FCC SAR TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

A1776 Flip Phone

ISSUED TO
Lan Global Inc

12031 Sherman Rd, North Hollywood, CA , USA

Report No.:	BL-SZ1990123-701
EUT Name:	A1776 Flip Phone
Model Name:	A1776
Brand Name:	ECS
FCC ID:	2AUBNA1776
Test Standard:	FCC 47 CFR Part 2.1093
	ANSI C95.1: 1999
	IEEE 1528: 2013
Maximum SAR:	Head (1 g): 0.452 W/kg
	Body (1 g): 1.217 W/kg
Test Conclusion:	Pass
Test Date:	Sep. 15, 2019 ~ Sep. 25, 2019
Date of Issue:	Mar. 06, 2020

Tested by: Zong Liyao
Date Mar. 06, 2020

Approved by: Liao Jianming
(Technical Director)
Date Mar. 06. 2020

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Revision History

Version	Issue Date	Revisions Content
Rev. 01	Feb. 28, 2020	Initial Issue
Rev. 02	Mar. 06, 2020	Added Bluetooth mode to Highest Simultaneous SAR in section 3.3.2. Revised description for wireless mode in section 8.1 Revised tune-up limit for LTE Band 13 in page 36.

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1 GENERAL INFORMATION

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

1.2 Identification of the Responsible Testing Location

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

1.3 Test Environment Condition

Ambient Temperature	21℃ to 23℃
Ambient Relative Humidity	37% to 48%
Ambient Pressure	100 KPa to 102 KPa

1.4 Announce

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

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

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

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

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

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

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Lan Global Inc
Address	12031 Sherman Rd, North Hollywood, CA , USA

2.2 Manufacturer Information

Manufacturer	Lan Global Inc
Address	12031 Sherman Rd, North Hollywood, CA , USA

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	A1776 Flip Phone
Model Name Under Test	A1776
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	DVT
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	A1776
	Serial No.	N/A
	Capacity	2000 mAh
	Rated Voltage	3.8 V
	Limit Charge Voltage	4.35 V
Ancillary Equipment 2	USB Cable	
	Model No.	N/A
	Length (Approx.)	1 m

2.6 Technical Information

Network and Wireless connectivity	3G Network CDMA BC0, BC1, BC10 4G Network FDD LTE Band 2/4/5/12/13/25/26/71 TDD LTE Band 41 Bluetooth 4.2 (BR+EDR+BLE) WIFI 802.11b, 802.11g, 802.11n(HT20) GPS, GLONASS

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

Operating Mode	CDMA, FDD-LTE, TDD-LTE, 2.4G WLAN, Bluetooth		
Frequency Range	CDMA BC0	TX: 815.025 ~ 848.985 MHz	RX: 860.025 ~ 893.985 MHz
	CDMA BC1	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	CDMA BC10	TX: 806.000 ~ 900.975 MHz	RX: 851.000 ~ 939.975 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 12	TX: 699 ~ 716 MHz	RX: 729 ~ 746 MHz
	LTE Band 13	TX: 777 ~ 787 MHz	RX: 746 ~ 756 MHz
	LTE Band 25	TX: 1850 ~ 1915 MHz	RX: 1930 ~ 1995 MHz
	LTE Band 26	TX: 814 ~ 849 MHz	RX: 859 ~ 894 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	LTE Band 71	TX: 663 ~ 698 MHz	RX: 617 ~ 652 MHz
	802.11b/g /n(HT20)	2400 ~ 2483.5 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		
CDMA BC0	**0.452**	0.752	0.643	0.452	1.217
CDMA BC1	0.224	1.022	0.945		
CDMA BC10	0.390	0.928	0.793		
LTE Band 4	0.132	**1.217**	**1.217**		
LTE Band 12	0.158	0.425	0.425		
LTE Band 13	0.293	0.738	0.738		
LTE Band 25/2	0.146	1.187	1.187		
LTE Band 26/5W	0.441	0.780	0.780		
LTE Band 41	0.132	0.587	0.587		
LTE Band 71	0.072	0.285	0.285		
2.4G WLAN	0.126	0.172	0.172		
Bluetooth	0.075	0.096	0.096		
Limit (W/kg)	1.60				
Verdict	Pass				

Note1: This device supports both LTE Band 2 / Band 5 and Band 25 / Band 26. Since the supported frequency span for LTE Band 2 / Band 5 falls completely within the supports frequency span for LTE Band 25 / Band 26, both LTE bands have the same target power, and both LTE bands share the same transmission path, therefore SAR was only assessed for LTE Band 25 and Band 26.

3.3.2 Highest Simultaneous SAR

Position	Simultaneous Configuration	Simultaneous SAR (W/kg)	Limit (W/kg)	Verdict
Head	CDMA + 2.4G WLAN	0.578	1.6	Pass
	CDMA + Bluetooth	0.527	1.6	Pass
Body-worn	LTE QPSK + 2.4G WLAN	1.389	1.6	Pass
	LTE QPSK + Bluetooth	1.313	1.6	Pass
Hotspot Mode	LTE QPSK + 2.4G WLAN	1.389	1.6	Pass
	LTE QPSK + Bluetooth	1.313	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 1.217 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

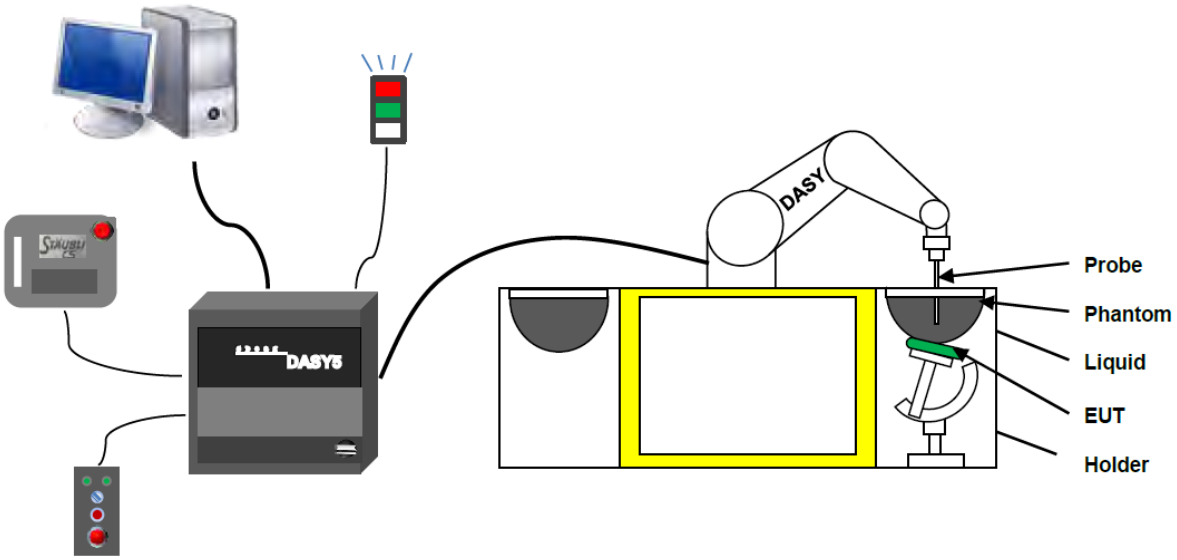
$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}\mathbf{E}^2}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue,

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

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



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

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

4.2.2 Robot

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

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

4.2.3 E-Field Probe

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

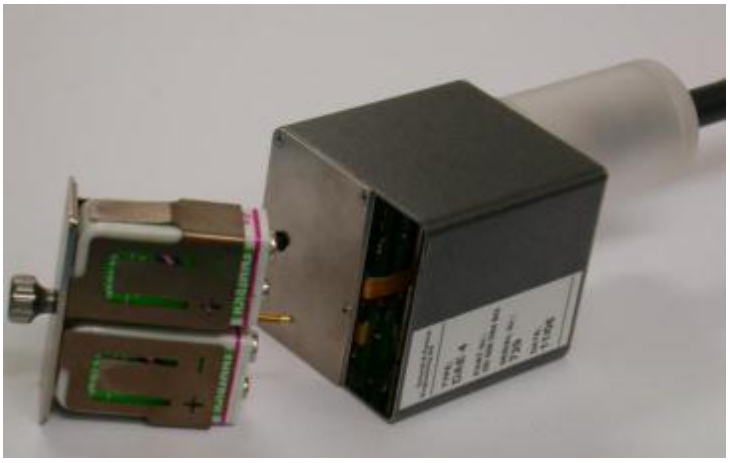
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection systemBuilt-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz;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

E-Field Probe Calibration Process

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

4.2.4 Data Acquisition Electronics

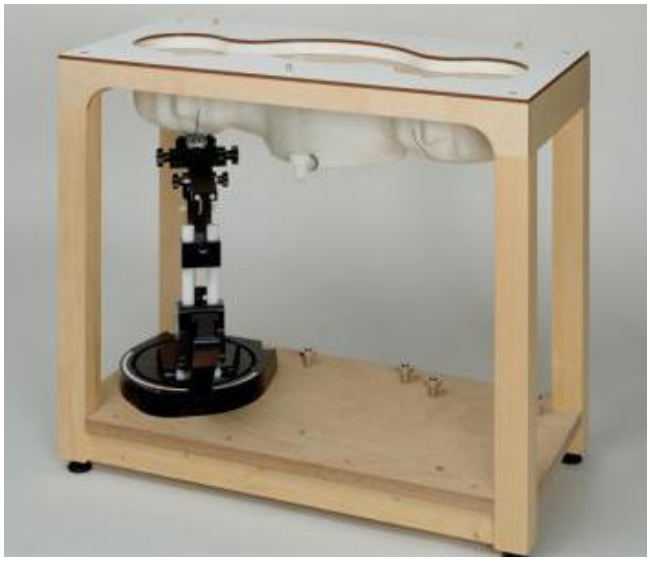
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



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

4.2.5 Phantoms

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



- Left hand
- Right hand
- Flat phantom

Photo of Phantom SN1857

Photo of Phantom SN1859

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

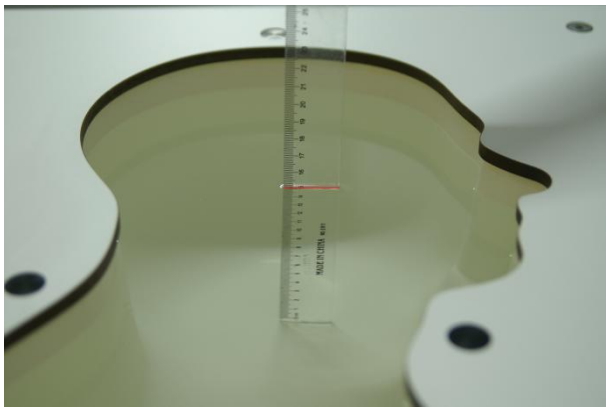
4.2.6 Device Holder

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

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

4.2.7 Simulating Liquid

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

Head Liquid Depth	Body Liquid Depth
	

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

Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ε
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.4	40.0
2450	55.0	0	0	0.1	0	44.9	1.80	39.2
2600	54.9	0	0	0.1	0	45.0	1.96	39.0
Frequency (MHz)	Water (%)	Hexyl Carbitol (%)			Triton X-100 (%)		Conductivity σ (S/m)	Permittivity ε
5200	62.52	17.24			17.24		4.66	36.0
5800	62.52	17.24			17.24		5.27	35.3
Body (From instrument manufacturer)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ε
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0.1	0	31.3	1.95	52.7
2600	68.2	0	0	0.1	0	31.7	2.16	52.5
Frequency(MHz)	Water	DGBE (%)			Salt (%)		Conductivity σ (S/m)	Permittivity ε
5200	78.60	21.40			/		5.54	47.86
5800	78.50	21.40			0.1		6.0	48.20

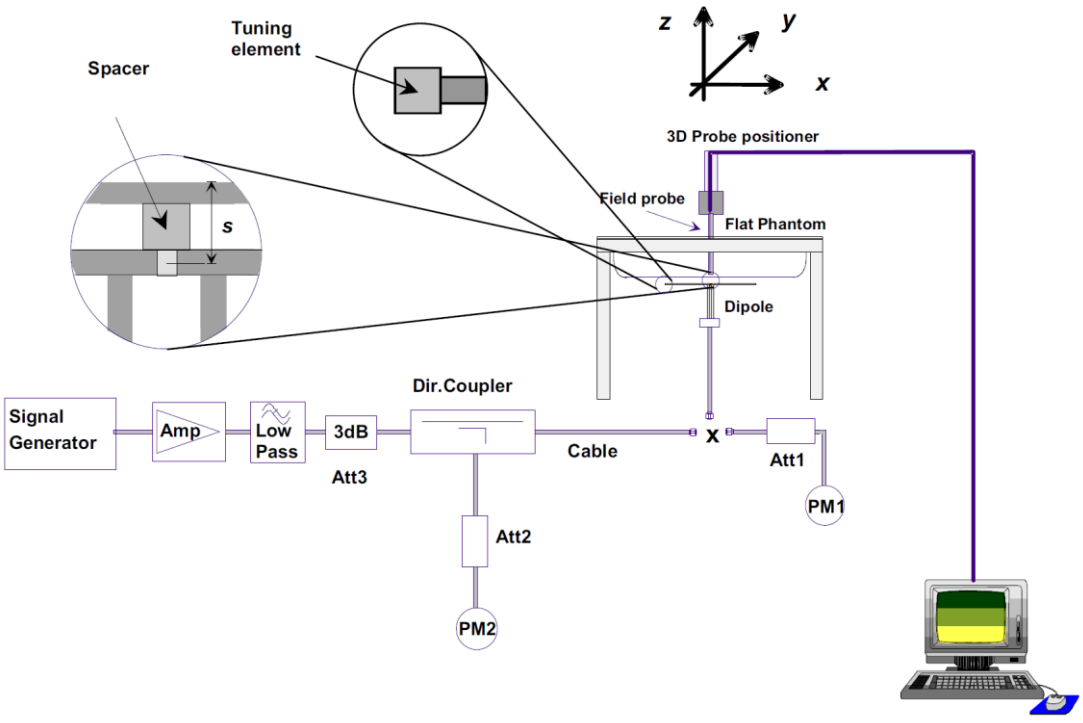
5 SYSTEM VERIFICATION

5.1 Purpose of System Check

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

5.2 System Check Setup

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



6 TEST POSITION CONFIGURATIONS

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

6.1 Head Exposure Conditions

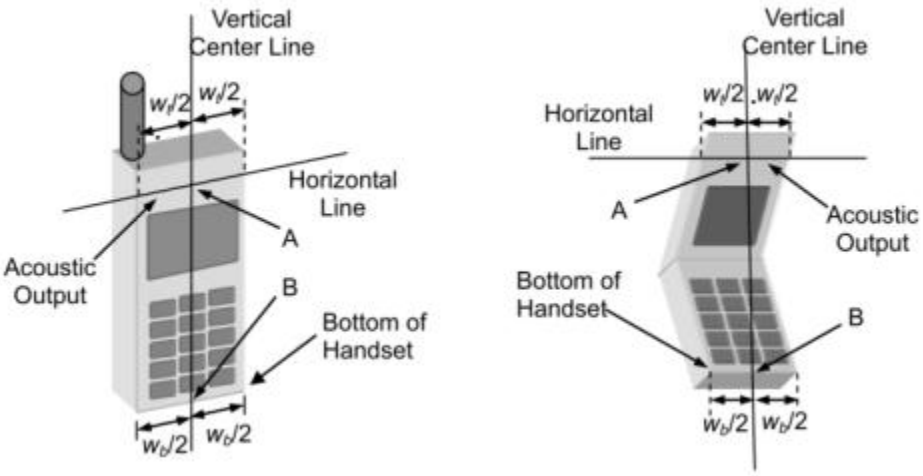
Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

6.1.1 Two Imaginary Lines on the Handset

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

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

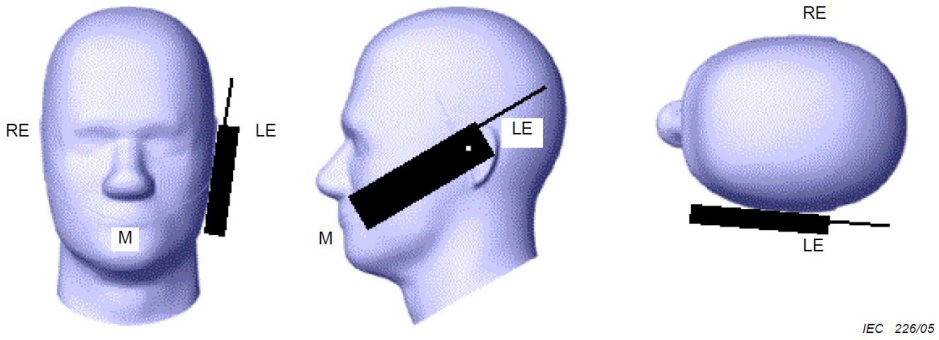
(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset,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



6.1.2 Cheek Position

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

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



6.1.3 Tilted Position

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

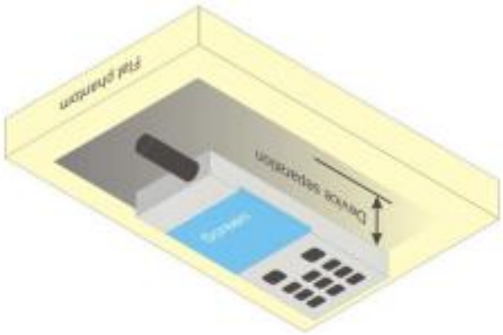
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

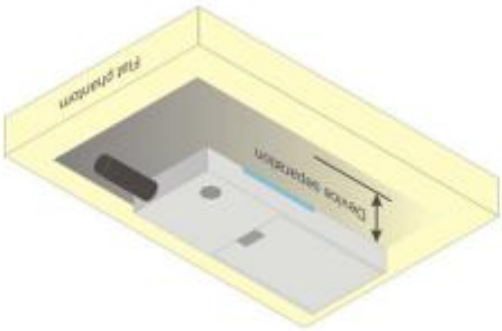
6.2 Body-worn Position Conditions

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

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

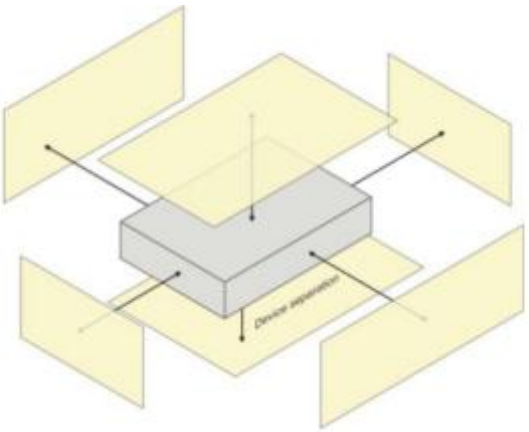
Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice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





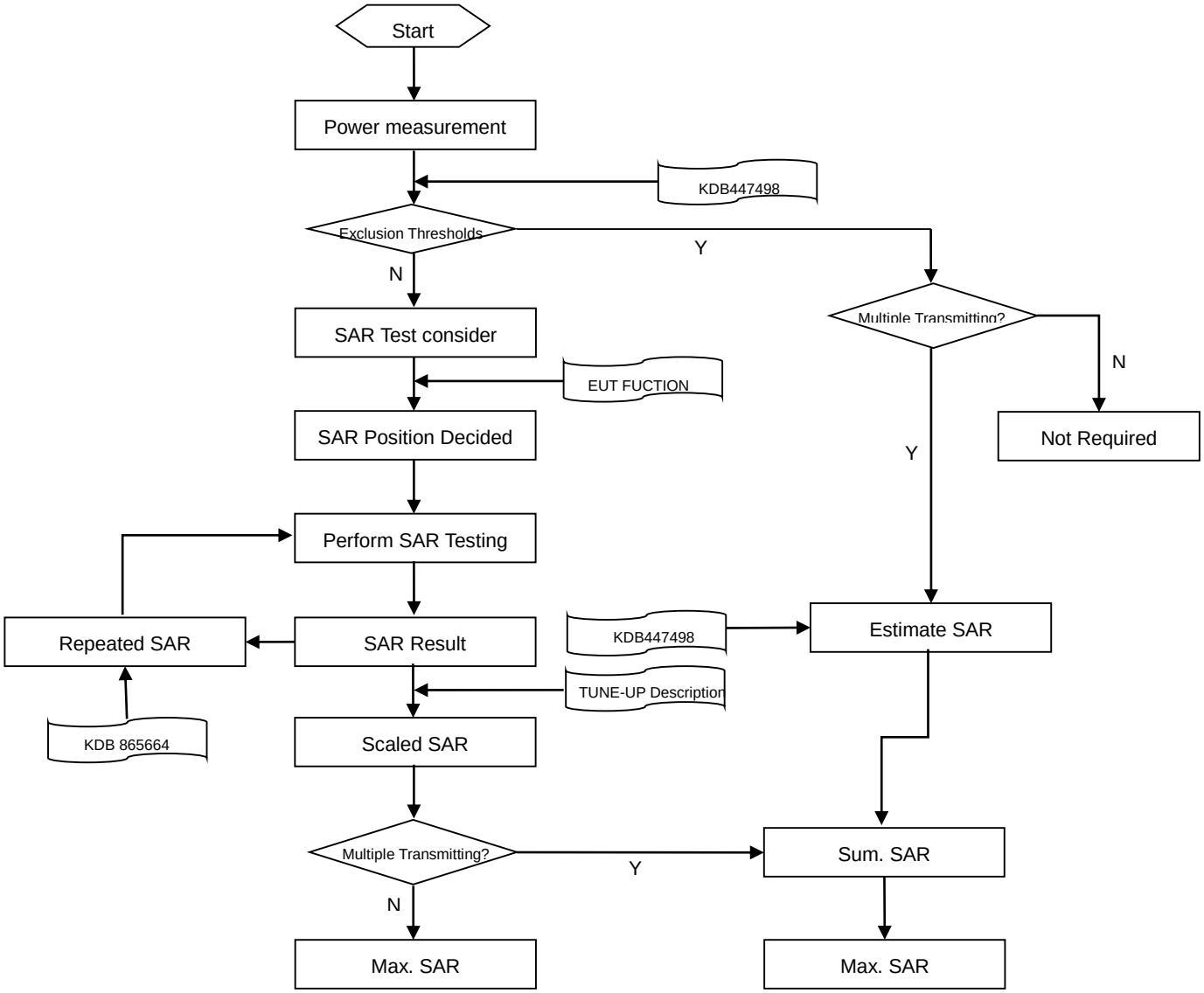
6.3 Hotspot Mode Exposure Position Conditions

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



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="2">≤ 4 mm</td><td>3–4 GHz: ≤ 3 mm</td></tr>
<tr><td>4–5 GHz: ≤ 2.5 mm</td></tr>
<tr><td>Δz Zoom (n>1): between subsequent points</td><td>5–6 GHz: ≤ 2 mm</td><td>≤ 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 CDMA

CDMA	BC0				BC1			
Channel	1013	384	777	Tune-up Limit (dBm)	25	600	1175	Tune-up Limit (dBm)
1xRTT RC1 SO55	25.28	25.17	23.50	25.50	23.63	23.64	23.26	24.00
1xRTT RC3 SO55	**25.32**	25.24	23.49	25.50	23.49	**23.56**	23.29	24.00
1xRTT RC3 SO32 （FCH）	25.12	**25.21**	23.47	25.50	23.45	**23.55**	23.23	24.00
1xRTT RC3 SO32 （SCH）	25.11	25.13	23.42	25.50	23.35	23.49	23.15	24.00
1xEVDO Rel.0 RTAP 153.6kbps	23.42	**23.53**	23.25	24.00	23.81	**23.81**	23.63	24.00
1xEVDO Rel.A RETAP: 4096	23.38	23.36	23.31	24.00	23.55	23.74	23.26	24.00
CDMA	BC10				-			
Channel	450	560	670	Tune-up Limit (dBm)	-	-	-	-
1xRTT RC1 SO55	24.73	24.86	24.76	25.00	-	-	-	-
1xRTT RC3 SO55	24.76	**24.95**	24.85	25.00	-	-	-	-
1xRTT RC3 SO32 （FCH）	24.70	**24.75**	24.69	25.00	-	-	-	-
1xRTT RC3 SO32 （SCH）	24.66	24.63	24.55	25.00	-	-	-	-
1xEVDO Rel.0 RTAP 153.6kbps	23.40	**23.45**	23.24	24.00	-	-	-	-
1xEVDO Rel.A RETAP: 4096	23.27	23.32	23.10	24.00	-	-	-	-

8.2 LTE

Note: LTE Band 2 / Band 5 SAR test was covered by Band 25 / Band 26; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if:

a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion

b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

FDD LTE Band 2									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18700	18900	19100		18700	18900	19100	
20 MHz	1 (RB_Pos:0)	24.24	24.54	24.29	25.00	23.47	23.57	23.30	24.00
	1 (RB_Pos:50)	**24.69**	24.68	24.29	25.00	23.48	23.34	22.78	24.00
	1 (RB_Pos:99)	24.22	24.48	24.10	25.00	23.01	22.86	22.67	24.00
	50 (RB_Pos:0)	23.45	23.41	23.24	24.00	22.53	22.33	22.20	23.00
	50 (RB_Pos:25)	23.47	23.35	23.25	24.00	22.65	22.45	22.32	23.00
	50 (RB_Pos:50)	23.29	23.27	23.20	24.00	22.40	22.46	22.27	23.00
	100 (RB_Pos:0)	23.37	23.25	23.37	24.00	22.48	22.43	22.25	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18675	18900	19125		18675	18900	19125	
15 MHz	1 (RB_Pos:0)	24.30	24.25	24.26	25.00	23.56	23.06	23.70	24.00
	1 (RB_Pos:38)	24.32	24.25	24.07	25.00	23.51	22.94	23.71	24.00
	1 (RB_Pos:74)	24.37	24.26	24.15	25.00	23.55	22.85	23.68	24.00
	36 (RB_Pos:0)	23.35	23.33	23.19	24.00	22.50	22.57	22.26	23.00
	36 (RB_Pos:20)	23.35	23.33	23.13	24.00	22.51	22.47	22.21	23.00
	36 (RB_Pos:39)	23.26	23.27	23.16	24.00	22.43	22.39	22.15	23.00
	75 (RB_Pos:0)	23.28	23.25	23.12	24.00	22.37	22.38	22.14	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18650	18900	19150		18650	18900	19150	
10 MHz	1 (RB_Pos:0)	24.58	24.25	24.35	25.00	23.19	23.81	23.23	24.00
	1 (RB_Pos:25)	24.46	24.52	24.14	25.00	23.77	23.31	23.28	24.00
	1 (RB_Pos:49)	24.58	24.36	24.20	25.00	23.54	23.04	23.17	24.00
	25 (RB_Pos:0)	23.39	23.32	23.04	24.00	22.47	22.62	22.30	23.00
	25 (RB_Pos:12)	23.39	23.39	23.07	24.00	22.48	22.70	22.32	23.00
	25 (RB_Pos:25)	23.35	23.31	23.14	24.00	22.44	22.49	22.30	23.00
	50 (RB_Pos:0)	23.32	23.26	23.13	24.00	22.38	22.45	22.22	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18625	18900	19175		18625	18900	19175	

5 MHz	1 (RB_Pos:0)	24.07	24.19	23.89	25.00	22.76	23.05	22.73	24.00
	1 (RB_Pos:13)	24.18	23.99	24.02	25.00	22.92	22.86	22.64	24.00
	1 (RB_Pos:24)	24.10	24.15	24.27	25.00	22.99	22.85	22.77	24.00
	12 (RB_Pos:0)	23.14	23.26	23.11	24.00	22.33	22.38	22.16	23.00
	12 (RB_Pos:6)	23.29	23.17	23.10	24.00	22.23	22.20	22.14	23.00
	12 (RB_Pos:13)	23.28	23.25	23.13	24.00	22.23	22.26	22.19	23.00
	25 (RB_Pos:0)	23.20	23.30	23.06	24.00	22.50	22.33	22.21	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18615	18900	19185		18615	18900	19185	
3.0 MHz	1 (RB_Pos:0)	24.20	24.26	24.09	25.00	23.50	23.72	22.96	24.00
	1 (RB_Pos:8)	24.42	24.08	24.12	25.00	23.64	23.65	23.04	24.00
	1 (RB_Pos:14)	24.48	24.19	24.20	25.00	23.64	23.33	23.14	24.00
	8 (RB_Pos:0)	23.14	23.26	23.01	24.00	22.11	22.30	21.86	23.00
	8 (RB_Pos:3)	23.37	23.23	23.02	24.00	22.13	22.36	21.88	23.00
	8 (RB_Pos:7)	23.25	23.16	22.93	24.00	22.01	22.28	22.09	23.00
	15 (RB_Pos:0)	23.20	23.20	23.09	24.00	22.29	22.30	22.05	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	18607	18900	19193		18607	18900	19193	
1.4 MHz	1 (RB_Pos:0)	24.13	23.99	24.16	25.00	23.26	23.40	23.09	24.00
	1 (RB_Pos:3)	24.29	24.13	24.07	25.00	23.45	23.46	23.13	24.00
	1 (RB_Pos:5)	24.25	24.27	24.01	25.00	23.04	22.83	23.24	24.00
	3 (RB_Pos:0)	24.08	24.28	24.09	25.00	23.05	23.10	23.23	24.00
	3 (RB_Pos:1)	24.22	24.29	24.09	25.00	23.30	23.17	23.25	24.00
	3 (RB_Pos:3)	24.22	24.24	24.12	25.00	23.22	23.11	23.17	24.00
	6 (RB_Pos:0)	23.21	23.25	23.05	24.00	22.02	22.04	22.34	23.00

FDD LTE Band 4									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20050	20175	20300		20050	20175	20300	
20 MHz	1 (RB_Pos:0)	24.34	24.66	24.37	25.00	23.58	23.00	23.96	24.00
	1 (RB_Pos:50)	24.55	24.60	24.64	25.00	23.09	22.65	23.40	24.00
	1 (RB_Pos:99)	24.18	**24.80**	24.50	25.00	22.97	23.32	23.87	24.00
	50 (RB_Pos:0)	23.49	23.27	23.55	24.00	22.58	22.29	22.50	23.00
	50 (RB_Pos:25)	23.38	23.24	23.53	24.00	22.39	22.14	22.48	23.00
	50 (RB_Pos:50)	23.32	23.45	23.43	24.00	22.36	22.55	22.48	23.00
	100 (RB_Pos:0)	23.42	23.45	23.37	24.00	22.46	22.29	22.27	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19275	19575	19875		19275	19575	19875	
15 MHz	1 (RB_Pos:0)	24.37	24.46	24.58	25.00	23.45	24.02	24.18	25.00
	1 (RB_Pos:38)	24.43	24.39	24.68	25.00	23.58	23.80	24.46	25.00
	1 (RB_Pos:74)	24.46	24.45	24.45	25.00	23.59	23.71	24.03	25.00
	36 (RB_Pos:0)	23.46	23.45	23.85	24.00	22.43	22.65	22.24	23.00
	36 (RB_Pos:20)	23.29	23.26	23.63	24.00	22.38	22.38	22.52	23.00
	36 (RB_Pos:39)	23.27	23.18	23.53	24.00	22.28	22.47	22.59	23.00
	75 (RB_Pos:0)	23.36	23.70	23.38	24.00	22.56	22.64	22.48	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19250	19575	19900		19250	19575	19900	
10 MHz	1 (RB_Pos:0)	24.40	24.56	24.61	25.00	23.28	23.79	23.60	24.00
	1 (RB_Pos:25)	24.32	24.62	24.72	25.00	23.56	23.75	23.62	24.00
	1 (RB_Pos:49)	24.37	24.52	24.76	25.00	23.36	23.84	23.50	24.00
	25 (RB_Pos:0)	23.44	23.25	23.44	24.00	22.42	22.52	22.50	23.00
	25 (RB_Pos:12)	23.30	23.36	23.60	24.00	22.39	22.34	22.64	23.00
	25 (RB_Pos:25)	23.45	23.24	23.56	24.00	22.26	22.53	22.74	23.00
	50 (RB_Pos:0)	23.50	23.49	23.41	24.00	22.48	22.60	22.44	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19225	19575	19925		19225	19575	19925	
5 MHz	1 (RB_Pos:0)	24.47	24.30	24.52	25.00	22.82	22.89	23.23	24.00
	1 (RB_Pos:13)	24.36	24.65	24.58	25.00	22.74	22.82	23.05	24.00
	1 (RB_Pos:24)	24.31	24.44	24.72	25.00	23.00	23.07	23.12	24.00
	12 (RB_Pos:0)	23.41	23.36	23.50	24.00	22.54	22.31	22.37	23.00
	12 (RB_Pos:6)	23.30	23.30	23.44	24.00	22.33	22.33	22.40	23.00
	12 (RB_Pos:13)	23.28	23.38	23.58	24.00	22.33	22.24	22.35	23.00
	25 (RB_Pos:0)	23.45	23.36	23.49	24.00	22.55	22.23	22.28	23.00

Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19215	19575	19935		19215	19575	19935	
3.0 MHz	1 (RB_Pos:0)	24.57	24.49	24.63	25.00	23.60	22.87	23.38	24.00
	1 (RB_Pos:8)	24.31	24.44	24.18	25.00	23.28	22.65	23.32	24.00
	1 (RB_Pos:14)	24.46	24.43	24.60	25.00	23.51	22.81	23.45	24.00
	8 (RB_Pos:0)	23.31	23.34	23.23	24.00	22.46	22.49	22.08	23.00
	8 (RB_Pos:3)	23.35	23.31	23.32	24.00	22.39	22.47	22.09	23.00
	8 (RB_Pos:7)	23.30	23.35	23.35	24.00	22.45	22.58	22.41	23.00
	15 (RB_Pos:0)	23.31	23.28	23.30	24.00	22.39	22.41	22.10	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	19207	19575	19943		19207	19575	19943	
1.4 MHz	1 (RB_Pos:0)	24.61	24.39	24.30	25.00	23.35	22.73	23.36	24.00
	1 (RB_Pos:3)	24.38	24.44	24.38	25.00	23.35	22.72	23.46	24.00
	1 (RB_Pos:5)	24.38	24.36	24.20	25.00	23.26	23.76	23.46	24.00
	3 (RB_Pos:0)	24.40	24.44	24.34	25.00	23.11	23.33	23.68	24.00
	3 (RB_Pos:1)	24.47	24.46	24.43	25.00	23.19	23.31	23.68	24.00
	3 (RB_Pos:3)	24.67	24.48	24.48	25.00	23.09	23.25	23.62	24.00
	6 (RB_Pos:0)	23.36	23.25	23.37	24.00	22.38	22.14	22.42	23.00

FDD LTE Band 5									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20450	20525	20600		20450	20525	20600	
10 MHz	1 (RB_Pos:0)	24.22	24.14	24.28	25.00	24.38	24.55	24.17	25.00
	1 (RB_Pos:25)	**24.35**	24.26	24.34	25.00	24.45	24.27	24.30	25.00
	1 (RB_Pos:49)	24.23	24.30	23.32	25.00	24.23	24.41	22.41	25.00
	25 (RB_Pos:0)	24.34	24.35	24.41	25.00	23.41	23.55	23.58	24.00
	25 (RB_Pos:12)	24.27	24.24	24.30	25.00	23.25	23.44	23.38	24.00
	25 (RB_Pos:25)	24.33	24.35	24.31	25.00	23.32	23.46	23.42	24.00
	50 (RB_Pos:0)	24.36	24.29	24.39	25.00	23.35	23.40	23.35	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20425	20525	20625		20425	20525	20625	
5MHz	1 (RB_Pos:0)	24.00	24.05	24.04	25.00	23.66	24.18	24.16	25.00
	1 (RB_Pos:13)	24.09	24.05	24.07	25.00	23.69	23.85	23.74	25.00
	1 (RB_Pos:24)	24.19	24.07	23.86	25.00	23.77	23.88	23.04	25.00
	12 (RB_Pos:0)	24.31	24.21	24.36	25.00	23.34	23.04	23.45	24.00
	12 (RB_Pos:6)	24.29	24.23	24.27	25.00	23.29	23.11	23.04	24.00
	12 (RB_Pos:13)	24.34	24.33	24.16	25.00	23.39	23.08	23.04	24.00
	25 (RB_Pos:0)	24.34	24.26	24.48	25.00	23.36	23.23	23.31	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20415	20525	20635		20415	20525	20635	
3.0 MHz	1 (RB_Pos:0)	24.39	24.27	24.22	25.00	24.34	24.01	23.70	25.00
	1 (RB_Pos:8)	24.33	24.13	24.04	25.00	24.31	24.36	23.36	25.00
	1 (RB_Pos:14)	24.09	24.35	23.96	25.00	24.28	23.85	23.05	25.00
	8 (RB_Pos:0)	24.17	24.25	24.41	25.00	23.48	23.30	23.56	24.00
	8 (RB_Pos:3)	24.28	24.27	24.24	25.00	23.52	23.42	23.40	24.00
	8 (RB_Pos:7)	24.22	24.32	24.07	25.00	23.48	23.46	23.24	24.00
	15 (RB_Pos:0)	24.22	24.32	24.26	25.00	23.51	23.34	23.21	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20407	20525	20643		20407	20525	20643	
1.4MHz	1 (RB_Pos:0)	24.24	24.15	24.15	25.00	24.16	23.80	23.26	25.00
	1 (RB_Pos:3)	24.34	24.17	24.17	25.00	24.28	23.74	23.22	25.00
	1 (RB_Pos:5)	24.44	24.19	24.03	25.00	24.16	23.69	23.14	25.00
	3 (RB_Pos:0)	24.32	24.25	24.14	25.00	24.25	23.63	23.38	25.00
	3 (RB_Pos:1)	24.34	24.29	24.11	25.00	24.37	24.44	23.36	25.00
	3 (RB_Pos:3)	24.38	24.34	24.03	25.00	24.34	24.13	23.28	25.00
	6 (RB_Pos:0)	24.19	24.36	24.04	25.00	23.49	22.98	23.35	24.00

FDD LTE Band 12									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	23060	23095	23130		23060	23095	23130	
10 MHz	1 (RB_Pos:0)	23.86	23.93	23.50	25.00	22.91	23.29	22.56	24.00
	1 (RB_Pos:25)	24.18	24.26	24.74	25.00	23.52	23.68	23.82	24.00
	1 (RB_Pos:49)	23.52	24.20	23.64	25.00	22.53	23.64	22.74	24.00
	25 (RB_Pos:0)	24.38	24.10	24.09	25.00	23.54	23.23	23.30	24.00
	25 (RB_Pos:12)	23.98	24.21	24.64	25.00	23.09	23.36	23.85	24.00
	25 (RB_Pos:25)	24.06	24.23	24.14	25.00	23.06	23.38	23.34	24.00
	50 (RB_Pos:0)	24.12	24.14	24.19	25.00	23.15	23.08	23.08	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	23035	23095	23155		23035	23095	23155	
5MHz	1 (RB_Pos:0)	23.95	23.70	23.93	25.00	23.49	23.61	23.69	24.00
	1 (RB_Pos:13)	24.18	23.85	24.07	25.00	23.56	23.58	23.65	24.00
	1 (RB_Pos:24)	24.09	24.11	23.75	25.00	23.43	23.66	23.05	24.00
	12 (RB_Pos:0)	24.01	24.04	24.11	25.00	22.89	23.01	23.09	24.00
	12 (RB_Pos:6)	24.08	24.09	23.99	25.00	22.98	23.17	23.06	24.00
	12 (RB_Pos:13)	24.04	24.12	23.88	25.00	22.95	23.21	22.90	24.00
	25 (RB_Pos:0)	24.06	24.18	24.03	25.00	23.10	23.08	23.05	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	23025	23095	23165		23025	23095	23165	
3.0 MHz	1 (RB_Pos:0)	24.05	24.05	24.01	25.00	23.53	23.50	23.96	24.00
	1 (RB_Pos:8)	24.15	24.01	23.81	25.00	23.75	23.45	23.77	24.00
	1 (RB_Pos:14)	24.22	24.06	23.84	25.00	23.65	23.71	23.32	24.00
	8 (RB_Pos:0)	23.92	24.20	24.18	25.00	23.20	23.37	23.11	24.00
	8 (RB_Pos:3)	24.05	24.11	24.08	25.00	23.32	23.41	22.90	24.00
	8 (RB_Pos:7)	24.01	24.11	23.98	25.00	23.30	23.41	22.65	24.00
	15 (RB_Pos:0)	24.06	24.19	24.06	25.00	23.29	23.34	22.89	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	23017	23095	23173		23017	23095	23173	
1.4MHz	1 (RB_Pos:0)	23.90	23.89	23.87	25.00	23.80	23.65	23.69	24.00
	1 (RB_Pos:3)	24.00	24.03	23.86	25.00	23.95	23.73	23.54	24.00
	1 (RB_Pos:5)	24.15	23.98	23.91	25.00	23.93	23.71	23.41	24.00
	3 (RB_Pos:0)	23.93	24.17	24.09	25.00	23.77	23.47	23.80	24.00
	3 (RB_Pos:1)	24.03	24.13	24.16	25.00	23.87	23.53	23.71	24.00
	3 (RB_Pos:3)	24.00	24.20	24.13	25.00	23.86	23.48	23.58	24.00
	6 (RB_Pos:0)	23.95	24.21	24.10	25.00	23.11	23.22	23.71	24.00

FDD LTE Band 13									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	23060				23060			
10 MHz	1 (RB_Pos:0)	22.53			23.00	21.44			22.00
	1 (RB_Pos:25)	**24.29**			25.00	23.25			24.00
	1 (RB_Pos:49)	23.16			24.00	22.12			23.00
	25 (RB_Pos:0)	23.58			24.00	22.65			23.00
	25 (RB_Pos:12)	24.14			25.00	23.23			24.00
	25 (RB_Pos:25)	24.05			25.00	23.13			24.00
	50 (RB_Pos:0)	23.81			24.00	22.87			23.00
Bandwidth (MHz)	RB Set	Powaser (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	23205	23230	23255		23205	23230	23255	
5MHz	1 (RB_Pos:0)	22.94	23.55	24.14	25.00	22.06	23.03	23.26	24.00
	1 (RB_Pos:13)	23.84	24.34	24.42	25.00	23.00	23.87	23.56	24.00
	1 (RB_Pos:24)	24.00	24.24	23.74	25.00	23.22	23.77	22.92	24.00
	12 (RB_Pos:0)	23.49	23.87	24.29	25.00	22.61	23.07	23.42	24.00
	12 (RB_Pos:6)	23.77	24.22	24.33	25.00	22.90	23.44	23.45	24.00
	12 (RB_Pos:13)	23.85	24.27	24.08	25.00	22.99	23.49	23.21	24.00
	25 (RB_Pos:0)	23.65	24.07	24.18	25.00	22.76	23.22	23.23	24.00

FDD LTE Band 25									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26140	26365	26590		26140	26365	26590	
20 MHz	1 (RB_Pos:0)	24.33	24.47	24.37	25.00	23.35	23.45	23.59	24.00
	1 (RB_Pos:50)	24.43	**24.53**	24.51	25.00	23.06	23.44	23.33	24.00
	1 (RB_Pos:99)	24.28	24.42	23.10	25.00	22.75	23.30	22.61	24.00
	50 (RB_Pos:0)	23.36	23.48	23.44	24.00	22.29	22.59	22.51	23.00
	50 (RB_Pos:25)	23.39	23.48	23.26	24.00	22.50	22.62	22.43	23.00
	50 (RB_Pos:50)	23.26	23.34	23.27	24.00	22.46	22.43	22.37	23.00
	100 (RB_Pos:0)	23.31	23.37	23.37	24.00	22.43	22.46	22.39	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26115	26365	26615		26115	26365	26615	
15 MHz	1 (RB_Pos:0)	24.33	24.40	24.15	25.00	23.55	22.98	23.70	24.00
	1 (RB_Pos:38)	24.09	24.43	24.22	25.00	23.32	22.91	23.76	24.00
	1 (RB_Pos:74)	24.26	24.51	23.15	25.00	23.44	23.72	22.65	24.00
	36 (RB_Pos:0)	23.40	23.52	23.40	24.00	22.48	22.57	22.55	23.00
	36 (RB_Pos:20)	23.30	23.35	23.30	24.00	22.39	22.49	22.30	23.00
	36 (RB_Pos:39)	23.24	23.31	23.25	24.00	22.42	22.43	22.18	23.00
	75 (RB_Pos:0)	23.27	23.30	23.28	24.00	22.37	22.54	22.30	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26090	26365	26640		26090	26365	26640	
10 MHz	1 (RB_Pos:0)	24.59	24.31	24.48	25.00	23.53	23.60	23.35	24.00
	1 (RB_Pos:25)	24.39	24.30	24.51	25.00	23.71	23.20	23.24	24.00
	1 (RB_Pos:49)	24.26	24.43	22.99	25.00	23.42	23.03	22.09	24.00
	25 (RB_Pos:0)	23.44	23.52	23.42	24.00	22.34	22.44	22.74	23.00
	25 (RB_Pos:12)	23.33	23.45	23.02	24.00	22.33	22.38	22.25	23.00
	25 (RB_Pos:25)	23.30	23.37	23.24	24.00	22.31	22.36	22.30	23.00
	50 (RB_Pos:0)	23.37	23.33	23.28	24.00	22.35	22.54	22.40	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26065	26365	26665		26065	26365	26665	
5 MHz	1 (RB_Pos:0)	24.18	24.16	24.22	25.00	22.95	23.32	23.65	24.00
	1 (RB_Pos:13)	24.27	24.26	24.15	25.00	22.67	22.91	23.13	24.00
	1 (RB_Pos:24)	24.22	24.33	23.29	25.00	22.58	22.94	22.59	24.00
	12 (RB_Pos:0)	23.31	23.36	23.28	24.00	22.47	22.41	22.44	23.00
	12 (RB_Pos:6)	23.22	23.29	23.23	24.00	22.39	22.43	22.34	23.00
	12 (RB_Pos:13)	23.31	23.33	23.23	24.00	22.48	22.39	22.25	23.00
	25 (RB_Pos:0)	23.35	23.30	23.34	24.00	22.56	22.45	22.35	23.00

Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26055	26365	26675		26055	26365	26675	
3.0 MHz	1 (RB_Pos:0)	24.18	24.33	24.35	25.00	23.53	23.01	23.51	24.00
	1 (RB_Pos:8)	24.20	24.15	24.15	25.00	23.42	22.76	23.19	24.00
	1 (RB_Pos:14)	24.44	24.48	23.21	25.00	23.47	22.80	22.40	24.00
	8 (RB_Pos:0)	23.32	23.36	23.44	24.00	22.67	22.52	22.49	23.00
	8 (RB_Pos:3)	23.29	23.37	23.31	24.00	22.54	22.53	22.38	23.00
	8 (RB_Pos:7)	23.23	23.44	23.44	24.00	22.51	22.40	22.46	23.00
	15 (RB_Pos:0)	23.31	23.31	23.50	24.00	22.53	22.43	22.50	23.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26047	26365	26683		26047	26365	26683	
1.4 MHz	1 (RB_Pos:0)	24.41	24.25	24.11	25.00	23.07	23.09	23.02	24.00
	1 (RB_Pos:3)	24.25	24.31	23.67	25.00	23.19	23.19	22.72	24.00
	1 (RB_Pos:5)	24.17	24.25	23.26	25.00	23.14	22.92	22.43	24.00
	3 (RB_Pos:0)	24.08	24.33	23.77	25.00	22.90	22.72	23.11	24.00
	3 (RB_Pos:1)	24.21	24.45	23.51	25.00	22.94	22.66	22.90	24.00
	3 (RB_Pos:3)	24.21	24.39	23.30	25.00	22.86	22.57	22.72	24.00
	6 (RB_Pos:0)	23.31	23.38	23.45	24.00	22.14	22.22	22.89	23.00

FDD LTE Band 26									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26765	26865	26965		26765	26865	26965	
15 MHz	1 (RB_Pos:0)	24.24	24.16	24.21	25.00	23.35	24.12	24.01	25.00
	1 (RB_Pos:38)	**24.34**	24.03	24.12	25.00	24.29	24.46	24.32	25.00
	1 (RB_Pos:74)	24.33	24.23	22.69	25.00	23.57	23.94	22.12	25.00
	36 (RB_Pos:0)	24.23	24.18	24.28	25.00	23.21	23.32	23.36	24.00
	36 (RB_Pos:20)	24.15	24.27	24.22	25.00	23.12	23.19	23.38	24.00
	36 (RB_Pos:39)	24.12	24.27	24.11	25.00	23.14	23.22	23.20	24.00
	75 (RB_Pos:0)	24.11	24.26	24.22	25.00	23.05	23.22	23.32	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26740	26865	26990		26740	26865	26990	
10 MHz	1 (RB_Pos:0)	23.98	24.13	24.35	25.00	23.22	24.00	23.49	25.00
	1 (RB_Pos:25)	24.33	24.18	24.42	25.00	24.40	24.06	23.66	25.00
	1 (RB_Pos:49)	24.02	24.17	22.58	25.00	23.55	23.69	21.67	25.00
	25 (RB_Pos:0)	24.07	24.23	24.59	25.00	22.97	23.44	23.89	24.00
	25 (RB_Pos:12)	24.14	24.25	24.16	25.00	22.95	23.46	23.25	24.00
	25 (RB_Pos:25)	24.13	24.27	23.75	25.00	23.05	23.39	22.94	24.00
	50 (RB_Pos:0)	24.09	24.24	24.26	25.00	22.99	23.36	23.40	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26715	26865	27015		26715	26865	27015	
5 MHz	1 (RB_Pos:0)	23.81	24.00	24.23	25.00	23.64	24.05	23.46	25.00
	1 (RB_Pos:13)	23.79	24.18	23.86	25.00	23.72	24.33	23.01	25.00
	1 (RB_Pos:24)	23.89	24.25	23.10	25.00	23.63	24.34	22.31	25.00
	12 (RB_Pos:0)	23.93	24.19	24.16	25.00	22.97	23.24	23.31	24.00
	12 (RB_Pos:6)	24.08	24.28	23.85	25.00	22.94	23.10	23.00	24.00
	12 (RB_Pos:13)	24.02	24.21	23.45	25.00	22.99	23.18	22.63	24.00
	25 (RB_Pos:0)	24.01	24.19	23.79	25.00	23.14	23.19	22.89	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26705	26865	27025		26705	26865	27025	
3.0 MHz	1 (RB_Pos:0)	24.02	24.14	23.90	25.00	23.85	23.75	22.95	25.00
	1 (RB_Pos:8)	23.88	24.06	23.52	25.00	24.21	23.73	22.60	25.00
	1 (RB_Pos:14)	24.24	24.11	23.16	25.00	24.11	24.51	22.28	25.00
	8 (RB_Pos:0)	24.08	24.26	23.67	25.00	23.33	23.49	22.83	24.00
	8 (RB_Pos:3)	24.25	24.29	23.51	25.00	23.17	23.54	22.67	24.00
	8 (RB_Pos:7)	24.00	24.26	23.34	25.00	23.07	23.19	22.52	24.00
	15 (RB_Pos:0)	24.15	24.24	23.52	25.00	23.03	23.16	22.59	24.00

Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	26697	26865	27033		26697	26865	27033	
1.4 MHz	1 (RB_Pos:0)	24.20	24.20	23.42	25.00	23.96	23.86	22.46	25.00
	1 (RB_Pos:3)	24.17	24.06	23.36	25.00	24.06	23.79	22.43	25.00
	1 (RB_Pos:5)	24.18	24.30	23.20	25.00	23.97	23.74	22.34	25.00
	3 (RB_Pos:0)	24.12	24.19	23.32	25.00	24.07	24.24	22.58	25.00
	3 (RB_Pos:1)	24.11	24.22	23.31	25.00	24.06	24.22	22.58	25.00
	3 (RB_Pos:3)	24.09	24.17	23.23	25.00	24.06	24.14	22.49	25.00
	6 (RB_Pos:0)	24.11	24.25	23.28	25.00	23.34	23.02	22.61	24.00

TDD LTE Band 41-Class 2 Power													
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39750	40185	40620	41055	41490		39750	40185	40620	41055	41490	
20MHz	1 (RB_Pos:0)	26.56	26.68	26.51	26.63	26.34	27.50	26.05	25.69	25.16	25.82	25.46	26.50
	1 (RB_Pos:50)	26.76	**27.05**	26.79	26.83	26.74	27.50	26.00	25.99	25.20	26.15	25.72	26.50
	1 (RB_Pos:99)	26.74	26.46	26.32	26.57	26.27	27.50	25.82	25.40	24.69	25.99	25.34	26.50
	50 (RB_Pos:0)	25.71	25.82	25.92	25.67	25.87	26.00	24.81	24.87	24.76	24.79	24.77	25.50
	50 (RB_Pos:25)	25.69	25.86	25.65	25.86	25.84	26.00	25.01	25.00	24.77	25.00	24.79	25.50
	50 (RB_Pos:50)	25.61	25.57	25.57	25.64	25.47	26.00	24.70	24.64	24.68	24.72	24.71	25.50
	100 (RB_Pos:0)	25.58	25.67	25.66	25.65	25.63	26.00	24.65	24.75	24.60	24.68	24.75	25.00
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39725	40160	40620	41080	41515		39725	40160	40620	41080	41515	
15MHz	1 (RB_Pos:0)	26.36	26.82	26.55	26.28	26.52	27.00	25.87	25.29	25.85	26.02	25.19	26.50
	1 (RB_Pos:38)	26.67	26.80	26.50	26.73	26.57	27.00	25.94	25.31	25.68	26.08	25.04	26.50
	1 (RB_Pos:74)	26.46	26.69	26.36	26.31	26.56	27.00	25.98	25.21	25.51	25.84	25.02	26.50
	36 (RB_Pos:0)	25.66	25.74	25.74	25.72	25.59	26.00	24.58	24.79	24.94	24.67	24.70	25.00
	36 (RB_Pos:20)	25.72	25.75	25.70	25.81	25.60	26.00	24.64	24.85	24.98	24.79	24.82	25.00
	36 (RB_Pos:39)	25.59	25.59	25.54	25.62	25.45	26.00	24.54	24.76	24.55	24.58	24.60	25.00
	75 (RB_Pos:0)	25.70	25.62	25.64	25.66	25.55	26.00	24.54	24.79	24.63	24.67	24.70	25.00
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39700	40135	40620	41105	41540		39700	40135	40620	41105	41540	
10MHz	1 (RB_Pos:0)	26.63	26.75	26.53	26.32	26.53	27.00	26.16	25.25	26.21	25.84	25.08	27.00
	1 (RB_Pos:25)	26.69	26.85	26.40	26.62	26.74	27.00	26.50	25.12	26.70	26.28	25.09	27.00
	1 (RB_Pos:49)	26.70	26.63	26.50	26.36	26.56	27.00	25.85	25.01	26.15	25.94	24.93	27.00
	25 (RB_Pos:0)	25.78	25.68	25.83	25.70	25.80	26.00	24.82	24.59	24.92	24.75	24.54	25.00
	25 (RB_Pos:12)	25.95	25.70	25.66	25.78	25.76	26.00	24.90	24.76	24.68	24.87	24.57	25.00
	25 (RB_Pos:25)	25.64	25.64	25.60	25.63	25.48	26.00	24.75	24.62	24.54	24.73	24.45	25.00
	50 (RB_Pos:0)	25.61	25.64	25.60	25.58	25.48	26.00	24.70	24.75	24.56	24.58	24.56	25.00
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39675	40110	40620	41130	41565		39675	40110	40620	41130	41565	
5MHz	1 (RB_Pos:0)	26.48	26.63	26.45	26.43	26.38	27.00	25.44	25.34	25.76	25.53	25.06	26.00
	1 (RB_Pos:13)	26.66	26.81	26.58	26.57	26.52	27.00	25.63	25.29	25.62	25.74	25.11	26.00
	1 (RB_Pos:24)	26.61	26.65	26.36	26.39	26.45	27.00	25.52	25.13	25.39	25.56	24.91	26.00
	12 (RB_Pos:0)	25.74	25.79	25.71	25.76	25.69	26.00	24.84	24.79	24.71	24.83	24.59	25.00
	12 (RB_Pos:6)	25.79	25.76	25.78	25.82	25.69	26.00	24.91	24.89	24.79	24.94	24.57	25.00
	12 (RB_Pos:13)	25.75	25.90	25.68	25.73	25.58	26.00	24.89	24.91	24.70	24.86	24.49	25.00
	25 (RB_Pos:0)	25.69	25.88	25.68	25.73	25.64	26.00	24.91	24.87	24.64	24.87	24.82	25.00

TDD LTE Band 41-Class 3 Power													
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39750	40185	40620	41055	41490		39750	40185	40620	41055	41490	
20MHz	1 (RB_Pos:0)	23.68	24.05	24.39	23.96	23.84	25.00	23.86	23.38	24.45	23.94	23.28	25.00
	1 (RB_Pos:50)	24.07	**24.63**	24.54	24.12	23.91	25.00	24.12	23.66	24.63	24.42	23.33	25.00
	1 (RB_Pos:99)	23.67	23.88	24.28	23.63	23.54	25.00	23.52	23.33	24.58	23.68	23.04	25.00
	50 (RB_Pos:0)	24.07	24.19	24.28	24.22	23.87	25.00	24.13	24.03	24.32	24.19	23.88	25.00
	50 (RB_Pos:25)	24.14	24.15	24.27	24.28	23.87	25.00	24.03	24.19	24.39	24.15	24.03	25.00
	50 (RB_Pos:50)	23.97	24.22	24.19	23.99	23.76	25.00	23.99	24.25	24.25	23.99	23.75	25.00
	100 (RB_Pos:0)	24.00	24.14	24.27	23.99	23.78	25.00	24.02	24.09	24.19	24.01	23.71	25.00
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39725	40160	40620	41080	41515		39725	40160	40620	41080	41515	
15MHz	1 (RB_Pos:0)	23.97	24.05	24.21	23.99	23.70	24.50	24.12	24.43	23.70	24.09	24.02	25.00
	1 (RB_Pos:38)	24.26	24.27	24.28	24.02	23.86	24.50	24.36	24.50	24.17	24.08	24.13	25.00
	1 (RB_Pos:74)	23.93	24.19	24.29	23.73	23.75	24.50	23.88	24.50	23.61	23.89	24.04	25.00
	36 (RB_Pos:0)	24.01	24.16	24.24	24.09	23.95	24.50	23.88	23.97	24.21	24.03	23.83	25.00
	36 (RB_Pos:20)	23.99	24.14	24.20	24.24	24.00	24.50	23.84	24.12	24.30	24.26	23.80	25.00
	36 (RB_Pos:39)	23.91	24.15	24.12	23.99	23.84	24.50	23.84	23.95	24.18	24.01	23.67	25.00
	75 (RB_Pos:0)	24.00	24.11	24.34	23.98	23.83	24.50	23.93	24.23	24.25	24.07	23.87	25.00
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39700	40135	40620	41105	41540		39700	40135	40620	41105	41540	
10MHz	1 (RB_Pos:0)	24.68	23.88	24.18	23.93	23.72	25.00	24.94	24.27	23.54	24.26	24.05	25.50
	1 (RB_Pos:25)	24.91	24.13	24.37	24.03	23.81	25.00	25.25	24.26	23.68	24.32	24.14	25.50
	1 (RB_Pos:49)	23.97	24.06	24.45	23.76	23.68	25.00	24.13	24.30	23.52	24.15	24.01	24.50
	25 (RB_Pos:0)	24.14	24.10	24.20	24.09	23.95	25.00	24.13	24.11	24.01	24.10	24.03	24.50
	25 (RB_Pos:12)	24.17	24.14	24.25	24.10	23.88	25.00	24.23	24.12	24.15	24.12	23.96	24.50
	25 (RB_Pos:25)	23.99	24.10	24.25	23.97	23.65	25.00	23.97	24.15	24.24	23.99	23.78	24.50
	50 (RB_Pos:0)	24.08	24.09	24.21	23.97	23.76	25.00	24.14	23.89	24.14	24.01	23.86	24.50
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39675	40110	40620	41130	41565		39675	40110	40620	41130	41565	
5MHz	1 (RB_Pos:0)	24.15	23.92	23.88	23.82	23.63	24.50	23.51	23.81	23.99	23.54	23.78	24.50
	1 (RB_Pos:13)	24.16	23.96	24.10	24.15	23.64	24.50	23.52	23.54	23.88	23.56	23.68	24.50
	1 (RB_Pos:24)	23.94	23.84	23.92	23.66	23.50	24.50	23.40	23.50	23.87	23.25	23.26	24.50
	12 (RB_Pos:0)	24.08	24.02	24.09	23.90	23.72	24.50	23.84	23.88	24.10	23.75	23.73	24.50
	12 (RB_Pos:6)	24.10	24.17	24.20	23.97	23.72	24.50	23.91	23.99	24.22	23.83	23.64	24.50
	12 (RB_Pos:13)	24.11	23.99	24.11	23.90	23.63	24.50	23.87	23.90	24.13	23.75	23.54	24.50
	25 (RB_Pos:0)	24.12	24.06	24.10	23.87	23.71	24.50	24.18	24.00	24.03	23.79	23.63	24.50

FDD LTE Band 71									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	133222	133297	133372		133222	133297	133372	
20 MHz	1 (RB_Pos:0)	23.47	23.29	24.19	25.00	22.94	22.73	24.24	25.00
	1 (RB_Pos:50)	24.72	**24.80**	24.31	25.00	24.42	24.40	23.72	25.00
	1 (RB_Pos:99)	24.07	24.46	24.18	25.00	23.81	23.80	24.11	25.00
	50 (RB_Pos:0)	24.18	24.38	24.28	25.00	23.09	23.43	23.15	24.00
	50 (RB_Pos:25)	24.37	24.36	24.39	25.00	23.31	23.38	23.31	24.00
	50 (RB_Pos:50)	24.38	24.35	24.40	25.00	23.20	23.18	23.38	24.00
	100 (RB_Pos:0)	24.27	24.37	24.39	25.00	23.12	23.39	23.29	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	133197	133297	133397		133197	133297	133397	
15 MHz	1 (RB_Pos:0)	23.86	24.07	24.25	25.00	22.78	23.81	24.38	25.00
	1 (RB_Pos:38)	24.48	24.20	24.32	25.00	23.47	23.90	24.51	25.00
	1 (RB_Pos:74)	24.53	24.19	24.35	25.00	24.48	23.66	24.50	25.00
	36 (RB_Pos:0)	24.17	24.40	24.26	25.00	23.42	23.55	23.02	24.00
	36 (RB_Pos:20)	24.33	24.29	24.41	25.00	23.34	23.42	23.42	24.00
	36 (RB_Pos:39)	24.33	24.41	24.45	25.00	23.34	23.37	23.53	24.00
	75 (RB_Pos:0)	24.22	24.38	24.32	25.00	23.14	23.39	23.33	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	133172	133297	133422		133172	133297	133422	
10 MHz	1 (RB_Pos:0)	23.90	24.09	24.14	25.00	22.81	23.92	24.01	25.00
	1 (RB_Pos:25)	24.78	24.44	24.50	25.00	23.78	24.20	24.64	25.00
	1 (RB_Pos:49)	24.03	24.19	24.23	25.00	23.02	23.85	24.58	25.00
	25 (RB_Pos:0)	24.49	24.31	24.31	25.00	23.59	23.52	23.39	24.00
	25 (RB_Pos:12)	24.23	24.32	24.45	25.00	23.05	23.43	23.61	24.00
	25 (RB_Pos:25)	24.37	24.25	24.44	25.00	23.14	23.17	23.60	24.00
	50 (RB_Pos:0)	24.35	24.32	24.35	25.00	23.28	23.14	23.47	24.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	133147	133297	133447		133147	133297	133447	
5 MHz	1 (RB_Pos:0)	23.98	24.05	24.10	25.00	23.68	24.14	24.06	25.00
	1 (RB_Pos:13)	24.15	24.04	24.23	25.00	23.71	24.22	24.19	25.00
	1 (RB_Pos:24)	23.94	24.02	24.27	25.00	23.50	23.57	24.17	25.00
	12 (RB_Pos:0)	24.17	24.26	24.34	25.00	23.02	23.28	23.26	24.00
	12 (RB_Pos:6)	24.29	24.20	24.50	25.00	23.05	23.13	23.42	24.00
	12 (RB_Pos:13)	24.19	24.21	24.37	25.00	23.15	23.14	23.36	24.00
	25 (RB_Pos:0)	24.19	24.26	24.34	25.00	23.21	23.29	23.40	24.00

8.3 WIFI

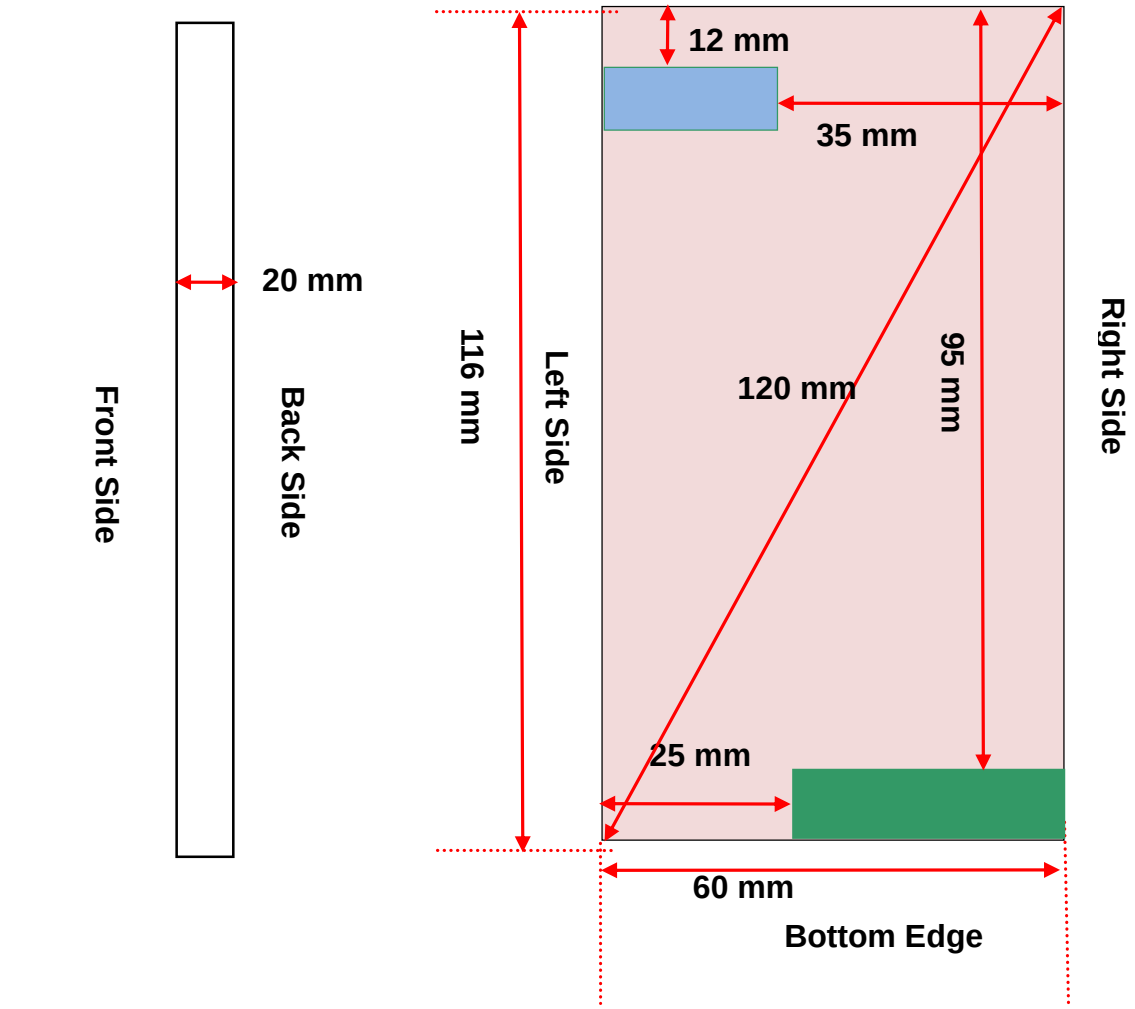
8.3.1 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Peak Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	15.16	16.0	Yes
		6	2437	**15.60**	16.0	Yes
		11	2462	15.26	16.0	Yes
	802.11g	1	2412	14.30	15.5	No
		6	2437	14.86	15.5	No
		11	2462	15.15	15.5	No
	802.11n(HT20)	1	2412	13.50	14.5	No
		6	2437	14.15	14.5	No
		11	2462	14.20	14.5	No

8.4 Bluetooth

Mode	GFSK			π/4-DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Peak Power (dBm)	9.36	**9.76**	9.06	8.73	9.12	8.46
Tune-Up Limit (dBm)	10.00			9.50		
Mode	8-DPSK			BLE		
Channel	0	39	78	0	19	39
Frequency (MHz)	2402	2441	2480	2402	2440	2480
Peak Power (dBm)	9.06	9.45	8.74	-1.64	-0.74	-1.43
Tune-Up Limit (dBm)	9.50			-0.50		

9 TEST EXCLUSION CONSIDERATION



WWAN Antenna

WLAN/BT Antenna

EUT Back View

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
CDMA BC0	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	1XRTT RC3SO55	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
	1XRTT RC3SO32	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
EVDO BC0	Rev0	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
CDMA BC1	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	1XRTT RC3SO55	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
	1XRTT RC3SO32	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
EVDO BC1	Rev0	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
CDMA BC10	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	1XRTT RC3SO55	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
	1XRTT RC3SO32	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
EVDO BC10	Rev0	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 2	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
LTE Band 4	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
LTE Band 5	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
LTE Band 12	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
LTE Band 13	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
LTE Band 25	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
LTE Band 26	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
LTE Band 41	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
LTE Band 71	Distance to User			<5mm	<5mm	25mm	<5mm	95mm	<5mm
	QPSK	25.00	316.23	Yes	Yes	Yes	Yes	No	Yes
WLAN 2.4 G	Distance to User			<5mm	<5mm	<5mm	35mm	12mm	85mm
	802.11b	16.00	39.81	Yes	Yes	Yes	No	Yes	No
	802.11g	15.50	35.48	No	No	No	No	No	No
	802.11n(HT20)	14.50	28.18	No	No	No	No	No	No
Bluetooth	Distance to User			<5mm	<5mm	<5mm	35mm	12mm	85mm
	BR/EDR	10.00	10.00	Yes	Yes	Yes	No	Yes	No

	BLE	-0.50	0.89	No	No	No	No	No	No

Note:

1. Maximum power is the source-based time-average power and represents the maximum RF output power including tune-up tolerance among production units
2. Per KDB 447498 D01, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. Per KDB 447498 D01, standalone SAR test exclusion threshold is applied; If the distance of the antenna to the user is < 5mm, 5mm is used to determine SAR exclusion threshold
4. Per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
   a. f(GHz) is the RF channel transmit frequency in GHz
   b. Power and distance are rounded to the nearest mW and mm before calculation
   c. The result is rounded to one decimal place for comparison
   d. For < 50 mm distance, we just calculate mW of the exclusion threshold value (3.0) to do compare.

   This formula is [3.0] / [√f(GHz)] ·[(min. test separation distance, mm)] = exclusion threshold of mW.
5. Per KDB 447498 D01, at 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following
   a. [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz
   b. [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz
6. Per KDB 941225 D01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA /HSUPA /DC-HSDPA output power is < 0.25dB higher than RMC12.2Kbps, or reported SAR with RMC 12.2kbps setting is ≤ 1.2W/kg, HSDPA/HSUPA/DC-HSDPA SAR evaluation can be excluded.
7. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion.8. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4dB higher than those measured at the lowest data rate
8. Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
   a. When KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
   b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

9.2 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 overall diagonal dimension is 12 cm, which is less than 16 cm, 10 g extremity SAR is not required.

10 TEST RESULT

10.1 CDMA BC0

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head											
1xRTT (RC3 SO55)	Left Cheek	0	1013	824.70	-0.12	0.434	25.32	25.50	1.042	**0.452**	1#
	Left Tilt	0	1013	824.70	0.14	0.198	25.32	25.50	1.042	0.206	/
	Right Cheek	0	1013	824.70	-0.01	0.411	25.32	25.50	1.042	0.428	/
	Right Tilt	0	1013	824.70	0.11	0.136	25.32	25.50	1.042	0.142	/
Body-worn Accessory(10mm)											
1xRTT (RC3 SO32)	Front Side	10	384	836.52	-0.09	0.452	25.21	25.50	1.069	0.483	/
	Back Side	10	384	836.52	-0.08	0.703	25.21	25.50	1.069	**0.752**	2#
Body-worn&Hotspot (10mm)											
EVDO Rel.0	Front Side	10	384	836.52	0.12	0.346	23.53	24.00	1.114	0.386	/
	Back Side	10	384	836.52	-0.18	0.577	23.53	24.00	1.114	**0.643**	3#
	Left Edge	10	384	836.52	-0.07	0.344	23.53	24.00	1.114	0.383	/
	Right Edge	10	384	836.52	-0.16	0.564	23.53	24.00	1.114	0.628	/
	Bottom Edge	10	384	836.52	-0.03	0.137	23.53	24.00	1.114	0.153	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.											

10.2CDMA BC1

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head											
1xRTT (RC3 SO55)	Left Cheek	0	600	1880.00	0.05	0.134	23.56	24.00	1.107	0.148	/
	Left Tilt	0	600	1880.00	0.04	0.060	23.56	24.00	1.107	0.067	/
	Right Cheek	0	600	1880.00	-0.06	0.202	23.56	24.00	1.107	**0.224**	4#
	Right Tilt	0	600	1880.00	-0.05	0.050	23.56	24.00	1.107	0.055	/
Body-worn Accessory (10mm)											
1xRTT (RC3 SO32)	Front Side	10	600	1880.00	0.11	0.215	23.55	24.00	1.109	0.238	/
	Back Side	10	600	1880.00	0.13	0.921	23.55	24.00	1.109	**1.022**	5#
		10	25	1851.25	0.19	0.894	23.45	24.00	1.135	1.015	/
		10	1175	1908.75	0.13	0.848	23.23	24.00	1.194	1.013	/
Hotspot (10mm)											
EVDO Rel.0	Front Side	10	600	1880.00	0.13	0.201	23.81	24.00	1.045	0.210	/
	Back Side	10	600	1880.00	0.14	0.905	23.81	24.00	1.045	**0.945**	6#
		10	25	1851.25	-0.12	0.843	23.81	24.00	1.045	0.881	/
		10	1175	1908.75	-0.08	0.805	23.63	24.00	1.089	0.877	/
	Left Edge	10	600	1880.00	-0.06	0.115	23.81	24.00	1.045	0.120	/
	Right Edge	10	600	1880.00	-0.16	0.716	23.81	24.00	1.045	0.748	/
	Bottom Edge	10	600	1880.00	-0.02	0.184	23.81	24.00	1.045	0.192	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.											

10.3CDMA BC10

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head											
1xRTT (RC3 SO55)	Left Cheek	0	560	820.00	-0.07	0.386	24.95	25.00	1.012	**0.390**	7#
	Left Tilt	0	560	820.00	0.03	0.168	24.95	25.00	1.012	0.170	/
	Right Cheek	0	560	820.00	0.02	0.351	24.95	25.00	1.012	0.355	/
	Right Tilt	0	560	820.00	0.13	0.122	24.95	25.00	1.012	0.123	/
Body-worn Accessory (10mm)											
1xRTT (RC3 SO32)	Front Side	10	560	820.00	0.07	0.469	24.75	25.00	1.059	0.497	/
	Back Side	10	560	820.00	-0.12	0.876	24.75	25.00	1.059	**0.928**	8#
		10	450	817.25	-0.09	0.773	24.70	25.00	1.072	0.828	/
		10	670	822.75	0.10	0.824	24.69	25.00	1.074	0.885	/
Hotspot (10mm)											
EVDO Rel.0	Front Side	10	560	820.00	0.01	0.375	23.45	24.00	1.135	0.426	/
	Back Side	10	560	820.00	0.03	0.699	23.45	24.00	1.135	**0.793**	9#
	Left Edge	10	560	820.00	0.09	0.350	23.45	24.00	1.135	0.397	/
	Right Edge	10	560	820.00	0.08	0.695	23.45	24.00	1.135	0.789	/
	Bottom Edge	10	560	820.00	0.14	0.155	23.45	24.00	1.135	0.176	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.											

10.4LTE Band 4 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	20175	1732.5	1	HIGH	0.03	0.044	24.80	25.00	1.047	0.046	/
		0	20300	1745.0	50	LOW	0.02	0.038	23.55	24.00	1.109	0.042	/
	Left Tilt	0	20175	1732.5	1	HIGH	0.06	0.013	24.80	25.00	1.047	0.014	/
		0	20300	1745.0	50	LOW	0.04	0.013	23.55	24.00	1.109	0.014	/
	Right Cheek	0	20175	1732.5	1	HIGH	0.04	0.126	24.80	25.00	1.047	**0.132**	10#
		0	20300	1745.0	50	LOW	0.01	0.114	23.55	24.00	1.109	0.126	/
	Right Tilt	0	20175	1732.5	1	HIGH	-0.05	0.035	24.80	25.00	1.047	0.037	/
		0	20300	1745.0	50	LOW	0.07	0.033	23.55	24.00	1.109	0.036	/
Body-worn&Hotspot (10mm)													
QPSK	Front Side	10	20175	1732.5	1	HIGH	0.01	0.191	24.80	25.00	1.047	0.200	/
		10	20300	1745.0	50	LOW	0.01	0.169	23.55	24.00	1.109	0.187	/
	Back Side	10	20175	1732.5	1	HIGH	0.16	0.991	24.80	25.00	1.047	1.038	/
		10	20050	1720.0	1	MID	-0.14	1.050	24.55	25.00	1.109	1.165	/
		10	20300	1745.0	1	MID	-0.01	1.120	24.64	25.00	1.086	**1.217**	11#
		10	20300	1745.0	50	LOW	0.11	0.825	23.55	24.00	1.109	0.915	/
		10	20050	1720.0	50	LOW	0.09	0.827	23.49	24.00	1.125	0.930	/
		10	20175	1732.5	50	HIGH	-0.05	0.908	23.45	24.00	1.135	1.031	/
		10	20175	1732.5	100	LOW	-0.06	0.827	23.45	24.00	1.135	0.939	/
	Left Edge	10	20175	1732.5	1	HIGH	-0.12	0.129	24.80	25.00	1.047	0.135	/
		10	20300	1745.0	50	LOW	-0.19	0.111	23.55	24.00	1.109	0.123	/
	Right Edge	10	20175	1732.5	1	HIGH	-0.03	0.328	24.80	25.00	1.047	0.343	/
		10	20300	1745.0	50	LOW	-0.02	0.267	23.55	24.00	1.109	0.296	/
	Bottom Edge	10	20175	1732.5	1	HIGH	-0.09	0.735	24.80	25.00	1.047	0.770	/
		10	20300	1745.0	50	LOW	-0.07	0.640	23.55	24.00	1.109	0.710	/

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

10.5LTE Band 12 (10MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	23130	711.0	1	MID	0.06	0.127	24.74	25.00	1.062	0.135	/
		0	23130	711.0	25	MID	0.04	0.087	24.64	25.00	1.086	0.095	/
	Left Tilt	0	23130	711.0	1	MID	-0.09	0.044	24.74	25.00	1.062	0.047	/
		0	23130	711.0	25	MID	0.03	0.035	24.64	25.00	1.086	0.038	/
	Right Cheek	0	23130	711.0	1	MID	0.01	0.149	24.74	25.00	1.062	**0.158**	12#
		0	23130	711.0	25	MID	0.07	0.123	24.64	25.00	1.086	0.134	/
	Right Tilt	0	23130	711.0	1	MID	-0.07	0.026	24.74	25.00	1.062	0.028	/
		0	23130	711.0	25	MID	-0.07	0.026	24.64	25.00	1.086	0.028	/
Body-worn&Hotspot (10mm)													
QPSK	Front Side	10	23130	711.0	1	MID	0.04	0.121	24.74	25.00	1.062	0.128	/
		10	23130	711.0	25	MID	-0.02	0.111	24.64	25.00	1.086	0.121	/
	Back Side	10	23130	711.0	1	MID	-0.01	0.400	24.74	25.00	1.062	**0.425**	13#
		10	23130	711.0	25	MID	-0.05	0.374	24.64	25.00	1.086	0.406	/
	Left Edge	10	23130	711.0	1	MID	0.09	0.088	24.74	25.00	1.062	0.093	/
		10	23130	711.0	25	MID	-0.12	0.101	24.64	25.00	1.086	0.110	/
	Right Edge	10	23130	711.0	1	MID	-0.05	0.243	24.74	25.00	1.062	0.258	/
		10	23130	711.0	25	MID	-0.07	0.228	24.64	25.00	1.086	0.248	/
	Bottom Edge	10	23130	711.0	1	MID	-0.05	0.045	24.74	25.00	1.062	0.048	/
		10	23130	711.0	25	MID	-0.02	0.063	24.64	25.00	1.086	0.068	/

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

10.6LTE Band 13 (10MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	23230	782.0	1	MID	-0.03	0.249	24.29	25.00	1.178	**0.293**	14#
		0	23230	782.0	25	MID	-0.07	0.227	24.14	25.00	1.219	0.277	/
	Left Tilt	0	23230	782.0	1	MID	0.15	0.088	24.29	25.00	1.178	0.104	/
		0	23230	782.0	25	MID	0.12	0.084	24.14	25.00	1.219	0.103	/
	Right Cheek	0	23230	782.0	1	MID	-0.15	0.200	24.29	25.00	1.178	0.236	/
		0	23230	782.0	25	MID	-0.04	0.190	24.14	25.00	1.219	0.232	/
	Right Tilt	0	23230	782.0	1	MID	-0.15	0.083	24.29	25.00	1.178	0.098	/
		0	23230	782.0	25	MID	0.12	0.083	24.14	25.00	1.219	0.101	/
Body-worn&Hotspot (10mm)													
QPSK	Front Side	10	23230	782.0	1	MID	-0.05	0.199	24.29	25.00	1.178	0.234	/
		10	23230	782.0	25	MID	-0.18	0.185	24.14	25.00	1.219	0.226	/
	Back Side	10	23230	782.0	1	MID	-0.09	0.627	24.29	25.00	1.178	**0.738**	15#
		10	23230	782.0	25	MID	-0.02	0.554	24.14	25.00	1.219	0.675	/
	Left Edge	10	23230	782.0	1	MID	-0.05	0.176	24.29	25.00	1.178	0.207	/
		10	23230	782.0	25	MID	-0.17	0.154	24.14	25.00	1.219	0.188	/
	Right Edge	10	23230	782.0	1	MID	-0.18	0.388	24.29	25.00	1.178	0.457	/
		10	23230	782.0	25	MID	0.16	0.366	24.14	25.00	1.219	0.446	/
	Bottom Edge	10	23230	782.0	1	MID	-0.01	0.084	24.29	25.00	1.178	0.099	/
		10	23230	782.0	25	MID	-0.03	0.075	24.14	25.00	1.219	0.091	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.7LTE Band 25 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	26365	1882.5	1	MID	0.17	0.062	24.53	25.00	1.114	0.069	/
		0	26365	1882.5	50	MID	0.05	0.052	23.48	24.00	1.127	0.059	/
	Left Tilt	0	26365	1882.5	1	MID	-0.17	0.028	24.53	25.00	1.114	0.031	/
		0	26365	1882.5	50	MID	0.13	0.022	23.48	24.00	1.127	0.025	/
	Right Cheek	0	26365	1882.5	1	MID	-0.07	0.131	24.53	25.00	1.114	**0.146**	16#
		0	26365	1882.5	50	MID	0.09	0.118	23.48	24.00	1.127	0.133	/
	Right Tilt	0	26365	1882.5	1	MID	0.08	0.055	24.53	25.00	1.114	0.061	/
		0	26365	1882.5	50	MID	0.18	0.042	23.48	24.00	1.127	0.047	/
Body-worn&Hotspot (10mm)													
QPSK	Front Side	10	26365	1882.5	1	MID	0.17	0.230	24.53	25.00	1.114	0.256	/
		10	26365	1882.5	50	MID	0.09	0.190	23.48	24.00	1.127	0.214	/
	Back Side	10	26365	1882.5	1	MID	0.10	1.010	24.53	25.00	1.114	1.125	/
		10	26140	1860.0	1	MID	0.13	0.946	24.43	25.00	1.140	1.079	/
		10	26590	1905.0	1	MID	0.02	1.060	24.51	25.00	1.119	**1.187**	17#
		10	26365	1882.5	50	MID	0.15	0.833	23.48	24.00	1.127	0.939	/
		10	26140	1860.0	50	MID	0.03	0.882	23.39	24.00	1.151	1.015	/
		10	26590	1905.0	50	LOW	0.02	0.921	23.44	24.00	1.138	1.048	/
		10	26365	1882.5	100	LOW	0.06	0.649	23.37	24.00	1.156	0.750	/
	Left Edge	10	26365	1882.5	1	MID	-0.05	0.080	24.53	25.00	1.114	0.089	/
		10	26365	1882.5	50	MID	-0.04	0.060	23.48	24.00	1.127	0.068	/
	Right Edge	10	26365	1882.5	1	MID	-0.05	0.272	24.53	25.00	1.114	0.303	/
		10	26365	1882.5	50	MID	-0.02	0.217	23.48	24.00	1.127	0.245	/
	Bottom Edge	10	26365	1882.5	1	MID	0.12	0.876	24.53	25.00	1.114	0.976	/
		10	26140	1860.0	1	MID	0.05	0.608	24.43	25.00	1.140	0.693	/
		10	26590	1905.0	1	MID	0.17	0.876	24.51	25.00	1.119	0.981	/
		10	26365	1882.5	50	MID	0.17	0.671	23.48	24.00	1.127	0.756	/
		10	26365	1882.5	100	LOW	0.14	0.491	23.37	24.00	1.156	0.568	/

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

10.8LTE Band 26 (15MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	26765	821.5	1	MID	-0.10	0.379	24.34	25.00	1.164	**0.441**	18#
		0	26965	841.5	36	Low	-0.03	0.351	24.28	25.00	1.180	0.414	/
	Left Tilt	0	26765	821.5	1	MID	0.09	0.132	24.34	25.00	1.164	0.154	/
		0	26965	841.5	36	Low	0.04	0.130	24.28	25.00	1.180	0.153	/
	Right Cheek	0	26765	821.5	1	MID	-0.17	0.312	24.34	25.00	1.164	0.363	/
		0	26965	841.5	36	Low	0.07	0.262	24.28	25.00	1.180	0.309	/
	Right Tilt	0	26765	821.5	1	MID	0.12	0.115	24.34	25.00	1.164	0.134	/
		0	26965	841.5	36	Low	0.11	0.104	24.28	25.00	1.180	0.123	/
Body-worn&Hotspot (10mm)													
QPSK	Front Side	10	26765	821.5	1	MID	-0.04	0.269	24.34	25.00	1.164	0.313	/
		10	26965	841.5	36	Low	-0.03	0.177	24.28	25.00	1.180	0.209	/
	Back Side	10	26765	821.5	1	MID	-0.07	0.670	24.34	25.00	1.164	**0.780**	19#
		10	26965	841.5	36	Low	0.00	0.581	24.28	25.00	1.180	0.686	/
	Left Edge	10	26765	821.5	1	MID	-0.02	0.294	24.34	25.00	1.164	0.342	/
		10	26965	841.5	36	Low	-0.02	0.264	24.28	25.00	1.180	0.312	/
	Right Edge	10	26765	821.5	1	MID	0.12	0.461	24.34	25.00	1.164	0.537	/
		10	26965	841.5	36	Low	-0.06	0.301	24.28	25.00	1.180	0.355	/
	Bottom Edge	10	26765	821.5	1	MID	-0.09	0.108	24.34	25.00	1.164	0.126	/
		10	26965	841.5	36	Low	0.16	0.104	24.28	25.00	1.180	0.123	/

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

10.9LTE Band 41 (20MHz Bandwidth)

Class Level	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head														
Class 3	QPSK	Left Cheek	0	40185	2549.5	1	MID	0.14	0.108	24.63	25.00	1.089	0.118	/
Class 3			0	40620	2593.0	50	LOW	-0.03	0.100	24.28	25.00	1.180	0.118	/
Class 2		Left Cheek	0	40185	2549.5	1	MID	-0.04	0.121	27.05	27.50	1.089	**0.132**	20#
Class 3		Left Tilt	0	40185	2549.5	1	MID	0.01	0.052	24.63	25.00	1.089	0.057	/
Class 3			0	40620	2593.0	50	LOW	0.01	0.045	24.28	25.00	1.180	0.054	/
Class 3		Right Cheek	0	40185	2549.5	1	MID	0.03	0.092	24.63	25.00	1.089	0.100	/
Class 3			0	40620	2593.0	50	LOW	0.02	0.074	24.28	25.00	1.180	0.087	/
Class 3		Right Tilt	0	40185	2549.5	1	MID	0.12	0.062	24.63	25.00	1.089	0.068	/
Class 3			0	40620	2593.0	50	LOW	-0.12	0.051	24.28	25.00	1.180	0.060	/
Body-worn&Hotspot (10mm)														
Class 3	QPSK	Front Side	10	40185	2549.5	1	MID	0.05	0.033	24.63	25.00	1.089	0.036	/
Class 3			10	40620	2593.0	50	LOW	0.04	0.040	24.28	25.00	1.180	0.047	/
Class 3		Back Side	10	40185	2549.5	1	MID	0.03	0.472	24.63	25.00	1.089	0.514	/
Class 3			10	40620	2593.0	50	LOW	-0.18	0.382	24.28	25.00	1.180	0.451	/
Class 2		Back Side	10	40185	2549.5	1	MID	0.09	0.539	27.05	27.50	1.089	**0.587**	21#
Class 3		Left Edge	10	40185	2549.5	1	MID	0.02	0.010	24.63	25.00	1.089	0.011	/
Class 3			10	40620	2593.0	50	LOW	-0.09	0.017	24.28	25.00	1.180	0.020	/
Class 3		Right Edge	10	40185	2549.5	1	MID	0.02	0.250	24.63	25.00	1.089	0.272	/
Class 3			10	40620	2593.0	50	LOW	0.03	0.210	24.28	25.00	1.180	0.248	/
Class 3		Bottom Edge	10	40185	2549.5	1	MID	0.08	0.279	24.63	25.00	1.089	0.304	/
Class 3			10	40620	2593.0	50	LOW	0.02	0.234	24.28	25.00	1.180	0.276	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

10.10 LTE Band71 (20MHz Bandwidth)

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
QPSK	Left Cheek	0	133297	680.5	1	MID	0.13	0.069	24.80	25.00	1.047	**0.072**	22#
		0	133372	688.0	50	HIGH	0.02	0.044	24.40	25.00	1.148	0.051	/
	Left Tilt	0	133297	680.5	1	MID	0.04	0.017	24.80	25.00	1.047	0.018	/
		0	133372	688.0	50	HIGH	0.09	0.011	24.40	25.00	1.148	0.012	/
	Right Cheek	0	133297	680.5	1	MID	-0.01	0.042	24.80	25.00	1.047	0.044	/
		0	133372	688.0	50	HIGH	0.04	0.039	24.40	25.00	1.148	0.044	/
	Right Tilt	0	133297	680.5	1	MID	0.07	0.010	24.80	25.00	1.047	0.010	/
		0	133372	688.0	50	HIGH	0.05	0.009	24.40	25.00	1.148	0.010	/
Body-worn&Hotspot (10mm)													
QPSK	Front Side	10	133297	680.5	1	MID	-0.06	0.137	24.80	25.00	1.047	0.143	/
		10	133372	688.0	50	HIGH	-0.08	0.062	24.40	25.00	1.148	0.071	/
	Back Side	10	133297	680.5	1	MID	-0.06	0.272	24.80	25.00	1.047	**0.285**	23#
		10	133372	688.0	50	HIGH	0.17	0.218	24.40	25.00	1.148	0.250	/
	Left Edge	10	133297	680.5	1	MID	0.12	0.058	24.80	25.00	1.047	0.061	/
		10	133372	688.0	50	HIGH	-0.08	0.042	24.40	25.00	1.148	0.049	/
	Right Edge	10	133297	680.5	1	MID	-0.01	0.215	24.80	25.00	1.047	0.225	/
		10	133372	688.0	50	HIGH	-0.09	0.191	24.40	25.00	1.148	0.219	/
	Bottom Edge	10	133297	680.5	1	MID	-0.05	0.068	24.80	25.00	1.047	0.071	/
		10	133372	688.0	50	HIGH	-0.04	0.056	24.40	25.00	1.148	0.064	/

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

10.11 WIFI 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	6	2437	-0.07	0.123	18.48	18.50	1.096	97.3	1.028	**0.126**	24#
	Left Tilt	0	6	2437	0.09	0.018	18.48	18.50	1.096	97.3	1.028	0.019	/
	Right Cheek	0	6	2437	0.08	0.075	18.48	18.50	1.096	97.3	1.028	0.077	/
	Right Tilt	0	6	2437	0.17	0.014	18.48	18.50	1.096	97.3	1.028	0.015	/
Body-worn&Hotspot (10mm)													
802.11 b	Front Side	10	6	2437	0.12	0.051	15.60	16.00	1.096	97.3	1.028	0.052	/
	Back Side	10	6	2437	0.04	0.167	15.60	16.00	1.096	97.3	1.028	**0.172**	25#
	Left Edge	10	6	2437	-0.07	0.030	15.60	16.00	1.096	97.3	1.028	0.031	/
	Top Edge	10	6	2437	-0.05	0.055	15.60	16.00	1.096	97.3	1.028	0.057	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.12 Bluetooth

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													
BT(DH5)	Left Cheek	0	39	2441	-0.19	0.058	9.76	10.00	1.057	77.1	1.297	**0.075**	26#
	Left Tilt	0	39	2441	0.01	0.013	9.76	10.00	1.057	77.1	1.297	0.017	/
	Right Cheek	0	39	2441	0.12	0.042	9.76	10.00	1.057	77.1	1.297	0.054	/
	Right Tilt	0	39	2441	0.05	0.009	9.76	10.00	1.057	77.1	1.297	0.012	/
Body-worn&Hotspot (10mm)													
BT(DH5)	Front Side	10	39	2441	0.05	0.026	9.76	10.00	1.057	77.1	1.297	0.034	/
	Back Side	10	39	2441	0.13	0.074	9.76	10.00	1.057	77.1	1.297	**0.096**	27#
	Left Edge	10	39	2441	-0.11	0.017	9.76	10.00	1.057	77.1	1.297	0.022	/
	Top Edge	10	39	2441	-0.08	0.029	9.76	10.00	1.057	77.1	1.297	0.038	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.													

10.13 TDD LTE Band 41(HPUE) Linearity Data Analysis

LTE Band 41(HPUE)-Linearity Data for Head Exposure Condition		
Power Class	LTE Band 41 (Power Class3)	LTE Band 41 (Power Class2)
Maximum Tune up Power(dBm)	25.00	27.50
Scaled 1g SAR (W/Kg)	0.118	0.132
Duty Cycle (%)	63.30	43.30
Frame Averaged (mW)	200.17	243.49
Linearity SAR (W/Kg)	0.143	N/A
% Deviation from Expected Linearity	N/A	-7.69%

LTE Band 41(HPUE)-Linearity Data for Body-worn and Hotspot Exposure Condition		
Power Class	LTE Band 41 (Power Class3)	LTE Band 41 (Power Class2)
Maximum Tune up Power(dBm)	25.00	27.50
Scaled 1g SAR (W/Kg)	0.514	0.587
Duty Cycle (%)	63.30	43.30
Frame Averaged (mW)	200.17	243.49
Linearity SAR (W/Kg)	0.625	N/A
% Deviation from Expected Linearity	N/A	-6.08%

Note:

1. The device can adjust uplink/downlink configuration automatically according to the transmitting power class level for LTE band 41.
2. According to TCB Workshop May 2017, Rel. 14 has introduced HPUE Power Class 2 for Band 41. HPUE Power Class 2 does not support uplink downlink configurations 0 and 6.
3. Power class 3 is expected to be the dominant use configuration; therefore, SAR should be tested as normally required.
4. Power class 2 is tested using the highest SAR test configuration in power class 3 of each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in power class 2.
5. Separate SAR testing for Power Class 2 is not required when:
   a. The reported SAR vs. output power can be linearly scaled with < 10%
   b. Discrepancy between power classes and all reported 1g SAR are < 1.4 W/kg (The same procedures should be adapted for measurements according to extremity limits by applying a factor of 2.5 for extremity exposure.)
6. The highest deviation is -7.69%, so separate SAR testing for Power Class 2 is not required.

11 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Frequency Band (MHz)	Wireless Band	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Largest to Smallest SAR Radio
850	CDMA BC10	Body	Back Side	0.876	Yes	0.857	1.02
1750	LTE Band 4	Body	Back Side	1.120	Yes	1.114	1.01
1900	CDMA BC1	Body	Back Side	0.921	Yes	0.901	1.02
	LTE Band 25	Body	Back Side	1.060	Yes	1.048	1.01
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 & Bluetooth		
		Head	Body-worn	Hotspot
1	CDMA	+ Bluetooth	+ Bluetooth	+ Bluetooth
		+ 2.4G WLAN	+ 2.4G WLAN	+ 2.4G WLAN
2	LTE	+ Bluetooth	+ Bluetooth	+ Bluetooth
		+ 2.4G WLAN	+ 2.4G WLAN	+ 2.4G WLAN
Note: 1. 3G&4G share the same antenna and can't transmit simultaneously. 2. The Bluetooth and 2.4G WLAN share the same antenna, can't transmitting together. 3. Both the 2.4G WLAN or Bluetooth can transmit simultaneously with each WWAN.				

12.2 Sum SAR of Simultaneous Transmission

12.2.1 Sum Head SAR of Simultaneous Transmission

Simultaneous Mode	Mode	Max. 1g SAR (W/kg)	1g Sum SAR (W/kg)	SPLSR (Yes/No)
CDMA + Bluetooth	CDMA	0.452	0.527	No
	Bluetooth	0.075		
CDMA + 2.4G WLAN	CDMA	0.452	**0.578**	No
	2.4G WLAN	0.126		
LTE QPSK + Bluetooth	LTE QPSK	0.441	0.516	No
	Bluetooth	0.075		
LTE QPSK + 2.4G WLAN	LTE QPSK	0.441	0.567	No
	2.4G WLAN	0.126		

12.2.2 Sum Body-worn SAR of Simultaneous Transmission

Simultaneous Mode	Mode	Max. 1g SAR (W/kg)	1g Sum SAR (W/kg)	SPLSR (Yes/No)
CDMA + Bluetooth	CDMA	1.022	1.118	No
	Bluetooth	0.096		
CDMA + 2.4G WLAN	CDMA	1.022	1.194	No
	2.4G WLAN	0.172		
LTE QPSK + Bluetooth	LTE QPSK	1.217	1.313	No
	Bluetooth	0.096		
LTE QPSK + 2.4G WLAN	LTE QPSK	1.217	**1.389**	No
	2.4G WLAN	0.172		

12.2.3 Sum Hotspot mode SAR of Simultaneous Transmission

Simultaneous Mode	Mode	Max. 1g SAR (W/kg)	1g Sum SAR (W/kg)	SPLSR (Yes/No)
CDMA + Bluetooth	CDMA	0.945	1.041	No
	Bluetooth	0.096		
CDMA + 2.4G WLAN	CDMA	0.945	1.117	No
	2.4G WLAN	0.172		
LTE QPSK + Bluetooth	LTE QPSK	1.217	1.313	No
	Bluetooth	0.096		
LTE QPSK + 2.4G WLAN	LTE QPSK	1.217	**1.389**	No
	2.4G WLAN	0.172		

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
750MHz Validation Dipole	Speag	D750V3	SN: 1055	2017/06/26	2020/06/25
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2017/06/26	2020/06/25
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2017/07/01	2020/06/30
1900MHz Validation Dipole	Speag	D1900V2	SN: 5d193	2017/06/30	2020/06/29
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2017/03/21	2020/03/20
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2017/07/10	2020/07/09
E-Field Probe	Speag	EX3DV4	SN: 7510	2019/08/02	2020/08/01
Data Acquisition Electronics	Speag	DAE4	SN: 1454	2019/08/02	2020/08/01
Signal Generator	R&S	SMBV100A	260592	2019/06/13	2020/06/12
Power Meter	Agilent	E4419B	GB40201833	2018/11/01	2019/10/31
Power Sensor	Agilent	E9300A	MY41498012	2018/11/01	2019/10/31
Power Sensor	Agilent	E9300A	MY41499891	2018/11/01	2019/10/31
Wireless Communication Test Set	Agilent	8960-E5515C	MY50260493	2018/11/01	2019/10/31
Wireless Communication Test Set	R&S	CMW 500	127801	2019/02/28	2020/02/27
Network Analyzer	R&S	ZVL-6	101380	2019/06/20	2020/06/19
Thermometer	Elitech	RC-4HC	N/A	2018/11/05	2019/11/04
Power Amplifier	SATIMO	6552B	22374	N/A	N/A
Dielectric Probe Kit	SATIMO	SCLMP	SN 25/13 OCPG56	N/A	N/A
Phantom1	Speag	SAM	SN: 1859	N/A	N/A
Phantom2	Speag	SAM	SN: 1857	N/A	N/A
Attenuator	COM-MW	ZA-S1-31	1305003187	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

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

1. There is no physical damage on the dipole;

2. System validation with specific dipole is within 10% of calibrated value;

3. Return-loss in within 20% of calibrated measurement.

4. Impedance (real or imaginary parts) in within 5 Ohms of calibrated measurement.

ANNEX A SIMULATING LIQUID VERIFICATION RESULT

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

Date	Liquid Type	Fre. (MHz)	Temp. (℃)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ε)	Target Conductivity (σ) (S/m)	Target Permittivity (ε)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2019.09.15	Head	750	21.4	0.90	42.13	0.89	41.90	1.12	0.55
2019.09.16	Head	750	21.3	0.88	42.25	0.89	41.90	-1.12	0.84
2019.09.17	Head	835	21.6	0.89	41.75	0.90	41.50	-1.11	0.60
2019.09.18	Head	835	21.4	0.89	42.04	0.90	41.50	-1.11	1.30
2019.09.21	Head	1750	21.4	1.37	40.48	1.37	40.08	0.00	1.00
2019.09.22	Head	1900	21.5	1.40	39.13	1.40	40.00	0.00	-2.17
2019.09.23	Head	1900	21.6	1.42	39.73	1.40	40.00	1.43	-0.68
2019.09.24	Head	2450	21.5	1.81	39.01	1.80	39.20	0.56	-0.48
2019.09.25	Head	2600	21.2	1.96	38.45	1.96	39.01	0.00	-1.44

Note1: The tolerance limit of Conductivity and Permittivity is± 5%.

Note2: According to April 2019 TCB workshop, FCC accept SAR testing with IEC tissue parameters, so this product used IEC tissue parameters to perform SAR testing.

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 (%)
2019.09.15	Head	750	100	0.798	7.98	8.27	-3.51	8.49	-6.01
2019.09.16	Head	750	100	0.851	8.51	8.27	2.90	8.49	0.24
2019.09.17	Head	835	100	0.945	9.45	9.75	-3.08	9.56	-1.15
2019.09.18	Head	835	100	0.958	9.58	9.75	-1.74	9.56	0.21
2019.09.21	Head	1750	100	3.710	37.10	36.90	0.54	36.40	1.92
2019.09.22	Head	1900	100	4.040	40.40	39.90	1.25	39.70	1.76
2019.09.23	Head	1900	100	4.130	41.30	39.90	3.51	39.70	4.03
2019.09.24	Head	2450	100	5.300	53.00	52.40	1.15	52.40	1.15
2019.09.25	Head	2600	100	5.530	55.30	56.40	-1.95	55.30	0.00

Note1: The tolerance limit of System validation ±10%.

Note2: According to April 2019 TCB workshop, FCC accept SAR testing with IEC tissue parameters, so this product used IEC tissue parameters to perform SAR testing.

System Performance Check Data (750MHz Head)

Date: 2019.09.15
Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 750 MHz; σ = 0.896 S/m; ε_r = 42.132; ρ = 1000 kg/m^3
Phantom section: Flat Section

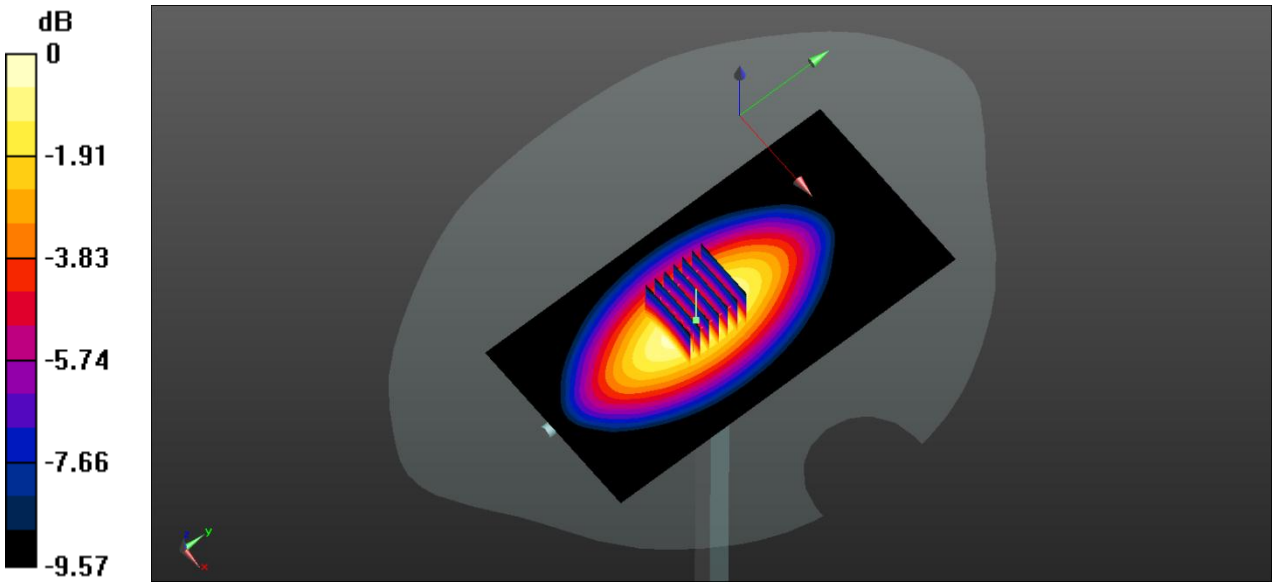
Ambient Temperature:22.8 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.35, 10.35, 10.35); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 750 100mW/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.858 W/kg

CW 750 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.52 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.798 W/kg; SAR(10 g) = 0.526 W/kg
Maximum value of SAR (measured) = 0.861 W/kg



0 dB = 0.861 W/kg

System Performance Check Data (750MHz Head)

Date: 2019.09.16
Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 750 MHz; σ = 0.882 S/m; ε_r = 42.253; ρ = 1000 kg/m^3
Phantom section: Flat Section

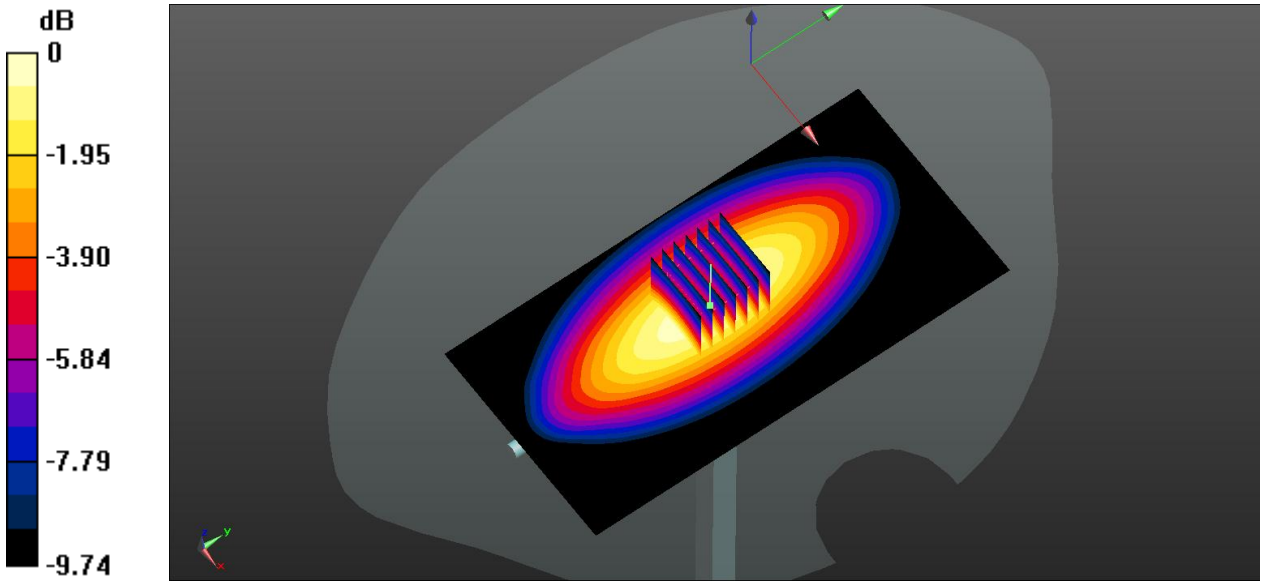
Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.35, 10.35, 10.35); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 750 100mW/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.907 W/kg

CW 750 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.05 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.851 W/kg; SAR(10 g) = 0.570 W/kg
Maximum value of SAR (measured) = 0.915 W/kg



0 dB = 0.915 W/kg

System Performance Check Data (835MHz Head)

Date: 2019.09.17
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.891 S/m; ε_r = 41.753; ρ = 1000 kg/m^3
Phantom section: Flat Section

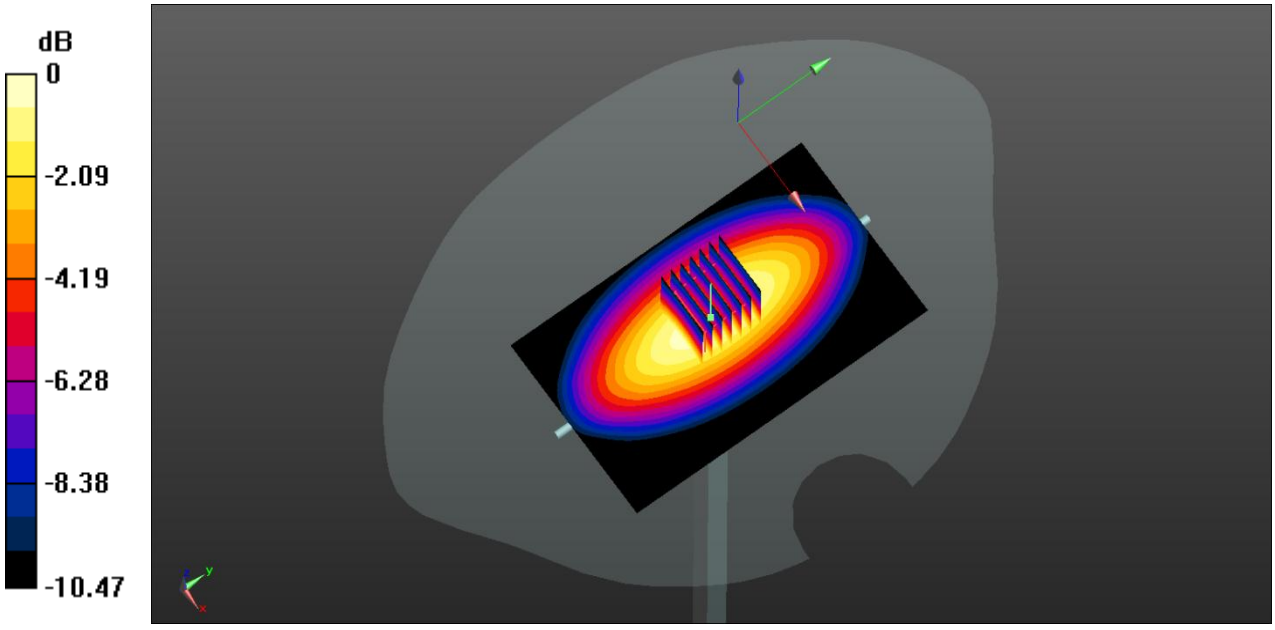
Ambient Temperature:22.7 Liquid Temperature:21.6

DASY5 Configuration:

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

CW 835 100mW HEAD/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.02 W/kg

CW 835 100mW HEAD/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.18 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.945 W/kg; SAR(10 g) = 0.617 W/kg
Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg

System Performance Check Data (835MHz Head)

Date: 2019.09.18
Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.895 S/m; ε_r = 42.036; ρ = 1000 kg/m^3
Phantom section: Flat Section

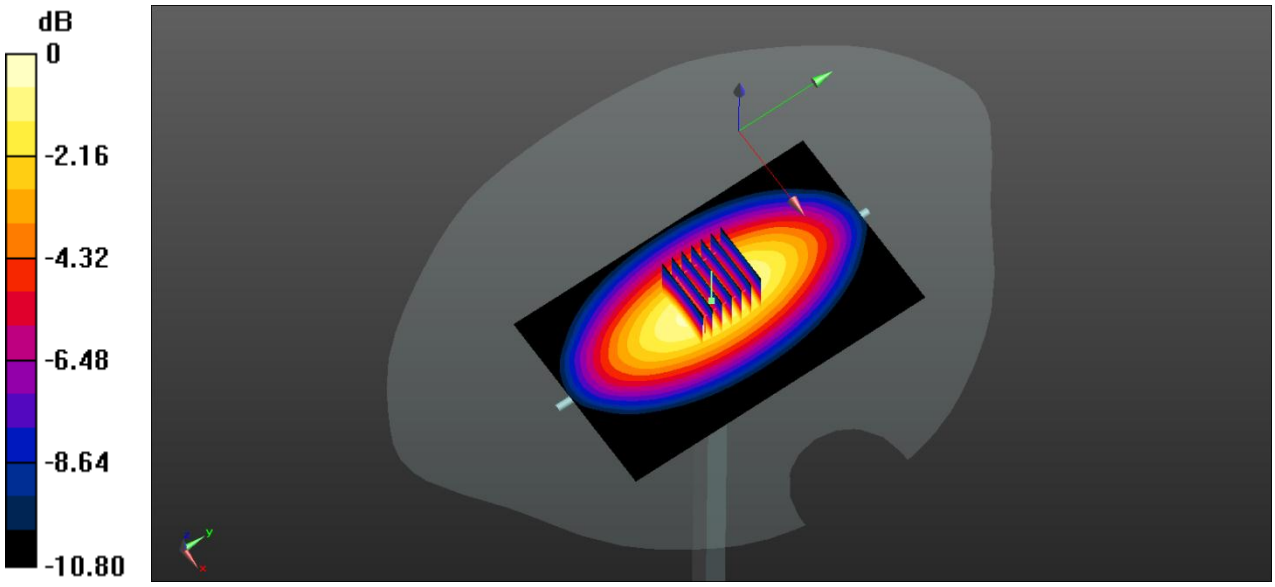
Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

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

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

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



0 dB = 1.05 W/kg

System Performance Check Data (1750MHz Head)

Date: 2019.09.21
Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.366 S/m; ε_r = 40.476; ρ = 1000 kg/m^3
Phantom section: Flat Section

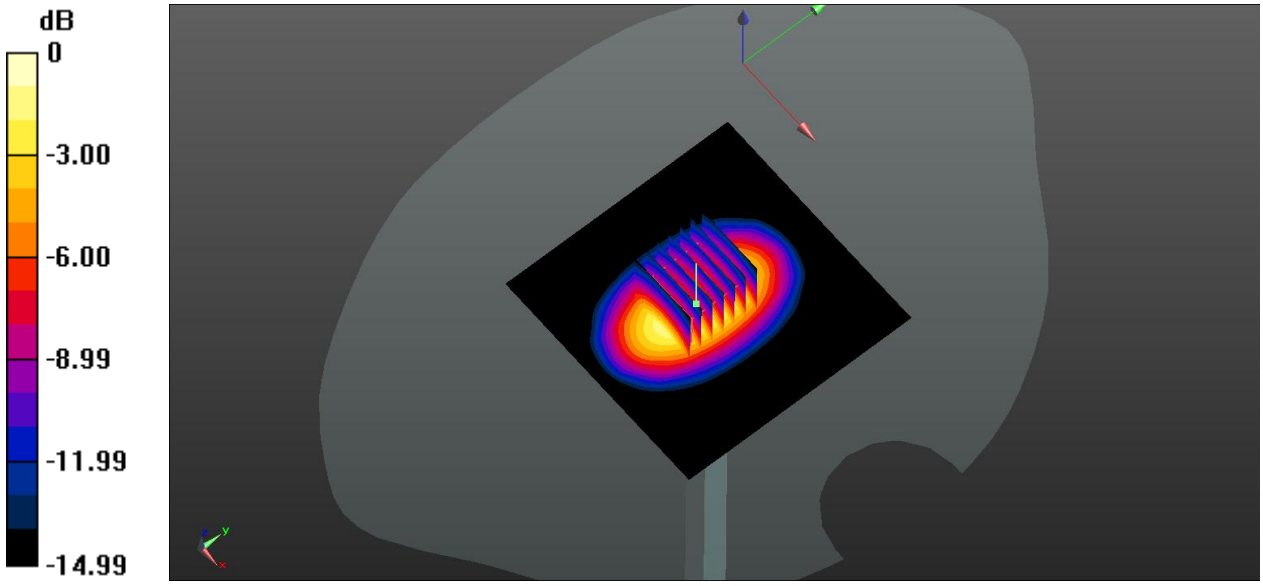
Ambient Temperature:22.7 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1750 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 4.19 W/kg

CW 1750 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.22 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 6.48 W/kg
SAR(1 g) = 3.71 W/kg; SAR(10 g) = 2.04 W/kg
Maximum value of SAR (measured) = 4.18 W/kg



0 dB = 4.18 W/kg

System Performance Check Data (1900MHz Head)

Date: 2019.09.22
Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.403 S/m; ε_r = 39.128; ρ = 1000 kg/m^3
Phantom section: Flat Section

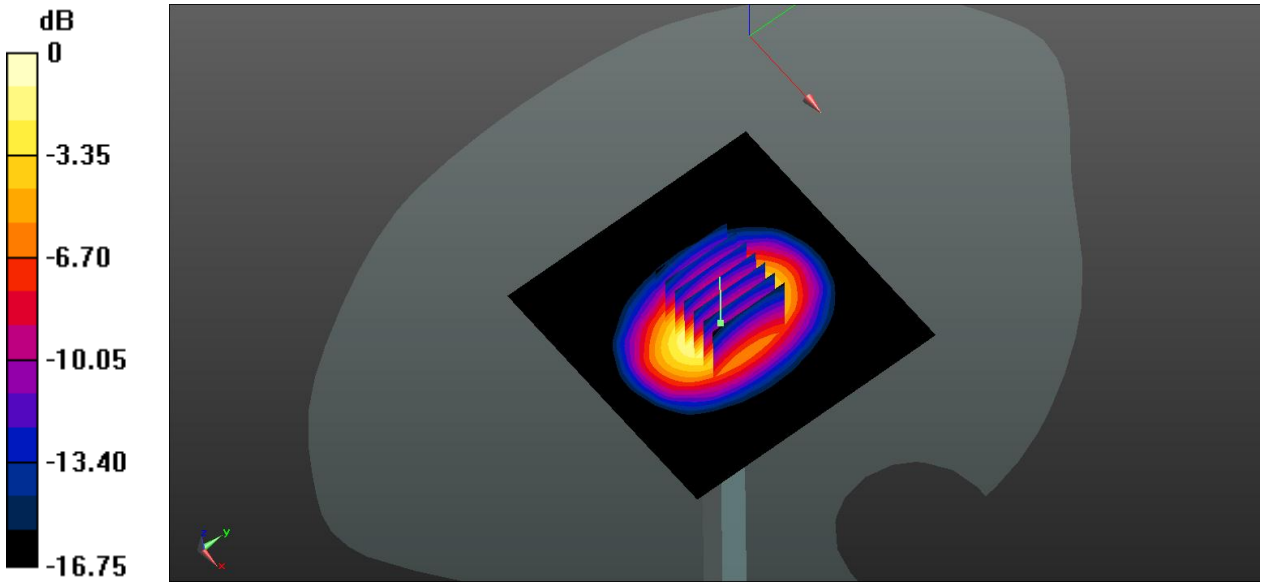
Ambient Temperature:22.8 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom:SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 4.55 W/kg

CW 1900 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.76 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 7.32 W/kg
SAR(1 g) = 4.04 W/kg; SAR(10 g) = 2.14 W/kg
Maximum value of SAR (measured) = 4.55 W/kg



0 dB = 4.55 W/kg

System Performance Check Data (1900MHz Head)

Date: 2019.09.23
Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.416 S/m; ε_r = 39.729; ρ = 1000 kg/m^3
Phantom section: Flat Section

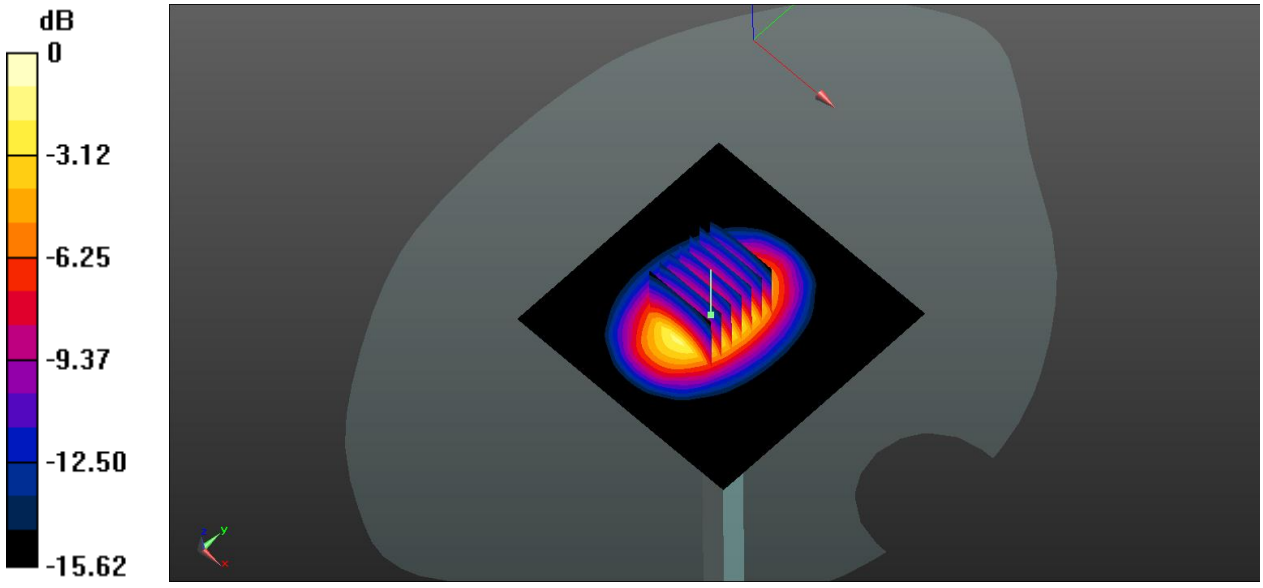
Ambient Temperature:22.8 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom:SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 4.65 W/kg

CW 1900 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.52 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 7.36 W/kg
SAR(1 g) = 4.13 W/kg; SAR(10 g) = 2.12 W/kg
Maximum value of SAR (measured) = 4.66 W/kg



0 dB = 4.66 W/kg

System Performance Check Data (2450MHz Head)

Date: 2019.09.24
Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.811 S/m; ε_r = 39.009; ρ = 1000 kg/m^3
Phantom section: Flat Section

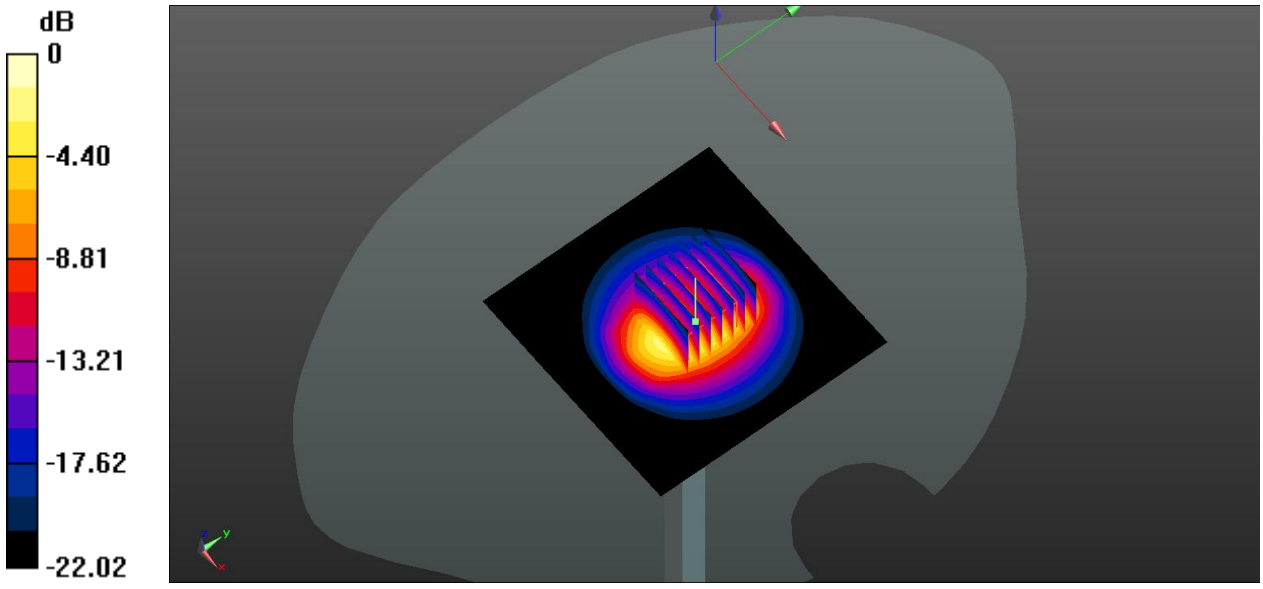
Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

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

CW 2450 100mW/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.18 W/kg

CW 2450 100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.27 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 11.0 W/kg
SAR(1 g) = 5.3 W/kg; SAR(10 g) = 2.41 W/kg
Maximum value of SAR (measured) = 6.09 W/kg



0 dB = 6.09 W/kg

System Performance Check Data (2600MHz Head)

Date: 2019.09.25
Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2600 MHz; σ =1.955 S/m; ε_r = 38.451; ρ = 1000 kg/m^3
Phantom section: Flat Section

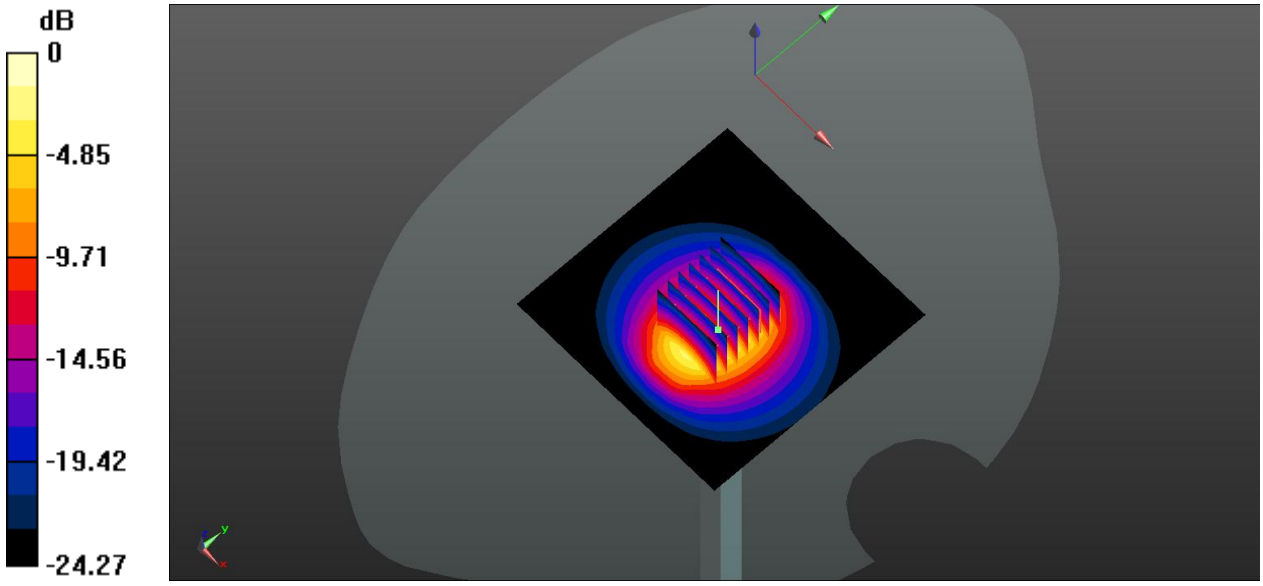
Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

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

CW 2600 100mW /Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.60 W/kg

CW 2600 100mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 45.73 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 12.5 W/kg
SAR(1 g) = 5.53 W/kg; SAR(10 g) = 2.36 W/kg
Maximum value of SAR (measured) = 6.37 W/kg



0 dB = 6.37 W/kg

ANNEX C TEST DATA

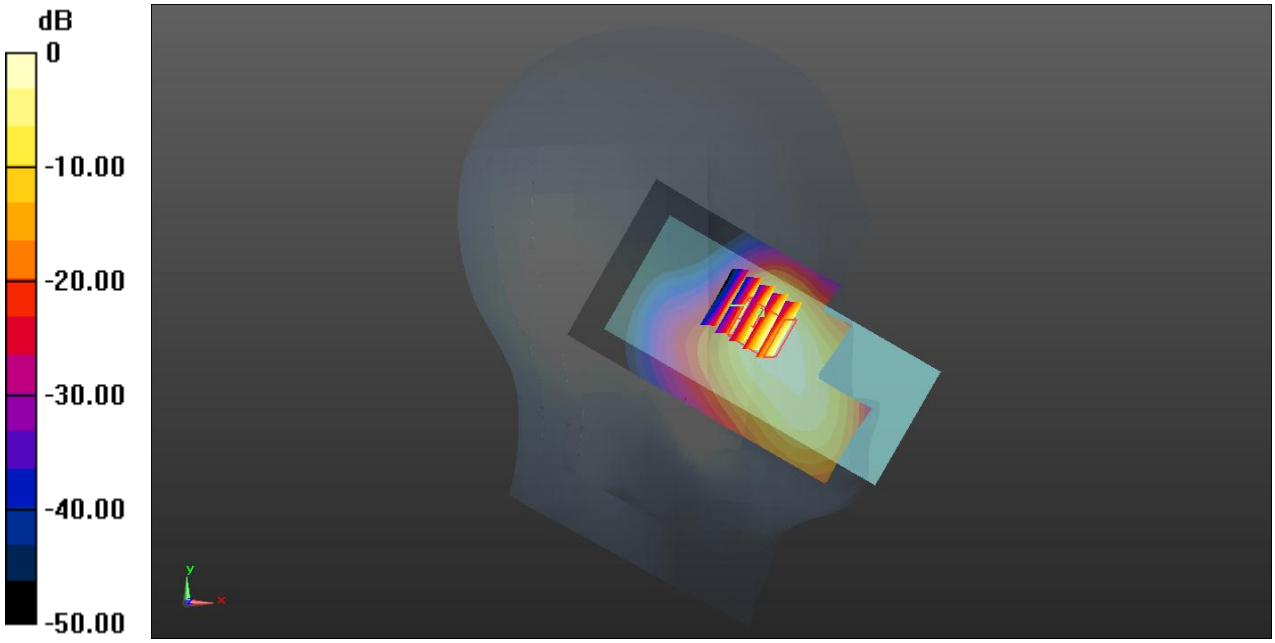
MEAS.1 Left Head with Cheek on Low Channel in CDMA BC0 mode
Date: 2019.09.17
Communication System Band: CDMA BC0; Frequency: 824.7 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 824.7 MHz; σ = 0.883 S/m; ε_r = 42.065; ρ = 1000 kg/m^3
Phantom section: Left Section

Ambient Temperature:22.7 Liquid Temperature:21.6

DASY5 Configuration:

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

Ch1013/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.398 W/kg
Ch1013/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.484 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.696 W/kg
SAR(1 g) = 0.434 W/kg; SAR(10 g) = 0.282 W/kg
Maximum value of SAR (measured) = 0.479 W/kg



0 dB = 0.479 W/kg

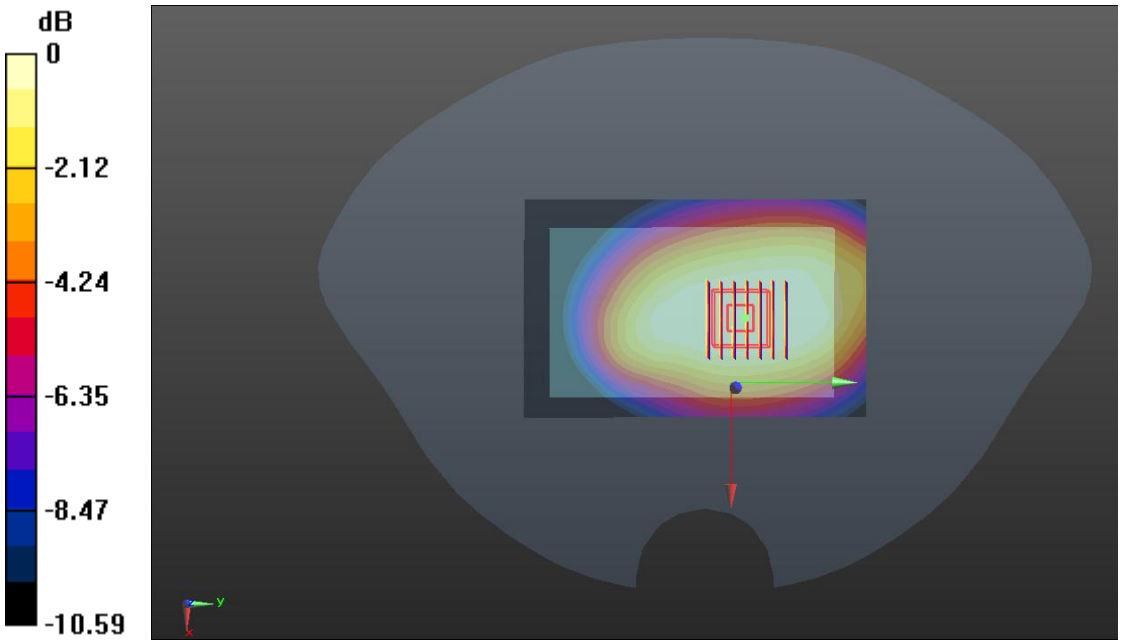
MEAS.2 Body Plane with Back Side 10mm on Middle Channel in CDMA BC0 mode
Date: 2019.09.17
Communication System Band: CDMA BC0; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.941 S/m; ε_r = 40.827; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.6

DASY5 Configuration:

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

Ch384/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.805 W/kg
Ch384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.51 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.932 W/kg
SAR(1 g) = 0.703 W/kg; SAR(10 g) = 0.505 W/kg
Maximum value of SAR (measured) = 0.744 W/kg



0 dB = 0.744 W/kg

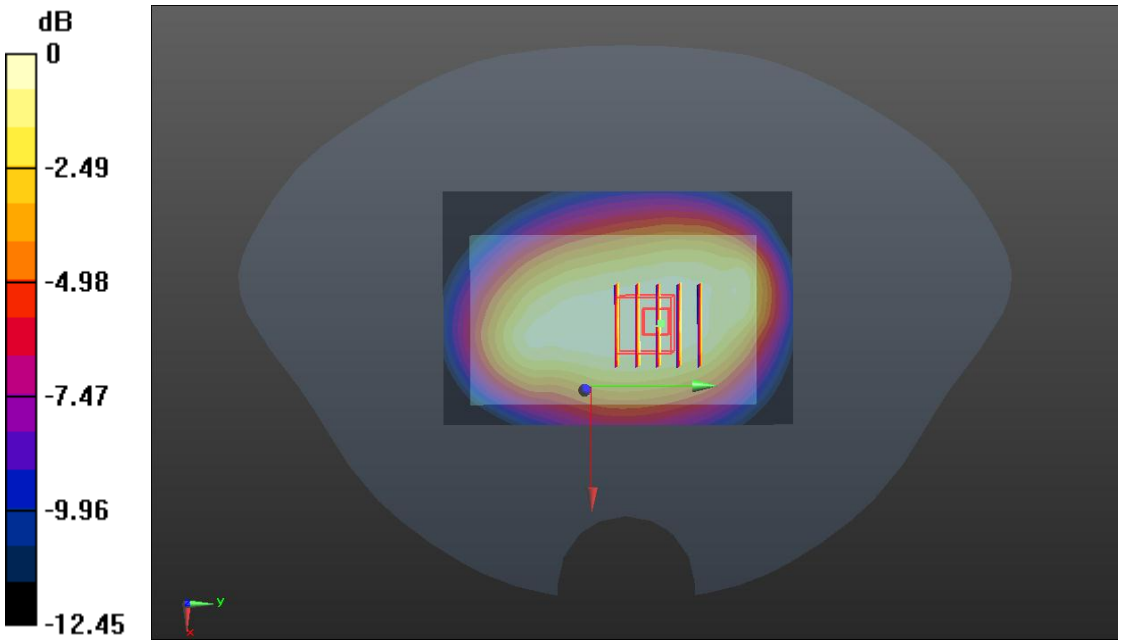
MEAS.3 Body Plane with Back Side 10mm on Middle Channel in EVDO BC0 mode
Date: 2019.09.17
Communication System Band: EVDO BC0; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.941 S/m; ε_r = 40.827; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.6

DASY5 Configuration:

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

Ch384/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.617 W/kg
Ch384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.07 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.796 W/kg
SAR(1 g) = 0.577 W/kg; SAR(10 g) = 0.412 W/kg
Maximum value of SAR (measured) = 0.617 W/kg



0 dB = 0.617 W/kg

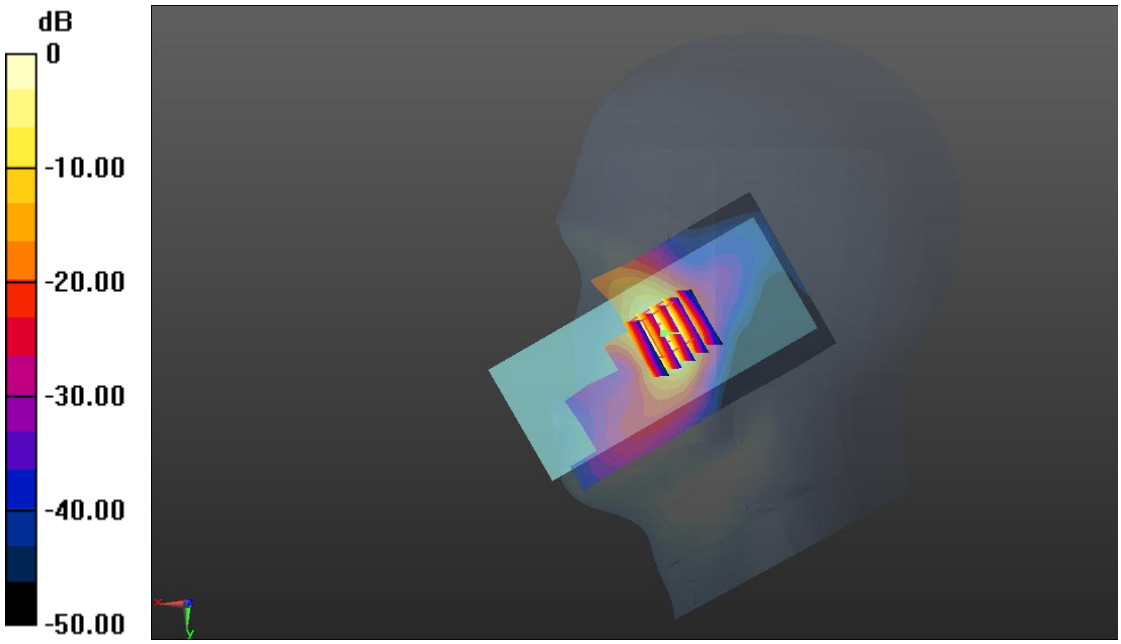
MEAS.4 Right Head with Cheek on Middle Channel in CDMA BC1 mode
Date: 2019.09.22
Communication System Band: CDMA BC1; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.392 S/m; ε_r = 39.736; ρ = 1000 kg/m^3
Phantom section: Right Section

Ambient Temperature:22.8 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch600/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.206 W/kg
Ch600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.897 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.391 W/kg
SAR(1 g) = 0.202 W/kg; SAR(10 g) = 0.114 W/kg
Maximum value of SAR (measured) = 0.209 W/kg



0 dB = 0.209 W/kg

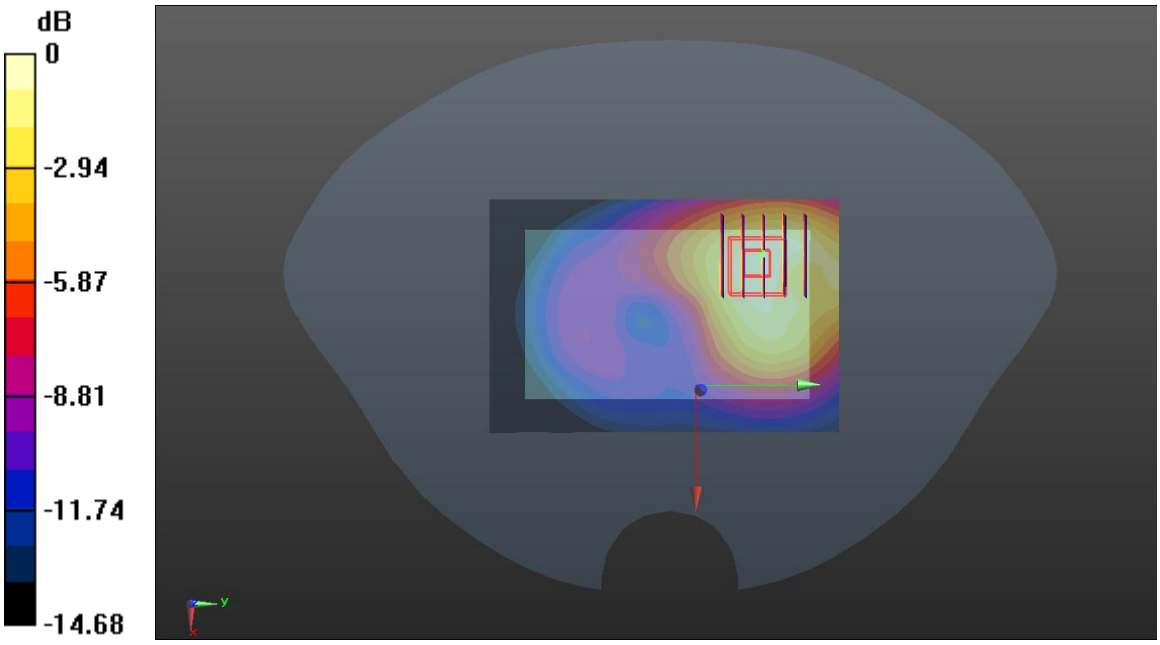
MEAS.5 Body Plane with Back Side 10mm on Middle Channel in CDMA BC1 mode
Date: 2019.09.22
Communication System Band: CDMA BC1; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.392 S/m; ε_r = 39.736; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Ch600/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.961 W/kg
Ch600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.770 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.59 W/kg
SAR(1 g) = 0.921 W/kg; SAR(10 g) = 0.527 W/kg
Maximum value of SAR (measured) = 0.995 W/kg



0 dB = 0.995 W/kg

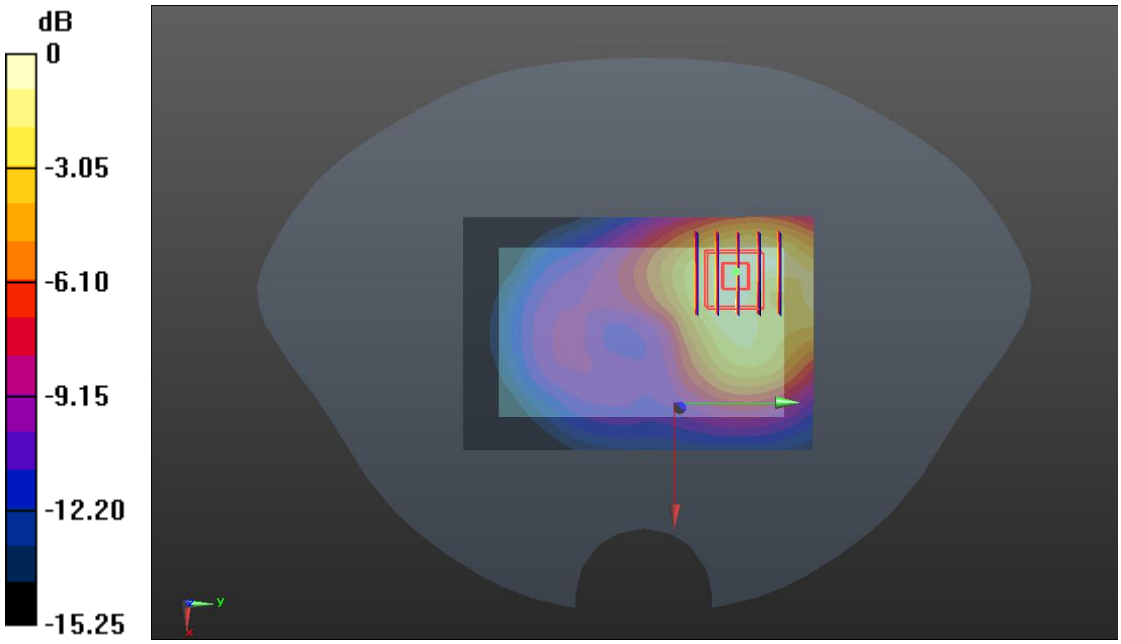
MEAS.6 Body Plane with Back Side 10mm on Middle Channel in EVDO BC1 mode
Date: 2019.09.22
Communication System Band: EVDO BC1; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.392 S/m; ε_r = 39.736; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Ch600/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.942 W/kg
Ch600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.630 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.905 W/kg; SAR(10 g) = 0.511 W/kg
Maximum value of SAR (measured) = 0.982 W/kg



0 dB = 0.982 W/kg

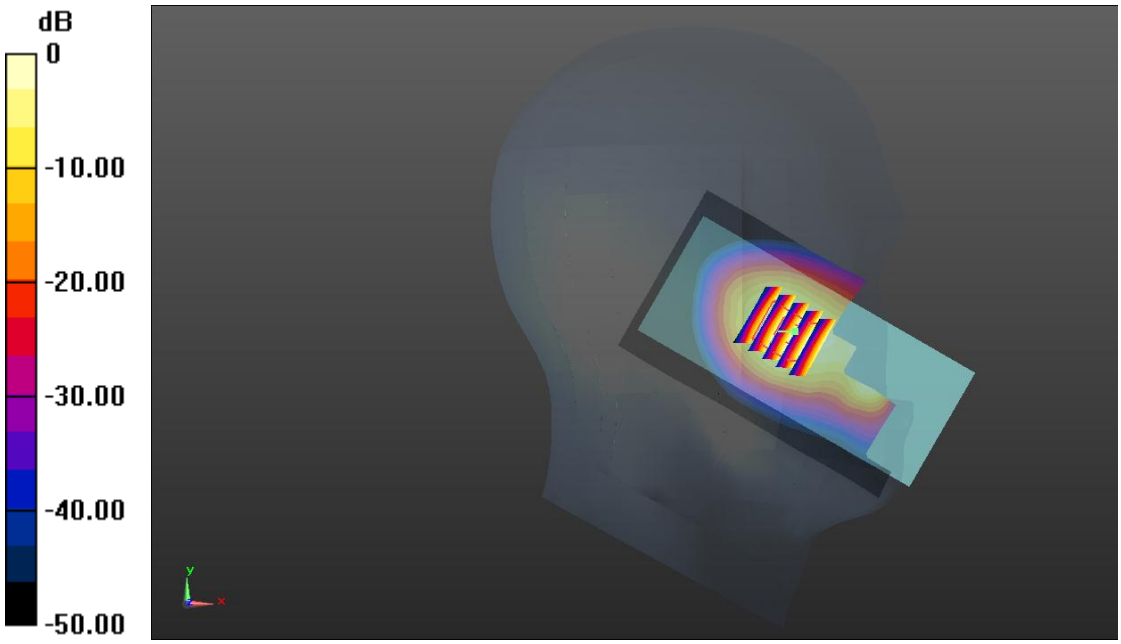
MEAS.7 Left Head with Cheek on Middle Channel in CDMA BC10 mode
Date: 2019.09.17
Communication System Band: BC 10; Frequency: 820 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 820 MHz; σ = 0.878 S/m; ε_r = 42.356; ρ = 1000 kg/m^3
Phantom section: Left Section

Ambient Temperature:22.7 Liquid Temperature:21.6

DASY5 Configuration:

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

Ch560/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.364 W/kg
Ch560/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.220 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.620 W/kg
SAR(1 g) = 0.386 W/kg; SAR(10 g) = 0.251 W/kg
Maximum value of SAR (measured) = 0.430 W/kg



0 dB = 0.430 W/kg

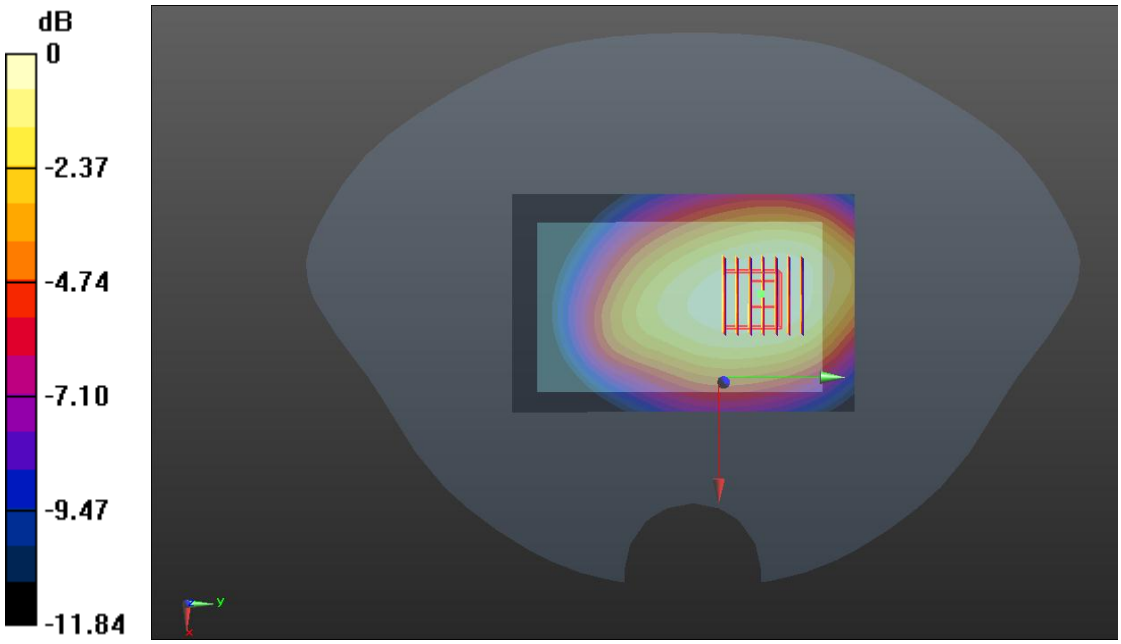
MEAS.8 Body Plane with Back Side 10mm on Middle Channel in CDMA BC10 mode
Date: 2019.09.17
Communication System Band: BC 10; Frequency: 820 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 820 MHz; σ = 0.877 S/m; ε_r = 42.356; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.6

DASY5 Configuration:

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

Ch560/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.942 W/kg
Ch560/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.63 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.876 W/kg; SAR(10 g) = 0.618 W/kg
Maximum value of SAR (measured) = 0.930 W/kg



0 dB = 0.930 W/kg

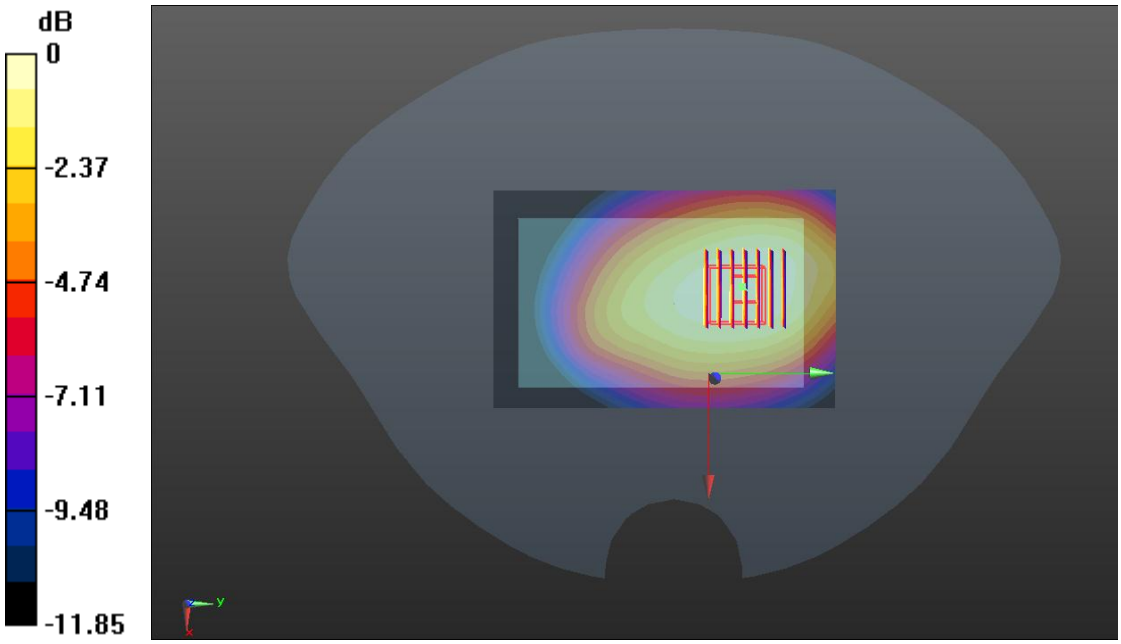
MEAS.9 Body Plane with Back Side 10mm on Middle Channel in EVD BC10 mode
Date: 2019.09.17
Communication System Band: EVDO BC10; Frequency: 820 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 820 MHz; σ = 0.877 S/m; ε_r = 42.356; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.6

DASY5 Configuration:

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

Ch560/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.801 W/kg
Ch560/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.42 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.699 W/kg; SAR(10 g) = 0.489 W/kg
Maximum value of SAR (measured) = 0.795 W/kg



0 dB = 0.795 W/kg

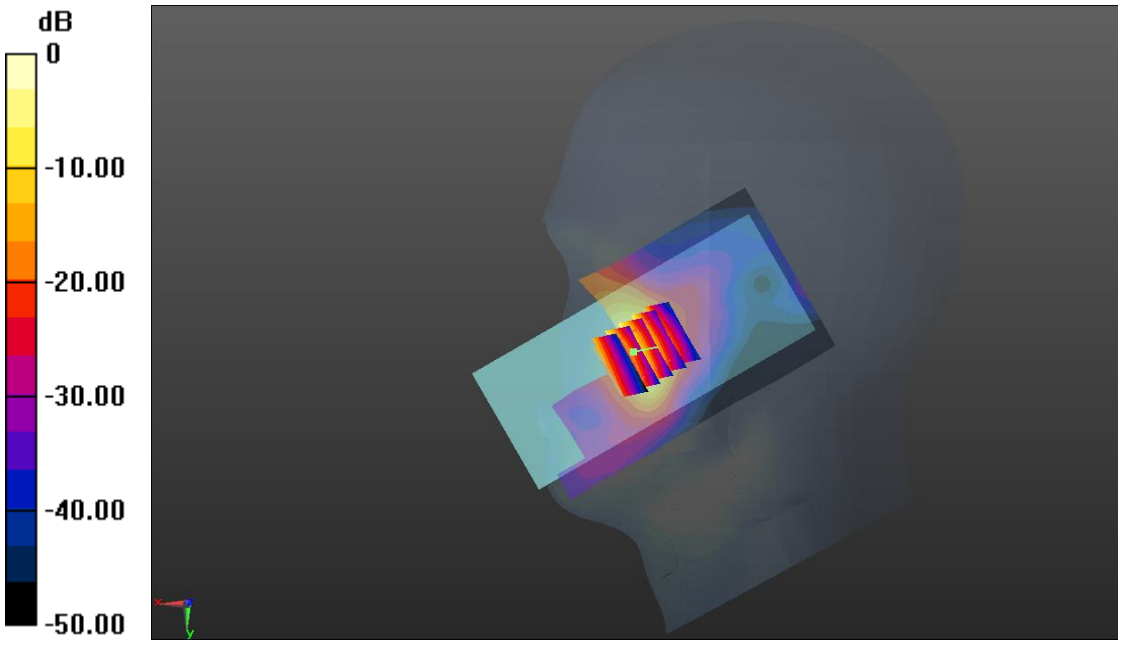
MEAS.10 Right Head with Cheek on Middle Channel in LTE Band 4 mode with 1RB
Date: 2019.09.21
Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.3468 S/m; ε_r = 40.717; ρ = 1000 kg/m^3
Phantom section: Right Section

Ambient Temperature:22.7 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20175/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.135 W/kg
Ch20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.506 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.202 W/kg
SAR(1 g) = 0.126 W/kg; SAR(10 g) = 0.073 W/kg
Maximum value of SAR (measured) = 0.132 W/kg



0 dB = 0.132 W/kg

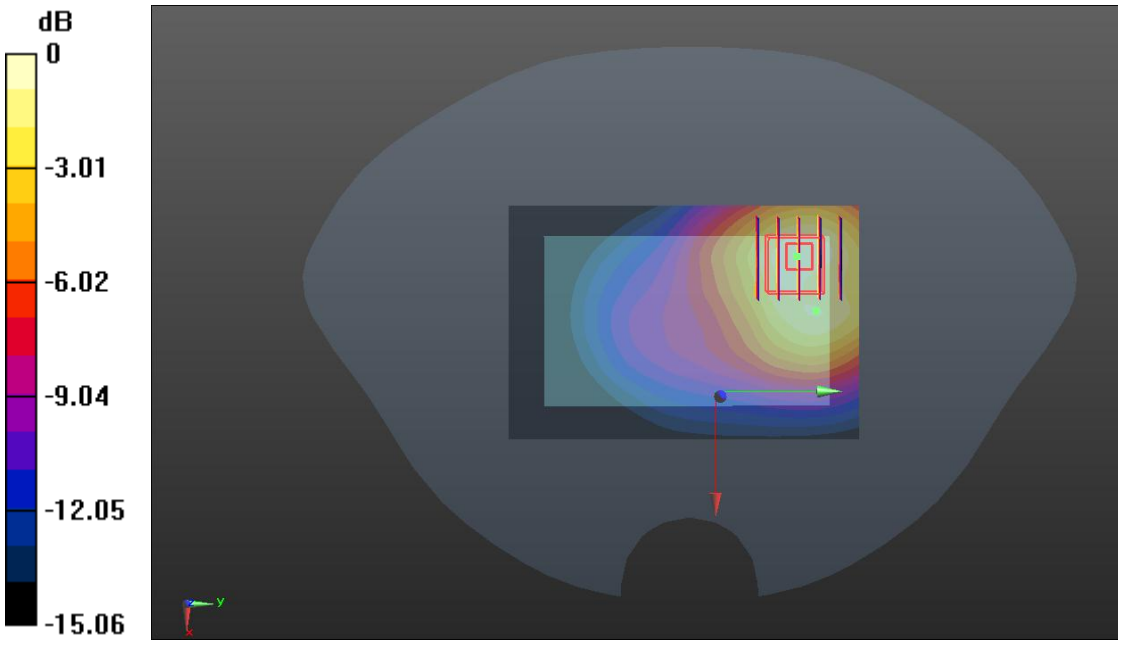
MEAS.11 Body Plane with Back Side 10mm on High Channel in LTE Band 4 mode with 1RB
Date: 2019.09.18
Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.360 S/m; ε_r = 40.503; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.7 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.67, 8.67, 8.67); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Ch20300/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.20 W/kg
Ch20300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.67 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.88 W/kg
SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.652 W/kg
Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg

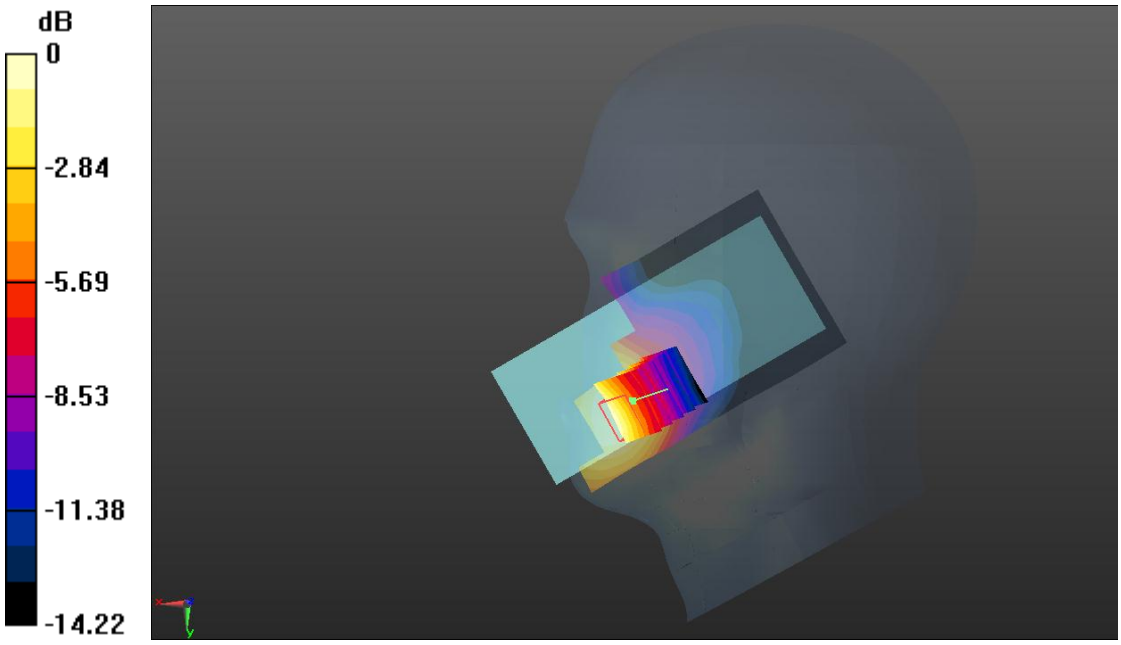
MEAS.12 Right Head with Cheek on High Channel in LTE Band 12 mode with 1RB
Date: 2019.09.16
Communication System Band: Band 12, E-UTRA/FDD (698.0 - 716.0 MHz); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 711 MHz; σ = 0.867 S/m; ε_r = 43.021; ρ = 1000 kg/m^3
Phantom section: Right Section

Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.35, 10.35, 10.35); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23130/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.186 W/kg
Ch23130/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.510 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.282 W/kg
SAR(1 g) = 0.149 W/kg; SAR(10 g) = 0.098 W/kg
Maximum value of SAR (measured) = 0.155 W/kg



0 dB = 0.155 W/kg

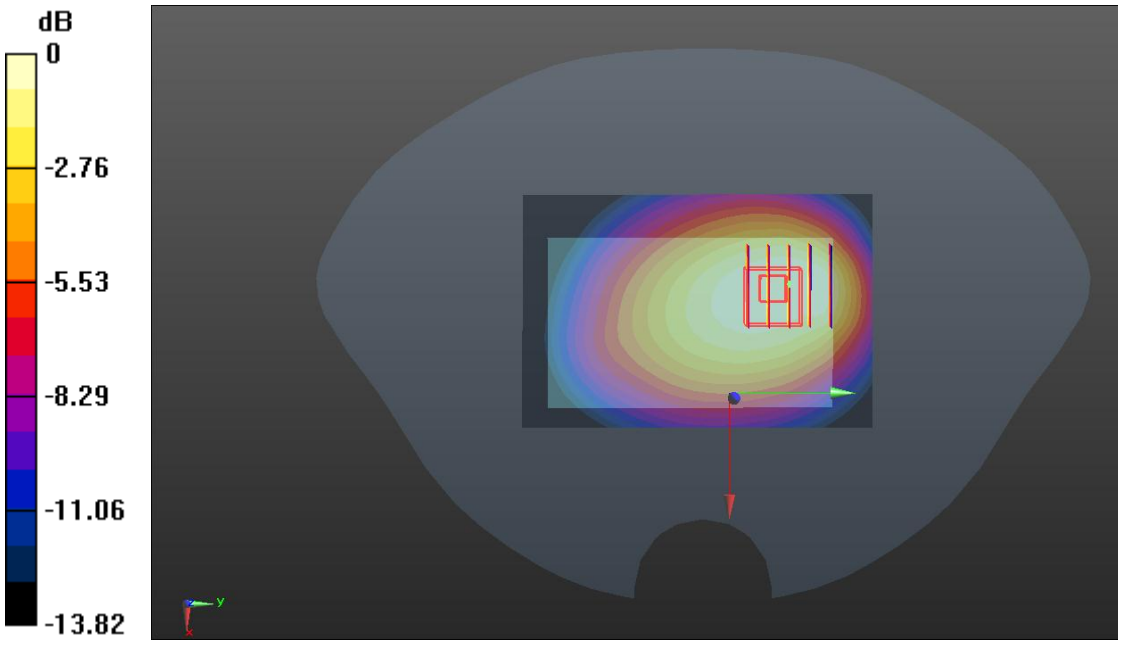
MEAS.13 Body Plane with Back Side 10mm on High Channel in LTE Band 12 mode with 1RB
Date: 2019.09.16
Communication System Band: Band 12, E-UTRA/FDD (698.0 - 716.0 MHz); Frequency: 711 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 711 MHz; σ = 0.867 S/m; ε_r = 43.021; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.35, 10.35, 10.35); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23130/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.459 W/kg
Ch23130/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.54 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.633 W/kg
SAR(1 g) = 0.400 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.424 W/kg



0 dB = 0.424 W/kg

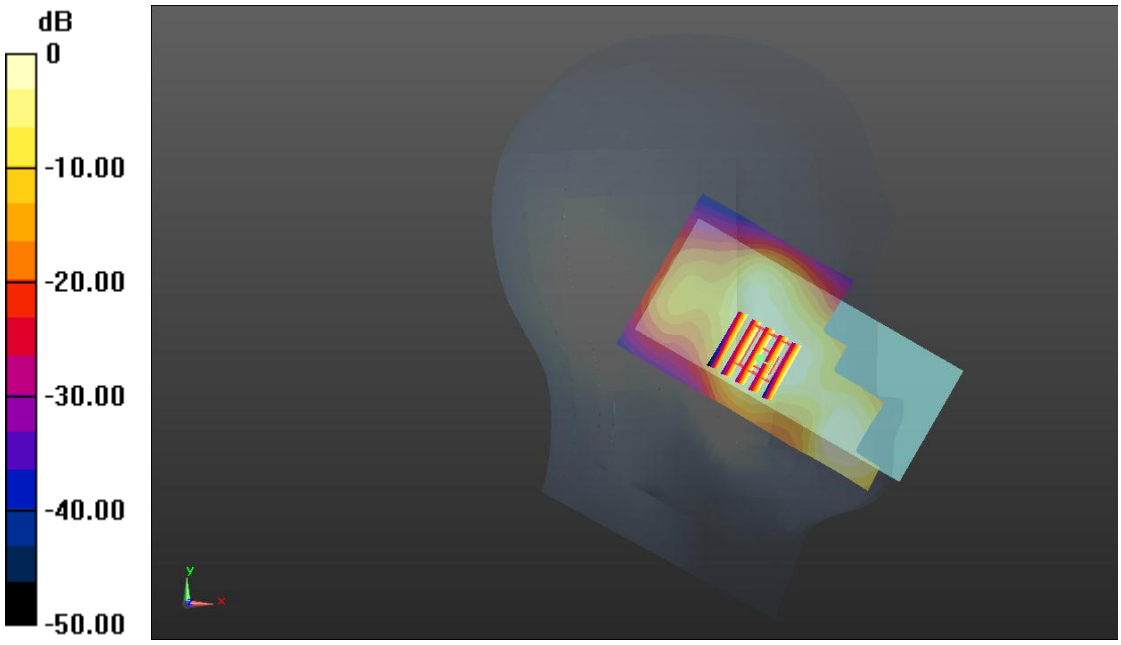
MEAS.14 Left Head with Cheek on Low Channel in LTE Band 13 mode with 1RB
Date: 2019.09.16
Communication System Band: Band 13, E-UTRA/FDD (777.0 - 787.0 MHz); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.899 S/m; ε_r = 41.584; ρ = 1000 kg/m^3
Phantom section: Right Section

Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.35, 10.35, 10.35); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23230/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.293 W/kg
Ch23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.987 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.391 W/kg
SAR(1 g) = 0.249 W/kg; SAR(10 g) = 0.163 W/kg
Maximum value of SAR (measured) = 0.259 W/kg



0 dB = 0.259 W/kg

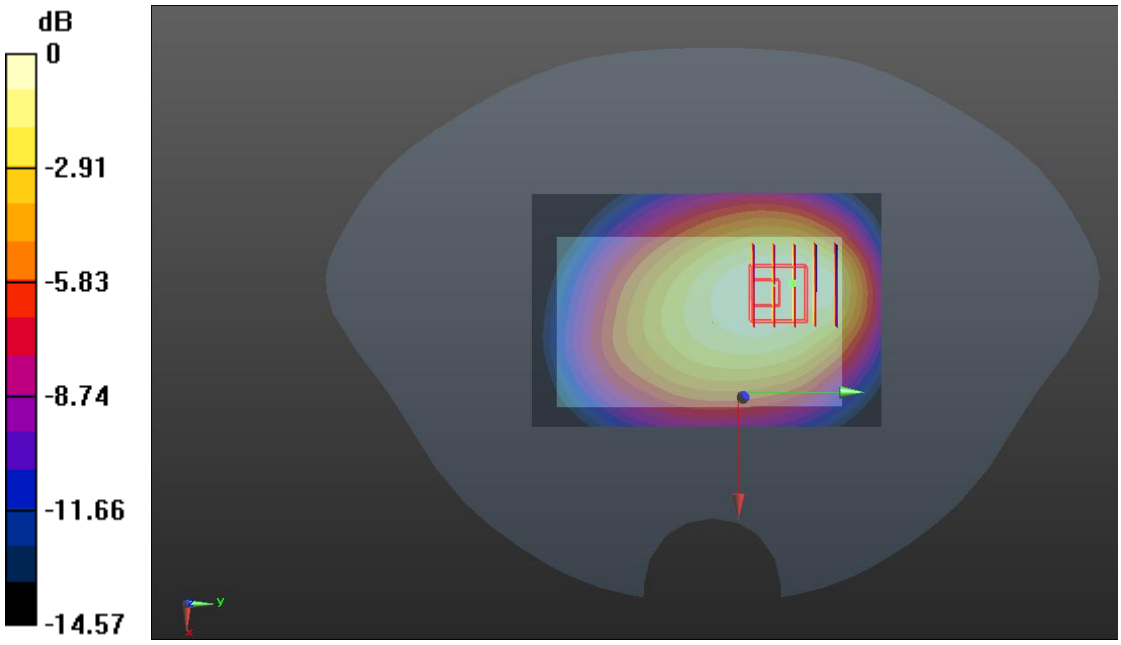
MEAS.15 Body Plane with Back Side 10mm on Low Channel in LTE Band 13 mode with 1RB
Date: 2019.09.16
Communication System Band: Band 13, E-UTRA/FDD (777.0 - 787.0 MHz); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.899 S/m; ε_r = 41.584; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.35, 10.35, 10.35); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch23230/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.698 W/kg
Ch23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.45 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.935 W/kg
SAR(1 g) = 0.627 W/kg; SAR(10 g) = 0.421 W/kg
Maximum value of SAR (measured) = 0.660 W/kg



0 dB = 0.660 W/kg

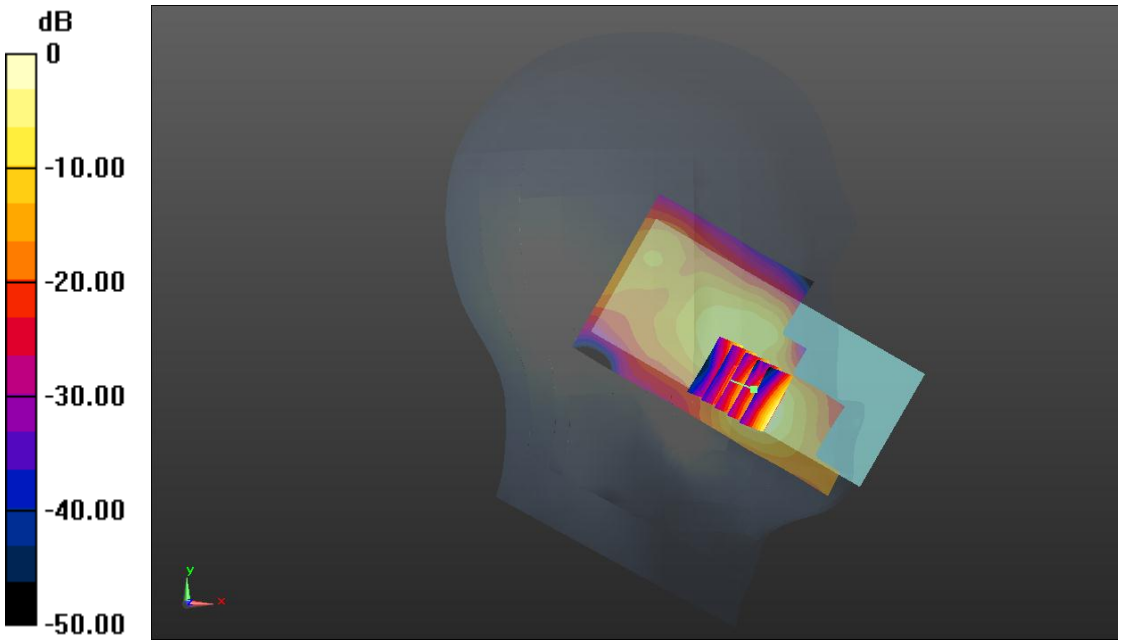
MEAS.16 Left Head with Cheek on Low Channel in LTE Band 25 mode with 1RB
Date: 2019.09.23
Communication System Band: Band 25; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.399 S/m; ε_r = 40.352; ρ = 1000 kg/m^3
Phantom section: Right Section

Ambient Temperature:22.8 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch26365/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.123 W/kg
Ch126365/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.910 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.241 W/kg
SAR(1 g) = 0.131 W/kg; SAR(10 g) = 0.075 W/kg
Maximum value of SAR (measured) = 0.128 W/kg



0 dB = 0.128 W/kg

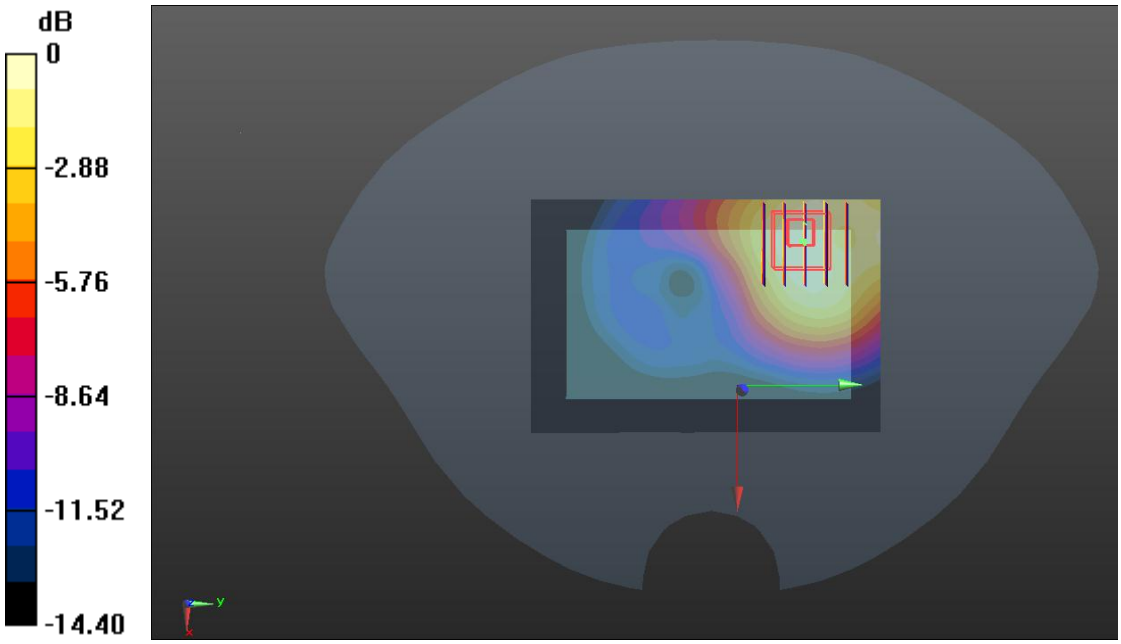
MEAS.17 Body Plane with Back Side 10mm on High Channel in LTE Band 25 mode with 1RB
Date: 2019.09.23
Communication System Band: Band 25; Frequency: 1905 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1905 MHz; σ = 1.421 S/m; ε_r = 39.542; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.38, 8.38, 8.38); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Ch26590/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.19 W/kg
Ch26590/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.929 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.83 W/kg
SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.628 W/kg
Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.16 W/kg

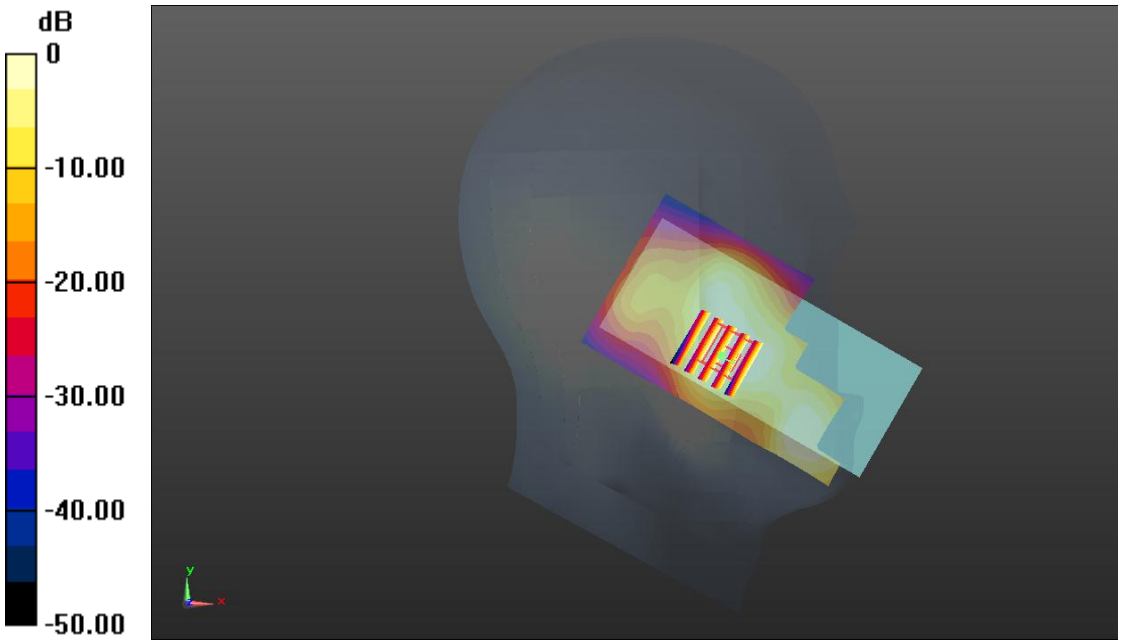
MEAS.18 Left Head with Cheek on Low Channel in LTE Band 26 mode with 1RB
Date: 2019.09.18
Communication System Band: Band26; Frequency: 821.5 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 821.5 MHz; σ = 0.881 S/m; ε_r = 42.385; ρ = 1000 kg/m^3
Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

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

Ch26765/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.427 W/kg
Ch26765/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.305 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.628 W/kg
SAR(1 g) = 0.379 W/kg; SAR(10 g) = 0.251 W/kg
Maximum value of SAR (measured) = 0.393 W/kg



0 dB = 0.393 W/kg

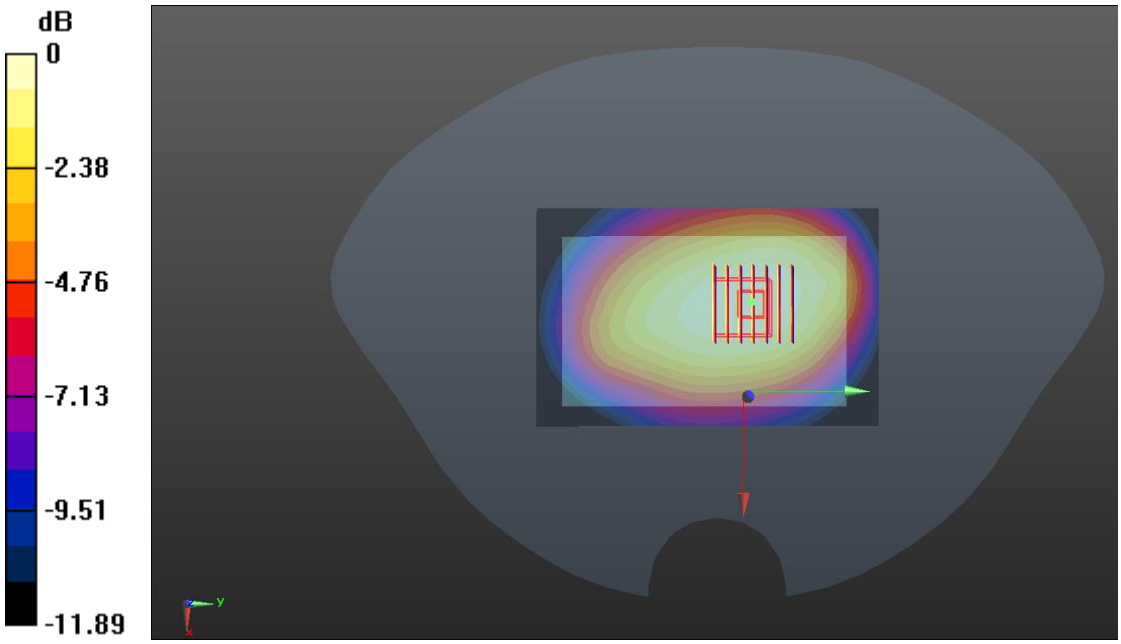
MEAS.19 Body Plane with Back Side 10mm on Low Channel in LTE Band 26 mode with 1RB
Date: 2019.09.18
Communication System Band: Band26; Frequency: 821.5 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 821.5 MHz; σ = 0.892 S/m; ε_r = 42.385; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.4

DASY5 Configuration:

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

Ch26765/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.718 W/kg
Ch26765/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.62 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.943 W/kg
SAR(1 g) = 0.670 W/kg; SAR(10 g) = 0.472 W/kg
Maximum value of SAR (measured) = 0.710 W/kg



0 dB = 0.710 W/kg

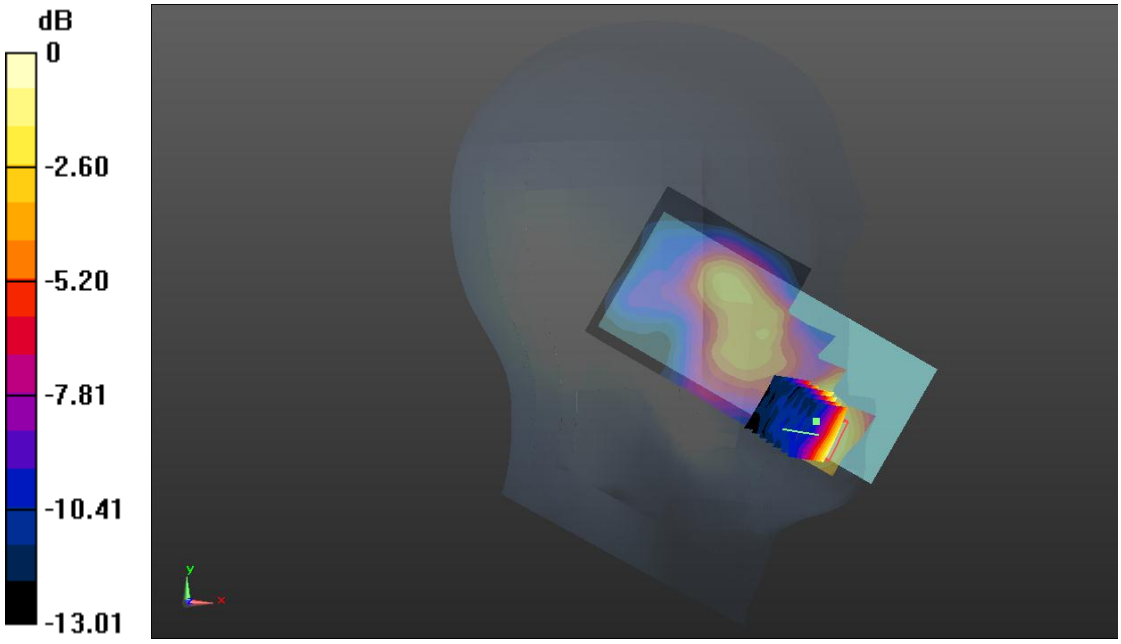
MEAS.20 Left Head with Cheek on Low Channel in LTE Band 41 mode with 1RB and Class 2
Date: 2019.09.25
Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2549.5 MHz;Duty Cycle: 1:1.58
Medium parameters used (interpolated): f = 2549.5 MHz; σ = 1.880 S/m; ε_r = 39.667; ρ = 1000 kg/m^3
Phantom section: Left Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

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

Ch40185/Area Scan (71x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.136 W/kg
Ch40185/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.774 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.226 W/kg
SAR(1 g) = 0.121 W/kg; SAR(10 g) = 0.069 W/kg
Maximum value of SAR (measured) = 0.130 W/kg



0 dB = 0.130 W/kg

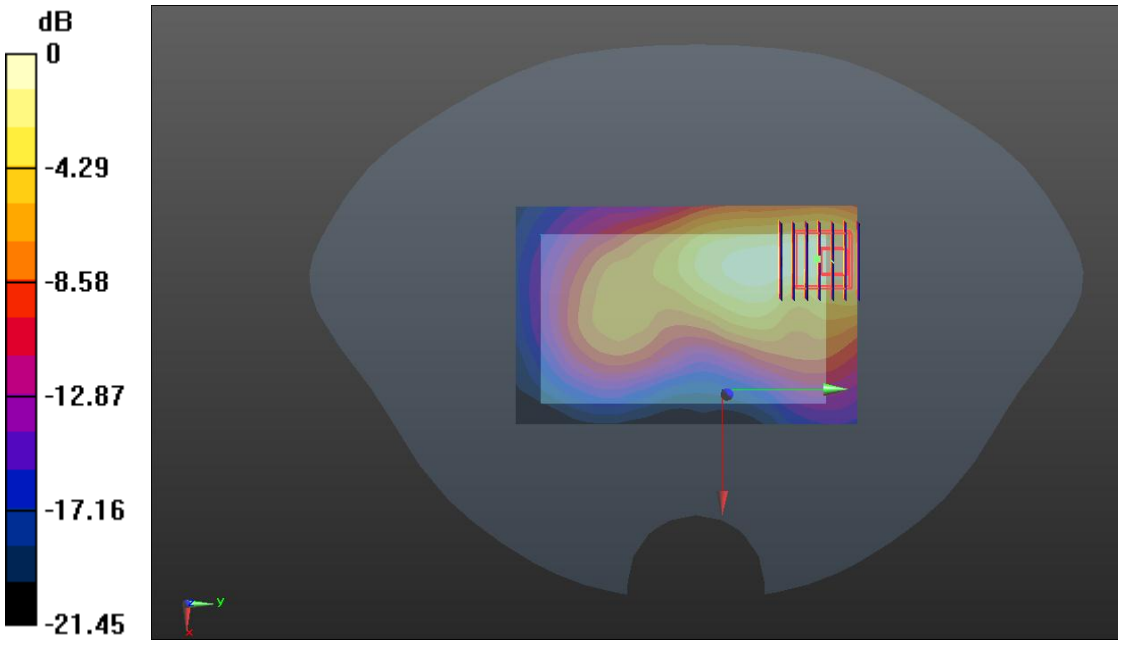
MEAS.21 Body Plane with Back Side 10mm on Low Channel in LTE Band 41 mode with 1RB and Class 2
Date: 2019.09.25
Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2549.5 MHz;Duty Cycle: 1:1.58
Medium parameters used (interpolated): f = 2549.5 MHz; σ = 1.880 S/m; ε_r = 39.667; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

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

Ch40185/Area Scan (71x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.547 W/kg
Ch40185/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.08 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.539 W/kg; SAR(10 g) = 0.254 W/kg
Maximum value of SAR (measured) = 0.617 W/kg



0 dB = 0.617 W/kg

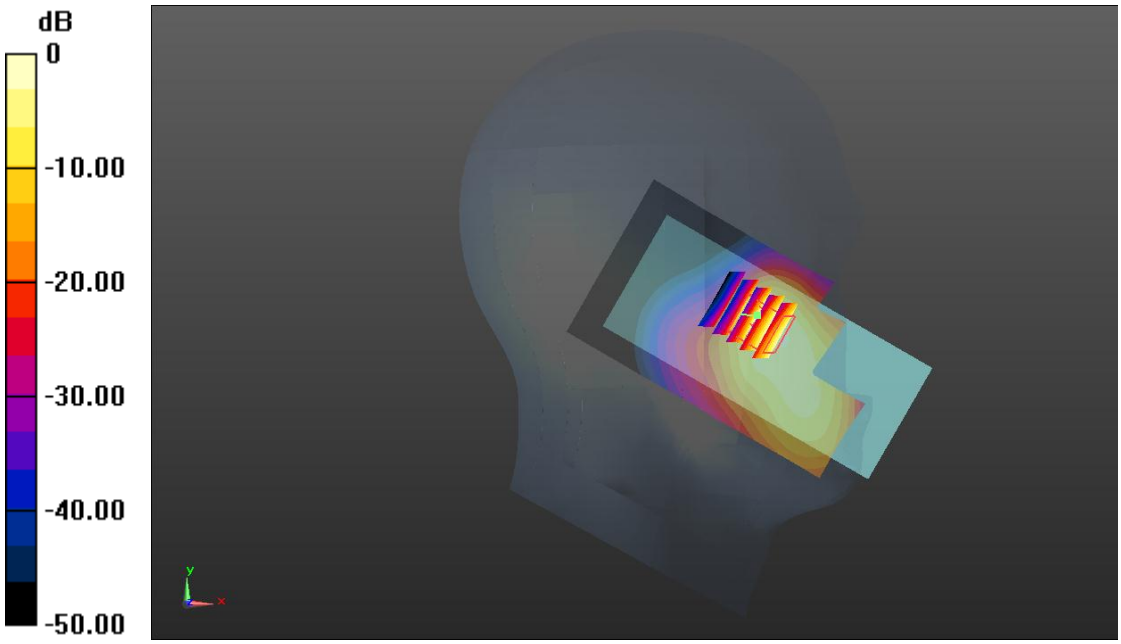
MEAS.22 Left Head with Cheek on Middle Channel in LTE Band 71 mode with 1RB
Date: 2019.09.15
Communication System Band: Band 71; Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 680.5 MHz; σ = 0.883 S/m; ε_r = 42.806; ρ = 1000 kg/m^3
Phantom section: Left Section

Ambient Temperature:22.8 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.35, 10.35, 10.35); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch133297/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0727 W/kg
Ch133297/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.2760 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.134 W/kg
SAR(1 g) = 0.069 W/kg; SAR(10 g) = 0.028
Maximum value of SAR (measured) = 0.0807 W/kg



0 dB = 0.0807 W/kg

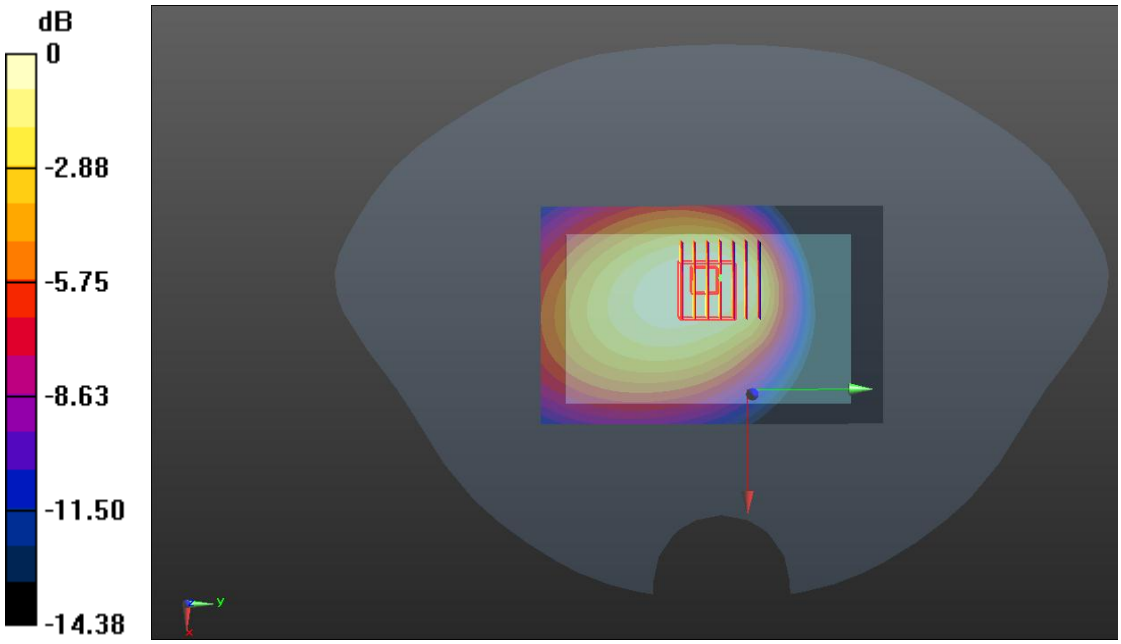
MEAS.23 Body Plane with Back Side 10mm on Middle Channel in LTE Band 71 mode with 1RB
Date: 2019.09.15
Communication System Band: Band 71; Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 680.5 MHz; σ = 0.883 S/m; ε_r = 42.806; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.8 Liquid Temperature:21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.35, 10.35, 10.35); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch133297/Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.312 W/kg
Ch133297/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.19 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.452 W/kg
SAR(1 g) = 0.272 W/kg; SAR(10 g) = 0.183 W/kg
Maximum value of SAR (measured) = 0.290 W/kg



0 dB = 0.290 W/kg

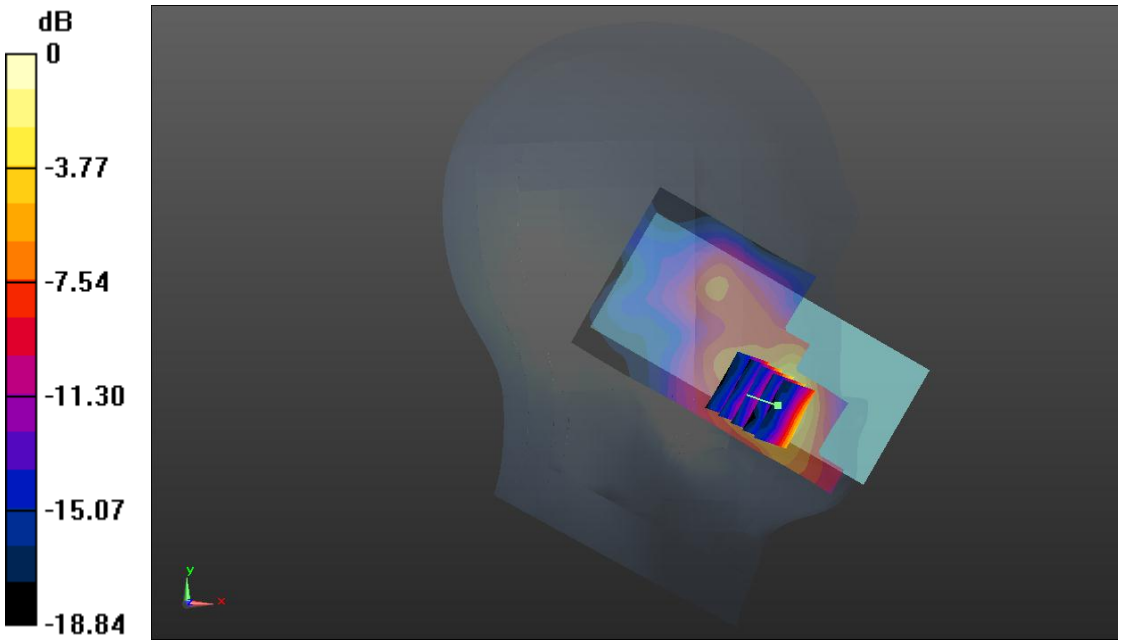
MEAS.24 Left Head with Cheek on Middle Channel in 802.11 b mode
Date: 2019.09.24
Communication System Band: WLAN(b); Frequency: 2437 MHz;Duty Cycle: 1:1.096
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.781 S/m; ε_r = 39.538; ρ = 1000 kg/m^3
Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

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

Ch6/Area Scan (71x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.119 W/kg
Ch6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.690 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.292 W/kg
SAR(1 g) = 0.123 W/kg; SAR(10 g) = 0.053 W/kg
Maximum value of SAR (measured) = 0.126 W/kg



0 dB = 0.126 W/kg

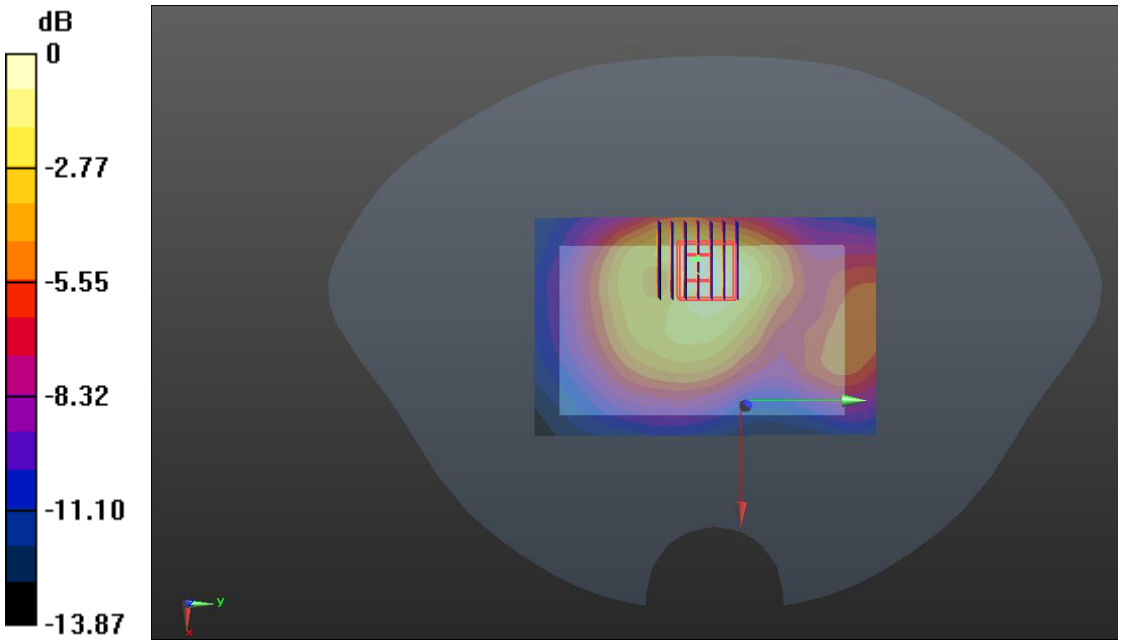
MEAS.25 Body Plane with Back Side 10mm on Middle Channel in 802.11 b mode
Date: 2019.09.24
Communication System Band: WLAN(b); Frequency: 2437 MHz;Duty Cycle: 1:1.096
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.781 S/m; ε_r = 39.538; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

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

Ch6/Area Scan (71x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.185 W/kg
Ch6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.421 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.354 W/kg
SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.088 W/kg
Maximum value of SAR (measured) = 0.183 W/kg



0 dB = 0.183 W/kg

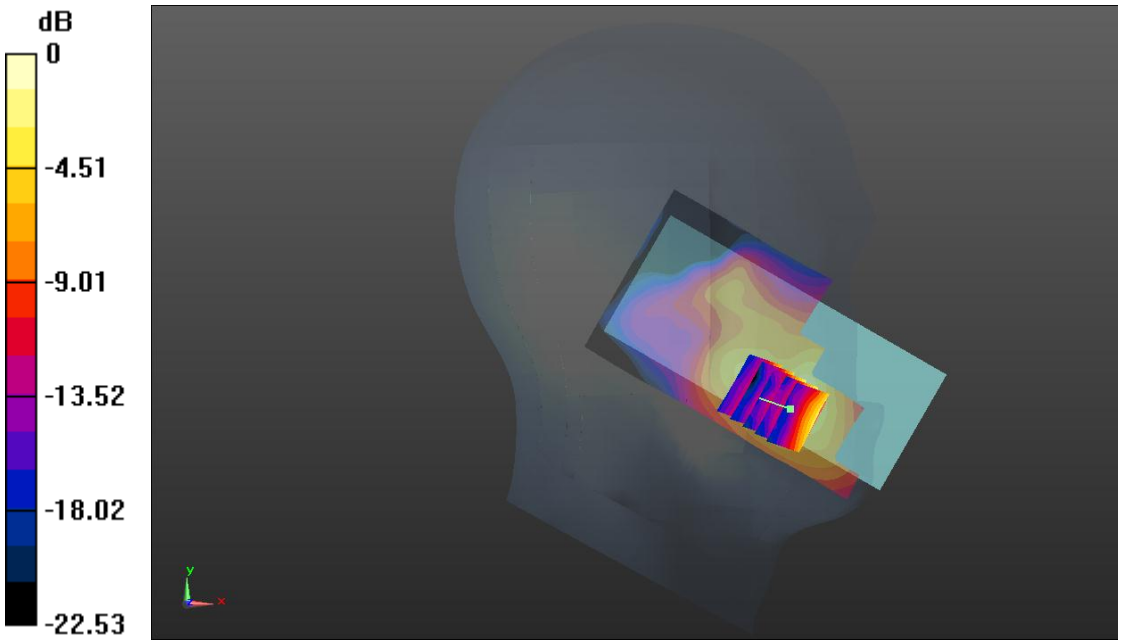
MEAS.26 Left Head with Cheek on Middle Channel in Bluetooth DH5 mode
Date: 2019.09.24
Communication System Band: BT; Frequency: 2441 MHz;Duty Cycle: 1:1.297
Medium parameters used: f = 2441 MHz; σ = 1.790 S/m; ε_r = 39.412; ρ = 1000 kg/m^3
Phantom section: Left Section

Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

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

Ch39/Area Scan (71x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0571 W/kg
Ch39/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.9810 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.127 W/kg
SAR(1 g) = 0.058 W/kg; SAR(10 g) = 0.027 W/kg
Maximum value of SAR (measured) = 0.0674 W/kg



0 dB = 0.0674 W/kg

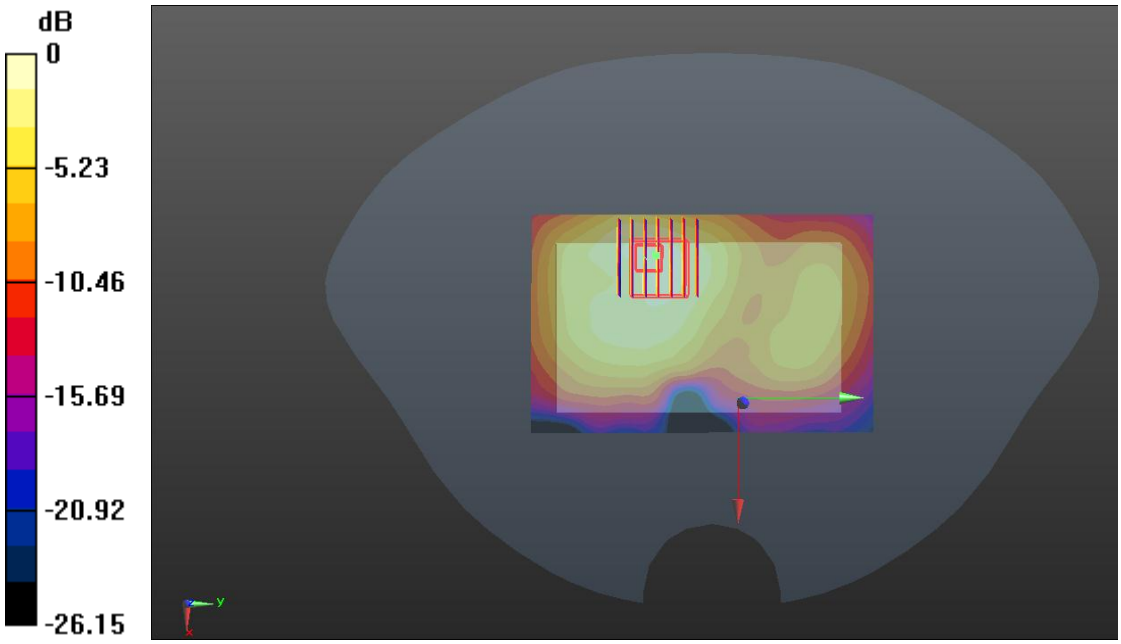
MEAS.27 Body Plane with Back Side 10mm on Middle Channel in Bluetooth DH5 mode
Date: 2019.09.24
Communication System Band: BT; Frequency: 2441 MHz;Duty Cycle: 1:1.297
Medium parameters used: f = 2441 MHz; σ = 1.790 S/m; ε_r = 39.412; ρ = 1000 kg/m^3
Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.5

DASY5 Configuration:

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

Ch39/Area Scan (71x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0789 W/kg
Ch39/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.097 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.171 W/kg
SAR(1 g) = 0.074 W/kg; SAR(10 g) = 0.036 W/kg
Maximum value of SAR (measured) = 0.0828 W/kg



0 dB = 0.0828 W/kg

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ1990123-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ1990123-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “CALIBRATION REPORT.pdf”.

--END OF REPORT--