



TESTING LABORATORY  
CERTIFICATE#4323.01



## SAR EVALUATION REPORT

For

### Shanghai Sunmi Technology Co.,Ltd.

Room 605, Block 7, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai 200433 China

**FCC ID: 2AH25T8910**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Handheld Wireless Terminal	
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<b>Report Number:</b>	RKSA201026002-20B	
<b>Report Date:</b>	2021-03-24	
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Attestation of Test Results			
EUT Information	Tested Model	T8910	
	Serial Number	RKSA201026002	
	Test Date	2021-01-13~2021-01-23 / 2021-03-04~2021-03-09	
Frequency Band	Max. SAR Level(s) Measured(W/kg)		Limit(W/kg)
GSM 850	1g Head SAR	0.09	1.6
	1g Body SAR	0.11	
PCS 1900	1g Head SAR	0.13	
	1g Body SAR	0.33	
WCDMA Band II	1g Head SAR	0.17	
	1g Body SAR	0.40	
WCDMA Band V	1g Head SAR	0.06	
	1g Body SAR	0.08	
LTE Band 12&LTE Band 17	1g Head SAR	0.06	
	1g Body SAR	0.15	
LTE Band 5	1g Head SAR	0.09	
	1g Body SAR	0.11	
LTE Band 25&LTE Band 2	1g Head SAR	0.12	
	1g Body SAR	0.27	
LTE Band 26	1g Head SAR	0.07	
	1g Body SAR	0.09	
LTE Band 66&LTE Band 4	1g Head SAR	0.16	
	1g Body SAR	0.31	
LTE Band 7	1g Head SAR	0.18	
	1g Body SAR	0.44	
LTE Band 40-Lower	1g Head SAR	0.02	
	1g Body SAR	0.35	
LTE Band 40-upper	1g Head SAR	0.02	
	1g Body SAR	0.49	
LTE Band 41&LTE Band 38	1g Head SAR	0.10	
	1g Body SAR	0.47	
WLAN 2.4GHz	1g Head SAR	0.27	
	1g Body SAR	0.25	
Bluetooth	1g Head SAR	0.07	

	1g Body SAR	0.01	<b>1.6</b>
<b>WLAN 5GHz</b>	1g Head SAR	0.55	
	1g Body SAR	0.39	
<b>RF ID</b>	1g Body SAR	0.76	
<b>Simultaneous</b>	1g Head SAR	0.73	
	1g Body SAR	1.51	
	1g Body SAR	1.29(Hotspot)	

Frequency Band	Max. SAR Level(s) Measured(W/kg)		Limit(W/kg)
<b>GSM 850</b>	10g Body SAR	0.40	<b>4.0</b>
<b>PCS 1900</b>	10g Body SAR	1.00	
<b>WCDMA Band II</b>	10g Body SAR	1.25	
<b>WCDMA Band V</b>	10g Body SAR	0.42	
<b>LTE Band 12&amp;LTE Band 17</b>	10g Body SAR	0.27	
<b>LTE Band 5</b>	10g Body SAR	0.41	
<b>LTE Band 25&amp;LTE Band 2</b>	10g Body SAR	1.00	
<b>LTE Band 26</b>	10g Body SAR	0.41	
<b>LTE Band 66&amp;LTE Band 4</b>	10g Body SAR	1.04	
<b>LTE Band 7</b>	10g Body SAR	0.53	
<b>LTE Band 40-Lower</b>	10g Body SAR	0.41	
<b>LTE Band 40-upper</b>	10g Body SAR	0.53	
<b>LTE Band 41&amp;LTE Band 38</b>	10g Body SAR	0.45	
<b>WLAN 2.4GHz</b>	10g Body SAR	0.16	
<b>Bluetooth</b>	10g Body SAR	0.01	
<b>WLAN 5GHz</b>	10g Body SAR	0.48	
<b>RF ID</b>	10g Body SAR	0.97	
<b>Simultaneous</b>	10g Body SAR	2.52	

<b>Applicable Standards</b>	<p><b>IEEE1528:2013</b> IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques</p>
	<p><b>FCC 47 CFR part 2.1093</b> Radiofrequency radiation exposure evaluation: portable devices</p>
	<p><b>IEC 62209-2:2010</b> Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices-Human models, instrumentation, and procedures-Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)</p>
	<p><b>62209-1:2016</b> Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1: Devices used next to the ear (Frequency range of 300 MHz to 6 GHz)</p>
	<p><b>KDB procedures</b> KDB 447498 D01 General RF Exposure Guidance v06 KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04 KDB865664 D02 RF Exposure Reporting v01r02 KDB941225 D01 3G SAR Procedures v03r01 KDB 941225 D05 SAR for LTE Devices v02r05 KDB941225 D06 Hotspot Mode v02r01 KDB 248227 D01 802 11 Wi-Fi SAR v02r02</p>

**Note:** This wireless device has been shown to be capable of compliance for localized specific absorption rate (SAR) for General Population/Uncontrolled Exposure limits specified in **FCC 47 CFR part 2.1093** and has been tested in accordance with the measurement procedures specified in IEEE 1528-2013 and RF exposure KDB procedures.  
**The results and statements contained in this report pertain only to the device(s) evaluated.**

**DOCUMENT REVISION HISTORY**

<b>Revision Number</b>	<b>Report Number</b>	<b>Description of Revision</b>	<b>Date of Revision</b>
1.0	RKSA201026002-20B	Original Report	2021-03-24

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## EUT DESCRIPTION

This report has been prepared on behalf of **Shanghai Sunmi Technology Co.,Ltd.** and their product **Handheld Wireless Terminal**, Model: **T8910** or the EUT (Equipment under Test) as referred to in the rest of this report.

*\*All measurement and test data in this report was gathered from production sample serial number: RKSA201026002-1. (Assigned by the BACL. The EUT supplied by the applicant was received on 2020-10-26)*

### Product Description for Equipment under Test (EUT)

Applicant:	Shanghai Sunmi Technology Co.,Ltd.
Tested Model:	T8910
Product Type:	Handheld Wireless Terminal
Power Supply:	DC 3.8V from battery and DC 5V from Adapter
RF Function:	GSM/GPRS/EGPRS, WCDMA, LTE, 2.4G Wi-Fi; BT; 5G Wi-Fi
Operating Band/Frequency:	GPRS/EGPRS 850: 824-849 MHz(TX), 869-894 MHz(RX)
	GPRS/EGPRS 1900: 1850-1910MHz(TX), 1930-1990MHz(RX)
	WCDMA Band II: 1850-1910 MHz(TX), 1930-1990 MHz(RX)
	WCDMA Band V: 824-849 MHz(TX), 869-894 MHz(RX)
	LTE Band 2: 1850-1910 MHz(TX), 1930-1990MHz(RX)
	LTE Band 4: 1710-1755 MHz(TX), 2110-2155MHz(RX)
	LTE Band 5: 824-849 MHz(TX), 869-894 MHz(RX)
	LTE Band 7: 2500-2570 MHz(TX), 2620-2690 MHz(RX)
	LTE Band 12: 699-716 MHz(TX), 729-746 MHz(RX)
	LTE Band 17: 704-716 MHz(TX), 734-746 MHz(RX)
	LTE Band 25: 1850-1915 MHz(TX), 1930-1995 MHz(RX)
	LTE Band 26: 814-849 MHz(TX), 859-894 MHz(RX)
	LTE Band 38: 2570-2620 MHz(TX), 2570-2620 MHz(RX)
	LTE Band 40 Lower: 2305-2315 MHz(TX), 2305-2315 MHz(RX)
	LTE Band 40 Upper: 2350-2360 MHz(TX), 2350-2360 MHz(RX)
	LTE Band 41: 2555-2655 MHz(TX), 2555-2655 MHz(RX)
	LTE Band 66: 1710-1780 MHz(TX), 2110-2200 MHz(RX)
2.4G Wi-Fi: 2412-2462 MHz(b/g/n20), 2422-2452 MHz(n40)	
BT: 2402-2480 MHz; BLE(1Mbps)/BLE(2Mbps): 2402-2480 MHz	
5G Band 1: 5150~5250 MHz, 5G Band 4: 5725~5850 MHz	
RFID: 915.0~924.8MHz	
Power Class:	GSM900: Class 4; DCS1800: Class 1; WCDMA: Class 3; LTE: Class 3
Modulation Type	GSM/GPRS/EGPRS: GMSK, 8PSK
	WCDMA: BPSK, QPSK, 16QAM; LTE: QPSK, 16QAM
	2.4G Wi-Fi: DSSS, OFDM; 5G Wi-Fi: OFDM
	BT 3.0: GFSK, $\pi/4$ -DQPSK, 8DPSK; BLE: GFSK
RFID: ASK	
Antenna Type:	2G/3G/4G/2.4G Wifi/5G Wifi/BT: FPC Antenna
	RFID: Ceramics Antenna

## REFERENCE, STANDARDS, AND GUIDELINES

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### **FCC:**

The Report and Order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g as recommended by the ANSI/IEEE standard C95.1-1992 [6] for an uncontrolled environment (Paragraph 65). According to the Supplement C of OET Bulletin 65 "Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in North America is 1.6 mW/g average over 1 gram of tissue mass.

### **CE:**

The order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 2 mW/g as recommended by EN62209-1 for an uncontrolled environment. According to the Standard, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in Europe is 2 mW/g average over 10 gram of tissue mass.

The test configurations were laid out on a specially designed test fixture to ensure the reproducibility of measurements. Each configuration was scanned for SAR. Analysis of each scan was carried out to characterize the above effects in the device.



**SAR Limits**

**FCC Limit**

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1 g of tissue)	1.60	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

**CE Limit**

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 10 g of tissue)	2.0	10
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

Population/Uncontrolled Environments are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.

Occupational/Controlled Environments are defined as locations where there is exposure that maybe incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).

General Population/Uncontrolled environments Spatial Peak limit 1.6W/kg (FCC) & 2 W/kg(CE) applied to the EUT.

## **FACILITIES**

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The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) Lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4323.01) and the FCC designation No. CN1185 under the FCC KDB 974614 D01and CAB identifier CN0004 under the ISED requirement. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

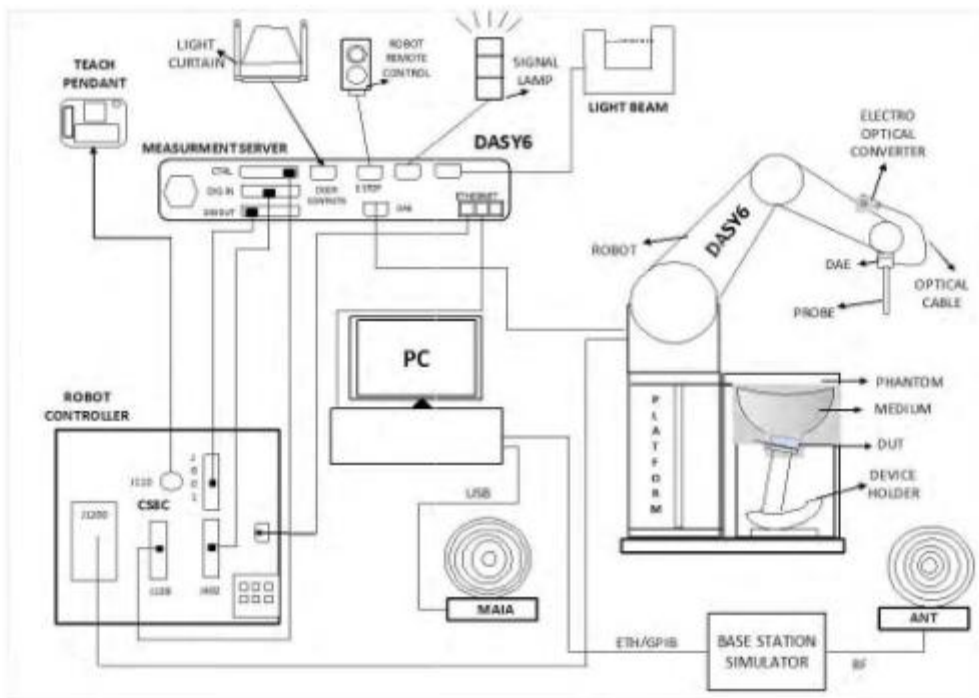
## DESCRIPTION OF TEST SYSTEM

These measurements were performed with the automated near-field scanning system DASY6 from Schmid & Partner Engineering AG (SPEAG) which is the Fifth generation of the system shown in the figure hereinafter:



### DASY6 System Description

The DASY6 system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot (Staubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal application, 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.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 professional operating system and the DASY52 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

### DASY6 Measurement Server

The DASY6 measurement server is based on a PC/104 CPU board with a 400 MHz Intel ULV Celeron, 128 MB chip-disk and 128 MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) electronics box, as well as the 16-bit AD converter system for optical detection and digital I/O interface are contained on the DASY6 I/O board, which is directly connected to the PC/104 bus of the CPU board.



The measurement server performs all real-time data evaluations of field measurements and surface detection, controls robot movements, and handles safety operations. The PC operating system cannot interfere with these time-critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program- controlled robot movements. Furthermore, the measurement server is equipped with an expansion port, which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Connection of devices from any other supplier could seriously damage the measurement server.

**Data Acquisition Electronics**

The data acquisition electronics (DAE4) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter 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.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of both the DAE4 as well as of the DAE3 box is 200M $\Omega$ ; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

**EX3DV4 E-Field Probes**

<b>Frequency</b>	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
<b>Directivity</b>	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
<b>Dynamic Range</b>	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
<b>Dimensions</b>	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
<b>Application</b>	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
<b>Compatibility</b>	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

**SAM Twin Phantom**

The SAM Twin Phantom (shown in front of DASY6) is a fiberglass shell phantom with shell thickness 2 mm, except in the ear region where the thickness is increased to 6 mm. The phantom has three measurement areas: 1) Left Head, 2) Right Head, and 3) Flat Section. For larger devices, the use of the ELI-Phantom (shown behind DASY6) is required. For devices such as glasses with a wireless link, the Face Down Phantom is the most suitable (between the SAM Twin and ELI phantoms).

When the phantom is mounted inside allocated slot of the DASY6 platform, phantom reference points can be taught directly in the DASY5 V5.2 software. When the DASY6 platform is used to mount the Phantom, some of the phantom teaching points cannot be reached by the robot in DASY5 V5.2. A special tool called P1a-P2aX-Former is provided to transform two of the three points, P1 and P2, to reachable locations. To use these new teaching points, a revised phantom configuration file is required.

In addition to our standard broadband liquids, the phantom can be used with the following tissue simulating liquids:

Sugar-water-based liquids can be left permanently in the phantom. Always cover the liquid when the system is not in use to prevent changes in liquid parameters due to water evaporation.

DGBE-based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom, and the phantom should be dried when the system is not in use (desirable at least once a week).

Do not use other organic solvents without previously testing the solvent resistivity of the phantom. Approximately 25 liters of liquid is required to fill the SAM Twin phantom.



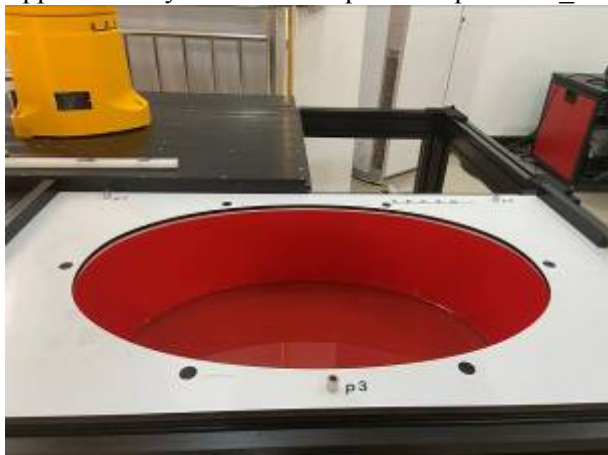
## ELI Phantom

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6 GHz. ELI is fully compatible with the latest draft of the standard IEC 62209-2 and the use of all known tissue simulating liquids. ELI has been optimized for performance and can be integrated into a SPEAG standard phantom table. A cover is provided to prevent evaporation of water and changes in liquid parameters. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points.

The phantom can be used with the following tissue simulating liquids:

- Sugar-water-based liquids can be left permanently in the phantom. Always cover the liquid when the system is not in use to prevent changes in liquid parameters due to water evaporation.
- DGBE-based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom, and the phantom should be dried when the system is not in use (desirable at least once a week).
- Do not use other organic solvents without previously testing the solvent resistivity of the phantom.

Approximately 25 liters of liquid is required to fill the ELI phantom.



## Robots

The DASY6 system uses the high-precision industrial robots TX60L, TX90XL, and RX160L from Staubli SA (France). The TX robot family - the successor of the well-known RX robot family - continues to offer the features important for DASY6 applications:

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

The robots are controlled by the Staubli CS8c robot controllers. All information regarding the use and maintenance of the robot arm and the robot controller is provided

## Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 15mm<sup>2</sup> step integral, with 1.5mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

## Zoom Scan (Cube Scan Averaging)

The averaging zoom scan volume utilized in the DASY5 software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/m<sup>3</sup> is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 10mm, with the side length of the 10g cube is 21.5mm.

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 7 x 7 x 7 (5mmx5mmx5mm) providing a volume of 30 mm in the X & Y & Z axis.



## Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEC 62209-1:2016

### Recommended Tissue Dielectric Parameters for Head liquid

**Table A.3 – Dielectric properties of the head tissue-equivalent liquid**

Frequency MHz	Relative permittivity $\epsilon_r$	Conductivity ( $\sigma$ ) S/m
300	45,3	0,87
450	43,5	0,87
<i>750</i>	<i>41,9</i>	<i>0,89</i>
835	41,5	0,90
900	41,5	0,97
1 450	40,5	1,20
<i>1 500</i>	<i>40,4</i>	<i>1,23</i>
<i>1 640</i>	<i>40,2</i>	<i>1,31</i>
<i>1 750</i>	<i>40,1</i>	<i>1,37</i>
1 800	40,0	1,40
1 900	40,0	1,40
2 000	40,0	1,40
<i>2 100</i>	<i>39,8</i>	<i>1,49</i>
<i>2 300</i>	<i>39,5</i>	<i>1,67</i>
2 450	39,2	1,80
<i>2 600</i>	<i>39,0</i>	<i>1,96</i>
3 000	38,5	2,40
<i>3 500</i>	<i>37,9</i>	<i>2,91</i>
<i>4 000</i>	<i>37,4</i>	<i>3,43</i>
<i>4 500</i>	<i>36,8</i>	<i>3,94</i>
<i>5 000</i>	<i>36,2</i>	<i>4,45</i>
<i>5 200</i>	<i>36,0</i>	<i>4,66</i>
<i>5 400</i>	<i>35,8</i>	<i>4,86</i>
<i>5 600</i>	<i>35,5</i>	<i>5,07</i>
<i>5 800</i>	<i>35,3</i>	<i>5,27</i>
<i>6 000</i>	<i>35,1</i>	<i>5,48</i>

NOTE For convenience, permittivity and conductivity values at those frequencies which are not part of the original data provided by Drossos et al. [33] or the extension to 5 800 MHz are provided (i.e. the values shown *in italics*). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6 000 MHz that were linearly extrapolated from the values at 3 000 MHz and 5 800 MHz.

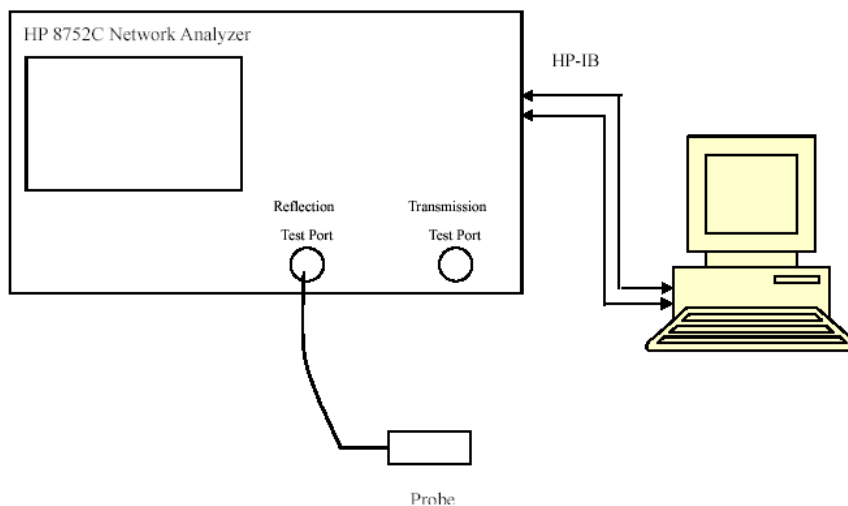
## EQUIPMENT LIST AND CALIBRATION

### Equipments List & Calibration Information

Equipment	Model	S/N	Calibration Date	Calibration Due Date
DASY5 Test Software	DASY52 52.10.2	N/A	NCR	NCR
DASY6 Measurement Server	DASY6 6.0.31	N/A	NCR	NCR
Data Acquisition Electronics	DAE4	527	2020/07/9	2021/07/8
E-Field Probe	EX3DV4	7557	2020/11/05	2021/11/04
Mounting Device	MD4HHTV5	SD 000 H01 KA	NCR	NCR
Twin-SAM Phantom	QD 000 P41 AA	1963	NCR	NCR
Dipole, 750MHz	D750V3	1166	2018/09/05	2021/09/04
Dipole, 835MHz	D835V2	445	2019/12/17	2022/12/16
Dipole, 1750MHz	D1750V2	1140	2018/06/25	2021/06/24
Dipole, 1900MHz	D1900V2	5d206	2018/09/11	2021/09/10
Dipole, 2300MHz	D2300V2	1098	2019/10/02	2022/10/01
Dipole, 2450MHz	D2450V2	970	2018/06/26	2021/06/25
Dipole, 2600MHz	D2600V2	1162	2019/10/02	2022/10/01
Dipole, 5GHz	D5GHzV2	1296	2019/10/03	2022/10/02
Simulated Tissue LiquidHead	HBBL600-6000V6	180611-3	Each Time	
Network Analyzer	8753B	3625A00809	2020/12/13	2021/12/12
Dielectric Assessment Kit	DAK-3.5	SM DAK 300AB	NCR	NCR
Signal Generator	N5182B	MY53051592	2020/12/13	2021/12/12
Power Meter	E4419B	GB43312421	2020/08/04	2021/08/03
Power Amplifier	5S1G4	71377	NCR	NCR
Directional Coupler	4242-10	3307	NCR	NCR
Attenuator	3dB	5402	NCR	NCR
Attenuator	10dB	AU 3842	NCR	NCR
UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	100184	2020/02/14	2021/02/13
Wideband Radio Communication Tester	CMW500	104478	2020/08/04	2021/08/03
Signal Analyzer	FSV40	101116	2020-07-22	2021-07-21

# SAR MEASUREMENT SYSTEM VERIFICATION

## Liquid Verification



Liquid Verification Setup Block Diagram

## Liquid Verification Results

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma'$ (S/m)	$\epsilon_r$	$\sigma'$ (S/m)	$\epsilon_r$	$\Delta \sigma'$	$\Delta \epsilon_r$	
750	750MHz Head	0.900	41.545	0.89	41.90	1.12	-0.85	$\pm 5$
707.5	750MHz Head	0.861	42.103	0.89	42.11	-3.26	-0.02	$\pm 5$

\*Liquid Verification was performed on 2021/01/14

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma'$ (S/m)	$\epsilon_r$	$\sigma'$ (S/m)	$\epsilon_r$	$\Delta \sigma'$	$\Delta \epsilon_r$	
1900	1900MHz Head	1.423	38.836	1.40	40.00	1.64	-2.91	$\pm 5$
1880	1900MHz Head	1.406	38.933	1.40	40.00	0.43	-2.67	$\pm 5$
1882.5	1900MHz Head	1.407	38.920	1.40	40.00	0.50	-2.70	$\pm 5$

\*Liquid Verification was performed on 2021/01/18

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\Delta \sigma$	$\Delta \epsilon_r$	
835	835MHz Head	0.911	42.055	0.90	41.50	1.22	1.34	±5
836.6	835MHz Head	0.912	42.043	0.90	41.50	1.33	1.31	±5
836.5	835MHz Head	0.912	42.042	0.90	41.50	1.33	1.31	±5
831.5	835MHz Head	0.907	42.108	0.90	41.50	0.78	1.47	±5
920	835MHz Head	0.986	41.194	0.982	41.499	0.61	-0.74	±5

\*Liquid Verification was performed on 2021/01/15

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\Delta \sigma$	$\Delta \epsilon_r$	
1750	1750MHz Head	1.349	40.850	1.39	40.04	-2.95	2.02	±5
1745	1750MHz Head	1.343	40.868	1.38	40.05	-2.68	2.04	±5

\*Liquid Verification was performed on 2021/1/17

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\Delta \sigma$	$\Delta \epsilon_r$	
1900	1900MHz Head	1.423	38.836	1.40	40.00	1.64	-2.91	±5
1880	1900MHz Head	1.406	38.933	1.40	40.00	0.43	-2.67	±5
1882.5	1900MHz Head	1.407	39.920	1.40	40.00	0.50	-2.70	±5

\*Liquid Verification was performed on 2021/01/18

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
2450	2450MHz Head	1.880	38.153	1.80	39.20	4.44	-2.67	±5
2437	2450MHz Head	1.865	38.212	1.79	39.22	4.19	1.865	±5
2402	2450MHz Head	1.824	38.363	1.76	39.27	3.64	-2.31	±5

\*Liquid Verification was performed on 2021/01/19

**Liquid Verification Results**

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
2300	2300MHz Head	1.699	39.770	1.665	39.441	1.74	0.84	±5
2310	2300MHz Head	1.71	39.733	1.673	39.424	2.40	0.79	±5
2355	2300MHz Head	1.763	39.584	1.713	39.347	3.10	0.59	±5

\*Liquid Verification was performed on 2021/01/20

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
2600	2600MHz Head	2.052	37.734	1.96	39.00	4.69	-3.25	±5
2535	2600MHz Head	1.974	37.995	1.89	39.08	4.44	-2.78	±5
2593	2600MHz Head	2.043	37.756	1.95	39.01	4.77	-3.21	

\*Liquid Verification was performed on 2021/01/21

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
5250	5250MHz Head	4.627	35.797	4.71	35.95	-1.76	-0.43	±5
5180	5250MHz Head	4.537	35.954	4.64	36.02	-2.22	-0.18	±5

\*Liquid Verification was performed on 2021/01/22

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
5800	5800MHz Head	5.257	34.572	5.27	35.30	-0.25	-2.06	±5
5775	5800MHz Head	5.237	34.604	5.24	35.33	-0.06	-2.05	±5

\*Liquid Verification was performed on 2021/01/23

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
750	750MHz Head	0.902	41.933	0.89	41.90	1.35	0.08	±5
707.5	750MHz Head	0.863	42.554	0.89	42.11	-3.03	1.05	±5

\*Liquid Verification was performed on 2021/03/04

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
835	835MHz Head	0.918	42.754	0.90	41.50	2.00	3.02	±5
836.6	835MHz Head	0.918	42.733	0.90	41.50	2.00	2.97	±5
836.5	835MHz Head	0.919	42.731	0.90	41.50	2.11	2.97	±5
831.5	835MHz Head	0.914	42.804	0.90	41.50	1.56	3.14	±5

\*Liquid Verification was performed on 2021/03/04

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
1750	1750MHz Head	1.361	40.171	1.37	40.10	-0.66	0.18	±5
1745	1750MHz Head	1.356	40.193	1.38	40.05	-1.74	0.36	±5

\*Liquid Verification was performed on 2021/03/05

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\Delta \sigma$	$\Delta \epsilon_r$	
1900	1900MHz Head	1.401	38.694	1.40	40.00	0.07	-3.26	$\pm 5$
1880	1900MHz Head	1.378	38.779	1.40	40.00	-1.57	-3.05	$\pm 5$
1882.5	1900MHz Head	1.381	38.775	1.40	40.00	-1.36	-3.06	$\pm 5$

\*Liquid Verification was performed on 2021/03/05

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\Delta \sigma$	$\Delta \epsilon_r$	
2300	2300MHz Head	1.697	39.092	1.67	39.50	1.62	-1.03	$\pm 5$
2310	2300MHz Head	1.708	39.043	1.67	39.42	2.28	-0.96	$\pm 5$
2355	2300MHz Head	1.759	38.839	1.71	39.35	2.87	-1.30	$\pm 5$

\*Liquid Verification was performed on 2021/03/06

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\Delta \sigma$	$\Delta \epsilon_r$	
2450	2450MHz Head	1.864	38.443	1.80	39.20	3.56	-1.93	$\pm 5$
2437	2450MHz Head	1.85	38.502	1.79	39.22	3.35	-1.83	$\pm 5$
2402	2450MHz Head	1.811	38.661	1.76	39.27	2.90	-1.55	$\pm 5$

\*Liquid Verification was performed on 2021/03/06

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\Delta \sigma$	$\Delta \epsilon_r$	
2600	2600MHz Head	2.038	37.830	1.96	39.00	3.98	-3.00	$\pm 5$
2535	2600MHz Head	1.962	38.095	1.89	39.08	3.81	-2.52	$\pm 5$
2593	2600MHz Head	2.030	37.854	1.95	39.01	4.10	-2.96	$\pm 5$

\*Liquid Verification was performed on 2021/03/07

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
5250	5250MHz Head	4.882	37.306	4.71	35.90	3.65	3.92	±5
5180	5250MHz Head	4.809	37.422	4.64	36.02	3.64	3.89	±5

\*Liquid Verification was performed on 2021/03/08

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
5800	5800MHz Head	5.464	36.461	5.27	35.30	3.68	3.29	±5
5775	5800MHz Head	5.438	36.513	5.24	35.33	3.78	3.35	±5

\*Liquid Verification was performed on 2021/03/08

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta(%)		Tolerance (%)
		O (S/m)	$\epsilon_r$	O (S/m)	$\epsilon_r$	$\Delta O$	$\Delta \epsilon_r$	
835	835MHz Head	0.906	42.171	0.90	41.50	0.67	1.62	±5
920	835MHz Head	0.986	41.194	0.982	41.499	0.61	-0.74	±5

\*Liquid Verification was performed on 2021/03/09



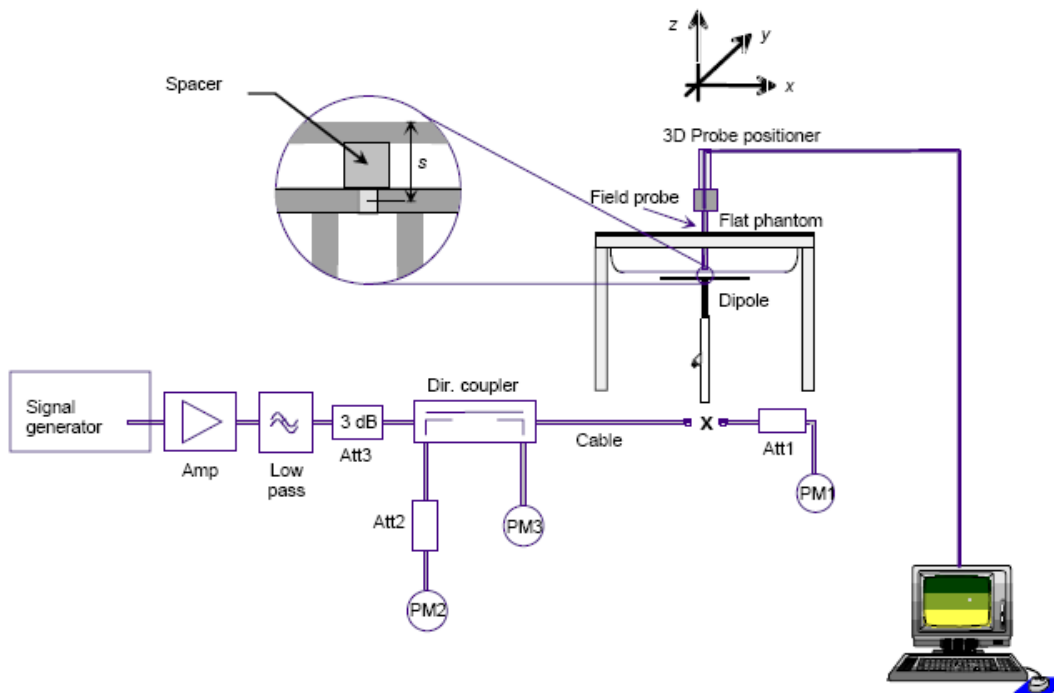
### System Accuracy Verification

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of  $\pm 10\%$ . The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

The spacing distances in the **System Verification Setup Block Diagram** is given by the following:

- a)  $s = 15 \text{ mm} \pm 0,2 \text{ mm}$  for  $300 \text{ MHz} \leq f \leq 1 \text{ 000 MHz}$ ;
- b)  $s = 10 \text{ mm} \pm 0,2 \text{ mm}$  for  $1 \text{ 000 MHz} < f \leq 3 \text{ 000 MHz}$ ;
- c)  $s = 10 \text{ mm} \pm 0,2 \text{ mm}$  for  $3 \text{ 000 MHz} < f \leq 6 \text{ 000 MHz}$ .

### System Verification Setup Block Diagram



**System Accuracy Check Results**

Date	Frequency Band (MHz)	Liquid Type	Input Power (mW)	Measured SAR (W/kg)		Normalized to 1W (W/kg)	Target Value (W/Kg )	Delta (%)	Tolerance (%)
				1g	2.04				
2021/01/14	750	Head	250	1g	2.04	8.16	8.26	-1.21	±10
				10g	1.30	5.2	5.56	-6.47	
2021/01/15	835	Head	250	1g	2.51	10.04	9.52	5.46	±10
				10g	1.59	6.36	6.20	2.58	
2021/01/17	1750	Head	250	1g	8.82	35.28	36.50	-3.34	±10
				10g	4.65	18.60	19.90	-6.53	
2021/01/18	1900	Head	250	1g	10.00	39.20	40.00	2.04	±10
				10g	5.08	20.32	20.80	-2.31	
2021/01/19	2450	Head	250	1g	13.70	54.80	53.30	-1.51	±10
				10g	6.33	25.32	25.10	0.88	
2021/01/20	2300	Head	250	1g	11.60	46.40	48.00	-3.33	±10
				10g	5.61	22.44	23.10	-2.86	
2021/01/21	2600	Head	250	1g	13.50	54.00	55.40	6.43	±10
				10g	6.43	25.72	24.90	3.29	
2021/01/22	5250	Head	100	1g	7.35	73.50	79.20	-7.20	±10
				10g	2.09	20.90	22.70	-7.93	
2021/01/23	5800	Head	100	1g	8.52	85.20	79.90	6.63	±10
				10g	2.34	23.40	22.60	3.54	

\*The SAR values above are normalized to 1 Watt forward power

Date	Frequency Band (MHz)	Liquid Type	Input Power (mW)	Measured SAR (W/kg)		Normalized to 1W (W/kg)	Target Value (W/Kg)	Delta (%)	Tolerance (%)
				1g	2.25				
2021/03/04	750	Head	250	1g	2.25	9.00	8.26	8.96	±10
				10g	1.50				
2021/03/04	835	Head	250	1g	2.61	10.44	9.52	9.66	±10
				10g	1.69				
2021/03/05	1750	Head	250	1g	9.45	37.80	36.50	3.56	±10
				10g	5.09				
2021/03/05	1900	Head	250	1g	8.88	35.52	39.20	-9.39	±10
				10g	4.69				
2021/03/06	2300	Head	250	1g	12.40	49.60	48.00	3.33	±10
				10g	5.95				
2021/03/06	2450	Head	250	1g	14.50	58.00	53.30	8.82	±10
				10g	6.83				
2021/03/07	2600	Head	250	1g	15.10	60.40	55.40	9.03	±10
				10g	6.81				
2021/03/08	5250	Head	100	1g	7.42	74.2	79.20	-6.31	±10
				10g	2.07				
2021/03/08	5800	Head	100	1g	8.58	85.8	79.90	7.38	±10
				10g	2.45				
2021/03/09	835	Head	250	1g	2.56	10.24	9.52	7.56	±10
				10g	1.67				

\*The SAR values above are normalized to 1 Watt forward power

**SAR SYSTEM VALIDATION DATA**

System Check\_Head\_750MHz

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:1166

Communication System: UID 0, Systemperformance Check MHz (0); Frequency: 750 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.9 \text{ S/m}$ ;  $\epsilon_r = 41.545$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.39, 10.39, 10.39); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (101x201x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 2.20 W/kg

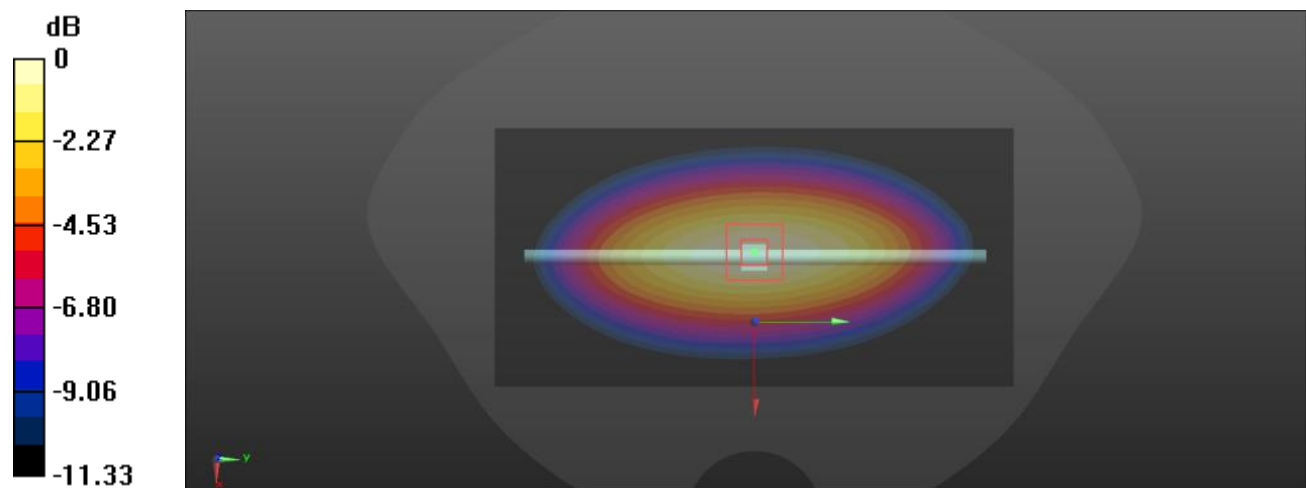
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 49.72 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 3.17 W/kg

**SAR(1 g) = 2.04 W/kg; SAR(10 g) = 1.3 W/kg**

Maximum value of SAR (measured) = 2.20 W/kg



$0 \text{ dB} = 2.20 \text{ W/kg} = 3.42 \text{ dBW/kg}$

System Check\_Head\_835MHz

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:445

Communication System: UID 0, Systemperformance Check MHz (0); Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.911 \text{ S/m}$ ;  $\epsilon_r = 42.055$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (101x201x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) = 2.72 W/kg

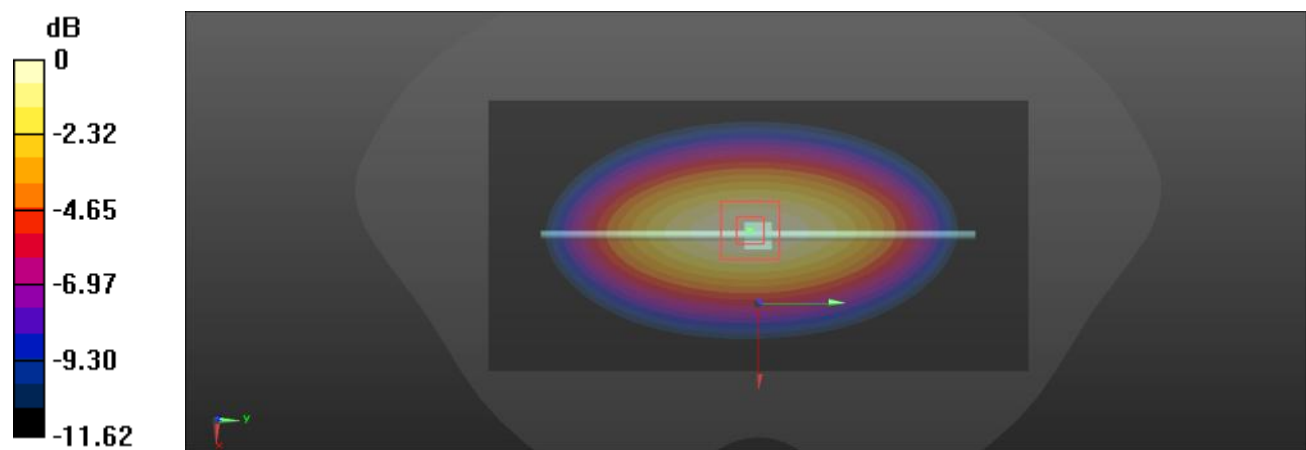
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 55.18 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 3.92 W/kg

**SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.59 W/kg**

Maximum value of SAR (measured) = 2.72 W/kg



$0 \text{ dB} = 2.72 \text{ W/kg} = 4.35 \text{ dBW/kg}$

System Check\_Head\_1750MHz

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2; Serial: D1750V2 - SN:1140

Communication System: UID 0, Systemperformance Check (0); Frequency: 1750 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 1750 \text{ MHz}$ ;  $\sigma = 1.349 \text{ S/m}$ ;  $\epsilon_r = 40.85$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.48, 8.48, 8.48); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (101x141x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 9.88 W/kg

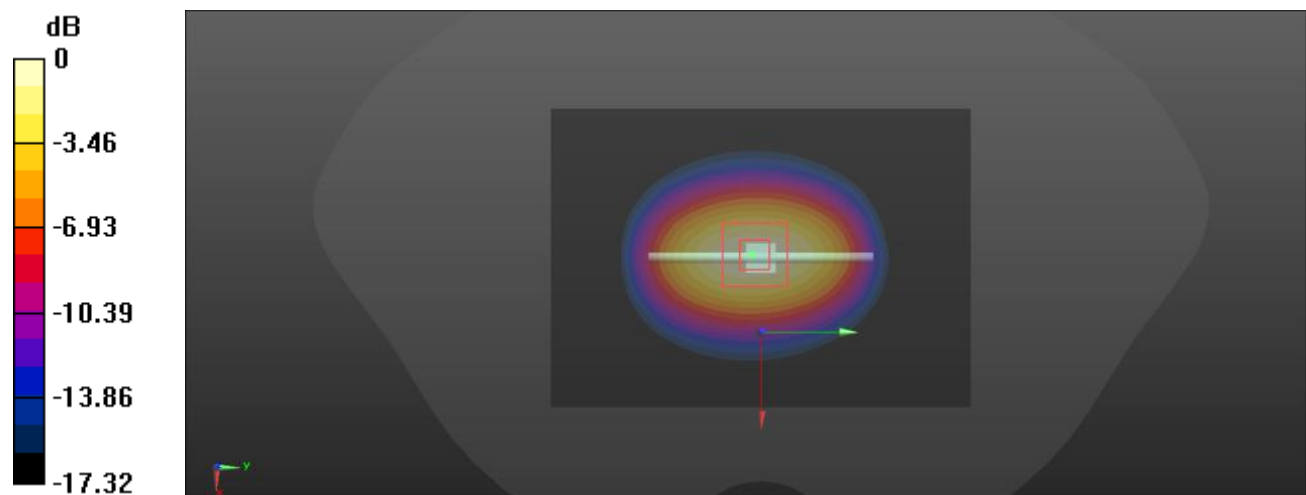
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 86.09 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 16.4 W/kg

**SAR(1 g) = 8.82 W/kg; SAR(10 g) = 4.65 W/kg**

Maximum value of SAR (measured) = 9.83 W/kg



$0 \text{ dB} = 9.83 \text{ W/kg} = 9.93 \text{ dBW/kg}$

System Check\_Head\_1900MHz

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d206

Communication System: UID 0, Systemperformance Check MHz (0); Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.423 \text{ S/m}$ ;  $\epsilon_r = 38.836$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

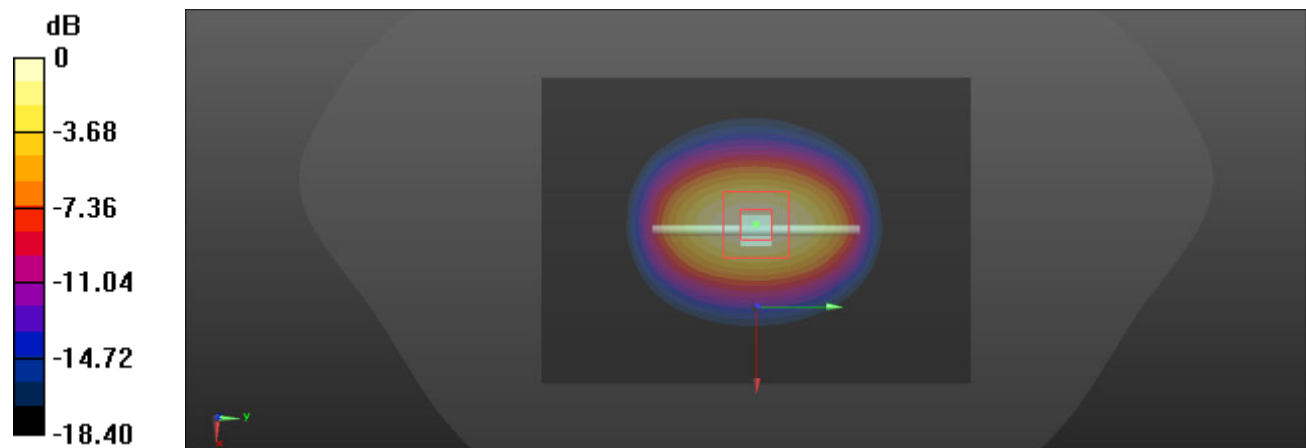
**Pin=250mW/Area Scan (101x141x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) = 11.2 W/kg

**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 89.00 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 19.5 W/kg

**SAR(1 g) = 10 W/kg; SAR(10 g) = 5.08 W/kg**

Maximum value of SAR (measured) = 11.2 W/kg



$0 \text{ dB} = 11.2 \text{ W/kg} = 10.49 \text{ dBW/kg}$

System Check\_Head\_2450MHz

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:970

Communication System: UID 0, Systemperformance Check 2450MHz (0); Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 2450 \text{ MHz}$ ;  $\sigma = 1.88 \text{ S/m}$ ;  $\epsilon_r = 38.153$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

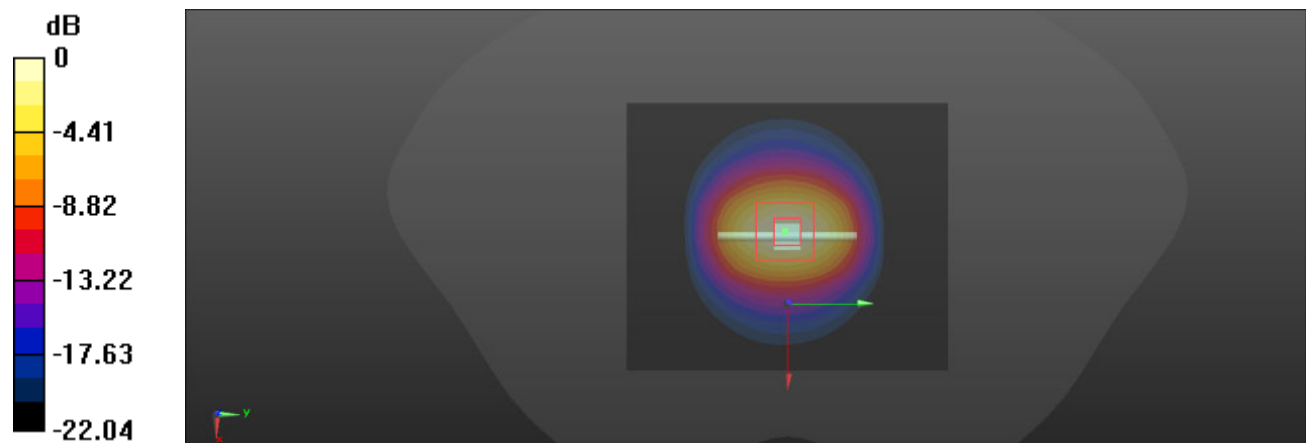
**Pin=250mW/Area Scan (101x121x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 15.7 W/kg

**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 89.74 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 28.8 W/kg

**SAR(1 g) = 13.7 W/kg; SAR(10 g) = 6.33 W/kg**

Maximum value of SAR (measured) = 15.6 W/kg



$0 \text{ dB} = 15.6 \text{ W/kg} = 11.93 \text{ dBW/kg}$



System Check\_Head\_2300MHz

DUT: Dipole 2300V2-1098; Type: D2300V2; Serial: D2300V2 - SN:1098

Communication System: UID 0, Systemperformance Check 2300MHz (0); Frequency: 2300 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 2300 \text{ MHz}$ ;  $\sigma = 1.699 \text{ S/m}$ ;  $\epsilon_r = 39.77$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.6, 7.6, 7.6); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (101x121x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 15.5 W/kg

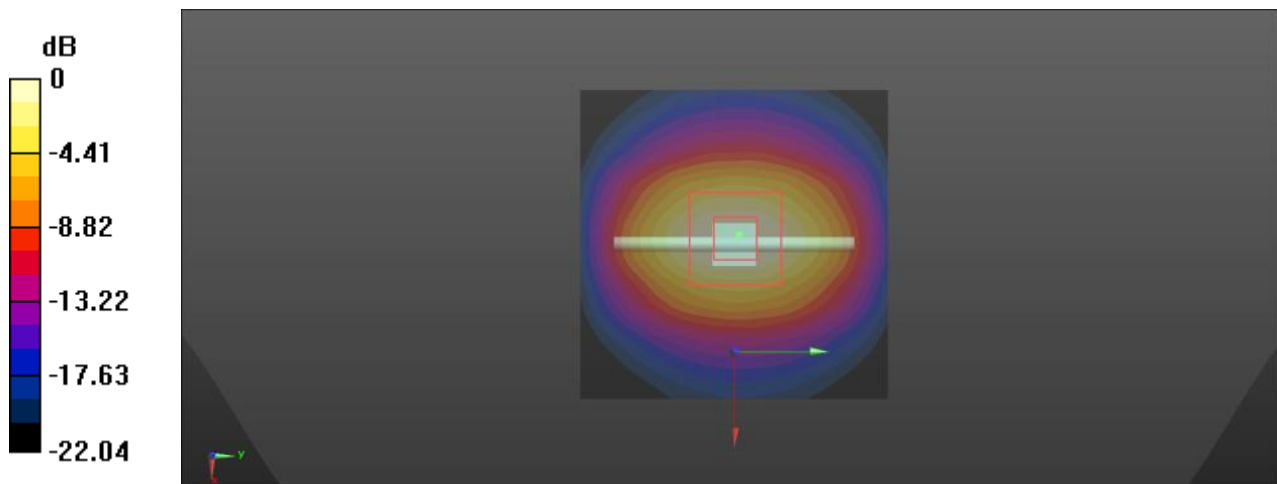
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 95.90 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 23.1 W/kg

**SAR(1 g) = 11.6 W/kg; SAR(10 g) = 5.61 W/kg**

Maximum value of SAR (measured) = 15.0 W/kg



$0 \text{ dB} = 15.0 \text{ W/kg} = 11.76\text{dBW/kg}$

System Check\_Head\_2600MHz

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2; Serial: D2600V2 - SN:1162

Communication System: UID 0, Systemperformance Check MHz (0); Frequency: 2600 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 2600 \text{ MHz}$ ;  $\sigma = 2.052 \text{ S/m}$ ;  $\epsilon_r = 37.734$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.13, 7.13, 7.13); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

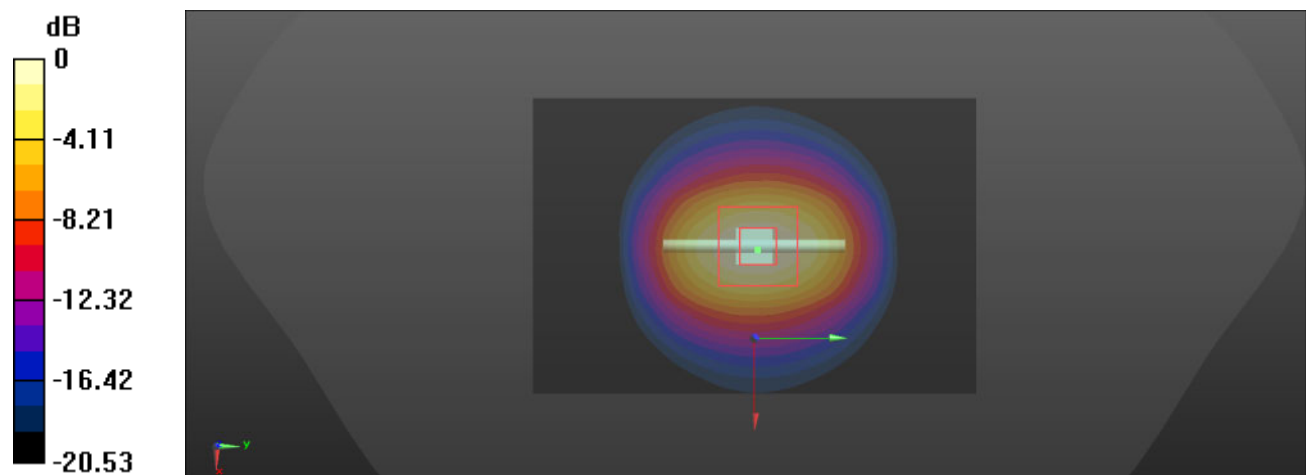
**Pin=250mW/Area Scan (81x121x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $15.7 \text{ W/kg}$

**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $93.07 \text{ V/m}$ ; Power Drift =  $-0.62 \text{ dB}$

Peak SAR (extrapolated) =  $27.2 \text{ W/kg}$

**SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.43 W/kg**

Maximum value of SAR (measured) =  $15.3 \text{ W/kg}$



$0 \text{ dB} = 15.3 \text{ W/kg} = 11.85 \text{ dBW/kg}$

System Check\_Head\_5250MHz

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1296

Communication System: UID 0, Systemperformance Check MHz (0); Frequency: 5250 MHz;Duty Cycle: 1:1

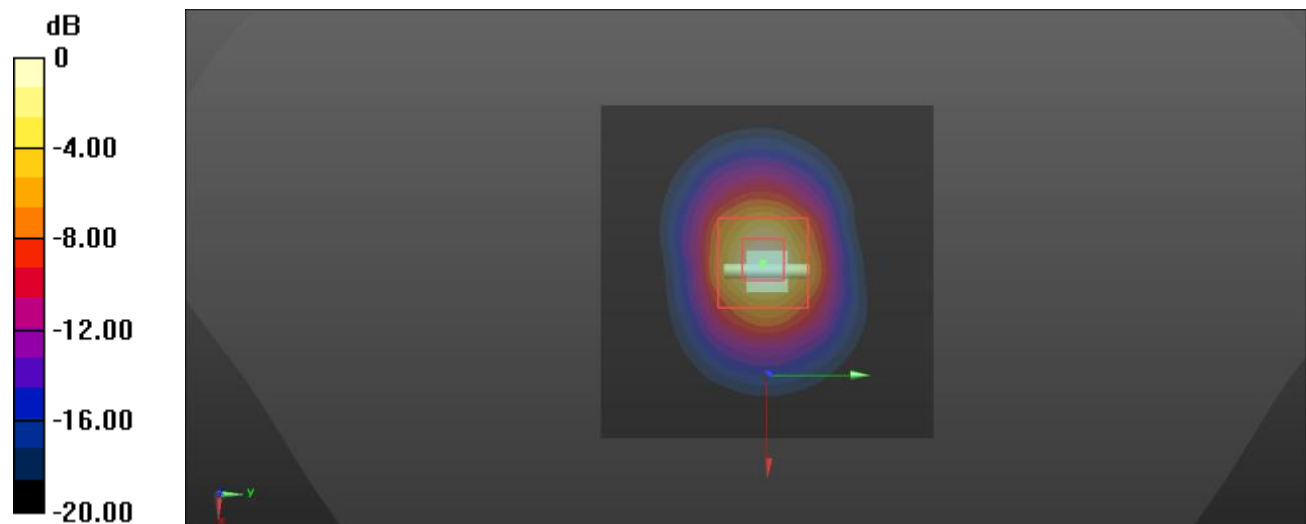
Medium parameters used:  $f = 5250 \text{ MHz}$ ;  $\sigma = 4.627 \text{ S/m}$ ;  $\epsilon_r = 35.797$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(5.38, 5.38, 5.38); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=100mW/Area Scan (81x81x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) = 8.04 W/kg

**Pin=100mW/Zoom Scan (8x8x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$   
 Reference Value = 41.62 V/m; Power Drift = -0.04 dB  
 Peak SAR (extrapolated) = 30.8 W/kg  
**SAR(1 g) = 7.35 W/kg; SAR(10 g) = 2.09 W/kg**  
 Maximum value of SAR (measured) = 7.64 W/kg



$$0 \text{ dB} = 7.64 \text{ W/kg} = 8.83 \text{ dBW/kg}$$

System Check\_Head\_5800MHz

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1296

Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1

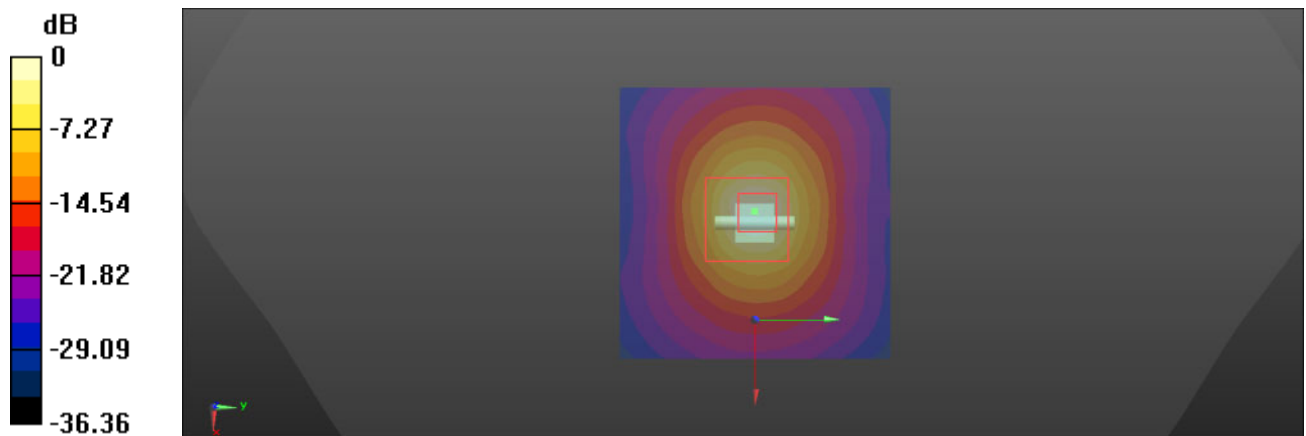
Medium parameters used:  $f = 5800 \text{ MHz}$ ;  $\sigma = 5.257 \text{ S/m}$ ;  $\epsilon_r = 34.572$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(4.73, 4.73, 4.73); Calibrated: 11/5/2020;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Type: QD 000 P41 Ax; Serial: 1953
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=100mW/Area Scan (71x71x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) = 22.3 W/kg

**Pin=100mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$   
 Reference Value = 68.41 V/m; Power Drift = 0.03 dB  
 Peak SAR (extrapolated) = 40.4 W/kg  
**SAR(1 g) = 8.52 W/kg; SAR(10 g) = 2.34 W/kg**  
 Maximum value of SAR (measured) = 22.2 W/kg



$0 \text{ dB} = 22.2 \text{ W/kg} = 13.46 \text{ dBW/kg}$

System Check\_Head\_750MHz

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:1166

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.902 \text{ S/m}$ ;  $\epsilon_r = 41.933$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.39, 10.39, 10.39); Calibrated: 11/5/2020,
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (51x51x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 2.56 W/kg

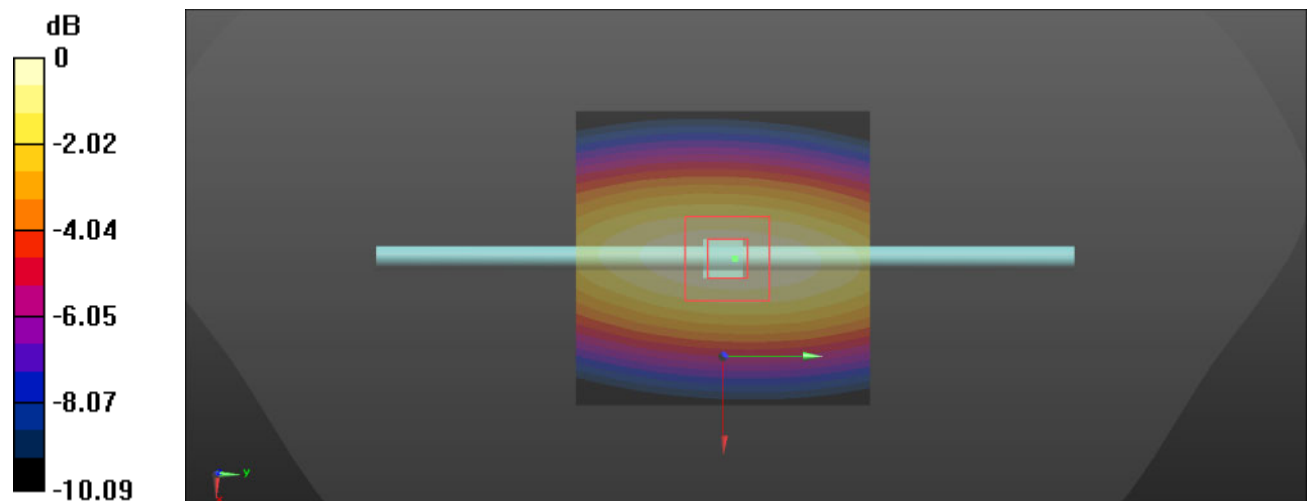
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 53.89 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 3.32 W/kg

**SAR(1 g) = 2.25 W/kg; SAR(10 g) = 1.5 W/kg**

Maximum value of SAR (measured) = 2.61 W/kg



0 dB = 2.61 W/kg = 4.17 dBW/kg

System Check\_Head\_835MHz

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:445

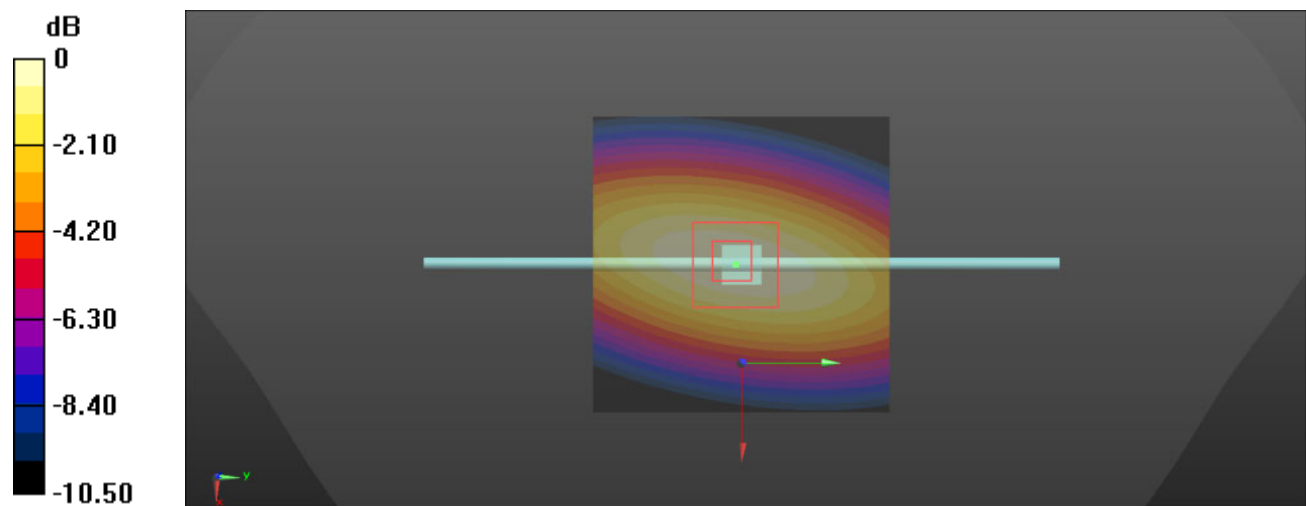
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.918 \text{ S/m}$ ;  $\epsilon_r = 42.754$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (51x51x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $3.04 \text{ W/kg}$

**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $58.32 \text{ V/m}$ ; Power Drift =  $-0.04 \text{ dB}$   
 Peak SAR (extrapolated) =  $3.85 \text{ W/kg}$   
**SAR(1 g) = 2.61 W/kg; SAR(10 g) = 1.69 W/kg**  
 Maximum value of SAR (measured) =  $3.06 \text{ W/kg}$



0 dB =  $3.06 \text{ W/kg} = 4.86 \text{ dBW/kg}$

System Check\_Head\_1750MHz

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2; Serial: D1750V2 - SN:1140

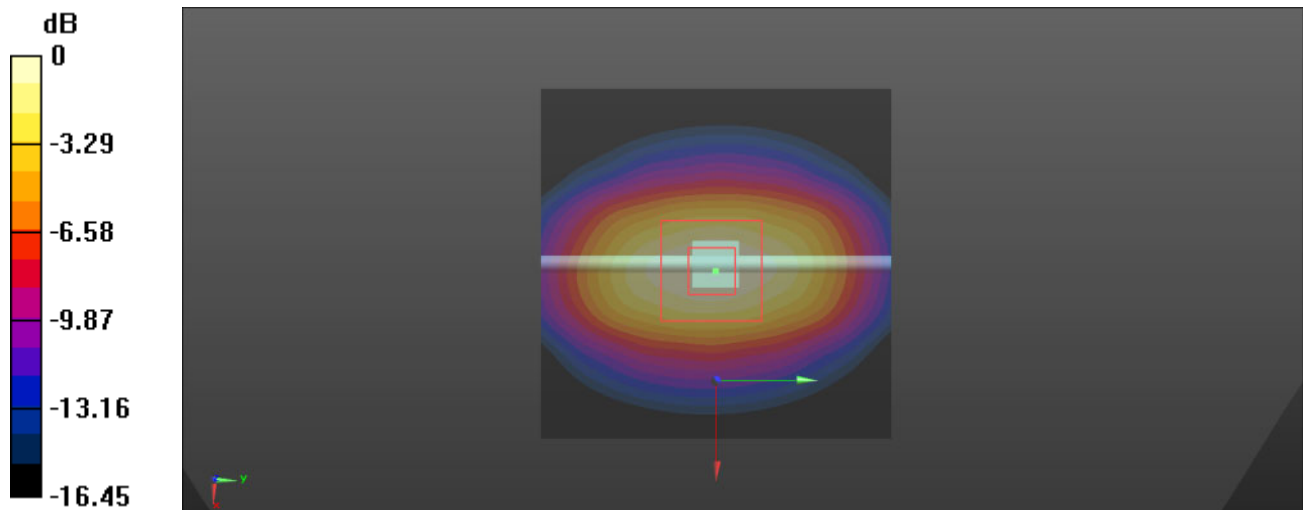
Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1750 \text{ MHz}$ ;  $\sigma = 1.361 \text{ S/m}$ ;  $\epsilon_r = 40.171$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.48, 8.48, 8.48); Calibrated: 11/5/2020,
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (51x51x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) = 12.9 W/kg

**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 93.38 V/m; Power Drift = -0.02 dB  
 Peak SAR (extrapolated) = 16.6 W/kg  
**SAR(1 g) = 9.45 W/kg; SAR(10 g) = 5.09 W/kg**  
 Maximum value of SAR (measured) = 11.8 W/kg



0 dB = 11.8 W/kg = 10.72 dBW/kg

System Check\_Head\_1900MHz

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d206

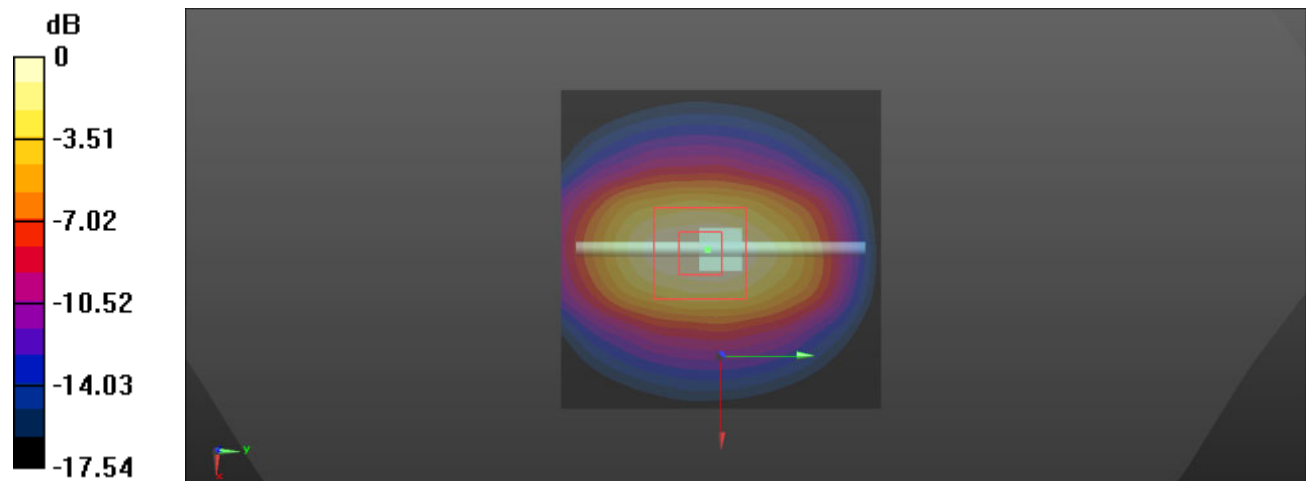
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.401 \text{ S/m}$ ;  $\epsilon_r = 38.694$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (51x51x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) = 12.0 W/kg

**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 88.18 V/m; Power Drift = -0.05 dB  
 Peak SAR (extrapolated) = 15.7 W/kg  
**SAR(1 g) = 8.88 W/kg; SAR(10 g) = 4.69 W/kg**  
 Maximum value of SAR (measured) = 11.0 W/kg



0 dB = 11.0 W/kg = 10.41 dBW/kg



System Check\_Head\_2300MHz

DUT: D2300V2-1098; Type: D2300V2; Serial: D2300V2 - SN:1098

Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 2300$  MHz;  $\sigma = 1.697$  S/m;  $\epsilon_r = 39.092$ ;  $\rho = 1000$  kg/m<sup>3</sup>

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.6, 7.6, 7.6); Calibrated: 11/5/2020,
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 16.9 W/kg

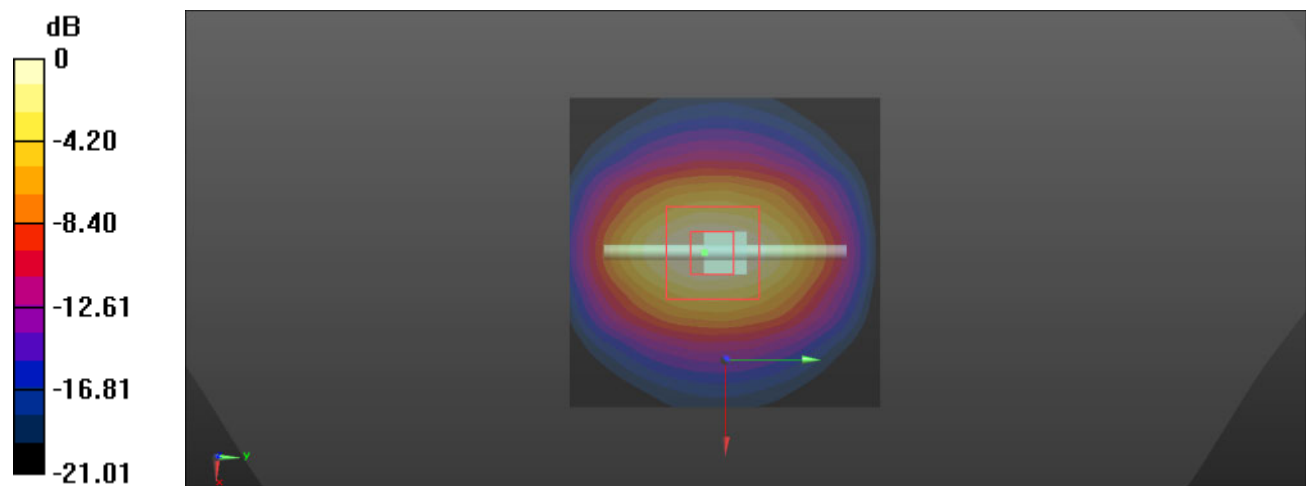
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.03 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 24.4 W/kg

**SAR(1 g) = 12.4 W/kg; SAR(10 g) = 5.95 W/kg**

Maximum value of SAR (measured) = 16.0 W/kg



0 dB = 16.0 W/kg = 12.04 dBW/kg

System Check\_Head\_2450MHz

DUT: D2450V2-970; Type: D2450V2; Serial: D2450V2 - SN:970

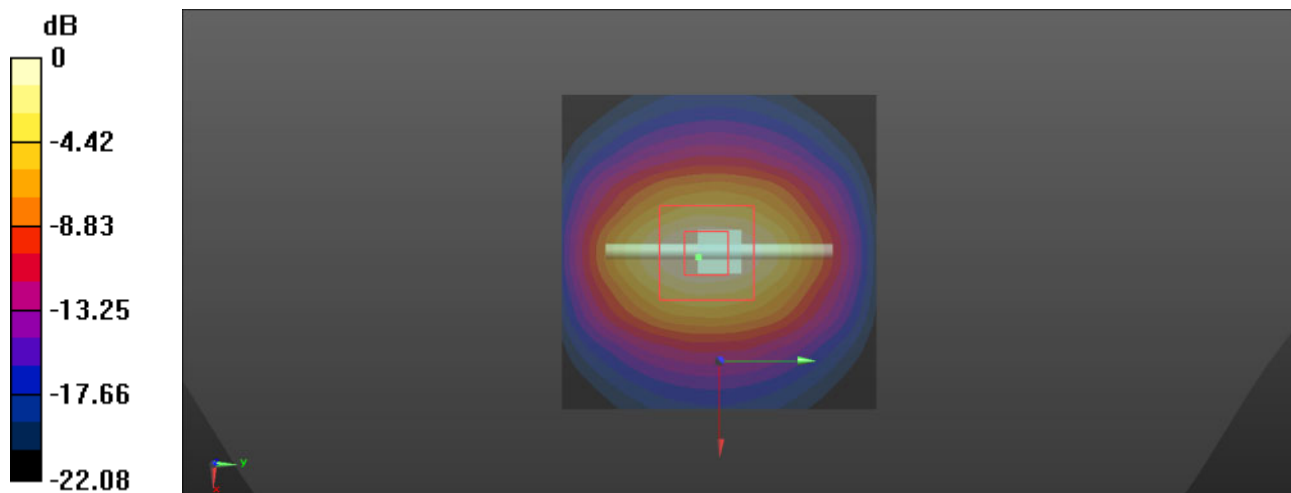
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2450 \text{ MHz}$ ;  $\sigma = 1.864 \text{ S/m}$ ;  $\epsilon_r = 38.443$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 19.7 W/kg

**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 100.7 V/m; Power Drift = -0.00 dB  
 Peak SAR (extrapolated) = 29.3 W/kg  
**SAR(1 g) = 14.5 W/kg; SAR(10 g) = 6.83 W/kg**  
 Maximum value of SAR (measured) = 18.8 W/kg



0 dB = 18.8 W/kg = 12.74 dBW/kg

System Check\_Head\_2600MHz

DUT: D2600V2-1162; Type: D2600V2; Serial: D2600V2 - SN:1162

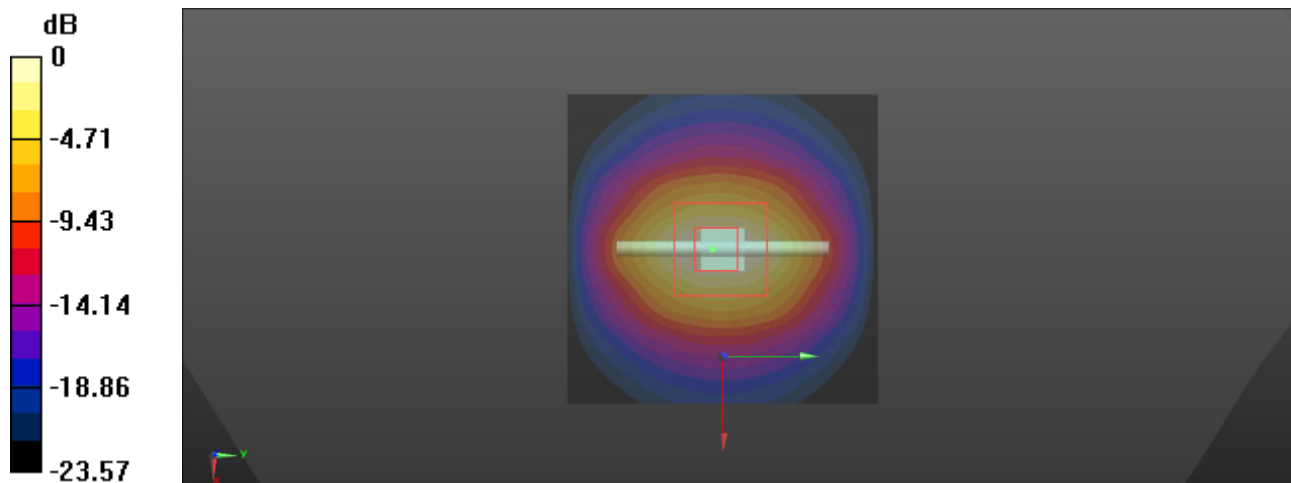
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2600 \text{ MHz}$ ;  $\sigma = 2.038 \text{ S/m}$ ;  $\epsilon_r = 37.83$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.13, 7.13, 7.13); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 28.2 W/kg

**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 122.8 V/m; Power Drift = -0.07 dB  
 Peak SAR (extrapolated) = 35.3 W/kg  
**SAR(1 g) = 15.1 W/kg; SAR(10 g) = 6.81 W/kg**  
 Maximum value of SAR (measured) = 28.5 W/kg



0 dB = 28.5 W/kg = 14.55 dBW/kg

System Check\_Head\_5250MHz

DUT: D5GHzV2-1296-5250; Type: D5GHzV2; Serial: D5GHzV2 - SN:1296

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1

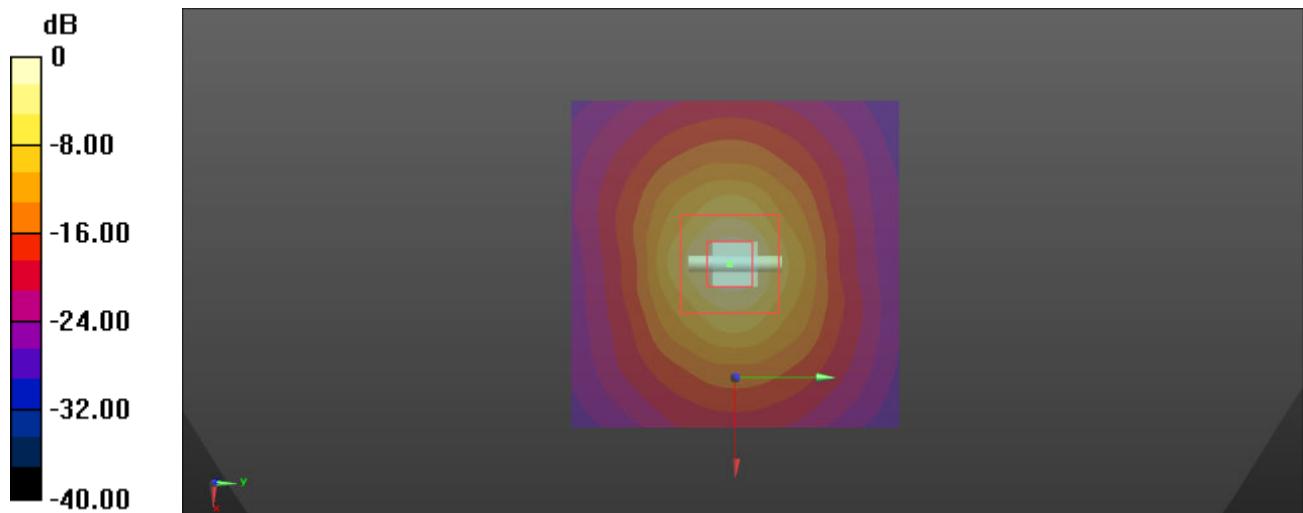
Medium parameters used:  $f = 5250 \text{ MHz}$ ;  $\sigma = 4.882 \text{ S/m}$ ;  $\epsilon_r = 37.306$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(5.38, 5.38, 5.38); Calibrated: 11/5/2020,
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=100mW/Area Scan (61x61x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 10.5 W/kg

**Pin=100mW/Zoom Scan (7x7x5)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 64.52 V/m; Power Drift = -0.02 dB  
 Peak SAR (extrapolated) = 36.3 W/kg  
**SAR(1 g) = 7.42 W/kg; SAR(10 g) = 2.07 W/kg**  
 Maximum value of SAR (measured) = 10.7 W/kg



0 dB = 10.7 W/kg = 10.29 dBW/kg

System Check\_Head\_5800MHz

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1296

Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 5800 \text{ MHz}$ ;  $\sigma = 5.464 \text{ S/m}$ ;  $\epsilon_r = 36.461$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(4.73, 4.73, 4.73); Calibrated: 11/5/2020,
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=100mW/Area Scan (81x81x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) = 15.0 W/kg

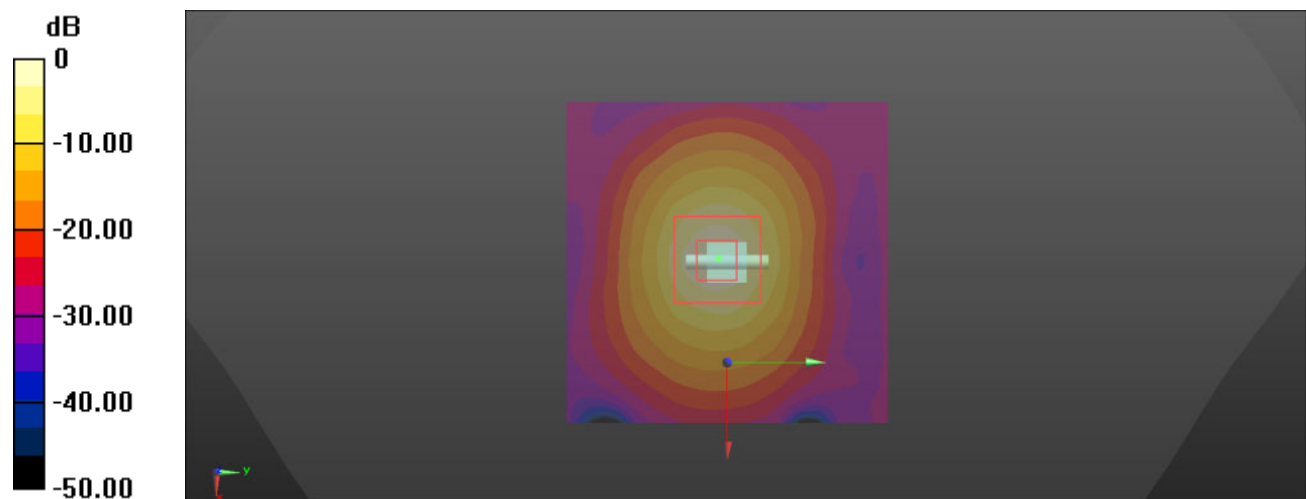
**Pin=100mW/Zoom Scan (10x10x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 74.09 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 42.6 W/kg

**SAR(1 g) = 8.58 W/kg; SAR(10 g) = 2.45 W/kg**

Maximum value of SAR (measured) = 15.0 W/kg



0 dB = 15.0 W/kg = 11.76 dBW/kg

System Check\_Head\_835MHz

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:445

Communication System: UID 0, CW; Frequency: 835 MHz;Duty Cycle: 1:1

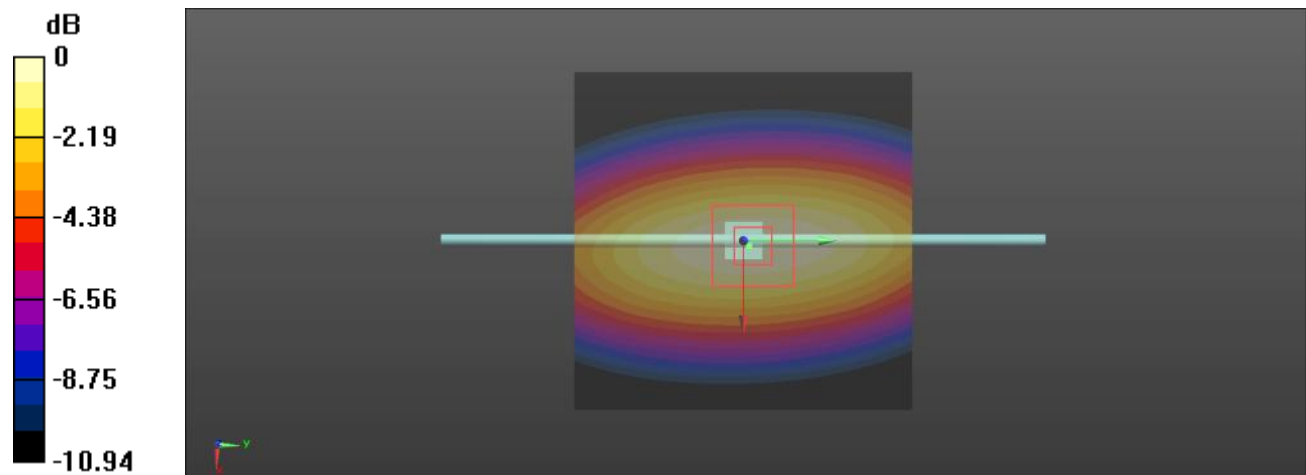
Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.906 \text{ S/m}$ ;  $\epsilon_r = 42.171$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2095
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $3.27 \text{ W/kg}$

**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $57.56 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$   
 Peak SAR (extrapolated) =  $3.87 \text{ W/kg}$   
**SAR(1 g) =  $2.56 \text{ W/kg}$ ; SAR(10 g) =  $1.67 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $3.26 \text{ W/kg}$



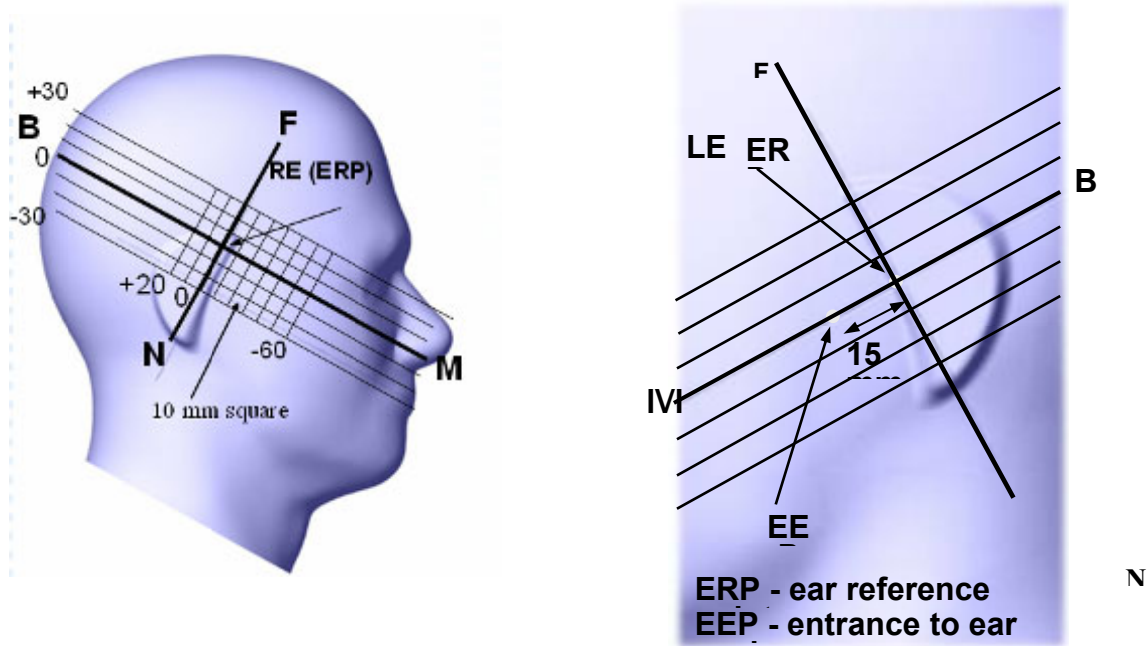
0 dB =  $3.26 \text{ W/kg}$  =  $5.13 \text{ dBW/kg}$

**EUT TEST STRATEGY AND METHODOLOGY**

**Test Positions for Device Operating Next to a Person’s Ear**

This category includes most wireless handsets with fixed, retractable or internal antennas located toward the top half of the device, with or without a foldout, sliding or similar keypad cover. The handset should have its earpiece located within the upper ¼ of the device, either along the centerline or off-centered, as perceived by its users. This type of handset should be positioned in a normal operating position with the “test device reference point” located along the “vertical centerline” on the front of the device aligned to the “ear reference point”. The “test device reference point” should be located at the same level as the center of the earpiece region. The “vertical centerline” should bisect the front surface of the handset at its top and bottom edges. A “ear reference point” is located on the outer surface of the head phantom on each ear spacer. It is located 1.5 cm above the center of the ear canal entrance in the “phantom reference plane” defined by the three lines joining the center of each “ear reference point” (left and right) and the tip of the mouth.

A handset should be initially positioned with the earpiece region pressed against the ear spacer of a head phantom. For the SCC-34/SC-2 head phantom, the device should be positioned parallel to the “N-F” line defined along the base of the ear spacer that contains the “ear reference point”. For interim head phantoms, the device should be positioned parallel to the cheek for maximum RF energy coupling. The “test device reference point” is aligned to the “ear reference point” on the head phantom and the “vertical centerline” is aligned to the “phantom reference plane”. This is called the “initial ear position”. While maintaining these three alignments, the body of the handset is gradually adjusted to each of the following positions for evaluating SAR:



## **Cheek/Touch Position**

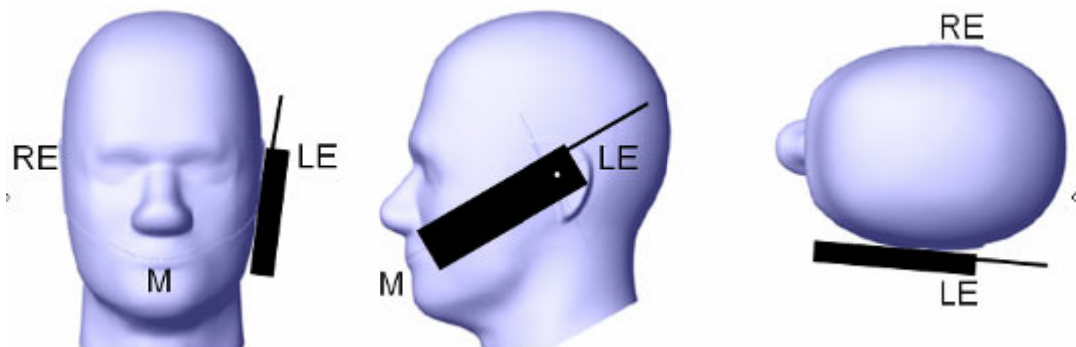
The device is brought toward the mouth of the head phantom by pivoting against the “ear reference point” or along the “N-F” line for the SCC-34/SC-2 head phantom.

This test position is established:

- When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.
- (or) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

For existing head phantoms – when the handset loses contact with the phantom at the pivoting point, rotation should continue until the device touches the cheek of the phantom or breaks its last contact from the ear spacer.

### **Cheek /Touch Position**



### **Ear/Tilt Position**

With the handset aligned in the “Cheek/Touch Position”:

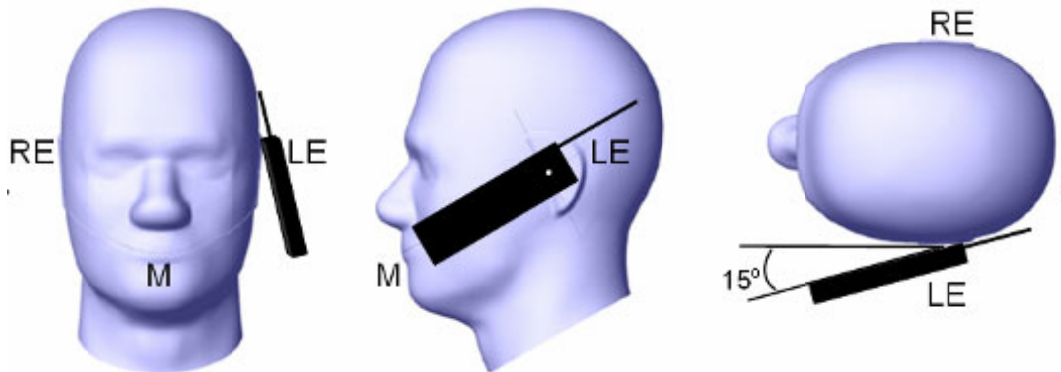
1) If the earpiece of the handset is not in full contact with the phantom’s ear spacer (in the “Cheek/Touch position”) and the peak SAR location for the “Cheek/Touch” position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the “initial ear position” by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.

2) (otherwise) The handset should be moved (translated) away from the cheek perpendicular to the line passes through both “ear reference points” (note: one of these ear reference points may not physically exist on a split head model) for approximate 2-3 cm. While it is in this position, the device handset is tilted away from the mouth with respect to the “test device reference point” until the inside angle between the vertical centerline on the front surface of the phone and the horizontal line passing through the ear reference point is by 15°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both “ear reference points” until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously. This test position may require a device holder or positioner to achieve the translation and tilting with acceptable positioning repeatability.



If a device is also designed to transmit with its keypad cover closed for operating in the head position, such positions should also be considered in the SAR evaluation. The device should be tested on the left and right side of the head phantom in the “Cheek/Touch” and “Ear/Tilt” positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tile/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s). If the transmission band of the test device is less than 10 MHz, testing at the high and low frequency channels is optional.

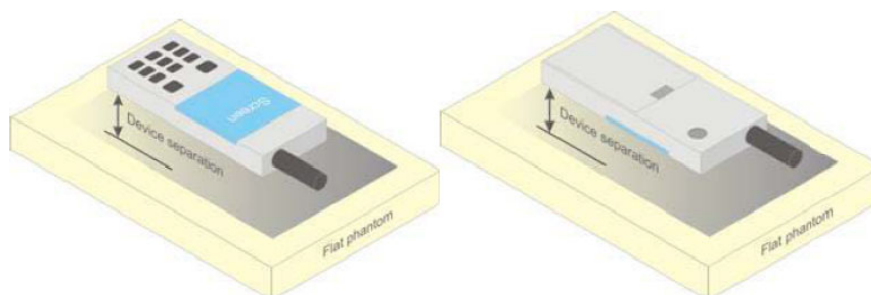
**Ear /Tilt 15° Position**



**Test positions for body-worn and other configurations**

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.



**Figure 5 – Test positions for body-worn devices**

## SAR Evaluation Procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the SAR value at a fixed location above the ear point or central position was used as a reference value for assessing the power drop. The SAR at this point is measured at the start of the test and then again at the end of the testing.

Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 4 mm from the inner surface of the shell. The area covered the entire dimension of the head or radiating structures of the EUT, the horizontal grid spacing was 15 mm x 15 mm, and the SAR distribution was determined by integrated grid of 1.5mm x 1.5mm. Based on these data, the area of the maximum absorption was determined by spline interpolation. The first Area Scan covers the entire dimension of the EUT to ensure that the hotspot was correctly identified.

Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7x 7 x 7 points. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

1) The data at the surface were extrapolated, since the center of the dipoles is 1.2 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

2) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one dimensional splines with the "Not a knot"-condition (in x, y and z-directions). The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the averages.

All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

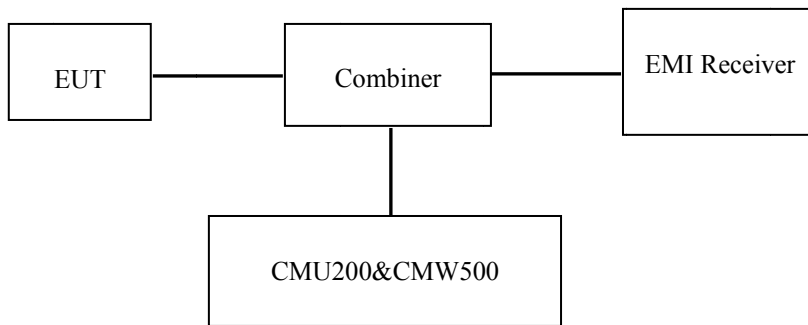
## CONDUCTED OUTPUT POWER MEASUREMENT

### Provision Applicable

The measured peak output power should be greater and within 5% than EMI measurement.

### Test Procedure

The RF output of the transmitter was connected to the input of the EMI Receiver through sufficient attenuation.

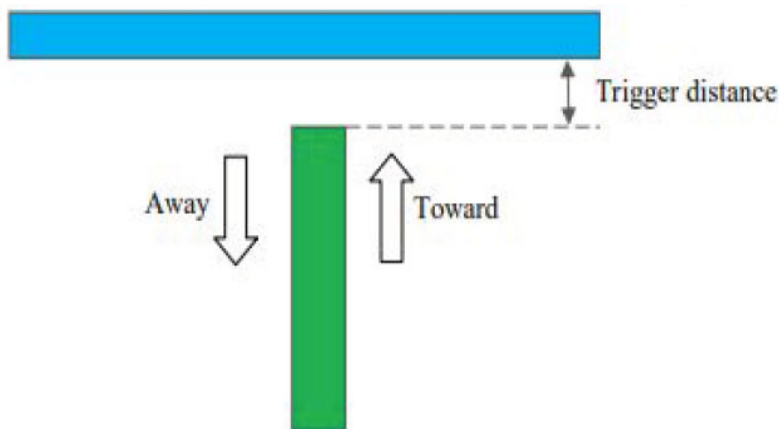


**GSM&3G&4G**

### Proximity Sensor Operation

Triggering distances(Per KDB 616717)

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (6000MHz) and lowest (600MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensor placed coincident with antenna elements at the bottom end of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back side surface of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna
3. The device employs proximity sensors that detect the presence of the user's body or handhold at the bottom or back faces of the device. When bottom or back body worn condition is detected, LTE Band 7 reduced power will be active. other mode or frequency band can't be active. (P-sensor can't work at detecting presence of the user's body at the front, top, left, right edges of the device.)



The minimum detection distances determined as below:

**Proximity Sensor Triggering Distance(mm) and Triggering Power(dBm)**

Distance		0	4	7	13	14	15	16	17	18	19	20	21	22	23	24	25	28	
Back edge	Toward	18	18	18	18	18	18	18	18	18	18	18	22.5	22.5	22.5	22.5	22.5	22.5	22.5
	Away	18	18	18	18	18	18	18	18	18	18	18	18	22.5	22.5	22.5	22.5	22.5	22.5
Bottom edge	Toward	18	18	18	18	18	18	18	18	18	18	18	22.5	22.5	22.5	22.5	22.5	22.5	22.5
	Away	18	18	18	18	18	18	18	18	18	18	18	18	18	22.5	22.5	22.5	22.5	22.5

**Note:** each side minimum detection distance was performed with below:  
 Toward: moving toward the phantom  
 Away: Moving away from the phantom

**Summary of trigger distances:**

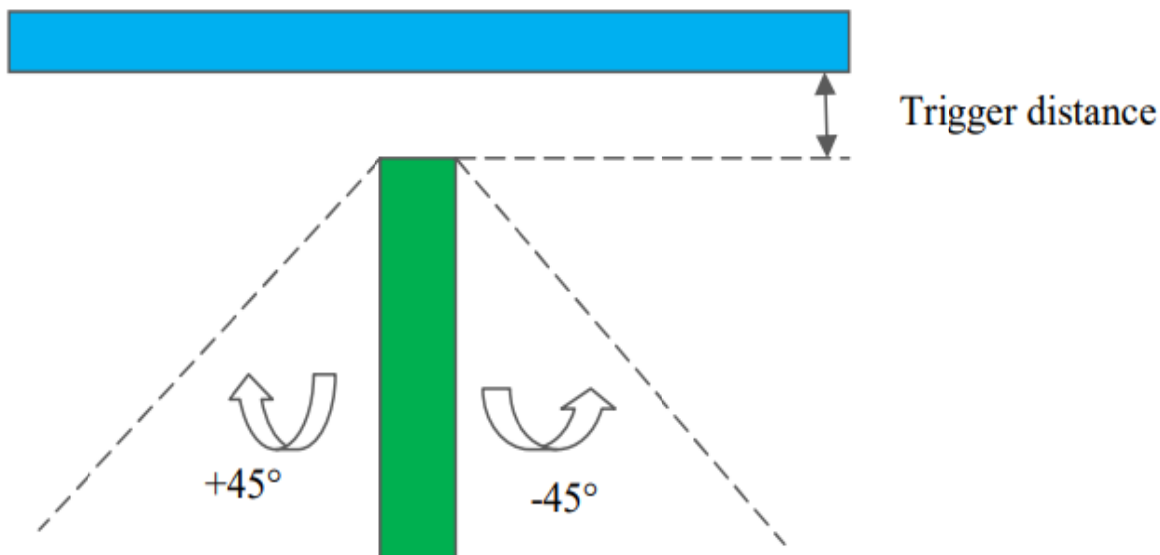
Band	Back edge (mm)		Bottom edge (mm)	
	Toward	Away	Toward	Away
LTE Band 7	19	21	19	22

**Note:** The SAR sensor located in LTE Band 7 antenna

**Tilt angle**

The influence of device tilt angles to proximity sensor triggering was determined by positioning each device edge that contains a transmitting antenna, perpendicular to the flat phantom, at 19 mm separation.

Rotating the device around the edge next to the phantom in  $\leq 10^\circ$  increments until the device is  $\pm 45^\circ$  from the vertical position at  $0^\circ$ . And the maximum output power remains in the reduced mode.



**Proximity Sensor Status Table**

Band	Minimum Distance(mm)	-45	-40	-30	-20	-10	0	10	20	30	40	45
LTE Band 7	19	on	on	on	on	on	on	on	on	on	on	on

**Resulting test positions for SAR measurements**

Wireless Technologies	Position	Triggering Distance(mm)	Worst case distance For SAR(mm)
LTE Band 7	Back	19	18
	Bottom	19	18

**Test Results:**

**WWAN Antenna Full Power**

**GSM**

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)
GSM850	128	824.2	33.27
	190	836.6	33.32
	251	848.8	33.17
PCS1900	512	1850.2	30.83
	661	1880	30.94
	810	1909.8	30.02

**GPRS:**

Mode	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM850	128	824.2	33.65	32.18	29.89	28.52
	190	836.6	33.64	32.44	29.87	28.52
	251	848.8	33.77	32.22	30.15	28.91
PCS1900	512	1850.2	30.23	29.44	28.40	25.84
	661	1880	29.94	28.97	28.51	25.62
	810	1909.8	29.92	28.95	27.84	25.12

**EGPRS:**

Mode	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM850	128	824.2	27.57	26.47	24.45	23.07
	190	836.6	27.65	26.61	24.51	23.15
	251	848.8	27.94	27.22	24.95	23.62
PCS1900	512	1850.2	25.38	24.58	23.32	21.04
	661	1880	24.93	24.30	23.04	20.72
	810	1909.8	24.66	24.73	22.70	20.47

For SAR, the time based average power is relevant, the difference in between depends on the duty cycle of the TDMA signal.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.25 dB	-3 dB
Crest Factor	8	4	2.66	2

**The time based average power for GSM**

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)
GSM850	128	824.2	24.27
	190	836.6	24.32
	251	848.8	24.17
PCS1900	512	1850.2	21.83
	661	1880	21.94
	810	1909.8	21.02

**The time based average power for GPRS**

Mode	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM850	128	824.2	24.65	26.18	25.63	25.52
	190	836.6	24.64	26.44	25.61	25.52
	251	848.8	24.77	26.22	25.89	25.91
PCS1900	512	1850.2	21.23	23.44	24.14	22.84
	661	1880	20.94	22.97	24.25	22.62
	810	1909.8	20.92	22.95	23.58	22.12

**The time based average power for EGPRS**

Mode	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM850	128	824.2	18.57	20.47	20.19	20.07
	190	836.6	18.65	20.61	20.25	20.15
	251	848.8	18.94	21.22	20.69	20.62
PCS1900	512	1850.2	16.38	18.58	19.06	18.04
	661	1880	15.93	18.30	18.78	17.72
	810	1909.8	15.66	18.73	18.44	17.47



**WCDMA WWAN Antenna Full Power**

**WCDMA Band II**

Test Condition	Test Mode	3GPP Sub Test	Averaged Mean Power (dBm)		
			Low Channel	Mid Channel	High Channel
Normal	Rel 99 RMC	1	22.41	22.51	22.27
	HSDPA	1	22.22	22.02	22.20
		2	22.22	22.11	22.11
		3	22.13	22.07	22.05
		4	22.27	21.91	22.10
	HSUPA	1	22.21	22.14	22.12
		2	22.25	22.07	22.14
		3	22.30	22.09	22.10
		4	22.23	22.04	22.20
		5	22.36	22.02	22.06
		1	22.37	21.92	22.23

**WCDMA Band V**

Test Condition	Test Mode	3GPP Sub Test	Averaged Mean Power (dBm)			
			Low Channel	Mid Channel	High Channel	
Normal	Rel 99 RMC	1	22.32	22.42	22.34	
	HSDPA	1	22.14	21.97	22.04	
		2	22.31	22.10	22.12	
		3	22.26	22.10	22.12	
		4	22.15	22.13	22.19	
	HSUPA	1	22.21	22.08	22.16	
		2	22.15	22.07	22.23	
		3	22.24	22.05	22.05	
		4	22.32	21.94	22.11	
		5	22.28	22.03	22.18	
	HSPA+	HPA+	1	22.35	22.04	22.23

**LTE:**

**Full Power**

**LTE Band 2**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	21.68	21.98	21.85
		1#3	21.58	21.96	21.84
		1#5	21.65	22.03	21.84
		3#0	21.69	22.11	21.81
		3#1	21.65	22.01	21.79
		3#3	21.56	21.93	21.92
		6#0	21.50	21.93	22.00
	16-QAM	1#0	21.49	22.00	21.95
		1#3	21.45	22.02	21.99
		1#5	21.49	22.06	22.05
		3#0	21.49	22.08	22.11
		3#1	21.50	22.04	22.09
		3#3	21.51	22.08	22.11
		6#0	21.43	22.00	22.07
3M	QPSK	1#0	22.15	22.22	22.06
		1#7	21.59	22.02	22.02
		1#14	21.58	22.00	22.00
		8#0	21.60	22.00	22.05
		8#4	21.53	21.97	22.06
		8#7	21.57	21.97	22.03
		15#0	21.57	22.02	21.93
	16-QAM	1#0	21.61	22.03	22.04
		1#7	21.61	22.08	22.10
		1#14	21.58	22.07	22.19
		8#0	21.54	22.11	22.20
		8#4	21.49	22.05	22.13
		8#7	21.59	22.05	22.01
		15#0	21.63	22.03	22.10

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.71	22.04	22.15
		1#12	21.74	22.01	22.09
		1#24	21.80	21.90	22.15
		12#0	21.85	21.93	22.11
		12#6	21.84	21.94	22.05
		12#11	21.85	21.87	22.11
		25#0	21.95	21.85	22.16
	16-QAM	1#0	21.90	21.92	22.17
		1#12	22.00	22.03	22.22
		1#24	22.01	21.91	22.22
		12#0	22.15	21.95	22.17
		12#6	22.25	21.92	22.28
		12#11	22.34	21.91	22.25
		25#0	22.47	21.92	22.32
10M	QPSK	1#0	22.50	21.94	22.33
		1#24	22.47	22.02	22.35
		1#49	22.33	22.07	22.32
		25#0	22.28	22.15	22.31
		25#12	22.29	22.15	22.39
		25#24	22.22	22.22	22.42
		50#0	22.17	22.17	22.33
	16-QAM	1#0	22.19	22.10	22.39
		1#24	22.21	22.02	22.41
		1#49	22.24	22.05	22.37
		25#0	22.30	22.14	22.30
		25#12	22.31	22.25	22.36
		25#24	22.27	22.32	22.23
		50#0	22.28	22.35	22.25

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	22.2	22.36	22.2
		1#37	22.16	22.37	22.21
		1#74	22.1	22.24	22.19
		36#0	22.14	22.29	22.11
		36#17	22.18	22.27	22.08
		36#35	22.17	22.31	22.08
		75#0	22.15	22.36	22.04
	16-QAM	1#0	22.1	22.37	22.02
		1#37	22.1	22.31	22.04
		1#74	22.11	22.24	22.02
		36#0	22.12	22.3	22.02
		36#17	22.11	22.29	22.16
		36#35	22.17	22.3	22.17
		75#0	22.15	22.21	22.18
20M	QPSK	1#0	22.18	22.44	22.1
		1#49	22.15	22.35	22.1
		1#99	22.17	22.37	22.1
		50#0	22.12	22.39	21.98
		50#24	22.04	22.38	21.93
		50#49	21.94	22.39	21.91
		100#0	21.9	22.33	21.93
	16-QAM	1#0	21.9	22.31	21.96
		1#49	22.01	22.31	21.97
		1#99	21.95	22.28	21.93
		50#0	22	22.32	21.82
		50#24	22.07	22.37	21.81
		50#49	22.12	22.36	21.78
		100#0	22.19	22.43	21.72

**LTE Band 4**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	20.88	21.18	21.05
		1#3	20.88	21.22	21.13
		1#5	20.87	21.23	21.27
		3#0	20.93	21.29	21.32
		3#1	20.84	21.3	21.32
		3#3	20.86	21.22	21.29
		6#0	20.91	21.17	21.28
	16-QAM	1#0	20.9	21.2	21.21
		1#3	20.83	21.24	21.2
		1#5	20.84	21.35	21.15
		3#0	20.82	21.39	21.21
		3#1	20.77	21.29	21.28
		3#3	20.83	21.32	21.3
		6#0	20.86	21.31	21.26
3M	QPSK	1#0	20.96	21.31	21.26
		1#7	20.91	21.42	21.26
		1#14	20.87	21.47	21.17
		8#0	20.79	21.46	21.17
		8#4	20.7	21.44	21.27
		8#7	20.63	21.38	21.24
		15#0	20.67	21.34	21.33
	16-QAM	1#0	20.6	21.38	21.28
		1#7	20.59	21.34	21.19
		1#14	20.64	21.41	21.06
		8#0	20.72	21.36	21.08
		8#4	20.62	21.43	21.21
		8#7	20.56	21.47	21.08
		15#0	20.58	21.59	21.03

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	20.63	21.63	20.98
		1#12	20.67	21.54	20.95
		1#24	20.74	21.63	21.00
		12#0	20.78	21.72	21.00
		12#6	20.69	21.70	21.03
		12#11	20.75	21.74	20.99
		25#0	20.81	21.77	21.00
	16-QAM	1#0	20.71	21.83	20.94
		1#12	20.66	21.86	20.87
		1#24	20.65	21.85	20.88
		12#0	20.72	21.90	20.79
		12#6	20.73	22.00	20.72
		12#11	20.73	21.96	20.69
		25#0	20.68	21.93	20.61
10M	QPSK	1#0	20.72	21.90	20.68
		1#24	20.70	21.87	20.58
		1#49	20.71	21.82	20.58
		25#0	20.60	21.77	20.62
		25#12	20.67	21.88	20.73
		25#24	20.67	22.01	20.61
		50#0	20.66	22.11	20.49
	16-QAM	1#0	20.71	22.13	20.59
		1#24	20.71	22.18	20.53
		1#49	20.66	22.12	20.45
		25#0	20.69	22.21	20.47
		25#12	20.66	22.20	20.47
		25#24	20.62	22.10	20.46
		50#0	20.58	22.05	20.35

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	20.65	22.03	20.39
		1#37	20.71	22.05	20.42
		1#74	20.61	22.02	20.39
		36#0	20.62	22.05	20.39
		36#17	20.71	22.15	20.48
		36#35	20.72	22.11	20.57
		75#0	20.84	21.98	20.50
	16-QAM	1#0	20.84	22.00	20.47
		1#37	20.82	22.03	20.47
		1#74	20.78	22.08	20.59
		36#0	20.88	22.04	20.64
		36#17	20.79	22.01	20.68
		36#35	20.80	22.10	20.79
		75#0	20.68	22.02	20.85
20M	QPSK	1#0	20.69	22.23	20.87
		1#49	20.73	21.90	20.88
		1#99	20.68	21.89	20.93
		50#0	20.65	21.92	20.90
		50#24	20.66	21.99	20.89
		50#49	20.64	22.06	20.89
		100#0	20.60	22.00	20.77
	16-QAM	1#0	20.57	21.93	20.84
		1#49	20.45	21.89	20.91
		1#99	20.44	21.90	20.90
		50#0	20.35	21.96	20.78
		50#24	20.36	22.04	20.82
		50#49	20.34	22.03	20.92
		100#0	20.36	21.95	20.91

**LTE Band 5**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)	
1.4M	QPSK	1#0	21.68	21.98	21.85	
		1#3	21.75	22.08	21.89	
		1#5	21.79	22.11	21.94	
		3#0	21.74	22.08	21.93	
		3#1	21.76	22.11	22.04	
		3#3	21.70	22.03	22.03	
	16-QAM	6#0	21.65	21.93	22.04	
		1#0	21.66	21.91	21.98	
		1#3	21.63	21.97	21.92	
		1#5	21.67	21.90	21.84	
		3#0	21.71	21.80	21.78	
		3#1	21.81	21.76	21.77	
	3M	QPSK	3#3	21.71	21.89	21.69
			6#0	21.64	21.81	21.67
1#0			21.67	21.83	21.70	
1#7			21.59	21.88	21.60	
1#14			21.49	21.85	21.71	
8#0			21.48	21.88	21.68	
8#4			21.38	21.88	21.75	
16-QAM		8#7	21.30	21.91	21.76	
		15#0	21.35	21.83	21.72	
		1#0	21.45	21.83	21.79	
		1#7	21.48	21.72	21.85	
		1#14	21.49	21.74	21.84	
		8#0	21.49	21.75	21.82	
		8#4	21.48	21.73	21.80	
8#7	21.48	21.79	21.74			
15#0	21.58	21.71	21.78			



Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.54	21.81	21.79
		1#12	21.52	21.76	21.76
		1#24	21.51	21.85	21.68
		12#0	21.53	21.88	21.57
		12#6	21.54	21.76	21.61
		12#11	21.56	21.74	21.55
		25#0	21.54	21.72	21.52
	16-QAM	1#0	21.60	21.64	21.62
		1#12	21.66	21.77	21.53
		1#24	21.65	21.81	21.46
		12#0	21.56	21.80	21.55
		12#6	21.58	21.82	21.58
		12#11	21.67	21.75	21.44
		25#0	21.73	21.75	21.46
10M	QPSK	1#0	21.89	22.26	21.95
		1#24	21.75	21.80	21.51
		1#49	21.75	21.72	21.51
		25#0	21.61	21.80	21.55
		25#12	21.84	21.53	21.51
		25#24	21.95	21.53	21.61
		50#0	22.05	21.64	21.61
	16-QAM	1#0	22.02	21.74	21.53
		1#24	22.03	21.74	21.45
		1#49	22.02	21.75	21.50
		25#0	22.03	21.76	21.60
		25#12	22.09	21.81	21.63
		25#24	22.20	21.82	21.67
		50#0	21.64	21.70	21.43

LTE Band 7

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	22.16	21.40	21.78
		1#12	21.89	21.96	21.83
		1#24	22.23	21.93	21.82
		12#0	21.34	21.87	21.45
		12#6	21.38	21.77	21.73
		12#11	22.15	21.81	21.56
		25#0	21.87	21.70	21.51
	16-QAM	1#0	22.05	21.48	21.75
		1#12	21.67	21.35	21.39
		1#24	21.26	21.50	21.08
		12#0	21.72	22.03	21.53
		12#6	21.39	21.30	21.24
		12#11	22.14	21.58	21.12
		25#0	21.49	22.06	21.23
10M	QPSK	1#0	21.54	21.97	22.05
		1#24	21.96	21.91	22.18
		1#49	21.09	21.19	21.63
		25#0	21.81	21.99	21.39
		25#12	21.51	21.75	21.71
		25#24	21.59	21.35	22.05
		50#0	22.01	21.44	21.74
	16-QAM	1#0	21.16	21.93	21.64
		1#24	21.90	21.26	21.75
		1#49	21.84	21.48	22.18
		25#0	21.87	21.27	21.61
		25#12	21.58	21.67	21.99
		25#24	21.24	21.17	21.71
		50#0	21.06	21.75	21.69

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	21.57	21.96	21.83
		1#37	21.14	21.25	21.91
		1#74	21.27	21.58	22.04
		36#0	20.95	21.66	22.12
		36#17	20.94	21.08	21.62
		36#35	20.74	21.42	21.96
		75#0	20.78	21.22	22.00
	16-QAM	1#0	21.45	21.49	21.90
		1#37	21.04	21.21	21.47
		1#74	20.90	21.13	21.99
		36#0	21.54	21.80	21.27
		36#17	21.29	21.79	21.66
		36#35	20.89	21.17	21.95
		75#0	21.27	21.29	21.51
20M	QPSK	1#0	22.45	22.47	22.17
		1#49	21.70	21.32	21.29
		1#99	21.37	21.82	20.98
		50#0	21.75	21.79	21.71
		50#24	21.67	21.15	21.54
		50#49	21.18	21.73	21.77
		100#0	21.46	21.60	21.61
	16-QAM	1#0	21.30	21.27	21.76
		1#49	21.54	21.25	21.55
		1#99	20.91	20.98	21.76
		50#0	21.83	21.81	21.33
		50#24	21.60	21.66	21.60
		50#49	21.55	21.61	21.59
		100#0	21.83	21.86	21.01

LTE Band 12

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	21.68	21.98	21.85
		1#3	21.65	22.08	21.88
		1#5	21.70	22.06	21.85
		3#0	21.75	22.06	21.86
		3#1	21.73	22.05	21.83
		3#3	21.70	22.03	21.87
		6#0	21.73	22.07	21.80
	16-QAM	1#0	21.70	22.00	21.87
		1#3	21.79	22.03	21.80
		1#5	21.84	21.91	21.81
		3#0	21.80	21.85	21.80
		3#1	21.70	21.84	21.74
		3#3	21.65	21.85	21.71
		6#0	21.65	21.80	21.75
3M	QPSK	1#0	21.52	21.87	21.76
		1#7	21.61	21.78	21.68
		1#14	21.58	21.76	21.61
		8#0	21.58	21.70	21.60
		8#4	21.48	21.64	21.72
		8#7	21.53	21.58	21.83
		15#0	21.51	21.59	21.86
	16-QAM	1#0	21.58	21.60	21.87
		1#7	21.58	21.65	21.91
		1#14	21.59	21.62	22.05
		8#0	21.56	21.54	22.10
		8#4	21.53	21.45	22.09
		8#7	21.56	21.50	22.15
		15#0	21.68	21.46	22.18

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.65	21.35	22.14
		1#12	21.65	21.36	22.15
		1#24	21.66	21.38	22.19
		12#0	21.64	21.51	22.21
		12#6	21.57	21.42	22.15
		12#11	21.50	21.42	22.21
		25#0	21.56	21.39	22.15
	16-QAM	1#0	21.68	21.50	22.12
		1#12	21.67	21.47	22.15
		1#24	21.76	21.54	22.13
		12#0	21.82	21.44	22.16
		12#6	21.84	21.47	22.11
		12#11	21.79	21.47	22.08
		25#0	21.78	21.40	22.05
10M	QPSK	1#0	21.94	22.36	22.04
		1#24	21.64	21.32	21.99
		1#49	21.65	21.19	22.01
		25#0	21.60	21.86	21.85
		25#12	21.59	21.14	21.82
		25#24	21.58	21.24	21.73
		50#0	21.65	21.23	21.69
	16-QAM	1#0	21.66	21.26	21.76
		1#24	21.68	21.25	21.70
		1#49	21.71	21.29	21.72
		25#0	21.80	21.32	21.62
		25#12	21.80	21.38	21.66
		25#24	21.78	21.50	21.68
		50#0	21.74	21.55	21.71

LTE Band 17

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.68	21.98	21.85
		1#12	21.60	22.05	21.89
		1#24	21.59	22.03	21.85
		12#0	21.73	22.10	21.84
		12#6	21.79	22.08	21.91
		12#11	21.74	22.04	21.92
		25#0	21.69	21.99	21.95
	16-QAM	1#0	21.67	21.93	21.92
		1#12	21.64	21.83	21.88
		1#24	21.61	21.85	21.97
		12#0	21.61	21.88	22.04
		12#6	21.59	21.79	22.04
		12#11	21.60	21.78	22.03
		25#0	21.50	21.78	22.06
10M	QPSK	1#0	21.41	22.17	22.08
		1#24	21.41	21.63	22.11
		1#49	21.36	21.61	22.16
		25#0	21.34	21.58	22.05
		25#12	21.45	21.56	22.05
		25#24	21.51	21.58	22.08
		50#0	21.52	21.56	22.06
	16-QAM	1#0	21.61	21.53	22.08
		1#24	21.59	21.58	22.02
		1#49	21.50	21.64	21.90
		25#0	21.51	21.57	21.87
		25#12	21.39	21.49	21.85
		25#24	21.29	21.47	21.82
		50#0	21.19	21.46	21.76

**LTE Band 25**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	22.05	21.21	21.63
		1#3	22.09	21.18	21.57
		1#5	21.91	21.13	21.73
		3#0	21.55	21.47	21.36
		3#1	21.35	21.98	21.58
		3#3	21.64	21.67	21.40
		6#0	21.78	21.95	21.05
	16-QAM	1#0	21.63	21.68	21.08
		1#3	21.61	21.40	21.41
		1#5	22.18	21.55	21.27
		3#0	21.39	21.66	21.73
		3#1	21.84	21.75	21.74
		3#3	21.93	21.59	21.41
		6#0	21.75	21.54	21.88
3M	QPSK	1#0	21.38	21.70	21.83
		1#7	21.61	21.48	21.84
		1#14	21.61	21.86	21.84
		8#0	21.72	21.87	22.10
		8#4	21.63	21.98	21.66
		8#7	21.35	21.45	22.05
		15#0	21.89	21.66	22.01
	16-QAM	1#0	21.57	21.15	22.17
		1#7	21.82	21.29	21.94
		1#14	21.08	22.08	22.01
		8#0	21.37	21.57	22.15
		8#4	21.87	21.45	21.84
		8#7	21.86	21.18	22.17
		15#0	22.01	21.96	21.90

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.10	21.65	21.18
		1#12	21.45	22.01	21.63
		1#24	21.40	21.82	21.18
		12#0	21.09	21.22	22.12
		12#6	21.20	21.99	21.33
		12#11	20.95	22.04	21.28
		25#0	21.17	21.80	21.68
	16-QAM	1#0	21.71	21.35	21.29
		1#12	21.57	21.28	21.97
		1#24	21.35	21.78	21.44
		12#0	20.83	21.35	21.64
		12#6	21.00	21.33	21.23
		12#11	21.28	21.74	21.40
		25#0	21.73	21.84	21.81
10M	QPSK	1#0	20.90	21.84	21.45
		1#24	20.92	20.94	21.10
		1#49	21.46	21.60	21.63
		25#0	20.97	21.65	21.59
		25#12	21.43	21.89	20.90
		25#24	21.41	21.39	21.60
		50#0	21.51	21.52	20.87
	16-QAM	1#0	21.77	21.67	21.18
		1#24	21.83	21.83	21.55
		1#49	20.91	20.92	21.12
		25#0	21.74	21.58	21.44
		25#12	21.55	21.62	21.69
		25#24	21.07	21.49	21.62
		50#0	21.56	21.57	21.44



Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	21.29	21.58	21.35
		1#37	21.44	21.64	21.29
		1#74	21.47	21.80	21.07
		36#0	21.71	21.61	21.01
		36#17	20.91	21.32	21.43
		36#35	21.15	21.75	20.91
		75#0	21.41	21.23	21.69
	16-QAM	1#0	21.62	21.74	21.15
		1#37	20.95	21.75	21.72
		1#74	21.75	21.00	21.73
		36#0	21.26	21.57	21.70
		36#17	21.41	21.11	21.65
		36#35	21.19	21.56	21.75
		75#0	20.97	21.33	21.43
20M	QPSK	1#0	22.34	22.65	22.48
		1#49	22.02	22.35	22.26
		1#99	21.31	21.28	21.80
		50#0	22.64	22.49	22.34
		50#24	21.89	21.77	21.45
		50#49	21.80	21.74	21.91
		100#0	22.18	21.41	21.56
	16-QAM	1#0	21.84	21.76	21.60
		1#49	22.17	21.83	21.41
		1#99	21.69	21.65	21.08
		50#0	21.89	22.07	21.38
		50#24	21.91	21.23	21.25
		50#49	22.05	21.18	21.76
		100#0	22.19	21.52	21.17

**LTE Band 26**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	22.08	21.86	21.87
		1#3	21.36	21.21	21.39
		1#5	21.46	22.00	21.67
		3#0	21.51	21.54	21.76
		3#1	21.74	21.14	21.32
		3#3	21.66	21.12	21.13
		6#0	21.89	22.08	21.36
	16-QAM	1#0	21.67	21.20	21.36
		1#3	21.88	21.24	21.53
		1#5	22.21	22.05	21.20
		3#0	21.43	21.88	21.40
		3#1	22.11	21.12	21.16
		3#3	21.53	21.62	21.96
		6#0	22.23	21.19	21.62
3M	QPSK	1#0	21.79	21.21	22.22
		1#7	21.59	21.44	21.40
		1#14	21.77	21.30	21.94
		8#0	21.77	21.35	21.94
		8#4	21.64	21.31	21.94
		8#7	21.41	21.63	21.37
		15#0	21.84	22.04	21.89
	16-QAM	1#0	21.24	21.36	21.81
		1#7	21.60	21.28	21.55
		1#14	21.32	21.56	21.56
		8#0	21.38	21.71	21.90
		8#4	21.70	22.01	21.89
		8#7	21.48	21.87	21.88
		15#0	21.97	21.52	22.21

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	20.93	21.25	21.61
		1#12	21.71	22.01	21.23
		1#24	21.01	21.56	22.10
		12#0	21.09	21.23	21.80
		12#6	21.48	22.01	21.65
		12#11	21.07	21.81	21.53
		25#0	20.97	21.51	21.58
	16-QAM	1#0	20.88	21.11	21.44
		1#12	20.76	21.20	21.39
		1#24	21.04	21.94	22.01
		12#0	21.44	21.96	21.91
		12#6	21.19	21.74	21.85
		12#11	21.71	21.63	21.80
		25#0	21.50	21.14	21.87
10M	QPSK	1#0	21.08	21.22	21.22
		1#24	21.44	21.28	20.99
		1#49	21.35	21.02	21.61
		25#0	21.32	20.95	21.10
		25#12	21.85	21.63	21.34
		25#24	21.39	21.49	21.37
		50#0	20.94	21.75	21.18
	16-QAM	1#0	21.38	21.52	21.57
		1#24	21.34	21.36	21.66
		1#49	21.29	21.50	21.53
		25#0	21.16	21.83	21.43
		25#12	20.97	21.47	21.72
		25#24	21.15	21.07	21.13
		50#0	21.70	21.54	21.00

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	21.83	22.31	21.91
		1#37	21.58	21.77	21.32
		1#74	21.47	21.81	21.52
		36#0	21.31	21.38	21.54
		36#17	21.85	21.44	21.69
		36#35	21.14	21.10	21.60
		75#0	21.54	21.60	20.91
	16-QAM	1#0	21.62	21.37	21.29
		1#37	21.37	21.41	21.22
		1#74	21.81	21.61	21.44
		36#0	20.95	21.39	21.10
		36#17	21.10	21.09	21.05
		36#35	21.14	21.07	21.36
		75#0	20.95	21.45	20.89

**LTE Band 38**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.59	21.01	21.60
		1#12	21.12	20.88	21.49
		1#24	21.44	20.86	21.19
		12#0	21.12	20.87	20.88
		12#6	21.65	20.88	21.25
		12#11	21.18	21.62	21.62
		25#0	21.50	21.50	21.08
	16-QAM	1#0	21.09	21.61	21.01
		1#12	21.51	21.77	21.69
		1#24	21.90	21.04	21.08
		12#0	21.41	21.43	21.62
		12#6	21.25	21.28	21.22
		12#11	21.02	21.68	21.48
		25#0	21.62	21.20	21.24
10M	QPSK	1#0	20.78	21.61	21.43
		1#24	21.55	21.64	21.96
		1#49	20.75	21.02	21.38
		25#0	21.59	21.13	21.12
		25#12	21.14	21.68	21.36
		25#24	21.35	21.74	22.04
		50#0	20.97	20.90	21.50
	16-QAM	1#0	21.65	21.75	21.26
		1#24	20.80	21.82	21.50
		1#49	21.61	21.24	21.06
		25#0	21.67	21.43	21.49
		25#12	21.01	21.57	21.90
		25#24	21.26	21.10	21.20
		50#0	21.46	21.46	22.03

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	20.69	21.12	20.95
		1#37	20.80	21.29	21.81
		1#74	20.88	21.24	21.15
		36#0	20.57	20.99	21.61
		36#17	20.61	21.05	21.15
		36#35	20.76	21.64	21.41
		75#0	21.13	21.13	21.05
	16-QAM	1#0	21.15	21.32	20.95
		1#37	20.63	21.11	21.59
		1#74	21.30	21.09	21.03
		36#0	20.79	21.15	21.19
		36#17	21.12	21.56	21.82
		36#35	20.56	21.37	21.74
		75#0	20.78	21.50	21.70
20M	QPSK	1#0	22.07	22.14	21.93
		1#49	20.58	21.34	21.30
		1#99	21.10	20.80	20.96
		50#0	21.30	21.30	21.52
		50#24	20.92	21.24	20.56
		50#49	20.99	21.53	21.11
		100#0	20.84	20.92	21.31
	16-QAM	1#0	21.27	21.49	21.13
		1#49	21.20	20.95	20.99
		1#99	21.38	20.84	21.46
		50#0	21.45	20.72	20.79
		50#24	21.23	21.23	20.77
		50#49	21.39	20.71	21.48
		100#0	21.35	21.19	20.51

**LTE Band 40 Lower**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	22.06	22.08	21.96
		1#12	22.02	21.95	21.65
		1#24	21.97	21.93	21.43
		12#0	21.61	21.26	21.94
		12#6	22.21	21.97	21.34
		12#11	21.98	21.32	22.01
		25#0	21.97	21.81	21.03
	16-QAM	1#0	21.71	21.70	21.14
		1#12	21.83	21.82	21.68
		1#24	21.86	21.88	21.66
		12#0	21.56	21.36	21.92
		12#6	21.92	21.51	21.64
		12#11	21.82	21.91	21.73
		25#0	21.89	21.97	21.98
10M	QPSK	1#0	/	22.31	/
		1#24	/	21.44	/
		1#49	/	21.85	/
		25#0	/	21.92	/
		25#12	/	21.90	/
		25#24	/	21.52	/
		50#0	/	21.96	/
	16-QAM	1#0	/	21.70	/
		1#24	/	22.10	/
		1#49	/	21.20	/
		25#0	/	21.35	/
		25#12	/	21.52	/
		25#24	/	22.05	/
		50#0	/	21.91	/

**LTE Band 40 Upper**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.42	21.10	21.63
		1#12	21.25	22.06	21.65
		1#24	21.13	21.26	21.89
		12#0	20.92	21.11	21.13
		12#6	20.85	21.24	21.51
		12#11	21.37	21.23	21.29
		25#0	21.53	21.18	21.67
	16-QAM	1#0	20.94	21.38	21.58
		1#12	21.41	21.99	21.17
		1#24	20.88	21.66	21.39
		12#0	20.91	21.97	21.32
		12#6	20.84	22.00	21.71
		12#11	21.22	21.85	21.71
		25#0	21.29	21.09	21.59
10M	QPSK	1#0	/	22.15	/
		1#24	/	21.15	/
		1#49	/	21.11	/
		25#0	/	20.94	/
		25#12	/	21.33	/
		25#24	/	21.29	/
		50#0	/	20.97	/
	16-QAM	1#0	/	21.17	/
		1#24	/	21.4	/
		1#49	/	21.12	/
		25#0	/	21.75	/
		25#12	/	21.74	/
		25#24	/	21.34	/
		50#0	/	21.01	/



**LTE Band 41**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Lowest Channel (dBm)	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.67	21.61	21.34	21.77
		1#12	22.04	21.32	21.22	21.84
		1#24	21.33	21.26	21.52	21.34
		12#0	21.47	21.36	21.27	21.22
		12#6	21.65	21.42	22.02	21.63
		12#11	22.05	21.86	21.69	21.67
		25#0	21.37	21.25	22.03	21.59
	16-QAM	1#0	21.54	21.41	21.67	21.41
		1#12	21.30	21.22	22.02	21.14
		1#24	21.65	21.51	21.92	21.21
		12#0	22.00	21.86	21.44	21.96
		12#6	21.57	21.51	21.29	21.98
		12#11	21.41	21.36	21.61	21.95
		25#0	21.87	21.75	21.31	21.51
10M	QPSK	1#0	21.72	21.63	21.66	21.92
		1#24	21.11	21.02	21.19	21.85
		1#49	21.79	21.63	22.00	21.90
		25#0	21.62	21.54	21.51	21.51
		25#12	22.00	21.86	21.29	21.97
		25#24	21.76	21.69	21.35	21.52
		50#0	22.01	21.93	21.23	21.66
	16-QAM	1#0	21.23	21.20	21.72	21.84
		1#24	21.46	21.41	21.87	21.98
		1#49	21.53	21.48	21.97	21.97
		25#0	21.92	21.84	21.88	21.78
		25#12	21.66	21.46	21.15	21.48
		25#24	21.60	21.51	21.65	22.09
		50#0	21.29	21.16	22.00	21.54

Test Bandwidth	Test Modulation	Resource Block & RB offset	Lowest Channel (dBm)	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	21.72	21.63	21.75	21.94
		1#37	21.14	21.05	21.80	21.35
		1#74	20.77	20.60	21.56	21.94
		36#0	20.85	20.71	21.87	22.10
		36#17	20.90	20.76	21.90	22.07
		36#35	20.84	20.76	21.92	21.77
		75#0	21.02	20.92	21.29	22.09
	16-QAM	1#0	21.15	21.11	21.72	21.65
		1#37	21.49	21.32	22.04	21.21
		1#74	21.59	21.48	22.02	21.23
		36#0	21.55	21.46	21.66	21.19
		36#17	21.53	21.30	21.24	21.23
		36#35	21.37	21.29	21.22	21.15
		75#0	20.99	20.82	21.10	22.04
20M	QPSK	1#0	20.05	21.96	<b>22.11</b>	22.06
		1#49	21.77	21.62	21.32	21.64
		1#99	21.08	20.90	21.88	21.03
		50#0	21.65	21.56	21.71	21.32
		50#24	21.67	21.60	21.74	21.19
		50#49	21.01	20.93	21.11	20.88
		100#0	20.88	20.76	21.19	21.54
	16-QAM	1#0	21.44	21.36	21.25	21.33
		1#49	21.74	21.64	21.41	21.01
		1#99	20.92	20.90	21.80	21.00
		50#0	21.68	21.56	21.87	21.61
		50#24	21.70	21.63	21.68	20.82
		50#49	21.48	21.41	20.98	21.16
		100#0	21.20	21.06	20.99	21.79

**Note:** The low channel frequency is 2580 MHz

**LTE Band 66**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	21.68	21.98	21.85
		1#3	21.63	22.00	21.87
		1#5	21.60	21.96	21.79
		3#0	21.61	21.96	21.67
		3#1	21.63	21.97	21.68
		3#3	21.50	22.08	21.70
		6#0	21.56	22.01	21.62
	16-QAM	1#0	21.53	22.08	21.66
		1#3	21.47	22.12	21.63
		1#5	21.36	22.01	21.70
		3#0	21.25	21.99	21.68
		3#1	21.18	22.01	21.64
		3#3	21.11	22.10	21.56
		6#0	21.12	22.14	21.51
3M	QPSK	1#0	21.02	22.19	21.55
		1#7	21.03	22.20	21.43
		1#14	20.95	22.15	21.51
		8#0	20.96	22.13	21.52
		8#4	21.01	22.16	21.51
		8#7	20.97	22.14	21.52
		15#0	20.93	22.15	21.51
	16-QAM	1#0	20.86	22.20	21.46
		1#7	20.83	22.18	21.38
		1#14	20.79	22.20	21.30
		8#0	20.78	22.12	21.27
		8#4	20.75	22.10	21.23
		8#7	20.80	22.12	21.25
		15#0	20.83	22.21	21.26

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	20.93	21.74	21.24
		1#12	20.99	21.77	21.24
		1#24	21.01	21.66	21.29
		12#0	21.05	21.68	21.32
		12#6	20.92	21.62	21.19
		12#11	20.96	21.66	21.16
		25#0	20.99	21.68	21.17
	16-QAM	1#0	21.09	21.62	21.21
		1#12	20.98	21.68	21.21
		1#24	20.97	21.72	21.16
		12#0	20.98	21.71	21.19
		12#6	20.97	21.71	21.25
		12#11	20.98	21.67	21.24
		25#0	20.98	21.73	21.25
10M	QPSK	1#0	20.98	21.75	21.29
		1#24	20.99	21.82	21.25
		1#49	20.99	21.75	21.27
		25#0	20.98	21.71	21.28
		25#12	20.88	21.57	21.27
		25#24	20.9	21.58	21.27
		50#0	20.88	21.61	21.24
	16-QAM	1#0	20.94	21.56	21.27
		1#24	20.91	21.58	21.29
		1#49	20.86	21.6	21.32
		25#0	20.78	21.51	21.26
		25#12	20.83	21.45	21.18
		25#24	20.78	21.4	21.32
		50#0	20.75	21.4	21.35

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	20.86	22.17	21.3
		1#37	20.85	22.19	21.16
		1#74	20.81	22.21	21.11
		36#0	20.83	22.23	21.11
		36#17	20.8	22.23	21.08
		36#35	20.87	22.16	21.15
		75#0	20.97	22.13	21.27
	16-QAM	1#0	21.07	22.15	21.26
		1#37	21.09	22.16	21.22
		1#74	21.01	22.12	21.13
		36#0	20.89	22.07	21.13
		36#17	20.9	22.07	21.2
		36#35	20.93	22.02	21.12
		75#0	20.94	22.08	21.1
20M	QPSK	1#0	22.15	22.24	22.18
		1#49	21.13	22.08	20.98
		1#99	21.12	22.04	20.95
		50#0	21.02	22.07	20.94
		50#24	20.92	22.07	20.98
		50#49	20.9	21.99	21.04
		100#0	20.94	22.06	21.17
	16-QAM	1#0	20.9	22.05	21.24
		1#49	20.9	21.99	21.25
		1#99	20.88	21.95	21.21
		50#0	20.91	21.87	21.09
		50#24	21.02	21.92	21.14
		50#49	20.96	21.91	21.11
		100#0	21.01	21.77	21.21

**Note:**

1. The CMW500 Wideband Radio Communication tester is used for LTE output power measurements and SAR testing. Closed loop power control is used to keep the radio transmitters the max output power during the test.

**WLAN 2.4GHz:**

Mode	Channel frequency (MHz)	Data Rate	Average Power(dBm)
802.11b	2412	1Mbps	14.00
	2437		14.34
	2462		14.32
802.11g	2412	6Mbps	13.01
	2437		13.30
	2462		13.18
802.11n-HT20	2412	MCS0	12.88
	2437		13.20
	2462		13.06
802.11n-HT40	2422	MCS0	12.53
	2437		12.33
	2452		12.51

**WLAN 5.2GHz:**

Mode	Channel frequency (MHz)	Data Rate	Average Power(dBm)
802.11a	5180	6Mbps	16.83
	5200		16.01
	5240		16.11
802.11ac20	5180	MCS0	15.80
	5200		15.92
	5240		15.98
802.11n-HT20	5180	MCS0	13.84
	5200		13.73
	5240		13.75
802.11ac40	5190	MCS0	13.69
	5230		13.85
802.11n-HT40	5190	MCS0	13.73
	5230		13.68
802.11ac80	5210	MCS0	11.74

**WLAN 5.8GHz:**

Mode	Channel frequency (MHz)	Data Rate	Average Power(dBm)
802.11a	5745	6Mbps	19.77
	5785		19.51
	5825		19.42
802.11ac20	5745	MCS0	19.51
	5785		19.45
	5825		19.39
802.11n-HT20	5745	MCS0	19.58
	5785		19.48
	5825		19.21
802.11ac40	5755	MCS0	19.56
	5795		19.65
802.11n-HT40	5755	MCS0	19.68
	5795		19.63
802.11ac80	5775	MCS0	19.77

**Note:** The output power was tested under data rate 1Mbps for 802.11b, 6Mbps for 802.11g, MCS0 for 802.11n HT20, MCS0 for 802.11n HT40.

**Bluetooth:**

Mode	Channel frequency (MHz)	Peak Output Power (dBm)
BDR (GFSK)	2402	7.94
	2441	7.51
	2480	7.80
EDR ( $\pi/4$ -DQPSK)	2402	7.33
	2441	6.82
	2480	7.21
EDR (8DPSK)	2402	7.33
	2441	6.82
	2480	7.08
BLE (1Mbps) Mode	2402	-1.24
	2440	-2.16
	2480	-3.64
BLE (2Mbps) Mode	2402	-1.29
	2440	-2.09
	2480	-3.63

**RFID**

Band	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	
		(dBm)	(mW)
RFID	Low	22.40	174
	Middle	22.25	168
	High	22.11	163



**WWAN Antenna Reduction Power**

**LTE Band 7**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	17.06	16.78	16.96
		1#12	16.79	17.34	17.01
		1#24	17.13	17.31	17.00
		12#0	16.24	17.25	16.63
		12#6	16.28	17.15	16.91
		12#11	17.05	17.19	16.74
		25#0	16.77	17.08	16.69
	16-QAM	1#0	16.95	16.86	16.93
		1#12	16.57	16.73	16.57
		1#24	16.16	16.88	16.26
		12#0	16.62	17.41	16.71
		12#6	16.29	16.68	16.42
		12#11	17.04	16.96	16.30
		25#0	16.39	17.44	16.41
10M	QPSK	1#0	16.44	17.35	17.23
		1#24	16.86	17.29	17.36
		1#49	15.99	16.57	16.81
		25#0	16.71	17.37	16.57
		25#12	16.41	17.13	16.89
		25#24	16.49	16.73	17.23
		50#0	16.91	16.82	16.92
	16-QAM	1#0	16.06	17.31	16.82
		1#24	16.80	16.64	16.93
		1#49	16.74	16.86	17.36
		25#0	16.77	16.65	16.79
		25#12	16.48	17.05	17.17
		25#24	16.14	16.55	16.89
		50#0	15.96	17.13	16.87

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	16.36	16.80	16.65
		1#37	15.93	16.09	16.73
		1#74	16.06	16.42	16.86
		36#0	15.74	16.50	16.94
		36#17	15.73	15.92	16.44
		36#35	15.53	16.26	16.78
		75#0	15.57	16.06	16.82
	16-QAM	1#0	16.24	16.33	16.72
		1#37	15.83	16.05	16.29
		1#74	15.69	15.97	16.81
		36#0	16.33	16.64	16.09
		36#17	16.08	16.63	16.48
		36#35	15.68	16.01	16.77
		75#0	16.06	16.13	16.33
20M	QPSK	1#0	17.26	17.78	16.99
		1#49	17.49	17.16	17.11
		1#99	17.16	17.66	16.80
		50#0	17.54	17.63	17.53
		50#24	16.46	16.99	16.36
		50#49	15.97	16.57	16.59
		100#0	16.25	16.44	16.43
	16-QAM	1#0	16.09	16.11	16.58
		1#49	16.33	16.09	16.37
		1#99	15.70	15.82	16.58
		50#0	16.62	16.65	16.15
		50#24	16.39	16.50	16.42
		50#49	16.34	16.45	16.41
		100#0	16.62	16.70	15.83

**Maximum Target Output Power**

**WWAN Antenna Full Power Target power**

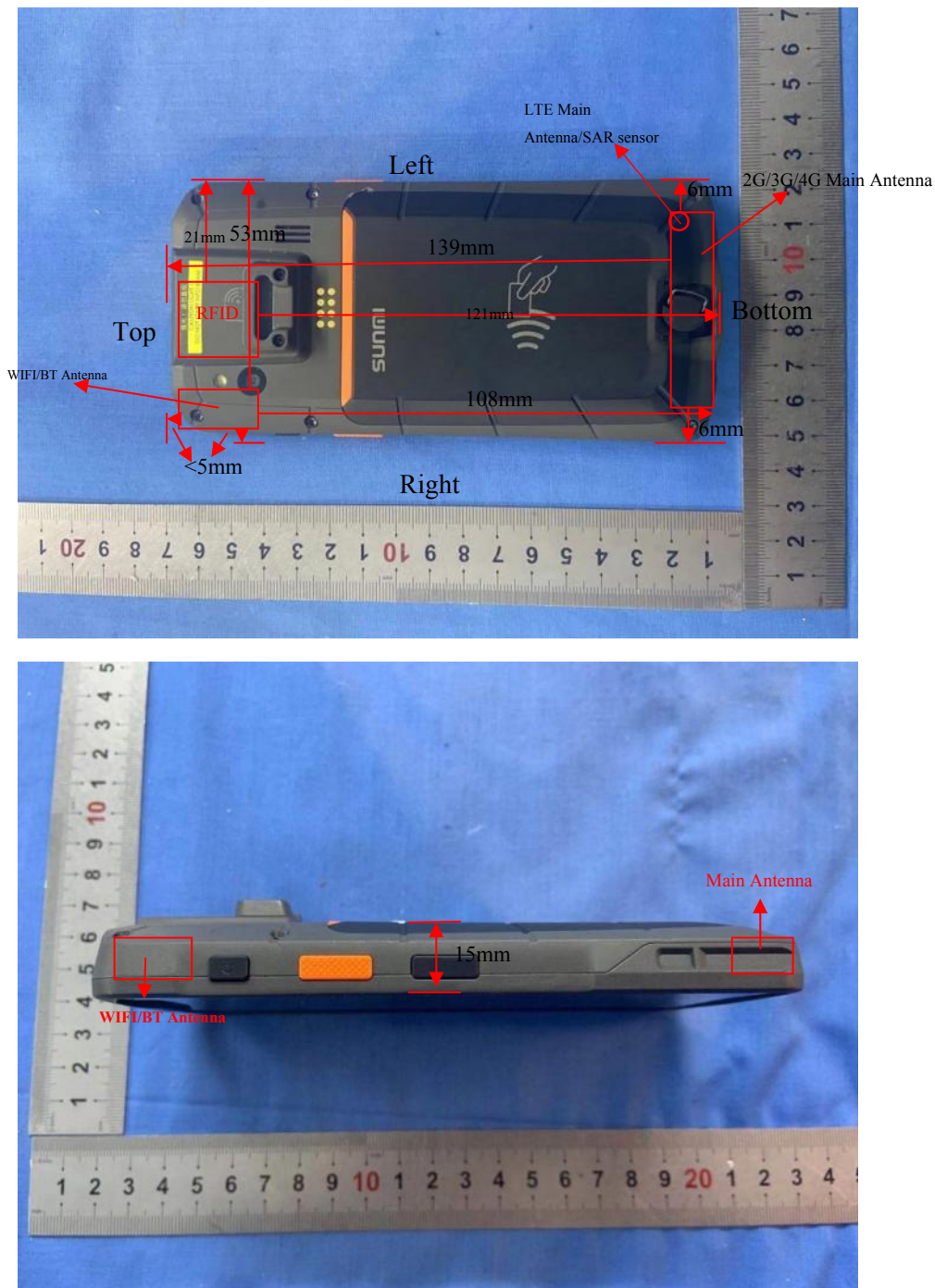
<b>Max Target Power(dBm)</b>			
<b>Mode/Band</b>	<b>Channel</b>		
	<b>Low</b>	<b>Middle</b>	<b>High</b>
GSM 850	34.0	34.0	34.0
GSM 850:GPRS 1 TX Slot	34.0	34.0	34.0
GSM 850:GPRS 2 TX Slot	33.0	33.0	33.0
GSM 850:GPRS 3 TX Slot	30.5	30.5	30.5
GSM 850:GPRS 4 TX Slot	29.0	29.0	29.0
GSM 850:EGPRS 1 TX Slot	28.0	28.0	28.0
GSM 850:EGPRS 2 TX Slot	27.5	27.5	27.5
GSM 850:EGPRS 3 TX Slot	25.5	25.5	25.5
GSM 850:EGPRS 4 TX Slot	24.0	24.0	24.0
PCS 1900	31.0	31.0	31.0
PCS 1900:GPRS 1 TX Slot	31.0	31.0	31.0
PCS 1900:GPRS 2 TX Slot	29.5	29.5	29.5
PCS 1900:GPRS 3 TX Slot	29.0	29.0	29.0
PCS 1900:GPRS 4 TX Slot	26.0	26.0	26.0
PCS 1900:EGPRS 1 TX Slot	25.5	25.5	25.5
PCS 1900:EGPRS 2 TX Slot	25.0	25.0	25.0
PCS 1900:EGPRS 3 TX Slot	23.5	23.5	23.5
PCS 1900:EGPRS 4 TX Slot	21.5	21.5	21.5
WCDMA Band 2	22.8	22.8	22.8
WCDMA Band 5	22.5	22.5	22.5
LTE Band 2	23.0	23.0	23.0
LTE Band 4	22.5	22.5	22.5
LTE Band 7	22.5	22.5	22.5
LTE Band 5	22.5	22.5	22.5
LTE Band 12	22.5	22.5	22.5
LTE Band 17	22.5	22.5	22.5
LTE Band 25	23.0	23.0	23.0
LTE Band 26	22.5	22.5	22.5
LTE Band 38	22.5	22.5	22.5
LTE Band 40-lower	22.5	22.5	22.5
LTE Band 40-upper	22.5	22.5	22.5
LTE Band 41	22.5	22.5	22.5
LTE Band 66	22.5	22.5	22.5
WLAN 2.4GHz	14.5	14.5	14.5
WLAN 5.2GHz	17.0	17.0	17.0
WLAN 5.8GHz	20.0	20.0	20.0
Bluetooth BDR/EDR	8.0	8.0	8.0
BLE(1Mbps/2Mbps)	-1.0	-1.0	-1.0
RF ID(ASK)	22.5	22.5	22.5

**WWAN Antenna Reduction Target power**

<b>Max Target Power(dBm)</b>			
<b>Mode/Band</b>	<b>Channel</b>		
	<b>Low</b>	<b>Middle</b>	<b>High</b>
LTE Band 7	18.0	18.0	18.0

# STANDALONE SAR TEST EXCLUSION CONSIDERATIONS

## Antennas Location:



## Antenna Distance To Edge

Antenna	Antenna Distance To Edge(mm)					
	Front	Back	Left	Right	Top	Bottom
WWAN	<5	<5	6	6	139	<5
WLAN & BT	<5	<5	53	<5	<5	108
RFID	<5	<5	21	21	<5	121

**Standalone SAR test exclusion considerations**

Mode	Frequency (MHz)	Pavg (dBm)	Pavg (mW)	Test Exclusion Distance(mm)
GSM 850	836.4	33.0	1995	378
PCS 1900	1880	29.0	794	118
WCDMA 2	1880	22.8	191	58
WCDMA 5	846.6	22.5	178	53
LTE Band 12	707.5	22.5	178	50
LTE Band 5	836.5	22.5	178	51
LTE Band 25	1880	22.5	178	55
LTE Band 26	831.5	22.5	178	52
LTE Band 66	1745	22.5	178	56
LTE Band 7	2535	22.5	178	58
LTE Band 40-lower	2310	22.5	178	55
LTE Band 40-upper	2355	22.5	178	55
LTE Band 41	2605	22.5	178	55
BT	2402	8	6	3
WLAN 2.4G Antenna	2437	14.5	28	15
WLAN 5.2G Antenna	5180	17.0	50	41
WLAN 5.8G Antenna	5775	20.0	100	54
RF ID	920	22.5	178	53

**SAR test exclusion for the EUT edge considerations Result**

Mode	Back	Front	Left	Right	Top	Bottom
GSM 850	Required	Required	Required	Required	Required	Required
PCS 1900	Required	Required	Required	Required	Exclusion	Required
WCDMA Band 2	Required	Required	Required	Required	Exclusion	Required
WCDMA Band 5	Required	Required	Required	Required	Exclusion	Required
LTEBand 12	Required	Required	Required	Required	Exclusion	Required
LTEBand 5	Required	Required	Required	Required	Exclusion	Required
LTEBand 25	Required	Required	Required	Required	Exclusion	Required
LTEBand 26	Required	Required	Required	Required	Exclusion	Required
LTEBand 66	Required	Required	Required	Required	Exclusion	Required
LTE Band 7	Required	Required	Required	Required	Exclusion	Required
LTE Band 40-lower	Required	Required	Required	Required	Exclusion	Required
LTE Band 40-upper	Required	Required	Required	Required	Exclusion	Required
LTE Band 41	Required	Required	Required	Required	Exclusion	Required
BT	Required	Required	Exclusion	Required	Required	Exclusion
WLAN 2.4G	Required	Required	Exclusion	Required	Required	Exclusion
WLAN 5.2G	Required	Required	Exclusion	Required	Required	Exclusion
WLAN 5.8G	Required	Required	Required	Required	Required	Exclusion
RF ID	Required	Required	Required	Required	Required	Exclusion

**Note:**

**Required:** The distance is less than **Test Exclusion Distance**, testing is required.

**Exclusion\*:** SAR test exclusion evaluation has been done above.

**Exclusion:** The distance is larger than **Test Exclusion Distance**, testing is not required.

## SAR MEASUREMENT RESULTS

This page summarizes the results of the performed dosimetric evaluation.

### Test Results:

#### Environmental Conditions:

<b>Temperature:</b>	22.1-23.3°C	21.4-22.8°C	21.2-22.7°C	21.7-23.3°C	21.4-22.6°C
<b>Relative Humidity:</b>	45-51%	50-57%	47-54%	49-55%	48-52%
<b>ATM Pressure:</b>	101.7kPa	101.5kPa	101.4kPa	101.7kPa	101.5kPa
<b>Test Date:</b>	2021/01/13	2021/01/14	2021/01/15	2021/01/16	2021/01/17
<b>Temperature:</b>	22.2-23.1 °C	21.5-22.9 °C	21.6-22.6 °C	21.7-23.4 °C	21.6-22.4 °C
<b>Relative Humidity:</b>	45-50%	50-55%	47-55%	49-56%	48-53%
<b>ATM Pressure:</b>	101.7 kPa	101.6 kPa	101.5 kPa	101.5 kPa	101.5 kPa
<b>Test Date:</b>	2021/01/18	2021/01/19	2021/01/20	2021/01/21	2021/01/22
<b>Temperature:</b>	21.9-23.2 °C				
<b>Relative Humidity:</b>	45-55%				
<b>ATM Pressure:</b>	101.7 kPa				
<b>Test Date:</b>	2021/01/23				

\* Testing was performed by Bard.Liu and Chris Wang

### GSM 850:

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	836.6	GSM voice	33.32	34.00	1.169	0.076	0.089	1.6	1#
Head Right Tilted	836.6	GSM voice	33.32	34.00	1.169	0.041	0.047	1.6	/
Head Left Cheek	836.6	GSM voice	33.32	34.00	1.169	0.067	0.079	1.6	/
Head Left Tilted	836.6	GSM voice	33.32	34.00	1.169	0.036	0.042	1.6	/
Body Front(10mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.071	0.081	1.6	/
Body Back(10mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.092	0.105	1.6	2#
BodyHeadsetBack(10mm)	836.6	GSM voice	33.32	34.00	1.169	0.042	0.049	1.6	/
Body Left(10mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.064	0.072	1.6	/
Body Right(10mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.088	0.101	1.6	
Body Top(10mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.007	0.007	1.6	
Body Bottom(10mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.042	0.047	1.6	

**Note:**

1. When the 1-g SAR is  $\leq 0.8\text{W/Kg}$ , testing for low and high channel is optional.
2. The EUT is a Class B mobile phone which can be attached to both GPRS and GSM services, using one service at a time.
3. The Multi-slot has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 1DL+2UL is the worst case.
4. The EUT transmit and receive through the same GSM antenna while testing SAR.



**PCS 1900:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	1880	GSM voice	30.94	31.00	1.014	0.060	0.061	1.6	/
Head Right Tilted	1880	GSM voice	30.94	31.00	1.014	0.054	0.054	1.6	/
Head Left Cheek	1880	GSM voice	30.94	31.00	1.014	0.124	0.126	1.6	3#
Head Left Tilted	1880	GSM voice	30.94	31.00	1.014	0.051	0.051	1.6	/
Body Front(10mm)	1880	GPRS 3TS	28.51	29.00	1.119	0.151	0.169	1.6	/
Body Back(10mm)	1880	GPRS 3TS	28.51	29.00	1.119	0.295	0.330	1.6	4#
Body-Headset-Back(10mm)	1880	GSM voice	30.94	31.00	1.014	0.102	0.103	1.6	
Body Left(10mm)	1880	GPRS 3TS	28.51	29.00	1.119	0.218	0.244	1.6	/
Body Right(10mm)	1880	GPRS 3TS	28.51	29.00	1.119	0.058	0.065	1.6	/
Body Bottom(10mm)	1880	GPRS 3TS	28.51	29.00	1.119	0.167	0.187	1.6	/

**Note:**

1. When the 1-g SAR is  $\leq 0.8W/Kg$ , testing for low and high channel is optional.
2. The EUT is a Class B mobile phone which can be attached to both GPRS and GSM services, using one service at a time.
3. The Multi-slot has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 1DL+3UL is the worst case.
4. The EUT transmit and receive through the same GSM antenna while testing SAR.

**WCDMA Band II:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	1880	RMC	22.51	22.80	1.069	0.071	0.075	1.6	/
Head Right Tilted	1880	RMC	22.51	22.80	1.069	0.061	0.065	1.6	/
Head Left Cheek	1880	RMC	22.51	22.80	1.069	0.163	0.174	1.6	5#
Head Left Tilted	1880	RMC	22.51	22.80	1.069	0.071	0.076	1.6	/
Body Front(10mm)	1880	RMC	22.51	22.80	1.069	0.159	0.170	1.6	/
Body Back(10mm)	1880	RMC	22.51	22.80	1.069	0.371	0.397	1.6	6#
Body Left(10mm)	1880	RMC	22.51	22.80	1.069	0.263	0.281	1.6	/
Body Right(10mm)	1880	RMC	22.51	22.80	1.069	0.065	0.070	1.6	/
Body Bottom(10mm)	1880	RMC	22.51	22.80	1.069	0.123	0.131	1.6	/

**WCDMA Band V:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	836.6	RMC	22.42	22.50	1.019	0.059	0.060	1.6	7#
Head Right Tilted	836.6	RMC	22.42	22.50	1.019	0.029	0.029	1.6	/
Head Left Cheek	836.6	RMC	22.42	22.50	1.019	0.053	0.053	1.6	/
Head Left Tilted	836.6	RMC	22.42	22.50	1.019	0.031	0.031	1.6	/
Body Front(10mm)	836.6	RMC	22.42	22.50	1.019	0.058	0.059	1.6	/
Body Back(10mm)	836.6	RMC	22.42	22.50	1.019	0.073	0.075	1.6	8#
Body Left(10mm)	836.6	RMC	22.42	22.50	1.019	0.052	0.052	1.6	/
Body Right(10mm)	836.6	RMC	22.42	22.50	1.019	0.072	0.073	1.6	/
Body Bottom(10mm)	836.6	RMC	22.42	22.50	1.019	0.027	0.028	1.6	/

**Note:**

1. When the 10-g SAR is  $\leq 1.0\text{W/Kg}$ , testing for low and high channel is optional.
2. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Mode.

**LTE FDD Band 5:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	836.5	QPSK	10	1	22.26	22.50	1.057	0.089	0.094	1.6	9#
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.074	0.087	1.6	/
Head Right Tilted	836.5	QPSK	10	1	22.26	22.50	1.057	0.047	0.049	1.6	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.040	0.047	1.6	/
Head Left Cheek	836.5	QPSK	10	1	22.26	22.50	1.057	0.076	0.081	1.6	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.060	0.070	1.6	/
Head Left Tilted	836.5	QPSK	10	1	22.26	22.50	1.057	0.040	0.043	1.6	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.034	0.040	1.6	/
Body Front(10mm)	836.5	QPSK	10	1	22.26	22.50	1.057	0.077	0.081	1.6	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.066	0.077	1.6	/
Body Back(10mm)	836.5	QPSK	10	1	22.26	22.50	1.057	0.099	0.105	1.6	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.081	0.096	1.6	/
Body Left(10mm)	836.5	QPSK	10	1	22.26	22.50	1.057	0.070	0.074	1.6	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.058	0.068	1.6	/
Body Right(10mm)	836.5	QPSK	10	1	22.26	22.50	1.057	0.101	0.107	1.6	10#
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.089	0.104	1.6	/
Body Bottom(10mm)	836.5	QPSK	10	1	22.26	22.50	1.057	0.042	0.044	1.6	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.036	0.042	1.6	/

**LTE FDD Band 7:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Sensor	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
								Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.080	0.081	1.6	/
	2535	QPSK	20	50%		21.79	22.50	1.178	0.066	0.078	1.6	/
Head Right Tilted	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.110	0.111	1.6	/
	2535	QPSK	20	50%		21.79	22.50	1.178	0.088	0.104	1.6	/
Head Left Cheek	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.181	0.182	1.6	<b>11#</b>
	2535	QPSK	20	50%		21.79	22.50	1.178	0.128	0.151	1.6	/
Head Left Tilted	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.057	0.057	1.6	/
	2535	QPSK	20	50%		21.79	22.50	1.178	0.048	0.057	1.6	/
Body Front(10mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.166	0.167	1.6	/
	2535	QPSK	20	50%		21.79	22.50	1.178	0.141	0.166	1.6	/
Body Back(10mm)	2535	QPSK	20	1	ON	17.78	18.00	1.052	0.417	0.439	1.6	<b>12#</b>
	2535	QPSK	20	50%		17.63	18.00	1.089	0.360	0.392	1.6	/
Body Left(10mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.251	0.253	1.6	/
	2535	QPSK	20	50%		21.79	22.50	1.178	0.219	0.258	1.6	/
Body Right(10mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.017	0.017	1.6	/
	2535	QPSK	20	50%		21.79	22.50	1.178	0.013	0.015	1.6	/
Body Bottom(10mm)	2535	QPSK	20	1	ON	17.78	18.00	1.052	0.166	0.175	1.6	/
	2535	QPSK	20	50%		17.63	18.00	1.089	0.142	0.155	1.6	/

**LTE FDD Band 12& LTE FDD Band 17:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	707.5	QPSK	10	1	22.36	22.50	1.033	0.061	0.062	1.6	13#
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.044	0.051	1.6	/
Head Right Tilted	707.5	QPSK	10	1	22.36	22.50	1.033	0.031	0.031	1.6	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.023	0.026	1.6	/
Head Left Cheek	707.5	QPSK	10	1	22.36	22.50	1.033	0.055	0.057	1.6	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.037	0.042	1.6	/
Head Left Tilted	707.5	QPSK	10	1	22.36	22.50	1.033	0.030	0.031	1.6	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.022	0.025	1.6	/
Body Front(10mm)	707.5	QPSK	10	1	22.36	22.50	1.033	0.074	0.077	1.6	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.056	0.064	1.6	/
Body Back(10mm)	707.5	QPSK	10	1	22.36	22.50	1.033	0.149	0.154	1.6	14#
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.112	0.130	1.6	/
Body Left(10mm)	707.5	QPSK	10	1	22.36	22.50	1.033	0.099	0.103	1.6	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.075	0.087	1.6	/
Body Right(10mm)	707.5	QPSK	10	1	22.36	22.50	1.033	0.096	0.099	1.6	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.071	0.082	1.6	/
Body Bottom(10mm)	707.5	QPSK	10	1	22.36	22.50	1.033	0.074	0.077	1.6	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.056	0.064	1.6	/

**LTE FDD Band 25& LTE FDD Band 2:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	1882.5	QPSK	20	1	22.65	23.00	1.084	0.062	0.067	1.6	/
	1882.5	QPSK	20	50%	22.49	23.00	1.125	0.048	0.054	1.6	/
Head Right Tilted	1882.5	QPSK	20	1	22.65	23.00	1.084	0.059	0.063	1.6	/
	1882.5	QPSK	20	50%	22.49	23.00	1.125	0.046	0.052	1.6	/
Head Left Cheek	1882.5	QPSK	20	1	22.65	23.00	1.084	0.111	0.120	1.6	15#
	1882.5	QPSK	20	50%	22.49	23.00	1.125	0.084	0.094	1.6	/
Head Left Tilted	1882.5	QPSK	20	1	22.65	23.00	1.084	0.048	0.052	1.6	/
	1882.5	QPSK	20	50%	22.49	23.00	1.125	0.039	0.043	1.6	/
Body Front(10mm)	1882.5	QPSK	20	1	22.21	22.50	1.069	0.140	0.150	1.6	/
	1882.5	QPSK	20	50%	21.79	22.50	1.178	0.115	0.135	1.6	/
Body Back(10mm)	1882.5	QPSK	20	1	22.21	22.50	1.069	0.249	0.266	1.6	16#
	1882.5	QPSK	20	50%	21.79	22.50	1.178	0.219	0.258	1.6	/
Body Left(10mm)	1882.5	QPSK	20	1	22.21	22.50	1.069	0.212	0.227	1.6	/
	1882.5	QPSK	20	50%	21.79	22.50	1.178	0.170	0.200	1.6	/
Body Right(10mm)	1882.5	QPSK	20	1	22.21	22.50	1.069	0.050	0.053	1.6	/
	1882.5	QPSK	20	50%	21.79	22.50	1.178	0.042	0.049	1.6	/
Body Bottom(10mm)	1882.5	QPSK	20	1	22.21	22.50	1.069	0.109	0.117	1.6	/
	1882.5	QPSK	20	50%	21.79	22.50	1.178	0.092	0.108	1.6	/

**LTE FDD Band 26:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	831.5	QPSK	15	1	22.31	22.50	1.045	0.068	0.071	1.6	17#
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.060	0.062	1.6	/
Head Right Tilted	831.5	QPSK	15	1	22.31	22.50	1.045	0.036	0.037	1.6	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.032	0.033	1.6	/
Head Left Cheek	831.5	QPSK	15	1	22.31	22.50	1.045	0.058	0.060	1.6	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.049	0.051	1.6	/
Head Left Tilted	831.5	QPSK	15	1	22.31	22.50	1.045	0.030	0.031	1.6	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.027	0.028	1.6	/
Body Front(10mm)	831.5	QPSK	15	1	22.31	22.50	1.045	0.062	0.065	1.6	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.055	0.056	1.6	/
Body Back(10mm)	831.5	QPSK	15	1	22.31	22.50	1.045	0.082	0.086	1.6	18#
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.071	0.073	1.6	/
Body Left(10mm)	831.5	QPSK	15	1	22.31	22.50	1.045	0.061	0.063	1.6	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.053	0.054	1.6	/
Body Right(10mm)	831.5	QPSK	15	1	22.31	22.50	1.045	0.070	0.073	1.6	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.078	0.080	1.6	/
Body Bottom(10mm)	831.5	QPSK	15	1	22.31	22.50	1.045	0.030	0.032	1.6	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.029	0.029	1.6	/



**LTE FDD Band 66& LTE FDD Band 4:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	1745	QPSK	20	1	22.24	22.50	1.062	0.054	0.058	1.6	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.050	0.055	1.6	/
Head Right Tilted	1745	QPSK	20	1	22.24	22.50	1.062	0.050	0.053	1.6	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.046	0.051	1.6	/
Head Left Cheek	1745	QPSK	20	1	22.24	22.50	1.062	0.150	0.159	1.6	19#
	1745	QPSK	20	50%	22.07	22.50	1.104	0.130	0.144	1.6	/
Head Left Tilted	1745	QPSK	20	1	22.24	22.50	1.062	0.061	0.065	1.6	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.053	0.058	1.6	/
Body Front(10mm)	1745	QPSK	20	1	22.24	22.50	1.062	0.146	0.155	1.6	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.131	0.145	1.6	/
Body Back(10mm)	1745	QPSK	20	1	22.24	22.50	1.062	0.292	0.310	1.6	20#
	1745	QPSK	20	50%	22.07	22.50	1.104	0.266	0.294	1.6	/
Body Left(10mm)	1745	QPSK	20	1	22.24	22.50	1.062	0.199	0.211	1.6	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.177	0.195	1.6	/
Body Right(10mm)	1745	QPSK	20	1	22.24	22.50	1.062	0.031	0.032	1.6	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.027	0.030	1.6	/
Body Bottom(10mm)	1745	QPSK	20	1	22.24	22.50	1.062	0.287	0.305	1.6	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.248	0.274	1.6	/

**LTE TDD Band 40:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	2310	QPSK	10	1	22.31	22.50	1.045	0.008	0.008	1.6	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.006	0.006	1.6	/
Head Right Tilted	2310	QPSK	10	1	22.31	22.50	1.045	0.008	0.009	1.6	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.007	0.007	1.6	/
Head Left Cheek	2310	QPSK	10	1	22.31	22.50	1.045	0.020	0.021	1.6	21#
	2310	QPSK	10	50%	21.92	22.00	1.019	0.016	0.016	1.6	/
Head Left Tilted	2310	QPSK	10	1	22.31	22.50	1.045	0.006	0.006	1.6	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.004	0.004	1.6	/
Body Front(10mm)	2310	QPSK	10	1	22.31	22.50	1.045	0.059	0.064	1.6	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.048	0.049	1.6	/
Body Back(10mm)	2310	QPSK	10	1	22.31	22.50	1.045	0.317	0.344	1.6	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.267	0.271	1.6	/
Body Left(10mm)	2310	QPSK	10	1	22.31	22.50	1.045	0.033	0.035	1.6	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.026	0.027	1.6	/
Body Right(10mm)	2310	QPSK	10	1	22.31	22.50	1.045	0.020	0.022	1.6	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.018	0.018	1.6	/
Body Bottom(10mm)	2310	QPSK	10	1	22.31	22.50	1.045	0.327	0.354	1.6	22#
	2310	QPSK	10	50%	21.92	22.00	1.019	0.281	0.285	1.6	/

**LTE TDD Band 40:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	2355	QPSK	10	1	22.15	22.50	1.084	0.009	0.010	1.6	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.011	0.011	1.6	/
Head Right Tilted	2355	QPSK	10	1	22.15	22.50	1.084	0.011	0.011	1.6	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.010	0.010	1.6	/
Head Left Cheek	2355	QPSK	10	1	22.15	22.50	1.084	0.020	0.022	1.6	23#
	2355	QPSK	10	50%	20.94	21.00	1.014	0.018	0.018	1.6	/
Head Left Tilted	2355	QPSK	10	1	22.15	22.50	1.084	0.004	0.005	1.6	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.007	0.007	1.6	/
Body Front(10mm)	2355	QPSK	10	1	22.15	22.50	1.084	0.070	0.075	1.6	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.062	0.069	1.6	/
Body Back(10mm)	2355	QPSK	10	1	22.15	22.50	1.084	0.439	0.466	1.6	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.388	0.428	1.6	/
Body Left(10mm)	2355	QPSK	10	1	22.15	22.50	1.084	0.040	0.042	1.6	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.034	0.038	1.6	/
Body Right(10mm)	2355	QPSK	10	1	22.15	22.50	1.084	0.025	0.026	1.6	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.021	0.023	1.6	/
Body Bottom(10mm)	2355	QPSK	10	1	22.15	22.50	1.084	0.462	0.491	1.6	24#
	2355	QPSK	10	50%	20.94	21.00	1.014	0.434	0.479	1.6	/

**LTE TDD Band 41& LTE FDD Band 38:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	2605	QPSK	20	1	22.24	22.50	1.062	0.044	0.047	1.6	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.039	0.043	1.6	/
Head Right Tilted	2605	QPSK	20	1	22.24	22.50	1.062	0.061	0.064	1.6	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.049	0.054	1.6	/
Head Left Cheek	2605	QPSK	20	1	22.24	22.50	1.062	0.096	0.102	1.6	25#
	2605	QPSK	20	50%	22.07	22.50	1.104	0.081	0.089	1.6	/
Head Left Tilted	2605	QPSK	20	1	22.24	22.50	1.062	0.028	0.030	1.6	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.024	0.026	1.6	/
Body Front(10mm)	2605	QPSK	20	1	22.24	22.50	1.062	0.088	0.093	1.6	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.074	0.081	1.6	/
Body Back(10mm)	2605	QPSK	20	1	22.24	22.50	1.062	0.384	0.408	1.6	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.319	0.352	1.6	/
Body Left(10mm)	2605	QPSK	20	1	22.24	22.50	1.062	0.151	0.160	1.6	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.125	0.138	1.6	/
Body Right(10mm)	2605	QPSK	20	1	22.24	22.50	1.062	0.022	0.024	1.6	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.018	0.020	1.6	/
Body Bottom(10mm)	2605	QPSK	20	1	22.24	22.50	1.062	0.444	0.471	1.6	26#
	2605	QPSK	20	50%	22.07	22.50	1.104	0.379	0.418	1.6	/

**WLAN 2.4G:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	2437	802.11b 1Mbps	14.34	14.5	1.038	0.240	0.249	1.6	/
Head Right Tilted	2437	802.11b 1Mbps	14.34	14.5	1.038	0.059	0.061	1.6	/
Head Left Cheek	2437	802.11b 1Mbps	14.34	14.5	1.038	0.259	0.269	1.6	27#
Head Left Tilted	2437	802.11b 1Mbps	14.34	14.5	1.038	0.180	0.187	1.6	/
Body Front(10mm)	2437	802.11b 1Mbps	14.34	14.5	1.038	0.232	0.241	1.6	/
Body Back(10mm)	2437	802.11b 1Mbps	14.34	14.5	1.038	0.059	0.061	1.6	/
Body Right(10mm)	2437	802.11b 1Mbps	14.34	14.5	1.038	0.240	0.249	1.6	28#
Body Top(10mm)	2437	802.11b 1Mbps	14.34	14.5	1.038	0.074	0.077	1.6	/

**Bluetooth:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	2402	DH51Mbps	7.94	8.00	1.014	0.025	0.025	1.6	/
Head Right Tilted	2402	DH51Mbps	7.94	8.00	1.014	0.021	0.021	1.6	/
Head Left Cheek	2402	DH51Mbps	7.94	8.00	1.014	0.069	0.070	1.6	29#
Head Left Tilted	2402	DH51Mbps	7.94	8.00	1.014	0.045	0.045	1.6	/
Body Front(10mm)	2402	DH51Mbps	7.94	8.00	1.014	0.012	0.012	1.6	30#
Body Back(10mm)	2402	DH51Mbps	7.94	8.00	1.014	0.004	0.004	1.6	/
Body Right(10mm)	2402	DH51Mbps	7.94	8.00	1.014	0.008	0.008	1.6	/
Body Top(10mm)	2402	DH51Mbps	7.94	8.00	1.014	0.002	0.002	1.6	/

**WLAN 5.2G:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	5180	802.11a 6Mbps	16.83	17.00	1.040	0.356	0.370	1.6	/
Head Right Tilted	5180	802.11a 6Mbps	16.83	17.00	1.040	0.324	0.337	1.6	/
Head Left Cheek	5180	802.11a 6Mbps	16.83	17.00	1.040	0.527	0.548	1.6	31#
Head Left Tilted	5180	802.11a 6Mbps	16.83	17.00	1.040	0.464	0.483	1.6	/
Body Front(10mm)	5180	802.11a 6Mbps	16.83	17.00	1.040	0.172	0.179	1.6	/
Body Back(10mm)	5180	802.11a 6Mbps	16.83	17.00	1.040	0.265	0.276	1.6	/
Body Right(10mm)	5180	802.11a 6Mbps	16.83	17.00	1.040	0.217	0.226	1.6	/
Body Top(10mm)	5180	802.11a 6Mbps	16.83	17.00	1.040	0.309	0.321	1.6	32#

**WLAN 5.8G:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Head Right Cheek	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.167	0.176	1.6	/
Head Right Tilted	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.157	0.166	1.6	/
Head Left Cheek	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.203	0.214	1.6	33
Head Left Tilted	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.178	0.188	1.6	/
Body Front(10mm)	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.185	0.195	1.6	/
Body Back(10mm)	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.164	0.173	1.6	/
Body Right(10mm)	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.373	0.393	1.6	34#
Body Top(10mm)	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.165	0.174	1.6	/



**RFID:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Front(10mm)	920	ASK	22.25	22.5	1.059	0.035	0.037	1.6	/
Body Back(10mm)	920	ASK	22.25	22.5	1.059	0.720	0.763	1.6	36#
Body Left(10mm)	920	ASK	22.25	22.5	1.059	0.086	0.091	1.6	/
Body Right(10mm)	920	ASK	22.25	22.5	1.059	0.087	0.092	1.6	/
Body Top(10mm)	920	ASK	22.25	22.5	1.059	0.134	0.142	1.6	/

**Test Results:**

**Environmental Conditions:**

<b>Temperature:</b>	22.2-23.1℃	21.4-22.8℃	21.2-22.7℃	21.7-23.3℃	21.4-22.6℃
<b>Relative Humidity:</b>	44-53%	50-57%	47-54%	49-55%	48-52%
<b>ATM Pressure:</b>	101.7kPa	101.5kPa	101.4kPa	101.7kPa	101.5kPa
<b>Test Date:</b>	2021/03/04	2021/03/05	2021/03/06	2021/03/07	2021/03/08
<b>Temperature:</b>	22.2-23.1 ℃				
<b>Relative Humidity:</b>	45-50%				
<b>ATM Pressure:</b>	101.7 kPa				
<b>Test Date:</b>	2021/03/09				

\* Testing was performed by Bard.Liu and Chris Wang

**GSM 850:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.401	0.456	4.0	37#
Body Left(0mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.063	0.072	4.0	/
Body Right(0mm)	836.6	GPRS 2TS	32.44	33.00	1.138	0.103	0.117	4.0	/

**PCS 1900:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	1880	GPRS 3TS	28.51	29.00	1.119	1.000	1.119	4.0	38#
Body Left(0mm)	1880	GPRS 3TS	28.51	29.00	1.119	0.461	0.516	4.0	/
Body Right(0mm)	1880	GPRS 3TS	28.51	29.00	1.119	0.043	0.049	4.0	/

**WCDMA Band II:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	1880	RMC	22.51	22.80	1.069	1.250	1.336	4.0	39#
Body Left(0mm)	1880	RMC	22.51	22.80	1.069	0.585	0.625	4.0	/
Body Right(0mm)	1880	RMC	22.51	22.80	1.069	0.060	0.064	4.0	/

**WCDMA Band V:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	836.6	RMC	22.42	22.50	1.019	0.423	0.431	4.0	40#
Body Left(0mm)	836.6	RMC	22.42	22.50	1.019	0.099	0.101	4.0	/
Body Right(0mm)	836.6	RMC	22.42	22.50	1.019	0.138	0.141	4.0	/

**Note:**

1. When the 10-g SAR is  $\leq 2.0$ W/Kg, testing for low and high channel is optional.
2. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Mode.

**LTE FDD Band 5:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	836.5	QPSK	10	1	22.26	22.50	1.057	0.412	0.435	4.0	41#
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.333	0.391	4.0	/
Body Left(0mm)	836.5	QPSK	10	1	22.26	22.50	1.057	0.149	0.157	4.0	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.122	0.143	4.0	/
Body Right(0mm)	836.5	QPSK	10	1	22.26	22.50	1.057	0.207	0.219	4.0	/
	836.5	QPSK	10	50%	21.80	22.50	1.175	0.168	0.197	4.0	/

**LTE FDD Band 7:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Sensor	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
								Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	2535	QPSK	20	1	ON	17.78	18.00	1.052	<b>0.533</b>	0.561	4.0	42#
	2535	QPSK	20	50%	ON	17.63	18.00	1.089	0.512	0.558	4.0	/
Body Left(0mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.185	0.186	4.0	/
	2535	QPSK	20	50%	OFF	21.79	22.50	1.178	0.202	0.238	4.0	/
Body Right(0mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.015	0.015	4.0	/
	2535	QPSK	20	50%	OFF	21.79	22.50	1.178	0.014	0.016	4.0	/

**LTE FDD Band 7:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Sensor	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
								Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(18mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.143	0.144	1.6	35#
	2535	QPSK	20	50%	OFF	21.79	22.50	1.178	0.121	0.142	1.6	/
Body Bottom(18mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.114	0.115	1.6	/
	2535	QPSK	20	50%	OFF	21.79	22.50	1.178	0.106	0.125	1.6	/

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Sensor	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
								Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(18mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.076	0.077	4.0	35#
	2535	QPSK	20	50%	OFF	21.79	22.50	1.178	0.060	0.071	4.0	/
Body Bottom(18mm)	2535	QPSK	20	1	OFF	22.47	22.50	1.007	0.045	0.045	4.0	/
	2535	QPSK	20	50%	OFF	21.79	22.50	1.178	0.064	0.075	4.0	/

**LTE FDD Band 12& LTE FDD Band 17:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	707.5	QPSK	10	1	22.36	22.50	1.033	0.271	0.280	4.0	43#
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.201	0.233	4.0	/
Body Left(0mm)	707.5	QPSK	10	1	22.36	22.50	1.033	0.090	0.093	4.0	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.067	0.077	4.0	/
Body Right(0mm)	707.5	QPSK	10	1	22.36	22.50	1.033	0.085	0.088	4.0	/
	707.5	QPSK	10	50%	21.86	22.50	1.159	0.064	0.074	4.0	/

**LTE FDD Band 25& LTE FDD Band 2:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	1882.5	QPSK	20	1	22.21	22.50	1.069	1.000	1.069	4.0	44#
	1882.5	QPSK	20	50%	21.79	22.50	1.178	0.905	1.066	4.0	/
Body Left(0mm)	1882.5	QPSK	20	1	22.21	22.50	1.069	0.511	0.546	4.0	/
	1882.5	QPSK	20	50%	21.79	22.50	1.178	0.418	0.492	4.0	/
Body Right(0mm)	1882.5	QPSK	20	1	22.21	22.50	1.069	0.044	0.047	4.0	/
	1882.5	QPSK	20	50%	21.79	22.50	1.178	0.036	0.042	4.0	/

**LTE FDD Band 26:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	831.5	QPSK	15	1	22.31	22.50	1.045	0.407	0.425	4.0	45#
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.326	0.335	4.0	/
Body Left(0mm)	831.5	QPSK	15	1	22.31	22.50	1.045	0.146	0.153	4.0	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.117	0.120	4.0	/
Body Right(0mm)	831.5	QPSK	15	1	22.31	22.50	1.045	0.205	0.214	4.0	/
	831.5	QPSK	15	50%	21.38	21.50	1.028	0.165	0.170	4.0	/

**LTE FDD Band 66& LTE FDD Band 4:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	1745	QPSK	20	1	22.24	22.50	1.062	1.040	1.104	4.0	46#
	1745	QPSK	20	50%	22.07	22.50	1.104	0.871	0.962	4.0	/
Body Left(0mm)	1745	QPSK	20	1	22.24	22.50	1.062	0.409	0.434	4.0	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.335	0.370	4.0	/
Body Right(0mm)	1745	QPSK	20	1	22.24	22.50	1.062	0.063	0.067	4.0	/
	1745	QPSK	20	50%	22.07	22.50	1.104	0.054	0.060	4.0	/

**LTE TDD Band 40:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	2310	QPSK	10	1	22.31	22.50	1.045	0.413	0.448	4.0	47#
	2310	QPSK	10	50%	21.92	22.00	1.019	0.339	0.344	4.0	/
Body Left(0mm)	2310	QPSK	10	1	22.31	22.50	1.045	0.168	0.182	4.0	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.153	0.155	4.0	/
Body Right(0mm)	2310	QPSK	10	1	22.31	22.50	1.045	0.008	0.009	4.0	/
	2310	QPSK	10	50%	21.92	22.00	1.019	0.007	0.007	4.0	/

**LTE TDD Band 40:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	2355	QPSK	10	1	22.15	22.50	1.084	0.533	0.566	4.0	48#
	2355	QPSK	10	50%	20.94	21.00	1.014	0.459	0.507	4.0	/
Body Left(0mm)	2355	QPSK	10	1	22.15	22.50	1.084	0.221	0.235	4.0	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.184	0.203	4.0	/
Body Right(0mm)	2355	QPSK	10	1	22.15	22.50	1.084	0.011	0.011	4.0	/
	2355	QPSK	10	50%	20.94	21.00	1.014	0.010	0.011	4.0	/

**LTE TDD Band 41& LTE TDD Band 38:**

EUT Position	Frequency (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
							Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	2605	QPSK	20	1	22.24	22.50	1.062	0.374	0.397	4.0	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.317	0.350	4.0	/
Body Left(0mm)	2605	QPSK	20	1	22.24	22.50	1.062	0.448	0.476	4.0	49#
	2605	QPSK	20	50%	22.07	22.50	1.104	0.369	0.407	4.0	/
Body Right(0mm)	2605	QPSK	20	1	22.24	22.50	1.062	0.014	0.015	4.0	/
	2605	QPSK	20	50%	22.07	22.50	1.104	0.012	0.013	4.0	/

**WLAN 2.4G:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	2437	802.11b 1Mbps	14.34	14.5	1.038	0.051	0.053	4.0	/
Body Left(0mm)	2437	802.11b 1Mbps	14.34	14.5	1.038	0.023	0.024	4.0	/
Body Right(0mm)	2437	802.11b 1Mbps	14.34	14.5	1.038	0.164	0.170	4.0	50#

**Bluetooth:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	2402	DH51Mbps	7.94	8.00	1.014	0.006	0.006	4.0	51#
Body Left(0mm)	2402	DH51Mbps	7.94	8.00	1.014	0.001	0.001	4.0	/
Body Right(0mm)	2402	DH51Mbps	7.94	8.00	1.014	0.002	0.002	4.0	/

**WLAN 5.2G:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	5180	802.11a 6Mbps	16.83	17.00	1.040	0.150	0.156	4.0	/
Body Left(0mm)	5180	802.11a 6Mbps	16.83	17.00	1.040	0.017	0.017	4.0	/
Body Right(0mm)	5180	802.11a 6Mbps	16.83	17.00	1.040	0.476	0.495	4.0	52#

**WLAN 5.8G:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.044	0.047	4.0	/
Body Left(0mm)	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.007	0.008	4.0	/
Body Right(0mm)	5775	802.11ac-VHT80 MCS0	19.77	20.00	1.054	0.258	0.272	4.0	53#



**RFID:**

EUT Position	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	10g SAR (W/Kg)				
					Scaled Factor	Meas.	Scaled SAR	Limit	Plot
Body Back(0mm)	920	ASK	22.25	22.5	1.059	0.972	1.030	4.0	54#
Body Left(0mm)	920	ASK	22.25	22.5	1.059	0.143	0.151	4.0	/
Body Right(0mm)	920	ASK	22.25	22.5	1.059	0.157	0.166	4.0	/

## SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

### Simultaneous Transmission:

Description of Simultaneous Transmit Capabilities		
Transmitter Combination	Simultaneous?	Hotspot
WWAN(WCDMA/LTE) + WLAN 2.4G + RF ID	√	√
WWAN(WCDMA/LTE) + WLAN 5G + RF ID	√	×
WWAN(GSM/WCDMA/LTE) + Bluetooth + RF ID	√	×

### Simultaneous Transmission Consideration Detail

Transmitter Combination	Position	Max SAR(W/kg)			ΣSAR<1.6W/kg
		SAR1(WWAN)	SAR2(WLAN)	SAR2(RFID)	
WWAN+ WLAN 2.4G	Head Right Cheek	0.094	0.249	N/A	0.34
	Head Right Tilt	0.111	0.061	N/A	0.17
	Head Left Cheek	0.182	0.269	N/A	0.45
	Head Left Tilt	0.076	0.187	N/A	0.26
	Body Front(10mm)	0.170	0.241	0.037	0.45
	Body Back(10mm)	0.466	0.061	0.763	1.29
	Body Left(10mm)	0.281	N/A	N/A	N/A
	Body Right(10mm)	0.017	0.249	0.092	0.36
	Body Top(10mm)	0.007	0.077	0.142	0.226
	Body Bottom(10mm)	0.491	N/A	N/A	N/A

Transmitter Combination	Position	Max SAR(W/kg)			ΣSAR<1.6W/kg
		SAR1(WWAN)	SAR2(WLAN)	SAR2(RFID)	
WWAN+ WLAN 5G	Head Right Cheek	0.094	0.370	N/A	0.46
	Head Right Tilt	0.111	0.337	N/A	0.45
	Head Left Cheek	0.182	0.548	N/A	0.73
	Head Left Tilt	0.076	0.483	N/A	0.56
	Body Front(10mm)	0.170	0.195	0.037	0.40
	Body Back(10mm)	0.466	0.276	0.763	1.51
	Body Left(10mm)	0.281	N/A	N/A	N/A
	Body Right(10mm)	0.017	0.393	0.092	0.50
	Body Top(10mm)	0.007	0.321	0.142	0.47
	Body Bottom(10mm)	0.491	N/A	N/A	N/A

Transmitter Combination	Position	Max SAR(W/kg)			ΣSAR<1.6W/kg
		SAR1(WWAN)	SAR2(Bluetooth)	SAR2(RFID)	
WWAN+ Bluetooth	Head Right Cheek	0.094	0.025	N/A	0.12
	Head Right Tilt	0.111	0.021	N/A	0.13
	Head LeftCheek	0.182	0.070	N/A	0.25
	Head Left Tilt	0.076	0.045	N/A	0.12
	Body Front(10mm)	0.170	0.012	0.037	0.22
	Body Back(10mm)	0.466	0.004	0.763	1.23
	Body Left(10mm)	0.281	N/A	N/A	N/A
	Body Right(10mm)	0.017	0.008	0.092	0.12
	Body Top(10mm)	0.007	0.002	0.142	0.15
	Body Bottom(10mm)	0.491	N/A	N/A	N/A

**Conclusion:**

Sum of SAR:ΣSAR ≤ 1.6 W/kg for 1g Body SAR,therefore simultaneous transmission SAR with Volume Scans is **not required**.

**NTOE:**

1. The P-sensor located in LTE Band 7 antenna
2. LTE Band 7 WWAN 18mm 1gSAR (W/Kg) less than LTE Band 7 WWAN 10mm 1gSAR (W/Kg) , So the simultaneous transmission of LTE Band 7 WWAN 18mm 1gSAR (W/Kg) should be less than the 10mm 1g SAR (W/Kg) .

Transmitter Combination	Position	Max SAR(W/kg)			ΣSAR<4.0W/kg
		SAR1(WWAN)	SAR2(WLAN)	SAR2(RFID)	
WWAN+ WLAN 2.4G+ RF ID	Body Back(0mm)	1.336	0.053	1.030	2.419
	Body Left(0mm)	0.625	0.024	0.151	0.800
	Body Right(0mm)	0.219	0.170	0.166	0.555

Transmitter Combination	Position	Max SAR(W/kg)			ΣSAR<4.0W/kg
		SAR1(WWAN)	SAR2(WLAN)	SAR2(RFID)	
WWAN+ WLAN 5G+ RF ID	Body Back(0mm)	1.336	0.156	1.030	2.522
	Body Left(0mm)	0.625	0.017	0.151	0.793
	Body Right(0mm)	0.219	0.495	0.166	0.880

Transmitter Combination	Position	Max SAR(W/kg)			ΣSAR<4.0W/kg
		SAR1(WWAN)	SAR2(WLAN)	SAR2(RFID)	
WWAN+ Bluetooth + RF ID	Body Back(0mm)	1.336	0.006	1.030	2.372
	Body Left(0mm)	0.625	0.001	0.151	0.777
	Body Right(0mm)	0.219	0.002	0.166	0.387

**Conclusion:**

Sum of SAR:ΣSAR ≤ 4.0 W/kg for 10g Body SAR,therefore simultaneous transmission SAR with Volume Scans is **not required**.

## APPENDIX A MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

### MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

**Measurement uncertainty evaluation for IEEE1528-2013 SAR test**

Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
<b>Measurement system</b>							
Probe calibration	6.0	N	1	1	1	6.0	6.0
Axial Isotropy	4.7	R	$\sqrt{3}$	1	1	1.9	1.9
Hemispherical Isotropy	9.6	R	$\sqrt{3}$	0	0	3.9	3.9
Boundary effect	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Linearity	4.7	R	$\sqrt{3}$	1	1	2.7	2.7
Detection limits	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.8	R	$\sqrt{3}$	1	1	0.5	0.5
Integration time	2.6	R	$\sqrt{3}$	1	1	1.5	1.5
RF ambient conditions – noise	3.0	R	$\sqrt{3}$	1	1	1.7	1.7
RF ambient conditions–reflections	3.0	R	$\sqrt{3}$	1	1	1.7	1.7
Probe positioner mech. Restrictions	0.02	R	$\sqrt{3}$	1	1	0.0	0.0
Probe positioning with respect to phantom shell	0.4	R	$\sqrt{3}$	1	1	0.2	0.2
Post-processing	2.0	R	$\sqrt{3}$	1	1	1.2	1.2
<b>Test sample related</b>							
Test sample positioning	2.9	N	1	1	1	2.9	2.9
Device holder uncertainty	3.6	N	1	1	1	3.6	3.6
Drift of output power	5.0	R	$\sqrt{3}$	1	1	2.9	2.9
<b>Phantom and set-up</b>							
Phantom uncertainty (shape and thickness tolerances)	6.1	R	$\sqrt{3}$	1	1	2.3	2.3
Liquid conductivity target)	5.0	R	$\sqrt{3}$	0.78	0.71	2.0	1.8
Liquid conductivity meas.)	2.5	N	1	0.78	0.71	2.0	1.8
Liquid permittivity target)	5.0	R	$\sqrt{3}$	0.23	0.26	0.6	0.7
Liquid permittivity meas.)	2.5	N	1	0.23	0.26	0.6	0.7
Combined standard uncertainty		RSS				11.3	11.2
Expanded uncertainty 95 % confidence interval)						22.6	22.4

Measurement uncertainty evaluation for IEC62209-2 SAR test

Source of uncertainty	Tolerance/uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
<b>Measurement system</b>							
Probe calibration	6.55	N	1	1	1	6.55	6.55
Axial Isotropy	4.7	R	√3	1	1	1.9	1.9
Hemispherical Isotropy	9.6	R	√3	0	0	3.9	3.9
Linearity	4.7	R	√3	1	1	2.7	2.7
Modulation Response	2.4	R	√3	1	1	1.4	1.4
Detection limits	1.0	R	√3	1	1	0.6	0.6
Boundary effect	2.0	R	√3	1	1	1.2	1.2
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.8	R	√3	1	1	0.5	0.5
Integration time	2.6	R	√3	1	1	1.5	1.5
RF ambient conditions – noise	3.0	R	√3	1	1	1.7	1.7
RF ambient conditions–reflections	3.0	R	√3	1	1	1.7	1.7
Probe positioner mech. Restrictions	0.04	R	√3	1	1	0.0	0.0
Probe positioning with respect to phantom shell	0.8	R	√3	1	1	0.5	0.5
Post-processing	4.0	R	√3	1	1	2.3	2.3
<b>Test sample related</b>							
Device holder Uncertainty	3.6	N	1	1	1	3.6	3.6
Test sample positioning	2.9	N	1	1	1	2.9	2.9
Power scaling	0	R	√3	1	1	0	0
Drift of output power	5.0	R	√3	1	1	2.9	2.9
<b>Phantom and set-up</b>							
Phantom uncertainty (shape and thickness tolerances)	7.6	R	√3	1	1	4.4	4.4
Algorithm for correcting SAR for deviations in permittivity and conductivity	1.9	N	1	1	0.84	1.9	1.9
Liquid conductivity (meas.)	2.5	N	1	0.78	0.71	2.0	1.8
Liquid permittivity (meas.)	2.5	N	1	0.23	0.26	0.6	0.7
Temp. unc. - Conductivity	3.4	R	√3	0.78	0.71	1.5	1.4
Temp. unc. - Permittivity	0.4	R	√3	0.23	0.26	0.1	0.1
Combined standard uncertainty		RSS				12.1	12.0
Expanded uncertainty 95 % confidence interval)						24.1	24.0

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## **APPENDIX B EUT TEST POSITION PHOTOS**

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**Please Refer to the Attachment.**

### APPENDIX C SAR PLOTS OF SAR MEASUREMENT

1\_GSM850\_GSM Voice\_Right Cheek\_0mm\_Ch190

Communication System: UID 0, GSM850 (0); Frequency: 836.6MHz;Duty Cycle: 1:8.3  
 Medium parameters used:  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.912 \text{ S/m}$ ;  $\epsilon_r = 42.043$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.0949 W/kg

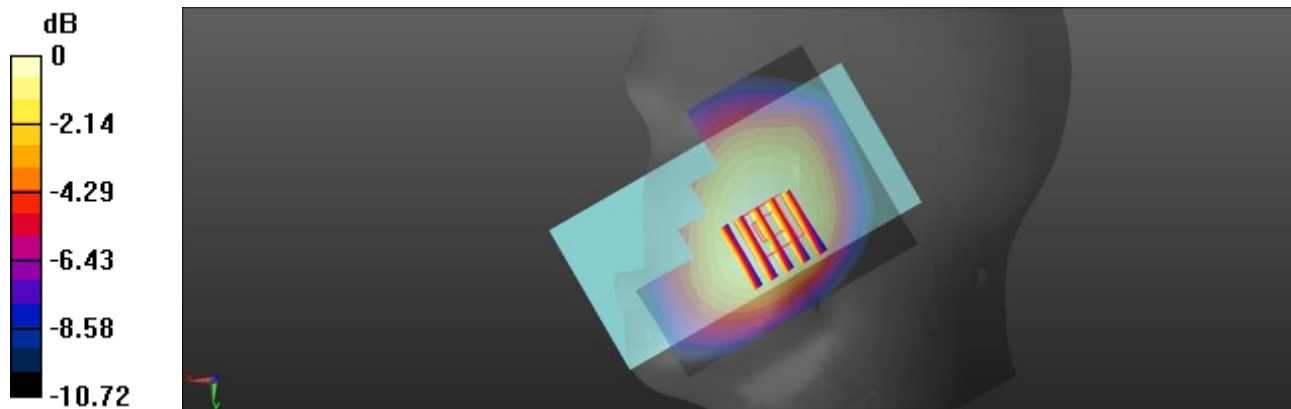
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 2.104 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.104 W/kg

**SAR(1 g) = 0.076 W/kg; SAR(10 g) = 0.057 W/kg**

Maximum value of SAR (measured) = 0.0929 W/kg



$0 \text{ dB} = 0.0929 \text{ W/kg} = -10.32 \text{ dBW/kg}$



2\_GSM850\_GPRS 2 Tx slots\_Back\_10mm\_Ch190

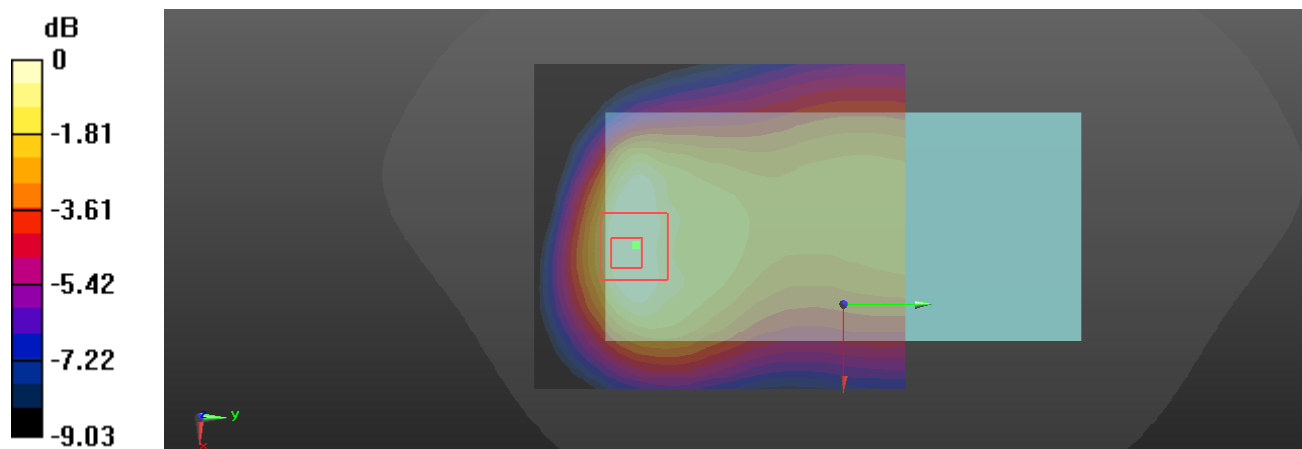
Communication System: UID 0, GSM850 (0); Frequency: 836.6MHz;Duty Cycle: 1:4  
 Medium parameters used:  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.912 \text{ S/m}$ ;  $\epsilon_r = 42.043$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x91x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.116 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $10.94 \text{ V/m}$ ; Power Drift =  $-0.00 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.130 \text{ W/kg}$   
**SAR(1 g) =  $0.092 \text{ W/kg}$ ; SAR(10 g) =  $0.067 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.116 \text{ W/kg}$



$0 \text{ dB} = 0.116 \text{ W/kg} = -9.36 \text{ dBW/kg}$

3\_GSM1900\_GSM Voice\_Left Cheek\_0mm\_Ch661

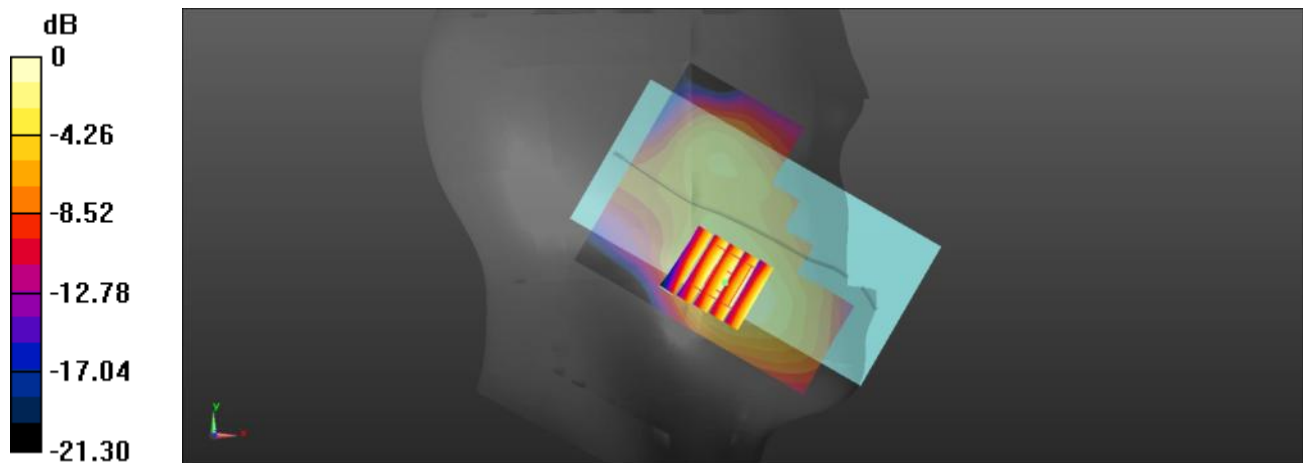
Communication System: UID 0, GSM 1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:8.3  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.406 \text{ S/m}$ ;  $\epsilon_r = 38.933$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.165 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $2.760 \text{ V/m}$ ; Power Drift =  $0.07 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.198 \text{ W/kg}$   
**SAR(1 g) =  $0.124 \text{ W/kg}$ ; SAR(10 g) =  $0.076 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.171 \text{ W/kg}$



$0 \text{ dB} = 0.171 \text{ W/kg} = -7.67 \text{ dBW/kg}$

4\_GSM1900\_GPRS 3 Tx slots\_Back\_10mm\_Ch661

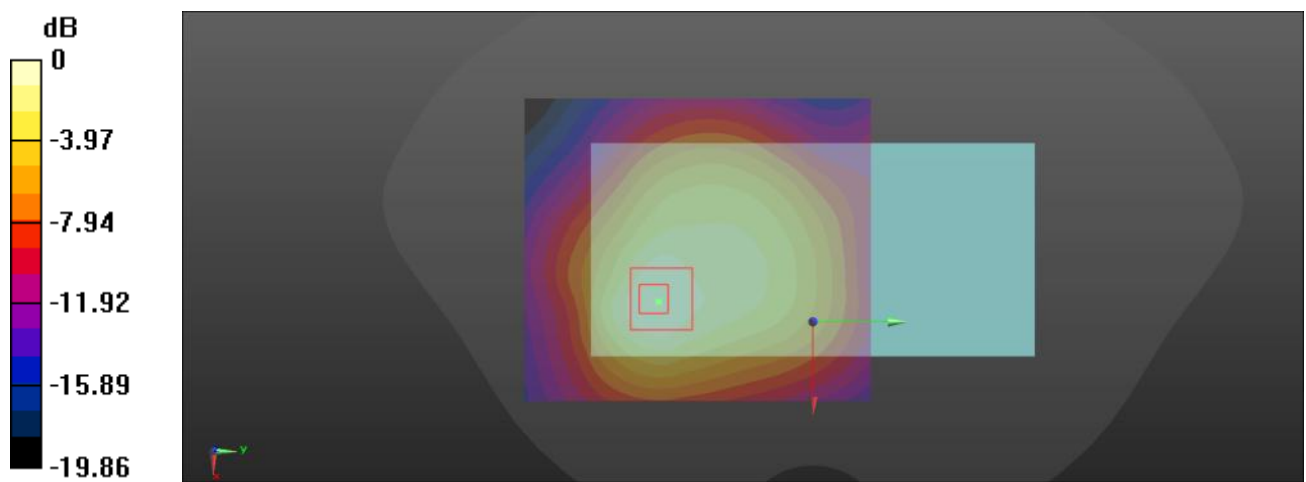
Communication System: UID 0, GSM 1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:2.66  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.406 \text{ S/m}$ ;  $\epsilon_r = 38.933$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.434 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $9.827 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.526 \text{ W/kg}$   
**SAR(1 g) =  $0.295 \text{ W/kg}$ ; SAR(10 g) =  $0.169 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.421 \text{ W/kg}$



$0 \text{ dB} = 0.421 \text{ W/kg} = -3.76 \text{ dBW/kg}$

5\_WCDMA 2\_RMC 12.2Kbps\_Left Cheek\_0mm\_Ch9400

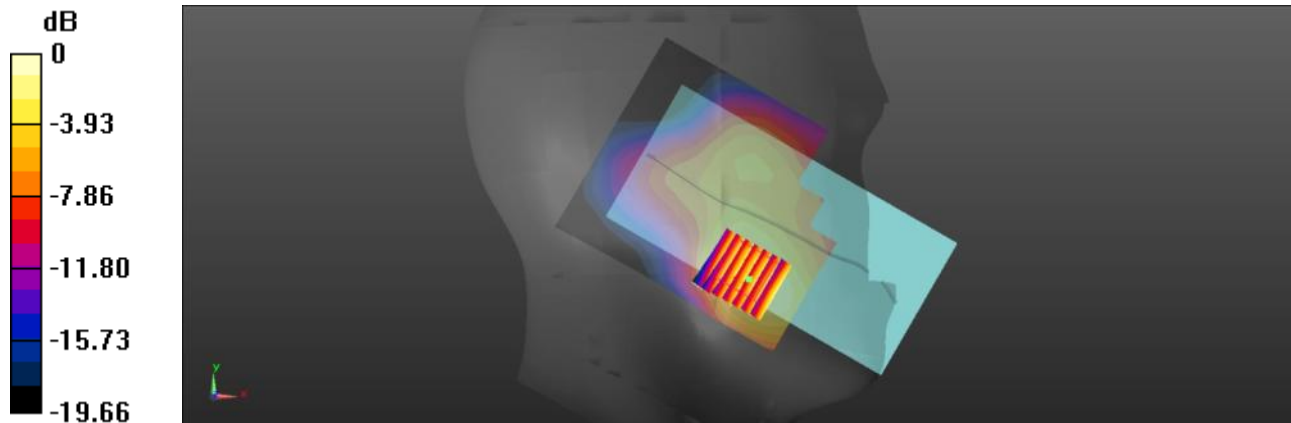
Communication System: UID 0, WCDMA 3G (0); Frequency: 1880 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.406 \text{ S/m}$ ;  $\epsilon_r = 38.933$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.222 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $3.654 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.263 \text{ W/kg}$   
**SAR(1 g) =  $0.163 \text{ W/kg}$ ; SAR(10 g) =  $0.098 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.227 \text{ W/kg}$



$$0 \text{ dB} = 0.227 \text{ W/kg} = -6.44 \text{ dBW/kg}$$

6\_WCDMA 2\_RMC 12.2Kbps\_Back\_10mm\_Ch9400

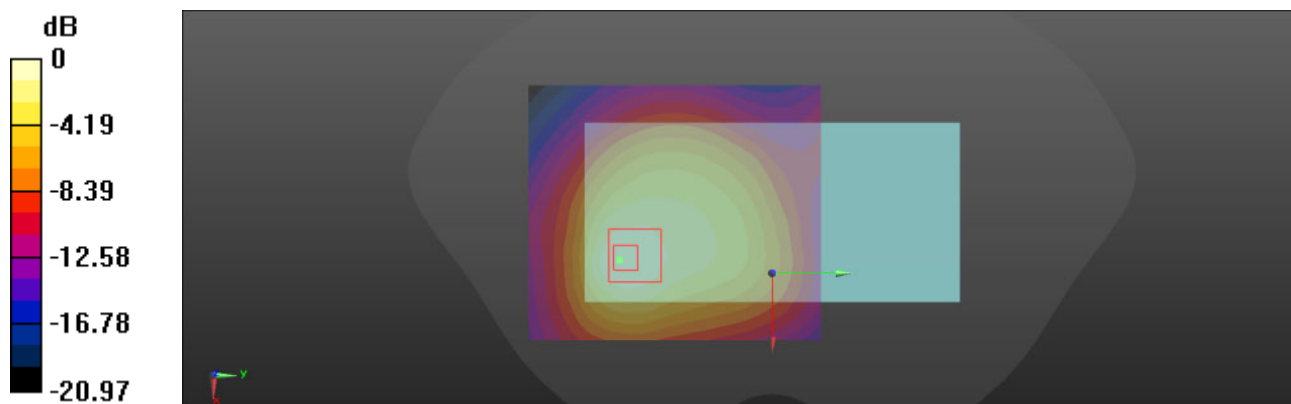
Communication System: UID 0, WCDMA 3G (0); Frequency: 1880 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.406 \text{ S/m}$ ;  $\epsilon_r = 38.933$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.540 \text{ W/kg}$

**Zoom Scan (7x8x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $9.207 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.645 \text{ W/kg}$   
**SAR(1 g) =  $0.371 \text{ W/kg}$ ; SAR(10 g) =  $0.213 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.540 \text{ W/kg}$



$0 \text{ dB} = 0.540 \text{ W/kg} = -2.68 \text{ dBW/kg}$

7\_WCDMA 5\_RMC 12.2Kbps\_Right Cheek\_0mm\_Ch4183

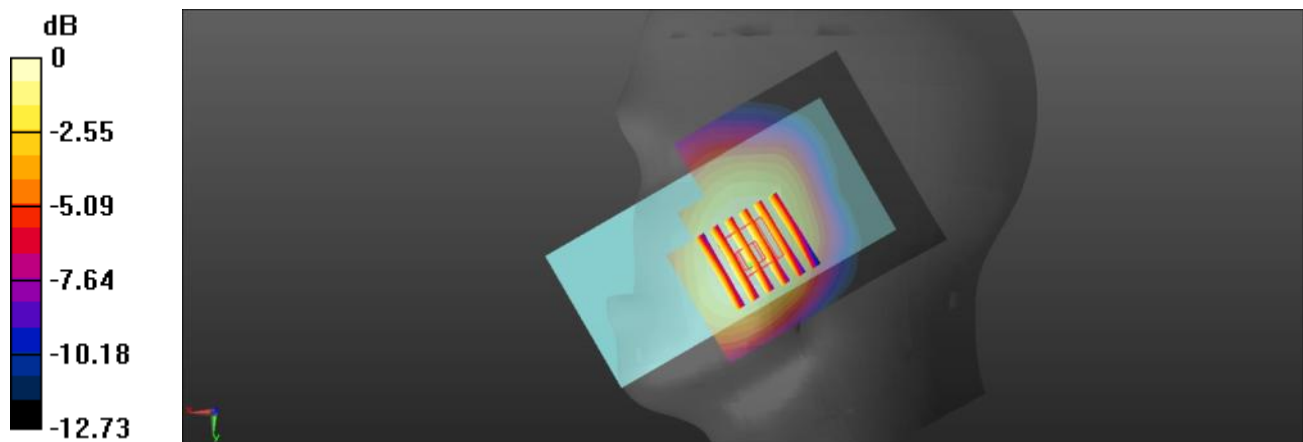
Communication System: UID 0, WCDMA 3G (0); Frequency: 836.6 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.912 \text{ S/m}$ ;  $\epsilon_r = 42.043$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.0723 \text{ W/kg}$

**Zoom Scan (6x6x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $1.580 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.0800 \text{ W/kg}$   
**SAR(1 g) =  $0.059 \text{ W/kg}$ ; SAR(10 g) =  $0.044 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.0718 \text{ W/kg}$



$0 \text{ dB} = 0.0718 \text{ W/kg} = -11.44 \text{ dBW/kg}$

8\_WCDMA 5\_RMC 12.2Kbps\_Back\_10mm\_Ch4183

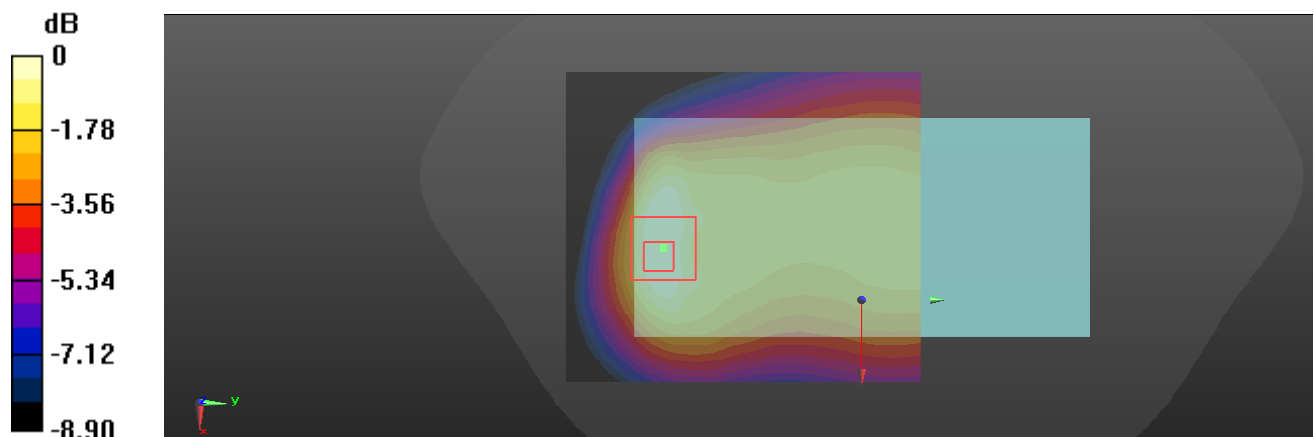
Communication System: UID 0, WCDMA 3G (0); Frequency: 836.6 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.912 \text{ S/m}$ ;  $\epsilon_r = 42.043$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x91x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.0930 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $10.00 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.105 \text{ W/kg}$   
**SAR(1 g) =  $0.073 \text{ W/kg}$ ; SAR(10 g) =  $0.054 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.0936 \text{ W/kg}$



$0 \text{ dB} = 0.0936 \text{ W/kg} = -10.29 \text{ dBW/kg}$

9\_LTE Band 5\_10M\_QPSK\_1RB\_0offset\_Right Cheek\_0mm\_Ch20525

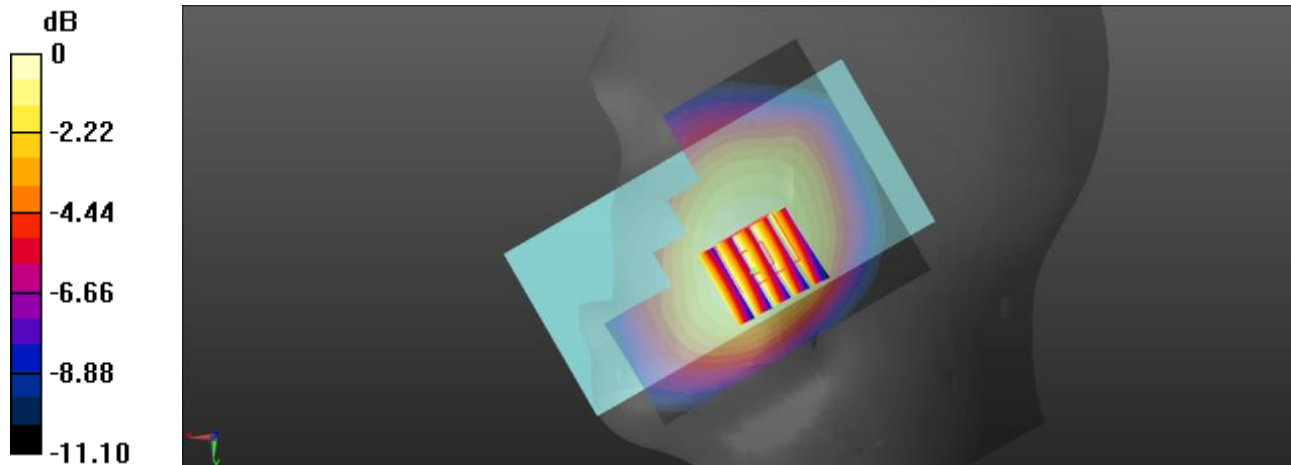
Communication System: UID 0, FDD LTE 4G (0); Frequency: 836.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 836.5 \text{ MHz}$ ;  $\sigma = 0.912 \text{ S/m}$ ;  $\epsilon_r = 42.042$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.112 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $2.477 \text{ V/m}$ ; Power Drift =  $0.10 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.121 \text{ W/kg}$   
**SAR(1 g) =  $0.089 \text{ W/kg}$ ; SAR(10 g) =  $0.067 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.110 \text{ W/kg}$



$0 \text{ dB} = 0.110 \text{ W/kg} = -9.59 \text{ dBW/kg}$



10\_LTEBand5\_10M\_QPSK\_1RB\_0offset\_RightSide\_10mm\_Ch20525

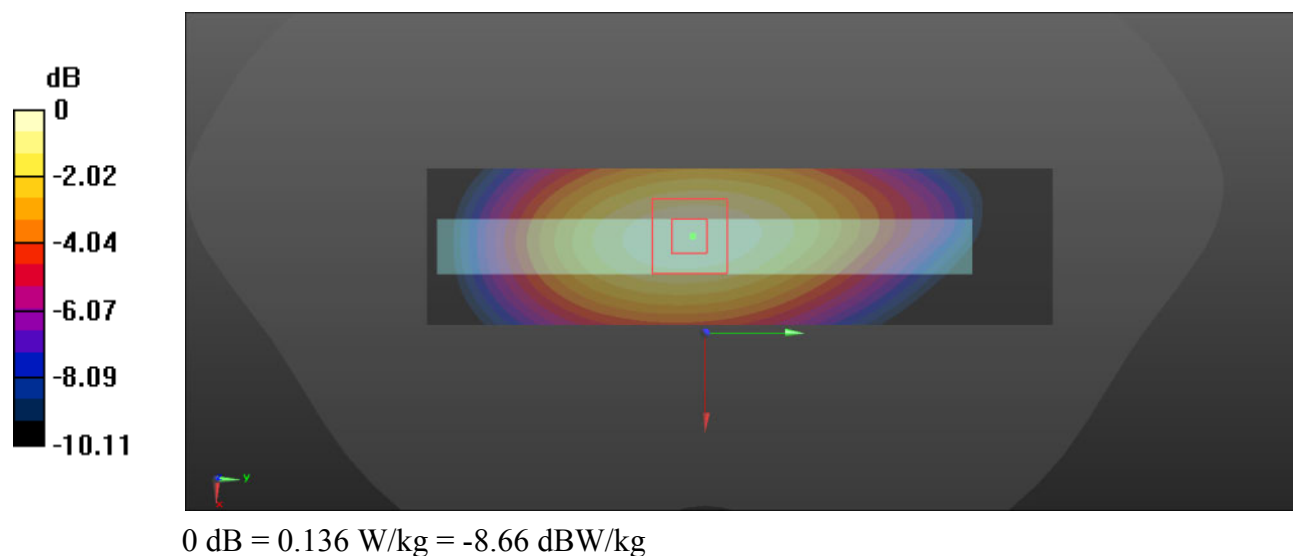
Communication System: UID 0, FDD LTE 4G (0); Frequency: 836.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 836.5 \text{ MHz}$ ;  $\sigma = 0.912 \text{ S/m}$ ;  $\epsilon_r = 42.042$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (31x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.134 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $12.44 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.158 \text{ W/kg}$   
**SAR(1 g) =  $0.101 \text{ W/kg}$ ; SAR(10 g) =  $0.069 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.136 \text{ W/kg}$



11\_LTE Band 7\_20M\_QPSK\_1RB\_0offset\_Left Cheek\_0mm\_Ch21100

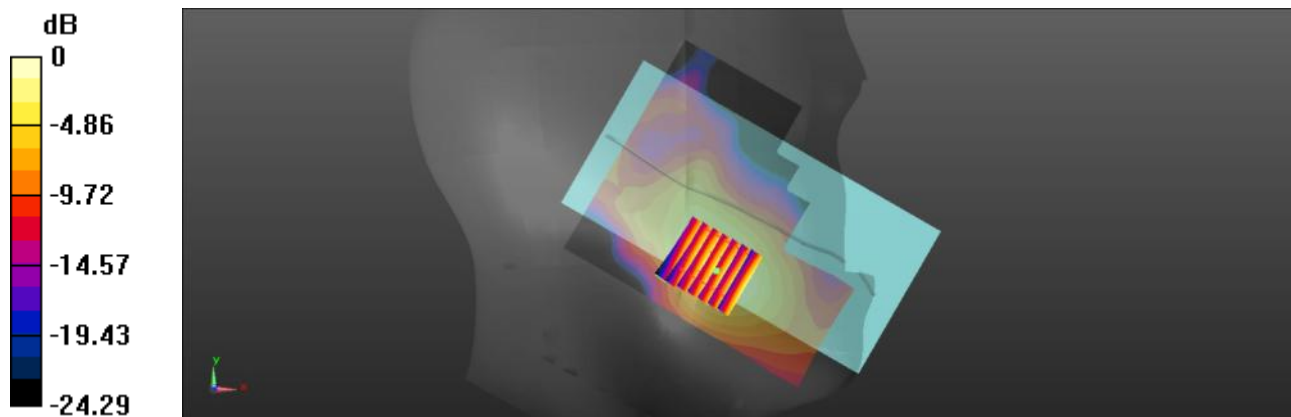
Communication System: UID 0, FDD LTE 4G (0); Frequency: 2535 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2535 \text{ MHz}$ ;  $\sigma = 1.974 \text{ S/m}$ ;  $\epsilon_r = 37.995$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x101x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.292 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $3.749 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.334 \text{ W/kg}$   
**SAR(1 g) =  $0.181 \text{ W/kg}$ ; SAR(10 g) =  $0.095 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.272 \text{ W/kg}$



$0 \text{ dB} = 0.272 \text{ W/kg} = -5.65 \text{ dBW/kg}$

12\_LTE Band 7\_20M\_QPSK\_1RB\_0offset\_Back\_10mm\_Ch21100

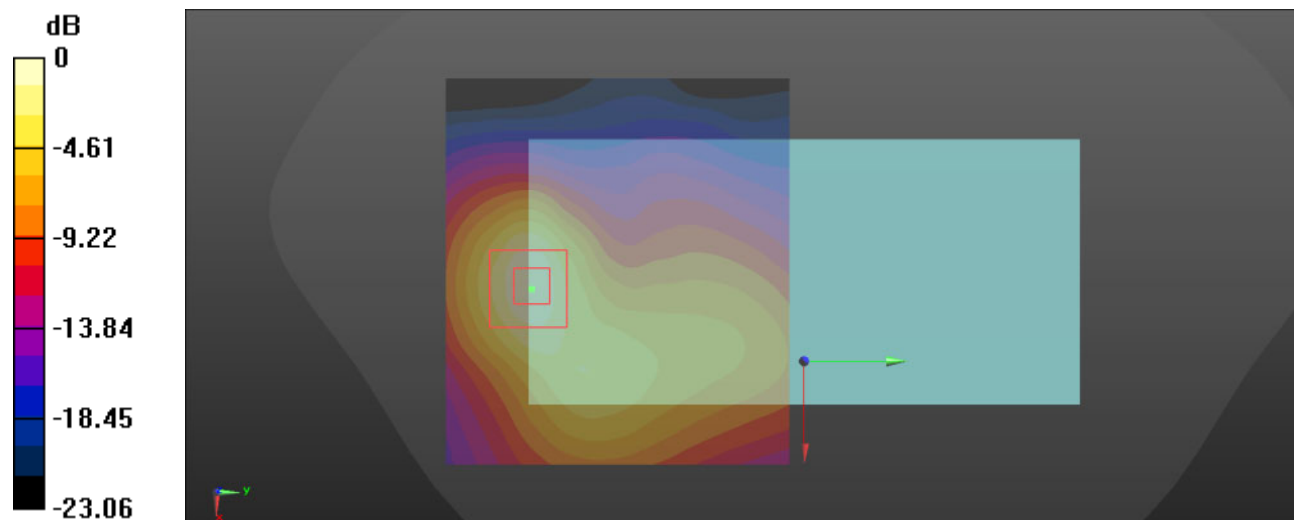
Communication System: UID 0, FDD LTE 4G (0); Frequency: 2535 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2535 \text{ MHz}$ ;  $\sigma = 1.974 \text{ S/m}$ ;  $\epsilon_r = 37.995$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x81x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.658 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $4.957 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.807 \text{ W/kg}$   
**SAR(1 g) =  $0.417 \text{ W/kg}$ ; SAR(10 g) =  $0.202 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.665 \text{ W/kg}$



$0 \text{ dB} = 0.665 \text{ W/kg} = -1.77 \text{ dBW/kg}$

13\_LTE Band 12\_10M\_QPSK\_1RB\_0offset\_Right Cheek\_0mm\_Ch23095

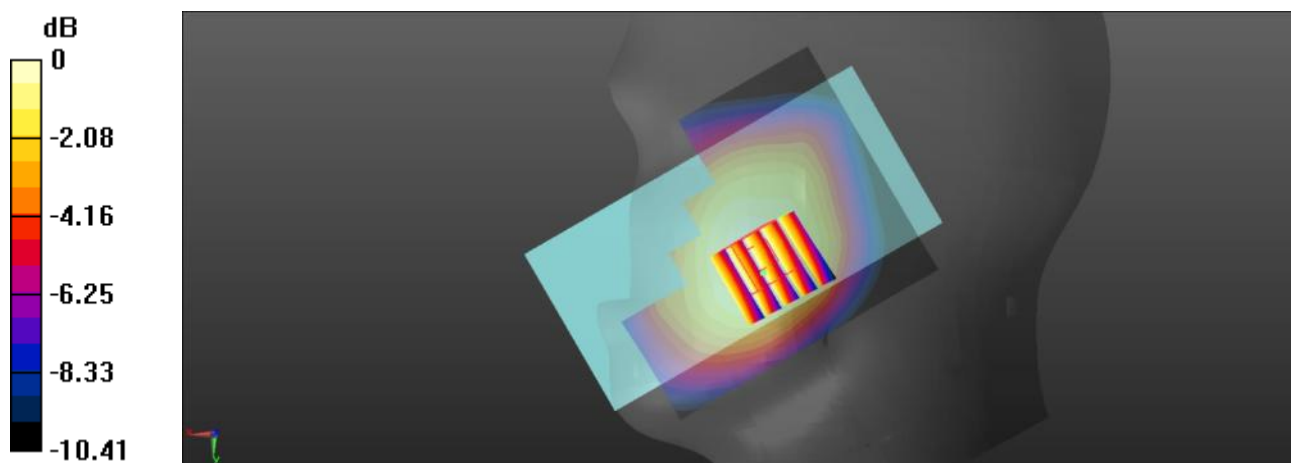
Communication System: UID 0, FDD LTE 4G (0); Frequency: 707.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 707.5 \text{ MHz}$ ;  $\sigma = 0.861 \text{ S/m}$ ;  $\epsilon_r = 42.103$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.39, 10.39, 10.39); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.0758 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $2.495 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.0800 \text{ W/kg}$   
**SAR(1 g) =  $0.061 \text{ W/kg}$ ; SAR(10 g) =  $0.046 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.0726 \text{ W/kg}$



$0 \text{ dB} = 0.0726 \text{ W/kg} = -11.39 \text{ dBW/kg}$

14\_LTE Band 12\_10M\_QPSK\_1RB\_0offset\_Back\_10mm\_Ch23095

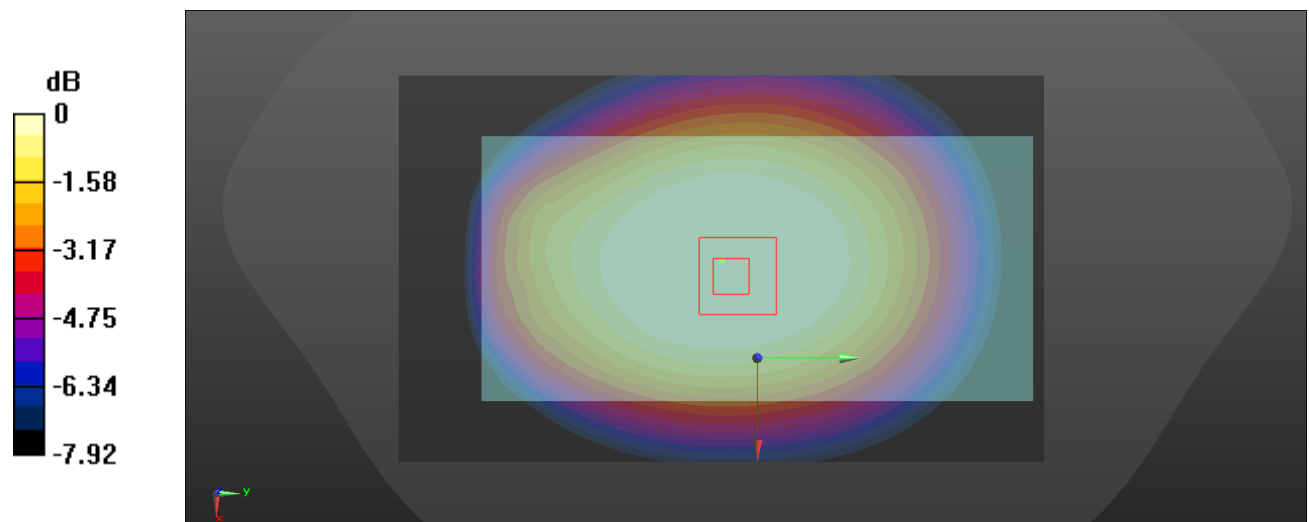
Communication System: UID 0, FDD LTE 4G (0); Frequency: 707.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 707.5 \text{ MHz}$ ;  $\sigma = 0.861 \text{ S/m}$ ;  $\epsilon_r = 42.103$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.39, 10.39, 10.39); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x91x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.184 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $15.00 \text{ V/m}$ ; Power Drift =  $-0.07 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.204 \text{ W/kg}$   
**SAR(1 g) =  $0.149 \text{ W/kg}$ ; SAR(10 g) =  $0.112 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.184 \text{ W/kg}$



$0 \text{ dB} = 0.184 \text{ W/kg} = -7.35 \text{ dBW/kg}$

15\_LTE Band 25\_20M\_QPSK\_1RB\_0offset\_Left Cheek\_0mm\_Ch26683

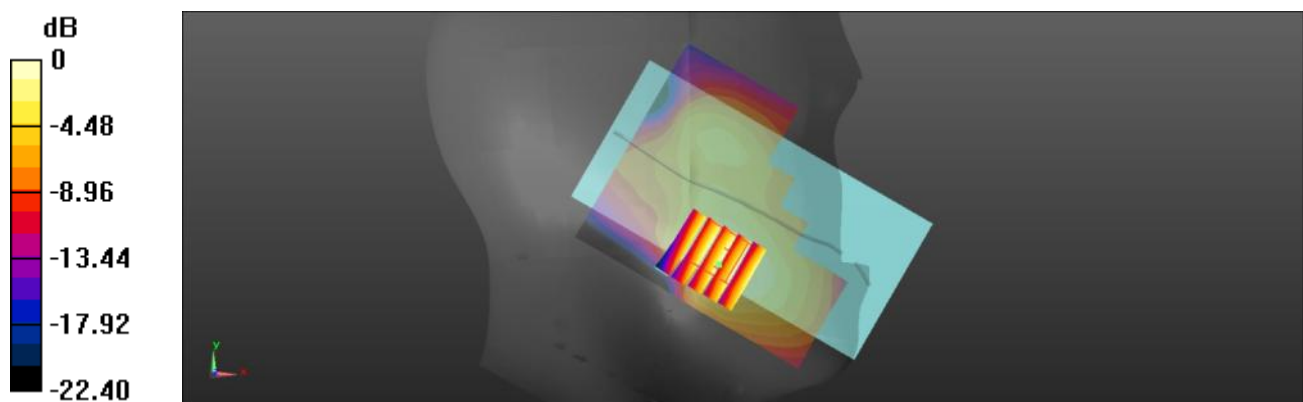
Communication System: UID 0, FDD LTE 4G (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1882.5 \text{ MHz}$ ;  $\sigma = 1.407 \text{ S/m}$ ;  $\epsilon_r = 38.920$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.152 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $1.833 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.182 \text{ W/kg}$   
**SAR(1 g) =  $0.111 \text{ W/kg}$ ; SAR(10 g) =  $0.068 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.156 \text{ W/kg}$



$0 \text{ dB} = 0.156 \text{ W/kg} = -8.07 \text{ dBW/kg}$

16\_LTE Band 25\_20M\_QPSK\_1RB\_0offset\_Back\_10mm\_Ch26683

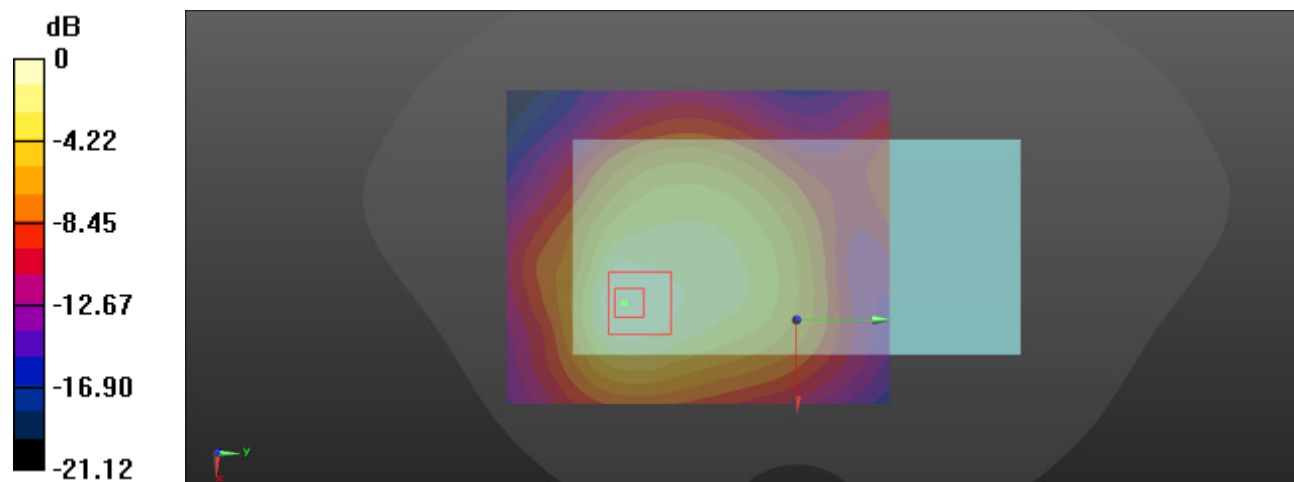
Communication System: UID 0, FDD LTE 4G (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1882.5 \text{ MHz}$ ;  $\sigma = 1.407 \text{ S/m}$ ;  $\epsilon_r = 38.920$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x111x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.385 \text{ W/kg}$

**Zoom Scan (7x8x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $8.499 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.428 \text{ W/kg}$   
**SAR(1 g) =  $0.249 \text{ W/kg}$ ; SAR(10 g) =  $0.145 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.363 \text{ W/kg}$



$$0 \text{ dB} = 0.363 \text{ W/kg} = -4.40 \text{ dBW/kg}$$

17\_LTE Band 26\_15M\_QPSK\_1RB\_0offset\_Right Cheek\_0mm\_Ch26865

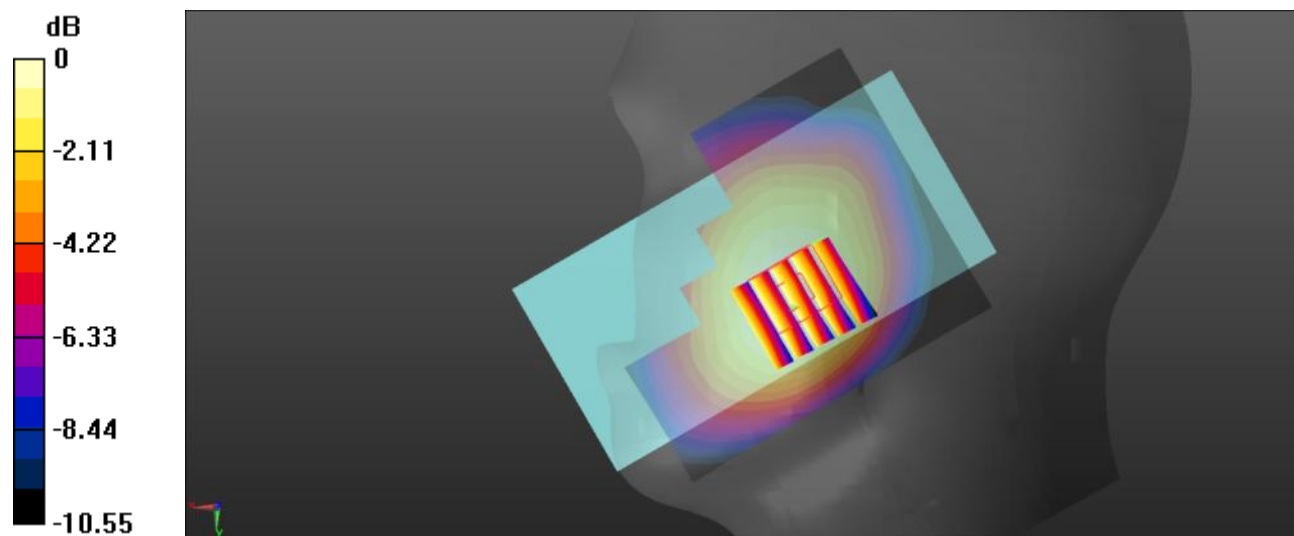
Communication System: UID 0, FDD LTE 4G (0); Frequency: 831.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 831.5 \text{ MHz}$ ;  $\sigma = 0.907 \text{ S/m}$ ;  $\epsilon_r = 42.108$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.0861 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $2.044 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.0920 \text{ W/kg}$   
**SAR(1 g) =  $0.068 \text{ W/kg}$ ; SAR(10 g) =  $0.052 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.0823 \text{ W/kg}$



$0 \text{ dB} = 0.0823 \text{ W/kg} = -10.85 \text{ dBW/kg}$



18\_LTE Band 26\_15M\_QPSK\_1RB\_0offset\_Back\_10mm\_Ch26915

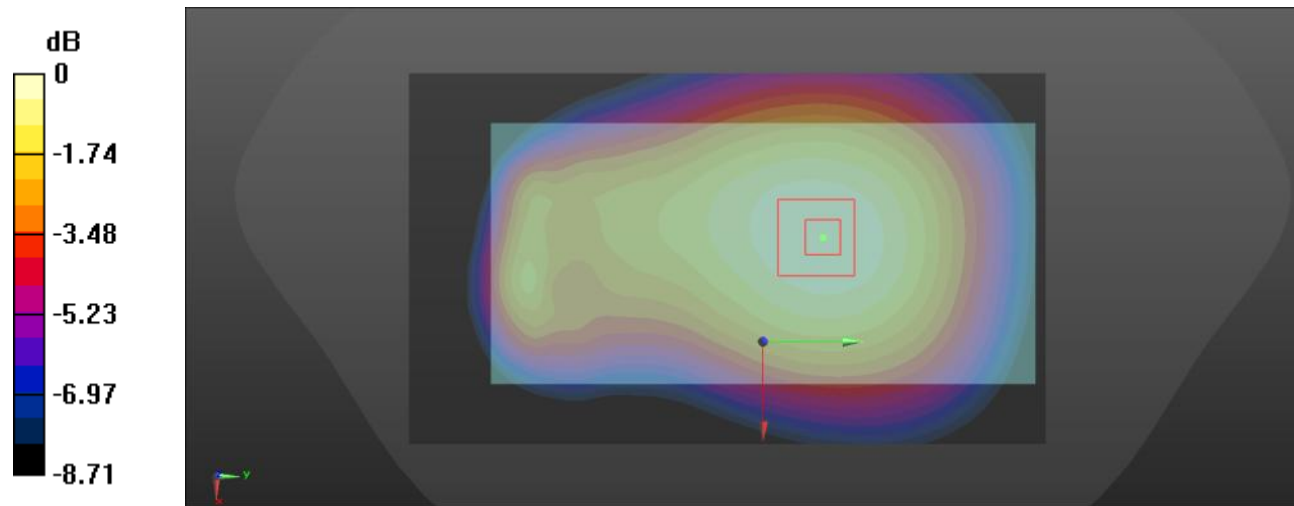
Communication System: UID 0, FDD LTE 4G (0); Frequency: 831.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 831.5 \text{ MHz}$ ;  $\sigma = 0.907 \text{ S/m}$ ;  $\epsilon_r = 42.108$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x111x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.105 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $10.50 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.117 \text{ W/kg}$   
**SAR(1 g) =  $0.082 \text{ W/kg}$ ; SAR(10 g) =  $0.060 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.104 \text{ W/kg}$



$$0 \text{ dB} = 0.104 \text{ W/kg} = -9.83 \text{ dBW/kg}$$

19\_LTE Band 66\_20M\_QPSK\_1RB\_0offset\_Left Cheek\_0mm\_Ch132322

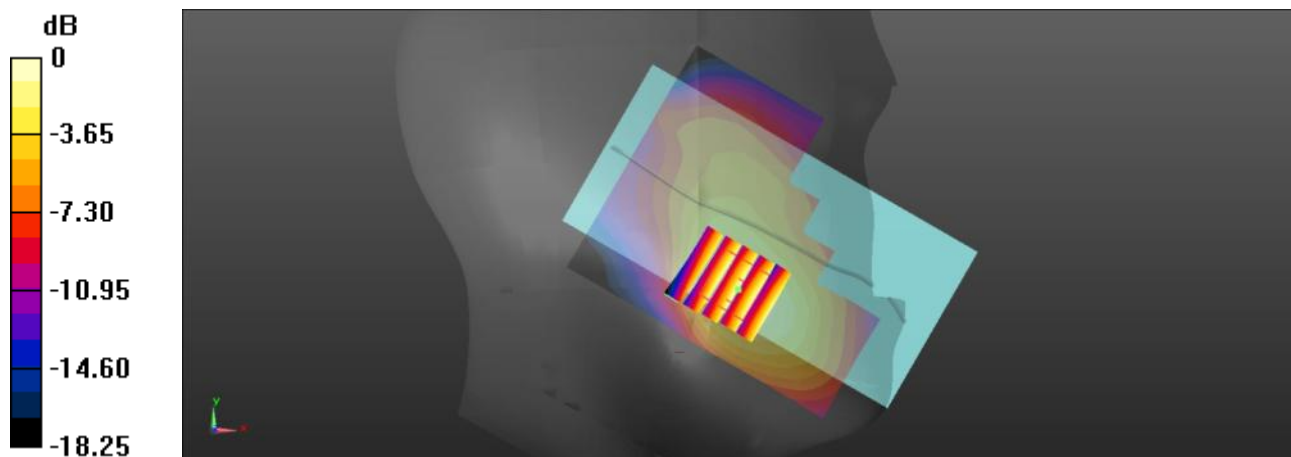
Communication System: UID 0, FDD LTE 4G (0); Frequency: 1745 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1745 \text{ MHz}$ ;  $\sigma = 1.343 \text{ S/m}$ ;  $\epsilon_r = 40.868$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.48, 8.48, 8.48); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.205 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $1.938 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.242 \text{ W/kg}$   
**SAR(1 g) =  $0.150 \text{ W/kg}$ ; SAR(10 g) =  $0.094 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.203 \text{ W/kg}$



$0 \text{ dB} = 0.203 \text{ W/kg} = -6.93 \text{ dBW/kg}$

20\_LTE Band 66\_20M\_QPSK\_1RB\_0offset\_Back\_10mm\_Ch132322

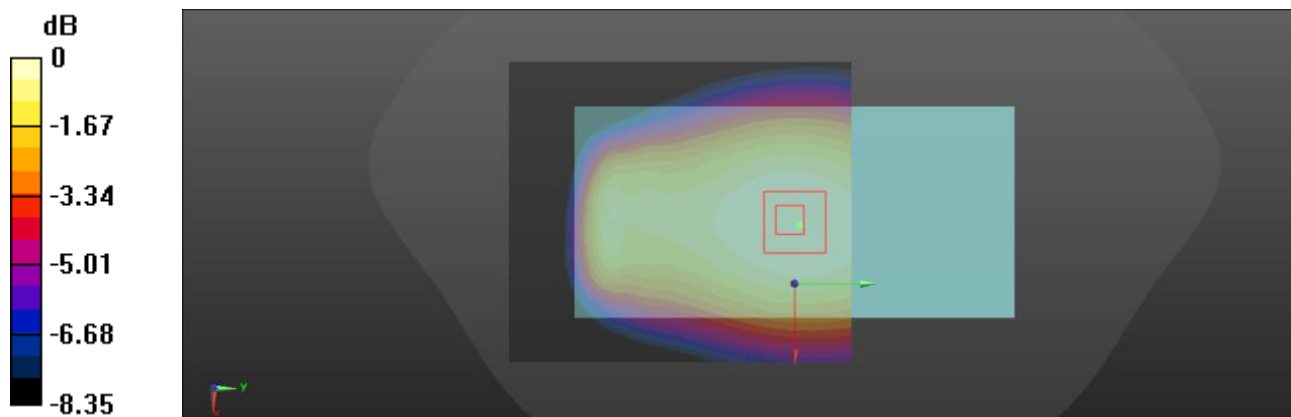
Communication System: UID 0, FDD LTE 4G (0); Frequency: 738 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 738 \text{ MHz}$ ;  $\sigma = 0.899 \text{ S/m}$ ;  $\epsilon_r = 42.424$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.39, 10.39, 10.39); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.222 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $16.13 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.239 \text{ W/kg}$   
**SAR(1 g) =  $0.292 \text{ W/kg}$ ; SAR(10 g) =  $0.131 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.217 \text{ W/kg}$



$0 \text{ dB} = 0.217 \text{ W/kg} = -6.64 \text{ dBW/kg}$

21\_LTE Band 40\_10M\_QPSK\_1RB\_0offset\_Left Cheek\_0mm\_Ch38750

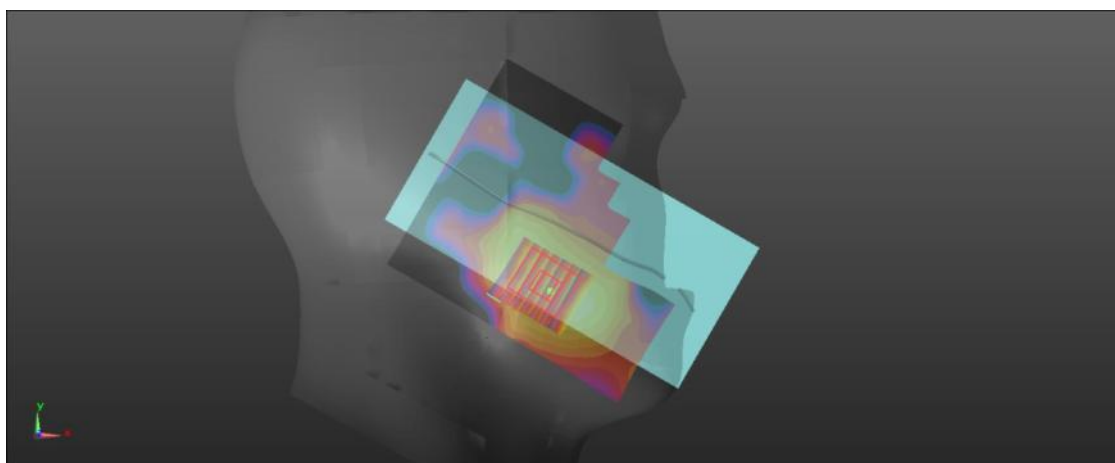
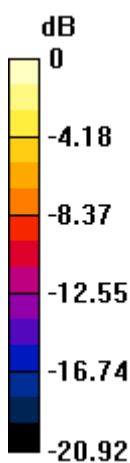
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2310 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2310 \text{ MHz}$ ;  $\sigma = 1.71 \text{ S/m}$ ;  $\epsilon_r = 39.733$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.6, 7.6, 7.6); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x101x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.0299 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $0.1600 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.0360 \text{ W/kg}$   
**SAR(1 g) =  $0.020 \text{ W/kg}$ ; SAR(10 g) =  $0.011 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.0303 \text{ W/kg}$



$0 \text{ dB} = 0.0303 \text{ W/kg} = -15.19 \text{ dBW/kg}$

22\_LTE Band 40\_10M\_QPSK\_1RB\_0offset\_Bottom\_10mm\_Ch38750

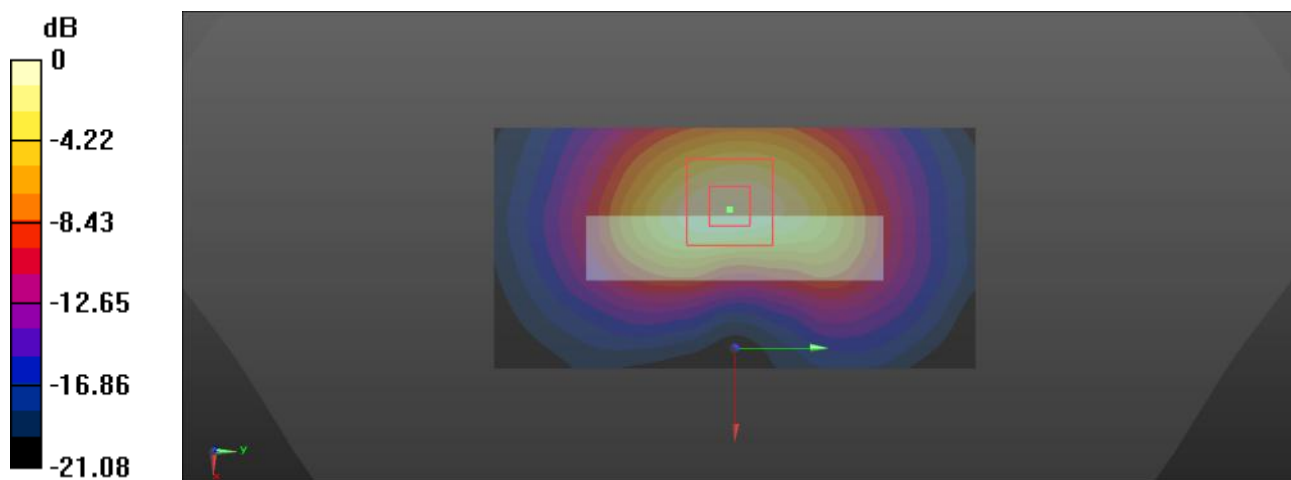
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2310 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2310 \text{ MHz}$ ;  $\sigma = 1.71 \text{ S/m}$ ;  $\epsilon_r = 39.733$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.6, 7.6, 7.6); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (51x101x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.544 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $11.74 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.615 \text{ W/kg}$   
**SAR(1 g) =  $0.327 \text{ W/kg}$ ; SAR(10 g) =  $0.163 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.512 \text{ W/kg}$



$$0 \text{ dB} = 0.512 \text{ W/kg} = -2.91 \text{ dBW/kg}$$

23\_LTE Band 40\_10M\_QPSK\_1RB\_0offset\_Left Cheek\_0mm\_Ch39200

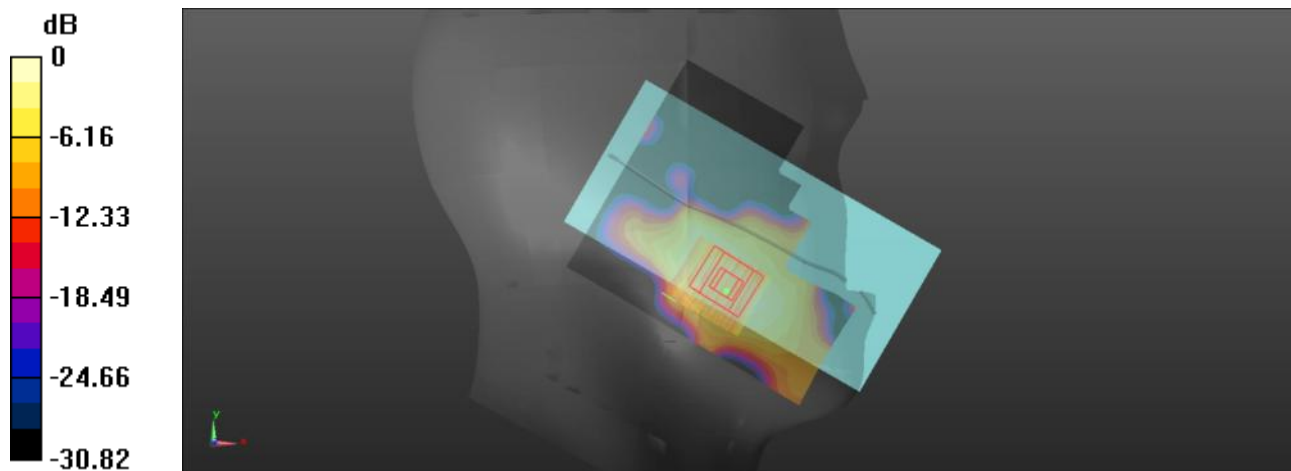
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2355 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2355 \text{ MHz}$ ;  $\sigma = 1.763 \text{ S/m}$ ;  $\epsilon_r = 39.584$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.6, 7.6, 7.6); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x101x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.0314 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $0.2980 \text{ V/m}$ ; Power Drift =  $0.07 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.0360 \text{ W/kg}$   
**SAR(1 g) =  $0.020 \text{ W/kg}$ ; SAR(10 g) =  $0.011 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.0300 \text{ W/kg}$



$0 \text{ dB} = 0.0300 \text{ W/kg} = -15.23 \text{ dBW/kg}$

24\_LTE Band 40\_10M\_QPSK\_1RB\_0offset\_Bottom\_10mm\_Ch39200

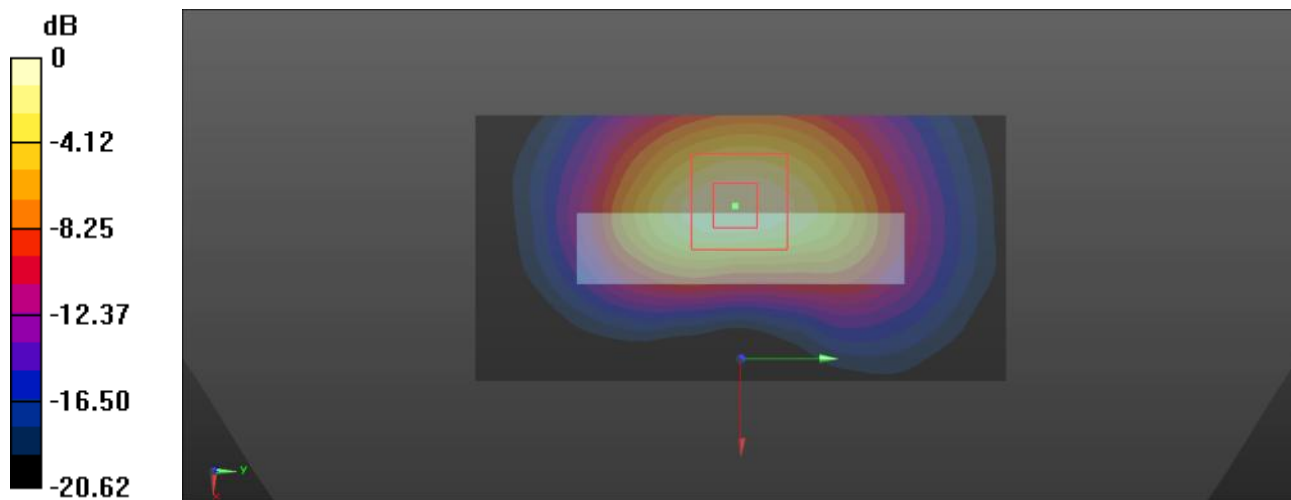
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2355 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2355 \text{ MHz}$ ;  $\sigma = 1.763 \text{ S/m}$ ;  $\epsilon_r = 39.584$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.6, 7.6, 7.6); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (51x101x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.770 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $14.65 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.877 \text{ W/kg}$   
**SAR(1 g) =  $0.462 \text{ W/kg}$ ; SAR(10 g) =  $0.228 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.729 \text{ W/kg}$



$0 \text{ dB} = 0.729 \text{ W/kg} = -1.37 \text{ dBW/kg}$

25\_LTE Band 41\_20M\_QPSK\_1RB\_0offset\_Left Cheek\_0mm\_Ch40620

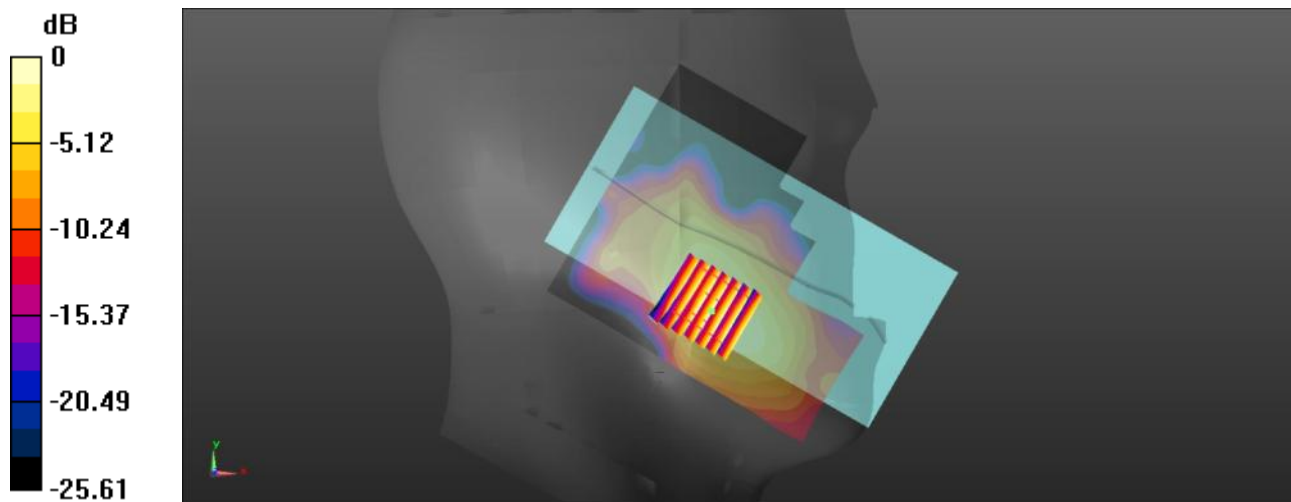
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2593 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2593 \text{ MHz}$ ;  $\sigma = 2.043 \text{ S/m}$ ;  $\epsilon_r = 37.756$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.13, 7.13, 7.13); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x101x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.156 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $2.268 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.182 \text{ W/kg}$   
**SAR(1 g) =  $0.096 \text{ W/kg}$ ; SAR(10 g) =  $0.050 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.146 \text{ W/kg}$



$0 \text{ dB} = 0.146 \text{ W/kg} = -8.36 \text{ dBW/kg}$



26\_LTE Band 41\_20M\_QPSK\_1RB\_0offset\_Bottom\_10mm\_Ch40620

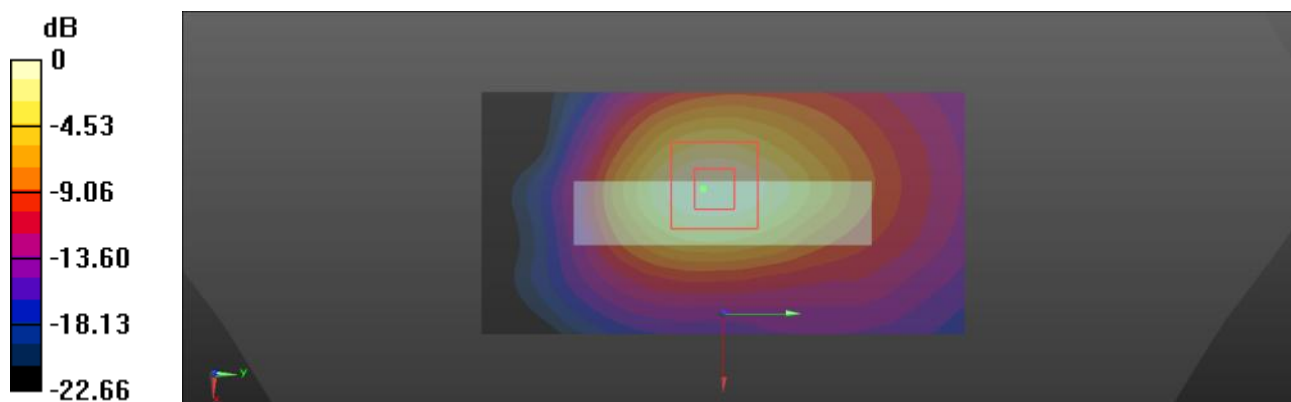
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2593 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2593 \text{ MHz}$ ;  $\sigma = 2.043 \text{ S/m}$ ;  $\epsilon_r = 37.756$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.13, 7.13, 7.13); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (51x101x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.713 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $16.90 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.868 \text{ W/kg}$   
**SAR(1 g) =  $0.444 \text{ W/kg}$ ; SAR(10 g) =  $0.217 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.700 \text{ W/kg}$



$0 \text{ dB} = 0.700 \text{ W/kg} = -1.55 \text{ dBW/kg}$

27\_WLAN 2.4GHz\_802.11b 1Mbps\_Left Cheek\_0mm\_Ch6

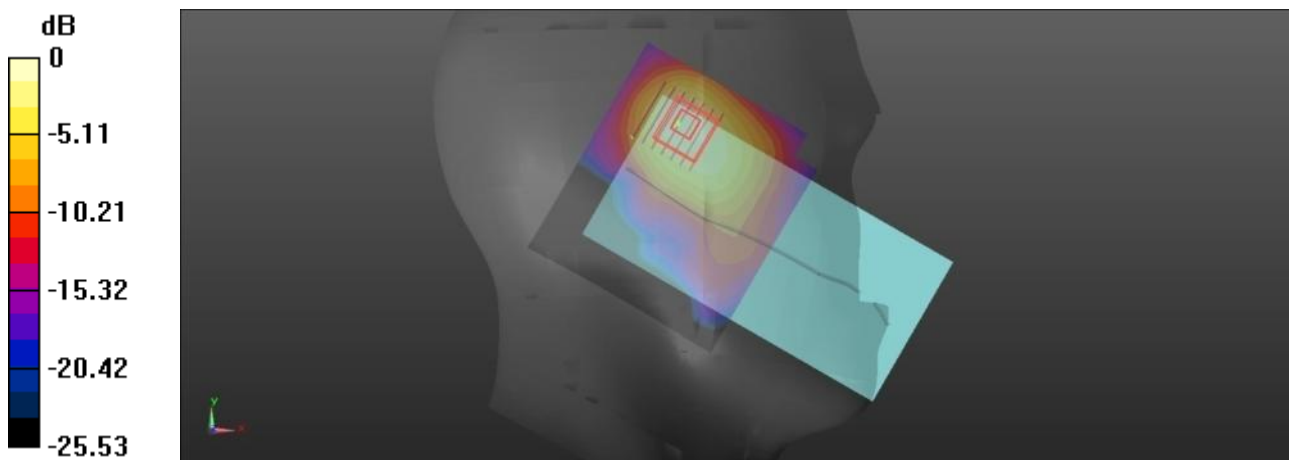
Communication System: UID 0, WIFI2.4G (0); Frequency: 2437 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.865 \text{ S/m}$ ;  $\epsilon_r = 38.212$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x81x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.507 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $3.535 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.635 \text{ W/kg}$   
**SAR(1 g) =  $0.259 \text{ W/kg}$ ; SAR(10 g) =  $0.149 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.495 \text{ W/kg}$



0 dB =  $0.495 \text{ W/kg}$  =  $-3.05 \text{ dBW/kg}$

28\_WLAN 2.4GHz\_802.11b 1Mbps\_Right Side\_10mm\_Ch6

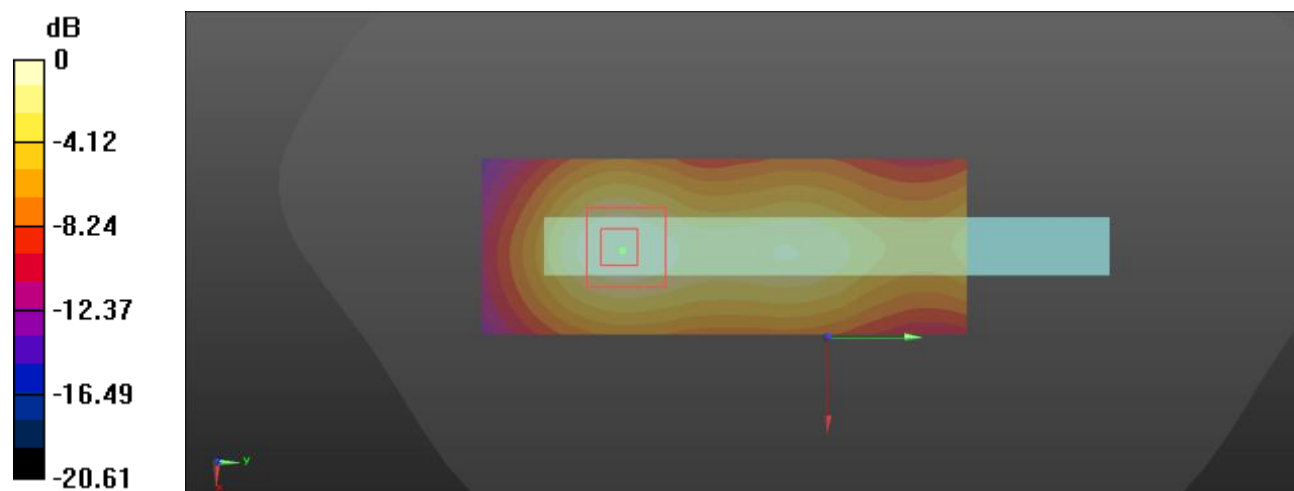
Communication System: UID 0, WIFI2.4G (0); Frequency: 2437 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.865 \text{ S/m}$ ;  $\epsilon_r = 38.212$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (41x111x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.413 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $12.36 \text{ V/m}$ ; Power Drift =  $-0.10 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.490 \text{ W/kg}$   
**SAR(1 g) =  $0.240 \text{ W/kg}$ ; SAR(10 g) =  $0.134 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.403 \text{ W/kg}$



$0 \text{ dB} = 0.403 \text{ W/kg} = -3.95 \text{ dBW/kg}$

29\_BT\_DH5 1Mbps\_Left Cheek\_10mm\_Ch0

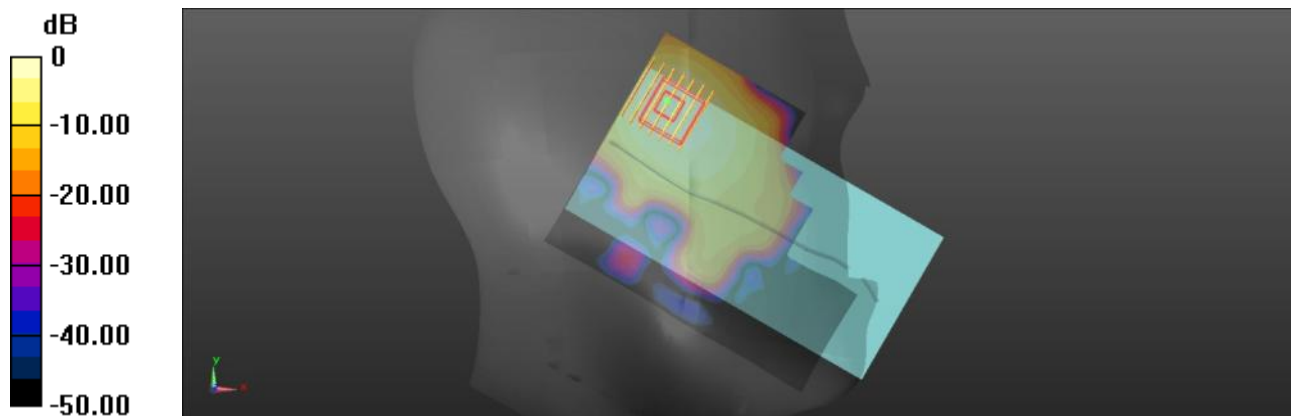
Communication System: UID 0, Bluetooth (0); Frequency: 2402MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 2402 \text{ MHz}$ ;  $\sigma = 1.824 \text{ S/m}$ ;  $\epsilon_r = 38.363$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x111x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
Maximum value of SAR (interpolated) =  $0.118 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value =  $1.969 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
Peak SAR (extrapolated) =  $0.137 \text{ W/kg}$   
**SAR(1 g) =  $0.069 \text{ W/kg}$ ; SAR(10 g) =  $0.035 \text{ W/kg}$**   
Maximum value of SAR (measured) =  $0.113 \text{ W/kg}$



$0 \text{ dB} = 0.113 \text{ W/kg} = -9.47 \text{ dBW/kg}$

30\_BT\_DH5 1Mbps\_Front\_10mm\_Ch39

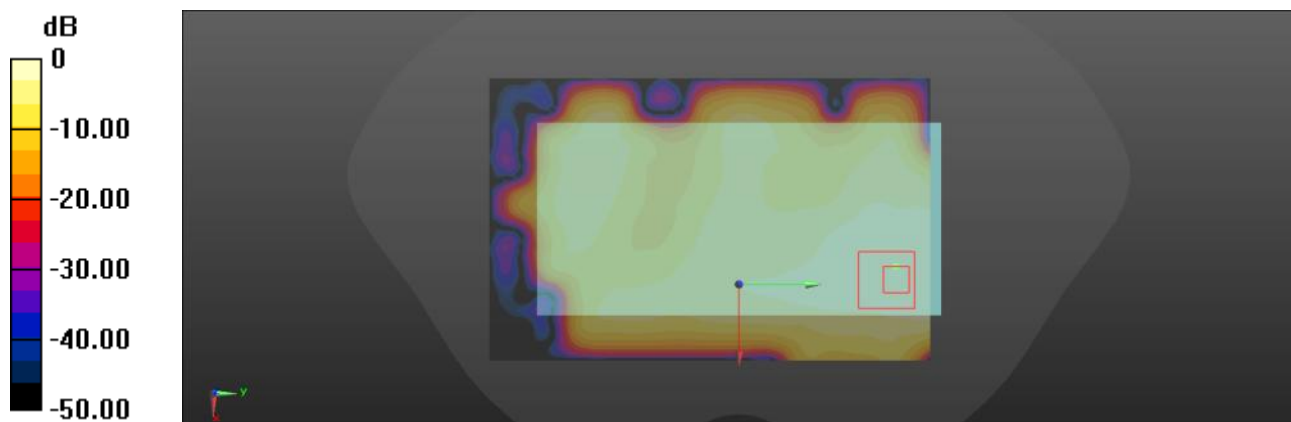
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2441 \text{ MHz}$ ;  $\sigma = 1.87 \text{ S/m}$ ;  $\epsilon_r = 38.195$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x141x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.0176 \text{ W/kg}$

**Zoom Scan (8x8x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $1.867 \text{ V/m}$ ; Power Drift =  $0.16 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.0220 \text{ W/kg}$   
**SAR(1 g) =  $0.012 \text{ W/kg}$ ; SAR(10 g) =  $0.00601 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.0183 \text{ W/kg}$



$0 \text{ dB} = 0.0183 \text{ W/kg} = -17.38 \text{ dBW/kg}$

31\_ WLAN 5.2GHz\_ 802.11a 6Mbps\_ Left Cheek\_ 0mm\_ Ch36

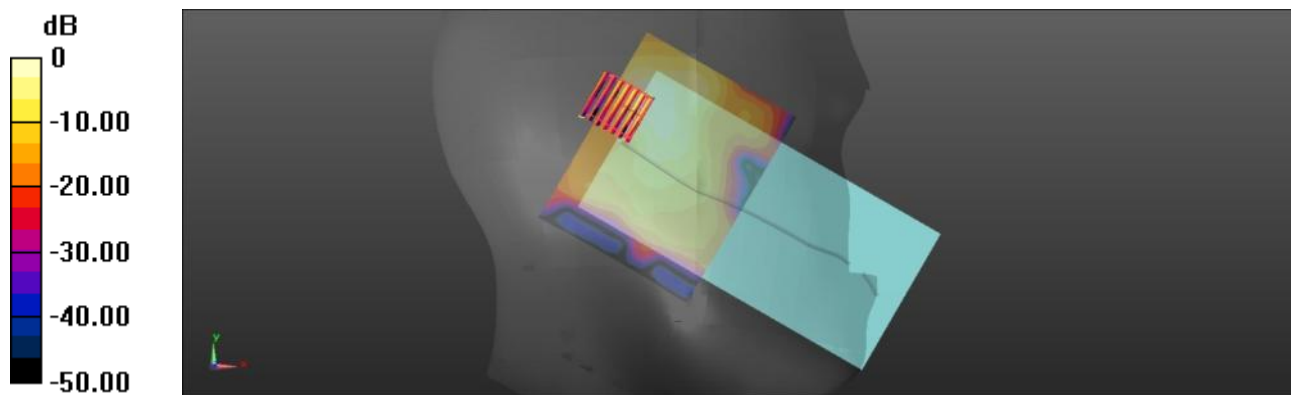
Communication System: UID 0, WIFI 5G (0); Frequency: 5180 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 5180 \text{ MHz}$ ;  $\sigma = 4.537 \text{ S/m}$ ;  $\epsilon_r = 35.954$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(5.38, 5.38, 5.38); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (101x81x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) = 1.48 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$   
 Reference Value = 4.778 V/m; Power Drift = 0.09 dB  
 Peak SAR (extrapolated) = 2.50 W/kg  
**SAR(1 g) = 0.527 W/kg; SAR(10 g) = 0.086 W/kg**  
 Maximum value of SAR (measured) = 1.61 W/kg



$0 \text{ dB} = 1.61 \text{ W/kg} = 2.07 \text{ dBW/kg}$

32\_WLAN 5.2GHz\_802.11a 6Mbps\_Top\_10mm\_Ch36

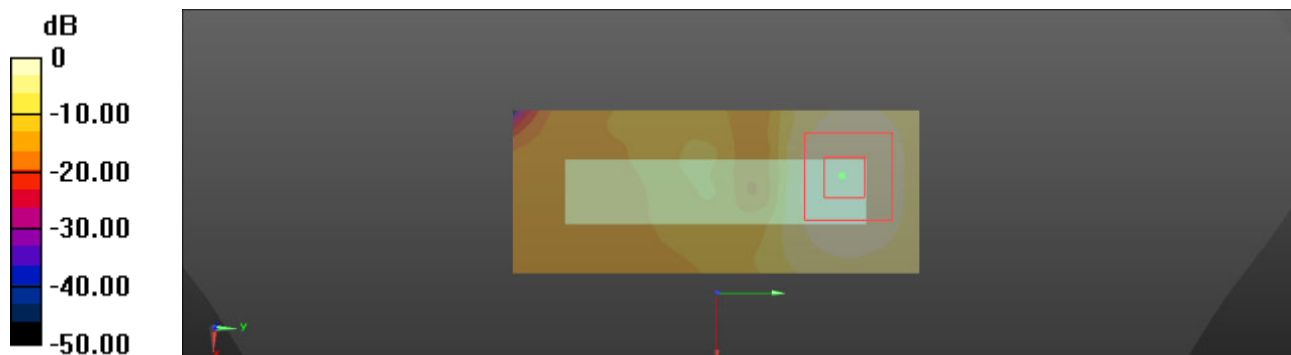
Communication System: UID 0, WIFI 5G (0); Frequency: 5180 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 5180 \text{ MHz}$ ;  $\sigma = 4.537 \text{ S/m}$ ;  $\epsilon_r = 35.954$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(5.38, 5.38, 5.38); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (41x101x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
Maximum value of SAR (interpolated) =  $0.667 \text{ W/kg}$

**Zoom Scan (11x11x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$   
Reference Value =  $4.224 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$   
Peak SAR (extrapolated) =  $1.03 \text{ W/kg}$   
**SAR(1 g) =  $0.309 \text{ W/kg}$ ; SAR(10 g) =  $0.123 \text{ W/kg}$**   
Maximum value of SAR (measured) =  $0.671 \text{ W/kg}$



$$0 \text{ dB} = 0.671 \text{ W/kg} = -1.73 \text{ dBW/kg}$$

33\_ WLAN 5.8GHz\_802.11ac-VHT80 MCS0\_Left Cheek\_0mm\_Ch155

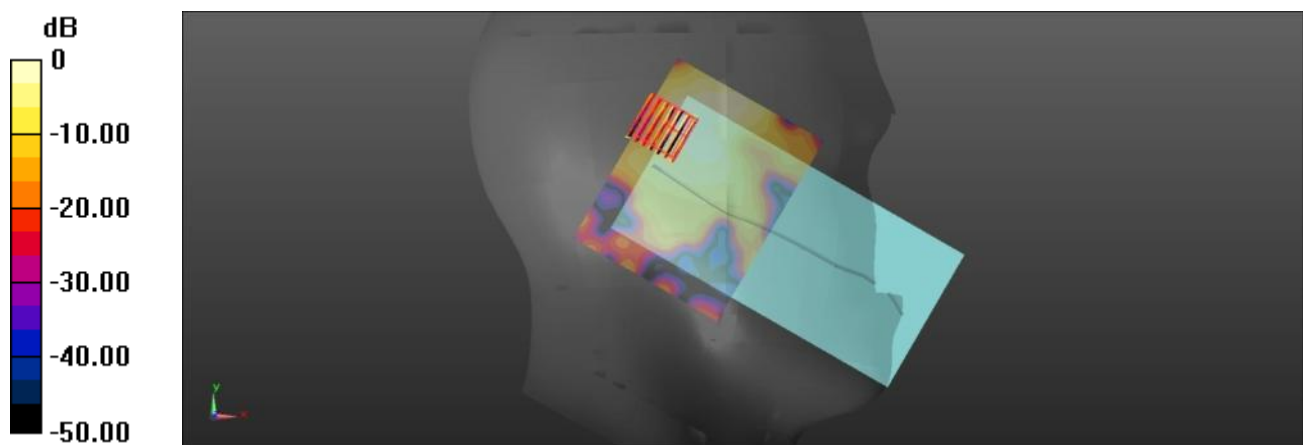
Communication System: UID 0, WIFI 5G (0); Frequency: 5775 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 5775 \text{ MHz}$ ;  $\sigma = 5.237 \text{ S/m}$ ;  $\epsilon_r = 34.604$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(4.73, 4.73, 4.73); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (101x81x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.527 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$   
 Reference Value =  $6.037 \text{ V/m}$ ; Power Drift =  $0.17 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.934 \text{ W/kg}$   
**SAR(1 g) =  $0.203 \text{ W/kg}$ ; SAR(10 g) =  $0.036 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.573 \text{ W/kg}$



$0 \text{ dB} = 0.573 \text{ W/kg} = -2.42 \text{ dBW/kg}$



34\_WLAN 5.8GHz\_802.11ac-VHT80 MCS0\_Right Side\_10mm\_Ch155

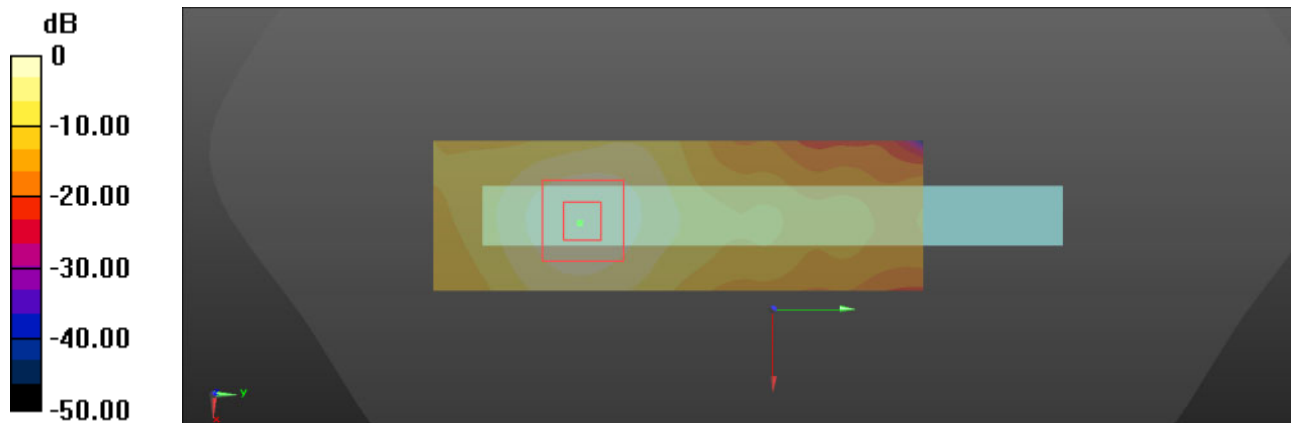
Communication System: UID 0, WIFI 5G (0); Frequency: 5775 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 5775 \text{ MHz}$ ;  $\sigma = 5.237 \text{ S/m}$ ;  $\epsilon_r = 34.604$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(4.73, 4.73, 4.73); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (41x131x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.869 \text{ W/kg}$

**Zoom Scan (11x11x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$   
 Reference Value =  $4.681 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$   
 Peak SAR (extrapolated) =  $1.46 \text{ W/kg}$   
**SAR(1 g) =  $0.373 \text{ W/kg}$ ; SAR(10 g) =  $0.141 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.862 \text{ W/kg}$



$$0 \text{ dB} = 0.862 \text{ W/kg} = -0.64 \text{ dBW/kg}$$

35\_LTE Band 7\_20M\_QPSK\_1RB\_0offset\_Back\_18mm\_Ch21100

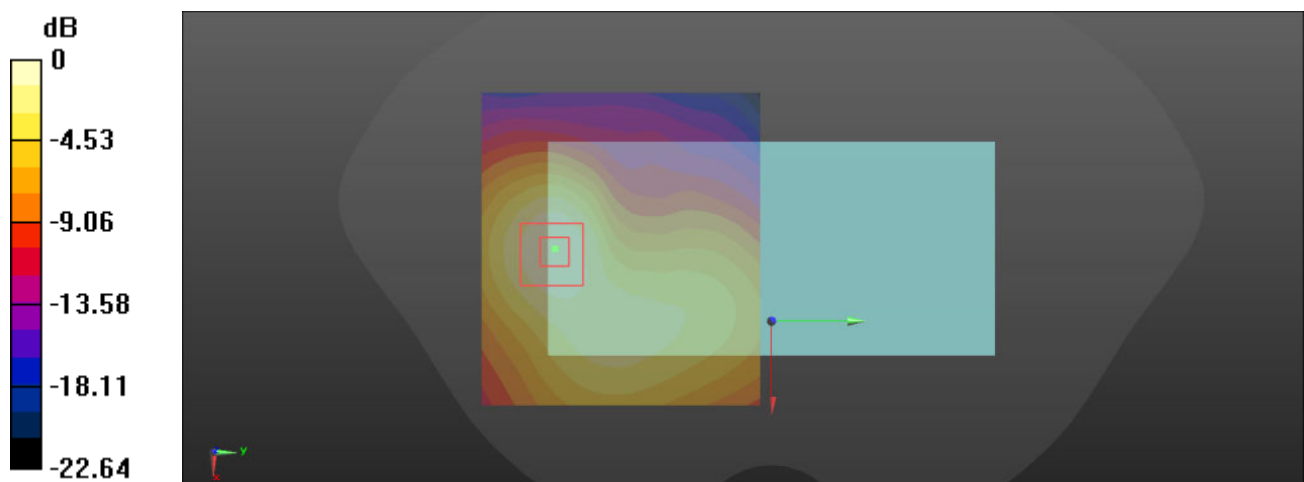
Communication System: UID 0, FDD LTE 4G (0); Frequency: 2535 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2535 \text{ MHz}$ ;  $\sigma = 1.962 \text{ S/m}$ ;  $\epsilon_r = 38.095$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x81x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.228 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $3.985 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.266 \text{ W/kg}$   
**SAR(1 g) =  $0.143 \text{ W/kg}$ ; SAR(10 g) =  $0.076 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.219 \text{ W/kg}$



$0 \text{ dB} = 0.219 \text{ W/kg} = -6.60 \text{ dBW/kg}$

36\_RF ID\_Back\_25

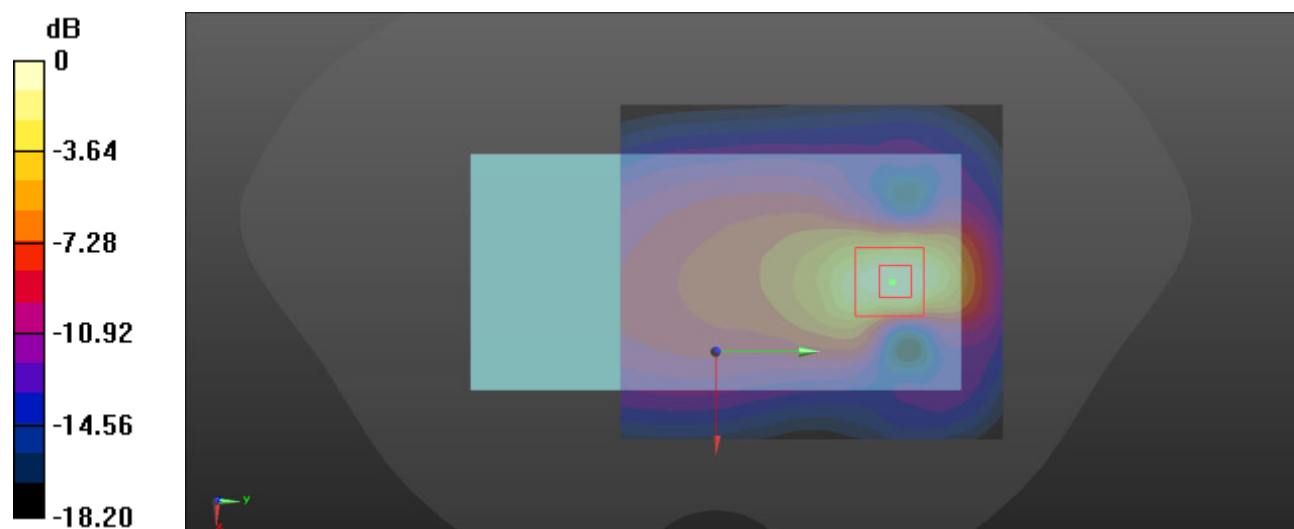
Communication System: UID 0, RF ID (0); Frequency: 921 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 920 \text{ MHz}$ ;  $\sigma = 0.986 \text{ S/m}$ ;  $\epsilon_r = 41.194$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $1.18 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $13.77 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $1.35 \text{ W/kg}$   
**SAR(1 g) =  $0.720 \text{ W/kg}$ ; SAR(10 g) =  $0.368 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $1.09 \text{ W/kg}$



$0 \text{ dB} = 1.09 \text{ W/kg} = 0.37 \text{ dBW/kg}$

37\_GSM850\_GPRS 2 Tx slots\_Back\_0mm\_Ch190

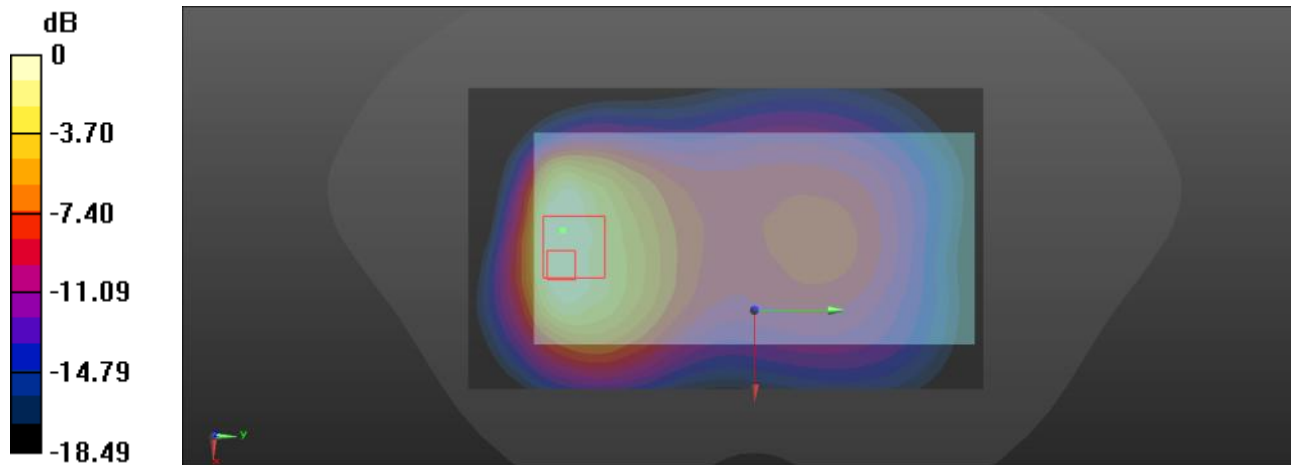
Communication System: UID 0, GSM850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:4  
 Medium parameters used:  $f = 836.6 \text{ MHz}$ ;  $\sigma = 0.918 \text{ S/m}$ ;  $\epsilon_r = 42.733$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x121x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) = 1.76 W/kg

**Zoom Scan (6x6x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 13.53 V/m; Power Drift = -0.00 dB  
 Peak SAR (extrapolated) = 1.61 W/kg  
**SAR(1 g) = 0.691 W/kg; SAR(10 g) = 0.401 W/kg**  
 Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.20 W/kg = 0.79 dBW/kg

38\_GSM1900\_GPRS 3 Tx slots\_Back\_0mm\_Ch661

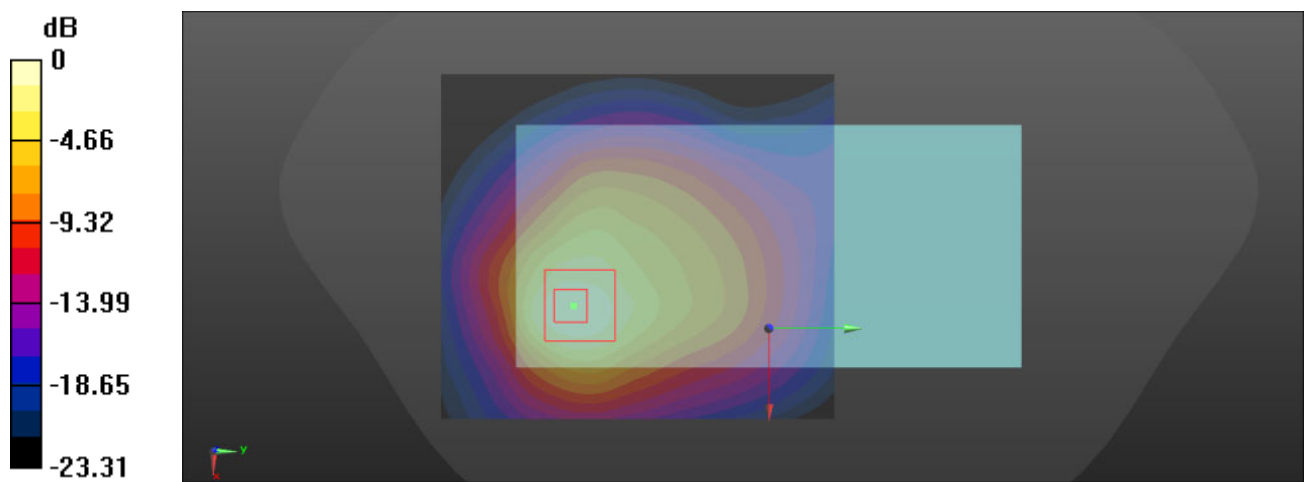
Communication System: UID 0, GSM 1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:2.66  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.378 \text{ S/m}$ ;  $\epsilon_r = 38.779$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $2.98 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $12.96 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $4.37 \text{ W/kg}$   
**SAR(1 g) = 2 W/kg; SAR(10 g) = 1 W/kg**  
 Maximum value of SAR (measured) =  $3.01 \text{ W/kg}$



0 dB =  $3.01 \text{ W/kg} = 4.79 \text{ dBW/kg}$

39\_WCDMA 2\_RMC 12.2Kbps\_Back\_0mm\_Ch9400

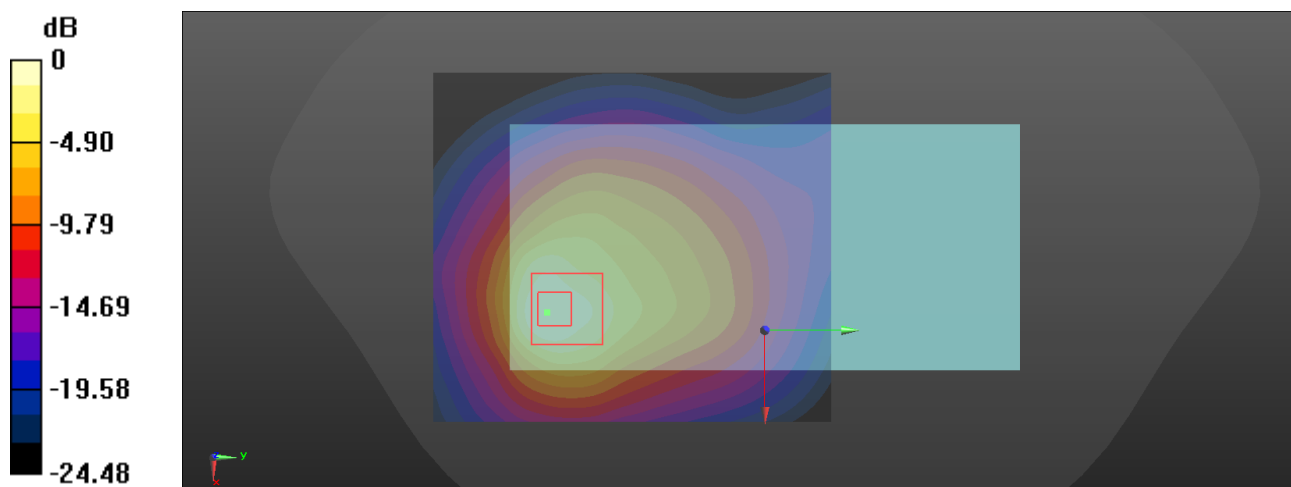
Communication System: UID 0, WCDMA 3G (0); Frequency: 1880 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1880 \text{ MHz}$ ;  $\sigma = 1.378 \text{ S/m}$ ;  $\epsilon_r = 38.779$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $4.60 \text{ W/kg}$

**Zoom Scan (5x6x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $12.92 \text{ V/m}$ ; Power Drift =  $-0.09 \text{ dB}$   
 Peak SAR (extrapolated) =  $5.20 \text{ W/kg}$   
**SAR(1 g) =  $2.52 \text{ W/kg}$ ; SAR(10 g) =  $1.25 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $4.05 \text{ W/kg}$



0 dB =  $4.05 \text{ W/kg} = 6.07 \text{ dBW/kg}$

40\_WCDMA 5\_RMC 12.2Kbps\_Back\_0mm\_Ch4182

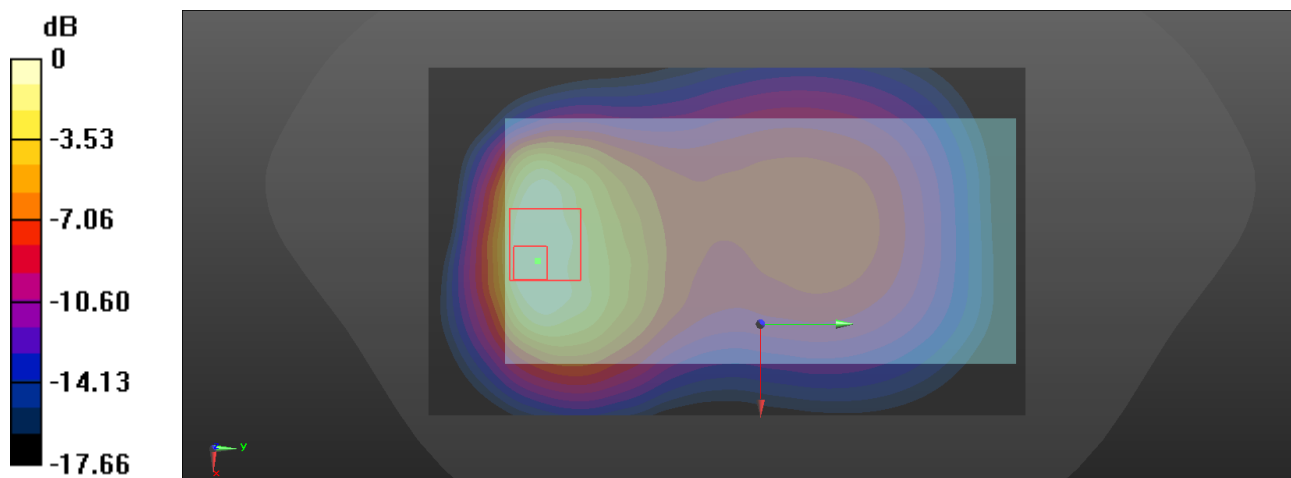
Communication System: UID 0, WCDMA 3G (0); Frequency: 836.6 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 837 \text{ MHz}$ ;  $\sigma = 0.919 \text{ S/m}$ ;  $\epsilon_r = 42.72$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x121x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) = 1.83 W/kg

**Zoom Scan (6x6x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 15.22 V/m; Power Drift = -0.02 dB  
 Peak SAR (extrapolated) = 1.93 W/kg  
**SAR(1 g) = 0.749 W/kg; SAR(10 g) = 0.423 W/kg**  
 Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.21 W/kg = 0.83 dBW/kg

41\_LTE Band 5\_10M\_QPSK\_1RB\_0offset\_Back\_0mm\_Ch20525

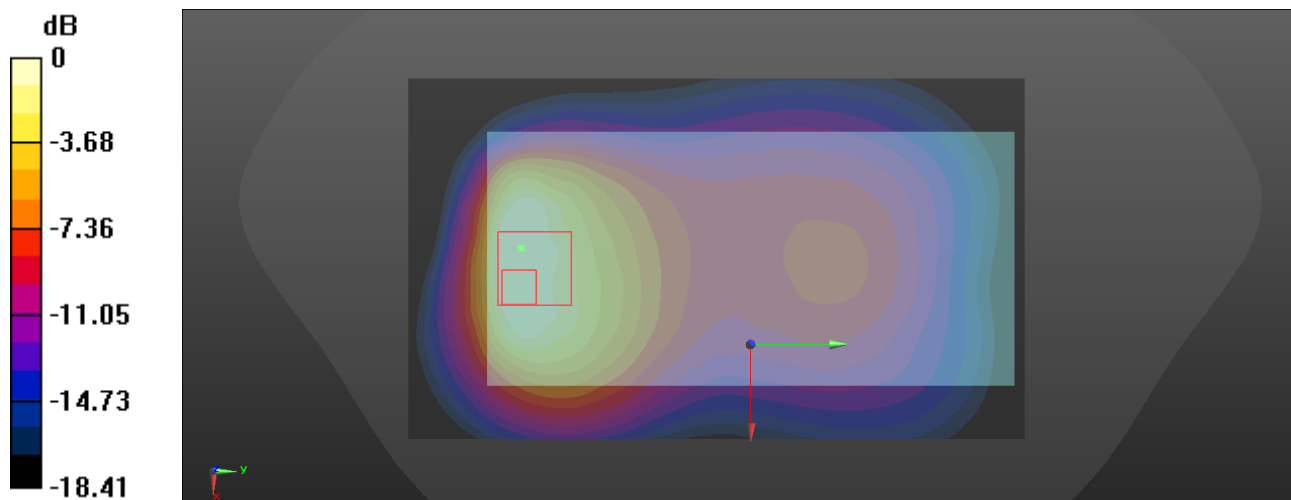
Communication System: UID 0, FDD LTE 4G (0); Frequency: 836.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 836.5 \text{ MHz}$ ;  $\sigma = 0.919 \text{ S/m}$ ;  $\epsilon_r = 42.731$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x121x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) = 1.82 W/kg

**Zoom Scan (6x6x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 13.20 V/m; Power Drift = 0.04 dB  
 Peak SAR (extrapolated) = 1.66 W/kg  
**SAR(1 g) = 0.702 W/kg; SAR(10 g) = 0.412 W/kg**  
 Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.20 W/kg = 0.79 dBW/kg



42\_LTE Band 7\_20M\_QPSK\_1RB\_0offset\_Back\_0mm\_Ch21100

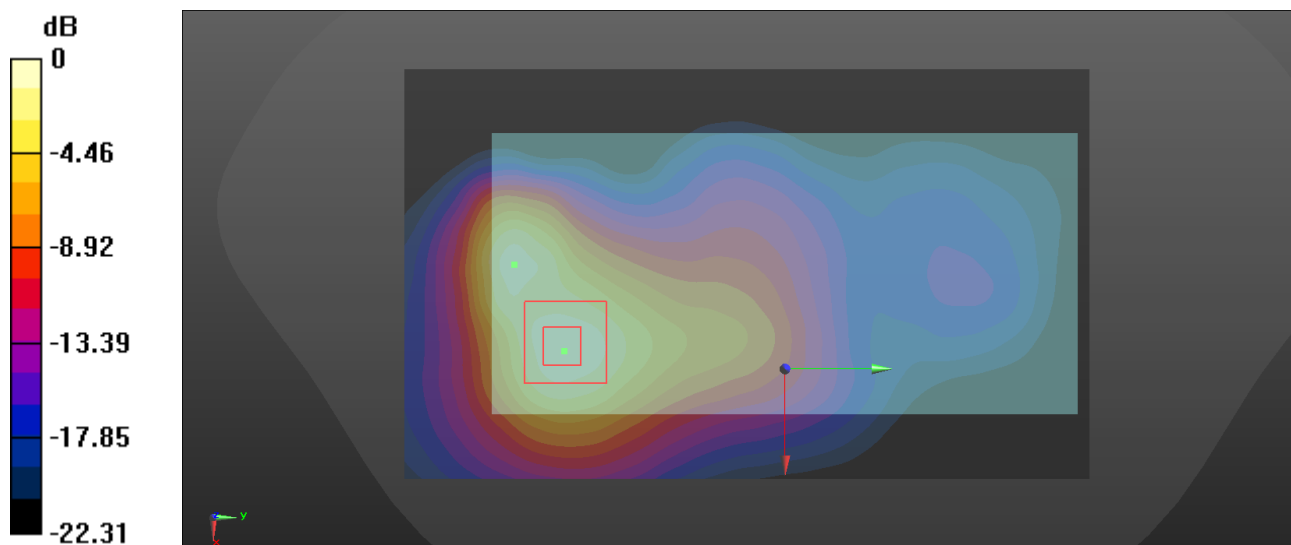
Communication System: UID 0, FDD LTE 4G (0); Frequency: 2535 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2535 \text{ MHz}$ ;  $\sigma = 1.962 \text{ S/m}$ ;  $\epsilon_r = 38.095$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x151x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $1.97 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $8.853 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $2.64 \text{ W/kg}$   
**SAR(1 g) =  $1.23 \text{ W/kg}$ ; SAR(10 g) =  $0.591 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $2.06 \text{ W/kg}$



$0 \text{ dB} = 2.06 \text{ W/kg} = 3.14 \text{ dBW/kg}$

43\_LTE Band 12\_10M\_QPSK\_1RB\_0offset\_Back\_0mm\_Ch23095

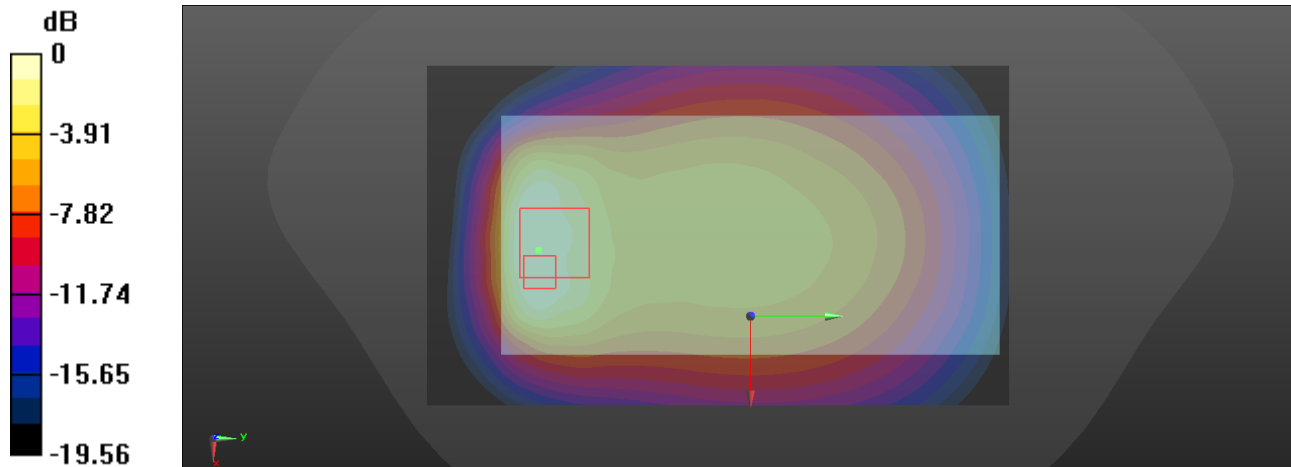
Communication System: UID 0, FDD LTE 4G (0); Frequency: 707.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 707.5 \text{ MHz}$ ;  $\sigma = 0.863 \text{ S/m}$ ;  $\epsilon_r = 42.554$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.39, 10.39, 10.39); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x121x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $1.26 \text{ W/kg}$

**Zoom Scan (6x6x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $19.95 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$   
 Peak SAR (extrapolated) =  $1.27 \text{ W/kg}$   
**SAR(1 g) =  $0.477 \text{ W/kg}$ ; SAR(10 g) =  $0.271 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.891 \text{ W/kg}$



0 dB =  $0.891 \text{ W/kg} = -0.50 \text{ dBW/kg}$

44\_LTE Band 25\_20M\_QPSK\_1RB\_0offset\_Back\_0mm\_Ch26683

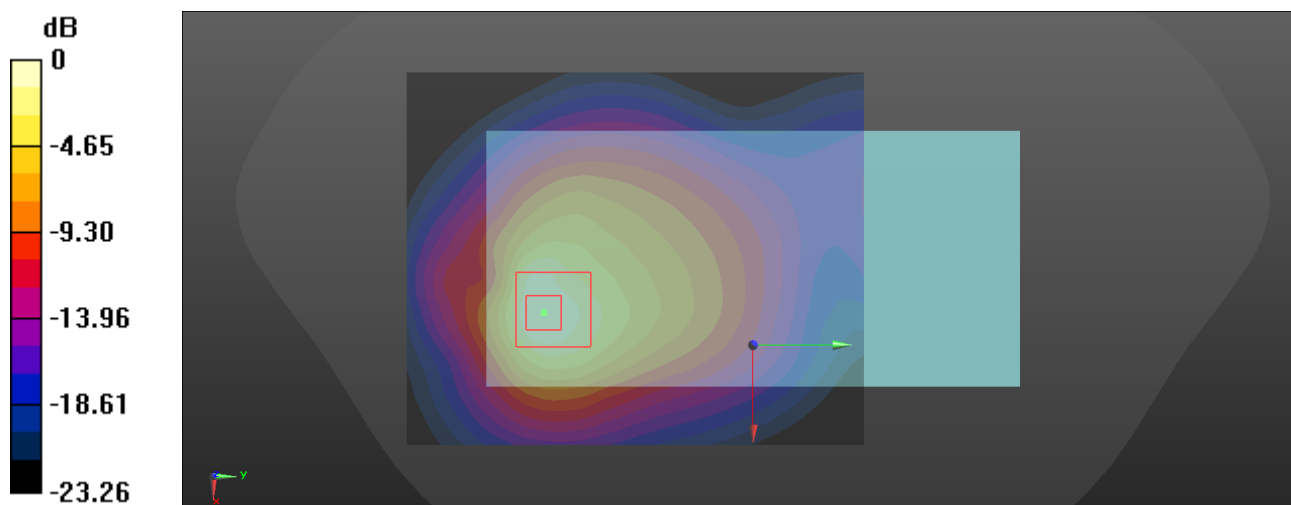
Communication System: UID 0, FDD LTE 4G (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1882.5 \text{ MHz}$ ;  $\sigma = 1.381 \text{ S/m}$ ;  $\epsilon_r = 38.775$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.12, 8.12, 8.12); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x111x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $3.71 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $13.21 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $4.28 \text{ W/kg}$   
**SAR(1 g) =  $1.99 \text{ W/kg}$ ; SAR(10 g) =  $1 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $3.18 \text{ W/kg}$



0 dB =  $3.18 \text{ W/kg} = 5.02 \text{ dBW/kg}$

45\_LTE Band 26\_15M\_QPSK\_1RB\_0offset\_Back\_0mm\_Ch26915

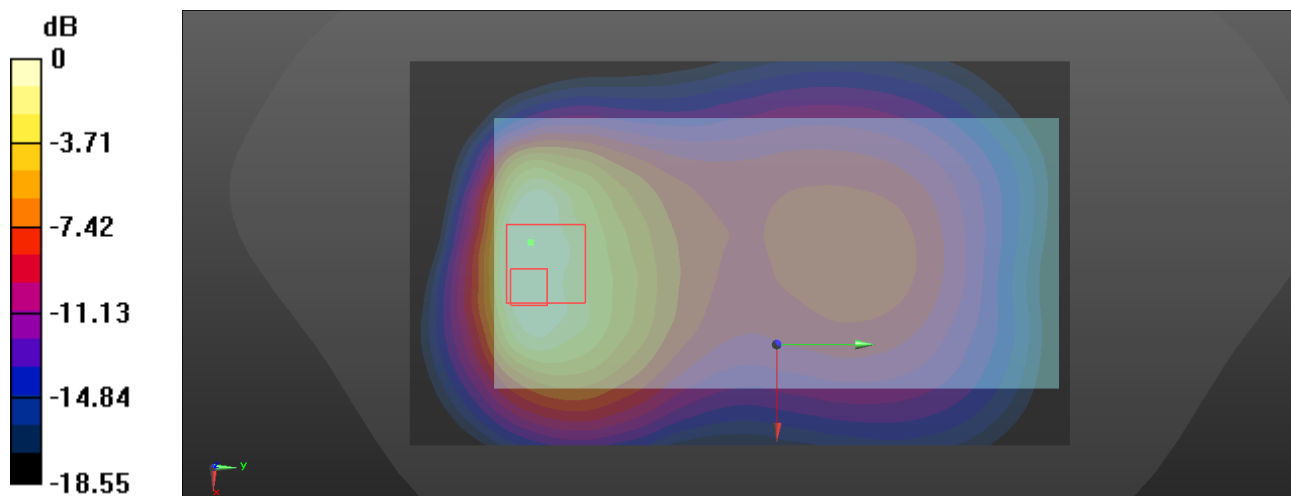
Communication System: UID 0, FDD LTE 4G (0); Frequency: 831.5 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 831.5 \text{ MHz}$ ;  $\sigma = 0.914 \text{ S/m}$ ;  $\epsilon_r = 42.804$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x121x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) = 1.81 W/kg

**Zoom Scan (6x6x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 14.13 V/m; Power Drift = 0.02 dB  
 Peak SAR (extrapolated) = 1.63 W/kg  
**SAR(1 g) = 0.702 W/kg; SAR(10 g) = 0.407 W/kg**  
 Maximum value of SAR (measured) = 1.22 W/kg



0 dB = 1.22 W/kg = 0.86 dBW/kg

46\_LTE Band 66\_20M\_QPSK\_1RB\_0offset\_Back\_0mm\_Ch132322

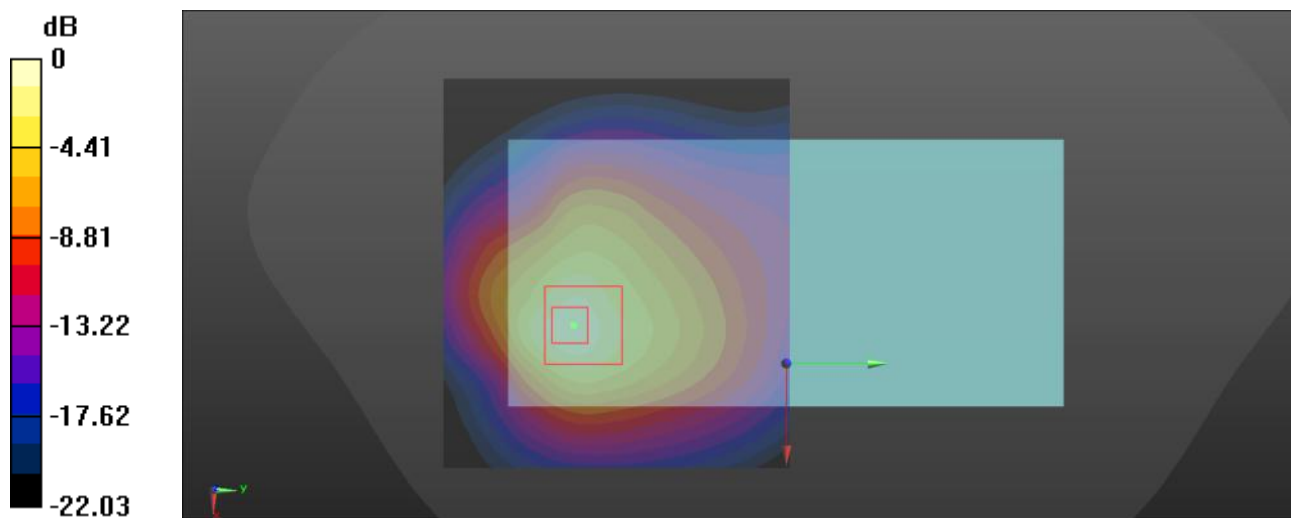
Communication System: UID 0, FDD LTE 4G (0); Frequency: 1745 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 1745 \text{ MHz}$ ;  $\sigma = 1.356 \text{ S/m}$ ;  $\epsilon_r = 40.193$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(8.48, 8.48, 8.48); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x81x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $3.11 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $11.82 \text{ V/m}$ ; Power Drift =  $0.00 \text{ dB}$   
 Peak SAR (extrapolated) =  $4.37 \text{ W/kg}$   
**SAR(1 g) =  $2.02 \text{ W/kg}$ ; SAR(10 g) =  $1.04 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $3.33 \text{ W/kg}$



0 dB =  $3.33 \text{ W/kg}$  =  $5.22 \text{ dBW/kg}$

47\_LTE Band 40\_10M\_QPSK\_1RB\_0offset\_Back\_0mm\_Ch38750

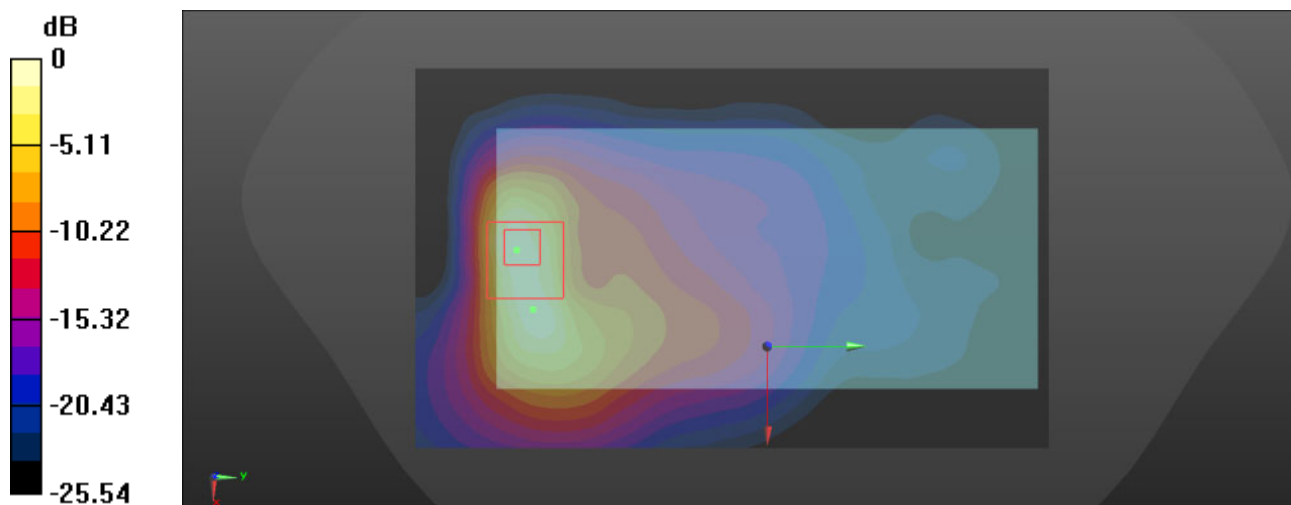
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2310 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2310 \text{ MHz}$ ;  $\sigma = 1.708 \text{ S/m}$ ;  $\epsilon_r = 39.043$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.6, 7.6, 7.6); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x151x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $1.70 \text{ W/kg}$

**Zoom Scan (8x8x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $5.534 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$   
 Peak SAR (extrapolated) =  $2.18 \text{ W/kg}$   
**SAR(1 g) =  $0.944 \text{ W/kg}$ ; SAR(10 g) =  $0.413 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $1.68 \text{ W/kg}$



0 dB =  $1.68 \text{ W/kg} = 2.25 \text{ dBW/kg}$

48\_LTE Band 40\_10M\_QPSK\_1RB\_0offset\_Back\_0mm\_Ch39200

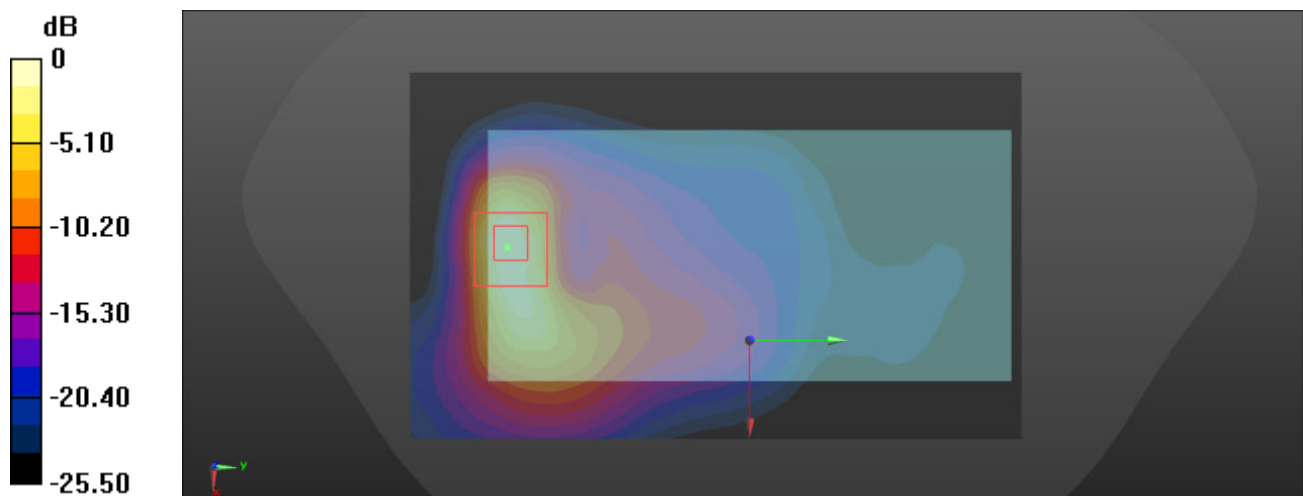
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2355 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2355 \text{ MHz}$ ;  $\sigma = 1.759 \text{ S/m}$ ;  $\epsilon_r = 38.839$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.6, 7.6, 7.6); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x151x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) = 2.63 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value = 4.680 V/m; Power Drift = 0.01 dB  
 Peak SAR (extrapolated) = 2.82 W/kg  
**SAR(1 g) = 1.29 W/kg; SAR(10 g) = 0.533 W/kg**  
 Maximum value of SAR (measured) = 2.29 W/kg



0 dB = 2.29 W/kg = 3.60 dBW/kg

49\_LTE Band 41\_20M\_QPSK\_1RB\_0offset\_Left Side\_0mm\_Ch40620

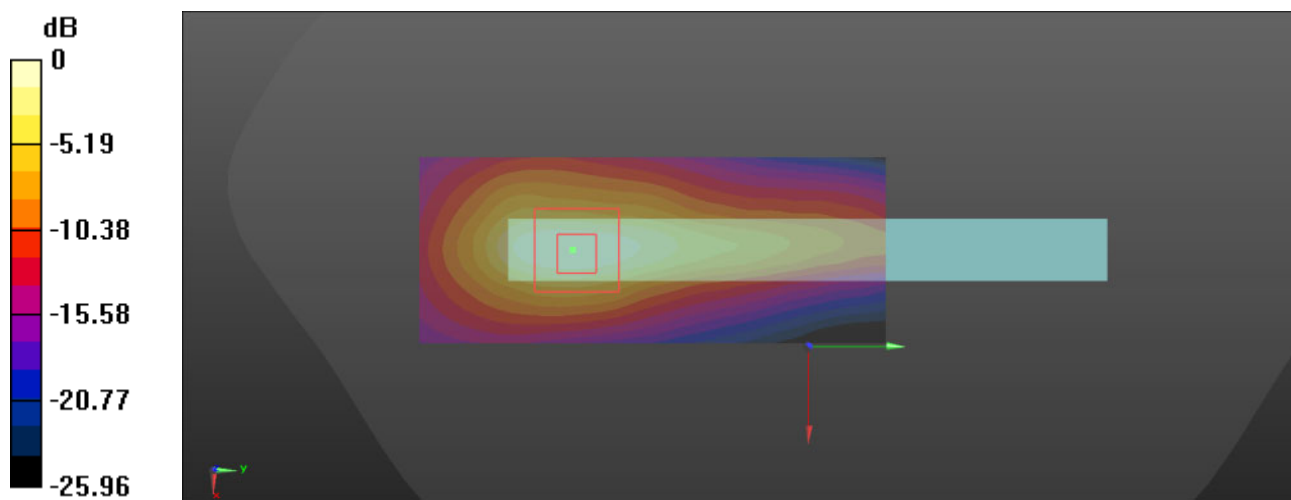
Communication System: UID 0, TDD LTE 4G (0); Frequency: 2593 MHz;Duty Cycle: 1:1.59  
 Medium parameters used:  $f = 2593 \text{ MHz}$ ;  $\sigma = 2.03 \text{ S/m}$ ;  $\epsilon_r = 37.854$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.13, 7.13, 7.13); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (41x101x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $1.71 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $12.48 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $2.28 \text{ W/kg}$   
**SAR(1 g) =  $1.01 \text{ W/kg}$ ; SAR(10 g) =  $0.448 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $1.73 \text{ W/kg}$



0 dB =  $1.73 \text{ W/kg} = 2.38 \text{ dBW/kg}$



50\_WLAN 2.4GHz\_802.11b 1Mbps\_Right Side\_0mm\_Ch6

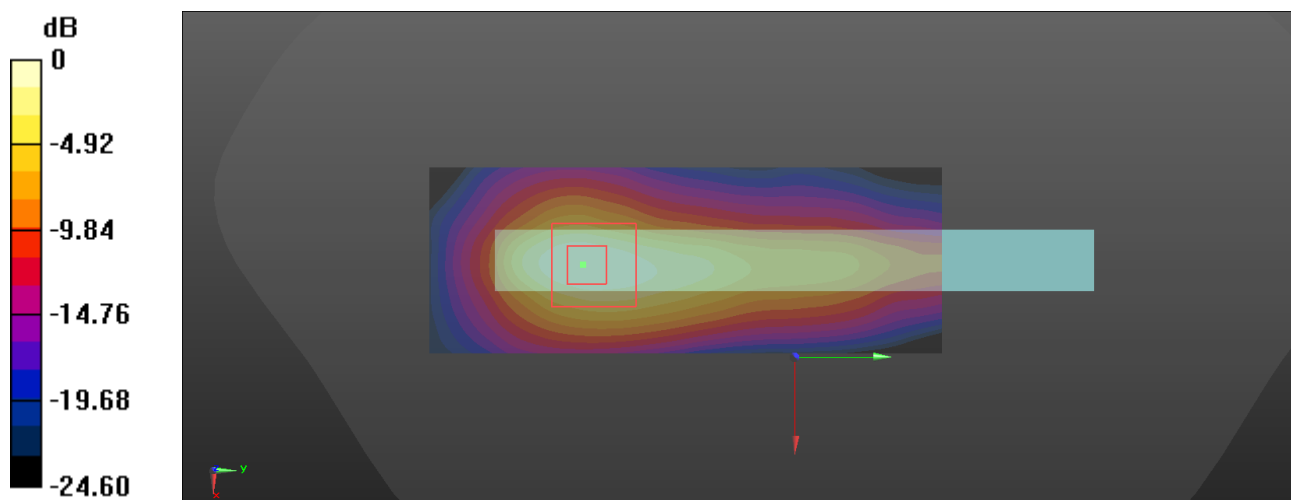
Communication System: UID 0, WIFI2.4G (0); Frequency: 2437 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.85 \text{ S/m}$ ;  $\epsilon_r = 38.502$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (41x111x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.651 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $9.807 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.761 \text{ W/kg}$   
**SAR(1 g) =  $0.360 \text{ W/kg}$ ; SAR(10 g) =  $0.164 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.597 \text{ W/kg}$



0 dB =  $0.597 \text{ W/kg} = -2.24 \text{ dBW/kg}$

51\_BT\_DH5 1Mbps\_Back\_0mm\_Ch39

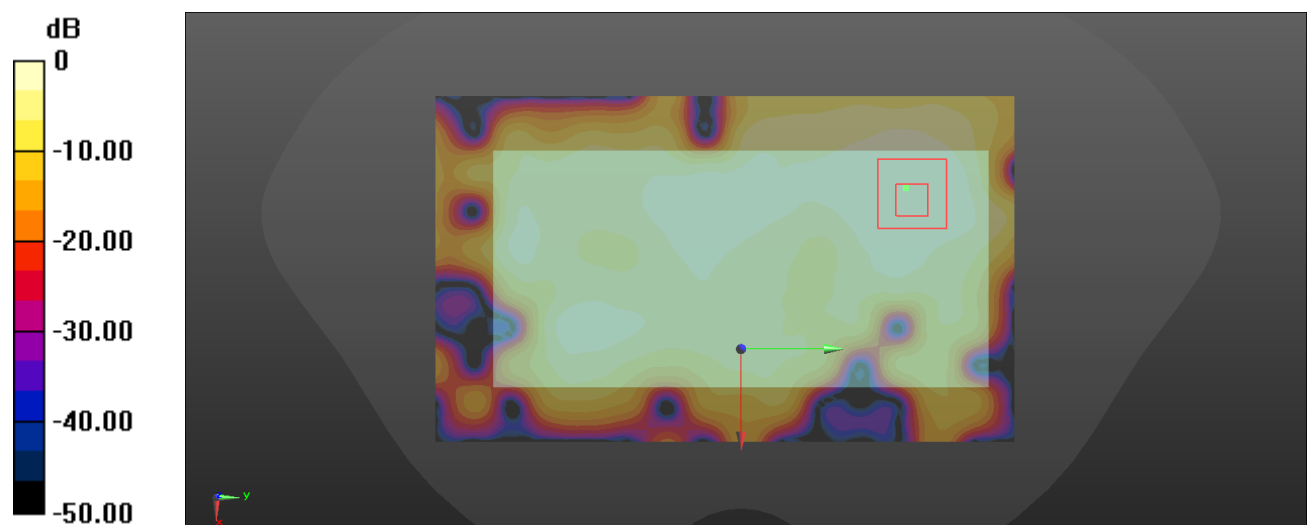
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 2441 \text{ MHz}$ ;  $\sigma = 1.854 \text{ S/m}$ ;  $\epsilon_r = 38.484$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(7.23, 7.23, 7.23); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (91x151x1):** Interpolated grid:  $dx=1.200 \text{ mm}$ ,  $dy=1.200 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.0176 \text{ W/kg}$

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $2.053 \text{ V/m}$ ; Power Drift =  $0.04 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.0220 \text{ W/kg}$   
**SAR(1 g) =  $0.011 \text{ W/kg}$ ; SAR(10 g) =  $0.00582 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.0181 \text{ W/kg}$



$0 \text{ dB} = 0.0181 \text{ W/kg} = -17.42 \text{ dBW/kg}$

52\_ WLAN 5.2GHz\_ 802.11a 6Mbps\_ Right Side\_ 0mm\_ Ch36

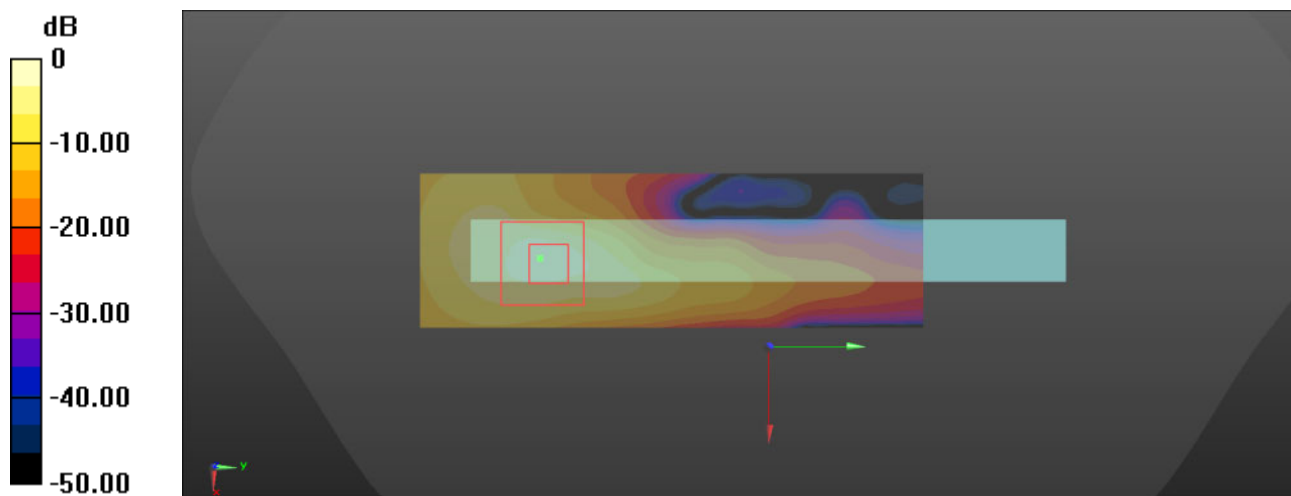
Communication System: UID 0, WIFI 5G (0); Frequency: 5180 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 5180 \text{ MHz}$ ;  $\sigma = 4.809 \text{ S/m}$ ;  $\epsilon_r = 37.422$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(5.38, 5.38, 5.38); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (41x131x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $3.62 \text{ W/kg}$

**Zoom Scan (10x10x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$   
 Reference Value =  $2.962 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$   
 Peak SAR (extrapolated) =  $8.28 \text{ W/kg}$   
**SAR(1 g) =  $1.73 \text{ W/kg}$ ; SAR(10 g) =  $0.476 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $4.46 \text{ W/kg}$



0 dB =  $4.46 \text{ W/kg} = 6.49 \text{ dBW/kg}$

53\_ WLAN 5.8GHz\_802.11ac-VHT80 MCS0\_Right Side\_0mm\_Ch155

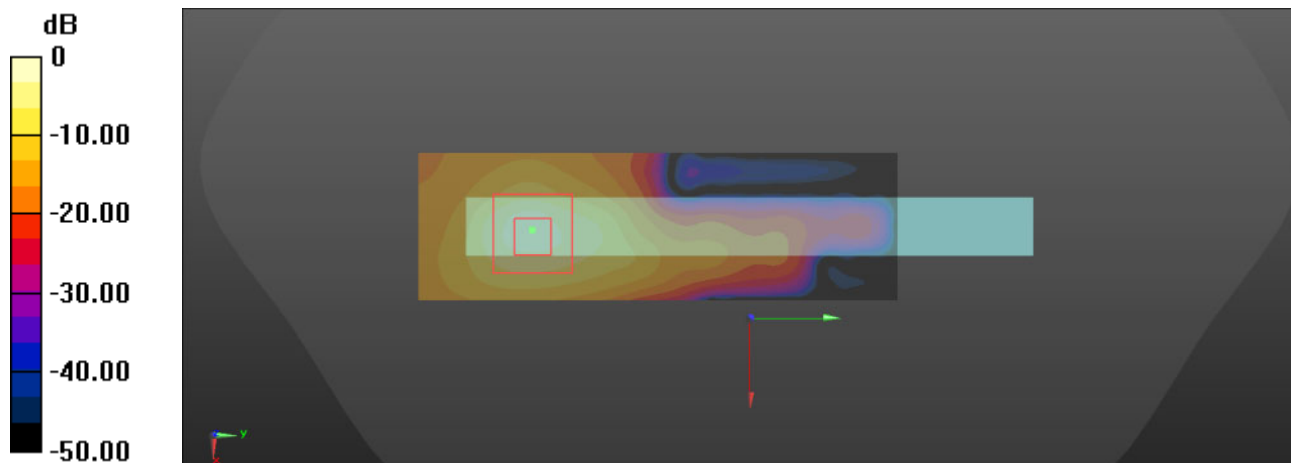
Communication System: UID 0, WIFI 5G (0); Frequency: 5775 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 5775 \text{ MHz}$ ;  $\sigma = 5.438 \text{ S/m}$ ;  $\epsilon_r = 36.513$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(4.73, 4.73, 4.73); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (41x131x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$   
 Maximum value of SAR (interpolated) = 2.50 W/kg

**Zoom Scan (9x9x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$   
 Reference Value = 1.861 V/m; Power Drift = 0.01 dB  
 Peak SAR (extrapolated) = 4.88 W/kg  
**SAR(1 g) = 0.961 W/kg; SAR(10 g) = 0.258 W/kg**  
 Maximum value of SAR (measured) = 2.63 W/kg



0 dB = 2.63 W/kg = 4.20 dBW/kg

54\_RF ID\_Back\_25

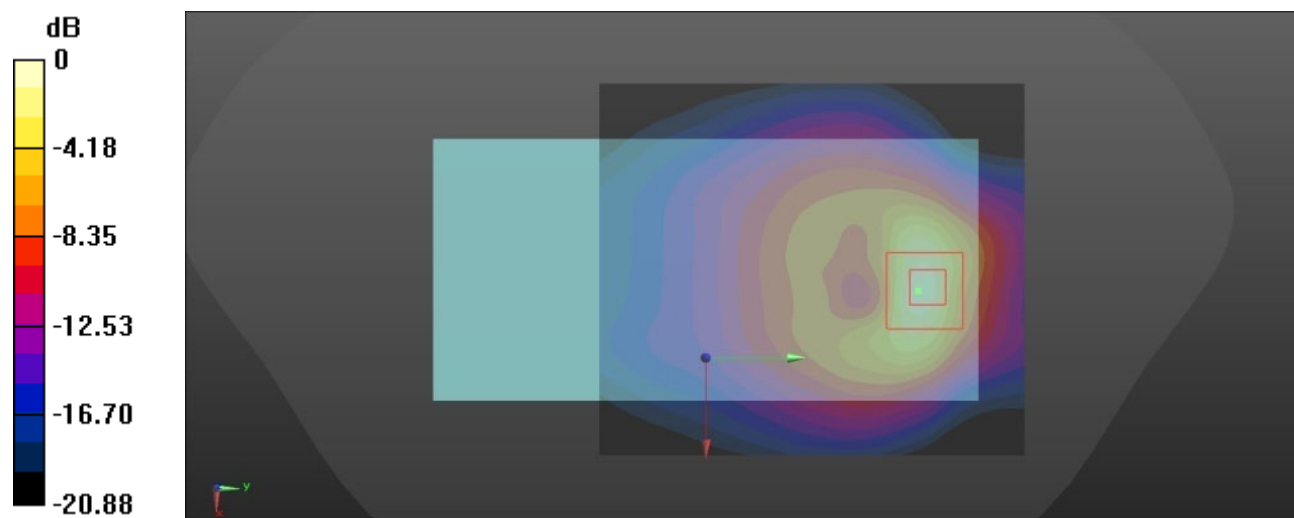
Communication System: UID 0, RF ID (0); Frequency: 920 MHz;Duty Cycle: 1:1  
 Medium parameters used:  $f = 920 \text{ MHz}$ ;  $\sigma = 0.986 \text{ S/m}$ ;  $\epsilon_r = 41.194$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7557;ConvF(10.05, 10.05, 10.05); Calibrated: 11/5/2020,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn527; Calibrated: 7/9/2020
- Phantom: Twin-SAM; Type: QD 000 P41 Ax; Serial: 1963
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7437)

**Area Scan (71x81x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $3.02 \text{ W/kg}$

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $13.53 \text{ V/m}$ ; Power Drift =  $-0.01 \text{ dB}$   
 Peak SAR (extrapolated) =  $4.59 \text{ W/kg}$   
**SAR(1 g) =  $2.1 \text{ W/kg}$ ; SAR(10 g) =  $0.972 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $3.32 \text{ W/kg}$



$0 \text{ dB} = 3.32 \text{ W/kg} = 5.21 \text{ dBW/kg}$

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## **APPENDIX D PROBE AND DAE CALIBRATION CERTIFICATES**

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**Please Refer to the Attachment.**

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## **APPENDIX E DIPOLE CALIBRATION CERTIFICATES**

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**Please Refer to the Attachment.**

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## APPENDIX F INFORMATIVE REFERENCES

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