



TEST REPORT

Applicant: Hangzhou Sunyard Technology Co., Ltd.
Address: Sunyard Science & Technology Building, 3888 Jiangnan Ave., Binjiang Dist., Hangzhou, China
Equipment Type: Android POS Terminal
Model Name: S60P (refer to section 2.3)
Brand Name: SUNYARD
FCC ID: 2BFZW-S60
Test Standard: ANSI C95.1-1992 (refer to section 3.1)
Maximum SAR: Body-worn (1 g@10mm): 0.53 W/kg
Hotspot (1 g@10mm): 1.11 W/kg
Specific (10 g@0mm): 3.14 W/kg
Sample Arrival Date: Feb. 07, 2025
Test Date: Feb. 08, 2025 - Feb. 16, 2025
Date of Issue: Mar. 07, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

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

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Mar. 07, 2025</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	☐ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☒ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

1.3 Test Environment Condition

Ambient Temperature	18°C to 25°C
Ambient Relative Humidity	30% to 70%

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Hangzhou Sunyard Technology Co., Ltd.
Address	Sunyard Science & Technology Building, 3888 Jiangnan Ave., Binjiang Dist., Hangzhou, China

2.2 Manufacturer Information

Manufacturer	Hangzhou Sunyard Technology Co., Ltd.
Address	Sunyard Science & Technology Building, 3888 Jiangnan Ave., Binjiang Dist., Hangzhou, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Android POS Terminal		
Model Name Under Test	S60P		
Series Model Name	S60		
Description of Model name differentiation	All models are same with electrical parameters and internal circuit structure, but only differ as below. (this information provided by the applicant).		
	Model	Screen	Button
	S60P	4 inch	Physical buttons
	S60	5 inch	Virtual buttons
Hardware Version	V1.10		
Software Version	20_24_13001		
Dimensions (Approx.)	N/A		
Weight (Approx.)	N/A		

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	SX18650-2S1P-C
	Serial No.	N/A
	Capacitance	2600 mAh
	Rated Voltage	7.2 V
	Limited Voltage	8.4 V
	Manufacturer	Shenzhen Powercom Electronics Co., Ltd

2.5 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network FDD LTE Band 2/4/5/7/12/17/66 TDD LTE Band 38/41 Bluetooth (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n(HT20/40) and 802.11ac(VHT20/40/80), NFC
Note: The EUT is an Android POS Terminal, 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:

Requirement for the following technical information of the EUT was tested in this report:			
Operating Mode	GSM, WCDMA, LTE, 2.4G WLAN, 5G WLAN, 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 17	TX: 704 ~ 716 MHz	RX: 734 ~ 746 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/HT40)	2412 ~ 2462 MHz	
	802.11a/ n(HT20/HT40)/ ac(VHT20/VHT40/ VHT80)	5150 ~ 5250 MHz	
		5725 ~ 5850 MHz	
	Bluetooth	2402 ~ 2480 MHz	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
DTM	N/A		
Hotspot Function	Support		
Power Reduction	Not Support		
Exposure Category	General Population/Uncontrolled exposure		
Product Type	Portable Device		
EUT Type	☒ Production unit		☐ Identical prototype

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1 ☆	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	ANSI C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3 ☆	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
4 ☆	KDB 941225 D01 v03r01	3G SAR MEAUREMENT PROCEDURES
5 ☆	KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices
6 ☆	KDB 941225 D06 v02r01	SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES
7 ☆	KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
8 ☆	KDB 865664 D02 v01r02	RF Exposure Reporting
9 ☆	KDB 648474 D04 v01r03	SAR EVALUATION CONSIDERATIONS FOR WIRELESS HANDSETS
10 ☆	KDB 248227 D01 v02r02	SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

3.2 Device Category and SAR Limit

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

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

Table of Exposure Limits:

Body Position	SAR Value (W/Kg)	
	General Population/ Uncontrolled Exposure	Occupational/ 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)		
		Body-worn (10mm)	Hotspot (10mm)	Specific (0mm)	Body-worn (10mm)	Hotspot (10mm)	Specific (0mm)
		1g SAR		10g SAR	1g SAR		10g SAR
PCB	GSM 850	0.53	1.11	1.70	0.53	1.11	3.14
	GSM 1900	0.11	0.71	3.14			
	WCDMA Band 2	0.09	0.84	2.56			
	WCDMA Band 4	0.10	0.36	1.44			
	WCDMA Band 5	0.13	0.18	0.28			
	LTE Band 2	0.10	0.72	2.30			
	LTE Band 4	0.01	0.33	1.40			
	LTE Band 5	0.10	0.30	0.34			
	LTE Band 7	0.07	0.55	1.50			
	LTE Band 12	0.07	0.15	0.18			
	LTE Band 17	0.07	0.15	0.19			
	LTE Band 66	0.16	0.31	1.28			
	LTE Band 38	0.07	0.45	0.71			
	LTE Band 41	0.07	1.00	1.98			
DTS	2.4G WIFI	0.07	0.60	2.11			
NII	5.2G WIFI	0.09	0.20	1.13			
	5.8G WIFI	0.22	0.37	1.80			
DSS	Bluetooth	0.01	0.04	0.29			
Limit (W/kg)		1.60		4.00			
Verdict		Pass					

3.3.2 Highest Simultaneous Transmission SAR Values

Equipment Class	Maximum Scaled SAR (W/kg)		
	Body-worn 1g (0mm)	Hotspot 1g (10mm)	Specific 10g (0mm)
PCB	0.82	1.55	3.90
DTS	0.82	1.55	3.90
NII	0.82	1.55	3.90
DSS	0.76	1.45	2.08
Limit (W/Kg)	1.60		4.00
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 1g 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 1g SAR for the EUT in this report is 1.11 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 10g SAR for the EUT in this report is 3.14 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:

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

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

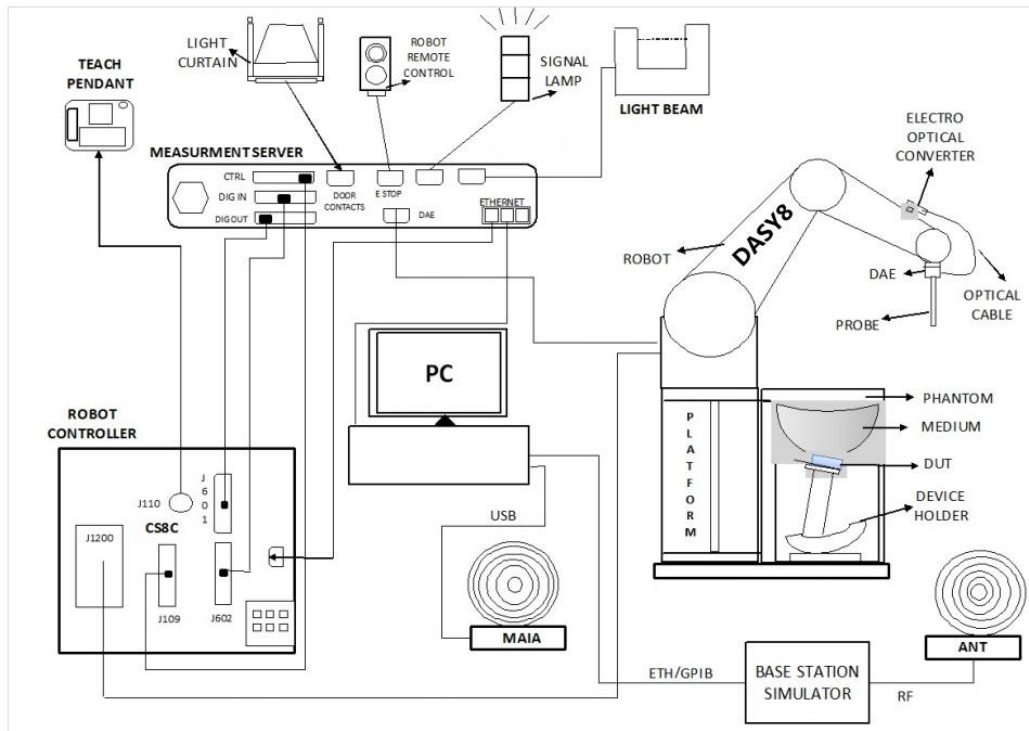
$$\text{SAR} = \frac{\sigma E^2}{\rho}$$

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

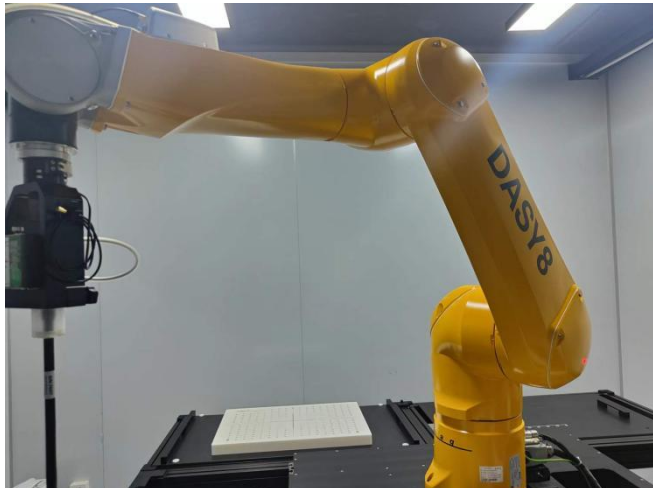


The DASY system for performing compliance tests consists of the following items:

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 DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation.
7. DASY5 software and SEMCAD data evaluation software.
8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
9. The generic twin phantom enabling the testing of left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. System validation dipoles allowing to validate the proper functioning of the system.

4.2.2 Robot

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



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

4.2.3 E-Field Probe

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

Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection 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

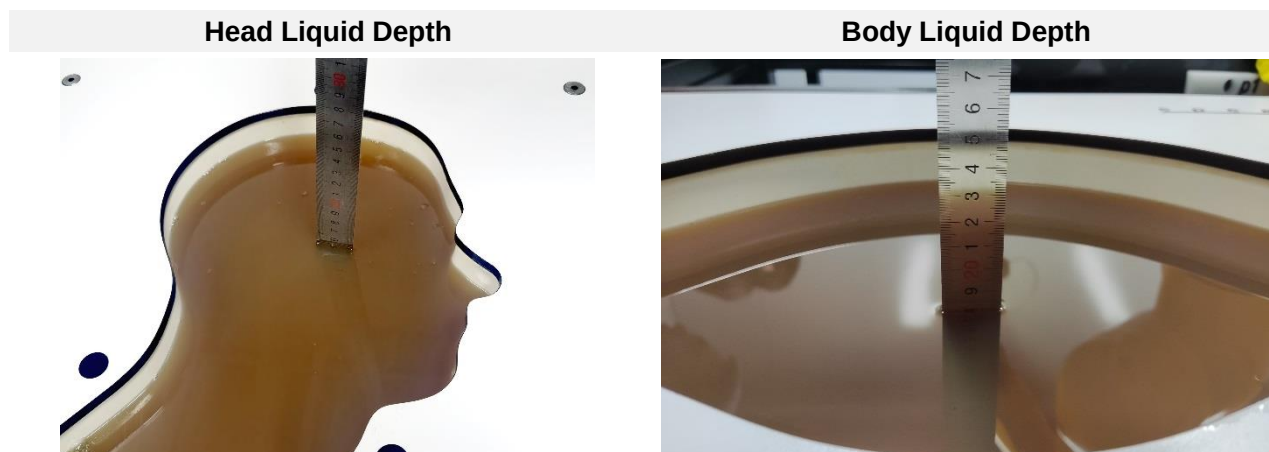
The DASY device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65° . The bottom plate contains three pair of bolts for 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%.



The following table gives the recipes for tissue simulating liquid.

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

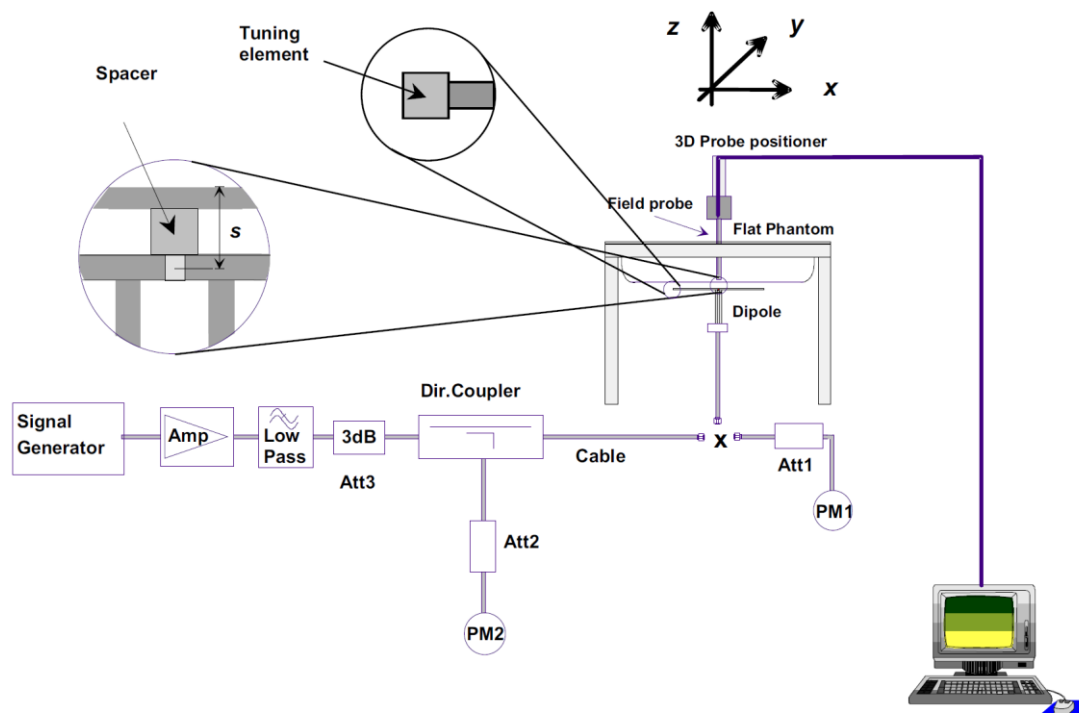
5 SYSTEM VERIFICATION

5.1 Purpose of System Check

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

5.2 System Check Setup

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



6 TEST POSITION CONFIGURATIONS

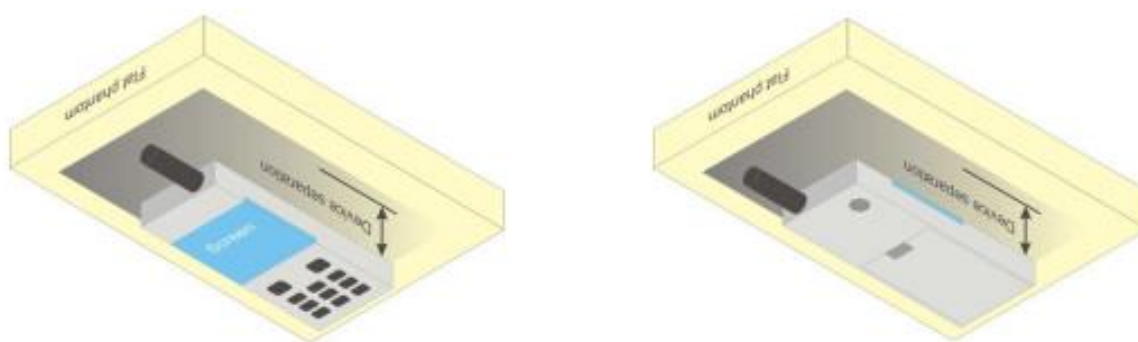
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

6.1 Body-worn Position Conditions

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

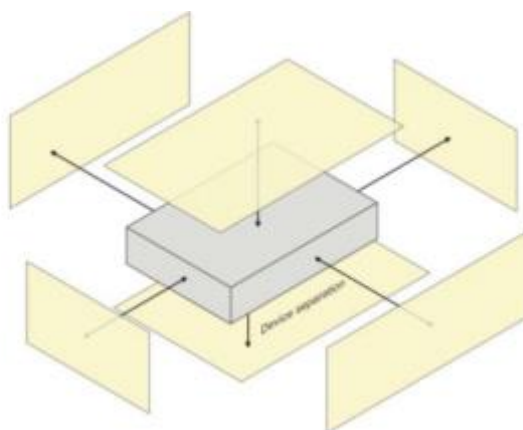
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.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

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



6.2 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).



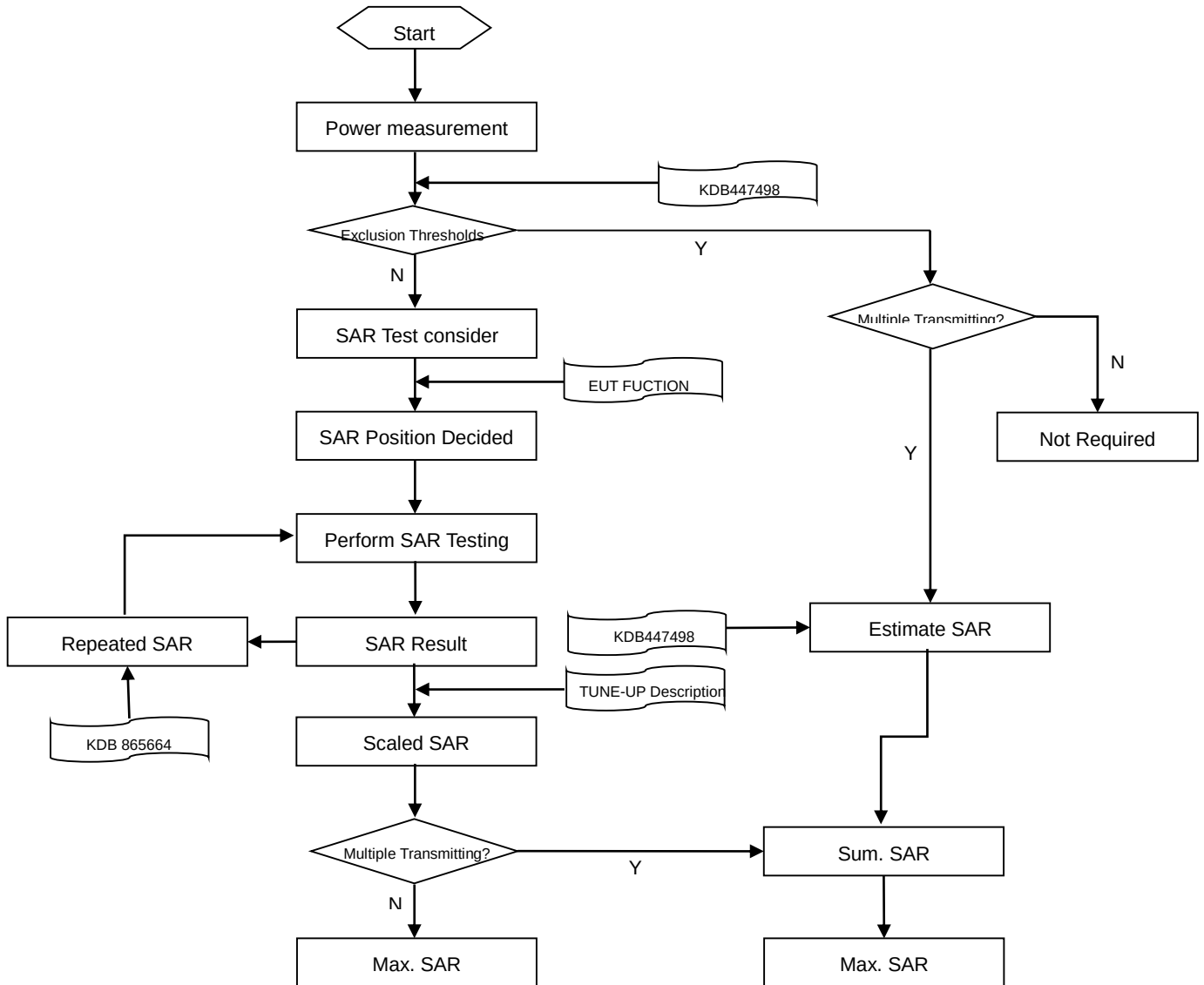
6.3 Product Specific 10g Exposure Consideration

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 1g 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	≤ 4 mm	3–4 GHz: ≤ 3 mm
				4–5 GHz: ≤ 2.5 mm
		Δz Zoom (n>1): between subsequent points	≤ 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 1g 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.

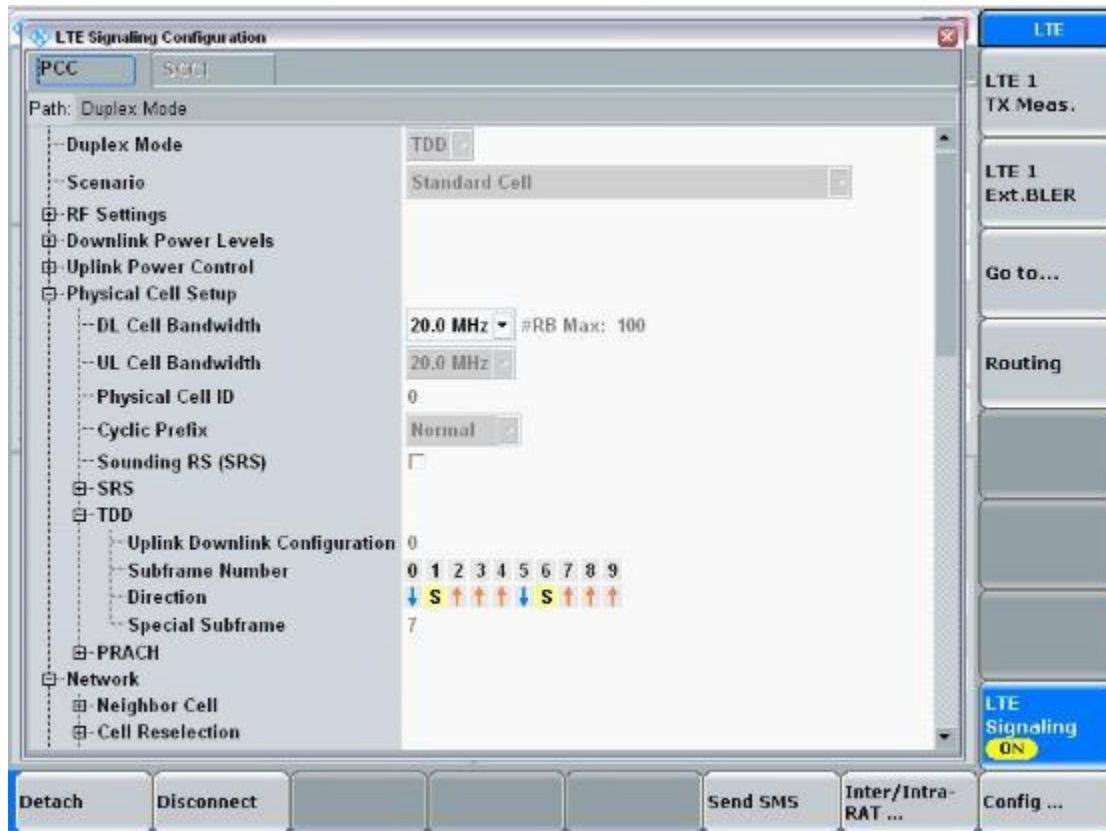
7.4 Area & Zoom Scan Procedure

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.

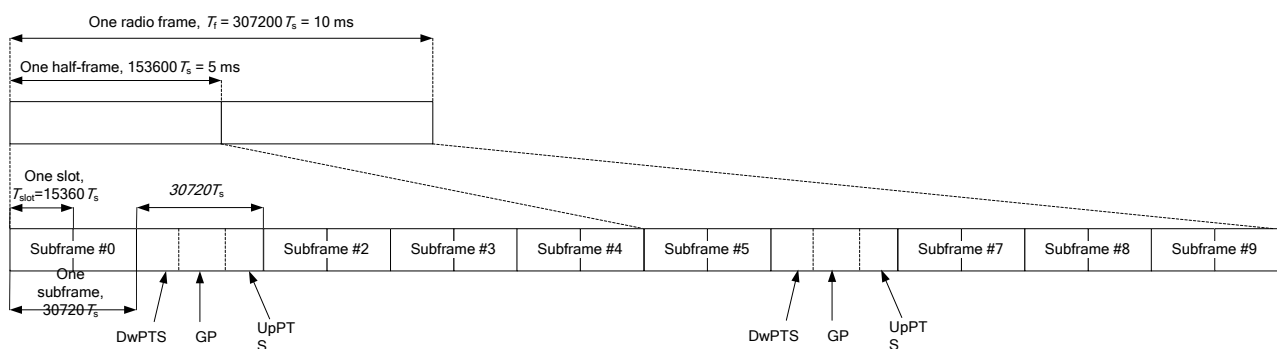
When the 1g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

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



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

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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$2560 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21592 \cdot T_s$			$12800 \cdot T_s$	-	-
8	$24144 \cdot T_s$			-		
9	$13168 \cdot T_s$			-		

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

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

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-SZ2520129-AP.pdf”.

8.2 WCDMA

Please refer the document “BL-SZ2520129-AP.pdf”.

8.3 LTE

Please refer the document “BL-SZ2520129-AP.pdf”.

8.4 WIFI

8.4.1 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4	802.11b	1	2412	18.49	19.00	Yes
		6	2437	18.68	19.00	Yes
		11	2462	18.78	19.00	Yes
	802.11g	1	2412	16.36	17.00	No
		6	2437	16.78	17.00	No
		11	2462	16.36	17.00	No
	802.11n(HT20)	1	2412	15.55	16.00	No
		6	2437	15.52	16.00	No
		11	2462	15.69	16.00	No
	802.11n(HT40)	3	2422	14.54	15.00	No
		6	2437	14.40	15.00	No
		9	2452	14.39	15.00	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 = $0.07 * (50.12\text{mW}/79.43\text{mW}) = 0.044$ W/Kg, so 2.4G OFDM SAR test is not required.

8.4.2 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2	802.11a	36	5180	16.86	17.00	Yes
		44	5220	16.51	17.00	No
		48	5240	16.60	17.00	No
	802.11n(HT20)	36	5180	14.81	15.00	No
		44	5220	14.45	15.00	No
		48	5240	14.54	15.00	No
	802.11n(HT40)	38	5190	14.59	15.00	No
		46	5230	14.84	15.00	No
	802.11ac(VHT20)	36	5180	14.89	15.00	No
		44	5220	14.48	15.00	No
		48	5240	14.48	15.00	No
	802.11ac(VHT40)	38	5190	14.32	15.00	No
		46	5230	14.65	15.00	No
	802.11ac(VHT80)	42	5210	12.39	14.00	No
5.8	802.11a	149	5745	16.46	17.00	No
		157	5785	16.79	17.00	Yes
		165	5825	16.81	17.00	Yes
	802.11n(HT20)	149	5745	14.67	15.00	No
		157	5785	14.45	15.00	No
		165	5825	14.46	15.00	No
	802.11n(HT40)	151	5755	14.30	15.00	No
		159	5795	14.30	15.00	No
	802.11ac(VHT20)	149	5745	14.55	15.00	No
		157	5785	14.52	15.00	No
		165	5825	14.54	15.00	No
	802.11ac(VHT40)	151	5755	14.45	15.00	No
		159	5795	14.36	15.00	No
	802.11ac(VHT80)	155	5775	12.21	14.00	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 among the multiple configurations in a frequency band with the same maximum tune-up output power.
- 2) When multiple transmission modes (802.11a/n/ac) 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., 802.11a is chosen over 802.11n then 802.11ac.

8.5 Bluetooth

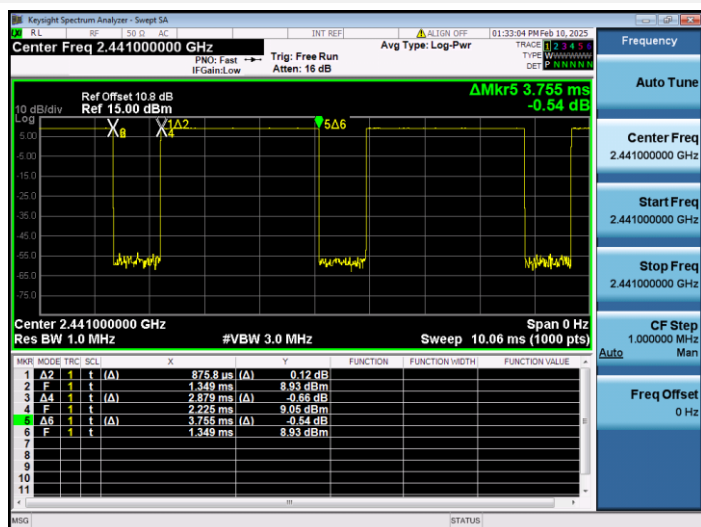
Mode	GFSK			$\pi/4$ -DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Average Power (dBm)	11.15	8.81	7.73	8.11	5.48	4.10
Tune-Up Limit (dBm)	12.00	9.00	9.00	9.00	6.00	6.00
SAR Test Require	Yes	No	No	No	No	No
Mode	8-DPSK			/		
Channel	0	39	78	/	/	/
Frequency (MHz)	2402	2441	2480	/	/	/
Average Power (dBm)	8.07	5.45	4.21	/	/	/
Tune-Up Limit (dBm)	9.00	6.00	6.00	/	/	/
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)	-2.34	-1.84	-2.52	-2.16	-1.80	-2.36
Tune-Up Limit (dBm)	-1.50	-1.50	-1.50	-1.50	-1.50	-1.50
SAR Test Require	No	No	No	No	No	No

Note: 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.

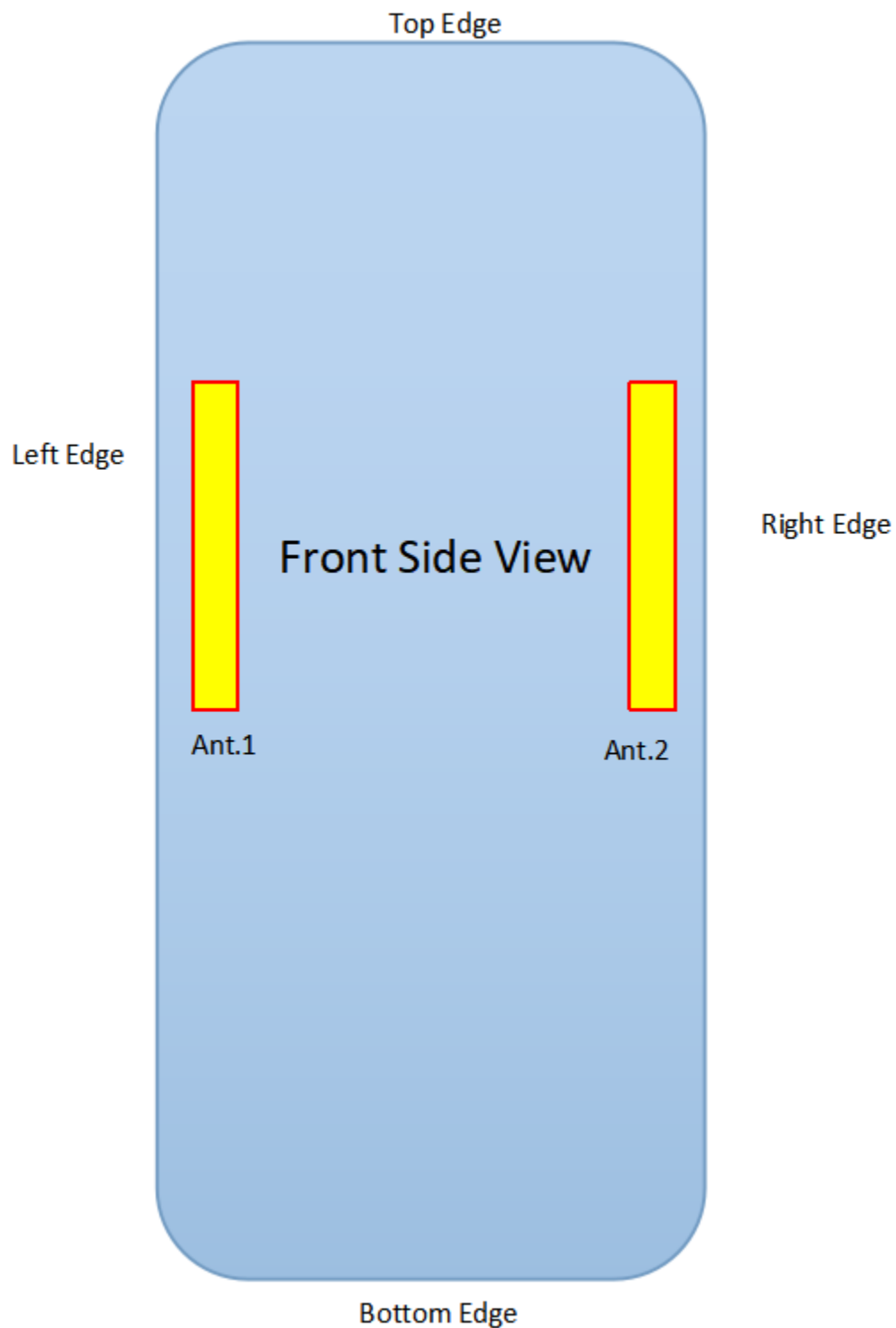
Note: The Bluetooth BT DH5 duty cycle is 76.68 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation.

Duty Cycle

Bluetooth-GFSK



9 TEST EXCLUSION CONSIDERATION



Antenna	Band
Ant.1	GSM 850
	GSM 1900
	WCDMA Band 2
	WCDMA Band 4
	WCDMA Band 5
	LTE Band 2
	LTE Band 4
	LTE Band 5
	LTE Band 7
	LTE Band 12
	LTE Band 17
	LTE Band 66
	LTE Band 38
	LTE Band 41
Ant.2	2.4G/5G WiFi;BT

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

Note: Per KDB 941225 DO6, When the overall length and width of a device is > 9 cm *5 cm, a test separation distance of 10 mm is required for hotspot mode SAR measurements and hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge.

10 TEST RESULT

10.1GSM 850

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot												
ANT1	GPRS 4Slots	Front Side	10	128	824.2	0.00	0.437	28.18	29.00	1.208	0.528	/
		Back Side	10	128	824.2	-0.13	0.272	28.18	29.00	1.208	0.329	/
		Left Edge	10	128	824.2	0.16	0.842	28.18	29.00	1.208	1.017	/
		Left Edge	10	190	836.6	-0.17	0.826	28.16	29.00	1.213	1.002	/
		Left Edge	10	251	848.8	-0.02	0.901	28.09	29.00	1.233	1.111	1#
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific												
ANT1	GPRS 4Slots	Front Side	0	128	824.2	-0.01	0.598	28.18	29.00	1.208	0.722	/
		Back Side	0	128	824.2	0.17	0.302	28.18	29.00	1.208	0.365	/
		Left Edge	0	128	824.2	-0.13	1.410	28.18	29.00	1.208	1.703	2#
		Left Edge	0	190	836.6	-0.16	1.330	28.16	29.00	1.213	1.613	/
		Left Edge	0	251	848.8	0.06	1.320	28.09	29.00	1.233	1.628	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.2GSM 1900

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot												
ANT1	GPRS 4Slots	Front Side	10	512	1710.2	-0.07	0.047	25.38	26.00	1.153	0.054	/
		Back Side	10	512	1710.2	-0.01	0.095	25.38	26.00	1.153	0.110	/
		Left Edge	10	512	1710.2	-0.11	0.615	25.38	26.00	1.153	0.709	3#
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific												
ANT1	GPRS 4Slots	Front Side	0	512	1710.2	0.01	0.085	25.38	26.00	1.153	0.098	/
		Back Side	0	512	1710.2	0.09	0.152	25.38	26.00	1.153	0.175	/
		Left Edge	0	512	1710.2	0.15	2.550	25.38	26.00	1.153	2.940	/
		Left Edge	0	661	1880.0	0.16	2.420	25.66	26.00	1.081	2.616	/
		Left Edge	0	810	1769.8	-0.02	3.050	25.88	26.00	1.028	3.135	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)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot												
ANT1	RCM	Front Side	10	9538	1907.6	0.02	0.038	22.75	23.00	1.059	0.040	/
		Back Side	10	9538	1907.6	0.19	0.085	22.75	23.00	1.059	0.090	/
		Left Edge	10	9538	1907.6	-0.03	0.789	22.75	23.00	1.059	0.836	5#
		Left Edge	10	9262	1852.4	0.18	0.666	22.56	23.00	1.107	0.737	/
		Left Edge	10	9400	1880.0	-0.17	0.700	22.66	23.00	1.081	0.757	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific												
ANT1	RCM	Front Side	0	9538	1907.6	0.19	0.076	22.75	23.00	1.059	0.080	/
		Back Side	0	9538	1907.6	0.09	0.131	22.75	23.00	1.059	0.139	/
		Left Edge	0	9538	1907.6	-0.12	2.000	22.75	23.00	1.059	2.118	/
		Left Edge	0	9262	1852.4	-0.07	2.310	22.56	23.00	1.107	2.557	6#
		Left Edge	0	9400	1880.0	0.02	2.100	22.66	23.00	1.081	2.270	/
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)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot												
ANT1	RCM	Front Side	10	1513	1752.6	-0.11	0.015	21.96	23.00	1.271	0.019	/
		Back Side	10	1513	1752.6	-0.02	0.077	21.96	23.00	1.271	0.098	/
		Left Edge	10	1513	1752.6	0.10	0.280	21.96	23.00	1.271	0.356	7#
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific												
ANT1	RCM	Front Side	0	1513	1752.6	0.07	0.048	21.96	23.00	1.271	0.061	/
		Back Side	0	1513	1752.6	-0.01	0.059	21.96	23.00	1.271	0.075	/
		Left Edge	0	1513	1752.6	-0.04	1.130	21.96	23.00	1.271	1.436	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)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot												
ANT1	RCM	Front Side	10	4233	846.6	-0.07	0.121	22.81	23.00	1.045	0.126	/
		Back Side	10	4233	846.6	-0.19	0.066	22.81	23.00	1.045	0.069	/
		Left Edge	10	4233	846.6	-0.01	0.176	22.81	23.00	1.045	0.184	9#
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific												
ANT1	RCM	Front Side	0	4233	846.6	0.01	0.212	22.81	23.00	1.045	0.222	/
		Back Side	0	4233	846.6	0.06	0.087	22.81	23.00	1.045	0.091	/
		Left Edge	0	4233	846.6	-0.09	0.272	22.81	23.00	1.045	0.284	10#
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.6LTE Band 2 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	19100	1900	1	Mid	0.18	0.041	22.62	23.00	1.091	0.045	/
			10	19100	1900	50	Mid	-0.18	0.033	21.48	22.00	1.127	0.037	/
		Back Side	10	19100	1900	1	Mid	0.12	0.095	22.62	23.00	1.091	0.104	/
			10	19100	1900	50	Mid	-0.01	0.084	21.48	22.00	1.127	0.095	/
		Left Edge	10	19100	1900	1	Mid	-0.01	0.663	22.62	23.00	1.091	0.723	11#
			10	19100	1900	50	Mid	0.05	0.584	21.48	22.00	1.127	0.658	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	19100	1900	1	Mid	-0.06	0.067	22.62	23.00	1.091	0.073	/
			0	19100	1900	50	Mid	0.05	0.056	21.48	22.00	1.127	0.063	/
		Back Side	0	19100	1900	1	Mid	-0.18	0.108	22.62	23.00	1.091	0.118	/
			0	19100	1900	50	Mid	0.05	0.096	21.48	22.00	1.127	0.108	/
		Left Edge	0	19100	1900	1	Mid	-0.01	1.648	22.62	23.00	1.091	1.798	/
			0	19100	1900	50	Mid	-0.17	1.950	21.48	22.00	1.127	2.198	/
			0	18700	1860	1	Mid	0.03	2.060	22.52	23.00	1.117	2.301	12#
			0	18900	1860	1	Mid	0.05	1.940	22.54	23.00	1.112	2.157	/
			0	18700	1900	50	Mid	-0.16	1.510	21.38	22.00	1.153	1.741	/
			0	18900	1900	50	Mid	0.16	1.720	21.39	22.00	1.151	1.980	/
			0	19100	1900	100	Mid	0.09	2.020	21.55	22.00	1.109	2.240	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.7LTE Band 4 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	20175	1732.5	1	Mid	-0.11	0.002	21.99	23.00	1.262	0.003	/
			10	20175	1732.5	50	Mid	-0.06	0.001	20.89	22.00	1.291	0.001	/
		Back Side	10	20175	1732.5	1	Mid	0.14	0.005	21.99	23.00	1.262	0.006	/
			10	20175	1732.5	50	Mid	0.10	0.001	20.89	22.00	1.291	0.001	/
		Left Edge	10	20175	1732.5	1	Mid	0.01	0.260	21.99	23.00	1.262	0.328	13#
			10	20175	1732.5	50	Mid	0.03	0.239	20.89	22.00	1.291	0.309	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	20175	1732.5	1	Mid	-0.08	0.043	21.99	23.00	1.262	0.054	/
			0	20175	1732.5	50	Mid	-0.17	0.034	20.89	22.00	1.291	0.044	/
		Back Side	0	20175	1732.5	1	Mid	-0.07	0.050	21.99	23.00	1.262	0.063	/
			0	20175	1732.5	50	Mid	0.16	0.041	20.89	22.00	1.291	0.053	/
		Left Edge	0	20175	1732.5	1	Mid	0.11	1.110	21.99	23.00	1.262	1.401	14#
			0	20175	1732.5	50	Mid	0.01	0.980	20.89	22.00	1.291	1.265	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.8LTE Band 5 (10MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	20525	836.5	1	Mid	0.05	0.084	23.25	24.00	1.189	0.100	/
			10	20525	836.5	25	Mid	0.11	0.042	22.25	23.00	1.189	0.050	/
		Back Side	10	20525	836.5	1	Mid	-0.07	0.091	23.25	24.00	1.189	0.108	/
			10	20525	836.5	25	Mid	0.16	0.068	22.25	23.00	1.189	0.081	/
		Left Edge	10	20525	836.5	1	Mid	-0.04	0.254	23.25	24.00	1.189	0.302	15#
			10	20525	836.5	25	Mid	0.00	0.159	22.25	23.00	1.189	0.189	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	20525	836.5	1	Mid	0.16	0.219	23.25	24.00	1.189	0.260	/
			0	20525	836.5	25	Mid	0.06	0.201	22.25	23.00	1.189	0.239	/
		Back Side	0	20525	836.5	1	Mid	-0.06	0.080	23.25	24.00	1.189	0.095	/
			0	20525	836.5	25	Mid	-0.17	0.060	22.25	23.00	1.189	0.071	/
		Left Edge	0	20525	836.5	1	Mid	-0.08	0.284	23.25	24.00	1.189	0.338	16#
			0	20525	836.5	25	Mid	0.08	0.211	22.25	23.00	1.189	0.251	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.9LTE Band 7 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	21350	2560	1	High	-0.10	0.033	22.12	23.00	1.225	0.040	/
			10	21350	2560	50	Mid	-0.11	0.030	20.99	22.00	1.262	0.038	/
		Back Side	10	21350	2560	1	High	-0.17	0.053	22.12	23.00	1.225	0.065	/
			10	21350	2560	50	Mid	0.19	0.050	20.99	22.00	1.262	0.063	/
		Left Edge	10	21350	2560	1	High	0.01	0.448	22.12	23.00	1.225	0.549	17#
			10	21350	2560	50	Mid	0.02	0.375	20.99	22.00	1.262	0.473	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	21350	2560	1	High	0.05	0.058	22.12	23.00	1.225	0.071	/
			0	21350	2560	50	Mid	-0.10	0.052	20.99	22.00	1.262	0.066	/
		Back Side	0	21350	2560	1	High	0.08	0.077	22.12	23.00	1.225	0.094	/
			0	21350	2560	50	Mid	0.11	0.073	20.99	22.00	1.262	0.092	/
		Left Edge	0	21350	2560	1	High	-0.02	1.220	22.12	23.00	1.225	1.495	18#
			0	21350	2560	50	Mid	0.01	1.150	20.99	22.00	1.262	1.451	/
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)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	23095	707.5	1	Mid	0.18	0.062	22.85	23.00	1.035	0.064	/
			10	23095	707.5	25	High	0.14	0.056	21.73	22.00	1.064	0.060	/
		Back Side	10	23095	707.5	1	Mid	0.19	0.063	22.85	23.00	1.035	0.065	/
			10	23095	707.5	25	High	-0.17	0.055	21.73	22.00	1.064	0.059	/
		Left Edge	10	23095	707.5	1	Mid	0.03	0.144	22.85	23.00	1.035	0.149	19#
			10	23095	707.5	25	High	0.02	0.111	21.73	22.00	1.064	0.118	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	23095	707.5	1	Mid	0.14	0.070	22.85	23.00	1.035	0.072	/
			0	23095	707.5	25	High	-0.08	0.063	21.73	22.00	1.064	0.067	/
		Back Side	0	23095	707.5	1	Mid	-0.17	0.074	22.85	23.00	1.035	0.077	/
			0	23095	707.5	25	High	0.09	0.064	21.73	22.00	1.064	0.068	/
		Left Edge	0	23095	707.5	1	Mid	-0.05	0.173	22.85	23.00	1.035	0.179	20#
			0	23095	707.5	25	High	0.04	0.155	21.73	22.00	1.064	0.165	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.11 LTE Band 17 (10MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	23800	711	1	Mid	-0.18	0.062	22.72	23.00	1.067	0.066	/
			10	23800	711	25	Mid	0.14	0.056	21.59	22.00	1.099	0.062	/
		Back Side	10	23800	711	1	Mid	0.02	0.062	22.72	23.00	1.067	0.066	/
			10	23800	711	25	Mid	0.16	0.053	21.59	22.00	1.099	0.058	/
		Left Edge	10	23800	711	1	Mid	0.05	0.140	22.72	23.00	1.067	0.149	21#
			10	23800	711	25	Mid	0.01	0.111	21.59	22.00	1.099	0.122	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	23800	711	1	Mid	0.12	0.070	22.72	23.00	1.067	0.075	/
			0	23800	711	25	Mid	0.16	0.064	21.59	22.00	1.099	0.070	/
		Back Side	0	23800	711	1	Mid	-0.10	0.072	22.72	23.00	1.067	0.077	/
			0	23800	711	25	Mid	0.13	0.061	21.59	22.00	1.099	0.067	/
		Left Edge	0	23800	711	1	Mid	0.02	0.174	22.72	23.00	1.067	0.186	22#
			0	23800	711	25	Mid	0.03	0.166	21.59	22.00	1.099	0.182	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.12 LTE Band 66 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	132322	1745	1	Mid	-0.12	0.133	22.31	23.00	1.172	0.156	/
			10	132322	1745	50	Mid	0.17	0.105	21.22	22.00	1.197	0.126	/
		Back Side	10	132322	1745	1	Mid	-0.01	0.045	22.31	23.00	1.172	0.053	/
			10	132322	1745	50	Mid	0.19	0.032	21.22	22.00	1.197	0.038	/
		Left Edge	10	132322	1745	1	Mid	0.01	0.267	22.31	23.00	1.172	0.313	23#
			10	132322	1745	50	Mid	0.02	0.244	21.22	22.00	1.197	0.292	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	132322	1745	1	Mid	-0.03	0.047	22.31	23.00	1.172	0.055	/
			0	132322	1745	50	Mid	0.10	0.043	21.22	22.00	1.197	0.051	/
		Back Side	0	132322	1745	1	Mid	-0.06	0.051	22.31	23.00	1.172	0.060	/
			0	132322	1745	50	Mid	-0.06	0.046	21.22	22.00	1.197	0.055	/
		Left Edge	0	132322	1745	1	Mid	-0.08	1.090	22.31	23.00	1.172	1.277	24#
			0	132322	1745	50	Mid	0.05	0.940	21.22	22.00	1.197	1.125	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.13 LTE Band 38 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	38150	2610	1	Mid	0.15	0.065	22.42	23.00	1.143	0.074	/
			10	38150	2610	50	Mid	0.18	0.043	21.34	22.00	1.164	0.050	/
		Back Side	10	38150	2610	1	Mid	0.03	0.056	22.42	23.00	1.143	0.064	/
			10	38150	2610	50	Mid	-0.05	0.042	21.34	22.00	1.164	0.049	/
		Left Edge	10	38150	2610	1	Mid	0.00	0.394	22.42	23.00	1.143	0.450	25#
			10	38150	2610	50	Mid	0.01	0.218	21.34	22.00	1.164	0.254	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	38150	2610	1	Mid	-0.07	0.028	22.42	23.00	1.143	0.032	/
			0	38150	2610	50	Mid	0.07	0.023	21.34	22.00	1.164	0.027	/
		Back Side	0	38150	2610	1	Mid	0.13	0.033	22.42	23.00	1.143	0.038	/
			0	38150	2610	50	Mid	0.02	0.035	21.34	22.00	1.164	0.041	/
		Left Edge	0	38150	2610	1	Mid	-0.01	0.625	22.42	23.00	1.143	0.714	26#
			0	38150	2610	50	Mid	0.03	0.471	21.34	22.00	1.164	0.548	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.14 LTE Band 41 (20MHz Bandwidth)

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
ANT1	QPSK	Front Side	10	41490	2680	1	Mid	0.09	0.044	22.04	23.00	1.247	0.055	/
			10	41490	2680	50	Mid	-0.18	0.021	21.02	22.00	1.253	0.026	/
		Back Side	10	41490	2680	1	Mid	-0.05	0.055	22.04	23.00	1.247	0.069	/
			10	41490	2680	50	Mid	0.04	0.044	21.02	22.00	1.253	0.055	/
		Left Edge	10	41490	2680	1	Mid	-0.04	0.798	22.04	23.00	1.247	0.995	27#
			10	41490	2680	50	Mid	-0.12	0.404	21.02	22.00	1.253	0.506	/
			10	39750	2506	1	Mid	-0.06	0.623	21.66	23.00	1.361	0.848	/
			10	40185	2549.5	1	Mid	0.13	0.666	21.78	23.00	1.324	0.882	/
			10	40620	2593	1	Low	0.02	0.634	21.85	23.00	1.303	0.826	/
			10	41055	2636.5	1	Low	0.12	0.632	21.73	23.00	1.340	0.847	/
			10	39750	2506	50	Mid	-0.13	0.533	20.65	22.00	1.365	0.728	/
			10	40185	2549.5	50	Mid	-0.09	0.518	20.76	22.00	1.330	0.689	/
			10	40620	2593	50	Mid	-0.10	0.498	20.96	22.00	1.271	0.633	/
			10	41055	2636.5	50	Mid	0.03	0.466	20.79	22.00	1.321	0.616	/
			10	41490	2680	100	Low	-0.10	0.472	20.71	22.00	1.346	0.635	/
Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
ANT1	QPSK	Front Side	0	41490	2680	1	Mid	0.15	0.048	22.04	23.00	1.247	0.060	/
			0	41490	2680	50	Mid	0.02	0.040	21.02	22.00	1.253	0.050	/
		Back Side	0	41490	2680	1	Mid	-0.15	0.062	22.04	23.00	1.247	0.077	/
			0	41490	2680	50	Mid	0.11	0.055	21.02	22.00	1.253	0.069	/
		Left Edge	0	41490	2680	1	Mid	0.04	1.590	22.04	23.00	1.247	1.983	28#
			0	41490	2680	50	Mid	0.01	1.220	21.02	22.00	1.253	1.529	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.15 WIFI 2.4GHz

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
802.11b	ANT2	Front Side	10	11	2462	-0.01	0.048	18.78	19.00	1.052	97.33	1.027	0.052	/
		Back Side	10	11	2462	-0.02	0.063	18.78	19.00	1.052	97.33	1.027	0.068	/
		Right Edge	10	11	2462	0.01	0.556	18.78	19.00	1.052	97.33	1.027	0.601	29#
Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
802.11b	ANT2	Front Side	0	11	2462	0.12	0.114	18.78	19.00	1.052	97.33	1.027	0.123	/
		Back Side	0	11	2462	-0.04	0.098	18.78	19.00	1.052	97.33	1.027	0.106	/
		Right Edge	0	11	2462	-0.06	1.950	18.78	19.00	1.052	97.33	1.027	2.108	30#
		Right Edge	0	1	2412	0.10	1.710	18.49	19.00	1.125	97.33	1.027	1.976	/
		Right Edge	0	6	2437	-0.04	1.820	18.68	19.00	1.076	97.33	1.027	2.011	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.16 WIFI 5GHz

Band	Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot															
5.2G	802.11a	ANT2	Front Side	10	36	5180	-0.10	0.078	16.86	17.00	1.033	89.64	1.116	0.090	/
			Back Side	10	36	5180	0.12	0.046	16.86	17.00	1.033	89.64	1.116	0.053	/
			Right Edge	10	36	5180	0.09	0.171	16.86	17.00	1.033	89.64	1.116	0.197	31#
5.8G	802.11a	ANT2	Front Side	10	165	5825	0.04	0.185	16.81	17.00	1.045	89.64	1.116	0.216	/
			Back Side	10	165	5825	0.08	0.061	16.81	17.00	1.045	89.64	1.116	0.071	/
			Right Edge	10	165	5825	0.11	0.319	16.81	17.00	1.045	89.64	1.116	0.372	32#
Band	Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Report SAR (W/kg)	Meas. No.
Specific															
5.2G	802.11a	ANT2	Front Side	0	36	5180	0.09	0.224	16.86	17.00	1.033	89.64	1.116	0.258	/
			Back Side	0	36	5180	0.12	0.060	16.86	17.00	1.033	89.64	1.116	0.069	/
			Right Edge	0	36	5180	0.01	0.978	16.86	17.00	1.033	89.64	1.116	1.127	33#
5.8G	802.11a	ANT2	Front Side	0	165	5825	0.04	0.275	16.81	17.00	1.045	89.64	1.116	0.321	/
			Back Side	0	165	5825	-0.18	0.049	16.81	17.00	1.045	89.64	1.116	0.057	/
			Right Edge	0	165	5825	-0.07	1.540	16.81	17.00	1.045	89.64	1.116	1.796	34#
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

10.17 Bluetooth

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Report SAR (W/kg)	Meas. No.
Body-worn&Hotspot														
DH5	ANT2	Front Side	10	0	2402	0.06	0.004	11.15	12.0	1.216	76.68	1.304	0.006	/
		Back Side	10	0	2402	0.05	0.008	11.15	12.0	1.216	76.68	1.304	0.013	/
		Right Edge	10	0	2402	-0.10	0.022	11.15	12.0	1.216	76.68	1.304	0.035	35#
Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Report SAR (W/kg)	Meas. No.
Specific														
DH5	ANT2	Front Side	0	0	2402	-0.06	0.045	11.15	12.0	1.216	76.68	1.304	0.071	/
		Back Side	0	0	2402	0.15	0.012	11.15	12.0	1.216	76.68	1.304	0.019	/
		Right Edge	0	0	2402	0.05	0.182	11.15	12.0	1.216	76.68	1.304	0.289	36#
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.18 NFC SAR

1. 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	67.93	3	6	-10.87
Note:					
1. Add the appropriate maximum ground reflection factor to the ERP level (6 dB for frequencies $\leq$ 30 MHz).					
2. $\text{ERP} = 49.92 + 20 \cdot \log(10) - 104.8 + 6 = -10.87$ (dBm)					

According to the FCC KDB 447498 D04

Estimated SAR: $\text{SAR}_{\text{test}} = 1.6 \cdot P_{\text{ant}} / P_{\text{th}}$ [W/kg]

Estimated SAR	$1.6 \cdot P_{\text{ant}} / P_{\text{th}}$ [W/kg]		
P_{meas} (dBm)	-10.87	P_{meas} (mW)	0.08
P_{th} (mW)	443.13		
NFC Estimated 1g SAR [W/kg]	< 0.001		

11 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Frequency Band (MHz)	Wireless Band	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Repeated ^{1st} Measured SAR (W/kg)	Largest to Smallest SAR Ratio
824.2	GSM850	Body-worn&Hotspot	Left Edge	0.842	Yes	0.821	1.03
836.6	GSM850	Body-worn&Hotspot	Left Edge	0.826	Yes	0.807	1.02
848.8	GSM850	Body-worn&Hotspot	Left Edge	0.901	Yes	0.883	1.02
824.2	GSM850	Specific	Left Edge	1.410	Yes	1.350	1.04
836.6	GSM850	Specific	Left Edge	1.330	Yes	1.280	1.04
848.8	GSM850	Specific	Left Edge	1.320	Yes	1.310	1.01
1710.2	GSM1900	Specific	Left Edge	2.550	Yes	2.440	1.05
1880.0	GSM1900	Specific	Left Edge	2.420	Yes	2.380	1.02
1769.8	GSM1900	Specific	Left Edge	3.050	Yes	2.980	1.02
1907.6	WCDMA Band2	Body-worn&Hotspot	Left Edge	2.000	Yes	1.920	1.04
1852.4	WCDMA Band2	Body-worn&Hotspot	Left Edge	2.310	Yes	2.210	1.05
1880.0	WCDMA Band2	Body-worn&Hotspot	Left Edge	2.100	Yes	2.030	1.03
1907.6	WCDMA Band2	Specific	Left Edge	2.000	Yes	1.890	1.06
1852.4	WCDMA Band2	Specific	Left Edge	2.310	Yes	2.230	1.04
1880.0	WCDMA Band2	Specific	Left Edge	2.100	Yes	2.070	1.01
1752.6	WCDMA Band4	Specific	Left Edge	1.130	Yes	1.080	1.05
1900	LTE Band2	Specific	Left Edge	1.648	Yes	1.630	1.01
1900	LTE Band2	Specific	Left Edge	1.950	Yes	1.880	1.04
1860	LTE Band2	Specific	Left Edge	2.060	Yes	2.010	1.02
1860	LTE Band2	Specific	Left Edge	1.940	Yes	1.860	1.04
1900	LTE Band2	Specific	Left Edge	1.510	Yes	1.460	1.03
1900	LTE Band2	Specific	Left Edge	1.720	Yes	1.660	1.04
1900	LTE Band2	Specific	Left Edge	2.020	Yes	1.910	1.06
1732.5	LTE Band4	Specific	Left Edge	1.110	Yes	1.070	1.04
1732.5	LTE Band4	Specific	Left Edge	0.980	Yes	0.930	1.05
2560	LTE Band7	Specific	Left Edge	1.220	Yes	1.180	1.03
2560	LTE Band7	Specific	Left Edge	1.150	Yes	1.110	1.04
1745	LTE Band66	Specific	Left Edge	1.090	Yes	1.030	1.06
1745	LTE Band66	Specific	Left Edge	0.940	Yes	0.896	1.05
2680	LTE Band41	Specific	Left Edge	1.590	Yes	1.510	1.05
2680	LTE Band41	Specific	Left Edge	1.220	Yes	1.170	1.04
2462	802.11b	Specific	Right Edge	1.950	Yes	1.890	1.03
2412	802.11b	Specific	Right Edge	1.710	Yes	1.630	1.05
2437	802.11b	Specific	Right Edge	1.820	Yes	1.770	1.03
5180	802.11a	Specific	Right Edge	0.978	Yes	0.963	1.02
5825	802.11a	Specific	Right Edge	1.540	Yes	1.460	1.05
Note: The ratio of largest to smallest SAR for the original and first repeated measurements is < 1.20, the second repeated measurement. is not required.							

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	Body-worn&Hotspot	Specific
1	WWAN+WIFI 2.4G+WIFI 5G	Yes	Yes
2	WWAN+BT+WIFI 5G	Yes	Yes

Note:

1. WiFi 2.4G and Bluetooth share the same antenna, and can't transmit simultaneously.
2. When stand-alone SAR is not required for a side of antenna, its SAR is considered zero in the SAR summing process to assess Multi-band transmission SAR compliance.
3. The maximum SAR summation is calculated based on the same configuration and test position.
4. The simultaneous transmission combinations of the more antennas contain combinations of less antennas, so only the worst simultaneous transmission combinations is shown in this report.

12.2 Sum SAR of Simultaneous Transmission

12.2.1 Body-worn&Hotspot Simultaneous Transmission SAR Evaluation for WWAN and WLAN and BT

Band	Antenna	Position	Stand alone SAR				SUM SAR	
			1	2	3	4		
			WWAN	2.4GWIFI	5GWIFI Max.	Bluetooth	1+2+3	1+3+4
GSM850	Ant.1	Front Side 10mm	0.527	0.052	0.216	0.006	0.795	0.749
		Back Side 10mm	0.329	0.068	0.071	0.013	0.468	0.413
		Left Edge 10mm	1.110	0.000	0.000	0.000	1.110	1.110
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
GSM1900	Ant.1	Front Side 10mm	0.054	0.052	0.216	0.006	0.322	0.276
		Back Side 10mm	0.110	0.068	0.071	0.013	0.249	0.194
		Left Edge 10mm	0.709	0.000	0.000	0.000	0.709	0.709
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
WCDMA B2	Ant.1	Front Side 10mm	0.040	0.052	0.216	0.006	0.308	0.262
		Back Side 10mm	0.090	0.068	0.071	0.013	0.229	0.174
		Left Edge 10mm	0.836	0.000	0.000	0.000	0.836	0.836
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
WCDMA B4	Ant.1	Front Side 10mm	0.019	0.052	0.216	0.006	0.287	0.241
		Back Side 10mm	0.098	0.068	0.071	0.013	0.237	0.182
		Left Edge 10mm	0.356	0.000	0.000	0.000	0.356	0.356
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
WCDMA B5	Ant.1	Front Side 10mm	0.126	0.052	0.216	0.006	0.394	0.348
		Back Side 10mm	0.068	0.068	0.071	0.013	0.207	0.152
		Left Edge 10mm	0.184	0.000	0.000	0.000	0.184	0.184
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B2	Ant.1	Front Side 10mm	0.045	0.052	0.216	0.006	0.313	0.267
		Back Side 10mm	0.104	0.068	0.071	0.013	0.243	0.188
		Left Edge 10mm	0.723	0.000	0.000	0.000	0.723	0.723
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B4	Ant.1	Front Side 10mm	0.003	0.052	0.216	0.006	0.271	0.225
		Back Side 10mm	0.006	0.068	0.071	0.013	0.145	0.090
		Left Edge 10mm	0.328	0.000	0.000	0.000	0.328	0.328
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B5	Ant.1	Front Side 10mm	0.219	0.052	0.216	0.006	0.487	0.441
		Back Side 10mm	0.108	0.068	0.071	0.013	0.247	0.192
		Left Edge 10mm	0.302	0.000	0.000	0.000	0.302	0.302
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B7	Ant.1	Front Side 10mm	0.041	0.052	0.216	0.006	0.309	0.263
		Back Side 10mm	0.065	0.068	0.071	0.013	0.204	0.149

		Left Edge 10mm	0.549	0.000	0.000	0.000	0.549	0.549
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B12	Ant.1	Front Side 10mm	0.064	0.052	0.216	0.006	0.332	0.286
		Back Side 10mm	0.065	0.068	0.071	0.013	0.204	0.149
		Left Edge 10mm	0.149	0.000	0.000	0.000	0.149	0.149
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B17	Ant.1	Front Side 10mm	0.066	0.052	0.216	0.006	0.334	0.288
		Back Side 10mm	0.066	0.068	0.071	0.013	0.205	0.150
		Left Edge 10mm	0.149	0.000	0.000	0.000	0.149	0.149
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B66	Ant.1	Front Side 10mm	0.156	0.052	0.216	0.006	0.424	0.378
		Back Side 10mm	0.053	0.068	0.071	0.013	0.192	0.137
		Left Edge 10mm	0.313	0.000	0.000	0.000	0.313	0.313
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B38	Ant.1	Front Side 10mm	0.074	0.052	0.216	0.006	0.342	0.296
		Back Side 10mm	0.064	0.068	0.071	0.013	0.203	0.148
		Left Edge 10mm	0.450	0.000	0.000	0.000	0.450	0.450
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407
LTE B41	Ant.1	Front Side 10mm	0.055	0.052	0.216	0.006	0.323	0.277
		Back Side 10mm	0.069	0.068	0.071	0.013	0.208	0.153
		Left Edge 10mm	0.995	0.000	0.000	0.000	0.995	0.995
		Right Edge 10mm	0.000	0.601	0.372	0.035	0.973	0.407

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 1.11 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Antenna	Position	Stand alone SAR				SUM SAR	
			1	2	3	4	1+2+3	1+3+4
			WWAN	2.4GWIFI	5GWIFI Max.	Bluetooth		
GSM850	Ant.1	Front Side 0mm	0.722	0.123	0.321	0.071	1.166	1.114
		Back Side 0mm	0.365	0.106	0.069	0.019	0.540	0.453
		Left Edge 0mm	1.703	0.000	0.000	0.000	1.703	1.703
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
GSM1900	Ant.1	Front Side 0mm	0.098	0.123	0.321	0.071	0.542	0.490
		Back Side 0mm	0.175	0.106	0.069	0.019	0.350	0.263
		Left Edge 0mm	3.135	0.000	0.000	0.000	3.135	3.135
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
WCDMA B2	Ant.1	Front Side 0mm	0.080	0.123	0.321	0.071	0.524	0.472
		Back Side 0mm	0.139	0.106	0.069	0.019	0.314	0.227
		Left Edge 0mm	2.557	0.000	0.000	0.000	2.557	2.557
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
WCDMA B4	Ant.1	Front Side 0mm	0.061	0.123	0.321	0.071	0.505	0.453
		Back Side 0mm	0.075	0.106	0.069	0.019	0.250	0.163
		Left Edge 0mm	1.436	0.000	0.000	0.000	1.436	1.436
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
WCDMA B5	Ant.1	Front Side 0mm	0.222	0.123	0.321	0.071	0.666	0.614
		Back Side 0mm	0.091	0.106	0.069	0.019	0.266	0.179
		Left Edge 0mm	0.284	0.000	0.000	0.000	0.284	0.284
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
LTE B2	Ant.1	Front Side 0mm	0.073	0.123	0.321	0.071	0.517	0.465
		Back Side 0mm	0.118	0.106	0.069	0.019	0.293	0.206
		Left Edge 0mm	2.301	0.000	0.000	0.000	2.301	2.301
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
LTE B4	Ant.1	Front Side 0mm	0.054	0.123	0.321	0.071	0.498	0.446
		Back Side 0mm	0.063	0.106	0.069	0.019	0.238	0.151
		Left Edge 0mm	1.401	0.000	0.000	0.000	1.401	1.401
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
LTE B5	Ant.1	Front Side 0mm	0.260	0.123	0.321	0.071	0.704	0.652
		Back Side 0mm	0.095	0.106	0.069	0.019	0.270	0.183
		Left Edge 0mm	0.338	0.000	0.000	0.000	0.338	0.338
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
LTE B7	Ant.1	Front Side 0mm	0.071	0.123	0.321	0.071	0.515	0.463
		Back Side 0mm	0.094	0.106	0.069	0.019	0.269	0.182
		Left Edge 0mm	1.495	0.000	0.000	0.000	1.495	1.495
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084

LTE B12	Ant.1	Front Side 0mm	0.072	0.123	0.321	0.071	0.516	0.464
		Back Side 0mm	0.077	0.106	0.069	0.019	0.252	0.165
		Left Edge 0mm	0.179	0.000	0.000	0.000	0.179	0.179
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
LTE B17	Ant.1	Front Side 0mm	0.075	0.123	0.321	0.071	0.519	0.467
		Back Side 0mm	0.077	0.106	0.069	0.019	0.252	0.165
		Left Edge 0mm	0.186	0.000	0.000	0.000	0.186	0.186
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
LTE B66	Ant.1	Front Side 0mm	0.055	0.123	0.321	0.071	0.499	0.447
		Back Side 0mm	0.060	0.106	0.069	0.019	0.235	0.148
		Left Edge 0mm	1.277	0.000	0.000	0.000	1.277	1.277
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
LTE B38	Ant.1	Front Side 0mm	0.032	0.123	0.321	0.071	0.476	0.424
		Back Side 0mm	0.040	0.106	0.069	0.019	0.215	0.128
		Left Edge 0mm	0.714	0.000	0.000	0.000	0.714	0.714
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084
LTE B40	Ant.1	Front Side 0mm	0.060	0.123	0.321	0.071	0.504	0.452
		Back Side 0mm	0.077	0.106	0.069	0.019	0.252	0.165
		Left Edge 0mm	1.983	0.000	0.000	0.000	1.983	1.983
		Right Edge 0mm	0.000	2.108	1.795	0.289	3.903	2.084

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 10g SAR is 3.903 W/Kg < 4.0 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.3 Highest Total Exposure Ratio of Simultaneous Transmission

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

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

The maximum SAR value for Simultaneous Transmission is 3.903 [W/kg]. SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption thresholds Therefore, the worst TER $= (3.903 + 0.001) / 4.0 = 0.976 < 1$, the NFC SAR transmit simultaneously Pass.

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY8	16.2.2.1588	N/A	N/A
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2024/05/08	2027/05/07
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2024/05/08	2027/05/07
1950MHz Validation Dipole	Speag	D1950V3	SN: 1240	2024/08/22	2027/08/21
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 Electronics	Speag	DAE4	SN: 1711	2024/03/18	2025/03/17
E-Field Probe	Speag	EX3DV4	SN: 7893	2024/09/05	2025/09/04
Signal Generator	R&S	SMB100A	177746	2024/04/24	2025/04/23
Power Meter	R&S	NRVD-B2	835843/014	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z4	100381	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z2	100211	2024/08/08	2025/08/07
Wireless Communication Test Set	Anritsu	MT8820C	6201144551	2024/05/14	2025/05/13
Network Analyzer	Agilent	E5071C	MY46103472	2024/09/11	2025/09/10
Thermometer	Elitech	RC-4HC	EF7239002655	2024/10/31	2025/10/30
Thermometer	Elitech	RC-4HC	EF7216002974	2024/10/31	2025/10/30
Power Amplifier	Mini-Circuits	ZVA-183W-S+	932502132	N/A	N/A
Dielectric Probe Kit	Speag	DAK3.5	SN: 1312	N/A	N/A
Phantom	Speag	SAM	SN: 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 (%)
2025.02.08	Head	750	21.2	0.91	41.46	0.89	41.94	2.25	-1.14
2025.02.09	Head	835	21.3	0.89	42.06	0.90	41.50	-1.11	1.35
2025.02.10	Head	1750	21.2	1.36	39.82	1.37	40.08	-0.73	-0.65
2025.02.11	Head	1750	21.3	1.40	40.00	1.37	40.08	2.19	-0.20
2025.02.12	Head	1950	21.2	1.44	39.80	1.40	40.00	2.86	-0.50
2025.02.13	Head	2450	21.1	1.81	38.70	1.80	39.20	0.56	-1.28
2025.02.14	Head	2600	21.2	1.98	38.47	1.96	39.01	1.02	-1.38
2025.02.15	Head	5250	21.2	4.79	35.19	4.71	35.93	1.70	-2.06
2025.02.16	Head	5750	21.3	5.24	35.65	5.22	35.36	0.38	0.82

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 (%)
2025.02.08	Head	750	100	0.871	8.71	8.46	2.96
2025.02.09	Head	835	100	1.020	10.20	9.74	4.72
2025.02.10	Head	1750	100	3.620	36.20	37.00	-2.16
2025.02.11	Head	1750	100	3.570	35.70	37.00	-3.51
2025.02.12	Head	1950	100	4.210	42.10	41.70	0.96
2025.02.13	Head	2450	100	5.260	52.60	52.60	0.00
2025.02.14	Head	2600	100	5.400	54.00	55.90	-3.40
2025.02.15	Head	5250	100	7.820	78.20	77.70	0.64
2025.02.16	Head	5750	100	7.830	78.30	77.60	0.90
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 (%)
2025.02.08	Head	750	100	0.581	5.81	5.70	1.93
2025.02.09	Head	835	100	0.656	6.56	6.43	2.02
2025.02.10	Head	1750	100	1.930	19.30	19.70	-2.03
2025.02.11	Head	1750	100	1.910	19.10	19.70	-3.05
2025.02.12	Head	1950	100	2.220	22.20	21.70	2.30
2025.02.13	Head	2450	100	2.490	24.90	24.70	0.81
2025.02.14	Head	2600	100	2.430	24.30	25.40	-4.33
2025.02.15	Head	5250	100	2.220	22.20	22.00	0.91
2025.02.16	Head	5750	100	2.280	22.80	21.90	4.11
Note: The tolerance limit of System validation $\pm 10\%$.							

System Performance Check Data (750MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		D750	CW, 0--	750.0, 50	8.92	0.91	41.5	22.3	21.2

Hardware Setup

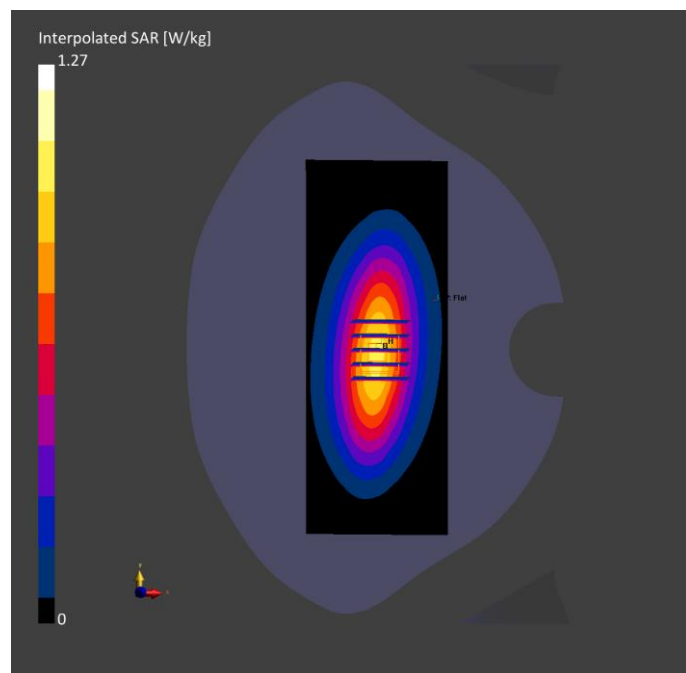
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-08	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-08	2025-02-08
psSAR1g [W/kg]	0.869	0.871
psSAR10g [W/kg]	0.579	0.581
Power Drift [dB]	0.00	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		68.1
Dist 3dB Peak [mm]		16.3



System Performance Check Data (835MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		CD835	CW, 0--	835.0, 50	8.85	0.89	42.1	22.5	21.3

Hardware Setup

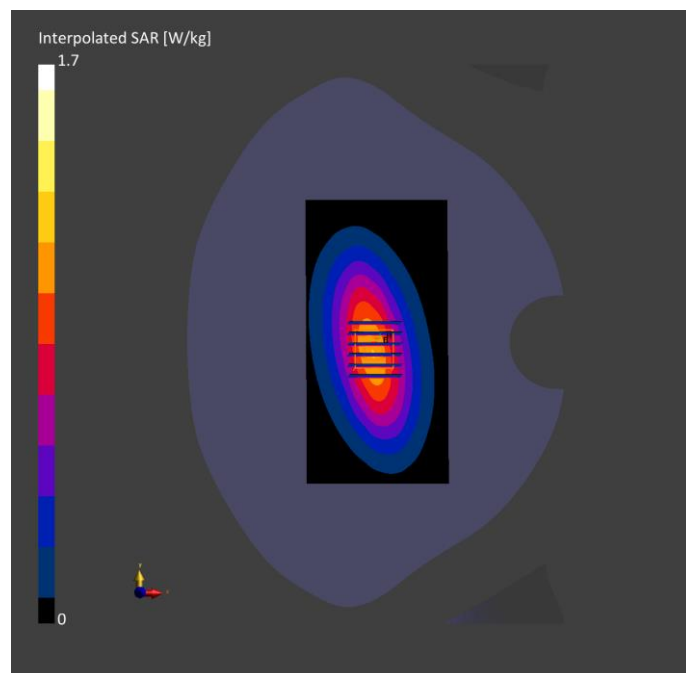
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-09	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	2025-02-09	2025-02-09
psSAR1g [W/kg]	0.986	1.02
psSAR10g [W/kg]	0.651	0.656
Power Drift [dB]	-0.00	0.00
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		82.8
Dist 3dB Peak [mm]		16.7



System Performance Check Data (1750MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		D1750	CW, 0--	1750.0, 50	7.57	1.36	39.8	22.4	21.2

Hardware Setup

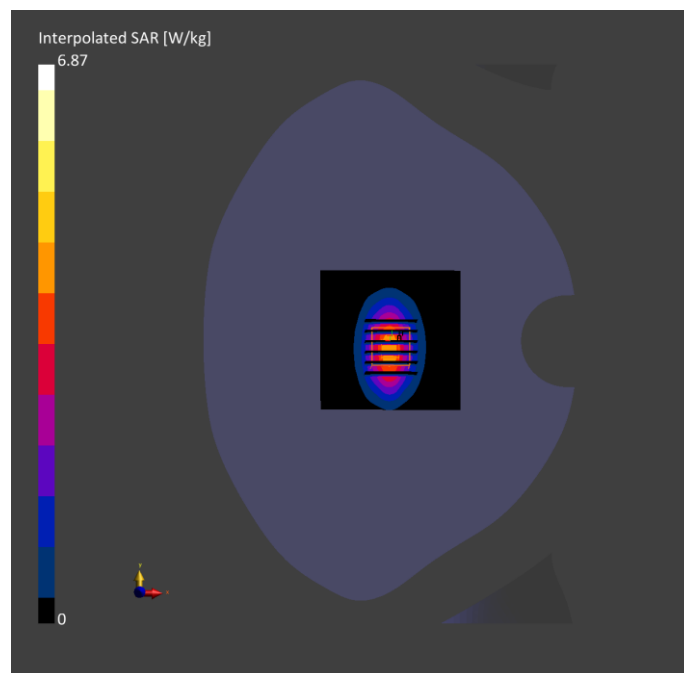
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-10	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-10	2025-02-10
psSAR1g [W/kg]	3.68	3.62
psSAR10g [W/kg]	1.97	1.93
Power Drift [dB]	-0.03	0.00
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		82.5
Dist 3dB Peak [mm]		9.9



System Performance Check Data (1750MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		D1750	CW, 0--	1750.0, 50	7.57	1.40	40.0	22.6	21.3

Hardware Setup

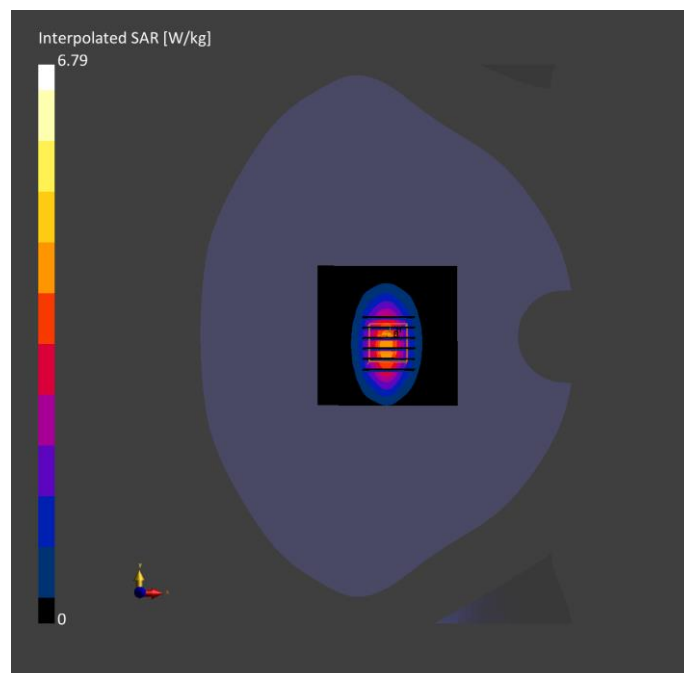
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-11	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	2025-02-11	2025-02-11
psSAR1g [W/kg]	3.53	3.57
psSAR10g [W/kg]	1.89	1.91
Power Drift [dB]	-0.02	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		82.1
Dist 3dB Peak [mm]		9.6



System Performance Check Data (1950MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		D1950	CW, 0--	1950.0, 50	7.34	1.44	39.8	22.5	21.2

Hardware Setup

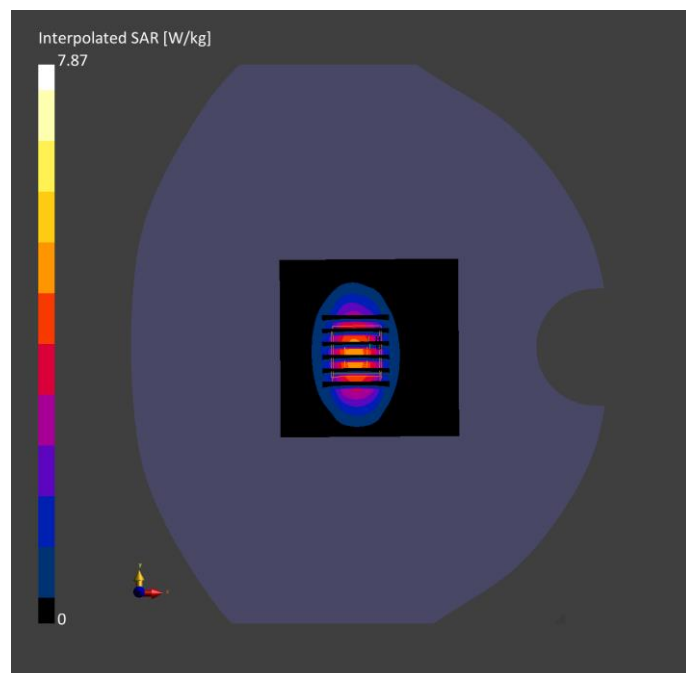
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-12	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	2025-02-12	2025-02-12
psSAR1g [W/kg]	4.20	4.21
psSAR10g [W/kg]	2.15	2.22
Power Drift [dB]	0.05	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		81.6
Dist 3dB Peak [mm]		9.7



System Performance Check Data (2450MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		D2450	CW, 0--	2450.0, 2450	6.98	1.81	38.7	22.3	21.1

Hardware Setup

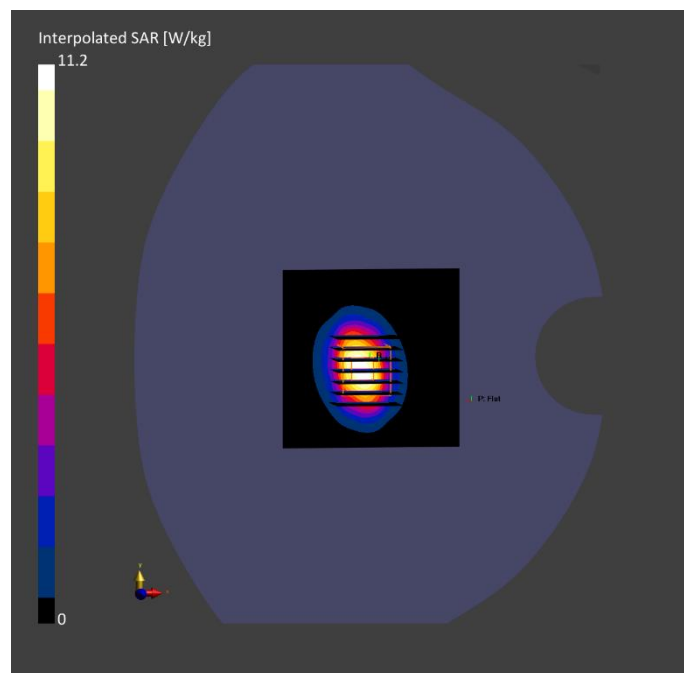
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-13	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-13	2025-02-13
psSAR1g [W/kg]	5.22	5.26
psSAR10g [W/kg]	2.41	2.49
Power Drift [dB]	-0.06	-0.08
Power Scaling	Disabled	Disabled
Scaling Factor		
[dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		81.2
Dist 3dB Peak [mm]		8.9



System Performance Check Data (2600MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivi ty	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		CD2600 V3	CW, 0--	2600.0, 50	7.06	1.98	38.5	22.4	21.2

Hardware Setup

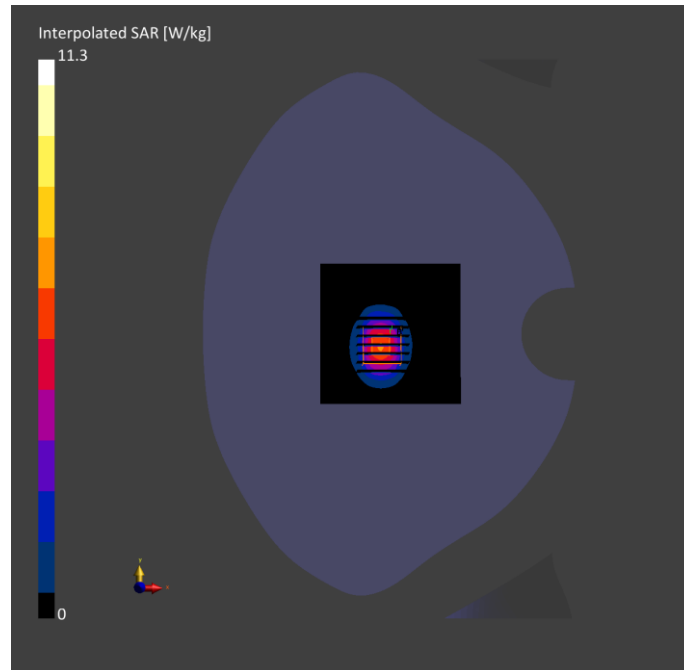
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-14	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-14	2025-02-14
psSAR1g [W/kg]	5.29	5.40
psSAR10g [W/kg]	2.46	2.43
Power Drift [dB]	0.04	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		80.3
Dist 3dB Peak [mm]		9.0



System Performance Check Data (5250MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		D5GHz	CW, 0--	5250.0, 5250	5.44	4.79	35.2	22.3	21.2

Hardware Setup

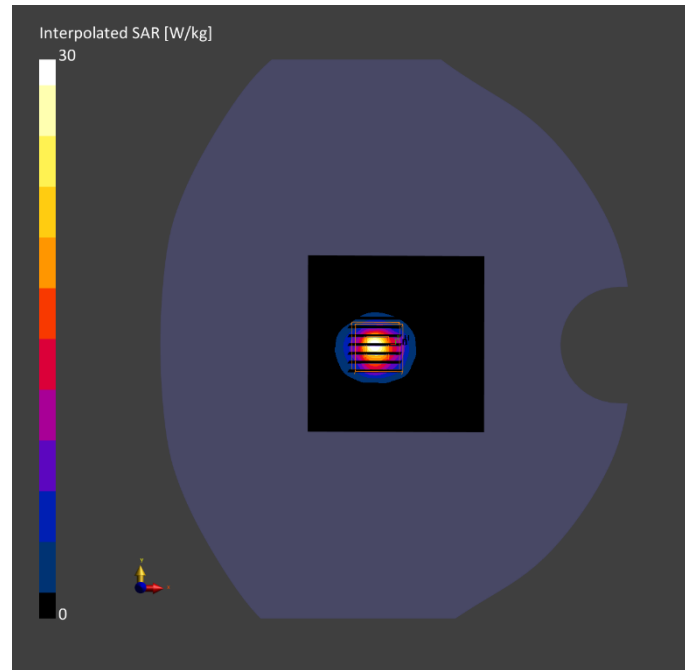
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-15	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-15	2025-02-15
psSAR1g [W/kg]	7.55	7.82
psSAR10g [W/kg]	2.06	2.22
Power Drift [dB]	0.01	0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		65.8
Dist 3dB Peak [mm]		7.9



System Performance Check Data (5750MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL		Validati on band	CW, 0--	5750.0, 5750	4.98	5.24	35.7	22.5	21.3

Hardware Setup

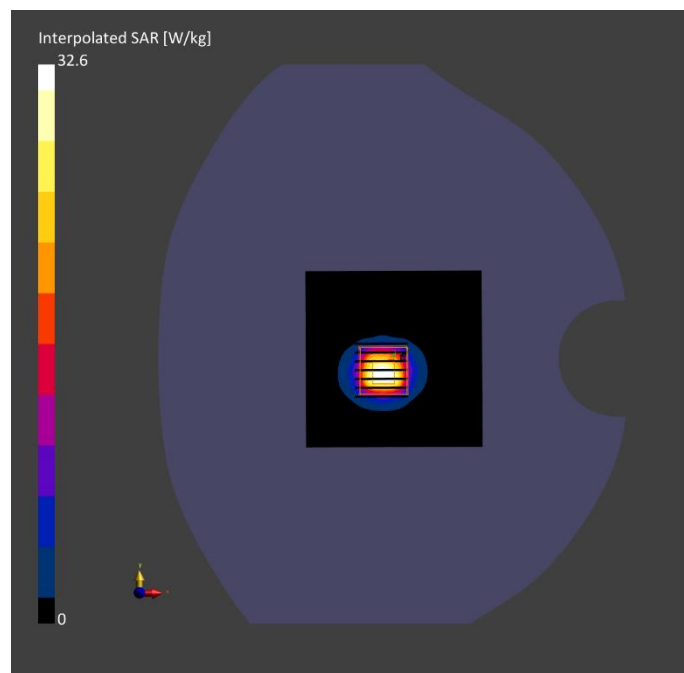
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-16	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-16	2025-02-16
psSAR1g [W/kg]	7.68	7.83
psSAR10g [W/kg]	2.17	2.28
Power Drift [dB]	-0.03	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		64.2
Dist 3dB Peak [mm]		7.6



ANNEX C TEST DATA

Meas.1 Body Plane with Left Edge 10mm on High Channel in GSM850 4Slot mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	GSM 850	GSM, 10028-DAC	848.8, 251	8.85	0.94	40.6	22.5	21.3

Hardware Setup

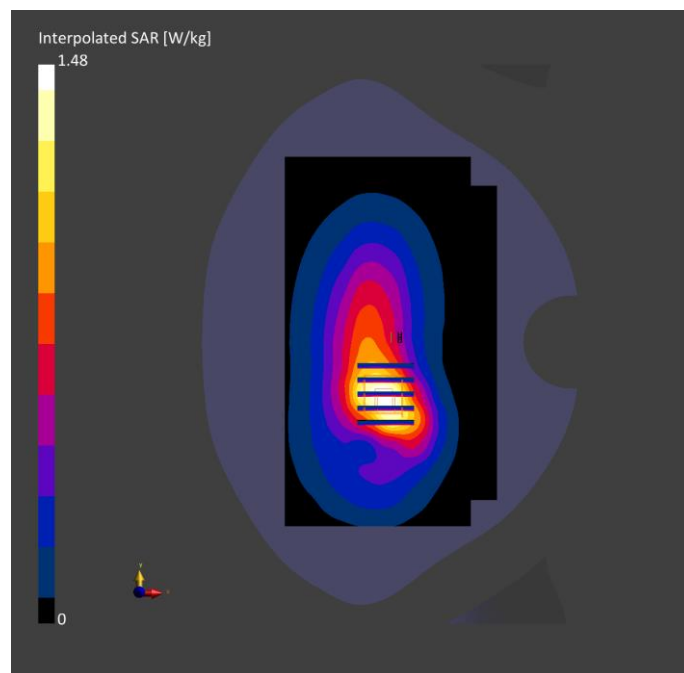
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-09	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-09	2025-02-09
psSAR1g [W/kg]	0.764	0.901
psSAR10g [W/kg]	0.498	0.580
Power Drift [dB]	0.09	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		60.0
Dist 3dB Peak [mm]		13.8



Meas.2 Body Plane with Left Edge 0mm on Low Channel in GSM850 4Slot mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	GSM 850	GSM, 10028- DAC	824.2, 128	8.85	0.88	42.7	22.5	21.3

Hardware Setup

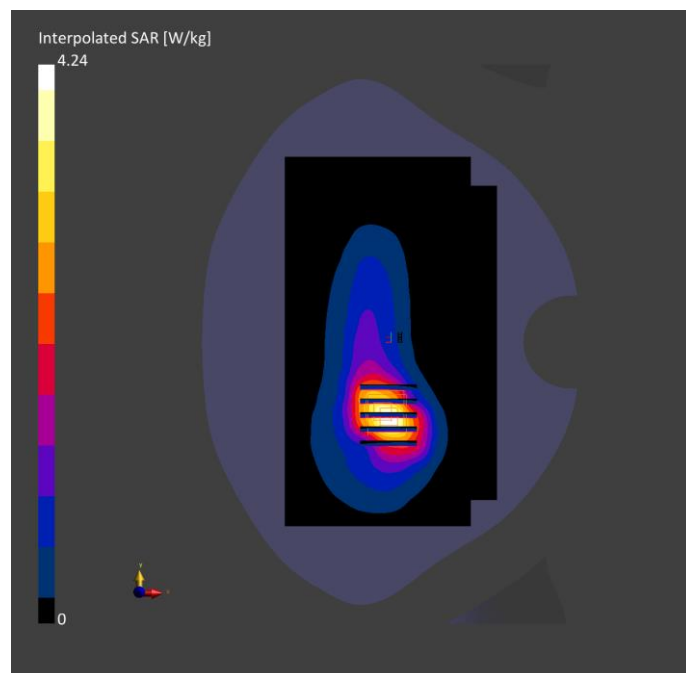
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-09	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-09	2025-02-09
psSAR1g [W/kg]	2.29	2.45
psSAR10g [W/kg]	1.41	1.41
Power Drift [dB]	-0.01	-0.13
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.0
Dist 3dB Peak [mm]		12.5



Meas.3 Body Plane with Left Edge 10mm on Low Channel in GSM1900 4Slot mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	PCS 1900	GSM, 10028-DAC	1710.2, 512	7.57	1.31	41.0	22.4	21.2

Hardware Setup

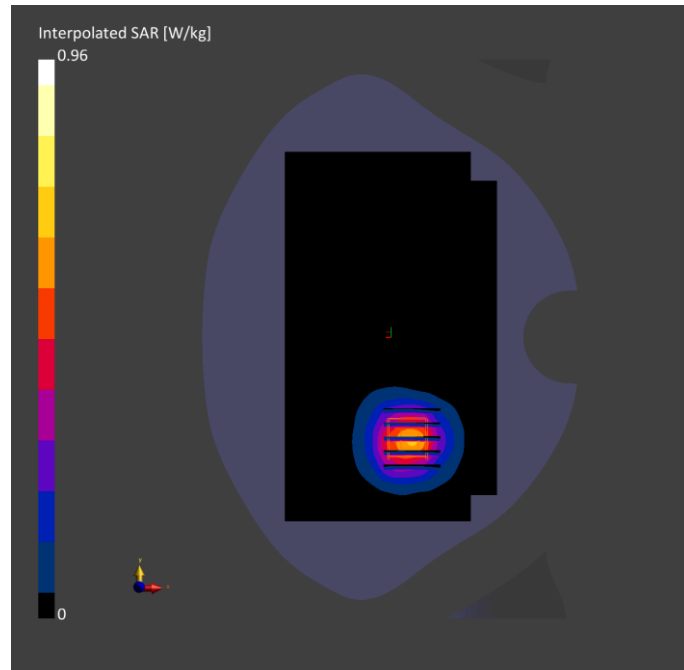
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-10	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-10	2025-02-10
psSAR1g [W/kg]	0.538	0.615
psSAR10g [W/kg]	0.304	0.370
Power Drift [dB]	-0.02	-0.11
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		64.1
Dist 3dB Peak [mm]		15.8



Meas.4 Body Plane with Left Edge 0mm on High Channel in GSM1900 4Slot mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	PCS 1900	GSM, 10028-DAC	1769.8, 810	7.57	1.40	39.6	22.4	21.2

Hardware Setup

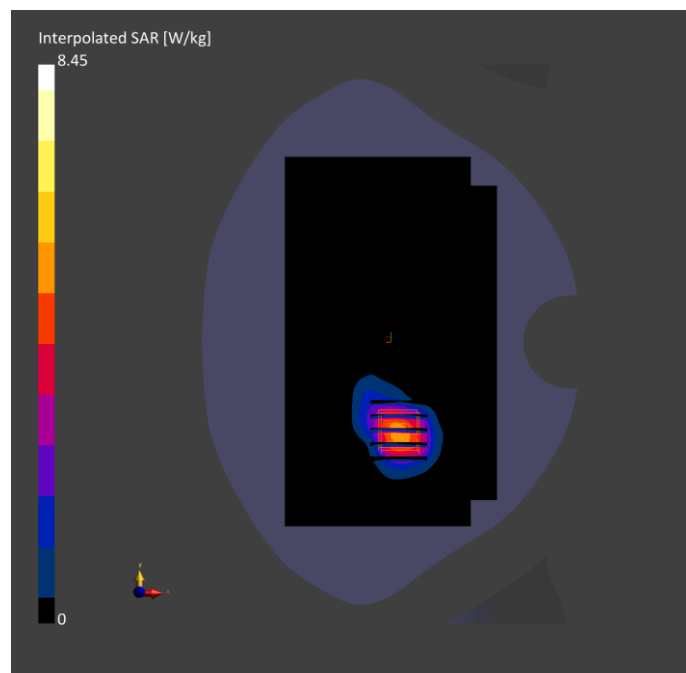
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-10	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-10	2025-02-10
psSAR1g [W/kg]	4.60	5.21
psSAR10g [W/kg]	2.52	3.05
Power Drift [dB]	-0.00	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor		
[dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.2
Dist 3dB Peak [mm]		12.5



Meas.5 Body Plane with Left Edge 10mm on High Channel in WCDMA B2 mode with Antenna 1

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	Band 2	WCDMA, 10457-AAB	1907.6, 9538	7.34	1.42	40.1	22.5	21.2

Hardware Setup

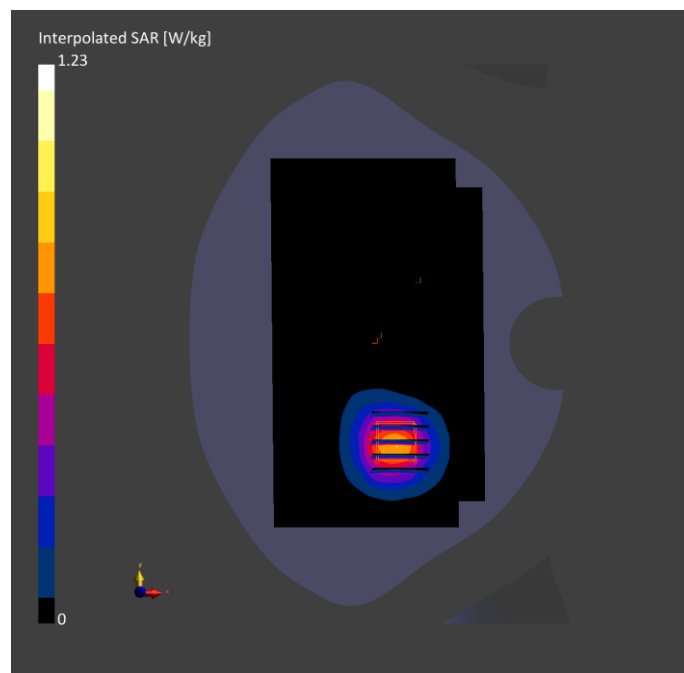
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-12	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-12	2025-02-12
psSAR1g [W/kg]	0.683	0.789
psSAR10g [W/kg]	0.388	0.483
Power Drift [dB]	0.09	0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		64.6
Dist 3dB Peak [mm]		15.8



Meas.6 Body Plane with Left Edge 0mm on Low Channel in WCDMA B2 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 2	WCDMA, 10457-AAB	1852.4, 9262	7.34	1.37	41.0	22.5	21.2

Hardware Setup

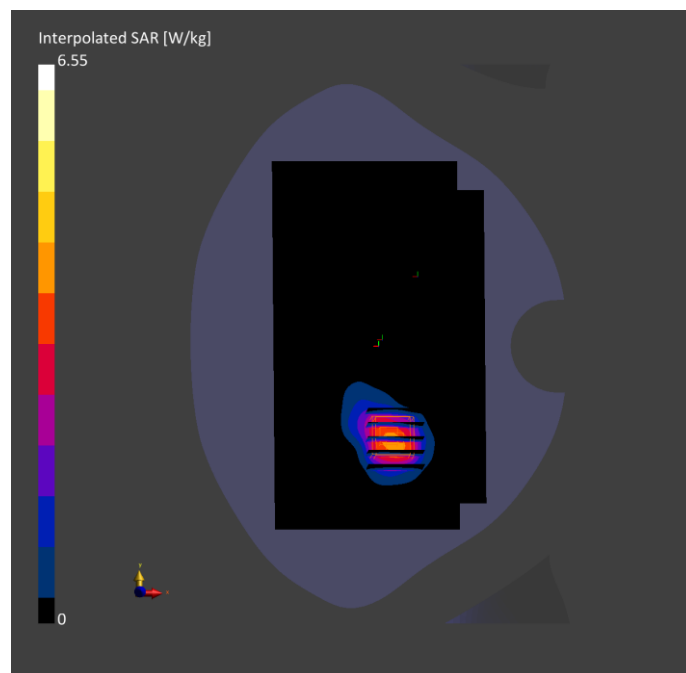
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-12	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-12	2025-02-12
psSAR1g [W/kg]	3.56	3.78
psSAR10g [W/kg]	1.96	2.31
Power Drift [dB]	-0.03	-0.07
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		49.0
Dist 3dB Peak [mm]		9.3



Meas.7 Body Plane with Left Edge 10mm on High Channel in WCDMA B4 mode with Antenna 1

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	Band 4	WCDMA, 10457-AAB	1752.6, 1513	7.57	1.39	39.8	22.4	21.2

Hardware Setup

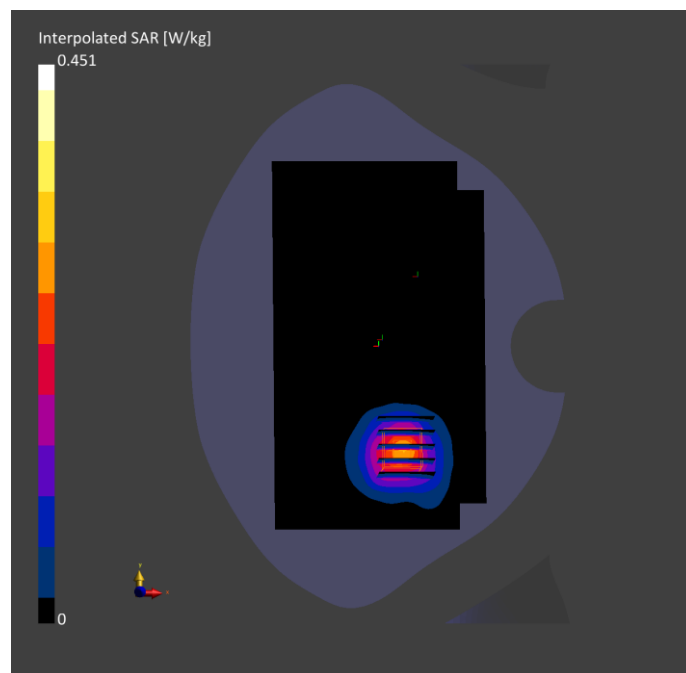
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-10	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-10	2025-02-10
psSAR1g [W/kg]	0.244	0.280
psSAR10g [W/kg]	0.137	0.164
Power Drift [dB]	0.07	0.10
Power Scaling	Disabled	Disabled
Scaling Factor		
[dB]		
TSL	No correction	No correction
Correction		
M2/M1 [%]		61.4
Dist 3dB Peak [mm]		12.9



Meas.8 Body Plane with Left Edge 0mm on High Channel in WCDMA B4 mode with Antenna 1

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, 0.00	Band 4	WCDMA, 10457-AAB	1752.6, 1513	7.57	1.39	39.8	22.4	21.2

Hardware Setup

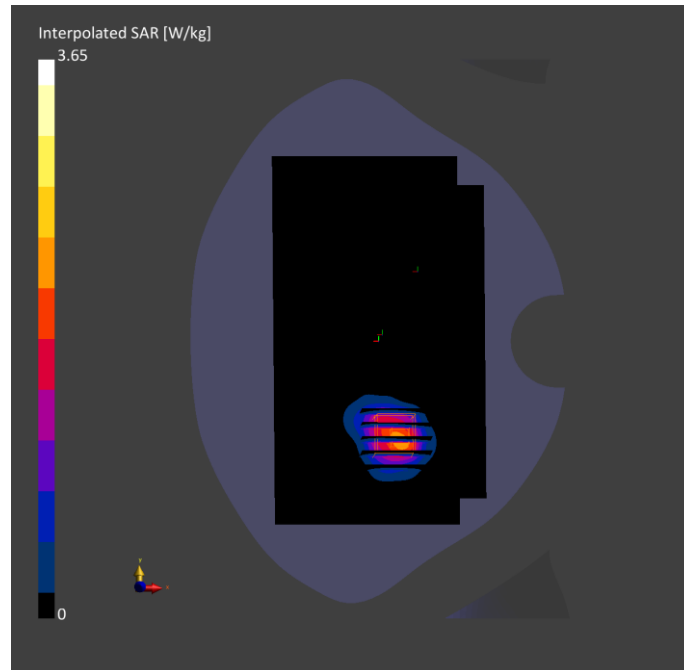
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-10	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-10	2025-02-10
psSAR1g [W/kg]	1.92	1.98
psSAR10g [W/kg]	1.06	1.13
Power Drift [dB]	-0.08	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor		
[dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		48.3
Dist 3dB Peak [mm]		9.3



Meas.9 Body Plane with Left Edge 10mm on High Channel in WCDMA B9 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	Band 5	WCDMA, 10457-AAB	846.6, 4233	8.85	0.92	41.0	22.5	21.3

Hardware Setup

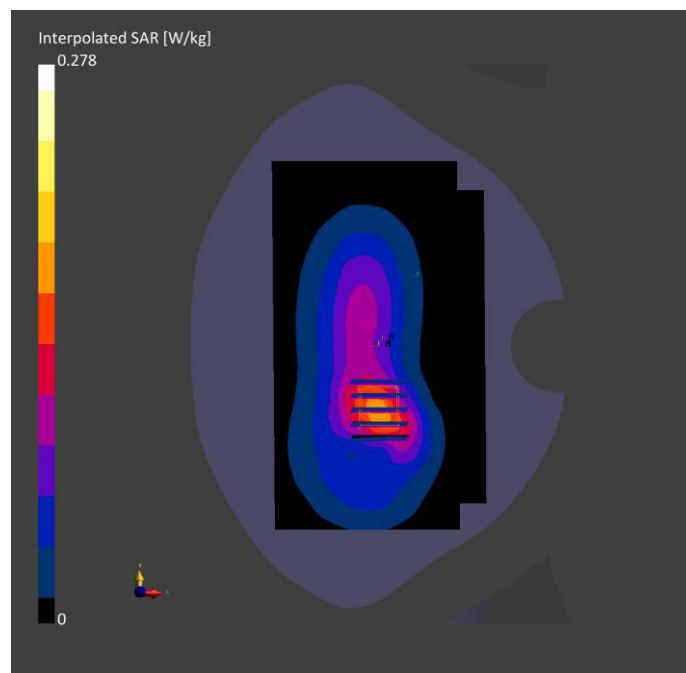
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-09	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-09	2025-02-09
psSAR1g [W/kg]	0.154	0.176
psSAR10g [W/kg]	0.101	0.112
Power Drift [dB]	0.07	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		60.9
Dist 3dB Peak [mm]		15.2



Meas.10 Body Plane with Left Edge 0mm on High Channel in WCDMA B9 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 5	WCDMA, 10457-AAB	846.6, 4233	8.85	0.92	41.0	22.5	21.3

Hardware Setup

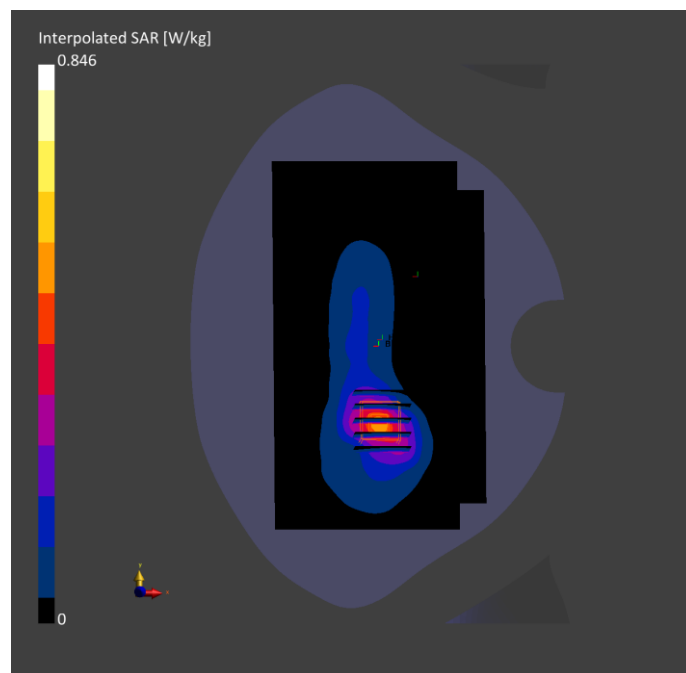
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-09	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-09	2025-02-09
psSAR1g [W/kg]	0.444	0.481
psSAR10g [W/kg]	0.261	0.272
Power Drift [dB]	-0.05	-0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.8
Dist 3dB Peak [mm]		11.5



Meas.11 Body Plane with Left Edge 10mm on High Channel in LTE B2 mode with Antenna 1

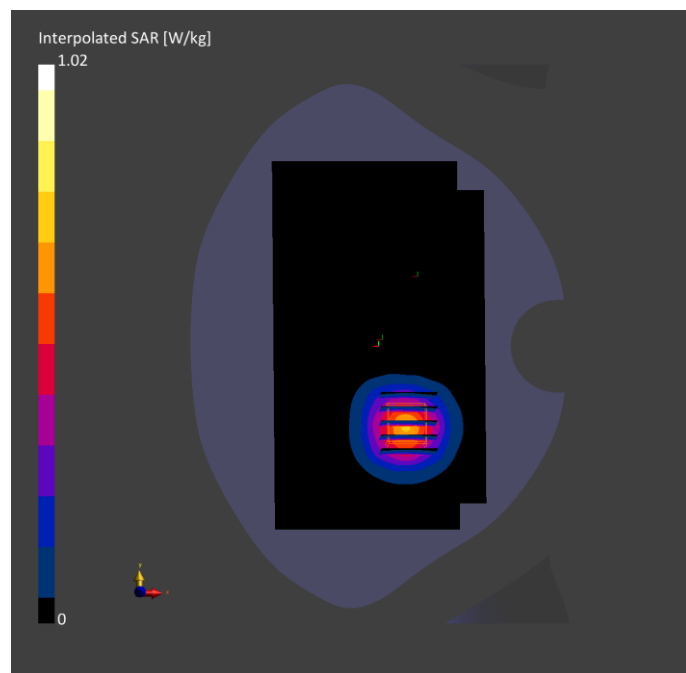
Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conducti vity [S/m]	TSL Permittivi ty	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	Band 2	LTE-FDD, 10169-CAF	1900.0, 19100	7.34	1.41	40.3	22.5	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	2025-02-12	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

Scan Setup			Measurement Results		
	Area Scan	Zoom Scan		Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 x 30.0	Date	2025-02-12	2025-02-12
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0	psSAR1g [W/kg]	0.570	0.663
Sensor Surface [mm]	3.0	1.4	psSAR10g [W/kg]	0.323	0.407
Graded Grid	Yes	Yes	Power Drift [dB]	-0.03	-0.01
Grading Ratio	1.5	1.5	Power Scaling	Disabled	Disabled
MAIA	N/A	N/A	Scaling Factor		
Surface	VMS + 6p	VMS + 6p			
Detection			[dB]		
Scan Method	Measured	Measured	TSL Correction	No correction	No correction
			M2/M1 [%]		65.7
			Dist 3dB Peak [mm]		15.1



Meas.12 Body Plane with Left Edge 0mm on Low Channel in LTE B2 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 2	LTE-FDD, 10169-CAF	1860.0, 18700	7.34	1.37	41.0	22.5	21.2

Hardware Setup

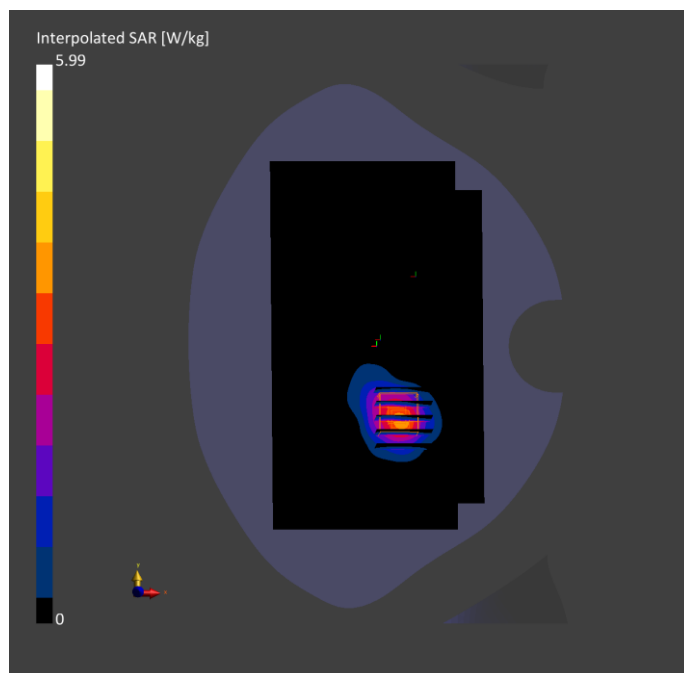
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-12	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-12	2025-02-12
psSAR1g [W/kg]	3.08	3.43
psSAR10g [W/kg]	1.65	2.06
Power Drift [dB]	-0.03	0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		54.3
Dist 3dB Peak [mm]		9.1



Meas.13 Body Plane with Left Edge 10mm on Middle Channel in LTE B4 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	Band 4	LTE-FDD, 10169-CAF	1732.5, 20175	7.57	1.35	41.0	22.6	21.3

Hardware Setup

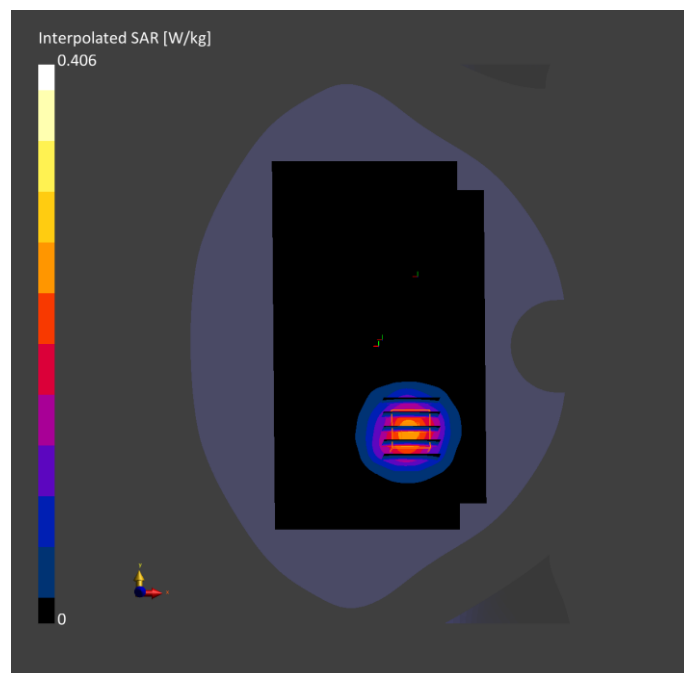
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-11	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-11	2025-02-11
psSAR1g [W/kg]	0.218	0.260
psSAR10g [W/kg]	0.126	0.153
Power Drift [dB]	0.02	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		64.3
Dist 3dB Peak [mm]		14.3



Meas.14 Body Plane with Left Edge 0mm on Middle Channel in LTE B4 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 4	LTE-FDD, 10169-CAF	1732.5, 20175	7.57	1.35	41.0	22.6	21.3

Hardware Setup

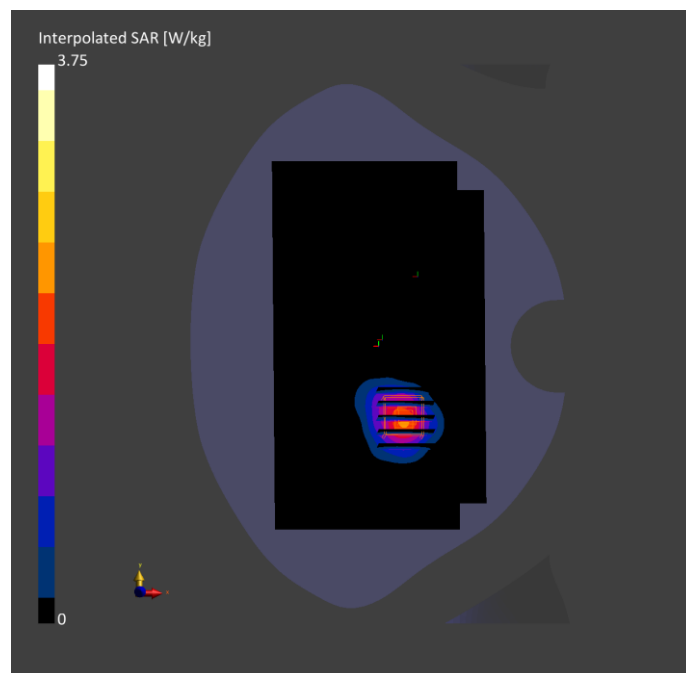
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-11	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-11	2025-02-11
psSAR1g [W/kg]	1.85	1.97
psSAR10g [W/kg]	1.00	1.11
Power Drift [dB]	-0.10	0.11
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		46.3
Dist 3dB Peak [mm]		8.6



Meas.15 Body Plane with Left Edge 10mm on Middle Channel in LTE B5 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	Band 5	LTE-FDD, 10175-CAH	836.5, 20525	8.85	0.90	41.9	22.5	21.3

Hardware Setup

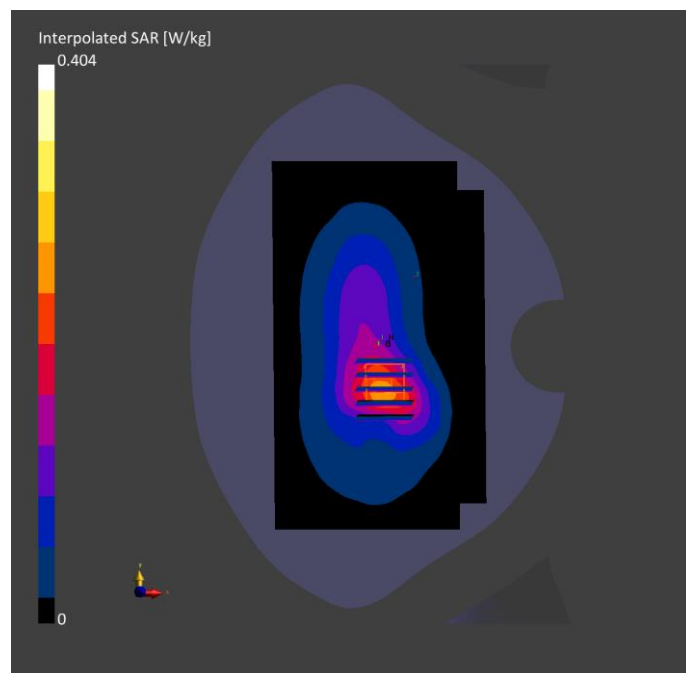
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-09	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-09	2025-02-09
psSAR1g [W/kg]	0.225	0.254
psSAR10g [W/kg]	0.145	0.162
Power Drift [dB]	0.07	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		60.7
Dist 3dB Peak [mm]		16.1



Meas.16 Body Plane with Left Edge 0mm on Middle Channel in LTE B5 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 5	LTE-FDD, 10175-CAH	836.5, 20525	8.85	0.90	41.9	22.5	21.3

Hardware Setup

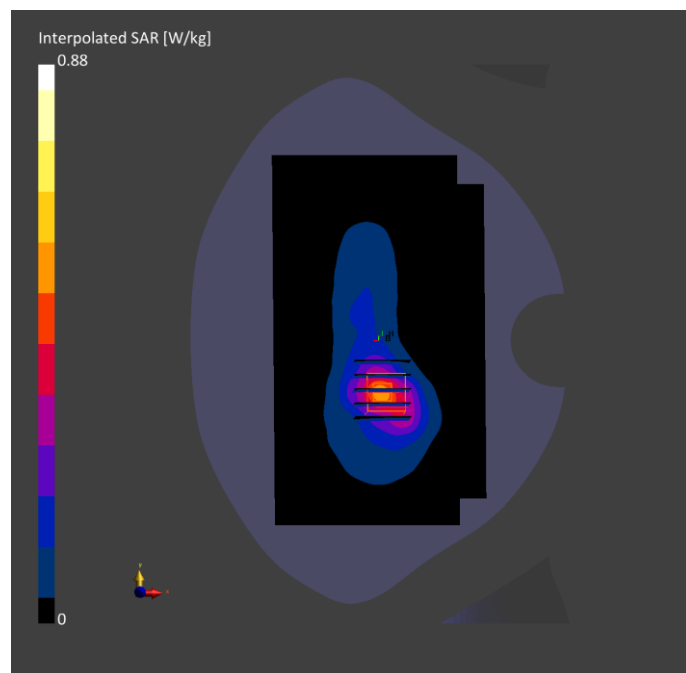
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-09	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-09	2025-02-09
psSAR1g [W/kg]	0.464	0.497
psSAR10g [W/kg]	0.276	0.284
Power Drift [dB]	-0.01	-0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.2
Dist 3dB Peak [mm]		12.5



Meas.17 Body Plane with Left Edge 10mm on High Channel in LTE B7 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	Band 7	LTE-FDD, 10169-CAF	2560.0, 21350	7.06	1.89	39.5	22.4	21.2

Hardware Setup

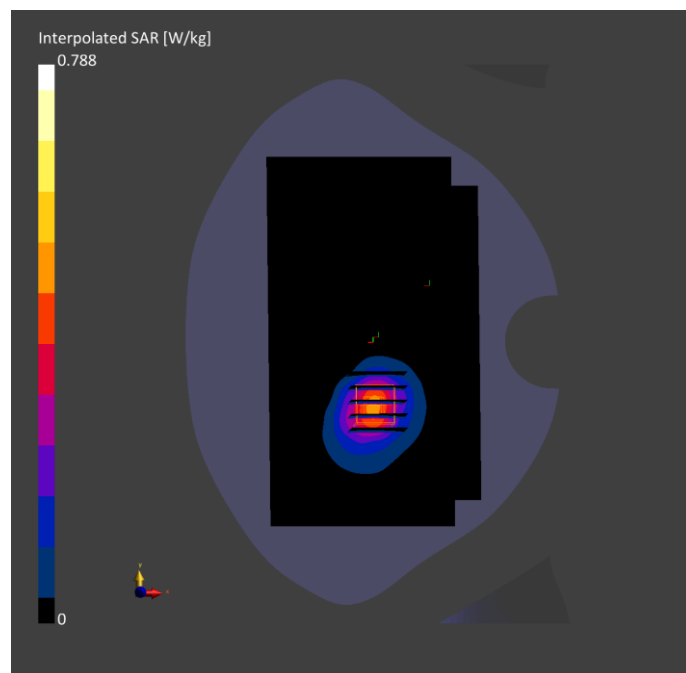
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-14	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-14	2025-02-14
psSAR1g [W/kg]	0.396	0.448
psSAR10g [W/kg]	0.204	0.237
Power Drift [dB]	-0.02	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.8
Dist 3dB Peak [mm]		13.2



Meas.18 Body Plane with Left Edge 0mm on High Channel in LTE B7 mode with Antenna 1

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, 0.00	Band 7	LTE-FDD, 10169-CAF	2560.0, 21350	7.06	1.89	39.5	22.4	21.2

Hardware Setup

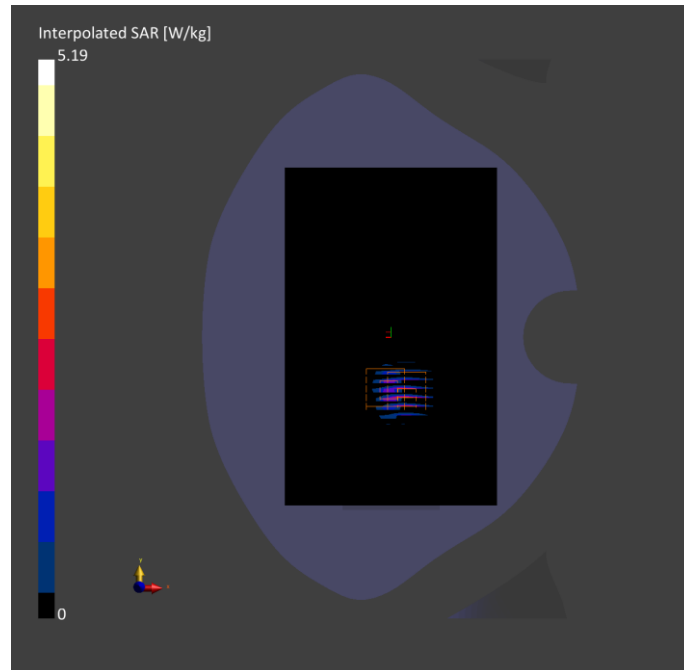
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-14	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-14	2025-02-14
psSAR1g [W/kg]	2.33	2.70
psSAR10g [W/kg]	1.24	1.22
Power Drift [dB]	-0.14	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.2
Dist 3dB Peak [mm]		8.1



eas.19 Body Plane with Left Edge 10mm on High Channel in LTE B12 mode with Antenna 1

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	Band 12	LTE-FDD, 10175-CAH	707.5, 23095	8.92	0.88	42.6	22.3	21.2

Hardware Setup

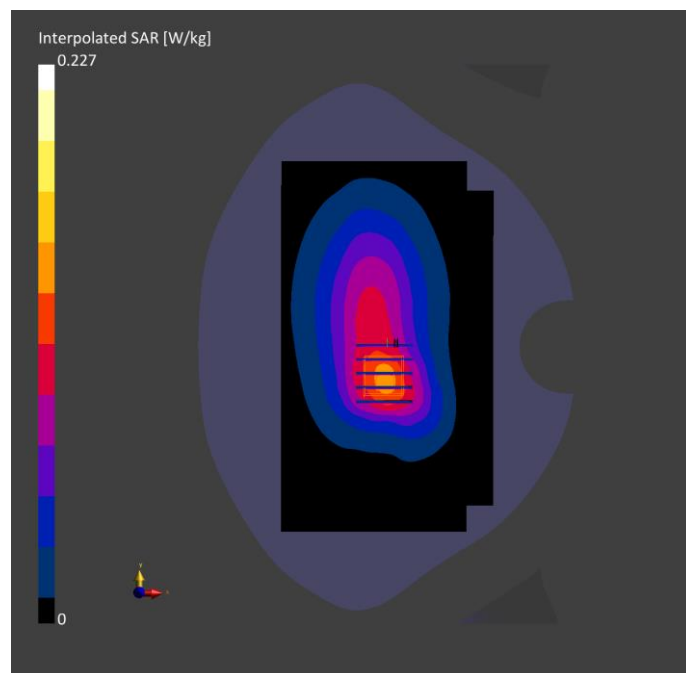
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-08	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-08	2025-02-08
psSAR1g [W/kg]	0.124	0.144
psSAR10g [W/kg]	0.084	0.095
Power Drift [dB]	0.05	0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		62.3
Dist 3dB Peak [mm]		18.7



Meas.20 Body Plane with Left Edge 0mm on High Channel in LTE B12 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 12	LTE-FDD, 10175-CAH	707.5, 23095	8.92	0.88	42.6	22.3	21.2

Hardware Setup

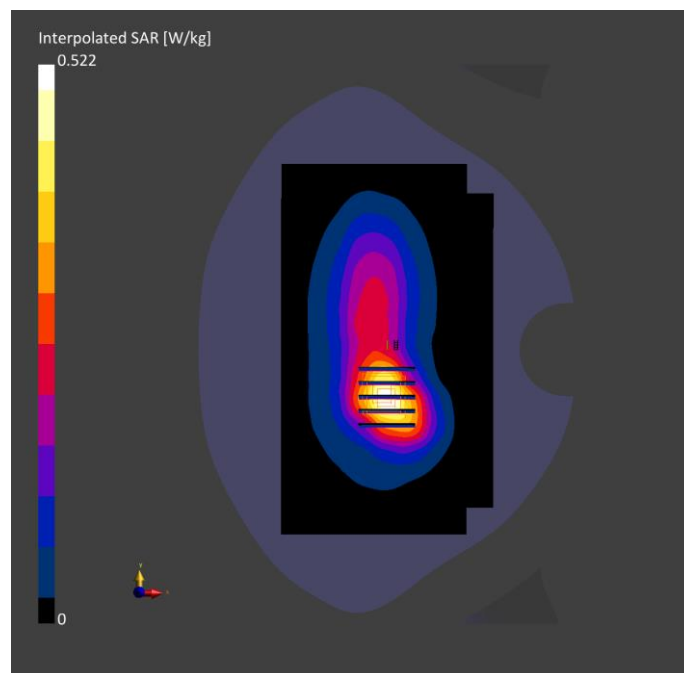
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-08	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-08	2025-02-08
psSAR1g [W/kg]	0.265	0.295
psSAR10g [W/kg]	0.169	0.173
Power Drift [dB]	-0.00	-0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.0
Dist 3dB Peak [mm]		13.2



Meas.21 Body Plane with Left Edge 10mm on High Channel in LTE B17 mode with Antenna 1

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	Band 17	LTE-FDD, 10175-CAH	711.0, 23800	8.92	0.90	42.3	22.3	21.2

Hardware Setup

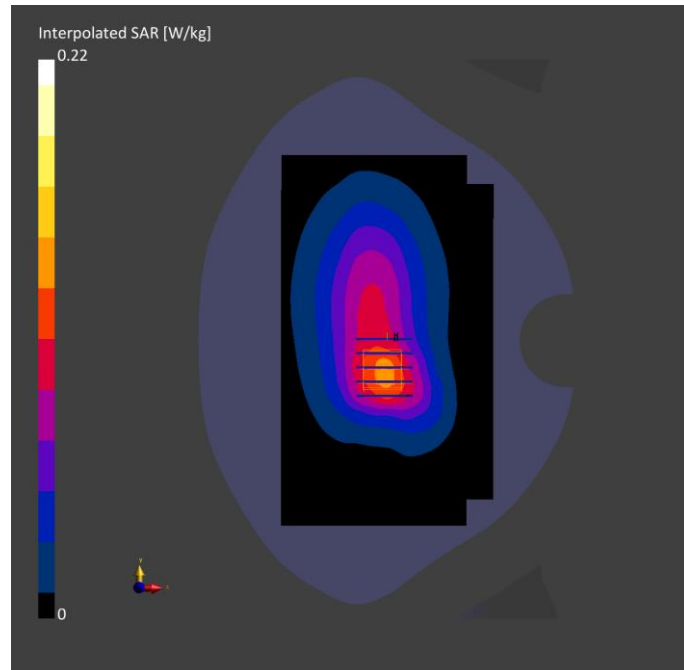
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-08	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	Y	N/A
Surface	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-08	2025-02-08
psSAR1g [W/kg]	0.120	0.140
psSAR10g [W/kg]	0.081	0.092
Power Drift [dB]	0.04	0.05
Power Scaling	Disabled	Disabled
Scaling Factor		
TSL Correction	No correction	No correction
M2/M1 [%]		62.2
Dist 3dB Peak [mm]		20.5



Meas.22 Body Plane with Left Edge 0mm on High Channel in LTE B17 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conducti vity [S/m]	TSL Permittivi ty	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 17	LTE-FDD, 10175- CAH	711.0, 23800	8.92	0.90	42.3	22.3	21.2

Hardware Setup

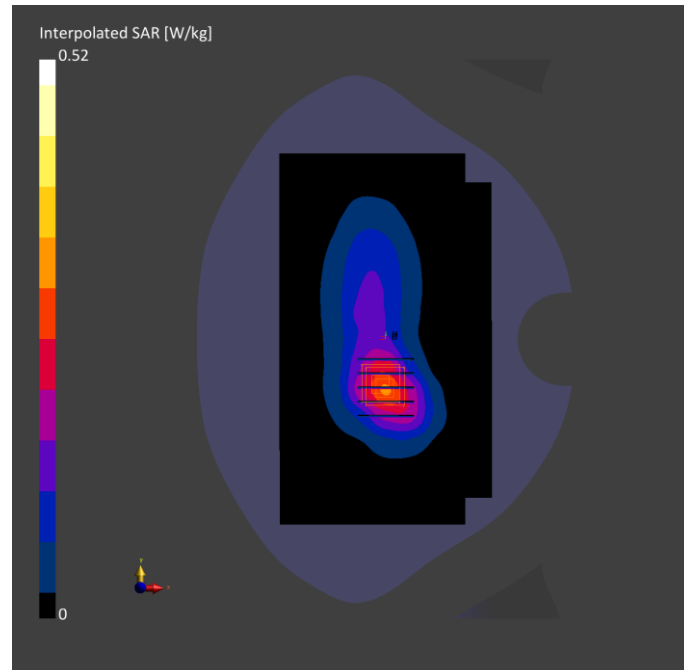
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-08	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-08	2025-02-08
psSAR1g [W/kg]	0.266	0.296
psSAR10g [W/kg]	0.171	0.174
Power Drift [dB]	-0.03	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.8
Dist 3dB Peak [mm]		11.6



Meas.23 Body Plane with Left Edge 10mm on Middle Channel in LTE B66 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	Band 66	LTE-FDD, 10169-CAF	1745.0, 132322	7.57	1.38	40.7	22.6	21.3

Hardware Setup

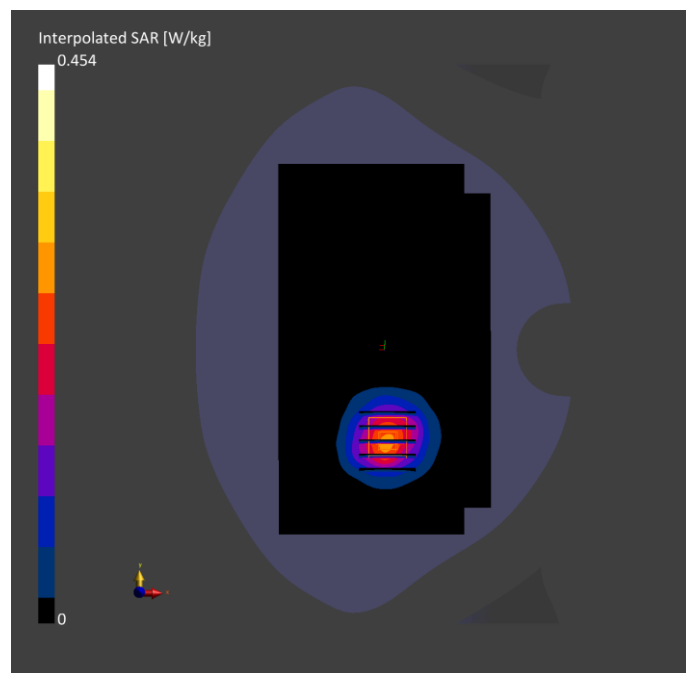
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-11	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-11	2025-02-11
psSAR1g [W/kg]	0.234	0.267
psSAR10g [W/kg]	0.134	0.159
Power Drift [dB]	-0.02	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.7
Dist 3dB Peak [mm]		13.6



Meas.24 Body Plane with Left Edge 0mm on Middle Channel in LTE B66 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivi ty	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 66	LTE-FDD, 10169-CAF	1745.0, 132322	7.57	1.38	40.7	22.6	21.3

Hardware Setup

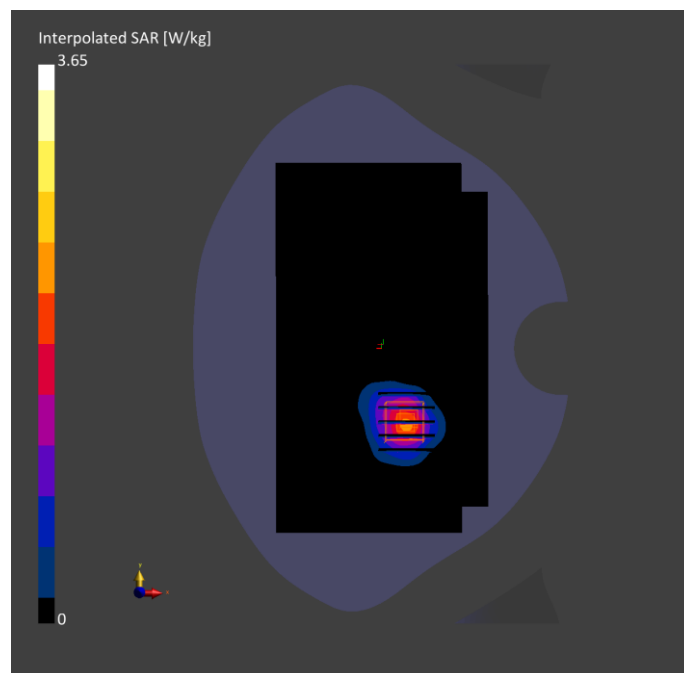
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-11	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-11	2025-02-11
psSAR1g [W/kg]	1.81	1.91
psSAR10g [W/kg]	0.965	1.09
Power Drift [dB]	-0.16	-0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		47.8
Dist 3dB Peak [mm]		8.6



eas.25 Body Plane with Left Edge 10mm on High Channel in LTE B38 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 10.00	Band 38	LTE-TDD, 10172-CAH	2610.0, 38150	7.06	2.00	38.2	22.4	21.2

Hardware Setup

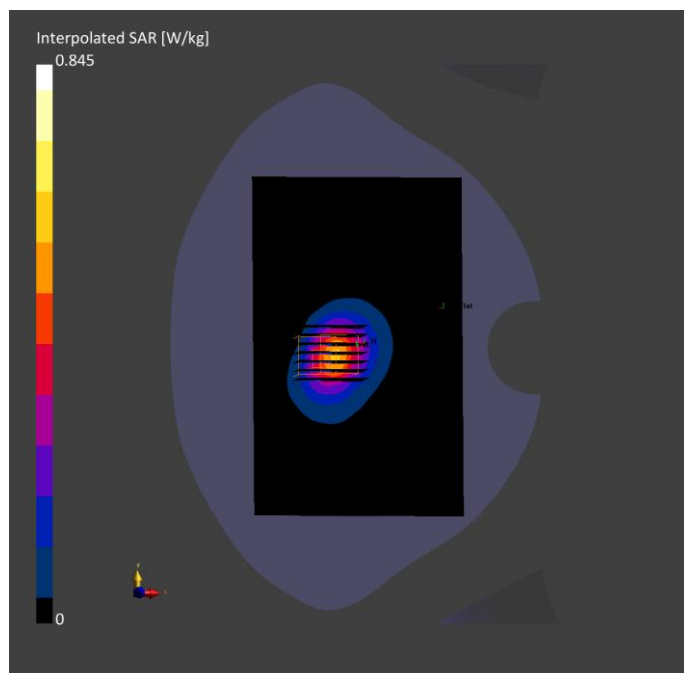
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-14	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-14	2025-02-14
psSAR1g [W/kg]	0.465	0.394
psSAR10g [W/kg]	0.237	0.155
Power Drift [dB]	0.01	0.00
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		57.1
Dist 3dB Peak [mm]		3.0



Meas.26 Body Plane with Left Edge 0mm on High Channel in LTE B38 mode with Antenna 1

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, 0.00	Band 38	LTE-TDD, 10172- CAH	2610.0, 37850	7.06	2.00	38.2	22.4	21.2

Hardware Setup

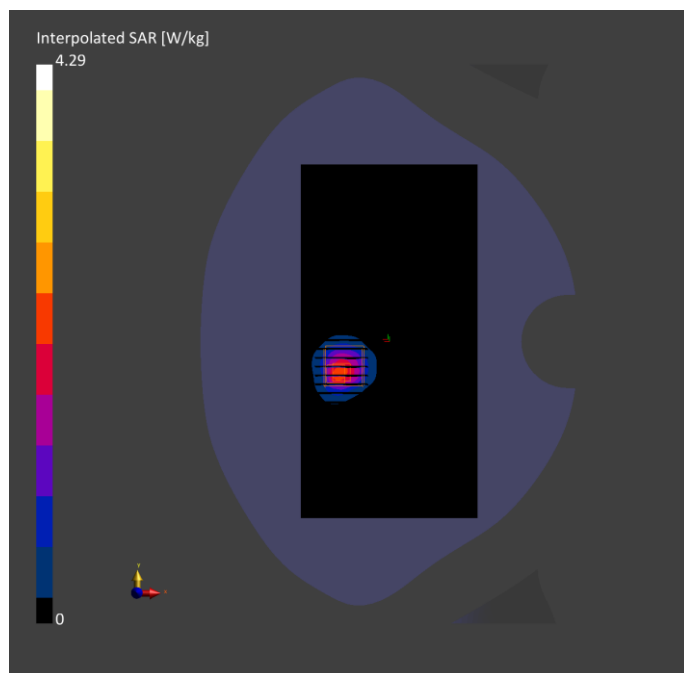
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-14	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 x 200.0	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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-14	2025-02-14
psSAR1g [W/kg]	1.82	1.83
psSAR10g [W/kg]	0.789	0.625
Power Drift [dB]	-0.03	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		83.7
Dist 3dB Peak [mm]		3.0



eas.27 Body Plane with Left Edge 10mm on High Channel in LTE B41 mode with Antenna 1

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	Band 41	LTE-TDD, 10172-CAH	2680.0, 41490	7.06	2.11	37.9	22.4	21.2

Hardware Setup

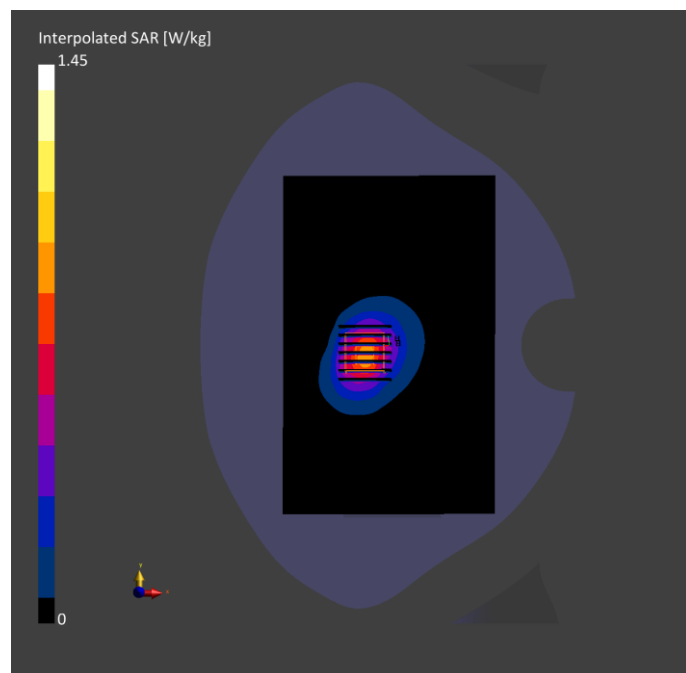
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-14	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-14	2025-02-14
psSAR1g [W/kg]	0.729	0.798
psSAR10g [W/kg]	0.367	0.410
Power Drift [dB]	-0.07	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		54.9
Dist 3dB Peak [mm]		12.4



eas.28 Body Plane with Left Edge 0mm on High Channel in LTE B41 mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE LEFT, 0.00	Band 41	LTE-TDD, 10172-CAH	2680.0, 41490	7.06	2.11	37.9	22.4	21.2

Hardware Setup

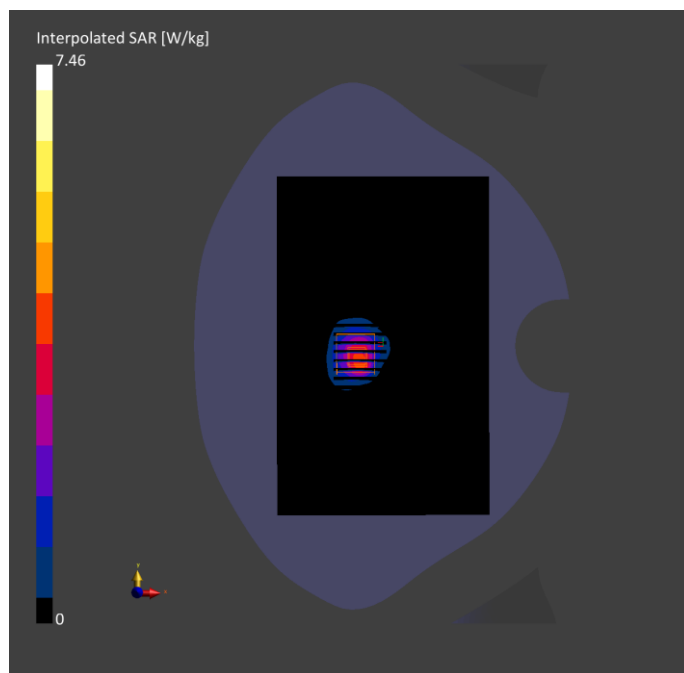
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-14	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-14	2025-02-14
psSAR1g [W/kg]	3.20	3.82
psSAR10g [W/kg]	1.39	1.59
Power Drift [dB]	-0.16	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.9
Dist 3dB Peak [mm]		7.8



eas.29 Body Plane with Right Edge 10mm on 11 Channel in IEEE802.11b mode with Antenna 2

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE RIGHT, 10.00	WLAN 2.4GH z	WLAN, 10012-CAB	2462.0, 11	6.98	1.84	38.5	22.3	21.1

Hardware Setup

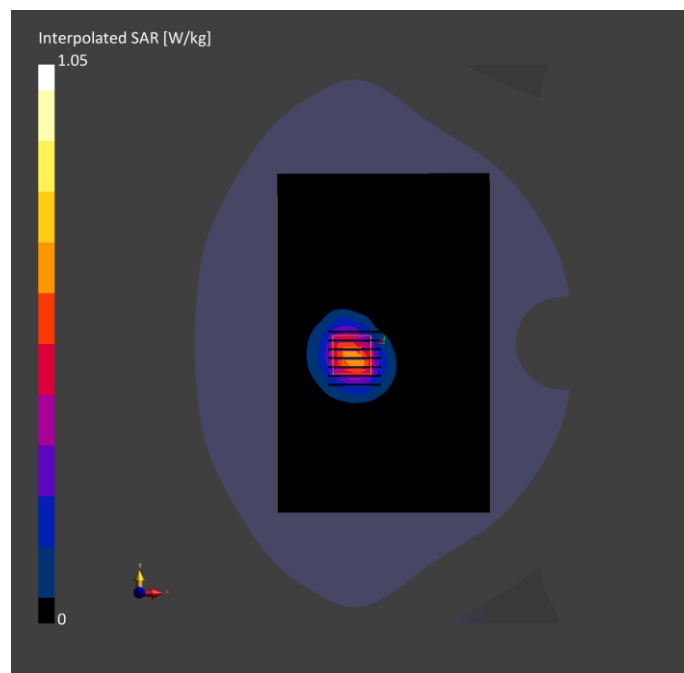
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-13	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-13	2025-02-13
psSAR1g [W/kg]	0.542	0.556
psSAR10g [W/kg]	0.273	0.278
Power Drift [dB]	0.01	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.9
Dist 3dB Peak [mm]		11.2



Meas.30 Body Plane with Right Edge 0mm on 11 Channel in IEEE802.11b mode with Antenna 2

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE RIGHT, 0.00	WLAN 2.4GH z	WLAN, 10012-CAB	2462.0, 11	6.98	1.84	38.5	22.3	21.1

Hardware Setup

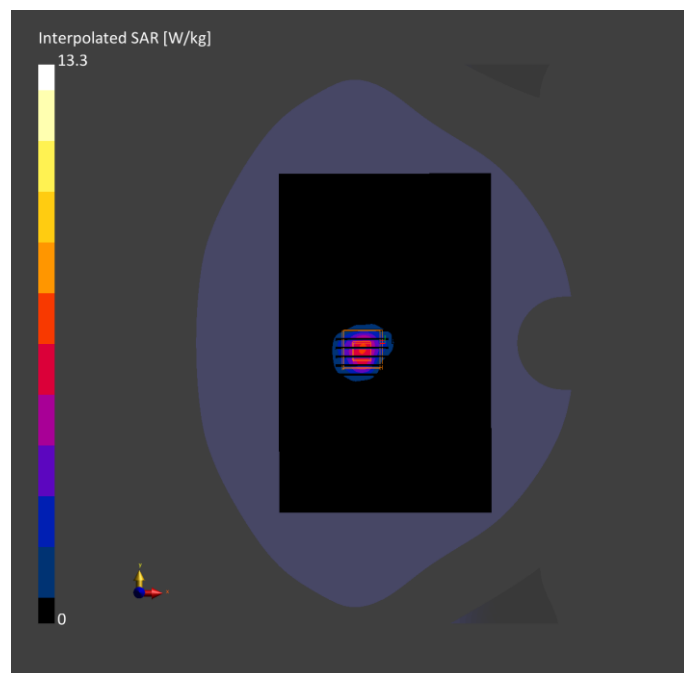
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-13	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-13	2025-02-13
psSAR1g [W/kg]	5.41	5.95
psSAR10g [W/kg]	2.01	1.95
Power Drift [dB]	0.09	-0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		44.2
Dist 3dB Peak [mm]		8.2



Meas.31 Body Plane with Right Edge 10mm on 36 Channel in IEEE802.11a mode with Antenna 2

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE RIGHT, 10.00	WLAN 5GHz	WLAN, 10062-CAD	5180.0, 36	5.44	4.52	36.9	22.3	21.2

Hardware Setup

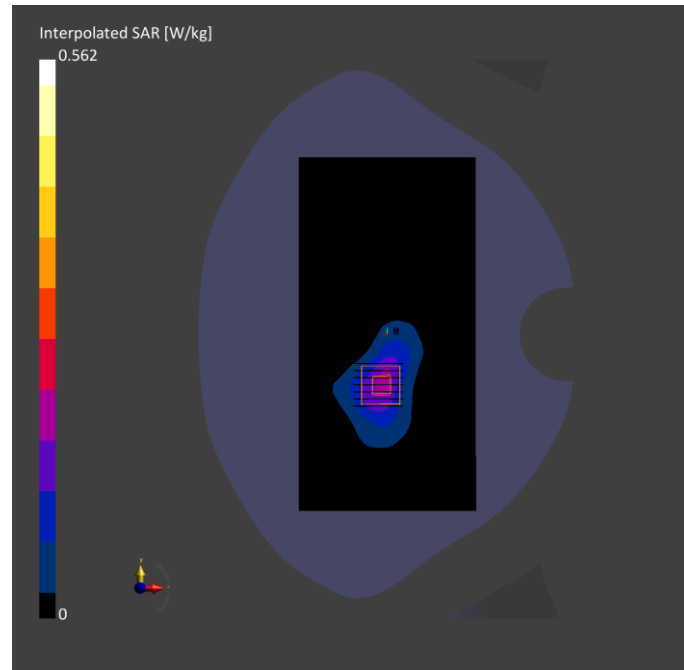
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-15	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 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	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-15	2025-02-15
psSAR1g [W/kg]	0.153	0.171
psSAR10g [W/kg]	0.063	0.067
Power Drift [dB]	-0.14	0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.2
Dist 3dB Peak [mm]		11.3



Meas.32 Body Plane with Right Edge 10mm on 165 Channel in IEEE802.11a mode with Antenna 2

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE RIGHT, 10.00	WLAN 5GHz	WLAN, 10062-CAD	5825.0, 165	4.98	5.39	34.7	22.5	21.3

Hardware Setup

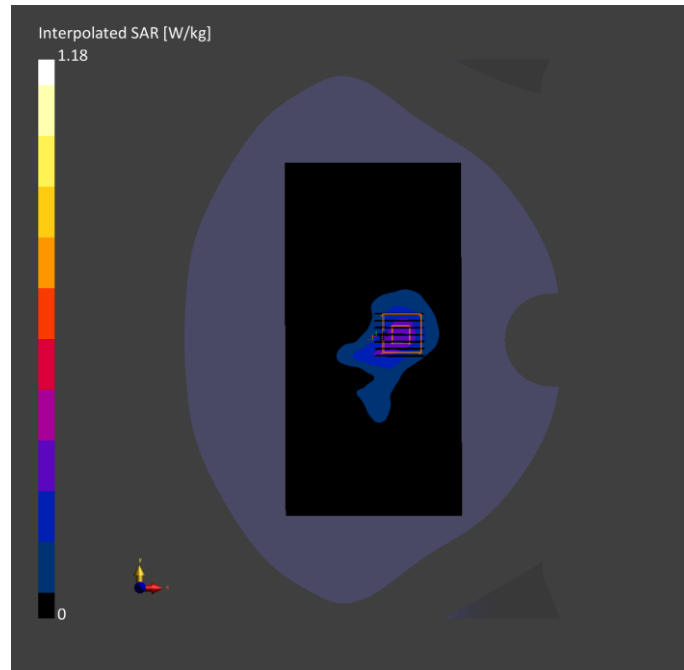
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-16	EX3DV4 - SN7893, 2024-09-05		DAE4 Sn1711, 2024-03-18	

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 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	2025-02-16	2025-02-16
psSAR1g [W/kg]	0.289	0.319
psSAR10g [W/kg]	0.115	0.123
Power Drift [dB]	-0.01	0.11
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.4
Dist 3dB Peak [mm]		11.3



Meas.33 Body Plane with Right Edge 0mm on 36 Channel in IEEE802.11a mode with Antenna 2

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, 0.00	WLAN 5GHz	WLAN, 10062-CAD	5180.0, 36	5.44	4.52	36.9	22.3	21.2

Hardware Setup

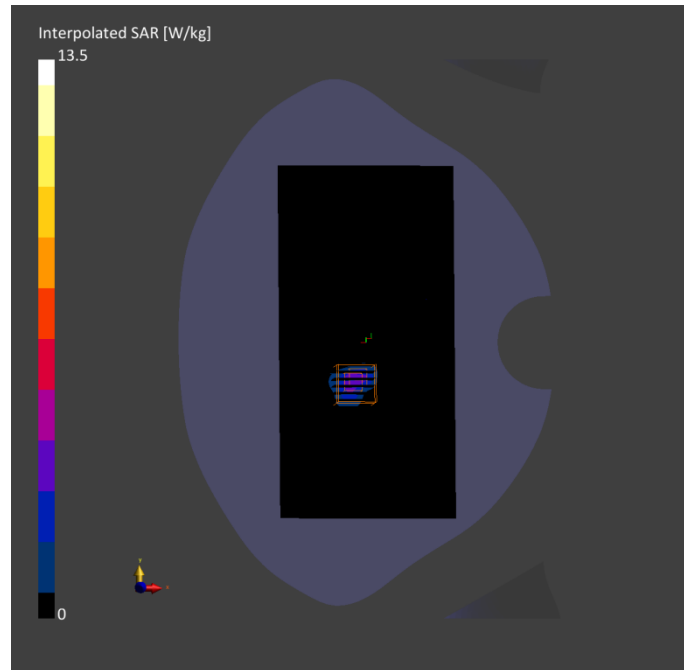
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-15	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 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 Surface	N/A	N/A
Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-15	2025-02-15
psSAR1g [W/kg]	2.92	3.23
psSAR10g [W/kg]	0.918	0.978
Power Drift [dB]	-0.09	0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL	No correction	No correction
Correction		
M2/M1 [%]		55.2
Dist 3dB Peak [mm]		5.1



Meas.34 Body Plane with Right Edge 0mm on 165 Channel in IEEE802.11a mode with Antenna 2

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE RIGHT, 0.00	WLAN 5GHz	WLAN, 10062-CAD	5825.0, 165	4.98	5.39	34.7	22.5	21.3

Hardware Setup

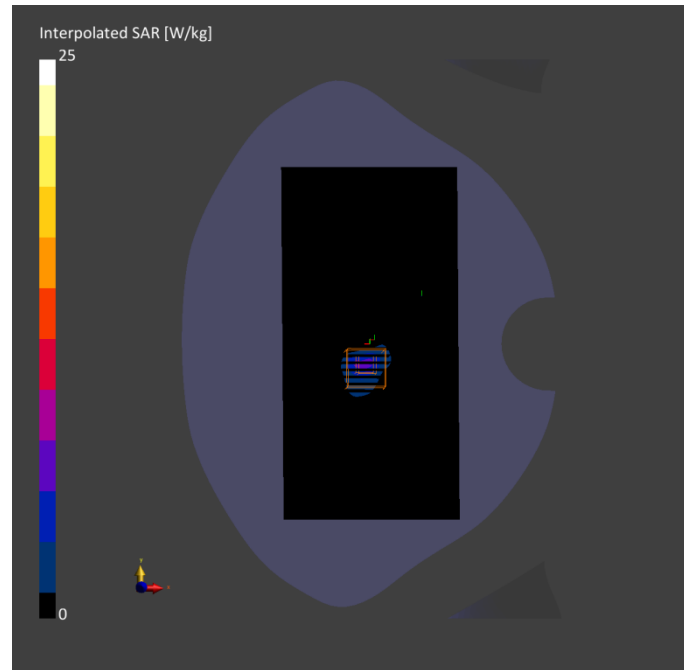
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-16	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 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	N/A	N/A
Surface	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-16	2025-02-16
psSAR1g [W/kg]	4.89	5.40
psSAR10g [W/kg]	1.57	1.54
Power Drift [dB]	-0.00	-0.07
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL	No correction	No correction
Correction		
M2/M1 [%]		48.7
Dist 3dB Peak [mm]		4.1



Meas.35 Body Plane with Right Edge 10mm on 0 Channel in Bluetooth mode with Antenna 1

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	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2402.0, 0	6.98	1.73	39.4	22.3	21.1

Hardware Setup

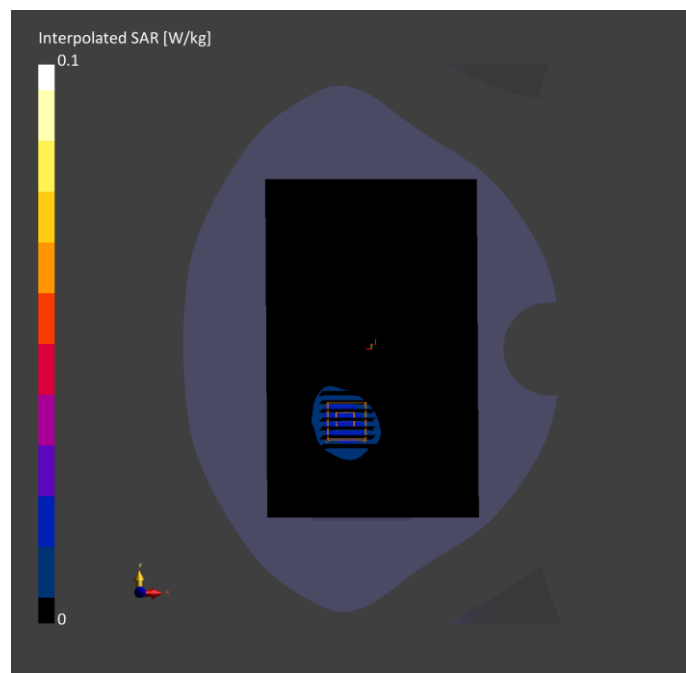
Phantom	TSL, Measured Date		Probe, Calibration Date		DAE, Calibration Date	
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000	2025-02-13	EX3DV4 - SN7893,	2024-09-05	DAE4 Sn1711,	2024-03-18

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	Y	Y
Surface	VMS + 6p	VMS + 6p
Detection		
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-13	2025-02-13
psSAR1g [W/kg]	0.020	0.022
psSAR10g [W/kg]	0.011	0.011
Power Drift [dB]	-0.04	-0.10
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		48.9
Dist 3dB Peak [mm]		> 15.0



Meas.36 Body Plane with Right Edge 0mm on 0 Channel in Bluetooth mode with Antenna 1

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversio n Factor	TSL Conductiv ity [S/m]	TSL Permittivit y	Ambient Temperat ure [°C]	Liquid Temperat ure [°C]
Flat, HSL	EDGE RIGHT, 0.00	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2402.0, 0	6.98	1.73	39.4	22.3	21.1

Hardware Setup

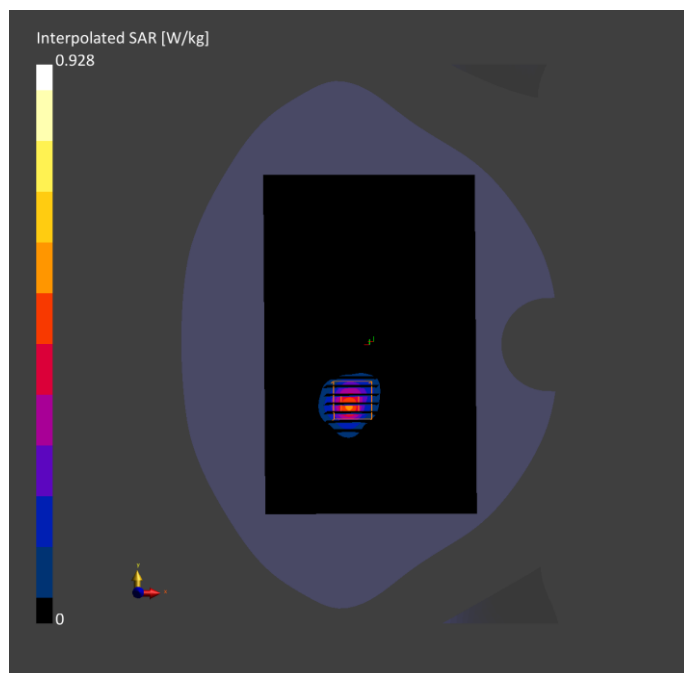
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1859	HBBL-600-10000 2025-02-13	EX3DV4 - SN7893, 2024-09-05	DAE4 Sn1711, 2024-03-18

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	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2025-02-13	2025-02-13
psSAR1g [W/kg]	0.409	0.428
psSAR10g [W/kg]	0.171	0.182
Power Drift [dB]	0.01	0.05
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		46.1
Dist 3dB Peak [mm]		8.5



ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2520129-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ2520129-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “BL-SZ2520129-AC.pdf”.

ANNEX G TUNE-UP PROCEDURE

Please refer the document “BL-SZ2520129-AT.pdf”.

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