NVLAP TESTING
NVLAP LAB CODE 600341-0

BACL Bay Area Compliance Labs Corp.

# FCC SAR TEST REPORT

| | |
|---|---|
| **Applicant:** | **Shenzhen Xinguodu Technology Co.,Ltd.** |
| **Address:** | **17B JinSong Mansion, Terra Industrial & Trade Park Chegongmiao, Futian District, Shenzhen, Guangdong, China.** |
| **Product Name:** | **POS terminal** |
| **FCC ID:** | **XDQN86PRO-01** |
| **Standard(s):** | **47 CFR Part 2(2.1093)** |
| **Report Number:** | **2502Q44141E-20** |
| **Report Date:** | **2025/03/26** |

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

| | |
|---|---|
| **Reviewed By:** Mark Dong | **Approved By:** Brave Lu |
| Title: SAR Engineer | Title: SAR Supervisor |

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# SAR TEST RESULTS SUMMARY

**Body SAR:**

| Mode | | Max. Reported SAR Level(s) (W/kg) | Limit (W/kg) |
|---|---|---|---|
| GSM 850 | 1g Body SAR | 0.38 | 1.6 |
| GSM 1900 | 1g Body SAR | 0.08 | |
| WCDMA Band 2 | 1g Body SAR | 0.11 | |
| WCDMA Band 5 | 1g Body SAR | 0.13 | |
| LTE Band 2 | 1g Body SAR | 0.15 | |
| LTE Band 4 | 1g Body SAR | 0.24 | |
| LTE Band 5 | 1g Body SAR | 0.13 | |
| LTE Band 7 | 1g Body SAR | **0.43** | |
| LTE Band 38 | 1g Body SAR | 0.35 | |
| WLAN 2.4G | 1g Body SAR | 0.31 | |
| WLAN 5.2G | 1g Body SAR | 0.34 | |
| WLAN 5.3G | 1g Body SAR | 0.56 | |
| WLAN 5.6G | 1g Body SAR | 0.66 | |
| WLAN 5.8G | 1g Body SAR | 0.45 | |
| Simultaneous | 1g Body SAR | **1.09** | |

**Limb SAR:**

| Mode | | Max. Reported SAR Level(s) (W/kg) | Limit (W/kg) |
|---|---|---|---|
| GSM 850 | 10g Extremity SAR | 1.28 | 4.0 |
| GSM 1900 | 10g Extremity SAR | 1.46 | |
| WCDMA Band 2 | 10g Extremity SAR | 1.90 | |
| WCDMA Band 5 | 10g Extremity SAR | 0.56 | |
| LTE Band 2 | 10g Extremity SAR | **1.97** | |
| LTE Band 4 | 10g Extremity SAR | 1.72 | |
| LTE Band 5 | 10g Extremity SAR | 0.52 | |
| LTE Band 7 | 10g Extremity SAR | 1.02 | |
| LTE Band 38 | 10g Extremity SAR | 0.66 | |
| WLAN 2.4G | 10g Extremity SAR | 0.67 | |
| WLAN 5.2G | 10g Extremity SAR | 0.56 | |
| WLAN 5.3G | 10g Extremity SAR | 0.55 | |
| WLAN 5.6G | 10g Extremity SAR | 0.69 | |
| WLAN 5.8G | 10g Extremity SAR | 0.40 | |
| Simultaneous | 10g Extremity SAR | **2.66** | |

| | |
|---|---|
| **Applicable Standards** | **FCC 47 CFR part 2.1093**<br>Radiofrequency radiation exposure evaluation: portable devices |
| | **IEEE 1528:2013**<br>IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques |
| | **KDB procedures**<br>KDB 447498 D01 General RF Exposure Guidance v06<br>KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04<br>KDB 865664 D02 RF Exposure Reporting v01r02<br>KDB 941225 D01 3G SAR Procedures v03r01<br>KDB 941225 D05 SAR for LTE Devices v02r05<br>KDB 248227 D01 802.11 Wi-Fi SAR v02r02 |
| **Note:** This wireless device has been shown to be capable of compliance for localized specific absorption rate (SAR) for General Population/Uncontrolled Exposure limits specified in **FCC 47 CFR part 2.1093** and has been tested in accordance with the measurement procedures specified in IEEE 1528-2013 and RF exposure KDB procedures.<br>**The results and statements contained in this report pertain only to the device(s) evaluated.** | |

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# DOCUMENT REVISION HISTORY

| Revision Number | Report Number | Description of Revision | Date of Revision |
|---|---|---|---|
| 1.0 | 2502Q44141E-20 | Original Report | 2025/03/26 |

# 1. GENERAL INFORMATION

## 1.1 Product Description for Equipment under Test (EUT)

| | |
|---|---|
| **EUT Name:** | POS terminal |
| **EUT Model:** | N86 Pro |
| **Device Type:** | Portable |
| **Exposure Category:** | Population / Uncontrolled |
| **Antenna Type(s):** | Internal Antenna |
| **Body-Worn Accessories:** | None |
| **Proximity Sensor:** | None |
| **Carrier Aggregation:** | None |
| **Operation Modes:** | GPRS/EGPRS Data,<br>WCDMA( R99 (Data), HSUPA/HSDPA/HSPA+),<br>FDD-LTE, TDD-LTE,WLAN, Bluetooth, BLE, NFC |
| **Frequency Band:** | GSM 850: 824-849 MHz(TX); 869-894 MHz(RX) |
| | PCS 1900: 1850-1910 MHz(TX); 1930-1990 MHz(RX) |
| | WCDMA Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) |
| | WCDMA Band 5: 824-849 MHz(TX); 869-894 MHz(RX) |
| | LTE Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) |
| | LTE Band 4: 1710-1755 MHz(TX); 2110-2155 MHz(RX) |
| | LTE Band 5: 824-849 MHz(TX); 869-894 MHz(RX) |
| | LTE Band 7: 2500-2570 MHz(TX); 2620-2690 MHz(RX) |
| | LTE Band 38: 2570-2620 MHz(TX); 2570-2620 MHz (RX) |
| | Wi-Fi 2.4G: 2412-2462 MHz/2422-2452 MHz (TX/RX) |
| | Wi-Fi 5.2G: 5150-5250 MHz(TX/RX) |
| | Wi-Fi 5.3G: 5250-5350 MHz(TX/RX) |
| | Wi-Fi 5.6G: 5470-5725 MHz(TX/RX) |
| | Wi-Fi 5.8G: 5725-5850 MHz(TX/RX) |
| | Bluetooth: 2402-2480MHz(TX/RX) |
| | BLE 1M:2402-2480MHz(TX/RX) |
| | NFC:13.56MHz |
| **Dimensions (L*W*H):** | 195mm (L) *77mm (W) *71mm (H) |
| **Rated Input Voltage:** | DC 7.2V from Rechargeable Battery |
| **Serial Number:** | 2YIH-1 (Sample 1#)<br>2YIH-2 (Sample 2#) |
| **Normal Operation:** | Body and Limbs |
| **EUT Received Date:** | 2025/02/17 |
| **Test Date:** | 2025/02/24~2025/03/21 |
| **EUT Received Status:** | Good |

## 1.2 EUT Information:

| Sample | Parameters |
|---|---|
| Sample 1# | (1GB RAM+8GB ROM) +Front camera 2MP+Back camera 2MP+Double SIM+ Screen 1# (Tianshan) |
| Sample 2# | (2GB RAM+32GB ROM)+Front camera 2MP+Back camera 5MP+Single ESIM+Single SIM + Screen 2#( Hongzhan) + Flash lamp |

## 1.3 Accessory Information

| Accessory Description | Manufacturer | Model | Parameters |
|---|---|---|---|
| Battery 1# | Zhengzhou BAK Battery Co.,Ltd. | GX11 | Nominal Voltage: 7.2V<br>Typical Capacity: 2600mAh<br>Rated Capacity: 2500mAh<br>Typical Energy: 18.72Wh<br>Nominal Energy: 18Wh |
| Battery 2# | Zhengzhou BAK Battery Co.,Ltd. | GX12 | Nominal Voltage: 7.2V<br>Typical Capacity: 3300mAh<br>Rated Capacity: 3200mAh<br>Typical Energy: 23.76Wh<br>Nominal Energy: 23.04Wh |

# 2. REFERENCE, STANDARDS, AND GUIDELINES

**FCC:**

The Report and Order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g as recommended by the ANSI/IEEE standard C95.1-1992 [6] for an uncontrolled environment (Paragraph 65). According to the Supplement C of OET Bulletin 65 “Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under “worst-case” conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in North America is 1.6 mW/g average over 1 gram of tissue mass.

## 2.1 SAR Limits

**FCC Limit**

| EXPOSURE LIMITS | SAR (W/kg) | |
|---|---|---|
| | (General Population / Uncontrolled Exposure Environment) | (Occupational / Controlled Exposure Environment) |
| Spatial Average (averaged over the whole body) | 0.08 | 0.4 |
| Spatial Peak (averaged over any 1 g of tissue) | **1.6** | 8 |
| Spatial Peak (hands/wrists/feet/ankles averaged over 10 g) | 4 | 20 |

Population/Uncontrolled Environments are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.

Occupational/Controlled Environments are defined as locations where there is exposure that maybe incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).

General Population/Uncontrolled environments Spatial Peak limit 1.6 W/kg(FCC) for 1g Body SAR , limit 4 W/kg(FCC) for 10g Extremity SAR applied to the EUT.

## 2.2 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

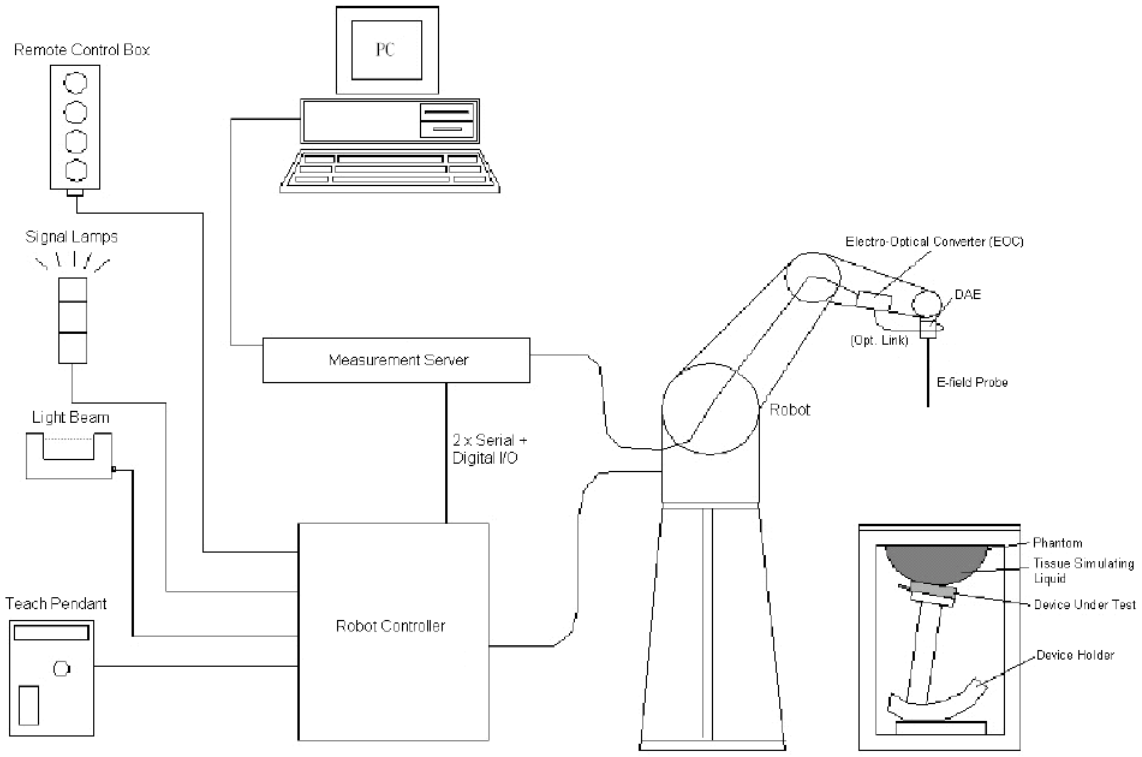
The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. :829273, the FCC Designation No. : CN5044.

# 3. DESCRIPTION OF TEST SYSTEM

These measurements were performed with the automated near-field scanning system DASY5 from Schmid & Partner Engineering AG (SPEAG) which is the Fifth generation of the system shown in the figure hereinafter:


## DASY5 System Description

The DASY5 system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal application, 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.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 professional operating system and the DASY52 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

**DASY5 Measurement Server**


The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz Intel ULV Celeron, 128MB chip-disk and 128MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) electronics box, as well as the 16 bit AD-converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized point out, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.

**Data Acquisition Electronics**

The data acquisition electronics (DAE4) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of both the DAE4 as well as of the DAE3 box is 200MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

**EX3DV4 E-Field Probes**

| | |
|---|---|
| **Frequency** | 4 MHz–10 GHz<br>Linearity: ± 0.2 dB (30 MHz–10 GHz) |
| **Directivity(typical)** | ± 0.1 dB in TSL (rotation around probe axis)<br>± 0.3 dB in TSL (rotation normal to probe axis) |
| **Dynamic Range** | 10 µW/g – > 100 mW/g<br>Linearity: ± 0.2 dB (noise: typically< 1 µW/g) |
| **Dimensions** | Overall length: 337 mm (tip: 20 mm)<br>Tip diameter: 2.5 mm (body: 12 mm)<br>Typical distance from probe tip to dipole centers: 1 mm |
| **Applications** | High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%. |
| **Compatibility** | DASY3, DASY4, DASY52, DASY6, DASY8, EASY6, EASY4/MRI |

**ES3DV3 E-Field Probes**

| | |
|---|---|
| **Frequency** | 10 MHz – 4 GHz;<br>Linearity: ±0.2 dB (30 MHz – 4 GHz) |
| **Directivity** | ±0.2 dB in TSL (rotation around probe axis)<br>±0.3 dB in TSL (rotation normal to probe axis) |
| **Dynamic Range** | 5 µW/g – >100 mW/g;<br>Linearity: ±0.2 dB |
| **Dimensions** | Overall length: 337 mm (tip: 20 mm)<br>Tip diameter: 3.9 mm (body: 12 mm)<br>Distance from the probe tip to dipole centers: 2.0 mm |
| **Application** | General dosimetry up to 4 GHz<br>Dosimetry in strong gradient fields<br>Compliance tests of mobile phones |
| **Compatibility** | DASY3, DASY4, DASY52, DASY6, DASY8, EASY6, EASY4/MRI |

**SAM Twin Phantom**

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region, where shell thickness
increases to 6 mm). The phantom has three measurement areas:
_ Left Head
_ Right Head
_ Flat phantom

The phantom table for the DASY systems based on the robots have the size of 100 x 50 x 85 cm (L x W x H).
For easy dislocation these tables have fork lift cut outs at the bottom.
The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. Only one device holder is necessary if two phantoms are used (e.g., for different liquids)

A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible.
Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot.

**Robots**

The DASY5 system uses the high precision industrial robot. The robot offers the same features important for our application:

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

The above mentioned robots are controlled by the Staubli CS7MB robot controllers. All information regarding the use and maintenance of the robot arm and the robot controller is contained on the CDs delivered along with the robot. Paper manuals are available upon request direct from Staubli.

**Area Scans**

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 15mm2 step integral, with 1.5mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

**Zoom Scan (Cube Scan Averaging)**

The averaging zoom scan volume utilized in the DASY5 software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/$m^3$ is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 10mm,with the side length of the 10g cube is 21.5mm.

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 7 x7 x 7 (5mmx5mmx5mm) providing a volume of 30 mm in the X & Y & Z axis.

## Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE 1528:2013

**Recommended Tissue Dielectric Parameters for Head liquid**

**Table 3—Target dielectric properties of head tissue-equivalent material in the 300 MHz to 6000 MHz frequency range**

| Frequency (MHz) | Relative permittivity ($\varepsilon'_r$) | Conductivity ($\sigma$) (S/m) |
|---|---|---|
| 300 | 45.3 | 0.87 |
| 450 | 43.5 | 0.87 |
| *750* | *41.9* | *0.89* |
| 835 | 41.5 | 0.90 |
| 900 | 41.5 | 0.97 |
| 1450 | 40.5 | 1.20 |
| *1500* | *40.4* | *1.23* |
| *1640* | *40.2* | *1.31* |
| *1750* | *40.1* | *1.37* |
| 1800 | 40.0 | 1.40 |
| 1900 | 40.0 | 1.40 |
| 2000 | 40.0 | 1.40 |
| *2100* | *39.8* | *1.49* |
| *2300* | *39.5* | *1.67* |
| 2450 | 39.2 | 1.80 |
| *2600* | *39.0* | *1.96* |
| 3000 | 38.5 | 2.40 |
| *3500* | *37.9* | *2.91* |
| *4000* | *37.4* | *3.43* |
| *4500* | *36.8* | *3.94* |
| *5000* | *36.2* | *4.45* |
| *5200* | *36.0* | *4.66* |
| *5400* | *35.8* | *4.86* |
| *5600* | *35.5* | *5.07* |
| 5800 | 35.3 | 5.27 |
| *6000* | *35.1* | *5.48* |

NOTE—For convenience, permittivity and conductivity values at some frequencies that are not part of the original data from Drossos et al. [B60] or the extension to 5800 MHz are provided (i.e., the values shown in italics). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6000 MHz that were linearly extrapolated from the values at 3000 MHz and 5800 MHz.

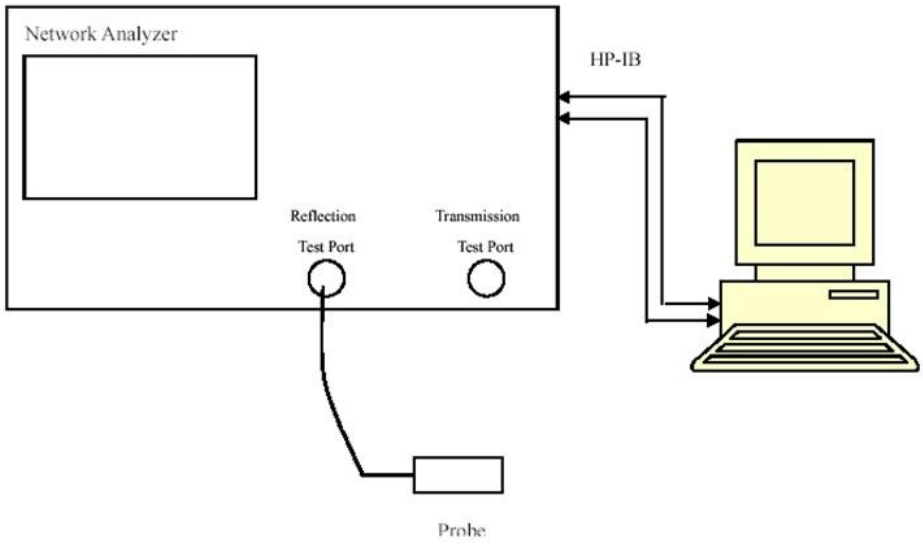
# 4. EQUIPMENT LIST AND CALIBRATION

## 4.1 Equipments List & Calibration Information

| Equipment | Model | S/N | Calibration Date | Calibration Due Date |
|---|---|---|---|---|
| DASY5 Test Software | DASY52.10 | N/A | NCR | NCR |
| DASY5 Measurement Server | DASY5 4.5.12 | 1470 | NCR | NCR |
| Data Acquisition Electronics | DAE4 | 772 | 2025/2/17 | 2026/2/16 |
| E-Field Probe | ES3DV3 | 3220 | 2024/10/15 | 2025/10/14 |
| E-Field Probe | EX3DV4 | 7441 | 2024/3/4 | 2025/3/3 |
| Mounting Device | MD4HHTV5 | SD 000 H01 KA | NCR | NCR |
| Twin SAM | Twin SAM V5.0 | 1874 | NCR | NCR |
| Dipole, 750 MHz | D750V3 | 1167 | 2022/10/31 | 2025/10/30 |
| Dipole, 1750 MHz | D1750V2 | 1141 | 2024/6/17 | 2027/6/16 |
| Dipole, 1900 MHz | D1900V2 | 543 | 2022/11/2 | 2025/11/1 |
| Dipole, 2450 MHz | D2450V2 | 971 | 2024/6/15 | 2027/6/14 |
| Dipole, 2600 MHz | D2600V2 | 1132 | 2022/11/1 | 2025/10/31 |
| Dipole, 5 GHz | D5GHzV2 | 1246 | 2022/11/1 | 2025/10/31 |
| Simulated Tissue Liquid Head | HBBL600-10000V6 | SL AAH U16 BC (Batch:220809-1) | Each Time | / |
| Network Analyzer | 8753C +85047A | 3029A01355 +3033A02857 | 2024/5/9 | 2025/5/9 |
| Dielectric assessment kit | 1253 | SM DAK 040 CA | NCR | NCR |
| synthesized signal generator | 8665B | 3438a00584 | 2024/10/18 | 2025/10/17 |
| EPM Series Power Meter | E4419B | MY45103907 | 2024/10/18 | 2025/10/17 |
| Power Sensor | 8482A | US37296108 | 2024/10/19 | 2025/10/18 |
| Power Meter | EPM-441A | GB37481494 | 2024/10/19 | 2025/10/18 |
| USB Power Sensor | U2001H | MY50000432 | 2024/4/1 | 2025/3/31 |
| USB Wideband Power Sensor | U2022XA | MY54170006 | 2024/10/18 | 2025/10/17 |
| Power Amplifier | ZHL-5W-202-S+ | 416402204 | NCR | NCR |
| Power Amplifier | ZVE-6W-83+ | 637202210 | NCR | NCR |
| Directional Coupler | 441493 | 520Z | NCR | NCR |
| Attenuator | 20dB, 100W | LN749 | NCR | NCR |
| Attenuator | 6dB, 150W | 2754 | NCR | NCR |
| Thermometer | DTM3000 | 3635 | 2024/8/12 | 2025/8/11 |
| Hygrothermograph | HTC-2 | EM072 | 2024/11/4 | 2025/11/3 |
| Wireless communication tester | 8960 | MY50266471 | 2024/9/5 | 2025/9/4 |
| Wideband Radio Communication Tester | CMW500 | 147473 | 2024/9/5 | 2025/9/4 |
| Spectrum Analyzer | FSV40 | 101461 | 2024/9/5 | 2025/9/4 |

# 5. SAR MEASUREMENT SYSTEM VERIFICATION

## 5.1 Liquid Verification




## 5.2 Liquid Verification Results

| Frequency (MHz) | Liquid Type | Liquid Parameter | | Target Value | | Delta (%) | | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|
| | | $\varepsilon_r$ | $\sigma$ (S/m) | $\varepsilon_r$ | $\sigma$ (S/m) | $\Delta\varepsilon_r$ | $\Delta\sigma$ (S/m) | |
| 750 | Simulated Tissue Liquid Head | 42.858 | 0.902 | 41.9 | 0.89 | 2.29 | 1.35 | ±5 |
| 824.2 | Simulated Tissue Liquid Head | 41.952 | 0.922 | 41.55 | 0.9 | 0.97 | 2.44 | ±5 |
| 826.4 | Simulated Tissue Liquid Head | 41.918 | 0.923 | 41.54 | 0.9 | 0.91 | 2.56 | ±5 |
| 829 | Simulated Tissue Liquid Head | 41.877 | 0.925 | 41.53 | 0.9 | 0.84 | 2.78 | ±5 |
| 836.5 | Simulated Tissue Liquid Head | 41.771 | 0.931 | 41.5 | 0.9 | 0.65 | 3.44 | ±5 |
| 836.6 | Simulated Tissue Liquid Head | 41.769 | 0.931 | 41.5 | 0.9 | 0.65 | 3.44 | ±5 |
| 844 | Simulated Tissue Liquid Head | 41.618 | 0.932 | 41.5 | 0.91 | 0.28 | 2.42 | ±5 |
| 846.6 | Simulated Tissue Liquid Head | 41.55 | 0.938 | 41.5 | 0.91 | 0.12 | 3.08 | ±5 |
| 848.8 | Simulated Tissue Liquid Head | 41.493 | 0.941 | 41.5 | 0.91 | -0.02 | 3.41 | ±5 |

**Liquid Verification above was performed on 2025/03/20.*

| Frequency (MHz) | Liquid Type | Liquid Parameter | | Target Value | | Delta (%) | | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|
| | | $\varepsilon_r$ | $\sigma$ (S/m) | $\varepsilon_r$ | $\sigma$ (S/m) | $\Delta\varepsilon_r$ | $\Delta\sigma$ (S/m) | |
| 1720 | Simulated Tissue Liquid Head | 39.307 | 1.349 | 40.13 | 1.35 | -2.05 | -0.07 | ±5 |
| 1732.5 | Simulated Tissue Liquid Head | 39.295 | 1.365 | 40.12 | 1.36 | -2.06 | 0.37 | ±5 |
| 1745 | Simulated Tissue Liquid Head | 39.231 | 1.37 | 40.1 | 1.37 | -2.17 | 0 | ±5 |
| 1750 | Simulated Tissue Liquid Head | 39.175 | 1.377 | 40.1 | 1.37 | -2.31 | 0.51 | ±5 |

**Liquid Verification above was performed on 2025/03/21.*

| Frequency (MHz) | Liquid Type | Liquid Parameter | | Target Value | | Delta (%) | | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|
| | | $\varepsilon_r$ | $\sigma$ (S/m) | $\varepsilon_r$ | $\sigma$ (S/m) | $\Delta\varepsilon_r$ | $\Delta\sigma$ (S/m) | |
| 1850.2 | Simulated Tissue Liquid Head | 39.56 | 1.427 | 40.00 | 1.40 | -1.1 | 1.93 | ±5 |
| 1852.4 | Simulated Tissue Liquid Head | 39.496 | 1.427 | 40.00 | 1.40 | -1.26 | 1.93 | ±5 |
| 1860 | Simulated Tissue Liquid Head | 39.276 | 1.429 | 40.00 | 1.40 | -1.81 | 2.07 | ±5 |
| 1880 | Simulated Tissue Liquid Head | 39.195 | 1.425 | 40.00 | 1.40 | -2.01 | 1.79 | ±5 |
| 1900 | Simulated Tissue Liquid Head | 39.27 | 1.437 | 40.00 | 1.40 | -1.82 | 2.64 | ±5 |
| 1907.6 | Simulated Tissue Liquid Head | 39.121 | 1.429 | 40.00 | 1.40 | -2.2 | 2.07 | ±5 |
| 1909.8 | Simulated Tissue Liquid Head | 39.077 | 1.427 | 40.00 | 1.40 | -2.31 | 1.93 | ±5 |

**Liquid Verification above was performed on 2025/03/20.*

| Frequency (MHz) | Liquid Type | Liquid Parameter | | Target Value | | Delta (%) | | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|
| | | $\varepsilon_r$ | $\sigma$ (S/m) | $\varepsilon_r$ | $\sigma$ (S/m) | $\Delta\varepsilon_r$ | $\Delta\sigma$ (S/m) | |
| 2412 | Simulated Tissue Liquid Head | 40.514 | 1.792 | 39.28 | 1.77 | 3.14 | 1.24 | ±5 |
| 2437 | Simulated Tissue Liquid Head | 40.394 | 1.827 | 39.23 | 1.79 | 2.97 | 2.07 | ±5 |
| 2450 | Simulated Tissue Liquid Head | 40.411 | 1.847 | 39.2 | 1.8 | 3.09 | 2.61 | ±5 |
| 2462 | Simulated Tissue Liquid Head | 40.315 | 1.863 | 39.18 | 1.81 | 2.9 | 2.93 | ±5 |
| 2510 | Simulated Tissue Liquid Head | 40.156 | 1.908 | 39.12 | 1.86 | 2.65 | 2.58 | ±5 |
| 2535 | Simulated Tissue Liquid Head | 40.028 | 1.917 | 39.09 | 1.89 | 2.4 | 1.43 | ±5 |

**Liquid Verification above was performed on 2025/03/21.*

| Frequency (MHz) | Liquid Type | Liquid Parameter | | Target Value | | Delta (%) | | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|
| | | $\varepsilon_r$ | $\sigma$ (S/m) | $\varepsilon_r$ | $\sigma$ (S/m) | $\Delta\varepsilon_r$ | $\Delta\sigma$ (S/m) | |
| 2560 | Simulated Tissue Liquid Head | 40.158 | 1.999 | 39.05 | 1.92 | 2.84 | 4.11 | ±5 |
| 2580 | Simulated Tissue Liquid Head | 40.005 | 1.996 | 39.03 | 1.94 | 2.5 | 2.89 | ±5 |
| 2595 | Simulated Tissue Liquid Head | 40.049 | 2.021 | 39.01 | 1.95 | 2.66 | 3.64 | ±5 |
| 2600 | Simulated Tissue Liquid Head | 40.036 | 2.025 | 39 | 1.96 | 2.66 | 3.32 | ±5 |
| 2610 | Simulated Tissue Liquid Head | 40.041 | 2.048 | 38.99 | 1.97 | 2.7 | 3.96 | ±5 |

**Liquid Verification above was performed on 2025/03/21.*

| Frequency (MHz) | Liquid Type | Liquid Parameter | | Target Value | | Delta (%) | | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|
| | | $\varepsilon_r$ | $\sigma$ (S/m) | $\varepsilon_r$ | $\sigma$ (S/m) | $\Delta\varepsilon_r$ | $\Delta\sigma$ (S/m) | |
| 5210 | Simulated Tissue Liquid Head | 36.815 | 4.898 | 35.99 | 4.67 | 2.29 | 4.88 | ±5 |
| 5250 | Simulated Tissue Liquid Head | 36.672 | 4.934 | 35.95 | 4.71 | 2.01 | 4.76 | ±5 |
| 5280 | Simulated Tissue Liquid Head | 36.433 | 4.976 | 35.92 | 4.74 | 1.43 | 4.98 | ±5 |
| 5320 | Simulated Tissue Liquid Head | 36.184 | 4.992 | 35.88 | 4.78 | 0.85 | 4.44 | ±5 |

**Liquid Verification above was performed on 2025/02/24.*

| Frequency (MHz) | Liquid Type | Liquid Parameter | | Target Value | | Delta (%) | | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|
| | | $\varepsilon_r$ | $\sigma$ (S/m) | $\varepsilon_r$ | $\sigma$ (S/m) | $\Delta\varepsilon_r$ | $\Delta\sigma$ (S/m) | |
| 5530 | Simulated Tissue Liquid Head | 36.847 | 4.752 | 35.61 | 5 | 3.47 | -4.96 | ±5 |
| 5600 | Simulated Tissue Liquid Head | 36.523 | 4.869 | 35.5 | 5.07 | 2.88 | -3.96 | ±5 |
| 5610 | Simulated Tissue Liquid Head | 36.507 | 4.885 | 35.49 | 5.08 | 2.87 | -3.84 | ±5 |
| 5690 | Simulated Tissue Liquid Head | 36.459 | 4.919 | 35.41 | 5.16 | 2.96 | -4.67 | ±5 |

**Liquid Verification above was performed on 2025/02/24.*

| Frequency (MHz) | Liquid Type | Liquid Parameter | | Target Value | | Delta (%) | | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|
| | | $\varepsilon_r$ | $\sigma$ (S/m) | $\varepsilon_r$ | $\sigma$ (S/m) | $\Delta\varepsilon_r$ | $\Delta\sigma$ (S/m) | |
| 5745 | Simulated Tissue Liquid Head | 36.623 | 5.136 | 35.36 | 5.22 | 3.57 | -1.61 | ±5 |
| 5750 | Simulated Tissue Liquid Head | 36.476 | 5.298 | 35.35 | 5.22 | 3.19 | 1.49 | ±5 |
| 5785 | Simulated Tissue Liquid Head | 36.429 | 5.367 | 35.32 | 5.26 | 3.14 | 2.03 | ±5 |
| 5825 | Simulated Tissue Liquid Head | 36.317 | 5.485 | 35.28 | 5.3 | 2.94 | 3.49 | ±5 |

**Liquid Verification above was performed on 2025/02/24.*

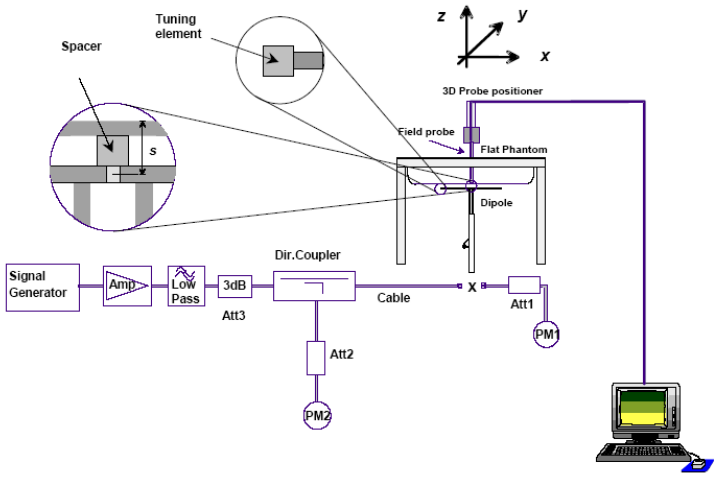
## 5.3 System Accuracy Verification

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of ±10%. The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

The spacing distances in the **System Verification Setup Block Diagram** is given by the following:

a) s = 15 mm ± 0,2 mm for 300 MHz ≤ f ≤ 1 000 MHz;
b) s = 10 mm ± 0,2 mm for 1 000 MHz < f ≤ 3 000 MHz;
c) s = 10 mm ± 0,2 mm for 3 000 MHz < f ≤ 6 000 MHz.

**System Verification Setup Block Diagram**




## 5.4 System Accuracy Check Results

| Date | Frequency Band (MHz) | Liquid Type | Input Power (mW) | Measured SAR (W/kg) | | Normalized to 1W (W/kg) | Target Value (W/Kg) | Delta (%) | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|---|
| 2025/03/20 | 750 | Simulated Tissue Liquid Head | 100 | 1g | 0.806 | 8.06 | 8.48 | -4.95 | ±10 |
| 2025/03/21 | 1750 | Simulated Tissue Liquid Head | 100 | 1g | 3.48 | 34.8 | 36.1 | -3.6 | ±10 |
| 2025/03/20 | 1900 | Simulated Tissue Liquid Head | 100 | 1g | 4.26 | 42.6 | 40.2 | 5.97 | ±10 |
| 2025/03/21 | 2450 | Simulated Tissue Liquid Head | 100 | 1g | 5.04 | 50.4 | 52.7 | -4.36 | ±10 |
| 2025/03/21 | 2600 | Simulated Tissue Liquid Head | 100 | 1g | 5.23 | 52.3 | 55.8 | -6.27 | ±10 |
| 2025/02/24 | 5250 | Simulated Tissue Liquid Head | 100 | 1g | 7.82 | 78.2 | 77.5 | 0.9 | ±10 |
| 2025/02/24 | 5600 | Simulated Tissue Liquid Head | 100 | 1g | 8.65 | 86.5 | 80.7 | 7.19 | ±10 |
| 2025/02/24 | 5750 | Simulated Tissue Liquid Head | 100 | 1g | 7.37 | 73.7 | 78.4 | -5.99 | ±10 |

| Date | Frequency Band (MHz) | Liquid Type | Input Power (mW) | Measured SAR (W/kg) | | Normalized to 1W (W/kg) | Target Value (W/Kg) | Delta (%) | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|---|
| 2025/03/20 | 750 | Simulated Tissue Liquid Head | 100 | 10g | 0.537 | 5.37 | 5.63 | -4.62 | ±10 |
| 2025/03/21 | 1750 | Simulated Tissue Liquid Head | 100 | 10g | 1.77 | 17.7 | 19.4 | -8.76 | ±10 |
| 2025/03/20 | 1900 | Simulated Tissue Liquid Head | 100 | 10g | 2.27 | 22.7 | 20.9 | 8.61 | ±10 |
| 2025/03/21 | 2450 | Simulated Tissue Liquid Head | 100 | 10g | 2.56 | 25.6 | 24.8 | 3.23 | ±10 |
| 2025/03/21 | 2600 | Simulated Tissue Liquid Head | 100 | 10g | 2.31 | 23.1 | 25.4 | -9.06 | ±10 |
| 2025/02/24 | 5250 | Simulated Tissue Liquid Head | 100 | 10g | 2.28 | 22.8 | 22 | 3.64 | ±10 |

| Date | Frequency Band (MHz) | Liquid Type | Input Power (mW) | Measured SAR (W/kg) | | Normalized to 1W (W/kg) | Target Value (W/Kg) | Delta (%) | Tolerance (%) |
|---|---|---|---|---|---|---|---|---|---|
| 2025/02/24 | 5600 | Simulated Tissue Liquid Head | 100 | 10g | 2.11 | 21.1 | 22.8 | -7.46 | ±10 |
| 2025/02/24 | 5750 | Simulated Tissue Liquid Head | 100 | 10g | 2.15 | 21.5 | 22 | -2.27 | ±10 |

**Note:**
All the SAR values are normalized to 1Watt forward power.

## 5.5 SAR SYSTEM VALIDATION DATA

**System Performance 750 MHz Head**

**DUT: D750V3; Type: 750 MHz; Serial: 1167**

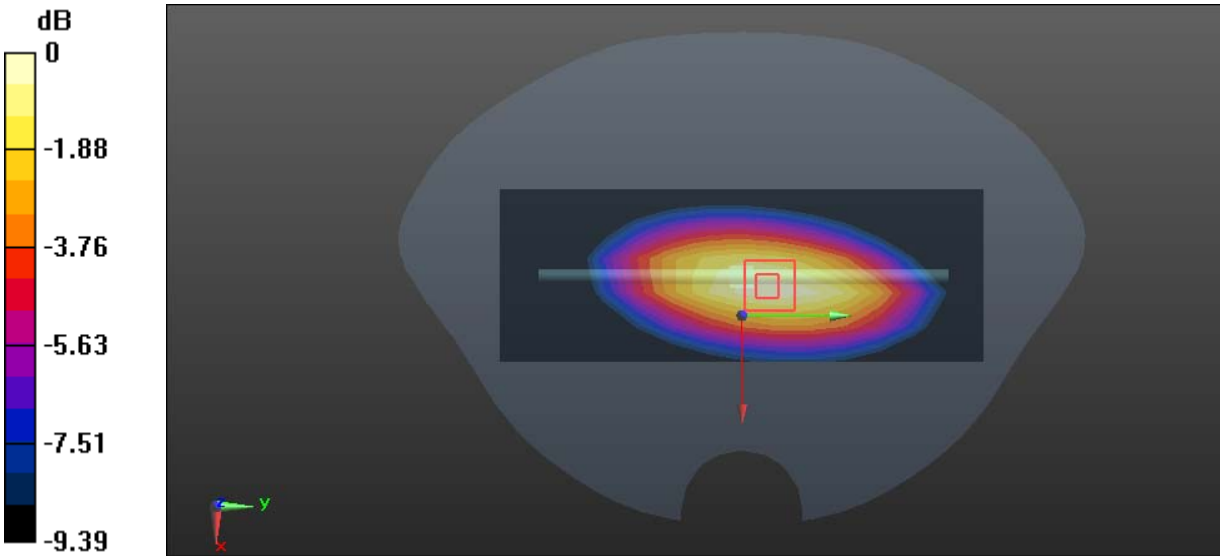
Communication System: CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; $\sigma$ = 0.902 S/m; $\varepsilon_r$ =42.858; $\rho$ = 1000 kg/$m^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3220; ConvF(6.68, 6.68, 6.68) @750 MHz; Calibrated: 2024/10/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn772; Calibrated: 2025/2/17
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

**Area Scan(6x15x1):**Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.858 W/kg

**Zoom Scan (5x5x7)/Cube 0:**Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value =31.61 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.14 W/kg
**SAR(1 g) = 0.806 W/kg; SAR(10 g) = 0.537 W/kg**
Maximum value of SAR (measured) = 0.902 W/kg




0 dB = 0.902 W/kg = -0.45 dBW/kg

**System Performance 1750 MHz Head**

**DUT: D1750V2; Type: 1750 MHz; Serial: 1141**

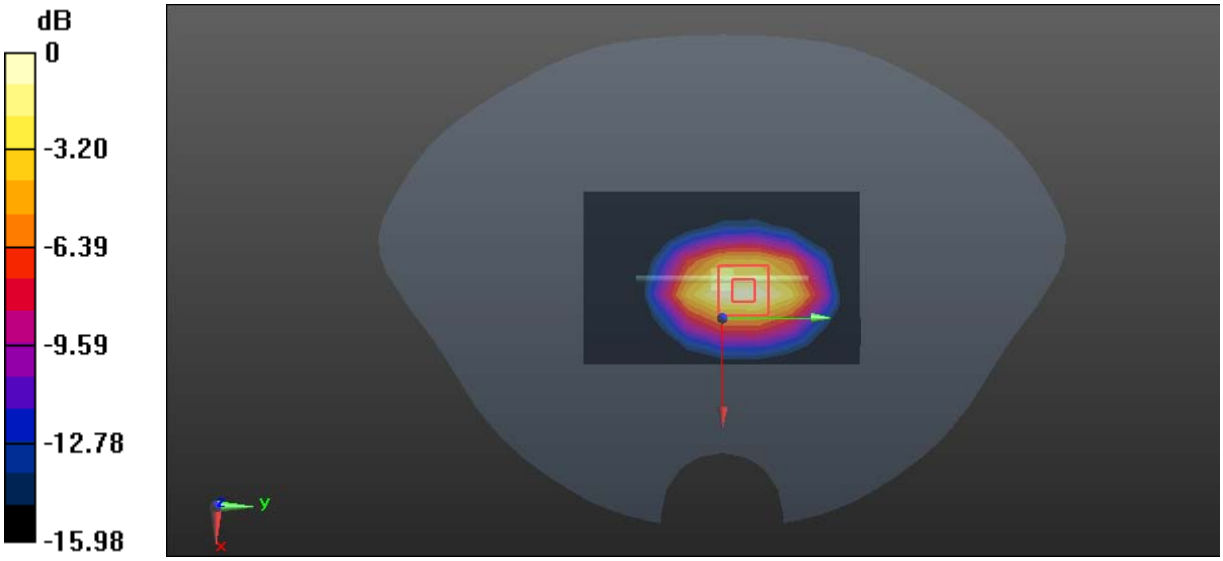
Communication System: CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; $\sigma$ = 1.377 S/m; $\varepsilon_r$ =39.175; $\rho$ = 1000 kg/m$^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3220; ConvF(5.53, 5.53, 5.53) @1750 MHz; Calibrated: 2024/10/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn772; Calibrated: 2025/2/17
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

**Area Scan(6x9x1):**Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.69 W/kg

**Zoom Scan (5x5x7)/Cube 0:**Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value =44.28 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 5.06 W/kg
**SAR(1 g) = 3.48 W/kg; SAR(10 g) = 1.77 W/kg**
Maximum value of SAR (measured) = 3.93 W/kg




0 dB = 3.93 W/kg = 5.94 dBW/kg

**System Performance 1900 MHz Head**

**DUT: D1900V2; Type: 1900 MHz; Serial: 543**

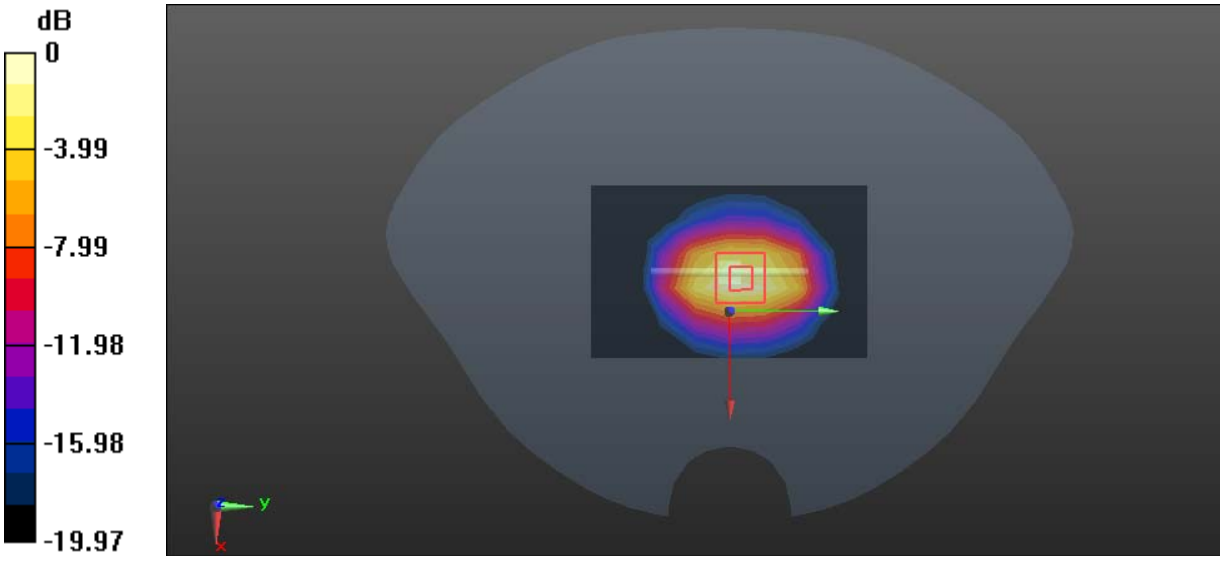
Communication System: CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; $\sigma$ = 1.437 S/m; $\varepsilon_r$ =39.27; $\rho$ = 1000 kg/$m^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3220; ConvF(5.24, 5.24, 5.24) @1900 MHz; Calibrated: 2024/10/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn772; Calibrated: 2025/2/17
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

**Area Scan(6x9x1):**Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.51 W/kg

**Zoom Scan (5x5x7)/Cube 0:**Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value =54.83 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 8.39 W/kg
**SAR(1 g) = 4.26 W/kg; SAR(10 g) = 2.27 W/kg**
Maximum value of SAR (measured) = 5.47 W/kg




0 dB = 5.47 W/kg = 7.38 dBW/kg

**System Performance 2450 MHz Head**

**DUT: D2450V2; Type: 2450 MHz; Serial: 971**

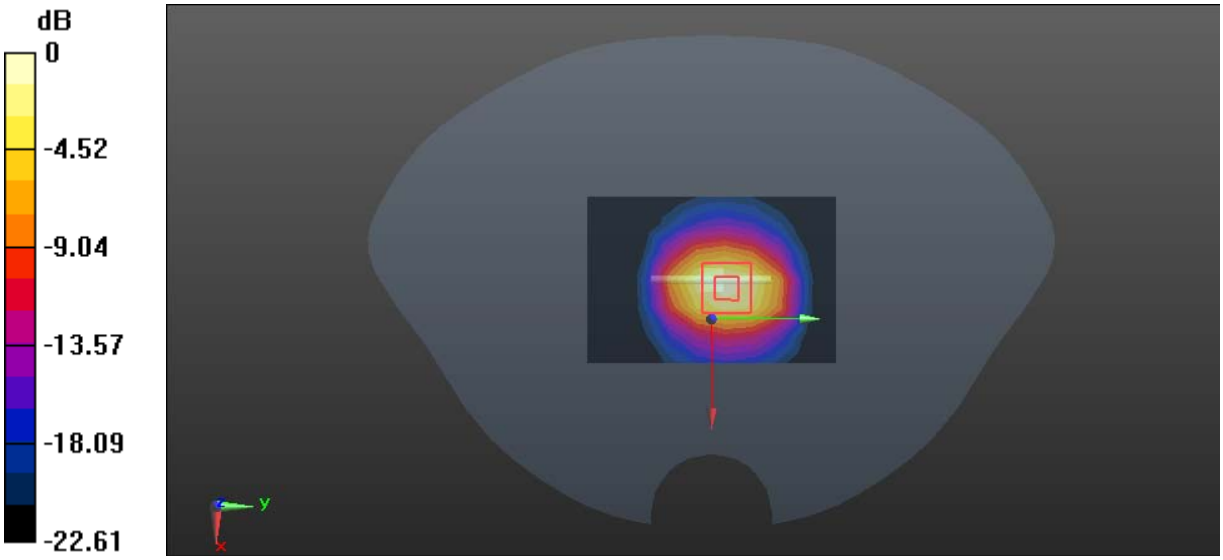
Communication System: CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; $\sigma$ = 1.847 S/m; $\varepsilon_r$ =40.411; $\rho$ = 1000 kg/m$^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3220; ConvF(4.83, 4.83, 4.83) @2450 MHz; Calibrated: 2024/10/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn772; Calibrated: 2025/2/17
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

**Area Scan(7x10x1):**Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 6.25 W/kg

**Zoom Scan (7x7x7)/Cube 0:**Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value =64.81 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 9.57 W/kg
**SAR(1 g) = 5.04 W/kg; SAR(10 g) = 2.56 W/kg**
Maximum value of SAR (measured) = 6.34 W/kg




0 dB = 6.34 W/kg = 8.02 dBW/kg

**System Performance 2600 MHz Head**

**DUT: D2600V2; Type: 2600 MHz; Serial: 1132**

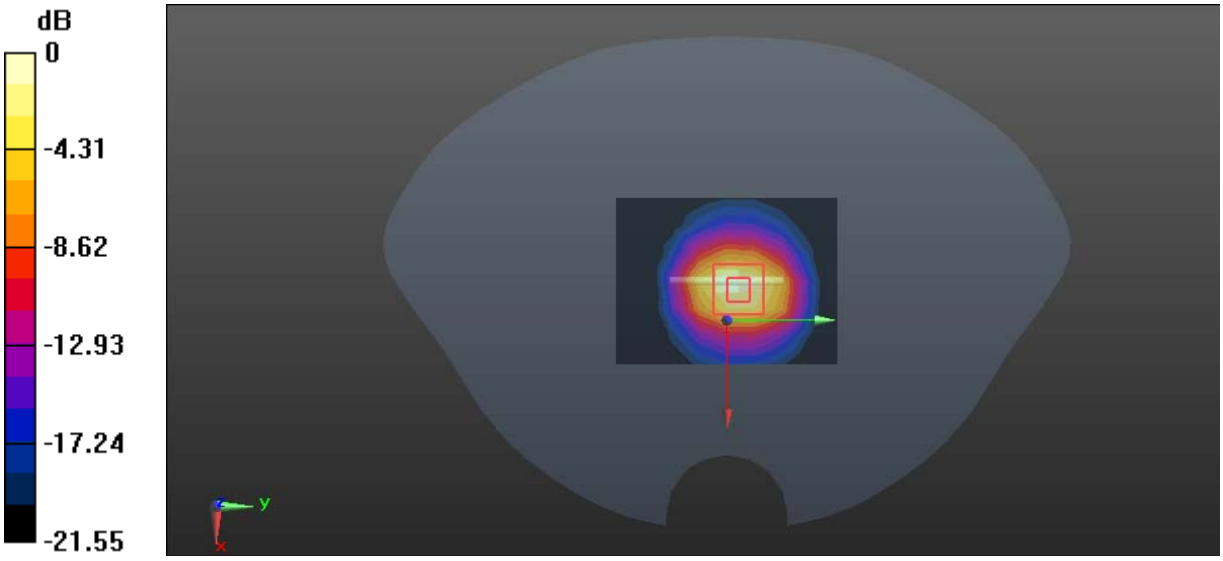
Communication System: CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; $\sigma$ = 2.025 S/m; $\varepsilon_r$ =40.036; $\rho$ = 1000 kg/m$^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe:ES3DV3 - SN3220; ConvF(4.66, 4.66, 4.66) @2600 MHz; Calibrated: 2024/10/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn772; Calibrated: 2025/2/17
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

**Area Scan(7x9x1):**Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 6.34 W/kg

**Zoom Scan (7x7x7)/Cube 0:**Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value =53.86 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 11.2 W/kg
**SAR(1 g) = 5.23 W/kg; SAR(10 g) = 2.31 W/kg**
Maximum value of SAR (measured) = 6.55 W/kg




0 dB = 6.55 W/kg = 8.16 dBW/kg

**System Performance 5250 MHz Head**

**DUT: D5GHzV2; Type: 5250 MHz; Serial: 1246**

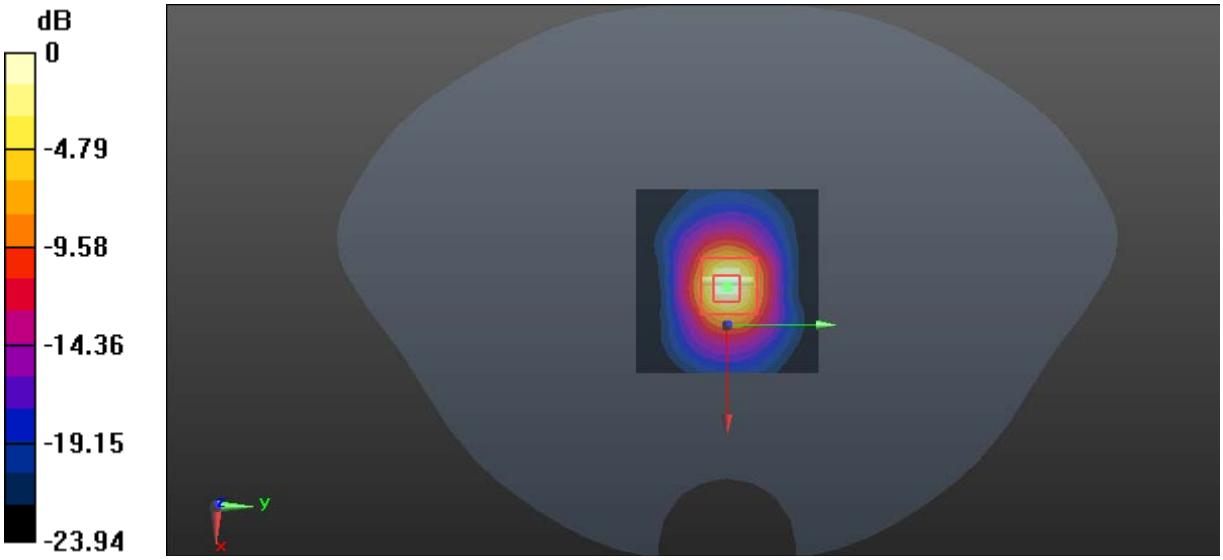
Communication System: CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; $\sigma$ = 4.934 S/m; $\varepsilon_r$ =36.672; $\rho$ = 1000 kg/$m^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe:EX3DV4 - SN7441; ConvF(5.43, 5.43, 5.43) @5250 MHz; Calibrated: 2024/3/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn772; Calibrated: 2025/2/17
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

**Area Scan(9x10x1):**Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.6 W/kg

**Zoom Scan (7x7x12)/Cube 0:**Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value =47.92 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 32.1 W/kg
**SAR(1 g) = 7.82 W/kg; SAR(10 g) = 2.28 W/kg**
Maximum value of SAR (measured) = 16.2 W/kg




0 dB = 16.2 W/kg = 12.10 dBW/kg

**System Performance 5600 MHz Head**

**DUT: D5GHzV2; Type: 5600 MHz; Serial: 1246**

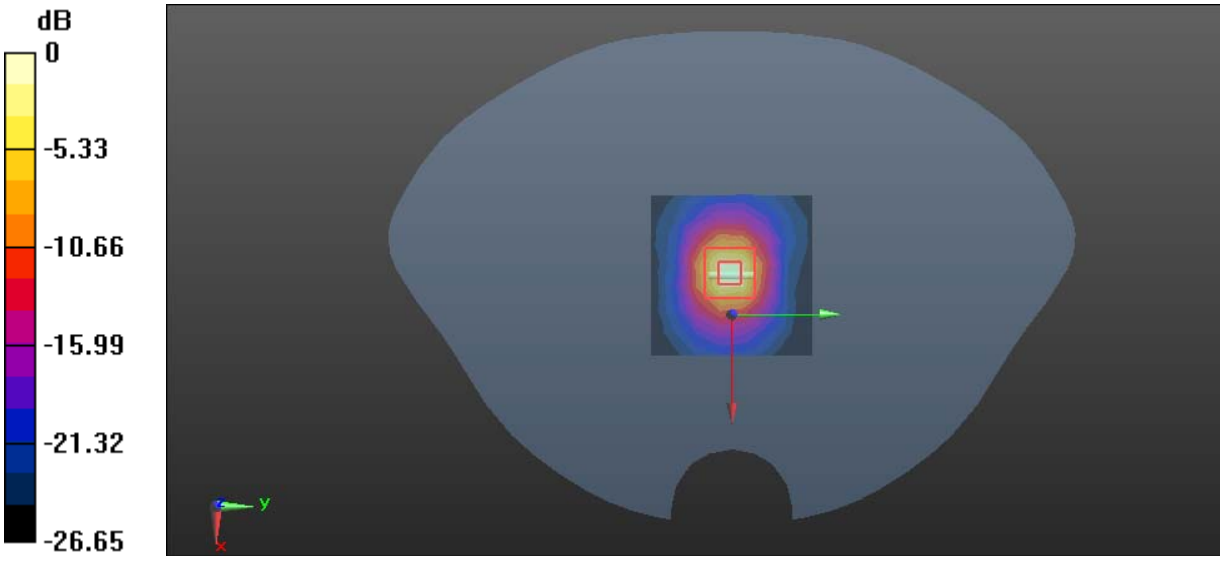
Communication System: CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; $\sigma$ = 4.869 S/m; $\varepsilon_r$ =36.523; $\rho$ = 1000 kg/m$^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe:EX3DV4 - SN7441; ConvF(4.71, 4.71, 4.71) @5600 MHz; Calibrated: 2024/3/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn772; Calibrated: 2025/2/17
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

**Area Scan(8x8x1):**Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 17.4 W/kg

**Zoom Scan (8x8x15)/Cube 0:**Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value =43.82 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 33.7 W/kg
**SAR(1 g) = 8.65 W/kg; SAR(10 g) = 2.11 W/kg**
Maximum value of SAR (measured) = 19.2 W/kg




0 dB = 19.2 W/kg = 12.83 dBW/kg

**System Performance 5750 MHz Head**

**DUT: D5GHzV2; Type: 5750 MHz; Serial: 1246**

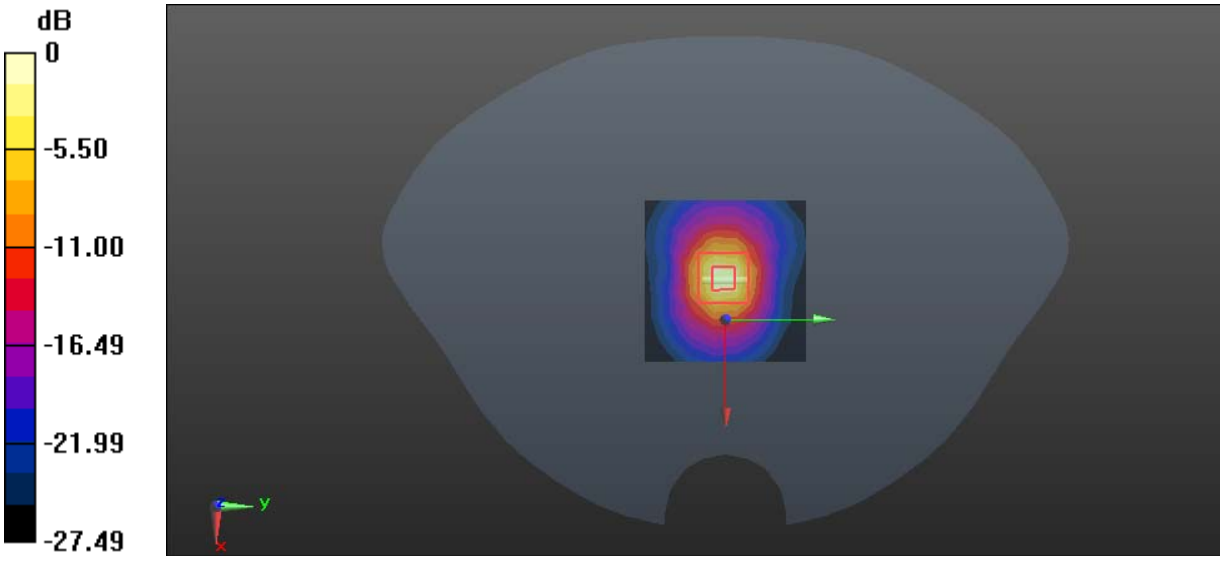
Communication System: CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; $\sigma$ = 5.298 S/m; $\varepsilon_r$ =36.476; $\rho$ = 1000 kg/m$^3$;
Phantom section: Flat Section

DASY5 Configuration:

- Probe:EX3DV4 - SN7441; ConvF(4.84, 4.84, 4.84) @5750 MHz; Calibrated: 2024/3/4
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn772; Calibrated: 2025/2/17
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

**Area Scan(8x8x1):**Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 17.1 W/kg

**Zoom Scan (8x8x15)/Cube 0:**Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value =44.65 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 31.2 W/kg
**SAR(1 g) = 7.37 W/kg; SAR(10 g) = 2.15 W/kg**
Maximum value of SAR (measured) = 17.6 W/kg




0 dB = 17.6 W/kg = 12.46 dBW/kg

# 6. EUT TEST STRATEGY AND METHODOLOGY

## 6.1Test positions for body-worn and other configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.

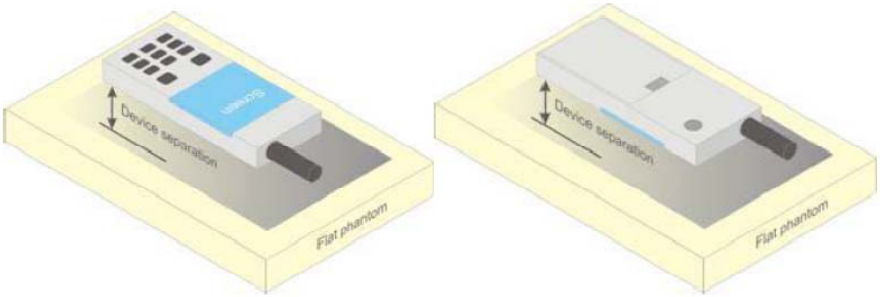



Figure 5 – Test positions for body-worn devices

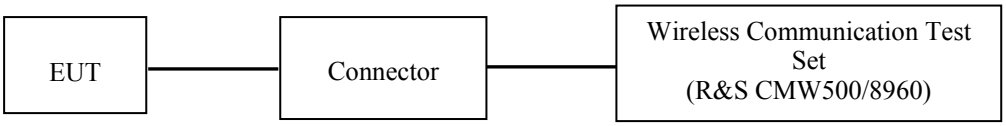
## 6.2Test Distance for SAR Evaluation

For Body mode(1g Body SAR) the EUT(Equipment Under Test) is set 5mm away from the phantom, the test distance is 5mm;
For Limb mode(10g Extremity SAR) the EUT is set 0mm away from the phantom, the test distance is 0mm.

# 7. CONDUCTED OUTPUT POWER MEASUREMENT

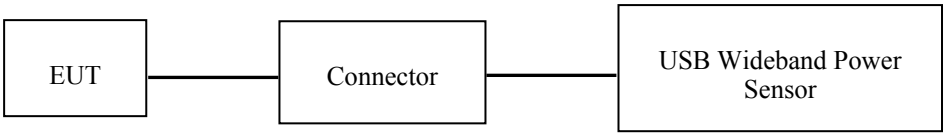
## 7.1 Test Procedure

The RF output of the transmitter was connected to the input of the Wireless Communication Test Set through Connector.




**GSM/WCDMA/LTE**

The RF output of the transmitter was connected to the input port of the USB Wideband Power Sensor through Connector.




**WLAN/BT**

## 7.2 Radio Configuration

The power measurement was configured by the Wireless Communication Test Set.

**GPRS/EGPRS**

Function: Menu select > GSM Mobile Station > GSM 850/1900
Press Connection control to choose the different menus
Press RESET > choose all the reset all settings
Connection Press Signal Off to turn off the signal and change settings
Network Support > GSM + GPRS or GSM + EGSM
Main Service > Packet Data
Service selection > Test Mode A – Auto Slot Config. off
MS Signal Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting
> Slot configuration > Uplink/Gamma
> 33 dBm for GPRS 850
> 30 dBm for GPRS 1900
> 27 dBm for EGPRS 850
> 26 dBm for EGPRS 1900
BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel
Frequency Offset > + 0 Hz
Mode > BCCH and TCH
BCCH Level > -85 dBm (May need to adjust if link is not stabe)
BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]

Channel Type > Off
P0 > 4 dB
Slot Config >Unchanged (if already set under MS signal)
TCH > choose desired test channel
Hopping > Off

Main Timeslot > 3
Network Coding Scheme > CS4 (GPRS) and MCS5 (EGPRS)
Bit Stream >2E9-1 PSR Bit Stream
AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
Connection Press Signal on to turn on the signal and change settings

**WCDMA Release 99**

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP
TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

| | | |
|---|---|---|
| **WCDMA General Settings** | Loopback Mode | Test Mode 1 |
| | Rel99 RMC | 12.2kbps RMC |
| | Power Control Algorithm | Algorithm2 |
| | $\beta_c/\beta_d$ | 8/15 |

**HSDPA**

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP
TS34.121-1 specification.

| | Mode | HSDPA | HSDPA | HSDPA | HSDPA |
|---|---|---|---|---|---|
| | Subset | 1 | 2 | 3 | 4 |
| WCDMA General Settings | Loopback Mode | Test Mode 1 | | | |
| | Rel99 RMC | 12.2kbps RMC | | | |
| | HSDPA FRC | H-Set1 | | | |
| | Power Control Algorithm | Algorithm2 | | | |
| | $\beta_c$ | 2/15 | 12/15 | 15/15 | 15/15 |
| | $\beta_d$ | 15/15 | 15/15 | 8/15 | 4/15 |
| | $\beta_d$(SF) | 64 | | | |
| | $\beta_c/\beta_d$ | 2/15 | 12/15 | 15/8 | 15/4 |
| | $\beta_{hs}$ | 4/15 | 24/15 | 30/15 | 30/15 |
| | MPR(dB) | 0 | 0 | 0.5 | 0.5 |
| HSDPA Specific Settings | DACK | 8 | | | |
| | DNAK | 8 | | | |
| | DCQI | 8 | | | |
| | Ack-Nack repetition factor | 3 | | | |
| | CQI Feedback | 4ms | | | |
| | CQI Repetition Factor | 2 | | | |
| | Ahs=βhs/ βc | 30/15 | | | |

**HSUPA**

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP
TS34.121-1 specification.

| | Mode | HSUPA | HSUPA | HSUPA | HSUPA | HSUPA |
|---|---|---|---|---|---|---|
| | **Subset** | **1** | **2** | **3** | **4** | **5** |
| **WCDMA General Settings** | Loopback Mode | Test Mode 1 | | | | |
| | Rel99 RMC | 12.2kbps RMC | | | | |
| | HSDPA FRC | H-Set1 | | | | |
| | HSUPA Test | HSUPA Loopback | | | | |
| | Power Control Algorithm | Algorithm2 | | | | |
| | $\beta_c$ | 11/15 | 6/15 | 15/15 | 2/15 | 15/15 |
| | $\beta_d$ | 15/15 | 15/15 | 9/15 | 15/15 | 0 |
| | $\beta_{ec}$ | 209/225 | 12/15 | 30/15 | 2/15 | 5/15 |
| | $\beta_c/\beta_d$ | 11/15 | 6/15 | 15/9 | 2/15 | - |
| | $\beta_{hs}$ | 22/15 | 12/15 | 30/15 | 4/15 | 5/15 |
| | CM(dB) | 1.0 | 3.0 | 2.0 | 3.0 | 1.0 |
| | MPR(dB) | 0 | 2 | 1 | 2 | 0 |
| **HSDPA Specific Settings** | DACK | 8 | | | | |
| | DNAK | 8 | | | | |
| | DCQI | 8 | | | | |
| | Ack-Nack repetition factor | 3 | | | | |
| | CQI Feedback | 4ms | | | | |
| | CQI Repetition Factor | 2 | | | | |
| | Ahs=$\beta_{hs}/\beta_c$ | 30/15 | | | | |
| **HSUPA Specific Settings** | DE-DPCCH | 6 | 8 | 8 | 5 | 7 |
| | DHARQ | 0 | 0 | 0 | 0 | 0 |
| | AG Index | 20 | 12 | 15 | 17 | 21 |
| | ETFCI | 75 | 67 | 92 | 71 | 81 |
| | Associated Max UL Data Rate kbps | 242.1 | 174.9 | 482.8 | 205.8 | 308.9 |
| | Reference E_FCIs | E-TFCI 11 E<br>E-TFCI PO 4<br>E-TFCI 67<br>E-TFCI PO 18<br>E-TFCI 71<br>E-TFCI PO23<br>E-TFCI 75<br>E-TFCI PO26<br>E-TFCI 81<br>E-TFCI PO 27 | | E-TFCI 11<br>E-TFCI PO4<br>E-TFCI 92<br>E-TFCI PO 18 | E-TFCI 11 E<br>E-TFCI PO 4<br>E-TFCI 67<br>E-TFCI PO 18<br>E-TFCI 71<br>E-TFCI PO23<br>E-TFCI 75<br>E-TFCI PO26<br>E-TFCI 81<br>E-TFCI PO 27 | |

**HSPA+**

| Sub-test | $\beta_c$ (Note3) | $\beta_d$ | $\beta_{HS}$ (Note1) | $\beta_{ec}$ | $\beta_{ed}$ (2xSF2) (Note 4) | $\beta_{ed}$ (2xSF4) (Note 4) | CM (dB) (Note 2) | MPR (dB) (Note 2) | AG Index (Note 4) | E-TFCI (Note 5) | E-TFCI (boost) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 30/15 | 30/15 | $\beta_{ed}$1: 30/15<br>$\beta_{ed}$2: 30/15 | $\beta_{ed}$3: 24/15<br>$\beta_{ed}$4: 24/15 | 3.5 | 2.5 | 14 | 105 | 105 |

Note 1: $\Delta_{ACK}$, $\Delta_{NACK}$ and $\Delta_{CQI}$ = 30/15 with $\beta_{hs}$ = 30/15 * $\beta_c$.

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).

Note 3: DPDCH is not configured, therefore the $\beta_c$ is set to 1 and $\beta_d$ = 0 by default.

Note 4: $\beta_{ed}$ can not be set directly; it is set by Absolute Grant Value.

Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

The following tests were conducted according to the test requirements in Table C.11.1.4 of 3GPP TS 34.121-1

**FDD-LTE**

For UE Power Class 1 and 3, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2-1due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1.

**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1 and 3**

| Modulation | Channel bandwidth / Transmission bandwidth ($N_{RB}$) | | | | | | MPR (dB) |
|---|---|---|---|---|---|---|---|
| | 1.4 MHz | 3.0 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz | |
| QPSK | > 5 | > 4 | > 8 | > 12 | > 16 | > 18 | ≤ 1 |
| 16 QAM | ≤ 5 | ≤ 4 | ≤ 8 | ≤ 12 | ≤ 16 | ≤ 18 | ≤ 1 |
| 16 QAM | > 5 | > 4 | > 8 | > 12 | > 16 | > 18 | ≤ 2 |

For UE Power Class 1 and 3 the specific requirements and identified sub clauses are specified in Table 6.2.4-1 along with the allowed A-MPR values that may be used to meet these requirements. The allowed A-MPR values specified below in Table 6.2.4.-1 to 6.2.4-15 are in addition to the allowed MPR requirements specified in sub clause 6.2.3.

**Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)**

| Network Signalling value | Requirements (subclause) | E-UTRA Band | Channel bandwidth (MHz) | Resources Blocks ($N_{RB}$) | A-MPR (dB) |
|---|---|---|---|---|---|
| NS_01 | 6.6.2.1.1 | Table 5.5-1 | 1.4, 3, 5, 10, 15, 20 | Table 5.6-1 | N/A |
| NS_03 | 6.6.2.2.1 | 2, 4,10, 23, 25, 35, 36 | 3 | >5 | ≤ 1 |
| | | | 5 | >6 | ≤ 1 |
| | | | 10 | >6 | ≤ 1 |
| | | | 15 | >8 | ≤ 1 |
| | | | 20 | >10 | ≤ 1 |
| NS_04 | 6.6.2.2.2 | 41 | 5 | >6 | ≤ 1 |
| | | | 10, 15, 20 | Table 6.2.4-4 | |
| NS_05 | 6.6.3.3.1 | 1 | 10,15,20 | ≥ 50 | ≤ 1 |
| NS_06 | 6.6.2.2.3 | 12, 13, 14, 17 | 1.4, 3, 5, 10 | Table 5.6-1 | N/A |
| NS_07 | 6.6.2.2.3 6.6.3.3.2 | 13 | 10 | Table 6.2.4-2 | |
| NS_08 | 6.6.3.3.3 | 19 | 10, 15 | > 44 | ≤ 3 |
| NS_09 | 6.6.3.3.4 | 21 | 10, 15 | > 40 | ≤ 1 |
| | | | | > 55 | ≤ 2 |
| NS_10 | | 20 | 15, 20 | Table 6.2.4-3 | |
| NS_11 | 6.6.2.2.1 | 23 | 1.4, 3, 5, 10, 15, 20 | Table 6.2.4-5 | |
| NS_12 | 6.6.3.3.5 | 26 | 1.4, 3, 5 | Table 6.2.4-6 | |
| NS_13 | 6.6.3.3.6 | 26 | 5 | Table 6.2.4-7 | |
| NS_14 | 6.6.3.3.7 | 26 | 10, 15 | Table 6.2.4-8 | |
| NS_15 | 6.6.3.3.8 | 26 | 1.4, 3, 5, 10, 15 | Table 6.2.4-9 Table 6.2.4-10 | |
| NS_16 | 6.6.3.3.9 | 27 | 3, 5, 10 | Table 6.2.4-11, Table 6.2.4-12, Table 6.2.4-13 | |
| NS_17 | 6.6.3.3.10 | 28 | 5, 10 | Table 5.6-1 | N/A |
| NS_18 | 6.6.3.3.11 | 28 | 5 | ≥ 2 | ≤ 1 |
| | | | 10, 15, 20 | ≥ 1 | ≤ 4 |
| NS_19 | 6.6.3.3.12 | 44 | 10, 15, 20 | Table 6.2.4-14 | |
| NS_20 | 6.2.2 6.6.2.2.1 6.6.3.2 | 23 | 5, 10, 15, 20 | Table 6.2.4-15 | |
| ... | | | | | |
| NS_32 | - | - | - | - | - |

## TDD-LTE

LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

| Special subframe configuration | Normal cyclic prefix in downlink | | | Extended cyclic prefix in downlink | | |
|---|---|---|---|---|---|---|
| | DwPTS | UpPTS | | DwPTS | UpPTS | |
| | | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink | | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |
| 0 | $6592 \cdot T_s$ | $2192 \cdot T_s$ | $2560 \cdot T_s$ | $7680 \cdot T_s$ | $2192 \cdot T_s$ | $2560 \cdot T_s$ |
| 1 | $19760 \cdot T_s$ | | | $20480 \cdot T_s$ | | |
| 2 | $21952 \cdot T_s$ | | | $23040 \cdot T_s$ | | |
| 3 | $24144 \cdot T_s$ | | | $25600 \cdot T_s$ | | |
| 4 | $26336 \cdot T_s$ | | | $7680 \cdot T_s$ | $4384 \cdot T_s$ | $5120 \cdot T_s$ |
| 5 | $6592 \cdot T_s$ | $4384 \cdot T_s$ | $5120 \cdot T_s$ | $20480 \cdot T_s$ | | |
| 6 | $19760 \cdot T_s$ | | | $23040 \cdot T_s$ | | |
| 7 | $21952 \cdot T_s$ | | | $12800 \cdot T_s$ | | |
| 8 | $24144 \cdot T_s$ | | | - | - | - |
| 9 | $13168 \cdot T_s$ | | | - | - | - |

Table 4.2-2: Uplink-downlink configurations.

| Uplink-downlink configuration | Downlink-to-Uplink Switch-point periodicity | Subframe number | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0 | 5 ms | D | S | U | U | U | D | S | U | U | U |
| 1 | 5 ms | D | S | U | U | D | D | S | U | U | D |
| 2 | 5 ms | D | S | U | D | D | D | S | U | D | D |
| 3 | 10 ms | D | S | U | U | U | D | D | D | D | D |
| 4 | 10 ms | D | S | U | U | D | D | D | D | D | D |
| 5 | 10 ms | D | S | U | D | D | D | D | D | D | D |
| 6 | 5 ms | D | S | U | U | U | D | S | U | U | D |

**Calculated Duty Cycle**

| Uplink-Downlink Configuration | Downlink-to-Uplink Switch-point Periodicity | Subframe Number | | | | | | | | | | Calculated Duty Cycle (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 0 | 5 ms | D | S | U | U | U | D | S | U | U | U | 63.33 |
| 1 | 5 ms | D | S | U | U | D | D | S | U | U | D | 43.33 |
| 2 | 5 ms | D | S | U | D | D | D | S | U | D | D | 23.33 |
| 3 | 10 ms | D | S | U | U | U | D | D | D | D | D | 31.67 |
| 4 | 10 ms | D | S | U | U | D | D | D | D | D | D | 21.67 |
| 5 | 10 ms | D | S | U | D | D | D | D | D | D | D | 11.67 |
| 6 | 5 ms | D | S | U | U | U | D | S | U | U | D | 53.33 |

We used configuration 0 for LTE Band 38 SAR test, that is 63.33%(1:1.58)for duty cycle.

## 7.3 Maximum Target Output Power

| Max Target Power(dBm) | | | |
|---|---|---|---|
| Mode/Band | Channel | | |
| | Low | Middle | High |
| GPRS 850 1 TX Slot | 33 | 33 | 33 |
| GPRS 850 2 TX Slot | 32.5 | 32.5 | 32.5 |
| GPRS 850 3 TX Slot | 30.5 | 30.5 | 30.5 |
| GPRS 850 4 TX Slot | 29.5 | 29.5 | 29.5 |
| EDGE 850 1 TX Slot | 28 | 28 | 28 |
| EDGE 850 2 TX Slot | 27 | 27 | 27 |
| EDGE 850 3 TX Slot | 25 | 25 | 25 |
| EDGE 850 4 TX Slot | 24 | 24 | 24 |
| GPRS 1900 1 TX Slot | 30 | 30 | 30 |
| GPRS 1900 2 TX Slot | 29.5 | 29.5 | 29.5 |
| GPRS 1900 3 TX Slot | 27.5 | 27.5 | 27.5 |
| GPRS 1900 4 TX Slot | 26.5 | 26.5 | 26.5 |
| EDGE 1900 1 TX Slot | 26 | 26 | 26 |
| EDGE 1900 2 TX Slot | 25 | 25 | 25 |
| EDGE 1900 3 TX Slot | 23 | 23 | 23 |
| EDGE 1900 4 TX Slot | 22 | 22 | 22 |
| WCDMA Band 2 | 22.5 | 22.5 | 22.5 |
| HSDPA | 19 | 19 | 19 |
| HSUPA | 19 | 19 | 19 |
| HSPA+ | 19 | 19 | 19 |
| WCDMA Band 5 | 23.5 | 23.5 | 23.5 |
| HSDPA | 20 | 20 | 20 |
| HSUPA | 20 | 20 | 20 |
| HSPA+ | 20 | 20 | 20 |
| LTE Band 2(20M, 1RB) | 22 | 22 | 22 |
| LTE Band 2(20M, 50%&100%RB) | 21 | 21 | 21 |
| LTE Band 4(20M, 1RB) | 22.5 | 22.5 | 22.5 |
| LTE Band 4(20M, 50%&100%RB) | 21.5 | 21.5 | 21.5 |
| LTE Band 5(10M, 1RB) | 23.5 | 23.5 | 23.5 |
| LTE Band 5(10M, 50%&100%RB) | 22.5 | 22.5 | 22.5 |
| LTE Band 7(20M, 1RB) | 23 | 23 | 23 |
| LTE Band 7(20M, 50%&100%RB) | 22 | 22 | 22 |
| LTE Band 38(20M, 1RB) | 23.5 | 23.5 | 23.5 |
| LTE Band 38(20M, 50%&100%RB) | 22 | 22 | 22 |
| WLAN 2.4G(802.11b) | 11 | 11 | 11 |
| WLAN 2.4G(802.11g) | 13 | 13 | 13 |
| WLAN 2.4G(802.11n ht20) | 12 | 12 | 12 |
| WLAN 2.4G(802.11n ht40) | 9 | 9 | 9 |
| WLAN 5.2G(802.11a) | 12 | 12 | 12.5 |
| WLAN 5.2G(802.11n20) | 12 | 12 | 12.4 |
| WLAN 5.2G(802.11n40) | 12 | / | 12 |
| WLAN 5.2G(802.11ac80) | / | 13 | / |
| WLAN 5.3G(802.11a) | 12.5 | 12.5 | 12.5 |
| WLAN 5.3G(802.11n20) | 12.4 | 12.4 | 12.4 |

| Max Target Power(dBm) | | | |
|---|---|---|---|
| Mode/Band | Channel | | |
| | Low | Middle | High |
| WLAN 5.3G(802.11n40) | 12.4 | / | 12.4 |
| WLAN 5.3G(802.11ac80) | / | 12.4 | / |
| WLAN 5.6G(802.11a) | 12.5 | 12.5 | 12.5 |
| WLAN 5.6G(802.11n20) | 12 | 12 | 12 |
| WLAN 5.6G(802.11n40) | 12 | 12 | 12 |
| WLAN 5.6G(802.11ac80) | 13 | 13 | 13 |
| WLAN 5.8G(802.11a) | 12.5 | 12.5 | 12 |
| WLAN 5.8G(802.11n20) | 12.4 | 12.4 | 12.4 |
| WLAN 5.8G(802.11n40) | 12.4 | / | 12.4 |
| WLAN 5.8G(802.11ac80) | / | 12.4 | / |
| BT BDR(GFSK) | 2.5 | 2.5 | 3 |
| BT EDR(π/4-DQPSK) | 2 | 2 | 2 |
| BT EDR(8DPSK) | 2 | 2 | 2 |
| BLE 1Mbps | 0.5 | 0.5 | 0.5 |

Note: The Maximum Target Power for LTE bands corresponds to their maximum power in QPSK modes with maximum bandwidth.

## 7.4 Test Results:

**GPRS:**

| Band | Channel No. | Frequency (MHz) | RF Output Power (dBm) | | | |
|---|---|---|---|---|---|---|
| | | | 1 slot | 2 slots | 3 slots | 4 slots |
| GSM 850 | 128 | 824.2 | 32.88 | 32.14 | 30.46 | 29.32 |
| | 190 | 836.6 | 32.73 | 31.99 | 30.25 | 29.34 |
| | 251 | 848.8 | 32.64 | 31.98 | 30.18 | 29.24 |
| GSM 1900 | 512 | 1850.2 | 29.65 | 28.92 | 27.09 | 25.91 |
| | 661 | 1880 | 29.61 | 28.94 | 27.05 | 26.00 |
| | 810 | 1909.8 | 29.76 | 29.13 | 27.25 | 26.17 |

**EDGE:**

| Band | Channel No. | Frequency (MHz) | RF Output Power (dBm) | | | |
|---|---|---|---|---|---|---|
| | | | 1 slot | 2 slots | 3 slots | 4 slots |
| GSM 850 | 128 | 824.2 | 27.81 | 26.82 | 24.68 | 23.62 |
| | 190 | 836.6 | 27.55 | 26.46 | 24.33 | 23.34 |
| | 251 | 848.8 | 27.38 | 26.34 | 24.19 | 23.10 |
| GSM 1900 | 512 | 1850.2 | 25.68 | 24.48 | 22.16 | 21.05 |
| | 661 | 1880 | 25.62 | 24.28 | 22.15 | 21.06 |
| | 810 | 1909.8 | 25.75 | 24.64 | 22.52 | 21.42 |

**For SAR, the time based average power is relevant, the difference in between depends on the duty cycle of the TDMA signal.**

| Number of Time slot | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Duty Cycle | 1:8 | 1:4 | 1:2.66 | 1:2 |
| Time based Ave. power compared to slotted Ave. power | -9 dB | -6 dB | -4.25 dB | -3 dB |
| Crest Factor | 8 | 4 | 2.66 | 2 |

**The time based average power for GPRS**

| Band | Channel No. | Frequency (MHz) | RF Output Power (dBm) | | | |
|---|---|---|---|---|---|---|
| | | | 1 slot | 2 slots | 3 slots | 4 slots |
| GSM 850 | 128 | 824.2 | 23.88 | 26.14 | 26.21 | 26.32 |
| | 190 | 836.6 | 23.73 | 25.99 | 26 | **26.34** |
| | 251 | 848.8 | 23.64 | 25.98 | 25.93 | 26.24 |
| GSM 1900 | 512 | 1850.2 | 20.65 | 22.92 | 22.84 | 22.91 |
| | 661 | 1880 | 20.61 | 22.94 | 22.8 | 23 |
| | 810 | 1909.8 | 20.76 | 23.13 | 23 | **23.17** |

**The time based average power for EDGE**

| Band | Channel No. | Frequency (MHz) | RF Output Power (dBm) | | | |
|---|---|---|---|---|---|---|
| | | | 1 slot | 2 slots | 3 slots | 4 slots |
| GSM 850 | 128 | 824.2 | 18.81 | 20.82 | 20.43 | 20.62 |
| | 190 | 836.6 | 18.55 | 20.46 | 20.08 | 20.34 |
| | 251 | 848.8 | 18.38 | 20.34 | 19.94 | 20.1 |
| GSM 1900 | 512 | 1850.2 | 16.68 | 18.48 | 17.91 | 18.05 |
| | 661 | 1880 | 16.62 | 18.28 | 17.9 | 18.06 |
| | 810 | 1909.8 | 16.75 | 18.64 | 18.27 | 18.42 |

**Note:**
1. Agilent Technologies Communication Tester (8960) was used for the measurement of GSM peak and average output power for active timeslots.
2 .For GPRS, 1, 2, 3 and 4 timeslots has been activated separately with power level 3(850 MHz band) and 3(1900 MHz band).
3 .For EGPRS, 1, 2, 3 and 4 timeslots has been activated separately with power level 6(850 MHz band) and 5(1900 MHz band).
4. According to KDB941225D01-SAR for EGPRS mode are not required when the source-based time-averaged output power for data mode is lower than that in the normal GPRS mode.

**WCDMA:**

**WCDMA Band 2:**

| Test Mode | Conducted Average Output Power(dBm) | | |
|---|---|---|---|
| | Lowest Channel | Middle Channel | Highest Channel |
| WCDMA | 22.45 | 22.34 | 22.43 |
| HSDPA Subset 1 | 18.39 | 18.44 | 18.68 |
| HSDPA Subset 2 | 18.35 | 18.33 | 18.58 |
| HSDPA Subset 3 | 18.34 | 18.24 | 18.50 |
| HSDPA Subset 4 | 18.43 | 18.33 | 18.56 |
| HSUPA Subset 1 | 18.51 | 18.48 | 18.62 |
| HSUPA Subset 2 | 18.28 | 18.24 | 18.52 |
| HSUPA Subset 3 | 18.26 | 18.37 | 18.39 |
| HSUPA Subset 4 | 18.23 | 18.45 | 18.58 |
| HSUPA Subset 5 | 18.16 | 18.36 | 18.57 |
| HSPA+ | 18.35 | 18.31 | 18.66 |

**WCDMA Band 5:**

| Test Mode | Conducted Average Output Power(dBm) | | |
|---|---|---|---|
| | Lowest Channel | Middle Channel | Highest Channel |
| WCDMA | 23.33 | 23.48 | 23.45 |
| HSDPA Subset 1 | 19.54 | 19.49 | 19.41 |
| HSDPA Subset 2 | 19.59 | 19.56 | 19.57 |
| HSDPA Subset 3 | 19.43 | 19.37 | 19.58 |
| HSDPA Subset 4 | 19.45 | 19.51 | 19.54 |
| HSUPA Subset 1 | 19.50 | 19.56 | 19.37 |
| HSUPA Subset 2 | 19.47 | 19.46 | 19.42 |
| HSUPA Subset 3 | 19.45 | 19.70 | 19.56 |
| HSUPA Subset 4 | 19.55 | 19.46 | 19.45 |
| HSUPA Subset 5 | 19.52 | 19.68 | 19.59 |
| HSPA+ | 19.40 | 19.59 | 19.49 |

**Note:**
1. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in all 1.
2. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/HSPA+ when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

**LTE Band 2:**

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 1.4M | QPSK | 1@0 | 21.78 | 21.15 | 21.08 |
| | | 1@3 | **21.99** | 21.36 | 21.37 |
| | | 1@5 | 21.74 | 21.08 | 21.06 |
| | | 3@0 | 21.75 | 21.18 | 21.32 |
| | | 3@1 | 21.75 | 21.21 | 21.3 |
| | | 3@3 | 21.64 | 21.15 | 21.22 |
| | | 6@0 | 20.65 | 20.25 | 20.24 |
| | 16-QAM | 1@0 | 20.54 | 19.98 | 20.04 |
| | | 1@3 | 20.6 | 20.07 | 20.2 |
| | | 1@5 | 20.49 | 19.97 | 20.09 |
| | | 3@0 | 20.37 | 20.33 | 20.21 |
| | | 3@1 | 20.39 | 20.44 | 20.44 |
| | | 3@3 | 20.41 | 20.45 | 20.4 |
| | | 6@0 | 19.22 | 19.44 | 19.47 |
| 3M | QPSK | 1@0 | 21.56 | 21.18 | 21.3 |
| | | 1@8 | 21.17 | 21.34 | 21.47 |
| | | 1@14 | 21.11 | 21.31 | 21.33 |
| | | 8@0 | 20.23 | 20.37 | 20.2 |
| | | 8@4 | 20.17 | 20.27 | 20.27 |
| | | 8@7 | 20.18 | 20.23 | 20.31 |
| | | 15@0 | 20.26 | 20.33 | 20.16 |
| | 16-QAM | 1@0 | 20.08 | 20.31 | 20.45 |
| | | 1@8 | 19.89 | 20.17 | 20.66 |
| | | 1@14 | 19.85 | 20.12 | 20.62 |
| | | 8@0 | 19.09 | 19.38 | 19.42 |
| | | 8@4 | 19.28 | 19.38 | 19.33 |
| | | 8@7 | 19.11 | 19.33 | 19.3 |
| | | 15@0 | 19.15 | 19.28 | 19.16 |
| 5M | QPSK | 1@0 | 21.12 | 21.09 | 21.01 |
| | | 1@12 | 21.35 | 21.42 | 21.38 |
| | | 1@24 | 21.14 | 21.2 | 21.18 |
| | | 12@0 | 20.17 | 20.31 | 20.14 |
| | | 12@7 | 20.28 | 20.26 | 20.3 |
| | | 12@13 | 20.31 | 20.27 | 20.1 |
| | | 25@0 | 20.1 | 20.19 | 20.12 |
| | 16-QAM | 1@0 | 20.12 | 20.21 | 20.63 |
| | | 1@12 | 20.39 | 20.54 | 20.87 |
| | | 1@24 | 20 | 20.14 | 20.64 |
| | | 12@0 | 19.28 | 19.36 | 19.18 |
| | | 12@7 | 19.32 | 19.33 | 19.33 |
| | | 12@13 | 19.29 | 19.27 | 19.27 |
| | | 25@0 | 19.23 | 19.26 | 19.25 |

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 10M | QPSK | 1@0 | 21.19 | 21.29 | 21.49 |
| | | 1@25 | 21.23 | 21.42 | 21.53 |
| | | 1@49 | 20.98 | 21.17 | 21.3 |
| | | 25@0 | 20.28 | 20.39 | 20.32 |
| | | 25@12 | 20.29 | 20.42 | 20.18 |
| | | 25@25 | 20.18 | 20.34 | 20.24 |
| | | 50@0 | 20.21 | 20.27 | 20.31 |
| | 16-QAM | 1@0 | 19.86 | 20.15 | 20.65 |
| | | 1@25 | 20.11 | 20.45 | 20.73 |
| | | 1@49 | 19.84 | 20.2 | 20.58 |
| | | 25@0 | 19.24 | 19.42 | 19.28 |
| | | 25@12 | 19.26 | 19.31 | 19.19 |
| | | 25@25 | 19.27 | 19.33 | 19.36 |
| | | 50@0 | 19.21 | 19.24 | 19.17 |
| 15M | QPSK | 1@0 | 21.27 | 21.23 | 21.35 |
| | | 1@37 | 21.49 | 21.37 | 21.46 |
| | | 1@74 | 21.27 | 21.16 | 21.31 |
| | | 36@0 | 20.18 | 20.44 | 20.41 |
| | | 36@20 | 20.3 | 20.36 | 20.36 |
| | | 36@39 | 20.18 | 20.31 | 20.26 |
| | | 75@0 | 20.33 | 20.39 | 20.42 |
| | 16-QAM | 1@0 | 20.1 | 20.16 | 20.53 |
| | | 1@37 | 20.37 | 20.34 | 20.58 |
| | | 1@74 | 20.2 | 20.08 | 20.54 |
| | | 36@0 | 19.09 | 19.42 | 19.25 |
| | | 36@20 | 19.32 | 19.3 | 19.32 |
| | | 36@39 | 19.19 | 19.24 | 19.3 |
| | | 75@0 | 19.25 | 19.3 | 19.35 |
| 20M | QPSK | 1@0 | 20.84 | 20.99 | 21.03 |
| | | 1@49 | 21.13 | 21.44 | 21.16 |
| | | 1@99 | 20.82 | 21.05 | 20.89 |
| | | 50@0 | 20.14 | 20.33 | 20.19 |
| | | 50@24 | 20.29 | 20.37 | 20.26 |
| | | 50@50 | 20.25 | 20.37 | 20.32 |
| | | 100@0 | 20.22 | 20.25 | 20.38 |
| | 16-QAM | 1@0 | 20.27 | 20.59 | 20.3 |
| | | 1@49 | 20.54 | 20.88 | 20.6 |
| | | 1@99 | 20.25 | 20.59 | 20.23 |
| | | 50@0 | 19.18 | 19.24 | 19.38 |
| | | 50@24 | 19.1 | 19.27 | 19.19 |
| | | 50@50 | 19.23 | 19.23 | 19.31 |
| | | 100@0 | 19.18 | 19.25 | 19.21 |

**LTE Band 4:**

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 1.4M | QPSK | 1@0 | 21.66 | 21.23 | 21.2 |
| | | 1@3 | 21.71 | 21.47 | 21.36 |
| | | 1@5 | 21.45 | 21.16 | 21.13 |
| | | 3@0 | 21.5 | 21.31 | 21.43 |
| | | 3@1 | 21.57 | 21.33 | 21.46 |
| | | 3@3 | 21.46 | 21.3 | 21.23 |
| | | 6@0 | 20.48 | 20.43 | 20.34 |
| | 16-QAM | 1@0 | 20.82 | 20.09 | 20.1 |
| | | 1@3 | 20.82 | 20.14 | 20.25 |
| | | 1@5 | 20.71 | 20.08 | 20.11 |
| | | 3@0 | 20.77 | 20.33 | 20.53 |
| | | 3@1 | 20.71 | 20.44 | 20.55 |
| | | 3@3 | 20.77 | 20.46 | 20.4 |
| | | 6@0 | 19.33 | 19.44 | 19.44 |
| 3M | QPSK | 1@0 | 21.84 | 21.9 | 21.93 |
| | | 1@8 | 21.65 | 21.79 | 22 |
| | | 1@14 | 21.81 | 21.96 | 22.04 |
| | | 8@0 | 20.86 | 20.86 | 20.83 |
| | | 8@4 | 20.94 | 20.92 | 20.83 |
| | | 8@7 | 20.85 | 20.81 | 20.89 |
| | | 15@0 | 20.61 | 20.75 | 20.75 |
| | 16-QAM | 1@0 | 20.76 | 20.79 | 21.18 |
| | | 1@8 | 20.77 | 20.77 | 21.24 |
| | | 1@14 | 20.69 | 20.88 | 21.2 |
| | | 8@0 | 19.92 | 19.87 | 20.06 |
| | | 8@4 | 19.87 | 19.9 | 19.93 |
| | | 8@7 | 19.91 | 19.85 | 19.96 |
| | | 15@0 | 19.98 | 19.95 | 19.77 |
| 5M | QPSK | 1@0 | 21.76 | 21.8 | 21.65 |
| | | 1@12 | 22.01 | 22.13 | 21.86 |
| | | 1@24 | 21.83 | 21.83 | 21.62 |
| | | 12@0 | 21.06 | 20.82 | 20.85 |
| | | 12@7 | 20.98 | 20.87 | 20.71 |
| | | 12@13 | 20.97 | 20.94 | 20.81 |
| | | 25@0 | 20.99 | 20.95 | 20.76 |
| | 16-QAM | 1@0 | 20.96 | 20.89 | 21.33 |
| | | 1@12 | 21.05 | 21.05 | 21.26 |
| | | 1@24 | 20.85 | 20.84 | 21.01 |
| | | 12@0 | 20.07 | 19.86 | 19.75 |
| | | 12@7 | 20.1 | 19.9 | 19.62 |
| | | 12@13 | 20.11 | 19.85 | 19.64 |
| | | 25@0 | 19.98 | 19.79 | 19.57 |

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 10M | QPSK | 1@0 | 21.88 | 21.51 | 21.54 |
| | | 1@25 | 22.08 | 21.51 | 21.69 |
| | | 1@49 | 21.78 | 21.33 | 21.58 |
| | | 25@0 | 21.05 | 20.34 | 20.33 |
| | | 25@12 | 20.96 | 20.4 | 20.4 |
| | | 25@25 | 20.43 | 20.39 | 20.31 |
| | | 50@0 | 20.49 | 20.35 | 20.33 |
| | 16-QAM | 1@0 | 20.26 | 20.4 | 20.62 |
| | | 1@25 | 20.37 | 20.41 | 20.78 |
| | | 1@49 | 20.24 | 20.28 | 20.72 |
| | | 25@0 | 19.54 | 19.55 | 19.36 |
| | | 25@12 | 19.66 | 19.48 | 19.4 |
| | | 25@25 | 19.59 | 19.4 | 19.31 |
| | | 50@0 | 19.54 | 19.34 | 19.27 |
| 15M | QPSK | 1@0 | 21.87 | 21.91 | 21.88 |
| | | 1@37 | 22.11 | 21.97 | **22.26** |
| | | 1@74 | 21.99 | 21.76 | 22 |
| | | 36@0 | 21.03 | 20.96 | 20.96 |
| | | 36@20 | 20.99 | 20.92 | 20.94 |
| | | 36@39 | 20.95 | 20.94 | 20.91 |
| | | 75@0 | 21.1 | 20.87 | 20.81 |
| | 16-QAM | 1@0 | 20.85 | 20.85 | 21.14 |
| | | 1@37 | 21.22 | 20.88 | 21.35 |
| | | 1@74 | 21.03 | 20.74 | 21.1 |
| | | 36@0 | 19.99 | 19.98 | 19.77 |
| | | 36@20 | 19.97 | 20.06 | 20 |
| | | 36@39 | 19.83 | 20.05 | 19.9 |
| | | 75@0 | 19.9 | 19.97 | 19.92 |
| 20M | QPSK | 1@0 | 21.69 | 21.61 | 21.5 |
| | | 1@49 | 22.01 | 21.93 | 21.86 |
| | | 1@99 | 21.67 | 21.57 | 21.58 |
| | | 50@0 | 21.15 | 20.9 | 20.88 |
| | | 50@24 | 20.95 | 20.91 | 20.93 |
| | | 50@50 | 20.99 | 20.93 | 20.91 |
| | | 100@0 | 20.95 | 20.97 | 20.9 |
| | 16-QAM | 1@0 | 21.26 | 20.95 | 20.84 |
| | | 1@49 | 21.58 | 21.21 | 21.22 |
| | | 1@99 | 21.18 | 21.01 | 20.85 |
| | | 50@0 | 20.11 | 19.95 | 19.87 |
| | | 50@24 | 19.97 | 19.92 | 19.82 |
| | | 50@50 | 19.96 | 19.88 | 19.74 |
| | | 100@0 | 20.03 | 20.05 | 19.88 |

**LTE Band 5:**

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 1.4M | QPSK | 1@0 | 23.05 | 22.66 | 22.69 |
| | | 1@3 | 23.1 | 22.77 | 22.62 |
| | | 1@5 | 23.05 | 22.66 | 22.68 |
| | | 3@0 | 22.79 | 22.82 | 22.84 |
| | | 3@1 | 22.94 | 22.9 | 22.69 |
| | | 3@3 | 23.01 | 22.84 | 22.76 |
| | | 6@0 | 21.85 | 21.77 | 21.69 |
| | 16-QAM | 1@0 | 22.16 | 21.41 | 21.42 |
| | | 1@3 | 22.16 | 21.56 | 21.62 |
| | | 1@5 | 22.18 | 21.42 | 21.55 |
| | | 3@0 | 22.11 | 21.79 | 21.9 |
| | | 3@1 | 22.11 | 21.89 | 21.92 |
| | | 3@3 | 22.19 | 21.8 | 21.89 |
| | | 6@0 | 20.7 | 20.91 | 20.88 |
| 3M | QPSK | 1@0 | 22.83 | 22.76 | 22.93 |
| | | 1@8 | 22.84 | 22.77 | 22.83 |
| | | 1@14 | 22.71 | 22.79 | 22.94 |
| | | 8@0 | 21.94 | 21.83 | 21.73 |
| | | 8@4 | 21.99 | 21.75 | 21.8 |
| | | 8@7 | 21.96 | 21.72 | 21.65 |
| | | 15@0 | 21.75 | 21.69 | 21.69 |
| | 16-QAM | 1@0 | 21.63 | 21.75 | 22.04 |
| | | 1@8 | 21.63 | 21.64 | 22.03 |
| | | 1@14 | 21.59 | 21.55 | 22.09 |
| | | 8@0 | 20.77 | 20.83 | 20.67 |
| | | 8@4 | 20.88 | 20.74 | 20.85 |
| | | 8@7 | 20.85 | 20.75 | 20.89 |
| | | 15@0 | 20.77 | 20.81 | 20.74 |
| 5M | QPSK | 1@0 | 22.77 | 22.65 | 22.6 |
| | | 1@12 | 22.95 | 22.84 | 22.87 |
| | | 1@24 | 22.8 | 22.59 | 22.57 |
| | | 12@0 | 21.86 | 21.72 | 21.77 |
| | | 12@7 | 21.94 | 21.9 | 21.73 |
| | | 12@13 | 21.92 | 21.74 | 21.62 |
| | | 25@0 | 21.89 | 21.75 | 21.67 |
| | 16-QAM | 1@0 | 21.73 | 21.78 | 22.25 |
| | | 1@12 | 21.92 | 21.82 | 22.37 |
| | | 1@24 | 21.84 | 21.66 | 22.27 |
| | | 12@0 | 20.97 | 20.76 | 20.75 |
| | | 12@7 | 20.85 | 20.84 | 20.73 |
| | | 12@13 | 20.82 | 20.82 | 20.74 |
| | | 25@0 | 20.91 | 20.67 | 20.88 |

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 10M | QPSK | 1@0 | 22.76 | 22.84 | 23.06 |
| | | 1@25 | 22.87 | 22.86 | **23.24** |
| | | 1@49 | 22.67 | 22.74 | 22.97 |
| | | 25@0 | 22.03 | 21.74 | 21.92 |
| | | 25@12 | 21.94 | 21.8 | 21.94 |
| | | 25@25 | 21.89 | 21.74 | 21.83 |
| | | 50@0 | 22.05 | 21.68 | 21.8 |
| | 16-QAM | 1@0 | 21.6 | 21.69 | 22.31 |
| | | 1@25 | 21.84 | 21.83 | 22.4 |
| | | 1@49 | 21.5 | 21.64 | 22.11 |
| | | 25@0 | 21.02 | 20.75 | 20.92 |
| | | 25@12 | 20.92 | 20.91 | 20.99 |
| | | 25@25 | 20.96 | 21.04 | 20.79 |
| | | 50@0 | 20.96 | 21.04 | 20.91 |

**LTE Band 7:**

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 5M | QPSK | 1@0 | 21.45 | 21.45 | 21.51 |
| | | 1@12 | 21.83 | 21.84 | 21.89 |
| | | 1@24 | 21.53 | 21.51 | 21.5 |
| | | 12@0 | 20.67 | 20.76 | 20.74 |
| | | 12@7 | 20.76 | 20.74 | 20.81 |
| | | 12@13 | 20.68 | 20.63 | 20.71 |
| | | 25@0 | 20.61 | 20.59 | 20.76 |
| | 16-QAM | 1@0 | 21.09 | 20.43 | 20.58 |
| | | 1@12 | 21.37 | 20.71 | 20.89 |
| | | 1@24 | 21.09 | 20.48 | 20.58 |
| | | 12@0 | 19.74 | 19.71 | 19.66 |
| | | 12@7 | 19.8 | 19.73 | 19.71 |
| | | 12@13 | 19.8 | 19.74 | 19.66 |
| | | 25@0 | 19.67 | 19.57 | 19.7 |
| 10M | QPSK | 1@0 | 21.47 | 21.92 | 21.48 |
| | | 1@25 | 21.65 | 21.86 | 21.6 |
| | | 1@49 | 21.53 | 21.81 | 21.51 |
| | | 25@0 | 20.51 | 20.71 | 20.52 |
| | | 25@12 | 20.69 | 20.75 | 20.68 |
| | | 25@25 | 20.69 | 20.59 | 20.69 |
| | | 50@0 | 20.72 | 20.58 | 20.54 |
| | 16-QAM | 1@0 | 20.53 | 21.04 | 20.37 |
| | | 1@25 | 20.66 | 21.19 | 20.48 |
| | | 1@49 | 20.43 | 20.98 | 20.34 |
| | | 25@0 | 19.71 | 19.83 | 19.77 |
| | | 25@12 | 19.75 | 19.74 | 19.68 |
| | | 25@25 | 19.77 | 19.7 | 19.8 |
| | | 50@0 | 19.65 | 19.61 | 19.71 |
| 15M | QPSK | 1@0 | 21.62 | 21.45 | 21.83 |
| | | 1@37 | 21.71 | 21.72 | 21.86 |
| | | 1@74 | 21.53 | 21.49 | 21.75 |
| | | 36@0 | 20.59 | 20.78 | 20.58 |
| | | 36@20 | 20.59 | 20.68 | 20.72 |
| | | 36@39 | 20.62 | 20.67 | 20.66 |
| | | 75@0 | 20.68 | 20.6 | 20.59 |
| | 16-QAM | 1@0 | 20.49 | 20.52 | 20.85 |
| | | 1@37 | 20.85 | 20.72 | 21.18 |
| | | 1@74 | 20.52 | 20.37 | 20.83 |
| | | 36@0 | 19.43 | 19.62 | 19.66 |
| | | 36@20 | 19.57 | 19.65 | 19.64 |
| | | 36@39 | 19.52 | 19.55 | 19.74 |
| | | 75@0 | 19.59 | 19.61 | 19.75 |

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 20M | QPSK | 1@0 | 22.15 | 22.35 | 22.37 |
| | | 1@49 | 22.57 | **22.75** | 22.73 |
| | | 1@99 | 22.19 | 22.38 | 22.4 |
| | | 50@0 | 21.49 | 21.51 | 21.58 |
| | | 50@24 | 21.44 | 21.55 | 21.63 |
| | | 50@50 | 21.47 | 21.51 | 21.69 |
| | | 100@0 | 21.38 | 21.52 | 21.63 |
| | 16-QAM | 1@0 | 21.38 | 21.49 | 21.65 |
| | | 1@49 | 21.92 | 21.82 | 21.87 |
| | | 1@99 | 21.48 | 21.53 | 21.62 |
| | | 50@0 | 20.46 | 20.52 | 20.51 |
| | | 50@24 | 20.58 | 20.61 | 20.51 |
| | | 50@50 | 20.57 | 20.59 | 20.59 |
| | | 100@0 | 20.54 | 20.6 | 20.62 |

**LTE Band 38:**

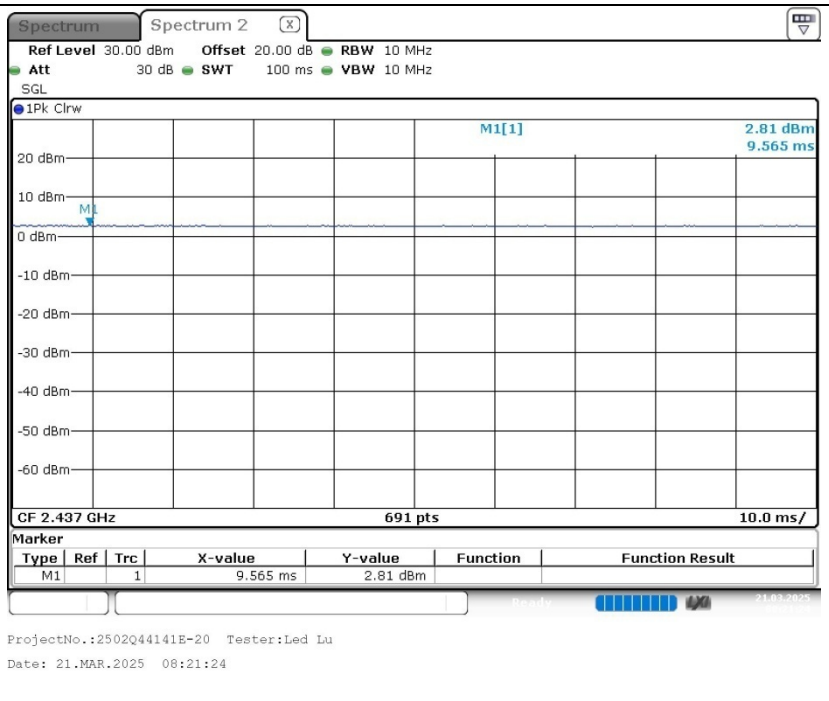
| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 5M | QPSK | 1@0 | 22.74 | 22.9 | 22.82 |
| | | 1@12 | 22.9 | 23.17 | 23.13 |
| | | 1@24 | 22.65 | 22.85 | 22.84 |
| | | 12@0 | 21.7 | 21.87 | 21.79 |
| | | 12@7 | 21.7 | 21.95 | 21.72 |
| | | 12@13 | 21.71 | 21.93 | 21.8 |
| | | 25@0 | 21.59 | 21.93 | 21.83 |
| | 16-QAM | 1@0 | 21.87 | 22.21 | 21.83 |
| | | 1@12 | 22.21 | 22.5 | 22.19 |
| | | 1@24 | 21.7 | 22.2 | 21.91 |
| | | 12@0 | 20.57 | 20.85 | 20.79 |
| | | 12@7 | 20.52 | 20.89 | 20.88 |
| | | 12@13 | 20.53 | 20.97 | 20.84 |
| | | 25@0 | 20.55 | 20.85 | 20.76 |
| 10M | QPSK | 1@0 | 22.83 | 22.72 | 22.84 |
| | | 1@25 | 22.97 | 23.1 | **23.22** |
| | | 1@49 | 22.78 | 22.74 | 22.81 |
| | | 25@0 | 21.62 | 21.99 | 21.78 |
| | | 25@12 | 21.75 | 21.97 | 21.81 |
| | | 25@25 | 21.71 | 21.96 | 21.77 |
| | | 50@0 | 21.72 | 21.95 | 21.84 |
| | 16-QAM | 1@0 | 21.85 | 21.93 | 22.19 |
| | | 1@25 | 22.04 | 22.34 | 22.44 |
| | | 1@49 | 21.93 | 21.97 | 22.11 |
| | | 25@0 | 20.67 | 20.78 | 20.77 |
| | | 25@12 | 20.6 | 20.81 | 20.73 |
| | | 25@25 | 20.77 | 20.74 | 20.77 |
| | | 50@0 | 20.7 | 20.94 | 20.76 |
| 15M | QPSK | 1@0 | 22.52 | 22.78 | 22.81 |
| | | 1@37 | 22.86 | 23.05 | 23.18 |
| | | 1@74 | 22.56 | 22.69 | 22.84 |
| | | 36@0 | 21.8 | 21.91 | 21.81 |
| | | 36@20 | 21.78 | 22 | 21.84 |
| | | 36@39 | 21.69 | 21.99 | 21.86 |
| | | 75@0 | 21.8 | 21.94 | 21.88 |
| | 16-QAM | 1@0 | 21.74 | 22.12 | 22.07 |
| | | 1@37 | 21.98 | 22.39 | 22.39 |
| | | 1@74 | 21.84 | 22.01 | 22.02 |
| | | 36@0 | 20.65 | 20.82 | 20.94 |
| | | 36@20 | 20.66 | 20.82 | 20.87 |
| | | 36@39 | 20.72 | 20.84 | 20.97 |
| | | 75@0 | 20.6 | 20.81 | 20.67 |

| Test Bandwidth | Test Modulation | Resource Block & RB offset | Low Channel (dBm) | Middle Channel (dBm) | High Channel (dBm) |
|---|---|---|---|---|---|
| 20M | QPSK | 1@0 | 22.48 | 22.69 | 22.59 |
| | | 1@49 | 22.85 | 23.18 | 22.86 |
| | | 1@99 | 22.69 | 22.87 | 22.54 |
| | | 50@0 | 21.66 | 21.86 | 21.8 |
| | | 50@24 | 21.71 | 21.94 | 21.83 |
| | | 50@50 | 21.8 | 21.97 | 21.81 |
| | | 100@0 | 21.78 | 21.89 | 21.79 |
| | 16-QAM | 1@0 | 21.57 | 21.87 | 21.71 |
| | | 1@49 | 21.95 | 22.17 | 22.02 |
| | | 1@99 | 21.75 | 21.97 | 21.76 |
| | | 50@0 | 20.56 | 20.76 | 20.73 |
| | | 50@24 | 20.62 | 20.79 | 20.76 |
| | | 50@50 | 20.84 | 20.85 | 20.84 |
| | | 100@0 | 20.65 | 20.76 | 20.85 |

**WLAN: 2.4G**

| Mode | Channel frequency (MHz) | Data Rate | Duty cycle (%) | RF Output Power (dBm) |
|---|---|---|---|---|
| 802.11b | 2412 | 1Mbps | 100 | 10.45 |
| | 2437 | | | 10.99 |
| | 2462 | | | 10.35 |
| 802.11g | 2412 | 6Mbps | / | 12.50 |
| | 2437 | | | **12.74** |
| | 2462 | | | 12.32 |
| 802.11n ht20 | 2412 | MCS0 | / | 11.23 |
| | 2437 | | | 11.59 |
| | 2462 | | | 11.19 |
| 802.11n ht40 | 2422 | MCS0 | / | 8.68 |
| | 2437 | | | 8.68 |
| | 2452 | | | 8.47 |

| Test Modes | Ton (ms) | Ton+off (ms) | Duty cycle (%) | Scaled Factor (1/duty cycle) |
|---|---|---|---|---|
| 802.11b_2437MHz | 100 | 100 | 100 | 1 |

| Duty Cycle | |
|---|---|
| 802.11b_2437MHz |  |



*Note: The duty cycle was measured under radiation method.*

**WLAN: 5.2G**

| Mode | Channel frequency (MHz) | Data Rate | Duty cycle (%) | RF Output Power (dBm) |
|---|---|---|---|---|
| 802.11a | 5180 | 6Mbps | / | 11.64 |
| | 5200 | | | 11.61 |
| | 5240 | | | 12.10 |
| 802.11n20 | 5180 | MCS0 | / | 11.36 |
| | 5200 | | | 11.49 |
| | 5240 | | | 12.01 |
| 802.11n40 | 5190 | MCS0 | / | 11.53 |
| | 5230 | | | 11.93 |
| 802.11ac80 | 5210 | MCS0 | 88.1 | **12.70** |

**WLAN: 5.3G**

| Mode | Channel frequency (MHz) | Data Rate | Duty cycle (%) | RF Output Power (dBm) |
|---|---|---|---|---|
| 802.11a | 5260 | 6Mbps | 96 | 12.13 |
| | 5280 | | | **12.29** |
| | 5320 | | | 12.26 |
| 802.11n20 | 5260 | MCS0 | / | 12.12 |
| | 5280 | | | 12.37 |
| | 5320 | | | 12.35 |
| 802.11n40 | 5270 | MCS0 | / | 12.16 |
| | 5310 | | | 12.26 |
| 802.11ac80 | 5290 | MCS0 | / | 12.02 |

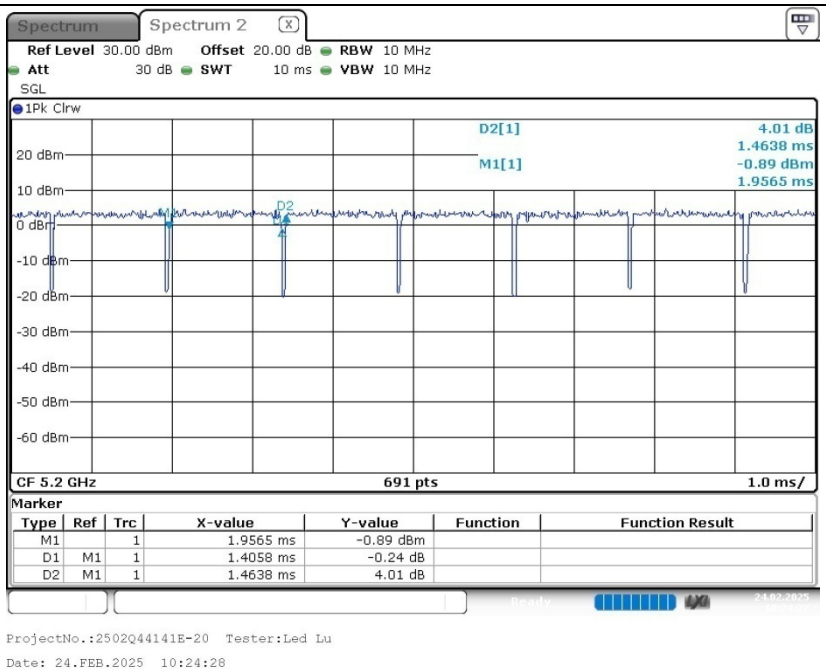
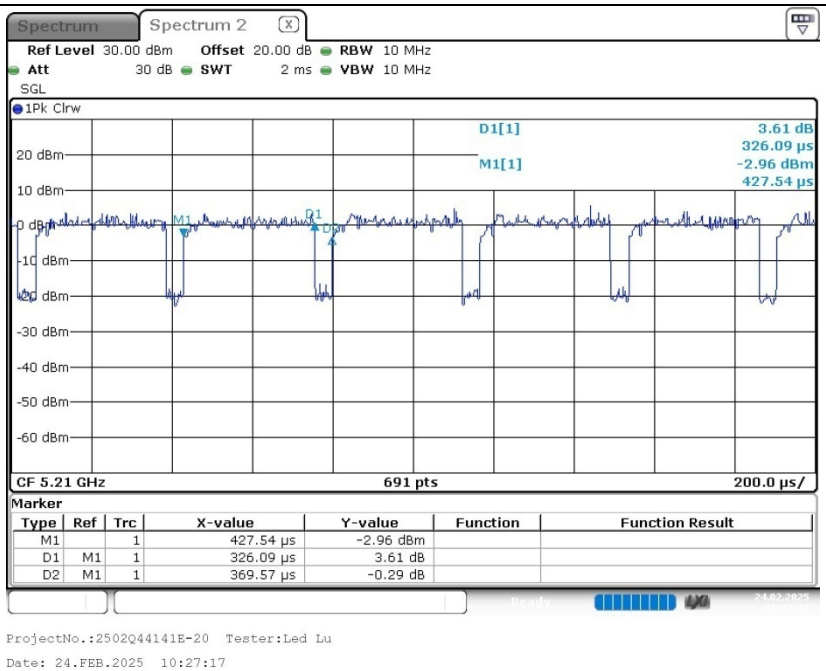
**WLAN: 5.6G**

| Mode | Channel frequency (MHz) | Data Rate | Duty cycle (%) | RF Output Power (dBm) |
|---|---|---|---|---|
| 802.11a | 5500 | 6Mbps | / | 12.19 |
| | 5580 | | | 11.96 |
| | 5700 | | | 11.83 |
| | 5720 | | | 12.01 |
| 802.11n20 | 5500 | MCS0 | / | 11.96 |
| | 5580 | | | 11.64 |
| | 5700 | | | 11.48 |
| | 5720 | | | 11.81 |
| 802.11n40 | 5510 | MCS0 | / | 11.85 |
| | 5590 | | | 11.66 |
| | 5670 | | | 11.37 |
| | 5710 | | | 11.35 |
| 802.11ac80 | 5530 | MCS0 | 88.1 | **12.63** |
| | 5610 | | | 12.27 |
| | 5690 | | | 12.06 |

**WLAN: 5.8G**

| Mode | Channel frequency (MHz) | Data Rate | Duty cycle (%) | RF Output Power (dBm) |
|---|---|---|---|---|
| 802.11a | 5745 | 6Mbps | 96 | **12.29** |
| | 5785 | | | 12.22 |
| | 5825 | | | 11.99 |
| 802.11n20 | 5745 | MCS0 | / | 12.12 |
| | 5785 | | | 12.08 |
| | 5825 | | | 11.86 |
| 802.11n40 | 5755 | MCS0 | / | 12.11 |
| | 5795 | | | 11.93 |
| 802.11ac80 | 5775 | MCS0 | / | 12.03 |

| Test Modes | Ton (ms) | Ton+off (ms) | Duty cycle (%) | Scaled Factor (1/duty cycle) |
|---|---|---|---|---|
| 802.11a_5200MHz | 1.406 | 1.464 | 96% | 1.04 |
| 802.11ac80_5210MHz | 0.326 | 0.370 | 88.1% | 1.14 |

| Duty Cycle | |
|---|---|
| 802.11a_5200MHz |  |
| 802.11ac80_5210MHz |  |

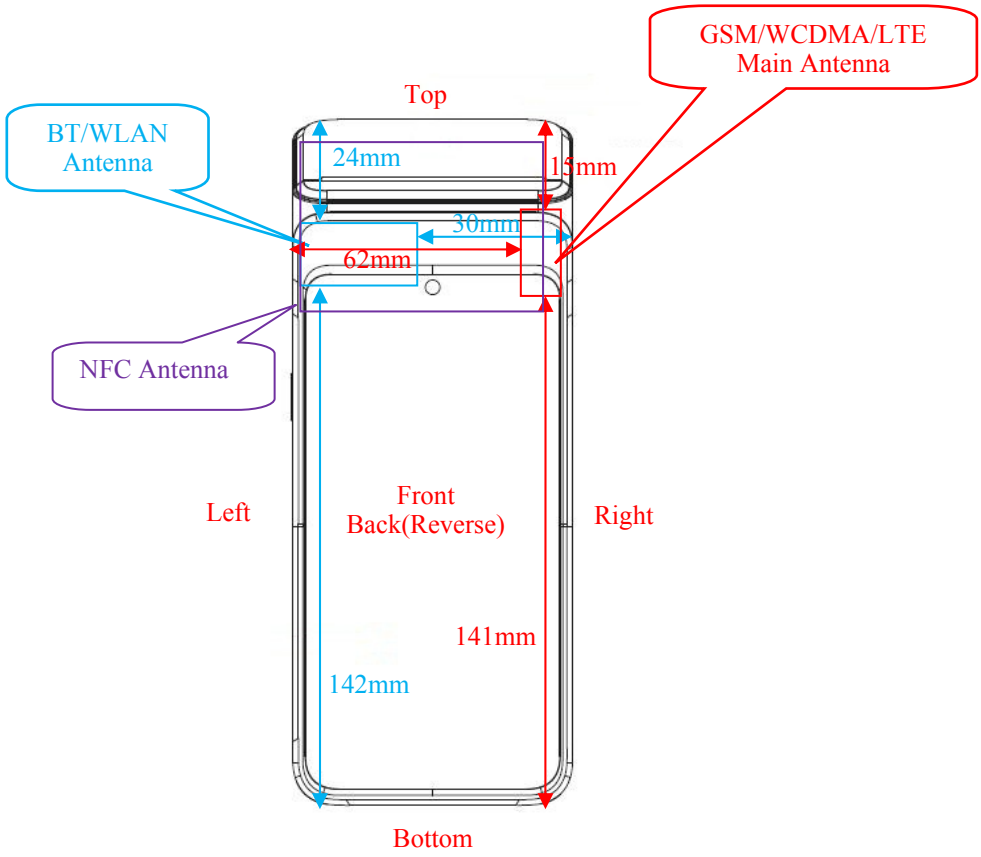
*Note: The duty cycle was measured under radiation method.*

**Bluetooth:**

| Mode | Channel frequency (MHz) | RF Output Power (dBm) |
|---|---|---|
| BDR(GFSK) | 2402 | 2.18 |
| | 2441 | 2.4 |
| | 2480 | 2.73 |
| EDR(π/4-DQPSK) | 2402 | 1.47 |
| | 2441 | 1.61 |
| | 2480 | 1.97 |
| EDR(8DPSK) | 2402 | 1.56 |
| | 2441 | 1.81 |
| | 2480 | 1.88 |
| BLE 1Mbps | 2402 | -0.16 |
| | 2440 | 0.02 |
| | 2480 | 0.2 |

# 8. STANDALONE SAR TEST EXCLUSION CONSIDERATIONS

## 8.1 Antennas Location:




## 8.2 Antenna Distance To Edge

| Antenna Distance To Edge(mm) | | | | | | |
|---|---|---|---|---|---|---|
| **Antenna** | **Back** | **Front** | **Left** | **Right** | **Top** | **Bottom** |
| WWAN Antenna(GSM/WCDMA/LTE) | < 5 | < 5 | 62 | < 5 | 15 | 141 |
| WLAN/BT Antenna | < 5 | < 5 | < 5 | 30 | 24 | 142 |

## 8.3 Standalone SAR test exclusion considerations

**Body**

| Mode | Frequency (MHz) | Output Power (dBm) | Output Power (mW) | Distance (mm) | Calculated value | Threshold (1-g) | SAR Test Exclusion |
|---|---|---|---|---|---|---|---|
| WLAN 2.4G | 2462 | 13 | 19.95 | 5 | 6.3 | 3.0 | NO |
| WLAN 5.2G | 5240 | 13 | 19.95 | 5 | 9.1 | 3.0 | NO |
| WLAN 5.3G | 5320 | 12.5 | 17.78 | 5 | 8.2 | 3.0 | NO |
| WLAN 5.6G | 5720 | 13 | 19.95 | 5 | 9.5 | 3.0 | NO |
| WLAN 5.8G | 5825 | 12.5 | 17.78 | 5 | 8.6 | 3.0 | NO |
| Bluetooth | 2480 | 3 | 2.00 | 5 | 0.6 | 3.0 | YES |

**Limb**

| Mode | Frequency (MHz) | Output Power (dBm) | Output Power (mW) | Distance (mm) | Calculated value | Threshold (10-g) | SAR Test Exclusion |
|---|---|---|---|---|---|---|---|
| WLAN 2.4G | 2462 | 13 | 19.95 | 0 | 6.3 | 7.5 | YES |
| WLAN 5.2G | 5240 | 13 | 19.95 | 0 | 9.1 | 7.5 | NO |
| WLAN 5.3G | 5320 | 12.5 | 17.78 | 0 | 8.2 | 7.5 | NO |
| WLAN 5.6G | 5720 | 13 | 19.95 | 0 | 9.5 | 7.5 | NO |
| WLAN 5.8G | 5825 | 12.5 | 17.78 | 0 | 8.6 | 7.5 | NO |
| Bluetooth | 2480 | 3 | 2.00 | 0 | 0.6 | 7.5 | YES |

Note:

1.The WLAN based average power for calculation. and bluetooth based peak output power for calculation.
2.The Limb SAR of WLAN 2.4G was selected to test.

NOTE:
The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[( max. power of channel, including tune-up tolerance, mW )/( min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤7.5 for 10-g extremity SAR, where
1. f(GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

According to KDB447498 D01 General RF Exposure Guidance v06: 4.3. General SAR test exclusion guidance

c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):
1) For test separation distances > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by [1 + log(100/f(MHz))]
2) For test separation distances ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by ½
3) SAR measurement procedures are not established below 100 MHz

Measurement Result:

For NFC, the power of EUT: E Field@3m is 73.07dBuV/m =-22.13 dBm (0.006mW)
Note: E[dBμV/m] = EIRP[dBm] + 95.2 for d = 3 m.

SAR test exclusion threshold for NFC(13.56MHz) separation distance < 50mm

=[474*(1 + log(100/f(MHz)))]/2

= 443mW

>0.006mW

Conclusion:

The NFC SAR evaluation can be exempted.

*Note:*
*1.The E Field value of NFC, please refer to the report: 2502Q44141E-RF-00G, which was issued by Bay Area Compliance Laboratories Corp. (Dongguan).*

## 8.4 Standalone SAR estimation:

| Mode | Frequency (MHz) | Output Power (dBm) | Output Power (mW) | Distance (mm) | Estimated (W/kg) |
|---|---|---|---|---|---|
| BT Body | 2480 | 3 | 2.00 | 5 | 0.08@1-g |
| BT Limb | 2480 | 3 | 2.00 | 0 | 0.03@10-g |

***Note:*** *The bluetooth based peak power for calculation.*

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
[( max. power of channel, including tune-up tolerance , mW)/( min. test separation distance,mm)] ·
[√f(GHz)/x ] W/kg for test separation distances ≤50 mm;
where x = 7.5 for 1-g SAR and x = 18.75 for 10-g SAR.
When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion

## 8.5 SAR test exclusion for the EUT edge considerations Result

| Mode | Frequency (MHz) | Output Power (dBm) | Output Power (mW) | Test Exclusion Distance (mm) |
|---|---|---|---|---|
| GSM 850 | 848.8 | 26.5 | 446.68 | 57.0 |
| PCS 1900 | 1909.8 | 23.5 | 223.87 | 41.2 |
| WCDMA Band 2 | 1907.6 | 22.5 | 177.83 | 32.7 |
| WCDMA Band 5 | 846.6 | 23.5 | 223.87 | 27.4 |
| LTE Band 2 | 1900 | 22 | 158.49 | 29.1 |
| LTE Band 4 | 1745 | 22.5 | 177.83 | 31.3 |
| LTE Band 5 | 844 | 23.5 | 223.87 | 27.4 |
| LTE Band 7 | 2560 | 23 | 199.53 | 42.5 |
| LTE Band 38 | 2610 | 23.5 | 223.87 | 48.2 |
| WLAN 2.4G | 2462 | 13 | 19.95 | 4.1 |
| WLAN 5.2G | 5240 | 13 | 19.95 | 6.0 |
| WLAN 5.3G | 5320 | 12.5 | 17.78 | 5.4 |
| WLAN 5.6G | 5720 | 13 | 19.95 | 6.3 |
| WLAN 5.8G | 5825 | 12.5 | 17.78 | 5.7 |

*Note: The GSM 850/PCS1900 based average power for calculation.*

| Mode | Back | Front | Left | Right | Top | Bottom |
|---|---|---|---|---|---|---|
| BT | Exclusion* | Exclusion* | Exclusion* | Exclusion* | Exclusion* | Exclusion* |
| WLAN | **Required** | **Required** | **Required** | Exclusion | **Required** | Exclusion |
| WWAN(GSM/WCDMA/LTE) | **Required** | **Required** | Exclusion | **Required** | **Required** | Exclusion |

**Note:**

**Required:** The distance is less than **Test Exclusion Distance**, the SAR test is required.
**Exclusion:** The distance is large than **Test Exclusion Distance**, SAR test is not required.
**Exclusion*** SAR test exclusion evaluation has been done above.

**SAR test exclusion for the EUT edge considerations detail:**

**Distance< 50mm(To Edges)**
The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[( max. power of channel, including tune-up tolerance, mW )/( min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤7.5 for 10-g extremity SAR, where
1. f(GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.
5. The Time based average Power is used for calculation

**Distance> 50mm(To Edges)**
At 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following:
a) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·( f(MHz)/150)] mW, at 100 MHz to 1500 MHz
b) [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz.

# 9. SAR MEASUREMENT RESULTS

This page summarizes the results of the performed dosimetric evaluation.

## 9.1 SAR Test Data

**Environmental Conditions**

| | | | |
|---|---|---|---|
| **Environmental Temperature:** | 21.6-22.2 ℃ | 22.1-22.9℃ | 20.7-21.4 ℃ |
| **Relative Humidity:** | 41% | 41% | 39% |
| **ATM Pressure:** | 102.4 kPa | 101.9 kPa | 101.8 kPa |
| **Test Date:** | 2025/02/24 | 2025/03/20 | 2025/03/21 |

*Testing was performed by Lily Yang, Musk Huang, Led Lu.*

**GSM 850:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 824.2 | GPRS | / | / | / | / | / | / |
| | 836.6 | GPRS | 29.34 | 29.5 | 1.038 | 0.368 | **0.38** | **1#** |
| | 848.8 | GPRS | / | / | / | / | / | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 824.2 | GPRS | / | / | / | / | / | / |
| | 836.6 | GPRS | 29.34 | 29.5 | 1.038 | 0.332 | 0.34 | / |
| | 848.8 | GPRS | / | / | / | / | / | / |
| Limb Back (0mm) | 824.2 | GPRS | / | / | / | / | / | / |
| | 836.6 | GPRS | 29.34 | 29.5 | 1.038 | 0.857 | 0.89 | / |
| | 848.8 | GPRS | / | / | / | / | / | / |
| Limb Right (0mm) | 824.2 | GPRS | / | / | / | / | / | / |
| | 836.6 | GPRS | 29.34 | 29.5 | 1.038 | 1.23 | **1.28** | **2#** |
| | 848.8 | GPRS | / | / | / | / | / | / |
| Limb Top (0mm) | 824.2 | GPRS | / | / | / | / | / | / |
| | 836.6 | GPRS | 29.34 | 29.5 | 1.038 | 0.140 | 0.15 | / |
| | 848.8 | GPRS | / | / | / | / | / | / |

**Note:**

1. When the SAR value is less than half of the limit, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
4. When the maximum output power variation across the required test channels is > 0.5 dB, instead of the middle channel, the highest output power channel must be used.
5.The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 1DL+4UL is the worst case.

**GSM 1900:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 1850.2 | GPRS | / | / | / | / | / | / |
| | 1880 | GPRS | 26.00 | 26.5 | 1.122 | 0.072 | **0.08** | **3#** |
| | 1909.8 | GPRS | / | / | / | / | / | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 1850.2 | GPRS | / | / | / | / | / | / |
| | 1880 | GPRS | 26.00 | 26.5 | 1.122 | 0.183 | 0.21 | / |
| | 1909.8 | GPRS | / | / | / | / | / | / |
| Limb Back (0mm) | 1850.2 | GPRS | / | / | / | / | / | / |
| | 1880 | GPRS | 26.00 | 26.5 | 1.122 | 0.325 | 0.36 | / |
| | 1909.8 | GPRS | / | / | / | / | / | / |
| Limb Right (0mm) | 1850.2 | GPRS | / | / | / | / | / | / |
| | 1880 | GPRS | 26.00 | 26.5 | 1.122 | 1.3 | **1.46** | **4#** |
| | 1909.8 | GPRS | / | / | / | / | / | / |
| Limb Top (0mm) | 1850.2 | GPRS | / | / | / | / | / | / |
| | 1880 | GPRS | 26.00 | 26.5 | 1.122 | 0.034 | 0.04 | / |
| | 1909.8 | GPRS | / | / | / | / | / | / |

**Note:**

1. When the SAR value is less than half of the limit, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
4. When the maximum output power variation across the required test channels is > 0.5 dB, instead of the middle channel, the highest output power channel must be used.
5.The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 1DL+4UL is the worst case.

**WCDMA Band 2:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 1852.4 | RMC | / | / | / | / | / | / |
| | 1880 | RMC | 22.34 | 22.5 | 1.038 | 0.107 | **0.11** | **5#** |
| | 1907.6 | RMC | / | / | / | / | / | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 1852.4 | RMC | / | / | / | / | / | / |
| | 1880 | RMC | 22.34 | 22.5 | 1.038 | 0.300 | 0.31 | / |
| | 1907.6 | RMC | / | / | / | / | / | / |
| Limb Back (0mm) | 1852.4 | RMC | / | / | / | / | / | / |
| | 1880 | RMC | 22.34 | 22.5 | 1.038 | 0.205 | 0.21 | / |
| | 1907.6 | RMC | / | / | / | / | / | / |
| Limb Right (0mm) | 1852.4 | RMC | / | / | / | / | / | / |
| | 1880 | RMC | 22.34 | 22.5 | 1.038 | 1.83 | **1.90** | **6#** |
| | 1907.6 | RMC | / | / | / | / | / | / |
| Limb Top (0mm) | 1852.4 | RMC | / | / | / | / | / | / |
| | 1880 | RMC | 22.34 | 22.5 | 1.038 | 0.073 | 0.08 | / |
| | 1907.6 | RMC | / | / | / | / | / | / |

**WCDMA Band 5:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 826.4 | RMC | / | / | / | / | / | / |
| | 836.6 | RMC | 23.48 | 23.5 | 1.005 | 0.130 | **0.13** | **7#** |
| | 846.6 | RMC | / | / | / | / | / | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 826.4 | RMC | / | / | / | / | / | / |
| | 836.6 | RMC | 23.48 | 23.5 | 1.005 | 0.134 | 0.13 | / |
| | 846.6 | RMC | / | / | / | / | / | / |
| Limb Back (0mm) | 826.4 | RMC | / | / | / | / | / | / |
| | 836.6 | RMC | 23.48 | 23.5 | 1.005 | 0.204 | 0.21 | / |
| | 846.6 | RMC | / | / | / | / | / | / |
| Limb Right (0mm) | 826.4 | RMC | / | / | / | / | / | / |
| | 836.6 | RMC | 23.48 | 23.5 | 1.005 | 0.562 | **0.56** | **8#** |
| | 846.6 | RMC | / | / | / | / | / | / |
| Limb Top (0mm) | 826.4 | RMC | / | / | / | / | / | / |
| | 836.6 | RMC | 23.48 | 23.5 | 1.005 | 0.079 | 0.08 | / |
| | 846.6 | RMC | / | / | / | / | / | / |

**Note:**
1. When the SAR value is less than half of the limit, testing for other channels are optional.
2. The EUT transmit and receive through the same antenna while testing SAR.
3. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC(reference measurement Channel) Configured in Test Loop Model.
4. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/HSPA+ when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.
5. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested

**LTE Band 2:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 1860 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 1RB | 21.44 | 22 | 1.138 | 0.130 | **0.15** | **9#** |
| | 1900 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 50%RB | 20.37 | 21 | 1.156 | 0.108 | 0.12 | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 1860 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 1RB | 21.44 | 22 | 1.138 | 0.229 | 0.26 | / |
| | 1900 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 50%RB | 20.37 | 21 | 1.156 | 0.206 | 0.24 | / |
| Limb Back (0mm) | 1860 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 1RB | 21.44 | 22 | 1.138 | 0.166 | 0.19 | / |
| | 1900 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 50%RB | 20.37 | 21 | 1.156 | 0.158 | 0.18 | / |
| Limb Right (0mm) | 1860 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 1RB | 21.44 | 22 | 1.138 | 1.73 | **1.97** | **10#** |
| | 1900 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 50%RB | 20.37 | 21 | 1.156 | 1.38 | 1.60 | / |
| Limb Top (0mm) | 1860 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 1RB | 21.44 | 22 | 1.138 | 0.050 | 0.06 | / |
| | 1900 | 20 | 1RB | / | / | / | / | / | / |
| | 1880 | 20 | 50%RB | 20.37 | 21 | 1.156 | 0.045 | 0.05 | / |

**LTE Band 4:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 1720 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 1RB | 21.93 | 22.5 | 1.14 | 0.213 | **0.24** | **11#** |
| | 1745 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 50%RB | 20.93 | 21.5 | 1.14 | 0.175 | 0.20 | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 1720 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 1RB | 21.93 | 22.5 | 1.14 | 0.274 | 0.31 | / |
| | 1745 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 50%RB | 20.93 | 21.5 | 1.14 | 0.222 | 0.25 | / |
| Limb Back (0mm) | 1720 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 1RB | 21.93 | 22.5 | 1.14 | 0.188 | 0.21 | / |
| | 1745 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 50%RB | 20.93 | 21.5 | 1.14 | 0.154 | 0.18 | / |
| Limb Right (0mm) | 1720 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 1RB | 21.93 | 22.5 | 1.14 | 1.51 | **1.72** | **12#** |
| | 1745 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 50%RB | 20.93 | 21.5 | 1.14 | 1.29 | 1.47 | / |
| Limb Top (0mm) | 1720 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 1RB | 21.93 | 22.5 | 1.14 | 0.045 | 0.05 | / |
| | 1745 | 20 | 1RB | / | / | / | / | / | / |
| | 1732.5 | 20 | 50%RB | 20.93 | 21.5 | 1.14 | 0.040 | 0.05 | / |

**LTE Band 5:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 829 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 1RB | 22.86 | 23.5 | 1.159 | 0.113 | **0.13** | **13#** |
| | 844 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 50%RB | 21.8 | 22.5 | 1.175 | 0.085 | 0.10 | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 829 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 1RB | 22.86 | 23.5 | 1.159 | 0.113 | 0.13 | / |
| | 844 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 50%RB | 21.8 | 22.5 | 1.175 | 0.087 | 0.10 | / |
| Limb Back (0mm) | 829 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 1RB | 22.86 | 23.5 | 1.159 | 0.151 | 0.18 | / |
| | 844 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 50%RB | 21.8 | 22.5 | 1.175 | 0.116 | 0.14 | / |
| Limb Right (0mm) | 829 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 1RB | 22.86 | 23.5 | 1.159 | 0.452 | **0.52** | **14#** |
| | 844 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 50%RB | 21.8 | 22.5 | 1.175 | 0.351 | 0.41 | / |
| Limb Top (0mm) | 829 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 1RB | 22.86 | 23.5 | 1.159 | 0.062 | 0.07 | / |
| | 844 | 10 | 1RB | / | / | / | / | / | / |
| | 836.5 | 10 | 50%RB | 21.8 | 22.5 | 1.175 | 0.051 | 0.06 | / |

**LTE Band 7:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 2510 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 1RB | 22.75 | 23 | 1.059 | 0.405 | **0.43** | **15#** |
| | 2560 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 50%RB | 21.55 | 22 | 1.109 | 0.331 | 0.37 | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 2510 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 1RB | 22.75 | 23 | 1.059 | 0.097 | 0.10 | / |
| | 2560 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 50%RB | 21.55 | 22 | 1.109 | 0.067 | 0.07 | / |
| Limb Back (0mm) | 2510 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 1RB | 22.75 | 23 | 1.059 | 0.338 | 0.36 | / |
| | 2560 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 50%RB | 21.55 | 22 | 1.109 | 0.295 | 0.33 | / |
| Limb Right (0mm) | 2510 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 1RB | 22.75 | 23 | 1.059 | 0.963 | **1.02** | **16#** |
| | 2560 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 50%RB | 21.55 | 22 | 1.109 | 0.902 | 1.00 | / |
| Limb Top (0mm) | 2510 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 1RB | 22.75 | 23 | 1.059 | 0.092 | 0.10 | / |
| | 2560 | 20 | 1RB | / | / | / | / | / | / |
| | 2535 | 20 | 50%RB | 21.55 | 22 | 1.109 | 0.080 | 0.09 | / |

**LTE Band 38:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 2580 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 1RB | 23.18 | 23.5 | 1.076 | 0.327 | **0.35** | **17#** |
| | 2610 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 50%RB | 21.97 | 22 | 1.007 | 0.254 | 0.26 | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 2580 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 1RB | 23.18 | 23.5 | 1.076 | 0.070 | 0.08 | / |
| | 2610 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 50%RB | 21.97 | 22 | 1.007 | 0.068 | 0.07 | / |
| Limb Back (0mm) | 2580 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 1RB | 23.18 | 23.5 | 1.076 | 0.211 | 0.23 | / |
| | 2610 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 50%RB | 21.97 | 22 | 1.007 | 0.187 | 0.19 | / |
| Limb Right (0mm) | 2580 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 1RB | 23.18 | 23.5 | 1.076 | 0.610 | **0.66** | **18#** |
| | 2610 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 50%RB | 21.97 | 22 | 1.007 | 0.472 | 0.48 | / |
| Limb Top (0mm) | 2580 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 1RB | 23.18 | 23.5 | 1.076 | 0.071 | 0.08 | / |
| | 2610 | 20 | 1RB | / | / | / | / | / | / |
| | 2595 | 20 | 50%RB | 21.97 | 22 | 1.007 | 0.063 | 0.06 | / |

**Note:**
1. When the SAR value is less than half of the limit, testing for other channels are optional.
2. SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02.
3. KDB941225D05-SAR for higher order modulation is required only when the highest maximum output power for the configuration in the higher order modulation is > 0.5 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg
4. KDB941225D05-For QPSK with 100% RB allocation, when the reported SAR measured for the Highest output power channel is <1.45 W/kg, tests for the remaining required test channels are optional.
5.KDB941225D05- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
6. KDB941225D05- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offset the upper edge, middle and lower edge of each required test channel.
7. KDB941225D05- other channel bandwidths SAR test is required when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > 0.5 dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

**WLAN 2.4G:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 2412 | 802.11b | / | / | / | / | / | / | / |
| | 2437 | 802.11b | 10.99 | 11 | 1.002 | 1 | 0.313 | **0.31** | **19#** |
| | 2462 | 802.11b | / | / | / | / | / | / | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 2412 | 802.11b | / | / | / | / | / | / | / |
| | 2437 | 802.11b | 10.99 | 11 | 1.002 | 1 | 0.024 | 0.02 | / |
| | 2462 | 802.11b | / | / | / | / | / | / | / |
| Limb Back (0mm) | 2412 | 802.11b | / | / | / | / | / | / | / |
| | 2437 | 802.11b | 10.99 | 11 | 1.002 | 1 | 0.671 | **0.67** | **20#** |
| | 2462 | 802.11b | / | / | / | / | / | / | / |
| Limb Left (0mm) | 2412 | 802.11b | / | / | / | / | / | / | / |
| | 2437 | 802.11b | 10.99 | 11 | 1.002 | 1 | 0.044 | 0.04 | / |
| | 2462 | 802.11b | / | / | / | / | / | / | / |
| Limb Top (0mm) | 2412 | 802.11b | / | / | / | / | / | / | / |
| | 2437 | 802.11b | 10.99 | 11 | 1.002 | 1 | 0.033 | 0.03 | / |
| | 2462 | 802.11b | / | / | / | / | / | / | / |

**Note:**
1. When the SAR value is less than half of the limit, testing for other channels are optional.
2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3. According to KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/( duty cycle)”.

**2.4 GHz 802.11g/n OFDM SAR Test Exclusion Requirements**

**Body Mode:**

| Mode | Target Output Power (dBm) | Target Output Power (mW) | Reported SAR(W/kg) | Adjusted SAR(W/kg) | Limit(W/kg) | SAR Test Exclusion |
|---|---|---|---|---|---|---|
| 802.11b(DSSS) | 11 | 12.59 | 0.31 | / | / | / |
| 802.11g(OFDM) | 13 | 19.95 | / | 0.49 | 1.2 | Yes |
| 802.11n ht20(OFDM) | 12 | 15.85 | / | 0.39 | 1.2 | Yes |
| 802.11n ht40(OFDM) | 9 | 7.94 | / | 0.20 | 1.2 | Yes |

**Limb Mode:**

| Mode | Target Output Power (dBm) | Target Output Power (mW) | Reported SAR(W/kg) | Adjusted SAR(W/kg) | Limit(W/kg) | SAR Test Exclusion |
|---|---|---|---|---|---|---|
| 802.11b(DSSS) | 11 | 12.59 | 0.67 | / | / | / |
| 802.11g(OFDM) | 13 | 19.95 | / | 1.06 | 1.2 | Yes |
| 802.11n ht20(OFDM) | 12 | 15.85 | / | 0.84 | 1.2 | Yes |
| 802.11n ht40(OFDM) | 9 | 7.94 | / | 0.42 | 1.2 | Yes |

Per KDB 248227 D01, When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (see 5.3, including subclauses). SAR is not required for the following 2.4 GHz OFDM conditions.
a) When KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
b) 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.

**WLAN 5.2G:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 5210 | 802.11ac80 | 12.70 | 13 | 1.072 | 1.14 | 0.279 | **0.34** | **21#** |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 5210 | 802.11ac80 | 12.70 | 13 | 1.072 | 1.14 | <0.01 | 0.01 | / |
| Limb Back (0mm) | 5210 | 802.11ac80 | 12.70 | 13 | 1.072 | 1.14 | 0.461 | **0.56** | **22#** |
| Limb Left (0mm) | 5210 | 802.11ac80 | 12.70 | 13 | 1.072 | 1.14 | 0.015 | 0.02 | / |
| Limb Top (0mm) | 5210 | 802.11ac80 | 12.70 | 13 | 1.072 | 1.14 | 0.013 | 0.02 | / |

**Note:**
1.When the SAR value is less than half of the limit, testing for other channels are optional.
2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3.For 802.11ac80 mode power is the largest among 802.11a/n/ac, 802.11ac80 mode as initial test configuration is selected to test.
4. According to KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/( duty cycle)”.

**WLAN 5.3G:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 5260 | 802.11a | / | / | / | / | / | / | / |
| | 5280 | 802.11a | 12.29 | 12.5 | 1.05 | 1.04 | 0.510 | **0.56** | **23#** |
| | 5320 | 802.11a | / | / | / | / | / | / | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 5260 | 802.11a | / | / | / | / | / | / | / |
| | 5280 | 802.11a | 12.29 | 12.5 | 1.05 | 1.04 | 0.015 | 0.02 | / |
| | 5320 | 802.11a | / | / | / | / | / | / | / |
| Limb Back (0mm) | 5260 | 802.11a | / | / | / | / | / | / | / |
| | 5280 | 802.11a | 12.29 | 12.5 | 1.05 | 1.04 | 0.501 | **0.55** | **24#** |
| | 5320 | 802.11a | / | / | / | / | / | / | / |
| Limb Left (0mm) | 5260 | 802.11a | / | / | / | / | / | / | / |
| | 5280 | 802.11a | 12.29 | 12.5 | 1.05 | 1.04 | 0.018 | 0.02 | / |
| | 5320 | 802.11a | / | / | / | / | / | / | / |
| Limb Top (0mm) | 5260 | 802.11a | / | / | / | / | / | / | / |
| | 5280 | 802.11a | 12.29 | 12.5 | 1.05 | 1.04 | 0.017 | 0.02 | / |
| | 5320 | 802.11a | / | / | / | / | / | / | / |

**Note:**
1.When the SAR value is less than half of the limit, testing for other channels are optional.
2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3.For 802.11a mode power is the largest among 802.11a/n/ac, 802.11a mode as initial test configuration is selected to test.
4. According to KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/( duty cycle)”.

**WLAN 5.6G:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 5530 | 802.11ac80 | / | / | / | / | / | / | / |
| | 5610 | 802.11ac80 | 12.27 | 13 | 1.183 | 1.14 | 0.488 | **0.66** | **25#** |
| | 5690 | 802.11ac80 | / | / | / | / | / | | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 5530 | 802.11ac80 | / | / | / | / | / | / | / |
| | 5610 | 802.11ac80 | 12.27 | 13 | 1.183 | 1.14 | 0.044 | 0.06 | / |
| | 5690 | 802.11ac80 | / | / | / | / | / | / | / |
| Limb Back (0mm) | 5530 | 802.11ac80 | / | / | / | / | / | / | / |
| | 5610 | 802.11ac80 | 12.27 | 13 | 1.183 | 1.14 | 0.514 | **0.69** | **26#** |
| | 5690 | 802.11ac80 | / | / | / | / | / | / | / |
| Limb Left (0mm) | 5530 | 802.11ac80 | / | / | / | / | / | / | / |
| | 5610 | 802.11ac80 | 12.27 | 13 | 1.183 | 1.14 | 0.062 | 0.08 | / |
| | 5690 | 802.11ac80 | / | / | / | / | / | / | / |
| Limb Top (0mm) | 5530 | 802.11ac80 | / | / | / | / | / | / | / |
| | 5610 | 802.11ac80 | 12.27 | 13 | 1.183 | 1.14 | 0.027 | 0.04 | / |
| | 5690 | 802.11ac80 | / | / | / | / | / | / | / |

**Note:**
1.When the SAR value is less than half of the limit, testing for other channels are optional.
2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3.For 802.11ac80 mode power is the largest among 802.11a/n/ac, 802.11ac80 mode as initial test configuration is selected to test.
4.According to KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/( duty cycle)”.

**WLAN 5.8G:**

**Body Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | 5745 | 802.11a | / | / | / | / | / | / | / |
| | 5785 | 802.11a | 12.22 | 12.5 | 1.067 | 1.04 | 0.407 | **0.45** | **27#** |
| | 5825 | 802.11a | / | / | / | / | / | / | / |

**Limb Mode:**

| EUT Position | Frequency (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Scaled Factor | Duty cycle Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Front (0mm) | 5745 | 802.11a | / | / | / | / | / | / | / |
| | 5785 | 802.11a | 12.22 | 12.5 | 1.067 | 1.04 | <0.01 | 0.01 | / |
| | 5825 | 802.11a | / | / | / | / | / | / | / |
| Limb Back (0mm) | 5745 | 802.11a | / | / | / | / | / | / | / |
| | 5785 | 802.11a | 12.22 | 12.5 | 1.067 | 1.04 | 0.361 | **0.40** | **28#** |
| | 5825 | 802.11a | / | / | / | / | / | / | / |
| Limb Left (0mm) | 5745 | 802.11a | / | / | / | / | / | / | / |
| | 5785 | 802.11a | 12.22 | 12.5 | 1.067 | 1.04 | 0.105 | 0.12 | / |
| | 5825 | 802.11a | / | / | / | / | / | / | / |
| Limb Top (0mm) | 5745 | 802.11a | / | / | / | / | / | / | / |
| | 5785 | 802.11a | 12.22 | 12.5 | 1.067 | 1.04 | 0.030 | 0.03 | / |
| | 5825 | 802.11a | / | / | / | / | / | / | / |

**Note:**
1.When the SAR value is less than half of the limit, testing for other channels are optional.
2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3.For 802.11a mode power is the largest among 802.11a/n/ac, 802.11a mode as initial test configuration is selected to test.
4. According to KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/( duty cycle)”.

**Spot Check for Batteries:**

The device have two kind of batteries, the Battery 2(the highest rated voltage) was selected to full test, Spot check was performed for the Battery 1#.

**Body Mode:**

**LTE Band 7:**

| EUT Position | Battery | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | Battery 1# | 2510 | 20 | 1RB | / | / | / | / | / | / |
| | | 2535 | 20 | 1RB | 22.75 | 23 | 1.059 | 0.331 | 0.35 | / |
| | | 2560 | 20 | 1RB | / | / | / | / | / | / |

**Limb Mode:**

**LTE Band 2**

| EUT Position | Battery | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Right (0mm) | Battery 1# | 1860 | 20 | 1RB | / | / | / | / | / | / |
| | | 1880 | 20 | 1RB | 21.44 | 22 | 1.138 | 1.34 | 1.52 | / |
| | | 1900 | 20 | 1RB | / | / | / | / | / | / |

**Spot Check for Samples:**

The device have two kind of samples, the parameters refer to it as below, the Sample 1# was selected to full test, Spot check was performed for the Sample 2#.

| Sample | Parameters |
|---|---|
| Sample 1# | (1GB RAM+8GB ROM) +Front camera 2MP+Back camera 2MP+Double SIM+ Screen 1# (Tianshan) |
| Sample 2# | (2GB RAM+32GB ROM)+Front camera 2MP+Back camera 5MP+Single ESIM+Single SIM + Screen 2#( Hongzhan) + Flash lamp |

**Body Mode:**

**LTE Band 7:**

| EUT Position | Sample | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 1g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Body Back (5mm) | Sample 2# | 2510 | 20 | 1RB | / | / | / | / | / | / |
| | | 2535 | 20 | 1RB | 22.75 | 23 | 1.059 | 0.307 | 0.33 | / |
| | | 2560 | 20 | 1RB | / | / | / | / | / | / |

**Limb Mode:**

**LTE Band 2**

| EUT Position | Sample | Frequency (MHz) | Bandwidth (MHz) | Test Mode | Max. Meas. Power (dBm) | Max. Rated Power (dBm) | 10g SAR (W/kg) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Scaled Factor | Meas. SAR | Scaled SAR | Plot |
| Limb Right (0mm) | Sample 2# | 1860 | 20 | 1RB | / | / | / | / | / | / |
| | | 1880 | 20 | 1RB | 21.44 | 22 | 1.138 | 1.58 | 1.80 | / |
| | | 1900 | 20 | 1RB | / | / | / | / | / | / |

# 10. MEASUREMENT VARIABILITY

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz v01. 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

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only 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 (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

*Note: The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.*

**The Highest Measured SAR Configuration in Each Frequency Band**

**Body**

| SAR probe calibration point | Frequency Band | Freq.(MHz) | EUT Position | Meas. SAR (W/kg) | | Largest to Smallest SAR Ratio |
|---|---|---|---|---|---|---|
| | | | | Original | Repeated | |
| / | / | / | / | / | / | / |

**Note:**

1. The measured SAR results **do not** have to be scaled to the maximum tune-up tolerance to determine if repeated measurements are required.
2. SAR measurement variability must be assessed for each frequency band, which is determined by the **SAR probe calibration point and tissue-equivalent medium** used for the device measurements.

# 11. DUT HOLDER PERTURBATIONS

In accordance with TCB workshop October 2016:

1) SAR perturbation due to test device holders, depending on antenna locations, buttons locations on phones or device, form factor (e.g. dongles etc.), the measured SAR could be influenced by the relative positions of the test device and its holder
2) SAR measurement standards have included protocols to evaluate this with a flat phantom, with and without the device holder
3) When the highest reported SAR of an antenna is > 1.2 W/kg, holder perturbation verification is required for each antenna, using the highest SAR configuration among all applicable frequency bands in the same exact device and holder positions used for head and body SAR measurements; i.e. same device/button locations in the holder

Per IEEE 1528: 2013/Annex E/E.4.1.1: Device holder perturbation tolerance for a specific test device: Type B

When it is unknown if a device holder perturbs the fields of a test device, the SAR uncertainty shall be assessed with a flat phantom (see Clause 5) by comparing the SAR with and without the device holder according to the following tests:

The SAR tolerance for device holder disturbance is computed using Equation (E.21) and entered in the corresponding row of the appropriate uncertainty table with an assumed rectangular probability distribution and $vi = \infty$ degrees of freedom:

$$SAR_{\text{tolerance}}[\%] = 100 \times \left( \frac{SAR_{\text{w/ holder}} - SAR_{\text{w/o holder}}}{SAR_{\text{w/o holder}}} \right) \quad \text{(E.21)}$$

**The Highest Measured SAR Configuration among all applicable Frequency Band**

| Frequency Band | Freq.(MHz) | EUT Position | Meas. SAR (W/kg) | | The Device holder perturbation uncertainty |
|---|---|---|---|---|---|
| | | | With holder | Without holder | |
| / | / | / | / | / | / |

# 12. SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

## 12.1 Simultaneous Transmission:

| Description of Simultaneous Transmit Capabilities | | |
|---|---|---|
| **Transmitter Combination** | **Simultaneous?** | **Hotspot?** |
| WWAN(GSM/WCDMA/LTE) + WLAN 2.4G + NFC | √ | × |
| WWAN(GSM/WCDMA/LTE) + WLAN 5G + NFC | √ | × |
| WWAN(GSM/WCDMA/LTE) + Bluetooth + NFC | √ | × |
| WLAN 2.4G+ Bluetooth + NFC | × | × |
| WLAN 5G + Bluetooth + NFC | × | × |
| WLAN 2.4G + WLAN 5G + NFC | × | × |

*Note:*
*1.For the EIRP of NFC is 0.006mW, per KDB447498 D01 clause 4.3, the estimated SAR is so lower, so the NFC almost have no influence on the results of simultaneous transmission.*

## 12.2 Simultaneous SAR test exclusion considerations:

**Body SAR:**

| Mode(SAR1+SAR2) | Position | Reported SAR(W/kg) | | ΣSAR < 1.6W/kg |
|---|---|---|---|---|
| | | SAR1 | SAR2 | |
| WWAN(GSM/WCDMA/LTE) + WLAN 2.4G | Body | 0.43 | 0.31 | 0.74 |
| WWAN(GSM/WCDMA/LTE) + WLAN 5G | Body | 0.43 | 0.66 | **1.09** |
| WWAN(GSM/WCDMA/LTE) + Bluetooth | Body | 0.43 | 0.08 | 0.51 |

**Conclusion:**
Sum of SAR:**ΣSAR ≤1.6 W/kg** therefore simultaneous transmission SAR with Volume Scans is **not required.**

**Limb SAR:**

| Mode(SAR1+SAR2) | Position | Reported SAR(W/kg) | | ΣSAR < 4.0W/kg |
|---|---|---|---|---|
| | | SAR1 | SAR2 | |
| WWAN(GSM/WCDMA/LTE) + WLAN 2.4G | Limb | 1.97 | 0.67 | 2.64 |
| WWAN(GSM/WCDMA/LTE) + WLAN 5G | Limb | 1.97 | 0.69 | **2.66** |
| WWAN(GSM/WCDMA/LTE) + Bluetooth | Limb | 1.97 | 0.03 | 2.00 |

**Conclusion:**
Sum of SAR:**ΣSAR ≤4.0 W/kg** therefore simultaneous transmission SAR with Volume Scans is **not required.**

# APPENDIX A - MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

**Measurement uncertainty evaluation for IEEE1528-2013 SAR test**

| Uncertainty component | Tolerance/ uncertainty ± % | Probability distribution | Divisor | ci (1 g) | ci (10 g) | Standard uncertainty ± %, (1 g) | Standard uncertainty ± %, (10 g) |
|---|---|---|---|---|---|---|---|
| **Measurement system** | | | | | | | |
| Probe calibration(k=1) | 6.55 | N | 1 | 1 | 1 | 6.6 | 6.6 |
| Axial isotropy | 4.7 | R | √3 | √0.5 | √0.5 | 1.9 | 1.9 |
| Hemispherical isotropy | 9.6 | R | √3 | √0.5 | √0.5 | 3.9 | 3.9 |
| Boundary effect | 1.0 | R | √3 | 1 | 1 | 0.6 | 0.6 |
| Linearity | 4.7 | R | √3 | 1 | 1 | 2.7 | 2.7 |
| System detection limits | 1.0 | R | √3 | 1 | 1 | 0.6 | 0.6 |
| Modulation response | 0.0 | R | √3 | 1 | 1 | 0.0 | 0.0 |
| Readout electronics | 0.3 | N | 1 | 1 | 1 | 0.3 | 0.3 |
| Response time | 0.0 | R | √3 | 1 | 1 | 0.0 | 0.0 |
| Integration time | 0.0 | R | √3 | 1 | 1 | 0.0 | 0.0 |
| RF ambient conditions-noise | 1.0 | R | √3 | 1 | 1 | 0.6 | 0.6 |
| RF ambient conditions-reflections | 1.0 | R | √3 | 1 | 1 | 0.6 | 0.6 |
| Probe positioner mech tolerance | 0.8 | R | √3 | 1 | 1 | 0.5 | 0.5 |
| Probe positioning with respect to phantom shell | 6.7 | R | √3 | 1 | 1 | 3.9 | 3.9 |
| Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation | 2.0 | R | √3 | 1 | 1 | 1.2 | 1.2 |
| **Test sample related** | | | | | | | |
| Test sample positioning | 3.3 | N | 1 | 1 | 1 | 3.3 | 3.3 |
| Device holder uncertainty | 2.8 | N | 1 | 1 | 1 | 2.8 | 2.8 |
| Output power variation –SAR draft measurement | 5.0 | R | √3 | 1 | 1 | 2.9 | 2.9 |
| SAR scaling | 2.8 | R | √3 | 1 | 1 | 1.6 | 1.6 |
| **Phantom and tissue parameters** | | | | | | | |
| Phantom shell uncertainty– shape, thickness and permittivity | 4.0 | R | √3 | 1 | 1 | 2.3 | 2.3 |
| Uncertainty in SAR correction for deviations in permittivity and conductivity | 1.9 | N | 1 | 1 | 0.84 | 1.9 | 1.6 |
| Liquid conductivity meas. | 2.5 | N | 1 | 0.78 | 0.71 | 2.0 | 1.8 |
| Liquid permittivity meas. | 2.5 | N | 1 | 0.23 | 0.26 | 0.6 | 0.7 |
| Liquid conductivity – temperature uncertainty | 1.7 | R | √3 | 0.78 | 0.71 | 0.8 | 0.7 |
| Liquid permittivity – temperature uncertainty | 0.3 | R | √3 | 0.23 | 0.26 | 0.0 | 0.0 |
| Combined standard uncertainty | | RSS | | | | 12.1 | 12.0 |
| Expanded uncertainty (95 % confidence interval) | | k=2 | | | | 24.2 | 24.0 |

# APPENDIX B - SAR PLOTS

Please refer to the attachment.

# APPENDIX C - EUT TEST POSITION PHOTOS

Please refer to the attachment.

# APPENDIX D - PROBE CALIBRATION CERTIFICATES

Please refer to the attachment.

# APPENDIX E - DIPOLE CALIBRATION CERTIFICATES

Please refer to the attachment.

*******END OF REPORT*******