TEST REPORT

Applicant:	Shenzhen Jimi IoT Co., Ltd.
Address:	3-4/F, Block A, Building #7, Shenzhen International Innovation Valley, Dashi 1st Road, Nanshan District, Shenzhen, Guangdong, China
Equipment Type:	Portable GNSS Tracker
Model Name:	P6401 NA (refer to section 2.3)
Brand Name:	Jimi IoT
FCC ID:	2AMLF-P6401NA
Test Standard:	FCC 47 CFR Part 2.1093 (refer to section 3.1)
Maximum SAR:	Body (1 g@0mm): 0.85 W/kg
Sample Arrival Date:	Apr. 27, 2025
Test Date:	May 06, 2025 - May 08, 2025
Date of Issue:	May 21, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Xu Rui **Checked by:** Zong Liyao **Approved by:** Tolan Tu (Testing Director)

Revision History

Version	Issue Date	Revisions Content
Rev. 01	May 19, 2025	Initial Issue
Rev. 02	May 21, 2025	Modify the content in Section 3.3, 8.2 and ANNEX G The original report is invalid

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1 GENERAL INFORMATION

1.1 Test Laboratory

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

1.2 Test Location

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

1.3 Test Environment Condition

Ambient Temperature	18℃ to 25℃
Ambient Relative Humidity	30% to 70%

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Shenzhen Jimi IoT Co., Ltd.
Address	3-4/F, Block A, Building #7, Shenzhen International Innovation Valley, Dashi 1st Road, Nanshan District, Shenzhen, Guangdong, China

2.2 Manufacturer Information

Manufacturer	Shenzhen Jimi IoT Co., Ltd.
Address	3-4/F, Block A, Building #7, Shenzhen International Innovation Valley, Dashi 1st Road, Nanshan District, Shenzhen, Guangdong, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Portable GNSS Tracker
Model Name Under Test	P6401 NA
Series Model Name	PL601NA, PL601N, A410, P6401, PL601
Description of Model name differentiation	All models are same with electrical parameters and internal circuit structure, but only differ in model name. (this information provided by the applicant)
Hardware Version	P6401-MB-V1.1
Software Version	P6401_P6401_WFBI_NA_V1.0.0_250331.1015
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	SP0601
	Serial No.	N/A
	Capacity	650mAh
	Rated Voltage	3.8V
	Limit Charge Voltage	4.35V

2.5 Technical Information

Network and Wireless connectivity	4G Network LTE FDD Band 2/4/5/7/12/14/17/25/26/66 LTE TDD Band 41 Bluetooth BLE GPS, BDS

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

Operating Mode	LTE; Bluetooth		
Frequency Range	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE Band 12	TX: 699 ~ 716 MHz	RX: 729 ~ 746 MHz
	LTE Band 14	TX: 788 ~ 798 MHz	RX: 758 ~ 768 MHz
	LTE Band 17	TX: 704 ~ 716 MHz	RX: 734 ~ 746 MHz
	LTE Band 25	TX: 1850 ~ 1915 MHz	RX: 1930 ~ 1995 MHz
	LTE Band 26	TX: 814 ~ 824 MHz	RX: 859 ~ 869 MHz
		TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2180 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	Bluetooth	2402 MHz ~ 2480 MHz	
Antenna Type	WIFI: PIFA Antenna Bluetooth: PIFA Antenna		
Hotspot Function	N/A		
Exposure Category	General Population/Uncontrolled exposure		
Product Type	Portable Device		
EUT Type	☒ Production unit	☐ Identical prototype	

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	ANSI/IEEE C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	FCC KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
4	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
5	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
6	KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices

3.2 Device Category and SAR Limit

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

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

Table of Exposure Limits:

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

NOTE:

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

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

3.3 Test Result Summary

3.3.1 Highest SAR

Equipment Class	Band	Maximum Scaled SAR (W/kg)	Maximum Report SAR (W/kg)
		Body (0mm)	Body (0mm)
		1g SAR	1g SAR
PCE	LTE Band 2	0.61	0.85
	LTE Band 4	0.58	
	LTE Band 5	0.59	
	LTE Band 7	0.85	
	LTE Band 12	0.55	
	LTE Band 14	0.40	
	LTE Band 17	0.51	
	LTE Band 25	0.46	
	LTE Band 26	0.49	
	LTE Band 66	0.38	
	LTE Band 41	0.55	
Limit (W/kg)		1.6	1.6
Verdict		PASS	

3.3.2 Simultaneous Transmission Results

Equipment Class	Total Exposure Ratio
PCE	0.90
DSS	0.90
TER_{limit}	1.00
Verdict	Pass

3.4 Test Uncertainty

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

The maximum 1 g SAR for the EUT in this report is 0.85 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

4 MEASUREMENT SYSTEM

4.1 Specific Absorption Rate (SAR) Definition

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

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

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

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

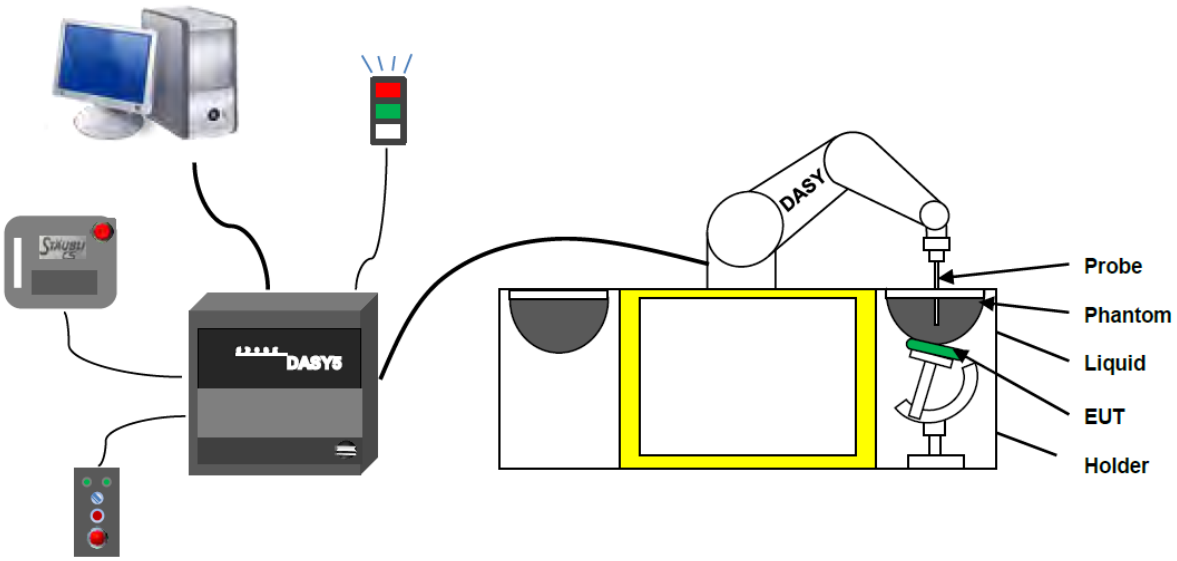
$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}\mathbf{E}^{2}}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue,

ρis the mass density of the tissue and E is the RMS electrical field strength.

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



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

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

4.2.2 Robot

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

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

4.2.3 E-Field Probe

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

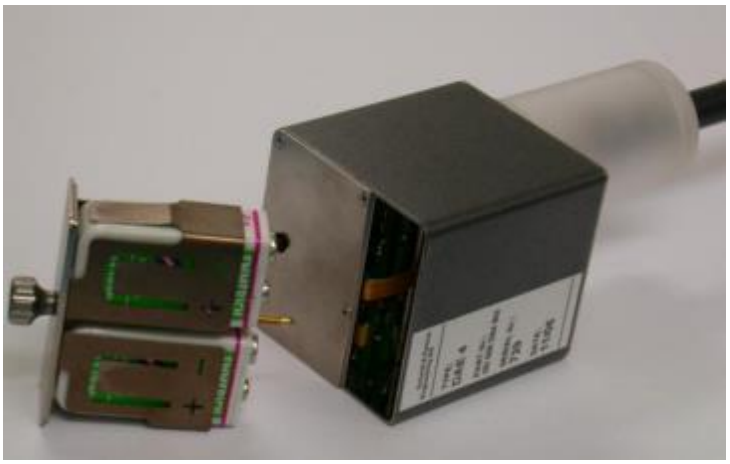
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ; ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 μW/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 9 mm) Tip diameter: 2.5 mm (Body: 10 mm) Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (EX3DV4)

E-Field Probe Calibration Process

Probe calibration is realized, in compliance with CENELEC EN 62209-1/-2 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 62209-1/2 annexe technique using reference guide at the five frequencies.

4.2.4 Data Acquisition Electronics

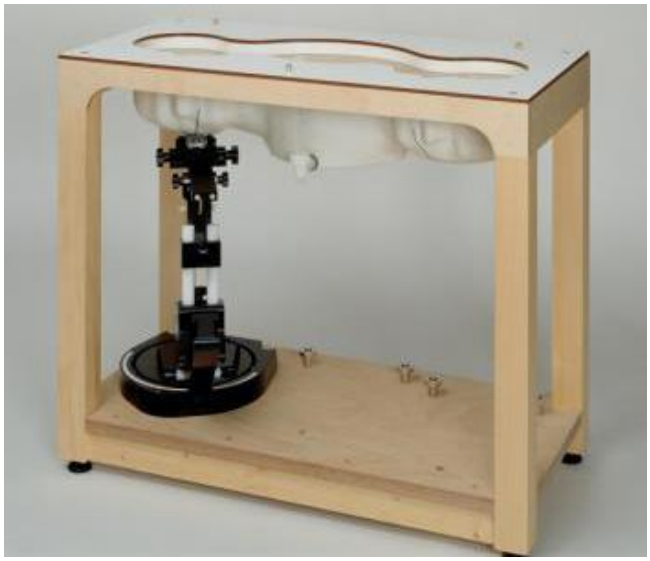
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



- Input Impedance: 200MOhm
- The Inputs: Symmetrical and Floating
- Commom Mode Rejection: Above 80dB

4.2.5 Phantoms

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



- Left hand
- Right hand
- Flat phantom

Photo of Phantom SN1858

Serial Number	Material	Length	Height
SN 1858 SAM	Vinylester, glass fiber reinforced	1000	500

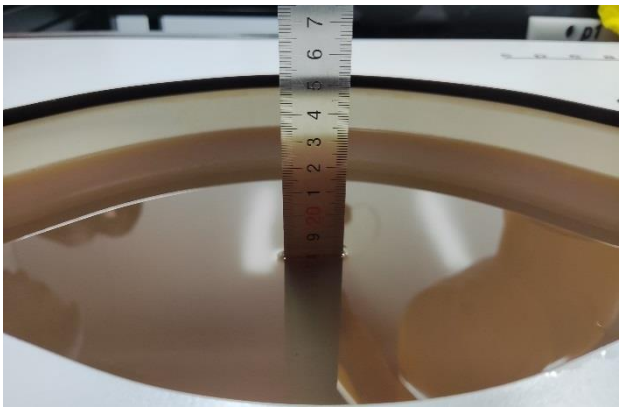
4.2.6 Device Holder

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

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

4.2.7 Simulating Liquid

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

Head Liquid Depth	Body Liquid Depth
	

The following table gives the recipes for tissue simulating liquid.

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

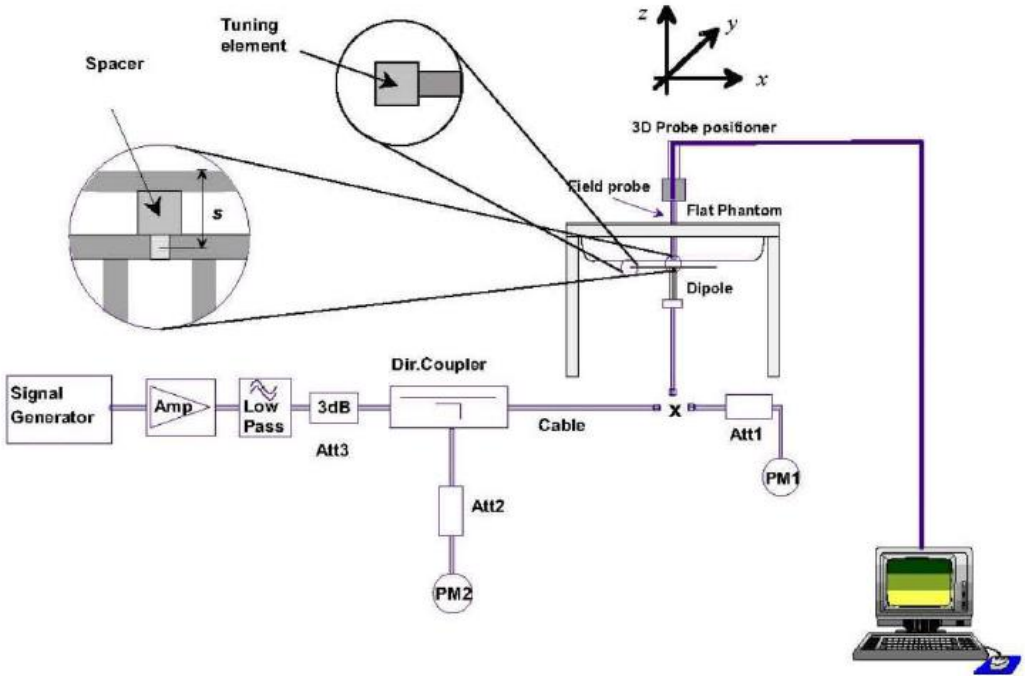
5 SYSTEM VERIFICATION

5.1 Purpose of System Check

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

5.2 System Check Setup

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



6 TEST POSITION CONFIGURATIONS

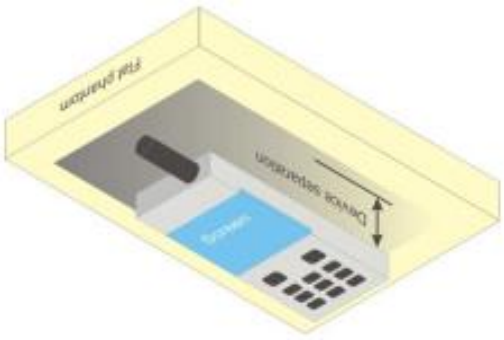
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

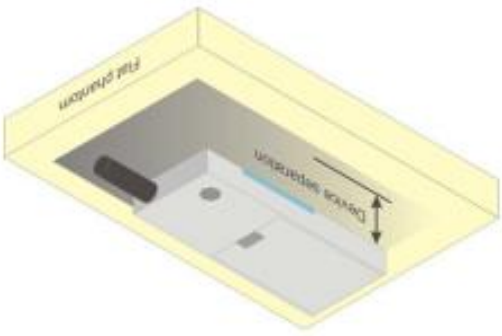
6.1 Body-worn Position Conditions

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

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

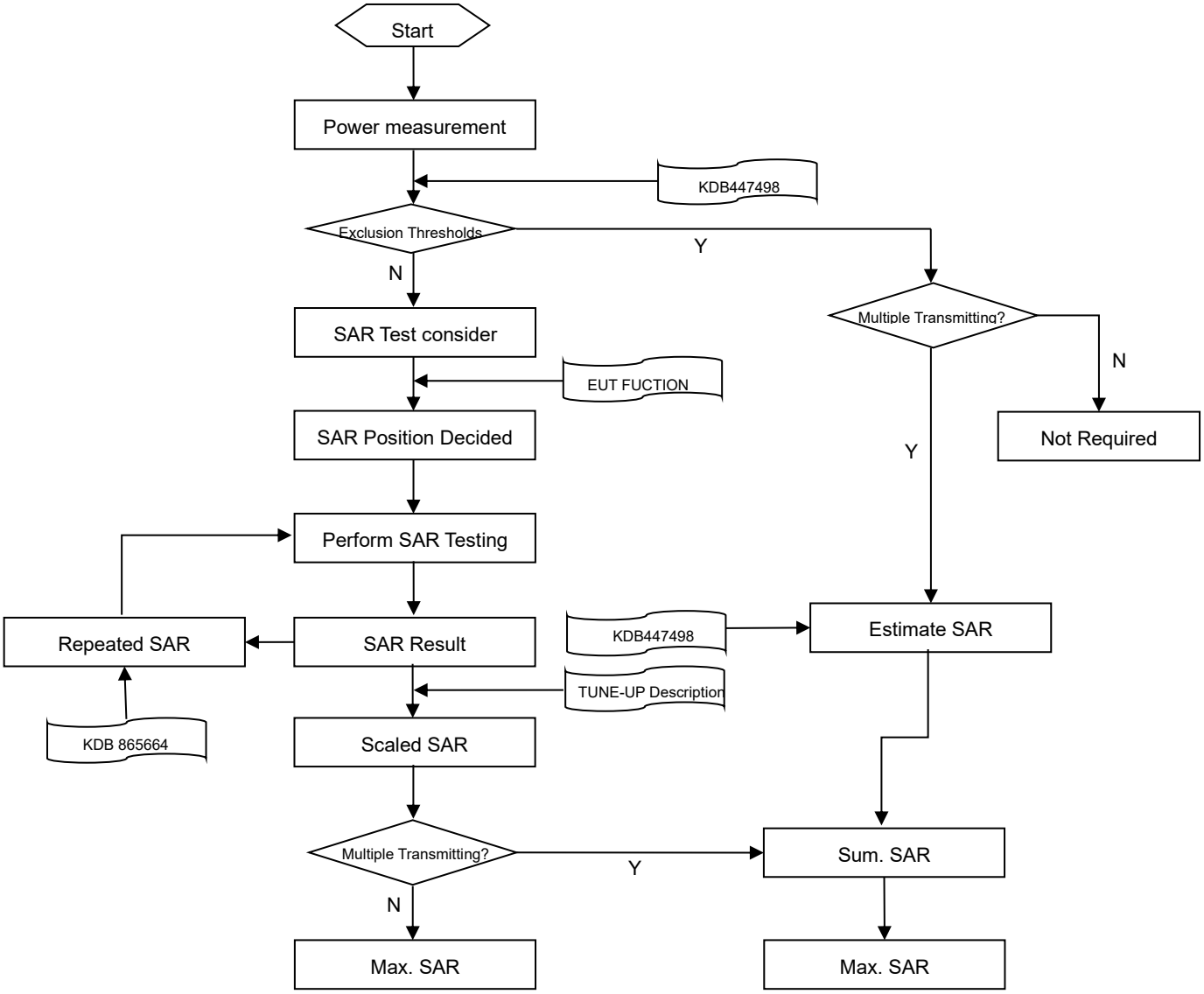
Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice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





7 MEASUREMENT PROCEDURE

7.1 Measurement Process Diagram



7.2 SAR Scan General Requirement

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

<table>
<tr><th colspan="3"></th><th>≤3GHz</th><th>>3GHz</th></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5±1 mm</td><td>½·δ·ln(2)±0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30°±1°</td><td>20°±1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx Area , Δy Area</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3–4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom</td><td>≤ 2 GHz: ≤ 8 mm
2 –3 GHz: ≤ 5 mm*</td><td>3–4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="7">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2" rowspan="3">uniform grid: Δz Zoom (n)</td><td rowspan="3">≤ 5 mm</td><td>3–4 GHz: ≤ 4 mm</td></tr>
<tr><td>4–5 GHz: ≤ 3 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="4">graded grid</td><td rowspan="3">Δz Zoom (1): between 1st two points closest to phantom surface</td><td rowspan="3">≤ 4 mm</td><td>3–4 GHz: ≤ 3 mm</td></tr>
<tr><td>4–5 GHz: ≤ 2.5 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td>Δz Zoom (n>1): between subsequent points</td><td colspan="2">≤ 1.5·Δz Zoom (n-1)</td></tr>
<tr><td rowspan="3">Minimum zoom scan volume</td><td colspan="2" rowspan="3">x, y, z</td><td rowspan="3">≥30 mm</td><td>3–4 GHz: ≥ 28 mm</td></tr>
<tr><td>4–5 GHz: ≥ 25 mm</td></tr>
<tr><td>5–6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">Note:
1. δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
2. * When zoom scan is required and the reported SAR from the area scan based 1 g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

7.3 Measurement Procedure

The following steps are used for each test position

a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
c. Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
d. Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 *32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

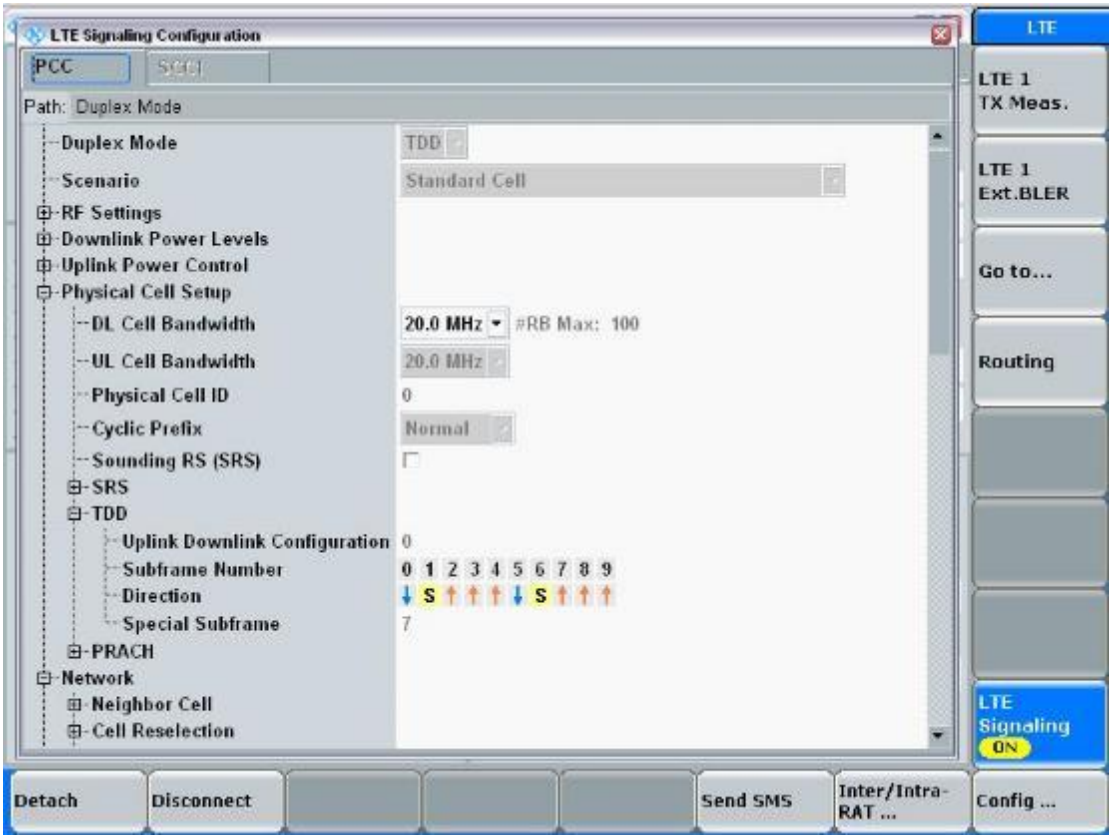
7.4 Area & Zoom Scan Procedure

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

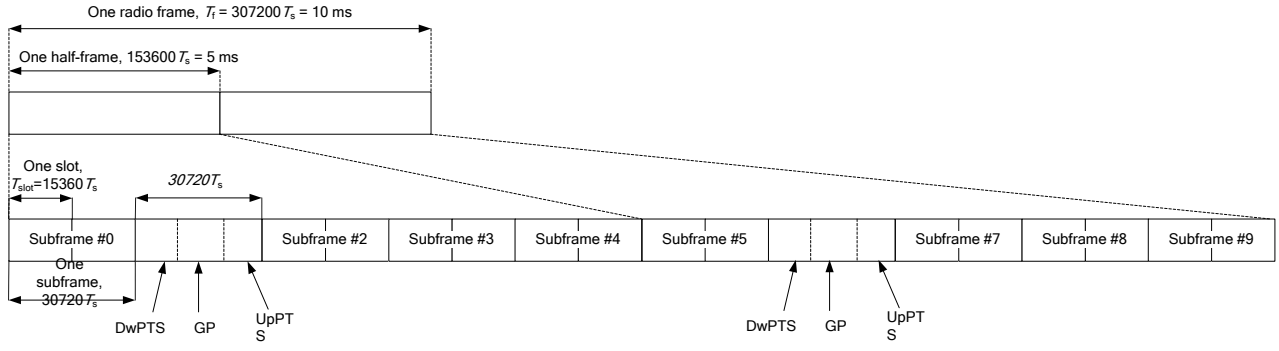
When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

7.5 LTE (TDD) Considerations

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



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



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

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

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

Special sub-frame 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·T_s	2192·T_s	2560·T_s	7680·T_s	2192·T_s	2560·T_s
1	19760·T_s			20480·T_s		
2	21592·T_s			23040·T_s		
3	24144·T_s			25600·T_s		
4	26336·T_s			7680·T_s	2560·T_s	5120·T_s
5	6592·T_s	4384·T_s	5120·T_s	20480·T_s		
6	19760·T_s			23040·T_s		
7	21592·T_s			12800·T_s		
8	24144·T_s			-	-	-
9	13168·T_s			-	-	-

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

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

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

8 CONDUCTED RF OUPUT POWER

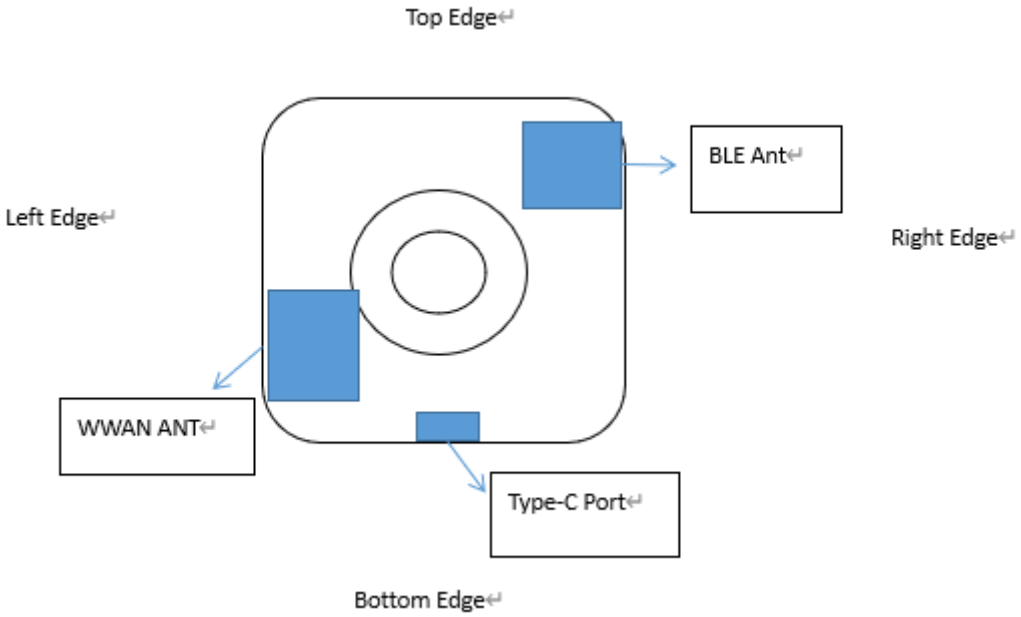
8.1 LTE

Please refer the document “BL-SZ2541441-AP.pdf”.

8.2 Bluetooth

Mode	BLE-1Mbps		
Channel	0	19	39
Frequency (MHz)	2402	2440	2480
PK power (dBm)	-2.90	-3.84	-1.73
Tune-Up Limit (dBm)	-2.00	-2.00	-1.00
SAR Test Require	NO	NO	NO
Note 1: Since Bluetooth BR mode is the maximum output power mode，SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is ≤ ¼ dB higher than the primary mode.			

9 TEST EXCLUSION CONSIDERATION



9.1 SAR Test Consideration Table

According with FCC KDB 447498 D04, Appendix B, The SAR-based exemption formula applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). The following table shows the power threshold from 5mm to 50mm.

Power Thresholds (mW)					
Frequency (MHz)	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
300	39 mW	65 mW	88 mW	110 mW	129 mW
450	22 mW	44 mW	67 mW	89 mW	112 mW
835	9 mW	25 mW	44 mW	66 mW	90 mW
1900	3 mW	12 mW	26 mW	44 mW	66 mW
2450	3 mW	10 mW	22 mW	38 mW	59 mW
3600	2 mW	8 mW	18 mW	32 mW	49 mW
5800	1 mW	6 mW	14 mW	25 mW	40 mW
Frequency (MHz)	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of 50 mm
300	148 mW	166 mW	184 mW	201 mW	217 mW
450	135 mW	158 mW	180 mW	203 mW	226 mW
835	116 mW	145 mW	175 mW	207 mW	240 mW
1900	92 mW	122 mW	157 mW	195 mW	236 mW
2450	83 mW	111 mW	143 mW	179 mW	219 mW
3600	71 mW	96 mW	125 mW	158 mW	195 mW
5800	58 mW	80 mW	106 mW	136 mW	169 mW

9.1.1 SAR Test Consideration

This host is a notebook computer, under normal use the RF exposure scenarios are shown in the table below:

RF exposure Position	RF exposure scenarios
Front Side	Body
Back Side	Body
Left Edge	Body
Right Edge	Body
Top Edge	Body
Bottom Edge	Body

Aux. Antenna Body RF exposure scenarios

Aux. Antenna		
Test Position Configurations	Mode	Bluetooth
Calculated Frequency(MHz)		2480
Front Side	Distance to User (mm)	5.00
	Max. Peak Power (dBm)	0.00
	Max. Peak Power (mW)	1.00
	Exclusion Threshold (mW)	2.72
	SAR Test Required	No
Back Side	Distance to User (mm)	5
	Max. Peak Power (dBm)	0.00
	Max. Peak Power (mW)	1.00
	Exclusion Threshold (mW)	2.72
	SAR Test Required	No
Left Edge	Distance to User (mm)	5
	Max. Peak Power (dBm)	0.00
	Max. Peak Power (mW)	1.00
	Exclusion Threshold (mW)	2.72
	SAR Test Required	No
Right Edge	Distance to User (mm)	5
	Max. Peak Power (dBm)	0.00
	Max. Peak Power (mW)	1.00
	Exclusion Threshold (mW)	2.72
	SAR Test Required	No
Top Edge	Distance to User (mm)	5
	Max. Peak Power (dBm)	0.00
	Max. Peak Power (mW)	1.00
	Exclusion Threshold (mW)	2.72
	SAR Test Required	No

Bottom Edge	Distance to User (mm)	5
	Max. Peak Power (dBm)	0.00
	Max. Peak Power (mW)	1.00
	Exclusion Threshold (mW)	2.72
	SAR Test Required	No

Note:

1. Maximum power is the source-based time-average power and represents the maximum RF output power including tune-up tolerance among production units
2. Per KDB 447498 D04, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. Per KDB 447498 D04, standalone SAR test exclusion threshold is applied; If the distance of the antenna to the user is < 5mm, 5mm is used to determine SAR exclusion threshold
4. Per KDB 447498 D04, for separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive), the threshold Pth (mW) is given by Following:

$$P_{th}(mW) = \begin{cases} ERP_{20cm}(d/20cm)^x & d \le 20cm \\ ERP_{20cm} & 20cm < d \le 40cm \end{cases}$$

where

$$x = -log_{10}\left(\frac{60}{ERP_{20cm}\sqrt{f}}\right)$$

   a. f(GHz) is the RF channel transmit frequency in GHz
   b. d is the separation distance (cm), The result is rounded to one decimal place for comparison
   c. ERP_{20cm} are determined by:

$$ERP_{20cm}(mW) = f(x) = \begin{cases} 2040f & 0.3GHz \le f < 1.5GHz \\ 3060 & 1.5GHz \le f \le 6GHz \end{cases}$$

5. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion.8. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4dB higher than those measured at the lowest data rate
6. Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
   a. When KDB Publication 447498 D04 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.
7. Per KDB 248227 D01 SAR is not required for the following U-NII-1 and U-NII-2A bands conditions.
   a. When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.
   b. When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, each band is tested independently for SAR.
8. For Limb SAR, SAR test exemption considered by applying a factor of 2.5 to the applicable power level thresholds.

10 TEST RESULT

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

10.1 LTE Band2 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	18900	1880	1	Mid	0.03	0.521	21.32	22.00	1.169	0.609	**1#**
	Back Side	0	18900	1880	1	Mid	0.17	0.470	21.32	22.00	1.169	0.549	/
	Left Edge	0	18900	1880	1	Mid	-0.09	0.252	21.32	22.00	1.169	0.294	/
	Right Edge	0	18900	1880	1	Mid	0.07	0.068	21.32	22.00	1.169	0.079	/
	Top Edge	0	18900	1880	1	Mid	-0.03	0.148	21.32	22.00	1.169	0.173	/
	Bottom Edge	0	18900	1880	1	Mid	0.02	0.311	21.32	22.00	1.169	0.364	/
	Front Side	0	18900	1880	50	Mid	0.18	0.478	20.15	21.00	1.216	0.581	/
	Back Side	0	18900	1880	50	Mid	0.04	0.429	20.15	21.00	1.216	0.522	/
	Left Edge	0	18900	1880	50	Mid	0.14	0.186	20.15	21.00	1.216	0.227	/
	Right Edge	0	18900	1880	50	Mid	-0.14	0.104	20.15	21.00	1.216	0.126	/
	Top Edge	0	18900	1880	50	Mid	-0.09	0.146	20.15	21.00	1.216	0.177	/
	Bottom Edge	0	18900	1880	50	Mid	-0.18	0.307	20.15	21.00	1.216	0.373	/

10.2 LTE Band4 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	20175	1732.5	1	Mid	0.16	0.555	22.35	22.50	1.035	0.575	**2#**
	Back Side	0	20175	1732.5	1	Mid	0.14	0.442	22.35	22.50	1.035	0.458	/
	Left Edge	0	20175	1732.5	1	Mid	0.10	0.178	22.35	22.50	1.035	0.184	/
	Right Edge	0	20175	1732.5	1	Mid	0.03	0.056	22.35	22.50	1.035	0.058	/
	Top Edge	0	20175	1732.5	1	Mid	0.10	0.105	22.35	22.50	1.035	0.109	/
	Bottom Edge	0	20175	1732.5	1	Mid	0.18	0.308	22.35	22.50	1.035	0.319	/
	Front Side	0	20175	1732.5	50	Mid	-0.19	0.507	21.05	20.50	0.881	0.446	/
	Back Side	0	20175	1732.5	50	Mid	0.02	0.415	21.05	20.50	0.881	0.365	/
	Left Edge	0	20175	1732.5	50	Mid	0.02	0.156	21.05	20.50	0.881	0.137	/
	Right Edge	0	20175	1732.5	50	Mid	0.03	0.033	21.05	20.50	0.881	0.029	/
	Top Edge	0	20175	1732.5	50	Mid	0.19	0.086	21.05	20.50	0.881	0.075	/
	Bottom Edge	0	20175	1732.5	50	Mid	0.12	0.269	21.05	20.50	0.881	0.237	/

10.3 LTE Band5 (10MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	20525	836.5	1	Mid	0.18	0.423	21.56	22.00	1.107	0.468	/
	Back Side	0	20525	836.5	1	Mid	-0.05	0.194	21.56	22.00	1.107	0.215	/
	Left Edge	0	20525	836.5	1	Mid	0.09	0.537	21.56	22.00	1.107	0.594	**3#**
	Right Edge	0	20525	836.5	1	Mid	0.18	0.046	21.56	22.00	1.107	0.051	/
	Top Edge	0	20525	836.5	1	Mid	0.19	0.077	21.56	22.00	1.107	0.085	/
	Bottom Edge	0	20525	836.5	1	Mid	0.14	0.078	21.56	22.00	1.107	0.086	/
	Front Side	0	20525	836.5	25	Mid	0.06	0.328	20.46	21.00	1.132	0.371	/
	Back Side	0	20525	836.5	25	Mid	0.04	0.213	20.46	21.00	1.132	0.241	/
	Left Edge	0	20525	836.5	25	Mid	0.05	0.513	20.46	21.00	1.132	0.581	/
	Right Edge	0	20525	836.5	25	Mid	-0.13	0.041	20.46	21.00	1.132	0.047	/
	Top Edge	0	20525	836.5	25	Mid	0.04	0.046	19.51	20.00	1.119	0.051	/
	Bottom Edge	0	20525	836.5	25	Mid	-0.17	0.053	19.51	20.00	1.119	0.059	/

10.4LTE Band7 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	21100	2535	1	Mid	-0.12	0.355	20.70	21.00	1.072	0.380	/
	Back Side	0	21100	2535	1	Mid	-0.16	0.331	20.70	21.00	1.072	0.355	/
	Left Edge	0	21100	2535	1	Mid	-0.17	0.789	20.70	21.00	1.072	0.845	**4#**
	Right Edge	0	21100	2535	1	Mid	0.14	0.154	20.70	21.00	1.072	0.165	/
	Top Edge	0	21100	2535	1	Mid	0.09	0.108	20.70	21.00	1.072	0.115	/
	Bottom Edge	0	21100	2535	1	Mid	-0.08	0.374	20.70	21.00	1.072	0.401	/
	Front Side	0	21100	2535	50	Mid	-0.03	0.296	19.42	20.00	1.143	0.338	/
	Back Side	0	21100	2535	50	Mid	-0.11	0.285	19.42	20.00	1.143	0.326	/
	Left Edge	0	21100	2535	50	Mid	0.10	0.613	19.42	20.00	1.143	0.700	/
	Right Edge	0	21100	2535	50	Mid	0.16	0.106	19.42	20.00	1.143	0.122	/
	Top Edge	0	21100	2535	50	Mid	0.08	0.096	19.42	20.00	1.143	0.110	/
	Bottom Edge	0	21100	2535	50	Mid	0.07	0.258	19.42	20.00	1.143	0.295	/
	Left Edge	0	20850	2510	1	Low	0.12	0.759	20.79	21.00	1.050	0.797	/
	Left Edge	0	21350	2560	1	High	-0.02	0.628	20.41	21.00	1.146	0.719	/
	Left Edge	0	20850	2510	50	Low	-0.02	0.613	19.51	20.00	1.119	0.686	/
	Left Edge	0	21350	2560	50	High	0.01	0.626	19.35	20.00	1.161	0.727	/
	Left Edge	0	21100	2535	100	Mid	-0.19	0.602	20.00	20.00	1.000	0.602	/

10.5LTE Band12 (10MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	23095	707.5	1	Mid	0.14	0.452	22.30	22.50	1.047	0.473	/
	Back Side	0	23095	707.5	1	Mid	-0.12	0.225	22.30	22.50	1.047	0.236	/
	Left Edge	0	23095	707.5	1	Mid	-0.04	0.527	22.30	22.50	1.047	0.552	5#
	Right Edge	0	23095	707.5	1	Mid	-0.18	0.039	22.30	22.50	1.047	0.041	/
	Top Edge	0	23095	707.5	1	Mid	0.01	0.073	22.30	22.50	1.047	0.077	/
	Bottom Edge	0	23095	707.5	1	Mid	-0.01	0.062	22.30	22.50	1.047	0.065	/
	Front Side	0	23095	707.5	50	Mid	-0.19	0.428	20.64	21.00	1.086	0.465	/
	Back Side	0	23095	707.5	50	Mid	0.11	0.215	20.64	21.00	1.086	0.234	/
	Left Edge	0	23095	707.5	50	Mid	-0.14	0.439	20.64	21.00	1.086	0.477	/
	Right Edge	0	23095	707.5	50	Mid	0.09	0.059	20.64	21.00	1.086	0.064	/
	Top Edge	0	23095	707.5	50	Mid	-0.08	0.043	20.64	21.00	1.086	0.047	/
	Bottom Edge	0	23095	707.5	50	Mid	-0.11	0.065	20.64	21.00	1.086	0.071	/

10.6 LTE Band14 (10MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	23330	793	1	Mid	-0.13	0.281	21.87	22.00	1.030	0.289	/
	Back Side	0	23330	793	1	Mid	0.04	0.152	21.87	22.00	1.030	0.157	/
	Left Edge	0	23330	793	1	Mid	-0.05	0.390	21.87	22.00	1.030	0.402	6#
	Right Edge	0	23330	793	1	Mid	-0.03	0.046	21.87	22.00	1.030	0.047	/
	Top Edge	0	23330	793	1	Mid	0.12	0.072	21.87	22.00	1.030	0.074	/
	Bottom Edge	0	23330	793	1	Mid	0.07	0.071	21.87	22.00	1.030	0.073	/
	Front Side	0	23330	793	50	Mid	-0.10	0.277	20.71	21.00	1.069	0.296	/
	Back Side	0	23330	793	50	Mid	-0.14	0.144	20.71	21.00	1.069	0.154	/
	Left Edge	0	23330	793	50	Mid	-0.13	0.329	20.71	21.00	1.069	0.351	/
	Right Edge	0	23330	793	50	Mid	0.09	0.032	20.71	21.00	1.069	0.035	/
	Top Edge	0	23330	793	50	Mid	0.11	0.072	20.71	21.00	1.069	0.076	/
	Bottom Edge	0	23330	793	50	Mid	0.08	0.069	20.71	21.00	1.069	0.074	/

10.7 LTE Band17 (10MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	23790	710	1	Mid	-0.07	0.245	22.11	22.50	1.094	0.268	/
	Back Side	0	23790	710	1	Mid	-0.17	0.116	22.11	22.50	1.094	0.126	/
	Left Edge	0	23790	710	1	Mid	-0.07	0.463	22.11	22.50	1.094	0.507	7#
	Right Edge	0	23790	710	1	Mid	0.05	0.026	22.11	22.50	1.094	0.029	/
	Top Edge	0	23790	710	1	Mid	0.07	0.059	22.11	22.50	1.094	0.065	/
	Bottom Edge	0	23790	710	1	Mid	0.10	0.053	22.11	22.50	1.094	0.058	/
	Front Side	0	23790	710	50	Mid	-0.08	0.220	20.96	21.50	1.132	0.249	/
	Back Side	0	23790	710	50	Mid	-0.10	0.096	20.96	21.50	1.132	0.109	/
	Left Edge	0	23790	710	50	Mid	-0.02	0.424	20.96	21.50	1.132	0.481	/
	Right Edge	0	23790	710	50	Mid	-0.16	0.022	20.96	21.50	1.132	0.024	/
	Top Edge	0	23790	710	50	Mid	0.14	0.045	20.96	21.50	1.132	0.051	/
	Bottom Edge	0	23790	710	50	Mid	-0.15	0.213	20.96	21.50	1.132	0.241	/

10.8 LTE Band25 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	26365	1882.5	1	Mid	-0.15	0.443	21.30	21.50	1.047	0.464	8#
	Back Side	0	26365	1882.5	1	Mid	0.18	0.379	21.30	21.50	1.047	0.397	/
	Left Edge	0	26365	1882.5	1	Mid	0.12	0.179	21.30	21.50	1.047	0.187	/
	Right Edge	0	26365	1882.5	1	Mid	-0.14	0.096	21.30	21.50	1.047	0.101	/
	Top Edge	0	26365	1882.5	1	Mid	0.03	0.122	21.30	21.50	1.047	0.127	/
	Bottom Edge	0	26365	1882.5	1	Mid	-0.01	0.245	21.30	21.50	1.047	0.256	/
	Front Side	0	26365	1882.5	50	Mid	-0.14	0.424	20.24	20.50	1.062	0.451	/
	Back Side	0	26365	1882.5	50	Mid	-0.14	0.360	20.24	20.50	1.062	0.382	/
	Left Edge	0	26365	1882.5	50	Mid	-0.15	0.167	20.24	20.50	1.062	0.177	/
	Right Edge	0	26365	1882.5	50	Mid	0.01	0.095	20.24	20.50	1.062	0.101	/
	Top Edge	0	26365	1882.5	50	Mid	-0.13	0.111	20.24	20.50	1.062	0.118	/
	Bottom Edge	0	26365	1882.5	50	Mid	-0.10	0.235	20.24	20.50	1.062	0.249	/

10.9 LTE Band26 (15MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	26865	831.5	1	Mid	-0.15	0.376	22.06	22.50	1.107	0.417	/
	Back Side	0	26865	831.5	1	Mid	-0.03	0.195	22.06	22.50	1.107	0.216	/
	Left Edge	0	26865	831.5	1	Mid	-0.19	0.438	22.06	22.50	1.107	0.485	9#
	Right Edge	0	26865	831.5	1	Mid	0.06	0.070	22.06	22.50	1.107	0.077	/
	Top Edge	0	26865	831.5	1	Mid	-0.05	0.169	22.06	22.50	1.107	0.187	/
	Bottom Edge	0	26865	831.5	1	Mid	0.11	0.173	22.06	22.50	1.107	0.191	/
	Front Side	0	26865	831.5	50	Mid	-0.03	0.365	20.85	21.50	1.161	0.424	/
	Back Side	0	26865	831.5	50	Mid	0.16	0.186	20.85	21.50	1.161	0.216	/
	Left Edge	0	26865	831.5	50	Mid	0.06	0.413	20.85	21.50	1.161	0.479	/
	Right Edge	0	26865	831.5	50	Mid	0.17	0.071	20.85	21.50	1.161	0.082	/
	Top Edge	0	26865	831.5	50	Mid	0.10	0.168	20.85	21.50	1.161	0.195	/
	Bottom Edge	0	26865	831.5	50	Mid	0.15	0.172	20.85	21.50	1.161	0.200	/

10.10 LTE Band66 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	132322	1745	1	Mid	0.03	0.343	21.57	22.00	1.104	0.379	10#
	Back Side	0	132322	1745	1	Mid	0.16	0.289	21.57	22.00	1.104	0.319	/
	Left Edge	0	132322	1745	1	Mid	0.05	0.177	21.57	22.00	1.104	0.196	/
	Right Edge	0	132322	1745	1	Mid	0.19	0.087	21.57	22.00	1.104	0.096	/
	Top Edge	0	132322	1745	1	Mid	0.01	0.066	21.57	22.00	1.104	0.073	/
	Bottom Edge	0	132322	1745	1	Mid	0.01	0.201	21.57	22.00	1.104	0.221	/
	Front Side	0	132322	1745	50	Mid	-0.11	0.298	19.99	21.00	1.262	0.376	/
	Back Side	0	132322	1745	50	Mid	-0.12	0.246	19.99	21.00	1.262	0.311	/
	Left Edge	0	132322	1745	50	Mid	0.15	0.151	19.99	21.00	1.262	0.190	/
	Right Edge	0	132322	1745	50	Mid	-0.03	0.082	19.99	21.00	1.262	0.104	/
	Top Edge	0	132322	1745	50	Mid	-0.16	0.044	19.99	21.00	1.262	0.055	/
	Bottom Edge	0	132322	1745	50	Mid	0.13	0.190	19.99	21.00	1.262	0.240	/

10.11 LTE Band41 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-power(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body													
QPSK	Front Side	0	40620	2593	1	Mid	0.05	0.160	21.42	22.00	1.143	0.183	/
	Back Side	0	40620	2593	1	Mid	0.12	0.235	21.42	22.00	1.143	0.268	/
	Left Edge	0	40620	2593	1	Mid	-0.16	0.478	21.42	22.00	1.143	0.546	11#
	Right Edge	0	40620	2593	1	Mid	0.07	0.098	21.42	22.00	1.143	0.113	/
	Top Edge	0	40620	2593	1	Mid	-0.06	0.091	21.42	22.00	1.143	0.104	/
	Bottom Edge	0	40620	2593	1	Mid	-0.01	0.201	21.42	22.00	1.143	0.230	/
	Front Side	0	40620	2593	50	Mid	-0.19	0.138	20.24	21.00	1.191	0.165	/
	Back Side	0	40620	2593	50	Mid	-0.03	0.192	20.24	21.00	1.191	0.228	/
	Left Edge	0	40620	2593	50	Mid	-0.12	0.433	20.24	21.00	1.191	0.516	/
	Right Edge	0	40620	2593	50	Mid	-0.01	0.093	20.24	21.00	1.191	0.111	/
	Top Edge	0	40620	2593	50	Mid	0.15	0.086	20.24	21.00	1.191	0.103	/
	Bottom Edge	0	40620	2593	50	Mid	0.05	0.180	20.24	21.00	1.191	0.214	/

11 SAR Measurement Variability

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

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is >= 0.80 W/kg, repeat that measurement once.
3. If the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20, or when the original or repeated measurement is >= 1.45 W/kg, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20, and the original, first or second repeated measurement is >= 1.5 W/kg, perform a third repeated measurement.
5. Note: For 1g SAR, the highest measured 1g SAR is 0.789＜0.80 W/kg, repeated measurement is not required.

12 SIMULTANEOUS TRANSMISSION

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

According KDB 447498 D04, simultaneous transmission:

a) SPLSR = (SAR1 + SAR2)^1.5 / R_i (min. separation distance, mm), and the peak separation distance is determined from the square root of [$(x1-x2)^2$ + $(y1-y2)^2$ + $(z1-z2)^2$], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
SAR1 is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition.
SAR2 is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition as the first.

b) If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.

c) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.

12.1 Simultaneous Transmission Mode Considerations

No.	Simultaneous Tx Combination	Body-worn
1	WWAN + BT	Yes
Note: 1. The maximum SAR summation is calculated based on the same configuration and test position.		

12.2 Exposure Ratio of Simultaneous Transmission

12.2.1 Simultaneous Transmission Exposure Ratio Evaluation for WWAN and Bluetooth

Mode	f(Ghz)	Exposure Ratio	TER	Verdict
WWLAN	2.535	0.53	**0.90**	Pass
Bluetooth	2.48	0.37		

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY5	52.8.8.1222	N/A	N/A
750MHz Validation Dipole	Speag	D750V3	SN: 1208	2024/08/19	2027/08/18
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2024/05/08	2027/05/07
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2024/05/08	2027/05/07
1950MHz Validation Dipole	Speag	D1950V3	SN: 1240	2024/08/22	2027/08/21
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2024/05/08	2027/05/07
Data Acquisition Electronics	Speag	DAE4	SN: 878	2025/03/05	2026/03/04
E-Field Probe	Speag	EX3DV4	SN: 7893	2024/09/05	2025/09/04
Signal Generator	Keysight	N5173B	MY62150163	2024/08/12	2025/08/11
Power Meter	R&S	NRVD-B2	835843/014	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z4	100381	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z2	100211	2024/08/08	2025/08/07
Wireless Communication Test Set	Anritsu	MT8820C	6201502974	2024/08/01	2025/07/31
Network Analyzer	Agilent	E5071C	MY46103472	2024/09/11	2025/09/10
Thermometer	Elitech	RC-4HC	EF7216002985	2024/10/31	2025/10/30
Thermometer	Elitech	RC-4HC	EF720B004811	2024/10/31	2025/10/30
Power Amplifier	Mini-Circuits	ZVA-183W-S+	932502132	N/A	N/A
Dielectric Probe Kit	Speag	DAK3.5	SN: 1312	N/A	N/A
Phantom	Speag	SAM	SN: 1858	N/A	N/A
Attenuator	COM-MW	ZA-S1-31	1305003187	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

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

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

ANNEX A SIMULATING LIQUID VERIFICATION RESULT

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

Body liquid

Date	Liquid Type	Fre. (MHz)	Temp. (℃)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ε)	Target Conductivity (σ) (S/m)	Target Permittivity (ε)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2025.05.06	Body	750	21.3	0.91	41.77	0.89	41.94	2.25	-0.41
2025.05.06	Body	835	21.3	0.90	41.94	0.90	41.50	0.00	1.06
2025.05.07	Body	1750	21.2	1.38	40.02	1.37	40.08	0.73	-0.15
2025.05.07	Body	1950	21.2	1.40	39.89	1.40	40.00	0.00	-0.28
2025.05.08	Body	2600	21.4	1.97	38.64	1.96	39.01	0.51	-0.95
Note: The tolerance limit of Conductivity and Permittivity is± 5%.									

ANNEX B SYSTEM CHECK RESULT

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

Body liquid 1g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2025.05.06	Body	750	100	0.87	8.74	8.46	3.31
2025.05.06	Body	835	100	0.94	9.42	9.74	-3.29
2025.05.07	Body	1750	100	3.78	37.80	37.00	2.16
2025.05.07	Body	1950	100	4.34	43.40	41.70	4.08
2025.05.08	Body	2600	100	5.48	54.80	55.90	-1.97
Note: The tolerance limit of System validation ±10%.							

System Performance Check Data (750MHz)

Date: 2025.05.06

Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 750 MHz; σ = 0.905 S/m; ε_r = 41.774; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(8.92, 9.23, 9.45); Calibrated: 2024.09.05;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2024.03.04=5
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: TP:1858
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW750/Area Scan (31x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.958 W/kg

CW750/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 32.35 V/m; Power Drift = 0.04 dB

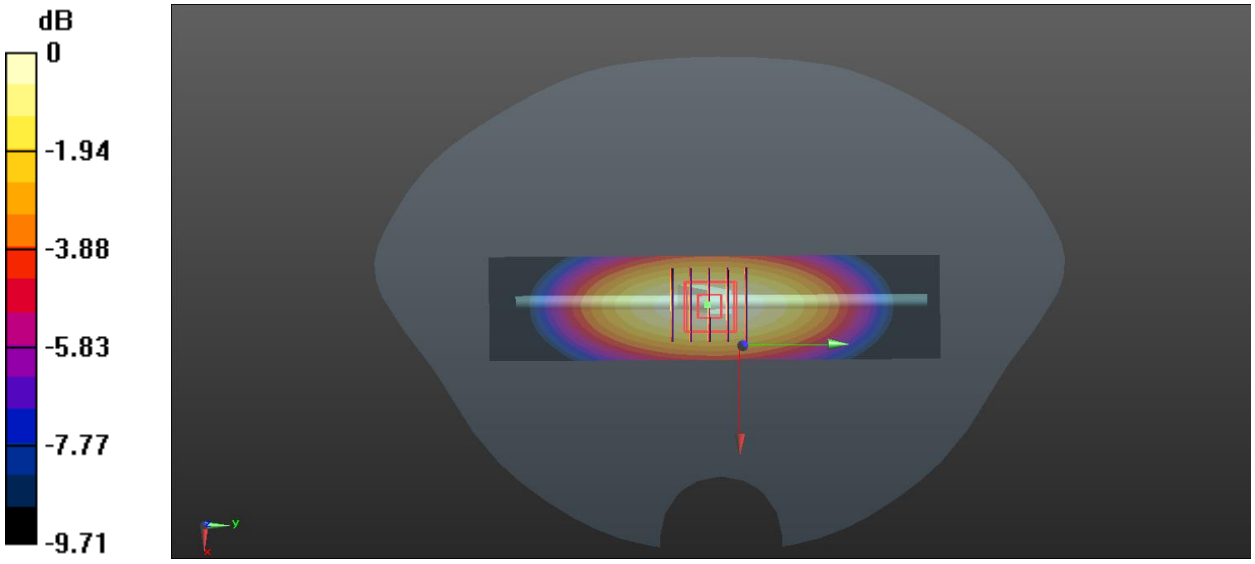
Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.874 W/kg; SAR(10 g) = 0.0.543 W/kg

Smallest distance from peaks to all points 3 dB below = 15.5 mm

Ratio of SAR at M2 to SAR at M1 = 58.2%

Maximum value of SAR (measured) = 0.948 W/kg



0 dB = 0.948 W/kg

System Performance Check Data (835MHz)

Date: 2025.05.06

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

Medium parameters used (interpolated): f = 835 MHz; σ = 0.897 S/m; ε_r = 41.942; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(8.85, 9.15, 9.38); Calibrated: 2024.09.05;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2024.03.05
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: TP:1858
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW835/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.09 W/kg

CW835/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 34.12 V/m; Power Drift = -0.07 dB

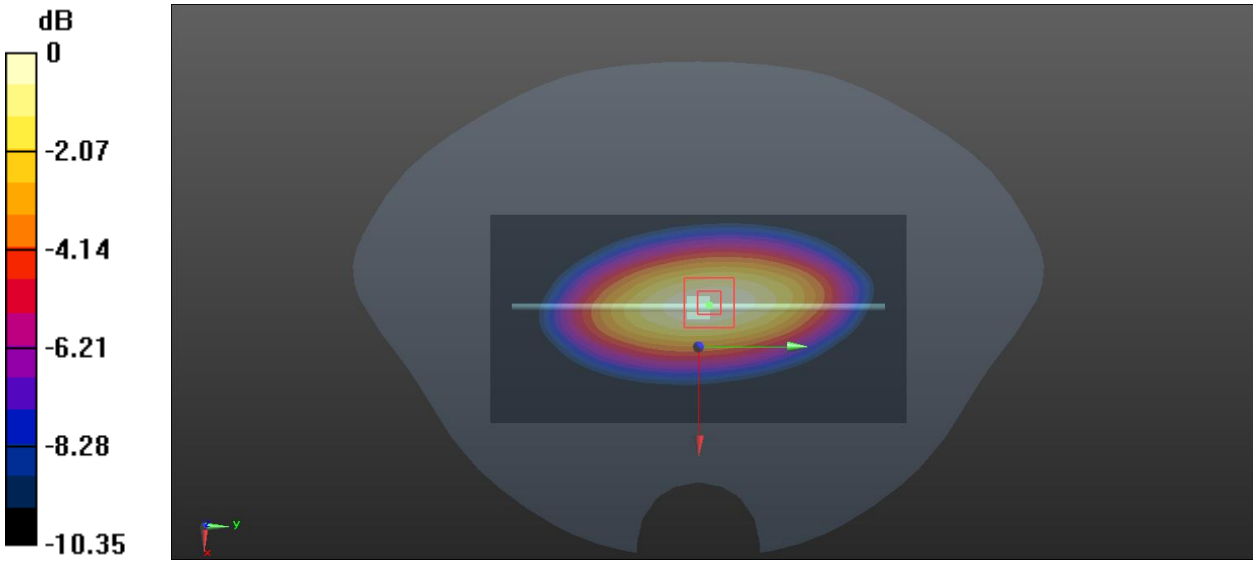
Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.942 W/kg; SAR(10 g) = 0.648 W/kg

Smallest distance from peaks to all points 3 dB below = 16.3 mm

Ratio of SAR at M2 to SAR at M1 = 68%

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



0 dB = 1.13 W/kg

System Performance Check Data (1750MHz)

Date: 2025.05.07

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

Medium parameters used: f = 1750 MHz; σ = 1.381 S/m; ε_r = 40.017; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.1℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(7.57, 7.83, 8.02); Calibrated: 2024.09.05;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2024.03.05
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: TP:1858
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW1750/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 4.15 W/kg

CW1750/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.35 V/m; Power Drift = -0.13 dB

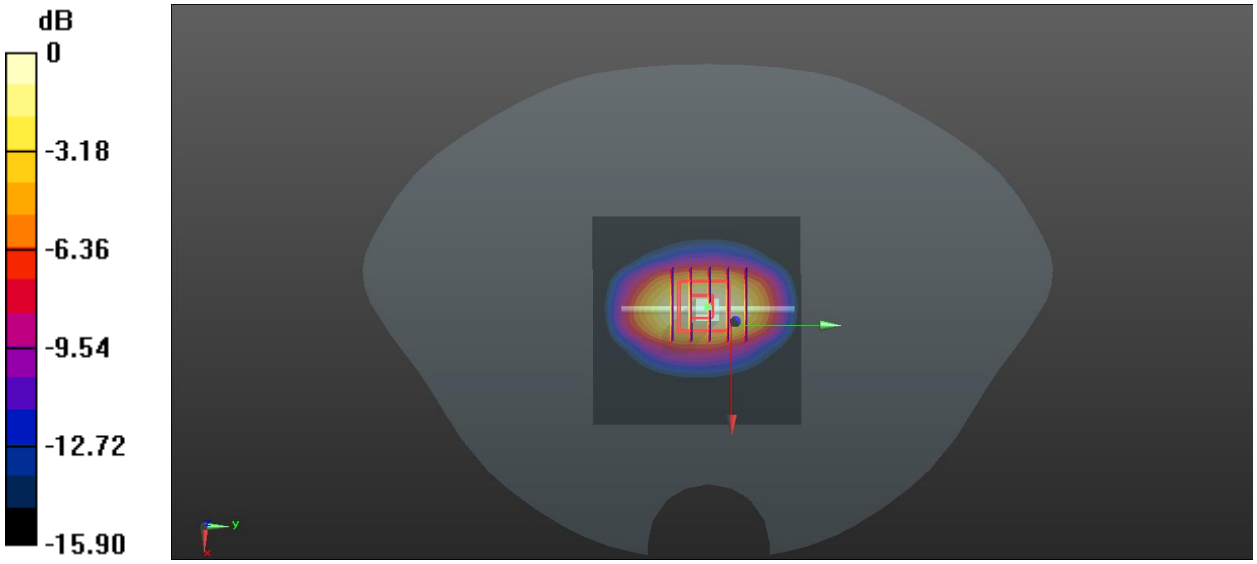
Peak SAR (extrapolated) = 6.15 W/kg

SAR(1 g) = 3.78 W/kg; SAR(10 g) = 2.05 W/kg

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 58.1%

Maximum value of SAR (measured) = 3.45 W/kg



0 dB = 3.45 W/kg

System Performance Check Data (1950MHz)

Date: 2025.05.07

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

Medium parameters used: f = 1950 MHz; σ = 1.401 S/m; ε_r = 39.893; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.1℃ Liquid Temperature:21.2℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(7.34, 7.59, 7.78); Calibrated: 2024.09.05;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2024.03.05
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: TP:1858
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW1950/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 5.15 W/kg

CW1950/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 62.35 V/m; Power Drift = -0.08 dB

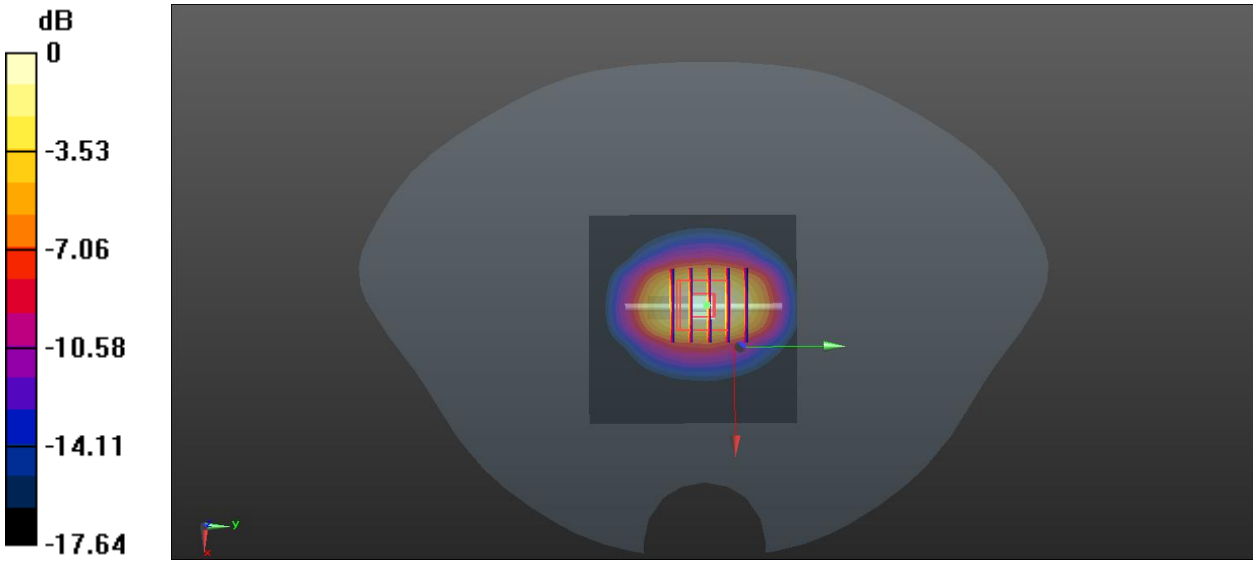
Peak SAR (extrapolated) = 7.48 W/kg

SAR(1 g) = 4.34 W/kg; SAR(10 g) = 2.31 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 52.7%

Maximum value of SAR (measured) = 4.13 W/kg



0 dB = 4.13 W/kg

System Performance Check Data (2600MHz)

Date: 2025.05.08

Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2600 MHz; σ = 1.969 S/m; ε_r = 38.642; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(7.06, 7.30, 7.48); Calibrated: 2024.09.05;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2024.03.05
- Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: TP:1858
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW2600/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 6.12 W/kg

CW2600/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.31 V/m; Power Drift = 0.14 dB

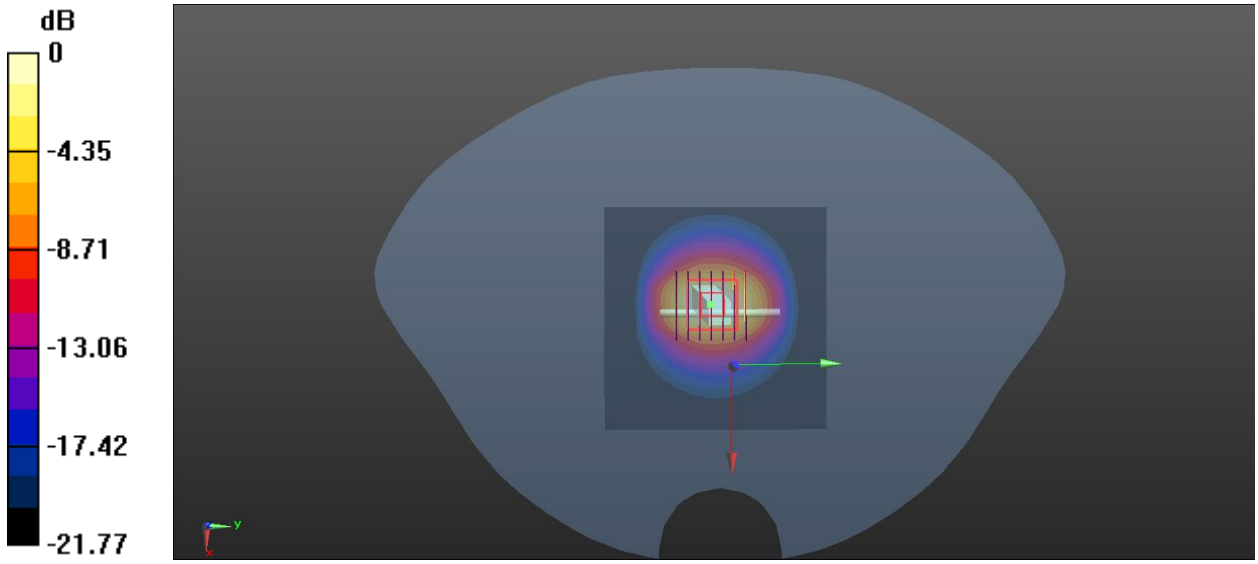
Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 5.48 W/kg; SAR(10 g) = 2.41 W/kg

Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 51.8%

Maximum value of SAR (measured) = 6.15 W/kg



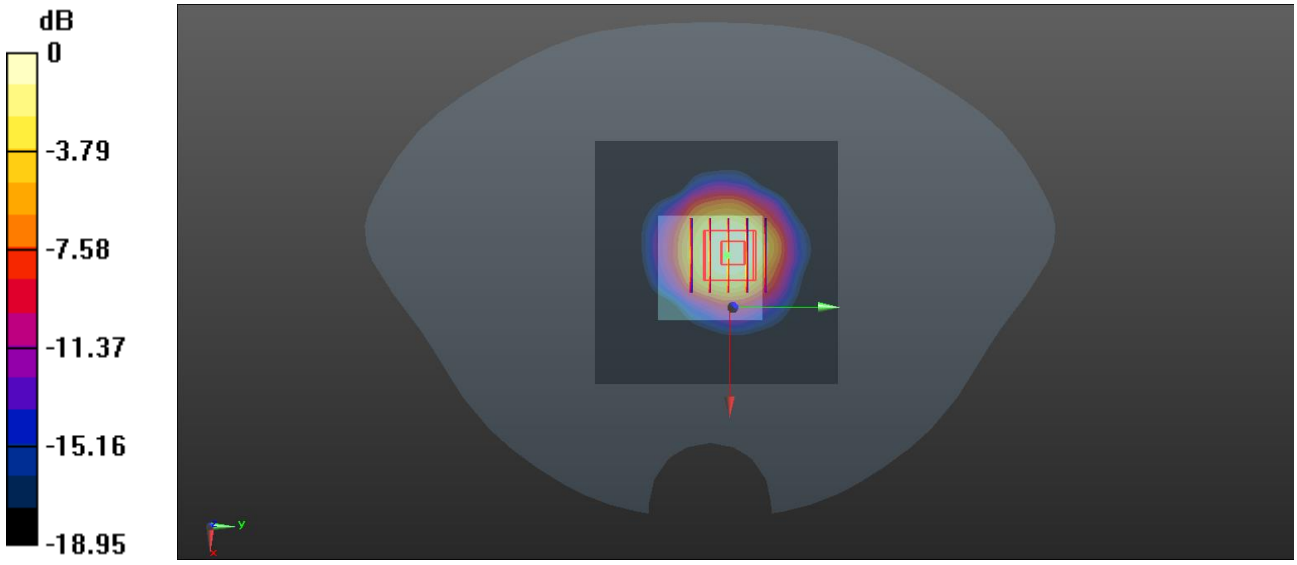
0 dB = 6.15 W/kg

ANNEX C TEST DATA

Meas.1 Body Plane with Front Side 0mm on Middle Channel in LTE Band 2 mode with Antenna 1
Date: 2025.05.07
Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1880 MHz; σ = 1.395 S/m; ε_r = 39.982; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.1℃ Liquid Temperature:21.2℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(7.34, 7.59, 7.78); Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch18900/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.614 W/kg

Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.43 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.917 W/kg
SAR(1 g) = 0.521 W/kg; SAR(10 g) = 0.289 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 67.8%
Maximum value of SAR (measured) = 0.554 W/kg

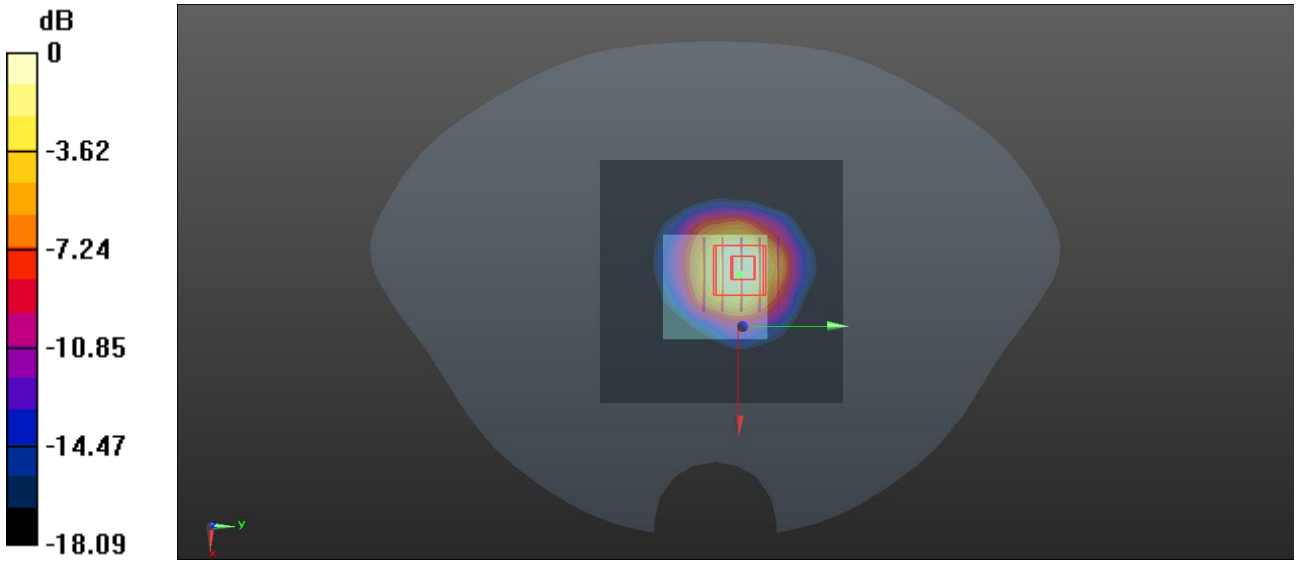


0 dB = 0.554 W/kg

Meas.2 Body Plane with Front Side 0mm on Middle Channel in LTE Band 4 mode with Antenna 1
Date: 2025.05.07
Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.360 S/m; ε_r = 40.272; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.1℃ Liquid Temperature:21.2℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(7.57, 7.83, 8.02) @ 1732.5 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20175/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.634 W/kg

Ch20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.99 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.999 W/kg
SAR(1 g) = 0.555 W/kg; SAR(10 g) = 0.300 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 66.5%
Maximum value of SAR (measured) = 0.592 W/kg



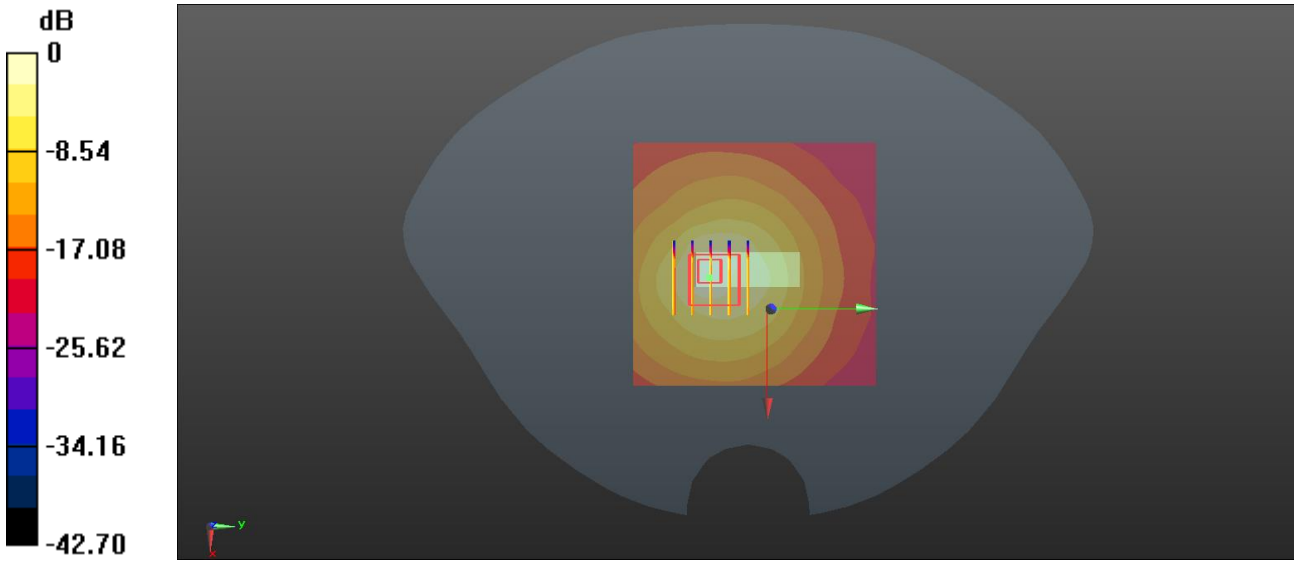
0 dB = 0.592 W/kg

Meas.3 Body Plane with Left Side 0mm on Middle Channel in LTE Band 5 mode with Antenna 1
Date: 2025.05.06
Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.899 S/m; ε_r = 41.884; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.4℃ Liquid Temperature:21.3℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(8.85, 9.15, 9.38) @ 836.5 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20525/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.410 W/kg

Ch20525/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.50 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 2.18 W/kg
SAR(1 g) = 0.537 W/kg; SAR(10 g) = 0.191 W/kg
Smallest distance from peaks to all points 3 dB below = 8.5 mm
Ratio of SAR at M2 to SAR at M1 = 42.1%
Maximum value of SAR (measured) = 0.461 W/kg

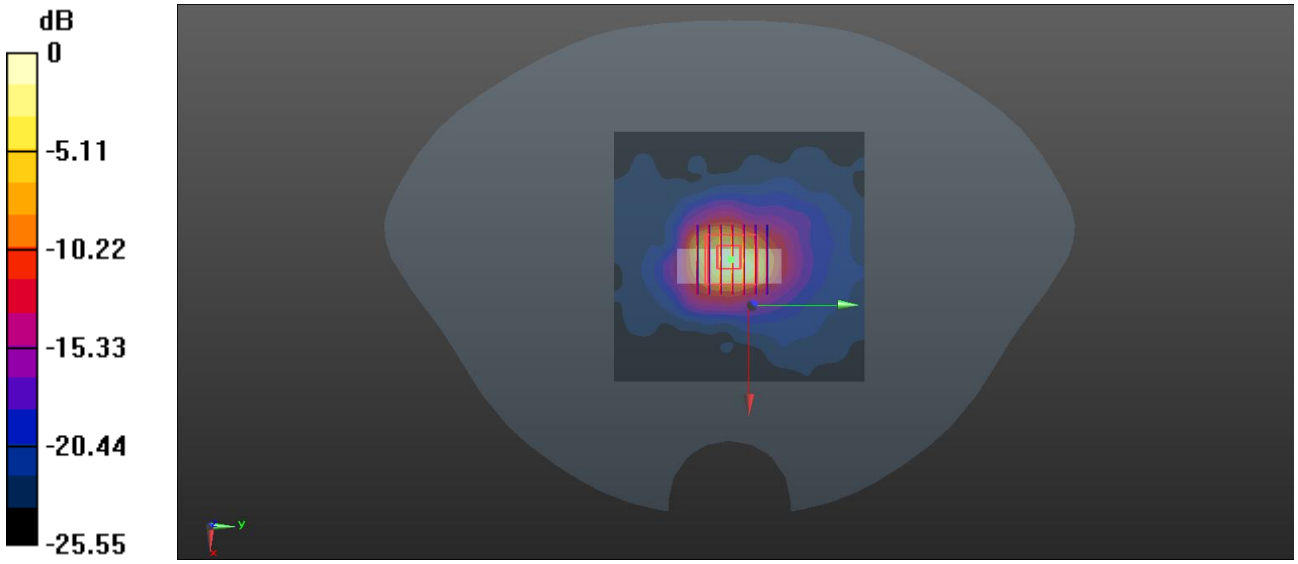


0 dB = 0.461 W/kg

Meas.4 Body Plane with Left Side 0mm on Middle Channel in LTE Band 7 mode with Antenna 1
Date: 2025.05.08
Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2535 MHz; σ = 1.905 S/m; ε_r = 38.985; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.5℃ Liquid Temperature:21.4℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(7.06, 7.30, 7.48) @ 2535 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21100/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.814 W/kg

Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.13 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 2.19 W/kg
SAR(1 g) = 0.798 W/kg; SAR(10 g) = 0.277 W/kg
Smallest distance from peaks to all points 3 dB below = 5.7 mm
Ratio of SAR at M2 to SAR at M1 = 44.9%
Maximum value of SAR (measured) = 1.01 W/kg

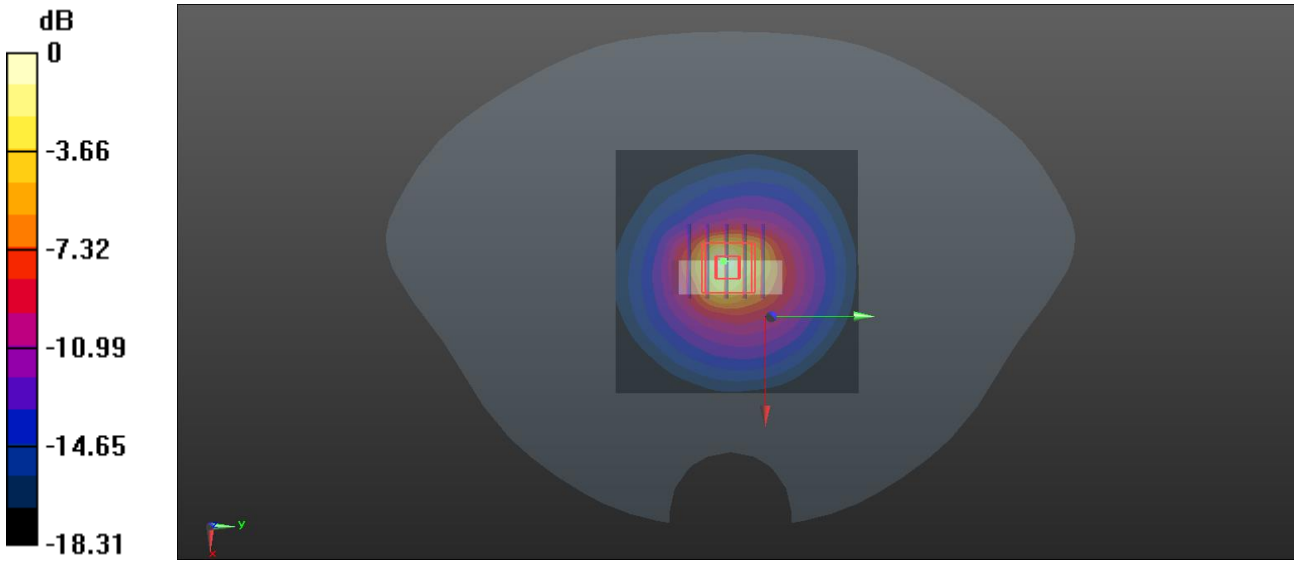


0 dB = 1.01 W/kg

Meas.5 Body Plane with Left Side 0mm on Middle Channel in LTE Band 12 mode with Antenna 1
Date: 2025.05.06
Communication System Band: Band 12, E-UTRA/FDD (698.0 - 716.0 MHz); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.886S/m; ε_r = 42.36; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.4℃ Liquid Temperature:21.3℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(8.92, 9.23, 9.45) @ 707.5 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23095/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.493 W/kg

Ch23095/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.60 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.98 W/kg
SAR(1 g) = 0.527 W/kg; SAR(10 g) = 0.190 W/kg
Smallest distance from peaks to all points 3 dB below = 8.4 mm
Ratio of SAR at M2 to SAR at M1 = 36.3%
Maximum value of SAR (measured) = 0.562 W/kg

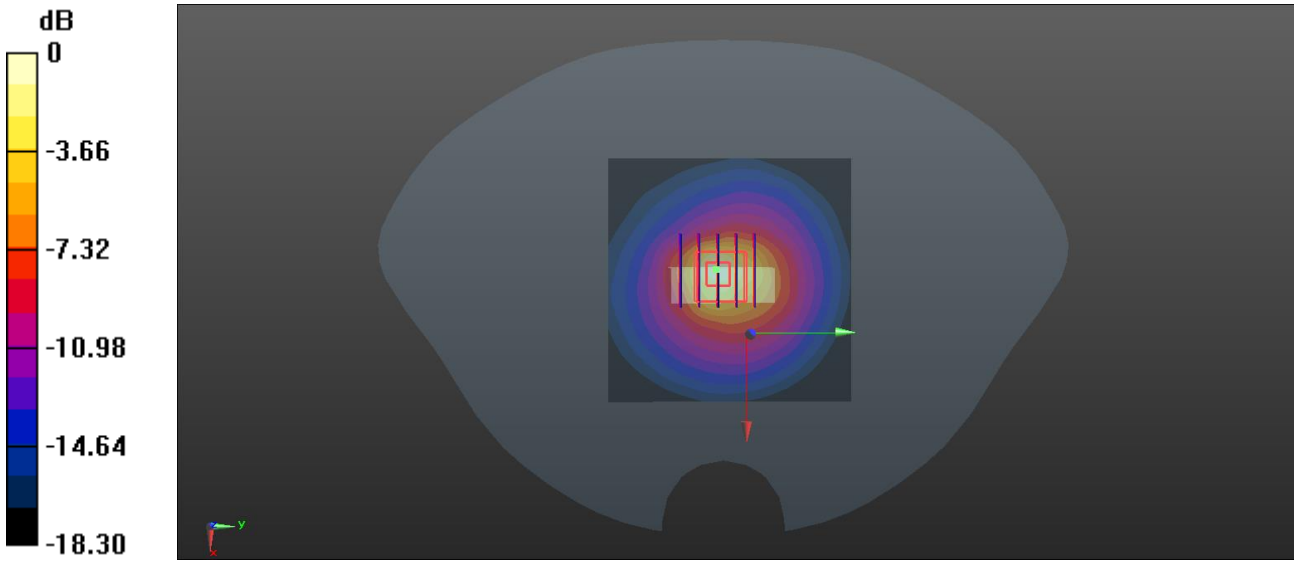


0 dB = 0.562 W/kg

Meas.6 Body Plane with Left Side 0mm on Middle Channel in LTE Band 14 mode with Antenna 1
Date: 2025.05.06
Communication System Band: Band 14, E-UTRA/FDD (788.0 - 798.0 MHz); Frequency: 793 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 793 MHz; σ = 0.915 S/m; ε_r = 41.771; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.4℃ Liquid Temperature:21.3℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893;ConvF(8.92, 9.23, 9.45) @ 793 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23330/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.423 W/kg

Ch23330/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.74 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.390 W/kg; SAR(10 g) = 0.153 W/kg
Smallest distance from peaks to all points 3 dB below = 8.1 mm
Ratio of SAR at M2 to SAR at M1 = 38.2%
Maximum value of SAR (measured) = 0.441 W/kg

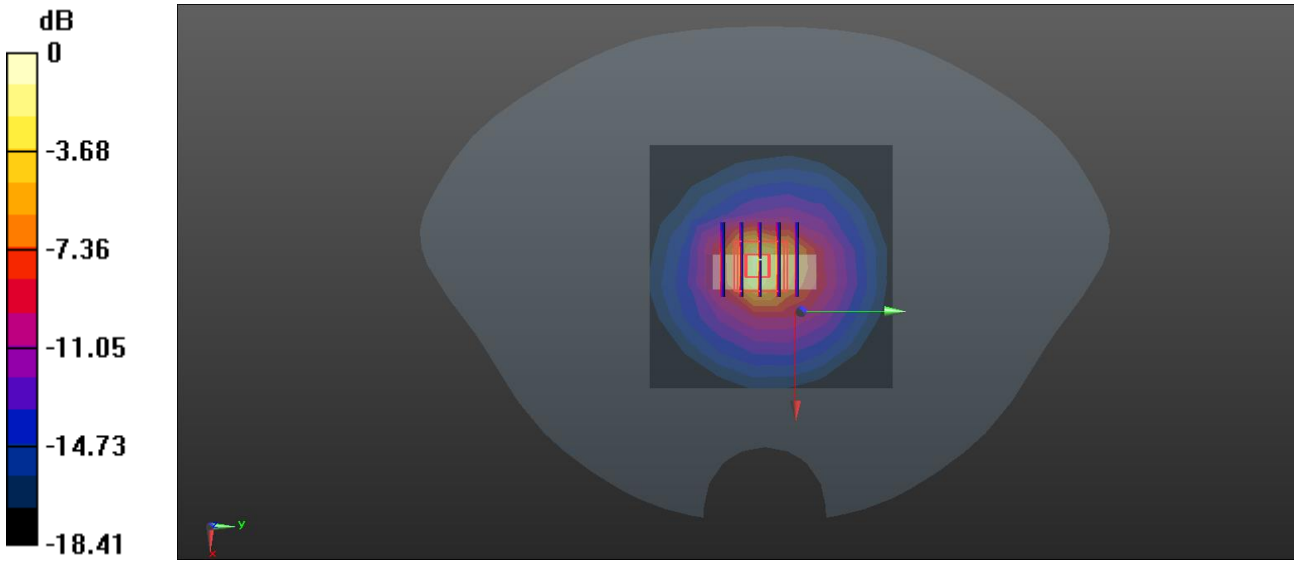


0 dB = 0.441 W/kg

Meas.7 Body Plane with Left Side 0mm on Middle Channel in LTE Band 17 mode with Antenna 1
Date: 2025.05.06
Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 710 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 710 MHz; σ = 0.891 S/m; ε_r = 42.35; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.4℃ Liquid Temperature:21.3℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893;ConvF(8.92, 9.23, 9.45) @ 710 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23790/Area Scan (8x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.318 W/kg

Ch23790/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.28 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.79 W/kg
SAR(1 g) = 0.463 W/kg; SAR(10 g) = 0.165 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 36%
Maximum value of SAR (measured) = 0.494 W/kg

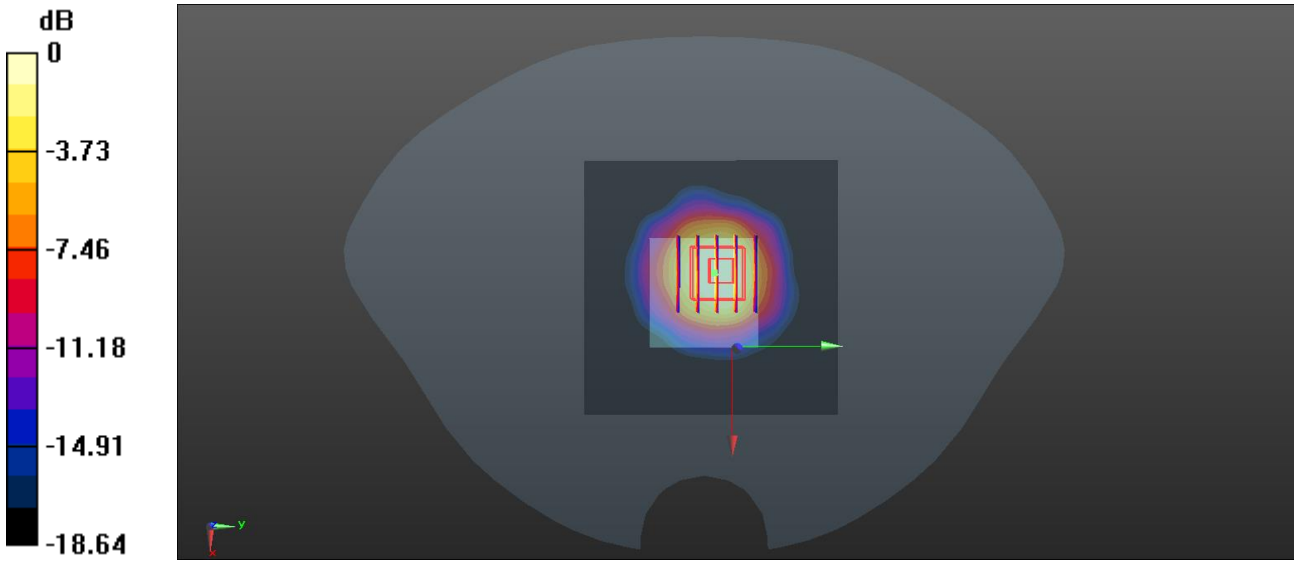


0 dB = 0.494 W/kg

Meas.8 Body Plane with Front Side 0mm on Middle Channel in LTE Band 25 mode with Antenna 1
Date: 2025.05.07
Communication System Band: Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.395 S/m; ε_r = 39.982; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.1℃ Liquid Temperature:21.2℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(7.34, 7.59, 7.78) @ 1882.5 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch26365/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.594 W/kg

Ch26365/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.79 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.782 W/kg
SAR(1 g) = 0.443 W/kg; SAR(10 g) = 0.237 W/kg
Smallest distance from peaks to all points 3 dB below = 11.6 mm
Ratio of SAR at M2 to SAR at M1 = 65.1%
Maximum value of SAR (measured) = 0.477 W/kg

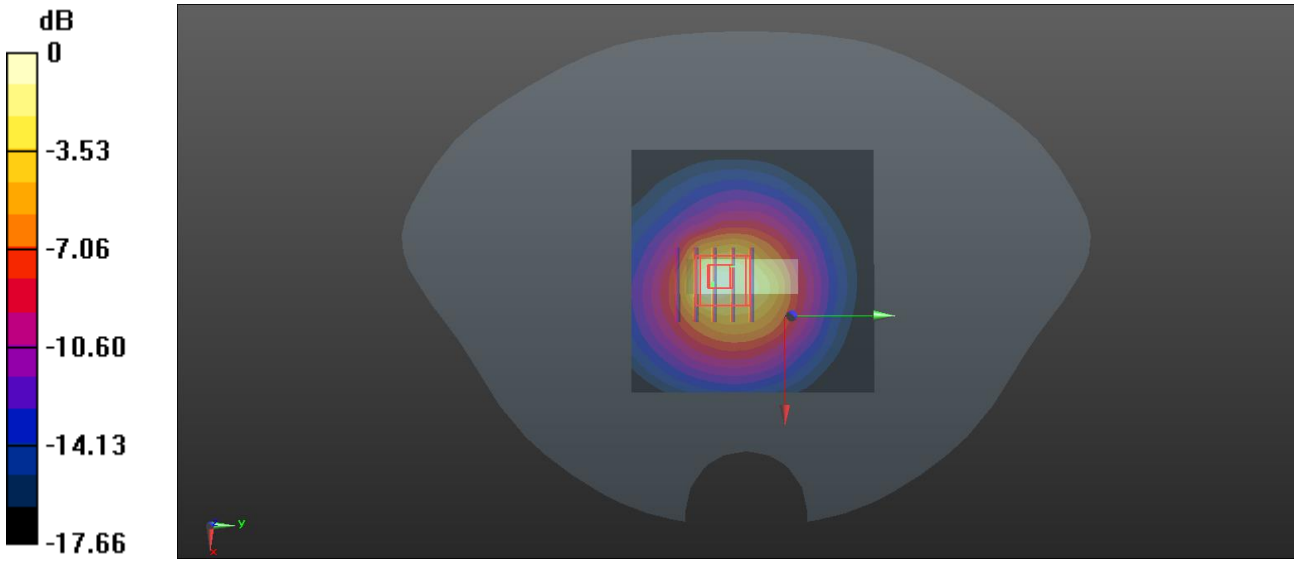


0 dB = 0.477 W/kg

Meas.9 Body Plane with Left Side 0mm on Middle Channel in LTE Band 26 mode with Antenna 1
Date: 2025.05.06
Communication System Band: Band26,E-UTRA/FDD(814-849); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.895 S/m; ε_r = 42.049; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.4℃ Liquid Temperature:21.3℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(8.85, 9.15, 9.38) @ 831.5 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch26865/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.389 W/kg

Ch26865/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.27 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.438 W/kg; SAR(10 g) = 0.187 W/kg
Smallest distance from peaks to all points 3 dB below = 11.5 mm
Ratio of SAR at M2 to SAR at M1 = 44.8%
Maximum value of SAR (measured) = 0.413 W/kg

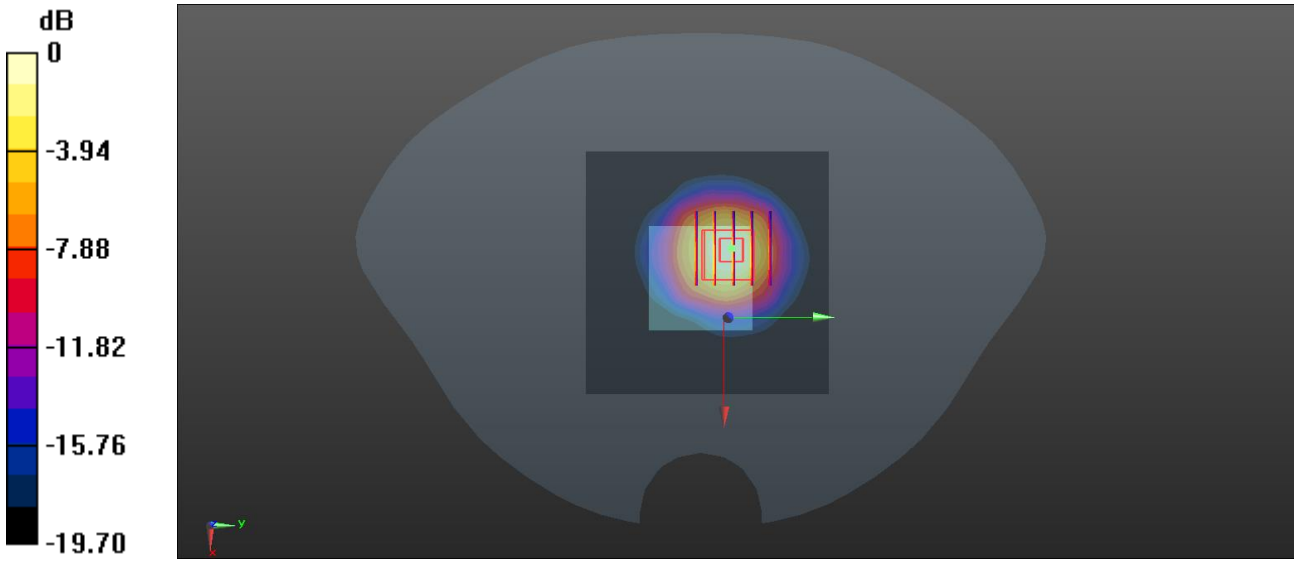


0 dB = 0.413 W/kg

Meas.10 Body Plane with Front Side 0mm on Middle Channel in LTE Band 66 mode with Antenna 1
Date: 2025.05.07
Communication System Band: Band 66,E-UTRA/FDD; Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.375 S/m; ε_r = 40.121; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.1℃ Liquid Temperature:21.2℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(7.57, 7.83, 8.02) @ 831.5 MHz; Calibrated: 2025.09.04
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878;Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch132322/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.376 W/kg

Ch132322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.29 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.617 W/kg
SAR(1 g) = 0.343 W/kg; SAR(10 g) = 0.179 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 60.1%
Maximum value of SAR (measured) = 0.381 W/kg

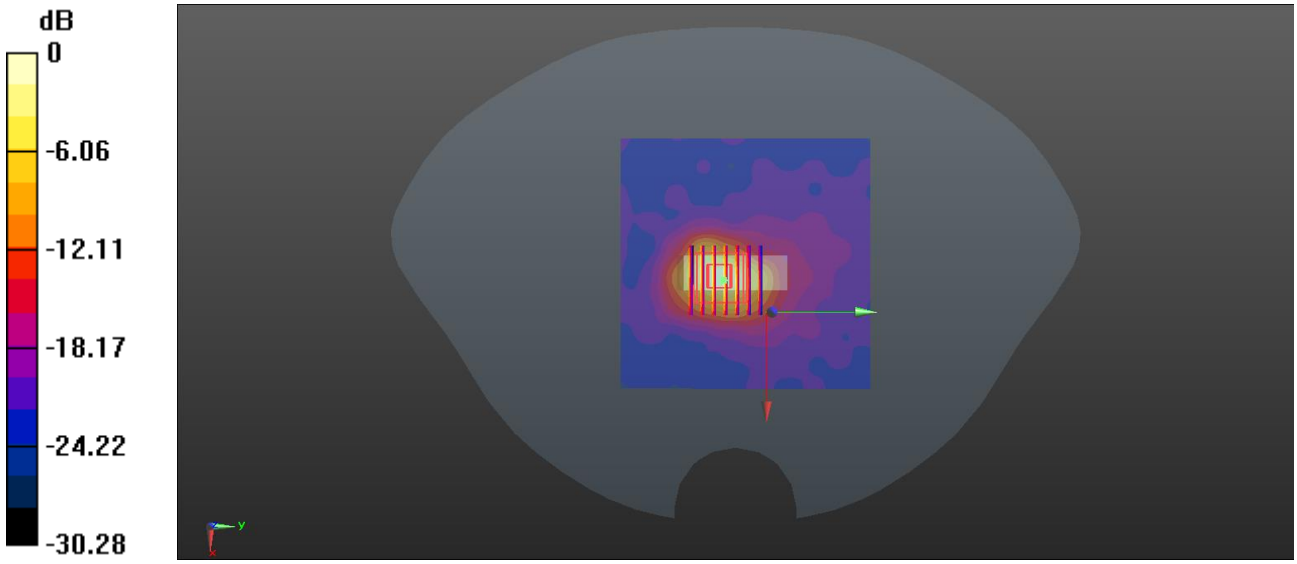


0 dB = 0.381 W/kg

Meas.11 Body Plane with Left Side 0mm on Middle Channel in LTE Band 41 mode with Antenna 1
Date: 2025.05.08
Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2593 MHz;Duty Cycle: 1:1.58
Medium parameters used (interpolated): f = 2593 MHz; σ = 1.962 S/m; ε_r = 38.705; ρ = 1000 kg/m^3
Phantom section: Flat Section
Ambient Temperature:22.5℃ Liquid Temperature:21.4℃
DASY5 Configuration:
Probe: EX3DV4 - SN7893; ConvF(7.06, 7.30, 7.48) @ 2593 MHz; Calibrated: 2024.09.05;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn878; Calibrated: 2024.03.05
Phantom: Twin SAM V5.0; Type: QD000P40CD; Serial: 1858
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch40620/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.532 W/kg

Ch40620/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.48 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.478 W/kg; SAR(10 g) = 0.164 W/kg
Smallest distance from peaks to all points 3 dB below = 5.8 mm
Ratio of SAR at M2 to SAR at M1 = 44%
Maximum value of SAR (measured) = 0.591 W/kg



0 dB = 0.591 W/kg

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2541441-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ2541441-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “BL-SZ2541441-AC.pdf”.

ANNEX G TUNE-UP PROCEDURE

Please refer the document “BL-SZ2541441-AT.pdf”.

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