

FCC

SAR

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Mobile Phone

ISSUED TO
Realme Chongqing Mobile Telecommunications Corp., Ltd.

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



Tested by: Zong Liyao
Zong Liyao

(Engineer)

Date: Dec. 13, 2019

Approved by: Wei Yanquan

Wei Yanquan
(Chief Engineer)

Date: Dec. 13, 2019

Report No.: BL-SZ19A0431-701

EUT Name: Mobile Phone

Model Name: RMX1921

Brand Name: realme

FCC ID: 2AUYFRMX1921

Test Standard: FCC 47 CFR Part 2.1093

ANSI C95.1: 1999, IEEE 1528: 2013

Maximum SAR: Head (1 g): 1.192 W/kg

Body-worn (1 g): 0.403 W/kg

Hotspot (1 g): 1.074 W/kg

Test Conclusion: Pass

Test Date: Nov. 18, 2019 ~ Dec. 10, 2019

Date of Issue: Dec. 13, 2019

NOTE: This test report of test results only related to testing samples, which can be duplicated completely for the legal use with the approval of the applicant; it shall not be reproduced except in full, without the written approval of Shenzhen BALUN Technology Co., Ltd. Any objections should be raised within thirty days from the date of issue. To validate the report, please contact us.

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Dec. 13, 2019</u>	<u>Initial Issue</u>

TABLE OF CONTENTS

1	GENERAL INFORMATION.....	5
1.1	Identification of the Testing Laboratory.....	5
1.2	Identification of the Responsible Testing Location.....	5
1.3	Test Environment Condition.....	5
1.4	Announce.....	6
2	PRODUCT INFORMATION.....	7
2.1	Applicant Information.....	7
2.2	Manufacturer Information.....	7
2.3	Factory Information.....	7
2.4	General Description for Equipment under Test (EUT).....	7
2.5	Ancillary Equipment.....	7
2.6	Technical Information.....	8
2.7	Power Reduction Description.....	10
3	SUMMARY OF TEST RESULT.....	11
3.1	Test Standards.....	11
3.2	Device Category and SAR Limit.....	12
3.3	Test Result Summary.....	13
3.4	Test Uncertainty.....	15
4	MEASUREMENT SYSTEM.....	16
4.1	Specific Absorption Rate (SAR) Definition.....	16
4.2	DASY SAR System.....	17
5	SYSTEM VERIFICATION.....	24
5.1	Purpose of System Check.....	24
5.2	System Check Setup.....	24
6	TEST POSITION CONFIGURATIONS.....	25
6.1	Head Exposure Conditions.....	25
6.2	Body-worn Position Conditions.....	27

6.3	Hotspot Mode Exposure Position Conditions.....	28
6.4	Product Specific 10g Exposure Consideration.....	28
7	MEASUREMENT PROCEDURE.....	29
7.1	Measurement Process Diagram.....	29
7.2	SAR Scan General Requirement.....	30
7.3	Measurement Procedure.....	31
7.4	Area & Zoom Scan Procedure.....	31
8	CONDUCTED RF OUPUT POWER.....	32
8.1	GSM.....	32
8.2	WCDMA.....	33
8.3	LTE.....	34
8.4	WIFI.....	41
8.5	Bluetooth.....	43
8.6	Power Reduction List.....	44
9	TEST EXCLUSION CONSIDERATION.....	74
9.1	SAR Test Exclusion Consideration Table.....	75
10	TEST RESULT.....	79
10.1	GSM 850 GSM 850 Head SAR.....	79
10.2	GSM 1900.....	80
10.3	WCDMA Band 2.....	81
10.4	WCDMA Band 4.....	82
10.5	WCDMA Band 5.....	83
10.6	LTE Band 2 (20MHz Bandwidth).....	84
10.7	LTE Band 4 (20MHz Bandwidth).....	86
10.8	LTE Band 5 (10MHz Bandwidth).....	88
10.9	LTE Band 7 (20MHz Bandwidth).....	89
10.10	LTE Band 41 (20MHz Bandwidth).....	91
10.11	WIFI 2.4GHz.....	93
10.12	5G WIFI.....	95
10.13	Bluetooth.....	96
11	SAR Measurement Variability.....	97
12	SIMULTANEOUS TRANSMISSION.....	98

12.1 Simultaneous Transmission Mode Consider.....	98
12.2 Sum SAR of Simultaneous Transmission.....	99
13 TEST EQUIPMENTS LIST.....	118
ANNEX A SIMULATING LIQUID VERIFICATION RESULT.....	119
ANNEX B SYSTEM CHECK RESULT.....	120
ANNEX C TEST DATA.....	146
ANNEX D EUT EXTERNAL PHOTOS.....	195
ANNEX E SAR TEST SETUP PHOTOS.....	195
ANNEX F CALIBRATION REPORT.....	195

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°C to 23°C
Ambient Relative Humidity	36% to 48%
Ambient Pressure	100 KPa to 102 KPa

1.4 Announce

- (1) The test report reference to the report template version v2.2.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant Information

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

2.2 Manufacturer Information

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

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	RMX1921
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	2RA133
Software Version	ColorOS V6.0.1
Dimensions (Approx.)	158.7 mm × 75.2 mm × 8.6 mm
Weight (Approx.)	183 g(with battery)

2.5 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery	
	Brand Name	realme
	Model No.	BLP741
	Serial No.	N/A
	Capacitance	Rated: 3920mAh/15.17Wh Typical: 4000mAh/15.48Wh
	Rated Voltage	3.87 V
	Limited Voltage	4.45 V
	Manufacturer	Ningde Ampere Technology Limited

2.6 Technical Information

Network and Wireless connectivity	2G Network GSM/GPRS/EDGE 850/900/1800/1900 MHz 3G Network WCDMA/HSDPA/HSUPA/HSPA+ Band 1/2/4/5/8 4G Network FDD LTE Band 1/2/3/4/5/7/8/20/28 TDD LTE Band 38/39/40/41 Bluetooth 5.0 (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20) 5G WIFI 802.11a, 802.11n(HT20/40) and 802.11ac(VHT20/ 40/ 80) GPS, GLONASS, BDS, NFC
Note: The EUT is a mobile phone, supporting dual SIM card slots under the same transceiver. Both SIM card slots support GSM, WCDMA and LTE. And both SIM card slots share the same transceiver, so only SIM1 is tested in this report.	

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

Operating Mode	GSM, WCDMA, LTE, 2.4G WLAN, 5G WLAN, Bluetooth		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM 1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE Band 38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	802.11b/g /n(HT20)	2400 ~ 2483.5 MHz	
	802.11a/ /n(HT20/HT40) /ac(VHT20/VHT40/ VHT80)	5150 ~ 5250 MHz	
		5250 ~ 5350 MHz	
		5470 ~ 5725 MHz	
		5725 ~ 5850 MHz	
	Bluetooth	2400 ~ 2483.5 MHz	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
DTM	Not Support		
Hotspot Function	Support		
Power Reduction	Support		
Exposure Category	General Population/Uncontrolled exposure		
EUT Stage	Portable Device		
Product	Type		
	☒ Production unit	☐ Identical prototype	
Note:			

1. This device supports both LTE Band 38 and Band 41. Since the supported frequency span for LTE Band 38 falls completely within the supports frequency span for LTE Band 41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE Band 41.
2. This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz WLAN/5.5GHz WLAN supports WiFi Direct (GC only).
3. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
4. This device has two WWAN transmit antennas. WWAN down antenna is located at the bottom edge of the device, and WWAN up antenna is located at the top edge of the device. Up and Down antenna support the same WWAN frequency bands, and they can't transmit simultaneously.

2.7 Power Reduction Description

This mobile phone device supports the receiver detection mechanism. This device uses the receiver to indicate whether the user is making a call in head or body or hand.

When there is a voice call (including VOIP) and the audio is actively routed through the earpiece receiver, which indicating the head exposure condition it will trigger the head exposure reduced the power.

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

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

For WWAN Up Antenna (4 sets of power reduction levels)

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

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

Reduced power level 1-PCS1900; WCDMA Band 2/4; LTE Band2/4/7/38/41(WWAN Use Only)

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

Reduced power level 2 -PCS1900; WCDMA Band 2/4; LTE Band2/4/7/38/41(WWAN+WLAN2.4G)

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

Reduced power level 3 -PCS1900; WCDMA Band 2/4; LTE Band2/4/7/38/41(WWAN+WLAN5G)

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

b) Body (Body-worn and Hotspot) and Product Specific exposure conditions:

Reduced power level 4-WCDMA Band 2; LTE Band2/7

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

The power reduction support in WWAN Use Only, WWAN transmitting simultaneously with the WLAN 2.4G or WWAN transmitting simultaneously with the WLAN 5G mode.

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

For WLAN Antenna (2 sets of power reduction levels)

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

Reduced power level 1-WLAN2.4G, WLAN 5G (WLAN Use Only)

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

Reduced power level 2-WLAN2.4G, WLAN 5G(WLAN +WWAN)

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

Note: When the device transmitting at the WLAN at head and body exposure conditions this product not support power reduction function.

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	ANSI/IEEE Std. C95.1-1999	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D01 v06	Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies
5	FCC KDB 941225 D01 v03r01	3G SAR MEAUREMENT PROCEDURES
6	FCC KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices
7	FCC KDB 941225 D06 v02r01	SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities
8	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
9	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
10	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
11	KDB 248227 D01 v02r02	SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters

3.2 Device Category and SAR Limit

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

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

Table of Exposure Limits:

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

NOTE:

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

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

3.3 Test Result Summary

3.3.1 Highest Head and Body SAR (1 g Value)

Band	Maximum Scaled SAR (W/kg)			Maximum Report SAR (W/kg)	
	Head	Body		Head	Body
		Body-worn (15mm)	Hotspot (10mm)		
GSM 850	0.573	0.191	0.370	1.192	1.074
GSM 1900	1.081	0.354	1.074		
WCDMA Band 2	1.192	0.373	0.846		
WCDMA Band 4	1.042	0.403	0.870		
WCDMA Band 5	0.424	0.225	0.283		
LTE Band 2	1.181	0.385	0.646		
LTE Band 4	1.138	0.399	0.772		
LTE Band 5	0.481	0.220	0.341		
LTE Band 7	1.133	0.271	0.605		
LTE Band 41	0.994	0.334	0.477		
2.4G WLAN	1.177	0.256	0.460		
5.2G WLAN	1.161	0.212	0.410		
5.6G WLAN	0.572	0.229	/		
5.8G WLAN	1.127	0.135	0.237		
Bluetooth	0.272	0.063	0.127		
Limit (W/kg)	1.60				
Verdict	Pass				
Note: This device supports both LTE Band 38 and Band 41. Since the supported frequency span for LTE Band 38 falls completely within the supports frequency span for LTE Band 41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE Band 41.					

3.3.2 Highest Product Specific SAR (10 g Value)

Band	Maximum Scaled SAR (W/kg)	Maximum Report SAR (W/kg)
	Specific (0mm)	Specific (0mm)
WCDMA Band 2	1.694	1.694
LTE Band 2	1.661	
LTE Band 7	1.343	
5.3G WLAN	0.274	
5.6G WLAN	0.416	
Limit (W/kg)	4.0	
Verdict	Pass	

3.3.3 Highest Simultaneous SAR

Position	Simultaneous Configuration	Simultaneous SAR (W/kg)	Limit (W/kg)	Verdict
Head (1g)	WCDMA + 2.4G WLAN	1.498	1.6	Pass
Body-worn (1g)	WCDMA + 5G WLAN + Bluetooth	0.671	1.6	Pass
Hotspot Mode (1g)	GSM+ 5G WLAN + Bluetooth	1.500	1.6	Pass
Product Specific (10g)	LTE + 5G WLAN	2.036	4.0	Pass

3.4 Test Uncertainty

According to KDB 865664 D01, When the highest measured 1 g SAR within a frequency band is $< 1.5 \text{ W/kg}$, 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 1.192 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:

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

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

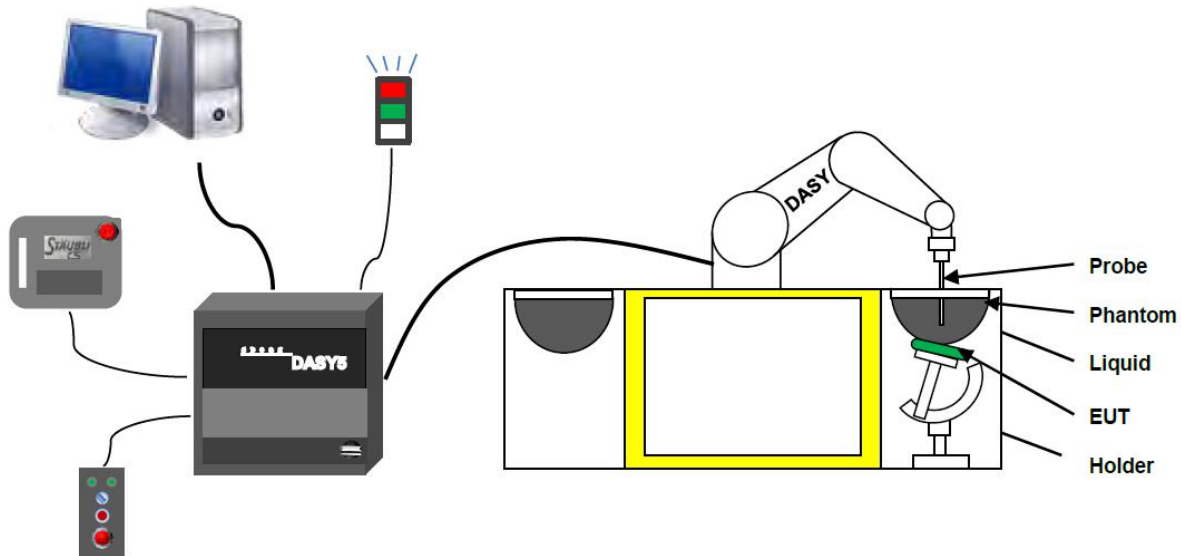
$$\text{SAR} = \frac{\sigma E^2}{\rho}$$

Where: σ is the conductivity of the tissue,

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

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



The 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 system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	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 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 9 mm) Tip diameter: 2.5 mm (Body: 10 mm) Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (EX3DV4)



E-Field Probe Calibration Process

Probe calibration is realized, in compliance with 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

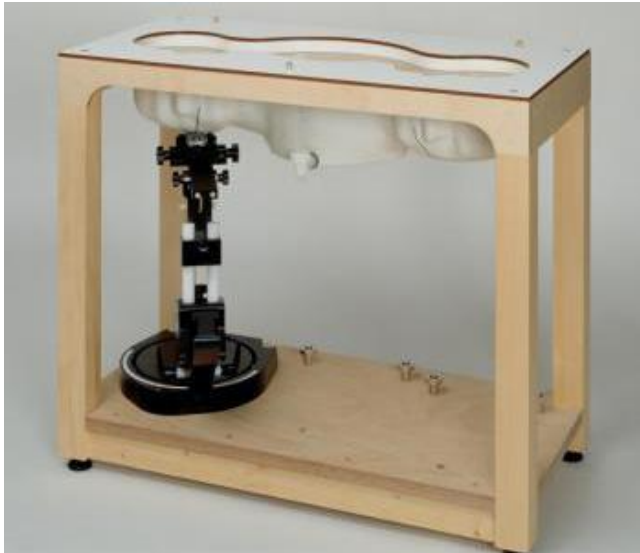
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



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

4.2.5 Phantoms

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



- Left 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

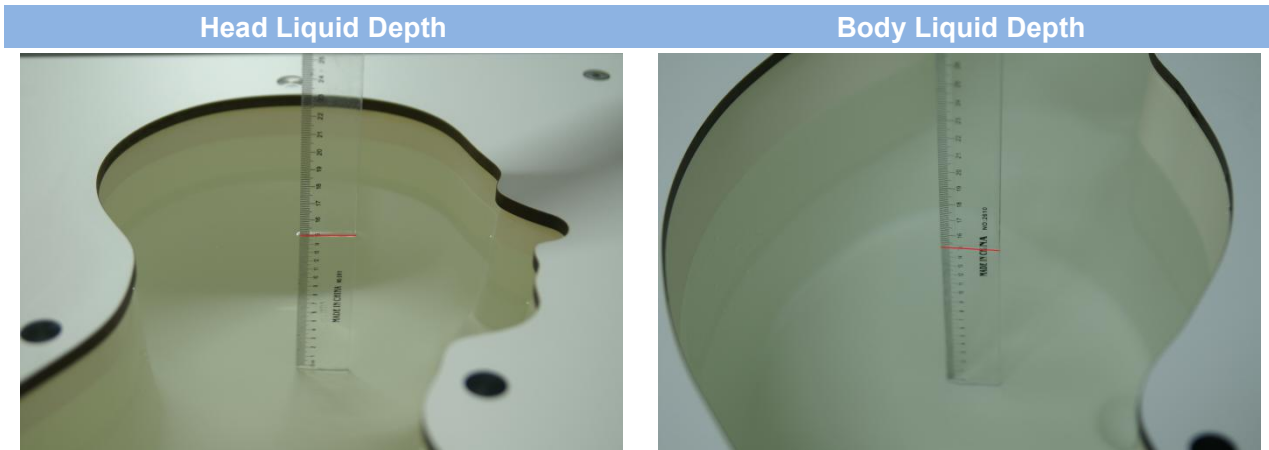
The DASY5 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65° . The bottom plate contains three pair of bolts for 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%.



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

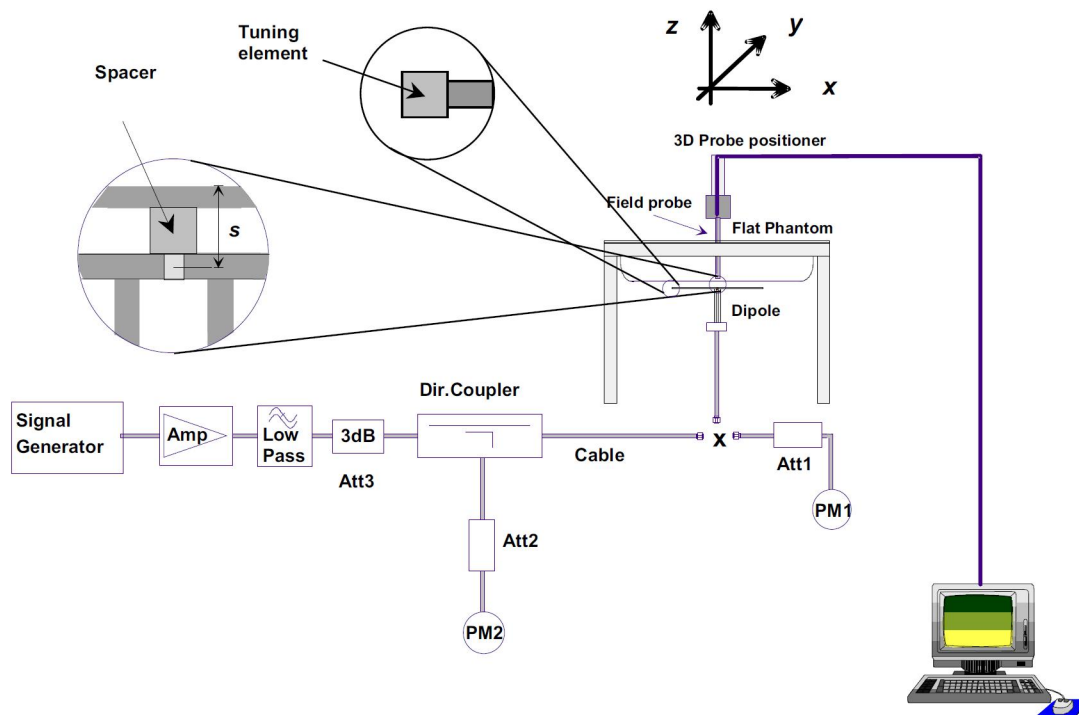
5 SYSTEM VERIFICATION

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

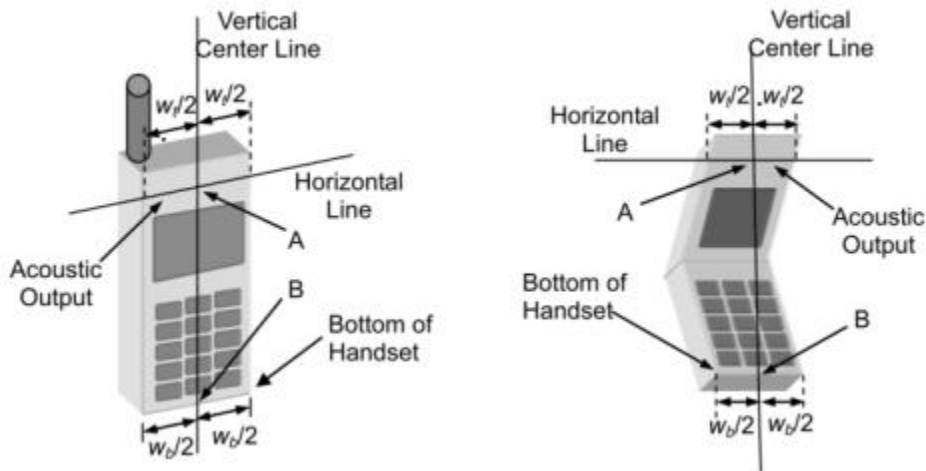
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

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.

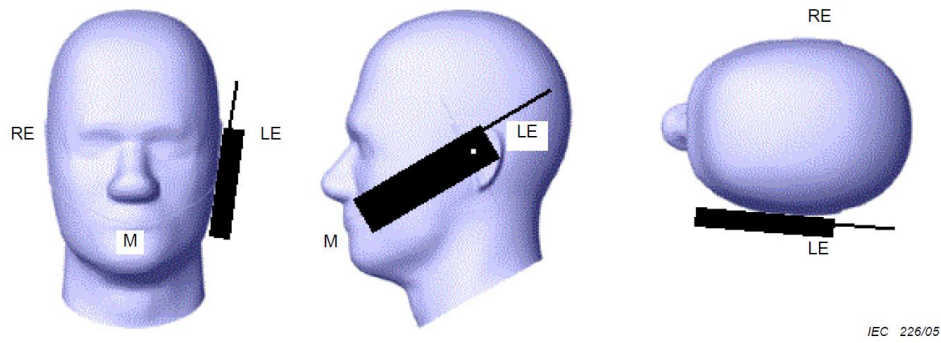
6.1.1 Two Imaginary Lines on the Handset

- 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.
- 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.
- 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

- 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.
- 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

- To position the device in the "cheek" position described above.
- While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

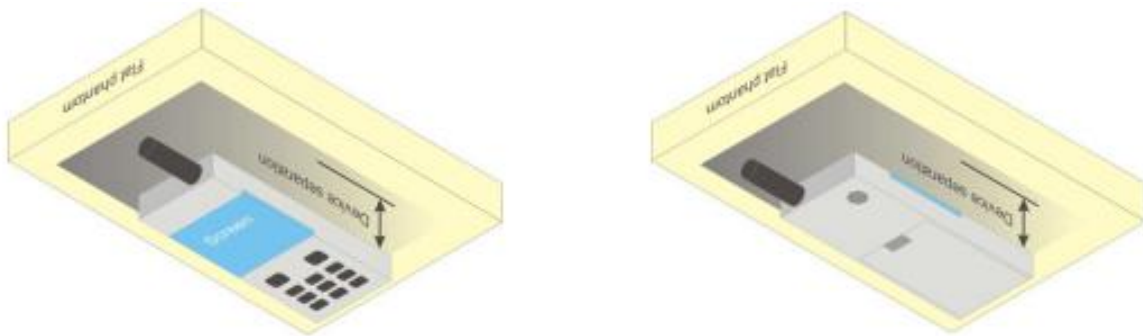


6.2 Body-worn Position Conditions

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

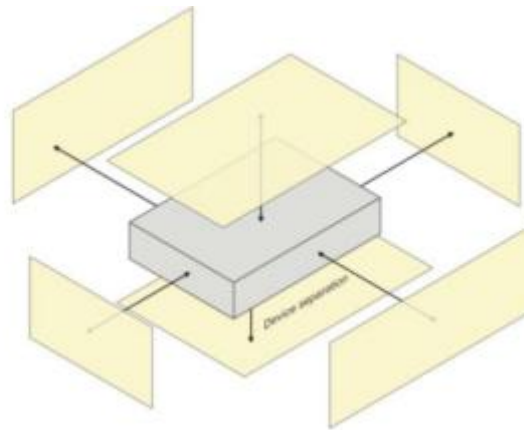
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.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

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



6.3 Hotspot Mode Exposure Position Conditions

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



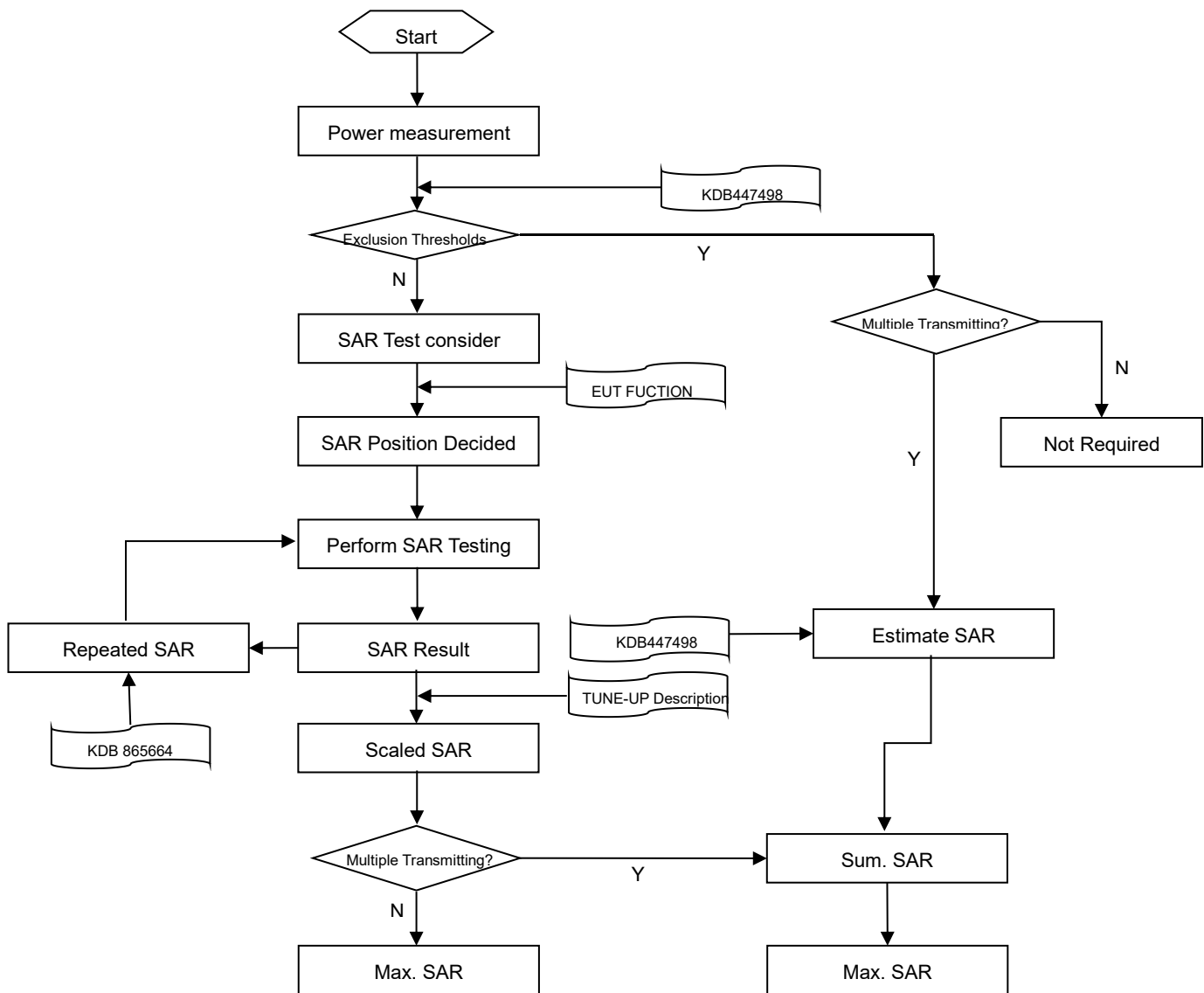
6.4 Product Specific 10g Exposure Consideration

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

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

7 MEASUREMENT PROCEDURE

7.1 Measurement Process Diagram



7.2 SAR Scan General Requirement

Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 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.

			≤3GHz	>3GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5±1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30°±1°	20°±1°
Maximum area scan spatial resolution: Δx Area , Δy Area			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3–4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3–4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz Zoom (n)		≤ 5 mm	3–4 GHz: ≤ 4 mm
				4–5 GHz: ≤ 3 mm
				5–6 GHz: ≤ 2 mm
	graded grid	Δz Zoom (1): between 1st two points closest to phantom surface	≤ 4 mm	3–4 GHz: ≤ 3 mm
				4–5 GHz: ≤ 2.5 mm
				5–6 GHz: ≤ 2 mm
	Δz Zoom (n>1): between subsequent points		$\leq 1.5 \cdot \Delta z$ Zoom (n-1)	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3–4 GHz: ≥ 28 mm
				4–5 GHz: ≥ 25 mm
				5–6 GHz: ≥ 22 mm

Note:

- δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
- * 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.

7.3 Measurement Procedure

The following steps are used for each test position

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

7.4 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

When the 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 OUTPUT POWER

8.1 GSM

GSM 850								
GSM850 Band	Burst Average Power(dBm)			Tune-up	Frame-Averaged power (dBm)			Tune-up
Channel	128	190	251	Limit (dBm)	128	190	251	Limit (dBm)
GSM (GMSK, 1-Slot)	33.40	33.26	33.13	33.50	24.21	24.07	23.94	24.31
GPRS (GMSK, 1-Slot)	33.23	33.02	33.02	33.50	24.04	23.83	23.83	24.31
GPRS (GMSK, 2-Slots)	30.87	30.71	31.04	31.50	24.74	24.58	24.91	25.37
GPRS (GMSK, 3-Slots)	28.92	28.83	28.80	29.00	24.50	24.41	24.38	24.58
GPRS (GMSK, 4-Slots)	27.35	27.27	27.70	28.00	24.17	24.09	24.52	24.82
EGPRS (8PSK, 1-Slot)	29.54	29.66	29.74	30.00	20.35	20.47	20.55	20.81
EGPRS (8PSK, 2-Slots)	27.57	27.19	27.48	28.00	21.44	21.06	21.35	21.87
EGPRS (8PSK, 3-Slots)	26.42	26.02	26.32	26.50	22.00	21.60	21.90	22.08
EGPRS (8PSK, 4-Slots)	25.81	25.34	25.61	26.00	22.63	22.16	22.43	22.82
GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up	Frame-Averaged power(dBm)			Tune-up
Channel	512	661	810	Limit (dBm)	512	661	810	Limit (dBm)
GSM (GMSK, 1-Slot)	30.01	29.82	29.95	30.50	20.82	20.63	20.76	21.31
GPRS (GMSK, 1-Slot)	29.91	29.77	29.88	30.50	20.72	20.58	20.69	21.31
GPRS (GMSK, 2-Slots)	27.58	27.48	27.62	28.00	21.45	21.35	21.49	21.87
GPRS (GMSK, 3-Slots)	26.01	26.28	26.41	27.00	21.59	21.86	21.99	22.58
GPRS (GMSK, 4-Slots)	24.78	24.62	24.62	25.00	21.60	21.44	21.44	21.82
EGPRS (8PSK, 1-Slot)	28.91	28.84	28.95	29.50	19.72	19.65	19.76	20.31
EGPRS (8PSK, 2-Slots)	27.18	27.13	27.22	27.50	21.05	21.00	21.09	21.37
EGPRS (8PSK, 3-Slots)	26.00	25.77	25.88	26.50	21.58	21.35	21.46	22.08
EGPRS (8PSK, 4-Slots)	24.84	24.63	24.61	25.00	21.66	21.45	21.43	21.82

Note¹: SAR testing was performed on the maximum frame-averaged power mode.

Note²: The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:

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

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

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

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

8.2 WCDMA

WCDMA	Band 2				Band 4			
Channel	9262	9400	9538	Tune-up Limit (dBm)	1312	1412	1513	Tune-up Limit (dBm)
RMC 12.2Kbps	22.72	22.56	22.69	24.00	22.66	22.79	22.89	24.00
HSDPA Subtest-1	21.74	21.57	21.67	22.00	21.60	21.77	21.85	22.00
HSDPA Subtest-2	21.75	21.60	21.67	22.00	21.67	21.76	21.90	22.00
HSDPA Subtest-3	21.27	21.12	21.19	21.50	21.16	21.29	21.38	21.50
HSDPA Subtest-4	21.25	21.10	21.22	21.50	21.15	21.29	21.36	21.50
HSUPA Subtest-1	21.51	21.29	21.61	22.00	21.62	21.80	21.60	22.00
HSUPA Subtest-2	19.66	19.54	19.71	20.00	19.56	19.74	19.90	20.00
HSUPA Subtest-3	20.74	20.53	20.67	21.00	20.57	20.72	20.85	21.00
HSUPA Subtest-4	19.70	19.56	19.64	20.00	19.62	19.75	19.85	20.00
HSUPA Subtest-5	21.68	21.54	21.66	22.00	21.60	21.68	21.83	22.00
WCDMA	Band 5				-			
Channel	4132	4182	4233	Tune-up Limit (dBm)	-	-	-	-
RMC 12.2Kbps	22.99	22.96	22.96	24.30	-	-	-	-
HSDPA Subtest-1	22.09	21.94	21.95	22.30	-	-	-	-
HSDPA Subtest-2	22.15	21.99	21.97	22.30	-	-	-	-
HSDPA Subtest-3	21.55	21.52	21.48	21.80	-	-	-	-
HSDPA Subtest-4	21.56	21.53	21.47	21.80	-	-	-	-
HSUPA Subtest-1	22.12	21.94	21.99	22.30	-	-	-	-
HSUPA Subtest-2	20.05	19.99	20.00	20.30	-	-	-	-
HSUPA Subtest-3	21.11	21.01	20.99	21.30	-	-	-	-
HSUPA Subtest-4	20.09	19.96	20.02	20.30	-	-	-	-
HSUPA Subtest-5	22.18	21.98	21.99	22.30	-	-	-	-

8.3 LTE

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)	23.32	23.34	23.14	24.00	22.86	22.76	22.58	23.00
	1 (RB_Pos:50)	23.07	22.98	22.96	24.00	22.61	22.35	22.31	23.00
	1 (RB_Pos:99)	23.21	23.16	23.10	24.00	22.77	22.53	22.46	23.00
	50 (RB_Pos:0)	22.16	22.18	22.11	23.00	21.25	21.29	21.18	22.00
	50 (RB_Pos:25)	22.17	22.02	22.04	23.00	21.25	21.13	21.12	22.00
	50 (RB_Pos:50)	22.10	22.07	22.02	23.00	21.24	21.19	21.08	22.00
	100 (RB_Pos:0)	22.13	22.12	22.06	23.00	21.25	21.18	21.15	22.00
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)	23.20	23.06	23.16	24.00	22.08	22.50	22.54	23.00
	1 (RB_Pos:38)	23.08	22.96	23.02	24.00	22.01	22.30	22.34	23.00
	1 (RB_Pos:74)	23.05	22.98	23.19	24.00	22.04	22.42	22.44	23.00
	36 (RB_Pos:0)	22.15	22.03	22.08	23.00	21.22	21.15	21.15	22.00
	36 (RB_Pos:20)	22.10	22.01	22.03	23.00	21.21	21.17	21.11	22.00
	36 (RB_Pos:39)	22.07	22.04	22.06	23.00	21.18	21.16	21.15	22.00
	75 (RB_Pos:0)	22.10	22.09	22.05	23.00	21.22	21.22	21.17	22.00
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)	23.35	23.24	23.11	24.00	22.23	22.63	22.12	23.00
	1 (RB_Pos:25)	23.07	22.94	23.14	24.00	21.98	22.35	22.12	23.00
	1 (RB_Pos:49)	23.24	23.10	23.20	24.00	22.17	22.52	22.10	23.00
	25 (RB_Pos:0)	22.09	21.99	22.04	23.00	21.20	21.11	21.20	22.00
	25 (RB_Pos:12)	22.09	22.00	22.07	23.00	21.20	21.10	21.24	22.00
	25 (RB_Pos:25)	22.11	21.92	22.12	23.00	21.18	21.02	21.29	22.00
	50 (RB_Pos:0)	22.12	21.94	22.07	23.00	21.19	21.08	21.18	22.00
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)	23.07	23.03	23.17	24.00	22.28	22.54	22.22	23.00
	1 (RB_Pos:13)	23.14	23.00	23.23	24.00	22.28	22.55	22.27	23.00
	1 (RB_Pos:24)	23.07	22.94	23.21	24.00	22.22	22.51	22.25	23.00
	12 (RB_Pos:0)	22.08	21.97	22.21	23.00	21.25	21.19	21.26	22.00
	12 (RB_Pos:6)	22.07	21.94	22.17	23.00	21.21	21.15	21.28	22.00
	12 (RB_Pos:13)	22.07	21.95	22.15	23.00	21.22	21.16	21.28	22.00

	25 (RB_Pos:0)	22.08	21.91	22.14	23.00	21.18	21.08	21.20	22.00
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)	23.08	22.92	23.18	24.00	21.94	22.34	22.18	23.00
	1 (RB_Pos:8)	23.06	22.94	23.23	24.00	21.91	22.30	22.12	23.00
	1 (RB_Pos:14)	23.01	22.94	23.22	24.00	21.95	22.30	22.14	23.00
	8 (RB_Pos:0)	22.05	21.97	22.16	23.00	21.21	21.10	21.26	22.00
	8 (RB_Pos:3)	22.11	21.97	22.19	23.00	21.23	21.10	21.30	22.00
	8 (RB_Pos:7)	22.08	21.95	22.14	23.00	21.19	21.05	21.23	22.00
	15 (RB_Pos:0)	22.04	21.92	22.19	23.00	21.13	21.05	21.14	22.00
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)	23.09	22.88	23.11	24.00	22.06	22.27	22.08	23.00
	1 (RB_Pos:3)	23.16	22.92	23.17	24.00	22.14	22.31	22.11	23.00
	1 (RB_Pos:5)	23.10	22.86	23.16	24.00	22.05	22.24	22.10	23.00
	3 (RB_Pos:0)	22.91	22.84	23.07	24.00	22.07	22.14	22.29	23.00
	3 (RB_Pos:1)	22.97	22.91	23.16	24.00	22.11	22.18	22.35	23.00
	3 (RB_Pos:3)	22.87	22.84	23.11	24.00	22.08	22.07	22.28	23.00
	6 (RB_Pos:0)	21.93	21.85	22.08	23.00	21.17	20.86	21.30	22.00

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)	23.25	23.32	23.37	24.00	22.84	22.82	22.86	23.00
	1 (RB_Pos:50)	23.02	23.26	23.24	24.00	22.64	22.71	22.74	23.00
	1 (RB_Pos:99)	23.12	23.34	23.13	24.00	22.73	22.78	22.55	23.00
	50 (RB_Pos:0)	22.28	22.42	22.36	23.00	21.45	21.55	21.43	22.00
	50 (RB_Pos:25)	22.24	22.37	22.41	23.00	21.40	21.51	21.51	22.00
	50 (RB_Pos:50)	22.19	22.34	22.24	23.00	21.31	21.40	21.35	22.00
	100 (RB_Pos:0)	22.20	22.33	22.29	23.00	21.35	21.47	21.36	22.00
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)	23.28	23.28	23.50	24.00	22.22	22.77	22.95	23.00
	1 (RB_Pos:38)	23.03	23.22	23.23	24.00	22.10	22.72	22.68	23.00
	1 (RB_Pos:74)	23.15	23.33	23.19	24.00	22.18	22.79	22.63	23.00
	36 (RB_Pos:0)	22.24	22.34	22.40	23.00	21.37	21.53	21.50	22.00
	36 (RB_Pos:20)	22.14	22.33	22.31	23.00	21.24	21.45	21.39	22.00

	36 (RB_Pos:39)	22.23	22.29	22.19	23.00	21.35	21.40	21.32	22.00
	75 (RB_Pos:0)	22.18	22.34	22.32	23.00	21.34	21.44	21.39	22.00
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)	23.23	23.19	23.35	24.00	22.19	22.68	22.44	23.00
	1 (RB_Pos:25)	23.08	23.24	23.20	24.00	22.09	22.70	22.29	23.00
	1 (RB_Pos:49)	23.04	23.18	23.14	24.00	22.08	22.65	22.22	23.00
	25 (RB_Pos:0)	22.25	22.34	22.32	23.00	21.40	21.47	21.51	22.00
	25 (RB_Pos:12)	22.30	22.35	22.30	23.00	21.38	21.42	21.52	22.00
	25 (RB_Pos:25)	22.14	22.32	22.19	23.00	21.31	21.41	21.40	22.00
	50 (RB_Pos:0)	22.24	22.30	22.29	23.00	21.38	21.45	21.45	22.00
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)	23.23	23.31	23.27	24.00	22.43	22.85	22.46	23.00
	1 (RB_Pos:13)	23.28	23.31	23.24	24.00	22.51	22.88	22.42	23.00
	1 (RB_Pos:24)	23.06	23.29	23.18	24.00	22.37	22.86	22.36	23.00
	12 (RB_Pos:0)	22.25	22.30	22.25	23.00	21.43	21.54	21.43	22.00
	12 (RB_Pos:6)	22.26	22.30	22.24	23.00	21.45	21.53	21.41	22.00
	12 (RB_Pos:13)	22.24	22.27	22.21	23.00	21.44	21.50	21.38	22.00
	25 (RB_Pos:0)	22.22	22.28	22.24	23.00	21.37	21.40	21.29	22.00
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)	23.23	23.25	23.18	24.00	22.15	22.68	22.33	23.00
	1 (RB_Pos:8)	23.17	23.22	23.19	24.00	22.14	22.66	22.22	23.00
	1 (RB_Pos:14)	23.16	23.22	23.14	24.00	22.15	22.68	22.22	23.00
	8 (RB_Pos:0)	22.20	22.26	22.16	23.00	21.39	21.44	21.30	22.00
	8 (RB_Pos:3)	22.25	22.32	22.21	23.00	21.41	21.44	21.31	22.00
	8 (RB_Pos:7)	22.18	22.26	22.13	23.00	21.40	21.38	21.28	22.00
	15 (RB_Pos:0)	22.21	22.24	22.19	23.00	21.32	21.42	21.23	22.00
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)	23.08	23.18	23.12	24.00	22.28	22.60	22.17	23.00
	1 (RB_Pos:3)	23.17	23.21	23.15	24.00	22.33	22.66	22.22	23.00
	1 (RB_Pos:5)	23.13	23.16	23.09	24.00	22.31	22.61	22.19	23.00
	3 (RB_Pos:0)	23.15	23.20	23.15	24.00	22.29	22.54	22.39	23.00
	3 (RB_Pos:1)	23.20	23.30	23.26	24.00	22.36	22.59	22.45	23.00
	3 (RB_Pos:3)	23.14	23.21	23.14	24.00	22.32	22.48	22.38	23.00
	6 (RB_Pos:0)	22.11	22.22	22.03	23.00	21.36	21.18	21.37	22.00

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)	23.20	23.24	23.31	24.30	22.04	22.64	22.25	23.30
	1 (RB_Pos:25)	23.24	23.22	23.25	24.30	22.10	22.55	22.20	23.30
	1 (RB_Pos:49)	23.10	23.29	23.16	24.30	22.05	22.58	22.15	23.30
	25 (RB_Pos:0)	22.12	22.25	22.30	23.30	21.19	21.37	21.38	22.30
	25 (RB_Pos:12)	22.18	22.29	22.28	23.30	21.27	21.34	21.37	22.30
	25 (RB_Pos:25)	22.20	22.21	22.22	23.30	21.29	21.29	21.32	22.30
	50 (RB_Pos:0)	22.19	22.21	22.22	23.30	21.27	21.32	21.30	22.30
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20425	20525	20625		20425	20525	20625	
5MHz	1 (RB_Pos:0)	23.13	23.24	23.24	24.30	22.32	22.76	22.31	23.30
	1 (RB_Pos:13)	23.18	23.30	23.27	24.30	22.34	22.79	22.36	23.30
	1 (RB_Pos:24)	23.06	23.26	23.18	24.30	22.30	22.68	22.28	23.30
	12 (RB_Pos:0)	22.16	22.25	22.30	23.30	21.30	21.46	21.34	22.30
	12 (RB_Pos:6)	22.15	22.26	22.24	23.30	21.27	21.42	21.35	22.30
	12 (RB_Pos:13)	22.12	22.20	22.20	23.30	21.25	21.42	21.31	22.30
	25 (RB_Pos:0)	22.12	22.20	22.24	23.30	21.24	21.39	21.23	22.30
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20415	20525	20635		20415	20525	20635	
3.0 MHz	1 (RB_Pos:0)	23.10	23.26	23.21	24.30	22.08	22.57	22.24	23.30
	1 (RB_Pos:8)	23.12	23.22	23.17	24.30	22.01	22.52	22.20	23.30
	1 (RB_Pos:14)	23.11	23.22	23.21	24.30	21.99	22.56	22.20	23.30
	8 (RB_Pos:0)	22.12	22.27	22.22	23.30	21.31	21.33	21.30	22.30
	8 (RB_Pos:3)	22.18	22.28	22.22	23.30	21.29	21.34	21.34	22.30
	8 (RB_Pos:7)	22.11	22.25	22.17	23.30	21.28	21.29	21.26	22.30
	15 (RB_Pos:0)	22.09	22.23	22.23	23.30	21.22	21.33	21.21	22.30
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20407	20525	20643		20407	20525	20643	
1.4MHz	1 (RB_Pos:0)	23.02	23.15	23.12	24.30	22.20	22.49	22.12	23.30
	1 (RB_Pos:3)	23.07	23.19	23.15	24.30	22.23	22.54	22.16	23.30
	1 (RB_Pos:5)	23.04	23.16	23.11	24.30	22.18	22.46	22.13	23.30
	3 (RB_Pos:0)	23.03	23.10	23.13	24.30	22.16	22.30	22.29	23.30
	3 (RB_Pos:1)	23.11	23.13	23.16	24.30	22.21	22.40	22.36	23.30
	3 (RB_Pos:3)	23.02	23.10	23.10	24.30	22.14	22.30	22.29	23.30
	6 (RB_Pos:0)	22.04	22.19	22.11	23.30	21.27	21.14	21.35	22.30

FDD LTE Band 7

Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	22.69	22.80	22.79	23.50	22.27	22.32	22.20	22.50
	1 (RB_Pos:50)	22.57	22.65	22.64	23.50	22.20	22.07	22.10	22.50
	1 (RB_Pos:99)	22.58	22.59	22.58	23.50	22.20	22.05	22.05	22.50
	50 (RB_Pos:0)	21.70	21.76	21.81	22.50	20.81	20.88	20.86	21.50
	50 (RB_Pos:25)	21.68	21.83	21.78	22.50	20.81	20.92	20.81	21.50
	50 (RB_Pos:50)	21.67	21.69	21.75	22.50	20.73	20.77	20.80	21.50
	100 (RB_Pos:0)	21.68	21.75	21.77	22.50	20.79	20.83	20.82	21.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	22.63	22.69	22.75	23.50	21.69	22.22	22.10	22.50
	1 (RB_Pos:38)	22.54	22.55	22.61	23.50	21.61	22.00	22.04	22.50
	1 (RB_Pos:74)	22.56	22.55	22.53	23.50	21.59	21.94	22.03	22.50
	36 (RB_Pos:0)	21.68	21.67	21.70	22.50	20.78	20.82	20.75	21.50
	36 (RB_Pos:20)	21.68	21.75	21.70	22.50	20.73	20.90	20.76	21.50
	36 (RB_Pos:39)	21.57	21.62	21.63	22.50	20.72	20.75	20.70	21.50
	75 (RB_Pos:0)	21.63	21.68	21.63	22.50	20.73	20.81	20.74	21.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	22.67	22.68	22.72	23.50	21.67	22.12	21.75	22.50
	1 (RB_Pos:25)	22.58	22.59	22.64	23.50	21.63	21.97	21.74	22.50
	1 (RB_Pos:49)	22.57	22.62	22.55	23.50	21.59	22.00	21.67	22.50
	25 (RB_Pos:0)	21.71	21.70	21.72	22.50	20.82	20.79	20.85	21.50
	25 (RB_Pos:12)	21.68	21.68	21.70	22.50	20.81	20.77	20.85	21.50
	25 (RB_Pos:25)	21.70	21.71	21.63	22.50	20.74	20.81	20.79	21.50
	50 (RB_Pos:0)	21.66	21.70	21.69	22.50	20.78	20.78	20.82	21.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	22.60	22.61	22.63	23.50	21.80	22.16	21.80	22.50
	1 (RB_Pos:13)	22.66	22.66	22.64	23.50	21.93	22.25	21.86	22.50
	1 (RB_Pos:24)	22.53	22.54	22.55	23.50	21.84	22.11	21.77	22.50
	12 (RB_Pos:0)	21.67	21.63	21.65	22.50	20.83	20.84	20.81	21.50
	12 (RB_Pos:6)	21.67	21.60	21.69	22.50	20.83	20.85	20.83	21.50
	12 (RB_Pos:13)	21.63	21.56	21.61	22.50	20.81	20.78	20.73	21.50
	25 (RB_Pos:0)	21.61	21.62	21.66	22.50	20.77	20.76	20.68	21.50

TDD LTE Band 38

Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37850	38000	38150		37850	38000	38150	
20MHz	1 (RB_Pos:0)	23.34	23.42	23.45	24.00	22.73	22.68	22.88	23.00
	1 (RB_Pos:50)	23.24	23.29	23.24	24.00	22.64	22.58	22.67	23.00
	1 (RB_Pos:99)	23.31	23.16	23.10	24.00	22.67	22.47	22.56	23.00
	50 (RB_Pos:0)	22.42	22.35	22.39	23.00	21.48	21.55	21.50	22.00
	50 (RB_Pos:25)	22.35	22.36	22.30	23.00	21.38	21.46	21.46	22.00
	50 (RB_Pos:50)	22.30	22.30	22.13	23.00	21.44	21.39	21.26	22.00
	100 (RB_Pos:0)	22.42	22.31	22.30	23.00	21.51	21.42	21.41	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37825	38000	38175		37825	38000	38175	
15MHz	1 (RB_Pos:0)	23.30	23.39	23.42	24.00	22.69	22.95	22.81	23.00
	1 (RB_Pos:38)	23.24	23.26	23.16	24.00	22.64	22.80	22.54	23.00
	1 (RB_Pos:74)	23.13	23.19	23.04	24.00	22.52	22.76	22.46	23.00
	36 (RB_Pos:0)	22.32	22.29	22.27	23.00	21.42	21.41	21.43	22.00
	36 (RB_Pos:20)	22.24	22.26	22.15	23.00	21.38	21.36	21.30	22.00
	36 (RB_Pos:39)	22.21	22.21	22.09	23.00	21.29	21.32	21.20	22.00
	75 (RB_Pos:0)	22.27	22.24	22.26	23.00	21.42	21.35	21.33	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37800	38000	38200		37800	38000	38200	
10MHz	1 (RB_Pos:0)	23.22	23.38	23.25	24.00	22.58	22.83	22.66	23.00
	1 (RB_Pos:25)	23.27	23.31	23.22	24.00	22.67	22.86	22.64	23.00
	1 (RB_Pos:49)	23.16	23.22	23.05	24.00	22.58	22.77	22.59	23.00
	25 (RB_Pos:0)	22.33	22.32	22.18	23.00	21.51	21.46	21.31	22.00
	25 (RB_Pos:12)	22.33	22.33	22.18	23.00	21.49	21.43	21.30	22.00
	25 (RB_Pos:25)	22.30	22.28	22.08	23.00	21.36	21.37	21.28	22.00
	50 (RB_Pos:0)	22.34	22.30	22.13	23.00	21.42	21.43	21.32	22.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37775	38000	38225		37775	38000	38225	
5MHz	1 (RB_Pos:0)	23.23	23.36	23.20	24.00	22.60	22.67	22.68	23.00
	1 (RB_Pos:13)	23.24	23.35	23.22	24.00	22.62	22.75	22.70	23.00
	1 (RB_Pos:24)	23.28	23.26	23.13	24.00	22.61	22.60	22.59	23.00
	12 (RB_Pos:0)	22.27	22.31	22.16	23.00	21.43	21.42	21.37	22.00
	12 (RB_Pos:6)	22.25	22.30	22.15	23.00	21.42	21.41	21.42	22.00
	12 (RB_Pos:13)	22.30	22.26	22.15	23.00	21.53	21.39	21.38	22.00
	25 (RB_Pos:0)	22.29	22.26	22.13	23.00	21.48	21.48	21.28	22.00

TDD LTE Band 41

TDD LTE Band 41													
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)	23.09	23.21	23.33	23.25	23.08	24.00	22.45	22.48	22.76	22.59	22.31	23.00
	1 (RB_Pos:50)	22.98	23.04	23.17	23.06	23.01	24.00	22.32	22.27	22.59	22.42	22.23	23.00
	1 (RB_Pos:99)	23.08	23.01	23.19	23.02	23.04	24.00	22.41	22.29	22.62	22.37	22.28	23.00
	50 (RB_Pos:0)	22.08	22.13	22.21	22.18	22.07	23.00	21.15	21.25	21.32	21.24	21.12	22.00
	50 (RB_Pos:25)	22.05	22.12	22.16	22.15	22.11	23.00	21.09	21.18	21.32	21.19	21.12	22.00
	50 (RB_Pos:50)	22.08	22.08	22.07	22.04	21.96	23.00	21.16	21.13	21.21	21.13	21.10	22.00
	100 (RB_Pos:0)	22.12	22.08	22.15	22.13	22.05	23.00	21.20	21.15	21.25	21.18	21.16	22.00
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)	23.05	23.16	23.24	23.15	23.07	24.00	22.39	22.67	22.66	22.47	22.61	23.00
	1 (RB_Pos:38)	22.95	22.99	23.11	23.04	22.97	24.00	22.29	22.54	22.53	22.38	22.48	23.00
	1 (RB_Pos:74)	22.89	23.00	23.20	22.95	23.06	24.00	22.27	22.50	22.54	22.30	22.47	23.00
	36 (RB_Pos:0)	22.00	22.07	22.12	22.08	22.04	23.00	21.10	21.16	21.27	21.16	21.09	22.00
	36 (RB_Pos:20)	21.99	22.04	22.09	22.02	22.04	23.00	21.08	21.13	21.26	21.15	21.04	22.00
	36 (RB_Pos:39)	21.93	22.00	22.04	21.99	21.93	23.00	21.03	21.09	21.15	21.04	21.03	22.00
	75 (RB_Pos:0)	22.01	22.02	22.11	22.04	21.96	23.00	21.06	21.13	21.19	21.11	21.09	22.00
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)	22.94	23.12	23.20	23.04	23.04	24.00	22.27	22.58	22.64	22.35	22.52	23.00
	1 (RB_Pos:25)	22.94	23.02	23.15	22.95	23.02	24.00	22.30	22.48	22.55	22.30	22.53	23.00
	1 (RB_Pos:49)	22.94	22.97	23.16	22.90	23.00	24.00	22.28	22.45	22.60	22.25	22.51	23.00
	25 (RB_Pos:0)	22.06	22.09	22.16	22.06	22.04	23.00	21.10	21.12	21.27	21.15	21.07	22.00
	25 (RB_Pos:12)	22.07	22.05	22.12	22.09	22.02	23.00	21.13	21.15	21.26	21.14	21.06	22.00
	25 (RB_Pos:25)	22.02	21.99	22.10	22.04	22.06	23.00	21.09	21.07	21.22	21.08	21.13	22.00
	50 (RB_Pos:0)	22.01	22.02	22.12	22.02	22.03	23.00	21.10	21.12	21.26	21.12	21.05	22.00
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)	23.00	23.08	23.16	23.01	23.09	24.00	22.27	22.40	22.60	22.35	22.39	23.00
	1 (RB_Pos:13)	23.02	23.10	23.20	23.06	23.13	24.00	22.36	22.43	22.68	22.37	22.44	23.00
	1 (RB_Pos:24)	22.93	22.96	23.12	22.95	23.01	24.00	22.24	22.29	22.55	22.27	22.32	23.00
	12 (RB_Pos:0)	21.98	22.06	22.14	22.02	22.03	23.00	21.20	21.12	21.34	21.16	21.15	22.00
	12 (RB_Pos:6)	22.02	22.07	22.17	22.07	22.07	23.00	21.23	21.13	21.32	21.22	21.16	22.00
	12 (RB_Pos:13)	22.00	22.01	22.11	22.01	22.03	23.00	21.15	21.12	21.37	21.16	21.15	22.00
	25 (RB_Pos:0)	22.01	22.00	22.12	22.05	22.07	23.00	21.05	21.15	21.20	21.16	21.19	22.00

8.4 WIFI

8.4.1 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	18.47	19.50	Yes
		6	2437	18.82	19.50	Yes
		11	2462	18.62	19.50	Yes
	802.11g	1	2412	17.00	18.50	No
		6	2437	16.75	18.50	No
		11	2462	16.90	18.50	No
	802.11n(HT20)	1	2412	16.55	18.50	No
		6	2437	16.60	18.50	No
		11	2462	16.68	18.50	No

8.4.2 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	18.40	18.50	No
		44	5220	17.90	18.50	No
		48	5240	17.90	18.50	No
	802.11n(HT20)	36	5180	18.25	18.50	No
		44	5220	17.70	18.50	No
		48	5240	17.75	18.50	No
	802.11n(HT40)	38	5190	15.63	16.00	Yes
		46	5230	18.10	18.50	Yes
	802.11ac(VHT20)	36	5180	18.30	18.50	No
		44	5220	17.70	18.50	No
		48	5240	17.80	18.50	No
	802.11ac(VHT40)	38	5190	15.60	16.00	No
		46	5230	18.10	18.50	No
	802.11ac(VHT80)	42	5210	13.65	14.00	No
5.3 (5.25~5.35)	802.11a	52	5260	17.20	17.50	No
		60	5300	16.70	17.50	No
		64	5320	17.00	17.50	No
	802.11n(HT20)	52	5260	17.00	17.50	No
		60	5300	16.50	17.50	No
		64	5320	16.80	17.50	No
	802.11n(HT40)	54	5270	17.35	17.50	Yes
		62	5310	11.20	11.50	Yes
	802.11ac(VHT20)	52	5260	17.05	17.50	No
		60	5300	16.55	17.50	No
		64	5320	16.80	17.50	No
	802.11ac(VHT40)	54	5270	17.35	17.50	No

		62	5310	11.20	11.50	No
	802.11ac(VHT80)	58	5290	9.60	10.00	No
5.6 (5.47~5.725)	802.11a	100	5500	17.79	18.50	No
		116	5580	17.71	18.50	No
		140	5700	16.48	16.50	No
	802.11n(HT20)	100	5500	17.63	18.50	No
		116	5580	17.54	18.50	No
		140	5700	16.40	16.50	No
	802.11n(HT40)	102	5510	14.10	14.50	Yes
		118	5590	17.95	18.50	Yes
		134	5670	15.40	15.50	Yes
	802.11ac(VHT20)	100	5500	17.61	18.50	No
		116	5580	17.56	18.50	No
		140	5700	16.36	16.50	No
	802.11ac(VHT40)	102	5510	14.10	14.50	No
		118	5590	17.93	18.50	No
		134	5670	15.36	15.50	No
	802.11ac(VHT80)	106	5530	10.77	11.00	No
		122	5610	10.75	11.00	No
5.8 (5.725~5.850)	802.11a	149	5745	16.85	17.00	No
		157	5785	16.92	17.00	No
		165	5825	16.92	17.00	No
	802.11n(HT20)	149	5745	16.62	17.00	No
		157	5785	16.75	17.00	No
		165	5825	16.76	17.00	No
	802.11n(HT40)	151	5755	16.94	17.00	No
		159	5795	16.88	17.00	No
	802.11ac(VHT20)	149	5745	16.75	17.00	No
		157	5785	16.82	17.00	No
		165	5825	16.78	17.00	No
	802.11ac(VHT40)	151	5755	16.73	17.00	No
		159	5795	16.76	17.00	No
	802.11ac(VHT80)	155	5775	16.97	17.00	Yes

8.5 Bluetooth

Mode	GFSK			$\pi/4$ -DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Conducted Power (dBm)	10.42	10.88	10.11	9.96	10.31	9.66
Tune-Up Limit (dBm)	11.50			11.50		
Mode	8-DPSK			BLE		
Channel	0	39	78	0	19	39
Frequency (MHz)	2402	2441	2480	2402	2440	2480
Conducted Power (dBm)	10.14	10.59	9.84	10.59	11.44	10.26
Tune-Up Limit (dBm)	11.50			12.50		

8.6 Power Reduction List

8.6.1 Power Reduced Level 1 of GSM 1900

GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up Limit (dBm)	Frame-Averaged power(dBm)			Tune-up Limit (dBm)
Channel	512	661	810		512	661	810	
GSM (GMSK, 1-Slot)	24.87	24.74	24.75	26.00	15.68	15.55	15.56	16.81
GPRS (GMSK, 1-Slot)	24.60	24.47	24.47	26.00	15.41	15.28	15.28	16.81
GPRS (GMSK, 2-Slots)	22.59	22.63	22.61	23.50	16.46	16.50	16.48	17.37
GPRS (GMSK, 3-Slots)	21.64	21.36	21.53	22.50	17.22	16.94	17.11	18.08
GPRS (GMSK, 4-Slots)	19.87	19.58	19.74	20.50	16.69	16.40	16.56	17.32
EGPRS (8PSK, 1-Slot)	24.81	24.73	24.66	25.00	15.62	15.54	15.47	15.81
EGPRS (8PSK, 2-Slots)	22.49	22.50	22.50	23.00	16.36	16.37	16.37	16.87
EGPRS (8PSK, 3-Slots)	20.72	20.59	20.96	22.00	16.30	16.17	16.54	17.58
EGPRS (8PSK, 4-Slots)	19.87	19.82	19.73	20.50	16.69	16.64	16.55	17.32

8.6.2 Power Reduced Level 2 of GSM 1900

GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up Limit (dBm)	Frame-Averaged power(dBm)			Tune-up Limit (dBm)
Channel	512	661	810		512	661	810	
GSM (GMSK, 1-Slot)	24.48	24.31	24.29	25.50	15.29	15.12	15.10	16.31
GPRS (GMSK, 1-Slot)	24.34	24.14	24.11	25.50	15.15	14.95	14.92	16.31
GPRS (GMSK, 2-Slots)	22.32	22.30	22.27	23.00	16.19	16.17	16.14	16.87
GPRS (GMSK, 3-Slots)	21.38	21.03	21.19	22.00	16.96	16.61	16.77	17.58
GPRS (GMSK, 4-Slots)	19.46	19.31	19.47	20.00	16.28	16.13	16.29	16.82
EGPRS (8PSK, 1-Slot)	24.48	24.31	24.34	24.50	15.29	15.12	15.15	15.31
EGPRS (8PSK, 2-Slots)	22.42	22.22	22.28	22.50	16.29	16.09	16.15	16.37
EGPRS (8PSK, 3-Slots)	21.31	21.14	20.88	21.50	16.89	16.72	16.46	17.08
EGPRS (8PSK, 4-Slots)	19.68	19.55	19.54	20.00	16.50	16.37	16.36	16.82

8.6.3 Power Reduced Level 3 of GSM 1900

GSM 1900								
GSM1900 Band	Burst Average Power(dBm)			Tune-up	Frame-Averaged power(dBm)			Tune-up
Channel	512	661	810	Limit (dBm)	512	661	810	Limit (dBm)
GSM (GMSK, 1-Slot)	23.92	23.94	23.94	24.50	14.73	14.75	14.75	15.31
GPRS (GMSK, 1-Slot)	23.80	23.81	23.78	24.50	14.61	14.62	14.59	15.31
GPRS (GMSK, 2-Slots)	21.84	21.52	21.68	22.00	15.71	15.39	15.55	15.87
GPRS (GMSK, 3-Slots)	20.58	20.25	20.40	21.00	16.16	15.83	15.98	16.58
GPRS (GMSK, 4-Slots)	18.57	18.41	18.59	19.00	15.39	15.23	15.41	15.82
EGPRS (8PSK, 1-Slot)	23.74	23.64	23.59	23.50	14.55	14.45	14.40	14.31
EGPRS (8PSK, 2-Slots)	21.51	21.46	21.29	21.50	15.38	15.33	15.16	15.37
EGPRS (8PSK, 3-Slots)	20.55	20.48	20.19	20.50	16.13	16.06	15.77	16.08
EGPRS (8PSK, 4-Slots)	18.99	18.80	18.59	19.00	15.81	15.62	15.41	15.82

8.6.4 Power Reduced Level 1&2 of WCDMA Band 2

WCDMA	Band 2			
Channel	9262	9400	9538	Tune-up Limit (dBm)
RMC 12.2Kbps	16.07	15.98	16.02	17.00
HSDPA Subtest-1	14.91	14.87	14.94	15.00
HSDPA Subtest-2	14.90	14.89	14.95	15.00
HSDPA Subtest-3	14.38	14.37	14.43	14.50
HSDPA Subtest-4	14.40	14.38	14.43	14.50
HSUPA Subtest-1	14.88	14.82	14.95	15.00
HSUPA Subtest-2	12.80	12.92	12.87	13.00
HSUPA Subtest-3	13.85	13.86	13.98	14.00
HSUPA Subtest-4	12.87	12.82	12.95	13.00
HSUPA Subtest-5	15.01	14.90	14.92	15.00

8.6.5 Power Reduced Level 3 of WCDMA Band 2

WCDMA	Band 2			
Channel	9262	9400	9538	Tune-up Limit (dBm)
RMC 12.2Kbps	14.72	14.63	14.65	15.50
HSDPA Subtest-1	13.32	13.33	13.39	13.50
HSDPA Subtest-2	13.34	13.32	13.40	13.50
HSDPA Subtest-3	12.84	12.83	12.90	13.00
HSDPA Subtest-4	12.87	12.83	12.90	13.00
HSUPA Subtest-1	13.24	13.27	13.31	13.50
HSUPA Subtest-2	11.31	11.36	11.26	11.50
HSUPA Subtest-3	12.38	12.38	12.35	12.50
HSUPA Subtest-4	11.31	11.29	11.42	11.50
HSUPA Subtest-5	13.34	13.34	13.39	13.50

8.6.6 Power Reduced Level 4 of WCDMA Band 2

WCDMA	Band 2			
Channel	9262	9400	9538	Tune-up Limit (dBm)
RMC 12.2Kbps	20.11	19.84	19.97	21.00
HSDPA Subtest-1	18.88	18.85	18.88	19.00
HSDPA Subtest-2	18.88	18.87	18.91	19.00
HSDPA Subtest-3	18.36	18.41	18.42	18.50
HSDPA Subtest-4	18.36	18.39	18.42	18.50
HSUPA Subtest-1	18.88	18.87	18.91	19.00
HSUPA Subtest-2	16.90	16.81	16.94	17.00
HSUPA Subtest-3	17.86	17.90	17.96	18.00

HSUPA Subtest-4	16.76	16.97	16.87	17.00
HSUPA Subtest-5	18.88	18.94	18.96	19.00

8.6.7 Power Reduced Level 1 of WCDMA Band 4

WCDMA	Band 4			
Channel	1312	1412	1513	Tune-up Limit (dBm)
RMC 12.2Kbps	18.12	17.89	18.05	19.00
HSDPA Subtest-1	16.91	16.85	16.98	17.00
HSDPA Subtest-2	16.95	16.88	17.02	17.00
HSDPA Subtest-3	16.43	16.37	16.54	16.50
HSDPA Subtest-4	16.62	16.36	16.51	16.50
HSUPA Subtest-1	16.90	16.66	16.80	17.00
HSUPA Subtest-2	14.88	14.62	14.83	15.00
HSUPA Subtest-3	15.90	15.61	15.79	16.00
HSUPA Subtest-4	14.94	14.65	14.79	15.00
HSUPA Subtest-5	16.85	16.61	16.81	17.00

8.6.8 Power Reduced Level 2 of WCDMA Band 4

WCDMA	Band 4			
Channel	1312	1412	1513	Tune-up Limit (dBm)
RMC 12.2Kbps	16.82	16.54	16.71	17.50
HSDPA Subtest-1	15.51	15.28	15.43	15.50
HSDPA Subtest-2	15.22	15.32	15.48	15.50
HSDPA Subtest-3	14.96	14.78	14.96	15.00
HSDPA Subtest-4	14.85	14.81	14.96	15.00
HSUPA Subtest-1	15.36	15.26	15.44	15.50
HSUPA Subtest-2	13.42	13.28	13.47	13.50
HSUPA Subtest-3	14.39	14.28	14.40	14.50
HSUPA Subtest-4	13.47	13.23	13.42	13.50
HSUPA Subtest-5	15.50	15.31	15.48	15.50

8.6.9 Power Reduced Level 3 of WCDMA Band 4

WCDMA	Band 4			
Channel	1312	1412	1513	Tune-up Limit (dBm)
RMC 12.2Kbps	15.82	15.56	15.71	17.00
HSDPA Subtest-1	14.83	14.56	14.75	15.00
HSDPA Subtest-2	14.87	14.63	14.76	15.00
HSDPA Subtest-3	14.34	14.10	14.25	14.50
HSDPA Subtest-4	14.36	14.09	14.23	14.50
HSUPA Subtest-1	14.83	14.52	14.76	15.00

HSUPA Subtest-2	12.80	12.65	12.77	13.00
HSUPA Subtest-3	13.73	13.63	13.72	14.00
HSUPA Subtest-4	12.84	12.57	12.69	13.00
HSUPA Subtest-5	14.84	14.61	14.77	15.00

8.6.10 Power Reduced Level 1 of LTE Band 2

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)	17.20	17.32	17.03	18.00	17.21	17.71	17.41	18.00
	1 (RB_Pos:50)	16.98	16.96	16.89	18.00	17.04	17.31	17.24	18.00
	1 (RB_Pos:99)	17.22	17.19	16.91	18.00	17.06	17.60	17.26	18.00
	50 (RB_Pos:0)	17.13	17.19	17.11	18.00	17.36	17.33	17.21	18.00
	50 (RB_Pos:25)	17.15	17.00	17.04	18.00	17.29	17.18	17.15	18.00
	50 (RB_Pos:50)	17.12	17.12	16.99	18.00	17.27	17.29	17.10	18.00
	100 (RB_Pos:0)	17.11	17.30	17.00	18.00	17.28	17.27	17.17	18.00
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)	17.02	17.07	17.09	18.00	17.14	17.37	17.44	18.00
	1 (RB_Pos:38)	16.90	16.92	16.92	18.00	16.98	17.24	17.27	18.00
	1 (RB_Pos:74)	17.03	17.04	16.94	18.00	17.11	17.38	17.33	18.00
	36 (RB_Pos:0)	16.97	17.01	17.01	18.00	17.16	17.19	17.13	18.00
	36 (RB_Pos:20)	17.07	16.97	16.99	18.00	17.21	17.19	17.12	18.00
	36 (RB_Pos:39)	17.04	17.05	16.92	18.00	17.19	17.28	17.05	18.00
	75 (RB_Pos:0)	17.07	17.08	16.99	18.00	17.22	17.20	17.16	18.00
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)	17.18	17.19	16.98	18.00	17.27	17.51	17.18	18.00
	1 (RB_Pos:25)	16.86	16.93	16.89	18.00	16.98	17.24	17.08	18.00
	1 (RB_Pos:49)	17.16	17.13	16.92	18.00	17.29	17.47	17.07	18.00
	25 (RB_Pos:0)	16.97	17.01	17.02	18.00	17.19	17.17	17.23	18.00
	25 (RB_Pos:12)	17.02	17.00	17.01	18.00	17.16	17.15	17.22	18.00
	25 (RB_Pos:25)	17.09	17.01	17.00	18.00	17.21	17.13	17.21	18.00
	50 (RB_Pos:0)	17.12	17.01	17.01	18.00	17.22	17.18	17.17	18.00

Bandwidth (MHz)	RB Set	Power (dBm)			
		QPSK	Tune up	16QAM	Tune

	Channel	18625	18900	19175	limit (dBm)	18625	18900	19175	up limit (dBm)
5 MHz	1 (RB_Pos:0)	16.94	16.98	16.89	18.00	17.27	17.44	17.26	18.00
	1 (RB_Pos:13)	16.97	16.98	16.99	18.00	17.32	17.47	17.24	18.00
	1 (RB_Pos:24)	16.92	16.96	16.94	18.00	17.27	17.41	17.20	18.00
	12 (RB_Pos:0)	17.01	16.99	16.99	18.00	17.27	17.28	17.20	18.00
	12 (RB_Pos:6)	16.97	16.96	16.98	18.00	17.22	17.27	17.18	18.00
	12 (RB_Pos:13)	16.96	16.99	16.98	18.00	17.18	17.27	17.16	18.00
	25 (RB_Pos:0)	16.97	16.96	17.00	18.00	17.19	17.22	17.08	18.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up	16QAM			Tune up
	Channel	18615	18900	19185	limit (dBm)	18615	18900	19185	up limit (dBm)
3.0 MHz	1 (RB_Pos:0)	16.90	16.91	16.89	18.00	16.99	17.25	17.15	18.00
	1 (RB_Pos:8)	16.88	16.87	16.91	18.00	17.00	17.28	17.05	18.00
	1 (RB_Pos:14)	16.87	16.91	16.90	18.00	16.99	17.41	17.06	18.00
	8 (RB_Pos:0)	16.96	16.96	16.94	18.00	17.22	17.17	17.13	18.00
	8 (RB_Pos:3)	16.99	16.93	16.95	18.00	17.26	17.16	17.19	18.00
	8 (RB_Pos:7)	16.93	16.92	16.94	18.00	17.22	17.18	17.12	18.00
	15 (RB_Pos:0)	16.94	16.94	16.97	18.00	17.16	17.14	17.04	18.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up	16QAM			Tune up
	Channel	18607	18900	19193	limit (dBm)	18607	18900	19193	up limit (dBm)
1.4 MHz	1 (RB_Pos:0)	16.81	16.81	16.80	18.00	17.12	17.19	17.03	18.00
	1 (RB_Pos:3)	16.86	16.90	16.89	18.00	17.18	17.25	17.09	18.00
	1 (RB_Pos:5)	16.80	16.82	16.79	18.00	17.14	17.20	17.03	18.00
	3 (RB_Pos:0)	16.92	16.92	16.95	18.00	17.12	17.30	17.20	18.00
	3 (RB_Pos:1)	16.92	16.98	16.98	18.00	17.20	17.32	17.31	18.00
	3 (RB_Pos:3)	16.90	16.93	16.93	18.00	17.12	17.26	17.23	18.00
	6 (RB_Pos:0)	16.81	16.84	16.85	18.00	17.15	16.88	17.19	18.00

8.6.11 Power Reduced Level 2 of LTE Band 2

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)	16.37	16.54	16.19	17.00	16.76	16.76	16.44	17.00
	1 (RB_Pos:50)	16.19	16.14	16.05	17.00	16.57	16.38	16.28	17.00
	1 (RB_Pos:99)	16.42	16.41	16.04	17.00	16.71	16.59	16.32	17.00
	50 (RB_Pos:0)	16.34	16.39	16.29	17.00	16.52	16.53	16.34	17.00
	50 (RB_Pos:25)	16.37	16.20	16.24	17.00	16.44	16.34	16.29	17.00
	50 (RB_Pos:50)	16.34	16.31	16.20	17.00	16.43	16.42	16.26	17.00
	100 (RB_Pos:0)	16.33	16.30	16.19	17.00	16.51	16.41	16.31	17.00
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)	16.20	16.23	16.21	17.00	16.30	16.44	16.51	17.00
	1 (RB_Pos:38)	16.08	16.09	16.06	17.00	16.15	16.34	16.34	17.00
	1 (RB_Pos:74)	16.22	16.23	16.12	17.00	16.29	16.43	16.35	17.00
	36 (RB_Pos:0)	16.18	16.17	16.16	17.00	16.34	16.37	16.28	17.00
	36 (RB_Pos:20)	16.31	16.17	16.13	17.00	16.37	16.36	16.23	17.00
	36 (RB_Pos:39)	16.29	16.28	16.13	17.00	16.36	16.42	16.18	17.00
	75 (RB_Pos:0)	16.28	16.27	16.16	17.00	16.37	16.38	16.25	17.00
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)	16.34	16.35	16.15	17.00	16.47	16.84	16.33	17.00
	1 (RB_Pos:25)	16.08	16.09	16.08	17.00	16.16	16.31	16.24	17.00
	1 (RB_Pos:49)	16.41	16.30	16.08	17.00	16.45	16.78	16.22	17.00
	25 (RB_Pos:0)	16.18	16.20	16.21	17.00	16.36	16.33	16.39	17.00
	25 (RB_Pos:12)	16.22	16.20	16.21	17.00	16.34	16.37	16.39	17.00
	25 (RB_Pos:25)	16.25	16.17	16.21	17.00	16.40	16.32	16.36	17.00
	50 (RB_Pos:0)	16.31	16.18	16.21	17.00	16.41	16.36	16.31	17.00
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)	16.13	16.14	16.16	17.00	16.46	16.50	16.40	17.00
	1 (RB_Pos:13)	16.12	16.13	16.17	17.00	16.46	16.55	16.40	17.00
	1 (RB_Pos:24)	16.05	16.14	16.11	17.00	16.41	16.47	16.37	17.00
	12 (RB_Pos:0)	16.18	16.18	16.16	17.00	16.39	16.43	16.32	17.00
	12 (RB_Pos:6)	16.11	16.19	16.19	17.00	16.36	16.40	16.35	17.00
	12 (RB_Pos:13)	16.13	16.14	16.18	17.00	16.37	16.41	16.33	17.00

	25 (RB_Pos:0)	16.14	16.12	16.22	17.00	16.32	16.38	16.24	17.00
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)	16.07	16.09	16.05	17.00	16.13	16.28	16.25	17.00
	1 (RB_Pos:8)	16.07	16.08	16.05	17.00	16.17	16.30	16.18	17.00
	1 (RB_Pos:14)	16.04	16.04	16.05	17.00	16.13	16.39	16.21	17.00
	8 (RB_Pos:0)	16.12	16.09	16.09	17.00	16.36	16.30	16.25	17.00
	8 (RB_Pos:3)	16.16	16.14	16.17	17.00	16.41	16.35	16.29	17.00
	8 (RB_Pos:7)	16.11	16.11	16.09	17.00	16.36	16.31	16.23	17.00
	15 (RB_Pos:0)	16.16	16.13	16.15	17.00	16.33	16.29	16.21	17.00
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)	16.02	15.99	15.98	17.00	16.30	16.22	16.10	17.00
	1 (RB_Pos:3)	16.09	16.08	16.04	17.00	16.38	16.32	16.23	17.00
	1 (RB_Pos:5)	16.04	16.02	15.99	17.00	16.32	16.25	16.13	17.00
	3 (RB_Pos:0)	16.10	16.05	16.12	17.00	16.33	16.45	16.37	17.00
	3 (RB_Pos:1)	16.17	16.18	16.18	17.00	16.39	16.48	16.41	17.00
	3 (RB_Pos:3)	16.12	16.06	16.15	17.00	16.31	16.44	16.34	17.00
	6 (RB_Pos:0)	16.01	15.99	15.96	17.00	16.31	16.05	16.32	17.00

8.6.12 Power Reduced Level 3 of LTE Band 2

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)	15.34	15.51	15.22	16.00	15.75	15.81	15.52	16.00
	1 (RB_Pos:50)	15.22	15.17	15.03	16.00	15.62	15.38	15.33	16.00
	1 (RB_Pos:99)	15.37	15.36	15.08	16.00	15.75	15.65	15.32	16.00
	50 (RB_Pos:0)	15.37	15.34	15.24	16.00	15.53	15.51	15.39	16.00
	50 (RB_Pos:25)	15.29	15.23	15.19	16.00	15.50	15.34	15.33	16.00
	50 (RB_Pos:50)	15.28	15.28	15.19	16.00	15.49	15.45	15.30	16.00
	100 (RB_Pos:0)	15.31	15.35	15.23	16.00	15.48	15.43	15.32	16.00
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)	15.20	15.21	15.25	16.00	15.28	15.43	15.38	16.00
	1 (RB_Pos:38)	15.10	15.10	15.11	16.00	15.12	15.22	15.16	16.00
	1 (RB_Pos:74)	15.24	15.18	15.08	16.00	15.31	15.43	15.32	16.00
	36 (RB_Pos:0)	15.14	15.15	15.21	16.00	15.29	15.36	15.28	16.00
	36 (RB_Pos:20)	15.24	15.13	15.15	16.00	15.41	15.35	15.28	16.00
	36 (RB_Pos:39)	15.22	15.22	15.12	16.00	15.38	15.43	15.23	16.00
	75 (RB_Pos:0)	15.22	15.27	15.11	16.00	15.44	15.41	15.31	16.00
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)	15.33	15.35	15.15	16.00	15.43	15.82	15.39	16.00
	1 (RB_Pos:25)	15.07	15.09	15.05	16.00	15.18	15.26	15.27	16.00
	1 (RB_Pos:49)	15.39	15.29	15.07	16.00	15.48	15.79	15.28	16.00
	25 (RB_Pos:0)	15.21	15.18	15.20	16.00	15.32	15.34	15.38	16.00
	25 (RB_Pos:12)	15.19	15.22	15.19	16.00	15.32	15.31	15.38	16.00
	25 (RB_Pos:25)	15.25	15.16	15.18	16.00	15.43	15.30	15.38	16.00
	50 (RB_Pos:0)	15.32	15.16	15.19	16.00	15.45	15.35	15.32	16.00
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)	15.11	15.12	15.15	16.00	15.42	15.39	15.39	16.00
	1 (RB_Pos:13)	15.16	15.13	15.13	16.00	15.47	15.33	15.43	16.00
	1 (RB_Pos:24)	15.07	15.15	15.08	16.00	15.43	15.36	15.41	16.00
	12 (RB_Pos:0)	15.16	15.18	15.14	16.00	15.38	15.45	15.37	16.00
	12 (RB_Pos:6)	15.15	15.14	15.17	16.00	15.37	15.36	15.35	16.00
	12 (RB_Pos:13)	15.11	15.11	15.16	16.00	15.35	15.40	15.36	16.00

	25 (RB_Pos:0)	15.13	15.13	15.17	16.00	15.32	15.30	15.27	16.00
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)	15.06	15.08	15.07	16.00	15.14	15.37	15.28	16.00
	1 (RB_Pos:8)	15.04	15.03	15.07	16.00	15.16	15.37	15.24	16.00
	1 (RB_Pos:14)	15.02	15.02	15.08	16.00	15.12	15.32	15.26	16.00
	8 (RB_Pos:0)	15.12	15.12	15.08	16.00	15.32	15.31	15.27	16.00
	8 (RB_Pos:3)	15.12	15.12	15.10	16.00	15.38	15.29	15.29	16.00
	8 (RB_Pos:7)	15.11	15.08	15.09	16.00	15.32	15.26	15.27	16.00
	15 (RB_Pos:0)	15.16	15.11	15.15	16.00	15.33	15.26	15.21	16.00
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)	14.98	14.97	14.97	16.00	15.28	15.23	15.20	16.00
	1 (RB_Pos:3)	15.05	15.06	15.05	16.00	15.35	15.27	15.26	16.00
	1 (RB_Pos:5)	14.98	14.98	14.95	16.00	15.30	15.21	15.19	16.00
	3 (RB_Pos:0)	15.15	15.06	15.11	16.00	15.26	15.40	15.39	16.00
	3 (RB_Pos:1)	15.11	15.11	15.15	16.00	15.32	15.43	15.43	16.00
	3 (RB_Pos:3)	15.09	15.09	15.13	16.00	15.28	15.39	15.42	16.00
	6 (RB_Pos:0)	14.98	15.01	15.00	16.00	15.30	15.05	15.35	16.00

8.6.13 Power Reduced Level 4 of LTE Band 2

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)	20.40	20.50	20.24	21.00	20.69	20.74	20.46	21.00
	1 (RB_Pos:50)	20.19	20.16	20.06	21.00	20.57	20.38	20.31	21.00
	1 (RB_Pos:99)	20.40	20.43	20.06	21.00	20.73	20.59	20.30	21.00
	50 (RB_Pos:0)	20.38	20.32	20.25	21.00	20.50	20.49	20.36	21.00
	50 (RB_Pos:25)	20.32	20.22	20.21	21.00	20.48	20.35	20.31	21.00
	50 (RB_Pos:50)	20.31	20.30	20.16	21.00	20.48	20.46	20.26	21.00
	100 (RB_Pos:0)	20.29	20.31	20.25	21.00	20.46	20.47	20.30	21.00
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)	20.20	20.22	20.25	21.00	20.30	20.45	20.53	21.00
	1 (RB_Pos:38)	20.09	20.10	20.08	21.00	20.14	20.31	20.31	21.00
	1 (RB_Pos:74)	20.25	20.24	20.13	21.00	20.28	20.45	20.32	21.00
	36 (RB_Pos:0)	20.19	20.23	20.22	21.00	20.36	20.36	20.31	21.00
	36 (RB_Pos:20)	20.29	20.17	20.18	21.00	20.45	20.35	20.29	21.00
	36 (RB_Pos:39)	20.28	20.30	20.14	21.00	20.44	20.42	20.24	21.00
	75 (RB_Pos:0)	20.26	20.26	20.15	21.00	20.44	20.43	20.27	21.00
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)	20.37	20.39	20.19	21.00	20.42	20.84	20.36	21.00
	1 (RB_Pos:25)	20.05	20.09	20.11	21.00	20.14	20.54	20.24	21.00
	1 (RB_Pos:49)	20.41	20.28	20.13	21.00	20.42	20.31	20.24	21.00
	25 (RB_Pos:0)	20.19	20.19	20.19	21.00	20.32	20.30	20.40	21.00
	25 (RB_Pos:12)	20.18	20.20	20.17	21.00	20.32	20.32	20.39	21.00
	25 (RB_Pos:25)	20.30	20.16	20.19	21.00	20.39	20.30	20.35	21.00
	50 (RB_Pos:0)	20.32	20.18	20.23	21.00	20.45	20.35	20.32	21.00
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)	20.12	20.17	20.15	21.00	20.41	20.46	20.37	21.00
	1 (RB_Pos:13)	20.16	20.18	20.17	21.00	20.47	20.50	20.36	21.00
	1 (RB_Pos:24)	20.06	20.13	20.11	21.00	20.41	20.43	20.33	21.00
	12 (RB_Pos:0)	20.20	20.17	20.18	21.00	20.34	20.41	20.33	21.00
	12 (RB_Pos:6)	20.14	20.16	20.19	21.00	20.37	20.39	20.34	21.00
	12 (RB_Pos:13)	20.14	20.12	20.16	21.00	20.33	20.38	20.32	21.00

	25 (RB_Pos:0)	20.14	20.15	20.20	21.00	20.33	20.34	20.22	21.00
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)	20.05	20.08	20.12	21.00	20.14	20.29	20.28	21.00
	1 (RB_Pos:8)	20.06	20.07	20.06	21.00	20.13	20.28	20.21	21.00
	1 (RB_Pos:14)	20.04	20.05	20.10	21.00	20.11	20.27	20.23	21.00
	8 (RB_Pos:0)	20.13	20.11	20.10	21.00	20.40	20.30	20.29	21.00
	8 (RB_Pos:3)	20.14	20.13	20.15	21.00	20.37	20.30	20.33	21.00
	8 (RB_Pos:7)	20.09	20.10	20.09	21.00	20.33	20.28	20.25	21.00
	15 (RB_Pos:0)	20.14	20.11	20.18	21.00	20.29	20.27	20.17	21.00
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)	19.97	19.96	20.00	21.00	20.25	20.21	20.13	21.00
	1 (RB_Pos:3)	20.02	20.04	20.06	21.00	20.33	20.26	20.21	21.00
	1 (RB_Pos:5)	19.96	19.98	19.97	21.00	20.26	20.20	20.13	21.00
	3 (RB_Pos:0)	20.03	20.06	20.10	21.00	20.24	20.39	20.32	21.00
	3 (RB_Pos:1)	20.13	20.09	20.17	21.00	20.29	20.45	20.40	21.00
	3 (RB_Pos:3)	20.03	20.04	20.11	21.00	20.24	20.37	20.34	21.00
	6 (RB_Pos:0)	19.99	19.99	20.01	21.00	20.26	20.04	20.32	21.00

8.6.14 Power Reduced Level 1 of LTE Band 4

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)	18.41	18.57	18.50	19.50	18.80	18.62	19.00	19.50
	1 (RB_Pos:50)	18.31	18.46	18.50	19.50	18.61	18.91	18.98	19.50
	1 (RB_Pos:99)	18.39	18.61	18.41	19.50	18.80	19.10	18.75	19.50
	50 (RB_Pos:0)	18.44	18.53	18.51	19.50	18.57	18.62	18.62	19.50
	50 (RB_Pos:25)	18.41	18.51	18.49	19.50	18.56	18.57	18.60	19.50
	50 (RB_Pos:50)	18.42	18.50	18.48	19.50	18.49	18.55	18.58	19.50
	100 (RB_Pos:0)	18.39	18.72	18.49	19.50	18.53	18.56	18.62	19.50
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)	18.44	18.51	18.63	19.50	18.48	19.00	18.70	19.50
	1 (RB_Pos:38)	18.33	18.36	18.50	19.50	18.40	18.60	18.76	19.50
	1 (RB_Pos:74)	18.33	18.52	18.38	19.50	18.39	18.98	18.47	19.50
	36 (RB_Pos:0)	18.43	18.44	18.55	19.50	18.52	18.65	18.67	19.50
	36 (RB_Pos:20)	18.37	18.43	18.41	19.50	18.52	18.64	18.55	19.50
	36 (RB_Pos:39)	18.40	18.46	18.43	19.50	18.46	18.61	18.49	19.50
	75 (RB_Pos:0)	18.35	18.43	18.44	19.50	18.51	18.58	18.53	19.50
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)	18.41	18.47	18.51	19.50	18.46	18.93	18.66	19.50
	1 (RB_Pos:25)	18.31	18.39	18.37	19.50	18.38	18.84	18.47	19.50
	1 (RB_Pos:49)	18.34	18.42	18.38	19.50	18.38	18.89	18.49	19.50
	25 (RB_Pos:0)	18.46	18.46	18.46	19.50	18.56	18.61	18.67	19.50
	25 (RB_Pos:12)	18.45	18.48	18.45	19.50	18.54	18.64	18.67	19.50
	25 (RB_Pos:25)	18.45	18.47	18.40	19.50	18.52	18.60	18.63	19.50
	50 (RB_Pos:0)	18.41	18.45	18.43	19.50	18.48	18.60	18.59	19.50
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)	18.38	18.46	18.40	19.50	18.64	18.74	18.65	19.50
	1 (RB_Pos:13)	18.44	18.46	18.42	19.50	18.68	18.81	18.66	19.50
	1 (RB_Pos:24)	18.33	18.45	18.41	19.50	18.63	18.75	18.66	19.50
	12 (RB_Pos:0)	18.45	18.48	18.45	19.50	18.61	18.71	18.58	19.50
	12 (RB_Pos:6)	18.40	18.44	18.43	19.50	18.59	18.70	18.59	19.50
	12 (RB_Pos:13)	18.42	18.42	18.44	19.50	18.52	18.67	18.56	19.50

	25 (RB_Pos:0)	18.41	18.42	18.45	19.50	18.56	18.58	18.48	19.50
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)	18.35	18.42	18.36	19.50	18.38	18.87	18.53	19.50
	1 (RB_Pos:8)	18.36	18.38	18.38	19.50	18.38	18.84	18.52	19.50
	1 (RB_Pos:14)	18.35	18.42	18.40	19.50	18.39	18.90	18.49	19.50
	8 (RB_Pos:0)	18.38	18.40	18.34	19.50	18.60	18.58	18.52	19.50
	8 (RB_Pos:3)	18.40	18.43	18.42	19.50	18.60	18.59	18.61	19.50
	8 (RB_Pos:7)	18.39	18.40	18.34	19.50	18.55	18.55	18.53	19.50
	15 (RB_Pos:0)	18.38	18.42	18.44	19.50	18.53	18.55	18.44	19.50
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)	18.24	18.28	18.26	19.50	18.54	18.52	18.43	19.50
	1 (RB_Pos:3)	18.31	18.36	18.36	19.50	18.63	18.86	18.48	19.50
	1 (RB_Pos:5)	18.25	18.32	18.26	19.50	18.50	18.79	18.44	19.50
	3 (RB_Pos:0)	18.30	18.35	18.32	19.50	18.47	18.65	18.62	19.50
	3 (RB_Pos:1)	18.34	18.43	18.39	19.50	18.53	18.71	18.66	19.50
	3 (RB_Pos:3)	18.31	18.37	18.35	19.50	18.50	18.59	18.59	19.50
	6 (RB_Pos:0)	18.29	18.39	18.28	19.50	18.56	18.41	18.60	19.50

8.6.15 Power Reduced Level 2 of LTE Band 4

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)	17.25	17.24	17.21	18.00	17.74	17.46	17.68	18.00
	1 (RB_Pos:50)	17.01	17.15	17.17	18.00	17.18	17.63	17.39	18.00
	1 (RB_Pos:99)	17.09	17.30	17.10	18.00	17.29	17.72	17.57	18.00
	50 (RB_Pos:0)	17.15	17.19	17.23	18.00	17.30	17.33	17.28	18.00
	50 (RB_Pos:25)	17.11	17.22	17.20	18.00	17.27	17.32	17.25	18.00
	50 (RB_Pos:50)	17.08	17.20	17.16	18.00	17.19	17.31	17.20	18.00
	100 (RB_Pos:0)	17.14	17.20	17.19	18.00	17.24	17.26	17.25	18.00
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)	17.26	17.20	17.35	18.00	17.22	17.42	17.81	18.00
	1 (RB_Pos:38)	17.09	17.05	17.25	18.00	17.08	17.36	17.71	18.00
	1 (RB_Pos:74)	17.08	17.21	17.09	18.00	17.14	17.65	17.22	18.00
	36 (RB_Pos:0)	17.13	17.15	17.29	18.00	17.20	17.31	17.33	18.00
	36 (RB_Pos:20)	17.07	17.13	17.15	18.00	17.23	17.27	17.21	18.00
	36 (RB_Pos:39)	17.08	17.16	17.15	18.00	17.17	17.28	17.22	18.00
	75 (RB_Pos:0)	17.13	17.15	17.18	18.00	17.22	17.27	17.25	18.00
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)	17.21	17.17	17.25	18.00	17.17	17.63	17.41	18.00
	1 (RB_Pos:25)	17.12	17.09	17.12	18.00	17.10	17.56	17.21	18.00
	1 (RB_Pos:49)	17.17	17.12	17.07	18.00	17.07	17.59	17.19	18.00
	25 (RB_Pos:0)	17.19	17.22	17.18	18.00	17.29	17.34	17.30	18.00
	25 (RB_Pos:12)	17.16	17.21	17.15	18.00	17.24	17.33	17.30	18.00
	25 (RB_Pos:25)	17.12	17.20	17.16	18.00	17.24	17.28	17.32	18.00
	50 (RB_Pos:0)	17.17	17.22	17.15	18.00	17.22	17.30	17.27	18.00
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)	17.22	17.19	17.10	18.00	17.37	17.37	17.38	18.00
	1 (RB_Pos:13)	17.23	17.19	17.15	18.00	17.43	17.37	17.37	18.00
	1 (RB_Pos:24)	17.17	17.16	17.11	18.00	17.38	17.46	17.36	18.00
	12 (RB_Pos:0)	17.20	17.18	17.16	18.00	17.27	17.42	17.30	18.00
	12 (RB_Pos:6)	17.23	17.18	17.17	18.00	17.27	17.39	17.30	18.00
	12 (RB_Pos:13)	17.07	17.13	17.12	18.00	17.31	17.35	17.25	18.00

	25 (RB_Pos:0)	17.14	17.16	17.13	18.00	17.22	17.29	17.17	18.00
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)	17.16	17.12	17.12	18.00	17.10	17.59	17.24	18.00
	1 (RB_Pos:8)	17.16	17.07	17.06	18.00	17.07	17.54	17.16	18.00
	1 (RB_Pos:14)	17.10	17.12	17.07	18.00	17.05	17.54	17.18	18.00
	8 (RB_Pos:0)	17.08	17.11	17.03	18.00	17.30	17.29	17.24	18.00
	8 (RB_Pos:3)	17.11	17.13	17.09	18.00	17.31	17.30	17.26	18.00
	8 (RB_Pos:7)	17.06	17.11	17.03	18.00	17.27	17.25	17.17	18.00
	15 (RB_Pos:0)	17.10	17.13	17.11	18.00	17.21	17.26	17.14	18.00
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)	17.10	17.00	16.99	18.00	17.21	17.49	17.11	18.00
	1 (RB_Pos:3)	17.11	17.07	17.06	18.00	17.27	17.53	17.16	18.00
	1 (RB_Pos:5)	17.05	17.03	17.01	18.00	17.23	17.50	17.13	18.00
	3 (RB_Pos:0)	17.16	17.06	17.04	18.00	17.18	17.36	17.23	18.00
	3 (RB_Pos:1)	17.15	17.14	17.11	18.00	17.21	17.38	17.28	18.00
	3 (RB_Pos:3)	17.02	17.04	17.04	18.00	17.15	17.31	17.23	18.00
	6 (RB_Pos:0)	16.99	17.09	16.97	18.00	17.30	17.06	17.27	18.00

8.6.16 Power Reduced Level 3 of LTE Band 4

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)	16.25	16.23	16.19	17.00	16.57	16.55	16.50	17.00
	1 (RB_Pos:50)	16.11	16.15	16.13	17.00	16.47	16.32	16.51	17.00
	1 (RB_Pos:99)	16.18	16.28	16.09	17.00	16.42	16.77	16.47	17.00
	50 (RB_Pos:0)	16.24	16.19	16.19	17.00	16.31	16.36	16.28	17.00
	50 (RB_Pos:25)	16.20	16.21	16.19	17.00	16.28	16.31	16.26	17.00
	50 (RB_Pos:50)	16.16	16.19	16.15	17.00	16.25	16.30	16.22	17.00
	100 (RB_Pos:0)	16.23	16.16	16.18	17.00	16.22	16.29	16.27	17.00
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)	16.25	16.17	16.36	17.00	16.30	16.33	16.85	17.00
	1 (RB_Pos:38)	16.10	16.05	16.15	17.00	16.17	16.42	16.46	17.00
	1 (RB_Pos:74)	16.17	16.22	16.08	17.00	16.24	16.70	16.38	17.00
	36 (RB_Pos:0)	16.23	16.16	16.30	17.00	16.33	16.34	16.38	17.00
	36 (RB_Pos:20)	16.20	16.14	16.14	17.00	16.32	16.30	16.25	17.00
	36 (RB_Pos:39)	16.20	16.17	16.09	17.00	16.29	16.32	16.22	17.00
	75 (RB_Pos:0)	16.15	16.12	16.12	17.00	16.36	16.25	16.24	17.00
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)	16.19	16.17	16.26	17.00	16.25	16.63	16.38	17.00
	1 (RB_Pos:25)	16.12	16.11	16.07	17.00	16.15	16.55	16.23	17.00
	1 (RB_Pos:49)	16.13	16.10	16.09	17.00	16.21	16.56	16.19	17.00
	25 (RB_Pos:0)	16.21	16.16	16.16	17.00	16.35	16.36	16.33	17.00
	25 (RB_Pos:12)	16.21	16.17	16.16	17.00	16.37	16.35	16.36	17.00
	25 (RB_Pos:25)	16.21	16.18	16.12	17.00	16.33	16.29	16.29	17.00
	50 (RB_Pos:0)	16.21	16.17	16.17	17.00	16.36	16.32	16.28	17.00
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)	16.18	16.17	16.11	17.00	16.50	16.34	16.35	17.00
	1 (RB_Pos:13)	16.19	16.19	16.12	17.00	16.50	16.41	16.38	17.00
	1 (RB_Pos:24)	16.12	16.15	16.08	17.00	16.47	16.22	16.35	17.00
	12 (RB_Pos:0)	16.17	16.17	16.12	17.00	16.41	16.43	16.28	17.00
	12 (RB_Pos:6)	16.23	16.17	16.12	17.00	16.39	16.40	16.29	17.00
	12 (RB_Pos:13)	16.21	16.14	16.10	17.00	16.36	16.38	16.30	17.00

	25 (RB_Pos:0)	16.20	16.11	16.12	17.00	16.36	16.31	16.21	17.00
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)	16.17	16.10	16.08	17.00	16.20	16.59	16.23	17.00
	1 (RB_Pos:8)	16.12	16.05	16.05	17.00	16.20	16.26	16.18	17.00
	1 (RB_Pos:14)	16.14	16.10	16.04	17.00	16.18	16.57	16.21	17.00
	8 (RB_Pos:0)	16.14	16.11	16.08	17.00	16.38	16.26	16.23	17.00
	8 (RB_Pos:3)	16.16	16.14	16.10	17.00	16.43	16.33	16.26	17.00
	8 (RB_Pos:7)	16.16	16.12	16.04	17.00	16.35	16.28	16.20	17.00
	15 (RB_Pos:0)	16.16	16.15	16.09	17.00	16.36	16.24	16.12	17.00
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)	16.06	16.04	15.95	17.00	16.33	16.48	16.13	17.00
	1 (RB_Pos:3)	16.11	16.10	16.03	17.00	16.43	16.55	16.20	17.00
	1 (RB_Pos:5)	16.09	16.01	15.97	17.00	16.33	16.51	16.18	17.00
	3 (RB_Pos:0)	16.11	16.04	16.02	17.00	16.30	16.31	16.25	17.00
	3 (RB_Pos:1)	16.19	16.10	16.08	17.00	16.32	16.36	16.33	17.00
	3 (RB_Pos:3)	16.11	16.05	16.05	17.00	16.30	16.31	16.29	17.00
	6 (RB_Pos:0)	16.10	16.06	16.00	17.00	16.36	16.06	16.29	17.00

8.6.17 Power Reduced Level 1&2 of LTE Band 7

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	18.18	18.14	18.01	19.00	18.60	18.62	18.45	19.00
	1 (RB_Pos:50)	18.02	18.02	17.85	19.00	18.42	18.47	18.30	19.00
	1 (RB_Pos:99)	18.02	18.11	17.93	19.00	18.38	18.54	18.42	19.00
	50 (RB_Pos:0)	18.20	18.09	18.03	19.00	18.23	18.17	18.06	19.00
	50 (RB_Pos:25)	18.15	18.22	17.98	19.00	18.19	18.29	18.00	19.00
	50 (RB_Pos:50)	18.08	18.09	17.91	19.00	18.12	18.16	17.95	19.00
	100 (RB_Pos:0)	18.13	18.17	17.97	19.00	18.19	18.23	18.00	19.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	18.15	18.12	18.04	19.00	18.18	18.53	18.51	19.00
	1 (RB_Pos:38)	18.03	17.97	17.91	19.00	18.07	18.45	18.39	19.00
	1 (RB_Pos:74)	17.96	18.04	17.95	19.00	18.05	18.46	18.24	19.00
	36 (RB_Pos:0)	18.13	18.03	17.94	19.00	18.19	18.17	18.00	19.00
	36 (RB_Pos:20)	18.12	18.15	17.96	19.00	18.16	18.28	18.02	19.00
	36 (RB_Pos:39)	18.06	18.10	17.90	19.00	18.11	18.22	17.97	19.00
	75 (RB_Pos:0)	18.03	18.10	17.90	19.00	18.19	18.21	17.99	19.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	18.10	18.05	17.97	19.00	18.17	18.49	18.06	19.00
	1 (RB_Pos:25)	18.04	17.99	18.04	19.00	18.07	18.41	18.12	19.00
	1 (RB_Pos:49)	18.04	18.06	18.01	19.00	18.07	18.48	18.08	19.00
	25 (RB_Pos:0)	18.17	18.09	17.96	19.00	18.22	18.19	18.11	19.00
	25 (RB_Pos:12)	18.15	18.05	17.96	19.00	18.24	18.14	18.11	19.00
	25 (RB_Pos:25)	18.11	18.17	18.06	19.00	18.24	18.26	18.20	19.00
	50 (RB_Pos:0)	18.10	18.17	17.93	19.00	18.19	18.25	18.07	19.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	18.08	18.01	18.04	19.00	18.35	18.31	18.27	19.00
	1 (RB_Pos:13)	18.17	18.08	18.10	19.00	18.42	18.44	18.28	19.00
	1 (RB_Pos:24)	18.06	18.00	18.01	19.00	18.36	18.28	18.20	19.00
	12 (RB_Pos:0)	18.15	18.06	18.12	19.00	18.31	18.25	18.21	19.00
	12 (RB_Pos:6)	18.14	18.07	18.09	19.00	18.29	18.23	18.19	19.00
	12 (RB_Pos:13)	18.09	17.99	18.08	19.00	18.27	18.24	18.18	19.00

	25 (RB_Pos:0)	18.13	18.03	18.03	19.00	18.26	18.15	18.06	19.00
--	---------------	-------	-------	-------	-------	-------	-------	-------	-------

8.6.18 Power Reduced Level 3 of LTE Band 7

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	16.79	16.79	16.62	17.50	17.13	17.26	16.84	17.50
	1 (RB_Pos:50)	16.68	16.63	16.50	17.50	17.06	17.11	16.97	17.50
	1 (RB_Pos:99)	16.63	16.70	16.53	17.50	16.95	17.17	17.02	17.50
	50 (RB_Pos:0)	16.80	16.69	16.60	17.50	16.91	16.86	16.67	17.50
	50 (RB_Pos:25)	16.77	16.81	16.63	17.50	16.87	16.87	16.61	17.50
	50 (RB_Pos:50)	16.64	16.75	16.53	17.50	16.75	16.81	16.59	17.50
	100 (RB_Pos:0)	16.70	16.77	16.62	17.50	16.87	16.83	16.67	17.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	16.75	16.74	16.68	17.50	16.81	17.18	17.13	17.50
	1 (RB_Pos:38)	16.62	16.61	16.54	17.50	16.69	17.06	17.01	17.50
	1 (RB_Pos:74)	16.64	16.64	16.56	17.50	16.69	17.11	17.06	17.50
	36 (RB_Pos:0)	16.71	16.65	16.61	17.50	16.87	16.86	16.71	17.50
	36 (RB_Pos:20)	16.68	16.76	16.56	17.50	16.87	16.91	16.64	17.50
	36 (RB_Pos:39)	16.66	16.71	16.52	17.50	16.80	16.85	16.58	17.50
	75 (RB_Pos:0)	16.69	16.72	16.57	17.50	16.81	16.89	16.68	17.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	16.75	16.68	16.59	17.50	16.81	17.12	16.70	17.50
	1 (RB_Pos:25)	16.69	16.60	16.66	17.50	16.73	17.06	16.75	17.50
	1 (RB_Pos:49)	16.66	16.68	16.61	17.50	16.70	17.12	16.71	17.50
	25 (RB_Pos:0)	16.74	16.69	16.56	17.50	16.91	16.77	16.73	17.50
	25 (RB_Pos:12)	16.77	16.69	16.60	17.50	16.86	16.79	16.75	17.50
	25 (RB_Pos:25)	16.72	16.75	16.65	17.50	16.81	16.85	16.84	17.50
	50 (RB_Pos:0)	16.72	16.76	16.59	17.50	16.79	16.82	16.66	17.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	16.70	16.66	16.64	17.50	17.04	16.94	16.84	17.50
	1 (RB_Pos:13)	16.77	16.73	16.70	17.50	17.06	16.98	16.89	17.50
	1 (RB_Pos:24)	16.66	16.61	16.62	17.50	17.01	16.93	16.83	17.50
	12 (RB_Pos:0)	16.77	16.63	16.70	17.50	16.97	16.89	16.83	17.50

	12 (RB_Pos:6)	16.77	16.66	16.71	17.50	16.95	16.91	16.82	17.50
	12 (RB_Pos:13)	16.72	16.61	16.64	17.50	16.92	16.86	16.79	17.50
	25 (RB_Pos:0)	16.74	16.62	16.65	17.50	16.86	16.78	16.68	17.50

8.6.19 Power Reduced Level 4 of LTE Band 7

FDD LTE Band 7									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20850	21100	21350		20850	21100	21350	
20MHz	1 (RB_Pos:0)	19.69	19.71	19.55	20.50	20.11	19.94	19.73	20.50
	1 (RB_Pos:50)	19.57	19.54	19.38	20.50	19.84	19.86	19.75	20.50
	1 (RB_Pos:99)	19.52	19.62	19.42	20.50	19.96	19.77	19.76	20.50
	50 (RB_Pos:0)	19.67	19.66	19.52	20.50	19.89	19.85	19.66	20.50
	50 (RB_Pos:25)	19.69	19.71	19.54	20.50	19.85	19.86	19.66	20.50
	50 (RB_Pos:50)	19.62	19.62	19.47	20.50	19.79	19.80	19.57	20.50
	100 (RB_Pos:0)	19.67	19.73	19.51	20.50	19.84	19.84	19.67	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20825	21100	21375		20825	21100	21375	
15MHz	1 (RB_Pos:0)	19.79	19.71	19.65	20.50	19.82	20.19	20.10	20.50
	1 (RB_Pos:38)	19.64	19.63	19.54	20.50	19.72	20.04	20.03	20.50
	1 (RB_Pos:74)	19.62	19.66	19.60	20.50	19.62	20.09	20.06	20.50
	36 (RB_Pos:0)	19.72	19.70	19.61	20.50	19.86	19.84	19.64	20.50
	36 (RB_Pos:20)	19.73	19.77	19.60	20.50	19.82	19.88	19.65	20.50
	36 (RB_Pos:39)	19.69	19.73	19.52	20.50	19.76	19.86	19.56	20.50
	75 (RB_Pos:0)	19.71	19.74	19.61	20.50	19.83	19.86	19.62	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20800	21100	21400		20800	21100	21400	
10MHz	1 (RB_Pos:0)	19.78	19.67	19.62	20.50	19.79	20.14	19.68	20.50
	1 (RB_Pos:25)	19.73	19.62	19.67	20.50	19.75	20.09	19.73	20.50
	1 (RB_Pos:49)	19.71	19.71	19.63	20.50	19.69	20.14	19.71	20.50
	25 (RB_Pos:0)	19.80	19.71	19.60	20.50	19.92	19.80	19.73	20.50
	25 (RB_Pos:12)	19.79	19.74	19.58	20.50	19.87	19.82	19.73	20.50
	25 (RB_Pos:25)	19.77	19.75	19.66	20.50	19.82	19.84	19.80	20.50
	50 (RB_Pos:0)	19.76	19.77	19.62	20.50	19.88	19.84	19.72	20.50
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	20775	21100	21425		20775	21100	21425	
5MHz	1 (RB_Pos:0)	19.75	19.69	19.64	20.50	20.01	20.05	19.83	20.50
	1 (RB_Pos:13)	19.79	19.72	19.67	20.50	20.04	19.98	19.87	20.50

	1 (RB_Pos:24)	19.69	19.61	19.61	20.50	19.97	19.95	19.79	20.50
	12 (RB_Pos:0)	19.79	19.68	19.69	20.50	19.94	19.89	19.84	20.50
	12 (RB_Pos:6)	19.81	19.71	19.71	20.50	19.95	19.89	19.80	20.50
	12 (RB_Pos:13)	19.74	19.65	19.69	20.50	19.90	19.84	19.80	20.50
	25 (RB_Pos:0)	19.76	19.64	19.65	20.50	19.88	19.80	19.69	20.50

8.6.20 Power Reduced Level 1&2 of LTE Band 38

TDD LTE Band 38									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37850	38000	38150		37850	38000	38150	
20MHz	1 (RB_Pos:0)	20.22	20.29	20.23	21.00	20.56	20.62	20.57	21.00
	1 (RB_Pos:50)	20.11	20.11	20.22	21.00	20.46	20.47	20.64	21.00
	1 (RB_Pos:99)	20.16	20.11	20.13	21.00	20.53	20.31	20.58	21.00
	50 (RB_Pos:0)	20.23	20.29	20.24	21.00	20.30	20.40	20.38	21.00
	50 (RB_Pos:25)	20.18	20.25	20.22	21.00	20.26	20.41	20.36	21.00
	50 (RB_Pos:50)	20.24	20.16	20.11	21.00	20.29	20.30	20.26	21.00
	100 (RB_Pos:0)	20.25	20.24	20.16	21.00	20.38	20.33	20.28	21.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37825	38000	38175		37825	38000	38175	
15MHz	1 (RB_Pos:0)	20.19	20.28	20.24	21.00	20.55	20.54	20.69	20.00
	1 (RB_Pos:38)	20.12	20.12	20.07	21.00	20.45	20.41	20.55	21.00
	1 (RB_Pos:74)	20.04	20.14	20.11	21.00	20.39	20.35	20.43	21.00
	36 (RB_Pos:0)	20.16	20.20	20.16	21.00	20.26	20.32	20.32	21.00
	36 (RB_Pos:20)	20.11	20.20	20.13	21.00	20.21	20.30	20.28	21.00
	36 (RB_Pos:39)	20.07	20.12	20.07	21.00	20.17	20.23	20.21	21.00
	75 (RB_Pos:0)	20.14	20.18	20.12	21.00	20.25	20.30	20.21	21.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37800	38000	38200		37800	38000	38200	
10MHz	1 (RB_Pos:0)	20.08	20.24	20.16	21.00	20.48	20.42	20.41	21.00
	1 (RB_Pos:25)	20.07	20.14	20.08	21.00	20.46	20.44	20.34	21.00
	1 (RB_Pos:49)	20.02	20.06	20.03	21.00	20.43	20.35	20.31	21.00
	25 (RB_Pos:0)	20.16	20.23	20.15	21.00	20.30	20.33	20.30	21.00
	25 (RB_Pos:12)	20.16	20.24	20.19	21.00	20.29	20.31	20.31	21.00
	25 (RB_Pos:25)	20.12	20.18	20.09	21.00	20.23	20.27	20.25	21.00
	50 (RB_Pos:0)	20.19	20.21	20.14	21.00	20.27	20.31	20.28	21.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37775	38000	38225		37775	38000	38225	

5MHz	1 (RB_Pos:0)	20.11	20.17	20.06	21.00	20.50	20.67	20.43	21.00
	1 (RB_Pos:13)	20.14	20.19	20.11	21.00	20.53	20.40	20.49	21.00
	1 (RB_Pos:24)	20.05	20.12	20.00	21.00	20.41	20.59	20.38	21.00
	12 (RB_Pos:0)	20.13	20.14	20.12	21.00	20.21	20.38	20.26	21.00
	12 (RB_Pos:6)	20.12	20.17	20.13	21.00	20.26	20.44	20.29	21.00
	12 (RB_Pos:13)	20.12	20.19	20.07	21.00	20.23	20.36	20.27	21.00
	25 (RB_Pos:0)	20.11	20.18	20.10	21.00	20.28	20.26	20.21	21.00

8.6.21 Power Reduced Level 3 of LTE Band 38

TDD LTE Band 38									
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37850	38000	38150		37850	38000	38150	
20MHz	1 (RB_Pos:0)	19.28	19.43	19.42	20.00	19.62	19.64	19.69	20.00
	1 (RB_Pos:50)	19.20	19.18	19.18	20.00	19.67	19.58	19.50	20.00
	1 (RB_Pos:99)	19.18	19.16	19.21	20.00	19.63	19.48	19.61	20.00
	50 (RB_Pos:0)	19.32	19.39	19.29	20.00	19.45	19.51	19.46	20.00
	50 (RB_Pos:25)	19.28	19.35	19.26	20.00	19.37	19.49	19.44	20.00
	50 (RB_Pos:50)	19.30	19.26	19.16	20.00	19.41	19.40	19.36	20.00
	100 (RB_Pos:0)	19.35	19.32	19.22	20.00	19.48	19.47	19.34	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37825	38000	38175		37825	38000	38175	
15MHz	1 (RB_Pos:0)	19.28	19.35	19.32	20.00	19.75	19.50	19.44	20.00
	1 (RB_Pos:38)	19.14	19.23	19.18	20.00	19.60	19.46	19.65	20.00
	1 (RB_Pos:74)	19.07	19.17	19.13	20.00	19.55	19.41	19.60	20.00
	36 (RB_Pos:0)	19.24	19.30	19.25	20.00	19.38	19.42	19.41	20.00
	36 (RB_Pos:20)	19.22	19.27	19.22	20.00	19.37	19.38	19.40	20.00
	36 (RB_Pos:39)	19.16	19.20	19.16	20.00	19.29	19.33	19.32	20.00
	75 (RB_Pos:0)	19.22	19.28	19.21	20.00	19.32	19.41	19.33	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune up limit (dBm)	16QAM			Tune up limit (dBm)
	Channel	37800	38000	38200		37800	38000	38200	
10MHz	1 (RB_Pos:0)	19.23	19.33	19.26	20.00	19.64	19.46	19.38	20.00
	1 (RB_Pos:25)	19.13	19.23	19.23	20.00	19.62	19.33	19.73	20.00
	1 (RB_Pos:49)	19.15	19.21	19.17	20.00	19.57	19.49	19.67	20.00
	25 (RB_Pos:0)	19.29	19.32	19.25	20.00	19.40	19.44	19.40	20.00
	25 (RB_Pos:12)	19.28	19.32	19.25	20.00	19.43	19.44	19.42	20.00
	25 (RB_Pos:25)	19.22	19.27	19.19	20.00	19.34	19.39	19.34	20.00
	50 (RB_Pos:0)	19.26	19.30	19.21	20.00	19.38	19.44	19.38	20.00
Bandwidth (MHz)	RB Set	Power (dBm)							
		QPSK			Tune	16QAM			Tune

	Channel	37775	38000	38225	up limit (dBm)	37775	38000	38225	up limit (dBm)
5MHz	1 (RB_Pos:0)	19.25	19.31	19.17	20.00	19.66	19.78	19.55	20.00
	1 (RB_Pos:13)	19.24	19.36	19.22	20.00	19.70	19.72	19.59	20.00
	1 (RB_Pos:24)	19.18	19.24	19.10	20.00	19.60	19.56	19.49	20.00
	12 (RB_Pos:0)	19.24	19.30	19.23	20.00	19.39	19.55	19.40	20.00
	12 (RB_Pos:6)	19.26	19.32	19.22	20.00	19.42	19.55	19.41	20.00
	12 (RB_Pos:13)	19.24	19.29	19.19	20.00	19.37	19.50	19.37	20.00
	25 (RB_Pos:0)	19.22	19.28	19.20	20.00	19.38	19.43	19.32	20.00

8.6.22 Power Reduced Level 1&2 of LTE Band 41

TDD LTE Band 41													
Bandwidth (MHz)	RB Set	Power (dBm)											
	Channel	QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
		39750	40185	40620	41055	41490		39750	40185	40620	41055	41490	
20MHz	1 (RB_Pos:0)	20.17	20.08	20.45	20.25	20.41	21.00	20.57	20.40	20.45	20.73	20.80	21.00
	1 (RB_Pos:50)	20.22	20.04	20.09	20.03	20.34	21.00	20.44	20.49	20.27	20.37	20.72	21.00
	1 (RB_Pos:99)	20.13	20.03	20.10	19.90	20.39	21.00	20.42	20.45	20.37	20.22	20.80	21.00
	50 (RB_Pos:0)	20.31	20.26	20.39	20.35	20.33	21.00	20.34	20.35	20.26	20.48	20.41	21.00
	50 (RB_Pos:25)	20.23	20.25	20.16	20.15	20.30	21.00	20.29	20.23	20.21	20.50	20.40	21.00
	50 (RB_Pos:50)	20.15	20.30	20.06	19.94	20.21	21.00	20.23	20.15	20.16	20.21	20.23	21.00
	100 (RB_Pos:0)	20.22	20.39	20.16	20.07	20.24	21.00	20.25	20.19	20.21	20.28	20.33	21.00
Bandwidth (MHz)	RB Set	Power (dBm)											
	Channel	QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
		39725	40160	40620	41080	41515		39725	40160	40620	41080	41515	
15MHz	1 (RB_Pos:0)	20.14	20.19	20.21	20.38	20.33	21.00	20.54	20.49	20.70	20.65	20.67	21.00
	1 (RB_Pos:38)	20.12	20.16	20.09	20.12	20.24	21.00	20.50	20.51	20.58	20.52	20.60	21.00
	1 (RB_Pos:74)	20.08	20.07	20.13	20.08	20.30	21.00	20.39	20.26	20.24	20.51	20.66	21.00
	36 (RB_Pos:0)	20.09	20.19	20.15	20.01	20.23	21.00	20.18	20.13	20.22	20.43	20.37	21.00
	36 (RB_Pos:20)	20.21	20.13	20.12	19.94	20.21	21.00	20.28	20.17	20.20	20.19	20.34	21.00
	36 (RB_Pos:39)	20.12	20.01	20.03	20.07	20.14	21.00	20.22	20.28	20.13	20.30	20.28	21.00
	75 (RB_Pos:0)	20.15	20.20	20.12	20.12	20.22	21.00	20.30	20.31	20.17	20.33	20.32	21.00
Bandwidth (MHz)	RB Set	Power (dBm)											
	Channel	QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
		39700	40135	40620	41105	41540		39700	40135	40620	41105	41540	
10MHz	1 (RB_Pos:0)	20.07	20.05	20.16	20.01	20.32	21.00	20.47	20.30	20.62	20.31	20.74	21.00
	1 (RB_Pos:25)	20.02	19.96	20.09	19.96	20.30	21.00	20.43	20.42	20.55	20.29	20.74	21.00
	1 (RB_Pos:49)	20.13	20.19	20.11	20.18	20.32	21.00	20.51	20.58	20.13	20.55	20.75	21.00
	25 (RB_Pos:0)	20.15	20.08	20.14	20.24	20.28	21.00	20.28	20.28	20.22	20.29	20.36	21.00
	25 (RB_Pos:12)	20.14	20.23	20.14	20.31	20.25	21.00	20.21	20.14	20.21	20.39	20.34	21.00
	25 (RB_Pos:25)	20.22	20.24	20.12	20.05	20.34	21.00	20.27	20.24	20.17	20.48	20.41	21.00
	50 (RB_Pos:0)	20.20	20.36	20.06	19.97	20.24	21.00	20.34	20.34	20.17	20.28	20.33	21.00

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)	20.08	20.07	20.12	20.04	20.34	21.00	20.43	20.23	20.43	20.22	20.76	21.00
	1 (RB_Pos:13)	20.09	20.24	20.14	20.34	20.34	21.00	20.49	20.47	20.49	20.80	20.82	21.00
	1 (RB_Pos:24)	20.00	19.98	20.07	19.94	20.29	21.00	20.40	20.38	20.38	19.94	20.73	21.00
	12 (RB_Pos:0)	20.13	20.02	20.14	20.26	20.32	21.00	20.30	20.24	20.19	20.48	20.51	21.00
	12 (RB_Pos:6)	20.15	20.20	20.12	20.00	20.33	21.00	20.27	20.37	20.19	20.47	20.50	21.00
	12 (RB_Pos:13)	20.10	20.04	20.11	20.14	20.34	21.00	20.30	20.28	20.17	20.44	20.50	21.00
	25 (RB_Pos:0)	20.10	20.07	20.12	20.09	20.31	21.00	20.22	20.30	20.22	20.34	20.45	21.00

8.6.23 Power Reduced Level 3 of LTE Band 41

TDD LTE Band 41													
Bandwidth (MHz)	RB Set	Power (dBm)											
		QPSK					Tune up limit (dBm)	16QAM					Tune up limit (dBm)
	Channel	39750	40185	40620	41055	41490		39750	40185	40620	41055	41490	
20MHz	1 (RB_Pos:0)	19.37	19.39	19.56	19.55	19.47	20.00	19.60	19.57	19.62	19.93	19.91	20.00
	1 (RB_Pos:50)	19.26	19.07	19.12	19.31	19.28	20.00	19.64	19.53	19.37	19.42	19.74	20.00
	1 (RB_Pos:99)	19.25	19.38	19.20	19.44	19.38	20.00	19.58	19.38	19.46	19.49	19.80	20.00
	50 (RB_Pos:0)	19.39	19.40	19.29	19.25	19.37	20.00	19.49	19.60	19.35	19.43	19.50	20.00
	50 (RB_Pos:25)	19.36	19.45	19.47	19.43	19.32	20.00	19.42	19.26	19.35	19.49	19.46	20.00
	50 (RB_Pos:50)	19.24	19.22	19.15	19.28	19.26	20.00	19.35	19.39	19.27	19.35	19.41	20.00
	100 (RB_Pos:0)	19.29	19.13	19.21	19.15	19.31	20.00	19.44	19.54	19.34	19.28	19.43	20.00
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)	19.23	19.26	19.30	19.38	19.41	20.00	19.61	19.55	19.43	19.42	19.75	20.00
	1 (RB_Pos:38)	19.23	19.46	19.15	19.19	19.29	20.00	19.63	19.79	19.65	19.18	19.66	20.00
	1 (RB_Pos:74)	19.16	19.15	19.20	19.34	19.30	20.00	19.57	19.22	19.69	19.66	19.70	20.00
	36 (RB_Pos:0)	19.25	19.43	19.22	19.34	19.30	20.00	19.28	19.12	19.34	19.51	19.45	20.00
	36 (RB_Pos:20)	19.32	19.15	19.20	19.49	19.28	20.00	19.44	19.41	19.31	19.32	19.42	20.00
	36 (RB_Pos:39)	19.22	19.09	19.12	19.33	19.22	20.00	19.38	19.36	19.24	19.20	19.35	20.00
	75 (RB_Pos:0)	19.26	19.48	19.17	19.35	19.28	20.00	19.45	19.63	19.31	19.33	19.38	20.00
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)	19.20	19.40	19.22	19.35	19.38	20.00	19.60	19.41	19.34	19.72	19.80	20.00
	1 (RB_Pos:25)	19.16	19.20	19.16	19.22	19.32	20.00	19.51	19.36	19.65	19.67	19.80	20.00
	1 (RB_Pos:49)	19.23	19.25	19.25	19.38	19.34	20.00	19.64	19.61	19.73	19.83	19.81	20.00
	25 (RB_Pos:0)	19.28	19.43	19.23	19.26	19.33	20.00	19.33	19.38	19.34	19.50	19.48	20.00
	25 (RB_Pos:12)	19.26	19.14	19.20	19.34	19.34	20.00	19.38	19.21	19.31	19.60	19.43	20.00

	25 (RB_Pos:25)	19.32	19.25	19.18	19.32	19.35	20.00	19.45	19.36	19.25	19.35	19.47	20.00
	50 (RB_Pos:0)	19.35	19.19	19.19	19.33	19.35	20.00	19.44	19.44	19.34	19.55	19.36	19.35
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)	19.22	19.36	19.23	19.02	19.37	20.00	19.54	19.51	19.55	19.43	19.84	20.00
	1 (RB_Pos:13)	19.25	19.42	19.25	19.18	19.44	20.00	19.58	19.76	19.61	19.39	19.90	20.00
	1 (RB_Pos:24)	19.15	19.22	19.17	18.97	19.36	20.00	19.45	19.48	19.49	19.46	19.81	20.00
	12 (RB_Pos:0)	19.28	19.31	19.20	19.26	19.39	20.00	19.45	19.34	19.30	19.12	19.57	20.00
	12 (RB_Pos:6)	19.27	19.37	19.23	19.42	19.41	20.00	19.38	19.21	19.31	19.51	19.58	20.00
	12 (RB_Pos:13)	19.23	19.15	19.18	19.07	19.39	20.00	19.38	19.33	19.28	19.21	19.59	20.00
	25 (RB_Pos:0)	19.24	19.36	19.17	19.33	19.35	20.00	19.34	19.52	19.32	19.50	19.53	20.00

8.6.24 Power Reduced Level 1 of 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	17.79	18.50	Yes
		6	2437	17.92	18.50	Yes
		11	2462	17.86	18.50	Yes
	802.11g	1	2412	16.22	17.50	No
		6	2437	15.82	17.50	No
		11	2462	15.87	17.50	No
	802.11n(HT20)	1	2412	15.76	17.50	No
		6	2437	15.74	17.50	No
		11	2462	15.56	17.50	No

8.6.25 Power Reduced Level 2 of 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	16.41	17.50	Yes
		6	2437	16.73	17.50	Yes
		11	2462	16.35	17.50	Yes
	802.11g	1	2412	14.80	16.50	No
		6	2437	14.94	16.50	No
		11	2462	14.85	16.50	No
	802.11n(HT20)	1	2412	14.72	16.50	No
		6	2437	14.38	16.50	No
		11	2462	14.78	16.50	No

8.6.26 Power Reduced Level 1 of 5G WIFI

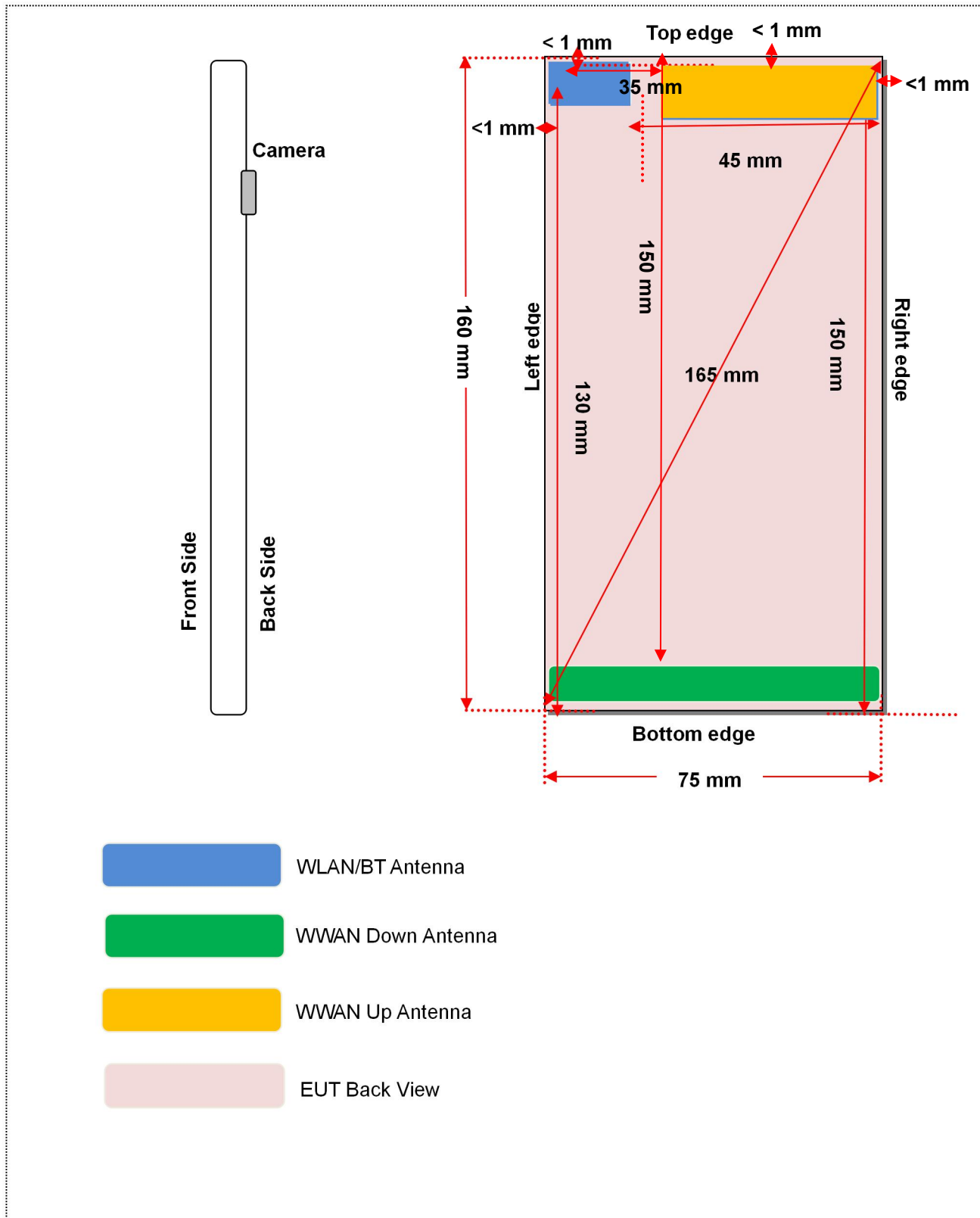
Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.6 (5.47~5.725)	802.11a	100	5500	16.81	17.50	No
		116	5580	16.83	17.50	No
		140	5700	15.40	15.50	No
	802.11n(HT20)	100	5500	16.57	17.50	No
		116	5580	16.48	17.50	No
		140	5700	15.53	15.50	No
	802.11n(HT40)	102	5510	13.26	13.50	Yes
		118	5590	17.09	17.50	Yes
		134	5670	14.32	14.50	Yes
	802.11ac(VHT20)	100	5500	16.74	17.50	No
		116	5580	16.71	17.50	No
		140	5700	15.29	15.50	No
	802.11ac(VHT40)	102	5510	13.26	13.50	No
		118	5590	16.91	17.50	No
		134	5670	14.44	14.50	No
	802.11ac(VHT80)	106	5530	9.72	10.00	No
		122	5610	9.72	10.00	No
5.8 (5.725~5.850)	802.11a	149	5745	16.47	16.50	No
		157	5785	16.42	16.50	No
		165	5825	16.37	16.50	No
	802.11n(HT20)	149	5745	16.28	16.50	No
		157	5785	16.16	16.50	No
		165	5825	16.42	16.50	No
	802.11n(HT40)	151	5755	16.56	16.50	No
		159	5795	16.32	16.50	No
	802.11ac(VHT20)	149	5745	16.26	16.50	No
		157	5785	16.26	16.50	No
		165	5825	16.46	16.50	No
	802.11ac(VHT40)	151	5755	16.25	16.50	No
		159	5795	16.17	16.50	No
	802.11ac(VHT80)	155	5775	16.48	16.50	Yes

8.6.27 Power Reduced Level 2 of 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	16.34	16.50	No
		44	5220	15.61	16.50	No
		48	5240	15.74	16.50	No
	802.11n(HT20)	36	5180	16.31	16.50	No
		44	5220	15.67	16.50	No
		48	5240	15.81	16.50	No
	802.11n(HT40)	38	5190	13.56	14.00	Yes
		46	5230	15.84	16.50	Yes
	802.11ac(VHT20)	36	5180	16.16	16.50	No
		44	5220	15.40	16.50	No
		48	5240	15.56	16.50	No
	802.11ac(VHT40)	38	5190	13.54	14.00	No
		46	5230	15.80	16.50	No
5.3 (5.25~5.35)	802.11a	52	5260	15.10	15.50	No
		60	5300	14.85	15.50	No
		64	5320	15.08	15.50	No
	802.11n(HT20)	52	5260	15.09	15.50	No
		60	5300	14.48	15.50	No
		64	5320	14.84	15.50	No
	802.11n(HT40)	54	5270	15.28	15.50	No
		62	5310	9.13	9.50	No
	802.11ac(VHT20)	52	5260	14.90	15.50	No
		60	5300	14.36	15.50	No
		64	5320	14.89	15.50	No
	802.11ac(VHT40)	54	5270	15.26	15.50	No
		62	5310	9.39	9.50	No
5.6 (5.47~5.725)	802.11a	58	5290	7.48	8.00	No
		100	5500	14.67	15.50	No
		116	5580	14.70	15.50	No
	802.11n(HT20)	140	5700	13.22	13.50	No
		100	5500	14.61	15.50	No
		116	5580	14.51	15.50	No
	802.11n(HT40)	140	5700	13.37	13.50	No
		102	5510	10.94	11.50	Yes
		118	5590	14.92	15.50	Yes
	802.11ac(VHT20)	134	5670	12.28	12.50	Yes
		100	5500	14.52	15.50	No
		116	5580	14.28	15.50	No
5.6 (5.47~5.725)	802.11ac(VHT40)	140	5700	13.24	13.50	No
		102	5510	11.02	11.50	No
		118	5590	14.84	15.50	No

	802.11ac(VHT80)	134	5670	12.14	12.50	No
		106	5530	7.61	8.00	No
		122	5610	7.64	8.00	No
5.8 (5.725~5.850)	802.11a	149	5745	13.82	14.00	No
		157	5785	13.66	14.00	No
		165	5825	13.71	14.00	No
	802.11n(HT20)	149	5745	13.55	14.00	No
		157	5785	13.69	14.00	No
		165	5825	13.47	14.00	No
	802.11n(HT40)	151	5755	13.83	14.00	No
		159	5795	13.82	14.00	No
	802.11ac(VHT20)	149	5745	13.46	14.00	No
		157	5785	13.56	14.00	No
		165	5825	13.48	14.00	No
	802.11ac(VHT40)	151	5755	13.49	14.00	No
		159	5795	13.54	14.00	No
	802.11ac(VHT80)	155	5775	13.92	14.00	Yes

9 TEST EXCLUSION CONSIDERATION



9.1 SAR Test Exclusion Consideration Table

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

WWLAN Up Antenna:

Band	Mode	Max. Peak Power		Test Position Configurations					
		dBm	mW	Head	Front/ Back	Left Edge	Right Edge	Top Edge	Bottom Edge
GSM 850	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	Voice	33.50	2238.72	Yes	Yes	Yes	Yes	Yes	No
	Data	31.50	1412.54	Yes	Yes	Yes	Yes	Yes	No
GSM 1900	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	Voice	30.50	1122.02	Yes	Yes	Yes	Yes	Yes	No
	Data	28.00	630.96	Yes	Yes	Yes	Yes	Yes	No
WCDMA Band 2	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	RMC	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No
WCDMA Band 4	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	RMC	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No
WCDMA Band 5	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	RMC	24.30	269.15	Yes	Yes	Yes	Yes	Yes	No
LTE Band 2	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No
LTE Band 4	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No
LTE Band 5	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	QPSK	24.30	269.15	Yes	Yes	Yes	Yes	Yes	No
LTE Band 7	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	QPSK	23.50	281.84	Yes	Yes	Yes	Yes	Yes	No
LTE Band 38	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No
LTE Band 41	Distance to User			<5mm	<5mm	35mm	<5mm	<5mm	150mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	Yes	No

WWLAN Down Antenna:

Band	Mode	Max. Peak Power		Test Position Configurations					
		dBm	mW	Head	Front/ Back	Left Edge	Right Edge	Top Edge	Bottom Edge
GSM 850	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	Voice	33.50	2238.72	Yes	Yes	Yes	Yes	No	Yes
	Data	31.50	1412.54	Yes	Yes	Yes	Yes	No	Yes
GSM 1900	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	Voice	30.50	1122.02	Yes	Yes	Yes	Yes	No	Yes
	Data	28.00	630.96	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 2	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	RMC	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 4	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	RMC	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
WCDMA Band 5	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	RMC	24.30	269.15	Yes	Yes	Yes	Yes	No	Yes
LTE Band 2	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 4	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 5	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	24.30	269.15	Yes	Yes	Yes	Yes	No	Yes
LTE Band 7	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	23.50	281.84	Yes	Yes	Yes	Yes	No	Yes
LTE Band 38	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
LTE Band 41	Distance to User			<5mm	<5mm	<5mm	<5mm	150mm	<5mm
	QPSK	24.00	251.19	Yes	Yes	Yes	Yes	No	Yes
WLAN 2.4 G	Distance to User			<5mm	<5mm	<5mm	45mm	<5mm	130mm
	802.11b	19.50	89.13	Yes	Yes	Yes	No	Yes	No
	802.11g	18.50	70.79	No	No	No	No	No	No
	802.11n(HT20)	18.50	70.79	No	No	No	No	No	No
WLAN 5.2 G	Distance to User			<5mm	<5mm	<5mm	45mm	<5mm	130mm
	802.11a	18.50	70.79	No	No	No	No	No	No
	802.11n(HT20)	18.50	70.79	No	No	No	No	No	No
	802.11n(HT40)	18.50	70.79	Yes	Yes	Yes	Yes	Yes	No
	802.11ac(VHT20)	18.50	70.79	No	No	No	No	No	No
	802.11ac(VHT40)	18.50	70.79	No	No	No	No	No	No
WLAN 5.3 G	Distance to User			<5mm	<5mm	<5mm	45mm	<5mm	130mm
	802.11a	17.50	56.23	Yes	Yes	Yes	Yes	Yes	No
	802.11n(HT20)	17.50	56.23	No	No	No	No	No	No
	802.11n(HT40)	17.50	56.23	Yes	Yes	Yes	Yes	Yes	No

	802.11ac(VHT20)	17.50	56.23	No	No	No	No	No	No
	802.11ac(VHT40)	17.50	56.23	No	No	No	No	No	No
	802.11ac(VHT80)	10.00	10.00	No	No	No	No	No	No
WLAN 5.6 G	Distance to User			<5mm	<5mm	<5mm	45mm	<5mm	130mm
	802.11a	18.50	70.79	No	No	No	No	No	No
	802.11n(HT20)	18.50	70.79	No	No	No	No	No	No
	802.11n(HT40)	18.50	70.79	Yes	Yes	Yes	Yes	Yes	No
	802.11ac(VHT20)	18.50	70.79	No	No	No	No	No	No
	802.11ac(VHT40)	18.50	70.79	No	No	No	No	No	No
	802.11ac(VHT80)	11.00	12.29	No	No	No	No	No	No
WLAN 5.8 G	Distance to User			<5mm	<5mm	<5mm	45mm	<5mm	130mm
	802.11a	17.00	50.12	No	No	No	No	No	No
	802.11n(HT20)	17.00	50.12	No	No	No	No	No	No
	802.11n(HT40)	17.00	50.12	No	No	No	No	No	No
	802.11ac(VHT20)	17.00	50.12	No	No	No	No	No	No
	802.11ac(VHT40)	17.00	50.12	No	No	No	No	No	No
	802.11ac(VHT80)	17.00	50.12	Yes	Yes	Yes	Yes	Yes	No
Bluetooth	Distance to User			<5mm	<5mm	<5mm	45mm	<5mm	130mm
	BR/EDR	11.50	14.13	No	No	No	No	No	No
	BLE	12.50	17.78	Yes	Yes	Yes	No	Yes	No

Note:

- Maximum power is the source-based time-average power and represents the maximum RF output power including tune-up tolerance among production units
- 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.
- 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
- 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - $f(\text{GHz})$ is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison
 - For < 50 mm distance, we just calculate mW of the exclusion threshold value (3.0) to do compare.
This formula is $[3.0] / [\sqrt{f(\text{GHz})}] \cdot [(\text{min. test separation distance, mm})] = \text{exclusion threshold of mW}$
- 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
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz
- 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 $\leq 1.2\text{W/kg}$, HSDPA/HSUPA/DC-HSDPA SAR evaluation can be excluded.
- Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion.8. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum

average output power for each of these configurations is less than 1/4dB higher than those measured at the lowest data rate

8. Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
 - a. When KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
 - b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
9. Per KDB 248227 D01 SAR is not required for the following U-NII-1 and U-NII-2A bands conditions.
 - a. When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.
 - b. When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, each band is tested independently for SAR.

10 TEST RESULT

10.1 GSM 850 GSM 850 Head SAR

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
Up	Off	GPRS (2slots)	Left Cheek	0	251	848.80	-0.17	0.388	31.04	31.50	1.112	0.431	/
	Off		Left Tilt	0	251	848.80	-0.10	0.324	31.04	31.50	1.112	0.360	/
	Off		Right Cheek	0	251	848.80	-0.03	0.515	31.04	31.50	1.112	0.573	1#
	Off		Right Tilt	0	251	848.80	-0.08	0.409	31.04	31.50	1.112	0.455	/
Down	Off	GPRS (2slots)	Left Cheek	0	251	848.80	-0.10	0.245	31.04	31.50	1.112	0.272	/
	Off		Left Tilt	0	251	848.80	0.09	0.090	31.04	31.50	1.112	0.100	/
	Off		Right Cheek	0	251	848.80	0.07	0.160	31.04	31.50	1.112	0.178	/
	Off		Right Tilt	0	251	848.80	0.03	0.087	31.04	31.50	1.112	0.097	/
Body-worn Accessory (15mm)													
Up	Off	Voice	Front Side	15	128	824.20	0.02	0.016	33.40	33.50	1.023	0.016	/
	Off		Back Side	15	128	824.20	0.07	0.038	33.40	33.50	1.023	0.039	/
	Off	GPRS (2slots)	Front Side	15	251	848.80	0.13	0.034	31.04	31.50	1.112	0.038	/
	Off		Back Side	15	251	848.80	-0.10	0.067	31.04	31.50	1.112	0.074	/
Down	Off	Voice	Front Side	15	128	824.20	0.17	0.100	33.40	33.50	1.023	0.102	/
	Off		Back Side	15	128	824.20	0.18	0.126	33.40	33.50	1.023	0.129	/
	Off	GPRS (2slots)	Front Side	15	251	848.80	0.00	0.157	31.04	31.50	1.112	0.175	/
	Off		Back Side	15	251	848.80	-0.02	0.172	31.04	31.50	1.112	0.191	2#
Hotspot (10mm)													
Up	Off	GPRS (2slots)	Front Side	10	251	848.80	0.14	0.044	31.04	31.50	1.112	0.049	/
	Off		Back Side	10	251	848.80	0.08	0.078	31.04	31.50	1.112	0.087	/
	Off		Left Edge	10	251	848.80	0.06	0.003	31.04	31.50	1.112	0.003	/
	Off		Right Edge	10	251	848.80	0.14	0.005	31.04	31.50	1.112	0.006	/
	Off		Top Edge	10	251	848.80	0.11	0.072	31.04	31.50	1.112	0.080	/
Down	Off	GPRS (2slots)	Front Side	10	251	848.80	0.12	0.296	31.04	31.50	1.112	0.329	/
	Off		Back Side	10	251	848.80	-0.02	0.314	31.04	31.50	1.112	0.349	/
	Off		Left Edge	10	251	848.80	0.03	0.094	31.04	31.50	1.112	0.105	/
	Off		Right Edge	10	251	848.80	0.14	0.195	31.04	31.50	1.112	0.217	/
	Off		Bottom Edge	10	251	848.80	0.07	0.333	31.04	31.50	1.112	0.370	3#
Note: Refer to 0 for the detailed test data for each test configuration.													

10.2GSM 1900

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
Up	Level1	GPRS (3slots)	Left Cheek	0	512	1850.20	0.20	0.430	21.64	22.50	1.219	0.524	/
	Level1		Left Tilt	0	512	1850.20	0.19	0.481	21.64	22.50	1.219	0.586	/
	Level1		Right Cheek	0	512	1850.20	0.10	0.677	21.64	22.50	1.219	0.825	/
	Level1			0	661	1880.00	0.04	0.709	21.36	22.50	1.300	0.922	/
	Level1			0	810	1909.80	0.14	0.764	21.53	22.50	1.250	0.955	/
	Level1		Right Tilt	0	512	1850.20	0.17	0.759	21.64	22.50	1.219	0.925	/
	Level1			0	661	1880.00	0.09	0.789	21.36	22.50	1.300	1.026	/
	Level1			0	810	1909.80	0.01	0.865	21.53	22.50	1.250	1.081	4#
Up	Level2	GPRS (3slots)	Left Cheek	0	512	1850.20	0.06	0.398	21.38	22.00	1.153	0.459	/
	Level2		Left Tilt	0	512	1850.20	0.13	0.416	21.38	22.00	1.153	0.480	/
	Level2		Right Cheek	0	512	1850.20	0.06	0.612	21.38	22.00	1.153	0.706	/
	Level2		Right Tilt	0	512	1850.20	0.09	0.664	21.38	22.00	1.153	0.766	/
Up	Level3	GPRS (3slots)	Left Cheek	0	512	1850.20	0.00	0.316	20.58	21.00	1.102	0.348	/
	Level3		Left Tilt	0	512	1850.20	0.05	0.331	20.58	21.00	1.102	0.364	/
	Level3		Right Cheek	0	512	1850.20	0.16	0.408	20.58	21.00	1.102	0.449	/
	Level3		Right Tilt	0	512	1850.20	0.14	0.486	20.58	21.00	1.102	0.535	/
Down	Off	GPRS (3slots)	Left Cheek	0	810	1909.80	0.15	0.044	26.41	27.00	1.146	0.051	/
	Off		Left Tilt	0	810	1909.80	0.07	0.033	26.41	27.00	1.146	0.037	/
	Off		Right Cheek	0	810	1909.80	0.18	0.040	26.41	27.00	1.146	0.045	/
	Off		Right Tilt	0	810	1909.80	0.05	0.032	26.41	27.00	1.146	0.037	/
Body-worn Accessory (15mm)													
Up	Off	Voice	Front Side	15	512	1850.20	0.02	0.177	30.01	30.50	1.119	0.198	/
	Off		Back Side	15	512	1850.20	0.18	0.230	30.01	30.50	1.119	0.257	/
	Off	GPRS (3slots)	Front Side	15	810	1909.80	0.06	0.270	26.41	27.00	1.146	0.309	/
	Off		Back Side	15	810	1909.80	-0.02	0.309	26.41	27.00	1.146	0.354	5#
Down	Off	Voice	Front Side	15	512	1850.20	0.03	0.084	30.01	30.50	1.119	0.094	/
	Off		Back Side	15	512	1850.20	0.10	0.125	30.01	30.50	1.119	0.140	/
	Off	GPRS (3slots)	Front Side	15	810	1909.80	0.09	0.122	26.41	27.00	1.146	0.140	/
	Off		Back Side	15	810	1909.80	0.15	0.197	26.41	27.00	1.146	0.226	/
Hotspot (10mm)													
Up	Off	GPRS (3slots)	Front Side	10	810	1909.80	-0.13	0.595	26.41	27.00	1.146	0.682	/
	Off		Back Side	10	810	1909.80	0.00	0.622	26.41	27.00	1.146	0.713	/
	Off		Left Edge	10	810	1909.80	0.16	0.076	26.41	27.00	1.146	0.087	/
	Off		Right Edge	10	810	1909.80	0.07	0.162	26.41	27.00	1.146	0.186	/
	Off		Top Edge	10	810	1909.80	0.08	0.896	26.41	27.00	1.146	1.026	/
	Off			10	512	1850.20	0.20	0.792	26.01	27.00	1.256	0.995	/
	Off			10	661	1880.00	-0.11	0.910	26.28	27.00	1.180	1.074	6#
Down	Off	GPRS (3slots)	Front Side	10	810	1909.80	0.02	0.186	26.41	27.00	1.146	0.213	/
	Off		Back Side	10	810	1909.80	0.02	0.443	26.41	27.00	1.146	0.507	/

	Off		Left Edge	10	810	1909.80	0.19	0.084	26.41	27.00	1.146	0.096	/
	Off		Right Edge	10	810	1909.80	0.17	0.032	26.41	27.00	1.146	0.037	/
	Off		Bottom Edge	10	810	1909.80	0.07	0.476	26.41	27.00	1.146	0.545	/
Note: Refer to 0 for the detailed test data for each test configuration.													

10.3WCDMA Band 2

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
Up	Level1&2	RMC	Left Cheek	0	9262	1852.40	0.10	0.402	16.07	17.00	1.239	0.498	/
	Level1&2		Left Tilt	0	9262	1852.40	0.08	0.458	16.07	17.00	1.239	0.567	/
	Level1&2		Right Cheek	0	9262	1852.40	0.16	0.582	16.07	17.00	1.239	0.721	/
	Level1&2		Right Tilt	0	9262	1852.40	0.07	0.688	16.07	17.00	1.239	0.852	/
	Level1&2			0	9400	1880.00	-0.07	0.802	15.98	17.00	1.265	1.014	/
	Level1&2			0	9538	1907.60	0.04	0.951	16.02	17.00	1.253	1.192	7#
Up	Level3	RMC	Left Cheek	0	9262	1852.40	0.14	0.282	14.72	15.50	1.197	0.337	/
	Level3		Left Tilt	0	9262	1852.40	0.19	0.336	14.72	15.50	1.197	0.402	/
	Level3		Right Cheek	0	9262	1852.40	0.00	0.430	14.72	15.50	1.197	0.515	/
	Level3		Right Tilt	0	9262	1852.40	-0.15	0.487	14.72	15.50	1.197	0.583	/
Down	Off	RMC	Left Cheek	0	9262	1852.40	0.13	0.089	22.72	24.00	1.343	0.120	/
	Off		Left Tilt	0	9262	1852.40	-0.12	0.078	22.72	24.00	1.343	0.105	/
	Off		Right Cheek	0	9262	1852.40	0.06	0.130	22.72	24.00	1.343	0.175	/
	Off		Right Tilt	0	9262	1852.40	0.08	0.096	22.72	24.00	1.343	0.129	/
Body-worn Accessory (15mm)													
Up	Level4	RMC	Front Side	15	9262	1852.40	0.17	0.174	20.11	21.00	1.227	0.214	/
	Level4		Back Side	15	9262	1852.40	-0.05	0.189	20.11	21.00	1.227	0.232	/
Down	Off	RMC	Front Side	15	9262	1852.40	0.15	0.123	22.72	24.00	1.343	0.165	/
	Off		Back Side	15	9262	1852.40	0.19	0.278	22.72	24.00	1.343	0.373	8#
Hotspot (10mm)													
Up	Level4	RMC	Front Side	10	9262	1852.40	0.17	0.239	20.11	21.00	1.227	0.293	/
	Level4		Back Side	10	9262	1852.40	0.06	0.303	20.11	21.00	1.227	0.372	/
	Level4		Left Edge	10	9262	1852.40	0.16	0.044	20.11	21.00	1.227	0.053	/
	Level4		Right Edge	10	9262	1852.40	-0.08	0.090	20.11	21.00	1.227	0.110	/
	Level4		Top Edge	10	9262	1852.40	-0.02	0.492	20.11	21.00	1.227	0.604	/
Down	Off	RMC	Front Side	10	9262	1852.40	0.07	0.226	22.72	24.00	1.343	0.303	/
	Off		Back Side	10	9262	1852.40	-0.08	0.576	22.72	24.00	1.343	0.773	/
	Off		Left Edge	10	9262	1852.40	0.06	0.107	22.72	24.00	1.343	0.144	/
	Off		Right Edge	10	9262	1852.40	0.01	0.055	22.72	24.00	1.343	0.074	/
	Off		Bottom Edge	10	9262	1852.40	0.14	0.630	22.72	24.00	1.343	0.846	9#
	Off			10	9400	1880.00	-0.01	0.560	22.56	24.00	1.393	0.780	/
	Off			10	9538	1907.60	0.13	0.482	22.69	24.00	1.352	0.652	/

	Reduction			(mm)		(MHz)	Drift (dB)	SAR10 g (W/Kg)	Power (dBm)	tune-up Power (dBm)	Factor	Scaled SAR (W/Kg)	No.
ProductSpecific10g SAR (0mm)													
Up	Level4	RMC	Front Side	0	9262	1852.40	0.05	0.750	20.11	21.00	1.227	0.921	/
	Level4		Back Side	0	9262	1852.40	-0.07	0.897	20.11	21.00	1.227	1.101	/
	Level4		Left Edge	0	9262	1852.40	0.08	0.061	20.11	21.00	1.227	0.075	/
	Level4		Right Edge	0	9262	1852.40	0.16	0.173	20.11	21.00	1.227	0.212	/
	Level4		Top Edge	0	9262	1852.40	0.19	1.380	20.11	21.00	1.227	1.694	10#
Note: Refer to 0 for the detailed test data for each test configuration.													

10.4WCDMA Band 4

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
Up	Level1	RMC	Left Cheek	0	1312	1712.40	0.04	0.582	18.12	19.00	1.225	0.713	/
	Level1		Left Tilt	0	1312	1712.40	-0.08	0.671	18.12	19.00	1.225	0.822	/
	Level1			0	1412	1732.40	0.15	0.722	17.89	19.00	1.291	0.932	/
	Level1			0	1513	1752.60	-0.18	0.816	18.05	19.00	1.245	1.016	/
	Level1		Right Cheek	0	1312	1712.40	-0.06	0.622	18.12	19.00	1.225	0.762	/
	Level1		Right Tilt	0	1312	1712.40	0.17	0.702	18.12	19.00	1.225	0.860	/
	Level1			0	1412	1732.40	0.08	0.751	17.89	19.00	1.291	0.970	/
	Level1			0	1513	1752.60	0.11	0.837	18.05	19.00	1.245	1.042	11#
Up	Level2	RMC	Left Cheek	0	1312	1712.40	0.09	0.423	16.82	17.50	1.169	0.495	/
	Level2		Left Tilt	0	1312	1712.40	0.12	0.475	16.82	17.50	1.169	0.556	/
	Level2		Right Cheek	0	1312	1712.40	0.14	0.431	16.82	17.50	1.169	0.504	/
	Level2		Right Tilt	0	1312	1712.40	-0.07	0.522	16.82	17.50	1.169	0.610	/
Up	Level3	RMC	Left Cheek	0	1312	1712.40	0.06	0.326	15.82	17.00	1.312	0.427	/
	Level3		Left Tilt	0	1312	1712.40	0.07	0.384	15.82	17.00	1.312	0.504	/
	Level3		Right Cheek	0	1312	1712.40	-0.20	0.352	15.82	17.00	1.312	0.462	/
	Level3		Right Tilt	0	1312	1712.40	-0.07	0.488	15.82	17.00	1.312	0.641	/
Down	Off	RMC	Left Cheek	0	1513	1752.60	0.04	0.081	22.89	24.00	1.291	0.105	/
	Off		Left Tilt	0	1513	1752.60	0.18	0.096	22.89	24.00	1.291	0.124	/
	Off		Right Cheek	0	1513	1752.60	0.09	0.132	22.89	24.00	1.291	0.170	/
	Off		Right Tilt	0	1513	1752.60	0.02	0.106	22.89	24.00	1.291	0.137	/
Body-worn Accessory (15mm)													
Up	Off	RMC	Front Side	15	1513	1752.60	-0.16	0.310	22.89	24.00	1.291	0.400	/
	Off		Back Side	15	1513	1752.60	0.12	0.312	22.89	24.00	1.291	0.403	12#
Down	Off	RMC	Front Side	15	1513	1752.60	0.12	0.127	22.89	24.00	1.291	0.164	/
	Off		Back Side	15	1513	1752.60	0.18	0.248	22.89	24.00	1.291	0.320	/
Hotspot (10mm)													
Up	Off	RMC	Front Side	10	1513	1752.60	-0.08	0.509	22.89	24.00	1.291	0.657	/
	Off		Back Side	10	1513	1752.60	-0.05	0.614	22.89	24.00	1.291	0.793	/

	Off		Left Edge	10	1513	1752.60	0.08	0.098	22.89	24.00	1.291	0.126	/
	Off		Right Edge	10	1513	1752.60	0.15	0.172	22.89	24.00	1.291	0.222	/
	Off		Top Edge	10	1513	1752.60	0.03	0.674	22.89	24.00	1.291	0.870	13#
	Off			10	1312	1712.40	0.00	0.578	22.66	24.00	1.361	0.787	/
	Off			10	1412	1732.40	0.03	0.631	22.79	24.00	1.321	0.834	/
Down	Off	RMC	Front Side	10	1513	1752.60	0.06	0.238	22.89	24.00	1.291	0.307	/
	Off		Back Side	10	1513	1752.60	-0.04	0.522	22.89	24.00	1.291	0.674	/
	Off		Left Edge	10	1513	1752.60	0.14	0.156	22.89	24.00	1.291	0.201	/
	Off		Right Edge	10	1513	1752.60	0.10	0.110	22.89	24.00	1.291	0.142	/
	Off		Bottom Edge	10	1513	1752.60	-0.10	0.594	22.89	24.00	1.291	0.767	/

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

10.5WCDMA Band 5

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
Up	Off	RMC	Left Cheek	0	4132	826.40	-0.01	0.264	22.99	24.00	1.262	0.333	/
	Off		Left Tilt	0	4132	826.40	0.02	0.213	22.99	24.00	1.262	0.269	/
	Off		Right Cheek	0	4132	826.40	-0.02	0.336	22.99	24.00	1.262	0.424	14#
	Off		Right Tilt	0	4132	826.40	0.00	0.284	22.99	24.00	1.262	0.358	/
Down	Off	RMC	Left Cheek	0	4132	826.40	0.18	0.172	22.99	24.00	1.262	0.217	/
	Off		Left Tilt	0	4132	826.40	0.11	0.081	22.99	24.00	1.262	0.102	/
	Off		Right Cheek	0	4132	826.40	0.11	0.156	22.99	24.00	1.262	0.197	/
	Off		Right Tilt	0	4132	826.40	0.10	0.085	22.99	24.00	1.262	0.107	/
Body-worn Accessory (15mm)													
Up	Off	RMC	Front Side	15	4132	826.40	0.04	0.022	22.99	24.00	1.262	0.028	/
	Off		Back Side	15	4132	826.40	0.20	0.056	22.99	24.00	1.262	0.070	/
	Off	RMC	Front Side	15	4132	826.40	-0.01	0.150	22.99	24.00	1.262	0.189	/
	Off		Back Side	15	4132	826.40	0.00	0.178	22.99	24.00	1.262	0.225	15#
Hotspot (10mm)													
Up	Off	RMC	Front Side	10	4132	826.40	-0.20	0.065	22.99	24.00	1.262	0.082	/
	Off		Back Side	10	4132	826.40	0.02	0.083	22.99	24.00	1.262	0.104	/
	Off		Left Edge	10	4132	826.40	0.14	0.004	22.99	24.00	1.262	0.005	/
	Off		Right Edge	10	4132	826.40	-0.01	0.009	22.99	24.00	1.262	0.011	/
	Off		Top Edge	10	4132	826.40	0.01	0.076	22.99	24.00	1.262	0.096	/
Down	Off	RMC	Front Side	10	4132	826.40	0.03	0.218	22.99	24.00	1.262	0.275	/
	Off		Back Side	10	4132	826.40	0.08	0.208	22.99	24.00	1.262	0.262	/
	Off		Left Edge	10	4132	826.40	-0.12	0.108	22.99	24.00	1.262	0.136	/
	Off		Right Edge	10	4132	826.40	-0.05	0.216	22.99	24.00	1.262	0.273	/
	Off		Bottom Edge	10	4132	826.40	-0.04	0.224	22.99	24.00	1.262	0.283	16#

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

10.6LTE Band 2 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
Up	level1	QPSK	Left Cheek	0	18900	1880	1	Low	-0.04	0.543	17.32	18.00	1.169	0.635	/
	level1			0	18900	1880	50	Low	-0.10	0.502	17.19	18.00	1.205	0.605	/
	level1		Left Tilt	0	18900	1880	1	Low	0.18	0.618	17.32	18.00	1.169	0.723	/
	level1			0	18900	1880	50	Low	-0.19	0.580	17.19	18.00	1.205	0.699	/
	level1		Right Cheek	0	18900	1880	1	Low	0.11	0.862	17.32	18.00	1.169	1.008	/
	level1			0	18700	1860	1	High	0.08	0.768	17.22	18.00	1.197	0.919	/
	level1			0	19100	1900	1	Low	-0.04	0.554	17.03	18.00	1.250	0.693	/
	level1			0	18900	1880	50	Low	0.11	0.744	17.19	18.00	1.205	0.897	/
	level1			0	18700	1860	50	Mid	0.06	0.628	17.15	18.00	1.216	0.764	/
	level1			0	19100	1900	50	Low	-0.04	0.469	17.11	18.00	1.227	0.576	/
	level1			0	18900	1880	100	Low	-0.18	0.573	17.30	18.00	1.175	0.673	/
	level1		Right Tilt	0	18900	1880	1	Low	0.11	1.010	17.32	18.00	1.169	1.181	17#
	level1			0	18700	1860	1	High	0.08	0.907	17.22	18.00	1.197	1.085	/
	level1			0	19100	1900	1	Low	0.14	0.682	17.03	18.00	1.250	0.853	/
	level1			0	18900	1880	50	Low	0.19	0.858	17.19	18.00	1.205	1.034	/
	level1			0	18700	1860	50	Mid	-0.16	0.726	17.15	18.00	1.216	0.883	/
	level1			0	19100	1900	50	Low	-0.08	0.552	17.11	18.00	1.227	0.678	/
	level1			0	18900	1880	100	Low	-0.12	0.672	17.30	18.00	1.175	0.790	/
Up	level2	QPSK	Left Cheek	0	18900	1880	1	Low	0.05	0.436	16.54	17.00	1.112	0.485	/
	level2			0	18900	1880	50	Low	0.09	0.412	16.39	17.00	1.151	0.474	/
	level2		Left Tilt	0	18900	1880	1	Low	-0.14	0.513	16.54	17.00	1.112	0.570	/
	level2			0	18900	1880	50	Low	0.15	0.488	16.39	17.00	1.151	0.562	/
	level2		Right Cheek	0	18900	1880	1	Low	-0.18	0.642	16.54	17.00	1.112	0.714	/
	level2			0	18900	1880	50	Low	0.05	0.603	16.39	17.00	1.151	0.694	/
	level2		Right Tilt	0	18900	1880	1	Low	-0.03	0.813	16.54	17.00	1.112	0.904	/
	level2			0	18700	1860	1	High	0.11	0.726	16.42	17.00	1.143	0.830	/
	level2			0	19100	1900	1	Low	0.14	0.538	16.19	17.00	1.205	0.648	/
	level2			0	18900	1880	50	Low	0.05	0.644	16.39	17.00	1.151	0.741	/
	level2			0	18700	1860	100	Low	-0.04	0.518	16.33	17.00	1.167	0.604	/
Up	level3	QPSK	Left Cheek		18900	1880	1	Low	-0.12	0.344	15.51	16.00	1.119	0.385	/
	level3			0	18700	1860	50	Low	0.07	0.316	15.37	16.00	1.156	0.365	/
	level3		Left Tilt	0	18900	1880	1	Low	-0.10	0.402	15.51	16.00	1.119	0.450	/
	level3			0	18700	1860	50	Low	0.10	0.348	15.37	16.00	1.156	0.402	/
	level3		Right Cheek	0	18900	1880	1	Low	0.09	0.533	15.51	16.00	1.119	0.597	/
	level3			0	18700	1860	50	Low	0.16	0.474	15.37	16.00	1.156	0.548	/
	level3		Right Tilt	0	18900	1880	1	Low	0.04	0.643	15.51	16.00	1.119	0.720	/
	level3			0	18700	1860	50	Low	-0.20	0.506	15.37	16.00	1.156	0.585	/
Down	Off	QPSK	Left Cheek	0	18900	1880	1	Low	-0.14	0.063	23.34	24.00	1.164	0.074	/
	Off			0	18900	1880	50	Low	-0.11	0.061	22.18	23.00	1.208	0.074	/

	Off		Left Tilt	0	18900	1880	1	Low	0.20	0.067	23.34	24.00	1.164	0.078	/
	Off			0	18900	1880	50	Low	0.00	0.070	22.18	23.00	1.208	0.085	/
	Off		Right Cheek	0	18900	1880	1	Low	0.16	0.118	23.34	24.00	1.164	0.137	/
	Off			0	18900	1880	50	Low	0.16	0.109	22.18	23.00	1.208	0.132	/
	Off		Right Tilt	0	18900	1880	1	Low	-0.10	0.061	23.34	24.00	1.164	0.071	/
	Off			0	18900	1880	50	Low	0.01	0.052	22.18	23.00	1.208	0.063	/
Body-worn Accessory (15mm)															
Up	Level4	QPSK	Front Side	15	18900	1880	1	Low	-0.16	0.173	20.50	21.00	1.122	0.194	/
	Level4			15	18700	1860	50	Low	0.06	0.141	20.38	21.00	1.153	0.163	/
	Level4		Back Side	15	18900	1880	1	Low	-0.11	0.220	20.50	21.00	1.122	0.247	/
	Level4			15	18700	1860	50	Low	0.01	0.155	20.38	21.00	1.153	0.179	/
Down	Off	QPSK	Front Side	15	18900	1880	1	Low	-0.15	0.194	23.34	24.00	1.164	0.226	/
	Off			15	18900	1880	50	Low	0.01	0.143	22.18	23.00	1.208	0.173	/
	Off		Back Side	15	18900	1880	1	Low	0.16	0.331	23.34	24.00	1.164	0.385	18#
	Off			15	18900	1880	50	Low	-0.07	0.264	22.18	23.00	1.208	0.319	/
Hotspot (10mm)															
Up	Level4	QPSK	Front Side	10	18900	1880	1	Low	0.03	0.350	20.50	21.00	1.122	0.392	/
	Level4			10	18700	1860	50	Low	0.14	0.280	20.38	21.00	1.153	0.322	/
	Level4		Back Side	10	18900	1880	1	Low	-0.03	0.388	20.50	21.00	1.122	0.435	/
	Level4			10	18700	1860	50	Low	0.16	0.308	20.38	21.00	1.153	0.355	/
	Level4		Left Edge	10	18900	1880	1	Low	-0.12	0.046	20.50	21.00	1.122	0.051	/
	Level4			10	18700	1860	50	Low	0.08	0.036	20.38	21.00	1.153	0.041	/
	Level4		Right Edge	10	18900	1880	1	Low	0.13	0.093	20.50	21.00	1.122	0.104	/
	Level4			10	18700	1860	50	Low	-0.12	0.073	20.38	21.00	1.153	0.084	/
	Level4		Top Edge	10	18900	1880	1	Low	0.00	0.575	20.50	21.00	1.122	0.645	/
	Level4			10	18700	1860	50	Low	-0.18	0.437	20.38	21.00	1.153	0.504	/
Down	Off	QPSK	Front Side	10	18900	1880	1	Low	0.07	0.226	23.34	24.00	1.164	0.263	/
	Off			10	18900	1880	50	Low	0.01	0.165	22.18	23.00	1.208	0.199	/
	Off		Back Side	10	18900	1880	1	Low	0.00	0.555	23.34	24.00	1.164	0.646	19#
	Off			10	18900	1880	50	Low	-0.15	0.411	22.18	23.00	1.208	0.496	/
	Off		Left Edge	10	18900	1880	1	Low	-0.11	0.113	23.34	24.00	1.164	0.132	/
	Off			10	18900	1880	50	Low	0.13	0.104	22.18	23.00	1.208	0.126	/
	Off		Right Edge	10	18900	1880	1	Low	0.02	0.058	23.34	24.00	1.164	0.068	/
	Off			10	18900	1880	50	Low	-0.13	0.045	22.18	23.00	1.208	0.054	/
	Off		Top Edge	10	18900	1880	1	Low	0.15	0.514	23.34	24.00	1.164	0.598	/
	Off			10	18900	1880	50	Low	-0.03	0.439	22.18	23.00	1.208	0.530	/
Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR10 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	10 g Scaled SAR (W/Kg)	Meas. No.
ProductSpecific10g SAR (0mm)															
Up	Level4	QPSK	Front Side	0	18900	1880	1	Low	0.05	1.070	20.50	21.00	1.122	1.201	/
	Level4			0	18700	1860	50	Low	0.15	0.877	20.38	21.00	1.153	1.012	/
	Level4		Back Side	0	18900	1880	1	Low	-0.17	1.260	20.50	21.00	1.122	1.414	/
	Level4			0	18700	1860	50	Low	0.03	1.040	20.38	21.00	1.153	1.200	/
	Level4		Left Edge	0	18900	1880	1	Low	0.09	0.074	20.50	21.00	1.122	0.083	/

	Level4			0	18700	1860	50	Low	-0.01	0.062	20.38	21.00	1.153	0.072	/
	Level4			0	18900	1880	1	Low	0.18	0.233	20.50	21.00	1.122	0.261	/
	Level4		Right Edge	0	18700	1860	50	Low	0.18	0.186	20.38	21.00	1.153	0.215	/
	Level4		Bottom Edg	0	18900	1880	1	Low	0.16	1.480	20.50	21.00	1.122	1.661	20#
	Level4		e	0	18700	1860	50	Low	-0.15	1.180	20.38	21.00	1.153	1.361	/

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

10.7LTE Band 4 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num b.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
Up	level1	QPSK	Left Cheek	0	20175	1732.5	1	High	-0.14	0.726	18.61	19.50	1.227	0.891	/
	level1			0	20050	1720	1	Low	-0.18	0.644	18.41	19.50	1.285	0.828	/
	level1			0	20300	1745	1	Low	-0.07	0.822	18.50	19.50	1.259	1.034	/
	level1			0	20175	1732.5	50	Low	0.10	0.728	18.53	19.50	1.250	0.910	/
	level1			0	20050	1720	50	Low	0.20	0.670	18.44	19.50	1.276	0.855	/
	level1			0	20300	1745	50	Low	-0.01	0.726	18.51	19.50	1.256	0.912	/
	level1			0	20175	1732.5	100	Low	-0.03	0.542	18.72	19.50	1.197	0.649	/
	level1			0	20175	1732.5	1	High	0.00	0.802	18.61	19.50	1.227	0.984	/
	level1		Left Tilt	0	20050	1720	1	Low	-0.04	0.716	18.41	19.50	1.285	0.920	/
	level1			0	20300	1745	1	Low	0.02	0.892	18.50	19.50	1.259	1.123	/
	level1			0	20175	1732.5	50	Low	0.10	0.810	18.53	19.50	1.250	1.013	/
	level1			0	20050	1720	50	Low	-0.11	0.732	18.44	19.50	1.276	0.934	/
	level1			0	20300	1745	50	Low	-0.14	0.798	18.51	19.50	1.256	1.002	/
	level1			0	20175	1732.5	100	Low	0.15	0.587	18.72	19.50	1.197	0.702	/
	level1			0	20175	1732.5	1	High	-0.05	0.765	18.61	19.50	1.227	0.939	/
	level1			0	20050	1720	1	Low	0.16	0.682	18.41	19.50	1.285	0.877	/
	level1		Right Cheek	0	20300	1745	1	Low	0.06	0.792	18.50	19.50	1.259	0.997	/
	level1			0	20175	1732.5	50	Low	-0.07	0.750	18.53	19.50	1.250	0.938	/
	level1			0	20050	1720	50	Low	0.01	0.711	18.44	19.50	1.276	0.908	/
	level1			0	20300	1745	50	Low	0.09	0.806	18.51	19.50	1.256	1.012	/
	level1			0	20175	1732.5	100	Low	0.19	0.554	18.72	19.50	1.197	0.663	/
	level1			0	20175	1732.5	1	High	-0.04	0.875	18.61	19.50	1.227	1.074	/
	level1			0	20050	1720	1	Low	-0.15	0.783	18.41	19.50	1.285	1.006	/
	level1			0	20300	1745	1	Low	0.10	0.886	18.50	19.50	1.259	1.115	/
	level1		Right Tilt	0	20175	1732.5	50	Low	-0.09	0.877	18.53	19.50	1.250	1.096	/
	level1			0	20050	1720	50	Low	-0.19	0.807	18.44	19.50	1.276	1.030	/
	level1			0	20300	1745	50	Low	0.10	0.906	18.51	19.50	1.256	1.138	21#
	level1			0	20175	1732.5	100	Low	0.10	0.646	18.72	19.50	1.197	0.773	/
Up	level2	QPSK	Left Cheek	0	20175	1745	1	High	-0.11	0.501	17.30	18.00	1.175	0.589	/
	level2			0	20300	1732.5	50	Low	0.02	0.495	17.23	18.00	1.194	0.591	/
	level2		Left Tilt	0	20175	1745	1	High	0.19	0.607	17.30	18.00	1.175	0.713	/
	level2			0	20300	1732.5	50	Low	-0.18	0.584	17.23	18.00	1.194	0.697	/

	level2		Right Cheek	0	20175	1745	1	High	0.04	0.577	17.30	18.00	1.175	0.678	/
	level2			0	20300	1732.5	50	Low	-0.09	0.516	17.23	18.00	1.194	0.616	/
	level2		Right Tilt	0	20175	1745	1	High	-0.17	0.619	17.30	18.00	1.175	0.727	/
	level2			0	20300	1732.5	50	Low	0.14	0.604	17.23	18.00	1.194	0.721	/
Up	level3	QPSK	Left Cheek	0	20175	1732.5	1	High	0.02	0.424	16.28	17.00	1.180	0.500	/
	level3			0	20050	1720	50	Low	0.11	0.390	16.24	17.00	1.191	0.465	/
	level3		Left Tilt	0	20175	1732.5	1	High	0.15	0.434	16.28	17.00	1.180	0.512	/
	level3			0	20050	1720	50	Low	0.18	0.431	16.24	17.00	1.191	0.513	/
	level3		Right Cheek	0	20175	1732.5	1	High	0.06	0.428	16.28	17.00	1.180	0.505	/
	level3			0	20050	1720	50	Low	0.19	0.410	16.24	17.00	1.191	0.488	/
	level3		Right Tilt	0	20175	1732.5	1	High	-0.17	0.499	16.28	17.00	1.180	0.589	/
	level3			0	20050	1720	50	Low	-0.20	0.457	16.24	17.00	1.191	0.544	/
Down	Off	QPSK	Left Cheek	0	20300	1745	1	Low	0.10	0.082	23.37	24.00	1.156	0.095	/
	Off			0	20175	1732.5	50	Low	-0.09	0.076	22.42	23.00	1.143	0.087	/
	Off		Left Tilt	0	20300	1745	1	Low	0.06	0.100	23.37	24.00	1.156	0.116	/
	Off			0	20175	1732.5	50	Low	-0.02	0.096	22.42	23.00	1.143	0.110	/
	Off		Right Cheek	0	20300	1745	1	Low	-0.11	0.132	23.37	24.00	1.156	0.153	/
	Off			0	20175	1732.5	50	Low	-0.08	0.136	22.42	23.00	1.143	0.155	/
	Off		Right Tilt	0	20300	1745	1	Low	0.00	0.102	23.37	24.00	1.156	0.118	/
	Off			0	20175	1732.5	50	Low	-0.18	0.094	22.42	23.00	1.143	0.107	/
Body-worn Accessory (15mm)															
Up	Off	QPSK	Front Side	15	20300	1745	1	Low	-0.13	0.312	23.37	24.00	1.156	0.361	/
	Off			15	20175	1732.5	50	Low	0.17	0.238	22.42	23.00	1.143	0.272	/
	Off		Back Side	15	20300	1745	1	Low	0.18	0.345	23.37	24.00	1.156	0.399	22#
	Off			15	20175	1732.5	50	Low	0.17	0.265	22.42	23.00	1.143	0.303	/
Down	Off	QPSK	Front Side	15	20300	1745	1	Low	0.14	0.131	23.37	24.00	1.156	0.151	/
	Off			15	20175	1732.5	50	Low	0.17	0.099	22.42	23.00	1.143	0.113	/
	Off		Back Side	15	20300	1745	1	Low	0.09	0.262	23.37	24.00	1.156	0.303	/
	Off			15	20175	1732.5	50	Low	0.16	0.196	22.42	23.00	1.143	0.224	/
Hotspot (10mm)															
Up	Off	QPSK	Front Side	10	20300	1745	1	Low	-0.11	0.630	23.37	24.00	1.156	0.728	/
	Off			10	20175	1732.5	50	Low	-0.08	0.481	22.42	23.00	1.143	0.550	/
	Off		Back Side	10	20300	1745	1	Low	0.03	0.573	23.37	24.00	1.156	0.662	/
	Off			10	20175	1732.5	50	Low	0.05	0.437	22.42	23.00	1.143	0.499	/
	Off		Left Edge	10	20300	1745	1	Low	-0.15	0.099	23.37	24.00	1.156	0.115	/
	Off			10	20175	1732.5	50	Low	0.10	0.068	22.42	23.00	1.143	0.077	/
	Off		Right Edge	10	20300	1745	1	Low	0.13	0.172	23.37	24.00	1.156	0.199	/
	Off			10	20175	1732.5	50	Low	0.13	0.129	22.42	23.00	1.143	0.147	/
	Off		Top Edge	10	20300	1745	1	Low	-0.16	0.668	23.37	24.00	1.156	0.772	23#
	Off			10	20175	1732.5	50	Low	0.11	0.572	22.42	23.00	1.143	0.654	/
Down	Off	QPSK	Front Side	10	20300	1745	1	Low	0.10	0.253	23.37	24.00	1.156	0.292	/
	Off			10	20175	1732.5	50	Low	0.14	0.204	22.42	23.00	1.143	0.233	/
	Off		Back Side	10	20300	1745	1	Low	0.09	0.499	23.37	24.00	1.156	0.577	/
	Off			10	20175	1732.5	50	Low	-0.06	0.379	22.42	23.00	1.143	0.433	/
	Off		Left Edge	10	20300	1745	1	Low	0.20	0.156	23.37	24.00	1.156	0.180	/
	Off			10	20175	1732.5	50	Low	0.09	0.118	22.42	23.00	1.143	0.135	/

	Off		Right Edge	10	20300	1745	1	Low	0.09	0.106	23.37	24.00	1.156	0.123	/
	Off			10	20175	1732.5	50	Low	0.10	0.081	22.42	23.00	1.143	0.093	/
	Off		Bottom Edge	10	20300	1745	1	Low	-0.07	0.583	23.37	24.00	1.156	0.674	/
	Off			10	20175	1732.5	50	Low	0.01	0.442	22.42	23.00	1.143	0.505	/

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

10.8LTE Band 5 (10MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Number	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
Up	Off	QPSK	Left Cheek	0	20600	844	1	Low	0.08	0.368	23.31	24.00	1.172	0.431	/
	Off			0	20600	844	25	Low	0.01	0.251	22.30	23.00	1.175	0.295	/
	Off		Left Tilt	0	20600	844	1	Low	0.02	0.300	23.31	24.00	1.172	0.352	/
	Off			0	20600	844	25	Low	0.00	0.215	22.30	23.00	1.175	0.253	/
	Off		Right Cheek	0	20600	844	1	Low	0.04	0.410	23.31	24.00	1.172	0.481	24#
	Off			0	20600	844	25	Low	0.00	0.330	22.30	23.00	1.175	0.388	/
	Off		Right Tilt	0	20600	844	1	Low	-0.05	0.373	23.31	24.00	1.172	0.437	/
	Off			0	20600	844	25	Low	-0.03	0.304	22.30	23.00	1.175	0.357	/
Down	Off	QPSK	Left Cheek	0	20600	844	1	Low	-0.14	0.190	23.31	24.00	1.172	0.223	/
	Off			0	20600	844	25	Low	-0.16	0.150	22.30	23.00	1.175	0.176	/
	Off		Left Tilt	0	20600	844	1	Low	0.02	0.083	23.31	24.00	1.172	0.097	/
	Off			0	20600	844	25	Low	0.17	0.066	22.30	23.00	1.175	0.077	/
	Off		Right Cheek	0	20600	844	1	Low	0.01	0.157	23.31	24.00	1.172	0.184	/
	Off			0	20600	844	25	Low	-0.12	0.122	22.30	23.00	1.175	0.143	/
	Off		Right Tilt	0	20600	844	1	Low	0.00	0.075	23.31	24.00	1.172	0.088	/
	Off			0	20600	844	25	Low	0.13	0.059	22.30	23.00	1.175	0.069	/
Body-worn Accessory (15mm)															
Up	Off	QPSK	Front Side	15	20600	844	1	Low	0.04	0.041	23.31	24.00	1.172	0.048	/
	Off			15	20600	844	25	Low	0.08	0.033	22.30	23.00	1.175	0.039	/
	Off		Back Side	15	20600	844	1	Low	0.00	0.059	23.31	24.00	1.172	0.069	/
	Off			15	20600	844	25	Low	0.01	0.049	22.30	23.00	1.175	0.057	/
Down	Off	QPSK	Front Side	15	20600	844	1	Low	-0.08	0.160	23.31	24.00	1.172	0.188	/
	Off			15	20600	844	25	Low	0.02	0.128	22.30	23.00	1.175	0.150	/
	Off		Back Side	15	20600	844	1	Low	0.02	0.188	23.31	24.00	1.172	0.220	25#
	Off			15	20600	844	25	Low	0.00	0.151	22.30	23.00	1.175	0.177	/
Hotspot (10mm)															
Up	Off	QPSK	Front Side	10	20600	844	1	Low	-0.02	0.071	23.31	24.00	1.172	0.083	/
	Off			10	20600	844	25	Low	0.19	0.059	22.30	23.00	1.175	0.069	/
	Off		Back Side	10	20600	844	1	Low	0.10	0.105	23.31	24.00	1.172	0.123	/
	Off			10	20600	844	25	Low	0.08	0.087	22.30	23.00	1.175	0.103	/
	Off		Left Edge	10	20600	844	1	Low	-0.06	0.043	23.31	24.00	1.172	0.050	/
	Off			10	20600	844	25	Low	-0.16	0.038	22.30	23.00	1.175	0.044	/
	Off		Right Edge	10	20600	844	1	Low	-0.01	0.028	23.31	24.00	1.172	0.033	/
	Off			10	20600	844	1	Low	-0.01	0.028	23.31	24.00	1.172	0.033	/

	Off		Top Edge	10	20600	844	25	Low	0.10	0.025	22.30	23.00	1.175	0.029	/
	Off			10	20600	844	1	Low	0.06	0.069	23.31	24.00	1.172	0.081	/
	Off			10	20600	844	25	Low	0.08	0.058	22.30	23.00	1.175	0.068	/
Down	Off	QPSK	Front Side	10	20600	844	1	Low	0.05	0.287	23.31	24.00	1.172	0.336	/
	Off			10	20600	844	25	Low	0.04	0.234	22.30	23.00	1.175	0.275	/
	Off		Back Side	10	20600	844	1	Low	0.02	0.263	23.31	24.00	1.172	0.308	/
	Off			10	20600	844	25	Low	0.07	0.218	22.30	23.00	1.175	0.256	/
	Off		Left Edge	10	20600	844	1	Low	0.03	0.110	23.31	24.00	1.172	0.129	/
	Off			10	20600	844	25	Low	-0.06	0.084	22.30	23.00	1.175	0.099	/
	Off		Right Edge	10	20600	844	1	Low	-0.01	0.235	23.31	24.00	1.172	0.275	/
	Off			10	20600	844	25	Low	0.02	0.190	22.30	23.00	1.175	0.223	/
	Off		Bottom Edge	10	20600	844	1	Low	0.01	0.291	23.31	24.00	1.172	0.341	26#
	Off			10	20600	844	25	Low	0.01	0.239	22.30	23.00	1.175	0.281	/
Note: Refer to 0 for the detailed test data for each test configuration.															

10.9LTE Band 7 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num b.	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
Up	Level 1&2	QPSK	Left Cheek	0	20850	2510	1	Low	0.19	0.300	18.18	19.00	1.208	0.362	/
	Level 1&2			0	21100	2535	50	Mid	0.12	0.284	18.22	19.00	1.197	0.340	/
	Level 1&2		Left Tilt	0	21100	2535	1	Low	0.20	0.332	18.18	19.00	1.208	0.401	/
	Level 1&2			0	21100	2535	50	Mid	0.16	0.299	18.22	19.00	1.197	0.358	/
	Level 1&2		Right Cheek	0	20850	2510	1	Low	0.07	0.938	18.18	19.00	1.208	1.133	27#
	Level 1&2			0	21100	2535	1	Low	0.16	0.907	18.14	19.00	1.219	1.106	/
	Level 1&2			0	21350	2560	1	Low	0.03	0.829	18.01	19.00	1.256	1.041	/
	Level 1&2			0	21100	2535	50	Mid	-0.14	0.867	18.22	19.00	1.197	1.038	/
	Level 1&2			0	20850	2510	50	Low	0.04	0.889	18.20	19.00	1.202	1.069	/
	Level 1&2			0	21350	2560	50	Low	-0.17	0.802	18.03	19.00	1.250	1.003	/
	Level 1&2			0	21100	2535	100	Low	0.05	0.659	18.17	19.00	1.211	0.798	/
	Level 1&2			0	21100	2535	100	Low	0.05	0.659	18.17	19.00	1.211	0.798	/
	Level 1&2		Right Tilt	0	20850	2510	1	Low	-0.02	0.867	18.18	19.00	1.208	1.047	/

	Level 1&2			0	21100	2535	1	Low	-0.03	0.832	18.14	19.00	1.219	1.014	/
	Level 1&2			0	21350	2560	1	Low	-0.16	0.776	18.01	19.00	1.256	0.975	/
	Level 1&2			0	21100	2535	50	Mid	0.19	0.800	18.22	19.00	1.197	0.957	/
	Level 1&2			0	20850	2510	50	Low	0.20	0.824	18.20	19.00	1.202	0.991	/
	Level 1&2			0	21350	2560	50	Low	0.15	0.731	18.03	19.00	1.250	0.914	/
	Level 1&2			0	21100	2535	100	Low	0.04	0.621	18.17	19.00	1.211	0.752	/
Up	Level3	QPSK	Left Cheek	0	21100	2535	1	Low	0.10	0.220	16.79	17.50	1.178	0.259	/
	Level3			0	21100	2535	50	Low	-0.11	0.196	16.81	17.50	1.172	0.230	/
	Level3		Left Tilt	0	21100	2535	1	Low	0.06	0.242	16.79	17.50	1.178	0.285	/
	Level3			0	21100	2535	50	Mid	0.04	0.208	16.81	17.50	1.172	0.244	/
	Level3		Right Cheek	0	21100	2535	1	Low	-0.16	0.625	16.79	17.50	1.178	0.736	/
	Level3			0	21100	2535	50	Low	0.07	0.609	16.81	17.50	1.172	0.714	/
	Level3		Right Tilt	0	21100	2535	1	Low	0.06	0.594	16.79	17.50	1.178	0.699	/
	Level3			0	21100	2535	50	Mid	0.10	0.588	16.81	17.50	1.172	0.689	/
Down	Off	QPSK	Left Cheek	0	21100	2535	1	Low	-0.07	0.062	22.80	23.50	1.175	0.073	/
	Off			0	21100	2535	50	Mid	-0.13	0.066	21.83	22.50	1.167	0.077	/
	Off		Left Tilt	0	21100	2535	1	Low	-0.16	0.084	22.80	23.50	1.175	0.099	/
	Off			0	21100	2535	50	Mid	-0.12	0.079	21.83	22.50	1.167	0.092	/
	Off		Right Cheek	0	21100	2535	1	Low	0.16	0.111	22.80	23.50	1.175	0.130	/
	Off			0	21100	2535	50	Mid	0.20	0.103	21.83	22.50	1.167	0.120	/
	Off		Right Tilt	0	21100	2535	1	Low	0.11	0.062	22.80	23.50	1.175	0.073	/
	Off			0	21100	2535	50	Mid	0.20	0.060	21.83	22.50	1.167	0.070	/
Body-worn Accessory (15mm)															
Up	Level4	QPSK	Front Side	15	21100	2535	1	Low	0.04	0.138	19.71	20.50	1.199	0.166	/
	Level4			15	21100	2535	50	Mid	-0.08	0.118	19.71	20.50	1.199	0.141	/
	Level4		Back Side	15	21100	2535	1	Low	-0.16	0.226	19.71	20.50	1.199	0.271	28#
	Level4			15	21100	2535	50	Mid	0.17	0.152	19.71	20.50	1.199	0.182	/
Down	Off	QPSK	Front Side	15	21100	2535	1	Low	0.12	0.205	22.80	23.50	1.175	0.241	/
	Off			15	21100	2535	50	Mid	0.19	0.154	21.83	22.50	1.167	0.180	/
	Off		Back Side	15	21100	2535	1	Low	0.08	0.194	22.80	23.50	1.175	0.228	/
	Off			15	21100	2535	50	Mid	-0.20	0.163	21.83	22.50	1.167	0.190	/
Hotspot (10mm)															
Up	Level4	QPSK	Front Side	10	21100	2535	1	Low	-0.13	0.256	19.71	20.50	1.199	0.307	/
	Level4			10	21100	2535	50	Mid	0.18	0.204	19.71	20.50	1.199	0.245	/
	Level4		Back Side	10	21100	2535	1	Low	-0.14	0.504	19.71	20.50	1.199	0.605	29#
	Level4			10	21100	2535	50	Mid	-0.06	0.472	19.71	20.50	1.199	0.566	/
	Level4		Left Edge	10	21100	2535	1	Low	0.20	0.016	19.71	20.50	1.199	0.019	/
	Level4			10	21100	2535	50	Mid	0.16	0.012	19.71	20.50	1.199	0.014	/
	Level4		Right Edge	10	21100	2535	1	Low	-0.13	0.301	19.71	20.50	1.199	0.361	/
	Level4			10	21100	2535	50	Mid	-0.03	0.216	19.71	20.50	1.199	0.259	/

	Level4		Top Edge	10	21100	2535	1	Low	-0.14	0.491	19.71	20.50	1.199	0.589	/
	Level4			10	21100	2535	50	Mid	-0.15	0.418	19.71	20.50	1.199	0.501	/
Down	Off	QPSK	Front Side	10	21100	2535	1	Low	-0.02	0.326	22.80	23.50	1.175	0.383	/
	Off			10	21100	2535	50	Mid	0.08	0.259	21.83	22.50	1.167	0.302	/
	Off		Back Side	10	21100	2535	1	Low	-0.15	0.372	22.80	23.50	1.175	0.437	/
	Off			10	21100	2535	50	Mid	-0.11	0.292	21.83	22.50	1.167	0.341	/
	Off		Left Edge	10	21100	2535	1	Low	-0.10	0.257	22.80	23.50	1.175	0.302	/
	Off			10	21100	2535	50	Mid	-0.15	0.256	21.83	22.50	1.167	0.299	/
	Off		Right Edge	10	21100	2535	1	Low	0.02	0.068	22.80	23.50	1.175	0.080	/
	Off			10	21100	2535	50	Mid	-0.15	0.060	21.83	22.50	1.167	0.070	/
	Off		Bottom Edge	10	21100	2535	1	Low	0.17	0.211	22.80	23.50	1.175	0.248	/
	Off			10	21100	2535	50	Mid	-0.17	0.164	21.83	22.50	1.167	0.191	/
Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Number	RB Start	Power Drift (dB)	Meas. SAR10 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	10 g Scaled SAR (W/Kg)	Meas. No.
Product Specific 10g SAR (0mm)															
Up	Level4	QPSK	Front Side	0	21100	2535	1	Low	-0.18	1.010	19.71	20.50	1.199	1.211	/
	Level4			0	21100	2535	50	Mid	0.18	0.948	19.71	20.50	1.199	1.137	/
	Level4		Back Side	0	21100	2535	1	Low	0.13	1.120	19.71	20.50	1.199	1.343	30#
	Level4			0	21100	2535	50	Mid	0.11	1.070	19.71	20.50	1.199	1.283	/
	Level4		Left Edge	0	21100	2535	1	Low	0.10	0.216	19.71	20.50	1.199	0.259	/
	Level4			0	21100	2535	50	Mid	-0.14	0.213	19.71	20.50	1.199	0.255	/
	Level4		Right Edge	0	21100	2535	1	Low	0.07	0.724	19.71	20.50	1.199	0.868	/
	Level4			0	21100	2535	50	Mid	0.14	0.707	19.71	20.50	1.199	0.848	/
	Level4		Top Edge	0	21100	2535	1	Low	-0.14	1.040	19.71	20.50	1.199	1.247	/
	Level4			0	21100	2535	50	Mid	-0.06	1.020	19.71	20.50	1.199	1.223	/
Note: Refer to ANNEX C for the detailed test data for each test configuration.															

10.10 LTE Band 41 (20MHz Bandwidth)

Antenna	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Number	RB Start	Power Drift (dB)	Meas. SAR1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head															
Up	Level 1&2	QPSK	Left Cheek	0	40620	2593	1	Low	0.10	0.275	20.45	21.00	1.135	0.312	/
	Level 1&2			0	40620	2593	50	Low	-0.19	0.246	20.39	21.00	1.151	0.283	/
	Level 1&2		Left Tilt	0	40620	2593	1	Low	0.00	0.303	20.45	21.00	1.135	0.344	/
	Level 1&2			0	40620	2593	50	Low	0.07	0.249	20.39	21.00	1.151	0.287	/
	Level 1&2		Right Cheek	0	40620	2593	1	Low	0.12	0.733	20.45	21.00	1.135	0.832	/

	Level 1&2			0	39750	2506	1	Mid	-0.19	0.821	20.22	21.00	1.197	0.983	/
	Level 1&2			0	40185	2549.5	1	Low	0.12	0.804	20.08	21.00	1.236	0.994	31#
	Level 1&2			0	41055	2536.5	1	Low	0.15	0.669	20.25	21.00	1.189	0.795	/
	Level 1&2			0	41490	2680	1	Low	-0.04	0.545	20.41	21.00	1.146	0.624	/
	Level 1&2			0	40620	2593	50	Low	0.09	0.714	20.39	21.00	1.151	0.822	/
	Level 1&2			0	39750	2506	50	Low	0.06	0.810	20.31	21.00	1.172	0.950	/
	Level 1&2		Right Tilt	0	40185	2549.5	50	High	0.12	0.811	20.30	21.00	1.175	0.953	/
	Level 1&2			0	41055	2536.5	50	Low	-0.17	0.649	20.35	21.00	1.161	0.754	/
Up	Level3	QPSK	Left Cheek	0	41490	2680	50	Mid	0.07	0.532	20.33	21.00	1.167	0.620	/
	Level3			0	40185	2549.5	100	Low	0.04	0.548	20.39	21.00	1.151	0.631	/
	Level3		Left Tilt	0	40620	2593	1	Low	-0.12	0.648	20.45	21.00	1.135	0.735	/
	Level3			0	40620	2593	50	Low	0.15	0.622	20.39	21.00	1.151	0.716	/
	Level3		Right Cheek	0	40620	2593	1	Low	0.06	0.225	19.56	20.00	1.107	0.249	/
	Level3			0	40620	2593	50	Mid	0.02	0.202	19.47	20.00	1.130	0.228	/
	Level3		Right Tilt	0	40620	2593	1	Low	0.07	0.248	19.56	20.00	1.107	0.275	/
	Level3			0	40620	2593	50	Low	0.17	0.204	19.47	20.00	1.130	0.231	/
Down	Off	QPSK	Left Cheek	0	40620	2593	1	Low	0.01	0.611	19.56	20.00	1.107	0.676	/
	Off			0	40620	2593	50	Low	-0.09	0.585	19.47	20.00	1.130	0.661	/
	Off		Left Tilt	0	40620	2593	1	Low	0.08	0.524	19.56	20.00	1.107	0.580	/
	Off			0	40620	2593	50	Low	-0.19	0.482	19.47	20.00	1.130	0.545	/
	Off		Right Cheek	0	40620	2593	1	Low	-0.02	0.072	23.33	24.00	1.167	0.084	/
	Off			0	40620	2593	50	Low	-0.08	0.068	22.21	23.00	1.199	0.082	/
	Off		Right Tilt	0	40620	2593	1	Low	0.14	0.058	23.33	24.00	1.167	0.068	/
	Off			0	40620	2593	50	Low	-0.07	0.052	22.21	23.00	1.199	0.062	/
Body-worn Accessory (15mm)															
Up	Off	QPSK	Front Side	15	40620	2593	1	Low	-0.10	0.182	23.33	24.00	1.167	0.212	/
	Off			15	40620	2593	50	Low	0.05	0.142	22.21	23.00	1.199	0.170	/
	Off		Back Side	15	40620	2593	1	Low	-0.18	0.286	23.33	24.00	1.167	0.334	32#
	Off			15	40620	2593	50	Low	-0.05	0.182	22.21	23.00	1.199	0.218	/
Down	Off	QPSK	Front Side	15	40620	2593	1	Low	0.00	0.110	23.33	24.00	1.167	0.128	/
	Off			15	40620	2593	50	Low	-0.04	0.084	22.21	23.00	1.199	0.100	/
	Off		Back Side	15	40620	2593	1	Low	-0.20	0.188	23.33	24.00	1.167	0.219	/
	Off			15	40620	2593	50	Low	0.18	0.120	22.21	23.00	1.199	0.144	/
Hotspot (10mm)															
Up	Off	QPSK	Front Side	10	40620	2593	1	Low	-0.19	0.249	23.33	24.00	1.167	0.291	/
	Off			10	40620	2593	50	Low	0.02	0.194	22.21	23.00	1.199	0.233	/
	Off		Back Side	10	40620	2593	1	Low	-0.01	0.409	23.33	24.00	1.167	0.477	33#
	Off			10	40620	2593	50	Low	0.08	0.318	22.21	23.00	1.199	0.381	/

Down	Off	QPSK	Left Edge	10	40620	2593	1	Low	0.07	0.026	23.33	24.00	1.167	0.030	/
	Off			10	40620	2593	50	Low	-0.01	0.021	22.21	23.00	1.199	0.025	/
	Off		Right Edge	10	40620	2593	1	Low	-0.16	0.393	23.33	24.00	1.167	0.459	/
	Off			10	40620	2593	50	Low	-0.08	0.304	22.21	23.00	1.199	0.365	/
	Off		Top Edge	10	40620	2593	1	Low	0.15	0.364	23.33	24.00	1.167	0.425	/
	Off			10	40620	2593	50	Low	0.04	0.290	22.21	23.00	1.199	0.348	/
	Off		Front Side	10	40620	2593	1	Low	0.17	0.211	23.33	24.00	1.167	0.246	/
	Off			10	40620	2593	50	Low	0.01	0.154	22.21	23.00	1.199	0.185	/
	Off		Back Side	10	40620	2593	1	Low	-0.03	0.395	23.33	24.00	1.167	0.461	/
	Off			10	40620	2593	50	Low	0.08	0.218	22.21	23.00	1.199	0.261	/
	Off		Left Edge	10	40620	2593	1	Low	0.08	0.220	23.33	24.00	1.167	0.257	/
	Off			10	40620	2593	50	Low	0.00	0.175	22.21	23.00	1.199	0.210	/
Down	Off	QPSK	Right Edge	10	40620	2593	1	Low	0.02	0.012	23.33	24.00	1.167	0.014	/
	Off			10	40620	2593	50	Low	-0.09	0.011	22.21	23.00	1.199	0.013	/
	Off		Bottom Edge	10	40620	2593	1	Low	-0.03	0.152	23.33	24.00	1.167	0.177	/
	Off			10	40620	2593	50	Low	0.13	0.128	22.21	23.00	1.199	0.154	/

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

10.11 WIFI 2.4GHz

Mode	Power Reduction	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. 1tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head														
802.11 b	Level1	Left Cheek	0	6	2437	0.12	1.010	17.92	18.50	1.143	98.08	1.02	1.177	34#
	Level1		0	1	2412	0.08	0.974	17.79	18.50	1.178	98.08	1.02	1.169	/
	Level1		0	11	2462	0.13	0.912	17.86	18.50	1.159	98.08	1.02	1.077	/
	Level1	Left Tilt	0	6	2437	0.07	0.795	17.92	18.50	1.143	98.08	1.02	0.926	/
	Level1		0	1	2412	0.08	0.735	17.79	18.50	1.178	98.08	1.02	0.882	/
	Level1		0	11	2462	0.13	0.705	17.86	18.50	1.159	98.08	1.02	0.833	/
	Level1	Right Cheek	0	6	2437	-0.14	0.331	17.92	18.50	1.143	98.08	1.02	0.385	/
	Level1	Right Tilt	0	6	2437	-0.08	0.331	17.92	18.50	1.143	98.08	1.02	0.385	/
802.11 b	Level2	Left Cheek	0	6	2437	0.00	0.745	16.73	17.50	1.194	98.08	1.02	0.907	/
	Level2		0	1	2412	-0.12	0.657	16.41	17.50	1.285	98.08	1.02	0.861	/
	Level2		0	11	2462	-0.13	0.597	16.34	17.50	1.306	98.08	1.02	0.795	/
	Level2	Left Tilt	0	6	2437	-0.01	0.631	16.73	17.50	1.194	98.08	1.02	0.768	/
	Level2	Right Cheek	0	6	2437	-0.06	0.263	16.73	17.50	1.194	98.08	1.02	0.320	/
	Level2	Right Tilt	0	6	2437	0.01	0.251	16.73	17.50	1.194	98.08	1.02	0.306	/
Body-worn Accessory (15mm)														
802.11 b	Off	Front Side	15	6	2437	-0.06	0.085	18.82	19.50	1.169	98.08	1.02	0.101	/
	Off	Back Side	15	6	2437	-0.11	0.215	18.82	19.50	1.169	98.08	1.02	0.256	35#
Hotspot (10mm)														
802.11 b	Off	Front Side	10	6	2437	0.19	0.127	18.82	19.50	1.169	98.08	1.02	0.151	/
	Off	Back Side	10	6	2437	0.05	0.386	18.82	19.50	1.169	98.08	1.02	0.460	36#
	Off	Left Edge	10	6	2437	-0.17	0.197	18.82	19.50	1.169	98.08	1.02	0.235	/



	Off	Top Edge	10	6	2437	0.11	0.150	18.82	19.50	1.169	98.08	1.02	0.179	/
Note: Refer to 0 for the detailed test data for each test configuration.														

10.12 5G WIFI

Fre. Band	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	1 g Scaled SAR (W/Kg)	Measurements No.
Head															
5.2G	Off	802.11n (HT40)	Left Cheek	0	46	5230	0.02	0.746	18.10	18.50	1.096	96.30	1.04	0.849	/
	Off			0	38	5190	-0.08	0.474	15.63	16.00	1.089	96.30	1.04	0.536	/
	Off		Left Tilt	0	46	5230	0.05	1.020	18.10	18.50	1.096	96.30	1.04	1.161	37#
	Off			0	38	5190	0.14	0.613	15.63	16.00	1.089	96.30	1.04	0.693	/
	Off		Right Cheek	0	46	5230	0.08	0.662	18.10	18.50	1.096	96.30	1.04	0.754	/
	Off		Right Tilt	0	46	5230	0.12	0.746	18.10	18.50	1.096	96.30	1.04	0.849	/
5.2G	Level2	802.11n (HT40)	Left Cheek	0	46	5230	0.09	0.572	15.84	16.50	1.164	96.30	1.04	0.691	/
	Level2		Left Tilt	0	46	5230	-0.01	0.594	15.84	16.50	1.164	96.30	1.04	0.718	/
	Level2		Right Cheek	0	46	5230	0.11	0.412	15.84	16.50	1.164	96.30	1.04	0.498	/
	Level2		Right Tilt	0	46	5230	-0.19	0.431	15.84	16.50	1.164	96.30	1.04	0.521	/
5.6G	Level1	802.11n (HT40)	Left Cheek	0	118	5590	0.14	0.458	17.09	17.50	1.099	96.30	1.04	0.523	/
	Level1		Left Tilt	0	118	5590	-0.03	0.501	17.09	17.50	1.099	96.30	1.04	0.572	38#
	Level1		Right Cheek	0	118	5590	0.09	0.329	17.09	17.50	1.099	96.30	1.04	0.375	/
	Level1		Right Tilt	0	118	5590	-0.16	0.373	17.09	17.50	1.099	96.30	1.04	0.426	/
5.6G	Level2	802.11n (HT40)	Left Cheek	0	118	5590	-0.07	0.289	14.92	15.50	1.143	96.30	1.04	0.343	/
	Level2		Left Tilt	0	118	5590	0.01	0.315	14.92	15.50	1.143	96.30	1.04	0.374	/
	Level2		Right Cheek	0	118	5590	-0.01	0.208	14.92	15.50	1.143	96.30	1.04	0.246	/
	Level2		Right Tilt	0	118	5590	0.13	0.235	14.92	15.50	1.143	96.30	1.04	0.279	/
5.8G	Level1	802.11ac (VHT80)	Left Cheek	0	155	5775	-0.10	0.963	16.48	16.50	1.005	92.70	1.08	1.044	/
	Level1		Left Tilt	0	155	5775	0.00	1.040	16.48	16.50	1.005	92.70	1.08	1.127	39#
	Level1		Right Cheek	0	155	5775	-0.17	0.737	16.48	16.50	1.005	92.70	1.08	0.799	/
	Level1		Right Tilt	0	155	5775	0.02	0.803	16.48	16.50	1.005	92.70	1.08	0.870	/
5.8G	Level2	802.11ac (VHT80)	Left Cheek	0	155	5775	0.14	0.504	13.92	14.00	1.019	92.70	1.08	0.554	/
	Level2		Left Tilt	0	155	5775	0.01	0.680	13.92	14.00	1.019	92.70	1.08	0.747	/
	Level2		Right Cheek	0	155	5775	-0.05	0.575	13.92	14.00	1.019	92.70	1.08	0.632	/
	Level2		Right Tilt	0	155	5775	-0.03	0.603	13.92	14.00	1.019	92.70	1.08	0.663	/
Body-worn Accessory (15mm)															
5.2G	Off	802.11n (HT40)	Front Side	15	46	5230	0.01	0.101	18.10	18.50	1.096	96.30	1.04	0.115	/
	Off		Back Side	15	46	5230	-0.13	0.186	18.10	18.50	1.096	96.30	1.04	0.212	40#
5.6G	Off	802.11n (HT40)	Front Side	15	118	5590	0.02	0.161	17.95	18.50	1.135	96.30	1.04	0.190	/
	Off		Back Side	15	118	5590	0.01	0.194	17.95	18.50	1.135	96.30	1.04	0.229	41#
5.8G	Off	802.11ac (VHT80)	Front Side	15	155	5775	0.00	0.101	16.97	17.00	1.007	92.70	1.08	0.110	/
	Off		Back Side	15	155	5775	0.00	0.124	16.97	17.00	1.007	92.70	1.08	0.135	42#
Hotspot (10mm)															
5.2G	Off	802.11a	Front Side	10	46	5230	0.12	0.230	18.10	18.50	1.096	96.30	1.04	0.262	/
	Off		Back Side	10	46	5230	0.14	0.360	18.10	18.50	1.096	96.30	1.04	0.410	43#
	Off		Left Edge	10	46	5230	-0.15	0.137	18.10	18.50	1.096	96.30	1.04	0.156	/
	Off		Right Edge	10	46	5230	0.00	0.030	18.10	18.50	1.096	96.30	1.04	0.034	/
	Off		Top Edge	10	46	5230	0.02	0.344	18.10	18.50	1.096	96.30	1.04	0.392	/

5.8G	Off	802.11a	Front Side	10	155	5775	0.08	0.217	16.97	17.00	1.007	92.70	1.08	0.236	/
	Off		Back Side	10	155	5775	0.18	0.218	16.97	17.00	1.007	92.70	1.08	0.237	44#
	Off		Left Edge	10	155	5775	-0.19	0.118	16.97	17.00	1.007	92.70	1.08	0.128	/
	Off		Right Edge	10	155	5775	0.11	0.022	16.97	17.00	1.007	92.70	1.08	0.024	/
	Off		Top Edge	10	155	5775	0.03	0.286	16.97	17.00	1.007	92.70	1.08	0.311	/
Fre. Band	Power Reduction	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	10 g Scaled SAR (W/Kg)	Measurements No.
Product Specific 10g SAR (0mm)															
5.3G	Off	802.11a	Front Side	0	54	5270	-0.20	0.236	17.35	17.50	1.035	96.30	1.04	0.254	/
	Off		Back Side	0	54	5270	-0.15	0.179	17.35	17.50	1.035	96.30	1.04	0.192	/
	Off		Left Edge	0	54	5270	0.17	0.113	17.35	17.50	1.035	96.30	1.04	0.121	/
	Off		Right Edge	0	54	5270	-0.08	0.038	17.35	17.50	1.035	96.30	1.04	0.041	/
	Off		Top Edge	0	54	5270	-0.19	0.255	17.35	17.50	1.035	96.30	1.04	0.274	45#
5.6G	Off	802.11a	Front Side	0	118	5590	-0.18	0.312	17.95	18.50	1.135	96.30	1.04	0.368	/
	Off		Back Side	0	118	5590	-0.01	0.249	17.95	18.50	1.135	96.30	1.04	0.293	/
	Off		Left Edge	0	118	5590	-0.14	0.157	17.95	18.50	1.135	96.30	1.04	0.185	/
	Off		Right Edge	0	118	5590	0.16	0.046	17.95	18.50	1.135	96.30	1.04	0.054	/
	Off		Top Edge	0	118	5590	0.02	0.353	17.95	18.50	1.135	96.30	1.04	0.416	46#
Note: Refer to 0 for the detailed test data for each test configuration.															

10.13 Bluetooth

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas. SAR (W/Kg)	Meas. Power (dBm)	Max. 1 tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	1 g Scaled SAR (W/Kg)	Meas. No.
Head													
BLE	Left Cheek	0	19	2440	-0.01	0.133	11.44	12.50	1.276	62.50	1.60	0.272	47#
	Left Tilt	0	19	2440	0.09	0.116	11.44	12.50	1.276	62.50	1.60	0.237	/
	Right Cheek	0	19	2440	0.10	0.051	11.44	12.50	1.276	62.50	1.60	0.104	/
	Right Tilt	0	19	2440	-0.13	0.046	11.44	12.50	1.276	62.50	1.60	0.094	/
Body-worn Accessory (15mm)													
BLE	Front Side	15	19	2440	0.08	0.022	11.44	12.50	1.276	62.50	1.60	0.045	/
	Back Side	15	19	2440	0.16	0.031	11.44	12.50	1.276	62.50	1.60	0.063	48#
Hotspot (10mm)													
BLE	Front Side	10	19	2440	0.07	0.059	11.44	12.50	1.276	62.50	1.60	0.120	/
	Back Side	10	19	2440	0.00	0.062	11.44	12.50	1.276	62.50	1.60	0.127	49#
	Left Edge	10	0	2402	0.02	0.026	11.44	12.50	1.276	62.50	1.60	0.053	/
	Top Edge	10	39	2480	-0.17	0.019	11.44	12.50	1.276	62.50	1.60	0.038	/
Note: Refer to 0 for the detailed test data for each test configuration.													

11 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Frequency Band (MHz)	Wireless Band	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Largest to Smallest SAR Ratio
1750	WCDMA Band 4	Head	Right Tilt	0.837	Yes	0.812	1.03
	LTE Band 4	Head	Right Tilt	0.906	Yes	0.883	1.03
1900	GSM 1900	Head	Right Tilt	0.865	Yes	0.814	1.06
		Body	Top Edge	0.910	Yes	0.862	1.06
	WCDMA Band 2	Head	Right Tilt	0.951	Yes	0.844	1.13
	LTE Band 2	Head	Right Tilt	1.010	Yes	0.983	1.03
2600	LTE Band 7	Head	Right Cheek	0.938	Yes	0.877	1.07
	LTE Band 41	Head	Right Cheek	0.821	Yes	0.813	1.01
2450	802.11 b	Head	Left Cheek	1.010	Yes	0.976	1.04
5250	802.11n(HT40)	Head	Left Tilt	1.020	Yes	0.974	1.05
5750	802.11 ac(VHT80)	Head	Left Tilt	1.040	Yes	0.982	1.06

Note: The ratio of largest to smallest SAR for the original and first repeated measurements is < 1.20 , the second repeated measurement. is not required.

12 SIMULTANEOUS TRANSMISSION

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

12.1 Simultaneous Transmission Mode Consider

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

Note:

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

12.2 Sum SAR of Simultaneous Transmission

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

Band	Power Reduction	Position	Stand alone SAR		SUM SAR
			1	2	WWAN+2.4G WIFI
			WWAN	2.4GWIFI	Sum SAR (1+2)
GSM 850	Off	Left Cheek	0.431	0.907	1.338
	Off	Left Tilt	0.360	0.769	1.129
	Off	Right Cheek	0.573	0.320	0.893
	Off	Right Tilt	0.455	0.320	0.775
GSM1900	Level 2	Left Cheek	0.459	0.907	1.366
	Level 2	Left Tilt	0.480	0.769	1.249
	Level 2	Right Cheek	0.706	0.320	1.026
	Level 2	Right Tilt	0.766	0.320	1.086
WCDMA B2	Level 2	Left Cheek	0.498	0.907	1.405
	Level 2	Left Tilt	0.567	0.769	1.336
	Level 2	Right Cheek	0.721	0.320	1.041
	Level 2	Right Tilt	1.192	0.306	1.498
WCDMA B4	Level 2	Left Cheek	0.495	0.907	1.402
	Level 2	Left Tilt	0.556	0.769	1.325
	Level 2	Right Cheek	0.504	0.320	0.824
	Level 2	Right Tilt	0.610	0.320	0.930
WCDMA B5	Off	Left Cheek	0.333	0.907	1.240
	Off	Left Tilt	0.269	0.769	1.038
	Off	Right Cheek	0.424	0.320	0.744
	Off	Right Tilt	0.358	0.320	0.678
LTE B2	Level 2	Left Cheek	0.485	0.907	1.392
	Level 2	Left Tilt	0.570	0.769	1.339
	Level 2	Right Cheek	0.714	0.320	1.034
	Level 2	Right Tilt	0.904	0.320	1.224
LTE B4	Level 2	Left Cheek	0.589	0.907	1.496
	Level 2	Left Tilt	0.713	0.769	1.482
	Level 2	Right Cheek	0.678	0.320	0.998
	Level 2	Right Tilt	0.727	0.320	1.047
LTE B5	Off	Left Cheek	0.431	0.907	1.338
	Off	Left Tilt	0.352	0.769	1.121
	Off	Right Cheek	0.481	0.320	0.801
	Off	Right Tilt	0.437	0.320	0.757
LTE B7	Level 2	Left Cheek	0.362	0.907	1.269
	Level 2	Left Tilt	0.401	0.769	1.170
	Level 2	Right Cheek	1.133	0.320	1.453

	Level 2	Right Tilt	1.047	0.320	1.367
LTE B41	Level 2	Left Cheek	0.312	0.907	1.219
	Level 2	Left Tilt	0.344	0.769	1.113
	Level 2	Right Cheek	0.994	0.320	1.314
	Level 2	Right Tilt	0.735	0.320	1.055

Note:

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

2: The highest Combined 10g SAR is 1.498 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3	Sum SAR (1+2)	Sum SAR (1+3)	Sum SAR (1+2+3)
			WWAN	5G WIFI	Bluetooth			
GSM 850	Off	Left Cheek	0.431	0.691	0.272	1.122	0.703	1.394
	Off	Left Tilt	0.360	0.747	0.237	1.107	0.597	1.344
	Off	Right Cheek	0.573	0.632	0.104	1.205	0.677	1.309
	Off	Right Tilt	0.455	0.663	0.094	1.118	0.549	1.212
GSM1900	Level 3	Left Cheek	0.348	0.691	0.272	1.039	0.620	1.311
	Level 3	Left Tilt	0.364	0.747	0.237	1.111	0.601	1.348
	Level 3	Right Cheek	0.449	0.632	0.104	1.081	0.553	1.185
	Level 3	Right Tilt	0.535	0.663	0.094	1.198	0.629	1.292
WCDMA B2	Level 3	Left Cheek	0.337	0.691	0.272	1.028	0.609	1.300
	Level 3	Left Tilt	0.402	0.747	0.237	1.149	0.639	1.386
	Level 3	Right Cheek	0.515	0.632	0.104	1.147	0.619	1.251
	Level 3	Right Tilt	0.583	0.663	0.094	1.246	0.677	1.340
WCDMA B4	Level 3	Left Cheek	0.427	0.691	0.272	1.118	0.699	1.390
	Level 3	Left Tilt	0.504	0.747	0.237	1.251	0.741	1.488
	Level 3	Right Cheek	0.462	0.632	0.104	1.094	0.566	1.198
	Level 3	Right Tilt	0.641	0.663	0.094	1.304	0.735	1.398
WCDMA B5	Off	Left Cheek	0.333	0.691	0.272	1.024	0.605	1.296
	Off	Left Tilt	0.269	0.747	0.237	1.016	0.506	1.253
	Off	Right Cheek	0.424	0.632	0.104	1.056	0.528	1.160
	Off	Right Tilt	0.358	0.663	0.094	1.021	0.452	1.115
LTE B2	Level 3	Left Cheek	0.385	0.691	0.272	1.076	0.657	1.348
	Level 3	Left Tilt	0.450	0.747	0.237	1.197	0.687	1.434
	Level 3	Right Cheek	0.597	0.632	0.104	1.229	0.701	1.333
	Level 3	Right Tilt	0.720	0.663	0.094	1.383	0.814	1.477
LTE B4	Level 3	Left Cheek	0.500	0.691	0.272	1.191	0.772	1.463
	Level 3	Left Tilt	0.513	0.747	0.237	1.260	0.750	1.497
	Level 3	Right Cheek	0.505	0.632	0.104	1.137	0.609	1.241

	Level 3	Right Tilt	0.589	0.663	0.094	1.252	0.683	1.346
LTE B5	Off	Left Cheek	0.431	0.691	0.272	1.122	0.703	1.394
	Off	Left Tilt	0.352	0.747	0.237	1.099	0.589	1.336
	Off	Right Cheek	0.481	0.632	0.104	1.113	0.585	1.217
	Off	Right Tilt	0.437	0.663	0.094	1.100	0.531	1.194
LTE B7	Level 3	Left Cheek	0.259	0.691	0.272	0.950	0.531	1.222
	Level 3	Left Tilt	0.285	0.747	0.237	1.032	0.522	1.269
	Level 3	Right Cheek	0.736	0.632	0.104	1.368	0.840	1.472
	Level 3	Right Tilt	0.699	0.663	0.094	1.362	0.793	1.456
LTE B41	Level 3	Left Cheek	0.249	0.691	0.272	0.940	0.521	1.212
	Level 3	Left Tilt	0.275	0.747	0.237	1.022	0.512	1.259
	Level 3	Right Cheek	0.676	0.632	0.104	1.308	0.780	1.412
	Level 3	Right Tilt	0.580	0.663	0.094	1.243	0.674	1.337

Note:

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

2: The highest Combined 10g SAR is 1.497 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR		SUM SAR
			1	2	WWAN+2.4G WIFI
			WWAN	2.4GWIFI	Sum SAR (1+2)
GSM 850	Off	Front Side 15mm	0.039	0.101	0.140
	Off	Back Side 15mm	0.074	0.256	0.330
GSM1900	Off	Front Side 15mm	0.309	0.101	0.410
	Off	Back Side 15mm	0.354	0.256	0.610
WCDMA B2	Level 4	Front Side 15mm	0.207	0.101	0.308
	Level 4	Back Side 15mm	0.225	0.256	0.481
WCDMA B4	Off	Front Side 15mm	0.400	0.101	0.501
	Off	Back Side 15mm	0.403	0.256	0.659
WCDMA B5	Off	Front Side 15mm	0.028	0.101	0.129
	Off	Back Side 15mm	0.070	0.256	0.326
LTE B2	Level 4	Front Side 15mm	0.194	0.101	0.295
	Level 4	Back Side 15mm	0.247	0.256	0.503
LTE B4	Off	Front Side 15mm	0.361	0.101	0.462
	Off	Back Side 15mm	0.399	0.256	0.655
LTE B5	Off	Front Side 15mm	0.048	0.101	0.149
	Off	Back Side 15mm	0.069	0.256	0.325
LTE B7	Level 4	Front Side 15mm	0.162	0.101	0.263
	Level 4	Back Side 15mm	0.266	0.256	0.522
LTE B41	Off	Front Side 15mm	0.212	0.101	0.313
	Off	Back Side 15mm	0.334	0.256	0.590

Note:

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

2: The highest Combined 10g SAR is 0.659 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)	Sum SAR (1+2+3)
GSM 850	Off	Front Side 15mm	0.039	0.171	0.040	0.210	0.079	0.250
	Off	Back Side 15mm	0.074	0.212	0.056	0.286	0.130	0.342
GSM1900	Off	Front Side 15mm	0.309	0.171	0.040	0.480	0.349	0.520
	Off	Back Side 15mm	0.354	0.212	0.056	0.566	0.410	0.622
WCDMA B2	Level 4	Front Side 15mm	0.184	0.171	0.040	0.355	0.224	0.395
	Level 4	Back Side 15mm	0.204	0.212	0.056	0.416	0.260	0.472
WCDMA B4	Off	Front Side 15mm	0.400	0.171	0.040	0.571	0.440	0.611
	Off	Back Side 15mm	0.403	0.212	0.056	0.615	0.459	0.671
WCDMA B5	Off	Front Side 15mm	0.028	0.171	0.040	0.199	0.068	0.239
	Off	Back Side 15mm	0.070	0.212	0.056	0.282	0.126	0.338
LTE B2	Level 4	Front Side 15mm	0.194	0.171	0.040	0.365	0.234	0.405
	Level 4	Back Side 15mm	0.247	0.212	0.056	0.459	0.303	0.515
LTE B4	Off	Front Side 15mm	0.361	0.171	0.040	0.532	0.401	0.572
	Off	Back Side 15mm	0.399	0.212	0.056	0.611	0.455	0.667
LTE B5	Off	Front Side 15mm	0.048	0.171	0.040	0.219	0.088	0.259
	Off	Back Side 15mm	0.069	0.212	0.056	0.281	0.125	0.337
LTE B7	Level 4	Front Side	0.162	0.171	0.040	0.333	0.202	0.373

		15mm						
	Level 4	Back Side 15mm	0.266	0.212	0.056	0.478	0.322	0.534
LTE B41	Off	Front Side 15mm	0.212	0.171	0.040	0.383	0.252	0.423
	Off	Back Side 15mm	0.334	0.212	0.056	0.546	0.390	0.602

Note:

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

2: The highest Combined 1g SAR is 0.671 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR		SUM SAR WWAN+2.4G WIFI
			1	2	Sum SAR (1+2)
			WWAN	2.4GWIFI	
GSM 850	Off	Front Side 10mm	0.049	0.151	0.200
	Off	Back Side 10mm	0.087	0.460	0.547
	Off	Left Edge 10mm	0.003	0.235	0.238
	Off	Right Edge 10mm	0.006	0.000	0.006
	Off	Top Edge 10mm	0.080	0.179	0.259
GSM1900	Off	Front Side 10mm	0.682	0.151	0.833
	Off	Back Side 10mm	0.713	0.460	1.173
	Off	Left Edge 10mm	0.087	0.235	0.322
	Off	Right Edge 10mm	0.186	0.000	0.186
	Off	Top Edge 10mm	1.074	0.179	1.253
WCDMA B2	Level 4	Front Side 10mm	0.284	0.151	0.435
	Level 4	Back Side 10mm	0.360	0.460	0.820
	Level 4	Left Edge 10mm	0.052	0.235	0.287
	Level 4	Right Edge 10mm	0.107	0.000	0.107
	Level 4	Top Edge 10mm	0.585	0.179	0.764
WCDMA B4	Off	Front Side 10mm	0.657	0.151	0.808
	Off	Back Side 10mm	0.793	0.460	1.253
	Off	Left Edge 10mm	0.126	0.235	0.361
	Off	Right Edge 10mm	0.222	0.000	0.222
	Off	Top Edge 10mm	0.870	0.179	1.049
WCDMA B5	Off	Front Side 10mm	0.082	0.151	0.233
	Off	Back Side 10mm	0.104	0.460	0.564
	Off	Left Edge 10mm	0.005	0.235	0.240
	Off	Right Edge 10mm	0.011	0.000	0.011
	Off	Top Edge 10mm	0.096	0.179	0.275
LTE B2	Level 4	Front Side 10mm	0.392	0.151	0.543

	Level 4	Back Side 10mm	0.435	0.460	0.895
	Level 4	Left Edge 10mm	0.051	0.235	0.286
	Level 4	Right Edge 10mm	0.104	0.000	0.104
	Level 4	Top Edge 10mm	0.645	0.179	0.824
LTE B4	Off	Front Side 10mm	0.728	0.151	0.879
	Off	Back Side 10mm	0.662	0.460	1.122
	Off	Left Edge 10mm	0.115	0.235	0.350
	Off	Right Edge 10mm	0.199	0.000	0.199
	Off	Top Edge 10mm	0.772	0.179	0.951
LTE B5	Off	Front Side 10mm	0.083	0.151	0.234
	Off	Back Side 10mm	0.123	0.460	0.583
	Off	Left Edge 10mm	0.050	0.235	0.285
	Off	Right Edge 10mm	0.033	0.000	0.033
	Off	Top Edge 10mm	0.081	0.179	0.260
LTE B7	Level 4	Front Side 10mm	0.300	0.151	0.451
	Level 4	Back Side 10mm	0.591	0.460	1.051
	Level 4	Left Edge 10mm	0.019	0.235	0.254
	Level 4	Right Edge 10mm	0.353	0.000	0.353
	Level 4	Top Edge 10mm	0.576	0.179	0.755
LTE B41	Off	Front Side 10mm	0.291	0.151	0.442
	Off	Back Side 10mm	0.477	0.460	0.937
	Off	Left Edge 10mm	0.030	0.235	0.265
	Off	Right Edge 10mm	0.459	0.000	0.459
	Off	Top Edge 10mm	0.425	0.179	0.604

Note:

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

2: The highest Combined 1g SAR is 1.253 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR			SUM SAR	SUM SAR	SUM SAR
			1	2	3	WWAN+5G WIFI	WWAN+Bluetooth	WWAN+5G+Bluetooth
			WWAN	5G WIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)	Sum SAR (1+2+3)
GSM 850	Off	Front Side 10mm	0.049	0.262	0.107	0.311	0.156	0.418
	Off	Back Side 10mm	0.087	0.410	0.113	0.497	0.200	0.610
	Off	Left Edge 10mm	0.003	0.156	0.047	0.159	0.050	0.206
	Off	Right Edge 10mm	0.006	0.034	0.000	0.040	0.006	0.040
	Off	Top Edge 10mm	0.080	0.392	0.034	0.472	0.114	0.506
GSM1900	Off	Front Side 10mm	0.682	0.262	0.107	0.944	0.789	1.051
	Off	Back Side 10mm	0.713	0.410	0.113	1.123	0.826	1.236
	Off	Left Edge 10mm	0.087	0.156	0.047	0.243	0.134	0.290
	Off	Right Edge 10mm	0.186	0.034	0.000	0.220	0.186	0.220
	Off	Top Edge 10mm	1.074	0.392	0.034	1.466	1.108	1.500
WCDMA B2	Level 4	Front Side 10mm	0.247	0.262	0.107	0.509	0.354	0.616
	Level 4	Back Side 10mm	0.318	0.410	0.113	0.728	0.431	0.841
	Level 4	Left Edge 10mm	0.046	0.156	0.047	0.202	0.093	0.249
	Level 4	Right Edge 10mm	0.095	0.034	0.000	0.129	0.095	0.129
	Level 4	Top Edge 10mm	0.513	0.392	0.034	0.905	0.547	0.939
WCDMA B4	Off	Front Side 10mm	0.657	0.262	0.107	0.919	0.764	1.026
	Off	Back Side 10mm	0.793	0.410	0.113	1.203	0.906	1.316
	Off	Left Edge 10mm	0.126	0.156	0.047	0.282	0.173	0.329
	Off	Right Edge 10mm	0.222	0.034	0.000	0.256	0.222	0.256
	Off	Top Edge	0.870	0.392	0.034	1.262	0.904	1.296

		10mm						
WCDMA B5	Off	Front Side 10mm	0.082	0.262	0.107	0.344	0.189	0.451
	Off	Back Side 10mm	0.104	0.410	0.113	0.514	0.217	0.627
	Off	Left Edge 10mm	0.005	0.156	0.047	0.161	0.052	0.208
	Off	Right Edge 10mm	0.011	0.034	0.000	0.045	0.011	0.045
	Off	Top Edge 10mm	0.096	0.392	0.034	0.488	0.130	0.522
LTE B2	Level 4	Front Side 10mm	0.392	0.262	0.107	0.654	0.499	0.761
	Level 4	Back Side 10mm	0.435	0.410	0.113	0.845	0.548	0.958
	Level 4	Left Edge 10mm	0.051	0.156	0.047	0.207	0.098	0.254
	Level 4	Right Edge 10mm	0.104	0.034	0.000	0.138	0.104	0.138
	Level 4	Top Edge 10mm	0.645	0.392	0.034	1.037	0.679	1.071
LTE B4	Off	Front Side 10mm	0.728	0.262	0.107	0.990	0.835	1.097
	Off	Back Side 10mm	0.662	0.410	0.113	1.072	0.775	1.185
	Off	Left Edge 10mm	0.115	0.156	0.047	0.271	0.162	0.318
	Off	Right Edge 10mm	0.199	0.034	0.000	0.233	0.199	0.233
	Off	Top Edge 10mm	0.772	0.392	0.034	1.164	0.806	1.198
LTE B5	Off	Front Side 10mm	0.083	0.262	0.107	0.345	0.190	0.452
	Off	Back Side 10mm	0.123	0.410	0.113	0.533	0.236	0.646
	Off	Left Edge 10mm	0.050	0.156	0.047	0.206	0.097	0.253
	Off	Right Edge 10mm	0.033	0.034	0.000	0.067	0.033	0.067
	Off	Top Edge 10mm	0.081	0.392	0.034	0.473	0.115	0.507
LTE B7	Level 4	Front Side 10mm	0.300	0.262	0.107	0.562	0.407	0.669
	Level 4	Back Side 10mm	0.591	0.410	0.113	1.001	0.704	1.114

	Level 4	Left Edge 10mm	0.019	0.156	0.047	0.175	0.066	0.222
	Level 4	Right Edge 10mm	0.353	0.034	0.000	0.387	0.353	0.387
	Level 4	Top Edge 10mm	0.576	0.392	0.034	0.968	0.610	1.002
LTE B41	Off	Front Side 10mm	0.291	0.262	0.107	0.553	0.398	0.660
	Off	Back Side 10mm	0.477	0.410	0.113	0.887	0.590	1.000
	Off	Left Edge 10mm	0.030	0.156	0.047	0.186	0.077	0.233
	Off	Right Edge 10mm	0.459	0.034	0.000	0.493	0.459	0.493
	Off	Top Edge 10mm	0.425	0.392	0.034	0.817	0.459	0.851

Note:

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

2: The highest Combined 1g SAR is 1.5 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	SUM SAR WWAN+5G WIFI		SUM SAR WWAN+5G WIFI
			1	2	
			WWAN	5G WIFI	Sum SAR (1+2)
WCDMA B2	Level 4	Front Side 10mm	0.783	0.332	1.115
	Level 4	Back Side 10mm	0.936	0.265	1.201
	Level 4	Left Edge 10mm	0.057	0.167	0.224
	Level 4	Right Edge 10mm	0.191	0.049	0.240
	Level 4	Top Edge 10mm	1.447	0.375	1.822
LTE B2	Level 4	Front Side 10mm	1.201	0.332	1.533
	Level 4	Back Side 10mm	1.414	0.265	1.679
	Level 4	Left Edge 10mm	0.083	0.167	0.250
	Level 4	Right Edge 10mm	0.261	0.049	0.310
	Level 4	Top Edge 10mm	1.661	0.375	2.036
LTE B7	Level 4	Front Side 10mm	1.184	0.332	1.516
	Level 4	Back Side 10mm	1.313	0.265	1.578
	Level 4	Left Edge 10mm	0.253	0.167	0.420
	Level 4	Right Edge 10mm	0.849	0.049	0.898
	Level 4	Top Edge 10mm	1.219	0.375	1.594

Note:

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

2: The highest Combined 10g SAR is 2.036 W/Kg < 4.0 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR		SUM SAR
			1	2	WWAN+2.4G WIFI
			WWAN	2.4GWIFI	Sum SAR (1+2)
GSM 850	Off	Left Cheek	0.272	0.907	1.179
	Off	Left Tilt	0.100	0.769	0.869
	Off	Right Cheek	0.178	0.320	0.498
	Off	Right Tilt	0.097	0.320	0.417
GSM1900	Off	Left Cheek	0.051	0.907	0.958
	Off	Left Tilt	0.037	0.769	0.806
	Off	Right Cheek	0.045	0.320	0.365
	Off	Right Tilt	0.037	0.320	0.357
WCDMA B2	Off	Left Cheek	0.120	0.907	1.027
	Off	Left Tilt	0.105	0.769	0.874
	Off	Right Cheek	0.175	0.320	0.495
	Off	Right Tilt	0.129	0.320	0.449
WCDMA B4	Off	Left Cheek	0.105	0.907	1.012
	Off	Left Tilt	0.124	0.769	0.893
	Off	Right Cheek	0.170	0.320	0.490
	Off	Right Tilt	0.137	0.320	0.457
WCDMA B5	Off	Left Cheek	0.217	0.907	1.124
	Off	Left Tilt	0.102	0.769	0.871
	Off	Right Cheek	0.197	0.320	0.517
	Off	Right Tilt	0.107	0.320	0.427
LTE B2	Off	Left Cheek	0.074	0.907	0.981
	Off	Left Tilt	0.078	0.769	0.847
	Off	Right Cheek	0.137	0.320	0.457
	Off	Right Tilt	0.071	0.320	0.391
LTE B4	Off	Left Cheek	0.095	0.907	1.002
	Off	Left Tilt	0.116	0.769	0.885
	Off	Right Cheek	0.153	0.320	0.473
	Off	Right Tilt	0.118	0.320	0.438
LTE B5	Off	Left Cheek	0.223	0.907	1.130
	Off	Left Tilt	0.097	0.769	0.866
	Off	Right Cheek	0.184	0.320	0.504
	Off	Right Tilt	0.088	0.320	0.408
LTE B7	Off	Left Cheek	0.073	0.907	0.980
	Off	Left Tilt	0.099	0.769	0.868
	Off	Right Cheek	0.130	0.320	0.450

	Off	Right Tilt	0.073	0.320	0.393
LTE B41	Off	Left Cheek	0.084	0.907	0.991
	Off	Left Tilt	0.068	0.769	0.837
	Off	Right Cheek	0.132	0.320	0.452
	Off	Right Tilt	0.065	0.320	0.385

Note:

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

2: The highest Combined 1g SAR is 1.179 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)	Sum SAR (1+2+3)
GSM 850	Off	Left Cheek	0.272	0.691	0.242	0.963	0.514	1.205
	Off	Left Tilt	0.100	0.747	0.211	0.847	0.311	1.058
	Off	Right Cheek	0.178	0.632	0.093	0.810	0.271	0.903
	Off	Right Tilt	0.097	0.663	0.084	0.760	0.181	0.844
GSM1900	Off	Left Cheek	0.051	0.691	0.265	0.742	0.316	1.007
	Off	Left Tilt	0.037	0.747	0.211	0.784	0.248	0.995
	Off	Right Cheek	0.045	0.632	0.093	0.677	0.138	0.770
	Off	Right Tilt	0.037	0.663	0.084	0.700	0.121	0.784
WCDMA B2	Off	Left Cheek	0.120	0.691	0.265	0.811	0.385	1.076
	Off	Left Tilt	0.105	0.747	0.211	0.852	0.316	1.063
	Off	Right Cheek	0.175	0.632	0.093	0.807	0.268	0.900
	Off	Right Tilt	0.129	0.663	0.084	0.792	0.213	0.876
WCDMA B4	Off	Left Cheek	0.105	0.691	0.265	0.796	0.370	1.061
	Off	Left Tilt	0.124	0.747	0.211	0.871	0.335	1.082
	Off	Right Cheek	0.170	0.632	0.093	0.802	0.263	0.895
	Off	Right Tilt	0.137	0.663	0.084	0.800	0.221	0.884
WCDMA B5	Off	Left Cheek	0.217	0.691	0.265	0.908	0.482	1.173
	Off	Left Tilt	0.102	0.747	0.211	0.849	0.313	1.060
	Off	Right Cheek	0.197	0.632	0.093	0.829	0.290	0.922
	Off	Right Tilt	0.107	0.663	0.084	0.770	0.191	0.854
LTE B2	Off	Left Cheek	0.074	0.691	0.265	0.765	0.339	1.030
	Off	Left Tilt	0.078	0.747	0.211	0.825	0.289	1.036
	Off	Right Cheek	0.137	0.632	0.093	0.769	0.230	0.862
	Off	Right Tilt	0.071	0.663	0.084	0.734	0.155	0.818
LTE B4	Off	Left Cheek	0.095	0.691	0.265	0.786	0.360	1.051
	Off	Left Tilt	0.116	0.747	0.211	0.863	0.327	1.074
	Off	Right Cheek	0.153	0.632	0.093	0.785	0.246	0.878

	Off	Right Tilt	0.118	0.663	0.084	0.781	0.202	0.865
LTE B5	Off	Left Cheek	0.223	0.691	0.265	0.914	0.488	1.179
	Off	Left Tilt	0.097	0.747	0.211	0.844	0.308	1.055
	Off	Right Cheek	0.184	0.632	0.093	0.816	0.277	0.909
	Off	Right Tilt	0.088	0.663	0.084	0.751	0.172	0.835
LTE B7	Off	Left Cheek	0.073	0.691	0.265	0.764	0.338	1.029
	Off	Left Tilt	0.099	0.747	0.211	0.846	0.310	1.057
	Off	Right Cheek	0.130	0.632	0.093	0.762	0.223	0.855
	Off	Right Tilt	0.073	0.663	0.084	0.736	0.157	0.820
LTE B41	Off	Left Cheek	0.084	0.691	0.265	0.775	0.349	1.040
	Off	Left Tilt	0.068	0.747	0.211	0.815	0.279	1.026
	Off	Right Cheek	0.132	0.632	0.093	0.764	0.225	0.857
	Off	Right Tilt	0.065	0.663	0.084	0.728	0.149	0.812

Note:

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

2: The highest Combined 1g SAR is 1.205 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR		SUM SAR
			1	2	WWAN+2.4G WIFI
			WWAN	2.4GWIFI	Sum SAR (1+2)
GSM 850	Off	Front Side 15mm	0.175	0.101	0.276
	Off	Back Side 15mm	0.191	0.256	0.447
GSM1900	Off	Front Side 15mm	0.140	0.101	0.241
	Off	Back Side 15mm	0.226	0.256	0.482
WCDMA B2	Off	Front Side 15mm	0.165	0.101	0.266
	Off	Back Side 15mm	0.373	0.256	0.629
WCDMA B4	Off	Front Side 15mm	0.164	0.101	0.265
	Off	Back Side 15mm	0.320	0.256	0.576
WCDMA B5	Off	Front Side 15mm	0.189	0.101	0.290
	Off	Back Side 15mm	0.225	0.256	0.481
LTE B2	Off	Front Side 15mm	0.226	0.101	0.327
	Off	Back Side 15mm	0.385	0.256	0.641
LTE B4	Off	Front Side 15mm	0.151	0.101	0.252
	Off	Back Side 15mm	0.303	0.256	0.559
LTE B5	Off	Front Side 15mm	0.188	0.101	0.289
	Off	Back Side 15mm	0.220	0.256	0.476
LTE B7	Off	Front Side 15mm	0.241	0.101	0.342
	Off	Back Side 15mm	0.228	0.256	0.484
LTE B41	Off	Front Side 15mm	0.128	0.101	0.229
	Off	Back Side 15mm	0.219	0.256	0.475

Note:

- 1: Only the worst simultaneous transmission combinations was shown in this table.
- 2: The highest Combined 1g SAR is 0.641 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)	Sum SAR (1+2+3)
GSM 850	Off	Front Side 15mm	0.175	0.171	0.040	0.346	0.215	0.386
	Off	Back Side 15mm	0.191	0.212	0.056	0.403	0.247	0.459
GSM1900	Off	Front Side 15mm	0.140	0.171	0.040	0.311	0.180	0.351
	Off	Back Side 15mm	0.226	0.212	0.056	0.438	0.282	0.494
WCDMA B2	Off	Front Side 15mm	0.165	0.171	0.040	0.336	0.205	0.376
	Off	Back Side 15mm	0.373	0.212	0.056	0.585	0.429	0.641
WCDMA B4	Off	Front Side 15mm	0.164	0.171	0.040	0.335	0.204	0.375
	Off	Back Side 15mm	0.320	0.212	0.056	0.532	0.376	0.588
WCDMA B5	Off	Front Side 15mm	0.189	0.171	0.040	0.360	0.229	0.400
	Off	Back Side 15mm	0.225	0.212	0.056	0.437	0.281	0.493
LTE B2	Off	Front Side 15mm	0.226	0.171	0.040	0.397	0.266	0.437
	Off	Back Side 15mm	0.385	0.212	0.056	0.597	0.441	0.653
LTE B4	Off	Front Side 15mm	0.151	0.171	0.040	0.322	0.191	0.362
	Off	Back Side 15mm	0.303	0.212	0.056	0.515	0.359	0.571
LTE B5	Off	Front Side 15mm	0.188	0.171	0.040	0.359	0.228	0.399
	Off	Back Side 15mm	0.220	0.212	0.056	0.432	0.276	0.488
LTE B7	Off	Front Side 15mm	0.241	0.171	0.040	0.412	0.281	0.452
	Off	Back Side 15mm	0.228	0.212	0.056	0.440	0.284	0.496
LTE B41	Off	Front Side 15mm	0.128	0.171	0.040	0.299	0.168	0.339

	Off	Back Side 15mm	0.219	0.212	0.056	0.431	0.275	0.487
--	-----	-------------------	-------	-------	-------	-------	-------	-------

Note:

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

2: The highest Combined 1g SAR is 0.653 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR		SUM SAR WWAN+2.4G WIFI
			1	2	Sum SAR (1+2)
			WWAN	2.4GWIFI	
GSM 850	Off	Front Side 10mm	0.329	0.151	0.480
	Off	Back Side 10mm	0.349	0.460	0.809
	Off	Left Edge 10mm	0.105	0.235	0.340
	Off	Right Edge 10mm	0.217	0.000	0.217
	Off	Bottom Edge 10mm	0.370	0.179	0.549
GSM1900	Off	Front Side 10mm	0.213	0.151	0.364
	Off	Back Side 10mm	0.507	0.460	0.967
	Off	Left Edge 10mm	0.096	0.235	0.331
	Off	Right Edge 10mm	0.037	0.000	0.037
	Off	Bottom Edge 10mm	0.545	0.179	0.724
WCDMA B2	Off	Front Side 10mm	0.303	0.151	0.454
	Off	Back Side 10mm	0.773	0.460	1.233
	Off	Left Edge 10mm	0.144	0.235	0.379
	Off	Right Edge 10mm	0.074	0.000	0.074
	Off	Bottom Edge 10mm	0.846	0.179	1.025
WCDMA B4	Off	Front Side 10mm	0.307	0.151	0.458
	Off	Back Side 10mm	0.674	0.460	1.134
	Off	Left Edge 10mm	0.201	0.235	0.436
	Off	Right Edge 10mm	0.142	0.000	0.142
	Off	Bottom Edge 10mm	0.767	0.179	0.946
WCDMA B5	Off	Front Side 10mm	0.275	0.151	0.426
	Off	Back Side 10mm	0.262	0.460	0.722
	Off	Left Edge 10mm	0.136	0.235	0.371
	Off	Right Edge 10mm	0.273	0.000	0.273
	Off	Bottom Edge 10mm	0.283	0.179	0.462
LTE B2	Off	Front Side 10mm	0.263	0.151	0.414
	Off	Back Side 10mm	0.646	0.460	1.106
	Off	Left Edge 10mm	0.132	0.235	0.367
	Off	Right Edge 10mm	0.068	0.000	0.068
	Off	Bottom Edge 10mm	0.598	0.179	0.777
LTE B4	Off	Front Side 10mm	0.292	0.151	0.443

	Off	Back Side 10mm	0.577	0.460	1.037
	Off	Left Edge 10mm	0.180	0.235	0.415
	Off	Right Edge 10mm	0.123	0.000	0.123
	Off	Bottom Edge 10mm	0.674	0.179	0.853
LTE B5	Off	Front Side 10mm	0.336	0.151	0.487
	Off	Back Side 10mm	0.308	0.460	0.768
	Off	Left Edge 10mm	0.129	0.235	0.364
	Off	Right Edge 10mm	0.275	0.000	0.275
	Off	Bottom Edge 10mm	0.341	0.179	0.520
LTE B7	Off	Front Side 10mm	0.383	0.151	0.534
	Off	Back Side 10mm	0.437	0.460	0.897
	Off	Left Edge 10mm	0.302	0.235	0.537
	Off	Right Edge 10mm	0.080	0.000	0.080
	Off	Bottom Edge 10mm	0.248	0.179	0.427
LTE B41	Off	Front Side 10mm	0.246	0.151	0.397
	Off	Back Side 10mm	0.461	0.460	0.921
	Off	Left Edge 10mm	0.257	0.235	0.492
	Off	Right Edge 10mm	0.014	0.000	0.014
	Off	Bottom Edge 10mm	0.177	0.179	0.356

Note:

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

2: The highest Combined 1g SAR is 1.233 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

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

Band	Power Reduction	Position	Stand alone SAR			SUM SAR WWAN+5G WIFI	SUM SAR WWAN+Bluetooth	SUM SAR WWAN+5G+Bluetooth
			1	2	3			
			WWAN	5G WIFI	Bluetooth	Sum SAR (1+2)	Sum SAR (1+3)	Sum SAR (1+2+3)
GSM 850	Off	Front Side 10mm	0.329	0.262	0.107	0.591	0.436	0.698
	Off	Back Side 10mm	0.349	0.410	0.113	0.759	0.462	0.872
	Off	Left Edge 10mm	0.105	0.156	0.047	0.261	0.152	0.308
	Off	Right Edge 10mm	0.217	0.034	0.000	0.251	0.217	0.251
	Off	Bottom Edge 10mm	0.370	0.392	0.034	0.762	0.404	0.796
GSM1900	Off	Front Side 10mm	0.213	0.262	0.107	0.475	0.320	0.582
	Off	Back Side 10mm	0.507	0.410	0.113	0.917	0.620	1.030
	Off	Left Edge 10mm	0.096	0.156	0.047	0.252	0.143	0.299
	Off	Right Edge 10mm	0.037	0.034	0.000	0.071	0.037	0.071
	Off	Bottom Edge 10mm	0.545	0.392	0.034	0.937	0.579	0.971
WCDMA B2	Off	Front Side 10mm	0.303	0.262	0.107	0.565	0.410	0.672
	Off	Back Side 10mm	0.773	0.410	0.113	1.183	0.886	1.296
	Off	Left Edge 10mm	0.144	0.156	0.047	0.300	0.191	0.347
	Off	Right Edge 10mm	0.074	0.034	0.000	0.108	0.074	0.108
	Off	Bottom Edge 10mm	0.846	0.392	0.034	1.238	0.880	1.272
WCDMA B4	Off	Front Side 10mm	0.307	0.262	0.107	0.569	0.414	0.676
	Off	Back Side 10mm	0.674	0.410	0.113	1.084	0.787	1.197
	Off	Left Edge 10mm	0.201	0.156	0.047	0.357	0.248	0.404
	Off	Right Edge 10mm	0.142	0.034	0.000	0.176	0.142	0.176

	Off	Bottom Edge 10mm	0.767	0.392	0.034	1.159	0.801	1.193
WCDMA B5	Off	Front Side 10mm	0.275	0.262	0.107	0.537	0.382	0.644
	Off	Back Side 10mm	0.262	0.410	0.113	0.672	0.375	0.785
	Off	Left Edge 10mm	0.136	0.156	0.047	0.292	0.183	0.339
	Off	Right Edge 10mm	0.273	0.034	0.000	0.307	0.273	0.307
	Off	Bottom Edge 10mm	0.283	0.392	0.034	0.675	0.317	0.709
LTE B2	Off	Front Side 10mm	0.263	0.262	0.107	0.525	0.370	0.632
	Off	Back Side 10mm	0.646	0.410	0.113	1.056	0.759	1.169
	Off	Left Edge 10mm	0.132	0.156	0.047	0.288	0.179	0.335
	Off	Right Edge 10mm	0.068	0.034	0.000	0.102	0.068	0.102
	Off	Bottom Edge 10mm	0.598	0.392	0.034	0.990	0.632	1.024
LTE B4	Off	Front Side 10mm	0.292	0.262	0.107	0.554	0.399	0.661
	Off	Back Side 10mm	0.577	0.410	0.113	0.987	0.690	1.100
	Off	Left Edge 10mm	0.180	0.156	0.047	0.336	0.227	0.383
	Off	Right Edge 10mm	0.123	0.034	0.000	0.157	0.123	0.157
	Off	Bottom Edge 10mm	0.674	0.392	0.034	1.066	0.708	1.100
LTE B5	Off	Front Side 10mm	0.336	0.262	0.107	0.598	0.443	0.705
	Off	Back Side 10mm	0.308	0.410	0.113	0.718	0.421	0.831
	Off	Left Edge 10mm	0.129	0.156	0.047	0.285	0.176	0.332
	Off	Right Edge 10mm	0.275	0.034	0.000	0.309	0.275	0.309
	Off	Bottom Edge 10mm	0.341	0.392	0.034	0.733	0.375	0.767
LTE B7	Off	Front Side 10mm	0.383	0.262	0.107	0.645	0.490	0.752
	Off	Back Side	0.437	0.410	0.113	0.847	0.550	0.960

		10mm						
	Off	Left Edge 10mm	0.302	0.156	0.047	0.458	0.349	0.505
	Off	Right Edge 10mm	0.080	0.034	0.000	0.114	0.080	0.114
	Off	Bottom Edge 10mm	0.248	0.392	0.034	0.640	0.282	0.674
LTE B41	Off	Front Side 10mm	0.246	0.262	0.107	0.508	0.353	0.615
	Off	Back Side 10mm	0.461	0.410	0.113	0.871	0.574	0.984
	Off	Left Edge 10mm	0.257	0.156	0.047	0.413	0.304	0.460
	Off	Right Edge 10mm	0.014	0.034	0.000	0.048	0.014	0.048
	Off	Bottom Edge 10mm	0.177	0.392	0.034	0.569	0.211	0.603

13 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY5	52.8.8.1222	N/A	N/A
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2017/06/26	2020/06/25
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
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2017/06/29	2020/06/28
E-Field Probe	Speag	EX3DV4	SN: 7510	2019/08/02	2020/08/01
Data Acquisition Electronics	Speag	DAE4	SN: 1454	2019/08/02	2020/08/01
Signal Generator	R&S	SMBV100A	260592	2019/06/13	2020/06/12
Power Meter	R&S	NRVD-B2	7250BJ-0112/2011	2019/10/30	2020/10/29
Power Sensor	R&S	NRV-Z4	100381	2019/10/30	2020/10/29
Power Sensor	R&S	NRV-Z2	100211	2019/10/30	2020/10/29
Wireless Communication Test Set	Agilent	8960-E5515C	MY50260493	2019/10/30	2020/10/29
Wireless Communication Test Set	R&S	CMW 500	104946	2019/10/30	2020/10/29
Network Analyzer	R&S	ZVL-6	101380	2019/06/20	2020/06/19
Thermometer	Elitech	RC-4HC	N/A	2019/11/02	2020/11/01
Power Amplifier	SATIMO	6552B	22374	N/A	N/A
Dielectric Probe Kit	SATIMO	SCLMP	SN 25/13 OCPG56	N/A	N/A
Phantom1	Speag	SAM	SN: 1859	N/A	N/A
Phantom2	Speag	SAM	SN: 1857	N/A	N/A
Attenuator	COM-MW	ZA-S1-31	1305003187	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

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

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

ANNEX A SIMULATING LIQUID VERIFICATION RESULT

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

Date	Liquid Type	Fre. (MHz)	Temp. (°C)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ϵ)	Target Conductivity (σ) (S/m)	Target Permittivity (ϵ)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2019.11.18	Head	835	21.3	0.91	41.44	0.90	41.50	1.11	-0.14
2019.11.19	Body	835	21.8	0.98	55.71	0.97	55.20	1.03	0.92
2019.11.20	Body	835	21.3	0.98	55.35	0.97	55.20	1.03	0.27
2019.11.21	Head	1750	21.5	1.37	39.33	1.37	40.08	0.00	-1.87
2019.11.22	Head	1750	21.5	1.39	39.77	1.37	40.08	1.46	-0.77
2019.11.23	Body	1750	21.5	1.50	53.79	1.49	53.43	0.67	0.67
2019.11.24	Body	1750	21.6	1.53	54.05	1.49	53.43	2.68	1.16
2019.11.25	Head	1900	21.7	1.42	39.39	1.40	40.00	1.43	-1.53
2019.11.26	Head	1900	21.5	1.44	38.97	1.40	40.00	2.86	-2.58
2019.11.27	Head	1900	21.8	1.42	38.83	1.40	40.00	1.43	-2.93
2019.11.28	Body	1900	21.2	1.54	53.42	1.52	53.30	1.32	0.23
2019.11.30	Body	1900	21.1	1.55	53.44	1.52	53.30	1.97	0.26
2019.11.39	Body	1900	21.1	1.55	53.78	1.52	53.30	1.97	0.90
2019.12.09	Head	2450	21.8	1.82	38.28	1.80	39.20	1.11	-2.35
2019.12.10	Body	2450	21.0	1.97	52.74	1.95	52.70	1.03	0.08
2019.12.05	Head	2600	21.7	2.02	38.85	1.96	39.01	3.06	-0.41
2019.12.06	Head	2600	21.2	1.99	37.95	1.96	39.01	1.53	-2.72
2019.12.07	Body	2600	21.2	2.20	52.14	2.16	52.51	1.85	-0.70
2019.12.08	Body	2600	21.4	2.20	50.66	2.16	52.51	1.85	-3.52
2019.12.01	Head	5250	21.5	4.75	36.35	4.71	35.93	0.85	1.17
2019.12.03	Body	5250	21.8	5.39	49.03	5.36	48.95	0.56	0.16
2019.12.02	Head	5600	21.7	5.11	35.21	5.07	35.53	0.79	-0.90
2019.12.04	Body	5600	21.6	5.86	48.16	5.77	48.47	1.56	-0.64
2019.12.02	Head	5750	21.7	5.36	34.61	5.22	35.36	2.68	-2.12
2019.12.04	Body	5750	21.6	6.14	47.35	5.94	48.27	3.37	-1.91

Note: The tolerance limit of Conductivity and Permittivity is $\pm 5\%$.

ANNEX B SYSTEM CHECK RESULT

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

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)	Targeted SAR(W/kg)	Tolerance (%)
2019.11.18	Head	835	100	0.937	9.37	9.75	-3.90	9.56	-1.99
2019.11.19	Body	835	100	0.972	9.72	9.53	1.99	9.56	1.67
2019.11.20	Body	835	100	0.978	9.78	9.53	2.62	9.56	2.30
2019.11.21	Head	1750	100	3.820	38.20	36.90	3.52	36.40	4.95
2019.11.22	Head	1750	100	3.720	37.20	36.90	0.81	36.40	2.20
2019.11.23	Body	1750	100	3.710	37.10	36.70	1.09	36.40	1.92
2019.11.24	Body	1750	100	3.680	36.80	36.70	0.27	36.40	1.10
2019.11.25	Head	1900	100	4.030	40.30	39.90	1.00	39.70	1.51
2019.11.26	Head	1900	100	4.110	41.10	39.90	3.01	39.70	3.53
2019.11.27	Head	1900	100	4.090	40.90	39.90	2.51	39.70	3.02
2019.11.28	Body	1900	100	4.030	40.30	39.90	1.00	39.70	1.51
2019.11.30	Body	1900	100	3.910	39.10	39.90	-2.01	39.70	-1.51
2019.11.29	Body	1900	100	4.160	41.60	39.90	4.26	39.70	4.79
2019.12.09	Head	2450	100	5.180	51.80	52.40	-1.15	52.40	-1.15
2019.12.10	Body	2450	100	5.270	52.70	50.50	4.36	52.40	0.57
2019.12.05	Head	2600	100	5.320	53.20	56.40	-5.67	55.30	-3.80
2019.12.06	Head	2600	100	5.430	54.30	56.40	-3.72	55.30	-1.81
2019.12.07	Body	2600	100	5.530	55.30	54.30	1.84	55.30	0.00
2019.12.08	Body	2600	100	5.700	57.00	54.30	4.97	55.30	3.07
2019.12.01	Head	5250	100	7.820	78.20	76.20	2.62	76.50	2.22
2019.12.03	Body	5250	100	7.810	78.10	75.20	3.86	76.50	2.09
2019.12.02	Head	5600	100	8.020	80.20	82.60	-2.91	83.30	-3.72
2019.12.04	Body	5600	100	8.120	81.20	77.90	4.24	83.30	-2.52
2019.12.02	Head	5750	100	8.040	80.40	80.80	-0.50	78.00	3.08
2019.12.04	Body	5750	100	7.840	78.40	75.00	4.53	78.00	0.51

Note: The tolerance limit of System validation $\pm 10\%$.

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

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)	Targeted SAR(W/kg)	Tolerance (%)
2019.11.30	Body	1900	100	2.04	20.40	21.00	-2.86	20.50	-0.49
2019.11.29	Body	1900	100	2.14	21.40	21.00	1.90	20.50	4.39
2019.12.07	Body	2600	100	2.36	23.60	24.40	-3.28	24.60	-4.07
2019.12.03	Body	5250	100	2.14	21.40	21.20	0.94	21.60	-0.93
2019.12.04	Body	5600	100	2.24	22.40	21.90	2.28	23.40	-4.27
Note: The tolerance limit of System validation $\pm 10\%$.									

System Performance Check Data (835MHz Head)

Date: 2019.11.18

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

Medium parameters used (extrapolated): $f = 835$ MHz; $\sigma = 0.912$ S/m; $\epsilon_r = 41.438$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.0 Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 835-Head-100mW/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.927 W/kg

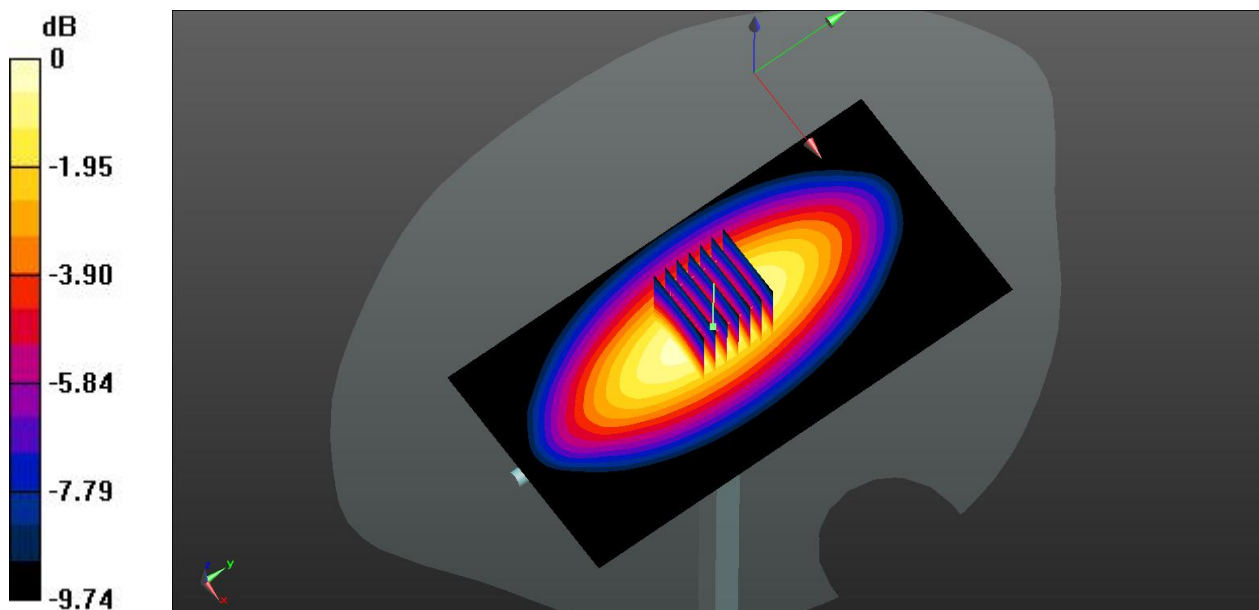
CW 835-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.05 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.937 W/kg; SAR(10 g) = 0.606 W/kg

Maximum value of SAR (measured) = 0.974 W/kg



0 dB = 0.974 W/kg

System Performance Check Data (835MHz Body)

Date: 2019.11.19

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

Medium parameters used: $f = 835$ MHz; $\sigma = 0.982$ S/m; $\epsilon_r = 55.712$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.8

DASY5 Configuration:

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

CW 835-Body-100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.04 W/kg

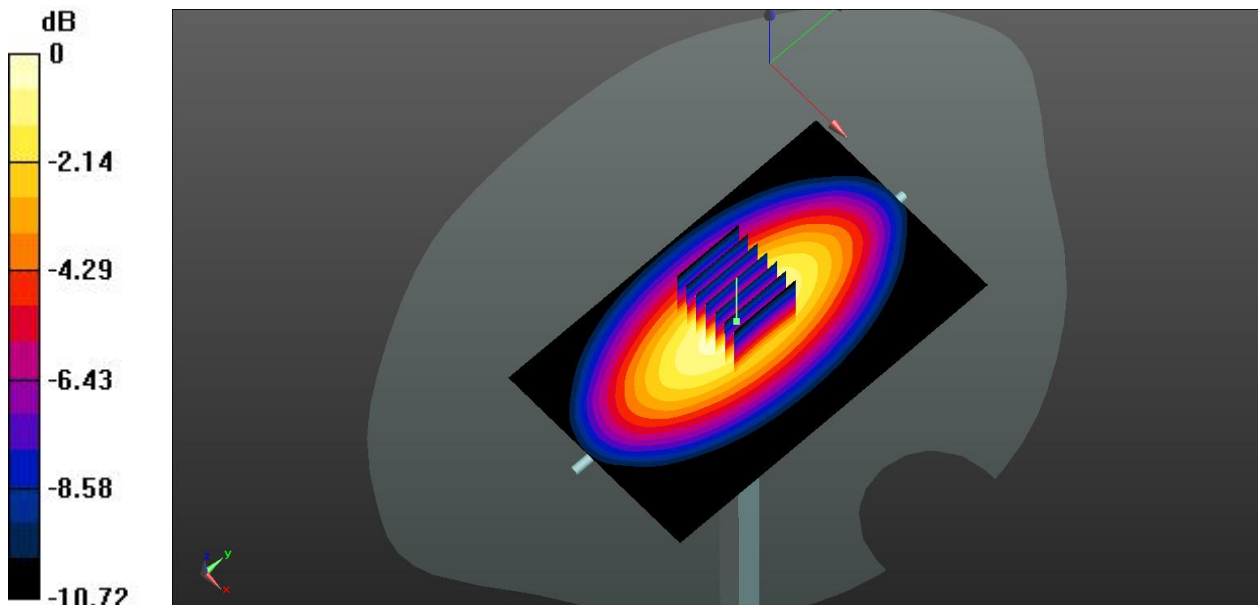
CW 835-Body-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.29 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.972 W/kg; SAR(10 g) = 0.628 W/kg

Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.06 W/kg

System Performance Check Data (835MHz Body)

Date: 2019.11.20

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

Medium parameters used: $f = 835$ MHz; $\sigma = 0.982$ S/m; $\epsilon_r = 55.349$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.2 Liquid Temperature: 21.3

DASY5 Configuration:

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

CW 835-Body-100mW/Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

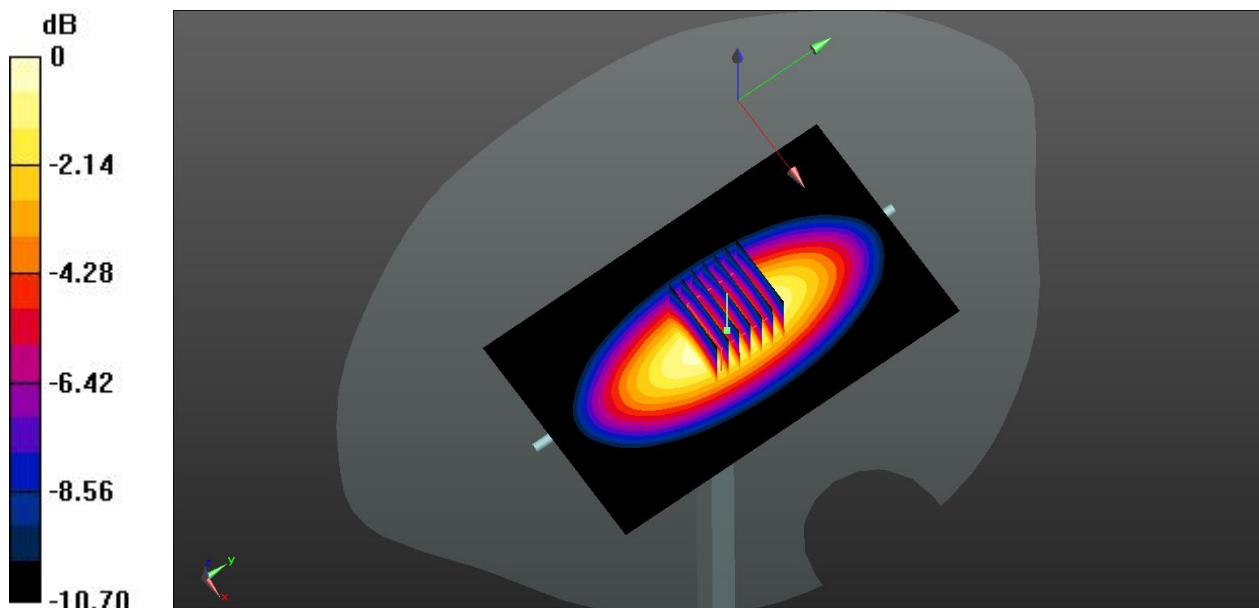
CW 835-Body-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.68 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.978 W/kg; SAR(10 g) = 0.636 W/kg

Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.06 W/kg

System Performance Check Data (1750MHz Head)

Date: 2019.11.21

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 39.33$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.7 Liquid Temperature: 21.5

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 on Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1750-Head-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.07 W/kg

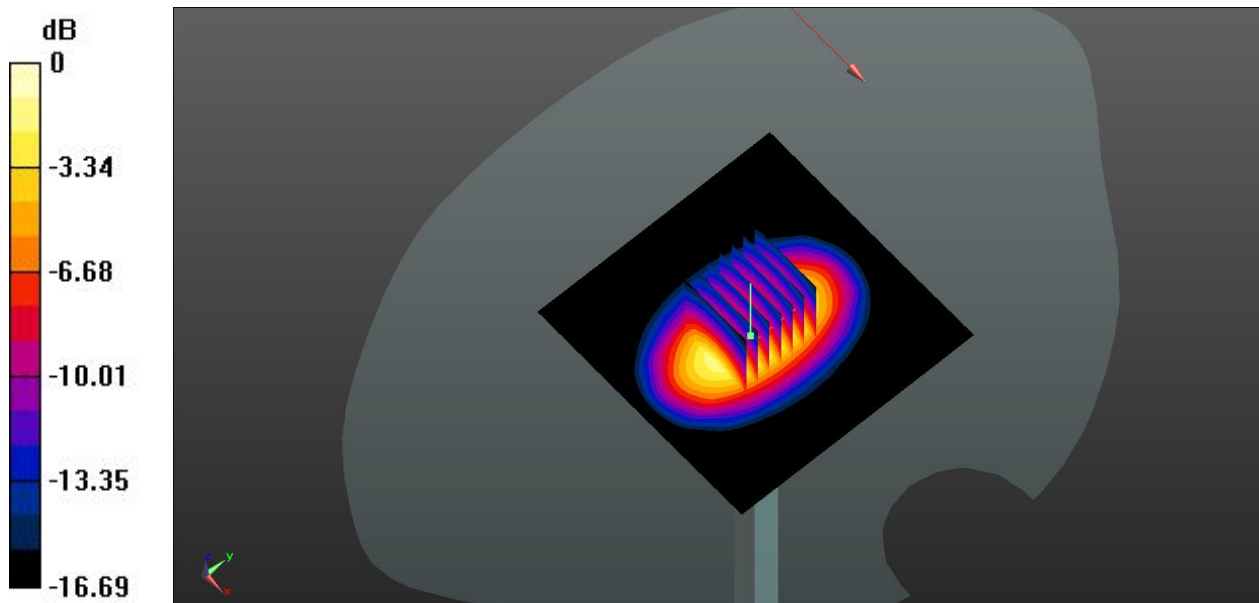
CW 1750-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.57 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 6.68 W/kg

SAR(1 g) = 3.82 W/kg; SAR(10 g) = 2.04 W/kg

Maximum value of SAR (measured) = 4.04 W/kg



0 dB = 4.04 W/kg

System Performance Check Data (1750MHz Head)

Date: 2019.11.22

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.391$ S/m; $\epsilon_r = 39.77$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.5

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 on Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1750-Head-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.16 W/kg

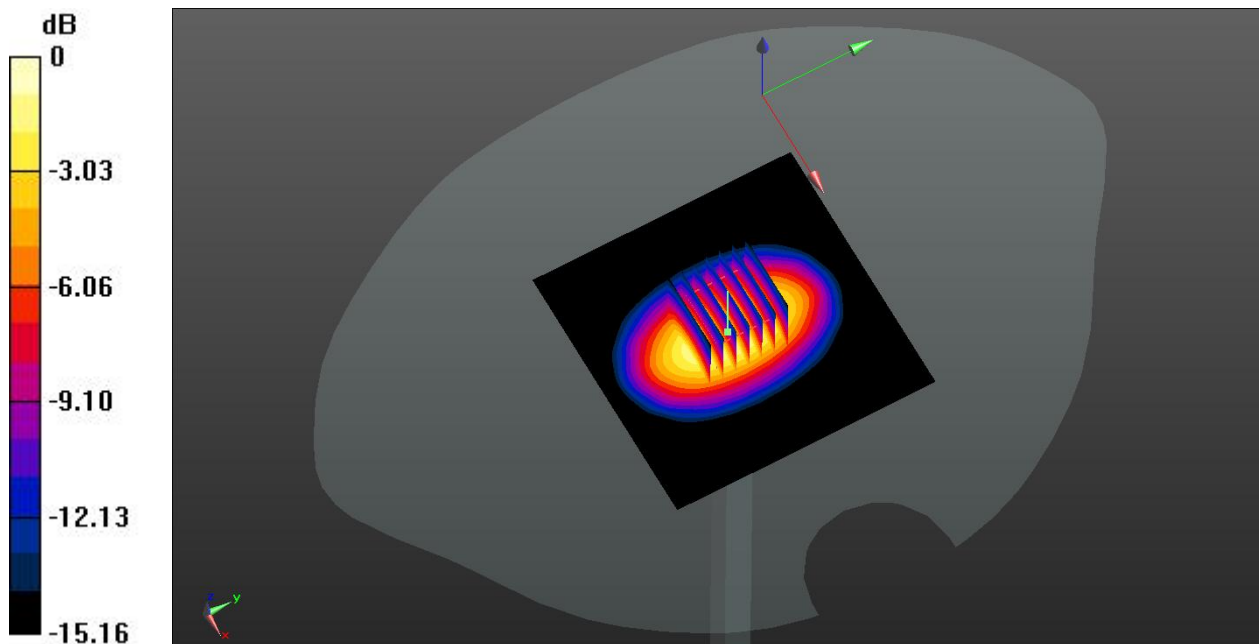
CW 1750-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.84 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 6.49 W/kg

SAR(1 g) = 3.72 W/kg; SAR(10 g) = 2.01 W/kg

Maximum value of SAR (measured) = 4.16 W/kg



0 dB = 4.16 W/kg

System Performance Check Data (1750MHz Body)

Date: 2019.11.23

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.503$ S/m; $\epsilon_r = 53.788$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.31, 8.31, 8.31); 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 1750-Body-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.19 W/kg

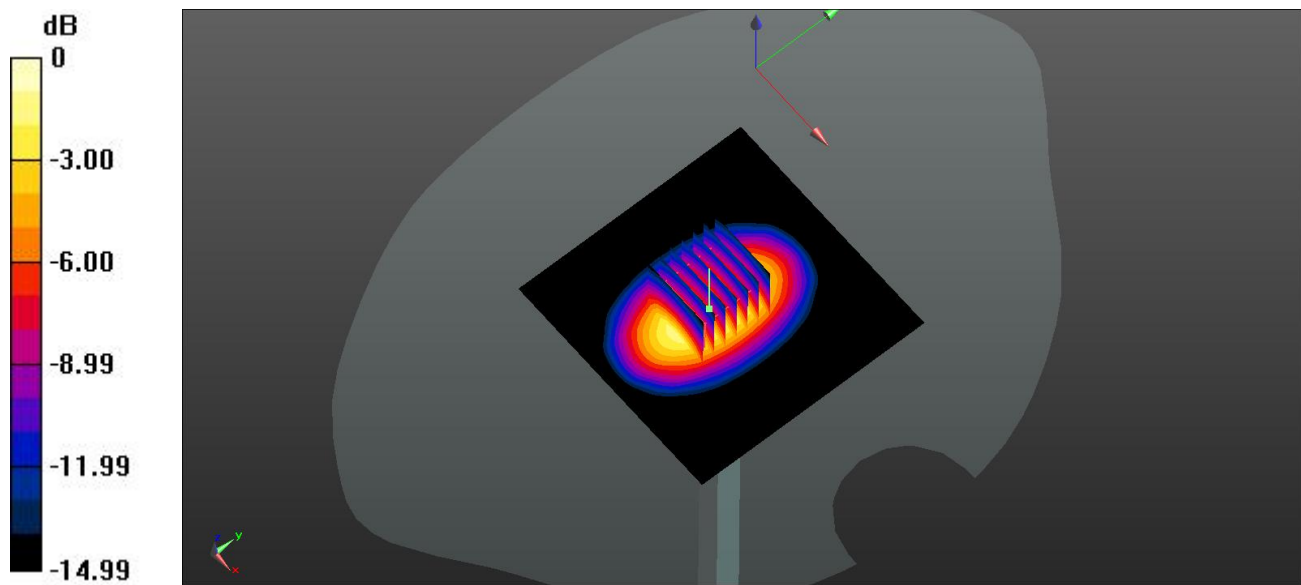
CW 1750-Body-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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) = 1.95 W/kg

Maximum value of SAR (measured) = 4.18 W/kg



0 dB = 4.18 W/kg

System Performance Check Data (1750MHz Body)

Date: 2019.11.24

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.532$ S/m; $\epsilon_r = 54.045$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.31, 8.31, 8.31); 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 1750-Body-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.03 W/kg

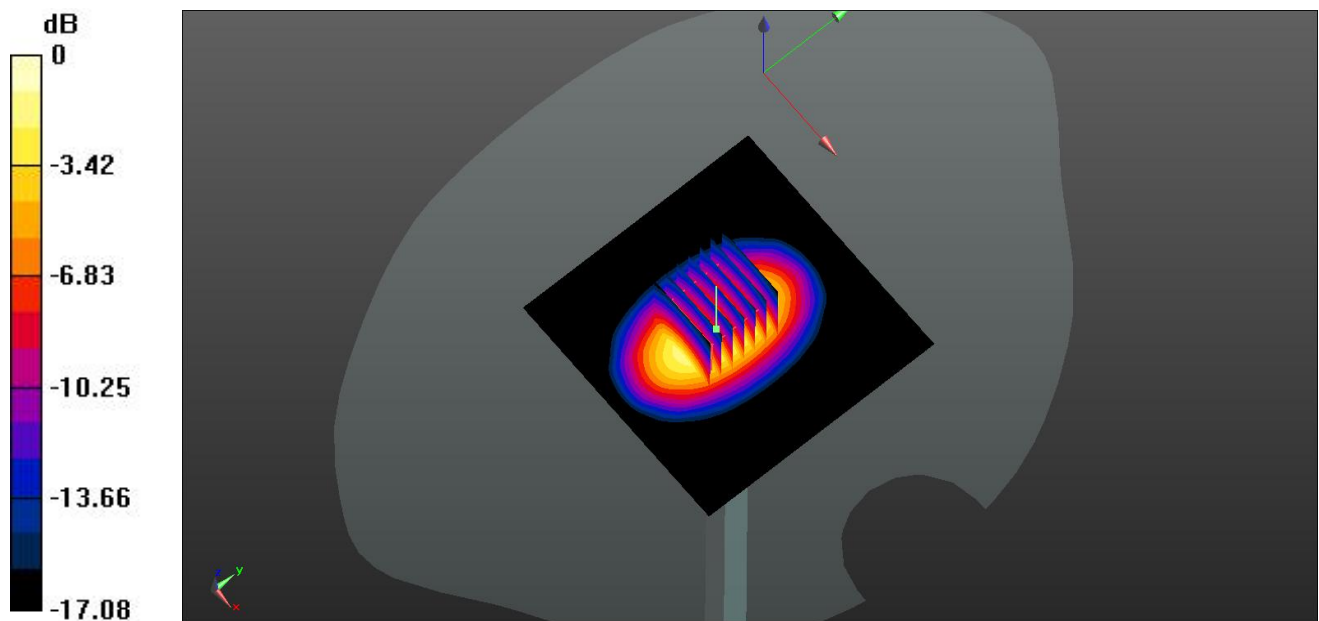
CW 1750-Body-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.02 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 6.73 W/kg

SAR(1 g) = 3.68 W/kg; SAR(10 g) = 1.92 W/kg

Maximum value of SAR (measured) = 4.05 W/kg



0 dB = 4.05 W/kg

System Performance Check Data (1900MHz Head)

Date: 2019.11.25

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.422$ S/m; $\epsilon_r = 39.392$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.3 Liquid Temperature: 21.7

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 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900-Head-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.54 W/kg

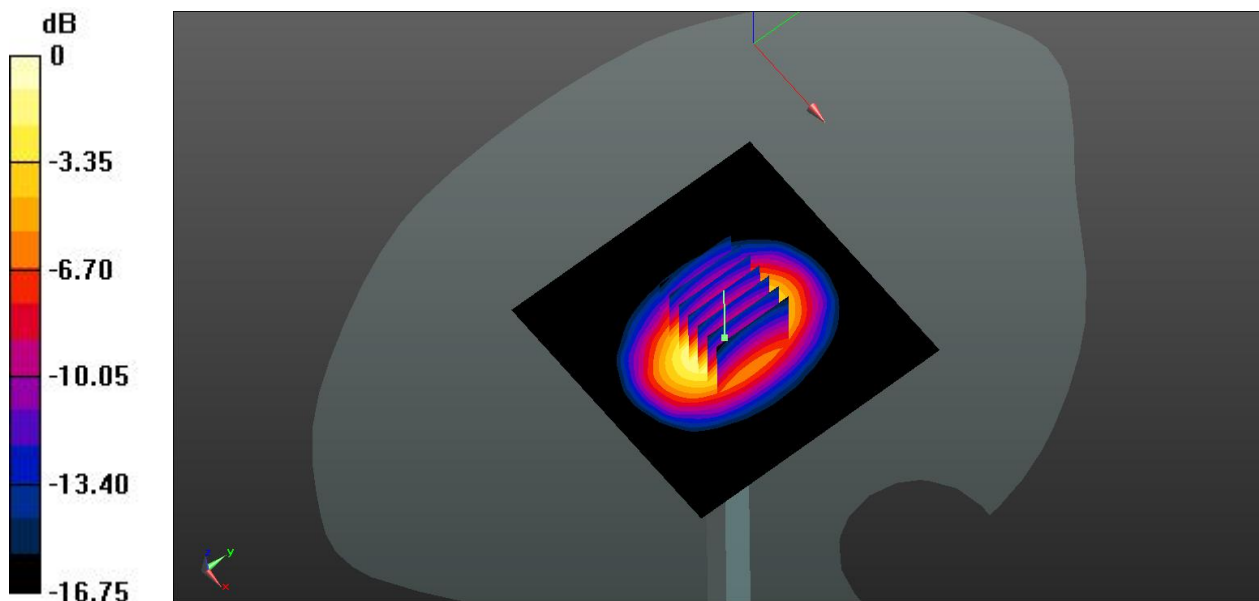
CW 1900-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.77 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 7.85 W/kg

SAR(1 g) = 4.03 W/kg; SAR(10 g) = 2.09 W/kg

Maximum value of SAR (measured) = 4.58 W/kg



0 dB = 4.58 W/kg

System Performance Check Data (1900MHz Head)

Date: 2019.11.26

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.441$ S/m; $\epsilon_r = 38.97$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 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 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900-Head-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.61 W/kg

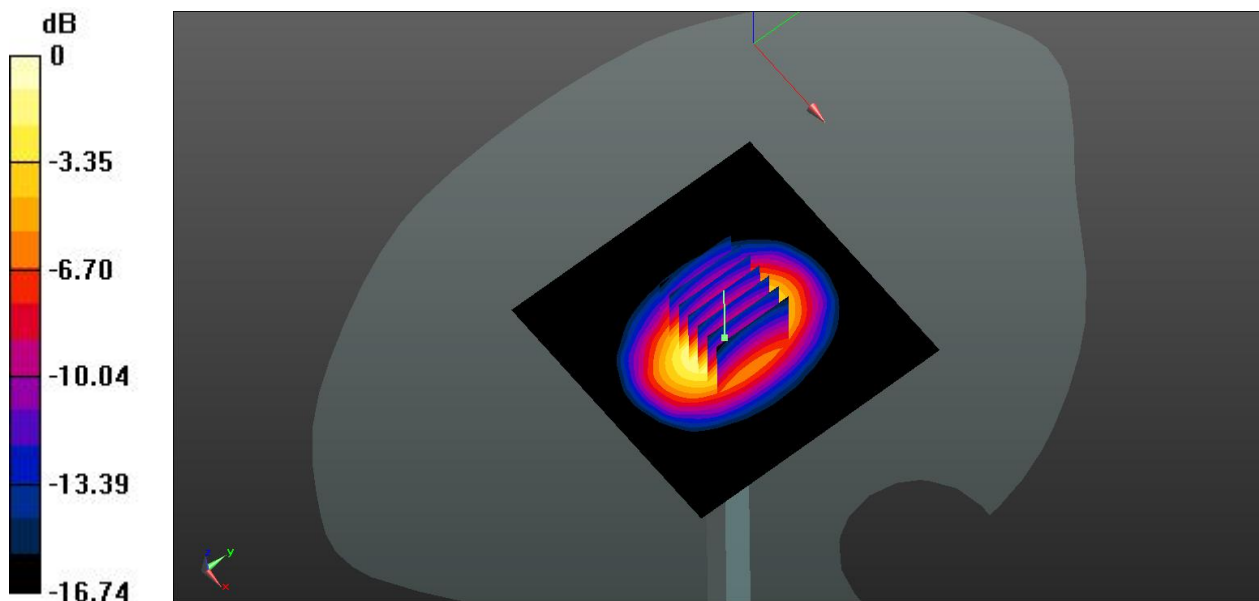
CW 1900-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.20 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 7.52 W/kg

SAR(1 g) = 4.11 W/kg; SAR(10 g) = 2.13 W/kg

Maximum value of SAR (measured) = 4.63 W/kg



0 dB = 4.63 W/kg

System Performance Check Data (1900MHz Head)

Date: 2019.11.27

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.418$ S/m; $\epsilon_r = 38.828$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.8

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 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900-Head-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.65 W/kg

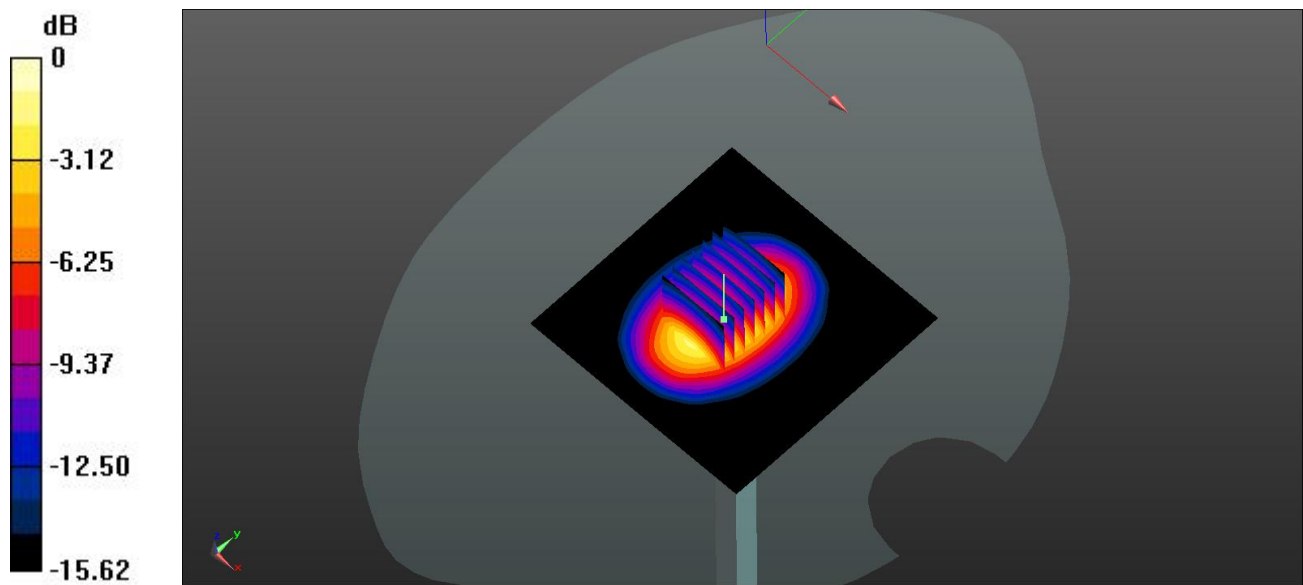
CW 1900-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.52 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 7.36 W/kg

SAR(1 g) = 4.09 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 (1900MHz Body)

Date: 2019.11.28

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.542$ S/m; $\epsilon_r = 53.42$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.3 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900-Body-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.54 W/kg

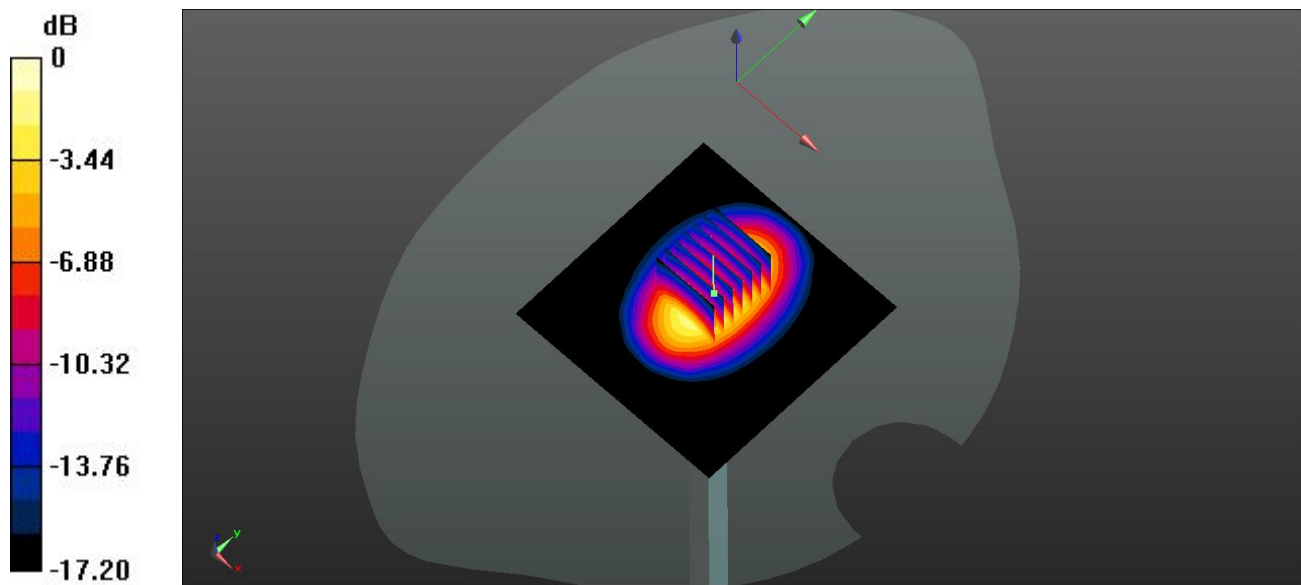
CW 1900-Body-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.10 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 7.51 W/kg

SAR(1 g) = 4.03 W/kg; SAR(10 g) = 2.1 W/kg

Maximum value of SAR (measured) = 4.54 W/kg



0 dB = 4.54 W/kg

System Performance Check Data (1900MHz Body)

Date: 2019.11.30

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.547$ S/m; $\epsilon_r = 53.436$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 1900-Body-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 4.45 W/kg

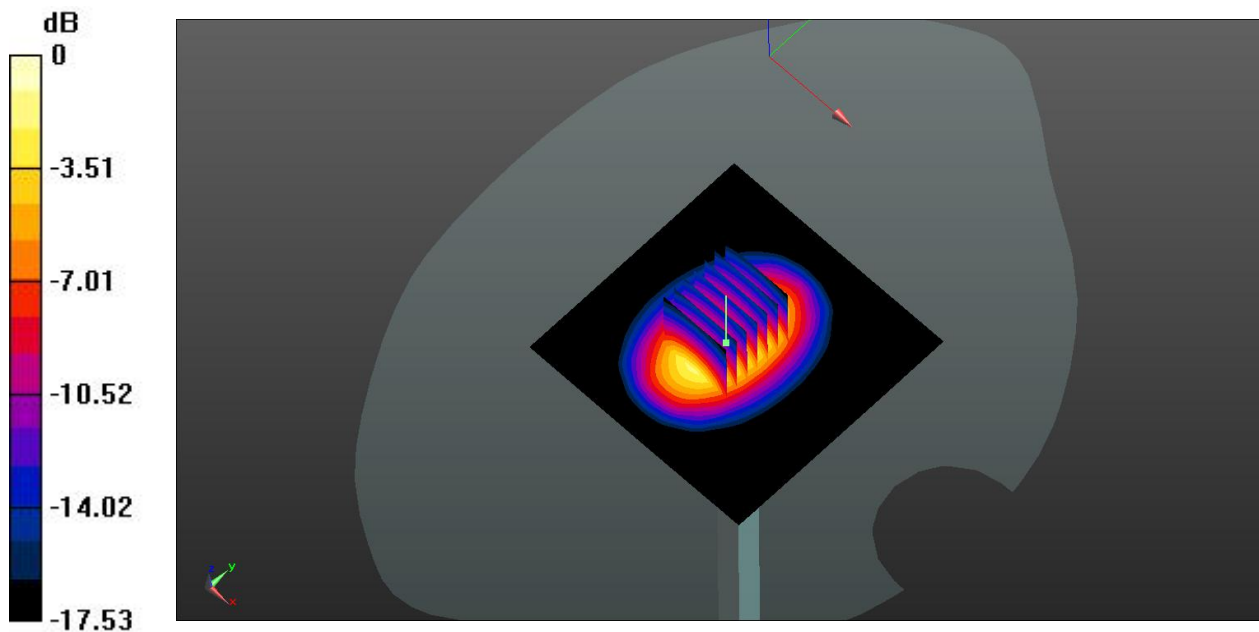
CW 1900-Body-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.57 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 7.26 W/kg

SAR(1 g) = 3.91 W/kg; SAR(10 g) = 2.04 W/kg

Maximum value of SAR (measured) = 4.43 W/kg



0 dB = 4.43 W/kg

System Performance Check Data (2450MHz Head)

Date: 2019.12.09

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.82$ S/m; $\epsilon_r = 38.275$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2450-Head-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 5.86 W/kg

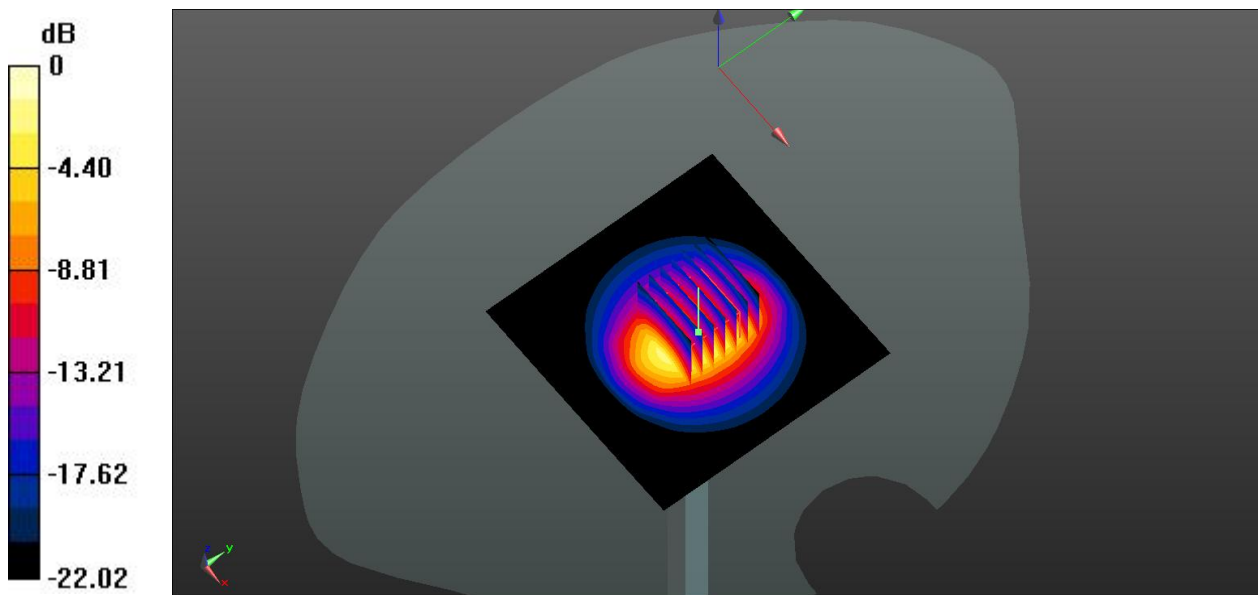
CW 2450-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.32 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 10.22 W/kg

SAR(1 g) = 5.18 W/kg; SAR(10 g) = 2.47 W/kg

Maximum value of SAR (measured) = 5.91 W/kg



0 dB = 5.91 W/kg

System Performance Check Data (2450MHz Body)

Date: 2019.12.10

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.97$ S/m; $\epsilon_r = 52.744$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.0

DASY5 Configuration:

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

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

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

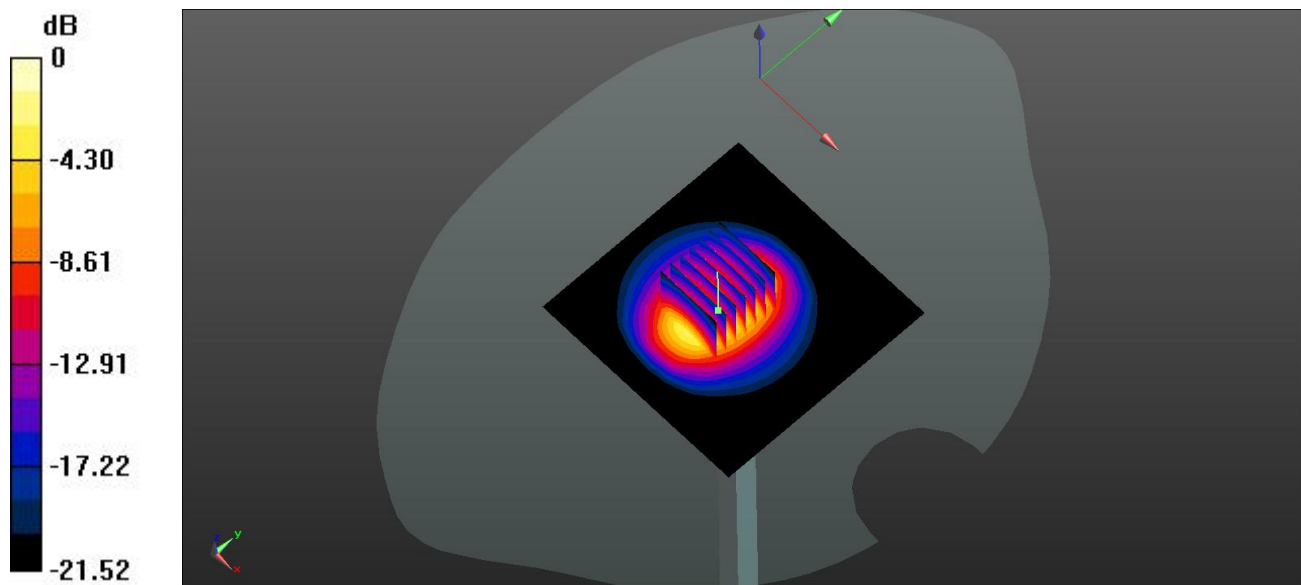
CW 2450-Body-100mW Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.73 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 10.8 W/kg

SAR(1 g) = 5.27 W/kg; SAR(10 g) = 2.43 W/kg

Maximum value of SAR (measured) = 6.10 W/kg



0 dB = 6.10 W/kg

System Performance Check Data (2600MHz Head)

Date: 2019.12.05

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

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.02$ S/m; $\epsilon_r = 38.847$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.3 Liquid Temperature: 21.7

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 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2600-Head-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 6.44 W/kg

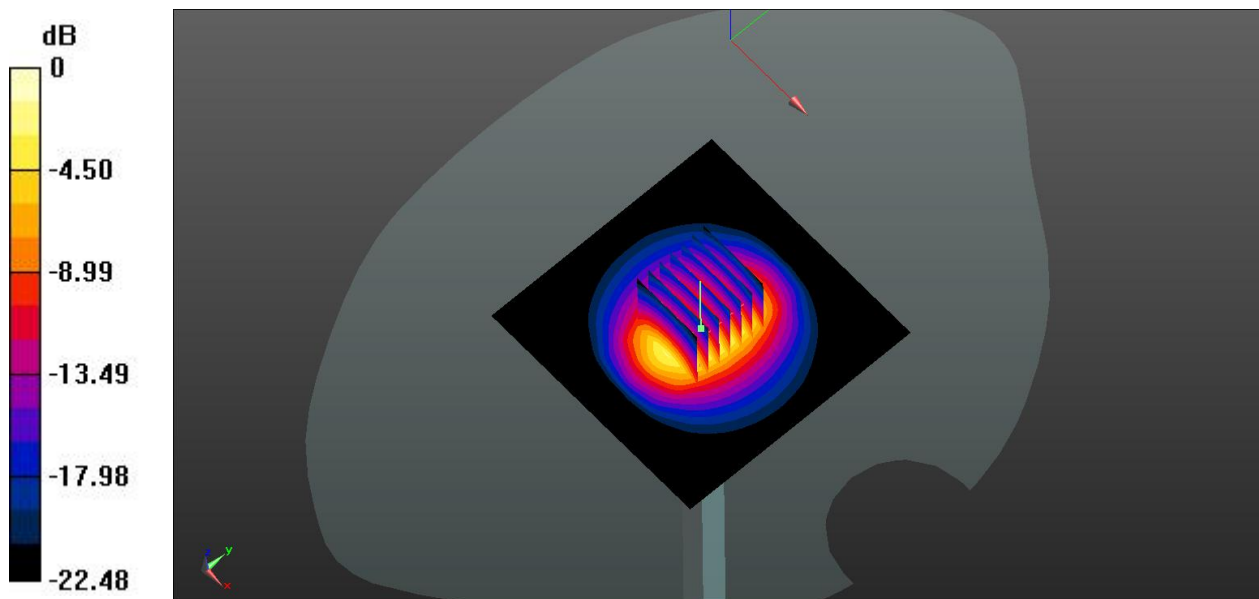
CW 2600-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.63 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 12.2 W/kg

SAR(1 g) = 5.32 W/kg; SAR(10 g) = 2.37 W/kg

Maximum value of SAR (measured) = 6.06 W/kg



0 dB = 6.06 W/kg

System Performance Check Data (2600MHz Head)

Date: 2019.12.06

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

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.992$ S/m; $\epsilon_r = 37.948$; $\rho = 1000$ kg/m³

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 on Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 2600-Head-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 6.45 W/kg

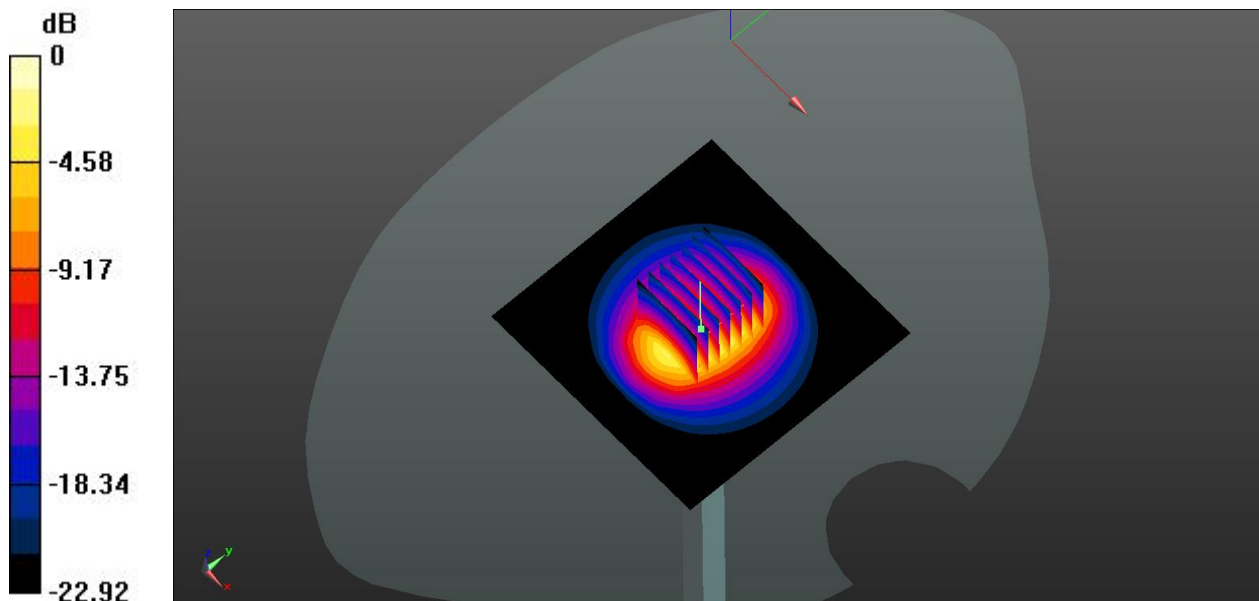
CW 2600-Head-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.65 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 12.7 W/kg

SAR(1 g) = 5.43 W/kg; SAR(10 g) = 2.42 W/kg

Maximum value of SAR (measured) = 6.29 W/kg



0 dB = 6.29 W/kg

System Performance Check Data (2600MHz Body)

Date: 2019.12.07

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

Medium parameters used (interpolated): $f = 2600$ MHz; $\sigma = 2.196$ S/m; $\epsilon_r = 52.138$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.2

DASY5 Configuration:

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

CW 2600-Body-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 6.60 W/kg

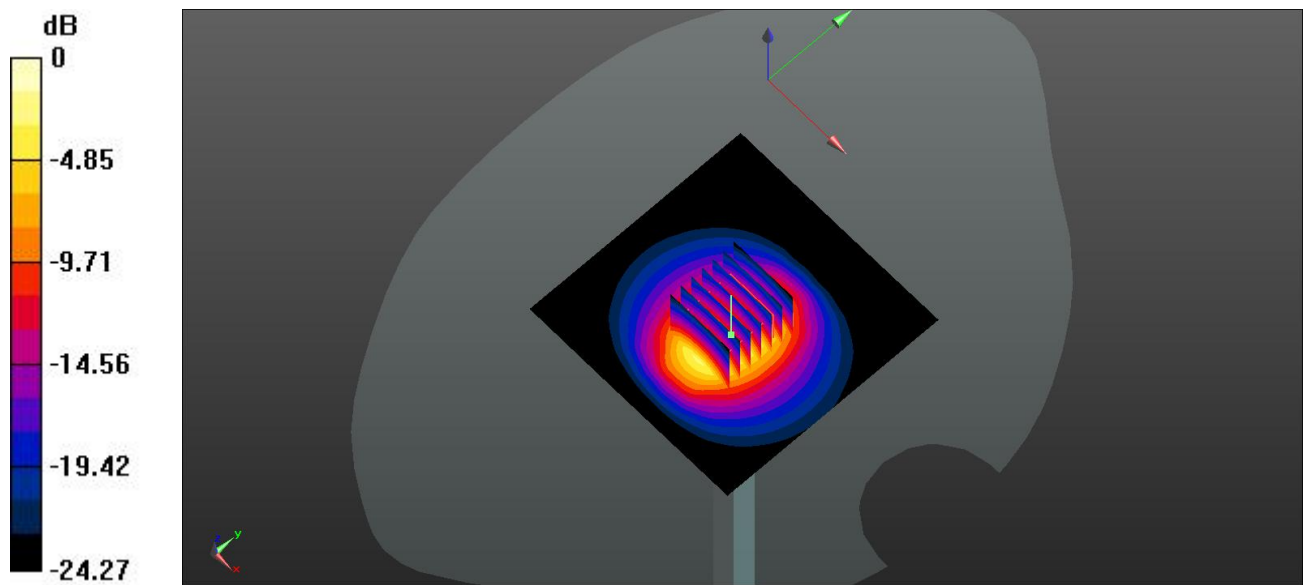
CW 2600-Body-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 45.73 V/m; Power Drift = -0.07 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

System Performance Check Data (2600MHz Body)

Date: 2019.12.08

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

Medium parameters used (interpolated): $f = 2600$ MHz; $\sigma = 2.203$ S/m; $\epsilon_r = 50.656$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.2 Liquid Temperature: 21.4

DASY5 Configuration:

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

CW 2600-Body-100mW/Area Scan (101x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 6.56 W/kg

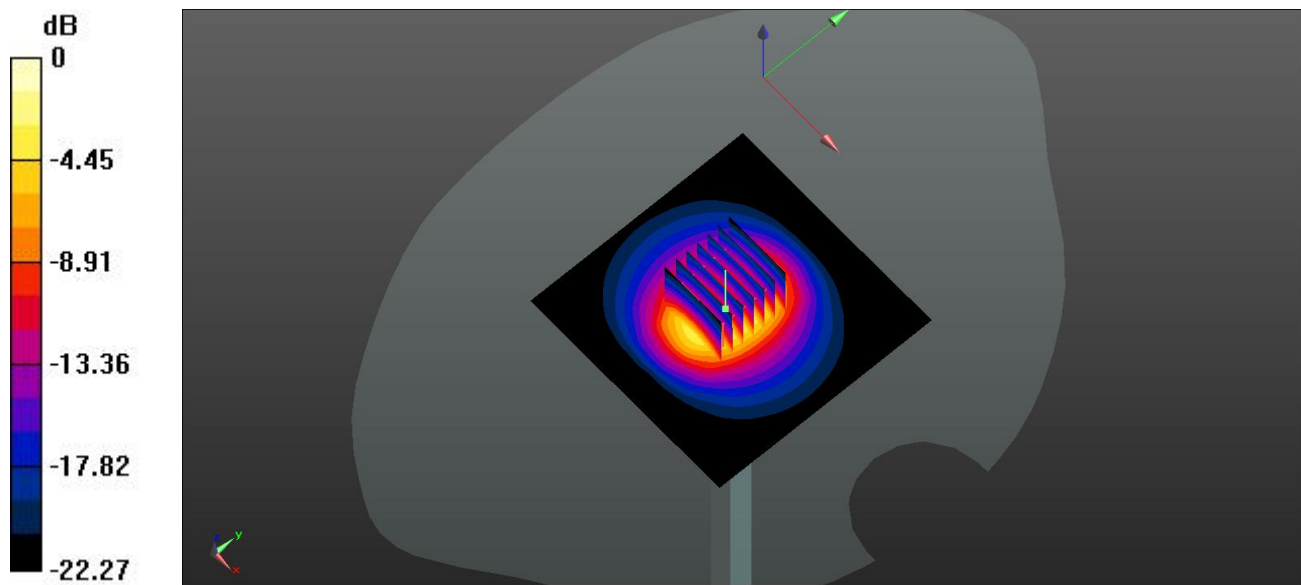
CW 2600-Body-100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 57.58 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 13.2 W/kg

SAR(1 g) = 5.7 W/kg; SAR(10 g) = 2.49 W/kg

Maximum value of SAR (measured) = 6.50 W/kg



0 dB = 6.50 W/kg

System Performance Check Data (5250MHz Head)

Date: 2019.12.01

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.754$ S/m; $\epsilon_r = 36.345$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5250-Head-100mW/Area Scan (81x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 9.16 W/kg

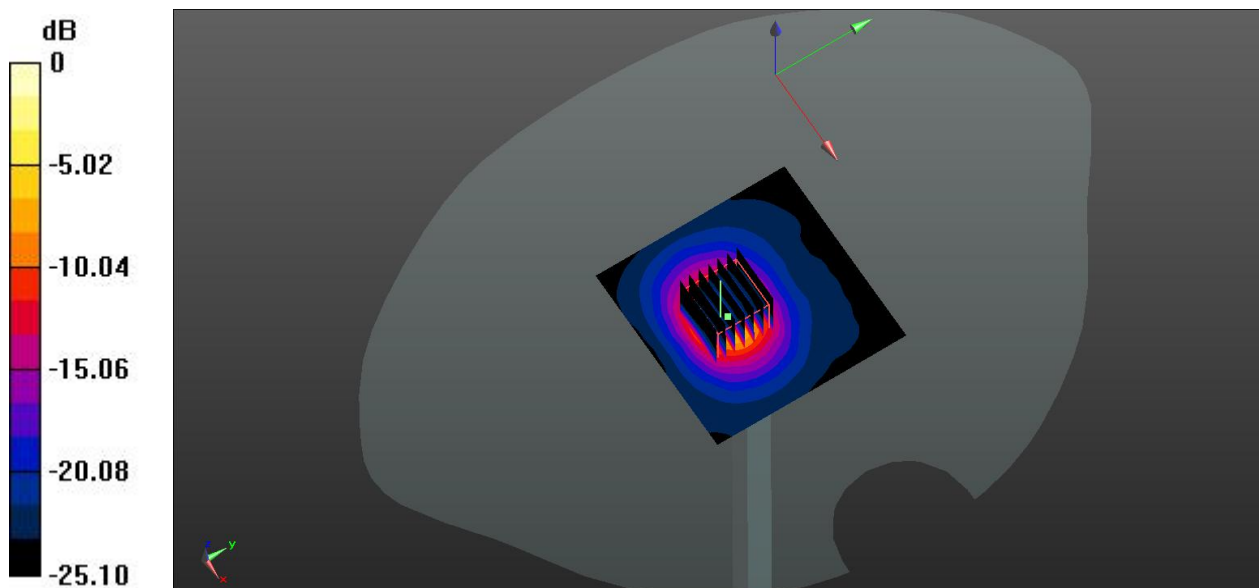
CW 5250-Head-100mW/Zoom Scan (7x7x15)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 34.87 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 33.9 W/kg

SAR(1 g) = 7.82 W/kg; SAR(10 g) = 2.23 W/kg

Maximum value of SAR (measured) = 16.22 W/kg



0 dB = 16.22 W/kg

System Performance Check Data (5250MHz Body)

Date: 2019.12.03

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5250$ MHz; $\sigma = 5.392$ S/m; $\epsilon_r = 49.026$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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 5250-Body-100mW /Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.39 W/kg

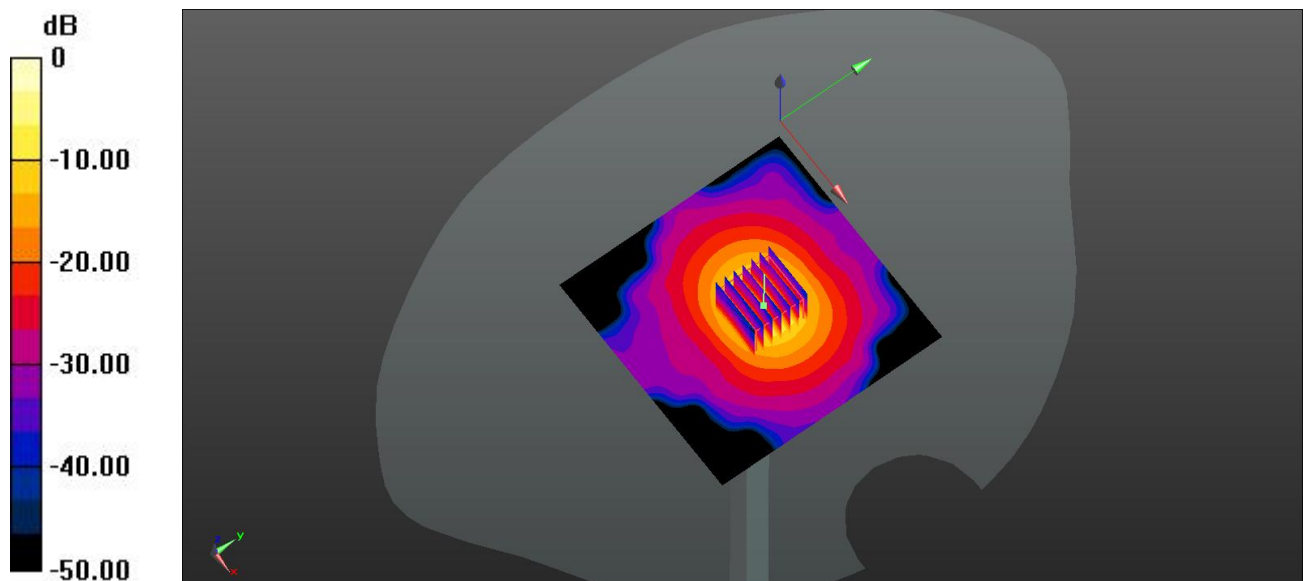
CW 5250-Body-100mW /Zoom Scan (7x7x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 37.06 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 33.2 W/kg

SAR(1 g) = 7.81 W/kg; SAR(10 g) = 2.14 W/kg

Maximum value of SAR (measured) = 19.7 W/kg



0 dB = 19.7 W/kg

System Performance Check Data (5600MHz Head)

Date: 2019.12.02

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.112$ S/m; $\epsilon_r = 35.213$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.7

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5600-Head-100mW/Area Scan (81x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 8.85 W/kg

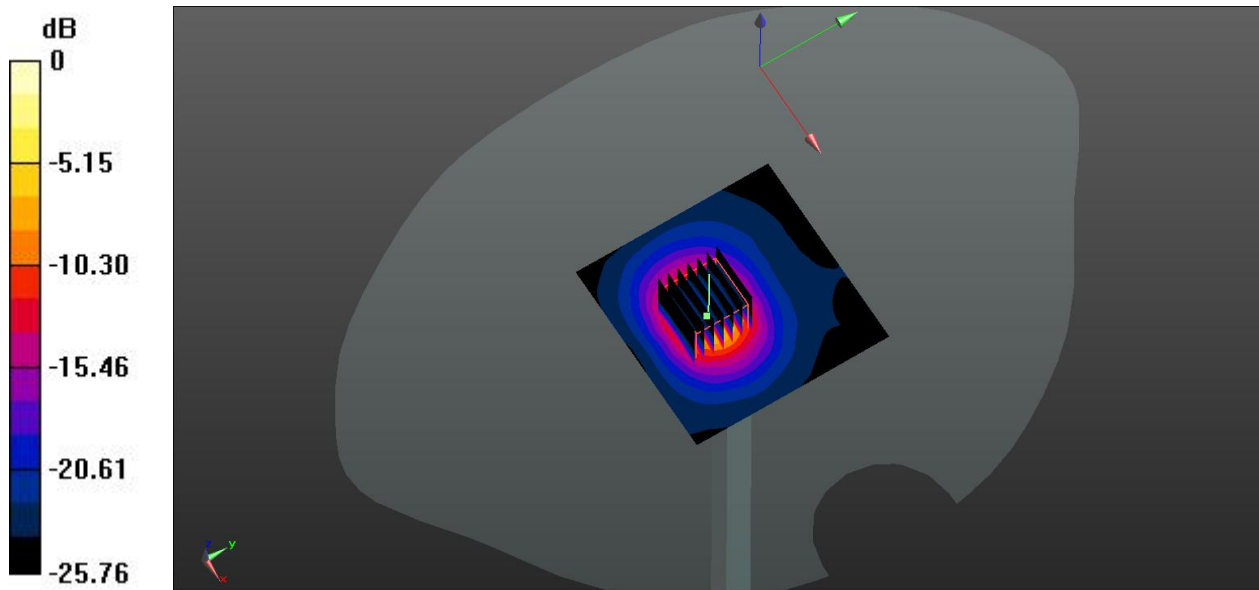
CW 5600-Head-100mW/Zoom Scan (7x7x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 31.58 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 37.88 W/kg

SAR(1 g) = 8.02 W/kg; SAR(10 g) = 2.31 W/kg

Maximum value of SAR (measured) = 16.1 W/kg



0 dB = 16.1 W/kg

System Performance Check Data (5600MHz Body)

Date: 2019.12.04

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.858$ S/m; $\epsilon_r = 48.163$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.36, 4.36, 4.36); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

CW5600-Body-100mw /Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.61 W/kg

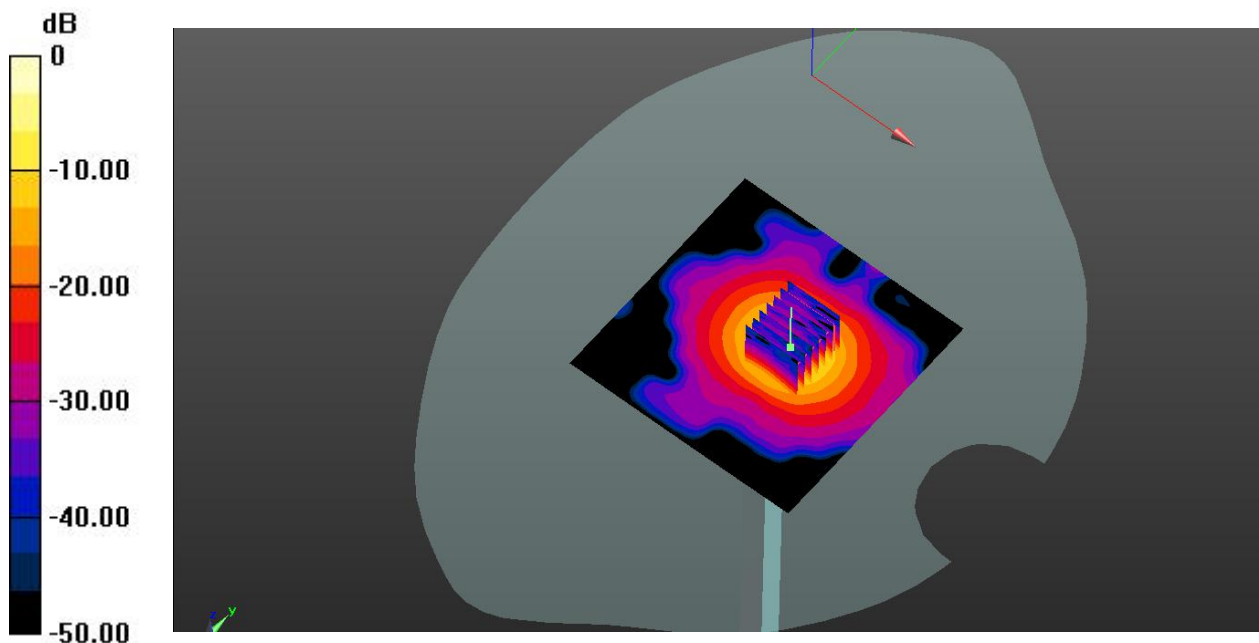
CW5600-Body-100mw /Zoom Scan (7x7x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 28.27 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 38.4 W/kg

SAR(1 g) = 8.12 W/kg; SAR(10 g) = 2.24 W/kg

Maximum value of SAR (measured) = 20.7 W/kg



0 dB = 20.7 W/kg

System Performance Check Data (5750MHz Head)

Date: 2019.12.02

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.358$ S/m; $\epsilon_r = 34.607$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.7

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.06, 5.06, 5.06); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CW 5750-Head-100mW/Area Scan (81x101x1): Interpolated grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 8.96 W/kg

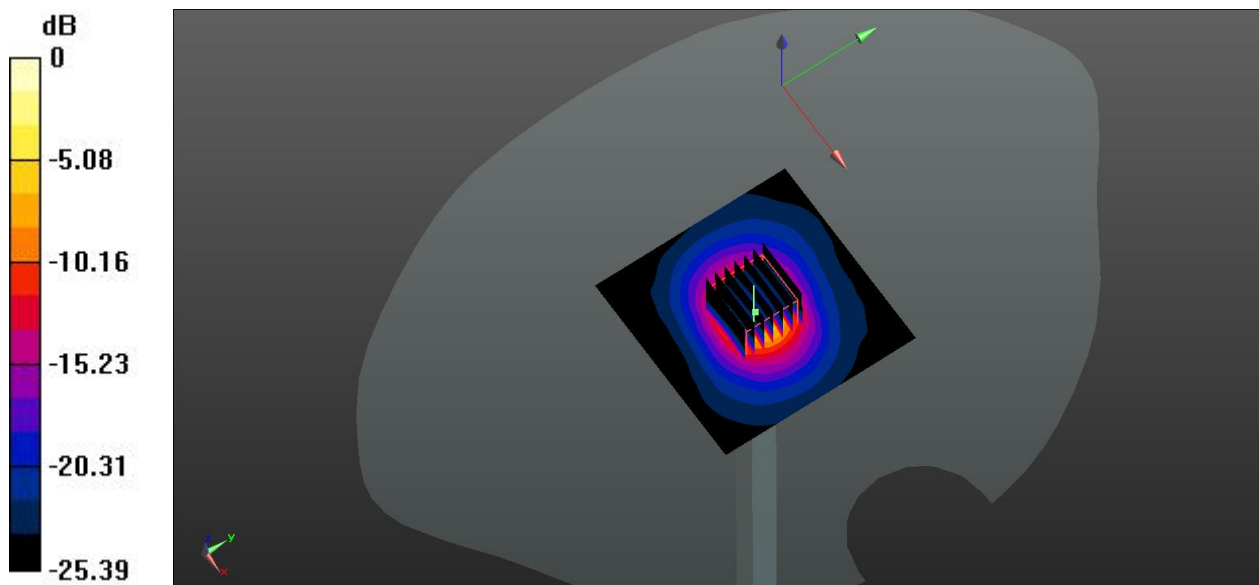
CW 5750-Head-100mW/Zoom Scan (7x7x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 37.42 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 40.3 W/kg

SAR(1 g) = 8.04 W/kg; SAR(10 g) = 2.26 W/kg

Maximum value of SAR (measured) = 17.4 W/kg



0 dB = 17.4 W/kg

System Performance Check Data (5750MHz Body)

Date: 2019.12.04

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5750$ MHz; $\sigma = 6.144$ S/m; $\epsilon_r = 47.349$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.51, 4.51, 4.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

CW5750-Body-100mw/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 8.09 W/kg

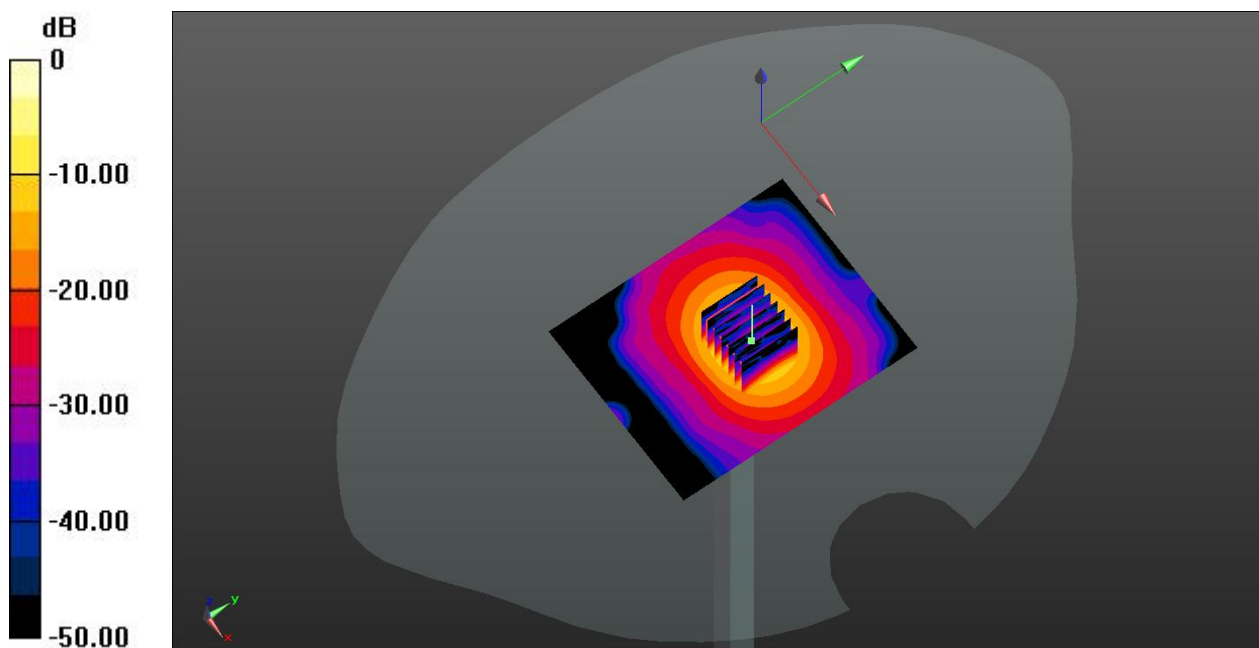
CW5750-Body-100mw/Zoom Scan (7x7x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 27.34 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 38.1 W/kg

SAR(1 g) = 7.84 W/kg; SAR(10 g) = 2.18 W/kg

Maximum value of SAR (measured) = 16.3 W/kg



0 dB = 16.3 W/kg

ANNEX C TEST DATA

MEAS.1 Right Head with Cheek on High Channel in GPRS850 2Slots mode with Up Antenna

Date: 2019.11.18

Communication System Band: GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.15

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.926$ S/m; $\epsilon_r = 40.674$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.0 Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 251/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.638 W/kg

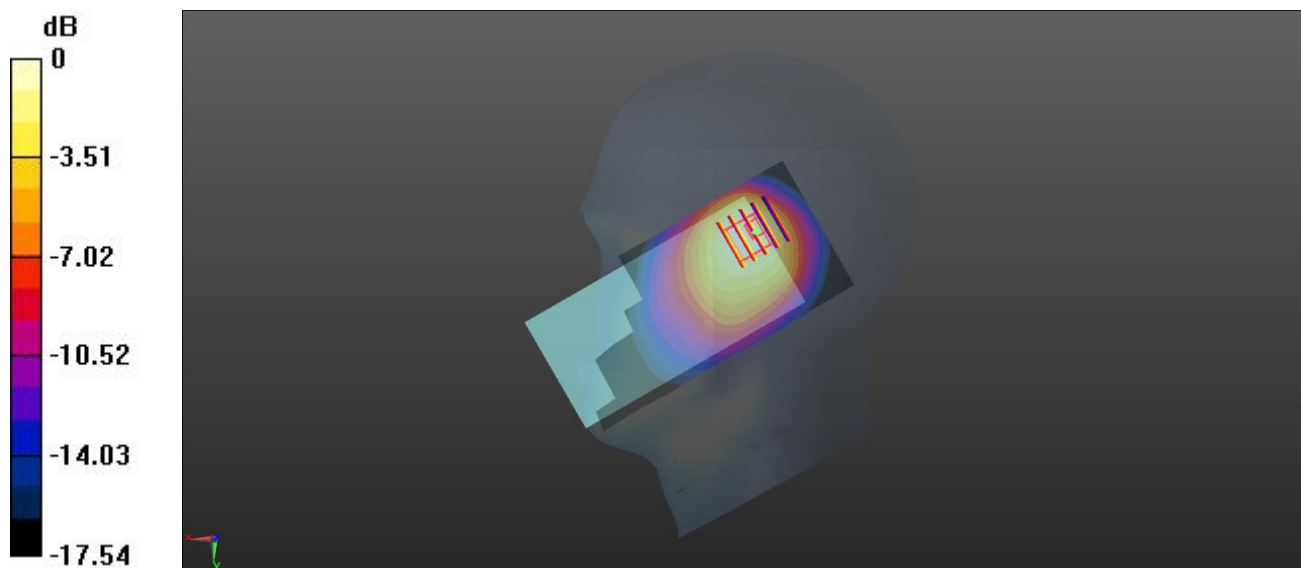
Ch 251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.07 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.515 W/kg; SAR(10 g) = 0.311 W/kg

Maximum value of SAR (measured) = 0.535 W/kg



0 dB = 0.535 W/kg

MEAS.2 Body Plane with Back Side 15mm on High Channel in GPRS850 2Slots mode with Down Antenna

Date: 2019.11.19

Communication System Band: GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.15

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.997$ S/m; $\epsilon_r = 55.138$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.8

DASY5 Configuration:

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

Ch 251/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.179 W/kg

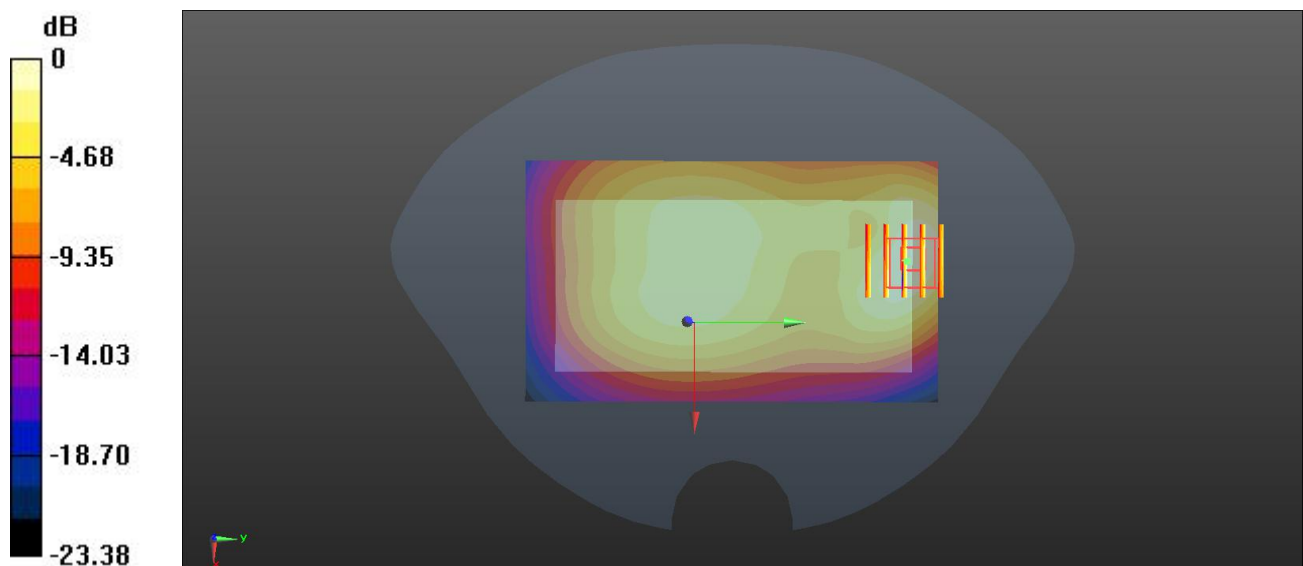
Ch 251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.44 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.193 W/kg

SAR(1 g) = 0.172 W/kg; SAR(10 g) = 0.133 W/kg

Maximum value of SAR (measured) = 0.175 W/kg



0 dB = 0.175 W/kg

MEAS.3 Body Plane with Bottom Edge 10mm on High Channel in GPRS850 2Slots mode with Down Antenna

Date: 2019.11.19

Communication System Band: GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.15

Medium parameters used (interpolated): $f = 848.8$ MHz; $\sigma = 0.997$ S/m; $\epsilon_r = 55.138$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.8

DASY5 Configuration:

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

Ch 251/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.384 W/kg

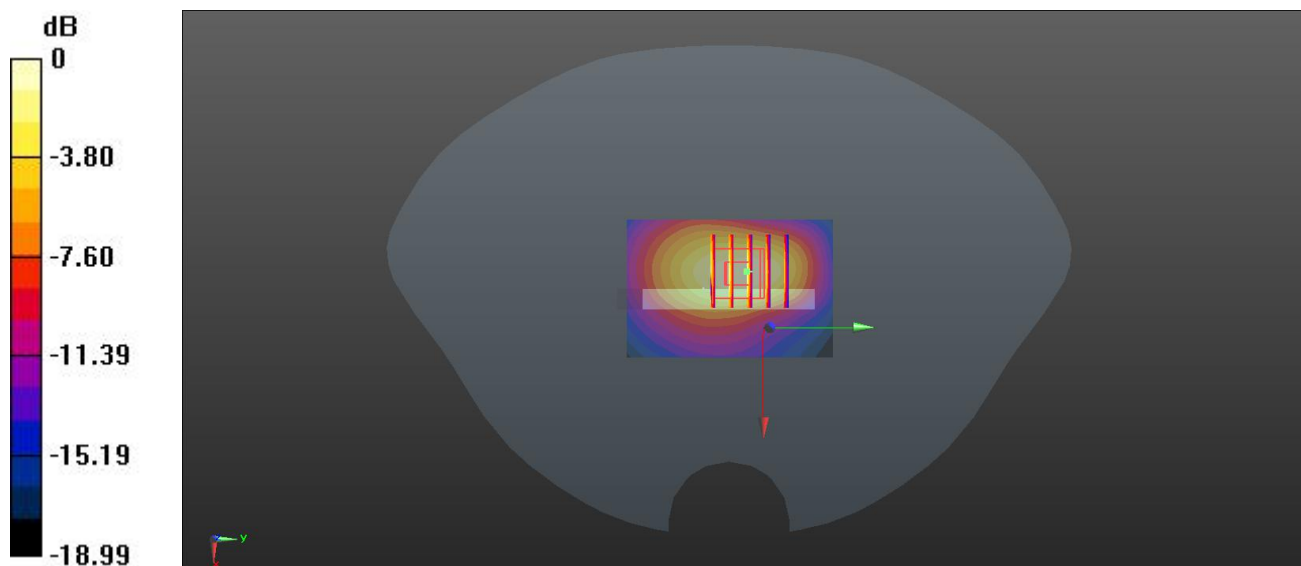
Ch 251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.34 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.636 W/kg

SAR(1 g) = 0.333 W/kg; SAR(10 g) = 0.184 W/kg

Maximum value of SAR (measured) = 0.376 W/kg



0 dB = 0.376 W/kg

MEAS.4 Right Head with Tilt on High Channel in GPRS1900 3Slots mode with Up Antenna

Date: 2019.11.25

Communication System Band: GPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2.77

Medium parameters used: $f = 1909.8$ MHz; $\sigma = 1.433$ S/m; $\epsilon_r = 39.013$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.3 Liquid Temperature: 21.7

DASY5 Configuration:

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

Ch 810/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.01 W/kg

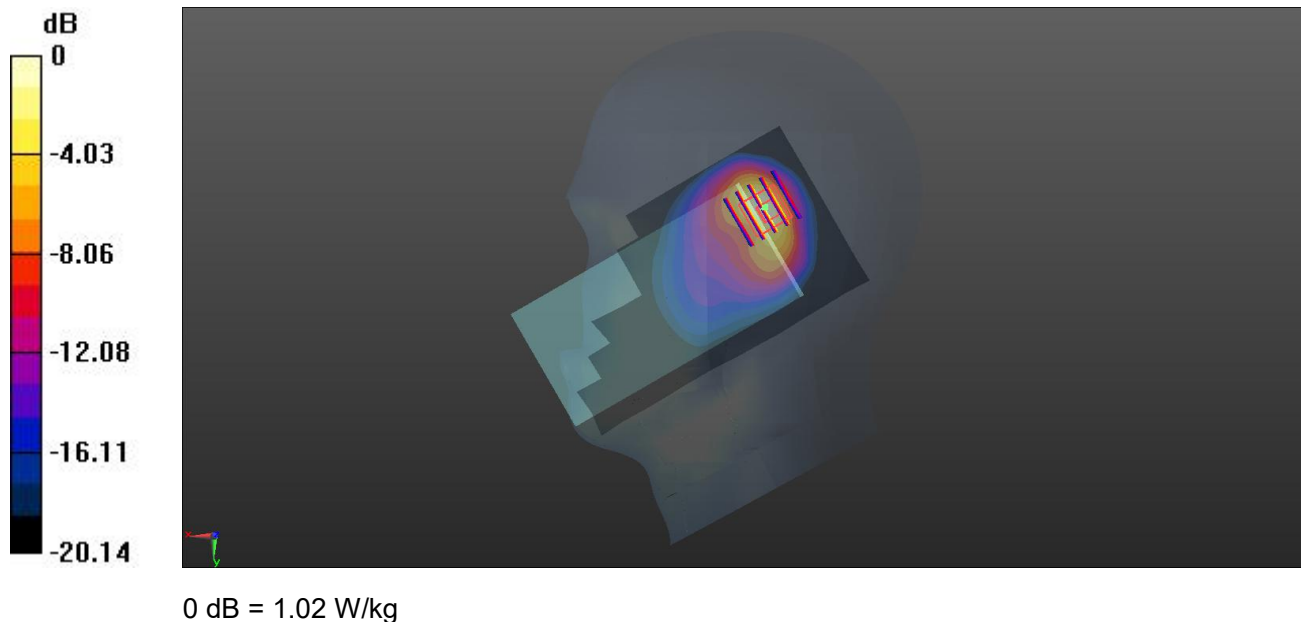
Ch 810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.01 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 0.865 W/kg; SAR(10 g) = 0.384 W/kg

Maximum value of SAR (measured) = 1.02 W/kg



MEAS.5 Body Plane with Back Side 15mm on High Channel in GPRS1900 3Slots mode with Up Antenna

Date: 2019.11.28

Communication System Band: GPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:2.77

Medium parameters used: $f = 1909.8$ MHz; $\sigma = 1.553$ S/m; $\epsilon_r = 52.748$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.3 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch810/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.345 W/kg

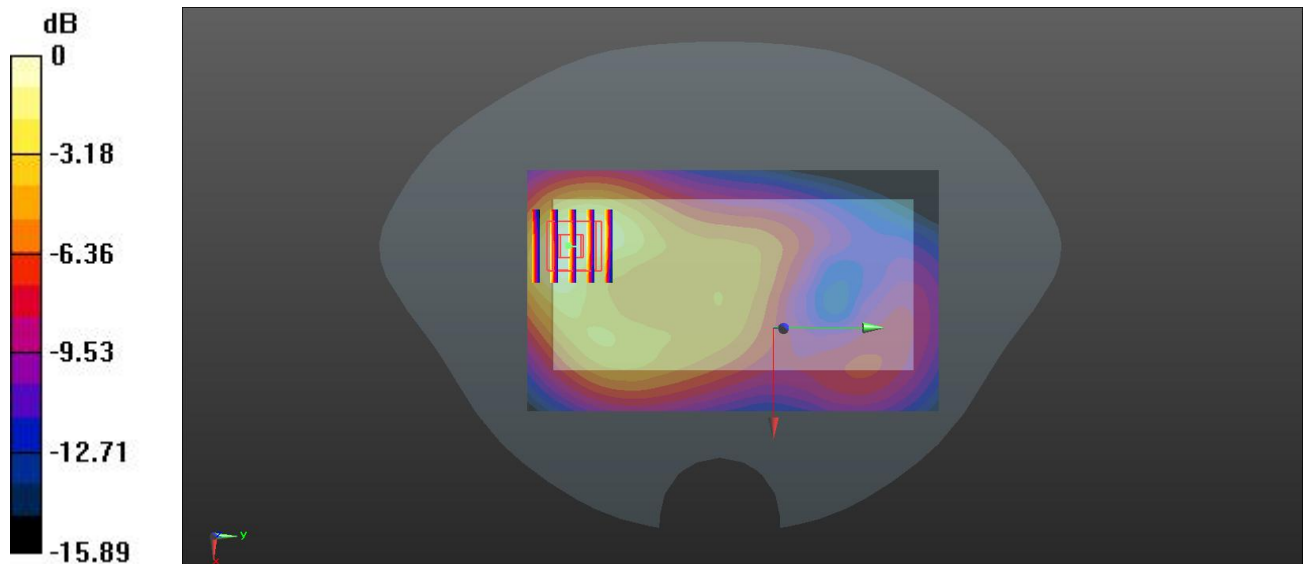
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.662 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.496 W/kg

SAR(1 g) = 0.309 W/kg; SAR(10 g) = 0.181 W/kg

Maximum value of SAR (measured) = 0.340 W/kg



0 dB = 0.340 W/kg

MEAS.6 Body Plane with Top Edge 10mm on Middle Channel in GPRS1900 3Slots mode with Up Antenna

Date: 2019.11.28

Communication System Band: GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.77

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 53.907$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.3 Liquid Temperature: 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch661/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.02 W/kg

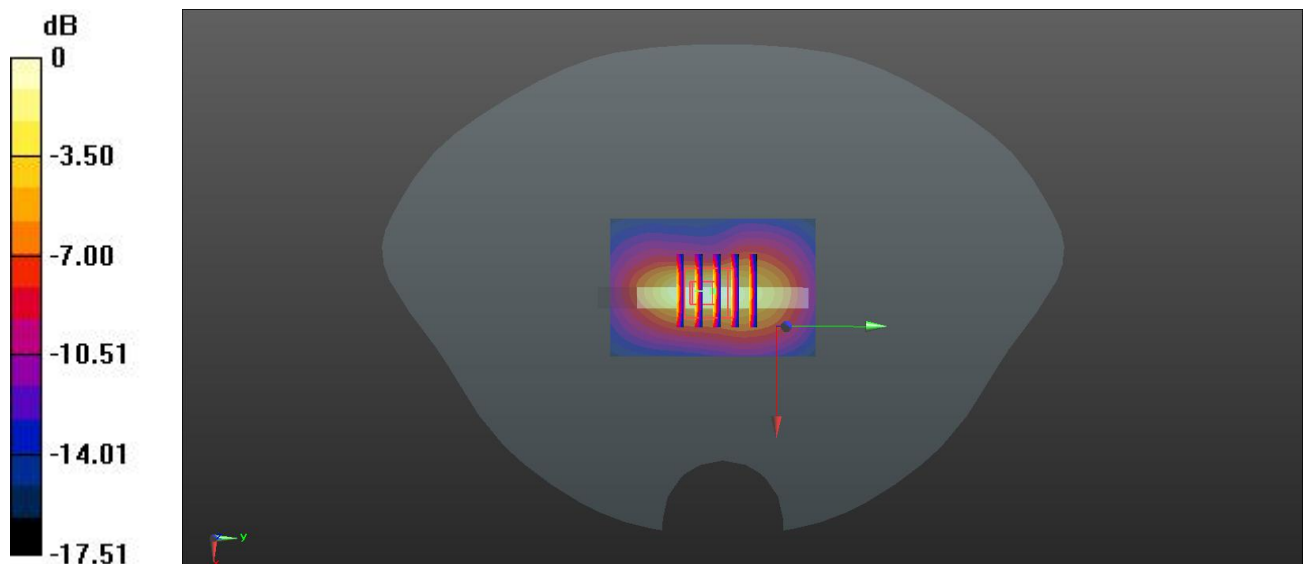
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.14 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.910 W/kg; SAR(10 g) = 0.446 W/kg

Maximum value of SAR (measured) = 1.04 W/kg



0 dB = 1.04 W/kg

MEAS.7 Right Head with Tilt on High Channel in WCDMA Band 2 mode with Up Antenna

Date: 2019.11.25

Communication System Band: II; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1907.6$ MHz; $\sigma = 1.429$ S/m; $\epsilon_r = 39.206$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.3 Liquid Temperature: 21.7

DASY5 Configuration:

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

Ch 9538/Area Scan (71x131x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.12 W/kg

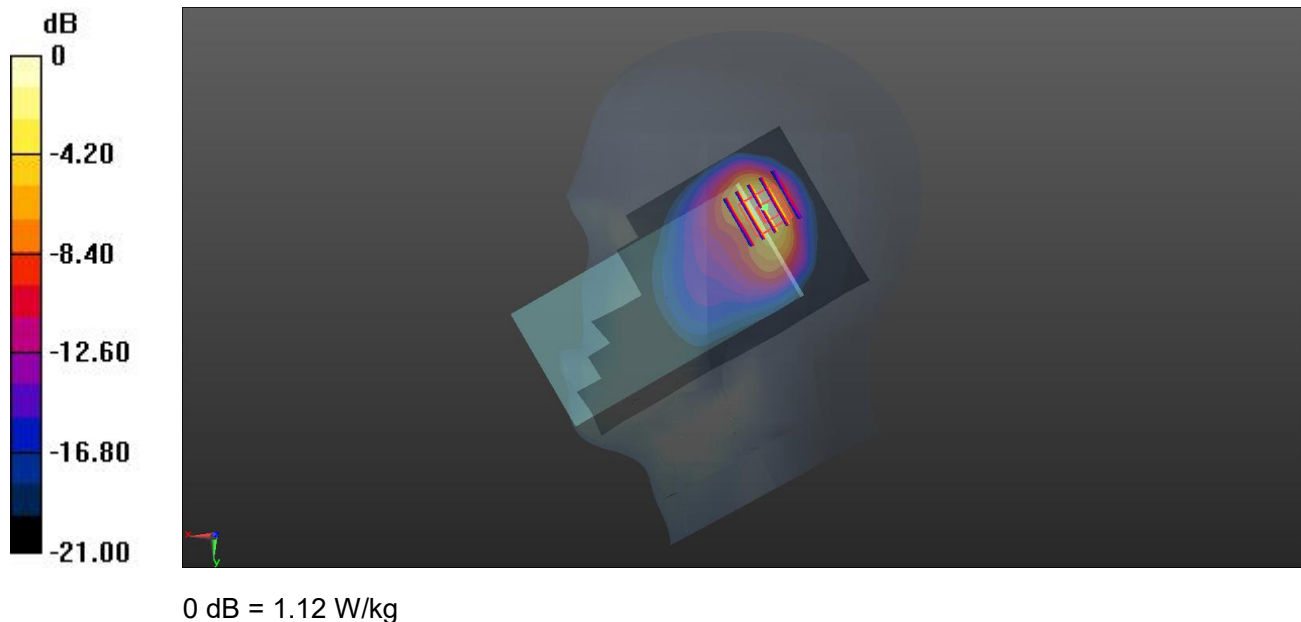
Ch 9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 20.03 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.21 W/kg

SAR(1 g) = 0.951 W/kg; SAR(10 g) = 0.413 W/kg

Maximum value of SAR (measured) = 1.12 W/kg



MEAS.8 Body Plane with Back Side 15mm on Low Channel in WCDMA Band 2 mode with Down Antenna

Date: 2019.11.30

Communication System Band: II; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.529$ S/m; $\epsilon_r = 54.188$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9262/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

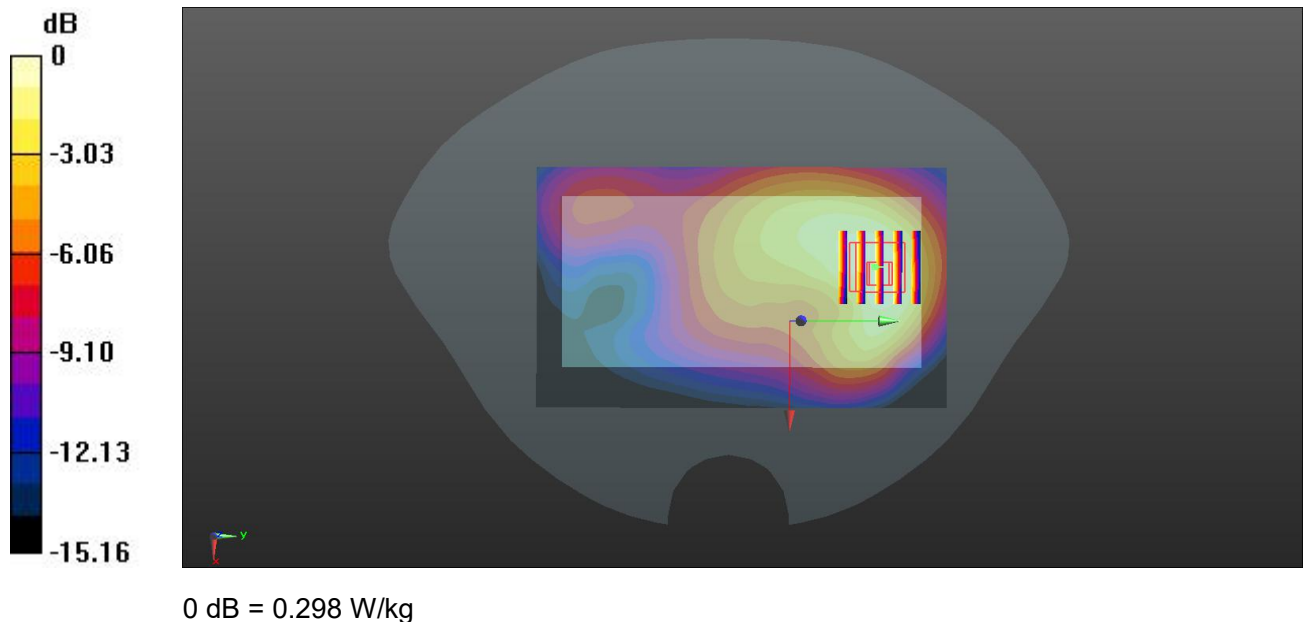
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.278 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.434 W/kg

SAR(1 g) = 0.278 W/kg; SAR(10 g) = 0.174 W/kg

Maximum value of SAR (measured) = 0.298 W/kg



MEAS.9 Body Plane with Bottom Edge 10mm on Low Channel in WCDMA Band 2 mode with Down Antenna

Date: 2019.11.30

Communication System Band: II; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.529$ S/m; $\epsilon_r = 54.188$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9262/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.727 W/kg

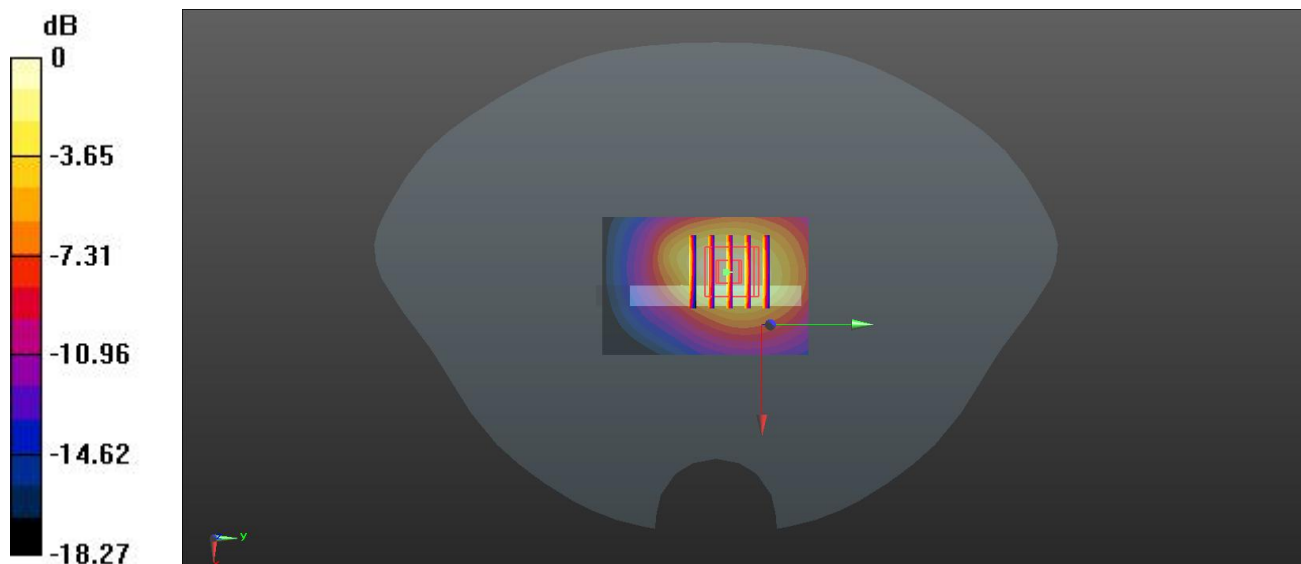
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.28 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.361 W/kg

Maximum value of SAR (measured) = 0.692 W/kg



0 dB = 0.692 W/kg

MEAS.10 Body Plane with Top Edge 0mm on Low Channel in WCDMA Band 2 mode with Up Antenna

Date: 2019.11.30

Communication System Band: II; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.529$ S/m; $\epsilon_r = 54.188$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9262/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 4.28 W/kg

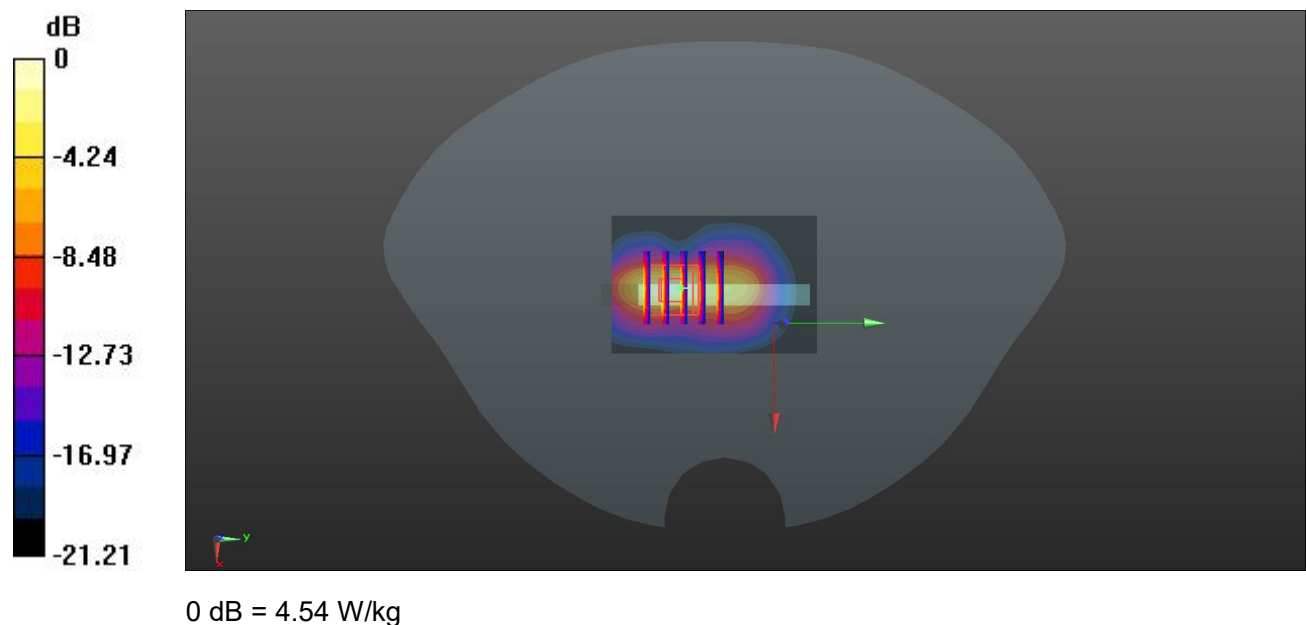
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 32.67 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 8.74 W/kg

SAR(1 g) = 3.57 W/kg; SAR(10 g) = 1.38 W/kg

Maximum value of SAR (measured) = 4.54 W/kg



MEAS.11 Right Head with Tilt on High Channel in WCDMA Band 4 mode with Up Antenna

Date: 2019.11.21

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

Medium parameters used (interpolated): $f = 1752.6$ MHz; $\sigma = 1.395$ S/m; $\epsilon_r = 39.074$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.7 Liquid Temperature: 21.5

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)

Ch 1513/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.995 W/kg

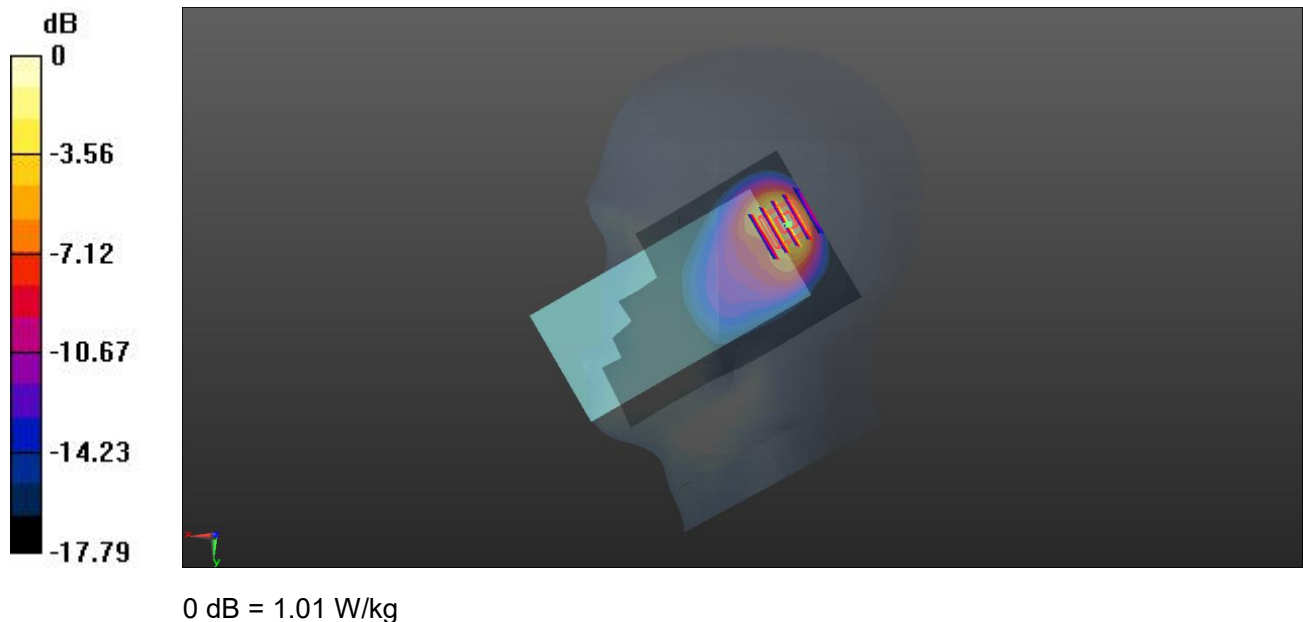
Ch 1513/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.36 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 0.837 W/kg; SAR(10 g) = 0.405 W/kg

Maximum value of SAR (measured) = 1.01 W/kg



MEAS.12 Body Plane with Back Side 15mm on High Channel in WCDMA Band 4 mode with Up Antenna

Date: 2019.11.23

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

Medium parameters used (interpolated): $f = 1752.6$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 53.129$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.31, 8.31, 8.31); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 1513/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.354 W/kg

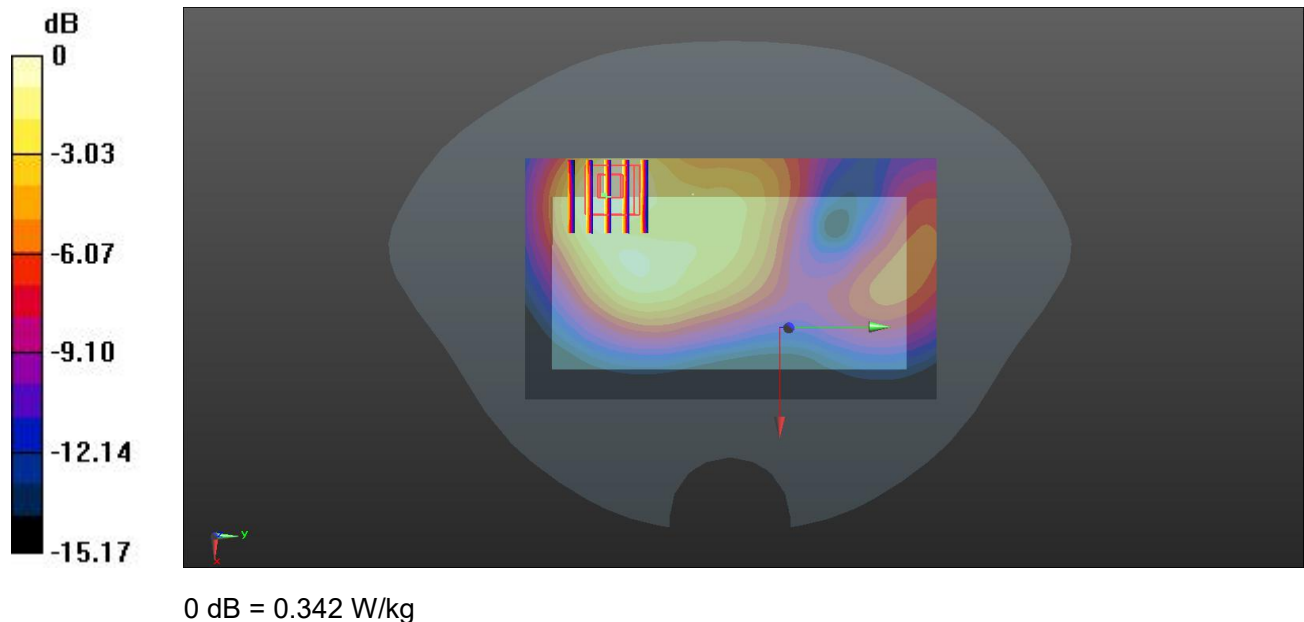
Ch 1513/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.14 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.510 W/kg

SAR(1 g) = 0.312 W/kg; SAR(10 g) = 0.185 W/kg

Maximum value of SAR (measured) = 0.342 W/kg



MEAS.13 Body Plane with Top Edge 10mm on High Channel in WCDMA Band 4 mode with Up Antenna

Date: 2019.11.23

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

Medium parameters used (interpolated): $f = 1752.6$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 53.129$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5 Liquid Temperature: 21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.31, 8.31, 8.31); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 1513/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.762 W/kg

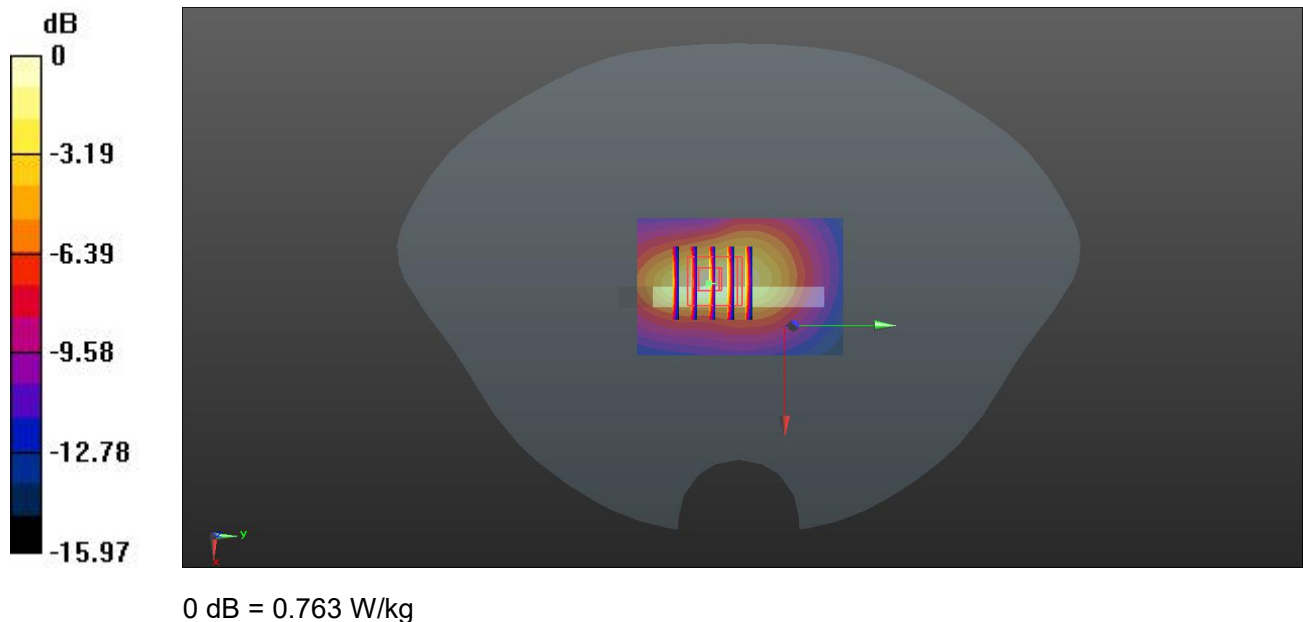
Ch 1513/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.47 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.674 W/kg; SAR(10 g) = 0.359 W/kg

Maximum value of SAR (measured) = 0.763 W/kg



MEAS.14 Right Head with Cheek on Low Channel in WCDMA Band 5 mode with Up Antenna

Date: 2019.10.31

Communication System Band: V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.903$ S/m; $\epsilon_r = 42.01$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.0 Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 4132/Area Scan (61x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.414 W/kg

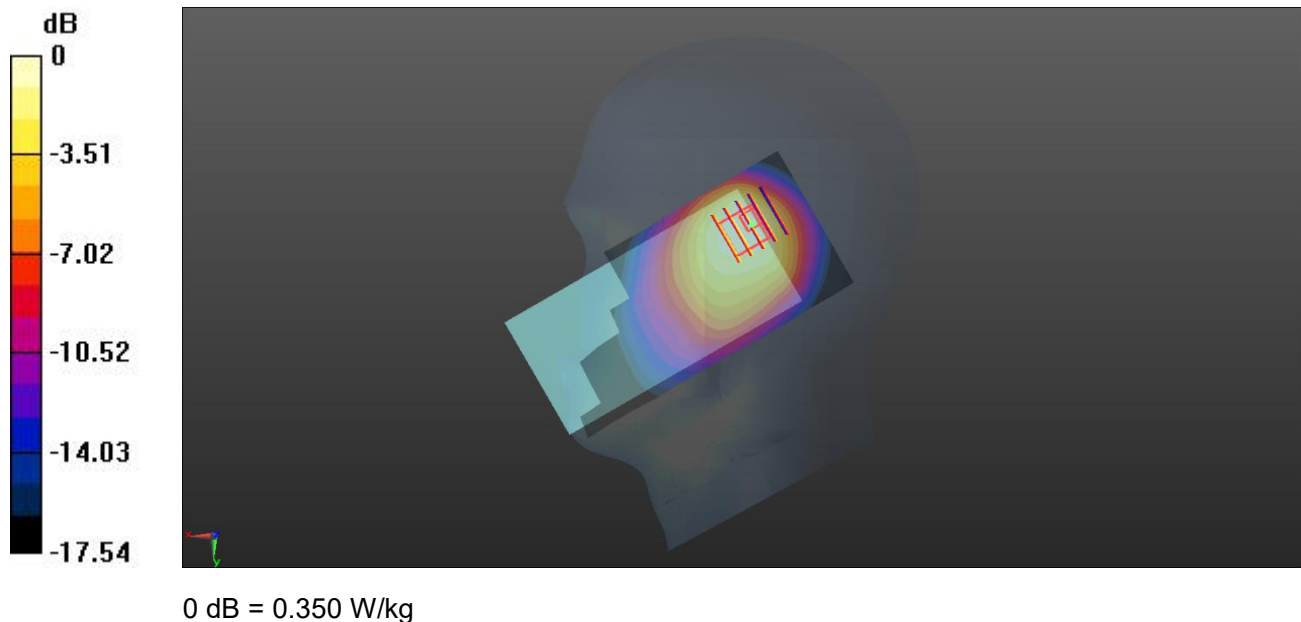
Ch 4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 17.35 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.670 W/kg

SAR(1 g) = 0.336 W/kg; SAR(10 g) = 0.205 W/kg

Maximum value of SAR (measured) = 0.350 W/kg



MEAS.15 Body Plane with Back Side 15mm on Low Channel in WCDMA Band 5 mode with Down Antenna

Date: 2019.11.19

Communication System Band: V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.978$ S/m; $\epsilon_r = 56.051$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.8

DASY5 Configuration:

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

Ch 4132/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.186 W/kg

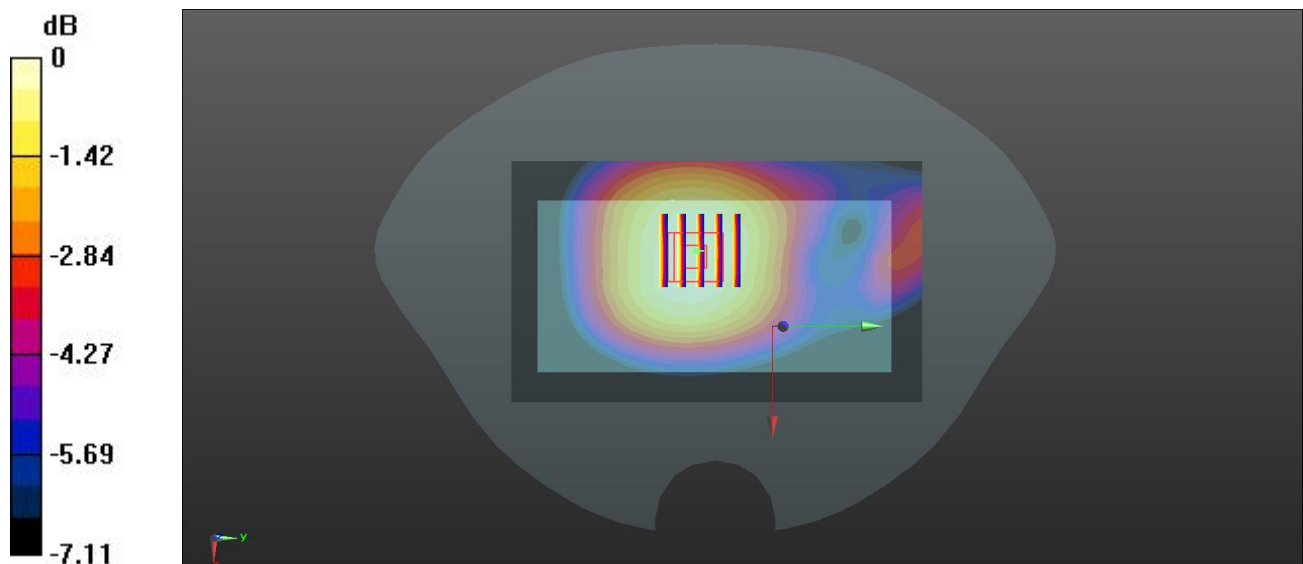
Ch 4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.63 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.217 W/kg

SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.140 W/kg

Maximum value of SAR (measured) = 0.186 W/kg



0 dB = 0.186 W/kg

MEAS.16 Body Plane with Bottom 10mm on Low Channel in WCDMA Band 5 mode with Down Antenna

Date: 2019.11.19

Communication System Band: V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.978$ S/m; $\epsilon_r = 56.051$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.6 Liquid Temperature: 21.8

DASY5 Configuration:

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

Ch 4132/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

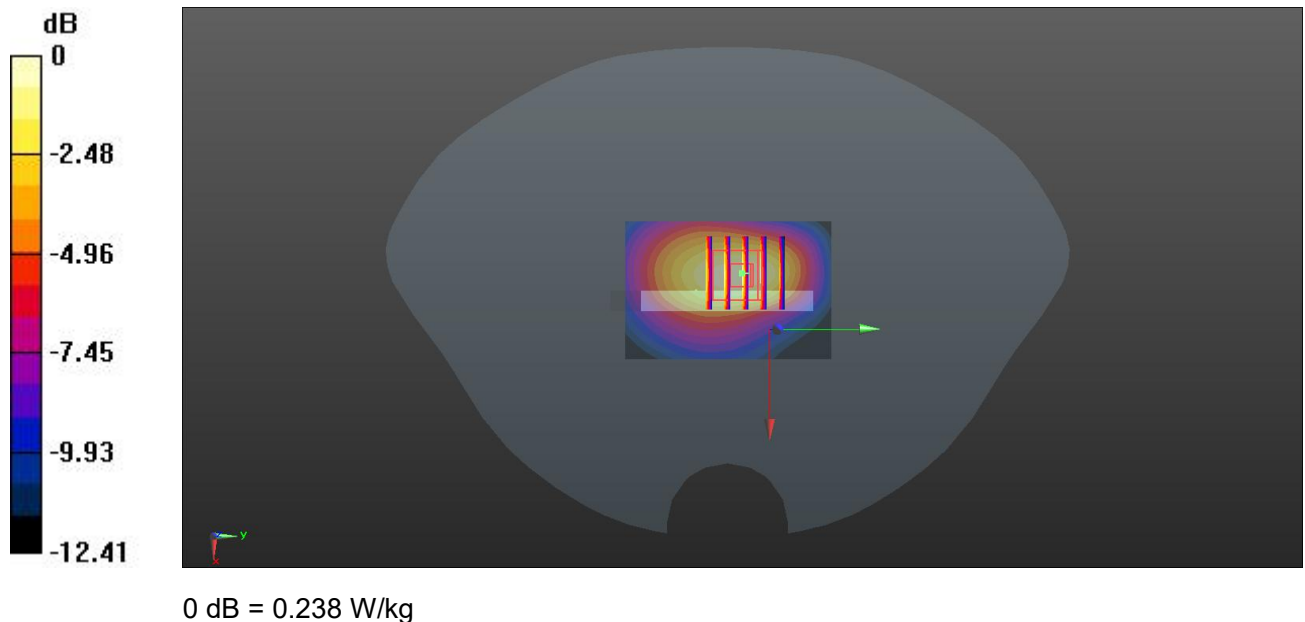
Ch 4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.92 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.362 W/kg

SAR(1 g) = 0.224 W/kg; SAR(10 g) = 0.136 W/kg

Maximum value of SAR (measured) = 0.238 W/kg



MEAS.17 Right Head with Tilt on Middle Channel in LTE Band 2 mode with Up Antenna

Date: 2019.11.26

Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.434$ S/m; $\epsilon_r = 39.142$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.4 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 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 18900/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

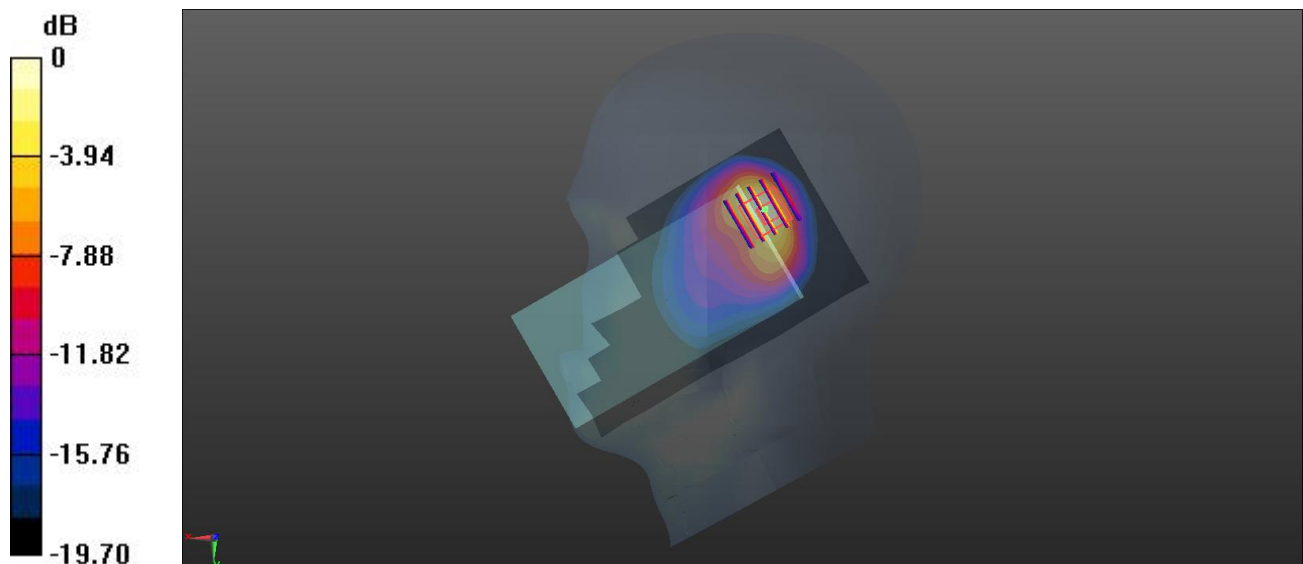
Ch 18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.56 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 2.27 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.448 W/kg

Maximum value of SAR (measured) = 1.19 W/kg



0 dB = 1.19 W/kg

MEAS.18 Body Plane with Back Side 15mm on Middle Channel in LTE Band 2 mode with Down Antenna

Date: 2019.11.29

Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch18900/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.354 W/kg

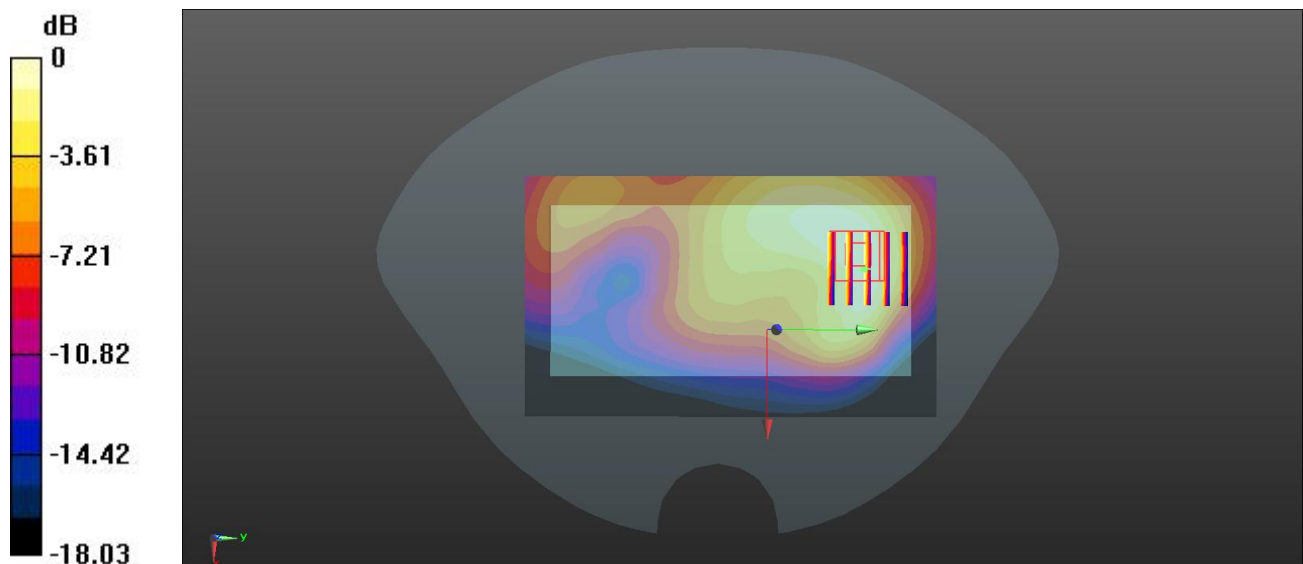
Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.043 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.533 W/kg

SAR(1 g) = 0.331 W/kg; SAR(10 g) = 0.201 W/kg

Maximum value of SAR (measured) = 0.355 W/kg



0 dB = 0.355 W/kg

MEAS.19 Body Plane with Back Side 10mm on Middle Channel in LTE Band 2 mode with Down Antenna

Date: 2019.11.29

Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.3 Liquid Temperature:21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch18900/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.647 W/kg

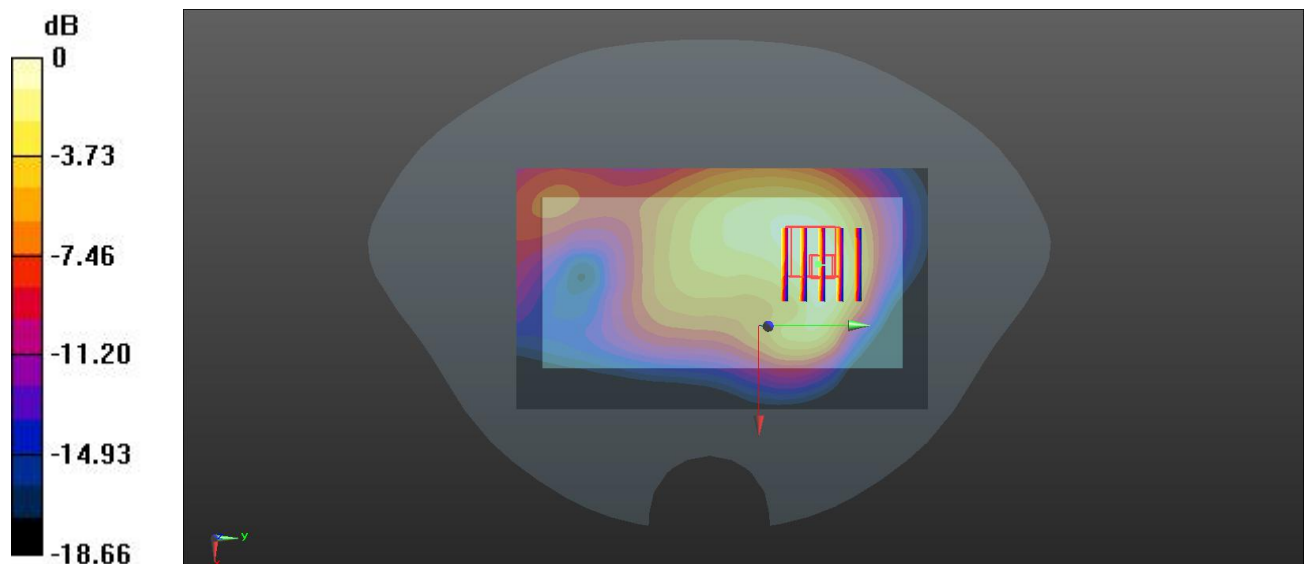
Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.94 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.963 W/kg

SAR(1 g) = 0.555 W/kg; SAR(10 g) = 0.322 W/kg

Maximum value of SAR (measured) = 0.608 W/kg



0 dB = 0.608 W/kg

MEAS.20 Body Plane with Top Edge 0mm on Middle Channel in LTE Band 2 mode with Up Antenna

Date: 2019.11.29

Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.3 Liquid Temperature: 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.99, 7.99, 7.99); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch18900/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.70 W/kg

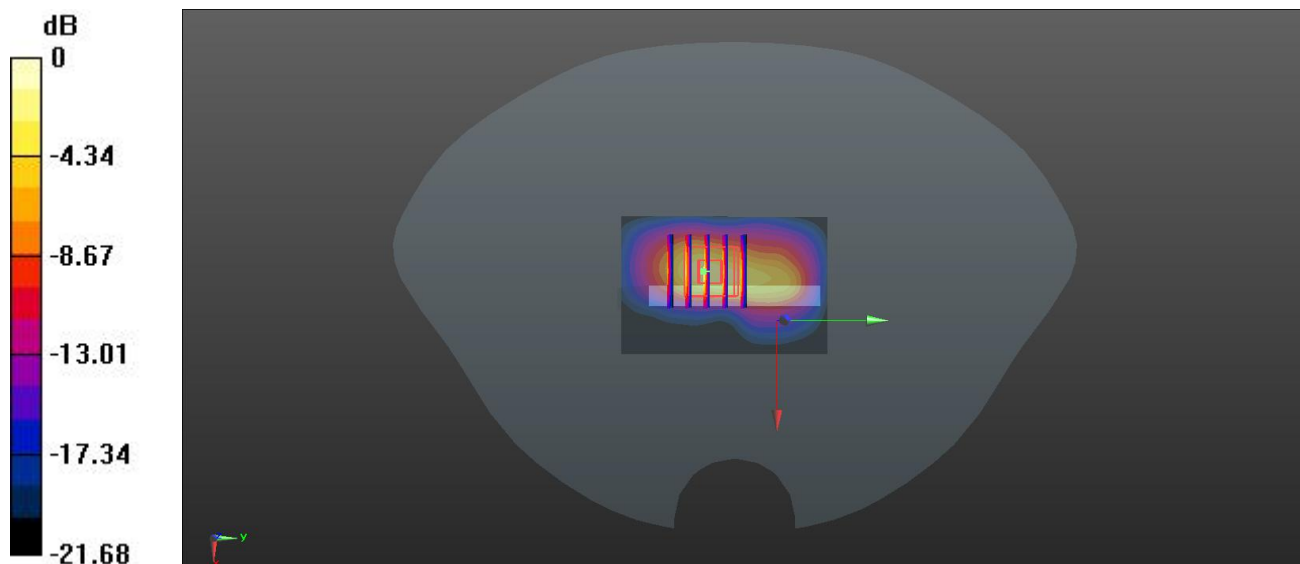
Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 37.10 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 9.87 W/kg

SAR(1 g) = 3.86 W/kg; SAR(10 g) = 1.48 W/kg

Maximum value of SAR (measured) = 5.00 W/kg



0 dB = 5.00 W/kg

MEAS.21 Right Head with Tilt on High Channel in LTE Band 4 mode with Up Antenna

Date: 2019.11.22

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; $\sigma = 1.374$ S/m; $\epsilon_r = 40.294$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.5 Liquid Temperature: 21.5

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)

Ch 20300/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.08 W/kg

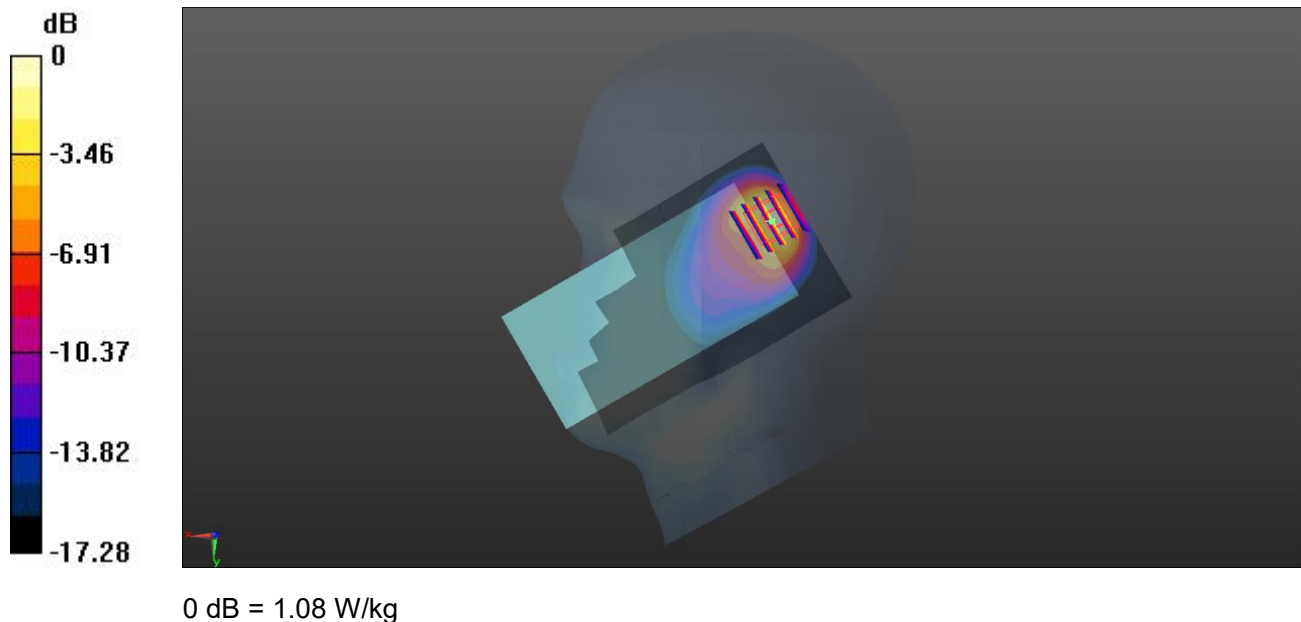
Ch 20300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.05 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.77 W/kg

SAR(1 g) = 0.906 W/kg; SAR(10 g) = 0.437 W/kg

Maximum value of SAR (measured) = 1.08 W/kg



MEAS.22 Body Plane with Back Side 15mm on High Channel in LTE Band 4 mode with Up Antenna

Date: 2019.11.24

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; $\sigma = 1.511$ S/m; $\epsilon_r = 54.437$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.31, 8.31, 8.31); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20300/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.362 W/kg

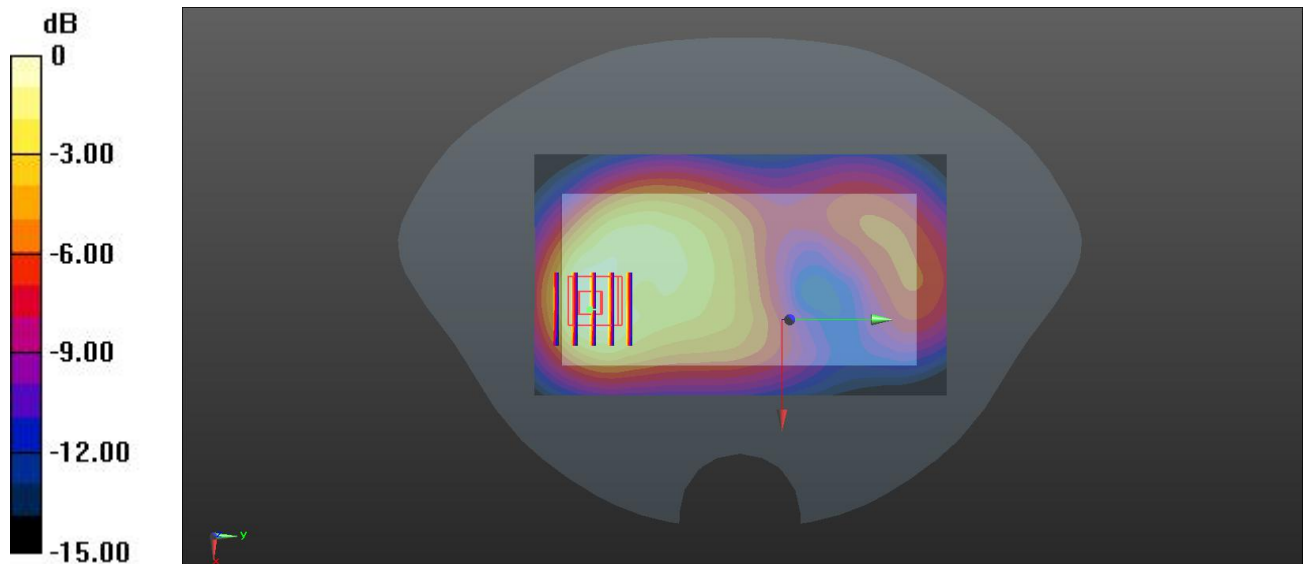
Ch 20300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.367 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.552 W/kg

SAR(1 g) = 0.345 W/kg; SAR(10 g) = 0.210 W/kg

Maximum value of SAR (measured) = 0.377 W/kg



0 dB = 0.377 W/kg

MEAS.23 Body Plane with Top Edge 10mm on High Channel in LTE Band 4 mode with Up Antenna

Date: 2019.11.24

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; $\sigma = 1.511$ S/m; $\epsilon_r = 54.437$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(8.31, 8.31, 8.31); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 on left 1859; Type: QD000P40CD; Serial: TP:1859
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20300/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.726 W/kg

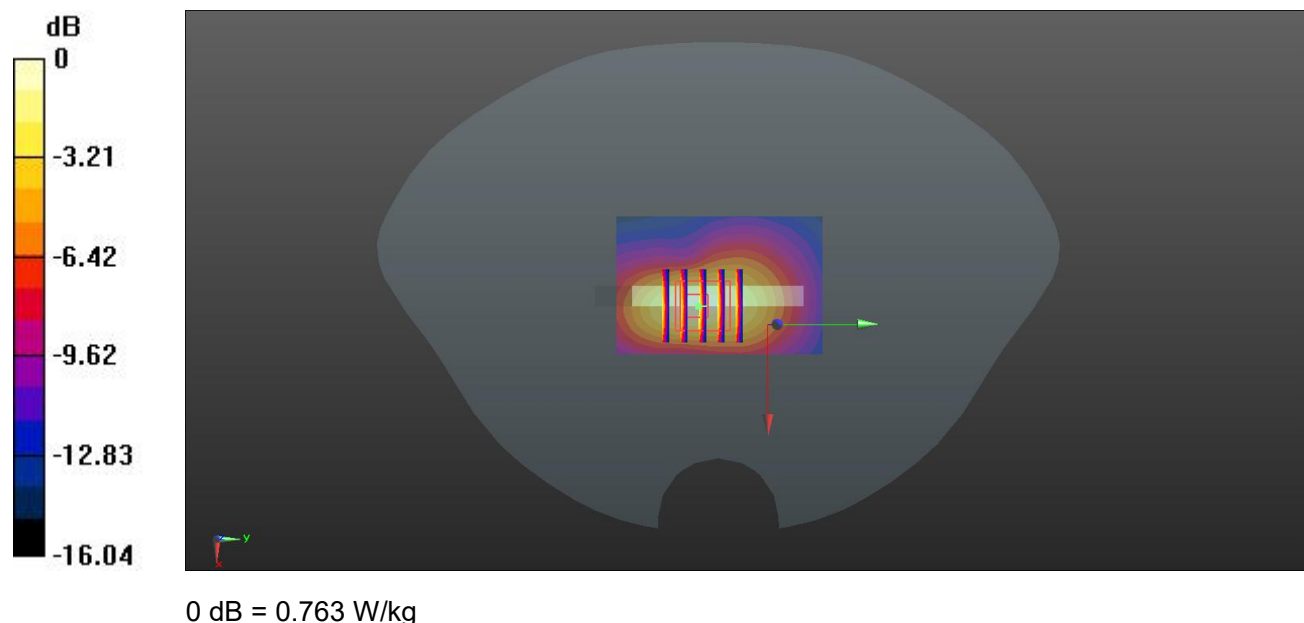
Ch 20300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.71 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.668 W/kg; SAR(10 g) = 0.358 W/kg

Maximum value of SAR (measured) = 0.763 W/kg



MEAS.24 Right Head with Cheek on High Channel in LTE Band 5 mode with Up Antenna

Date: 2019.11.18

Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 844 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 844$ MHz; $\sigma = 0.918$ S/m; $\epsilon_r = 40.977$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.0 Liquid Temperature: 21.3

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(10.02, 10.02, 10.02); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch 20600/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.500 W/kg

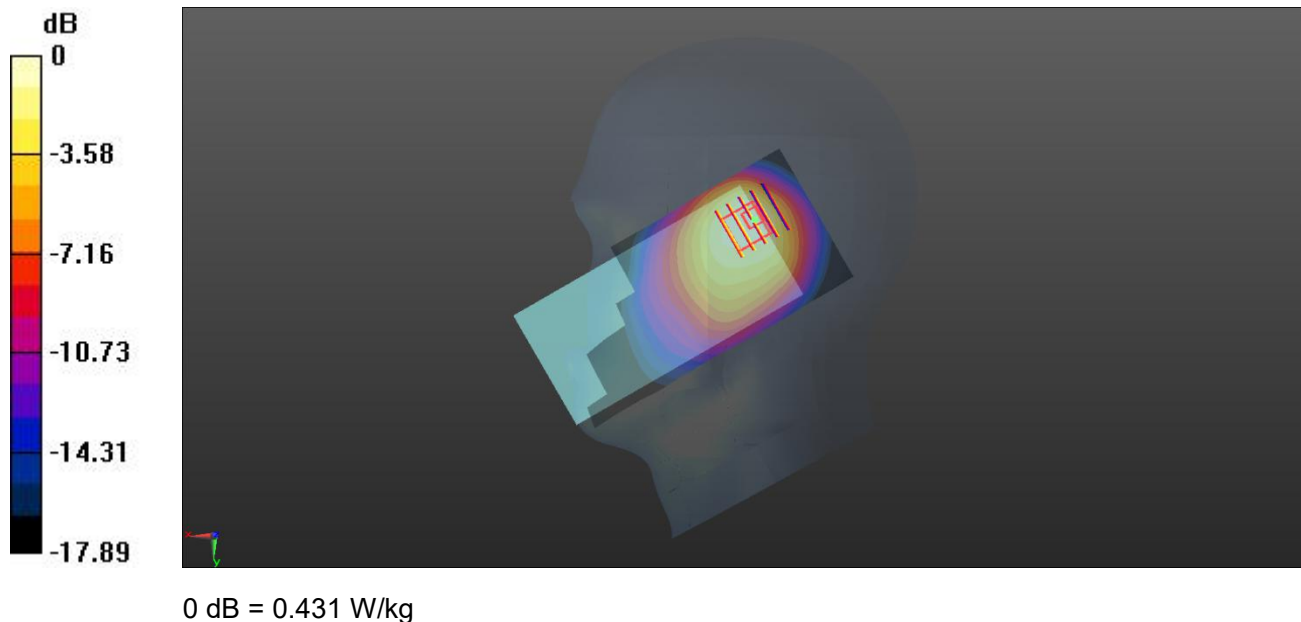
Ch 20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.68 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.808 W/kg

SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.249 W/kg

Maximum value of SAR (measured) = 0.431 W/kg



MEAS.25 Body Plane with Back Side 15mm on High Channel in LTE Band 5 mode with Down Antenna

Date: 2019.11.20

Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 844 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 844 \text{ MHz}$; $\sigma = 0.998 \text{ S/m}$; $\epsilon_r = 54.094$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature: 22.2 Liquid Temperature: 21.3

DASY5 Configuration:

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

Ch 20600/Area Scan (71x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.197 W/kg

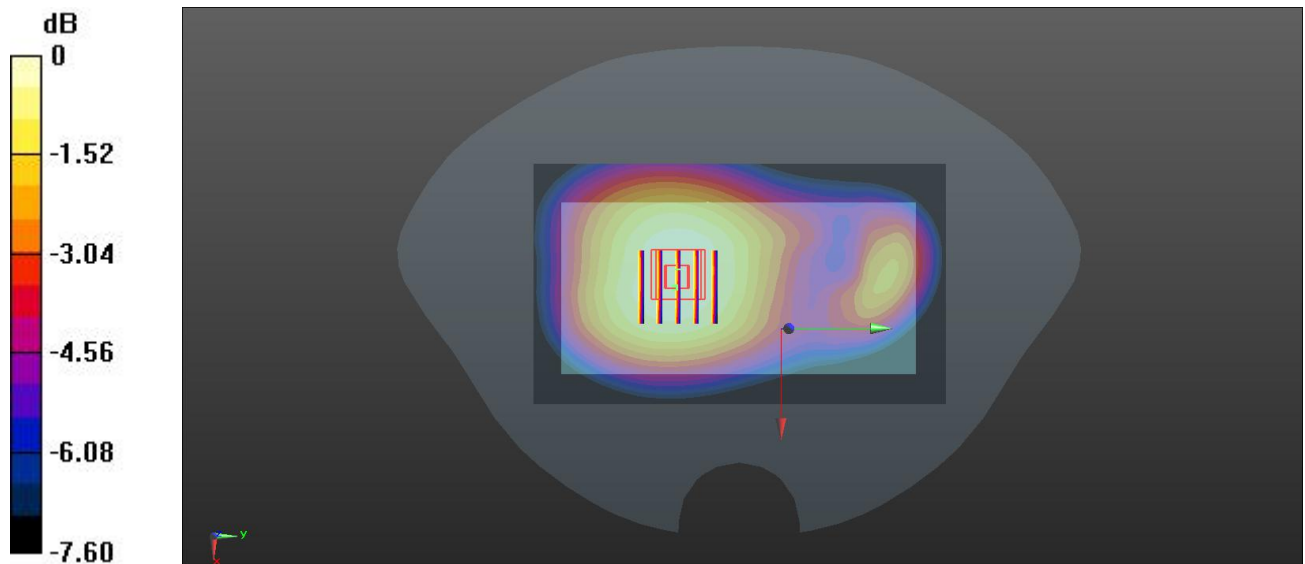
Ch 20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.43 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.229 W/kg

SAR(1 g) = 0.188 W/kg; SAR(10 g) = 0.147 W/kg

Maximum value of SAR (measured) = 0.196 W/kg



0 dB = 0.196 W/kg

MEAS.26 Body Plane with Bottom Edge 10mm on High Channel in LTE Band 5 mode with Down Antenna

Date: 2019.11.20

Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 844 MHz; Duty Cycle: 1:1 Medium parameters used (interpolated): $f = 844$ MHz; $\sigma = 0.998$ S/m; $\epsilon_r = 54.094$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.2 Liquid Temperature: 21.3

DASY5 Configuration:

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

Ch 20600/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.322 W/kg

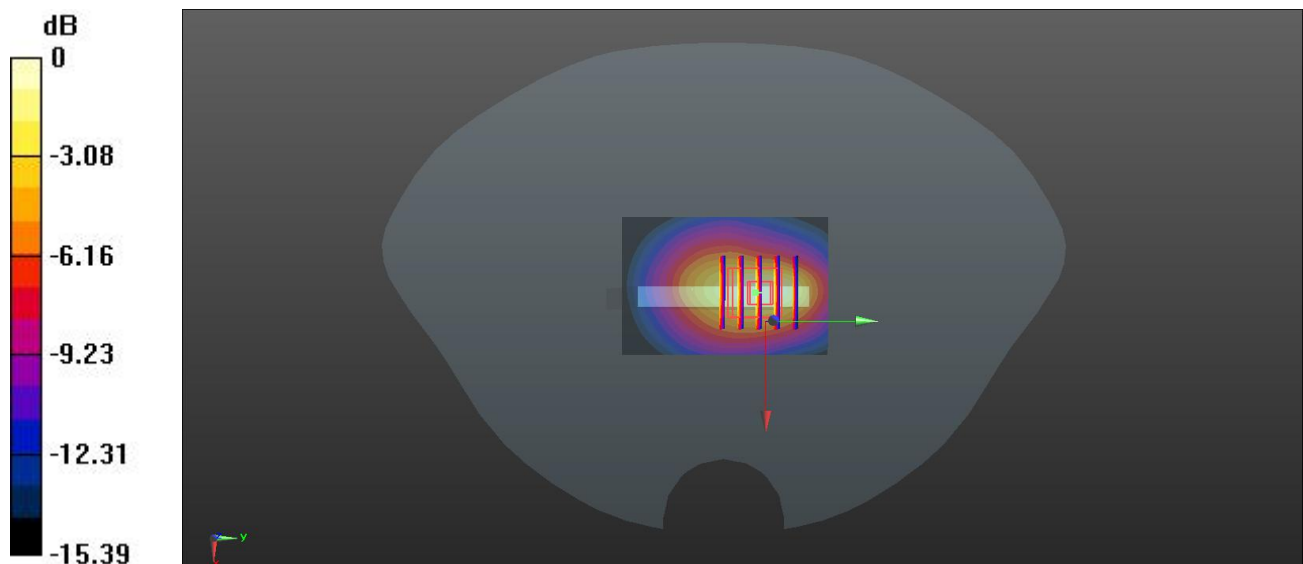
Ch 20600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.83 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.525 W/kg

SAR(1 g) = 0.291 W/kg; SAR(10 g) = 0.158 W/kg

Maximum value of SAR (measured) = 0.328 W/kg



0 dB = 0.328 W/kg

MEAS.27 Right Head with Cheek on Low Channel in LTE Band 7 mode with Up Antenna

Date: 2019.12.05

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

Medium parameters used (interpolated): $f = 2510$ MHz; $\sigma = 1.878$ S/m; $\epsilon_r = 39.872$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature: 22.3 Liquid Temperature: 21.7

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 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

Maximum value of SAR (interpolated) = 1.24 W/kg

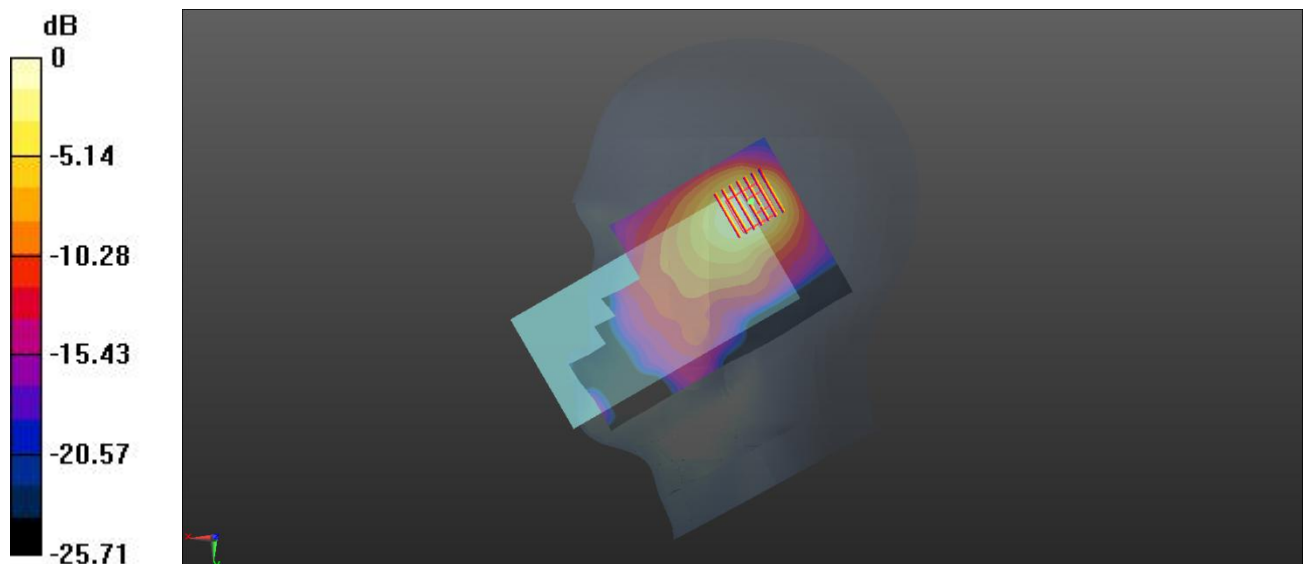
Ch20850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.906 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 2.34 W/kg

SAR(1 g) = 0.938 W/kg; SAR(10 g) = 0.485 W/kg

Maximum value of SAR (measured) = 1.05 W/kg



0 dB = 1.05 W/kg

MEAS.28 Body Plane with Back Side 15mm on Middle Channel in LTE Band 7 mode with Up Antenna

Date: 2019.12.07

Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.099$ S/m; $\epsilon_r = 53.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.2

DASY5 Configuration:

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

Ch 21100/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.256 W/kg

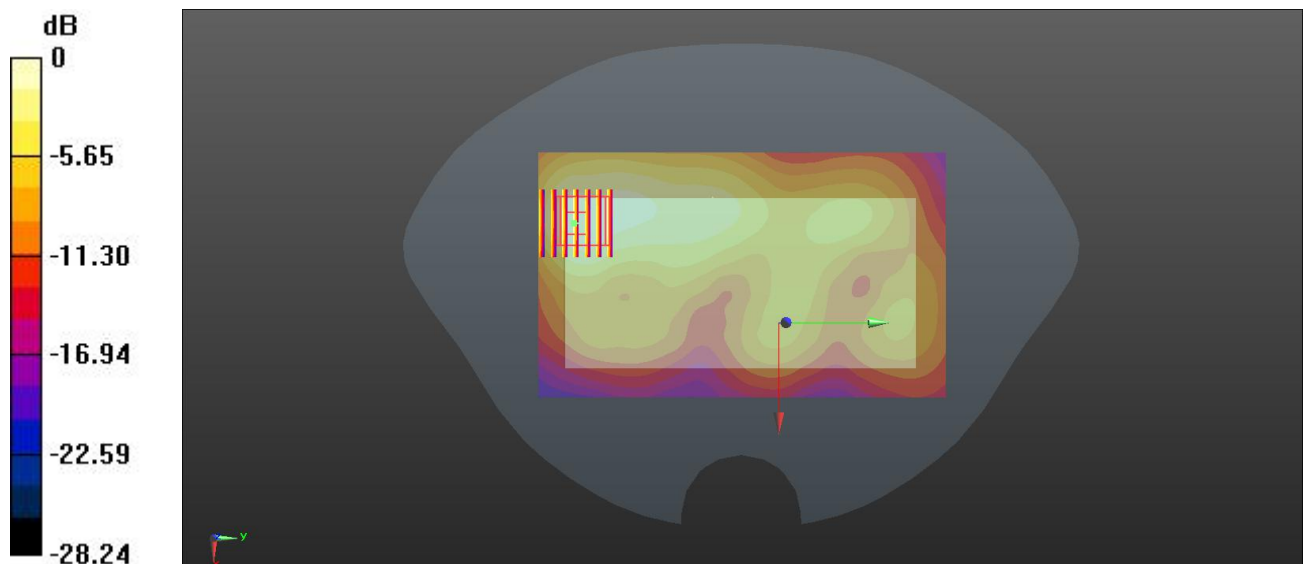
Ch 21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.432 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.446 W/kg

SAR(1 g) = 0.226 W/kg; SAR(10 g) = 0.116 W/kg

Maximum value of SAR (measured) = 0.255 W/kg



0 dB = 0.255 W/kg

MEAS.29 Body Plane with Back Side 10mm on Middle Channel in LTE Band 7 mode with Up Antenna

Date: 2019.12.07

Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.099$ S/m; $\epsilon_r = 53.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.2

DASY5 Configuration:

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

Ch 21100/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

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

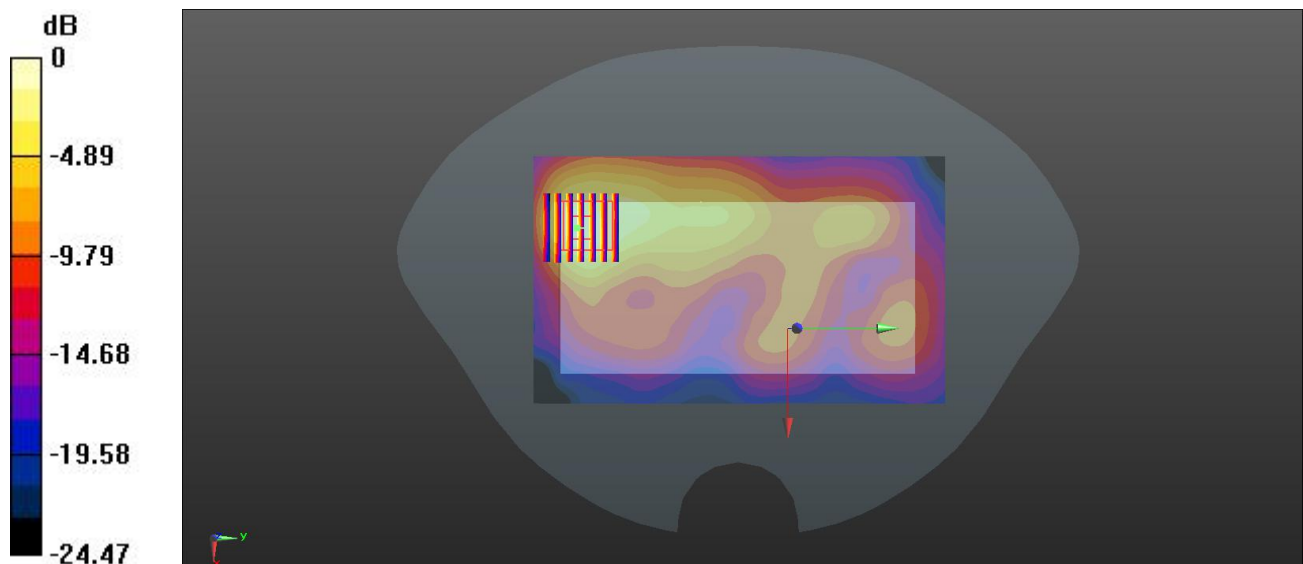
Ch 21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.566 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.504 W/kg; SAR(10 g) = 0.233 W/kg

Maximum value of SAR (measured) = 0.588 W/kg



0 dB = 0.588 W/kg

MEAS.30 Body Plane with Back Side 0mm on Middle Channel in LTE Band 7 mode with Up Antenna

Date: 2019.12.07

Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.099$ S/m; $\epsilon_r = 53.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.2

DASY5 Configuration:

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

Ch 21100/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 3.39 W/kg

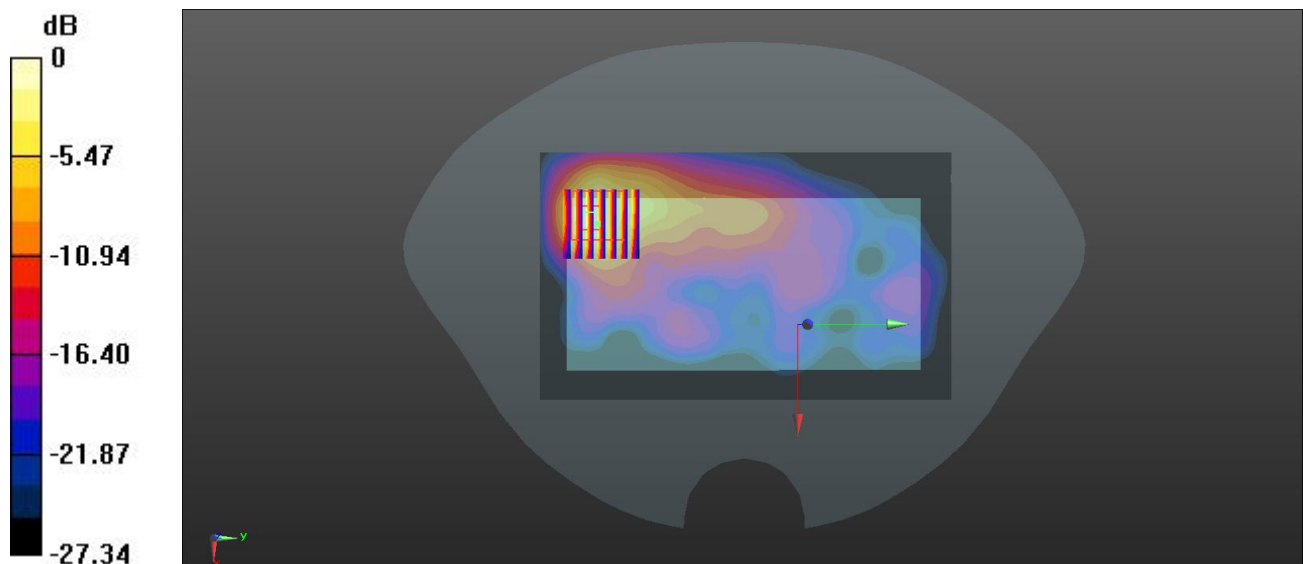
Ch 21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.160 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 8.02 W/kg

SAR(1 g) = 2.86 W/kg; SAR(10 g) = 1.12 W/kg

Maximum value of SAR (measured) = 3.52 W/kg



0 dB = 3.52 W/kg

MEAS.31 Right Head with Cheek on Channel 40185 in LTE Band 41 mode with Up Antenna

Date: 2019.12.06

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; $\sigma = 1.895$ S/m; $\epsilon_r = 38.322$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature:22.6 Liquid Temperature:21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(7.81, 7.81, 7.81); Calibrated: 2019.08.02;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch40185/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.996 W/kg

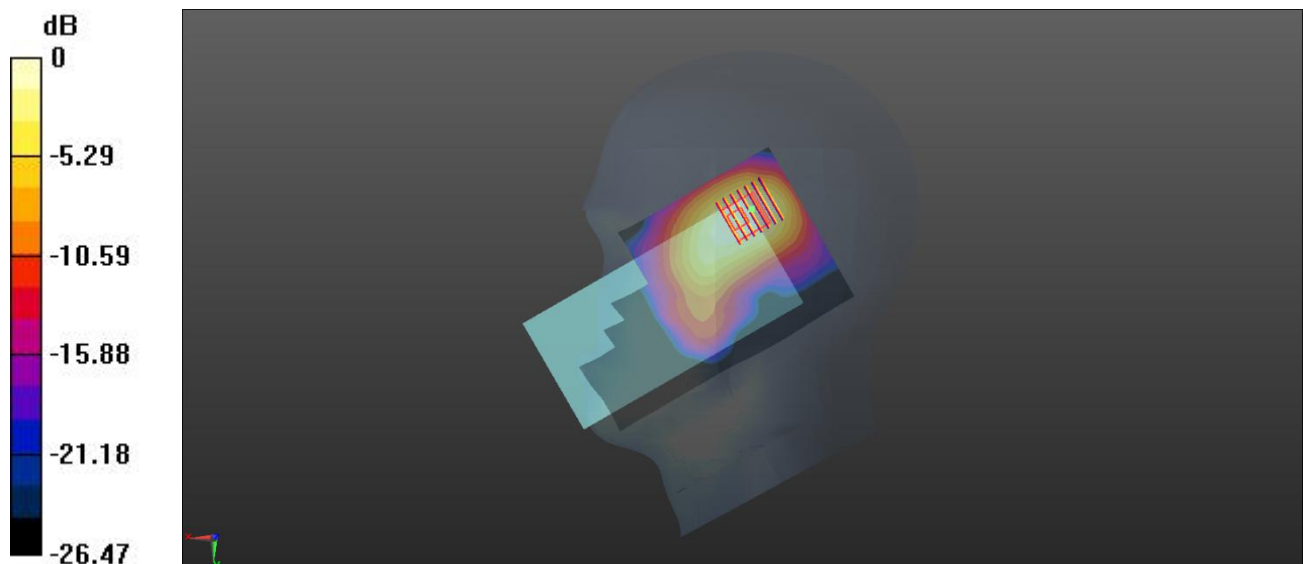
Ch40185/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.214 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.83 W/kg

SAR(1 g) = 0.804 W/kg; SAR(10 g) = 0.409 W/kg

Maximum value of SAR (measured) = 0.905 W/kg



0 dB = 0.905 W/kg

MEAS.32 Body Plane with Back Side 15mm on Middle Channel in LTE Band 41 mode with Up Antenna

Date: 2019.12.08

Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2593 MHz; Duty Cycle: 1:1 .58

Medium parameters used: $f = 2593$ MHz; $\sigma = 2.184$ S/m; $\epsilon_r = 50.918$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.2 Liquid Temperature:21.4

DASY5 Configuration:

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

Ch 40620/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.313 W/kg

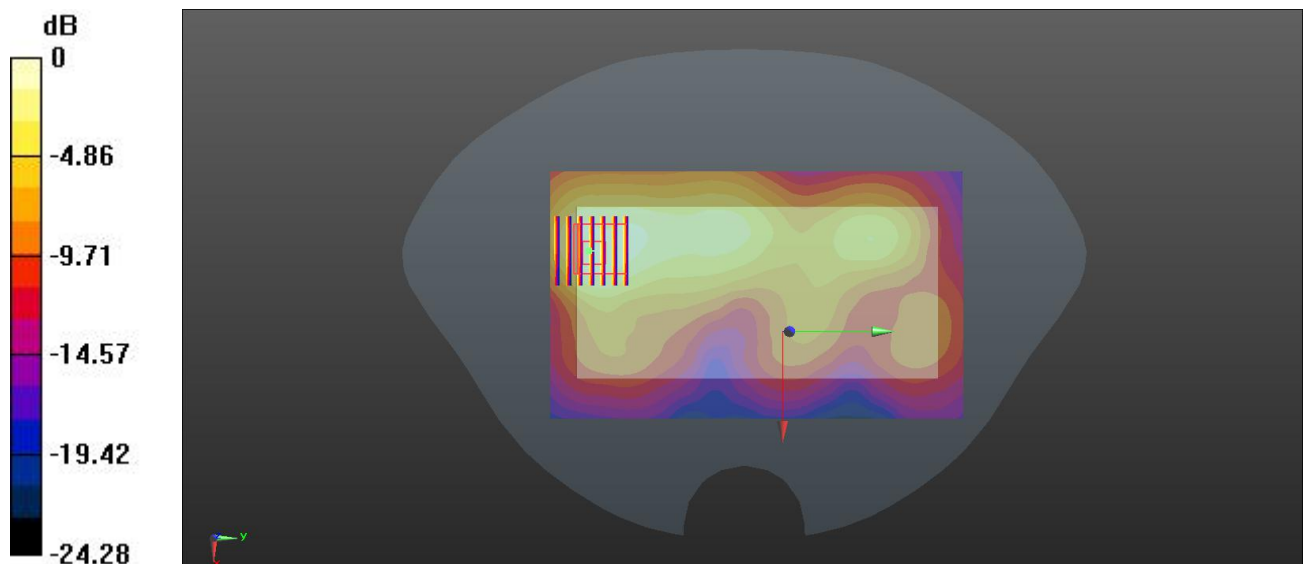
Ch 40620/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.882 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.600 W/kg

SAR(1 g) = 0.286 W/kg; SAR(10 g) = 0.139 W/kg

Maximum value of SAR (measured) = 0.319 W/kg



0 dB = 0.319 W/kg

MEAS.33 Body Plane with Back Side 10mm on Middle Channel in LTE Band 41 mode with Up Antenna

Date: 2019.12.08

Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); Frequency: 2593 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2593$ MHz; $\sigma = 2.184$ S/m; $\epsilon_r = 50.918$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.2 Liquid Temperature: 21.4

DASY5 Configuration:

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

Ch40620/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.479 W/kg

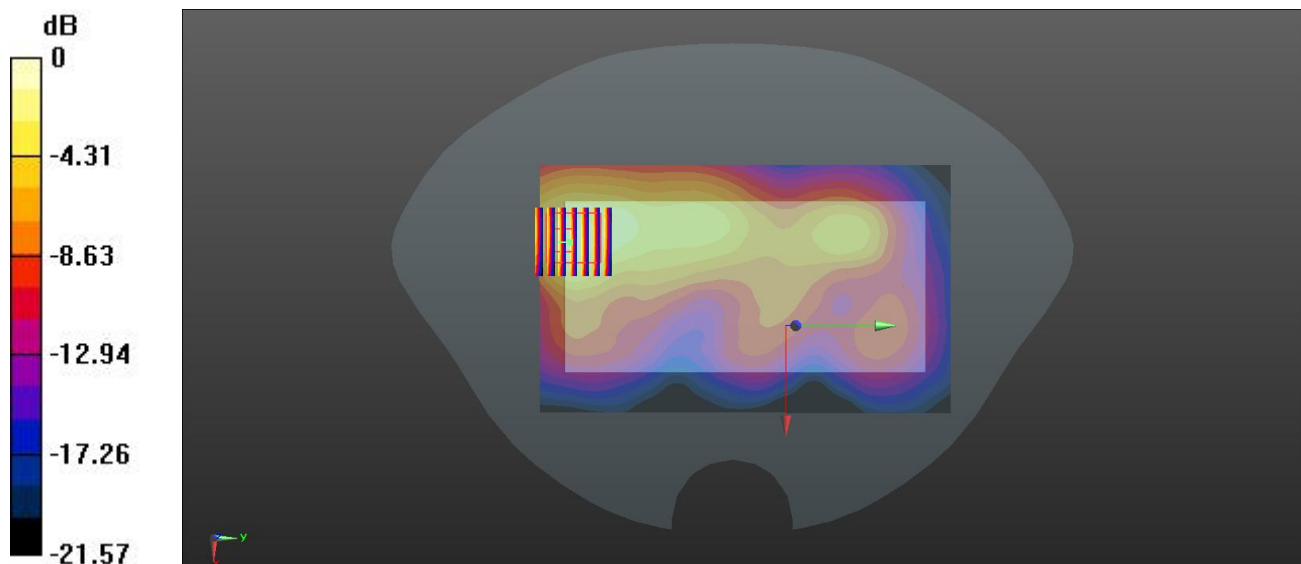
Ch40620/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.022 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.881 W/kg

SAR(1 g) = 0.409 W/kg; SAR(10 g) = 0.197 W/kg

Maximum value of SAR (measured) = 0.453 W/kg



0 dB = 0.453 W/kg

MEAS.34 Left Head with Cheek on Middle Channel in IEEE802.11b mode

Date: 2019.12.09

Communication System Band: WLAN(b); Frequency: 2437 MHz; Duty Cycle: 1:1.02

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.772$ S/m; $\epsilon_r = 39.647$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature: 22.4 Liquid Temperature: 21.8

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 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch6/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.19 W/kg

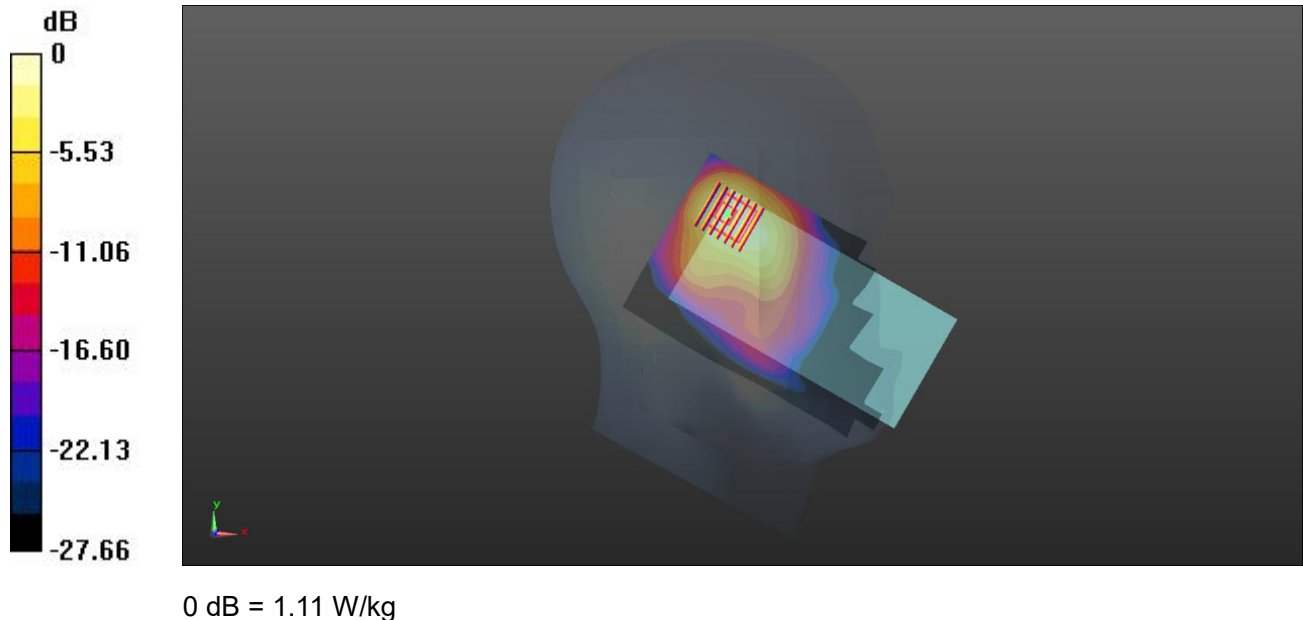
Ch6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.38 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 2.38 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.485 W/kg

Maximum value of SAR (measured) = 1.11 W/kg



MEAS.35 Body Plane with Back Side 15mm on Middle Channel in IEEE802.11b mode

Date: 2019.12.10

Communication System Band: WLAN(b); Frequency: 2437 MHz;Duty Cycle: 1:1.02

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.924$ S/m; $\epsilon_r = 53.26$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.4 Liquid Temperature:21.0

DASY5 Configuration:

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

Ch6/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.240 W/kg

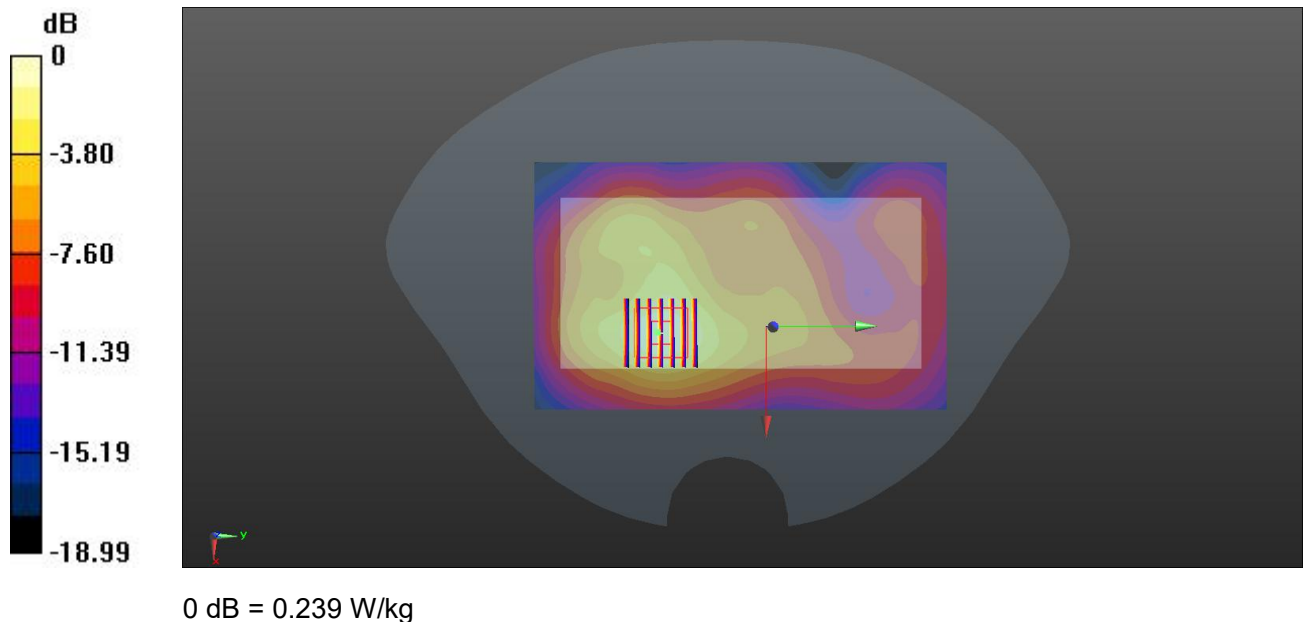
Ch6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.128 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.380 W/kg

SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.116 W/kg

Maximum value of SAR (measured) = 0.239 W/kg



MEAS.36 Body Plane with Back Side 10mm on Middle Channel in IEEE802.11b mode

Date: 2019.12.10

Communication System Band: WLAN(b); Frequency: 2437 MHz; Duty Cycle: 1:1.02

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.924$ S/m; $\epsilon_r = 53.26$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.0

DASY5 Configuration:

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

Ch6/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.433 W/kg

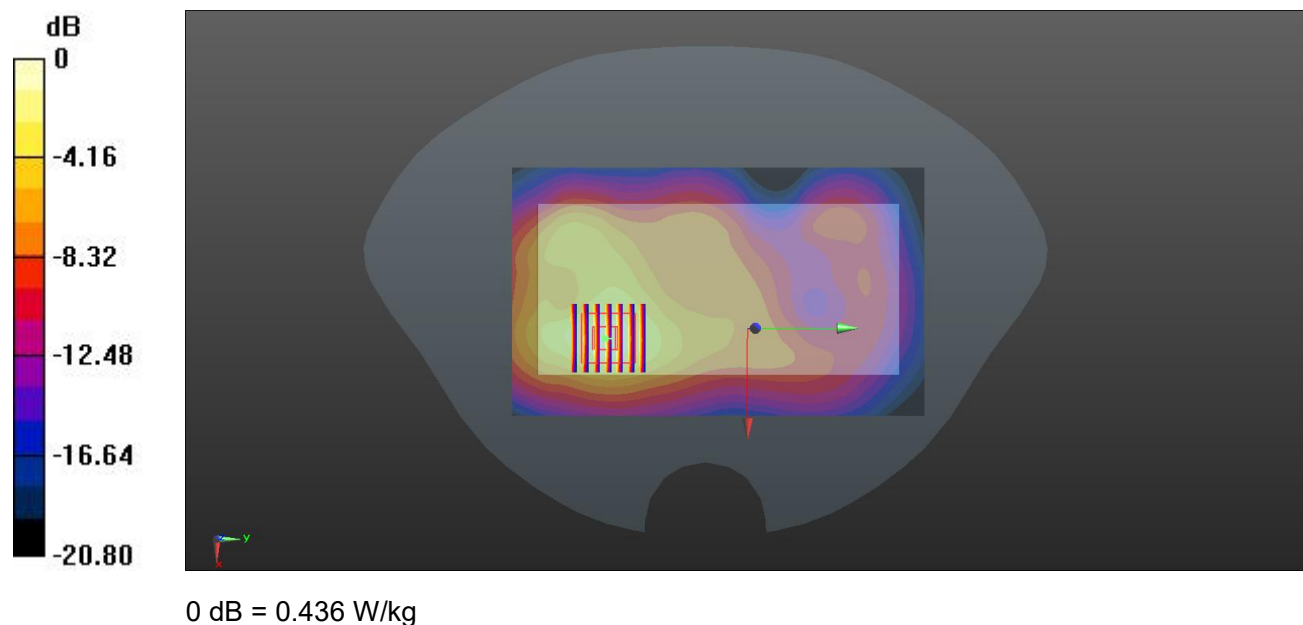
Ch6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.233 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.696 W/kg

SAR(1 g) = 0.386 W/kg; SAR(10 g) = 0.198 W/kg

Maximum value of SAR (measured) = 0.436 W/kg



MEAS.37 Left Head with Tilt on Channel 46 in IEEE802.11n(HT40) mode

Date: 2019.12.01

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

Medium parameters used: $f = 5230$ MHz; $\sigma = 4.585$ S/m; $\epsilon_r = 36.893$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature:22.4 Liquid Temperature:21.5

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.51, 5.51, 5.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch46/Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

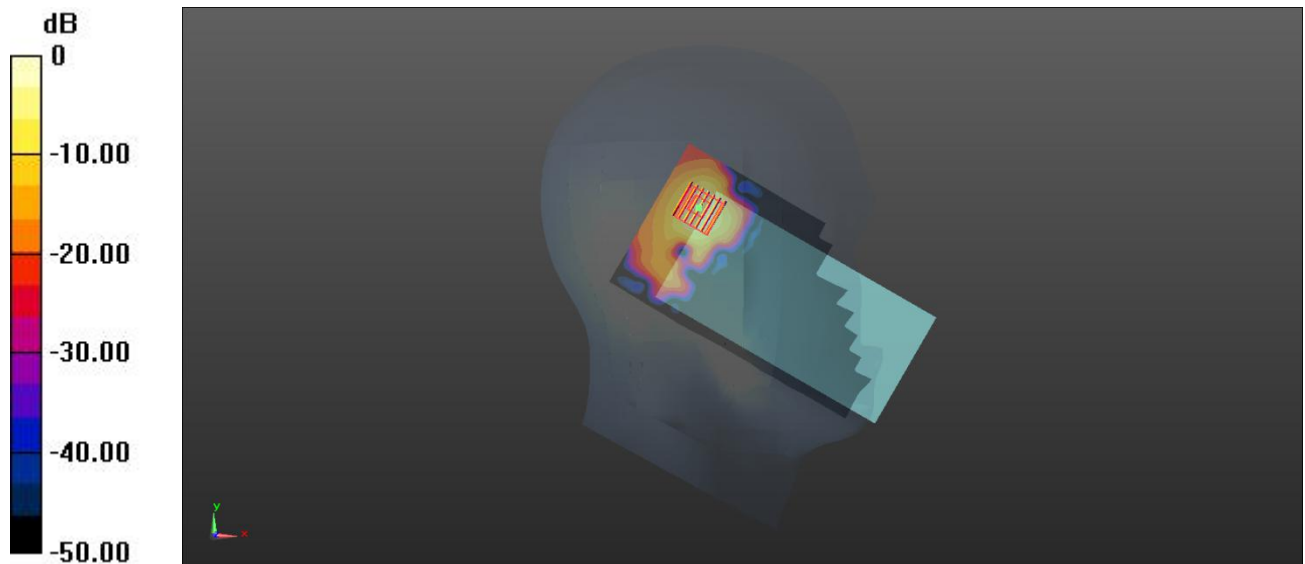
Ch46/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.410 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 4.60 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.314 W/kg

Maximum value of SAR (measured) = 2.25 W/kg



0 dB = 2.25 W/kg

MEAS.38 Left Head with Tilt on Channel 118 in IEEE802.11n(HT40) mode

Date: 2019.12.02

Communication System Band: WLAN(n)40Mhz; Frequency: 5590 MHz;Duty Cycle: 1:1.04

Medium parameters used (interpolated): $f = 5590$ MHz; $\sigma = 4.998$ S/m; $\epsilon_r = 35.502$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature:22.4 Liquid Temperature:21.7

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

Ch118/Area Scan (101x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.537 W/kg

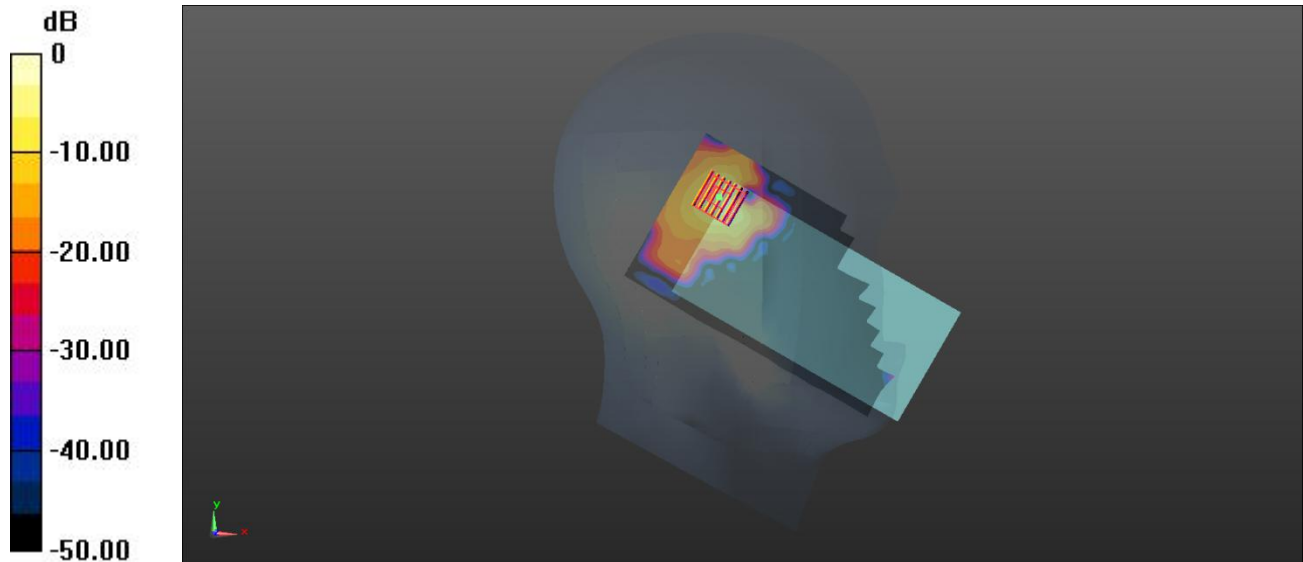
Ch118/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.985 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.41 W/kg

SAR(1 g) = 0.501 W/kg; SAR(10 g) = 0.149 W/kg

Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg

MEAS.39 Left Head with Tilt on Channel 155 in IEEE802.11ac(VHT80) mode

Date: 2019.12.02

Communication System Band: WLAN(ac) 80Mhz; Frequency: 5775 MHz;Duty Cycle: 1:1.08

Medium parameters used (interpolated): $f = 5775$ MHz; $\sigma = 5.364$ S/m; $\epsilon_r = 34.138$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature:22.4 Liquid Temperature:21.7

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.06, 5.06, 5.06); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1454; Calibrated: 2019.08.02
- Phantom: SAM (30deg probe tilt) with CRP v5.0 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch155/Area Scan (101x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.02 W/kg

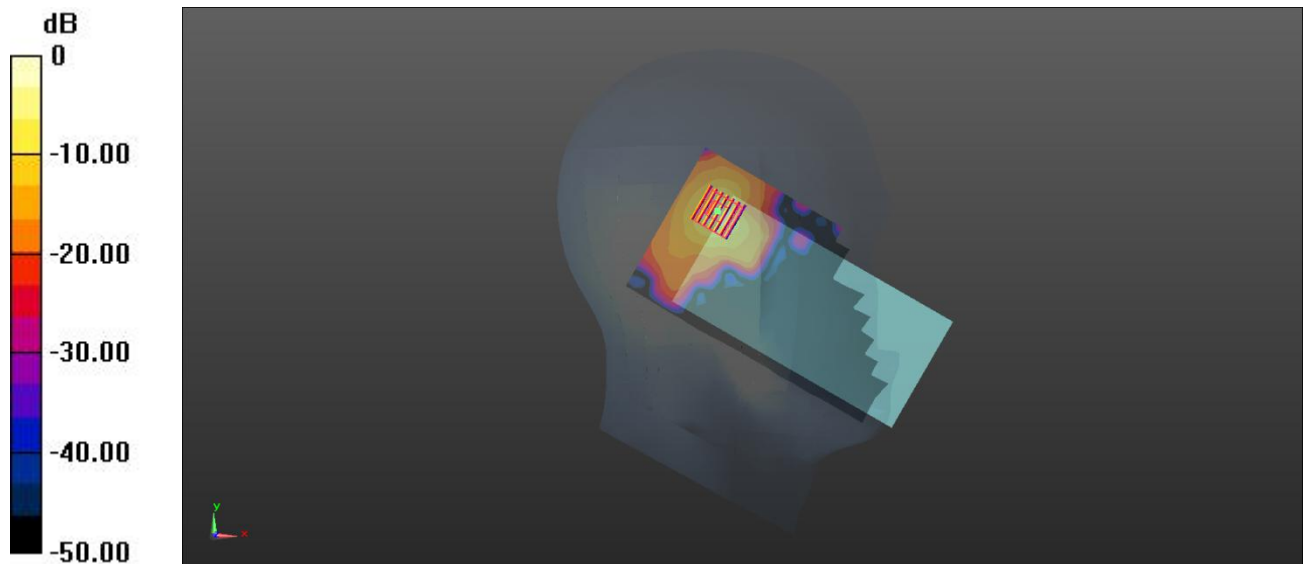
Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.748 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 5.24 W/kg

SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.305 W/kg

Maximum value of SAR (measured) = 2.28 W/kg



0 dB = 2.28 W/kg

MEAS.40 Body Plane with Back Side 15mm on Channel 46 in IEEE802.11n(HT40) mode

Date: 2019.12.03

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

Medium parameters used: $f = 5230$ MHz; $\sigma = 5.294$ S/m; $\epsilon_r = 49.525$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

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

Maximum value of SAR (interpolated) = 0.191 W/kg

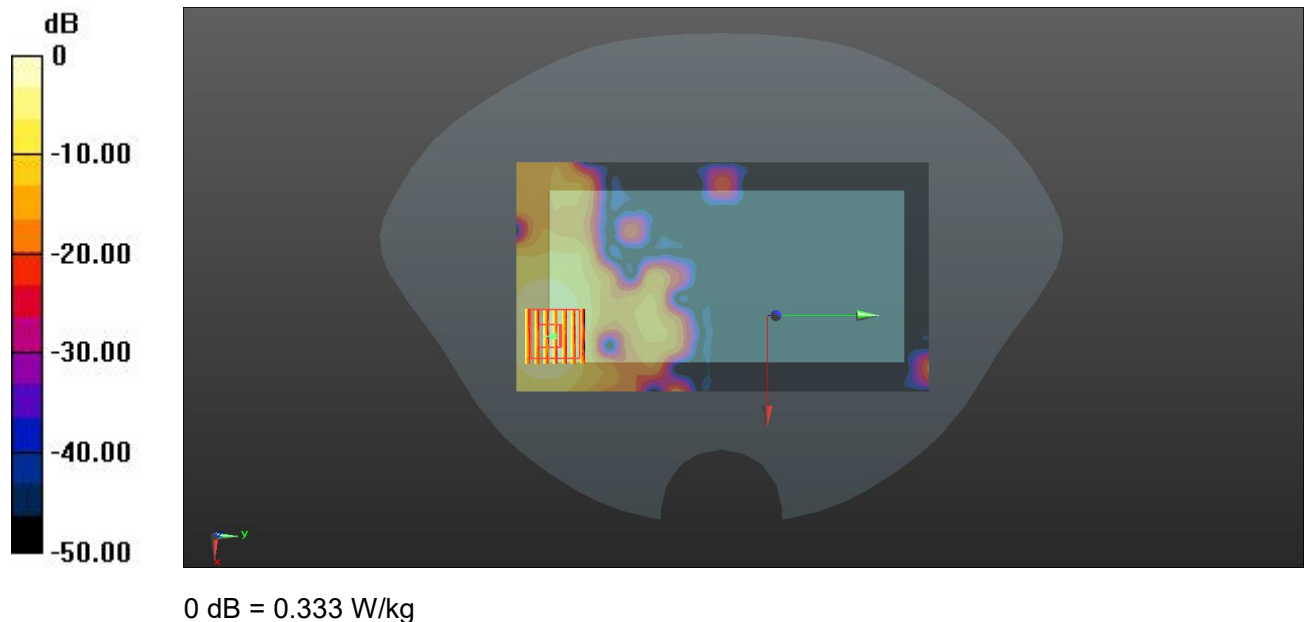
Ch46/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.2670 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.677 W/kg

SAR(1 g) = 0.186 W/kg; SAR(10 g) = 0.075 W/kg

Maximum value of SAR (measured) = 0.333 W/kg



MEAS.41 Body Plane with Back Side 15mm on Channel 118 in IEEE802.11n(HT40) mode

Date: 2019.12.04

Communication System Band: WLAN(n)40Mhz; Frequency: 5590 MHz;Duty Cycle: 1:1.04

Medium parameters used: $f = 5590$ MHz; $\sigma = 5.84$ S/m; $\epsilon_r = 48.212$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.36, 4.36, 4.36); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

Ch134/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.210 W/kg

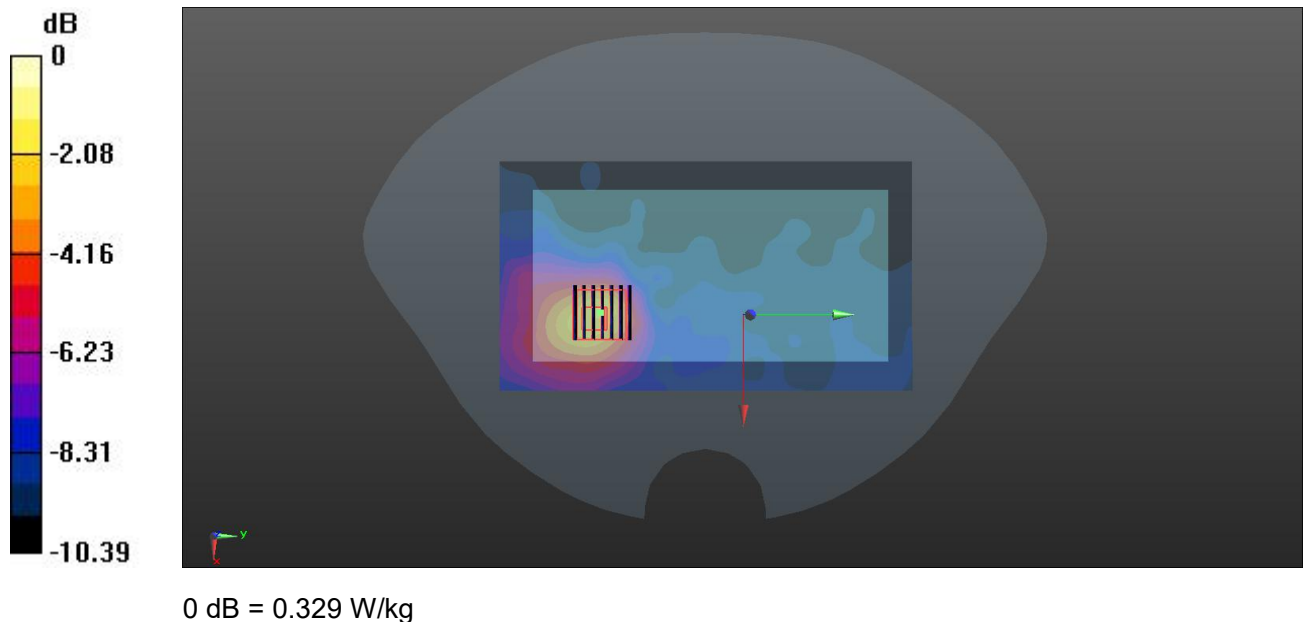
Ch134/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.770 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.611 W/kg

SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.097 W/kg

Maximum value of SAR (measured) = 0.329 W/kg



MEAS.42 Body Plane with Back Side 15mm on Channel 155 in IEEE802.11ac(VHT80) mode

Date: 2019.12.04

Communication System Band: WLAN(ac)80MHz; Frequency: 5775 MHz;Duty Cycle: 1:1.08

Medium parameters used: $f = 5775$ MHz; $\sigma = 6.153$ S/m; $\epsilon_r = 47.107$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.51, 4.51, 4.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

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

Maximum value of SAR (interpolated) = 0.114 W/kg

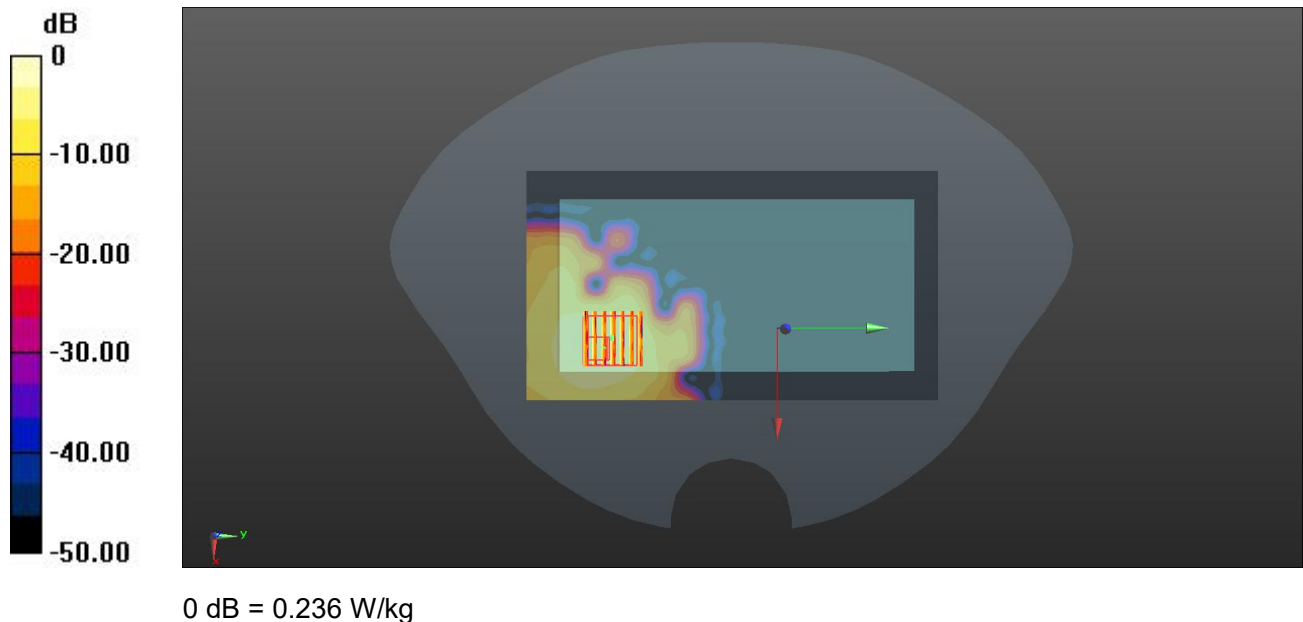
Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.485 W/kg

SAR(1 g) = 0.124 W/kg; SAR(10 g) = 0.049 W/kg

Maximum value of SAR (measured) = 0.236 W/kg



MEAS.43 Body Plane with Back Side 10mm on Channel 46 in IEEE802.11n(HT40) mode

Date: 2019.12.03

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

Medium parameters used: $f = 5230$ MHz; $\sigma = 5.294$ S/m; $\epsilon_r = 49.525$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

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

Maximum value of SAR (interpolated) = 0.383 W/kg

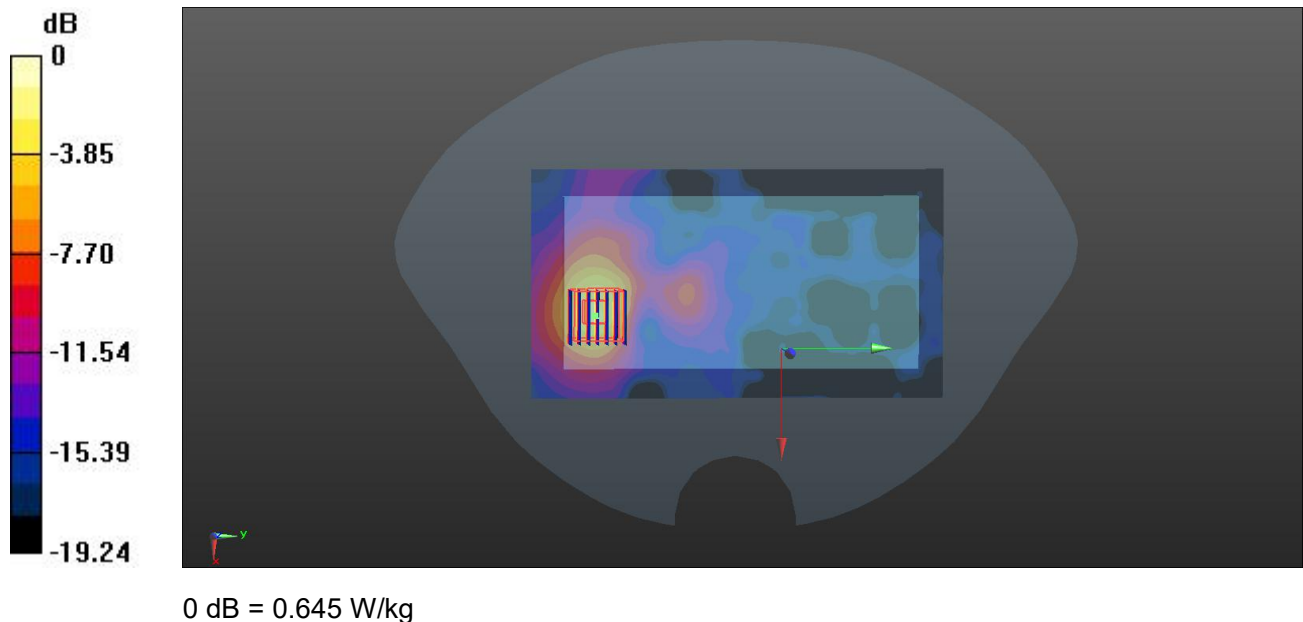
Ch46/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.821 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.360 W/kg; SAR(10 g) = 0.147 W/kg

Maximum value of SAR (measured) = 0.645 W/kg



MEAS.44 Body Plane with Back Side 10mm on Channel 155 in IEEE802.11ac(VHT80) mode

Date: 2019.12.04

Communication System Band: WLAN(ac)80MHz; Frequency: 5775 MHz;Duty Cycle: 1:1.08

Medium parameters used: $f = 5775$ MHz; $\sigma = 6.153$ S/m; $\epsilon_r = 47.107$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.51, 4.51, 4.51); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

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

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

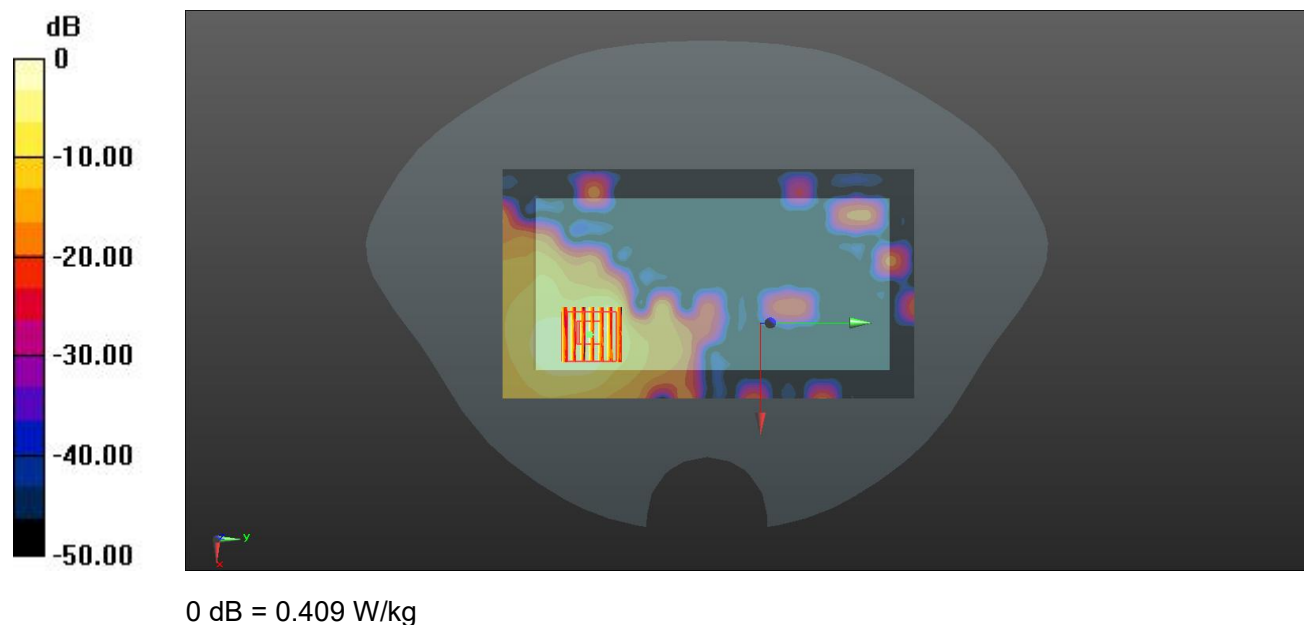
Ch155/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.438 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.904 W/kg

SAR(1 g) = 0.218 W/kg; SAR(10 g) = 0.085 W/kg

Maximum value of SAR (measured) = 0.409 W/kg



MEAS.45 Body Plane with Top Edge 0mm on Channel 54 in IEEE802.11n(HT40) mode

Date: 2019.12.03

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

Medium parameters used: $f = 5270$ MHz; $\sigma = 5.424$ S/m; $\epsilon_r = 48.275$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.5 Liquid Temperature:21.8

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(5.08, 5.08, 5.08); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

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

Maximum value of SAR (interpolated) = 1.65 W/kg

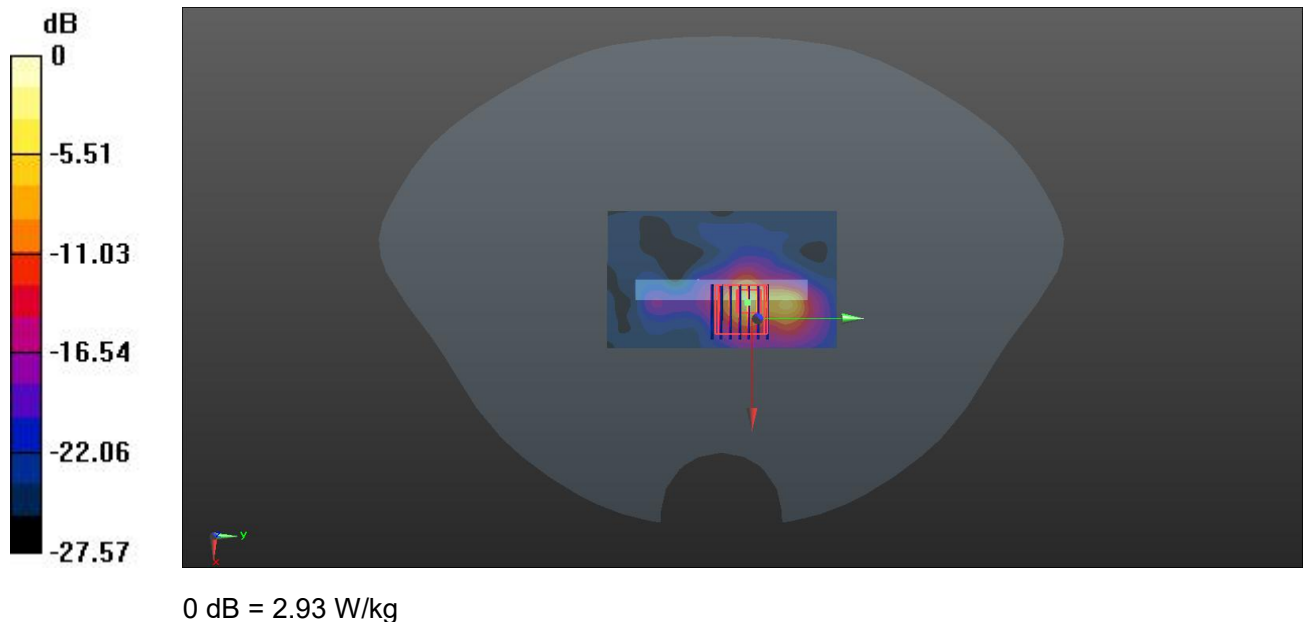
Ch54/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.345 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 5.82 W/kg

SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.255 W/kg

Maximum value of SAR (measured) = 2.93 W/kg



MEAS.46 Body Plane with Top Edge 0mm on Channel 118 in IEEE802.11n(HT40) mode

Date: 2019.12.04

Communication System Band: WLAN(n)40Mhz; Frequency: 5590 MHz;Duty Cycle: 1:1.04

Medium parameters used: $f = 5590$ MHz; $\sigma = 5.84$ S/m; $\epsilon_r = 48.212$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature:22.6 Liquid Temperature:21.6

DASY5 Configuration:

- Probe: EX3DV4 - SN7510; ConvF(4.36, 4.36, 4.36); Calibrated: 2019.08.02;
- Sensor-Surface: 2mm (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)

Ch134/Area Scan (101x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.948 W/kg

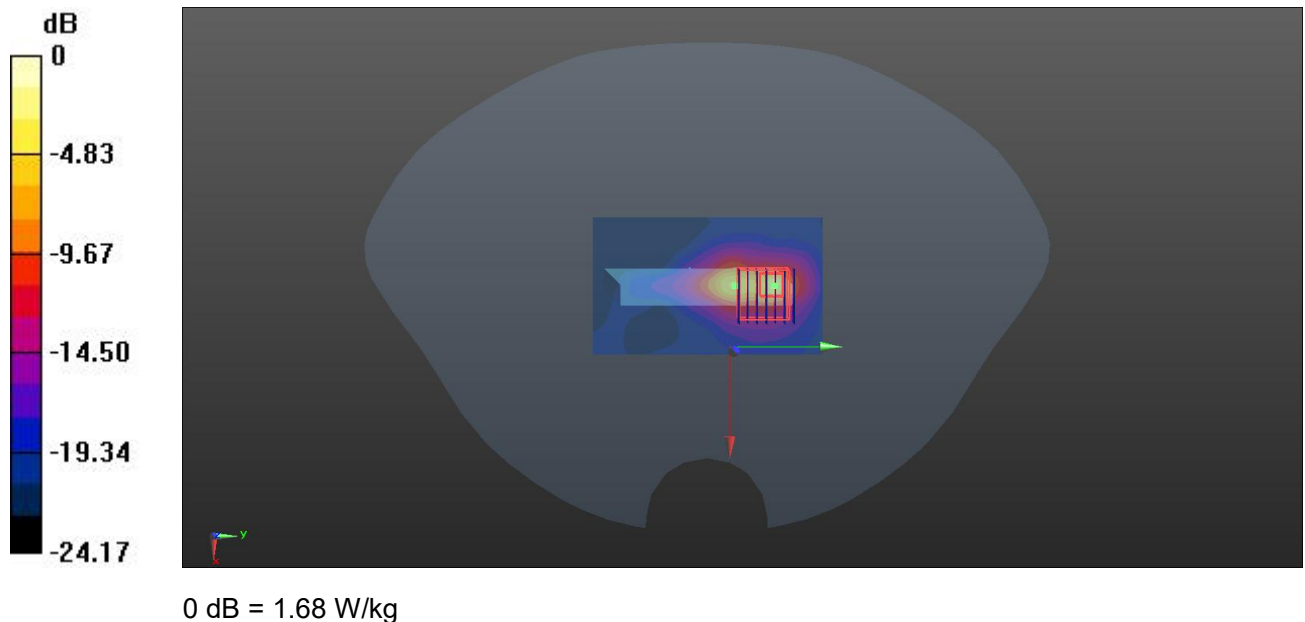
Ch134/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.466 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.29 W/kg

SAR(1 g) = 0.915 W/kg; SAR(10 g) = 0.353 W/kg

Maximum value of SAR (measured) = 1.68 W/kg



MEAS.47 Left Head with Cheek on Middle Channel in Bluetooth DH5 mode

Date: 2019.12.09

Communication System Band: BLE; Frequency: 2440 MHz; Duty Cycle: 1:1.6

Medium parameters used: $f = 2440$ MHz; $\sigma = 1.787$ S/m; $\epsilon_r = 39.563$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature: 22.4 Liquid Temperature: 21.8

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 Right 1857; Type: QD000P40CD; Serial: TP1857
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch19/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.153 W/kg

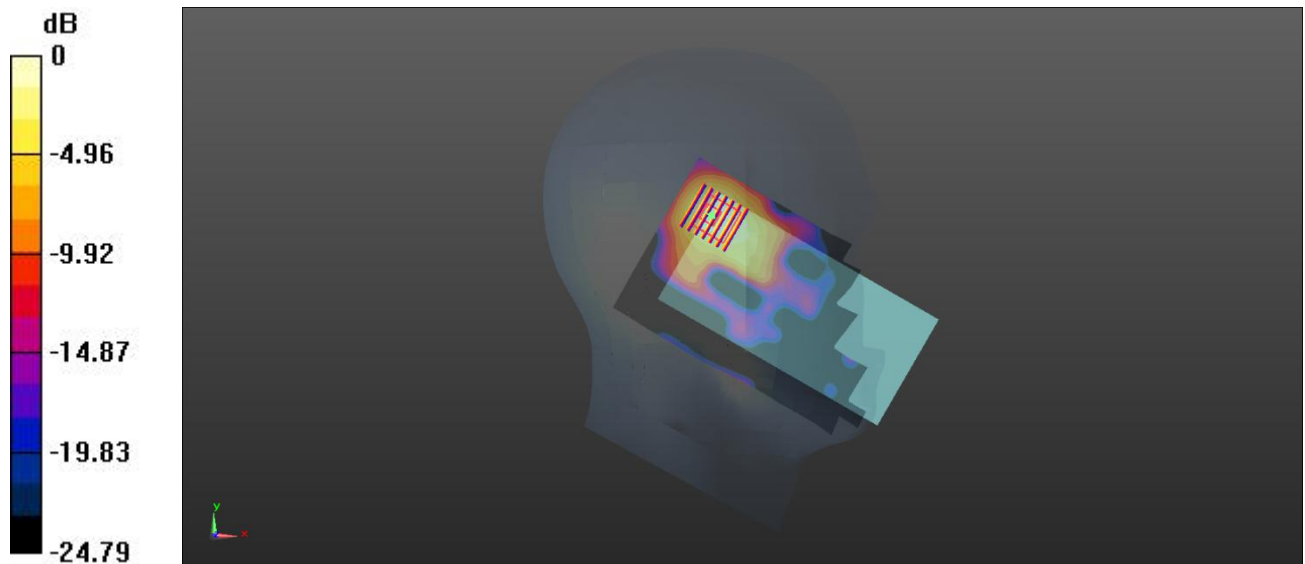
Ch19/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.876 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.285 W/kg

SAR(1 g) = 0.133 W/kg; SAR(10 g) = 0.064 W/kg

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



0 dB = 0.151 W/kg

MEAS.48 Body Plane with Back Side 15mm on Middle Channel in Bluetooth BLE mode

Date: 2019.12.10

Communication System Band: BLE; Frequency: 2440 MHz; Duty Cycle: 1:1.6

Medium parameters used (interpolated): $f = 2440$ MHz; $\sigma = 1.952$ S/m; $\epsilon_r = 52.986$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.0

DASY5 Configuration:

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

Ch19/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0332 W/kg

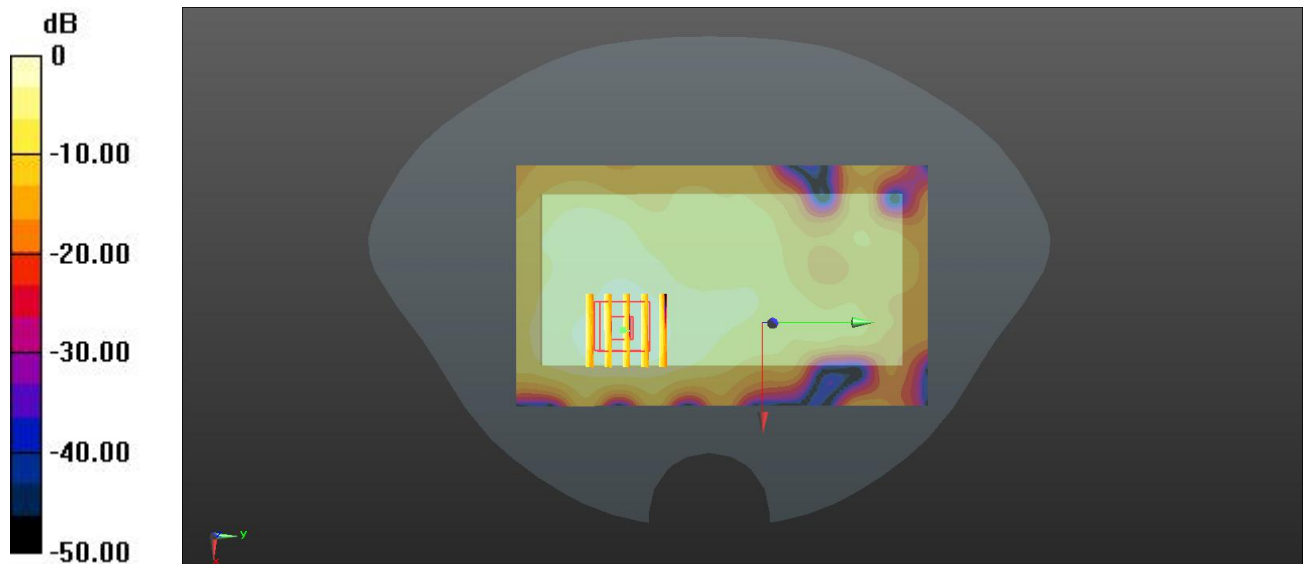
Ch19/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.258 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.0590 W/kg

SAR(1 g) = 0.031 W/kg; SAR(10 g) = 0.016 W/kg

Maximum value of SAR (measured) = 0.0341 W/kg



0 dB = 0.0341 W/kg

MEAS.49 Body Plane with Back Side 15mm on Middle Channel in Bluetooth BLE mode

Date: 2019.12.10

Communication System Band: BLE; Frequency: 2440 MHz; Duty Cycle: 1:1.6

Medium parameters used (interpolated): $f = 2440$ MHz; $\sigma = 1.952$ S/m; $\epsilon_r = 52.986$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4 Liquid Temperature: 21.0

DASY5 Configuration:

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

Ch19/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0692 W/kg

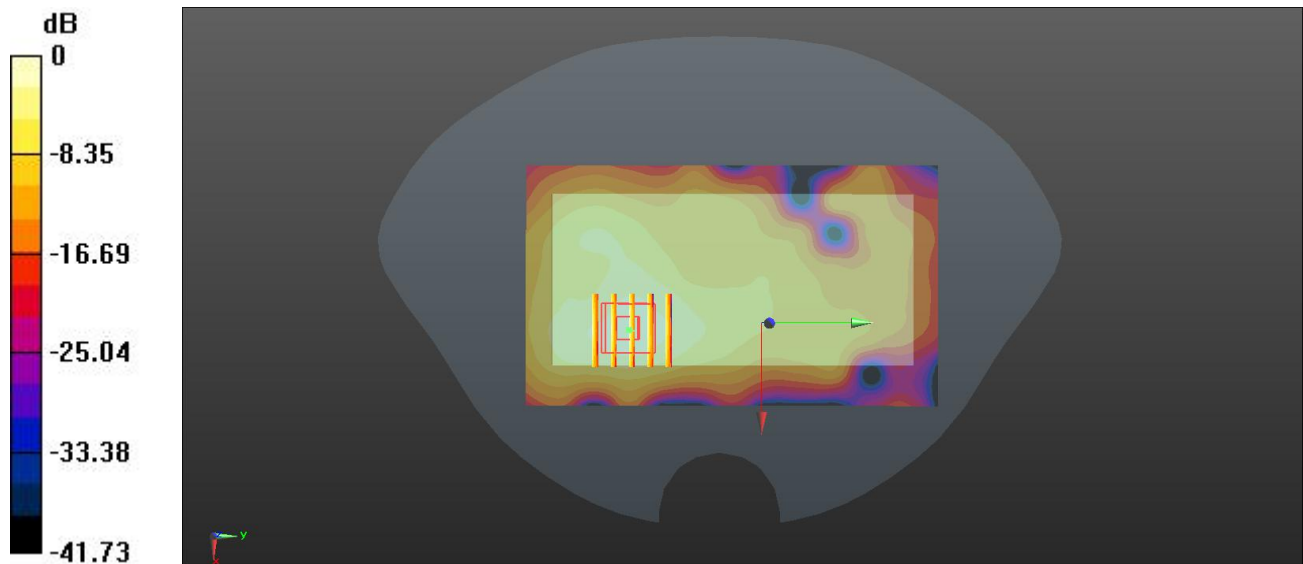
Ch19/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.194 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.118 W/kg

SAR(1 g) = 0.062 W/kg; SAR(10 g) = 0.031 W/kg

Maximum value of SAR (measured) = 0.0702 W/kg



0 dB = 0.0702 W/kg

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document "BL-SZ19A0431-AW.pdf".

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document "BL-SZ19A0431-AS.pdf".

ANNEX F CALIBRATION REPORT

Please refer the document "CALIBRATION REPORT.pdf".

--END OF REPORT--