 | 16.00 | 1.239 | **0.203** | 8# |
| Ant.0 | RMC | Front Side | 10 | 1513 | 1752.6 | 0.04 | 0.022 | 14.66 | 16.00 | 1.361 | 0.030 | / |
| | | Back Side | 10 | 1513 | 1752.6 | 0.10 | 0.051 | 14.66 | 16.00 | 1.361 | 0.069 | / |
| | | Left Edge | 10 | 1513 | 1752.6 | -0.05 | 0.006 | 14.66 | 16.00 | 1.361 | 0.008 | / |
| | | Right Edge | 10 | 1513 | 1752.6 | -0.12 | 0.011 | 14.66 | 16.00 | 1.361 | 0.015 | / |
| | | Bottom Edge | 10 | 1513 | 1752.6 | 0.12 | 0.057 | 14.66 | 16.00 | 1.361 | 0.078 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | |

## 10.5WCDMA Band 5

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | |
| Ant.2 | RMC | Left Cheek | 0 | 4182 | 836.4 | -0.07 | 0.352 | 20.60 | 21.50 | 1.230 | 0.433 | / |
| | | Left Tilt | 0 | 4182 | 836.4 | -0.12 | 0.316 | 20.60 | 21.50 | 1.230 | 0.389 | / |
| | | Right Cheek | 0 | 4182 | 836.4 | -0.04 | 0.464 | 20.60 | 21.50 | 1.230 | **0.571** | 9# |
| | | Right Tilt | 0 | 4182 | 836.4 | -0.06 | 0.413 | 20.60 | 21.50 | 1.230 | 0.508 | / |
| Ant.0 | RMC | Left Cheek | 0 | 4182 | 836.4 | -0.12 | 0.059 | 20.25 | 21.50 | 1.334 | 0.079 | / |
| | | Left Tilt | 0 | 4182 | 836.4 | -0.04 | 0.033 | 20.25 | 21.50 | 1.334 | 0.044 | / |
| | | Right Cheek | 0 | 4182 | 836.4 | -0.02 | 0.068 | 20.25 | 21.50 | 1.334 | 0.091 | / |
| | | Right Tilt | 0 | 4182 | 836.4 | -0.06 | 0.071 | 20.25 | 21.50 | 1.334 | 0.095 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | |
| Ant.2 | RMC | Front Side | 10 | 4182 | 836.4 | -0.08 | 0.105 | 20.60 | 21.50 | 1.230 | 0.129 | / |
| | | Back Side | 10 | 4182 | 836.4 | -0.06 | 0.132 | 20.60 | 21.50 | 1.230 | **0.162** | 10# |
| | | Right Edge | 10 | 4182 | 836.4 | 0.12 | 0.049 | 20.60 | 21.50 | 1.230 | 0.060 | / |
| | | Top Edge | 10 | 4182 | 836.4 | -0.06 | 0.110 | 20.60 | 21.50 | 1.230 | 0.135 | / |
| Ant.0 | RMC | Front Side | 10 | 4182 | 836.4 | 0.13 | 0.052 | 20.25 | 21.50 | 1.334 | 0.069 | / |
| | | Back Side | 10 | 4182 | 836.4 | 0.05 | 0.085 | 20.25 | 21.50 | 1.334 | 0.113 | / |
| | | Left Edge | 10 | 4182 | 836.4 | -0.01 | 0.051 | 20.25 | 21.50 | 1.334 | 0.068 | / |
| | | Right Edge | 10 | 4182 | 836.4 | -0.10 | 0.029 | 20.25 | 21.50 | 1.334 | 0.039 | / |
| | | Bottom Edge | 10 | 4182 | 836.4 | 0.00 | 0.062 | 20.25 | 21.50 | 1.334 | 0.083 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | |

## 10.6 LTE Band 2 (20MHz Bandwidth)

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Left Cheek | 0 | 18900 | 1880 | 1 | Mid | 0.05 | 0.178 | 15.06 | 16.00 | 1.242 | 0.221 | / |
| | | Left Tilt | 0 | 18900 | 1880 | 1 | Mid | -0.09 | 0.230 | 15.06 | 16.00 | 1.242 | 0.286 | / |
| | | Right Cheek | 0 | 18900 | 1880 | 1 | Mid | 0.02 | 0.321 | 15.06 | 16.00 | 1.242 | 0.399 | / |
| | | Right Tilt | 0 | 18900 | 1880 | 1 | Mid | -0.14 | 0.373 | 15.06 | 16.00 | 1.242 | **0.463** | 11# |
| | | Left Cheek | 0 | 19100 | 1900 | 50 | Mid | -0.05 | 0.134 | 14.05 | 15.00 | 1.245 | 0.167 | / |
| | | Left Tilt | 0 | 19100 | 1900 | 50 | Mid | -0.08 | 0.178 | 14.05 | 15.00 | 1.245 | 0.222 | / |
| | | Right Cheek | 0 | 19100 | 1900 | 50 | Mid | -0.11 | 0.245 | 14.05 | 15.00 | 1.245 | 0.305 | / |
| | | Right Tilt | 0 | 19100 | 1900 | 50 | Mid | -0.10 | 0.291 | 14.05 | 15.00 | 1.245 | 0.362 | / |
| Ant.0 | QPSK | Left Cheek | 0 | 18900 | 1880 | 1 | Mid | 0.00 | 0.021 | 14.66 | 16.00 | 1.361 | 0.029 | / |
| | | Left Tilt | 0 | 18900 | 1880 | 1 | Mid | 0.14 | 0.018 | 14.66 | 16.00 | 1.361 | 0.024 | / |
| | | Right Cheek | 0 | 18900 | 1880 | 1 | Mid | 0.10 | 0.021 | 14.66 | 16.00 | 1.361 | 0.029 | / |
| | | Right Tilt | 0 | 18900 | 1880 | 1 | Mid | -0.12 | 0.014 | 14.66 | 16.00 | 1.361 | 0.019 | / |
| | | Left Cheek | 0 | 18900 | 1880 | 50 | Mid | 0.02 | 0.017 | 13.60 | 15.00 | 1.380 | 0.023 | / |
| | | Left Tilt | 0 | 18900 | 1880 | 50 | Mid | -0.11 | 0.015 | 13.60 | 15.00 | 1.380 | 0.021 | / |
| | | Right Cheek | 0 | 18900 | 1880 | 50 | Mid | 0.08 | 0.019 | 13.60 | 15.00 | 1.380 | 0.026 | / |
| | | Right Tilt | 0 | 18900 | 1880 | 50 | Mid | -0.07 | 0.012 | 13.60 | 15.00 | 1.380 | 0.017 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Front Side | 10 | 18900 | 1880 | 1 | Mid | -0.13 | 0.063 | 15.06 | 16.00 | 1.242 | 0.078 | / |
| | | Back Side | 10 | 18900 | 1880 | 1 | Mid | 0.02 | 0.107 | 15.06 | 16.00 | 1.242 | 0.133 | / |
| | | Right Edge | 10 | 18900 | 1880 | 1 | Mid | 0.14 | 0.016 | 15.06 | 16.00 | 1.242 | 0.020 | / |
| | | Top Edge | 10 | 18900 | 1880 | 1 | Mid | 0.02 | 0.144 | 15.06 | 16.00 | 1.242 | **0.179** | 12# |
| | | Front Side | 10 | 19100 | 1900 | 50 | Mid | -0.01 | 0.051 | 14.05 | 15.00 | 1.245 | 0.063 | / |
| | | Back Side | 10 | 19100 | 1900 | 50 | Mid | -0.09 | 0.089 | 14.05 | 15.00 | 1.245 | 0.111 | / |
| | | Right Edge | 10 | 19100 | 1900 | 50 | Mid | -0.07 | 0.013 | 14.05 | 15.00 | 1.245 | 0.016 | / |
| | | Top Edge | 10 | 19100 | 1900 | 50 | Mid | 0.06 | 0.123 | 14.05 | 15.00 | 1.245 | 0.153 | / |
| Ant.0 | QPSK | Front Side | 10 | 18900 | 1880 | 1 | Mid | -0.10 | 0.030 | 14.66 | 16.00 | 1.361 | 0.041 | / |
| | | Back Side | 10 | 18900 | 1880 | 1 | Mid | -0.10 | 0.058 | 14.66 | 16.00 | 1.361 | 0.079 | / |
| | | Left Edge | 10 | 18900 | 1880 | 1 | Mid | 0.13 | 0.007 | 14.66 | 16.00 | 1.361 | 0.010 | / |
| | | Right Edge | 10 | 18900 | 1880 | 1 | Mid | 0.13 | 0.022 | 14.66 | 16.00 | 1.361 | 0.030 | / |
| | | Bottom Edge | 10 | 18900 | 1880 | 1 | Mid | 0.17 | 0.064 | 14.66 | 16.00 | 1.361 | 0.087 | / |
| | | Front Side | 10 | 18900 | 1880 | 50 | Mid | -0.12 | 0.025 | 13.60 | 15.00 | 1.380 | 0.035 | / |
| | | Back Side | 10 | 18900 | 1880 | 50 | Mid | -0.12 | 0.049 | 13.60 | 15.00 | 1.380 | 0.068 | / |
| | | Left Edge | 10 | 18900 | 1880 | 50 | Mid | -0.03 | 0.006 | 13.60 | 15.00 | 1.380 | 0.008 | / |
| | | Right Edge | 10 | 18900 | 1880 | 50 | Mid | 0.01 | 0.020 | 13.60 | 15.00 | 1.380 | 0.028 | / |
| | | Bottom Edge | 10 | 18900 | 1880 | 50 | Mid | -0.15 | 0.053 | 13.60 | 15.00 | 1.380 | 0.073 | / |

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

## 10.7 LTE Band 2 Worse case for CA Test

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Right Tilt | 0 | 18900 +19098 | 1880 +1899.8 | 1+1 | High +Low | -0.03 | 0.350 | 14.81 | 16.00 | 1.315 | 0.460 | / |
| **Hotspot-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Top Edge | 10 | 18900 +19098 | 1880 +1899.8 | 1+1 | High +Low | 0.07 | 0.132 | 14.81 | 16.00 | 1.315 | 0.174 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.8 LTE Band 4 (20MHz Bandwidth)

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Left Cheek | 0 | 20300 | 1745 | 1 | Mid | -0.02 | 0.285 | 15.05 | 16.00 | 1.245 | 0.355 | / |
| | | Left Tilt | 0 | 20300 | 1745 | 1 | Mid | 0.12 | 0.348 | 15.05 | 16.00 | 1.245 | 0.433 | / |
| | | Right Cheek | 0 | 20300 | 1745 | 1 | Mid | -0.11 | 0.548 | 15.05 | 16.00 | 1.245 | 0.682 | / |
| | | Right Tilt | 0 | 20300 | 1745 | 1 | Mid | -0.08 | 0.568 | 15.05 | 16.00 | 1.245 | **0.707** | 13# |
| | | Left Cheek | 0 | 20050 | 1720 | 50 | Mid | 0.13 | 0.225 | 14.06 | 15.00 | 1.242 | 0.279 | / |
| | | Left Tilt | 0 | 20050 | 1720 | 50 | Mid | 0.05 | 0.285 | 14.06 | 15.00 | 1.242 | 0.354 | / |
| | | Right Cheek | 0 | 20050 | 1720 | 50 | Mid | -0.08 | 0.450 | 14.06 | 15.00 | 1.242 | 0.559 | / |
| | | Right Tilt | 0 | 20050 | 1720 | 50 | Mid | 0.09 | 0.464 | 14.06 | 15.00 | 1.242 | 0.576 | / |
| Ant.0 | QPSK | Left Cheek | 0 | 20175 | 1732.5 | 1 | Mid | 0.08 | 0.011 | 14.61 | 16.00 | 1.377 | 0.015 | / |
| | | Left Tilt | 0 | 20175 | 1732.5 | 1 | Mid | 0.00 | 0.008 | 14.61 | 16.00 | 1.377 | 0.011 | / |
| | | Right Cheek | 0 | 20175 | 1732.5 | 1 | Mid | 0.11 | 0.015 | 14.61 | 16.00 | 1.377 | 0.021 | / |
| | | Right Tilt | 0 | 20175 | 1732.5 | 1 | Mid | -0.13 | 0.010 | 14.61 | 16.00 | 1.377 | 0.014 | / |
| | | Left Cheek | 0 | 20300 | 1745 | 50 | Mid | -0.01 | 0.008 | 13.60 | 15.00 | 1.380 | 0.011 | / |
| | | Left Tilt | 0 | 20300 | 1745 | 50 | Mid | 0.14 | 0.007 | 13.60 | 15.00 | 1.380 | 0.010 | / |
| | | Right Cheek | 0 | 20300 | 1745 | 50 | Mid | -0.14 | 0.011 | 13.60 | 15.00 | 1.380 | 0.015 | / |
| | | Right Tilt | 0 | 20300 | 1745 | 50 | Mid | 0.12 | 0.008 | 13.60 | 15.00 | 1.380 | 0.011 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Front Side | 10 | 20300 | 1745 | 1 | Mid | 0.12 | 0.123 | 15.05 | 16.00 | 1.245 | 0.153 | / |
| | | Back Side | 10 | 20300 | 1745 | 1 | Mid | 0.01 | 0.163 | 15.05 | 16.00 | 1.245 | 0.203 | / |
| | | Right Edge | 10 | 20300 | 1745 | 1 | Mid | -0.04 | 0.033 | 15.05 | 16.00 | 1.245 | 0.041 | / |
| | | Top Edge | 10 | 20300 | 1745 | 1 | Mid | -0.06 | 0.166 | 15.05 | 16.00 | 1.245 | **0.207** | 14# |
| | | Front Side | 10 | 20050 | 1720 | 50 | Mid | 0.02 | 0.105 | 14.06 | 15.00 | 1.242 | 0.130 | / |
| | | Back Side | 10 | 20050 | 1720 | 50 | Mid | 0.03 | 0.143 | 14.06 | 15.00 | 1.242 | 0.178 | / |
| | | Right Edge | 10 | 20050 | 1720 | 50 | Mid | -0.15 | 0.027 | 14.06 | 15.00 | 1.242 | 0.034 | / |
| | | Top Edge | 10 | 20050 | 1720 | 50 | Mid | -0.04 | 0.144 | 14.06 | 15.00 | 1.242 | 0.179 | / |
| Ant.0 | QPSK | Front Side | 10 | 20175 | 1732.5 | 1 | Mid | 0.05 | 0.021 | 14.61 | 16.00 | 1.377 | 0.029 | / |
| | | Back Side | 10 | 20175 | 1732.5 | 1 | Mid | 0.13 | 0.044 | 14.61 | 16.00 | 1.377 | 0.061 | / |
| | | Left Edge | 10 | 20175 | 1732.5 | 1 | Mid | -0.12 | 0.006 | 14.61 | 16.00 | 1.377 | 0.008 | / |
| | | Right Edge | 10 | 20175 | 1732.5 | 1 | Mid | 0.10 | 0.011 | 14.61 | 16.00 | 1.377 | 0.015 | / |
| | | Bottom Edge | 10 | 20175 | 1732.5 | 1 | Mid | -0.02 | 0.044 | 14.61 | 16.00 | 1.377 | 0.061 | / |
| | | Front Side | 10 | 20300 | 1745 | 50 | Mid | -0.06 | 0.016 | 13.60 | 15.00 | 1.380 | 0.022 | / |
| | | Back Side | 10 | 20300 | 1745 | 50 | Mid | -0.14 | 0.037 | 13.60 | 15.00 | 1.380 | 0.051 | / |
| | | Left Edge | 10 | 20300 | 1745 | 50 | Mid | 0.11 | 0.005 | 13.60 | 15.00 | 1.380 | 0.007 | / |
| | | Right Edge | 10 | 20300 | 1745 | 50 | Mid | -0.08 | 0.008 | 13.60 | 15.00 | 1.380 | 0.011 | / |
| | | Bottom Edge | 10 | 20300 | 1745 | 50 | Mid | -0.06 | 0.039 | 13.60 | 15.00 | 1.380 | 0.054 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.9 LTE Band 5 (10MHz Bandwidth)

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Left Cheek | 0 | 20525 | 836.5 | 1 | Mid | 0.07 | 0.671 | 22.97 | 23.50 | 1.130 | 0.758 | / |
| | | Left Tilt | 0 | 20525 | 836.5 | 1 | Mid | 0.15 | 0.598 | 22.97 | 23.50 | 1.130 | 0.676 | / |
| | | Right Cheek | 0 | 20525 | 836.5 | 1 | Mid | -0.10 | 0.872 | 22.97 | 23.50 | 1.130 | **0.985** | 15# |
| | | Right Tilt | 0 | 20525 | 836.5 | 1 | Mid | 0.15 | 0.820 | 22.97 | 23.50 | 1.130 | 0.927 | / |
| | | Left Cheek | 0 | 20525 | 836.5 | 25 | Mid | 0.11 | 0.546 | 21.92 | 22.50 | 1.143 | 0.624 | / |
| | | Left Tilt | 0 | 20525 | 836.5 | 25 | Mid | 0.00 | 0.498 | 21.92 | 22.50 | 1.143 | 0.569 | / |
| | | Right Cheek | 0 | 20525 | 836.5 | 25 | Mid | 0.10 | 0.715 | 21.92 | 22.50 | 1.143 | 0.817 | / |
| | | Right Tilt | 0 | 20525 | 836.5 | 25 | Mid | 0.05 | 0.661 | 21.92 | 22.50 | 1.143 | 0.756 | / |
| | | Right Cheek | 0 | 20450 | 829 | 1 | High | -0.14 | 0.843 | 22.86 | 23.50 | 1.159 | 0.977 | / |
| | | Right Cheek | 0 | 20600 | 844 | 1 | Mid | 0.11 | 0.838 | 22.97 | 23.50 | 1.130 | 0.947 | / |
| | | Right Cheek | 0 | 20450 | 829 | 25 | Mid | -0.01 | 0.701 | 21.86 | 22.50 | 1.159 | 0.812 | / |
| | | Right Cheek | 0 | 20600 | 844 | 25 | Mid | 0.07 | 0.686 | 21.90 | 22.50 | 1.148 | 0.788 | / |
| | | Right Cheek | 0 | 20525 | 836.5 | 50 | Low | 0.05 | 0.701 | 21.91 | 22.50 | 1.146 | 0.803 | / |
| | | Right Tilt | 0 | 20450 | 829 | 1 | High | 0.04 | 0.778 | 22.86 | 23.50 | 1.159 | 0.902 | / |
| | | Right Tilt | 0 | 20600 | 844 | 1 | Mid | -0.09 | 0.769 | 22.97 | 23.50 | 1.130 | 0.869 | / |
| | | Right Tilt | 0 | 20450 | 829 | 25 | Mid | 0.05 | 0.643 | 21.86 | 22.50 | 1.159 | 0.745 | / |
| | | Right Tilt | 0 | 20600 | 844 | 25 | Mid | 0.11 | 0.604 | 21.90 | 22.50 | 1.148 | 0.693 | / |
| | | Right Tilt | 0 | 20525 | 836.5 | 50 | Low | -0.03 | 0.632 | 21.91 | 22.50 | 1.146 | 0.724 | / |
| Ant.0 | QPSK | Left Cheek | 0 | 20525 | 836.5 | 1 | Mid | 0.02 | 0.089 | 22.58 | 24.00 | 1.387 | 0.123 | / |
| | | Left Tilt | 0 | 20525 | 836.5 | 1 | Mid | 0.11 | 0.051 | 22.58 | 24.00 | 1.387 | 0.071 | / |
| | | Right Cheek | 0 | 20525 | 836.5 | 1 | Mid | -0.07 | 0.096 | 22.58 | 24.00 | 1.387 | 0.133 | / |
| | | Right Tilt | 0 | 20525 | 836.5 | 1 | Mid | 0.11 | 0.052 | 22.58 | 24.00 | 1.387 | 0.072 | / |
| | | Left Cheek | 0 | 20525 | 836.5 | 25 | Mid | 0.13 | 0.071 | 21.58 | 23.00 | 1.387 | 0.098 | / |
| | | Left Tilt | 0 | 20525 | 836.5 | 25 | Mid | 0.06 | 0.046 | 21.58 | 23.00 | 1.387 | 0.064 | / |
| | | Right Cheek | 0 | 20525 | 836.5 | 25 | Mid | 0.04 | 0.078 | 21.58 | 23.00 | 1.387 | 0.108 | / |
| | | Right Tilt | 0 | 20525 | 836.5 | 25 | Mid | -0.11 | 0.043 | 21.58 | 23.00 | 1.387 | 0.060 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Front Side | 10 | 20525 | 836.5 | 1 | Mid | 0.11 | 0.179 | 22.97 | 23.50 | 1.130 | 0.202 | / |
| | | Back Side | 10 | 20525 | 836.5 | 1 | Mid | -0.06 | 0.214 | 22.97 | 23.50 | 1.130 | **0.242** | 16# |
| | | Right Edge | 10 | 20525 | 836.5 | 1 | Mid | 0.06 | 0.081 | 22.97 | 23.50 | 1.130 | 0.092 | / |
| | | Top Edge | 10 | 20525 | 836.5 | 1 | Mid | 0.12 | 0.195 | 22.97 | 23.50 | 1.130 | 0.220 | / |
| | | Front Side | 10 | 20525 | 836.5 | 25 | Mid | 0.12 | 0.130 | 21.92 | 22.50 | 1.143 | 0.149 | / |
| | | Back Side | 10 | 20525 | 836.5 | 25 | Mid | 0.01 | 0.167 | 21.92 | 22.50 | 1.143 | 0.191 | / |
| | | Right Edge | 10 | 20525 | 836.5 | 25 | Mid | -0.06 | 0.059 | 21.92 | 22.50 | 1.143 | 0.067 | / |
| | | Top Edge | 10 | 20525 | 836.5 | 25 | Mid | -0.07 | 0.146 | 21.92 | 22.50 | 1.143 | 0.167 | / |
| Ant.0 | QPSK | Front Side | 10 | 20525 | 836.5 | 1 | Mid | 0.10 | 0.099 | 22.58 | 24.00 | 1.387 | 0.137 | / |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Back Side | 10 | 20525 | 836.5 | 1 | Mid | 0.12 | 0.151 | 22.58 | 24.00 | 1.387 | 0.209 | / |
| | | Left Edge | 10 | 20525 | 836.5 | 1 | Mid | 0.05 | 0.098 | 22.58 | 24.00 | 1.387 | 0.136 | / |
| | | Right Edge | 10 | 20525 | 836.5 | 1 | Mid | -0.01 | 0.052 | 22.58 | 24.00 | 1.387 | 0.072 | / |
| | | Bottom Edge | 10 | 20525 | 836.5 | 1 | Mid | -0.07 | 0.116 | 22.58 | 24.00 | 1.387 | 0.161 | / |
| | | Front Side | 10 | 20525 | 836.5 | 25 | Mid | 0.00 | 0.079 | 21.58 | 23.00 | 1.387 | 0.110 | / |
| | | Back Side | 10 | 20525 | 836.5 | 25 | Mid | 0.05 | 0.120 | 21.58 | 23.00 | 1.387 | 0.166 | / |
| | | Left Edge | 10 | 20525 | 836.5 | 25 | Mid | 0.04 | 0.080 | 21.58 | 23.00 | 1.387 | 0.111 | / |
| | | Right Edge | 10 | 20525 | 836.5 | 25 | Mid | 0.06 | 0.045 | 21.58 | 23.00 | 1.387 | 0.062 | / |
| | | Bottom Edge | 10 | 20525 | 836.5 | 25 | Mid | 0.13 | 0.093 | 21.58 | 23.00 | 1.387 | 0.129 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.10 LTE Band 5 Worse case for CA Test

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Right Cheek | 0 | 20476 +20575 | 831.6 +841.5 | 1+1 | High +Low | 0.02 | 0.803 | 22.89 | 23.50 | 1.151 | 0.924 | / |
| **Body-worn&Hotspot-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Back Side | 10 | 20476 +20575 | 831.6 +841.5 | 1+1 | High +Low | -0.10 | 0.205 | 22.89 | 23.50 | 1.151 | 0.236 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.11 LTE Band 7 (20MHz Bandwidth)

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Left Cheek | 0 | 20850 | 2510 | 1 | Mid | -0.08 | 0.112 | 15.21 | 16.00 | 1.199 | 0.134 | / |
| | | Left Tilt | 0 | 20850 | 2510 | 1 | Mid | 0.12 | 0.153 | 15.21 | 16.00 | 1.199 | 0.183 | / |
| | | Right Cheek | 0 | 20850 | 2510 | 1 | Mid | 0.05 | 0.354 | 15.21 | 16.00 | 1.199 | 0.424 | / |
| | | Right Tilt | 0 | 20850 | 2510 | 1 | Mid | 0.05 | 0.394 | 15.21 | 16.00 | 1.199 | **0.472** | 17# |
| | | Left Cheek | 0 | 21350 | 2560 | 50 | Mid | 0.09 | 0.089 | 14.20 | 15.00 | 1.202 | 0.107 | / |
| | | Left Tilt | 0 | 21350 | 2560 | 50 | Mid | 0.04 | 0.125 | 14.20 | 15.00 | 1.202 | 0.150 | / |
| | | Right Cheek | 0 | 21350 | 2560 | 50 | Mid | -0.05 | 0.297 | 14.20 | 15.00 | 1.202 | 0.357 | / |
| | | Right Tilt | 0 | 21350 | 2560 | 50 | Mid | -0.08 | 0.327 | 14.20 | 15.00 | 1.202 | 0.393 | / |
| Ant.0 | QPSK | Left Cheek | 0 | 20850 | 2510 | 1 | Mid | 0.04 | 0.029 | 14.08 | 15.00 | 1.236 | 0.036 | / |
| | | Left Tilt | 0 | 20850 | 2510 | 1 | Mid | -0.15 | 0.016 | 14.08 | 15.00 | 1.236 | 0.020 | / |
| | | Right Cheek | 0 | 20850 | 2510 | 1 | Mid | 0.00 | 0.016 | 14.08 | 15.00 | 1.236 | 0.020 | / |
| | | Right Tilt | 0 | 20850 | 2510 | 1 | Mid | 0.04 | 0.013 | 14.08 | 15.00 | 1.236 | 0.016 | / |
| | | Left Cheek | 0 | 20850 | 2510 | 50 | Mid | -0.02 | 0.023 | 13.06 | 14.00 | 1.242 | 0.029 | / |
| | | Left Tilt | 0 | 20850 | 2510 | 50 | Mid | 0.08 | 0.013 | 13.06 | 14.00 | 1.242 | 0.016 | / |
| | | Right Cheek | 0 | 20850 | 2510 | 50 | Mid | -0.12 | 0.012 | 13.06 | 14.00 | 1.242 | 0.015 | / |
| | | Right Tilt | 0 | 20850 | 2510 | 50 | Mid | -0.03 | 0.010 | 13.06 | 14.00 | 1.242 | 0.012 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Front Side | 10 | 20850 | 2510 | 1 | Mid | 0.09 | 0.063 | 15.21 | 16.00 | 1.199 | 0.076 | / |
| | | Back Side | 10 | 20850 | 2510 | 1 | Mid | 0.14 | 0.140 | 15.21 | 16.00 | 1.199 | 0.168 | / |
| | | Right Edge | 10 | 20850 | 2510 | 1 | Mid | 0.02 | 0.061 | 15.21 | 16.00 | 1.199 | 0.073 | / |
| | | Top Edge | 10 | 20850 | 2510 | 1 | Mid | 0.01 | 0.148 | 15.21 | 16.00 | 1.199 | **0.177** | 18# |
| | | Front Side | 10 | 21350 | 2560 | 50 | Mid | -0.06 | 0.052 | 14.20 | 15.00 | 1.202 | 0.063 | / |
| | | Back Side | 10 | 21350 | 2560 | 50 | Mid | 0.00 | 0.114 | 14.20 | 15.00 | 1.202 | 0.137 | / |
| | | Right Edge | 10 | 21350 | 2560 | 50 | Mid | -0.09 | 0.052 | 14.20 | 15.00 | 1.202 | 0.063 | / |
| | | Top Edge | 10 | 21350 | 2560 | 50 | Mid | 0.05 | 0.123 | 14.20 | 15.00 | 1.202 | 0.148 | / |
| Ant.0 | QPSK | Front Side | 10 | 20850 | 2510 | 1 | Mid | 0.10 | 0.032 | 14.08 | 15.00 | 1.236 | 0.040 | / |
| | | Back Side | 10 | 20850 | 2510 | 1 | Mid | -0.09 | 0.036 | 14.08 | 15.00 | 1.236 | 0.044 | / |
| | | Left Edge | 10 | 20850 | 2510 | 1 | Mid | -0.09 | 0.006 | 14.08 | 15.00 | 1.236 | 0.007 | / |
| | | Right Edge | 10 | 20850 | 2510 | 1 | Mid | -0.11 | 0.032 | 14.08 | 15.00 | 1.236 | 0.040 | / |
| | | Bottom Edge | 10 | 20850 | 2510 | 1 | Mid | 0.08 | 0.043 | 14.08 | 15.00 | 1.236 | 0.053 | / |
| | | Front Side | 10 | 20850 | 2510 | 50 | Mid | -0.14 | 0.026 | 13.06 | 14.00 | 1.242 | 0.032 | / |
| | | Back Side | 10 | 20850 | 2510 | 50 | Mid | 0.07 | 0.028 | 13.06 | 14.00 | 1.242 | 0.035 | / |
| | | Left Edge | 10 | 20850 | 2510 | 50 | Mid | 0.12 | 0.004 | 13.06 | 14.00 | 1.242 | 0.005 | / |
| | | Right Edge | 10 | 20850 | 2510 | 50 | Mid | 0.08 | 0.027 | 13.06 | 14.00 | 1.242 | 0.034 | / |
| | | Bottom Edge | 10 | 20850 | 2510 | 50 | Mid | 0.07 | 0.035 | 13.06 | 14.00 | 1.242 | 0.043 | / |

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

## 10.12 LTE Band 7 Worse case for CA Test

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Right Tilt | 0 | 20850 +21048 | 2510 +2529.8 | 1+1 | High +Low | 0.09 | 0.371 | 15.00 | 16.00 | 1.259 | 0.467 | / |
| **Hotspot-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Top Edge | 10 | 20850 +21048 | 2510 +2529.8 | 1+1 | High +Low | -0.05 | 0.134 | 15.00 | 16.00 | 1.259 | 0.169 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.13 LTE Band 38 (20MHz Bandwidth)

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Left Cheek | 0 | 38000 | 2595 | 1 | Mid | 0.07 | 0.109 | 18.21 | 19.00 | 1.199 | 0.131 | / |
| | | Left Tilt | 0 | 38000 | 2595 | 1 | Mid | 0.12 | 0.141 | 18.21 | 19.00 | 1.199 | 0.169 | / |
| | | Right Cheek | 0 | 38000 | 2595 | 1 | Mid | -0.02 | 0.366 | 18.21 | 19.00 | 1.199 | 0.439 | / |
| | | Right Tilt | 0 | 38000 | 2595 | 1 | Mid | 0.16 | 0.378 | 18.21 | 19.00 | 1.199 | **0.453** | 19# |
| | | Left Cheek | 0 | 37850 | 2580 | 50 | Mid | 0.05 | 0.084 | 17.26 | 18.00 | 1.186 | 0.100 | / |
| | | Left Tilt | 0 | 37850 | 2580 | 50 | Mid | -0.02 | 0.113 | 17.26 | 18.00 | 1.186 | 0.134 | / |
| | | Right Cheek | 0 | 37850 | 2580 | 50 | Mid | -0.14 | 0.298 | 17.26 | 18.00 | 1.186 | 0.353 | / |
| | | Right Tilt | 0 | 37850 | 2580 | 50 | Mid | -0.14 | 0.319 | 17.26 | 18.00 | 1.186 | 0.378 | / |
| Ant.0 | QPSK | Left Cheek | 0 | 37850 | 2580 | 1 | Mid | -0.11 | 0.025 | 16.97 | 18.00 | 1.268 | 0.032 | / |
| | | Left Tilt | 0 | 37850 | 2580 | 1 | Mid | -0.03 | 0.013 | 16.97 | 18.00 | 1.268 | 0.016 | / |
| | | Right Cheek | 0 | 37850 | 2580 | 1 | Mid | 0.07 | 0.014 | 16.97 | 18.00 | 1.268 | 0.018 | / |
| | | Right Tilt | 0 | 37850 | 2580 | 1 | Mid | -0.08 | 0.012 | 16.97 | 18.00 | 1.268 | 0.015 | / |
| | | Left Cheek | 0 | 37850 | 2580 | 50 | Mid | 0.13 | 0.019 | 15.93 | 17.00 | 1.279 | 0.024 | / |
| | | Left Tilt | 0 | 37850 | 2580 | 50 | Mid | 0.10 | 0.008 | 15.93 | 17.00 | 1.279 | 0.010 | / |
| | | Right Cheek | 0 | 37850 | 2580 | 50 | Mid | 0.03 | 0.013 | 15.93 | 17.00 | 1.279 | 0.017 | / |
| | | Right Tilt | 0 | 37850 | 2580 | 50 | Mid | 0.05 | 0.010 | 15.93 | 17.00 | 1.279 | 0.013 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Front Side | 10 | 38000 | 2595 | 1 | Mid | 0.06 | 0.065 | 18.21 | 19.00 | 1.199 | 0.078 | / |
| | | Back Side | 10 | 38000 | 2595 | 1 | Mid | 0.04 | 0.161 | 18.21 | 19.00 | 1.199 | **0.193** | 20# |
| | | Right Edge | 10 | 38000 | 2595 | 1 | Mid | 0.09 | 0.083 | 18.21 | 19.00 | 1.199 | 0.100 | / |
| | | Top Edge | 10 | 38000 | 2595 | 1 | Mid | 0.06 | 0.147 | 18.21 | 19.00 | 1.199 | 0.176 | / |
| | | Front Side | 10 | 37850 | 2580 | 50 | Mid | -0.02 | 0.053 | 17.26 | 18.00 | 1.186 | 0.063 | / |
| | | Back Side | 10 | 37850 | 2580 | 50 | Mid | -0.15 | 0.139 | 17.26 | 18.00 | 1.186 | 0.165 | / |
| | | Right Edge | 10 | 37850 | 2580 | 50 | Mid | -0.03 | 0.071 | 17.26 | 18.00 | 1.186 | 0.084 | / |
| | | Top Edge | 10 | 37850 | 2580 | 50 | Mid | -0.04 | 0.121 | 17.26 | 18.00 | 1.186 | 0.144 | / |
| Ant.0 | QPSK | Front Side | 10 | 37850 | 2580 | 1 | Mid | -0.03 | 0.047 | 16.97 | 18.00 | 1.268 | 0.060 | / |
| | | Back Side | 10 | 37850 | 2580 | 1 | Mid | 0.13 | 0.054 | 16.97 | 18.00 | 1.268 | 0.068 | / |
| | | Left Edge | 10 | 37850 | 2580 | 1 | Mid | -0.06 | 0.008 | 16.97 | 18.00 | 1.268 | 0.010 | / |
| | | Right Edge | 10 | 37850 | 2580 | 1 | Mid | 0.10 | 0.049 | 16.97 | 18.00 | 1.268 | 0.062 | / |
| | | Bottom Edge | 10 | 37850 | 2580 | 1 | Mid | -0.14 | 0.056 | 16.97 | 18.00 | 1.268 | 0.071 | / |
| | | Front Side | 10 | 37850 | 2580 | 50 | Mid | -0.05 | 0.036 | 15.93 | 17.00 | 1.279 | 0.046 | / |
| | | Back Side | 10 | 37850 | 2580 | 50 | Mid | -0.14 | 0.043 | 15.93 | 17.00 | 1.279 | 0.055 | / |
| | | Left Edge | 10 | 37850 | 2580 | 50 | Mid | -0.06 | 0.006 | 15.93 | 17.00 | 1.279 | 0.008 | / |
| | | Right Edge | 10 | 37850 | 2580 | 50 | Mid | 0.06 | 0.039 | 15.93 | 17.00 | 1.279 | 0.050 | / |
| | | Bottom Edge | 10 | 37850 | 2580 | 50 | Mid | 0.14 | 0.043 | 15.93 | 17.00 | 1.279 | 0.055 | / |

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

## 10.14 LTE Band 38 Worse case for CA Test

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Right Tilt | 0 | 38099 +37901 | 2604.9 +2585.1 | 1+1 | Low +High | -0.01 | 0.358 | 18.04 | 19.00 | 1.247 | 0.446 | / |
| **Body-worn&Hotspot-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Back Side | 10 | 38099 +37901 | 2604.9 +2585.1 | 1+1 | Low +High | 0.05 | 0.150 | 18.04 | 19.00 | 1.247 | 0.187 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.15 LTE Band 41 (20MHz Bandwidth)

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Left Cheek | 0 | 40140 | 2545 | 1 | Mid | -0.04 | 0.146 | 18.26 | 19.00 | 1.186 | 0.173 | / |
| | | Left Tilt | 0 | 40140 | 2545 | 1 | Mid | -0.10 | 0.183 | 18.26 | 19.00 | 1.186 | 0.217 | / |
| | | Right Cheek | 0 | 40140 | 2545 | 1 | Mid | -0.13 | 0.418 | 18.26 | 19.00 | 1.186 | 0.496 | / |
| | | Right Tilt | 0 | 40140 | 2545 | 1 | Mid | 0.02 | 0.455 | 18.26 | 19.00 | 1.186 | **0.540** | 21# |
| | | Left Cheek | 0 | 40140 | 2545 | 50 | High | 0.00 | 0.119 | 17.26 | 18.00 | 1.186 | 0.141 | / |
| | | Left Tilt | 0 | 40140 | 2545 | 50 | High | 0.08 | 0.147 | 17.26 | 18.00 | 1.186 | 0.174 | / |
| | | Right Cheek | 0 | 40140 | 2545 | 50 | High | -0.15 | 0.339 | 17.26 | 18.00 | 1.186 | 0.402 | / |
| | | Right Tilt | 0 | 40140 | 2545 | 50 | High | 0.14 | 0.352 | 17.26 | 18.00 | 1.186 | 0.417 | / |
| Ant.0 | QPSK | Left Cheek | 0 | 40140 | 2545 | 1 | Mid | 0.15 | 0.024 | 17.09 | 18.00 | 1.233 | 0.030 | / |
| | | Left Tilt | 0 | 40140 | 2545 | 1 | Mid | -0.13 | 0.007 | 17.09 | 18.00 | 1.233 | 0.009 | / |
| | | Right Cheek | 0 | 40140 | 2545 | 1 | Mid | -0.11 | 0.012 | 17.09 | 18.00 | 1.233 | 0.015 | / |
| | | Right Tilt | 0 | 40140 | 2545 | 1 | Mid | 0.00 | 0.011 | 17.09 | 18.00 | 1.233 | 0.014 | / |
| | | Left Cheek | 0 | 40140 | 2545 | 50 | High | -0.04 | 0.019 | 16.02 | 17.00 | 1.253 | 0.024 | / |
| | | Left Tilt | 0 | 40140 | 2545 | 50 | High | 0.03 | 0.005 | 16.02 | 17.00 | 1.253 | 0.006 | / |
| | | Right Cheek | 0 | 40140 | 2545 | 50 | High | 0.12 | 0.010 | 16.02 | 17.00 | 1.253 | 0.013 | / |
| | | Right Tilt | 0 | 40140 | 2545 | 50 | High | -0.09 | 0.008 | 16.02 | 17.00 | 1.253 | 0.010 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Front Side | 10 | 40140 | 2545 | 1 | Mid | 0.14 | 0.073 | 18.26 | 19.00 | 1.186 | 0.087 | / |
| | | Back Side | 10 | 40140 | 2545 | 1 | Mid | 0.05 | 0.185 | 18.26 | 19.00 | 1.186 | **0.219** | 22# |
| | | Right Edge | 10 | 40140 | 2545 | 1 | Mid | -0.14 | 0.085 | 18.26 | 19.00 | 1.186 | 0.101 | / |
| | | Top Edge | 10 | 40140 | 2545 | 1 | Mid | -0.08 | 0.168 | 18.26 | 19.00 | 1.186 | 0.199 | / |
| | | Front Side | 10 | 40140 | 2545 | 50 | High | 0.03 | 0.056 | 17.26 | 18.00 | 1.186 | 0.066 | / |
| | | Back Side | 10 | 40140 | 2545 | 50 | High | -0.01 | 0.147 | 17.26 | 18.00 | 1.186 | 0.174 | / |
| | | Right Edge | 10 | 40140 | 2545 | 50 | High | 0.14 | 0.066 | 17.26 | 18.00 | 1.186 | 0.078 | / |
| | | Top Edge | 10 | 40140 | 2545 | 50 | High | -0.11 | 0.136 | 17.26 | 18.00 | 1.186 | 0.161 | / |
| Ant.0 | QPSK | Front Side | 10 | 40140 | 2545 | 1 | Mid | -0.05 | 0.042 | 17.09 | 18.00 | 1.233 | 0.052 | / |
| | | Back Side | 10 | 40140 | 2545 | 1 | Mid | -0.04 | 0.050 | 17.09 | 18.00 | 1.233 | 0.062 | / |
| | | Left Edge | 10 | 40140 | 2545 | 1 | Mid | -0.13 | 0.010 | 17.09 | 18.00 | 1.233 | 0.012 | / |
| | | Right Edge | 10 | 40140 | 2545 | 1 | Mid | -0.11 | 0.043 | 17.09 | 18.00 | 1.233 | 0.053 | / |
| | | Bottom Edge | 10 | 40140 | 2545 | 1 | Mid | 0.04 | 0.048 | 17.09 | 18.00 | 1.233 | 0.059 | / |
| | | Front Side | 10 | 40140 | 2545 | 50 | High | -0.07 | 0.033 | 16.02 | 17.00 | 1.253 | 0.041 | / |
| | | Back Side | 10 | 40140 | 2545 | 50 | High | -0.08 | 0.039 | 16.02 | 17.00 | 1.253 | 0.049 | / |
| | | Left Edge | 10 | 40140 | 2545 | 50 | High | -0.12 | 0.008 | 16.02 | 17.00 | 1.253 | 0.010 | / |
| | | Right Edge | 10 | 40140 | 2545 | 50 | High | 0.03 | 0.035 | 16.02 | 17.00 | 1.253 | 0.044 | / |
| | | Bottom Edge | 10 | 40140 | 2545 | 50 | High | 0.15 | 0.038 | 16.02 | 17.00 | 1.253 | 0.048 | / |

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

## 10.16 LTE Band 41 Worse case for CA Test

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | RB Num. | RB Start | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Right Tilt | 0 | 40140 +40338 | 2545 +2564.8 | 1+1 | High +Low | 0.14 | 0.423 | 17.97 | 19.00 | 1.268 | 0.536 | / |
| **Body-worn&Hotspot-CA** | | | | | | | | | | | | | | |
| Ant.2 | QPSK | Back Side | 10 | 40140 +40338 | 2545 +2564.8 | 1+1 | High +Low | 0.08 | 0.169 | 17.97 | 19.00 | 1.268 | 0.214 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.17 WIFI 2.4GHz

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | Duty Cycle (%) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | |
| Ant.12 | 802.11 b | Left Cheek | 0 | 6 | 2437 | -0.02 | 0.458 | 14.44 | 14.50 | 1.014 | 98.90 | 1.011 | **0.470** | 23# |
| | 802.11 b | Left Tilt | 0 | 6 | 2437 | -0.07 | 0.375 | 14.44 | 14.50 | 1.014 | 98.90 | 1.011 | 0.384 | / |
| | 802.11 b | Right Cheek | 0 | 6 | 2437 | 0.11 | 0.289 | 14.44 | 14.50 | 1.014 | 98.90 | 1.011 | 0.296 | / |
| | 802.11 b | Right Tilt | 0 | 6 | 2437 | 0.00 | 0.289 | 14.44 | 14.50 | 1.014 | 98.90 | 1.011 | 0.296 | / |
| Ant.14 | 802.11 b | Left Cheek | 0 | 1 | 2412 | 0.07 | 0.235 | 17.24 | 17.50 | 1.062 | 98.90 | 1.011 | 0.252 | / |
| | 802.11 b | Left Tilt | 0 | 1 | 2412 | 0.16 | 0.089 | 17.24 | 17.50 | 1.062 | 98.90 | 1.011 | 0.096 | / |
| | 802.11 b | Right Cheek | 0 | 1 | 2412 | 0.08 | 0.061 | 17.24 | 17.50 | 1.062 | 98.90 | 1.011 | 0.065 | / |
| | 802.11 b | Right Tilt | 0 | 1 | 2412 | -0.08 | 0.034 | 17.24 | 17.50 | 1.062 | 98.90 | 1.011 | 0.037 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | |
| Ant.12 | 802.11 b | Front Side | 10 | 6 | 2437 | 0.09 | 0.080 | 14.44 | 14.50 | 1.014 | 98.90 | 1.011 | 0.082 | / |
| | 802.11 b | Back Side | 10 | 6 | 2437 | -0.08 | 0.171 | 14.44 | 14.50 | 1.014 | 98.90 | 1.011 | **0.175** | 24# |
| | 802.11 b | Left Edge | 10 | 6 | 2437 | -0.11 | 0.056 | 14.44 | 14.50 | 1.014 | 98.90 | 1.011 | 0.057 | / |
| | 802.11 b | Top Edge | 10 | 6 | 2437 | 0.01 | 0.110 | 14.44 | 14.50 | 1.014 | 98.90 | 1.011 | 0.113 | / |
| Ant.14 | 802.11 b | Front Side | 10 | 1 | 2412 | 0.07 | 0.044 | 17.24 | 17.50 | 1.062 | 98.90 | 1.011 | 0.047 | / |
| | 802.11 b | Back Side | 10 | 1 | 2412 | 0.02 | 0.126 | 17.24 | 17.50 | 1.062 | 98.90 | 1.011 | 0.135 | / |
| | 802.11 b | Left Edge | 10 | 1 | 2412 | 0.16 | 0.072 | 17.24 | 17.50 | 1.062 | 98.90 | 1.011 | 0.077 | / |
| | 802.11 b | Top Edge | 10 | 1 | 2412 | 0.01 | 0.020 | 17.24 | 17.50 | 1.062 | 98.90 | 1.011 | 0.021 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.18 WIFI 5GHz

| Antenna | Band | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | Duty Cycle (%) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | | |
| Ant.12 | 5.3G | 802.11ac VHT80 | Left Cheek | 0 | 58 | 5290 | 0.07 | 0.123 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | 0.201 | / |
| | 5.3G | 802.11ac VHT80 | Left Tilt | 0 | 58 | 5290 | 0.03 | 0.155 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | **0.253** | 25# |
| | 5.3G | 802.11ac VHT80 | Right Cheek | 0 | 58 | 5290 | 0.04 | 0.075 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | 0.122 | / |
| | 5.3G | 802.11ac VHT80 | Right Tilt | 0 | 58 | 5290 | 0.15 | 0.104 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | 0.170 | / |
| Ant.12 | 5.6G | 802.11ac VHT80 | Left Cheek | 0 | 106 | 5530 | 0.02 | 0.162 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | **0.253** | 26# |
| | 5.6G | 802.11ac VHT80 | Left Tilt | 0 | 106 | 5530 | 0.06 | 0.154 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | 0.240 | / |
| | 5.6G | 802.11ac VHT80 | Right Cheek | 0 | 106 | 5530 | 0.03 | 0.091 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | 0.142 | / |
| | 5.6G | 802.11ac VHT80 | Right Tilt | 0 | 106 | 5530 | -0.09 | 0.115 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | 0.179 | / |
| Ant.12 | 5.8G | 802.11ac VHT80 | Left Cheek | 0 | 155 | 5775 | 0.05 | 0.150 | 12.45 | 13.50 | 1.274 | 89.97 | 1.111 | **0.212** | 27# |
| | 5.8G | 802.11ac VHT80 | Left Tilt | 0 | 155 | 5775 | -0.06 | 0.137 | 12.45 | 13.50 | 1.274 | 89.97 | 1.111 | 0.194 | / |
| | 5.8G | 802.11ac VHT80 | Right Cheek | 0 | 155 | 5775 | -0.03 | 0.073 | 12.45 | 13.50 | 1.274 | 89.97 | 1.111 | 0.103 | / |
| | 5.8G | 802.11ac VHT80 | Right Tilt | 0 | 155 | 5775 | 0.09 | 0.084 | 12.45 | 13.50 | 1.274 | 89.97 | 1.111 | 0.119 | / |
| **Body-worn** | | | | | | | | | | | | | | | |
| Ant.12 | 5.3G | 802.11ac VHT80 | Front Side | 10 | 58 | 5290 | -0.13 | 0.014 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | 0.023 | / |
| | 5.3G | 802.11ac VHT80 | Back Side | 10 | 58 | 5290 | 0.06 | 0.071 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | **0.116** | 28# |
| Ant.12 | 5.6G | 802.11ac VHT80 | Front Side | 10 | 106 | 5530 | 0.13 | 0.031 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | 0.048 | / |
| | 5.6G | 802.11ac VHT80 | Back Side | 10 | 106 | 5530 | 0.04 | 0.148 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | **0.231** | 29# |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | | |
| Ant.12 | 5.2G | 802.11ac VHT80 | Front Side | 10 | 42 | 5210 | -0.07 | 0.015 | 12.41 | 13.50 | 1.285 | 89.97 | 1.111 | 0.021 | / |
| | 5.2G | 802.11ac VHT80 | Back Side | 10 | 42 | 5210 | 0.09 | 0.078 | 12.41 | 13.50 | 1.285 | 89.97 | 1.111 | **0.111** | 30# |
| | 5.2G | 802.11ac VHT80 | Left Edge | 10 | 42 | 5210 | -0.10 | 0.020 | 12.41 | 13.50 | 1.285 | 89.97 | 1.111 | 0.029 | / |
| | 5.2G | 802.11ac VHT80 | Top Edge | 10 | 42 | 5210 | -0.04 | 0.076 | 12.41 | 13.50 | 1.285 | 89.97 | 1.111 | 0.109 | / |
| Ant.12 | 5.8G | 802.11ac VHT80 | Front Side | 10 | 155 | 5775 | -0.08 | 0.027 | 12.45 | 13.50 | 1.274 | 89.97 | 1.111 | 0.038 | / |
| | 5.8G | 802.11ac VHT80 | Back Side | 10 | 155 | 5775 | 0.02 | 0.121 | 12.45 | 13.50 | 1.274 | 89.97 | 1.111 | **0.171** | 31# |
| | 5.8G | 802.11ac VHT80 | Left Edge | 10 | 155 | 5775 | 0.08 | 0.080 | 12.45 | 13.50 | 1.274 | 89.97 | 1.111 | 0.113 | / |
| | 5.8G | 802.11ac VHT80 | Top Edge | 10 | 155 | 5775 | -0.03 | 0.080 | 12.45 | 13.50 | 1.274 | 89.97 | 1.111 | 0.113 | / |

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

| Antenna | Band | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 10 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | Duty Cycle (%) | Scaling Factor | 10 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Specific** | | | | | | | | | | | | | | | |
| Ant.12 | 5.3G | 802.11ac VHT80 | Front Side | 0 | 58 | 5290 | 0.07 | 0.088 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | 0.144 | / |
| | 5.3G | 802.11ac VHT80 | Back Side | 0 | 58 | 5290 | 0.10 | 0.171 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | 0.279 | / |
| | 5.3G | 802.11ac VHT80 | Left Edge | 0 | 58 | 5290 | -0.08 | 0.111 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | 0.181 | / |
| | 5.3G | 802.11ac VHT80 | Top Edge | 0 | 58 | 5290 | 0.02 | 0.227 | 11.83 | 13.50 | 1.469 | 89.97 | 1.111 | 0.370 | 32# |
| Ant.12 | 5.6G | 802.11ac VHT80 | Front Side | 0 | 106 | 5530 | 0.12 | 0.119 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | 0.185 | / |
| | 5.6G | 802.11ac VHT80 | Back Side | 0 | 106 | 5530 | 0.00 | 0.176 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | 0.274 | / |
| | 5.6G | 802.11ac VHT80 | Left Edge | 0 | 106 | 5530 | 0.05 | 0.173 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | 0.270 | / |
| | 5.6G | 802.11ac VHT80 | Top Edge | 0 | 106 | 5530 | 0.02 | 0.267 | 12.03 | 13.50 | 1.403 | 89.97 | 1.111 | **0.416** | 33# |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | | |

## 10.19 Bluetooth

| Antenna | Mode | Position | Dist. (mm) | Ch. | Freq. (MHz) | Power Drift (dB) | 1 g Meas SAR (W/kg) | Meas. Power (dBm) | Max. tune-power (dBm) | Scaling Factor | Duty Cycle (%) | Scaling Factor | 1 g Scaled SAR (W/kg) | Meas. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Head** | | | | | | | | | | | | | | |
| Ant.12 | DH5 | Left Cheek | 0 | 39 | 2441 | -0.07 | 0.289 | 12.40 | 13.50 | 1.288 | 76.88 | 1.301 | **0.484** | 34# |
| | DH5 | Left Tilt | 0 | 39 | 2441 | -0.11 | 0.177 | 12.40 | 13.50 | 1.288 | 76.88 | 1.301 | 0.297 | / |
| | DH5 | Right Cheek | 0 | 39 | 2441 | 0.09 | 0.099 | 12.40 | 13.50 | 1.288 | 76.88 | 1.301 | 0.166 | / |
| | DH5 | Right Tilt | 0 | 39 | 2441 | -0.07 | 0.104 | 12.40 | 13.50 | 1.288 | 76.88 | 1.301 | 0.174 | / |
| Ant.14 | DH5 | Left Cheek | 0 | 0 | 2402 | -0.12 | 0.155 | 15.22 | 16.50 | 1.343 | 76.61 | 1.305 | 0.272 | / |
| | DH5 | Left Tilt | 0 | 0 | 2402 | -0.14 | 0.068 | 15.22 | 16.50 | 1.343 | 76.61 | 1.305 | 0.119 | / |
| | DH5 | Right Cheek | 0 | 0 | 2402 | -0.07 | 0.044 | 15.22 | 16.50 | 1.343 | 76.61 | 1.305 | 0.077 | / |
| | DH5 | Right Tilt | 0 | 0 | 2402 | 0.02 | 0.023 | 15.22 | 16.50 | 1.343 | 76.61 | 1.305 | 0.040 | / |
| **Body-worn&Hotspot** | | | | | | | | | | | | | | |
| Ant.12 | DH5 | Front Side | 10 | 39 | 2441 | 0.08 | 0.034 | 12.40 | 13.50 | 1.288 | 76.88 | 1.301 | 0.044 | / |
| | DH5 | Back Side | 10 | 39 | 2441 | 0.11 | 0.080 | 12.40 | 13.50 | 1.288 | 76.88 | 1.301 | **0.103** | 35# |
| | DH5 | Left Edge | 10 | 39 | 2441 | -0.03 | 0.016 | 12.40 | 13.50 | 1.288 | 76.88 | 1.301 | 0.021 | / |
| | DH5 | Top Edge | 10 | 39 | 2441 | -0.02 | 0.052 | 12.40 | 13.50 | 1.288 | 76.88 | 1.301 | 0.067 | / |
| Ant.14 | DH5 | Front Side | 10 | 0 | 2402 | 0.16 | 0.026 | 15.22 | 16.50 | 1.343 | 76.61 | 1.305 | 0.035 | / |
| | DH5 | Back Side | 10 | 0 | 2402 | 0.04 | 0.075 | 15.22 | 16.50 | 1.343 | 76.61 | 1.305 | 0.101 | / |
| | DH5 | Left Edge | 10 | 0 | 2402 | 0.14 | 0.053 | 15.22 | 16.50 | 1.343 | 76.61 | 1.305 | 0.071 | / |
| | DH5 | Top Edge | 10 | 0 | 2402 | 0.01 | 0.014 | 15.22 | 16.50 | 1.343 | 76.61 | 1.305 | 0.019 | / |
| Note: Refer to ANNEX C for the detailed test data for each test configuration. | | | | | | | | | | | | | | |

## 10.20 NFC SAR

1. According to the 2022.04 TCBC Workshop meeting, the power threshold is ≤ 100MHz, refer to P6s.

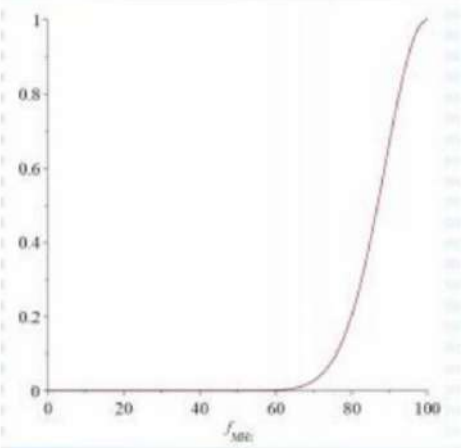
$$P_{7X}(d_{mm}, f_{MHz}) := \begin{cases} P_{6S}(d_{mm}, f_{MHz}) & f_{MHz} \le 100 \\ P_{6to7}(d_{mm}, f_{MHz}) & 100 < f_{MHz} \le 300 \\ P_{7}(d_{mm}, f_{MHz}) & 300 < f_{MHz} \end{cases}$$

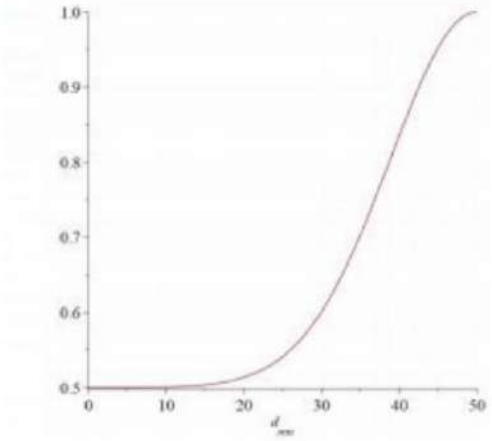
2. For portable products, when using a distance of ≤ 50mm, such as mobile phone NFC, P6s is calculated with the following formula calculate.

$$S_f(f_{MHz}) \cdot P_{431a}(d_{mm}, f_{MHz}) + (1 - S_f(f_{MHz})) \cdot S_d(d_{mm}) \, P_{431b1}(50., 100.) \cdot \left(1. + \log10\left(\frac{100.}{f_{MHz}}\right)\right) \qquad d_{mm} \le 50 \text{ and } f_{MHz} \le 100$$

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

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




| d≤50mm | | | | |
|---|---|---|---|---|
| f Max(MHz) | 100 | | d Max(mm) | 50 |
| f MHz | 13.56 | | d(mm) | 5 |
| △f(MHz) | 100 | | △d | 50 |
| $S_f(f_{MHz})$ | 0.000568861 | | $S_d$（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 ERP level (6 dB for frequencies ≤ 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 = ERP - 20log D + 104.8

where:

E = electric field strength in dBμV/m,

ERP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

| Mode | f (MHz) | Max. E-Field strength (dBuV/m) | D (m) | Ground reflection factor (dB) | ERP (dBm) |
|---|---|---|---|---|---|
| NFC (13.56MHz) | 13.56 | 57.15 | 10 | 6 | -21.65 |
| Note:<br>1. Add the appropriate maximum ground reflection factor to the ERP level (6 dB for frequencies ≤ 30 MHz).<br>2.ERP= 57.15+20*Log(10) - 104.8 + 6 =-21.65 (dBm) | | | | | |

According to the FCC KDB 447498 D04

Estimated SAR: SAR test =1.6 · Pant / Pth [W/kg]

| Estimated SAR | 1.6 ·Pant / Pth [W/kg] | | |
|---|---|---|---|
| Pmeas.(dBm) | -21.65 | Pmeas.(mW) | 0.00684 |
| Pth.(mW) | 443.13 | | |
| NFC Estimated 1g SAR [W/kg] | ＜0.001 | | |

# 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 ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 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 >= 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 >= 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 >= 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$^{1th}$ Measured SAR (W/kg) | Largest to Smallest SAR Radio |
|---|---|---|---|---|---|---|---|
| 836.6 | GSM850 | Head | Right Cheek | 0.831 | Yes | 0.820 | 1.01 |
| 1850.2 | GSM1900 | Head | Right Tilt | 0.909 | Yes | 0.896 | 1.01 |
| 836.5 | LTE Band5 | Head | Right Cheek | 0.872 | Yes | 0.871 | 1.00 |
| 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. | | | | | | | |

# 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 | Specific |
|---|---|---|---|---|---|
| 1 | WWAN + WLAN 2.4GHz(Ant.12) | Yes | Yes | Yes | Yes |
| 2 | WWAN + WLAN 2.4GHz(Ant.14) | Yes | Yes | Yes | Yes |
| 3 | WWAN + BT(Ant.12) | Yes | Yes | Yes | Yes |
| 4 | WWAN + BT(Ant.14) | Yes | Yes | Yes | Yes |
| 5 | WWAN + WLAN 5GHz(Ant.12) | Yes | Yes | Yes | Yes |
| 6 | WWAN + WLAN 5GHz(Ant.14) | Yes | Yes | Yes | Yes |
| 7 | WLAN 5GHz(Ant.12) + BT(Ant.12) | Yes | Yes | Yes | Yes |
| 8 | WLAN 5GHz(Ant.12) + BT(Ant.14) | Yes | Yes | Yes | Yes |
| 9 | WWAN + WLAN 5GHz(Ant.12) + BT(Ant.12) | Yes | Yes | Yes | Yes |
| 10 | WWAN + WLAN 5GHz(Ant.12) + BT(Ant.14) | Yes | Yes | Yes | Yes |

Note:
1. WWAN antennas can switch automatically, the standards supported by WWAN are(GSM Voice/GPRS/EDGE/WCDMA/LTE).
2. The maximum SAR summation is calculated based on the same configuration and test position.
3. WLAN 2.4GHz and Bluetooth will not be transmitting at same time, WLAN 2.4GHz and WLAN 5GHz will not be transmitting at same time.
4. The Bluetooth support dual antennas, and can't transmit simultaneously, the WLAN 2.4G support dual antennas, but does not support MIMO.

## 12.2 Sum SAR of Simultaneous Transmission

### 12.2.1 Head Simultaneous Transmission SAR Evaluation for WWAN and WLAN

| Band | Antenna | Position | Stand alone SAR | | | | SUM SAR | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | | |
| | | | WWAN | 2.4GWIFI Max. | 5GWIFI Max. | Bluetooth Max. | 1+2 | 1+3+4 |
| GSM850 | Ant.2 | Left Cheek | 0.541 | 0.470 | 0.253 | 0.484 | 1.011 | 1.278 |
| | | Left Tilt | 0.516 | 0.384 | 0.253 | 0.297 | 0.900 | 1.066 |
| | | Right Cheek | 0.971 | 0.296 | 0.142 | 0.166 | 1.267 | 1.279 |
| | | Right Tilt | 0.637 | 0.296 | 0.179 | 0.174 | 0.933 | 0.990 |
| GSM850 | Ant.0 | Left Cheek | 0.164 | 0.470 | 0.253 | 0.484 | 0.634 | 0.901 |
| | | Left Tilt | 0.091 | 0.384 | 0.253 | 0.297 | 0.475 | 0.641 |
| | | Right Cheek | 0.201 | 0.296 | 0.142 | 0.166 | 0.497 | 0.509 |
| | | Right Tilt | 0.106 | 0.296 | 0.179 | 0.174 | 0.402 | 0.459 |
| GSM1900 | Ant.2 | Left Cheek | 0.313 | 0.470 | 0.253 | 0.484 | 0.783 | 1.050 |
| | | Left Tilt | 0.443 | 0.384 | 0.253 | 0.297 | 0.827 | 0.993 |
| | | Right Cheek | 0.702 | 0.296 | 0.142 | 0.166 | 0.998 | 1.010 |
| | | Right Tilt | 0.958 | 0.296 | 0.179 | 0.174 | 1.254 | 1.311 |
| GSM1900 | Ant.0 | Left Cheek | 0.090 | 0.470 | 0.253 | 0.484 | 0.560 | 0.827 |
| | | Left Tilt | 0.038 | 0.384 | 0.253 | 0.297 | 0.422 | 0.588 |
| | | Right Cheek | 0.095 | 0.296 | 0.142 | 0.166 | 0.391 | 0.403 |
| | | Right Tilt | 0.062 | 0.296 | 0.179 | 0.174 | 0.358 | 0.415 |
| WCDMA B2 | Ant.2 | Left Cheek | 0.261 | 0.470 | 0.253 | 0.484 | 0.731 | 0.998 |
| | | Left Tilt | 0.343 | 0.384 | 0.253 | 0.297 | 0.727 | 0.893 |
| | | Right Cheek | 0.491 | 0.296 | 0.142 | 0.166 | 0.787 | 0.799 |
| | | Right Tilt | 0.607 | 0.296 | 0.179 | 0.174 | 0.903 | 0.960 |
| WCDMA B2 | Ant.0 | Left Cheek | 0.058 | 0.470 | 0.253 | 0.484 | 0.528 | 0.795 |
| | | Left Tilt | 0.039 | 0.384 | 0.253 | 0.297 | 0.423 | 0.589 |
| | | Right Cheek | 0.056 | 0.296 | 0.142 | 0.166 | 0.352 | 0.364 |
| | | Right Tilt | 0.035 | 0.296 | 0.179 | 0.174 | 0.331 | 0.388 |
| WCDMA B4 | Ant.2 | Left Cheek | 0.317 | 0.470 | 0.253 | 0.484 | 0.787 | 1.054 |
| | | Left Tilt | 0.389 | 0.384 | 0.253 | 0.297 | 0.773 | 0.939 |
| | | Right Cheek | 0.654 | 0.296 | 0.142 | 0.166 | 0.950 | 0.962 |
| | | Right Tilt | 0.743 | 0.296 | 0.179 | 0.174 | 1.039 | 1.096 |
| WCDMA B4 | Ant.0 | Left Cheek | 0.019 | 0.470 | 0.253 | 0.484 | 0.489 | 0.756 |
| | | Left Tilt | 0.012 | 0.384 | 0.253 | 0.297 | 0.396 | 0.562 |
| | | Right Cheek | 0.023 | 0.296 | 0.142 | 0.166 | 0.319 | 0.331 |
| | | Right Tilt | 0.018 | 0.296 | 0.179 | 0.174 | 0.314 | 0.371 |
| WCDMA B5 | Ant.2 | Left Cheek | 0.433 | 0.470 | 0.253 | 0.484 | 0.903 | 1.170 |
| | | Left Tilt | 0.389 | 0.384 | 0.253 | 0.297 | 0.773 | 0.939 |
| | | Right Cheek | 0.571 | 0.296 | 0.142 | 0.166 | 0.867 | 0.879 |
| | | Right Tilt | 0.508 | 0.296 | 0.179 | 0.174 | 0.804 | 0.861 |
| WCDMA B5 | Ant.0 | Left Cheek | 0.079 | 0.470 | 0.253 | 0.484 | 0.549 | 0.816 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Left Tilt | 0.044 | 0.384 | 0.253 | 0.297 | 0.428 | 0.594 |
| | | Right Cheek | 0.091 | 0.296 | 0.142 | 0.166 | 0.387 | 0.399 |
| | | Right Tilt | 0.095 | 0.296 | 0.179 | 0.174 | 0.391 | 0.448 |
| LTE B2 | Ant.2 | Left Cheek | 0.221 | 0.470 | 0.253 | 0.484 | 0.691 | 0.958 |
| | | Left Tilt | 0.286 | 0.384 | 0.253 | 0.297 | 0.670 | 0.836 |
| | | Right Cheek | 0.399 | 0.296 | 0.142 | 0.166 | 0.695 | 0.707 |
| | | Right Tilt | 0.463 | 0.296 | 0.179 | 0.174 | 0.759 | 0.816 |
| LTE B2 | Ant.0 | Left Cheek | 0.029 | 0.470 | 0.253 | 0.484 | 0.499 | 0.766 |
| | | Left Tilt | 0.024 | 0.384 | 0.253 | 0.297 | 0.408 | 0.574 |
| | | Right Cheek | 0.029 | 0.296 | 0.142 | 0.166 | 0.325 | 0.337 |
| | | Right Tilt | 0.019 | 0.296 | 0.179 | 0.174 | 0.315 | 0.372 |
| LTE B4 | Ant.2 | Left Cheek | 0.355 | 0.470 | 0.253 | 0.484 | 0.825 | 1.092 |
| | | Left Tilt | 0.433 | 0.384 | 0.253 | 0.297 | 0.817 | 0.983 |
| | | Right Cheek | 0.682 | 0.296 | 0.142 | 0.166 | 0.978 | 0.990 |
| | | Right Tilt | 0.707 | 0.296 | 0.179 | 0.174 | 1.003 | 1.060 |
| LTE B4 | Ant.0 | Left Cheek | 0.015 | 0.470 | 0.253 | 0.484 | 0.485 | 0.752 |
| | | Left Tilt | 0.011 | 0.384 | 0.253 | 0.297 | 0.395 | 0.561 |
| | | Right Cheek | 0.021 | 0.296 | 0.142 | 0.166 | 0.317 | 0.329 |
| | | Right Tilt | 0.014 | 0.296 | 0.179 | 0.174 | 0.310 | 0.367 |
| LTE B5 | Ant.2 | Left Cheek | 0.758 | 0.470 | 0.253 | 0.484 | 1.228 | **1.495** |
| | | Left Tilt | 0.676 | 0.384 | 0.253 | 0.297 | 1.060 | 1.226 |
| | | Right Cheek | 0.985 | 0.296 | 0.142 | 0.166 | 1.281 | 1.293 |
| | | Right Tilt | 0.927 | 0.296 | 0.179 | 0.174 | 1.223 | 1.280 |
| LTE B5 | Ant.0 | Left Cheek | 0.123 | 0.470 | 0.253 | 0.484 | 0.593 | 0.860 |
| | | Left Tilt | 0.071 | 0.384 | 0.253 | 0.297 | 0.455 | 0.621 |
| | | Right Cheek | 0.133 | 0.296 | 0.142 | 0.166 | 0.429 | 0.441 |
| | | Right Tilt | 0.072 | 0.296 | 0.179 | 0.174 | 0.368 | 0.425 |
| LTE B7 | Ant.2 | Left Cheek | 0.134 | 0.470 | 0.253 | 0.484 | 0.604 | 0.871 |
| | | Left Tilt | 0.183 | 0.384 | 0.253 | 0.297 | 0.567 | 0.733 |
| | | Right Cheek | 0.424 | 0.296 | 0.142 | 0.166 | 0.720 | 0.732 |
| | | Right Tilt | 0.472 | 0.296 | 0.179 | 0.174 | 0.768 | 0.825 |
| LTE B7 | Ant.0 | Left Cheek | 0.036 | 0.470 | 0.253 | 0.484 | 0.506 | 0.773 |
| | | Left Tilt | 0.020 | 0.384 | 0.253 | 0.297 | 0.404 | 0.570 |
| | | Right Cheek | 0.020 | 0.296 | 0.142 | 0.166 | 0.316 | 0.328 |
| | | Right Tilt | 0.016 | 0.296 | 0.179 | 0.174 | 0.312 | 0.369 |
| LTE B38 | Ant.2 | Left Cheek | 0.131 | 0.470 | 0.253 | 0.484 | 0.601 | 0.868 |
| | | Left Tilt | 0.169 | 0.384 | 0.253 | 0.297 | 0.553 | 0.719 |
| | | Right Cheek | 0.439 | 0.296 | 0.142 | 0.166 | 0.735 | 0.747 |
| | | Right Tilt | 0.453 | 0.296 | 0.179 | 0.174 | 0.749 | 0.806 |
| LTE B38 | Ant.0 | Left Cheek | 0.032 | 0.470 | 0.253 | 0.484 | 0.502 | 0.769 |
| | | Left Tilt | 0.016 | 0.384 | 0.253 | 0.297 | 0.400 | 0.566 |
| | | Right Cheek | 0.018 | 0.296 | 0.142 | 0.166 | 0.314 | 0.326 |
| | | Right Tilt | 0.015 | 0.296 | 0.179 | 0.174 | 0.311 | 0.368 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LTE B41 | Ant.2 | Left Cheek | 0.173 | 0.470 | 0.253 | 0.484 | 0.643 | 0.910 |
| | | Left Tilt | 0.217 | 0.384 | 0.253 | 0.297 | 0.601 | 0.767 |
| | | Right Cheek | 0.496 | 0.296 | 0.142 | 0.166 | 0.792 | 0.804 |
| | | Right Tilt | 0.540 | 0.296 | 0.179 | 0.174 | 0.836 | 0.893 |
| LTE B41 | Ant.0 | Left Cheek | 0.030 | 0.470 | 0.253 | 0.484 | 0.500 | 0.767 |
| | | Left Tilt | 0.009 | 0.384 | 0.253 | 0.297 | 0.393 | 0.559 |
| | | Right Cheek | 0.015 | 0.296 | 0.142 | 0.166 | 0.311 | 0.323 |
| | | Right Tilt | 0.014 | 0.296 | 0.179 | 0.174 | 0.310 | 0.367 |

Note:

1: The simultaneous transmission combinations of the antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.495 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

## 12.2.2 Body-Worn Simultaneous Transmission SAR Evaluation for WWAN and WLAN

| Band | Antenna | Position | Stand alone SAR | | | | SUM SAR | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | | |
| | | | WWAN | 2.4GWIFI Max. | 5GWIFI Max. | Bluetooth Max. | 1+2 | 1+3+4 |
| GSM850 | Ant.2 | Front Side 15mm | 0.231 | 0.082 | 0.048 | 0.044 | 0.313 | 0.323 |
| | | Back Side 15mm | 0.292 | 0.175 | 0.231 | 0.103 | 0.467 | **0.626** |
| GSM850 | Ant.0 | Front Side 15mm | 0.164 | 0.082 | 0.048 | 0.044 | 0.246 | 0.256 |
| | | Back Side 15mm | 0.271 | 0.175 | 0.231 | 0.103 | 0.446 | 0.605 |
| GSM1900 | Ant.2 | Front Side 15mm | 0.145 | 0.082 | 0.048 | 0.044 | 0.227 | 0.237 |
| | | Back Side 15mm | 0.268 | 0.175 | 0.231 | 0.103 | 0.443 | 0.602 |
| GSM1900 | Ant.0 | Front Side 15mm | 0.139 | 0.082 | 0.048 | 0.044 | 0.221 | 0.231 |
| | | Back Side 15mm | 0.272 | 0.175 | 0.231 | 0.103 | 0.447 | 0.606 |
| WCDMA B2 | Ant.2 | Front Side 15mm | 0.080 | 0.082 | 0.048 | 0.044 | 0.162 | 0.172 |
| | | Back Side 15mm | 0.119 | 0.175 | 0.231 | 0.103 | 0.294 | 0.453 |
| WCDMA B2 | Ant.0 | Front Side 15mm | 0.100 | 0.082 | 0.048 | 0.044 | 0.182 | 0.192 |
| | | Back Side 15mm | 0.182 | 0.175 | 0.231 | 0.103 | 0.357 | 0.516 |
| WCDMA B4 | Ant.2 | Front Side 15mm | 0.141 | 0.082 | 0.048 | 0.044 | 0.223 | 0.233 |
| | | Back Side 15mm | 0.197 | 0.175 | 0.231 | 0.103 | 0.372 | 0.531 |
| WCDMA B4 | Ant.0 | Front Side 15mm | 0.030 | 0.082 | 0.048 | 0.044 | 0.112 | 0.122 |
| | | Back Side 15mm | 0.069 | 0.175 | 0.231 | 0.103 | 0.244 | 0.403 |
| WCDMA B5 | Ant.2 | Front Side 15mm | 0.129 | 0.082 | 0.048 | 0.044 | 0.211 | 0.221 |
| | | Back Side 15mm | 0.162 | 0.175 | 0.231 | 0.103 | 0.337 | 0.496 |
| WCDMA B5 | Ant.0 | Front Side 15mm | 0.069 | 0.082 | 0.048 | 0.044 | 0.151 | 0.161 |
| | | Back Side 15mm | 0.113 | 0.175 | 0.231 | 0.103 | 0.288 | 0.447 |
| LTE B2 | Ant.2 | Front Side 15mm | 0.078 | 0.082 | 0.048 | 0.044 | 0.160 | 0.170 |
| | | Back Side 15mm | 0.133 | 0.175 | 0.231 | 0.103 | 0.308 | 0.467 |
| LTE B2 | Ant.0 | Front Side 15mm | 0.041 | 0.082 | 0.048 | 0.044 | 0.123 | 0.133 |
| | | Back Side 15mm | 0.079 | 0.175 | 0.231 | 0.103 | 0.254 | 0.413 |
| LTE B4 | Ant.2 | Front Side 15mm | 0.153 | 0.082 | 0.048 | 0.044 | 0.235 | 0.245 |
| | | Back Side 15mm | 0.203 | 0.175 | 0.231 | 0.103 | 0.378 | 0.537 |
| LTE B4 | Ant.0 | Front Side 15mm | 0.029 | 0.082 | 0.048 | 0.044 | 0.111 | 0.121 |
| | | Back Side 15mm | 0.061 | 0.175 | 0.231 | 0.103 | 0.236 | 0.395 |
| LTE B5 | Ant.2 | Front Side 15mm | 0.202 | 0.082 | 0.048 | 0.044 | 0.284 | 0.294 |
| | | Back Side 15mm | 0.242 | 0.175 | 0.231 | 0.103 | 0.417 | 0.576 |
| LTE B5 | Ant.0 | Front Side 15mm | 0.137 | 0.082 | 0.048 | 0.044 | 0.219 | 0.229 |
| | | Back Side 15mm | 0.209 | 0.175 | 0.231 | 0.103 | 0.384 | 0.543 |
| LTE B7 | Ant.2 | Front Side 15mm | 0.076 | 0.082 | 0.048 | 0.044 | 0.158 | 0.168 |
| | | Back Side 15mm | 0.168 | 0.175 | 0.231 | 0.103 | 0.343 | 0.502 |
| LTE B7 | Ant.0 | Front Side 15mm | 0.040 | 0.082 | 0.048 | 0.044 | 0.122 | 0.132 |
| | | Back Side 15mm | 0.044 | 0.175 | 0.231 | 0.103 | 0.219 | 0.378 |
| LTE B38 | Ant.2 | Front Side 15mm | 0.078 | 0.082 | 0.048 | 0.044 | 0.160 | 0.170 |
| | | Back Side 15mm | 0.193 | 0.175 | 0.231 | 0.103 | 0.368 | 0.527 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LTE B38 | Ant.0 | Front Side 15mm | 0.060 | 0.082 | 0.048 | 0.044 | 0.142 | 0.152 |
| | | Back Side 15mm | 0.068 | 0.175 | 0.231 | 0.103 | 0.243 | 0.402 |
| LTE B41 | Ant.2 | Front Side 15mm | 0.087 | 0.082 | 0.048 | 0.044 | 0.169 | 0.179 |
| | | Back Side 15mm | 0.219 | 0.175 | 0.231 | 0.103 | 0.394 | 0.553 |
| LTE B41 | Ant.0 | Front Side 15mm | 0.052 | 0.082 | 0.048 | 0.044 | 0.134 | 0.144 |
| | | Back Side 15mm | 0.062 | 0.175 | 0.231 | 0.103 | 0.237 | 0.396 |

Note:

1: The simultaneous transmission combinations of the antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.626 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

## 12.2.3 Hotspot Simultaneous Transmission SAR Evaluation for WWAN and WLAN

| Band | Antenna | Position | Stand alone SAR | | | | SUM SAR | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | | |
| | | | WWAN | 2.4GWIFI Max. | 5GWIFI Max. | Bluetooth Max. | 1+2 | 1+3+4 |
| GSM850 | Ant.2 | Front Side 10mm | 0.231 | 0.082 | 0.038 | 0.044 | 0.313 | 0.313 |
| | | Back Side 10mm | 0.292 | 0.175 | 0.171 | 0.103 | 0.467 | 0.566 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.110 | 0.000 | 0.000 | 0.000 | 0.110 | 0.110 |
| | | Top Edge 10mm | 0.249 | 0.113 | 0.113 | 0.067 | 0.362 | 0.429 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GSM850 | Ant.0 | Front Side 10mm | 0.164 | 0.082 | 0.038 | 0.044 | 0.246 | 0.246 |
| | | Back Side 10mm | 0.271 | 0.175 | 0.171 | 0.103 | 0.446 | 0.545 |
| | | Left Edge 10mm | 0.164 | 0.077 | 0.113 | 0.071 | 0.241 | 0.348 |
| | | Right Edge 10mm | 0.027 | 0.000 | 0.000 | 0.000 | 0.027 | 0.027 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.223 | 0.000 | 0.000 | 0.000 | 0.223 | 0.223 |
| GSM1900 | Ant.2 | Front Side 10mm | 0.145 | 0.082 | 0.038 | 0.044 | 0.227 | 0.227 |
| | | Back Side 10mm | 0.268 | 0.175 | 0.171 | 0.103 | 0.443 | 0.542 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.043 | 0.000 | 0.000 | 0.000 | 0.043 | 0.043 |
| | | Top Edge 10mm | 0.419 | 0.113 | 0.113 | 0.067 | 0.532 | **0.599** |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| GSM1900 | Ant.0 | Front Side 10mm | 0.139 | 0.082 | 0.038 | 0.044 | 0.221 | 0.221 |
| | | Back Side 10mm | 0.272 | 0.175 | 0.171 | 0.103 | 0.447 | 0.546 |
| | | Left Edge 10mm | 0.004 | 0.077 | 0.113 | 0.071 | 0.081 | 0.188 |
| | | Right Edge 10mm | 0.086 | 0.000 | 0.000 | 0.000 | 0.086 | 0.086 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.306 | 0.000 | 0.000 | 0.000 | 0.306 | 0.306 |
| WCDMA B2 | Ant.2 | Front Side 10mm | 0.080 | 0.082 | 0.038 | 0.044 | 0.162 | 0.162 |
| | | Back Side 10mm | 0.119 | 0.175 | 0.171 | 0.103 | 0.294 | 0.393 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.020 | 0.000 | 0.000 | 0.000 | 0.020 | 0.020 |
| | | Top Edge 10mm | 0.205 | 0.113 | 0.113 | 0.067 | 0.318 | 0.385 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| WCDMA B2 | Ant.0 | Front Side 10mm | 0.100 | 0.082 | 0.038 | 0.044 | 0.182 | 0.182 |
| | | Back Side 10mm | 0.182 | 0.175 | 0.171 | 0.103 | 0.357 | 0.456 |
| | | Left Edge 10mm | 0.022 | 0.077 | 0.113 | 0.071 | 0.099 | 0.206 |
| | | Right Edge 10mm | 0.076 | 0.000 | 0.000 | 0.000 | 0.076 | 0.076 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.188 | 0.000 | 0.000 | 0.000 | 0.188 | 0.188 |
| WCDMA B4 | Ant.2 | Front Side 10mm | 0.141 | 0.082 | 0.038 | 0.044 | 0.223 | 0.223 |
| | | Back Side 10mm | 0.197 | 0.175 | 0.171 | 0.103 | 0.372 | 0.471 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.040 | 0.000 | 0.000 | 0.000 | 0.040 | 0.040 |
| | | Top Edge 10mm | 0.203 | 0.113 | 0.113 | 0.067 | 0.316 | 0.383 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| WCDMA B4 | Ant.0 | Front Side 10mm | 0.030 | 0.082 | 0.038 | 0.044 | 0.112 | 0.112 |
| | | Back Side 10mm | 0.069 | 0.175 | 0.171 | 0.103 | 0.244 | 0.343 |
| | | Left Edge 10mm | 0.008 | 0.077 | 0.113 | 0.071 | 0.085 | 0.192 |
| | | Right Edge 10mm | 0.015 | 0.000 | 0.000 | 0.000 | 0.015 | 0.015 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.078 | 0.000 | 0.000 | 0.000 | 0.078 | 0.078 |
| WCDMA B5 | Ant.2 | Front Side 10mm | 0.129 | 0.082 | 0.038 | 0.044 | 0.211 | 0.211 |
| | | Back Side 10mm | 0.162 | 0.175 | 0.171 | 0.103 | 0.337 | 0.436 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.060 | 0.000 | 0.000 | 0.000 | 0.060 | 0.060 |
| | | Top Edge 10mm | 0.135 | 0.113 | 0.113 | 0.067 | 0.248 | 0.315 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| WCDMA B5 | Ant.0 | Front Side 10mm | 0.069 | 0.082 | 0.038 | 0.044 | 0.151 | 0.151 |
| | | Back Side 10mm | 0.113 | 0.175 | 0.171 | 0.103 | 0.288 | 0.387 |
| | | Left Edge 10mm | 0.068 | 0.077 | 0.113 | 0.071 | 0.145 | 0.252 |
| | | Right Edge 10mm | 0.039 | 0.000 | 0.000 | 0.000 | 0.039 | 0.039 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.083 | 0.000 | 0.000 | 0.000 | 0.083 | 0.083 |
| LTE B2 | Ant.2 | Front Side 10mm | 0.078 | 0.082 | 0.038 | 0.044 | 0.160 | 0.160 |
| | | Back Side 10mm | 0.133 | 0.175 | 0.171 | 0.103 | 0.308 | 0.407 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.020 | 0.000 | 0.000 | 0.000 | 0.020 | 0.020 |
| | | Top Edge 10mm | 0.179 | 0.113 | 0.113 | 0.067 | 0.292 | 0.359 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LTE B2 | Ant.0 | Front Side 10mm | 0.041 | 0.082 | 0.038 | 0.044 | 0.123 | 0.123 |
| | | Back Side 10mm | 0.079 | 0.175 | 0.171 | 0.103 | 0.254 | 0.353 |
| | | Left Edge 10mm | 0.010 | 0.077 | 0.113 | 0.071 | 0.087 | 0.194 |
| | | Right Edge 10mm | 0.030 | 0.000 | 0.000 | 0.000 | 0.030 | 0.030 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.087 | 0.000 | 0.000 | 0.000 | 0.087 | 0.087 |
| LTE B4 | Ant.2 | Front Side 10mm | 0.153 | 0.082 | 0.038 | 0.044 | 0.235 | 0.235 |
| | | Back Side 10mm | 0.203 | 0.175 | 0.171 | 0.103 | 0.378 | 0.477 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.041 | 0.000 | 0.000 | 0.000 | 0.041 | 0.041 |
| | | Top Edge 10mm | 0.207 | 0.113 | 0.113 | 0.067 | 0.320 | 0.387 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LTE B4 | Ant.0 | Front Side 10mm | 0.029 | 0.082 | 0.038 | 0.044 | 0.111 | 0.111 |
| | | Back Side 10mm | 0.061 | 0.175 | 0.171 | 0.103 | 0.236 | 0.335 |
| | | Left Edge 10mm | 0.008 | 0.077 | 0.113 | 0.071 | 0.085 | 0.192 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Right Edge 10mm | 0.015 | 0.000 | 0.000 | 0.000 | 0.015 | 0.015 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.061 | 0.000 | 0.000 | 0.000 | 0.061 | 0.061 |
| LTE B5 | Ant.2 | Front Side 10mm | 0.202 | 0.082 | 0.038 | 0.044 | 0.284 | 0.284 |
| | | Back Side 10mm | 0.242 | 0.175 | 0.171 | 0.103 | 0.417 | 0.516 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.092 | 0.000 | 0.000 | 0.000 | 0.092 | 0.092 |
| | | Top Edge 10mm | 0.220 | 0.113 | 0.113 | 0.067 | 0.333 | 0.400 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LTE B5 | Ant.0 | Front Side 10mm | 0.137 | 0.082 | 0.038 | 0.044 | 0.219 | 0.219 |
| | | Back Side 10mm | 0.209 | 0.175 | 0.171 | 0.103 | 0.384 | 0.483 |
| | | Left Edge 10mm | 0.136 | 0.077 | 0.113 | 0.071 | 0.213 | 0.320 |
| | | Right Edge 10mm | 0.072 | 0.000 | 0.000 | 0.000 | 0.072 | 0.072 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.161 | 0.000 | 0.000 | 0.000 | 0.161 | 0.161 |
| LTE B7 | Ant.2 | Front Side 10mm | 0.076 | 0.082 | 0.038 | 0.044 | 0.158 | 0.158 |
| | | Back Side 10mm | 0.168 | 0.175 | 0.171 | 0.103 | 0.343 | 0.442 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.073 | 0.000 | 0.000 | 0.000 | 0.073 | 0.073 |
| | | Top Edge 10mm | 0.177 | 0.113 | 0.113 | 0.067 | 0.290 | 0.357 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LTE B7 | Ant.0 | Front Side 10mm | 0.040 | 0.082 | 0.038 | 0.044 | 0.122 | 0.122 |
| | | Back Side 10mm | 0.044 | 0.175 | 0.171 | 0.103 | 0.219 | 0.318 |
| | | Left Edge 10mm | 0.007 | 0.077 | 0.113 | 0.071 | 0.084 | 0.191 |
| | | Right Edge 10mm | 0.040 | 0.000 | 0.000 | 0.000 | 0.040 | 0.040 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.053 | 0.000 | 0.000 | 0.000 | 0.053 | 0.053 |
| LTE B38 | Ant.2 | Front Side 10mm | 0.078 | 0.082 | 0.038 | 0.044 | 0.160 | 0.160 |
| | | Back Side 10mm | 0.193 | 0.175 | 0.171 | 0.103 | 0.368 | 0.467 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.100 | 0.000 | 0.000 | 0.000 | 0.100 | 0.100 |
| | | Top Edge 10mm | 0.176 | 0.113 | 0.113 | 0.067 | 0.289 | 0.356 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LTE B38 | Ant.0 | Front Side 10mm | 0.060 | 0.082 | 0.038 | 0.044 | 0.142 | 0.142 |
| | | Back Side 10mm | 0.068 | 0.175 | 0.171 | 0.103 | 0.243 | 0.342 |
| | | Left Edge 10mm | 0.010 | 0.077 | 0.113 | 0.071 | 0.087 | 0.194 |
| | | Right Edge 10mm | 0.062 | 0.000 | 0.000 | 0.000 | 0.062 | 0.062 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.071 | 0.000 | 0.000 | 0.000 | 0.071 | 0.071 |
| LTE B41 | Ant.2 | Front Side 10mm | 0.087 | 0.082 | 0.038 | 0.044 | 0.169 | 0.169 |
| | | Back Side 10mm | 0.219 | 0.175 | 0.171 | 0.103 | 0.394 | 0.493 |
| | | Left Edge 10mm | 0.000 | 0.077 | 0.113 | 0.071 | 0.077 | 0.184 |
| | | Right Edge 10mm | 0.101 | 0.000 | 0.000 | 0.000 | 0.101 | 0.101 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Top Edge 10mm | 0.199 | 0.113 | 0.113 | 0.067 | 0.312 | 0.379 |
| | | Bottom Edge 10mm | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LTE B41 | Ant.0 | Front Side 10mm | 0.052 | 0.082 | 0.038 | 0.044 | 0.134 | 0.134 |
| | | Back Side 10mm | 0.062 | 0.175 | 0.171 | 0.103 | 0.237 | 0.336 |
| | | Left Edge 10mm | 0.012 | 0.077 | 0.113 | 0.071 | 0.089 | 0.196 |
| | | Right Edge 10mm | 0.053 | 0.000 | 0.000 | 0.000 | 0.053 | 0.053 |
| | | Top Edge 10mm | 0.000 | 0.113 | 0.113 | 0.067 | 0.113 | 0.180 |
| | | Bottom Edge 10mm | 0.059 | 0.000 | 0.000 | 0.000 | 0.059 | 0.059 |

Note:

1: The simultaneous transmission combinations of the antennas antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.599 W/Kg < 1.6 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 | DASY5 | 52.8.8.1222 | N/A | N/A |
| 835MHz Validation Dipole | Speag | D835V2 | SN: 4d187 | 2024/05/08 | 2027/05/07 |
| 1750MHz Validation Dipole | Speag | D1750V2 | SN: 1130 | 2024/05/08 | 2027/05/07 |
| 1950MHz Validation Dipole | Speag | D1950V3 | SN: 1240 | 2021/09/13 | 2024/09/12 |
| 2450MHz Validation Dipole | Speag | D2450V2 | SN: 952 | 2024/05/07 | 2027/05/06 |
| 2600MHz Validation Dipole | Speag | D2600V2 | SN: 1095 | 2024/05/08 | 2027/05/07 |
| 5GHz Validation Dipole | Speag | D5GHzV2 | SN: 1200 | 2024/05/09 | 2027/05/08 |
| Data Acquisition Electronicsr | Speag | DAE4 | SN: 1711 | 2024/03/18 | 2025/03/17 |
| Data Acquisition Electronicsr | Speag | DAE4 | SN: 1710 | 2024/01/03 | 2025/01/02 |
| E-Field Probe | Speag | EX3DV4 | SN: 7510 | 2024/06/25 | 2025/06/24 |
| E-Field Probe | Speag | EX3DV4 | SN: 3748 | 2024/04/12 | 2025/04/11 |
| Signal Generator | R&S | SMB100A | 177746 | 2024/04/24 | 2025/04/23 |
| Power Meter | R&S | NRVD-B2 | 835843/014 | 2023/09/05 | 2024/09/04 |
| Power Sensor | R&S | NRV-Z4 | 100381 | 2023/09/05 | 2024/09/04 |
| Power Sensor | R&S | NRV-Z2 | 100211 | 2023/09/05 | 2024/09/04 |
| Wireless Communication Test Set | Anritsu | MT8820C | 6201502991 | 2023/11/14 | 2024/11/13 |
| Network Analyzer | Agilent | E5071C | MY46103472 | 2023/11/14 | 2024/11/14 |
| Thermometer | Elitech | RC-4 | EF5238001628 | 2023/10/09 | 2024/10/08 |
| Thermometer | Elitech | RC-4HC | EF7239002652 | 2023/11/17 | 2024/11/16 |
| 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: 1576 | 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. (℃) | Meas. Conductivity (σ) (S/m) | Meas. Permittivity (ε) | Target Conductivity (σ) (S/m) | Target Permittivity (ε) | Conductivity Tolerance (%) | Permittivity Tolerance (%) |
|---|---|---|---|---|---|---|---|---|---|
| 2024.07.29 | Head | 835 | 21.3 | 0.90 | 41.90 | 0.90 | 41.50 | 0.00 | 0.96 |
| 2024.07.24 | Head | 835 | 21.4 | 0.90 | 41.85 | 0.90 | 41.50 | 0.00 | 0.84 |
| 2024.07.25 | Head | 1750 | 21.4 | 1.37 | 39.70 | 1.37 | 40.08 | 0.00 | -0.95 |
| 2024.07.26 | Head | 1950 | 21.2 | 1.42 | 39.69 | 1.40 | 40.00 | 1.43 | -0.78 |
| 2024.07.21 | Head | 2450 | 21.4 | 1.81 | 38.92 | 1.80 | 39.20 | 0.56 | -0.71 |
| 2024.07.27 | Head | 2600 | 21.1 | 1.98 | 38.26 | 1.96 | 39.01 | 1.02 | -1.92 |
| 2024.07.28 | Head | 2600 | 21.4 | 1.96 | 39.44 | 1.96 | 39.01 | 0.00 | 1.10 |
| 2024.07.23 | Head | 5250 | 21.4 | 4.73 | 35.75 | 4.71 | 35.93 | 0.42 | -0.50 |
| 2024.07.23 | Head | 5600 | 21.4 | 5.04 | 35.87 | 5.07 | 35.53 | -0.59 | 0.96 |
| 2024.07.21 | Head | 5750 | 21.4 | 5.22 | 35.68 | 5.22 | 35.36 | 0.00 | 0.91 |
| Note: The tolerance limit of Conductivity and Permittivity is± 5%. | | | | | | | | | |

# ANNEX B SYSTEM CHECK RESULT

Comparing to the original SAR value provided by SPEAG, the validation data should be within itsspecification 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 (%) |
|---|---|---|---|---|---|---|---|
| 2024.07.29 | Head | 835 | 100 | 0.98 | 9.82 | 9.74 | 0.82 |
| 2024.07.24 | Head | 835 | 100 | 0.98 | 9.78 | 9.74 | 0.41 |
| 2024.07.25 | Head | 1750 | 100 | 3.68 | 36.80 | 37.00 | -0.54 |
| 2024.07.26 | Head | 1950 | 100 | 4.12 | 41.20 | 41.40 | -0.48 |
| 2024.07.21 | Head | 2450 | 100 | 5.35 | 53.50 | 52.60 | 1.71 |
| 2024.07.27 | Head | 2600 | 100 | 5.48 | 54.80 | 55.90 | -1.97 |
| 2024.07.28 | Head | 2600 | 100 | 5.53 | 55.30 | 55.90 | -1.07 |
| 2024.07.23 | Head | 5250 | 100 | 7.82 | 78.20 | 77.70 | 0.64 |
| 2024.07.23 | Head | 5600 | 100 | 8.18 | 81.80 | 81.30 | 0.62 |
| 2024.07.21 | Head | 5750 | 100 | 7.71 | 77.10 | 77.60 | -0.64 |
| Note: The tolerance limit of System validation ±10%. | | | | | | | |

Head liquid 10g

| Date | Freq. (MHz) | Power (mW) | Measured SAR (W/kg) | Normalized SAR (W/kg) | Dipole SAR (W/kg) | Tolerance (%) |
|---|---|---|---|---|---|---|
| 2024.07.23 | 5250 | 100 | 2.210 | 22.10 | 22.00 | 0.45 |
| 2024.07.23 | 5600 | 100 | 2.320 | 23.20 | 23.10 | 0.43 |
| Note: The tolerance limit of System validation ±10%. | | | | | | |

# System Performance Check Data (835MHz Head)

Date: 2024.07.29

Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 835 MHz; σ = 0.896 S/m; $\varepsilon_r$ = 41.898; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.3℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 – SN3748; ConvF(8.73, 8.73, 8.73); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 835 100mw/Area Scan (81x151x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.13 W/kg

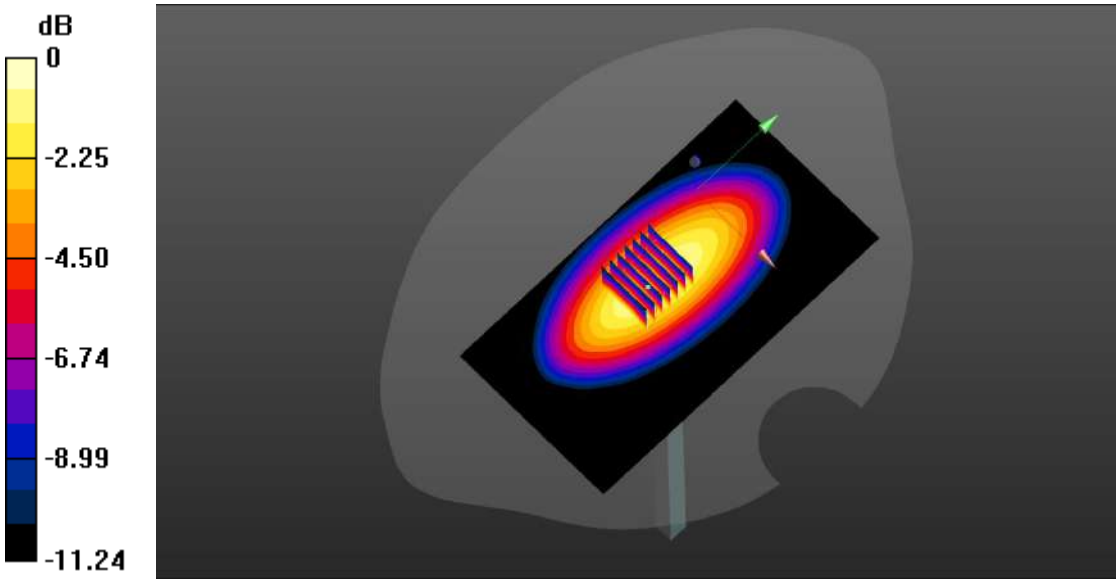
**CW 835 100mw/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 31.76 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.72 W/kg

**SAR(1 g) = 0.982 W/kg; SAR(10 g) = 0.641 W/kg**

Maximum value of SAR (measured) = 1.18 W/kg




0 dB = 1.18 W/kg

# System Performance Check Data (835MHz Head)

Date: 2024.07.24

Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 835 MHz; σ = 0.904 S/m; $\varepsilon_r$ = 41.846; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.73, 8.73, 8.73); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 835 100mw/Area Scan (81x151x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.16 W/kg

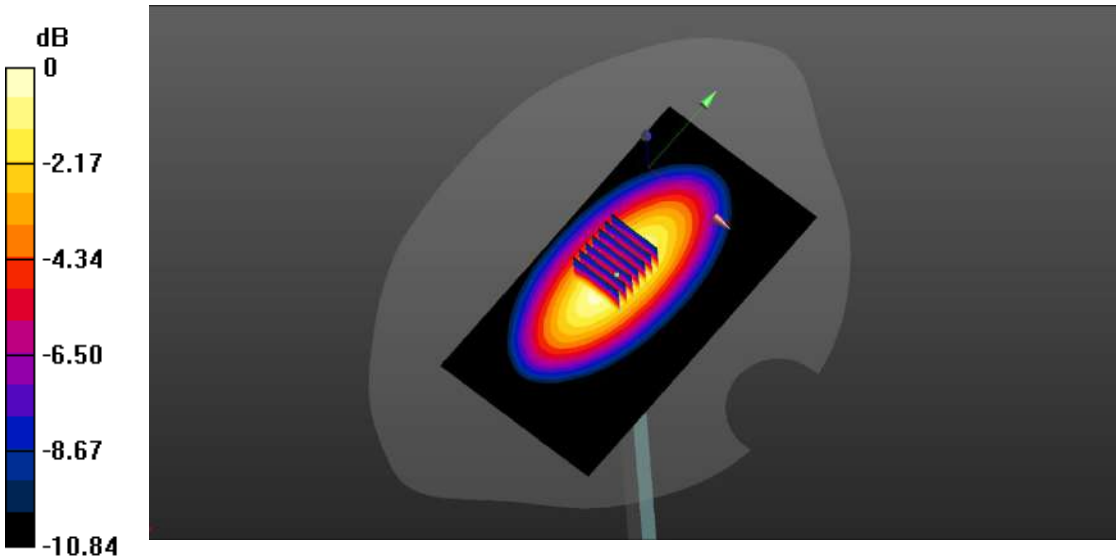
**CW 835 100mw/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.54 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.69 W/kg

**SAR(1 g) = 0.978 W/kg; SAR(10 g) = 0.638 W/kg**

Maximum value of SAR (measured) = 1.15 W/kg




0 dB = 1.15 W/kg

# System Performance Check Data (1750MHz Head)

Date: 2024.07.25

Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1750 MHz; σ = 1.368 S/m; $\varepsilon_r$ = 39.7; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.35, 7.35, 7.35); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW1750 100mw/Area Scan (71x121x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 4.26 W/kg

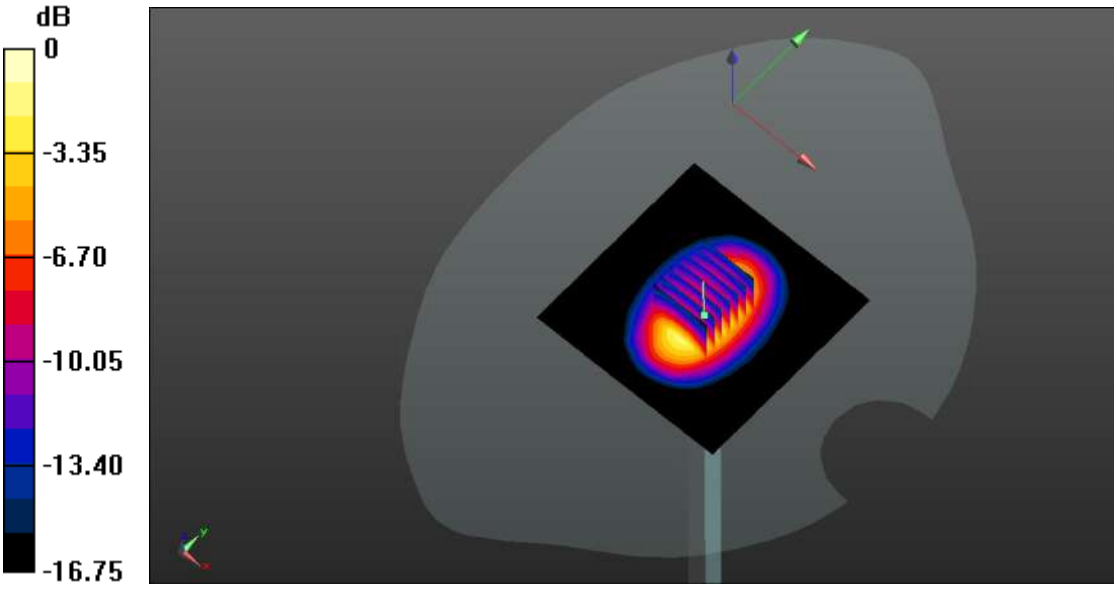
**CW1750 100mw/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 44.23 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 9.15 W/kg

**SAR(1 g) = 3.68 W/kg; SAR(10 g) = 1.95 W/kg**

Maximum value of SAR (measured) = 4.21 W/kg




0 dB = 4.21 W/kg

# System Performance Check Data (1950MHz Head)

Date: 2024.07.26

Communication System Band: D1950 (1950.0 MHz); Frequency: 1950 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1950 MHz; σ = 1.416 S/m; $\varepsilon_r$ = 39.692; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.19, 7.19, 7.19); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 1950 100mw/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 5.18 W/kg

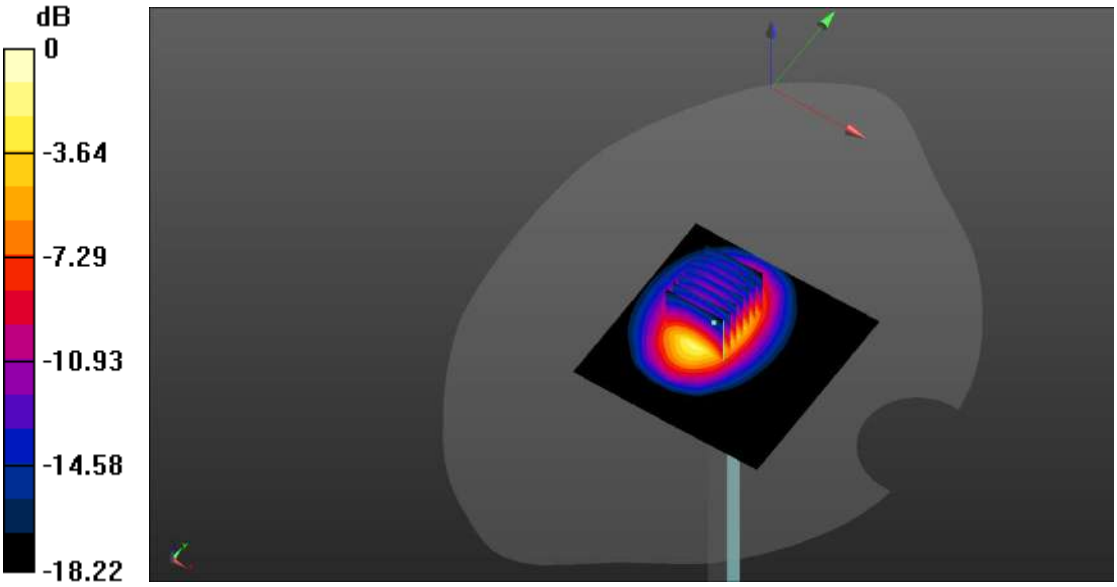
**CW 1950 100mw/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.68 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 8.67 W/kg

**SAR(1 g) = 4.12 W/kg; SAR(10 g) = 2.13 W/kg**

Maximum value of SAR (measured) = 4.73 W/kg




0 dB = 4.73 W/kg

# System Performance Check Data (2450MHz Head)

Date: 2024.07.21

Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; $\sigma$ = 1.811 S/m; $\varepsilon_r$ = 38.922; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.6℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 2450 100mw/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 6.25 W/kg

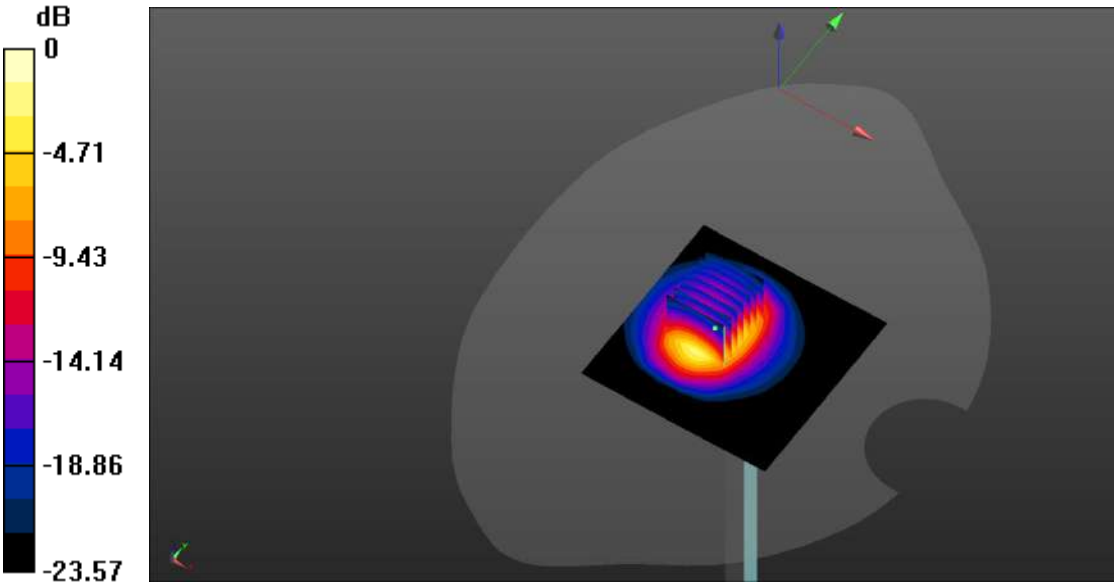
**CW 2450 100mw/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 42.62 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 11.4 W/kg

**SAR(1 g) = 5.35 W/kg; SAR(10 g) = 2.51 W/kg**

Maximum value of SAR (measured) = 6.28 W/kg




0 dB = 6.28 W/kg

# System Performance Check Data (2600MHz Head)

Date: 2024.07.27

Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2600 MHz; σ = 1.98 S/m; $\varepsilon_r$ = 38.255; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.3℃ Liquid Temperature:21.1℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.8, 6.8, 6.8); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 2600/Area Scan (101x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.55 W/kg

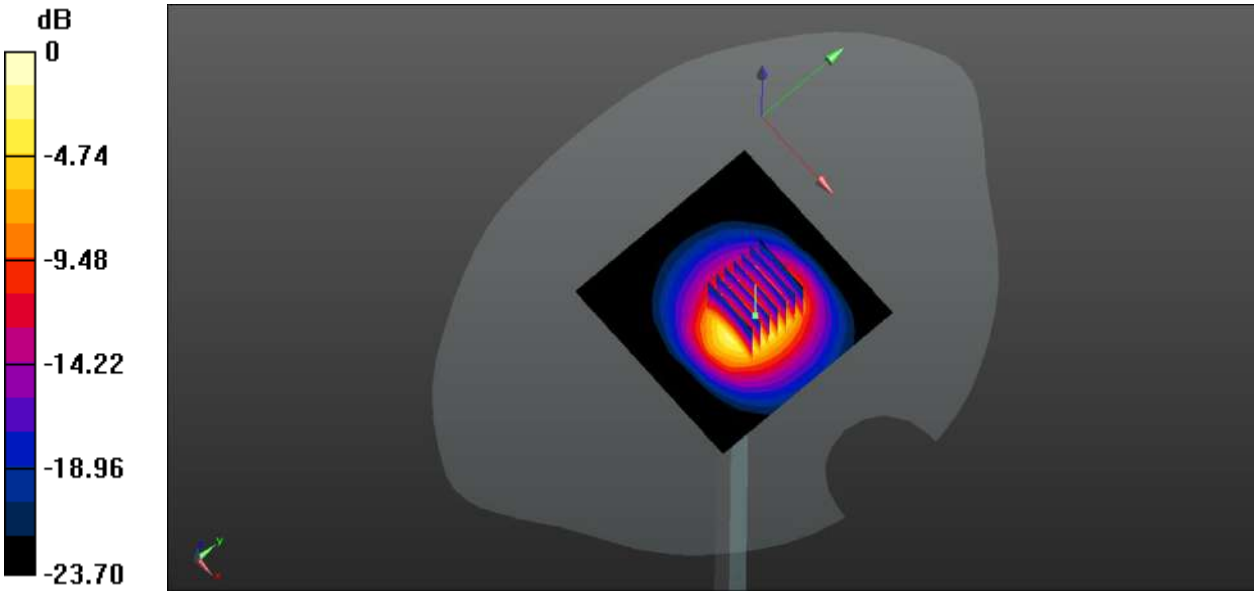
**CW 2600/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.96 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 11.8 W/kg

**SAR(1 g) = 5.48 W/kg; SAR(10 g) = 2.52 W/kg**

Maximum value of SAR (measured) = 6.59 W/kg




0 dB = 6.59 W/kg

# System Performance Check Data (2600MHz Head)

Date: 2024.07.28

Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2600 MHz; σ = 1.963 S/m; $\varepsilon_r$ = 39.437; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.8, 6.8, 6.8); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 2600/Area Scan (101x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.64 W/kg

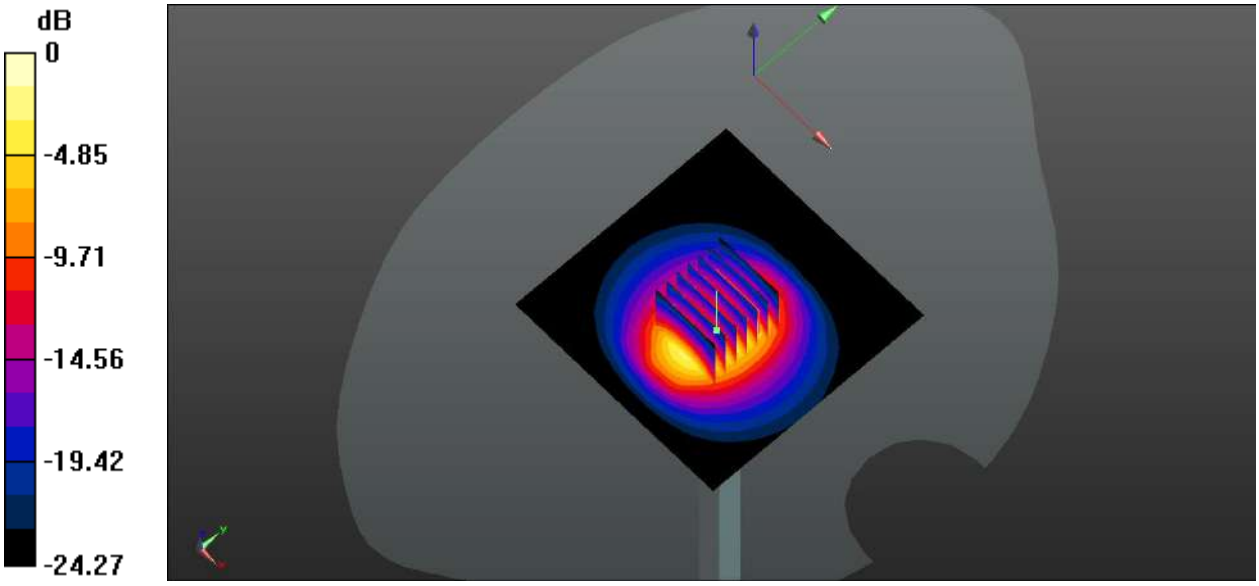
**CW 2600/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 45.73 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 12.4 W/kg

**SAR(1 g) = 5.53 W/kg; SAR(10 g) = 2.54 W/kg**

Maximum value of SAR (measured) = 6.42 W/kg




0 dB = 6.42 W/kg

# System Performance Check Data (5250MHz Head)

Date: 2024.07.23

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5250 MHz; σ = 4.731 S/m; $\varepsilon_r$ = 35.754; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.74, 5.74, 5.74); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 5250/Area Scan (81x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.44 W/kg

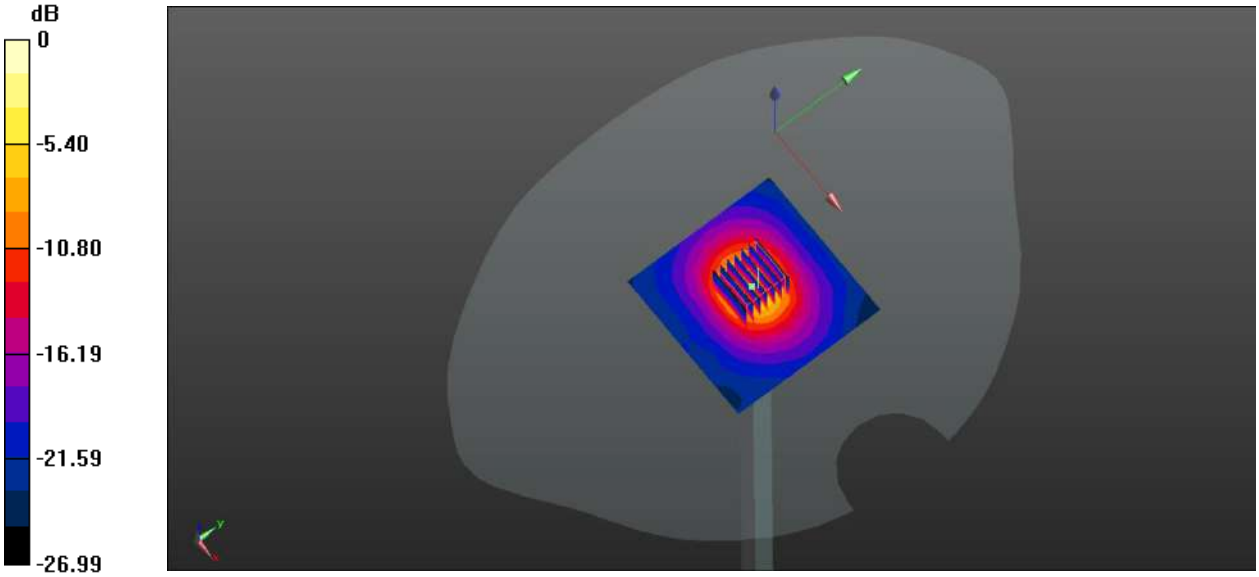
**CW 5250/Zoom Scan (7x7x15)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 30.68 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 30.2 W/kg

**SAR(1 g) = 7.82 W/kg; SAR(10 g) = 2.21 W/kg**

Maximum value of SAR (measured) = 14.1 W/kg




0 dB = 14.1 W/kg

# System Performance Check Data (5600MHz Head)

Date: 2024.07.23

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5600 MHz; $\sigma$ = 5.044 S/m; $\varepsilon_r$ = 35.872; $\rho$ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5, 5, 5); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 5600 100mw /Area Scan (81x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.84 W/kg

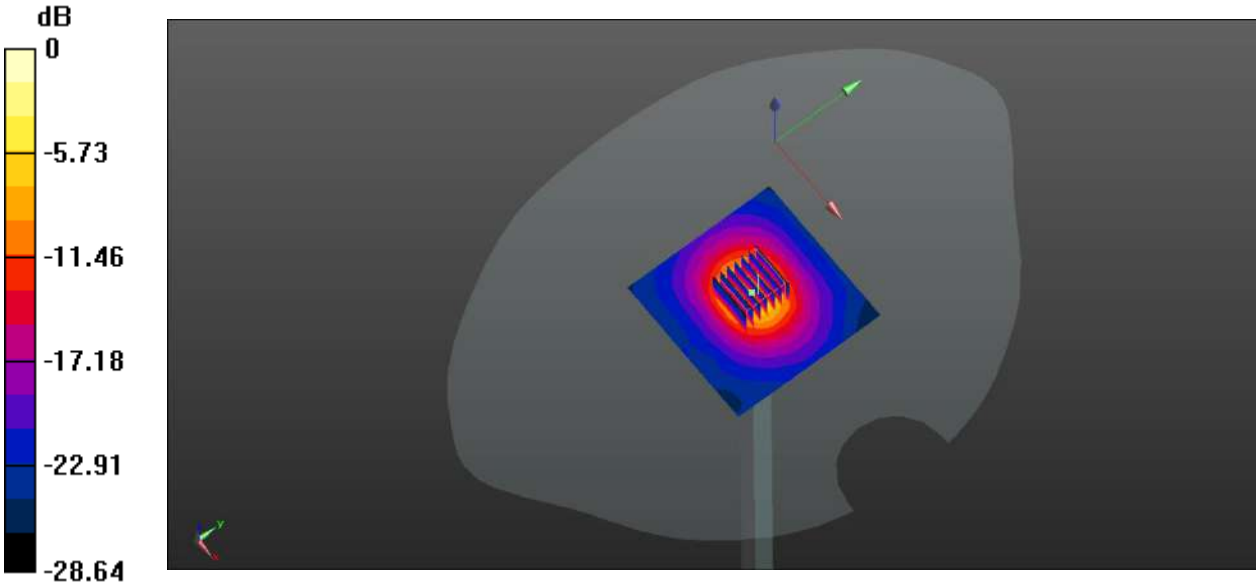
**CW 5600 100mw /Zoom Scan (7x7x15)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 30.85 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 35.8 W/kg

**SAR(1 g) = 8.18 W/kg; SAR(10 g) = 2.32 W/kg**

Maximum value of SAR (measured) = 13.9 W/kg




0 dB = 13.9 W/kg

# System Performance Check Data (5750MHz Head)

Date: 2024.07.21

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5750 MHz; σ = 5.223 S/m; $\varepsilon_r$ = 35.675; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.6℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.04, 5.04, 5.04); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**CW 5750 100mw/Area Scan (81x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.59 W/kg

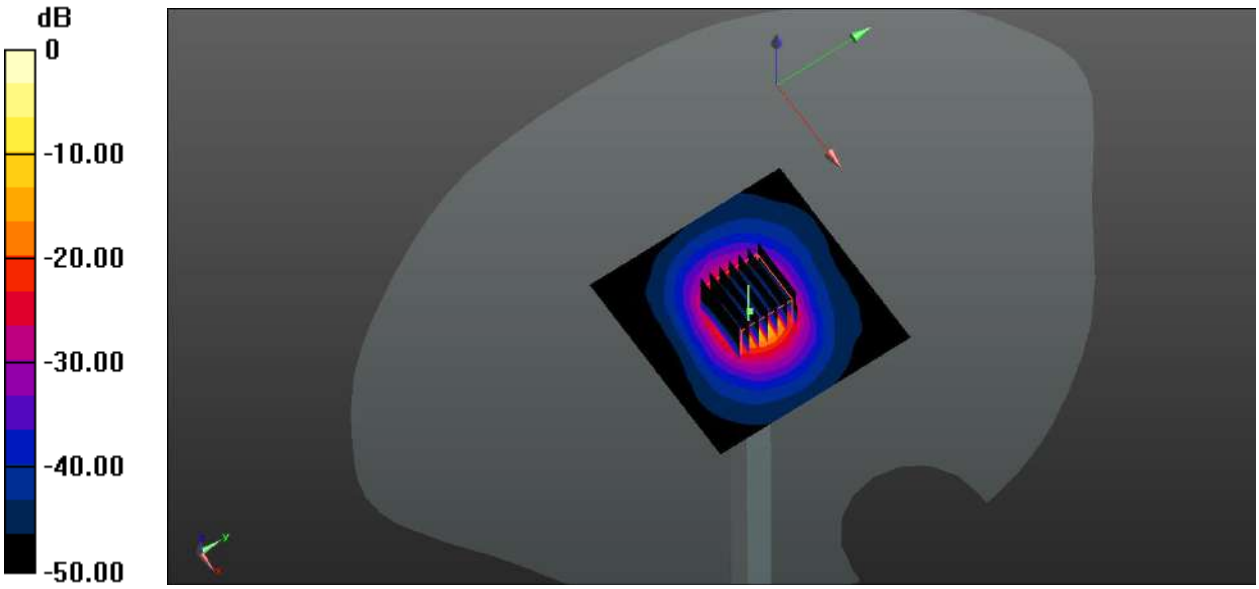
**CW 5750 100mw/Zoom Scan (7x7x15)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 38.75 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 36.1 W/kg

**SAR(1 g) = 7.71 W/kg; SAR(10 g) = 2.17 W/kg**

Maximum value of SAR (measured) = 16.6 W/kg




0 dB = 16.6 W/kg

# ANNEX C TEST DATA

### Meas.1 Right Head with Cheek on Middle Channel in GPRS850 3Slots mode with Antenna 2

Date: 2024.07.29

Communication System Band: GSM850; Frequency: 836.6 MHz;Duty Cycle: 1:2.77

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.908 S/m; $\varepsilon_r$ = 41.463; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.3℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 – SN3748; ConvF(8.73, 8.73, 8.73); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch190/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.08 W/kg

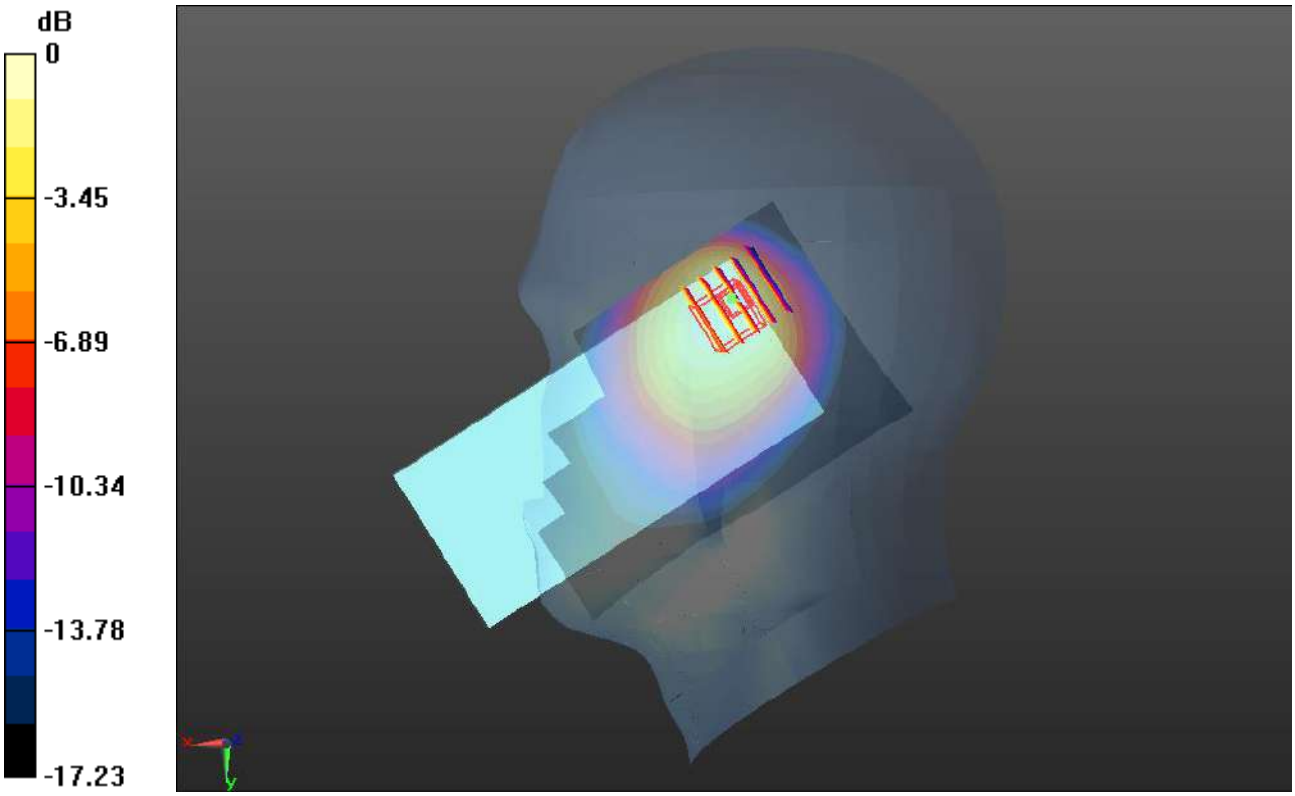
**Ch190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.58 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.57 W/kg

**SAR(1 g) = 0.831 W/kg; SAR(10 g) = 0.583 W/kg**

Maximum value of SAR (measured) = 0.867 W/kg




0 dB = 0.867 W/kg

## Meas.2 Body Plane with Back Side 10mm on Middle Channel in GPRS850 3Slots mode with Antenna 2

Date: 2024.07.29

Communication System Band: GSM850; Frequency: 836.6 MHz;Duty Cycle: 1:2.77

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.908 S/m; $\varepsilon_r$ = 41.463; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.3℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.73, 8.73, 8.73); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch190/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.313 W/kg

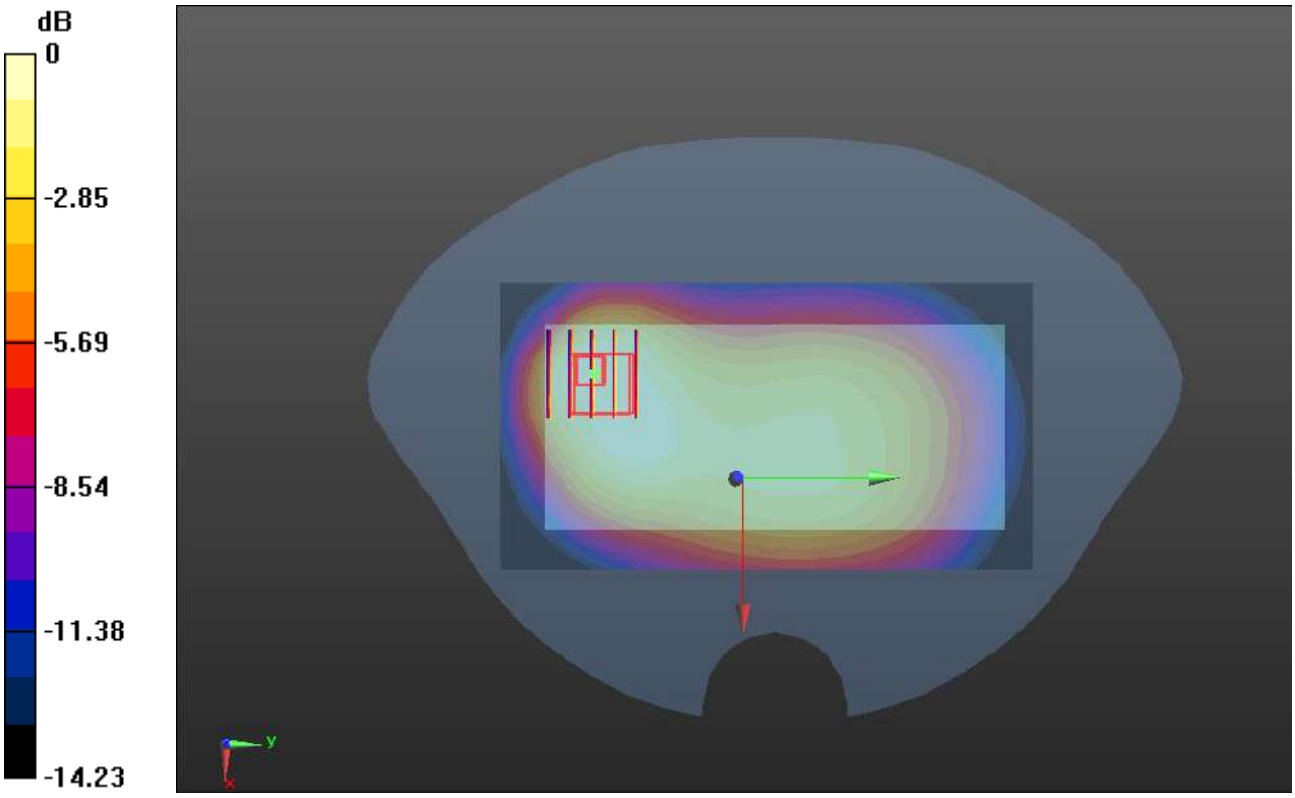
**Ch190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.78 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.410 W/kg

**SAR(1 g) = 0.250 W/kg; SAR(10 g) = 0.159 W/kg**

Maximum value of SAR (measured) = 0.269 W/kg




0 dB = 0.269 W/kg

## Meas.3 Right Head with Tilt on Low Channel in GPRS1900 2Slots mode with Antenna 2

Date: 2024.07.26

Communication System Band: PCS1900; Frequency: 1850.2 MHz;Duty Cycle: 1:4.1

Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.378 S/m; $\varepsilon_r$ = 40.8; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.4℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.35, 7.35, 7.35); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch512/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.920 W/kg

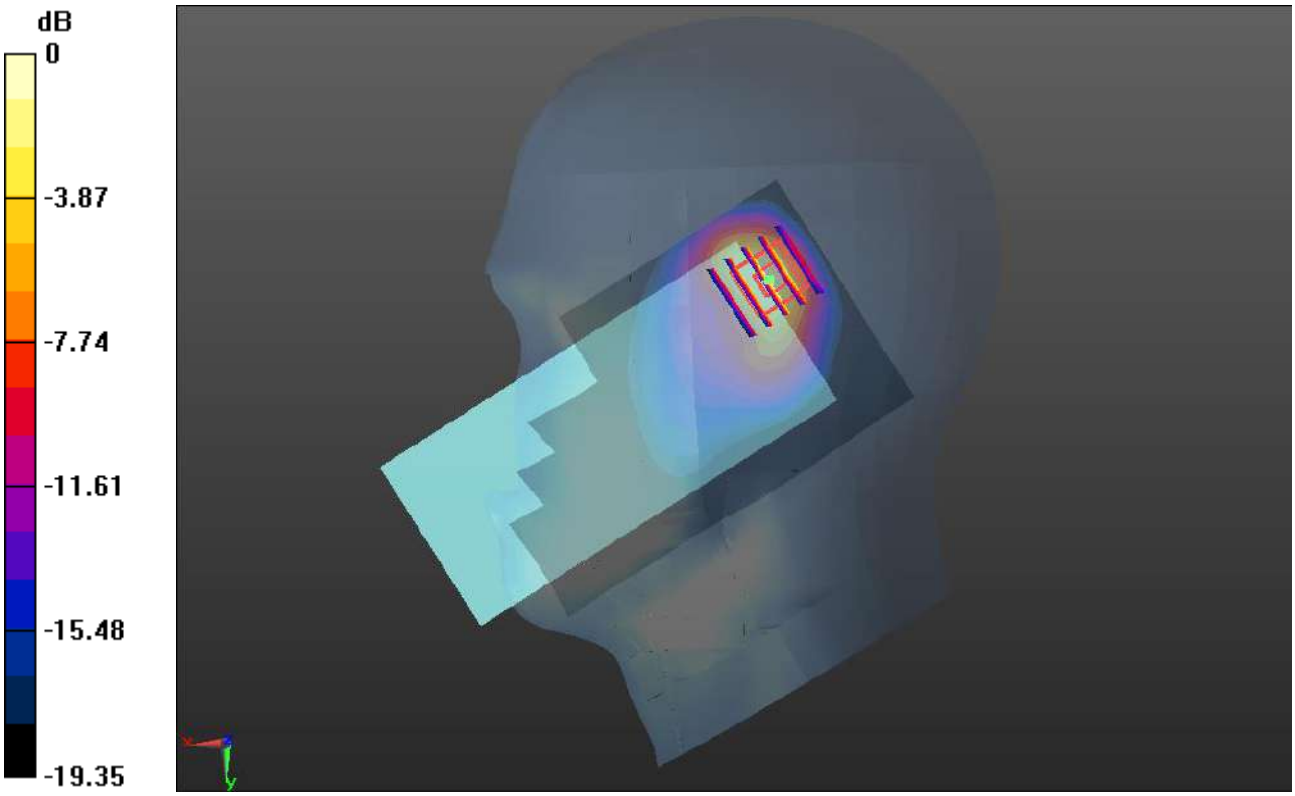
**Ch512/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.92 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.81 W/kg

**SAR(1 g) = 0.909 W/kg; SAR(10 g) = 0.410 W/kg**

Maximum value of SAR (measured) = 1.11 W/kg




0 dB = 1.11 W/kg

## Meas.4 Body Plane with Top Edge 10mm on High Channel in GPRS1900 2Slots mode with Antenna 2

Date: 2024.07.26

Communication System Band: PCS1900; Frequency: 1909.8 MHz;Duty Cycle: 1:4.1

Medium parameters used (interpolated): f = 1909.8 MHz; σ = 1.406 S/m; $\varepsilon_r$ = 40.11; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.19, 7.19, 7.19); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch810/Area Scan (51x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.490 W/kg

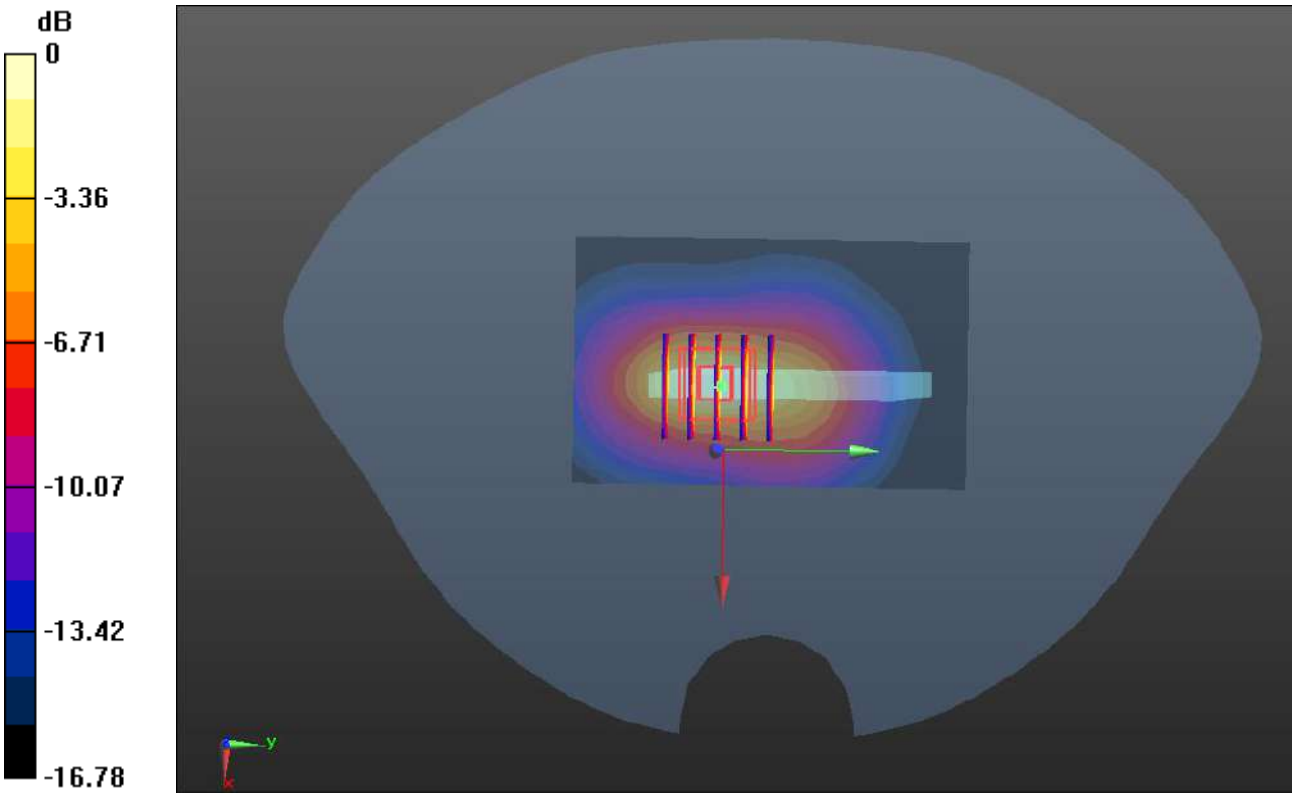
**Ch810/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.87 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.713 W/kg

**SAR(1 g) = 0.408 W/kg; SAR(10 g) = 0.211 W/kg**

Maximum value of SAR (measured) = 0.470 W/kg




0 dB = 0.470 W/kg

## Meas.5 Right Head with Tilt on High Channel in WCDMA Band2 mode with Antenna 2

Date: 2024.07.26

Communication System Band: BAND 2; Frequency: 1907.6 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.402 S/m; $\varepsilon_r$ = 40.143; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.4℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.19, 7.19, 7.19); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch9538/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.637 W/kg

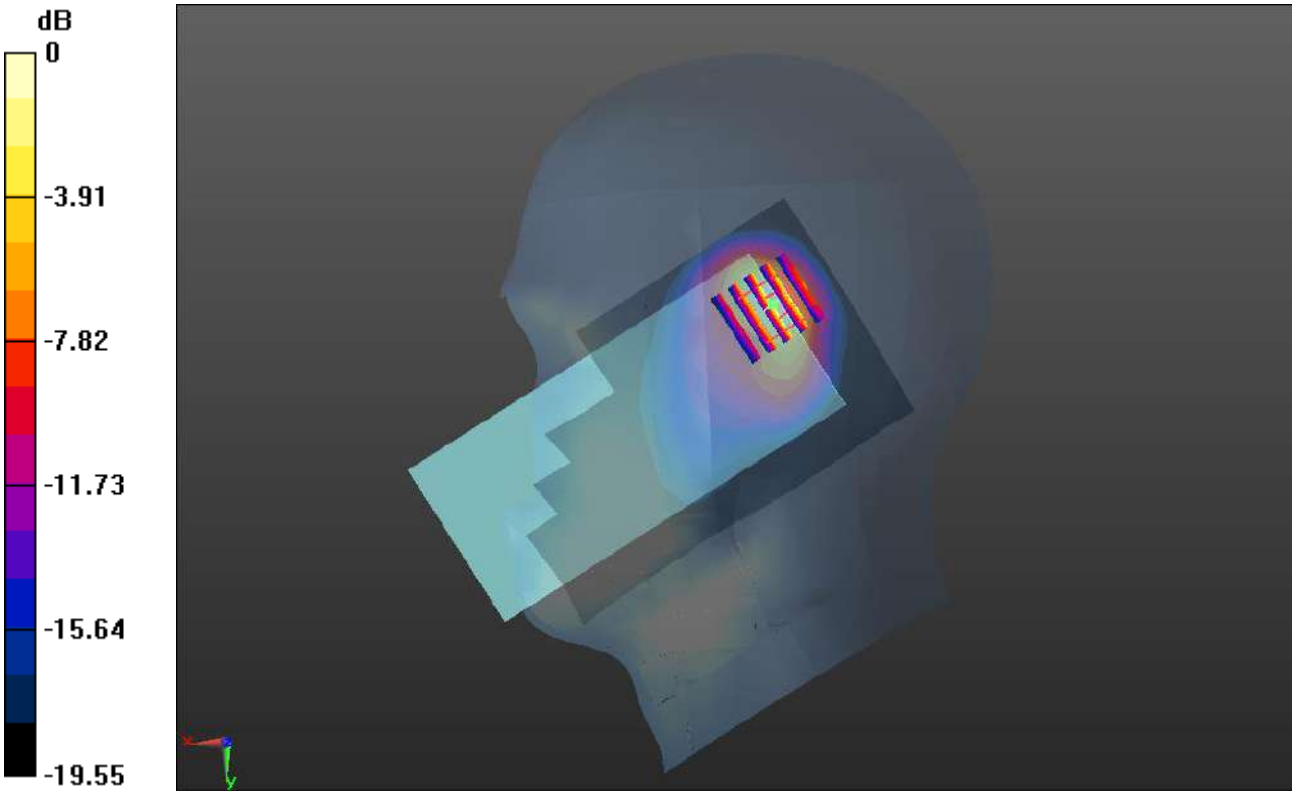
**Ch9538/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.81 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.07 W/kg

**SAR(1 g) = 0.524 W/kg; SAR(10 g) = 0.234 W/kg**

Maximum value of SAR (measured) = 0.604 W/kg




0 dB = 0.604 W/kg

**Meas.6 Body Plane with Top Edge 10mm on High Channel in WCDMA Band2 mode with Antenna 2**

Date: 2024.07.26

Communication System Band: BAND 2; Frequency: 1907.6 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.402 S/m; $\varepsilon_r$ = 40.143; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.19, 7.19, 7.19); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch9538/Area Scan (51x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.204 W/kg

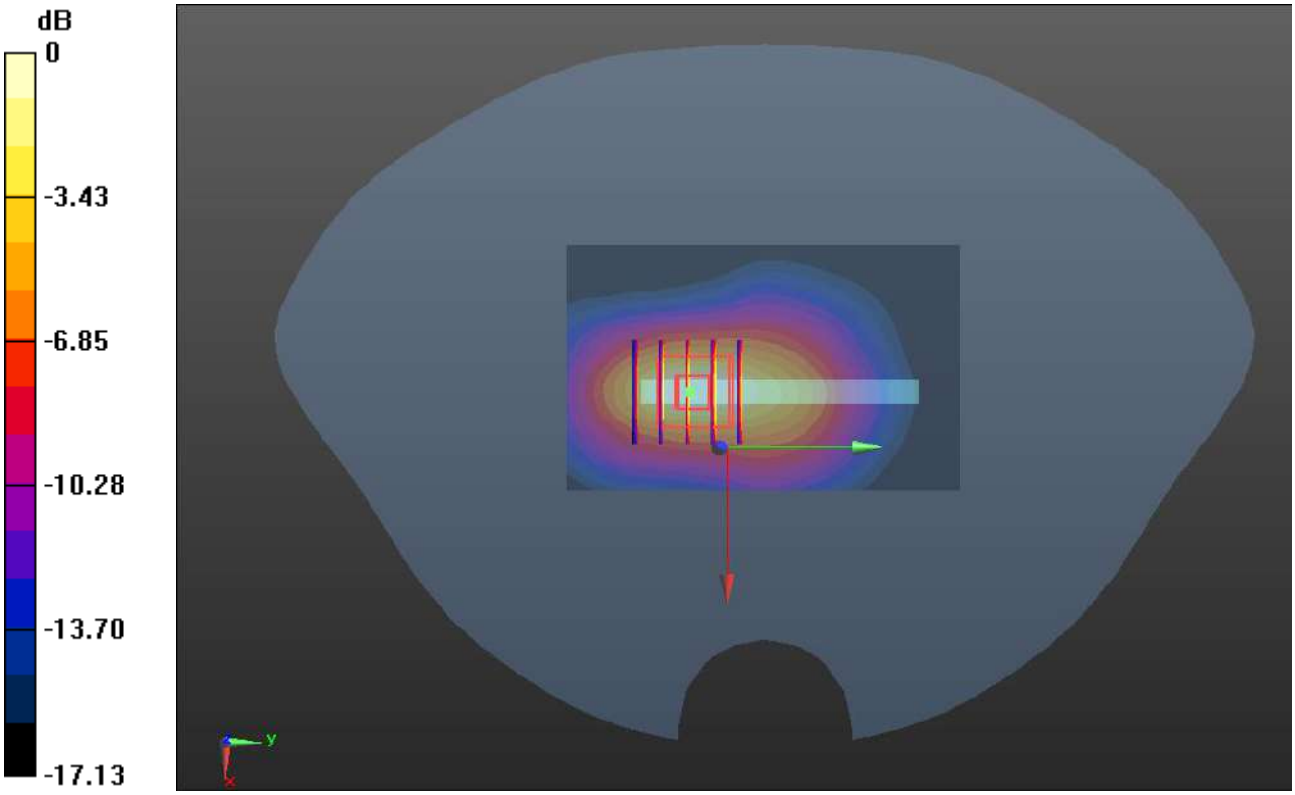
**Ch9538/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.193 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.308 W/kg

**SAR(1 g) = 0.177 W/kg; SAR(10 g) = 0.093 W/kg**

Maximum value of SAR (measured) = 0.203 W/kg




0 dB = 0.203 W/kg

## Meas.7 Right Head with Tilt on Middle Channel in WCDMA Band4 mode with Antenna 2

Date: 2024.07.25

Communication System Band: BAND 4; Frequency: 1732.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.351 S/m; $\varepsilon_r$ = 40.408; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.35, 7.35, 7.35); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch1412/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.703 W/kg

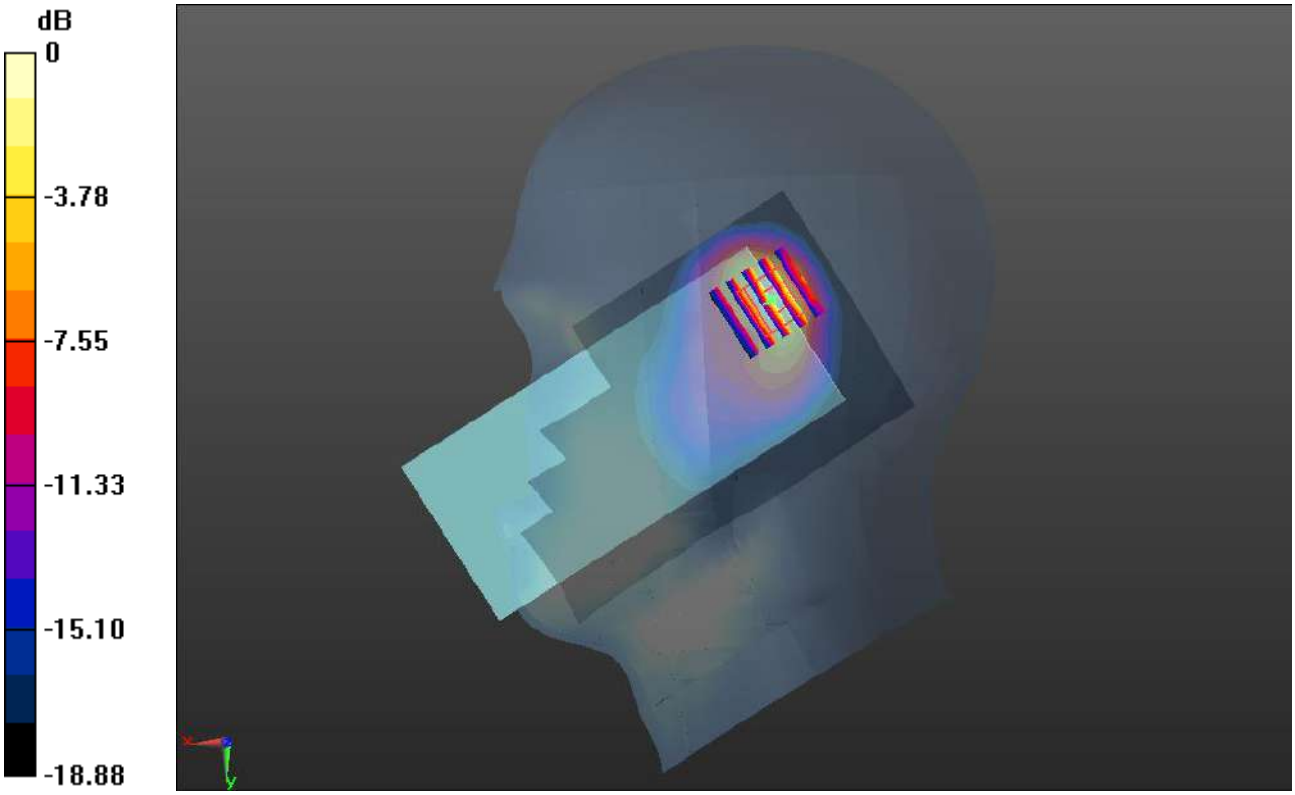
**Ch1412/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.42 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.20 W/kg

**SAR(1 g) = 0.600 W/kg; SAR(10 g) = 0.269 W/kg**

Maximum value of SAR (measured) = 0.693 W/kg




0 dB = 0.693 W/kg

## Meas.8 Body Plane with Top Edge 10mm on Middle Channel in WCDMA Band4 mode with Antenna 2

Date: 2024.07.25

Communication System Band: BAND 4; Frequency: 1732.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.351 S/m; $\varepsilon_r$ = 40.408; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.35, 7.35, 7.35); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch1412/Area Scan (51x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.177 W/kg

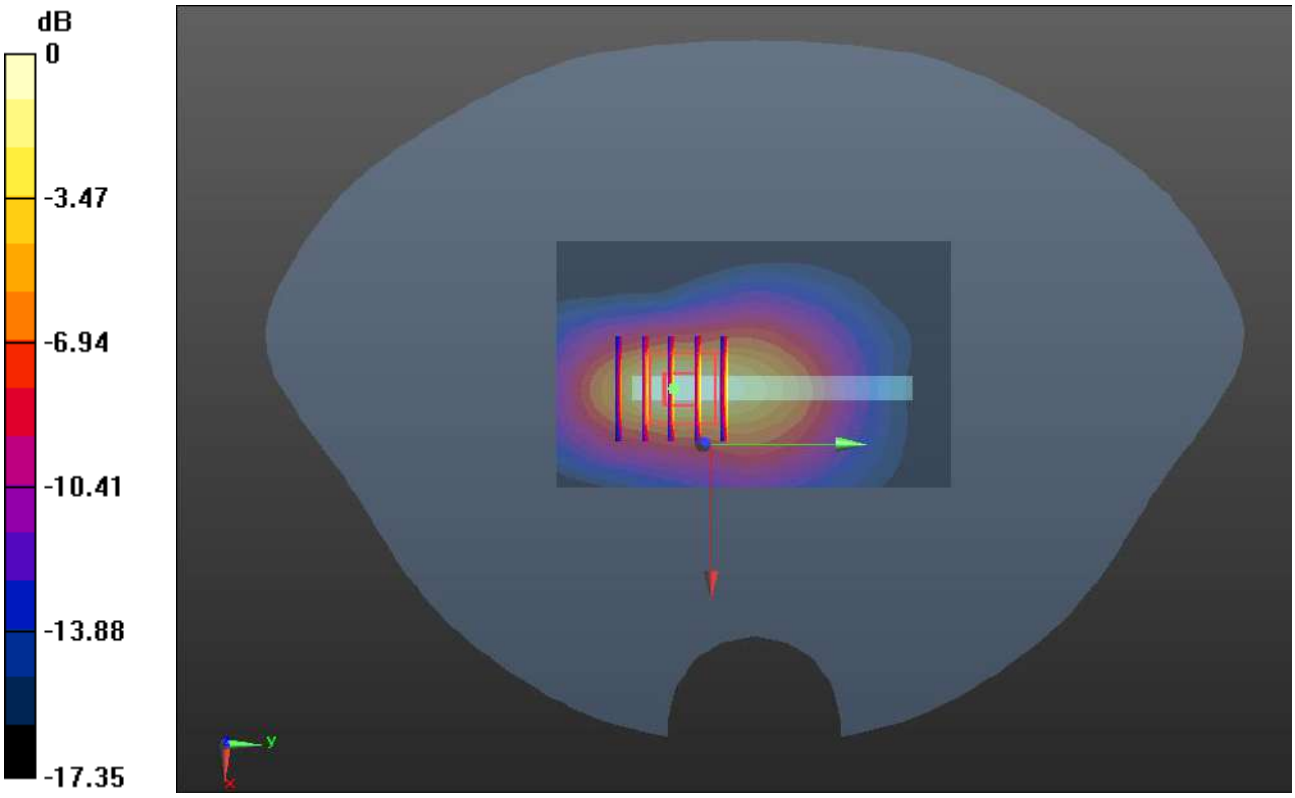
**Ch1412/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.561 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.281 W/kg

**SAR(1 g) = 0.164 W/kg; SAR(10 g) = 0.086 W/kg**

Maximum value of SAR (measured) = 0.187 W/kg




0 dB = 0.187 W/kg

## Meas.9 Right Head with Cheek on Middle Channel in WCDMA Band5 mode with Antenna 2

Date: 2024.07.29

Communication System Band: BAND 5; Frequency: 836.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.903 S/m; $\varepsilon_r$ = 41.619; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.3℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.73, 8.73, 8.73); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch4182/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.616 W/kg

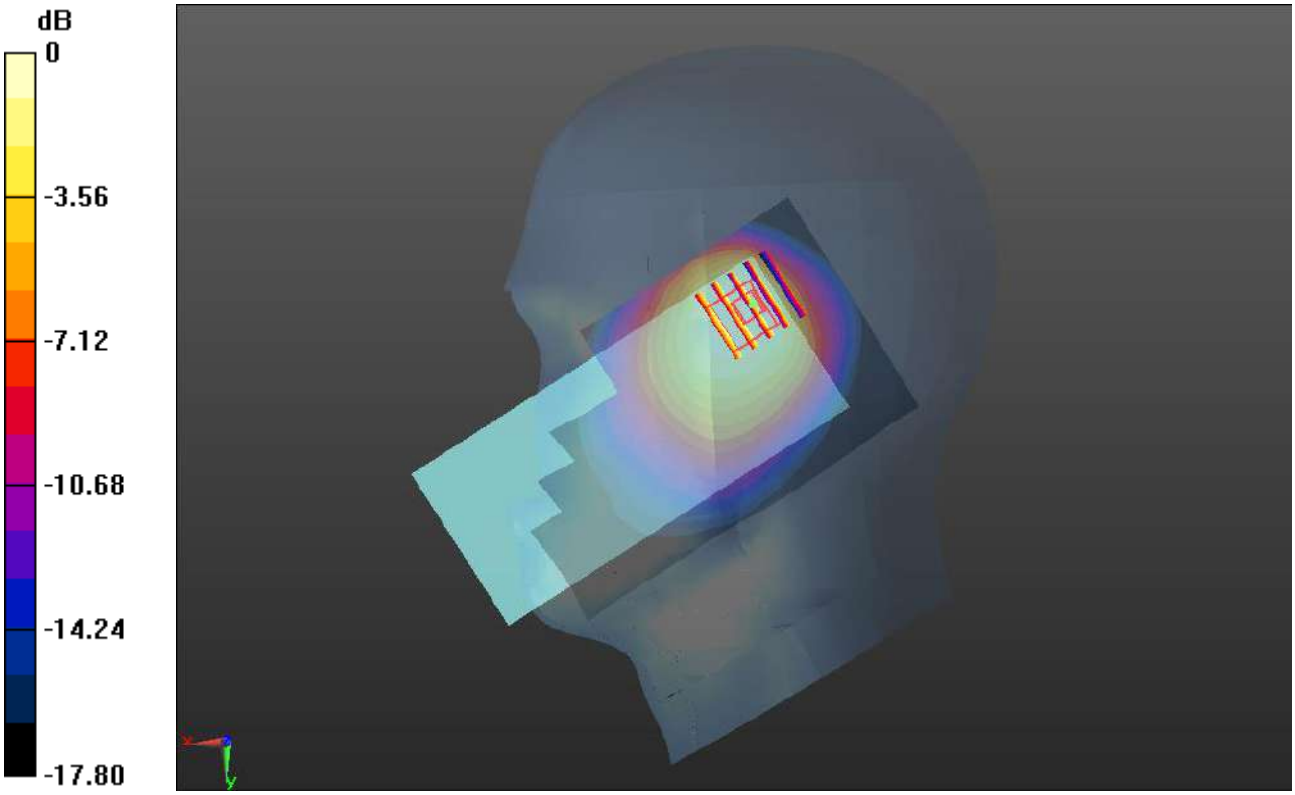
**Ch4182/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.62 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.852 W/kg

**SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.299 W/kg**

Maximum value of SAR (measured) = 0.488 W/kg




0 dB = 0.488 W/kg

**Meas.10 Body Plane with Back Side 10mm on Middle Channel in WCDMA Band5 mode with Antenna 2**

Date: 2024.07.29

Communication System Band: BAND 5; Frequency: 836.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.903 S/m; $\varepsilon_r$ = 41.619; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.3℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.73, 8.73, 8.73); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch4182/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.162 W/kg

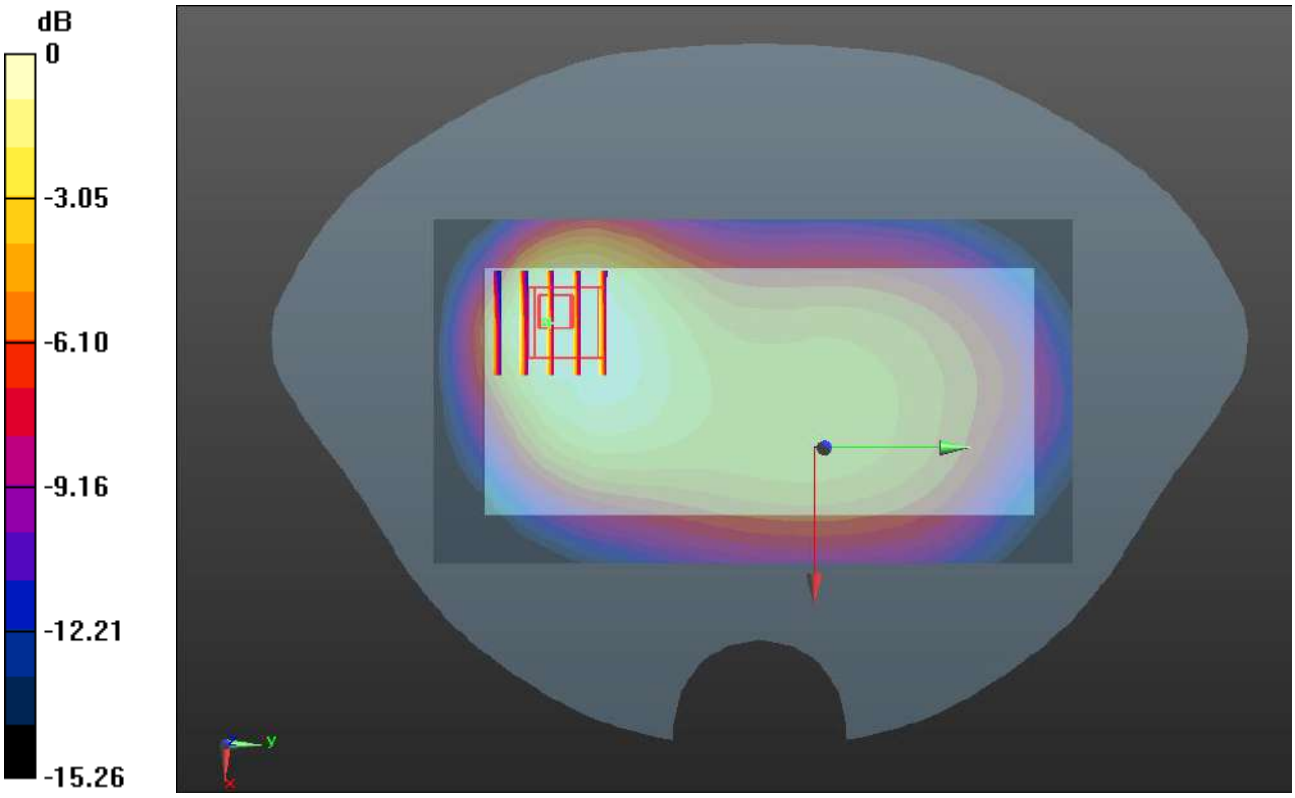
**Ch4182/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.314 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.220 W/kg

**SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.084 W/kg**

Maximum value of SAR (measured) = 0.138 W/kg




0 dB = 0.138 W/kg

## Meas.11 Right Head with Tilt on Middle Channel in LTE Band2 mode with Antenna 2

Date: 2024.07.26

Communication System Band: BAND 2; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.386 S/m; $\varepsilon_r$ = 40.636; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.4℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.19, 7.19, 7.19); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch18900/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.432 W/kg

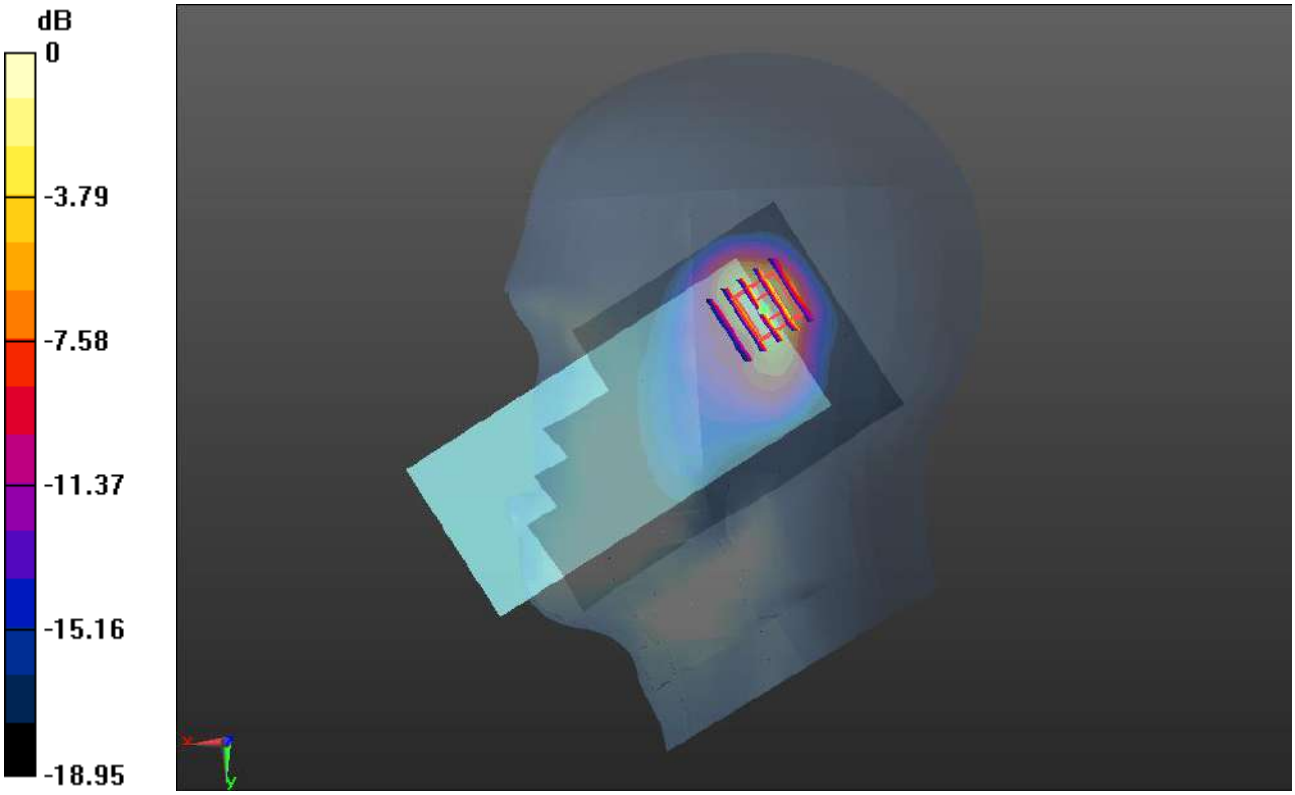
**Ch18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.05 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.756 W/kg

**SAR(1 g) = 0.373 W/kg; SAR(10 g) = 0.166 W/kg**

Maximum value of SAR (measured) = 0.422 W/kg




0 dB = 0.422 W/kg

**Meas.12 Body Plane with Top Edge 10mm on Middle Channel in LTE Band2 mode with Antenna 2**

Date: 2024.07.26

Communication System Band: BAND 2; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.386 S/m; $\varepsilon_r$ = 40.636; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.19, 7.19, 7.19); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch18900/Area Scan (51x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.158 W/kg

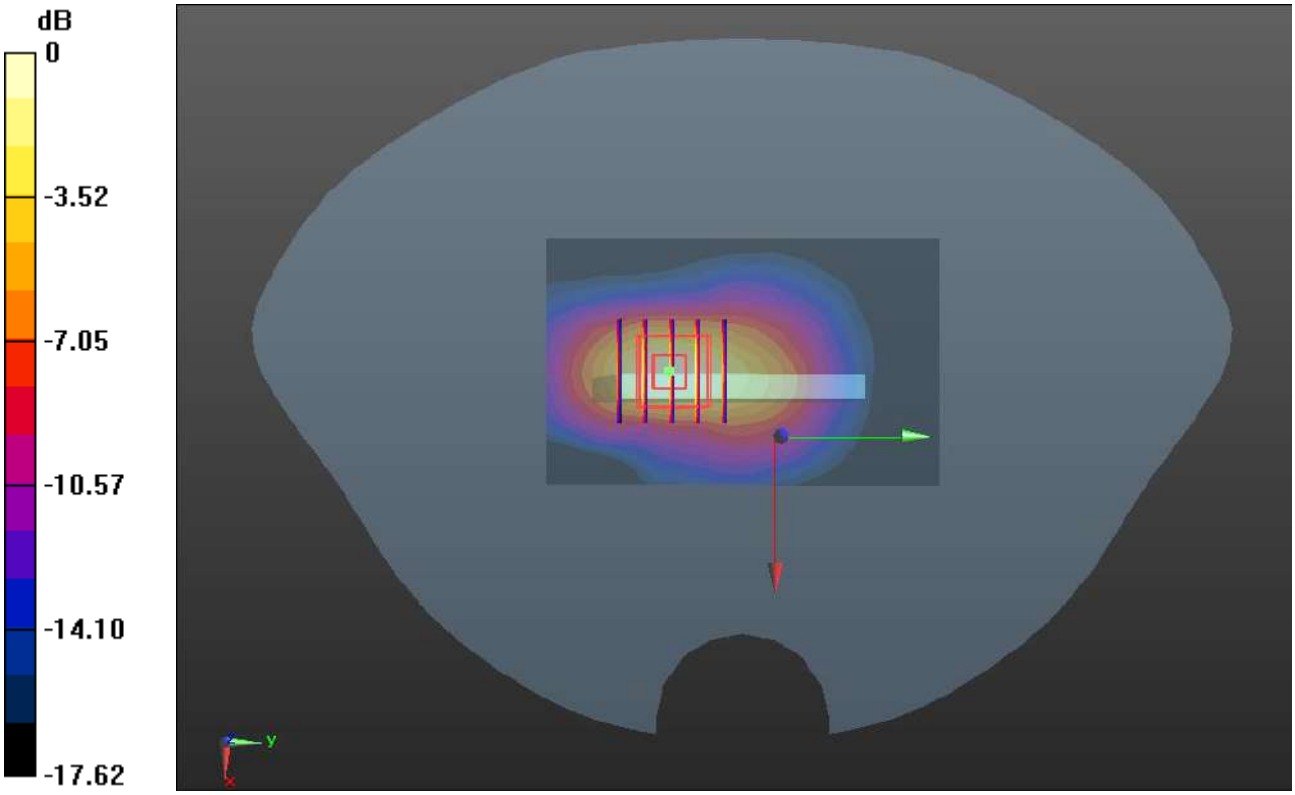
**Ch18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.299 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.255 W/kg

**SAR(1 g) = 0.144 W/kg; SAR(10 g) = 0.075 W/kg**

Maximum value of SAR (measured) = 0.166 W/kg




0 dB = 0.166 W/kg

## Meas.13 Right Head with Tilt on Middle Channel in LTE Band4 mode with Antenna 2

Date: 2024.07.25

Communication System Band: BAND 4; Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1745 MHz; σ = 1.364 S/m; $\varepsilon_r$ = 39.804; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.35, 7.35, 7.35); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20300/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.624 W/kg

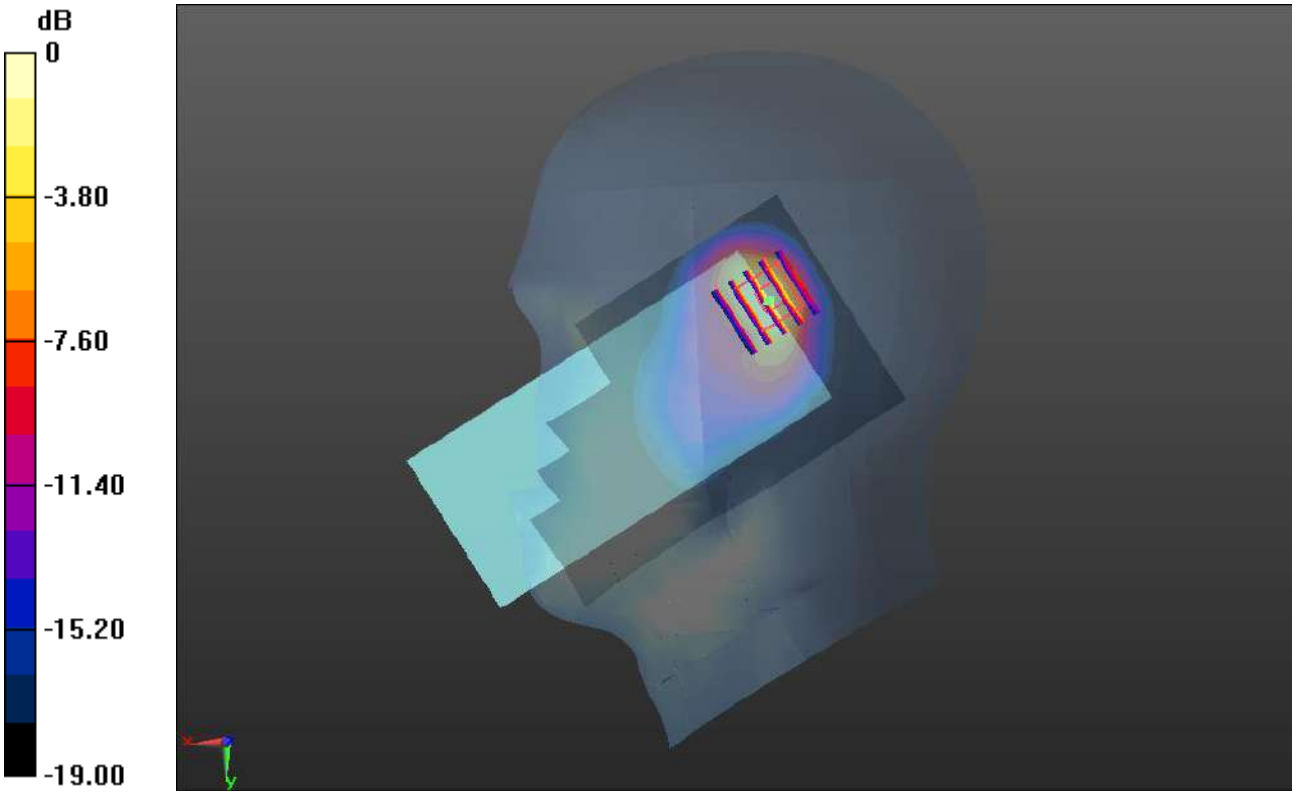
**Ch20300/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.02 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.14 W/kg

**SAR(1 g) = 0.568 W/kg; SAR(10 g) = 0.256 W/kg**

Maximum value of SAR (measured) = 0.689 W/kg




0 dB = 0.689 W/kg

## Meas.14 Body Plane with Top Edge 10mm on High Channel in LTE Band4 mode with Antenna 2

Date: 2024.07.25

Communication System Band: BAND 4; Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1745 MHz; σ = 1.364 S/m; $\varepsilon_r$ = 39.804; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.35, 7.35, 7.35); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20300/Area Scan (51x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.198 W/kg

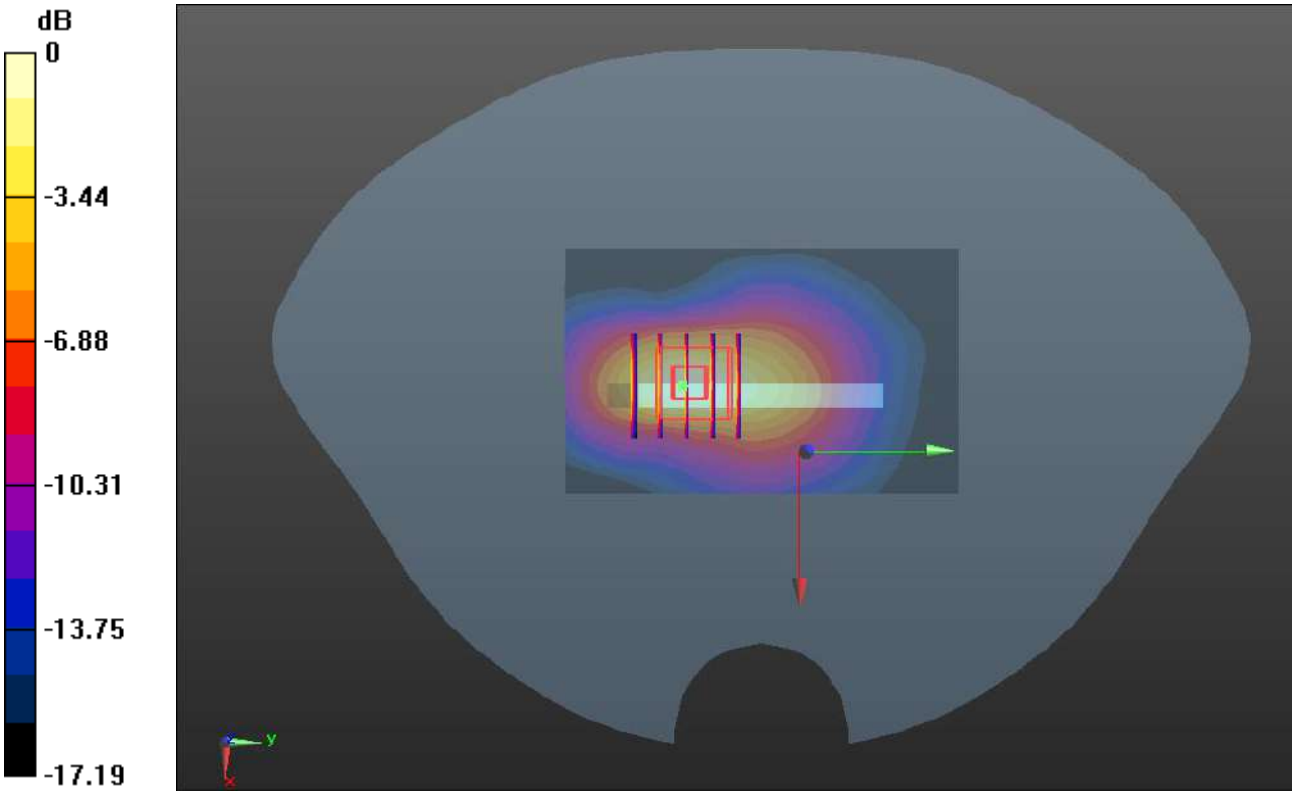
**Ch20300/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.690 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.284 W/kg

**SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.087 W/kg**

Maximum value of SAR (measured) = 0.190 W/kg




0 dB = 0.190 W/kg

## Meas.15 Right Head with Cheek on Middle Channel in LTE Band5 mode with Antenna 2

Date: 2024.07.24

Communication System Band: BAND 5; Frequency: 836.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.912 S/m; $\varepsilon_r$ = 41.366; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.73, 8.73, 8.73); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20525/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.07 W/kg

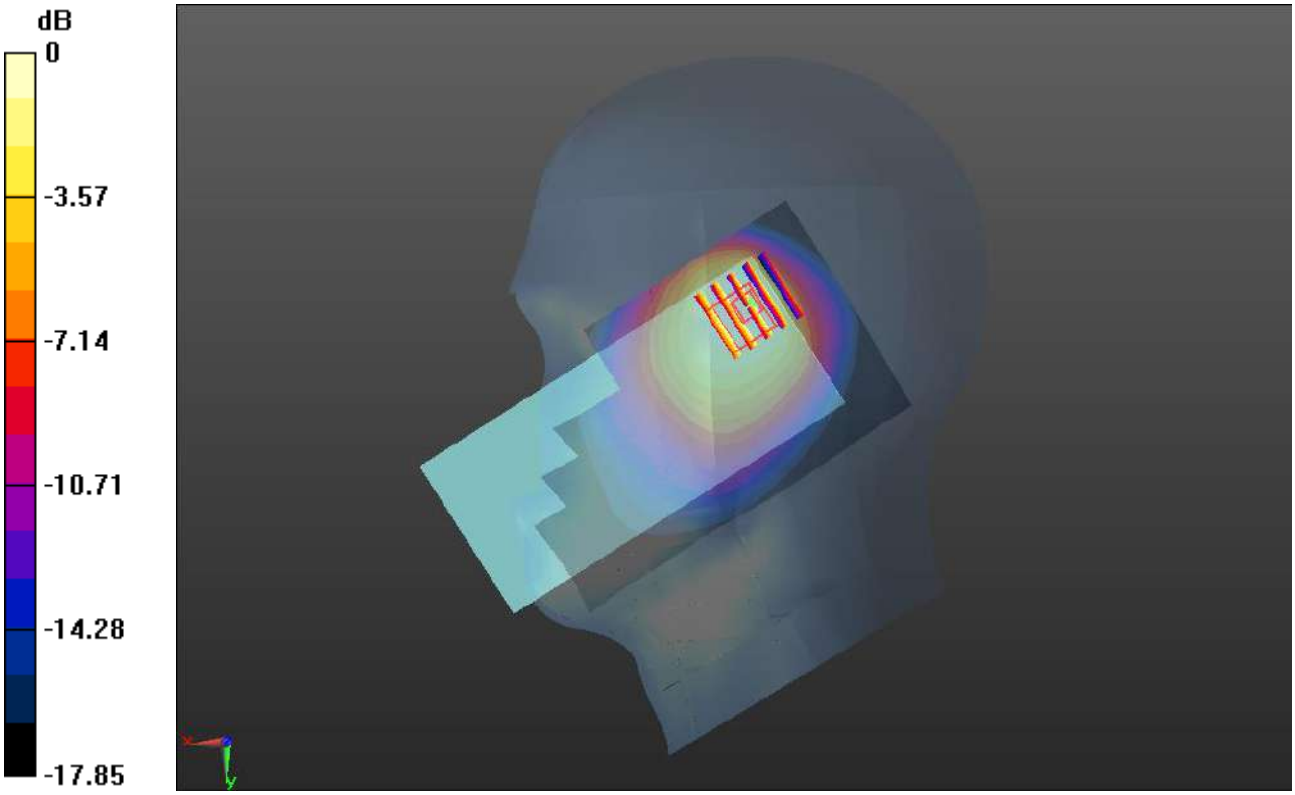
**Ch20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.38 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.60 W/kg

**SAR(1 g) = 0.872 W/kg; SAR(10 g) = 0.564 W/kg**

Maximum value of SAR (measured) = 0.914 W/kg




0 dB = 0.914 W/kg

**Meas.16 Body Plane with Back Side 10mm on Middle Channel in LTE Band5 mode with Antenna 2**

Date: 2024.07.24

Communication System Band: BAND 5; Frequency: 836.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.912 S/m; $\varepsilon_r$ = 41.366; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.73, 8.73, 8.73); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20525/Area Scan (71x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.245 W/kg

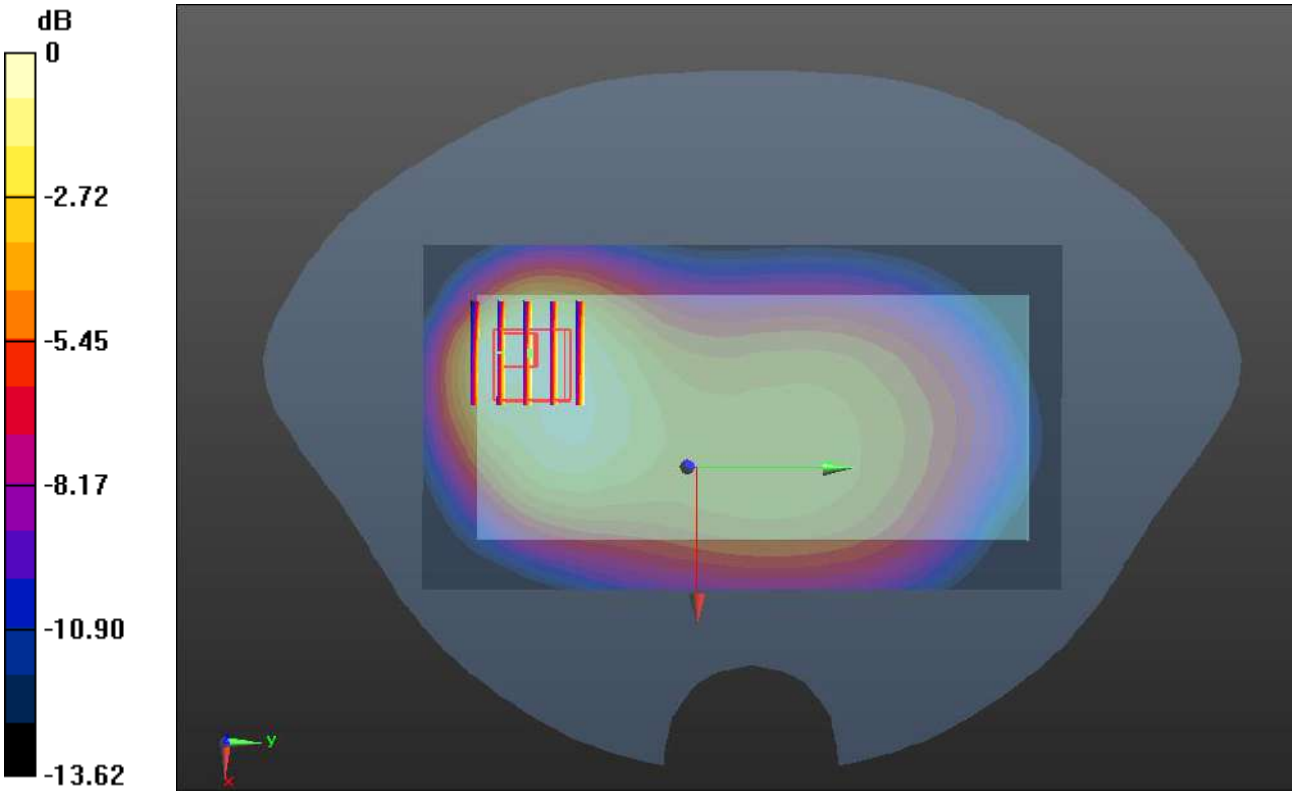
**Ch20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.56 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.353 W/kg

**SAR(1 g) = 0.214 W/kg; SAR(10 g) = 0.137 W/kg**

Maximum value of SAR (measured) = 0.230 W/kg




0 dB = 0.230 W/kg

## Meas.17 Right Head with Tilt on Low Channel in LTE Band7 mode with Antenna 2

Date: 2024.07.27

Communication System Band: BAND 7; Frequency: 2510 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2510 MHz; σ = 1.844 S/m; $\varepsilon_r$ = 39.651; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.3℃ Liquid Temperature:21.1℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.8, 6.8, 6.8); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20850/Area Scan (81x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.508 W/kg

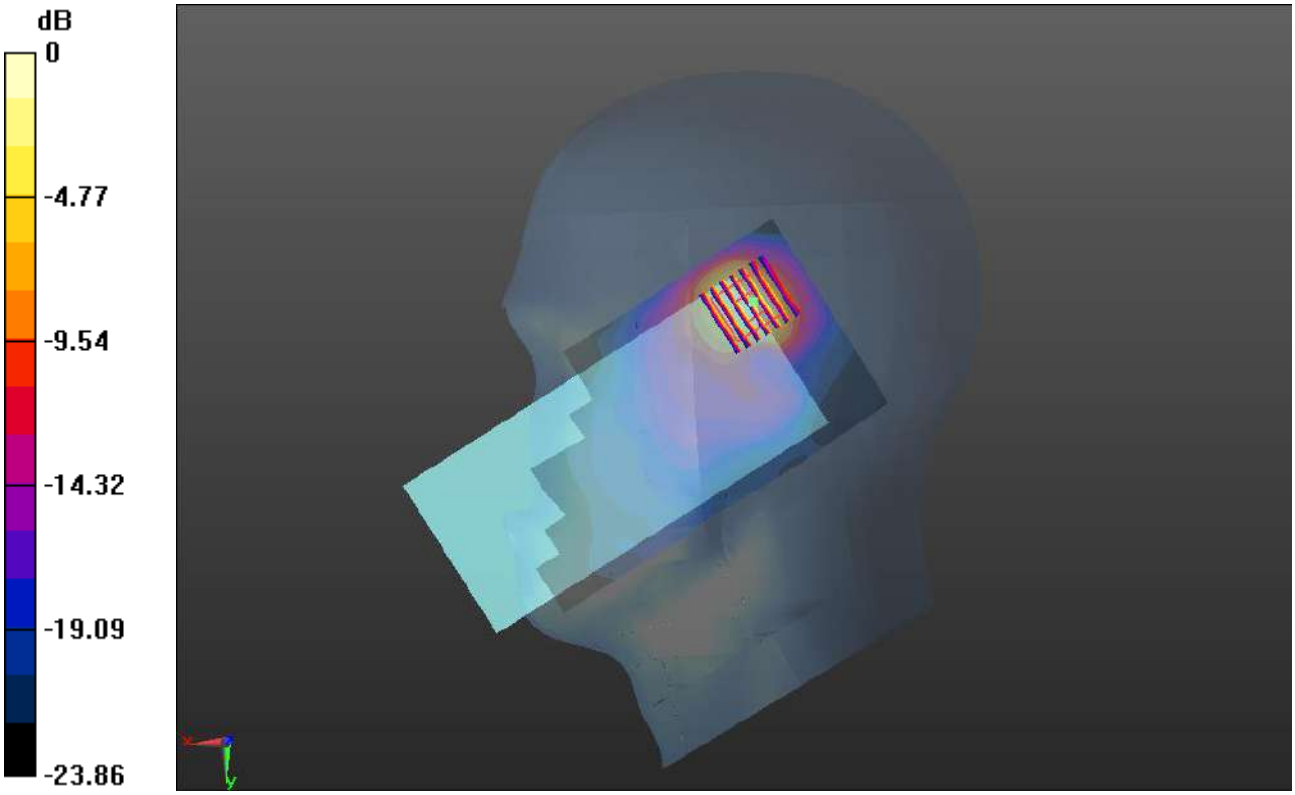
**Ch20850/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.998 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.961 W/kg

**SAR(1 g) = 0.394 W/kg; SAR(10 g) = 0.162 W/kg**

Maximum value of SAR (measured) = 0.478 W/kg




0 dB = 0.478 W/kg

## Meas.18 Body Plane with Top Edge 10mm on Low Channel in LTE Band7 mode with Antenna 2

Date: 2024.07.27

Communication System Band: BAND 7; Frequency: 2510 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2510 MHz; σ = 1.844 S/m; $\varepsilon_r$ = 39.651; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.3℃ Liquid Temperature:21.1℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.8, 6.8, 6.8); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch20850/Area Scan (61x101x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.200 W/kg

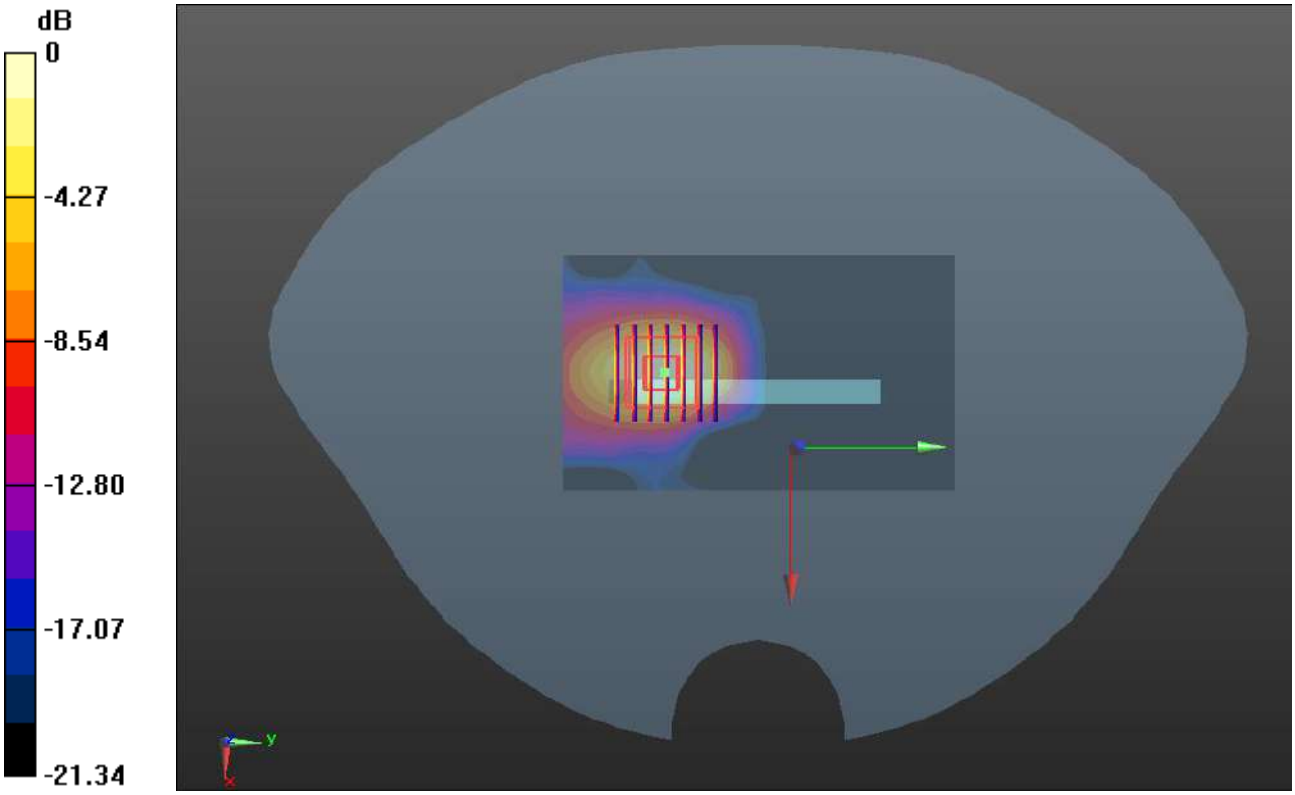
**Ch20850/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.3880 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.297 W/kg

**SAR(1 g) = 0.148 W/kg; SAR(10 g) = 0.066 W/kg**

Maximum value of SAR (measured) = 0.174 W/kg




0 dB = 0.174 W/kg

## Meas.19 Right Head with Tilt on Middle Channel in LTE Band38 mode with Antenna 2

Date: 2024.07.27

Communication System Band: BAND 38; Frequency: 2595 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2595 MHz; σ = 1.967 S/m; $\varepsilon_r$ = 38.543; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.3℃ Liquid Temperature:21.1℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.8, 6.8, 6.8); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch38000/Area Scan (81x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.491 W/kg

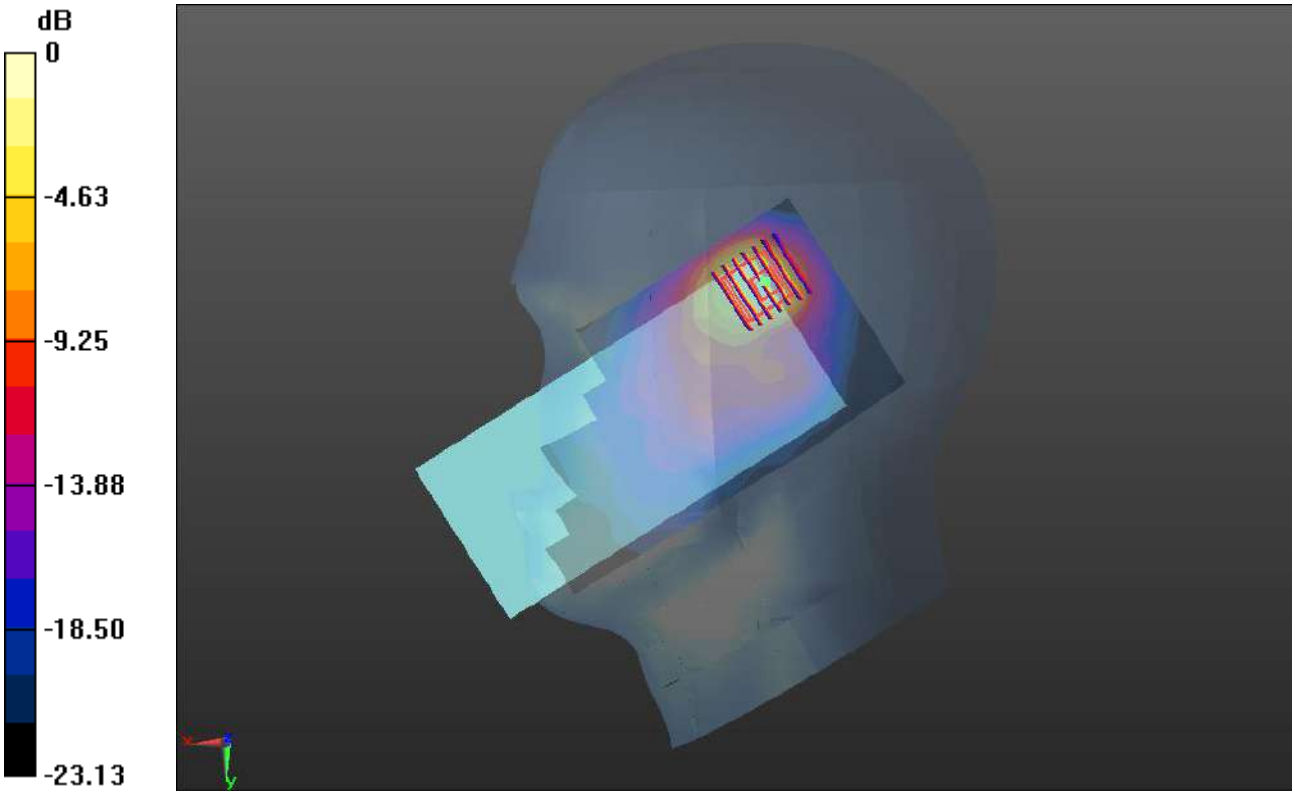
**Ch38000/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.058 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.940 W/kg

**SAR(1 g) = 0.378 W/kg; SAR(10 g) = 0.161 W/kg**

Maximum value of SAR (measured) = 0.452 W/kg




0 dB = 0.452 W/kg

## Meas.20 Body Plane with Back Side 10mm on Middle Channel in LTE Band38 mode with Antenna 2

Date: 2024.07.27

Communication System Band: BAND 38; Frequency: 2595 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2595 MHz; σ = 1.967 S/m; $\varepsilon_r$ = 38.543; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.3℃ Liquid Temperature:21.1℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.8, 6.8, 6.8); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch38000/Area Scan (81x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.167 W/kg

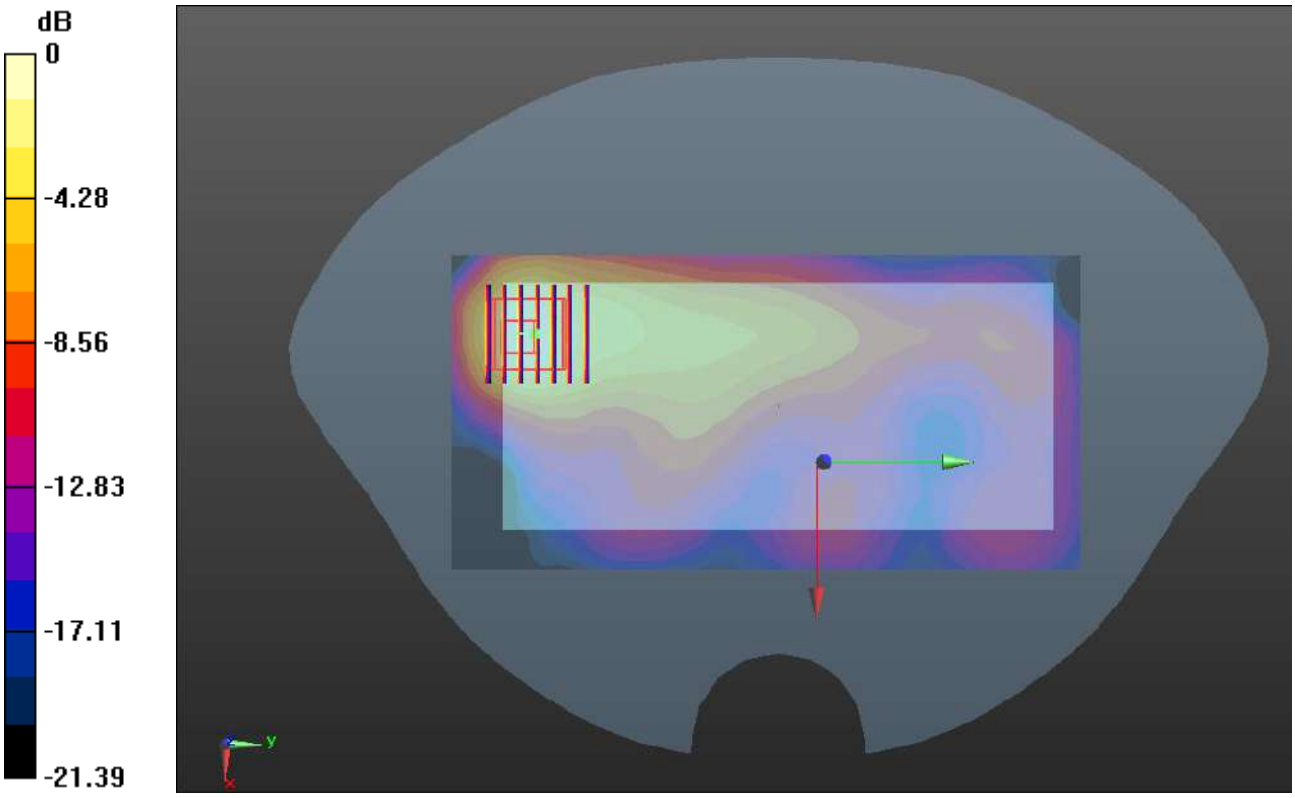
**Ch38000/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.526 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.338 W/kg

**SAR(1 g) = 0.161 W/kg; SAR(10 g) = 0.076 W/kg**

Maximum value of SAR (measured) = 0.187 W/kg




0 dB = 0.187 W/kg

## Meas.21 Right Head with Tilt on Low Channel in LTE Band41 mode with Antenna 2

Date: 2024.07.28

Communication System Band: BAND41; Frequency: 2545 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2545 MHz; σ = 1.874 S/m; $\varepsilon_r$ = 39.621; ρ = 1000 kg/m$^3$

Phantom section: Right Section

Ambient Temperature:22.4℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.8, 6.8, 6.8); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch40140/Area Scan (81x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.628 W/kg

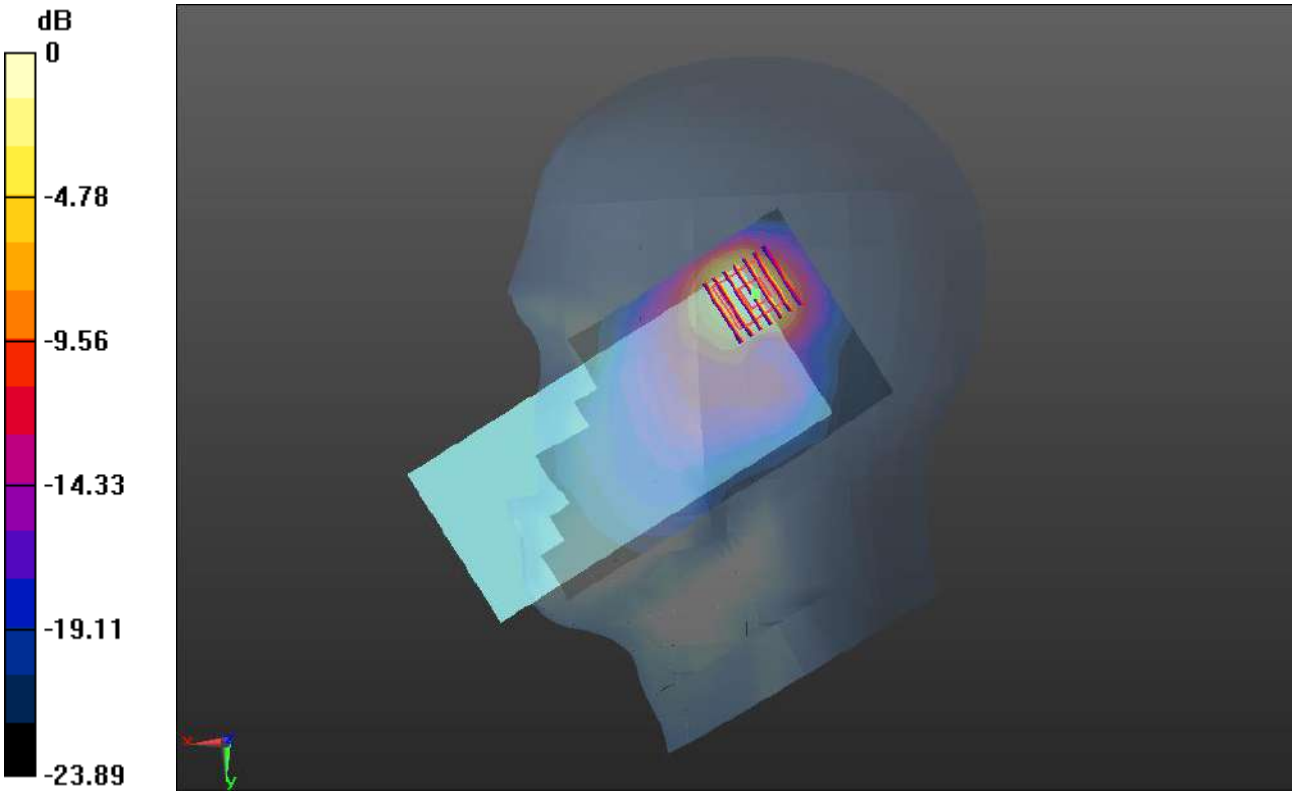
**Ch40140/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.952 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.11 W/kg

**SAR(1 g) = 0.455 W/kg; SAR(10 g) = 0.191 W/kg**

Maximum value of SAR (measured) = 0.550 W/kg




0 dB = 0.550 W/kg

## Meas.22 Body Plane with Back Side 10mm on Low Channel in LTE Band41 mode with Antenna 2

Date: 2024.07.28

Communication System Band: BAND41; Frequency: 2545 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2545 MHz; σ = 1.874 S/m; $\varepsilon_r$ = 39.621; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.8, 6.8, 6.8); Calibrated: 2024.04.12;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2024.01.03
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch40140/Area Scan (81x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.210 W/kg

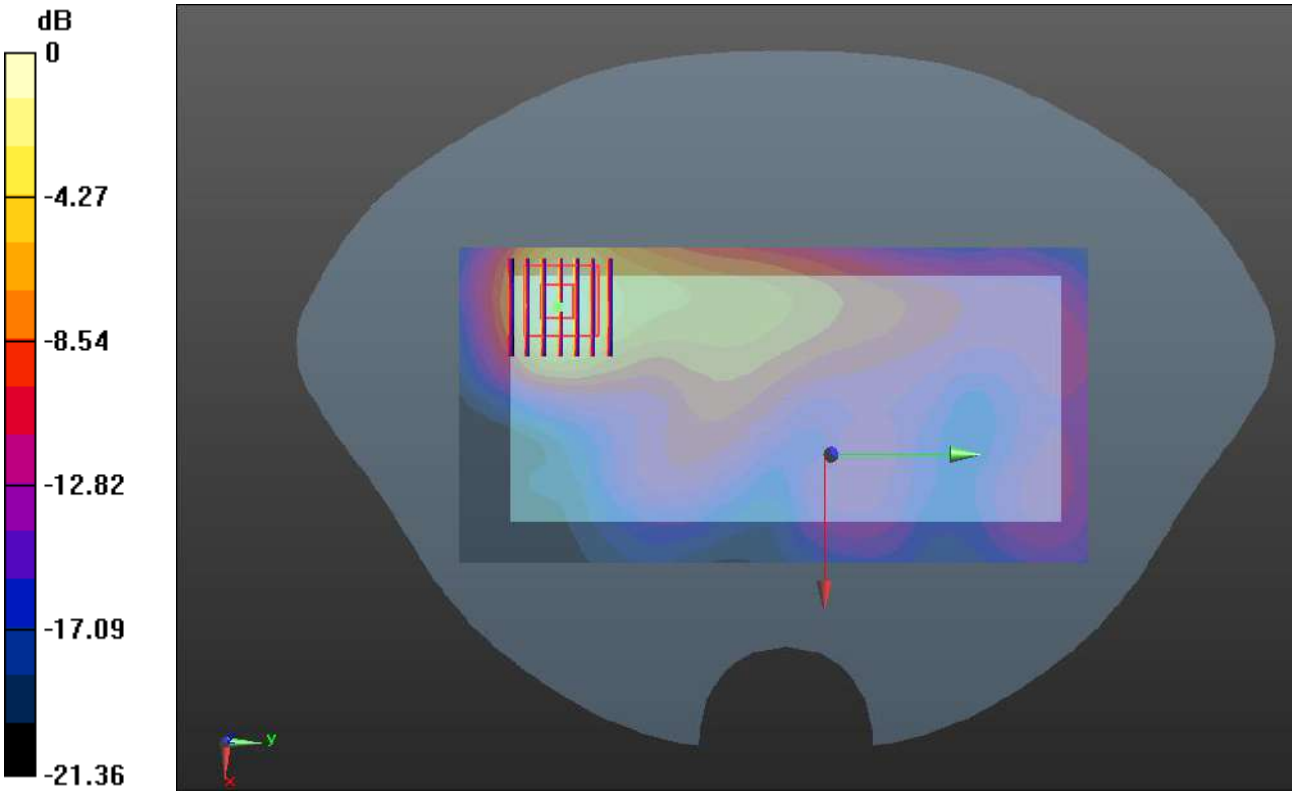
**Ch40140/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.919 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.376 W/kg

**SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.086 W/kg**

Maximum value of SAR (measured) = 0.213 W/kg




0 dB = 0.213 W/kg

## Meas.23 Left Head with Cheek on 6 Channel in IEEE802.11b mode with Antenna 12

Date: 2024.07.21

Communication System Band: 2.4G; Frequency: 2437 MHz;Duty Cycle: 1:1.011

Medium parameters used (interpolated): f = 2437 MHz; σ = 1.791 S/m; $\varepsilon_r$ = 39.509; ρ = 1000 kg/m$^3$

Phantom section: Left Section

Ambient Temperature:22.6℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/Area Scan (91x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.546 W/kg

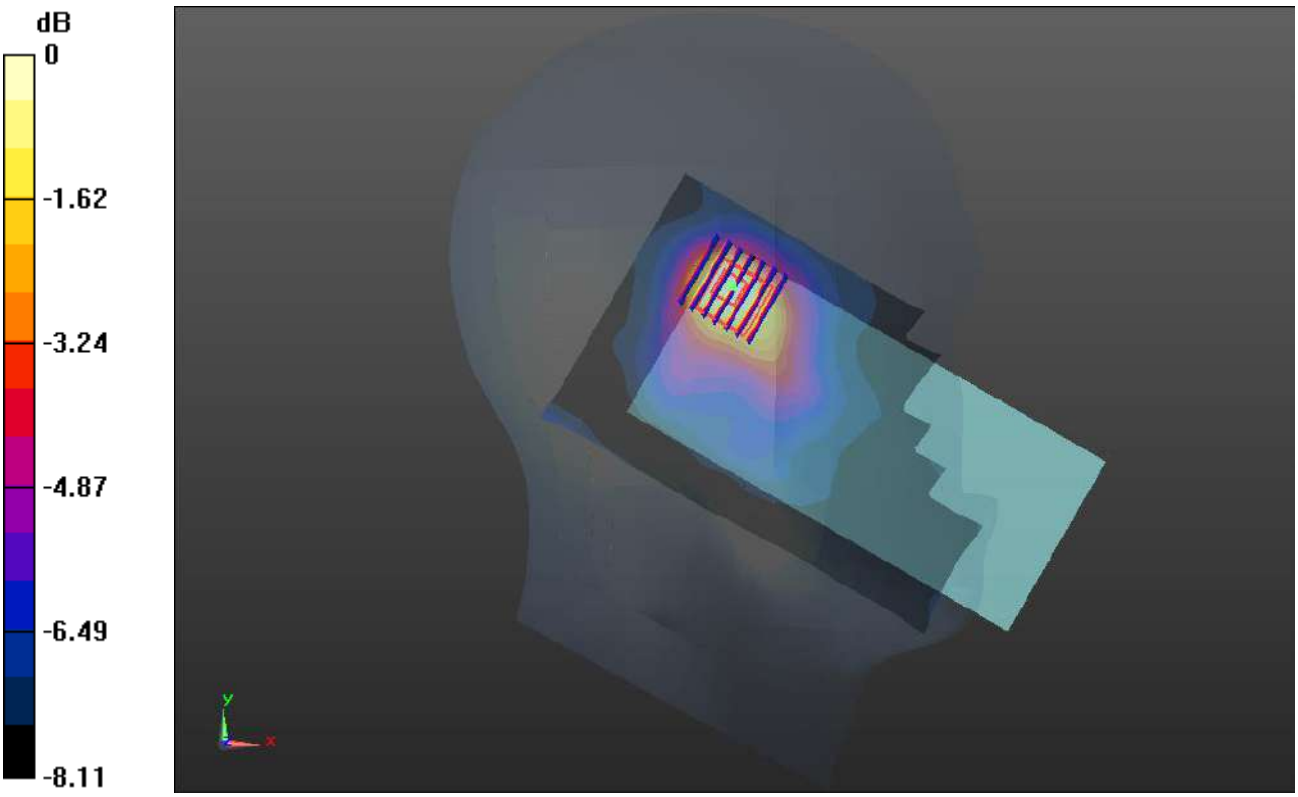
**Ch6/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.22 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.697 W/kg

**SAR(1 g) = 0.458 W/kg; SAR(10 g) = 0.241 W/kg**

Maximum value of SAR (measured) = 0.491 W/kg




0 dB = 0.491 W/kg

### Meas.24 Body Plane with Back Side 10mm on 6 Channel in IEEE802.11b mode with Antenna12

Date: 2024.07.21

Communication System Band: 2.4G; Frequency: 2437 MHz;Duty Cycle: 1:1.011

Medium parameters used (interpolated): f = 2437 MHz; σ = 1.791 S/m; $\varepsilon_r$ = 39.509; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.6℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch6/Area Scan (81x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.188 W/kg

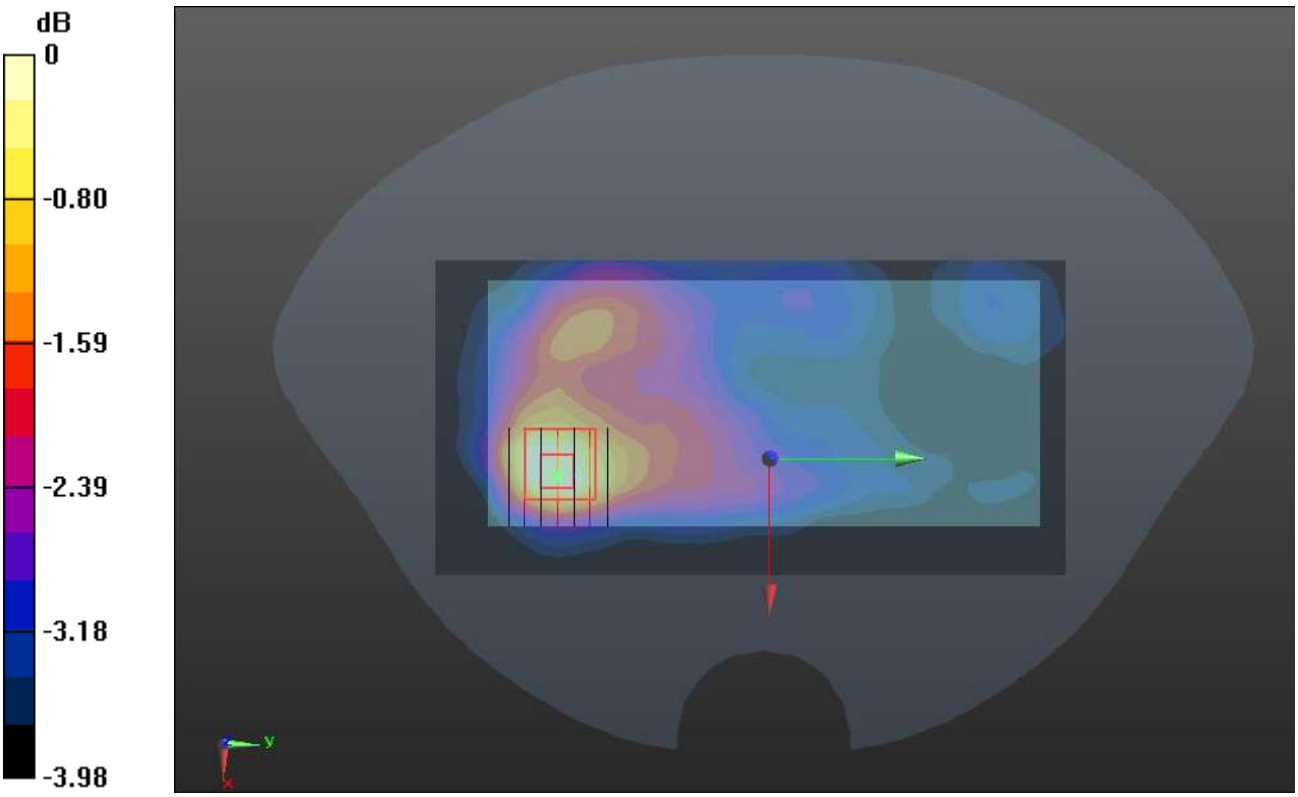
**Ch6/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.921 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.250 W/kg

**SAR(1 g) = 0.171 W/kg; SAR(10 g) = 0.126 W/kg**

Maximum value of SAR (measured) = 0.180 W/kg




0 dB = 0.180 W/kg

## Meas.25 Left Head with Tilt on 58 Channel in IEEE802.11ac80 mode with Antenna 12

Date: 2024.07.23

Communication System Band: 5.3G; Frequency: 5290 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5290 MHz; σ = 4.783 S/m; $\varepsilon_r$ = 35.46; ρ = 1000 kg/m$^3$

Phantom section: Left Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.5, 5.5, 5.5); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch58/Area Scan (111x191x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.336 W/kg

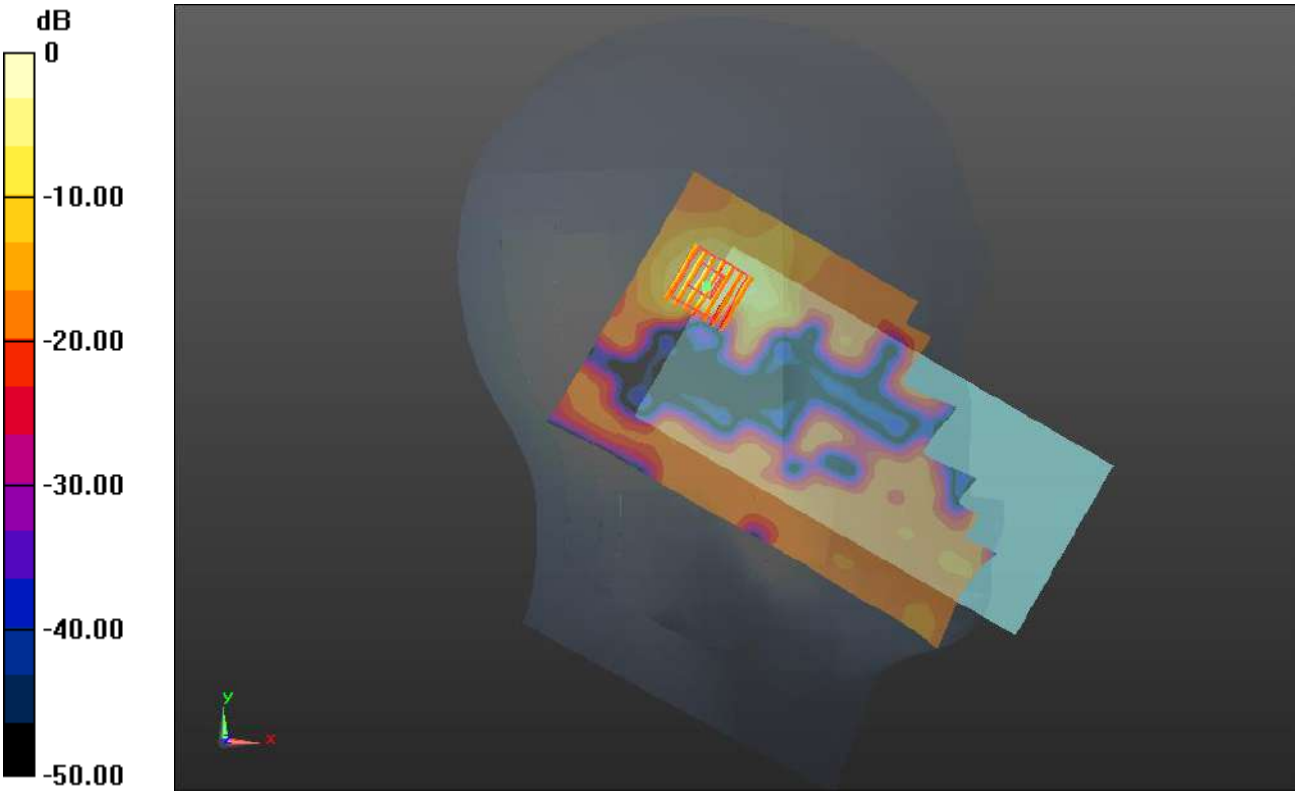
**Ch58/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.8130 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.610 W/kg

**SAR(1 g) = 0.155 W/kg; SAR(10 g) = 0.038 W/kg**

Maximum value of SAR (measured) = 0.332 W/kg




0 dB = 0.332 W/kg

### Meas.26 Left Head with Cheek on 106 Channel in IEEE802.11ac80 mode with Antenna 12

Date: 2024.07.23

Communication System Band: 5.6G; Frequency: 5530 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5530 MHz; σ = 4.965 S/m; $\varepsilon_r$ = 36.124; ρ = 1000 kg/m$^3$

Phantom section: Left Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.11, 5.11, 5.11); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch106/Area Scan (111x191x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.333 W/kg

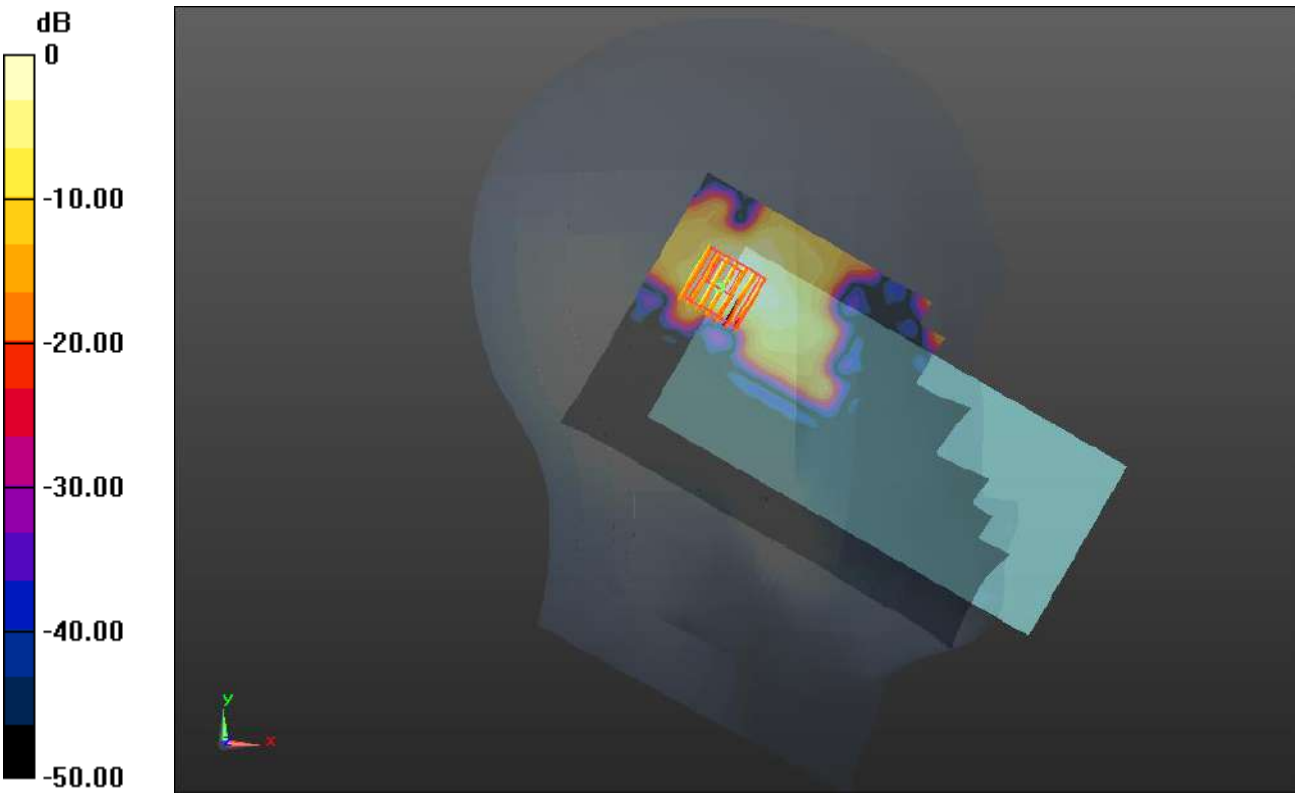
**Ch106/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.892 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.663 W/kg

**SAR(1 g) = 0.162 W/kg; SAR(10 g) = 0.047 W/kg**

Maximum value of SAR (measured) = 0.364 W/kg




0 dB = 0.364 W/kg

## Meas.27 Left Head with Cheek on 155 Channel in IEEE802.11ac80 mode with Antenna 12

Date: 2024.07.21

Communication System Band: 5.8G; Frequency: 5775 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5775 MHz; σ = 5.254 S/m; $\varepsilon_r$ = 35.24; ρ = 1000 kg/m$^3$

Phantom section: Left Section

Ambient Temperature:22.6℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.04, 5.04, 5.04); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch155/Area Scan (111x191x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.292 W/kg

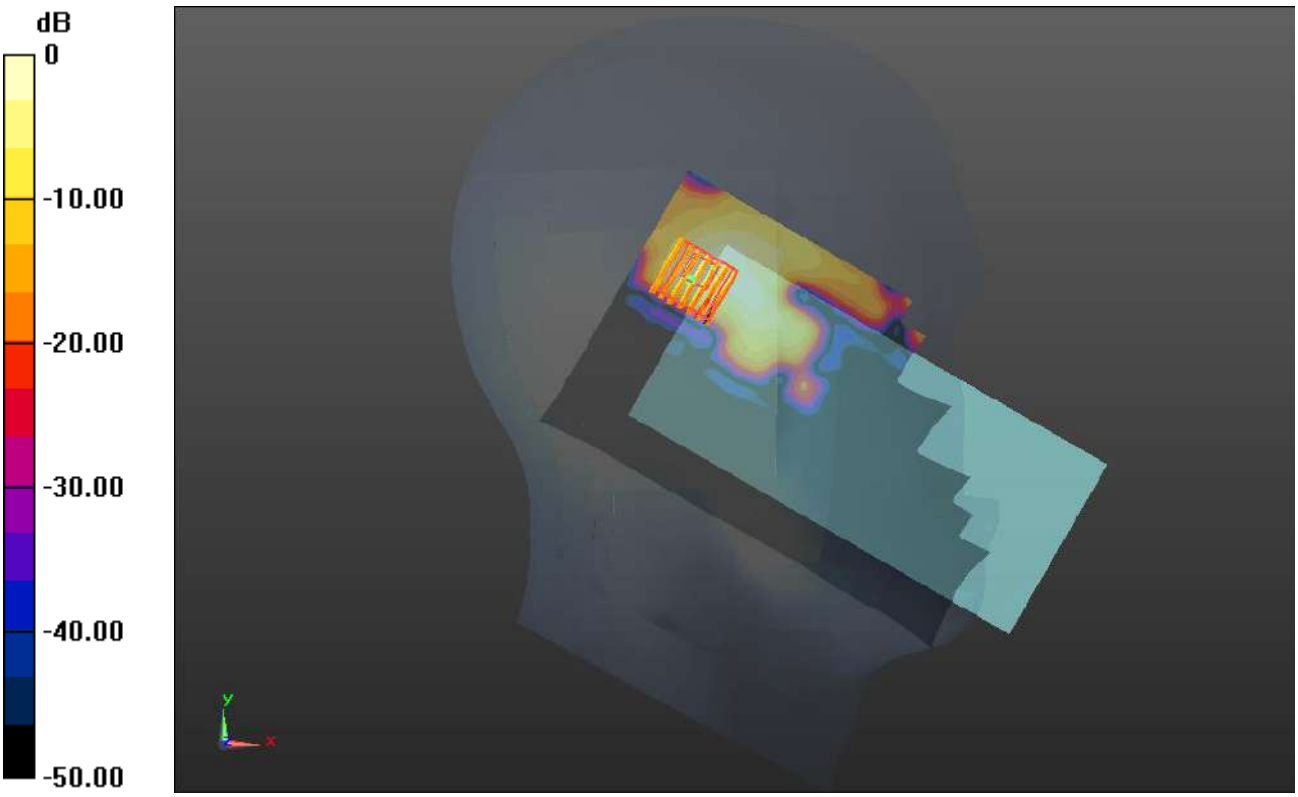
**Ch155/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.796 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.12 W/kg

**SAR(1 g) = 0.150 W/kg; SAR(10 g) = 0.040 W/kg**

Maximum value of SAR (measured) = 0.311 W/kg




0 dB = 0.311 W/kg

**Meas.28 Body Plane with Back Side 10mm on 58 Channel in IEEE802.11ac80 mode with Antenna12**

Date: 2024.07.23

Communication System Band: 5.3G; Frequency: 5290 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5290 MHz; σ = 4.783 S/m; $\varepsilon_r$ = 35.46; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.5, 5.5, 5.5); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch58/Area Scan (101x191x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.146 W/kg

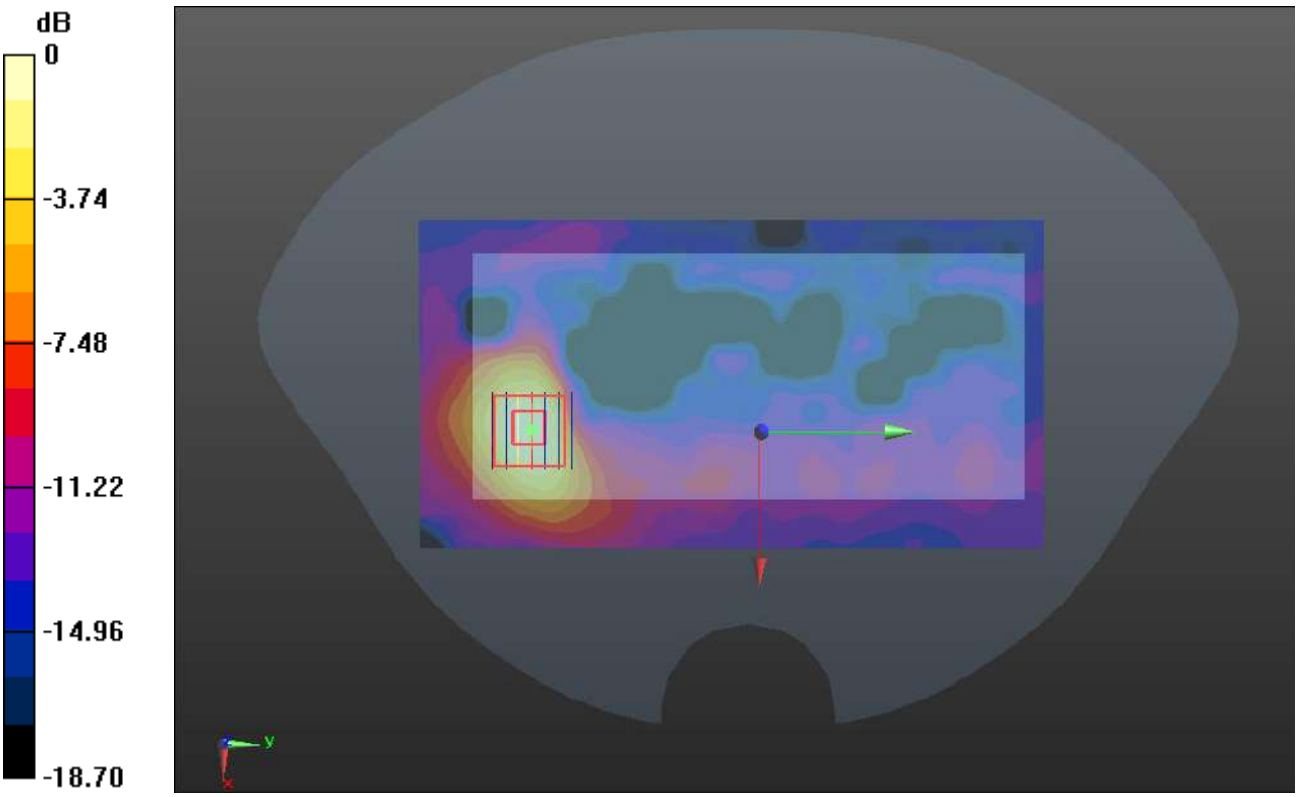
**Ch58/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.553 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.243 W/kg

**SAR(1 g) = 0.071 W/kg; SAR(10 g) = 0.027 W/kg**

Maximum value of SAR (measured) = 0.135 W/kg




0 dB = 0.135 W/kg

**Meas.29 Body Plane with Back Side 10mm on 106 Channel in IEEE802.11ac80 mode with Antenna12**

Date: 2024.07.23

Communication System Band: 5.6G; Frequency: 5530 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5530 MHz; σ = 4.965 S/m; $\varepsilon_r$ = 36.124; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.11, 5.11, 5.11); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch106/Area Scan (101x191x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.286 W/kg

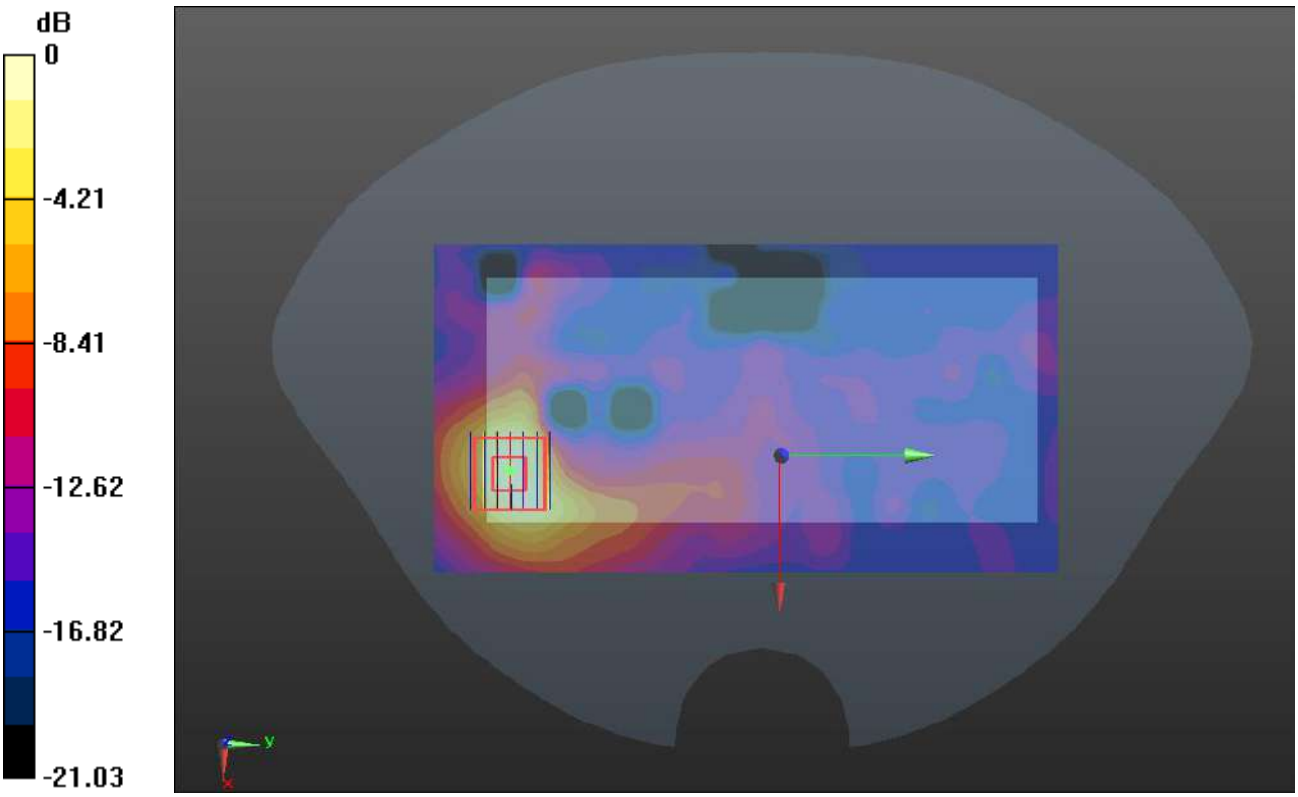
**Ch106/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.815 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.594 W/kg

**SAR(1 g) = 0.148 W/kg; SAR(10 g) = 0.054 W/kg**

Maximum value of SAR (measured) = 0.291 W/kg




0 dB = 0.291 W/kg

**Meas.30 Body Plane with Back Side 10mm on 42 Channel in IEEE802.11ac80 mode with Antenna12**

Date: 2024.07.23

Communication System Band: 5.2G; Frequency: 5210 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5210 MHz; σ = 4.65 S/m; $\varepsilon_r$ = 36.156; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.74, 5.74, 5.74); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch42/Area Scan (101x191x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.154 W/kg

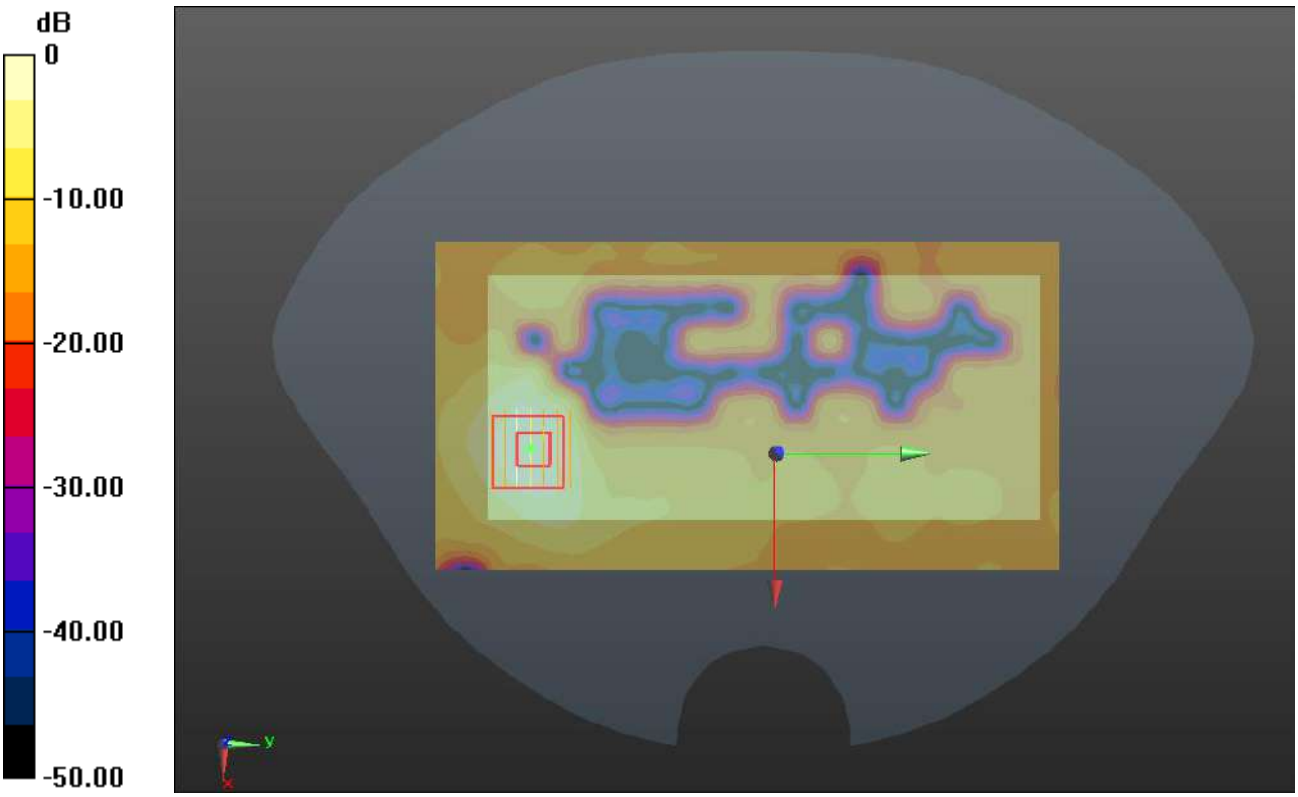
**Ch42/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.640 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.286 W/kg

**SAR(1 g) = 0.078 W/kg; SAR(10 g) = 0.028 W/kg**

Maximum value of SAR (measured) = 0.144 W/kg




0 dB = 0.144 W/kg

**Meas.31 Body Plane with Back Side 10mm on 155 Channel in IEEE802.11ac80 mode with Antenna12**

Date: 2024.07.21

Communication System Band: 5.8G; Frequency: 5775 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5775 MHz; σ = 5.254 S/m; $\varepsilon_r$ = 35.24; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.6℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.04, 5.04, 5.04); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch155/Area Scan (101x191x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.263 W/kg

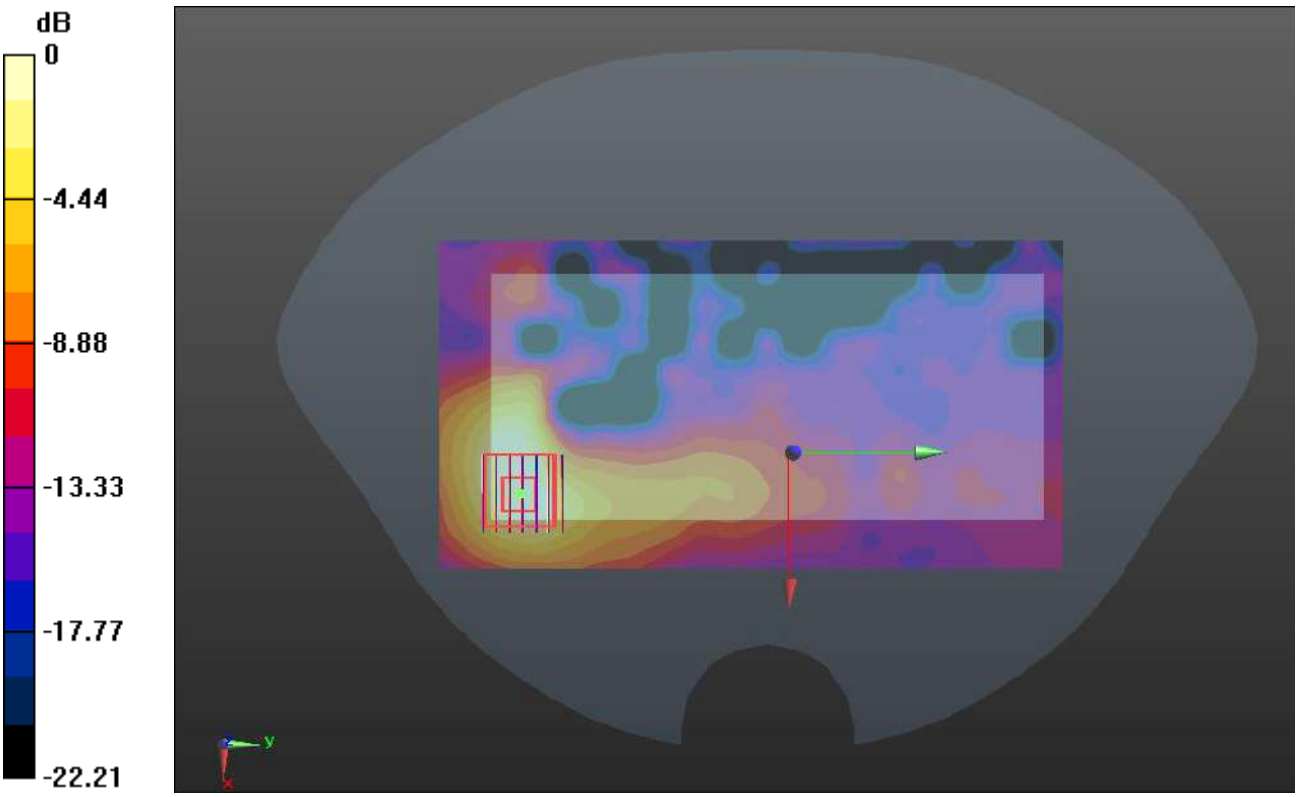
**Ch155/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.756 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.514 W/kg

**SAR(1 g) = 0.121 W/kg; SAR(10 g) = 0.047 W/kg**

Maximum value of SAR (measured) = 0.233 W/kg




0 dB = 0.233 W/kg

**Meas.32 Body Plane with Top Edge 0mm on 58 Channel in IEEE802.11ac80 mode with Antenna12**

Date: 2024.07.23

Communication System Band: 5.3G; Frequency: 5290 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5290 MHz; σ = 4.783 S/m; $\varepsilon_r$ = 35.46; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.5, 5.5, 5.5); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch58/Area Scan (81x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 2.79 W/kg

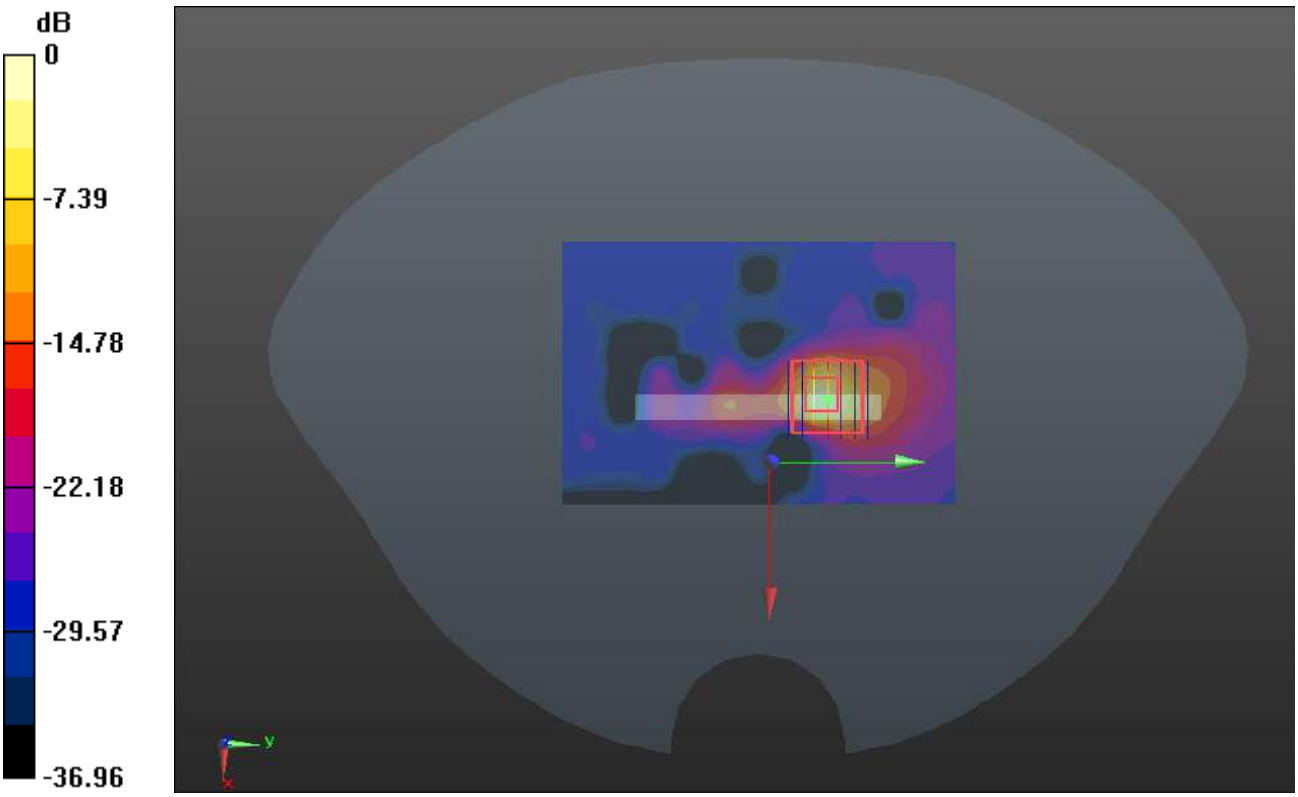
**Ch58/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.680 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 8.84 W/kg

**SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.227 W/kg**

Maximum value of SAR (measured) = 3.20 W/kg




0 dB = 3.20 W/kg

**Meas.33 Body Plane with Top Edge 0mm on 106 Channel in IEEE802.11ac80 mode with Antenna12**

Date: 2024.07.23

Communication System Band: 5.6G; Frequency: 5530 MHz;Duty Cycle: 1:1.111

Medium parameters used (interpolated): f = 5530 MHz; σ = 4.965 S/m; $\varepsilon_r$ = 36.124; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.11, 5.11, 5.11); Calibrated: 2024.06.25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch106/Area Scan (81x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 2.96 W/kg

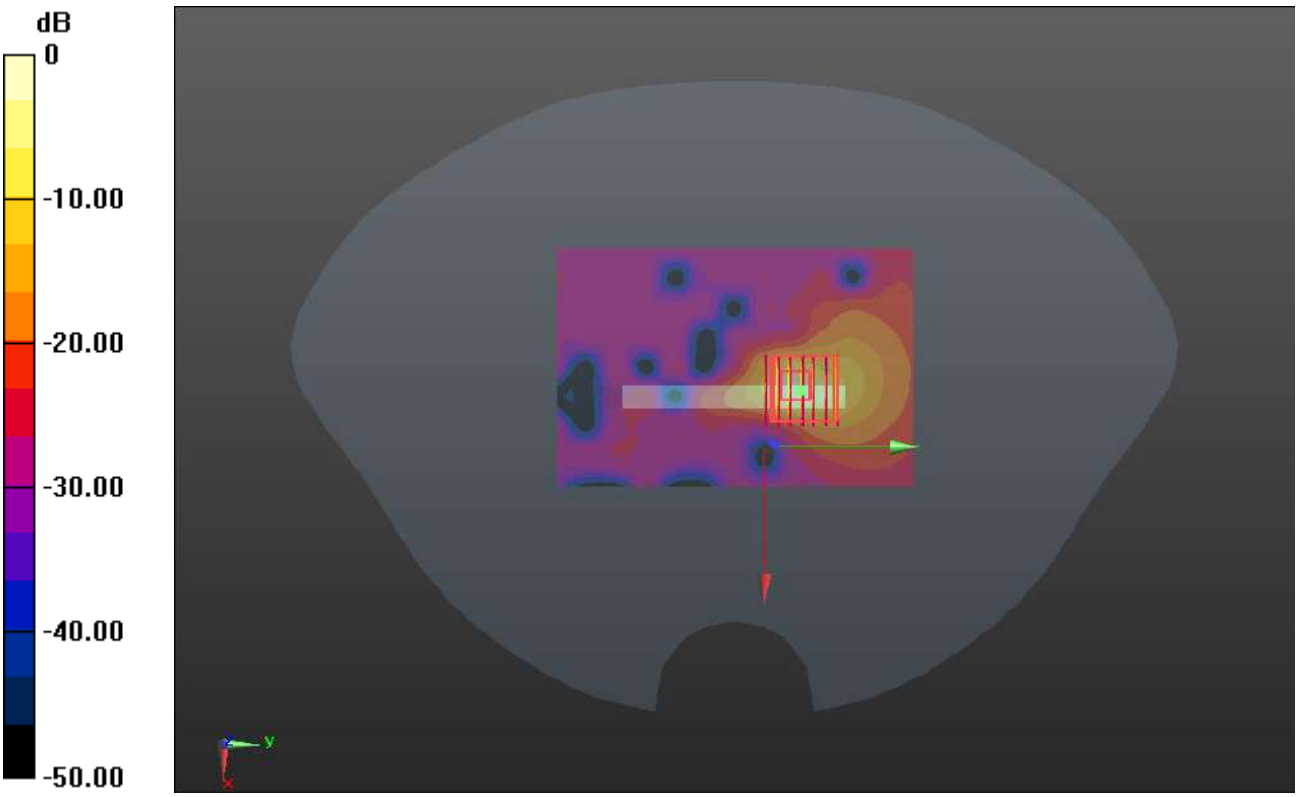
**Ch106/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.790 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 11.7 W/kg

**SAR(1 g) = 1.45 W/kg; SAR(10 g) = 0.267 W/kg**

Maximum value of SAR (measured) = 3.86 W/kg




0 dB = 3.86 W/kg

## Meas.34 Left Head with Cheek on 39 Channel in Bluetooth mode with Antenna 12

Date: 2024.07.21

Communication System Band: BT; Frequency: 2441 MHz;Duty Cycle: 1:1.301

Medium parameters used (interpolated): f = 2441 MHz; σ = 1.802 S/m; $\varepsilon_r$ = 39.295; ρ = 1000 kg/m$^3$

Phantom section: Left Section

Ambient Temperature:22.6℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch39/Area Scan (91x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.371 W/kg

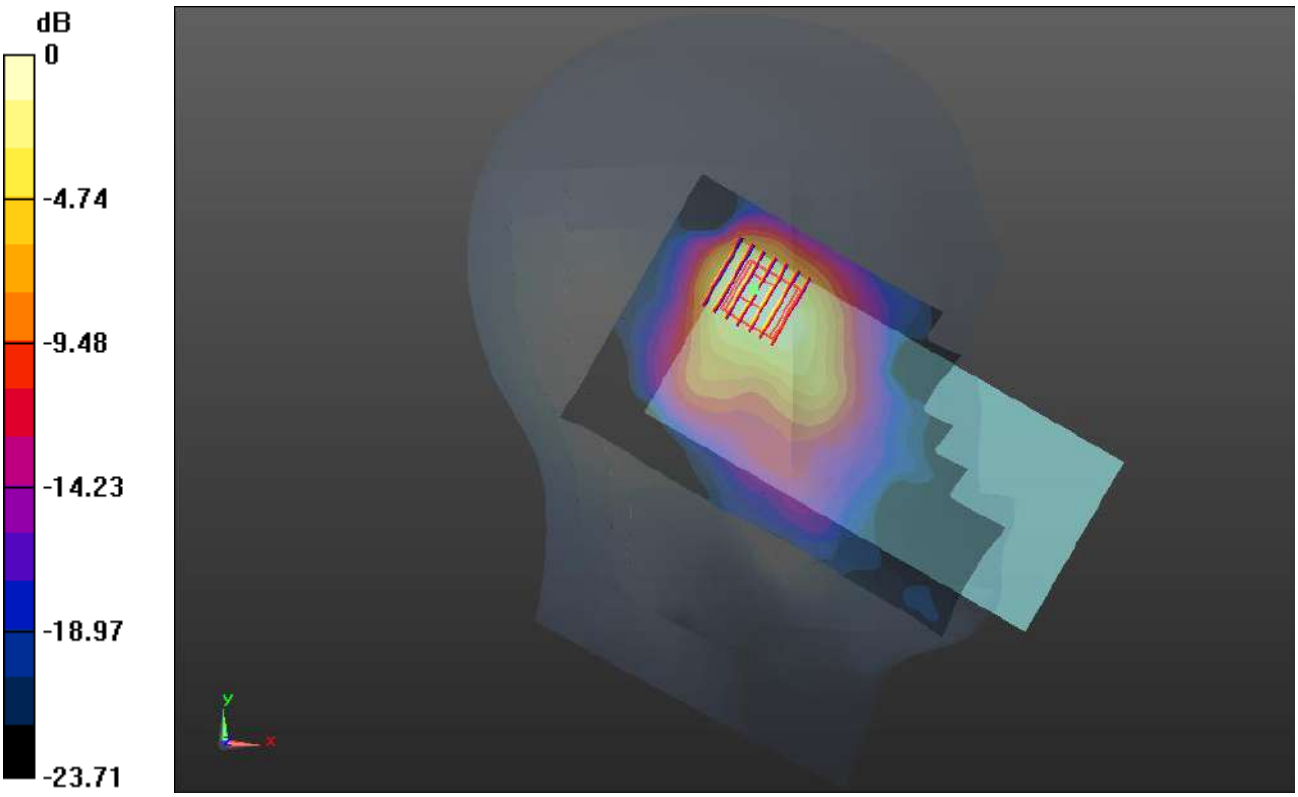
**Ch39/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.028 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.537 W/kg

**SAR(1 g) = 0.289 W/kg; SAR(10 g) = 0.152 W/kg**

Maximum value of SAR (measured) = 0.320 W/kg




0 dB = 0.320 W/kg

**Meas.35 Body Plane with Back Side 10mm on 39 Channel in Bluetooth mode with Antenna 12**

Date: 2024.07.21

Communication System Band: BT; Frequency: 2441 MHz;Duty Cycle: 1:1.301

Medium parameters used (interpolated): f = 2441 MHz; σ = 1.802 S/m; $\varepsilon_r$ = 39.295; ρ = 1000 kg/m$^3$

Phantom section: Flat Section

Ambient Temperature:22.6℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024.06.25;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1711; Calibrated: 2024.03.18
- Phantom: SAM1; Type: QD000P40CD; Serial: TP:1576
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Ch39/Area Scan (81x161x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0978 W/kg

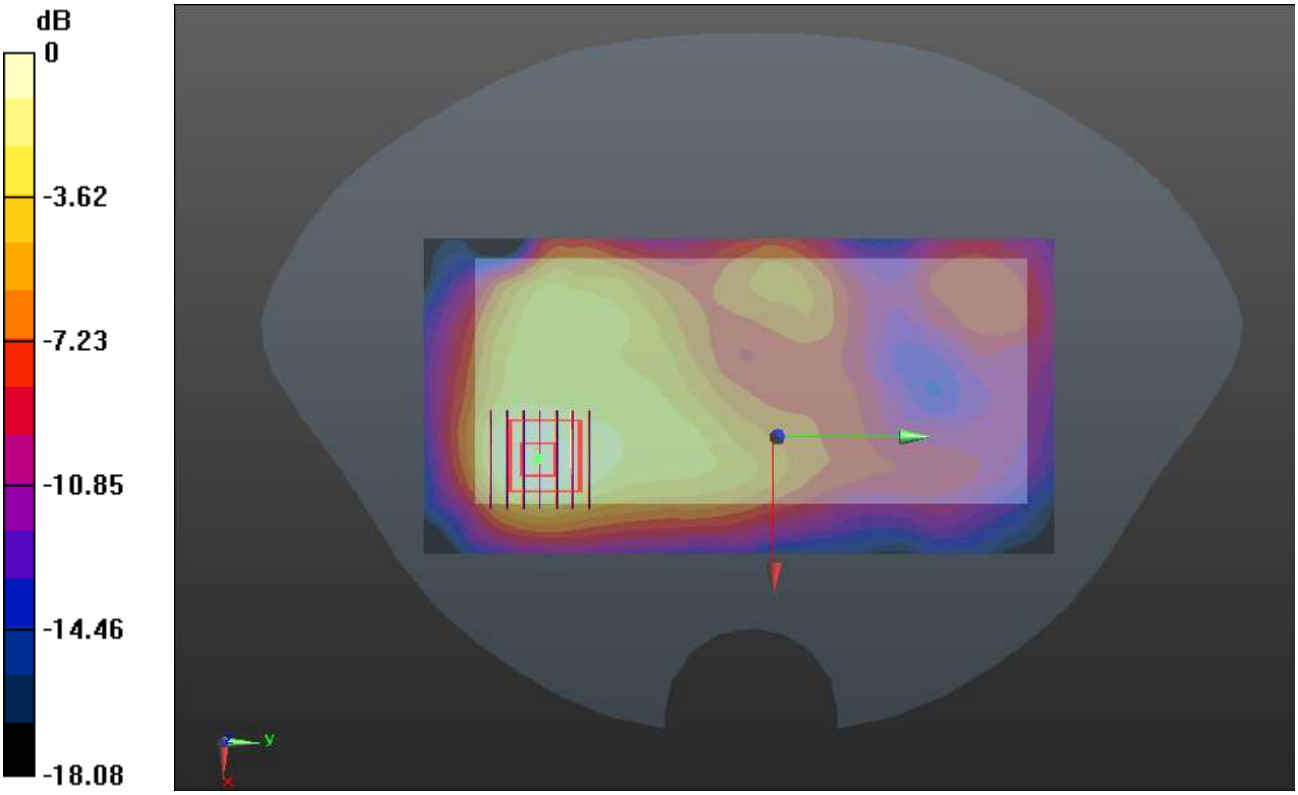
**Ch39/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.628 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.152 W/kg

**SAR(1 g) = 0.080 W/kg; SAR(10 g) = 0.042 W/kg**

Maximum value of SAR (measured) = 0.0890 W/kg




0 dB = 0.0890 W/kg

# ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2461005-AW.pdf”.

# ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ2461005-AS.pdf”.

# ANNEX F CALIBRATION REPORT

Please refer the document “BL-SZ2461005-AC.pdf”.

# Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the “inspection and testing dedicated stamp” or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--