

TEST REPORT

Applicant: INFINIX MOBILITY LIMITED
Address: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Equipment Type: Mobile phone
Model Name: X6880
Brand Name: Infinix
FCC ID: 2AIZN-YY5-X6880
Test Standard: FCC 47 CFR Part 2.1093 (refer section 3.1)
Maximum SAR: Head (1 g@0mm): 0.84 W/kg
Body-worn (1 g@10mm): 0.76 W/kg
Hotspot (1 g@10mm): 0.76 W/kg
Specific (10 g@10mm): 1.32 W/kg
Sample Arrival Date: Jun. 26, 2024
Test Date: Jun. 26, 2024 - Aug. 09, 2024
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ISSUED BY:

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Revision History		
Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Aug. 13, 2024</u>	<u>Initial Issue</u>

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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	<input type="checkbox"/> Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	<input checked="" type="checkbox"/> 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°C to 25°C
Ambient Relative Humidity	30% to 70%

2 PRODUCT INFORMATION

2.1 Applicant Information

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

2.2 Manufacturer Information

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

2.3 General Description for Equipment under Test (EUT)

EUT Name	Mobile phone
Model Name Under Test	X6880
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	BL-49UX
	Serial No.	N/A
	Capacity	Rated: 4900mAh/19.16Wh Typical: 5000mAh/19.55Wh
	Rated Voltage	3.91 V
	Limit Charge Voltage	4.50 V
Ancillary Equipment 2	Headset	
	Length (Approx.)	1.2m

2.5 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EGPRS 850/1900 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/5/7/12/13/17/25/26/66 LTE TDD Band 38/41 LTE CA Uplink (UL): CA_2C, CA_5B, CA_7C, CA_38C, CA_41C, CA_66C Bluetooth (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n(HT20/40) and 802.11ac(VHT20/40/80) GPS, GLONASS, BDS, Galileo, FM Receiver, 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		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM 1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE Band 12	TX: 699 ~ 716 MHz	RX: 729 ~ 746 MHz
	LTE Band 13	TX: 777 ~ 787 MHz	RX: 746 ~ 756 MHz
	LTE Band 17	TX: 704 ~ 716 MHz	RX: 734 ~ 746 MHz
	LTE Band 25	TX: 1850 ~ 1915 MHz	RX: 1930 ~ 1995 MHz
	LTE Band 26	TX: 814 ~ 849 MHz	RX: 859 ~ 894 MHz
	LTE Band 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2180 MHz
	LTE Band 38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	802.11b/g/n(HT20)	2412 ~ 2462 MHz	
	802.11a/n(HT20/HT40)/ac(VHT20/VHT40/VHT80)	5150 ~ 5250 MHz	5250 ~ 5350 MHz
		5470 ~ 5725 MHz	5725 ~ 5850 MHz
Bluetooth	2402 ~ 2480 MHz		
NFC	13.56 MHz		
Antenna Type	WWAN: PIFA Antenna		

	WIFI: PIFA Antenna Bluetooth: PIFA Antenna NFC: Coil Antenna	
DTM	N/A	
Hotspot Function	Support	
Power Reduction	Support	
Exposure Category	General Population/Uncontrolled exposure	
Product Type	Portable Device	
EUT Type	<input checked="" type="checkbox"/> Production unit	<input type="checkbox"/> Identical prototype

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	ANSI C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	IEEE Std. 1528-2013	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
5	KDB 941225 D01 v03r01	3G SAR MEAUREMENT PROCEDURES
6	KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices
7	KDB 941225 D05A v01r02	REL. 10 LTE SAR TEST GUIDANCE AND KDB INQUIRIES
8	KDB 941225 D06 v02r01	SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES
9	KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
10	KDB 865664 D02 v01r02	RF Exposure Reporting
11	KDB 648474 D04 v01r03	SAR EVALUATION CONSIDERATIONS FOR WIRELESS HANDSETS
12	KDB 248227 D01 v02r02	SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

3.2 Device Category and SAR Limit

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

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

Table of Exposure Limits:

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

NOTE:

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

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

3.3 Test Result Summary

3.3.1 Highest SAR Values

Equipment Class	Band	Maximum Scaled SAR (W/kg)				Maximum Report SAR (W/kg)			
		Head (0mm)	Body-worn (10mm)	Hotspot (10mm)	Specific (0mm)	Head (0mm)	Body-worn (10mm)	Hotspot (10mm)	Specific (0mm)
		1g SAR		10g SAR		1g SAR		10g SAR	
PCE	GSM 850	0.37	0.44	0.52	/	0.84	0.76	0.76	1.32
	GSM 1900	0.05	0.38	0.76	/				
	WCDMA Band 2	0.54	0.31	0.61	/				
	WCDMA Band 4	0.06	0.32	0.52	/				
	WCDMA Band 5	0.22	0.76	0.45	/				
	LTE Band 5	0.36	0.32	0.46	/				
	LTE Band 7	0.48	0.20	0.20	/				
	LTE Band 12	0.21	0.18	0.27	/				
	LTE Band 13	0.47	0.40	0.52	/				
	LTE Band 25	0.53	0.44	0.73	/				
	LTE Band 26	0.34	0.26	0.40	/				
	LTE Band 66	0.09	0.37	0.64	/				
LTE Band 41	0.59	0.33	0.33	/					
DTS	2.4G WIFI	0.84	0.22	0.26	/				
NII	5.2G WIFI	/	/	0.41	/				
	5.3G WIFI	0.75	0.39	0.39	0.64				
	5.6G WIFI	0.72	0.48	0.48	1.32				
	5.8G WIFI	0.70	0.34	0.38	/				
DSS	Bluetooth	0.24	0.16	0.18	/				
Limit (W/kg)		1.6		4.0		1.6		4.0	
Verdict		PASS							
<p>Note: This device supports both LTE Band 2/4/17/38 and Band 25/66/12/41. Since the supported frequency span for LTE Band 2/4/17/38 falls completely within the supports frequency span for LTE Band 25/66/12/41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE Band 25/66/12/41.</p>									

3.3.2 Highest Simultaneous Transmission SAR Values

Equipment Class	Maximum Scaled SAR (W/kg)		
	Head 1g (0mm)	Body-worn 1g (10mm)	Hotspot 1g (10mm)
PCE	1.40	1.23	1.23
DTS	0.98	0.98	0.98
NII	1.40	1.23	1.23
DSS	1.40	1.23	1.23
Limit (W/Kg)	1.60		
Verdict	Pass		
Note: The highest simultaneous SAR please refer section 12.2			

3.4 Test Uncertainty

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

The maximum 1 g SAR for the EUT in this report is 0.84 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 1.32 W/kg, which is lower than 3.75 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

4 MEASUREMENT SYSTEM

4.1 Specific Absorption Rate (SAR) Definition

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

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

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

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

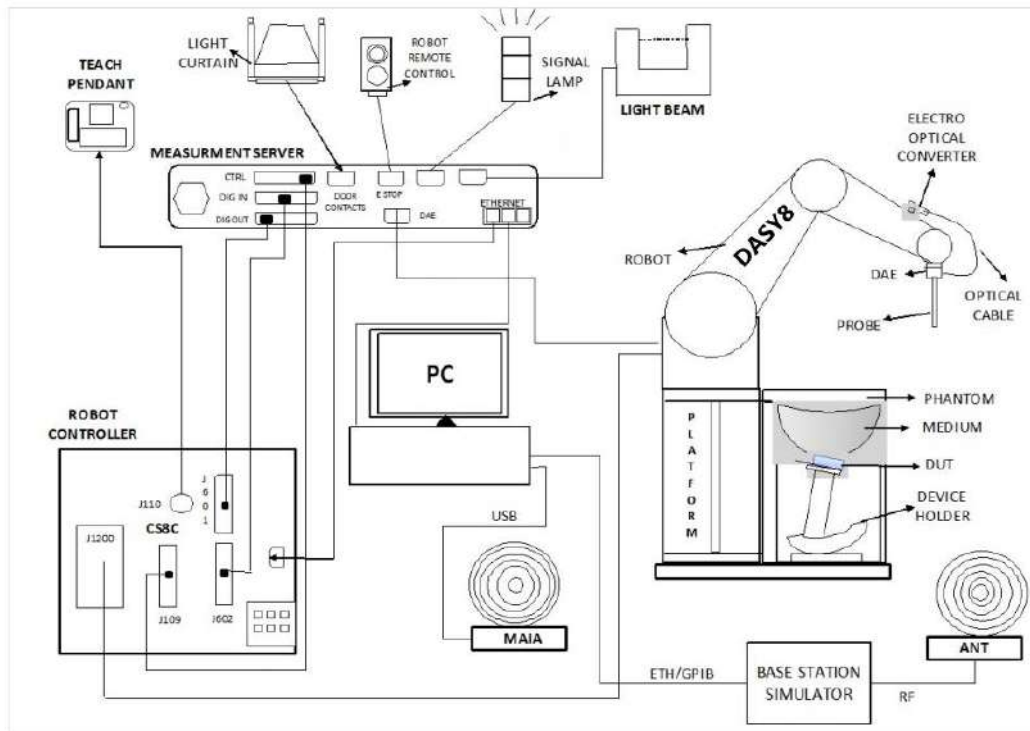
$$\mathbf{SAR} = \frac{\sigma E^2}{\rho}$$

Where: σ is the conductivity of the tissue,

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

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram

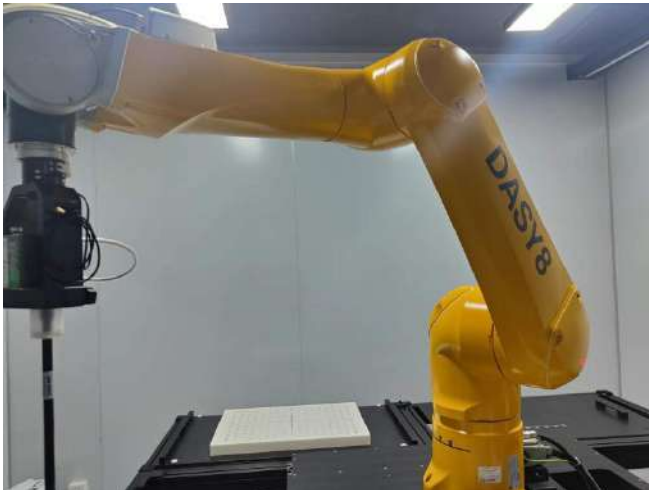


The DASY system for performing compliance tests consists of the following items:

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 DASY 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&7607 with following specifications is used.

Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	4 MHz to 10 GHz; Linearity: ± 0.2 dB
Directivity	± 0.2 dB in HSL (rotation around probe axis) ; ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 μ W/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 IEC/IEEE 62209-1528 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the IEC/IEEE 62209-1528 annexe technique using reference guide at the five frequencies.

4.2.4 Data Acquisition Electronics

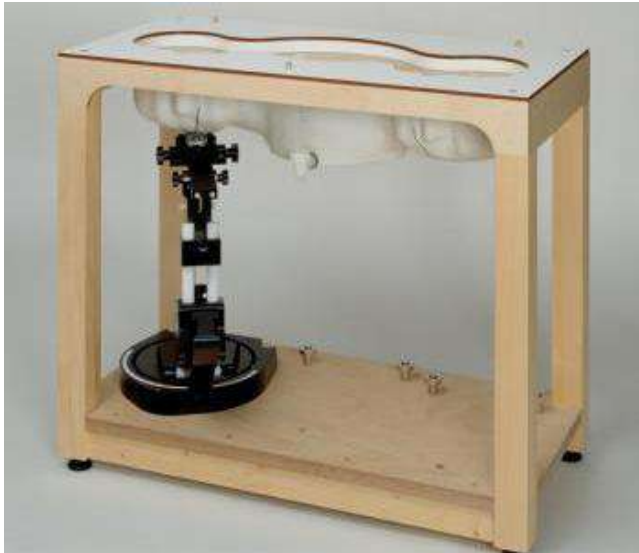
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



- Input Impedance: 200M Ω m
- 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 SN1859



Serial Number	Material	Length	Height
SN 1859 SAM	Vinylester, glass fiber reinforced	1000	500

4.2.6 Device Holder

The DASY 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° .

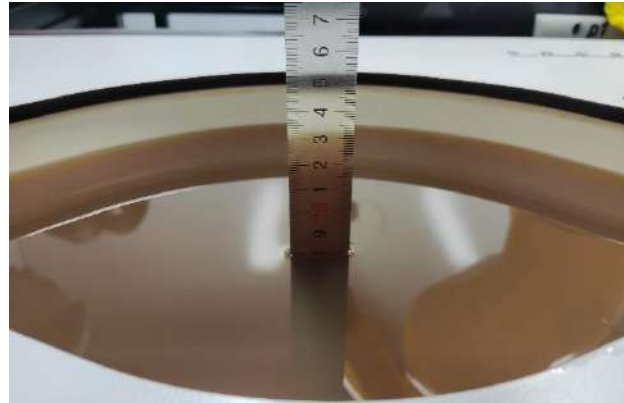
4.2.7 Simulating Liquid

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	Ethenediol, Sodium petroleum sulfonate, Hexylene Glycol / 2-Methyl-pentane-2.4-diol, Alkoxylated alcohol

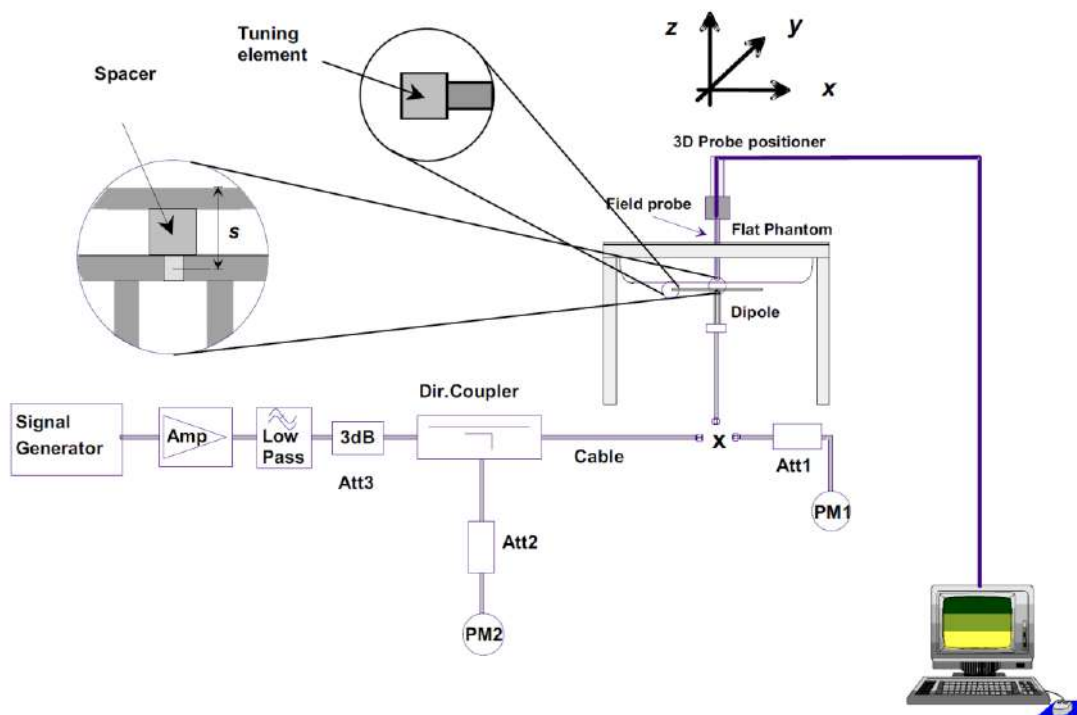
5 SYSTEM VERIFICATION

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

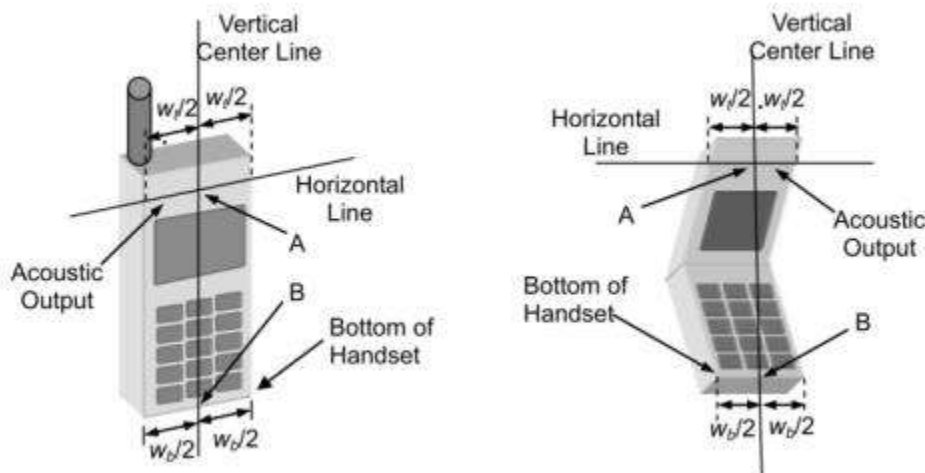
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

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.

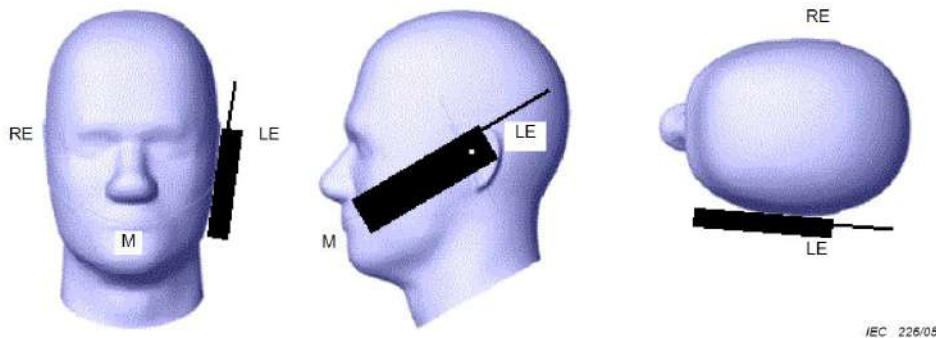
6.1.1 Two Imaginary Lines on the Handset

- 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.
- 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.
- 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.

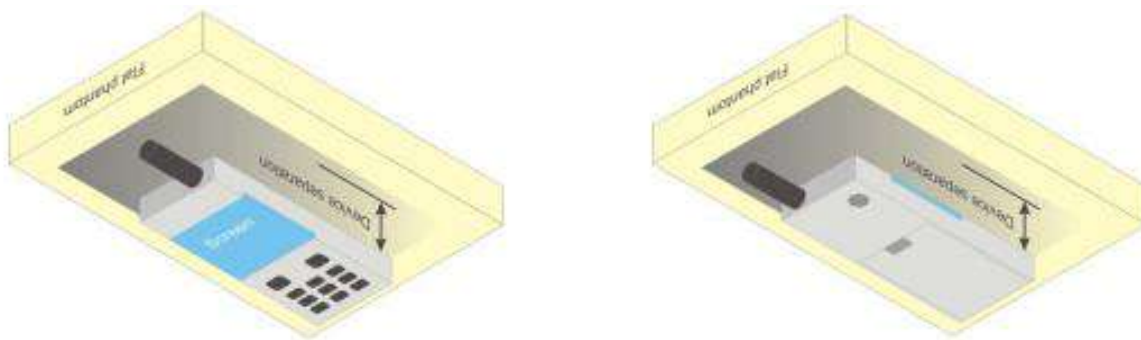


6.2 Body-worn Position Conditions

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.

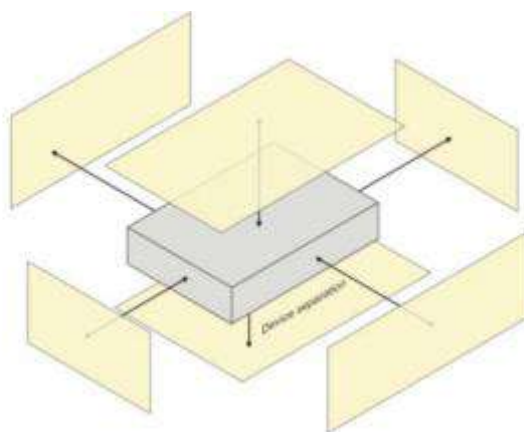
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.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



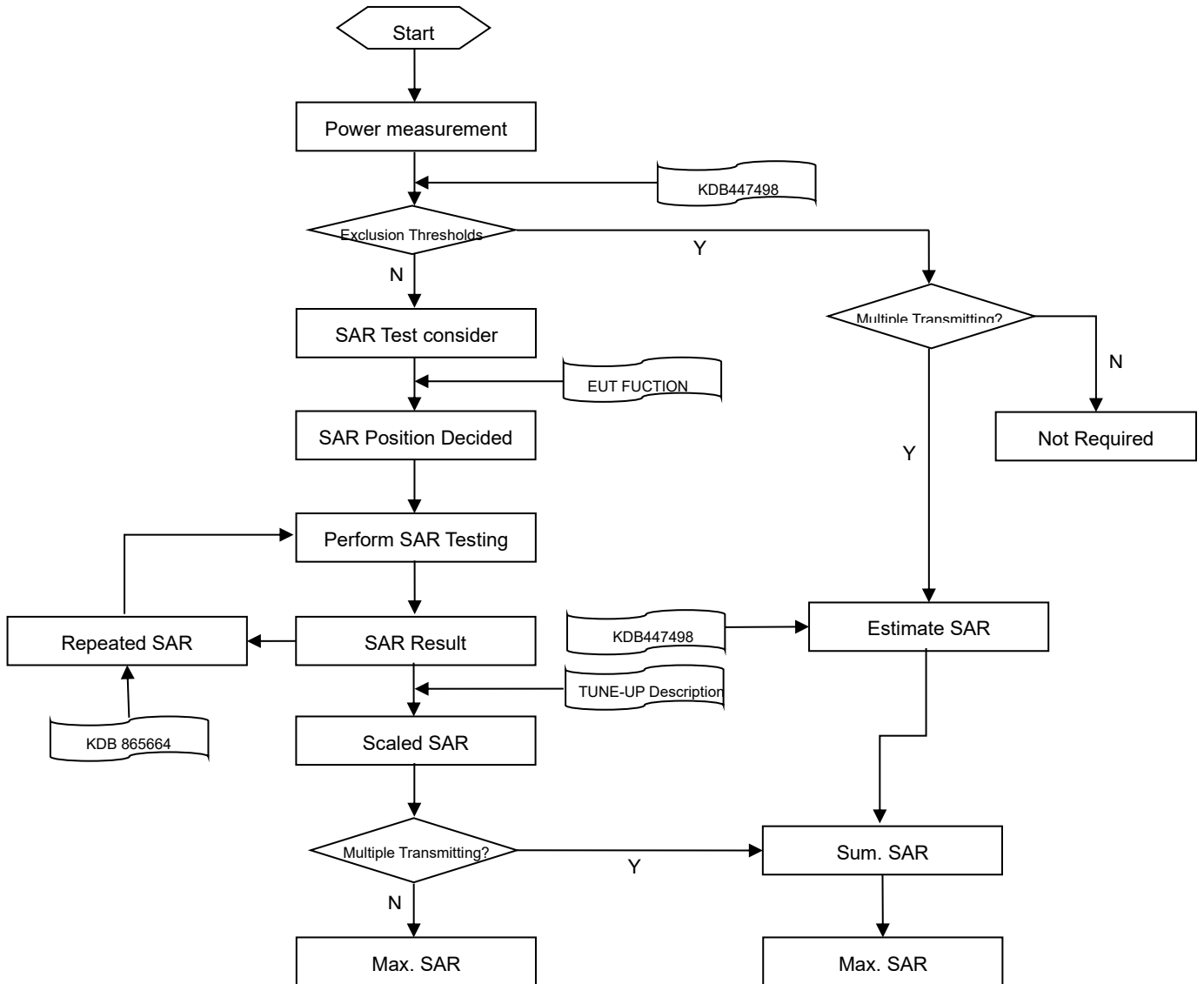
6.4 Product Specific 10g Exposure Consideration

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.

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. Both the 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.

		≤3GHz	>3GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		5±1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location		30°±1°	20°±1°
Maximum area scan spatial resolution: Δx Area , Δy Area		≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3–4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
		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.	
Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3–4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz Zoom (n)	≤ 5 mm	3–4 GHz: ≤ 4 mm
			4–5 GHz: ≤ 3 mm
			5–6 GHz: ≤ 2 mm
	graded grid	Δz Zoom (1): between 1st two points closest to phantom surface Δz Zoom (n>1): between subsequent points	≤ 4 mm
4–5 GHz: ≤ 2.5 mm			
		≤ 1.5· Δz Zoom (n-1)	
Minimum zoom scan volume	x, y, z	≥30 mm	3–4 GHz: ≥ 28 mm
			4–5 GHz: ≥ 25 mm
			5–6 GHz: ≥ 22 mm

Note:

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

7.3 Measurement Procedure

The following steps are used for each test position

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

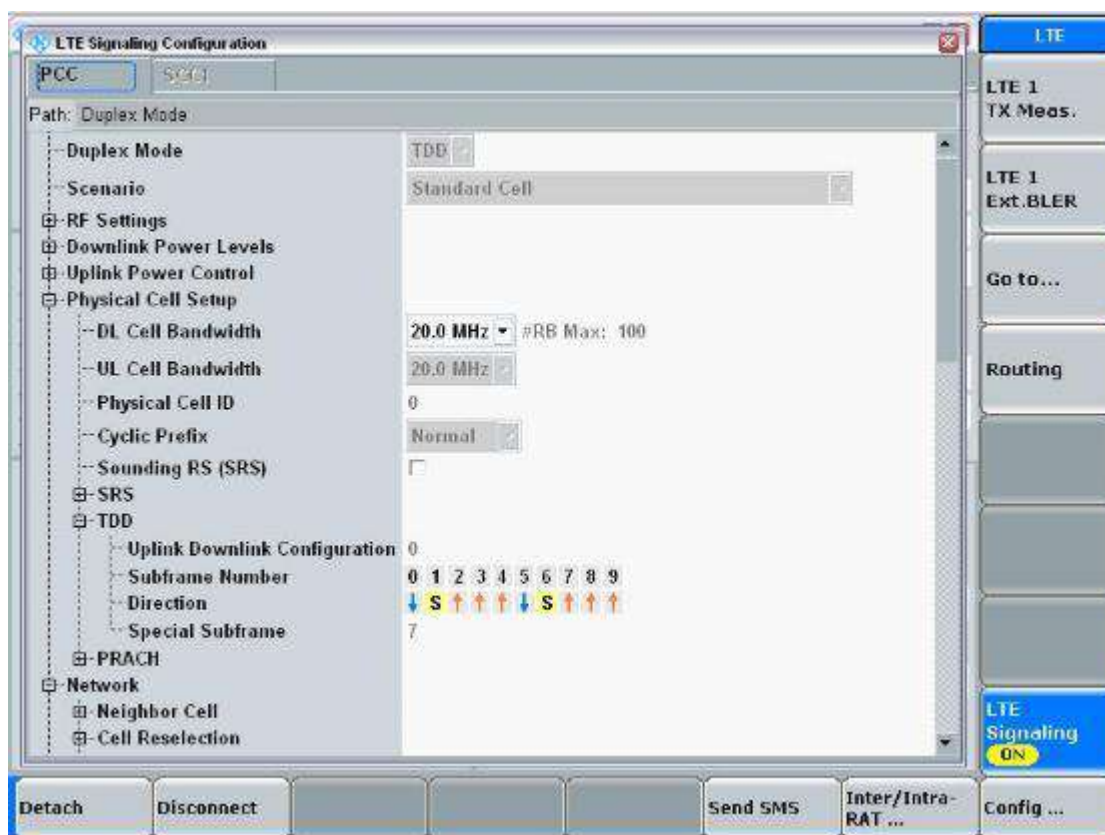
7.4 Area & Zoom Scan Procedure

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.

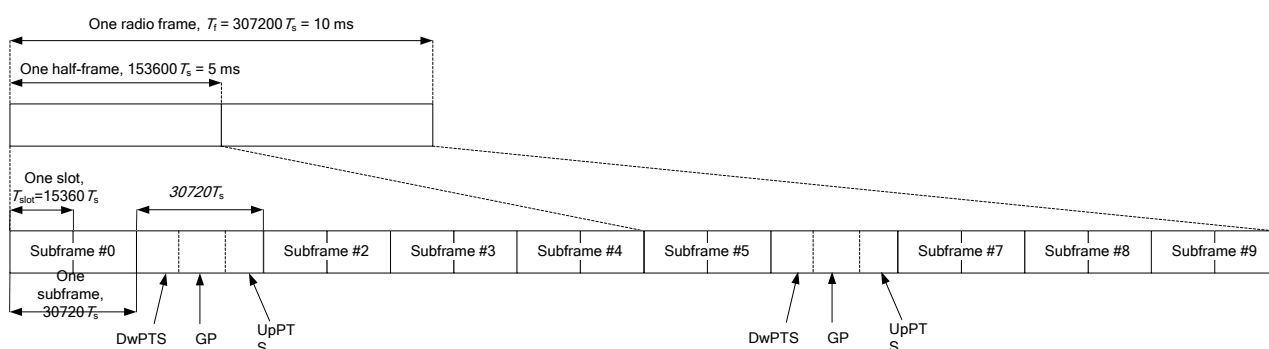
When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

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 ($T_f=307200 \cdot T_s = 10\text{ms}$) of two half-frames of length ($153600 \cdot T_s = 5\text{ms}$). Each half-frame consists of five sub-frames of length ($30720 \cdot T_s = 1\text{ms}$)



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 $30720 \cdot T_s = 1\text{ms}$.

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

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

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

Maximum uplink time of one special sub-frame=(largest cyclic prefix)/(one sub-frame of length)* time of one sub-frame= $5120 \cdot T_s / 30720 \cdot T_s \cdot 1 \text{ms} = 0.167 \text{ms}$

One radio frame with 6 uplink sub-frames and two special sub-frame,

there for the maximum Uplink time in one radio frame is: $6 \cdot 1 \text{ms} + 2 \cdot 0.167 \text{ms} = 6.334 \text{ms}$

So, the duty cycle for TDD-LTE is: $6.334 \text{ms} / 10 \text{ms} = 1: 1.58$

8 CONDUCTED RF OUPUT POWER

8.1 GSM

Please refer the document “BL-SZ2461152-AP Power List.pdf”.

8.2 WCDMA

Please refer the document “BL-SZ2461152-AP Power List.pdf”.

8.3 LTE

Please refer the document “BL-SZ2461152-AP Power List.pdf”.

8.4 Intra-Band Uplink CA Normal Power

Note:

1. This devices supports intra-band uplink CA of 2C/5B/7C/38C/41C/66C.
2. For intra-band uplink carrier aggregation power verification and measurement is selected highest PCC and SCC bandwidth combination to do and was according to 3GPP 36.52101 sectino6.2.2A.1 and section 6.2.2A.2 test procedure.
3. For intra-band uplink CA output power was measured high / middle / low channel combination, and for SAR verification is selected highest output power combination with each exposure condition in each frequency band using the highest SAR configuration test in standalone LTE mode.

Please refer the document “BL-SZ2461152-AP Power List.pdf”.

8.5 WIFI

8.5.1 2.4G WIFI-ANT13-AUX

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	20.60	21.00	Yes
		6	2437	18.97	20.00	Yes
		11	2462	18.34	20.00	Yes
	802.11g	1	2412	16.94	17.50	No
		6	2437	17.37	17.50	No
		11	2462	15.65	16.00	No
	802.11n(HT20)	1	2412	15.93	16.00	No
		6	2437	18.73	19.00	No
		11	2462	15.03	16.00	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 ≤ 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = $0.840 * (56.230\text{mW}/125.890\text{mW}) = 0.375$ W/Kg, so 2.4G OFDM SAR test is not required.

8.5.2 2.4G WIFI-ANT14-Main

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	17.06	17.50	No
		6	2437	17.35	17.50	Yes
		11	2462	16.97	17.50	No
	802.11g	1	2412	15.52	16.00	No
		6	2437	15.85	16.00	No
		11	2462	15.34	16.00	No
	802.11n(HT20)	1	2412	16.02	17.50	No
		6	2437	17.13	17.50	No
		11	2462	15.54	16.00	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 ≤ 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = $0.490 * (39.810\text{mW}/56.230\text{mW}) = 0.347$ W/Kg, so 2.4G OFDM SAR test is not required.

8.5.3 5G WIFI-ANT13-AUX

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	13.66	15.50	No
		44	5220	13.56	15.50	No
		48	5240	13.17	14.00	No
	802.11n(HT20)	36	5180	15.00	15.50	No
		44	5220	14.85	15.50	No
		48	5240	14.51	15.50	No
	802.11n(HT40)	38	5190	15.00	15.50	Yes
		46	5230	14.75	15.50	No
	802.11ac(VHT20)	36	5180	15.12	15.50	No
		44	5220	14.88	15.50	No
		48	5240	14.52	15.50	No
	802.11ac(VHT40)	38	5190	13.89	15.50	No
		46	5230	14.30	15.50	No
	802.11ac(VHT80)	42	5210	13.26	14.00	No
	5.3 (5.25~5.35)	802.11a	52	5260	13.27	15.00
60			5300	13.71	15.00	No
64			5320	13.31	15.00	No
802.11n(HT20)		52	5260	14.35	15.00	No
		60	5300	14.65	15.00	No
		64	5320	14.57	15.00	No
802.11n(HT40)		54	5270	14.20	15.50	No
		62	5310	14.49	15.50	Yes
802.11ac(VHT20)		52	5260	14.41	15.00	No
		60	5300	14.62	15.00	No
		64	5320	14.62	15.00	No
802.11ac(VHT40)		54	5270	13.81	14.00	No
		62	5310	13.42	14.00	No
802.11ac(VHT80)		58	5290	12.86	14.00	No
5.6 (5.47~5.725)		802.11a	100	5500	14.97	15.50
	116		5580	15.47	15.50	No
	140		5700	16.28	17.50	No
	802.11n(HT20)	100	5500	16.24	17.50	No
		116	5580	16.73	17.50	No
		140	5700	17.18	17.50	No
	802.11n(HT40)	102	5510	16.12	17.00	No
		118	5590	16.58	17.00	No

		134	5670	17.16	17.50	Yes
	802.11ac(VHT20)	100	5500	12.37	14.00	No
		116	5580	16.61	17.00	No
		140	5700	8.84	9.00	No
	802.11ac(VHT40)	102	5510	10.77	11.00	No
		118	5590	16.13	17.00	No
		134	5670	16.84	17.50	No
	802.11ac(VHT80)	106	5530	9.79	10.00	No
		122	5690	16.26	17.50	No
	5.8 (5.725~5.850)	802.11a	149	5745	16.00	18.00
157			5785	16.30	18.00	No
165			5825	16.35	18.00	No
802.11n(HT20)		149	5745	17.39	18.00	No
		157	5785	17.61	18.00	No
		165	5825	17.58	18.00	No
802.11n(HT40)		151	5755	17.28	18.00	No
		159	5795	17.52	18.00	No
802.11ac(VHT20)		149	5745	17.38	18.00	No
		157	5785	17.62	18.00	No
		165	5825	17.59	18.00	No
802.11ac(VHT40)		151	5755	16.82	18.00	No
		159	5795	16.97	18.00	No
802.11ac(VHT80)		155	5775	16.83	18.00	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.

8.5.4 5G WIFI-ANT14-Main

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	13.78	15.50	No
		44	5220	13.50	15.50	No
		48	5240	13.34	15.50	No
	802.11n(HT20)	36	5180	15.39	15.50	No
		44	5220	14.81	15.50	No
		48	5240	14.46	15.50	No
	802.11n(HT40)	38	5190	15.30	15.50	No
		46	5230	15.09	15.50	No
	802.11ac(VHT20)	36	5180	15.49	15.50	No
		44	5220	14.82	15.50	No
		48	5240	14.53	15.50	No
	802.11ac(VHT40)	38	5190	14.99	15.50	No
		46	5230	14.28	15.50	No
	802.11ac(VHT80)	42	5210	14.50	15.50	Yes
5.3 (5.25~5.35)	802.11a	52	5260	13.47	15.00	No
		60	5300	13.31	15.00	No
		64	5320	12.98	15.00	No
	802.11n(HT20)	52	5260	14.37	15.00	No
		60	5300	14.24	15.00	No
		64	5320	13.98	15.00	No
	802.11n(HT40)	54	5270	13.98	15.00	No
		62	5310	13.77	15.00	No
	802.11ac(VHT20)	52	5260	14.46	15.00	No
		60	5300	13.85	15.00	No
		64	5320	13.67	15.00	No
	802.11ac(VHT40)	54	5270	13.72	15.00	No
		62	5310	13.29	15.00	No
	802.11ac(VHT80)	58	5290	13.74	15.50	Yes
5.6 (5.47~5.725)	802.11a	100	5500	13.23	15.50	No
		116	5580	13.29	15.50	No
		140	5700	14.04	15.50	No
	802.11n(HT20)	100	5500	14.49	15.50	No
		116	5580	14.89	15.50	No
		140	5700	14.95	15.50	No
	802.11n(HT40)	102	5510	14.61	16.00	No
		118	5590	15.00	16.00	No

		134	5670	15.36	16.00	YES
	802.11ac(VHT20)	100	5500	14.79	15.50	No
		116	5580	14.81	15.50	No
		140	5700	15.38	15.50	No
	802.11ac(VHT40)	102	5510	14.54	15.50	No
		118	5590	14.23	15.50	No
		134	5670	14.86	15.50	No
	802.11ac(VHT80)	106	5530	13.85	15.00	No
		122	5690	14.38	15.00	No
	5.8 (5.725~5.850)	802.11a	149	5745	14.30	15.50
157			5785	14.53	15.50	No
165			5825	14.50	15.50	No
802.11n(HT20)		149	5745	15.40	15.50	No
		157	5785	15.51	15.50	No
		165	5825	15.58	15.50	No
802.11n(HT40)		151	5755	15.40	15.50	No
		159	5795	15.56	15.50	No
802.11ac(VHT20)		149	5745	15.55	15.50	No
		157	5785	15.67	15.50	No
		165	5825	15.65	15.50	No
802.11ac(VHT40)		151	5755	15.05	15.50	No
		159	5795	15.21	15.50	No
802.11ac(VHT80)		155	5775	15.05	15.50	Yes

Note: When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.

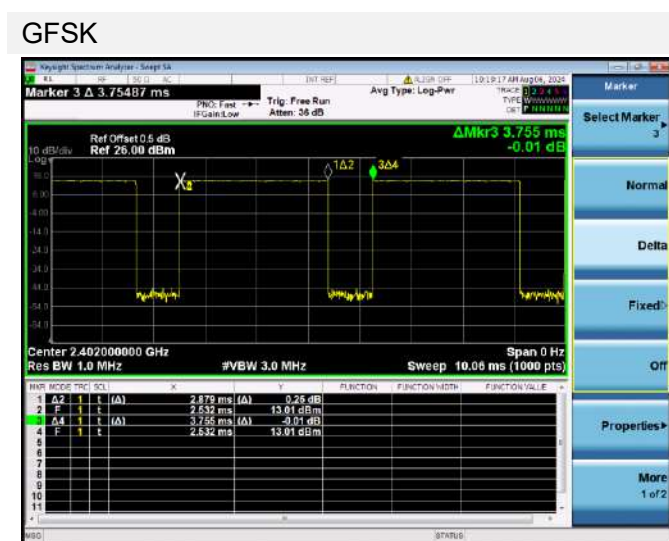
8.6 Bluetooth-ANT13

Mode	GFSK			π/4-DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Average Power (dBm)	13.26	13.59	12.81	12.40	11.79	12.08
Tune-Up Limit (dBm)	14.00	14.00	13.00	13.00	13.00	13.00
SAR Test Require	NO	YES	NO	NO	NO	NO
Mode	8-DPSK			/		
Channel	0	39	78	/	/	/
Frequency (MHz)	2402	2441	2480	/	/	/
Average Power (dBm)	12.46	11.82	12.11	/	/	/
Tune-Up Limit (dBm)	13.00	13.00	13.00	/	/	/
SAR Test Require	NO	NO	NO	/	/	/
Mode	BLE-1Mbps			BLE-2Mbps		
Channel	0	19	39	1	19	38
Frequency (MHz)	2402	2440	2480	2404	2440	2478
Average Power (dBm)	-3.94	-3.03	-3.90	-3.34	-3.17	-3.89
Tune-Up Limit (dBm)	-2.00	-2.00	-2.00	-2.00	-2.00	-2.00
SAR Test Require	NO	NO	NO	NO	NO	NO

Note 1: Since bluetooth BR mode is the maximum output power mode, SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode.

The Bluetooth BT DH5 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



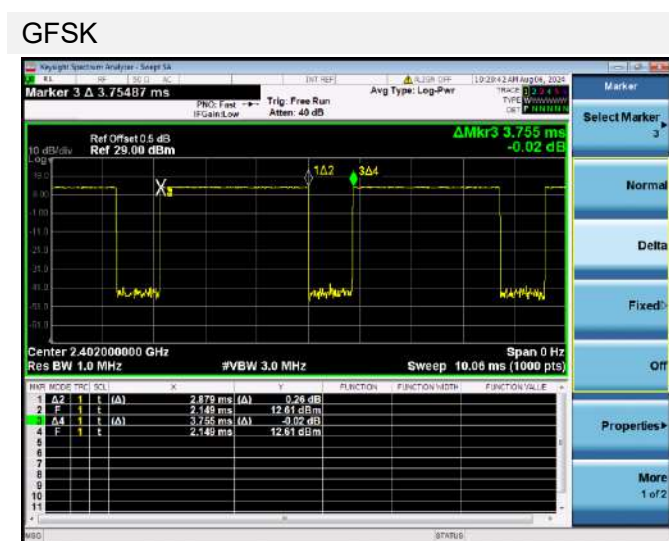
8.7 Bluetooth-ANT14

Mode	GFSK			π/4-DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Average Power (dBm)	14.07	9.72	13.30	13.22	8.90	12.55
Tune-Up Limit (dBm)	14.50	10.00	14.00	13.50	10.00	13.50
SAR Test Require	YES	NO	NO	NO	NO	NO
Mode	8-DPSK			/		
Channel	0	39	78	/	/	/
Frequency (MHz)	2402	2441	2480	/	/	/
Average Power (dBm)	13.28	8.99	12.57	/	/	/
Tune-Up Limit (dBm)	13.50	10.00	13.00	/	/	/
SAR Test Require	NO	NO	NO	/	/	/
Mode	BLE-1Mbps			BLE-2Mbps		
Channel	0	19	39	1	19	38
Frequency (MHz)	2402	2440	2480	2404	2440	2478
Average Power (dBm)	-2.15	-1.17	-2.26	-1.98	-1.79	-2.26
Tune-Up Limit (dBm)	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
SAR Test Require	NO	NO	NO	NO	NO	NO

Note 1: Since bluetooth BR mode is the maximum output power mode, SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode.

The Bluetooth BT DH5 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



9 TEST EXCLUSION CONSIDERATION

For antenna location and support bands please refer the document "BL-SZ2461152-AI EUT internal photo.pdf".

Antenna	Front Side(mm)	Back Side(mm)	Left Edge(mm)	Right Edge(mm)	Top Edge(mm)	Bottom Edge(mm)
Ant.0	<25	<25	<25	<25	>25	<25
Ant.1	<25	<25	>25	<25	<25	>25
Ant.2	<25	<25	>25	<25	<25	>25
Ant.13	<25	<25	<25	>25	<25	>25
Ant.14	<25	<25	<25	>25	<25	>25

Note: 1. Per KDB 941225 D06, When the overall length and width of a device is > 9 cm *5 cm, a test separation distance of 10 mm is required for hotspot mode SAR measurements and hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge.

10 TEST RESULT

10.1 GSM 850

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head												
Ant.1	DATA 2slots	Left Cheek	0	190	836.6	0.00	0.333	28.88	29.00	1.028	0.342	/
		Left Tilt	0	190	836.6	0.10	0.067	28.88	29.00	1.028	0.069	/
		Right Cheek	0	190	836.6	-0.11	0.359	28.88	29.00	1.028	0.369	1#
		Right Tilt	0	190	836.6	0.01	0.231	28.88	29.00	1.028	0.237	/
Ant.0	DATA 2slots	Left Cheek	0	190	836.6	0.10	0.030	27.23	28.00	1.194	0.036	/
		Left Tilt	0	190	836.6	-0.10	0.017	27.23	28.00	1.194	0.020	/
		Right Cheek	0	190	836.6	0.17	0.021	27.23	28.00	1.194	0.025	/
		Right Tilt	0	190	836.6	0.18	0.009	27.23	28.00	1.194	0.011	/
Body-worn&Hotspot												
Ant.1	DATA 2slots	Front Side	10	190	836.6	0.10	0.233	28.88	29.00	1.028	0.240	/
		Back Side	10	190	836.6	0.05	0.426	28.88	29.00	1.028	0.438	/
		Right Edge	10	190	836.6	0.02	0.507	28.88	29.00	1.028	0.521	2#
		Top Edge	10	190	836.6	0.02	0.123	28.88	29.00	1.028	0.126	/
Ant.0	DATA 2slots	Front Side	10	190	836.6	-0.10	0.069	27.23	28.00	1.194	0.082	/
		Back Side	10	190	836.6	-0.08	0.107	27.23	28.00	1.194	0.128	/
		Left Edge	10	190	836.6	0.02	0.063	27.23	28.00	1.194	0.075	/
		Right Edge	10	190	836.6	0.17	0.004	27.23	28.00	1.194	0.005	/
		Bottom Edge	10	190	836.6	-0.03	0.096	27.23	28.00	1.194	0.115	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.2 GSM 1900

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head												
Ant.2	DATA 2slots	Left Cheek	0	810	1909.8	-0.07	0.020	25.69	26.00	1.074	0.021	/
		Left Tilt	0	810	1909.8	0.12	0.010	25.69	26.00	1.074	0.011	/
		Right Cheek	0	810	1909.8	-0.03	0.050	25.69	26.00	1.074	0.054	3#
		Right Tilt	0	810	1909.8	0.02	0.030	25.69	26.00	1.074	0.032	/
Ant.0	DATA 2slots	Left Cheek	0	810	1909.8	0.12	0.010	24.50	25.00	1.122	0.011	/
		Left Tilt	0	810	1909.8	-0.11	0.020	24.50	25.00	1.122	0.022	/
		Right Cheek	0	810	1909.8	-0.06	0.010	24.50	25.00	1.122	0.011	/
		Right Tilt	0	810	1909.8	0.06	0.020	24.50	25.00	1.122	0.022	/
Body-worn&Hotspot												
Ant.2	DATA 2slots	Front Side	10	810	1909.8	-0.12	0.019	25.69	26.00	1.074	0.020	/
		Back Side	10	810	1909.8	0.00	0.010	25.69	26.00	1.074	0.011	/
		Right Edge	10	810	1909.8	0.13	0.005	25.69	26.00	1.074	0.005	/
		Top Edge	10	810	1909.8	0.16	0.023	25.69	26.00	1.074	0.025	/
Ant.0	DATA 2slots	Front Side	10	810	1909.8	0.03	0.246	24.50	25.00	1.122	0.276	/
		Back Side	10	810	1909.8	0.13	0.335	24.50	25.00	1.122	0.376	/
		Left Edge	10	810	1909.8	0.03	0.056	24.50	25.00	1.122	0.063	/
		Right Edge	10	810	1909.8	-0.06	0.037	24.50	25.00	1.122	0.042	/
		Bottom Edge	10	810	1909.8	-0.07	0.681	25.55	26.00	1.109	0.755	4#
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.3WCDMA Band 2

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head												
Ant.2	RMC	Left Cheek	0	9400	1880	0.12	0.191	19.36	20.30	1.242	0.237	/
		Left Tilt	0	9400	1880	-0.10	0.116	19.36	20.30	1.242	0.144	/
		Right Cheek	0	9400	1880	-0.01	0.431	19.36	20.30	1.242	0.535	5#
		Right Tilt	0	9400	1880	0.12	0.249	19.36	20.30	1.242	0.309	/
Ant.0	RMC	Left Cheek	0	9400	1880	0.01	0.024	18.19	19.00	1.205	0.029	/
		Left Tilt	0	9400	1880	0.15	0.011	18.19	19.00	1.205	0.013	/
		Right Cheek	0	9400	1880	0.05	0.019	18.19	19.00	1.205	0.023	/
		Right Tilt	0	9400	1880	0.02	0.011	18.19	19.00	1.205	0.013	/
Body-worn&Hotspot												
Ant.2	RMC	Front Side	10	9400	1880	-0.15	0.091	19.36	20.30	1.242	0.113	/
		Back Side	10	9400	1880	0.05	0.143	19.36	20.30	1.242	0.178	/
		Right Edge	10	9400	1880	-0.15	0.113	19.36	20.30	1.242	0.140	/
		Top Edge	10	9400	1880	0.01	0.043	19.36	20.30	1.242	0.053	/
Ant.0	RMC	Front Side	10	9400	1880	-0.12	0.186	18.19	19.00	1.205	0.224	/
		Back Side	10	9400	1880	0.09	0.253	18.19	19.00	1.205	0.305	/
		Left Edge	10	9400	1880	-0.15	0.038	18.19	19.00	1.205	0.046	/
		Right Edge	10	9400	1880	0.12	0.026	18.19	19.00	1.205	0.031	/
		Bottom Edge	10	9400	1880	-0.02	0.502	18.19	19.00	1.205	0.605	6#
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.4WCDMA Band 4

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head												
Ant.2	RMC	Left Cheek	0	1312	1712.4	0.05	0.022	19.90	20.30	1.096	0.024	/
		Left Tilt	0	1312	1712.4	0.05	0.018	19.90	20.30	1.096	0.020	/
		Right Cheek	0	1312	1712.4	0.09	0.055	19.90	20.30	1.096	0.060	7#
		Right Tilt	0	1312	1712.4	0.17	0.022	19.90	20.30	1.096	0.024	/
Ant.0	RMC	Left Cheek	0	1312	1712.4	0.10	0.005	18.59	19.50	1.233	0.006	/
		Left Tilt	0	1312	1712.4	-0.14	0.002	18.59	19.50	1.233	0.002	/
		Right Cheek	0	1312	1712.4	0.03	0.010	18.59	19.50	1.233	0.012	/
		Right Tilt	0	1312	1712.4	0.11	0.001	18.59	19.50	1.233	0.001	/
Body-worn&Hotspot												
Ant.2	RMC	Front Side	10	1312	1712.4	0.03	0.008	19.90	20.30	1.096	0.009	/
		Back Side	10	1312	1712.4	0.02	0.019	19.90	20.30	1.096	0.021	/
		Right Edge	10	1312	1712.4	0.02	0.018	19.90	20.30	1.096	0.020	/
		Top Edge	10	1312	1712.4	-0.08	0.008	19.90	20.30	1.096	0.009	/
Ant.0	RMC	Front Side	10	1312	1712.4	0.08	0.197	18.59	19.50	1.233	0.243	/
		Back Side	10	1312	1712.4	-0.09	0.261	18.59	19.50	1.233	0.322	/
		Left Edge	10	1312	1712.4	0.11	0.033	18.59	19.50	1.233	0.041	/
		Right Edge	10	1312	1712.4	0.05	0.022	18.59	19.50	1.233	0.027	/
		Top Edge	10	1312	1712.4	-0.10	0.000	18.59	19.50	1.233	0.000	/
		Bottom Edge	10	1312	1712.4	0.00	0.420	18.59	19.50	1.233	0.518	8#
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.5WCDMA Band 5

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head												
Ant.1	RMC	Left Cheek	0	4182	836.4	-0.16	0.195	19.40	20.00	1.148	0.224	9#
		Left Tilt	0	4182	836.4	-0.01	0.040	19.40	20.00	1.148	0.046	/
		Right Cheek	0	4182	836.4	-0.10	0.128	19.40	20.00	1.148	0.147	/
		Right Tilt	0	4182	836.4	0.16	0.065	19.40	20.00	1.148	0.075	/
Ant.0	RMC	Left Cheek	0	4182	836.4	-0.01	0.023	18.12	19.00	1.225	0.028	/
		Left Tilt	0	4182	836.4	0.13	0.009	18.12	19.00	1.225	0.011	/
		Right Cheek	0	4182	836.4	-0.14	0.014	18.12	19.00	1.225	0.017	/
		Right Tilt	0	4182	836.4	-0.05	0.006	18.12	19.00	1.225	0.007	/
Body-worn&Hotspot												
Ant.1	RMC	Front Side	10	4182	836.4	0.04	0.157	19.40	20.00	1.148	0.180	/
		Back Side	10	4182	836.4	-0.01	0.658	19.40	20.00	1.148	0.755	10#
		Right Edge	10	4182	836.4	0.05	0.356	19.40	20.00	1.148	0.409	/
		Top Edge	10	4182	836.4	-0.07	0.037	19.40	20.00	1.148	0.042	/
Ant.0	RMC	Front Side	10	4182	836.4	0.05	0.044	18.12	19.00	1.225	0.054	/
		Back Side	10	4182	836.4	-0.15	0.068	18.12	19.00	1.225	0.083	/
		Left Edge	10	4182	836.4	-0.15	0.045	18.12	19.00	1.225	0.055	/
		Right Edge	10	4182	836.4	0.12	0.003	18.12	19.00	1.225	0.004	/
		Top Edge	10	4182	836.4	-0.05	0.003	18.12	19.00	1.225	0.004	/
		Bottom Edge	10	4182	836.4	0.04	0.056	18.12	19.00	1.225	0.069	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.6LTE Band 5 (10MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.1	QPSK	Left Cheek	0	20525	836.5	1	Mid	0.02	0.338	19.89	20.00	1.026	0.347	/
		Left Tilt	0	20525	836.5	1	Mid	0.03	0.081	19.89	20.00	1.026	0.083	/
		Right Cheek	0	20525	836.5	1	Mid	-0.03	0.348	19.89	20.00	1.026	0.357	11#
		Right Tilt	0	20525	836.5	1	Mid	-0.07	0.125	19.89	20.00	1.026	0.128	/
		Left Cheek	0	20525	836.5	25	Mid	0.05	0.314	18.84	19.00	1.038	0.326	/
		Left Tilt	0	20525	836.5	25	Mid	0.15	0.066	18.84	19.00	1.038	0.069	/
		Right Cheek	0	20525	836.5	25	Mid	-0.07	0.320	18.84	19.00	1.038	0.332	/
		Right Tilt	0	20525	836.5	25	Mid	0.00	0.107	18.84	19.00	1.038	0.111	/
Ant.0	QPSK	Left Cheek	0	20525	836.5	1	Mid	-0.03	0.045	18.59	19.50	1.233	0.055	/
		Left Tilt	0	20525	836.5	1	Mid	-0.06	0.015	18.59	19.50	1.233	0.018	/
		Right Cheek	0	20525	836.5	1	Mid	0.11	0.036	18.59	19.50	1.233	0.044	/
		Right Tilt	0	20525	836.5	1	Mid	0.10	0.012	18.59	19.50	1.233	0.015	/
		Left Cheek	0	20525	836.5	25	Mid	-0.04	0.039	17.54	18.50	1.247	0.049	/
		Left Tilt	0	20525	836.5	25	Mid	-0.07	0.019	17.54	18.50	1.247	0.024	/
		Right Cheek	0	20525	836.5	25	Mid	-0.05	0.006	17.54	18.50	1.247	0.007	/
		Right Tilt	0	20525	836.5	25	Mid	0.04	0.004	17.54	18.50	1.247	0.005	/
Body-worn&Hotspot														
Ant.1	QPSK	Front Side	10	20525	836.5	1	Low	-0.08	0.172	19.89	20.00	1.026	0.176	/
		Back Side	10	20525	836.5	1	Low	-0.10	0.308	19.89	20.00	1.026	0.316	/
		Right Edge	10	20525	836.5	1	Low	0.02	0.451	19.89	20.00	1.026	0.463	12#
		Top Edge	10	20525	836.5	1	Low	-0.10	0.003	19.89	20.00	1.026	0.003	/
		Front Side	10	20525	836.5	25	Low	0.05	0.146	18.84	19.00	1.038	0.152	/
		Back Side	10	20525	836.5	25	Low	-0.12	0.262	18.84	19.00	1.038	0.272	/
		Right Edge	10	20525	836.5	25	Low	0.13	0.325	18.84	19.00	1.038	0.337	/
		Top Edge	10	20525	836.5	25	Low	0.03	0.002	18.84	19.00	1.038	0.002	/
Ant.0	QPSK	Front Side	10	20525	836.5	1	Mid	0.04	0.068	18.59	19.50	1.233	0.084	/
		Back Side	10	20525	836.5	1	Mid	0.11	0.102	18.59	19.50	1.233	0.126	/
		Left Edge	10	20525	836.5	1	Mid	0.14	0.073	18.59	19.50	1.233	0.090	/
		Right Edge	10	20525	836.5	1	Mid	0.06	0.035	18.59	19.50	1.233	0.043	/
		Bottom Edge	10	20525	836.5	1	Mid	-0.08	0.003	18.59	19.50	1.233	0.004	/
		Front Side	10	20525	836.5	25	Mid	-0.01	0.048	17.54	18.50	1.247	0.060	/
		Back Side	10	20525	836.5	25	Mid	0.02	0.077	17.54	18.50	1.247	0.096	/
		Left Edge	10	20525	836.5	25	Mid	0.17	0.044	17.54	18.50	1.247	0.055	/
		Right Edge	10	20525	836.5	25	Mid	-0.01	0.033	17.54	18.50	1.247	0.041	/
		Bottom Edge	10	20525	836.5	25	Mid	-0.05	0.001	17.54	18.50	1.247	0.001	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.7LTE Band 5 Worse case for CA Test

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head-CA														
Ant.1	QPSK	Right Cheek	0	20476 +20575	831.6 +841.5	1+1	High +Low	0.01	0.325	19.89	20.00	1.026	0.333	/
Body-worn&Hotspot-CA														
Ant.1	QPSK	Right Edge	10	20476 +20575	831.6 +841.5	1+1	High +Low	0.01	0.411	19.89	20.00	1.026	0.422	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.8LTE Band 7 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.2	QPSK	Left Cheek	0	21100	2535	1	Mid	0.13	0.135	18.56	19.00	1.107	0.149	/
		Left Tilt	0	21100	2535	1	Mid	0.12	0.121	18.56	19.00	1.107	0.134	/
		Right Cheek	0	21100	2535	1	Mid	-0.15	0.435	18.56	19.00	1.107	0.482	13#
		Right Tilt	0	21100	2535	1	Mid	-0.10	0.141	18.56	19.00	1.107	0.156	/
		Left Cheek	0	21100	2535	50	Mid	0.11	0.110	17.88	18.00	1.028	0.113	/
		Left Tilt	0	21100	2535	50	Mid	0.02	0.101	17.88	18.00	1.028	0.104	/
		Right Cheek	0	21100	2535	50	Mid	0.03	0.369	17.88	18.00	1.028	0.379	/
		Right Tilt	0	21100	2535	50	Mid	0.13	0.094	17.88	18.00	1.028	0.097	/
Ant.0	QPSK	Left Cheek	0	21100	2535	1	Mid	-0.09	0.030	17.25	18.00	1.189	0.036	/
		Left Tilt	0	21100	2535	1	Mid	-0.15	0.020	17.25	18.00	1.189	0.024	/
		Right Cheek	0	21100	2535	1	Mid	-0.04	0.029	17.25	18.00	1.189	0.034	/
		Right Tilt	0	21100	2535	1	Mid	0.00	0.017	17.25	18.00	1.189	0.020	/
		Left Cheek	0	21100	2535	50	Mid	0.07	0.026	16.40	17.00	1.148	0.030	/
		Left Tilt	0	21100	2535	50	Mid	-0.07	0.017	16.40	17.00	1.148	0.020	/
		Right Cheek	0	21100	2535	50	Mid	0.15	0.024	16.40	17.00	1.148	0.028	/
		Right Tilt	0	21100	2535	50	Mid	0.04	0.014	16.40	17.00	1.148	0.016	/
Body-worn&Hotspot														
Ant.2	QPSK	Front Side	10	21100	2535	1	Mid	0.03	0.094	18.56	19.00	1.107	0.104	/
		Back Side	10	21100	2535	1	Mid	-0.01	0.179	18.56	19.00	1.107	0.198	14#
		Right Edge	10	21100	2535	1	Mid	0.12	0.154	18.56	19.00	1.107	0.170	/
		Top Edge	10	21100	2535	1	Mid	-0.06	0.057	18.56	19.00	1.107	0.063	/
		Front Side	10	21100	2535	50	Mid	0.06	0.078	17.88	18.00	1.028	0.080	/
		Back Side	10	21100	2535	50	Mid	0.10	0.166	17.88	18.00	1.028	0.171	/
		Right Edge	10	21100	2535	50	Mid	-0.12	0.154	17.88	18.00	1.028	0.158	/
		Top Edge	10	21100	2535	50	Mid	-0.03	0.047	17.88	18.00	1.028	0.048	/
Ant.0	QPSK	Front Side	10	21100	2535	1	Mid	-0.07	0.110	17.25	18.00	1.189	0.131	/
		Back Side	10	21100	2535	1	Mid	0.18	0.140	17.25	18.00	1.189	0.166	/
		Left Edge	10	21100	2535	1	Mid	0.18	0.044	17.25	18.00	1.189	0.052	/
		Right Edge	10	21100	2535	1	Mid	0.01	0.030	17.25	18.00	1.189	0.036	/
		Bottom Edge	10	21100	2535	1	Mid	0.05	0.162	17.25	18.00	1.189	0.193	/
		Front Side	10	21100	2535	50	Mid	0.07	0.090	16.40	17.00	1.148	0.103	/
		Back Side	10	21100	2535	50	Mid	0.00	0.115	16.40	17.00	1.148	0.132	/
		Left Edge	10	21100	2535	50	Mid	0.02	0.036	16.40	17.00	1.148	0.041	/
		Right Edge	10	21100	2535	50	Mid	-0.12	0.024	16.40	17.00	1.148	0.028	/
		Bottom Edge	10	21100	2535	50	Mid	-0.07	0.153	16.40	17.00	1.148	0.176	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.9LTE Band 7 Worse case for CA Test

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head-CA														
Ant.2	QPSK	Right Cheek	0	21100+21298	2535+2554.8	1+1	High +Low	0.02	0.411	18.66	19.00	1.081	0.444	13#
Body-worn&Hotspot-CA														
Ant.2	QPSK	Back Side	10	21100+21298	2535+2554.8	1+1	High +Low	0.02	0.155	18.66	19.00	1.081	0.168	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.10 LTE Band 12 (10MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.1	QPSK	Left Cheek	0	23095	707.5	1	High	0.00	0.184	23.98	24.50	1.127	0.207	15#
		Left Tilt	0	23095	707.5	1	High	0.16	0.045	23.98	24.50	1.127	0.051	/
		Right Cheek	0	23095	707.5	1	High	-0.02	0.166	23.98	24.50	1.127	0.187	/
		Right Tilt	0	23095	707.5	1	High	0.08	0.105	23.98	24.50	1.127	0.118	/
		Left Cheek	0	23095	707.5	25	Mid	-0.14	0.152	22.93	23.50	1.140	0.173	/
		Left Tilt	0	23095	707.5	25	Mid	-0.07	0.032	22.93	23.50	1.140	0.036	/
		Right Cheek	0	23095	707.5	25	Mid	0.13	0.132	22.93	23.50	1.140	0.150	/
		Right Tilt	0	23095	707.5	25	Mid	-0.08	0.098	22.93	23.50	1.140	0.112	/
Ant.0	QPSK	Left Cheek	0	23095	707.5	1	High	-0.10	0.045	22.80	23.50	1.175	0.053	/
		Left Tilt	0	23095	707.5	1	High	0.10	0.019	22.80	23.50	1.175	0.022	/
		Right Cheek	0	23095	707.5	1	High	0.02	0.032	22.80	23.50	1.175	0.038	/
		Right Tilt	0	23095	707.5	1	High	-0.06	0.011	22.80	23.50	1.175	0.013	/
		Left Cheek	0	23095	707.5	25	Mid	0.05	0.032	21.71	22.50	1.199	0.038	/
		Left Tilt	0	23095	707.5	25	Mid	0.04	0.005	21.71	22.50	1.199	0.006	/
		Right Cheek	0	23095	707.5	25	Mid	-0.05	0.018	21.71	22.50	1.199	0.022	/
		Right Tilt	0	23095	707.5	25	Mid	-0.03	0.009	21.71	22.50	1.199	0.011	/
Body-worn&Hotspot														
Ant.1	QPSK	Front Side	10	23095	707.5	1	High	0.08	0.087	23.98	24.50	1.127	0.098	/
		Back Side	10	23095	707.5	1	High	0.17	0.159	23.98	24.50	1.127	0.179	/
		Right Edge	10	23095	707.5	1	High	0.03	0.237	23.98	24.50	1.127	0.267	16#
		Top Edge	10	23095	707.5	1	High	-0.15	0.015	23.98	24.50	1.127	0.017	/
		Front Side	10	23095	707.5	25	Mid	-0.08	0.076	22.93	23.50	1.140	0.087	/
		Back Side	10	23095	707.5	25	Mid	0.02	0.133	22.93	23.50	1.140	0.152	/
		Right Edge	10	23095	707.5	25	Mid	-0.04	0.204	22.93	23.50	1.140	0.233	/
		Top Edge	10	23095	707.5	25	Mid	-0.12	0.011	22.93	23.50	1.140	0.013	/
Ant.0	QPSK	Front Side	10	23095	707.5	1	High	0.00	0.061	22.80	23.50	1.175	0.072	/
		Back Side	10	23095	707.5	1	High	0.15	0.088	22.80	23.50	1.175	0.103	/
		Left Edge	10	23095	707.5	1	High	0.07	0.091	22.80	23.50	1.175	0.107	/
		Right Edge	10	23095	707.5	1	High	0.10	0.011	22.80	23.50	1.175	0.013	/
		Bottom Edge	10	23095	707.5	1	High	-0.09	0.049	22.80	23.50	1.175	0.058	/
		Front Side	10	23095	707.5	25	Mid	0.14	0.056	21.71	22.50	1.199	0.067	/
		Back Side	10	23095	707.5	25	Mid	-0.02	0.076	21.71	22.50	1.199	0.091	/
		Left Edge	10	23095	707.5	25	Mid	0.09	0.081	21.71	22.50	1.199	0.097	/
		Right Edge	10	23095	707.5	25	Mid	0.11	0.050	21.71	22.50	1.199	0.060	/
		Bottom Edge	10	23095	707.5	25	Mid	-0.03	0.060	21.71	22.50	1.199	0.072	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.11 LTE Band 13 (10MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.1	QPSK	Left Cheek	0	23230	782	1	High	0.01	0.395	23.92	24.50	1.143	0.451	/
		Left Tilt	0	23230	782	1	High	-0.05	0.097	23.92	24.50	1.143	0.111	/
		Right Cheek	0	23230	782	1	High	0.05	0.407	23.92	24.50	1.143	0.465	17#
		Right Tilt	0	23230	782	1	High	-0.14	0.185	23.92	24.50	1.143	0.211	/
		Left Cheek	0	23230	782	25	Mid	0.16	0.300	22.93	23.50	1.140	0.342	/
		Left Tilt	0	23230	782	25	Mid	-0.07	0.069	22.93	23.50	1.140	0.079	/
		Right Cheek	0	23230	782	25	Mid	-0.11	0.323	22.93	23.50	1.140	0.368	/
		Right Tilt	0	23230	782	25	Mid	-0.13	0.080	22.93	23.50	1.140	0.091	/
Ant.0	QPSK	Left Cheek	0	23230	782	1	High	0.16	0.124	22.80	23.50	1.175	0.146	/
		Left Tilt	0	23230	782	1	High	0.15	0.077	22.80	23.50	1.175	0.090	/
		Right Cheek	0	23230	782	1	High	0.03	0.088	22.80	23.50	1.175	0.103	/
		Right Tilt	0	23230	782	1	High	-0.14	0.032	22.80	23.50	1.175	0.038	/
		Left Cheek	0	23230	782	25	Mid	-0.01	0.095	21.71	22.50	1.199	0.114	/
		Left Tilt	0	23230	782	25	Mid	-0.11	0.035	21.71	22.50	1.199	0.042	/
		Right Cheek	0	23230	782	25	Mid	-0.01	0.048	21.71	22.50	1.199	0.058	/
		Right Tilt	0	23230	782	25	Mid	-0.03	0.022	21.71	22.50	1.199	0.026	/
Body-worn&Hotspot														
Ant.1	QPSK	Front Side	10	23230	782	1	High	-0.09	0.207	23.92	24.50	1.143	0.237	/
		Back Side	10	23230	782	1	High	0.05	0.350	23.92	24.50	1.143	0.400	/
		Right Edge	10	23230	782	1	High	0.02	0.454	23.92	24.50	1.143	0.519	18#
		Top Edge	10	23230	782	1	High	0.07	0.000	23.92	24.50	1.143	0.000	/
		Front Side	10	23230	782	25	Mid	0.03	0.154	22.93	23.50	1.140	0.176	/
		Back Side	10	23230	782	25	Mid	0.10	0.259	22.93	23.50	1.140	0.295	/
		Right Edge	10	23230	782	25	Mid	-0.15	0.339	22.93	23.50	1.140	0.386	/
		Top Edge	10	23230	782	25	Mid	0.09	0.004	22.93	23.50	1.140	0.005	/
Ant.0	QPSK	Front Side	10	23230	782	1	High	0.13	0.119	22.80	23.50	1.175	0.140	/
		Back Side	10	23230	782	1	High	-0.06	0.178	22.80	23.50	1.175	0.209	/
		Left Edge	10	23230	782	1	High	0.18	0.134	22.80	23.50	1.175	0.157	/
		Right Edge	10	23230	782	1	High	0.03	0.078	22.80	23.50	1.175	0.092	/
		Bottom Edge	10	23230	782	1	High	-0.01	0.096	22.80	23.50	1.175	0.113	/
		Front Side	10	23230	782	25	Mid	0.12	0.093	21.71	22.50	1.199	0.112	/
		Back Side	10	23230	782	25	Mid	0.14	0.149	21.71	22.50	1.199	0.179	/
		Left Edge	10	23230	782	25	Mid	0.01	0.104	21.71	22.50	1.199	0.125	/
		Right Edge	10	23230	782	25	Mid	-0.09	0.062	21.71	22.50	1.199	0.074	/
		Bottom Edge	10	23230	782	25	Mid	0.17	0.073	21.71	22.50	1.199	0.088	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.12 LTE Band 25 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.2	QPSK	Left Cheek	0	26365	1882.5	1	Mid	0.01	0.179	19.89	20.80	1.233	0.221	/
		Left Tilt	0	26365	1882.5	1	Mid	0.04	0.114	19.89	20.80	1.233	0.141	/
		Right Cheek	0	26365	1882.5	1	Mid	-0.14	0.428	19.89	20.80	1.233	0.528	19#
		Right Tilt	0	26365	1882.5	1	Mid	0.10	0.247	19.89	20.80	1.233	0.305	/
		Left Cheek	0	26365	1882.5	50	Mid	-0.08	0.128	18.68	19.80	1.294	0.166	/
		Left Tilt	0	26365	1882.5	50	Mid	0.09	0.063	18.68	19.80	1.294	0.082	/
		Right Cheek	0	26365	1882.5	50	Mid	-0.01	0.314	18.68	19.80	1.294	0.406	/
		Right Tilt	0	26365	1882.5	50	Mid	-0.08	0.165	18.68	19.80	1.294	0.214	/
Ant.0	QPSK	Left Cheek	0	26590	1905	1	Mid	0.13	0.020	18.07	19.50	1.390	0.028	/
		Left Tilt	0	26590	1905	1	Mid	0.06	0.007	18.07	19.50	1.390	0.010	/
		Right Cheek	0	26590	1905	1	Mid	-0.13	0.013	18.07	19.50	1.390	0.018	/
		Right Tilt	0	26590	1905	1	Mid	0.12	0.004	18.07	19.50	1.390	0.006	/
		Left Cheek	0	26590	1905	50	Mid	0.15	0.017	17.09	18.50	1.384	0.024	/
		Left Tilt	0	26590	1905	50	Mid	-0.13	0.031	17.09	18.50	1.384	0.043	/
		Right Cheek	0	26590	1905	50	Mid	0.10	0.006	17.09	18.50	1.384	0.008	/
		Right Tilt	0	26590	1905	50	Mid	0.00	0.002	17.09	18.50	1.384	0.003	/
Body-worn&Hotspot														
Ant.2	QPSK	Front Side	10	26365	1882.5	1	Mid	-0.01	0.094	19.89	20.80	1.233	0.116	/
		Back Side	10	26365	1882.5	1	Mid	0.05	0.163	19.89	20.80	1.233	0.201	/
		Right Edge	10	26365	1882.5	1	Mid	0.08	0.119	19.89	20.80	1.233	0.147	/
		Top Edge	10	26365	1882.5	1	Mid	-0.03	0.058	19.89	20.80	1.233	0.072	/
		Front Side	10	26365	1882.5	50	Mid	0.16	0.077	18.68	19.80	1.294	0.100	/
		Back Side	10	26365	1882.5	50	Mid	-0.04	0.014	18.68	19.80	1.294	0.018	/
		Right Edge	10	26365	1882.5	50	Mid	0.11	0.100	18.68	19.80	1.294	0.129	/
		Top Edge	10	26140	1860	50	Mid	-0.13	0.046	18.68	19.80	1.294	0.060	/
Ant.0	QPSK	Front Side	10	26590	1905	1	Mid	-0.09	0.234	18.07	19.50	1.390	0.325	/
		Back Side	10	26590	1905	1	Mid	0.04	0.316	18.07	19.50	1.390	0.439	/
		Left Edge	10	26590	1905	1	Mid	0.05	0.041	18.07	19.50	1.390	0.057	/
		Right Edge	10	26590	1905	1	Mid	0.02	0.030	18.07	19.50	1.390	0.042	/
		Bottom Edge	10	26590	1905	1	Mid	-0.04	0.527	18.07	19.50	1.390	0.733	20#
		Front Side	10	26590	1905	50	Mid	-0.14	0.199	17.09	18.50	1.384	0.275	/
		Back Side	10	26590	1905	50	Mid	-0.09	0.269	17.09	18.50	1.384	0.372	/
		Left Edge	10	26590	1905	50	Mid	0.09	0.048	17.09	18.50	1.384	0.066	/
		Right Edge	10	26590	1905	50	Mid	0.07	0.027	17.09	18.50	1.384	0.037	/
		Bottom Edge	10	26590	1905	50	Mid	-0.05	0.459	17.09	18.50	1.384	0.635	/

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

10.13 LTE Band 26 (15MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.1	QPSK	Left Cheek	0	26865	831.5	1	Low	-0.09	0.229	20.76	21.00	1.057	0.242	/
		Left Tilt	0	26865	831.5	1	Low	-0.09	0.048	20.76	21.00	1.057	0.051	/
		Right Cheek	0	26865	831.5	1	Low	-0.02	0.320	20.76	21.00	1.057	0.338	21#
		Right Tilt	0	26865	831.5	1	Low	-0.08	0.085	20.76	21.00	1.057	0.090	/
		Left Cheek	0	26865	831.5	36	Mid	-0.01	0.151	19.76	20.00	1.057	0.160	/
		Left Tilt	0	26865	831.5	36	Mid	-0.07	0.039	19.76	20.00	1.057	0.041	/
		Right Cheek	0	26865	831.5	36	Mid	0.03	0.204	19.76	20.00	1.057	0.216	/
		Right Tilt	0	26865	831.5	36	Mid	-0.11	0.058	19.76	20.00	1.057	0.061	/
Ant.0	QPSK	Left Cheek	0	26865	831.5	1	Low	0.02	0.027	19.56	20.00	1.107	0.030	/
		Left Tilt	0	26865	831.5	1	Low	0.03	0.011	19.56	20.00	1.107	0.012	/
		Right Cheek	0	26865	831.5	1	Low	-0.09	0.020	19.56	20.00	1.107	0.022	/
		Right Tilt	0	26865	831.5	1	Low	0.11	0.012	19.56	20.00	1.107	0.013	/
		Left Cheek	0	26865	831.5	36	Mid	0.11	0.023	18.49	19.00	1.125	0.026	/
		Left Tilt	0	26865	831.5	36	Mid	-0.08	0.007	18.49	19.00	1.125	0.008	/
		Right Cheek	0	26865	831.5	36	Mid	0.12	0.013	18.49	19.00	1.125	0.015	/
		Right Tilt	0	26865	831.5	36	Mid	-0.02	0.005	18.49	19.00	1.125	0.006	/
Body-worn&Hotspot														
Ant.2	QPSK	Front Side	10	26865	831.5	1	Low	0.18	0.133	20.76	21.00	1.057	0.141	/
		Back Side	10	26865	831.5	1	Low	0.05	0.244	20.76	21.00	1.057	0.258	/
		Right Edge	10	26865	831.5	1	Low	-0.04	0.374	20.76	21.00	1.057	0.395	22#
		Top Edge	10	26865	831.5	1	Low	-0.12	0.008	20.76	21.00	1.057	0.008	/
		Front Side	10	26865	831.5	36	Mid	-0.09	0.117	19.76	20.00	1.057	0.124	/
		Back Side	10	26865	831.5	36	Mid	-0.14	0.215	19.76	20.00	1.057	0.227	/
		Right Edge	10	26865	831.5	36	Mid	-0.14	0.261	19.76	20.00	1.057	0.276	/
		Top Edge	10	26865	831.5	36	Mid	-0.11	0.004	19.76	20.00	1.057	0.004	/
Ant.0	QPSK	Front Side	10	26865	831.5	1	Low	0.10	0.037	19.56	20.00	1.107	0.041	/
		Back Side	10	26865	831.5	1	Low	0.18	0.060	19.56	20.00	1.107	0.066	/
		Left Edge	10	26865	831.5	1	Low	0.07	0.040	19.56	20.00	1.107	0.044	/
		Right Edge	10	26865	831.5	1	Low	0.08	0.000	19.56	20.00	1.107	0.000	/
		Bottom Edge	10	26865	831.5	1	Low	-0.15	0.050	19.56	20.00	1.107	0.055	/
		Front Side	10	26865	831.5	36	Mid	0.08	0.031	18.49	19.00	1.125	0.035	/
		Back Side	10	26865	831.5	36	Mid	-0.03	0.051	18.49	19.00	1.125	0.057	/
		Left Edge	10	26865	831.5	36	Mid	-0.13	0.031	18.49	19.00	1.125	0.035	/
		Right Edge	10	26865	831.5	36	Mid	0.04	0.000	18.49	19.00	1.125	0.000	/
		Bottom Edge	10	26865	831.5	36	Mid	0.09	0.041	18.49	19.00	1.125	0.046	/

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

10.14 LTE Band 66 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.2	QPSK	Left Cheek	0	132322	1745	1	High	-0.08	0.040	21.12	21.50	1.091	0.044	/
		Left Tilt	0	132322	1745	1	High	-0.02	0.027	21.12	21.50	1.091	0.029	/
		Right Cheek	0	132322	1745	1	High	-0.01	0.083	21.12	21.50	1.091	0.091	23#
		Right Tilt	0	132322	1745	1	High	-0.04	0.036	21.12	21.50	1.091	0.039	/
		Left Cheek	0	132322	1745	50	High	-0.04	0.034	21.12	21.50	1.091	0.037	/
		Left Tilt	0	132322	1745	50	High	-0.03	0.024	20.09	20.50	1.099	0.026	/
		Right Cheek	0	132322	1745	50	High	-0.12	0.043	20.09	20.50	1.099	0.047	/
		Right Tilt	0	132322	1745	50	High	0.06	0.025	20.09	20.50	1.099	0.027	/
Ant.0	QPSK	Left Cheek	0	132322	1745	1	High	0.02	0.029	19.80	20.00	1.047	0.030	/
		Left Tilt	0	132322	1745	1	High	-0.04	0.014	19.80	20.00	1.047	0.015	/
		Right Cheek	0	132322	1745	1	High	0.04	0.025	19.80	20.00	1.047	0.026	/
		Right Tilt	0	132322	1745	1	High	-0.13	0.010	19.80	20.00	1.047	0.010	/
		Left Cheek	0	132322	1745	50	High	-0.15	0.022	18.76	19.00	1.057	0.023	/
		Left Tilt	0	132322	1745	50	High	-0.10	0.010	18.76	19.00	1.057	0.011	/
		Right Cheek	0	132322	1745	50	High	0.04	0.015	18.76	19.00	1.057	0.016	/
		Right Tilt	0	132322	1745	50	High	-0.03	0.008	18.76	19.00	1.057	0.008	/
Body-worn&Hotspot														
Ant.2	QPSK	Front Side	10	132322	1745	1	High	0.14	0.019	21.12	21.50	1.091	0.021	/
		Back Side	10	132322	1745	1	High	0.02	0.033	21.12	21.50	1.091	0.036	/
		Right Edge	10	132322	1745	1	High	0.16	0.026	21.12	21.50	1.091	0.028	/
		Top Edge	10	132322	1745	1	High	0.10	0.004	21.12	21.50	1.091	0.004	/
		Front Side	10	132322	1745	50	High	0.10	0.006	20.09	20.50	1.099	0.007	/
		Back Side	10	132322	1745	50	High	-0.09	0.028	20.09	20.50	1.099	0.031	/
		Right Edge	10	132322	1745	50	High	0.00	0.023	20.09	20.50	1.099	0.025	/
		Top Edge	10	132322	1745	50	High	-0.03	0.001	20.09	20.50	1.099	0.001	/
Ant.0	QPSK	Front Side	10	132572	1770	1	Mid	0.00	0.252	19.80	20.00	1.047	0.264	/
		Back Side	10	132572	1770	1	Mid	-0.13	0.349	19.80	20.00	1.047	0.365	/
		Left Edge	10	132572	1770	1	Mid	0.07	0.033	19.80	20.00	1.047	0.035	/
		Right Edge	10	132572	1770	1	Mid	0.05	0.027	19.80	20.00	1.047	0.028	/
		Bottom Edge	10	132572	1770	1	Mid	-0.09	0.612	19.80	20.00	1.047	0.641	24#
		Front Side	10	132572	1770	50	High	-0.01	0.201	18.76	19.00	1.057	0.212	/
		Back Side	10	132572	1770	50	High	-0.02	0.281	18.76	19.00	1.057	0.297	/
		Left Edge	10	132572	1770	50	High	-0.09	0.026	18.76	19.00	1.057	0.027	/
		Right Edge	10	132572	1770	50	High	0.11	0.022	18.76	19.00	1.057	0.023	/
		Bottom Edge	10	132572	1770	50	High	0.14	0.495	18.76	19.00	1.057	0.523	/

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

10.15 LTE Band 66 Worse case for CA Test

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head-CA														
Ant.2	QPSK	Right Cheek	0	132322+132520	1745+1764.8	1+1	High +Low	0.02	0.066	21.11	21.50	1.094	0.072	13#
Body-worn&Hotspot-CA														
Ant.0	QPSK	Bottom Edge	10	132322+132520	1745+1764.8	1+1	High +Low	0.08	0.588	19.88	20.00	1.028	0.604	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.16 LTE Band 41 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.2	QPSK	Left Cheek	0	40620	2593	1	Mid	0.02	0.142	21.12	22.00	1.225	0.174	/
		Left Tilt	0	40620	2593	1	Mid	0.08	0.131	21.12	22.00	1.225	0.160	/
		Right Cheek	0	40620	2593	1	Mid	-0.09	0.481	21.12	22.00	1.225	0.589	25#
		Right Tilt	0	40620	2593	1	Mid	0.00	0.270	21.12	22.00	1.225	0.331	/
		Left Cheek	0	40620	2593	50	Mid	0.13	0.116	20.33	21.00	1.167	0.135	/
		Left Tilt	0	40620	2593	50	Mid	0.10	0.103	20.33	21.00	1.167	0.120	/
		Right Cheek	0	40620	2593	50	Mid	-0.10	0.426	20.33	21.00	1.167	0.497	/
		Right Tilt	0	40620	2593	50	Mid	-0.01	0.204	20.33	21.00	1.167	0.238	/
Ant.0	QPSK	Left Cheek	0	40620	2593	1	Mid	-0.11	0.040	19.99	20.00	1.002	0.040	/
		Left Tilt	0	40620	2593	1	Mid	-0.09	0.027	19.99	20.00	1.002	0.027	/
		Right Cheek	0	40620	2593	1	Mid	0.08	0.032	19.99	20.00	1.002	0.032	/
		Right Tilt	0	40620	2593	1	Mid	0.04	0.023	19.99	20.00	1.002	0.023	/
		Left Cheek	0	40620	2593	50	Mid	-0.14	0.033	18.99	19.00	1.002	0.033	/
		Left Tilt	0	40620	2593	50	Mid	-0.04	0.022	18.99	19.00	1.002	0.022	/
		Right Cheek	0	40620	2593	50	Mid	-0.02	0.024	18.99	19.00	1.002	0.024	/
		Right Tilt	0	40620	2593	50	Mid	0.01	0.018	18.99	19.00	1.002	0.018	/
Body-worn&Hotspot														
Ant.2	QPSK	Front Side	10	40620	2593	1	Low	0.15	0.089	21.12	21.50	1.091	0.097	/
		Back Side	10	40620	2593	1	Low	-0.13	0.306	21.12	21.50	1.091	0.334	26#
		Right Edge	10	40620	2593	1	Low	0.11	0.161	21.12	21.50	1.091	0.176	/
		Top Edge	10	40620	2593	1	Low	-0.15	0.050	21.12	21.50	1.091	0.055	/
		Front Side	10	40620	2593	50	Mid	-0.15	0.068	20.33	21.00	1.167	0.079	/
		Back Side	10	40620	2593	50	Mid	-0.08	0.145	20.33	21.00	1.167	0.169	/
		Right Edge	10	40620	2593	50	Mid	0.09	0.122	20.33	21.00	1.167	0.142	/
		Top Edge	10	40620	2593	50	Mid	0.00	0.042	20.33	21.00	1.167	0.049	/
Ant.0	QPSK	Front Side	10	40620	2593	1	Mid	-0.03	0.106	19.99	20.00	1.002	0.106	/
		Back Side	10	40620	2593	1	Mid	0.04	0.120	19.99	20.00	1.002	0.120	/
		Left Edge	10	40620	2593	1	Mid	0.12	0.035	19.99	20.00	1.002	0.035	/
		Right Edge	10	40620	2593	1	Mid	-0.06	0.030	19.99	20.00	1.002	0.030	/
		Bottom Edge	10	40620	2593	1	Mid	0.18	0.153	19.99	20.00	1.002	0.153	/
		Front Side	10	40620	2593	50	Mid	-0.06	0.079	18.99	19.00	1.002	0.079	/
		Back Side	10	40620	2593	50	Mid	-0.13	0.099	18.99	19.00	1.002	0.099	/
		Left Edge	10	40620	2593	50	Mid	0.13	0.028	18.99	19.00	1.002	0.028	/
		Right Edge	10	40620	2593	50	Mid	-0.06	0.024	18.99	19.00	1.002	0.024	/
		Bottom Edge	10	40620	2593	50	Mid	0.14	0.124	18.99	19.00	1.002	0.124	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.17 LTE Band 41 Worse case for CA Test

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head-CA														
Ant.2	QPSK	Right Cheek	0	40620+40818	2593+2612.8	1+1	High +Low	0.01	0.421	21.10	22.00	1.230	0.518	/
Body-worn&Hotspot-CA														
Ant.2	QPSK	Back Side	10	40620+40818	2593+2612.8	1+1	High +Low	0.05	0.244	21.10	22.00	1.230	0.300	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.18 WIFI 2.4GHZ

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	Duty Cycle (%)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.13	802.11 b	Left Cheek	0	1	2412	-0.06	0.763	20.60	21.00	1.096	99.58	1.004	0.840	27#
	802.11 b	Left Tilt	0	1	2412	-0.07	0.251	20.60	21.00	1.096	99.58	1.004	0.276	/
	802.11 b	Right Cheek	0	1	2412	-0.08	0.189	20.60	21.00	1.096	99.58	1.004	0.208	/
	802.11 b	Right Tilt	0	1	2412	-0.13	0.079	20.60	21.00	1.096	99.58	1.004	0.087	/
	802.11 b	Left Cheek	0	6	2437	0.05	0.585	18.97	20.00	1.268	99.58	1.004	0.745	/
	802.11 b	Left Cheek	0	11	2462	0.12	0.511	18.34	20.00	1.466	99.58	1.004	0.752	/
Ant.14	802.11 b	Left Cheek	0	6	2437	-0.03	0.444	17.35	17.50	1.035	99.58	1.004	0.461	/
	802.11 b	Left Tilt	0	6	2437	0.08	0.472	17.35	17.50	1.035	99.58	1.004	0.490	/
	802.11 b	Right Cheek	0	6	2437	0.13	0.253	17.35	17.50	1.035	99.58	1.004	0.263	/
	802.11 b	Right Tilt	0	6	2437	0.14	0.269	17.35	17.50	1.035	99.58	1.004	0.280	/
Body-worn&Hotspot														
Ant.13	802.11 b	Front Side	10	1	2412	0.01	0.108	20.60	21.00	1.096	99.58	1.004	0.119	/
	802.11 b	Back Side	10	1	2412	0.05	0.122	20.60	21.00	1.096	99.58	1.004	0.134	/
	802.11 b	Left Edge	10	1	2412	-0.04	0.234	20.60	21.00	1.096	99.58	1.004	0.257	28#
	802.11 b	Top Edge	10	1	2412	0.08	0.040	20.60	21.00	1.096	99.58	1.004	0.044	/
Ant.14	802.11 b	Front Side	10	6	2437	-0.02	0.157	17.35	17.50	1.035	99.58	1.004	0.163	/
	802.11 b	Back Side	10	6	2437	0.07	0.212	17.35	17.50	1.035	99.58	1.004	0.220	/
	802.11 b	Left Edge	10	6	2437	0.16	0.012	17.35	17.50	1.035	99.58	1.004	0.012	/
	802.11 b	Top Edge	10	6	2437	0.03	0.212	17.35	17.50	1.035	99.58	1.004	0.220	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.19 WIFI 5GHz

Antenna	Band	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	Duty Cycle (%)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.13	5.3G	802.11 n40	Left Cheek	0	62	5310	0.13	0.248	14.49	15.50	1.262	93.26	1.072	0.336	/
	5.3G	802.11 n40	Left Tilt	0	62	5310	0.01	0.131	14.49	15.50	1.262	93.26	1.072	0.177	/
	5.3G	802.11 n40	Right Cheek	0	62	5310	-0.11	0.111	14.49	15.50	1.262	93.26	1.072	0.150	/
	5.3G	802.11 n40	Right Tilt	0	62	5310	-0.08	0.108	14.49	15.50	1.262	93.26	1.072	0.146	/
Ant.14	5.3G	802.11 ac80	Left Cheek	0	58	5290	-0.09	0.534	14.49	15.50	1.262	89.66	1.115	0.751	29#
	5.3G	802.11 ac80	Left Tilt	0	58	5290	-0.01	0.235	14.50	15.50	1.259	89.66	1.115	0.330	/
	5.3G	802.11 ac80	Right Cheek	0	58	5290	0.17	0.384	14.50	15.50	1.259	89.66	1.115	0.539	/
	5.3G	802.11 ac80	Right Tilt	0	58	5290	-0.12	0.235	14.50	15.50	1.259	89.66	1.115	0.330	/
Ant.13	5.6G	802.11 n40	Left Cheek	0	134	5670	0.01	0.388	17.16	17.50	1.081	89.66	1.115	0.468	/
	5.6G	802.11 n40	Left Tilt	0	134	5670	-0.01	0.242	17.16	17.50	1.081	89.66	1.115	0.292	/
	5.6G	802.11 n40	Right Cheek	0	134	5670	-0.10	0.143	17.16	17.50	1.081	89.66	1.115	0.172	/
	5.6G	802.11 n40	Right Tilt	0	134	5670	0.09	0.158	17.16	17.50	1.081	89.66	1.115	0.190	/
Ant.14	5.6G	802.11 n40	Left Cheek	0	134	5670	0.05	0.577	15.36	16.00	1.159	93.26	1.072	0.717	30#
	5.6G	802.11 n40	Left Tilt	0	134	5670	0.05	0.230	15.36	16.00	1.159	94.26	1.061	0.283	/
	5.6G	802.11 n40	Right Cheek	0	134	5670	0.02	0.388	15.36	16.00	1.159	95.26	1.050	0.472	/
	5.6G	802.11 n40	Right Tilt	0	134	5670	0.01	0.235	15.36	16.00	1.159	96.26	1.039	0.283	/
Ant.13	5.8G	802.11 ac80	Left Cheek	0	155	5775	0.14	0.317	16.83	18.00	1.309	89.66	1.115	0.463	/
	5.8G	802.11 ac80	Left Tilt	0	155	5775	-0.02	0.143	16.83	18.00	1.309	89.66	1.115	0.209	/
	5.8G	802.11 ac80	Right Cheek	0	155	5775	0.06	0.133	16.83	18.00	1.309	89.66	1.115	0.194	/
	5.8G	802.11 ac80	Right Tilt	0	155	5775	-0.09	0.122	16.83	18.00	1.309	89.66	1.115	0.178	/
Ant.14	5.8G	802.11 ac80	Left Cheek	0	155	5775	-0.02	0.563	15.05	15.50	1.109	89.66	1.115	0.696	31#
	5.8G	802.11 ac80	Left Tilt	0	155	5775	0.01	0.425	15.05	15.50	1.109	89.66	1.115	0.526	/
	5.8G	802.11 ac80	Right Cheek	0	155	5775	0.04	0.380	15.05	15.50	1.109	89.66	1.115	0.470	/
	5.8G	802.11 ac80	Right Tilt	0	155	5775	0.05	0.475	15.05	15.50	1.109	89.66	1.115	0.587	/
Body-worn															
Ant.13	5.3G	802.11 n40	Front Side	10	62	5310	0.12	0.067	14.49	15.50	1.262	93.26	1.072	0.091	/
	5.3G	802.11 n40	Back Side	10	62	5310	0.00	0.181	14.49	15.50	1.262	93.26	1.072	0.245	/
Ant.14	5.3G	802.11 ac80	Front Side	10	58	5290	0.15	0.075	13.74	15.00	1.337	89.66	1.115	0.112	/
	5.3G	802.11 ac80	Back Side	10	58	5290	0.01	0.261	13.74	15.00	1.337	89.66	1.115	0.389	32#
Ant.13	5.6G	802.11 n40	Front Side	10	134	5670	0.03	0.042	17.16	17.50	1.081	93.26	1.072	0.049	/
	5.6G	802.11 n40	Back Side	10	134	5670	-0.12	0.158	17.16	17.50	1.081	93.26	1.072	0.183	/
Ant.14	5.6G	802.11 n40	Front Side	10	134	5670	0.07	0.089	15.36	16.00	1.159	93.26	1.072	0.111	/
	5.6G	802.11 n40	Back Side	10	134	5670	0.16	0.387	15.36	16.00	1.159	93.26	1.072	0.481	33#
Ant.13	5.8G	802.11 ac80	Front Side	10	155	5775	0.12	0.072	16.83	18.00	1.309	89.66	1.115	0.105	/
	5.8G	802.11 ac80	Back Side	10	155	5775	0.12	0.211	16.83	18.00	1.309	89.66	1.115	0.308	/
Ant.14	5.8G	802.11 ac80	Front Side	10	155	5775	0.14	0.095	15.05	15.50	1.109	89.66	1.115	0.117	/

	5.8G	802.11 ac80	Back Side	10	155	5775	0.01	0.276	15.05	15.50	1.109	89.66	1.115	0.341	34#
Hotspot															
Ant.13	5.2G	802.11 n40	Front Side	10	38	5190	-0.01	0.048	15.00	15.50	1.122	93.26	1.072	0.058	/
	5.2G	802.11 n40	Back Side	10	38	5190	-0.03	0.116	15.00	15.50	1.122	93.26	1.072	0.140	/
	5.2G	802.11 n40	Left Edge	10	38	5190	0.14	0.111	15.00	15.50	1.122	93.26	1.072	0.134	/
	5.2G	802.11 n40	Top Edge	10	38	5190	-0.05	0.037	15.00	15.50	1.122	93.26	1.072	0.045	/
Ant.14	5.2G	802.11 ac80	Front Side	10	42	5210	0.13	0.093	14.50	15.50	1.259	89.66	1.115	0.131	/
	5.2G	802.11 ac80	Back Side	10	42	5210	-0.02	0.146	14.50	15.50	1.259	89.66	1.115	0.205	/
	5.2G	802.11 ac80	Left Edge	10	42	5210	0.10	0.011	14.50	15.50	1.259	89.66	1.115	0.015	/
	5.2G	802.11 ac80	Top Edge	10	42	5210	-0.02	0.290	14.50	15.50	1.259	89.66	1.115	0.407	35#
Ant.13	5.8G	802.11 ac80	Front Side	10	155	5775	0.12	0.072	16.83	18.00	1.309	89.66	1.115	0.105	/
	5.8G	802.11 ac80	Back Side	10	155	5775	0.12	0.211	16.83	18.00	1.309	89.66	1.115	0.308	/
	5.8G	802.11 ac80	Left Edge	10	155	5775	-0.03	0.222	16.83	18.00	1.309	89.66	1.115	0.324	/
	5.8G	802.11 ac80	Top Edge	10	155	5775	0.06	0.139	16.83	18.00	1.309	89.66	1.115	0.203	/
Ant.14	5.8G	802.11 ac80	Front Side	10	155	5775	0.14	0.095	15.05	15.50	1.109	89.66	1.115	0.117	/
	5.8G	802.11 ac80	Back Side	10	155	5775	-0.03	0.276	15.05	15.50	1.109	89.66	1.115	0.341	/
	5.8G	802.11 ac80	Left Edge	10	155	5775	0.07	0.014	15.05	15.50	1.109	89.66	1.115	0.017	/
	5.8G	802.11 ac80	Top Edge	10	155	5775	0.09	0.304	15.05	15.50	1.109	89.66	1.115	0.376	36#

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

Antenna	Band	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	Duty Cycle (%)	Scaling Factor	10 g Scaled SAR (W/kg)	Meas. No.
Specific															
Ant.13	5.3G	802.11 n40	Front Side	10	62	5310	-0.01	0.095	14.49	15.50	1.262	93.26	1.072	0.129	/
	5.3G	802.11 n40	Back Side	10	62	5310	-0.03	0.230	14.49	15.50	1.262	93.26	1.072	0.311	/
	5.3G	802.11 n40	Left Edge	10	62	5310	0.14	0.220	14.49	15.50	1.262	93.26	1.072	0.298	/
	5.3G	802.11 n40	Top Edge	10	62	5310	-0.05	0.073	14.49	15.50	1.262	93.26	1.072	0.099	/
Ant.14	5.3G	802.11 ac80	Front Side	10	58	5290	0.13	0.184	13.74	13.74	1.000	89.66	1.115	0.205	/
	5.3G	802.11 ac80	Back Side	10	58	5290	-0.02	0.289	13.74	13.74	1.000	89.66	1.115	0.322	/
	5.3G	802.11 ac80	Left Edge	10	58	5290	0.10	0.022	13.74	13.74	1.000	89.66	1.115	0.025	/
	5.3G	802.11 ac80	Top Edge	10	58	5290	-0.17	0.576	13.74	13.74	1.000	89.66	1.115	0.642	37#
Ant.13	5.6G	802.11 ac80	Front Side	10	106	5530	0.12	0.251	16.83	17.00	1.040	89.66	1.115	0.291	/
	5.6G	802.11 ac80	Back Side	10	106	5530	0.12	0.839	16.83	17.00	1.040	89.66	1.115	0.973	/
	5.6G	802.11 ac80	Left Edge	10	106	5530	-0.03	0.912	16.83	17.00	1.040	89.66	1.115	1.058	/
	5.6G	802.11 ac80	Top Edge	10	106	5530	0.06	0.484	16.83	17.00	1.040	89.66	1.115	0.561	/
Ant.14	5.6G	802.11 n40	Front Side	10	134	5670	0.14	0.331	15.36	16.00	1.159	93.26	1.072	0.411	/
	5.6G	802.11 n40	Back Side	10	134	5670	-0.03	0.960	15.36	16.00	1.159	93.26	1.072	1.193	/
	5.6G	802.11 n40	Left Edge	10	134	5670	0.07	0.049	15.36	16.00	1.159	93.26	1.072	0.061	/
	5.6G	802.11 n40	Top Edge	10	134	5670	-0.04	1.060	15.36	16.00	1.159	93.26	1.072	1.317	38#

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

10.20 Bluetooth

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	Duty Cycle (%)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas. No.
Head														
Ant.13	DH5	Left Cheek	0	39	2441	0.03	0.165	13.59	14.00	1.099	76.67	1.304	0.236	39#
Ant.13	DH5	Left Tilt	0	39	2441	-0.06	0.050	13.59	14.00	1.099	76.67	1.304	0.072	/
Ant.13	DH5	Right Cheek	0	39	2441	-0.06	0.085	13.59	14.00	1.099	76.67	1.304	0.122	/
Ant.13	DH5	Right Tilt	0	39	2441	0.01	0.032	13.59	14.00	1.099	76.67	1.304	0.046	/
Ant.14	DH5	Left Cheek	0	0	2402	-0.12	0.134	14.07	14.50	1.104	76.67	1.304	0.193	/
Ant.14	DH5	Left Tilt	0	0	2402	0.06	0.135	14.07	14.50	1.104	76.67	1.304	0.194	/
Ant.14	DH5	Right Cheek	0	0	2402	0.08	0.065	14.07	14.50	1.104	76.67	1.304	0.094	/
Ant.14	DH5	Right Tilt	0	0	2402	0.00	0.022	14.07	14.50	1.104	76.67	1.304	0.032	/
Body-worn&Hotspot														
Ant.13	DH5	Front Side	10	39	2441	0.02	0.049	13.59	14.00	1.099	76.67	1.304	0.070	/
Ant.13	DH5	Back Side	10	39	2441	0.05	0.109	13.59	14.00	1.099	76.67	1.304	0.156	/
Ant.13	DH5	Left Edge	10	39	2441	-0.08	0.125	13.59	14.00	1.099	76.67	1.304	0.179	40#
Ant.13	DH5	Top Edge	10	39	2441	-0.13	0.012	13.59	14.00	1.099	76.67	1.304	0.017	/
Ant.14	DH5	Front Side	10	0	2402	0.17	0.047	14.07	14.50	1.104	76.67	1.304	0.068	/
Ant.14	DH5	Back Side	10	0	2402	-0.14	0.092	14.07	14.50	1.104	76.67	1.304	0.132	/
Ant.14	DH5	Left Edge	10	0	2402	0.13	0.004	14.07	14.50	1.104	76.67	1.304	0.006	/
Ant.14	DH5	Top Edge	10	0	2402	0.14	0.076	14.07	14.50	1.104	76.67	1.304	0.109	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.21 NFC SAR

According to the ANSI C63.10 clause 11.12.2.2:

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

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)
- c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies \leq 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies $>$ 1000 MHz).
- d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
- e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship: $E = \text{EIRP} - 20\log D + 104.8$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

Mode	f (MHz)	Max. E-Field strength (dB μ V/m)	D (m)	Ground reflection factor (dB)	ERP (dBm)
NFC (13.56MHz)	13.56	60.67	10	6	-18.13
Note:					
1. Add the appropriate maximum ground reflection factor to the ERP level (6 dB for frequencies \leq 30 MHz).					
2.ERP= 60.67+20*Log(10) – 104.8 + 6 =-18.13 (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)	-18.13	Pmeas.(mW)	0.0154
Pth.(mW)	443.13		
NFC Estimated 1g SAR [W/kg]	<0.001		

10.21.1 Highest Total Exposure Ratio of Simultaneous Transmission

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

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

maximum SAR value for Simultaneous Transmission is 1.395 [W/kg]. Therefore, the worst TER
 $= (1.395 + 0.001) / 1.6 = 0.873 < 1$, the NFC SAR transmit simultaneously Pass.

11 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Note: For product specific 10g SAR, the highest measured 10g SAR is $1.06 < 2.0$ W/kg, repeated measurement is not required.

12 SIMULTANEOUS TRANSMISSION

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

12.1 Simultaneous Transmission Mode Consider

No.	Simultaneous Tx Combination	Head	Body-Worn	Hotspot	Specific
1	WWAN + WLAN 2.4GHz(Ant.13)	Yes	Yes	Yes	Yes
2	WWAN + WLAN 2.4GHz(Ant.14)	Yes	Yes	Yes	Yes
3	WWAN + BT(Ant.13)	Yes	Yes	Yes	Yes
4	WWAN + BT(Ant.14)	Yes	Yes	Yes	Yes
5	WWAN + WLAN 5GHz(Ant.13)	Yes	Yes	Yes	Yes
6	WWAN + WLAN 5GHz(Ant.14)	Yes	Yes	Yes	Yes
7	WLAN 5GHz(Ant.13) + BT(Ant.13)	Yes	Yes	Yes	Yes
8	WLAN 5GHz(Ant.14) + BT(Ant.14)	Yes	Yes	Yes	Yes
9	WWAN + WLAN 5GHz(Ant.13) + BT(Ant.13)	Yes	Yes	Yes	Yes
10	WWAN + WLAN 5GHz(Ant.14) + BT(Ant.14)	Yes	Yes	Yes	Yes

Note:

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

12.2 Sum SAR of Simultaneous Transmission

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

Band	Antenna	Position	Stand alone SAR							SUM SAR			
			1	2	3	4	5	6	7	1+2	1+3	1+4+6	1+5+7
			WWAN	2.4GWIFI Ant.13	2.4GWIFI Ant.14	5GWIFI Ant.13	5GWIFI Ant.14	Bluetooth Ant.13	Bluetooth Ant.14				
GSM850	Ant.1	Left Cheek	0.342	0.840	0.461	0.468	0.751	0.236	0.193	1.182	0.803	1.046	1.286
		Left Tilt	0.069	0.276	0.490	0.292	0.526	0.072	0.194	0.345	0.559	0.433	0.789
		Right Cheek	0.369	0.208	0.263	0.194	0.539	0.122	0.094	0.577	0.632	0.685	1.002
		Right Tilt	0.237	0.087	0.280	0.190	0.587	0.046	0.032	0.324	0.517	0.473	0.856
GSM850	Ant.0	Left Cheek	0.036	0.840	0.461	0.468	0.751	0.236	0.193	0.876	0.497	0.740	0.980
		Left Tilt	0.020	0.276	0.490	0.292	0.526	0.072	0.194	0.296	0.510	0.384	0.740
		Right Cheek	0.025	0.208	0.263	0.194	0.539	0.122	0.094	0.233	0.288	0.341	0.658
		Right Tilt	0.011	0.087	0.280	0.190	0.587	0.046	0.032	0.098	0.291	0.247	0.630
GSM1900	Ant.2	Left Cheek	0.021	0.840	0.461	0.468	0.751	0.236	0.193	0.861	0.482	0.725	0.965
		Left Tilt	0.011	0.276	0.490	0.292	0.526	0.072	0.194	0.287	0.501	0.375	0.731
		Right Cheek	0.054	0.208	0.263	0.194	0.539	0.122	0.094	0.262	0.317	0.370	0.687
		Right Tilt	0.032	0.087	0.280	0.190	0.587	0.046	0.032	0.119	0.312	0.268	0.651
GSM1900	Ant.0	Left Cheek	0.011	0.840	0.461	0.468	0.751	0.236	0.193	0.851	0.472	0.715	0.955
		Left Tilt	0.022	0.276	0.490	0.292	0.526	0.072	0.194	0.298	0.512	0.386	0.742
		Right Cheek	0.011	0.208	0.263	0.194	0.539	0.122	0.094	0.219	0.274	0.327	0.644
		Right Tilt	0.022	0.087	0.280	0.190	0.587	0.046	0.032	0.109	0.302	0.258	0.641
WCDMA B2	Ant.2	Left Cheek	0.237	0.840	0.461	0.468	0.751	0.236	0.193	1.077	0.698	0.941	1.181
		Left Tilt	0.144	0.276	0.490	0.292	0.526	0.072	0.194	0.420	0.634	0.508	0.864
		Right Cheek	0.535	0.208	0.263	0.194	0.539	0.122	0.094	0.743	0.798	0.851	1.168
		Right Tilt	0.309	0.087	0.280	0.190	0.587	0.046	0.032	0.396	0.589	0.545	0.928
WCDMA B2	Ant.0	Left Cheek	0.029	0.840	0.461	0.468	0.751	0.236	0.193	0.869	0.490	0.733	0.973
		Left Tilt	0.013	0.276	0.490	0.292	0.526	0.072	0.194	0.289	0.503	0.377	0.733
		Right Cheek	0.023	0.208	0.263	0.194	0.539	0.122	0.094	0.231	0.286	0.339	0.656
		Right Tilt	0.013	0.087	0.280	0.190	0.587	0.046	0.032	0.100	0.293	0.249	0.632
WCDMA B4	Ant.2	Left Cheek	0.024	0.840	0.461	0.468	0.751	0.236	0.193	0.864	0.485	0.728	0.968
		Left Tilt	0.020	0.276	0.490	0.292	0.526	0.072	0.194	0.296	0.510	0.384	0.740
		Right Cheek	0.060	0.208	0.263	0.194	0.539	0.122	0.094	0.268	0.323	0.376	0.693
		Right Tilt	0.024	0.087	0.280	0.190	0.587	0.046	0.032	0.111	0.304	0.260	0.643
WCDMA B4	Ant.0	Left Cheek	0.006	0.840	0.461	0.468	0.751	0.236	0.193	0.846	0.467	0.710	0.950
		Left Tilt	0.002	0.276	0.490	0.292	0.526	0.072	0.194	0.278	0.492	0.366	0.722
		Right Cheek	0.012	0.208	0.263	0.194	0.539	0.122	0.094	0.220	0.275	0.328	0.645
		Right Tilt	0.001	0.087	0.280	0.190	0.587	0.046	0.032	0.088	0.281	0.237	0.620
WCDMA B5	Ant.1	Left Cheek	0.224	0.840	0.461	0.468	0.751	0.236	0.193	1.064	0.685	0.928	1.168
		Left Tilt	0.046	0.276	0.490	0.292	0.526	0.072	0.194	0.322	0.536	0.410	0.766
		Right Cheek	0.147	0.208	0.263	0.194	0.539	0.122	0.094	0.355	0.410	0.463	0.780
		Right Tilt	0.075	0.087	0.280	0.190	0.587	0.046	0.032	0.162	0.355	0.311	0.694

WCDMA B5	Ant.0	Left Cheek	0.028	0.840	0.461	0.468	0.751	0.236	0.193	0.868	0.489	0.732	0.972
		Left Tilt	0.011	0.276	0.490	0.292	0.526	0.072	0.194	0.287	0.501	0.375	0.731
		Right Cheek	0.017	0.208	0.263	0.194	0.539	0.122	0.094	0.225	0.280	0.333	0.650
		Right Tilt	0.007	0.087	0.280	0.190	0.587	0.046	0.032	0.094	0.287	0.243	0.626
LTE B5	Ant.1	Left Cheek	0.347	0.840	0.461	0.468	0.751	0.236	0.193	1.187	0.808	1.051	1.291
		Left Tilt	0.083	0.276	0.490	0.292	0.526	0.072	0.194	0.359	0.573	0.447	0.803
		Right Cheek	0.357	0.208	0.263	0.194	0.539	0.122	0.094	0.565	0.620	0.673	0.990
		Right Tilt	0.128	0.087	0.280	0.190	0.587	0.046	0.032	0.215	0.408	0.364	0.747
LTE B5	Ant.0	Left Cheek	0.055	0.840	0.461	0.468	0.751	0.236	0.193	0.895	0.516	0.759	0.999
		Left Tilt	0.018	0.276	0.490	0.292	0.526	0.072	0.194	0.294	0.508	0.382	0.738
		Right Cheek	0.044	0.208	0.263	0.194	0.539	0.122	0.094	0.252	0.307	0.360	0.677
		Right Tilt	0.015	0.087	0.280	0.190	0.587	0.046	0.032	0.102	0.295	0.251	0.634
LTE B7	Ant.2	Left Cheek	0.149	0.840	0.461	0.468	0.751	0.236	0.193	0.989	0.610	0.853	1.093
		Left Tilt	0.134	0.276	0.490	0.292	0.526	0.072	0.194	0.410	0.624	0.498	0.854
		Right Cheek	0.482	0.208	0.263	0.194	0.539	0.122	0.094	0.690	0.745	0.798	1.115
		Right Tilt	0.156	0.087	0.280	0.190	0.587	0.046	0.032	0.243	0.436	0.392	0.775
LTE B7	Ant.0	Left Cheek	0.036	0.840	0.461	0.468	0.751	0.236	0.193	0.876	0.497	0.740	0.980
		Left Tilt	0.024	0.276	0.490	0.292	0.526	0.072	0.194	0.300	0.514	0.388	0.744
		Right Cheek	0.034	0.208	0.263	0.194	0.539	0.122	0.094	0.242	0.297	0.350	0.667
		Right Tilt	0.020	0.087	0.280	0.190	0.587	0.046	0.032	0.107	0.300	0.256	0.639
LTE B12	Ant.1	Left Cheek	0.207	0.840	0.461	0.468	0.751	0.236	0.193	1.047	0.668	0.911	1.151
		Left Tilt	0.051	0.276	0.490	0.292	0.526	0.072	0.194	0.327	0.541	0.415	0.771
		Right Cheek	0.187	0.208	0.263	0.194	0.539	0.122	0.094	0.395	0.450	0.503	0.820
		Right Tilt	0.118	0.087	0.280	0.190	0.587	0.046	0.032	0.205	0.398	0.354	0.737
LTE B12	Ant.0	Left Cheek	0.053	0.840	0.461	0.468	0.751	0.236	0.193	0.893	0.514	0.757	0.997
		Left Tilt	0.022	0.276	0.490	0.292	0.526	0.072	0.194	0.298	0.512	0.386	0.742
		Right Cheek	0.038	0.208	0.263	0.194	0.539	0.122	0.094	0.246	0.301	0.354	0.671
		Right Tilt	0.013	0.087	0.280	0.190	0.587	0.046	0.032	0.100	0.293	0.249	0.632
LTE B13	Ant.1	Left Cheek	0.451	0.840	0.461	0.468	0.751	0.236	0.193	1.291	0.912	1.155	1.395
		Left Tilt	0.111	0.276	0.490	0.292	0.526	0.072	0.194	0.387	0.601	0.475	0.831
		Right Cheek	0.465	0.208	0.263	0.194	0.539	0.122	0.094	0.673	0.728	0.781	1.098
		Right Tilt	0.211	0.087	0.280	0.190	0.587	0.046	0.032	0.298	0.491	0.447	0.830
LTE B13	Ant.0	Left Cheek	0.146	0.840	0.461	0.468	0.751	0.236	0.193	0.986	0.607	0.850	1.090
		Left Tilt	0.090	0.276	0.490	0.292	0.526	0.072	0.194	0.366	0.580	0.454	0.810
		Right Cheek	0.103	0.208	0.263	0.194	0.539	0.122	0.094	0.311	0.366	0.419	0.736
		Right Tilt	0.038	0.087	0.280	0.190	0.587	0.046	0.032	0.125	0.318	0.274	0.657
LTE B25	Ant.2	Left Cheek	0.221	0.840	0.461	0.468	0.751	0.236	0.193	1.061	0.682	0.925	1.165
		Left Tilt	0.141	0.276	0.490	0.292	0.526	0.072	0.194	0.417	0.631	0.505	0.861
		Right Cheek	0.528	0.208	0.263	0.194	0.539	0.122	0.094	0.736	0.791	0.844	1.161
		Right Tilt	0.305	0.087	0.280	0.190	0.587	0.046	0.032	0.392	0.585	0.541	0.924
LTE B25	Ant.0	Left Cheek	0.028	0.840	0.461	0.468	0.751	0.236	0.193	0.868	0.489	0.732	0.972
		Left Tilt	0.010	0.276	0.490	0.292	0.526	0.072	0.194	0.286	0.500	0.374	0.730
		Right Cheek	0.018	0.208	0.263	0.194	0.539	0.122	0.094	0.226	0.281	0.334	0.651

		Right Tilt	0.006	0.087	0.280	0.190	0.587	0.046	0.032	0.093	0.286	0.242	0.625
LTE B26	Ant.1	Left Cheek	0.242	0.840	0.461	0.468	0.751	0.236	0.193	1.082	0.703	0.946	1.186
		Left Tilt	0.051	0.276	0.490	0.292	0.526	0.072	0.194	0.327	0.541	0.415	0.771
		Right Cheek	0.338	0.208	0.263	0.194	0.539	0.122	0.094	0.546	0.601	0.654	0.971
		Right Tilt	0.090	0.087	0.280	0.190	0.587	0.046	0.032	0.177	0.370	0.326	0.709
LTE B26	Ant.0	Left Cheek	0.030	0.840	0.461	0.468	0.751	0.236	0.193	0.870	0.491	0.734	0.974
		Left Tilt	0.012	0.276	0.490	0.292	0.526	0.072	0.194	0.288	0.502	0.376	0.732
		Right Cheek	0.022	0.208	0.263	0.194	0.539	0.122	0.094	0.230	0.285	0.338	0.655
		Right Tilt	0.013	0.087	0.280	0.190	0.587	0.046	0.032	0.100	0.293	0.249	0.632
LTE B66	Ant.2	Left Cheek	0.044	0.840	0.461	0.468	0.751	0.236	0.193	0.884	0.505	0.748	0.988
		Left Tilt	0.029	0.276	0.490	0.292	0.526	0.072	0.194	0.305	0.519	0.393	0.749
		Right Cheek	0.091	0.208	0.263	0.194	0.539	0.122	0.094	0.299	0.354	0.407	0.724
		Right Tilt	0.039	0.087	0.280	0.190	0.587	0.046	0.032	0.126	0.319	0.275	0.658
LTE B66	Ant.0	Left Cheek	0.030	0.840	0.461	0.468	0.751	0.236	0.193	0.870	0.491	0.734	0.974
		Left Tilt	0.015	0.276	0.490	0.292	0.526	0.072	0.194	0.291	0.505	0.379	0.735
		Right Cheek	0.026	0.208	0.263	0.194	0.539	0.122	0.094	0.234	0.289	0.342	0.659
		Right Tilt	0.010	0.087	0.280	0.190	0.587	0.046	0.032	0.097	0.290	0.246	0.629
LTE B41	Ant.2	Left Cheek	0.174	0.840	0.461	0.468	0.751	0.236	0.193	1.014	0.635	0.878	1.118
		Left Tilt	0.160	0.276	0.490	0.292	0.526	0.072	0.194	0.436	0.650	0.524	0.880
		Right Cheek	0.589	0.208	0.263	0.194	0.539	0.122	0.094	0.797	0.852	0.905	1.222
		Right Tilt	0.331	0.087	0.280	0.190	0.587	0.046	0.032	0.418	0.611	0.567	0.950
LTE B41	Ant.0	Left Cheek	0.040	0.840	0.461	0.468	0.751	0.236	0.193	0.880	0.501	0.744	0.984
		Left Tilt	0.027	0.276	0.490	0.292	0.526	0.072	0.194	0.303	0.517	0.391	0.747
		Right Cheek	0.032	0.208	0.263	0.194	0.539	0.122	0.094	0.240	0.295	0.348	0.665
		Right Tilt	0.023	0.087	0.280	0.190	0.587	0.046	0.032	0.110	0.303	0.259	0.642

Note:

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

2: The highest Summed 1g SAR is 1.395 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.2 Hotspot Simultaneous Transmission SAR Evaluation for WWAN and WLAN and BT

Band	Antenna	Position	Stand alone SAR							SUM SAR			
			1	2	3	4	5	6	7	1+2	1+3	1+4+6	1+5+7
			WWAN	2.4GWIFI Ant.13	2.4GWIFI Ant.14	5GWIFI Ant.13	5GWIFI Ant.14	Bluetooth Ant.13	Bluetooth Ant.14				
GSM850	Ant.2	Front Side 10mm	0.240	0.119	0.163	0.105	0.131	0.070	0.068	0.359	0.403	0.415	0.439
		Back Side 10mm	0.438	0.134	0.220	0.308	0.341	0.156	0.132	0.572	0.658	0.902	0.911
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021
		Right Edge 10mm	0.521	0.000	0.000	0.000	0.000	0.000	0.000	0.521	0.521	0.521	0.521
		Top Edge 10mm	0.126	0.044	0.220	0.203	0.407	0.017	0.109	0.170	0.346	0.346	0.642
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GSM850	Ant.0	Front Side 10mm	0.082	0.119	0.163	0.105	0.131	0.070	0.068	0.201	0.245	0.257	0.281
		Back Side 10mm	0.128	0.134	0.220	0.308	0.341	0.156	0.132	0.262	0.348	0.592	0.601
		Left Edge 10mm	0.075	0.257	0.012	0.324	0.015	0.179	0.006	0.332	0.087	0.578	0.096
		Right Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516
		Bottom Edge 10mm	0.115	0.000	0.000	0.000	0.000	0.000	0.000	0.115	0.115	0.115	0.115
GSM1900	Ant.2	Front Side 10mm	0.020	0.119	0.163	0.105	0.131	0.070	0.068	0.139	0.183	0.195	0.219
		Back Side 10mm	0.011	0.134	0.220	0.308	0.341	0.156	0.132	0.145	0.231	0.475	0.484
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021
		Right Edge 10mm	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.005	0.005
		Top Edge 10mm	0.025	0.044	0.220	0.203	0.407	0.017	0.109	0.069	0.245	0.245	0.541
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GSM1900	Ant.0	Front Side 10mm	0.276	0.119	0.163	0.105	0.131	0.070	0.068	0.395	0.439	0.451	0.475
		Back Side 10mm	0.376	0.134	0.220	0.308	0.341	0.156	0.132	0.510	0.596	0.840	0.849
		Left Edge 10mm	0.063	0.257	0.012	0.324	0.015	0.179	0.006	0.320	0.075	0.566	0.084
		Right Edge 10mm	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.042	0.042	0.042
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516
		Bottom Edge 10mm	0.755	0.000	0.000	0.000	0.000	0.000	0.000	0.755	0.755	0.755	0.755
WCDMA B2	Ant.2	Front Side 10mm	0.113	0.119	0.163	0.105	0.131	0.070	0.068	0.232	0.276	0.288	0.312
		Back Side 10mm	0.178	0.134	0.220	0.308	0.341	0.156	0.132	0.312	0.398	0.642	0.651
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021
		Right Edge 10mm	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.140	0.140	0.140	0.140
		Top Edge 10mm	0.053	0.044	0.220	0.203	0.407	0.017	0.109	0.097	0.273	0.273	0.569
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WCDMA B2	Ant.0	Front Side 10mm	0.224	0.119	0.163	0.105	0.131	0.070	0.068	0.343	0.387	0.399	0.423
		Back Side 10mm	0.305	0.134	0.220	0.308	0.341	0.156	0.132	0.439	0.525	0.769	0.778
		Left Edge 10mm	0.046	0.257	0.012	0.324	0.015	0.179	0.006	0.303	0.058	0.549	0.067
		Right Edge 10mm	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.031	0.031	0.031
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516
		Bottom Edge 10mm	0.605	0.000	0.000	0.000	0.000	0.000	0.000	0.605	0.605	0.605	0.605
	Ant.2	Front Side 10mm	0.009	0.119	0.163	0.105	0.131	0.070	0.068	0.128	0.172	0.184	0.208

WCDMA B4		Back Side 10mm	0.030	0.134	0.220	0.308	0.341	0.156	0.132	0.164	0.250	0.494	0.503	
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021	
		Right Edge 10mm	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020	0.020	0.020
		Top Edge 10mm	0.009	0.044	0.220	0.203	0.407	0.017	0.109	0.053	0.229	0.229	0.525	
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
WCDMA B4	Ant.0	Front Side 10mm	0.243	0.119	0.163	0.105	0.131	0.070	0.068	0.362	0.406	0.418	0.442	
		Back Side 10mm	0.322	0.134	0.220	0.308	0.341	0.156	0.132	0.456	0.542	0.786	0.795	
		Left Edge 10mm	0.041	0.257	0.012	0.324	0.015	0.179	0.006	0.298	0.053	0.544	0.062	
		Right Edge 10mm	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.027	0.027	0.027	
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516	
		Bottom Edge 10mm	0.518	0.000	0.000	0.000	0.000	0.000	0.000	0.518	0.518	0.518	0.518	
WCDMA B5	Ant.2	Front Side 10mm	0.180	0.119	0.163	0.105	0.131	0.070	0.068	0.299	0.343	0.355	0.379	
		Back Side 10mm	0.755	0.134	0.220	0.308	0.341	0.156	0.132	0.889	0.975	1.219	1.228	
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021	
		Right Edge 10mm	0.409	0.000	0.000	0.000	0.000	0.000	0.000	0.409	0.409	0.409	0.409	
		Top Edge 10mm	0.042	0.044	0.220	0.203	0.407	0.017	0.109	0.086	0.262	0.262	0.558	
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
WCDMA B5	Ant.0	Front Side 10mm	0.054	0.119	0.163	0.105	0.131	0.070	0.068	0.173	0.217	0.229	0.253	
		Back Side 10mm	0.083	0.134	0.220	0.308	0.341	0.156	0.132	0.217	0.303	0.547	0.556	
		Left Edge 10mm	0.055	0.257	0.012	0.324	0.015	0.179	0.006	0.312	0.067	0.558	0.076	
		Right Edge 10mm	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.004	0.004	
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516	
		Bottom Edge 10mm	0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.069	0.069	0.069	0.069	
LTE B5	Ant.2	Front Side 10mm	0.176	0.119	0.163	0.105	0.131	0.070	0.068	0.295	0.339	0.351	0.375	
		Back Side 10mm	0.316	0.134	0.220	0.308	0.341	0.156	0.132	0.450	0.536	0.780	0.789	
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021	
		Right Edge 10mm	0.463	0.000	0.000	0.000	0.000	0.000	0.000	0.463	0.463	0.463	0.463	
		Top Edge 10mm	0.003	0.044	0.220	0.203	0.407	0.017	0.109	0.047	0.223	0.223	0.519	
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
LTE B5	Ant.0	Front Side 10mm	0.084	0.119	0.163	0.105	0.131	0.070	0.068	0.203	0.247	0.259	0.283	
		Back Side 10mm	0.126	0.134	0.220	0.308	0.341	0.156	0.132	0.260	0.346	0.590	0.599	
		Left Edge 10mm	0.090	0.257	0.012	0.324	0.015	0.179	0.006	0.347	0.102	0.593	0.111	
		Right Edge 10mm	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.043	0.043	0.043	
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516	
		Bottom Edge 10mm	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.004	0.004	
LTE B7	Ant.2	Front Side 10mm	0.104	0.119	0.163	0.105	0.131	0.070	0.068	0.223	0.267	0.279	0.303	
		Back Side 10mm	0.198	0.134	0.220	0.308	0.341	0.156	0.132	0.332	0.418	0.662	0.671	
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021	
		Right Edge 10mm	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.170	0.170	0.170	0.170	
		Top Edge 10mm	0.063	0.044	0.220	0.203	0.407	0.017	0.109	0.107	0.283	0.283	0.579	
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
LTE B7	Ant.0	Front Side 10mm	0.131	0.119	0.163	0.105	0.131	0.070	0.068	0.250	0.294	0.306	0.330	
		Back Side 10mm	0.166	0.134	0.220	0.308	0.341	0.156	0.132	0.300	0.386	0.630	0.639	

		Left Edge 10mm	0.052	0.257	0.012	0.324	0.015	0.179	0.006	0.309	0.064	0.555	0.073	
		Right Edge 10mm	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.036	0.036	0.036
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.220	0.516
		Bottom Edge 10mm	0.193	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.193	0.193	0.193	0.193
LTE B12	Ant.2	Front Side 10mm	0.098	0.119	0.163	0.105	0.131	0.070	0.068	0.217	0.261	0.273	0.297	
		Back Side 10mm	0.179	0.134	0.220	0.308	0.341	0.156	0.132	0.313	0.399	0.643	0.652	
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021	
		Right Edge 10mm	0.267	0.000	0.000	0.000	0.000	0.000	0.000	0.267	0.267	0.267	0.267	
		Top Edge 10mm	0.017	0.044	0.220	0.203	0.407	0.017	0.109	0.061	0.237	0.237	0.533	
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
LTE B12	Ant.0	Front Side 10mm	0.072	0.119	0.163	0.105	0.131	0.070	0.068	0.191	0.235	0.247	0.271	
		Back Side 10mm	0.103	0.134	0.220	0.308	0.341	0.156	0.132	0.237	0.323	0.567	0.576	
		Left Edge 10mm	0.107	0.257	0.012	0.324	0.015	0.179	0.006	0.364	0.119	0.610	0.128	
		Right Edge 10mm	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.013	0.013	0.013	
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516	
		Bottom Edge 10mm	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.058	0.058	0.058	0.058	
LTE B13	Ant.2	Front Side 10mm	0.237	0.119	0.163	0.105	0.131	0.070	0.068	0.356	0.400	0.412	0.436	
		Back Side 10mm	0.400	0.134	0.220	0.308	0.341	0.156	0.132	0.534	0.620	0.864	0.873	
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021	
		Right Edge 10mm	0.519	0.000	0.000	0.000	0.000	0.000	0.000	0.519	0.519	0.519	0.519	
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516	
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
LTE B13	Ant.0	Front Side 10mm	0.140	0.119	0.163	0.105	0.131	0.070	0.068	0.259	0.303	0.315	0.339	
		Back Side 10mm	0.209	0.134	0.220	0.308	0.341	0.156	0.132	0.343	0.429	0.673	0.682	
		Left Edge 10mm	0.157	0.257	0.012	0.324	0.015	0.179	0.006	0.414	0.169	0.660	0.178	
		Right Edge 10mm	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.092	0.092	0.092	0.092	
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516	
		Bottom Edge 10mm	0.113	0.000	0.000	0.000	0.000	0.000	0.000	0.113	0.113	0.113	0.113	
LTE B25	Ant.2	Front Side 10mm	0.116	0.119	0.163	0.105	0.131	0.070	0.068	0.235	0.279	0.291	0.315	
		Back Side 10mm	0.201	0.134	0.220	0.308	0.341	0.156	0.132	0.335	0.421	0.665	0.674	
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021	
		Right Edge 10mm	0.147	0.000	0.000	0.000	0.000	0.000	0.000	0.147	0.147	0.147	0.147	
		Top Edge 10mm	0.072	0.044	0.220	0.203	0.407	0.017	0.109	0.116	0.292	0.292	0.588	
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
LTE B25	Ant.0	Front Side 10mm	0.325	0.119	0.163	0.105	0.131	0.070	0.068	0.444	0.488	0.500	0.524	
		Back Side 10mm	0.439	0.134	0.220	0.308	0.341	0.156	0.132	0.573	0.659	0.903	0.912	
		Left Edge 10mm	0.057	0.257	0.012	0.324	0.015	0.179	0.006	0.314	0.069	0.560	0.078	
		Right Edge 10mm	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.042	0.042	0.042	
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516	
		Bottom Edge 10mm	0.733	0.000	0.000	0.000	0.000	0.000	0.000	0.733	0.733	0.733	0.733	
LTE B26	Ant.2	Front Side 10mm	0.141	0.119	0.163	0.105	0.131	0.070	0.068	0.260	0.304	0.316	0.340	
		Back Side 10mm	0.258	0.134	0.220	0.308	0.341	0.156	0.132	0.392	0.478	0.722	0.731	
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021	

		Right Edge 10mm	0.395	0.000	0.000	0.000	0.000	0.000	0.000	0.395	0.395	0.395	0.395
		Top Edge 10mm	0.008	0.044	0.220	0.203	0.407	0.017	0.109	0.052	0.228	0.228	0.524
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B26	Ant.0	Front Side 10mm	0.041	0.119	0.163	0.105	0.131	0.070	0.068	0.160	0.204	0.216	0.240
		Back Side 10mm	0.066	0.134	0.220	0.308	0.341	0.156	0.132	0.200	0.286	0.530	0.539
		Left Edge 10mm	0.044	0.257	0.012	0.324	0.015	0.179	0.006	0.301	0.056	0.547	0.065
		Right Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516
		Bottom Edge 10mm	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.055	0.055	0.055	0.055
LTE B66	Ant.2	Front Side 10mm	0.021	0.119	0.163	0.105	0.131	0.070	0.068	0.140	0.184	0.196	0.220
		Back Side 10mm	0.036	0.134	0.220	0.308	0.341	0.156	0.132	0.170	0.256	0.500	0.509
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021
		Right Edge 10mm	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.028	0.028	0.028
		Top Edge 10mm	0.004	0.044	0.220	0.203	0.407	0.017	0.109	0.048	0.224	0.224	0.520
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B66	Ant.0	Front Side 10mm	0.264	0.119	0.163	0.105	0.131	0.070	0.068	0.383	0.427	0.439	0.463
		Back Side 10mm	0.365	0.134	0.220	0.308	0.341	0.156	0.132	0.499	0.585	0.829	0.838
		Left Edge 10mm	0.035	0.257	0.012	0.324	0.015	0.179	0.006	0.292	0.047	0.538	0.056
		Right Edge 10mm	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.028	0.028	0.028
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516
		Bottom Edge 10mm	0.641	0.000	0.000	0.000	0.000	0.000	0.000	0.641	0.641	0.641	0.641
LTE B41	Ant.2	Front Side 10mm	0.097	0.119	0.163	0.105	0.131	0.070	0.068	0.216	0.260	0.272	0.296
		Back Side 10mm	0.334	0.134	0.220	0.308	0.341	0.156	0.132	0.468	0.554	0.798	0.807
		Left Edge 10mm	0.000	0.257	0.012	0.324	0.015	0.179	0.006	0.257	0.012	0.503	0.021
		Right Edge 10mm	0.176	0.000	0.000	0.000	0.000	0.000	0.000	0.176	0.176	0.176	0.176
		Top Edge 10mm	0.055	0.044	0.220	0.203	0.407	0.017	0.109	0.099	0.275	0.275	0.571
		Bottom Edge 10mm	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B41	Ant.0	Front Side 10mm	0.106	0.119	0.163	0.105	0.131	0.070	0.068	0.225	0.269	0.281	0.305
		Back Side 10mm	0.120	0.134	0.220	0.308	0.341	0.156	0.132	0.254	0.340	0.584	0.593
		Left Edge 10mm	0.035	0.257	0.012	0.324	0.015	0.179	0.006	0.292	0.047	0.538	0.056
		Right Edge 10mm	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.030	0.030	0.030
		Top Edge 10mm	0.000	0.044	0.220	0.203	0.407	0.017	0.109	0.044	0.220	0.220	0.516
		Bottom Edge 10mm	0.153	0.000	0.000	0.000	0.000	0.000	0.000	0.153	0.153	0.153	0.153

Note:

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

2: The highest Summed 1g SAR is 1.228 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY8	16.2.2.1588	N/A	N/A
750MHz Validation Dipole	Speag	D750V3	SN: 1208	2021/07/05	2024/07/04
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2024/05/08	2027/05/07
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2024/05/08	2027/05/07
1950MHz Validation Dipole	Speag	D1950V3	SN: 1240	2021/09/13	2024/09/12
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2024/05/07	2027/05/06
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2024/05/08	2027/05/07
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2024/05/09	2027/05/08
Data Acquisition Electronicsr	Speag	DAE4	SN: 1711	2024/03/18	2025/03/17
E-Field Probe	Speag	EX3DV4	SN: 7510	2024/06/25	2025/06/24
E-Field Probe	Speag	EX3DV4	SN: 7607	2023/07/04	2024/07/04
Signal Generator	R&S	SMB100A	177746	2024/04/24	2025/04/23
Power Meter	R&S	NRVD-B2	835843/014	2023/09/05	2024/09/04
Power Sensor	R&S	NRV-Z4	100381	2023/09/05	2024/09/04
Power Sensor	R&S	NRV-Z2	100211	2023/09/05	2024/09/04
Wireless Communication Test Set	Anritsu	MT8820C	6201502991	2023/11/14	2024/11/13
Network Analyzer	Agilent	E5071C	MY46103472	2023/11/14	2024/11/14
Thermometer	Elitech	RC-4	EF5238001628	2023/10/09	2024/10/08
Thermometer	Elitech	RC-4HC	EF7239002652	2023/11/17	2024/11/16
Power Amplifier	SATIMO	6552B	22374	N/A	N/A
Dielectric Probe Kit	Speag	DAK3.5	SN: 1312	N/A	N/A
Phantom	Speag	SAM	SN: 1859	N/A	N/A
Attenuator	COM-MW	ZA-S1-31	1305003187	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

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

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

ANNEX A SIMULATING LIQUID VERIFICATION RESULT

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

Head Liquid

Date	Liquid Type	Fre. (MHz)	Temp. (°C)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ϵ)	Target Conductivity (σ) (S/m)	Target Permittivity (ϵ)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2024.06.26	Head	750	21.6	0.90	41.09	0.89	41.94	1.12	-2.03
2024.06.27	Head	750	21.4	0.89	42.19	0.89	41.94	0.00	0.60
2024.08.04	Head	835	21.5	0.88	41.93	0.90	41.50	-2.22	1.04
2024.07.20	Head	835	21.2	0.88	42.78	0.90	41.50	-2.22	3.08
2024.07.07	Head	1750	21.1	1.38	39.07	1.37	40.08	0.73	-2.52
2024.07.08	Head	1750	21.4	1.38	39.10	1.37	40.08	0.73	-2.45
2024.07.01	Head	1950	21.5	1.45	38.78	1.40	40.00	3.57	-3.05
2024.07.09	Head	2450	21.4	1.82	39.31	1.80	39.20	1.11	0.28
2024.07.10	Head	2600	21.7	2.00	39.13	1.96	39.01	2.04	0.31
2024.07.11	Head	2600	21.2	1.95	38.51	1.96	39.01	-0.51	-1.28
2024.08.09	Head	5250	21.3	4.71	36.60	4.71	35.93	0.00	1.86
2024.07.18	Head	5600	21.3	5.04	35.20	5.07	35.53	-0.59	-0.93
2024.07.19	Head	5750	21.5	5.14	35.82	5.22	35.36	-1.53	1.30
2024.07.03	Head	1950	21.3	1.39	39.50	1.40	40.00	-0.71	-1.25

Note: The tolerance limit of Conductivity and Permittivity is $\pm 5\%$.

ANNEX B SYSTEM CHECK RESULT

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

Head liquid 1g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2024.06.26	Head	750	100	0.85	8.52	8.51	0.12
2024.06.27	Head	750	100	0.84	8.43	8.51	-0.94
2024.08.04	Head	835	100	0.97	9.68	9.74	-0.62
2024.07.20	Head	835	100	0.97	9.66	9.74	-0.82
2024.07.07	Head	1750	100	3.58	35.80	37.00	-3.24
2024.07.08	Head	1750	100	3.74	37.40	37.00	1.08
2024.07.01	Head	1950	100	4.23	42.30	41.40	2.17
2024.07.09	Head	2450	100	5.41	54.10	52.60	2.85
2024.07.10	Head	2600	100	5.65	56.50	55.90	1.07
2024.07.11	Head	2600	100	5.68	56.80	55.90	1.61
2024.08.09	Head	5250	100	8.21	82.10	77.70	5.66
2024.07.18	Head	5600	100	8.39	83.90	81.30	3.20
2024.07.19	Head	5750	100	8.21	82.10	77.60	5.80
2024.07.03	Head	1950	100	4.34	43.40	41.40	4.83

Note: The tolerance limit of System validation $\pm 10\%$.

Head liquid 10g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2024.08.09	Head	5250	100	2.15	21.50	22.00	-2.27
2024.07.18	Head	5600	100	2.38	23.80	23.10	3.03
2024.07.19	Head	5750	100	2.22	22.20	21.90	1.37

Note: The tolerance limit of System validation $\pm 10\%$.

System Performance Check Data (750MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
CD750V2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		CD700	CW, 0--	750.0, 100	10.31	0.896	41.1	22.2	21.6

Hardware Setup

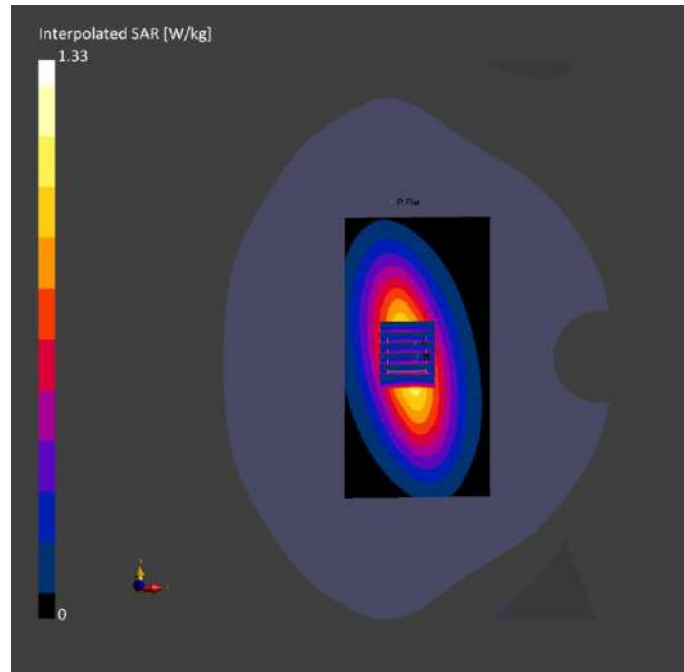
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-06-26	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 160.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-06-26	2024-06-26
psSAR1g [W/kg]	0.844	0.852
psSAR10g [W/kg]	0.568	0.561
Power Drift [dB]	-0.11	-0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		85.3
Dist 3dB Peak [mm]		17.1



System Performance Check Data (750MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	180.0 x 10.0 x 10.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D750	CW, 0--	750.0, 50	10.31	0.887	42.2	22.3	21.4

Hardware Setup

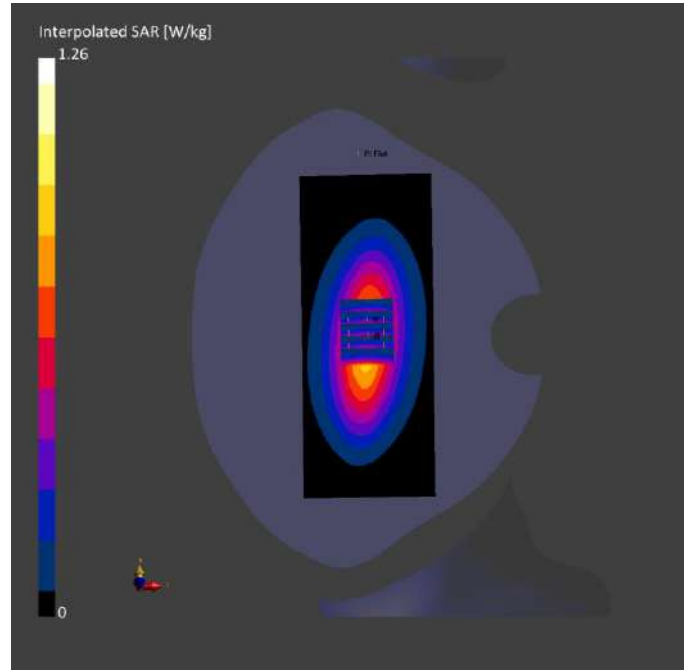
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2090	HBBL-600-10000 2024-06-27	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-06-27	2024-06-27
psSAR1g [W/kg]	0.862	0.843
psSAR10g [W/kg]	0.571	0.559
Power Drift [dB]	-0.04	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		67.2
Dist 3dB Peak [mm]		16.1



System Performance Check Data (835MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
CD835V2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	5.00	CD835	CW, 0--	835.0, 50	9.99	0.88	41.9	22.4	21.5

Hardware Setup

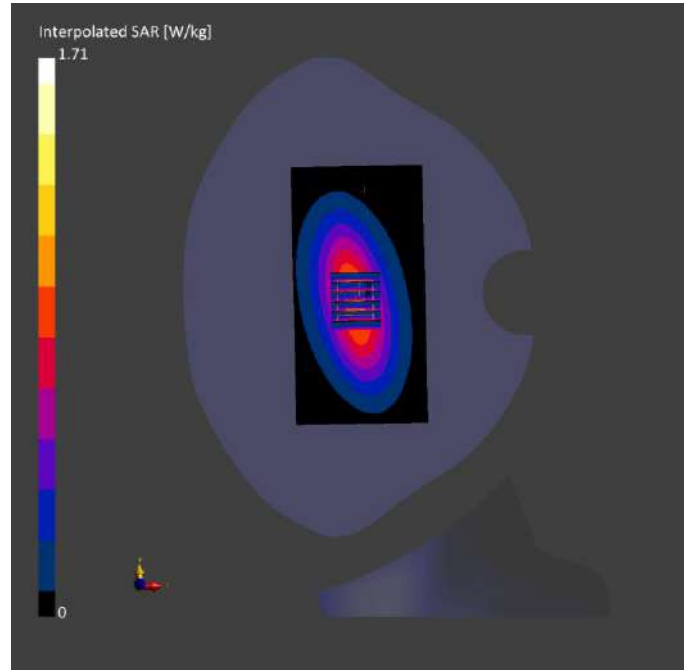
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-04	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 160.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-04	2024-08-04
psSAR1g [W/kg]	0.958	0.968
psSAR10g [W/kg]	0.624	0.637
Power Drift [dB]	-0.01	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		81.5
Dist 3dB Peak [mm]		16.4



System Performance Check Data (835MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
CD835V2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		CD835	CW, 0--	835.0, 50	9.99	0.878	42.8	22.3	21.2

Hardware Setup

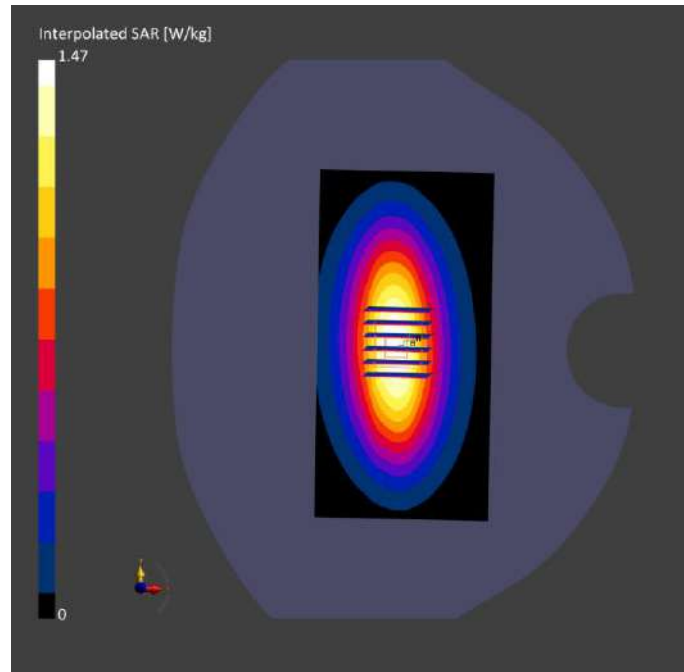
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-20	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 160.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-20	2024-07-20
psSAR1g [W/kg]	0.935	0.966
psSAR10g [W/kg]	0.622	0.634
Power Drift [dB]	-0.02	0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		85.3
Dist 3dB Peak [mm]		13.1



System Performance Check Data (1750MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
D1750V2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D1750	CW, 0--	1750.0, 50	8.67	1.38	39.1	22.2	21.1

Hardware Setup

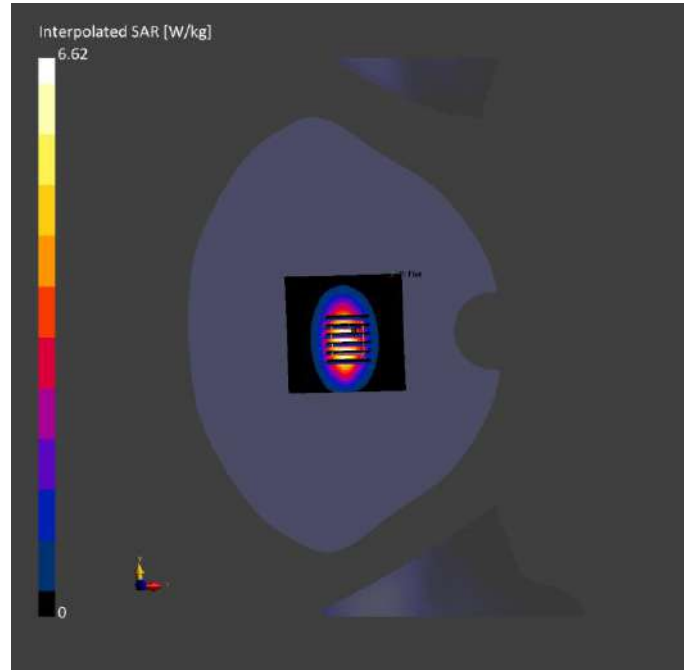
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-07	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-07	2024-07-07
psSAR1g [W/kg]	3.47	3.58
psSAR10g [W/kg]	1.81	1.92
Power Drift [dB]	-0.01	0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		81.3
Dist 3dB Peak [mm]		9.5



System Performance Check Data (1750MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
D1750V2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D1750	CW, 0--	1750.0, 50	8.67	1.38	39.1	22.3	21.4

Hardware Setup

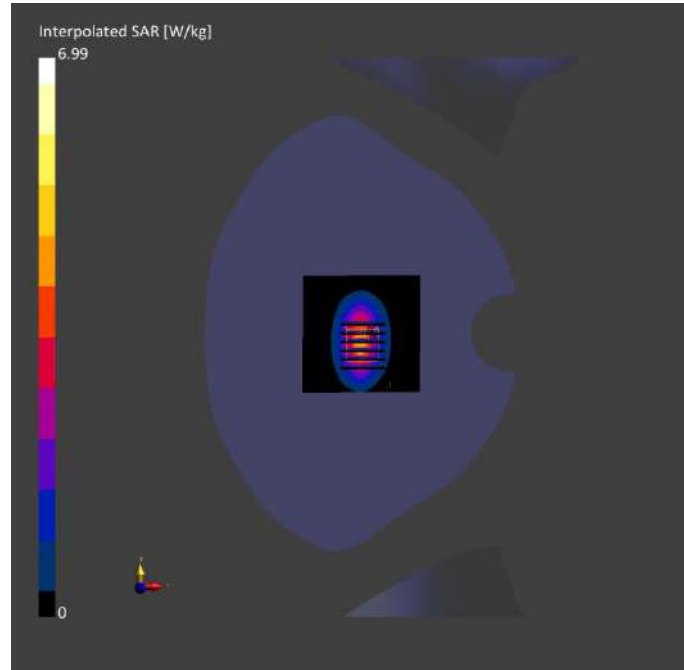
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-07	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-07	2024-07-07
psSAR1g [W/kg]	3.55	3.74
psSAR10g [W/kg]	1.92	1.88
Power Drift [dB]	-0.11	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		82.1
Dist 3dB Peak [mm]		9.5



System Performance Check Data (1950MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
D1950V2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D1950	CW, 0--	1950.0, 50	7.87	1.45	38.8	22.5	21.5

Hardware Setup

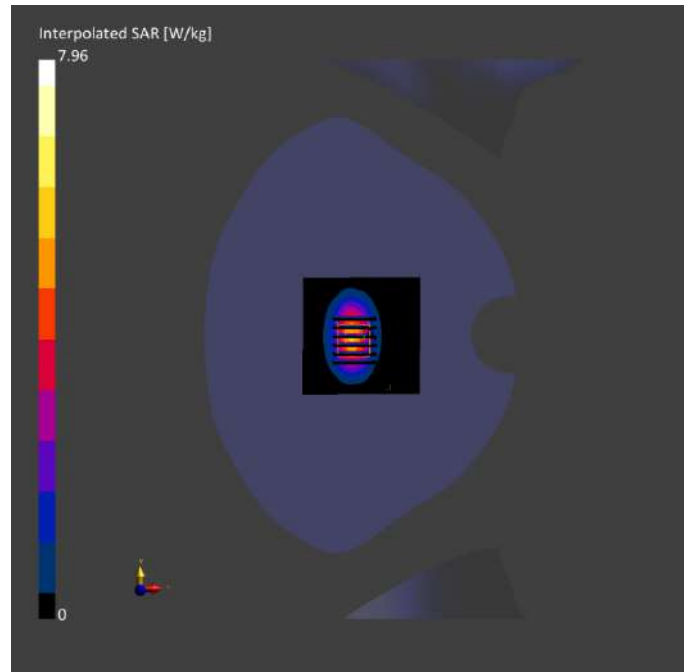
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-01	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-01	2024-07-01
psSAR1g [W/kg]	4.41	4.23
psSAR10g [W/kg]	2.32	2.05
Power Drift [dB]	-0.04	-0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		81.5
Dist 3dB Peak [mm]		9.2



System Performance Check Data (2450MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
D2450V2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D2450	CW, 0--	2450.0, 50	7.75	1.82	39.3	22.6	21.4

Hardware Setup

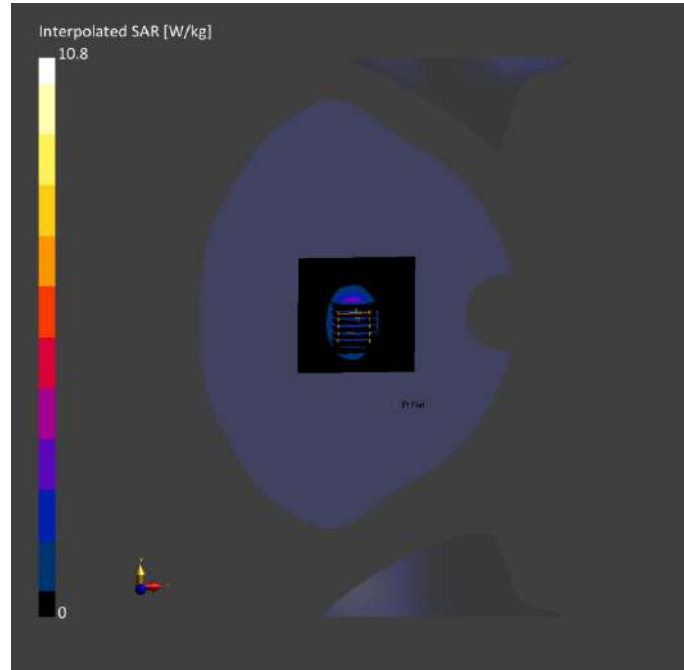
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-09	2024-07-09
psSAR1g [W/kg]	5.38	5.41
psSAR10g [W/kg]	2.51	2.49
Power Drift [dB]	0.02	-0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		81.4
Dist 3dB Peak [mm]		9.5



System Performance Check Data (2600MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
CD2600V3, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		CD2600 V3	CW, 0--	2600.0, 50	7.59	2.00	39.1	22.7	21.7

Hardware Setup

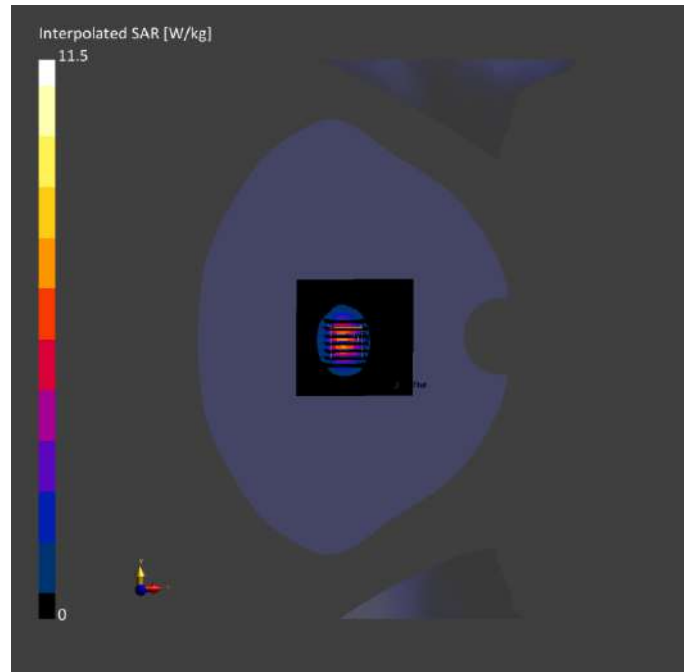
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-10	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-10	2024-07-10
psSAR1g [W/kg]	5.78	5.65
psSAR10g [W/kg]	2.80	2.53
Power Drift [dB]	0.00	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		79.5
Dist 3dB Peak [mm]		9.1



System Performance Check Data (2600MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
CD2600V3, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		CD2600 V3	CW, 0--	2600.0, 50	7.59	1.95	38.5	22.4	21.2

Hardware Setup

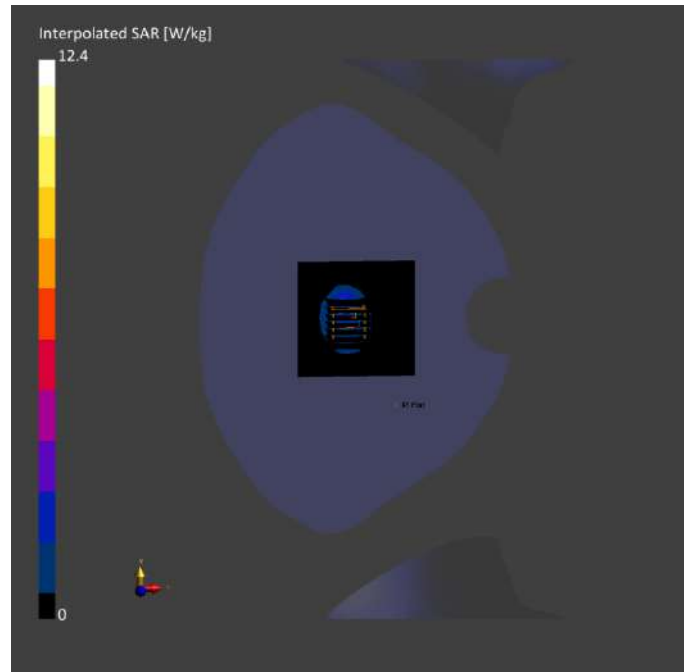
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-11	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-11	2024-07-11
psSAR1g [W/kg]	5.83	5.68
psSAR10g [W/kg]	2.67	2.54
Power Drift [dB]	0.01	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		79.4
Dist 3dB Peak [mm]		9.3



System Performance Check Data (5250MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
D5GHZV2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D5GHz	CW, 0--	5250.0, 20	5.74	4.71	36.6	22.2	21.3

Hardware Setup

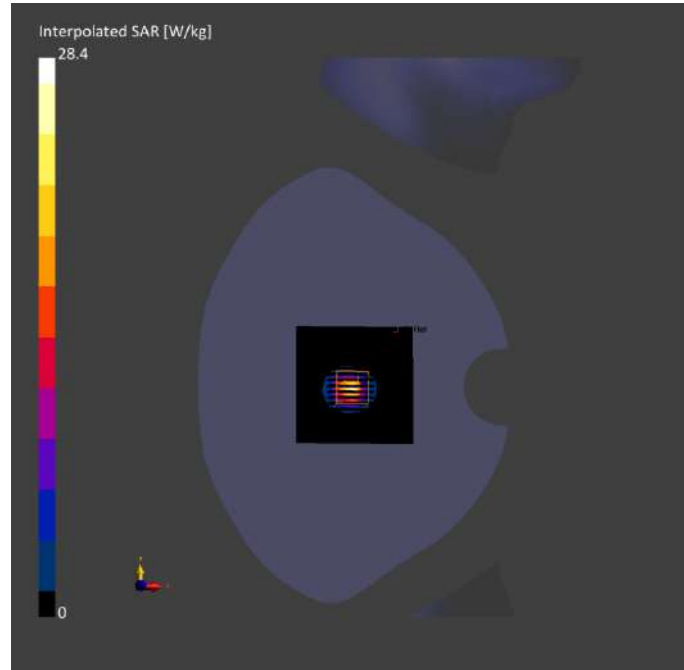
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-09	2024-08-09
psSAR1g [W/kg]	7.98	8.21
psSAR10g [W/kg]	1.99	2.15
Power Drift [dB]	0.04	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		65.8
Dist 3dB Peak [mm]		7.4



System Performance Check Data (5600MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
D5GHZV2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D5GHz	CW, 0--	5600.0, 60	5.00	5.04	35.2	22.4	21.3

Hardware Setup

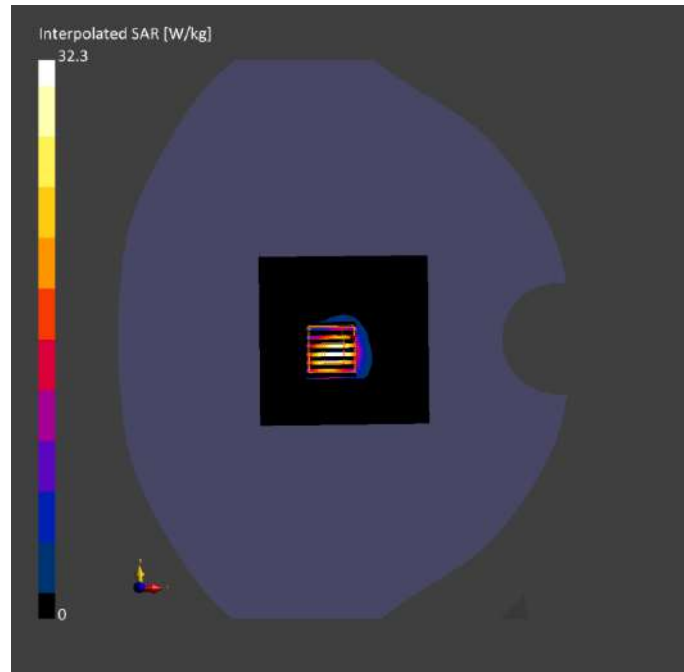
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-18	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-18	2024-07-18
psSAR1g [W/kg]	7.99	8.39
psSAR10g [W/kg]	2.14	2.38
Power Drift [dB]	0.01	0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		64.3
Dist 3dB Peak [mm]		7.2



System Performance Check Data (5750MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
D5GHZV2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D5GHz	CW, 0--	5750.0, 60	5.4	5.14	35.8	22.5	21.5

Hardware Setup

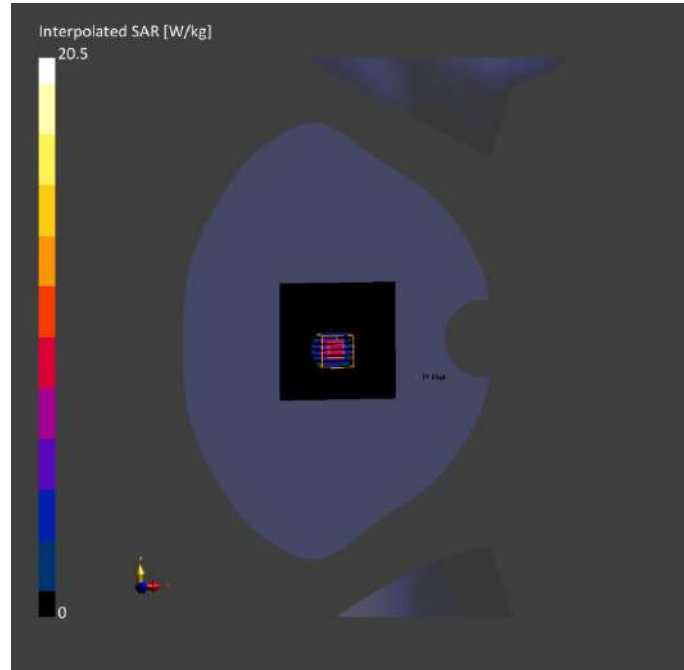
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-19	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-19	2024-07-19
psSAR1g [W/kg]	7.39	8.21
psSAR10g [W/kg]	2.32	2.22
Power Drift [dB]	0.02	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		63.1
Dist 3dB Peak [mm]		7.4



System Performance Check Data (1950MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
D1900V2, SPEAG	10.0 x 10.0 x 3.0	Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL		D1950	CW, 0--	1950.0, 50	8.33	1.39	39.5	22.3	21.3

Hardware Setup

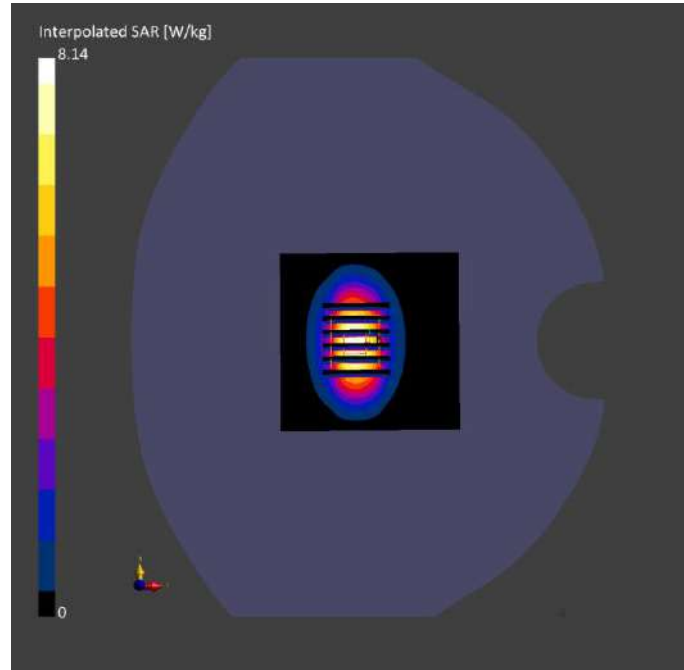
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-03	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-03	2024-07-03
psSAR1g [W/kg]	4.05	4.34
psSAR10g [W/kg]	2.04	2.11
Power Drift [dB]	-0.05	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		81.5
Dist 3dB Peak [mm]		9.6



ANNEX C TEST DATA

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

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	GSM 850	GSM, 10024-DAC	836.6, 190	9.99	0.894	40.4	22.4	21.5

Hardware Setup

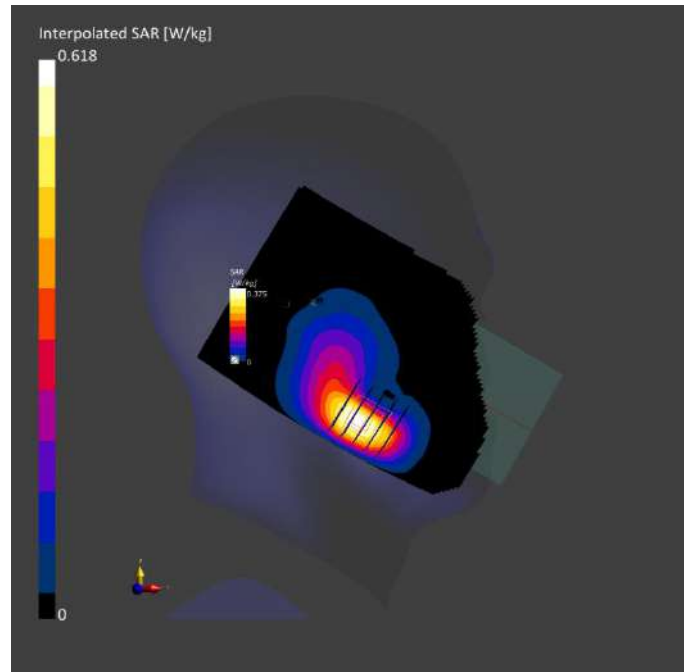
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-04	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-04	2024-08-04
psSAR1g [W/kg]	0	0.359
psSAR10g [W/kg]	0	0.203
Power Drift [dB]	-0.00	-0.11
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		59.3
Dist 3dB Peak [mm]		10.3



Meas.2 Body Plane with Right Edge 10mm on Middle Channel in GPRS850 2Slots mode with Antenna 1

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, RIGHT, 10.00	GSM, 850	GSM, 10024-DAC	836.6, 190	9.99	0.894	40.4	22.4	21.5

Hardware Setup

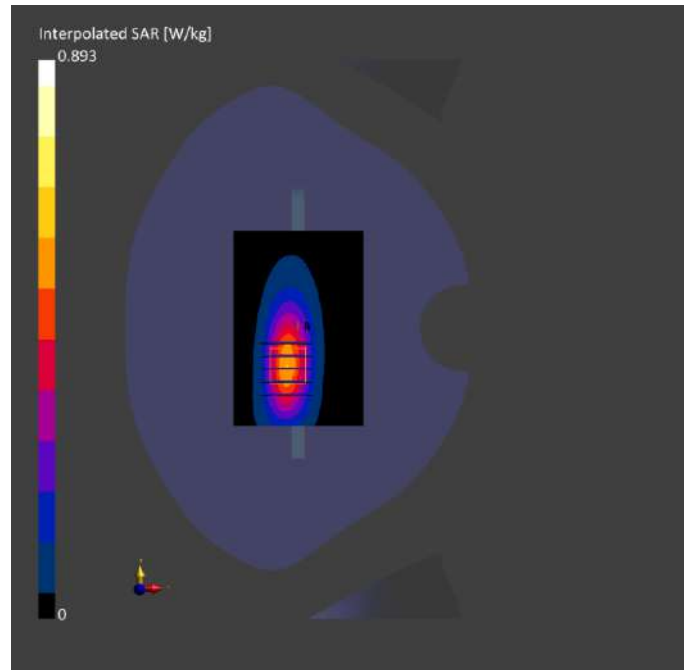
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-04	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-04	2024-08-04
psSAR1g [W/kg]	0.497	0.507
psSAR10g [W/kg]	0.302	0.293
Power Drift [dB]	0.00	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.4
Dist 3dB Peak [mm]		11.2



Meas.3 Right Head with Cheek on Middle Channel in GPRS1900 2Slots mode with Antenna 2
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	PCS 1900	GSM, 10024-DAC	1909.8, 810	7.98	1.42	40.1	22.5	21.5

Hardware Setup

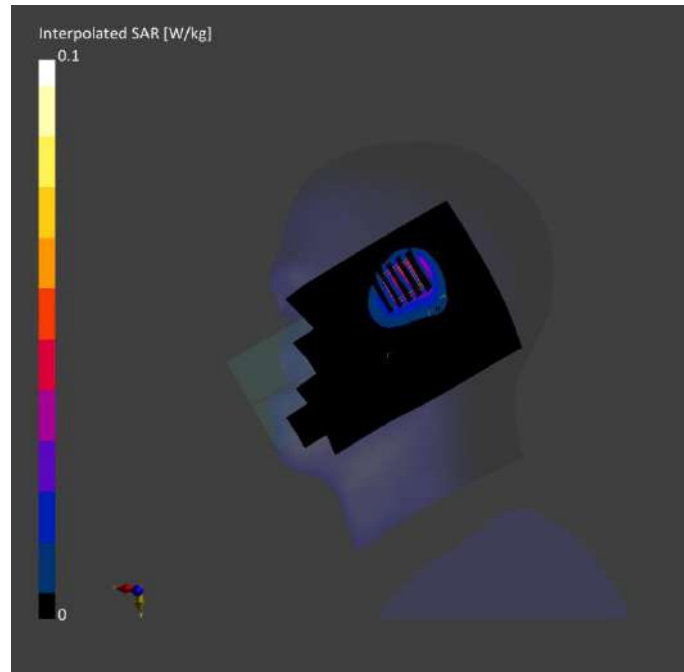
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-01	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-01	2024-07-01
psSAR1g [W/kg]	0.054	0.050
psSAR10g [W/kg]	0.028	0.026
Power Drift [dB]	-0.10	-0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		50.5
Dist 3dB Peak [mm]		16.0



Meas.4 Body Plane with Bottom Edge 10mm on Middle Channel in GPRS1900 2Slots mode with Antenna 0

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, BOTTOM, 10.00	PCS, 1900	GSM, 10024-DAC	1909.8, 810	7.98	1.42	40.1	22.5	21.5

Hardware Setup

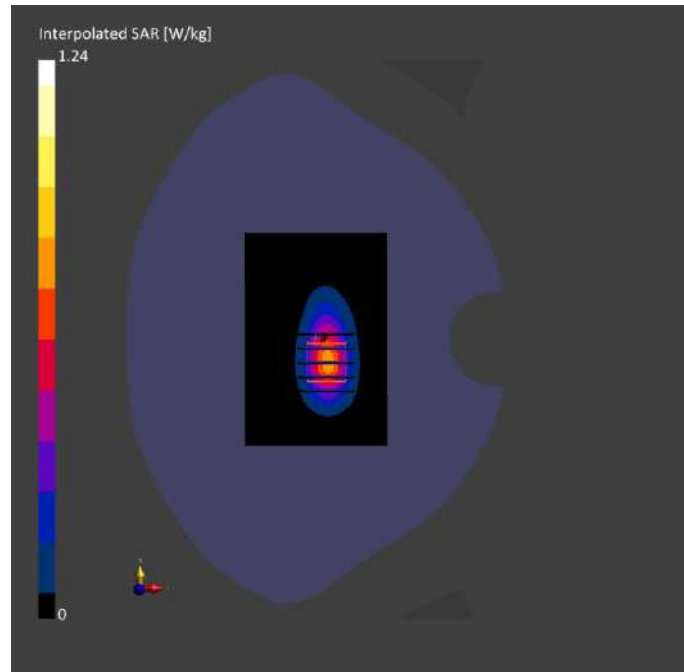
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-01	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-01	2024-07-01
psSAR1g [W/kg]	0.620	0.681
psSAR10g [W/kg]	0.312	0.349
Power Drift [dB]	-0.11	-0.07
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.3
Dist 3dB Peak [mm]		8.0



Meas.5 Right Head with Cheek on Middle Channel in WCDMA Band2 mode with Antenna 2

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 2	WCDMA, 10011-CAC	1880.0, 9400	7.98	1.39	40.4	22.5	21.5

Hardware Setup

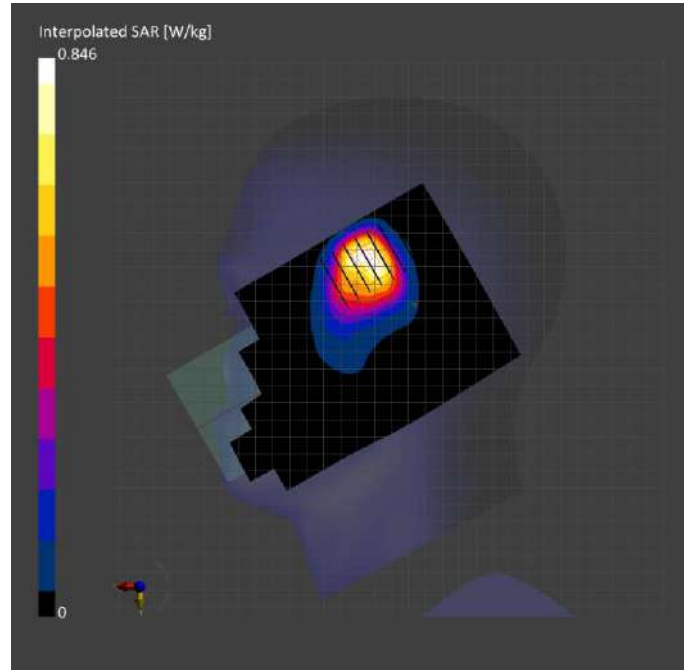
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-01	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 48.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-01	2024-07-01
psSAR1g [W/kg]	0.449	0.431
psSAR10g [W/kg]	0.258	0.243
Power Drift [dB]	-0.02	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		43.1
Dist 3dB Peak [mm]		7.2



Meas.6 Body Plane with Bottom Edge 10mm on High Channel in WCDMA Band2 mode with Antenna 0

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, BOTTOM, 10.00	Band 2	WCDMA, 10011-CAC	1880, 9400	7.98	1.39	40.4	22.5	21.5

Hardware Setup

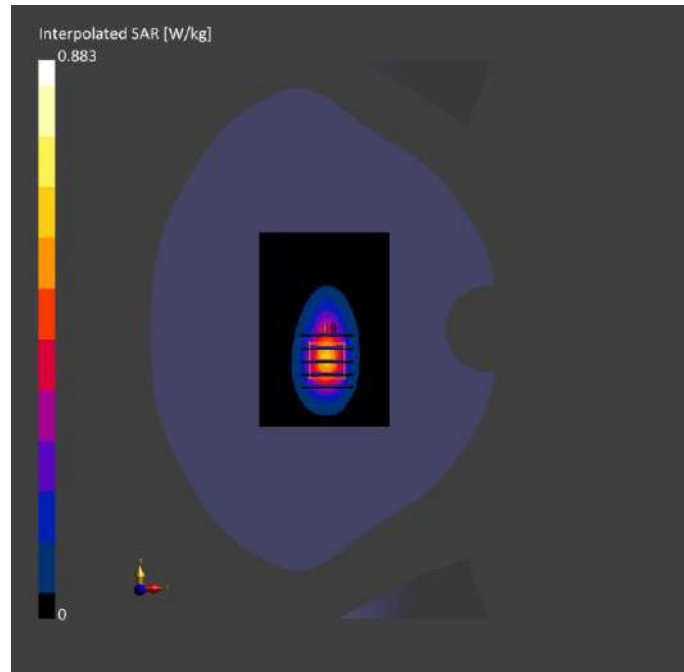
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-01	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-01	2024-07-01
psSAR1g [W/kg]	0.492	0.502
psSAR10g [W/kg]	0.256	0.267
Power Drift [dB]	0.00	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		57.2
Dist 3dB Peak [mm]		11.2



Meas.7 Right Head with Cheek on Low Channel in WCDMA Band4 mode with Antenna 2

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 4	WCDMA, 10011-CAC	1712.4, 1312	8.67	1.35	41.3	22.2	22.1

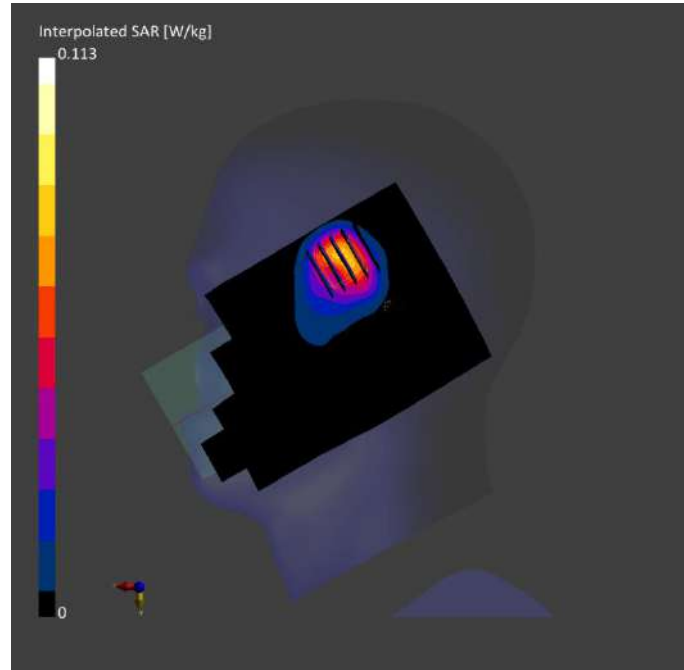
Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-07	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

Measurement Results

	Area Scan	Zoom Scan		Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0	Date	2024-07-07	2024-07-07
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0	psSAR1g [W/kg]	0.058	0.055
Sensor Surface [mm]	3.0	1.4	psSAR10g [W/kg]	0.033	0.030
Graded Grid	Yes	Yes	Power Drift [dB]	0.04	0.09
Grading Ratio	1.5	1.5	Power Scaling	Disabled	Disabled
MAIA	Y	Y	Scaling Factor [dB]		
Surface Detection	VMS + 6p	VMS + 6p	TSL Correction	No correction	No correction
Scan Method	Measured	Measured	M2/M1 [%]		43.8
			Dist 3dB Peak [mm]		16.0



Meas.8 Body Plane with Bottom Edge 10mm on High Channel in WCDMA Band4 mode with Antenna 0

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, BOTTOM, 10.00	Band 4	WCDMA, 10011-CAC	1712.4, 1312	8.67	1.35	41.3	22.2	22.1

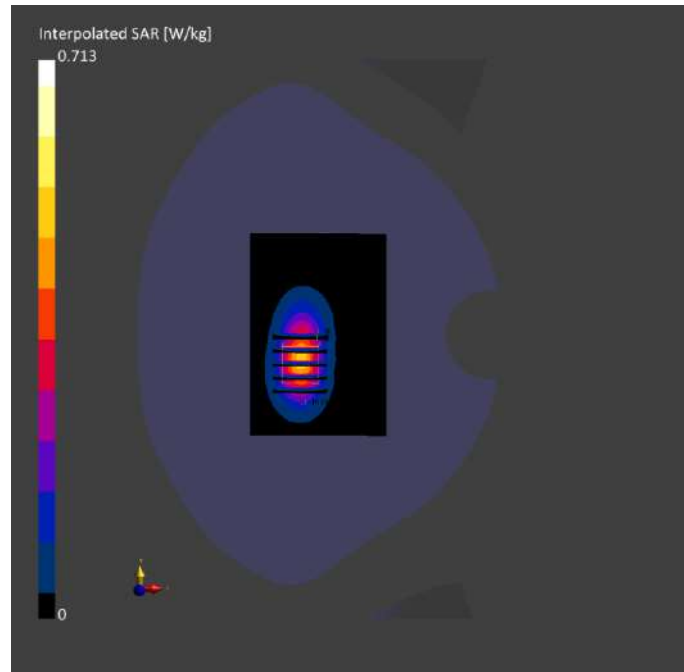
Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-07	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

Measurement Results

	Area Scan	Zoom Scan		Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	32.0 x 32.0 x 30.0	Date	2024-07-07	2024-07-07
Grid Steps [mm]	8.0 x 15.0	8.0 x 8.0 x 5.0	psSAR1g [W/kg]	0.405	0.420
Sensor Surface [mm]	3.0	1.4	psSAR10g [W/kg]	0.215	0.230
Graded Grid	Yes	Yes	Power Drift [dB]	0.01	0.00
Grading Ratio	1.5	1.5	Power Scaling	Disabled	Disabled
MAIA	N/A	N/A	Scaling Factor [dB]		
Surface Detection	VMS + 6p	VMS + 6p	TSL Correction	No correction	No correction
Scan Method	Measured	Measured	M2/M1 [%]		59.3
			Dist 3dB Peak [mm]		11.2



Meas.9 Left Head with Cheek on Middle Channel in WCDMA Band5 mode with Antenna 1

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
LeftHead, HSL	CHEEK, 0.00	Band 5	WCDMA, 10011-CAC	836.4, 4182	9.99	0.89	41.0	22.4	21.5

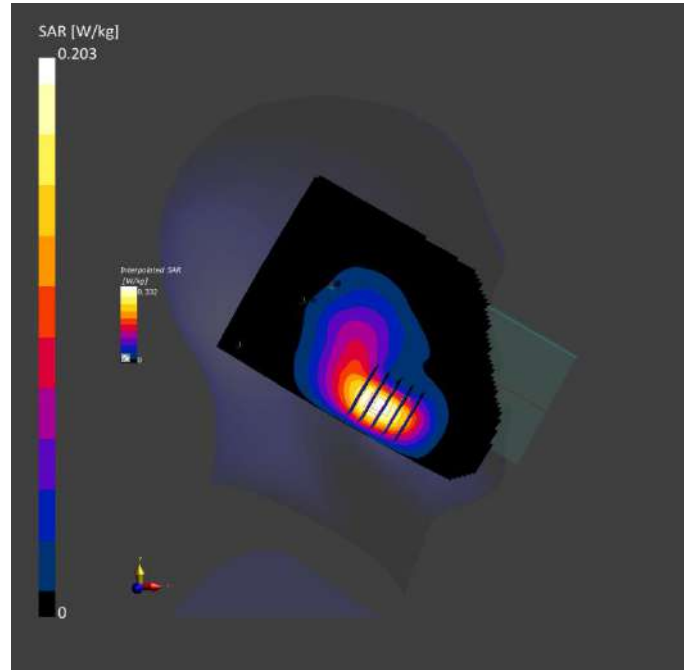
Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-04	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

Measurement Results

	Area Scan	Zoom Scan		Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0	Date	2024-08-04	2024-08-04
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0	psSAR1g [W/kg]	0	0.195
Sensor Surface [mm]	3.0	1.4	psSAR10g [W/kg]	0	0.112
Graded Grid	Yes	Yes	Power Drift [dB]	-0.01	-0.16
Grading Ratio	1.5	1.5	Power Scaling	Disabled	Disabled
MAIA	N/A	N/A	Scaling Factor [dB]		
Surface Detection	VMS + 6p	VMS + 6p	TSL Correction	No correction	No correction
Scan Method	Measured	Measured	M2/M1 [%]		59.4
			Dist 3dB Peak [mm]		10.0



Meas.10 Body Plane with Back Side 10mm on Middle Channel in WCDMA Band5 mode with Antenna 1

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	BACK, 10.00	Band 5	WCDMA, 10011-CAC	846.6, 4233	9.99	0.89	41.0	22.4	21.5

Hardware Setup

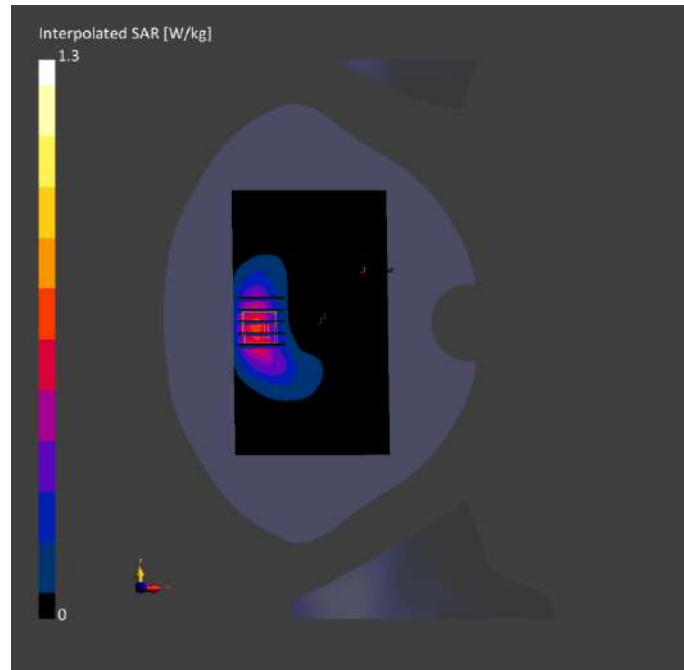
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-04	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-04	2024-08-04
psSAR1g [W/kg]	0.588	0.658
psSAR10g [W/kg]	0.377	0.383
Power Drift [dB]	-0.00	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.0
Dist 3dB Peak [mm]		9.6



Meas.11 Right Head with Cheek on Middle Channel in LTE Band5 mode with Antenna 1
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 5	LTE-FDD, 10175-CAH	836.5, 20525	9.99	0.882	40.3	22.3	21.2

Hardware Setup

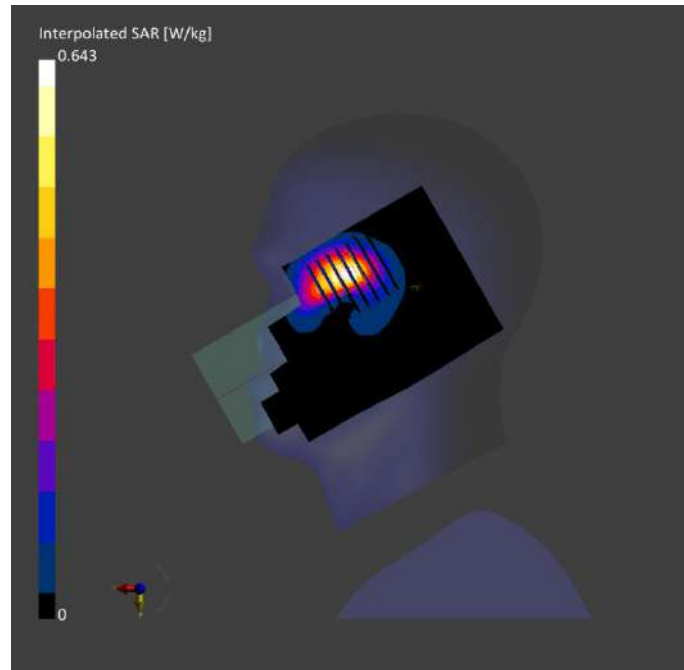
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-20	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-20	2024-07-20
psSAR1g [W/kg]	0.334	0.348
psSAR10g [W/kg]	0.200	0.191
Power Drift [dB]	0.03	-0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		50.6
Dist 3dB Peak [mm]		7.2



Meas.12 Body Plane with Right Edge 10mm on Middle Channel in LTE Band5 mode with Antenna 1
 Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, RIGHT, 10.00	Band 5	LTE-FDD, 10175-CAH	836.5, 20525	9.99	0.882	40.3	22.3	21.2

Hardware Setup

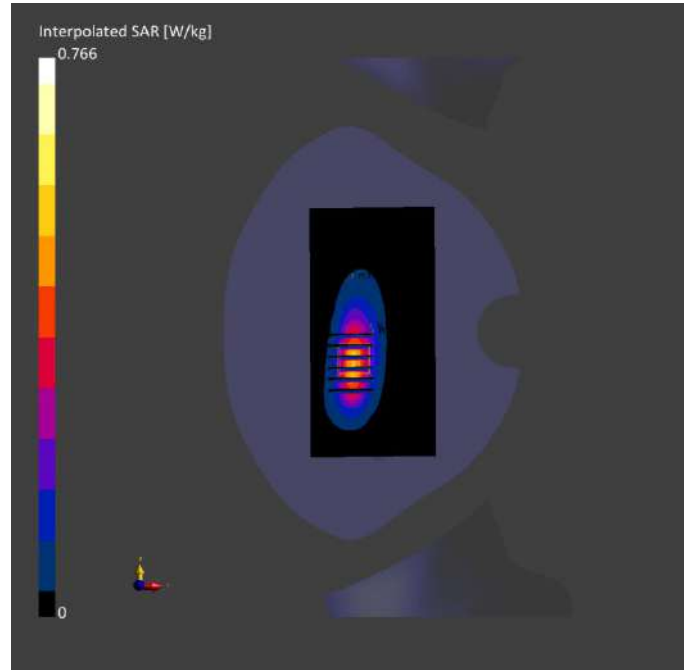
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-20	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1710, 2024-01-03

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	90.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-20	2024-07-20
psSAR1g [W/kg]	0.453	0.451
psSAR10g [W/kg]	0.267	0.256
Power Drift [dB]	0.02	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		57.0
Dist 3dB Peak [mm]		9.6



Meas.13 Right Head with Cheek on Middle Channel in LTE Band7 mode with Antenna 2

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 7	LTE-FDD, 10169-CAF	2535.0, 21100	7.75	1.90	39.9	22.7	21.7

Hardware Setup

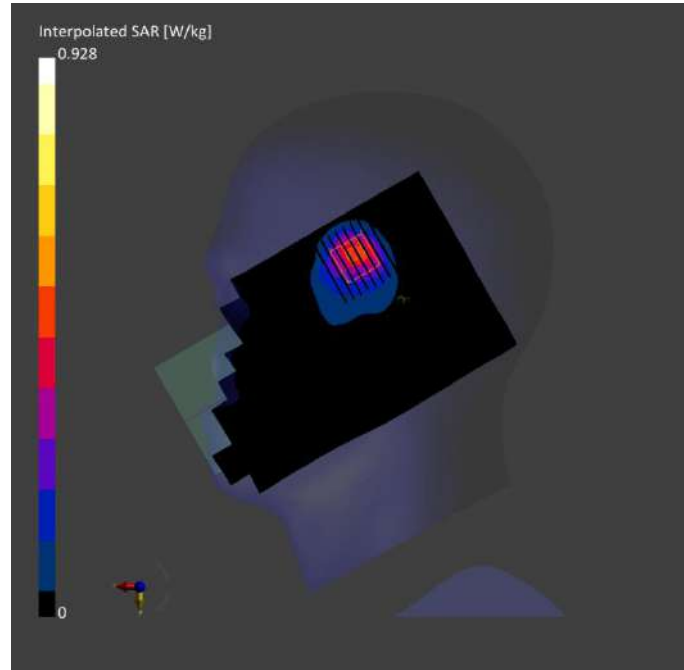
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-10	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 192.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	All points	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-10	2024-07-10
psSAR1g [W/kg]	0.399	0.435
psSAR10g [W/kg]	0.201	0.203
Power Drift [dB]	-0.00	-0.15
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		45.6
Dist 3dB Peak [mm]		8.3



Meas.14 Body Plane with Back Side 10mm on Middle Channel in LTE Band7 mode with Antenna 2
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	BACK, 10.00	Band 7	LTE-FDD, 10169-CAF	2535.0, 21100	7.75	1.90	39.9	22.7	21.7

Hardware Setup

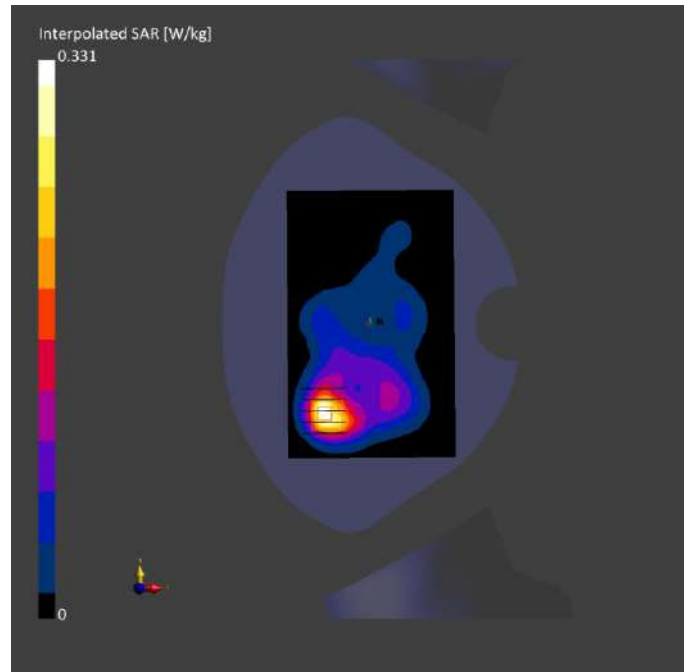
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-10	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 192.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-10	2024-07-10
psSAR1g [W/kg]	0.174	0.179
psSAR10g [W/kg]	0.088	0.088
Power Drift [dB]	-0.02	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.7
Dist 3dB Peak [mm]		11.6



Meas.15 Left Head with Cheek on Middle Channel in LTE Band12 mode with Antenna 1
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
LeftHead, HSL	CHEEK, 0.00	Band 12	LTE-FDD, 10175-CAH	707.5, 23095	10.31	0.866	41.7	22.2	21.6

Hardware Setup

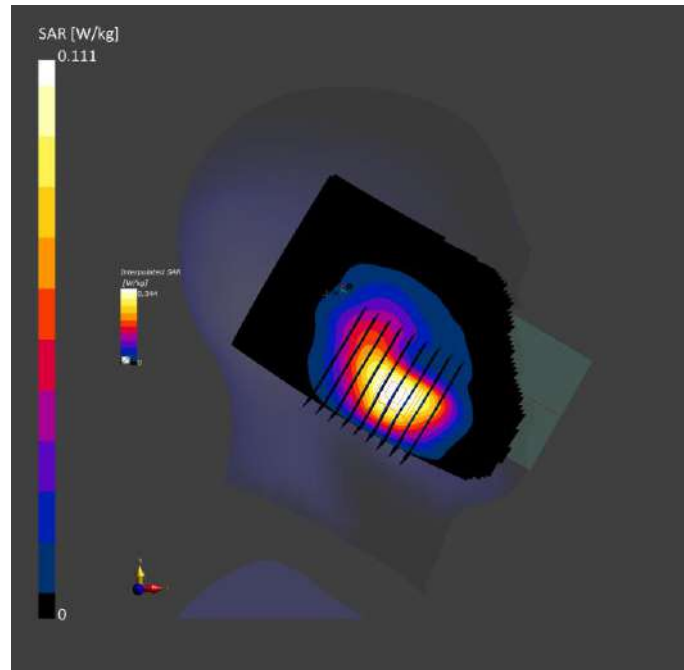
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-06-26	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	All points	All points
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-06-26	2024-06-26
psSAR1g [W/kg]	0	0.184
psSAR10g [W/kg]	0	0.102
Power Drift [dB]	0.01	0.00
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.9
Dist 3dB Peak [mm]		10.2



Meas.16 Body Plane with Right Edge 10mm on Middle Channel in LTE Band12 mode with Antenna 1

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, RIGHT, 10.00	Band 12	LTE-FDD, 10175-CAH	707.5, 23095	10.31	0.866	41.7	22.2	21.6

Hardware Setup

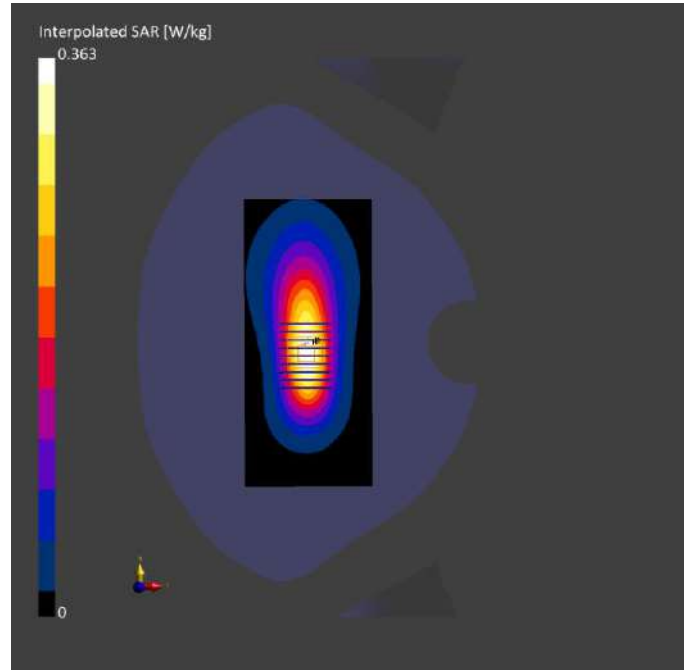
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-06-26	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 180.0	32.0 x 40.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	8.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-06-26	2024-06-26
psSAR1g [W/kg]	0.230	0.237
psSAR10g [W/kg]	0.146	0.150
Power Drift [dB]	0.00	0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		65.1
Dist 3dB Peak [mm]		12.8



Meas.17 Right Head with Cheek on Middle Channel in LTE Band13 mode with Antenna 1
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 13	LTE-FDD, 10175-CAH	782.0, 23230	10.31	0.915	40.9	22.3	21.4

Hardware Setup

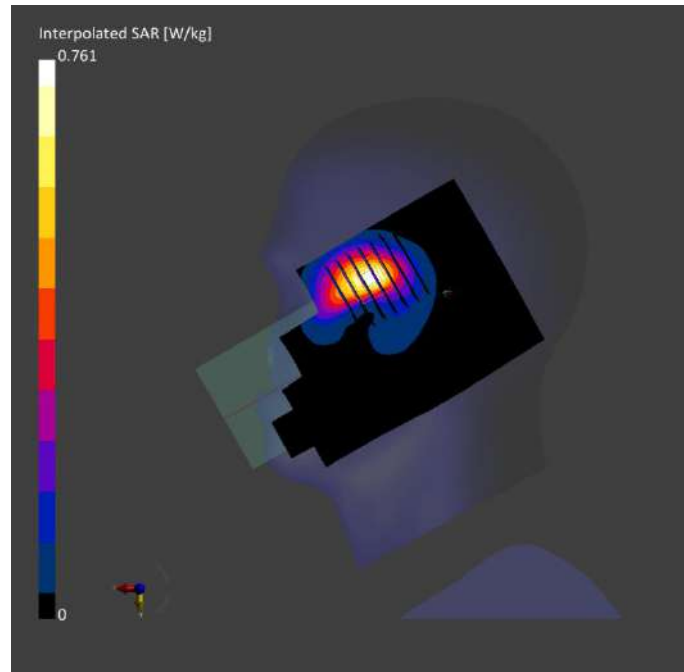
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-06-27	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-06-27	2024-06-27
psSAR1g [W/kg]	0.396	0.407
psSAR10g [W/kg]	0.239	0.224
Power Drift [dB]	-0.03	0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		49.7
Dist 3dB Peak [mm]		8.0



Meas.18 Body Plane with Right Edge 10mm on Middle Channel in LTE Band13 mode with Antenna 1

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, RIGHT, 10.00	Band 13	LTE-FDD, 10175-CAH	782.0, 23230	10.31	0.915	40.9	22.3	21.4

Hardware Setup

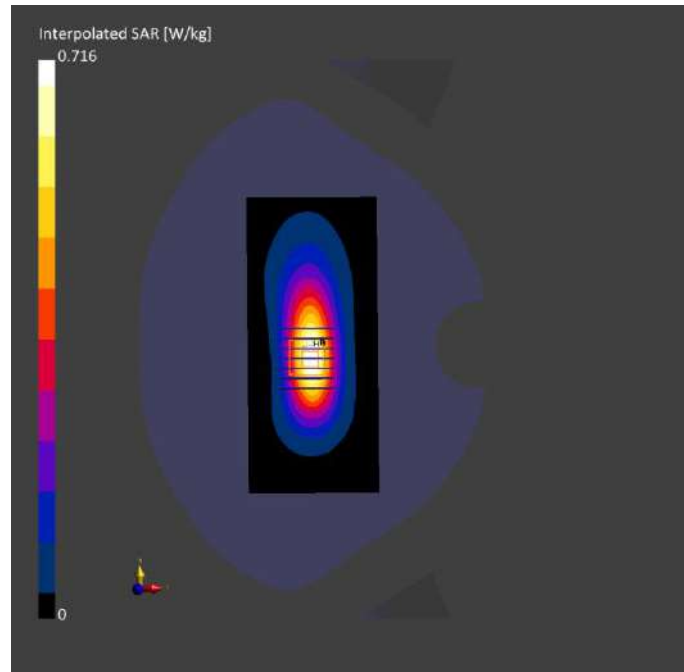
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-06-27	EX3DV4 - SN7607, 2023-07-04	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 180.0	32.0 x 36.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	8.0 x 6.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-06-27	2024-06-27
psSAR1g [W/kg]	0.446	0.454
psSAR10g [W/kg]	0.277	0.275
Power Drift [dB]	-0.03	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		63.6
Dist 3dB Peak [mm]		12.8



Meas.19 Right Head with Cheek on Middle Channel in LTE Band25 mode with Antenna 2

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 25	LTE-FDD, 10169-CAF	1882.5, 26365	8.33	1.37	40.9	22.3	21.3

Hardware Setup

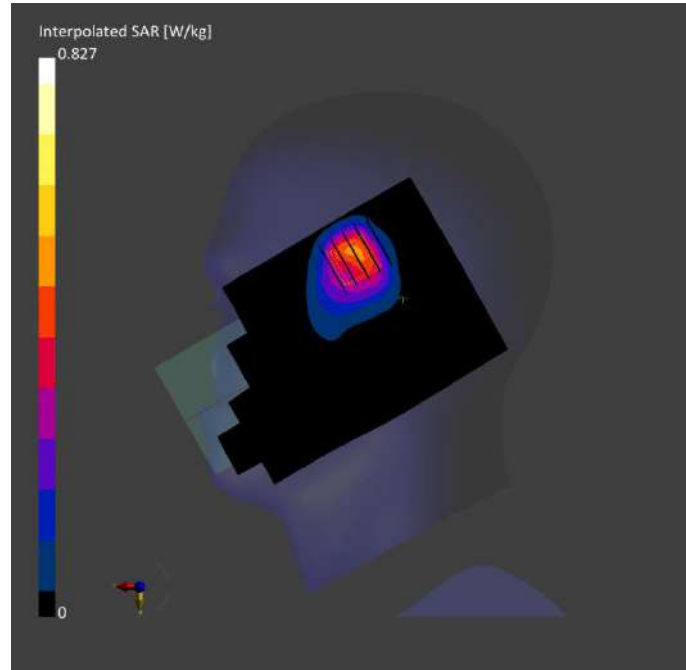
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-03	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-03	2024-07-03
psSAR1g [W/kg]	0.412	0.428
psSAR10g [W/kg]	0.236	0.232
Power Drift [dB]	0.03	-0.14
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		43.6
Dist 3dB Peak [mm]		7.2



Meas.20 Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band26 mode with Antenna 2

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, BOTTOM, 10.00	Band 25	LTE-FDD, 10169-CAF	1905.0, 26590	8.33	1.37	40.9	22.3	21.3

Hardware Setup

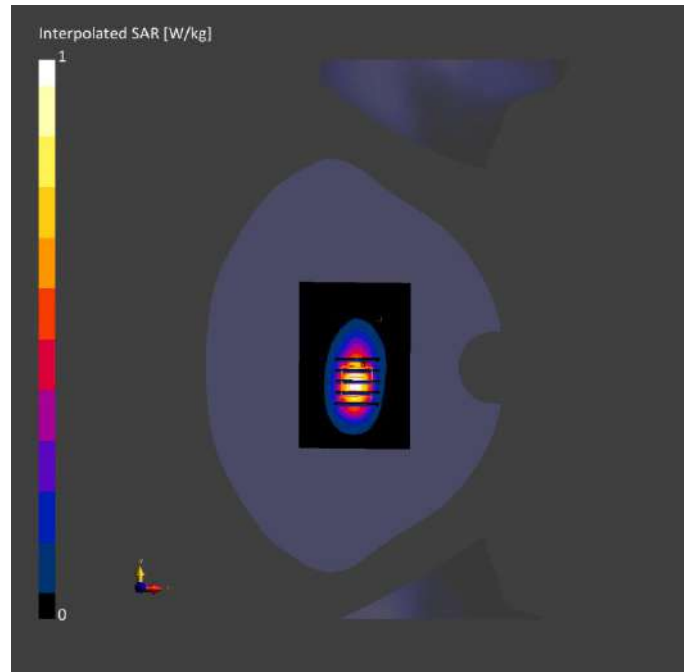
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-03	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-03	2024-07-03
psSAR1g [W/kg]	0.540	0.527
psSAR10g [W/kg]	0.277	0.232
Power Drift [dB]	-0.07	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.3
Dist 3dB Peak [mm]		10.1



Meas.21 Right Head with Cheek on Middle Channel in LTE Band26 mode with Antenna 1
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 26	LTE-FDD, 10181-CAF	831.5, 26865	9.99	0.876	42.4	22.4	21.5

Hardware Setup

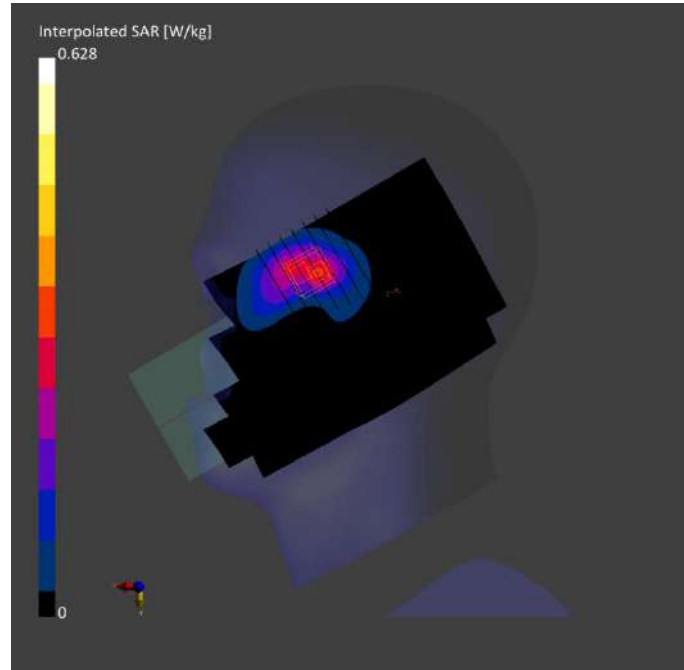
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-04	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	All points	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-04	2024-08-04
psSAR1g [W/kg]	0.268	0.320
psSAR10g [W/kg]	0.167	0.171
Power Drift [dB]	0.03	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		48.2
Dist 3dB Peak [mm]		4.8



Meas.22 Body Plane with Right Edge 10mm on Middle Channel in LTE Band26 mode with Antenna 2

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, RIGHT, 10.00	Band 26	LTE-FDD, 10181-CAF	831.5, 26865	9.99	0.876	42.4	22.4	21.5

Hardware Setup

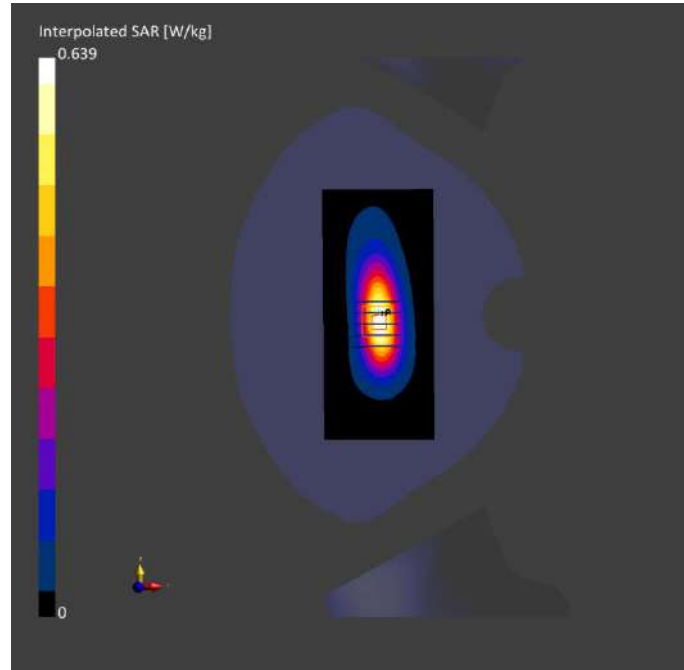
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-04	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-04	2024-08-04
psSAR1g [W/kg]	0.374	0.374
psSAR10g [W/kg]	0.225	0.217
Power Drift [dB]	0.01	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		57.7
Dist 3dB Peak [mm]		11.2



Meas.23 Right Head with Cheek on Middle Channel in LTE Band66 mode with Antenna 2

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 66	LTE-FDD, 10169-CAF	1720.0, 132072	8.67	1.37	39.8	22.3	21.4

Hardware Setup

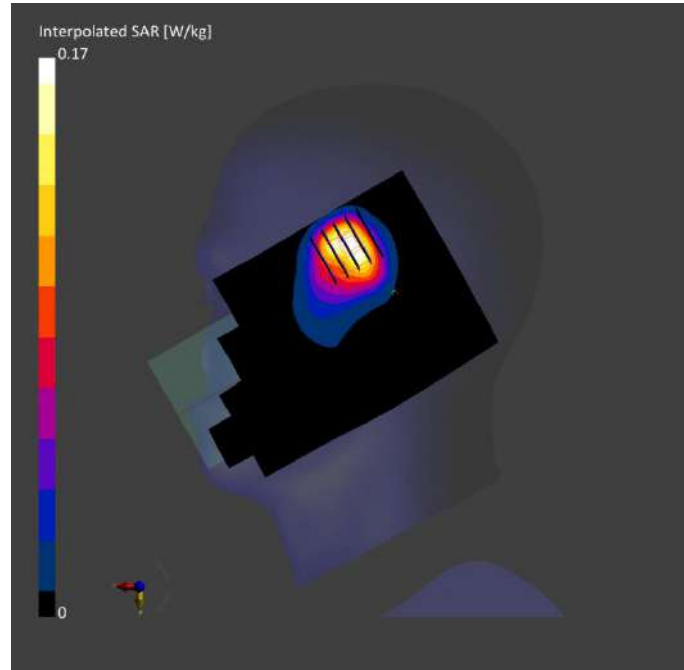
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-08	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-08	2024-07-08
psSAR1g [W/kg]	0.085	0.083
psSAR10g [W/kg]	0.049	0.044
Power Drift [dB]	0.02	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		44.0
Dist 3dB Peak [mm]		8.0



Meas.24 Body Plane with Right Edge 10mm on Middle Channel in LTE Band66 mode with Antenna 0

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE, BOTTOM, 10.00	Band 66	LTE-FDD, 10169-CAF	1720.0, 132072	8.67	1.37	39.8	22.3	21.4

Hardware Setup

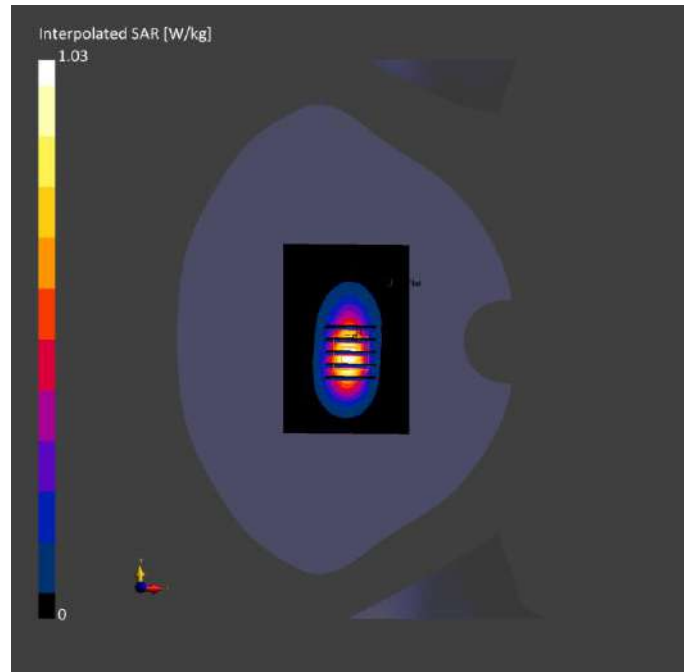
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-08	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-08	2024-07-08
psSAR1g [W/kg]	0.611	0.616
psSAR10g [W/kg]	0.321	0.334
Power Drift [dB]	-0.02	-0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		60.8
Dist 3dB Peak [mm]		9.6



Meas.25 Right Head with Cheek on Middle Channel in LTE Band41 mode with Antenna 2

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
RightHead, HSL	CHEEK, 0.00	Band 41	LTE-TDD, 10172-CAH	2593.0, 40620	7.59	1.94	39.6	22.4	21.2

Hardware Setup

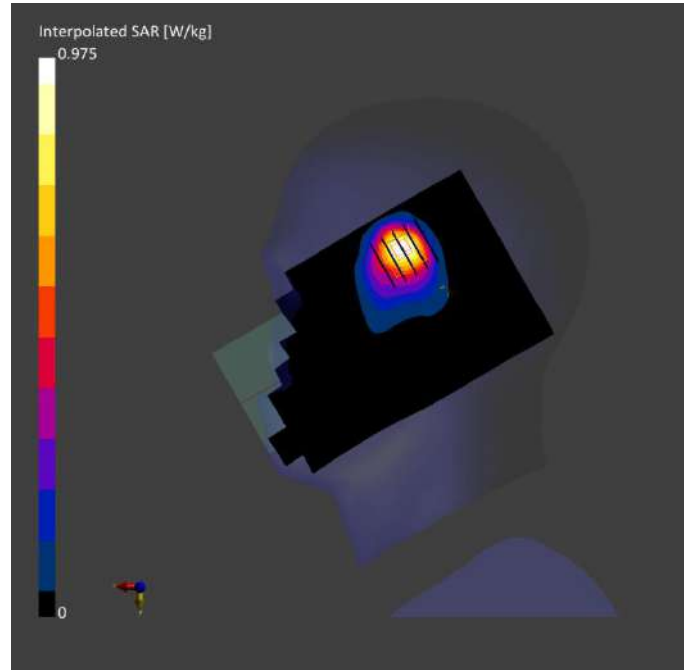
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-11	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 192.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	All points	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-11	2024-07-11
psSAR1g [W/kg]	0.472	0.481
psSAR10g [W/kg]	0.235	0.233
Power Drift [dB]	0.00	-0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		46.7
Dist 3dB Peak [mm]		7.2



Meas.26 Body Plane with Back Side 10mm on Middle Channel in LTE Band41 mode with Antenna 2
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	BACK, 10.00	Band 41	LTE-TDD, 10172-CAH	2593.0, 40620	7.59	1.94	39.6	22.4	21.2

Hardware Setup

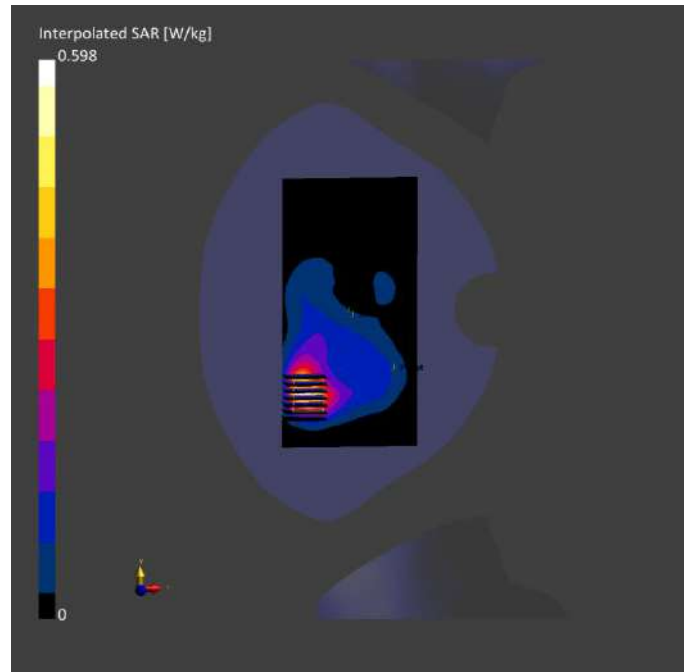
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-11	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	96.0 x 192.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-11	2024-07-11
psSAR1g [W/kg]	0.290	0.306
psSAR10g [W/kg]	0.141	0.145
Power Drift [dB]	0.01	-0.13
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		50.7
Dist 3dB Peak [mm]		9.8



Meas.27 Left Head with Cheek on 6 Channel in IEEE802.11 b mode with Antenna 12

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
LeftHead, HSL	CHEEK, 0.00	WLAN, 2.4GHz	WLAN, 10415-AAA	2412.0, 1	7.75	1.77	39.7	22.6	21.4

Hardware Setup

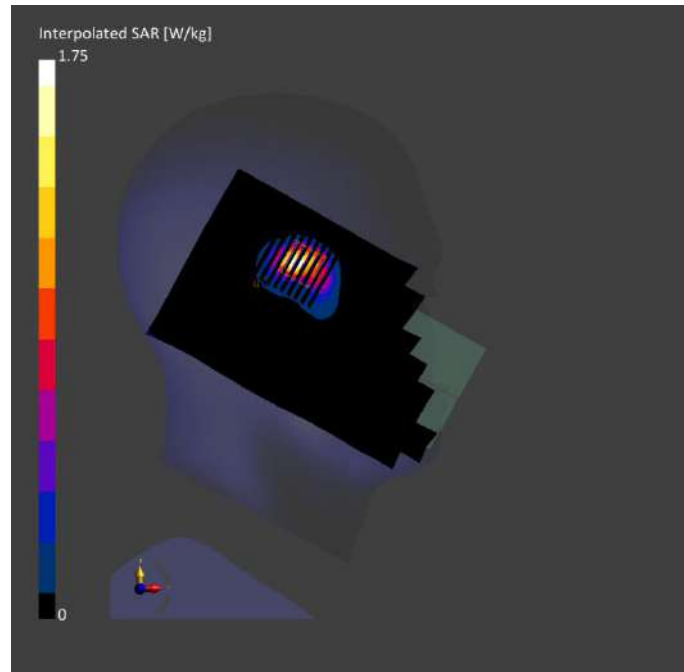
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 192.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	N/A	N/A
Surface Detection	All points	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-09	2024-07-09
psSAR1g [W/kg]	0.651	0.763
psSAR10g [W/kg]	0.291	0.301
Power Drift [dB]	-0.02	-0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		41.5
Dist 3dB Peak [mm]		6.0



Meas.28 Body Plane with Left Edge 10mm on 1 Channel in IEEE802.11b mode with Antenna 12

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE LEFT, 10.00	WLAN 2.4GHz	WLAN, 10415-AAA	2412.0, 1	7.75	1.77	39.7	22.6	21.4

Hardware Setup

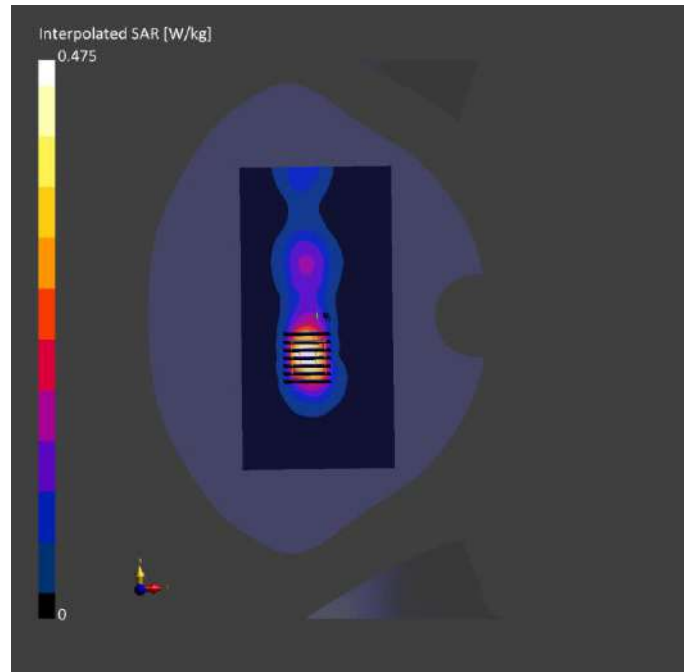
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	96.0 x 192.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	Y	N/A
Surface Detection	All points	All points
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-09	2024-07-09
psSAR1g [W/kg]	0.196	0.234
psSAR10g [W/kg]	0.096	0.103
Power Drift [dB]	-0.11	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		49.8
Dist 3dB Peak [mm]		7.1



Meas.29 Left Head with Cheek on 58 Channel in IEEE802.11ac80 mode with Antenna 12

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
LeftHead, HSL	CHEEK, 0.00	WLAN, 5GHz	WLAN, 10544-AAC	5290.0, 58	5.5	4.80	36.6	22.2	21.3

Hardware Setup

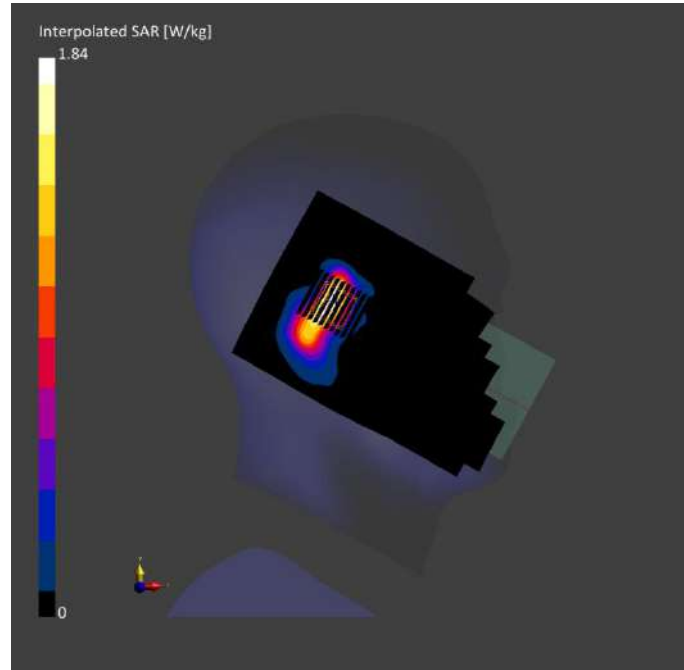
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-09	2024-08-09
psSAR1g [W/kg]	0.505	0.534
psSAR10g [W/kg]	0.193	0.195
Power Drift [dB]	-0.66	-0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		53.9
Dist 3dB Peak [mm]		6.6



Meas.30 Left Head with Cheek on 134 Channel in IEEE802.11n40 mode with Antenna 14

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
LeftHead, HSL	CHEEK, 0.00	WLAN, 5GHz	WLAN, 10544-AAC	5670.0, 134	5.0	5.20	34.8	22.4	21.3

Hardware Setup

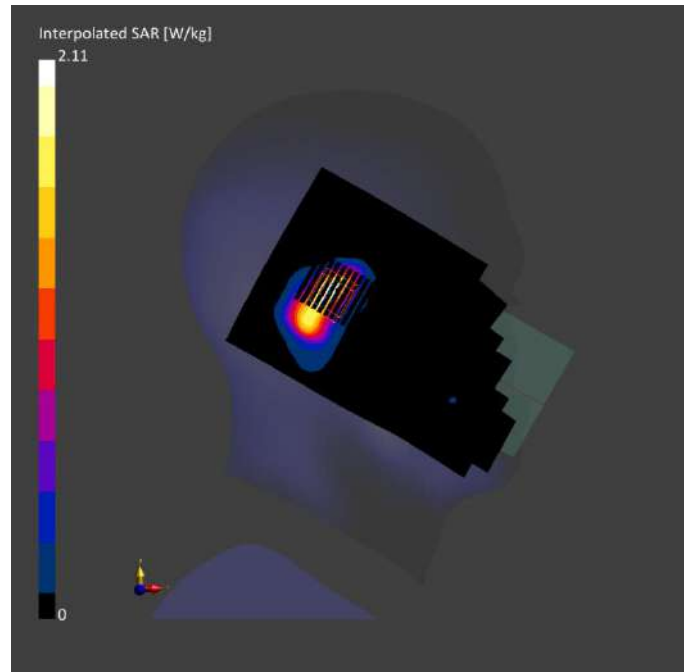
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-18	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-18	2024-07-18
psSAR1g [W/kg]	0.454	0.577
psSAR10g [W/kg]	0.168	0.198
Power Drift [dB]	-0.01	0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.4
Dist 3dB Peak [mm]		6.9



Meas.31 Left Head with Cheek on 155 Channel in IEEE802.11 ac80 mode with Antenna 14

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
LeftHead, HSL	CHEEK, 0.00	WLAN, 5GHz	WLAN, 10554-AAD	5775.0, 155	5.04	5.23	34.7	22.5	21.5

Hardware Setup

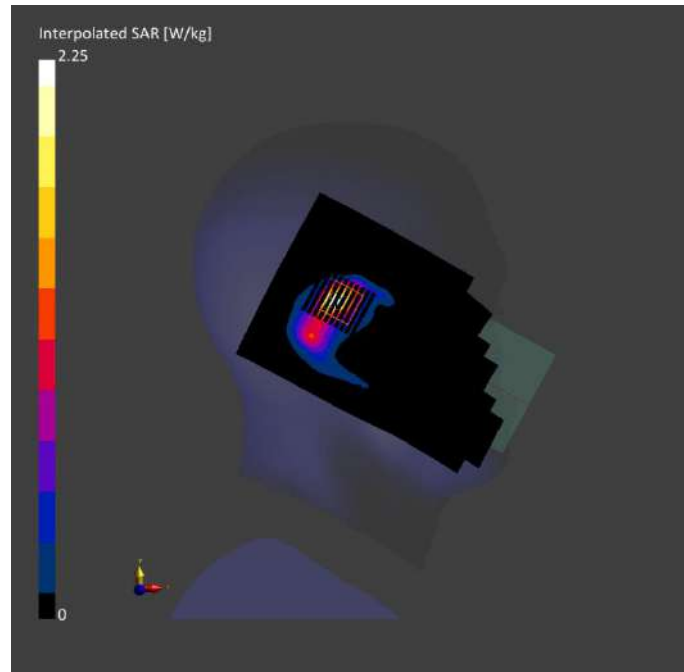
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-19	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	Y	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-19	2024-07-19
psSAR1g [W/kg]	0.474	0.563
psSAR10g [W/kg]	0.164	0.190
Power Drift [dB]	-0.09	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		48.9
Dist 3dB Peak [mm]		6.4



Meas.32 Body Plane with Back Side 10mm on 58 Channel in IEEE802.11ac80 mode with Antenna 14

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	BACK, 5.00	WLAN, 5GHz	WLAN, 10544-AAC	5290.0, 58	5.5	4.80	36.1	22.2	21.3

Hardware Setup

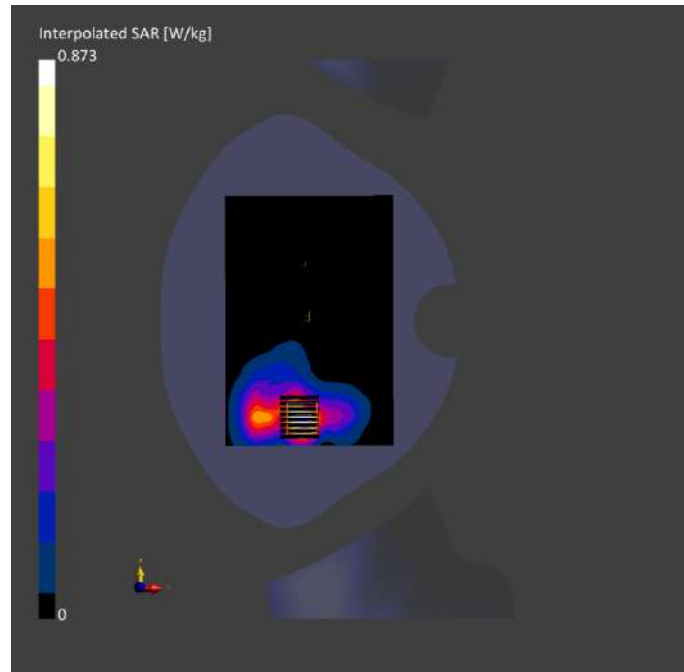
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-09	2024-08-09
psSAR1g [W/kg]	0.246	0.261
psSAR10g [W/kg]	0.095	0.097
Power Drift [dB]	0.10	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.5
Dist 3dB Peak [mm]		9.1



Meas.33 Body Plane with Back Side 10mm on 134 Channel in IEEE802.11n40 mode with Antenna 14

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	BACK, 10.00	WLAN, 5GHz	WLAN, 10599-AAD	5670.0, 134	5.00	5.20	34.8	22.4	21.3

Hardware Setup

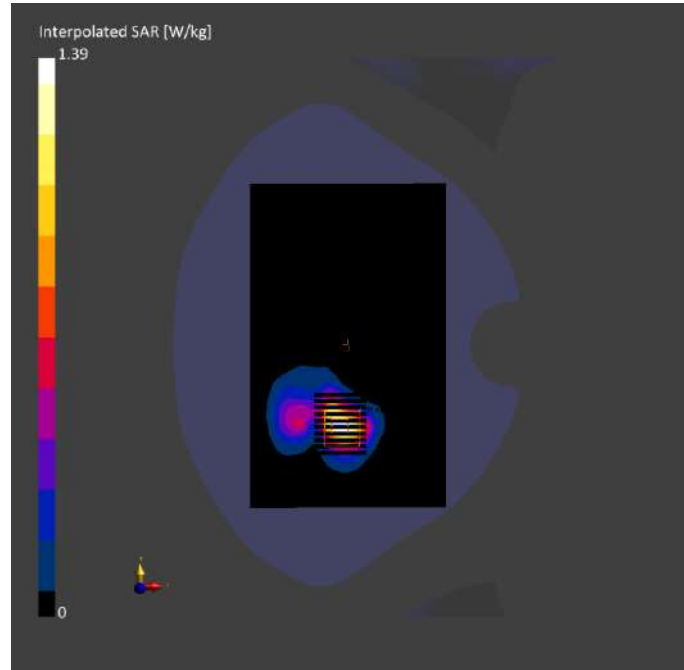
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2090	HBBL-600-10000 2024-07-18	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 200.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-18	2024-07-18
psSAR1g [W/kg]	0.375	0.387
psSAR10g [W/kg]	0.139	0.135
Power Drift [dB]	0.09	0.16
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.2
Dist 3dB Peak [mm]		9.6



Meas.34 Body Plane with Back Side 10mm on 155 Channel in IEEE802.11ac80 mode with Antenna 14

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	BACK, 5.00	WLAN, 5GHz	WLAN, 10544-AAC	5775.0, 155	5.04	5.23	34.7	22.5	21.5

Hardware Setup

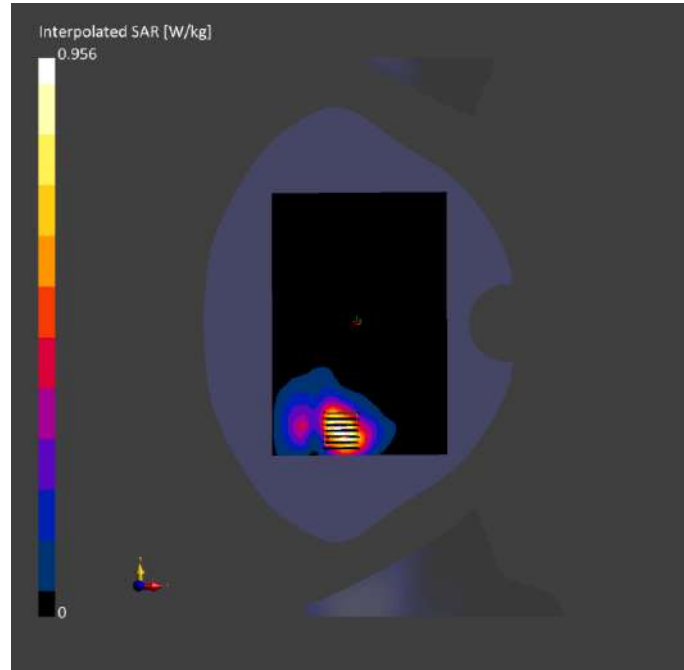
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-19	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-19	2024-07-19
psSAR1g [W/kg]	0.252	0.276
psSAR10g [W/kg]	0.097	0.101
Power Drift [dB]	-0.18	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		53.6
Dist 3dB Peak [mm]		8.2



Meas.35 Body Plane with Top Edge 10mm on 42 Channel in IEEE802.11ac80 mode with Antenna 14

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE TOP, 10.00	WLAN, 5GHz	WLAN, 10544-AAC	5210.0, 42	5.74	4.61	37.0	22.2	21.3

Hardware Setup

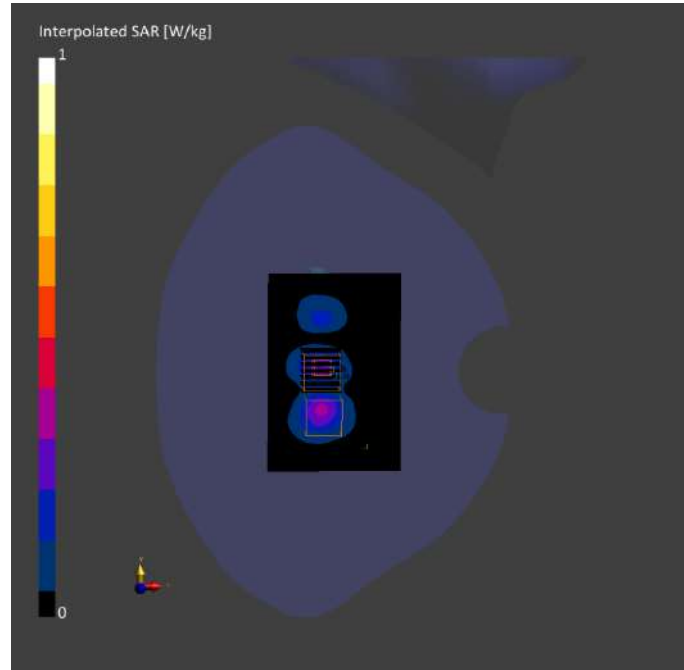
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	8.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-09	2024-08-09
psSAR1g [W/kg]	0.266	0.290
psSAR10g [W/kg]	0.096	0.097
Power Drift [dB]	0.05	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.2
Dist 3dB Peak [mm]		7.6



Meas.36 Body Plane with Top Edge 10mm on 155 Channel in IEEE802.11ac80 mode with Antenna 14

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE TOP, 10.00	WLAN, 5GHz	WLAN, 10544-AAC	5775.0, 155	5.04	5.23	34.7	22.5	21.5

Hardware Setup

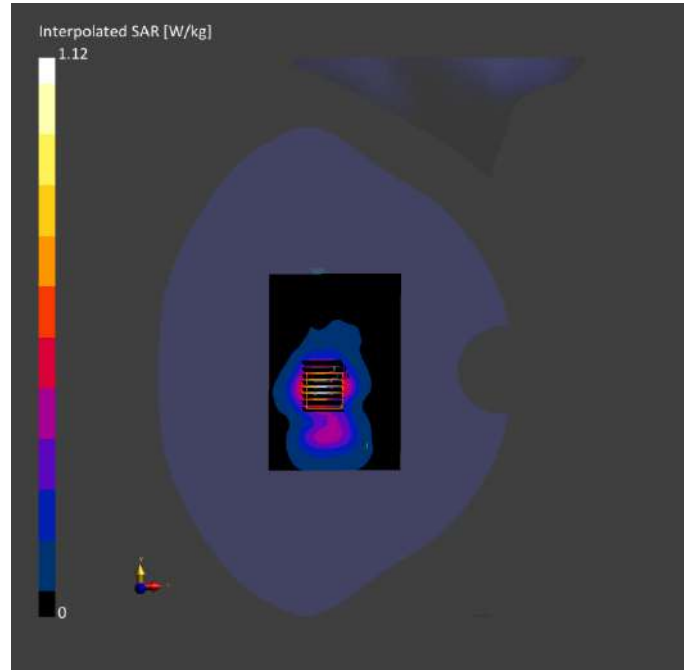
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-19	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	8.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-19	2024-07-19
psSAR1g [W/kg]	0.304	0.304
psSAR10g [W/kg]	0.109	0.108
Power Drift [dB]	-0.66	0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.9
Dist 3dB Peak [mm]		10.2



Meas.37 Body Plane with Top Edge 10mm on 58 Channel in IEEE802.11ac80 mode with Antenna 14
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE TOP, 10.00	WLAN 5GHz	WLAN, 10544-AAC	5290.0, 58	5.5	4.80	36.1	22.2	23.3

Hardware Setup

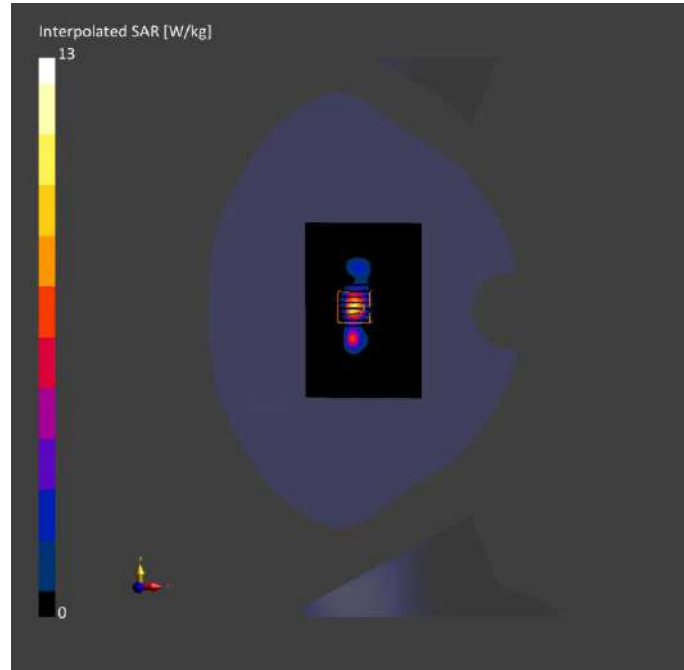
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-08-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 120.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	8.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-08-09	2024-08-09
psSAR1g [W/kg]	2.47	2.77
psSAR10g [W/kg]	0.653	0.576
Power Drift [dB]	-0.09	-0.17
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		57.8
Dist 3dB Peak [mm]		4.0



Meas.38 Body Plane with Top Edge 10mm on 34 Channel in IEEE802.11n40 mode with Antenna 14
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE TOP, 10.00	WLAN 5GHz	WLAN, 10599-AAC	5670.0, 134	5.0	5.20	34.8	22.4	21.3

Hardware Setup

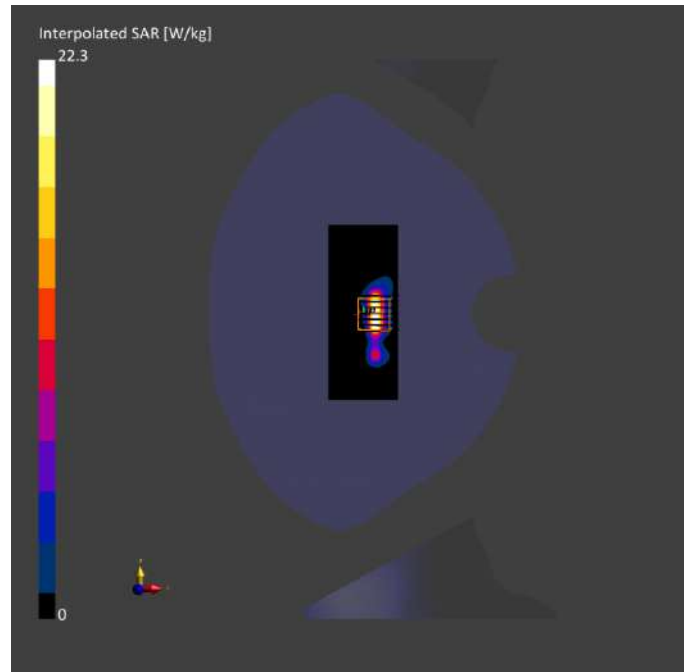
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-18	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	48.0 x 120.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	8.0 x 10.0	4.0 x 4.0 x 2.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-18	2024-07-18
psSAR1g [W/kg]	3.27	4.20
psSAR10g [W/kg]	0.908	1.06
Power Drift [dB]	-0.05	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		48.4
Dist 3dB Peak [mm]		4.3



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

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
LeftHead, HSL	CHEEK, 0.00	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2441.0, 39	7.75	1.80	39.6	22.6	21.4

Hardware Setup

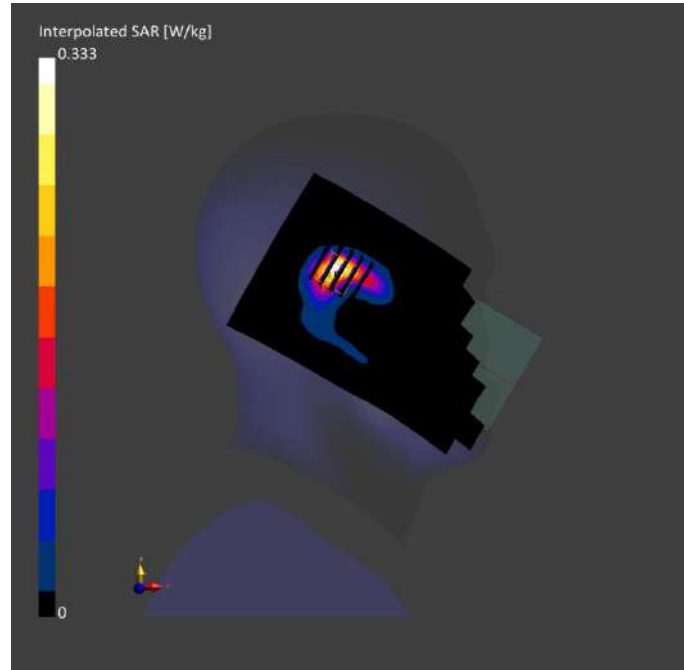
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 192.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	8.0 x 8.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-09	2024-07-09
psSAR1g [W/kg]	0.150	0.165
psSAR10g [W/kg]	0.068	0.073
Power Drift [dB]	-0.13	0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		46.6
Dist 3dB Peak [mm]		8.0



Meas.40 Body Plane with Left Edge Edge 10mm on 39 Channel in Bluetooth mode with Antenna 12
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	DUT Type
Device,	162.0 x 73.0 x 8.0	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	Ambient Temperature [°C]	Liquid Temperature [°C]
Flat, HSL	EDGE LEFT, 10.00	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2441.0, 39	7.75	1.80	39.6	22.6	21.4

Hardware Setup

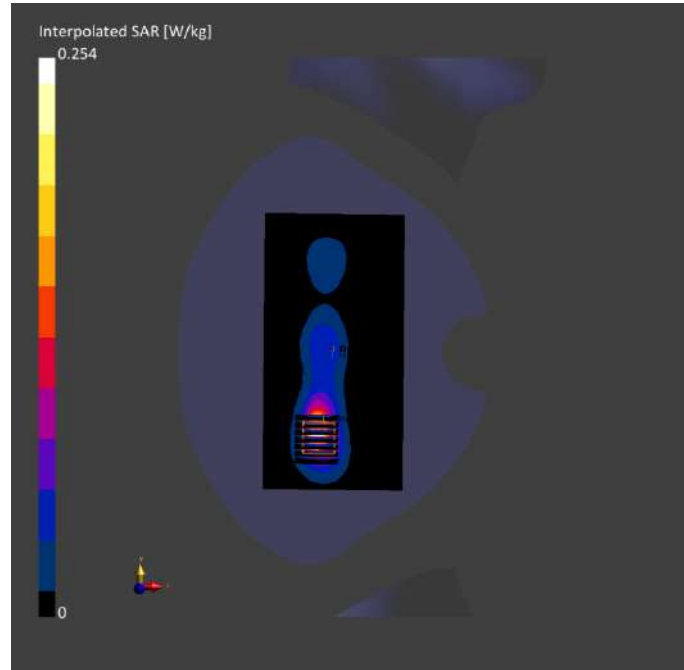
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2024-07-09	EX3DV4 - SN7510, 2024-06-25	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	96.0 x 192.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Graded Grid	Yes	Yes
Grading Ratio	1.5	1.5
MAIA	Y	Y
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2024-07-09	2024-07-09
psSAR1g [W/kg]	0.117	0.125
psSAR10g [W/kg]	0.052	0.054
Power Drift [dB]	-0.02	-0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		49.6
Dist 3dB Peak [mm]		8.0



ANNEX D EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ2461152-AW.pdf".

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document "BL-SZ2461152-AS.pdf".

ANNEX F CALIBRATION REPORT

Please refer the document "BL-SZ2461152-AC.pdf".

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