TEST REPORT

Applicant:	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address:	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China
Equipment Type:	Mobile Phone
Model Name:	RMX3581
Brand Name:	realme
FCC ID:	2AUYFRMX3581
Test Standard:	FCC 47 CFR Part 2.1093 (refer section 3.1)
Maximum SAR:	Head (1 g): 0.73 W/kg Body (1 g): 0.33 W/kg Hotspot (1 g): 0.71 W/kg Specific (10 g): 1.34 W/kg
Test Date:	Apr. 18, 2022 – Apr. 25, 2022
Date of Issue:	May 18, 2022

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Xu Rui **Checked by:** Zong Liyao **Approved by:** Wei Yanquan (Chief Engineer)

Revision History

Version	Issue Date	Revisions Content
Rev. 01	May 18, 2022	Initial Issue

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1 GENERAL INFORMATION

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China
Phone Number	+86 755 6685 0100

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.
Description	All measurement facilities used to collect the measurement data are located at Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

2.2 Manufacturer Information

Manufacturer	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

2.3 Factory Information

Factory	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.178 Yulong Avenue, Yufengshan, Yubei District, Chongqing, China

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	RMX3581
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	RMX3581_11_A.01
Dimensions (Approx.)	164.1x75.53x8.48mm
Weight (Approx.)	181g(with battery)
EUT ID:	S05; S06
IMEI Number	S06: 861385060124099/01
	S05: 861385060136358/01
Note1: EUT ID is used to identify the test sample in the lab internally. Note2: It is performed to test SAR with the EUT S06 and conducted power with the EUT S05.	

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery 1	
	Brand Name	realme
	Model No.	BLP877 (DESAY)
	Serial No.	N/A
	Capacity	4890 mAh (Rated) 5000 mAh (Typical)
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
Ancillary Equipment 2	Battery 2	
	Brand Name	realme
	Model No.	BLP877 (NVT)
	Serial No.	N/A
	Capacity	4890 mAh (Rated) 5000 mAh (Typical)
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
Ancillary Equipment 3	Battery 3	
	Brand Name	realme
	Model No.	BLP877 (TWS)
	Serial No.	N/A
	Capacity	4890 mAh (Rated) 5000 mAh (Typical)
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
Ancillary Equipment 3	Headset	
	Model No.	MH156
	Length (Approx.)	1m
Note: The EUT has three batterys, they are same with electrical parameters, but only differ in manufacturer and battery cell. By comparing the test data of four batteries, battery 1 can produce a more conservative SAR values.		

2.6 Technical Information

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

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

Operating Mode	GSM, WCDMA, LTE, 2.4G 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 13	TX: 777 ~ 787 MHz	RX: 746 ~ 756 MHz
	LTE Band 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2180MHz
	LTE Band 38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE Band 41	TX: 2535 ~ 2655 MHz	RX: 2535 ~ 2655 MHz
	802.11b/g /n(HT20/HT40)	2412 ~ 2462 MHz	
	Bluetooth	2402 ~ 2480 MHz	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
DTM	N/A		
Hotspot Function	Support		
Power Reduction	Support		
Exposure Category	General Population/Uncontrolled exposure		
EUT Stage	Portable Device		
Product	Type		
	☒ Production unit	☐ Identical prototype	
Note:			

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

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	ANSI C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D04	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices
5	FCC KDB 941225 D01 v03r01	3G SAR MEAUREMENT PROCEDURES
6	FCC KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices
7	FCC KDB 941225 D06 v02r01	SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities
8	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
9	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
10	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
11	KDB 248227 D01 v02r02	SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters

3.2 Device Category and SAR Limit

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

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

Table of Exposure Limits:

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

NOTE:

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

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

3.3 Test Result Summary

3.3.1 Highest SAR (1 g Value)

Band	Maximum Scaled SAR (W/kg)			Maximum Report SAR (W/kg)		
	Head	Body-worn Accessory	Hotspot	Head	Body-worn Accessory	Hotspot
GSM 850	0.11	0.11	0.21	0.73	0.33	0.71
GSM 1900	0.04	0.32	0.50			
WCDMA Band 2	0.10	0.25	**0.71**			
WCDMA Band 4	0.11	0.09	0.13			
WCDMA Band 5	0.19	0.16	0.20			
LTE Band 2	0.13	0.28	0.55			
LTE Band 4	0.08	0.19	0.31			
LTE Band 5	0.14	0.19	0.27			
LTE Band 7	0.12	0.11	0.29			
LTE Band 13	0.04	0.06	0.08			
LTE Band 66	0.10	0.08	0.25			
LTE Band 38	0.08	0.24	0.44			
LTE Band 41	0.10	0.19	0.42			
2.4G WLAN	**0.73**	**0.33**	0.41			
Bluetooth	0.41	0.09	0.15			
Limit (W/kg)	1.6			1.6		
Verdict	PASS					

3.3.2 Highest Specific SAR (10 g Value)

Band	Maximum Scaled SAR (W/kg)	Maximum Report SAR (W/kg)
	Specific 10g	
WCDMA Band 2	1.34	**1.34**
LTE Band 2	1.06	
Limit (W/kg)	4.0	4.0
Verdict	Pass	

3.3.3 Highest Simultaneous SAR

Note: The highest simultaneous SAR please refer section 12.

3.4 Test Uncertainty

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

The maximum 1 g SAR for the EUT in this report is 0.73 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.
The maximum 10 g SAR for the EUT in this report is 1.34 W/kg, which is lower than 3.75 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

4 MEASUREMENT SYSTEM

4.1 Specific Absorption Rate (SAR) Definition

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

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

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

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

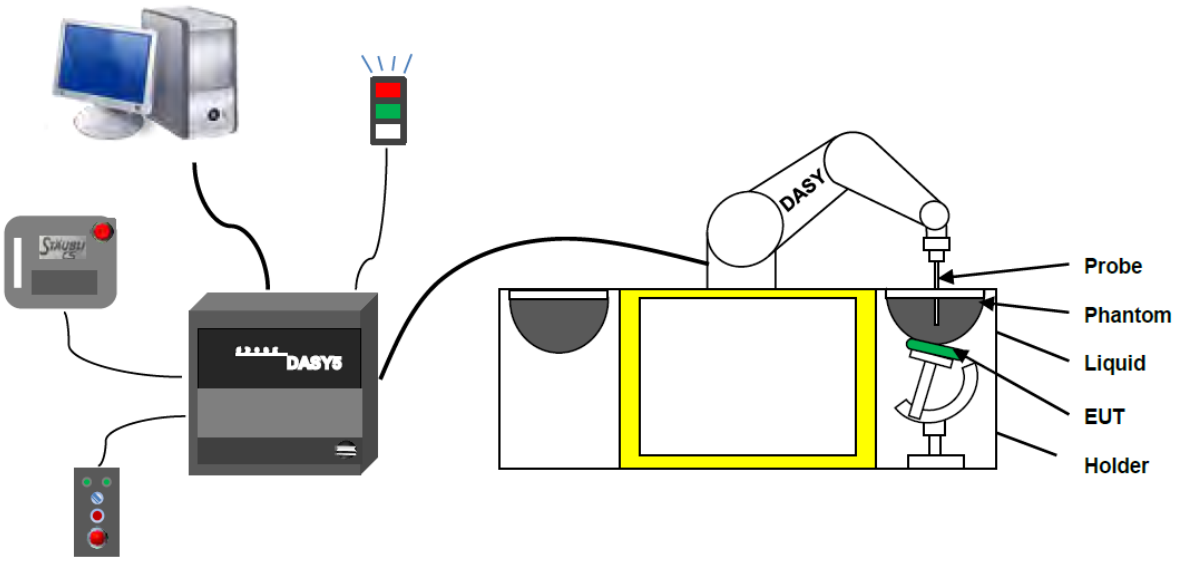
$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}\mathbf{E}^2}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue,

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

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



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

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

4.2.2 Robot

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

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

4.2.3 E-Field Probe

The probe is specially designed and calibrated for use in liquids with high permittivities for the measurements the Specific Dosimetric E-Field Probe EX3DV4-SN:3717 with following specifications is used.

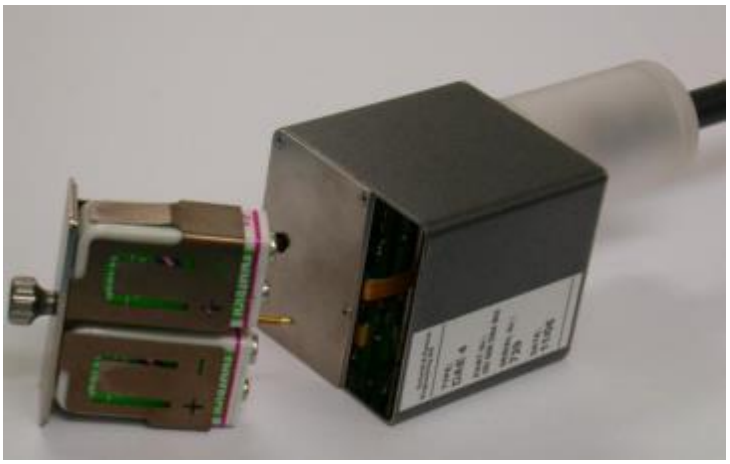
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz;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

E-Field Probe Calibration Process

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

4.2.4 Data Acquisition Electronics

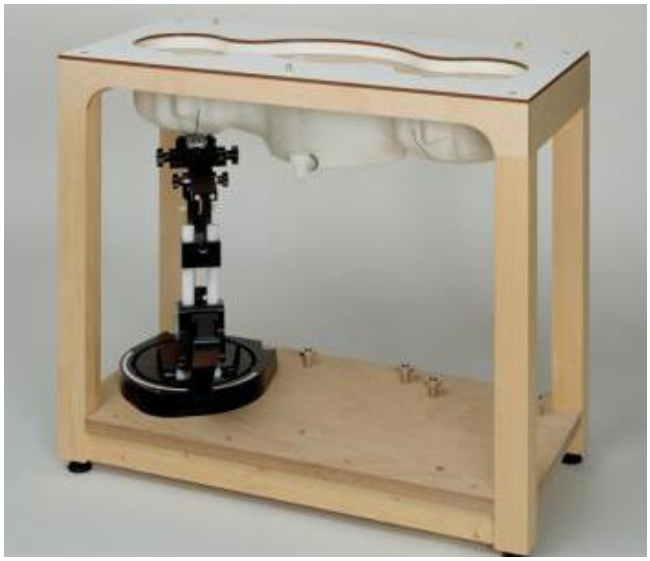
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



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

4.2.5 Phantoms

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



- Left hand
- Right hand
- Flat phantom

Photo of Phantom SN1857

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

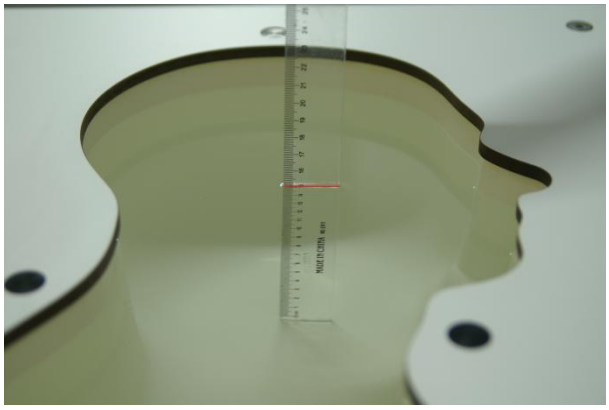
4.2.6 Device Holder

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

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

4.2.7 Simulating Liquid

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

Head Liquid Depth	Body Liquid Depth
	

The following table gives the recipes for tissue simulating liquid and the theoretical Conductivity/Permittivity.

Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ε
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.4	40.0
2450	55.0	0	0	0.1	0	44.9	1.80	39.2
2600	54.9	0	0	0.1	0	45.0	1.96	39.0
Frequency (MHz)	Water (%)	Hexyl Carbitol (%)			Triton X-100 (%)		Conductivity σ (S/m)	Permittivity ε
5200	62.52	17.24			17.24		4.66	36.0
5800	62.52	17.24			17.24		5.27	35.3
Body (From instrument manufacturer)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ε
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0.1	0	31.3	1.95	52.7
2600	68.2	0	0	0.1	0	31.7	2.16	52.5
Frequency(MHz)	Water	DGBE			Salt		Conductivity	Permittivity

		(%)	(%)	σ (S/m)	ε
5200	78.60	21.40	/	5.54	47.86
5800	78.50	21.40	0.1	6.0	48.20

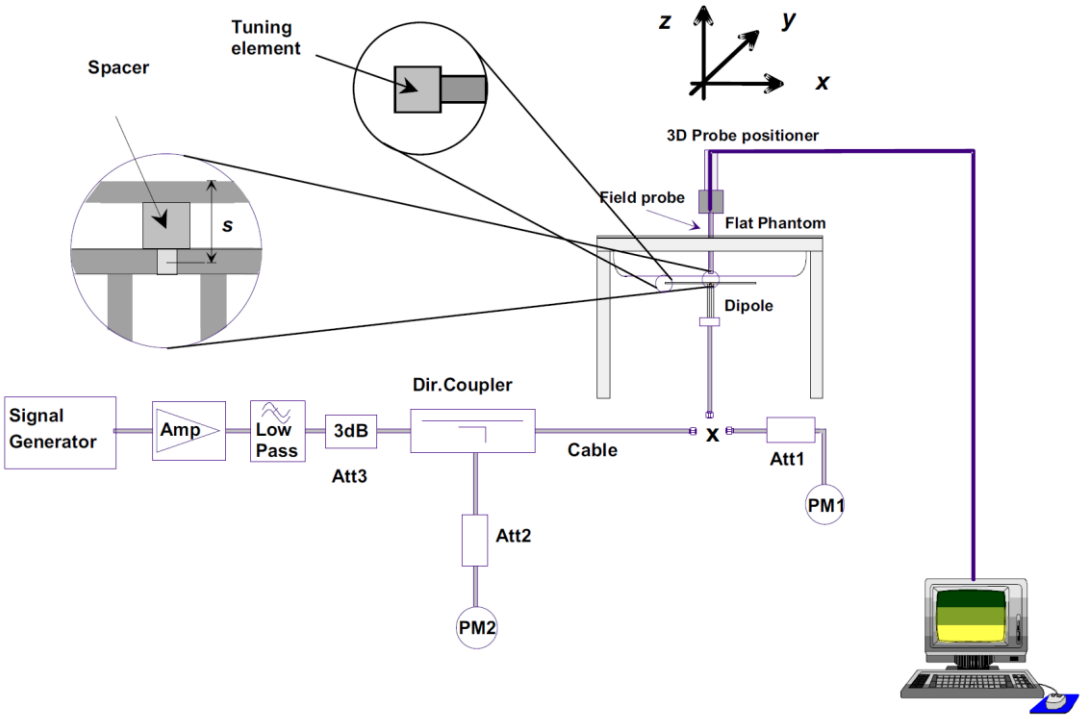
5 SYSTEM VERIFICATION

5.1 Purpose of System Check

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

5.2 System Check Setup

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



6 TEST POSITION CONFIGURATIONS

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

6.1 Head Exposure Conditions

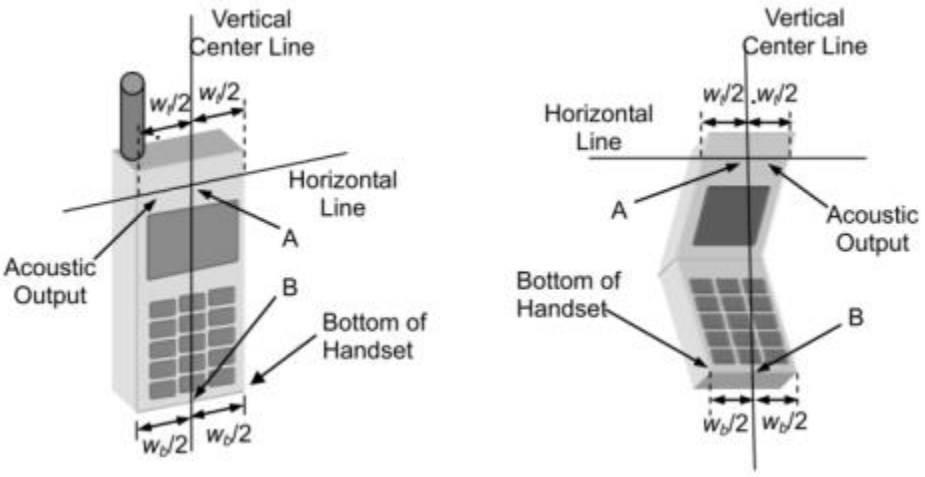
Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

6.1.1 Two Imaginary Lines on the Handset

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

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

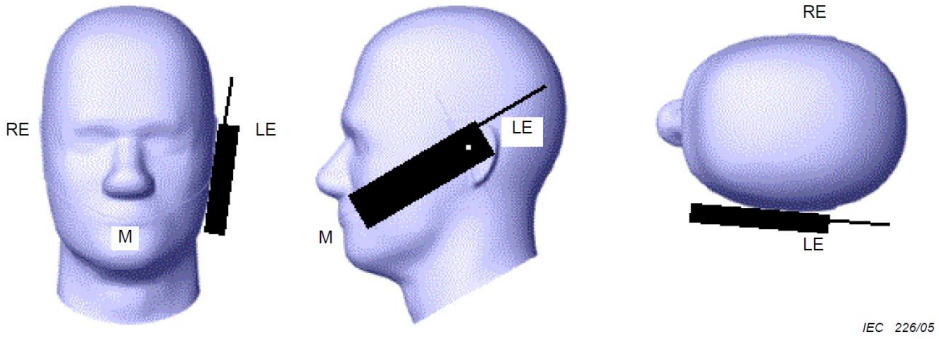
(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset,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



6.1.2 Cheek Position

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

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



6.1.3 Tilted Position

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

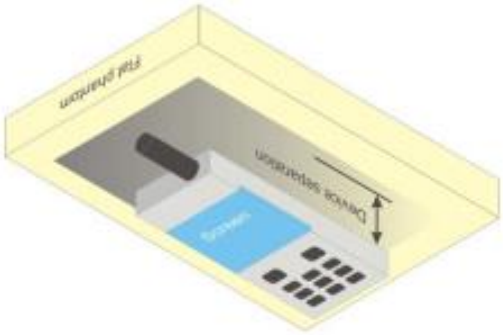
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

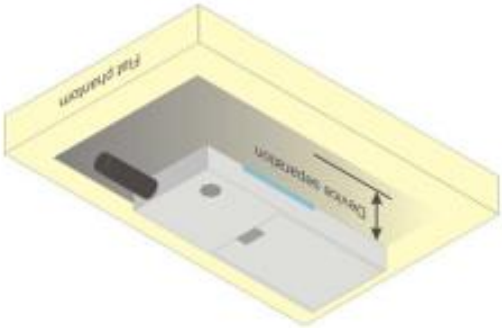
6.2 Body-worn Position Conditions

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

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

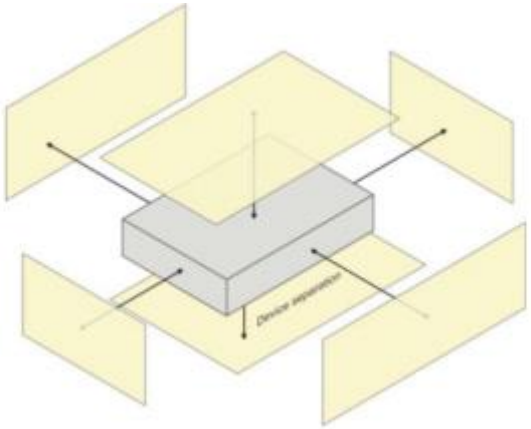
Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice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





6.3 Hotspot Mode Exposure Position Conditions

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



6.4 Product Specific 10g Exposure Consideration

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

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

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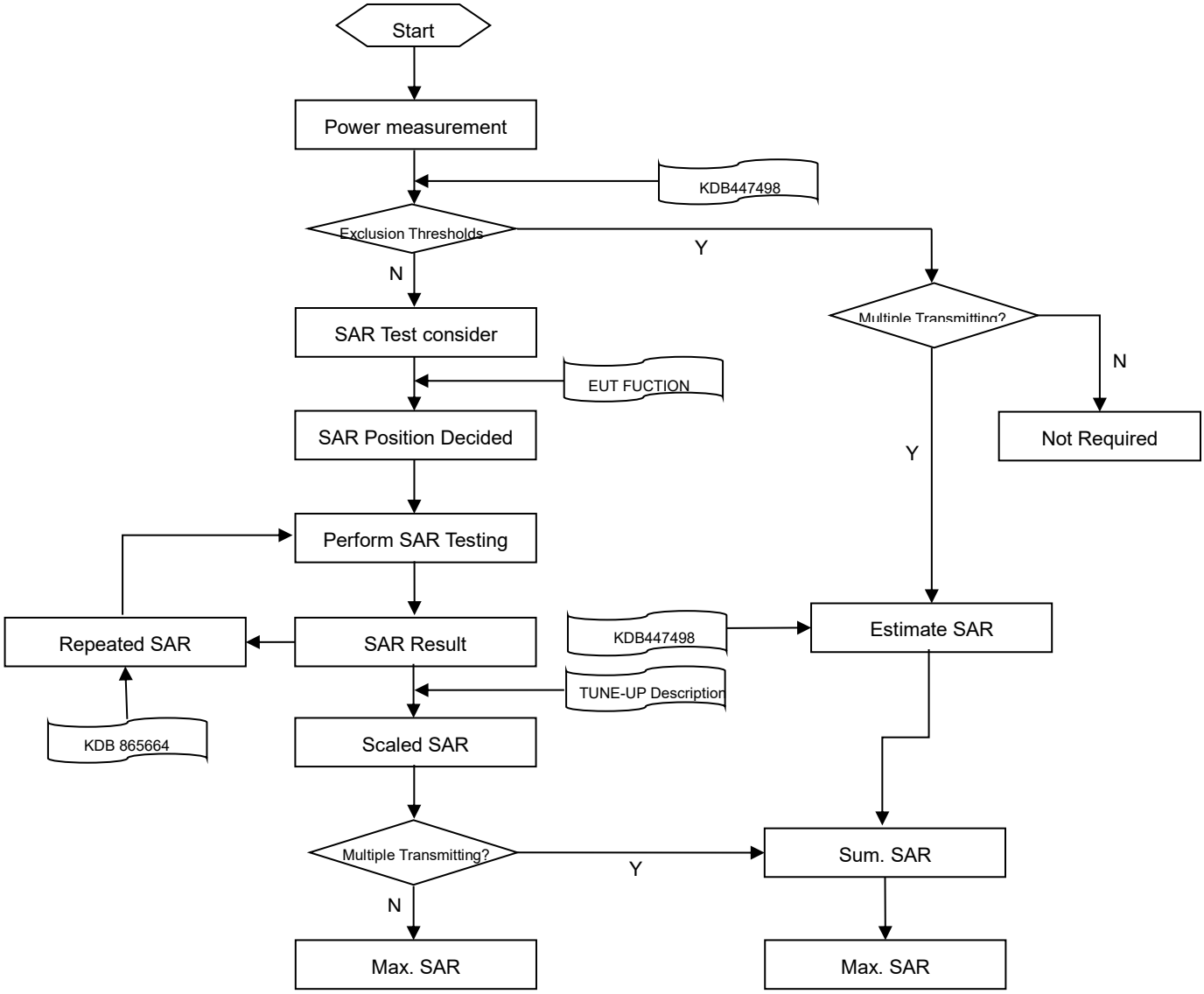
7 MEASUREMENT PROCEDURE

7.1 Measurement Process Diagram



7.2 SAR Scan General Requirement

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

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

7.3 Measurement Procedure

The following steps are used for each test position

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

7.4 Area & Zoom Scan Procedure

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

8 CONDUCTED RF OUPUT POWER

8.1 GSM

Please refer the document “Conducted RF Output Power List.pdf”.

8.2 WCDMA

Please refer the document “Conducted RF Output Power List.pdf”.

8.3 LTE

Please refer the document “Conducted RF Output Power List.pdf”.

8.4 WIFI

8.4.1 2.4G WIFI Full Power

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	18.53	19.00	No
		6	2437	19.21	20.00	No
		11	2462	18.06	19.00	No
	802.11g	1	2412	13.42	14.00	No
		6	2437	17.56	18.00	No
		11	2462	8.34	9.00	No
	802.11n(HT20)	1	2412	10.22	11.00	No
		6	2437	16.38	17.00	No
		11	2462	8.40	9.00	No
	802.11n(HT40)	3	2422	8.38	9.00	No
		6	2437	16.38	17.00	No
		9	2452	8.35	9.00	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.

8.4.2 2.4G WIFI Level1

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	14.36	15.00	Yes
		6	2437	**14.59**	15.00	Yes
		11	2462	14.12	15.00	Yes
	802.11g	1	2412	13.42	14.00	No
		6	2437	14.56	15.00	No
		11	2462	8.34	9.00	No
	802.11n(HT20)	1	2412	10.22	11.00	No
		6	2437	14.38	15.00	No
		11	2462	8.40	9.00	No
	802.11n(HT40)	3	2422	8.38	9.00	No
		6	2437	14.46	15.00	No
		9	2452	8.35	9.00	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 = 0.726 * (31.62mW/31.62mW) = 0.726 W/Kg, so 2.4G OFDM SAR test is not required.

8.4.3 2.4G WIFI Level2

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	11.98	13.00	Yes
		6	2437	**12.23**	13.00	Yes
		11	2462	12.16	13.00	Yes
	802.11g	1	2412	12.42	13.00	No
		6	2437	8.56	9.00	No
		11	2462	10.48	11.00	No
	802.11n(HT20)	1	2412	10.22	11.00	No
		6	2437	12.33	13.00	No
		11	2462	8.40	9.00	No
	802.11n(HT40)	3	2422	8.38	9.00	No
		6	2437	12.56	13.00	No
		9	2452	8.35	9.00	No

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

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

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

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

Adjusted SAR = 0.513 * (19.95mW/19.95mW) = 0.513 W/Kg, so 2.4G OFDM SAR test is not required.

8.4.4 2.4G WIFI Level3

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	18.53	19.00	Yes
		6	2437	**18.78**	19.00	Yes
		11	2462	18.06	19.00	Yes
	802.11g	1	2412	13.42	14.00	No
		6	2437	17.56	18.00	No
		11	2462	8.34	9.00	No
	802.11n(HT20)	1	2412	10.22	11.00	No
		6	2437	16.38	17.00	No
		11	2462	8.40	9.00	No
	802.11n(HT40)	3	2422	8.38	9.00	No
		6	2437	16.38	17.00	No
		9	2452	8.35	9.00	No

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

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

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

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

Adjusted SAR = 0.327 * (63.10mW/79.43mW) = 0.260 W/Kg, so 2.4G OFDM SAR test is not required.

8.4.5 2.4G WIFI Level4

Band (GHz)	Mode	Channel	Freq. (MHz)	Average Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	16.61	17.00	Yes
		6	2437	**16.73**	17.00	Yes
		11	2462	16.66	17.00	Yes
	802.11g	1	2412	13.42	14.00	No
		6	2437	16.42	17.00	No
		11	2462	8.34	9.00	No
	802.11n(HT20)	1	2412	10.22	11.00	No
		6	2437	16.38	17.00	No
		11	2462	8.40	9.00	No
	802.11n(HT40)	3	2422	8.38	9.00	No
		6	2437	16.38	17.00	No
		9	2452	8.35	9.00	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 = 0.405 * (50.12mW/50.12mW) = 0.405 W/Kg, so 2.4G OFDM SAR test is not required.

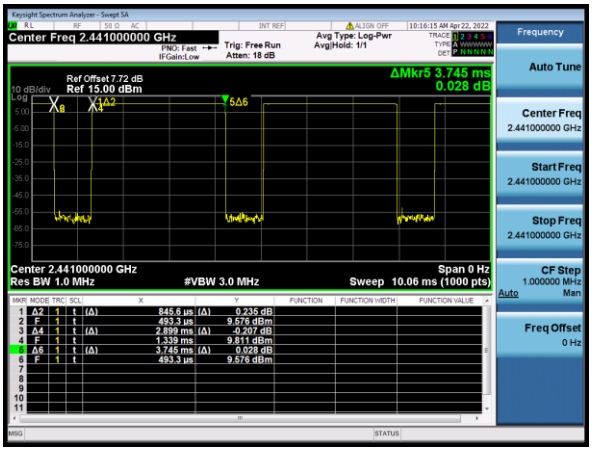
8.5 Bluetooth

Mode	GFSK			π/4-DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Average Power (dBm)	10.00	10.26	9.54	8.21	8.45	7.89
Tune-Up Limit (dBm)	11.50	11.50	11.50	9.50	9.50	9.50
SAR Test Require	Yes	Yes	Yes	No	No	No
Mode	8-DPSK			BLE		
Channel	0	39	78	0	19	39
Frequency (MHz)	2402	2441	2480	2402	2440	2480
Average Power (dBm)	8.21	8.48	7.93	6.38	6.50	6.14
Tune-Up Limit (dBm)	9.50	9.50	9.50	7.00	7.00	7.00
SAR Test Require	No	No	No	No	No	No

Note: The Bluetooth duty cycle is 77.41 % 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 Test plots

GFSK



8.6 Power Reduction List

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

WWAN Reduced power level table

Reduced state	Receiver state	Transmitting conditions	Power reduced bands
Full	On (Head/Body scenario)	WWAN Only WWAN + WLAN	GSM 8501900
			WCDMA 2/4/5
			LTE Band 2/4/5/7/13/38/41/66
Level1	Off (Body scenario)	WWAN Only	GSM 8501900
			WCDMA 2/4/5
			LTE Band 2/4/5/7/13/38/41/66
Level2	Off (Body scenario)	WWAN + WLAN	GSM 8501900
			WCDMA 2/4/5
			LTE Band 2/4/5/7/13/38/41/66

WLAN Reduced power level table

Reduced state	Receiver state	Transmitting conditions	Power reduced bands
Level 1	On (Head scenario)	WLAN Only	WLAN 2.4g
Level 2	On (Head scenario)	WWAN + WLAN	WLAN 2.4g
Level 3	Off (Body scenario)	WLAN Only	WLAN 2.4g
Level 4	Off (Body scenario)	WWAN + WLAN	WLAN 2.4g

WWAN Antenna Ant.1 Power table

Mode	Antenna	WWAN Antenna		
		Full Power	Body	
			Receiver off	
			Standalone	Simultaneous transmission
				WWAN + WLAN
			Level1	Level2
GSM 850	Ant.1	33.50	33.50	32.50
GPRS850 1 Tx Slot	Ant.1	33.50	33.50	32.50
GPRS850 2 Tx Slots	Ant.1	31.00	31.00	30.00
GPRS850 3 Tx Slots	Ant.1	29.00	29.00	28.00
GPRS850 4 Tx Slots	Ant.1	28.00	28.00	27.00
EGPRS850 1 Tx Slot	Ant.1	28.00	28.00	27.00
EGPRS850 2 Tx Slots	Ant.1	26.00	26.00	25.00
EGPRS850 3 Tx Slots	Ant.1	24.00	24.00	23.00
EGPRS850 4 Tx Slots	Ant.1	24.00	24.00	23.00
GSM 1900	Ant.1	30.50	29.50	28.50
GPRS1900 1 Tx Slot	Ant.1	30.50	29.50	28.50
GPRS1900 2 Tx Slots	Ant.1	28.50	27.50	26.50
GPRS1900 3 Tx Slots	Ant.1	26.50	25.50	24.50
GPRS1900 4 Tx Slots	Ant.1	25.00	24.00	23.00
EGPRS1900 1 Tx Slot	Ant.1	27.50	26.50	25.50
EGPRS1900 2 Tx Slots	Ant.1	26.00	25.00	24.00
EGPRS1900 3 Tx Slots	Ant.1	24.00	23.00	22.00
EGPRS1900 4 Tx Slots	Ant.1	22.50	21.50	20.50
WCDMA Band2 AMR	Ant.1	23.00	19.00	18.00
WCDMA Band2 RMC	Ant.1	24.00	20.00	19.00
HSDPA Subtest-1	Ant.1	23.00	19.00	18.00
HSDPA Subtest-2	Ant.1	23.00	19.00	18.00
HSDPA Subtest-3	Ant.1	22.50	18.50	17.50
HSDPA Subtest-4	Ant.1	22.50	18.50	17.50
HSUPA Subtest-1	Ant.1	21.00	17.00	16.00
HSUPA Subtest-2	Ant.1	21.00	17.00	16.00
HSUPA Subtest-3	Ant.1	21.00	17.00	16.00
HSUPA Subtest-4	Ant.1	21.10	17.10	16.10
HSUPA Subtest-5	Ant.1	23.50	19.50	18.50

HSPA+	Ant.1	21.50	17.00	16.00
WCDMA Band4 AMR	Ant.1	23.50	19.50	18.50
WCDMA Band4 RMC	Ant.1	24.00	20.00	19.00
HSDPA Subtest-1	Ant.1	23.00	19.00	18.00
HSDPA Subtest-2	Ant.1	23.00	19.00	18.00
HSDPA Subtest-3	Ant.1	22.50	18.50	17.50
HSDPA Subtest-4	Ant.1	22.50	18.50	17.50
HSUPA Subtest-1	Ant.1	23.00	19.00	18.00
HSUPA Subtest-2	Ant.1	23.00	19.00	18.00
HSUPA Subtest-3	Ant.1	22.50	18.50	17.50
HSUPA Subtest-4	Ant.1	22.50	18.50	17.50
HSUPA Subtest-5	Ant.1	23.50	19.50	18.50
HSPA+	Ant.1	21.50	19.00	18.00
WCDMA Band5 AMR	Ant.1	23.50	23.50	23.50
WCDMA Band5 RMC	Ant.1	24.50	24.50	24.50
HSDPA Subtest-1	Ant.1	23.50	23.50	23.50
HSDPA Subtest-2	Ant.1	23.50	23.50	23.50
HSDPA Subtest-3	Ant.1	23.00	23.00	23.00
HSDPA Subtest-4	Ant.1	23.00	23.00	23.00
HSUPA Subtest-1	Ant.1	23.50	23.50	23.50
HSUPA Subtest-2	Ant.1	21.50	21.50	21.50
HSUPA Subtest-3	Ant.1	22.50	22.50	22.50
HSUPA Subtest-4	Ant.1	21.50	21.50	21.50
HSUPA Subtest-5	Ant.1	24.00	24.00	24.00
HSPA+	Ant.1	21.50	21.50	21.50
LTE Band2	Ant.1	24.00	20.00	19.00
LTE Band4	Ant.1	24.00	20.00	19.00
LTE Band5	Ant.1	24.50	24.50	24.50
LTE Band7	Ant.1	23.50	19.50	18.50
LTE Band13	Ant.1	24.50	24.50	24.50
LTE Band66	Ant.1	24.00	20.00	19.00
LTE Band38	Ant.1	24.00	22.00	21.00
LTE Band41	Ant.1	24.00	22.00	21.00

WLAN Power table

Mode	WLAN Antenna				
	Full Power	Head		Body	
		Receiver on		Receiver off	
		Standalone	Simultaneous transmission	Standalone	Simultaneous transmission
			WWAN + WLAN		WWAN + WLAN
		Level 1	Level 2	Level 3	Level 4
2.4G WLAN 802.11b	20.00	15.00	13.00	19.00	17.00
2.4G WLAN 802.11g	18.00	15.00	13.00	18.00	17.00
2.4G WLAN802.11n20	17.00	15.00	13.00	17.00	17.00
2.4G WLAN 802.11n40	17.00	15.00	13.00	17.00	17.00
Bluetooth	11.50	11.50	11.50	11.50	11.50

9 TEST EXCLUSION CONSIDERATION

Antenna	Support Bands
WWAN Antenna 1	GSM 850/1900
	WCDMA: B2/4/5
	LTE: B2/4/5/7/13/66/38/41
WLAN/BT Antenna 2	2.4G WLAN
	Bluetooth

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

9.1 SAR Test Exclusion Consideration Table

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

ANT 1

Band	Mode	Max. Peak Power		Test Position Configurations					
		dBm	mW	Head	Front/ Back	Left Edge	Right Edge	Top Edge	Bottom Edge
GSM 850	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	Data	33.50	2238.72	Yes	Yes	Yes	Yes	No	Yes
GSM 1900	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	Data	30.50	1122.02	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 2	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	RMC	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 4	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	RMC	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 5	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	RMC	24.50	281.84	Yes	Yes	Yes	Yes	No	Yes
LTE Band 2	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 4	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 5	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	QPSK	24.50	281.84	Yes	Yes	Yes	Yes	No	Yes
LTE Band 7	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	QPSK	23.50	223.87	Yes	Yes	Yes	Yes	No	Yes
LTE Band 13	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	QPSK	24.50	281.84	Yes	Yes	Yes	Yes	No	Yes
LTE Band 66	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 38	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 41	Distance to User			<5mm	<5mm	<5mm	<5mm	>25mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes

ANT 2

Band	Mode	Max. Peak Power		Test Position Configurations					
		dBm	mW	Head	Front/ Back	Left Edge	Right Edge	Top Edge	Bottom Edge
WLAN 2.4 G	Distance to User			<5mm	<5mm	>25mm	>25mm	<5mm	>25mm
	802.11b	20.00	100.00	Yes	Yes	Yes	No	Yes	No
	802.11g	18.00	63.10	No	No	No	No	No	No
	802.11n(HT20)	17.00	50.12	No	No	No	No	No	No
	802.11n(HT40)	17.00	50.12	No	No	No	No	No	No
Bluetooth	Distance to User			<5mm	<5mm	>25mm	>25mm	<5mm	>25mm
	BT	11.50	14.13	Yes	Yes	Yes	No	Yes	No

Note:

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

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

where

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

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

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

5. Per KDB 941225 D01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA /HSUPA /DC-HSDPA output power is < 0.25dB higher than RMC12.2Kbps, or reported SAR with RMC 12.2kbps setting is ≤ 1.2W/kg, HSDPA/HSUPA/DC-HSDPA SAR evaluation can be excluded.
6. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion.8. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4dB higher than those measured at the lowest data rate
7. Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
   a. When KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
   b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

10 TEST RESULT

10.1 GSM 850

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Ant.1	Full power	GPRS 4 slots	Left Cheek	0	251	848.8	-0.14	0.099	30.54	31.00	1.113	**0.111**	1#
Ant.1	Full power	GPRS 4 slots	Left Tilt	0	251	848.8	0.19	0.051	30.54	31.00	1.113	0.057	/
Ant.1	Full power	GPRS 4 slots	Right Cheek	0	251	848.8	-0.03	0.088	30.54	31.00	1.113	0.098	/
Ant.1	Full power	GPRS 4 slots	Right Tilt	0	251	848.8	0.03	0.049	30.54	31.00	1.113	0.055	/
Body-worn													
Ant.1	Level1	GPRS 4 slots	Front Side	15	251	848.8	-0.10	0.085	30.54	31.00	1.113	0.095	/
Ant.1	Level1	GPRS 4 slots	Back Side	15	251	848.8	-0.08	0.094	30.54	31.00	1.113	**0.105**	2#
Ant.1	Level2	GPRS 4 slots	Front Side	15	251	848.8	-0.05	0.067	29.38	30.00	1.153	0.077	/
Ant.1	Level2	GPRS 4 slots	Back Side	15	251	848.8	-0.12	0.084	29.38	30.00	1.153	0.097	/
Hotspot													
Ant.1	Level2	GPRS 4 slots	Front Side	10	251	848.8	0.01	0.068	29.38	30.00	1.153	0.079	/
Ant.1	Level2	GPRS 4 slots	Back Side	10	251	848.8	-0.14	0.179	29.38	30.00	1.153	**0.206**	3#
Ant.1	Level2	GPRS 4 slots	Left Edge	10	251	848.8	0.16	0.062	29.38	30.00	1.153	0.071	/
Ant.1	Level2	GPRS 4 slots	Right Edge	10	251	848.8	-0.06	0.041	29.38	30.00	1.153	0.047	/
Ant.1	Level2	GPRS 4 slots	Top Edge	10	251	848.8	0.07	0.018	29.38	30.00	1.153	0.021	/
Ant.1	Level2	GPRS 4 slots	Bottom Edge	10	251	848.8	0.18	0.061	29.38	30.00	1.153	0.071	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.2 GSM 1900

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Ant.1	Full power	DATA 4 slots	Left Cheek	0	661	1880.0	0.09	0.012	27.70	28.00	1.072	0.013	/
Ant.1	Full power	DATA 4 slots	Left Tilt	0	661	1880.0	0.16	0.009	27.70	28.00	1.072	0.010	/
Ant.1	Full power	DATA 4 slots	Right Cheek	0	661	1880.0	0.04	0.041	27.70	28.00	1.072	**0.043**	4#
Ant.1	Full power	DATA 4 slots	Right Tilt	0	661	1880.0	-0.03	0.033	27.70	28.00	1.072	0.035	/
Body-worn													
Ant.1	Level1	DATA 4 slots	Front Side	15	661	1880.0	0.18	0.081	25.79	27.00	1.321	0.107	/
Ant.1	Level1	DATA 4 slots	Back Side	15	661	1880.0	-0.10	0.243	25.79	27.00	1.321	**0.321**	5#
Ant.1	Level2	DATA 4 slots	Front Side	15	661	1880.0	0.18	0.064	25.93	26.00	1.016	0.065	/
Ant.1	Level2	DATA 4 slots	Back Side	15	661	1880.0	-0.13	0.179	25.93	26.00	1.016	0.182	/
Hotspot													
Ant.1	Level2	DATA 4 slots	Front Side	10	661	1880.0	0.03	0.141	25.93	26.00	1.016	0.144	/
Ant.1	Level2	DATA 4 slots	Back Side	10	661	1880.0	-0.09	0.348	25.93	26.00	1.016	0.353	/
Ant.1	Level2	DATA 4 slots	Left Edge	10	661	1880.0	-0.02	0.041	25.93	26.00	1.016	0.042	/
Ant.1	Level2	DATA 4 slots	Right Edge	10	661	1880.0	0.16	0.061	25.93	26.00	1.016	0.062	/
Ant.1	Level2	DATA 4 slots	Top Edge	10	661	1880.0	-0.19	0.022	25.93	26.00	1.016	0.022	/
Ant.1	Level2	DATA 4 slots	Bottom Edge	10	661	1880.0	0.02	0.488	25.93	26.00	1.016	**0.496**	6#
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.3WCDMA Band 2

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Ant.1	Full power	RMC	Left Cheek	0	9400	1880.0	-0.19	0.065	23.33	24.00	1.167	0.076	/
Ant.1	Full power	RMC	Left Tilt	0	9400	1880.0	0.02	0.066	23.33	24.00	1.167	0.077	/
Ant.1	Full power	RMC	Right Cheek	0	9400	1880.0	0.13	0.083	23.33	24.00	1.167	**0.097**	7#
Ant.1	Full power	RMC	Right Tilt	0	9400	1880.0	0.04	0.071	23.33	24.00	1.167	0.083	/
Body-worn													
Ant.1	Level1	RMC	Front Side	15	9400	1880.0	0.01	0.100	19.21	20.00	1.199	0.120	/
Ant.1	Level1	RMC	Back Side	15	9400	1880.0	-0.07	0.204	19.21	20.00	1.199	**0.245**	8#
Ant.1	Level2	RMC	Front Side	15	9400	1880.0	-0.12	0.085	18.46	19.00	1.132	0.096	/
Ant.1	Level2	RMC	Back Side	15	9400	1880.0	-0.09	0.171	18.46	19.00	1.132	0.194	/
Hotspot													
Ant.1	Level2	RMC	Front Side	10	9400	1880.0	-0.09	0.164	18.46	19.00	1.132	0.186	/
Ant.1	Level2	RMC	Back Side	10	9400	1880.0	0.01	0.327	18.46	19.00	1.132	0.370	/
Ant.1	Level2	RMC	Left Edge	10	9400	1880.0	0.08	0.051	18.46	19.00	1.132	0.058	/
Ant.1	Level2	RMC	Right Edge	10	9400	1880.0	-0.01	0.081	18.46	19.00	1.132	0.092	/
Ant.1	Level2	RMC	Top Edge	10	9400	1880.0	-0.05	0.025	18.46	19.00	1.132	0.028	/
Ant.1	Level2	RMC	Bottom Edge	10	9400	1880.0	-0.03	0.629	18.46	19.00	1.132	**0.712**	9#
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	10 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Specific													
Ant.1	Level2	RMC	Bottom Edge	0	9400	1880.0	0.12	1.180	18.46	19.00	1.132	**1.336**	10#
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.4WCDMA Band 4

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Ant.1	Full power	RMC	Left Cheek	0	1513	1752.6	-0.07	0.051	23.07	24.00	1.239	0.063	/
Ant.1	Full power	RMC	Left Tilt	0	1513	1752.6	-0.15	0.059	23.07	24.00	1.239	0.073	/
Ant.1	Full power	RMC	Right Cheek	0	1513	1752.6	0.18	0.087	23.07	24.00	1.239	**0.107**	11#
Ant.1	Full power	RMC	Right Tilt	0	1513	1752.6	-0.13	0.067	23.07	24.00	1.239	0.083	/
Body-worn													
Ant.1	Level1	RMC	Front Side	15	1412	1732.4	-0.03	0.028	19.05	20.00	1.245	0.035	/
Ant.1	Level1	RMC	Back Side	15	1412	1732.4	0.08	0.072	19.05	20.00	1.245	**0.089**	12#
Ant.1	Level2	RMC	Front Side	15	1412	1732.4	-0.17	0.022	18.46	19.00	1.132	0.025	/
Ant.1	Level2	RMC	Back Side	15	1412	1732.4	0.04	0.057	18.46	19.00	1.132	0.065	/
Hotspot													
Ant.1	Level2	RMC	Front Side	10	1412	1732.4	-0.16	0.030	18.46	19.00	1.132	0.034	/
Ant.1	Level2	RMC	Back Side	10	1412	1732.4	-0.19	0.080	18.46	19.00	1.132	0.091	/
Ant.1	Level2	RMC	Left Edge	10	1412	1732.4	-0.10	0.011	18.46	19.00	1.132	0.012	/
Ant.1	Level2	RMC	Right Edge	10	1412	1732.4	-0.14	0.008	18.46	19.00	1.132	0.009	/
Ant.1	Level2	RMC	Top Edge	10	1412	1732.4	-0.11	0.003	18.46	19.00	1.132	0.003	/
Ant.1	Level2	RMC	Bottom Edge	10	1412	1732.4	-0.01	0.115	18.46	19.00	1.132	**0.130**	13#
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.5WCDMA Band 5

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Ant.1	Full power	RMC	Left Cheek	0	4182	836.4	-0.16	0.148	23.53	24.50	1.250	**0.185**	14#
Ant.1	Full power	RMC	Left Tilt	0	4182	836.4	0.12	0.058	23.53	24.50	1.250	0.073	/
Ant.1	Full power	RMC	Right Cheek	0	4182	836.4	0.01	0.107	23.53	24.50	1.250	0.134	/
Ant.1	Full power	RMC	Right Tilt	0	4182	836.4	0.10	0.063	23.53	24.50	1.250	0.079	/
Body-worn													
Ant.1	Full power	RMC	Front Side	15	4182	836.4	0.19	0.102	23.53	24.50	1.250	0.128	/
Ant.1	Full power	RMC	Back Side	15	4182	836.4	0.05	0.130	23.53	24.50	1.250	**0.163**	15#
Hotspot													
Ant.1	Full power	RMC	Front Side	10	4182	836.4	0.05	0.092	23.53	24.50	1.250	0.115	/
Ant.1	Full power	RMC	Back Side	10	4182	836.4	0.16	0.160	23.53	24.50	1.250	**0.200**	16#
Ant.1	Full power	RMC	Left Edge	10	4182	836.4	-0.17	0.085	23.53	24.50	1.250	0.106	/
Ant.1	Full power	RMC	Right Edge	10	4182	836.4	0.02	0.064	23.53	24.50	1.250	0.080	/
Ant.1	Full power	RMC	Top Edge	10	4182	836.4	-0.14	0.019	23.53	24.50	1.250	0.024	/
Ant.1	Full power	RMC	Bottom Edge	10	4182	836.4	0.17	0.102	23.53	24.50	1.250	0.128	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.6 LTE Band 2 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.1	Full power	QPSK	Left Cheek	0	18900	1880	1	Mid	-0.02	0.087	23.33	24.00	1.167	0.102	/
Ant.1	Full power	QPSK	Left Cheek	0	18900	1880	50	Mid	-0.15	0.095	22.24	23.00	1.191	0.113	/
Ant.1	Full power	QPSK	Left Tilt	0	18900	1880	1	Mid	-0.09	0.076	23.33	24.00	1.167	0.089	/
Ant.1	Full power	QPSK	Left Tilt	0	18900	1880	50	Mid	0.17	0.065	22.24	23.00	1.191	0.077	/
Ant.1	Full power	QPSK	Right Cheek	0	18900	1880	1	Mid	-0.11	0.111	23.33	24.00	1.167	**0.130**	17#
Ant.1	Full power	QPSK	Right Cheek	0	18900	1880	50	Mid	0.07	0.071	22.24	23.00	1.191	0.085	/
Ant.1	Full power	QPSK	Right Tilt	0	18900	1880	1	Mid	0.08	0.068	23.33	24.00	1.167	0.079	/
Ant.1	Full power	QPSK	Right Tilt	0	18900	1880	50	Mid	-0.04	0.064	22.24	23.00	1.191	0.076	/
Body-worn															
Ant.1	Level1	QPSK	Front Side	15	18900	1880	1	High	-0.15	0.114	19.98	20.00	1.005	0.115	/
Ant.1	Level1	QPSK	Front Side	15	18900	1880	50	High	0.13	0.090	18.98	19.00	1.005	0.090	/
Ant.1	Level1	QPSK	Back Side	15	18900	1880	1	High	-0.18	0.276	19.98	20.00	1.005	**0.277**	18#
Ant.1	Level1	QPSK	Back Side	15	18900	1880	50	High	0.18	0.216	18.98	19.00	1.005	0.217	/
Ant.1	Level2	QPSK	Front Side	15	18900	1880	1	Low	-0.09	0.090	18.68	19.00	1.076	0.097	/
Ant.1	Level2	QPSK	Front Side	15	18900	1880	50	Low	0.15	0.071	17.75	18.00	1.059	0.075	/
Ant.1	Level2	QPSK	Back Side	15	18900	1880	1	Low	0.14	0.219	18.68	19.00	1.076	0.236	/
Ant.1	Level2	QPSK	Back Side	15	18900	1880	50	Low	0.09	0.172	17.75	18.00	1.059	0.182	/
Hotspot															
Ant.1	Level2	QPSK	Front Side	10	18900	1880	1	Low	-0.03	0.157	18.68	19.00	1.076	0.169	/
Ant.1	Level2	QPSK	Front Side	10	18900	1880	50	Low	0.04	0.123	17.75	18.00	1.059	0.130	/
Ant.1	Level2	QPSK	Back Side	10	18900	1880	1	Low	-0.04	0.341	18.68	19.00	1.076	0.367	/
Ant.1	Level2	QPSK	Back Side	10	18900	1880	50	Low	0.04	0.306	17.75	18.00	1.059	0.324	/
Ant.1	Level2	QPSK	Left Edge	10	18900	1880	1	Low	-0.04	0.056	18.68	19.00	1.076	0.060	/
Ant.1	Level2	QPSK	Left Edge	10	18900	1880	50	Low	-0.10	0.038	17.75	18.00	1.059	0.040	/
Ant.1	Level2	QPSK	Right Edge	10	18900	1880	1	Low	0.05	0.060	18.68	19.00	1.076	0.065	/
Ant.1	Level2	QPSK	Right Edge	10	18900	1880	50	Low	-0.16	0.052	17.75	18.00	1.059	0.055	/
Ant.1	Level2	QPSK	Top Edge	10	18900	1880	1	Low	-0.19	0.012	18.68	19.00	1.076	0.013	/
Ant.1	Level2	QPSK	Top Edge	10	18900	1880	50	Low	-0.12	0.011	17.75	18.00	1.059	0.012	/
Ant.1	Level2	QPSK	Bottom Edge	10	18900	1880	1	Low	0.16	0.507	18.68	19.00	1.076	**0.546**	19#
Ant.1	Level2	QPSK	Bottom Edge	10	18900	1880	50	Low	-0.15	0.410	17.75	18.00	1.059	0.434	/

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

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	10 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Specific															
Ant.1	Level2	QPSK	Bottom Edge	0	18900	1880	1	Low	0.11	0.981	18.68	19.00	1.076	**1.056**	20#
Ant.1	Level2	QPSK	Bottom Edge	0	18900	1880	50	Low	0.05	0.866	17.75	18.00	1.059	0.917	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

10.7 LTE Band 4 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.1	Full power	QPSK	Left Cheek	0	20175	1732.5	1	Mid	-0.14	0.028	22.76	24.00	1.330	0.037	/
Ant.1	Full power	QPSK	Left Cheek	0	20175	1732.5	50	High	0.05	0.022	22.13	23.00	1.222	0.027	/
Ant.1	Full power	QPSK	Left Tilt	0	20175	1732.5	1	Mid	0.00	0.013	22.76	24.00	1.330	0.017	/
Ant.1	Full power	QPSK	Left Tilt	0	20175	1732.5	50	High	-0.07	0.015	22.13	23.00	1.222	0.018	/
Ant.1	Full power	QPSK	Right Cheek	0	20175	1732.5	1	Mid	0.02	0.058	22.76	24.00	1.330	**0.077**	21#
Ant.1	Full power	QPSK	Right Cheek	0	20175	1732.5	50	High	-0.03	0.047	22.13	23.00	1.222	0.057	/
Ant.1	Full power	QPSK	Right Tilt	0	20175	1732.5	1	Mid	0.07	0.022	22.76	24.00	1.330	0.029	/
Ant.1	Full power	QPSK	Right Tilt	0	20175	1732.5	50	High	0.10	0.021	22.13	23.00	1.222	0.026	/
Body-worn															
Ant.1	Level1	QPSK	Front Side	15	20175	1732.5	1	Mid	0.16	0.068	19.37	20.00	1.156	0.079	/
Ant.1	Level1	QPSK	Front Side	15	20175	1732.5	50	Mid	-0.12	0.063	18.45	19.00	1.135	0.072	/
Ant.1	Level1	QPSK	Back Side	15	20175	1732.5	1	Mid	0.13	0.167	19.37	20.00	1.156	**0.193**	22#
Ant.1	Level1	QPSK	Back Side	15	20175	1732.5	50	Mid	0.00	0.159	18.45	19.00	1.135	0.180	/
Ant.1	Level2	QPSK	Front Side	15	20300	1745	1	Mid	0.07	0.054	18.51	19.00	1.119	0.060	/
Ant.1	Level2	QPSK	Front Side	15	20300	1745	50	Low	-0.06	0.050	17.98	18.00	1.005	0.050	/
Ant.1	Level2	QPSK	Back Side	15	20300	1745	1	Mid	-0.04	0.133	18.51	19.00	1.119	0.149	/
Ant.1	Level2	QPSK	Back Side	15	20300	1745	50	Low	0.18	0.126	17.98	18.00	1.005	0.127	/
Hotspot															
Ant.1	Level2	QPSK	Front Side	10	20300	1745	1	Mid	-0.06	0.071	18.51	19.00	1.119	0.079	/
Ant.1	Level2	QPSK	Front Side	10	20300	1745	50	Low	0.01	0.068	17.98	18.00	1.005	0.068	/
Ant.1	Level2	QPSK	Back Side	10	20300	1745	1	Mid	0.00	0.187	18.51	19.00	1.119	0.209	/
Ant.1	Level2	QPSK	Back Side	10	20300	1745	50	Low	0.10	0.176	17.98	18.00	1.005	0.177	/
Ant.1	Level2	QPSK	Left Edge	10	20300	1745	1	Mid	0.19	0.029	18.51	19.00	1.119	0.032	/
Ant.1	Level2	QPSK	Left Edge	10	20300	1745	50	Low	0.02	0.024	17.98	18.00	1.005	0.024	/
Ant.1	Level2	QPSK	Right Edge	10	20300	1745	1	Mid	0.19	0.021	18.51	19.00	1.119	0.024	/
Ant.1	Level2	QPSK	Right Edge	10	20300	1745	50	Low	0.17	0.012	17.98	18.00	1.005	0.012	/
Ant.1	Level2	QPSK	Top Edge	10	20300	1745	1	Mid	-0.11	0.031	18.51	19.00	1.119	0.035	/
Ant.1	Level2	QPSK	Top Edge	10	20300	1745	50	Low	-0.13	0.025	17.98	18.00	1.005	0.025	/
Ant.1	Level2	QPSK	Bottom Edge	10	20300	1745	1	Mid	-0.19	0.280	18.51	19.00	1.119	**0.313**	23#
Ant.1	Level2	QPSK	Bottom Edge	10	20300	1745	50	Low	-0.03	0.248	17.98	18.00	1.005	0.249	/

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

10.8 LTE Band 5 (10MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.1	Full power	QPSK	Left Cheek	0	20600	844	1	Low	-0.10	0.106	23.45	24.50	1.274	**0.135**	24#
Ant.1	Full power	QPSK	Left Cheek	0	20600	844	25	High	0.13	0.084	22.58	23.50	1.236	0.104	/
Ant.1	Full power	QPSK	Left Tilt	0	20600	844	1	Low	0.16	0.053	23.45	24.50	1.274	0.067	/
Ant.1	Full power	QPSK	Left Tilt	0	20600	844	25	High	-0.13	0.043	22.58	23.50	1.236	0.053	/
Ant.1	Full power	QPSK	Right Cheek	0	20600	844	1	Low	-0.15	0.101	23.45	24.50	1.274	0.129	/
Ant.1	Full power	QPSK	Right Cheek	0	20600	844	25	High	-0.06	0.082	22.58	23.50	1.236	0.101	/
Ant.1	Full power	QPSK	Right Tilt	0	20600	844	1	Low	0.01	0.062	23.45	24.50	1.274	0.079	/
Ant.1	Full power	QPSK	Right Tilt	0	20600	844	25	High	-0.03	0.049	22.58	23.50	1.236	0.061	/
Body-worn															
Ant.1	Full power	QPSK	Front Side	15	20600	844	1	Low	0.17	0.132	23.45	24.50	1.274	0.168	/
Ant.1	Full power	QPSK	Front Side	15	20600	844	25	High	0.11	0.104	22.58	23.50	1.236	0.129	/
Ant.1	Full power	QPSK	Back Side	15	20600	844	1	Low	-0.12	0.145	23.45	24.50	1.274	**0.185**	25#
Ant.1	Full power	QPSK	Back Side	15	20600	844	25	High	0.14	0.118	22.58	23.50	1.236	0.146	/
Hotspot															
Ant.1	Full power	QPSK	Front Side	10	20600	844	1	Low	0.18	0.114	23.45	24.50	1.274	0.145	/
Ant.1	Full power	QPSK	Front Side	10	20600	844	25	High	-0.03	0.090	22.58	23.50	1.236	0.111	/
Ant.1	Full power	QPSK	Back Side	10	20600	844	1	Low	-0.19	0.210	23.45	24.50	1.274	**0.267**	26#
Ant.1	Full power	QPSK	Back Side	10	20600	844	25	High	0.12	0.155	22.58	23.50	1.236	0.192	/
Ant.1	Full power	QPSK	Left Edge	10	20600	844	1	Low	0.09	0.100	23.45	24.50	1.274	0.127	/
Ant.1	Full power	QPSK	Left Edge	10	20600	844	25	High	-0.18	0.082	22.58	23.50	1.236	0.101	/
Ant.1	Full power	QPSK	Right Edge	10	20600	844	1	Low	-0.04	0.083	23.45	24.50	1.274	0.106	/
Ant.1	Full power	QPSK	Right Edge	10	20600	844	25	High	0.10	0.061	22.58	23.50	1.236	0.075	/
Ant.1	Full power	QPSK	Top Edge	10	20600	844	1	Low	-0.11	0.026	23.45	24.50	1.274	0.033	/
Ant.1	Full power	QPSK	Top Edge	10	20600	844	25	High	-0.11	0.021	22.58	23.50	1.236	0.026	/
Ant.1	Full power	QPSK	Bottom Edge	10	20600	844	1	Low	-0.19	0.117	23.45	24.50	1.274	0.149	/
Ant.1	Full power	QPSK	Bottom Edge	10	20600	844	25	High	-0.08	0.097	22.58	23.50	1.236	0.120	/

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

10.9 LTE Band 7 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.1	Full power	QPSK	Left Cheek	0	21100	2535	1	Low	0.02	0.115	23.23	23.50	1.064	**0.122**	27#
Ant.1	Full power	QPSK	Left Cheek	0	20850	2510	50	Mid	-0.13	0.098	22.03	22.50	1.114	0.109	/
Ant.1	Full power	QPSK	Left Tilt	0	21100	2535	1	Low	-0.14	0.069	23.23	23.50	1.064	0.073	/
Ant.1	Full power	QPSK	Left Tilt	0	20850	2510	50	Mid	-0.05	0.052	22.03	22.50	1.114	0.058	/
Ant.1	Full power	QPSK	Right Cheek	0	21100	2535	1	Low	0.03	0.075	23.23	23.50	1.064	0.080	/
Ant.1	Full power	QPSK	Right Cheek	0	20850	2510	50	Mid	0.12	0.063	22.03	22.50	1.114	0.070	/
Ant.1	Full power	QPSK	Right Tilt	0	21100	2535	1	Low	0.04	0.058	23.23	23.50	1.064	0.062	/
Ant.1	Full power	QPSK	Right Tilt	0	20850	2510	50	Mid	-0.03	0.046	22.03	22.50	1.114	0.051	/
Body-worn															
Ant.1	Level1	QPSK	Front Side	15	21350	2560	1	Low	-0.07	0.070	19.06	19.50	1.107	0.077	/
Ant.1	Level1	QPSK	Front Side	15	21350	2560	50	Low	-0.01	0.056	18.09	18.50	1.099	0.062	/
Ant.1	Level1	QPSK	Back Side	15	21350	2560	1	Low	0.01	0.103	19.06	19.50	1.107	**0.114**	28#
Ant.1	Level1	QPSK	Back Side	15	21350	2560	50	Low	-0.04	0.082	18.09	18.50	1.099	0.090	/
Ant.1	Level2	QPSK	Front Side	15	21350	2560	1	Low	0.04	0.055	17.80	18.50	1.175	0.065	/
Ant.1	Level2	QPSK	Front Side	15	21350	2560	50	Low	-0.08	0.045	16.65	17.50	1.216	0.055	/
Ant.1	Level2	QPSK	Back Side	15	21350	2560	1	Low	0.06	0.082	17.80	18.50	1.175	0.096	/
Ant.1	Level2	QPSK	Back Side	15	21350	2560	50	Low	-0.04	0.065	16.65	17.50	1.216	0.079	/
Hotspot															
Ant.1	Level2	QPSK	Front Side	10	21350	2560	1	Low	0.19	0.123	17.80	18.50	1.175	0.145	/
Ant.1	Level2	QPSK	Front Side	10	21350	2560	50	Low	0.03	0.096	16.65	17.50	1.216	0.117	/
Ant.1	Level2	QPSK	Back Side	10	21350	2560	1	Low	-0.09	0.172	17.80	18.50	1.175	0.202	/
Ant.1	Level2	QPSK	Back Side	10	21350	2560	50	Low	-0.01	0.137	16.65	17.50	1.216	0.167	/
Ant.1	Level2	QPSK	Left Edge	10	21350	2560	1	Low	0.03	0.047	17.80	18.50	1.175	0.055	/
Ant.1	Level2	QPSK	Left Edge	10	21350	2560	50	Low	0.00	0.037	16.65	17.50	1.216	0.045	/
Ant.1	Level2	QPSK	Right Edge	10	21350	2560	1	Low	0.16	0.081	17.80	18.50	1.175	0.095	/
Ant.1	Level2	QPSK	Right Edge	10	21350	2560	50	Low	0.14	0.065	16.65	17.50	1.216	0.079	/
Ant.1	Level2	QPSK	Top Edge	10	21350	2560	1	Low	0.10	0.035	17.80	18.50	1.175	0.041	/
Ant.1	Level2	QPSK	Top Edge	10	21350	2560	50	Low	-0.15	0.024	16.65	17.50	1.216	0.029	/
Ant.1	Level2	QPSK	Bottom Edge	10	21350	2560	1	Low	-0.11	0.250	17.80	18.50	1.175	**0.294**	29#
Ant.1	Level2	QPSK	Bottom Edge	10	21350	2560	50	Low	0.02	0.199	16.65	17.50	1.216	0.242	/

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

10.10 LTE Band 13 (10MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.1	Full power	QPSK	Left Cheek	0	23230	782	1	Mid	0.07	0.027	23.41	24.50	1.285	**0.035**	30#
Ant.1	Full power	QPSK	Left Cheek	0	23230	782	25	Low	0.16	0.019	22.33	23.50	1.309	0.025	/
Ant.1	Full power	QPSK	Left Tilt	0	23230	782	1	Mid	0.05	0.012	23.41	24.50	1.285	0.015	/
Ant.1	Full power	QPSK	Left Tilt	0	23230	782	25	Low	-0.04	0.011	22.33	23.50	1.309	0.014	/
Ant.1	Full power	QPSK	Right Cheek	0	23230	782	1	Mid	0.00	0.010	23.41	24.50	1.285	0.013	/
Ant.1	Full power	QPSK	Right Cheek	0	23230	782	25	Low	-0.19	0.008	22.33	23.50	1.309	0.010	/
Ant.1	Full power	QPSK	Right Tilt	0	23230	782	1	Mid	-0.09	0.013	23.41	24.50	1.285	0.017	/
Ant.1	Full power	QPSK	Right Tilt	0	23230	782	25	Low	-0.16	0.011	22.33	23.50	1.309	0.014	/
Body-worn															
Ant.1	Full power	QPSK	Front Side	15	23230	782	1	Mid	0.02	0.015	23.41	24.50	1.285	0.019	/
Ant.1	Full power	QPSK	Front Side	15	23230	782	25	Low	-0.11	0.011	22.33	23.50	1.309	0.014	/
Ant.1	Full power	QPSK	Back Side	15	23230	782	1	Mid	0.16	0.048	23.41	24.50	1.285	**0.061**	31#
Ant.1	Full power	QPSK	Back Side	15	23230	782	25	Low	-0.12	0.022	22.33	23.50	1.309	0.029	/
Hotspot															
Ant.1	Full power	QPSK	Front Side	10	23230	782	1	Mid	0.13	0.042	23.41	24.50	1.285	0.054	/
Ant.1	Full power	QPSK	Front Side	10	23230	782	25	Low	0.16	0.033	22.33	23.50	1.309	0.043	/
Ant.1	Full power	QPSK	Back Side	10	23230	782	1	Mid	-0.06	0.060	23.41	24.50	1.285	**0.077**	32#
Ant.1	Full power	QPSK	Back Side	10	23230	782	25	Low	-0.04	0.053	22.33	23.50	1.309	0.069	/
Ant.1	Full power	QPSK	Left Edge	10	23230	782	1	Mid	0.19	0.031	23.41	24.50	1.285	0.040	/
Ant.1	Full power	QPSK	Left Edge	10	23230	782	25	Low	-0.09	0.021	22.33	23.50	1.309	0.027	/
Ant.1	Full power	QPSK	Right Edge	10	23230	782	1	Mid	0.12	0.015	23.41	24.50	1.285	0.019	/
Ant.1	Full power	QPSK	Right Edge	10	23230	782	25	Low	0.17	0.011	22.33	23.50	1.309	0.014	/
Ant.1	Full power	QPSK	Top Edge	10	23230	782	1	Mid	0.14	0.009	23.41	24.50	1.285	0.012	/
Ant.1	Full power	QPSK	Top Edge	10	23230	782	25	Low	-0.02	0.005	22.33	23.50	1.309	0.007	/
Ant.1	Full power	QPSK	Bottom Edge	10	23230	782	1	Mid	-0.11	0.021	23.41	24.50	1.285	0.027	/
Ant.1	Full power	QPSK	Bottom Edge	10	23230	782	25	Low	-0.08	0.019	22.33	23.50	1.309	0.025	/

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

10.11 LTE Band 66 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.1	Full power	QPSK	Left Cheek	0	132322	1745	1	High	-0.09	0.042	23.37	24.000	1.156	0.049	/
Ant.1	Full power	QPSK	Left Cheek	0	132572	1770	50	High	-0.14	0.037	22.14	23.000	1.219	0.045	/
Ant.1	Full power	QPSK	Left Tilt	0	132322	1745	1	High	-0.12	0.028	23.37	24.000	1.156	0.032	/
Ant.1	Full power	QPSK	Left Tilt	0	132572	1770	50	High	-0.14	0.021	22.14	23.000	1.219	0.026	/
Ant.1	Full power	QPSK	Right Cheek	0	132322	1745	1	High	-0.13	0.083	23.37	24.000	1.156	**0.096**	33#
Ant.1	Full power	QPSK	Right Cheek	0	132572	1770	50	High	0.09	0.072	22.14	23.000	1.219	0.088	/
Ant.1	Full power	QPSK	Right Tilt	0	132322	1745	1	High	0.04	0.043	23.37	24.000	1.156	0.050	/
Ant.1	Full power	QPSK	Right Tilt	0	132572	1770	50	High	0.12	0.036	22.14	23.000	1.219	0.044	/
Body-worn															
Ant.1	Level1	QPSK	Front Side	15	132322	1745	1	Low	0.15	0.036	19.85	20.00	1.035	0.037	/
Ant.1	Level1	QPSK	Front Side	15	132322	1745	50	Low	-0.14	0.027	18.50	19.00	1.122	0.030	/
Ant.1	Level1	QPSK	Back Side	15	132322	1745	1	Low	-0.03	0.081	19.85	20.00	1.035	**0.084**	34#
Ant.1	Level1	QPSK	Back Side	15	132322	1745	50	Low	-0.08	0.068	18.50	19.00	1.122	0.076	/
Ant.1	Level2	QPSK	Front Side	15	132322	1745	1	Low	-0.12	0.028	18.84	19.00	1.038	0.029	/
Ant.1	Level2	QPSK	Front Side	15	132322	1745	50	Low	-0.05	0.022	17.54	18.00	1.112	0.024	/
Ant.1	Level2	QPSK	Back Side	15	132322	1745	1	Low	-0.08	0.064	18.84	19.00	1.038	0.066	/
Ant.1	Level2	QPSK	Back Side	15	132322	1745	50	Low	-0.12	0.054	17.54	18.00	1.112	0.060	/
Hotspot															
Ant.1	Level2	QPSK	Front Side	10	132322	1745	1	Low	-0.19	0.067	18.84	19.00	1.038	0.070	/
Ant.1	Level2	QPSK	Front Side	10	132322	1745	50	Low	-0.08	0.045	17.54	18.00	1.112	0.050	/
Ant.1	Level2	QPSK	Back Side	10	132322	1745	1	Low	0.18	0.143	18.84	19.00	1.038	0.148	/
Ant.1	Level2	QPSK	Back Side	10	132322	1745	50	Low	-0.05	0.111	17.54	18.00	1.112	0.123	/
Ant.1	Level2	QPSK	Left Edge	10	132322	1745	1	Low	-0.08	0.023	18.84	19.00	1.038	0.024	/
Ant.1	Level2	QPSK	Left Edge	10	132322	1745	50	Low	0.03	0.021	17.54	18.00	1.112	0.023	/
Ant.1	Level2	QPSK	Right Edge	10	132322	1745	1	Low	0.12	0.016	18.84	19.00	1.038	0.017	/
Ant.1	Level2	QPSK	Right Edge	10	132322	1745	50	Low	-0.13	0.012	17.54	18.00	1.112	0.013	/
Ant.1	Level2	QPSK	Top Edge	10	132322	1745	1	Low	-0.06	0.008	18.84	19.00	1.038	0.008	/
Ant.1	Level2	QPSK	Top Edge	10	132322	1745	50	Low	0.17	0.005	17.54	18.00	1.112	0.006	/
Ant.1	Level2	QPSK	Bottom Edge	10	132322	1745	1	Low	0.09	0.242	18.84	19.00	1.038	**0.251**	35#
Ant.1	Level2	QPSK	Bottom Edge	10	132322	1745	50	Low	-0.17	0.158	17.54	18.00	1.112	0.176	/

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

10.12 LTE Band 38 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.1	Full power	QPSK	Left Cheek	0	38000	2595	1	Low	-0.11	0.070	23.21	24.00	1.199	**0.084**	36#
Ant.1	Full power	QPSK	Left Cheek	0	38000	2595	50	Mid	-0.19	0.032	22.15	23.00	1.216	0.039	/
Ant.1	Full power	QPSK	Left Tilt	0	38000	2595	1	Low	-0.11	0.026	23.21	24.00	1.199	0.031	/
Ant.1	Full power	QPSK	Left Tilt	0	38000	2595	50	Mid	0.19	0.021	22.15	23.00	1.216	0.026	/
Ant.1	Full power	QPSK	Right Cheek	0	38000	2595	1	Low	0.08	0.030	23.21	24.00	1.199	0.036	/
Ant.1	Full power	QPSK	Right Cheek	0	38000	2595	50	Mid	-0.02	0.024	22.15	23.00	1.216	0.029	/
Ant.1	Full power	QPSK	Right Tilt	0	38000	2595	1	Low	0.13	0.018	23.21	24.00	1.199	0.022	/
Ant.1	Full power	QPSK	Right Tilt	0	38000	2595	50	Mid	0.14	0.016	22.15	23.00	1.216	0.019	/
Body-worn															
Ant.1	Level1	QPSK	Front Side	15	37850	2580	1	Low	0.19	0.083	21.23	22.00	1.194	0.099	/
Ant.1	Level1	QPSK	Front Side	15	37850	2580	50	Low	-0.11	0.070	20.17	21.00	1.211	0.085	/
Ant.1	Level1	QPSK	Back Side	15	37850	2580	1	Low	-0.12	0.204	21.23	22.00	1.194	**0.244**	37#
Ant.1	Level1	QPSK	Back Side	15	37850	2580	50	Low	-0.15	0.162	20.17	21.00	1.211	0.196	/
Ant.1	Level2	QPSK	Front Side	15	37850	2580	1	Low	-0.09	0.066	20.20	21.00	1.202	0.079	/
Ant.1	Level2	QPSK	Front Side	15	37850	2580	50	High	-0.09	0.056	19.76	20.00	1.057	0.059	/
Ant.1	Level2	QPSK	Back Side	15	37850	2580	1	Low	0.03	0.162	20.20	21.00	1.202	0.195	/
Ant.1	Level2	QPSK	Back Side	15	37850	2580	50	High	-0.05	0.129	19.76	20.00	1.057	0.136	/
Hotspot															
Ant.1	Level2	QPSK	Front Side	10	37850	2580	1	Low	0.05	0.120	20.20	21.00	1.202	0.144	/
Ant.1	Level2	QPSK	Front Side	10	37850	2580	50	High	0.15	0.101	19.76	20.00	1.057	0.107	/
Ant.1	Level2	QPSK	Back Side	10	37850	2580	1	Low	0.09	0.271	20.20	21.00	1.202	0.326	/
Ant.1	Level2	QPSK	Back Side	10	37850	2580	50	High	-0.11	0.240	19.76	20.00	1.057	0.254	/
Ant.1	Level2	QPSK	Left Edge	10	37850	2580	1	Low	0.04	0.048	20.20	21.00	1.202	0.058	/
Ant.1	Level2	QPSK	Left Edge	10	37850	2580	50	High	0.00	0.047	19.76	20.00	1.057	0.050	/
Ant.1	Level2	QPSK	Right Edge	10	37850	2580	1	Low	0.00	0.041	20.20	21.00	1.202	0.049	/
Ant.1	Level2	QPSK	Right Edge	10	37850	2580	50	High	-0.15	0.033	19.76	20.00	1.057	0.035	/
Ant.1	Level2	QPSK	Top Edge	10	37850	2580	1	Low	-0.18	0.022	20.20	21.00	1.202	0.026	/
Ant.1	Level2	QPSK	Top Edge	10	37850	2580	50	High	0.03	0.012	19.76	20.00	1.057	0.013	/
Ant.1	Level2	QPSK	Bottom Edge	10	37850	2580	1	Low	0.06	0.364	20.20	21.00	1.202	**0.438**	38#
Ant.1	Level2	QPSK	Bottom Edge	10	37850	2580	50	High	0.15	0.311	19.76	20.00	1.057	0.329	/

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

10.13 LTE Band 41 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Head															
Ant.1	Full power	QPSK	Left Cheek	0	40765	2607.5	1	Mid	-0.14	0.082	23.34	24.00	1.164	**0.095**	39#
Ant.1	Full power	QPSK	Left Cheek	0	40765	2607.5	50	Mid	0.08	0.068	22.34	23.00	1.164	0.079	/
Ant.1	Full power	QPSK	Left Tilt	0	40765	2607.5	1	Mid	0.08	0.064	23.34	24.00	1.164	0.075	/
Ant.1	Full power	QPSK	Left Tilt	0	40765	2607.5	50	Mid	0.15	0.048	22.34	23.00	1.164	0.056	/
Ant.1	Full power	QPSK	Right Cheek	0	40765	2607.5	1	Mid	0.15	0.061	23.34	24.00	1.164	0.071	/
Ant.1	Full power	QPSK	Right Cheek	0	40765	2607.5	50	Mid	-0.05	0.057	22.34	23.00	1.164	0.066	/
Ant.1	Full power	QPSK	Right Tilt	0	40765	2607.5	1	Mid	-0.04	0.017	23.34	24.00	1.164	0.020	/
Ant.1	Full power	QPSK	Right Tilt	0	40765	2607.5	50	Mid	0.14	0.013	22.34	23.00	1.164	0.015	/
Body-worn															
Ant.1	Level1	QPSK	Front Side	15	40765	2607.5	1	Mid	-0.06	0.077	21.89	22.00	1.026	0.079	/
Ant.1	Level1	QPSK	Front Side	15	40765	2607.5	50	High	0.07	0.071	20.96	21.00	1.009	0.072	/
Ant.1	Level1	QPSK	Back Side	15	40765	2607.5	1	Mid	-0.03	0.180	21.89	22.00	1.026	**0.185**	40#
Ant.1	Level1	QPSK	Back Side	15	40765	2607.5	50	High	-0.16	0.179	20.96	21.00	1.009	0.181	/
Ant.1	Level2	QPSK	Front Side	15	40765	2607.5	1	Low	0.10	0.061	20.27	21.00	1.183	0.072	/
Ant.1	Level2	QPSK	Front Side	15	40765	2607.5	50	Low	0.19	0.061	19.74	20.00	1.062	0.065	/
Ant.1	Level2	QPSK	Back Side	15	40765	2607.5	1	Low	0.02	0.143	20.27	21.00	1.183	0.169	/
Ant.1	Level2	QPSK	Back Side	15	40765	2607.5	50	Low	-0.02	0.142	19.74	20.00	1.062	0.151	/
Hotspot															
Ant.1	Level2	QPSK	Front Side	10	40765	2607.5	1	Low	0.10	0.123	20.27	21.00	1.183	0.146	/
Ant.1	Level2	QPSK	Front Side	10	40765	2607.5	50	Low	-0.02	0.099	19.74	20.00	1.062	0.105	/
Ant.1	Level2	QPSK	Back Side	10	40765	2607.5	1	Low	0.11	0.318	20.27	21.00	1.183	0.376	/
Ant.1	Level2	QPSK	Back Side	10	40765	2607.5	50	Low	-0.09	0.258	19.74	20.00	1.062	0.274	/
Ant.1	Level2	QPSK	Left Edge	10	40765	2607.5	1	Low	-0.04	0.058	20.27	21.00	1.183	0.069	/
Ant.1	Level2	QPSK	Left Edge	10	40765	2607.5	50	Low	0.17	0.047	19.74	20.00	1.062	0.050	/
Ant.1	Level2	QPSK	Right Edge	10	40765	2607.5	1	Low	0.18	0.061	20.27	21.00	1.183	0.072	/
Ant.1	Level2	QPSK	Right Edge	10	40765	2607.5	50	Low	0.11	0.044	19.74	20.00	1.062	0.047	/
Ant.1	Level2	QPSK	Top Edge	10	40765	2607.5	1	Low	0.07	0.012	20.27	21.00	1.183	0.014	/
Ant.1	Level2	QPSK	Top Edge	10	40765	2607.5	50	Low	-0.08	0.008	19.74	20.00	1.062	0.008	/
Ant.1	Level2	QPSK	Bottom Edge	10	40765	2607.5	1	Low	0.13	0.356	20.27	21.00	1.183	**0.421**	41#
Ant.1	Level2	QPSK	Bottom Edge	10	40765	2607.5	50	Low	-0.02	0.311	19.74	20.00	1.062	0.330	/

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

10.14 WIFI 2.4GHz

Mode	Power Reduction	Fre. Band	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Meas. No.
Head																
Ant.2	Level1	2.4G	802.11 b	Left Cheek	0	6	2437	0.07	0.600	14.59	15.00	1.099	99.06	1.009	0.666	/
Ant.2	Level1	2.4G	802.11 b	Left Tilt	0	6	2437	0.14	0.654	14.59	15.00	1.099	99.06	1.009	**0.726**	42#
Ant.2	Level1	2.4G	802.11 b	Right Cheek	0	6	2437	0.14	0.257	14.59	15.00	1.099	99.06	1.009	0.285	/
Ant.2	Level1	2.4G	802.11 b	Right Tilt	0	6	2437	-0.06	0.320	14.59	15.00	1.099	99.06	1.009	0.355	/
Ant.2	Level2	2.4G	802.11 b	Left Cheek	0	6	2437	-0.15	0.370	12.23	13.00	1.194	99.06	1.009	0.446	/
Ant.2	Level2	2.4G	802.11 b	Left Tilt	0	6	2437	0.00	0.426	12.23	13.00	1.194	99.06	1.009	0.513	/
Ant.2	Level2	2.4G	802.11 b	Right Cheek	0	6	2437	0.07	0.170	12.23	13.00	1.194	99.06	1.009	0.205	/
Ant.2	Level2	2.4G	802.11 b	Right Tilt	0	6	2437	0.12	0.195	12.23	13.00	1.194	99.06	1.009	0.235	/
Body-worn																
Ant.2	Level3	2.4G	802.11 b	Front Side	15	6	2437	-0.08	0.167	18.78	19.00	1.052	99.06	1.009	0.177	/
Ant.2	Level3	2.4G	802.11 b	Back Side	15	6	2437	0.01	0.308	18.78	19.00	1.052	99.06	1.009	**0.327**	43#
Ant.2	Level4	2.4G	802.11 b	Front Side	15	6	2437	0.01	0.101	16.73	17.00	1.064	99.06	1.009	0.108	/
Ant.2	Level4	2.4G	802.11 b	Back Side	15	6	2437	-0.09	0.194	16.73	17.00	1.064	99.06	1.009	0.208	/
Hotspot																
Ant.2	Level4	2.4G	802.11 b	Front Side	10	6	2437	-0.18	0.131	16.73	17.00	1.064	99.06	1.009	0.141	/
Ant.2	Level4	2.4G	802.11 b	Back Side	10	6	2437	0.16	0.249	16.73	17.00	1.064	99.06	1.009	0.267	/
Ant.2	Level4	2.4G	802.11 b	Left Edge	10	6	2437	0.13	0.059	16.73	17.00	1.064	99.06	1.009	0.063	/
Ant.2	Level4	2.4G	802.11 b	Right Edge	10	6	2437	-0.07	0.024	16.73	17.00	1.064	99.06	1.009	0.026	/
Ant.2	Level4	2.4G	802.11 b	Top Edge	10	6	2437	0.08	0.377	16.73	17.00	1.064	99.06	1.009	**0.405**	44#
Ant.2	Level4	2.4G	802.11 b	Bottom Edge	10	6	2437	0.17	0.015	16.73	17.00	1.064	99.06	1.009	0.016	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.																

10.15 Bluetooth

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Meas. No.
Head													
Bluetooth	Left Cheek	0	39	2441	0.18	0.203	10.26	11.50	1.332	77.41	1.292	0.349	/
Bluetooth	Left Tilt	0	39	2441	0.19	0.236	10.26	11.50	1.332	77.41	1.292	**0.406**	45#
Bluetooth	Right Cheek	0	39	2441	-0.13	0.091	10.26	11.50	1.332	77.41	1.292	0.157	/
Bluetooth	Right Tilt	0	39	2441	0.05	0.102	10.26	11.50	1.332	77.41	1.292	0.175	/
Body													
Bluetooth	Front Side	15	39	2441	-0.05	0.017	10.26	11.50	1.332	77.41	1.292	0.029	/
Bluetooth	Back Side	15	39	2441	0.09	0.052	10.26	11.50	1.332	77.41	1.292	**0.090**	46#
Hotspot													
Bluetooth	Front Side	10	39	2441	0.01	0.088	10.26	11.50	1.332	77.41	1.292	0.151	/
Bluetooth	Back Side	10	39	2441	0.03	0.047	10.26	11.50	1.332	77.41	1.292	0.081	/
Bluetooth	Left Edge	10	39	2441	0.19	0.019	10.26	11.50	1.332	77.41	1.292	0.033	/
Bluetooth	Right Edge	10	39	2441	0.08	0.009	10.26	11.50	1.332	77.41	1.292	0.015	/
Bluetooth	Top Edge	10	39	2441	0.15	0.089	10.26	11.50	1.332	77.41	1.292	**0.153**	47#
Bluetooth	Bottom Edge	10	39	2441	0.11	0.006	10.26	11.50	1.332	77.41	1.292	0.010	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

11 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Note: For product specific 10g SAR, the highest measured 10g SAR is 0.654 < 2.0 W/kg, repeated measurement is not required.

12 SIMULTANEOUS TRANSMISSION

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

12.1 Simultaneous Transmission Mode Consider

No.	Simultaneous Tx Combination	Head	Body-worn	Hotspot
1	GSM + WiFi 2.4G	Yes	Yes	Yes
2	UMTS + WiFi 2.4G	Yes	Yes	Yes
3	LTE + WiFi 2.4G	Yes	Yes	Yes
4	GSM + Bluetooth	Yes	Yes	Yes
5	UMTS + Bluetooth	Yes	Yes	Yes
6	LTE + Bluetooth	Yes	Yes	Yes

Note:

1. 2G&3G&4G share the same antenna and can't transmit simultaneously.
2. 2.4G WLAN can't transmit simultaneously with Bluetooth.
3. The maximum SAR summation is calculated based on the same configuration and test position.
4. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.

12.2 Sum SAR of Simultaneous Transmission

12.2.1 Head Simultaneous Transmission SAR Evaluation for WWAN Antenna with WLAN or Bluetooth

Band	Antenna	Position	Stand alone SAR			SUM SAR	
			1	2	3		
			WWAN	2.4GWIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)
GSM850	ANT1	Left Cheek	0.111	0.446	0.349	0.557	0.460
	ANT1	Left Tilt	0.057	0.513	0.406	0.570	0.463
	ANT1	Right Cheek	0.098	0.205	0.157	0.303	0.255
	ANT1	Right Tilt	0.055	0.235	0.175	0.290	0.230
GSM1900	ANT1	Left Cheek	0.013	0.446	0.349	0.459	0.362
	ANT1	Left Tilt	0.010	0.513	0.406	0.523	0.416
	ANT1	Right Cheek	0.043	0.205	0.157	0.248	0.200
	ANT1	Right Tilt	0.035	0.235	0.175	0.270	0.210
WCDMA B2	ANT1	Left Cheek	0.076	0.446	0.349	0.522	0.425
	ANT1	Left Tilt	0.077	0.513	0.406	0.590	0.483
	ANT1	Right Cheek	0.097	0.205	0.157	0.302	0.254
	ANT1	Right Tilt	0.083	0.235	0.175	0.318	0.258
WCDMA B4	ANT1	Left Cheek	0.063	0.446	0.349	0.509	0.412
	ANT1	Left Tilt	0.073	0.513	0.406	0.586	0.479
	ANT1	Right Cheek	0.107	0.205	0.157	0.312	0.264
	ANT1	Right Tilt	0.083	0.235	0.175	0.318	0.258
WCDMA B5	ANT1	Left Cheek	0.185	0.446	0.349	**0.631**	0.534
	ANT1	Left Tilt	0.073	0.513	0.406	0.586	0.479
	ANT1	Right Cheek	0.134	0.205	0.157	0.339	0.291
	ANT1	Right Tilt	0.079	0.235	0.175	0.314	0.254
LTE B2	ANT1	Left Cheek	0.113	0.446	0.349	0.559	0.462
	ANT1	Left Tilt	0.089	0.513	0.406	0.602	0.495
	ANT1	Right Cheek	0.130	0.205	0.157	0.335	0.287
	ANT1	Right Tilt	0.079	0.235	0.175	0.314	0.254
LTE B4	ANT1	Left Cheek	0.037	0.446	0.349	0.483	0.386
	ANT1	Left Tilt	0.018	0.513	0.406	0.531	0.424
	ANT1	Right Cheek	0.077	0.205	0.157	0.282	0.234
	ANT1	Right Tilt	0.029	0.235	0.175	0.264	0.204
LTE B5	ANT1	Left Cheek	0.135	0.446	0.349	0.581	0.484
	ANT1	Left Tilt	0.067	0.513	0.406	0.580	0.473
	ANT1	Right Cheek	0.129	0.205	0.157	0.334	0.286
	ANT1	Right Tilt	0.079	0.235	0.175	0.314	0.254
LTE B7	ANT1	Left Cheek	0.122	0.446	0.349	0.568	0.471
	ANT1	Left Tilt	0.073	0.513	0.406	0.586	0.479
	ANT1	Right Cheek	0.080	0.205	0.157	0.285	0.237

	ANT1	Right Tilt	0.062	0.235	0.175	0.297	0.237
LTE B13	ANT1	Left Cheek	0.035	0.446	0.349	0.481	0.384
	ANT1	Left Tilt	0.015	0.513	0.406	0.528	0.421
	ANT1	Right Cheek	0.013	0.205	0.157	0.218	0.170
	ANT1	Right Tilt	0.017	0.235	0.175	0.252	0.192
LTE B66	ANT1	Left Cheek	0.049	0.446	0.349	0.495	0.398
	ANT1	Left Tilt	0.032	0.513	0.406	0.545	0.438
	ANT1	Right Cheek	0.096	0.205	0.157	0.301	0.253
	ANT1	Right Tilt	0.050	0.235	0.175	0.285	0.225
LTE B38	ANT1	Left Cheek	0.084	0.446	0.349	0.530	0.433
	ANT1	Left Tilt	0.031	0.513	0.406	0.544	0.437
	ANT1	Right Cheek	0.036	0.205	0.157	0.241	0.193
	ANT1	Right Tilt	0.022	0.235	0.175	0.257	0.197
LTE B41	ANT1	Left Cheek	0.095	0.446	0.349	0.541	0.444
	ANT1	Left Tilt	0.075	0.513	0.406	0.588	0.481
	ANT1	Right Cheek	0.071	0.205	0.157	0.276	0.228
	ANT1	Right Tilt	0.020	0.235	0.175	0.255	0.195

Note:

1: The simultaneous transmission combinations of the three 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 0.631 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.2 Body-worn Simultaneous Transmission SAR Evaluation for WWAN Antenna with WLAN or Bluetooth

Band	Antenna	Position	Stand alone SAR			SUM SAR	
			1	2	3		
			WWAN	2.4GWIFI	Bluetooth	Sum SAR（1+2）	Sum SAR（1+3）
GSM850	ANT1	Front Side 15mm	0.077	0.108	0.029	0.185	0.106
	ANT1	Back Side 15mm	0.097	0.208	0.090	0.305	0.187
GSM1900	ANT1	Front Side 15mm	0.065	0.108	0.029	0.173	0.094
	ANT1	Back Side 15mm	0.182	0.208	0.090	0.390	0.272
WCDMA B2	ANT1	Front Side 15mm	0.096	0.108	0.029	0.204	0.125
	ANT1	Back Side 15mm	0.194	0.208	0.090	0.402	0.284
WCDMA B4	ANT1	Front Side 15mm	0.025	0.108	0.029	0.133	0.054
	ANT1	Back Side 15mm	0.065	0.208	0.090	0.273	0.155
WCDMA B5	ANT1	Front Side 15mm	0.128	0.108	0.029	0.236	0.157
	ANT1	Back Side 15mm	0.163	0.208	0.090	0.371	0.253
LTE B2	ANT1	Front Side 15mm	0.097	0.108	0.029	0.205	0.126
	ANT1	Back Side 15mm	0.236	0.208	0.090	**0.444**	0.326
LTE B4	ANT1	Front Side 15mm	0.060	0.108	0.029	0.168	0.089
	ANT1	Back Side 15mm	0.149	0.208	0.090	0.357	0.239
LTE B5	ANT1	Front Side 15mm	0.168	0.108	0.029	0.276	0.197
	ANT1	Back Side 15mm	0.185	0.208	0.090	0.393	0.275
LTE B7	ANT1	Front Side 15mm	0.065	0.108	0.029	0.173	0.094
	ANT1	Back Side 15mm	0.096	0.208	0.090	0.304	0.186
LTE B13	ANT1	Front Side 15mm	0.019	0.108	0.029	0.127	0.048
	ANT1	Back Side 15mm	0.061	0.208	0.090	0.269	0.151
LTE B66	ANT1	Front Side 15mm	0.029	0.108	0.029	0.137	0.058
	ANT1	Back Side 15mm	0.066	0.208	0.090	0.274	0.156
LTE B38	ANT1	Front Side 15mm	0.079	0.108	0.029	0.187	0.108
	ANT1	Back Side 15mm	0.195	0.208	0.090	0.403	0.285
LTE B41	ANT1	Front Side 15mm	0.072	0.108	0.029	0.180	0.101
	ANT1	Back Side 15mm	0.169	0.208	0.090	0.377	0.259

Note:

1: The simultaneous transmission combinations of the three 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 0.444 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.3 Hotspot Simultaneous Transmission SAR Evaluation for WWAN Antenna with WLAN or Bluetooth

Band	Antenna	Position	Stand alone SAR			SUM SAR	
			1	2	3		
			WWAN	2.4GWIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)
GSM850	ANT1	Front Side 10mm	0.079	0.141	0.151	0.220	0.230
	ANT1	Back Side 10mm	0.206	0.267	0.081	0.473	0.287
	ANT1	Left Edge 10mm	0.071	0.063	0.033	0.134	0.104
	ANT1	Right Edge 10mm	0.047	0.026	0.015	0.073	0.062
	ANT1	Top Edge 10mm	0.021	0.405	0.153	0.426	0.174
	ANT1	Bottom Edge 10mm	0.071	0.016	0.010	0.087	0.081
GSM1900	ANT1	Front Side 10mm	0.144	0.141	0.151	0.285	0.295
	ANT1	Back Side 10mm	0.353	0.267	0.081	0.620	0.434
	ANT1	Left Edge 10mm	0.042	0.063	0.033	0.105	0.075
	ANT1	Right Edge 10mm	0.062	0.026	0.015	0.088	0.077
	ANT1	Top Edge 10mm	0.022	0.405	0.153	0.427	0.175
	ANT1	Bottom Edge 10mm	0.496	0.016	0.010	0.512	0.506
WCDMA B2	ANT1	Front Side 10mm	0.186	0.141	0.151	0.327	0.337
	ANT1	Back Side 10mm	0.370	0.267	0.081	0.637	0.451
	ANT1	Left Edge 10mm	0.058	0.063	0.033	0.121	0.091
	ANT1	Right Edge 10mm	0.092	0.026	0.015	0.118	0.107
	ANT1	Top Edge 10mm	0.028	0.405	0.153	0.433	0.181
	ANT1	Bottom Edge 10mm	0.712	0.016	0.010	**0.728**	0.722
WCDMA B4	ANT1	Front Side 10mm	0.034	0.141	0.151	0.175	0.185
	ANT1	Back Side 10mm	0.091	0.267	0.081	0.358	0.172
	ANT1	Left Edge 10mm	0.012	0.063	0.033	0.075	0.045
	ANT1	Right Edge 10mm	0.009	0.026	0.015	0.035	0.024
	ANT1	Top Edge 10mm	0.003	0.405	0.153	0.408	0.156
	ANT1	Bottom Edge 10mm	0.130	0.016	0.010	0.146	0.140
WCDMA B5	ANT1	Front Side 10mm	0.115	0.141	0.151	0.256	0.266
	ANT1	Back Side 10mm	0.200	0.267	0.081	0.467	0.281
	ANT1	Left Edge 10mm	0.106	0.063	0.033	0.169	0.139
	ANT1	Right Edge 10mm	0.080	0.026	0.015	0.106	0.095
	ANT1	Top Edge 10mm	0.024	0.405	0.153	0.429	0.177
	ANT1	Bottom Edge 10mm	0.128	0.016	0.010	0.144	0.138
LTE B2	ANT1	Front Side 10mm	0.169	0.141	0.151	0.310	0.320
	ANT1	Back Side 10mm	0.367	0.267	0.081	0.634	0.448
	ANT1	Left Edge 10mm	0.060	0.063	0.033	0.123	0.093
	ANT1	Right Edge 10mm	0.065	0.026	0.015	0.091	0.080
	ANT1	Top Edge 10mm	0.013	0.405	0.153	0.418	0.166
	ANT1	Bottom Edge 10mm	0.546	0.016	0.010	0.562	0.556

LTE B4	ANT1	Front Side 10mm	0.079	0.141	0.151	0.220	0.230
	ANT1	Back Side 10mm	0.209	0.267	0.081	0.476	0.290
	ANT1	Left Edge 10mm	0.032	0.063	0.033	0.095	0.065
	ANT1	Right Edge 10mm	0.024	0.026	0.015	0.050	0.039
	ANT1	Top Edge 10mm	0.035	0.405	0.153	0.440	0.188
	ANT1	Bottom Edge 10mm	0.313	0.016	0.010	0.329	0.323
LTE B5	ANT1	Front Side 10mm	0.145	0.141	0.151	0.286	0.296
	ANT1	Back Side 10mm	0.267	0.267	0.081	0.534	0.348
	ANT1	Left Edge 10mm	0.127	0.063	0.033	0.190	0.160
	ANT1	Right Edge 10mm	0.106	0.026	0.015	0.132	0.121
	ANT1	Top Edge 10mm	0.033	0.405	0.153	0.438	0.186
	ANT1	Bottom Edge 10mm	0.149	0.016	0.010	0.165	0.159
LTE B7	ANT1	Front Side 10mm	0.145	0.141	0.151	0.286	0.296
	ANT1	Back Side 10mm	0.202	0.267	0.081	0.469	0.283
	ANT1	Left Edge 10mm	0.055	0.063	0.033	0.118	0.088
	ANT1	Right Edge 10mm	0.095	0.026	0.015	0.121	0.110
	ANT1	Top Edge 10mm	0.041	0.405	0.153	0.446	0.194
	ANT1	Bottom Edge 10mm	0.294	0.016	0.010	0.310	0.304
LTE B13	ANT1	Front Side 10mm	0.054	0.141	0.151	0.195	0.205
	ANT1	Back Side 10mm	0.077	0.267	0.081	0.344	0.158
	ANT1	Left Edge 10mm	0.040	0.063	0.033	0.103	0.073
	ANT1	Right Edge 10mm	0.019	0.026	0.015	0.045	0.034
	ANT1	Top Edge 10mm	0.012	0.405	0.153	0.417	0.165
	ANT1	Bottom Edge 10mm	0.027	0.016	0.010	0.043	0.037
LTE B66	ANT1	Front Side 10mm	0.070	0.141	0.151	0.211	0.221
	ANT1	Back Side 10mm	0.148	0.267	0.081	0.415	0.229
	ANT1	Left Edge 10mm	0.024	0.063	0.033	0.087	0.057
	ANT1	Right Edge 10mm	0.017	0.026	0.015	0.043	0.032
	ANT1	Top Edge 10mm	0.008	0.405	0.153	0.413	0.161
	ANT1	Bottom Edge 10mm	0.251	0.016	0.010	0.267	0.261
LTE B38	ANT1	Front Side 10mm	0.144	0.141	0.151	0.285	0.295
	ANT1	Back Side 10mm	0.326	0.267	0.081	0.593	0.407
	ANT1	Left Edge 10mm	0.058	0.063	0.033	0.121	0.091
	ANT1	Right Edge 10mm	0.049	0.026	0.015	0.075	0.064
	ANT1	Top Edge 10mm	0.026	0.405	0.153	0.431	0.179
	ANT1	Bottom Edge 10mm	0.438	0.016	0.010	0.454	0.448
LTE B41	ANT1	Front Side 10mm	0.146	0.141	0.151	0.287	0.297
	ANT1	Back Side 10mm	0.376	0.267	0.081	0.643	0.457
	ANT1	Left Edge 10mm	0.069	0.063	0.033	0.132	0.102
	ANT1	Right Edge 10mm	0.072	0.026	0.015	0.098	0.087
	ANT1	Top Edge 10mm	0.014	0.405	0.153	0.419	0.167
	ANT1	Bottom Edge 10mm	0.421	0.016	0.010	0.437	0.431

Note:

1: The simultaneous transmission combinations of the three 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 0.728 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY5	52.8.8.1222	N/A	N/A
750MHz Validation Dipole	Speag	D750V3	SN: 1201	2020/11/11	2023/11/10
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2021/05/17	2024/05/16
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2021/05/17	2024/05/16
1900MHz Validation Dipole	Speag	D1900V2	SN: 5d193	2021/05/20	2024/05/19
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2021/05/19	2024/05/18
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2021/05/19	2024/05/18
E-Field Probe	Speag	EX3DV4	SN: 3717	2021/06/07	2022/06/06
Data Acquisition Electronics	Speag	DAE4	SN: 1226	2021/05/17	2022/05/16
Signal Generator	R&S	SMB100A	177746	2021/08/24	2022/08/23
Power Meter	R&S	NRVD-B2	7250BJ-0112/2011	2021/09/08	2022/09/07
Power Sensor	R&S	NRV-Z4	100381	2021/09/08	2022/09/07
Wireless Communication Test Set	Anritsu	MT8820C	6201502974	2022/01/04	2023/01/03
Network Analyzer	Agilent	E5071C	MY46103472	2021/12/29	2022/12/28
Thermometer	Elitech	RC-4HC	EF720B004820	2021/12/01	2022/11/30
Power Amplifier	SATIMO	6552B	22374	N/A	N/A
Dielectric Probe Kit	SATIMO	SCLMP	SN 25/13 OCPG56	N/A	N/A
Phantom1	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 an SCLMP Dielectric Probe Kit.

Head Liquid

Date	Liquid Type	Fre. (MHz)	Temp. (℃)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ε)	Target Conductivity (σ) (S/m)	Target Permittivity (ε)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2022.04.20	Head	750	21.5	0.91	41.94	0.89	41.94	2.25	0.00
2022.04.21	Head	835	21.6	0.90	41.85	0.90	41.50	0.00	0.84
2022.04.22	Head	1750	21.5	1.38	40.13	1.37	40.08	0.73	0.12
2022.04.23	Head	1900	21.9	1.39	39.93	1.40	40.00	-0.71	-0.18
2022.04.24	Head	2450	21.8	1.80	39.54	1.80	39.20	0.00	0.87
2022.04.25	Head	2600	21.1	1.98	38.62	1.96	39.01	1.02	-1.00
Note: The tolerance limit of Conductivity and Permittivity is± 5%.									

ANNEX B SYSTEM CHECK RESULT

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

Head liquid 1g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2022.04.20	Head	750	100	0.815	8.15	8.29	-1.69
2022.04.21	Head	835	100	0.970	9.70	9.76	-0.61
2022.04.22	Head	1750	100	3.670	36.70	36.70	0.00
2022.04.23	Head	1900	100	4.080	40.80	40.30	1.24
2022.04.24	Head	2450	100	5.420	54.20	53.00	2.26
2022.04.25	Head	2600	100	5.570	55.70	56.80	-1.94
Note: The tolerance limit of System validation ±10%.							

Head liquid 10g

Date	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2022.04.23	1900	100	2.050	20.50	20.40	0.49
Note: The tolerance limit of System validation ±10%.						

System Performance Check Data (750MHz Head)

Date: 2022.04.20

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

Medium parameters used (extrapolated): f = 750 MHz; σ = 0.911 S/m; ε_r = 41.94; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(9.94, 9.94, 9.94); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 750 100mW/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.847 W/kg

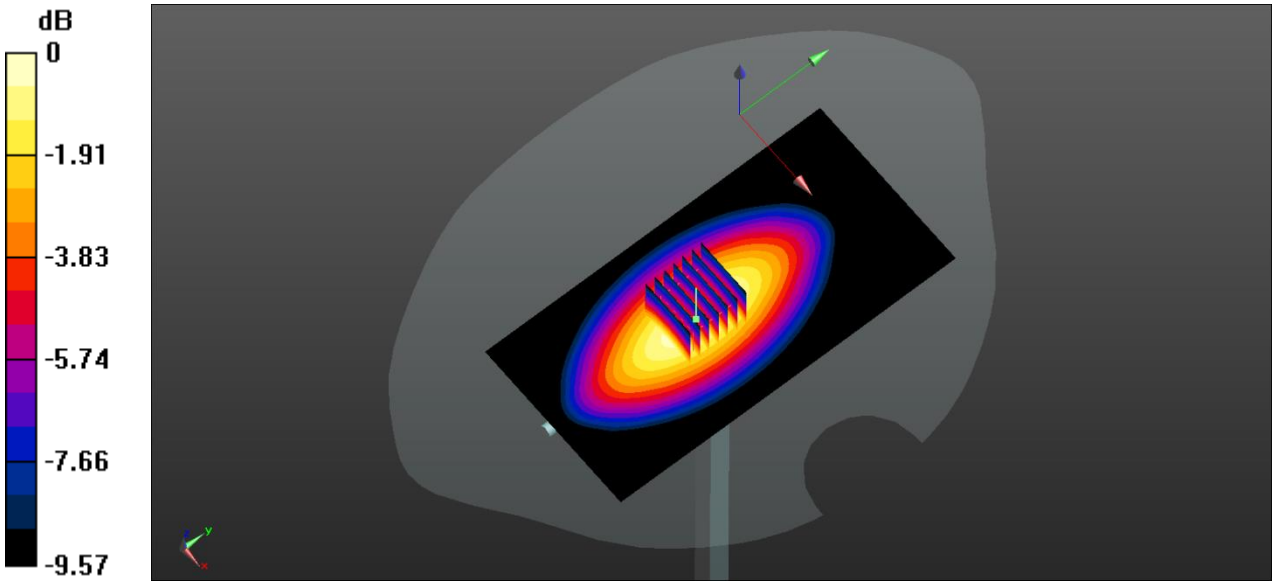
CW 750 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 38.63 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.815 W/kg; SAR(10 g) = 0.527 W/kg

Maximum value of SAR (measured) = 0.85 W/kg



0 dB = 0.85 W/kg

System Performance Check Data (835MHz Head)

Date: 2022.04.21

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

Medium parameters used: f = 835 MHz; σ = 0.896 S/m; ε_r = 41.846; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.07 W/kg

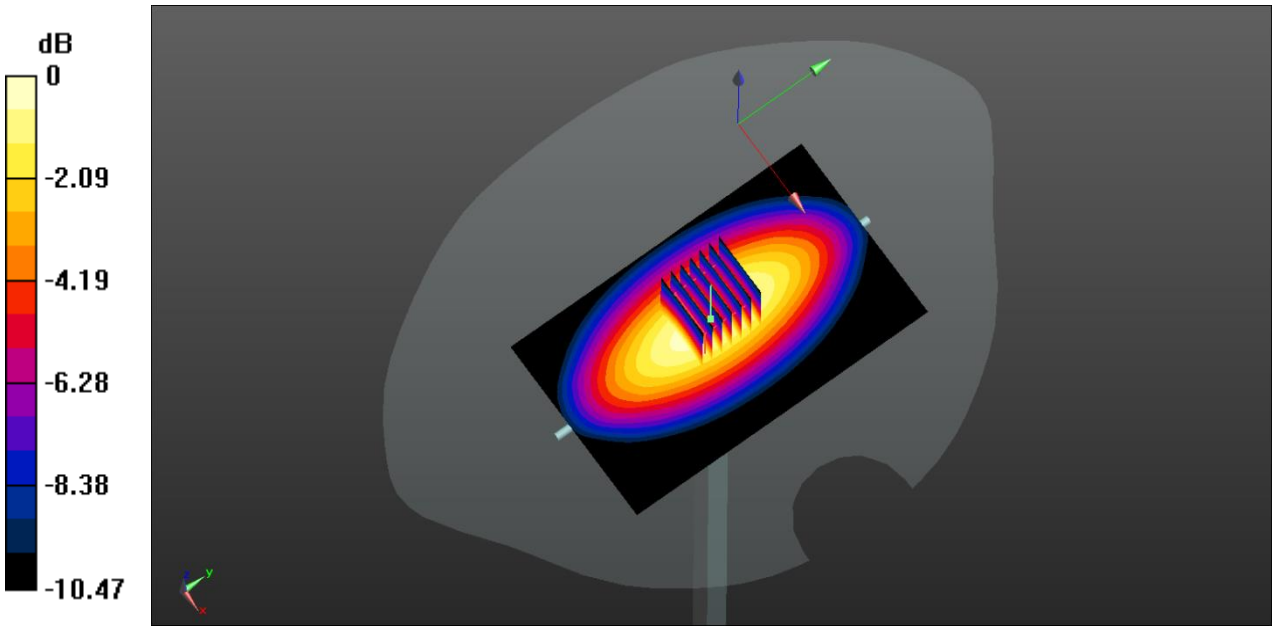
CW 835 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 38.24 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.97 W/kg; SAR(10 g) = 0.642 W/kg

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



0 dB = 1.13 W/kg

System Performance Check Data (1750MHz Head)

Date: 2022.04.22

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

Medium parameters used (interpolated): f = 1750 MHz; σ = 1.383 S/m; εr = 40.128; ρ = 1000 kg/m3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW1750 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 4.37 W/kg

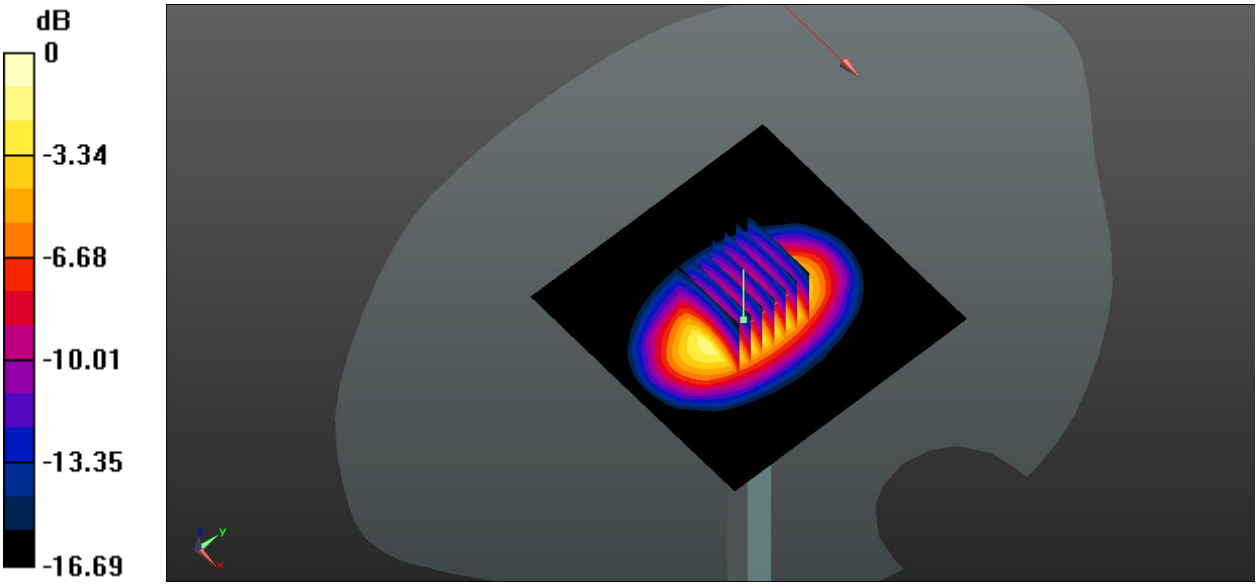
CW1750 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.81 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 7.04 W/kg

SAR(1 g) = 3.67 W/kg; SAR(10 g) = 1.94 W/kg

Maximum value of SAR (measured) = 4.11 W/kg



0 dB = 4.11 W/kg

System Performance Check Data (1900MHz Head)

Date: 2022.04.23

Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ =1.394 S/m; ε_r = 39.932; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900 100mw/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 4.68 W/kg

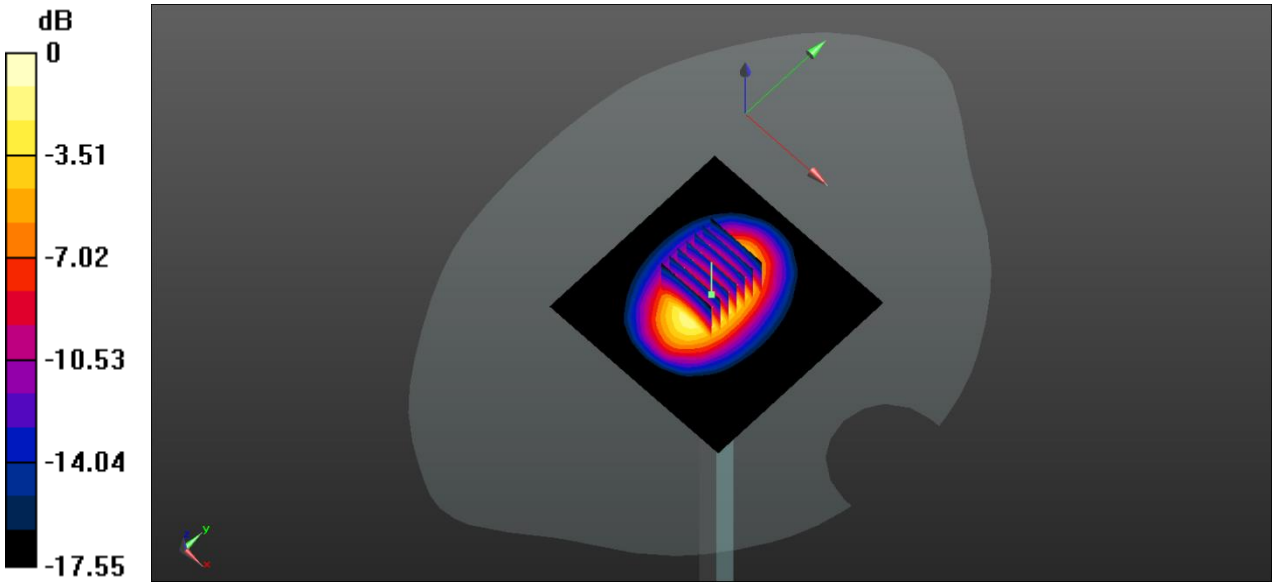
CW 1900 100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.27V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 7.23 W/kg

SAR(1 g) = 4.08 W/kg; SAR(10 g) = 2.05 W/kg

Maximum value of SAR (measured) = 4.85 W/kg



0 dB = 4.85 W/kg

System Performance Check Data (2450MHz Head)

Date: 2022.04.24

Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.802 S/m; ε_r = 39.542; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.15, 7.15, 7.15); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2450 100mw/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.32 W/kg

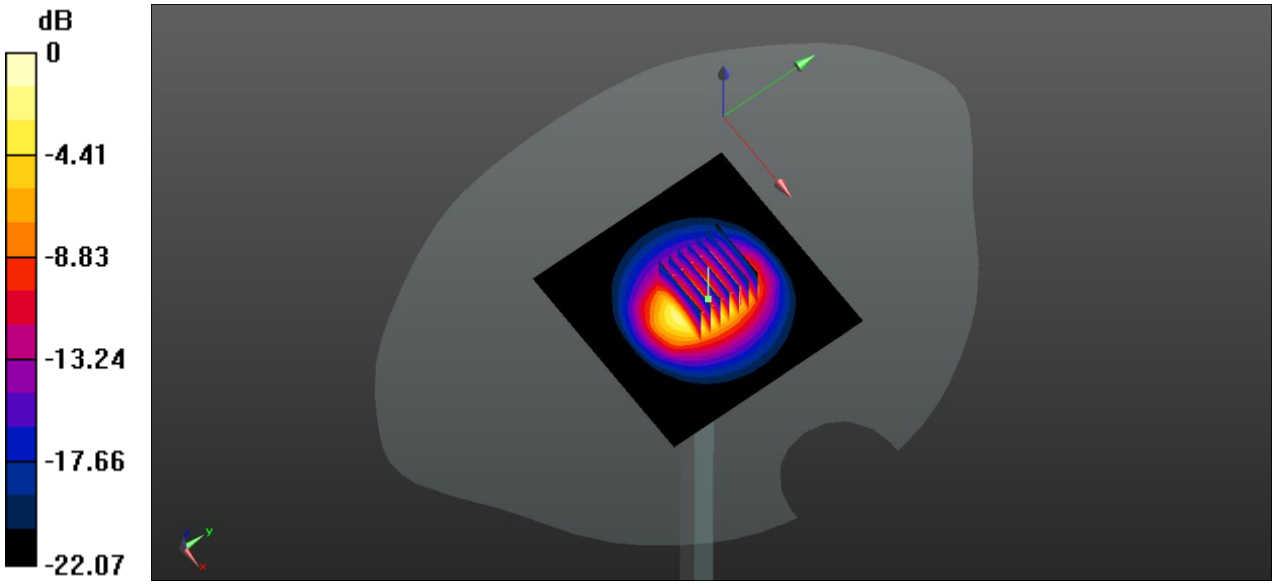
CW 2450 100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 58.13 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 11.8 W/kg

SAR(1 g) = 5.42 W/kg; SAR(10 g) = 2.46 W/kg

Maximum value of SAR (measured) = 6.25 W/kg



0 dB = 6.25 W/kg

System Performance Check Data (2600MHz Head)

Date: 2022.04.25

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

Medium parameters used (extrapolated): f = 2600 MHz; σ = 1.975 S/m; ε_r = 38.618; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2600 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.42 W/kg

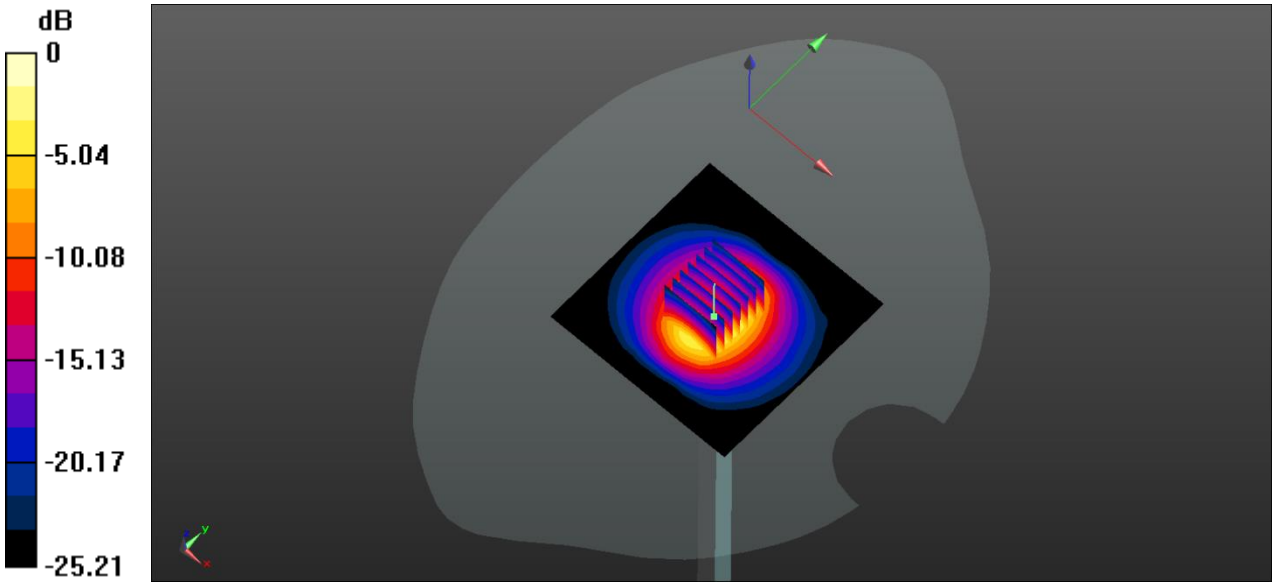
CW 2600 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.45 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 12.7 W/kg

SAR(1 g) = 5.57 W/kg; SAR(10 g) = 2.44 W/kg

Maximum value of SAR (measured) = 6.41 W/kg



0 dB = 6.41 W/kg

ANNEX C TEST DATA

1-Left Head with Cheek on High Channel in GPRS850 4Slots mode with Antenna 1

Date: 2022.04.21

3Communication System Band: GPRS850; Frequency: 848.8 MHz;Duty Cycle: 1:2.08

Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.918 S/m; ε_r = 41.451; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch251/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.102 W/kg

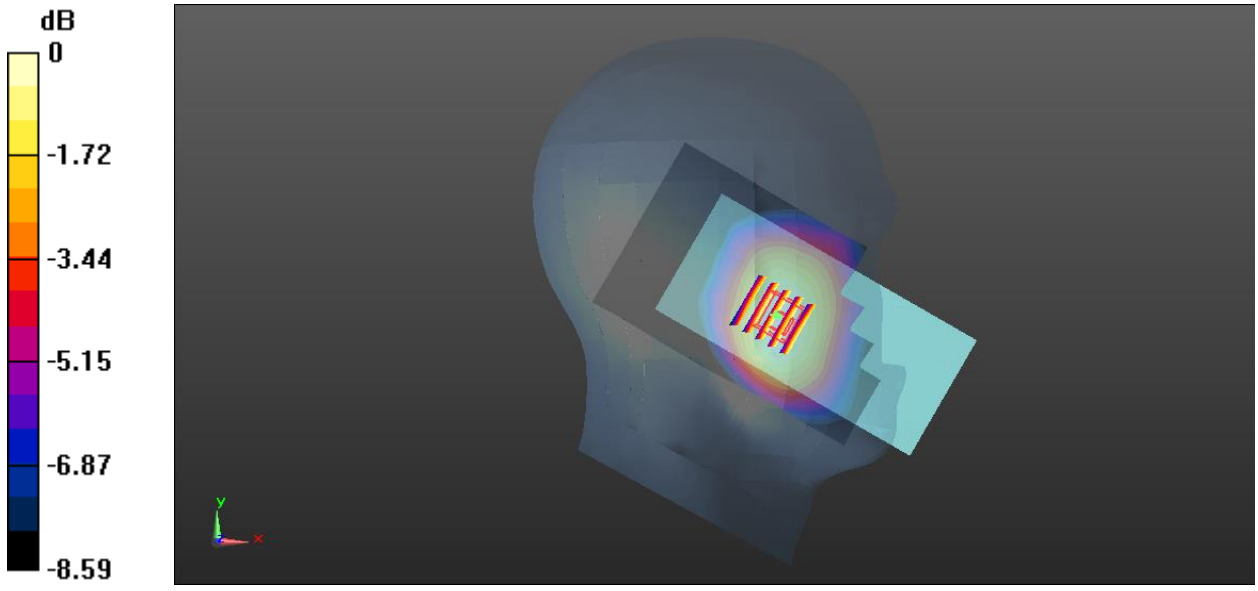
Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.500 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.119 W/kg

SAR(1 g) = 0.099 W/kg; SAR(10 g) = 0.078 W/kg

Maximum value of SAR (measured) = 0.103 W/kg



0 dB = 0.103 W/kg

2-Body Plane with Back Side 15mm on High Channel in GPRS850 4Slots mode with Antenna.1

Date: 2022.04.21

Communication System Band:GPRS850; Frequency: 848.4 MHz;Duty Cycle: 1:2.08

Medium parameters used (interpolated): f = 848.4MHz; σ = 0.918 S/m; ε_r = 41.451; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch251/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0991 W/kg

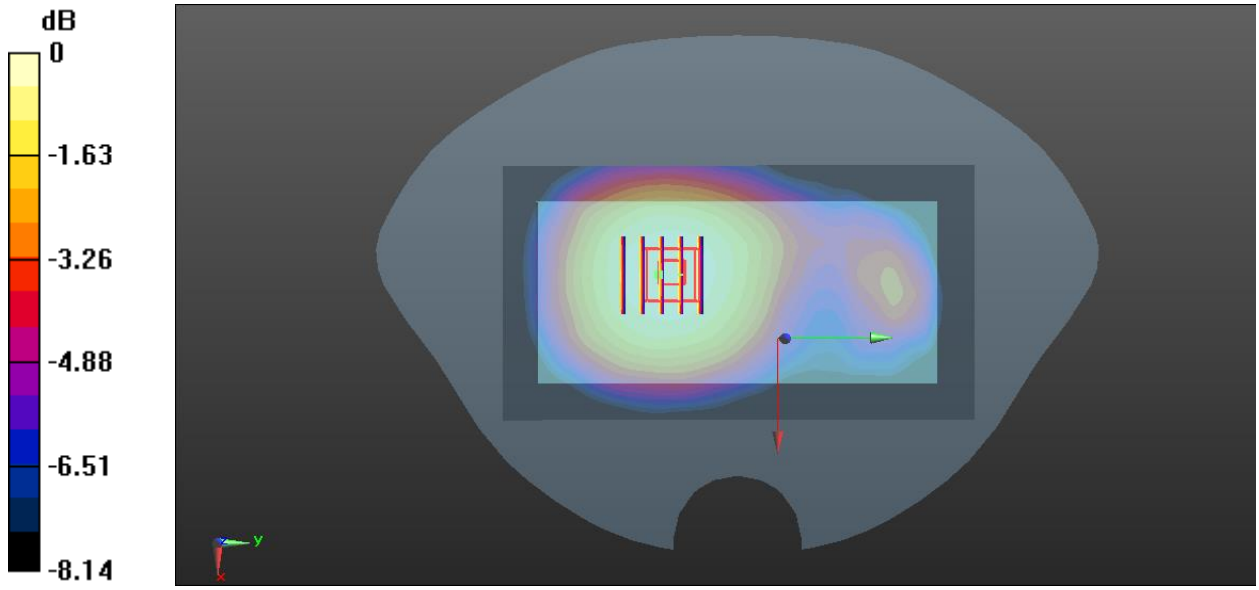
Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.909 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.118 W/kg

SAR(1 g) = 0.094 W/kg; SAR(10 g) = 0.072 W/kg

Maximum value of SAR (measured) = 0.0985 W/kg



0 dB = 0.0985 W/kg

3-Body Plane with Back 10mm on High Channel in GPRS 850 4Slots mode with Antenna.1

Date: 2022.04.21

Communication System Band: GPRS850; Frequency: 848.8 MHz;Duty Cycle: 1:2.08

Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.918 S/m; ε_r = 41.451; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch251/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.193 W/kg

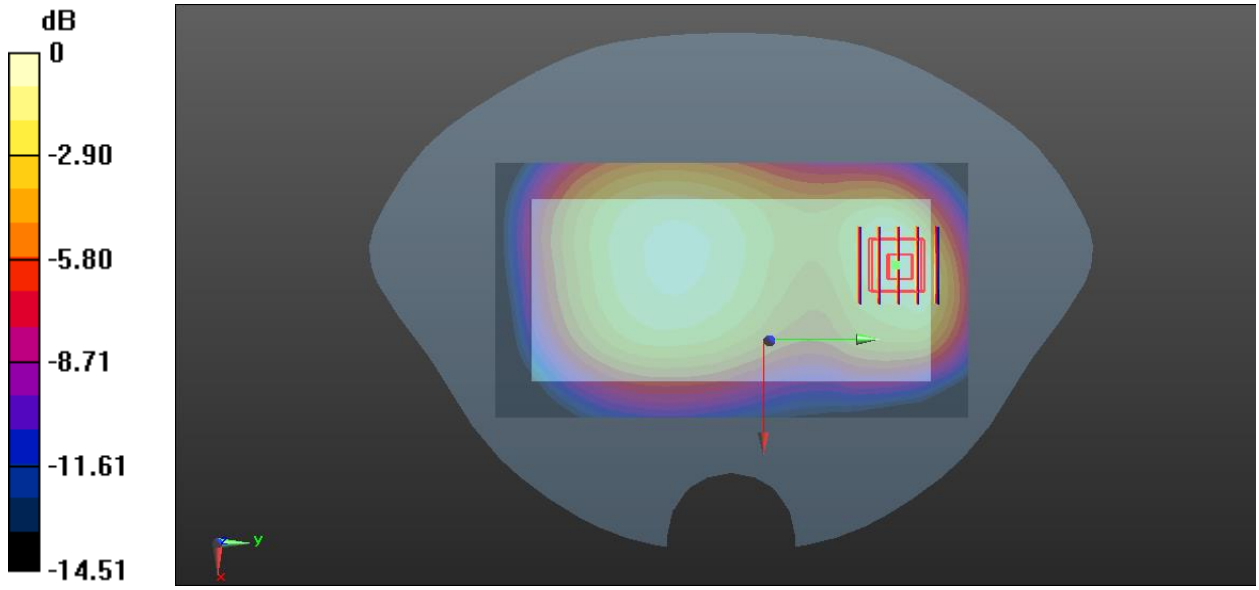
Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.81 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.298 W/kg

SAR(1 g) = 0.179 W/kg; SAR(10 g) = 0.108 W/kg

Maximum value of SAR (measured) = 0.192 W/kg



0 dB = 0.192 W/kg

4-Right Head with Cheek on Middle Channel in GPRS1900 4Slots mode with Antenna 1

Date: 2022.04.23

Communication System Band: GPRS1900; Frequency: 1880 MHz;Duty Cycle: 1:2.08

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Right Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch661/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0418 W/kg

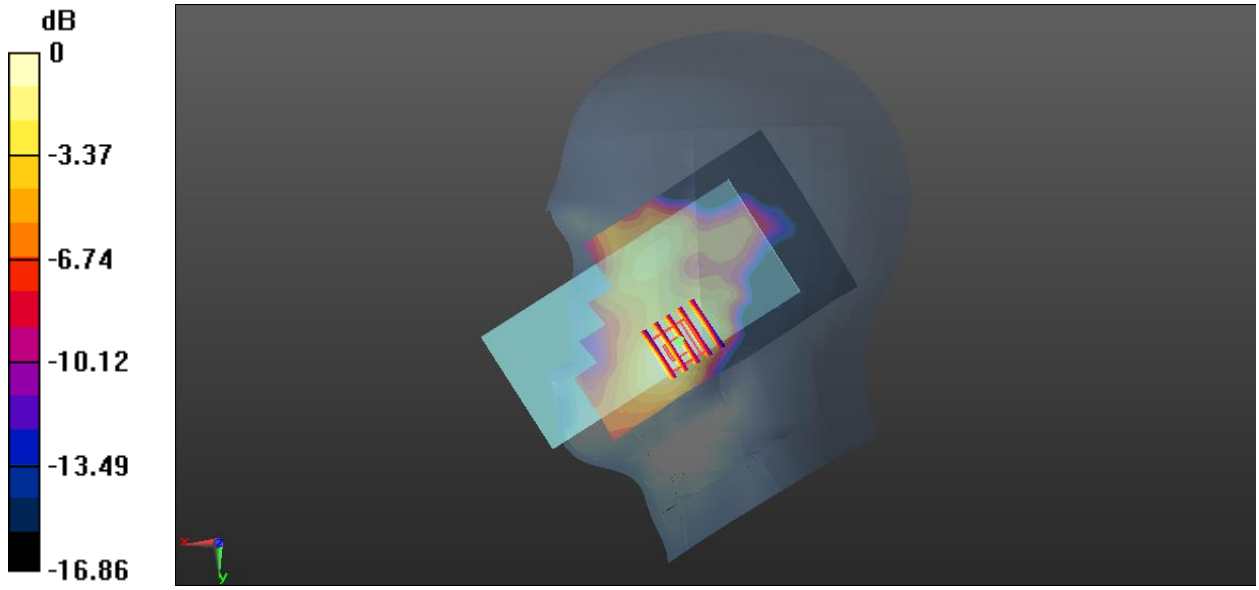
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.594 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.0620 W/kg

SAR(1 g) = 0.041 W/kg; SAR(10 g) = 0.025 W/kg

Maximum value of SAR (measured) = 0.0437 W/kg



0 dB = 0.0437 W/kg

5-Body Plane with Back Side 15mm on Middle Channel in GPRS1900 4Slots mode with Antenna.1

Date: 2022.04.23

Communication System Band: GPRS1900; Frequency: 1880 MHz;Duty Cycle: 1:2.08

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch661/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.266 W/kg

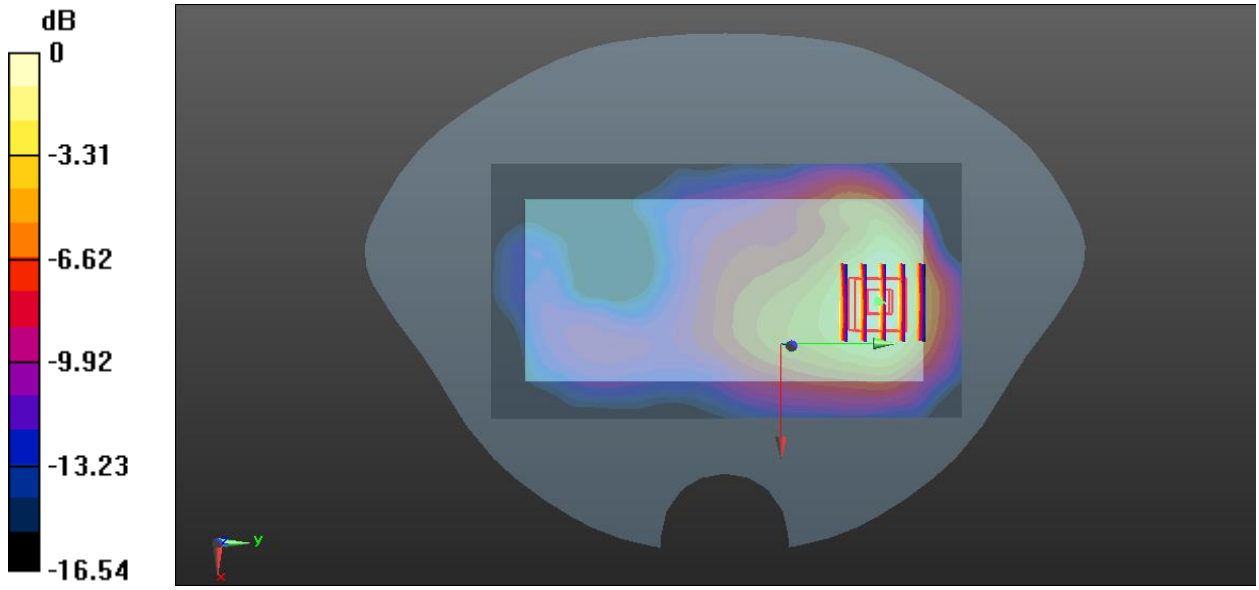
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.084 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.381 W/kg

SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.147 W/kg

Maximum value of SAR (measured) = 0.266 W/kg



0 dB = 0.266 W/kg

6-Body Plane with Bottom Edge 10mm on Middle Channel in GPRS1900 4Slots mode with Antenna.1

Date: 2022.04.23

Communication System Band: GPRS1900; Frequency: 1880 MHz;Duty Cycle: 1:2.08

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch661/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.543 W/kg

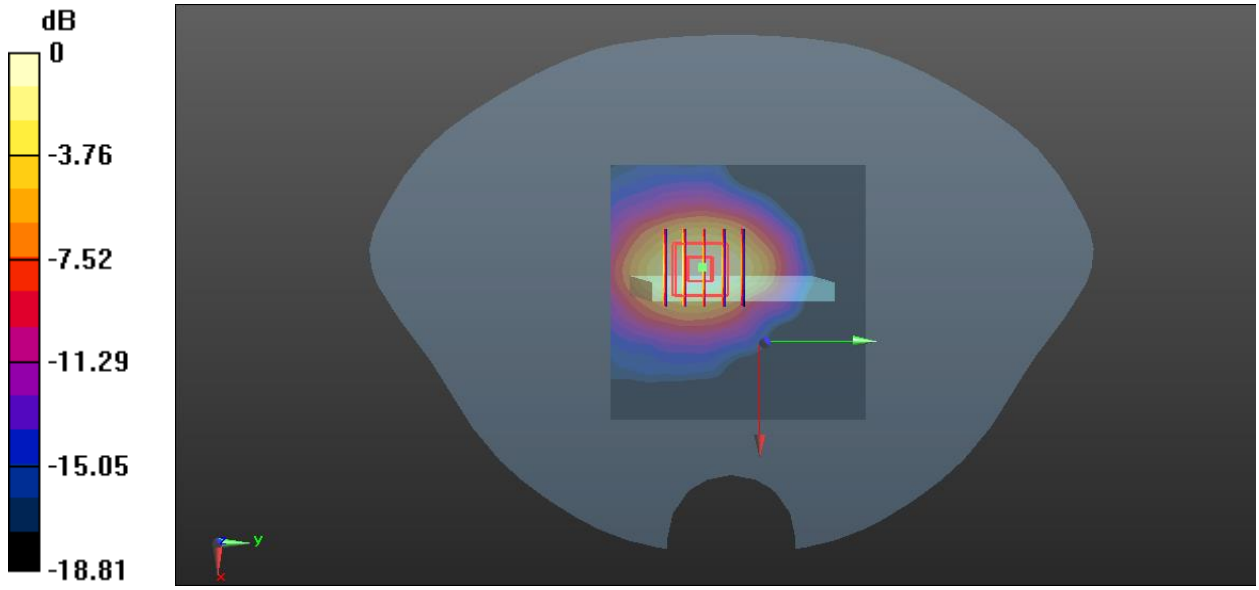
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.95 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.820 W/kg

SAR(1 g) = 0.488 W/kg; SAR(10 g) = 0.268 W/kg

Maximum value of SAR (measured) = 0.545 W/kg



0 dB = 0.545 W/kg

7-Right Head with Cheek on Middle Channel in WCDMA Band2 mode with Antenna 1

Date: 2022.04.23

Communication System Band: II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Right Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9400/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0878 W/kg

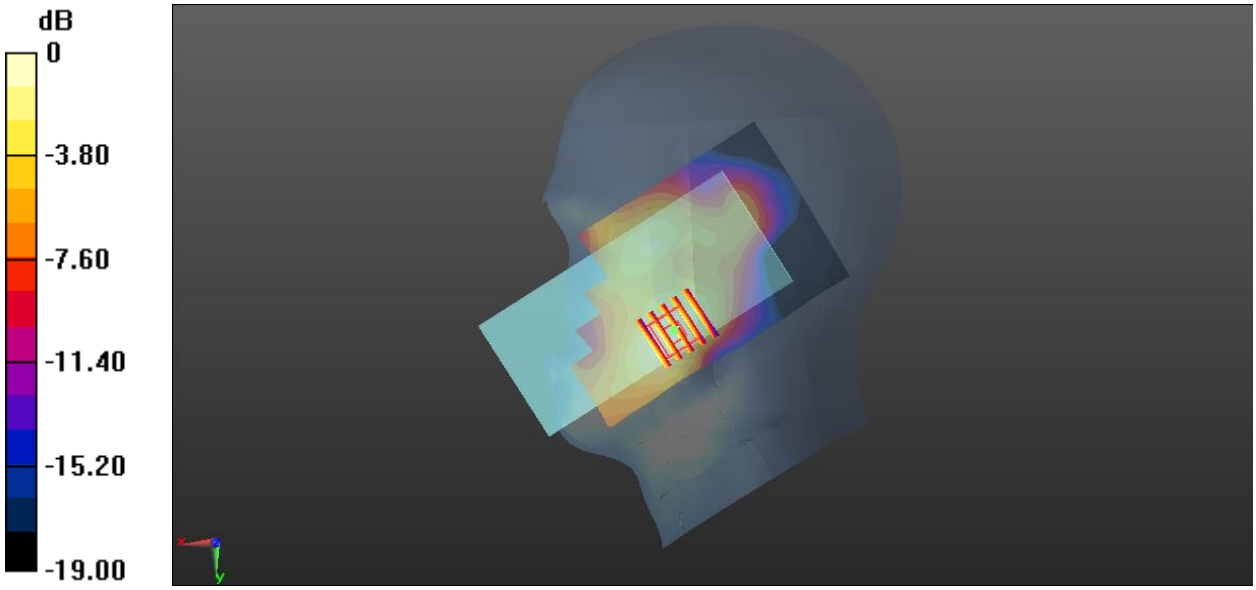
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.839 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.129 W/kg

SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.052 W/kg

Maximum value of SAR (measured) = 0.0902 W/kg



0 dB = 0.0902 W/kg

8-Body Plane with Back Side 15mm on Middle Channel in WCDMA Band2 mode with Antenna.1

Date: 2022.04.23

Communication System Band: II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9400/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.216 W/kg

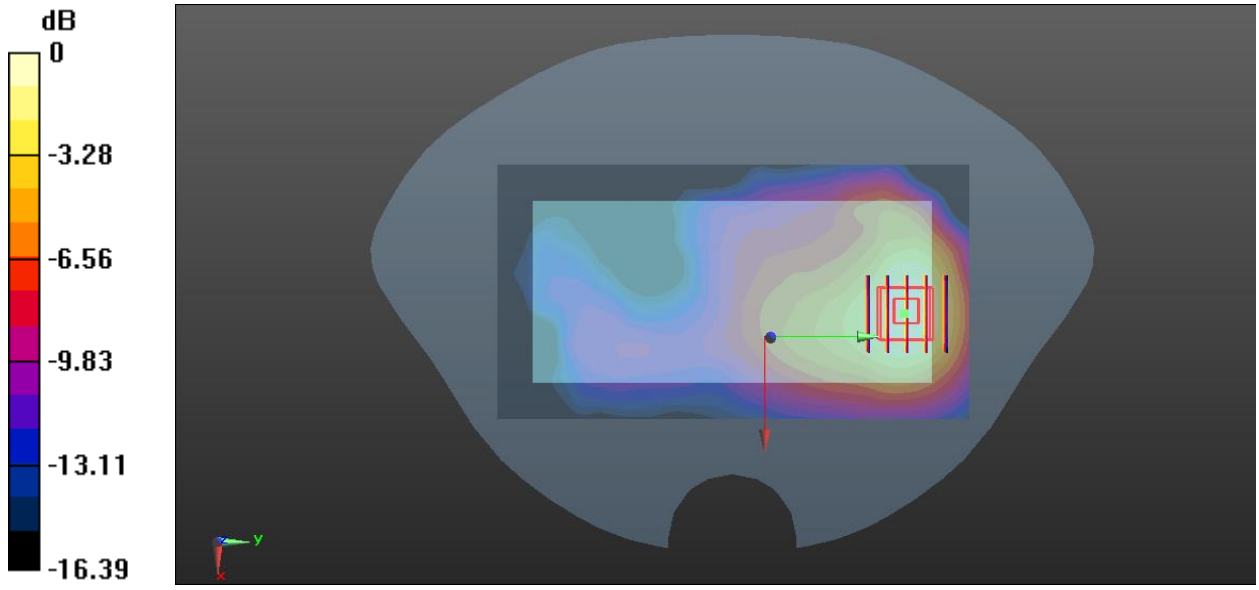
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.667 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.315 W/kg

SAR(1 g) = 0.204 W/kg; SAR(10 g) = 0.123 W/kg

Maximum value of SAR (measured) = 0.221 W/kg



0 dB = 0.221 W/kg

9-Body Plane with Bottom Edge 10mm on Middle Channel in WCDMA Band2 mode with Antenna.1

Date: 2022.04.23

Communication System Band: II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9400/Area Scan (51x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.700 W/kg

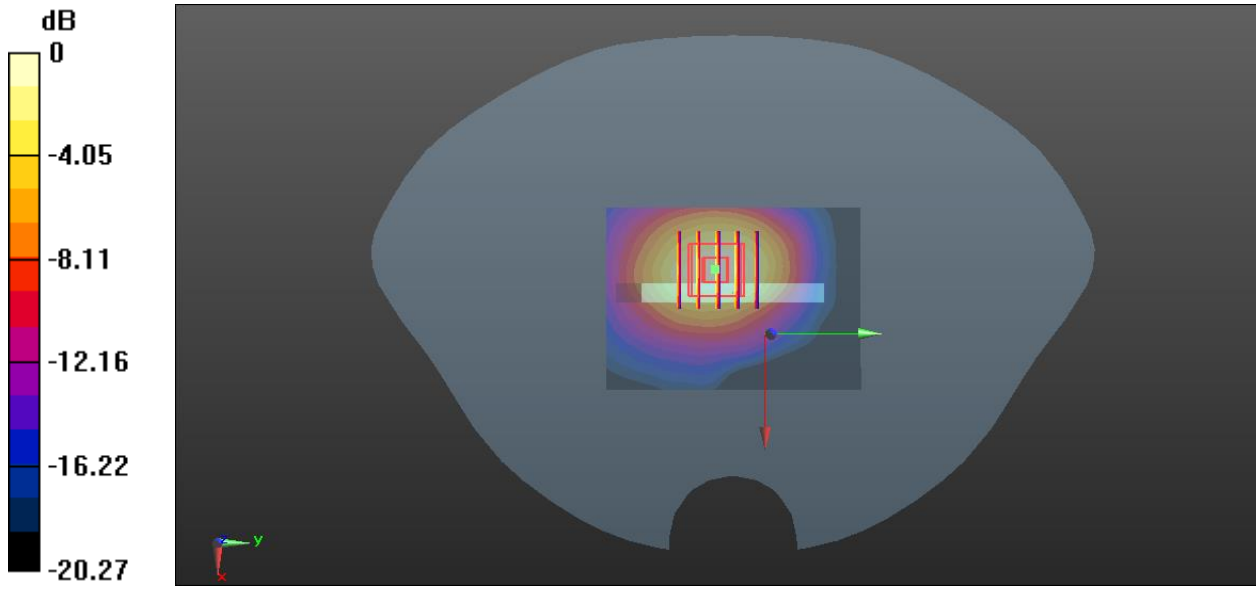
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.89 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.629 W/kg; SAR(10 g) = 0.347 W/kg

Maximum value of SAR (measured) = 0.700 W/kg



0 dB = 0.700 W/kg

10-Body Plane with Bottem Edge 0mm on Middle Channel in WCDMA Band2 mode with Antenna 1

Date: 2022.04.23

Communication System Band: II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9400/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.71 W/kg

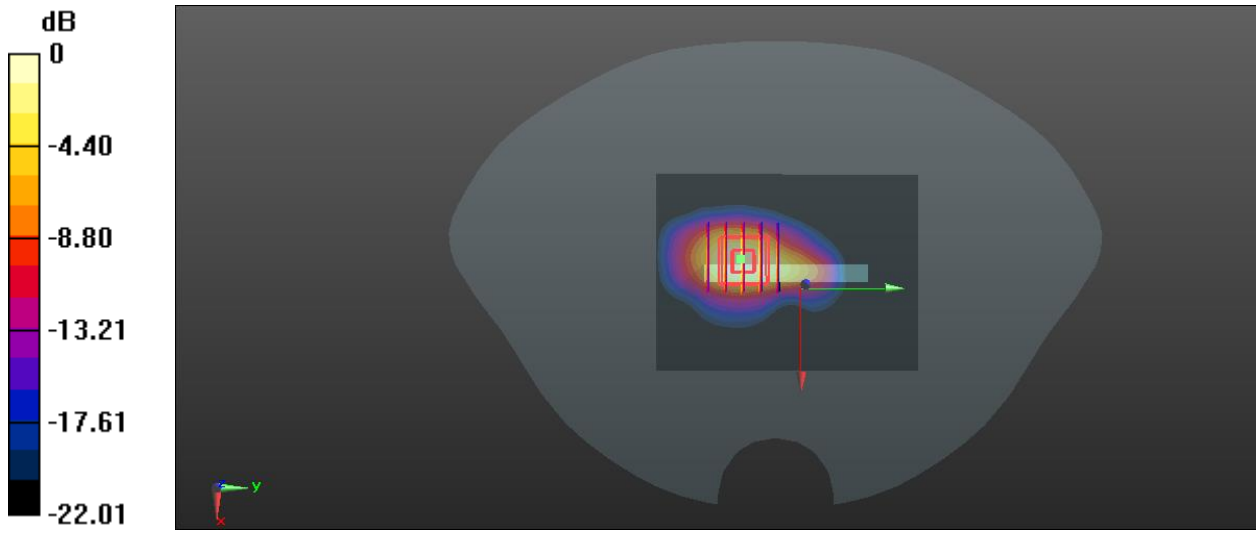
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 33.35 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 5.28 W/kg

SAR(1 g) = 2.58 W/kg; SAR(10 g) = 1.18 W/kg

Maximum value of SAR (measured) = 3.00 W/kg



0 dB = 3.00 W/kg

11-Right Head with Cheek on High Channel in WCDMA Band4 mode with Antenna 1

Date: 2022.04.22

Communication System Band: IV; Frequency: 1752.6 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.386 S/m; ε_r = 40.072; ρ = 1000 kg/m^3

Phantom section: Right Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1513/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.109 W/kg

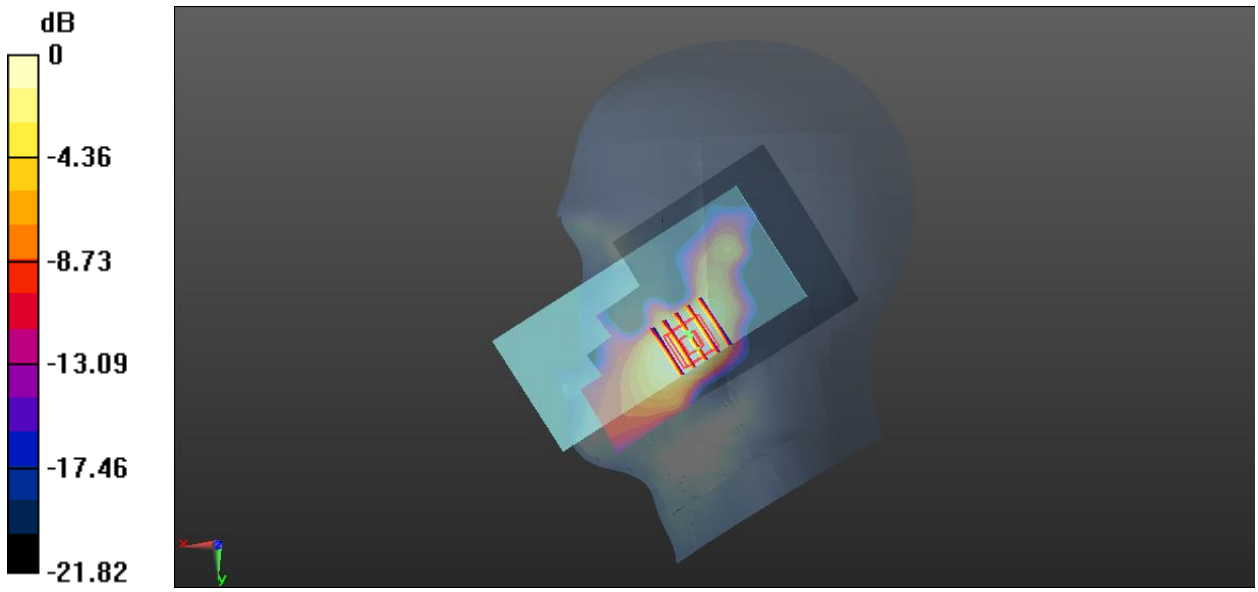
Ch1513/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.279 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.134 W/kg

SAR(1 g) = 0.087 W/kg; SAR(10 g) = 0.051 W/kg

Maximum value of SAR (measured) = 0.0906 W/kg



0 dB = 0.0906 W/kg

12-Body Plane with Back Side 15mm on Middle Channel in WCDMA Band4 mode with Antenna.1

Date: 2022.04.22

Communication System Band: IV; Frequency: 1732.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.368 S/m; ε_r = 40.401; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1412/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0833 W/kg

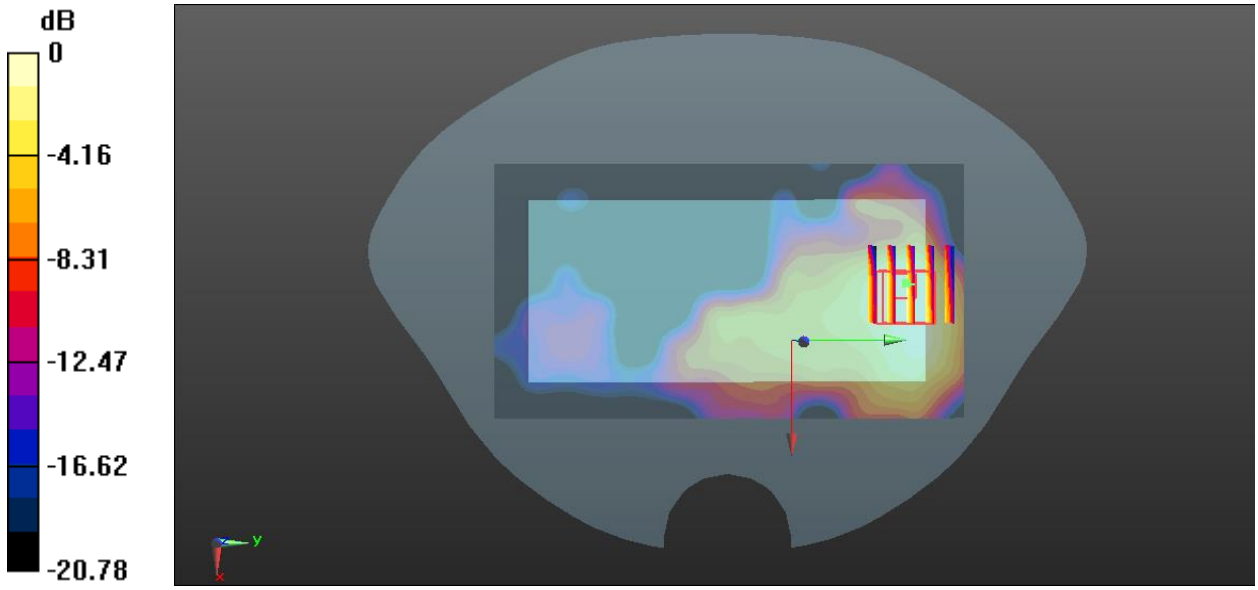
Ch1412/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.908 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.117 W/kg

SAR(1 g) = 0.072 W/kg; SAR(10 g) = 0.043 W/kg

Maximum value of SAR (measured) = 0.0782 W/kg



0 dB = 0.0782 W/kg

13-Body Plane with Bottom Edge 10mm on Middle Channel in WCDMA Band4 mode with Antenna.1

Date: 2022.04.22

Communication System Band: IV; Frequency: 1732.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.368 S/m; ε_r = 40.401; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1412/Area Scan (51x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.166 W/kg

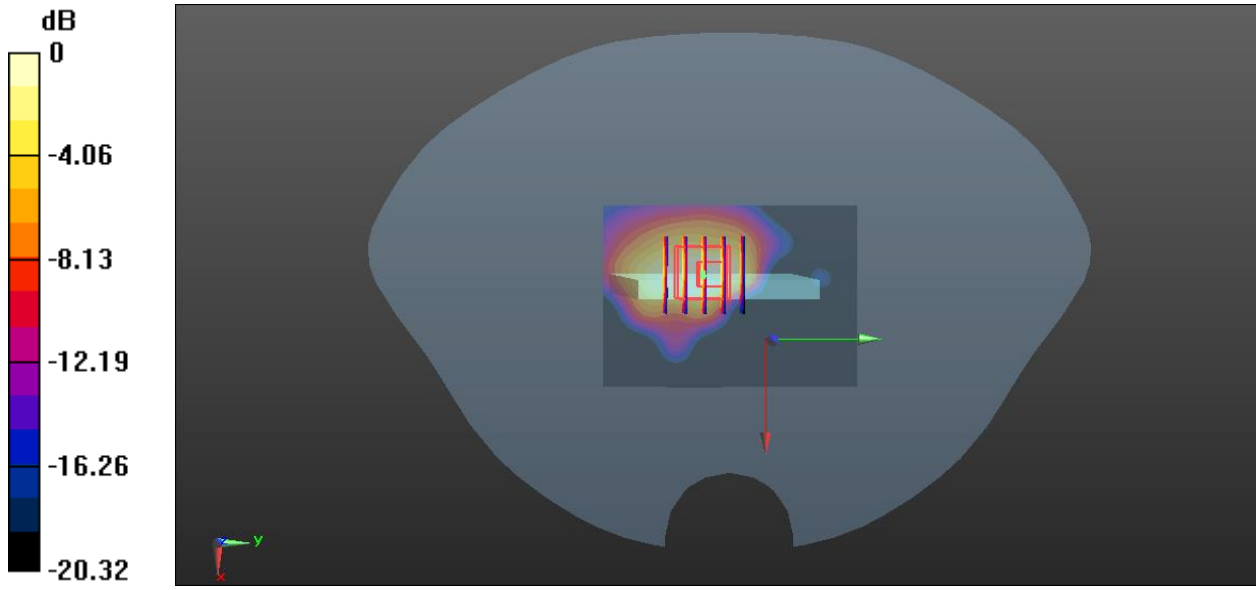
Ch1412/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.601 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.115 W/kg; SAR(10 g) = 0.059 W/kg

Maximum value of SAR (measured) = 0.127 W/kg



0 dB = 0.127 W/kg

14-Left Head with Cheek on Middle Channel in WCDMA Band5 mode with Antenna 1

Date: 2022.04.21

Communication System Band: V; Frequency: 836.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.898 S/m; ε_r = 41.794; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch4182/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.155 W/kg

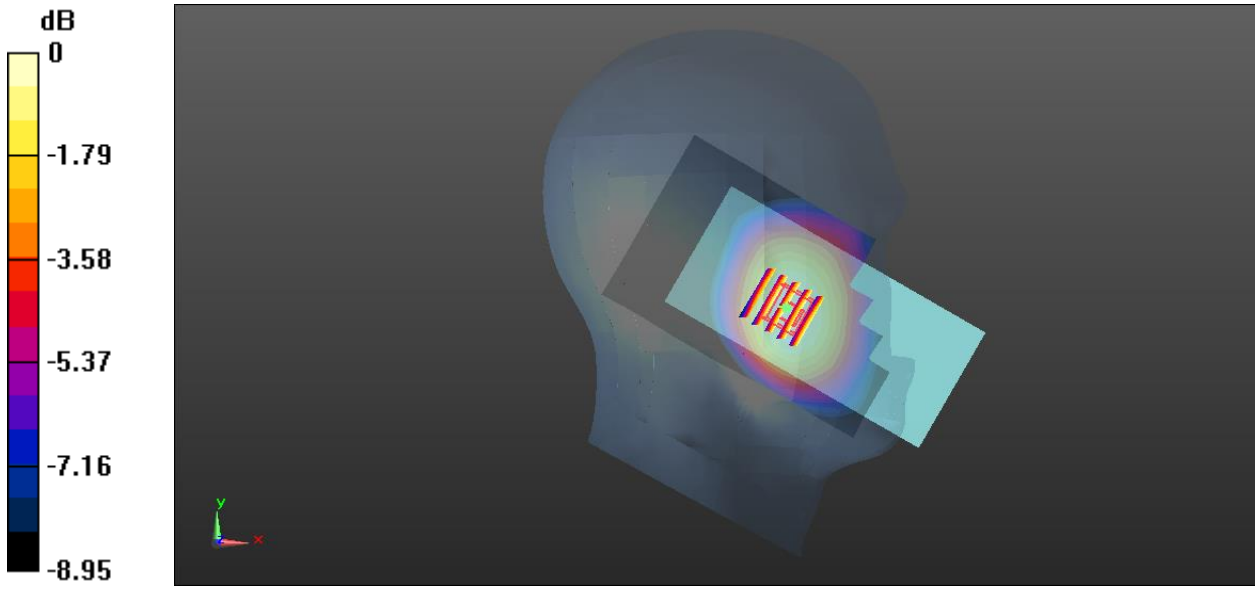
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.739 V/m; Power Drift = -0.16dB

Peak SAR (extrapolated) = 0.179 W/kg

SAR(1 g) = 0.148 W/kg; SAR(10 g) = 0.115 W/kg

Maximum value of SAR (measured) = 0.154 W/kg



0 dB = 0.154 W/kg

15-Body Plane with Back Side 15mm on Middle Channel in WCDMA Band5 mode with Antenna.1

Date: 2022.04.21

Communication System Band: V; Frequency: 836.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.898 S/m; ε_r = 41.794; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch4182/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.135 W/kg

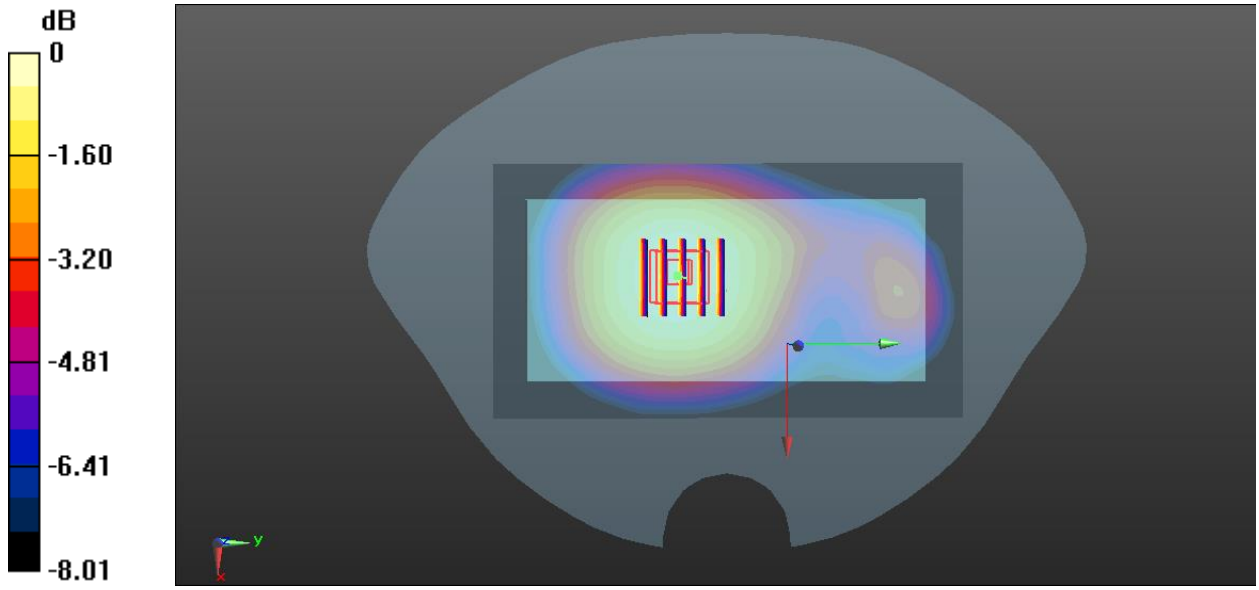
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.11 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.163 W/kg

SAR(1 g) = 0.130 W/kg; SAR(10 g) = 0.099 W/kg

Maximum value of SAR (measured) = 0.136 W/kg



0 dB = 0.136 W/kg

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

Date: 2022.04.21

Communication System Band: V; Frequency: 836.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.898 S/m; ε_r = 41.794; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch4182/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.169 W/kg

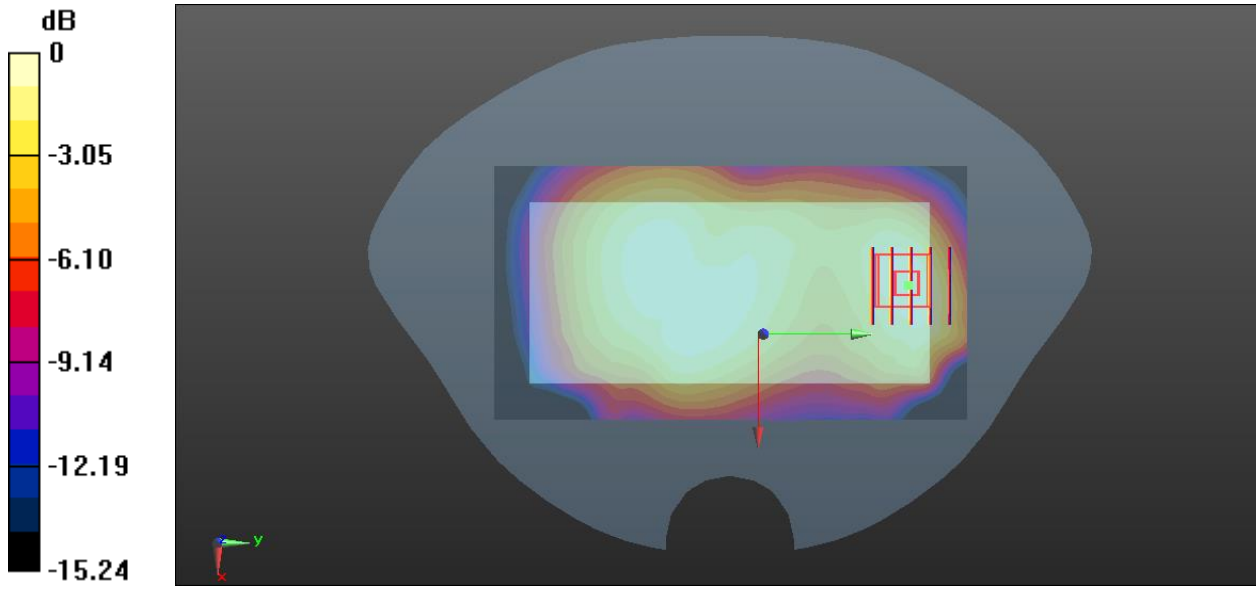
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.14 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.262 W/kg

SAR(1 g) = 0.160 W/kg; SAR(10 g) = 0.097 W/kg

Maximum value of SAR (measured) = 0.174 W/kg



0 dB = 0.174 W/kg

17-Right Head with Cheek on Middle Channel in LTE Band2 mode with Antenna.1

Date: 2022.04.23

Communication System Band:Band 2; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Right Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch18900/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.130 W/kg

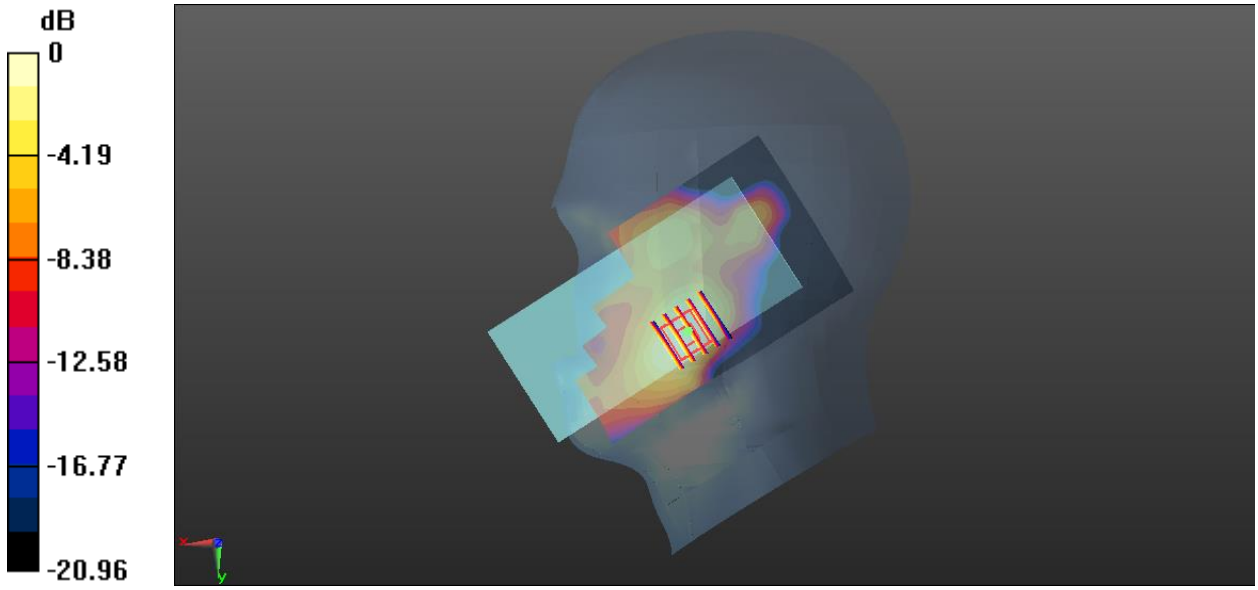
Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.830 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.176 W/kg

SAR(1 g) = 0.111 W/kg; SAR(10 g) = 0.064 W/kg

Maximum value of SAR (measured) = 0.120 W/kg



0 dB = 0.120 W/kg

18-Body Plane with Back 15mm on Middle Channel in LTE Band2 mode with Antenna.1

Date: 2022.04.23

Communication System Band: Band 2; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch18900/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.299 W/kg

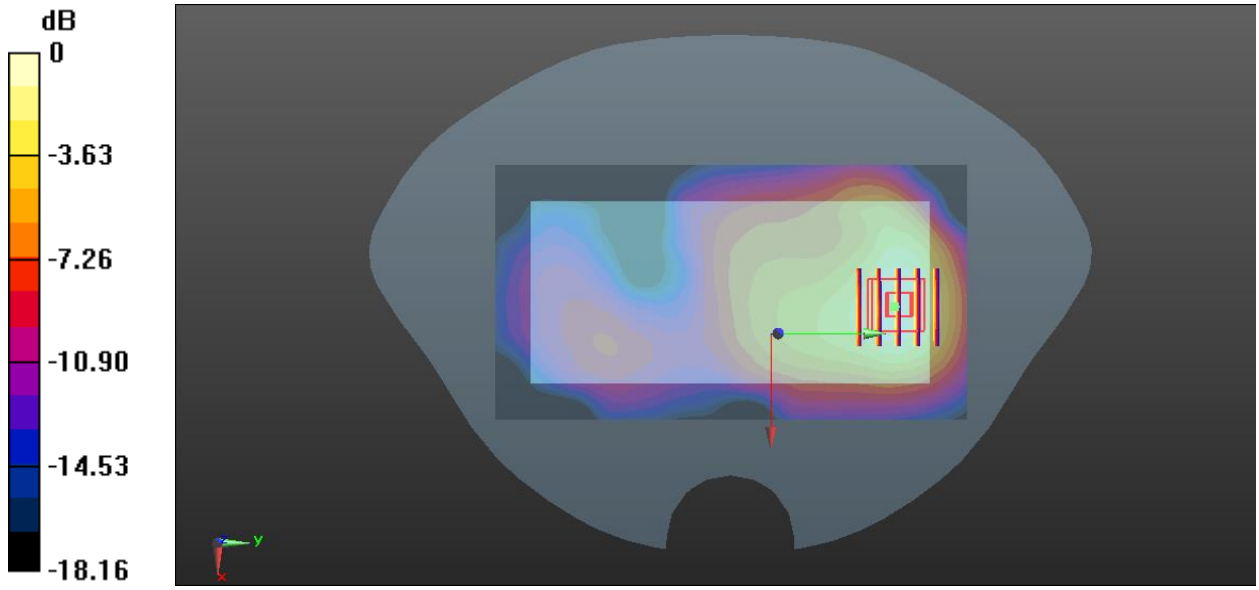
Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.717 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.438 W/kg

SAR(1 g) = 0.276 W/kg; SAR(10 g) = 0.166 W/kg

Maximum value of SAR (measured) = 0.300 W/kg



0 dB = 0.300 W/kg

19-Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band2 mode with Antenna.1

Date: 2022.04.23

Communication System Band: Band 2; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz; σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch18900/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.593 W/kg

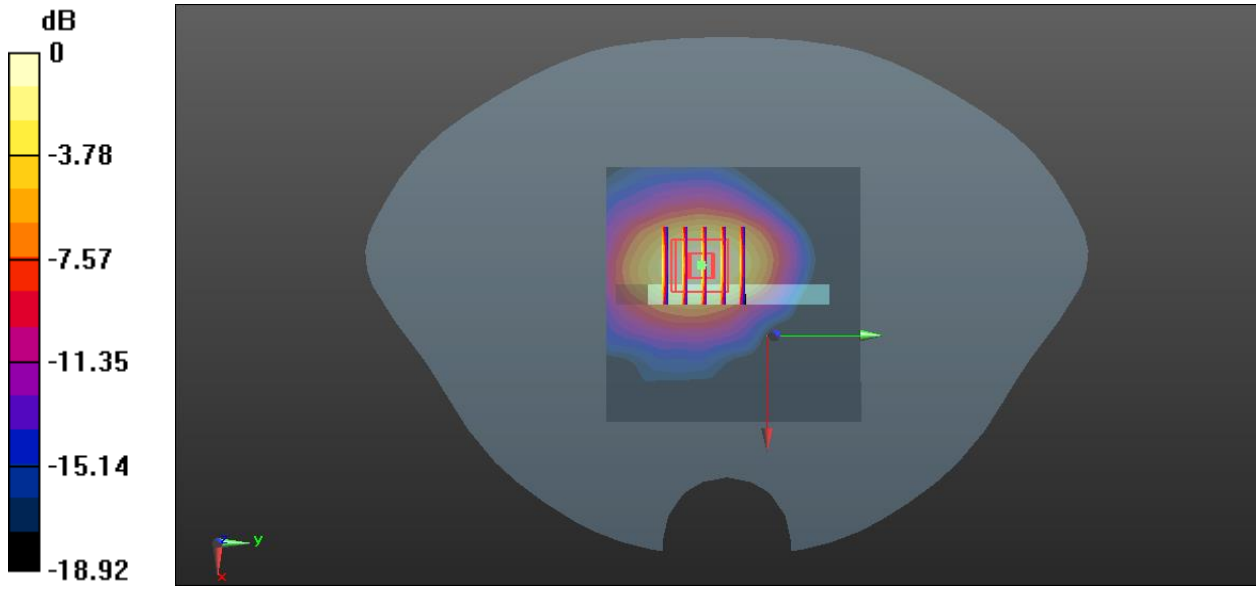
Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.86 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.857 W/kg

SAR(1 g) = 0.507 W/kg; SAR(10 g) = 0.277 W/kg

Maximum value of SAR (measured) = 0.568 W/kg



0 dB = 0.568 W/kg

20-Body Plane with Bottem Edge 0mm on Middle Channel in LTE Band2 mode with Antenna 1

Date: 2022.04.23

Communication System Band: Band 2; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1880 MHz;σ = 1.381 S/m; ε_r = 40.112; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.9

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.63, 7.63, 7.63); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch18900/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.23 W/kg

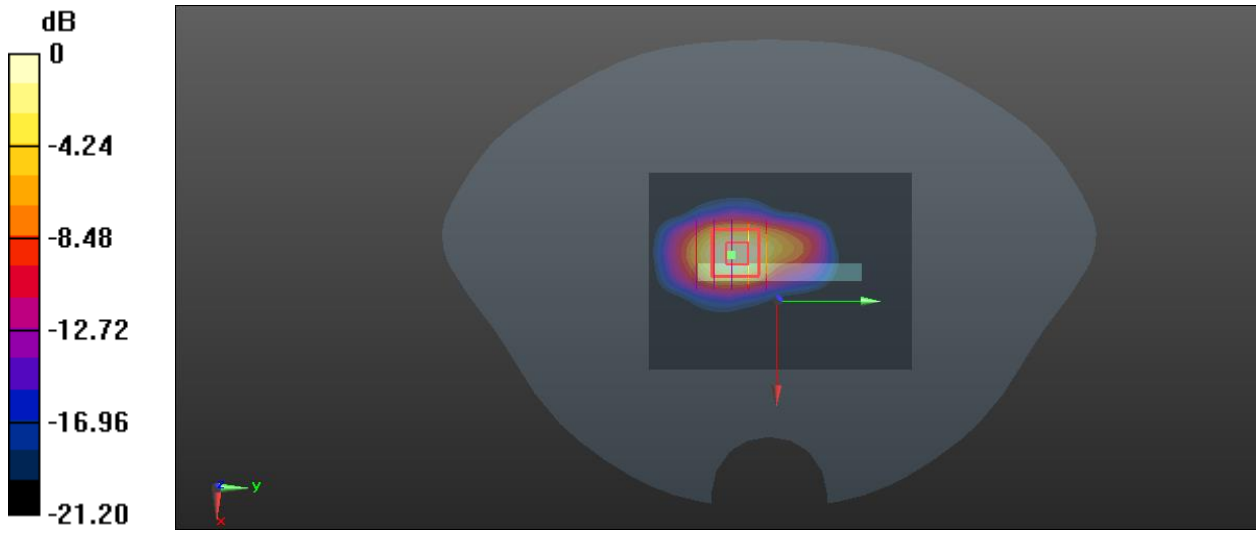
Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.05 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 4.48 W/kg

SAR(1 g) = 2.16 W/kg; SAR(10 g) = 0.981 W/kg

Maximum value of SAR (measured) = 2.45 W/kg



0 dB = 2.45 W/kg

21-Right Head with Cheek on Middle Channel in LTE Band4 mode with Antenna 1

Date: 2022.04.22

Communication System Band: Band 4; Frequency: 1732.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.369 S/m; ε_r = 40.401; ρ = 1000 kg/m^3

Phantom section: Right Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20175/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.130 W/kg

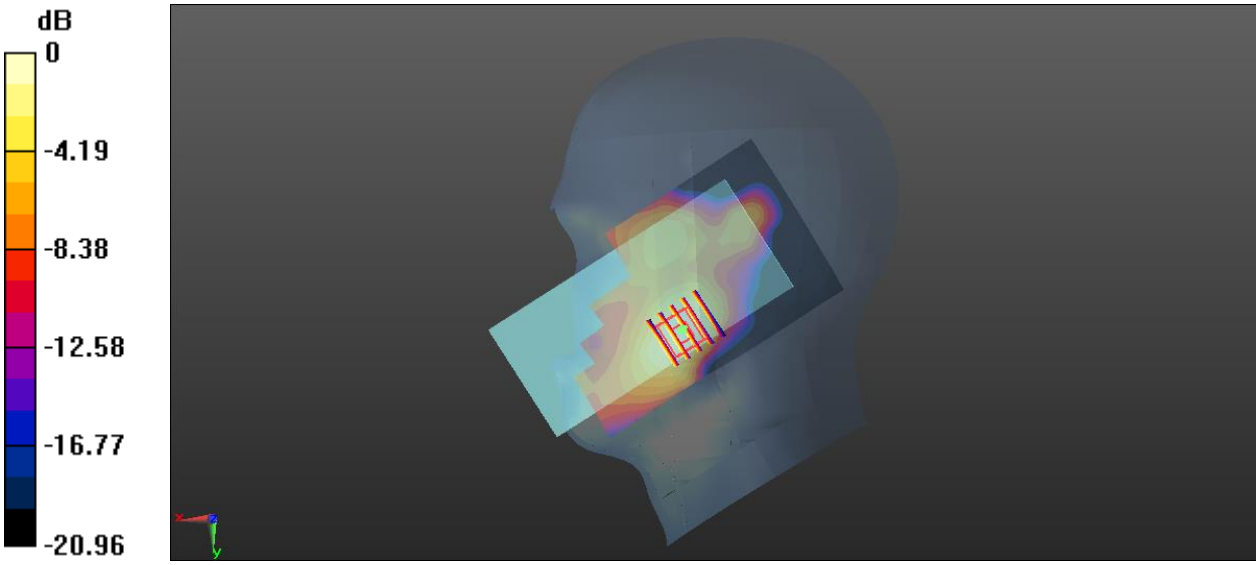
Ch20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.830 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.176 W/kg

SAR(1 g) = 0.058 W/kg; SAR(10 g) = 0.034 W/kg

Maximum value of SAR (measured) = 0.069 W/kg



0 dB = 0.069 W/kg

22-Body Plane with Back 15mm on Middle Channel in LTE Band4 mode with Antenna 1

Date: 2022.04.22

Communication System Band: Band 4; Frequency: 1732.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.369 S/m; ε_r = 40.401; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20175/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.216 W/kg

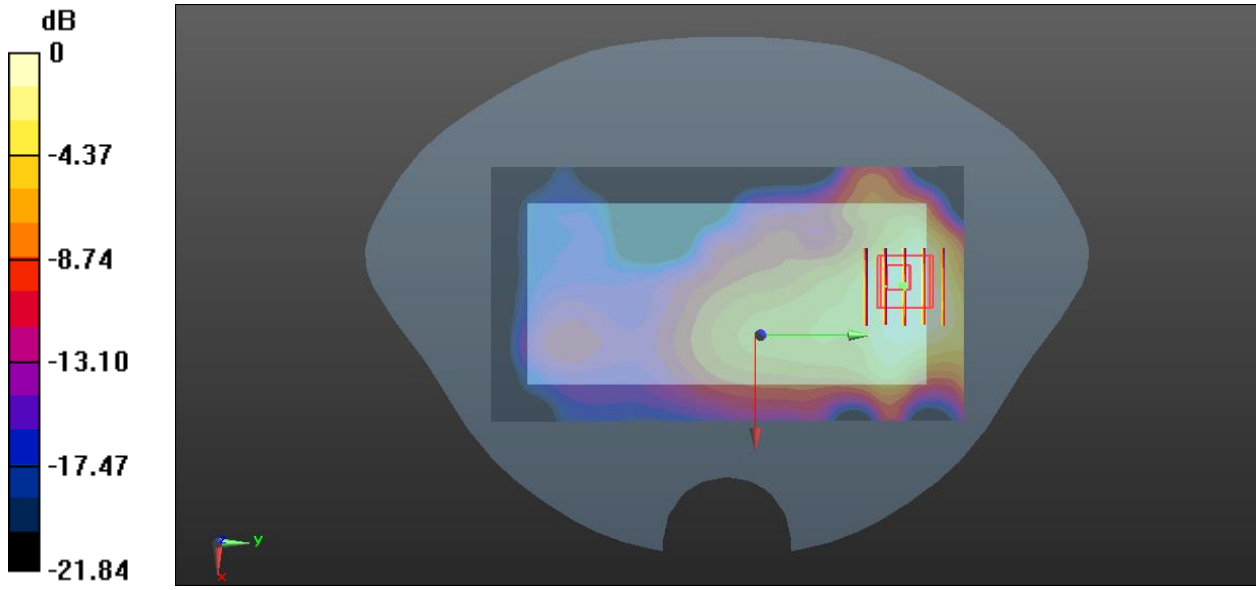
Ch20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.803 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.312 W/kg

SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.095 W/kg

Maximum value of SAR (measured) = 0.181 W/kg



0 dB = 0.181 W/kg

23-Body Plane with Bottom Edge 10mm on High Channel in LTE Band4 mode with Antenna 1

Date: 2022.04.22

Communication System Band: Band 4 ; Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1745 MHz; σ = 1.377 S/m; ε_r = 40.238; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20300/Area Scan (51x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.311 W/kg

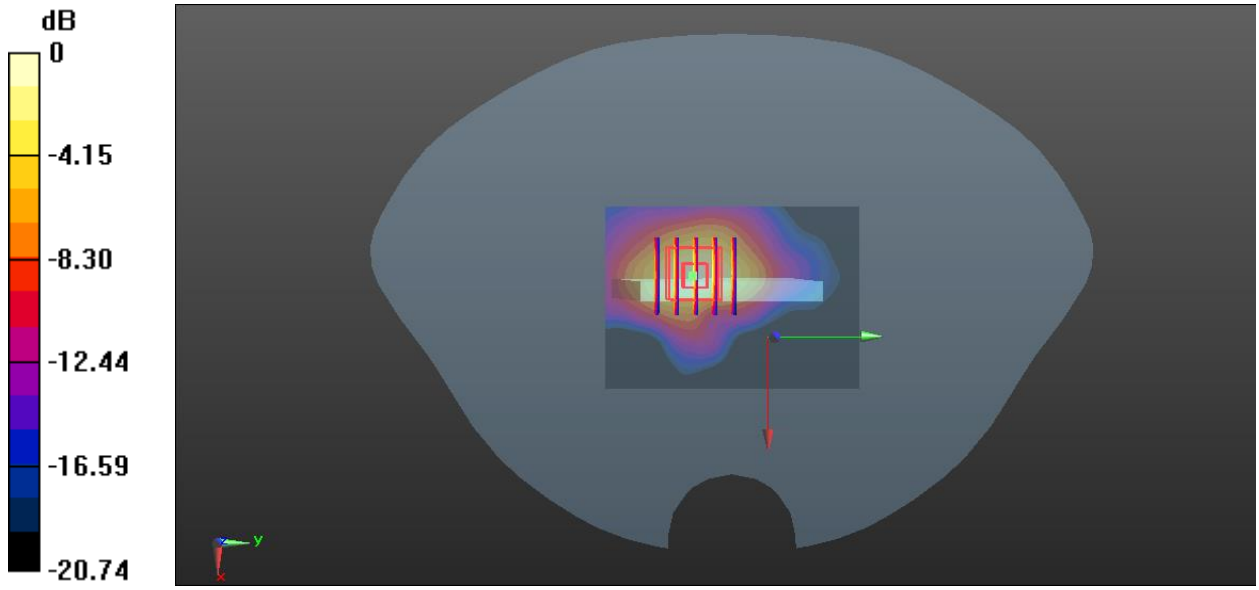
Ch20300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.420 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 0.508 W/kg

SAR(1 g) = 0.280 W/kg; SAR(10 g) = 0.140 W/kg

Maximum value of SAR (measured) = 0.321 W/kg



0 dB = 0.321 W/kg

24-Left Head with Cheek on High Channel in LTE Band5 mode with Antenna 1

Date: 2022.04.21

Communication System Band: Band 5; Frequency: 844 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 844 MHz; σ = 0.910 S/m; ε_r = 41.604; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20600/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.109 W/kg

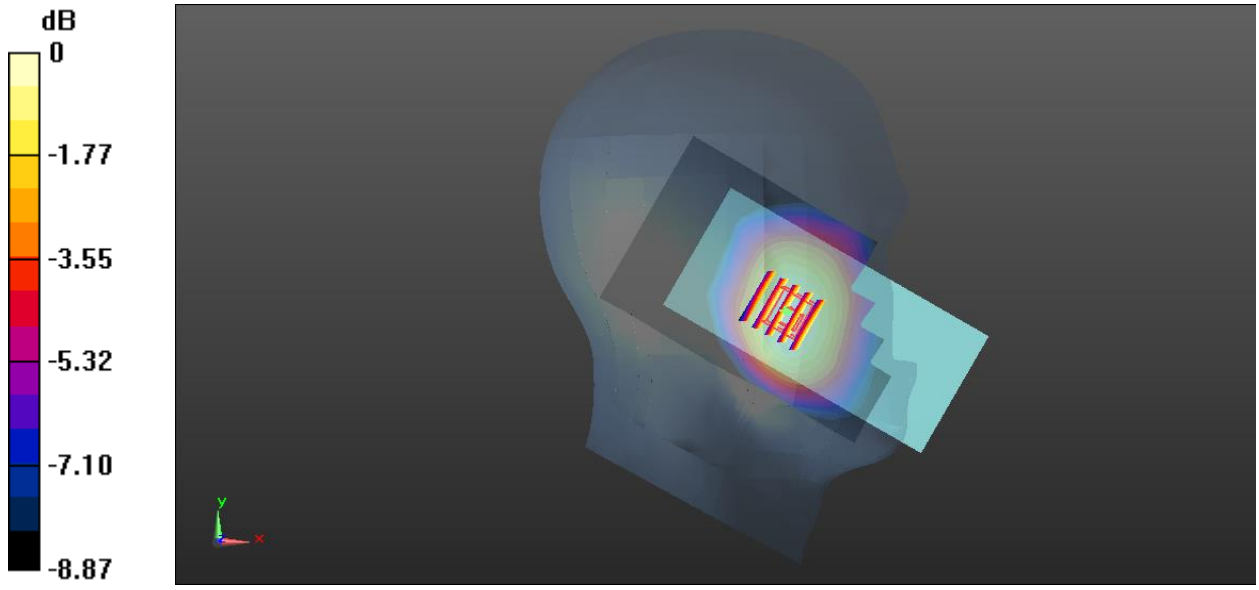
Ch20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.329 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.129 W/kg

SAR(1 g) = 0.106 W/kg; SAR(10 g) = 0.082 W/kg

Maximum value of SAR (measured) = 0.111 W/kg



0 dB = 0.111 W/kg

25-Body Plane with Back Side 15mm on High Channel in LTE Band5 mode with Antenna.1

Date: 2022.04.21

Communication System Band: Band 5; Frequency: 844 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 844 MHz; σ = 0.910 S/m; ε_r = 41.604; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20600/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.151 W/kg

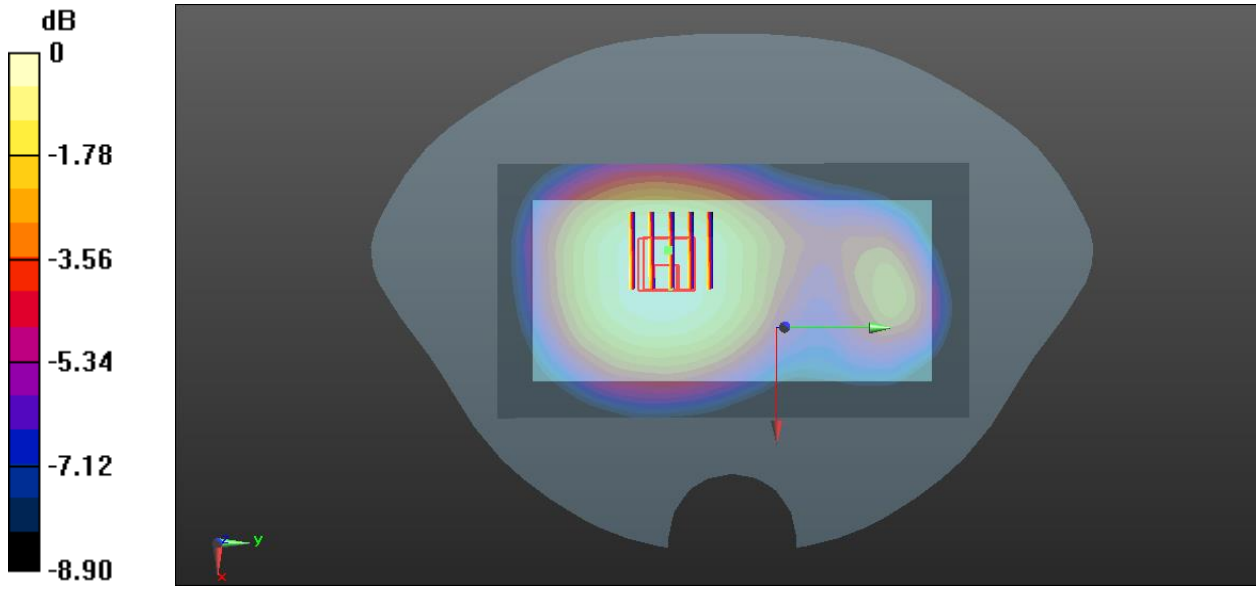
Ch20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.90 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.182 W/kg

SAR(1 g) = 0.145 W/kg; SAR(10 g) = 0.109 W/kg

Maximum value of SAR (measured) = 0.155 W/kg



0 dB = 0.155 W/kg

26-Body Plane with Back 10mm on High Channel in LTE Band5 mode with Antenna.1

Date: 2022.04.21

Communication System Band: Band 5; Frequency: 844 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 844 MHz; σ = 0.910 S/m; ε_r = 41.604; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(8.95, 8.95, 8.95); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20600/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.224 W/kg

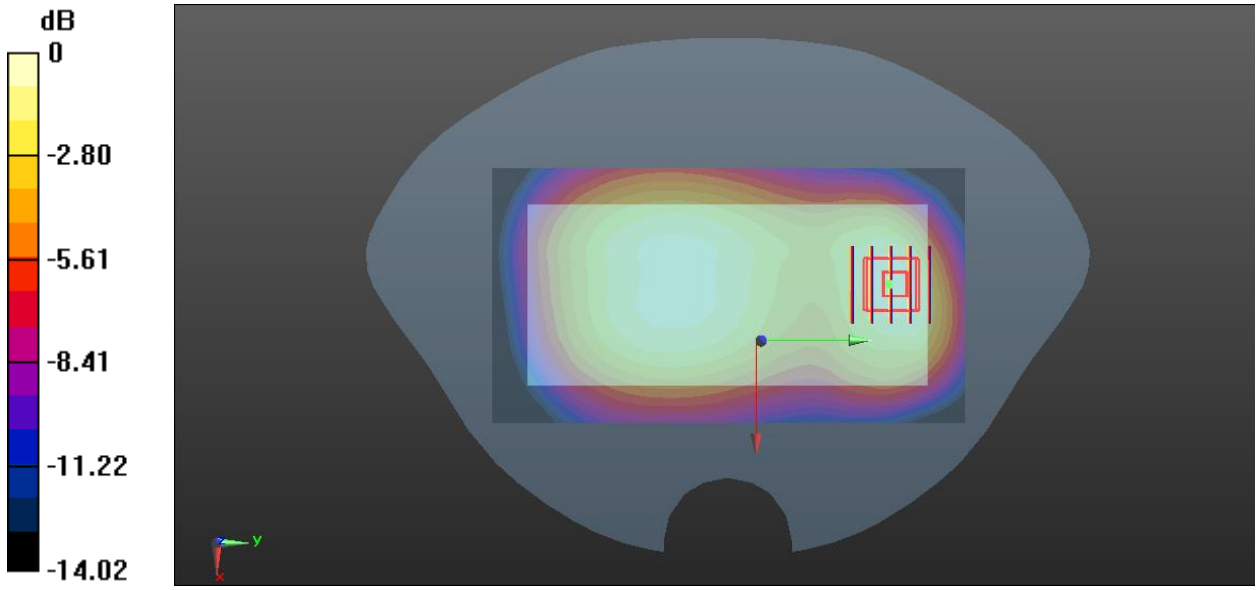
Ch20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.94 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 0.351 W/kg

SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.126 W/kg

Maximum value of SAR (measured) = 0.225 W/kg



0 dB = 0.225 W/kg

27-Left Head with Cheek on Middle Channel in LTE Band7 mode with Antenna.1

Date: 2022.04.25

Communication System Band: Band 7; Frequency: 2535 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2535 MHz; σ = 1.900 S/m; ε_r = 39.096; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21100/Area Scan (81x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.135 W/kg

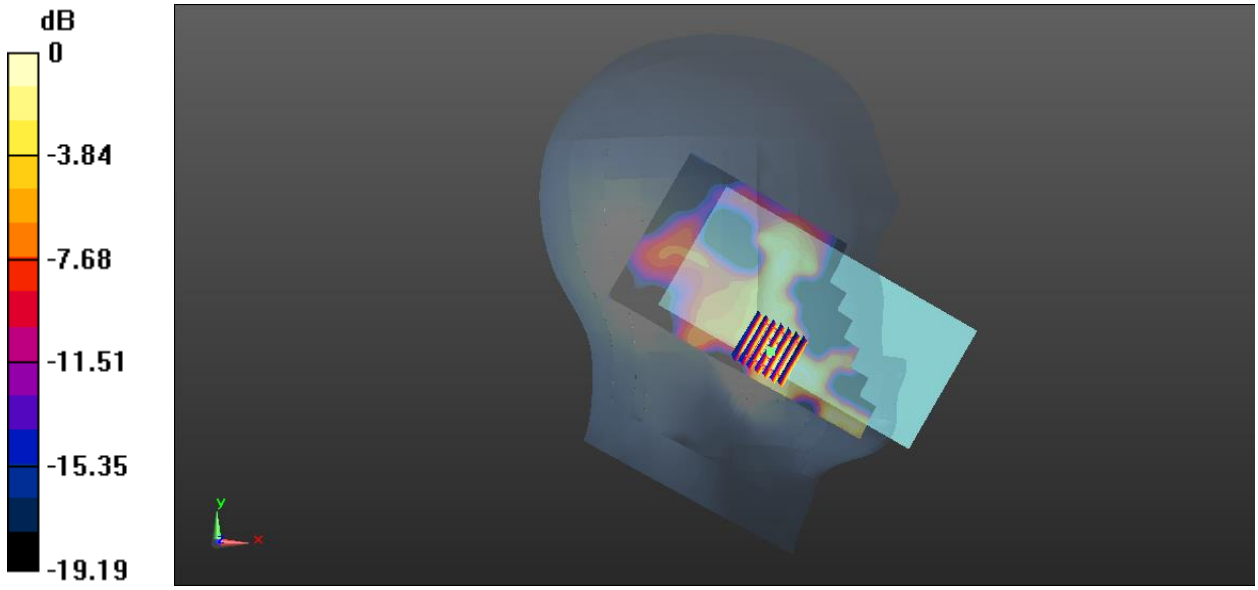
Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.713 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.199 W/kg

SAR(1 g) = 0.115 W/kg; SAR(10 g) = 0.056 W/kg

Maximum value of SAR (measured) = 0.128 W/kg



0 dB = 0.128 W/kg

28-Body Plane with Back Side 15mm on High Channel in LTE Band7 mode with Antenna 1

Date: 2022.04.25

Communication System Band: Band 7; Frequency: 2560 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2560 MHz; σ = 1.929 S/m; ε_r = 38.922; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21350/Area Scan (81x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.116 W/kg

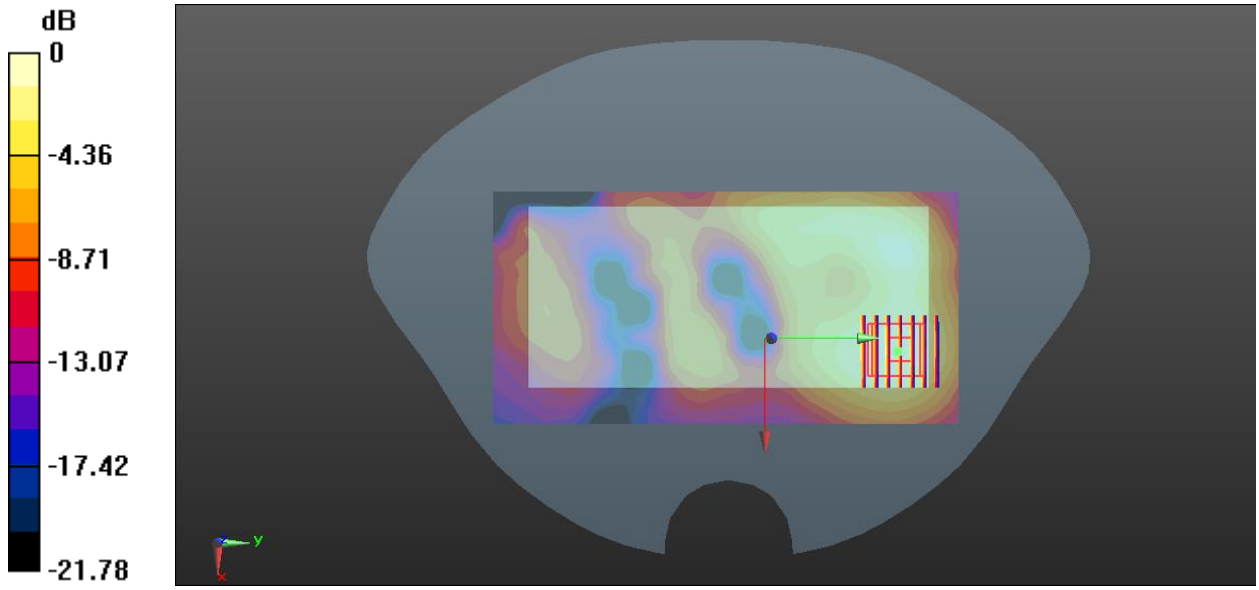
Ch21350/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.297 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.184 W/kg

SAR(1 g) = 0.103 W/kg; SAR(10 g) = 0.056 W/kg

Maximum value of SAR (measured) = 0.113 W/kg



0 dB = 0.113 W/kg

29-Body Plane with Bottom Edge 10mm on High Channel in LTE Band7 mode with Antenna.1

Date: 2022.04.25

Communication System Band: Band 7; Frequency: 2560 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2560 MHz; σ = 1.929 S/m; ε_r = 38.922; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21350/Area Scan (81x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.284 W/kg

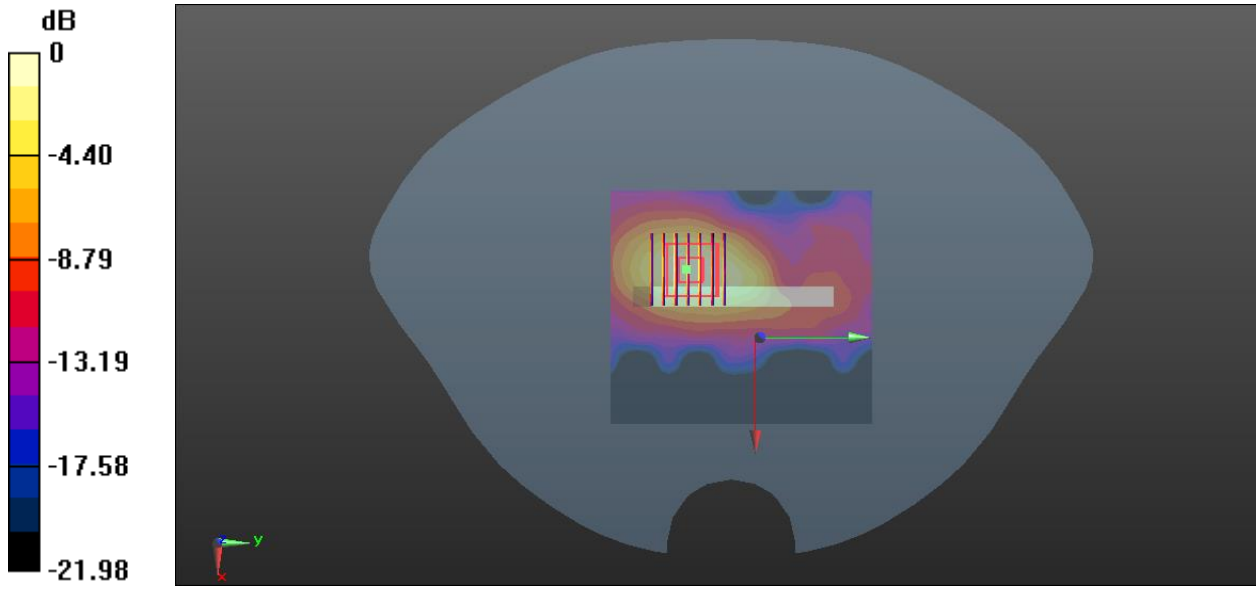
Ch21350/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.679 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.486 W/kg

SAR(1 g) = 0.250 W/kg; SAR(10 g) = 0.120 W/kg

Maximum value of SAR (measured) = 0.285 W/kg



0 dB = 0.285 W/kg

30-Right Head with Cheek on Middle Channel in LTE Band13 mode with Antenna 1

Date: 2022.04.20

Communication System Band: Band 13; Frequency: 782 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 782 MHz; σ = 0.936 S/m; ε_r = 41.692; ρ = 1000 kg/m^3

Phantom section: Right Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(9.94, 9.94, 9.94); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23230/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0278 W/kg

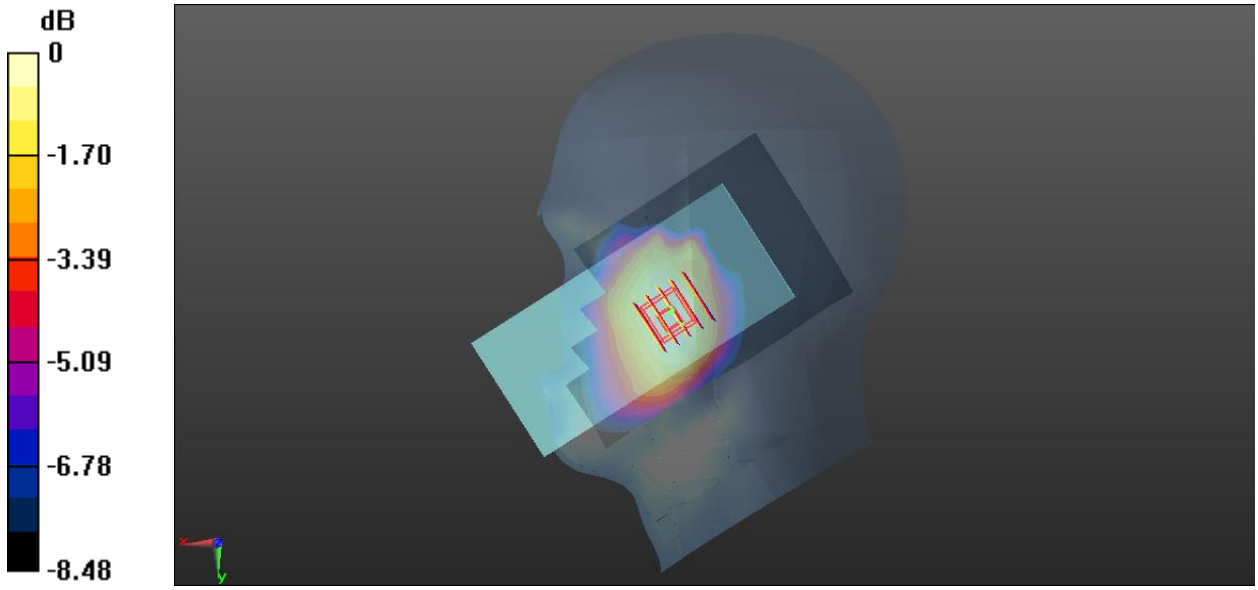
Ch23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.6750 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.0320 W/kg

SAR(1 g) = 0.027 W/kg; SAR(10 g) = 0.021 W/kg

Maximum value of SAR (measured) = 0.0281 W/kg



0 dB = 0.0281 W/kg

31-Body Plane with Back Side 15mm on Middle Channel in LTE Band13 mode with Antenna.1

Date: 2022.04.20

Communication System Band: Band 13; Frequency: 782 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 782 MHz; σ = 0.936 S/m; ε_r = 41.692; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(9.94, 9.94, 9.94); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23230/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0501 W/kg

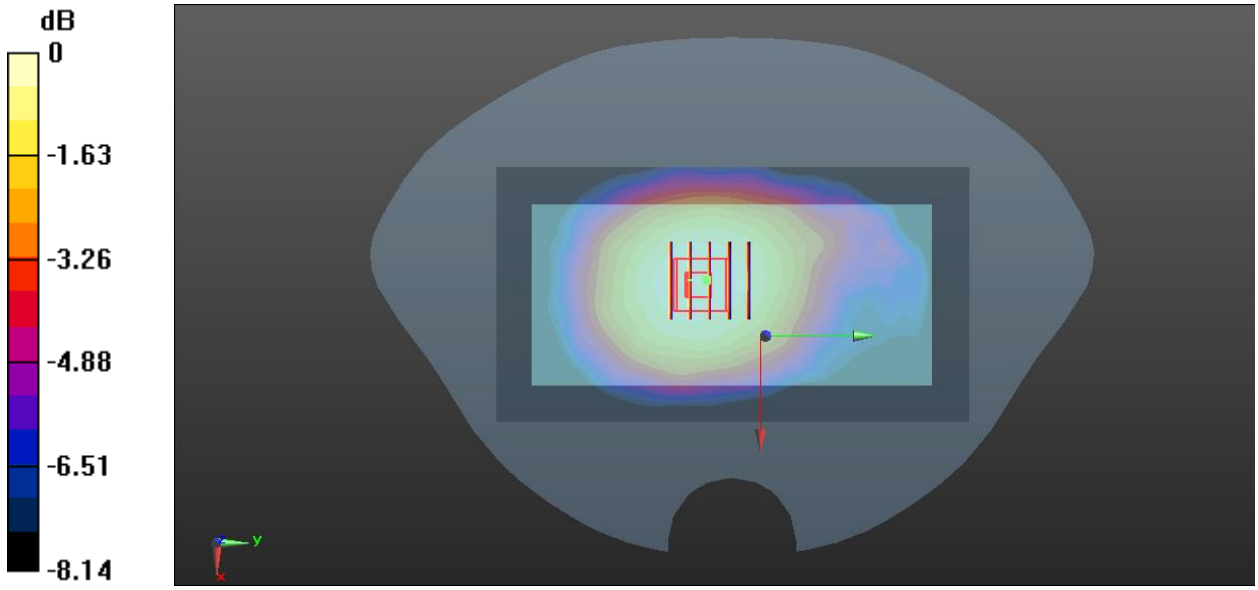
Ch23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.134 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.0590 W/kg

SAR(1 g) = 0.048 W/kg; SAR(10 g) = 0.037 W/kg

Maximum value of SAR (measured) = 0.0497 W/kg



0 dB = 0.0497 W/kg

32-Body Plane with Back Side 10mm on Middle Channel in LTE Band13 mode with Antenna.1

Date: 2022.04.20

Communication System Band: Band 13; Frequency: 782 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 782 MHz; σ = 0.936 S/m; ε_r = 41.692; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(9.94, 9.94, 9.94); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23230/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0629 W/kg

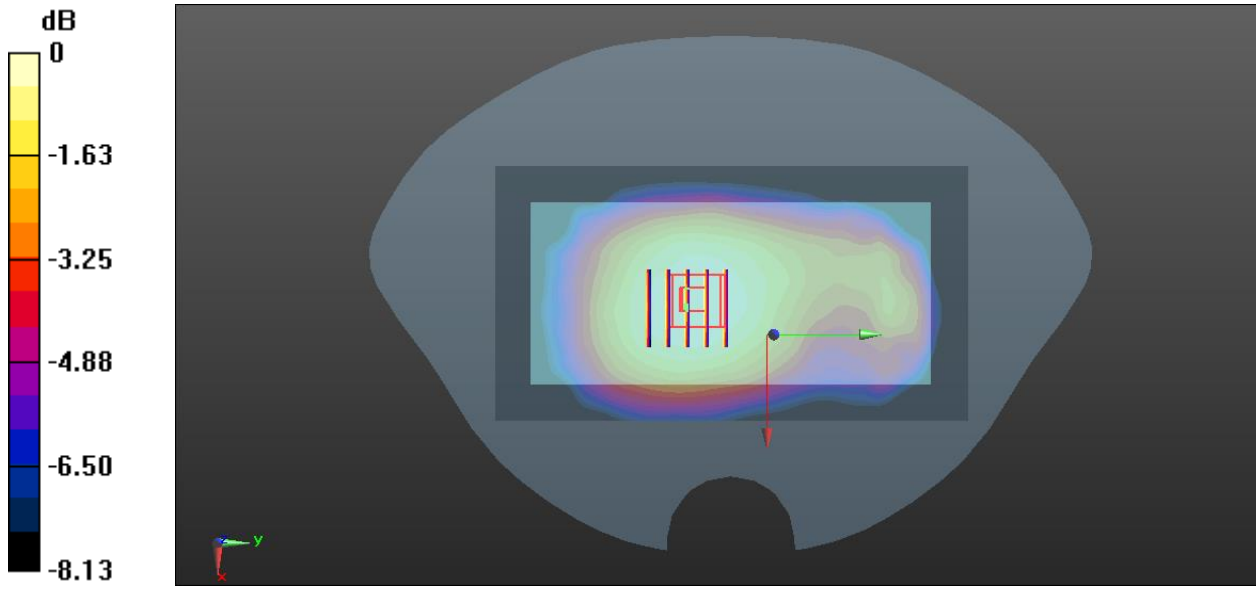
Ch23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.967 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.0740 W/kg

SAR(1 g) = 0.060 W/kg; SAR(10 g) = 0.046 W/kg

Maximum value of SAR (measured) = 0.0621 W/kg



0 dB = 0.0621 W/kg

33-Right Head with Cheek on Middle Channel in LTE Band66 mode with Antenna.1

Date: 2022.04.22

Communication System Band: Band 66; Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1745 MHz; σ = 1.377 S/m; ε_r = 40.238; ρ = 1000 kg/m^3

Phantom section: Right Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch132322/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0987 W/kg

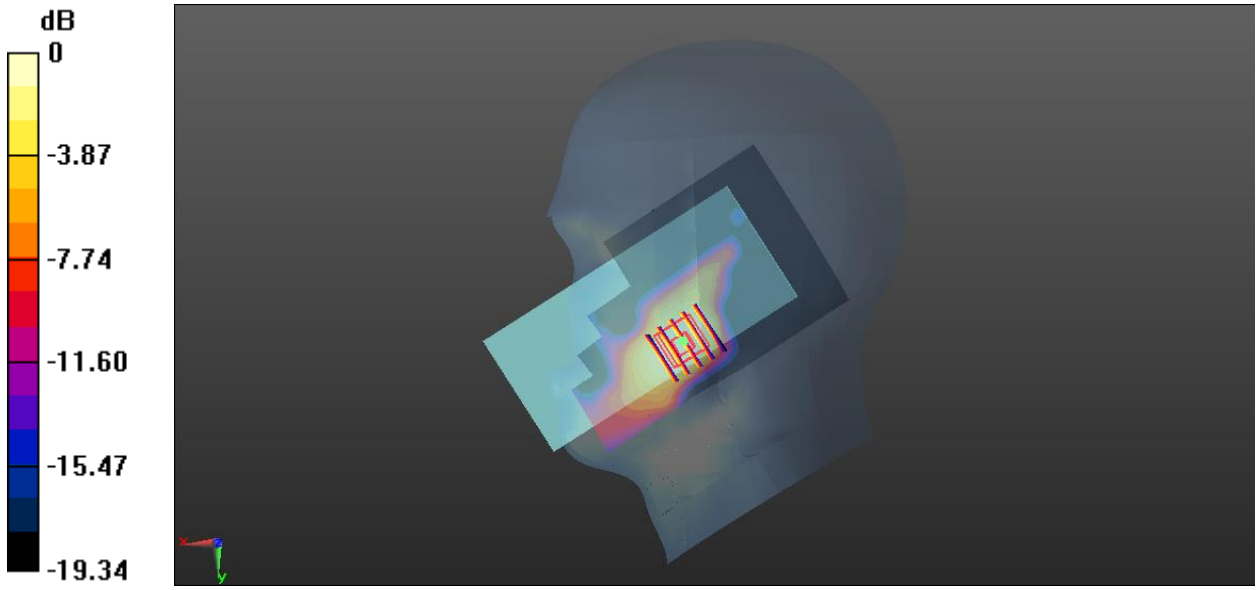
Ch132322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.136 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.129 W/kg

SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.049 W/kg

Maximum value of SAR (measured) = 0.0913 W/kg



0 dB = 0.0913 W/kg

34-Body Plane with Back Side 15mm on Middle Channel in LTE Band66 mode with Antenna.1

Date: 2022.04.22

Communication System Band: Band 66; Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1745 MHz; σ = 1.377 S/m; ε_r = 40.238; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch132322/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0952 W/kg

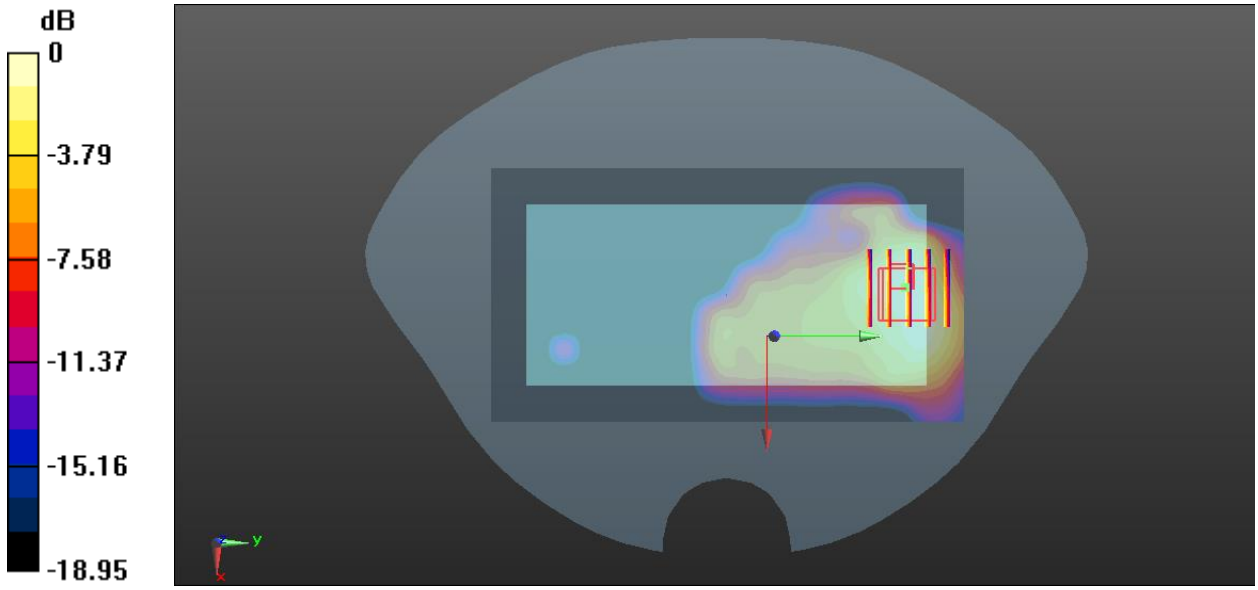
Ch132322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.010 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.133 W/kg

SAR(1 g) = 0.081 W/kg; SAR(10 g) = 0.049 W/kg

Maximum value of SAR (measured) = 0.0872 W/kg



0 dB = 0.0872 W/kg

35-Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band66 mode with Antenna.1

Date: 2022.04.22

Communication System Band: Band 66; Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1745 MHz;σ = 1.377 S/m; ε_r = 40.238; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.8, 7.8, 7.8); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch132322/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.282 W/kg

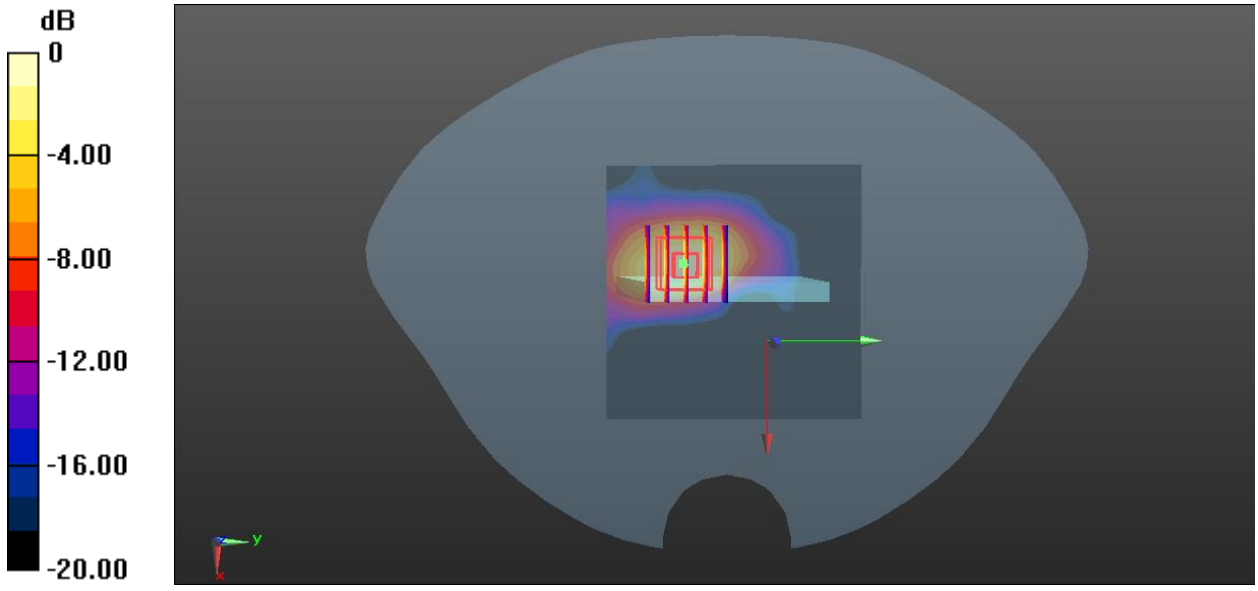
Ch132322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.624 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.423 W/kg

SAR(1 g) = 0.242 W/kg; SAR(10 g) = 0.123 W/kg

Maximum value of SAR (measured) = 0.275 W/kg



0 dB = 0.275 W/kg

36-Left Head with Cheek on Middle Channel in LTE Band38 mode with Antenna 1

Date: 2022.04.25

Communication System Band: Band 38; Frequency: 2595 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2595 MHz; σ = 1.969 S/m; ε_r = 38.671; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch38000/Area Scan (81x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0912 W/kg

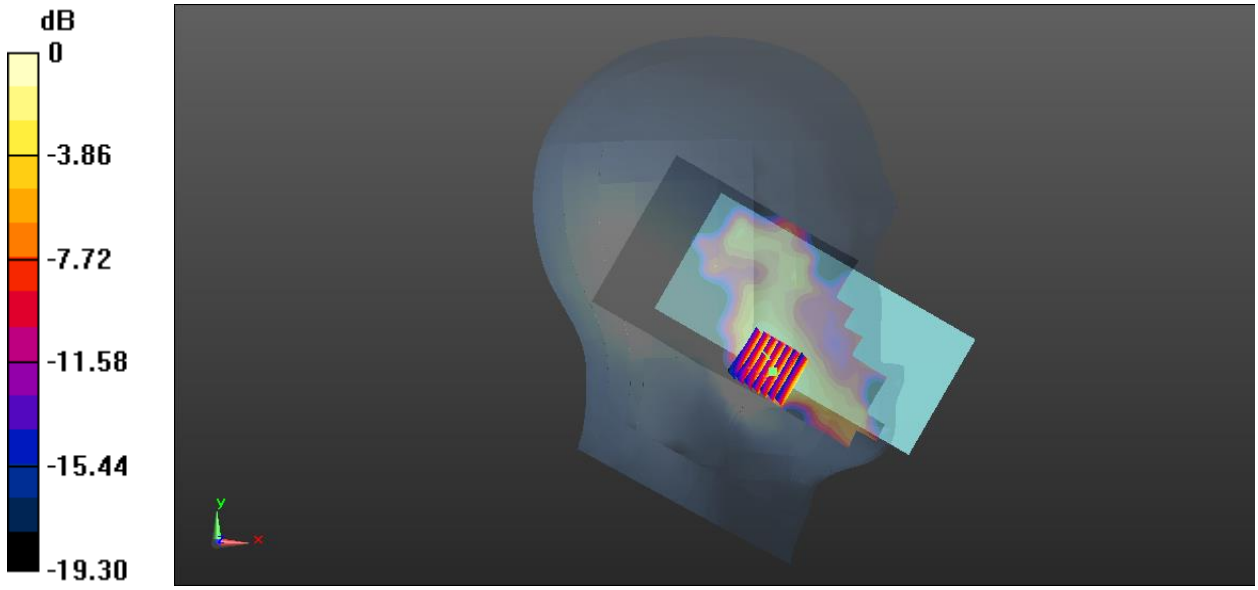
Ch38000/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.665 V/m; Power Drift = -0.01dB

Peak SAR (extrapolated) = 0.129 W/kg

SAR(1 g) = 0.070 W/kg; SAR(10 g) = 0.036 W/kg

Maximum value of SAR (measured) = 0.0765 W/kg



0 dB = 0.0765 W/kg

37-Body Plane with Back 15mm on Low Channel in LTE Band38 mode with Antenna 1

Date: 2022.04.25

Communication System Band: Band 38; Frequency: 2580 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2580 MHz; σ = 1.951 S/m; ε_r = 38.784; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch37850/Area Scan (81x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.228 W/kg

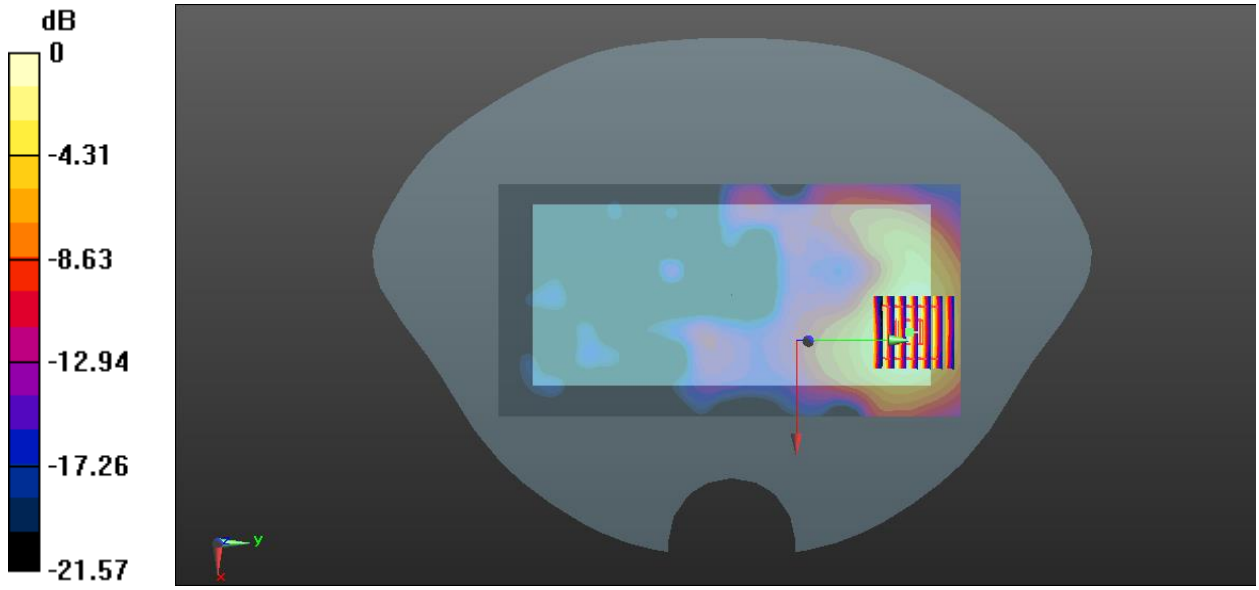
Ch37850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.4600 V/m; Power Drift = -0.12dB

Peak SAR (extrapolated) = 0.385 W/kg

SAR(1 g) = 0.204 W/kg; SAR(10 g) = 0.105 W/kg

Maximum value of SAR (measured) = 0.227 W/kg



0 dB = 0.227 W/kg

38-Body Plane with Bottom Edge 10mm on Low Channel in LTE Band38 mode with Antenna 1

Date: 2022.04.25

Communication System Band: Band 38; Frequency: 2580 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2580 MHz; σ = 1.951 S/m; ε_r = 38.784; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch37850/Area Scan (61x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.443 W/kg

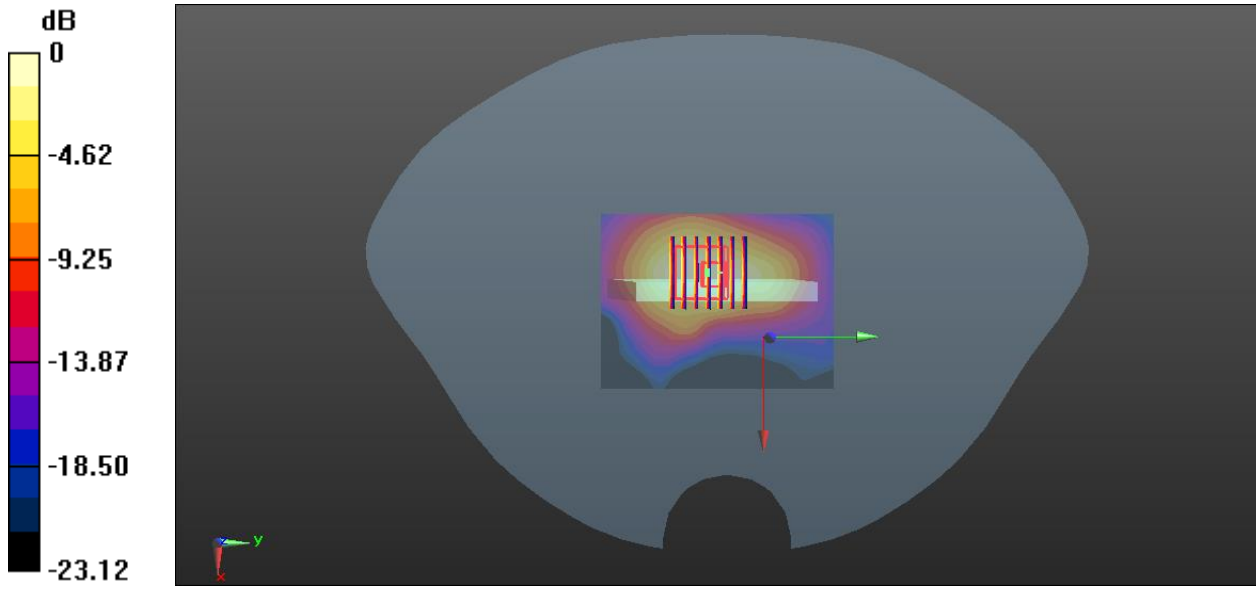
Ch37850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.50 V/m; Power Drift = 0.06dB

Peak SAR (extrapolated) = 0.793 W/kg

SAR(1 g) = 0.364 W/kg; SAR(10 g) = 0.174 W/kg

Maximum value of SAR (measured) = 0.423 W/kg



0 dB = 0.423 W/kg

39-Left Head with Cheek on Middle Channel in LTE Band41 mode with Antenna 1

Date: 2022.04.25

Communication System Band: Band 41; Frequency: 2607.5 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2607.5 MHz; σ = 1.983 S/m; ε_r = 38.578; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch40765/Area Scan (81x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0988 W/kg

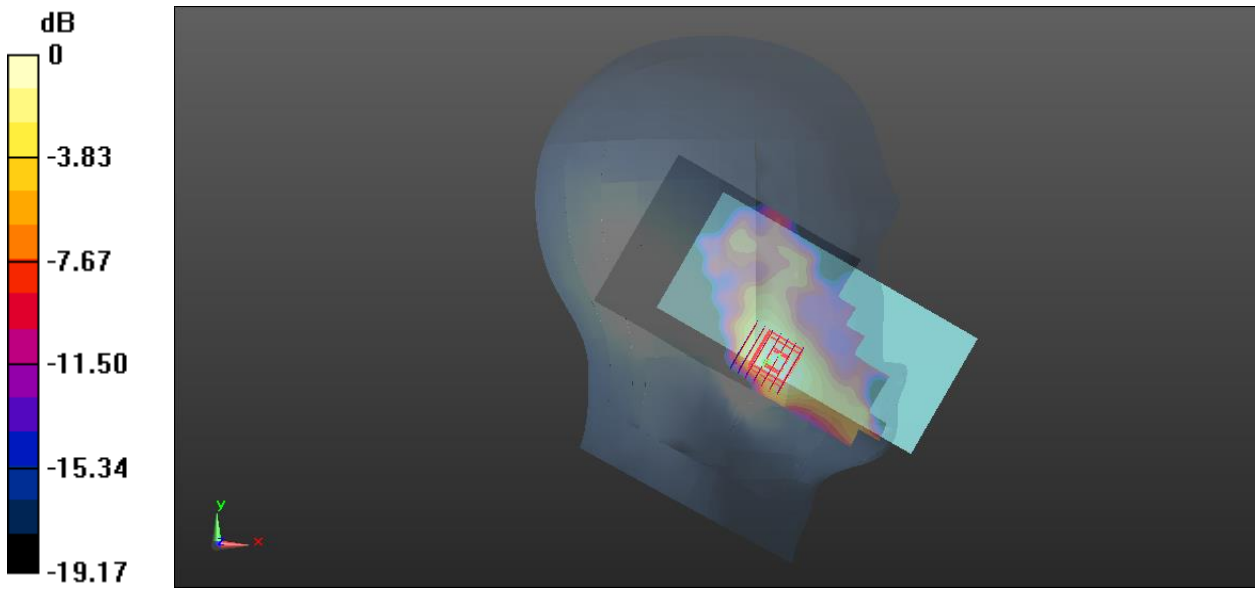
Ch40765/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.580 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.149 W/kg

SAR(1 g) = 0.082 W/kg; SAR(10 g) = 0.043 W/kg

Maximum value of SAR (measured) = 0.0904 W/kg



0 dB = 0.0904 W/kg

40-Body Plane with Back Side 15mm on Middle Channel in LTE Band41 mode with Antenna 1

Date: 2022.04.25

Communication System Band: Band 41; Frequency: 2607.5 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2607.5 MHz; σ = 1.983 S/m; ε_r = 38.578; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch40765/Area Scan (81x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.208 W/kg

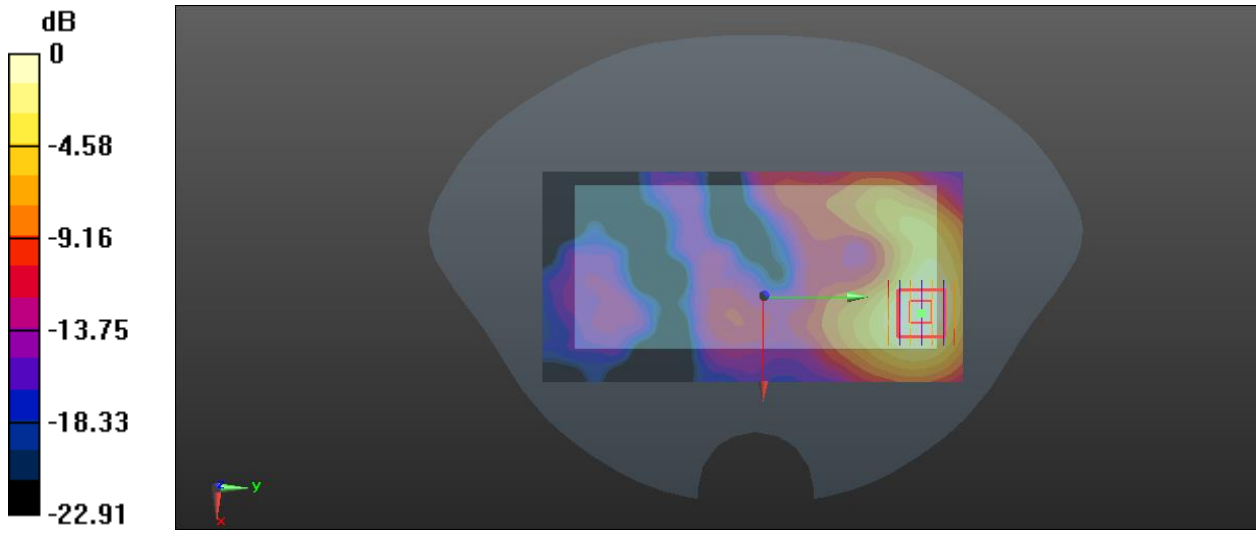
Ch40765/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.9110 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.352 W/kg

SAR(1 g) = 0.180 W/kg; SAR(10 g) = 0.092 W/kg

Maximum value of SAR (measured) = 0.209 W/kg



0 dB = 0.209 W/kg

41-Body Plane with Bottom Edge 10mm on Middle Channel in LTE Band41 mode with Antenna.1

Date: 2022.04.25

Communication System Band: Band 41; Frequency: 2607.5 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2607.5 MHz; σ = 1.983 S/m; ε_r = 38.578; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.2 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.91, 6.91, 6.91); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CC; Serial: TP:1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch40765/Area Scan (81x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.420 W/kg

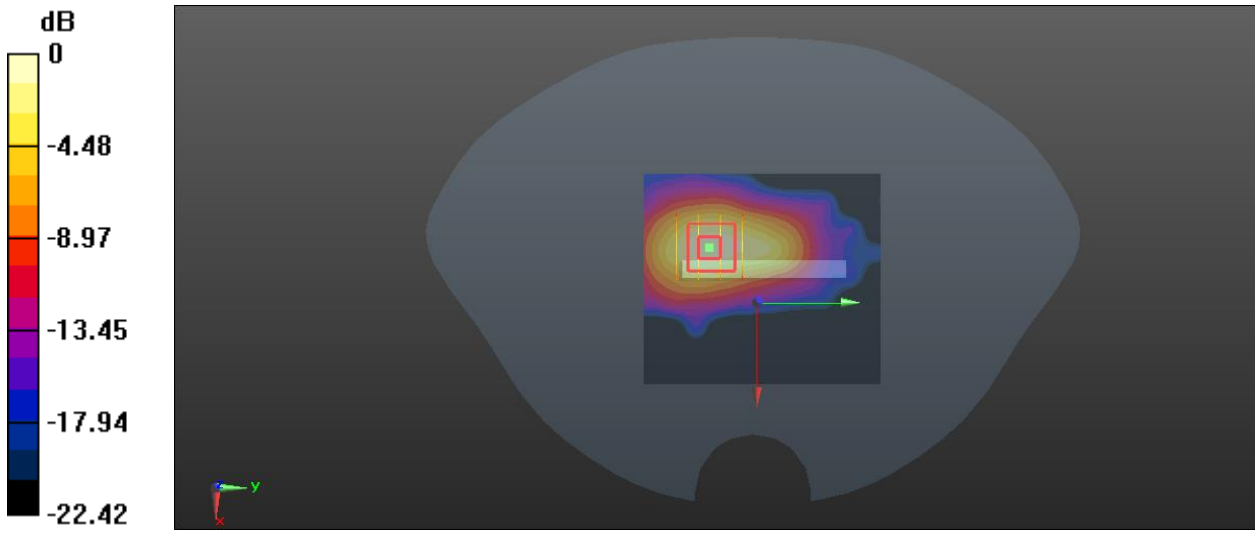
Ch40765/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.867 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.717 W/kg

SAR(1 g) = 0.356 W/kg; SAR(10 g) = 0.168 W/kg

Maximum value of SAR (measured) = 0.420 W/kg



0 dB = 0.420 W/kg

42-Left Head with Tilt on Middle Channel in IEEE802.11b mode with Antenna.2

Date: 2022.04.24

Communication System Band: 2.4G; Frequency: 2437 MHz;Duty Cycle: 1:1.009

Medium parameters used (interpolated): f = 2437 MHz; σ = 1.792 S/m; ε_r = 39.629; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.7 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.15, 7.15, 7.15); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.738 W/kg

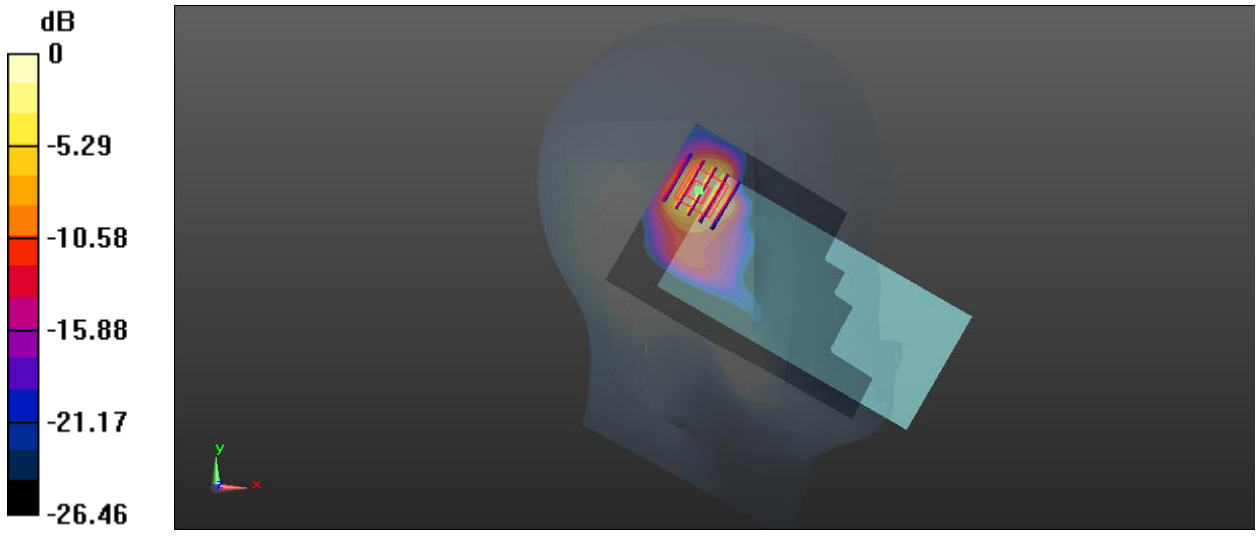
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.770 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.654 W/kg; SAR(10 g) = 0.262 W/kg

Maximum value of SAR (measured) = 0.799 W/kg



0 dB = 0.799 W/kg

43-Body Plane with Back Side 15mm on Middle Channel in IEEE802.11b mode with Antenna.2

Date: 2022.04.24

Communication System Band:2.4G; Frequency: 2437 MHz;Duty Cycle: 1:1.009

Medium parameters used (interpolated): f = 2437 MHz; σ = 1.792 S/m; ε_r = 39.629; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.15, 7.15, 7.15); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.356 W/kg

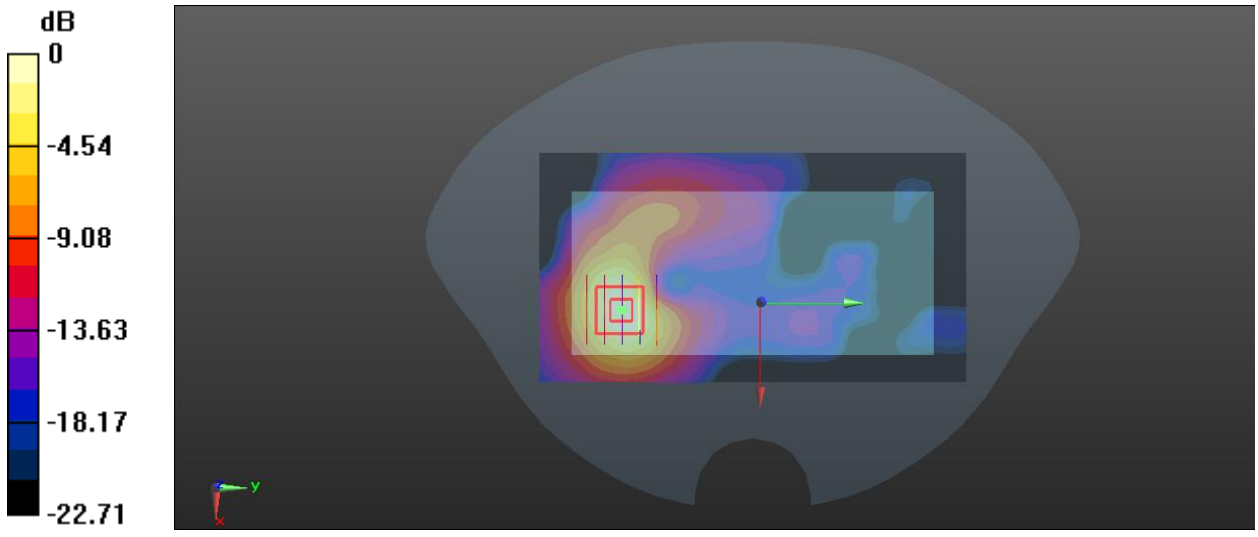
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.712 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.609 W/kg

SAR(1 g) = 0.308 W/kg; SAR(10 g) = 0.149 W/kg

Maximum value of SAR (measured) = 0.349 W/kg



0 dB = 0.349 W/kg

44-Body Plane with Top Edge 10mm on Middle Channel in IEEE802.11b mode with Antenna.2

Date: 2022.04.24

Communication System Band: 2.4G; Frequency: 2437 MHz;Duty Cycle: 1:1.009

Medium parameters used (interpolated): f = 2437 MHz; σ = 1.792 S/m; ε_r = 39.629; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.15, 7.15, 7.15); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.422 W/kg

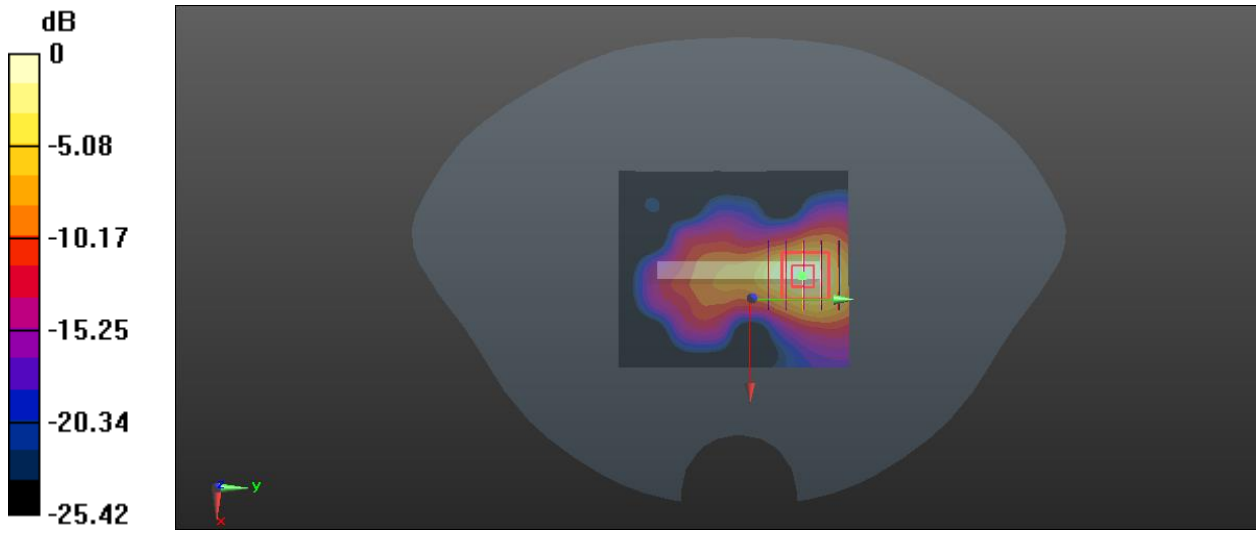
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.213 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.800 W/kg

SAR(1 g) = 0.377 W/kg; SAR(10 g) = 0.164 W/kg

Maximum value of SAR (measured) = 0.445 W/kg



0 dB = 0.445 W/kg

45-Left Head with Tilt on Middle Channel in Blutooth mode with Antenna.2

Date: 2022.04.24

Communication System Band: BT; Frequency: 2441 MHz;Duty Cycle: 1:1.292

Medium parameters used (interpolated): f = 2441 MHz; σ = 1.793 S/m; ε_r = 39.629; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.7 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.15, 7.15, 7.15); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch39/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.282 W/kg

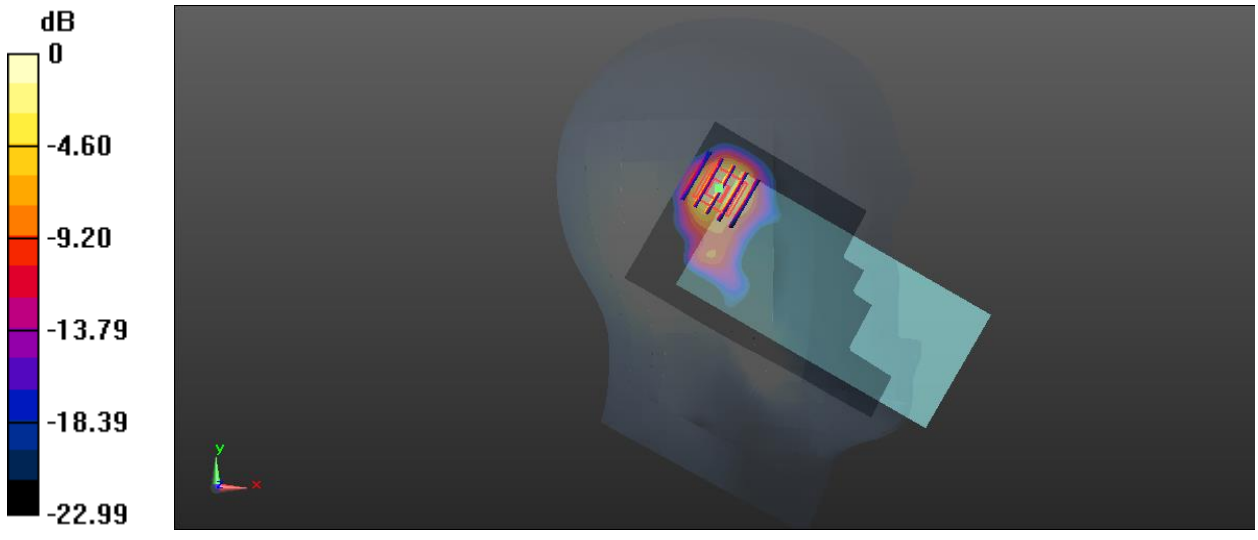
Ch39/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.599 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.536 W/kg

SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.096 W/kg

Maximum value of SAR (measured) = 0.291 W/kg



0 dB = 0.291 W/kg

46-Body Plane with Back Side 15mm on Middle Channel in Blutooth mode with Antenna.2

Date: 2022.04.24

Communication System Band: BT; Frequency: 2441 MHz;Duty Cycle: 1:1.292

Medium parameters used (interpolated): f = 2441 MHz; σ = 1.793 S/m; ε_r = 39.629; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.15, 7.15, 7.15); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch39/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0604 W/kg

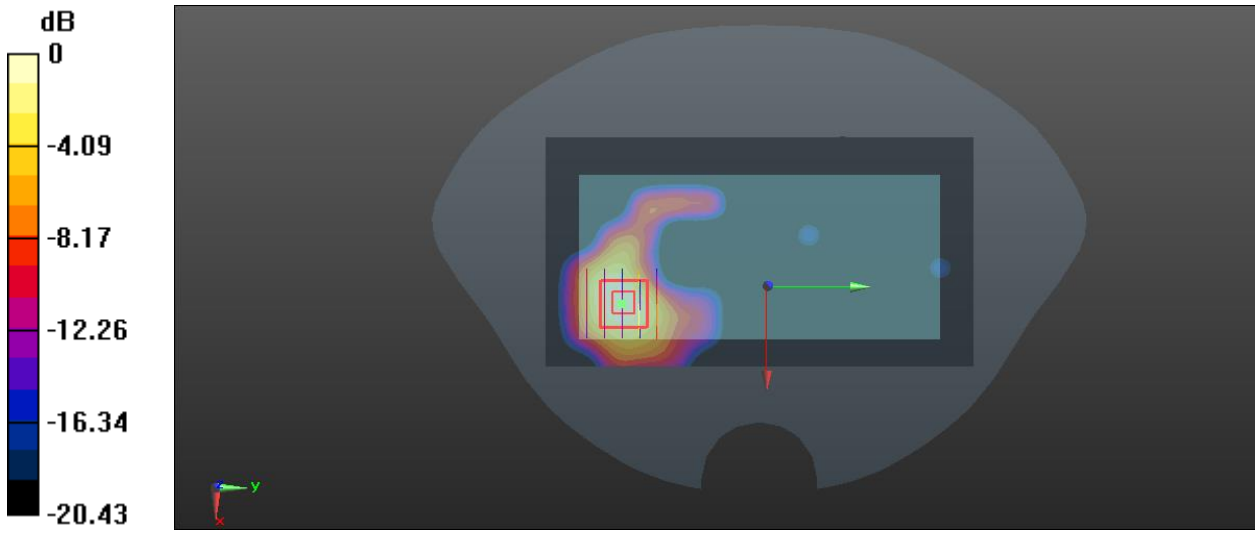
Ch39/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.0970 W/kg

SAR(1 g) = 0.052 W/kg; SAR(10 g) = 0.025 W/kg

Maximum value of SAR (measured) = 0.0614 W/kg



0 dB = 0.0614 W/kg

47-Body Plane with Top Edge 10mm on Middle Channel in Blutooth mode with Antenna.2

Date: 2022.04.24

Communication System Band: BT; Frequency: 2441 MHz;Duty Cycle: 1:1.292

Medium parameters used (interpolated): f = 2441 MHz; σ = 1.793 S/m; ε_r = 39.629; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.15, 7.15, 7.15); Calibrated: 2021.06.07;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 2021.05.17
- Phantom: SAM with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch39/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.135 W/kg

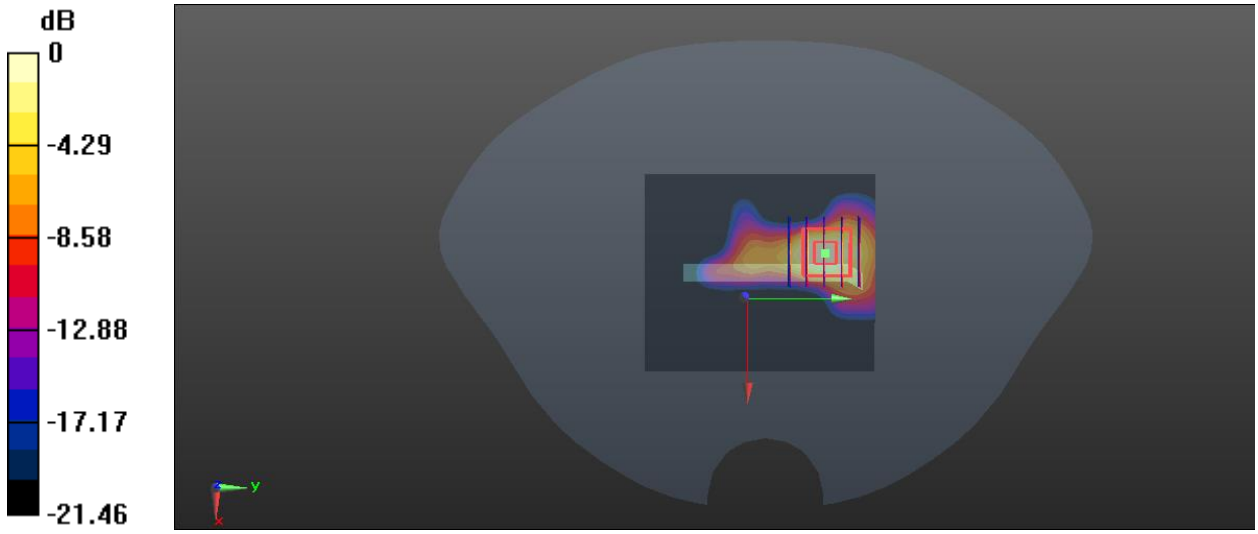
Ch39/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.753 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.169 W/kg

SAR(1 g) = 0.089 W/kg; SAR(10 g) = 0.038 W/kg

Maximum value of SAR (measured) = 0.110 W/kg



0 dB = 0.110 W/kg

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2240469-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ2240469-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “CALIBRATION REPORT.pdf”.

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