FCC SAR TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

C7 FDD-LTE Smartphone

ISSUED TO
TP-LINK Technologies Co., Ltd.

Building 24-1F/3F/4F/5F, 28-1F/2F/3F/4F Science and Technology Park, Shennan Road, Nanshan District, Shenzhen City, Guangdong Province, P.R. China

Tested by: Zong Liyao
Zong Liyao
(Engineer)
Date Dec. 20, 2017

Approved by:
Liao Jianming
(Technical Director)
Date Dec. 20, 2017

Report No.:	BL-SZ17A0392-701
EUT Name:	C7 FDD-LTE Smartphone
Model Name:	TP910C
Brand Name:	neffos
FCC ID:	TE7C7V1
Test Standard:	FCC 47 CFR Part 2.1093
	ANSI C95.1: 1999, IEEE 1528: 2013
Maximum SAR:	Head (1 g): 1.048 W/kg
	Body-Worn (1 g): 1.194 W/kg
	Hotspot (1 g): 1.194 W/kg
Test Conclusion:	Pass
Test Date:	Oct. 31, 2017 ~ Nov. 13, 2017
Date of Issue:	Dec. 20, 2017

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Revision History

Version	Issue Date	Revisions Content
Rev. 01	Dec. 11, 2017	Initial Issue
Rev. 02	Dec. 20, 2017	Added repeat SAR measurement plots on page 94 to 97.

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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 organizatin 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	20 to 23℃
Ambient Relative Humidity	41 to 58%
Ambient Pressure	100 to 102KPa

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	TP-LINK Technologies Co., Ltd.
Address	Building 24-1F/3F/4F/5F, 28-1F/2F/3F/4F Science and Technology Park, Shennan Road, Nanshan District, Shenzhen City, Guangdong Province, P.R. China

2.2 Manufacturer Information

Manufacturer	TP-LINK Technologies Co., Ltd.
Address	Building 24-1F/3F/4F/5F, 28-1F/2F/3F/4F Science and Technology Park, Shennan Road, Nanshan District, Shenzhen City, Guangdong Province, P.R. China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	C7 FDD-LTE Smartphone
Model Name Under Test	TP910C
Series Model Name	TP910C, TP910CXYZZ
Description of Model Name Differentiation	X=2 or 4 (2 indicates Cloudy Grey, 4 indicates Sunrise Gold) Y=4 , indicates the memory is 2G RAM + 16G Flash ZZ indicates different national All models are same with electrical parameters and internal circuit structure, but differ in color and shipping countries
Hardware Version	1.0
Software Version	TP910Rxxxx
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A
Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/1900 MHz GPRS/EDGE Class 12 3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network FDD LTE Band 2/4/7 Bluetooth 3.0 (BR+EDR), Bluetooth 4.0 Low Energy (BLE) WIFI 802.11a, 802.11b, 802.11g and 802.11n(HT20/40) GPS, FM, GLONASS

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	neffos
	Model No.	NBL-35B3000
	Serial No.	N/A
	Capacity	3000 mAh
	Rated Voltage	3.85 V
	Limit Charge Voltage	4.4 V
Ancillary Equipment 2	Charger	
	Brand Name	neffos
	Model Name	A8-501000
	Rated Input	100-240 V ~, 50/60 Hz, 200 mA
	Rated Output	5 V⎓ 1 A
Ancillary Equipment 3	USB Cable	
	Length(Approx.)	100 cm

2.6 Technical Information

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

Operating Mode	GSM, WCDMA, FDD-LTE, 2.4G WLAN, 5G WLAN, Bluetooth		
Frequency Range	GSM 850	TX: 824 MHz ~ 849 MHz	RX: 869 MHz ~ 894 MHz
	GSM 1900	TX: 1850 MHz ~ 1910 MHz	RX: 1930 MHz ~ 1990 MHz
	WCDMA Band 2	TX: 1850 MHz ~ 1910 MHz	RX: 1930 MHz ~ 1990 MHz
	WCDMA Band 4	TX: 1710 MHz ~ 1755 MHz	RX: 2110 MHz ~ 2155 MHz
	WCDMA Band 5	TX: 824 MHz ~ 849 MHz	RX: 869 MHz ~ 894 MHz
	LTE Band 2	TX: 1850 MHz ~ 1910 MHz	RX: 1930 MHz ~ 1990 MHz
	LTE Band 4	TX: 1710 MHz ~ 1755 MHz	RX: 2110 MHz ~ 2155 MHz
	LTE Band 7	TX: 2500 MHz ~ 2570 MHz	RX: 2620 MHz ~ 2690 MHz
	802.11b/g /n(HT20/HT40)	2400~2483.5 MHz	
	802.11a/ /n(HT20/HT40)	5150 MHz~ 5250 MHz	
		5725 MHz~ 5850 MHz	
	Bluetooth	2400~2483.5 MHz	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
DTM	N/A		
Hotspot Function	Support		
Power Reduction	Not Support		
Exposure Category	General Population/Uncontrolled exposure		
EUT Stage	Portable Device		
Product	Type		
	☒ Production unit	☐ Identical prototype	

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/ ControlledExposure
Whole-Body SAR (averaged over the entire body)	0.08	0.4
Partial-Body SAR (averaged over any 1 gram of tissue)	1.60	8.0
SAR for hands, wrists, feet and ankles (averaged over any 10 grams of tissue)	4.0	20.0

NOTE:

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

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

3.3 Test Result Summary

3.3.1 Highest SAR (1 g Value)

Band	Maximum Scaled SAR (W/kg)			Maximum Report SAR (W/kg)	
	Head	Body		Head	Body
		Body-worn	Hotspot		
GSM 850	0.538	0.710	0.710	1.048	1.194
GSM 1900	0.064	0.547	0.547		
WCDMA Band 2	0.092	0.878	0.878		
WCDMA Band 4	0.158	**1.194**	**1.194**		
WCDMA Band 5	0.267	0.310	0.310		
LTE Band 2	0.097	0.791	0.791		
LTE Band 4	0.148	1.175	1.175		
LTE Band 7	0.085	0.477	0.633		
2.4G WLAN	**1.048**	0.146	0.146		
5.2G WLAN	0.388	0.033	0.106		
5.8G WLAN	0.480	0.052	0.274		
Limit (W/kg)	1.60				
Verdict	Pass				

3.3.2 Highest Simultaneous SAR

Position	Simultaneous Configuration	Simultaneous SAR (W/kg)	Limit (W/kg)	Verdict
Head	GSM + 2.4G WLAN	1.586	1.6	Pass
Body-worn	WCDMA RMC + 2.4G WLAN	1.340	1.6	Pass
Hotspot Mode	WCDMA RMC + 5G WLAN	1.468	1.6	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 1.194 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:

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

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

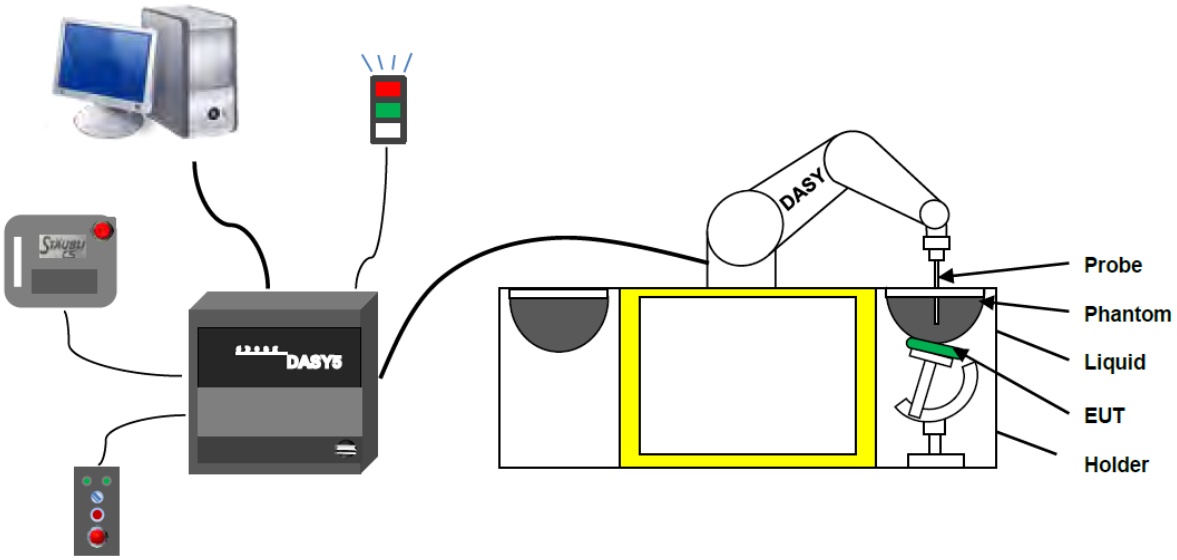
$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}\mathbf{E}^2}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue,

ρis 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:7340 with following specifications is used.

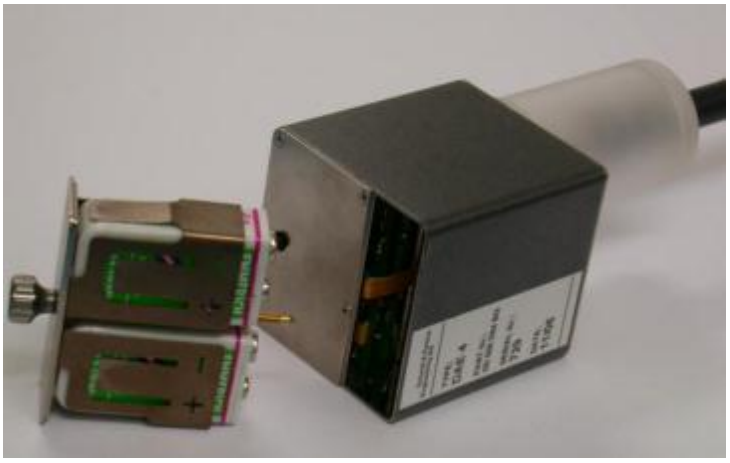
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz;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

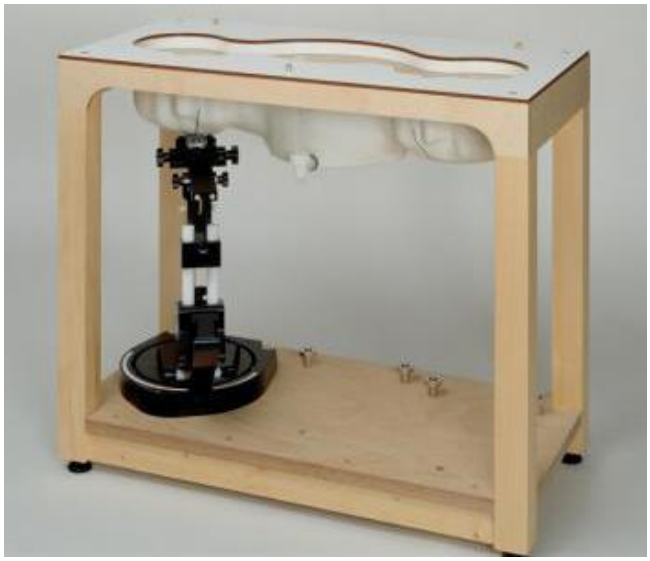
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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

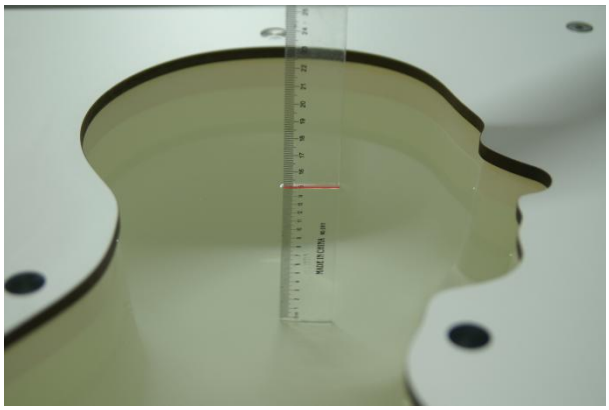
4.2.6 Device Holder

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

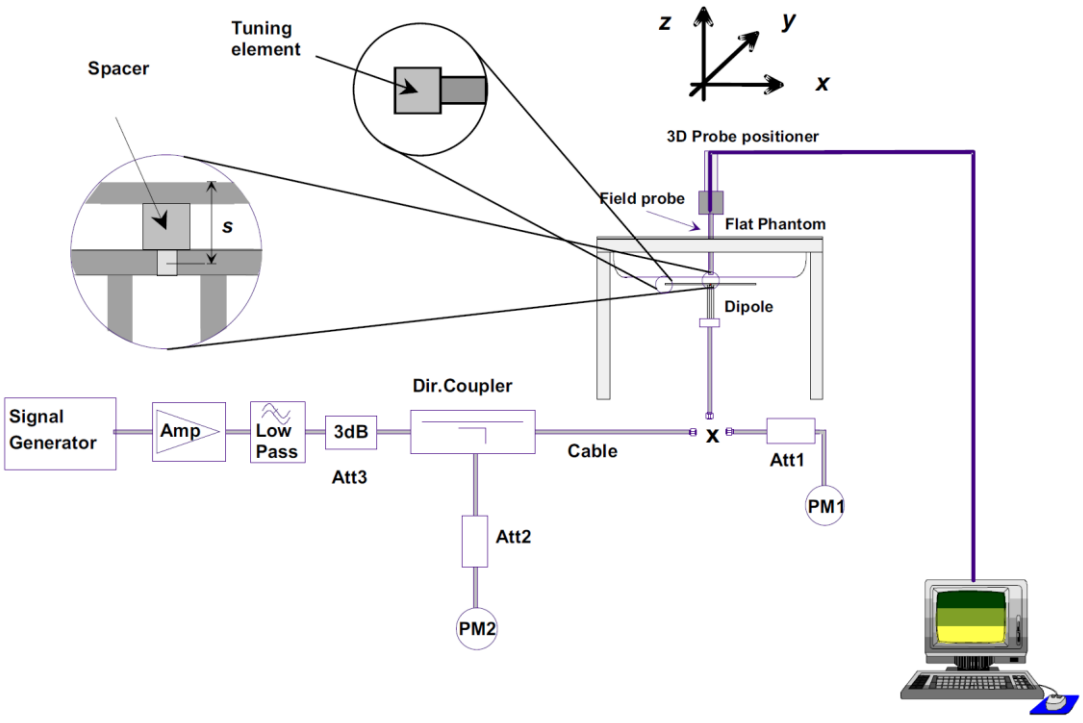
5 SYSTEM VERIFICATION

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

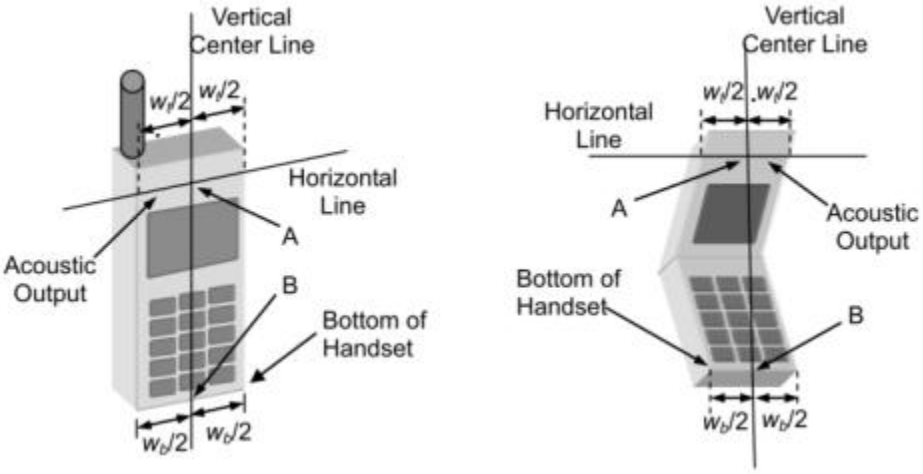
Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

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.

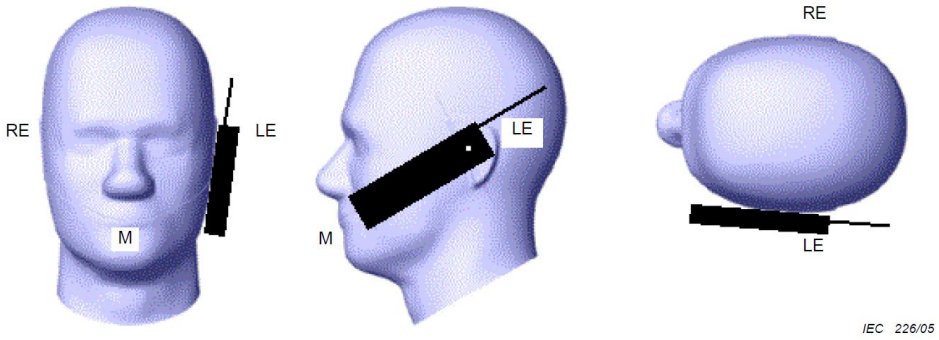
(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset,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

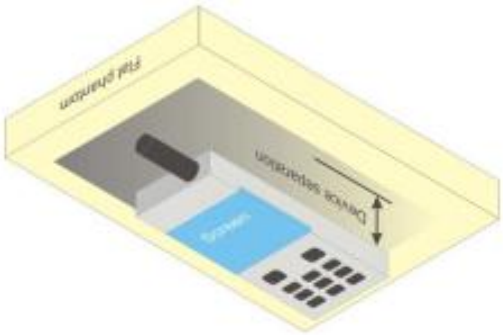
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

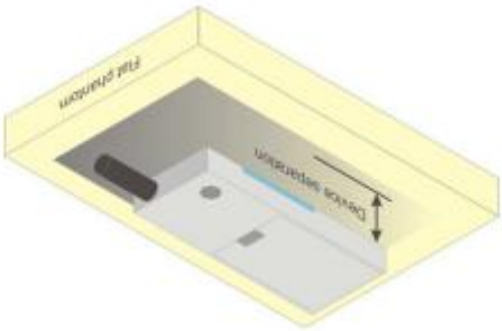
6.2 Body-worn Position Conditions

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.

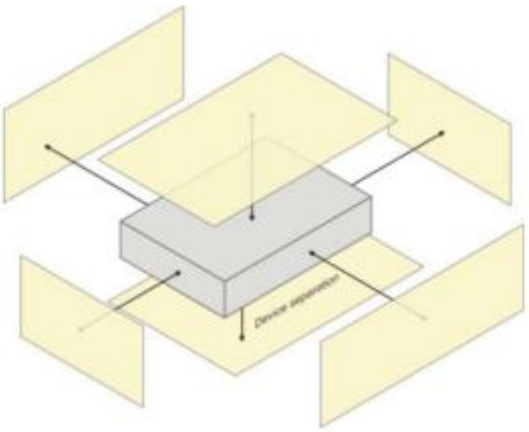
Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice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





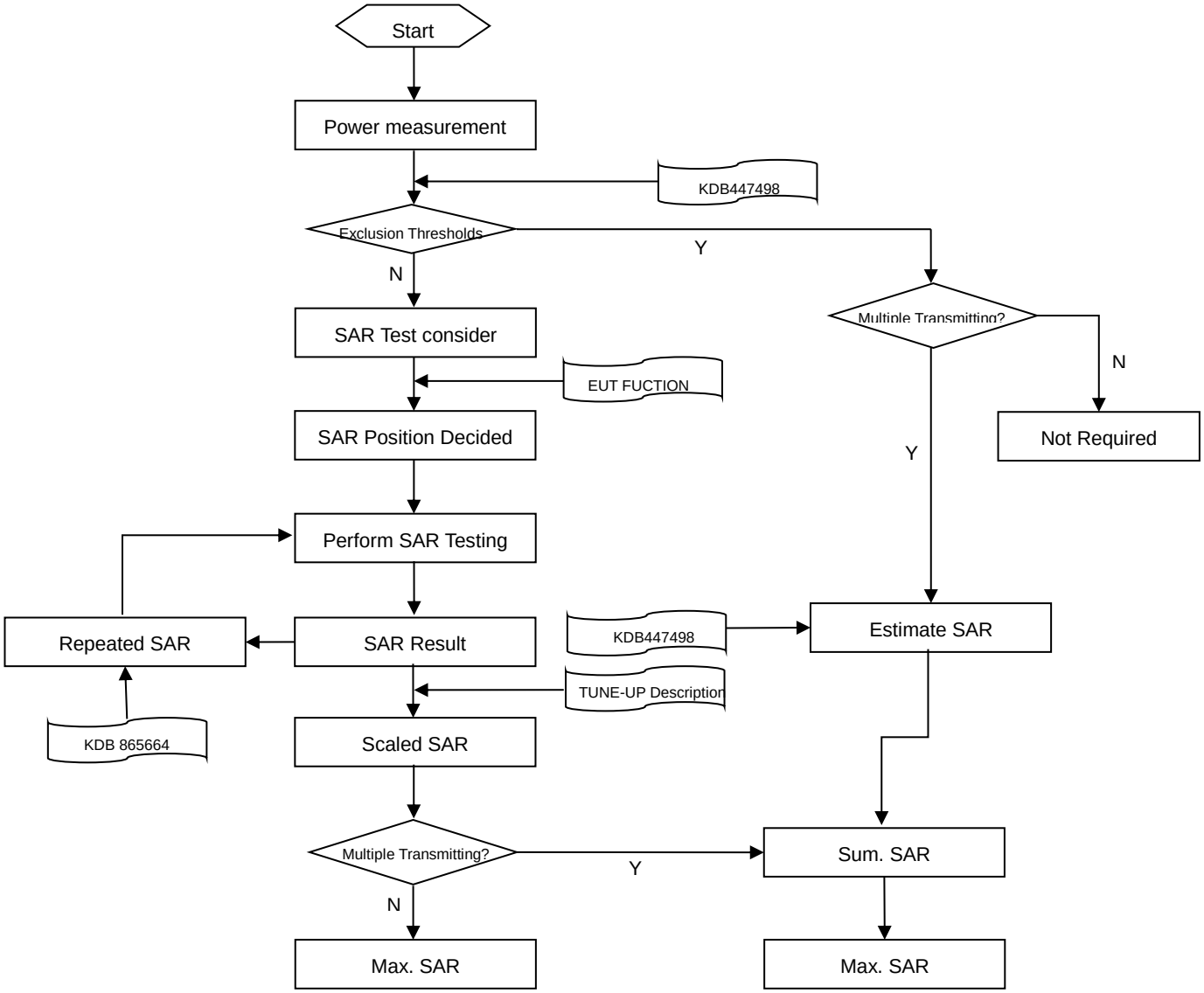
6.3 Hotspot Mode Exposure Position Conditions

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).



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="6">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 CONDUCTED RF OUPUT POWER

8.1 GSM

GSM 850 Band	Burst Peaked Power(dBm)			Frame- Peaked power(dBm)		
Channel	128	190	251	128	190	251
GSM (GMSK, 1-Slot)	32.88	32.93	32.91	23.88	**23.93**	23.91
GPRS (GMSK, 1-Slot)	32.88	32.89	32.87	23.88	23.89	23.87
GPRS (GMSK, 2-Slots)	32.37	32.35	32.31	26.37	26.35	26.31
GPRS (GMSK, 3-Slots)	30.90	30.84	30.79	26.64	26.58	26.53
GPRS (GMSK, 4-Slots)	29.88	29.80	29.69	**26.88**	26.80	26.69
EGPRS (8PSK, 1-Slot)	30.18	30.09	30.08	21.18	21.09	21.08
EGPRS (8PSK, 2-Slots)	29.07	29.11	29.06	23.07	23.11	23.06
EGPRS (8PSK, 3-Slots)	27.01	27.15	27.06	22.75	22.89	22.80
EGPRS (8PSK, 4-Slots)	26.11	26.13	26.00	23.11	**23.13**	23.00
GSM 1900 Band	Burst Peaked Power(dBm)			Frame- Peaked power(dBm)		
Channel	512	661	810	512	661	810
GSM (GMSK, 1-Slot)	30.64	30.62	30.63	**21.64**	21.62	21.63
GPRS (GMSK, 1-Slot)	30.57	30.59	30.53	21.57	21.59	21.53
GPRS (GMSK, 2-Slots)	29.85	29.89	29.93	23.85	23.89	23.93
GPRS (GMSK, 3-Slots)	28.04	28.13	28.28	23.78	23.87	24.02
GPRS (GMSK, 4-Slots)	26.97	27.06	27.22	23.97	24.06	**24.22**
EGPRS (8PSK, 1-Slot)	29.63	29.68	29.45	20.63	20.68	20.45
EGPRS (8PSK, 2-Slots)	26.96	28.47	28.40	20.96	**22.47**	22.40
EGPRS (8PSK, 3-Slots)	25.47	26.22	26.28	21.21	21.96	22.02
EGPRS (8PSK, 4-Slots)	25.06	25.13	25.18	22.06	22.13	22.18

Note:

1. SAR testing was performed on the maximum frame-Peaked power mode.
2. The frame- Peaked power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst- Peaked power based on time slots. The calculated method is shown as below:

   Frame- Peaked power = Burst Peaked power (1 Tx Slot) - 9 dB

   Frame- Peaked power = Burst Peaked power (2 Tx Slots) - 6 dB

   Frame- Peaked power = Burst Peaked power (3 Tx Slots) - 4.26 dB

   Frame- Peaked power = Burst Peaked power (4 Tx Slots) - 3 dB

8.2 WCDMA

WCDMA Band	Band 2			Band 4		
Channel	9262	9400	9538	1312	1412	1513
RMC 12.2Kbps	**23.06**	22.73	23.01	**22.70**	22.67	22.40
HSDPA Subtest-1	22.00	21.79	22.02	21.75	21.71	21.45
HSDPA Subtest-2	22.10	21.86	22.02	21.79	21.66	21.54
HSDPA Subtest-3	21.65	21.41	21.59	21.33	21.22	21.09
HSDPA Subtest-4	21.61	21.38	21.56	21.26	21.20	21.03
HSUPA Subtest-1	20.03	19.88	19.99	19.73	19.67	19.49
HSUPA Subtest-2	20.04	19.84	20.03	19.77	19.69	19.50
HSUPA Subtest-3	21.12	20.83	21.02	20.87	20.72	20.51
HSUPA Subtest-4	19.52	19.41	19.56	19.44	19.19	19.10
HSUPA Subtest-5	21.08	20.79	20.98	20.79	20.65	20.42
Band	Band 5			-		
Channel	4132	4182	4233	-	-	-
RMC 12.2Kbps	22.63	**22.75**	22.66	-	-	-
HSDPA Subtest-1	21.69	21.79	21.75	-	-	-
HSDPA Subtest-2	21.76	21.78	21.69	-	-	-
HSDPA Subtest-3	21.30	21.35	21.24	-	-	-
HSDPA Subtest-4	21.25	21.31	21.21	-	-	-
HSUPA Subtest-1	19.71	19.77	19.72	-	-	-
HSUPA Subtest-2	19.80	19.84	19.71	-	-	-
HSUPA Subtest-3	20.75	20.77	20.74	-	-	-
HSUPA Subtest-4	19.32	19.42	19.23	-	-	-
HSUPA Subtest-5	20.68	20.81	20.67	-	-	-

8.3 LTE

FDD LTE Band 2							
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	18700	18900	19100	18700	18900	19100
20MHz	1 (RB_Pos:0)	22.60	22.99	22.52	21.99	22.26	21.79
	1 (RB_Pos:49)	22.92	22.77	22.31	22.32	22.02	21.53
	1 (RB_Pos:99)	23.08	22.93	22.05	22.48	22.16	21.27
	50 (RB_Pos:0)	21.34	21.71	21.30	20.40	20.72	20.28
	50 (RB_Pos:24)	21.86	21.68	21.25	20.85	20.66	20.19
	50 (RB_Pos:49)	21.94	21.70	20.74	20.94	20.70	19.72
	100 (RB_Pos:0)	21.42	21.73	20.79	20.47	20.70	19.82
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	18675	18900	19125	18675	18900	19125
15MHz	1 (RB_Pos:0)	22.54	22.90	22.67	21.35	22.12	21.82
	1 (RB_Pos:37)	22.91	22.73	22.57	21.73	21.96	21.69
	1 (RB_Pos:74)	22.98	22.80	22.21	21.80	22.03	21.31
	36 (RB_Pos:0)	21.46	21.77	21.57	20.42	20.76	20.46
	36 (RB_Pos:18)	21.94	21.75	21.05	20.87	20.72	19.97
	36 (RB_Pos:37)	21.97	21.74	21.02	20.90	20.74	19.94
	75 (RB_Pos:0)	21.46	21.78	21.06	20.45	20.73	20.00
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	18650	18900	19150	18650	18900	19150
10MHz	1 (RB_Pos:0)	22.47	22.78	22.77	21.31	22.03	21.59
	1 (RB_Pos:24)	22.94	22.73	22.79	21.75	21.98	21.57
	1 (RB_Pos:49)	22.96	22.75	22.33	21.78	21.99	21.12
	25 (RB_Pos:0)	21.35	21.65	21.63	20.39	20.67	20.69
	25 (RB_Pos:12)	21.36	21.65	21.11	20.41	20.65	20.22
	25 (RB_Pos:24)	21.89	21.65	21.07	20.90	20.64	20.17
	50 (RB_Pos:0)	21.37	21.65	21.09	20.37	20.65	20.15
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	18625	18900	19175	18625	18900	19175
5MHz	1 (RB_Pos:0)	22.32	22.65	22.76	21.41	22.04	21.74
	1 (RB_Pos:12)	22.30	22.63	22.25	21.41	22.01	21.24
	1 (RB_Pos:24)	22.82	22.64	22.29	21.92	22.03	21.29
	12 (RB_Pos:0)	21.33	21.63	21.30	20.41	20.72	20.35
	12 (RB_Pos:6)	21.38	21.66	21.31	20.44	20.75	20.38
	12 (RB_Pos:11)	21.35	21.64	21.27	20.42	20.72	20.33
	25 (RB_Pos:0)	21.33	21.61	21.25	20.37	20.64	20.24
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	18615	18900	19185	18615	18900	19185

3MHz	1 (RB_Pos:0)	22.35	22.65	22.41	21.19	21.93	21.30
	1 (RB_Pos:7)	22.28	22.59	22.36	21.13	21.86	21.21
	1 (RB_Pos:14)	22.35	22.67	22.47	21.21	21.92	21.29
	8 (RB_Pos:0)	21.42	21.71	21.42	20.51	20.73	20.47
	8 (RB_Pos:4)	21.46	21.75	21.48	20.56	20.77	20.48
	8 (RB_Pos:7)	21.49	21.77	21.48	20.56	20.77	20.51
	15 (RB_Pos:0)	21.41	21.69	21.44	20.46	20.68	20.39
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	18607	18900	19193	18607	18900	19193
1.4MHz	1 (RB_Pos:0)	22.30	22.59	22.40	21.41	21.95	21.40
	1 (RB_Pos: 2)	22.31	22.59	22.44	21.33	21.84	21.35
	1 (RB_Pos:5)	22.36	22.60	22.47	21.43	21.96	21.45
	3 (RB_Pos:0)	22.32	22.59	22.52	21.43	21.79	21.59
	3 (RB_Pos:1)	22.39	22.64	22.46	21.36	21.77	21.62
	3 (RB_Pos:2)	22.41	22.68	22.42	21.34	21.83	21.65
	6 (RB_Pos:0)	21.31	21.61	21.37	20.43	20.46	20.47

FDD LTE Band 4							
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	20050	20175	20300	20050	20175	20300
20MHz	1 (RB_Pos:0)	22.05	22.62	22.51	21.50	21.93	21.82
	1 (RB_Pos:49)	22.36	22.43	22.16	21.81	21.72	21.53
	1 (RB_Pos:99)	22.51	22.50	21.71	21.93	21.81	21.08
	50 (RB_Pos:0)	20.83	21.39	21.34	19.84	20.43	20.38
	50 (RB_Pos:24)	21.32	21.34	21.20	20.39	20.39	20.23
	50 (RB_Pos:49)	21.40	21.35	20.72	20.46	20.38	19.70
	100 (RB_Pos:0)	20.90	21.39	20.81	19.93	20.41	19.82
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	20025	20175	20325	20025	20175	20325
15MHz	1 (RB_Pos:0)	21.95	22.50	22.39	20.84	21.78	21.67
	1 (RB_Pos:37)	22.34	22.37	22.15	21.21	21.66	21.49
	1 (RB_Pos:74)	22.40	22.40	21.65	21.26	21.70	20.99
	36 (RB_Pos:0)	20.86	21.41	21.24	19.84	20.44	20.24
	36 (RB_Pos:18)	21.36	21.39	20.67	20.36	20.43	19.66
	36 (RB_Pos:37)	21.42	21.37	20.64	20.41	20.41	19.62
	75 (RB_Pos:0)	20.94	21.41	20.74	19.89	20.41	19.71
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	20000	20175	20350	20000	20175	20350
10MHz	1 (RB_Pos:0)	21.87	22.39	22.20	20.80	21.68	21.16
	1 (RB_Pos:24)	22.35	22.36	22.11	21.23	21.65	21.07
	1 (RB_Pos:49)	22.37	22.37	21.55	21.24	21.66	20.56

	25 (RB_Pos:0)	20.81	21.30	21.12	19.82	20.37	20.26
	25 (RB_Pos:12)	20.86	21.30	20.62	19.88	20.37	19.74
	25 (RB_Pos:24)	21.36	21.29	20.56	20.42	20.34	19.69
	50 (RB_Pos:0)	20.86	21.30	20.64	19.85	20.34	19.68
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	19975	20175	20375	19975	20175	20375
5MHz	1 (RB_Pos:0)	21.76	22.26	21.98	20.93	21.69	21.08
	1 (RB_Pos:12)	21.74	22.25	21.42	20.93	21.68	20.57
	1 (RB_Pos:24)	22.26	22.26	21.42	21.39	21.69	20.57
	12 (RB_Pos:0)	20.81	21.27	20.57	19.87	20.43	19.64
	12 (RB_Pos:6)	20.88	21.32	20.59	19.95	20.47	19.66
	12 (RB_Pos:11)	20.88	21.27	20.56	19.95	20.43	19.61
	25 (RB_Pos:0)	20.84	21.26	20.58	19.86	20.35	19.54
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	19965	20175	20385	19965	20175	20385
3.0MHz	1 (RB_Pos:0)	21.78	22.27	21.49	20.70	21.59	20.56
	1 (RB_Pos:7)	21.72	22.24	21.40	20.66	21.52	20.45
	1 (RB_Pos:14)	21.77	22.28	21.47	20.71	21.59	20.51
	8 (RB_Pos:0)	20.92	21.34	20.58	19.99	20.45	19.63
	8 (RB_Pos:4)	20.95	21.38	20.61	20.06	20.47	19.67
	8 (RB_Pos:7)	20.98	21.40	20.62	20.06	20.48	19.68
	15 (RB_Pos:0)	20.92	21.33	20.60	19.95	20.39	19.58
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	19957	20175	20393	19957	20175	20393
1.4MHz	1 (RB_Pos:0)	21.75	22.26	21.40	20.94	21.65	20.58
	1 (RB_Pos:2)	21.75	22.28	21.44	20.87	21.57	20.50
	1 (RB_Pos:5)	21.78	22.28	21.43	20.97	21.66	20.61
	3 (RB_Pos:0)	21.82	22.33	21.67	21.02	21.58	20.83
	3 (RB_Pos:1)	21.86	22.37	21.57	20.97	21.54	20.85
	3 (RB_Pos:2)	21.88	22.40	21.55	20.95	21.60	20.91
	6 (RB_Pos:0)	20.80	21.23	20.43	19.91	20.18	19.61

FDD LTE Band 7							
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	20850	21100	21350	20850	21100	21350
20MHz	1 (RB_Pos:0)	21.49	21.79	21.36	20.95	21.09	20.69
	1 (RB_Pos:49)	21.77	21.59	21.23	21.22	20.88	20.51
	1 (RB_Pos:99)	21.97	21.72	20.97	21.42	21.00	20.22
	50 (RB_Pos:0)	20.33	20.63	20.30	19.41	19.70	19.34
	50 (RB_Pos:24)	20.74	20.52	20.19	19.85	19.60	19.22
	50 (RB_Pos:49)	20.80	20.50	19.65	19.88	19.56	18.65
	100 (RB_Pos:0)	20.32	20.57	19.75	19.42	19.61	18.77
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	20825	21100	21375	20825	21100	21375
15MHz	1 (RB_Pos:0)	21.18	21.67	21.52	20.07	20.96	20.77
	1 (RB_Pos:37)	21.53	21.54	21.45	20.42	20.81	20.63
	1 (RB_Pos:74)	21.62	21.57	21.10	20.50	20.85	20.27
	36 (RB_Pos:0)	20.13	20.64	20.49	19.13	19.67	19.44
	36 (RB_Pos:18)	20.61	20.56	19.97	19.60	19.61	18.90
	36 (RB_Pos:37)	20.60	20.53	19.94	19.59	19.58	18.86
	75 (RB_Pos:0)	20.14	20.60	19.98	19.14	19.59	18.92
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	20800	21100	21400	20800	21100	21400
10MHz	1 (RB_Pos:0)	20.87	21.55	21.62	19.78	20.83	20.48
	1 (RB_Pos:24)	21.35	21.55	21.67	20.24	20.82	20.47
	1 (RB_Pos:49)	21.38	21.57	21.22	20.23	20.84	20.10
	25 (RB_Pos:0)	19.83	20.52	20.55	18.90	19.59	19.67
	25 (RB_Pos:12)	19.86	20.48	20.05	18.92	19.55	19.15
	25 (RB_Pos:24)	20.33	20.46	19.98	19.39	19.52	19.07
	50 (RB_Pos:0)	19.86	20.48	20.05	18.90	19.56	19.10
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	20775	21100	21425	20775	21100	21425
5MHz	1 (RB_Pos:0)	20.56	21.46	21.65	19.74	20.86	20.64
	1 (RB_Pos:12)	20.53	21.44	21.15	19.71	20.85	20.20
	1 (RB_Pos:24)	21.04	21.45	21.18	20.16	20.86	20.24
	12 (RB_Pos:0)	19.63	20.47	20.26	18.74	19.65	19.30
	12 (RB_Pos:6)	19.67	20.48	20.25	18.77	19.66	19.29
	12 (RB_Pos:11)	19.65	20.46	20.20	18.75	19.63	19.24
	25 (RB_Pos:0)	19.64	20.45	20.22	18.70	19.56	19.18

8.4 WIFI

8.4.1 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	14.47	15.00	Yes
		6	2437	14.58	15.00	Yes
		11	2462	**14.63**	15.00	Yes
	802.11g	1	2412	14.24	15.00	No
		6	2437	14.25	15.00	No
		11	2462	14.47	15.00	No
	802.11n(HT20)	1	2412	13.53	14.50	No
		6	2437	13.73	14.50	No
		11	2462	14.02	14.50	No
	802.11n(HT40)	3	2422	13.18	14.00	No
		6	2437	13.71	14.00	No
		9	2452	13.56	14.00	No

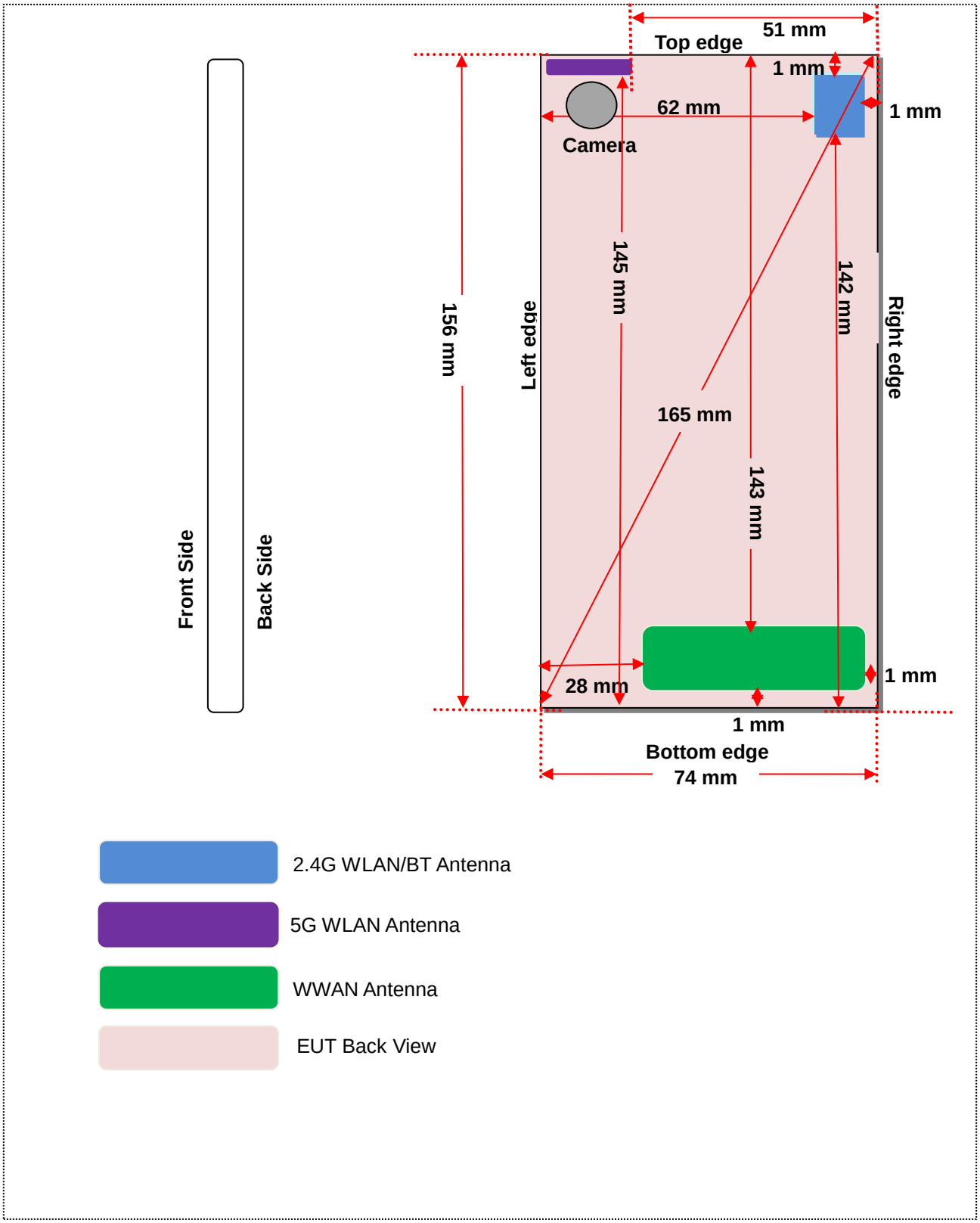
8.4.2 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-Up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	14.52	15.00	No
		44	5220	**14.80**	15.00	Yes
		48	5240	14.71	15.00	No
	802.11n(HT20)	36	5180	14.25	15.00	No
		44	5220	14.87	15.00	No
		48	5240	14.68	15.00	No
	802.11n(HT40)	38	5190	13.36	14.50	No
		46	5230	14.15	14.50	No
5.8 (5.725~5.850)	802.11a	149	5745	13.95	14.50	No
		157	5785	14.27	14.50	No
		165	5825	**14.35**	14.50	Yes
	802.11n(HT20)	149	5745	13.93	14.50	No
		157	5785	14.23	14.50	No
		165	5825	14.37	14.50	No
	802.11n(HT40)	151	5755	13.23	14.00	No
		159	5790	13.67	14.00	No

8.5 Bluetooth

Mode	GFSK			π/4-DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Conducted Power (dBm)	3.24	**4.70**	3.53	2.28	3.72	2.46
Tune-Up Limit (dBm)	5.00			4.00		
Mode	8-DPSK			BLE		
Channel	0	39	78	0	19	39
Frequency (MHz)	2402	2441	2480	2402	2440	2480
Conducted Power (dBm)	2.40	3.92	2.72	-3.68	-2.62	-4.28
Tune-Up Limit (dBm)	4.50			-2.00		

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 :

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	28mm	<5mm	143mm	<5mm
	Voice	33.50	2238.72	No	No	No	No	No	No
	Data	30.00	1000.00	Yes	Yes	Yes	Yes	No	Yes
GSM 1900	Distance to User			<5mm	<5mm	28mm	<5mm	143mm	<5mm
	Voice	31.00	1258.93	No	No	No	No	No	No
	Data	27.50	562.34	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 2	Distance to User			<5mm	<5mm	28mm	<5mm	143mm	<5mm
	RMC	23.50	223.87	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 4	Distance to User			<5mm	<5mm	28mm	<5mm	143mm	<5mm
	RMC	23.00	199.53	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 5	Distance to User			<5mm	<5mm	28mm	<5mm	143mm	<5mm
	RMC	23.00	199.53	Yes	Yes	Yes	Yes	No	Yes
LTE Band 2	Distance to User			<5mm	<5mm	28mm	<5mm	143mm	<5mm
	QPSK	23.50	223.87	Yes	Yes	Yes	Yes	No	Yes
LTE Band 4	Distance to User			<5mm	<5mm	28mm	<5mm	143mm	<5mm
	QPSK	23.00	199.53	Yes	Yes	Yes	Yes	No	Yes
LTE Band 7	Distance to User			<5mm	<5mm	28mm	<5mm	143mm	<5mm
	QPSK	22.00	158.49	Yes	Yes	Yes	Yes	No	Yes
WLAN 2.4 G	Distance to User			<5mm	<5mm	62mm	<5mm	<5mm	142mm
	802.11b	15.00	31.62	Yes	Yes	No	Yes	Yes	No
	802.11g	15.00	31.62	No	No	No	No	No	No
	802.11n(HT20)	14.50	28.18	No	No	No	No	No	No
	802.11n(HT40)	14.00	25.12	No	No	No	No	No	No
WLAN 5.2 G	Distance to User			<5mm	<5mm	<5mm	51mm	<5mm	145mm
	802.11a	15.00	31.62	Yes	Yes	Yes	No	Yes	No
	802.11n(HT20)	15.00	31.62	No	No	No	No	No	No
	802.11n(HT40)	14.50	28.18	No	No	No	No	No	No
WLAN 5.8 G	Distance to User			<5mm	<5mm	<5mm	51mm	<5mm	145mm
	802.11a	14.50	28.18	Yes	Yes	Yes	No	Yes	No
	802.11n(HT20)	14.50	28.18	No	No	No	No	No	No
	802.11n(HT40)	14.00	25.12	No	No	No	No	No	No
Bluetooth	Distance to User			<5mm	<5mm	62mm	<5mm	<5mm	142mm
	BR/EDR	5.00	3.16	No	No	No	No	No	No
	BLE	-2.00	0.63	No	No	No	No	No	No

Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM/GPRS/EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
2. Maximum power is the source-based time-average power and represents the maximum RF output power including tune-up tolerance among production units
3. 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.
4. 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
5. 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.
6. 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
7. 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.
8. 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
9. Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
   a. When KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
   b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
10. 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.

9.2 10g Extremity 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 $\leqslant$ 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.

Conclusion:
The EUT hotspot mode 1-g reported SAR is 1.194 W/kg, which is less than 1.2 W/kg, 10 g extremity SAR is not required.

10 TEST RESULT

10.1 GSM 850

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	1 g Scaled SAR (W/Kg)	Meas. No.
Head											
GPRS 4 slots	Left Cheek	0	128	824.2	-0.12	0.508	29.88	30.00	1.03	0.522	/
	Left Tilt	0	128	824.2	0.07	0.273	29.88	30.00	1.03	0.281	/
	Right Cheek	0	128	824.2	-0.09	0.523	29.88	30.00	1.03	**0.538**	1#
	Right Tilt	0	128	824.2	-0.13	0.266	29.88	30.00	1.03	0.273	/
Body-worn Accessory & Hotspot											
GPRS 4 slots	Front Side	10	128	824.2	-0.02	0.625	29.88	30.00	1.03	0.643	/
	Back Side	10	128	824.2	0.01	0.691	29.88	30.00	1.03	**0.710**	2#
	Left Edge	10	128	824.2	0.01	0.553	29.88	30.00	1.03	0.568	/
	Right Edge	10	128	824.2	-0.03	0.604	29.88	30.00	1.03	0.621	/
	Bottom Edge	10	128	824.2	0.03	0.519	29.88	30.00	1.03	0.534	/
Note: SAR is not required for EGPRS (8PSK) mode because its output power is less than that of GPRS Mode.											

10.2 GSM 1900

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	1 g Scaled SAR (W/Kg)	Meas. No.
Head											
GPRS 4 slots	Left Cheek	0	810	1909.8	-0.04	0.037	27.22	27.50	1.07	0.040	/
	Left Tilt	0	810	1909.8	0.09	0.026	27.22	27.50	1.07	0.028	/
	Right Cheek	0	810	1909.8	0.04	0.060	27.22	27.50	1.07	**0.064**	3#
	Right Tilt	0	810	1909.8	0.15	0.030	27.22	27.50	1.07	0.032	/
Body-worn Accessory & Hotspot											
GPRS 4 slots	Front Side	10	810	1909.8	-0.11	0.315	27.22	27.50	1.07	0.336	/
	Back Side	10	810	1909.8	0.06	0.513	27.22	27.50	1.07	**0.547**	4#
	Left Edge	10	810	1909.8	0.04	0.059	27.22	27.50	1.07	0.062	/
	Right Edge	10	810	1909.8	0.09	0.063	27.22	27.50	1.07	0.067	/
	Bottom Edge	10	810	1909.8	0.16	0.470	27.22	27.50	1.07	0.501	/
Note: SAR is not required for EGPRS (8PSK) mode because its output power is less than that of GPRS Mode.											

10.3WCDMA Band 2

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	1 g Scaled SAR (W/Kg)	Meas. No.
Head											
RMC	Left Cheek	0	9262	1852.4	0.08	0.054	23.06	23.50	1.11	0.060	/
	Left Tilt	0	9262	1852.4	0.11	0.039	23.06	23.50	1.11	0.043	/
	Right Cheek	0	9262	1852.4	0.07	0.083	23.06	23.50	1.11	**0.092**	5#
	Right Tilt	0	9262	1852.4	0.04	0.047	23.06	23.50	1.11	0.052	/
Body-worn Accessory & Hotspot											
RMC	Front Side	10	9262	1852.4	-0.14	0.590	23.06	23.50	1.11	0.653	/
	Back Side	10	9262	1852.4	0.05	0.793	23.06	23.50	1.11	**0.878**	6#
		10	9400	1880.0	0.09	0.677	22.73	23.50	1.19	0.808	/
		10	9538	1907.6	-0.06	0.612	23.01	23.50	1.12	0.685	/
	Left Edge	10	9262	1852.4	0.09	0.072	23.06	23.50	1.11	0.079	/
	Right Edge	10	9262	1852.4	0.16	0.091	23.06	23.50	1.11	0.100	/
	Bottom Edge	10	9262	1852.4	-0.02	0.750	23.06	23.50	1.11	0.830	/
		10	9400	1880.0	0.04	0.714	22.73	23.50	1.19	0.853	/
		10	9538	1907.6	-0.17	0.573	23.01	23.50	1.12	0.641	/

10.4WCDMA Band 4

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	1 g Scaled SAR (W/Kg)	Meas. No.
Head											
RMC	Left Cheek	0	1312	1712.4	0.04	0.101	22.70	23.00	1.07	0.108	/
	Left Tilt	0	1312	1712.4	0.15	0.082	22.70	23.00	1.07	0.088	/
	Right Cheek	0	1312	1712.4	-0.05	0.147	22.70	23.00	1.07	**0.158**	7#
	Right Tilt	0	1312	1712.4	0.09	0.099	22.70	23.00	1.07	0.106	/
Body-worn Accessory & Hotspot											
RMC	Front Side	10	1312	1712.4	0.05	0.975	22.70	23.00	1.07	1.045	/
		10	1412	1732.4	0.09	0.952	22.67	23.00	1.08	1.027	/
		10	1513	1752.6	0.08	0.936	22.40	23.00	1.15	1.075	/
	Back Side	10	1312	1712.4	0.06	1.090	22.70	23.00	1.07	1.168	/
		10	1412	1732.4	0.00	1.070	22.67	23.00	1.08	1.154	/
		10	1513	1752.6	0.03	1.040	22.40	23.00	1.15	**1.194**	8#
	Left Edge	10	1312	1712.4	0.17	0.075	22.70	23.00	1.07	0.080	/
	Right Edge	10	1312	1712.4	0.04	0.163	22.70	23.00	1.07	0.175	/
	Bottom Edge	10	1312	1712.4	-0.11	1.060	22.70	23.00	1.07	1.136	/
		10	1412	1732.4	-0.09	1.050	22.67	23.00	1.08	1.133	/
		10	1513	1752.6	0.05	1.010	22.40	23.00	1.15	1.160	/

10.5WCDMA Band 5

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	1 g Scaled SAR (W/Kg)	Meas. No.
Head											
RMC	Left Cheek	0	4182	836.4	0.08	0.244	22.75	23.00	1.06	0.258	/
	Left Tilt	0	4182	836.4	-0.10	0.137	22.75	23.00	1.06	0.145	/
	Right Cheek	0	4182	836.4	-0.01	0.252	22.75	23.00	1.06	**0.267**	9#
	Right Tilt	0	4182	836.4	0.04	0.138	22.75	23.00	1.06	0.146	/
Body-worn Accessory & Hotspot											
RMC	Front Side	10	4182	836.4	-0.03	0.278	22.75	23.00	1.06	0.294	/
	Back Side	10	4182	836.4	0.02	0.293	22.75	23.00	1.06	**0.310**	10#
	Left Edge	10	4182	836.4	-0.02	0.285	22.75	23.00	1.06	0.302	/
	Right Edge	10	4182	836.4	-0.06	0.279	22.75	23.00	1.06	0.296	/
	Bottom Edge	10	4182	836.4	0.01	0.257	22.75	23.00	1.06	0.272	/

10.6 LTE Band 2 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	18700	1860	1	High	0.07	0.050	23.08	23.50	1.102	0.055	/
			18700	1860	50	High	0.04	0.038	21.94	22.00	1.014	0.038	/
	Left Tilt	0	18700	1860	1	High	-0.05	0.035	23.08	23.50	1.102	0.038	/
			18700	1860	50	High	0.11	0.025	21.94	22.00	1.014	0.025	/
	Right Cheek	0	18700	1860	1	High	0.02	0.088	23.08	23.50	1.102	**0.097**	11#
			18700	1860	50	High	0.09	0.068	21.94	22.00	1.014	0.069	/
	Right Tilt	0	18700	1860	1	High	-0.10	0.043	23.08	23.50	1.102	0.048	/
			18700	1860	50	High	0.04	0.036	21.94	22.00	1.014	0.036	/
Body-worn Accessory& Hotspot													
QPSK	Front Side	10	18700	1860	1	High	0.13	0.552	23.08	23.50	1.102	0.608	/
			18700	1860	50	High	0.04	0.434	21.94	22.00	1.014	0.440	/
	Back Side	10	18700	1860	1	High	-0.03	0.718	23.08	23.50	1.102	**0.791**	12#
			18700	1860	50	High	-0.14	0.569	21.94	22.00	1.014	0.577	/
	Left Edge	10	18700	1860	1	High	-0.06	0.071	23.08	23.50	1.102	0.079	/
			18700	1860	50	High	0.08	0.054	21.94	22.00	1.014	0.055	/
	Right Edge	10	18700	1860	1	High	0.09	0.078	23.08	23.50	1.102	0.085	/
			18700	1860	50	High	0.02	0.038	21.94	22.00	1.014	0.039	/
	Bottom Edge	10	18700	1860	1	High	0.06	0.693	23.08	23.50	1.102	0.763	/
			18700	1860	50	High	-0.02	0.372	21.94	22.00	1.014	0.377	/

10.7 LTE Band 4 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	20175	1732.5	1	Low	-0.05	0.120	22.62	23.00	1.091	0.131	/
			20050	1720	50	High	0.04	0.090	21.40	21.50	1.023	0.092	/
	Left Tilt	0	20175	1732.5	1	Low	0.11	0.089	22.62	23.00	1.091	0.097	/
			20050	1720	50	High	0.17	0.067	21.40	21.50	1.023	0.069	/
	Right Cheek	0	20175	1732.5	1	Low	-0.13	0.136	22.62	23.00	1.091	0.148	13#
			20050	1720	50	High	0.09	0.103	21.40	21.50	1.023	0.105	/
	Right Tilt	0	20175	1732.5	1	Low	0.14	0.100	22.62	23.00	1.091	0.109	/
			20050	1720	50	High	0.05	0.072	21.40	21.50	1.023	0.074	/
Body-worn Accessory& Hotspot													
QPSK	Front Side	10	20175	1732.5	1	Low	0.06	0.878	22.62	23.00	1.091	0.958	/
			20050	1720	1	High	0.18	0.852	22.51	23.00	1.119	0.954	/
			20300	1745	1	Low	0.16	0.868	22.51	23.00	1.119	0.972	/
			20050	1720	50	High	-0.07	0.700	21.40	21.50	1.023	0.716	/
			20175	1732.5	100	Low	0.06	0.675	21.39	21.50	1.026	0.692	/
	Back Side	10	20175	1732.5	1	Low	0.03	1.050	22.62	23.00	1.091	1.146	/
			20050	1720	1	High	-0.17	0.944	22.51	23.00	1.119	1.057	/
			20300	1745	1	Low	0.08	1.050	22.51	23.00	1.119	1.175	14#
			20050	1720	50	High	0.04	0.799	21.40	21.50	1.023	0.818	/
			20175	1732.5	50	Low	0.19	0.805	21.39	21.50	1.026	0.826	/
			20300	1745	50	Low	0.15	0.803	21.34	21.50	1.038	0.833	/
			20175	1732.5	100	Low	0.10	0.800	21.39	21.50	1.026	0.821	/
	Left Edge	10	20175	1732.5	1	Low	0.07	0.067	22.62	23.00	1.091	0.073	/
			20050	1720	50	High	-0.05	0.050	21.40	21.50	1.023	0.051	/
	Right Edge	10	20175	1732.5	1	Low	0.04	0.150	22.62	23.00	1.091	0.164	/
			20050	1720	50	High	0.07	0.113	21.40	21.50	1.023	0.116	/
	Bottom Edge	10	20175	1732.5	1	Low	-0.12	1.030	22.62	23.00	1.091	1.124	/
			20050	1720	1	High	-0.04	0.91	22.51	23.00	1.119	1.016	/
			20300	1745	1	Low	-0.06	1.02	22.51	23.00	1.119	1.142	/
			20050	1720	50	High	0.13	0.77	21.40	21.50	1.023	0.788	/
			20175	1732.5	100	Low	0.04	0.772	21.39	21.50	1.026	0.792	/

10.8LTE Band 7 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	20850	2510	1	High	0.03	0.038	21.97	22.00	1.007	0.038	/
			20850	2510	50	High	0.09	0.030	20.80	21.00	1.047	0.032	/
	Left Tilt	0	20850	2510	1	High	0.01	0.024	21.97	22.00	1.007	0.024	/
			20850	2510	50	High	0.06	0.019	20.80	21.00	1.047	0.020	/
	Right Cheek	0	20850	2510	1	High	-0.01	0.084	21.97	22.00	1.007	0.085	15#
			20850	2510	50	High	-0.06	0.045	20.80	21.00	1.047	0.047	/
	Right Tilt	0	20850	2510	1	High	-0.07	0.049	21.97	22.00	1.007	0.049	/
			20850	2510	50	High	0.03	0.038	20.80	21.00	1.047	0.040	/
Body-worn Accessory& Hotspot													
QPSK	Front Side	10	20850	2510	1	High	0.12	0.364	21.97	22.00	1.007	0.367	/
			20850	2510	50	High	-0.01	0.280	20.80	21.00	1.047	0.293	/
	Back Side	10	20850	2510	1	High	-0.07	0.474	21.97	22.00	1.007	0.477	/
			20850	2510	50	High	0.08	0.422	20.80	21.00	1.047	0.442	/
	Left Edge	10	20850	2510	1	High	0.01	0.086	21.97	22.00	1.007	0.086	/
			20850	2510	50	High	0.05	0.065	20.80	21.00	1.047	0.068	/
	Right Edge	10	20850	2510	1	High	-0.06	0.082	21.97	22.00	1.007	0.082	/
			20850	2510	50	High	0.01	0.064	20.80	21.00	1.047	0.067	/
	Bottom Edge	10	20850	2510	1	High	-0.04	0.629	21.97	22.00	1.007	0.633	16#
			20850	2510	50	High	-0.13	0.492	20.80	21.00	1.047	0.515	/

10.9WIFI 2.4GHz

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													
802.11 b	Left Cheek	0	11	2462	-0.14	0.198	14.63	15.00	1.089	99.5	1.005	0.216	/
	Left Tilt	0	11	2462	0.06	0.157	14.63	15.00	1.089	99.5	1.005	0.171	/
	Right Cheek	0	11	2462	0.16	0.868	14.63	15.00	1.089	99.5	1.005	0.945	/
		0	1	2412	-0.01	0.923	14.47	15.00	1.130	99.5	1.005	**1.048**	17#
		0	6	2437	0.10	0.822	14.58	15.00	1.102	99.5	1.005	0.905	/
	Right Tilt	0	11	2462	-0.02	0.625	14.63	15.00	1.089	99.5	1.005	0.681	/
Body-worn Accessory& Hotspot													
802.11 b	Front Side	10	11	2462	0.14	0.116	14.63	15.00	1.089	99.5	1.005	0.126	/
	Back Side	10	11	2462	0.06	0.134	14.63	15.00	1.089	99.5	1.005	**0.146**	18#
	Right Edge	10	11	2462	0.10	0.119	14.63	15.00	1.089	99.5	1.005	0.130	/
	Top Edge	10	11	2462	-0.12	0.051	14.63	15.00	1.089	99.5	1.005	0.055	/

10.10 WIFI 5GHz

Fre. Band	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (%)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head														
5.2G	802.11 a	Left Cheek	0	44	5220	-0.05	0.328	14.80	15.00	1.047	95.0	1.053	0.343	/
		Left Tilt	0	44	5220	0.09	0.371	14.80	15.00	1.047	95.0	1.053	**0.388**	19#
		Right Cheek	0	44	5220	0.07	0.150	14.80	15.00	1.047	95.0	1.053	0.157	/
		Right Tilt	0	44	5220	0.14	0.174	14.80	15.00	1.047	95.0	1.053	0.182	/
5.8G	802.11 a	Left Cheek	0	165	5825	0.04	0.359	14.35	14.50	1.035	95.0	1.053	0.372	/
		Left Tilt	0	165	5825	0.01	0.464	14.35	14.50	1.035	95.0	1.053	**0.480**	20#
		Right Cheek	0	165	5825	0.05	0.241	14.35	14.50	1.035	95.0	1.053	0.249	/
		Right Tilt	0	165	5825	-0.16	0.281	14.35	14.50	1.035	95.0	1.053	0.291	/
Body-worn Accessory& Hotspot														
5.2G	802.11 a	Front Side	10	44	5220	-0.02	0.032	14.80	15.00	1.047	95.0	1.053	0.033	/
		Back Side	10	44	5220	0.00	0.023	14.80	15.00	1.047	95.0	1.053	0.024	/
		Left Edge	10	44	5220	0.17	0.101	14.80	15.00	1.047	95.0	1.053	**0.106**	21#
		Top Edge	10	44	5220	0.06	0.026	14.80	15.00	1.047	95.0	1.053	0.027	/
5.8G	802.11 a	Front Side	10	165	5825	0.01	0.042	14.35	14.50	1.035	95.0	1.053	0.044	/
		Back Side	10	165	5825	-0.09	0.050	14.35	14.50	1.035	95.0	1.053	0.052	/
		Left Edge	10	165	5825	0.12	0.265	14.35	14.50	1.035	95.0	1.053	**0.274**	22#
		Top Edge	10	165	5825	0.04	0.043	14.35	14.50	1.035	95.0	1.053	0.044	/

11 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Frequency Band (MHz)	Wireless Band	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Repeated Measured SAR (W/kg)	Largest to Smallest SAR Radio	Meas. No.
1750	WCDMA Band 4	Body	Back Side	1.090	Yes	1.050	1.04	23#
	LTE Band 4	Body	Back Side	1.050	Yes	1.020	1.03	24#
1900	WCDMA Band 2	Body	Back Side	0.793	Yes	0.787	1.01	25#
2400	WIFI 802.11 b	Head	Left Cheek	0.923	Yes	0.914	1.01	26#
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.	Mode	2.4G WLAN & 5G WLAN & 2.4G Bluetooth		
		Head	Body-worn	Hotspot
1	GSM	+ 2.4G WLAN	+ 2.4G WLAN	+ 2.4G WLAN
		+ 5G WLAN	+ 5G WLAN	+ 5G WLAN
		--	+ Bluetooth	--
3	WCDMA RMC	+ 2.4G WLAN	+ 2.4G WLAN	+ 2.4G WLAN
		+ 5G WLAN	+ 5G WLAN	+ 5G WLAN
		--	+ Bluetooth	--
4	LTE	+ 2.4G WLAN	+ 2.4G WLAN	+ 2.4G WLAN
		+ 5G WLAN	+ 5G WLAN	+ 5G WLAN
		--	+ Bluetooth	--

Note:

1. This device supported VoIP in GPRS, EGPRS, WCDMA, LTE (e.g. 3rd party VoIP).
2. 2G&3G&4G share the same antenna and can't transmit simultaneously.
3. The Bluetooth and 2.4G WLAN share the same antenna, can't transmit simultaneously.
4. The 2.4G WLAN and 5G WLAN can't transmit at the same time.
5. Bluetooth and 5G WLAN can't transmit at the same time.
6. The 2.4G WLAN, Bluetooth or 5G WLAN can transmit simultaneously with each WWAN.
7. The 2.4G WLAN and 5G WLAN support hotspot mode.

12.2 Estimated SAR Calculation

According to KDB 447498 D01, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR was estimated according to following formula to result in substantially conservative SAR values of <= 0.4 W/kg to determine simultaneous transmission SAR test exclusion.

$$\text{Estimated SAR} = \frac{Max.Tune\ Up\ Power(mw)}{Min\ Test\ Separation\ Distance} * \frac{\sqrt{f_{GHz}}}{x}$$ (where x = 7.5 for 1-g SAR)

If the minimum test separation distance is < 5 mm, a distance of 5 mm is used for estimated SAR calculation. When the test separation distance is > 50 mm, the 0.4 W/kg is used for SAR-1g.

Band	Mode	Position	Antenna To user (mm)	SAR Testing	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Frequency (GHz)	Calculation Distance/Gap (mm)	Estimated SAR (W/kg)
Bluetooth	GFSK	Front side	10	NO	5.00	3.16	2.441	10	0.066
		Back Side	10	NO	5.00	3.16	2.441	10	0.066
		Right Edge	10	NO	5.00	3.16	2.441	10	0.066
		Top Edge	10	NO	5.00	3.16	2.441	10	0.066

12.3 Sum SAR of Simultaneous Transmission

12.3.1 Sum Head SAR of Simultaneous Transmission

Simultaneous Mode	Mode	Max. 1g SAR (W/kg)	1g Sum SAR (W/kg)	SPLSR (Yes/No)
GSM + 2.4G WLAN	GSM	0.538	**1.586**	No
	2.4G WLAN	1.048		
GSM + 5G WLAN	GSM	0.538	1.018	No
	5G WLAN	0.480		
WCDMA RMC +2.4G WLAN	WCDMA RMC	0.267	1.315	No
	2.4G WLAN	1.048		
WCDMA RMC +5G WLAN	WCDMA RMC	0.267	0.747	No
	5G WLAN	0.480		
LTE QPSK + 2.4G WLAN	LTE QPSK	0.148	1.196	No
	2.4G WLAN	1.048		
LTE QPSK + 5G WLAN	LTE QPSK	0.148	0.628	No
	5G WLAN	0.480		

12.3.2 Sum Body-worn SAR of Simultaneous Transmission

Simultaneous Mode	Mode	Max. 1g SAR (W/kg)	1g Sum SAR (W/kg)	SPLSR (Yes/No)
GSM +Bluetooth	GSM	0.710	0.776	No
	Bluetooth	0.066		
GSM + 2.4G WLAN	GSM	0.710	0.856	No
	2.4G WLAN	0.146		
GSM + 5G WLAN	GSM	0.710	0.762	No
	5G WLAN	0.052		
WCDMA RMC +Bluetooth	WCDMA RMC	1.194	1.260	No
	Bluetooth	0.066		
WCDMA RMC +2.4G WLAN	WCDMA RMC	1.194	**1.340**	No
	2.4G WLAN	0.146		
WCDMA RMC + 5G WLAN	WCDMA RMC	1.194	1.246	No
	5G WLAN	0.052		
LTE QPSK + Bluetooth	LTE QPSK	1.175	1.241	No
	Bluetooth	0.066		
LTE QPSK + 2.4G WLAN	LTE QPSK	1.175	1.321	No
	2.4G WLAN	0.146		
LTE QPSK + 5G WLAN	LTE QPSK	1.175	1.227	No
	5G WLAN	0.052		

12.3.3 Sum Hotspot mode SAR of Simultaneous Transmission

Simultaneous Mode	Mode	Max. 1g SAR (W/kg)	1g Sum SAR (W/kg)	SPLSR (Yes/No)
GSM DATA + 2.4G WLAN	GSM DATA	0.710	0.856	No
	2.4G WLAN	0.146		
GSM DATA + 5G WLAN	GSM DATA	0.710	0.984	No
	5G WLAN	0.274		
WCDMA RMC +2.4G WLAN	WCDMA RMC	1.194	1.340	No
	2.4G WLAN	0.146		
WCDMA RMC +5G WLAN	WCDMA RMC	1.194	**1.468**	No
	5G WLAN	0.274		
LTE QPSK + 2.4G WLAN	LTE QPSK	1.175	1.321	No
	2.4G WLAN	0.146		
LTE QPSK + 5G WLAN	LTE QPSK	1.175	1.449	No
	5G WLAN	0.274		

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2014/11/26	2017/11/25
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2014/11/28	2017/11/27
1900MHz Validation Dipole	Speag	D1900V2	SN: 5d193	2014/11/28	2017/11/27
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2014/11/27	2017/11/26
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2014/11/27	2017/11/26
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2014/12/04	2017/12/03
E-Field Probe	Speag	EX3DV4	SN: 7340	2016/12/27	2017/12/26
Data acquisition electronics	Speag	DAE4	SN: 1454	2016/12/19	2017/12/18
Signal Generator	R&S	SMBV100A	260592	2017/06/12	2018/06/11
Power Meter	Agilent	E4419B	GB40201833	2017/11/02	2018/11/01
Power Sensor	Agilent	E9300A	MY41498012	2017/11/02	2018/11/01
Power Sensor	Agilent	E9300A	MY41499891	2017/11/02	2018/11/01
Power Amplifier	SATIMO	6552B	22374	2017/06/12	2018/06/11
Wireless Communication Test Set	Agilent	8960-E5515C	MY50260493	2017/11/02	2018/11/01
Wireless Communication Test Set	R&S	CMW 500	151885	2017/06/12	2018/06/11
Network Analyzer	Agilent	5071B	MY42404001	2017/06/12	2018/06/11
Thermometer	Elitech	RC-4HC	N/A	2017/02/18	2018/02/17
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
Power Amplifier	SATIMO	6552B	22374	N/A	N/A
Dielectric Probe Kit	SATIMO	SCLMP	SN 25/13 OCPG56	N/A	N/A

Note:

Per KDB 865664 D01, Dipole SAR Validation Verification, BALUN LAB has adopted 3 years calibration intervals. 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.

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 (%)
2017.11.06	Head	835	21.2	0.90	41.44	0.90	41.50	0.00	-0.14
2017.11.08	Body	835	21.3	0.98	55.59	0.97	55.20	1.03	0.71
2017.11.10	Head	1750	21.3	1.38	40.11	1.37	40.10	0.73	0.02
2017.11.13	Body	1750	21.0	1.48	53.51	1.49	53.40	-0.67	0.21
2017.11.04	Head	1900	21.3	1.43	40.09	1.40	40.00	2.14	0.23
2017.11.07	Body	1900	21.3	1.55	53.41	1.52	53.30	1.97	0.21
2017.11.02	Head	2450	21.2	1.83	39.34	1.80	39.20	1.67	0.36
2017.11.01	Body	2450	21.2	1.93	52.49	1.95	52.70	-1.03	-0.40
2017.11.02	Head	2600	21.2	1.95	38.27	1.96	39.00	-0.51	-1.87
2017.11.01	Body	2600	21.2	2.17	52.52	2.16	52.50	0.46	0.04
2017.10.31	Head	5200	21.1	4.62	36.04	4.66	36.00	-0.86	0.11
2017.11.03	Body	5200	21.1	5.28	49.22	5.30	49.00	-0.38	0.45
2017.10.31	Head	5800	21.1	5.34	34.82	5.27	35.30	1.33	-1.36
2017.11.03	Body	5800	21.1	6.05	48.07	6.00	48.20	0.83	-0.27
Note: The tolerance limit of Conductivity and Permittivity is± 5%.									

ANNEX B SYSTEM CHECK RESULT

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

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 (%)
2017.11.06	Head	835	100	0.910	9.10	9.15	-0.55	9.56	-4.81
2017.11.08	Body	835	100	0.898	8.98	9.17	-2.07	9.56	-6.07
2017.11.10	Head	1750	100	3.61	36.1	36.40	-0.82	36.40	-0.82
2017.11.13	Body	1750	100	3.63	36.3	37.30	-2.68	36.40	-0.27
2017.11.04	Head	1900	100	4.03	40.3	40.60	-0.74	39.70	1.51
2017.11.07	Body	1900	100	4.07	40.7	40.30	0.99	39.70	2.52
2017.11.02	Head	2450	100	5.06	50.6	52.30	-3.25	52.40	-3.44
2017.11.01	Body	2450	100	5.28	52.8	50.60	4.35	52.40	0.76
2017.11.02	Head	2600	100	5.77	57.7	57.30	0.70	55.30	4.34
2017.11.01	Body	2600	100	5.83	58.3	56.90	2.46	55.30	5.42
2017.10.31	Head	5200	100	7.54	75.4	77.30	-2.46	76.50	-1.44
2017.11.03	Body	5200	100	7.85	78.5	75.30	4.25	76.50	2.61
2017.10.31	Head	5800	100	8.02	80.2	77.50	3.48	78.00	2.82
2017.11.03	Body	5800	100	7.69	76.9	74.70	2.95	78.00	-1.41
Note: The tolerance limit of System validation ±10%.									

System Performance Check Data (835MHz Head)

Date: 2017.11.06
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.901 S/m; ε_r = 41.435; ρ = 1000 kg/m^3
Phantom section: Flat Section

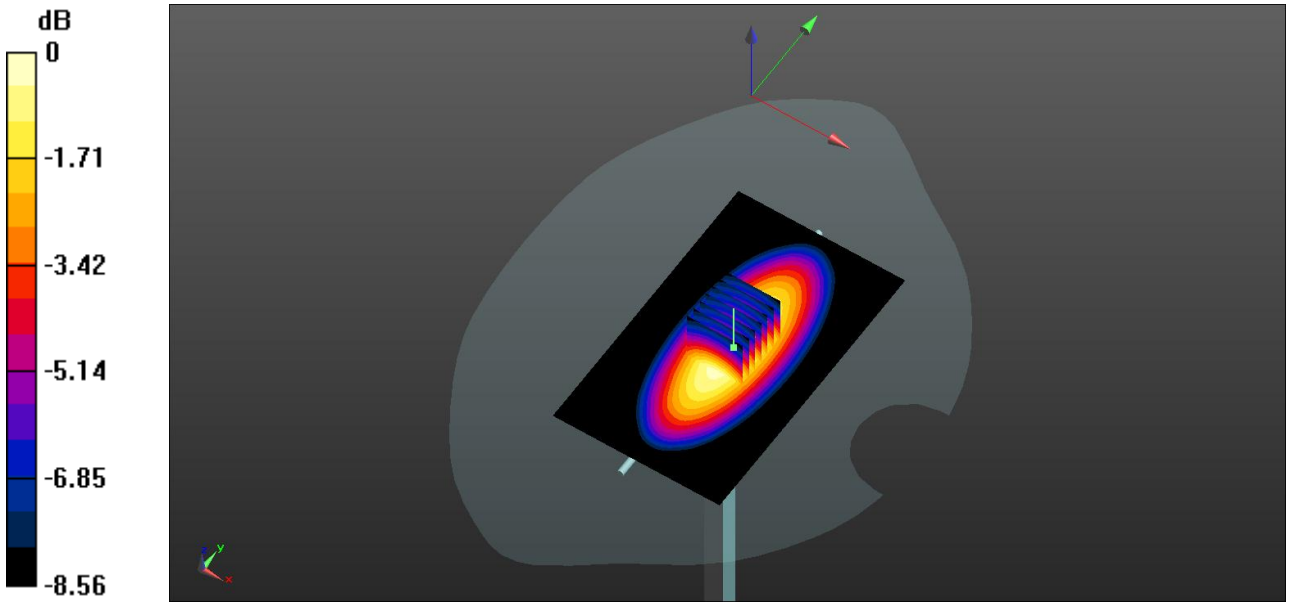
Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(9.45, 9.45, 9.45); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 835 Head 100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.977 W/kg

CW 835 Head 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.04 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.26 W/kg
SAR(1 g) = 0.910 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: 2017.11.08
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.975 S/m; ε_r = 55.594; ρ = 1000 kg/m^3
Phantom section: Flat Section

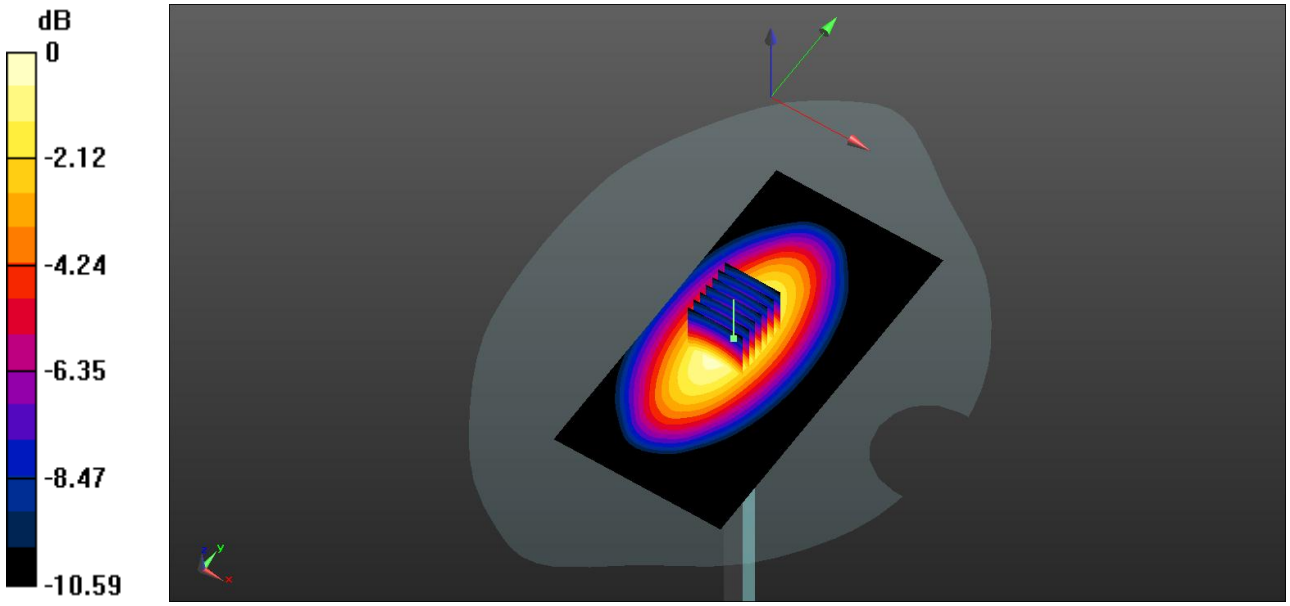
Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(9.91, 9.91, 9.91); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

CW 835 Body 100mW/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.958 W/kg

CW 835 Body 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 32.61 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.37 W/kg
SAR(1 g) = 0.898 W/kg; SAR(10 g) = 0.585 W/kg
Maximum value of SAR (measured) = 0.967 W/kg



0 dB = 0.967 W/kg

System Performance Check Data (1750MHz Head)

Date: 2017.11.10
Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.377 S/m; ε_r = 40.113; ρ = 1000 kg/m^3
Phantom section: Flat Section

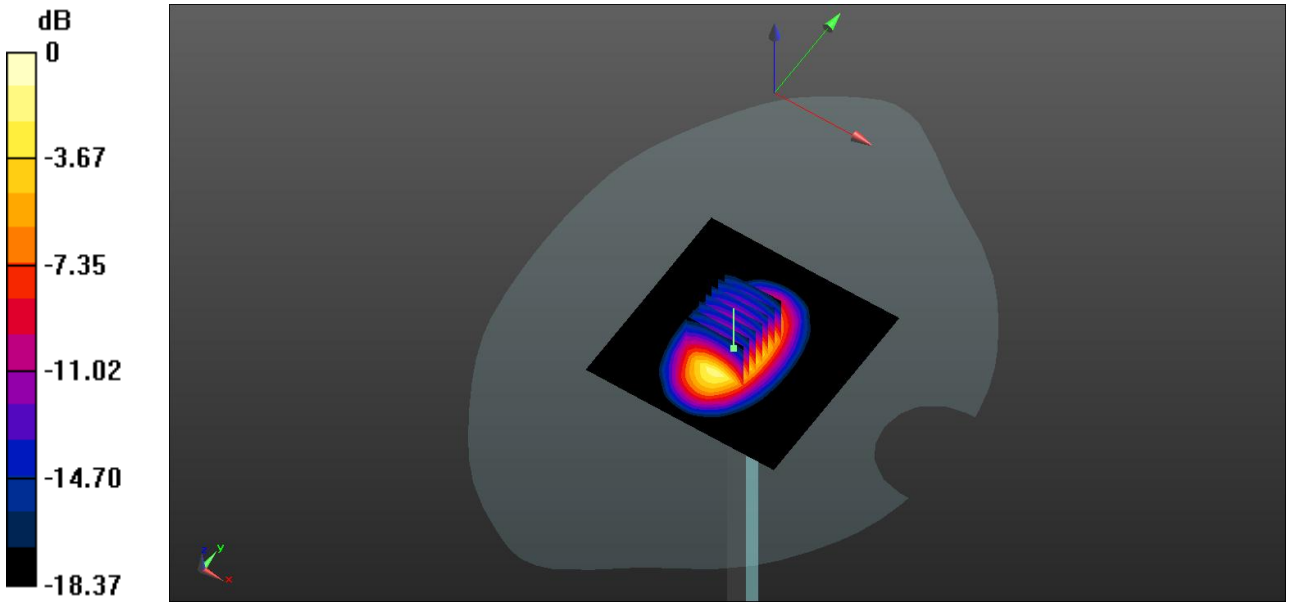
Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.46, 8.46, 8.46); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW1750 Head 100mw/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 4.04 W/kg

CW1750 Head 100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.76 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 7.02 W/kg
SAR(1 g) = 3.61 W/kg; SAR(10 g) = 1.85 W/kg
Maximum value of SAR (measured) = 4.05 W/kg



0 dB = 4.05 W/kg

System Performance Check Data (1750MHz Body)

Date: 2017.11.13
Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1750 MHz; σ = 1.476 S/m; ε_r = 53.511; ρ = 1000 kg/m^3
Phantom section: Flat Section

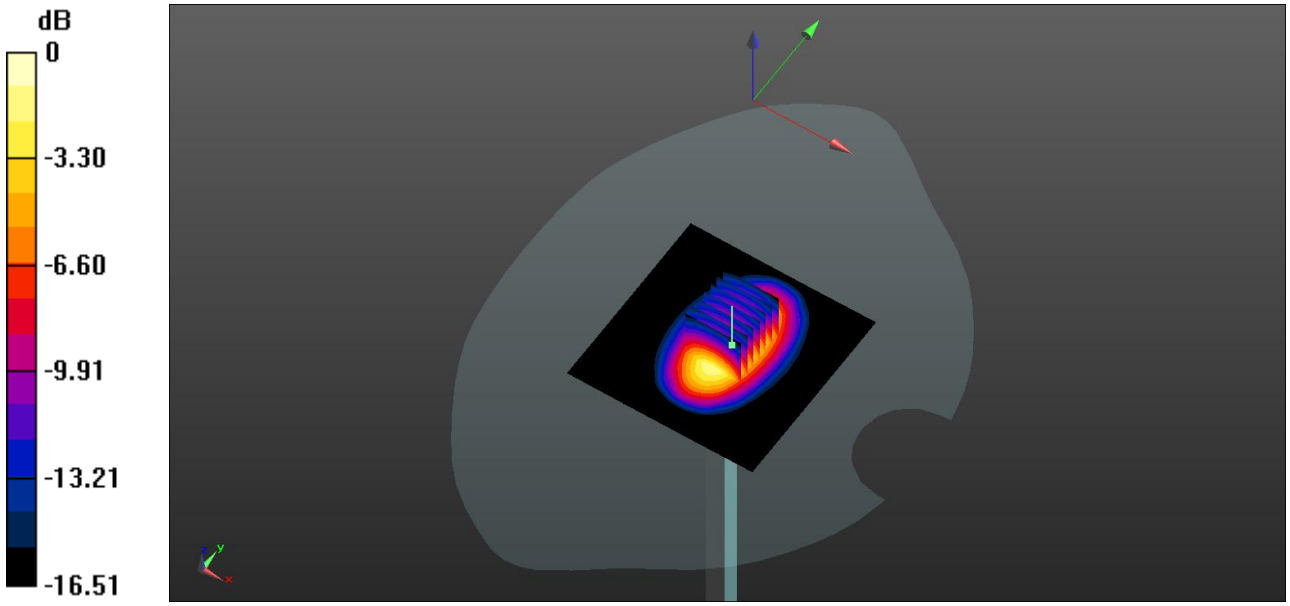
Ambient Temperature:22.5 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.25, 8.25, 8.25); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW1750 Body 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 4.15 W/kg

CW1750 Body 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.42 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 6.70 W/kg
SAR(1 g) = 3.63 W/kg; SAR(10 g) = 1.91 W/kg
Maximum value of SAR (measured) = 4.10 W/kg



0 dB = 4.10 W/kg

System Performance Check Data (1900MHz Head)

Date: 2017.11.04
Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.427 S/m; ε_r = 40.086; ρ = 1000 kg/m^3
Phantom section: Flat Section

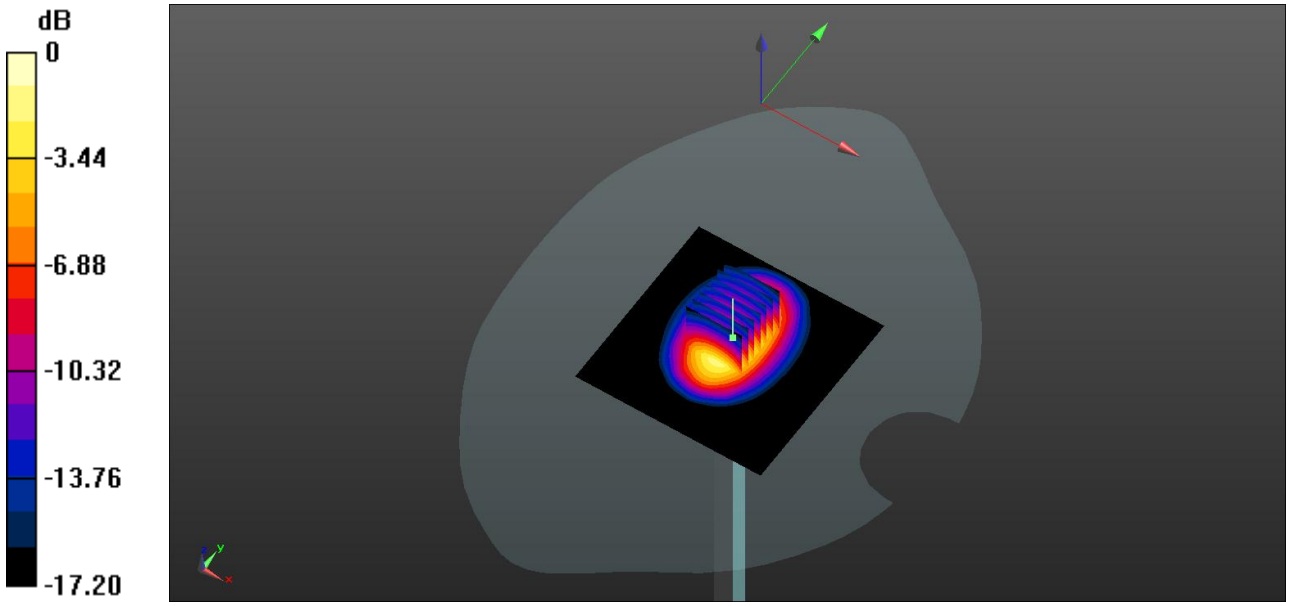
Ambient Temperature:22.7 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.21, 8.21, 8.21); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW1900 Head 100mw/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 4.54 W/kg

CW1900 Head 100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.10 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 7.51 W/kg
SAR(1 g) = 4.03 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 4.54 W/kg



0 dB = 4.54 W/kg

System Performance Check Data (1900MHz Body)

Date: 2017.11.07
Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.546 S/m; ε_r = 53.413; ρ = 1000 kg/m^3
Phantom section: Flat Section

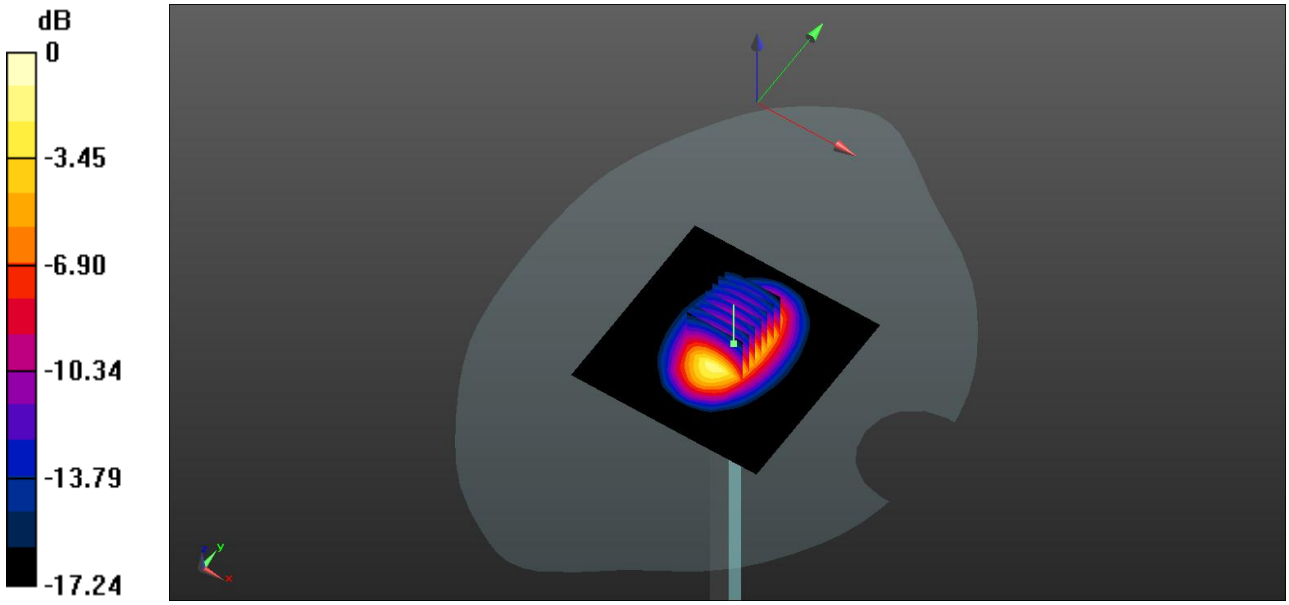
Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.96, 7.96, 7.96); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW1900 Body 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 4.68 W/kg

CW1900 Body 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.54 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 7.50 W/kg
SAR(1 g) = 4.07 W/kg; SAR(10 g) = 2.11 W/kg
Maximum value of SAR (measured) = 4.64 W/kg



0 dB = 4.64 W/kg

System Performance Check Data (2450MHz Head)

Date: 2017.11.02
Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.826 S/m; ε_r = 39.335; ρ = 1000 kg/m^3
Phantom section: Flat Section

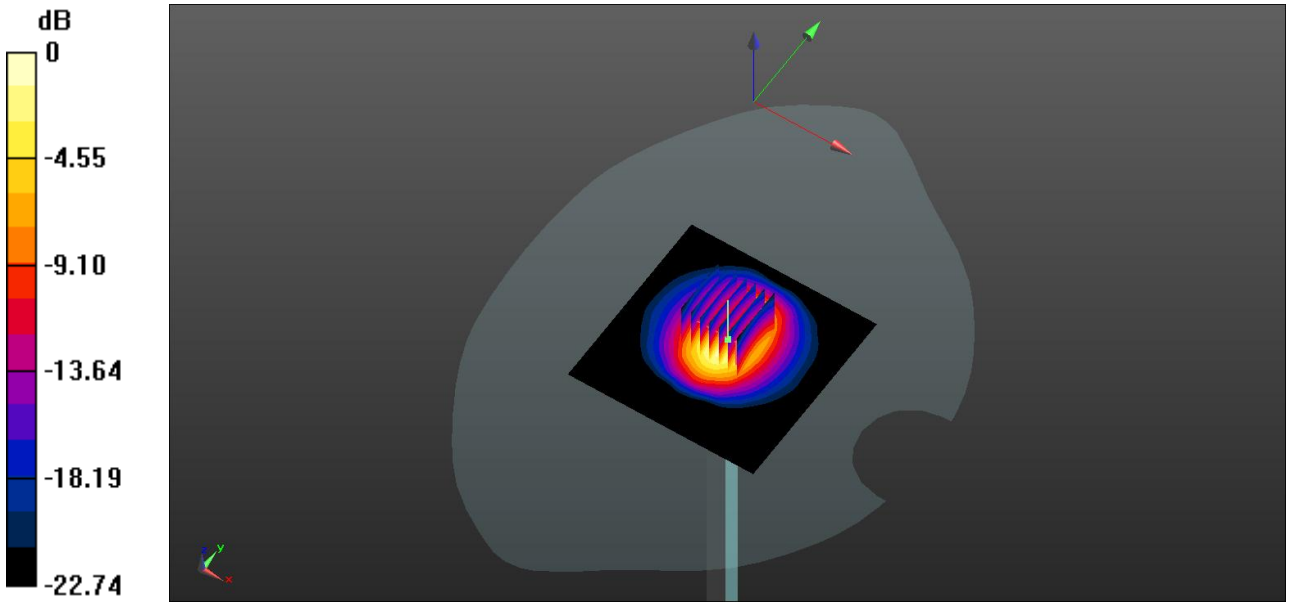
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.44, 7.44, 7.44); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW2450 Head 100mw/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 5.88 W/kg

CW2450 Head 100mw/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.58 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 10.7 W/kg
SAR(1 g) = 5.06 W/kg; SAR(10 g) = 2.32 W/kg
Maximum value of SAR (measured) = 5.77 W/kg



0 dB = 5.77 W/kg

System Performance Check Data (2450MHz Body)

Date: 2017.11.01
Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.934 S/m; ε_r = 52.489; ρ = 1000 kg/m^3
Phantom section: Flat Section

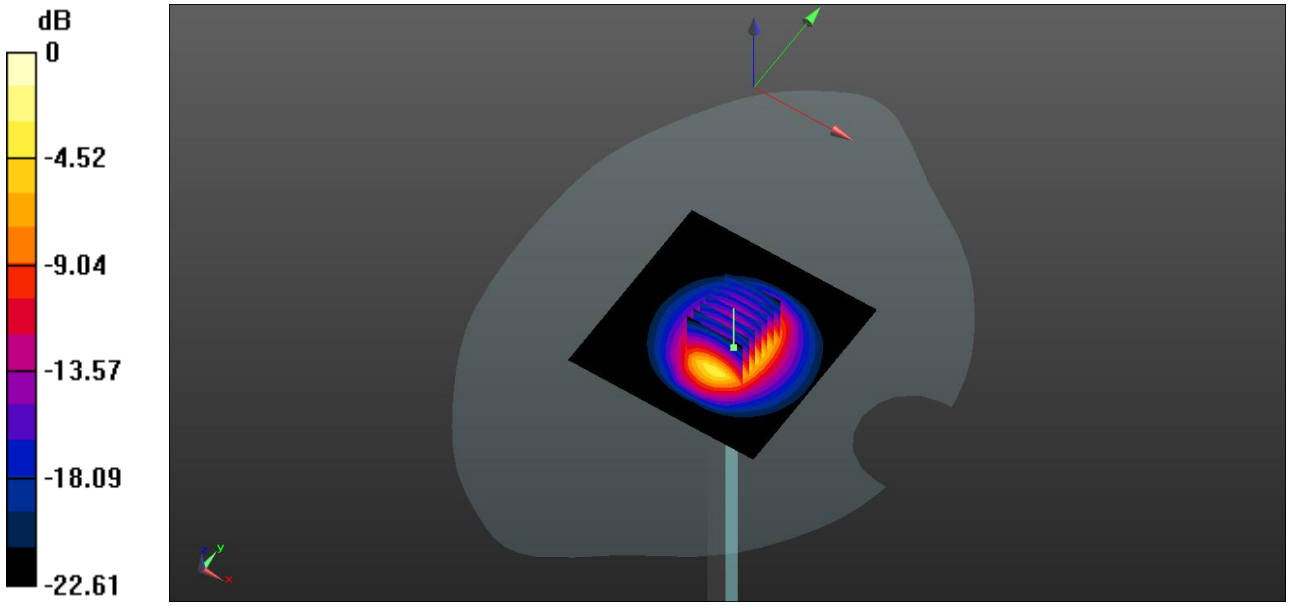
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.71, 7.71, 7.71); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW2450 Body 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.14 W/kg

CW2450 Body 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 42.77 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 11.2 W/kg
SAR(1 g) = 5.28 W/kg; SAR(10 g) = 2.39 W/kg
Maximum value of SAR (measured) = 6.07 W/kg



0 dB = 6.07 W/kg

System Performance Check Data (2600MHz Head)

Date: 2017.11.02
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 2600 MHz; σ = 1.951 S/m; ε_r = 38.268; ρ = 1000 kg/m^3
Phantom section: Flat Section

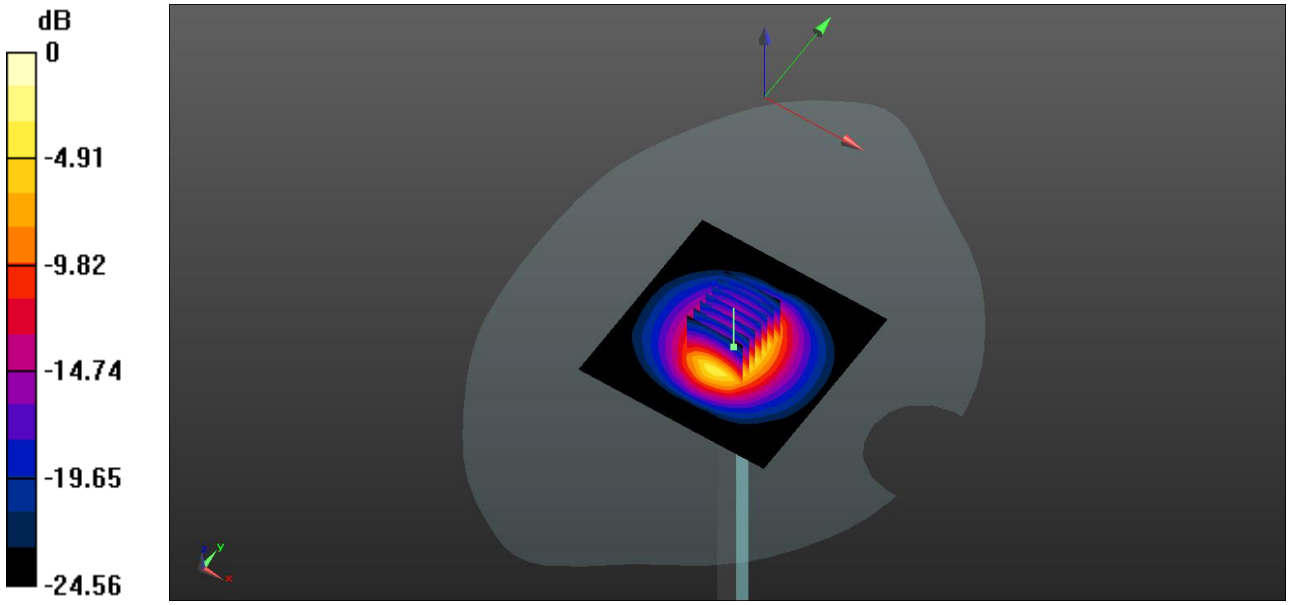
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.31, 7.31, 7.31); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW2600 Head 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.61 W/kg

CW2600 Head 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.56 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 13.1 W/kg
SAR(1 g) = 5.77 W/kg; SAR(10 g) = 2.53 W/kg
Maximum value of SAR (measured) = 6.62 W/kg



0 dB = 6.62 W/kg

System Performance Check Data (2600MHz Body)

Date: 2017.11.01
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.171 S/m; ε_r = 52.524; ρ = 1000 kg/m^3
Phantom section: Flat Section

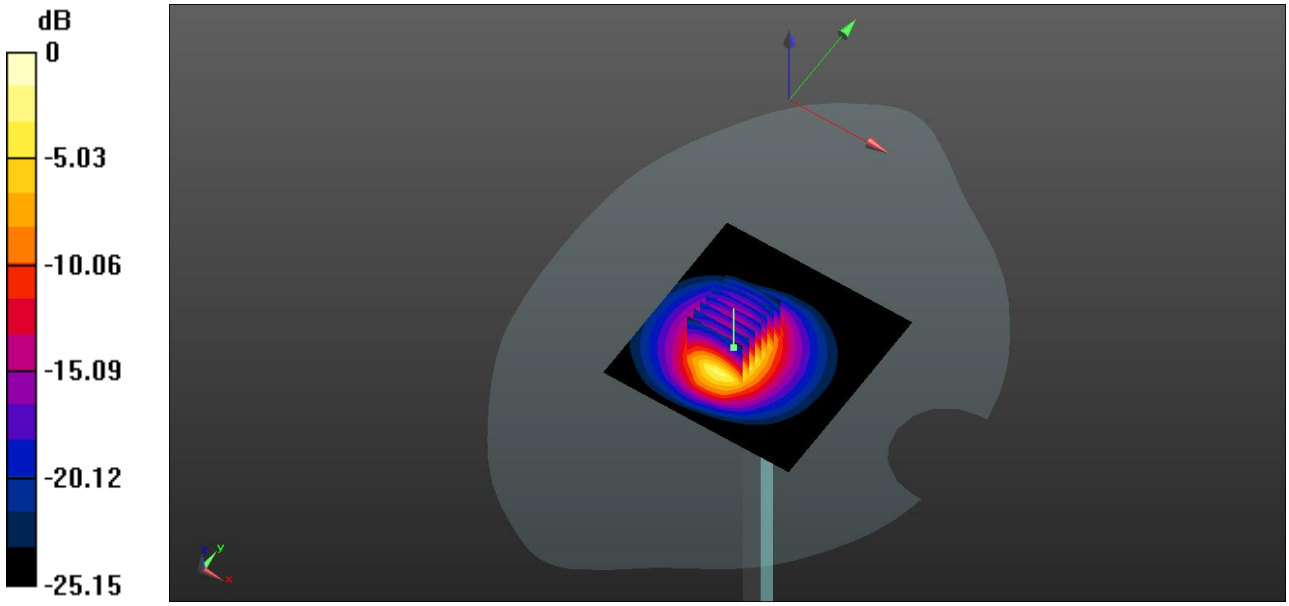
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.48, 7.48, 7.48); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW2600 Body 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.80 W/kg

CW2600 Body 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.29 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 12.9 W/kg
SAR(1 g) = 5.83 W/kg; SAR(10 g) = 2.55 W/kg
Maximum value of SAR (measured) = 6.68 W/kg



0 dB = 6.68 W/kg

System Performance Check Data (5200MHz Head)

Date: 2017.10.31
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; σ = 4.624 S/m; ε_r = 36.042; ρ = 1000 kg/m^3
Phantom section: Flat Section

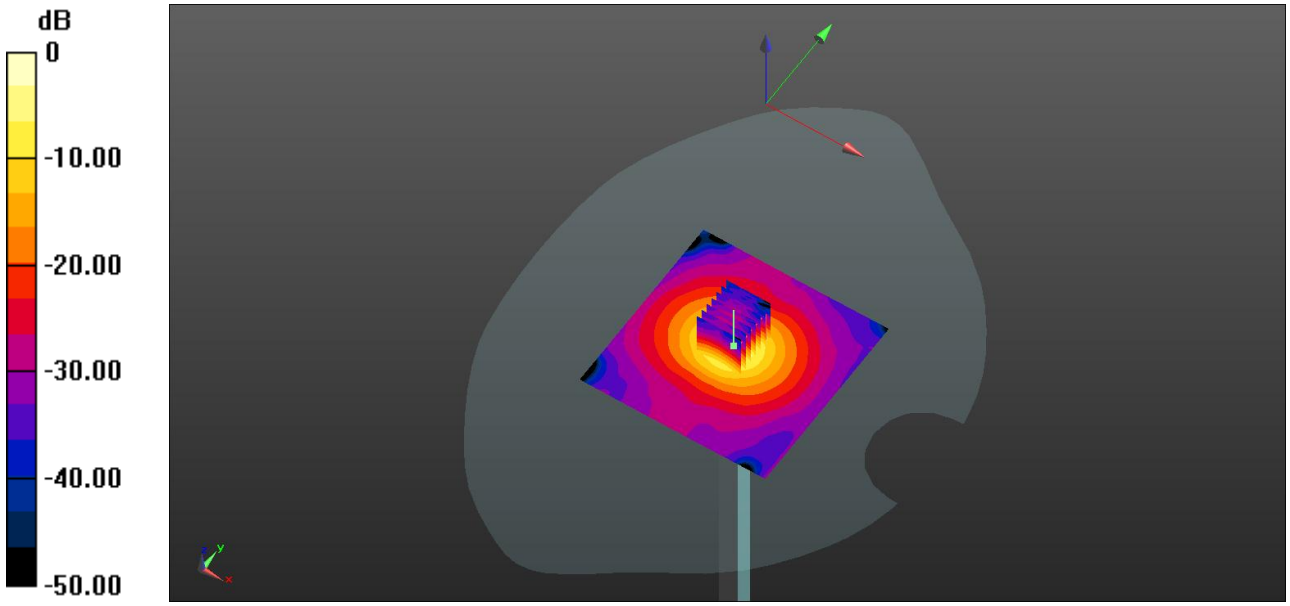
Ambient Temperature:22.5 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(5.31, 5.31, 5.31); Calibrated: 2016.12.27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW5200 Head 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 14.2 W/kg

CW5200 Head 100mW/Zoom Scan (7x7x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 37.76 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 31.9 W/kg
SAR(1 g) = 7.54 W/kg; SAR(10 g) = 2.14 W/kg
Maximum value of SAR (measured) = 19.0 W/kg



0 dB = 19.0 W/kg

System Performance Check Data (5200MHz Body)

Date: 2017.11.03
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; σ = 5.284 S/m; ε_r = 49.217; ρ = 1000 kg/m^3
Phantom section: Flat Section

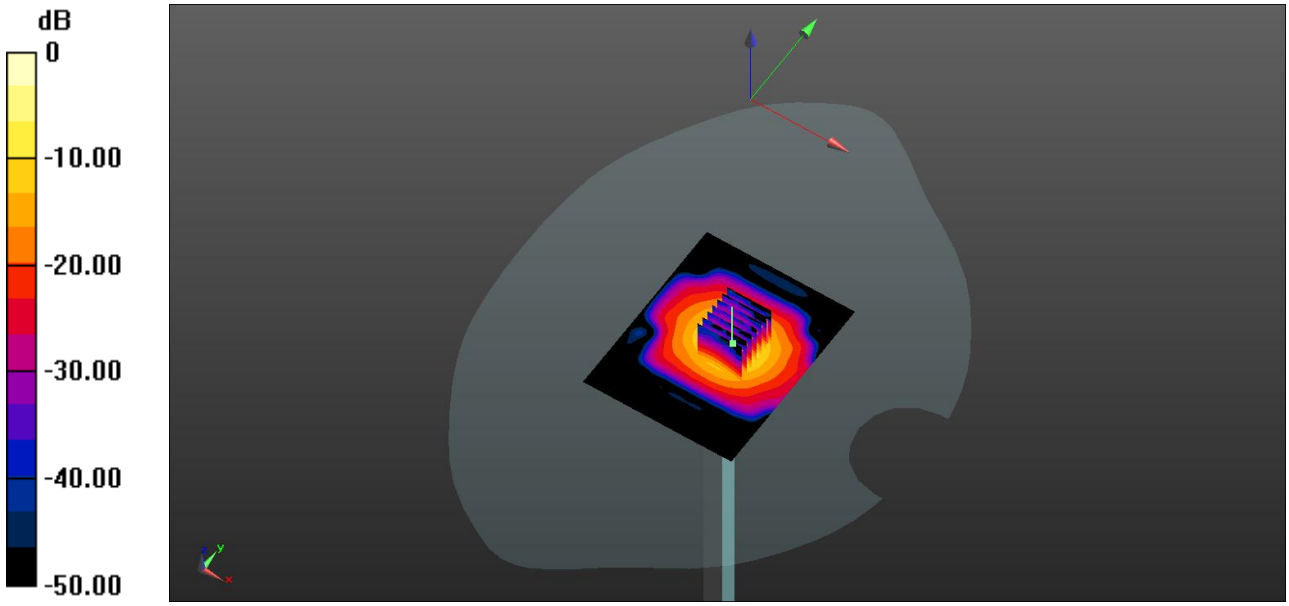
Ambient Temperature:22.6 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(4.82, 4.82, 4.82); Calibrated: 2016.12.27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 5200 Body 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.98 W/kg

CW 5200 Body 100mW/Zoom Scan (7x7x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 32.16 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 29.45 W/kg
SAR(1 g) = 7.85 W/kg; SAR(10 g) = 2.15 W/kg
Maximum value of SAR (measured) = 15.7 W/kg



0 dB = 15.7 W/kg

System Performance Check Data (5800MHz Head)

Date: 2017.10.31
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.338 S/m; ε_r = 34.824; ρ = 1000 kg/m^3
Phantom section: Flat Section

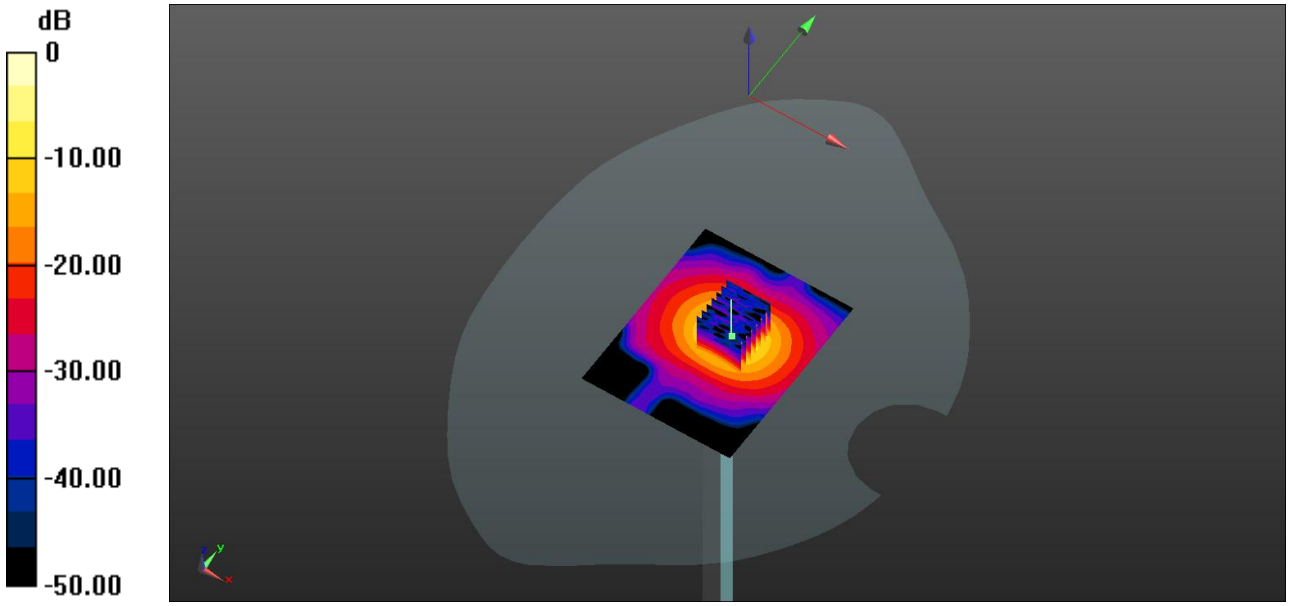
Ambient Temperature:22.5 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(4.88, 4.88, 4.88); Calibrated: 2016.12.27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

CW5800 Head 100mW/Area Scan (81x101x1): Interpolated grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 9.02 W/kg

CW5800 Head 100mW/Zoom Scan (8x8x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 33.32 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 40.4 W/kg
SAR(1 g) = 8.02 W/kg; SAR(10 g) = 2.13 W/kg
Maximum value of SAR (measured) = 17.1 W/kg



0 dB = 17.1 W/kg

System Performance Check Data (5800MHz Body)

Date: 2017.11.03
Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 6.054 S/m; ε_r = 48.072; ρ = 1000 kg/m^3
Phantom section: Flat Section

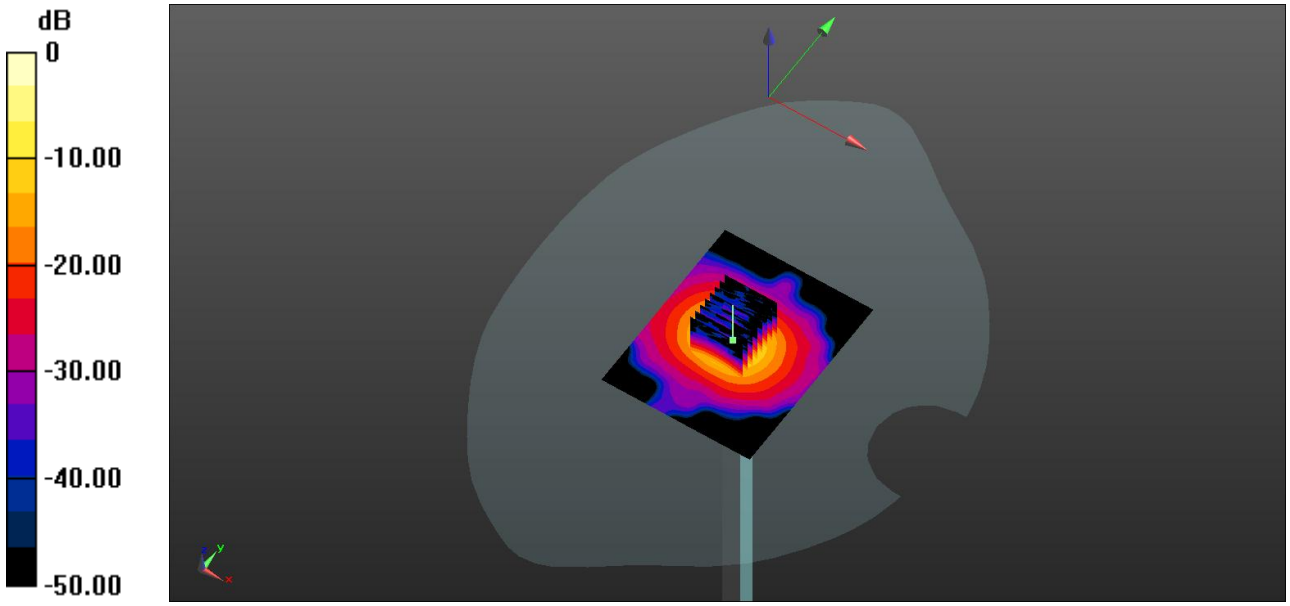
Ambient Temperature:22.6 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(4.56, 4.56, 4.56); Calibrated: 2016.12.27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 5800 Body 100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.46 W/kg

CW 5800 Body 100mW/Zoom Scan (8x8x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 36.33 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 35.4 W/kg
SAR(1 g) = 7.69 W/kg; SAR(10 g) = 2.14 W/kg
Maximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.3 W/kg

ANNEX C TEST DATA

1_Right Head with Cheek on Low Channel in GPRS 850 4slots mode

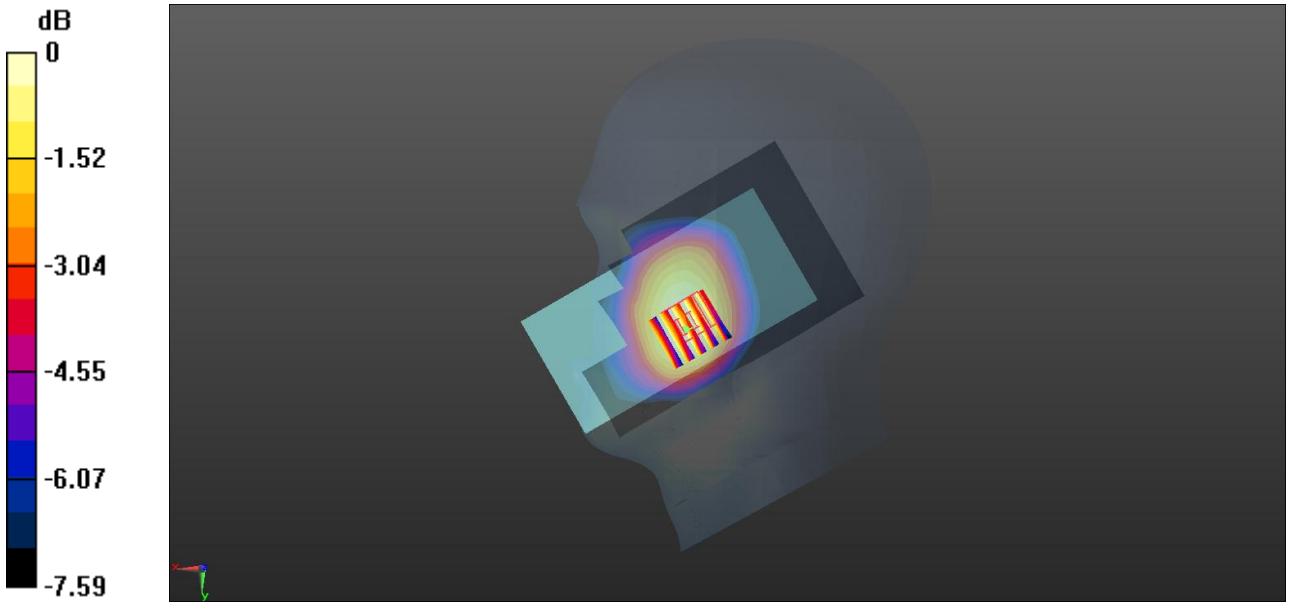
Date: 2017.11.06
Communication System Band: GPRS850; Frequency: 824.2 MHz;Duty Cycle: 1:2.0797
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.894 S/m; ε_r = 41.607; ρ = 1000 kg/m^3
Phantom section: Right Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(9.45, 9.45, 9.45); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch128/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.546 W/kg
的
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.451 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.576 W/kg
SAR(1 g) = 0.523 W/kg; SAR(10 g) = 0.423 W/kg
Maximum value of SAR (measured) = 0.540 W/kg



0 dB = 0.540 W/kg

2_Body Plane with Back Side 10mm on Low Channel in GPRS 850 4slots mode

Date: 2017.11.08
Communication System Band: GPRS850; Frequency: 824.2 MHz;Duty Cycle: 1:2.0797
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.962 S/m; ε_r = 55.621; ρ = 1000 kg/m^3
Phantom section: Flat Section

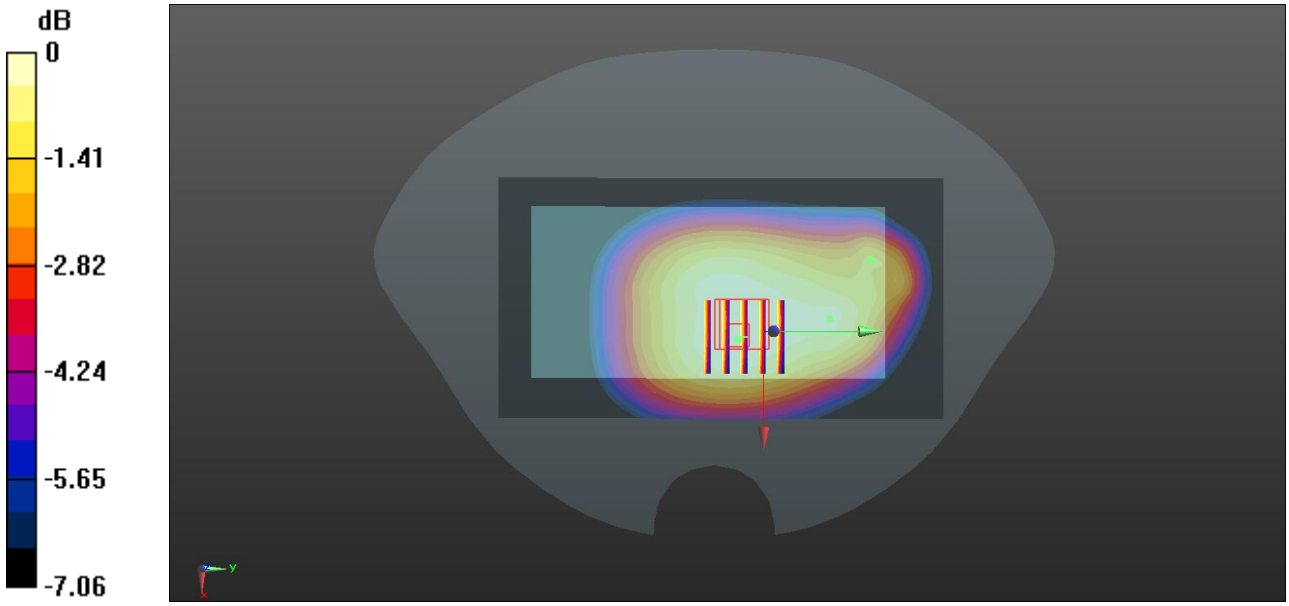
Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(9.91, 9.91, 9.91); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch128/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.728 W/kg

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.89 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.850 W/kg
SAR(1 g) = 0.691 W/kg; SAR(10 g) = 0.553 W/kg
Maximum value of SAR (measured) = 0.719 W/kg



0 dB = 0.719 W/kg

3_Right Head with Cheek on High Channel in GPRS 1900 4slots mode

Date: 2017.11.04
Communication System Band: GPRS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:2.0797
Medium parameters used: f = 1909.8 MHz; σ = 1.436 S/m; ε_r = 40.068; ρ = 1000 kg/m^3
Phantom section: Right Section

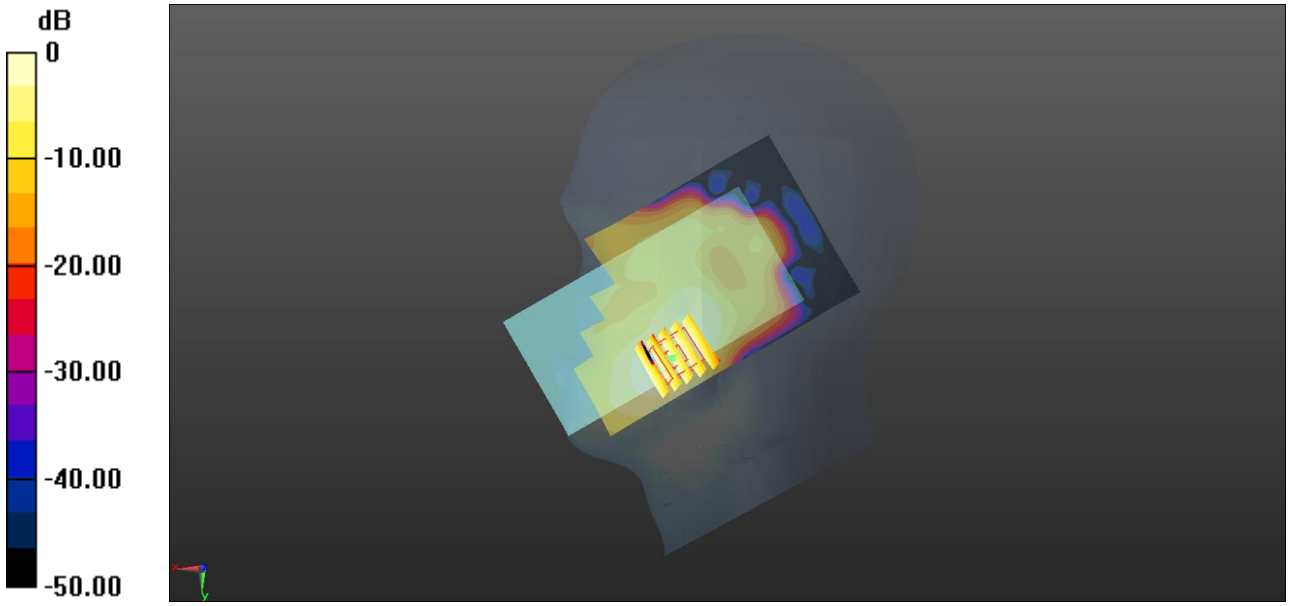
Ambient Temperature:22.7 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.21, 8.21, 8.21); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch810/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0699 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.557 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.0900 W/kg
SAR(1 g) = 0.060 W/kg; SAR(10 g) = 0.037 W/kg
Maximum value of SAR (measured) = 0.0660 W/kg



0 dB = 0.0660 W/kg

4_Body Plane with Back Side 10mm on High Channel in GPRS 1900 4slots mode

Date: 2017.11.07
Communication System Band: GPRS 1900; Frequency: 1909.8 MHz;Duty Cycle: 1:2.0797
Medium parameters used: f = 1909.8 MHz; σ = 1.559 S/m; ε_r = 53.397; ρ = 1000 kg/m^3
Phantom section: Flat Section

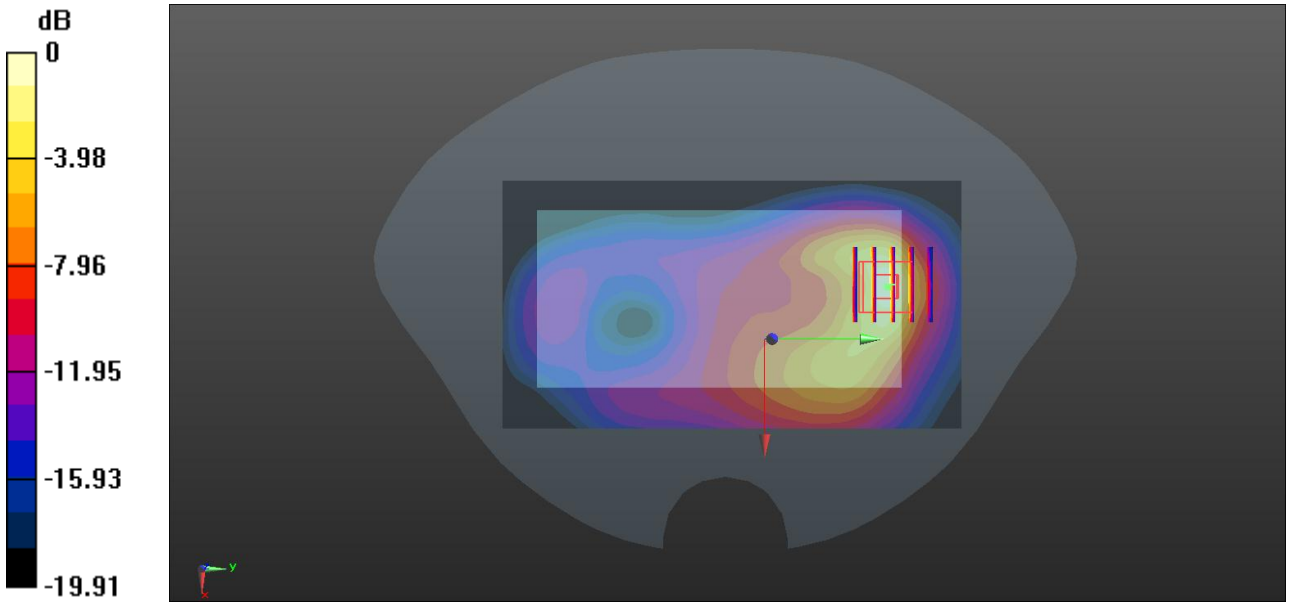
Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.96, 7.96, 7.96); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch810/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.583 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.45 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.00 W/kg
SAR(1 g) = 0.513 W/kg; SAR(10 g) = 0.248 W/kg
Maximum value of SAR (measured) = 0.565 W/kg



0 dB = 0.565 W/kg

5_Right Head with Cheek on Low Channel in WCDMA Band 2 mode

Date: 2017.11.04
Communication System Band: II; Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.386 S/m; ε_r = 40.187; ρ = 1000 kg/m^3
Phantom section: Right Section

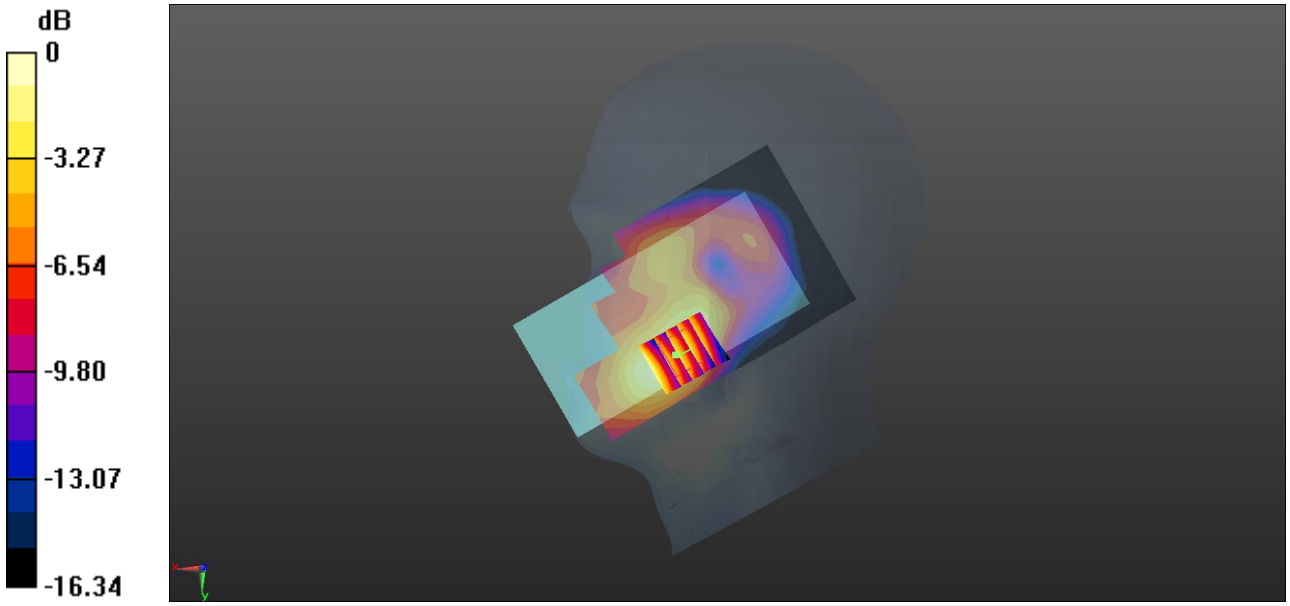
Ambient Temperature:22.7 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.21, 8.21, 8.21); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch9262/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0882 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.609 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.125 W/kg
SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.053 W/kg
Maximum value of SAR (measured) = 0.0900 W/kg



0 dB = 0.0900 W/kg

6_Body Plane with Back Side 10mm on Low Channel in WCDMA Band 2 mode

Date: 2017.11.07
Communication System Band: II; Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.513 S/m; ε_r = 53.495; ρ = 1000 kg/m^3
Phantom section: Flat Section

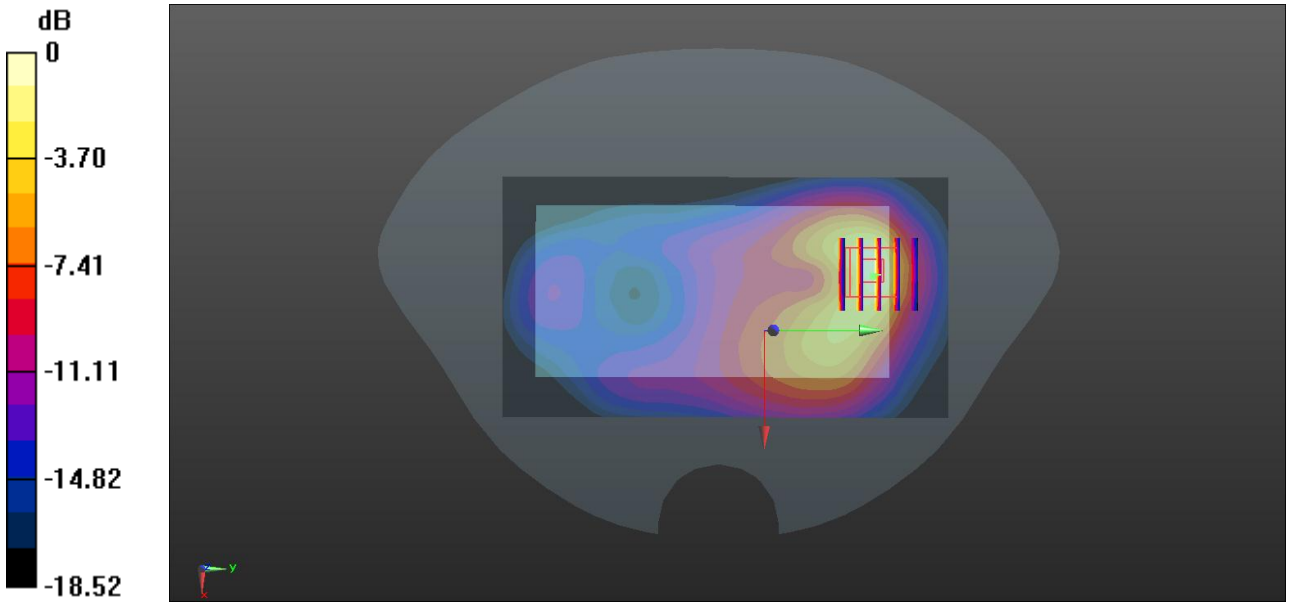
Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.96, 7.96, 7.96); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch9262/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.825 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.854 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.793 W/kg; SAR(10 g) = 0.391 W/kg
Maximum value of SAR (measured) = 0.875 W/kg



0 dB = 0.875 W/kg

7_Right with Cheek on Low Channel in WCDMA Band 4 mode

Date: 2017.11.10
Communication System Band: IV; Frequency: 1712.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1712.4 MHz; σ = 1.336 S/m; ε_r = 40.249; ρ = 1000 kg/m^3
Phantom section: Right Section

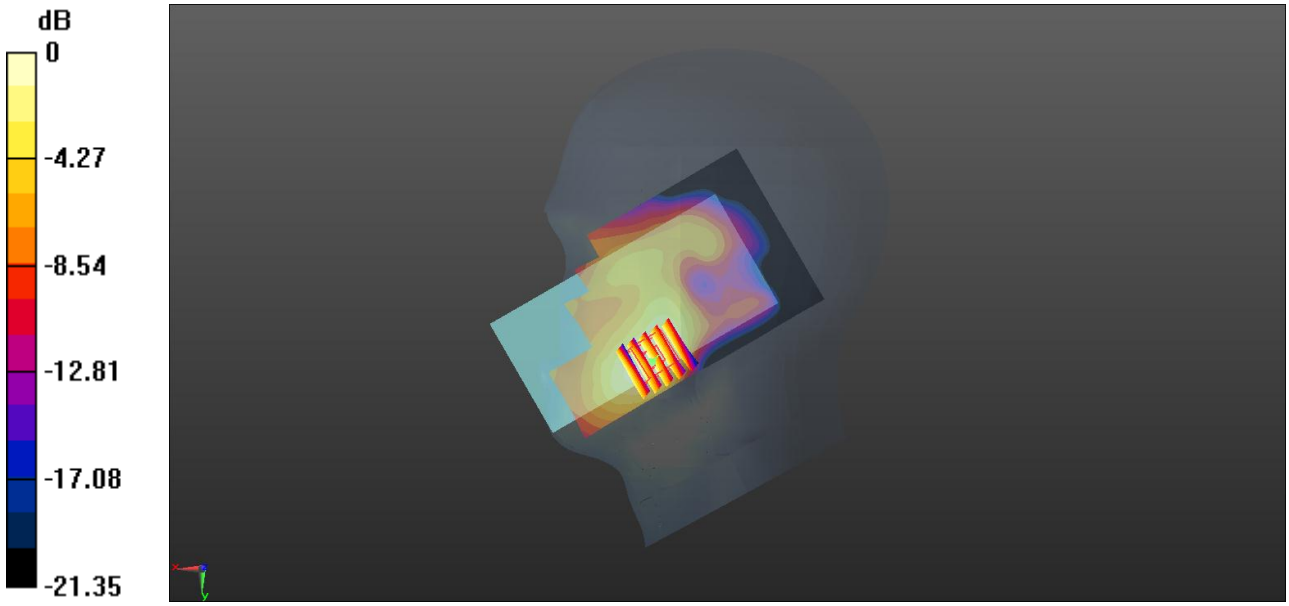
Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.46, 8.46, 8.46); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch1312/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.167 W/kg

Ch1312/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.442 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.221 W/kg
SAR(1 g) = 0.147 W/kg; SAR(10 g) = 0.091 W/kg
Maximum value of SAR (measured) = 0.160 W/kg



0 dB = 0.160 W/kg

8_Body Plane with Back Side 10mm on High Channel in WCDMA Band 4 mode

Date: 2017.11.13
Communication System Band: IV; Frequency: 1752.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.481 S/m; ε_r = 53.498; ρ = 1000 kg/m^3
Phantom section: Flat Section

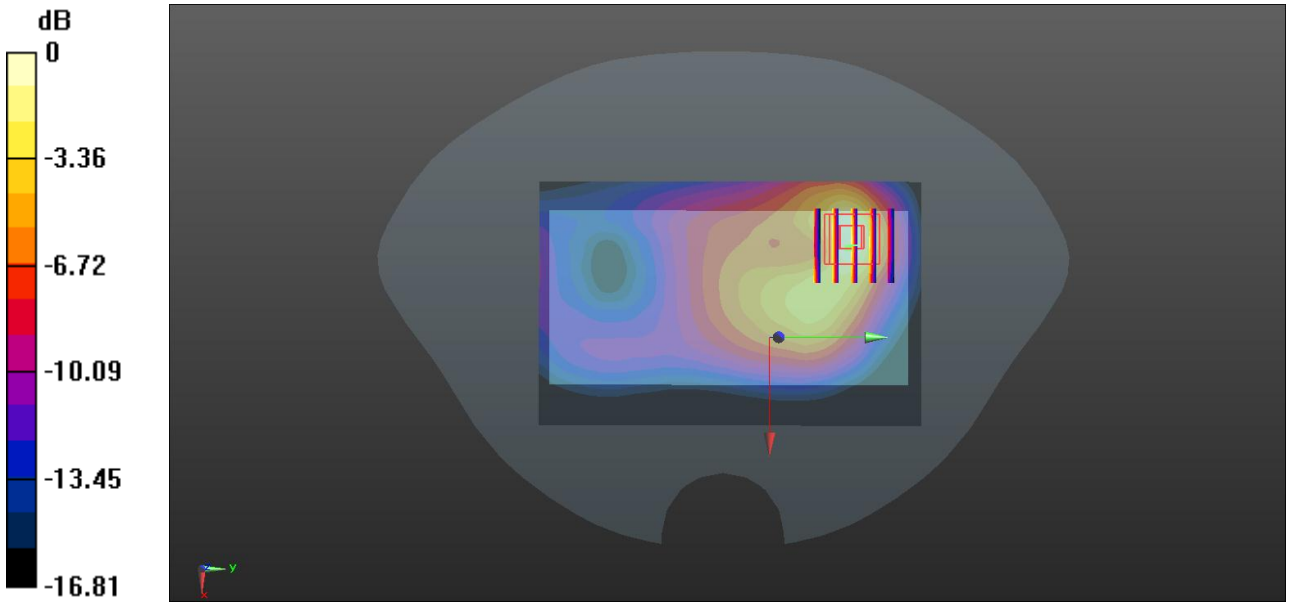
Ambient Temperature:22.5 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.25, 8.25, 8.25); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch1513/Area Scan (71x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.14 W/kg

Ch1513/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.89 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.552 W/kg
Maximum value of SAR (measured) = 1.19 W/kg



0 dB = 1.19 W/kg

9_Right Head with Cheek on Middle Channel in WCDMA Band 5 mode

Date: 2017.11.06
Communication System Band: V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.4 MHz; σ = 0.917 S/m; ε_r = 41.418; ρ = 1000 kg/m^3
Phantom section: Right Section

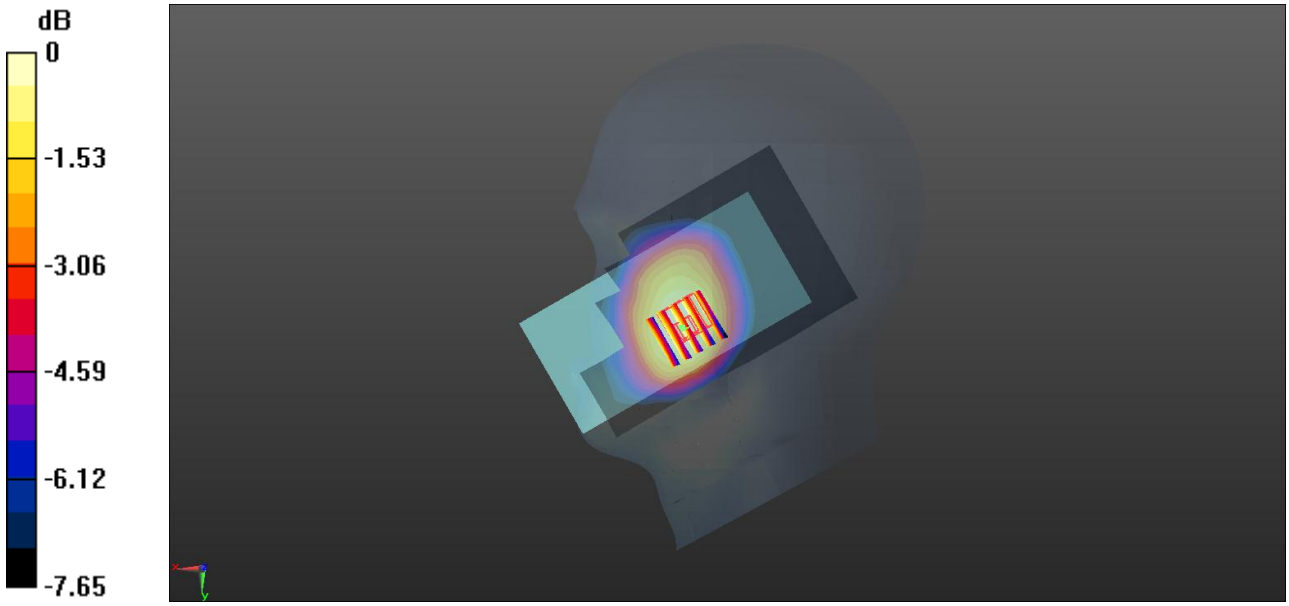
Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(9.45, 9.45, 9.45); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch4182/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.262 W/kg

Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.260 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.289 W/kg
SAR(1 g) = 0.252 W/kg; SAR(10 g) = 0.203 W/kg
Maximum value of SAR (measured) = 0.263 W/kg



0 dB = 0.263 W/kg

10_Body Plane with Back Side 10mm on Middle Channel in WCDMA Band 5 mode

Date: 2017.11.08
Communication System Band: V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.4 MHz; σ = 0.975 S/m; ε_r = 55.582; ρ = 1000 kg/m^3
Phantom section: Flat Section

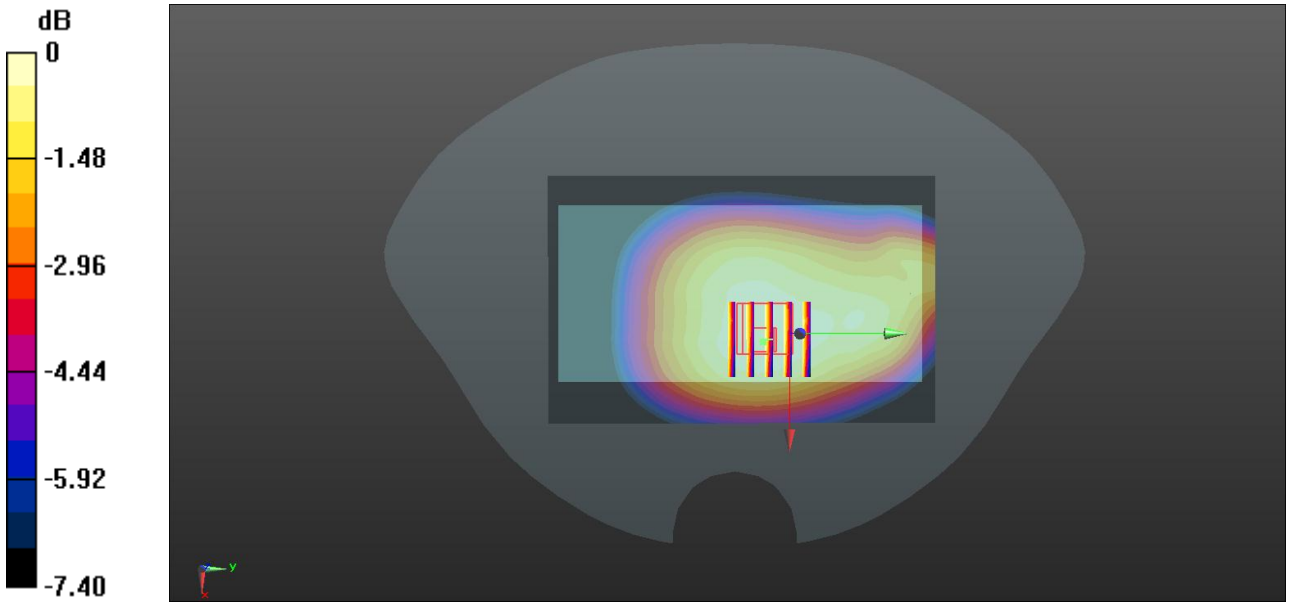
Ambient Temperature:22.5 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(9.91, 9.91, 9.91); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 4182/Area Scan (71x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.309 W/kg

Ch 4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.13 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.356 W/kg
SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.232 W/kg
Maximum value of SAR (measured) = 0.306 W/kg



0 dB = 0.306 W/kg

11_Right Head with Cheek on Low Channel in LTE Band 2 mode with 1RB

Date: 2017.11.04
Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1860 MHz; σ = 1.402 S/m; ε_r = 40.152; ρ = 1000 kg/m^3
Phantom section: Right Section

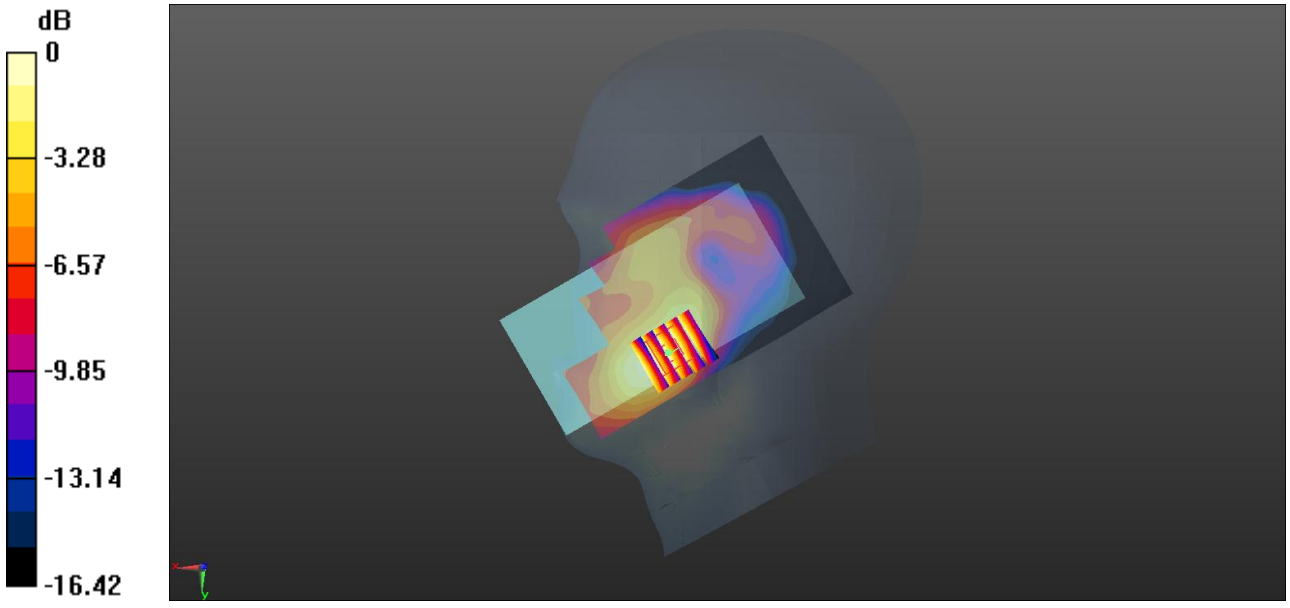
Ambient Temperature:22.7 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.21, 8.21, 8.21); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch18700/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0949 W/kg

Ch18700/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.023 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.134 W/kg
SAR(1 g) = 0.088 W/kg; SAR(10 g) = 0.056 W/kg
Maximum value of SAR (measured) = 0.0962 W/kg



0 dB = 0.0962 W/kg

12_Body Plane with Back Side 10mm on low Channel in LTE Band 2 mode with 1RB

Date: 2017.11.07
Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1860 MHz; σ = 1.524 S/m; ε_r = 53.474; ρ = 1000 kg/m^3
Phantom section: Flat Section

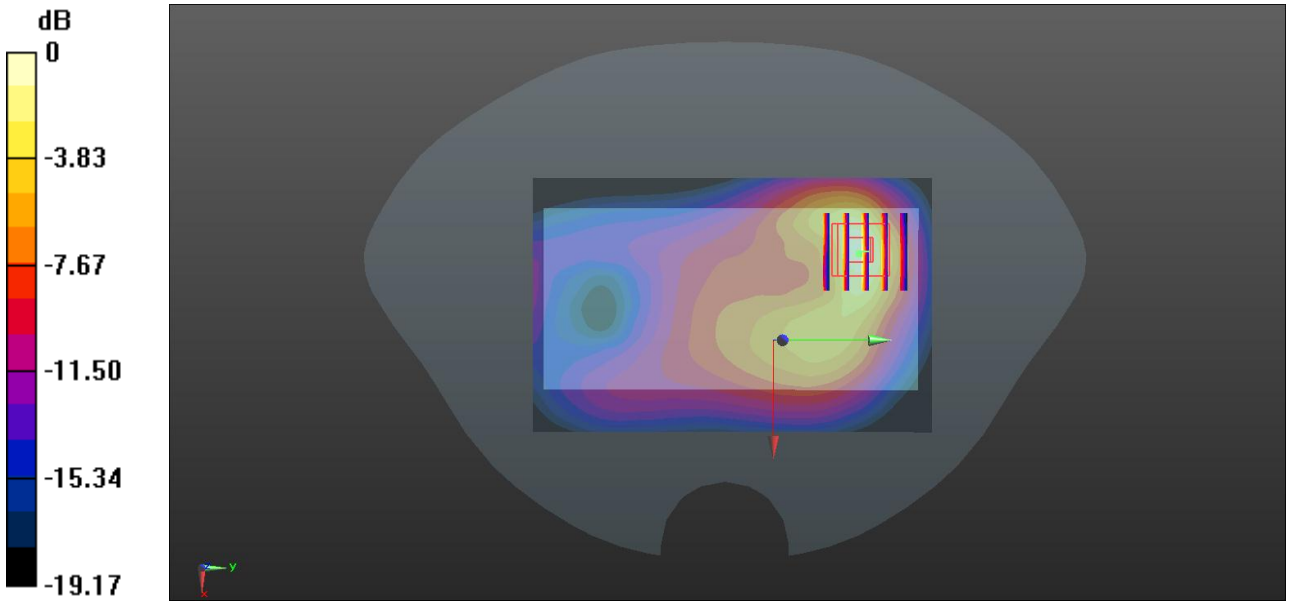
Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.96, 7.96, 7.96); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch18700/Area Scan (71x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.831 W/kg

Ch18700/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.439 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.718 W/kg; SAR(10 g) = 0.354 W/kg
Maximum value of SAR (measured) = 0.824 W/kg



0 dB = 0.824 W/kg

13_Right Head with Cheek on Middle Channel in LTE Band 4 mode with 1RB

Date: 2017.11.10
Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.363 S/m; ε_r = 40.186; ρ = 1000 kg/m^3
Phantom section: Right Section

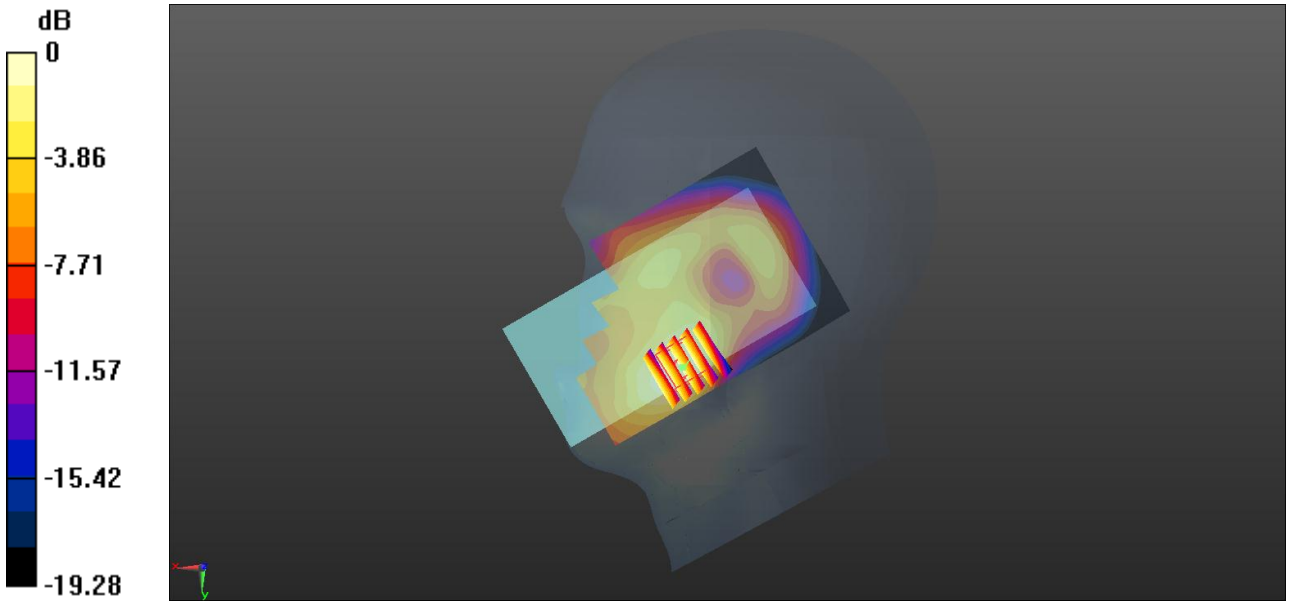
Ambient Temperature:22.4 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.46, 8.46, 8.46); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 20175/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.151 W/kg

Ch 20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.913 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.198 W/kg
SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.088 W/kg
Maximum value of SAR (measured) = 0.148 W/kg



0 dB = 0.148 W/kg

14_Body Plane with Back Side 10mm on High Channel in LTE Band 4 mode with 1RB

Date: 2017.11.13
Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.472 S/m; ε_r = 53.525; ρ = 1000 kg/m^3
Phantom section: Flat Section

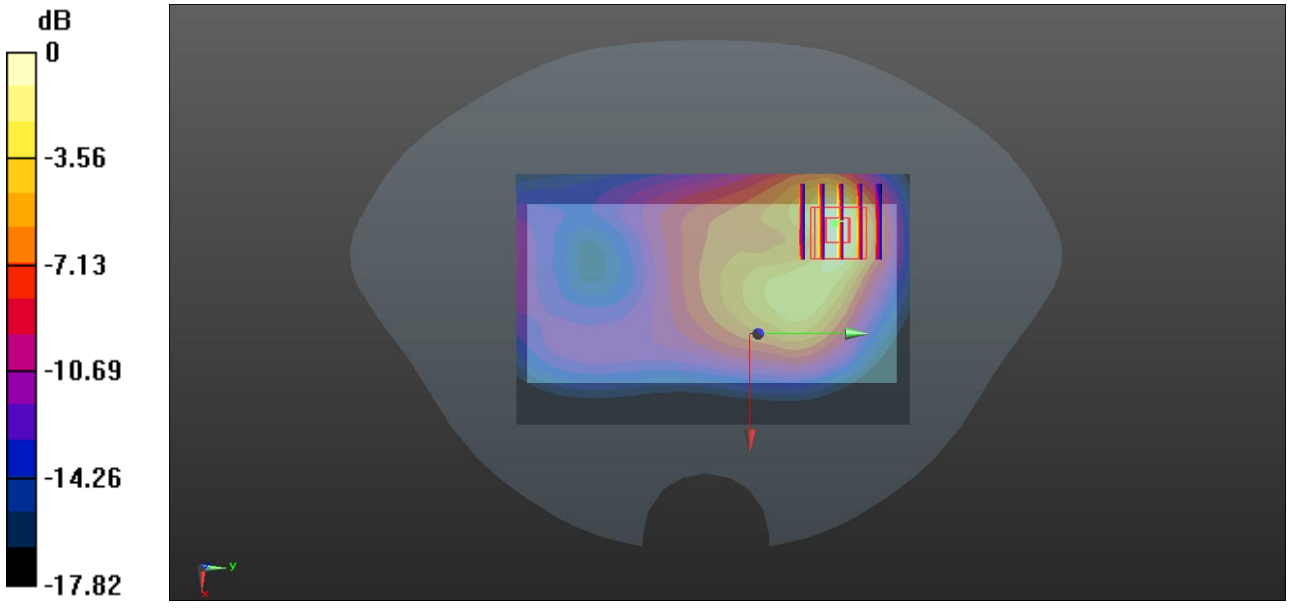
Ambient Temperature:22.5 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.25, 8.25, 8.25); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch20300/Area Scan (71x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.12 W/kg

Ch20300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.32 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.542 W/kg
Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.16 W/kg

15_Right Head with Cheek on Low Channel in LTE Band7 mode with 1RB

Date: 2017.11.02
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 = 1.845 S/m; ε_r = 39.094; ρ = 1000 kg/m^3
Phantom section: Right Section

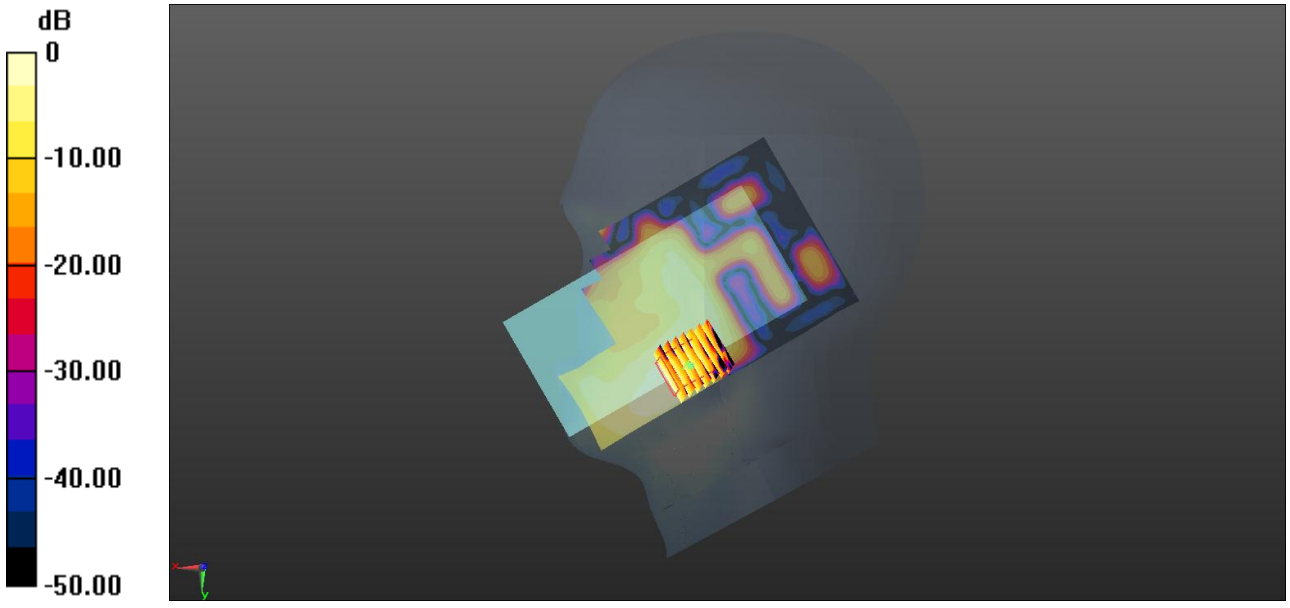
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.31, 7.31, 7.31); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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) = 0.0996 W/kg

Ch20850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.992 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.148 W/kg
SAR(1 g) = 0.084 W/kg; SAR(10 g) = 0.043 W/kg
Maximum value of SAR (measured) = 0.0956 W/kg



0 dB = 0.0956 W/kg

16_Body Plane with Bottom Side 10mm on Low Channel in LTE Band 7 mode with 1RB

Date: 2017.11.01
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 = 2.047 S/m; ε_r = 52.723; ρ = 1000 kg/m^3
Phantom section: Flat Section

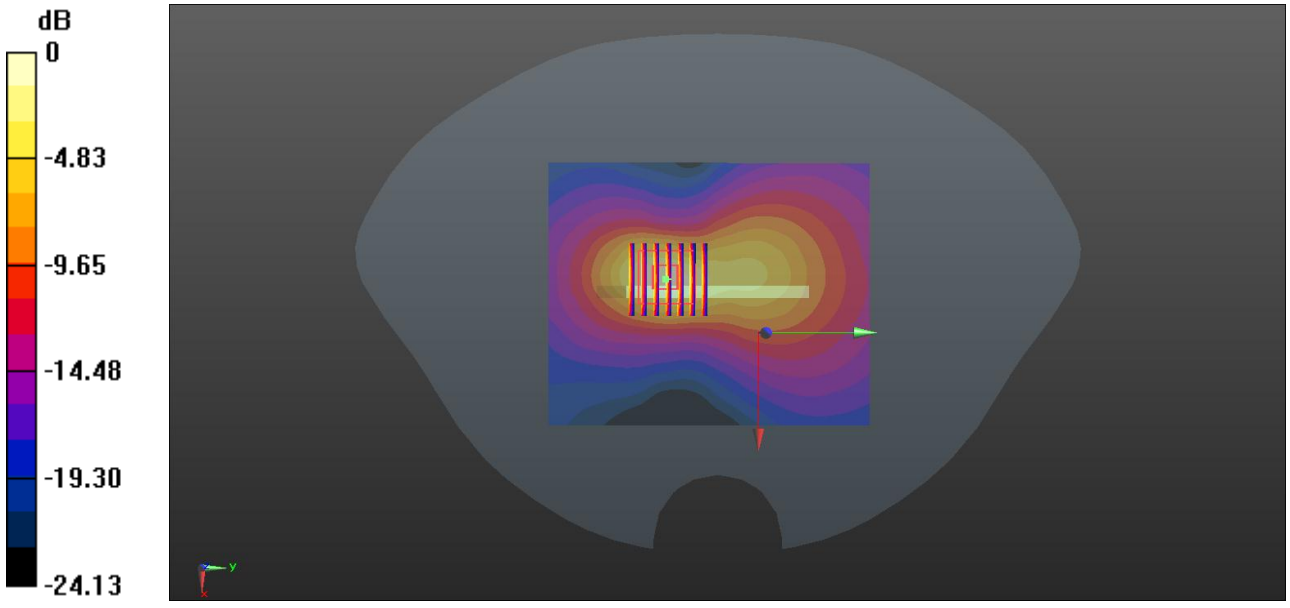
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.48, 7.48, 7.48); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch20850/Area Scan (91x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.724 W/kg

Ch20850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.18 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.32 W/kg
SAR(1 g) = 0.629 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.728 W/kg



0 dB = 0.728 W/kg

17_Right Head with Cheek on Channel 1 in 802.11b mode

Date: 2017.11.02
Communication System Band: WLAN(b); Frequency: 2412 MHz;Duty Cycle: 1:1.005
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.783 S/m; ε_r = 39.382; ρ = 1000 kg/m^3
Phantom section: Right Section

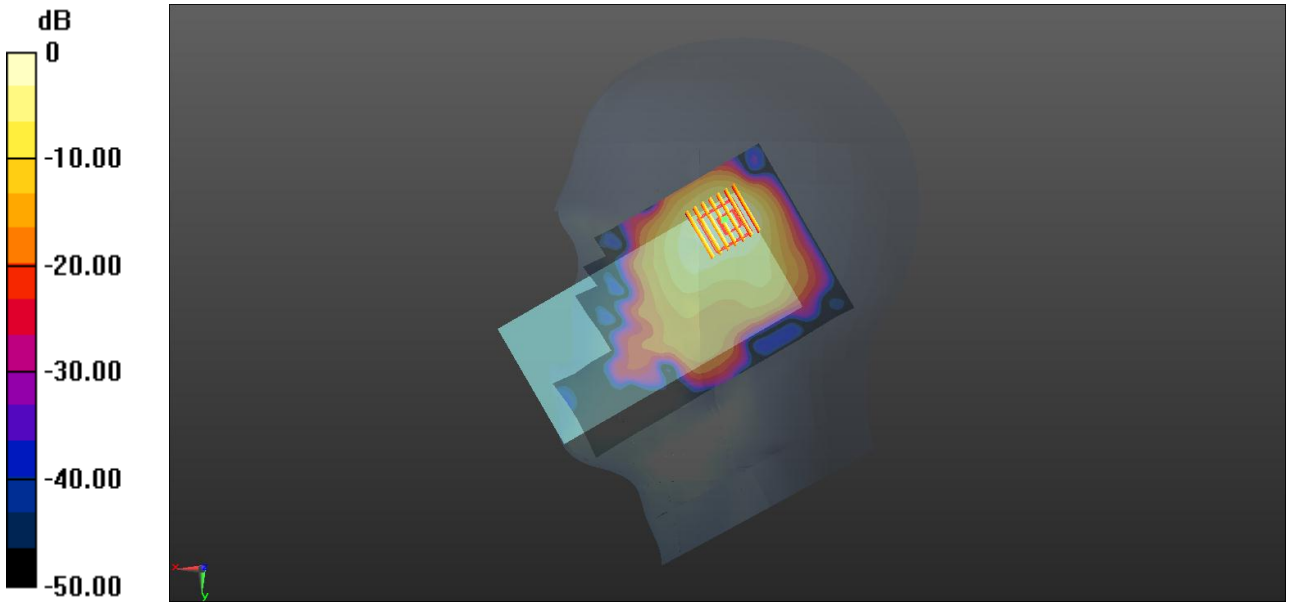
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.44, 7.44, 7.44); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.15 W/kg

Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.41 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.08 W/kg
SAR(1 g) = 0.923 W/kg; SAR(10 g) = 0.422 W/kg
Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.01 W/kg

18_Body plane with Back Side 10mm on Channel 11 in WIFI b mode

Date: 2017.11.01
Communication System Band: WLAN(b); Frequency: 2462 MHz;Duty Cycle: 1:1.005
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.945 S/m; ε_r = 52.446; ρ = 1000 kg/m^3
Phantom section: Flat Section

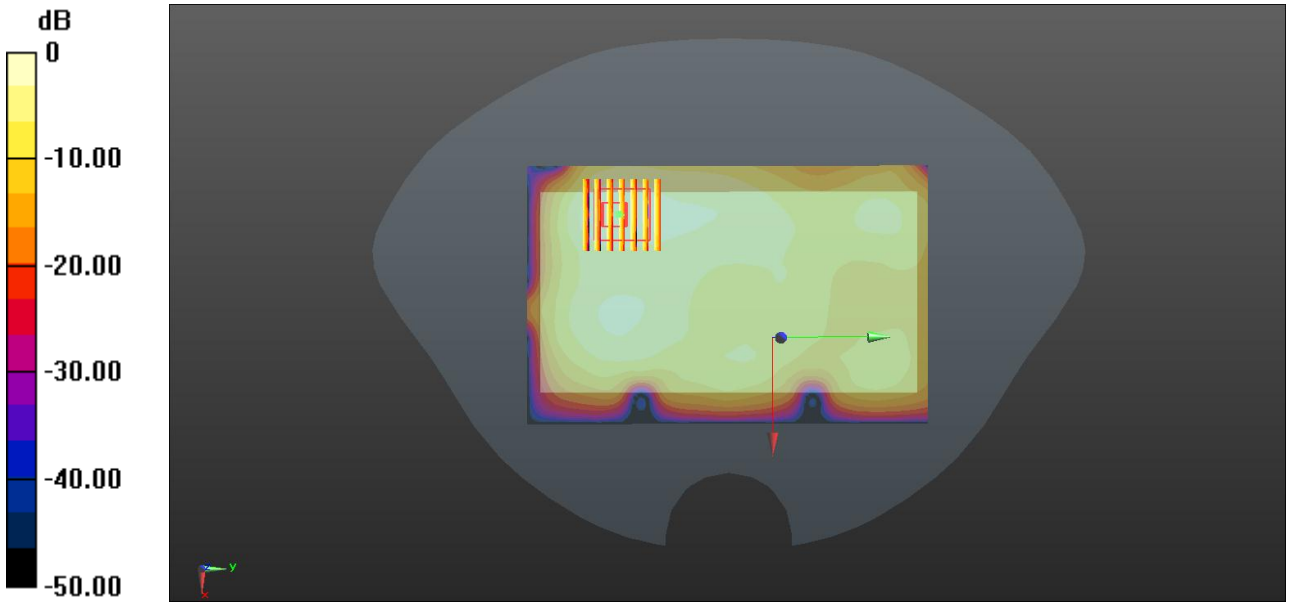
Ambient Temperature:22.4 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.71, 7.71, 7.71); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 11/Area Scan (91x141x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.150 W/kg

Ch 11/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.333 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.298 W/kg
SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.063 W/kg
Maximum value of SAR (measured) = 0.148 W/kg



0 dB = 0.148 W/kg

19_Left Head With Tilt on Channel 44 in 802.11a mode

Date: 2017.10.31
Communication System Band: WLAN(a); Frequency: 5220 MHz;Duty Cycle: 1:1053
Medium parameters used: f = 5220 MHz; σ = 4.652 S/m; ε_r = 36.012; ρ = 1000 kg/m^3
Phantom section: Left Section

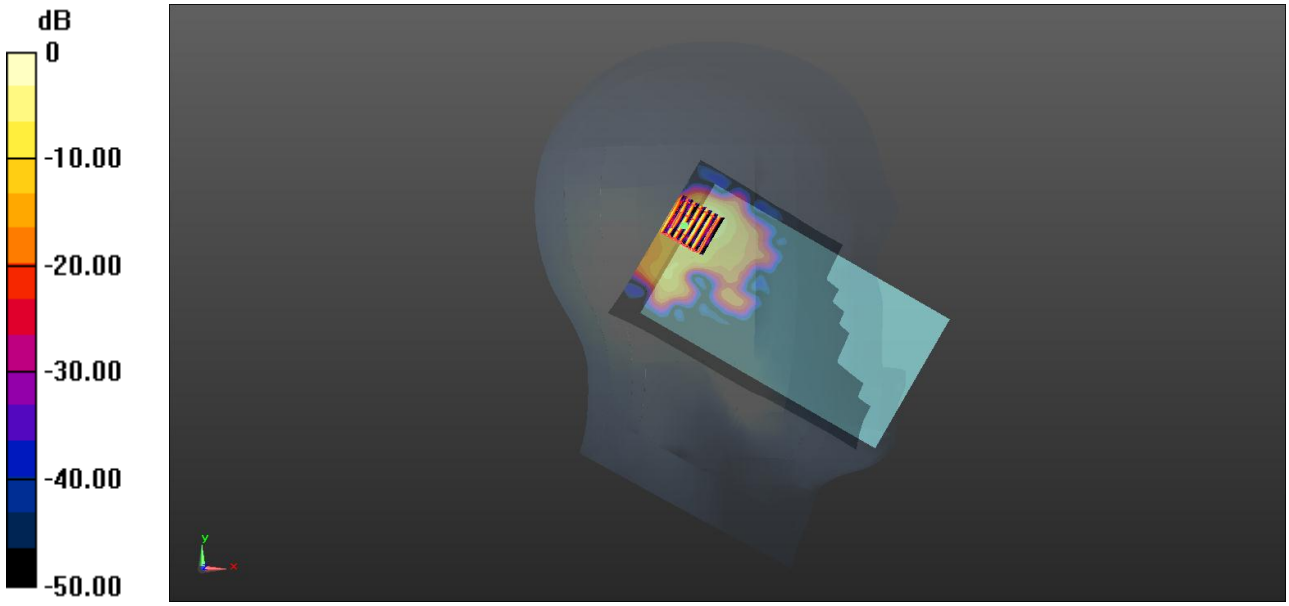
Ambient Temperature:22.5 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(5.31, 5.31, 5.31); Calibrated: 2016.12.27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 DAE4 Sn1454; Calibrated: 2016.12.19
- 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 48/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.419 W/kg

Ch 48/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.927 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.71 W/kg
SAR(1 g) = 0.371 W/kg; SAR(10 g) = 0.107 W/kg
Maximum value of SAR (measured) = 0.808 W/kg



0 dB = 0.808 W/kg

20_Left Head With Tilt on Channel 165 in 802.11a mode

Date: 2017.10.31
Communication System Band: WLAN(a); Frequency: 5825 MHz;Duty Cycle: 1:1.053
Medium parameters used: f = 5825 MHz; σ = 5.379 S/m; ε_r = 34.688; ρ = 1000 kg/m^3
Phantom section: Left Section

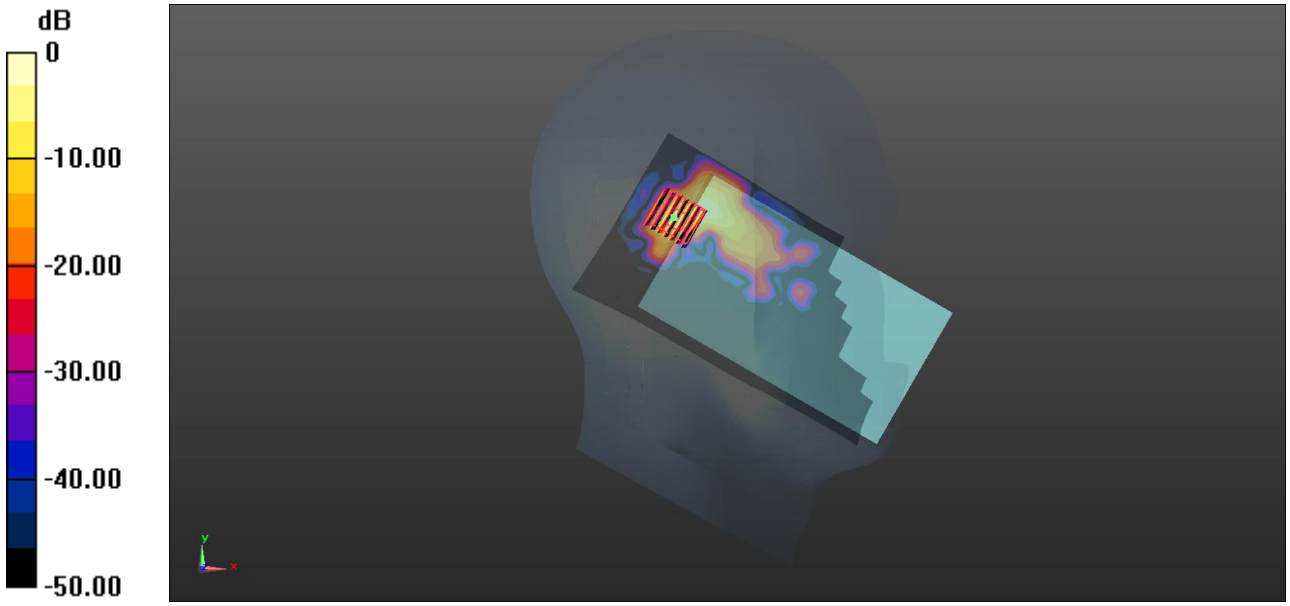
Ambient Temperature:22.5 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(4.88, 4.88, 4.88); Calibrated: 2016.12.27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch165/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.590 W/kg

Ch165/Zoom Scan (7x7x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.49 W/kg
SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.112 W/kg
Maximum value of SAR (measured) = 1.04 W/kg



0 dB = 1.04 W/kg

21_Body Plane with Left Edge 10mm on Channel 44 in 802.11a mode

Date: 2017.11.03
Communication System Band: WLAN(a); Frequency: 5220 MHz;Duty Cycle: 1:1.053
Medium parameters used: f = 5220 MHz; σ = 5.344 S/m; ε_r = 48.901; ρ = 1000 kg/m^3
Phantom section: Flat Section

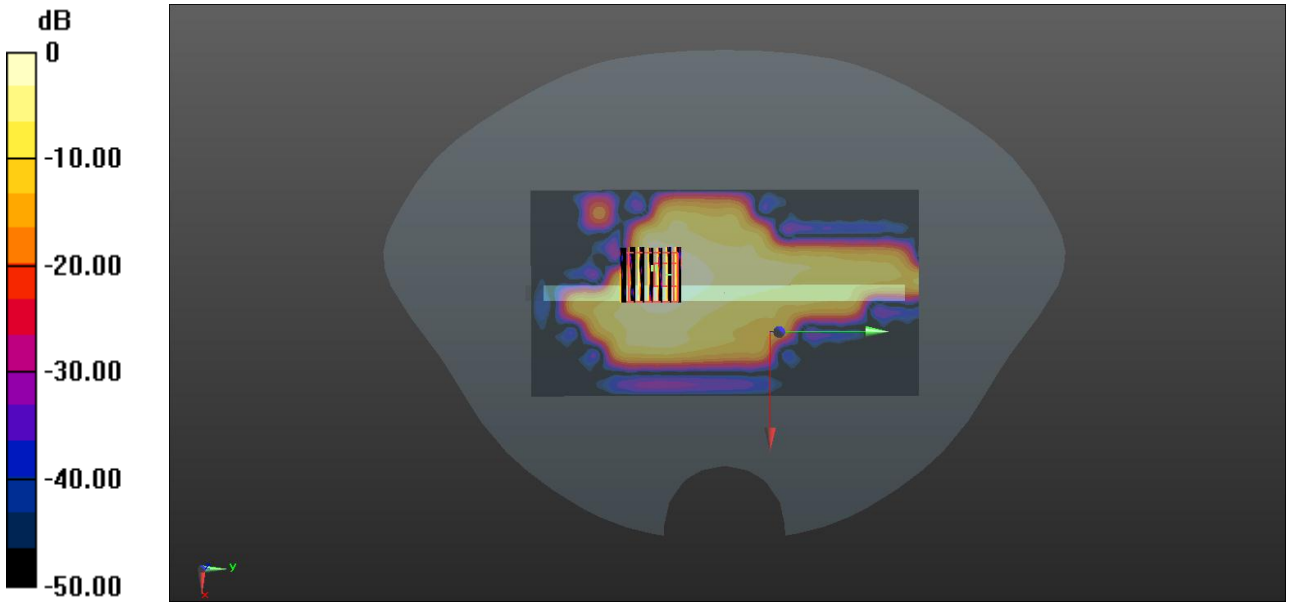
Ambient Temperature:22.6 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(4.82, 4.82, 4.82); Calibrated: 2016.12.27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 48/Area Scan (91x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.215 W/kg

Ch 48/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.488 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.338 W/kg
SAR(1 g) = 0.101 W/kg; SAR(10 g) = 0.032 W/kg
Maximum value of SAR (measured) = 0.190 W/kg



0 dB = 0.190 W/kg

22_Body Plane with Left Edge 10mm on Channel 165 in 802.11a mode

Date: 2017.11.03
Communication System Band: WLAN(a); Frequency: 5825 MHz;Duty Cycle: 1:1.053
Medium parameters used: f = 5825 MHz; σ = 6.112 S/m; ε_r = 48.027; ρ = 1000 kg/m^3
Phantom section: Flat Section

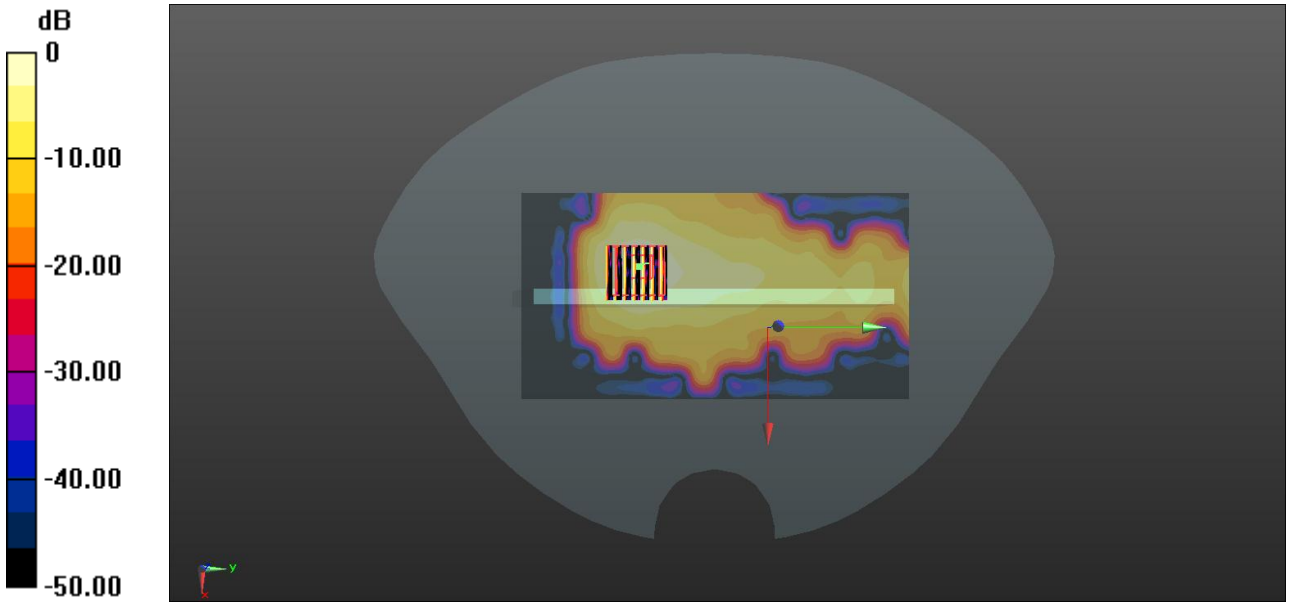
Ambient Temperature:22.6 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(4.56, 4.56, 4.56); Calibrated: 2016.12.27;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 165/Area Scan (91x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.504 W/kg

Ch 165/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.204 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.265 W/kg; SAR(10 g) = 0.094 W/kg
Maximum value of SAR (measured) = 0.496 W/kg



0 dB = 0.496 W/kg

23_Body Plane with Back Side 10mm on Low Channel in WCDMA Band 4 mode

Date: 2017.11.13
Communication System Band: IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1712.4 MHz; σ = 1.461 S/m; ε_r = 53.802; ρ = 1000 kg/m^3
Phantom section: Flat Section

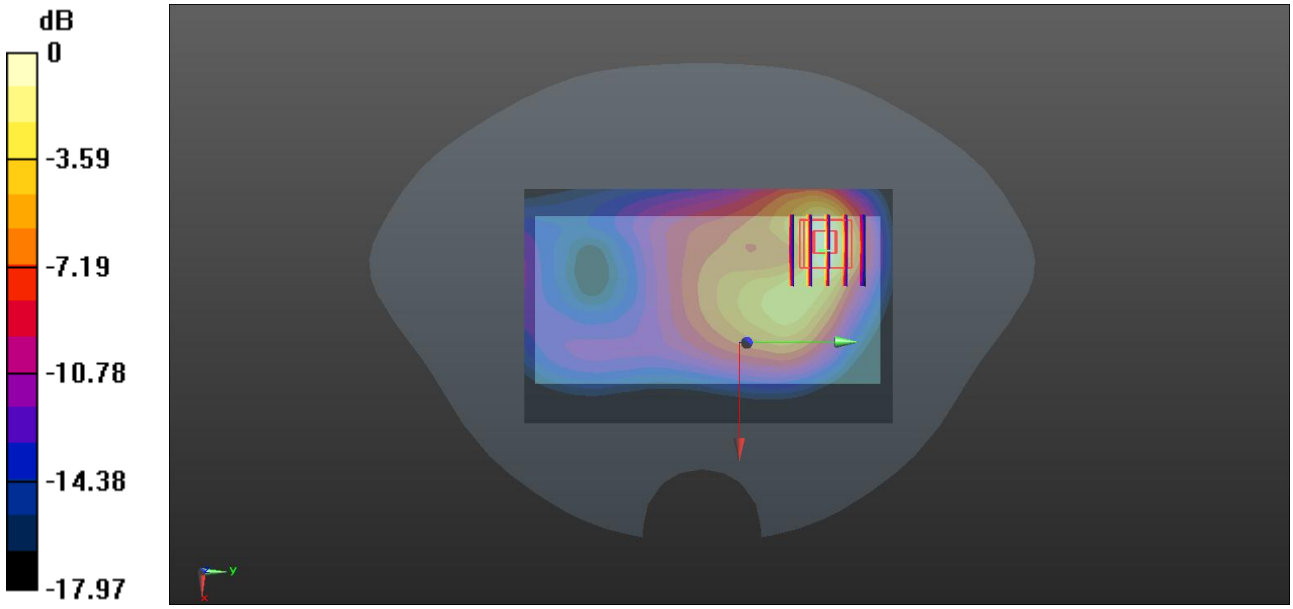
Ambient Temperature:22.5 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.25, 8.25, 8.25); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch1312/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.16 W/kg

Ch1312/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.06 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.92 W/kg
SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.523 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



0 dB = 1.18 W/kg

24_Body Plane with Back Side 10mm on High Channel in LTE Band 4 mode with 1RB

Date: 2017.11.13
Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.472 S/m; ε_r = 53.525; ρ = 1000 kg/m^3
Phantom section: Flat Section

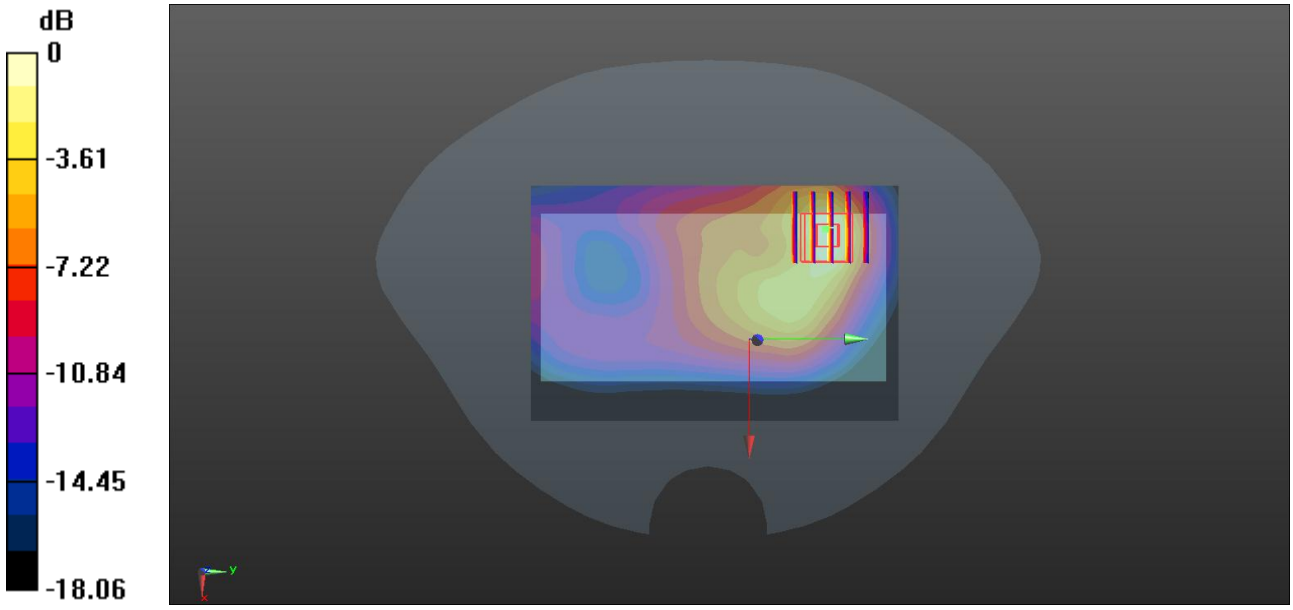
Ambient Temperature:22.5 Liquid Temperature:21.0

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(8.25, 8.25, 8.25); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch20300/Area Scan (71x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.11 W/kg

Ch20300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.38 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.84 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.534 W/kg
Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 1.13 W/kg

25_Body Plane with Back Side 10mm on Low Channel in WCDMA Band 2 mode

Date: 2017.11.07
Communication System Band: II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.513 S/m; ε_r = 53.495; ρ = 1000 kg/m^3
Phantom section: Flat Section

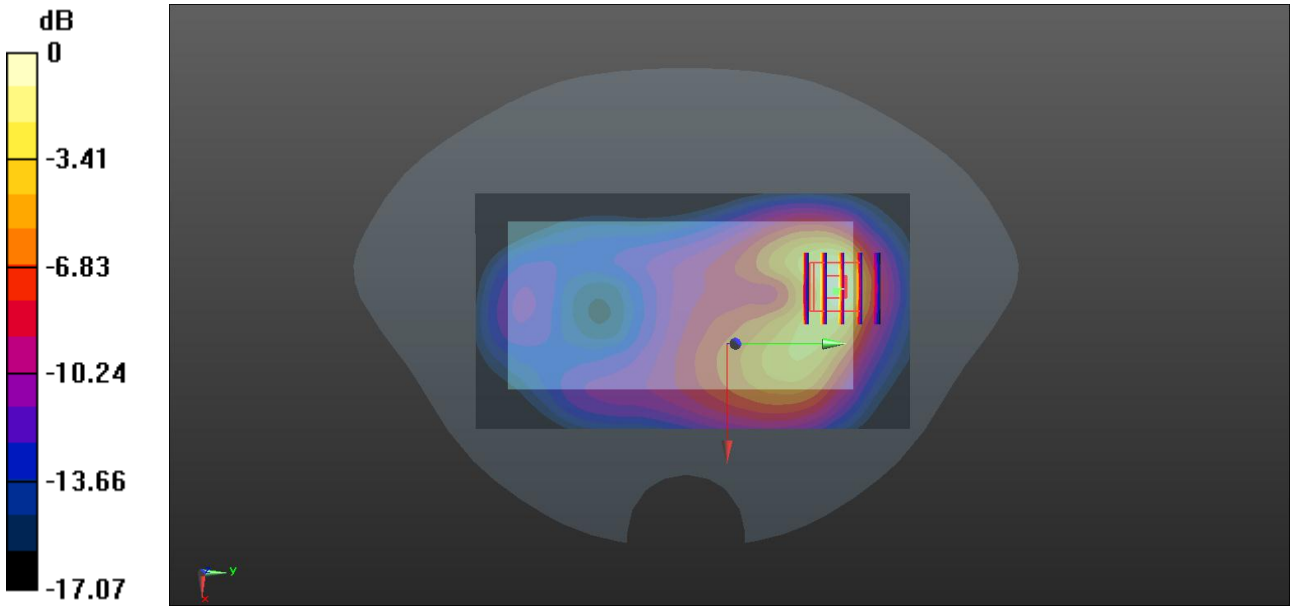
Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.96, 7.96, 7.96); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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)

Ch9262/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.811 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.784 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 0.787 W/kg; SAR(10 g) = 0.388 W/kg
Maximum value of SAR (measured) = 0.864 W/kg



0 dB = 0.864 W/kg

26_Right Head with Cheek on Channel 1 in 802.11b mode

Date: 2017.11.02
Communication System Band: WLAN(b); Frequency: 2412 MHz; Duty Cycle: 1:1.005
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.783 S/m; ε_r = 39.382; ρ = 1000 kg/m^3
Phantom section: Flat Section

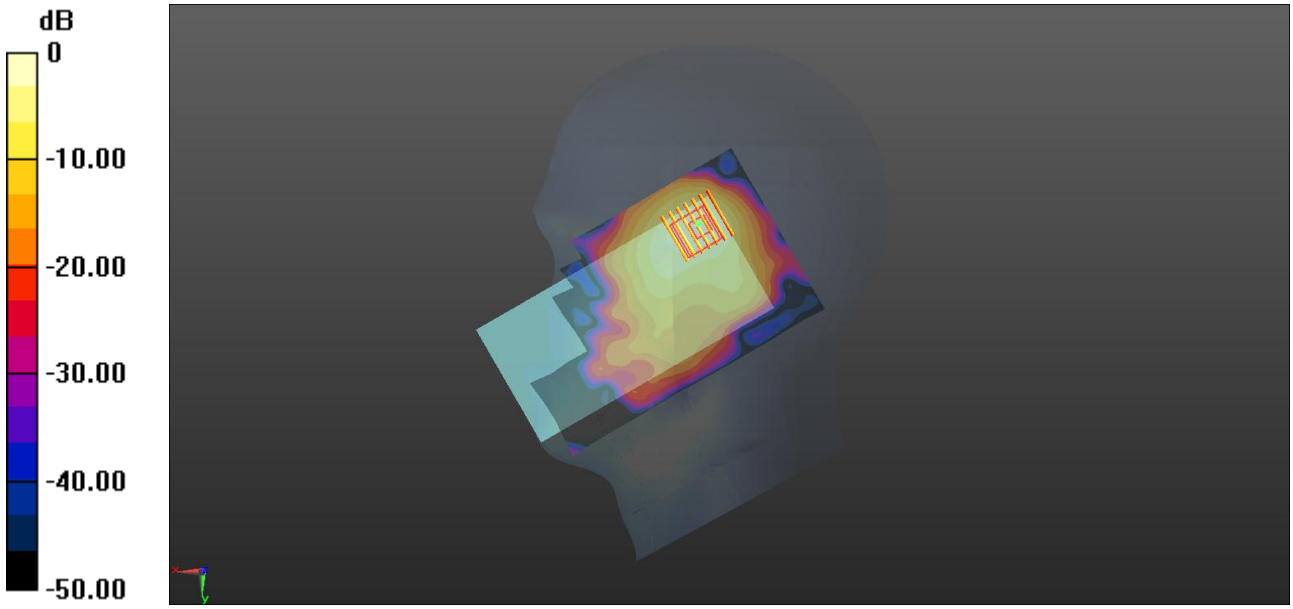
Ambient Temperature:22.5 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7340; ConvF(7.44, 7.44, 7.44); Calibrated: 2016.12.27;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2016.12.19
- 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 (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.05 W/kg

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.28 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.99 W/kg
SAR(1 g) = 0.914 W/kg; SAR(10 g) = 0.417 W/kg
Maximum value of SAR (measured) = 0.997 W/kg



0 dB = 0.997 W/kg

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ17A0392-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ17A0392-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “CALIBRATION REPORT.pdf”.

--END OF REPORT--