TEST REPORT

Applicant:	MEIZU TECHNOLOGY CO., LTD.
Address:	MEIZU Tech Bldg, Technology & Innovation Coast, Zhuhai, 519085, Guangdong, China
Equipment Type:	Mobile Phone
Model Name:	M513H
Brand Name:	MEIZU
FCC ID:	2ANQ6-M513H
Test Standard:	FCC 47 CFR Part 2.1093 (refer section 3.1)
Maximum SAR:	Head (1 g@0mm): 1.08 W/kg Body-worn (1 g@5mm): 0.92 W/kg Hotspot (1 g@10mm): 0.39 W/kg Extremity (10 g@0mm): 0.63 W/kg
Sample Arrival Date:	Feb. 26, 2025
Test Date：	Mar. 31, 2025 - Apr. 07, 2025
Date of Issue:	May. 16, 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	Apr. 29, 2025	Initial Issue
Rev. 02	May. 16, 2025	Added NFC RF Exposure evaluation in section 11.16.

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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	MEIZU TECHNOLOGY CO., LTD.
Address	MEIZU Tech Bldg, Technology & Innovation Coast, Zhuhai, 519085, Guangdong, China

2.2 Manufacturer Information

Manufacturer	MEIZU TECHNOLOGY CO., LTD.
Address	MEIZU Tech Bldg, Technology & Innovation Coast, Zhuhai, 519085, Guangdong, China

2.3 Factory Information

Factory	Ebot Digital Technology Co.,Limited
Address	Room 02,21/F,Hip Kwan Commercial Building,38 Pitt Street,Yau Ma Tei,Kowloon,Hongkong.

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	M513H
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	H900_MB_V1
Software Version	Android 15
Dimensions (Approx.)	165.2mm*75.5mm*8.35mm
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	BA513H
	Serial No.	N/A
	Capacitance	Rated Capacity: 5000mAh/19.25Wh Typical Capacity: 5100mAh/19.635Wh
	Rated Voltage	3.85 V
	Limited Voltage	4.48 V
	Manufacturer	Tianjin Lishen Juyuan New Energy Technology Co., Ltd.

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/5/7/12/17/18/19/26/66 LTE TDD Band 38/40/41 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 17	TX: 704 ~ 716 MHz	RX: 734 ~ 746 MHz
	LTE Band 18	TX: 815 ~ 830 MHz	RX: 860 ~ 875 MHz
	LTE Band 19	TX: 830~ 845 MHz	RX: 875 ~ 890 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 40	TX: 2300 ~ 2400 MHz	RX: 2300 ~ 2400 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	802.11b/g /n(HT20/HT40)	2412 ~ 2462 MHz	
	802.11a/ /n(HT20/HT40) /ac(VHT20/VHT40 /VHT80/VHT160)	5150 ~ 5250 MHz	
		5250 ~ 5350 MHz	
		5470 ~ 5725 MHz	
		5725 ~ 5850 MHz	
	802.11ax	5150 ~ 5250 MHz	

	(HE20/40/80/160)	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
Note: 1. The device utilizes independent power reduction mechanisms for SAR compliance for the 2/3/4G transmitter for held-to-ear exposure conditions. 2. The device utilizes independent power reduction mechanisms for SAR compliance for the 2/3/4G transmitter for near to body exposure conditions. 3. The reduction power details please refer section 8.6.		

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 (5mm)	Hotspot (10mm)	Extremity (0mm)	Head (0mm)	Body-worn (5mm)	Hotspot (10mm)	Extremity (0mm)
		1g SAR			10g SAR	1g SAR			10g SAR
PCE	GSM 850	0.21	0.81	0.23	/	1.08	0.92	0.39	0.63
	GSM 1900	1.08	0.73	0.33	/				
	Band 2	0.53	0.32	0.14	/				
	Band 4	0.34	0.20	0.16	/				
	Band 5	0.20	0.76	0.28	/				
	Band 2	0.72	0.53	0.25	/				
	Band 7	0.86	0.55	0.39	0.55				
	Band 12	0.07	0.32	0.18	/				
	Band 26	0.18	0.92	0.36	/				
	Band 66	0.58	0.30	0.16	/				
	Band 40	0.47	0.28	0.09	/				
	Band 41	0.73	0.69	0.26	0.63				
DTS	2.4G WIFI	0.07	0.31	0.10	/				
NII	5G WIFI	0.08	0.23	0.14	0.07				
DSS	Bluetooth	0.06	0.35	0.05	/				
Limit (W/kg)		1.6			4.0	1.6			4.0
Verdict		PASS							

Note: This device supports LTE B4/B5/B17/B18/B19 and LTE B66/B26/B12. Since the supported frequency span for LTE B4/B5/B17/B18/B19 falls completely within the supports freguency span for LTE B66/B26/B12, these LTE bands share the same transmission path, and B4/B5/B17/B18/B19 have lower or the same target power as LTE B66/B26/B12; Therefore, SAR was only assessed for LTE B66/B26/B12.

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)	Extremity 10g (0mm)
PCE	**1.18**	**1.50**	**0.57**	**0.84**
DTS	1.11	1.23	0.49	/
NII	1.18	1.50	0.57	0.84
DSS	1.18	1.50	0.57	/
Limit (W/Kg)	1.60	1.60	1.60	4.00
Verdict	Pass			
Note: The highest simultaneous SAR please refer section 13.2				

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 0.63 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:

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

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

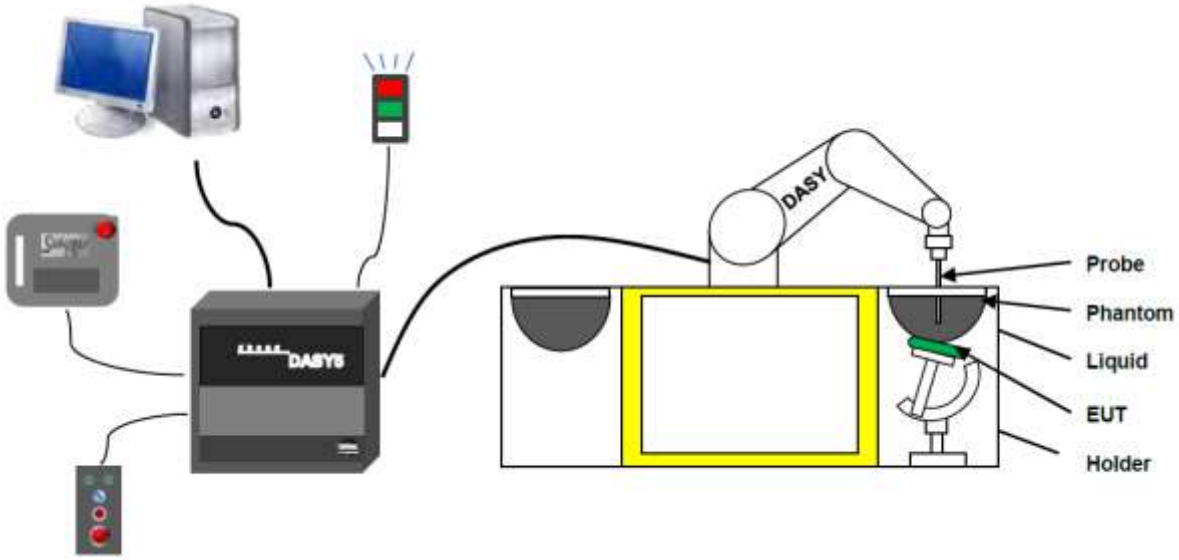
$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}\mathbf{E}^{2}}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue,

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.

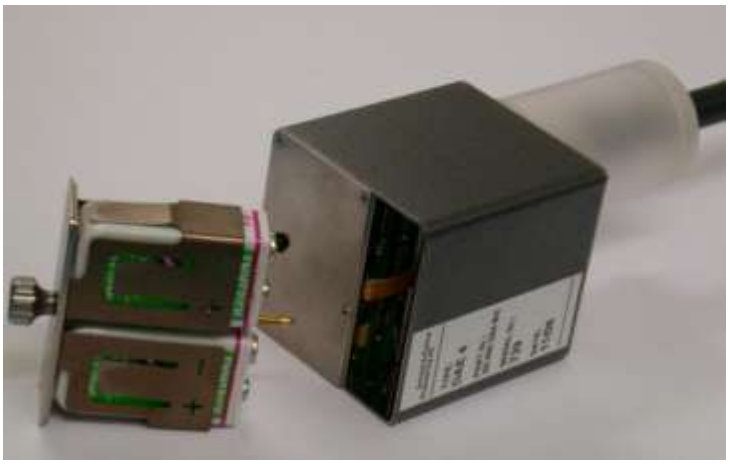
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz; 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

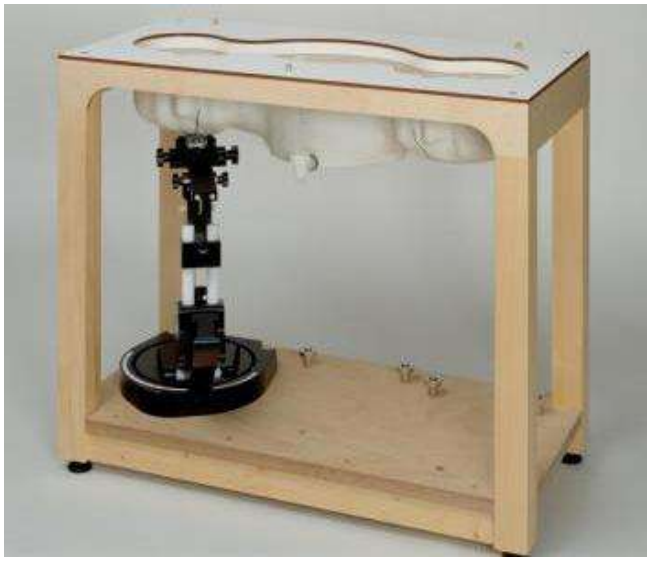
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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

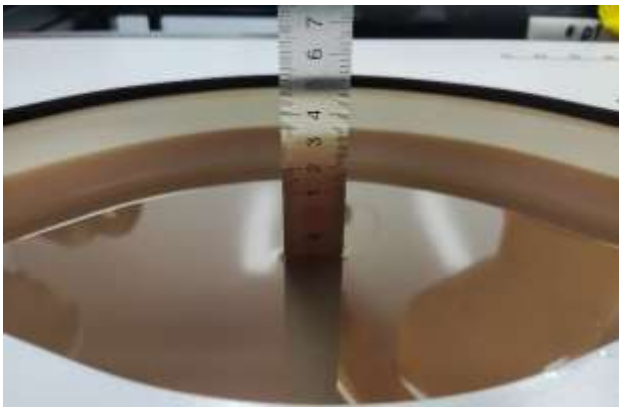
4.2.6 Device Holder

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

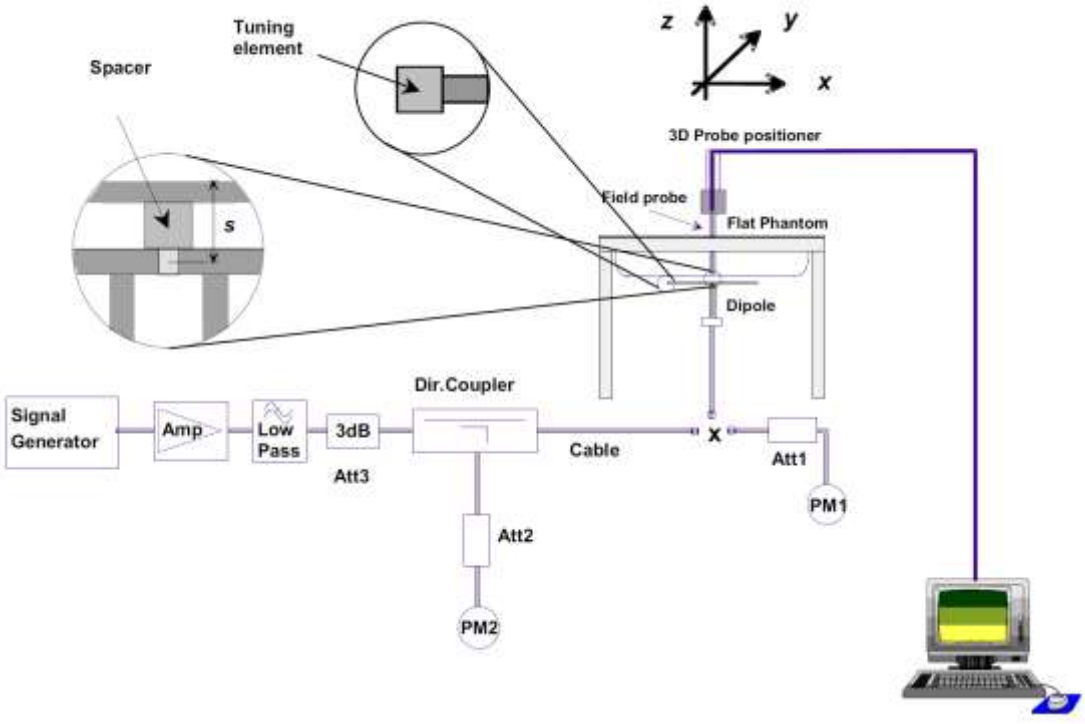
5 SYSTEM VERIFICATION

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

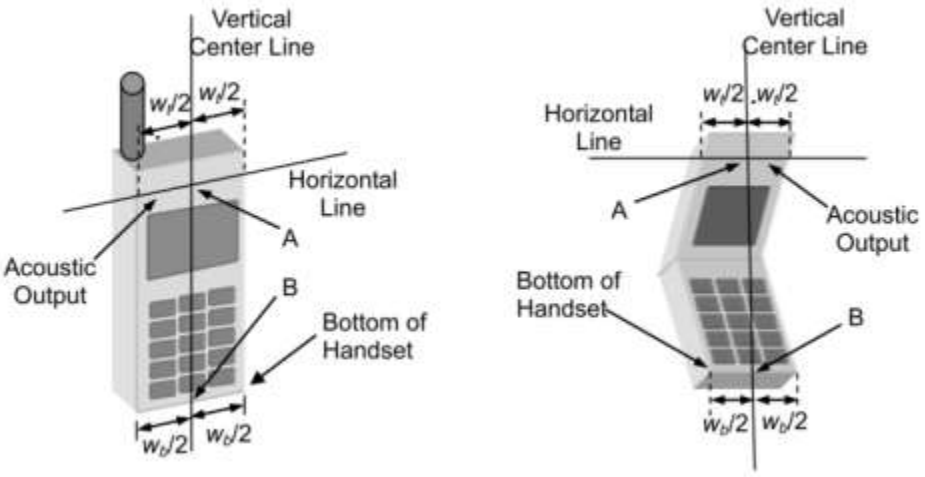
Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

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.

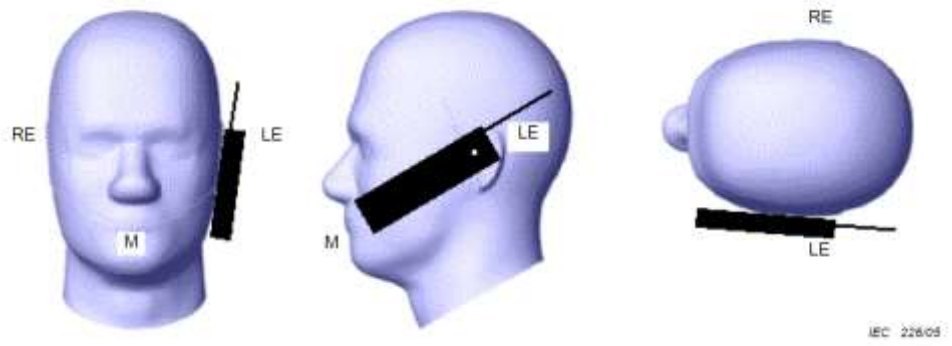
(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset,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

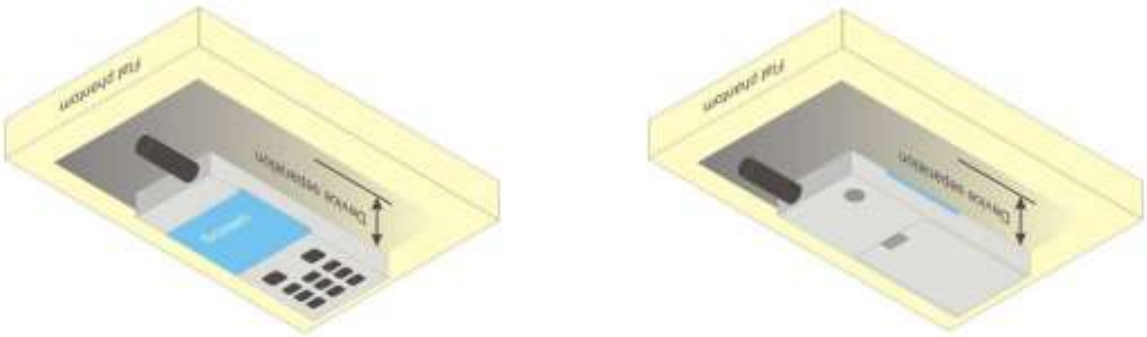
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

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.

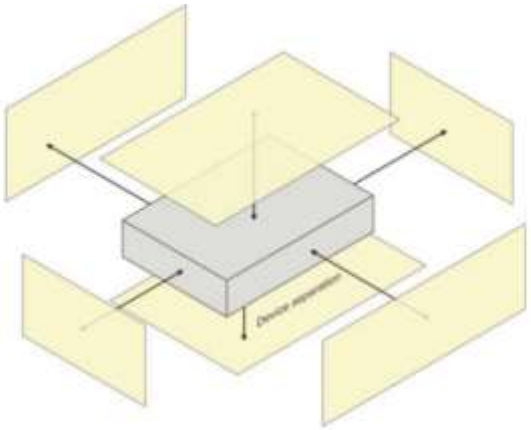
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.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

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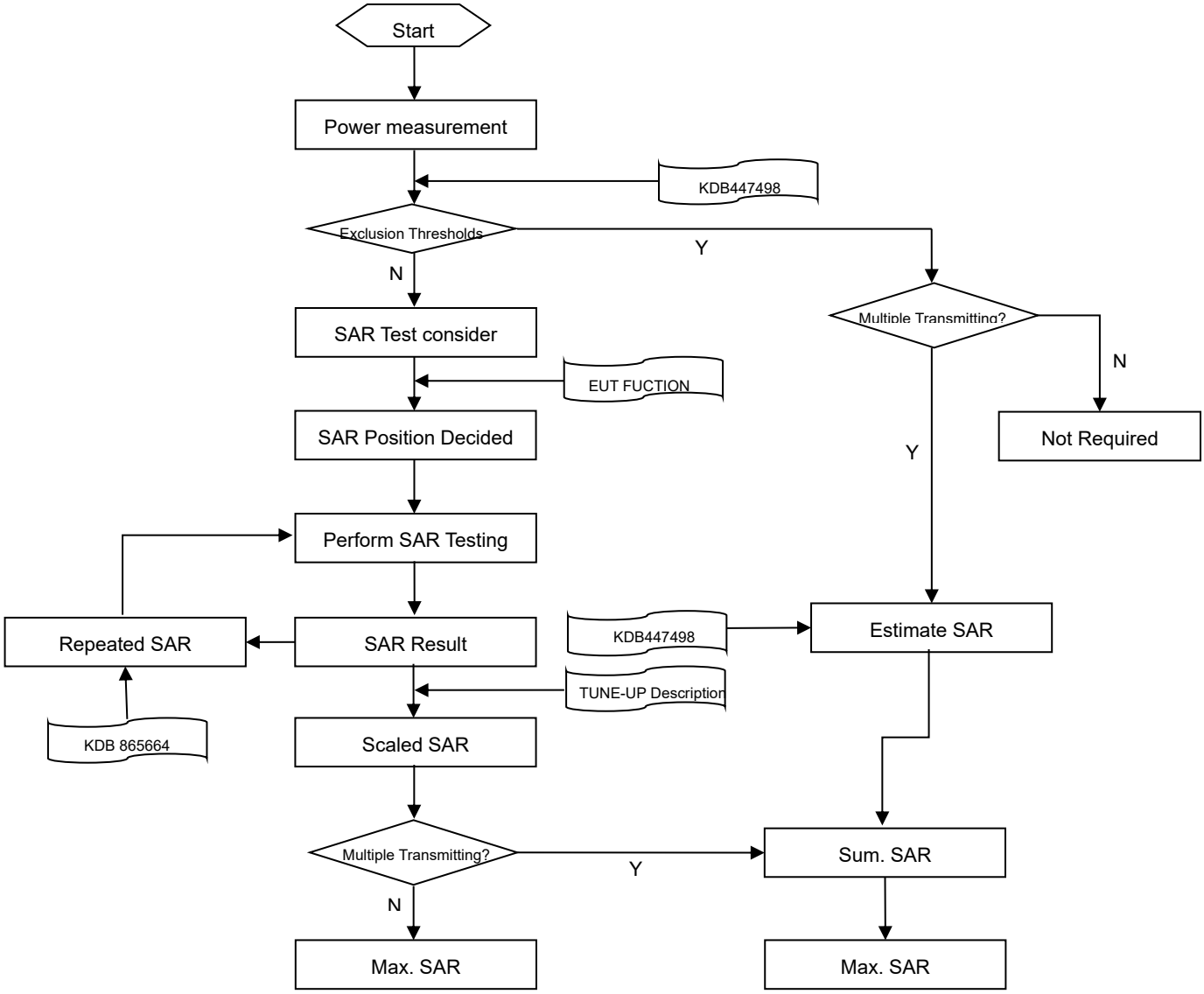
7 MEASUREMENT PROCEDURE

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="7">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2" rowspan="3">uniform grid: Δz Zoom (n)</td><td rowspan="3">≤ 5 mm</td><td>3–4 GHz: ≤ 4 mm</td></tr>
<tr><td>4–5 GHz: ≤ 3 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="4">graded grid</td><td rowspan="3">Δz Zoom (1): between 1st two points closest to phantom surface</td><td rowspan="3">≤ 4 mm</td><td>3–4 GHz: ≤ 3 mm</td></tr>
<tr><td>4–5 GHz: ≤ 2.5 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td>Δz Zoom (n>1): between subsequent points</td><td colspan="2">≤ 1.5·Δz Zoom (n-1)</td></tr>
<tr><td rowspan="3">Minimum zoom scan volume</td><td colspan="2" rowspan="3">x, y, z</td><td rowspan="3">≥30 mm</td><td>3–4 GHz: ≥ 28 mm</td></tr>
<tr><td>4–5 GHz: ≥ 25 mm</td></tr>
<tr><td>5–6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">Note:
1. δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
2. * When zoom scan is required and the reported SAR from the area scan based 1 g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

7.3 Measurement Procedure

The following steps are used for each test position

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

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

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

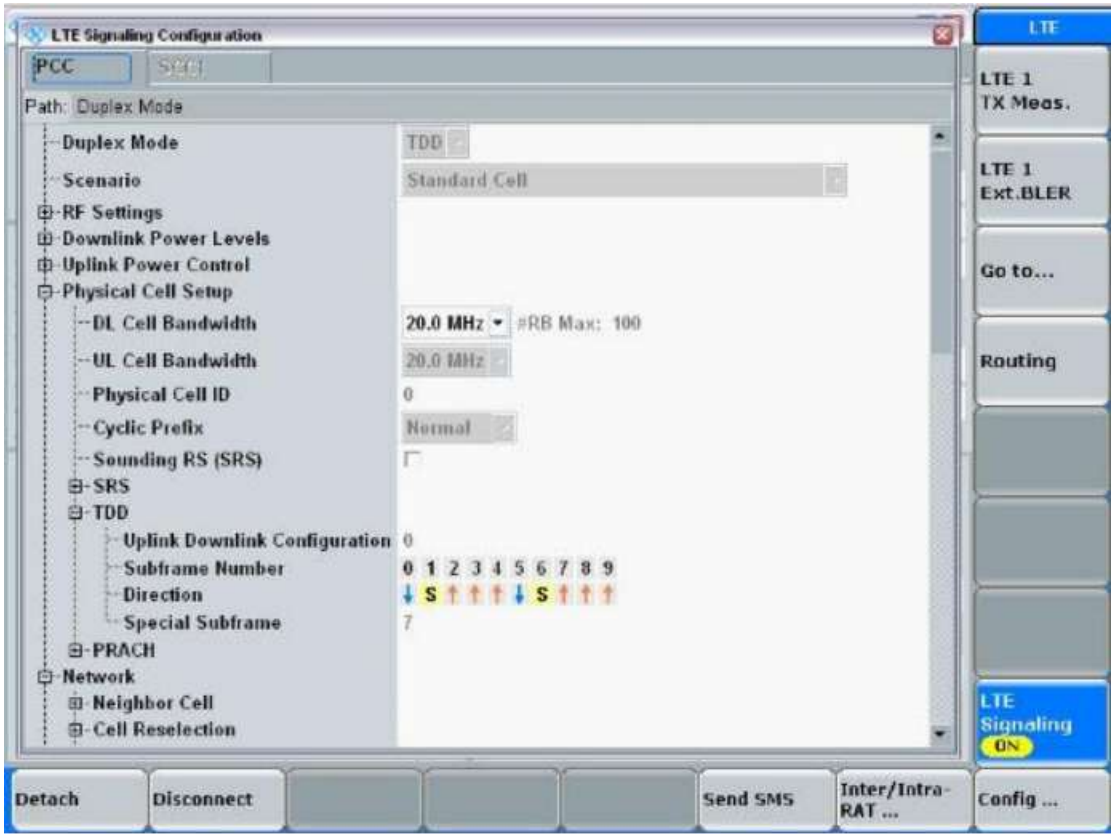
d. Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 *32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

7.4 Area & Zoom Scan Procedure

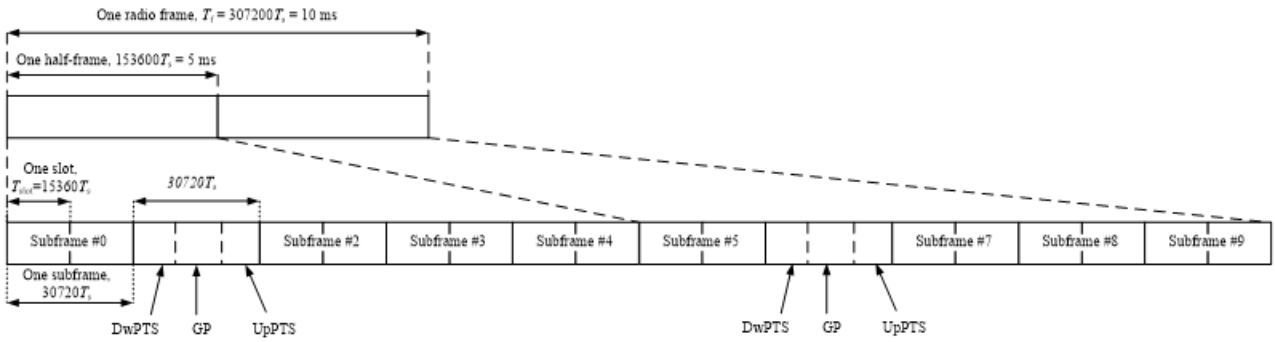
First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.
When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

7.5 LTE (TDD) Considerations

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



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



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

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

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

Special sub-frame configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	6592·T_s	2192·T_s	2560·T_s	7680·T_s	2192·T_s	2560·T_s
1	19760·T_s			20480·T_s		
2	21592·T_s			23040·T_s		
3	24144·T_s			25600·T_s		
4	26336·T_s			7680·T_s	2560·T_s	5120·T_s
5	6592·T_s	4384·T_s	5120·T_s	20480·T_s		
6	19760·T_s			23040·T_s		
7	21592·T_s			12800·T_s		
8	24144·T_s			-	-	-
9	13168·T_s			-	-	-

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

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

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

8 CONDUCTED RF OUPUT POWER

8.1 GSM

Please refer the document “BL-SZ2520873-AP Power List.pdf”.

8.2 WCDMA

Please refer the document “BL-SZ2520873-AP Power List.pdf”.

8.3 LTE

Please refer the document “BL-SZ2520873-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	13.11	14.00	No
		6	2437	13.49	14.00	Yes
		11	2462	13.07	14.00	No
	802.11g	1	2412	12.06	13.00	No
		6	2437	12.25	13.00	No
		11	2462	12.06	13.00	No
	802.11n(HT20)	1	2412	11.03	12.00	No
		6	2437	11.16	12.00	No
		11	2462	11.02	12.00	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 $\leqslant$ 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = 0.314 * (15.85mW/25.12mW) = 0.198 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	8.12	9.00	No
		44	5220	7.88	9.00	No
		48	5240	8.07	9.00	No
	802.11n(HT20)	36	5180	8.07	9.00	No
		44	5220	7.97	9.00	No
		48	5240	8.05	9.00	No
	802.11n(HT40)	38	5190	8.16	9.00	No
		46	5230	8.07	9.00	No
	802.11ac(VHT20)	36	5180	7.97	9.00	No
		44	5220	7.95	9.00	No
		48	5240	8.07	9.00	No
	802.11ac(VHT40)	38	5190	8.14	9.00	No

		46	5230	8.09	9.00	No
	802.11ac(VHT80)	42	5210	7.94	9.00	Yes
5.3 (5.25~5.35)	802.11a	52	5260	8.15	9.00	No
		60	5300	8.04	9.00	No
		64	5320	7.88	9.00	No
	802.11n(HT20)	52	5260	8.01	9.00	No
		60	5300	7.92	9.00	No
		64	5320	7.74	9.00	No
	802.11n(HT40)	54	5270	8.09	9.00	No
		62	5310	7.96	9.00	No
	802.11ac(VHT20)	52	5260	8.00	9.00	No
		60	5300	7.91	9.00	No
		64	5320	7.75	9.00	No
	802.11ac(VHT40)	54	5270	8.08	9.00	No
		62	5310	7.96	9.00	No
	802.11ac(VHT80)	58	5290	7.91	9.00	Yes
5.6 (5.47~5.725)	802.11a	100	5500	7.86	9.00	No
		116	5580	7.99	9.00	No
		140	5700	7.98	9.00	No
	802.11n(HT20)	100	5500	7.85	9.00	No
		116	5580	7.87	9.00	No
		140	5700	7.90	9.00	No
	802.11n(HT40)	102	5510	7.88	9.00	No
		118	5590	8.00	9.00	No
		134	5670	7.97	9.00	No
	802.11ac(VHT20)	100	5500	7.85	9.00	No
		116	5580	7.87	9.00	No
		140	5700	7.87	9.00	No
	802.11ac(VHT40)	102	5510	7.89	9.00	No
		118	5590	8.00	9.00	No
		134	5670	7.98	9.00	No
	802.11ac(VHT80)	106	5530	7.74	9.00	No
		122	5690	7.86	9.00	Yes
5.8 (5.725~5.850)	802.11a	149	5745	8.16	9.00	No
		157	5785	8.23	9.00	No
		165	5825	8.21	9.00	No
	802.11n(HT20)	149	5745	8.09	9.00	No
		157	5785	8.13	9.00	No
		165	5825	8.10	9.00	No

	802.11n(HT40)	151	5755	8.29	9.00	No
		159	5795	8.28	9.00	No
	802.11ac(VHT20)	149	5745	8.10	9.00	No
		157	5785	8.13	9.00	No
		165	5825	8.02	9.00	No
	802.11ac(VHT40)	151	5755	8.24	9.00	No
		159	5795	8.24	9.00	No
	802.11ac(VHT80)	155	5775	8.12	9.00	Yes
Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.						

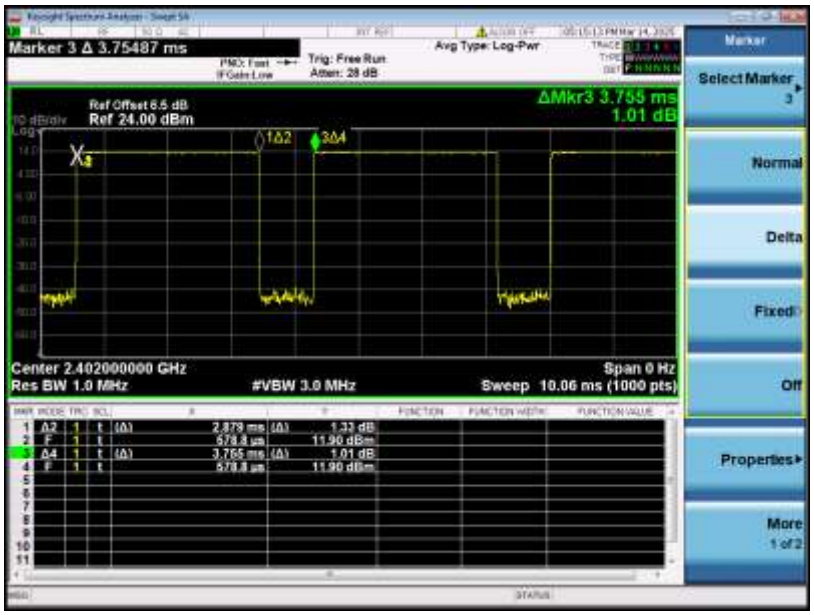
8.5 Bluetooth

Mode	GFSK			π/4-DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Conducted Power (dBm)	14.08	11.32	11.57	13.12	10.36	10.50
Tune-Up Limit (dBm)	15.00	12.50	12.50	14.00	11.50	11.50
SAR Test Require	YES	NO	NO	NO	NO	NO
Mode	8-DPSK			/		
Channel	0	39	78	/	/	/
Frequency (MHz)	2402	2441	2480	/	/	/
Conducted Power (dBm)	12.83	9.89	10.17	/	/	/
Tune-Up Limit (dBm)	14.0	11.00	11.00	/		
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)	3.29	4.02	1.48	3.74	4.09	1.41
Tune-Up Limit (dBm)	5.00	5.00	2.50	5.00	5.00	2.50
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 76.67 % 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



8.6 Power Reduction List

1. This mobile phone device supports the receiver detection mechanism. This device uses the receiver to indicate whether the user is making a call in head.
2. When device is making call in head, and the receiver will work, the power reduction will applied for SAR compliance.
3. When there is a voice call (including VOIP), the audio is actively routed through the headset or speaker, and the receiver will not work, which indicating the body exposure conditions will trigger the body/Limbs exposure reduced the power.
4. When this device used data mode only, and the receiver will not work too, the reduced the power are same as body exposure.

WWAN Reduced power level table

Reduced level	Sensor state	Antenna	Transmitting conditions	Position
DSI1	Sensor On	Antenna 1	Only WWAN WWAN + WLAN 2.4G WWAN + WLAN 5G+BT	Front Side; Back Side; Left Edge; Top Edge;
DSI2	Sensor Off	Antenna 1	Only WWAN WWAN + WLAN 2.4G WWAN + WLAN 5G+BT	Front Side; Back Side; Left Edge; Top Edge;

Mode	Antenna	WWAN Antenna		
		Full Power	Sensor On	Sensor Off
			DSI1	DSI2
GSM 1900	Ant.1	30.00	24.00	30.00
GPRS1900 1 Tx Slot	Ant.1	30.00	24.00	30.00
GPRS1900 2 Tx Slots	Ant.1	29.00	24.00	29.00
GPRS1900 3 Tx Slots	Ant.1	27.00	24.00	27.00
GPRS1900 4 Tx Slots	Ant.1	26.00	24.00	26.00
EGPRS1900 1 Tx Slot	Ant.1	26.00	20.00	26.00
EGPRS1900 2 Tx Slots	Ant.1	25.00	20.00	25.00
EGPRS1900 3 Tx Slots	Ant.1	23.00	19.50	23.00
EGPRS1900 4 Tx Slots	Ant.1	22.00	19.50	22.00
WCDMA Band 2	Ant.1	23.50	15.50	23.50
WCDMA Band 4	Ant.1	23.50	15.50	23.50
LTE Band2	Ant.1	24.50	18.00	24.50

LTE Band4	Ant.1	24.50	16.50	24.50
LTE Band7	Ant.1	24.50	13.50	24.50
LTE Band66	Ant.1	24.50	16.50	24.50
LTE Band38	Ant.1	24.50	12.50	24.50
LTE Band40	Ant.1	25.00	18.50	25.00
LTE Band41	Ant.1	24.50	12.50	24.50

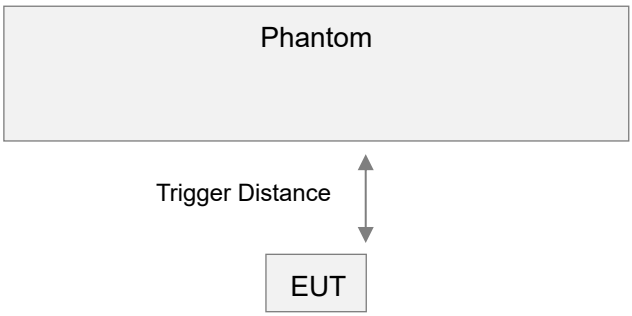
9 PROXIMITY SENSOR TRIGGERING TEST

9.1 Procedures for determining proximity sensor distance

The device uses one proximity sensors to reduce the maximum output power in selected wireless mode and operating configurations to ensure SAR compliance. The sensor implementation can identify and facilitate triggering different max power levels for different scenarios including the device held by hand(Extremity) and different exposure test positions test positions when the device is closed to a user's body.

Proximity sensor triggering distance testing was performed, EUT moving further away from the phantom and EUT moving toward the phantom were both assessed, and the shortest triggering distances were reported and used for SAR assessment. Note that while sensor is failed and it sets the output power to the lowest one in the sensor trigger state, to make sure the SAR requirements can still be satisfied.

proximity sensor



EUT moving toward Phantom

Distance in mm	1~15	16	17	18	19	20	21	22	23	24	25-30
Front Side	On	On	On	On	On	On	On	Off	Off	Off	Off
Back Side	On	On	On	On	On	On	On	Off	Off	Off	Off
Left Edge	On	On	On	On	On	On	On	Off	Off	Off	Off
Top Edge	On	On	On	On	On	On	On	Off	Off	Off	Off
Note: Power reduction is only applicable for ANT1.											

To ensure all production units are compliant, it is generally necessary to reduce the triggering distance determined from the triggering tests by 1 mm, or more if it is necessary, and use the smallest distance for EUT moving toward the phantom, minus 1 mm, as the sensor triggering distance for determining the SAR measurement distance.

ANT1 of proximity sensor

EUT Sides	Additional SAR test Distance in mm
Front Side	21
Back Side	21
Left Edge	21
Top Edge	21

9.2 Procedures for determining EUT tilt angle influences to proximity sensor triggering

The influence of EUT tilt angles to proximity sensor_1 triggering was determined by positioning each EUT edge that contains a transmitting antenna 1, perpendicular to the flat phantom, 16 mm separation for the top edge.
Rotating the EUT around the edge next to the phantom in ⩽ 10° increments until the EUT is ± 45° from the vertical position at 0°, and the maximum output power remains in the reduced mode.

The influence of EUT tilt angles to proximity sensor_2 triggering was determined by positioning each EUT edge that contains a transmitting antenna 3, perpendicular to the flat phantom, at 20 mm separation for the top edge.
Rotating the EUT around the edge next to the phantom in ⩽ 10° increments until the EUT is ± 45° from the vertical position at 0°, and the maximum output power remains in the reduced mode.

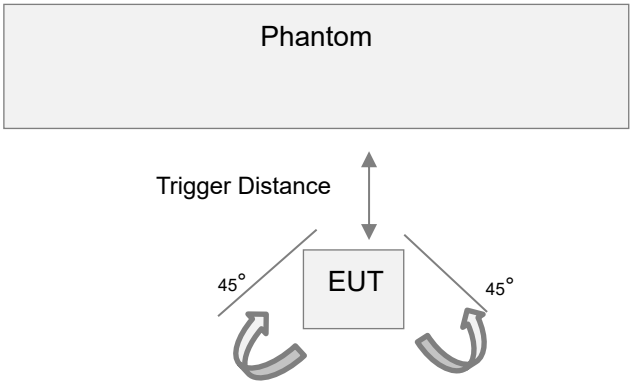
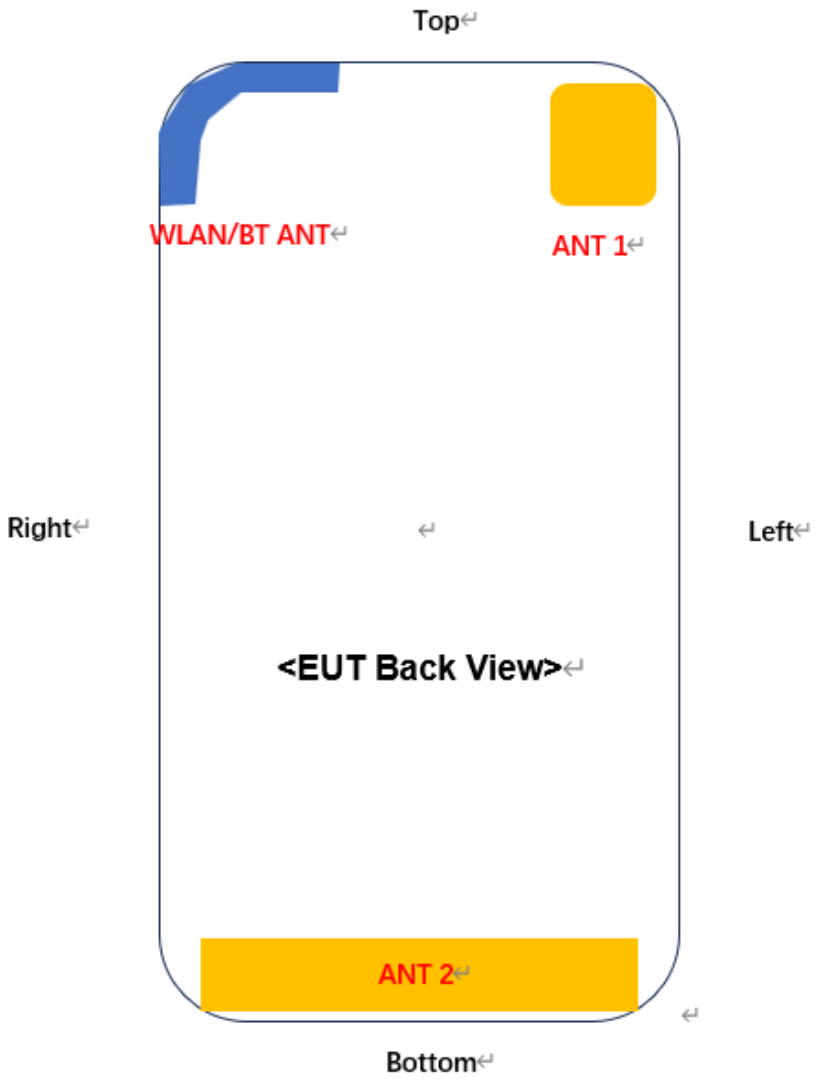


Table: Summary of Phone Tilt Angle Influence to Proximity Sensor Triggering(Top edge)

Antenna	Posltion	Minimum trigger distance at which power reduction was maintained over ±45°	Power Reduction Status										
			-45°	-35°	-25°	-15°	-5°	0°	5°	15°	25°	35°	45°
ANT1	Top Edge	21mm	on	on	on	on	on	on	on	on	on	on	on

10 TEST EXCLUSION CONSIDERATION



Antenna	Support Bands
ANT 1	GSM 1900; WCDMA B2/4; LTE B2/4/7/66/38/40/41
ANT 2	GSM 850; WCDMA B5; LTE B5/12/17/18/19/26
WLAN/BT	2.4G/5G WLAN Bluetooth

Antenna	Front Side(mm)	Back Side(mm)	Left Edge(mm)	Right Edge(mm)	Top Edge(mm)	Bottom Edge(mm)
ANT 1	<25	<25	<25	>25	<25	>25
ANT 2	<25	<25	<25	<25	>25	<25
WLAN/BT	<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.						

11 TEST RESULT

11.1 GSM 850

Antenna	Power Reduction	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (Wkg)	Meas. Power (dBm)	Tune-up Limit(dBm)	Scaling Factor	1g Scaled SAR (Wkg)	Meas. no.
Head													
Ant.2	DSI 2	Left cheek	0mm	GPRS 2TX	190	836.6	-0.11	0.153	31.71	32.00	1.069	0.164	/
	DSI 2	Left tilt			190	836.6	0.14	0.090	31.71	32.00	1.069	0.096	/
	DSI 2	Right cheek			190	836.6	-0.10	0.192	31.71	32.00	1.069	0.205	1
	DSI 2	Right tilt			190	836.6	-0.15	0.098	31.71	32.00	1.069	0.105	/
Body-worn													
Ant.2	DSI 2	Front side	5mm	GPRS 2TX	190	836.6	0.12	0.364	31.71	32.00	1.069	0.389	/
	DSI 2	Back side			190	836.6	0.02	0.754	31.71	32.00	1.069	0.806	2
	DSI 2	Back side			128	824.2	0.14	0.674	31.58	32.00	1.102	0.742	/
	DSI 2	Back side			251	848.8	-0.02	0.721	31.60	32.00	1.096	0.791	/
Hotspot													
Ant.2	DSI 2	Front side	10mm	GPRS 2TX	190	836.6	0.18	0.100	31.71	32.50	1.199	0.120	/
	DSI 2	Back side			190	836.6	0.08	0.188	31.71	32.50	1.199	0.226	3
	DSI 2	Left side			190	836.6	0.07	0.042	31.71	32.50	1.199	0.050	/
	DSI 2	Right side			190	836.6	0.09	0.101	31.71	32.50	1.199	0.121	/
	DSI 2	Bottom side			190	836.6	-0.10	0.171	31.71	32.50	1.199	0.205	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

11.2 GSM 1900

Antenna	Power Reduction	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.1	DSI 1	Left cheek	0mm	GPRS 4TX	810	1909.8	0.18	0.561	23.11	24.00	1.227	0.689	/
	DSI 1	Left tilt			810	1909.8	0.15	0.453	23.11	24.00	1.227	0.556	/
	DSI 1	Right cheek			810	1909.8	0.02	0.857	23.11	24.00	1.227	1.052	/
	DSI 1	Right tilt			810	1909.8	-0.12	0.525	23.11	24.00	1.227	0.644	/
	DSI 1	Right cheek			512	1850.2	-0.03	0.810	22.74	24.00	1.337	1.083	/
	DSI 1	Right cheek			661	1880	0.04	0.829	22.84	24.00	1.306	1.083	4
	DSI 1	Right cheek			661	1880	0.11	0.817	22.84	24.00	1.306	1.067	repeat
Body-worn													
Ant.1	DSI 1	Front side	5mm	GPRS 4TX	810	1909.8	0.05	0.489	23.11	24.00	1.227	0.600	/
	DSI 1	Back side			810	1909.8	0.16	0.592	23.11	24.00	1.227	0.727	5
Hotspot													
Ant.1	DSI 1	Front side	10mm	GPRS 4TX	810	1909.8	0.04	0.141	23.11	24.00	1.227	0.173	/
	DSI 1	Back side			810	1909.8	0.11	0.156	23.11	24.00	1.227	0.191	/
	DSI 1	Left side			810	1909.8	0.19	0.267	23.11	24.00	1.227	0.328	6
	DSI 1	Top side			810	1909.8	-0.03	0.119	23.11	24.00	1.227	0.146	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

Antenna	Power Reduction	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.
n-1													
Ant.1	DSI 2	Front side	20mm	GPRS 2TX	810	1909.8	0.11	0.088	28.32	29.00	1.169	0.103	/
	DSI 2	Back side			810	1909.8	0.17	0.398	28.32	29.00	1.169	0.465	/
	DSI 2	Left side			810	1909.8	-0.02	0.483	28.32	29.00	1.169	0.565	/
	DSI 2	Top side			810	1909.8	0.06	0.315	28.32	29.00	1.169	0.368	/

11.3WCDMA Band 2

Antenna	Power Reduction	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.1	DSI 1	Left cheek	0mm	RMC	9400	1880	0.13	0.218	14.64	15.50	1.219	0.266	/
	DSI 1	Left tilt			9400	1880	0.03	0.190	14.64	15.50	1.219	0.232	/
	DSI 1	Right cheek			9400	1880	-0.15	0.434	14.64	15.50	1.219	0.529	7
	DSI 1	Right tilt			9400	1880	-0.03	0.227	14.64	15.50	1.219	0.277	/
Body-worn													
Ant.1	DSI 1	Front side	5mm	RMC	9400	1880	0.02	0.180	14.64	15.50	1.219	0.219	/
	DSI 1	Back side			9400	1880	-0.12	0.259	14.64	15.50	1.219	0.316	8
Hotspot													
Ant.1	DSI 1	Front side	10mm	RMC	9400	1880	0.03	0.089	14.64	15.50	1.219	0.108	/
	DSI 1	Back side			9400	1880	0.04	0.112	14.64	15.50	1.219	0.137	9
	DSI 1	Left side			9400	1880	-0.11	0.111	14.64	15.50	1.219	0.135	/
	DSI 1	Top side			9400	1880	-0.18	0.084	14.64	15.50	1.219	0.102	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

Antenna	Power Reduction	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.
n-1													
Ant.1	DSI 2	Front side	20mm	GPRS 2TX	810	1909.8	0.11	0.088	28.32	29.00	1.169	0.103	/
	DSI 2	Back side			810	1909.8	0.17	0.398	28.32	29.00	1.169	0.465	/
	DSI 2	Left side			810	1909.8	-0.02	0.483	28.32	29.00	1.169	0.565	/
	DSI 2	Top side			810	1909.8	0.06	0.315	28.32	29.00	1.169	0.368	/

11.4WCDMA Band 4

Antenna	Power Reduction	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.1	DSI 1	Left cheek	0mm	RMC	1412	1732.4	0.11	0.164	14.18	15.50	1.355	0.222	/
	DSI 1	Left tilt			1412	1732.4	-0.14	0.123	14.18	15.50	1.355	0.167	/
	DSI 1	Right cheek			1412	1732.4	0.16	0.252	14.18	15.50	1.355	0.342	10
	DSI 1	Right tilt			1412	1732.4	0.02	0.162	14.18	15.50	1.355	0.220	/
Body-worn													
Ant.1	DSI 1	Front side	5mm	RMC	1412	1732.4	0.15	0.101	14.18	15.50	1.355	0.137	/
	DSI 1	Back side			1412	1732.4	-0.04	0.146	14.18	15.50	1.355	0.198	11
Hotspot													
Ant.1	DSI 1	Front side	10mm	RMC	1412	1732.4	0.19	0.046	14.18	15.50	1.355	0.062	/
	DSI 1	Back side			1412	1732.4	0.03	0.058	14.18	15.50	1.355	0.079	/
	DSI 1	Left side			1412	1732.4	0.18	0.115	14.18	15.50	1.355	0.156	12
	DSI 1	Top side			1412	1732.4	-0.04	0.047	14.18	15.50	1.355	0.064	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

Antenna	Power Reduction	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.
n-1													
Ant.1	DSI 2	Front side	20mm	RMC	1412	1732.4	0.09	0.172	22.32	23.50	1.312	0.226	/
	DSI 2	Back side			1412	1732.4	-0.03	0.183	22.32	23.50	1.312	0.240	/
	DSI 2	Left side			1412	1732.4	-0.14	0.214	22.32	23.50	1.312	0.281	/
	DSI 2	Top side			1412	1732.4	0.08	0.150	22.32	23.50	1.312	0.197	/

11.5WCDMA Band 5

Antenna	Power Reduction	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.2	DSI 2	Left cheek	0mm	RMC	4182	836.4	0.14	0.151	22.96	24.00	1.271	0.192	/
	DSI 2	Left tilt			4182	836.4	-0.17	0.088	22.96	24.00	1.271	0.112	/
	DSI 2	Right cheek			4182	836.4	0.19	0.159	22.96	24.00	1.271	0.202	13
	DSI 2	Right tilt			4182	836.4	-0.05	0.095	22.96	24.00	1.271	0.121	/
Body-worn													
Ant.2	DSI 2	Front side	5mm	RMC	4182	836.4	0.12	0.320	22.96	24.00	1.271	0.407	/
	DSI 2	Back side			4182	836.4	-0.09	0.596	22.96	24.00	1.271	0.757	14
Hotspot													
Ant.2	DSI 2	Front side	10mm	RMC	4182	836.4	-0.11	0.152	22.96	24.00	1.271	0.193	/
	DSI 2	Back side			4182	836.4	0.07	0.223	22.96	24.00	1.271	0.283	15
	DSI 2	Left side			4182	836.4	-0.04	0.082	22.96	24.00	1.271	0.104	/
	DSI 2	Right side			4182	836.4	-0.14	0.185	22.96	24.00	1.271	0.235	/
	DSI 2	Bottom side			4182	836.4	0.15	0.193	22.96	24.00	1.271	0.245	/

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

11.6 LTE Band 2 (20MHz Bandwidth)

Antenna	Power Reduction	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.1	DSI 1	Left cheek	0mm	QPSK	18900	1880	1	0	-0.05	0.246	16.44	18.00	1.432	0.352	/
	DSI 1	Left tilt			18900	1880	1	0	0.15	0.216	16.44	18.00	1.432	0.309	/
	DSI 1	Right cheek			18900	1880	1	0	-0.12	0.468	16.44	18.00	1.432	0.670	/
	DSI 1	Right tilt			18900	1880	1	0	-0.12	0.272	16.44	18.00	1.432	0.390	/
	DSI 1	Left cheek			18900	1880	50	24	-0.18	0.265	16.37	18.00	1.455	0.386	/
	DSI 1	Left tilt			18900	1880	50	24	-0.06	0.232	16.37	18.00	1.455	0.338	/
	DSI 1	Right cheek			18900	1880	50	24	0.12	0.495	16.37	18.00	1.455	0.720	16
	DSI 1	Right tilt			18900	1880	50	24	0.17	0.276	16.37	18.00	1.455	0.402	/
Body-worn															
Ant.1	DSI 1	Front side	5mm	QPSK	18900	1880	1	0	0.12	0.268	16.44	18.00	1.432	0.384	/
	DSI 1	Back side			18900	1880	1	0	0.09	0.331	16.44	18.00	1.432	0.474	/
	DSI 1	Front side			18900	1880	50	24	0.15	0.274	16.37	18.00	1.455	0.399	/
	DSI 1	Back side			18900	1880	50	24	-0.05	0.361	16.37	18.00	1.455	0.525	17
Hotspot															
Ant.1	DSI 1	Front side	10mm	QPSK	18900	1880	1	0	-0.16	0.129	16.44	18.00	1.432	0.185	/
	DSI 1	Back side			18900	1880	1	0	0.06	0.156	16.44	18.00	1.432	0.223	/
	DSI 1	Left side			18900	1880	1	0	-0.19	0.152	16.44	18.00	1.432	0.218	/
	DSI 1	Top side			18900	1880	1	0	-0.04	0.123	16.44	18.00	1.432	0.176	/
	DSI 1	Front side			18900	1880	50	24	0.08	0.131	16.37	18.00	1.455	0.191	/
	DSI 1	Back side			18900	1880	50	24	-0.12	0.172	16.37	18.00	1.455	0.250	18
	DSI 1	Left side			18900	1880	50	24	0.05	0.155	16.37	18.00	1.455	0.226	/
	DSI 1	Top side			18900	1880	50	24	-0.14	0.122	16.37	18.00	1.455	0.178	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

Antenna	Power Reduction	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.
n-1															
Ant.1	DSI 2	Front side	20mm	QPSK	18900	1880	1	0	0.02	0.187	23.21	24.50	1.346	0.252	/
	DSI 2	Back side			18900	1880	1	0	0.01	0.202	23.21	24.50	1.346	0.272	/
	DSI 2	Left side			18900	1880	1	0	-0.14	0.233	23.21	24.50	1.346	0.314	/
	DSI 2	Top side			18900	1880	1	0	0.15	0.162	23.21	24.50	1.346	0.218	/
	DSI 2	Front side			18900	1880	50	50	0.17	0.149	22.08	23.50	1.387	0.207	/
	DSI 2	Back side			18900	1880	50	50	0.03	0.164	22.08	23.50	1.387	0.227	/
	DSI 2	Left side			18900	1880	50	50	-0.05	0.188	22.08	23.50	1.387	0.261	/
	DSI 2	Top side			18900	1880	50	50	0.01	0.130	22.08	23.50	1.387	0.180	/

11.7 LTE Band 7 (20MHz Bandwidth)

Antenna	Power Reduction	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.1	DSI 1	Left cheek	0mm	QPSK	21100	2535	1	0	0.18	0.205	12.38	13.50	1.294	0.265	/
	DSI 1	Left tilt			21100	2535	1	0	0.08	0.275	12.38	13.50	1.294	0.356	/
	DSI 1	Right cheek			21100	2535	1	0	-0.18	0.527	12.38	13.50	1.294	0.682	/
	DSI 1	Right tilt			21100	2535	1	0	-0.09	0.439	12.38	13.50	1.294	0.568	/
	DSI 1	Left cheek			21100	2535	50	50	-0.06	0.231	12.35	13.50	1.303	0.301	/
	DSI 1	Left tilt			21100	2535	50	50	-0.14	0.306	12.35	13.50	1.303	0.399	/
	DSI 1	Right cheek			21100	2535	50	50	0.17	0.626	12.35	13.50	1.303	0.816	/
	DSI 1	Right tilt			21100	2535	50	50	-0.10	0.514	12.35	13.50	1.303	0.670	/
	DSI 1	Right cheek			20850	2510	50	50	0.16	0.449	12.30	13.50	1.318	0.592	/
	DSI 1	Right cheek			21350	2560	50	50	0.02	0.651	12.30	13.50	1.318	0.858	19
	DSI 1	Right cheek			21100	2535	100	0	-0.10	0.628	12.37	13.50	1.297	0.815	/
Body-worn															
Ant.1	DSI 1	Front side	5mm	QPSK	21100	2535	1	0	0.03	0.251	12.38	13.50	1.294	0.325	/
	DSI 1	Back side			21100	2535	1	0	0.09	0.351	12.38	13.50	1.294	0.454	/
	DSI 1	Front side			21100	2535	50	50	0.15	0.288	12.35	13.50	1.303	0.375	/
	DSI 1	Back side			21100	2535	50	50	-0.06	0.422	12.35	13.50	1.303	0.550	20
Hotspot															
Ant.1	DSI 1	Front side	10mm	QPSK	21100	2535	1	0	0.08	0.198	12.38	13.50	1.294	0.256	/
	DSI 1	Back side			21100	2535	1	0	0.06	0.267	12.38	13.50	1.294	0.346	/
	DSI 1	Left side			21100	2535	1	0	0.16	0.258	12.38	13.50	1.294	0.334	/
	DSI 1	Top side			21100	2535	1	0	0.12	0.145	12.38	13.50	1.294	0.188	/
	DSI 1	Front side			21100	2535	50	50	-0.18	0.220	12.35	13.50	1.303	0.287	/
	DSI 1	Back side			21100	2535	50	50	-0.13	0.303	12.35	13.50	1.303	0.395	21
	DSI 1	Left side			21100	2535	50	50	-0.08	0.300	12.35	13.50	1.303	0.391	/
	DSI 1	Top side			21100	2535	50	50	0.02	0.136	12.35	13.50	1.303	0.177	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

Antenna	Power Reduction	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 10-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	10g Scaled SAR (W/kg)	Meas. no.
Extremity															
Ant.1	DSI 1	Front side	0mm	QPSK	21100	2535	1	0	0.15	0.355	12.38	13.50	1.294	0.459	/
	DSI 1	Back side			21100	2535	1	0	-0.03	0.402	12.38	13.50	1.294	0.520	/
	DSI 1	Left side			21100	2535	1	0	0.10	0.323	12.38	13.50	1.294	0.418	/
	DSI 1	Top side			21100	2535	1	0	0.06	0.141	12.38	13.50	1.294	0.182	/
	DSI 1	Front side			21100	2535	50	50	0.09	0.420	12.35	13.50	1.303	0.547	/
	DSI 1	Back side			21100	2535	50	50	0.10	0.425	12.35	13.50	1.303	0.554	22
	DSI 1	Left side			21100	2535	50	50	-0.05	0.375	12.35	13.50	1.303	0.489	/
	DSI 1	Top side			21100	2535	50	50	0.04	0.151	12.35	13.50	1.303	0.197	/

Antenna	Power Reduction	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.
n-1															
Ant.1	DSI 2	Front side	20mm	QPSK	21100	2535	1	0	0.16	0.258	23.60	24.50	1.230	0.317	
	DSI 2	Back side			21100	2535	1	0	-0.02	0.333	23.60	24.50	1.230	0.410	/
	DSI 2	Left side			21100	2535	1	0	-0.17	0.356	23.60	24.50	1.230	0.438	/
	DSI 2	Top side			21100	2535	1	0	-0.16	0.240	23.60	24.50	1.230	0.295	/
	DSI 2	Front side			21100	2535	50	50	-0.12	0.210	23.60	24.50	1.230	0.258	/
	DSI 2	Back side			21100	2535	50	50	0.16	0.270	23.60	24.50	1.230	0.332	/
	DSI 2	Left side			21100	2535	50	50	-0.01	0.285	23.60	24.50	1.230	0.351	/
	DSI 2	Top side			21100	2535	50	50	0.19	0.190	23.60	24.50	1.230	0.234	/

11.8 LTE Band 12 (10MHz Bandwidth)

Antenna	Power Reduction	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.2	DSI 2	Left cheek	0mm	QPSK	23095	707.5	1	0	0.15	0.054	22.90	23.50	1.148	0.062	/
	DSI 2	Left tilt			23095	707.5	1	0	-0.18	0.016	22.90	23.50	1.148	0.018	/
	DSI 2	Right cheek			23095	707.5	1	0	-0.08	0.061	22.90	23.50	1.148	0.070	23
	DSI 2	Right tilt			23095	707.5	1	0	0.06	0.020	22.90	23.50	1.148	0.023	/
	DSI 2	Left cheek			23095	707.5	25	25	-0.15	0.021	22.01	22.50	1.119	0.024	/
	DSI 2	Left tilt			23095	707.5	25	25	0.02	0.018	22.01	22.50	1.119	0.020	/
	DSI 2	Right cheek			23095	707.5	25	25	0.05	0.047	22.01	22.50	1.119	0.053	/
	DSI 2	Right tilt			23095	707.5	25	25	0.09	0.014	22.01	22.50	1.119	0.016	/
Body-worn															
Ant.2	DSI 2	Front side	5mm	QPSK	23095	707.5	1	0	-0.11	0.148	22.90	23.50	1.148	0.170	/
	DSI 2	Back side			23095	707.5	1	0	0.13	0.278	22.90	23.50	1.148	0.319	24
	DSI 2	Front side			23095	707.5	25	25	0.06	0.119	22.01	22.50	1.119	0.133	/
	DSI 2	Back side			23095	707.5	25	25	0.12	0.211	22.01	22.50	1.119	0.236	/
Hotspot															
Ant.2	DSI 2	Front side	10mm	QPSK	23095	707.5	1	0	-0.05	0.082	22.90	23.50	1.148	0.094	/
	DSI 2	Back side			23095	707.5	1	0	0.17	0.112	22.90	23.50	1.148	0.129	/
	DSI 2	Left side			23095	707.5	1	0	0.05	0.050	22.90	23.50	1.148	0.057	/
	DSI 2	Right side			23095	707.5	1	0	0.07	0.160	22.90	23.50	1.148	0.184	25
	DSI 2	Bottom side			23095	707.5	1	0	-0.08	0.113	22.90	23.50	1.148	0.130	/
	DSI 2	Front side			23095	707.5	25	25	0.16	0.060	22.01	22.50	1.119	0.067	/
	DSI 2	Back side			23095	707.5	25	25	0.07	0.084	22.01	22.50	1.119	0.094	/
	DSI 2	Left side			23095	707.5	25	25	0.10	0.015	22.01	22.50	1.119	0.017	/
	DSI 2	Right side			23095	707.5	25	25	0.02	0.120	22.01	22.50	1.119	0.134	/
	DSI 2	Bottom side			23095	707.5	25	25	0.16	0.087	22.01	22.50	1.119	0.097	/

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

11.9 LTE Band 26 (15MHz Bandwidth)

Antenna	Power Reduction	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.2	DSI 2	Left cheek	0mm	QPSK	26865	831.5	1	0	0.16	0.127	23.12	24.50	1.374	0.175	/
	DSI 2	Left tilt			26865	831.5	1	0	0.04	0.073	23.12	24.50	1.374	0.100	/
	DSI 2	Right cheek			26865	831.5	1	0	-0.17	0.134	23.12	24.50	1.374	0.184	26
	DSI 2	Right tilt			26865	831.5	1	0	0.19	0.082	23.12	24.50	1.374	0.113	/
	DSI 2	Left cheek			26865	831.5	36	0	0.13	0.117	22.01	23.50	1.409	0.165	/
	DSI 2	Left tilt			26865	831.5	36	0	0.09	0.066	22.01	23.50	1.409	0.093	/
	DSI 2	Right cheek			26865	831.5	36	0	0.09	0.122	22.01	23.50	1.409	0.172	/
	DSI 2	Right tilt			26865	831.5	36	0	-0.01	0.072	22.01	23.50	1.409	0.101	/
Body-worn															
Ant.2	DSI 2	Front side	5mm	QPSK	26865	831.5	1	0	0.09	0.297	23.12	24.50	1.374	0.408	/
	DSI 2	Back side			26865	831.5	1	0	0.18	0.667	23.12	24.50	1.374	0.916	27
	DSI 2	Back side			26765	821.5	1	0	0.15	0.628	23.05	24.50	1.396	0.877	/
	DSI 2	Back side			26965	841.5	1	0	-0.17	0.616	22.96	24.50	1.426	0.878	/
	DSI 2	Front side			26865	831.5	36	0	0.11	0.271	22.01	23.50	1.409	0.382	/
	DSI 2	Back side			26865	831.5	36	0	0.02	0.484	22.01	23.50	1.409	0.682	/
	DSI 2	Back side			26865	831.5	75	0	0.13	0.502	22.04	23.50	1.400	0.703	/
Hotspot															
Ant.2	DSI 2	Front side	10mm	QPSK	26865	831.5	1	0	-0.03	0.124	23.12	24.50	1.374	0.170	/
	DSI 2	Back side			26865	831.5	1	0	0.09	0.263	23.12	24.50	1.374	0.361	28
	DSI 2	Left side			26865	831.5	1	0	0.14	0.068	23.12	24.50	1.374	0.093	/
	DSI 2	Right side			26865	831.5	1	0	0.04	0.145	23.12	24.50	1.374	0.199	/
	DSI 2	Bottom side			26865	831.5	1	0	0.06	0.215	23.12	24.50	1.374	0.295	/
	DSI 2	Front side			26865	831.5	36	0	0.11	0.112	22.01	23.50	1.409	0.158	/
	DSI 2	Back side			26865	831.5	36	0	-0.03	0.231	22.01	23.50	1.409	0.326	/
	DSI 2	Left side			26865	831.5	36	0	0.05	0.073	22.01	23.50	1.409	0.103	/
	DSI 2	Right side			26865	831.5	36	0	-0.11	0.145	22.01	23.50	1.409	0.204	/
	DSI 2	Bottom side			26865	831.5	36	0	0.16	0.209	22.01	23.50	1.409	0.295	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

11.10 LTE Band 66 (20MHz Bandwidth)

Antenna	Power Reduction	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.1	DSI 1	Left cheek	0mm	QPSK	132322	1745	1	0	-0.04	0.202	14.92	16.50	1.439	0.291	/
	DSI 1	Left tilt			132322	1745	1	0	0.17	0.161	14.92	16.50	1.439	0.232	/
	DSI 1	Right cheek			132322	1745	1	0	0.10	0.388	14.92	16.50	1.439	0.558	/
	DSI 1	Right tilt			132322	1745	1	0	0.04	0.191	14.92	16.50	1.439	0.275	/
	DSI 1	Left cheek			132322	1745	50	0	0.04	0.203	14.89	16.50	1.449	0.294	/
	DSI 1	Left tilt			132322	1745	50	0	0.09	0.167	14.89	16.50	1.449	0.242	/
	DSI 1	Right cheek			132322	1745	50	0	-0.03	0.401	14.89	16.50	1.449	0.581	29
	DSI 1	Right tilt			132322	1745	50	0	-0.19	0.203	14.89	16.50	1.449	0.294	/
Body-worn															
Ant.1	DSI 1	Front side	5mm	QPSK	132322	1745	1	0	-0.02	0.171	14.92	16.50	1.439	0.246	/
	DSI 1	Back side			132322	1745	1	0	-0.14	0.176	14.92	16.50	1.439	0.253	/
	DSI 1	Front side			132322	1745	50	0	0.03	0.179	14.89	16.50	1.449	0.259	/
	DSI 1	Back side			132322	1745	50	0	0.15	0.205	14.89	16.50	1.449	0.297	30
Hotspot															
Ant.1	DSI 1	Front side	10mm	QPSK	132322	1745	1	0	0.02	0.070	14.92	16.50	1.439	0.101	/
	DSI 1	Back side			132322	1745	1	0	0.05	0.077	14.92	16.50	1.439	0.111	/
	DSI 1	Left side			132322	1745	1	0	0.03	0.093	14.92	16.50	1.439	0.134	/
	DSI 1	Top side			132322	1745	1	0	-0.19	0.066	14.92	16.50	1.439	0.095	/
	DSI 1	Front side			132322	1745	50	0	0.18	0.069	14.89	16.50	1.449	0.100	/
	DSI 1	Back side			132322	1745	50	0	0.03	0.081	14.89	16.50	1.449	0.117	/
	DSI 1	Left side			132322	1745	50	0	0.15	0.111	14.89	16.50	1.449	0.161	31
	DSI 1	Top side			132322	1745	50	0	0.11	0.078	14.89	16.50	1.449	0.113	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

Antenna	Power Reduction	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.
n-1															
Ant.1	DSI 2	Front side	20mm	QPSK	132322	1745	1	0	-0.10	0.188	23.20	24.50	1.349	0.254	/
	DSI 2	Back side			132322	1745	1	0	-0.08	0.178	23.20	24.50	1.349	0.240	/
	DSI 2	Left side			132322	1745	1	0	0.08	0.081	23.20	24.50	1.349	0.109	/
	DSI 2	Top side			132322	1745	1	0	0.12	0.113	23.20	24.50	1.349	0.152	/
	DSI 2	Front side			132322	1745	50	24	-0.18	0.155	22.20	23.50	1.349	0.209	/
	DSI 2	Back side			132322	1745	50	24	0.13	0.156	22.20	23.50	1.349	0.210	/
	DSI 2	Left side			132322	1745	50	24	0.10	0.073	22.20	23.50	1.349	0.098	/
	DSI 2	Top side			132322	1745	50	24	0.18	0.099	22.20	23.50	1.349	0.134	/

11.11 LTE Band 40 (20MHz Bandwidth)

Antenna	Power Reduction	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.1	DSI 1	Left cheek	0mm	QPSK	39150	2350	1	0	0.13	0.131	17.27	18.50	1.327	0.174	/
	DSI 1	Left tilt			39150	2350	1	0	0.09	0.164	17.27	18.50	1.327	0.218	/
	DSI 1	Right cheek			39150	2350	1	0	0.11	0.357	17.27	18.50	1.327	0.474	32
	DSI 1	Right tilt			39150	2350	1	0	0.06	0.189	17.27	18.50	1.327	0.251	/
	DSI 1	Left cheek			39150	2350	50	0	0.18	0.133	17.22	18.50	1.343	0.179	/
	DSI 1	Left tilt			39150	2350	50	0	-0.17	0.170	17.22	18.50	1.343	0.228	/
	DSI 1	Right cheek			39150	2350	50	0	-0.16	0.295	17.22	18.50	1.343	0.396	/
	DSI 1	Right tilt			39150	2350	50	0	0.12	0.200	17.22	18.50	1.343	0.269	/
Body-worn															
Ant.1	DSI 1	Front side	5mm	QPSK	39150	2350	1	0	0.13	0.146	17.27	18.50	1.327	0.194	/
	DSI 1	Back side			39150	2350	1	0	0.10	0.196	17.27	18.50	1.327	0.260	/
	DSI 1	Front side			39150	2350	50	0	-0.02	0.153	17.22	18.50	1.343	0.205	/
	DSI 1	Back side			39150	2350	50	0	0.17	0.206	17.22	18.50	1.343	0.277	33
Hotspot															
Ant.1	DSI 1	Front side	10mm	QPSK	39150	2350	1	0	-0.17	0.049	17.27	18.50	1.327	0.065	/
	DSI 1	Back side			39150	2350	1	0	0.01	0.062	17.27	18.50	1.327	0.082	/
	DSI 1	Left side			39150	2350	1	0	0.11	0.060	17.27	18.50	1.327	0.080	/
	DSI 1	Top side			39150	2350	1	0	-0.10	0.045	17.27	18.50	1.327	0.060	/
	DSI 1	Front side			39150	2350	50	0	-0.09	0.058	17.22	18.50	1.343	0.078	/
	DSI 1	Back side			39150	2350	50	0	0.08	0.063	17.22	18.50	1.343	0.085	/
	DSI 1	Left side			39150	2350	50	0	-0.03	0.065	17.22	18.50	1.343	0.087	34
	DSI 1	Top side			39150	2350	50	0	0.12	0.056	17.22	18.50	1.343	0.075	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

Antenna	Power Reduction	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.
n-1															
Ant.1	DSI 2	Front side	20mm	QPSK	39150	2350	1	0	0.19	0.079	23.81	25.00	1.315	0.104	/
	DSI 2	Back side			39150	2350	1	0	0.05	0.084	23.81	25.00	1.315	0.110	/
	DSI 2	Left side			39150	2350	1	0	-0.06	0.093	23.81	25.00	1.315	0.122	/
	DSI 2	Top side			39150	2350	1	0	-0.01	0.077	23.81	25.00	1.315	0.101	/
	DSI 2	Front side			39150	2350	50	24	0.05	0.060	22.73	24.00	1.340	0.080	/
	DSI 2	Back side			39150	2350	50	24	0.18	0.065	22.73	24.00	1.340	0.087	/
	DSI 2	Left side			39150	2350	50	24	-0.15	0.078	22.73	24.00	1.340	0.104	/
	DSI 2	Top side			39150	2350	50	24	0.05	0.064	22.73	24.00	1.340	0.086	/

11.12 LTE Band 41 (20MHz Bandwidth)

Antenna	Power Reduction	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.1	DSI 1	Left cheek	0mm	QPSK	41490	2680	1	0	-0.15	0.157	11.89	12.50	1.151	0.181	/
	DSI 1	Left tilt			41490	2680	1	0	0.19	0.176	11.89	12.50	1.151	0.203	/
	DSI 1	Right cheek			41490	2680	1	0	0.08	0.530	11.89	12.50	1.151	0.610	/
	DSI 1	Right tilt			41490	2680	1	0	-0.17	0.409	11.89	12.50	1.151	0.471	/
	DSI 1	Left cheek			41490	2680	50	0	0.13	0.157	11.87	12.50	1.156	0.182	/
	DSI 1	Left tilt			41490	2680	50	0	-0.15	0.183	11.87	12.50	1.156	0.212	/
	DSI 1	Right cheek			41490	2680	50	0	-0.13	0.633	11.87	12.50	1.156	0.732	35
	DSI 1	Right tilt			41490	2680	50	0	-0.09	0.458	11.87	12.50	1.156	0.529	/
Body-worn															
Ant.1	DSI 1	Front side	5mm	QPSK	41490	2680	1	0	0.03	0.426	11.89	12.50	1.151	0.490	/
	DSI 1	Back side			41490	2680	1	0	0.06	0.538	11.89	12.50	1.151	0.619	/
	DSI 1	Front side			41490	2680	50	0	0.18	0.471	11.87	12.50	1.156	0.545	/
	DSI 1	Back side			41490	2680	50	0	0.09	0.597	11.87	12.50	1.156	0.690	36
Hotspot															
Ant.1	DSI 1	Front side	10mm	QPSK	41490	2680	1	0	-0.06	0.130	11.89	12.50	1.151	0.150	/
	DSI 1	Back side			41490	2680	1	0	-0.03	0.204	11.89	12.50	1.151	0.235	/
	DSI 1	Left side			41490	2680	1	0	-0.05	0.202	11.89	12.50	1.151	0.232	/
	DSI 1	Top side			41490	2680	1	0	-0.01	0.077	11.89	12.50	1.151	0.089	/
	DSI 1	Front side			41490	2680	50	0	0.04	0.091	11.87	12.50	1.156	0.105	/
	DSI 1	Back side			41490	2680	50	0	0.11	0.222	11.87	12.50	1.156	0.257	37
	DSI 1	Left side			41490	2680	50	0	0.13	0.219	11.87	12.50	1.156	0.253	/
	DSI 1	Top side			41490	2680	50	0	-0.09	0.102	11.87	12.50	1.156	0.118	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

Antenna	Power Reduction	Test Position	Dist.	Test Mode	Test Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 10-g SAR (W/kg)	Meas. Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	10g Scaled SAR (W/kg)	Meas. no.
Extremity															
Ant.1	DSI 1	Front side	0mm	QPSK	41490	2680	1	0	-0.16	0.359	11.89	12.50	1.151	0.413	/
	DSI 1	Back side			41490	2680	1	0	-0.13	0.529	11.89	12.50	1.151	0.609	/
	DSI 1	Left side			41490	2680	1	0	0.05	0.346	11.89	12.50	1.151	0.398	/
	DSI 1	Top side			41490	2680	1	0	0.12	0.153	11.89	12.50	1.151	0.176	/
	DSI 1	Front side			41490	2680	50	0	0.03	0.383	11.87	12.50	1.156	0.443	/
	DSI 1	Back side			41490	2680	50	0	0.14	0.546	11.87	12.50	1.156	0.631	38
	DSI 1	Left side			41490	2680	50	0	-0.10	0.357	11.87	12.50	1.156	0.413	/
	DSI 1	Top side			41490	2680	50	0	0.07	0.172	11.87	12.50	1.156	0.199	/

Antenna	Power Reduction	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.
n-1															
Ant.1	DSI 2	Front side	20mm	QPSK	40620	2593	1	0	-0.04	0.296	23.91	24.50	1.146	0.339	/
	DSI 2	Back side			40620	2593	1	0	0.19	0.388	23.91	24.50	1.146	0.444	/
	DSI 2	Left side			40620	2593	1	0	0.15	0.422	23.91	24.50	1.146	0.483	/
	DSI 2	Top side			40620	2593	1	0	0.01	0.203	23.91	24.50	1.146	0.233	/
	DSI 2	Front side			40620	2593	50	24	-0.03	0.277	22.87	23.50	1.156	0.320	/
	DSI 2	Back side			40620	2593	50	24	-0.07	0.377	22.87	23.50	1.156	0.436	/
	DSI 2	Left side			40620	2593	50	24	-0.05	0.417	22.87	23.50	1.156	0.482	/
	DSI 2	Top side			40620	2593	50	24	-0.18	0.194	22.87	23.50	1.156	0.224	/

11.13 WIFI 2.4GHz

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													
Left cheek	0mm	802.11b 1Mbps	6	2437	0.09	0.057	13.49	14.50	1.262	99.40	1.006	0.072	39
Left tilt			6	2437	0.12	0.053	13.49	14.50	1.262	99.40	1.006	0.067	/
Right cheek			6	2437	0.06	0.018	13.49	14.50	1.262	99.40	1.006	0.023	/
Right tilt			6	2437	0.08	0.012	13.49	14.50	1.262	99.40	1.006	0.015	/
Body-worn													
Front side	5mm	802.11b 1Mbps	6	2437	-0.12	0.037	13.49	14.50	1.262	99.40	1.006	0.047	/
Back side			6	2437	0.12	0.247	13.49	14.50	1.262	99.40	1.006	0.314	40
Hotspot													
Front side	10mm	802.11b 1Mbps	6	2437	0.01	0.016	13.49	14.50	1.262	99.40	1.006	0.020	/
Back side			6	2437	0.12	0.077	13.49	14.50	1.262	99.40	1.006	0.098	41
Right side			6	2437	0.03	0.040	13.49	14.50	1.262	99.40	1.006	0.051	/
Top side			6	2437	-0.11	0.048	13.49	14.50	1.262	99.40	1.006	0.061	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

11.14 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	802.11ac80	58	5290	-0.14	0.018	7.91	9.00	1.285	89.99	1.111	0.026	/
	Left tilt			58	5290	0.07	0.019	7.91	9.00	1.285	89.99	1.111	0.027	/
	Right cheek			58	5290	-0.09	0.021	7.91	9.00	1.285	89.99	1.111	0.030	/
	Right tilt			58	5290	-0.03	0.023	7.91	9.00	1.285	89.99	1.111	0.033	42
5.6G	Left cheek	0mm	802.11ac80	122	5610	0.10	0.030	7.86	9.00	1.300	89.99	1.111	0.043	43
	Left tilt			122	5610	0.17	0.020	7.86	9.00	1.300	89.99	1.111	0.029	/
	Right cheek			122	5610	-0.16	0.018	7.86	9.00	1.300	89.99	1.111	0.026	/
	Right tilt			122	5610	-0.08	0.023	7.86	9.00	1.300	89.99	1.111	0.033	/
5.8G	Left cheek	0mm	802.11ac80	155	5775	0.04	0.036	8.12	9.00	1.225	89.99	1.111	0.049	/
	Left tilt			155	5775	0.15	0.042	8.12	9.00	1.225	89.99	1.111	0.057	/
	Right cheek			155	5775	0.14	0.045	8.12	9.00	1.225	89.99	1.111	0.061	/
	Right tilt			155	5775	-0.08	0.062	8.12	9.00	1.225	89.99	1.111	0.085	44
Body-worn														
5.3G	Front side	5mm	802.11ac80	58	5290	-0.12	0.009	7.91	9.00	1.285	89.99	1.111	0.013	/
	Back side			58	5290	-0.19	0.010	7.91	9.00	1.285	89.99	1.111	0.014	45
5.6G	Front side	5mm	802.11ac80	122	5610	-0.16	0.039	7.86	9.00	1.300	89.99	1.111	0.056	/
	Back side			122	5610	-0.02	0.091	7.86	9.00	1.300	89.99	1.111	0.131	46
5.8G	Front side	5mm	802.11ac80	155	5775	0.06	0.051	8.12	9.00	1.225	89.99	1.111	0.069	/
	Back side			155	5775	0.18	0.169	8.12	9.00	1.225	89.99	1.111	0.230	47
Hotspot														
5.2G	Front side	10mm	802.11ac80	42	5210	-0.03	0.005	7.94	9.00	1.276	89.99	1.111	0.007	/
	Back side			42	5210	0.06	0.006	7.94	9.00	1.276	89.99	1.111	0.009	48
	Right side			42	5210	-0.03	0.004	7.94	9.00	1.276	89.99	1.111	0.006	/
	Top side			42	5210	-0.10	0.005	7.94	9.00	1.276	89.99	1.111	0.007	/
5.8G	Front side	10mm	802.11ac80	155	5775	-0.19	0.058	8.12	9.00	1.225	89.99	1.111	0.079	/
	Back side			155	5775	-0.04	0.102	8.12	9.00	1.225	89.99	1.111	0.139	49
	Right side			155	5775	0.08	0.085	8.12	9.00	1.225	89.99	1.111	0.116	/
	Top side			155	5775	-0.05	0.095	8.12	9.00	1.225	89.99	1.111	0.129	/
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	802.11ac80	58	5290	-0.01	0.015	7.91	9.00	1.285	89.99	1.111	0.021	/
	Back side			58	5290	0.18	0.029	7.91	9.00	1.285	89.99	1.111	0.041	/
	Right side			58	5290	-0.09	0.020	7.91	9.00	1.285	89.99	1.111	0.029	/
	Top side			58	5290	0.02	0.032	7.91	9.00	1.285	89.99	1.111	0.046	50
5.6G	Front side	0mm	802.11ac80	122	5610	0.18	0.018	7.86	9.00	1.300	89.99	1.111	0.026	/
	Back side			122	5610	-0.16	0.045	7.86	9.00	1.300	89.99	1.111	0.065	/
	Right side			122	5610	0.09	0.013	7.86	9.00	1.300	89.99	1.111	0.019	/
	Top side			122	5610	-0.07	0.046	7.86	9.00	1.300	89.99	1.111	0.066	51
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

11.15 Bluetooth

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													
Left cheek	0mm	BR/EDR 1Mbps	0	2402	-0.02	0.032	14.08	15.00	1.236	76.67	1.304	0.052	/
Left tilt			0	2402	0.12	0.036	14.08	15.00	1.236	76.67	1.304	0.058	52
Right cheek			0	2402	0.05	0.025	14.08	15.00	1.236	76.67	1.304	0.040	/
Right tilt			0	2402	0.08	0.028	14.08	15.00	1.236	76.67	1.304	0.045	/
Body-worn													
Front side	5mm	BR/EDR 1Mbps	0	2402	0.14	0.036	14.08	15.00	1.236	76.67	1.304	0.058	/
Back side			0	2402	0.06	0.218	14.08	15.00	1.236	76.67	1.304	0.351	53
Hotspot													
Front side	10mm	BR/EDR 1Mbps	0	2402	-0.10	0.021	14.08	15.00	1.236	76.67	1.304	0.034	/
Back side			0	2402	-0.03	0.023	14.08	15.00	1.236	76.67	1.304	0.037	/
Right side			0	2402	0.11	0.032	14.08	15.00	1.236	76.67	1.304	0.052	54
Top side			0	2402	0.06	0.018	14.08	15.00	1.236	76.67	1.304	0.029	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

11.16 NFC

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

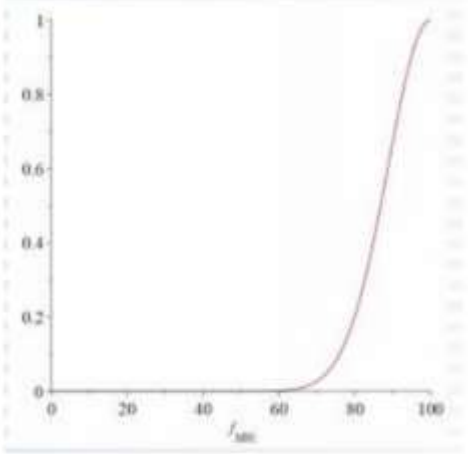
$$P_{7X}(d_{mm}, f_{MHz}) := \begin{cases} P_{6S}(d_{mm}, f_{MHz}) & f_{MHz} \le 100 \\ P_{6to7}(d_{mm}, f_{MHz}) & 100 < f_{MHz} \le 300 \\ P_{7}(d_{mm}, f_{MHz}) & 300 < f_{MHz} \end{cases}$$

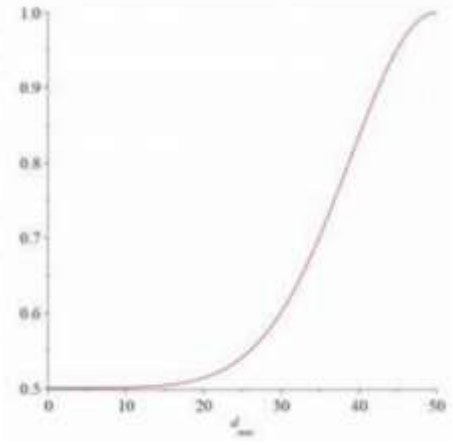
2. For portable products, when using a distance of ≤ 50mm, such as mobile phone NFC, P6s is calculated with the following formula calculate.

$$S_f(f_{MHz}) \cdot P_{431a}(d_{mm}, f_{MHz}) + (1 - S_f(f_{MHz})) \cdot S_d(d_{mm}) \cdot P_{431b}(50., 100.) \cdot \left(1. + \log 10\left(\frac{100.}{f_{MHz}}\right)\right) \qquad d_{mm} \le 50 \text{ and } f_{MHz} \le 100$$

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

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





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

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

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

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

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

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

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

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

where:

E = electric field strength in dBμV/m,

ERP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

Mode	f (MHz)	Max. E-Field strength (dBuV/m)	D (m)	Ground reflection factor (dB)	ERP (dBm)
NFC (13.56MHz)	13.56	60.32	3	6	-18.48
Note: 1. Add the appropriate maximum ground reflection factor to the ERP level (6 dB for frequencies ≤ 30 MHz). 2.ERP= 60.32+20*Log(10) - 104.8 + 6 =-18.48 (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)	-18.48	Pmeas.(mW)	0.014
Pth.(mW)	443.13		
NFC Estimated 1g SAR [W/kg]	＜0.001		

12 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Frequency Band (MHz)	Wireless Band	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Repeated^{1th} Measured SAR (W/kg)	Largest to Smallest SAR Radio
1900	GSM	Head	Right Cheek	0.829	Yes	0.817	1.02
Note: The ratio of largest to smallest SAR for the original and first repeated measurements is < 1.20, the second repeated measurement. Is not required.							

Note: For product specific 10g SAR, the highest measured 10g SAR is 0.63 < 2.0 W/kg, repeated measurement is not required.

13 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).

13.1 Simultaneous Transmission Mode Consider

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

Note:
1. WWAN antennas can switch auto matically, the standards supported by WWAN are (GSM/GPRS/EDGE/WCDMA/LTE).
2. WIFI2.4G/Bluetooth can't transmit simultaneously.
3. The maximum SAR summation is calculated based on the same configuration and test position.

13.2 Sum SAR of Simultaneous Transmission

13.2.1 Sum Head SAR of Simultaneous Transmission

Band	Position	Stand alone SAR				SUM SAR		
		1	2	3	4			
		WWAN	2.4GWIFI	5G WIFI	Bluetooth	2+3	1+2	1+3+4
GSM 850	Left Cheek	0.164	0.072	0.049	0.052	0.121	0.236	0.264
	Left Tilt	0.096	0.067	0.057	0.058	0.124	0.163	0.211
	Right Cheek	0.205	0.023	0.061	0.040	0.084	0.228	0.307
	Right Tilt	0.105	0.015	0.085	0.045	0.100	0.120	0.235
GSM 1900	Left Cheek	0.689	0.072	0.049	0.052	0.121	0.761	0.789
	Left Tilt	0.556	0.067	0.057	0.058	0.124	0.623	0.671
	Right Cheek	1.083	0.023	0.061	0.040	0.084	1.106	1.184
	Right Tilt	0.644	0.015	0.085	0.045	0.100	0.660	0.774
WCDMA B2	Left Cheek	0.266	0.072	0.049	0.052	0.121	0.338	0.366
	Left Tilt	0.232	0.067	0.057	0.058	0.124	0.299	0.347
	Right Cheek	0.529	0.023	0.061	0.040	0.084	0.552	0.631
	Right Tilt	0.277	0.015	0.085	0.045	0.100	0.292	0.407
WCDMA B4	Left Cheek	0.222	0.072	0.049	0.052	0.121	0.295	0.323
	Left Tilt	0.167	0.067	0.057	0.058	0.124	0.234	0.282
	Right Cheek	0.342	0.023	0.061	0.040	0.084	0.364	0.443
	Right Tilt	0.220	0.015	0.085	0.045	0.100	0.235	0.350
WCDMA B5	Left Cheek	0.192	0.072	0.049	0.052	0.121	0.264	0.292
	Left Tilt	0.112	0.067	0.057	0.058	0.124	0.179	0.227
	Right Cheek	0.202	0.023	0.061	0.040	0.084	0.225	0.304
	Right Tilt	0.121	0.015	0.085	0.045	0.100	0.136	0.251
LTE B2	Left Cheek	0.386	0.072	0.049	0.052	0.121	0.458	0.486
	Left Tilt	0.338	0.067	0.057	0.058	0.124	0.405	0.453
	Right Cheek	0.720	0.023	0.061	0.040	0.084	0.743	0.822
	Right Tilt	0.402	0.015	0.085	0.045	0.100	0.417	0.532
LTE B7	Left Cheek	0.301	0.072	0.049	0.052	0.121	0.373	0.402
	Left Tilt	0.399	0.067	0.057	0.058	0.124	0.466	0.514
	Right Cheek	0.858	0.023	0.061	0.040	0.084	0.881	0.960
	Right Tilt	0.670	0.015	0.085	0.045	0.100	0.685	0.800
LTE B12	Left Cheek	0.062	0.072	0.049	0.052	0.121	0.134	0.163
	Left Tilt	0.020	0.067	0.057	0.058	0.124	0.087	0.135
	Right Cheek	0.070	0.023	0.061	0.040	0.084	0.093	0.172
	Right Tilt	0.023	0.015	0.085	0.045	0.100	0.038	0.153
LTE B26	Left Cheek	0.175	0.072	0.049	0.052	0.121	0.247	0.275
	Left Tilt	0.100	0.067	0.057	0.058	0.124	0.168	0.215
	Right Cheek	0.184	0.023	0.061	0.040	0.084	0.207	0.286
	Right Tilt	0.113	0.015	0.085	0.045	0.100	0.128	0.243

LTE B66	Left Cheek	0.294	0.072	0.049	0.052	0.121	0.366	0.395
	Left Tilt	0.242	0.067	0.057	0.058	0.124	0.309	0.357
	Right Cheek	0.581	0.023	0.061	0.040	0.084	0.604	0.682
	Right Tilt	0.294	0.015	0.085	0.045	0.100	0.309	0.424
LTE B40	Left Cheek	0.179	0.072	0.049	0.052	0.121	0.251	0.279
	Left Tilt	0.228	0.067	0.057	0.058	0.124	0.296	0.343
	Right Cheek	0.474	0.023	0.061	0.040	0.084	0.497	0.575
	Right Tilt	0.269	0.015	0.085	0.045	0.100	0.284	0.399
LTE B41	Left Cheek	0.182	0.072	0.049	0.052	0.121	0.254	0.282
	Left Tilt	0.212	0.067	0.057	0.058	0.124	0.279	0.327
	Right Cheek	0.732	0.023	0.061	0.040	0.084	0.755	0.833
	Right Tilt	0.529	0.015	0.085	0.045	0.100	0.545	0.660
Note: The highest Summed 1g SAR is 1.184 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.								

13.2.2 Sum Body-worn SAR of Simultaneous Transmission

Band	Position	Stand alone SAR				SUM SAR		
		1	2	3	4			
		WWAN	2.4GWIFI	5G WIFI	Bluetooth	2+3	1+2	1+3+4
GSM 850	Front Side	0.389	0.047	0.069	0.058	0.116	0.436	0.517
	Back Side	0.806	0.314	0.230	0.351	0.544	1.120	1.387
GSM 1900	Front Side	0.600	0.047	0.069	0.058	0.116	0.647	0.728
	Back Side	0.727	0.314	0.230	0.351	0.544	1.040	1.308
WCDMA B2	Front Side	0.219	0.047	0.069	0.058	0.116	0.266	0.347
	Back Side	0.316	0.314	0.230	0.351	0.544	0.629	0.897
WCDMA B4	Front Side	0.137	0.047	0.069	0.058	0.116	0.184	0.264
	Back Side	0.198	0.314	0.230	0.351	0.544	0.511	0.779
WCDMA B5	Front Side	0.407	0.047	0.069	0.058	0.116	0.454	0.534
	Back Side	0.757	0.314	0.230	0.351	0.544	1.071	1.339
LTE B2	Front Side	0.399	0.047	0.069	0.058	0.116	0.446	0.526
	Back Side	0.525	0.314	0.230	0.351	0.544	0.839	1.107
LTE B7	Front Side	0.375	0.047	0.069	0.058	0.116	0.422	0.503
	Back Side	0.550	0.314	0.230	0.351	0.544	0.863	1.131
LTE B12	Front Side	0.170	0.047	0.069	0.058	0.116	0.217	0.297
	Back Side	0.319	0.314	0.230	0.351	0.544	0.633	0.901
LTE B26	Front Side	0.408	0.047	0.069	0.058	0.116	0.455	0.536
	Back Side	0.916	0.314	0.230	0.351	0.544	1.230	1.498
LTE B66	Front Side	0.259	0.047	0.069	0.058	0.116	0.306	0.387
	Back Side	0.297	0.314	0.230	0.351	0.544	0.611	0.878
LTE B40	Front Side	0.205	0.047	0.069	0.058	0.116	0.252	0.333
	Back Side	0.277	0.314	0.230	0.351	0.544	0.590	0.858

LTE B41	Front Side	0.545	0.047	0.069	0.058	0.116	0.591	0.672
	Back Side	0.690	0.314	0.230	0.351	0.544	1.004	1.272
Note: The highest Summed 1g SAR is 1.498 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.								

13.2.3 Sum Hotspot SAR of Simultaneous Transmission

Band	Position	Stand alone SAR				SUM SAR		
		1	2	3	4			
		WWAN	2.4GWIFI	5G WIFI	Bluetooth	2+3	1+2	1+3+4
GSM 850	Front Side	0.120	0.020	0.079	0.034	0.099	0.140	0.233
	Back Side	0.226	0.098	0.139	0.037	0.237	0.323	0.401
	Left Side	0.050	0.000	0.000	0.000	0.000	0.050	0.050
	Right Side	0.121	0.051	0.116	0.052	0.166	0.172	0.288
	Top Side	0.000	0.061	0.129	0.029	0.190	0.061	0.158
	Bottom Side	0.205	0.000	0.000	0.000	0.000	0.205	0.205
GSM 1900	Front Side	0.173	0.020	0.079	0.034	0.099	0.193	0.286
	Back Side	0.191	0.098	0.139	0.037	0.237	0.289	0.367
	Left Side	0.328	0.000	0.000	0.000	0.000	0.328	0.328
	Right Side	0.000	0.051	0.116	0.052	0.166	0.051	0.167
	Top Side	0.146	0.061	0.129	0.029	0.190	0.207	0.304
	Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WCDMA B2	Front Side	0.108	0.020	0.079	0.034	0.099	0.129	0.221
	Back Side	0.137	0.098	0.139	0.037	0.237	0.234	0.312
	Left Side	0.135	0.000	0.000	0.000	0.000	0.135	0.135
	Right Side	0.000	0.051	0.116	0.052	0.166	0.051	0.167
	Top Side	0.102	0.061	0.129	0.029	0.190	0.163	0.261
	Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WCDMA B4	Front Side	0.062	0.020	0.079	0.034	0.099	0.083	0.175
	Back Side	0.079	0.098	0.139	0.037	0.237	0.176	0.254
	Left Side	0.156	0.000	0.000	0.000	0.000	0.156	0.156
	Right Side	0.000	0.051	0.116	0.052	0.166	0.051	0.167
	Top Side	0.064	0.061	0.129	0.029	0.190	0.125	0.222
	Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WCDMA B5	Front Side	0.193	0.020	0.079	0.034	0.099	0.213	0.306
	Back Side	0.283	0.098	0.139	0.037	0.237	0.381	0.459
	Left Side	0.104	0.000	0.000	0.000	0.000	0.104	0.104
	Right Side	0.235	0.051	0.116	0.052	0.166	0.286	0.402
	Top Side	0.000	0.061	0.129	0.029	0.190	0.061	0.158
	Bottom Side	0.245	0.000	0.000	0.000	0.000	0.245	0.245
LTE B2	Front Side	0.191	0.020	0.079	0.034	0.099	0.211	0.303
	Back Side	0.250	0.098	0.139	0.037	0.237	0.348	0.426
	Left Side	0.226	0.000	0.000	0.000	0.000	0.226	0.226

	Right Side	0.000	0.051	0.116	0.052	0.166	0.051	0.167
	Top Side	0.178	0.061	0.129	0.029	0.190	0.238	0.336
	Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B7	Front Side	0.287	0.020	0.079	0.034	0.099	0.307	0.399
	Back Side	0.395	0.098	0.139	0.037	0.237	0.493	0.571
	Left Side	0.391	0.000	0.000	0.000	0.000	0.391	0.391
	Right Side	0.000	0.051	0.116	0.052	0.166	0.051	0.167
	Top Side	0.188	0.061	0.129	0.029	0.190	0.249	0.346
	Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B12	Front Side	0.094	0.020	0.079	0.034	0.099	0.114	0.207
	Back Side	0.129	0.098	0.139	0.037	0.237	0.226	0.304
	Left Side	0.057	0.000	0.000	0.000	0.000	0.057	0.057
	Right Side	0.184	0.051	0.116	0.052	0.166	0.234	0.351
	Top Side	0.000	0.061	0.129	0.029	0.190	0.061	0.158
	Bottom Side	0.130	0.000	0.000	0.000	0.000	0.130	0.130
LTE B26	Front Side	0.170	0.020	0.079	0.034	0.099	0.191	0.283
	Back Side	0.361	0.098	0.139	0.037	0.237	0.459	0.537
	Left Side	0.103	0.000	0.000	0.000	0.000	0.103	0.103
	Right Side	0.204	0.051	0.116	0.052	0.166	0.255	0.372
	Top Side	0.000	0.061	0.129	0.029	0.190	0.061	0.158
	Bottom Side	0.295	0.000	0.000	0.000	0.000	0.295	0.295
LTE B66	Front Side	0.101	0.020	0.079	0.034	0.099	0.121	0.213
	Back Side	0.117	0.098	0.139	0.037	0.237	0.215	0.293
	Left Side	0.161	0.000	0.000	0.000	0.000	0.161	0.161
	Right Side	0.000	0.051	0.116	0.052	0.166	0.051	0.167
	Top Side	0.113	0.061	0.129	0.029	0.190	0.174	0.271
	Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B40	Front Side	0.078	0.020	0.079	0.034	0.099	0.098	0.191
	Back Side	0.085	0.098	0.139	0.037	0.237	0.182	0.260
	Left Side	0.087	0.000	0.000	0.000	0.000	0.087	0.087
	Right Side	0.000	0.051	0.116	0.052	0.166	0.051	0.167
	Top Side	0.075	0.061	0.129	0.029	0.190	0.136	0.233
	Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B41	Front Side	0.150	0.020	0.079	0.034	0.099	0.170	0.262
	Back Side	0.257	0.098	0.139	0.037	0.237	0.354	0.433
	Left Side	0.253	0.000	0.000	0.000	0.000	0.253	0.253
	Right Side	0.000	0.051	0.116	0.052	0.166	0.051	0.167
	Top Side	0.118	0.061	0.129	0.029	0.190	0.179	0.276
	Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Note: The highest Summed 1g SAR is 0.571 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.								

13.2.4 Sum Extremity SAR of Simultaneous Transmission

Band	Position	Stand alone SAR		SUM SAR
		1	2	
		WWAN	5G WIFI	1+2
LTE B7	Front Side	0.547	0.096	0.643
	Back Side	0.554	0.205	0.759
	Left Side	0.489	0.000	0.489
	Right Side	0.000	0.114	0.114
	Top Side	0.197	0.325	0.522
	Bottom Side	0.000	0.000	0.000
LTE B41	Front Side	0.443	0.096	0.538
	Back Side	0.631	0.205	0.836
	Left Side	0.413	0.000	0.413
	Right Side	0.000	0.114	0.114
	Top Side	0.199	0.325	0.524
	Bottom Side	0.000	0.000	0.000
Note: The highest Summed 10g SAR is 0.836 W/Kg < 4.0 W/kg, so Simultaneous Transmission SAR test is not required.				

13.2.5 Highest Total Exposure Ratio of Simultaneous Transmission

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

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

The maximum SAR value for Simultaneous Transmission is 1.50 [W/kg], SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption thresholds. Therefore, the worst TER =(1.50+0.001)/1.6 = 0.938＜1,the NFC SAR transmit simultaneously Pass.

14 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY5	52.8.8.1222	N/A	N/A
750MHz Validation Dipole	Speag	D750V3	SN: 1208	2024/08/19	2027/08/18
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2024/05/08	2027/05/07
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2024/05/08	2027/05/07
1950MHz Validation Dipole	Speag	D1950V3	SN: 1240	2024/08/22	2027/08/21
2300MHz Validation Dipole	Speag	D2300V2	SN: 1014	2024/05/09	2027/05/08
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2024/05/07	2027/05/06
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2024/05/08	2027/05/07
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2024/05/09	2027/05/08
Data Acquisition Electronicsr	Speag	DAE4	SN: 1710	2025/01/20	2026/01/19
E-Field Probe	Speag	EX3DV4	SN: 7510	2024/06/25	2025/06/24
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	6201144551	2024/05/14	2025/05/13
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 (%)
2025.4.3	Head	750	21.1	0.87	42.92	0.89	41.94	-2.25	2.34
2025.4.2	Head	835	20.8	0.90	42.37	0.90	41.50	0.00	2.10
2025.4.3	Head	1750	21.1	1.38	39.57	1.37	40.08	0.73	-1.27
2025.4.4	Head	1950	21.3	1.43	39.02	1.40	40.00	2.14	-2.45
2025.4.5	Head	2300	21.3	1.69	38.83	1.67	39.47	1.20	-1.62
2025.4.1	Head	2450	21.5	1.81	39.33	1.80	39.20	0.56	0.33
2025.4.6	Head	2600	20.7	1.98	38.52	1.96	39.01	1.02	-1.26
2025.4.7	Head	2600	21.1	2.01	38.26	1.96	39.01	2.55	-1.92
2025.3.31	Head	5250	21.3	4.62	35.55	4.71	35.93	-1.91	-1.06
2025.3.31	Head	5600	21.3	4.99	34.91	5.07	35.53	-1.58	-1.75
2025.4.1	Head	5750	21.5	5.17	34.62	5.22	35.36	-0.96	-2.09
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 (%)
2025.4.3	Head	750	100	0.881	8.81	8.46	4.14
2025.4.2	Head	835	100	0.953	9.53	9.74	-2.16
2025.4.3	Head	1750	100	3.780	37.80	37.00	2.16
2025.4.4	Head	1950	100	4.230	42.30	41.70	1.44
2025.4.5	Head	2300	100	4.950	49.50	50.20	-1.39
2025.4.1	Head	2450	100	4.970	49.70	52.60	-5.51
2025.4.6	Head	2600	100	5.450	54.50	55.90	-2.50
2025.4.7	Head	2600	100	5.680	56.80	55.90	1.61
2025.3.31	Head	5250	100	7.410	74.10	77.70	-4.63
2025.3.31	Head	5600	100	8.130	81.30	81.30	0.00
2025.4.1	Head	5750	100	7.910	79.10	77.60	1.93
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 (%)
2025.4.6	Head	2600	100	2.410	24.10	25.40	-5.12
2025.4.7	Head	2600	100	2.520	25.20	25.40	-0.79
Note: The tolerance limit of System validation ±10%.							

System Performance Check Data (750MHz)

Date: 2025/4/3
Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.867 S/m; ε_r = 42.916; ρ = 1000 kg/m^3
Phantom section: Flat Section

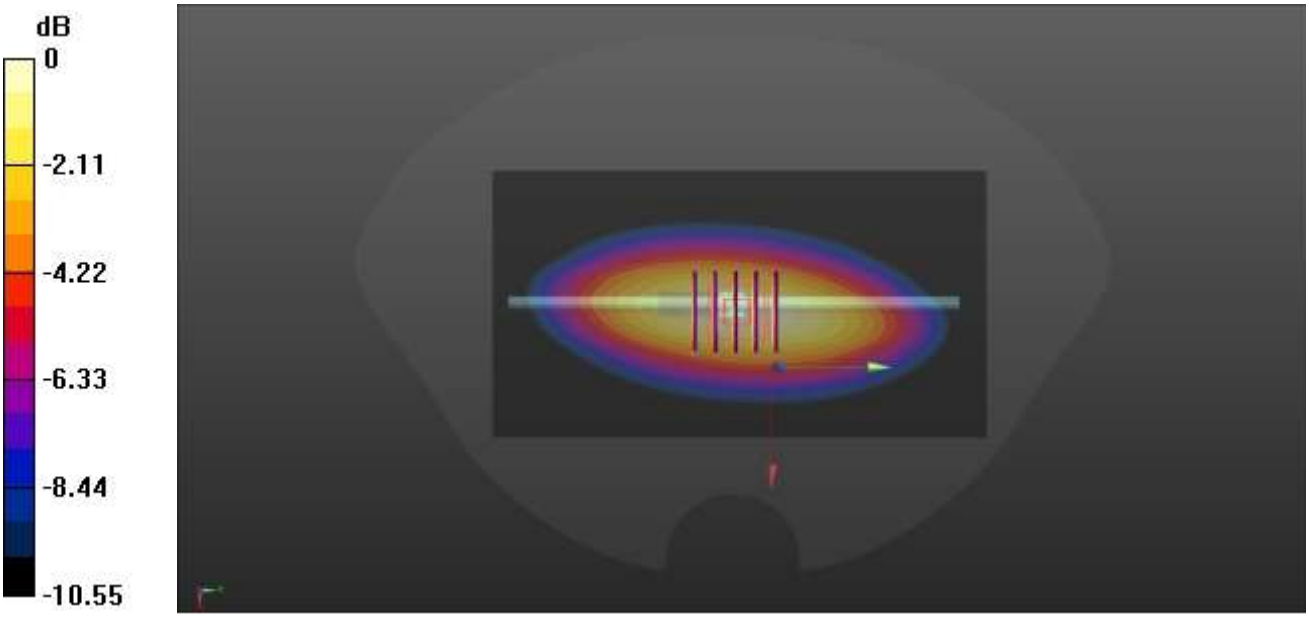
Ambient Temperature:22.5℃ Liquid Temperature:21.1℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.29, 10.29, 10.29); Calibrated: 2024/6/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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) = 0.881 W/kg; SAR(10 g) = 0.578 W/kg
Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg

System Performance Check Data (835MHz)

Date: 2025/4/2
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.902 S/m; ε_r = 42.365; ρ = 1000 kg/m^3
Phantom section: Flat Section

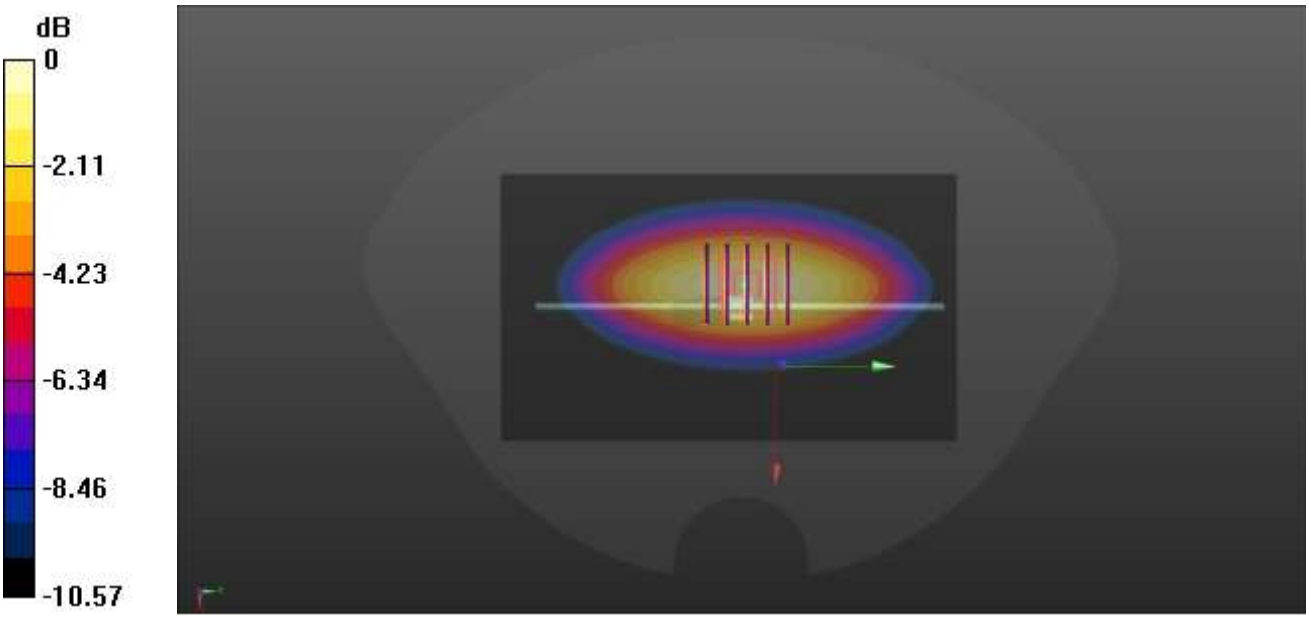
Ambient Temperature:22.3℃ Liquid Temperature:20.8℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(9.99, 9.99, 9.99); Calibrated: 2024/6/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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) = 1.31 W/kg

CW 835/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.58 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.953 W/kg; SAR(10 g) = 0.623 W/kg
Maximum value of SAR (measured) = 1.31 W/kg



0 dB = 1.31 W/kg

System Performance Check Data (1750MHz)

Date: 2025/4/3
Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.378 S/m; ε_r = 39.572; ρ = 1000 kg/m^3
Phantom section: Flat Section

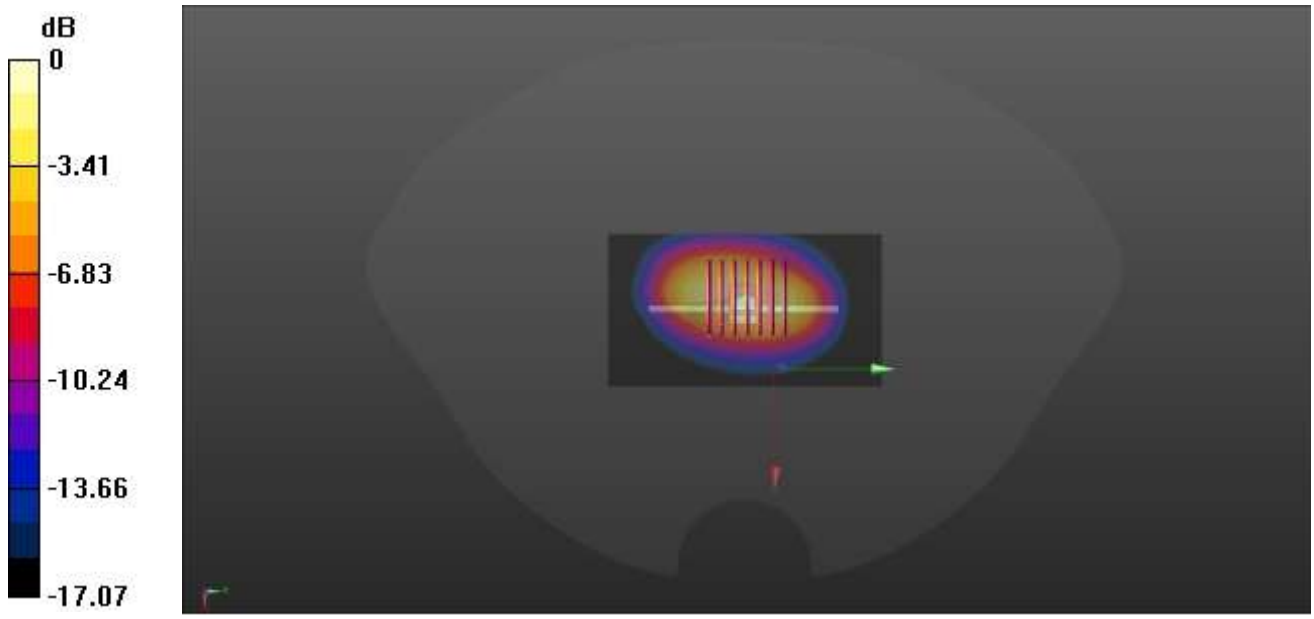
Ambient Temperature:22.5℃ Liquid Temperature:21.1℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2024/6/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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 (51x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 6.11 W/kg

CW 1750/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.77 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 7.20 W/kg
SAR(1 g) = 3.78 W/kg; SAR(10 g) = 1.99 W/kg
Maximum value of SAR (measured) = 5.94 W/kg



0 dB = 5.94 W/kg

System Performance Check Data (1950MHz)

Date: 2025/4/4
Communication System Band: D1950 (1950.0 MHz); Frequency: 1950 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1950 MHz; σ = 1.426 S/m; ε_r = 39.018; ρ = 1000 kg/m^3
Phantom section: Flat Section

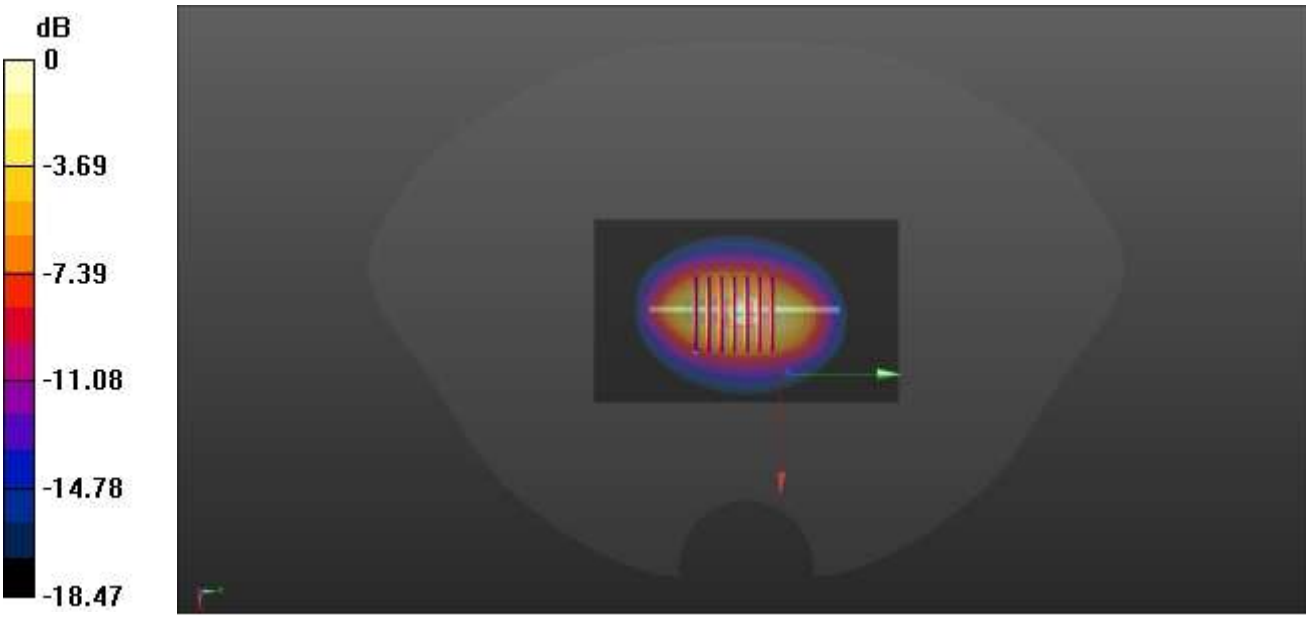
Ambient Temperature:22.8℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.33, 8.33, 8.33); Calibrated: 2024/6/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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) = 6.84 W/kg

CW 1950/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.22 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 8.10 W/kg
SAR(1 g) = 4.23 W/kg; SAR(10 g) = 2.18 W/kg
Maximum value of SAR (measured) = 6.65 W/kg



0 dB = 6.65 W/kg

System Performance Check Data (2300MHz)

Date: 2025/4/5
Communication System Band: D2300 (2300.0 MHz); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.687 S/m; ε_r = 38.829; ρ = 1000 kg/m^3
Phantom section: Flat Section

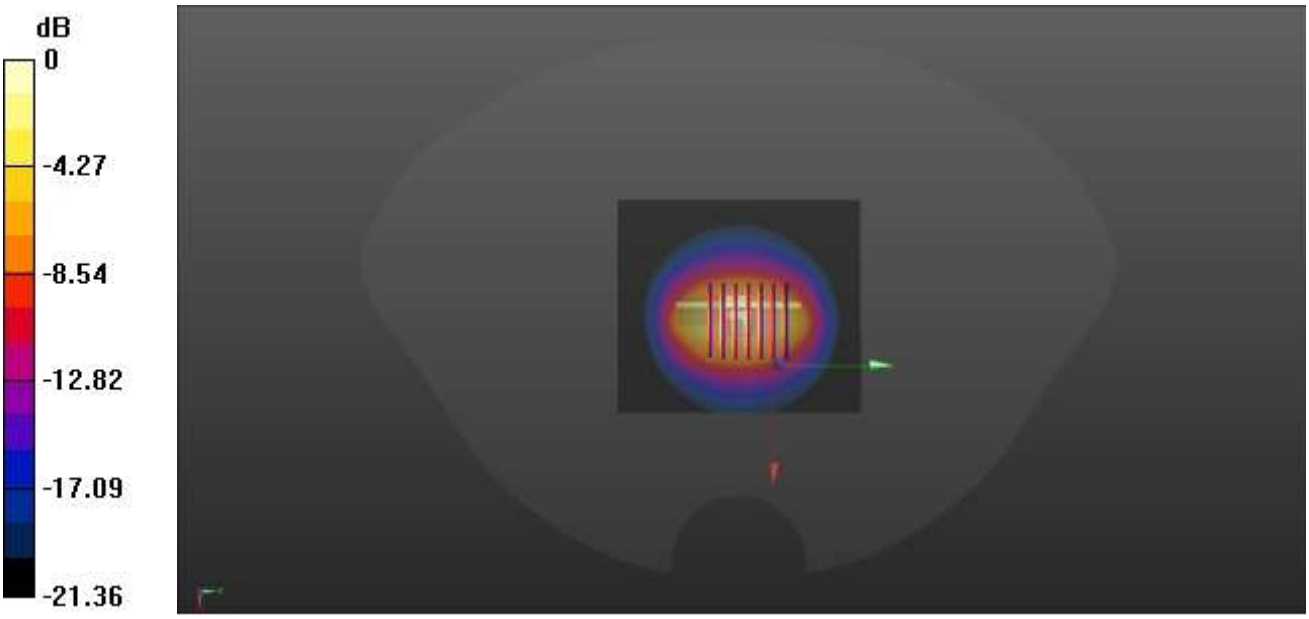
Ambient Temperature:22.3℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.93, 7.93, 7.93); Calibrated: 2024/6/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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 2300/Area Scan (71x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 8.26 W/kg

CW 2300/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.23 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 10.1 W/kg
SAR(1 g) = 4.95 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (measured) = 8.11 W/kg



0 dB = 8.11 W/kg

System Performance Check Data (2450MHz)

Date: 2025/4/1
Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.807 S/m; ε_r = 39.325; ρ = 1000 kg/m^3
Phantom section: Flat Section

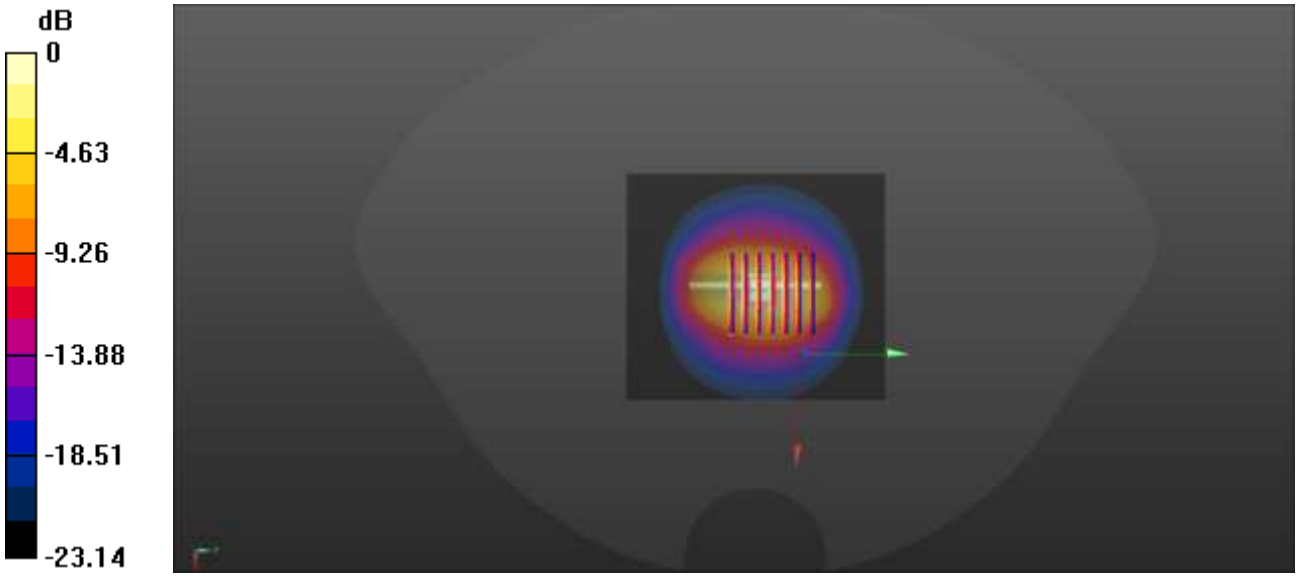
Ambient Temperature:22.7℃ Liquid Temperature:21.5℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.75, 7.75, 7.75); Calibrated: 2024/6/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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) = 8.71 W/kg

CW 2450/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.04 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 10.5 W/kg
SAR(1 g) = 4.97 W/kg; SAR(10 g) = 2.29 W/kg
Maximum value of SAR (measured) = 8.29 W/kg



0 dB = 8.29 W/kg

System Performance Check Data (2600MHz)

Date: 2025/4/6
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.983 S/m; ε_r = 38.516; ρ = 1000 kg/m^3
Phantom section: Flat Section

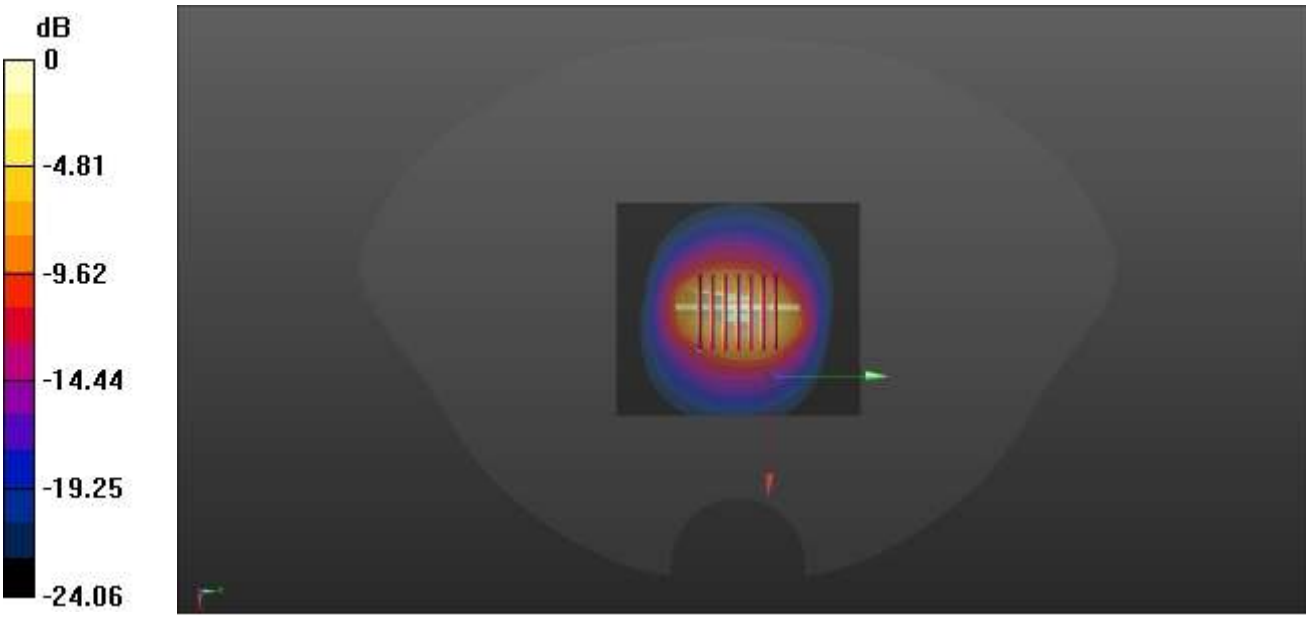
Ambient Temperature:22.1℃ Liquid Temperature:20.7℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.59, 7.59, 7.59); Calibrated: 2024/6/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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) = 9.56 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 = -0.06 dB
Peak SAR (extrapolated) = 12.1 W/kg
SAR(1 g) = 5.45 W/kg; SAR(10 g) = 2.41 W/kg
Maximum value of SAR (measured) = 9.38 W/kg



0 dB = 9.38 W/kg

System Performance Check Data (2600MHz)

Date: 2025/4/7
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.005 S/m; ε_r = 38.262; ρ = 1000 kg/m^3
Phantom section: Flat Section

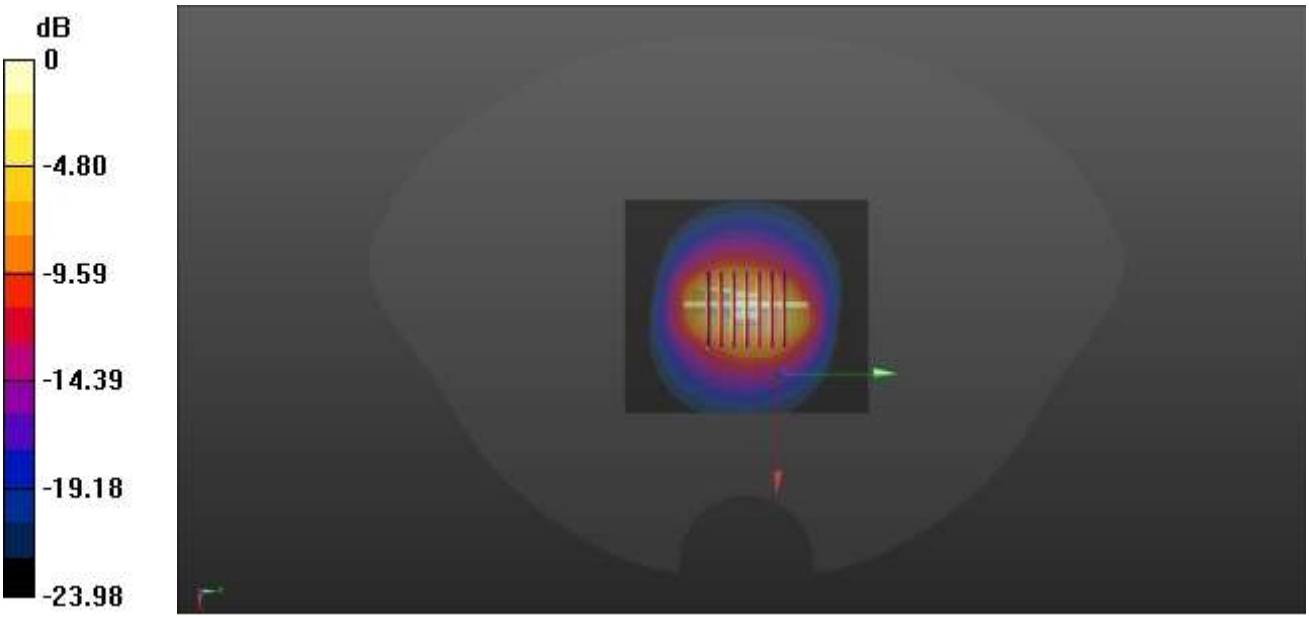
Ambient Temperature:22.4℃ Liquid Temperature:21.1℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.59, 7.59, 7.59); Calibrated: 2024/6/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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) = 10.1 W/kg

CW 2600/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.47 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 12.8 W/kg
SAR(1 g) = 5.68 W/kg; SAR(10 g) = 2.52 W/kg
Maximum value of SAR (measured) = 9.84 W/kg



0 dB = 9.84 W/kg

System Performance Check Data (5250MHz)

Date: 2025/3/31
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.622 S/m; ε_r = 35.551; ρ = 1000 kg/m^3
Phantom section: Flat Section

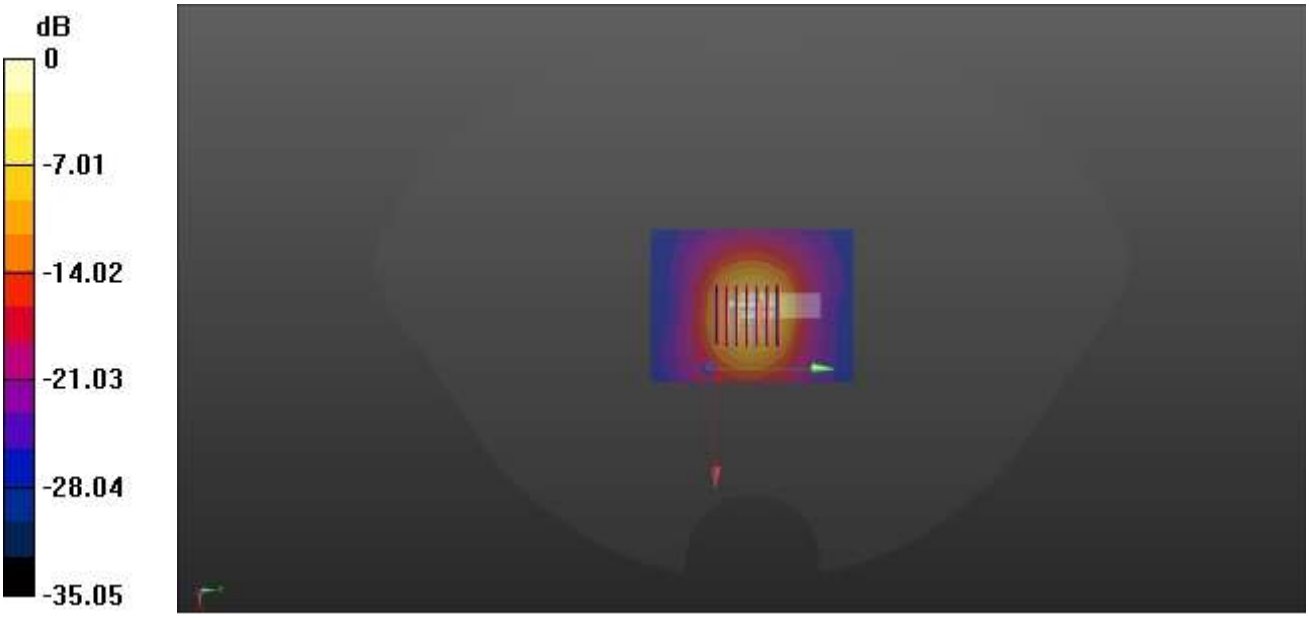
Ambient Temperature:22.7℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.74, 5.74, 5.74); Calibrated: 2024/6/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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 5250/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.4 W/kg

CW 5250/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 39.30 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 31.5 W/kg
SAR(1 g) = 7.41 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 15.7 W/kg



0 dB = 15.7 W/kg

System Performance Check Data (5600MHz)

Date: 2025/3/31
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 4.985 S/m; ε_r = 34.906; ρ = 1000 kg/m^3
Phantom section: Flat Section

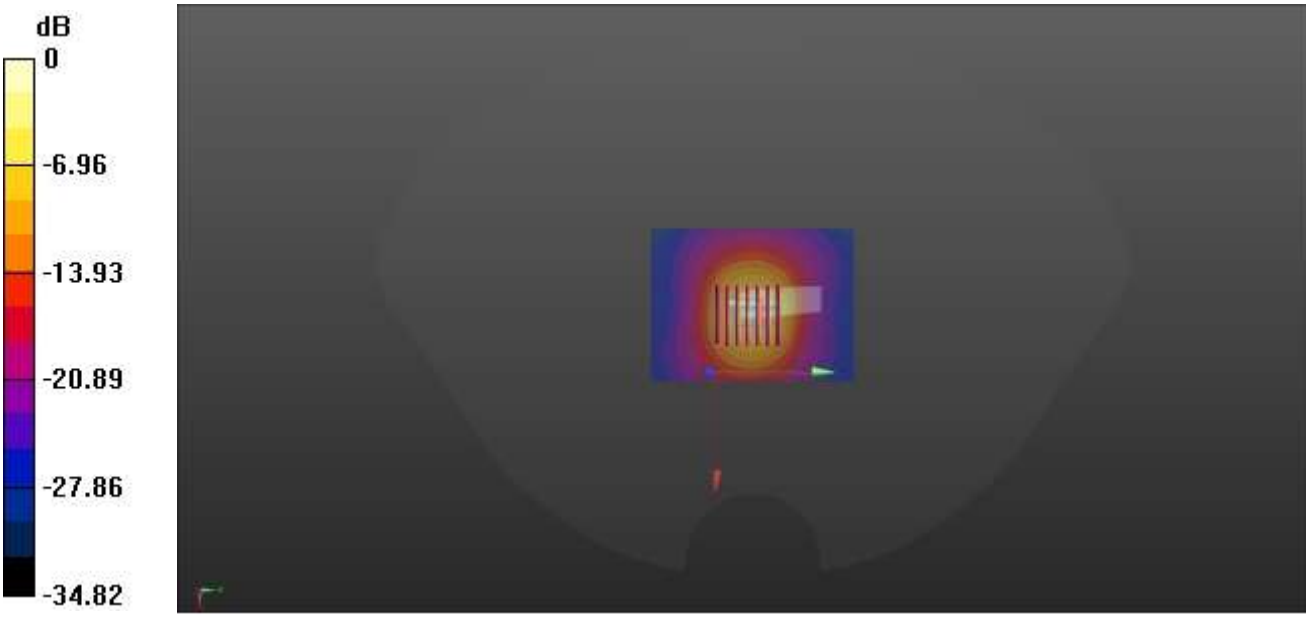
Ambient Temperature:22.7℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5, 5, 5); Calibrated: 2024/6/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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 (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.0 W/kg

CW 5600/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 41.36 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 34.4 W/kg
SAR(1 g) = 8.13 W/kg; SAR(10 g) = 2.3 W/kg
Maximum value of SAR (measured) = 17.0 W/kg



0 dB = 17.0 W/kg

System Performance Check Data (5750MHz)

Date: 2025/4/1
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.167 S/m; ε_r = 34.618; ρ = 1000 kg/m^3
Phantom section: Flat Section

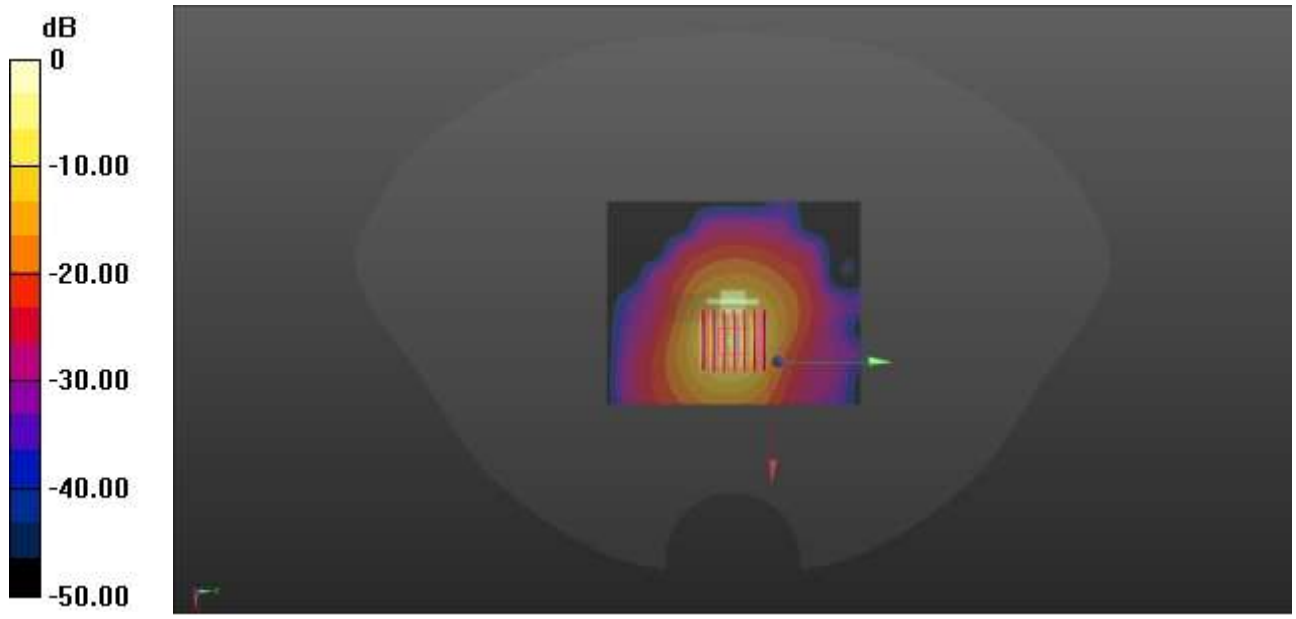
Ambient Temperature:22.7℃ Liquid Temperature:21.5℃

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.04, 5.04, 5.04); Calibrated: 2024/6/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1710; Calibrated: 2025/1/20
- 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 5750/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.8 W/kg

CW 5750/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 15.70 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 38.2 W/kg
SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.22 W/kg
Maximum value of SAR (measured) = 17.1 W/kg



0 dB = 17.1 W/kg

ANNEX C TEST DATA

Please refer the document “BL-SZ2520873-AT.pdf”.

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2520873-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ2520873-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “BL-SZ2520873-AC.pdf”.

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--END OF REPORT--