TEST REPORT

Applicant:	INFINIX MOBILITY LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT, Hong Kong
Equipment Type:	Mobile Phone
Model Name:	X6728
Brand Name:	INFINIX
FCC ID:	2AIZN-YYS-X6728
Test Standard:	FCC 47 CFR Part 2.1093 (refer section 3.1)
Maximum SAR:	Head (1 g@0mm): 0.92 W/kg Body-worn (1 g@10): 0.36 W/kg Hotspot (1 g@10mm): 0.37 W/kg Extremity (10 g@0mm): 0.56 W/kg
Sample Arrival Date:	Apr. 08, 2025
Test Date：	May. 11, 2025 - May. 18, 2025
Date of Issue:	May. 27, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Xiong Lining **Checked by:** Xu Rui **Approved by:** Tolan Tu (Testing Director)

Revision History

Version	Issue Date	Revisions Content
Rev. 01	May. 22, 2025	Initial Issue
Rev. 02	May. 27, 2025	Updated pages 50, 51, and 64.

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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	INFINIX MOBILITY LIMITED
Address	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT, Hong Kong

2.2 Manufacturer Information

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

2.3 Factory Information

Factory	SHENZHEN TECNO TECHNOLOGY CO., LTD.
Address	101, Building 24, Waijing Industrial Park,Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R. China

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	X6728
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	166.02*76.61*7.77mm
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	BL-50FX
	Serial No.	N/A
	Capacitance	Rated Capacity: 5060mAh Typical Capacity: 5160mAh
	Rated Voltage	3.92 V
	Limited Voltage	4.53 V
	Manufacturer	N/A

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/5/7/12/13/17/25/26/66 LTE TDD Band 38/41 Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n HT20, 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) ,5.8G SRD, GPS, GLONASS, BDS, Galileo, NFC
Note: The EUT is a mobile phone, which supports dual SIM card under the same transceiver. Each SIM supports GSM, WCDMA and LTE, and both SIM share the same transmitting electro circuit, NV parameters, so only SIM1 was tested in this report.	

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

Operating Mode	GSM, WCDMA, LTE, 2.4G WIFI, 5G WIFI, Bluetooth, NFC		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM 1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE Band 12	TX: 699 ~ 716 MHz	RX: 729 ~ 746 MHz
	LTE Band 13	TX: 777 ~ 787 MHz	RX: 746 ~ 756 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 ~ 849 MHz	RX: 859 ~ 894 MHz
	LTE Band 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2180 MHz
	LTE Band 38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	802.11b/g/n(HT20)	2412 ~ 2462 MHz	
	802.11a/ /n(HT20/HT40) /ac(VHT20/VHT40 /VHT80)	5150 ~ 5250 MHz	
		5250 ~ 5350 MHz	
		5470 ~ 5725 MHz	
		5725 ~ 5850 MHz	
	Bluetooth	2402 ~ 2480 MHz	
	NFC	13.56 MHz	
Antenna Type	WWAN: PIFA Antenna WIFI: PIFA Antenna Bluetooth: PIFA Antenna		

DTM	N/A	
Hotspot Function	Support	
Power Reduction	Support	
Exposure Category	General Population/Uncontrolled exposure	
Product Type	Portable Device	
EUT Type	☒ Production unit	☐ Identical prototype

3 SUMMARY OF TEST RESULT

3.1 Test Standards

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

3.2 Device Category and SAR Limit

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

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

Table of Exposure Limits:

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

NOTE:

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

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

3.3 Test Result Summary

3.3.1 Highest SAR Values

Equipment Class	Band	Maximum Scaled SAR (W/kg)				Maximum Report SAR (W/kg)			
		Head (0mm)	Body-worn (10mm)	Hotspot (10mm)	Extremity (0mm)	Head (0mm)	Body-worn (10mm)	Hotspot (10mm)	Extremity (0mm)
		1g SAR			10g SAR	1g SAR			10g SAR
PCE	GSM 850	0.92	0.30	0.30	/	0.92	0.36	0.37	0.56
	GSM 1900	0.52	0.22	0.31	/				
	WCDMA Band 2	0.39	0.18	0.23	/				
	WCDMA Band 4	0.46	0.17	0.22	/				
	WCDMA Band 5	0.54	0.18	0.18	/				
	LTE Band 7	0.13	0.08	0.09	/				
	LTE Band 12	0.14	0.05	0.05	/				
	LTE Band 13	0.20	0.07	0.07	/				
	LTE Band 25	0.55	0.24	0.32	/				
	LTE Band 26	0.12	0.05	0.05	/				
	LTE Band 66	0.53	0.21	0.27	/				
	LTE Band 41	0.13	0.11	0.12	/				
DTS	2.4G WIFI	0.45	0.18	0.18	/				
NII	5G WIFI	0.65	0.36	0.37	0.56				
DSS	Bluetooth	0.30	0.10	0.10	/				
Limit (W/kg)		1.6			4.0	1.6			4.0
Verdict		PASS							

Note: This device supports LTE B2/4/5/17/38 and LTE B12/25/26/66/41. Since the supported frequency span for LTE B2/4/5/17/38 falls completely within the supports freguency span for LTE B12/25/26/66/41, these LTE bands share the same transmission path, and LTE B2/4/5/17/38 have lower or the same target power as LTE B12/25/26/66/41; Therefore, SAR was only assessed for LTE B12/25/26/66/41.

3.3.2 Highest Simultaneous Transmission SAR Values

Equipment Class	Maximum Scaled SAR (W/kg)		
	Head 1g (0mm)	Body-worn 1g (5mm)	Hotspot 1g (10mm)
PCE	**1.54**	**0.77**	**0.78**
DTS	1.09	0.49	0.49
NII	**1.54**	**0.77**	**0.78**
DSS	**1.54**	**0.77**	**0.78**
Limit (W/Kg)	1.60	1.60	1.60
Verdict	Pass		
Note: The highest simultaneous SAR please refer section 12.2			

3.4 Test Uncertainty

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

The maximum 1 g SAR for the EUT in this report is 0.92 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.
The maximum 10 g SAR for the EUT in this report is 0.56 W/kg, which is lower than 3.75 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

4 MEASUREMENT SYSTEM

4.1 Specific Absorption Rate (SAR) Definition

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

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

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

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

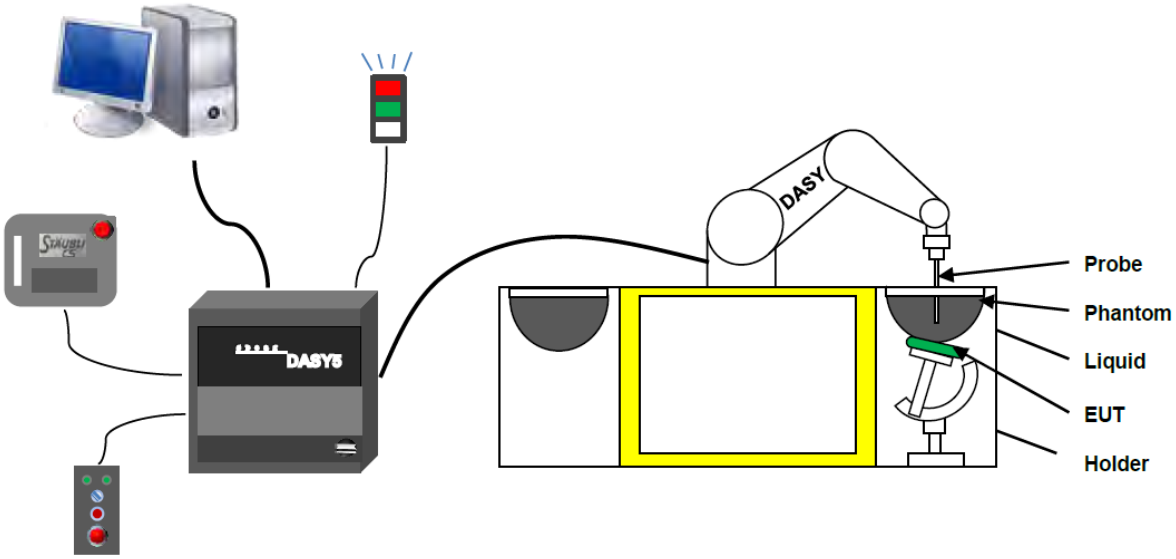
$$\mathbf{SAR} = \frac{\sigma \mathrm{E}^2}{\rho}$$

Where: σ is the conductivity of the tissue,

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

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



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

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

4.2.2 Robot

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

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

4.2.3 E-Field Probe

The probe is specially designed and calibrated for use in liquids with high permittivities for the measurements the Specific Dosimetric E-Field Probe EX3DV4-SN:7510 with following specifications is used.

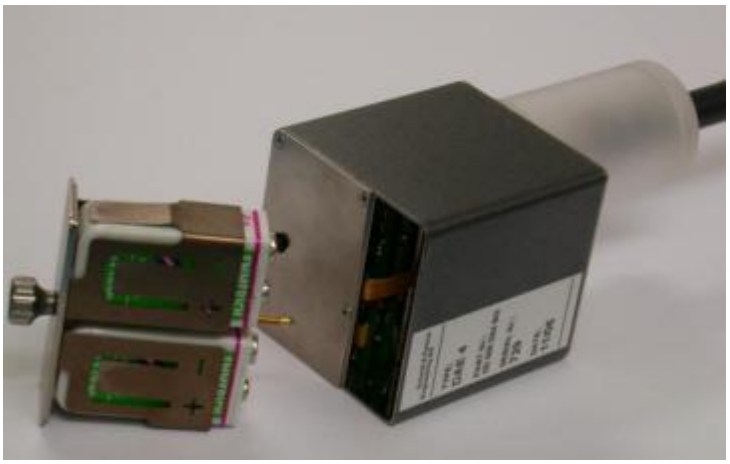
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz;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

E-Field Probe Calibration Process

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

4.2.4 Data Acquisition Electronics

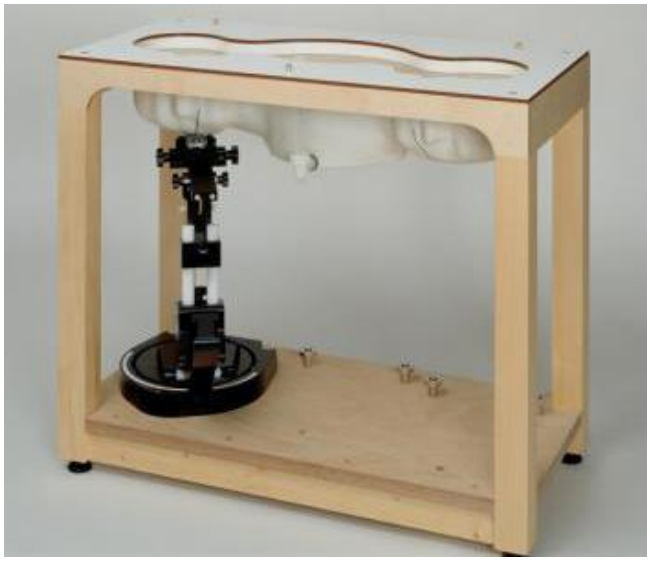
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



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

4.2.5 Phantoms

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



- Left head
- Right head
- Flat phantom

Photo of Phantom SN1857

Serial Number	Material	Length	Height
SN 1857 SAM1	Vinylester, glass fiber reinforced	1000	500

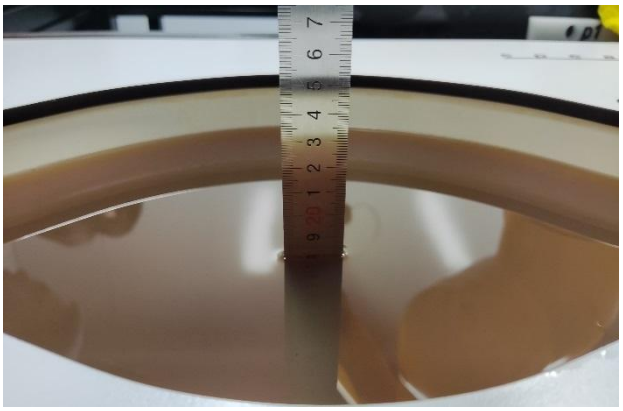
4.2.6 Device Holder

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

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

4.2.7 Simulating Liquid

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

Head Liquid Depth	Body Liquid Depth
	

The following table gives the recipes for tissue simulating liquid.

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

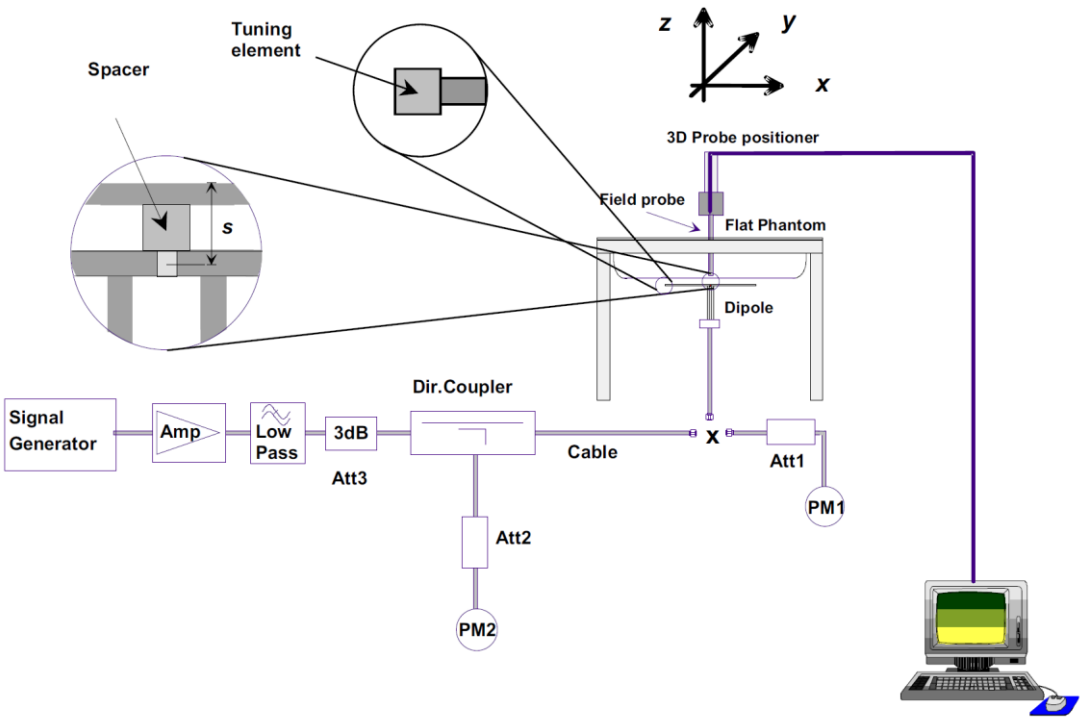
5 SYSTEM VERIFICATION

5.1 Purpose of System Check

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

5.2 System Check Setup

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



6 TEST POSITION CONFIGURATIONS

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

6.1 Head Exposure Conditions

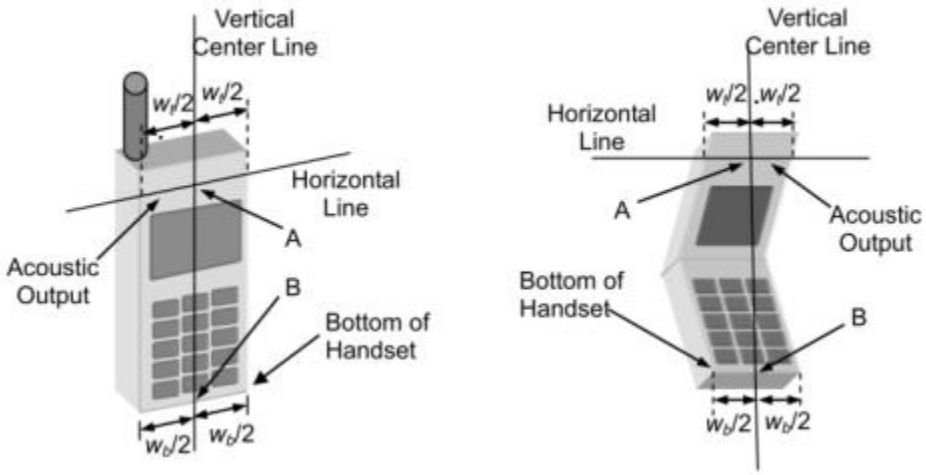
Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

6.1.1 Two Imaginary Lines on the Handset

(a) The vertical center line passes through two points on the front side of the handset - the midpoint of the width w t of the handset at the level of the acoustic output, and the midpoint of the width w b of the bottom of the handset.

(b) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.

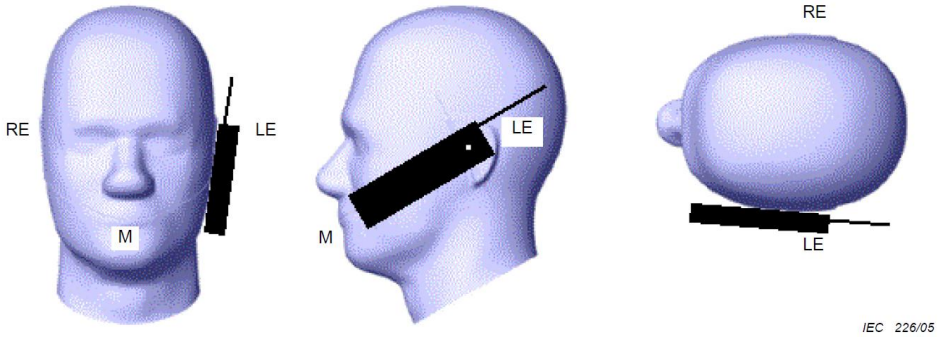
(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset,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



6.1.2 Cheek Position

(a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.

(b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.



6.1.3 Tilted Position

(a) To position the device in the “cheek” position described above.

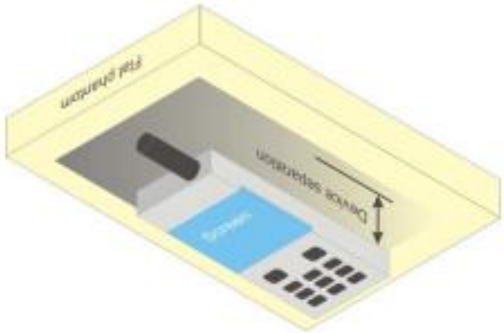
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

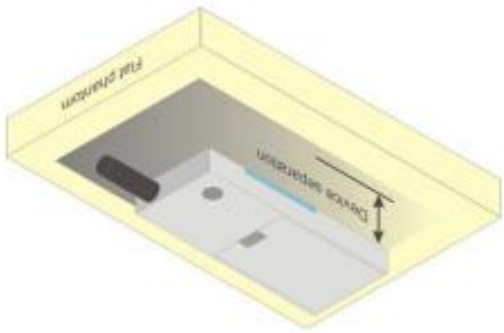
6.2 Body-worn Position Conditions

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

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

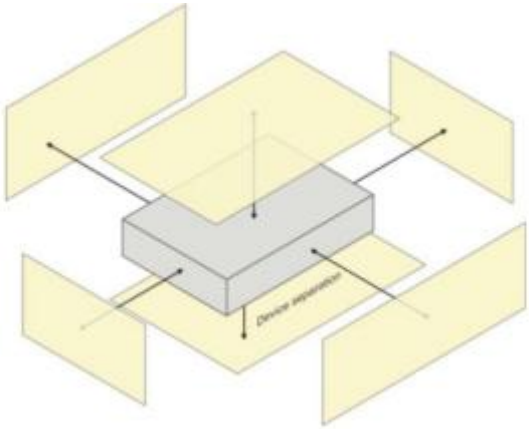
Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice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





6.3 Hotspot Mode Exposure Position Conditions

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



6.4 Product Specific 10g Exposure Consideration

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

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

6

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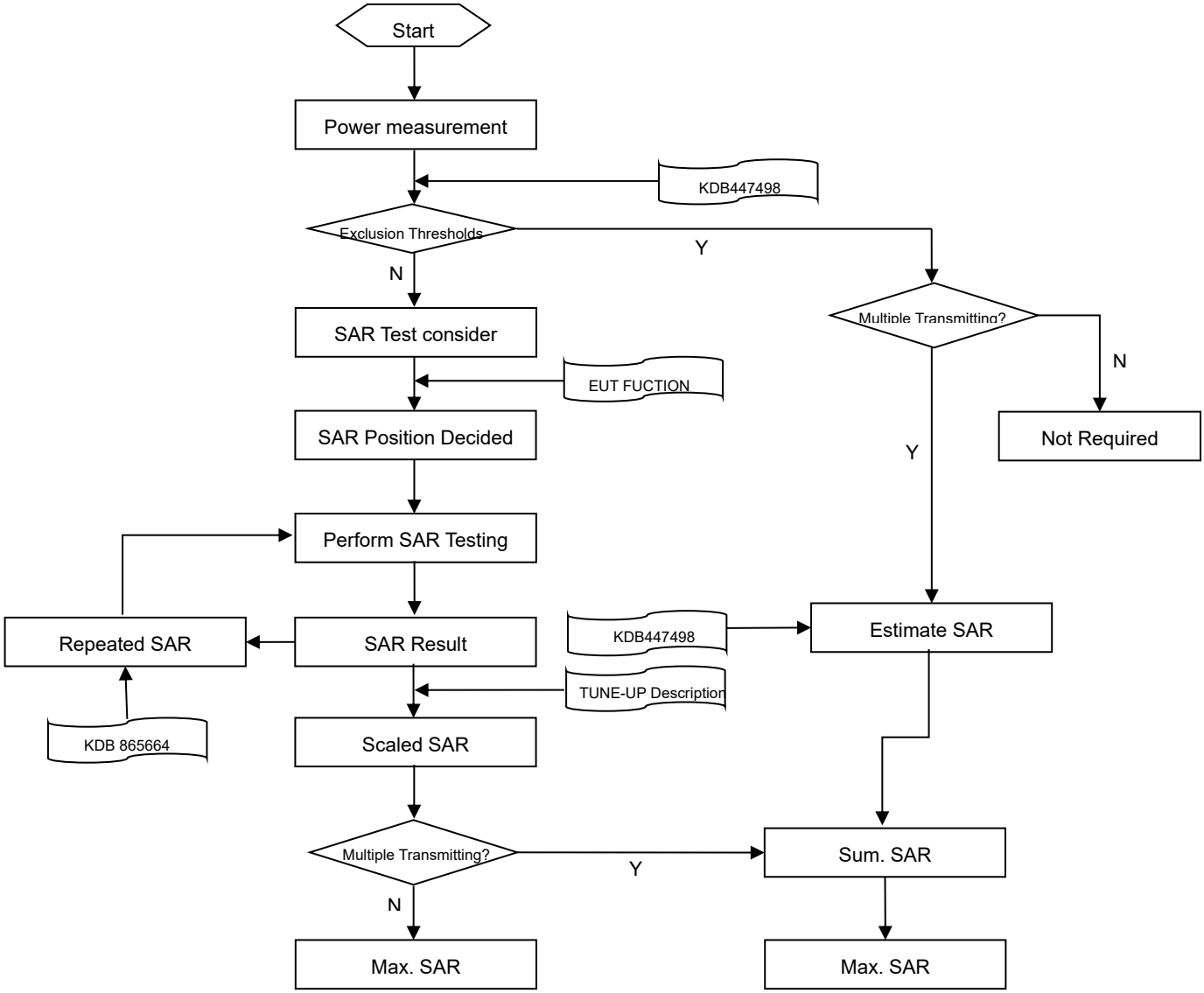
7 MEASUREMENT PROCEDURE

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="6">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2" rowspan="3">uniform grid: Δz Zoom (n)</td><td rowspan="3">≤ 5 mm</td><td>3–4 GHz: ≤ 4 mm</td></tr>
<tr><td>4–5 GHz: ≤ 3 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="3">graded grid</td><td rowspan="2">Δz Zoom (1): between 1st two points closest to phantom surface</td><td rowspan="3">≤ 4 mm</td><td>3–4 GHz: ≤ 3 mm</td></tr>
<tr><td>4–5 GHz: ≤ 2.5 mm</td></tr>
<tr><td>Δz Zoom (1): between 1st two points closest to phantom surface</td><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>
</table>

Note:

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

7.3 Measurement Procedure

The following steps are used for each test position

a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface

b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.

c. Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.

d. Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 *32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

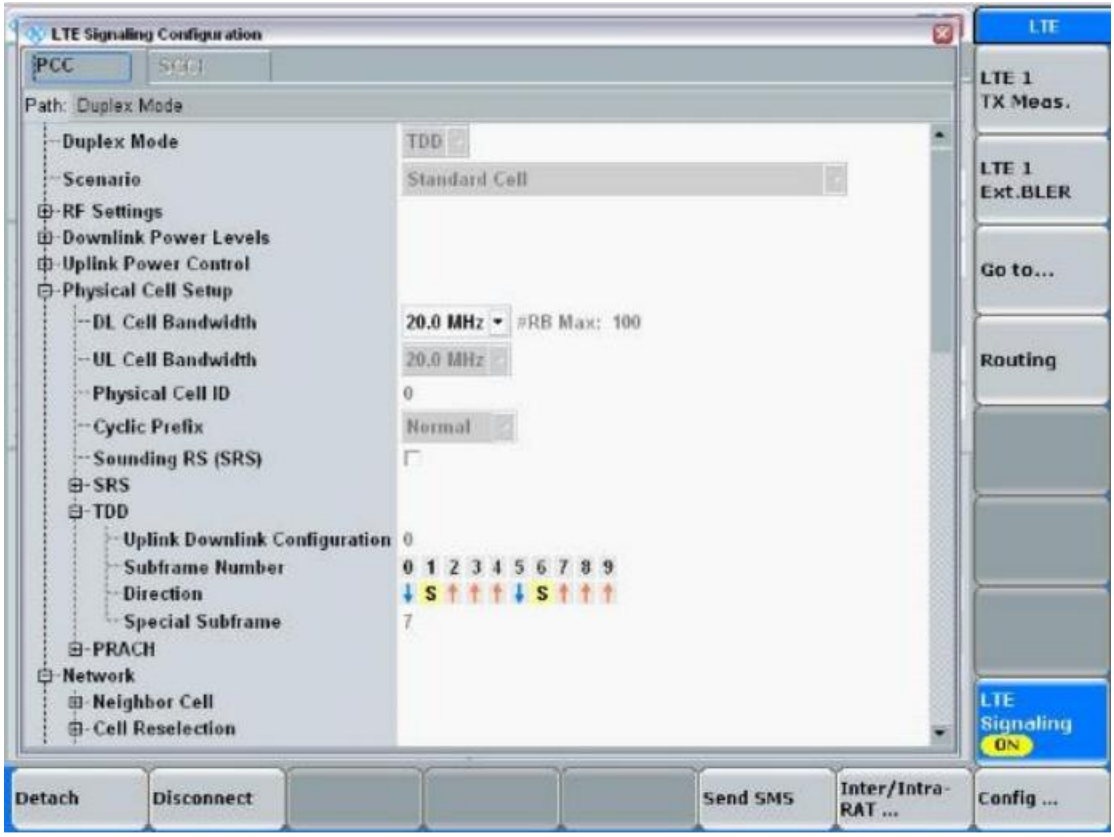
7.4 Area & Zoom Scan Procedure

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

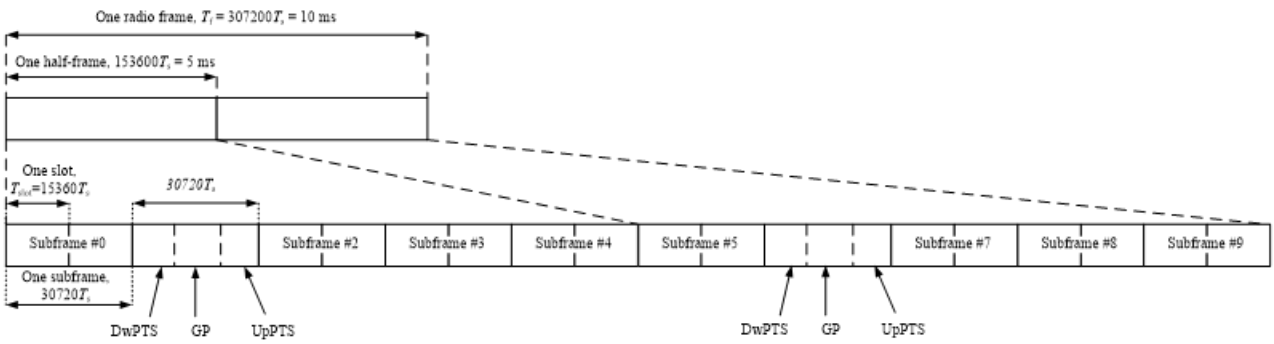
When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

7.5 LTE (TDD) Considerations

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	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21592 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$2560 \cdot T_s$	$5120 \cdot T_s$
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	$21592 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

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 GSM

Please refer the document “BL-SH2540326-AP Power List.pdf”.

8.2 WCDMA

Please refer the document “BL-SH2540326-AP Power List.pdf”.

8.3 LTE

Please refer the document “BL-SH2540326-AP Power List.pdf”.

8.4 WIFI

8.4.1 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	14.60	15.50	No
		6	2437	15.15	16.00	Yes
		11	2462	15.13	16.00	No
	802.11g	1	2412	14.65	15.50	No
		6	2437	14.43	15.50	No
		11	2462	14.61	15.50	No
	802.11n(HT20)	1	2412	14.57	15.50	No
		6	2437	14.52	15.50	No
		11	2462	13.48	14.50	No

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

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

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

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

Adjusted SAR = 0.452 * (35.48mW/39.81mW) = 0.403 W/Kg, so 2.4G OFDM SAR test is not required.

8.4.2 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	17.46	18.50	No
		44	5220	17.37	18.50	No
		48	5240	17.46	18.50	Yes
	802.11n(HT20)	36	5180	17.48	18.50	No
		44	5220	17.24	18.00	No
		48	5240	17.19	18.00	No
	802.11n(HT40)	38	5190	15.27	16.50	No
		46	5230	17.13	18.00	No
	802.11ac(VHT20)	36	5180	16.31	17.50	No
		44	5220	16.21	17.00	No
		48	5240	16.19	17.00	No
	802.11ac(VHT40)	38	5190	15.38	16.50	No
		46	5230	16.11	17.00	No
	802.11ac(VHT80)	42	5210	13.98	15.00	No
5.3 (5.25~5.35)	802.11a	52	5260	17.43	18.50	No
		60	5300	17.50	18.50	Yes
		64	5320	16.79	18.00	No
	802.11n(HT20)	52	5260	17.19	18.00	No
		60	5300	17.32	18.50	No
		64	5320	16.62	17.50	No
	802.11n(HT40)	54	5270	17.07	18.00	No
		62	5310	14.17	15.00	No
	802.11ac(VHT20)	52	5260	16.19	17.00	No
		60	5300	16.10	17.00	No
		64	5320	16.54	17.50	No
	802.11ac(VHT40)	54	5270	15.98	17.00	No
		62	5310	14.19	15.00	No
	802.11ac(VHT80)	58	5290	12.44	13.50	No
5.6 (5.47~5.725)	802.11a	100	5500	15.22	16.00	No
		116	5580	17.36	18.50	Yes
		140	5700	14.96	16.00	No
	802.11n(HT20)	100	5500	14.55	15.50	No
		116	5580	15.58	16.50	No
		140	5700	12.72	13.50	No
	802.11n(HT40)	102	5510	13.45	14.50	No
		118	5590	14.93	16.00	No

		134	5670	14.70	15.50	No
	802.11ac(VHT20)	100	5500	14.61	15.50	No
		116	5580	15.23	16.00	No
		140	5700	12.39	13.50	No
	802.11ac(VHT40)	102	5510	12.97	14.00	No
		118	5590	15.06	16.00	No
		134	5670	14.78	16.00	No
	802.11ac(VHT80)	106	5530	12.18	13.00	No
		122	5690	14.67	15.50	No
5.8 (5.725~5.850)	802.11a	149	5745	17.65	18.50	Yes
		157	5785	17.61	18.50	No
		165	5825	17.40	18.50	No
	802.11n(HT20)	149	5745	17.47	18.50	No
		157	5785	17.46	18.50	No
		165	5825	17.22	18.00	No
	802.11n(HT40)	151	5755	17.22	18.00	No
		159	5795	17.14	18.00	No
	802.11ac(VHT20)	149	5745	16.51	17.50	No
		157	5785	16.32	17.50	No
		165	5825	16.25	17.50	No
	802.11ac(VHT40)	151	5755	16.32	17.50	No
		159	5795	16.19	17.00	No
	802.11ac(VHT80)	155	5775	15.98	17.00	No
Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.						

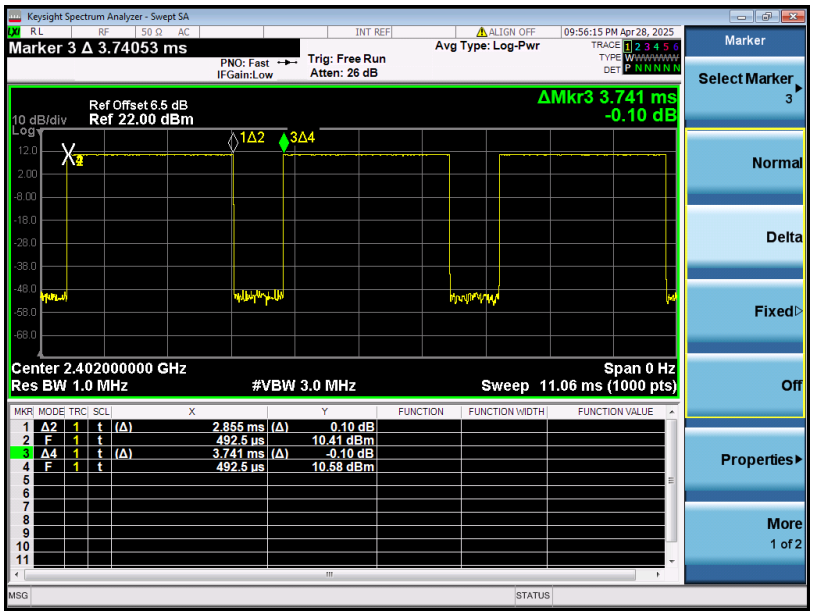
8.5 Bluetooth

Mode	GFSK			π/4-DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Conducted Power (dBm)	11.48	12.65	13.02	11.57	12.28	12.44
Tune-Up Limit (dBm)	12.50	13.50	14.00	12.50	13.50	13.50
SAR Test Require	NO	NO	YES	NO	NO	NO
Mode	8-DPSK			/		
Channel	0	39	78	/	/	/
Frequency (MHz)	2402	2441	2480	/	/	/
Conducted Power (dBm)	11.46	12.17	12.30	/	/	/
Tune-Up Limit (dBm)	12.50	13.00	13.50	/		
SAR Test Require	NO	NO	NO	NO	NO	NO
Mode	BLE-1Mbps			BLE-2Mbps		
Channel	0	19	39	1	19	38
Frequency (MHz)	2402	2440	2480	2404	2440	2478
Conducted Power (dBm)	-2.69	-1.37	-2.18	-2.42	-1.29	-1.92
Tune-Up Limit (dBm)	-1.50	-0.50	-1.00	-1.50	-0.50	-1.00
SAR Test Require	NO	NO	NO	NO	NO	NO

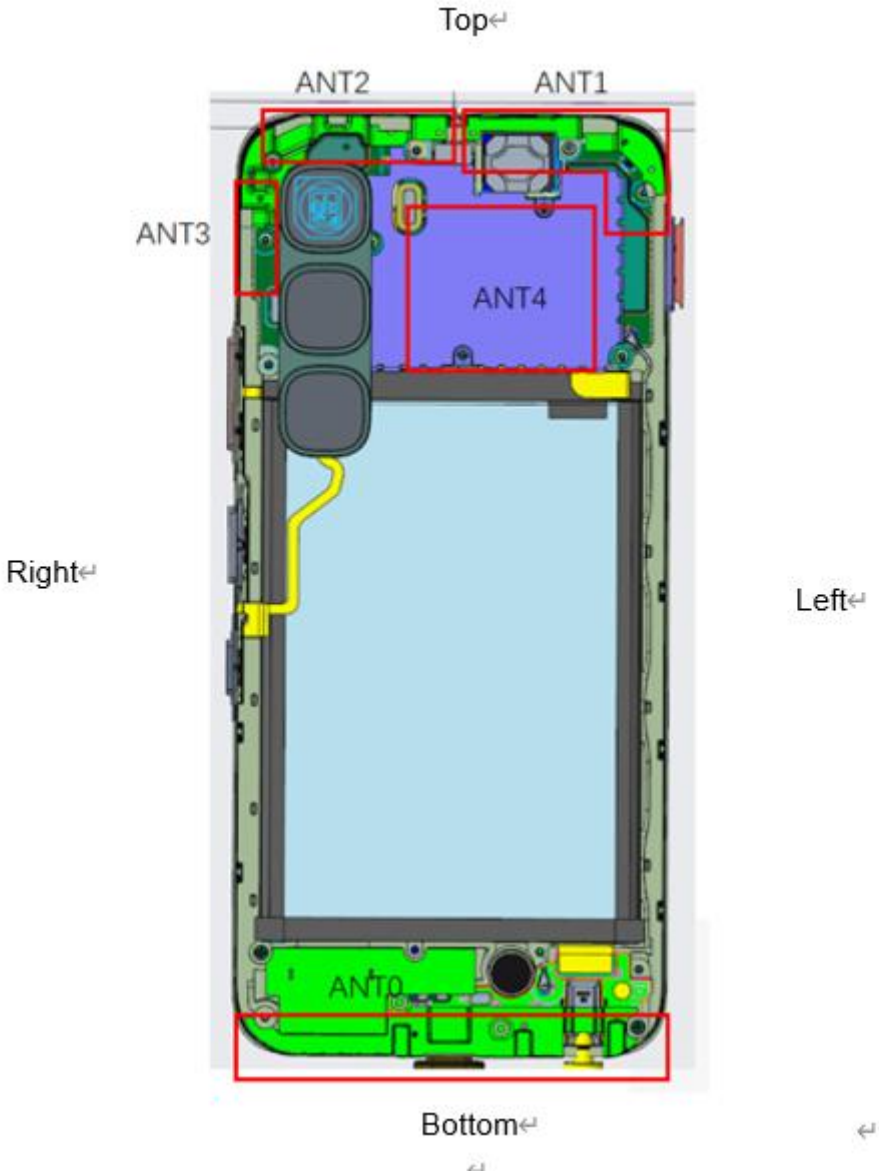
Note 1: Since Bluetooth BR mode is the maximum output power mode，SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is ≤ ¼ dB higher than the primary mode.

Note: The Bluetooth duty cycle is 76.3 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation.

Duty Cycle



9 TEST EXCLUSION CONSIDERATION



<EUT Back View>

Antenna	Support Bands
ANT 0	GSM 850/1900; WCDMA B2/4/5; LTE B2/4/5/7/12/13/17/25/26/66/38/41
ANT 1	GSM 850/1900; WCDMA B2/4/5; LTE B2/4/5/7/12/13/17/25/26/66/38/41
ANT 2	GPS
ANT 3	2.4G/5G WLAN, BT
ANT 4	NFC

Antenna	Front Side(mm)	Back Side(mm)	Left Edge(mm)	Right Edge(mm)	Top Edge(mm)	Bottom Edge(mm)
ANT 0	<25	<25	<25	<25	>25	<25
ANT 1	<25	<25	<25	>25	<25	>25
ANT 3	<25	<25	>25	<25	<25	>25
Note: 1. Per KDB 941225 DO6, When the overall length and width of a device is > 9 cm *5 cm, a test separation distance of 10 mm is required for hotspot mode SAR measurements and hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge.						

10 TEST RESULT

10.1 GSM 850

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head												
Ant.0	Left cheek	0mm	GPRS 2TX	190	836.6	0.05	0.032	21.33	22.50	1.309	0.042	/
	Left tilt			190	836.6	-0.13	0.027	21.33	22.50	1.309	0.035	/
	Right cheek			190	836.6	0.05	0.036	21.33	22.50	1.309	0.047	/
	Right tilt			190	836.6	0.12	0.033	21.33	22.50	1.309	0.043	/
Ant.1	Left cheek	0mm	GPRS 2TX	190	836.6	0.03	0.511	20.81	21.50	1.172	0.599	/
	Left tilt			190	836.6	-0.20	0.473	20.81	21.50	1.172	0.554	/
	Right cheek			190	836.6	-0.01	0.728	20.81	21.50	1.172	0.853	/
	Right cheek			128	824.2	0.16	0.620	20.77	21.50	1.183	0.733	/
	Right cheek			251	848.8	-0.13	0.751	20.62	21.50	1.225	0.920	1
	Right tilt			190	836.6	-0.12	0.650	20.81	21.50	1.172	0.762	/
Body-worn& Hotspot												
Ant.0	Front side	10mm	GPRS 2TX	190	836.6	0.16	0.025	21.33	22.50	1.309	0.033	/
	Back side			190	836.6	0.10	0.021	21.33	22.50	1.309	0.027	/
	Left side			190	836.6	-0.09	0.020	21.33	22.50	1.309	0.026	/
	Right side			190	836.6	-0.11	0.014	21.33	22.50	1.309	0.018	/
	Bottom side			190	836.6	-0.06	0.032	21.33	22.50	1.309	0.042	/
Ant.1	Front side	10mm	GPRS 2TX	190	836.6	0.19	0.181	20.81	21.50	1.172	0.212	/
	Back side			190	836.6	0.04	0.259	20.81	21.50	1.172	0.304	2
	Left side			190	836.6	-0.19	0.070	20.81	21.50	1.172	0.082	/
	Top side			190	836.6	-0.13	0.228	20.81	21.50	1.172	0.267	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.2 GSM 1900

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head												
Ant.0	Left cheek	0mm	GPRS 2TX	661	1880	-0.18	0.026	18.74	19.50	1.191	0.031	/
	Left tilt			661	1880	-0.12	0.022	18.74	19.50	1.191	0.026	/
	Right cheek			661	1880	0.07	0.023	18.74	19.50	1.191	0.027	/
	Right tilt			661	1880	-0.19	0.021	18.74	19.50	1.191	0.025	/
Ant.1	Left cheek	0mm	GPRS 2TX	661	1880	-0.04	0.181	18.49	19.50	1.262	0.228	/
	Left tilt			661	1880	-0.13	0.219	18.49	19.50	1.262	0.276	/
	Right cheek			661	1880	0.17	0.345	18.49	19.50	1.262	0.435	/
	Right tilt			661	1880	-0.14	0.409	18.49	19.50	1.262	0.516	3
Body-worn& Hotspot												
Ant.0	Front side	10mm	GPRS 2TX	661	1880	0.16	0.045	18.74	19.50	1.191	0.054	/
	Back side			661	1880	0.04	0.060	18.74	19.50	1.191	0.071	/
	Left side			661	1880	-0.17	0.036	18.74	19.50	1.191	0.043	/
	Right side			661	1880	0.08	0.023	18.74	19.50	1.191	0.027	/
	Bottom side			661	1880	0.02	0.058	18.74	19.50	1.191	0.069	/
Ant.1	Front side	10mm	GPRS 2TX	661	1880	0.08	0.096	18.49	19.50	1.262	0.121	/
	Back side			661	1880	-0.01	0.177	18.49	19.50	1.262	0.223	/
	Left side			661	1880	0.16	0.047	18.49	19.50	1.262	0.059	/
	Top side			661	1880	0.17	0.246	18.49	19.50	1.262	0.310	4
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.3WCDMA Band 2

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head												
Ant0	Left cheek	0mm	RMC	9400	1880	0.11	0.021	10.97	12.00	1.268	0.027	/
	Left tilt			9400	1880	0.17	0.018	10.97	12.00	1.268	0.023	/
	Right cheek			9400	1880	-0.16	0.028	10.97	12.00	1.268	0.035	/
	Right tilt			9400	1880	-0.13	0.026	10.97	12.00	1.268	0.033	/
Ant1	Left cheek	0mm	RMC	9400	1880	0.12	0.156	11.24	12.00	1.191	0.186	/
	Left tilt			9400	1880	0.11	0.192	11.24	12.00	1.191	0.229	/
	Right cheek			9400	1880	-0.02	0.277	11.24	12.00	1.191	0.330	/
	Right tilt			9400	1880	-0.13	0.329	11.24	12.00	1.191	0.392	5
Body-worn& Hotspot												
Ant0	Front side	10mm	RMC	9400	1880	0.11	0.038	10.97	12.00	1.268	0.048	/
	Back side			9400	1880	-0.02	0.043	10.97	12.00	1.268	0.055	/
	Left side			9400	1880	0.15	0.024	10.97	12.00	1.268	0.030	/
	Right side			9400	1880	0.18	0.022	10.97	12.00	1.268	0.028	/
	Bottom side			9400	1880	-0.15	0.045	10.97	12.00	1.268	0.057	/
Ant1	Front side	10mm	RMC	9400	1880	0.15	0.081	11.24	12.00	1.191	0.096	/
	Back side			9400	1880	-0.09	0.150	11.24	12.00	1.191	0.179	/
	Left side			9400	1880	0.11	0.036	11.24	12.00	1.191	0.043	/
	Top side			9400	1880	-0.03	0.190	11.24	12.00	1.191	0.226	6
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.4WCDMA Band 4

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head												
Ant0	Left cheek	0mm	RMC	1412	1732.4	0.03	0.039	12.44	13.50	1.276	0.050	/
	Left tilt			1412	1732.4	-0.15	0.035	12.44	13.50	1.276	0.045	/
	Right cheek			1412	1732.4	0.05	0.048	12.44	13.50	1.276	0.061	/
	Right tilt			1412	1732.4	0.04	0.041	12.44	13.50	1.276	0.052	/
Ant1	Left cheek	0mm	RMC	1412	1732.4	0.12	0.206	12.49	13.50	1.262	0.260	/
	Left tilt			1412	1732.4	-0.12	0.240	12.49	13.50	1.262	0.303	/
	Right cheek			1412	1732.4	-0.06	0.334	12.49	13.50	1.262	0.421	/
	Right tilt			1412	1732.4	-0.04	0.363	12.49	13.50	1.262	0.458	7
Body-worn& Hotspot												
Ant0	Front side	10mm	RMC	1412	1732.4	-0.08	0.047	12.44	13.50	1.276	0.060	/
	Back side			1412	1732.4	-0.04	0.056	12.44	13.50	1.276	0.071	/
	Left side			1412	1732.4	-0.12	0.036	12.44	13.50	1.276	0.046	/
	Right side			1412	1732.4	0.09	0.033	12.44	13.50	1.276	0.042	/
	Bottom side			1412	1732.4	0.1	0.079	12.44	13.50	1.276	0.101	/
Ant1	Front side	10mm	RMC	1412	1732.4	-0.11	0.097	12.49	13.50	1.262	0.122	/
	Back side			1412	1732.4	0.17	0.138	12.49	13.50	1.262	0.174	/
	Left side			1412	1732.4	-0.12	0.050	12.49	13.50	1.262	0.063	/
	Top side			1412	1732.4	0.03	0.173	12.49	13.50	1.262	0.218	8
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.5WCDMA Band 5

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit(dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head												
Ant0	Left cheek	0mm	RMC	4182	836.4	0.14	0.031	19.98	21.00	1.265	0.039	/
	Left tilt			4182	836.4	-0.17	0.027	19.98	21.00	1.265	0.034	/
	Right cheek			4182	836.4	-0.05	0.038	19.98	21.00	1.265	0.048	/
	Right tilt			4182	836.4	0.08	0.030	19.98	21.00	1.265	0.038	/
Ant1	Left cheek	0mm	RMC	4182	836.4	-0.12	0.414	20.16	21.00	1.213	0.502	/
	Left tilt			4182	836.4	-0.17	0.389	20.16	21.00	1.213	0.472	/
	Right cheek			4182	836.4	0.03	0.447	20.16	21.00	1.213	0.542	9
	Right tilt			4182	836.4	-0.07	0.421	20.16	21.00	1.213	0.511	/
Body-worn& Hotspot												
Ant0	Front side	10mm	RMC	4182	836.4	-0.01	0.040	19.98	21.00	1.265	0.051	/
	Back side			4182	836.4	-0.07	0.057	19.98	21.00	1.265	0.072	/
	Left side			4182	836.4	0.04	0.036	19.98	21.00	1.265	0.046	/
	Right side			4182	836.4	0.17	0.030	19.98	21.00	1.265	0.038	/
	Bottom side			4182	836.4	-0.12	0.060	19.98	21.00	1.265	0.076	/
Ant1	Front side	10mm	RMC	4182	836.4	0.06	0.111	20.16	21.00	1.213	0.135	/
	Back side			4182	836.4	0.06	0.148	20.16	21.00	1.213	0.180	10
	Left side			4182	836.4	-0.11	0.047	20.16	21.00	1.213	0.057	/
	Top side			4182	836.4	-0.18	0.131	20.16	21.00	1.213	0.159	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.6 LTE Band 7 (20MHz Bandwidth)

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head														
Ant.0	Left cheek	0mm	QPSK	21350	2560	1	0	0.09	0.030	9.69	10.00	1.074	0.032	/
	Left tilt			21350	2560	1	0	0.03	0.028	9.69	10.00	1.074	0.030	/
	Right cheek			21350	2560	1	0	0.02	0.033	9.69	10.00	1.074	0.035	/
	Right tilt			21350	2560	1	0	-0.11	0.030	9.69	10.00	1.074	0.032	/
	Left cheek			21350	2560	50	0	0.09	0.028	9.61	10.00	1.094	0.031	/
	Left tilt			21350	2560	50	0	0.04	0.026	9.61	10.00	1.094	0.028	/
	Right cheek			21350	2560	50	0	-0.01	0.030	9.61	10.00	1.094	0.033	/
	Right tilt			21350	2560	50	0	-0.19	0.026	9.61	10.00	1.094	0.028	/
Ant.1	Left cheek	0mm	QPSK	21350	2560	1	0	0.03	0.037	10.39	10.50	1.026	0.038	/
	Left tilt			21350	2560	1	0	-0.05	0.052	10.39	10.50	1.026	0.053	/
	Right cheek			21350	2560	1	0	-0.05	0.092	10.39	10.50	1.026	0.094	/
	Right tilt			21350	2560	1	0	-0.15	0.107	10.39	10.50	1.026	0.110	/
	Left cheek			21350	2560	50	0	0.18	0.046	10.25	10.50	1.059	0.049	/
	Left tilt			21350	2560	50	0	-0.13	0.057	10.25	10.50	1.059	0.060	/
	Right cheek			21350	2560	50	0	0.12	0.091	10.25	10.50	1.059	0.096	/
	Right tilt			21350	2560	50	0	-0.05	0.120	10.25	10.50	1.059	0.127	11
Body-worn& Hotspot														
Ant.0	Front side	10mm	QPSK	21350	2560	1	0	-0.15	0.054	9.69	10.00	1.074	0.058	/
	Back side			21350	2560	1	0	-0.02	0.061	9.69	10.00	1.074	0.066	/
	Left side			21350	2560	1	0	-0.15	0.045	9.69	10.00	1.074	0.048	/
	Right side			21350	2560	1	0	-0.06	0.040	9.69	10.00	1.074	0.043	/
	Bottom side			21350	2560	1	0	-0.17	0.058	9.69	10.00	1.074	0.062	/
	Front side			21350	2560	50	0	-0.12	0.050	9.61	10.00	1.094	0.055	/
	Back side			21350	2560	50	0	0.02	0.073	9.61	10.00	1.094	0.080	/
	Left side			21350	2560	50	0	-0.11	0.045	9.61	10.00	1.094	0.049	/
	Right side			21350	2560	50	0	0.14	0.041	9.61	10.00	1.094	0.045	/
	Bottom side			21350	2560	50	0	-0.06	0.081	9.61	10.00	1.094	0.089	/
Ant.1	Front side	10mm	QPSK	21350	2560	1	0	0.01	0.066	10.39	10.50	1.026	0.068	/
	Back side			21350	2560	1	0	0.13	0.071	10.39	10.50	1.026	0.073	/
	Left side			21350	2560	1	0	-0.04	0.056	10.39	10.50	1.026	0.057	/
	Top side			21350	2560	1	0	0.15	0.074	10.39	10.50	1.026	0.076	/
	Front side			21350	2560	50	0	-0.05	0.063	10.25	10.50	1.059	0.067	/
	Back side			21350	2560	50	0	0.07	0.079	10.25	10.50	1.059	0.084	/
	Left side			21350	2560	50	0	0.09	0.054	10.25	10.50	1.059	0.057	/
	Top side			21350	2560	50	0	0.16	0.087	10.25	10.50	1.059	0.092	12
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.7 LTE Band 12 (10MHz Bandwidth)

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head														
Ant.0	Left cheek	0mm	QPSK	23095	707.5	1	0	-0.08	0.016	18.61	19.50	1.227	0.020	/
	Left tilt			23095	707.5	1	0	0.09	0.010	18.61	19.50	1.227	0.012	/
	Right cheek			23095	707.5	1	0	0.12	0.045	18.61	19.50	1.227	0.055	/
	Right tilt			23095	707.5	1	0	-0.17	0.015	18.61	19.50	1.227	0.018	/
	Left cheek			23095	707.5	25	0	-0.19	0.011	18.44	19.50	1.276	0.014	/
	Left tilt			23095	707.5	25	0	0.17	0.005	18.44	19.50	1.276	0.006	/
	Right cheek			23095	707.5	25	0	0.03	0.020	18.44	19.50	1.276	0.026	/
	Right tilt			23095	707.5	25	0	0.08	0.008	18.44	19.50	1.276	0.010	/
Ant.1	Left cheek	0mm	QPSK	23095	707.5	1	0	-0.10	0.087	18.66	19.50	1.213	0.106	/
	Left tilt			23095	707.5	1	0	-0.07	0.078	18.66	19.50	1.213	0.095	/
	Right cheek			23095	707.5	1	0	0.18	0.099	18.66	19.50	1.213	0.120	/
	Right tilt			23095	707.5	1	0	0.19	0.115	18.66	19.50	1.213	0.140	13
	Left cheek			23095	707.5	25	0	0.07	0.080	18.51	19.50	1.256	0.100	/
	Left tilt			23095	707.5	25	0	0.18	0.072	18.51	19.50	1.256	0.090	/
	Right cheek			23095	707.5	25	0	-0.06	0.100	18.51	19.50	1.256	0.126	/
	Right tilt			23095	707.5	25	0	-0.14	0.098	18.51	19.50	1.256	0.123	/
Body-worn& Hotspot														
Ant.0	Front side	10mm	QPSK	23095	707.5	1	0	0.16	0.013	18.61	19.50	1.227	0.016	/
	Back side			23095	707.5	1	0	-0.03	0.012	18.61	19.50	1.227	0.015	/
	Left side			23095	707.5	1	0	-0.14	0.019	18.61	19.50	1.227	0.023	/
	Right side			23095	707.5	1	0	0.14	0.018	18.61	19.50	1.227	0.022	/
	Bottom side			23095	707.5	1	0	-0.11	0.013	18.61	19.50	1.227	0.016	/
	Front side			23095	707.5	25	0	-0.01	0.024	18.44	19.50	1.276	0.031	/
	Back side			23095	707.5	25	0	-0.15	0.015	18.44	19.50	1.276	0.019	/
	Left side			23095	707.5	25	0	-0.16	0.021	18.44	19.50	1.276	0.027	/
	Right side			23095	707.5	25	0	-0.07	0.019	18.44	19.50	1.276	0.024	/
	Bottom side			23095	707.5	25	0	0.12	0.020	18.44	19.50	1.276	0.026	/
Ant.1	Front side	10mm	QPSK	23095	707.5	1	0	-0.14	0.036	18.66	19.50	1.213	0.044	/
	Back side			23095	707.5	1	0	0.18	0.041	18.66	19.50	1.213	0.050	14
	Left side			23095	707.5	1	0	-0.08	0.032	18.66	19.50	1.213	0.039	/
	Top side			23095	707.5	1	0	-0.11	0.018	18.66	19.50	1.213	0.022	/
	Front side			23095	707.5	25	12	-0.05	0.025	18.51	19.50	1.256	0.031	/
	Back side			23095	707.5	25	12	0.17	0.030	18.51	19.50	1.256	0.038	/
	Left side			23095	707.5	25	12	-0.16	0.037	18.51	19.50	1.256	0.046	/
	Top side			23095	707.5	25	12	0.00	0.026	18.51	19.50	1.256	0.033	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.8 LTE Band 13 (10MHz Bandwidth)

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head														
Ant.0	Left cheek	0mm	QPSK	23230	782	1	0	0.07	0.081	18.41	19.50	1.285	0.104	/
	Left tilt			23230	782	1	0	0.18	0.047	18.41	19.50	1.285	0.060	/
	Right cheek			23230	782	1	0	-0.06	0.092	18.41	19.50	1.285	0.118	/
	Right tilt			23230	782	1	0	-0.14	0.052	18.41	19.50	1.285	0.067	/
	Left cheek			23230	782	25	0	-0.11	0.065	18.34	19.50	1.306	0.085	/
	Left tilt			23230	782	25	0	-0.18	0.012	18.34	19.50	1.306	0.016	/
	Right cheek			23230	782	25	0	0.14	0.071	18.34	19.50	1.306	0.093	/
	Right tilt			23230	782	25	0	-0.06	0.042	18.34	19.50	1.306	0.055	/
Ant.1	Left cheek	0mm	QPSK	23230	782	1	0	0.10	0.125	18.48	19.00	1.127	0.141	/
	Left tilt			23230	782	1	0	0.08	0.112	18.48	19.00	1.127	0.126	/
	Right cheek			23230	782	1	0	0.15	0.178	18.48	19.00	1.127	0.201	15
	Right tilt			23230	782	1	0	-0.03	0.145	18.48	19.00	1.127	0.163	/
	Left cheek			23230	782	25	0	0.19	0.120	18.43	19.00	1.140	0.137	/
	Left tilt			23230	782	25	0	-0.01	0.110	18.43	19.00	1.140	0.125	/
	Right cheek			23230	782	25	0	-0.06	0.165	18.43	19.00	1.140	0.188	/
	Right tilt			23230	782	25	0	0.00	0.158	18.43	19.00	1.140	0.180	/
Body-worn& Hotspot														
Ant.0	Front side	10mm	QPSK	23230	782	1	0	-0.14	0.048	18.41	19.50	1.285	0.062	/
	Back side			23230	782	1	0	0.18	0.037	18.41	19.50	1.285	0.048	/
	Left side			23230	782	1	0	-0.08	0.012	18.41	19.50	1.285	0.015	/
	Right side			23230	782	1	0	0.06	0.021	18.41	19.50	1.285	0.027	/
	Bottom side			23230	782	1	0	-0.11	0.032	18.41	19.50	1.285	0.041	/
	Front side			23230	782	25	0	-0.05	0.048	18.34	19.50	1.306	0.063	/
	Back side			23230	782	25	0	0.17	0.045	18.34	19.50	1.306	0.059	/
	Left side			23230	782	25	0	-0.16	0.049	18.34	19.50	1.306	0.064	/
	Right side			23230	782	25	0	-0.16	0.050	18.34	19.50	1.306	0.065	/
	Bottom side			23230	782	25	0	0.00	0.039	18.34	19.50	1.306	0.051	/
Ant.1	Front side	10mm	QPSK	23230	782	1	0	-0.15	0.031	18.48	19.00	1.127	0.035	/
	Back side			23230	782	1	0	0.11	0.060	18.48	19.00	1.127	0.068	16
	Left side			23230	782	1	0	0.16	0.058	18.48	19.00	1.127	0.065	/
	Top side			23230	782	1	0	-0.13	0.036	18.48	19.00	1.127	0.041	/
	Front side			23230	782	25	0	0.16	0.028	18.43	19.00	1.140	0.032	/
	Back side			23230	782	25	0	0.12	0.023	18.43	19.00	1.140	0.026	/
	Left side			23230	782	25	0	-0.11	0.030	18.43	19.00	1.140	0.034	/
	Top side			23230	782	25	0	0.16	0.022	18.43	19.00	1.140	0.025	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.9 LTE Band 25 (20MHz Bandwidth)

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head														
Ant.0	Left cheek	0mm	QPSK	26365	1882.5	1	0	0.07	0.051	12.01	13.00	1.256	0.064	/
	Left tilt			26365	1882.5	1	0	-0.16	0.047	12.01	13.00	1.256	0.059	/
	Right cheek			26365	1882.5	1	0	0.16	0.058	12.01	13.00	1.256	0.073	/
	Right tilt			26365	1882.5	1	0	0.00	0.054	12.01	13.00	1.256	0.068	/
	Left cheek			26365	1882.5	50	0	-0.04	0.047	11.96	13.00	1.271	0.060	/
	Left tilt			26365	1882.5	50	0	0.02	0.044	11.96	13.00	1.271	0.056	/
	Right cheek			26365	1882.5	50	0	0.03	0.052	11.96	13.00	1.271	0.066	/
	Right tilt			26365	1882.5	50	0	-0.14	0.050	11.96	13.00	1.271	0.064	/
Ant.1	Left cheek	0mm	QPSK	26365	1882.5	1	0	-0.17	0.203	12.06	13.00	1.242	0.252	/
	Left tilt			26365	1882.5	1	0	-0.18	0.243	12.06	13.00	1.242	0.302	/
	Right cheek			26365	1882.5	1	0	-0.17	0.308	12.06	13.00	1.242	0.382	/
	Right tilt			26365	1882.5	1	0	-0.16	0.334	12.06	13.00	1.242	0.415	/
	Left cheek			26365	1882.5	50	0	0.16	0.215	11.91	13.00	1.285	0.276	/
	Left tilt			26365	1882.5	50	0	0.06	0.253	11.91	13.00	1.285	0.325	/
	Right cheek			26365	1882.5	50	0	-0.02	0.339	11.91	13.00	1.285	0.436	/
	Right tilt			26365	1882.5	50	0	-0.03	0.427	11.91	13.00	1.285	0.549	17
Body-worn& Hotspot														
Ant.0	Front side	10mm	QPSK	26365	1882.5	1	0	-0.08	0.068	12.01	13.00	1.256	0.085	/
	Back side			26365	1882.5	1	0	0.05	0.065	12.01	13.00	1.256	0.082	/
	Left side			26365	1882.5	1	0	0.17	0.054	12.01	13.00	1.256	0.068	/
	Right side			26365	1882.5	1	0	0.19	0.050	12.01	13.00	1.256	0.063	/
	Bottom side			26365	1882.5	1	0	0.08	0.044	12.01	13.00	1.256	0.055	/
	Front side			26365	1882.5	50	0	-0.17	0.036	11.96	13.00	1.271	0.046	/
	Back side			26365	1882.5	50	0	-0.14	0.029	11.96	13.00	1.271	0.037	/
	Left side			26365	1882.5	50	0	0.18	0.039	11.96	13.00	1.271	0.050	/
	Right side			26365	1882.5	50	0	0.17	0.045	11.96	13.00	1.271	0.057	/
	Bottom side			26365	1882.5	50	0	-0.06	0.043	11.96	13.00	1.271	0.055	/
Ant.1	Front side	10mm	QPSK	26365	1882.5	1	0	-0.03	0.094	12.06	13.00	1.242	0.117	/
	Back side			26365	1882.5	1	0	-0.19	0.166	12.06	13.00	1.242	0.206	/
	Left side			26365	1882.5	1	0	-0.02	0.036	12.06	13.00	1.242	0.045	/
	Top side			26365	1882.5	1	0	0.01	0.203	12.06	13.00	1.242	0.252	/
	Front side			26365	1882.5	50	0	0.17	0.101	11.91	13.00	1.285	0.130	/
	Back side			26365	1882.5	50	0	-0.12	0.187	11.91	13.00	1.285	0.240	/
	Left side			26365	1882.5	50	0	-0.19	0.025	11.91	13.00	1.285	0.032	/
	Top side			26365	1882.5	50	0	-0.11	0.248	11.91	13.00	1.285	0.319	18
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.10 LTE Band 26 (15MHz Bandwidth)

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head														
Ant.0	Left cheek	0mm	QPSK	26865	831.5	1	0	0.18	0.053	18.11	19.00	1.227	0.065	/
	Left tilt			26865	831.5	1	0	0.15	0.018	18.11	19.00	1.227	0.022	/
	Right cheek			26865	831.5	1	0	0.06	0.060	18.11	19.00	1.227	0.074	/
	Right tilt			26865	831.5	1	0	0.03	0.020	18.11	19.00	1.227	0.025	/
	Left cheek			26865	831.5	36	0	-0.15	0.023	17.93	19.00	1.279	0.029	/
	Left tilt			26865	831.5	36	0	-0.17	0.010	17.93	19.00	1.279	0.013	/
	Right cheek			26865	831.5	36	0	-0.18	0.031	17.93	19.00	1.279	0.040	/
	Right tilt			26865	831.5	36	0	-0.12	0.050	17.93	19.00	1.279	0.064	/
Ant.1	Left cheek	0mm	QPSK	26865	831.5	1	0	0.01	0.080	18.10	19.00	1.230	0.098	/
	Left tilt			26865	831.5	1	0	-0.13	0.078	18.10	19.00	1.230	0.096	/
	Right cheek			26865	831.5	1	0	0.03	0.094	18.10	19.00	1.230	0.116	19
	Right tilt			26865	831.5	1	0	0.18	0.087	18.10	19.00	1.230	0.107	/
	Left cheek			26865	831.5	36	0	-0.14	0.077	17.82	19.00	1.312	0.101	/
	Left tilt			26865	831.5	36	0	0.09	0.074	17.82	19.00	1.312	0.097	/
	Right cheek			26865	831.5	36	0	-0.01	0.069	17.82	19.00	1.312	0.091	/
	Right tilt			26865	831.5	36	0	-0.03	0.060	17.82	19.00	1.312	0.079	/
Body-worn& Hotspot														
Ant.0	Front side	10mm	QPSK	26865	831.5	1	0	-0.12	0.019	18.11	19.00	1.227	0.023	/
	Back side			26865	831.5	1	0	0.16	0.027	18.11	19.00	1.227	0.033	/
	Left side			26865	831.5	1	0	-0.15	0.017	18.11	19.00	1.227	0.021	/
	Right side			26865	831.5	1	0	-0.07	0.014	18.11	19.00	1.227	0.017	/
	Bottom side			26865	831.5	1	0	-0.07	0.022	18.11	19.00	1.227	0.027	/
	Front side			26865	831.5	36	0	-0.11	0.015	17.93	19.00	1.279	0.019	/
	Back side			26865	831.5	36	0	0.01	0.023	17.93	19.00	1.279	0.029	/
	Left side			26865	831.5	36	0	0.17	0.017	17.93	19.00	1.279	0.022	/
	Right side			26865	831.5	36	0	-0.02	0.016	17.93	19.00	1.279	0.020	/
	Bottom side			26865	831.5	36	0	0.08	0.022	17.93	19.00	1.279	0.028	/
Ant.1	Front side	10mm	QPSK	26865	831.5	1	0	-0.02	0.032	18.10	19.00	1.230	0.039	/
	Back side			26865	831.5	1	0	0.02	0.041	18.10	19.00	1.230	0.050	20
	Left side			26865	831.5	1	0	0.17	0.017	18.10	19.00	1.230	0.021	/
	Top side			26865	831.5	1	0	0.13	0.040	18.10	19.00	1.230	0.050	/
	Front side			26865	831.5	36	0	-0.17	0.026	17.82	19.00	1.312	0.034	/
	Back side			26865	831.5	36	0	0.03	0.034	17.82	19.00	1.312	0.044	/
	Left side			26865	831.5	36	0	-0.01	0.014	17.82	19.00	1.312	0.018	/
	Top side			26865	831.5	36	0	0.09	0.029	17.82	19.00	1.312	0.039	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.11 LTE Band 66 (20MHz Bandwidth)

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head														
Ant.0	Left cheek	0mm	QPSK	132322	1745	1	0	-0.08	0.036	13.45	14.50	1.274	0.046	/
	Left tilt			132322	1745	1	0	0.03	0.032	13.45	14.50	1.274	0.041	/
	Right cheek			132322	1745	1	0	0.08	0.040	13.45	14.50	1.274	0.051	/
	Right tilt			132322	1745	1	0	-0.05	0.038	13.45	14.50	1.274	0.048	/
	Left cheek			132322	1745	50	0	-0.03	0.034	13.42	14.50	1.282	0.044	/
	Left tilt			132322	1745	50	0	0.04	0.030	13.42	14.50	1.282	0.038	/
	Right cheek			132322	1745	50	0	-0.18	0.045	13.42	14.50	1.282	0.058	/
	Right tilt			132322	1745	50	0	-0.12	0.040	13.42	14.50	1.282	0.051	/
Ant.1	Left cheek	0mm	QPSK	132322	1745	1	0	0.00	0.223	13.20	14.00	1.202	0.268	/
	Left tilt			132322	1745	1	0	0.07	0.268	13.20	14.00	1.202	0.322	/
	Right cheek			132322	1745	1	0	-0.14	0.426	13.20	14.00	1.202	0.512	/
	Right tilt			132322	1745	1	0	0.05	0.403	13.20	14.00	1.202	0.485	/
	Left cheek			132322	1745	50	0	-0.16	0.244	13.19	14.00	1.205	0.294	/
	Left tilt			132322	1745	50	0	-0.16	0.295	13.19	14.00	1.205	0.355	/
	Right cheek			132322	1745	50	0	0.01	0.375	13.19	14.00	1.205	0.452	/
	Right tilt			132322	1745	50	0	0.20	0.437	13.19	14.00	1.205	0.527	21
Body-worn& Hotspot														
Ant.0	Front side	10mm	QPSK	132322	1745	1	0	-0.18	0.048	13.45	14.50	1.274	0.061	/
	Back side			132322	1745	1	0	0.07	0.057	13.45	14.50	1.274	0.073	/
	Left side			132322	1745	1	0	0.14	0.050	13.45	14.50	1.274	0.064	/
	Right side			132322	1745	1	0	-0.10	0.047	13.45	14.50	1.274	0.060	/
	Bottom side			132322	1745	1	0	-0.18	0.083	13.45	14.50	1.274	0.106	/
	Front side			132322	1745	50	0	-0.12	0.066	13.42	14.50	1.282	0.085	/
	Back side			132322	1745	50	0	0.15	0.065	13.42	14.50	1.282	0.083	/
	Left side			132322	1745	50	0	0.14	0.048	13.42	14.50	1.282	0.062	/
	Right side			132322	1745	50	0	0.03	0.050	13.42	14.50	1.282	0.064	/
	Bottom side			132322	1745	50	0	0.17	0.083	13.42	14.50	1.282	0.106	/
Ant.1	Front side	10mm	QPSK	132322	1745	1	0	-0.18	0.110	13.20	14.00	1.202	0.132	/
	Back side			132322	1745	1	0	0.11	0.159	13.20	14.00	1.202	0.191	/
	Left side			132322	1745	1	0	-0.01	0.036	13.20	14.00	1.202	0.043	/
	Top side			132322	1745	1	0	0.08	0.188	13.20	14.00	1.202	0.226	/
	Front side			132322	1745	50	0	0.07	0.118	13.19	14.00	1.205	0.142	/
	Back side			132322	1745	50	0	-0.05	0.176	13.19	14.00	1.205	0.212	/
	Left side			132322	1745	50	0	-0.10	0.034	13.19	14.00	1.205	0.041	/
	Top side			132322	1745	50	0	-0.05	0.223	13.19	14.00	1.205	0.269	22
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.12 LTE Band 41 (20MHz Bandwidth)

Antenna	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. no.
Head														
Ant.0	Left cheek	0mm	QPSK	40620	2593	1	0	-0.06	0.020	11.68	12.00	1.076	0.022	/
	Left tilt			40620	2593	1	0	-0.11	0.018	11.68	12.00	1.076	0.019	/
	Right cheek			40620	2593	1	0	-0.12	0.017	11.68	12.00	1.076	0.018	/
	Right tilt			40620	2593	1	0	-0.18	0.016	11.68	12.00	1.076	0.017	/
	Left cheek			40620	2593	50	0	0.05	0.018	11.50	12.00	1.122	0.020	/
	Left tilt			40620	2593	50	0	-0.07	0.016	11.50	12.00	1.122	0.018	/
	Right cheek			40620	2593	50	0	0.04	0.012	11.50	12.00	1.122	0.013	/
	Right tilt			40620	2593	50	0	0.16	0.010	11.50	12.00	1.122	0.011	/
Ant.1	Left cheek	0mm	QPSK	40620	2593	1	0	-0.13	0.043	12.79	13.00	1.050	0.045	/
	Left tilt			40620	2593	1	0	-0.11	0.060	12.79	13.00	1.050	0.063	/
	Right cheek			40620	2593	1	0	-0.16	0.080	12.79	13.00	1.050	0.084	/
	Right tilt			40620	2593	1	0	0.01	0.115	12.79	13.00	1.050	0.121	/
	Left cheek			40620	2593	50	0	0.18	0.050	12.71	13.00	1.069	0.053	/
	Left tilt			40620	2593	50	0	0.13	0.064	12.71	13.00	1.069	0.068	/
	Right cheek			40620	2593	50	0	-0.03	0.112	12.71	13.00	1.069	0.120	/
	Right tilt			40620	2593	50	0	-0.07	0.119	12.71	13.00	1.069	0.127	23
Body-worn& Hotspot														
Ant.0	Front side	10mm	QPSK	40620	2593	1	0	-0.16	0.046	11.68	12.00	1.076	0.050	/
	Back side			40620	2593	1	0	-0.06	0.087	11.68	12.00	1.076	0.094	/
	Left side			40620	2593	1	0	-0.12	0.032	11.68	12.00	1.076	0.034	/
	Right side			40620	2593	1	0	0.07	0.040	11.68	12.00	1.076	0.043	/
	Bottom side			40620	2593	1	0	0.03	0.101	11.68	12.00	1.076	0.109	/
	Front side			40620	2593	50	0	-0.12	0.045	11.50	12.00	1.122	0.050	/
	Back side			40620	2593	50	0	-0.19	0.102	11.50	12.00	1.122	0.114	/
	Left side			40620	2593	50	0	-0.11	0.030	11.50	12.00	1.122	0.034	/
	Right side			40620	2593	50	0	-0.06	0.028	11.50	12.00	1.122	0.031	/
	Bottom side			40620	2593	50	0	-0.01	0.109	11.50	12.00	1.122	0.122	24
Ant.1	Front side	10mm	QPSK	40620	2593	1	0	0.06	0.065	12.79	13.00	1.050	0.068	/
	Back side			40620	2593	1	0	-0.15	0.081	12.79	13.00	1.050	0.085	/
	Left side			40620	2593	1	0	-0.12	0.028	12.79	13.00	1.050	0.029	/
	Top side			40620	2593	1	0	0.03	0.095	12.79	13.00	1.050	0.100	/
	Front side			40620	2593	50	0	-0.01	0.032	12.71	13.00	1.069	0.034	/
	Back side			40620	2593	50	0	0.09	0.089	12.71	13.00	1.069	0.095	/
	Left side			40620	2593	50	0	-0.13	0.045	12.71	13.00	1.069	0.048	/
	Top side			40620	2593	50	0	0.19	0.091	12.71	13.00	1.069	0.097	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.13 WIFI 2.4GHz

Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Left cheek	0mm	802.11b	6	2437	-0.14	0.369	15.15	16.00	1.216	99.30	1.007	0.452	25
Left tilt			6	2437	-0.12	0.250	15.15	16.00	1.216	99.30	1.007	0.306	/
Right cheek			6	2437	0.16	0.138	15.15	16.00	1.216	99.30	1.007	0.169	/
Right tilt			6	2437	0.09	0.106	15.15	16.00	1.216	99.30	1.007	0.130	/
Body-worn& Hotspot													
Front side	10mm	802.11b	6	2437	0.15	0.081	15.15	16.00	1.216	99.30	1.007	0.099	/
Back side			6	2437	0.10	0.149	15.15	16.00	1.216	99.30	1.007	0.182	26
Right side			6	2437	-0.01	0.119	15.15	16.00	1.216	99.30	1.007	0.146	/
Top side			6	2437	-0.12	0.053	15.15	16.00	1.216	99.30	1.007	0.065	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.14 WIFI 5GHz

Test Band	Test Position	Dist.	Test Mode	Test Channe	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Meas. No.
Head														
5.3G	Left cheek	0mm	802.11a	60	5300	-0.01	0.498	17.50	18.50	1.259	96.90	1.032	0.647	27
	Left tilt			60	5300	-0.17	0.388	17.50	18.50	1.259	96.90	1.032	0.504	/
	Right cheek			60	5300	-0.02	0.151	17.50	18.50	1.259	96.90	1.032	0.196	/
	Right tilt			60	5300	-0.04	0.159	17.50	18.50	1.259	96.90	1.032	0.207	/
5.6G	Left cheek	0mm	802.11a	116	5580	-0.11	0.434	17.36	18.50	1.300	96.90	1.032	0.582	28
	Left tilt			116	5580	0.09	0.251	17.36	18.50	1.300	96.90	1.032	0.337	/
	Right cheek			116	5580	-0.18	0.154	17.36	18.50	1.300	96.90	1.032	0.207	/
	Right tilt			116	5580	0.11	0.115	17.36	18.50	1.300	96.90	1.032	0.154	/
5.8G	Left cheek	0mm	802.11a	149	5745	0.18	0.327	17.65	18.50	1.216	96.90	1.032	0.410	29
	Left tilt			149	5745	0.10	0.223	17.65	18.50	1.216	96.90	1.032	0.280	/
	Right cheek			149	5745	0.15	0.133	17.65	18.50	1.216	96.90	1.032	0.167	/
	Right tilt			149	5745	-0.14	0.122	17.65	18.50	1.216	96.90	1.032	0.153	/
Body-worn														
5.3G	Front side	10mm	802.11a	60	5300	0.12	0.162	17.50	18.50	1.259	96.90	1.032	0.210	/
	Back side			60	5300	-0.03	0.236	17.50	18.50	1.259	96.90	1.032	0.307	30
5.6G	Front side	10mm	802.11a	116	5580	0.05	0.128	17.36	18.50	1.300	96.90	1.032	0.172	/
	Back side			116	5580	0.13	0.262	17.36	18.50	1.300	96.90	1.032	0.352	31
5.8G	Front side	10mm	802.11a	149	5745	-0.08	0.111	17.65	18.50	1.216	96.90	1.032	0.139	/
	Back side			149	5745	0.04	0.290	17.65	18.50	1.216	96.90	1.032	0.364	32
Hotspot														
5.2G	Front side	10mm	802.11a	48	5240	0.17	0.183	17.46	18.50	1.271	96.90	1.032	0.240	/
	Back side			48	5240	0.15	0.225	17.46	18.50	1.271	96.90	1.032	0.295	33
	Right side			48	5240	-0.17	0.206	17.46	18.50	1.271	96.90	1.032	0.270	/
	Top side			48	5240	0.02	0.142	17.46	18.50	1.271	96.90	1.032	0.186	/
5.8G	Front side	10mm	802.11a	149	5745	-0.08	0.111	17.65	18.50	1.216	96.90	1.032	0.139	/
	Back side			149	5745	0.04	0.290	17.65	18.50	1.216	96.90	1.032	0.364	32
	Right side			149	5745	-0.06	0.257	17.65	18.50	1.216	96.90	1.032	0.323	/
	Top side			149	5745	0.02	0.122	17.65	18.50	1.216	96.90	1.032	0.153	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

Test Band	Test Position	Dist.	Test Mode	Test Channe	Freq. (MHz)	Power Drift(dB)	Measured 10-g SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Scaled SAR (W/kg)	Meas. No.
Extremity														
5.3G	Front side	0mm	802.11a	60	5300	0.10	0.279	17.50	18.50	1.259	96.90	1.032	0.362	/
	Back side			60	5300	0.19	0.338	17.50	18.50	1.259	96.90	1.032	0.439	/
	Right side			60	5300	-0.18	0.430	17.50	18.50	1.259	96.90	1.032	0.559	34
	Top side			60	5300	0.14	0.405	17.50	18.50	1.259	96.90	1.032	0.526	/
5.6G	Front side	0mm	802.11a	116	5580	0.11	0.260	17.36	18.50	1.300	96.90	1.032	0.349	/
	Back side			116	5580	0.14	0.347	17.36	18.50	1.300	96.90	1.032	0.466	/
	Right side			116	5580	-0.18	0.367	17.36	18.50	1.300	96.90	1.032	0.492	35
	Top side			116	5580	-0.18	0.259	17.36	18.50	1.300	96.90	1.032	0.348	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.15 Bluetooth

Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Left cheek	0mm	DH5	78	2480	-0.14	0.203	13.02	13.50	1.118	76.30	1.311	0.297	36
Left tilt			78	2480	-0.16	0.122	13.02	13.50	1.118	76.30	1.311	0.179	/
Right cheek			78	2480	0.15	0.061	13.02	13.50	1.118	76.30	1.311	0.089	/
Right tilt			78	2480	-0.06	0.046	13.02	13.50	1.118	76.30	1.311	0.067	/
Body-worn& Hotspot													
Front side	10mm	DH5	78	2480	0.03	0.041	13.02	13.50	1.118	76.30	1.311	0.060	/
Back side			78	2480	-0.12	0.070	13.02	13.50	1.118	76.30	1.311	0.103	37
Right side			78	2480	0.12	0.053	13.02	13.50	1.118	76.30	1.311	0.078	/
Top side			78	2480	-0.11	0.045	13.02	13.50	1.118	76.30	1.311	0.066	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.16 NFC

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

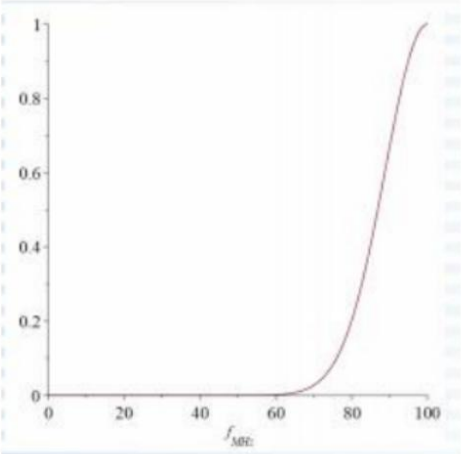
$$P_{7X}(d_{mm}, f_{MHz}) := \begin{cases} P_{6S}(d_{mm}, f_{MHz}) & f_{MHz} \le 100 \\ P_{6to7}(d_{mm}, f_{MHz}) & 100 < f_{MHz} \le 300 \\ P_{7}(d_{mm}, f_{MHz}) & 300 < f_{MHz} \end{cases}$$

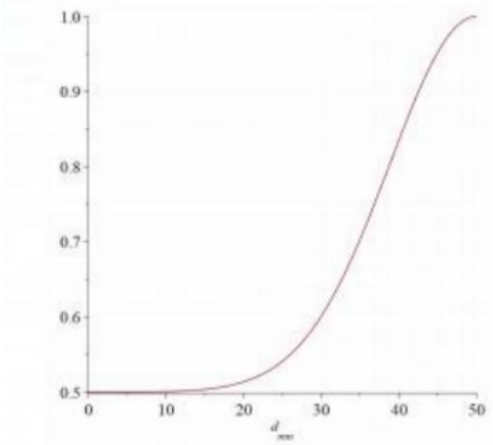
2. For portable products, when using a distance of ≤ 50mm, such as mobile phone NFC, P6s is calculated with the following formula calculate.

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

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

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





d≤50mm				
f Max(MHz)	100		d Max(mm)	50
f MHz	13.56		d(mm)	5
△f(MHz)	100		△d	50
$S_f(f_{MHz})$	0.000568861		S_d（dmm）	0.50015177
P6s(mW)	443.1257378			
Note: SAR testing is required when the distance is 5mm and the power is greater than 443.13mW.				

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

a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).

b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)

c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).

d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).

e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship: E = EIRP - 20log D + 104.8

where:
E = electric field strength in dBμV/m,
EIRP = equivalent isotropic radiated power in dBm
D = specified measurement distance in meters.

Mode	f (MHz)	Max. E-Field strength (dBuV/m)	D (m)	Ground reflection factor (dB)	ERP (dBm)
NFC (13.56MHz)	13.56	47.58	3	6	-31.22
Note: 1. Add the appropriate maximum ground reflection factor to the ERP level (6 dB for frequencies ≤ 30 MHz). 2.ERP= 47.58+20*Log(10) - 104.8 + 6 =-31.22 (dBm)					

According to the FCC KDB 447498 D04
Estimated SAR: SAR test =1.6 · Pant / Pth [W/kg]

Estimated SAR	1.6 ·Pant / Pth [W/kg]		
Pmeas.(dBm)	-31.22	Pmeas.(mW)	0.001
Pth.(mW)	443.13		
NFC Estimated 1g SAR [W/kg]	＜0.001		

11 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

12 SIMULTANEOUS TRANSMISSION

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

12.1 Simultaneous Transmission Mode Consider

No.	Simultaneous Tx Combination	Head	Body-worn	Hotspot
1	WWAN+2.4G WIFI	Yes	Yes	Yes
2	WWAN+BT	Yes	Yes	Yes
3	WWAN+5G WIFI	Yes	Yes	Yes
4	WWAN+5G WIFI+BT	Yes	Yes	Yes

Note:
1. WWAN antennas can switch automatically, the standards supported by WWAN are(GSM Voice/GPRS/EDGE/WCDMA/LTE).
2. 2.4G WIFI can’t transmit simultaneously with Bluetooth or 5G WIFI.
3. When stand-alone SAR is not required for a side of antenna, its SAR is considered zero in the SAR summing process to assess Multi-band transmission SAR compliance.
4. The maximum SAR summation is calculated based on the same configuration and test position.

12.2 Sum SAR of Simultaneous Transmission

12.2.1 Sum Head SAR of Simultaneous Transmission

Band	Antenna	Position	Stand alone SAR				SUM SAR	
			1	2	3	4		
			WWAN	2.4G WIFI	5G WIFI Max.	Bluetooth	1+2	1+3+4
GSM850	Ant.0	Left cheek	0.042	0.452	0.647	0.297	0.494	0.986
		Left Tilt	0.035	0.306	0.504	0.179	0.342	0.718
		Right Cheek	0.047	0.169	0.207	0.089	0.216	0.343
		Right Tilt	0.043	0.130	0.207	0.067	0.173	0.317
	Ant.1	Left cheek	0.599	0.452	0.647	0.297	1.051	1.543
		Left Tilt	0.554	0.306	0.504	0.179	0.861	1.237
		Right Cheek	0.920	0.169	0.207	0.089	1.089	1.216
		Right Tilt	0.762	0.130	0.207	0.067	0.892	1.036
GSM1900	Ant.0	Left Cheek	0.031	0.452	0.647	0.297	0.483	0.975
		Left Tilt	0.026	0.306	0.504	0.179	0.332	0.709
		Right Cheek	0.027	0.169	0.207	0.089	0.196	0.323
		Right Tilt	0.025	0.130	0.207	0.067	0.155	0.299
	Ant.1	Left Cheek	0.228	0.452	0.647	0.297	0.680	1.173
		Left Tilt	0.276	0.306	0.504	0.179	0.583	0.959
		Right Cheek	0.435	0.169	0.207	0.089	0.604	0.731
		Right Tilt	0.516	0.130	0.207	0.067	0.646	0.790
WCDMA B2	Ant.0	Left Cheek	0.027	0.452	0.647	0.297	0.479	0.971
		Left Tilt	0.023	0.306	0.504	0.179	0.329	0.706
		Right Cheek	0.035	0.169	0.207	0.089	0.205	0.331
		Right Tilt	0.033	0.130	0.207	0.067	0.163	0.307
	Ant.1	Left Cheek	0.186	0.452	0.647	0.297	0.638	1.130
		Left Tilt	0.229	0.306	0.504	0.179	0.535	0.912
		Right Cheek	0.330	0.169	0.207	0.089	0.499	0.626
		Right Tilt	0.392	0.130	0.207	0.067	0.522	0.666
WCDMA B4	Ant.0	Left Cheek	0.050	0.452	0.647	0.297	0.502	0.994
		Left Tilt	0.045	0.306	0.504	0.179	0.351	0.728
		Right Cheek	0.061	0.169	0.207	0.089	0.230	0.357
		Right Tilt	0.052	0.130	0.207	0.067	0.182	0.326
	Ant.1	Left Cheek	0.260	0.452	0.647	0.297	0.712	1.204
		Left Tilt	0.303	0.306	0.504	0.179	0.609	0.986
		Right Cheek	0.421	0.169	0.207	0.089	0.590	0.717
		Right Tilt	0.458	0.130	0.207	0.067	0.588	0.732
WCDMA B5	Ant.0	Left Cheek	0.039	0.452	0.647	0.297	0.491	0.984
		Left Tilt	0.034	0.306	0.504	0.179	0.340	0.717
		Right Cheek	0.048	0.169	0.207	0.089	0.217	0.344
		Right Tilt	0.038	0.130	0.207	0.067	0.168	0.312

	Ant.1	Left Cheek	0.502	0.452	0.647	0.297	0.954	1.447
		Left Tilt	0.472	0.306	0.504	0.179	0.778	1.155
		Right Cheek	0.542	0.169	0.207	0.089	0.711	0.838
		Right Tilt	0.511	0.130	0.207	0.067	0.641	0.785
LTE B7	Ant.0	Left Cheek	0.032	0.452	0.647	0.297	0.484	0.977
		Left Tilt	0.030	0.306	0.504	0.179	0.336	0.713
		Right Cheek	0.035	0.169	0.207	0.089	0.204	0.331
		Right Tilt	0.032	0.130	0.207	0.067	0.162	0.306
	Ant.1	Left Cheek	0.049	0.452	0.647	0.297	0.501	0.993
		Left Tilt	0.060	0.306	0.504	0.179	0.367	0.743
		Right Cheek	0.096	0.169	0.207	0.089	0.265	0.392
		Right Tilt	0.127	0.130	0.207	0.067	0.257	0.401
LTE B12	Ant.0	Left Cheek	0.020	0.452	0.647	0.297	0.472	0.964
		Left Tilt	0.012	0.306	0.504	0.179	0.318	0.695
		Right Cheek	0.055	0.169	0.207	0.089	0.224	0.351
		Right Tilt	0.018	0.130	0.207	0.067	0.148	0.292
	Ant.1	Left Cheek	0.106	0.452	0.647	0.297	0.558	1.050
		Left Tilt	0.095	0.306	0.504	0.179	0.401	0.777
		Right Cheek	0.126	0.169	0.207	0.089	0.295	0.422
		Right Tilt	0.140	0.130	0.207	0.067	0.269	0.414
LTE B13	Ant.0	Left Cheek	0.104	0.452	0.647	0.297	0.556	1.049
		Left Tilt	0.060	0.306	0.504	0.179	0.367	0.743
		Right Cheek	0.118	0.169	0.207	0.089	0.287	0.414
		Right Tilt	0.067	0.130	0.207	0.067	0.197	0.341
	Ant.1	Left Cheek	0.141	0.452	0.647	0.297	0.593	1.085
		Left Tilt	0.126	0.306	0.504	0.179	0.432	0.809
		Right Cheek	0.201	0.169	0.207	0.089	0.370	0.497
		Right Tilt	0.180	0.130	0.207	0.067	0.310	0.454
LTE B25	Ant.0	Left Cheek	0.064	0.452	0.647	0.297	0.516	1.008
		Left Tilt	0.059	0.306	0.504	0.179	0.365	0.742
		Right Cheek	0.073	0.169	0.207	0.089	0.242	0.369
		Right Tilt	0.068	0.130	0.207	0.067	0.198	0.342
	Ant.1	Left Cheek	0.276	0.452	0.647	0.297	0.728	1.221
		Left Tilt	0.325	0.306	0.504	0.179	0.631	1.008
		Right Cheek	0.436	0.169	0.207	0.089	0.605	0.732
		Right Tilt	0.549	0.130	0.207	0.067	0.679	0.823
LTE B26	Ant.0	Left Cheek	0.065	0.452	0.647	0.297	0.517	1.009
		Left Tilt	0.022	0.306	0.504	0.179	0.328	0.705
		Right Cheek	0.074	0.169	0.207	0.089	0.243	0.370
		Right Tilt	0.064	0.130	0.207	0.067	0.194	0.338
	Ant.1	Left Cheek	0.101	0.452	0.647	0.297	0.553	1.045
		Left Tilt	0.097	0.306	0.504	0.179	0.403	0.780
		Right Cheek	0.116	0.169	0.207	0.089	0.285	0.412

		Right Tilt	0.107	0.130	0.207	0.067	0.237	0.381
LTE B66	Ant.0	Left Cheek	0.046	0.452	0.647	0.297	0.498	0.990
		Left Tilt	0.041	0.306	0.504	0.179	0.347	0.724
		Right Cheek	0.058	0.169	0.207	0.089	0.227	0.354
		Right Tilt	0.051	0.130	0.207	0.067	0.181	0.325
	Ant.1	Left Cheek	0.294	0.452	0.647	0.297	0.746	1.238
		Left Tilt	0.355	0.306	0.504	0.179	0.662	1.038
		Right Cheek	0.512	0.169	0.207	0.089	0.681	0.808
		Right Tilt	0.527	0.130	0.207	0.067	0.656	0.801
LTE 41	Ant.0	Left Cheek	0.022	0.452	0.647	0.297	0.473	0.966
		Left Tilt	0.019	0.306	0.504	0.179	0.326	0.702
		Right Cheek	0.018	0.169	0.207	0.089	0.187	0.314
		Right Tilt	0.017	0.130	0.207	0.067	0.147	0.291
	Ant.1	Left Cheek	0.053	0.452	0.647	0.297	0.505	0.998
		Left Tilt	0.068	0.306	0.504	0.179	0.375	0.751
		Right Cheek	0.120	0.169	0.207	0.089	0.289	0.416
		Right Tilt	0.127	0.130	0.207	0.067	0.257	0.401
Note: The highest Summed 1g SAR is 1.543 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.								

12.2.2 Sum Body-worn SAR of Simultaneous Transmission

Band	Antenna	Position	Stand alone SAR				SUM SAR	
			1	2	3	4		
			WWAN	2.4G WIFI	5G WIFI Max	Bluetooth	1+2	1+3+4
GSM850	Ant.0	Front Side	0.033	0.099	0.210	0.060	0.132	0.303
		Back Side	0.027	0.182	0.364	0.103	0.210	0.494
	Ant.1	Front Side	0.212	0.099	0.210	0.060	0.311	0.483
		Back Side	0.304	0.182	0.364	0.103	0.486	0.770
GSM1900	Ant.0	Front Side	0.054	0.099	0.210	0.060	0.153	0.324
		Back Side	0.071	0.182	0.364	0.103	0.254	0.538
	Ant.1	Front Side	0.121	0.099	0.210	0.060	0.220	0.392
		Back Side	0.223	0.182	0.364	0.103	0.406	0.690
WCDMA B2	Ant.0	Front Side	0.048	0.099	0.210	0.060	0.147	0.319
		Back Side	0.055	0.182	0.364	0.103	0.237	0.521
	Ant.1	Front Side	0.096	0.099	0.210	0.060	0.196	0.367
		Back Side	0.179	0.182	0.364	0.103	0.361	0.645
WCDMA B4	Ant.0	Front Side	0.060	0.099	0.210	0.060	0.159	0.331
		Back Side	0.071	0.182	0.364	0.103	0.254	0.538
	Ant.1	Front Side	0.122	0.099	0.210	0.060	0.222	0.393
		Back Side	0.174	0.182	0.364	0.103	0.357	0.641
WCDMA B5	Ant.0	Front Side	0.051	0.099	0.210	0.060	0.150	0.321

		Back Side	0.072	0.182	0.364	0.103	0.255	0.539
	Ant.1	Front Side	0.135	0.099	0.210	0.060	0.234	0.405
		Back Side	0.180	0.182	0.364	0.103	0.362	0.646
LTE B7	Ant.0	Front Side	0.058	0.099	0.210	0.060	0.157	0.329
		Back Side	0.080	0.182	0.364	0.103	0.262	0.546
	Ant.1	Front Side	0.068	0.099	0.210	0.060	0.167	0.338
		Back Side	0.084	0.182	0.364	0.103	0.266	0.550
LTE B12	Ant.0	Front Side	0.031	0.099	0.210	0.060	0.130	0.301
		Back Side	0.019	0.182	0.364	0.103	0.202	0.486
	Ant.1	Front Side	0.044	0.099	0.210	0.060	0.143	0.314
		Back Side	0.050	0.182	0.364	0.103	0.232	0.516
LTE B13	Ant.0	Front Side	0.063	0.099	0.210	0.060	0.162	0.333
		Back Side	0.059	0.182	0.364	0.103	0.241	0.525
	Ant.1	Front Side	0.035	0.099	0.210	0.060	0.134	0.305
		Back Side	0.068	0.182	0.364	0.103	0.250	0.534
LTE B25	Ant.0	Front Side	0.085	0.099	0.210	0.060	0.185	0.356
		Back Side	0.082	0.182	0.364	0.103	0.264	0.548
	Ant.1	Front Side	0.130	0.099	0.210	0.060	0.229	0.400
		Back Side	0.240	0.182	0.364	0.103	0.423	0.707
LTE B26	Ant.0	Front Side	0.023	0.099	0.210	0.060	0.122	0.293
		Back Side	0.033	0.182	0.364	0.103	0.215	0.499
	Ant.1	Front Side	0.039	0.099	0.210	0.060	0.138	0.310
		Back Side	0.050	0.182	0.364	0.103	0.233	0.517
LTE B66	Ant.0	Front Side	0.085	0.099	0.210	0.060	0.184	0.355
		Back Side	0.083	0.182	0.364	0.103	0.266	0.550
	Ant.1	Front Side	0.142	0.099	0.210	0.060	0.241	0.413
		Back Side	0.212	0.182	0.364	0.103	0.395	0.679
LTE B41	Ant.0	Front Side	0.050	0.099	0.210	0.060	0.150	0.321
		Back Side	0.114	0.182	0.364	0.103	0.297	0.581
	Ant.1	Front Side	0.068	0.099	0.210	0.060	0.167	0.339
		Back Side	0.095	0.182	0.364	0.103	0.278	0.562
Note: The highest Summed 1g SAR is 0.770 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.								

12.2.3 Sum Hotspot SAR of Simultaneous Transmission

Band	Antenna	Position	Stand alone SAR				SUM SAR	
			1	2	3	4		
			WWAN	2.4G WIFI	5G WIFI Max	Bluetooth	1+2	1+3+4
GSM850	Ant.0	Front Side	0.033	0.099	0.240	0.060	0.132	0.333
		Back Side	0.027	0.182	0.364	0.103	0.210	0.494
		Left Side	0.026	0.000	0.000	0.000	0.026	0.026
		Right Side	0.018	0.146	0.323	0.078	0.164	0.419
		Bottom Side	0.000	0.065	0.186	0.066	0.065	0.252
	Ant.1	Front Side	0.042	0.000	0.000	0.000	0.042	0.042
		Back Side	0.212	0.099	0.240	0.060	0.311	0.512
		Left Side	0.304	0.182	0.364	0.103	0.486	0.770
		Right Side	0.082	0.000	0.000	0.000	0.082	0.082
		Top Side	0.000	0.146	0.323	0.078	0.146	0.400
GSM1900	Ant.0	Front Side	0.267	0.065	0.186	0.066	0.332	0.519
		Back Side	0.000	0.000	0.000	0.000	0.000	0.000
		Left Side	0.054	0.099	0.240	0.060	0.153	0.354
		Right Side	0.071	0.182	0.364	0.103	0.254	0.538
		Bottom Side	0.043	0.000	0.000	0.000	0.043	0.043
	Ant.1	Front Side	0.027	0.146	0.323	0.078	0.173	0.428
		Back Side	0.000	0.065	0.186	0.066	0.065	0.252
		Left Side	0.069	0.000	0.000	0.000	0.069	0.069
		Right Side	0.121	0.099	0.240	0.060	0.220	0.421
		Top Side	0.223	0.182	0.364	0.103	0.406	0.690
WCDMA B2	Ant.0	Front Side	0.059	0.000	0.000	0.000	0.059	0.059
		Back Side	0.000	0.146	0.323	0.078	0.146	0.400
		Left Side	0.310	0.065	0.186	0.066	0.375	0.563
		Right Side	0.000	0.000	0.000	0.000	0.000	0.000
		Bottom Side	0.048	0.099	0.240	0.060	0.147	0.348
	Ant.1	Front Side	0.055	0.182	0.364	0.103	0.237	0.521
		Back Side	0.030	0.000	0.000	0.000	0.030	0.030
		Left Side	0.028	0.146	0.323	0.078	0.174	0.428
		Right Side	0.000	0.065	0.186	0.066	0.065	0.252
		Top Side	0.057	0.000	0.000	0.000	0.057	0.057
WCDMA B4	Ant.0	Front Side	0.096	0.099	0.240	0.060	0.196	0.397
		Back Side	0.179	0.182	0.364	0.103	0.361	0.645
		Left Side	0.043	0.000	0.000	0.000	0.043	0.043
		Right Side	0.000	0.146	0.323	0.078	0.146	0.400
		Bottom Side	0.226	0.065	0.186	0.066	0.291	0.478
	Ant.1	Front Side	0.000	0.000	0.000	0.000	0.000	0.000
		Back Side	0.060	0.099	0.240	0.060	0.159	0.360

		Left Side	0.071	0.182	0.364	0.103	0.254	0.538
		Right Side	0.046	0.000	0.000	0.000	0.046	0.046
		Top Side	0.042	0.146	0.323	0.078	0.188	0.442
WCDMA B5	Ant.0	Front Side	0.000	0.065	0.186	0.066	0.065	0.252
		Back Side	0.101	0.000	0.000	0.000	0.101	0.101
		Left Side	0.122	0.099	0.240	0.060	0.222	0.422
		Right Side	0.174	0.182	0.364	0.103	0.357	0.641
		Bottom Side	0.063	0.000	0.000	0.000	0.063	0.063
	Ant.1	Front Side	0.000	0.146	0.323	0.078	0.146	0.400
		Back Side	0.218	0.065	0.186	0.066	0.283	0.470
		Left Side	0.000	0.000	0.000	0.000	0.000	0.000
		Right Side	0.051	0.099	0.240	0.060	0.150	0.351
		Top Side	0.072	0.182	0.364	0.103	0.255	0.539
LTE B7	Ant.0	Front Side	0.046	0.000	0.000	0.000	0.046	0.046
		Back Side	0.038	0.146	0.323	0.078	0.184	0.438
		Left Side	0.000	0.065	0.186	0.066	0.065	0.252
		Right Side	0.076	0.000	0.000	0.000	0.076	0.076
		Bottom Side	0.135	0.099	0.240	0.060	0.234	0.435
	Ant.1	Front Side	0.180	0.182	0.364	0.103	0.362	0.646
		Back Side	0.057	0.000	0.000	0.000	0.057	0.057
		Left Side	0.000	0.146	0.323	0.078	0.146	0.400
		Right Side	0.159	0.065	0.186	0.066	0.224	0.411
		Top Side	0.000	0.000	0.000	0.000	0.000	0.000
LTE B12	Ant.0	Front Side	0.058	0.099	0.240	0.060	0.157	0.358
		Back Side	0.080	0.182	0.364	0.103	0.262	0.546
		Left Side	0.049	0.000	0.000	0.000	0.049	0.049
		Right Side	0.045	0.146	0.323	0.078	0.191	0.445
		Bottom Side	0.000	0.065	0.186	0.066	0.065	0.252
	Ant.1	Front Side	0.089	0.000	0.000	0.000	0.089	0.089
		Back Side	0.068	0.099	0.240	0.060	0.167	0.368
		Left Side	0.084	0.182	0.364	0.103	0.266	0.550
		Right Side	0.057	0.000	0.000	0.000	0.057	0.057
		Top Side	0.000	0.146	0.323	0.078	0.146	0.400
LTE B13	Ant.0	Front Side	0.092	0.065	0.186	0.066	0.157	0.344
		Back Side	0.000	0.000	0.000	0.000	0.000	0.000
		Left Side	0.031	0.099	0.240	0.060	0.130	0.331
		Right Side	0.019	0.182	0.364	0.103	0.202	0.486
		Bottom Side	0.027	0.000	0.000	0.000	0.027	0.027
	Ant.1	Front Side	0.024	0.146	0.323	0.078	0.170	0.424
		Back Side	0.000	0.065	0.186	0.066	0.065	0.252
		Left Side	0.026	0.000	0.000	0.000	0.026	0.026
		Right Side	0.044	0.099	0.240	0.060	0.143	0.344
		Top Side	0.050	0.182	0.364	0.103	0.232	0.516

LTE B25	Ant.0	Front Side	0.046	0.000	0.000	0.000	0.046	0.046
		Back Side	0.000	0.146	0.323	0.078	0.146	0.400
		Left Side	0.033	0.065	0.186	0.066	0.098	0.285
		Right Side	0.000	0.000	0.000	0.000	0.000	0.000
		Bottom Side	0.063	0.099	0.240	0.060	0.162	0.363
	Ant.1	Front Side	0.059	0.182	0.364	0.103	0.241	0.525
		Back Side	0.064	0.000	0.000	0.000	0.064	0.064
		Left Side	0.065	0.146	0.323	0.078	0.211	0.466
		Right Side	0.000	0.065	0.186	0.066	0.065	0.252
		Top Side	0.051	0.000	0.000	0.000	0.051	0.051
LTE B26	Ant.0	Front Side	0.035	0.099	0.240	0.060	0.134	0.335
		Back Side	0.068	0.182	0.364	0.103	0.250	0.534
		Left Side	0.065	0.000	0.000	0.000	0.065	0.065
		Right Side	0.000	0.146	0.323	0.078	0.146	0.400
		Bottom Side	0.041	0.065	0.186	0.066	0.105	0.293
	Ant.1	Front Side	0.000	0.000	0.000	0.000	0.000	0.000
		Back Side	0.085	0.099	0.240	0.060	0.185	0.385
		Left Side	0.082	0.182	0.364	0.103	0.264	0.548
		Right Side	0.068	0.000	0.000	0.000	0.068	0.068
		Top Side	0.063	0.146	0.323	0.078	0.209	0.463
LTE B66	Ant.0	Front Side	0.000	0.065	0.186	0.066	0.065	0.252
		Back Side	0.055	0.000	0.000	0.000	0.055	0.055
		Left Side	0.130	0.099	0.240	0.060	0.229	0.430
		Right Side	0.240	0.182	0.364	0.103	0.423	0.707
		Bottom Side	0.045	0.000	0.000	0.000	0.045	0.045
	Ant.1	Front Side	0.000	0.146	0.323	0.078	0.146	0.400
		Back Side	0.319	0.065	0.186	0.066	0.384	0.571
		Left Side	0.000	0.000	0.000	0.000	0.000	0.000
		Right Side	0.023	0.099	0.240	0.060	0.122	0.323
		Top Side	0.033	0.182	0.364	0.103	0.215	0.499
		Bottom Side	0.022	0.000	0.000	0.000	0.022	0.022
LTE B41	Ant.0	Front Side	0.020	0.146	0.323	0.078	0.166	0.421
		Back Side	0.000	0.065	0.186	0.066	0.065	0.252
		Left Side	0.028	0.000	0.000	0.000	0.028	0.028
		Right Side	0.039	0.099	0.240	0.060	0.138	0.339
		Bottom Side	0.050	0.182	0.364	0.103	0.233	0.517
	Ant.1	Front Side	0.021	0.000	0.000	0.000	0.021	0.021
		Back Side	0.000	0.146	0.323	0.078	0.146	0.400
		Left Side	0.050	0.065	0.186	0.066	0.115	0.302
		Right Side	0.000	0.000	0.000	0.000	0.000	0.000
		Top Side	0.085	0.099	0.240	0.060	0.184	0.385
Note: The highest Summed 1g SAR is 0.770 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.								

12.2.4 Highest Total Exposure Ratio of Simultaneous Transmission

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

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

maximum SAR value for Simultaneous Transmission is 1.543 [W/kg]. Therefore, the worst TER =(1.543+0.001)/1.6 = 0.965＜1,the NFC SAR transmit simultaneously Pass.

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: 1201	2024/09/03	2027/09/02
835MHz Validation Dipole	Speag	D835V2	SN: 4d277	2024/08/30	2027/08/29
1750MHz Validation Dipole	Speag	D1750V2	SN: 1183	2024/09/03	2027/09/02
1950MHz Validation Dipole	Speag	D1950V3	SN: 1240	2024/08/22	2027/08/21
2450MHz Validation Dipole	Speag	D2450V2	SN: 1065	2024/09/05	2027/09/04
2600MHz Validation Dipole	Speag	D2600V2	SN: 1184	2024/08/30	2027/08/29
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1333	2024/09/04	2027/09/03
Data Acquisition Electronicsr	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	2024/07/31
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: 1857	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 an DAK3.5 Dielectric Probe Kit.

Head Liquid

Date	Liquid Type	Fre. (MHz)	Temp. (℃)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ε)	Target Conductivity (σ) (S/m)	Target Permittivity (ε)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2025.5.12	Head	750	21.4	0.91	41.38	0.89	41.94	2.25	-1.34
2025.5.11	Head	835	21.0	0.94	41.10	0.90	41.50	4.44	-0.96
2025.5.13	Head	1750	21.6	1.35	38.87	1.37	40.08	-1.46	-3.02
2025.5.14	Head	1950	20.8	1.43	38.78	1.40	40.00	2.14	-3.05
2025.5.16	Head	2450	21.3	1.86	38.07	1.80	39.20	3.33	-2.88
2025.5.15	Head	2600	21.6	2.02	37.74	1.96	39.01	3.06	-3.26
2025.5.16	Head	2600	21.3	2.00	38.03	1.96	39.01	2.04	-2.51
2025.5.18	Head	5300	20.4	4.79	35.19	4.76	35.87	0.63	-1.90
2025.5.17	Head	5600	21.0	5.12	34.89	5.07	35.53	0.99	-1.80
2025.5.17	Head	5800	21.0	5.38	34.48	5.27	35.30	2.09	-2.32
Note: The tolerance limit of Conductivity and Permittivity is± 5%.									

ANNEX B SYSTEM CHECK RESULT

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

Head liquid 1g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2025.5.12	Head	750	100	0.879	8.79	8.46	3.90
2025.5.11	Head	835	100	0.937	9.37	9.59	-2.29
2025.5.13	Head	1750	100	3.560	35.60	36.50	-2.47
2025.5.14	Head	1950	100	4.060	40.60	41.70	-2.64
2025.5.16	Head	2450	100	5.370	53.70	52.60	2.09
2025.5.15	Head	2600	100	5.360	53.60	55.30	-3.07
2025.5.16	Head	2600	100	5.640	56.40	55.30	1.99
2025.5.18	Head	5300	100	8.150	81.50	79.00	3.16
2025.5.17	Head	5600	100	8.310	83.10	82.80	0.36
2025.5.17	Head	5800	100	7.950	79.50	78.50	1.27
Note: The tolerance limit of System validation ±10%.							

Head liquid 10g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2025.5.18	Head	5300	100	2.310	23.10	23.00	0.43
2025.5.17	Head	5600	100	2.340	23.40	24.00	-2.50
Note: The tolerance limit of System validation ±10%.							

System Performance Check Data (750MHz)

Date: 2025/5/12
Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.906 S/m; ε_r = 41.376; ρ = 1000 kg/m^3
Phantom section: Flat Section

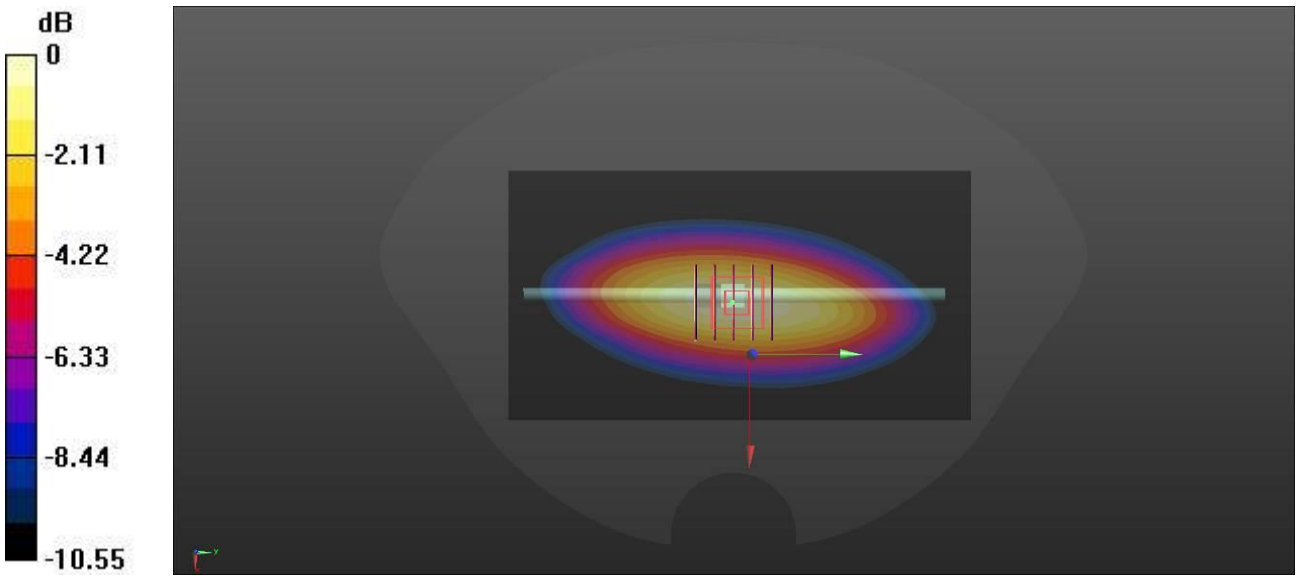
Ambient Temperature:22.5℃ Liquid Temperature:21.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(8.92, 9.23, 9.45); Calibrated: 2024/9/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 750/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.20 W/kg

CW 750/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.27 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.46 W/kg
SAR(1 g) = 0.879 W/kg; SAR(10 g) = 0.587 W/kg
Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg

System Performance Check Data (835MHz)

Date: 2025/5/11
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.939 S/m; ε_r = 41.099; ρ = 1000 kg/m^3
Phantom section: Flat Section

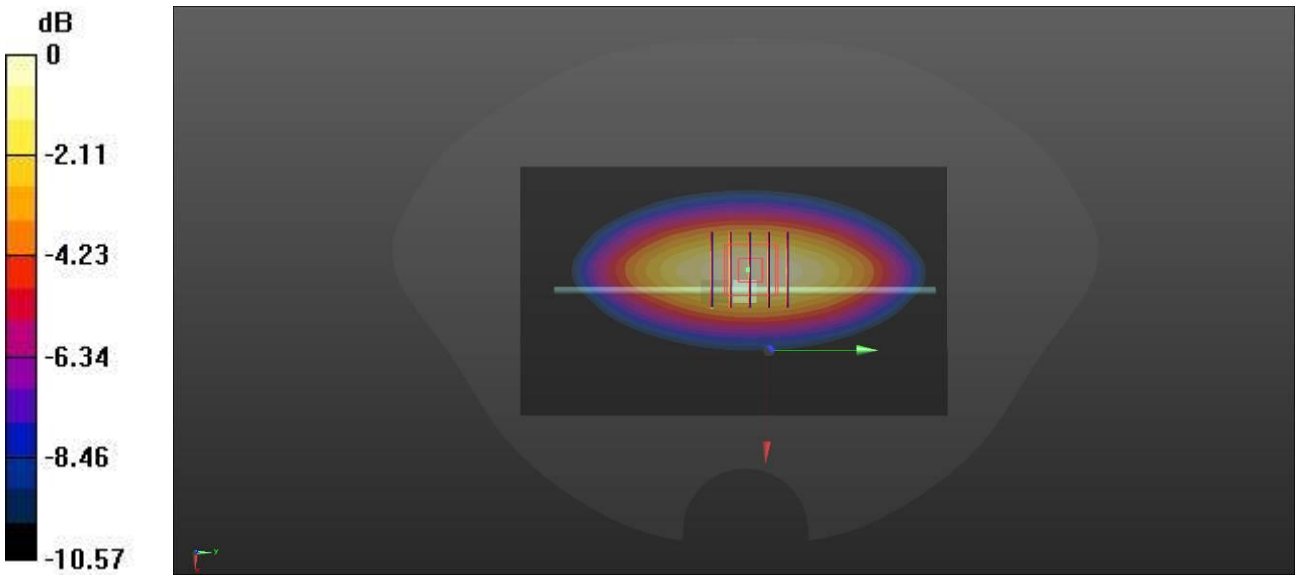
Ambient Temperature:22.3℃ Liquid Temperature:21.0℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(8.85, 9.15, 9.38); Calibrated: 2024/9/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 835/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.30 W/kg

CW 835/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.08 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 0.937 W/kg; SAR(10 g) = 0.612 W/kg
Maximum value of SAR (measured) = 1.29 W/kg



0 dB = 1.29 W/kg

System Performance Check Data (1750MHz)

Date: 2025/5/13
Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.347 S/m; ε_r = 38.869; ρ = 1000 kg/m^3
Phantom section: Flat Section

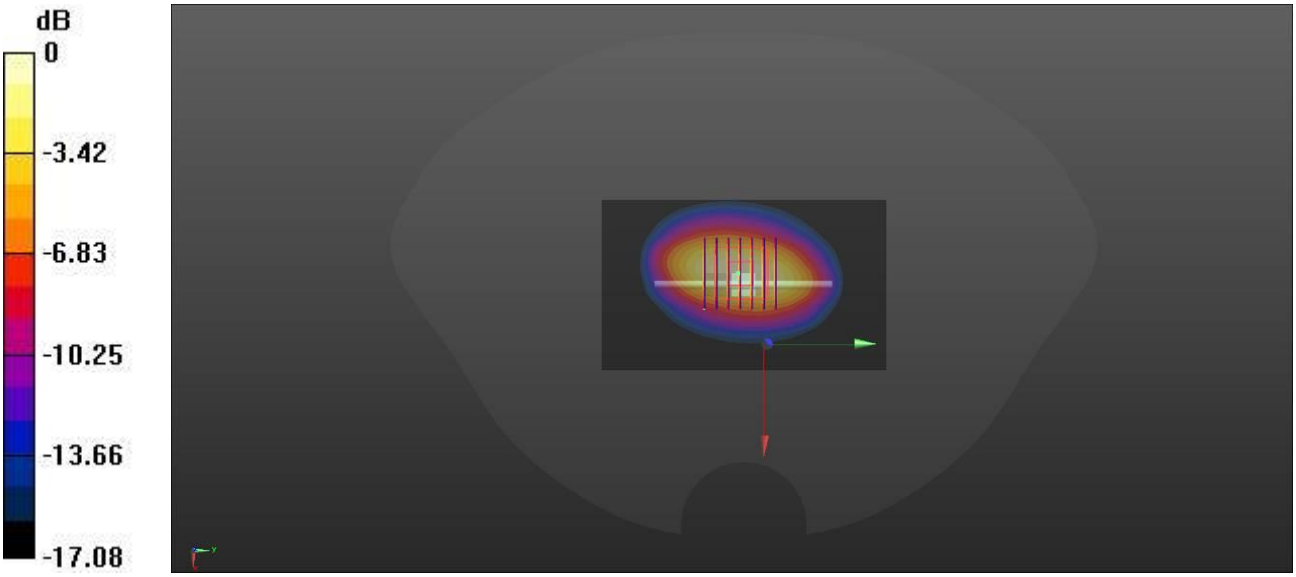
Ambient Temperature:22.7℃ Liquid Temperature:21.6℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(7.57, 7.83, 8.02); Calibrated: 2024/9/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 1750/Area Scan (61x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 5.58 W/kg

CW 1750/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.72 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 6.83 W/kg
SAR(1 g) = 3.56 W/kg; SAR(10 g) = 1.87 W/kg
Maximum value of SAR (measured) = 5.61 W/kg



0 dB = 5.61 W/kg

System Performance Check Data (1950MHz)

Date: 2025/5/14
Communication System Band: D1950 (1950.0 MHz); Frequency: 1950 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1950 MHz; σ = 1.425 S/m; ε_r = 38.781; ρ = 1000 kg/m^3
Phantom section: Flat Section

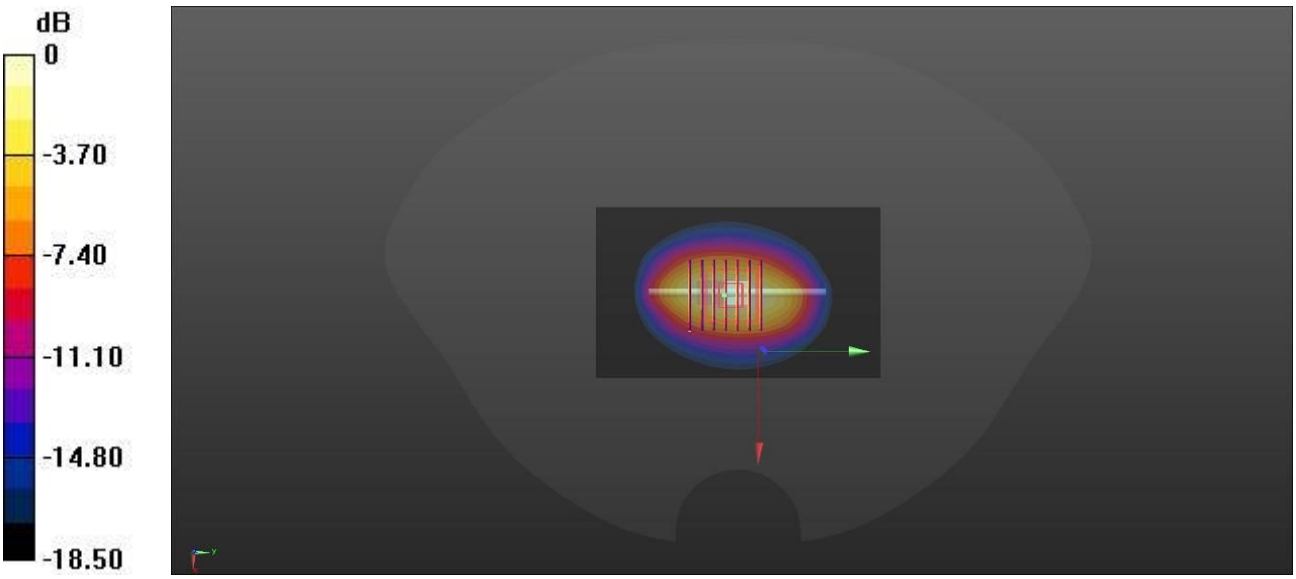
Ambient Temperature:22.1℃ Liquid Temperature:20.8℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(7.34, 7.59, 7.78); Calibrated: 2024/9/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 1950/Area Scan (61x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 6.57 W/kg

CW 1950/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.16 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 7.82 W/kg
SAR(1 g) = 4.06 W/kg; SAR(10 g) = 2.09 W/kg
Maximum value of SAR (measured) = 6.43 W/kg



0 dB = 6.43 W/kg

System Performance Check Data (2450MHz)

Date: 2025/5/16
Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.861 S/m; ε_r = 38.069; ρ = 1000 kg/m^3
Phantom section: Flat Section

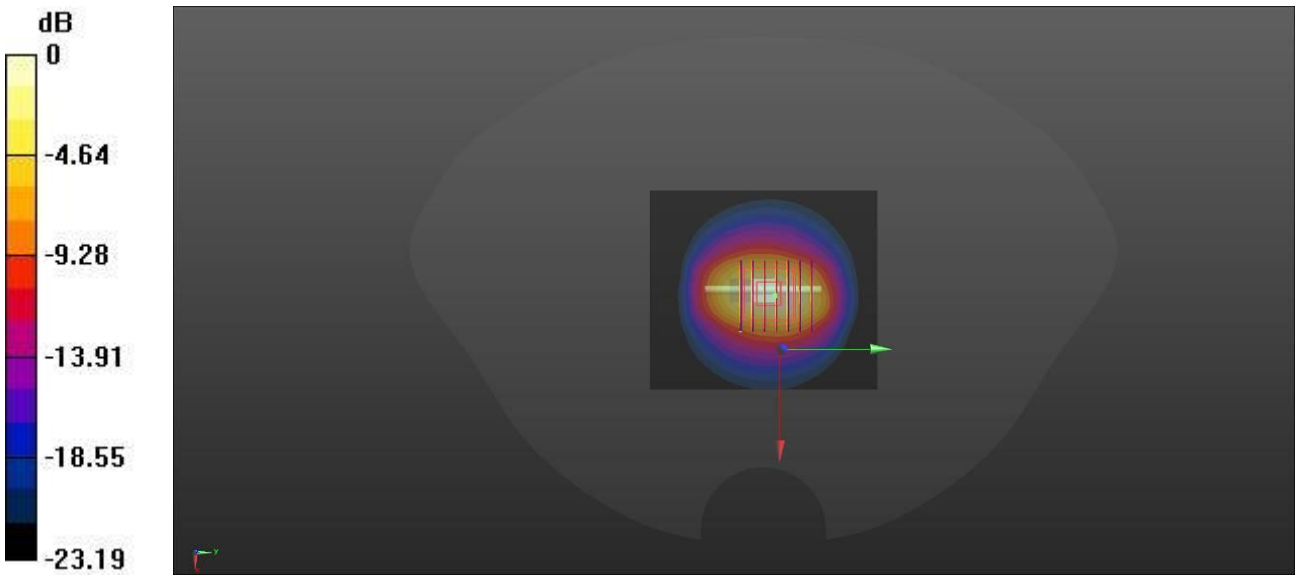
Ambient Temperature:22.5℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(6.98, 7.22, 7.4); Calibrated: 2024/9/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 2450/Area Scan (71x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 9.32 W/kg

CW 2450/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.73 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 11.3 W/kg
SAR(1 g) = 5.37 W/kg; SAR(10 g) = 2.47 W/kg
Maximum value of SAR (measured) = 8.96 W/kg



0 dB = 8.96 W/kg

System Performance Check Data (2600MHz)

Date: 2025/5/15
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.018 S/m; ε_r = 37.739; ρ = 1000 kg/m^3
Phantom section: Flat Section

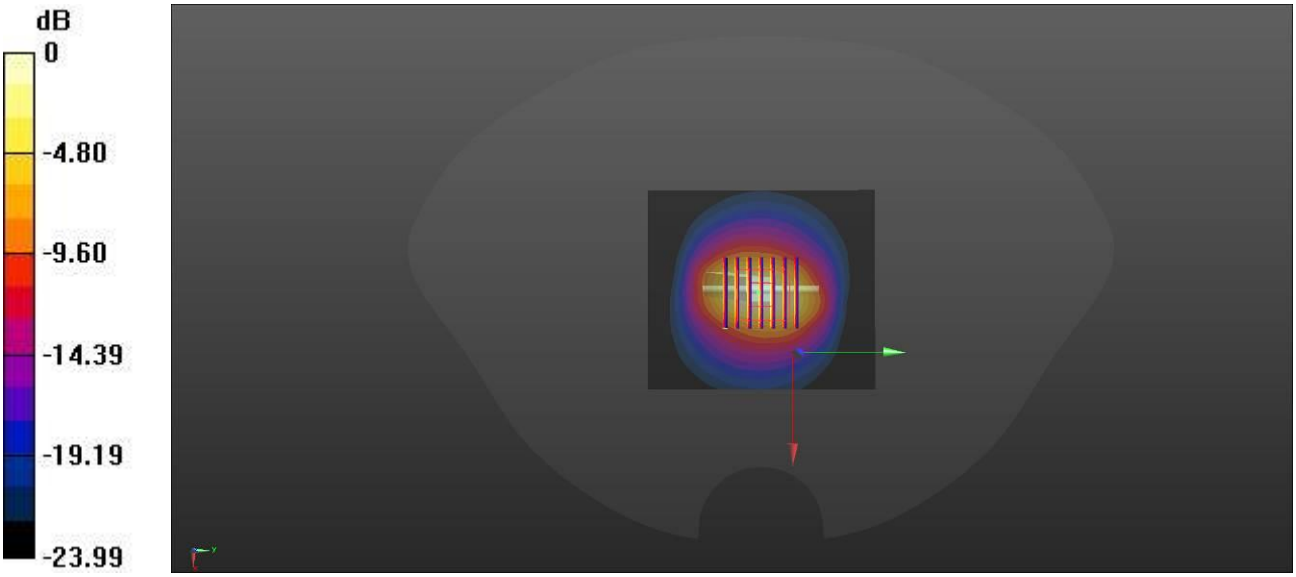
Ambient Temperature:22.9℃ Liquid Temperature:21.6℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(7.06, 7.3, 7.48); Calibrated: 2024/9/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 2600/Area Scan (71x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 9.55 W/kg

CW 2600/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.38 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 11.6 W/kg
SAR(1 g) = 5.36 W/kg; SAR(10 g) = 2.39 W/kg
Maximum value of SAR (measured) = 9.22 W/kg



0 dB = 9.22 W/kg

System Performance Check Data (2600MHz)

Date: 2025/5/16
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.996 S/m; ε_r = 38.025; ρ = 1000 kg/m^3
Phantom section: Flat Section

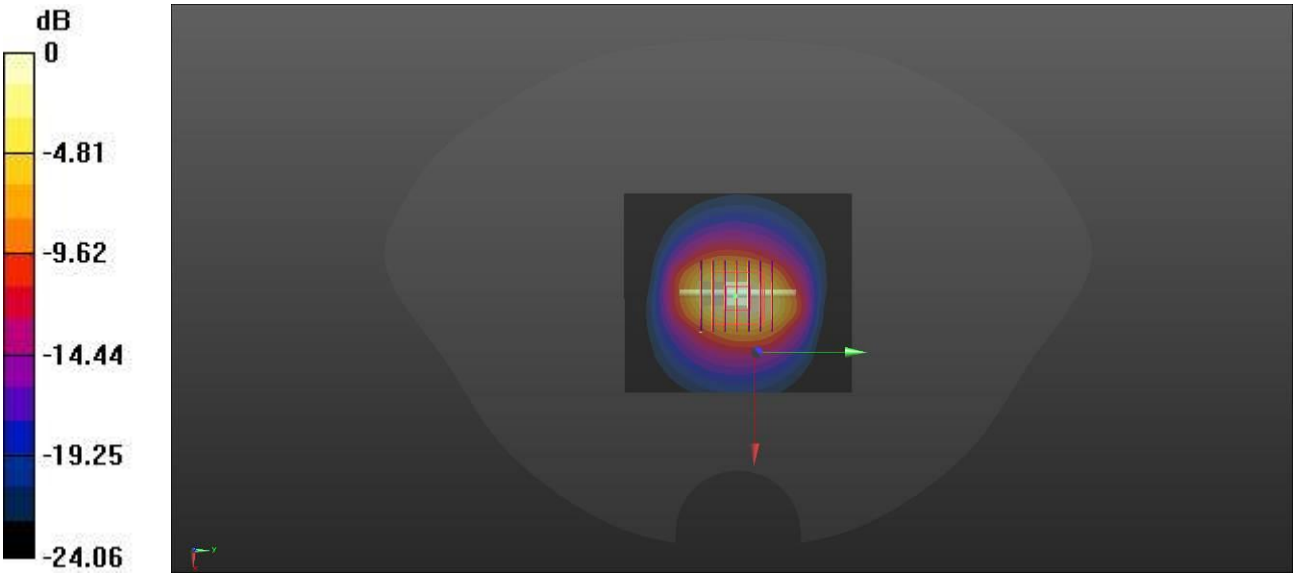
Ambient Temperature:22.5℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(7.06, 7.3, 7.48); Calibrated: 2024/9/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 2600/Area Scan (71x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 9.96 W/kg

CW 2600/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.40 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 12.3 W/kg
SAR(1 g) = 5.64 W/kg; SAR(10 g) = 2.51 W/kg
Maximum value of SAR (measured) = 9.78 W/kg



0 dB = 9.78 W/kg

System Performance Check Data (5300MHz)

Date: 2025/5/18
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 4.793 S/m; ε_r = 35.188; ρ = 1000 kg/m^3
Phantom section: Flat Section

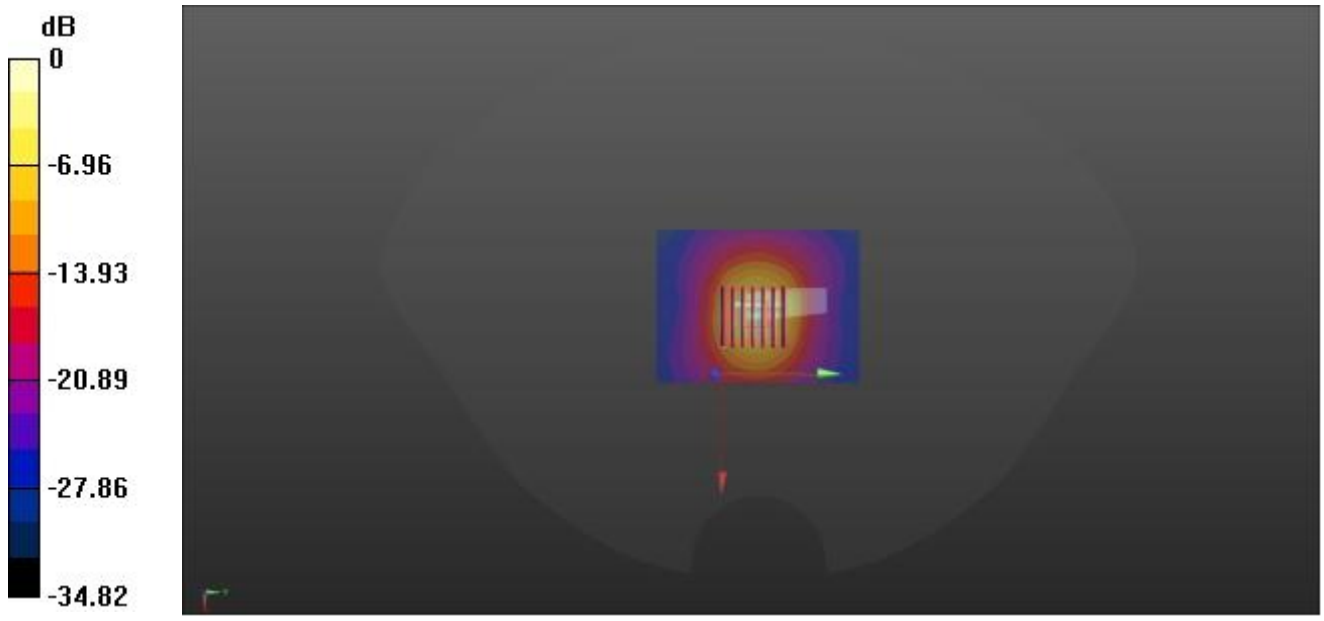
Ambient Temperature:21.8℃ Liquid Temperature:20.4℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(5.44, 5.62, 5.76); Calibrated: 2024/9/5
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 5300/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.2 W/kg

CW 5300/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 41.62 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 34.8 W/kg
SAR(1 g) = 8.15 W/kg; SAR(10 g) = 2.31 W/kg
Maximum value of SAR (measured) = 17.6 W/kg



0 dB = 17.6 W/kg

System Performance Check Data (5600MHz)

Date: 2025/5/17
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.116 S/m; ε_r = 34.892; ρ = 1000 kg/m^3
Phantom section: Flat Section

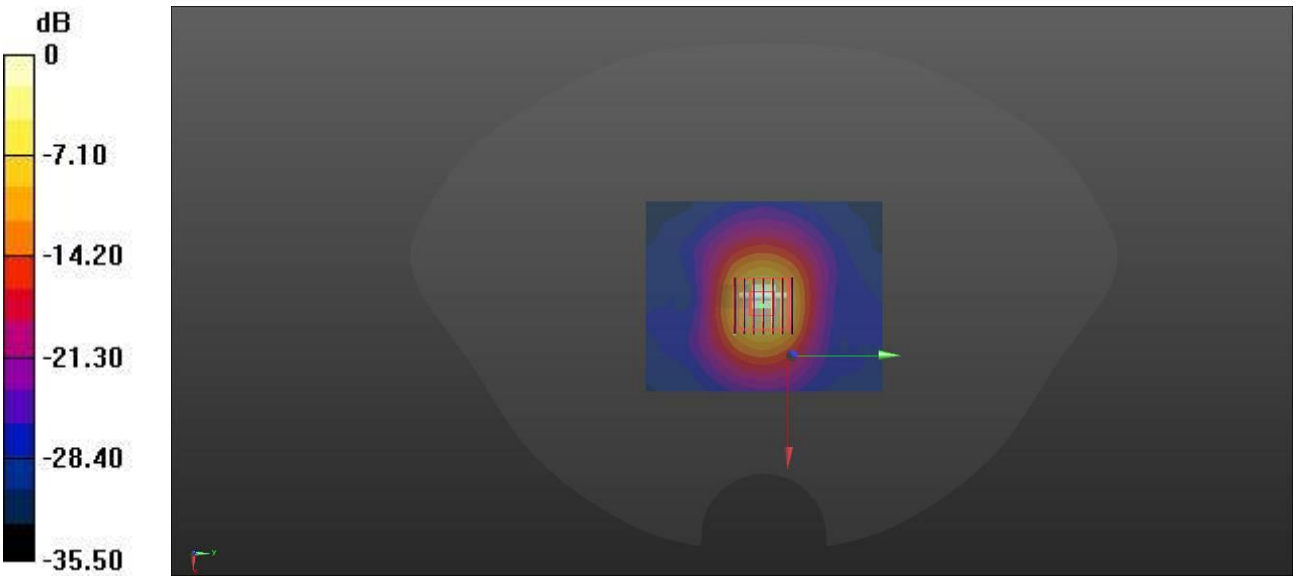
Ambient Temperature:22.3℃ Liquid Temperature:21.0℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(4.91, 5.08, 5.2); Calibrated: 2024/9/5
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 5600/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.6 W/kg

CW 5600/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 39.43 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 37.8 W/kg
SAR(1 g) = 8.31 W/kg; SAR(10 g) = 2.34 W/kg
Maximum value of SAR (measured) = 17.8 W/kg



0 dB = 17.8 W/kg

System Performance Check Data (5800MHz)

Date: 2025/5/17
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.384 S/m; ε_r = 34.486; ρ = 1000 kg/m^3
Phantom section: Flat Section

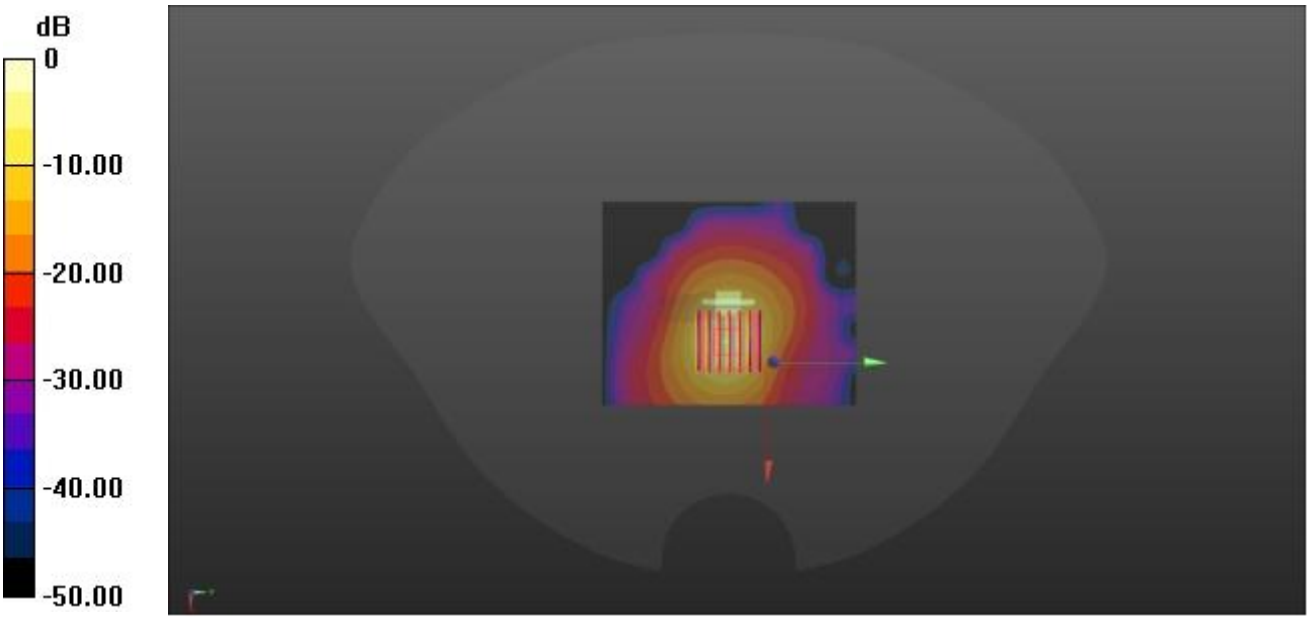
Ambient Temperature:22.3℃ Liquid Temperature:21.0℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7893; ConvF(4.98, 5.15, 5.27); Calibrated: 2024/9/5
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn878; Calibrated: 2025/3/5
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 5800/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.1 W/kg

CW 5800/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 15.96 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 38.4 W/kg
SAR(1 g) = 7.95 W/kg; SAR(10 g) = 2.21 W/kg
Maximum value of SAR (measured) = 17.5 W/kg



0 dB = 17.5 W/kg

ANNEX C TEST DATA

Please refer the document “BL-SH2540326-AT.pdf”.

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SH2540326-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SH2540326-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “BL-SH2540326-AC.pdf”.

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