FCC SAR TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

Mobile Phone

ISSUED TO
Realme Chongqing Mobile Telecommunications Corp., Ltd.

No.2 Building, No.24 Nichang Boulevard, Huixing Block, Yubei District, Chongqing, China

Report No.:	BL-SZ19A0595-701
EUT Name:	Mobile Phone
Model Name:	RMX1971
Brand Name:	realme
FCC ID:	2AUYFRMX1971
Test Standard:	FCC 47 CFR Part 2.1093
	ANSI C95.1: 1999, IEEE 1528: 2013
Maximum SAR:	Head (1 g): 1.156 W/kg
	Body-worn (1 g): 0.409 W/kg
	Hotspot (1 g): 0.691 W/kg
Test Conclusion:	Pass
Test Date:	Nov. 04, 2019 ~ Dec. 16, 2019
Date of Issue:	Dec. 23, 2019

Tested by: Zong Liyao
Zong Liyao
(Engineer)
Date Dec. 23, 2019

Approved by:
Wei Yanquan
(Chief Engineer)
Date Dec. 23, 2019

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Revision History

Version	Issue Date	Revisions Content
Rev. 01	Dec. 23, 2019	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, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory is a testing organization accredited by American Association for Laboratory Accreditation (A2LA) according to ISO/IEC 17025.The accreditation certificate is 4344.01. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Test Environment Condition

Ambient Temperature	21℃ to 23℃
Ambient Relative Humidity	36% to 48%
Ambient Pressure	100 KPa to 102 KPa

1.4 Announce

(1) The test report reference to the report template version v2.2.

(2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.

(3) The test report is invalid if there is any evidence and/or falsification.

(4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.

(5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.

(6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.2 Building, No.24 Nichang Boulevard, Huixing Block, Yubei District, Chongqing, China

2.2 Manufacturer Information

Manufacturer	Realme Chongqing Mobile Telecommunications Corp., Ltd.
Address	No.2 Building, No.24 Nichang Boulevard, Huixing Block, Yubei District, Chongqing, China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	RMX1971
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	11
Software Version	ColorOS V6.0
Dimensions (Approx.)	157.0 mm × 74.2 mm × 8.9 mm
Weight (Approx.)	184 g(with battery)

2.5 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery	
	Brand Name	realme
	Model No.	BLP731
	Serial No.	N/A
	Capacitance	Rated: 3950mAh Typical: 4035mAh
	Rated Voltage	3.85 V
	Limited Voltage	4.42 V
	Manufacturer	Huizhou Desay Battery Co., Ltd

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/900/1800/1900 MHz 3G Network WCDMA/HSDPA/HSUPA/HSPA+ Band 1/5/8 4G Network FDD LTE Band 1/3/5/7/8/20/28 TDD LTE Band 38/40/41 Bluetooth 5.0 (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20) 5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/ 40/ 80) GPS, GLONASS, BDS, FM
Note: The EUT is a mobile phone, supporting dual SIM card slots under the same transceiver. Both SIM card slots support GSM, WCDMA and LTE. And both SIM card slots share the same transceiver, so only SIM1 is 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, 5G WLAN, Bluetooth		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM 1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 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 38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	802.11b/g /n(HT20)	2400 ~ 2483.5 MHz	
	802.11a/ /n(HT20/HT40) /ac(VHT20/VHT40/ VHT80)	5150 ~ 5250 MHz	
		5250 ~ 5350 MHz	
		5470 ~ 5725 MHz	
		5725 ~ 5850 MHz	
	Bluetooth	2400 ~ 2483.5 MHz	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
DTM	Not Support		
Hotspot Function	Support		
Power Reduction	Support		
Exposure Category	General Population/Uncontrolled exposure		
EUT Stage	Portable Device		
Product	Type		
	☒ Production unit	☐ Identical prototype	
Note: 1. This device supports both LTE Band 38 and Band 41. Since the supported frequency span for LTE Band 38 falls completely within the supports frequency span for LTE Band 41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE Band 41.			

2.	This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz WLAN/5.5GHz WLAN supports WiFi Direct (GC only).
3.	This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
4.	This device has two WWAN transmit antennas. WWAN down antenna is located at the bottom edge of the device, and WWAN up antenna is located at the top edge of the device. Up and Down antenna support the same WWAN frequency bands, and they can't transmit simultaneously.

2.7 Power Reduction Description

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 or hand.

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.

When there is a voice call (including VOIP), and the audio is actively routed through the headset or speaker, which indicating the body or extremity exposure conditions and the proximity sensor will trigger the body or extremity exposure reduced the power.

When this device used data mode only, and the receiver will not work too, the reduced the power are same as body or extremity exposure.

For WWAN Antenna (6 sets of power reduction levels)

Head, Body and Extremity exposure condition conduction different reduction category, the detail as below:

a) Head exposure conditions (3 sets of power reduction levels):

Reduced power level 1-PCS1900; LTE Band7/38/41(WWAN Use Only)

When the device is transmitting at the WWAN Up Antenna, power reduction will be enabled for those bands.

Reduced power level 2 -PCS1900; LTE Band7/38/41(WWAN+WLAN 2.4G)

When the device WLAN 2.4GHz is transmitting simultaneously with the WWAN Up Antenna, power reduction will be enabled for those bands.

Reduced power level 3 -PCS1900; LTE Band7/38/41(WWAN+WLAN 5G)

When the device WLAN 5GHz is transmitting simultaneously with the WWAN Up Antenna, power reduction will be enabled for those bands.

b) Body（Body-worn and Hotspot） and Extremity exposure conditions(3 sets of power reduction levels):

Once the device is transmitting at the WWAN Up Antenna, the receiver to indicate user in body or hand. Power reduction will be enabled for those bands.

Reduced power level 4- LTE Band7 (WWAN Use Only)

When the device is transmitting at the WWAN Up Antenna, power reduction will be enabled for those bands.

Reduced power level 5- LTE Band7 (WWAN+WLAN 2.4G)

When the device WLAN 2.4GHz is transmitting simultaneously with the WWAN Up Antenna, power reduction will be enabled for those bands.

Reduced power level 6- LTE Band7 (WWAN+WLAN 5G)

When the device WLAN 5GHz is transmitting simultaneously with the WWAN Up Antenna, power reduction will be enabled for those bands.

Note: When the device transmitting at the WWAN Down antenna, Head exposure, Body or Extremity conditions this product not support power reduction function.

Reduced power level 5 same as reduced power 6.

For WLAN Antenna (3 sets of power reduction levels)

Head exposure conditions(2 sets of power reduction levels):

Reduced power level 1-WLAN 5.2&5.3G and WLAN 5.6G (WLAN Use Only)

When the device is transmitting at the WLAN Antenna, power reduction will be enabled for those bands.

Reduced power level 2-WLAN 2.4G, WLAN 5.2&5.3G, WLAN 5.6G and WLAN 5.8G(WLAN +WWAN)

When the device WLAN Antenna is transmitting simultaneously with the WWAN Antenna, power reduction will be enabled for those bands.

Body exposure conditions (1 sets of power reduction levels):

Reduced power level 3- WLAN 2.4G and WLAN 5.2G (WLAN +WWAN)

When device operating under hotspot mode, power reduction will be enabled for those bands.

Reduced power please refer to section 8.6.

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	ANSI/IEEE Std. C95.1-1999	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 D01 v06	Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies
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/ Controlled Exposure
Whole-Body SAR (averaged over the entire body)	0.08	0.4
Partial-Body SAR (averaged over any 1 gram of tissue)	1.60	8.0
SAR for hands, wrists, feet and ankles (averaged over any 10 grams of tissue)	4.0	20.0

NOTE:

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

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

3.3 Test Result Summary

3.3.1 Highest Head and Body SAR (1 g Value)

Band	Maximum Scaled SAR (W/kg)			Maximum Report SAR (W/kg)	
	Head	Body		Head	Body
		Body-worn (15mm)	Hotspot (10mm)		
GSM 850	0.981	0.140	0.245	1.156	0.691
GSM 1900	**1.156**	0.343	**0.691**		
WCDMA Band 5	0.737	0.181	0.312		
LTE Band 5	0.654	0.199	0.252		
LTE Band 7	0.827	0.234	0.580		
LTE Band 41	1.079	0.227	0.618		
2.4G WLAN	1.133	0.103	0.198		
5.2G WLAN	/	/	0.279		
5.3G WLAN	0.760	0.234	/		
5.6G WLAN	0.747	**0.409**	/		
5.8G WLAN	1.142	0.266	0.383		
Bluetooth	0.367	0.029	0.050		
Limit (W/kg)	1.60				
Verdict	Pass				
Note: This device supports both LTE Band 38 and Band 41. Since the supported frequency span for LTE Band 38 falls completely within the supports frequency span for LTE Band 41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE Band 41.					

3.3.2 Highest Product Specific SAR (10 g Value)

Band	Maximum Scaled SAR (W/kg)	Maximum Report SAR (W/kg)
	Specific (0mm)	Specific (0mm)
LTE Band 7	**1.608**	1.608
5.3G WLAN	0.765	
5.6G WLAN	0.728	
Limit (W/kg)	4.0	
Verdict	Pass	

3.3.3 Highest Simultaneous SAR

Position	Simultaneous Configuration	Simultaneous SAR (W/kg)	Limit (W/kg)	Verdict
Head (1g)	GSM + 2.4G WLAN	1.483	1.6	Pass
Body-worn (1g)	GSM + 5G WLAN + Bluetooth	0.781	1.6	Pass
Hotspot Mode (1g)	GSM+ 5G WLAN + Bluetooth	1.124	1.6	Pass
Product Specific (10g)	LTE + 5G WLAN	2.109	4.0	Pass

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 1.156 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

4 MEASUREMENT SYSTEM

4.1 Specific Absorption Rate (SAR) Definition

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

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

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

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

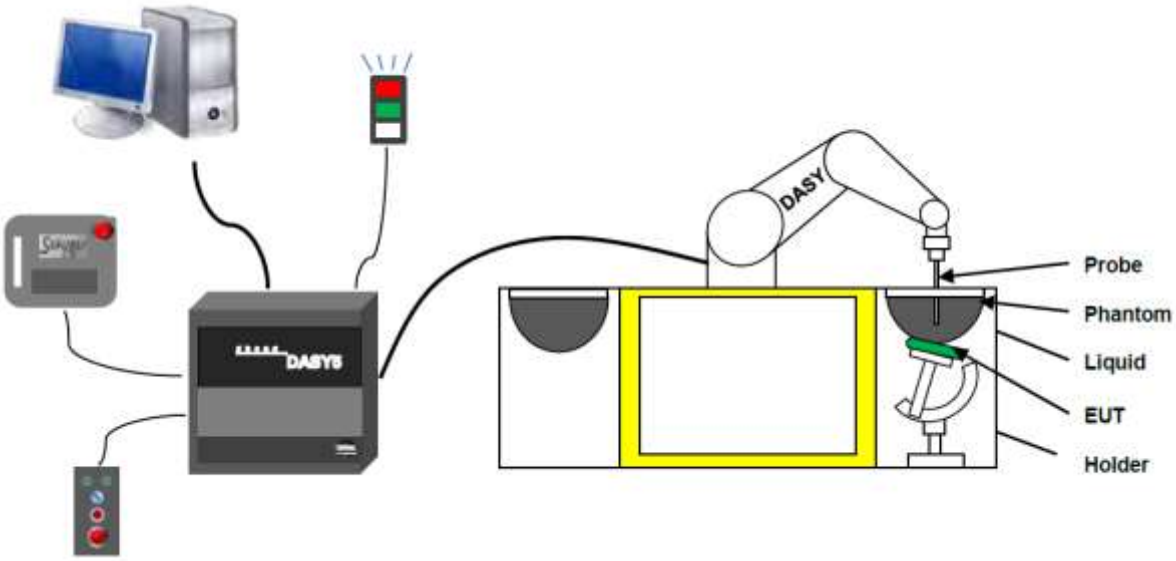
$$\mathbf{SAR} = \frac{\sigma \mathrm{E}^2}{\rho}$$

Where: σ is the conductivity of the tissue,

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

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



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

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

4.2.2 Robot

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

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

4.2.3 E-Field Probe

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

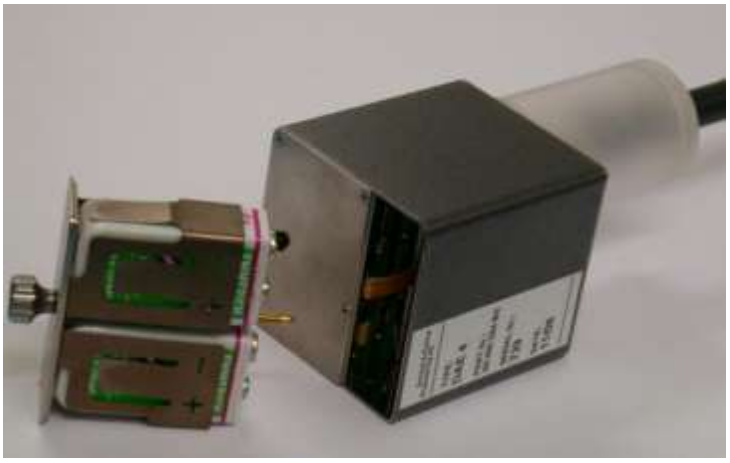
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz;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

E-Field Probe Calibration Process

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

4.2.4 Data Acquisition Electronics

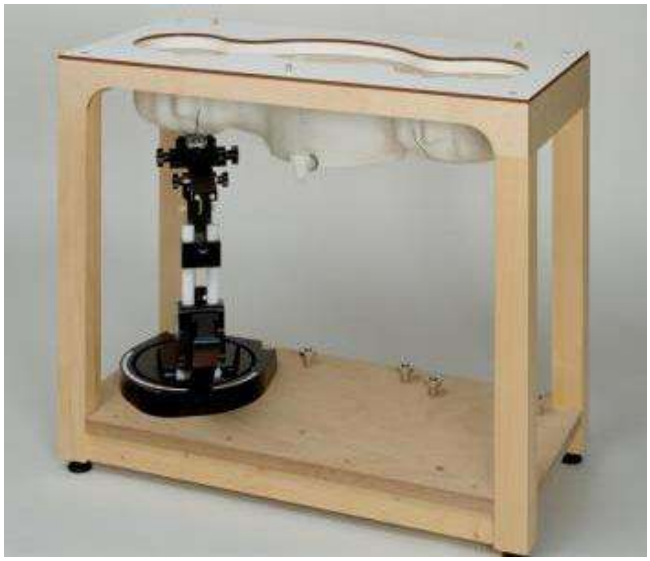
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



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

4.2.5 Phantoms

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



- Left hand
- Right hand
- Flat phantom

Photo of Phantom SN1857

Photo of Phantom SN1859

Serial Number	Material	Length	Height
SN 1857 SAM1	Vinylester, glass fiber reinforced	1000	500
SN 1859 SAM2	Vinylester, glass fiber reinforced	1000	500

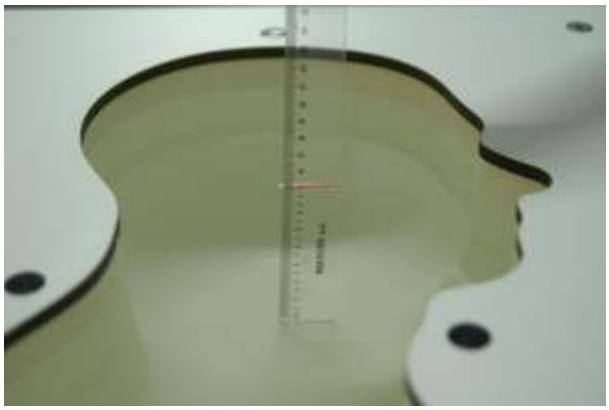
4.2.6 Device Holder

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

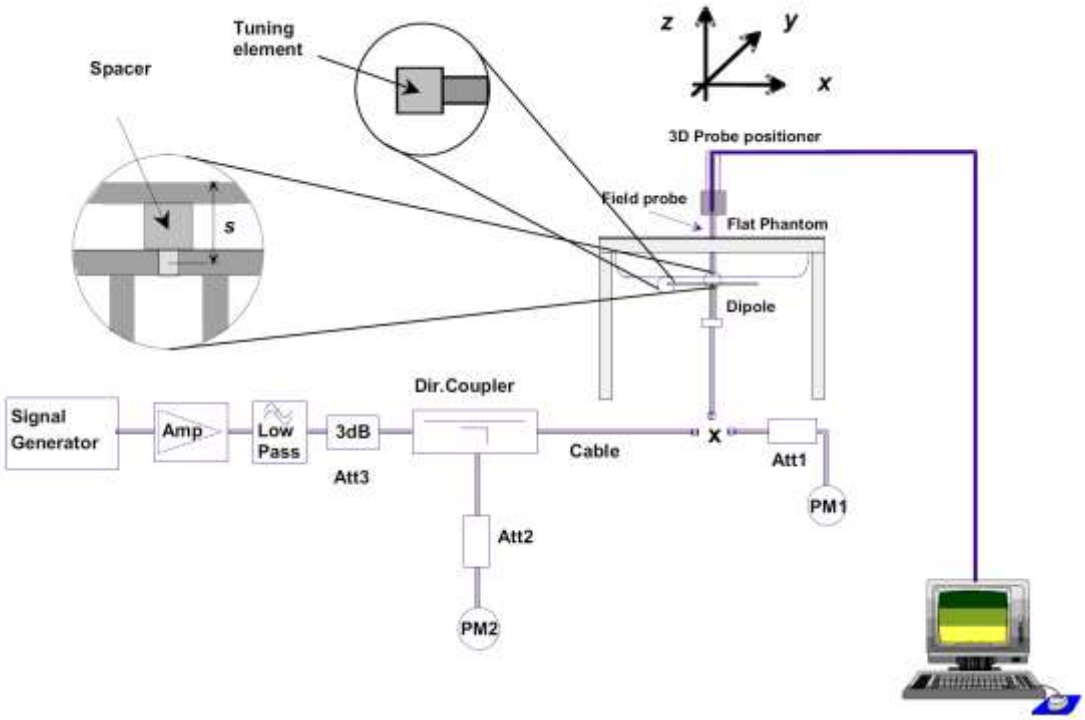
5 SYSTEM VERIFICATION

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

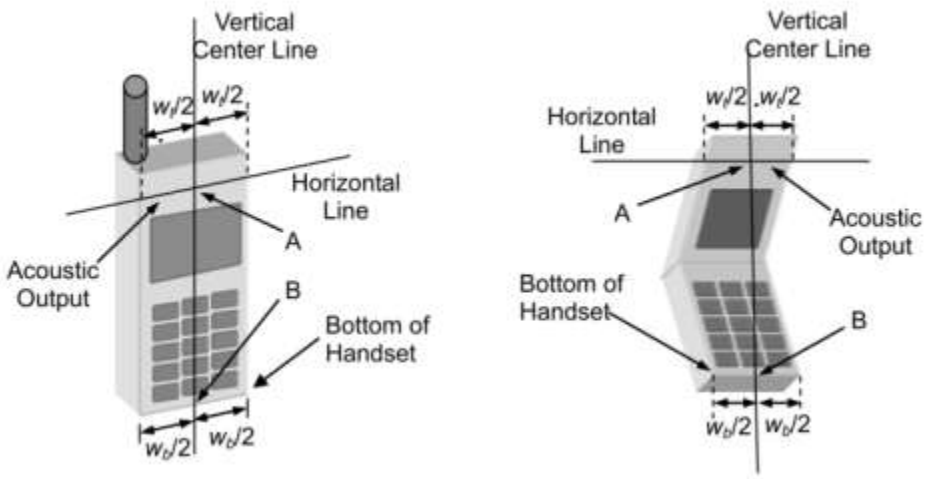
Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

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.

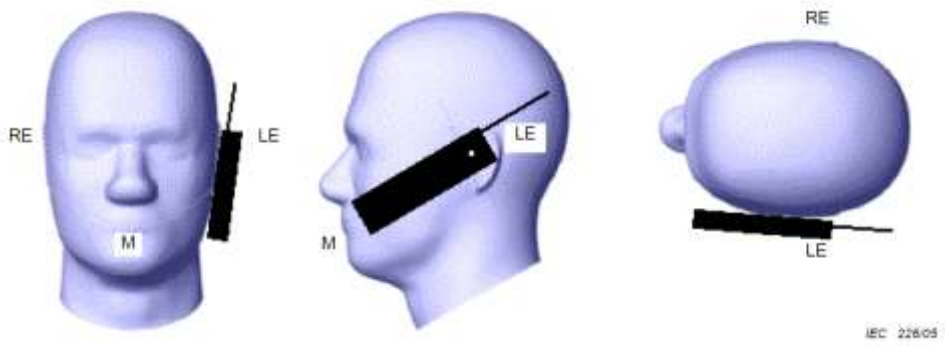
(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset,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

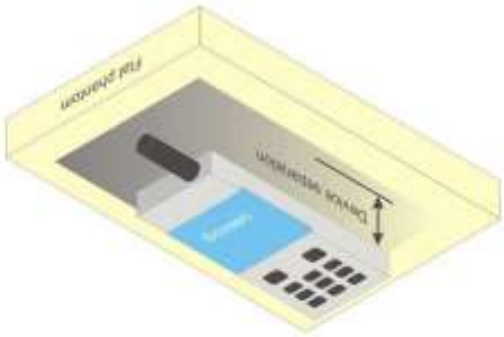
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

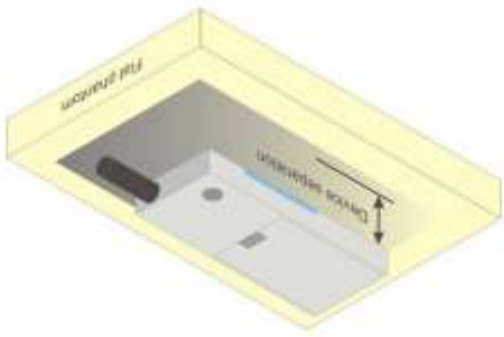
6.2 Body-worn Position Conditions

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.

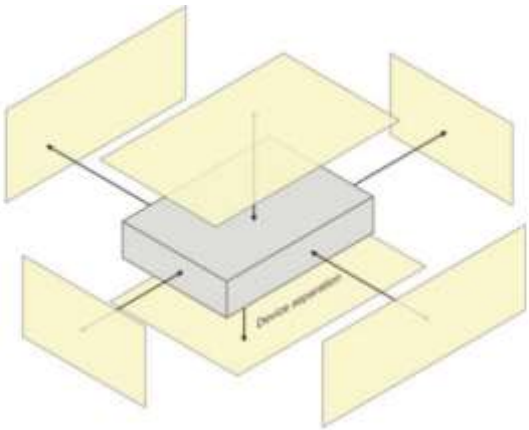
Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice 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).



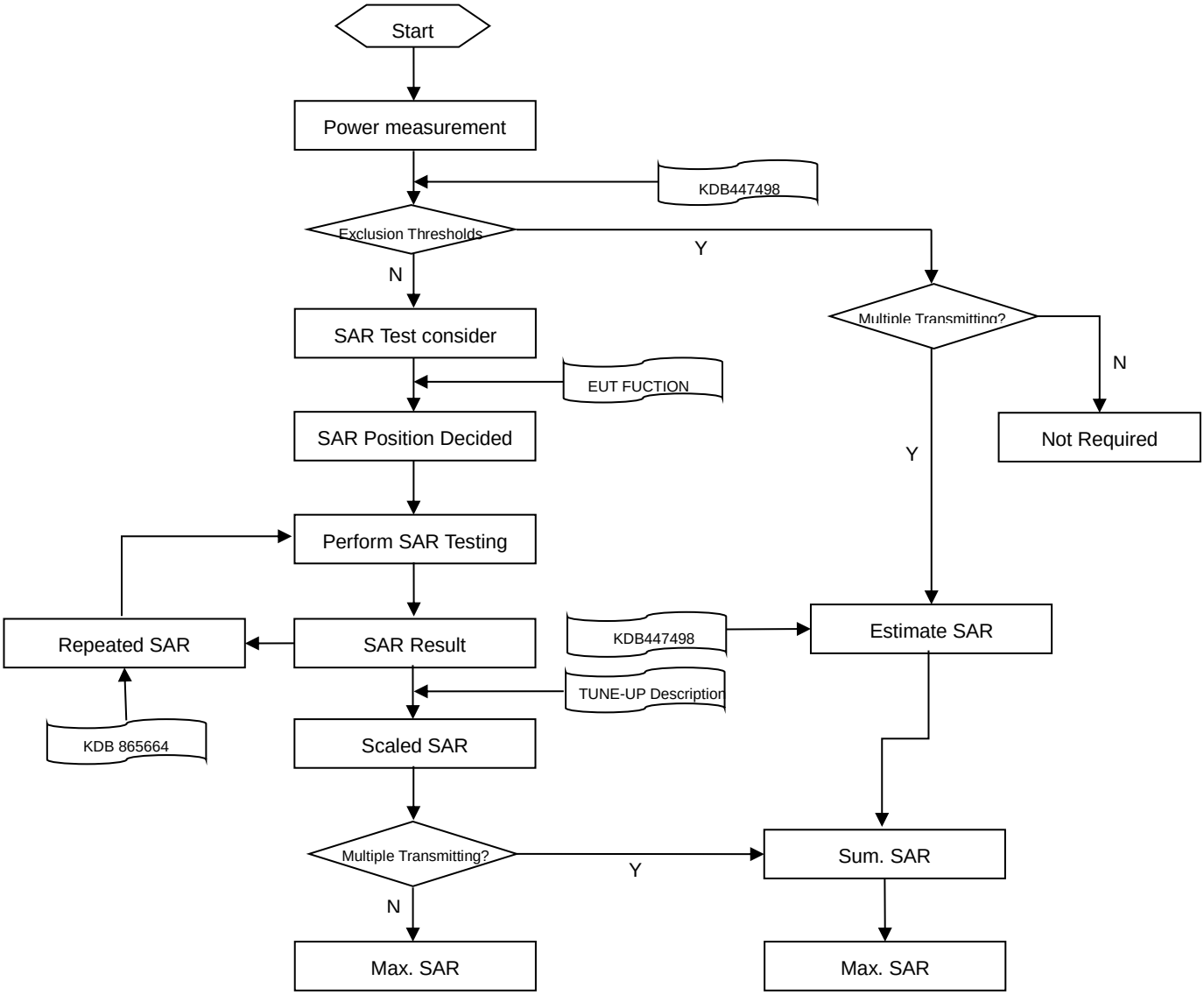
6.4 Product Specific 10g Exposure Consideration

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.

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="3">graded grid</td><td rowspan="2">Δz Zoom (1): between 1st two points closest to phantom surface</td><td rowspan="3">≤ 4 mm</td><td>3–4 GHz: ≤ 3 mm</td></tr>
<tr><td>4–5 GHz: ≤ 2.5 mm</td></tr>
<tr><td>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 FULL CONDUCTED RF OUPUT POWER

8.1 GSM

GSM 850								
GSM850 Band	Burst Average Power(dBm)			Tune-up Limit (dBm)	Frame-Averaged power (dBm)			Tune-up Limit (dBm)
Channel	128	190	251		128	190	251	
GSM (GMSK, 1-Slot)	32.44	32.64	32.43	33.50	23.25	23.45	23.24	24.31
GPRS (GMSK, 1-Slot)	32.44	32.63	32.41	33.50	23.25	23.44	23.22	24.31
GPRS (GMSK, 2-Slots)	30.58	30.73	30.76	31.50	24.45	24.60	24.63	25.37
GPRS (GMSK, 3-Slots)	29.27	29.44	29.08	30.50	24.85	25.02	24.66	26.08
GPRS (GMSK, 4-Slots)	28.34	28.37	28.30	29.50	25.16	**25.19**	25.12	26.32
EGPRS (8PSK, 1-Slot)	30.33	29.98	29.90	31.00	21.14	20.79	20.71	21.81
EGPRS (8PSK, 2-Slots)	28.11	27.61	27.61	29.00	21.98	21.48	21.48	22.87
EGPRS (8PSK, 3-Slots)	27.47	27.01	26.82	28.00	23.05	22.59	22.40	23.58
EGPRS (8PSK, 4-Slots)	27.41	26.86	26.70	28.00	24.23	23.68	23.52	24.82
GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up Limit (dBm)	Frame-Averaged power(dBm)			Tune-up Limit (dBm)
Channel	512	661	810		512	661	810	
GSM (GMSK, 1-Slot)	30.24	30.12	30.06	30.50	21.05	20.93	20.87	21.31
GPRS (GMSK, 1-Slot)	30.25	30.04	30.04	30.50	21.06	20.85	20.85	21.31
GPRS (GMSK, 2-Slots)	27.38	27.20	27.09	28.00	21.25	21.07	20.96	21.87
GPRS (GMSK, 3-Slots)	26.43	26.21	26.27	27.00	**22.01**	21.79	21.85	22.58
GPRS (GMSK, 4-Slots)	25.09	24.82	24.86	25.50	21.91	21.64	21.68	22.32
EGPRS (8PSK, 1-Slot)	28.65	28.36	28.87	29.00	19.46	19.17	19.68	19.81
EGPRS (8PSK, 2-Slots)	26.18	26.27	26.82	27.00	20.05	20.14	20.69	20.87
EGPRS (8PSK, 3-Slots)	24.91	24.67	24.19	25.00	20.49	20.25	19.77	20.58
EGPRS (8PSK, 4-Slots)	23.25	23.43	23.08	24.00	20.07	20.25	19.90	20.82

Note [1]: SAR testing was performed on the maximum frame-averaged power mode.

Note [2]: The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:

Frame-averaged power = Burst averaged power (1 Tx Slot) – 9.19 dB

Frame-averaged power = Burst averaged power (2 Tx Slots) – 6.13 dB

Frame-averaged power = Burst averaged power (3 Tx Slots) - 4.42dB

Frame-averaged power = Burst averaged power (4 Tx Slots) – 3.18 dB

8.2 WCDMA

WCDMA	Band 5			
Channel	4132	4182	4233	Tune-up Limit (dBm)
RMC 12.2Kbps	**23.15**	23.13	23.13	24.30
HSDPA Subtest-1	22.17	22.15	22.15	23.30
HSDPA Subtest-2	22.20	22.20	22.17	23.30
HSDPA Subtest-3	21.72	21.71	21.71	22.80
HSDPA Subtest-4	21.75	21.71	21.68	22.80
HSUPA Subtest-1	22.24	22.16	22.17	23.30
HSUPA Subtest-2	20.19	20.13	20.15	21.30
HSUPA Subtest-3	21.16	21.13	21.14	22.30
HSUPA Subtest-4	20.20	20.19	20.10	21.30
HSUPA Subtest-5	22.17	22.12	22.15	23.30

8.3 LTE

FDD LTE Band 5									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20450	20525	20600		20450	20525	20600	
10 MHz	1 (RB_Pos:0)	22.99	22.92	23.02	24.30	21.95	22.31	22.08	23.30
	1 (RB_Pos:25)	22.98	22.88	23.05	24.30	21.93	22.33	22.06	23.30
	1 (RB_Pos:49)	22.93	22.99	**23.07**	24.30	21.84	22.39	22.02	23.30
	25 (RB_Pos:0)	22.08	22.00	21.98	23.30	21.12	21.06	21.14	22.30
	25 (RB_Pos:12)	22.08	22.01	22.11	23.30	21.12	21.10	21.24	22.30
	25 (RB_Pos:25)	22.05	21.97	22.07	23.30	21.09	21.03	21.18	22.30
	50 (RB_Pos:0)	22.03	21.96	22.01	23.30	21.05	21.03	21.03	22.30
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20425	20525	20625		20425	20525	20625	
5MHz	1 (RB_Pos:0)	22.98	22.91	23.06	24.30	22.19	22.41	22.15	23.30
	1 (RB_Pos:13)	23.00	22.99	23.08	24.30	22.19	22.54	22.18	23.30
	1 (RB_Pos:24)	23.06	23.05	23.05	24.30	22.26	22.56	22.14	23.30
	12 (RB_Pos:0)	22.02	22.00	22.10	23.30	21.12	21.18	21.16	22.30
	12 (RB_Pos:6)	22.01	21.97	22.11	23.30	21.13	21.14	21.19	22.30
	12 (RB_Pos:13)	22.10	21.96	22.04	23.30	21.20	21.14	21.12	22.30
	25 (RB_Pos:0)	22.06	21.99	22.06	23.30	21.15	21.09	21.05	22.30
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20415	20525	20635		20415	20525	20635	
3.0 MHz	1 (RB_Pos:0)	22.93	22.93	23.05	24.30	21.92	22.36	22.05	23.30
	1 (RB_Pos:8)	22.91	22.91	23.03	24.30	21.89	22.32	21.98	23.30
	1 (RB_Pos:14)	22.92	22.91	23.01	24.30	21.84	22.30	22.00	23.30
	8 (RB_Pos:0)	21.95	21.97	21.98	23.30	21.15	21.07	21.09	22.30
	8 (RB_Pos:3)	21.97	21.97	22.06	23.30	21.16	21.08	21.12	22.30
	8 (RB_Pos:7)	21.94	21.91	22.02	23.30	21.11	21.03	21.06	22.30
	15 (RB_Pos:0)	21.95	21.96	22.03	23.30	21.08	21.04	21.02	22.30
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20407	20525	20643		20407	20525	20643	
1.4MHz	1 (RB_Pos:0)	22.78	22.81	22.92	24.30	22.02	22.24	21.90	23.30
	1 (RB_Pos:3)	22.88	22.91	22.98	24.30	22.06	22.27	21.96	23.30
	1 (RB_Pos:5)	22.82	22.80	22.93	24.30	22.08	22.24	21.93	23.30
	3 (RB_Pos:0)	22.83	22.83	22.88	24.30	21.98	22.05	22.03	23.30
	3 (RB_Pos:1)	22.91	22.88	22.95	24.30	22.02	22.11	22.10	23.30
	3 (RB_Pos:3)	22.82	22.81	22.89	24.30	21.98	22.03	22.03	23.30

	6 (RB_Pos:0)	21.86	21.90	21.98	23.30	21.09	20.85	21.16	22.30

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	22.46	22.72	22.78	24.00	21.97	22.15	22.22	23.00
	1 (RB_Pos:50)	22.53	22.66	**22.79**	24.00	22.01	22.11	22.17	23.00
	1 (RB_Pos:99)	22.42	22.48	22.68	24.00	22.00	21.91	22.15	23.00
	50 (RB_Pos:0)	21.59	21.78	21.80	23.00	20.69	20.84	20.88	22.00
	50 (RB_Pos:25)	21.57	21.71	21.88	23.00	20.70	20.80	20.99	22.00
	50 (RB_Pos:50)	21.53	21.64	21.86	23.00	20.66	20.70	20.89	22.00
	100 (RB_Pos:0)	21.53	21.68	21.77	23.00	20.69	20.79	20.88	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	22.43	22.59	22.87	24.00	21.37	22.04	22.24	23.00
	1 (RB_Pos:38)	22.39	22.54	22.79	24.00	21.35	21.99	22.16	23.00
	1 (RB_Pos:74)	22.53	22.35	22.67	24.00	21.43	21.79	22.05	23.00
	36 (RB_Pos:0)	21.45	21.69	21.87	23.00	20.57	20.79	20.91	22.00
	36 (RB_Pos:20)	21.55	21.61	21.81	23.00	20.65	20.80	20.91	22.00
	36 (RB_Pos:39)	21.53	21.55	21.72	23.00	20.60	20.67	20.85	22.00
	75 (RB_Pos:0)	21.51	21.65	21.79	23.00	20.67	20.74	20.86	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	22.43	22.63	22.83	24.00	21.36	22.04	21.88	23.00
	1 (RB_Pos:25)	22.41	22.58	22.76	24.00	21.33	22.03	21.84	23.00
	1 (RB_Pos:49)	22.51	22.52	22.69	24.00	21.43	21.90	21.68	23.00
	25 (RB_Pos:0)	21.43	21.64	21.82	23.00	20.53	20.79	21.02	22.00
	25 (RB_Pos:12)	21.50	21.69	21.81	23.00	20.53	20.75	21.02	22.00
	25 (RB_Pos:25)	21.53	21.61	21.79	23.00	20.59	20.72	20.91	22.00
	50 (RB_Pos:0)	21.50	21.63	21.84	23.00	20.61	20.70	20.92	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	22.35	22.64	22.74	24.00	21.56	22.19	21.92	23.00
	1 (RB_Pos:13)	22.45	22.63	22.77	24.00	21.62	22.21	21.94	23.00
	1 (RB_Pos:24)	22.33	22.53	22.68	24.00	21.55	22.12	21.82	23.00
	12 (RB_Pos:0)	21.41	21.67	21.81	23.00	20.53	20.87	20.94	22.00
	12 (RB_Pos:6)	21.42	21.64	21.81	23.00	20.60	20.83	20.89	22.00

	12 (RB_Pos:13)	21.39	21.58	21.79	23.00	20.53	20.80	20.88	22.00
	25 (RB_Pos:0)	21.37	21.61	21.76	23.00	20.50	20.74	20.80	22.00

TDD LTE Band 38									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37850	38000	38150		37850	38000	38150	
20MHz	1 (RB_Pos:0)	**23.35**	23.08	**23.35**	24.00	22.73	22.37	22.80	23.00
	1 (RB_Pos:50)	23.00	23.10	23.22	24.00	22.41	22.38	22.70	23.00
	1 (RB_Pos:99)	22.95	23.07	23.21	24.00	22.30	22.40	22.68	23.00
	50 (RB_Pos:0)	22.27	22.21	22.28	23.00	21.36	21.32	21.46	22.00
	50 (RB_Pos:25)	22.25	22.20	22.19	23.00	21.28	21.31	21.44	22.00
	50 (RB_Pos:50)	22.01	22.14	22.16	23.00	21.10	21.26	21.29	22.00
	100 (RB_Pos:0)	22.21	22.19	22.15	23.00	21.28	21.30	21.34	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37825	38000	38175		37825	38000	38175	
15MHz	1 (RB_Pos:0)	23.28	23.08	23.33	24.00	22.63	22.65	22.72	23.00
	1 (RB_Pos:38)	22.98	23.11	23.19	24.00	22.38	22.66	22.57	23.00
	1 (RB_Pos:74)	22.85	23.08	23.19	24.00	22.27	22.65	22.55	23.00
	36 (RB_Pos:0)	22.19	22.13	22.22	23.00	21.35	21.23	21.39	22.00
	36 (RB_Pos:20)	22.13	22.10	22.21	23.00	21.22	21.25	21.36	22.00
	36 (RB_Pos:39)	21.96	22.07	22.13	23.00	21.07	21.18	21.27	22.00
	75 (RB_Pos:0)	22.14	22.16	22.16	23.00	21.25	21.27	21.26	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37800	38000	38200		37800	38000	38200	
10MHz	1 (RB_Pos:0)	23.21	23.04	23.28	24.00	22.58	22.57	22.71	23.00
	1 (RB_Pos:25)	23.11	23.13	23.25	24.00	22.50	22.68	22.79	23.00
	1 (RB_Pos:49)	22.94	23.08	23.19	24.00	22.32	22.61	22.69	23.00
	25 (RB_Pos:0)	22.23	22.14	22.26	23.00	21.38	21.31	21.37	22.00
	25 (RB_Pos:12)	22.24	22.18	22.20	23.00	21.34	21.27	21.37	22.00
	25 (RB_Pos:25)	22.18	22.18	22.29	23.00	21.28	21.27	21.42	22.00
	50 (RB_Pos:0)	22.20	22.16	22.25	23.00	21.30	21.30	21.39	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37775	38000	38225		37775	38000	38225	
5MHz	1 (RB_Pos:0)	23.24	23.12	23.29	24.00	22.71	22.46	22.62	23.00
	1 (RB_Pos:13)	23.23	23.19	23.27	24.00	22.72	22.50	22.69	23.00
	1 (RB_Pos:24)	23.14	23.08	23.17	24.00	22.64	22.44	22.55	23.00
	12 (RB_Pos:0)	22.21	22.20	22.27	23.00	21.44	21.27	21.38	22.00

	12 (RB_Pos:6)	22.26	22.11	22.40	23.00	21.45	21.41	21.48	22.00
	12 (RB_Pos:13)	22.18	22.12	22.26	23.00	21.41	21.34	21.33	22.00
	25 (RB_Pos:0)	22.22	22.18	22.24	23.00	21.34	21.25	21.45	22.00

TDD LTE Band 41											
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40140	40473	40807	41140		40140	40473	40807	41140	
20MHz	1 (RB_Pos:0)	23.48	23.77	23.51	**23.86**	24.00	22.78	23.67	22.92	23.27	24.00
	1 (RB_Pos:50)	23.37	23.48	23.52	23.74	24.00	22.70	23.49	22.73	23.15	24.00
	1 (RB_Pos:99)	23.43	23.39	23.22	23.46	24.00	22.77	23.47	22.72	22.92	24.00
	50 (RB_Pos:0)	22.48	22.74	22.38	22.78	23.00	21.50	22.64	21.75	21.90	23.00
	50 (RB_Pos:25)	22.46	22.67	22.61	22.80	23.00	21.52	22.61	21.70	21.87	23.00
	50 (RB_Pos:50)	22.44	22.55	22.51	22.62	23.00	21.51	22.54	21.60	21.77	23.00
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40115	40465	40815	41165		40115	40465	40815	41165	
15MHz	1 (RB_Pos:0)	23.42	23.71	23.68	23.92	24.00	22.73	23.04	23.18	23.14	24.00
	1 (RB_Pos:38)	23.30	23.44	23.53	23.76	24.00	22.66	22.79	23.02	23.02	24.00
	1 (RB_Pos:74)	23.32	23.41	23.46	23.44	24.00	22.70	22.75	22.97	22.71	24.00
	36 (RB_Pos:0)	22.40	22.66	22.60	22.70	23.00	21.48	21.74	21.69	21.85	23.00
	36 (RB_Pos:20)	22.38	22.57	22.55	22.60	23.00	21.46	21.69	21.67	21.71	23.00
	36 (RB_Pos:39)	22.37	22.51	22.47	22.52	23.00	21.44	21.63	21.57	21.64	23.00
	75 (RB_Pos:0)	22.41	22.58	22.55	22.55	23.00	21.52	21.71	21.64	21.68	23.00
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40090	40457	40823	41190		40090	40457	40823	41190	
10MHz	1 (RB_Pos:0)	23.32	23.62	23.62	23.84	24.00	22.63	22.96	23.05	23.24	24.00
	1 (RB_Pos:25)	23.26	23.46	23.53	23.77	24.00	22.60	22.77	23.05	23.14	24.00
	1 (RB_Pos:49)	23.28	23.50	23.44	23.49	24.00	22.61	22.86	22.91	22.89	24.00
	25 (RB_Pos:0)	22.39	22.67	22.58	22.85	23.00	21.50	21.75	21.67	21.95	23.00
	25 (RB_Pos:12)	22.38	22.54	22.61	22.71	23.00	21.48	21.63	21.71	21.85	23.00
	25 (RB_Pos:25)	22.33	22.59	22.53	22.63	23.00	21.43	21.68	21.63	21.74	23.00
	50 (RB_Pos:0)	22.36	22.62	22.59	22.68	23.00	21.46	21.69	21.70	21.78	23.00
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40065	40448	40832	41215		40065	40448	40832	41215	
5MHz	1 (RB_Pos:0)	23.37	23.55	23.49	23.72	24.00	22.68	22.95	22.84	23.06	24.00
	1 (RB_Pos:13)	23.41	23.60	23.58	23.69	24.00	22.69	22.99	22.90	23.00	24.00
	1 (RB_Pos:24)	23.28	23.46	23.47	23.47	24.00	22.61	22.89	22.80	22.78	24.00
	12 (RB_Pos:0)	22.39	22.57	22.61	22.67	23.00	21.46	21.75	21.76	21.84	23.00

	12 (RB_Pos:6)	22.47	22.58	22.61	22.61	23.00	21.50	21.75	21.72	21.74	23.00
	12 (RB_Pos:13)	22.39	22.53	22.56	22.61	23.00	21.45	21.70	21.69	21.75	23.00

8.4 WIFI

8.4.1 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	AV Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	**19.13**	19.50	Yes
		6	2437	18.85	19.50	Yes
		11	2462	19.06	19.50	Yes
	802.11g	1	2412	17.12	17.50	No
		6	2437	17.47	17.50	No
		11	2462	17.12	17.50	No
	802.11n(HT20)	1	2412	16.90	17.50	No
		6	2437	17.01	17.50	No
		11	2462	16.90	17.50	No

8.4.2 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	AV Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	15.55	16.50	No
		44	5220	15.72	16.50	No
		48	5240	15.77	16.50	No
	802.11n(HT20)	36	5180	15.45	16.50	No
		44	5220	15.58	16.50	No
		48	5240	15.68	16.50	No
	802.11n(HT40)	38	5190	13.30	13.50	No
		46	5230	15.92	16.50	No
	802.11ac(VHT20)	36	5180	15.00	16.50	No
		44	5220	15.55	16.50	No
		48	5240	15.60	16.50	No
	802.11ac(VHT40)	38	5190	11.35	16.50	No
		46	5230	15.97	16.50	No
	802.11ac(VHT80)	42	5210	11.08	12.50	No
5.3 (5.25~5.35)	802.11a	52	5260	15.36	16.50	No
		60	5300	15.18	16.50	No
		64	5320	15.10	16.50	No
	802.11n(HT20)	52	5260	15.20	16.50	No
		60	5300	15.00	16.50	No
		64	5320	14.84	16.50	No
	802.11n(HT40)	54	5270	**15.51**	16.50	Yes
		62	5310	15.23	16.50	No
	802.11ac(VHT20)	52	5260	15.15	16.50	No
		60	5300	15.00	16.50	No
		64	5320	14.87	16.50	No

	802.11ac(VHT40)	54	5270	15.51	16.50	No
		62	5310	15.23	16.50	No
	802.11ac(VHT80)	58	5290	14.72	15.50	No
5.6 (5.47~5.725)	802.11a	100	5500	16.84	18.50	No
		116	5580	16.24	18.50	No
		140	5700	16.48	18.50	No
	802.11n(HT20)	100	5500	16.70	18.50	No
		116	5580	16.00	18.50	No
		140	5700	16.30	18.50	No
	802.11n(HT40)	102	5510	16.75	18.50	No
		118	5590	16.45	18.50	No
		134	5670	16.46	18.50	No
	802.11ac(VHT20)	100	5500	16.71	18.50	No
		116	5580	16.08	18.50	No
		140	5700	16.46	18.50	No
	802.11ac(VHT40)	102	5510	16.85	18.50	No
		118	5590	16.46	18.50	No
		134	5670	16.50	18.50	No
	802.11ac(VHT80)	106	5530	**16.65**	18.50	Yes
		122	5610	16.52	18.50	No
5.8 (5.725~5.850)	802.11a	149	5745	13.42	16.50	No
		157	5785	15.20	16.50	No
		165	5825	14.38	16.50	No
	802.11n(HT20)	149	5745	13.24	16.50	No
		157	5785	15.03	16.50	No
		165	5825	14.22	16.50	No
	802.11n(HT40)	151	5755	13.75	16.50	No
		159	5795	15.26	16.50	No
	802.11ac(VHT20)	149	5745	13.22	16.50	No
		157	5785	15.02	16.50	No
		165	5825	14.22	16.50	No
	802.11ac(VHT40)	151	5755	13.74	16.50	No
		159	5795	15.19	16.50	No
	802.11ac(VHT80)	155	5775	**15.19**	16.50	Yes

8.5 Bluetooth

Mode	GFSK			π/4-DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
AV Power (dBm)	**11.92**	11.38	11.40	11.56	10.82	11.02
Tune-Up Limit (dBm)	13.50			13.00		
Mode	8-DPSK			BLE		
Channel	0	39	78	0	19	39
Frequency (MHz)	2402	2441	2480	2402	2440	2480
AV Power (dBm)	11.70	11.12	11.21	11.96	11.60	11.40
Tune-Up Limit (dBm)	13.00			13.00		

8.6 Power Reduction List

8.6.1 Power Reduced Level 1&2 of GSM 1900

GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up	Frame-Averaged power(dBm)			Tune-up
Channel	512	661	810	Limit (dBm)	512	661	810	Limit (dBm)
GSM (GMSK, 1-Slot)	29.20	29.20	28.94	29.50	20.01	20.01	19.75	20.31
GPRS (GMSK, 1-Slot)	28.99	28.96	28.72	29.50	19.80	19.77	19.53	20.31
GPRS (GMSK, 2-Slots)	25.61	25.69	25.45	26.00	19.48	19.56	19.32	19.87
GPRS (GMSK, 3-Slots)	24.67	24.74	24.50	25.00	20.25	**20.32**	20.08	20.58
GPRS (GMSK, 4-Slots)	23.31	23.40	23.05	23.50	20.13	20.22	19.87	20.32
EGPRS (8PSK, 1-Slot)	26.95	26.87	26.42	28.00	17.76	17.68	17.23	18.81
EGPRS (8PSK, 2-Slots)	25.12	25.04	24.64	26.00	18.99	18.91	18.51	19.87
EGPRS (8PSK, 3-Slots)	23.51	23.53	23.10	24.00	19.09	19.11	18.68	19.58
EGPRS (8PSK, 4-Slots)	22.24	22.63	22.23	23.00	19.06	19.45	19.05	19.82

8.6.2 Power Reduced Level 3 of GSM 1900

GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up	Frame-Averaged power(dBm)			Tune-up
Channel	512	661	810	Limit (dBm)	512	661	810	Limit (dBm)
GSM (GMSK, 1-Slot)	28.07	28.18	27.93	28.50	18.88	18.99	18.74	19.31
GPRS (GMSK, 1-Slot)	28.06	28.14	27.88	28.50	18.87	18.95	18.69	19.31
GPRS (GMSK, 2-Slots)	24.75	24.93	24.56	25.00	18.62	18.80	18.43	18.87
GPRS (GMSK, 3-Slots)	23.92	24.00	23.64	24.50	19.50	**19.58**	19.22	20.08
GPRS (GMSK, 4-Slots)	22.45	22.51	22.26	23.00	19.27	19.33	19.08	19.82
EGPRS (8PSK, 1-Slot)	27.13	26.92	26.52	28.00	17.94	17.73	17.33	18.81
EGPRS (8PSK, 2-Slots)	23.66	23.65	23.16	24.00	17.53	17.52	17.03	17.87
EGPRS (8PSK, 3-Slots)	22.88	23.04	22.93	24.00	18.46	18.62	18.51	19.58
EGPRS (8PSK, 4-Slots)	21.24	21.71	21.43	22.00	18.06	18.53	18.25	18.82

8.6.3 Power Reduced Level 1&2 of LTE Band 7

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	17.43	**17.48**	17.22	18.00	17.91	17.89	17.67	18.00
	1 (RB_Pos:50)	17.37	17.35	17.18	18.00	17.85	17.83	17.67	18.00
	1 (RB_Pos:99)	17.38	17.34	17.04	18.00	17.81	17.77	17.46	18.00
	50 (RB_Pos:0)	17.51	17.45	17.24	18.00	17.59	17.53	17.23	18.00
	50 (RB_Pos:25)	17.44	17.38	17.18	18.00	17.52	17.47	17.21	18.00
	50 (RB_Pos:50)	17.42	17.31	17.11	18.00	17.51	17.42	17.14	18.00
	100 (RB_Pos:0)	17.45	17.37	17.22	18.00	17.55	17.46	17.25	18.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	17.43	17.44	17.36	18.00	17.39	17.92	17.85	18.00
	1 (RB_Pos:38)	17.31	17.35	17.13	18.00	17.27	17.80	17.60	18.00
	1 (RB_Pos:74)	17.35	17.27	17.04	18.00	17.38	17.69	17.50	18.00
	36 (RB_Pos:0)	17.38	17.41	17.21	18.00	17.46	17.60	17.24	18.00
	36 (RB_Pos:20)	17.45	17.37	17.18	18.00	17.53	17.53	17.22	18.00
	36 (RB_Pos:39)	17.40	17.37	17.12	18.00	17.52	17.50	17.21	18.00
	75 (RB_Pos:0)	17.44	17.34	17.19	18.00	17.56	17.48	17.24	18.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	17.43	17.41	17.30	18.00	17.40	17.86	17.43	18.00
	1 (RB_Pos:25)	17.38	17.36	17.14	18.00	17.32	17.80	17.21	18.00
	1 (RB_Pos:49)	17.41	17.27	17.11	18.00	17.43	17.76	17.14	18.00
	25 (RB_Pos:0)	17.39	17.42	17.23	18.00	17.46	17.49	17.35	18.00
	25 (RB_Pos:12)	17.37	17.39	17.21	18.00	17.43	17.51	17.34	18.00
	25 (RB_Pos:25)	17.48	17.39	17.14	18.00	17.56	17.49	17.27	18.00
	50 (RB_Pos:0)	17.44	17.36	17.19	18.00	17.51	17.45	17.26	18.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	17.40	17.36	17.11	18.00	17.81	17.60	17.33	18.00
	1 (RB_Pos:13)	17.41	17.41	17.12	18.00	17.85	17.63	17.40	18.00
	1 (RB_Pos:24)	17.34	17.34	17.06	18.00	17.77	17.58	17.30	18.00
	12 (RB_Pos:0)	17.41	17.38	17.18	18.00	17.60	17.52	17.30	18.00
	12 (RB_Pos:6)	17.39	17.40	17.14	18.00	17.57	17.55	17.25	18.00
	12 (RB_Pos:13)	17.35	17.36	17.11	18.00	17.52	17.52	17.21	18.00

	25 (RB_Pos:0)	17.38	17.37	17.15	18.00	17.48	17.41	17.23	18.00

8.6.4 Power Reduced Level 3 of LTE Band 7

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	16.45	**16.52**	16.27	17.00	16.94	16.95	16.67	17.00
	1 (RB_Pos:50)	16.41	16.38	16.20	17.00	16.89	16.79	16.60	17.00
	1 (RB_Pos:99)	16.38	16.35	16.05	17.00	16.86	16.72	16.48	17.00
	50 (RB_Pos:0)	16.52	16.41	16.25	17.00	16.56	16.53	16.25	17.00
	50 (RB_Pos:25)	16.47	16.38	16.21	17.00	16.50	16.43	16.22	17.00
	50 (RB_Pos:50)	16.39	16.32	16.15	17.00	16.42	16.36	16.15	17.00
	100 (RB_Pos:0)	16.48	16.36	16.17	17.00	16.54	16.42	16.21	17.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	16.39	16.46	16.38	17.00	16.38	16.89	16.82	17.00
	1 (RB_Pos:38)	16.32	16.36	16.13	17.00	16.25	16.75	16.59	17.00
	1 (RB_Pos:74)	16.40	16.27	16.07	17.00	16.31	16.64	16.55	17.00
	36 (RB_Pos:0)	16.38	16.44	16.22	17.00	16.41	16.54	16.24	17.00
	36 (RB_Pos:20)	16.46	16.38	16.16	17.00	16.51	16.48	16.19	17.00
	36 (RB_Pos:39)	16.43	16.32	16.10	17.00	16.46	16.46	16.19	17.00
	75 (RB_Pos:0)	16.40	16.35	16.14	17.00	16.53	16.43	16.26	17.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	16.40	16.40	16.33	17.00	16.38	16.80	16.36	17.00
	1 (RB_Pos:25)	16.38	16.35	16.14	17.00	16.31	16.75	16.18	17.00
	1 (RB_Pos:49)	16.43	16.30	16.12	17.00	16.36	16.69	16.15	17.00
	25 (RB_Pos:0)	16.37	16.40	16.18	17.00	16.43	16.49	16.33	17.00
	25 (RB_Pos:12)	16.35	16.39	16.21	17.00	16.44	16.48	16.31	17.00
	25 (RB_Pos:25)	16.46	16.38	16.14	17.00	16.52	16.45	16.25	17.00
	50 (RB_Pos:0)	16.43	16.37	16.18	17.00	16.45	16.43	16.24	17.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	16.39	16.37	16.11	17.00	16.82	16.55	16.37	17.00
	1 (RB_Pos:13)	16.45	16.39	16.19	17.00	16.93	16.57	16.41	17.00
	1 (RB_Pos:24)	16.34	16.33	16.05	17.00	16.82	16.47	16.34	17.00

	12 (RB_Pos:0)	16.39	16.38	16.17	17.00	16.54	16.49	16.28	17.00
	12 (RB_Pos:6)	16.38	16.44	16.15	17.00	16.57	16.52	16.26	17.00
	12 (RB_Pos:13)	16.33	16.37	16.11	17.00	16.51	16.47	16.22	17.00
	25 (RB_Pos:0)	16.39	16.37	16.09	17.00	16.47	16.37	16.24	17.00

8.6.5 Power Reduced Level 4 of LTE Band 7

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	19.96	**20.01**	19.78	20.50	20.45	20.46	20.18	20.50
	1 (RB_Pos:50)	19.91	19.85	19.64	20.50	20.38	20.32	20.08	20.50
	1 (RB_Pos:99)	19.86	19.84	19.51	20.50	20.32	20.27	19.99	20.50
	50 (RB_Pos:0)	20.01	19.90	19.67	20.50	20.09	20.06	19.76	20.50
	50 (RB_Pos:25)	19.97	19.87	19.66	20.50	20.04	20.02	19.74	20.50
	50 (RB_Pos:50)	19.91	19.81	19.62	20.50	19.99	19.94	19.69	20.50
	100 (RB_Pos:0)	19.94	19.85	19.64	20.50	20.05	19.98	19.76	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	19.90	19.91	19.85	20.50	19.94	20.32	20.32	20.50
	1 (RB_Pos:38)	19.83	19.82	19.64	20.50	19.81	20.26	20.12	20.50
	1 (RB_Pos:74)	19.89	19.73	19.56	20.50	19.82	20.22	20.03	20.50
	36 (RB_Pos:0)	19.88	19.87	19.72	20.50	19.95	20.09	19.81	20.50
	36 (RB_Pos:20)	19.93	19.90	19.68	20.50	20.02	20.01	19.78	20.50
	36 (RB_Pos:39)	19.87	19.80	19.63	20.50	20.00	19.98	19.72	20.50
	75 (RB_Pos:0)	19.86	19.86	19.63	20.50	20.04	19.95	19.73	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	19.89	19.90	19.80	20.50	19.91	20.33	19.91	20.50
	1 (RB_Pos:25)	19.85	19.83	19.61	20.50	19.85	20.29	19.72	20.50
	1 (RB_Pos:49)	19.91	19.80	19.57	20.50	19.91	20.23	19.66	20.50
	25 (RB_Pos:0)	19.87	19.87	19.64	20.50	20.01	20.03	19.83	20.50
	25 (RB_Pos:12)	19.89	19.87	19.65	20.50	19.97	20.02	19.82	20.50
	25 (RB_Pos:25)	19.94	19.89	19.66	20.50	20.01	19.94	19.83	20.50
	50 (RB_Pos:0)	19.98	19.87	19.67	20.50	20.02	19.97	19.79	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	

5MHz	1 (RB_Pos:0)	19.88	19.82	19.56	20.50	20.37	20.06	19.89	20.50
	1 (RB_Pos:13)	19.92	19.87	19.63	20.50	20.40	20.12	19.89	20.50
	1 (RB_Pos:24)	19.85	19.79	19.52	20.50	20.31	20.02	19.85	20.50
	12 (RB_Pos:0)	19.92	19.88	19.67	20.50	20.08	20.04	19.83	20.50
	12 (RB_Pos:6)	19.86	19.87	19.63	20.50	20.13	20.05	19.80	20.50
	12 (RB_Pos:13)	19.82	19.85	19.61	20.50	20.06	19.98	19.75	20.50
	25 (RB_Pos:0)	19.88	19.88	19.66	20.50	19.99	19.90	19.77	20.50

8.6.6 Power Reduced Level 5&6 of LTE Band 7

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	19.44	**19.49**	19.22	20.00	19.82	19.85	19.57	20.00
	1 (RB_Pos:50)	19.38	19.35	19.17	20.00	19.75	19.74	19.50	20.00
	1 (RB_Pos:99)	19.33	19.31	18.96	20.00	19.71	19.65	19.35	20.00
	50 (RB_Pos:0)	19.47	19.39	19.23	20.00	19.55	19.55	19.28	20.00
	50 (RB_Pos:25)	19.47	19.38	19.17	20.00	19.54	19.52	19.25	20.00
	50 (RB_Pos:50)	19.38	19.28	19.10	20.00	19.45	19.43	19.17	20.00
	100 (RB_Pos:0)	19.40	19.36	19.18	20.00	19.52	19.48	19.19	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	19.40	19.42	19.35	20.00	19.37	19.72	19.79	20.00
	1 (RB_Pos:38)	19.28	19.28	19.11	20.00	19.25	19.65	19.55	20.00
	1 (RB_Pos:74)	19.34	19.26	19.07	20.00	19.36	19.70	19.35	20.00
	36 (RB_Pos:0)	19.36	19.37	19.19	20.00	19.43	19.55	19.26	20.00
	36 (RB_Pos:20)	19.42	19.38	19.17	20.00	19.49	19.52	19.22	20.00
	36 (RB_Pos:39)	19.37	19.28	19.12	20.00	19.46	19.45	19.17	20.00
	75 (RB_Pos:0)	19.36	19.35	19.12	20.00	19.53	19.46	19.22	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	19.35	19.36	19.31	20.00	19.40	19.73	19.38	20.00
	1 (RB_Pos:25)	19.35	19.31	19.11	20.00	19.31	19.71	19.21	20.00
	1 (RB_Pos:49)	19.44	19.27	19.08	20.00	19.40	19.72	19.14	20.00
	25 (RB_Pos:0)	19.37	19.40	19.16	20.00	19.43	19.50	19.31	20.00
	25 (RB_Pos:12)	19.35	19.39	19.15	20.00	19.43	19.47	19.30	20.00
	25 (RB_Pos:25)	19.45	19.31	19.09	20.00	19.51	19.48	19.31	20.00
	50 (RB_Pos:0)	19.40	19.34	19.11	20.00	19.53	19.47	19.22	20.00
Bandwidth	RB Set	Power (dBm)							

(MHz)		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	19.36	19.34	19.11	20.00	19.71	19.57	19.35	20.00
	1 (RB_Pos:13)	19.43	19.38	19.14	20.00	19.78	19.59	19.40	20.00
	1 (RB_Pos:24)	19.33	19.30	19.01	20.00	19.76	19.53	19.30	20.00
	12 (RB_Pos:0)	19.35	19.39	19.12	20.00	19.58	19.50	19.29	20.00
	12 (RB_Pos:6)	19.39	19.38	19.14	20.00	19.56	19.51	19.30	20.00
	12 (RB_Pos:13)	19.33	19.33	19.11	20.00	19.52	19.49	19.25	20.00
	25 (RB_Pos:0)	19.34	19.36	19.12	20.00	19.48	19.37	19.21	20.00

8.6.7 Power Reduced Level 1 of LTE Band 38

TDD LTE Band 38									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37850	38000	38150		37850	38000	38150	
20MHz	1 (RB_Pos:0)	**19.86**	19.81	19.85	20.50	20.20	20.17	20.22	20.50
	1 (RB_Pos:50)	19.74	19.70	19.74	20.50	20.15	20.01	20.18	20.50
	1 (RB_Pos:99)	19.77	19.70	19.75	20.50	20.16	20.06	20.18	20.50
	50 (RB_Pos:0)	19.95	19.88	19.83	20.50	20.05	20.01	20.04	20.50
	50 (RB_Pos:25)	19.90	19.85	19.80	20.50	20.01	19.97	19.99	20.50
	50 (RB_Pos:50)	19.78	19.77	19.70	20.50	19.93	19.89	19.95	20.50
	100 (RB_Pos:0)	19.88	19.80	19.77	20.50	20.00	19.94	19.96	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37825	38000	38175		37825	38000	38175	
15MHz	1 (RB_Pos:0)	19.83	19.93	19.90	20.50	20.27	20.31	20.33	20.50
	1 (RB_Pos:38)	19.78	19.81	19.74	20.50	20.21	20.26	20.16	20.50
	1 (RB_Pos:74)	19.66	19.65	19.76	20.50	20.15	20.14	20.21	20.50
	36 (RB_Pos:0)	19.87	19.83	19.80	20.50	20.01	19.94	19.94	20.50
	36 (RB_Pos:20)	19.86	19.81	19.77	20.50	19.98	19.94	19.95	20.50
	36 (RB_Pos:39)	19.80	19.75	19.74	20.50	19.91	19.85	19.86	20.50
	75 (RB_Pos:0)	19.85	19.79	19.79	20.50	19.97	19.91	19.86	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37800	38000	38200		37800	38000	38200	
10MHz	1 (RB_Pos:0)	19.78	19.79	19.81	20.50	20.17	20.23	20.24	20.50
	1 (RB_Pos:25)	19.68	19.75	19.80	20.50	20.14	20.14	20.28	20.50
	1 (RB_Pos:49)	19.77	19.74	19.71	20.50	20.21	20.23	20.20	20.50
	25 (RB_Pos:0)	19.79	19.82	19.84	20.50	19.94	19.97	19.97	20.50
	25 (RB_Pos:12)	19.89	19.85	19.79	20.50	20.04	19.94	19.98	20.50

	25 (RB_Pos:25)	19.87	19.79	19.74	20.50	19.98	19.91	19.95	20.50
	50 (RB_Pos:0)	19.83	19.74	19.82	20.50	20.01	19.93	20.04	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37775	38000	38225		37775	38000	38225	
5MHz	1 (RB_Pos:0)	19.78	19.85	19.75	20.50	20.17	20.31	20.14	20.50
	1 (RB_Pos:13)	19.81	19.86	19.77	20.50	20.21	20.25	20.18	20.50
	1 (RB_Pos:24)	19.70	19.76	19.70	20.50	20.13	20.11	20.07	20.50
	12 (RB_Pos:0)	19.77	19.80	19.79	20.50	19.92	20.04	19.97	20.50
	12 (RB_Pos:6)	19.79	19.84	19.82	20.50	19.91	20.09	19.98	20.50
	12 (RB_Pos:13)	19.78	19.83	19.83	20.50	19.88	20.01	19.96	20.50
	25 (RB_Pos:0)	19.76	19.81	19.83	20.50	19.96	19.95	19.91	20.50

8.6.8 Power Reduced Level 2&3 of LTE Band 38

TDD LTE Band 38									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37850	38000	38150		37850	38000	38150	
20MHz	1 (RB_Pos:0)	18.86	18.84	**18.91**	19.50	19.15	19.20	19.30	19.50
	1 (RB_Pos:50)	18.75	18.73	18.79	19.50	19.14	19.06	19.15	19.50
	1 (RB_Pos:99)	18.71	18.66	18.67	19.50	19.02	19.05	19.03	19.50
	50 (RB_Pos:0)	18.93	18.85	18.81	19.50	19.04	18.98	19.01	19.50
	50 (RB_Pos:25)	18.84	18.81	18.81	19.50	18.96	18.96	18.98	19.50
	50 (RB_Pos:50)	18.80	18.73	18.72	19.50	18.92	18.87	18.89	19.50
	100 (RB_Pos:0)	18.86	18.79	18.77	19.50	18.99	18.93	18.88	19.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37825	38000	38175		37825	38000	38175	
15MHz	1 (RB_Pos:0)	18.81	18.91	18.85	19.50	19.20	19.31	19.30	19.50
	1 (RB_Pos:38)	18.77	18.69	18.71	19.50	19.20	19.18	19.20	19.50
	1 (RB_Pos:74)	18.66	18.73	18.76	19.50	19.11	19.21	19.18	19.50
	36 (RB_Pos:0)	18.85	18.78	18.76	19.50	18.97	18.88	18.92	19.50
	36 (RB_Pos:20)	18.82	18.76	18.75	19.50	18.97	18.89	18.93	19.50
	36 (RB_Pos:39)	18.76	18.69	18.69	19.50	18.87	18.82	18.84	19.50
	75 (RB_Pos:0)	18.82	18.75	18.72	19.50	18.98	18.87	18.85	19.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37800	38000	38200		37800	38000	38200	
10MHz	1 (RB_Pos:0)	18.75	18.76	18.82	19.50	19.12	19.15	19.18	19.50
	1 (RB_Pos:25)	18.74	18.72	18.77	19.50	19.08	19.11	19.15	19.50

	1 (RB_Pos:49)	18.74	18.70	18.71	19.50	19.17	19.08	19.08	19.50
	25 (RB_Pos:0)	18.80	18.78	18.77	19.50	18.90	18.95	18.99	19.50
	25 (RB_Pos:12)	18.89	18.79	18.80	19.50	19.03	18.95	18.93	19.50
	25 (RB_Pos:25)	18.83	18.76	18.75	19.50	18.96	18.88	18.91	19.50
	50 (RB_Pos:0)	18.86	18.77	18.83	19.50	18.99	18.91	18.90	19.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37775	38000	38225		37775	38000	38225	
5MHz	1 (RB_Pos:0)	18.78	18.78	18.72	19.50	19.14	19.21	19.11	19.50
	1 (RB_Pos:13)	18.81	18.81	18.72	19.50	19.18	19.24	19.15	19.50
	1 (RB_Pos:24)	18.72	18.72	18.64	19.50	19.07	19.04	19.07	19.50
	12 (RB_Pos:0)	18.77	18.76	18.75	19.50	18.85	18.99	18.92	19.50
	12 (RB_Pos:6)	18.78	18.77	18.76	19.50	18.89	19.05	18.99	19.50
	12 (RB_Pos:13)	18.78	18.74	18.74	19.50	18.81	18.98	18.98	19.50
	25 (RB_Pos:0)	18.75	18.74	18.74	19.50	18.90	18.90	18.91	19.50

8.6.9 Power Reduced Level 1 of LTE Band 41

TDD LTE Band 41											
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40140	40473	40807	41140		40140	40473	40807	41140	
20MHz	1 (RB_Pos:0)	**20.02**	19.80	19.90	19.95	20.50	20.35	20.28	20.21	20.19	20.50
	1 (RB_Pos:50)	19.88	19.59	19.72	19.67	20.50	20.22	19.88	20.03	20.02	20.50
	1 (RB_Pos:99)	19.80	19.77	19.67	19.90	20.50	20.24	19.92	19.97	20.28	20.50
	50 (RB_Pos:0)	20.03	19.82	19.86	19.89	20.50	20.08	20.05	19.97	20.01	20.50
	50 (RB_Pos:25)	19.98	19.91	19.85	19.82	20.50	20.00	20.04	20.00	20.02	20.50
	50 (RB_Pos:50)	19.87	19.84	19.83	19.78	20.50	19.95	19.85	19.86	19.94	20.50
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40115	40465	40815	41165		40115	40465	40815	41165	
15MHz	1 (RB_Pos:0)	20.02	19.81	19.89	19.91	20.50	20.35	20.18	20.18	20.31	20.50
	1 (RB_Pos:38)	19.84	19.94	19.80	19.71	20.50	20.20	20.29	20.18	20.12	20.50
	1 (RB_Pos:74)	19.79	19.71	19.73	19.92	20.50	20.20	20.05	20.12	20.29	20.50
	36 (RB_Pos:0)	19.93	19.83	19.84	19.82	20.50	20.08	19.83	19.92	19.98	20.50
	36 (RB_Pos:20)	19.91	19.76	19.80	19.80	20.50	20.02	20.00	19.93	19.91	20.50
	36 (RB_Pos:39)	19.84	19.76	19.78	19.76	20.50	19.95	19.85	19.86	19.86	20.50
	75 (RB_Pos:0)	19.90	19.97	19.82	19.81	20.50	20.03	20.04	19.95	19.88	20.50
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40090	40457	40823	41190		40090	40457	40823	41190	

10MHz	1 (RB_Pos:0)	19.92	19.96	19.85	19.77	20.50	20.30	20.21	20.25	20.22	20.50
	1 (RB_Pos:25)	19.83	19.82	19.76	19.81	20.50	20.23	20.21	20.23	20.27	20.50
	1 (RB_Pos:49)	19.80	19.65	19.77	19.92	20.50	20.24	20.17	20.26	20.37	20.50
	25 (RB_Pos:0)	19.98	19.86	19.86	19.89	20.50	20.09	20.02	19.99	19.96	20.50
	25 (RB_Pos:12)	19.96	20.01	19.89	19.87	20.50	20.08	19.87	19.93	19.98	20.50
	25 (RB_Pos:25)	19.90	19.71	19.82	19.80	20.50	20.01	20.06	19.92	19.95	20.50
	50 (RB_Pos:0)	19.97	19.78	19.84	19.88	20.50	20.04	19.93	19.91	19.97	20.50
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40065	40448	40832	41215		40065	40448	40832	41215	
5MHz	1 (RB_Pos:0)	20.00	19.68	19.82	19.80	20.50	20.37	20.11	20.24	20.14	20.50
	1 (RB_Pos:13)	20.02	19.98	19.89	19.94	20.50	20.40	20.34	20.24	20.31	20.50
	1 (RB_Pos:24)	19.89	19.93	19.81	19.85	20.50	20.27	20.25	20.23	20.20	20.50
	12 (RB_Pos:0)	20.02	19.94	19.85	19.84	20.50	20.10	19.91	20.00	19.98	20.50
	12 (RB_Pos:6)	20.03	19.83	19.86	19.97	20.50	20.15	19.89	20.03	20.13	20.50
	12 (RB_Pos:13)	19.98	19.73	19.83	19.93	20.50	20.11	19.84	19.98	20.07	20.50

8.6.10 Power Reduced Level 2&3 of LTE Band 41

TDD LTE Band 41											
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40140	40473	40807	41140		40140	40473	40807	41140	
20MHz	1 (RB_Pos:0)	19.05	18.99	18.94	**19.06**	19.50	19.39	19.13	19.17	19.40	19.50
	1 (RB_Pos:50)	18.88	18.96	18.82	18.82	19.50	19.20	18.89	19.03	19.12	19.50
	1 (RB_Pos:99)	18.83	18.74	18.73	19.03	19.50	19.15	18.96	18.99	19.39	19.50
	50 (RB_Pos:0)	19.02	19.00	18.91	18.91	19.50	19.05	19.02	19.00	19.01	19.50
	50 (RB_Pos:25)	18.98	18.90	18.88	18.86	19.50	18.96	19.08	18.98	18.97	19.50
	50 (RB_Pos:50)	18.89	18.82	18.79	18.78	19.50	18.92	18.76	18.89	18.91	19.50
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40115	40465	40815	41165		40115	40465	40815	41165	
15MHz	1 (RB_Pos:0)	18.98	18.81	18.92	18.91	19.50	19.37	19.14	19.24	19.31	19.50
	1 (RB_Pos:38)	18.86	18.75	18.83	18.72	19.50	19.19	19.09	19.17	19.08	19.50
	1 (RB_Pos:74)	18.82	18.66	18.75	18.83	19.50	19.14	19.00	19.05	19.23	19.50
	36 (RB_Pos:0)	18.96	18.75	18.86	18.82	19.50	19.04	18.91	18.95	18.96	19.50
	36 (RB_Pos:20)	18.93	18.96	18.83	18.82	19.50	19.02	18.94	18.90	18.93	19.50
	36 (RB_Pos:39)	18.87	18.82	18.76	18.74	19.50	18.94	18.87	18.86	18.86	19.50
	75 (RB_Pos:0)	18.92	18.71	18.79	18.77	19.50	19.00	19.02	18.89	18.89	19.50
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit	16QAM				Tune up limit
	Channel	40090	40457	40823	41190		40090	40457	40823	41190	

						(dBm)					(dBm)
10MHz	1 (RB_Pos:0)	18.93	18.91	18.90	18.78	19.50	19.26	19.25	19.20	19.07	19.50
	1 (RB_Pos:25)	18.89	18.94	18.80	18.92	19.50	19.24	19.20	19.13	19.12	19.50
	1 (RB_Pos:49)	18.81	18.70	18.79	18.84	19.50	19.16	19.04	19.13	19.17	19.50
	25 (RB_Pos:0)	19.00	18.76	18.84	18.85	19.50	19.05	18.81	18.92	18.96	19.50
	25 (RB_Pos:12)	18.98	18.86	18.86	18.84	19.50	19.04	18.85	18.94	18.94	19.50
	25 (RB_Pos:25)	18.93	18.91	18.82	18.82	19.50	19.01	19.05	18.90	18.94	19.50
	50 (RB_Pos:0)	18.90	18.73	18.87	18.83	19.50	18.98	18.88	18.89	18.98	19.50
Bandwidth (MHz)	RB Set	Power (dBm)									
		QPSK				Tune up limit (dBm)	16QAM				Tune up limit (dBm)
	Channel	40065	40448	40832	41215		40065	40448	40832	41215	
5MHz	1 (RB_Pos:0)	18.99	18.74	18.82	18.93	19.50	19.29	19.13	19.14	19.27	19.50
	1 (RB_Pos:13)	18.99	18.77	18.86	18.99	19.50	19.33	19.07	19.21	19.34	19.50
	1 (RB_Pos:24)	18.88	18.96	18.82	18.91	19.50	19.19	19.03	19.10	19.35	19.50
	12 (RB_Pos:0)	19.03	18.74	18.81	18.85	19.50	19.12	18.83	18.89	19.05	19.50
	12 (RB_Pos:6)	19.01	18.86	18.85	18.94	19.50	19.12	18.87	18.93	19.14	19.50
	12 (RB_Pos:13)	18.99	18.75	18.81	18.92	19.50	19.09	18.96	18.90	19.08	19.50

8.6.11 Power Reduced Level 2&3 of 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	AV Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	**17.12**	17.50	Yes
		6	2437	16.91	17.50	Yes
		11	2462	17.08	17.50	Yes
	802.11g	1	2412	15.18	15.50	No
		6	2437	15.55	15.50	No
		11	2462	15.22	15.50	No
	802.11n(HT20)	1	2412	14.88	15.50	No
		6	2437	15.05	15.50	No
		11	2462	14.86	15.50	No

8.6.12 Power Reduced Level 1 of 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	AV Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	12.63	13.50	No
		44	5220	12.68	13.50	No
		48	5240	12.75	13.50	No
	802.11n(HT20)	36	5180	12.45	13.50	No
		44	5220	12.58	13.50	No
		48	5240	12.59	13.50	No
	802.11n(HT40)	38	5190	12.56	13.50	No
		46	5230	**12.62**	13.50	No
	802.11ac(VHT20)	36	5180	12.60	13.50	No
		44	5220	12.52	13.50	No
		48	5240	12.55	13.50	No
	802.11ac(VHT40)	38	5190	11.28	13.50	No
		46	5230	13.04	13.50	No
	802.11ac(VHT80)	42	5210	11.10	12.50	No
5.3 (5.25~5.35)	802.11a	52	5260	12.34	13.50	No
		60	5300	12.14	13.50	No
		64	5320	12.08	13.50	No
	802.11n(HT20)	52	5260	12.14	13.50	No
		60	5300	11.93	13.50	No
		64	5320	11.91	13.50	No
	802.11n(HT40)	54	5270	12.59	13.50	Yes
		62	5310	12.15	13.50	No
	802.11ac(VHT20)	52	5260	12.14	13.50	No
		60	5300	11.97	13.50	No
		64	5320	11.87	13.50	No
	802.11ac(VHT40)	54	5270	12.59	13.50	No
		62	5310	12.26	13.50	No

	802.11ac(VHT80)	58	5290	11.67	12.50	No
5.6 (5.47~5.725)	802.11a	100	5500	12.77	14.50	No
		116	5580	12.19	14.50	No
		140	5700	12.46	14.50	No
	802.11n(HT20)	100	5500	12.75	14.50	No
		116	5580	12.06	14.50	No
		140	5700	12.37	14.50	No
	802.11n(HT40)	102	5510	12.67	14.50	No
		118	5590	12.42	14.50	No
		134	5670	12.56	14.50	No
	802.11ac(VHT20)	100	5500	12.67	14.50	No
		116	5580	12.13	14.50	No
		140	5700	12.43	14.50	No
	802.11ac(VHT40)	102	5510	12.93	14.50	No
		118	5590	12.55	14.50	No
		134	5670	12.53	14.50	No
	802.11ac(VHT80)	106	5530	**12.70**	14.50	Yes
		122	5610	12.43	14.50	No

8.6.13 Power Reduced Level 2 of 5G WIFI

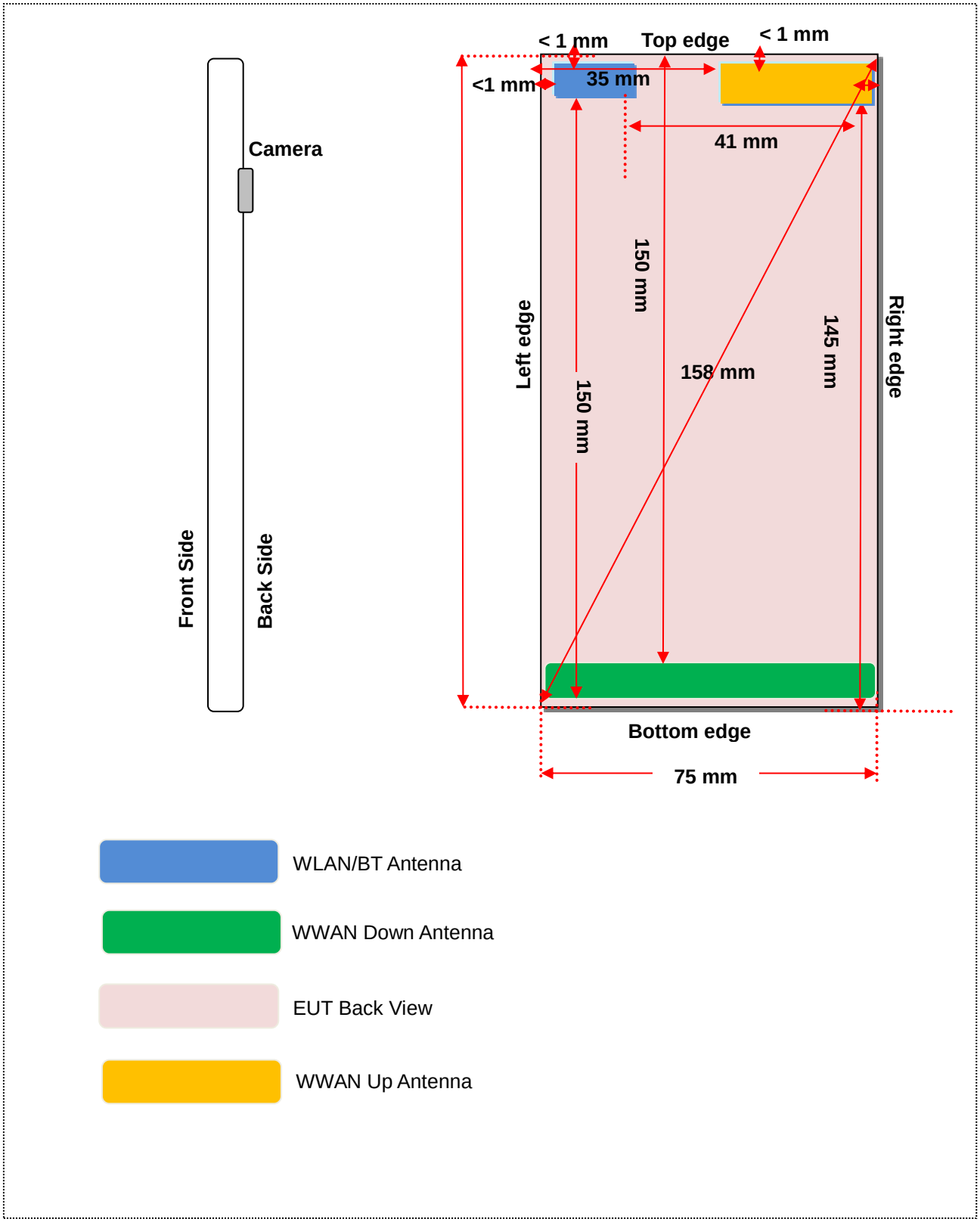
Band (GHz)	Mode	Channel	Freq. (MHz)	AV Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	10.59	11.50	No
		44	5220	10.66	11.50	No
		48	5240	10.80	11.50	No
	802.11n(HT20)	36	5180	10.48	11.50	No
		44	5220	10.51	11.50	No
		48	5240	10.38	11.50	No
	802.11n(HT40)	38	5190	10.46	11.50	No
		46	5230	10.20	11.50	No
	802.11ac(VHT20)	36	5180	10.49	11.50	No
		44	5220	10.55	11.50	No
		48	5240	10.67	11.50	No
	802.11ac(VHT40)	38	5190	9.69	11.50	No
		46	5230	10.87	11.50	No
	802.11ac(VHT80)	42	5210	9.98	10.50	No
5.3 (5.25~5.35)	802.11a	52	5260	10.36	11.50	No
		60	5300	10.17	11.50	No
		64	5320	10.04	11.50	No
	802.11n(HT20)	52	5260	10.29	11.50	No
		60	5300	10.02	11.50	No
		64	5320	9.83	11.50	No
	802.11n(HT40)	54	5270	**10.53**	11.50	Yes
		62	5310	10.25	11.50	No

	802.11ac(VHT20)	52	5260	10.11	11.50	No
		60	5300	9.96	11.50	No
		64	5320	9.92	11.50	No
	802.11ac(VHT40)	54	5270	10.42	11.50	No
		62	5310	10.28	11.50	No
	802.11ac(VHT80)	58	5290	10.19	10.50	No
5.6 (5.47~5.725)	802.11a	100	5500	10.92	12.50	No
		116	5580	10.32	12.50	No
		140	5700	10.53	12.50	No
	802.11n(HT20)	100	5500	10.66	12.50	No
		116	5580	10.09	12.50	No
		140	5700	10.27	12.50	No
	802.11n(HT40)	102	5510	10.71	12.50	No
		118	5590	10.49	12.50	No
		134	5670	10.36	12.50	No
	802.11ac(VHT20)	100	5500	10.63	12.50	No
		116	5580	10.03	12.50	No
		140	5700	10.54	12.50	No
	802.11ac(VHT40)	102	5510	10.93	12.50	No
		118	5590	10.46	12.50	No
		134	5670	10.47	12.50	No
	802.11ac(VHT80)	106	5530	**10.64**	12.50	Yes
		122	5610	10.44	12.50	No
5.8 (5.725~5.850)	802.11a	149	5745	11.42	14.50	No
		157	5785	13.27	14.50	No
		165	5825	12.45	14.50	No
	802.11n(HT20)	149	5745	11.21	14.50	No
		157	5785	13.10	14.50	No
		165	5825	12.26	14.50	No
	802.11n(HT40)	151	5755	11.70	14.50	No
		159	5795	13.25	14.50	No
	802.11ac(VHT20)	149	5745	11.31	14.50	No
		157	5785	12.92	14.50	No
		165	5825	12.12	14.50	No
	802.11ac(VHT40)	151	5755	11.74	14.50	No
		159	5795	13.13	14.50	No
	802.11ac(VHT80)	155	5775	**13.15**	14.50	Yes

8.6.14 Power Reduced Level 3 of 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	AV Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	12.63	13.5	No
		44	5220	12.68	13.5	No
		48	5240	12.75	13.5	No
	802.11n(HT20)	36	5180	12.45	13.5	No
		44	5220	12.58	13.5	No
		48	5240	12.59	13.5	No
	802.11n(HT40)	38	5190	12.56	13.5	No
		46	5230	**12.62**	13.5	Yes
	802.11ac(VHT20)	36	5180	12.60	13.5	No
		44	5220	12.52	13.5	No
		48	5240	12.55	13.5	No
	802.11ac(VHT40)	38	5190	11.28	13.5	No
		46	5230	13.04	13.5	No
	802.11ac(VHT80)	42	5210	11.10	12.5	No

9 TEST EXCLUSION CONSIDERATION



9.1 SAR Test Exclusion Consideration Table

According with FCC KDB 447498 D01, Appendix A, <SAR Test Exclusion Thresholds for 100 MHz－6 GHz and ≤ 50 mm> Table, this Device SAR test configurations consider as following :

WWAN Up Antenna：

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	35mm	<5mm	<5mm	145mm
	Voice	33.50	2238.72	Yes	Yes	Yes	Yes	Yes	No
	Data	31.50	1412.54	Yes	Yes	Yes	Yes	Yes	No
GSM 1900	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	145mm
	Voice	30.50	1122.02	Yes	Yes	Yes	Yes	Yes	No
	Data	28.00	630.96	Yes	Yes	Yes	Yes	Yes	No
WCDMA Band 5	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	145mm
	RMC	24.30	269.15	Yes	Yes	Yes	Yes	Yes	No
LTE Band 5	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	145mm
	QPSK	24.30	269.15	Yes	Yes	Yes	Yes	Yes	No
LTE Band 7	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	145mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No
LTE Band 38	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	145mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No
LTE Band 41	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	145mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No

WWAN Down Antenna：

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	150mm	<5mm
	Voice	33.50	2238.72	Yes	Yes	Yes	Yes	No	Yes
	Data	31.50	1412.54	Yes	Yes	Yes	Yes	No	Yes
GSM 1900	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	Voice	30.50	1122.02	Yes	Yes	Yes	Yes	No	Yes
	Data	28.00	630.96	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 5	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	RMC	24.30	269.15	Yes	Yes	Yes	Yes	No	Yes
LTE Band 5	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	24.30	269.15	Yes	Yes	Yes	Yes	No	Yes
LTE Band 7	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	23.50	281.84	Yes	Yes	Yes	Yes	No	Yes
LTE Band 38	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 41	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes

WLAN Antenna：

Band	Mode	Max. Peak Power		Test Position Configurations					
				Head	Front/ Back	Left Edge	Right Edge	Top Edge	Bottom Edge
WLAN 2.4 G	Distance to User			<5mm	<5mm	<5mm	41mm	<5mm	150mm
	802.11b	19.50	89.13	Yes	Yes	Yes	No	Yes	No
	802.11g	17.50	56.23	No	No	No	No	No	No
	802.11n(HT20)	17.50	56.23	No	No	No	No	No	No
WLAN 5.2 G	Distance to User			<5mm	<5mm	<5mm	41mm	<5mm	150mm
	802.11a	16.50	44.67	No	No	No	No	No	No
	802.11n(HT20)	16.50	44.67	No	No	No	No	No	No
	802.11n(HT40)	16.50	44.67	Yes	Yes	Yes	Yes	Yes	No
	802.11ac(VHT20)	16.50	44.67	No	No	No	No	No	No
	802.11ac(VHT40)	16.50	44.67	No	No	No	No	No	No
	802.11ac(VHT80)	12.50	17.78	No	No	No	No	No	No
WLAN 5.3 G	Distance to User			<5mm	<5mm	<5mm	41mm	<5mm	150mm
	802.11a	16.50	44.67	No	No	No	No	No	No
	802.11n(HT20)	16.50	44.67	No	No	No	No	No	No
	802.11n(HT40)	16.50	44.67	Yes	Yes	Yes	Yes	Yes	No
	802.11ac(VHT20)	16.50	44.67	No	No	No	No	No	No
	802.11ac(VHT40)	16.50	44.67	No	No	No	No	No	No
	802.11ac(VHT80)	15.50	35.48	No	No	No	No	No	No

WLAN 5.6 G	Distance to User			<5mm	<5mm	<5mm	41mm	<5mm	150mm
	802.11a	18.50	70.79	No	No	No	No	No	No
	802.11n(HT20)	18.50	70.79	No	No	No	No	No	No
	802.11n(HT40)	18.50	70.79	No	No	No	No	No	No
	802.11ac(VHT20)	18.50	70.79	No	No	No	No	No	No
	802.11ac(VHT40)	18.50	70.79	No	No	No	No	No	No
	802.11ac(VHT80)	18.50	70.79	Yes	Yes	Yes	Yes	Yes	No
WLAN 5.8 G	Distance to User			<5mm	<5mm	<5mm	41mm	<5mm	150mm
	802.11a	16.50	44.67	No	No	No	No	No	No
	802.11n(HT20)	16.50	44.67	No	No	No	No	No	No
	802.11n(HT40)	16.50	44.67	No	No	No	No	No	No
	802.11ac(VHT20)	16.50	44.67	No	No	No	No	No	No
	802.11ac(VHT40)	16.50	44.67	No	No	No	No	No	No
	802.11ac(VHT80)	16.50	44.67	Yes	Yes	Yes	Yes	Yes	No
Bluetooth	Distance to User			<5mm	<5mm	<5mm	41mm	<5mm	150mm
	BR/EDR	13.50	22.39	Yes	Yes	Yes	Yes	Yes	No
	BLE	13.00	19.95	No	No	No	No	No	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 D01, 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 D01, 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 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
   a. f(GHz) is the RF channel transmit frequency in GHz
   b. Power and distance are rounded to the nearest mW and mm before calculation
   c. The result is rounded to one decimal place for comparison
   d. For < 50 mm distance, we just calculate mW of the exclusion threshold value (3.0) to do compare.
   This formula is [3.0] / [√f(GHz)] ·[(min. test separation distance, mm)] = exclusion threshold of mW.
5. Per KDB 447498 D01, at 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following
   a. [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz
   b. [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz
6. 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.
7. 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

8. 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.
9. Per KDB 248227 D01 SAR is not required for the following U-NII-1 and U-NII-2A bands conditions.
   a. When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.
   b. When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, each band is tested independently for SAR.

10 TEST RESULT

10.1 GSM 850 SAR

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
Up	Off	GPRS (4slots)	Left Cheek	0	190	836.60	-0.14	0.339	28.37	29.50	1.297	0.440	/
	Off		Left Tilt	0	190	836.60	0.05	0.302	28.37	29.50	1.297	0.392	/
	Off		Right Cheek	0	190	836.60	-0.08	0.628	28.37	29.50	1.297	0.815	/
	Off			0	128	824.20	-0.03	0.333	28.34	29.50	1.306	0.435	/
	Off			0	251	848.80	-0.05	0.744	28.30	29.50	1.318	**0.981**	1#
	Off		Right Tilt	0	190	836.60	-0.08	0.400	28.37	29.50	1.297	0.519	/
Down	Off	GPRS (4slots)	Left Cheek	0	190	836.60	0.04	0.192	28.37	29.50	1.297	0.249	/
	Off		Left Tilt	0	190	836.60	0.14	0.082	28.37	29.50	1.297	0.106	/
	Off		Right Cheek	0	190	836.60	0.17	0.173	28.37	29.50	1.297	0.224	/
	Off		Right Tilt	0	190	836.60	0.07	0.070	28.37	29.50	1.297	0.090	/
Body-worn Accessory (15mm)													
Up	Off	Voice	Front Side	15	190	836.60	0.15	0.065	32.64	33.50	1.219	0.079	/
	Off		Back Side	15	190	836.60	-0.14	0.071	32.64	33.50	1.219	0.087	/
	Off	GPRS (4slots)	Front Side	15	190	836.60	0.12	0.055	28.37	29.50	1.297	0.071	/
	Off		Back Side	15	190	836.60	0.02	0.054	28.37	29.500	1.297	0.070	/
Down	Off	Voice	Front Side	15	190	836.60	0.03	0.064	32.64	33.50	1.219	0.078	/
	Off		Back Side	15	190	836.60	-0.18	0.100	32.64	33.50	1.219	0.122	/
	Off	GPRS (4slots)	Front Side	15	190	836.60	0.08	0.073	28.37	29.50	1.297	0.095	/
	Off		Back Side	15	190	836.60	0.01	0.101	28.37	29.50	1.297	0.131	/
	Off			15	128	824.20	0.03	0.097	28.34	29.50	1.306	0.127	/
	Off			15	251	848.80	-0.05	0.106	28.30	29.50	1.318	**0.140**	2#
Hotspot (10mm)													
Up	Off	Voice	Front Side	10	190	836.60	-0.03	0.070	32.64	33.50	1.219	0.085	/
	Off		Back Side	10	190	836.60	0.03	0.109	32.64	33.50	1.219	0.133	/
	Off	GPRS (4slots)	Front Side	10	190	836.60	0.11	0.060	28.37	29.50	1.297	0.078	/
	Off		Back Side	10	190	836.60	-0.18	0.135	28.37	29.50	1.297	0.175	/
	Off		Left Edge	10	190	836.60	-0.10	0.085	28.37	29.50	1.297	0.110	/
	Off		Right Edge	10	190	836.60	0.17	0.071	28.37	29.50	1.297	0.092	/
	Off		Top Edge	10	190	836.60	0.12	0.074	28.37	29.50	1.297	0.096	/
Down	Off	Voice	Front Side	10	190	836.60	-0.06	0.105	32.64	33.50	1.219	0.128	/
	Off		Back Side	10	190	836.60	0.06	0.179	32.64	33.50	1.219	0.218	/
	Off	GPRS (4slots)	Front Side	10	190	836.60	0.00	0.106	28.37	29.50	1.297	0.138	/
	Off		Back Side	10	190	836.60	0.03	0.155	28.37	29.50	1.297	0.201	/
	Off			10	128	824.20	-0.07	0.128	28.34	29.50	1.306	0.167	/
	Off			10	251	848.80	0.09	0.186	28.30	29.50	1.318	**0.245**	3#
	Off		Left Edge	10	190	836.60	-0.12	0.078	28.37	29.50	1.297	0.101	/

	Off		Right Edge	10	190	836.60	-0.09	0.148	28.37	29.50	1.297	0.192	/
	Off		Bottom Edge	10	190	836.60	-0.10	0.149	28.37	29.50	1.297	0.193	/
Note: Refer to ANNE 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 (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
Up	Level1&2	GPRS (3slots)	Left Cheek	0	661	1880.00	0.13	0.594	24.74	25.00	1.062	0.631	/
	Level1&2		Left Tilt	0	661	1880.00	0.00	0.553	24.74	25.00	1.062	0.587	/
	Level1&2		Right Cheek	0	661	1880.00	-0.14	0.761	24.74	25.00	1.062	0.808	/
	Level1&2			0	512	1850.20	-0.06	0.556	24.67	25.00	1.079	0.600	/
	Level1&2			0	810	1909.80	-0.18	1.030	24.50	25.00	1.122	**1.156**	4#
	Level1&2		Right Tilt	0	661	1880.00	0.15	0.681	24.74	25.00	1.062	0.723	/
Up	Level3	GPRS (3slots)	Left Cheek	0	661	1880.00	-0.12	0.457	24.00	24.50	1.122	0.513	/
	Level3		Left Tilt	0	661	1880.00	0.19	0.425	24.00	24.50	1.122	0.477	/
	Level3		Right Cheek	0	661	1880.00	-0.13	0.512	24.00	24.50	1.122	0.574	/
	Level3			0	512	1850.20	0.00	0.405	23.92	24.50	1.143	0.463	/
	Level3			0	810	1909.80	0.04	0.738	23.64	24.50	1.219	0.900	/
	Level3		Right Tilt	0	661	1880.00	0.06	0.524	24.00	24.50	1.122	0.588	/
Down	Off	GPRS (3slots)	Left Cheek	0	512	1850.20	0.15	0.069	26.43	27.00	1.140	0.079	/
	Off		Left Tilt	0	512	1850.20	0.09	0.050	26.43	27.00	1.140	0.057	/
	Off		Right Cheek	0	512	1850.20	0.13	0.080	26.43	27.00	1.140	0.092	/
	Off		Right Tilt	0	512	1850.20	0.05	0.073	26.43	27.00	1.140	0.083	/
Body-worn Accessory (15mm)													
Up	Off	Voice	Front Side	15	512	1850.20	0.18	0.176	30.24	30.50	1.062	0.187	/
	Off		Back Side	15	512	1850.20	-0.17	0.208	30.24	30.50	1.062	0.221	/
	Off	GPRS (3slots)	Front Side	15	512	1850.20	-0.03	0.193	26.43	27.00	1.140	0.220	/
	Off		Back Side	15	512	1850.20	0.01	0.234	26.43	27.00	1.140	0.267	/
	Off			15	661	1880.00	0.13	0.201	26.21	27.00	1.199	0.241	/
	Off			15	810	1909.80	-0.04	0.290	26.27	27.00	1.183	**0.343**	5#
Down	Off	Voice	Front Side	15	512	1850.20	-0.01	0.090	30.24	30.50	1.062	0.096	/
	Off		Back Side	15	512	1850.20	0.03	0.156	30.24	30.50	1.062	0.166	/
	Off	GPRS (3slots)	Front Side	15	512	1850.20	0.07	0.091	26.43	27.00	1.140	0.104	/
	Off		Back Side	15	512	1850.20	-0.19	0.162	26.43	27.00	1.140	0.185	/
Hotspot (10mm)													
Up	Off	Voice	Front Side	10	512	1850.20	0.03	0.278	30.24	30.50	1.062	0.295	/
	Off		Back Side	10	512	1850.20	0.17	0.463	30.24	30.50	1.062	0.492	/
	Off	GPRS (3slots)	Front Side	10	512	1850.20	-0.04	0.308	26.43	27.00	1.140	0.351	/
	Off		Back Side	10	512	1850.20	-0.14	0.506	26.43	27.00	1.140	0.577	/
	Off			10	661	1880.00	-0.12	0.401	26.21	27.00	1.199	0.481	/
	Off			10	810	1909.80	0.04	0.584	26.27	27.00	1.183	**0.691**	6#

	Off		Left Edge	10	512	1850.20	-0.08	0.052	26.43	27.00	1.140	0.059	/
	Off		Right Edge	10	512	1850.20	-0.06	0.303	26.43	27.00	1.140	0.345	/
	Off		Top Edge	10	512	1850.20	-0.02	0.400	26.43	27.00	1.140	0.456	/
Down	Off	Voice	Front Side	10	512	1850.20	0.06	0.158	30.24	30.50	1.062	0.168	/
	Off		Back Side	10	512	1850.20	-0.14	0.261	30.24	30.50	1.062	0.277	/
	Off	GPRS (3slots)	Front Side	10	512	1850.20	0.02	0.167	26.43	27.00	1.140	0.190	/
	Off		Back Side	10	512	1850.20	-0.03	0.264	26.43	27.00	1.140	0.301	/
	Off		Left Edge	10	512	1850.20	-0.15	0.141	26.43	27.00	1.140	0.161	/
	Off		Right Edge	10	512	1850.20	0.07	0.081	26.43	27.00	1.140	0.092	/
	Off		Bottom Edge	10	512	1850.20	0.16	0.426	26.43	27.00	1.140	0.486	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.3 WCDMA Band 5

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
Up	Off	RMC	Left Cheek	0	4132	826.40	0.02	0.376	23.15	24.30	1.303	0.490	/
	Off		Left Tilt	0	4132	826.40	0.00	0.336	23.15	24.30	1.303	0.438	/
	Off		Right Cheek	0	4132	826.40	-0.14	0.380	23.15	24.30	1.303	0.495	/
	Off			0	4182	836.40	-0.11	0.470	23.13	24.30	1.309	0.615	/
	Off			0	4233	846.60	-0.04	0.563	23.13	24.30	1.309	**0.737**	7#
	Off		Right Tilt	0	4132	826.40	-0.17	0.352	23.15	24.30	1.303	0.459	/
Down	Off	RMC	Left Cheek	0	4132	826.40	-0.14	0.144	23.15	24.30	1.303	0.188	/
	Off		Left Tilt	0	4132	826.40	0.04	0.063	23.15	24.30	1.303	0.082	/
	Off		Right Cheek	0	4132	826.40	0.03	0.142	23.15	24.30	1.303	0.185	/
	Off		Right Tilt	0	4132	826.40	0.19	0.068	23.15	24.30	1.303	0.089	/
Body-worn Accessory (15mm)													
Up	Off	RMC	Front Side	15	4132	826.40	0.05	0.068	23.15	24.30	1.303	0.088	/
	Off		Back Side	15	4132	826.40	0.01	0.074	23.15	24.30	1.303	0.097	/
	Off	RMC	Front Side	15	4132	826.40	0.02	0.114	23.15	24.30	1.303	0.149	/
	Off		Back Side	15	4132	826.40	0.05	0.121	23.15	24.30	1.303	0.158	/
	Off			15	4182	836.40	0.03	0.130	23.13	24.30	1.309	0.170	/
	Off			15	4233	846.60	0.04	0.138	23.13	24.30	1.309	**0.181**	8#
Hotspot (10mm)													
Up	Off	RMC	Front Side	10	4132	826.40	0.06	0.077	23.15	24.30	1.303	0.100	/
	Off		Back Side	10	4132	826.40	-0.01	0.117	23.15	24.30	1.303	0.152	/
	Off		Left Edge	10	4132	826.40	0.00	0.089	23.15	24.30	1.303	0.116	/
	Off		Right Edge	10	4132	826.40	0.12	0.076	23.15	24.30	1.303	0.099	/
	Off		Top Edge	10	4132	826.40	0.08	0.079	23.15	24.30	1.303	0.103	/
Down	Off	RMC	Front Side	10	4132	826.40	0.01	0.158	23.15	24.30	1.303	0.206	/
	Off		Back Side	10	4132	826.40	0.00	0.172	23.15	24.30	1.303	0.224	/
	Off			10	4182	836.40	0.01	0.209	23.13	24.30	1.309	0.274	/

	Off			10	4233	846.60	-0.03	0.238	23.13	24.30	1.309	**0.312**	9#
	Off		Left Edge	10	4132	826.40	-0.12	0.083	23.15	24.30	1.303	0.108	/
	Off		Right Edge	10	4132	826.40	0.08	0.148	23.15	24.30	1.303	0.193	/
	Off		Bottom Edge	10	4132	826.40	0.01	0.158	23.15	24.30	1.303	0.206	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.4LTE Band 5 (10MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
Up	Off	QPSK	Left Cheek	0	20600	844	1	High	-0.09	0.419	23.07	24.30	1.327	0.556	/
	Off			0	20600	844	25	Mid	-0.12	0.289	22.11	23.30	1.315	0.380	/
	Off		Left Tilt	0	20600	844	1	High	-0.05	0.286	23.07	24.30	1.327	0.380	/
	Off			0	20600	844	25	Mid	-0.12	0.230	22.11	23.30	1.315	0.303	/
	Off		Right Cheek	0	20600	844	1	High	-0.04	0.493	23.07	24.30	1.327	**0.654**	10#
	Off			0	20450	829	1	Low	-0.04	0.359	22.99	24.30	1.352	0.485	/
	Off			0	20525	836.5	1	High	-0.06	0.416	22.99	24.30	1.352	0.562	/
	Off			0	20600	844	25	Mid	-0.12	0.426	22.11	23.30	1.315	0.560	/
	Off		Right Tilt	0	20600	844	1	High	-0.04	0.465	23.07	24.30	1.327	0.617	/
	Off			0	20600	844	25	Mid	0.14	0.385	22.11	23.30	1.315	0.506	/
Down	Off	QPSK	Left Cheek	0	20600	844	1	High	0.16	0.151	23.07	24.30	1.327	0.200	/
	Off			0	20600	844	25	Mid	0.08	0.113	22.11	23.30	1.315	0.149	/
	Off		Left Tilt	0	20600	844	1	High	0.12	0.051	23.07	24.30	1.327	0.067	/
	Off			0	20600	844	25	Mid	-0.04	0.051	22.11	23.30	1.315	0.067	/
	Off		Right Cheek	0	20600	844	1	High	0.07	0.124	23.07	24.30	1.327	0.165	/
	Off			0	20600	844	25	Mid	-0.18	0.115	22.11	23.30	1.315	0.151	/
	Off		Right Tilt	0	20600	844	1	High	-0.04	0.063	23.07	24.30	1.327	0.084	/
	Off			0	20600	844	25	Mid	-0.07	0.060	22.11	23.30	1.315	0.079	/
Body-worn Accessory (15mm)															
Up	Off	QPSK	Front Side	15	20600	844	1	High	-0.08	0.056	23.07	24.30	1.327	0.074	/
	Off			15	20600	844	25	Mid	0.03	0.062	22.11	23.30	1.315	0.082	/
	Off		Back Side	15	20600	844	1	High	0.04	0.060	23.07	24.30	1.327	0.080	/
	Off			15	20600	844	25	Mid	0.14	0.075	22.11	23.30	1.315	0.099	/
Down	Off	QPSK	Front Side	15	20600	844	1	High	0.01	0.114	23.07	24.30	1.327	0.151	/
	Off			15	20600	844	25	Mid	0.04	0.093	22.11	23.30	1.315	0.122	/
	Off		Back Side	15	20600	844	1	High	0.00	0.150	23.07	24.30	1.327	**0.199**	11#
	Off			15	20450	829	1	Low	0.03	0.129	22.99	24.30	1.352	0.174	/
	Off			15	20525	836.5	1	High	0.01	0.132	22.99	24.30	1.352	0.178	/
	Off			15	20600	844	25	Mid	0.03	0.101	22.11	23.30	1.315	0.133	/
Hotspot (10mm)															
Up	Off	QPSK	Front Side	10	20600	844	1	High	-0.09	0.066	23.07	24.30	1.327	0.088	/
	Off			10	20600	844	25	Mid	-0.09	0.055	22.11	23.30	1.315	0.072	/

	Off		Back Side	10	20600	844	1	High	-0.18	0.100	23.07	24.30	1.327	0.133	/
	Off			10	20600	844	25	Mid	0.16	0.084	22.11	23.30	1.315	0.110	/
	Off		Left Edge	10	20600	844	1	High	0.09	0.073	23.07	24.30	1.327	0.097	/
	Off			10	20600	844	25	Mid	-0.01	0.058	22.11	23.30	1.315	0.076	/
	Off		Right Edge	10	20600	844	1	High	-0.06	0.068	23.07	24.30	1.327	0.090	/
	Off			10	20600	844	25	Mid	-0.08	0.050	22.11	23.30	1.315	0.066	/
	Off		Top Edge	10	20600	844	1	High	0.10	0.081	23.07	24.30	1.327	0.107	/
	Off			10	20600	844	25	Mid	-0.13	0.063	22.11	23.30	1.315	0.083	/
Down	Off	QPSK	Front Side	10	20600	844	1	High	0.03	0.127	23.07	24.30	1.327	0.169	/
	Off			10	20600	844	25	Mid	-0.17	0.108	22.11	23.30	1.315	0.142	/
	Off		Back Side	10	20600	844	1	High	0.01	0.190	23.07	24.30	1.327	**0.252**	12#
	Off			10	20450	829	1	Low	0.05	0.153	22.99	24.30	1.352	0.207	/
	Off			10	20525	836.5	1	High	0.05	0.160	22.99	24.30	1.352	0.216	/
	Off			10	20600	844	25	Mid	0.01	0.139	22.11	23.30	1.315	0.183	/
	Off		Left Edge	10	20600	844	1	High	0.01	0.074	23.07	24.30	1.327	0.098	/
	Off			10	20600	844	25	Mid	0.01	0.062	22.11	23.30	1.315	0.082	/
	Off		Right Edge	10	20600	844	1	High	0.04	0.134	23.07	24.30	1.327	0.178	/
	Off			10	20600	844	25	Mid	0.11	0.118	22.11	23.30	1.315	0.155	/
	Off		Bottom Edge	10	20600	844	1	High	0.15	0.122	23.07	24.30	1.327	0.162	/
	Off			10	20600	844	25	Mid	-0.19	0.109	22.11	23.30	1.315	0.143	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

10.5 LTE Band 7 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
Up	Level 1&2	QPSK	Left Cheek	0	21100	2535	1	Low	0.11	0.390	17.48	18.00	1.127	0.440	/
	Level 1&2			0	20850	2510	50	Low	0.09	0.392	17.51	18.00	1.119	0.439	/
	Level 1&2		Left Tilt	0	21100	2535	1	Low	-0.08	0.429	17.48	18.00	1.127	0.484	/
	Level 1&2			0	20850	2510	50	Low	0.18	0.431	17.51	18.00	1.119	0.482	/
	Level 1&2		Right Cheek	0	21100	2535	1	Low	-0.07	0.558	17.48	18.00	1.127	0.629	/
	Level 1&2			0	20850	2510	50	Low	-0.06	0.566	17.51	18.00	1.119	0.634	/
	Level 1&2		Right Tilt	0	21100	2535	1	Low	-0.11	0.726	17.48	18.00	1.127	0.818	/
	Level 1&2			0	20850	2510	1	Low	0.01	0.725	17.43	18.00	1.140	**0.827**	13#

	Level 1&2			0	21350	2560	1	Low	-0.17	0.676	17.22	18.00	1.197	0.809	/
	Level 1&2			0	20850	2510	50	Low	-0.01	0.730	17.51	18.00	1.119	0.817	/
	Level 1&2			0	21100	2535	50	Low	0.09	0.709	17.45	18.00	1.135	0.805	/
	Level 1&2			0	21350	2560	50	Low	-0.05	0.685	17.24	18.00	1.191	0.816	/
	Level 1&2			0	20850	2510	100	Low	0.02	0.695	17.45	18.00	1.135	0.789	/
Up	Level3	QPSK	Left Cheek	0	21100	2535	1	Low	0.18	0.315	16.52	17.00	1.117	0.352	/
	Level3			0	20850	2510	50	Low	-0.10	0.318	16.52	17.00	1.117	0.355	/
	Level3		Left Tilt	0	21100	2535	1	Low	-0.19	0.345	16.52	17.00	1.117	0.385	/
	Level3			0	20850	2510	50	Low	-0.15	0.348	16.52	17.00	1.117	0.389	/
	Level3		Right Cheek	0	21100	2535	1	Low	0.05	0.451	16.52	17.00	1.117	0.504	/
	Level3			0	20850	2510	50	Low	-0.06	0.456	16.52	17.00	1.117	0.509	/
	Level3		Right Tilt	0	21100	2535	1	Low	0.09	0.580	16.52	17.00	1.117	0.648	/
	Level3			0	20850	2510	1	Low	0.01	0.575	16.45	17.00	1.140	0.656	/
	Level3			0	21350	2560	1	Low	0.13	0.545	16.27	17.00	1.197	0.652	/
	Level3			0	20850	2510	50	Low	0.06	0.570	16.52	17.00	1.117	0.637	/
Dow n	Off	QPSK	Left Cheek	0	21350	2560	1	Mid	0.11	0.095	22.79	24.00	1.321	0.126	/
	Off			0	21350	2560	50	Mid	0.16	0.075	21.88	23.00	1.294	0.097	/
	Off		Left Tilt	0	21350	2560	1	Mid	0.02	0.112	22.79	24.00	1.321	0.148	/
	Off			0	21350	2560	50	Mid	-0.19	0.087	21.88	23.00	1.294	0.113	/
	Off		Right Cheek	0	21350	2560	1	Mid	0.11	0.142	22.79	24.00	1.321	0.188	/
	Off			0	21350	2560	50	Mid	0.10	0.126	21.88	23.00	1.294	0.163	/
	Off		Right Tilt	0	21350	2560	1	Mid	0.11	0.096	22.79	24.00	1.321	0.127	/
	Off			0	21350	2560	50	Mid	0.01	0.077	21.88	23.00	1.294	0.099	/
Body-worn Accessory (15mm)															
Up	Level4	QPSK	Front Side	15	21100	2535	1	Low	-0.03	0.122	20.01	20.50	1.119	0.137	/
	Level4			15	20850	2510	50	Low	0.17	0.118	20.01	20.50	1.119	0.132	/
	Level4		Back Side	15	21100	2535	1	Low	0.15	0.209	20.01	20.50	1.119	**0.234**	14#
	Level4			15	20850	2510	1	Low	-0.04	0.201	19.96	20.50	1.132	0.228	/
	Level4			15	21350	2560	1	Low	-0.14	0.195	19.73	20.50	1.194	0.233	/
	Level4			15	20850	2510	50	Low	0.18	0.206	20.01	20.50	1.119	0.231	/
Up	Level5&6	QPSK	Front Side	15	21100	2535	1	Low	-0.06	0.108	19.49	20.00	1.125	0.121	/
	Level5&6			15	20850	2510	50	Low	0.01	0.105	19.47	20.00	1.130	0.119	/
	Level5&6		Back Side	15	21100	2535	1	Low	0.07	0.183	19.49	20.00	1.125	0.206	/
	Level5&6			15	20850	2510	1	Low	-0.05	0.178	19.44	20.00	1.138	0.202	/
	Level5&6			15	21350	2560	1	Low	0.11	0.171	19.22	20.00	1.197	0.205	/
	Level5&6			15	20850	2510	50	Low	0.17	0.178	19.47	20.00	1.130	0.201	/
Dow n	Off	QPSK	Front Side	15	21350	2560	1	Mid	-0.07	0.165	22.79	24.00	1.321	0.218	/
	Off			15	21350	2560	50	Mid	0.14	0.160	21.88	23.00	1.294	0.207	/
	Off		Back Side	15	21350	2560	1	Mid	0.05	0.138	22.79	24.00	1.321	0.182	/
	Off			15	21350	2560	50	Mid	-0.12	0.135	21.88	23.00	1.294	0.175	/

Hotspot (10mm)															
Up	Level4	QPSK	Front Side	10	21100	2535	1	Low	-0.18	0.221	20.01	20.50	1.119	0.247	/
	Level4			10	20850	2510	50	Low	-0.19	0.227	20.01	20.50	1.119	0.254	/
	Level4		Back Side	10	21100	2535	1	Low	-0.04	0.421	20.01	20.50	1.119	0.471	/
	Level4			10	20850	2510	50	Low	0.04	0.424	20.01	20.50	1.119	0.475	/
	Level4		Left Edge	10	21100	2535	1	Low	0.15	0.032	20.01	20.50	1.119	0.036	/
	Level4			10	20850	2510	50	Low	-0.01	0.035	20.01	20.50	1.119	0.039	/
	Level4		Right Edge	10	21100	2535	1	Low	-0.19	0.053	20.01	20.50	1.119	0.059	/
	Level4			10	20850	2510	50	Low	0.16	0.060	20.01	20.50	1.119	0.067	/
	Level4		Top Edge	10	21100	2535	1	Low	0.16	0.494	20.01	20.50	1.119	0.553	/
	Level4			10	20850	2510	50	Low	0.11	0.518	20.01	20.50	1.119	**0.580**	15#
	Level4			10	21100	2535	50	Low	0.04	0.502	19.90	20.50	1.148	0.576	/
	Level4			10	21350	2560	50	Low	0.04	0.449	19.67	20.50	1.211	0.544	/
	Level4			10	21100	2535	1	Low	0.07	0.010	20.01	20.50	1.119	0.011	/
	Level4			10	20850	2510	50	Low	0.17	0.012	20.01	20.50	1.119	0.013	/
Up	Level5&6		Front Side	10	21100	2535	1	Low	-0.05	0.198	19.49	20.00	1.125	0.223	/
	Level5&6			10	20850	2510	50	Low	0.19	0.202	19.47	20.00	1.130	0.228	/
	Level5&6		Back Side	10	21100	2535	1	Low	-0.05	0.374	19.49	20.00	1.125	0.421	/
	Level5&6			10	20850	2510	50	Low	0.09	0.380	19.47	20.00	1.130	0.429	/
	Level5&6		Left Edge	10	21100	2535	1	Low	-0.08	0.031	19.49	20.00	1.125	0.035	/
	Level5&6			10	20850	2510	50	Low	-0.04	0.033	19.47	20.00	1.130	0.037	/
	Level5&6		Right Edge	10	21100	2535	1	Low	0.02	0.049	19.49	20.00	1.125	0.055	/
	Level5&6			10	20850	2510	50	Low	-0.07	0.053	19.47	20.00	1.130	0.060	/
	Level5&6		Top Edge	10	21100	2535	1	Low	0.12	0.438	19.49	20.00	1.125	0.493	/
	Level5&6			10	20850	2510	50	Low	0.16	0.455	19.47	20.00	1.130	0.514	/
	Level5&6			10	21100	2535	50	Low	-0.12	0.450	19.39	20.00	1.130	0.508	/
	Level5&6			10	21350	2560	50	Low	0.08	0.432	19.23	20.00	1.130	0.488	/
Dow n	Off	QPSK	Front Side	10	21350	2560	1	Mid	-0.02	0.328	22.79	24.00	1.321	0.433	/
	Off			10	21350	2560	50	Mid	-0.05	0.266	21.88	23.00	1.294	0.344	/
	Off		Back Side	10	21350	2560	1	Mid	-0.06	0.215	22.79	24.00	1.321	0.284	/
	Off			10	21350	2560	50	Mid	0.00	0.187	21.88	23.00	1.294	0.242	/
	Off		Left Edge	10	21350	2560	1	Mid	0.12	0.185	22.79	24.00	1.321	0.244	/
	Off			10	21350	2560	50	Mid	-0.15	0.148	21.88	23.00	1.294	0.192	/
	Off		Right Edge	10	21350	2560	1	Mid	-0.01	0.074	22.79	24.00	1.321	0.098	/
	Off			10	21350	2560	50	Mid	0.19	0.063	21.88	23.00	1.294	0.082	/
	Off		Bottom Edg e	10	21350	2560	1	Mid	-0.03	0.358	22.79	24.00	1.321	0.473	/
	Off			10	21350	2560	50	Mid	-0.04	0.336	21.88	23.00	1.294	0.435	/
Ante nna	Power Reductio n	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num b.	RB Start	Power Drift (dB)	Meas. SAR10 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	10 g Scaled SAR (W/Kg)	Meas. No.
ProductSpecific10g SAR (0mm)															
Up	Level4	QPSK	Front Side	0	21100	2535	1	Low	-0.08	0.703	20.01	20.50	1.119	0.787	/
	Level4			0	20850	2510	50	Low	-0.17	0.719	20.01	20.50	1.119	0.805	/
	Level4		Back Side	0	21100	2535	1	Low	0.12	1.210	20.01	20.50	1.119	1.355	/

	Level4			0	20850	2510	50	Low	0.11	1.230	20.01	20.50	1.119	1.377	/
	Level4		Left Edge	0	21100	2535	1	Low	0.04	0.065	20.01	20.50	1.119	0.073	/
	Level4			0	20850	2510	50	Low	0.11	0.068	20.01	20.50	1.119	0.076	/
	Level4		Right Edge	0	21100	2535	1	Low	-0.19	0.108	20.01	20.50	1.119	0.121	/
	Level4			0	20850	2510	50	Low	-0.17	0.110	20.01	20.50	1.119	0.123	/
	Level4		Top Edge	0	21100	2535	1	Low	-0.12	1.360	20.01	20.50	1.119	1.522	/
	Level4			0	20850	2510	50	Low	0.03	1.420	19.96	20.50	1.132	**1.608**	16#
	Level4			0	21100	2535	50	Low	0.11	1.350	19.90	20.50	1.148	1.550	/
	Level4			0	21350	2560	50	Low	-0.02	1.240	19.67	20.50	1.211	1.501	/
Up	Level5&6	QPSK	Front Side	0	21100	2535	1	Low	-0.06	0.627	19.49	20.00	1.125	0.705	/
	Level5&6			0	20850	2510	50	Low	-0.11	0.639	19.47	20.00	1.130	0.722	/
	Level5&6		Back Side	0	21100	2535	1	Low	0.17	1.075	19.49	20.00	1.125	1.209	/
	Level5&6			0	20850	2510	50	Low	0.02	1.088	19.47	20.00	1.130	1.229	/
	Level5&6		Left Edge	0	21100	2535	1	Low	0.17	0.059	19.49	20.00	1.125	0.066	/
	Level5&6			0	20850	2510	50	Low	0.08	0.061	19.47	20.00	1.130	0.069	/
	Level5&6		Right Edge	0	21100	2535	1	Low	-0.06	0.095	19.49	20.00	1.125	0.107	/
	Level5&6			0	20850	2510	50	Low	0.11	0.100	19.47	20.00	1.130	0.113	/
	Level5&6		Top Edge	0	21100	2535	1	Low	-0.09	1.120	19.49	20.00	1.125	1.260	/
	Level5&6			0	20850	2510	50	Low	0.05	1.190	19.47	20.00	1.130	1.344	/
	Level5&6			0	21100	2535	50	Low	0.03	1.080	19.39	20.00	1.151	1.243	/
	Level5&6			0	21350	2560	50	Low	0.15	1.010	19.23	20.00	1.194	1.206	/

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

10.6 LTE Band 41 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
Up	Level 1	QPSK	Left Cheek	0	40140	2545	1	Low	-0.17	0.532	20.02	20.50	1.117	0.594	/
	Level 1			0	40140	2545	50	Low	0.14	0.509	20.03	20.50	1.114	0.567	/
	Level 1		Left Tilt	0	40140	2545	1	Low	-0.11	0.583	20.02	20.50	1.117	0.651	/
	Level 1			0	40140	2545	50	Low	-0.01	0.560	20.03	20.50	1.114	0.624	/
	Level 1		Right Cheek	0	40140	2545	1	Low	0.06	0.614	20.02	20.50	1.117	0.686	/
	Level 1			0	40140	2545	50	Low	-0.19	0.590	20.03	20.50	1.114	0.657	/
	Level 1		Right Tilt	0	40140	2545	1	Low	-0.01	0.716	20.02	20.50	1.117	0.800	/
	Level 1			0	40473	2578.3	1	Low	-0.07	0.689	19.80	20.50	1.175	0.810	/
	Level 1			0	40807	2611.7	1	Low	0.14	0.751	19.90	20.50	1.148	0.862	/
	Level 1			0	41140	2645	1	Low	0.06	0.951	19.95	20.50	1.135	**1.079**	17#
	Level 1			0	40140	2545	50	Low	-0.07	0.705	20.03	20.50	1.114	0.786	/
	Level 1			0	40140	2545	100	Low	-0.12	0.685	19.92	20.50	1.143	0.783	/
Up	Level2&3	QPSK	Left Cheek	0	41140	2645	1	Low	-0.11	0.421	19.06	19.50	1.107	0.466	/
	Level2&3			0	40140	2545	50	Low	0.08	0.405	19.02	19.50	1.117	0.452	/
	Level2&3		Left Tilt	0	41140	2645	1	Low	0.00	0.460	19.06	19.50	1.107	0.509	/

	Level2&3			0	40140	2545	50	Low	0.15	0.443	19.02	19.50	1.117	0.495	/
	Level2&3		Right Cheek	0	41140	2645	1	Low	-0.03	0.486	19.06	19.50	1.107	0.538	/
	Level2&3			0	40140	2545	50	Low	0.18	0.468	19.02	19.50	1.117	0.523	/
	Level2&3		Right Tilt	0	41140	2645	1	Low	-0.04	0.751	19.06	19.50	1.107	0.831	/
	Level2&3			0	40140	2545	1	Low	-0.17	0.545	19.05	19.50	1.109	0.605	/
	Level2&3			0	40473	2578.3	1	Low	0.06	0.594	18.99	19.50	1.125	0.668	/
	Level2&3			0	40807	2611.7	1	Low	-0.15	0.605	18.94	19.50	1.138	0.688	/
	Level2&3			0	40140	2545	50	Low	-0.05	0.558	19.02	19.50	1.117	0.623	/
Down	Off	QPSK	Left Cheek	0	41140	2645	1	Low	0.16	0.093	23.86	24.00	1.033	0.096	/
	Off			0	41140	2645	50	Mid	0.18	0.080	22.80	23.00	1.047	0.084	/
	Off		Left Tilt	0	41140	2645	1	Low	-0.11	0.112	23.86	24.00	1.033	0.116	/
	Off			0	41140	2645	50	Mid	-0.12	0.090	22.80	23.00	1.047	0.094	/
	Off		Right Cheek	0	41140	2645	1	Low	0.01	0.139	23.86	24.00	1.033	0.144	/
	Off			0	41140	2645	50	Mid	0.03	0.124	22.80	23.00	1.047	0.130	/
	Off		Right Tilt	0	41140	2645	1	Low	0.14	0.089	23.86	24.00	1.033	0.092	/
	Off			0	41140	2645	50	Mid	0.05	0.074	22.80	23.00	1.047	0.077	/
Body-worn Accessory (15mm)															
Up	Off	QPSK	Front Side	15	41140	2645	1	Low	0.13	0.158	23.86	24.00	1.033	0.163	/
	Off			15	41140	2645	50	Mid	0.13	0.127	22.80	23.00	1.047	0.133	/
	Off		Back Side	15	41140	2645	1	Low	0.13	0.220	23.86	24.00	1.033	**0.227**	18#
	Off			15	40140	2545	1	Low	0.19	0.178	23.48	24.00	1.127	0.201	/
	Off			15	40473	2578.3	1	Low	-0.08	0.170	23.77	24.00	1.054	0.179	/
	Off			15	40807	2611.7	1	Low	-0.18	0.182	23.11	24.00	1.227	0.223	/
	Off			15	41140	2645	50	Mid	-0.14	0.208	22.80	23.00	1.047	0.218	/
Down	Off	QPSK	Front Side	15	41140	2645	1	Low	0.06	0.169	23.86	24.00	1.033	0.175	/
	Off			15	41140	2645	50	Mid	-0.19	0.137	22.80	23.00	1.047	0.143	/
	Off		Back Side	15	41140	2645	1	Low	0.00	0.125	23.86	24.00	1.033	0.129	/
	Off			15	41140	2645	50	Mid	0.09	0.102	22.80	23.00	1.047	0.107	/
Hotspot (10mm)															
Up	Off	QPSK	Front Side	10	41140	2645	1	Low	-0.11	0.347	23.86	24.00	1.033	0.358	/
	Off			10	41140	2645	50	Mid	-0.13	0.281	22.80	23.00	1.047	0.294	/
	Off		Back Side	10	41140	2645	1	Low	0.01	0.578	23.86	24.00	1.033	0.597	/
	Off			10	41140	2645	50	Mid	-0.10	0.462	22.80	23.00	1.047	0.484	/
	Off		Left Edge	10	41140	2645	1	Low	0.16	0.055	23.86	24.00	1.033	0.057	/
	Off			10	41140	2645	50	Mid	-0.02	0.046	22.80	23.00	1.047	0.048	/
	Off		Right Edge	10	41140	2645	1	Low	-0.14	0.056	23.86	24.00	1.033	0.058	/
	Off			10	41140	2645	50	Mid	0.08	0.044	22.80	23.00	1.047	0.046	/
	Off		Top Edge	10	41140	2645	1	Low	0.05	0.598	23.86	24.00	1.033	**0.618**	19#
	Off			10	40140	2545	1	Low	0.12	0.547	23.48	24.00	1.127	0.617	/
	Off			10	40473	2578.3	1	Low	-0.16	0.500	23.77	24.00	1.054	0.527	/
	Off			10	40807	2611.7	1	Low	0.14	0.411	23.11	24.00	1.227	0.504	/
	Off			10	41140	2645	50	Mid	-0.02	0.489	22.80	23.00	1.047	0.512	/
Down	Off	QPSK	Front Side	10	41140	2645	1	Low	0.12	0.324	23.86	24.00	1.033	0.335	/
	Off			10	41140	2645	50	Mid	-0.01	0.248	22.80	23.00	1.047	0.260	/
	Off		Back Side	10	41140	2645	1	Low	0.14	0.187	23.86	24.00	1.033	0.193	/

	Off			10	41140	2645	50	Mid	-0.18	0.152	22.80	23.00	1.047	0.159	/
	Off		Left Edge	10	41140	2645	1	Low	-0.17	0.142	23.86	24.00	1.033	0.147	/
	Off			10	41140	2645	50	Mid	0.02	0.117	22.80	23.00	1.047	0.123	/
	Off		Right Edge	10	41140	2645	1	Low	0.16	0.038	23.86	24.00	1.033	0.039	/
	Off			10	41140	2645	50	Mid	-0.19	0.032	22.80	23.00	1.047	0.034	/
	Off		Bottom Edg	10	41140	2645	1	Low	0.02	0.308	23.86	24.00	1.033	0.318	/
	Off		e	10	41140	2645	50	Mid	-0.18	0.229	22.80	23.00	1.047	0.240	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

10.7 WIFI 2.4GHz

Mode	Power Reduction	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. 1tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head														
802.11 b	Off	Left Cheek	0	1	2412	0.01	1.020	19.13	19.50	1.089	98.02	1.020	**1.133**	20#
	Off		0	6	2437	-0.04	0.802	18.85	19.50	1.161	98.02	1.020	0.950	/
	Off		0	11	2462	0.15	0.890	19.06	19.50	1.107	98.02	1.020	1.005	/
	Off	Left Tilt	0	1	2412	0.01	1.010	19.13	19.50	1.089	98.02	1.020	1.122	/
	Off	Right Cheek	0	1	2412	-0.02	0.443	19.13	19.50	1.089	98.02	1.020	0.492	/
	Off	Right Tilt	0	1	2412	0.04	0.530	19.13	19.50	1.089	98.02	1.020	0.589	/
802.11 b	Level2	Left Cheek	0	1	2412	0.00	0.739	17.12	17.50	1.091	98.02	1.020	0.823	/
	Level2		0	6	2437	-0.08	0.585	16.91	17.50	1.146	98.02	1.020	0.684	/
	Level2		0	11	2462	0.01	0.643	17.08	17.50	1.102	98.02	1.020	0.723	/
	Level2	Left Tilt	0	1	2412	0.04	0.688	17.12	17.50	1.091	98.02	1.020	0.766	/
	Level2	Right Cheek	0	1	2412	0.06	0.293	17.12	17.50	1.091	98.02	1.020	0.327	/
	Level2	Right Tilt	0	1	2412	0.16	0.351	17.12	17.50	1.091	98.02	1.020	0.391	/
Body-worn Accessory (15mm)														
802.11 b	Off	Front Side	15	1	2412	0.14	0.063	19.13	19.50	1.089	98.02	1.020	0.070	/
	Off	Back Side	15	1	2412	0.05	0.093	19.13	19.50	1.089	98.02	1.020	**0.103**	21#
	Off		15	6	2437	-0.04	0.075	18.85	19.50	1.161	98.02	1.020	0.089	/
	Off		15	11	2462	-0.07	0.080	19.06	19.50	1.107	98.02	1.020	0.090	/
Hotspot (10mm)														
802.11 b	Off	Front Side	10	1	2412	-0.13	0.091	19.13	19.50	1.089	98.02	1.020	0.101	/
	Off	Back Side	10	1	2412	0.13	0.178	19.13	19.50	1.089	98.02	1.020	**0.198**	22#
	Off		10	6	2437	-0.15	0.142	18.85	19.50	1.161	98.02	1.020	0.168	/
	Off		10	11	2462	-0.14	0.155	19.06	19.50	1.107	98.02	1.020	0.175	/
	Off	Left Edge	10	1	2412	0.14	0.073	19.13	19.50	1.089	98.02	1.020	0.081	/
	Off	Right Edge	10	1	2412	-0.09	0.015	19.13	19.50	1.089	98.02	1.020	0.017	/
	Off	Top Edge	10	1	2412	0.11	0.115	19.13	19.50	1.089	98.02	1.020	0.128	/
802.11 b	Level3	Front Side	10	1	2412	-0.02	0.048	17.12	17.50	1.091	98.02	1.020	0.053	/
	Level3	Back Side	10	1	2412	0.13	0.094	17.12	17.50	1.091	98.02	1.020	0.104	/
	Level3		10	6	2437	0.02	0.075	16.91	17.50	1.146	98.02	1.020	0.088	/
	Level3		10	11	2462	-0.01	0.081	17.08	17.50	1.102	98.02	1.020	0.091	/

	Level3	Left Edge	10	1	2412	-0.08	0.049	17.12	17.50	1.091	98.02	1.020	0.055	/
	Level3	Right Edge	10	1	2412	0.19	0.012	17.12	17.50	1.091	98.02	1.020	0.013	/
	Level3	Top Edge	10	1	2412	0.14	0.091	17.12	17.50	1.091	98.02	1.020	0.101	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.85G WIFI

Fre. Band	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
5.3G	Level1	802.11n (HT40)	Left Cheek	0	54	5270	-0.12	0.465	12.59	13.50	1.233	96.00	1.042	0.597	/
	Level1		Left Tilt	0	54	5270	0.07	0.592	12.59	13.50	1.233	96.00	1.042	**0.760**	23#
	Level1			0	62	5310	0.13	0.491	12.15	13.50	1.365	96.00	1.042	0.698	/
	Level1		Right Cheek	0	54	5270	0.19	0.318	12.59	13.50	1.233	96.00	1.042	0.408	/
	Level1		Right Tilt	0	54	5270	-0.05	0.375	12.59	13.50	1.233	96.00	1.042	0.482	/
5.3G	Level2	802.11n (HT40)	Left Cheek	0	54	5270	-0.01	0.278	10.53	11.50	1.250	96.00	1.042	0.362	/
	Level2		Left Tilt	0	54	5270	0.09	0.357	10.53	11.50	1.250	96.00	1.042	0.465	/
	Level2			0	62	5310	-0.07	0.293	10.25	11.50	1.334	96.00	1.042	0.407	/
	Level2		Right Cheek	0	54	5270	-0.10	0.190	10.53	11.50	1.250	96.00	1.042	0.247	/
	Level2		Right Tilt	0	54	5270	-0.01	0.224	10.53	11.50	1.250	96.00	1.042	0.292	/
5.6G	Level1	802.11ac (VHT80)	Left Cheek	0	106	5530	0.09	0.335	12.70	14.50	1.514	92.14	1.085	0.550	/
	Level1		Left Tilt	0	106	5530	0.15	0.455	12.70	14.50	1.514	92.14	1.085	**0.747**	24#
	Level1			0	122	5610	0.01	0.372	12.43	14.50	1.611	92.14	1.085	0.650	/
	Level1		Right Cheek	0	106	5530	-0.09	0.244	12.70	14.50	1.514	92.14	1.085	0.401	/
	Level1		Right Tilt	0	106	5530	-0.09	0.289	12.70	14.50	1.514	92.14	1.085	0.475	/
5.6G	Level2	802.11ac (VHT80)	Left Cheek	0	106	5530	-0.06	0.175	10.64	12.50	1.535	92.14	1.085	0.291	/
	Level2		Left Tilt	0	106	5530	0.15	0.241	10.64	12.50	1.535	92.14	1.085	0.401	/
	Level2			0	122	5610	0.03	0.198	10.44	12.50	1.607	92.14	1.085	0.345	/
	Level2		Right Cheek	0	106	5530	-0.16	0.130	10.64	12.50	1.535	92.14	1.085	0.217	/
	Level2		Right Tilt	0	106	5530	0.14	0.151	10.64	12.50	1.535	92.14	1.085	0.251	/
5.8G	Off	802.11ac (VHT80)	Left Cheek	0	155	5775	-0.13	0.717	15.19	16.50	1.352	92.14	1.085	1.052	/
	Off		Left Tilt	0	155	5775	-0.04	0.778	15.19	16.50	1.352	92.14	1.085	**1.142**	25#
	Off		Right Cheek	0	155	5775	0.08	0.494	15.19	16.50	1.352	92.14	1.085	0.725	/
	Off		Right Tilt	0	155	5775	-0.06	0.507	15.19	16.50	1.352	92.14	1.085	0.744	/
5.8G	Level2	802.11ac (VHT80)	Left Cheek	0	155	5775	-0.07	0.414	13.15	14.50	1.365	92.14	1.085	0.613	/
	Level2		Left Tilt	0	155	5775	-0.11	0.449	13.15	14.50	1.365	92.14	1.085	0.665	/
	Level2		Right Cheek	0	155	5775	0.19	0.249	13.15	14.50	1.365	92.14	1.085	0.369	/
	Level2		Right Tilt	0	155	5775	0.06	0.255	13.15	14.50	1.365	92.14	1.085	0.378	/
Body-worn Accessory (15mm)															
5.3G	Off	802.11n (HT40)	Front Side	15	54	5270	-0.13	0.122	15.51	16.50	1.256	96.00	1.042	0.160	/
	Off		Back Side	15	54	5270	0.09	0.179	15.51	16.50	1.256	96.00	1.042	**0.234**	26#
	Off			15	62	5310	0.02	0.167	15.23	16.50	1.340	96.00	1.042	0.233	/
5.6G	Off	802.11ac (VHT80)	Front Side	15	106	5530	0.05	0.143	16.65	18.50	1.531	92.14	1.085	0.238	/
	Off		Back Side	15	106	5530	0.19	0.246	16.65	18.50	1.531	92.14	1.085	**0.409**	27#
	Off			15	122	5610	-0.15	0.219	16.52	18.50	1.578	92.14	1.085	0.375	/
5.8G	Off	802.11ac (VHT80)	Front Side	15	155	5775	0.09	0.082	15.19	16.50	1.352	92.14	1.085	0.120	/
	Off		Back Side	15	155	5775	-0.13	0.181	15.19	16.50	1.352	92.14	1.085	**0.266**	28#
Hotspot (10mm)															
5.2G	Level3	802.11n	Front Side	10	46	5230	0.09	0.103	12.62	13.50	1.225	96.00	1.042	0.131	/

	Level3	(HT40)	Back Side	10	46	5230	0.12	0.191	12.62	13.50	1.225	96.00	1.042	0.244	/
	Level3		Left Edge	10	46	5230	-0.16	0.066	12.62	13.50	1.225	96.00	1.042	0.084	/
	Level3		Right Edge	10	46	5230	-0.11	0.015	12.62	13.50	1.225	96.00	1.042	0.019	/
	Level3		Top Edge	10	46	5230	0.06	0.219	12.62	13.50	1.225	96.00	1.042	**0.279**	29#
	Level3			10	38	5190	0.04	0.108	12.56	13.50	1.242	96.00	1.042	0.140	/
5.8G	Off	802.11ac (VHT80)	Front Side	10	155	5775	0.07	0.114	15.19	16.50	1.352	92.14	1.085	0.167	/
	Off		Back Side	10	155	5775	0.13	0.261	15.19	16.50	1.352	92.14	1.085	**0.383**	30#
	Off		Left Edge	10	155	5775	0.07	0.058	15.19	16.50	1.352	92.14	1.085	0.085	/
	Off		Right Edge	10	155	5775	0.04	0.020	15.19	16.50	1.352	92.14	1.085	0.030	/
	Off		Top Edge	10	155	5775	0.13	0.253	15.19	16.50	1.352	92.14	1.085	0.371	/
Fre. Band	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	10 g Scaled SAR (W/Kg)	Meas. No.
ProductSpecific10g SAR (0mm)															
5.3G	Off	802.11n (HT40)	Front Side	0	54	5270	0.01	0.302	15.51	16.50	1.256	96.00	1.042	0.395	/
	Off		Back Side	0	54	5270	0.13	0.361	15.51	16.50	1.256	96.00	1.042	0.472	/
	Off		Left Edge	0	54	5270	0.11	0.172	15.51	16.50	1.256	96.00	1.042	0.225	/
	Off		Right Edge	0	54	5270	-0.03	0.024	15.51	16.50	1.256	96.00	1.042	0.031	/
	Off		Top Edge	0	54	5270	0.12	0.585	15.51	16.50	1.256	96.00	1.042	**0.765**	31#
	Off			0	62	5310	0.01	0.537	15.23	16.50	1.340	96.00	1.042	0.749	/
5.6G	Off	802.11ac (VHT80)	Front Side	0	106	5530	-0.07	0.321	16.65	18.50	1.531	92.14	1.085	0.533	/
	Off		Back Side	0	106	5530	-0.05	0.335	16.65	18.50	1.531	92.14	1.085	0.557	/
	Off		Left Edge	0	106	5530	-0.07	0.146	16.65	18.50	1.531	92.14	1.085	0.243	/
	Off		Right Edge	0	106	5530	-0.09	0.024	16.65	18.50	1.531	92.14	1.085	0.040	/
	Off		Top Edge	0	106	5530	0.06	0.438	16.65	18.50	1.531	92.14	1.085	**0.728**	32#
	Off			0	122	5610	0.11	0.359	16.52	18.50	1.578	92.14	1.085	0.615	/

Note: Refer to 0 for the detailed test data for each test configuration.

10.9 Bluetooth

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. 1tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
DH5	Left Cheek	0	0	2402	0.07	0.197	11.95	13.50	1.429	76.8	1.302	**0.367**	33#
		0	39	2441	0.12	0.174	11.56	13.50	1.563	76.8	1.302	0.354	/
		0	78	2480	-0.15	0.185	11.75	13.50	1.496	76.8	1.302	0.360	/
	Left Tilt	0	0	2402	0.11	0.128	11.95	13.50	1.429	76.8	1.302	0.238	/
	Right Cheek	0	0	2402	0.06	0.068	11.95	13.50	1.429	76.8	1.302	0.127	/
	Right Tilt	0	0	2402	0.16	0.088	11.95	13.50	1.429	76.8	1.302	0.164	/
Body-worn Accessory (15mm)													
DH5	Front Side	15	0	2402	0.15	0.011	11.95	13.50	1.429	76.8	1.302	0.020	/
	Back Side	15	0	2402	0.08	0.016	11.95	13.50	1.429	76.8	1.302	**0.029**	34#
		15	39	2441	0.07	0.014	11.56	13.50	1.563	76.8	1.302	0.028	/
		15	78	2480	-0.11	0.015	11.75	13.50	1.496	76.8	1.302	0.029	/
Hotspot (10mm)													
DH5	Front Side	10	0	2402	0.05	0.018	11.95	13.50	1.429	76.8	1.302	0.033	/
	Back Side	10	0	2402	-0.09	0.027	11.95	13.50	1.429	76.8	1.302	**0.050**	35#
		10	39	2441	-0.14	0.024	11.56	13.50	1.563	76.8	1.302	0.049	/
		10	78	2480	0.12	0.025	11.75	13.50	1.496	76.8	1.302	0.049	/
	Left Edge	10	0	2402	0.06	0.017	11.95	13.50	1.429	76.8	1.302	0.032	/
	Right Edge	10	0	2402	0.05	0.006	11.95	13.50	1.429	76.8	1.302	0.011	/
	Top Edge	10	0	2402	0.06	0.027	11.95	13.50	1.429	76.8	1.302	0.049	/
Note: Refer to 0 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.

Frequency Band (MHz)	Wireless Band	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Largest to Smallest SAR Radio
1900	GSM 1900	Head	Right cheek	1.030	Yes	0.995	1.04
2600	LTE Band 41	Head	Right Cheek	0.951	Yes	0.922	1.03
2450	802.11 b	Head	Left Cheek	1.020	Yes	0.985	1.04
Note: The ratio of largest to smallest SAR for the original and first repeated measurements is < 1.20, the second repeated measurement. is not required.							

12 SIMULTANEOUS TRANSMISSION

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

12.1 Simultaneous Transmission Mode Consider

No.	Simultaneous Tx Combination	Head	Body-worn	Hotspot	Product Specific
1	GSM + WiFi 2.4G	Yes	Yes	Yes	Yes
2	GSM + WiFi 5G	Yes	Yes	Yes	Yes
3	GSM + Bluetooth	Yes	Yes	Yes	Yes
4	GSM + WiFi 5G + Bluetooth	Yes	Yes	No	Yes
5	UMTS + WiFi 2.4G	Yes	Yes	Yes	Yes
6	UMTS + WiFi 5G	Yes	Yes	Yes	Yes
7	UMTS + Bluetooth	Yes	Yes	Yes	Yes
8	UMTS + WiFi 5G + Bluetooth	Yes	Yes	No	Yes
9	LTE + WiFi 2.4G	Yes	Yes	Yes	Yes
10	LTE + WiFi 5G	Yes	Yes	Yes	Yes
11	LTE + Bluetooth	Yes	Yes	Yes	Yes
12	LTE + WiFi 5G + Bluetooth	Yes	Yes	No	Yes

Note:

1. 2G&3G&4G share the same antenna and can’t transmit simultaneously.
2. The Bluetooth and 2.4G WLAN share the same antenna, can’t transmitting together.
3. The 2.4G WLAN or 5G WLAN can transmit simultaneously with each WWAN.
4. Two WWAN antennas can switch automatically, but up and down antenna can't transmit simultaneously.
5. The maximum SAR summation is calculated based on the same configuration and test position.

12.2 Sum SAR of Simultaneous Transmission

12.2.1 Head Simultaneous Transmission SAR Evaluation for WWAN Antenna Up with 2.4G WLAN

Band	Power Reduction	Position	Stand alone SAR		SUM SAR WWAN+2.4G WIFI
			1	2	
			WWAN	2.4GWIFI	Sum SAR （1+2）
GSM 850	Off	Left Cheek	0.440	0.823	1.263
	Off	Left Tilt	0.392	0.766	1.158
	Off	Right Cheek	0.981	0.327	1.308
	Off	Right Tilt	0.519	0.391	0.910
GSM1900	Level2	Left Cheek	0.631	0.823	1.454
	Level2	Left Tilt	0.587	0.766	1.353
	Level2	Right Cheek	1.156	0.327	**1.483**
	Level2	Right Tilt	0.723	0.391	1.114
WCDMA B5	Off	Left Cheek	0.490	0.823	1.313
	Off	Left Tilt	0.438	0.766	1.204
	Off	Right Cheek	0.737	0.327	1.064
	Off	Right Tilt	0.459	0.391	0.850
LTE B5	Off	Left Cheek	0.556	0.823	1.379
	Off	Left Tilt	0.380	0.766	1.146
	Off	Right Cheek	0.654	0.327	0.981
	Off	Right Tilt	0.617	0.391	1.008
LTE B7	Level2	Left Cheek	0.440	0.823	1.263
	Level2	Left Tilt	0.484	0.766	1.250
	Level2	Right Cheek	0.634	0.327	0.961
	Level2	Right Tilt	0.827	0.391	1.218
LTE B41	Level2	Left Cheek	0.466	0.823	1.289
	Level2	Left Tilt	0.509	0.766	1.275
	Level2	Right Cheek	0.538	0.327	0.865
	Level2	Right Tilt	0.831	0.391	1.222

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.483 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.2 Head Simultaneous Transmission SAR Evaluation for WWAN Antenna Up with 5G WLAN and Bluetooth

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN + Bluetooth	SUM SAR WWAN + 5G + Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR （1+2）	Sum SAR （1+3）	Sum SAR （1+2+3）
GSM 850	Off	Left Cheek	0.440	0.613	0.367	1.053	0.807	1.420
	Off	Left Tilt	0.392	0.665	0.238	1.057	0.630	1.295
	Off	Right Cheek	0.981	0.369	0.127	1.350	1.108	**1.477**
	Off	Right Tilt	0.519	0.378	0.164	0.897	0.683	1.061
GSM1900	Level3	Left Cheek	0.513	0.613	0.272	1.126	0.785	1.398
	Level3	Left Tilt	0.477	0.665	0.237	1.142	0.714	1.379
	Level3	Right Cheek	0.900	0.369	0.104	1.269	1.004	1.373
	Level3	Right Tilt	0.588	0.378	0.094	0.966	0.682	1.060
WCDMA B5	Off	Left Cheek	0.490	0.613	0.272	1.103	0.762	1.375
	Off	Left Tilt	0.438	0.665	0.237	1.103	0.675	1.340
	Off	Right Cheek	0.737	0.369	0.104	1.106	0.841	1.210
	Off	Right Tilt	0.459	0.378	0.094	0.837	0.553	0.931
LTE B5	Off	Left Cheek	0.556	0.613	0.272	1.169	0.828	1.441
	Off	Left Tilt	0.380	0.665	0.237	1.045	0.617	1.282
	Off	Right Cheek	0.654	0.369	0.104	1.023	0.758	1.127
	Off	Right Tilt	0.617	0.378	0.094	0.995	0.711	1.089
LTE B7	Level3	Left Cheek	0.355	0.613	0.272	0.968	0.627	1.240
	Level3	Left Tilt	0.389	0.665	0.237	1.054	0.626	1.291
	Level3	Right Cheek	0.509	0.369	0.104	0.878	0.613	0.982
	Level3	Right Tilt	0.656	0.378	0.094	1.034	0.750	1.128
LTE B41	Level3	Left Cheek	0.466	0.613	0.272	1.079	0.738	1.351
	Level3	Left Tilt	0.509	0.665	0.237	1.174	0.746	1.411
	Level3	Right Cheek	0.538	0.369	0.104	0.907	0.642	1.011
	Level3	Right Tilt	0.831	0.378	0.094	1.209	0.925	1.303

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.477 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.3 Body-worn Simultaneous Transmission SAR Evaluation for WWAN Antenna Up with 2.4G WLAN

Band	Power Reduction	Position	Stand alone SAR		SUM SAR WWAN+2.4G WIFI
			1	2	
			WWAN	2.4GWIFI	Sum SAR（1+2）
GSM 850	Off	Front Side 15mm	0.079	0.039	0.118
	Off	Back Side 15mm	0.087	0.058	0.145
GSM1900	Off	Front Side 15mm	0.220	0.039	0.259
	Off	Back Side 15mm	0.343	0.058	**0.401**
WCDMA B5	Off	Front Side 15mm	0.088	0.039	0.127
	Off	Back Side 15mm	0.097	0.058	0.155
LTE B5	Off	Front Side 15mm	0.082	0.039	0.121
	Off	Back Side 15mm	0.099	0.058	0.157
LTE B7	Level5	Front Side 15mm	0.121	0.039	0.160
	Level5	Back Side 15mm	0.206	0.058	0.264
LTE B41	Off	Front Side 15mm	0.163	0.039	0.202
	Off	Back Side 15mm	0.227	0.058	0.285

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.401 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.4 Body-worn Simultaneous Transmission SAR Evaluation for WWAN Antenna Up with 5G WLAN and Bluetooth

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR（1+2）	Sum SAR（1+3）	Sum SAR（1+2+3）
GSM 850	Off	Front Side 15mm	0.079	0.238	0.020	0.317	0.099	0.337
	Off	Back Side 15mm	0.087	0.409	0.029	0.496	0.116	0.525
GSM1900	Off	Front Side 15mm	0.220	0.238	0.020	0.458	0.240	0.478
	Off	Back Side 15mm	0.343	0.409	0.029	0.752	0.372	**0.781**
WCDMA B5	Off	Front Side 15mm	0.088	0.238	0.020	0.326	0.108	0.346
	Off	Back Side 15mm	0.097	0.409	0.029	0.506	0.126	0.535

LTE B5	Off	Front Side 15mm	0.082	0.238	0.020	0.320	0.102	0.340
	Off	Back Side 15mm	0.099	0.409	0.029	0.508	0.128	0.537
LTE B7	Level6	Front Side 15mm	0.121	0.238	0.020	0.359	0.141	0.379
	Level6	Back Side 15mm	0.206	0.409	0.029	0.615	0.235	0.644
LTE B41	Off	Front Side 15mm	0.163	0.238	0.020	0.401	0.183	0.421
	Off	Back Side 15mm	0.227	0.409	0.029	0.636	0.256	0.665

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.781 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.5 Hotspot Simultaneous Transmission SAR Evaluation for WWAN Antenna Up with 2.4G WLAN

Band	Power Reduction	Position	Stand alone SAR		SUM SAR WWAN+2.4G WIFI
			1	2	
			WWAN	2.4GWIFI	Sum SAR (1+2)
GSM 850	Off	Front Side 10mm	0.085	0.053	0.138
	Off	Back Side 10mm	0.175	0.104	0.279
	Off	Left Edge 10mm	0.110	0.055	0.165
	Off	Right Edge10mm	0.092	0.013	0.105
	Off	Top Edge10mm	0.096	0.101	0.197
GSM1900	Off	Front Side 10mm	0.351	0.053	0.404
	Off	Back Side 10mm	0.691	0.104	**0.795**
	Off	Left Edge 10mm	0.059	0.055	0.114
	Off	Right Edge10mm	0.345	0.013	0.358
	Off	Top Edge10mm	0.456	0.101	0.557
WCDMA B5	Off	Front Side 10mm	0.100	0.053	0.153
	Off	Back Side 10mm	0.152	0.104	0.256
	Off	Left Edge 10mm	0.116	0.055	0.171
	Off	Right Edge10mm	0.099	0.013	0.112
	Off	Top Edge10mm	0.103	0.101	0.204
LTE B5	Off	Front Side 10mm	0.088	0.053	0.141
	Off	Back Side 10mm	0.133	0.104	0.237
	Off	Left Edge 10mm	0.097	0.055	0.152
	Off	Right Edge10mm	0.090	0.013	0.103
	Off	Top Edge10mm	0.107	0.101	0.208
LTE B7	Level5	Front Side 10mm	0.228	0.053	0.281
	Level5	Back Side 10mm	0.429	0.104	0.533

	Level5	Left Edge 10mm	0.037	0.055	0.092
	Level5	Right Edge10mm	0.060	0.013	0.073
	Level5	Top Edge10mm	0.514	0.101	0.615
LTE B41	Off	Front Side 10mm	0.358	0.053	0.411
	Off	Back Side 10mm	0.597	0.104	0.701
	Off	Left Edge 10mm	0.057	0.055	0.112
	Off	Right Edge10mm	0.058	0.013	0.071
	Off	Top Edge10mm	0.618	0.101	0.719

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.795 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.6 Hotspot Simultaneous Transmission SAR Evaluation for WWAN Antenna Up with 5G WLAN and Bluetooth

Band	Power Reduction	Position	**Stand alone SAR**			**SUM SAR WWAN+5G WIFI**	**SUM SAR WWAN+Bluetooth**	**SUM SAR WWAN+5G+Bluetooth**
			1	**2**	**3**			
			WWAN	5G WIFI	Bluetooth	Sum SAR（1+2）	Sum SAR（1+3）	Sum SAR（1+2+3）
GSM 850	Off	Front Side 10mm	0.085	0.167	0.033	0.252	0.118	0.285
	Off	Back Side 10mm	0.175	0.383	0.050	0.558	0.225	0.608
	Off	Left Edge 10mm	0.110	0.085	0.032	0.195	0.142	0.227
	Off	Right Edge10mm	0.092	0.030	0.011	0.122	0.103	0.133
	Off	Top Edge10mm	0.096	0.371	0.049	0.467	0.145	0.516
GSM1900	Off	Front Side 10mm	0.351	0.167	0.033	0.518	0.384	0.551
	Off	Back Side 10mm	0.691	0.383	0.050	1.074	0.741	**1.124**
	Off	Left Edge 10mm	0.059	0.085	0.032	0.144	0.091	0.176
	Off	Right Edge10mm	0.345	0.030	0.011	0.375	0.356	0.386
	Off	Top Edge10mm	0.456	0.371	0.049	0.827	0.505	0.876
WCDMA B5	Off	Front Side 10mm	0.100	0.167	0.033	0.267	0.133	0.300
	Off	Back Side 10mm	0.152	0.383	0.050	0.535	0.202	0.585

	Off	Left Edge 10mm	0.116	0.085	0.032	0.201	0.148	0.233
	Off	Right Edge10mm	0.099	0.030	0.011	0.129	0.110	0.140
	Off	Top Edge10mm	0.103	0.371	0.049	0.474	0.152	0.523
LTE B5	Off	Front Side 10mm	0.088	0.167	0.033	0.255	0.121	0.288
	Off	Back Side 10mm	0.133	0.383	0.050	0.516	0.183	0.566
	Off	Left Edge 10mm	0.097	0.085	0.032	0.182	0.129	0.214
	Off	Right Edge10mm	0.090	0.030	0.011	0.120	0.101	0.131
	Off	Top Edge10mm	0.107	0.371	0.049	0.478	0.156	0.527
LTE B7	Level6	Front Side 10mm	0.228	0.167	0.033	0.395	0.261	0.428
	Level6	Back Side 10mm	0.429	0.383	0.050	0.812	0.479	0.862
	Level6	Left Edge 10mm	0.037	0.085	0.032	0.122	0.069	0.154
	Level6	Right Edge10mm	0.060	0.030	0.011	0.090	0.071	0.101
	Level6	Top Edge10mm	0.514	0.371	0.049	0.885	0.563	0.934
LTE B41	Off	Front Side 10mm	0.358	0.167	0.033	0.525	0.391	0.558
	Off	Back Side 10mm	0.597	0.383	0.050	0.980	0.647	1.030
	Off	Left Edge 10mm	0.057	0.085	0.032	0.142	0.089	0.174
	Off	Right Edge10mm	0.058	0.030	0.011	0.088	0.069	0.099
	Off	Top Edge10mm	0.618	0.371	0.049	0.989	0.667	1.038

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.124 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.7 Product Specific Simultaneous Transmission SAR Evaluation for WWAN Antenna Up with 5G WLAN(10g)

Band	Power Reduction	Position	Stand alone SAR		SUM SAR
			1	2	WWAN+5G WIFI

			WWAN	5G WIFI	Sum SAR（1+2）
LTE B7	Level5&6	Front Side 0mm	0.722	0.533	1.255
	Level5&6	Back Side 0mm	1.229	0.557	1.786
	Level5&6	Left Edge 0mm	0.069	0.243	0.312
	Level5&6	Right Edge 0mm	0.113	0.040	0.153
	Level5&6	Top Edge 0mm	1.344	0.765	**2.109**

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 10g SAR is 2.109 W/Kg < 4.0 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.8 Head Simultaneous Transmission SAR Evaluation for WWAN Antenna Down with 2.4G WLAN

Band	Power Reduction	Position	Stand alone SAR		SUM SAR WWAN+2.4G WIFI
			1	2	
			WWAN	2.4GWIFI	Sum SAR （1+2）
GSM 850	Off	Left Cheek	0.249	0.823	1.072
	Off	Left Tilt	0.106	0.766	0.872
	Off	Right Cheek	0.224	0.327	0.551
	Off	Right Tilt	0.090	0.391	0.481
GSM1900	Off	Left Cheek	0.079	0.823	0.902
	Off	Left Tilt	0.057	0.766	0.823
	Off	Right Cheek	0.092	0.327	0.419
	Off	Right Tilt	0.083	0.391	0.474
WCDMA B5	Off	Left Cheek	0.188	0.823	1.011
	Off	Left Tilt	0.082	0.766	0.848
	Off	Right Cheek	0.185	0.327	0.512
	Off	Right Tilt	0.089	0.391	0.480
LTE B5	Off	Left Cheek	0.200	0.823	1.023
	Off	Left Tilt	0.067	0.766	0.833
	Off	Right Cheek	0.165	0.327	0.492
	Off	Right Tilt	0.084	0.391	0.475
LTE B7	Off	Left Cheek	0.126	0.823	0.949
	Off	Left Tilt	0.148	0.766	0.914
	Off	Right Cheek	0.188	0.327	0.515
	Off	Right Tilt	0.127	0.391	0.518
LTE B41	Off	Left Cheek	0.096	0.823	0.919
	Off	Left Tilt	0.116	0.766	0.882
	Off	Right Cheek	0.144	0.327	0.471
	Off	Right Tilt	0.092	0.391	0.483

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.072 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.9 Head Simultaneous Transmission SAR Evaluation for WWAN Antenna Down with 5G WLAN and Bluetooth

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)	Sum SAR (1+2+3)
GSM 850	Off	Left Cheek	0.249	0.613	0.367	0.862	0.616	**1.229**
	Off	Left Tilt	0.106	0.665	0.238	0.771	0.344	1.009
	Off	Right Cheek	0.224	0.369	0.127	0.593	0.351	0.720
	Off	Right Tilt	0.090	0.378	0.164	0.468	0.254	0.632
GSM1900	Off	Left Cheek	0.079	0.613	0.272	0.692	0.351	0.964
	Off	Left Tilt	0.057	0.665	0.237	0.722	0.294	0.959
	Off	Right Cheek	0.092	0.369	0.104	0.461	0.196	0.565
	Off	Right Tilt	0.083	0.378	0.094	0.461	0.177	0.555
WCDMA B5	Off	Left Cheek	0.188	0.613	0.272	0.801	0.460	1.073
	Off	Left Tilt	0.082	0.665	0.237	0.747	0.319	0.984
	Off	Right Cheek	0.185	0.369	0.104	0.554	0.289	0.658
	Off	Right Tilt	0.089	0.378	0.094	0.467	0.183	0.561
LTE B5	Off	Left Cheek	0.200	0.613	0.272	0.813	0.472	1.085
	Off	Left Tilt	0.067	0.665	0.237	0.732	0.304	0.969
	Off	Right Cheek	0.165	0.369	0.104	0.534	0.269	0.638
	Off	Right Tilt	0.084	0.378	0.094	0.462	0.178	0.556
LTE B7	Off	Left Cheek	0.126	0.613	0.272	0.739	0.398	1.011
	Off	Left Tilt	0.148	0.665	0.237	0.813	0.385	1.050
	Off	Right Cheek	0.188	0.369	0.104	0.557	0.292	0.661
	Off	Right Tilt	0.127	0.378	0.094	0.505	0.221	0.599
LTE B41	Off	Left Cheek	0.096	0.613	0.272	0.709	0.368	0.981
	Off	Left Tilt	0.116	0.665	0.237	0.781	0.353	1.018
	Off	Right Cheek	0.144	0.369	0.104	0.513	0.248	0.617
	Off	Right Tilt	0.092	0.378	0.094	0.470	0.186	0.564

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 1.229 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.10 Body-worn Simultaneous Transmission SAR Evaluation for WWAN Antenna Down with 2.4G WLAN

Band	Power Reduction	Position	Stand alone SAR		SUM SAR WWAN+2.4G WIFI
			1	2	
			WWAN	2.4GWIFI	Sum SAR (1+2)
GSM 850	Off	Front Side 15mm	0.095	0.039	0.134
	Off	Back Side 15mm	0.140	0.058	0.198
GSM1900	Off	Front Side 15mm	0.104	0.039	0.143
	Off	Back Side 15mm	0.185	0.058	0.243
WCDMA B5	Off	Front Side 15mm	0.149	0.039	0.188
	Off	Back Side 15mm	0.181	0.058	0.239
LTE B5	Off	Front Side 15mm	0.151	0.039	0.190
	Off	Back Side 15mm	0.199	0.058	**0.257**
LTE B7	Off	Front Side 15mm	0.218	0.039	0.257
	Off	Back Side 15mm	0.182	0.058	0.240
LTE B41	Off	Front Side 15mm	0.175	0.039	0.214
	Off	Back Side 15mm	0.129	0.058	0.187

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.257 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.11 Body-worn Simultaneous Transmission SAR Evaluation for WWAN Antenna Down with 5G WLAN and Bluetooth

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)	Sum SAR (1+2+3)
GSM 850	Off	Front Side 15mm	0.095	0.238	0.020	0.333	0.115	0.353
	Off	Back Side 15mm	0.140	0.409	0.029	0.549	0.169	0.578
GSM1900	Off	Front Side 15mm	0.104	0.238	0.020	0.342	0.124	0.362
	Off	Back Side 15mm	0.185	0.409	0.029	0.594	0.214	0.623
WCDMA B5	Off	Front Side 15mm	0.149	0.238	0.020	0.387	0.169	0.407
	Off	Back Side 15mm	0.181	0.409	0.029	0.590	0.210	0.619
LTE B5	Off	Front Side 15mm	0.151	0.238	0.020	0.389	0.171	0.409

	Off	Back Side 15mm	0.199	0.409	0.029	0.608	0.228	**0.637**
LTE B7	Off	Front Side 15mm	0.218	0.238	0.020	0.456	0.238	0.476
	Off	Back Side 15mm	0.182	0.409	0.029	0.591	0.211	0.620
LTE B41	Off	Front Side 15mm	0.175	0.238	0.020	0.413	0.195	0.433
	Off	Back Side 15mm	0.129	0.409	0.029	0.538	0.158	0.567

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.637 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.12 Hotspot Simultaneous Transmission SAR Evaluation for WWAN Antenna Down with 2.4G WLAN

Band	Power Reduction	Position	Stand alone SAR		SUM SAR WWAN+2.4G WIFI
			1	2	
			WWAN	2.4GWIFI	Sum SAR （1+2）
GSM 850	Off	Front Side 10mm	0.138	0.053	0.191
	Off	Back Side 10mm	0.245	0.104	0.349
	Off	Left Edge 10mm	0.101	0.055	0.156
	Off	Right Edge10mm	0.192	0.013	0.205
	Off	Bottom Edge10mm	0.193	0.400	0.593
GSM1900	Off	Front Side 10mm	0.190	0.053	0.243
	Off	Back Side 10mm	0.301	0.104	0.405
	Off	Left Edge 10mm	0.161	0.055	0.216
	Off	Right Edge10mm	0.092	0.013	0.105
	Off	Bottom Edge10mm	0.486	0.400	**0.886**
WCDMA B5	Off	Front Side 10mm	0.206	0.053	0.259
	Off	Back Side 10mm	0.312	0.104	0.416
	Off	Left Edge 10mm	0.108	0.055	0.163
	Off	Right Edge10mm	0.193	0.013	0.206
	Off	Bottom Edge10mm	0.206	0.400	0.606
LTE B5	Off	Front Side 10mm	0.169	0.053	0.222
	Off	Back Side 10mm	0.252	0.104	0.356
	Off	Left Edge 10mm	0.098	0.055	0.153
	Off	Right Edge10mm	0.178	0.013	0.191
	Off	Bottom Edge10mm	0.162	0.400	0.562
LTE B7	Off	Front Side 10mm	0.433	0.053	0.486
	Off	Back Side 10mm	0.284	0.104	0.388
	Off	Left Edge 10mm	0.244	0.055	0.299

	Off	Right Edge10mm	0.098	0.013	0.111
	Off	Bottom Edge10mm	0.473	0.007	0.480
LTE B41	Off	Front Side 10mm	0.335	0.053	0.388
	Off	Back Side 10mm	0.193	0.104	0.297
	Off	Left Edge 10mm	0.147	0.055	0.202
	Off	Right Edge10mm	0.039	0.013	0.052
	Off	Bottom Edge10mm	0.318	0.400	0.718

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.886 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.13 Hotspot Simultaneous Transmission SAR Evaluation for WWAN Antenna Down with 5G WLAN and Bluetooth

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR（1+2）	Sum SAR（1+3）	Sum SAR（1+2+3）
GSM 850	Off	Front Side 10mm	0.138	0.167	0.033	0.305	0.171	0.338
	Off	Back Side 10mm	0.245	0.383	0.050	0.628	0.295	0.678
	Off	Left Edge 10mm	0.101	0.085	0.032	0.186	0.133	0.218
	Off	Right Edge10mm	0.192	0.030	0.011	0.222	0.203	0.233
	Off	Bottom Edge10mm	0.193	0.400	0.015	0.593	0.208	0.608
GSM1900	Off	Front Side 10mm	0.190	0.167	0.033	0.357	0.223	0.390
	Off	Back Side 10mm	0.301	0.383	0.050	0.684	0.351	0.734
	Off	Left Edge 10mm	0.161	0.085	0.032	0.246	0.193	0.278
	Off	Right Edge10mm	0.092	0.030	0.011	0.122	0.103	0.133
	Off	Bottom Edge10mm	0.486	0.400	0.015	0.886	0.501	**0.901**
WCDMA B5	Off	Front Side 10mm	0.206	0.167	0.033	0.373	0.239	0.406
	Off	Back Side 10mm	0.312	0.383	0.050	0.695	0.362	0.745
	Off	Left Edge 10mm	0.108	0.085	0.032	0.193	0.140	0.225

	Off	Right Edge10mm	0.193	0.030	0.011	0.223	0.204	0.234
	Off	Bottom Edge10mm	0.206	0.400	0.015	0.606	0.221	0.621
LTE B5	Off	Front Side 10mm	0.169	0.167	0.033	0.336	0.202	0.369
	Off	Back Side 10mm	0.252	0.383	0.050	0.635	0.302	0.685
	Off	Left Edge 10mm	0.098	0.085	0.032	0.183	0.130	0.215
	Off	Right Edge10mm	0.178	0.030	0.011	0.208	0.189	0.219
	Off	Bottom Edge10mm	0.162	0.400	0.015	0.562	0.177	0.577
LTE B7	Off	Front Side 10mm	0.433	0.167	0.033	0.600	0.466	0.633
	Off	Back Side 10mm	0.284	0.383	0.050	0.667	0.334	0.717
	Off	Left Edge 10mm	0.244	0.085	0.032	0.329	0.276	0.361
	Off	Right Edge10mm	0.098	0.030	0.011	0.128	0.109	0.139
	Off	Bottom Edge10mm	0.473	0.400	0.015	0.873	0.488	0.888
LTE B41	Off	Front Side 10mm	0.335	0.167	0.033	0.502	0.368	0.535
	Off	Back Side 10mm	0.193	0.383	0.050	0.576	0.243	0.626
	Off	Left Edge 10mm	0.147	0.085	0.032	0.232	0.179	0.264
	Off	Right Edge10mm	0.039	0.030	0.011	0.069	0.050	0.080
	Off	Bottom Edge10mm	0.318	0.400	0.015	0.718	0.333	0.733

Note:

1: Only the worst simultaneous transmission combinations was shown in this table.

2: The highest Summed 1g SAR is 0.901 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
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2017/06/26	2020/06/25
1900MHz Validation Dipole	Speag	D1900V2	SN: 5d193	2017/06/30	2020/06/29
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2017/03/21	2020/03/20
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2017/07/10	2020/07/09
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2017/06/29	2020/06/28
E-Field Probe	Speag	EX3DV4	SN: 7510	2019/08/02	2020/08/01
Data Acquisition Electronics	Speag	DAE4	SN: 1454	2019/08/02	2020/08/01
Signal Generator	R&S	SMBV100A	260592	2019/06/13	2020/06/12
Power Meter	R&S	NRVD-B2	7250BJ-0112/2011	2019/10/30	2020/10/29
Power Sensor	R&S	NRV-Z4	100381	2019/10/30	2020/10/29
Power Sensor	R&S	NRV-Z2	100211	2019/10/30	2020/10/29
Wireless Communication Test Set	Agilent	8960-E5515C	MY50260493	2019/10/30	2020/10/29
Wireless Communication Test Set	R&S	CMW 500	104946	2019/10/30	2020/10/29
Network Analyzer	R&S	ZVL-6	101380	2019/06/20	2020/06/19
Thermometer	Elitech	RC-4HC	N/A	2019/11/02	2020/11/01
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
Phantom2	Speag	SAM	SN: 1857	N/A	N/A
Attenuator	COM-MW	ZA-S1-31	1305003187	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

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

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

ANNEX A SIMULATING LIQUID VERIFICATION RESULT

The dielectric parameters of the liquids were verified prior to the SAR evaluation using an SCLMP Dielectric Probe Kit.

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 (%)
2019.11.04	Head	835	21.5	0.91	41.91	0.90	41.50	1.11	0.99
2019.11.06	Head	835	21.1	0.87	41.53	0.90	41.50	-3.33	0.07
2019.11.08	Head	835	21.3	0.90	41.24	0.90	41.50	0.00	-0.63
2019.11.05	Body	835	21.3	0.99	56.15	0.97	55.20	2.06	1.72
2019.11.07	Body	835	21.4	0.95	55.86	0.97	55.20	-2.06	1.20
2019.11.09	Body	835	21.0	0.99	54.52	0.97	55.20	2.06	-1.23
2019.12.11	Head	1900	21.2	1.38	38.81	1.40	40.00	-1.43	-2.97
2019.11.10	Body	1900	21.4	1.48	53.02	1.52	53.30	-2.63	-0.53
2019.11.12	Head	2450	21.2	1.84	38.39	1.80	39.20	2.22	-2.07
2019.11.12	Body	2450	21.2	1.98	52.02	1.95	52.70	1.54	-1.29
2019.12.12	Head	2600	21.2	2.05	37.40	1.96	39.01	4.59	-4.13
2019.12.16	Head	2600	21.3	1.98	37.87	1.96	39.01	1.02	-2.92
2019.12.13	Body	2600	21.1	2.19	51.03	2.16	52.51	1.39	-2.82
2019.12.14	Body	2600	21.2	2.13	53.05	2.16	52.51	-1.39	1.03
2019.12.15	Body	2600	21.2	2.19	51.71	2.16	52.51	1.39	-1.52
2019.11.11	Body	2600	21.1	2.11	53.04	2.16	52.51	-2.31	1.01
2019.11.13	Head	5250	21.2	4.74	36.58	4.71	35.93	0.64	1.81
2019.11.14	Head	5250	21.0	4.58	37.37	4.71	35.93	-2.76	4.01
2019.11.13	Body	5250	21.2	5.48	49.86	5.36	48.95	2.24	1.86
2019.11.14	Body	5250	21.0	5.32	50.36	5.36	48.95	-0.75	2.88
2019.11.15	Head	5600	21.3	5.12	34.60	5.07	35.53	0.99	-2.62
2019.11.15	Body	5600	21.3	5.85	47.88	5.77	48.47	1.39	-1.22
2019.11.16	Head	5750	21.2	5.29	34.56	5.22	35.36	1.34	-2.26
2019.11.16	Body	5750	21.2	6.03	47.66	5.94	48.27	1.52	-1.26
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 its specification of 10 %(for 1 g Head and Body SAR).

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)	Targeted SAR(W/kg)	Tolerance (%)
2019.11.04	Head	835	100	0.956	9.56	9.75	-1.95	9.56	0.00
2019.11.06	Head	835	100	0.945	9.45	9.75	-3.08	9.56	-1.15
2019.11.08	Head	835	100	0.942	9.42	9.75	-3.38	9.56	-1.46
2019.11.05	Body	835	100	0.958	9.58	9.53	0.52	9.56	0.21
2019.11.07	Body	835	100	0.950	9.50	9.53	-0.31	9.56	-0.63
2019.11.09	Body	835	100	0.952	9.52	9.53	-0.10	9.56	-0.42
2019.12.11	Head	1900	100	3.890	38.90	39.90	-2.51	39.70	-2.02
2019.11.10	Body	1900	100	4.060	40.60	39.90	1.75	39.70	2.27
2019.11.12	Head	2450	100	5.300	53.00	52.40	1.15	52.40	1.15
2019.11.12	Body	2450	100	5.120	51.20	50.50	1.39	52.40	-2.29
2019.12.12	Head	2600	100	5.530	55.30	56.40	-1.95	55.30	0.00
2019.12.16	Head	2600	100	5.220	52.20	56.40	-7.45	55.30	-5.61
2019.12.13	Body	2600	100	5.610	56.10	54.30	3.31	55.30	1.45
2019.12.14	Body	2600	100	5.580	55.80	54.30	2.76	55.30	0.90
2019.12.15	Body	2600	100	5.820	58.20	54.30	7.18	55.30	5.24
2019.11.11	Body	2600	100	5.700	57.00	54.30	4.97	55.30	3.07
2019.11.13	Head	5250	100	7.120	71.20	76.20	-6.56	76.50	-6.93
2019.11.14	Head	5250	100	7.250	72.50	76.20	-4.86	76.50	-5.23
2019.11.13	Body	5250	100	7.080	70.80	75.20	-5.85	76.50	-7.45
2019.11.14	Body	5250	100	7.130	71.30	75.20	-5.19	76.50	-6.80
2019.11.15	Head	5600	100	8.440	84.40	82.60	2.18	83.30	1.32
2019.11.15	Body	5600	100	8.340	83.40	77.90	7.06	83.30	0.12
2019.11.16	Head	5750	100	8.220	82.20	80.80	1.73	78.00	5.38
2019.11.16	Body	5750	100	8.090	80.90	75.00	7.87	78.00	3.72
Note: The tolerance limit of System validation ±10%.									

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

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)	Targeted SAR(W/kg)	Tolerance (%)
2019.12.13	Body	2600	100	2.490	24.90	24.40	2.05	24.60	1.22
2019.11.13	Body	5250	100	2.010	20.10	21.20	-5.19	21.60	-6.94
2019.11.15	Body	5600	100	2.360	23.60	21.90	7.76	23.40	0.85
Note: The tolerance limit of System validation ±10%.									

System Performance Check Data (835MHz Head)

Date: 2019.11.04
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.905 S/m; ε_r = 41.914; ρ = 1000 kg/m^3
Phantom section: Flat Section

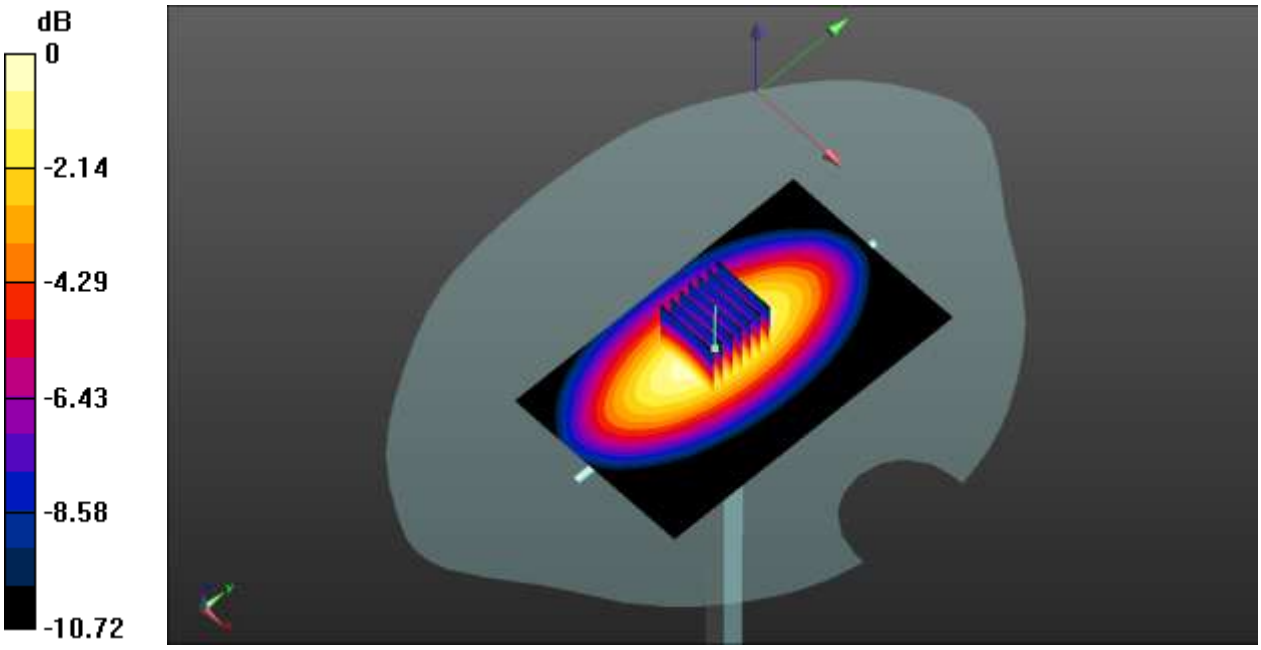
Ambient Temperature:22.7 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW /Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.03 W/kg

CW 835 100mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 32.94 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.956 W/kg; SAR(10 g) = 0.621 W/kg
Maximum value of SAR (measured) = 1.08 W/kg



0 dB = 1.08 W/kg

System Performance Check Data (835MHz Head)

Date: 2019.11.06
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.872 S/m; ε_r = 41.531; ρ = 1000 kg/m^3
Phantom section: Flat Section

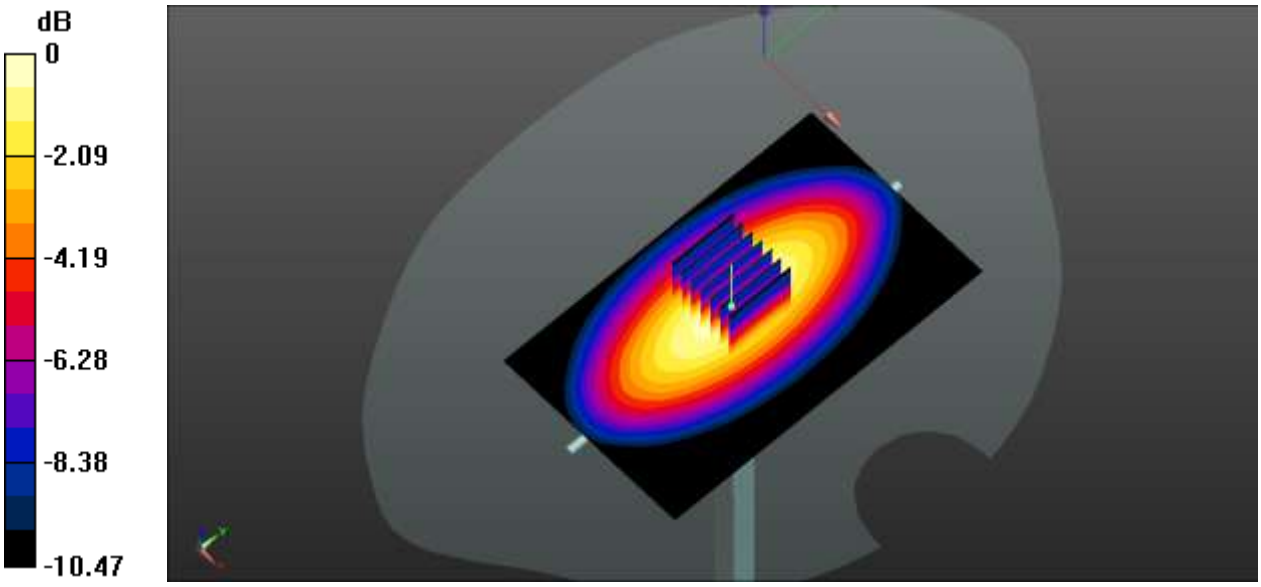
Ambient Temperature:22.5 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.01 W/kg

CW 835 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.08 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.945 W/kg; SAR(10 g) = 0.618 W/kg
Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg

System Performance Check Data (835MHz Head)

Date: 2019.11.08
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.9 S/m; ε_r = 41.238; ρ = 1000 kg/m^3
Phantom section: Flat Section

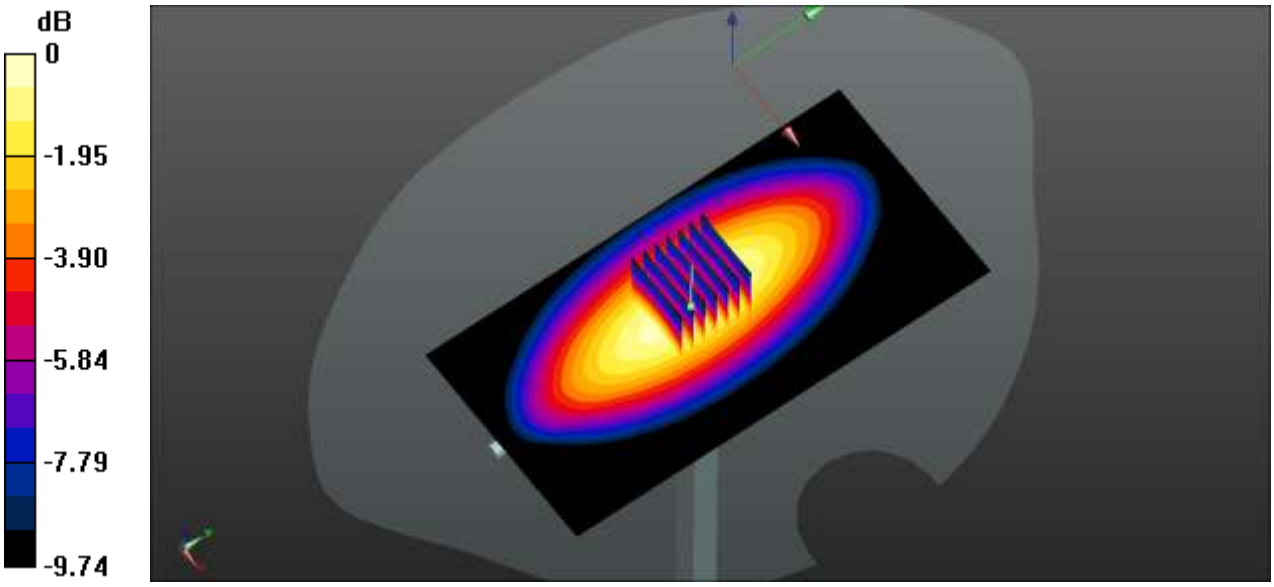
Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW HEAD/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.01 W/kg

CW 835 100mW HEAD/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.15 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.942 W/kg; SAR(10 g) = 0.611 W/kg
Maximum value of SAR (measured) = 0.998 W/kg



0 dB = 0.998 W/kg

System Performance Check Data (835MHz Body)

Date: 2019.11.05
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.986 S/m; ε_r = 56.152; ρ = 1000 kg/m^3
Phantom section: Flat Section

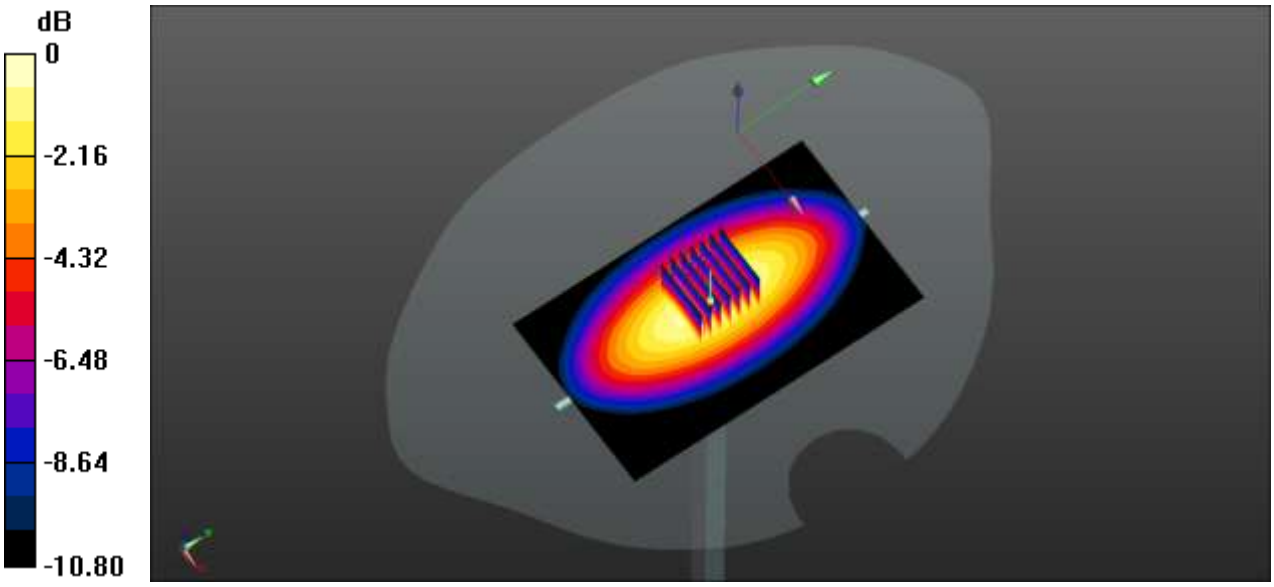
Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.992 W/kg

CW 835 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.58 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.958 W/kg; SAR(10 g) = 0.621 W/kg
Maximum value of SAR (measured) = 1.05 W/kg



0 dB = 1.05 W/kg

System Performance Check Data (835MHz Body)

Date: 2019.11.07
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.953 S/m; ε_r = 55.857; ρ = 1000 kg/m^3
Phantom section: Flat Section

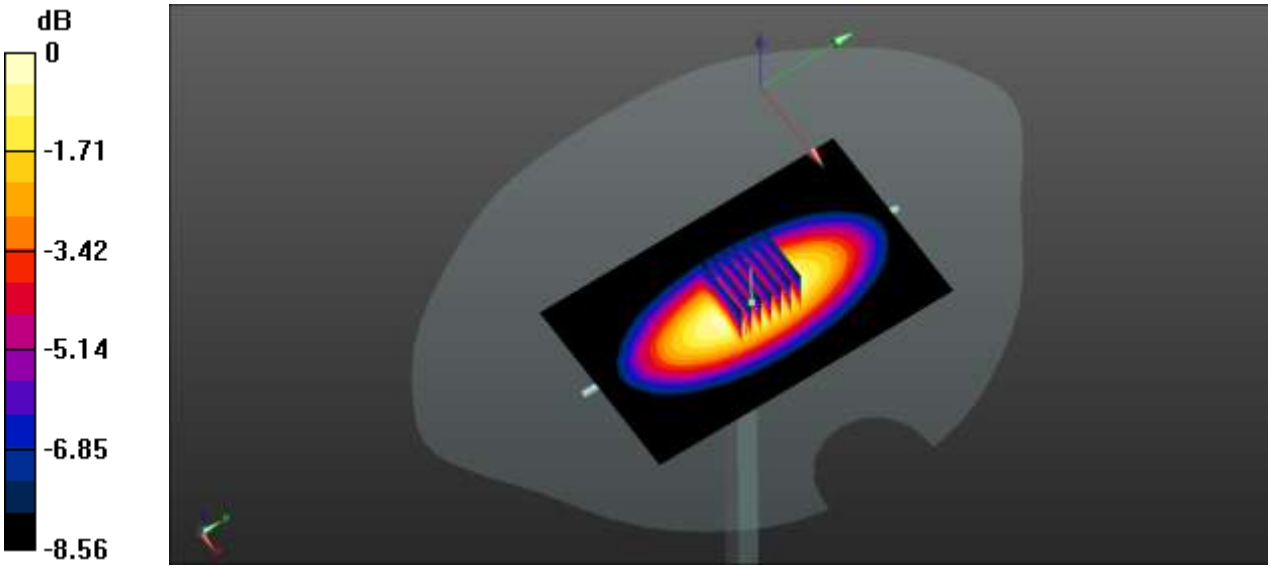
Ambient Temperature:22.3 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.03 W/kg

CW 835 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.84 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.950 W/kg; SAR(10 g) = 0.627 W/kg
Maximum value of SAR (measured) = 0.977 W/kg



0 dB = 0.977 W/kg

System Performance Check Data (835MHz Body)

Date: 2019.11.09
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.99 S/m; ε_r = 54.518; ρ = 1000 kg/m^3
Phantom section: Flat Section

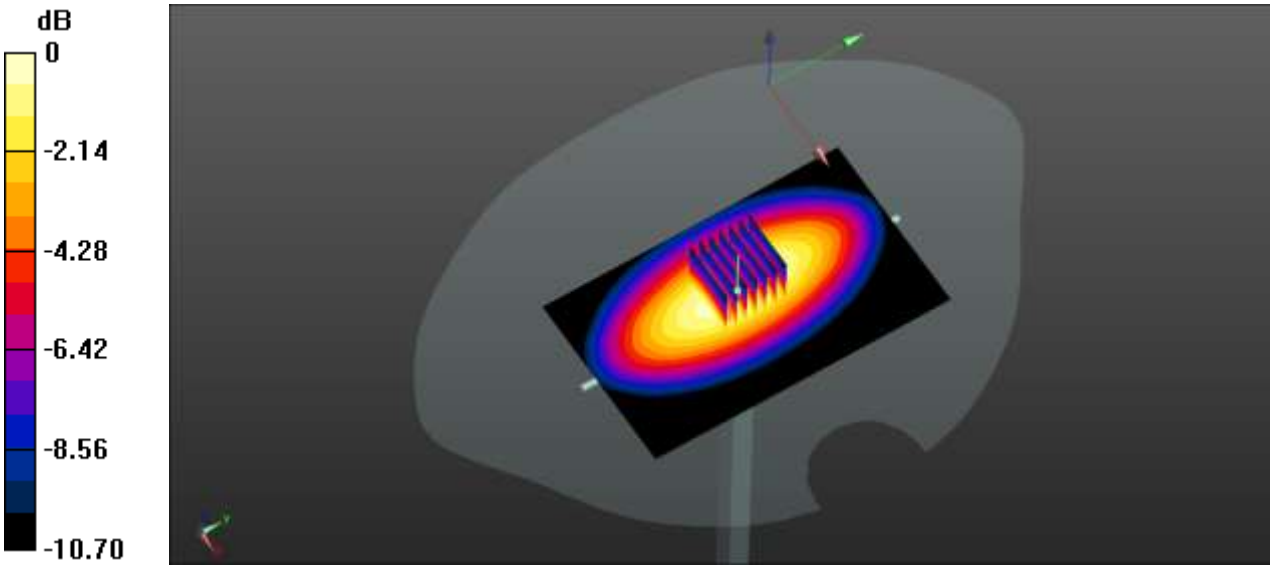
Ambient Temperature:22.1 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835 100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.05 W/kg

CW 835 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.79 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 0.952 W/kg; SAR(10 g) = 0.631 W/kg
Maximum value of SAR (measured) = 1.04 W/kg



0 dB = 1.04 W/kg

System Performance Check Data (1900MHz Head)

Date: 2019.12.11
Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.384 S/m; ε_r = 38.814; ρ = 1000 kg/m^3
Phantom section: Flat Section

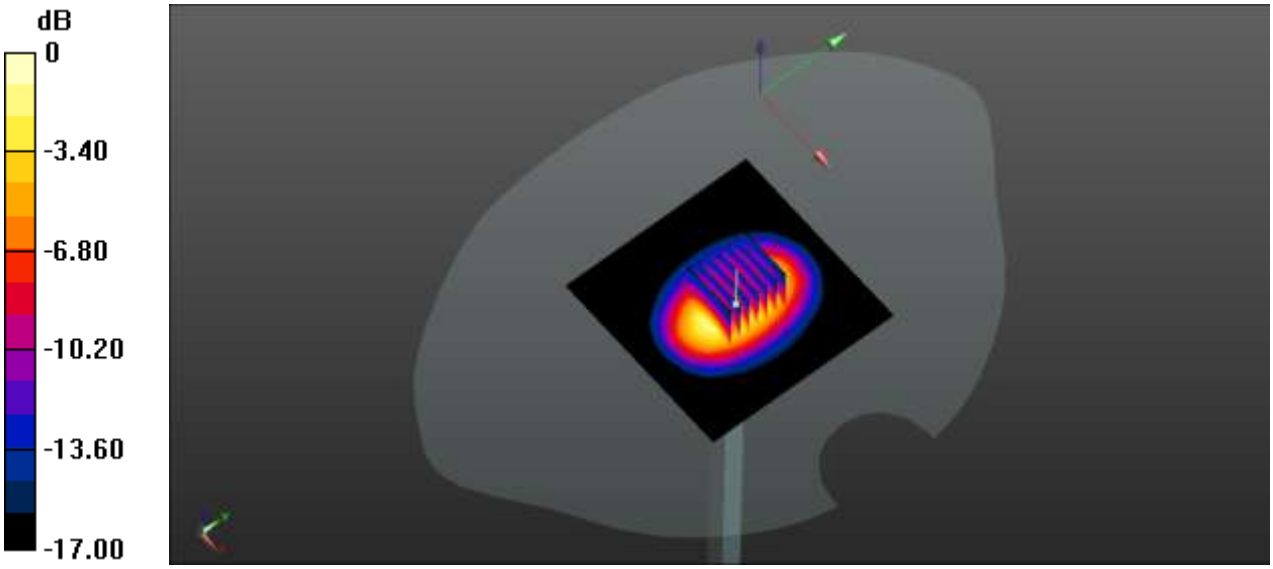
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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) = 4.45 W/kg

CW 1900 100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.59 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 7.22 W/kg
SAR(1 g) = 3.89 W/kg; SAR(10 g) = 2.03 W/kg
Maximum value of SAR (measured) = 4.39 W/kg



0 dB = 4.39 W/kg

System Performance Check Data (1900MHz Body)

Date: 2019.11.10
Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.48 S/m; ε_r = 53.015; ρ = 1000 kg/m^3
Phantom section: Flat Section

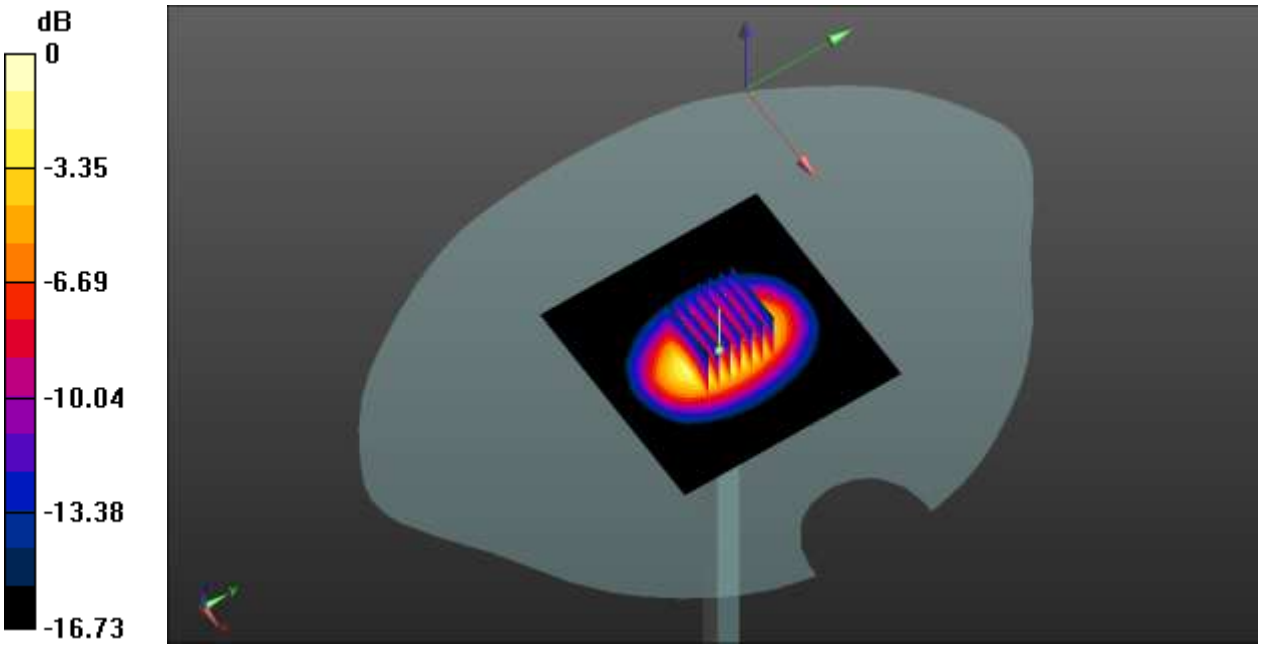
Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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) = 4.58 W/kg

CW 1900 100mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.75 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 7.34 W/kg
SAR(1 g) = 4.06 W/kg; SAR(10 g) = 2.12 W/kg
Maximum value of SAR (measured) = 4.58 W/kg



0 dB = 4.58 W/kg

System Performance Check Data (2450MHz Head)

Date: 2019.11.12
Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.843 S/m; ε_r = 38.389; ρ = 1000 kg/m^3
Phantom section: Flat Section

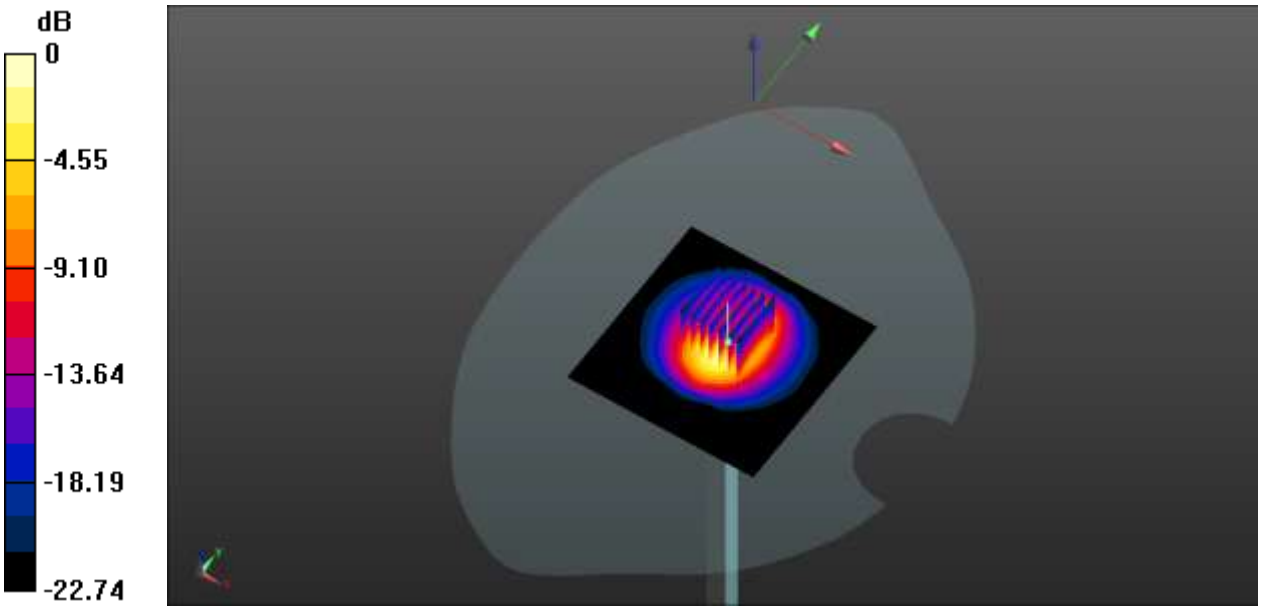
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- 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) = 6.19 W/kg

CW 2450 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.26 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 11.0 W/kg
SAR(1 g) = 5.3 W/kg; SAR(10 g) = 2.41 W/kg
Maximum value of SAR (measured) = 6.08 W/kg



0 dB = 6.08 W/kg

System Performance Check Data (2450MHz Body)

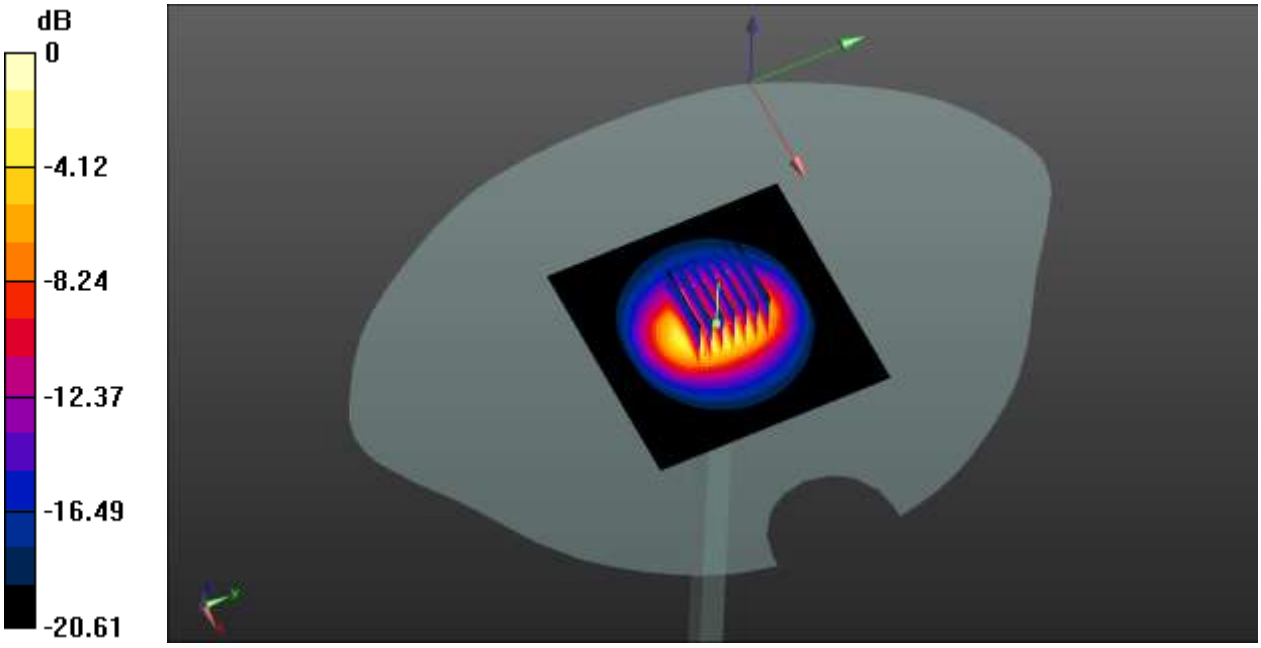
Date: 2019.11.12
Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.984 S/m; ε_r = 52.023; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.79, 7.79, 7.79); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- 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) = 5.78 W/kg
CW 2450 100mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.24 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 11.3 W/kg
SAR(1 g) = 5.12 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (measured) = 5.78 W/kg



0 dB = 5.78 W/kg

System Performance Check Data (2600MHz Head)

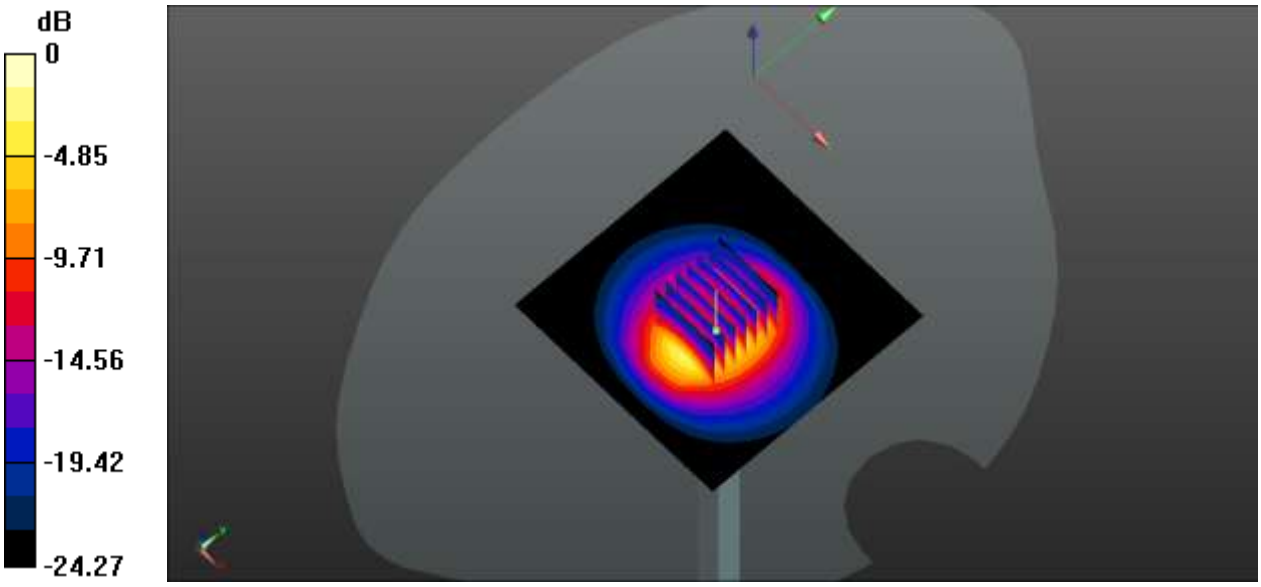
Date: 2019.12.12
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2600 MHz; σ =2.053 S/m; ε_r = 37.397; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- 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) = 6.60 W/kg
CW 2600 100mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 45.74 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 12.5 W/kg
SAR(1 g) = 5.53 W/kg; SAR(10 g) = 2.36 W/kg
Maximum value of SAR (measured) = 6.36 W/kg



0 dB = 6.36 W/kg

System Performance Check Data (2600MHz Head)

Date: 2019.12.16
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.981 S/m; ε_r = 37.874; ρ = 1000 kg/m^3
Phantom section: Flat Section

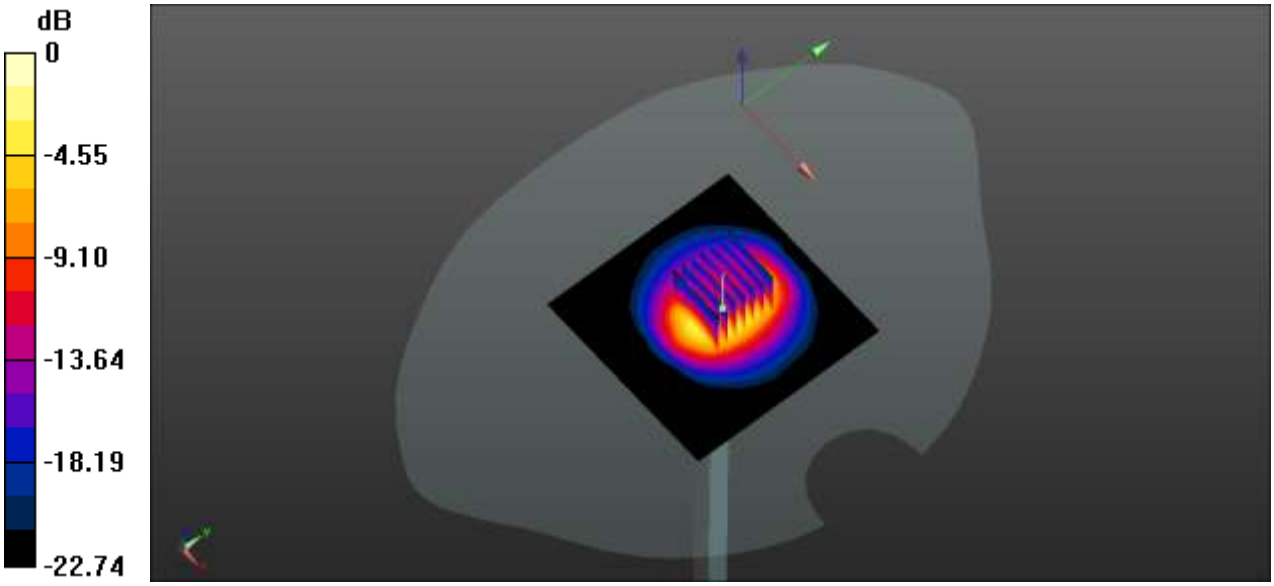
Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- 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) = 5.91 W/kg

CW 2600 100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.6 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 10.7 W/kg
SAR(1 g) = 5.22 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (measured) = 5.81 W/kg



0 dB = 5.81 W/kg

System Performance Check Data (2600MHz Body)

Date: 2019.12.13
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 2600 MHz; σ = 2.194 S/m; ε_r = 51.031; ρ = 1000 kg/m^3
Phantom section: Flat Section

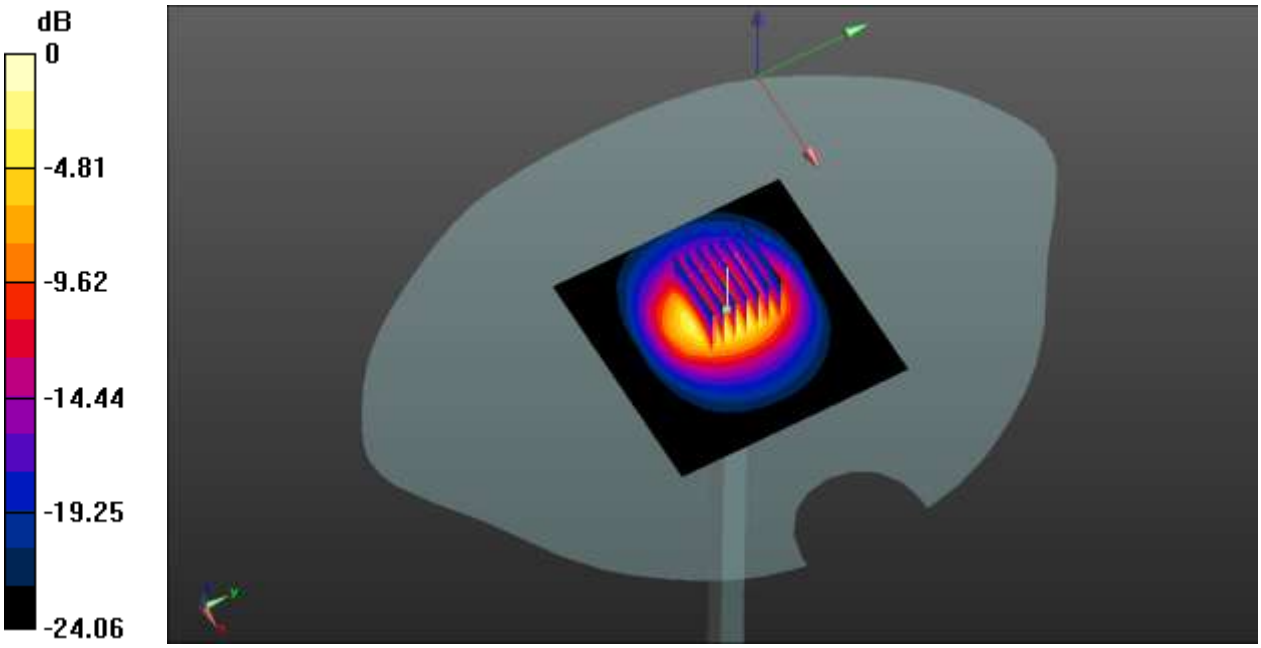
Ambient Temperature:22.3 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.46, 7.46, 7.46); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- 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) = 6.34 W/kg

CW 2600 100mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.58 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 11.78 W/kg
SAR(1 g) = 5.61 W/kg; SAR(10 g) = 2.49 W/kg
Maximum value of SAR (measured) = 6.28 W/kg



0 dB = 6.28 W/kg

System Performance Check Data (2600MHz Body)

Date: 2019.12.14
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.134 S/m; ε_r = 53.05; ρ = 1000 kg/m^3
Phantom section: Flat Section

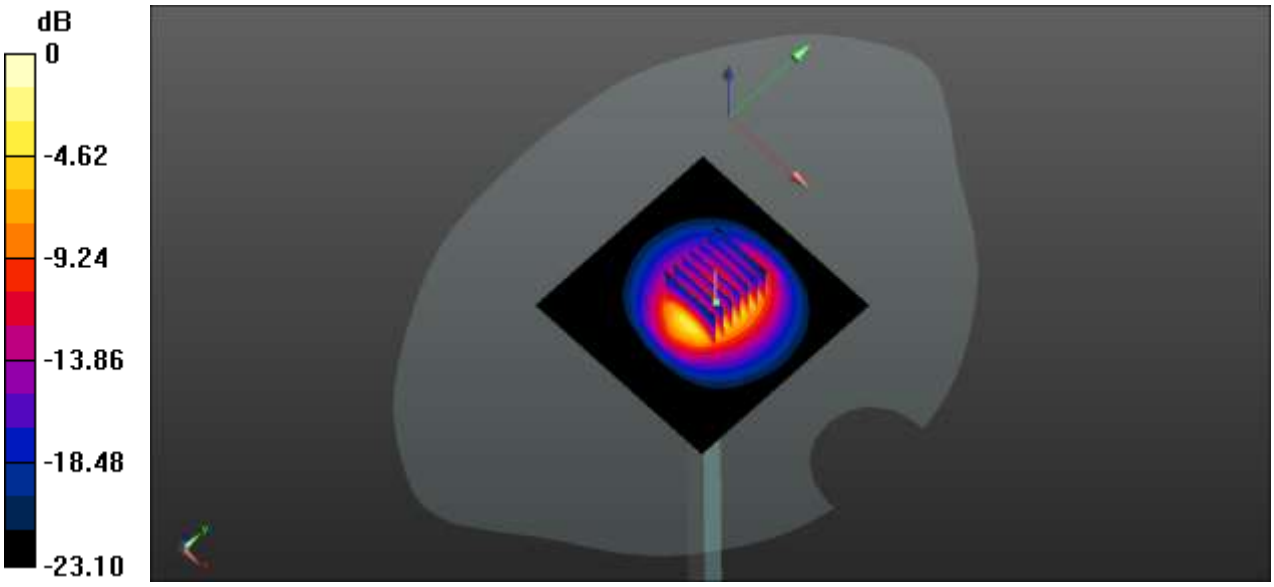
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.46, 7.46, 7.46); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- 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) = 6.38 W/kg

CW 2600 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.51 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 11.28 W/kg
SAR(1 g) = 5.58 W/kg; SAR(10 g) = 2.45 W/kg
Maximum value of SAR (measured) = 6.18 W/kg



0 dB = 6.18 W/kg

System Performance Check Data (2600MHz Body)

Date: 2019.12.15
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2600 MHz; σ = 2.189 S/m; ε_r = 51.705; ρ = 1000 kg/m^3
Phantom section: Flat Section

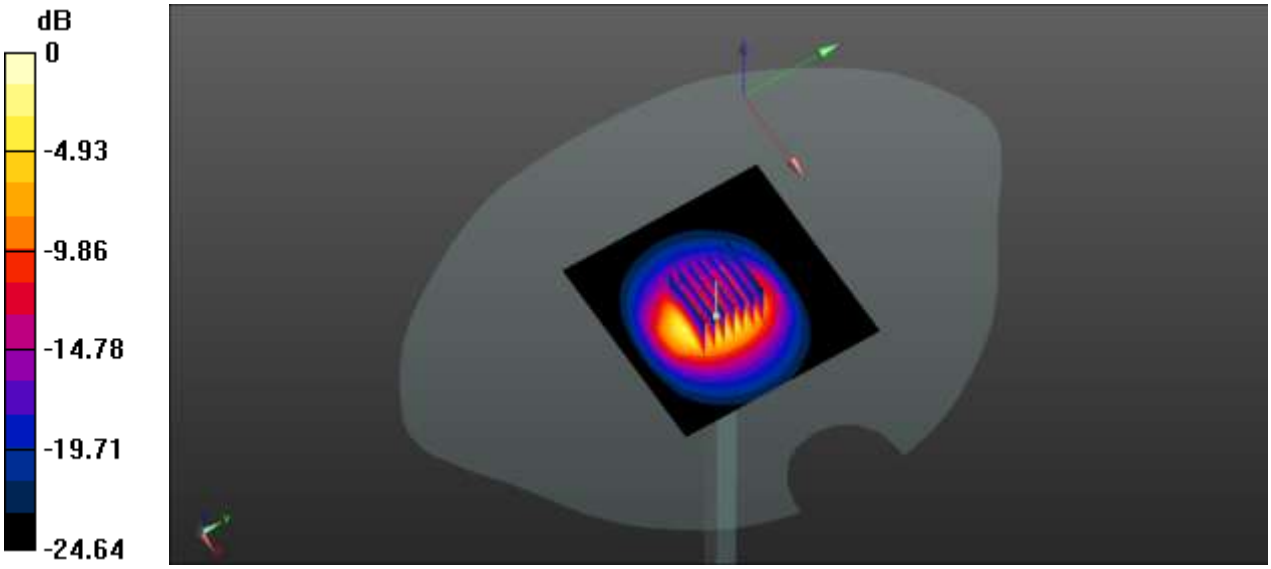
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.46, 7.46, 7.46); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- 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) = 6.95 W/kg

CW 2600 100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.96 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 13.1 W/kg
SAR(1 g) = 5.82 W/kg; SAR(10 g) = 2.49 W/kg
Maximum value of SAR (measured) = 6.73 W/kg



0 dB = 6.73 W/kg

System Performance Check Data (2600MHz Body)

Date: 2019.11.11
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.113 S/m; ε_r = 53.043; ρ = 1000 kg/m^3
Phantom section: Flat Section

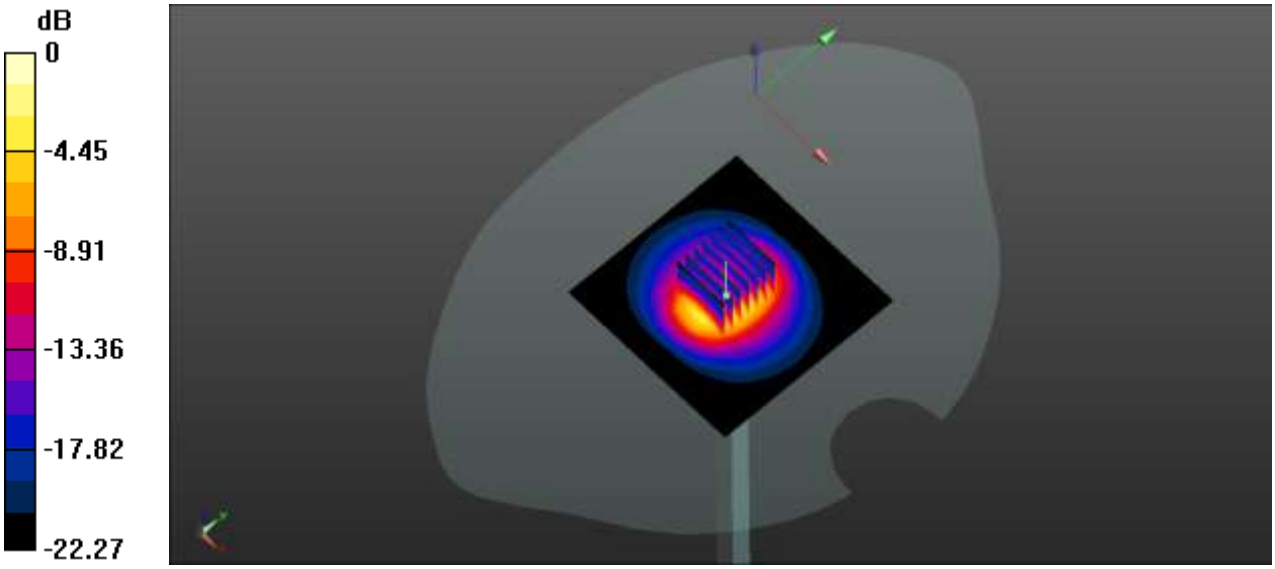
Ambient Temperature:22.3 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.46, 7.46, 7.46); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- 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) = 6.56 W/kg

CW 2600 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.58 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 13.2 W/kg
SAR(1 g) = 5.7 W/kg; SAR(10 g) = 2.49 W/kg
Maximum value of SAR (measured) = 6.48 W/kg



0 dB = 6.48 W/kg

System Performance Check Data (5250MHz Head)

Date: 2019.11.13
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.744 S/m; ε_r = 36.58; ρ = 1000 kg/m^3
Phantom section: Flat Section

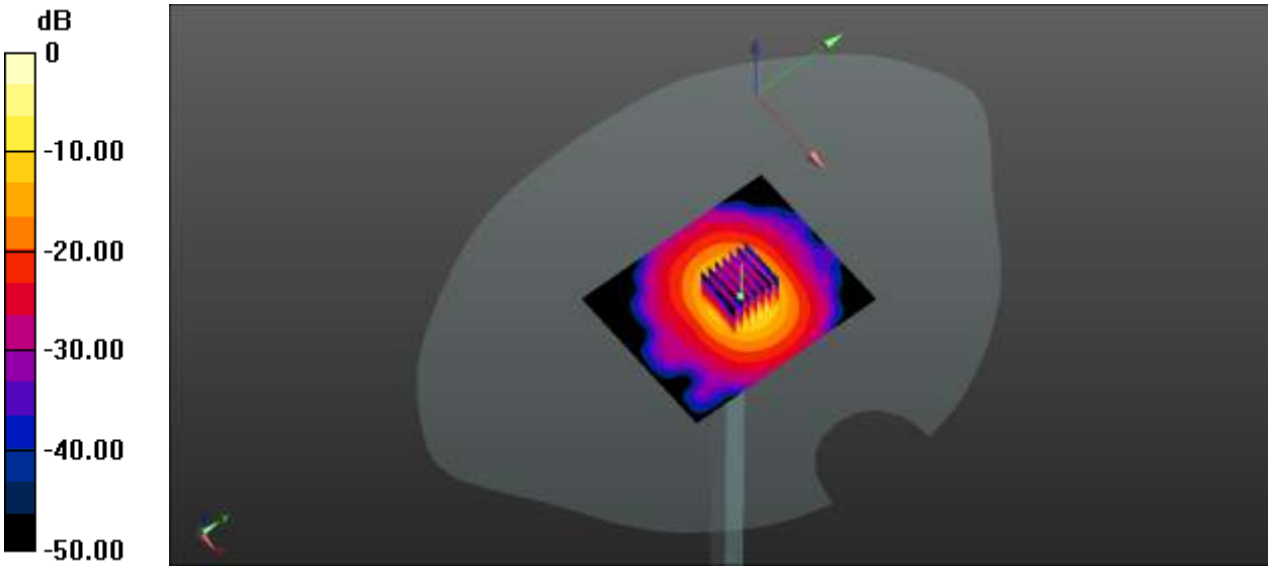
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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 5250 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.63 W/kg

CW 5250 100mW/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 34.55 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 25.9 W/kg
SAR(1 g) = 7.12 W/kg; SAR(10 g) = 2.01 W/kg
Maximum value of SAR (measured) = 14.6 W/kg



0 dB = 14.6 W/kg

System Performance Check Data (5250MHz Head)

Date: 2019.11.14
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.584 S/m; ε_r = 37.365; ρ = 1000 kg/m^3
Phantom section: Flat Section

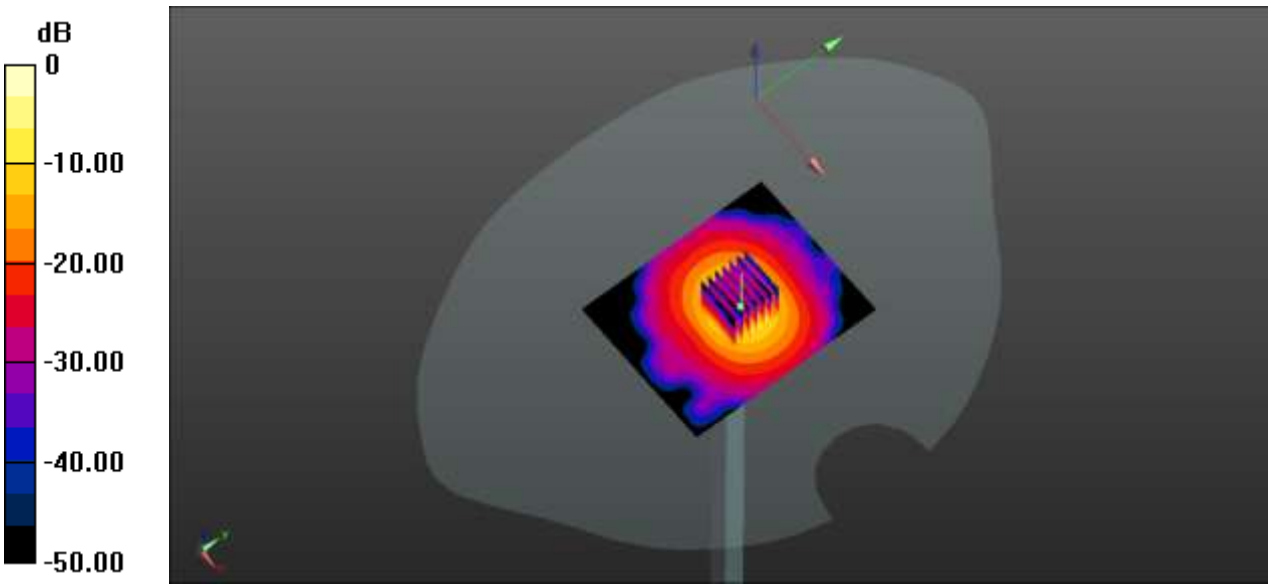
Ambient Temperature:22.1 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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 5250 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.92 W/kg

CW 5250 100mW/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 35.29 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 26.1 W/kg
SAR(1 g) = 7.25 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 15.3 W/kg



0 dB = 15.3 W/kg

System Performance Check Data (5250MHz Body)

Date: 2019.11.13
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 5.479 S/m; ε_r = 49.862; ρ = 1000 kg/m^3
Phantom section: Flat Section

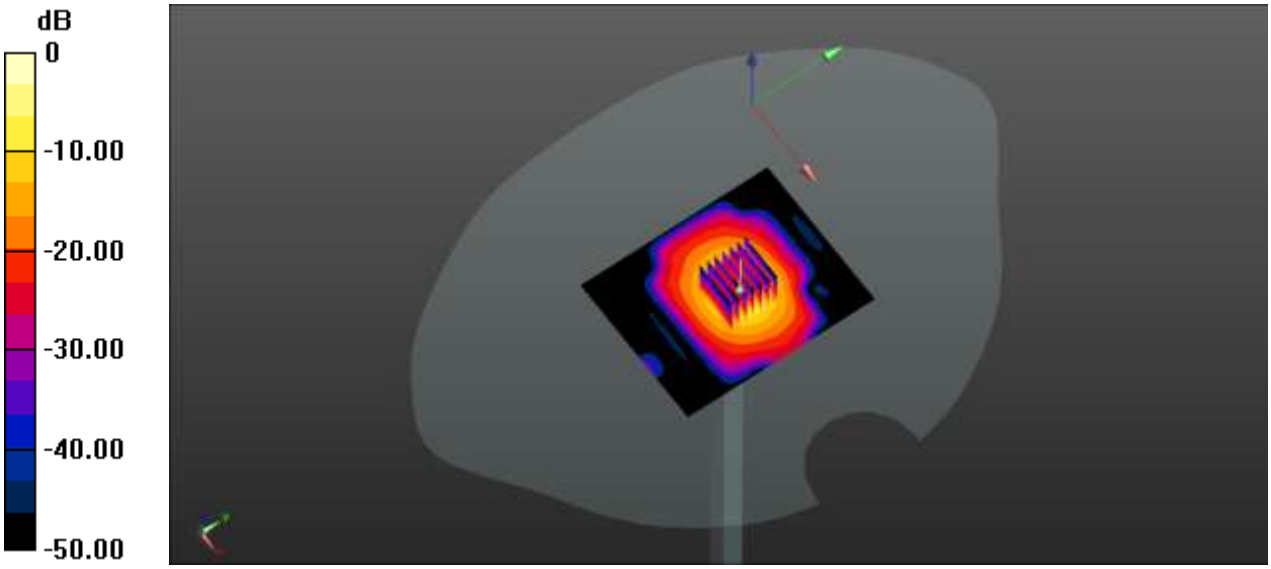
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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 5250 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.79 W/kg

CW 5250 100mW/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 35.34 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 26.7 W/kg
SAR(1 g) = 7.08 W/kg; SAR(10 g) = 2.01 W/kg
Maximum value of SAR (measured) = 13.8 W/kg



0 dB = 13.8 W/kg

System Performance Check Data (5250MHz Body)

Date: 2019.11.14
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 5.319 S/m; ε_r = 50.362; ρ = 1000 kg/m^3
Phantom section: Flat Section

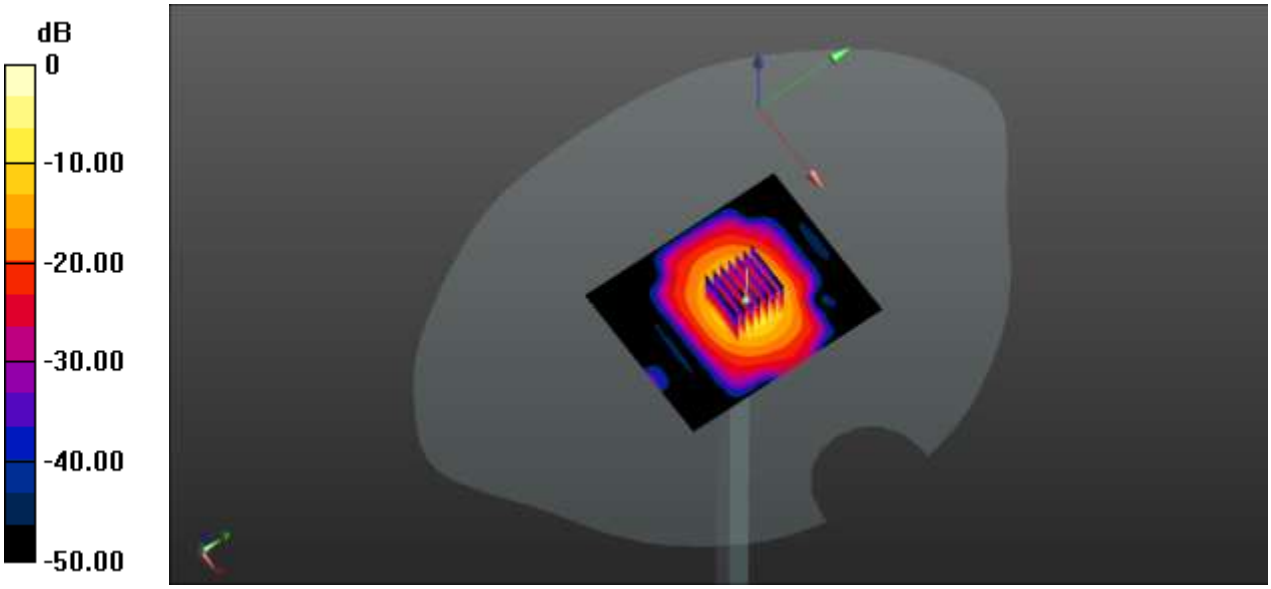
Ambient Temperature:22.1 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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 5250 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.03 W/kg

CW 5250 100mW/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 35.75 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 27.2 W/kg
SAR(1 g) = 7.13 W/kg; SAR(10 g) = 2.06 W/kg
Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kg

System Performance Check Data (5600MHz Head)

Date: 2019.11.15
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.116 S/m; ε_r = 34.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

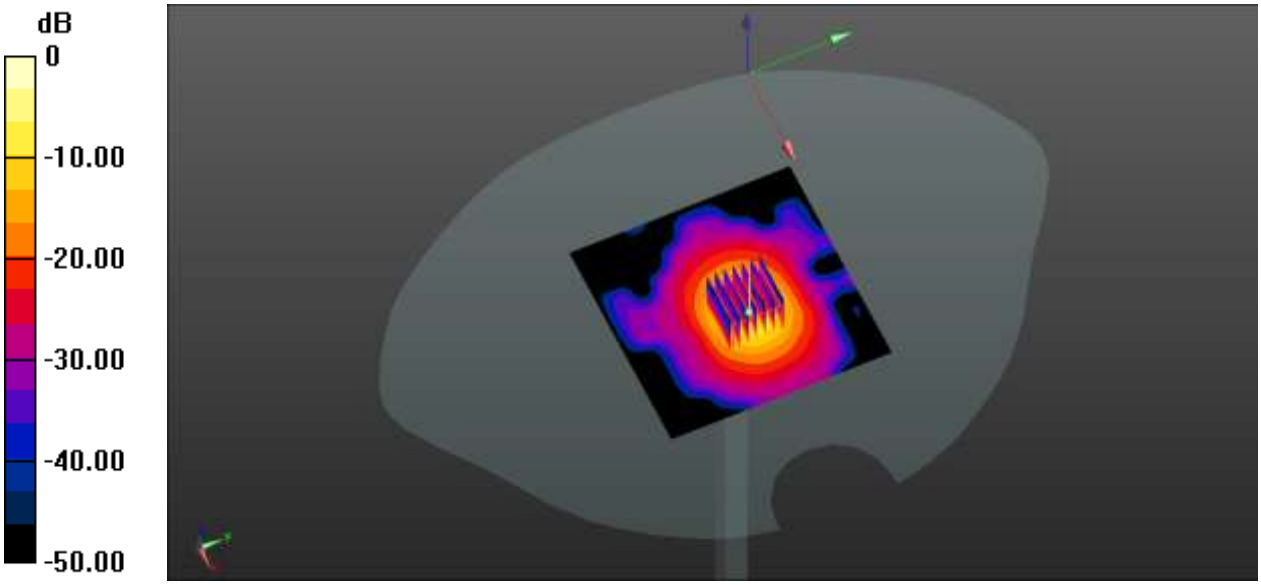
Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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 5600 100mW /Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.14 W/kg

CW 5600 100mW /Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 22.83 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 38.19 W/kg
SAR(1 g) = 8.44 W/kg; SAR(10 g) = 2.42 W/kg
Maximum value of SAR (measured) = 17.1 W/kg



0 dB = 17.1 W/kg

System Performance Check Data (5600MHz Body)

Date: 2019.11.15
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.851 S/m; ε_r = 47.882; ρ = 1000 kg/m^3
Phantom section: Flat Section

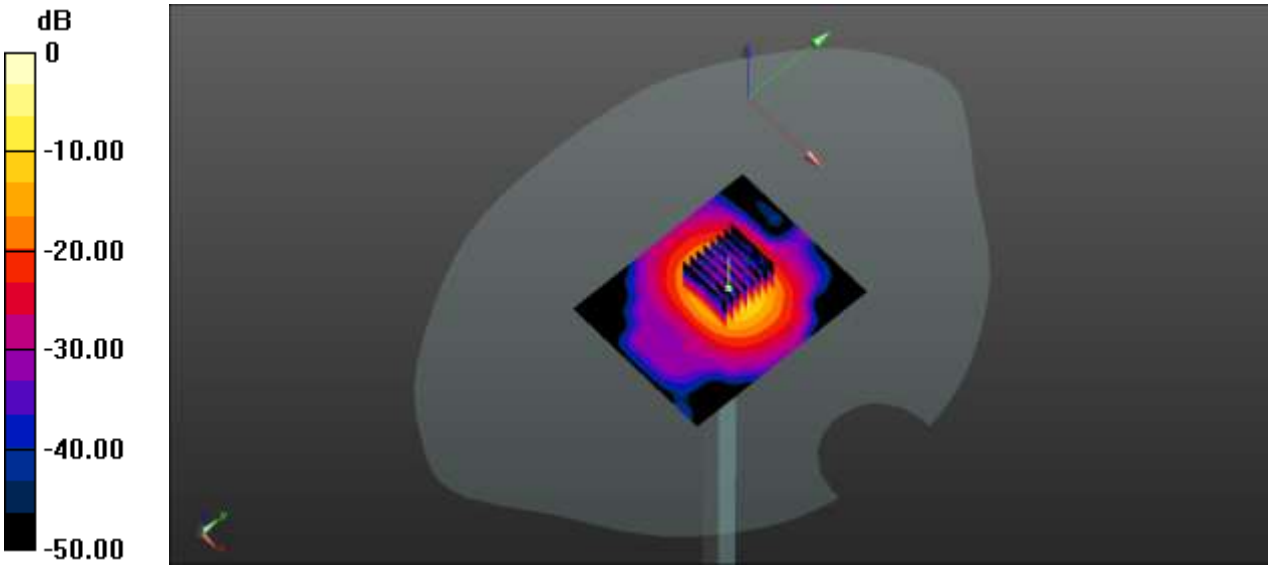
Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.36, 4.36, 4.36); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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 5600 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 10.84 W/kg

CW 5600 100mW/Zoom Scan (8x8x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 35.50 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 37.1 W/kg
SAR(1 g) = 8.34 W/kg; SAR(10 g) = 2.36 W/kg
Maximum value of SAR (measured) = 20.9 W/kg



0 dB = 20.9 W/kg

System Performance Check Data (5750MHz Head)

Date: 2019.11.16
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.292 S/m; ε_r = 34.556; ρ = 1000 kg/m^3
Phantom section: Flat Section

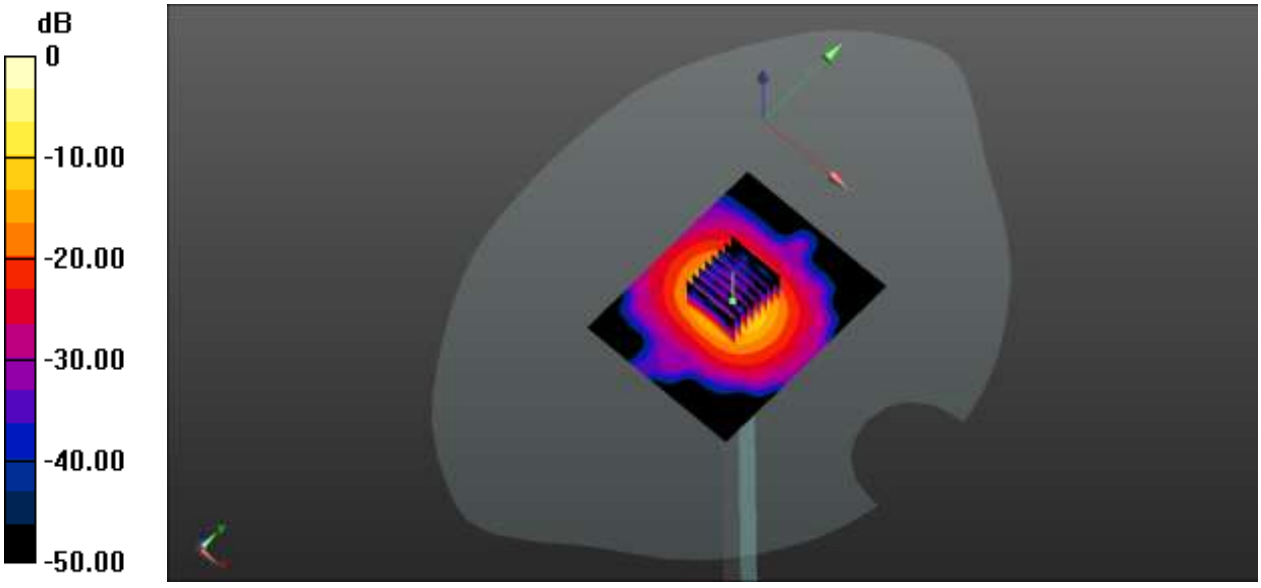
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.06, 5.06, 5.06); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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 5750 100mW/Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.85 W/kg

CW 5750 100mW/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 40.11 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 36.3 W/kg
SAR(1 g) = 8.22 W/kg; SAR(10 g) = 2.31 W/kg
Maximum value of SAR (measured) = 16.1 W/kg



0 dB = 16.1 W/kg

System Performance Check Data (5750MHz Body)

Date: 2019.11.16
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 6.027 S/m; ε_r = 47.664; ρ = 1000 kg/m^3
Phantom section: Flat Section

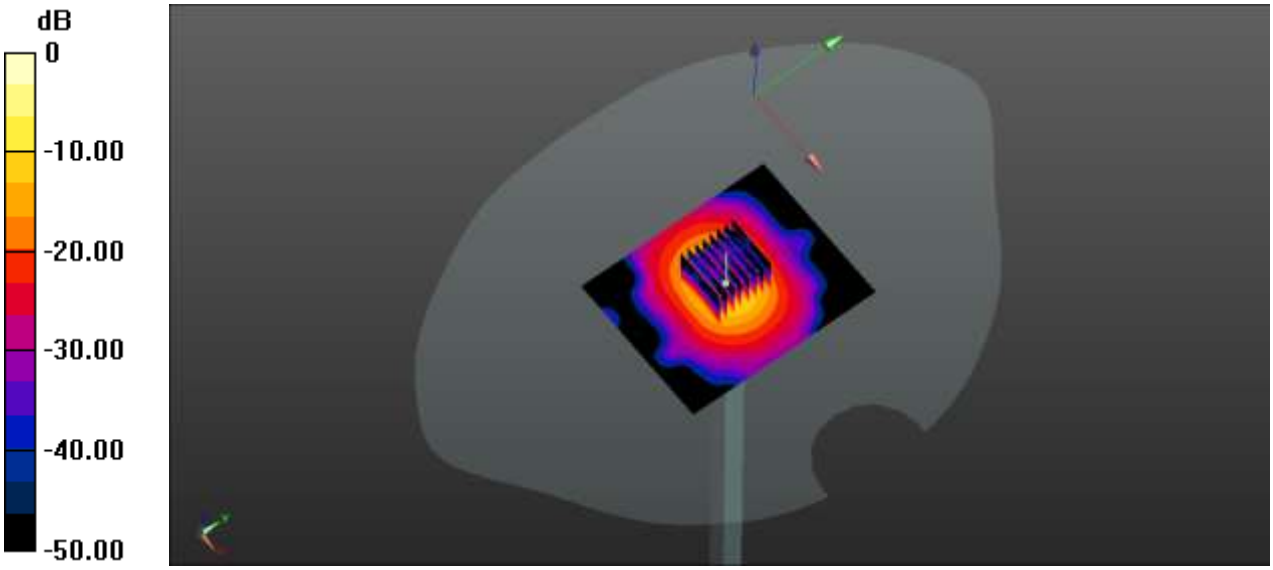
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.51, 4.51, 4.51); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) 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 5750 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.63 W/kg

CW 5750 100mW/Zoom Scan (8x8x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 36.53 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 35.7 W/kg
SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.26 W/kg
Maximum value of SAR (measured) = 19.4 W/kg



0 dB = 19.4 W/kg

ANNEX C TEST DATA

MEAS.1 Right Head with Cheek on High Channel in GPRS850 4Slots mode with Up Antenna
Date: 2019.11.04
Communication System Band: GPRS850; Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.925 S/m; ε_r = 41.665; ρ = 1000 kg/m^3
Phantom section: Right Section

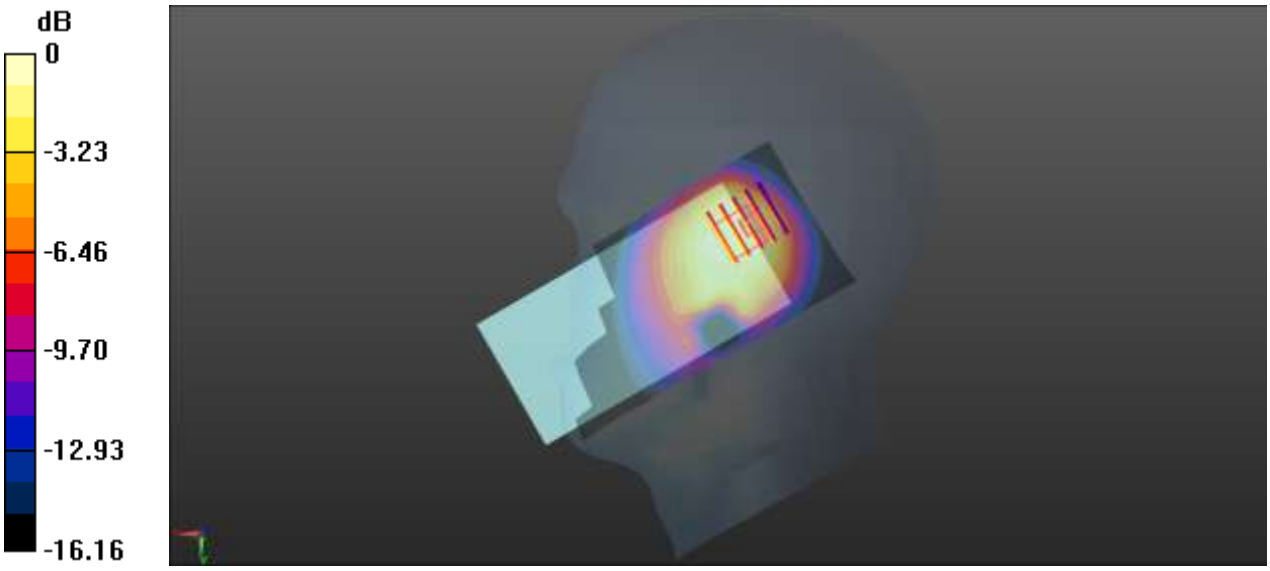
Ambient Temperature:22.7 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 251/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.934 W/kg

Ch 251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.41 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 2.23 W/kg
SAR(1 g) = 0.744 W/kg; SAR(10 g) = 0.477 W/kg
Maximum value of SAR (measured) = 0.755 W/kg



0 dB = 0.755 W/kg

MEAS.2 Body Plane with Back Side 15mm on High Channel in GPRS850 4Slots mode with Down Antenna
Date: 2019.11.05
Communication System Band: GPRS850; Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium parameters used (interpolated): f = 848.8 MHz; σ = 1.006 S/m; ε_r = 56.008; ρ = 1000 kg/m^3
Phantom section: Flat Section

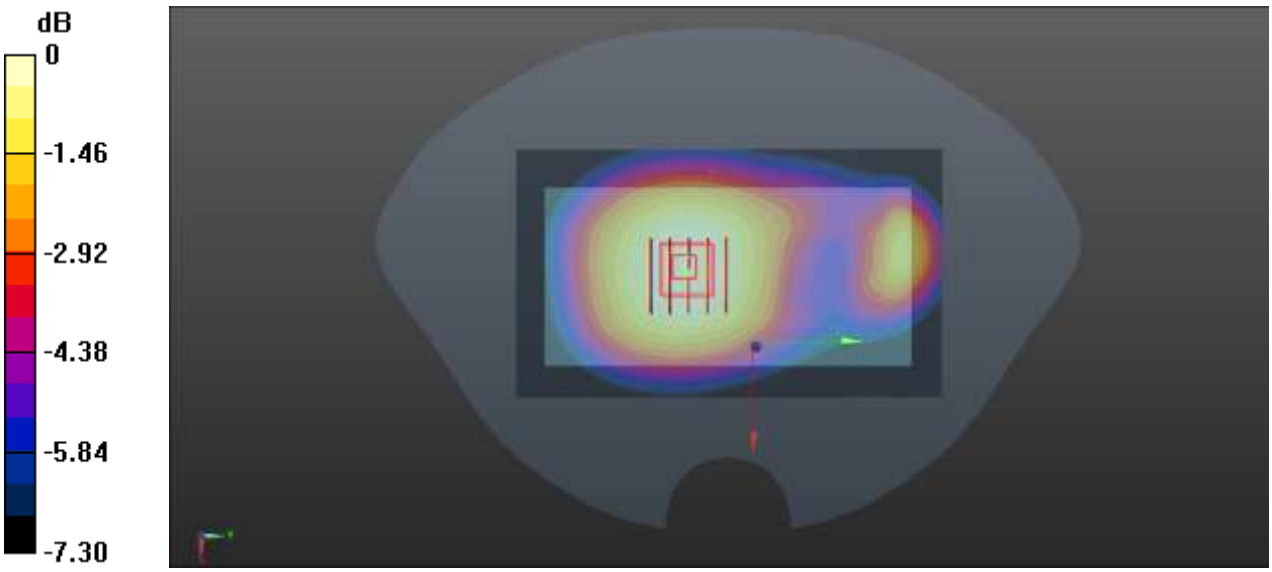
Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 251/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.110 W/kg

Ch 251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.17 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.130 W/kg
SAR(1 g) = 0.106 W/kg; SAR(10 g) = 0.082 W/kg
Maximum value of SAR (measured) = 0.110 W/kg



0 dB = 0.110 W/kg

MEAS.3 Body Plane with Back Side 10mm on High Channel in GPRS850 4Slots mode with Down Antenna
Date: 2019.11.05
Communication System Band: GPRS850; Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium parameters used (interpolated): f = 848.8 MHz; σ = 1.006 S/m; ε_r = 56.008; ρ = 1000 kg/m^3
Phantom section: Flat Section

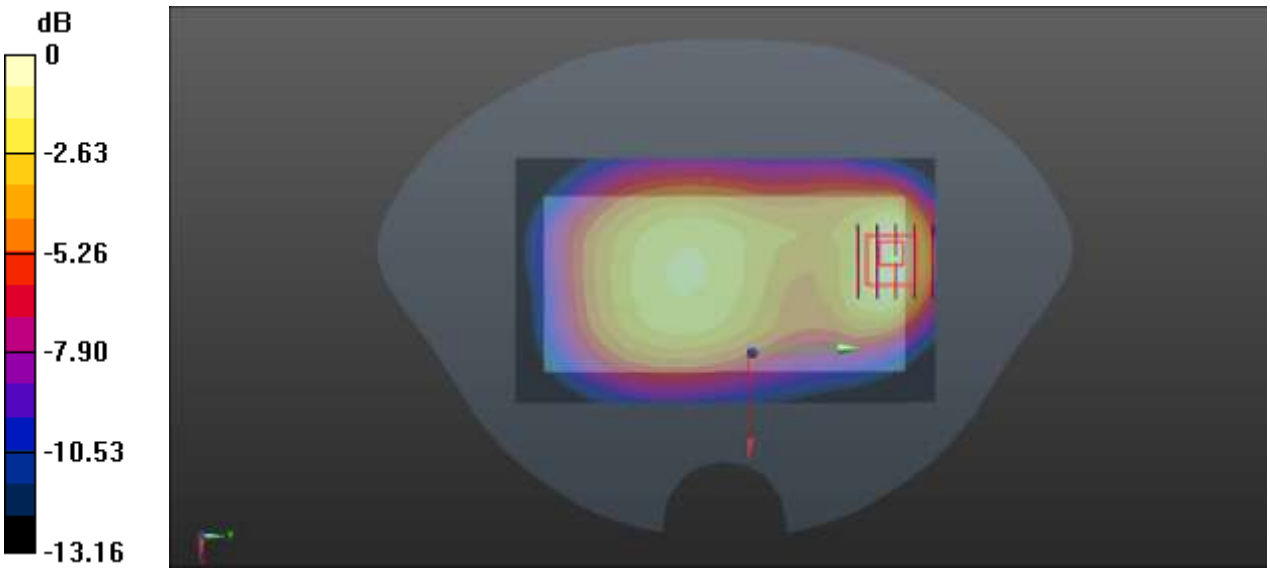
Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 251/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.203 W/kg

Ch 251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.15 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.305 W/kg
SAR(1 g) = 0.186 W/kg; SAR(10 g) = 0.111 W/kg
Maximum value of SAR (measured) = 0.203 W/kg



0 dB = 0.203 W/kg

MEAS.4 Right Head with Cheek on High Channel in GPRS1900 3Slots mode with Up Antenna
Date: 2019.12.11
Communication System Band: GPRS1900; Frequency: 1909.8 MHz;Duty Cycle: 1:2.77
Medium parameters used: f = 1909.8 MHz; σ = 1.386 S/m; ε_r = 38.502; ρ = 1000 kg/m^3
Phantom section: Right Section

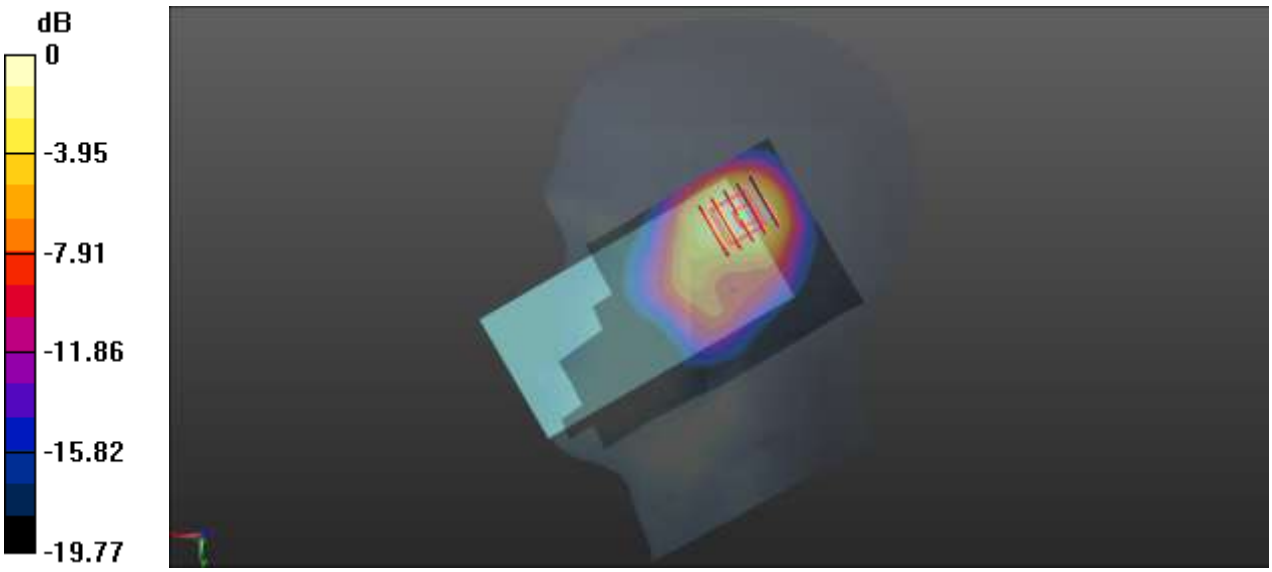
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 810/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.20 W/kg

Ch 810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.23 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.94 W/kg
SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.579 W/kg
Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 1.13 W/kg

MEAS.5 Body Plane with Back Side 15mm on High Channel in GPRS1900 3Slots mode with Up Antenna
Date: 2019.11.10
Communication System Band: GPRS1900; Frequency: 1909.8 MHz;Duty Cycle: 1:2.77
Medium parameters used: f = 1909.8 MHz; σ = 1.482 S/m; ε_r = 52.926; ρ = 1000 kg/m^3
Phantom section: Flat Section

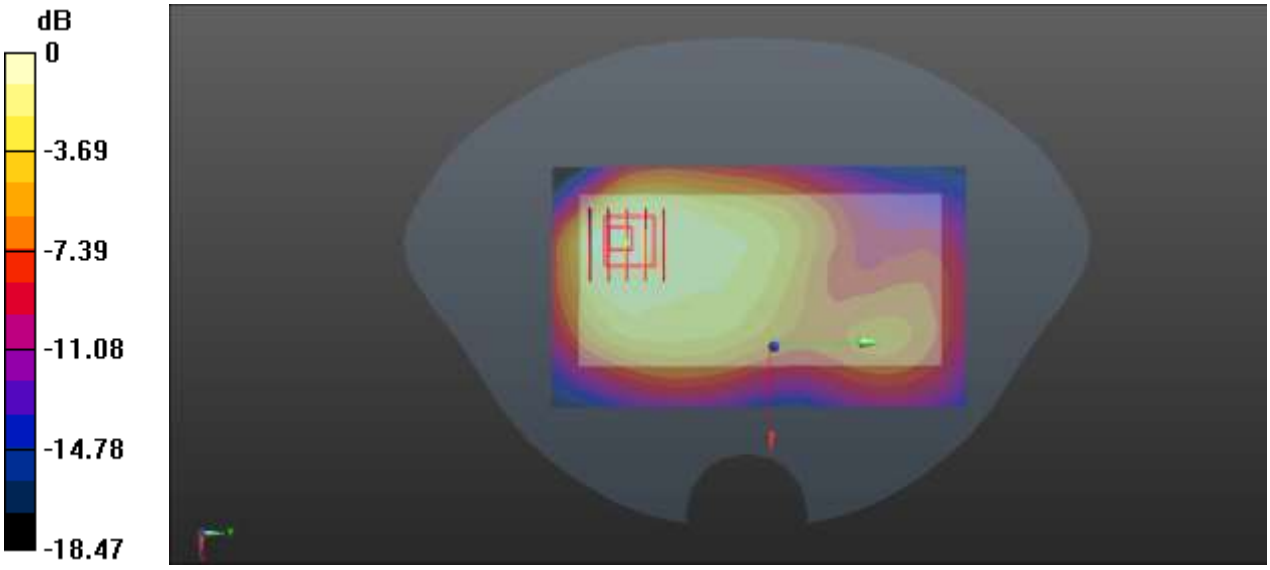
Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch810/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.333 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.25 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.507 W/kg
SAR(1 g) = 0.290 W/kg; SAR(10 g) = 0.169 W/kg
Maximum value of SAR (measured) = 0.310 W/kg



0 dB = 0.310 W/kg

MEAS.6 Body Plane with Back Side 10mm on High Channel in GPRS1900 3Slots mode with Up Antenna
Date: 2019.11.10
Communication System Band: GPRS1900; Frequency: 1909.8 MHz;Duty Cycle: 1:2.77
Medium parameters used: f = 1909.8 MHz; σ = 1.482 S/m; ε_r = 52.926; ρ = 1000 kg/m^3
Phantom section: Flat Section

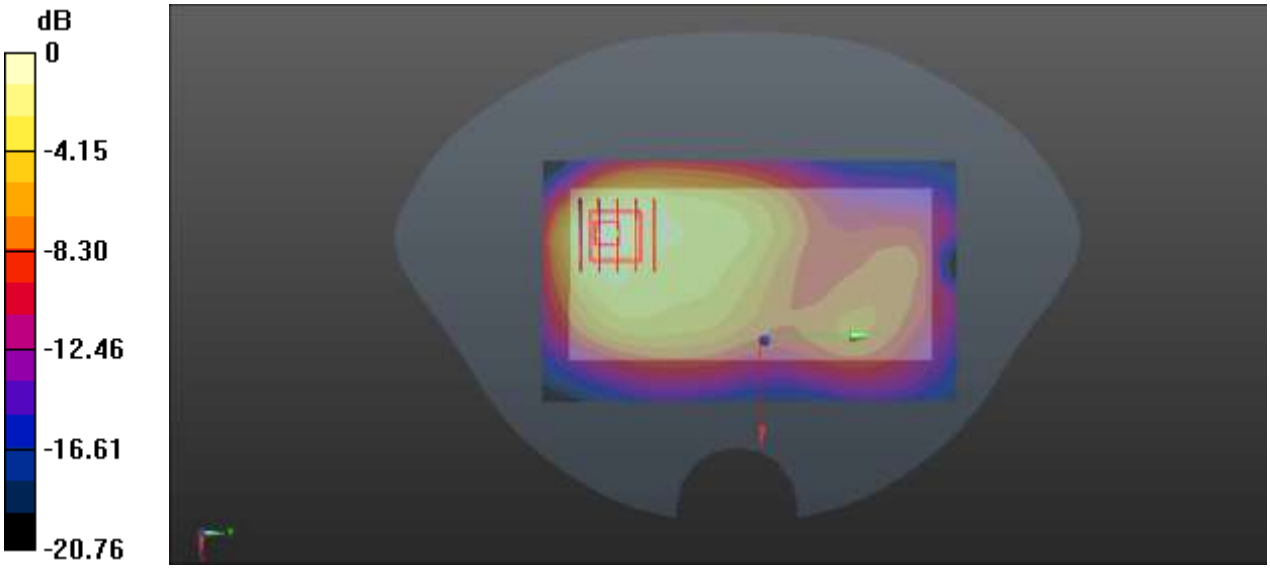
Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch810/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.663 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.65 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.584 W/kg; SAR(10 g) = 0.319 W/kg
Maximum value of SAR (measured) = 0.638 W/kg



0 dB = 0.638 W/kg

MEAS.7 Right Head with Cheek on High Channel in WCDMA Band 5 mode with Up Antenna
Date: 2019.11.06
Communication System Band: V; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.893 S/m; ε_r = 41.177; ρ = 1000 kg/m^3
Phantom section: Right Section

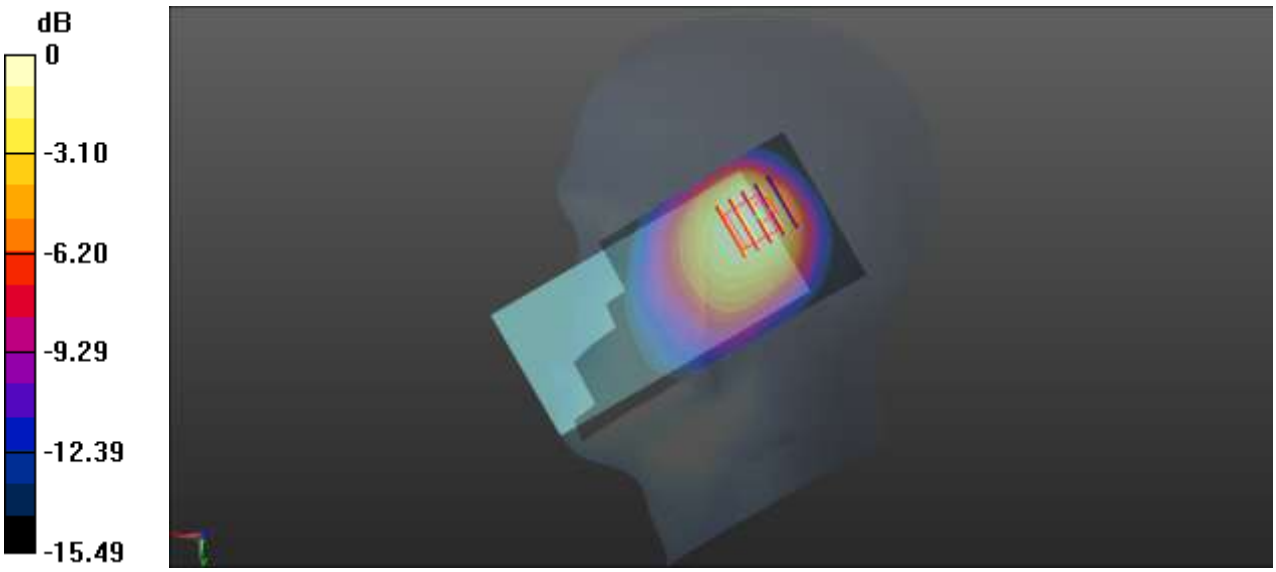
Ambient Temperature:22.5 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 4233/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.698 W/kg

Ch 4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.53 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.563 W/kg; SAR(10 g) = 0.358 W/kg
Maximum value of SAR (measured) = 0.587 W/kg



0 dB = 0.587 W/kg

MEAS.8 Body Plane with Back Side 15mm on High Channel in WCDMA Band 5 mode with Down Antenna
Date: 2019.11.07
Communication System Band: V; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.974 S/m; ε_r = 55.574; ρ = 1000 kg/m^3
Phantom section: Flat Section

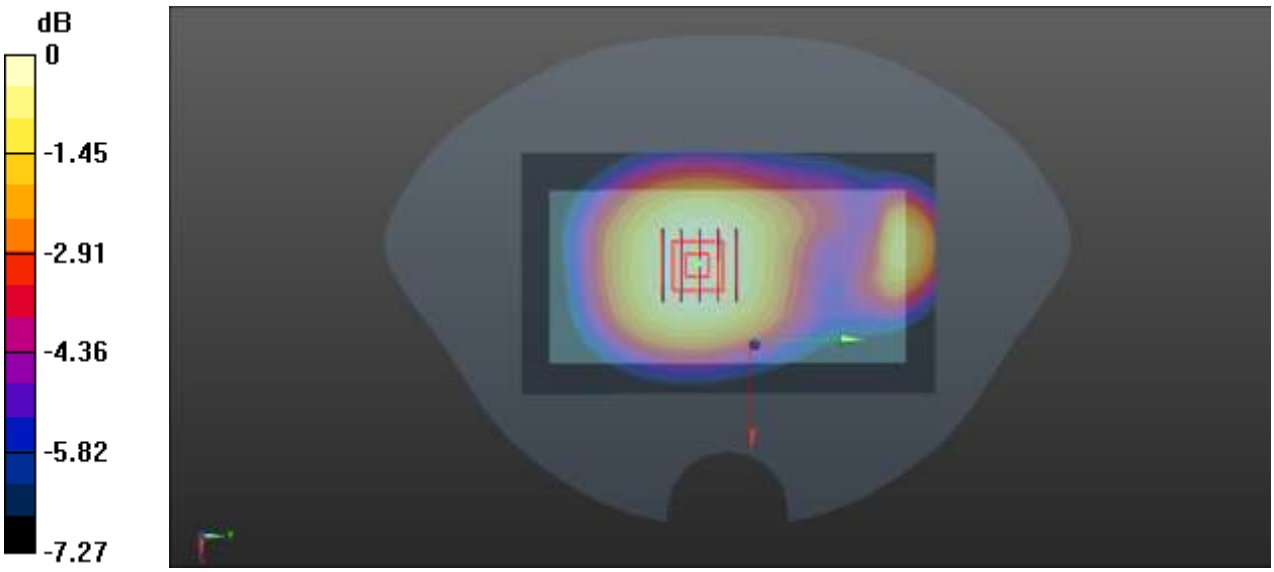
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 4233/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.145 W/kg

Ch 4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.86 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.167 W/kg
SAR(1 g) = 0.138 W/kg; SAR(10 g) = 0.108 W/kg
Maximum value of SAR (measured) = 0.144 W/kg



0 dB = 0.144 W/kg

MEAS.9 Body Plane with Back Side 10mm on High Channel in WCDMA Band 5 mode with Down Antenna
Date: 2019.11.07
Communication System Band: V; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.974 S/m; ε_r = 55.574; ρ = 1000 kg/m^3
Phantom section: Flat Section

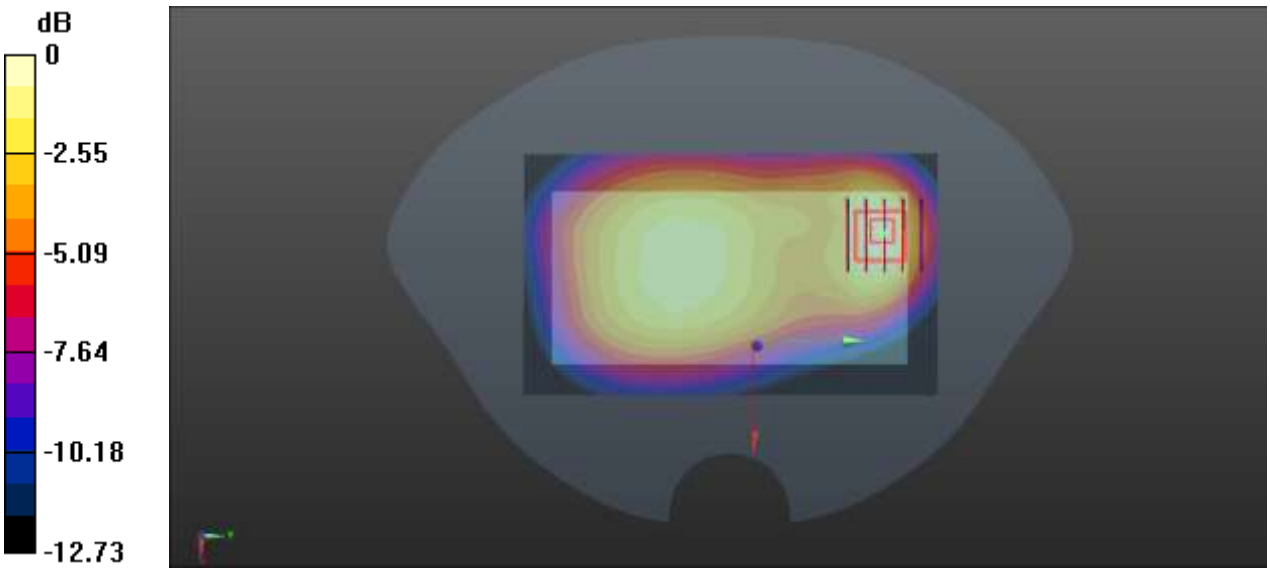
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 4233/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.253 W/kg

Ch 4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.51 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.384 W/kg
SAR(1 g) = 0.238 W/kg; SAR(10 g) = 0.142 W/kg
Maximum value of SAR (measured) = 0.264 W/kg



0 dB = 0.264 W/kg

MEAS.10 Right Head with Cheek on High Channel in LTE Band 5 mode with Up Antenna
Date: 2019.11.08
Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 844 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 844 MHz; σ = 0.913 S/m; ε_r = 41.105; ρ = 1000 kg/m^3
Phantom section: Right Section

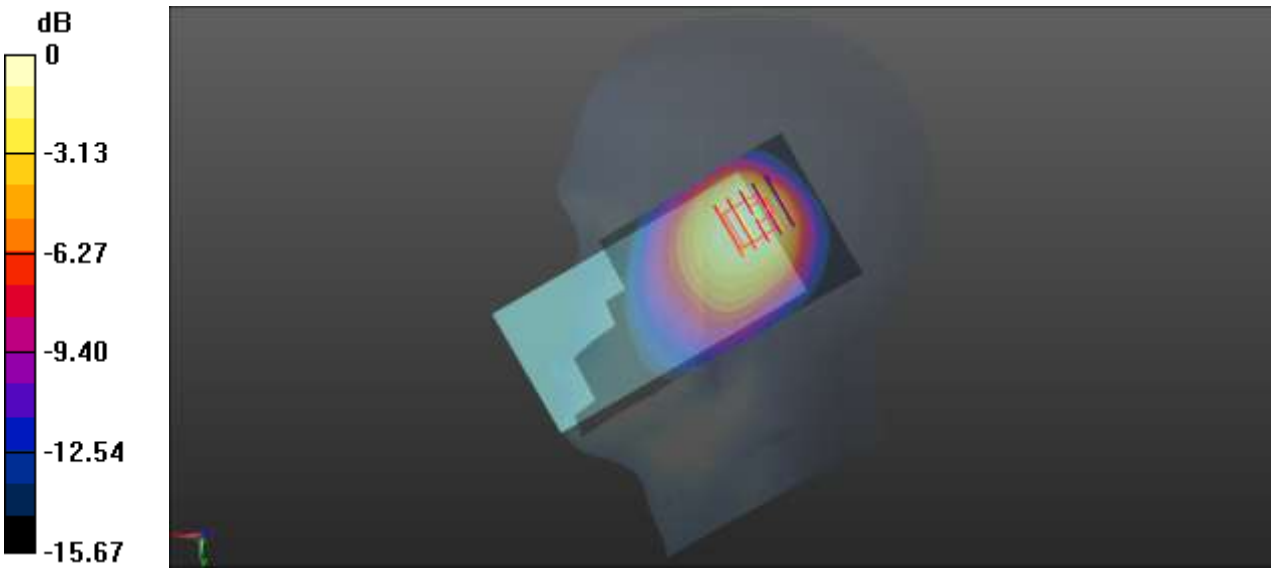
Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20600/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.606 W/kg

Ch 20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.76 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.949 W/kg
SAR(1 g) = 0.493 W/kg; SAR(10 g) = 0.311 W/kg
Maximum value of SAR (measured) = 0.515 W/kg



0 dB = 0.515 W/kg

MEAS.11 Body Plane with Back Side 15mm on High Channel in LTE Band 5 mode with Down Antenna
Date: 2019.11.09
Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 844 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 844 MHz; σ = 1.013 S/m; ε_r = 54.247; ρ = 1000 kg/m^3
Phantom section: Flat Section

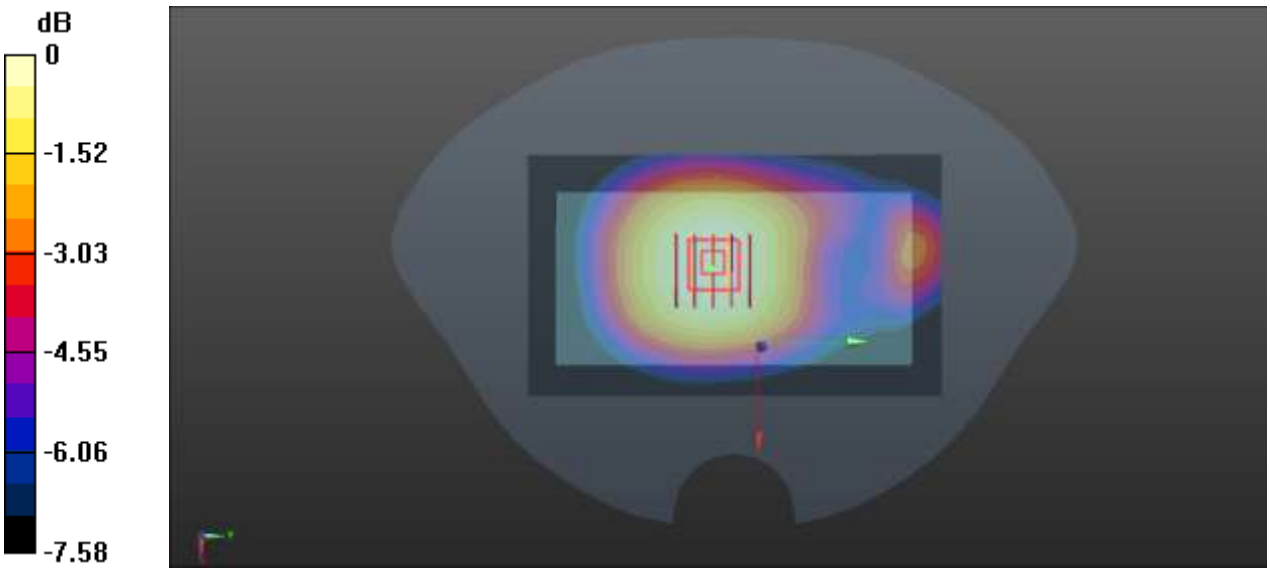
Ambient Temperature:22.1 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20600/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.157 W/kg

Ch 20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.89 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.183 W/kg
SAR(1 g) = 0.150 W/kg; SAR(10 g) = 0.117 W/kg
Maximum value of SAR (measured) = 0.157 W/kg



0 dB = 0.157 W/kg

MEAS.12 Body Plane with Back Side 10mm on High Channel in LTE Band 5 mode with Down Antenna
Date: 2019.11.09
Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 844 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 844 MHz; σ = 1.013 S/m; ε_r = 54.247; ρ = 1000 kg/m^3
Phantom section: Flat Section

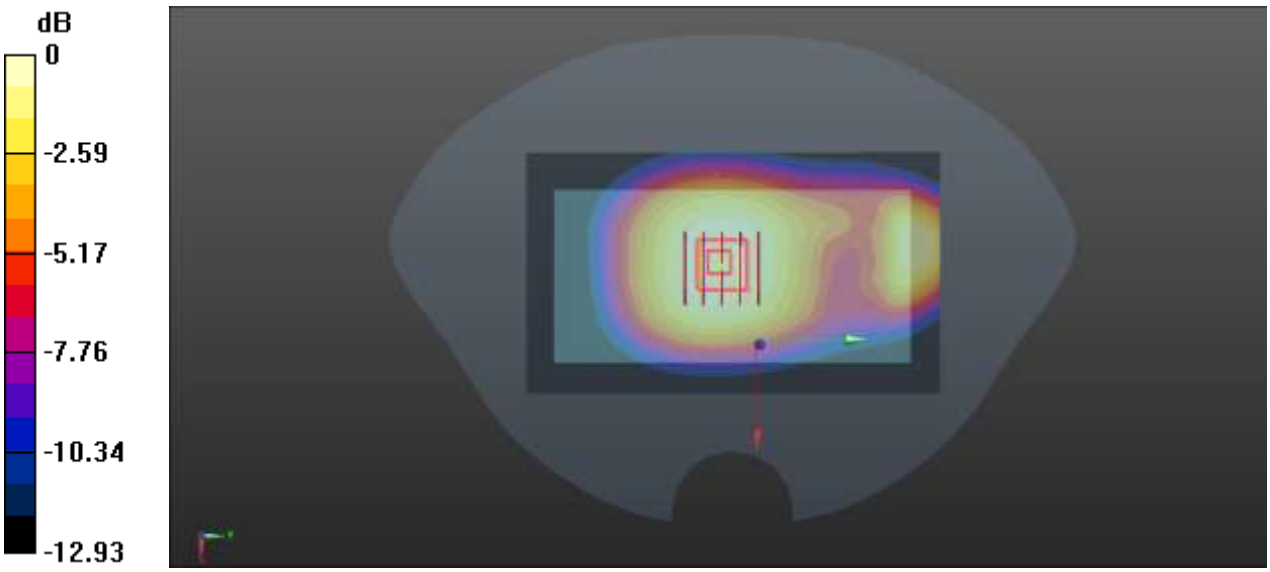
Ambient Temperature:22.1 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.07, 10.07, 10.07); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20600/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.186 W/kg

Ch 20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.28 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.305 W/kg
SAR(1 g) = 0.190 W/kg; SAR(10 g) = 0.114 W/kg
Maximum value of SAR (measured) = 0.211 W/kg



0 dB = 0.211 W/kg

MEAS.13 Right Head with Tilt on Low Channel in LTE Band 7 mode with Up Antenna

Date: 2019.12.12

Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2510 MHz; σ = 1.91 S/m; ε_r = 38.324; ρ = 1000 kg/m^3

Phantom section: Right Section

Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20850/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.875 W/kg

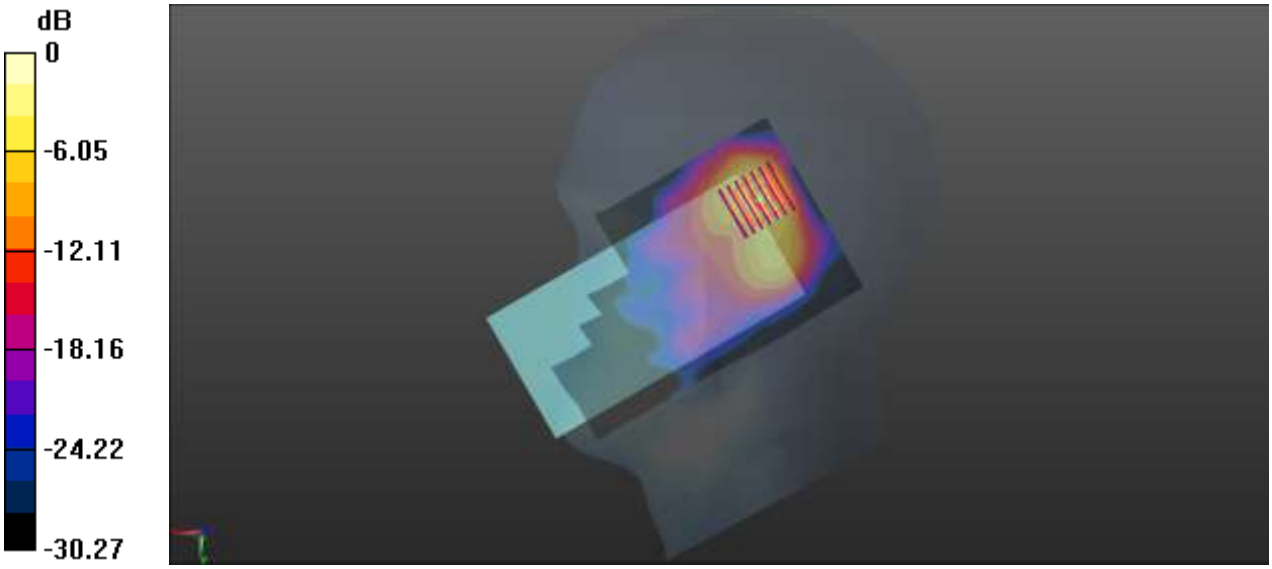
Ch20850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.41 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.84 W/kg

SAR(1 g) = 0.725 W/kg; SAR(10 g) = 0.284 W/kg

Maximum value of SAR (measured) = 0.838 W/kg



0 dB = 0.838 W/kg

MEAS.14 Body Plane with Back Side 15mm on Middle Channel in LTE Band 7 mode with Up Antenna
Date: 2019.12.13
Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2535 MHz; σ = 2.091 S/m; ε_r = 51.704; ρ = 1000 kg/m^3
Phantom section: Flat Section

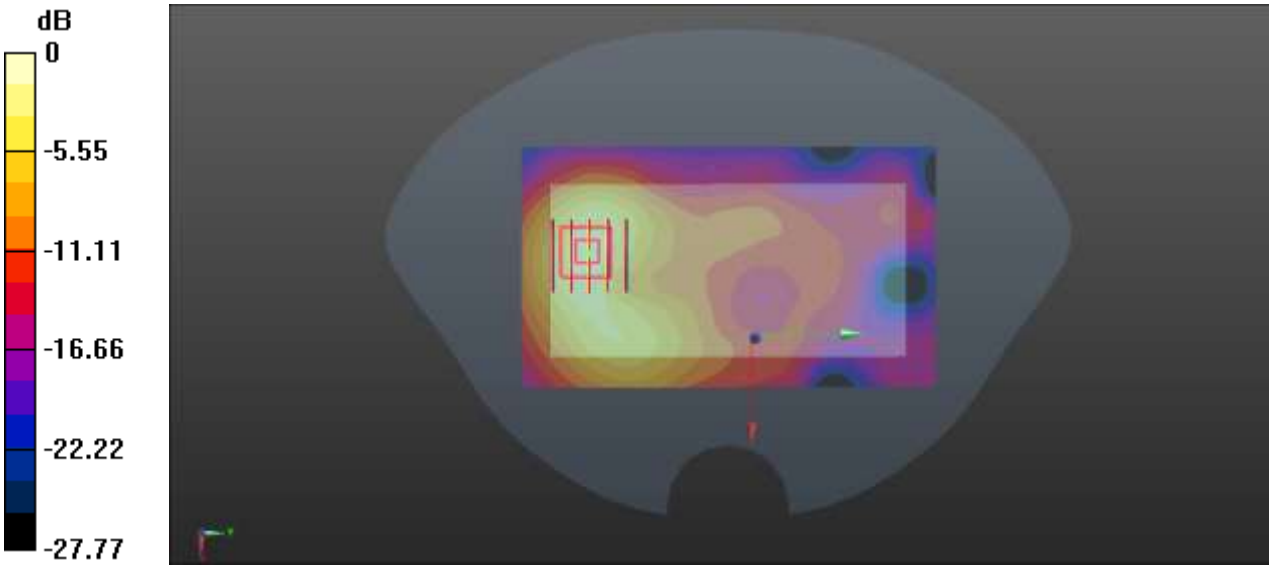
Ambient Temperature:22.3 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.79, 7.79, 7.79); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 21100/Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.240 W/kg

Ch 21100/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.576 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.416 W/kg
SAR(1 g) = 0.209 W/kg; SAR(10 g) = 0.101 W/kg
Maximum value of SAR (measured) = 0.238 W/kg



0 dB = 0.238 W/kg

MEAS.15 Body Plane with Top Edge 10mm on Low Channel in LTE Band 7 mode with Up Antenna

Date: 2019.12.14

Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2510 MHz; σ = 2.011 S/m; ε_r = 53.285; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.79, 7.79, 7.79); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20850/Area Scan (51x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.620 W/kg

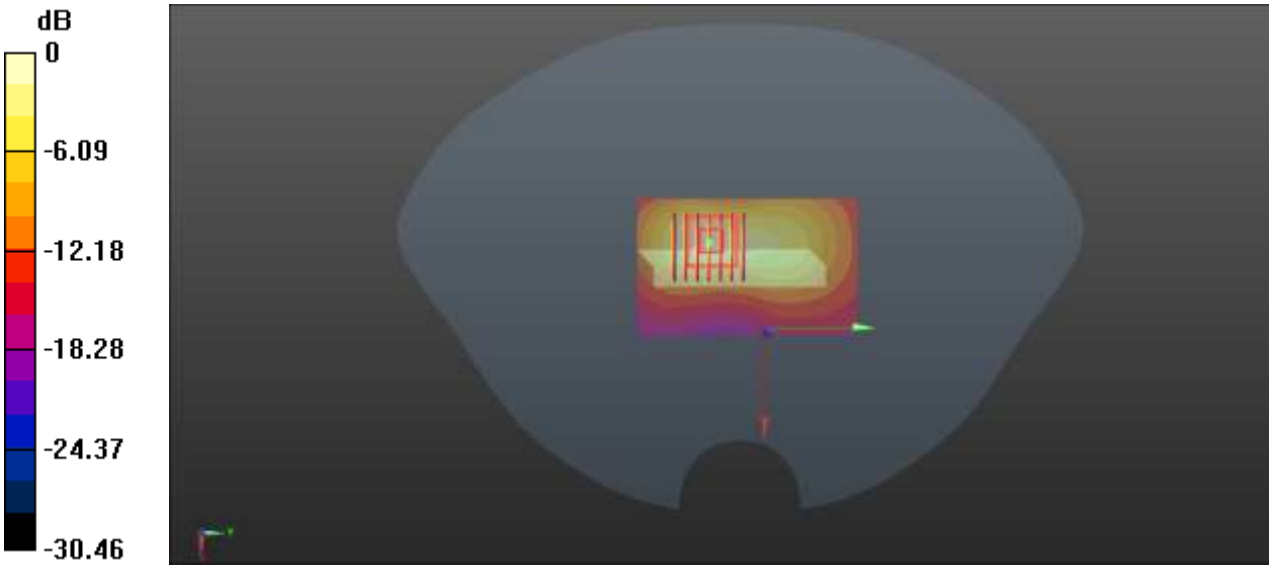
Ch20850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.384 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.518 W/kg; SAR(10 g) = 0.222 W/kg

Maximum value of SAR (measured) = 0.585 W/kg



0 dB = 0.585 W/kg

MEAS.16 Body Plane with Top Edge 0mm on Low Channel in LTE Band 7 mode with Up Antenna

Date: 2019.12.15

Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2510 MHz; σ = 2.05 S/m; ε_r = 52.08; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.79, 7.79, 7.79); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20850/Area Scan (51x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 5.80 W/kg

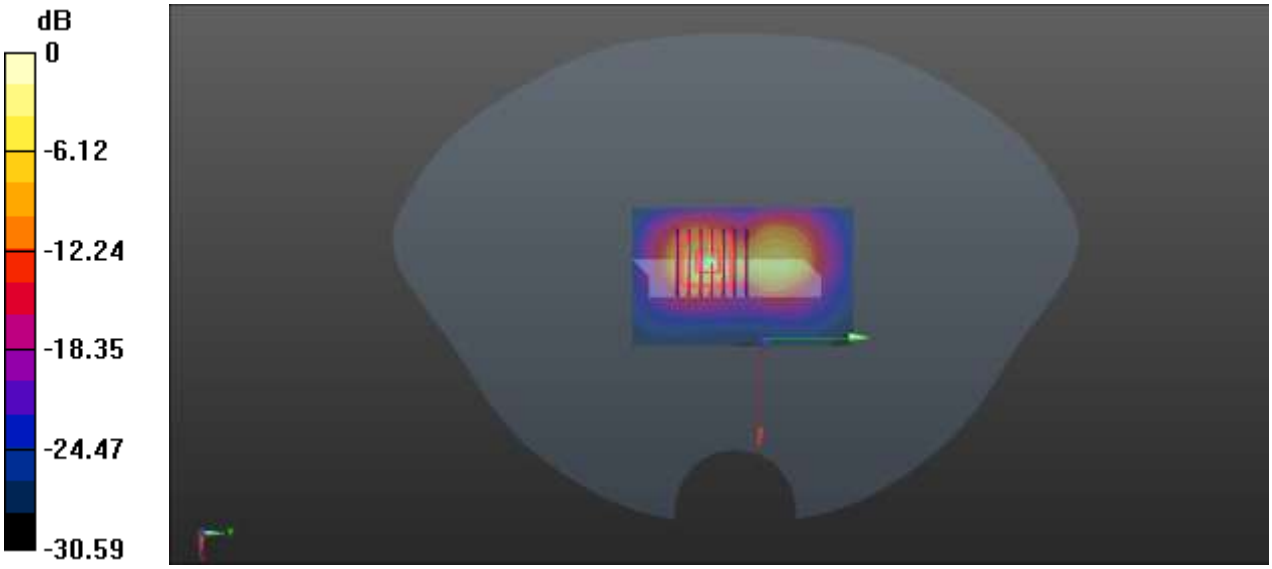
Ch20850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.29 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 17.1 W/kg

SAR(1 g) = 4.8 W/kg; SAR(10 g) = 1.42 W/kg

Maximum value of SAR (measured) = 6.35 W/kg



0 dB = 6.35 W/kg

MEAS.17 Right Head with Tilt on High Channel in LTE Band 41 mode with Up Antenna
Date: 2019.12.16
Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2645 MHz;Duty Cycle: 1:1.58
Medium parameters used (extrapolated): f = 2645 MHz; σ = 2.07 S/m; ε_r = 37.224; ρ = 1000 kg/m^3
Phantom section: Right Section

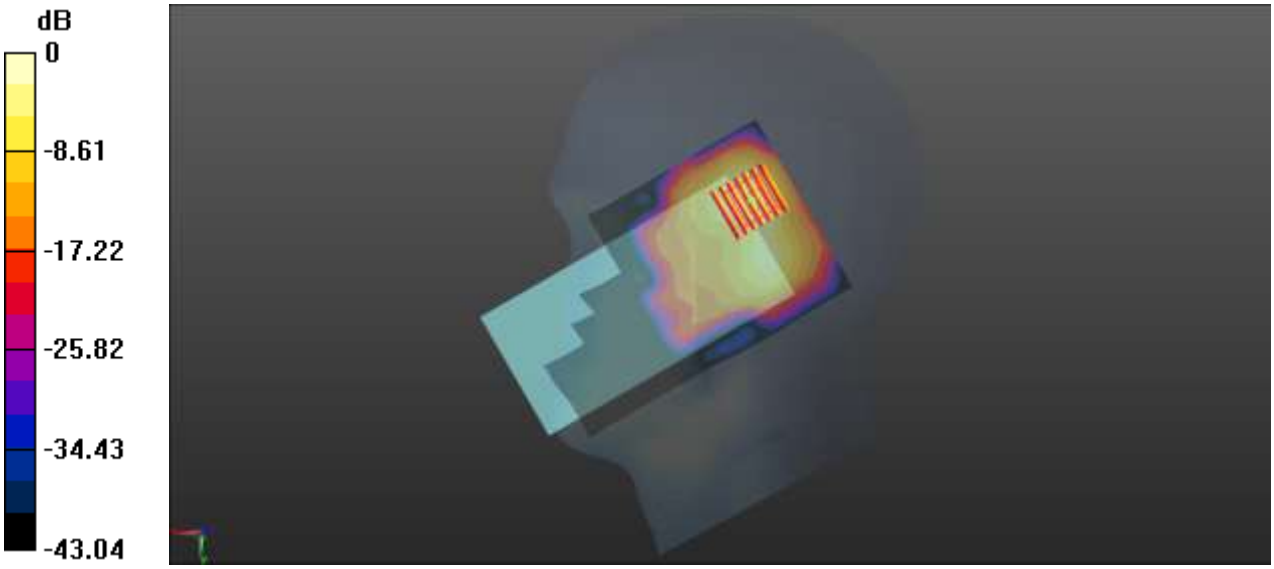
Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.61, 7.61, 7.61); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch41140/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.10 W/kg

Ch41140/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.05 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 2.68 W/kg
SAR(1 g) = 0.951 W/kg; SAR(10 g) = 0.350 W/kg
Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 1.07 W/kg

MEAS.18 Body Plane with Back Side 15mm on High Channel in LTE Band 41 mode with Up Antenna
Date: 2019.11.11
Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2645 MHz;Duty Cycle: 1:1.58
Medium parameters used (extrapolated): f = 2645 MHz; σ = 2.186 S/m; ε_r = 52.601; ρ = 1000 kg/m^3
Phantom section: Flat Section

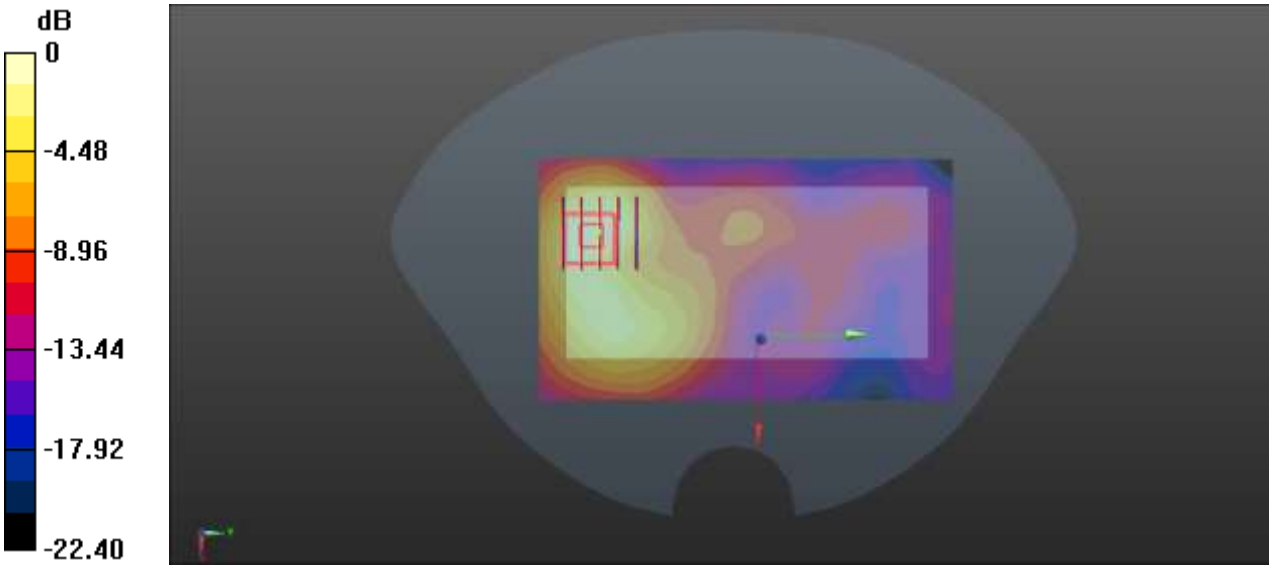
Ambient Temperature:22.3 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.46, 7.46, 7.46); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch41140/Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.229 W/kg

Ch41140/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.206 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.439 W/kg
SAR(1 g) = 0.220 W/kg; SAR(10 g) = 0.109 W/kg
Maximum value of SAR (measured) = 0.243 W/kg



0 dB = 0.243 W/kg

MEAS.19 Body Plane with Top Edge 10mm on High Channel in LTE Band 41 mode with Up Antenna
Date: 2019.11.11
Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2645 MHz;Duty Cycle: 1:1.58
Medium parameters used: f = 2645 MHz; σ = 2.186 S/m; ε_r = 52.601; ρ = 1000 kg/m^3
Phantom section: Flat Section

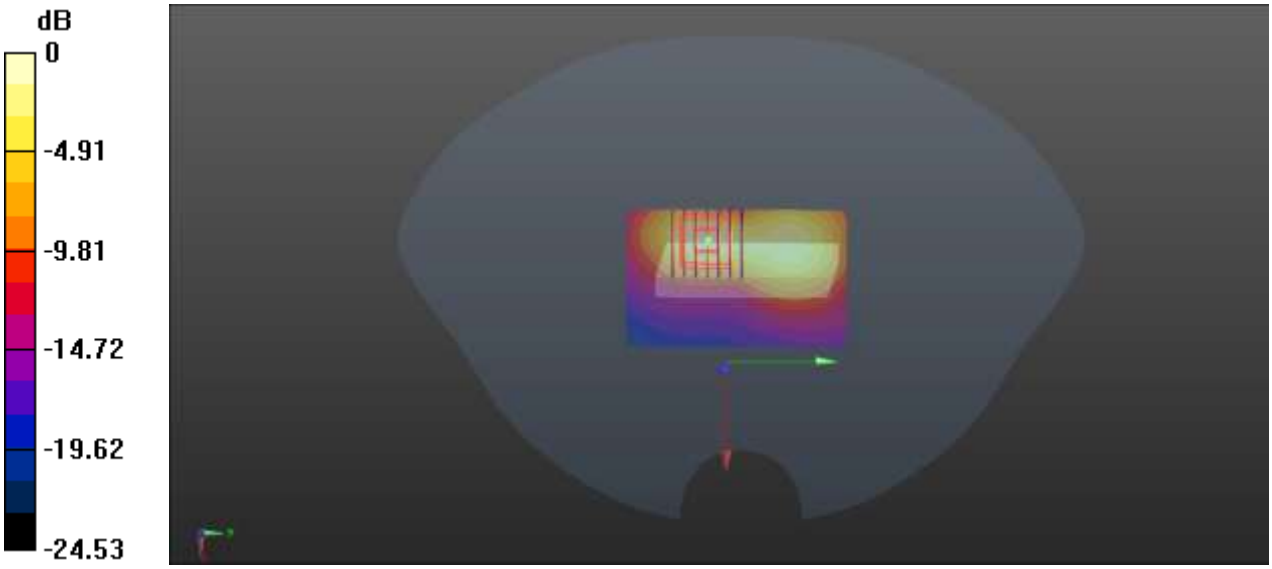
Ambient Temperature:22.3 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.46, 7.46, 7.46); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch41140/Area Scan (51x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.720 W/kg

Ch41140/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.125 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.598 W/kg; SAR(10 g) = 0.245 W/kg
Maximum value of SAR (measured) = 0.720 W/kg



0 dB = 0.720 W/kg

MEAS.20 Left Head with Cheek on Low Channel in IEEE802.11b mode

Date: 2019.11.12

Communication System Band: WLAN(b); Frequency: 2412 MHz;Duty Cycle: 1:1.02

Medium parameters used (interpolated): f = 2412 MHz; σ = 1.798 S/m; ε_r = 38.787; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.21 W/kg

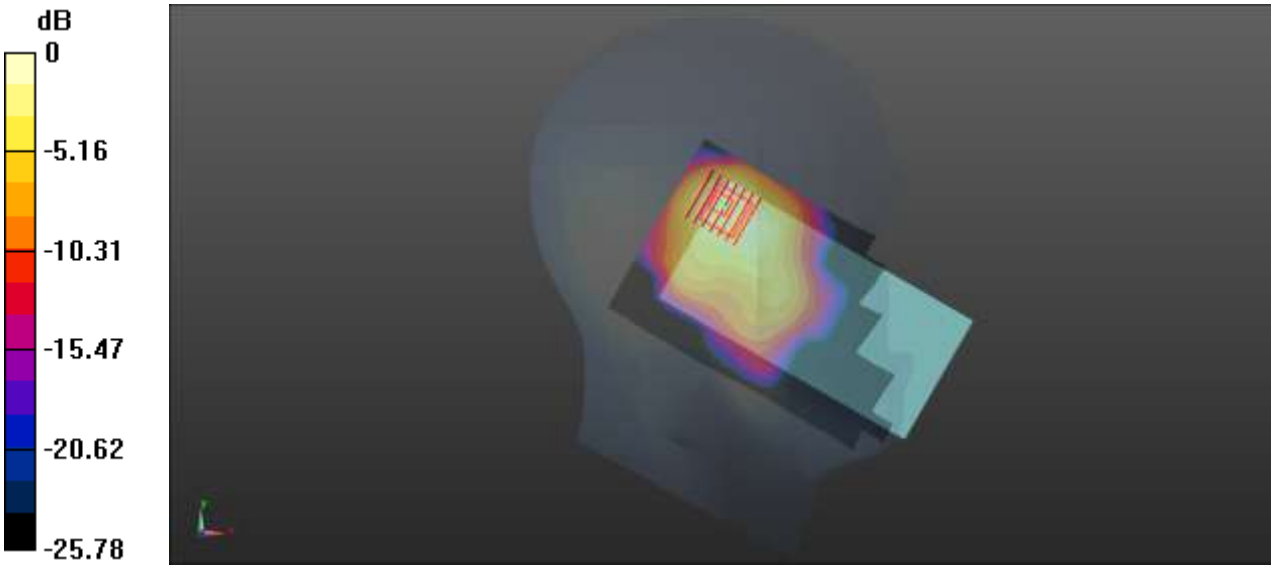
Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.11 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.56 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.482 W/kg

Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.20 W/kg

MEAS.21 Body Plane with Back Side 15mm on Low Channel in IEEE802.11b mode
Date: 2019.11.12
Communication System Band: WLAN(b); Frequency: 2412 MHz;Duty Cycle: 1:1.02
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.939 S/m; ε_r = 52.421; ρ = 1000 kg/m^3
Phantom section: Flat Section

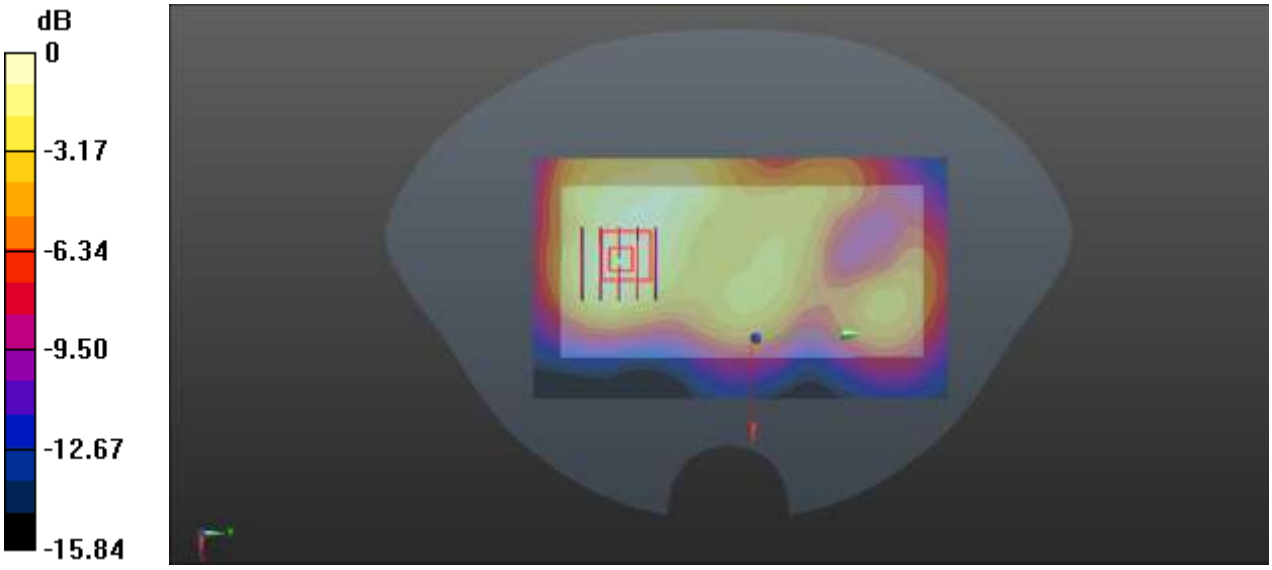
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.79, 7.79, 7.79); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1/Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.113 W/kg

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.087 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.170 W/kg
SAR(1 g) = 0.093 W/kg; SAR(10 g) = 0.052 W/kg
Maximum value of SAR (measured) = 0.111 W/kg



0 dB = 0.111 W/kg

MEAS.22 Body Plane with Back Side 10mm on Low Channel in IEEE802.11b mode
Date: 2019.11.12
Communication System Band: WLAN(b); Frequency: 2412 MHz;Duty Cycle: 1:1.02
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.939 S/m; ε_r = 52.421; ρ = 1000 kg/m^3
Phantom section: Flat Section

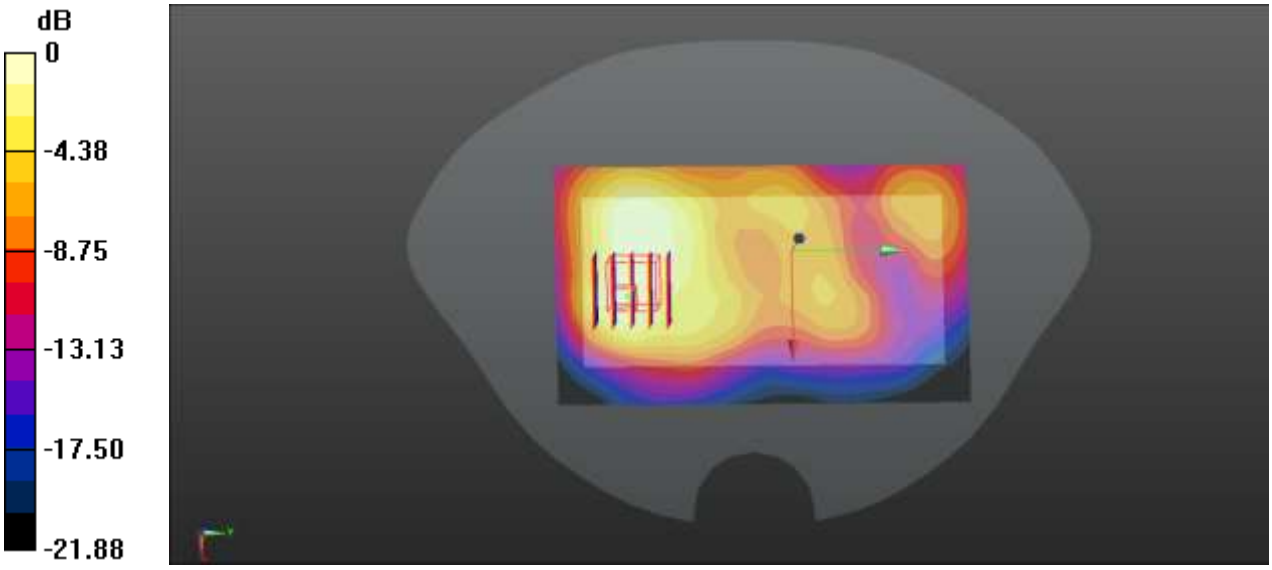
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.79, 7.79, 7.79); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1/Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.232 W/kg

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.345 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.405 W/kg
SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.083 W/kg
Maximum value of SAR (measured) = 0.205 W/kg



0 dB = 0.205 W/kg

MEAS.23 Left Head with Tilt on Channel 54 in IEEE802.11n(HT40) mode

Date: 2019.11.14

Communication System Band: WLAN(n)40Mhz; Frequency: 5270 MHz;Duty Cycle: 1:1.04

Medium parameters used (interpolated): f = 5270 MHz; σ = 4.644 S/m; ε_r = 37.037; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.1 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch54/Area Scan (101x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.611 W/kg

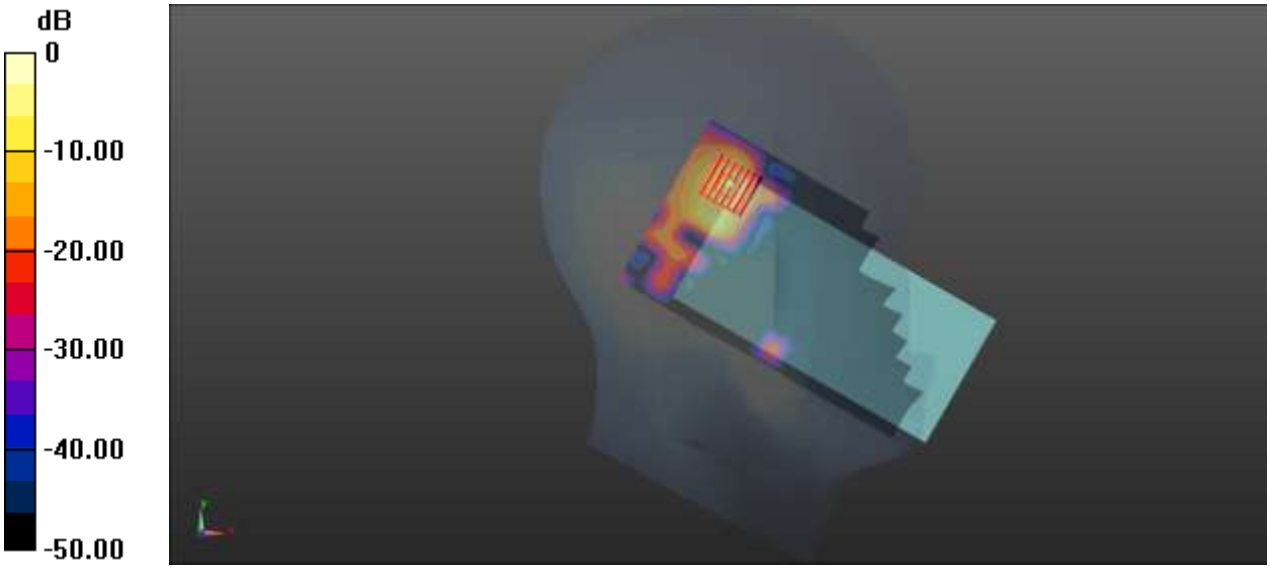
Ch54/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.589 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 2.82 W/kg

SAR(1 g) = 0.592 W/kg; SAR(10 g) = 0.157 W/kg

Maximum value of SAR (measured) = 1.30 W/kg



0 dB = 1.30 W/kg

MEAS.24 Left Head with Tilt on Channel 106 in IEEE802.11ac(VHT80) mode

Date: 2019.11.15

Communication System Band: WLAN(ac) 80Mhz; Frequency: 5530 MHz;Duty Cycle: 1:1.09

Medium parameters used: f = 5530 MHz; σ = 4.996 S/m; ε_r = 35.369; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch106/Area Scan (101x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.472 W/kg

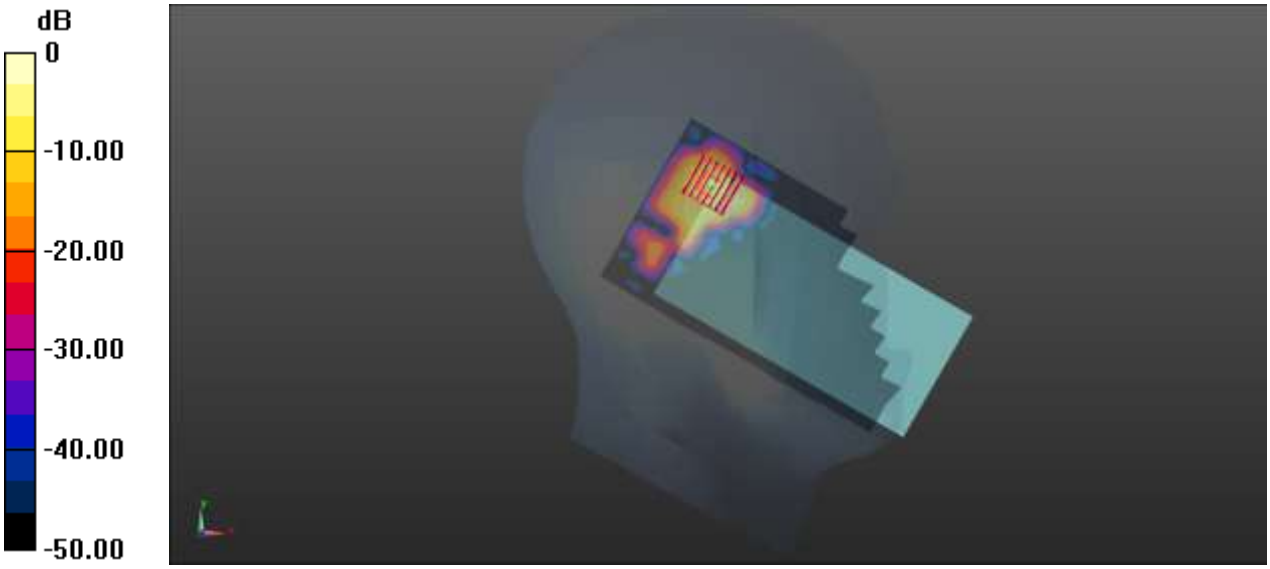
Ch106/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.961 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 2.36 W/kg

SAR(1 g) = 0.455 W/kg; SAR(10 g) = 0.117 W/kg

Maximum value of SAR (measured) = 1.00 W/kg



0 dB = 1.00 W/kg

MEAS.25 Left Head with Tilt on Channel 155 in IEEE802.11ac(VHT80) mode

Date: 2019.11.16

Communication System Band: WLAN(ac) 80Mhz; Frequency: 5775 MHz;Duty Cycle: 1:1.09

Medium parameters used (interpolated): f = 5775 MHz; σ = 5.305 S/m; ε_r = 34.164; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.06, 5.06, 5.06); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.782 W/kg

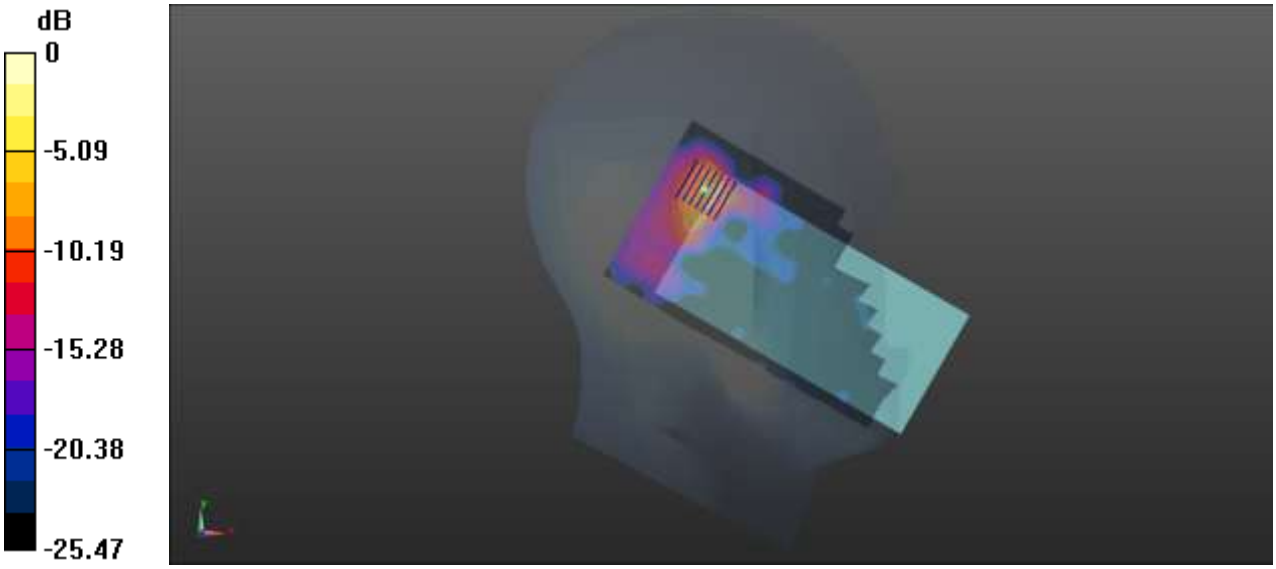
Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.549 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 4.06 W/kg

SAR(1 g) = 0.778 W/kg; SAR(10 g) = 0.209 W/kg

Maximum value of SAR (measured) = 1.80 W/kg



0 dB = 1.80 W/kg

MEAS.26 Body Plane with Back Side 15mm on Channel 54 in IEEE802.11n(HT40) mode
Date: 2019.11.14
Communication System Band: WLAN(n)40Mhz; Frequency: 5270 MHz;Duty Cycle: 1:1.04
Medium parameters used: f = 5270 MHz; σ = 5.379 S/m; ε_r = 50.101; ρ = 1000 kg/m^3
Phantom section: Flat Section

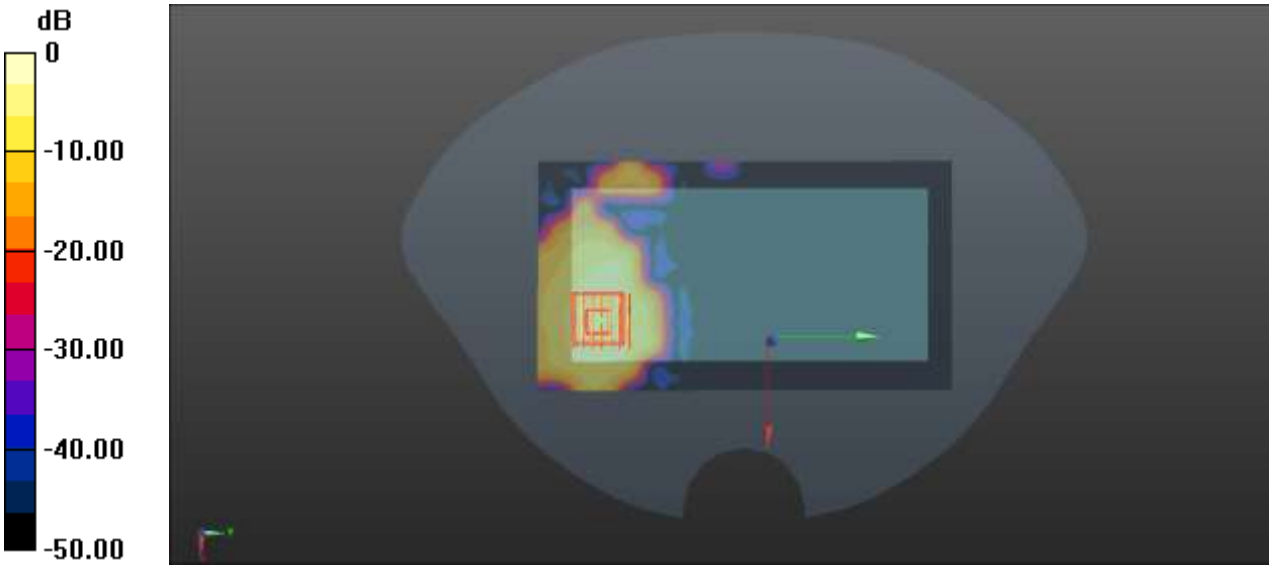
Ambient Temperature:22.1 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch54/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.172 W/kg

Ch54/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.631 W/kg
SAR(1 g) = 0.179 W/kg; SAR(10 g) = 0.069 W/kg
Maximum value of SAR (measured) = 0.327 W/kg



0 dB = 0.327 W/kg

MEAS.27 Body Plane with Back Side 15mm on Channel 106 in IEEE802.11ac(VHT80) mode
Date: 2019.11.15
Communication System Band: WLAN(ac) 80Mhz; Frequency: 5530 MHz;Duty Cycle: 1:1.09
Medium parameters used: f = 5530 MHz; σ = 5.731 S/m; ε_r = 48.395; ρ = 1000 kg/m^3
Phantom section: Flat Section

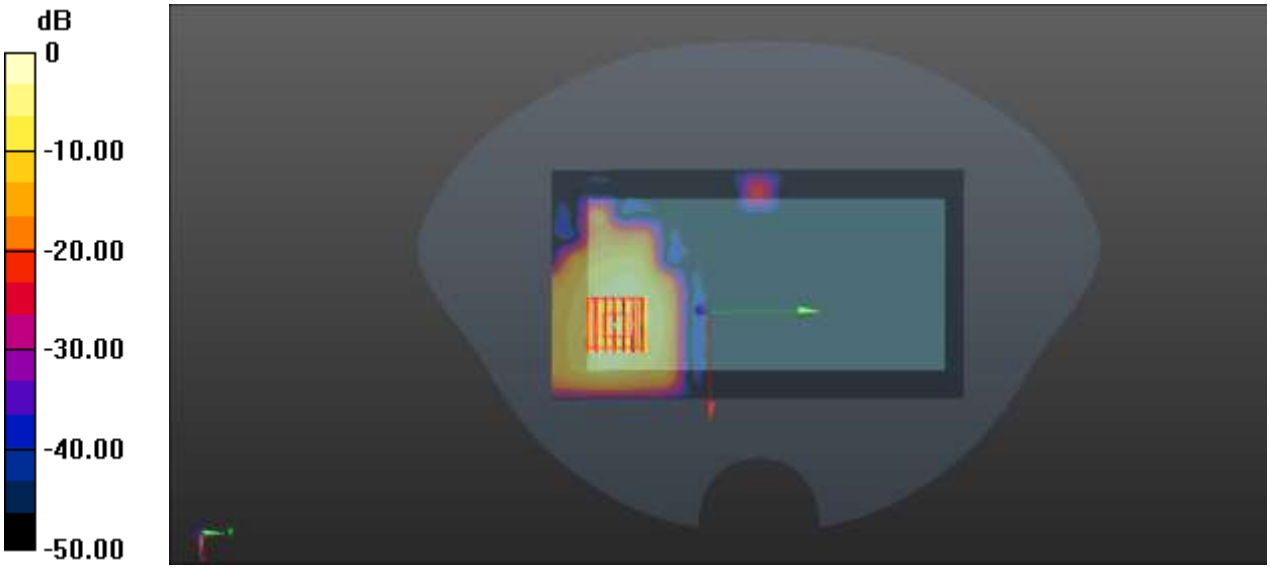
Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.36, 4.36, 4.36); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch106/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.236 W/kg

Ch106/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.926 W/kg
SAR(1 g) = 0.246 W/kg; SAR(10 g) = 0.095 W/kg
Maximum value of SAR (measured) = 0.457 W/kg



0 dB = 0.457 W/kg

MEAS.28 Body Plane with Back Side 15mm on Channel 155 in IEEE802.11ac(VHT80) mode

Date: 2019.11.16

Communication System Band: WLAN(ac) 80Mhz; Frequency: 5775 MHz;Duty Cycle: 1:1.09

Medium parameters used: f = 5775 MHz; σ = 6.04 S/m; ε_r = 47.45; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.51, 4.51, 4.51); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.178 W/kg

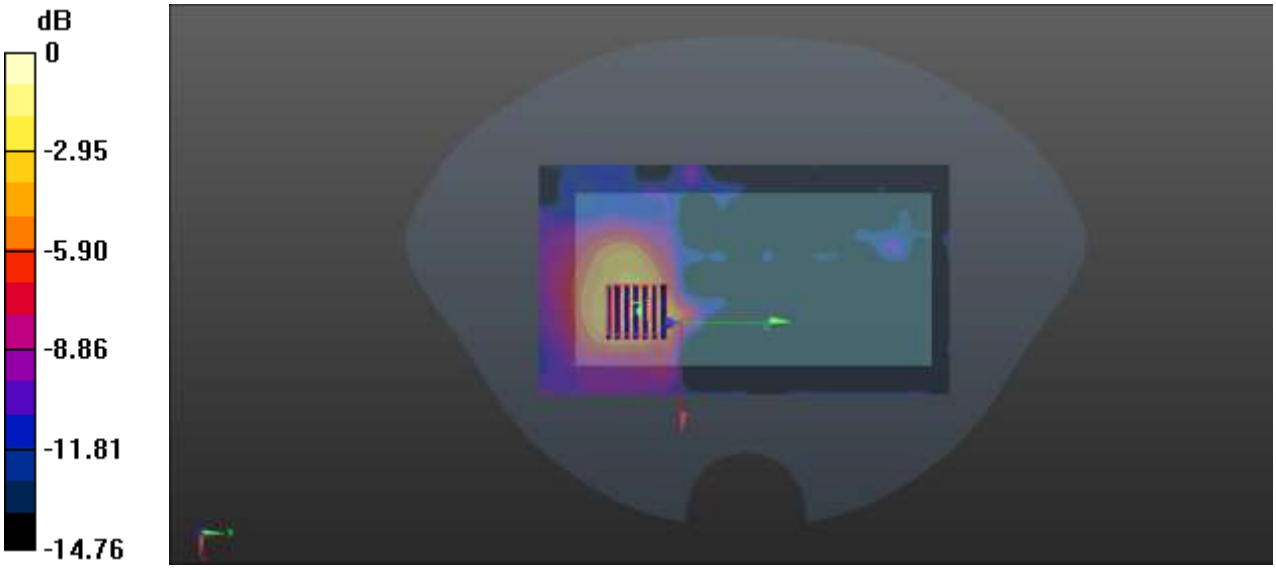
Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.743 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.667 W/kg

SAR(1 g) = 0.181 W/kg; SAR(10 g) = 0.077 W/kg

Maximum value of SAR (measured) = 0.320 W/kg



0 dB = 0.320 W/kg

MEAS.29 Body Plane with Top Edge 10mm on Channel 46 in IEEE802.11n(HT40) mode

Date: 2019.11.13

Communication System Band: WLAN(n)40Mhz; Frequency: 5230 MHz;Duty Cycle: 1:1.04

Medium parameters used: f = 5230 MHz; σ = 5.44 S/m; ε_r = 50.017; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch46/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

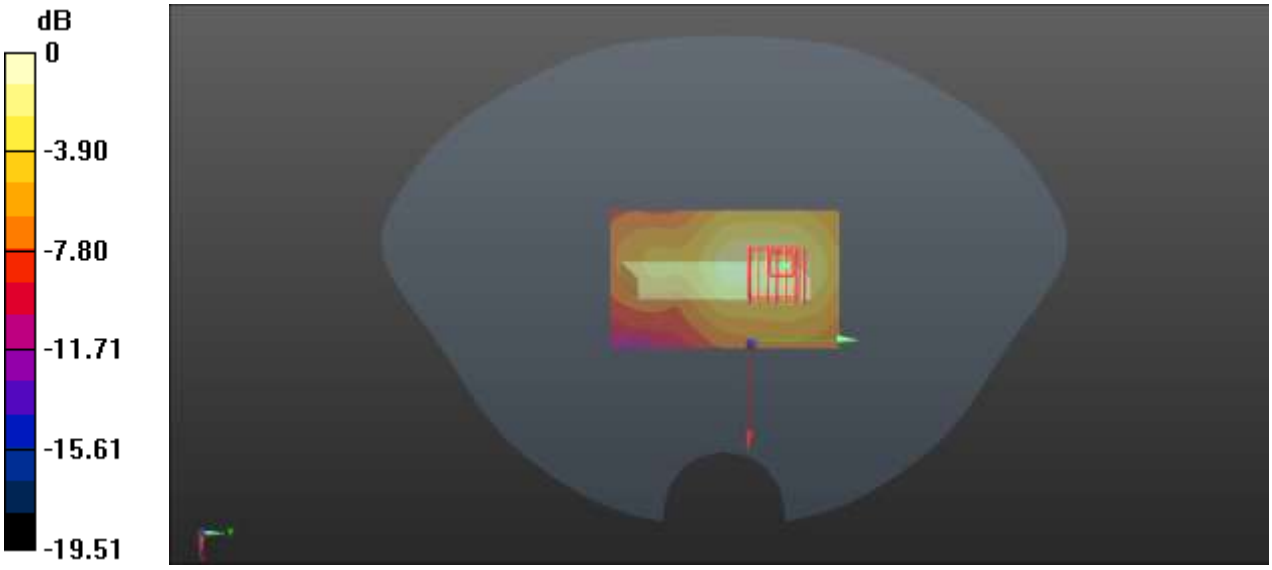
Ch46/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.286 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.885 W/kg

SAR(1 g) = 0.219 W/kg; SAR(10 g) = 0.104 W/kg

Maximum value of SAR (measured) = 0.426 W/kg



0 dB = 0.426 W/kg

MEAS.30 Body Plane with Back Side 10mm on Channel 155 in IEEE802.11ac(VHT80) mode
Date: 2019.11.16
Communication System Band: WLAN(ac) 80Mhz; Frequency: 5775 MHz;Duty Cycle: 1:1.09
Medium parameters used: f = 5775 MHz; σ = 6.04 S/m; ε_r = 47.45; ρ = 1000 kg/m^3
Phantom section: Flat Section

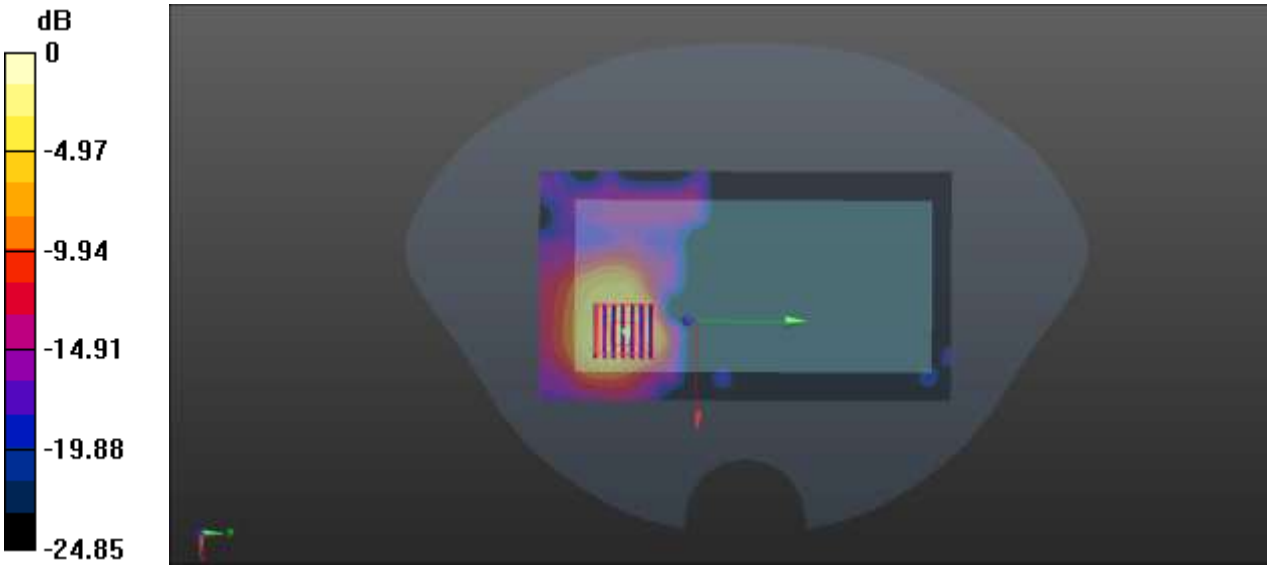
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.51, 4.51, 4.51); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.282 W/kg

Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0.8060 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.993 W/kg
SAR(1 g) = 0.261 W/kg; SAR(10 g) = 0.102 W/kg
Maximum value of SAR (measured) = 0.504 W/kg



0 dB = 0.504 W/kg

MEAS.31 Body Plane with Top Edge 0mm on Channel 54 in IEEE802.11n(HT40) mode

Date: 2019.11.14

Communication System Band: WLAN(n)40Mhz; Frequency: 5270 MHz;Duty Cycle: 1:1.04

Medium parameters used: f = 5270 MHz; σ = 5.379 S/m; ε_r = 50.101; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.1 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch54/Area Scan (61x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 3.22 W/kg

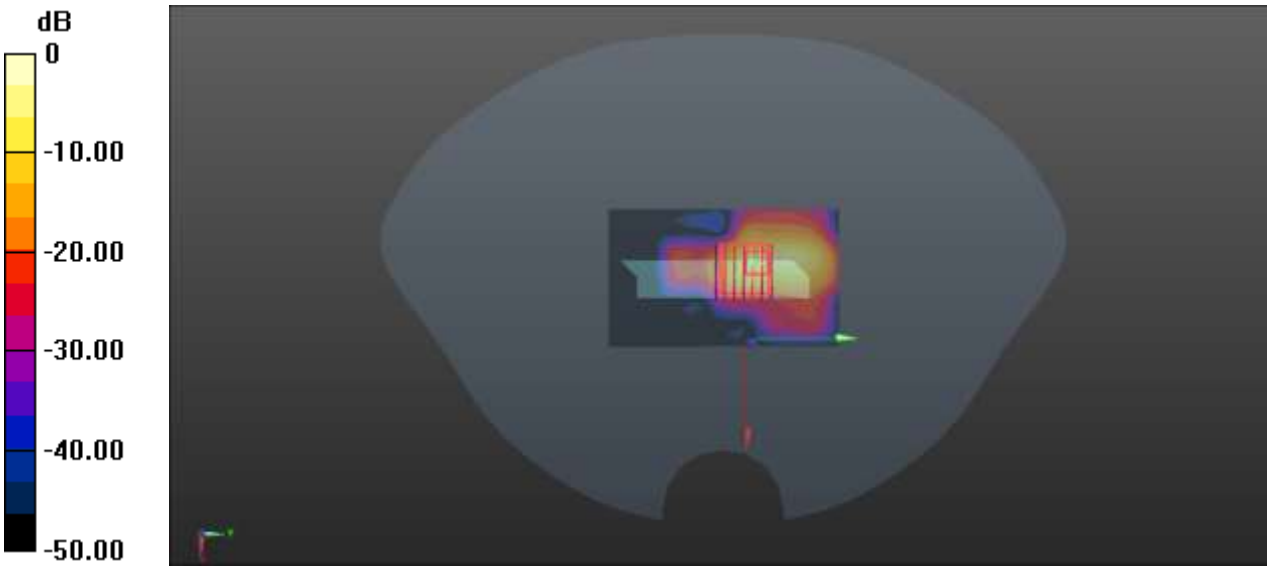
Ch54/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.833 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 16.3 W/kg

SAR(1 g) = 3.12 W/kg; SAR(10 g) = 0.585 W/kg

Maximum value of SAR (measured) = 7.60 W/kg



0 dB = 7.60 W/kg

MEAS.32 Body Plane with Top Edge 0mm on Channel 106 in IEEE802.11ac(VHT80) mode

Date: 2019.11.15

Communication System Band: WLAN(ac) 80Mhz; Frequency: 5530 MHz;Duty Cycle: 1:1.09

Medium parameters used: f = 5530 MHz; σ = 5.731 S/m; ε_r = 48.395; ρ = 1000 kg/m^3

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.36, 4.36, 4.36); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch106/Area Scan (61x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 2.63 W/kg

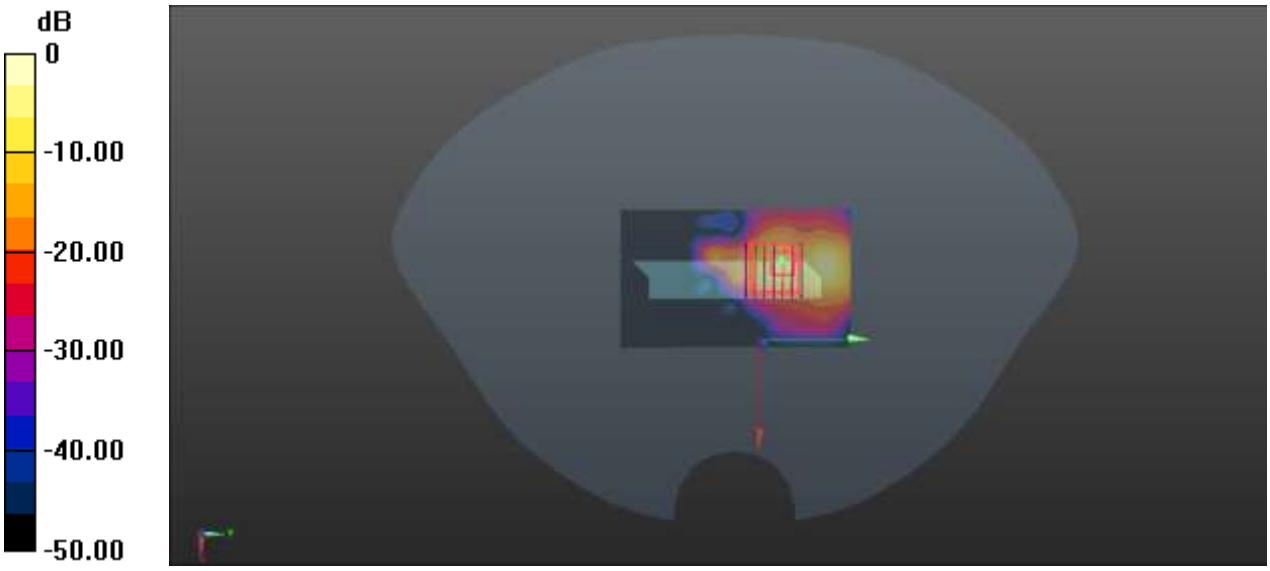
Ch106/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.036 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 14.8 W/kg

SAR(1 g) = 2.34 W/kg; SAR(10 g) = 0.438 W/kg

Maximum value of SAR (measured) = 5.99 W/kg



0 dB = 5.99 W/kg

MEAS.33 Left Head with Cheek on Low Channel in Bluetooth DH5 mode

Date: 2019.11.12

Communication System Band: BT; Frequency: 2402 MHz;Duty Cycle: 1:1.3

Medium parameters used: f = 2402 MHz; σ = 1.788 S/m; ε_r = 38.889; ρ = 1000 kg/m^3

Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch0/Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.229 W/kg

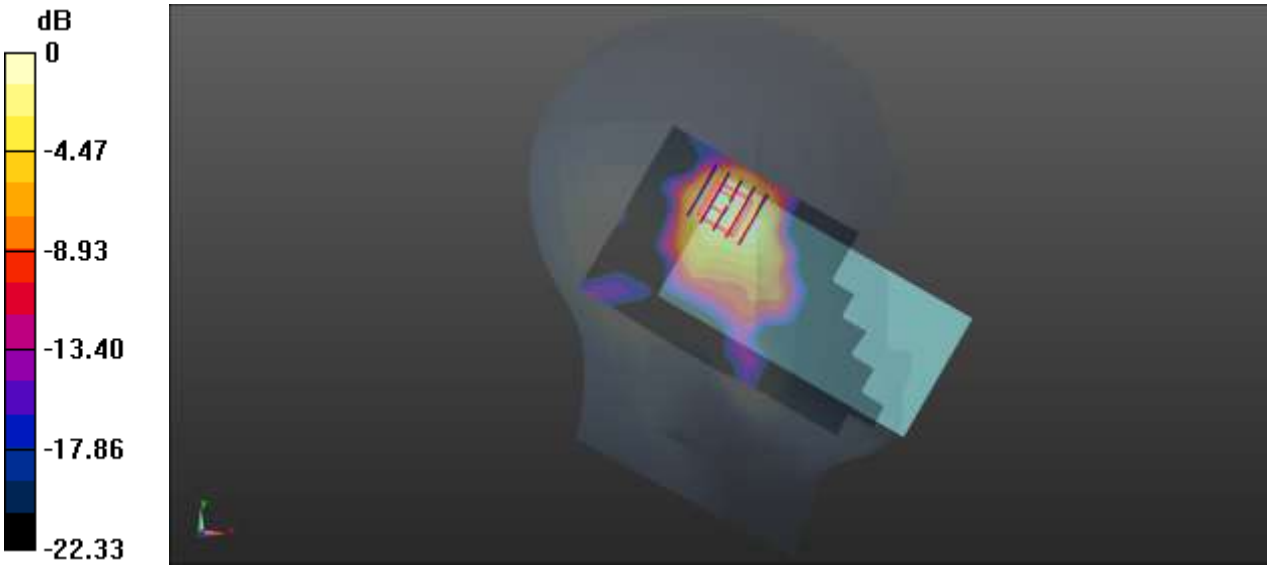
Ch0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.521 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.480 W/kg

SAR(1 g) = 0.197 W/kg; SAR(10 g) = 0.093 W/kg

Maximum value of SAR (measured) = 0.206 W/kg



0 dB = 0.206 W/kg

MEAS.34 Body Plane with Back Side 15mm on Low Channel in Bluetooth DH5 mode
Date: 2019.11.12
Communication System Band: BT; Frequency: 2402 MHz;Duty Cycle: 1:1.3
Medium parameters used: f = 2402 MHz; σ = 1.929 S/m; ε_r = 52.523; ρ = 1000 kg/m^3
Phantom section: Flat Section

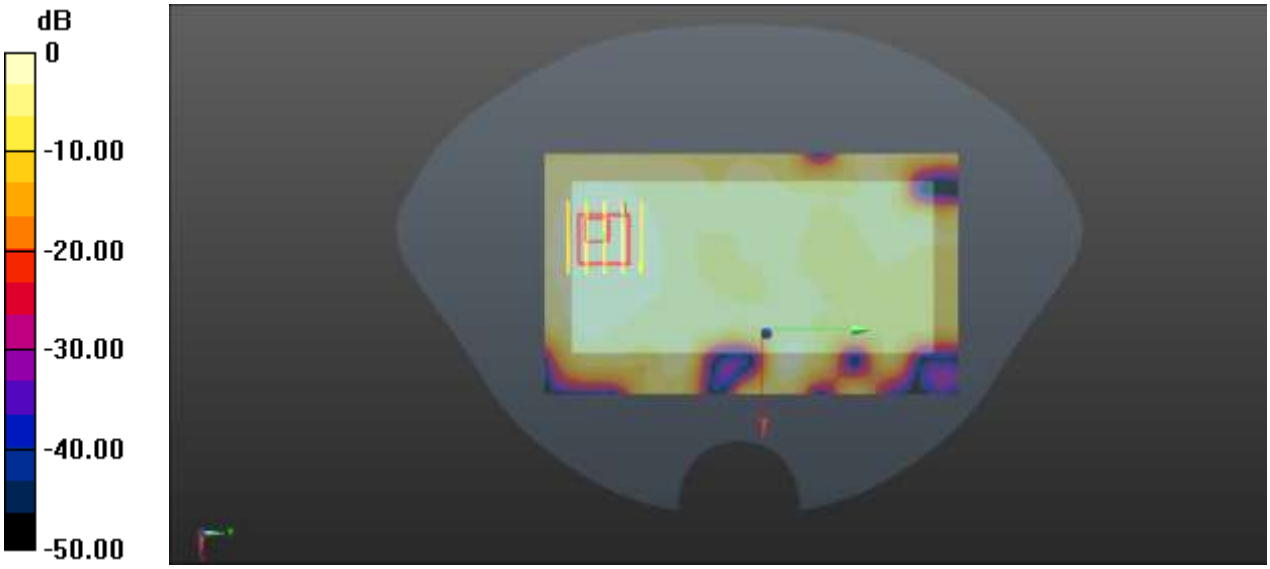
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.79, 7.79, 7.79); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch0/Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1200 mm
Maximum value of SAR (interpolated) = 0.0176 W/kg

Ch0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.033 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.0310 W/kg
SAR(1 g) = 0.016 W/kg; SAR(10 g) = 0.00943 W/kg
Maximum value of SAR (measured) = 0.0159 W/kg



0 dB = 0.0159 W/kg

MEAS.35 Body Plane with Back Side 10mm on Low Channel in Bluetooth DH5 mode
Date: 2019.11.12
Communication System Band: BT; Frequency: 2402 MHz;Duty Cycle: 1:1.3
Medium parameters used: f = 2402 MHz; σ = 1.929 S/m; ε_r = 52.523; ρ = 1000 kg/m^3
Phantom section: Flat Section

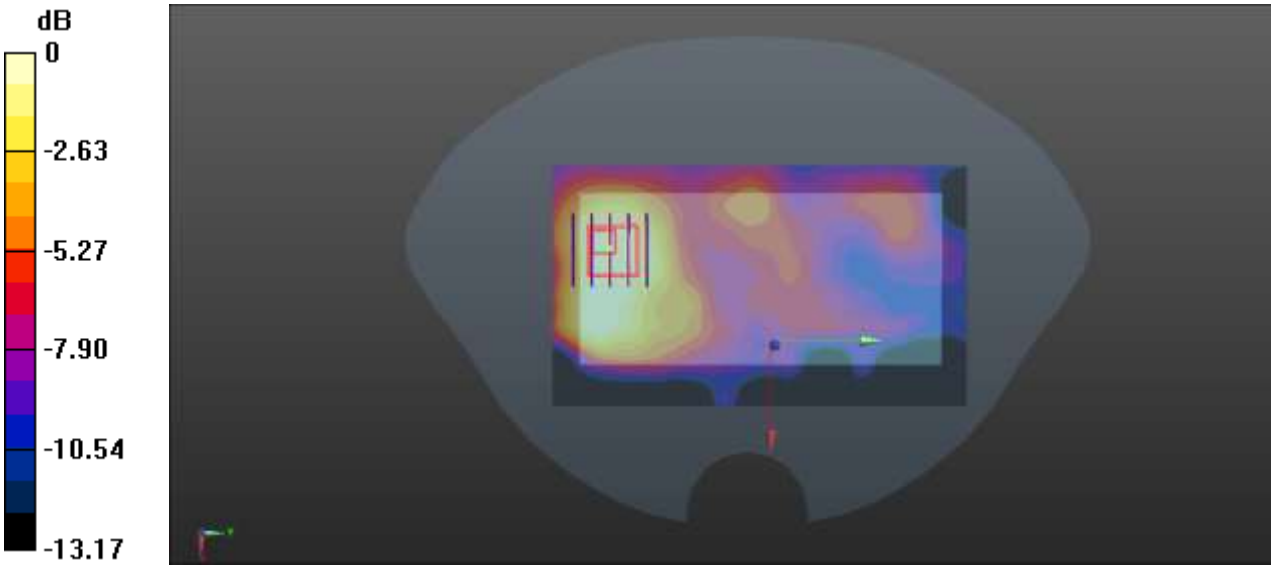
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.79, 7.79, 7.79); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch0/Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0304 W/kg

Ch0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.523 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.0510 W/kg
SAR(1 g) = 0.027 W/kg; SAR(10 g) = 0.016 W/kg
Maximum value of SAR (measured) = 0.0287 W/kg



0 dB = 0.0287 W/kg

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ19A0595-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ19A0595-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “CALIBRATION REPORT.pdf”.

--END OF REPORT--