



A Test Lab Techno Corp.

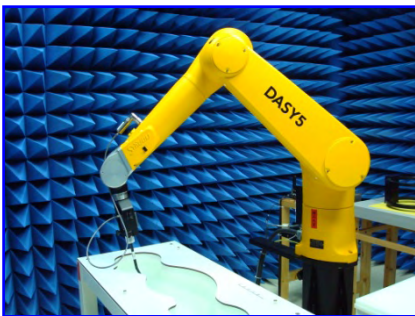
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SAR EVALUATION REPORT

Test Report No.	: 1708FS16-01
Applicant	: Netgear Incorporated
Product Type	: Mobile Router
Trade Name	: NETGEAR
Model Number	: MR1100-320
Date of Received	: Apr. 12, 2017
Test Period	: Jul. 18 ~ Aug. 02, 2017
Date of Issued	: Sep. 04, 2017
Test Environment	: Ambient Temperature : $22 \pm 2^{\circ} \text{C}$ Relative Humidity : 40 - 70 %
Standard	: ANSI/IEEE C95.1-1992 / IEEE Std. 1528-2013 47 CFR Part §2.1093 KDB 865664 D01 v01r04 / KDB 865664 D02 v01r02 KDB 447498 D01 v06 / KDB 941225 D01 v03r01 KDB 941225 D05 v02r05 / KDB 941225 D05A LTE_v01r02 KDB 941225 D06 v02r01 / KDB 248227 D01 v02r02
Test Lab Location	: Chang-an Lab
Test Firm MRA designation number	: TW0010



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1. Summary of Maximum Reported SAR Value

Equipment Class	Mode	Highest Reported			
		Head SAR _{1g} (W/kg)	Body SAR _{1g} (W/kg)	Hotspot SAR _{1g} (W/kg)	Extremity SAR _{1g} (W/kg)
PCB	WCDMA(RMC-12.2K)/HSDPA/HSUPA/HSPA+ BandII	N/A	N/A	1.05	N/A
	WCDMA(RMC-12.2K)/HSDPA/HSUPA/HSPA+ BandV	N/A	N/A	0.70	N/A
	LTE Band2	N/A	N/A	1.20	N/A
	LTE Band4	N/A	N/A	1.20	N/A
	LTE Band5	N/A	N/A	0.86	N/A
	LTE Band7	N/A	N/A	1.09	N/A
	LTE Band12	N/A	N/A	0.62	N/A
	LTE Band30	N/A	N/A	1.09	N/A
	LTE Band66	N/A	N/A	1.01	N/A
DTS	2.4GHz WLAN	N/A	N/A	0.16	N/A
U-NII	5GHz U-NII-1	N/A	N/A	0.07	N/A
	5GHz U-NII-3	N/A	N/A	0.11	N/A
Highest Simultaneous Transmission SAR		Head SAR _{1g} (W/kg)	Body SAR _{1g} (W/kg)	Hotspot SAR _{1g} (W/kg)	Extremity SAR _{1g} (W/kg)
PCB+DTS+NII at test position side2		N/A	N/A	1.39	N/A

NOTE: 1. The N/A is EUT not apply to the assessment of the exposure conditions.

2. The SAR limit (Head & Body: SAR_{1g} 1.6 W/kg) for general population / uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992.



2. Description of Equipment under Test (EUT)

Applicant	Netgear Incorporated 350 East Plumeria Drive, San Jose, California, United States 95134	
Manufacture	Netgear Inc. Suite 168 - 10760 Shellbridge Way, Richmond, BC Canada V6X 3H1	
Product Type	Mobile Router	
Trade Name	NETGEAR	
Model Number	MR1100-320	
IMEI No.	01497500	
FCC ID	PY317200378	
RF Function	Operate Bands	Operate Frequency (MHz)
	WCDMA(RMC 12.2K) / HSDPA / HSUPA Band II	1852.4 - 1907.6
	WCDMA (RMC 12.2K) / HSDPA / HSUPA Band V	826.4 - 846.6
	LTE Band 2 (BW 1.4, 3, 5, 10, 15, 20 MHz)	1850.0 - 1910.0
	LTE Band 4 (BW 1.4, 3, 5, 10, 15, 20 MHz)	1710.0 - 1754.9
	LTE Band 5 (BW 1.4, 3, 5, 10 MHz)	824.0 - 849.0
	LTE Band 7 (BW 5, 10, 15, 20 MHz)	2500.0 - 2570.0
	LTE Band 12 (BW 1.4, 3, 5, 10 MHz)	699.0 - 716.0
	LTE Band 30 (BW 5, 10 MHz)	2305.0 - 2315.0
	LTE Band 66 (BW 1.4, 3, 5, 10, 15, 20 MHz)	1710.0 - 1755.0
	IEEE 802.11b / 802.11g	2412 - 2462
	IEEE 802.11n 2.4GHz 20MHz (256QAM)	2422 - 2452
	IEEE 802.11n 2.4GHz 40MHz (256QAM)	2422 - 2452
	IEEE 802.11a	5180 - 5825
	IEEE 802.11n 5GHz 20MHz	5180 - 5825
IEEE 802.11ac 20MHz	5190 - 5795	
IEEE 802.11n 5GHz 40MHz	5190 - 5795	
IEEE 802.11ac 40MHz	5210 - 5775	
IEEE 802.11ac 80MHz	5210 - 5775	
Antenna Type	PIFA Antenna	
Battery Option	Standard	
	(1) Trade mark: NETGEAR Model Name: W-10a Spec: 3.85V, 5040mAh	
Device Category	(2) Trade mark: NETGEAR Model Name: W-10 Spec: 3.8V, 5040mAh	
	Portable Device	
Application Type	Certification	

Note: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



3. Introduction

The A Test Lab Techno Corp. has performed measurements of the maximum potential exposure to the user of **Netgear Incorporated Trade Name : NETGEAR Model(s) : MR1100-320**. The test procedures, as described in American National Standards, Institute C95.1-1999 [1] were employed and they specify the maximum exposure limit of 1.6mW/g as averaged over any 1 gram of tissue for portable devices being used within 20cm between user and EUT in the uncontrolled environment. A description of the product and operating configuration, detailed summary of the test results, methodology and procedures used in the equipment used are included within this test report.

3.1 SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative (rate) of the incremental energy (dw) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Figure 2).

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

Figure 2. SAR Mathematical Equation

SAR is expressed in units of Watts per kilogram (W/kg)

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

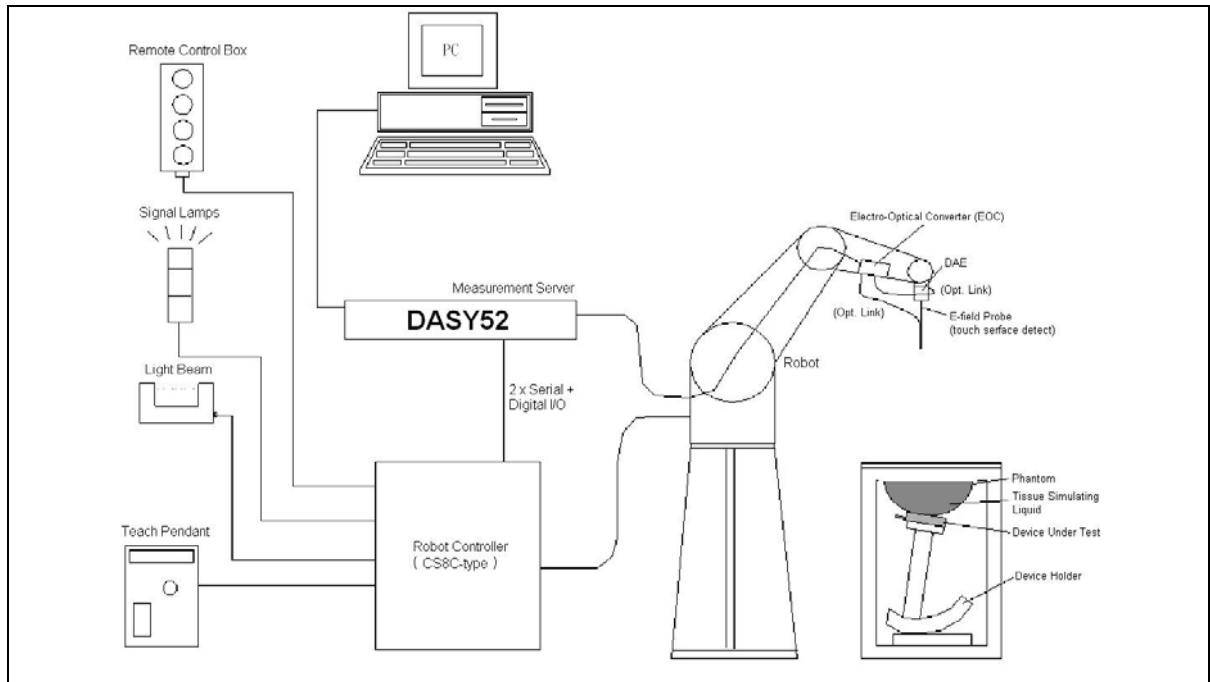
Where :

- σ = conductivity of the tissue (S/m)
- ρ = mass density of the tissue (kg/m³)
- E = RMS electric field strength (V/m)

*Note :

The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane [2]

4. SAR Measurement Setup



The DASY52 system for performing compliance tests consists of the following items:

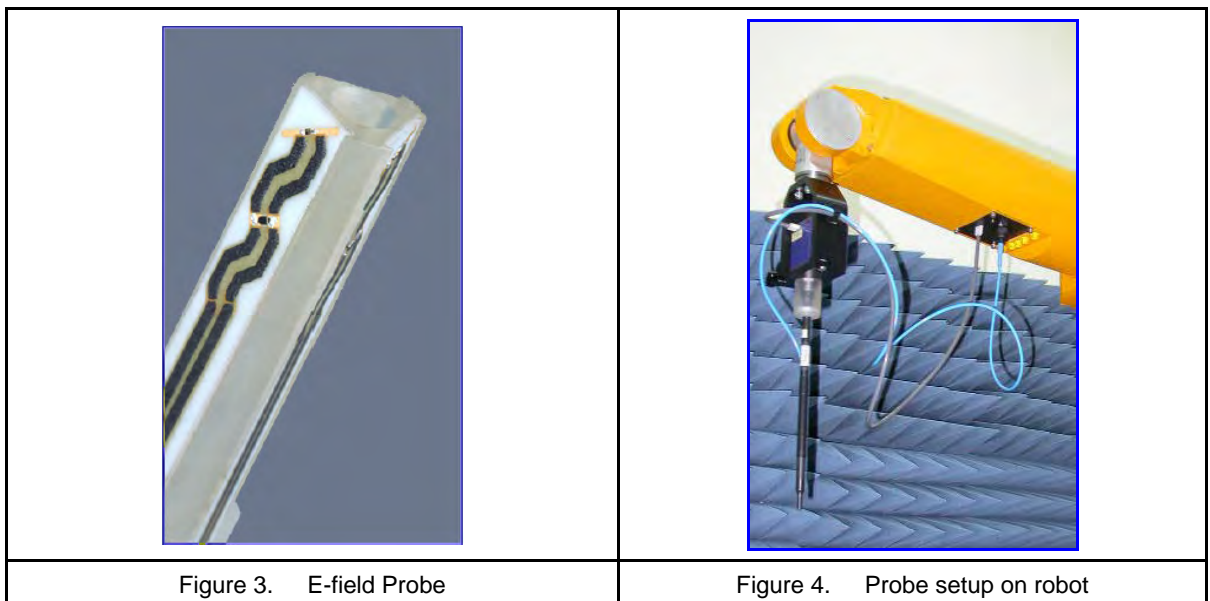
1. A standard high precision 6-axis robot (Stäubli TX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. 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.
5. A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
6. A computer operating Windows 2000 or Windows XP.
7. DASY52 software.
8. Remote controls with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
9. The SAM twin phantom enabling testing left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. Validation dipole kits allowing validating the proper functioning of the system.

4.1 DASY E-Field Probe System

The SAR measurements were conducted with the dosimetric probe (manufactured by SPEAG), designed in the classical triangular configuration [3] and optimized for dosimetric evaluation. The probes is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multi-fiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY software reads the reflection during a software approach and looks for the maximum using a 2nd order fitting. The approach is stopped when reaching the maximum.

4.1.1 E-Field Probe Specification

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in brain tissue (rotation around probe axis) ± 0.5 dB in brain tissue (rotation normal probe axis)
Dimensions	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





4.1.2 E-Field Probe Calibration process

Dosimetric Assessment Procedure

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm²) using an RF Signal generator, TEM cell, and RF Power Meter.

Free Space Assessment

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and in a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1 mW/cm².

Temperature Assessment

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated head tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$\text{SAR} = C \frac{\Delta T}{\Delta t}$$

Where :

Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (head or body),

ΔT = Temperature increase due to RF exposure.

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

Where :

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m³).



4.2 Data Acquisition Electronic (DAE) System

Model : DAE3, DAE4
Construction : Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY4/5 embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.
Measurement Range : -100 to +300 mV (16 bit resolution and two range settings: 4mV, 400mV)
Input Offset Voltage : < 5 μ V (with auto zero)
Input Bias Current : < 50 fA
Dimensions : 60 x 60 x 68 mm

4.3 Robot

Positioner : Stäubli Unimation Corp. Robot Model: TX90XL
Repeatability : ± 0.02 mm
No. of Axis : 6

4.4 Measurement Server

Processor : PC/104 with a 400MHz intel ULV Celeron
I/O-board : Link to DAE4 (or DAE3)
16-bit A/D converter for surface detection system
Digital I/O interface
Serial link to robot
Direct emergency stop output for robot

4.5 Device Holder

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon=3$ and loss tangent $\delta=0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

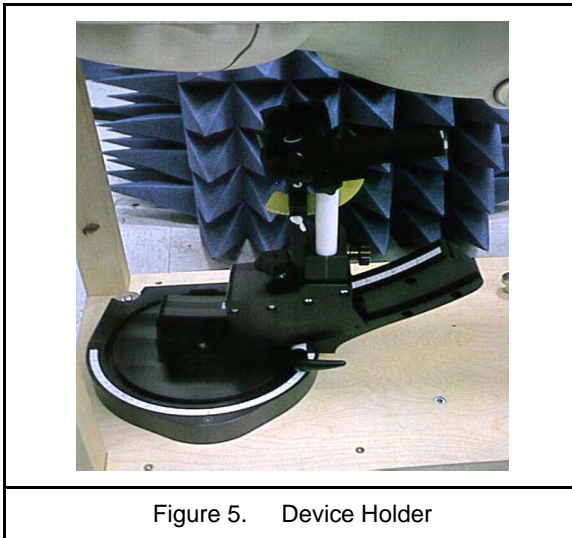


Figure 5. Device Holder

4.6 Oval Flat Phantom - ELI 5.0

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (Oval Flat) phantom defined in IEEE 1528-2013, CENELEC 50361 and IEC 62209-2. It enables the dosimetric evaluation of wireless portable device usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points with the robot.

Shell Thickness	2 ±0.2 mm
Filling Volume	Approx. 30 liters
Dimensions	190x600x400 mm (HxLxW)
Table 1. Specification of ELI 5.0	

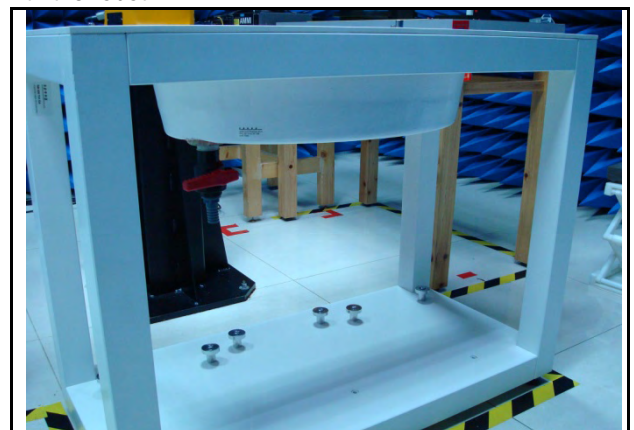


Figure 6. Oval Flat Phantom



4.7 Data Storage and Evaluation

4.7.1 Data Storage

The DASY software stores the assessed data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all the necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension DA4 or DA5. The post processing software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of erroneous parameter settings. For example, if a measurement has been performed with an incorrect crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be reevaluated.

4.7.2 Data Evaluation

The DASY post processing software (SEMCAD) automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software :

- Probe parameters : - Sensitivity $Norm_i, ai0, ai1, ai2$
- Conversion factor $ConvFi$
- Diode compression point dcp_i
- Device parameters : - Frequency f
- Crest factor cf
- Media parameters : - Conductivity σ
- Density ρ

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as :

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

- With V_i = compensated signal of channel i (i = x, y, z)
 U_i = input signal of channel i (i = x, y, z)
 cf = crest factor of exciting field (DASY parameter)
 dcp_i = diode compression point (DASY parameter)



From the compensated input signals the primary field data for each channel can be evaluated :

$$E\text{-field probes : } E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}$$

$$H\text{-field probes : } H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

- with V_i = compensated signal of channel i (i = x, y, z)
- $Norm_i$ = sensor sensitivity of channel i (i = x, y, z)
- $\mu V/(V/m)^2$ for *E-field Probes*
- $ConvF$ = sensitivity enhancement in solution
- a_{ij} = sensor sensitivity factors for H-field probes
- f = carrier frequency [GHz]
- E_i = electric field strength of channel i in V/m
- H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude) :

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

- with SAR = local specific absorption rate in mW/g
- E_{tot} = total field strength in V/m
- σ = conductivity in [mho/m] or [Siemens/m]
- ρ = equivalent tissue density in g/cm³

* Note : That the density is set to 1, to account for actual head tissue density rather than the density of the tissue simulating liquid.

The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = \frac{E_{tot}^2}{3770} \quad \text{or} \quad P_{pwe} = \frac{H_{tot}^2}{37.7}$$

- with P_{pwe} = equivalent power density of a plane wave in mW/cm²
- E_{tot} = total electric field strength in V/m
- H_{tot} = total magnetic field strength in A/m



5. Tissue Simulating Liquids

The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.

The dielectric parameters of the liquids were verified prior to the SAR evaluation using an 85070C Dielectric Probe Kit and an E5071B Network Analyzer.

IEEE SCC-34/SC-2 in 1528 recommended Tissue Dielectric Parameters

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in 1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in human head. Other head and body tissue parameters that have not been specified in 1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equation and extrapolated according to the head parameter specified in 1528.

Target Frequency	Head		Body	
(MHz)	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 - 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00
(ϵ_r = relative permittivity, σ = conductivity and $\rho = 1000$ kg/m ³)				

Table 2. Tissue dielectric parameters for head and body phantoms



5.1 Ingredients

The following ingredients are used:

- Water: deionized water (pure H₂O), resistivity $\geq 16 \text{ M } \Omega$ -as basis for the liquid
- Sugar: refined white sugar (typically 99.7 % sucrose, available as crystal sugar in food shops)
-to reduce relative permittivity
- Salt: pure NaCl -to increase conductivity
- Cellulose: Hydroxyethyl-cellulose, medium viscosity (75-125 mPa.s, 2% in water, 20 °C), CAS # 54290 -to increase viscosity and to keep sugar in solution.
- Preservative: Preventol D-7 Bayer AG, D-51368 Leverkusen, CAS # 55965-84-9 -to prevent the spread of bacteria and molds
- DGBE: Diethylenglycol-monobutyl ether (DGBE), Fluka Chemie GmbH, CAS # 112-34-5 -to reduce relative permittivity

5.2 Recipes

The following tables give the recipes for tissue simulating liquids to be used in different frequency bands.

Note: The goal dielectric parameters (at 22 °C) must be achieved within a tolerance of $\pm 5\%$ for ϵ and $\pm 5\%$ for σ .

Ingredients (% by weight)	Frequency (MHz)												Frequency (GHz)	
	750		835		1750		1900		2450		2600		5GHz	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	39.28	51.30	41.45	52.40	54.50	40.20	54.90	40.40	62.70	73.20	60.30	71.40	65.5	78.6
Salt (NaCl)	1.47	1.42	1.45	1.50	0.17	0.49	0.18	0.50	0.50	0.10	0.60	0.20	0.00	0.00
Sugar	58.15	46.18	56.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HEC	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bactericide	0.10	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Triton X-100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.2	10.7
DGBE	0.00	0.00	0.00	0.00	45.33	59.31	44.92	59.10	36.80	26.70	39.10	28.40	0.00	0.00
Dielectric Constant	41.88	54.60	42.54	56.10	40.10	53.60	39.90	54.00	39.80	52.50	39.80	52.50	0.00	0.00
Conductivity (S/m)	0.90	0.97	0.91	0.95	1.39	1.49	1.42	1.45	1.88	1.78	1.88	1.78	0.00	0.00
Diethylene Glycol Mono-hexlether	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.3	10.7

Salt: 99% Pure Sodium Chloride

Sugar: 98% Pure Sucrose

Water: De-ionized, $16 \text{ M } \Omega^+$ resistivity

HEC: Hydroxyethyl Cellulose

DGBE: 99% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]

Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1, 3, 3-tetramethylbutyl)phenyl]ether

5.3 Liquid Depth

According to KDB865664 ,the depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm with $\leq \pm 0.5$ cm variation for SAR measurements ≤ 3 GHz and ≥ 10.0 cm with $\leq \pm 0.5$ cm variation for measurements > 3 GHz.

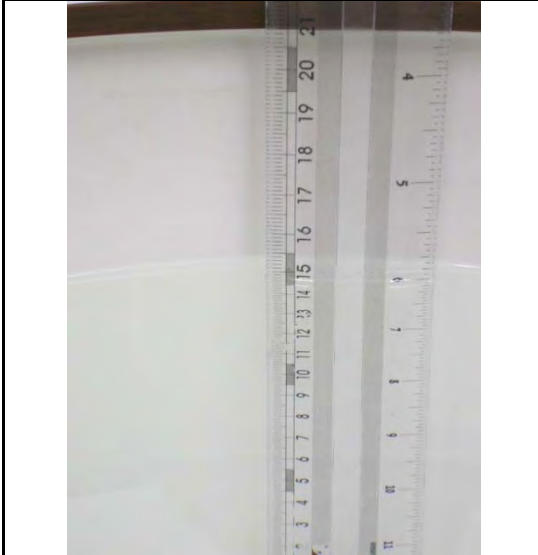


Figure 7. Body-Position



6. SAR Testing with RF Transmitters

6.1 SAR Testing with WCDMA Transmitters

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

- Step 1: set a Test Mode 1 loop back with a 12.2kbps Reference Measurement Channel (RMC).
- Step 2: set and send continuously up power control commands to the device.
- Step 3: measure the power at the device antenna connector using the power meter with average detector and test SAR

6.2 SAR Testing with HSDPA Transmitters

HSDPA Date Devices setup for SAR Measurement

HSDPA should be configured according to the UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors(β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Setup for Release 5 HSDPA							
Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1,2)}$	$CM^{(3)}$ (dB)	$MRP^{(3)}$ (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15(4)	15/15(4)	64	12/15(4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note

1. Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
2. For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude(EVM) with HS-DPCCH test in clause 5.13.1A and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$ and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$
3. $CM = 1$ for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
4. For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.



HSPA Data Devices setup for SAR Measurement.

The following procedures are applicable to HSPA (HSUPA/HSDPA) data devices operating under 3GPP Release 6. Body exposure conditions generally apply to these devices, including handsets and data modems operating in various electronic devices. HSUPA operates in conjunction with WCDMA and HSDPA. SAR is initially measured in WCDMA test configurations without HSPA. The default test configuration is to establish a radio link between the DUT and a communication test set to configure a 12.2 kbps RMC (reference measurement channel) in Test Loop Mode 1. SAR for HSPA is selectively measured with HS-DPCCH, EDPCCH and E-DPDCH, all enabled, along with a 12.2 kbps RMC using the highest SAR configuration in WCDMA with 12.2 kbps RMC only. An FRC is configured according to HSDPCCH Sub-test 1 using H-set 1 and QPSK. HSPA is configured according to E-DCH Subtest 5 requirements. SAR for other HSPA sub-test configurations is also confirmed selectively according to output power, exposure conditions and E-DCH UE Category. Maximum output power is verified according to procedures in applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. The UE Categories for HSDPCCH and HSPA should be clearly identified in the SAR report. The following procedures are applicable only if Maximum Power Reduction (MPR) is implemented according to Cubic Metric (CM) requirements.

When voice transmission and head exposure conditions are applicable to a WCDMA/HSPA data device, head exposure is measured according to the 'Head SAR Measurements' procedures in the 'WCDMA Handsets' section of this document. SAR for body exposure configurations are measured according to the 'Body SAR Measurements' procedures in the 'WCDMA Handsets' section of this document. In addition, body SAR is also measured for HSPA when the maximum average output of each RF channel with HSPA active is at least ¼ dB higher than that measured without HSPA using 12.2 kbps RMC or the maximum SAR for 12.2 kbps RMC is above 75% of the SAR limit. Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 with power control algorithm 2, according to the highest body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP is applicable for head exposure, SAR is not required when the maximum output of each RF channel with HSPA is less than ¼ dB higher than that measured using 12.2 kbps RMC; otherwise, the same HSPA configuration used for body measurements should be used to test for head exposure.

Due to inner loop power control requirements in HSPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA should be configured according to the β values indicated below as well as other applicable procedures described in the 'WCDMA Handset' and 'Release 5 HSDPA Data Devices' sections of this document.



The highest body SAR measured in Antenna Extended & Retracted configurations on a channel in 12.2 kbps RMC. The possible channels are the High, Middle & Low channel. Contact the FCC Laboratory for test and approval requirements if the maximum output power measured in E-DCH Sub-test 2 - 4 is higher than Sub-test 5.

Setup for Release 6 HSPA / Release 7 HSPA+													
Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	Bed (SF)	Bed (codes)	CM ⁽²⁾ (dB)	MPR (dB)	AG ⁽⁴⁾ Index	E-TFCI
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note

- Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
- CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
- For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.
- For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.
- Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
- β_{ed} can not be set directly; it is set by Absolute Grant Value.

6.3 SAR Testing with LTE-FDD Transmitters

All SAR measurements for LTE were performed using the Anritsu MT8820C. A closed loop power control setting allowed the UE to transmit at the maximum output power during the SAR measurements. Configure the basestation to support LTE tests in respect to the 3GPP 36.521-1, and set ch, RB allocation number, RB allocation offset, and send continuously Up power control commands to the device.

MPR was enabled for this device. A-MPR was disabled for all SAR test measurements.



6.4 SAR Testing with LTE-TDD Transmitters

All SAR measurements for LTE were performed using the Anritsu MT8820C. A closed loop power control setting allowed the UE to transmit at the maximum output power during the SAR measurements. Configure the basestation to support LTE tests in respect to the 3GPP 36.521-1, and set ch , TDD mode , RB allocation number ,RB allocation offset , and send continuously Up power control commands to the device.

MPR was enabled for this device. A-MPR was disabled for all SAR test measurements.

For 3GPP table 4.2.1 as below, support configurations and worst-case UpPTS information into the table.

3GPP Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink			EUT Support Special subframe	Worst case UpPTS
	DwPTS	UpPTS		DwPTS	UpPTS			
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		
0	$6592 \times T_s$	$2192 \times T_s$	$2560 \times T_s$	$7680 \times T_s$	$2192 \times T_s$	$2560 \times T_s$	<input type="checkbox"/>	<input type="checkbox"/>
1	$19760 \times T_s$			$20480 \times T_s$			<input type="checkbox"/>	<input type="checkbox"/>
2	$21952 \times T_s$			$23040 \times T_s$			<input type="checkbox"/>	<input type="checkbox"/>
3	$24144 \times T_s$			$25600 \times T_s$			<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	$26336 \times T_s$	$4384 \times T_s$	$5120 \times T_s$	$7680 \times T_s$	$4384 \times T_s$	$5120 \times T_s$	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	$6592 \times T_s$			$20480 \times T_s$			<input type="checkbox"/>	<input type="checkbox"/>
6	$19760 \times T_s$			$23040 \times T_s$			<input type="checkbox"/>	<input type="checkbox"/>
7	$21952 \times T_s$			$12800 \times T_s$			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	$24144 \times T_s$			-			-	<input type="checkbox"/>
9	$13168 \times T_s$	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>	
Duty cycle _(maximum)								43.33%

The EUT only supports the 40% case, which is Table 4.2.2, configuration #1 below.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number										Type of EUT
		0	1	2	3	4	5	6	7	8	9	
0	5ms	D	S	U	U	U	D	S	U	U	U	<input type="checkbox"/>
1	5ms	D	S	U	U	D	D	S	U	U	D	<input checked="" type="checkbox"/>
2	5ms	D	S	U	D	D	D	S	U	D	D	<input type="checkbox"/>
3	10ms	D	S	U	U	U	D	D	D	D	D	<input type="checkbox"/>
4	10ms	D	S	U	U	D	D	D	D	D	D	<input type="checkbox"/>
5	10ms	D	S	U	D	D	D	D	D	D	D	<input type="checkbox"/>
6	5ms	D	S	U	U	U	D	S	U	U	D	<input type="checkbox"/>



6.5 LTE Frequency range and channel bandwidth

Channel bandwidth support:

Band	BW (MHz)					
	1.4	3	5	10	15	20
LTE Band 2	V	V	V	V	V	V
LTE Band 4	V	V	V	V	V	V
LTE Band 5	V	V	V	V		
LTE Band 7			V	V	V	V
LTE Band 12	V	V	V	V		
LTE Band 30			V	V		
LTE Band 66	V	V	V	V	V	V

LTE Band	Bandwidth (MHz)	Test frequency ID	N _{UL}	Frequency of Uplink (MHz)
LTE Band 2	1.4	Low Range	18607	1850.7
		Mid Range	18900	1880.0
		High Range	19193	1909.3
	3	Low Range	18615	1851.5
		Mid Range	18900	1880.0
		High Range	19185	1908.5
	5	Low Range	18625	1852.5
		Mid Range	18900	1880.0
		High Range	19175	1907.5
	10	Low Range	18650	1855.0
		Mid Range	18900	1880.0
		High Range	19150	1905.0
	15	Low Range	18675	1857.5
		Mid Range	18900	1880.0
		High Range	19125	1902.5
20	Low Range	18700	1860.0	
	Mid Range	18900	1880.0	
	High Range	19100	1900.0	



LTE Band	Bandwidth (MHz)	Test frequency ID	N _{UL}	Frequency of Uplink (MHz)
LTE Band 4	1.4	Low Range	19957	1710.7
		Mid Range	20175	1732.5
		High Range	20393	1754.3
	3	Low Range	19965	1711.5
		Mid Range	20175	1732.5
		High Range	20385	1753.5
	5	Low Range	19975	1712.5
		Mid Range	20175	1732.5
		High Range	20375	1752.5
	10	Low Range	20000	1715.0
		Mid Range	20175	1732.5
		High Range	20350	1750.0
	15	Low Range	20025	1717.5
		Mid Range	20175	1732.5
		High Range	20325	1747.5
20	Low Range	20050	1720.0	
	Mid Range	20175	1732.5	
	High Range	20300	1745.0	
LTE Band 5	1.4	Low Range	20407	824.7
		Mid Range	20525	836.5
		High Range	20643	848.3
	3	Low Range	20415	825.5
		Mid Range	20525	836.5
		High Range	20635	847.5
	5	Low Range	20425	826.5
		Mid Range	20525	836.5
		High Range	20625	846.5
	10	Low Range	20450	829.0
		Mid Range	20525	836.5
		High Range	20600	844.0



LTE Band	Bandwidth (MHz)	Test frequency ID	N _{UL}	Frequency of Uplink (MHz)
LTE Band 7	5	Low Range	20775	2502.5
		Mid Range	21100	2535.0
		High Range	21425	2567.5
	10	Low Range	20800	2505.0
		Mid Range	21100	2535.0
		High Range	21400	2565.0
	15	Low Range	20825	2507.5
		Mid Range	21100	2535.0
		High Range	21375	23562.5
	20	Low Range	20850	2510.0
		Mid Range	21100	2535.0
		High Range	21350	2560.0
LTE Band 12	1.4	Low Range	20317	699.7
		Mid Range	23095	707.5
		High Range	23173	715.3
	3	Low Range	23025	700.5
		Mid Range	23095	707.5
		High Range	23165	714.5
	5	Low Range	23035	701.5
		Mid Range	23095	707.5
		High Range	23155	713.5
	10	Low Range	23060	704.0
		Mid Range	23095	707.5
		High Range	23130	711.0
LTE Band 30	5	Low Range	27685	2307.5
		Mid Range	27710	2310.0
		High Range	27735	2312.5
	10	Low Range	27710	2310.0
		Mid Range	27710	2310.0
		High Range	27710	2310.0



LTE Band	Bandwidth (MHz)	Test frequency ID	N _{UL}	Frequency of Uplink (MHz)
LTE Band 66	1.4	Low Range	131979	1710.7
		Mid Range	132197	1732.5
		High Range	132415	1754.3
	3	Low Range	131987	1711.5
		Mid Range	132197	1732.5
		High Range	132407	1753.5
	5	Low Range	131997	1712.5
		Mid Range	132197	1732.5
		High Range	132397	1752.5
	10	Low Range	132022	1715.0
		Mid Range	132197	1732.5
		High Range	132372	1750.0
	15	Low Range	132047	1717.5
		Mid Range	132197	1732.5
		High Range	132347	1747.5
20	Low Range	132072	1720.0	
	Mid Range	132197	1732.5	
	High Range	132322	1745.0	



6.5.1 Maximum power reduction (MPR)

Identify the LTE voice/data requirements in each operating mode and exposure condition with respect to head and body test configurations, antenna locations, handset flip-cover or slide positions, antenna diversity conditions etc.

The voice and data transmission:

- ◆ Data only device.

Identify if Maximum Power Reduction (MPR) is optional or mandatory, i.e. built-in by design:

- ◆ Maximum Power Reduction (MPR) is mandatory, i.e. built-in by design.
- ◆ A-MPR (additional MPR) must be disabled
- ◆ A-MPR was disabled during testing.

Maximum Power Reduction (MPR) for Power Class 3							
Channel bandwidth / Transmission bandwidth configuration (RB)							
Modulation	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20MHz	MPR (dB)
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

6.6 Power reduction

No power reduction issue.



6.7 Carrier Aggregation Measurements:

Intra-band non-contiguous bandwidth combination set:

E-UTRACA configuration	Uplink CA configurations (NOTE 1)	E-UTRA CA configuration / Bandwidth combination set					
		Component carriers in order of increasing carrier frequency				Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_2A-2A	-	5, 10, 15, 20	5, 10, 15, 20			40	0
CA_3A-3A	-	5, 10, 15, 20	5, 10, 15, 20			40	0
		5, 10	5, 10, 15, 20			30	1
CA_4A-4A	CA_4A-4A	5, 10, 15, 20	5, 10, 15, 20			40	0
		5, 10	5, 10			20	1
CA_5A-5A	-	5, 10	5, 10			20	0
CA_7A-7A	-	5	15			40	0
		10	10, 15				
		15	15, 20				
		20	20			40	1
		5, 10, 15, 20	5, 10, 15, 20				
		5, 10, 15, 20	5, 10				
10, 15, 20	10, 15, 20			40	3		
CA_23A-23A	-	5	10			15	0
CA_25A-25A	-	5, 10	5, 10			20	0
		5, 10, 15, 20	5, 10, 15, 20			40	1
CA_40A-40A	-	10, 20	10, 20			40	0
CA_41A-41A	-	10, 15, 20	10, 15, 20			40	0
		5, 10, 15, 20	5, 10, 15, 20			40	1
CA_41A-41C	-	5, 10, 15, 20	See CA_41C Bandwidth Combination Set 1 in Table 5.4.2A.1-1			60	0
		See CA_41C Bandwidth Combination Set 1 in Table 5.4.2A.1-1		5, 10, 15, 20			
CA_41A-41D	CA_41C	5, 10, 15, 20	See CA_41D Bandwidth Combination Set 0 in Table 5.4.2A.1-1			80	0
		See CA_41D Bandwidth Combination Set 0 in Table 5.4.2A.1-1			5, 10, 15, 20		
CA_41C-41C	CA_41C	See CA_41C Bandwidth Combination Set 0 in Table 5.4.2A.1-1		See CA_41C Bandwidth Combination Set 0 in Table 5.4.2A.1-1		80	0
CA_42A-42A	-	5, 10, 15, 20	5, 10, 15, 20			40	0
CA_42A-42C	-	5, 10, 15, 20	See CA_42C Bandwidth Combination Set 0 in Table 5.4.2A.1-1			60	0
		See CA_42C Bandwidth Combination Set 0 in Table 5.4.2A.1-1		5, 10, 15, 20			
CA_42A-42D	-	5, 10, 15, 20	See CA_42D Bandwidth Combination Set 0 in Table 5.4.2A.1-1			80	0
		See CA_42D Bandwidth Combination Set 0 in Table 5.4.2A.1-1			5, 10, 15, 20		
CA_42C-42C	-	See CA_42C Bandwidth Combination Set 0 in Table 5.4.2A.1-1		See CA_42C Bandwidth Combination Set 0 in Table 5.4.2A.1-1		80	0



Inter-band bandwidth combination set (two bands):

CA_1A-42C	CA_1A-42A	1			Yes	Yes	Yes	Yes	60	0
		42	See CA_42C Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_1A-46A	-	1			Yes	Yes	Yes	Yes	40	0
		46						Yes		
CA_1A-46C	-	1			Yes	Yes	Yes	Yes	60	0
		46	See CA_46C Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_1A-46D	-	1			Yes	Yes	Yes	Yes	80	0
		46	See CA_46D Bandwidth combination set 0 in Table 5.4.2A.1-1							
CA_1A-46E	-	1			Yes	Yes	Yes	Yes	100	0
		46	See CA_46E Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_2A-4A	CA_2A-4A	2	Yes	Yes	Yes	Yes	Yes	Yes	40	0
		4			Yes	Yes	Yes	Yes		
		2			Yes	Yes			20	1
		4			Yes	Yes				
		2			Yes	Yes	Yes	Yes	40	2
4			Yes	Yes	Yes	Yes				
CA_2A-2A-4A	-	2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3						60	0
		4			Yes	Yes	Yes	Yes		
CA_2A-4A-4A	-	2			Yes	Yes	Yes	Yes	60	0
		4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3							
CA_2A-2A-4A-4A	-	2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3						80	0
		4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3							
CA_2A-5A	CA_2A-5A	2			Yes	Yes	Yes	Yes	30	0
		5			Yes	Yes				
		2			Yes	Yes			20	1
		5			Yes	Yes				
CA_2A-2A-5A	-	2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3						50	0
		5			Yes	Yes				
CA_2C-5A	-	2	See CA_2C Bandwidth combination set 0 in Table 5.4.2A.1-1						50	0
		5			Yes	Yes				
CA_2A-5B	-	2			Yes	Yes	Yes	Yes	40	0
		5	See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_2C-5B	-	2	See CA_2C Bandwidth combination set 0 in Table 5.4.2A.1-1						60	0
		5	See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_2A-7A	CA_2A-7A	2			Yes	Yes	Yes	Yes	40	0
		7			Yes	Yes	Yes	Yes		
CA_2A-7A-7A	-	2			Yes	Yes	Yes	Yes	60	0
		7	See the CA_7A-7A Bandwidth combination set 1 in Table 5.4.2A.1-3							
CA_2A-12A	CA_2A-12A ⁶	2			Yes	Yes	Yes	Yes	30	0
		12			Yes	Yes				
		2			Yes	Yes	Yes	Yes	30	1
		12	Yes	Yes	Yes					
		2			Yes	Yes			20	2
12			Yes	Yes						
CA_2A-2A-12A	-	2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3						50	0
		12			Yes	Yes				
CA_2A-12B	CA_2A-12A ⁶	2			Yes	Yes	Yes	Yes	35	0
		12	See CA_12B Bandwidth Combination Set 0 in Table 5.4.2A.1-1							



CA_2A-2A-12B	-	2	See CA_2A-2A Bandwidth combination set 0 in Table 5.4.2A.1-3				55	0		
		12	See CA_12B Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_2C-12A	-	2	See CA_2C Bandwidth combination set 0 in Table 5.4.2A.1-1				50	0		
		12		Yes	Yes					
CA_2A-13A	CA_2A-13A	2		Yes	Yes	Yes	Yes	30	0	
		13			Yes					
		2		Yes	Yes					
		13			Yes					
CA_2A-2A-13A	-	2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				50	0		
		13			Yes					
CA_2A-17A	-	2		Yes	Yes			20	0	
		17		Yes	Yes					
CA_2A-28A	-	2		Yes	Yes	Yes	Yes	40	0	
		28		Yes	Yes	Yes	Yes			
CA_2A-29A	-	2		Yes	Yes			20	0	
		29	Yes	Yes	Yes					
		2		Yes	Yes			20	1	
		29		Yes	Yes					
		2		Yes	Yes	Yes	Yes	30	2	
		29		Yes	Yes					
CA_2C-29A	-	2	See CA_2C Bandwidth Combination Set 0 in table 5.4.2A.1-1				50	0		
		29		Yes	Yes					
CA_2A-30A	-	2		Yes	Yes	Yes	Yes	30	0	
		30		Yes	Yes					
CA_2C-30A	-	2	See CA_2C Bandwidth combination set 0 in Table 5.4.2A.1-1				50	0		
		30		Yes	Yes					
CA_2A-46A	-	2		Yes	Yes	Yes	Yes	40	0	
		46					Yes			
CA_2A-46A-46C	-	2		Yes	Yes	Yes	Yes	80	0	
		46	See CA_46A-46C Bandwidth Combination Set 0 in Table 5.4.2A.1-3							
CA_2A-46C	-	2		Yes	Yes	Yes	Yes	80	0	
		46	See CA_46C Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_2A-46D	-	2		Yes	Yes	Yes	Yes	80	0	
		46	See CA_46D Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_2A-46A-46A	-	2		Yes	Yes	Yes	Yes	60	0	
		46	See CA_46A-46A Bandwidth combination set 0 in Table 5.4.2A.1-3							
CA_2A-46A-46D	-	2		Yes	Yes	Yes	Yes	100	0	
		46	See CA_46A-46D Bandwidth Combination Set 0 in Table 5.4.2A.1-3							
CA_2A-66A	-	2	Yes	Yes	Yes	Yes	Yes	Yes	40	0
		66			Yes	Yes	Yes	Yes		
		2			Yes	Yes			20	1
		66			Yes	Yes				
		2			Yes	Yes	Yes	Yes	40	2
66			Yes	Yes	Yes	Yes				
CA_2A-66B	-	2		Yes	Yes	Yes	Yes	40	0	
		66	See CA_66B Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_2A-66C	-	2		Yes	Yes	Yes	Yes	60	0	
		66	See CA_66C Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_2A-66D	-	2		Yes	Yes	Yes	Yes	60	0	



		40		Yes	Yes	Yes	Yes		
		3		Yes	Yes	Yes	Yes		
CA_3A-40C	-	40		See CA_40C Bandwidth Combination Set 1 in Table 5.4.2A.1-1				60	0
		3		See CA_3C Bandwidth Combination Set 0 in Table 5.4.2A.1-1				60	0
CA_3C-40A	-	40		Yes	Yes	Yes	Yes		
		3		See CA_3C Bandwidth Combination Set 0 in Table 5.4.2A.1-1				80	0
CA_3C-40C	-	40		See CA_40C Bandwidth Combination Set 1 in Table 5.4.2A.1-1					
CA_3A-41A	CA_3A-41A	3		Yes	Yes	Yes	Yes	40	0
		41		Yes	Yes	Yes	Yes		
CA_3A-41C	-	3		Yes	Yes	Yes	Yes	60	0
		41		See CA_41C Bandwidth Combination Set 0 in Table 5.4.2A.1-1					
CA_3A-41D	-	3		Yes	Yes	Yes	Yes	80	0
		41		See CA_41D Bandwidth Combination Set 0 in Table 5.4.2A.1-1					
CA_3C-41A	-	3		See CA_3C Bandwidth Combination Set 0 in Table 5.4.2A.1-1				60	0
		41		Yes	Yes	Yes	Yes		
CA_3C-41C	-	3		See CA_3C Bandwidth Combination Set 0 in Table 5.4.2A.1-1				80	0
		41		See CA_41C Bandwidth Combination Set 0 in Table 5.4.2A.1-1					
CA_3C-41D	-	3		See CA_3C Bandwidth Combination Set 0 in Table 5.4.2A.1-1				100	0
		41		See CA_41D Bandwidth Combination Set 0 in Table 5.4.2A.1-1					
CA_3A-42A	CA_3A-42A	3		Yes	Yes	Yes	Yes	40	0
		42		Yes	Yes	Yes	Yes		
CA_3A-42C	CA_3A-42A	3		Yes	Yes	Yes	Yes	60	0
		42		See CA_42C Bandwidth Combination Set 0 in Table 5.4.2A.1-1					
CA_3A-46A	-	3		Yes	Yes	Yes	Yes	40	0
		46					Yes		
CA_3A-46C	-	3		Yes	Yes	Yes	Yes	60	0
		46		See CA_46C Bandwidth Combination Set 0 in Table 5.4.2A.1-1					
CA_3A-46D	-	3		Yes	Yes	Yes	Yes	80	0
		46		See CA_46D Bandwidth combination set 0 in Table 5.4.2A.1-1					
		3		Yes	Yes	Yes	Yes	80	1
		46		See CA_46D Bandwidth combination set 0 in Table 5.4.2A.1-1					
CA_3A-46E	-	3		Yes	Yes	Yes	Yes	100	0
		46		See CA_46E Bandwidth Combination Set 0 in Table 5.4.2A.1-1					
CA_3A-69A	-	3		Yes	Yes	Yes	Yes	40	0
		69		Yes	Yes	Yes	Yes		
CA_4A-5A	CA_4A-5A	4		Yes	Yes			20	0
		5		Yes	Yes				
		4		Yes	Yes	Yes	Yes	30	1
		5		Yes	Yes				
CA_4A-4A-5A	-	4		See CA_4A-4A Bandwidth Combination Set 0 in table 5.4.2A.1-3				50	0
		5		Yes	Yes				
CA_4A-5B	-	4		Yes	Yes	Yes	Yes	40	0
		5		See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1					
CA_4A-4A-5B	-	4		See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				60	0



		5	See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_4A-7A	CA_4A-7A	4			Yes	Yes		30	0	
		7			Yes	Yes	Yes	Yes		
		4			Yes	Yes	Yes	Yes	40	1
		7			Yes	Yes	Yes	Yes		
CA_4A-4A-7A	-	4			Yes	Yes		40	0	
		4			Yes	Yes				
		7			Yes	Yes	Yes	Yes		
		4			Yes	Yes	Yes	Yes	60	1
		4			Yes	Yes	Yes	Yes		
CA_4A-7A-7A	-	4			Yes	Yes	Yes	Yes	60	0
		7	See the CA_7A-7A Bandwidth combination set 1 in Table 5.4.2A.1-3							
CA_4A-12A	CA_4A-12A	4	Yes	Yes	Yes	Yes		20	0	
		12			Yes	Yes				
		4	Yes	Yes	Yes	Yes	Yes	Yes	30	1
		12			Yes	Yes				
		4			Yes	Yes	Yes	Yes	30	2
		12		Yes	Yes	Yes				
		4			Yes	Yes			20	3
		12			Yes	Yes				
		4			Yes	Yes	Yes	Yes	30	4
		12			Yes	Yes				
CA_4A-4A-12A	-	4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3					50	0	
		12			Yes	Yes				
CA_4A-4A-12B	-	4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3					55	0	
		12	See CA_12B Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_4A-12B	CA_4A-12A	4			Yes	Yes	Yes	Yes	35	0
		12	See CA_12B Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_4A-13A	CA_4A-13A	4			Yes	Yes	Yes	Yes	30	0
		13				Yes				
		4			Yes	Yes			20	1
CA_4A-4A-13A	-	13				Yes				
		4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3					50	0	
CA_4A-17A	CA_4A-17A	4			Yes	Yes		20	0	
		17			Yes	Yes				
CA_4A-27A	-	4			Yes	Yes	Yes	Yes	30	0
		27		Yes	Yes	Yes				
CA_4A-28A	-	4			Yes	Yes	Yes	Yes	40	0
		28			Yes	Yes	Yes	Yes		
CA_4A-29A	-	4			Yes	Yes		20	0	
		29		Yes	Yes	Yes				
		4			Yes	Yes			20	1
		29			Yes	Yes				
		4			Yes	Yes	Yes	Yes	30	2
CA_4A-4A-29A	-	29			Yes	Yes		50	0	
		4	See CA_4A-4A Bandwidth combination set 0 in Table 5.4.2A.1-3							
CA_4A-30A	-	4			Yes	Yes	Yes	Yes	30	0
		30			Yes	Yes				



		39	See CA_39C Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_8A-40A	-	8			Yes	Yes			30	0
		40			Yes	Yes	Yes	Yes		
CA_8A-41A	CA_8A-41A	8	Yes	Yes	Yes	Yes			30	1
		40			Yes	Yes	Yes	Yes		
CA_8A-41C	-	8	Yes	Yes	Yes	Yes			50	0
		41	See CA_41C bandwidth combination set 3 in table 5.4.2A.1-1							
CA_8A-41D	-	8	Yes	Yes	Yes	Yes			70	0
		41	See CA_41D bandwidth combination set 0 in table 5.4.2A.1-1							
CA_8B-41A	-	8	See CA_8B Bandwidth combination set 0 in Table 5.4.2A.1-1					40	0	
		41					Yes			
CA_8B-41C	-	8	See CA_8B bandwidth combination set 0 in table 5.4.2A.1-1					60	0	
		41	See CA_41C bandwidth combination set 3 in table 5.4.2A.1-1							
CA_8B-41D	-	8	See CA_8B bandwidth combination set 0 in table 5.4.2A.1-1					80	0	
		41	See CA_41D bandwidth combination set 0 in table 5.4.2A.1-1							
CA_8A-42A	-	8	Yes	Yes	Yes	Yes			30	0
		42			Yes	Yes	Yes	Yes		
CA_8A-42C	-	8	Yes	Yes	Yes	Yes			50	0
		42	See CA_42C Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_8A-46A	-	8	Yes	Yes	Yes	Yes			30	0
		46						Yes		
CA_11A-18A	-	11			Yes	Yes			25	0
		18			Yes	Yes	Yes			
CA_11A-41A	-	11			Yes	Yes			30	0
		41			Yes	Yes	Yes	Yes		
CA_11A-41C	-	11			Yes	Yes			50	0
		41	See CA_41C bandwidth combination set 0 in table 5.4.2A.1-1							
CA_11A-42A	-	11			Yes	Yes			30	0
		42			Yes	Yes	Yes	Yes		
CA_11A-42C	-	11			Yes	Yes			50	0
		42	See CA_42C Bandwidth Combination Set 0 in Table 5.4.2A.1-1							
CA_12A-25A	-	12			Yes	Yes			30	0
		25			Yes	Yes	Yes	Yes		
CA_12A-30A	-	12			Yes	Yes			20	0
		30			Yes	Yes				
CA_12A-66A	-	12			Yes	Yes			20	0
		66	Yes	Yes	Yes	Yes				
		12			Yes	Yes			30	1
		66	Yes	Yes	Yes	Yes	Yes	Yes		
		12		Yes	Yes	Yes			30	2
		66		Yes	Yes	Yes	Yes	Yes		
		12			Yes	Yes			20	3
		66			Yes	Yes				
		12			Yes	Yes			30	4
		66			Yes	Yes	Yes	Yes		
CA_12A-66A-66A	-	12			Yes	Yes			20	5
		66			Yes	Yes	Yes	Yes		
		66	See CA_66A-66A Bandwidth combination set 0 in Table 5.4.2A.1-3					50	0	



Inter-band bandwidth combination set (three bands):

CA_1A-41C-42A ¹⁰	-	1		Yes	Yes	Yes	Yes	80	0
		41	See CA_41C Bandwidth combination Set 0 in Table 5.4.2A.1-1						
		42		Yes	Yes	Yes	Yes		
CA_1A-41C-42C ¹⁰	-	1		Yes	Yes	Yes	Yes	100	0
		41	See CA_41C Bandwidth combination set 0 in Table 5.4.2A.1-1						
		42	See CA_42C Bandwidth combination set 1 in Table 5.4.2A.1-1						
CA_2A-4A-5A	CA_2A-4A	2		Yes	Yes	Yes	Yes	50	0
		4		Yes	Yes	Yes	Yes		
		5		Yes	Yes				
CA_2A-2A-4A-5A	-	2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				70	0	
		4		Yes	Yes	Yes			Yes
		5		Yes	Yes				
CA_2A-4A-5B	-	2		Yes	Yes	Yes	Yes	60	0
		4		Yes	Yes	Yes	Yes		
		5	See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1						
CA_2A-4A-7A	-	2		Yes	Yes	Yes	Yes	60	0
		4		Yes	Yes	Yes	Yes		
		7		Yes	Yes	Yes	Yes		
CA_2A-4A-7A-7A	-	2		Yes	Yes	Yes	Yes	80	0
		4		Yes	Yes	Yes	Yes		
		7	See the CA_7A-7A Bandwidth combination set 1 in Table 5.4.2A.1-3						
CA_2A-4A-4A-5A	-	2		Yes	Yes	Yes	Yes	70	0
		4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3						
		5		Yes	Yes				
CA_2A-4A-12A	CA_2A-4A CA_4A-12A	2		Yes	Yes	Yes	Yes	50	0
		4		Yes	Yes	Yes	Yes		
		12		Yes	Yes				
CA_2A-4A-12B	-	2		Yes	Yes	Yes	Yes	55	0
		4		Yes	Yes	Yes	Yes		
		12	See CA_12B Bandwidth Combination Set 0 in Table 5.4.2A.1-1						
CA_2A-2A-4A-12A	-	2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				70	0	
		4		Yes	Yes	Yes			Yes
		12		Yes	Yes				
CA_2A-4A-4A-12A	-	2		Yes	Yes	Yes	Yes	70	0
		4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3						
		12		Yes	Yes				
CA_2A-4A-13A	-	2		Yes	Yes	Yes	Yes	50	0
		4		Yes	Yes	Yes	Yes		
		13		Yes					
CA_2A-4A-29A	CA_2A-4A	2		Yes	Yes	Yes	Yes	50	0
		4		Yes	Yes	Yes	Yes		
		29		Yes	Yes				
CA_2A-4A-30A	-	2		Yes	Yes	Yes	Yes	50	0
		4		Yes	Yes	Yes	Yes		
		30		Yes	Yes				
CA_2A-5A-12A	-	2		Yes	Yes	Yes	Yes	40	0
		5		Yes	Yes				
		12		Yes	Yes				
CA_2A-2A-5A-12A	-	2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				60	0	
		5		Yes	Yes				
		12		Yes	Yes				



CA_2A-2A-5A-66A		2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				70	0	
		5		Yes	Yes				
		66		Yes	Yes	Yes			Yes
CA_2A-2A-13A-66A		2	See CA_2A-2A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				70	0	
		13		Yes	Yes				
		66		Yes	Yes	Yes			Yes
CA_2A-5A-12B		2		Yes	Yes			45	0
		5		Yes	Yes				
		12	See CA_12B Bandwidth Combination Set 0 in Table 5.4.2A.1-1						
CA_2A-5A-13A	CA_2A-13A ^o	2		Yes	Yes	Yes	Yes	40	0
		5		Yes	Yes				
		13			Yes				
CA_2A-5A-29A		2		Yes	Yes	Yes	Yes	40	0
		5		Yes	Yes				
		29		Yes	Yes				
CA_2A-5A-30A		2		Yes	Yes	Yes	Yes	40	0
		5		Yes	Yes				
		30		Yes	Yes				
CA_2C-5A-30A		2	See CA_2C Bandwidth combination set 0 in Table 5.4.2A.1-1				60	0	
		5		Yes	Yes				
		30		Yes	Yes				
CA_2A-5B-30A		2		Yes	Yes	Yes	Yes	50	0
		5	See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1						
		30		Yes	Yes				
CA_2C-5B-30A		2	See CA_2C Bandwidth combination set 0 in Table 5.4.2A.1-1				70	0	
		5	See CA_5B Bandwidth combination set 0 in Table 5.4.2A.1-1						
		30		Yes					30
CA_2A-5A-66A		2		Yes	Yes	Yes	Yes	50	0
		5		Yes	Yes				
		66		Yes	Yes	Yes	Yes		
CA_2A-5A-66B		2		Yes	Yes	Yes	Yes	50	0
		5		Yes	Yes				
		66	See CA_66B Bandwidth combination set 0 in Table 5.4.2A.1-1						
CA_2A-5A-66C		2		Yes	Yes	Yes	Yes	70	0
		5		Yes	Yes				
		66	See CA_66C Bandwidth combination set 0 in Table 5.4.2A.1-1						
CA_2A-5B-66A		2		Yes	Yes	Yes	Yes	60	0
		5	See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1						
		66		Yes	Yes	Yes	Yes		
CA_2A-7A-12A		2		Yes	Yes	Yes	Yes	50	0
		7		Yes	Yes	Yes	Yes		
		12		Yes	Yes				
CA_2A-7A-66A		2		Yes	Yes	Yes	Yes	60	0
		7		Yes	Yes	Yes	Yes		
		66		Yes	Yes	Yes	Yes		
CA_2A-12A-30A	CA_2A-12A ^o	2		Yes	Yes	Yes	Yes	40	0
		12		Yes	Yes				
		30		Yes	Yes				
CA_2C-12A-30A		2	See CA_2C Bandwidth combination set 0 in Table 5.4.2A.1-1				60	0	
		12		Yes	Yes				
		30		Yes	Yes				
CA_2A-12A-66A		2		Yes	Yes	Yes	Yes	50	0
		12		Yes	Yes				



		66		Yes	Yes	Yes	Yes		
		2		Yes	Yes				
		12		Yes	Yes				
		66		Yes	Yes	Yes	Yes		
CA_2A-13A-66A	-	2		Yes	Yes	Yes	Yes		
		13		Yes	Yes				
		66		Yes	Yes	Yes	Yes		
CA_2A-13A-66A-66A	-	2		Yes	Yes	Yes	Yes		
		13		Yes	Yes				
		66	See CA_66A-66A Bandwidth Combination Set 0 in Table 5.4.2A.1-3						
CA_2A-13A-66B	-	2		Yes	Yes	Yes	Yes		
		13		Yes	Yes				
		66	See CA_66B Bandwidth combination set 0 in Table 5.4.2A.1-1						
CA_2A-13A-66C	-	2		Yes	Yes	Yes	Yes		
		13		Yes	Yes				
		66	See CA_66C Bandwidth combination set 0 in Table 5.4.2A.1-1						
CA_2A-29A-30A	-	2		Yes	Yes	Yes	Yes		
		29		Yes	Yes				
		30		Yes	Yes				
CA_2C-29A-30A	-	2	See CA_2C Bandwidth Combination set 0 in Table 5.4.2A.1-1						
		29		Yes	Yes				
		30		Yes	Yes				
CA_3A-5A-7A	-	3			Yes	Yes	Yes		
		5		Yes	Yes				
		7			Yes	Yes	Yes		
CA_3A-5A-7A-7A	-	3			Yes	Yes	Yes		
		5		Yes	Yes				
		7	See CA_7A-7A Bandwidth Combination Set 3 in Table 5.4.2A.1-3						
CA_3A-5A-40A	CA_3A-5A	3		Yes	Yes	Yes	Yes		
		5		Yes	Yes				
		40			Yes	Yes	Yes		
CA_3A-7A-7A-8A	-	3		Yes	Yes	Yes	Yes		
		7	See CA_7A-7A Bandwidth Combination Set 1 in Table 5.4.2A.1-3						
		8		Yes	Yes				
		3		Yes	Yes	Yes	Yes		
		7	See CA_7A-7A Bandwidth Combination Set 2 in Table 5.4.2A.1-3						
		8		Yes	Yes				
CA_3A-7A-8A	-	3		Yes	Yes	Yes			
		7			Yes	Yes			
		8		Yes	Yes				
		3		Yes	Yes	Yes	Yes		
		7			Yes	Yes	Yes		
		8		Yes	Yes				
		3		Yes	Yes	Yes	Yes		
		7		Yes	Yes	Yes	Yes		
		8		Yes	Yes				
CA_3A-7A-20A	CA_3A-7A CA_3A-20A CA_7A-20A ⁶	3		Yes	Yes	Yes	Yes		
		7			Yes	Yes	Yes		
		20		Yes	Yes	Yes	Yes		
CA_3A-7A-28A	CA_3A-7A CA_7A-28A	3		Yes	Yes	Yes	Yes		
		7		Yes	Yes	Yes	Yes		
		28		Yes	Yes	Yes	Yes		
CA_3A-7C-28A	CA_3A-7A, CA_7C, CA_7A-28A	3			Yes	Yes	Yes		
		7	See CA_7C Bandwidth Combination Set 2 in Table 5.4.2A.1-1						
		28			Yes	Yes	Yes		



CA_3A-41A-42C	-	42			Yes	Yes	Yes	80	0
		3			Yes	Yes	Yes		
		41			Yes	Yes	Yes		
		42	See CA_42C Bandwidth combination set 1 in Table 5.4.2A.1-1						
CA_3A-41C-42A	-	3			Yes	Yes	Yes	80	0
		41	See CA_41C Bandwidth combination set 0 in Table 5.4.2A.1-1						
		42			Yes	Yes	Yes		
CA_3A-41C-42C	-	3			Yes	Yes	Yes	100	0
		41	See CA_41C Bandwidth combination set 0 in Table 5.4.2A.1-1						
		42	See CA_42C Bandwidth combination set 1 in Table 5.4.2A.1-1						
CA_4A-5A-12A	-	4			Yes	Yes	Yes	40	0
		5			Yes	Yes			
		12			Yes	Yes			
CA_4A-5A-12B	-	4			Yes	Yes	Yes	45	0
		5			Yes	Yes			
		12	See CA_12B Bandwidth Combination Set 0 in Table 5.4.2A.1-1						
CA_4A-4A-5A-12A	-	4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				80	0	
		5			Yes	Yes			
		12			Yes	Yes			
CA_4A-5A-13A	CA_4A-13A ⁶	4			Yes	Yes	Yes	40	0
		5			Yes	Yes			
		13			Yes				
CA_4A-5A-29A	-	4			Yes	Yes	Yes	40	0
		5			Yes	Yes			
		29			Yes	Yes			
CA_4A-5A-30A	-	4			Yes	Yes	Yes	40	0
		5			Yes	Yes			
		30			Yes	Yes			
CA_4A-4A-5A-30A	-	4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				80	0	
		5			Yes	Yes			
		30			Yes	Yes			
CA_4A-4A-5B-30A	-	4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				70	0	
		5	See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1						
		30			Yes				30
CA_4A-5B-30A	-	4			Yes	Yes	Yes	50	0
		5	See CA_5B Bandwidth Combination Set 0 in Table 5.4.2A.1-1						
		30			Yes	Yes			
CA_4A-7A-12A	-	4			Yes	Yes		40	0
		7			Yes	Yes	Yes		
		12			Yes	Yes			
		4			Yes	Yes	Yes		
		7			Yes	Yes	Yes		
CA_4A-12A-30A	CA_4A-12A	4			Yes	Yes	Yes	40	0
		12			Yes	Yes			
		30			Yes	Yes			
CA_4A-4A-12A-30A	-	4	See CA_4A-4A Bandwidth Combination Set 0 in Table 5.4.2A.1-3				80	0	
		12			Yes	Yes			
		30			Yes	Yes			
CA_4A-29A-30A	-	4			Yes	Yes	Yes	40	0
		29			Yes	Yes			
		30			Yes	Yes			



Inter-band bandwidth combination set (four bands):

CA_1A-7A-20A-42A		7			Yes	Yes	Yes			
		20			Yes	Yes	Yes	Yes		
		42			Yes	Yes	Yes	Yes		
CA_1A-19A-21A-42A		1			Yes	Yes	Yes	Yes	70	0
		19			Yes	Yes	Yes			
		21			Yes	Yes	Yes			
		42			Yes	Yes	Yes	Yes		
CA_1A-19A-21A-42C		1			Yes	Yes	Yes	Yes	90	0
		19			Yes	Yes	Yes			
		21			Yes	Yes	Yes			
		42	See CA_42C Bandwidth combination set 0 in Table 5.4.2A.1-1							
CA_2A-4A-5A-12A		2			Yes	Yes	Yes	Yes	60	0
		4			Yes	Yes	Yes	Yes		
		5			Yes	Yes				
		12			Yes	Yes				
CA_2A-4A-5A-29A	CA_2A-4A	2			Yes	Yes	Yes	Yes	60	0
		4			Yes	Yes	Yes	Yes		
		5			Yes	Yes				
		29			Yes	Yes				
CA_2A-4A-5A-30A		2			Yes	Yes	Yes	Yes	60	0
		4			Yes	Yes	Yes	Yes		
		5			Yes	Yes				
		30			Yes	Yes				
CA_2A-4A-5B-30A		2			Yes	Yes	Yes	Yes	70	0
		4			Yes	Yes	Yes	Yes		
		5	See CA_5B Bandwidth combination set 0 in Table 5.4.2A.1-1							
		30			Yes	Yes				
CA_2A-4A-7A-12A		2			Yes	Yes	Yes	Yes	70	0
		4			Yes	Yes	Yes	Yes		
		7			Yes	Yes	Yes	Yes		
		12			Yes	Yes				
CA_2A-4A-12A-30A		2			Yes	Yes	Yes	Yes	60	0
		4			Yes	Yes	Yes	Yes		
		12			Yes	Yes				
		30			Yes	Yes				
CA_2A-4A-29A-30A		2			Yes	Yes	Yes	Yes	60	0
		4			Yes	Yes	Yes	Yes		
		29			Yes	Yes				
		30			Yes	Yes				
CA_3A-7A-20A-42A		3			Yes	Yes	Yes	Yes	80	0
		7				Yes	Yes	Yes		
		20			Yes	Yes	Yes	Yes		
		42			Yes	Yes	Yes	Yes		



Test frequencies:

Table 4.3.1.1.2-1: Test frequencies for E-UTRA channel bandwidth for operating band 2

Test Frequency ID	Bandwidth [MHz]	N _{UL}	Frequency of Uplink [MHz]	N _{DL}	Frequency of Downlink [MHz]
Low Range	1.4	18607	1850.7	607	1930.7
	3	18615	1851.5	615	1931.5
	5	18625	1852.5	625	1932.5
	10	18650	1855	650	1935
	15 ^[1]	18675	1857.5	675	1937.5
	20 ^[1]	18700	1860	700	1940
Mid Range	1.4/3/5/10 15 ^[1] /20 ^[1]	18900	1880	900	1960
High Range	1.4	19193	1909.3	1193	1989.3
	3	19185	1908.5	1185	1988.5
	5	19175	1907.5	1175	1987.5
	10	19150	1905	1150	1985
	15 ^[1]	19125	1902.5	1125	1982.5
	20 ^[1]	19100	1900	1100	1980

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

4.3.1.1.2A FDD reference test frequencies for CA in operating band 2

Table 4.3.1.1.2A-1: Test frequencies for CA_2A-2A

Test Frequency ID	CC-Combo / N _{RB,100} [RB]	CC1 Note1					Wgap [MHz]	CC2 Note1				
		BW [RB]	N _{UL}	f _{UL} [MHz]	N _{DL}	f _{DL} [MHz]		BW [RB]	N _{UL}	f _{UL} [MHz]	N _{DL}	f _{DL} [MHz]
Max WGap	25+25	25	18625	1852.5	625	1932.5	50	25	19175	1907.5	1175	1987.5
	25+50	25	18625	1852.5	625	1932.5	45	50	19150	1905	1150	1985
		50	18650	1855	650	1935	45	25	19175	1907.5	1175	1987.5
	25+75	25	18625	1852.5	625	1932.5	40	75	19125	1902.5	1125	1982.5
		75	18675	1857.5	675	1937.5	40	25	19175	1907.5	1175	1987.5
	50+50	50	18650	1855	650	1935	40	50	19150	1905	1150	1985
		25+100	25	18625	1852.5	625	1932.5	35	100	19100	1900	1100
	100		18700	1860	700	1940	35	25	19175	1907.5	1175	1987.5
	50+75	50	18650	1855	650	1935	35	75	19125	1902.5	1125	1982.5
		75	18675	1857.5	675	1937.5	35	50	19150	1905	1150	1985
	50+100	50	18650	1855	650	1935	30	100	19100	1900	1100	1980
		100	18700	1860	700	1940	30	50	19150	1905	1150	1985
	75+75	75	18675	1857.5	675	1937.5	30	75	19125	1902.5	1125	1982.5
		75+100	75	18675	1857.5	675	1937.5	25	100	19100	1900	1100
	100		18700	1860	700	1940	25	75	19125	1902.5	1125	1982.5
	100+100	100	18700	1860	700	1940	20	100	19100	1900	1100	1980

Note 1: Carriers in increasing frequency order.



Table 4.3.1.1.4-1: Test frequencies for E-UTRA channel bandwidth for operating band 4

Test Frequency ID	Bandwidth [MHz]	N _{UL}	Frequency of Uplink [MHz]	N _{DL}	Frequency of Downlink [MHz]
Low Range	1.4	19957	1710.7	1957	2110.7
	3	19965	1711.5	1965	2111.5
	5	19975	1712.5	1975	2112.5
	10	20000	1715	2000	2115
	15	20025	1717.5	2025	2117.5
	20	20050	1720	2050	2120
Mid Range	1.4/3/5/10/15/20	20175	1732.5	2175	2132.5
High Range	1.4	20393	1754.3	2393	2154.3
	3	20385	1753.5	2385	2153.5
	5	20375	1752.5	2375	2152.5
	10	20350	1750	2350	2150

Table 4.3.1.1.4A-1: Test frequencies for CA_4A-4A

Test Frequency ID	CC-Combo / N _{RB,agg} [RB]	CC1 Note1					Wgap [MHz]	CC2 Note1				
		BW [RB]	N _{UL}	f _{UL} [MHz]	N _{DL}	f _{DL} [MHz]		BW [RB]	N _{UL}	f _{UL} [MHz]	N _{DL}	f _{DL} [MHz]
Low WGap	25+25	25	20125	1727.5	2125	2127.5	5	25	20225	1737.5	2225	21
	50+50	50	20100	1725	2100	2125	5	50	20250	1740	2250	2
	50+100	50	20095	1724.5	2095	2124.5	5	100	20255	1740.5	2255	21
	100+100	100	20050	1720	2050	2120	5	100	20300	1745	2300	2
Max WGap	25+25	25	19975	1712.5	1975	2112.5	35	25	20375	1752.5	2375	21
	25+50	25	19975	1712.5	1975	2112.5	30	50	20350	1750	2350	2
		50	20000	1715	2000	2115	30	25	20375	1752.5	2375	21
	25+75	25	19975	1712.5	1975	2112.5	25	75	20325	1747.5	2325	21
		75	20025	1717.5	2025	2117.5	25	25	20375	1752.5	2375	21
	50+50	50	20000	1715	2000	2115	25	50	20350	1750	2350	2
	25+100	25	19975	1712.5	1975	2112.5	20	100	20300	1745	2300	2
		100	20050	1720	2050	2120	20	25	20375	1752.5	2375	21
	50+75	50	20000	1715	2000	2115	20	75	20325	1747.5	2325	21
		75	20025	1717.5	2025	2117.5	20	50	20350	1750	2350	2
	50+100	50	20000	1715	2000	2115	15	100	20300	1745	2300	2
		100	20050	1720	2050	2120	15	50	20350	1750	2350	2
	75+75	75	20025	1717.5	2025	2117.5	15	75	20325	1747.5	2325	21
	75+100	75	20025	1717.5	2025	2117.5	10	100	20300	1745	2300	2
		100	20050	1720	2050	2120	10	75	20325	1747.5	2325	21
	100+100	100	20050	1720	2050	2120	5	100	20300	1745	2300	2

Table 4.3.1.1.12-1: Test frequencies for E-UTRA channel bandwidth for operating band 12

Test Frequency ID	Bandwidth [MHz]	N _{UL}	Frequency of Uplink [MHz]	N _{DL}	Frequency of Downlink [MHz]
Low Range	1.4	23017	699.7	5017	729.7
	3	23025	700.5	5025	730.5
	5 [1]	23035	701.5	5035	731.5
	10 [1]	23060	704	5060	734
Mid Range	1.4/3 5 [1]/10 [1]	23095	707.5	5095	737.5
High Range	1.4	23173	715.3	5173	745.3
	3	23165	714.5	5165	744.5
	5 [1]	23155	713.5	5155	743.5
	10 [1]	23130	711	5130	741

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

Test configurations:

Initial Conditions								
Test Environment as specified in TS 36.508[7] subclause 4.1				NC, TL/VL, TL/VH, TH/VL, TH/VH				
Test Frequencies as specified in TS 36.508 [7] subclause 4.3.1 for different CA bandwidth classes, and PCC and SCCs are mapped onto physical frequencies according to Table 6.1-2.				Low and High range				
Test CC Combination setting (N _{RB_agg}) as specified in subclause 5.4.2A.1 for the CA Configuration across bandwidth combination sets supported by the UE.				Lowest N _{RB_agg} Highest N _{RB_agg} (Note 2)				
Test Parameters for CA Configurations								
CA Configuration / N _{RB_agg}		DL Allocation	CC MOD	UL Allocation				
PCC N _{RB}	SCCs N _{RB}	PCC & SCC RB allocation		N _{RB_alloc}	PCC & SCC RB allocations (L _{CRB} @ RB _{start})			
25	50	N/A for this test	QPSK	1	P_1@0	S_0@0	-	-
25	50		QPSK	8	P_8@0	S_0@0	-	-
50	50		QPSK	1	P_1@0	S_0@0	-	-
50	50		QPSK	12	P_12@0	S_0@0	-	-
100	25		QPSK	1	P_1@0	S_0@0	-	-
100	25		QPSK	8	P_8@0	S_0@0	-	-
75	75		QPSK	1	P_1@0	S_0@0	-	-
75	75		QPSK	16	P_16@0	S_0@0	-	-
100	50		QPSK	1	P_1@0	S_0@0	-	-
100	50		QPSK	12	P_12@0	S_0@0	-	-
100	75		QPSK	1	P_1@0	S_0@0	-	-
100	75		QPSK	16	P_16@0	S_0@0	-	-
100	100		QPSK	1	P_1@0	S_0@0	-	-
100	100		QPSK	18	P_18@0	S_0@0	-	-

Note 1: CA Configuration Test CC Combination settings are checked separately for each CA Configuration, which applicable aggregated channel bandwidths are specified in Table 5.4.2A.1-1

Note 2: If in the CA Configuration UE supports multiple CC Combinations with the same N_{RB_agg}, only the first of those is tested, according to the order on the Test Configuration Table list.

Table 6.2.2A.2.4.1-1: Test Configuration Table

Initial Conditions								
Test Environment as specified in TS 36.508[7] subclause 4.1				NC, TL/VL, TL/VH, TH/VL, TH/VH				
Test Frequencies as specified in TS 36.508 [7] subclause 4.3.1 for different CA bandwidth classes.				Low range for PCC and SCC High range for PCC and SCC (Note 3)				
Test CC Combination setting (N_{RB_agg}) as specified in subclause 5.4.2A.1 for the CA Configuration across bandwidth combination sets supported by the UE.				Lowest N_{RB_agg} Highest N_{RB_agg} (Note 2)				
Test Parameters for CA Configurations								
CA Configuration / N_{RB_agg}		DL Allocation	CC MOD	UL Allocation				
PCC N_{RB}	SCCs N_{RB}	PCC & SCC RB allocation		N_{RB_alloc}	PCC & SCC RB allocations (L _{CRB} @ RB _{start})			
8	25	N/A for this test	QPSK	2	P_1@0	S_1@0	-	-
8	25		QPSK	2	P_1@5	S_1@24	-	-
8	25		QPSK	13	P_5@0	S_8@0	-	-
8	25		QPSK	13	P_5@1	S_8@17	-	-
8	50		QPSK	2	P_1@0	S_1@0	-	-
8	50		QPSK	2	P_1@5	S_1@49	-	-
8	50		QPSK	17	P_5@0	S_12@0	-	-
8	50		QPSK	17	P_5@1	S_12@38	-	-
25	15		QPSK	2	P_1@0	S_1@0	-	-
25	15		QPSK	2	P_1@24	S_1@14	-	-
25	15		QPSK	12	P_8@0	S_5@0	-	-
25	15		QPSK	12	P_8@17	S_5@10	-	-
25	25		QPSK	2	P_1@0	S_1@0	-	-
25	25		QPSK	2	P_1@24	S_1@24	-	-
25	25		QPSK	16	P_8@0	S_8@0	-	-
25	25		QPSK	16	P_8@17	S_8@17	-	-
25	50		QPSK	2	P_1@0	S_1@0	-	-
25	50		QPSK	2	P_1@24	S_1@49	-	-
25	50		QPSK	20	P_8@0	S_12@0	-	-
25	50		QPSK	20	P_8@17	S_12@38	-	-
50	25		QPSK	2	P_1@0	S_1@0	-	-
50	25		QPSK	2	P_1@49	S_1@24	-	-
50	25		QPSK	8	P_12@0	S_8@0	-	-
50	25		QPSK	8	P_12@38	S_8@17	-	-
50	50		QPSK	2	P_1@0	S_1@0	-	-
50	50		QPSK	2	P_1@49	S_1@49	-	-
50	50		QPSK	24	P_12@0	S_12@0	-	-
50	50		QPSK	24	P_12@38	S_12@38	-	-
50	100		QPSK	2	P_1@0	S_1@0	-	-
50	100		QPSK	2	P_1@49	S_1@49	-	-
50	100	QPSK	30	P_12@0	S_18@0	-	-	

50	100	QPSK	30	P_12@38	S_18@82	-	-
75	75	QPSK	2	P_1@0	S_1@0	-	-
75	75	QPSK	2	P_1@74	S_1@74	-	-
75	75	QPSK	32	P_16@0	S_16@0	-	-
75	75	QPSK	32	P_16@59	S_16@59	-	-
100	50	QPSK	2	P_1@0	S_1@0	-	-
100	50	QPSK	2	P_1@99	S_1@49	-	-
100	50	QPSK	30	P_18@0	S_12@0	-	-
100	50	QPSK	30	P_18@82	S_12@38	-	-
100	75	QPSK	2	P_1@0	S_1@0	-	-
100	75	QPSK	2	P_1@99	S_1@74	-	-
100	75	QPSK	34	P_18@0	S_16@0	-	-
100	75	QPSK	34	P_18@82	S_16@59	-	-
100	100	QPSK	2	P_1@0	S_1@0	-	-
100	100	QPSK	2	P_1@99	S_1@99	-	-
100	100	QPSK	36	P_18@0	S_18@0	-	-
100	100	QPSK	36	P_18@82	S_18@82	-	-

Note 1: CA Configuration Test CC Combination settings are checked separately for each CA Configuration, which applicable aggregated channel bandwidths are specified in Table 5.4.2A.1-2.

Note 2: If in the CA Configuration UE supports multiple CC Combinations with the same N_{RB_agg} , only the first of those is tested, according to the order on the Test Configuration Table list.

Note 3: For Low range use only test points with RBstart=0. For High range use only test points with RBstart=RBmax-LCRB+1.



6.8 SAR Testing with 802.11 Transmitters

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; these are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the initial test position(s) by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The initial test position(s) is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the reported SAR for the initial test position is:

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions are tested.
 - For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
 - When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.
 - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.
- When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.



6.9 Conducted Power

Band	Modulation	Sub-test	CH	Frequency (MHz)	Burst Average Power (dBm)
WCDMA Band II (RMC12.2K)	QPSK	---	Lowest	1852.4	23.89
			Middle	1880.0	23.76
			Highest	1907.6	23.81
HSDPA Band II	QPSK	1	Lowest	1852.4	23.14
			Middle	1880.0	22.95
			Highest	1907.6	23.04
		2	Lowest	1852.4	22.65
			Middle	1880.0	22.45
			Highest	1907.6	22.54
		3	Lowest	1852.4	22.61
			Middle	1880.0	22.43
			Highest	1907.6	22.52
		4	Lowest	1852.4	22.99
			Middle	1880.0	22.84
			Highest	1907.6	22.91
HSUPA Band II	QPSK	1	Lowest	1852.4	22.62
			Middle	1880.0	22.43
			Highest	1907.6	22.52
		2	Lowest	1852.4	20.64
			Middle	1880.0	20.45
			Highest	1907.6	20.55
		3	Lowest	1852.4	21.59
			Middle	1880.0	21.40
			Highest	1907.6	21.49
		4	Lowest	1852.4	20.61
			Middle	1880.0	20.39
			Highest	1907.6	20.50
		5	Lowest	1852.4	22.48
			Middle	1880.0	22.29
			Highest	1907.6	22.38



Band	Modulation	Sub-test	CH	Frequency (MHz)	Burst Average Power (dBm)
WCDMA Band V (RMC12.2K)	QPSK	---	Lowest	826.4	23.65
			Middle	836.6	23.73
			Highest	846.6	23.69
HSDPA Band V	QPSK	1	Lowest	826.4	22.87
			Middle	836.6	22.95
			Highest	846.6	22.82
		2	Lowest	826.4	22.36
			Middle	836.6	22.46
			Highest	846.6	22.30
		3	Lowest	826.4	22.33
			Middle	836.6	22.42
			Highest	846.6	22.29
		4	Lowest	826.4	22.76
			Middle	836.6	22.81
			Highest	846.6	22.68
HSUPA Band V	QPSK	1	Lowest	826.4	22.34
			Middle	836.6	22.42
			Highest	846.6	22.29
		2	Lowest	826.4	20.36
			Middle	836.6	20.42
			Highest	846.6	20.31
		3	Lowest	826.4	21.31
			Middle	836.6	21.42
			Highest	846.6	21.28
		4	Lowest	826.4	20.33
			Middle	836.6	20.40
			Highest	846.6	20.29
		5	Lowest	826.4	22.22
			Middle	836.6	22.31
			Highest	846.6	22.16



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	1.4 MHz	QPSK	18607	1850.7	1	0	23.12	0.205
					1	2	23.21	0.209
					1	5	23.10	0.204
					3	0	23.26	0.212
					3	1	23.30	0.214
					3	3	23.18	0.208
			6	0	22.14	0.164		
			1	0	23.08	0.203		
			1	2	23.12	0.205		
			1	5	23.16	0.207		
			3	0	23.15	0.207		
			3	1	23.30	0.214		
			3	3	23.25	0.211		
			6	0	22.14	0.164		
			1	0	23.13	0.206		
			1	2	23.06	0.202		
			1	5	23.07	0.203		
			3	0	23.11	0.205		
		3	1	23.34	0.216			
		3	3	23.16	0.207			
		6	0	22.18	0.165			
		1	0	22.61	0.182			
		1	2	22.73	0.187			
		1	5	22.74	0.188			
		3	0	22.20	0.166			
		3	1	22.34	0.171			
		3	3	22.24	0.167			
		6	0	21.31	0.135			
		1	0	22.48	0.177			
		1	2	22.79	0.190			
		1	5	22.65	0.184			
		3	0	22.09	0.162			
		3	1	22.22	0.167			
		3	3	22.18	0.165			
		6	0	21.27	0.134			
		1	0	22.67	0.185			
1	2	22.65	0.184					
1	5	22.65	0.184					
3	0	22.18	0.165					
3	1	22.11	0.163					
3	3	22.13	0.163					
6	0	21.24	0.133					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	3 MHz	QPSK	18615	1851.5	1	0	23.34	0.216
					1	7	23.06	0.202
					1	14	23.17	0.207
					8	0	22.45	0.176
					8	3	22.36	0.172
					8	7	22.31	0.170
			15	0	22.43	0.175		
			1	0	23.37	0.217		
			1	7	23.08	0.203		
			1	14	23.01	0.200		
			8	0	22.35	0.172		
			8	3	22.29	0.169		
			8	7	22.27	0.169		
			15	0	22.31	0.170		
			1	0	23.27	0.212		
			1	7	23.32	0.215		
			1	14	23.09	0.204		
			8	0	22.29	0.169		
		8	3	22.20	0.166			
		8	7	22.24	0.167			
		15	0	22.31	0.170			
		1	0	22.73	0.187			
		1	7	22.49	0.177			
		1	14	22.62	0.183			
		8	0	21.33	0.136			
		8	3	21.38	0.137			
		8	7	21.42	0.139			
		15	0	21.43	0.139			
		1	0	22.73	0.187			
		1	7	22.50	0.178			
		1	14	22.58	0.181			
		8	0	21.40	0.138			
		8	3	21.24	0.133			
		8	7	21.26	0.134			
		15	0	21.34	0.136			
		1	0	22.43	0.175			
1	7	22.41	0.174					
1	14	22.58	0.181					
8	0	21.33	0.136					
8	3	21.23	0.133					
8	7	21.13	0.130					
15	0	21.23	0.133					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	5 MHz	QPSK	18625	1852.5	1	0	23.33	0.215
					1	12	23.29	0.213
					1	24	23.38	0.218
					12	0	22.30	0.170
					12	6	22.29	0.169
					12	13	22.18	0.165
			25	0	22.25	0.168		
			1	0	23.27	0.212		
			1	12	23.22	0.210		
			1	24	23.20	0.209		
			12	0	22.24	0.167		
			12	6	22.23	0.167		
			12	13	22.11	0.163		
			25	0	22.17	0.165		
			1	0	23.19	0.208		
			1	12	23.26	0.212		
			1	24	23.25	0.211		
			12	0	22.16	0.164		
		12	6	22.28	0.169			
		12	13	22.16	0.164			
		25	0	22.21	0.166			
		1	0	22.72	0.187			
		1	12	22.52	0.179			
		1	24	22.71	0.187			
		12	0	21.44	0.139			
		12	6	21.33	0.136			
		12	13	21.32	0.136			
		25	0	21.34	0.136			
		1	0	22.68	0.185			
		1	12	22.70	0.186			
		1	24	22.52	0.179			
		12	0	21.23	0.133			
		12	6	21.22	0.132			
		12	13	21.21	0.132			
		25	0	21.15	0.130			
		1	0	22.62	0.183			
		1	12	22.61	0.182			
		1	24	22.52	0.179			
		12	0	21.20	0.132			
		12	6	21.23	0.133			
		12	11	21.16	0.131			
		25	0	21.20	0.132			



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	10 MHz	QPSK	18650	1855.0	1	0	23.30	0.214
					1	24	23.35	0.216
					1	49	23.30	0.214
					25	0	22.44	0.175
					25	12	22.31	0.170
					25	25	22.33	0.171
			50	0	22.28	0.169		
			1	0	23.36	0.217		
			1	24	23.32	0.215		
			1	49	23.29	0.213		
			25	0	22.26	0.168		
			25	12	22.25	0.168		
			25	25	22.26	0.168		
			50	0	22.22	0.167		
			1	0	23.31	0.214		
			1	24	23.21	0.209		
			1	49	23.28	0.213		
			25	0	22.21	0.166		
		25	12	22.22	0.167			
		25	25	22.27	0.169			
		50	0	22.29	0.169			
		1	0	22.62	0.183			
		1	24	22.57	0.181			
		1	49	22.67	0.185			
		25	0	21.20	0.132			
		25	12	21.35	0.136			
		25	25	21.25	0.133			
		50	0	21.34	0.136			
		1	0	22.69	0.186			
		1	24	22.48	0.177			
		1	49	22.60	0.182			
		25	0	21.23	0.133			
		25	12	21.22	0.132			
		25	25	21.24	0.133			
		50	0	21.21	0.132			
		1	0	22.62	0.183			
1	24	22.45	0.176					
1	49	22.49	0.177					
25	0	21.17	0.131					
25	12	21.21	0.132					
25	25	21.13	0.130					
50	0	21.18	0.131					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power			
					Size	Offset	(dBm)	(W)		
LTE Band 2	15 MHz	QPSK	18675	1857.5	1	0	23.34	0.216		
					1	37	23.32	0.215		
					1	74	23.31	0.214		
					36	0	22.43	0.175		
					36	19	22.35	0.172		
					36	39	22.36	0.172		
			75	0	22.37	0.173				
			1	0	23.35	0.216				
			1	37	23.20	0.209				
			1	74	23.21	0.209				
			36	0	22.29	0.169				
			36	19	22.25	0.168				
			36	39	22.22	0.167				
			75	0	22.25	0.168				
			1	0	23.28	0.213				
			1	37	23.05	0.202				
			1	74	23.20	0.209				
			36	0	22.29	0.169				
			36	19	22.20	0.166				
			36	39	22.21	0.166				
			75	0	22.20	0.166				
			1	0	22.66	0.185				
			1	37	22.44	0.175				
			1	74	22.56	0.180				
		36	0	21.41	0.138					
		36	19	21.42	0.139					
		36	39	21.31	0.135					
		75	0	21.34	0.136					
		1	0	22.59	0.182					
		1	37	22.42	0.175					
		1	74	22.46	0.176					
		36	0	21.27	0.134					
		36	19	21.25	0.133					
		36	39	21.21	0.132					
		75	0	21.27	0.134					
		1	0	22.49	0.177					
		1	37	22.36	0.172					
		1	74	22.37	0.173					
		36	0	21.23	0.133					
		36	19	21.20	0.132					
		36	39	21.16	0.131					
		75	0	21.20	0.132					
		16QAM	18675	1857.5	18675	1857.5	1	0	22.66	0.185
							1	37	22.44	0.175
							1	74	22.56	0.180
							36	0	21.41	0.138
							36	19	21.42	0.139
							36	39	21.31	0.135
75	0		21.34	0.136						
1	0		22.59	0.182						
1	37		22.42	0.175						
1	74		22.46	0.176						
36	0		21.27	0.134						
36	19		21.25	0.133						
36	39	21.21	0.132							
75	0	21.27	0.134							
1	0	22.49	0.177							
1	37	22.36	0.172							
1	74	22.37	0.173							
36	0	21.23	0.133							
36	19	21.20	0.132							
36	39	21.16	0.131							
75	0	21.20	0.132							



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 2	20 MHz	QPSK	18700	1860.0	1	0	23.28	0.213
					1	49	23.40	0.219
					1	99	23.21	0.209
					50	0	22.24	0.167
					50	25	22.36	0.172
					50	50	22.28	0.169
			100	0	22.35	0.172		
			1	0	23.19	0.208		
			1	49	23.33	0.215		
			1	99	23.22	0.210		
			50	0	22.23	0.167		
			50	25	22.28	0.169		
			50	50	22.28	0.169		
			100	0	22.27	0.169		
			1	0	23.11	0.205		
			1	49	23.31	0.214		
			1	99	23.21	0.209		
			50	0	22.22	0.167		
		50	25	22.22	0.167			
		50	50	22.16	0.164			
		100	0	22.19	0.166			
		1	0	22.74	0.188			
		1	49	22.87	0.194			
		1	99	22.67	0.185			
		50	0	21.42	0.139			
		50	25	21.47	0.140			
		50	50	21.40	0.138			
		100	0	21.36	0.137			
		1	0	22.31	0.170			
		1	49	22.84	0.192			
		1	99	22.48	0.177			
		50	0	21.32	0.136			
		50	25	21.39	0.138			
		50	50	21.37	0.137			
		100	0	21.16	0.131			
		1	0	22.66	0.185			
1	49	22.74	0.188					
1	99	22.61	0.182					
50	0	21.30	0.135					
50	25	21.34	0.136					
50	50	21.27	0.134					
100	0	21.33	0.136					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	1.4 MHz	QPSK	19957	1710.7	1	0	23.20	0.209
					1	2	23.19	0.208
					1	5	23.08	0.203
					3	0	22.30	0.170
					3	1	22.21	0.166
					3	3	22.17	0.165
			6	0	22.29	0.169		
			1	0	23.19	0.208		
			1	2	22.97	0.198		
			1	5	22.91	0.195		
			3	0	22.29	0.169		
			3	1	22.23	0.167		
			3	3	22.14	0.164		
			6	0	22.15	0.164		
			1	0	23.13	0.206		
			1	2	22.89	0.195		
			1	5	22.95	0.197		
			3	0	22.24	0.167		
		3	1	22.15	0.164			
		3	3	22.12	0.163			
		6	0	22.08	0.161			
		1	0	22.57	0.181			
		1	2	22.67	0.185			
		1	5	22.44	0.175			
		3	0	21.35	0.136			
		3	1	21.26	0.134			
		3	3	21.29	0.135			
		6	0	21.32	0.136			
		1	0	22.83	0.192			
		1	2	22.34	0.171			
		1	5	22.23	0.167			
		3	0	21.29	0.135			
		3	1	21.25	0.133			
		3	3	21.27	0.134			
		6	0	21.12	0.129			
		1	0	22.49	0.177			
1	2	22.20	0.166					
1	5	22.34	0.171					
3	0	21.19	0.132					
3	1	21.25	0.133					
3	3	21.14	0.130					
6	0	21.16	0.131					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	3 MHz	QPSK	19965	1711.5	1	0	23.18	0.208
					1	7	22.99	0.199
					1	14	23.05	0.202
					8	0	22.25	0.168
					8	3	22.29	0.169
					8	7	22.24	0.167
			15	0	22.23	0.167		
			1	0	22.92	0.196		
			1	7	23.09	0.204		
			1	14	23.01	0.200		
			8	0	22.14	0.164		
			8	3	22.22	0.167		
			8	7	22.07	0.161		
			15	0	22.15	0.164		
			1	0	22.94	0.197		
			1	7	23.17	0.207		
			1	14	22.88	0.194		
			8	0	22.04	0.160		
			8	3	22.07	0.161		
			8	7	22.06	0.161		
			15	0	22.03	0.160		
			1	0	22.38	0.173		
			1	7	22.67	0.185		
			1	14	22.32	0.171		
		8	0	21.10	0.129			
		8	3	21.16	0.131			
		8	7	21.11	0.129			
		15	0	21.15	0.130			
		1	0	22.26	0.168			
		1	7	22.56	0.180			
		1	14	22.43	0.175			
		8	0	21.07	0.128			
		8	3	21.04	0.127			
		8	7	21.10	0.129			
		15	0	21.18	0.131			
		1	0	22.22	0.167			
		1	7	22.40	0.174			
		1	14	22.15	0.164			
		8	0	21.12	0.129			
		8	3	20.96	0.125			
		8	7	20.98	0.125			
		15	0	21.00	0.126			



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	5 MHz	QPSK	19975	1712.5	1	0	23.13	0.206
					1	12	23.03	0.201
					1	24	23.11	0.205
					12	0	22.21	0.166
					12	6	22.33	0.171
					12	13	22.23	0.167
			25	0	22.23	0.167		
			1	0	23.29	0.213		
			1	12	23.17	0.207		
			1	24	22.96	0.198		
			12	0	22.23	0.167		
			12	6	22.19	0.166		
			12	13	22.10	0.162		
			25	0	22.17	0.165		
			1	0	22.95	0.197		
			1	12	23.01	0.200		
			1	24	22.80	0.191		
			12	0	22.08	0.161		
			12	6	22.08	0.161		
			12	13	22.03	0.160		
			25	0	22.12	0.163		
			1	0	22.49	0.177		
			1	12	22.26	0.168		
			1	24	22.28	0.169		
		12	0	21.27	0.134			
		12	6	21.18	0.131			
		12	13	21.18	0.131			
		25	0	21.32	0.136			
		1	0	22.54	0.179			
		1	12	22.17	0.165			
		1	24	22.20	0.166			
		12	0	21.04	0.127			
		12	6	21.32	0.136			
		12	13	21.22	0.132			
		25	0	21.11	0.129			
		1	0	22.22	0.167			
		1	12	22.07	0.161			
		1	24	22.13	0.163			
		12	0	21.16	0.131			
		12	6	21.08	0.128			
		12	11	21.03	0.127			
		25	0	21.10	0.129			



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	10 MHz	QPSK	20000	1715.0	1	0	23.22	0.210
					1	24	23.05	0.202
					1	49	23.00	0.200
					25	0	22.27	0.169
					25	12	22.24	0.167
					25	25	22.30	0.170
			50	0	22.31	0.170		
			1	0	23.11	0.205		
			1	24	23.00	0.200		
			1	49	22.89	0.195		
			25	0	22.18	0.165		
			25	12	22.14	0.164		
			25	25	22.18	0.165		
			50	0	22.21	0.166		
			1	0	23.23	0.210		
			1	24	22.85	0.193		
			1	49	22.90	0.195		
			25	0	22.19	0.166		
		25	12	22.10	0.162			
		25	25	22.08	0.161			
		50	0	22.09	0.162			
		1	0	22.37	0.173			
		1	24	22.29	0.169			
		1	49	22.56	0.180			
		25	0	21.19	0.132			
		25	12	21.32	0.136			
		25	25	21.21	0.132			
		50	0	21.28	0.134			
		1	0	22.50	0.178			
		1	24	22.38	0.173			
		1	49	22.28	0.169			
		25	0	21.21	0.132			
		25	12	21.29	0.135			
		25	25	21.03	0.127			
		50	0	21.23	0.133			
		1	0	22.17	0.165			
1	24	22.34	0.171					
1	49	22.04	0.160					
25	0	21.18	0.131					
25	12	21.14	0.130					
25	25	21.11	0.129					
50	0	21.10	0.129					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	15 MHz	QPSK	20025	1717.5	1	0	23.27	0.212
					1	37	23.19	0.208
					1	74	23.20	0.209
					36	0	22.32	0.171
					36	19	22.27	0.169
					36	39	22.20	0.166
			75	0	22.27	0.169		
			1	0	23.25	0.211		
			1	37	23.06	0.202		
			1	74	22.98	0.199		
			36	0	22.26	0.168		
			36	19	22.20	0.166		
			36	39	22.21	0.166		
			75	0	22.21	0.166		
			1	0	23.10	0.204		
			1	37	22.94	0.197		
			1	74	22.97	0.198		
			36	0	22.23	0.167		
		36	19	22.10	0.162			
		36	39	22.09	0.162			
		75	0	22.12	0.163			
		1	0	22.54	0.179			
		1	37	22.36	0.172			
		1	74	22.44	0.175			
		36	0	21.33	0.136			
		36	19	21.28	0.134			
		36	39	21.21	0.132			
		75	0	21.31	0.135			
		1	0	22.60	0.182			
		1	37	22.27	0.169			
		1	74	22.40	0.174			
		36	0	21.20	0.132			
		36	19	21.18	0.131			
		36	39	21.12	0.129			
		75	0	21.33	0.136			
		1	0	22.35	0.172			
		1	37	22.19	0.166			
		1	74	22.07	0.161			
		36	0	21.16	0.131			
		36	19	21.15	0.130			
		36	39	21.06	0.128			
		75	0	21.20	0.132			



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 4	20 MHz	QPSK	20050	1720.0	1	0	23.30	0.214
					1	49	23.12	0.205
					1	99	23.02	0.200
					50	0	23.15	0.207
					50	25	23.16	0.207
					50	50	23.24	0.211
			100	0	22.22	0.167		
			20175	1732.5	1	0	23.01	0.200
					1	49	23.01	0.200
					1	99	22.97	0.198
					50	0	23.20	0.209
					50	25	23.21	0.209
					50	50	23.10	0.204
			20300	1745.0	100	0	22.05	0.160
					1	0	22.96	0.198
					1	49	23.03	0.201
					1	99	22.82	0.191
					50	0	22.94	0.197
		50			25	23.09	0.204	
		16QAM	20050	1720.0	50	50	23.10	0.204
					100	0	21.96	0.157
					1	0	22.48	0.177
					1	49	22.41	0.174
					1	99	22.25	0.168
					50	0	22.15	0.164
			20175	1732.5	50	25	22.14	0.164
					50	50	22.27	0.169
					100	0	21.10	0.129
					1	0	22.31	0.170
					1	49	22.23	0.167
1	99				22.34	0.171		
20300	1745.0	50	0	22.16	0.164			
		50	25	22.08	0.161			
		50	50	22.09	0.162			
		100	0	21.17	0.131			
		1	0	22.17	0.165			
		1	49	22.19	0.166			
20300	1745.0	1	99	22.23	0.167			
		50	0	21.98	0.158			
		50	25	22.05	0.160			
		50	50	22.01	0.159			
		100	0	21.08	0.128			



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power		
					Size	Offset	(dBm)	(W)	
LTE Band 5	1.4 MHz	QPSK	20407	824.7	1	0	22.57	0.181	
					1	2	22.90	0.195	
					1	5	22.69	0.186	
					3	0	22.73	0.187	
					3	1	22.68	0.185	
					3	3	22.68	0.185	
			6	0	21.72	0.149			
			6	0	21.72	0.149			
			20525	836.5	1	0	22.81	0.191	
					1	2	22.96	0.198	
					1	5	22.76	0.189	
					3	0	22.79	0.190	
					3	1	22.82	0.191	
					3	3	22.78	0.190	
			6	0	21.84	0.153			
			20643	848.3	1	0	22.84	0.192	
					1	2	23.11	0.205	
					1	5	22.85	0.193	
		3			0	22.97	0.198		
		3			1	22.90	0.195		
		3			3	22.99	0.199		
		6	0	21.87	0.154				
		16QAM	1.4 MHz	20407	824.7	1	0	21.73	0.149
						1	2	22.17	0.165
						1	5	22.14	0.164
						3	0	21.53	0.142
						3	1	21.58	0.144
						3	3	21.64	0.146
				6	0	20.70	0.117		
				20525	836.5	1	0	22.26	0.168
						1	2	22.40	0.174
						1	5	22.33	0.171
						3	0	21.78	0.151
						3	1	21.81	0.152
						3	3	21.73	0.149
				6	0	20.94	0.124		
20643	848.3			1	0	22.37	0.173		
				1	2	22.56	0.180		
				1	5	22.33	0.171		
				3	0	21.89	0.155		
		3	1	21.90	0.155				
		3	3	21.79	0.151				
6	0	20.97	0.125						



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 5	3 MHz	QPSK	20415	825.5	1	0	22.79	0.190
					1	7	22.88	0.194
					1	14	22.77	0.189
					8	0	21.84	0.153
					8	3	21.91	0.155
					8	7	21.80	0.151
			15	0	21.77	0.150		
			1	0	22.92	0.196		
			1	7	22.91	0.195		
			1	14	22.83	0.192		
			8	0	21.91	0.155		
			8	3	21.93	0.156		
			8	7	21.97	0.157		
			15	0	22.00	0.158		
			1	0	22.94	0.197		
			1	7	23.07	0.203		
			1	14	22.75	0.188		
			8	0	22.01	0.159		
		8	3	21.98	0.158			
		8	7	21.96	0.157			
		15	0	21.95	0.157			
		1	0	22.37	0.173			
		1	7	22.53	0.179			
		1	14	21.90	0.155			
		8	0	20.93	0.124			
		8	3	20.98	0.125			
		8	7	20.80	0.120			
		15	0	20.89	0.123			
		1	0	22.59	0.182			
		1	7	22.51	0.178			
		1	14	22.43	0.175			
		8	0	20.89	0.123			
		8	3	21.00	0.126			
		8	7	20.96	0.125			
		15	0	21.00	0.126			
		1	0	22.59	0.182			
1	7	22.54	0.179					
1	14	22.45	0.176					
8	0	21.10	0.129					
8	3	21.08	0.128					
8	7	21.07	0.128					
15	0	21.06	0.128					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 5	5 MHz	QPSK	20425	826.5	1	0	23.04	0.201
					1	12	22.93	0.196
					1	24	22.92	0.196
					12	0	21.99	0.158
					12	6	21.89	0.155
					12	13	21.85	0.153
			25	0	21.92	0.156		
			25	0	21.92	0.156		
			20525	836.5	1	0	22.77	0.189
					1	12	22.78	0.190
					1	24	22.72	0.187
					12	0	21.82	0.152
					12	6	21.95	0.157
					12	13	21.95	0.157
			25	0	21.99	0.158		
			25	0	21.99	0.158		
			20625	846.5	1	0	23.01	0.200
					1	12	22.79	0.190
					1	24	22.72	0.187
					12	0	21.93	0.156
					12	6	21.96	0.157
					12	13	21.87	0.154
			25	0	21.97	0.157		
			25	0	21.97	0.157		
		16QAM	20425	826.5	1	0	22.54	0.179
					1	12	22.40	0.174
					1	24	22.31	0.170
					12	0	21.02	0.126
					12	6	21.01	0.126
					12	13	21.00	0.126
			25	0	21.05	0.127		
			25	0	21.05	0.127		
			20525	836.5	1	0	22.44	0.175
					1	12	22.41	0.174
					1	24	22.34	0.171
					12	0	21.04	0.127
					12	6	20.98	0.125
					12	13	20.99	0.126
			25	0	21.00	0.126		
			25	0	21.00	0.126		
			20625	846.5	1	0	22.49	0.177
					1	12	22.55	0.180
					1	24	22.32	0.171
					12	0	20.88	0.122
					12	6	20.99	0.126
					12	11	20.91	0.123
			25	0	20.95	0.124		
			25	0	20.95	0.124		



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 5	10 MHz	QPSK	20450	829.0	1	0	23.14	0.206
					1	24	22.91	0.195
					1	49	22.66	0.185
					25	0	22.00	0.158
					25	12	21.92	0.156
					25	25	21.92	0.156
			50	0	21.92	0.156		
			1	0	22.93	0.196		
			1	24	22.85	0.193		
			1	49	22.71	0.187		
			25	0	21.98	0.158		
			25	12	22.02	0.159		
			25	25	21.97	0.157		
			50	0	21.93	0.156		
			1	0	23.02	0.200		
			1	24	22.85	0.193		
			1	49	22.82	0.191		
			25	0	21.95	0.157		
		25	12	21.99	0.158			
		25	25	21.90	0.155			
		50	0	21.89	0.155			
		1	0	22.49	0.177			
		1	24	22.27	0.169			
		1	49	22.24	0.167			
		25	0	20.99	0.126			
		25	12	21.01	0.126			
		25	25	20.80	0.120			
		50	0	20.98	0.125			
		1	0	22.30	0.170			
		1	24	22.47	0.177			
		1	49	22.41	0.174			
		25	0	21.10	0.129			
		25	12	20.99	0.126			
		25	25	20.93	0.124			
		50	0	20.98	0.125			
		1	0	22.60	0.182			
1	24	22.32	0.171					
1	49	22.18	0.165					
25	0	21.03	0.127					
25	12	20.96	0.125					
25	25	20.97	0.125					
50	0	20.95	0.124					
16QAM	20450	829.0	1	0	22.49	0.177		
			1	24	22.27	0.169		
			1	49	22.24	0.167		
			25	0	20.99	0.126		
			25	12	21.01	0.126		
			25	25	20.80	0.120		
	50	0	20.98	0.125				
	1	0	22.30	0.170				
	1	24	22.47	0.177				
	1	49	22.41	0.174				
	25	0	21.10	0.129				
	25	12	20.99	0.126				
	25	25	20.93	0.124				
	50	0	20.98	0.125				
	1	0	22.60	0.182				
	1	24	22.32	0.171				
	1	49	22.18	0.165				
	25	0	21.03	0.127				
25	12	20.96	0.125					
25	25	20.97	0.125					
50	0	20.95	0.124					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 7	5 MHz	QPSK	20775	2502.5	1	0	22.93	0.196
					1	12	22.89	0.195
					1	24	22.90	0.195
					12	0	21.96	0.157
					12	6	21.97	0.157
					12	13	21.95	0.157
			25	0	21.92	0.156		
			1	0	23.03	0.201		
			1	12	22.96	0.198		
			1	24	22.93	0.196		
			12	0	21.92	0.156		
			12	6	21.99	0.158		
			12	13	21.95	0.157		
			25	0	21.92	0.156		
			1	0	23.11	0.205		
			1	12	23.16	0.207		
			1	24	23.05	0.202		
			12	0	22.28	0.169		
		12	6	22.20	0.166			
		12	13	22.19	0.166			
		25	0	22.22	0.167			
		1	0	22.38	0.173			
		1	12	22.30	0.170			
		1	24	22.31	0.170			
		12	0	20.90	0.123			
		12	6	20.91	0.123			
		12	13	20.99	0.126			
		25	0	20.95	0.124			
		1	0	22.40	0.174			
		1	12	22.37	0.173			
		1	24	22.41	0.174			
		12	0	20.89	0.123			
		12	6	20.98	0.125			
		12	13	20.92	0.124			
		25	0	20.98	0.125			
		1	0	22.68	0.185			
1	12	22.78	0.190					
1	24	22.58	0.181					
12	0	21.20	0.132					
12	6	21.12	0.129					
12	11	21.14	0.130					
25	0	21.25	0.133					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 7	10 MHz	QPSK	20800	2505.0	1	0	22.95	0.197
					1	24	22.83	0.192
					1	49	22.88	0.194
					25	0	21.99	0.158
					25	12	21.94	0.156
					25	25	21.93	0.156
			50	0	22.05	0.160		
			50	0	22.05	0.160		
			21100	2535.0	1	0	22.87	0.194
					1	24	23.03	0.201
					1	49	22.91	0.195
					25	0	22.04	0.160
					25	12	21.95	0.157
					25	25	21.92	0.156
			50	0	21.97	0.157		
			21400	2565.0	1	0	23.24	0.211
					1	24	23.28	0.213
					1	49	23.24	0.211
		25			0	22.29	0.169	
		25			12	22.36	0.172	
		25			25	22.31	0.170	
		50	0	22.25	0.168			
		16QAM	20800	2505.0	1	0	22.41	0.174
					1	24	22.25	0.168
					1	49	22.22	0.167
					25	0	21.03	0.127
					25	12	21.02	0.126
					25	25	20.95	0.124
			50	0	21.05	0.127		
			21100	2535.0	1	0	22.51	0.178
					1	24	22.09	0.162
					1	49	21.98	0.158
					25	0	21.04	0.127
					25	12	21.02	0.126
					25	25	20.95	0.124
			50	0	21.05	0.127		
21400	2565.0		1	0	22.26	0.168		
			1	24	22.38	0.173		
			1	49	22.80	0.191		
			25	0	21.38	0.137		
		25	12	21.36	0.137			
		25	25	21.36	0.137			
50	0	21.33	0.136					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 7	15 MHz	QPSK	20825	2507.5	1	0	22.95	0.197
					1	37	22.96	0.198
					1	74	22.87	0.194
					36	0	21.97	0.157
					36	19	21.98	0.158
					36	39	21.96	0.157
			75	0	21.94	0.156		
			75	0	21.94	0.156		
			1	0	22.95	0.197		
			1	37	22.91	0.195		
			1	74	22.93	0.196		
			36	0	22.03	0.160		
			36	19	21.99	0.158		
			36	39	21.90	0.155		
			75	0	21.95	0.157		
			75	0	21.95	0.157		
			1	0	23.14	0.206		
			1	37	23.32	0.215		
		1	74	23.20	0.209			
		36	0	22.34	0.171			
		36	19	22.40	0.174			
		36	39	22.29	0.169			
		75	0	22.31	0.170			
		75	0	22.31	0.170			
		1	0	22.50	0.178			
		1	37	22.33	0.171			
		1	74	21.94	0.156			
		36	0	21.02	0.126			
		36	19	20.97	0.125			
		36	39	20.94	0.124			
		75	0	20.99	0.126			
		75	0	20.99	0.126			
		1	0	22.52	0.179			
		1	37	22.45	0.176			
		1	74	22.47	0.177			
		36	0	20.95	0.124			
36	19	21.00	0.126					
36	39	20.98	0.125					
75	0	21.03	0.127					
75	0	21.03	0.127					
1	0	22.62	0.183					
1	37	22.73	0.187					
1	74	22.80	0.191					
36	0	21.34	0.136					
36	19	21.29	0.135					
36	39	21.30	0.135					
75	0	21.31	0.135					
75	0	21.31	0.135					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 7	20 MHz	QPSK	20850	2510.0	1	0	23.04	0.201
					1	49	22.97	0.198
					1	99	22.89	0.195
					50	0	21.93	0.156
					50	25	21.98	0.158
					50	50	21.92	0.156
			100	0	21.96	0.157		
			1	0	22.98	0.199		
			1	49	23.01	0.200		
			1	99	22.88	0.194		
			50	0	22.02	0.159		
			50	25	21.96	0.157		
			50	50	21.94	0.156		
			100	0	21.99	0.158		
			1	0	23.34	0.216		
			1	49	23.28	0.213		
			1	99	23.24	0.211		
			50	0	22.30	0.170		
		50	25	22.34	0.171			
		50	50	22.32	0.171			
		100	0	22.37	0.173			
		1	0	22.38	0.173			
		1	49	22.35	0.172			
		1	99	22.19	0.166			
		50	0	20.98	0.125			
		50	25	21.03	0.127			
		50	50	20.98	0.125			
		100	0	21.06	0.128			
		1	0	22.29	0.169			
		1	49	22.35	0.172			
		1	99	22.30	0.170			
		50	0	21.03	0.127			
		50	25	21.05	0.127			
		50	50	21.03	0.127			
		100	0	21.08	0.128			
		1	0	22.66	0.185			
1	49	22.63	0.183					
1	99	22.60	0.182					
50	0	21.34	0.136					
50	25	21.41	0.138					
50	50	21.30	0.135					
100	0	21.35	0.136					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power		
					Size	Offset	(dBm)	(W)	
LTE Band 12	1.4 MHz	QPSK	23017	699.7	1	0	22.69	0.186	
					1	2	22.87	0.194	
					1	5	22.89	0.195	
					3	0	22.77	0.189	
					3	1	22.92	0.196	
					3	3	22.85	0.193	
			6	0	21.80	0.151			
			6	0	21.80	0.151			
			23095	707.5	1	0	22.81	0.191	
					1	2	22.84	0.192	
					1	5	22.66	0.185	
					3	0	22.74	0.188	
					3	1	22.85	0.193	
					3	3	22.76	0.189	
			6	0	21.72	0.149			
			23173	715.3	1	0	22.79	0.190	
					1	2	22.74	0.188	
					1	5	22.69	0.186	
		3			0	22.70	0.186		
		3			1	22.70	0.186		
		3			3	22.54	0.179		
		6	0	21.65	0.146				
		16QAM	1.4 MHz	23017	699.7	1	0	22.03	0.160
						1	2	21.79	0.151
						1	5	21.65	0.146
						3	0	21.89	0.155
						3	1	21.79	0.151
						3	3	21.82	0.152
				6	0	20.89	0.123		
				23095	707.5	1	0	21.77	0.150
						1	2	21.81	0.152
						1	5	21.70	0.148
						3	0	21.89	0.155
						3	1	21.92	0.156
						3	3	21.68	0.147
				6	0	20.74	0.119		
23173	715.3			1	0	21.59	0.144		
				1	2	21.61	0.145		
				1	5	21.97	0.157		
				3	0	21.56	0.143		
		3	1	21.63	0.146				
		3	3	21.50	0.141				
6	0	20.72	0.118						



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 12	3 MHz	QPSK	23025	700.5	1	0	22.54	0.179
					1	7	22.71	0.187
					1	14	22.74	0.188
					8	0	21.78	0.151
					8	3	21.76	0.150
					8	7	21.71	0.148
			15	0	21.71	0.148		
			1	0	22.81	0.191		
			1	7	22.79	0.190		
			1	14	22.60	0.182		
			8	0	21.83	0.152		
			8	3	21.89	0.155		
			8	7	21.83	0.152		
			15	0	21.88	0.154		
			1	0	22.74	0.188		
			1	7	22.73	0.187		
			1	14	22.58	0.181		
			8	0	21.75	0.150		
		8	3	21.76	0.150			
		8	7	21.76	0.150			
		15	0	21.80	0.151			
		1	0	21.75	0.150			
		1	7	21.71	0.148			
		1	14	21.68	0.147			
		8	0	20.74	0.119			
		8	3	20.77	0.119			
		8	7	20.71	0.118			
		15	0	20.68	0.117			
		1	0	21.92	0.156			
		1	7	21.95	0.157			
		1	14	21.85	0.153			
		8	0	20.91	0.123			
		8	3	21.04	0.127			
		8	7	20.91	0.123			
		15	0	20.82	0.121			
		1	0	21.81	0.152			
1	7	21.93	0.156					
1	14	21.81	0.152					
8	0	20.81	0.121					
8	3	20.82	0.121					
8	7	20.77	0.119					
15	0	20.79	0.120					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 12	5 MHz	QPSK	23035	701.5	1	0	22.85	0.193
					1	12	22.57	0.181
					1	24	22.56	0.180
					12	0	21.72	0.149
					12	6	21.72	0.149
					12	13	21.79	0.151
			25	0	21.69	0.148		
			25	0	22.88	0.194		
			23095	707.5	1	0	22.70	0.186
					1	12	22.81	0.191
					1	24	22.81	0.191
					12	0	21.91	0.155
					12	6	21.87	0.154
					12	13	21.91	0.155
			23155	713.5	25	0	21.79	0.151
					1	0	22.85	0.193
					1	12	22.79	0.190
					1	24	22.77	0.189
		12			0	21.75	0.150	
		12			6	21.83	0.152	
		16QAM	23035	701.5	12	13	21.80	0.151
					25	0	21.83	0.152
					1	0	21.86	0.153
					1	12	21.29	0.135
					1	24	21.66	0.147
					12	0	20.68	0.117
			23095	707.5	12	6	20.79	0.120
					12	13	20.70	0.117
					25	0	20.71	0.118
					1	0	21.85	0.153
					1	12	21.71	0.148
					1	24	21.88	0.154
			23155	713.5	12	0	20.93	0.124
					12	6	20.89	0.123
					12	13	20.86	0.122
					25	0	20.77	0.119
1	0				21.66	0.147		
1	12				21.63	0.146		
23155	713.5	1	24	21.88	0.154			
		12	0	20.82	0.121			
		12	6	20.93	0.124			
		12	11	20.90	0.123			
		25	0	20.86	0.122			
		25	0	20.86	0.122			



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 12	10 MHz	QPSK	23060	704.0	1	0	22.65	0.184
					1	24	22.62	0.183
					1	49	22.61	0.182
					25	0	21.67	0.147
					25	12	21.72	0.149
					25	25	21.62	0.145
			50	0	21.69	0.148		
			1	0	22.96	0.198		
			1	24	22.72	0.187		
			1	49	22.79	0.190		
			25	0	21.81	0.152		
			25	12	21.87	0.154		
			25	25	21.89	0.155		
			50	0	21.97	0.157		
			1	0	22.84	0.192		
			1	24	22.91	0.195		
			1	49	22.78	0.190		
			25	0	22.09	0.162		
		25	12	22.02	0.159			
		25	25	22.03	0.160			
		50	0	22.08	0.161			
		1	0	21.69	0.148			
		1	24	21.51	0.142			
		1	49	21.54	0.143			
		25	0	20.74	0.119			
		25	12	20.79	0.120			
		25	25	20.64	0.116			
		50	0	20.72	0.118			
		1	0	22.00	0.158			
		1	24	21.63	0.146			
		1	49	21.70	0.148			
		25	0	21.02	0.126			
		25	12	20.90	0.123			
		25	25	20.85	0.122			
		50	0	20.90	0.123			
		1	0	21.95	0.157			
1	24	21.77	0.150					
1	49	21.98	0.158					
25	0	20.88	0.122					
25	12	21.08	0.128					
25	25	20.97	0.125					
50	0	20.95	0.124					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 30	5 MHz	QPSK	27685	2307.5	1	0	22.81	0.191
					1	12	22.88	0.194
					1	24	22.74	0.188
					12	0	21.89	0.155
					12	6	21.88	0.154
					12	13	21.82	0.152
			25	0	21.92	0.156		
			1	0	22.95	0.197		
			1	12	22.75	0.188		
			1	24	22.89	0.195		
			12	0	21.92	0.156		
			12	6	21.96	0.157		
			12	13	21.91	0.155		
			25	0	21.90	0.155		
			1	0	22.90	0.195		
			1	12	22.96	0.198		
			1	24	22.84	0.192		
			12	0	21.96	0.157		
		12	6	21.89	0.155			
		12	13	21.89	0.155			
		25	0	21.88	0.154			
		1	0	22.13	0.163			
		1	12	21.84	0.153			
		1	24	22.31	0.170			
		12	0	20.92	0.124			
		12	6	20.76	0.119			
		12	13	20.90	0.123			
		25	0	20.94	0.124			
		1	0	22.34	0.171			
		1	12	22.22	0.167			
		1	24	22.06	0.161			
		12	0	20.96	0.125			
		12	6	21.10	0.129			
		12	13	20.88	0.122			
		25	0	20.96	0.125			
		1	0	22.14	0.164			
1	12	21.88	0.154					
1	24	22.50	0.178					
12	0	21.02	0.126					
12	6	20.78	0.120					
12	11	20.92	0.124					
25	0	20.93	0.124					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 30	10 MHz	QPSK	27710	2310.0	1	0	22.97	0.198
					1	24	22.95	0.197
					1	49	22.72	0.187
					25	0	21.99	0.158
					25	12	21.93	0.156
					25	25	21.91	0.155
					50	0	21.96	0.157
		16QAM	27710	2310.0	1	0	22.18	0.165
					1	24	22.49	0.177
					1	49	22.46	0.176
					25	0	20.98	0.125
					25	12	20.91	0.123
					25	25	20.86	0.122
					50	0	20.92	0.124



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 66	1.4 MHz	QPSK	131979	1710.7	1	0	23.12	0.205
					1	2	23.22	0.210
					1	5	23.17	0.207
					3	0	22.25	0.168
					3	1	22.28	0.169
					3	3	22.26	0.168
			6	0	22.31	0.170		
			1	0	23.29	0.213		
			1	2	22.98	0.199		
			1	5	22.98	0.199		
			3	0	22.34	0.171		
			3	1	22.18	0.165		
			3	3	22.19	0.166		
			6	0	22.14	0.164		
			1	0	23.14	0.206		
			1	2	22.82	0.191		
			1	5	22.91	0.195		
			3	0	22.15	0.164		
		3	1	22.25	0.168			
		3	3	22.22	0.167			
		6	0	22.17	0.165			
		1	0	22.66	0.185			
		1	2	22.71	0.187			
		1	5	22.34	0.171			
		3	0	21.29	0.135			
		3	1	21.19	0.132			
		3	3	21.23	0.133			
		6	0	21.32	0.136			
		1	0	22.92	0.196			
		1	2	22.37	0.173			
		1	5	22.2	0.166			
		3	0	21.26	0.134			
		3	1	21.23	0.133			
		3	3	21.29	0.135			
		6	0	21.16	0.131			
		1	0	22.47	0.177			
1	2	22.27	0.169					
1	5	22.34	0.171					
3	0	21.27	0.134					
3	1	21.28	0.134					
3	3	21.18	0.131					
6	0	21.09	0.129					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 66	3 MHz	QPSK	131987	1711.5	1	0	23.2	0.209
					1	7	23.02	0.200
					1	14	23.11	0.205
					8	0	22.26	0.168
					8	3	22.24	0.167
					8	7	22.33	0.171
			15	0	22.3	0.170		
			1	0	22.99	0.199		
			1	7	23.16	0.207		
			1	14	22.98	0.199		
			8	0	22.2	0.166		
			8	3	22.28	0.169		
			8	7	22.07	0.161		
			15	0	22.08	0.161		
			1	0	22.86	0.193		
			1	7	23.15	0.207		
			1	14	22.82	0.191		
			8	0	22.12	0.163		
		8	3	22.13	0.163			
		8	7	21.96	0.157			
		15	0	22.01	0.159			
		1	0	22.45	0.176			
		1	7	22.67	0.185			
		1	14	22.38	0.173			
		8	0	21.1	0.129			
		8	3	21.24	0.133			
		8	7	21.1	0.129			
		15	0	21.07	0.128			
		1	0	22.2	0.166			
		1	7	22.47	0.177			
		1	14	22.53	0.179			
		8	0	21.01	0.126			
		8	3	21.02	0.126			
		8	7	21.15	0.130			
		15	0	21.24	0.133			
		1	0	22.27	0.169			
1	7	22.38	0.173					
1	14	22.19	0.166					
8	0	21.1	0.129					
8	3	21.03	0.127					
8	7	20.91	0.123					
15	0	20.98	0.125					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power			
					Size	Offset	(dBm)	(W)		
LTE Band 66	5 MHz	QPSK	131997	1712.5	1	0	23.07	0.203		
					1	12	22.97	0.198		
					1	24	23.12	0.205		
					12	0	22.31	0.170		
					12	6	22.25	0.168		
					12	13	22.2	0.166		
			25	0	22.25	0.168				
			1	0	23.28	0.213				
			1	12	23.15	0.207				
			1	24	22.92	0.196				
			12	0	22.28	0.169				
			12	6	22.29	0.169				
			12	13	22.02	0.159				
			25	0	22.22	0.167				
			1	0	23	0.200				
			1	12	22.99	0.199				
			1	24	22.86	0.193				
			12	0	22.08	0.161				
			12	6	22.02	0.159				
			12	13	22.01	0.159				
			25	0	22.07	0.161				
			1	0	22.47	0.177				
			1	12	22.3	0.170				
			1	24	22.27	0.169				
		12	0	21.25	0.133					
		12	6	21.18	0.131					
		12	13	21.26	0.134					
		25	0	21.27	0.134					
		1	0	22.54	0.179					
		1	12	22.22	0.167					
		1	24	22.13	0.163					
		12	0	20.95	0.124					
		12	6	21.35	0.136					
		12	13	21.23	0.133					
		25	0	21.13	0.130					
		1	0	22.16	0.164					
		1	12	22.17	0.165					
		1	24	22.23	0.167					
		12	0	21.2	0.132					
		12	6	21.1	0.129					
		12	11	21.08	0.128					
		25	0	21.02	0.126					
		16QAM	132197	1732.5	131997	1712.5	1	0	22.47	0.177
							1	12	22.3	0.170
							1	24	22.27	0.169
							12	0	21.25	0.133
							12	6	21.18	0.131
							12	13	21.26	0.134
25	0		21.27	0.134						
1	0		22.54	0.179						
1	12		22.22	0.167						
1	24		22.13	0.163						
12	0		20.95	0.124						
12	6		21.35	0.136						
12	13	21.23	0.133							
25	0	21.13	0.130							
132397	1752.5	132397	1752.5	1	0	22.16	0.164			
				1	12	22.17	0.165			
				1	24	22.23	0.167			
				12	0	21.2	0.132			
				12	6	21.1	0.129			
				12	11	21.08	0.128			
25	0	21.02	0.126							



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 66	10 MHz	QPSK	132022	1715.0	1	0	23.25	0.211
					1	24	23.2	0.209
					1	49	23.09	0.204
					25	0	23.17	0.207
					25	12	23.24	0.211
					25	25	23.18	0.208
			50	0	22.16	0.164		
			1	0	23.04	0.201		
			1	24	23.02	0.200		
			1	49	22.94	0.197		
			25	0	23.21	0.209		
			25	12	23.24	0.211		
			25	25	23.07	0.203		
			50	0	22.06	0.161		
			1	0	22.95	0.197		
			1	24	23.12	0.205		
			1	49	22.73	0.187		
			25	0	23.02	0.200		
		25	12	23.14	0.206			
		25	25	23.02	0.200			
		50	0	22.02	0.159			
		1	0	22.58	0.181			
		1	24	22.47	0.177			
		1	49	22.34	0.171			
		25	0	22.15	0.164			
		25	12	22.12	0.163			
		25	25	22.23	0.167			
		50	0	21.18	0.131			
		1	0	22.29	0.169			
		1	24	22.2	0.166			
		1	49	22.39	0.173			
		25	0	22.1	0.162			
		25	12	22	0.158			
		25	25	22.19	0.166			
		50	0	21.09	0.129			
		1	0	22.07	0.161			
1	24	22.22	0.167					
1	49	22.27	0.169					
25	0	22.03	0.160					
25	12	22.06	0.161					
25	25	21.98	0.158					
50	0	20.98	0.125					
16QAM	132022	1715.0	1715.0	1	0	22.58	0.181	
				1	24	22.47	0.177	
				1	49	22.34	0.171	
				25	0	22.15	0.164	
				25	12	22.12	0.163	
				25	25	22.23	0.167	
	50	0	21.18	0.131				
	1	0	22.29	0.169				
	1	24	22.2	0.166				
	1	49	22.39	0.173				
	25	0	22.1	0.162				
	25	12	22	0.158				
	25	25	22.19	0.166				
	50	0	21.09	0.129				
	1	0	22.07	0.161				
	1	24	22.22	0.167				
	1	49	22.27	0.169				
	25	0	22.03	0.160				
25	12	22.06	0.161					
25	25	21.98	0.158					
50	0	20.98	0.125					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 66	15 MHz	QPSK	132047	1717.5	1	0	23.31	0.214
					1	37	23.28	0.213
					1	74	23.21	0.209
					36	0	22.42	0.175
					36	19	22.35	0.172
					36	39	22.14	0.164
			75	0	22.35	0.172		
			1	0	23.23	0.210		
			1	37	23.02	0.200		
			1	74	22.93	0.196		
			36	0	22.26	0.168		
			36	19	22.12	0.163		
			36	39	22.15	0.164		
			75	0	22.22	0.167		
			1	0	23.14	0.206		
			1	37	23.01	0.200		
			1	74	22.92	0.196		
			36	0	22.26	0.168		
		36	19	22.19	0.166			
		36	39	22.04	0.160			
		75	0	22.16	0.164			
		1	0	22.46	0.176			
		1	37	22.39	0.173			
		1	74	22.37	0.173			
		36	0	21.33	0.136			
		36	19	21.22	0.132			
		36	39	21.25	0.133			
		75	0	21.24	0.133			
		1	0	22.68	0.185			
		1	37	22.3	0.170			
		1	74	22.35	0.172			
		36	0	21.18	0.131			
		36	19	21.11	0.129			
		36	39	21.18	0.131			
		75	0	21.42	0.139			
		1	0	22.4	0.174			
1	37	22.14	0.164					
1	74	22.12	0.163					
36	0	21.15	0.130					
36	19	21.08	0.128					
36	39	21.14	0.130					
75	0	21.24	0.133					



Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band 66	20 MHz	QPSK	132072	1720.0	1	0	23.29	0.213
					1	49	23.09	0.204
					1	99	22.97	0.198
					50	0	22.17	0.165
					50	25	22.28	0.169
					50	50	22.32	0.171
			100	0	22.41	0.174		
			1	0	23.11	0.205		
			1	49	23.06	0.202		
			1	99	22.8	0.191		
			50	0	22.27	0.169		
			50	25	22.15	0.164		
			50	50	22.15	0.164		
			100	0	22.26	0.168		
			1	0	23.33	0.215		
			1	49	22.79	0.190		
			1	99	22.98	0.199		
			50	0	22.1	0.162		
		50	25	22.12	0.163			
		50	50	22.03	0.160			
		100	0	22.17	0.165			
		1	0	22.43	0.175			
		1	49	22.32	0.171			
		1	99	22.56	0.180			
		50	0	21.2	0.132			
		50	25	21.27	0.134			
		50	50	21.3	0.135			
		100	0	21.24	0.133			
		1	0	22.52	0.179			
		1	49	22.31	0.170			
1	99	22.24	0.167					
50	0	21.24	0.133					
50	25	21.32	0.136					
50	50	21.04	0.127					
100	0	21.17	0.131					
1	0	22.21	0.166					
1	49	22.37	0.173					
1	99	21.99	0.158					
50	0	21.14	0.130					
50	25	21.13	0.130					
50	50	21.02	0.126					
100	0	21.17	0.131					



LTE Band2A+2A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Intra-Band non-contiguous PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Max W Gap	Lowest	23.20	18700	1860.0	QPSK	20MHz	1	0
	Highest	23.16	18700	1860.0	QPSK	20MHz	8	0
	Lowest	23.21	18700	1860.0	QPSK	20MHz	1	0
	Highest	23.18	18700	1860.0	QPSK	20MHz	18	0

Intra-Band non-continuous SCC (B2)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
19175	1907.5	QPSK	5MHz	0	0
19175	1907.5	QPSK	5Mhz	0	0
19100	1900.0	QPSK	20MHz	0	0
19100	1900.0	QPSK	20MHz	0	0

DL CA Note :

For others DL CA configurations, RX usually will not affect the TX function. The single band power is already worst-case.



LTE Band2A+4A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.11	18607	1850.7	QPSK	1.4MHz	1	0
		23.05	18607	1850.7	QPSK	1.4MHz	1	5
	Highest	22.99	18607	1850.7	QPSK	1.4MHz	5	0
		23.01	18607	1850.7	QPSK	1.4MHz	5	1
High	Lowest	23.10	19193	1909.3	QPSK	1.4MHz	1	0
		23.02	19193	1909.3	QPSK	1.4MHz	1	5
	Highest	23.05	19193	1909.3	QPSK	1.4MHz	5	0
		23.03	19193	1909.3	QPSK	1.4MHz	5	1
Low	Lowest	23.26	18700	1860.0	QPSK	20MHz	1	0
		23.19	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.19	18700	1860.0	QPSK	20MHz	18	0
		23.17	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.06	19100	1900.0	QPSK	20MHz	1	0
		23.17	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.05	19100	1900.0	QPSK	20MHz	18	0
		23.09	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B4)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
19975	1712.5	QPSK	5MHz	1	0
19975	1712.5	QPSK	5MHz	1	24
19975	1712.5	QPSK	5MHz	8	0
19975	1712.5	QPSK	5MHz	8	17
20375	1752.5	QPSK	5MHz	1	0
20375	1752.5	QPSK	5MHz	1	24
20375	1752.5	QPSK	5MHz	8	0
20375	1752.5	QPSK	5MHz	8	17
20050	1720.0	QPSK	20MHz	1	0
20050	1720.0	QPSK	20MHz	1	99
20050	1720.0	QPSK	20MHz	18	0
20050	1720.0	QPSK	20MHz	18	82
20300	1745.0	QPSK	20MHz	1	0
20300	1745.0	QPSK	20MHz	1	99
20300	1745.0	QPSK	20MHz	18	0
20300	1745.0	QPSK	20MHz	18	82



LTE Band2A+5A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.31	18625	1852.5	QPSK	5MHz	1	0
		23.37	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.28	18625	1852.5	QPSK	5MHz	8	0
		23.28	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.17	19175	1907.5	QPSK	5MHz	1	0
		23.24	19175	1907.5	QPSK	5MHz	1	24
	Highest	23.19	19175	1907.5	QPSK	5MHz	8	0
		23.17	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.29	18650	1855.0	QPSK	10MHz	1	0
		23.27	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.28	18650	1855.0	QPSK	10MHz	12	0
		23.25	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.30	19150	1905.0	QPSK	10MHz	1	0
		23.26	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.20	19150	1905.0	QPSK	10MHz	12	0
		23.21	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.27	18700	1860.0	QPSK	20MHz	1	0
		23.21	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.20	18700	1860.0	QPSK	20MHz	18	0
		23.18	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.09	19100	1900.0	QPSK	20MHz	1	0
		23.19	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.08	19100	1900.0	QPSK	20MHz	18	0
		23.07	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B5)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
20425	826.5	QPSK	5MHz	1	0
20425	826.5	QPSK	5MHz	1	24
20425	826.5	QPSK	5MHz	8	0
20425	826.5	QPSK	5MHz	8	17
20625	846.5	QPSK	5MHz	1	0
20625	846.5	QPSK	5MHz	1	24
20625	846.5	QPSK	5MHz	8	0
20625	846.5	QPSK	5MHz	8	17
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	49
20450	829.0	QPSK	10MHz	12	0
20450	829.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	49
20450	829.0	QPSK	10MHz	12	0
20450	829.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38



LTE Band2A+12A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.30	18625	1852.5	QPSK	5MHz	1	0
		23.37	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.28	18625	1852.5	QPSK	5MHz	8	0
		23.26	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.17	19175	1907.5	QPSK	5MHz	1	0
		23.25	19175	1907.5	QPSK	5MHz	1	24
	Highest	23.19	19175	1907.5	QPSK	5MHz	8	0
		23.17	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.29	18650	1855.0	QPSK	10MHz	1	0
		23.25	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.27	18650	1855.0	QPSK	10MHz	12	0
		23.25	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.30	19150	1905.0	QPSK	10MHz	1	0
		23.26	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.19	19150	1905.0	QPSK	10MHz	12	0
		23.22	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.27	18700	1860.0	QPSK	20MHz	1	0
		23.21	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.20	18700	1860.0	QPSK	20MHz	18	0
		23.16	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.09	19100	1900.0	QPSK	20MHz	1	0
		23.18	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.07	19100	1900.0	QPSK	20MHz	18	0
		23.09	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B12)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23025	700.5	QPSK	3MHz	1	0
23025	700.5	QPSK	3MHz	1	14
23025	700.5	QPSK	3MHz	5	0
23025	700.5	QPSK	3MHz	5	10
23165	714.5	QPSK	3MHz	1	0
23165	714.5	QPSK	3MHz	1	14
23165	714.5	QPSK	3MHz	5	0
23165	714.5	QPSK	3MHz	5	10
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38



LTE Band2A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.33	18625	1852.5	QPSK	5MHz	1	0
		23.35	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.27	18625	1852.5	QPSK	5MHz	8	0
		23.25	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.17	19175	1907.5	QPSK	5MHz	1	0
		23.17	19175	1907.5	QPSK	5MHz	1	24
	Highest	23.19	19175	1907.5	QPSK	5MHz	8	0
		23.18	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.29	18650	1855.0	QPSK	10MHz	1	0
		23.27	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.26	18650	1855.0	QPSK	10MHz	12	0
		23.25	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.29	19150	1905.0	QPSK	10MHz	1	0
		23.27	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.20	19150	1905.0	QPSK	10MHz	12	0
		23.21	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.26	18700	1860.0	QPSK	20MHz	1	0
		23.21	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.19	18700	1860.0	QPSK	20MHz	18	0
		23.16	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.09	19100	1900.0	QPSK	20MHz	1	0
		23.20	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.06	19100	1900.0	QPSK	20MHz	18	0
		23.08	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38



LTE Band4A+4A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Intra-Band non-contiguous PCC (B4)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low W Gap	Lowest	23.29	20050	1720.0	QPSK	20MHz	1	0
	Highest	22.97	20050	1720.0	QPSK	20MHz	18	0
Max W Gap	Lowest	23.30	20050	1720.0	QPSK	20MHz	1	0
	Highest	23.01	20050	1720.0	QPSK	20MHz	18	0
	Lowest	23.27	20050	1720.0	QPSK	20MHz	1	0
	Highest	22.98	20050	1720.0	QPSK	20MHz	8	0

Intra-Band non-continuous SCC (B4)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
20300	1745.0	QPSK	20MHz	0	0
20300	1745.0	QPSK	20MHz	0	0
20300	1745.0	QPSK	20MHz	0	0
20300	1745.0	QPSK	20MHz	0	0
20375	1752.5	QPSK	5MHz	0	0
20375	1752.5	QPSK	5Mhz	0	0



LTE Band4A+5A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B4)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.11	19975	1712.5	QPSK	5MHz	1	0
		23.11	19975	1712.5	QPSK	5MHz	1	24
	Highest	23.01	19975	1712.5	QPSK	5MHz	8	0
		22.99	19975	1712.5	QPSK	5MHz	8	17
High	Lowest	22.93	20375	1752.5	QPSK	5MHz	1	0
		22.79	20375	1752.5	QPSK	5MHz	1	24
	Highest	22.76	20375	1752.5	QPSK	5MHz	8	0
		22.74	20375	1752.5	QPSK	5MHz	8	17
Low	Lowest	23.20	20000	1715.0	QPSK	10MHz	1	0
		22.98	20000	1715.0	QPSK	10MHz	1	49
	Highest	22.97	20000	1715.0	QPSK	10MHz	12	0
		22.94	20000	1715.0	QPSK	10MHz	12	38
High	Lowest	23.23	20350	1750.0	QPSK	10MHz	1	0
		22.87	20350	1750.0	QPSK	10MHz	1	49
	Highest	22.83	20350	1750.0	QPSK	10MHz	12	0
		22.85	20350	1750.0	QPSK	10MHz	12	38
Low	Lowest	23.27	20050	1720.0	QPSK	20MHz	1	0
		23.01	20050	1720.0	QPSK	20MHz	1	99
	Highest	22.97	20050	1720.0	QPSK	20MHz	18	0
		22.98	20050	1720.0	QPSK	20MHz	18	82
High	Lowest	22.95	20300	1745.0	QPSK	20MHz	1	0
		22.82	20300	1745.0	QPSK	20MHz	1	99
	Highest	22.78	20300	1745.0	QPSK	20MHz	18	0
		22.81	20300	1745.0	QPSK	20MHz	18	82



Inter-Band SCC (B5)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
20425	826.5	QPSK	5MHz	1	0
20425	826.5	QPSK	5MHz	1	24
20425	826.5	QPSK	5MHz	8	0
20425	826.5	QPSK	5MHz	8	17
20625	846.5	QPSK	5MHz	1	0
20625	846.5	QPSK	5MHz	1	24
20625	846.5	QPSK	5MHz	8	0
20625	846.5	QPSK	5MHz	8	17
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	49
20450	829.0	QPSK	10MHz	12	0
20450	829.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38



LTE Band4A+12A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B4)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.17	19957	1710.7	QPSK	1.4MHz	1	0
		23.08	19957	1710.7	QPSK	1.4MHz	1	5
	Highest	22.15	19957	1710.7	QPSK	1.4MHz	5	0
		22.17	19957	1710.7	QPSK	1.4MHz	5	1
High	Lowest	23.11	20393	1754.3	QPSK	1.4MHz	1	0
		22.93	20393	1754.3	QPSK	1.4MHz	1	5
	Highest	22.12	20393	1754.3	QPSK	1.4MHz	5	0
		22.12	20393	1754.3	QPSK	1.4MHz	5	1
Low	Lowest	23.21	20000	1715.0	QPSK	10MHz	1	0
		22.94	20000	1715.0	QPSK	10MHz	1	49
	Highest	22.94	20000	1715.0	QPSK	10MHz	12	0
		22.97	20000	1715.0	QPSK	10MHz	12	38
High	Lowest	23.22	20350	1750.0	QPSK	10MHz	1	0
		22.99	20350	1750.0	QPSK	10MHz	1	49
	Highest	22.95	20350	1750.0	QPSK	10MHz	12	0
		22.96	20350	1750.0	QPSK	10MHz	12	38
Low	Lowest	23.26	20050	1720.0	QPSK	20MHz	1	0
		23.01	20050	1720.0	QPSK	20MHz	1	99
	Highest	23.01	20050	1720.0	QPSK	20MHz	18	0
		23.02	20050	1720.0	QPSK	20MHz	18	82
High	Lowest	22.94	20300	1745.0	QPSK	20MHz	1	0
		22.80	20300	1745.0	QPSK	20MHz	1	99
	Highest	22.79	20300	1745.0	QPSK	20MHz	18	0
		22.81	20300	1745.0	QPSK	20MHz	18	82



Inter-Band SCC (B12)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	24
23035	701.5	QPSK	5MHz	8	0
23035	701.5	QPSK	5MHz	8	17
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	24
23155	713.5	QPSK	5MHz	8	0
23155	713.5	QPSK	5MHz	8	17
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38



LTE Band4A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B4)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.12	19975	1712.5	QPSK	5MHz	1	0
		23.10	19975	1712.5	QPSK	5MHz	1	24
	Highest	23.03	19975	1712.5	QPSK	5MHz	8	0
		23.03	19975	1712.5	QPSK	5MHz	8	17
High	Lowest	22.95	20375	1752.5	QPSK	5MHz	1	0
		22.77	20375	1752.5	QPSK	5MHz	1	24
	Highest	22.78	20375	1752.5	QPSK	5MHz	8	0
		22.00	20375	1752.5	QPSK	5MHz	8	17
Low	Lowest	23.20	20000	1715.0	QPSK	10MHz	1	0
		22.92	20000	1715.0	QPSK	10MHz	1	49
	Highest	22.87	20000	1715.0	QPSK	10MHz	12	0
		22.84	20000	1715.0	QPSK	10MHz	12	38
High	Lowest	23.22	20350	1750.0	QPSK	10MHz	1	0
		22.88	20350	1750.0	QPSK	10MHz	1	49
	Highest	22.76	20350	1750.0	QPSK	10MHz	12	0
		22.78	20350	1750.0	QPSK	10MHz	12	38
Low	Lowest	23.27	20050	1720.0	QPSK	20MHz	1	0
		23.01	20050	1720.0	QPSK	20MHz	1	99
	Highest	22.97	20050	1720.0	QPSK	20MHz	18	0
		22.84	20050	1720.0	QPSK	20MHz	18	82
High	Lowest	22.95	20300	1745.0	QPSK	20MHz	1	0
		22.82	20300	1745.0	QPSK	20MHz	1	99
	Highest	22.75	20300	1745.0	QPSK	20MHz	18	0
		22.79	20300	1745.0	QPSK	20MHz	18	82



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38



LTE Band12A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B12)					# of Resource Blocks	Resource Block Offset
			EARFCN	Freq. (MHz)	Modulation	Bandwidth			
Low	Lowest	22.85	23035	701.5	QPSK	5MHz	1	0	
		22.53	23035	701.5	QPSK	5MHz	1	24	
	Highest	22.44	23035	701.5	QPSK	5MHz	8	0	
		22.41	23035	701.5	QPSK	5MHz	8	17	
High	Lowest	22.84	23155	713.5	QPSK	5MHz	1	0	
		22.77	23155	713.5	QPSK	5MHz	1	24	
	Highest	22.69	23155	713.5	QPSK	5MHz	8	0	
		22.73	23155	713.5	QPSK	5MHz	8	17	
Low	Lowest	22.85	23035	701.5	QPSK	5MHz	1	0	
		22.53	23035	701.5	QPSK	5MHz	1	24	
	Highest	22.47	23035	701.5	QPSK	5MHz	8	0	
		22.44	23035	701.5	QPSK	5MHz	8	17	
High	Lowest	22.83	23155	713.5	QPSK	5MHz	1	0	
		22.76	23155	713.5	QPSK	5MHz	1	24	
	Highest	22.69	23155	713.5	QPSK	5MHz	8	0	
		22.68	23155	713.5	QPSK	5MHz	8	17	
Low	Lowest	22.64	23060	704.0	QPSK	10MHz	1	0	
		22.57	23060	704.0	QPSK	10MHz	1	49	
	Highest	22.57	23060	704.0	QPSK	10MHz	12	0	
		22.53	23060	704.0	QPSK	10MHz	12	38	
High	Lowest	22.84	23130	711.0	QPSK	10MHz	1	0	
		22.75	23130	711.0	QPSK	10MHz	1	49	
	Highest	22.71	23130	711.0	QPSK	10MHz	12	0	
		22.65	23130	711.0	QPSK	10MHz	12	38	
Low	Lowest	22.63	23060	704.0	QPSK	10MHz	1	0	
		22.57	23060	704.0	QPSK	10MHz	1	49	
	Highest	22.57	23060	704.0	QPSK	10MHz	12	0	
		22.51	23060	704.0	QPSK	10MHz	12	38	
High	Lowest	22.83	23130	711.0	QPSK	10MHz	1	0	
		22.73	23130	711.0	QPSK	10MHz	1	49	
	Highest	22.63	23130	711.0	QPSK	10MHz	12	0	
		22.67	23130	711.0	QPSK	10MHz	12	38	



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38



LTE Band2A+4A+12A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.32	18625	1852.5	QPSK	5MHz	1	0
		23.38	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.18	18625	1852.5	QPSK	5MHz	8	0
		23.15	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.16	19175	1907.5	QPSK	5MHz	1	0
		23.23	19175	1907.5	QPSK	5MHz	1	24
	Highest	22.87	19175	1907.5	QPSK	5MHz	8	0
		22.94	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.29	18650	1855.0	QPSK	10MHz	1	0
		23.27	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.16	18650	1855.0	QPSK	10MHz	12	0
		23.11	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.29	19150	1905.0	QPSK	10MHz	1	0
		23.27	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.18	19150	1905.0	QPSK	10MHz	12	0
		23.15	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.31	18675	1857.5	QPSK	15MHz	1	0
		23.30	18675	1857.5	QPSK	15MHz	1	74
	Highest	23.27	18675	1857.5	QPSK	15MHz	16	0
		23.25	18675	1857.5	QPSK	15MHz	16	59
High	Lowest	23.27	19125	1902.5	QPSK	15MHz	1	0
		23.19	19125	1902.5	QPSK	15MHz	1	74
	Highest	22.94	19125	1902.5	QPSK	15MHz	16	0
		22.97	19125	1902.5	QPSK	15MHz	16	59
Low	Lowest	23.27	18700	1860.0	QPSK	20MHz	1	0
		23.19	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.14	18700	1860.0	QPSK	20MHz	18	0
		23.16	18700	1860.0	QPSK	20MHz	18	82



Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
High	Lowest	23.10	19100	1900.0	QPSK	20MHz	1	0
		23.21	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.04	19100	1900.0	QPSK	20MHz	18	0
		23.09	19100	1900.0	QPSK	20MHz	18	82
Low	Lowest	23.26	18700	1860.0	QPSK	20MHz	1	0
		23.19	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.14	18700	1860.0	QPSK	20MHz	18	0
		23.18	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.10	19100	1900.0	QPSK	20MHz	1	0
		23.20	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.01	19100	1900.0	QPSK	20MHz	18	0
		23.04	19100	1900.0	QPSK	20MHz	18	82

Inter-Band SCC (B4)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
19975	1712.5	QPSK	5MHz	1	0
19975	1712.5	QPSK	5MHz	1	24
19975	1712.5	QPSK	5MHz	8	0
19975	1712.5	QPSK	5MHz	8	17
20375	1752.5	QPSK	5MHz	1	0
20375	1752.5	QPSK	5MHz	1	24
20375	1752.5	QPSK	5MHz	8	0
20375	1752.5	QPSK	5MHz	8	17
20050	1720.0	QPSK	20MHz	1	0
20050	1720.0	QPSK	20MHz	1	99
20050	1720.0	QPSK	20MHz	18	0
20050	1720.0	QPSK	20MHz	18	82
20300	1745.0	QPSK	20MHz	1	0
20300	1745.0	QPSK	20MHz	1	99
20300	1745.0	QPSK	20MHz	18	0
20300	1745.0	QPSK	20MHz	18	82



EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
20025	1717.5	QPSK	15MHz	1	0
20025	1717.5	QPSK	15MHz	1	74
20025	1717.5	QPSK	15MHz	16	0
20025	1717.5	QPSK	15MHz	16	59
20325	1747.5	QPSK	15MHz	1	0
20325	1747.5	QPSK	15MHz	1	74
20325	1747.5	QPSK	15MHz	16	0
20325	1747.5	QPSK	15MHz	16	59
20000	1715.0	QPSK	10MHz	1	0
20000	1715.0	QPSK	10MHz	1	49
20000	1715.0	QPSK	10MHz	12	0
20000	1715.0	QPSK	10MHz	12	38
20350	1750.0	QPSK	10MHz	1	0
20350	1750.0	QPSK	10MHz	1	49
20350	1750.0	QPSK	10MHz	12	0
20350	1750.0	QPSK	10MHz	12	38
20050	1720.0	QPSK	20MHz	1	0
20050	1720.0	QPSK	20MHz	1	99
20050	1720.0	QPSK	20MHz	18	0
20050	1720.0	QPSK	20MHz	18	82
20300	1745.0	QPSK	20MHz	1	0
20300	1745.0	QPSK	20MHz	1	99
20300	1745.0	QPSK	20MHz	18	0
20300	1745.0	QPSK	20MHz	18	82



Inter-Band SCC (B12)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	24
23035	701.5	QPSK	5MHz	8	0
23035	701.5	QPSK	5MHz	8	17
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	24
23155	713.5	QPSK	5MHz	8	0
23155	713.5	QPSK	5MHz	8	17
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	99
23035	701.5	QPSK	5MHz	18	0
23035	701.5	QPSK	5MHz	18	82
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	99
23155	713.5	QPSK	5MHz	18	0
23155	713.5	QPSK	5MHz	18	82
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	74
23035	701.5	QPSK	5MHz	16	0
23035	701.5	QPSK	5MHz	16	59
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	74
23155	713.5	QPSK	5MHz	16	0
23155	713.5	QPSK	5MHz	16	59
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	49
23035	701.5	QPSK	5MHz	12	0
23035	701.5	QPSK	5MHz	12	38
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	49
23155	713.5	QPSK	5MHz	12	0
23155	713.5	QPSK	5MHz	12	38



EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	99
23060	704.0	QPSK	10MHz	18	0
23060	704.0	QPSK	10MHz	18	82
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	99
23130	711.0	QPSK	10MHz	18	0
23130	711.0	QPSK	10MHz	18	82



LTE Band2A+5A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.32	18625	1852.5	QPSK	5MHz	1	0
		23.37	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.18	18625	1852.5	QPSK	5MHz	8	0
		23.21	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.17	19175	1907.5	QPSK	5MHz	1	0
		23.24	19175	1907.5	QPSK	5MHz	1	24
	Highest	23.12	19175	1907.5	QPSK	5MHz	8	0
		23.17	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.27	18650	1855.0	QPSK	10MHz	1	0
		23.29	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.24	18650	1855.0	QPSK	10MHz	12	0
		23.28	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.28	19150	1905.0	QPSK	10MHz	1	0
		23.27	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.16	19150	1905.0	QPSK	10MHz	12	0
		23.10	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.27	18700	1860.0	QPSK	20MHz	1	0
		23.20	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.18	18700	1860.0	QPSK	20MHz	18	0
		23.15	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.08	19100	1900.0	QPSK	20MHz	1	0
		23.19	19100	1900.0	QPSK	20MHz	1	99
	Highest	22.87	19100	1900.0	QPSK	20MHz	18	0
		22.91	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B5)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
20425	826.5	QPSK	5MHz	1	0
20425	826.5	QPSK	5MHz	1	24
20425	826.5	QPSK	5MHz	8	0
20425	826.5	QPSK	5MHz	8	17
20625	846.5	QPSK	5MHz	1	0
20625	846.5	QPSK	5MHz	1	24
20625	846.5	QPSK	5MHz	8	0
20625	846.5	QPSK	5MHz	8	17
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	49
20450	829.0	QPSK	10MHz	12	0
20450	829.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	49
20450	829.0	QPSK	10MHz	12	0
20450	829.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38



LTE Band2A+12A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.33	18625	1852.5	QPSK	5MHz	1	0
		23.36	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.19	18625	1852.5	QPSK	5MHz	8	0
		23.21	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.18	19175	1907.5	QPSK	5MHz	1	0
		23.24	19175	1907.5	QPSK	5MHz	1	24
	Highest	22.94	19175	1907.5	QPSK	5MHz	8	0
		22.97	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.27	18650	1855.0	QPSK	10MHz	1	0
		23.30	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.21	18650	1855.0	QPSK	10MHz	12	0
		23.19	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.30	19150	1905.0	QPSK	10MHz	1	0
		23.25	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.16	19150	1905.0	QPSK	10MHz	12	0
		23.19	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.28	18700	1860.0	QPSK	20MHz	1	0
		23.21	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.16	18700	1860.0	QPSK	20MHz	18	0
		23.11	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.10	19100	1900.0	QPSK	20MHz	1	0
		23.19	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.09	19100	1900.0	QPSK	20MHz	18	0
		23.06	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B12)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	24
23035	701.5	QPSK	5MHz	8	0
23035	701.5	QPSK	5MHz	8	17
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	24
23155	713.5	QPSK	5MHz	8	0
23155	713.5	QPSK	5MHz	8	17
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38



LTE Band2A+12A+66A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.31	18625	1852.5	QPSK	5MHz	1	0
		23.36	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.19	18625	1852.5	QPSK	5MHz	8	0
		23.24	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.16	19175	1907.5	QPSK	5MHz	1	0
		23.23	19175	1907.5	QPSK	5MHz	1	24
	Highest	23.01	19175	1907.5	QPSK	5MHz	8	0
		23.07	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.27	18650	1855.0	QPSK	10MHz	1	0
		23.30	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.21	18650	1855.0	QPSK	10MHz	12	0
		23.22	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.30	19150	1905.0	QPSK	10MHz	1	0
		23.26	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.17	19150	1905.0	QPSK	10MHz	12	0
		23.13	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.29	18650	1855.0	QPSK	10MHz	1	0
		23.30	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.20	18650	1855.0	QPSK	10MHz	12	0
		23.21	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.29	19150	1905.0	QPSK	10MHz	1	0
		23.28	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.14	19150	1905.0	QPSK	10MHz	12	0
		23.11	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.27	18700	1860.0	QPSK	20MHz	1	0
		23.19	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.01	18700	1860.0	QPSK	20MHz	18	0
		23.12	18700	1860.0	QPSK	20MHz	18	82



Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
High	Lowest	23.11	19100	1900.0	QPSK	20MHz	1	0
		23.20	19100	1900.0	QPSK	20MHz	1	99
	Highest	22.97	19100	1900.0	QPSK	20MHz	18	0
		23.02	19100	1900.0	QPSK	20MHz	18	82
Low	Lowest	23.28	18700	1860.0	QPSK	20MHz	1	0
		23.19	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.14	18700	1860.0	QPSK	20MHz	18	0
		23.11	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.10	19100	1900.0	QPSK	20MHz	1	0
		23.21	19100	1900.0	QPSK	20MHz	1	99
	Highest	22.98	19100	1900.0	QPSK	20MHz	18	0
		22.99	19100	1900.0	QPSK	20MHz	18	82

Inter-Band SCC (B12)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	24
23035	701.5	QPSK	5MHz	8	0
23035	701.5	QPSK	5MHz	8	17
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	24
23155	713.5	QPSK	5MHz	8	0
23155	713.5	QPSK	5MHz	8	17
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	24
23035	701.5	QPSK	5MHz	8	0
23035	701.5	QPSK	5MHz	8	17
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	24
23155	713.5	QPSK	5MHz	8	0
23155	713.5	QPSK	5MHz	8	17



EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38



Inter-Band SCC (B66)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
131997	1712.5	QPSK	5MHz	1	0
131997	1712.5	QPSK	5MHz	1	24
131997	1712.5	QPSK	5MHz	8	0
131997	1712.5	QPSK	5MHz	8	17
132647	1777.5	QPSK	5MHz	1	0
132647	1777.5	QPSK	5MHz	1	24
132647	1777.5	QPSK	5MHz	8	0
132647	1777.5	QPSK	5MHz	8	17
132072	1720.0	QPSK	20MHz	1	0
132072	1720.0	QPSK	20MHz	1	24
132072	1720.0	QPSK	20MHz	8	0
132072	1720.0	QPSK	20MHz	8	17
132572	1770.0	QPSK	20MHz	1	0
132572	1770.0	QPSK	20MHz	1	24
132572	1770.0	QPSK	20MHz	8	0
132572	1770.0	QPSK	20MHz	8	17
132047	1717.5	QPSK	15MHz	1	0
132047	1717.5	QPSK	15MHz	1	49
132047	1717.5	QPSK	15MHz	12	0
132047	1717.5	QPSK	15MHz	12	38
132597	1772.5	QPSK	15MHz	1	0
132597	1772.5	QPSK	15MHz	1	49
132597	1772.5	QPSK	15MHz	12	0
132597	1772.5	QPSK	15MHz	12	38
131997	1712.5	QPSK	5MHz	1	0
131997	1712.5	QPSK	5MHz	1	49
131997	1712.5	QPSK	5MHz	12	0
131997	1712.5	QPSK	5MHz	12	38
132647	1777.5	QPSK	5MHz	1	0
132647	1777.5	QPSK	5MHz	1	49
132647	1777.5	QPSK	5MHz	12	0
132647	1777.5	QPSK	5MHz	12	38



EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
132072	1720.0	QPSK	20MHz	1	0
132072	1720.0	QPSK	20MHz	1	49
132072	1720.0	QPSK	20MHz	12	0
132072	1720.0	QPSK	20MHz	12	38
132572	1770.0	QPSK	20MHz	1	0
132572	1770.0	QPSK	20MHz	1	49
132572	1770.0	QPSK	20MHz	12	0
132572	1770.0	QPSK	20MHz	12	38



LTE Band2A+29A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.31	18625	1852.5	QPSK	5MHz	1	0
		23.37	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.17	18625	1852.5	QPSK	5MHz	8	0
		23.19	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.17	19175	1907.5	QPSK	5MHz	1	0
		23.25	19175	1907.5	QPSK	5MHz	1	24
	Highest	23.04	19175	1907.5	QPSK	5MHz	8	0
		23.01	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.27	18650	1855.0	QPSK	10MHz	1	0
		23.30	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.21	18650	1855.0	QPSK	10MHz	12	0
		23.19	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.30	19150	1905.0	QPSK	10MHz	1	0
		23.26	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.14	19150	1905.0	QPSK	10MHz	12	0
		23.12	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.28	18700	1860.0	QPSK	20MHz	1	0
		23.20	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.10	18700	1860.0	QPSK	20MHz	18	0
		23.07	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.09	19100	1900.0	QPSK	20MHz	1	0
		23.20	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.02	19100	1900.0	QPSK	20MHz	18	0
		23.04	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B29)					
EARFCN(DL)	Freq. (MHz)_DL	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
9685	719.5	QPSK	5MHz	1	0
9685	719.5	QPSK	5MHz	1	24
9685	719.5	QPSK	5MHz	8	0
9685	719.5	QPSK	5MHz	8	17
9745	725.5	QPSK	5MHz	1	0
9745	725.5	QPSK	5MHz	1	24
9745	725.5	QPSK	5MHz	8	0
9745	725.5	QPSK	5MHz	8	17
9710	722.0	QPSK	10MHz	1	0
9710	722.0	QPSK	10MHz	1	49
9710	722.0	QPSK	10MHz	12	0
9710	722.0	QPSK	10MHz	12	38
9720	723.0	QPSK	10MHz	1	0
9720	723.0	QPSK	10MHz	1	49
9720	723.0	QPSK	10MHz	12	0
9720	723.0	QPSK	10MHz	12	38
9710	722.0	QPSK	10MHz	1	0
9710	722.0	QPSK	10MHz	1	49
9710	722.0	QPSK	10MHz	12	0
9710	722.0	QPSK	10MHz	12	38
9720	723.0	QPSK	10MHz	1	0
9720	723.0	QPSK	10MHz	1	49
9720	723.0	QPSK	10MHz	12	0
9720	723.0	QPSK	10MHz	12	38



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38



LTE Band4A+5A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B4)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.11	19975	1712.5	QPSK	5MHz	1	0
		23.08	19975	1712.5	QPSK	5MHz	1	24
	Highest	22.84	19975	1712.5	QPSK	5MHz	8	0
		22.81	19975	1712.5	QPSK	5MHz	8	17
High	Lowest	22.95	20375	1752.5	QPSK	5MHz	1	0
		22.78	20375	1752.5	QPSK	5MHz	1	24
	Highest	22.71	20375	1752.5	QPSK	5MHz	8	0
		22.69	20375	1752.5	QPSK	5MHz	8	17
Low	Lowest	23.21	20000	1715.0	QPSK	10MHz	1	0
		23.00	20000	1715.0	QPSK	10MHz	1	49
	Highest	22.87	20000	1715.0	QPSK	10MHz	12	0
		22.84	20000	1715.0	QPSK	10MHz	12	38
High	Lowest	23.21	20350	1750.0	QPSK	10MHz	1	0
		22.90	20350	1750.0	QPSK	10MHz	1	49
	Highest	23.23	20350	1750.0	QPSK	10MHz	12	0
		22.87	20350	1750.0	QPSK	10MHz	12	38
Low	Lowest	23.29	20050	1720.0	QPSK	20MHz	1	0
		23.02	20050	1720.0	QPSK	20MHz	1	99
	Highest	22.89	20050	1720.0	QPSK	20MHz	18	0
		22.84	20050	1720.0	QPSK	20MHz	18	82
High	Lowest	22.94	20300	1745.0	QPSK	20MHz	1	0
		22.81	20300	1745.0	QPSK	20MHz	1	99
	Highest	22.74	20300	1745.0	QPSK	20MHz	18	0
		22.79	20300	1745.0	QPSK	20MHz	18	82



Inter-Band SCC (B5)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
20425	826.5	QPSK	5MHz	1	0
20425	826.5	QPSK	5MHz	1	24
20425	826.5	QPSK	5MHz	8	0
20425	826.5	QPSK	5MHz	8	17
20625	846.5	QPSK	5MHz	1	0
20625	846.5	QPSK	5MHz	1	24
20625	846.5	QPSK	5MHz	8	0
20625	846.5	QPSK	5MHz	8	17
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	49
20450	829.0	QPSK	10MHz	12	0
20450	829.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	49
20450	829.0	QPSK	10MHz	12	0
20450	829.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38



LTE Band4A+12A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B4)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.12	19975	1712.5	QPSK	5MHz	1	0
		23.08	19975	1712.5	QPSK	5MHz	1	24
	Highest	22.84	19975	1712.5	QPSK	5MHz	8	0
		22.79	19975	1712.5	QPSK	5MHz	8	17
High	Lowest	22.95	20375	1752.5	QPSK	5MHz	1	0
		22.80	20375	1752.5	QPSK	5MHz	1	24
	Highest	22.69	20375	1752.5	QPSK	5MHz	8	0
		22.73	20375	1752.5	QPSK	5MHz	8	17
Low	Lowest	23.20	20000	1715.0	QPSK	10MHz	1	0
		22.99	20000	1715.0	QPSK	10MHz	1	49
	Highest	22.84	20000	1715.0	QPSK	10MHz	12	0
		22.79	20000	1715.0	QPSK	10MHz	12	38
High	Lowest	23.21	20350	1750.0	QPSK	10MHz	1	0
		22.89	20350	1750.0	QPSK	10MHz	1	49
	Highest	22.74	20350	1750.0	QPSK	10MHz	12	0
		22.74	20350	1750.0	QPSK	10MHz	12	38
Low	Lowest	23.27	20050	1720.0	QPSK	20MHz	1	0
		23.02	20050	1720.0	QPSK	20MHz	1	99
	Highest	22.88	20050	1720.0	QPSK	20MHz	18	0
		22.84	20050	1720.0	QPSK	20MHz	18	82
High	Lowest	22.96	20300	1745.0	QPSK	20MHz	1	0
		22.78	20300	1745.0	QPSK	20MHz	1	99
	Highest	22.71	20300	1745.0	QPSK	20MHz	18	0
		22.64	20300	1745.0	QPSK	20MHz	18	82



Inter-Band SCC (B12)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	24
23035	701.5	QPSK	5MHz	8	0
23035	701.5	QPSK	5MHz	8	17
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	24
23155	713.5	QPSK	5MHz	8	0
23155	713.5	QPSK	5MHz	8	17
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38



LTE Band2A+4A+5A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.30	18625	1852.5	QPSK	5MHz	1	0
		23.35	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.16	18625	1852.5	QPSK	5MHz	8	0
		23.19	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.17	19175	1907.5	QPSK	5MHz	1	0
		23.25	19175	1907.5	QPSK	5MHz	1	24
	Highest	23.02	19175	1907.5	QPSK	5MHz	8	0
		22.99	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.27	18650	1855.0	QPSK	10MHz	1	0
		23.30	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.20	18650	1855.0	QPSK	10MHz	12	0
		23.19	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.30	19150	1905.0	QPSK	10MHz	1	0
		23.23	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.14	19150	1905.0	QPSK	10MHz	12	0
		23.12	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.27	18650	1855.0	QPSK	10MHz	1	0
		22.99	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.21	18650	1855.0	QPSK	10MHz	12	0
		23.19	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.30	19150	1905.0	QPSK	10MHz	1	0
		23.26	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.13	19150	1905.0	QPSK	10MHz	12	0
		23.12	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.28	18700	1860.0	QPSK	20MHz	1	0
		23.20	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.10	18700	1860.0	QPSK	20MHz	18	0
		23.03	18700	1860.0	QPSK	20MHz	18	82



Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
High	Lowest	23.07	19100	1900.0	QPSK	20MHz	1	0
		23.20	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.05	19100	1900.0	QPSK	20MHz	18	0
		23.05	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B4)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
19975	1712.5	QPSK	5MHz	1	0
19975	1712.5	QPSK	5MHz	1	24
19975	1712.5	QPSK	5MHz	8	0
19975	1712.5	QPSK	5MHz	8	17
20375	1752.5	QPSK	5MHz	1	0
20375	1752.5	QPSK	5MHz	1	24
20375	1752.5	QPSK	5MHz	8	0
20375	1752.5	QPSK	5MHz	8	17
20000	1715.0	QPSK	10MHz	1	0
20000	1715.0	QPSK	10MHz	1	49
20000	1715.0	QPSK	10MHz	12	0
20000	1715.0	QPSK	10MHz	12	38
20350	1750.0	QPSK	10MHz	1	0
20350	1750.0	QPSK	10MHz	1	49
20350	1750.0	QPSK	10MHz	12	0
20350	1750.0	QPSK	10MHz	12	38
20050	1720.0	QPSK	20MHz	1	0
20050	1720.0	QPSK	20MHz	1	99
20050	1720.0	QPSK	20MHz	18	0
20050	1720.0	QPSK	20MHz	18	82
20300	1745.0	QPSK	20MHz	1	0
20300	1745.0	QPSK	20MHz	1	99
20300	1745.0	QPSK	20MHz	18	0
20300	1745.0	QPSK	20MHz	18	82
20050	1720.0	QPSK	20MHz	1	0
20050	1720.0	QPSK	20MHz	1	99
20050	1720.0	QPSK	20MHz	18	0
20050	1720.0	QPSK	20MHz	18	82
20300	1745.0	QPSK	20MHz	1	0
20300	1745.0	QPSK	20MHz	1	99
20300	1745.0	QPSK	20MHz	18	0
20300	1745.0	QPSK	20MHz	18	82



Inter-Band SCC (B5)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
20425	826.5	QPSK	5MHz	1	0
20425	826.5	QPSK	5MHz	1	24
20425	826.5	QPSK	5MHz	8	0
20425	826.5	QPSK	5MHz	8	17
20625	846.5	QPSK	5MHz	1	0
20625	846.5	QPSK	5MHz	1	24
20625	846.5	QPSK	5MHz	8	0
20625	846.5	QPSK	5MHz	8	17
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	49
20450	829.0	QPSK	10MHz	12	0
20450	829.0	QPSK	10MHz	12	38
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	49
20600	844.0	QPSK	10MHz	12	0
20600	844.0	QPSK	10MHz	12	38
20425	826.5	QPSK	5MHz	1	0
20425	826.5	QPSK	5MHz	1	99
20425	826.5	QPSK	5MHz	18	0
20425	826.5	QPSK	5MHz	18	82
20625	846.5	QPSK	5MHz	1	0
20625	846.5	QPSK	5MHz	1	99
20625	846.5	QPSK	5MHz	18	0
20625	846.5	QPSK	5MHz	18	82
20450	829.0	QPSK	10MHz	1	0
20450	829.0	QPSK	10MHz	1	99
20450	829.0	QPSK	10MHz	18	0
20450	829.0	QPSK	10MHz	18	82
20600	844.0	QPSK	10MHz	1	0
20600	844.0	QPSK	10MHz	1	99
20600	844.0	QPSK	10MHz	18	0
20600	844.0	QPSK	10MHz	18	82



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	99
27685	2307.5	QPSK	5MHz	18	0
27685	2307.5	QPSK	5MHz	18	82
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	99
27735	2312.5	QPSK	5MHz	18	0
27735	2312.5	QPSK	5MHz	18	82
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	99
27710	2310.0	QPSK	10MHz	18	0
27710	2310.0	QPSK	10MHz	18	82
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	99
27710	2310.0	QPSK	10MHz	18	0
27710	2310.0	QPSK	10MHz	18	82



LTE Band2A+4A+12A+30A_DL CA

Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.32	18625	1852.5	QPSK	5MHz	1	0
		23.36	18625	1852.5	QPSK	5MHz	1	24
	Highest	23.17	18625	1852.5	QPSK	5MHz	8	0
		23.18	18625	1852.5	QPSK	5MHz	8	17
High	Lowest	23.16	19175	1907.5	QPSK	5MHz	1	0
		23.25	19175	1907.5	QPSK	5MHz	1	24
	Highest	23.04	19175	1907.5	QPSK	5MHz	8	0
		23.01	19175	1907.5	QPSK	5MHz	8	17
Low	Lowest	23.25	18650	1855.0	QPSK	10MHz	1	0
		23.29	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.19	18650	1855.0	QPSK	10MHz	12	0
		23.18	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.31	19150	1905.0	QPSK	10MHz	1	0
		23.26	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.17	19150	1905.0	QPSK	10MHz	12	0
		23.11	19150	1905.0	QPSK	10MHz	12	38
Low	Lowest	23.28	18650	1855.0	QPSK	10MHz	1	0
		23.29	18650	1855.0	QPSK	10MHz	1	49
	Highest	23.24	18650	1855.0	QPSK	10MHz	12	0
		23.22	18650	1855.0	QPSK	10MHz	12	38
High	Lowest	23.27	19150	1905.0	QPSK	10MHz	1	0
		23.26	19150	1905.0	QPSK	10MHz	1	49
	Highest	23.17	19150	1905.0	QPSK	10MHz	12	0
		23.12	19150	1905.0	QPSK	10MHz	12	38



Test freq. ID	NRB_agg	Maximum Average Power (dBm)	Inter-Band PCC (B2)					
			EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
Low	Lowest	23.28	18700	1860.0	QPSK	20MHz	1	0
		23.20	18700	1860.0	QPSK	20MHz	1	99
	Highest	23.14	18700	1860.0	QPSK	20MHz	18	0
		23.07	18700	1860.0	QPSK	20MHz	18	82
High	Lowest	23.09	19100	1900.0	QPSK	20MHz	1	0
		23.24	19100	1900.0	QPSK	20MHz	1	99
	Highest	23.07	19100	1900.0	QPSK	20MHz	18	0
		23.01	19100	1900.0	QPSK	20MHz	18	82



Inter-Band SCC (B4)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
19975	1712.5	QPSK	5MHz	1	0
19975	1712.5	QPSK	5MHz	1	24
19975	1712.5	QPSK	5MHz	8	0
19975	1712.5	QPSK	5MHz	8	17
20375	1752.5	QPSK	5MHz	1	0
20375	1752.5	QPSK	5MHz	1	24
20375	1752.5	QPSK	5MHz	8	0
20375	1752.5	QPSK	5MHz	8	17
20000	1715.0	QPSK	10MHz	1	0
20000	1715.0	QPSK	10MHz	1	49
20000	1715.0	QPSK	10MHz	12	0
20000	1715.0	QPSK	10MHz	12	38
20350	1750.0	QPSK	10MHz	1	0
20350	1750.0	QPSK	10MHz	1	49
20350	1750.0	QPSK	10MHz	12	0
20350	1750.0	QPSK	10MHz	12	38
20050	1720.0	QPSK	20MHz	1	0
20050	1720.0	QPSK	20MHz	1	99
20050	1720.0	QPSK	20MHz	18	0
20050	1720.0	QPSK	20MHz	18	82
20300	1745.0	QPSK	20MHz	1	0
20300	1745.0	QPSK	20MHz	1	99
20300	1745.0	QPSK	20MHz	18	0
20300	1745.0	QPSK	20MHz	18	82
20050	1720.0	QPSK	20MHz	1	0
20050	1720.0	QPSK	20MHz	1	99
20050	1720.0	QPSK	20MHz	18	0
20050	1720.0	QPSK	20MHz	18	82
20300	1745.0	QPSK	20MHz	1	0
20300	1745.0	QPSK	20MHz	1	99
20300	1745.0	QPSK	20MHz	18	0
20300	1745.0	QPSK	20MHz	18	82



Inter-Band SCC (B12)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	24
23035	701.5	QPSK	5MHz	8	0
23035	701.5	QPSK	5MHz	8	17
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	24
23155	713.5	QPSK	5MHz	8	0
23155	713.5	QPSK	5MHz	8	17
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	49
23060	704.0	QPSK	10MHz	12	0
23060	704.0	QPSK	10MHz	12	38
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	49
23130	711.0	QPSK	10MHz	12	0
23130	711.0	QPSK	10MHz	12	38
23035	701.5	QPSK	5MHz	1	0
23035	701.5	QPSK	5MHz	1	99
23035	701.5	QPSK	5MHz	18	0
23035	701.5	QPSK	5MHz	18	82
23155	713.5	QPSK	5MHz	1	0
23155	713.5	QPSK	5MHz	1	99
23155	713.5	QPSK	5MHz	18	0
23155	713.5	QPSK	5MHz	18	82
23060	704.0	QPSK	10MHz	1	0
23060	704.0	QPSK	10MHz	1	99
23060	704.0	QPSK	10MHz	18	0
23060	704.0	QPSK	10MHz	18	82
23130	711.0	QPSK	10MHz	1	0
23130	711.0	QPSK	10MHz	1	99
23130	711.0	QPSK	10MHz	18	0
23130	711.0	QPSK	10MHz	18	82



Inter-Band SCC (B30)					
EARFCN	Freq. (MHz)	Modulation	Bandwidth	# of Resource Blocks	Resource Block Offset
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	24
27685	2307.5	QPSK	5MHz	8	0
27685	2307.5	QPSK	5MHz	8	17
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	24
27735	2312.5	QPSK	5MHz	8	0
27735	2312.5	QPSK	5MHz	8	17
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	49
27710	2310.0	QPSK	10MHz	12	0
27710	2310.0	QPSK	10MHz	12	38
27685	2307.5	QPSK	5MHz	1	0
27685	2307.5	QPSK	5MHz	1	99
27685	2307.5	QPSK	5MHz	18	0
27685	2307.5	QPSK	5MHz	18	82
27735	2312.5	QPSK	5MHz	1	0
27735	2312.5	QPSK	5MHz	1	99
27735	2312.5	QPSK	5MHz	18	0
27735	2312.5	QPSK	5MHz	18	82
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	99
27710	2310.0	QPSK	10MHz	18	0
27710	2310.0	QPSK	10MHz	18	82
27710	2310.0	QPSK	10MHz	1	0
27710	2310.0	QPSK	10MHz	1	99
27710	2310.0	QPSK	10MHz	18	0
27710	2310.0	QPSK	10MHz	18	82



Band	Data Rate	CH	Frequency (MHz)	Average Conducted Power (dBm)		
				ANT-0	ANT-1	ANT-0+1
IEEE 802.11b	1 M	1	2412.0	8.72	---	---
		6	2437.0	8.21	---	---
		11	2462.0	8.95	---	---
	2 M	6	2437.0	8.20	---	---
	5.5 M	6	2437.0	8.19	---	---
	11 M	6	2437.0	8.17	---	---
IEEE 802.11g	6 M	1	2412.0	8.70	8.41	11.57
		6	2437.0	8.90	8.15	11.55
		11	2462.0	8.33	8.87	11.62
	9 M	6	2437.0	8.87	8.12	11.52
	12 M	6	2437.0	8.85	8.10	11.50
	18 M	6	2437.0	8.80	8.14	11.49
	24 M	6	2437.0	8.83	8.08	11.48
	36 M	6	2437.0	8.78	8.06	11.45
	48 M	6	2437.0	8.70	8.12	11.43
	54 M	6	2437.0	8.72	8.09	11.43
IEEE 802.11n 2.4 GHz 20MHz(256-QAM)	13 M	1	2412.0	8.45	8.31	11.39
		6	2437.0	8.82	8.90	11.87
		11	2462.0	8.92	8.86	11.90
	28.8 M	6	2437.0	8.70	8.27	11.50
	43.4 M	6	2437.0	8.74	8.23	11.50
	57.8 M	6	2437.0	8.65	8.28	11.48
	86.6 M	6	2437.0	8.75	8.17	11.48
	115.6 M	6	2437.0	8.70	8.20	11.47
	130 M	6	2437.0	8.62	8.21	11.43
	144.4 M	6	2437.0	8.73	8.25	11.51
173.4 M	6	2437.0	8.79	8.14	11.49	



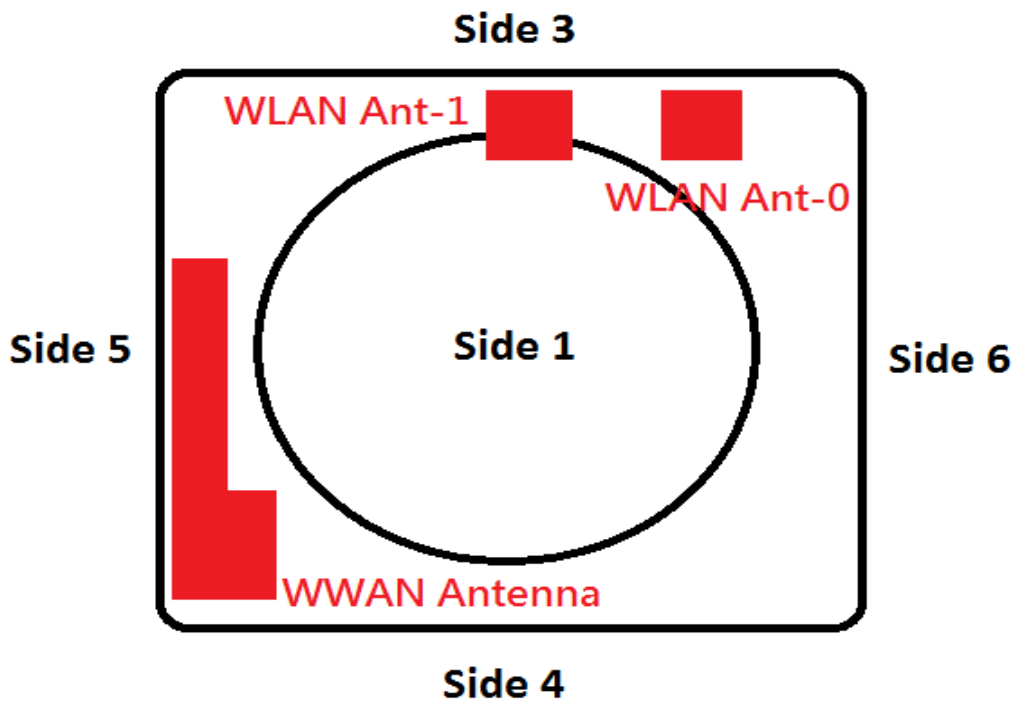
Band	Data Rate	CH	Frequency (MHz)	Average Conducted Power (dBm)		
				ANT-0	ANT-1	ANT-0+1
IEEE 802.11n 2.4 GHz 40MHz(256-QAM)	27 M	3	2422.0	8.67	9.00	11.85
		6	2437.0	8.70	8.14	11.44
		9	2452.0	8.15	8.10	11.14
	60 M	6	2437.0	8.64	8.10	11.39
	90 M	6	2437.0	8.46	7.97	11.23
	120 M	6	2437.0	8.58	7.90	11.26
	180 M	6	2437.0	8.60	8.05	11.34
	240 M	6	2437.0	8.41	7.80	11.13
	270 M	6	2437.0	8.40	7.71	11.08
	300 M	6	2437.0	8.54	8.07	11.32
	360 M	6	2437.0	8.38	7.67	11.05
	400 M	6	2437.0	8.36	7.73	11.07
EEE 802.11a	6 M	36	5180.0	8.93	8.98	11.97
		40	5200.0	8.53	8.89	11.72
		44	5220.0	8.57	8.85	11.72
		48	5240.0	8.34	8.86	11.62
		149	5745.0	8.38	8.92	11.67
		153	5765.0	8.41	8.71	11.57
		157	5785.0	8.54	8.74	11.65
		161	5805.0	8.56	8.81	11.70
		165	5825.0	8.38	8.81	11.61
	54 M	36	5180.0	8.80	8.87	11.85
		40	5200.0	8.43	8.77	11.61
		44	5220.0	8.51	8.81	11.67
		48	5240.0	8.28	8.80	11.56
		149	5745.0	8.31	8.84	11.59
		153	5765.0	8.36	8.64	11.51
		157	5785.0	8.50	8.67	11.60
		161	5805.0	8.48	8.73	11.62
		165	5825.0	8.34	8.74	11.55



Band	Data Rate	CH	Frequency (MHz)	Average Conducted Power (dBm)		
				ANT-0	ANT-1	ANT-0+1
IEEE 802.11ac 20MHz	13 M	36	5180.0	8.34	8.83	11.60
		40	5200.0	8.41	8.80	11.62
		44	5220.0	8.70	8.88	11.80
		48	5240.0	8.13	8.90	11.54
		149	5745.0	8.20	8.88	11.56
		153	5765.0	8.40	8.81	11.62
		157	5785.0	8.37	8.92	11.66
		161	5805.0	8.32	8.87	11.61
		165	5825.0	8.29	8.72	11.52
	173.4 M	36	5180.0	8.30	8.75	11.54
		40	5200.0	8.31	8.69	11.51
		44	5220.0	8.59	8.79	11.70
		48	5240.0	8.10	8.84	11.50
		149	5745.0	8.11	8.80	11.48
		153	5765.0	8.33	8.70	11.53
		157	5785.0	8.30	8.83	11.58
		161	5805.0	8.28	8.81	11.56
		165	5825.0	8.23	8.66	11.46
IEEE 802.11ac 40MHz	27 M	38	5190.0	8.84	8.36	11.62
		46	5230.0	8.78	8.23	11.52
		151	5755.0	8.76	8.58	11.68
		159	5795.0	8.83	8.34	11.60
	400 M	38	5190.0	8.80	8.30	11.57
		46	5230.0	8.73	8.11	11.44
		151	5755.0	8.74	8.49	11.63
		159	5795.0	8.77	8.28	11.54
IEEE 802.11ac 80MHz	58.6 M	42	5210.0	8.54	8.78	11.67
		155	5775.0	8.50	8.87	11.70
	866.6 M	42	5210.0	8.50	8.71	11.62
		155	5775.0	8.44	8.80	11.63

6.10 Antenna location

Antenna-User						
Ant.	To Side 1 (mm)	To Side 2 (mm)	To Side 3 (mm)	To Side 4 (mm)	To Side 5 (mm)	To Side 6 (mm)
WWAN_ANT	13	6	29	20	3	86
WLAN_ANT 0	6	15	11	74	68	21
WLAN_ANT 1	6	15	13	74	37	50





6.11 Stand-alone SAR Evaluate

Transmitter and antenna implementation as below:

Band	WWAN Antenna	WWAN Antenna
WWAN	V	---
WLAN	---	V

Stand-alone transmission configurations as below:

Band	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WCDMA BandII	V	V	V	V	V	---
WCDMA BandV	V	V	V	V	V	---
LTE Band2	V	V	V	V	V	---
LTE Band4	V	V	V	V	V	---
LTE Band5	V	V	V	V	V	---
LTE Band7	V	V	V	V	V	---
LTE Band12	V	V	V	V	V	---
LTE Band30	V	V	V	V	V	---
LTE Band66	V	V	V	V	V	---
IEEE 802.11b	V	V	---	V	V	---
IEEE 802.11g	V	V	---	V	V	---
IEEE 802.11n 2.4GHz 20MHz	---	---	---	---	---	---
IEEE 802.11n 2.4GHz 40MHz	---	---	---	---	---	---
IEEE 802.11a	V	V	---	V	V	---
IEEE 802.11ac 20MHz	---	---	---	---	---	---
IEEE 802.11ac 40MHz	---	---	---	---	---	---
IEEE 802.11ac 80MHz	---	---	---	---	---	---

Note: The "-" on behalf of Stand-alone SAR is not required (Refer to KDB447498 D01 v06 4.3.1 for the Standalone SAR test exclusion considerations)



Ant. Used	Band	Channel	Frequency	Tune-Power		Distance of Ant. To User (mm)					
			(GHz)	(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WWAN_ANT	WCDMA BII	9538	1.9076	24	251	13	6	29	20	5	86
	WCDMA BV	4233	0.8466	24	251	13	6	29	20	5	86
	LTE Band 2	19100	1.9	24	251	13	6	29	20	5	86
	LTE Band 4	20300	1.745	24	251	13	6	29	20	5	86
	LTE Band 5	20600	0.844	24	251	13	6	29	20	5	86
	LTE Band 7	21350	2.56	24	251	13	6	29	20	5	86
	LTE Band 12	23130	0.711	24	251	13	6	29	20	5	86
	LTE Band 30	27710	2.31	23	200	13	6	29	20	5	86
	LTE Band 66	132322	1.745	24	251	13	6	29	20	5	86
WLAN_Ant-0	IEEE 802.11 b	11	2.462	10	10	6	15	11	74	68	21
	IEEE 802.11 g	11	2.462	10	10	6	15	11	74	68	21
	IEEE 802.11 n 20M (2.4GHz)	11	2.462	10	10	6	15	11	74	68	21
	IEEE 802.11 n 40M (2.4GHz)	9	2.452	10	10	6	15	11	74	68	21
	IEEE 802.11 a U-NII Band I	48	5.24	10	10	6	15	11	74	68	21
	IEEE 802.11 ac 20M U-NII Band I	48	5.24	10	10	6	15	11	74	68	21
	IEEE 802.11 ac 40M U-NII Band I	46	5.23	10	10	6	15	11	74	68	21
	IEEE 802.11 ac 80M U-NII Band I	42	5.21	10	10	6	15	11	74	68	21
	IEEE 802.11 a U-NII Band III	165	5.825	10	10	6	15	11	74	68	21
	IEEE 802.11 ac 20M U-NII Band III	165	5.825	10	10	6	15	11	74	68	21
	IEEE 802.11 ac 40M U-NII Band III	159	5.795	10	10	6	15	11	74	68	21
	IEEE 802.11 ac 80M U-NII Band III	155	5.775	10	10	6	15	11	74	68	21



Ant. Used	Band	Channel	Frequency	Tune-Power		Distance of Ant. To User (mm)					
			(GHz)	(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WLAN_Ant-1	IEEE 802.11 g	11	2.462	10	10	6	15	13	74	37	50
	IEEE 802.11 n 20M (2.4GHz)	11	2.462	10	10	6	15	13	74	37	50
	IEEE 802.11 n 40M (2.4GHz)	9	2.452	10	10	6	15	13	74	37	50
	IEEE 802.11 a U-NII Band I	48	5.24	10	10	6	15	13	74	37	50
	IEEE 802.11 ac 20M U-NII Band I	48	5.24	10	10	6	15	13	74	37	50
	IEEE 802.11 ac 40M U-NII Band I	46	5.23	10	10	6	15	13	74	37	50
	IEEE 802.11 ac 80M U-NII Band I	42	5.21	10	10	6	15	13	74	37	50
	IEEE 802.11 a U-NII Band III	165	5.825	10	10	6	15	13	74	37	50
	IEEE 802.11 ac 20M U-NII Band III	165	5.825	10	10	6	15	13	74	37	50
	IEEE 802.11 ac 40M U-NII Band III	159	5.795	10	10	6	15	13	74	37	50
	IEEE 802.11 ac 80M U-NII Band III	155	5.775	10	10	6	15	13	74	37	50



Ant. Used	Band	Channel	Frequency	Tune-Power		Calculated value and evaluated result					
			(GHz)	(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WWAN_ANT	WCDMA BII	9538	1.9076	24	251	26.7	57.8	12	17.3	69.3	468.6mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT
	WCDMA BV	4233	0.8466	24	251	17.8	38.5	8	11.5	46.2	366.2mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT
	LTE Band 2	19100	1.9	24	251	26.6	57.7	11.9	17.3	69.2	468.8mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT
	LTE Band 4	20300	1.745	24	251	25.5	55.3	11.4	16.6	66.3	473.6mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT
	LTE Band 5	20600	0.844	24	251	17.7	38.4	8	11.5	46.1	365.8mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT
	LTE Band 7	21350	2.56	24	251	30.9	66.9	13.8	20.1	80.3	453.8mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT
	LTE Band 12	23130	0.711	24	251	16.3	35.3	7.3	10.6	42.3	348.5mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT
	LTE Band 30	27710	2.31	23	200	23.4	50.7	10.5	15.2	60.8	458.7mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT
	LTE Band 66	132322	1.745	24	251	25.5	55.3	11.4	16.6	66.3	473.6mW
						MEASURE	MEASURE	MEASURE	MEASURE	MEASURE	EXEMPT



Ant. Used	Band	Channel	Frequency	Tune-Power		Calculated value and evaluated result					
			(GHz)	(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WLAN_ Ant-0	IEEE 802.11 b	11	2.462	10	10	2.6	1	1.4	335.6mW	275.6mW	0.7
						EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 g	11	2.462	10	10	2.6	1	1.4	335.6mW	275.6mW	0.7
						EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 n 2.4GHz 20M	11	2.462	10	10	2.6	1	1.4	335.6mW	275.6mW	0.7
						EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 n 2.4GHz 40M	9	2.452	10	10	2.6	1	1.4	335.8mW	275.8mW	0.7
						EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 a U-NII Band I	48	5.24	10	10	3.8	1.5	2.1	305.5mW	245.5mW	1.1
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 ac 20M U-NII Band I	48	5.24	10	10	3.8	1.5	2.1	305.5mW	245.5mW	1.1
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 ac 40M U-NII Band I	46	5.23	10	10	3.8	1.5	2.1	305.6mW	245.6mW	1.1
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 ac 80M U-NII Band I	42	5.21	10	10	3.8	1.5	2.1	305.7mW	245.7mW	1.1
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
IEEE 802.11 a U-NII Band III	165	5.825	10	10	4	1.6	2.2	302.2mW	242.2mW	1.1	
					MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	
IEEE 802.11 ac 20M U-NII Band III	165	5.825	10	10	4	1.6	2.2	302.2mW	242.2mW	1.1	
					MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	
IEEE 802.11 ac 40M U-NII Band III	159	5.795	10	10	4	1.6	2.2	302.3mW	242.3mW	1.1	
					MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	
IEEE 802.11 ac 80M U-NII Band III	155	5.775	10	10	4	1.6	2.2	302.4mW	242.4mW	1.1	
					MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	



Ant. Used	Band	Channel	Frequency	Tune-Power		Calculated value and evaluated result					
			(GHz)	(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WLAN_ Ant-1	IEEE 802.11 g	11	2.462	10	10	2.6	1	1.2	335.6mW	0.4	95.6mW
						EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 n 2.4GHz 20M	11	2.462	10	10	2.6	1	1.2	335.6mW	0.4	95.6mW
						EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 n 2.4GHz 40M	9	2.452	10	10	2.6	1	1.2	335.8mW	0.4	95.8mW
						EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 a U-NII Band I	48	5.24	10	10	3.8	1.5	1.8	305.5mW	0.6	65.5mW
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 ac 20M U-NII Band I	48	5.24	10	10	3.8	1.5	1.8	305.5mW	0.6	65.5mW
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 ac 40M U-NII Band I	46	5.23	10	10	3.8	1.5	1.8	305.6mW	0.6	65.6mW
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 ac 80M U-NII Band I	42	5.21	10	10	3.8	1.5	1.8	305.7mW	0.6	65.7mW
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 a U-NII Band III	165	5.825	10	10	4	1.6	1.9	302.2mW	0.7	62.2mW
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
	IEEE 802.11 ac 20M U-NII Band III	165	5.825	10	10	4	1.6	1.9	302.2mW	0.7	62.2mW
						MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT
IEEE 802.11 ac 40M U-NII Band III	159	5.795	10	10	4	1.6	1.9	302.3mW	0.7	62.3mW	
					MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	
IEEE 802.11 ac 80M U-NII Band III	155	5.775	10	10	4	1.6	1.8	302.4mW	0.6	62.4mW	
					MEASURE	EXEMPT	EXEMPT	EXEMPT	EXEMPT	EXEMPT	



Note:

1. Calculated Value include string "mW", that is mean through compare output power with threshold, if the output power more than threshold value the SAR test should be perform. Otherwise, the SAR test could be exempt. (> 50mm).
2. Calculated Value only include number format, that is mean through compare output power with threshold, if the Calculated value more than 3, the SAR test should be perform. Otherwise, the SAR test could be exempt. (<50mm).
3. When an antenna qualifies for the standalone SAR test exclusion of KDB 447498 section 4.3.1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to KDB 447498 section "4.3.2. Simultaneous transmission SAR test exclusion considerations b) ".
4. We used highest frequency and power, that result should be evaluated the worst case..
5. Power and distance are rounded to the nearest mW and mm before calculation..
6. The result is rounded to one decimal place for comparison.
7. For 2.4/5GHz wlan, we choose side 1, 2, 4 and 5 to perform the test.



6.12 Simultaneous Transmitting Evaluate

Simultaneous transmission configurations as below:

Condition(s)	Side	Band		
		WWAN Ant	WLAN Ant-0	WLAN Ant-1
1	1	V	V	V
2	2	V	V	V
3	3	V	V	V
4	4	V	V	V
5	5	V	V	V
6	6	V	V	V

Estimated SAR

Ant. Used	Band	Channel	Frequency	Tune-Power		Estimated SAR 1-g (W/kg)					
			(GHz)	(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WWAN_ANT	WCDMA BII	9538	1.9076	24	251	---	---	---	---	---	0.4
	WCDMA BV	4233	0.8466	24	251	---	---	---	---	---	0.4
	LTE Band 2	19100	1.9	24	251	---	---	---	---	---	0.4
	LTE Band 4	20300	1.745	24	251	---	---	---	---	---	0.4
	LTE Band 5	20600	0.844	24	251	---	---	---	---	---	0.4
	LTE Band 7	21350	2.56	24	251	---	---	---	---	---	0.4
	LTE Band 12	23130	0.711	24	251	---	---	---	---	---	0.4
	LTE Band 30	27710	2.31	23	200	---	---	---	---	---	0.4
LTE Band 66	132322	1.745	24	251	---	---	---	---	---	0.4	



Ant. Used	Band	Channel	Frequency	Tune-Power		Estimated SAR 1-g (W/kg)					
			(GHz)	(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WLAN_Ant-0	IEEE 802.11 b	11	2.462	10	10	0.35	0.14	0.19	0.4	0.4	0.1
	IEEE 802.11 g	11	2.462	10	10	0.35	0.14	0.19	0.4	0.4	0.1
	IEEE 802.11 n 2.4GHz 20M	11	2.462	10	10	0.35	0.14	0.19	0.4	0.4	0.1
	IEEE 802.11 n 2.4GHz 40M	9	2.452	10	10	0.35	0.14	0.19	0.4	0.4	0.1
	IEEE 802.11 a U-NII Band I	48	5.24	10	10	---	0.2	0.28	0.4	0.4	0.15
	IEEE 802.11 ac 20M U-NII Band I	48	5.24	10	10	---	0.2	0.28	0.4	0.4	0.15
	IEEE 802.11 ac 40M U-NII Band I	46	5.23	10	10	---	0.2	0.28	0.4	0.4	0.15
	IEEE 802.11 ac 80M U-NII Band I	42	5.21	10	10	---	0.2	0.28	0.4	0.4	0.14
	IEEE 802.11 a U-NII Band III	165	5.825	10	10	---	0.21	0.29	0.4	0.4	0.15
	IEEE 802.11 ac 20M U-NII Band III	165	5.825	10	10	---	0.21	0.29	0.4	0.4	0.15
	IEEE 802.11 ac 40M U-NII Band III	159	5.795	10	10	---	0.21	0.29	0.4	0.4	0.15
	IEEE 802.11 ac 80M U-NII Band III	155	5.775	10	10	---	0.21	0.29	0.4	0.4	0.15



Ant. Used	Band	Channel	Frequency	Tune-Power		Estimated SAR 1-g (W/kg)					
			(GHz)	(dBm)	(mW)	Side 1	Side 2	Side 3	Side 4	Side 5	Side 6
WLAN_Ant-1	IEEE 802.11 g	11	2.462	10	10	0.35	0.14	0.16	0.4	0.06	0.04
	IEEE 802.11 n 2.4GHz 20M	11	2.462	10	10	0.35	0.14	0.16	0.4	0.06	0.04
	IEEE 802.11 n 2.4GHz 40M	9	2.452	10	10	0.35	0.14	0.16	0.4	0.06	0.04
	IEEE 802.11 a U-NII Band I	48	5.24	10	10	---	0.2	0.23	0.4	0.08	0.06
	IEEE 802.11 ac 20M U-NII Band I	48	5.24	10	10	---	0.2	0.23	0.4	0.08	0.06
	IEEE 802.11 ac 40M U-NII Band I	46	5.23	10	10	---	0.2	0.23	0.4	0.08	0.06
	IEEE 802.11 ac 80M U-NII Band I	42	5.21	10	10	---	0.2	0.23	0.4	0.08	0.06
	IEEE 802.11 a U-NII Band III	165	5.825	10	10	---	0.21	0.25	0.4	0.09	0.06
	IEEE 802.11 ac 20M U-NII Band III	165	5.825	10	10	---	0.21	0.25	0.4	0.09	0.06
	IEEE 802.11 ac 40M U-NII Band III	159	5.795	10	10	---	0.21	0.25	0.4	0.09	0.06
	IEEE 802.11 ac 80M U-NII Band III	155	5.775	10	10	---	0.21	0.25	0.4	0.09	0.06



6.12.1 Sum of 1-g SAR of all simultaneously transmitting

When the sum of 1-g SAR of all simultaneously transmitting antennas in and operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration.

Sum of 1-g SAR of summary as below:

Phantom Position	Spacing (mm)	ASSY	WWAN Ant		2.4GHz WLAN Ant-0		2.4GHz WLAN Ant-1		
			Band	SAR ^{1g} (W/Kg)	Band	SAR ^{1g} (W/Kg)	Band	SAR ^{1g} (W/Kg)	
Flat	Side 1	10	N/A	LTE Band30	1.09	IEEE 802.11g	0.05	IEEE 802.11g	0.03
	Side 2	10	N/A	LTE Band4	1.2	IEEE 802.11g	0.04	IEEE 802.11g	0.01
	Side 3	10	N/A	LTE Band5	0.2	2.4GHz WLAN Band	*0.19	2.4GHz WLAN Band	*0.16
	Side 4	10	N/A	LTE Band2	1.2	IEEE 802.11g	0	IEEE 802.11g	0
	Side 5	10	N/A	LTE Band4	0.87	IEEE 802.11g	0	IEEE 802.11g	0.01
	Side 6	10	N/A	WWAN Band	**0.4	2.4GHz WLAN Band	*0.1	2.4GHz WLAN Band	*0.04

Phantom Position	Spacing (mm)	ASSY	5GHz WLAN Ant-0		5GHz WLAN Ant-1		Σ SAR ^{1g} (W/Kg)	Event	
			Band	SAR ^{1g} (W/Kg)	Band	SAR ^{1g} (W/Kg)			
Flat	Side 1	10	N/A	IEEE 802.11a	0.06	IEEE 802.11a	0.08	1.31	<1.6
	Side 2	10	N/A	IEEE 802.11a	0.11	IEEE 802.11a	0.03	1.39	<1.6
	Side 3	10	N/A	5GHz WLAN Band	*0.29	5GHz WLAN Band	*0.25	1.09	<1.6
	Side 4	10	N/A	IEEE 802.11a	0.01	IEEE 802.11a	0.01	1.22	<1.6
	Side 5	10	N/A	IEEE 802.11a	0.02	IEEE 802.11a	0.02	0.92	<1.6
	Side 6	10	N/A	5GHz WLAN Band	*0.15	5GHz WLAN Band	*0.06	0.75	<1.6

- Note: 1. *=Estimated SAR
 2. **The Estimated SAR 0.4W/Kg , test separation distances is > 50 mm
 3. When the sum of 1-g SAR of all simultaneously transmitting antennas in and operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration.



6.12.2 SAR to peak location separation ratio (SPLSR)

When the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio. The ratio is determined by $(SAR1 + SAR2)^{1.5}/R_i$, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

All of sum of SAR < 1.6 W/kg, therefore SPLSR is not required.

6.13 SAR test reduction according to KDB

General:

- The test data reported are the worst-case SAR value with the position set in a typical configuration. Test procedures used were according to FCC, Supplement C [June 2001], IEEE1528-2013.
- All modes of operation were investigated, and worst-case results are reported.
- Tissue parameters and temperatures are listed on the SAR plots.
- Batteries are fully charged for all readings.
- When the Channel's SAR 1g of maximum conducted power is > 0.8 mW/g, low, middle and high channel are supposed to be tested.

KDB 447498:

- The test data reported are the worst-case SAR value with the position set in a typical configuration. Test procedures used were according to IEEE1528-2013.

KDB 865664:

- Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.
- When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
- Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg.
- Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

KDB 941225:

- When HSDPA & (HSUPA / HSPA+ uplink with QPSK) power are not more than WCDMA 12.2K RMC 0.25dB and the SAR value of WCDMA BII/BV < 1.2 W/kg, therefore HSDPA & HSUPA / HSPA+ Stand-alone SAR is not required.
- SAR for EVDO Rev. A is not required when the maximum average output of each RF channels is less than that measured in Subtype 0/1 Physical layer configurations.
- For 1xRTT SAR is not required when the maximum average output of each channel is less than 1/4 dB higher than that measured in EVDO Rev.0.
- When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation, otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel.
- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.



- SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.
- For smaller channel bandwidth SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is $> \frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

KDB 248227:

- Refer 6.8 SAR Testing with 802.11 Transmitters.

7. System Verification and Validation

7.1 Symmetric Dipoles for System Verification

Construction	Symmetrical dipole with 1/4 balun enables measurement of feed point impedance with NWA matched for use near flat phantoms filled with head simulating solutions Includes distance holder and tripod adaptor Calibration Calibrated SAR value for specified position and input power at the flat phantom in head simulating solutions.
Frequency	750, 835, 1750, 1900 ,2300, 2450, 5200 and 5800 MHz
Return Loss	> 20 dB at specified verification position
Power Capability	> 100 W (f < 1GHz); > 40 W (f > 1GHz)
Options	Dipoles for other frequencies or solutions and other calibration conditions are available upon request
Dimensions	D750V3: dipole length 177 mm; overall height 300 mm D835V2: dipole length 161 mm; overall height 340 mm D1750V2: dipole length 75.2 mm; overall height 301.5 mm D1900V2: dipole length 67.7 mm; overall height 300 mm D2300V2: dipole length 51.5 mm; overall height 300 mm D2450V2: dipole length 51.5 mm; overall height 300 mm D2600V2: dipole length 49.2 mm; overall height 290 mm D5GHzV2: dipole length 20.6 mm; overall height 300 mm

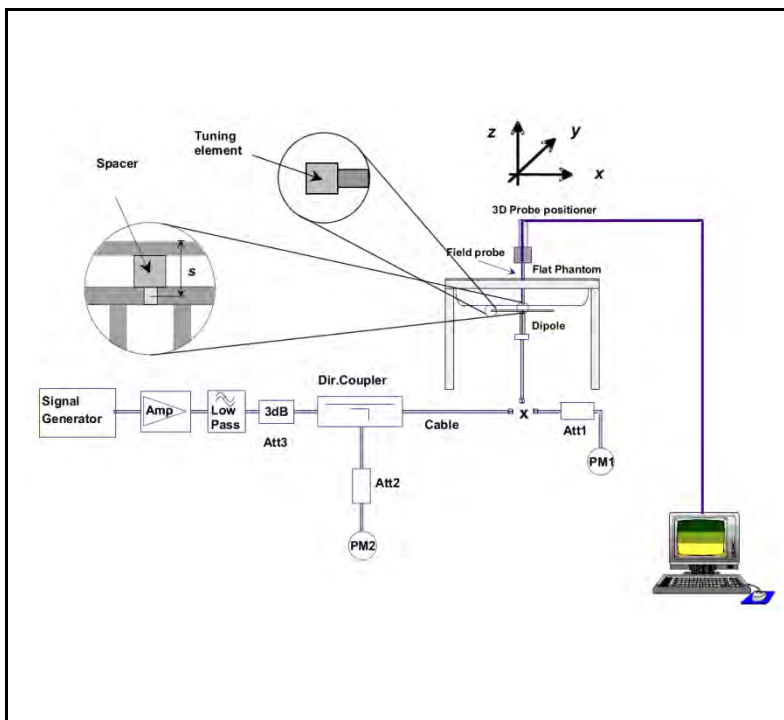


Figure 8. System Verification Setup Diagram



Figure 9. Validation Kit

7.2 Liquid Parameters

In order to comply with the target values of IEC 62209-2, we carry the same decimal place as the target value and provide it in the report. Because the gap between the values is very small, so it look same after the carry in some coefficients.



Liquid Verify								
Ambient Temperature : 22 ± 2 °C ; Relative Humidity : 40 -70%								
Liquid Type	Frequency	Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)	Measured Date
750 (Body)	698MHz	22.0	ϵ_r	55.73	54.94	-1.44%	± 5	Jul. 22, 2017
			σ	0.959	0.944	-2.08%	± 5	
	730MHz	22.0	ϵ_r	55.61	54.27	-2.34%	± 5	
			σ	0.962	0.985	3.13%	± 5	
	750MHz	22.0	ϵ_r	55.53	54.58	-1.62%	± 5	
			σ	0.963	1.001	4.17%	± 5	
835 (Body)	820MHz	22.0	ϵ_r	55.26	55.35	0.00%	± 5	Jul. 22, 2017
			σ	0.969	0.972	0.00%	± 5	
	835MHz	22.0	ϵ_r	55.20	55.19	0.00%	± 5	
			σ	0.970	0.993	2.06%	± 5	
	850MHz	22.0	ϵ_r	55.15	55.03	-0.36%	± 5	
			σ	0.988	1.013	2.02%	± 5	
835 (Body)	820MHz	22.0	ϵ_r	55.26	55.35	0.00%	± 5	Jul. 24, 2017
			σ	0.969	0.972	0.00%	± 5	
	835MHz	22.0	ϵ_r	55.20	55.19	0.00%	± 5	
			σ	0.970	0.993	2.06%	± 5	
	850MHz	22.0	ϵ_r	55.15	55.03	-0.36%	± 5	
			σ	0.988	1.013	2.02%	± 5	
1750 (Body)	1700MHz	22.0	ϵ_r	53.56	54.19	1.12%	± 5	Jul. 21, 2107
			σ	1.457	1.478	1.37%	± 5	
	1750MHz	22.0	ϵ_r	53.43	54.02	1.12%	± 5	
			σ	1.488	1.522	2.01%	± 5	
	1760MHz	22.0	ϵ_r	53.41	53.98	1.12%	± 5	
			σ	1.495	1.525	2.69%	± 5	
1750 (Body)	1700MHz	22.0	ϵ_r	53.56	54.19	1.12%	± 5	Jul. 26, 2017
			σ	1.457	1.478	1.37%	± 5	
	1750MHz	22.0	ϵ_r	53.43	54.02	1.12%	± 5	
			σ	1.488	1.522	2.01%	± 5	
	1760MHz	22.0	ϵ_r	53.41	53.98	1.12%	± 5	
			σ	1.495	1.525	2.69%	± 5	

Table 3. Measured Tissue dielectric parameters for body phantoms -1



Liquid Verify								
Ambient Temperature : 22 ± 2 °C ; Relative Humidity : 40 -70%								
Liquid Type	Frequency	Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)	Measured Date
1750 (Body)	1700MHz	22.0	ϵ_r	53.56	54.19	1.12%	± 5	Jul. 27, 2017
			σ	1.457	1.478	1.37%	± 5	
	1750MHz	22.0	ϵ_r	53.43	54.02	1.12%	± 5	
			σ	1.488	1.522	2.01%	± 5	
	1760MHz	22.0	ϵ_r	53.41	53.98	1.12%	± 5	
			σ	1.495	1.525	2.69%	± 5	
1900 (Body)	1850MHz	22.0	ϵ_r	53.30	52.16	-2.06%	± 5	Jul. 18, 2017
			σ	1.520	1.459	-3.95%	± 5	
	1900MHz	22.0	ϵ_r	53.30	52.29	-1.88%	± 5	
			σ	1.520	1.511	-0.66%	± 5	
	1950MHz	22.0	ϵ_r	53.30	51.99	-2.44%	± 5	
			σ	1.520	1.563	2.63%	± 5	
1900 (Body)	1850MHz	22.0	ϵ_r	53.30	52.16	-2.06%	± 5	Jul. 19, 2017
			σ	1.520	1.459	-3.95%	± 5	
	1900MHz	22.0	ϵ_r	53.30	52.29	-1.88%	± 5	
			σ	1.520	1.511	-0.66%	± 5	
	1950MHz	22.0	ϵ_r	53.30	51.99	-2.44%	± 5	
			σ	1.520	1.563	2.63%	± 5	
1900 (Body)	1850MHz	22.0	ϵ_r	53.30	52.16	-2.06%	± 5	Jul. 24, 2017
			σ	1.520	1.459	-3.95%	± 5	
	1900MHz	22.0	ϵ_r	53.30	52.29	-1.88%	± 5	
			σ	1.520	1.511	-0.66%	± 5	
	1950MHz	22.0	ϵ_r	53.30	51.99	-2.44%	± 5	
			σ	1.520	1.563	2.63%	± 5	
2300 (Body)	2250MHz	22.0	ϵ_r	52.97	52.36	-1.13%	± 5	Jul. 19, 2017
			σ	1.759	1.694	-3.98%	± 5	
	2300MHz	22.0	ϵ_r	52.90	52.03	-1.70%	± 5	
			σ	1.807	1.738	-3.87%	± 5	
	2350MHz	22.0	ϵ_r	52.83	52.15	-1.33%	± 5	
			σ	1.854	1.838	-0.54%	± 5	

Table 4. Measured Tissue dielectric parameters for body phantoms -2



Liquid Verify								
Ambient Temperature : 22 ± 2 °C ; Relative Humidity : 40 -70%								
Liquid Type	Frequency	Temp (°C)	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)	Measured Date
2450 (Body)	2400MHz	22.0	ϵ_r	52.77	52.71	-0.19%	± 5	Aug. 01, 2017
			σ	1.902	1.919	1.05%	± 5	
	2450MHz	22.0	ϵ_r	52.70	52.40	-0.57%	± 5	
			σ	1.950	1.964	0.51%	± 5	
	2500MHz	22.0	ϵ_r	52.64	52.42	-0.38%	± 5	
			σ	2.021	2.049	1.49%	± 5	
2600 (Body)	2500MHz	22.0	ϵ_r	52.64	51.26	-2.47%	± 5	Jul. 20, 2017
			σ	2.021	2.084	2.97%	± 5	
	2550MHz	22.0	ϵ_r	52.57	51.13	-2.85%	± 5	
			σ	2.092	2.152	2.87%	± 5	
	2600MHz	22.0	ϵ_r	52.51	50.75	-3.43%	± 5	
			σ	2.163	2.193	1.39%	± 5	
5200 (Body)	5150MHz	22.0	ϵ_r	49.08	48.80	-0.61%	± 5	Jul. 28, 2017
			σ	5.241	5.167	-1.34%	± 5	
	5200MHz	22.0	ϵ_r	49.01	48.77	-0.41%	± 5	
			σ	5.299	5.245	-0.94%	± 5	
	5250MHz	22.0	ϵ_r	48.95	48.59	-0.61%	± 5	
			σ	5.358	5.304	-1.12%	± 5	
5200 (Body)	5150MHz	22.0	ϵ_r	49.08	48.80	-0.61%	± 5	Jul. 31, 2017
			σ	5.241	5.167	-1.34%	± 5	
	5200MHz	22.0	ϵ_r	49.01	48.77	-0.41%	± 5	
			σ	5.299	5.245	-0.94%	± 5	
	5250MHz	22.0	ϵ_r	48.95	48.59	-0.61%	± 5	
			σ	5.358	5.304	-1.12%	± 5	
5800 (Body)	5750MHz	22.0	ϵ_r	48.27	47.46	-1.66%	± 5	Jul. 31, 2017
			σ	5.942	6.036	1.68%	± 5	
	5800MHz	22.0	ϵ_r	48.20	47.28	-1.87%	± 5	
			σ	6.000	6.131	2.17%	± 5	
	5850MHz	22.0	ϵ_r	48.20	47.23	-2.08%	± 5	
			σ	6.000	6.202	3.33%	± 5	

Table 5. Measured Tissue dielectric parameters for body phantoms -3



7.3 Verification Summary

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of $\pm 7\%$. The verification was performed at 750, 835, 1750, 1900, 2300, 2450, 5200 and 5800 MHz

Mixture Type	Frequency (MHz)	Power	SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	Drift (dB)	Difference percentage		Probe Model / Serial No.	Dipole Model / Serial No.	1W Target		Date
						1g	10g			SAR _{1g} (mW/g)	SAR _{10g} (mW/g)	
Body	750	250 mW	2.33	1.55	-0.09	4.8%	3.2%	EX3DV4-SN3847	D750V3 – SN1004	8.89	6.01	Jul. 22, 2017
		Normalize to 1 Watt	9.32	6.20								
Body	835	250 mW	2.44	1.6	0	1.1%	-0.6%	EX3DV4-SN3847	D835V2 – SN4d082	9.65	6.44	Jul. 22, 2017
		Normalize to 1 Watt	9.76	6.40								
Body	835	250 mW	2.52	1.65	-0.04	4.5%	2.5%	EX3DV4-SN3847	D835V2 – SN4d082	9.65	6.44	Jul. 24, 2017
		Normalize to 1 Watt	10.08	6.60								
Body	1750	250 mW	9.28	4.84	0.03	0.6%	-1.7%	EX3DV4-SN3847	D1750V2 – SN1023	36.90	19.70	Jul. 21, 2017
		Normalize to 1 Watt	37.12	19.36								
Body	1750	250 mW	9.27	4.81	0.01	0.5%	-2.3%	EX3DV4-SN3847	D1750V2 – SN1023	36.90	19.70	Jul. 26, 2017
		Normalize to 1 Watt	37.08	19.24								
Body	1750	250 mW	9.11	4.76	0	-1.2%	-3.4%	EX3DV4-SN3847	D1750V2 – SN1023	36.90	19.70	Jul. 27, 2017
		Normalize to 1 Watt	36.44	19.04								
Body	1900	250 mW	10.4	5.45	-0.01	3.2%	1.9%	EX3DV4-SN3847	D1900V2 – SN5d111	40.30	21.40	Jul. 18, 2017
		Normalize to 1 Watt	41.60	21.80								
Body	1900	250 mW	10.4	5.55	0	3.2%	3.7%	EX3DV4-SN3847	D1900V2 – SN5d111	40.30	21.40	Jul. 19, 2017
		Normalize to 1 Watt	41.60	22.20								
Body	1900	250 mW	10.3	5.39	0.04	2.2%	0.7%	EX3DV4-SN3847	D1900V2 – SN5d111	40.30	21.40	Jul. 24, 2017
		Normalize to 1 Watt	41.20	21.56								
Body	2300	250 mW	12.2	5.86	0.02	0.2%	0.2%	EX3DV4-SN3847	D2300V2 – SN1005	48.70	23.40	Jul. 19, 2017
		Normalize to 1 Watt	48.80	23.44								
Body	2450	250 mW	12.9	5.88	0.01	3.4%	0.1%	EX3DV4-SN3847	D2450V2 – SN712	49.90	23.50	Aug. 01, 2017
		Normalize to 1 Watt	51.60	23.52								
Body	2600	250 mW	14.3	6.24	0.01	3.1%	1.5%	EX3DV4-SN3847	D2600V2 – SN1007	55.50	24.60	Jul. 20, 2017
		Normalize to 1 Watt	57.20	24.96								
Body	5200	100 mW	7.24	2.15	0.12	-1.8%	3.9%	EX3DV4-SN3847	D5200V2 – SN1021	73.70	20.70	Jul. 28, 2017
		Normalize to 1 Watt	72.40	21.50								
Body	5200	100 mW	7.21	2.17	-0.07	-2.2%	4.8%	EX3DV4-SN3847	D5200V2 – SN1021	73.70	20.70	Jul. 31, 2017
		Normalize to 1 Watt	72.10	21.70								
Body	5800	100 mW	7.51	2.16	0.03	-3.3%	0.5%	EX3DV4-SN3847	D5800V2 – SN1021	77.70	21.50	Jul. 31, 2017
		Normalize to 1 Watt	75.10	21.60								



7.4 Validation Summary

Per FCC KDB 865664 D02 v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in IEEE 1528-2013 and FCC KDB 865664 D01v01r04. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters as below.

Probe Type Model / Serial No.	Prob Cal. Point (MHz)	Head / Body	Cond.	Perm.	CW Validation			Mod. Validation			Date
			ϵ_r	σ	Sensitivity	Probe	Probe	Mod. Type	Duty Factor	PAR	
						Linearity	Isotropy				
EX3DV4- SN3847	750	Body	54.58	1.001	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 22, 2017
EX3DV4- SN3847	835	Body	55.19	0.993	Pass	Pass	Pass	QPSK, RMC-12.2K	Pass	N/A	Jul. 22, 2017
EX3DV4- SN3847	835	Body	55.19	0.993	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 24, 2017
EX3DV4- SN3847	1750	Body	54.02	1.522	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 21, 2017
EX3DV4- SN3847	1750	Body	54.02	1.522	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 26, 2017
EX3DV4- SN3847	1750	Body	54.02	1.522	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 27, 2017
EX3DV4- SN3847	1900	Body	52.29	1.511	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 18, 2017
EX3DV4- SN3847	1900	Body	52.29	1.511	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 19, 2017
EX3DV4- SN3847	1900	Body	52.29	1.511	Pass	Pass	Pass	QPSK, RMC-12.2K	Pass	N/A	Jul. 24, 2017
EX3DV4- SN3847	2300	Body	52.03	1.738	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 19, 2017
EX3DV4- SN3847	2450	Body	52.40	1.964	Pass	Pass	Pass	DSSS.OFDM	Pass	N/A	Aug. 01, 2017
EX3DV4- SN3847	2600	Body	50.75	2.193	Pass	Pass	Pass	QPSK	Pass	N/A	Jul. 20, 2017
EX3DV4- SN3847	5200	Body	48.77	5.245	Pass	Pass	Pass	OFDM	Pass	N/A	Jul. 28, 2017
EX3DV4- SN3847	5200	Body	48.77	5.245	Pass	Pass	Pass	OFDM	Pass	N/A	Jul. 31, 2017
EX3DV4- SN3847	5800	Body	47.28	6.131	Pass	Pass	Pass	OFDM	Pass	N/A	Jul. 31, 2017



8. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1004	08/23/2016	08/23/2017
SPEAG	835MHz System Validation Kit	D835V2	4d082	08/23/2016	08/23/2017
SPEAG	1750MHz System Validation Kit	D1750V2	1023	06/27/2017	06/27/2018
SPEAG	1900MHz System Validation Kit	D1900V2	5d111	08/25/2016	08/25/2017
SPEAG	2300MHz System Validation Kit	D2300V2	1005	10/25/2016	10/25/2017
SPEAG	2450MHz System Validation Kit	D2450V2	712	03/23/2017	03/23/2018
SPEAG	2600MHz System Validation Kit	D2600V2	1007	10/25/2016	10/25/2017
SPEAG	5GHz System Validation Kit	D5GHzV2	1021	04/26/2017	04/26/2018
SPEAG	Dosimetric E-Field Probe	EX3DV4	3847	05/05/2017	05/05/2018
SPEAG	Data Acquisition Electronics	DAE4	541	02/13/2017	02/13/2018
SPEAG	Measurement Server	SE UMS 011 AA	1025	NCR	
SPEAG	Device Holder	N/A	N/A	NCR	
SPEAG	Phantom	ELI V5.0	1133	NCR	
SPEAG	Robot	Staubli TX90XL	F07/564ZA1/A/01	NCR	
SPEAG	Software	DASY52 V52.8 (8)	N/A	NCR	
SPEAG	Software	SEMCAD X V14.6.10(7331)	N/A	NCR	
R&S	Wireless Communication Test Set	CMU200	109369	12/01/2016	12/01/2017
Anritsu	Radio Communication Analyzer	MT8821C	6201060962	12/05/2016	12/05/2017
Agilent	Dielectric Probe Kit	85070C	US99360094	NCR	
HILA	Digital Thermometer	TM-906	GF-006	08/12/2016	08/12/2017
Agilent	Power Sensor	8481H	3318A20779	06/07/2017	06/07/2018
Agilent	Power Meter	EDM Series E4418B	GB40206143	06/07/2017	06/07/2018
Agilent	Signal Generator	E8257D	MY53050382	03/01/2017	03/01/2018
Agilent	Dual Directional Coupler	778D	50334	NCR	
Woken	Dual Directional Coupler	0100AZ20200801O	11012409517	NCR	
Mini-Circuits	Power Amplifier	ZHL-42W-SMA	D111103#5	NCR	
Mini-Circuits	Power Amplifier	ZVE-8G-SMA	D042005 671800514	NCR	
Aisi	Attenuator	IEAT 3dB	N/A	NCR	

Table 6. Test Equipment List



9. **Measurement Uncertainty**

Measurement uncertainties in SAR measurements are difficult to quantify due to several variables including biological, physiological, and environmental. However, we estimate the measurement uncertainties in SAR_{1g} to be less than $\pm 21.76\%$ for 300MHz ~3GHz and 3GHz ~ 6GHz $\pm 25.68\%$ [8] .

According to Std. C95.3 [9], the overall uncertainties are difficult to assess and will vary with the type of meter and usage situation. However, accuracy's of ± 1 to 3 dB can be expected in practice, with greater uncertainties in near-field situations and at higher frequencies (shorter wavelengths), or areas where large reflecting objects are present. Under optimum measurement conditions, SAR measurement uncertainties of at least ± 2 dB can be expected.



Uncertainty of a Measure SAR of EUT with DASY System

Item	Uncertainty Component	Uncertainty Value	Prob. Dist	Div.	c_i (1g)	c_i (10g)	Std. Unc. (1-g)	Std. Unc. (10-g)	V_i or V_{eff}
Measurement System									
u1	Probe Calibration ($k=1$)	±6.0%	Normal	1	1	1	±6.0%	±6.0%	∞
u2	Axial Isotropy	±4.7%	Rectangular	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
u3	Hemispherical Isotropy	±9.6%	Rectangular	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	
u4	Boundary Effect	±1.0%	Rectangular	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
u5	Linearity	±4.7%	Rectangular	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
u6	System Detection Limit	±1.0%	Rectangular	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
u7	Readout Electronics	±0.3%	Normal	1	1	1	±0.3%	±0.3%	∞
u8	Response Time	±0.8%	Rectangular	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
u9	Integration Time	±1.9%	Rectangular	$\sqrt{3}$	1	1	±1.1%	±1.1%	∞
u10	RF Ambient Conditions	±3.0%	Rectangular	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
u11	RF Ambient Reflections	±3.0%	Rectangular	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
u12	Probe Positioner Mechanical Tolerance	±0.4%	Rectangular	$\sqrt{3}$	1	1	±0.2%	±0.2%	∞
u13	Probe Positioning with respect to Phantom Shell	±2.9%	Rectangular	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
u14	Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation	±1.0%	Rectangular	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Test sample Related									
u15	Test sample Positioning	±3.6%	Normal	1	1	1	±3.6%	±3.6%	89
u16	Device Holder Uncertainty	±2.7%	Normal	1	1	1	±2.7%	±2.7%	5
u17	Output Power Variation - SAR drift measurement	±5.0%	Rectangular	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Phantom and Tissue Parameters									
u18	Phantom Uncertainty (shape and thickness tolerances)	±4.0%	Rectangular	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
u19	Liquid Conductivity - deviation from target values	±5.0%	Rectangular	$\sqrt{3}$	0.64	0.43	±1.8%	±1.2%	∞
u20	Liquid Conductivity - measurement uncertainty	±2.5%	Normal	1	0.64	0.43	±1.6%	±1.08%	69
u21	Liquid Permittivity - deviation from target values	±5.0%	Rectangular	$\sqrt{3}$	0.6	0.49	±1.7%	±1.4%	∞
u22	Liquid Permittivity - measurement uncertainty	±2.5%	Normal	1	0.6	0.49	±1.5%	±1.23%	69
Combined standard uncertainty			RSS				±10.88%	±10.66%	313
Expanded uncertainty (95% CONFIDENCE LEVEL)			$k=2$				±21.76%	±21.31%	

Table 7. Uncertainty Budget for frequency range 300MHz to 3GHz



Uncertainty of a Measure SAR of EUT with DASY System

Item	Uncertainty Component	Uncertainty Value	Prob. Dist	Div.	c_i (1g)	c_i (10g)	Std. Unc. (1-g)	Std. Unc. (10-g)	V_i or V_{eff}
Measurement System									
u1	Probe Calibration ($k=1$)	±6.5%	Normal	1	1	1	±6.5%	±6.5%	∞
u2	Axial Isotropy	±4.7%	Rectangular	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
u3	Hemispherical Isotropy	±9.6%	Rectangular	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	
u4	Boundary Effect	±2.0%	Rectangular	$\sqrt{3}$	1	1	±1.2%	±1.2%	∞
u5	Linearity	±4.7%	Rectangular	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
u6	System Detection Limit	±1.0%	Rectangular	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
u7	Readout Electronics	±0.0%	Normal	1	1	1	±0.0%	±0.0%	∞
u8	Response Time	±0.8%	Rectangular	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
u9	Integration Time	±2.8%	Rectangular	$\sqrt{3}$	1	1	±2.8%	±2.8%	∞
u10	RF Ambient Conditions	±3.0%	Rectangular	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
u11	RF Ambient Reflections	±3.0%	Rectangular	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
u12	Probe Positioner Mechanical Tolerance	±0.7%	Rectangular	$\sqrt{3}$	1	1	±0.7%	±0.7%	∞
u13	Probe Positioning with respect to Phantom Shell	±9.9%	Rectangular	$\sqrt{3}$	1	1	±5.7%	±5.7%	∞
u14	Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation	±3.0%	Rectangular	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Test sample Related									
u15	Test sample Positioning	±3.6%	Normal	1	1	1	±3.6%	±3.6%	89
u16	Device Holder Uncertainty	±2.7%	Normal	1	1	1	±2.7%	±2.7%	5
u17	Output Power Variation - SAR drift measurement	±5.0%	Rectangular	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Phantom and Tissue Parameters									
u18	Phantom Uncertainty (shape and thickness tolerances)	±4.0%	Rectangular	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
u19	Liquid Conductivity - deviation from target values	±5.0%	Rectangular	$\sqrt{3}$	0.64	0.43	±1.8%	±1.2%	∞
u20	Liquid Conductivity - measurement uncertainty	±2.5%	Normal	1	0.64	0.43	±1.6%	±1.08%	69
u21	Liquid Permittivity - deviation from target values	±5.0%	Rectangular	$\sqrt{3}$	0.6	0.49	±1.7%	±1.4%	∞
u22	Liquid Permittivity - measurement uncertainty	±2.5%	Normal	1	0.6	0.49	±1.5%	±1.23%	69
Combined standard uncertainty			RSS				±12.84%	±12.65%	313
Expanded uncertainty (95% CONFIDENCE LEVEL)			$k=2$				±25.68%	±25.29%	

Table 8. Uncertainty Budget for frequency range 3GHz to 6GHz



10. **Measurement Procedure**

The measurement procedures are as follows:

1. For WLAN function, engineering testing software installed on Notebook can provide continuous transmitting signal.
2. Measure output power through RF cable and power meter
3. Set scan area, grid size and other setting on the DASY software
4. Find out the largest SAR result on these testing positions of each band
5. Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

1. Power reference measurement
2. Area scan
3. Zoom scan
4. Power drift measurement

10.1 **Spatial Peak SAR Evaluation**

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages

1. Extraction of the measured data (grid and values) from the Zoom Scan
2. Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
3. Generation of a high-resolution mesh within the measured volume
4. Interpolation of all measured values from the measurement grid to the high-resolution grid
5. Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
6. Calculation of the averaged SAR within masses of 1g and 10g



10.2 Area & Zoom Scan Procedures

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

Grid Type	Frequency		Step size (mm)			X*Y*Z (Point)	Cube size			Step size		
			X	Y	Z		X	Y	Z	X	Y	Z
uniform grid	≤ 3GHz	≤ 2GHz	≤ 8	≤ 8	≤ 5	5*5*7	32	32	30	8	8	5
		2G - 3G	≤ 5	≤ 5	≤ 5	7*7*7	30	30	30	5	5	5
	3 - 6GHz	3 - 4GHz	≤ 5	≤ 5	≤ 4	7*7*8	30	30	28	5	5	4
		4 - 5GHz	≤ 4	≤ 4	≤ 3	8*8*10	28	28	27	4	4	3
		5 - 6GHz	≤ 4	≤ 4	≤ 2	8*8*12	28	28	22	4	4	2

(Our measure settings are refer KDB Publication 865664 D01v01r04)

10.3 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the DUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

10.4 SAR Averaged Methods

In DASYS, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation. Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

10.5 Power Drift Monitoring

All SAR testing is under the DUT install full charged battery and transmit maximum output power. In DASYS measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of DUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drift more than 5%, the SAR will be retested.



11. SAR Test Results Summary

1. When the WWAN band channel's reported SAR1g of the position is > 0.8 W/kg, low, middle and high channel are supposed to be tested.(WCDMA/LTE)
2. Require the middle channel to be tested first , if the maximum output power variation across the required test channels is $> \frac{1}{2}$ dB, instead of the middle channel, the highest output power channel must be used.
3. When the overall length and width of a device is > 9 cm x 5 cm ($\sim 3.5''$ x 2''), a test separation distance of 10 mm is required for hotspot mode SAR measurements.
4. Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge,middle and lower edge of each required test channel.
5. When the highest reported SAR for 1 RB and 50% RB allocation are > 0.8 W/kg, SAR is measured for the highest output power channel in 100%RB.
6. The procedures required for 1 RB allocation are applied to measure the SAR for QPSK with 50% RB allocation.
7. This device only supports 4RX MIMO and DL CA, RX usually will not affect the TX function. The single band results is already worst-case.
8. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.
9. The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) configurations with 12.2 kbps RMC as the primary mode.
10. When the reported SAR of the highest measured maximum output power channel is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS.
11. When KDB Publication 447498 SAR test exclusion is applies, SAR is not required for 2.4G OFDM configuration.
12. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for 2.4G OFDM configuration.
13. SAR for the initial test configuration is measured using the highest maximum output power channel.
14. When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n.
15. When the highest reported SAR for the initial test configuration, according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

11.1 Head SAR Measurement

Evaluated head SAR is not available.

11.2 Body SAR Measurement

Evaluated body SAR is not available.



11.3 Hot-spot mode SAR Measurement

Index.	Band	Frequency		Modulation or Sub-Test	Test Position	Spacing (mm)	SAR _{1g}	Power Drift	Burst Avg Power	Max tune-up	Reported SAR _{1g} (W/kg)
		Ch.	MHz				(W/Kg)				
#120	WCDMA Band II	9262	1852.4	RMC12.2K	Side1	10	0.842	-0.09	23.89	24	0.86
#114	WCDMA Band II	9400	1880.0	RMC12.2K	Side1	10	0.765	-0.16	23.76	24	0.81
#121	WCDMA Band II	9538	1907.6	RMC12.2K	Side1	10	0.641	-0.07	23.81	24	0.67
#115	WCDMA Band II	9400	1880.0	RMC12.2K	Side2	10	0.749	0.16	23.76	24	0.79
#116	WCDMA Band II	9400	1880.0	RMC12.2K	Side3	10	0.013	0.18	23.76	24	0.01
#122	WCDMA Band II	9262	1852.4	RMC12.2K	Side4	10	1.01	-0.17	23.89	24	1.04
#117	WCDMA Band II	9400	1880.0	RMC12.2K	Side4	10	0.995	-0.14	23.76	24	1.05
#123	WCDMA Band II	9538	1907.6	RMC12.2K	Side4	10	0.909	-0.13	23.81	24	0.95
#118	WCDMA Band II	9400	1880.0	RMC12.2K	Side5	10	0.576	0.07	23.76	24	0.61
#84	WCDMA Band V	4183	836.6	RMC12.2K	Side1	10	0.629	-0.05	23.73	24	0.67
#85	WCDMA Band V	4183	836.6	RMC12.2K	Side2	10	0.654	-0.04	23.73	24	0.70
#86	WCDMA Band V	4183	836.6	RMC12.2K	Side3	10	0.162	-0.01	23.73	24	0.17
#87	WCDMA Band V	4183	836.6	RMC12.2K	Side4	10	0.229	-0.04	23.73	24	0.24
#88	WCDMA Band V	4183	836.6	RMC12.2K	Side5	10	0.213	0.06	23.73	24	0.23



Index.	Band	Frequency		Modulation	BW	RB Size	RB Offset	Test Position	Spacing (mm)	SAR _{1g}	Power Drift	Burst Avg Power	Max tune-up	Reported SAR _{1g} (W/kg)
		Ch.	MHz							(W/Kg)				
#1	LTE Band2	18900	1880.0	QPSK	20MHz	1	49	Side1	10	0.463	0.01	23.33	24	0.54
#4	LTE Band2	18700	1860.0	QPSK	20MHz	1	49	Side2	10	0.734	-0.05	23.40	24	0.84
#3	LTE Band2	18900	1880.0	QPSK	20MHz	1	49	Side2	10	0.692	-0.05	23.33	24	0.81
#5	LTE Band2	19100	1900.0	QPSK	20MHz	1	49	Side2	10	0.649	-0.12	23.31	24	0.76
#8	LTE Band2	18900	1880.0	QPSK	20MHz	1	49	Side3	10	0.015	0.06	23.33	24	0.02
#12	LTE Band2	18700	1860.0	QPSK	20MHz	1	49	Side4	10	1.04	-0.16	23.40	24	1.19
#11	LTE Band2	18900	1880.0	QPSK	20MHz	1	49	Side4	10	1.03	-0.12	23.33	24	1.20
#13	LTE Band2	19100	1900.0	QPSK	20MHz	1	49	Side4	10	0.998	-0.13	23.31	24	1.17
#17	LTE Band2	18900	1880.0	QPSK	20MHz	1	49	Side5	10	0.469	0.16	23.33	24	0.55
#2	LTE Band2	18900	1880.0	QPSK	20MHz	50	25	Side1	10	0.376	-0.01	22.28	22.5	0.40
#6	LTE Band2	18900	1880.0	QPSK	20MHz	50	25	Side2	10	0.552	-0.01	22.28	22.5	0.58
#9	LTE Band2	18900	1880.0	QPSK	20MHz	50	25	Side3	10	0.012	0.19	22.28	22.5	0.01
#15	LTE Band2	18700	1860.0	QPSK	20MHz	50	25	Side4	10	0.805	-0.14	22.36	22.5	0.83
#10	LTE Band2	18900	1880.0	QPSK	20MHz	50	25	Side4	10	0.834	-0.18	22.28	22.5	0.88
#14	LTE Band2	19100	1900.0	QPSK	20MHz	50	25	Side4	10	0.67	-0.19	22.22	22.5	0.71
#18	LTE Band2	18900	1880.0	QPSK	20MHz	50	25	Side5	10	0.381	0.15	22.28	22.5	0.40
#7	LTE Band2	18700	1860.0	QPSK	20MHz	100	0	Side2	10	0.593	0.01	22.35	22.5	0.61
#16	LTE Band2	18700	1860.0	QPSK	20MHz	100	0	Side4	10	0.805	-0.13	22.35	22.5	0.83



Index.	Band	Frequency		Modulation	BW	RB Size	RB Offset	Test Position	Spacing (mm)	SAR _{1g}	Power Drift	Burst Avg Power	Max tune-up	Reported SAR _{1g} (W/kg)
		Ch.	MHz							(W/Kg)				
#71	LTE Band4	20050	1720.0	QPSK	20MHz	1	0	Side1	10	0.781	-0.03	23.30	24	0.92
#59	LTE Band4	20175	1732.5	QPSK	20MHz	1	0	Side1	10	0.794	-0.04	23.01	24	1.00
#72	LTE Band4	20300	1745.0	QPSK	20MHz	1	49	Side1	10	0.773	-0.09	23.03	24	0.97
#74	LTE Band4	20050	1720.0	QPSK	20MHz	1	0	Side2	10	0.977	0.08	23.30	24	1.15
#60	LTE Band4	20175	1732.5	QPSK	20MHz	1	0	Side2	10	0.957	0.13	23.01	24	1.20
#75	LTE Band4	20300	1745.0	QPSK	20MHz	1	49	Side2	10	0.884	0.09	23.03	24	1.11
#61	LTE Band4	20175	1732.5	QPSK	20MHz	1	0	Side3	10	0.014	0.02	23.01	24	0.02
#80	LTE Band4	20050	1720.0	QPSK	20MHz	1	0	Side4	10	0.765	-0.14	23.30	24	0.90
#62	LTE Band4	20175	1732.5	QPSK	20MHz	1	0	Side4	10	0.818	0.18	23.01	24	1.03
#81	LTE Band4	20300	1745.0	QPSK	20MHz	1	49	Side4	10	0.82	-0.14	23.03	24	1.03
#77	LTE Band4	20050	1720.0	QPSK	20MHz	1	0	Side5	10	0.706	0.06	23.30	24	0.83
#63	LTE Band4	20175	1732.5	QPSK	20MHz	1	0	Side5	10	0.693	0.06	23.01	24	0.87
#78	LTE Band4	20300	1745.0	QPSK	20MHz	1	49	Side5	10	0.608	0.07	23.03	24	0.76
#65	LTE Band4	20175	1732.5	QPSK	20MHz	50	25	Side1	10	0.635	-0.04	23.21	23.5	0.68
#66	LTE Band4	20175	1732.5	QPSK	20MHz	50	25	Side2	10	0.737	0	23.21	23.5	0.79
#67	LTE Band4	20175	1732.5	QPSK	20MHz	50	25	Side3	10	0.011	-0.15	23.21	23.5	0.01
#68	LTE Band4	20175	1732.5	QPSK	20MHz	50	25	Side4	10	0.649	-0.12	23.21	23.5	0.69
#69	LTE Band4	20175	1732.5	QPSK	20MHz	50	25	Side5	10	0.52	0.09	23.21	23.5	0.56
#73	LTE Band4	20050	1720.0	QPSK	20MHz	100	0	Side1	10	0.623	-0.03	22.22	22.5	0.66
#76	LTE Band4	20050	1720.0	QPSK	20MHz	100	0	Side2	10	0.745	0.03	22.22	22.5	0.79
#82	LTE Band4	20050	1720.0	QPSK	20MHz	100	0	Side4	10	0.613	-0.09	22.22	22.5	0.65
#79	LTE Band4	20050	1720.0	QPSK	20MHz	100	0	Side5	10	0.533	0.09	22.22	22.5	0.57



Index.	Band	Frequency		Modulation	BW	RB Size	RB Offset	Test Position	Spacing (mm)	SAR _{1g}	Power Drift	Burst Avg Power	Max tune-up	Reported SAR _{1g} (W/kg)
		Ch.	MHz							(W/Kg)				
#90	LTE Band5	20525	836.5	QPSK	10MHz	1	0	Side1	10	0.501	-0.05	22.93	24	0.64
#125	LTE Band5	20450	829.0	QPSK	10MHz	1	0	Side2	10	0.307	-0.02	23.14	24	0.37
#91	LTE Band5	20525	836.5	QPSK	10MHz	1	0	Side2	10	0.673	-0.02	22.93	24	0.86
#126	LTE Band5	20600	844.0	QPSK	10MHz	1	0	Side2	10	0.252	-0.07	23.02	24	0.32
#92	LTE Band5	20525	836.5	QPSK	10MHz	1	0	Side3	10	0.159	0	22.93	24	0.20
#93	LTE Band5	20525	836.5	QPSK	10MHz	1	0	Side4	10	0.243	0.01	22.93	24	0.31
#94	LTE Band5	20525	836.5	QPSK	10MHz	1	0	Side5	10	0.177	0.12	22.93	24	0.23
#96	LTE Band5	20525	836.5	QPSK	10MHz	25	12	Side1	10	0.382	-0.03	22.02	24	0.60
#97	LTE Band5	20525	836.5	QPSK	10MHz	25	12	Side2	10	0.495	-0.03	22.02	24	0.78
#98	LTE Band5	20525	836.5	QPSK	10MHz	25	12	Side3	10	0.123	0	22.02	24	0.19
#99	LTE Band5	20525	836.5	QPSK	10MHz	25	12	Side4	10	0.166	-0.01	22.02	24	0.26
#100	LTE Band5	20525	836.5	QPSK	10MHz	25	12	Side5	10	0.141	0.17	22.02	24	0.22
#127	LTE Band5	20525	836.5	QPSK	10MHz	50	0	Side2	10	0.283	-0.04	21.93	22	0.29
#49	LTE Band7	20850	2510.0	QPSK	20MHz	1	0	Side1	10	0.866	0.15	23.04	24	1.08
#37	LTE Band7	21100	2535.0	QPSK	20MHz	1	49	Side1	10	0.711	-0.08	23.01	24	0.89
#50	LTE Band7	21350	2560.0	QPSK	20MHz	1	0	Side1	10	0.799	-0.07	23.34	24	0.93
#51	LTE Band7	20850	2510.0	QPSK	20MHz	1	0	Side2	10	0.663	0.11	23.04	24	0.83
#38	LTE Band7	21100	2535.0	QPSK	20MHz	1	49	Side2	10	0.647	0.03	23.01	24	0.81
#52	LTE Band7	21350	2560.0	QPSK	20MHz	1	0	Side2	10	0.734	0.11	23.34	24	0.85
#39	LTE Band7	21100	2535.0	QPSK	20MHz	1	49	Side3	10	0.025	0.1	23.01	24	0.03
#55	LTE Band7	20850	2510.0	QPSK	20MHz	1	0	Side4	10	0.827	-0.08	23.04	24	1.03
#40	LTE Band7	21100	2535.0	QPSK	20MHz	1	49	Side4	10	0.871	0.05	23.01	24	1.09
#56	LTE Band7	21350	2560.0	QPSK	20MHz	1	0	Side4	10	0.873	-0.04	23.34	24	1.02
#41	LTE Band7	21100	2535.0	QPSK	20MHz	1	49	Side5	10	0.529	-0.02	23.01	24	0.66
#43	LTE Band7	21100	2535.0	QPSK	20MHz	50	0	Side1	10	0.581	-0.08	22.02	22.5	0.65
#44	LTE Band7	21100	2535.0	QPSK	20MHz	50	0	Side2	10	0.508	0.14	22.02	22.5	0.57
#45	LTE Band7	21100	2535.0	QPSK	20MHz	50	0	Side3	10	0.02	-0.08	22.02	22.5	0.02
#46	LTE Band7	21100	2535.0	QPSK	20MHz	50	0	Side4	10	0.705	-0.1	22.02	22.5	0.79
#47	LTE Band7	21100	2535.0	QPSK	20MHz	50	0	Side5	10	0.419	-0.1	22.02	22.5	0.47
#53	LTE Band7	21350	2560.0	QPSK	20MHz	100	0	Side1	10	0.617	0.07	22.37	22.5	0.64
#54	LTE Band7	21350	2560.0	QPSK	20MHz	100	0	Side2	10	0.573	0.17	22.37	22.5	0.59
#57	LTE Band7	21350	2560.0	QPSK	20MHz	100	0	Side4	10	0.674	-0.03	22.37	22.5	0.69



Index.	Band	Frequency		Modulation	BW	RB Size	RB Offset	Test Position	Spacing (mm)	SAR _{1g}	Power Drift	Burst Avg Power	Max tune-up	Reported SAR _{1g} (W/kg)
		Ch.	MHz							(W/Kg)				
#102	LTE Band12	23095	707.5	QPSK	10MHz	1	0	Side1	10	0.438	-0.07	22.96	24	0.56
#103	LTE Band12	23095	707.5	QPSK	10MHz	1	0	Side2	10	0.488	-0.03	22.96	24	0.62
#104	LTE Band12	23095	707.5	QPSK	10MHz	1	0	Side3	10	0.077	0	22.96	24	0.10
#105	LTE Band12	23095	707.5	QPSK	10MHz	1	0	Side4	10	0.176	-0.03	22.96	24	0.22
#106	LTE Band12	23095	707.5	QPSK	10MHz	1	0	Side5	10	0.059	0.06	22.96	24	0.07
#108	LTE Band12	23095	707.5	QPSK	10MHz	25	25	Side1	10	0.31	0	21.89	22.5	0.36
#109	LTE Band12	23095	707.5	QPSK	10MHz	25	25	Side2	10	0.299	0	21.89	22.5	0.34
#110	LTE Band12	23095	707.5	QPSK	10MHz	25	25	Side3	10	0.049	0.03	21.89	22.5	0.06
#111	LTE Band12	23095	707.5	QPSK	10MHz	25	25	Side4	10	0.125	-0.02	21.89	22.5	0.14
#112	LTE Band12	23095	707.5	QPSK	10MHz	25	25	Side5	10	0.048	0.07	21.89	22.5	0.06
#22	LTE Band30	27710	2310.0	QPSK	10MHz	1	0	Side1	10	1.08	0.03	22.97	23	1.09
#23	LTE Band30	27710	2310.0	QPSK	10MHz	1	0	Side2	10	0.395	-0.04	22.97	23	0.40
#24	LTE Band30	27710	2310.0	QPSK	10MHz	1	0	Side3	10	0.078	-0.07	22.97	23	0.08
#25	LTE Band30	27710	2310.0	QPSK	10MHz	1	0	Side4	10	0.221	0.16	22.97	23	0.22
#26	LTE Band30	27710	2310.0	QPSK	10MHz	1	0	Side5	10	0.629	-0.1	22.97	23	0.63
#28	LTE Band30	27710	2310.0	QPSK	10MHz	25	0	Side1	10	0.854	0.03	21.99	22.5	0.96
#29	LTE Band30	27710	2310.0	QPSK	10MHz	25	0	Side2	10	0.352	0.17	21.99	22.5	0.40
#30	LTE Band30	27710	2310.0	QPSK	10MHz	25	0	Side3	10	0.068	0.04	21.99	22.5	0.08
#31	LTE Band30	27710	2310.0	QPSK	10MHz	25	0	Side4	10	0.191	-0.13	21.99	22.5	0.21
#32	LTE Band30	27710	2310.0	QPSK	10MHz	25	0	Side5	10	0.498	0.03	21.99	22.5	0.56
#34	LTE Band30	27710	2310.0	QPSK	10MHz	50	0	Side1	10	0.888	0.13	21.96	22	0.90
#35	LTE Band30	27710	2310.0	QPSK	10MHz	50	0	Side5	10	0.497	-0.01	21.96	22	0.50



Index.	Band	Frequency		Modulation	BW	RB Size	RB Offset	Test Position	Spacing	SAR _{1g}	Power Drift	Burst Avg Power	Max tune-up	Reported SAR _{1g} (W/kg)
		Ch.	MHz						(mm)	(W/Kg)				
#140	LTE Band66	132072	1720.0	QPSK	20MHz	1	0	Side1	10	0.653	-0.19	23.29	24	0.77
#128	LTE Band66	132197	1732.5	QPSK	20MHz	1	0	Side1	10	0.713	-0.04	23.11	24	0.88
#141	LTE Band66	132322	1745.0	QPSK	20MHz	1	0	Side1	10	0.636	-0.18	23.33	24	0.74
#143	LTE Band66	132072	1720.0	QPSK	20MHz	1	0	Side2	10	0.808	0.08	23.29	24	0.95
#129	LTE Band66	132197	1732.5	QPSK	20MHz	1	0	Side2	10	0.819	0.04	23.11	24	1.01
#144	LTE Band66	132322	1745.0	QPSK	20MHz	1	0	Side2	10	0.739	0.03	23.33	24	0.86
#130	LTE Band66	132197	1732.5	QPSK	20MHz	1	0	Side3	10	0.014	0.12	23.11	24	0.02
#146	LTE Band66	132072	1720.0	QPSK	20MHz	1	0	Side4	10	0.829	-0.18	23.29	24	0.98
#131	LTE Band66	132197	1732.5	QPSK	20MHz	1	0	Side4	10	0.802	0.09	23.11	24	0.98
#147	LTE Band66	132322	1745.0	QPSK	20MHz	1	0	Side4	10	0.831	-0.11	23.33	24	0.97
#132	LTE Band66	132197	1732.5	QPSK	20MHz	1	0	Side5	10	0.515	-0.09	23.11	24	0.63
#134	LTE Band66	132197	1732.5	QPSK	20MHz	50	0	Side1	10	0.566	-0.03	22.27	22.5	0.60
#135	LTE Band66	132197	1732.5	QPSK	20MHz	50	0	Side2	10	0.645	0.06	22.27	22.5	0.68
#136	LTE Band66	132197	1732.5	QPSK	20MHz	50	0	Side3	10	0.011	-0.11	22.27	22.5	0.01
#137	LTE Band66	132197	1732.5	QPSK	20MHz	50	0	Side4	10	0.62	-0.07	22.27	22.5	0.65
#138	LTE Band66	132197	1732.5	QPSK	20MHz	50	0	Side5	10	0.394	0.07	22.27	22.5	0.42
#142	LTE Band66	132072	1720.0	QPSK	20MHz	100	0	Side1	10	0.509	-0.09	22.41	22.5	0.52
#145	LTE Band66	132072	1720.0	QPSK	20MHz	100	0	Side2	10	0.614	0.07	22.41	22.5	0.63
#148	LTE Band66	132072	1720.0	QPSK	20MHz	100	0	Side4	10	0.657	-0.1	22.41	22.5	0.67



Index.	Band	Frequency		Data Rate	Test Position	Spacing (mm)	Remark	SAR _{1g}	Power Drift	Burst Avg Powe	Max tune-up	Reported SAR 1g (W/kg)
		Ch.	MHz					(W/Kg)				
#162	IEEE 802.11b	11	2462.0	1M	Side 1	10	Ant-0	0.127	0.06	8.95	10	0.16
#163	IEEE 802.11b	11	2462.0	1M	Side 2	10	Ant-0	0.072	0.09	8.95	10	0.09
#164	IEEE 802.11b	11	2462.0	1M	Side 4	10	Ant-0	0.00343	0.13	8.95	10	0.00
#165	IEEE 802.11b	11	2462.0	1M	Side 5	10	Ant-0	0.047	0.16	8.95	10	0.06
#166	IEEE 802.11g	6	2437.0	6M	Side 1	10	Ant-0	0.035	-0.05	8.90	10	0.05
#167	IEEE 802.11g	6	2437.0	6M	Side 2	10	Ant-0	0.029	0.04	8.90	10	0.04
#168	IEEE 802.11g	6	2437.0	6M	Side 4	10	Ant-0	0.00309	-0.01	8.90	10	0.00
#169	IEEE 802.11g	6	2437.0	6M	Side 5	10	Ant-0	0.00218	0.17	8.90	10	0.00
#174	IEEE 802.11a	36	5180.0	6M	Side 1	10	Ant-0	0.025	-0.13	8.93	10	0.03
#150	IEEE 802.11a	36	5180.0	6M	Side 2	10	Ant-0	0.055	-0.04	8.93	10	0.07
#151	IEEE 802.11a	36	5180.0	6M	Side 4	10	Ant-0	0.00464	-0.17	8.93	10	0.01
#152	IEEE 802.11a	36	5180.0	6M	Side 5	10	Ant-0	0.011	0.19	8.93	10	0.01
#175	IEEE 802.11a	161	5805.0	6M	Side 1	10	Ant-0	0.046	-0.17	8.56	10	0.06
#156	IEEE 802.11a	161	5805.0	6M	Side 2	10	Ant-0	0.078	-0.01	8.56	10	0.11
#157	IEEE 802.11a	161	5805.0	6M	Side 4	10	Ant-0	0.00858	0	8.56	10	0.01
#158	IEEE 802.11a	161	5805.0	6M	Side 5	10	Ant-0	0.011	0.14	8.56	10	0.02
#170	IEEE 802.11g	11	2462.0	6M	Side 1	10	Ant-1	0.023	-0.09	8.87	10	0.03
#171	IEEE 802.11g	11	2462.0	6M	Side 2	10	Ant-1	0.0088	-0.1	8.87	10	0.01
#172	IEEE 802.11g	11	2462.0	6M	Side 4	10	Ant-1	0.00315	0.02	8.87	10	0.00
#173	IEEE 802.11g	11	2462.0	6M	Side 5	10	Ant-1	0.00499	-0.12	8.87	10	0.01
#176	IEEE 802.11a	36	5180.0	6M	Side 1	10	Ant-1	0.054	-0.18	8.98	10	0.07
#153	IEEE 802.11a	36	5180.0	6M	Side 2	10	Ant-1	0.00969	-0.13	8.98	10	0.01
#154	IEEE 802.11a	36	5180.0	6M	Side 4	10	Ant-1	0.00303	-0.11	8.98	10	0.00
#155	IEEE 802.11a	36	5180.0	6M	Side 5	10	Ant-1	0.011	0.05	8.98	10	0.01
#177	IEEE 802.11a	149	5745.0	6M	Side 1	10	Ant-1	0.059	0.14	8.92	10	0.08
#159	IEEE 802.11a	149	5745.0	6M	Side 2	10	Ant-1	0.02	-0.19	8.92	10	0.03
#160	IEEE 802.11a	149	5745.0	6M	Side 4	10	Ant-1	0.00554	0	8.92	10	0.01
#161	IEEE 802.11a	149	5745.0	6M	Side 5	10	Ant-1	0.015	-0.12	8.92	10	0.02

W10_3.8V Battery spot check														
Index.	Band	Frequency		Modulation	BW	RB Size	RB Offset	Test Position	Spacing	SAR _{1g}	Power Drift	Burst Avg Powe	Max tune-up	Reported SAR 1g (W/kg)
		Ch.	MHz						(mm)	(W/Kg)				
#19	LTE Band2	18900	1880	QPSK	20MHz	1	49	Side4	10	0.997	-0.06	23.33	24	1.16

Note:

We choose the positions with higher results to test w10_3.8V battery, and the w10a_3.85V results is worst-case.



11.4 Extremity SAR Measurement

Evaluated extremity SAR is not available.

11.5 SAR Variability Measurement

Detailed evaluations please refer KDB 865664 on "SAR test reduction according to KDB" section.

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

1. The original highest measured Reported SAR 1g is ≥ 0.80 W/kg, repeat that measurement once.

2. Perform a second repeated measurement the ratio of largest to smallest SAR for the original and first repeated measurements is < 1.2 , the original or repeated measurement is ≥ 1.45 W/kg ($\sim 10\%$ from the 1-g SAR limit).

3. Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

Index.	Band	Frequency		Modulation or Sub-Test	Test Position	Spacing (mm)	Note	Original SAR _{1g}	First SAR _{1g}	First Ratio	Second SAR _{1g}	Second Ratio	Third SAR _{1g}	Third Ratio
		Ch.	MHz					(W/kg)	(W/kg)		(W/kg)		(W/kg)	
#124	WCDMA Band II	9262	1852	RMC12.2K	Side4	10	original #122_measurement once	1.01	1.01	1 < 1.2	-	-	-	-

Index.	Band	Frequency		Modulation	Bandwidth	RB Size	RB Offset	Test Position	Spacing (mm)	Note	Original SAR _{1g}	First SAR _{1g}	First Ratio	Second SAR _{1g}	Second Ratio	Third SAR _{1g}	Third Ratio
		Ch.	MHz								(W/kg)	(W/kg)		(W/kg)		(W/kg)	
#21	LTE Band2	18700	1860.0	QPSK	20MHz	1	49	Side4	10	original #12	1.04	0.95	1.1 < 1.2	-	-	-	-
#83	LTE Band4	20050	1720.0	QPSK	20MHz	1	0	Side2	10	original #74	0.977	0.853	1.1 < 1.2	-	-	-	-
#58	LTE Band7	21350	2560.0	QPSK	20MHz	1	0	Side4	10	original #56	0.873	0.911	1.1 < 1.2	-	-	-	-
#36	LTE Band30	27710	2310.0	QPSK	10MHz	1	0	Side1	10	original #22	1.08	0.948	1.1 < 1.2	-	-	-	-
#149	LTE Band66	132322	1745.0	QPSK	20MHz	1	0	Side4	10	original #147	0.831	0.831	1 < 1.2	-	-	-	-



11.6 Std. C95.1-1992 RF Exposure Limit

Human Exposure	Population Uncontrolled Exposure (W/kg) or (mW/g)	Occupational Controlled Exposure (W/kg) or (mW/g)
Spatial Peak SAR* (head)	1.60	8.00
Spatial Peak SAR** (Whole Body)	0.08	0.40
Spatial Peak SAR*** (Partial-Body)	1.60	8.00
Spatial Peak SAR**** (Hands / Feet / Ankle / Wrist)	4.00	20.00

Table 9. Safety Limits for Partial Body Exposure

Notes :

- * The Spatial Peak value of the SAR averaged over any 1 gram of tissue. (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
- ** The Spatial Average value of the SAR averaged over the whole – body.
- *** The Spatial Average value of the SAR averaged over the partial – body.
- **** The Spatial Peak value of the SAR averaged over any 10 grams of tissue. (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

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



12. References

- [1] Std. C95.1-1999, "American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 300KHz to 100GHz", New York.
- [2] NCRP, National Council on Radiation Protection and Measurements, "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields", NCRP report NO. 86, 1986.
- [3] T. Schmid, O. Egger, and N. Kuster, "Automatic E-field scanning system for dosimetric assessments", IEEE Transactions on Microwave Theory and Techniques, vol. 44, pp, 105-113, Jan. 1996.
- [4] K. Pokovi^c, T. Schmid, and N. Kuster, "Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequency", in ICECOM'97, Dubrovnik, October 15-17, 1997, pp.120-124.
- [5] K. Pokovi^c, T. Schmid, and N. Kuster, "E-field probe with improved isotropy in brain simulating liquids", in Proceedings of the ELMAR, Zadar, Croatia, 23-25 June, 1996, pp.172-175.
- [6] N. Kuster, and Q. Balzano, "Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300MHz", IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.
- [7] Robert J. Renka, "Multivariate Interpolation Of Large Sets Of Scattered Data", University of North Texas ACM Transactions on Mathematical Software, vol. 14, no. 2, June 1988 , pp. 139-148.
- [8] N. Kuster, R. Kastle, T. Schmid, Dosimetric evaluation of mobile communications equipment with known precision, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.
- [9] Std. C95.3-1991, "IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave, New York: IEEE, Aug. 1992.
- [10] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), Human Exposure to Electromagnetic Fields High-frequency: 10KHz-300GHz, Jan. 1995.
- [11] IEEE Std 1528™-2013 - IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head From Wireless Communications Devices: Measurement Techniques

Appendix A - System Performance Check

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 11:08:55 AM

System Performance Cheak at 750MHz_20170722_Body

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1004

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

Medium parameters used: $f = 750$ MHz; $\sigma = 1.011$ S/m; $\epsilon_r = 54.582$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 750MHz/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.95 W/kg

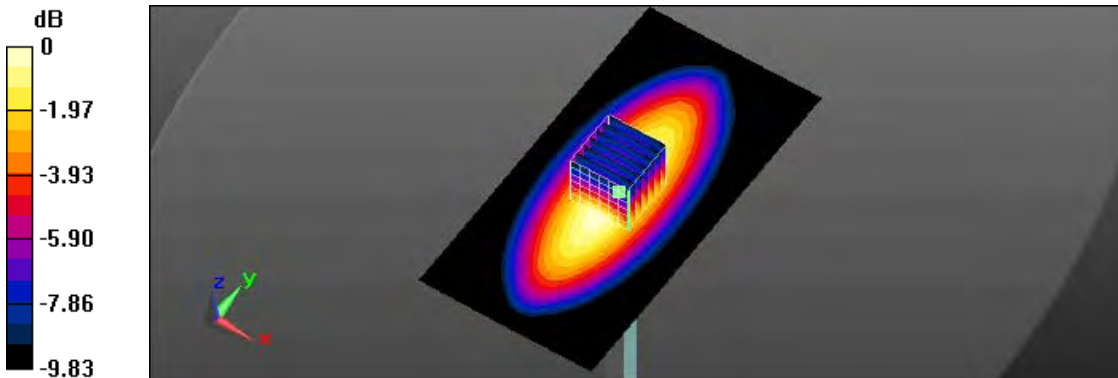
System Performance Cheak at 750MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.38 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 3.42 W/kg

SAR(1 g) = 2.33 W/kg; SAR(10 g) = 1.55 W/kg

Maximum value of SAR (measured) = 2.92 W/kg



0 dB = 2.92 W/kg = 4.65 dBW/kg



Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2017/7/22 04:01:47 AM
System Performance Cheak at 835MHz_20170722_Body
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d082

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.993 \text{ S/m}$; $\epsilon_r = 55.189$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

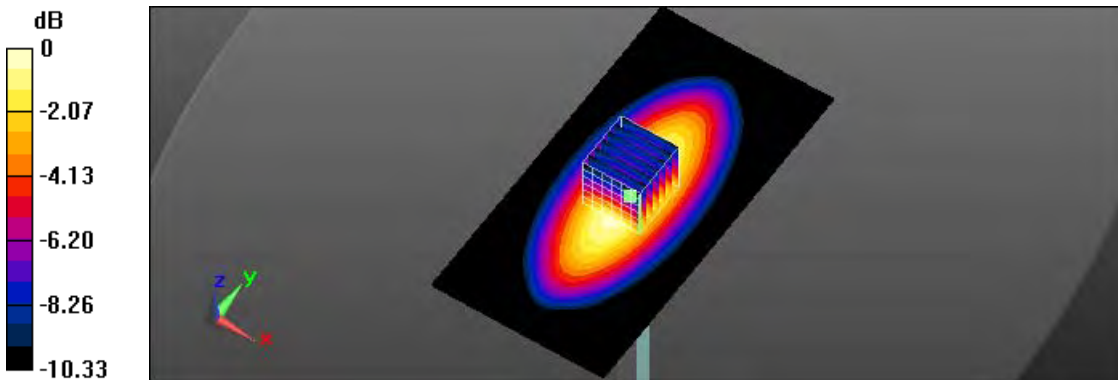
System Performance Cheak at 835MHz/Area Scan (61x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 3.09 W/kg

System Performance Cheak at 835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
Reference Value = 56.93 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 3.64 W/kg

SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.6 W/kg

Maximum value of SAR (measured) = 3.09 W/kg



0 dB = 3.09 W/kg = 4.90 dBW/kg



Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2017/7/24 06:20:51 PM
System Performance Cheak at 835MHz_20170724_Body
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d082

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.993 \text{ S/m}$; $\epsilon_r = 55.189$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

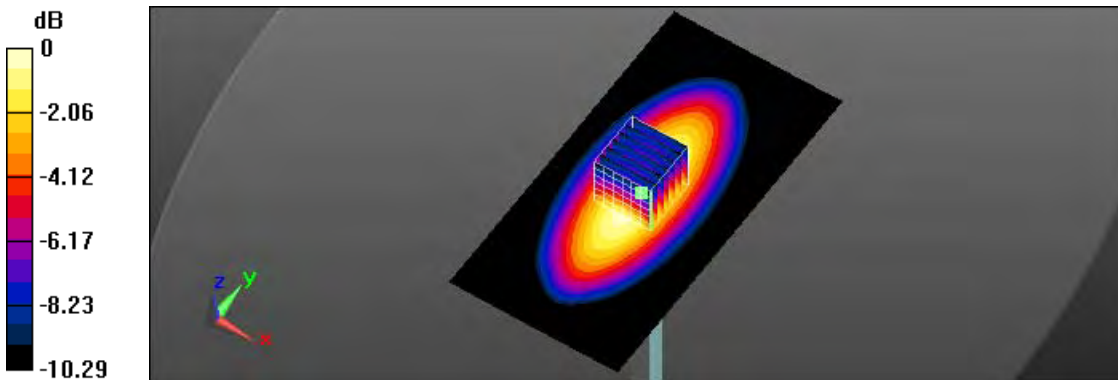
System Performance Cheak at 835MHz/Area Scan (61x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 3.20 W/kg

System Performance Cheak at 835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
Reference Value = 57.86 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.76 W/kg

SAR(1 g) = 2.52 W/kg; SAR(10 g) = 1.65 W/kg

Maximum value of SAR (measured) = 3.20 W/kg



0 dB = 3.20 W/kg = 5.05 dBW/kg



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 02:43:21 PM

System Performance Cheak at 1750MHz_20170721_Body

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1023

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.522$ S/m; $\epsilon_r = 54.021$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 1750MHz/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 13.3 W/kg

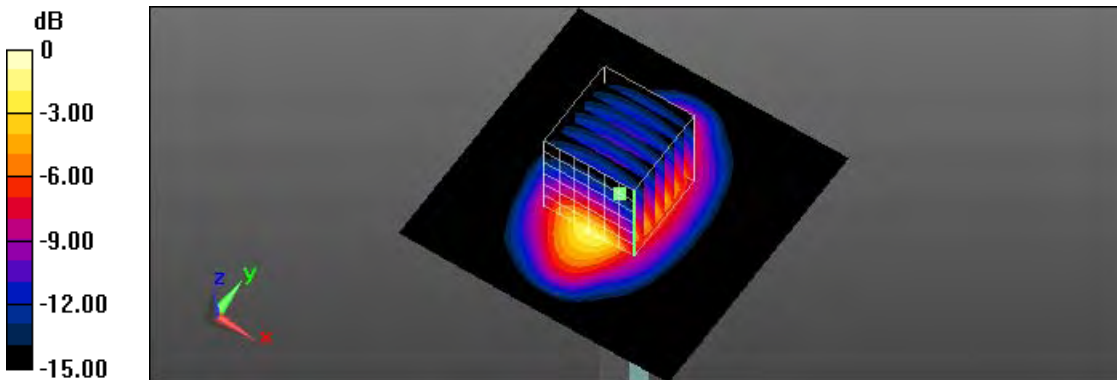
System Performance Cheak at 1750MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.50 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 17.0 W/kg

SAR(1 g) = 9.28 W/kg; SAR(10 g) = 4.84 W/kg

Maximum value of SAR (measured) = 13.4 W/kg



0 dB = 13.4 W/kg = 11.27 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/26 01:11:34 PM

System Performance Cheak at 1750MHz_20170726_Body

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1023

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.522$ S/m; $\epsilon_r = 54.021$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 1750MHz/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 13.4 W/kg

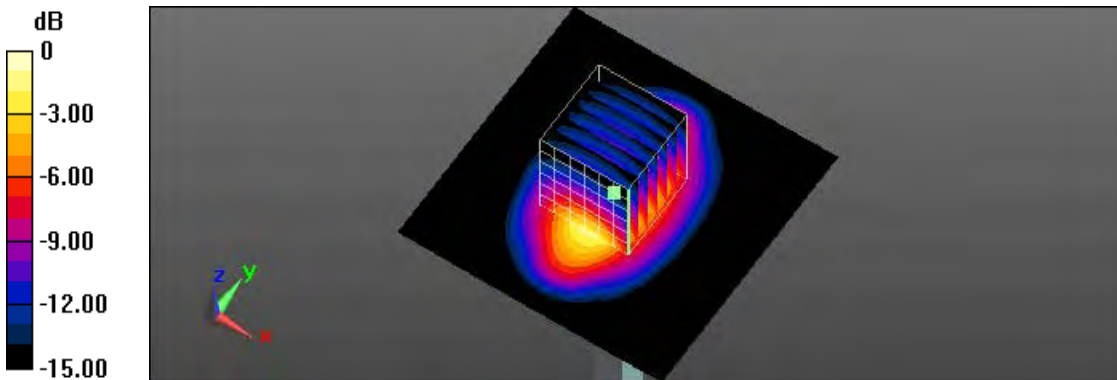
System Performance Cheak at 1750MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.69 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 9.27 W/kg; SAR(10 g) = 4.81 W/kg

Maximum value of SAR (measured) = 13.4 W/kg



0 dB = 13.4 W/kg = 11.27 dBW/kg



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/27 01:09:52 PM

System Performance Cheak at 1750MHz_20170727_Body

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1023

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.522$ S/m; $\epsilon_r = 54.021$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 1750MHz/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 13.1 W/kg

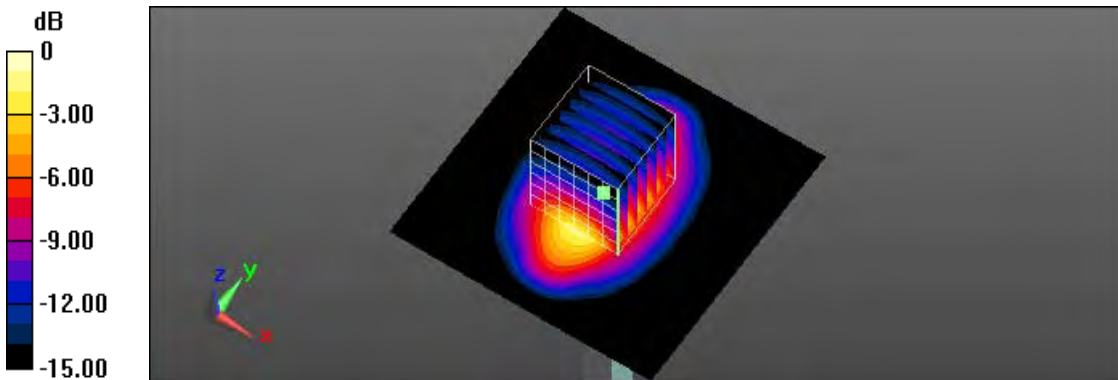
System Performance Cheak at 1750MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.69 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 16.7 W/kg

SAR(1 g) = 9.11 W/kg; SAR(10 g) = 4.76 W/kg

Maximum value of SAR (measured) = 13.1 W/kg



0 dB = 13.1 W/kg = 11.17 dBW/kg



Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2017/7/18 11:56:04 AM
System Performance Cheak at 1900MHz_20170718_Body
DUT: Dipole D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d111

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 1900$ MHz; $\sigma = 1.511$ S/m; $\epsilon_r = 52.293$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
DASY5.2 Configuration:

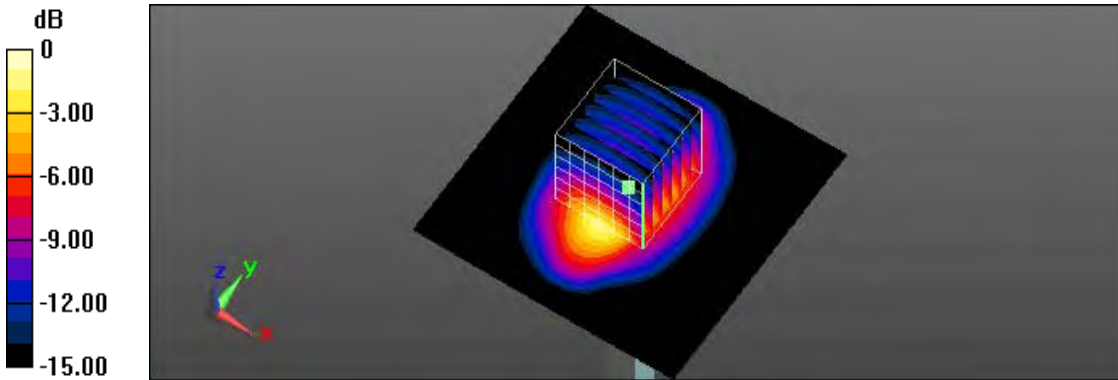
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 1900MHz/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.8 W/kg

System Performance Cheak at 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 100.3 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 18.7 W/kg
SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.45 W/kg

Maximum value of SAR (measured) = 14.8 W/kg



0 dB = 14.8 W/kg = 11.70 dBW/kg

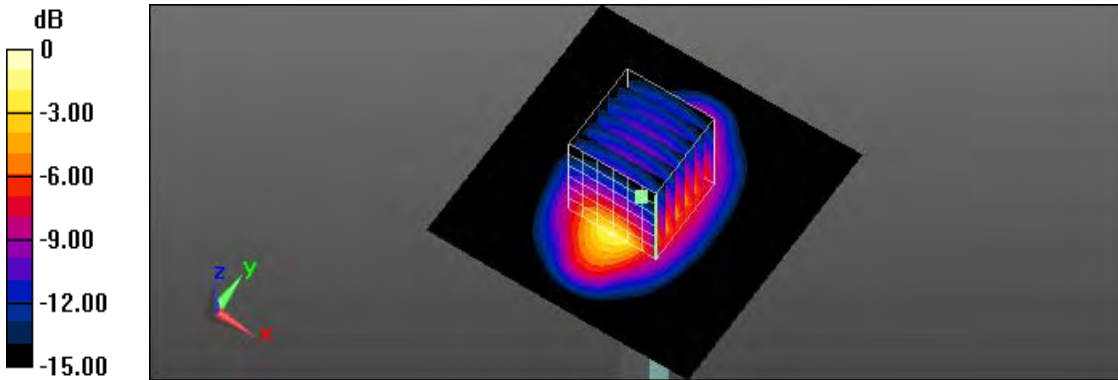
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 11:51:31 AM
 System Performance Cheak at 1900MHz_20170719_Body
DUT: Dipole D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d111

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.511$ S/m; $\epsilon_r = 52.293$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 1900MHz/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 14.7 W/kg

System Performance Cheak at 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 100.3 V/m; Power Drift = 0.00 dB
 Peak SAR (extrapolated) = 18.5 W/kg
SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.55 W/kg
 Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.7 W/kg = 11.67 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 12:00:41 PM
 System Performance Cheak at 1900MHz_20170724_Body
DUT: Dipole D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d111

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.511 \text{ S/m}$; $\epsilon_r = 52.293$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

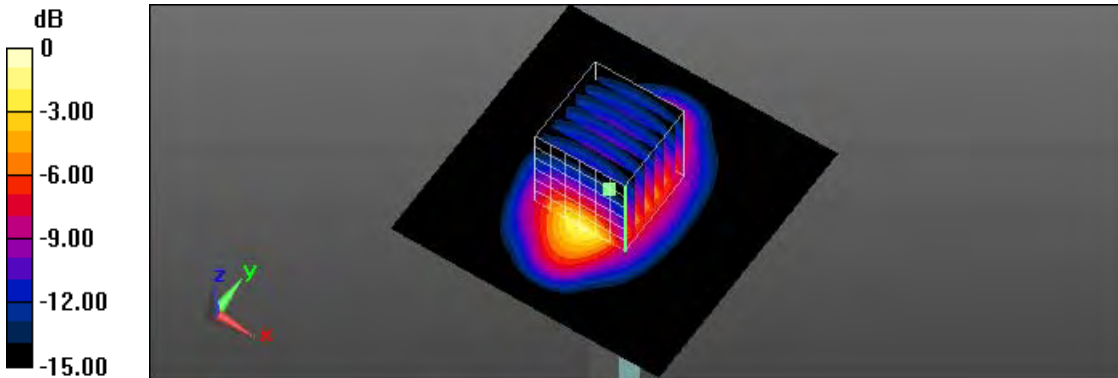
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 1900MHz/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 14.5 W/kg

System Performance Cheak at 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 99.06 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 18.6 W/kg
SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.39 W/kg

Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.7 W/kg = 11.67 dBW/kg

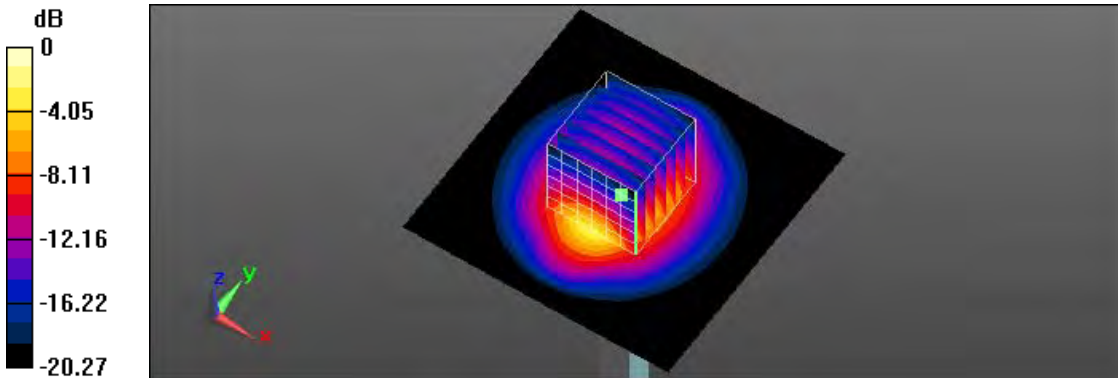
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 07:49:51 PM
 System Performance Cheak at 2300MHz_20170719_Body
DUT: Dipole 2300 MHz; Type: D2300V2; Serial: D2300V2 - SN:1005

Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
 Medium parameters used: $f = 2300$ MHz; $\sigma = 1.738$ S/m; $\epsilon_r = 52.027$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 2300MHz/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 18.1 W/kg

System Performance Cheak at 2300MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 104.0 V/m; Power Drift = 0.02 dB
 Peak SAR (extrapolated) = 23.9 W/kg
SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.86 W/kg
 Maximum value of SAR (measured) = 18.2 W/kg



0 dB = 18.2 W/kg = 12.60 dBW/kg



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/8/1 02:58:59 AM

System Performance Cheak at 2450MHz_20170801_Body

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:712

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.964$ S/m; $\epsilon_r = 52.402$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 2450MHz/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 19.9 W/kg

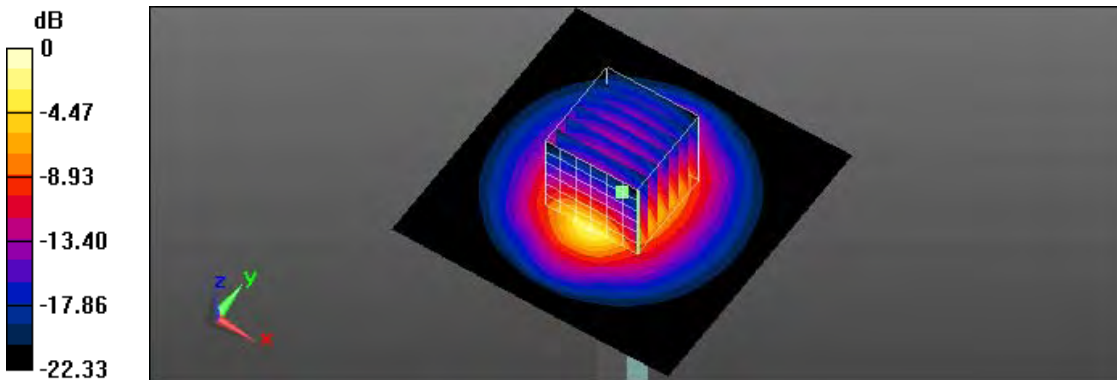
System Performance Cheak at 2450MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 102.0 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 27.2 W/kg

SAR(1 g) = 12.9 W/kg; SAR(10 g) = 5.88 W/kg

Maximum value of SAR (measured) = 20.0 W/kg



0 dB = 20.0 W/kg = 13.01 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 05:42:05 PM
 System Performance Cheak at 2600MHz_20170720_Body
DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1007

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
 Medium parameters used: $f = 2600$ MHz; $\sigma = 2.192$ S/m; $\epsilon_r = 50.75$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

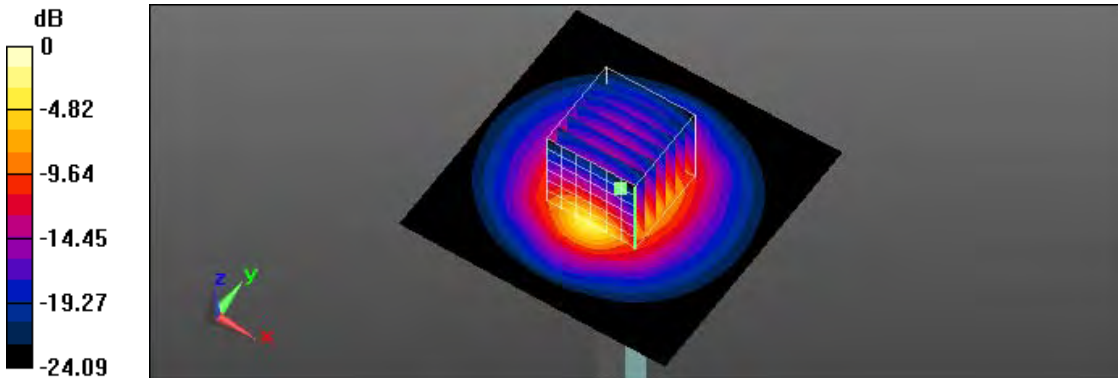
- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 2600MHz/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 22.5 W/kg

System Performance Cheak at 2600MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 102.7 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 31.4 W/kg
SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.24 W/kg

Maximum value of SAR (measured) = 22.5 W/kg



0 dB = 22.5 W/kg = 13.52 dBW/kg



Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2017/7/28 09:06:11 AM
System Performance Cheak at 5200MHz_20170728_Body
DUT: Dipole 5GHzV2; Type: D5GHz; Serial: 1021

Communication System: UID 0, CW (0); Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 5200$ MHz; $\sigma = 5.245$ S/m; $\epsilon_r = 48.766$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 5200MHz/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 12.2 W/kg

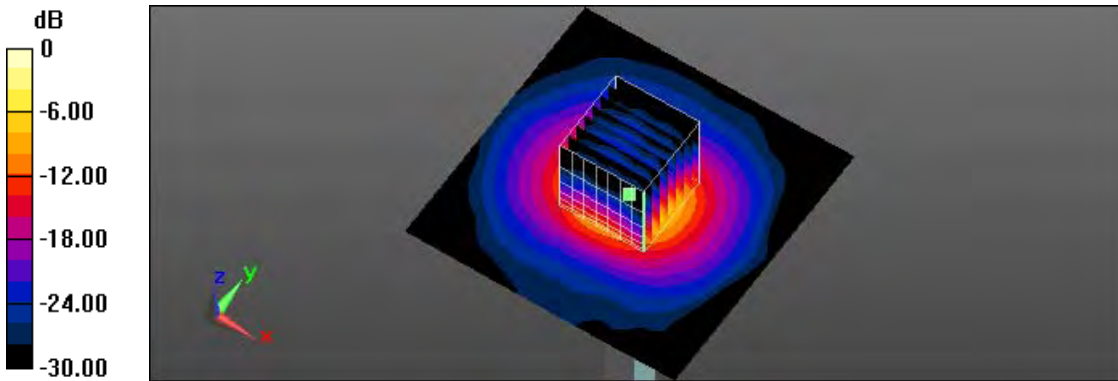
System Performance Cheak at 5200MHz/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 54.26 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 24.0 W/kg

SAR(1 g) = 7.24 W/kg; SAR(10 g) = 2.15 W/kg

Maximum value of SAR (measured) = 13.3 W/kg



0 dB = 13.3 W/kg = 11.24 dBW/kg



Test Laboratory: A Test Lab Techno Corp.
Date/Time: 2017/7/31 10:26:05 AM
System Performance Cheak at 5200MHz_20170731_Body
DUT: Dipole 5GHzV2; Type: D5GHz; Serial: 1021

Communication System: UID 0, CW (0); Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 5200$ MHz; $\sigma = 5.245$ S/m; $\epsilon_r = 48.766$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 5200MHz/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 12.4 W/kg

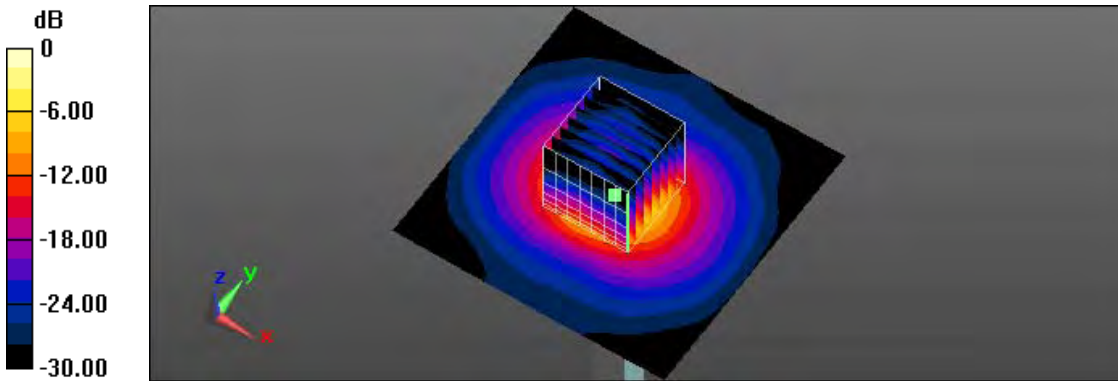
System Performance Cheak at 5200MHz/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 55.18 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 23.9 W/kg

SAR(1 g) = 7.21 W/kg; SAR(10 g) = 2.17 W/kg

Maximum value of SAR (measured) = 13.1 W/kg



0 dB = 13.1 W/kg = 11.17 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 05:15:37 PM
 System Performance Cheak at 5800MHz_20170731_Body
DUT: Dipole 5GHzV2; Type: D5GHz; Serial: 1021

Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
 Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.131 \text{ S/m}$; $\epsilon_r = 47.276$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Cheak at 5800MHz/Area Scan (91x91x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 13.8 W/kg

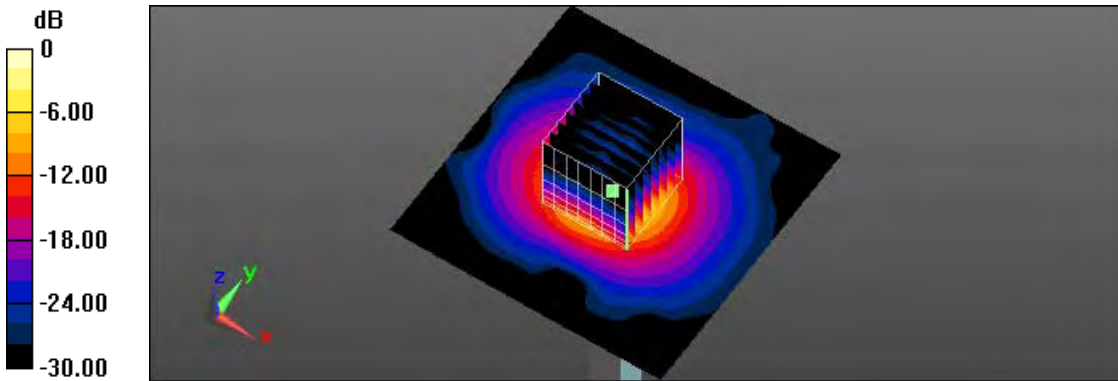
System Performance Cheak at 5800MHz/Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 52.85 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 26.8 W/kg

SAR(1 g) = 7.51 W/kg; SAR(10 g) = 2.16 W/kg

Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kg = 11.52 dBW/kg

Appendix B - SAR Measurement Data

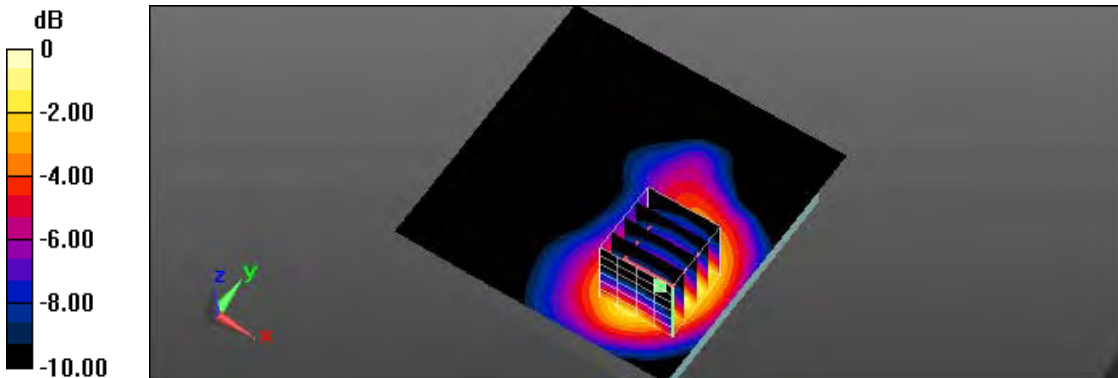
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 01:51:04 PM
 120_WCDMA Band II CH 9262_RMC12.2K_side1_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, WCDMA Band II (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.462$ S/m; $\epsilon_r = 52.157$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 1.09 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 9.684 V/m; Power Drift = -0.09 dB
 Peak SAR (extrapolated) = 1.32 W/kg
SAR(1 g) = 0.842 W/kg; SAR(10 g) = 0.516 W/kg
 Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 01:17:35 PM
 114_WCDMA Band II CH 9400_RMC12.2K_side1_10mm
DUT: MR1100-320; Type: Mobile Router

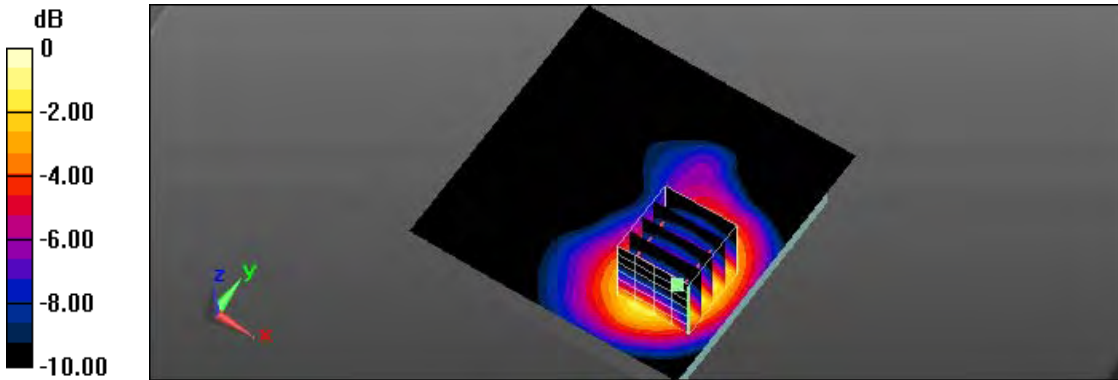
Communication System: UID 0, WCDMA Band II (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.996 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 8.380 V/m; Power Drift = -0.16 dB
 Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.765 W/kg; SAR(10 g) = 0.470 W/kg
 Maximum value of SAR (measured) = 0.994 W/kg



0 dB = 0.994 W/kg = -0.03 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 02:05:28 PM
 121_WCDMA Band II CH 9538_RMC12.2K_side1_10mm
DUT: MR1100-320; Type: Mobile Router

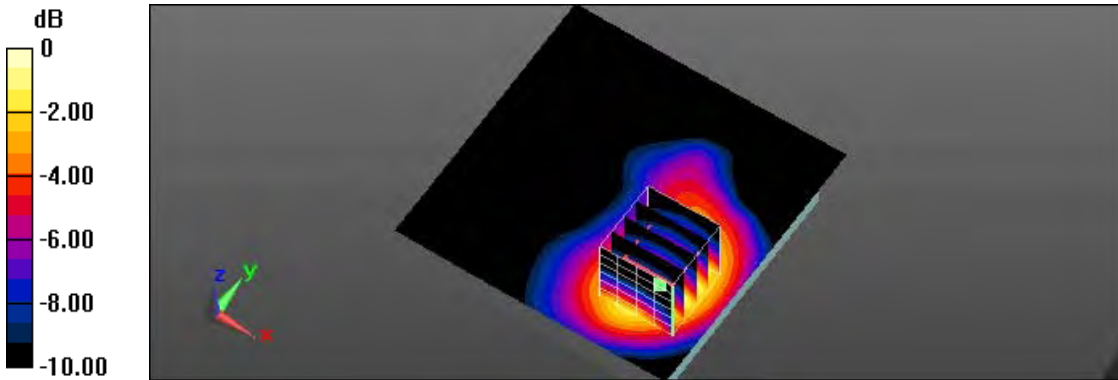
Communication System: UID 0, WCDMA Band II (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1908 \text{ MHz}$; $\sigma = 1.518 \text{ S/m}$; $\epsilon_r = 52.263$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.841 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 8.734 V/m; Power Drift = -0.07 dB
 Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.641 W/kg; SAR(10 g) = 0.396 W/kg
 Maximum value of SAR (measured) = 0.834 W/kg



0 dB = 0.834 W/kg = -0.79 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 02:23:11 PM
 115_WCDMA Band II CH 9400_RMC12.2K_side2_10mm
DUT: MR1100-320; Type: Mobile Router

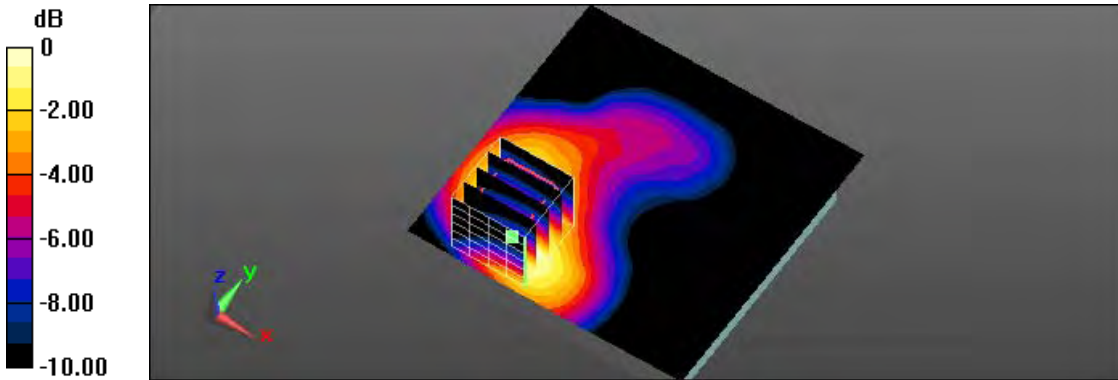
Communication System: UID 0, WCDMA Band II (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.04 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.32 V/m; Power Drift = 0.16 dB
 Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.749 W/kg; SAR(10 g) = 0.466 W/kg
 Maximum value of SAR (measured) = 0.978 W/kg



0 dB = 0.978 W/kg = -0.10 dBW/kg

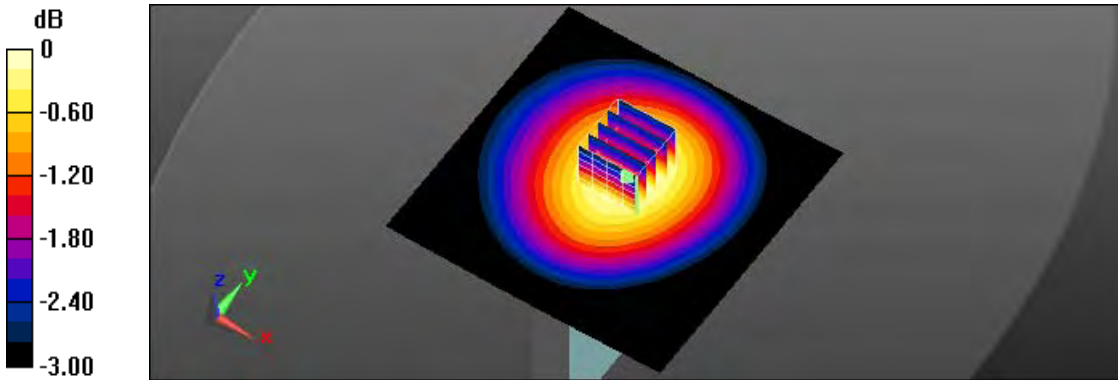
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 03:12:06 PM
 116_WCDMA Band II CH 9400_RMC12.2K_side3_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, WCDMA Band II (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0155 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 2.514 V/m; Power Drift = 0.18 dB
 Peak SAR (extrapolated) = 0.0190 W/kg
SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.00873 W/kg
 Maximum value of SAR (measured) = 0.0164 W/kg



0 dB = 0.0164 W/kg = -17.85 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 04:12:12 PM
 122_WCDMA Band II CH 9262_RMC12.2K_side4_10mm
DUT: MR1100-320; Type: Mobile Router

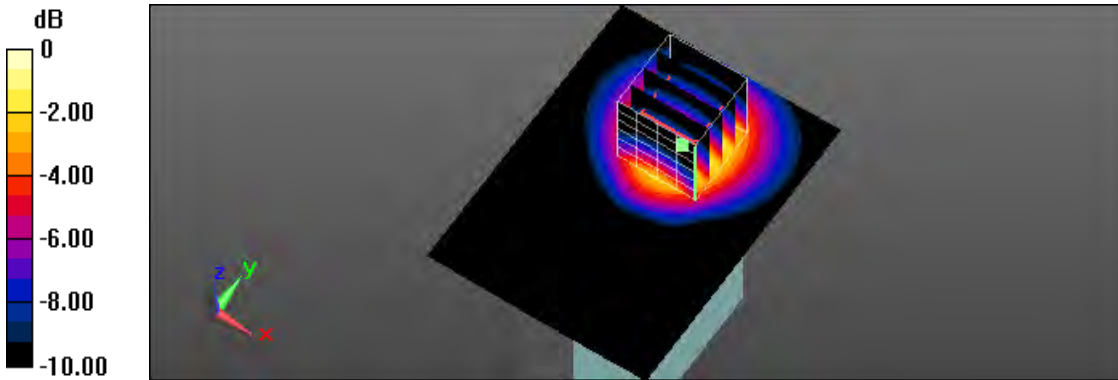
Communication System: UID 0, WCDMA Band II (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1852.4 \text{ MHz}$; $\sigma = 1.462 \text{ S/m}$; $\epsilon_r = 52.157$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (61x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.35 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 15.78 V/m; Power Drift = -0.17 dB
 Peak SAR (extrapolated) = 1.59 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.611 W/kg
 Maximum value of SAR (measured) = 1.32 W/kg



0 dB = 1.32 W/kg = 1.21 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 03:47:49 PM
 117_WCDMA Band II CH 9400_RMC12.2K_side4_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, WCDMA Band II (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

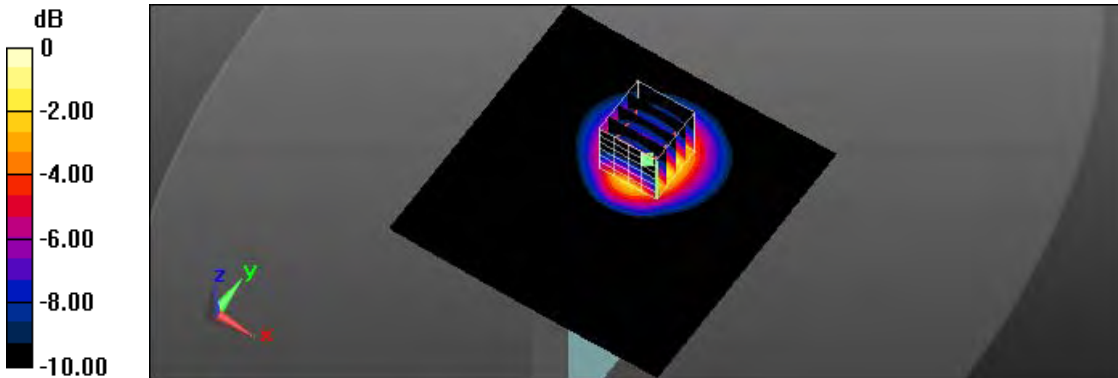
Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.34 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 16.81 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 0.995 W/kg; SAR(10 g) = 0.597 W/kg

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



0 dB = 1.30 W/kg = 1.14 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 04:26:01 PM
 123_WCDMA Band II CH 9538_RMC12.2K_side4_10mm
DUT: MR1100-320; Type: Mobile Router

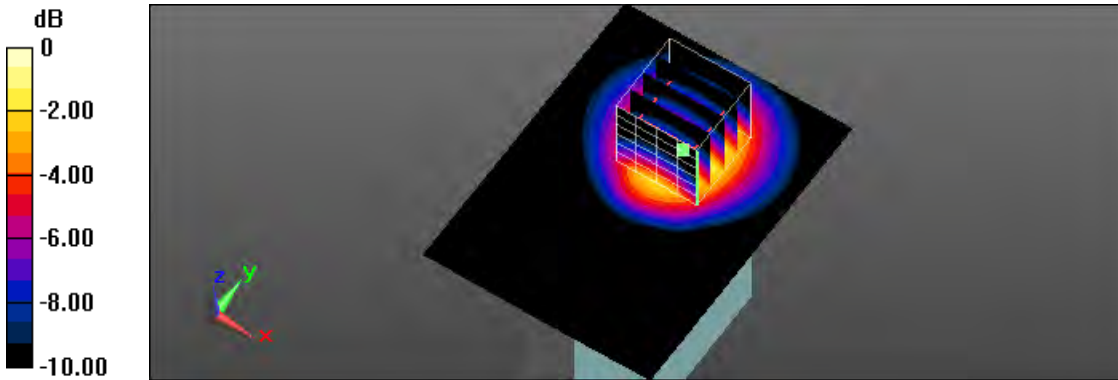
Communication System: UID 0, WCDMA Band II (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1908 \text{ MHz}$; $\sigma = 1.518 \text{ S/m}$; $\epsilon_r = 52.263$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (61x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.23 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 17.81 V/m; Power Drift = -0.13 dB
 Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.909 W/kg; SAR(10 g) = 0.542 W/kg
 Maximum value of SAR (measured) = 1.20 W/kg



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

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 05:04:48 PM
 118_WCDMA Band II CH 9400_RMC12.2K_side5_10mm
DUT: MR1100-320; Type: Mobile Router

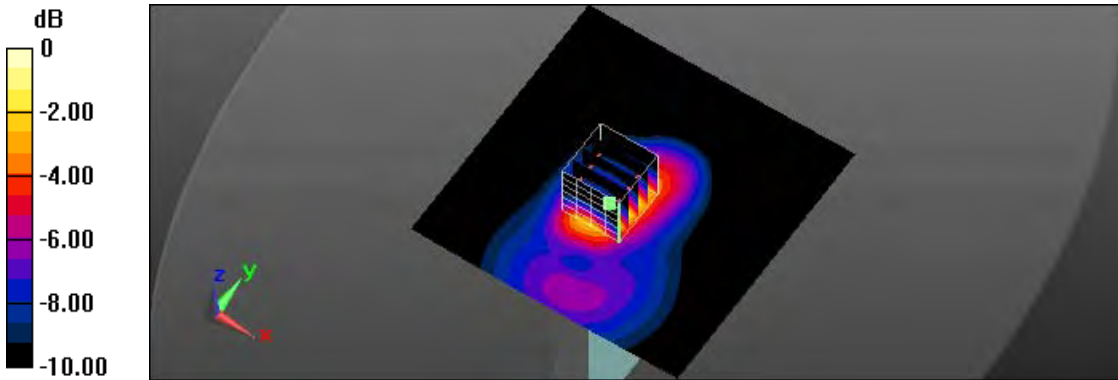
Communication System: UID 0, WCDMA Band II (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.779 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 19.84 V/m; Power Drift = 0.07 dB
 Peak SAR (extrapolated) = 0.953 W/kg

SAR(1 g) = 0.576 W/kg; SAR(10 g) = 0.329 W/kg
 Maximum value of SAR (measured) = 0.775 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 04:29:56 AM
 84_WCDMA Band V CH 4183_RMC12.2K_side1_10mm
DUT: MR1100-320; Type: Mobile Router

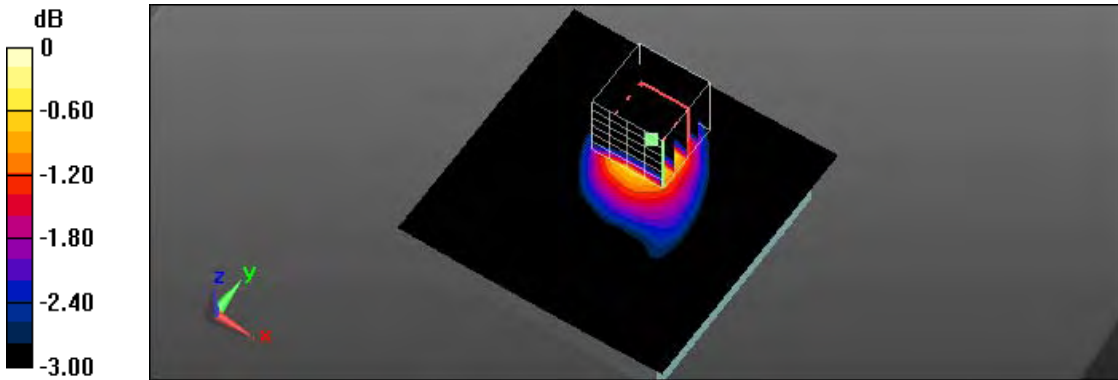
Communication System: UID 0, WCDMA Band V (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 837 \text{ MHz}$; $\sigma = 0.995 \text{ S/m}$; $\epsilon_r = 55.162$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.754 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 23.49 V/m; Power Drift = -0.05 dB
 Peak SAR (extrapolated) = 0.849 W/kg

SAR(1 g) = 0.629 W/kg; SAR(10 g) = 0.454 W/kg
 Maximum value of SAR (measured) = 0.752 W/kg



0 dB = 0.752 W/kg = -1.24 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 04:44:50 AM
 85_WCDMA Band V CH 4183_RMC12.2K_side2_10mm
DUT: MR1100-320; Type: Mobile Router

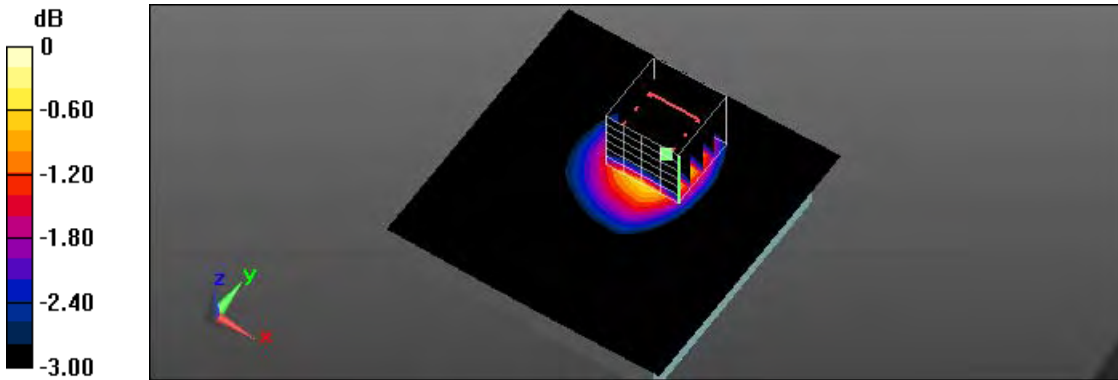
Communication System: UID 0, WCDMA Band V (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 837 \text{ MHz}$; $\sigma = 0.995 \text{ S/m}$; $\epsilon_r = 55.162$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.780 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 24.07 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 0.880 W/kg

SAR(1 g) = 0.654 W/kg; SAR(10 g) = 0.474 W/kg
 Maximum value of SAR (measured) = 0.780 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 05:46:23 AM
 86_WCDMA Band V CH 4183_RMC12.2K_side3_10mm
DUT: MR1100-320; Type: Mobile Router

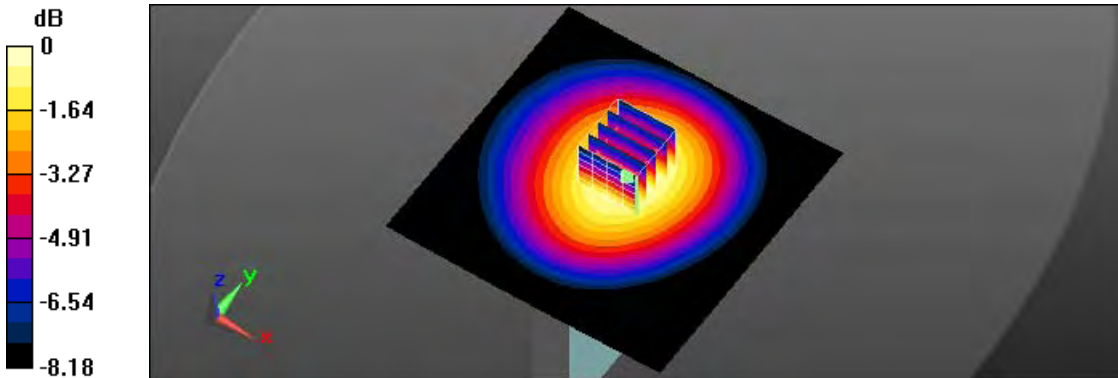
Communication System: UID 0, WCDMA Band V (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 837 \text{ MHz}$; $\sigma = 0.995 \text{ S/m}$; $\epsilon_r = 55.162$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.190 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 13.77 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.162 W/kg; SAR(10 g) = 0.120 W/kg
 Maximum value of SAR (measured) = 0.190 W/kg



0 dB = 0.190 W/kg = -7.21 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 06:04:55 AM
 87_WCDMA Band V CH 4183_RMC12.2K_side4_10mm
DUT: MR1100-320; Type: Mobile Router

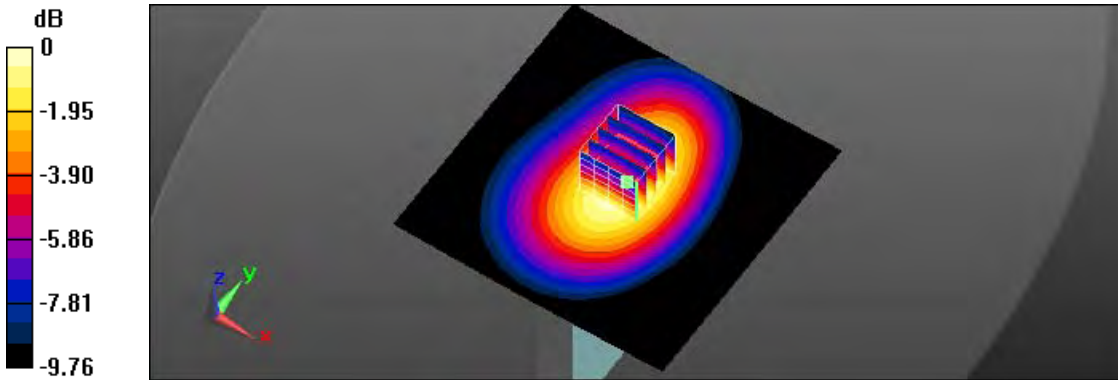
Communication System: UID 0, WCDMA Band V (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 837 \text{ MHz}$; $\sigma = 0.995 \text{ S/m}$; $\epsilon_r = 55.162$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.279 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 17.00 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 0.320 W/kg

SAR(1 g) = 0.229 W/kg; SAR(10 g) = 0.161 W/kg
 Maximum value of SAR (measured) = 0.279 W/kg



0 dB = 0.279 W/kg = -5.54 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 05:02:23 AM
 88_WCDMA Band V CH 4183_RMC12.2K_side5_10mm
DUT: MR1100-320; Type: Mobile Router

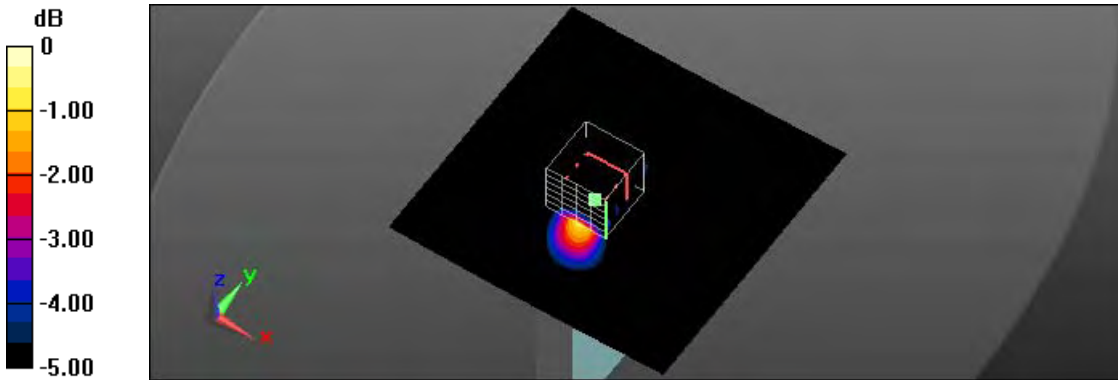
Communication System: UID 0, WCDMA Band V (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 837 \text{ MHz}$; $\sigma = 0.995 \text{ S/m}$; $\epsilon_r = 55.162$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.289 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 14.84 V/m; Power Drift = 0.06 dB
 Peak SAR (extrapolated) = 0.368 W/kg

SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.121 W/kg
 Maximum value of SAR (measured) = 0.287 W/kg



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/24 04:38:54 PM

124_WCDMA Band II CH 9262_RMC12.2K_side4_10mm_original #122_measurement once

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, WCDMA Band II (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.462$ S/m; $\epsilon_r = 52.157$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.34 W/kg

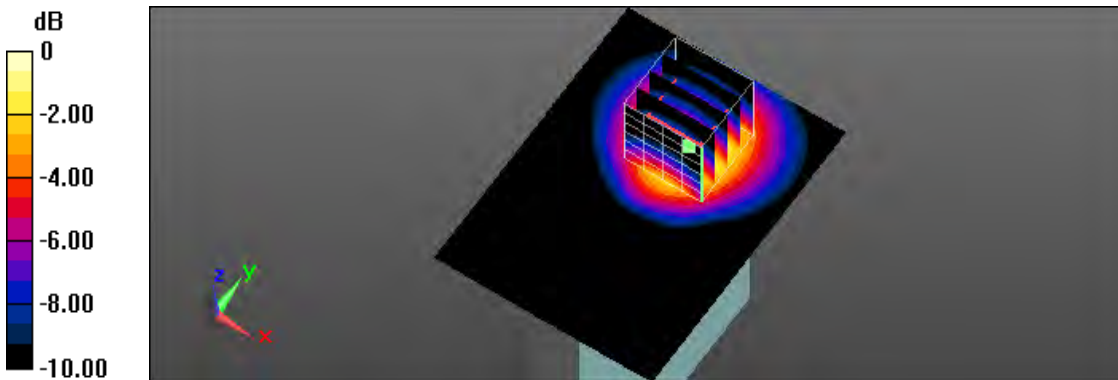
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.74 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.610 W/kg

Maximum value of SAR (measured) = 1.32 W/kg



0 dB = 1.32 W/kg = 1.21 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/18 07:13:53 PM
 1_LTE Band2 CH 18900_QPSK_BW 20MHz_1 RB size 49 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

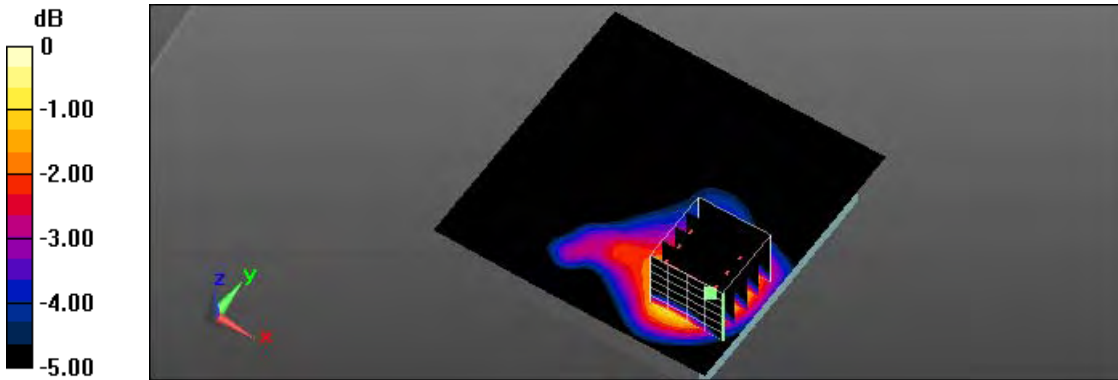
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.601 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.58 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.712 W/kg

SAR(1 g) = 0.463 W/kg; SAR(10 g) = 0.294 W/kg
 Maximum value of SAR (measured) = 0.592 W/kg



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/18 08:15:22 PM

4_LTE Band2 CH 18700_QPSK_BW 20MHz_1 RB size 49 RB offset_side2_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1860 \text{ MHz}$; $\sigma = 1.471 \text{ S/m}$; $\epsilon_r = 52.172$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (91x91x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.977 W/kg

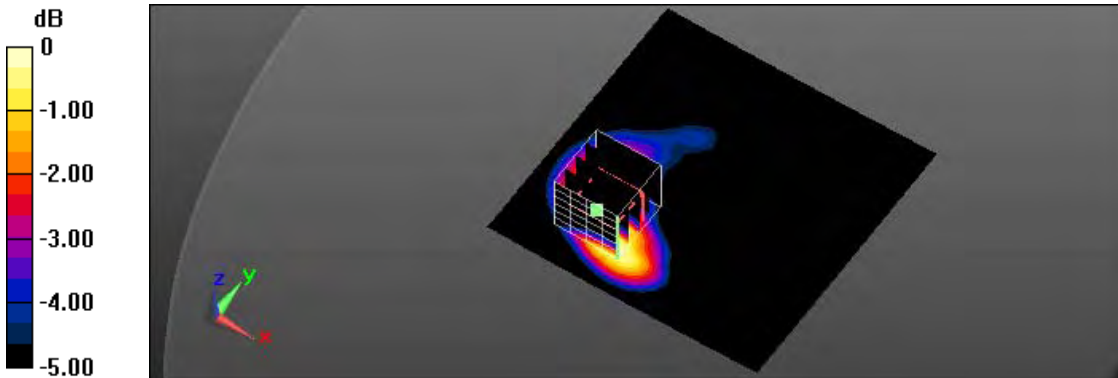
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.33 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.734 W/kg; SAR(10 g) = 0.451 W/kg

Maximum value of SAR (measured) = 0.948 W/kg



0 dB = 0.948 W/kg = -0.23 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/18 07:52:58 PM

3_LTE Band2 CH 18900_QPSK_BW 20MHz_1 RB size 49 RB offset_side2_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (91x91x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.909 W/kg

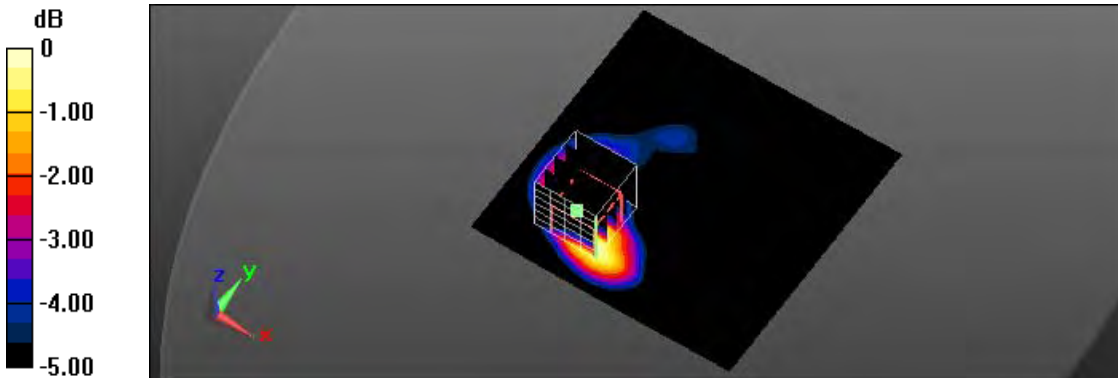
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.29 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.692 W/kg; SAR(10 g) = 0.422 W/kg

Maximum value of SAR (measured) = 0.892 W/kg



0 dB = 0.892 W/kg = -0.50 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/18 08:30:57 PM
 5_LTE Band2 CH 19100_QPSK_BW 20MHz_1 RB size 49 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

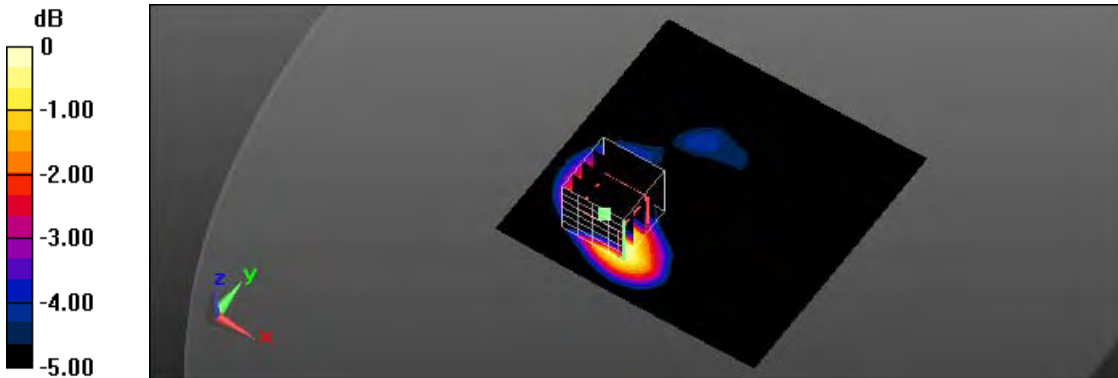
Communication System: UID 0, Generic LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.511 \text{ S/m}$; $\epsilon_r = 52.293$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (91x91x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.856 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 11.10 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.649 W/kg; SAR(10 g) = 0.395 W/kg
 Maximum value of SAR (measured) = 0.841 W/kg



0 dB = 0.841 W/kg = -0.75 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 10:40:12 AM
 8_LTE Band2 CH 18900_QPSK_BW 20MHz_1 RB size 49 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

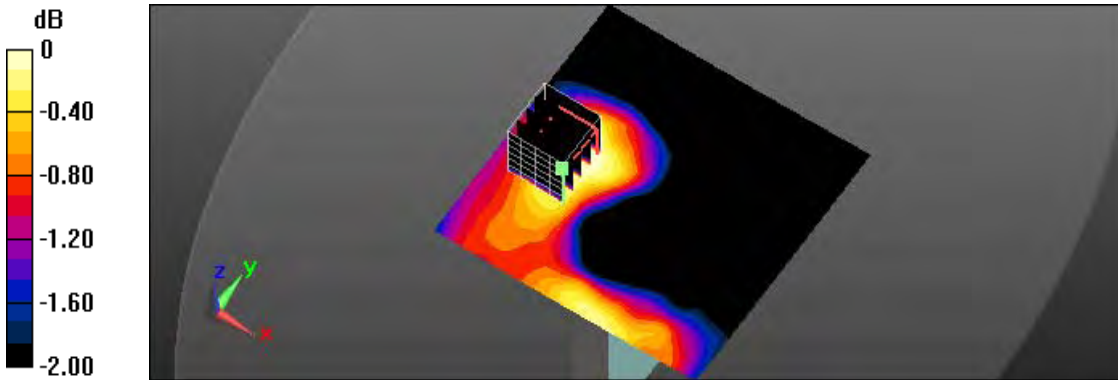
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0180 W/kg

/Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 2.796 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.0200 W/kg
SAR(1 g) = 0.015 W/kg; SAR(10 g) = 0.010 W/kg
 Maximum value of SAR (measured) = 0.0180 W/kg



0 dB = 0.0180 W/kg = -17.45 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 01:52:57 PM
 12_LTE Band2 CH 18700_QPSK_BW 20MHz_1 RB size 49 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

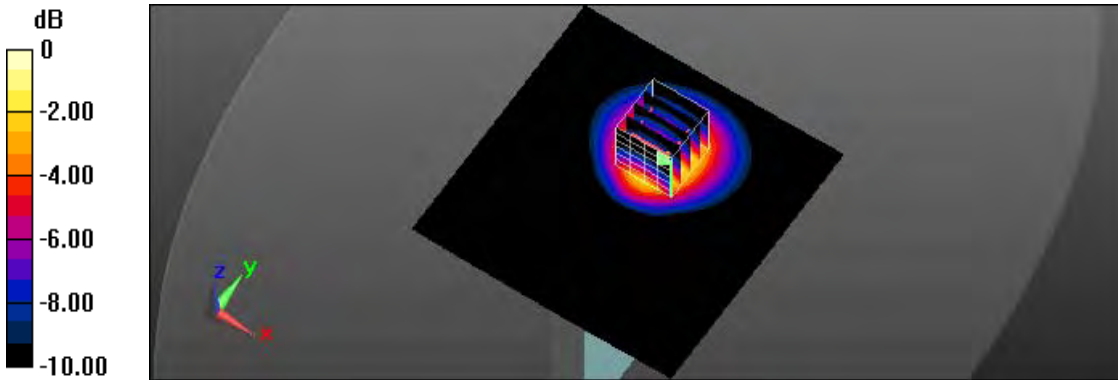
Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1860 \text{ MHz}$; $\sigma = 1.471 \text{ S/m}$; $\epsilon_r = 52.172$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.37 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 16.15 V/m; Power Drift = -0.16 dB
 Peak SAR (extrapolated) = 1.62 W/kg

SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.639 W/kg
 Maximum value of SAR (measured) = 1.35 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 01:32:09 PM
 11_LTE Band2 CH 18900_QPSK_BW 20MHz_1 RB size 49 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

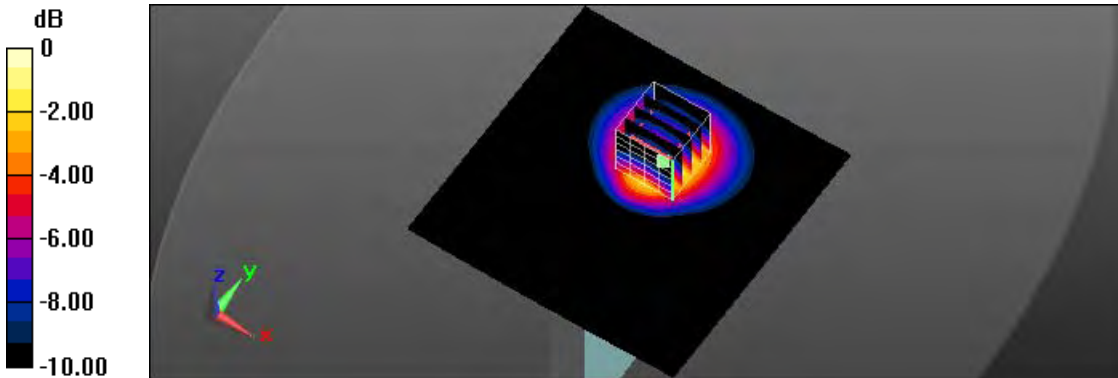
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.36 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 17.01 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.629 W/kg
 Maximum value of SAR (measured) = 1.34 W/kg



0 dB = 1.34 W/kg = 1.27 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 02:16:40 PM
 13_LTE Band2 CH 19100_QPSK_BW 20MHz_1 RB size 49 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.511 \text{ S/m}$; $\epsilon_r = 52.293$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

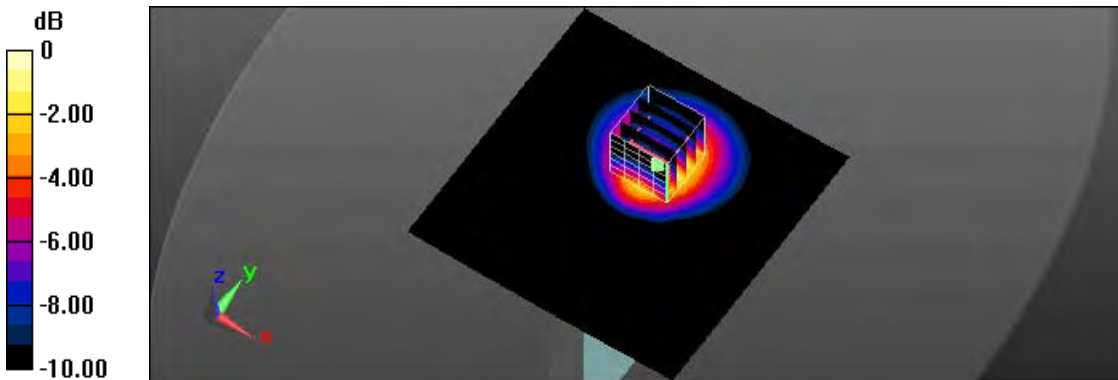
Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.33 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 17.99 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.998 W/kg; SAR(10 g) = 0.605 W/kg

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



0 dB = 1.30 W/kg = 1.14 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 04:24:57 PM
 17_LTE Band2 CH 18900_QPSK_BW 20MHz_1 RB size 49 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

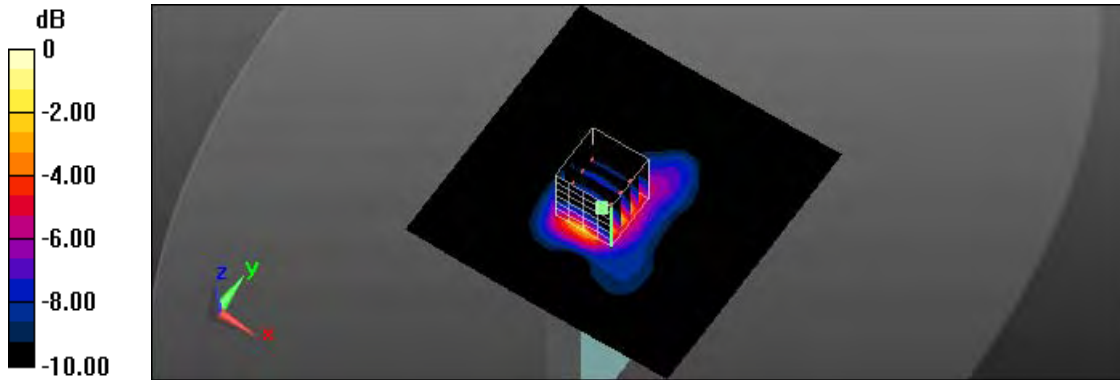
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.637 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 16.45 V/m; Power Drift = 0.16 dB
 Peak SAR (extrapolated) = 0.780 W/kg

SAR(1 g) = 0.469 W/kg; SAR(10 g) = 0.259 W/kg
 Maximum value of SAR (measured) = 0.630 W/kg



0 dB = 0.630 W/kg = -2.01 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/18 07:28:25 PM
 2_LTE Band2 CH 18900_QPSK_BW 20MHz_50 RB size 25 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

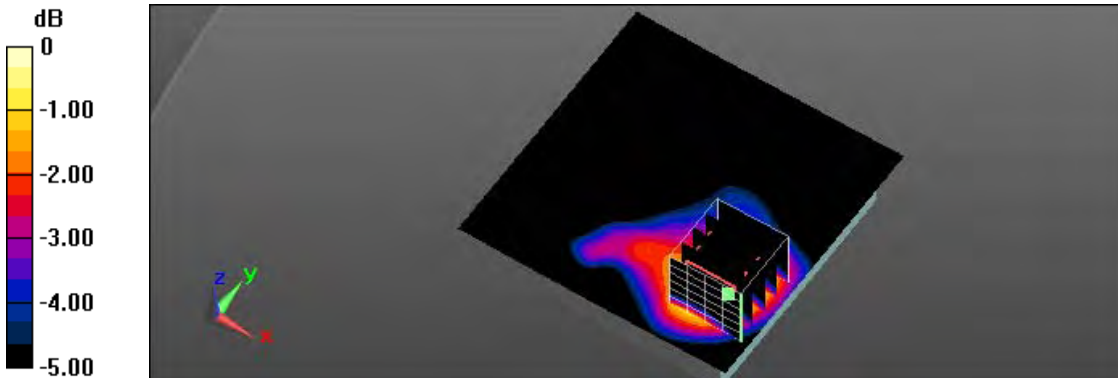
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.491 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 9.547 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.577 W/kg

SAR(1 g) = 0.376 W/kg; SAR(10 g) = 0.239 W/kg
 Maximum value of SAR (measured) = 0.479 W/kg



0 dB = 0.479 W/kg = -3.20 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/18 08:47:33 PM

6_LTE Band2 CH 18900_QPSK_BW 20MHz_50 RB size 25 RB offset_side2_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (91x91x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.729 W/kg

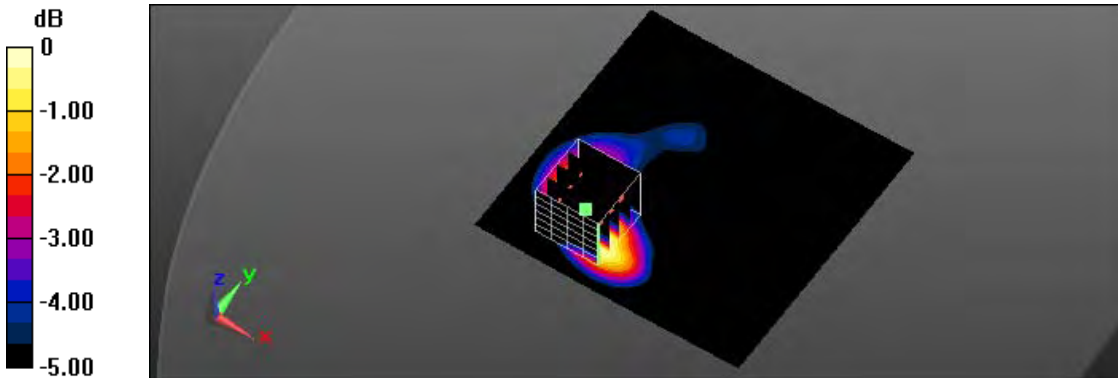
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.06 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.874 W/kg

SAR(1 g) = 0.552 W/kg; SAR(10 g) = 0.338 W/kg

Maximum value of SAR (measured) = 0.720 W/kg



0 dB = 0.720 W/kg = -1.43 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 10:59:55 AM
 9_LTE Band2 CH 18900_QPSK_BW 20MHz_50 RB size 25 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

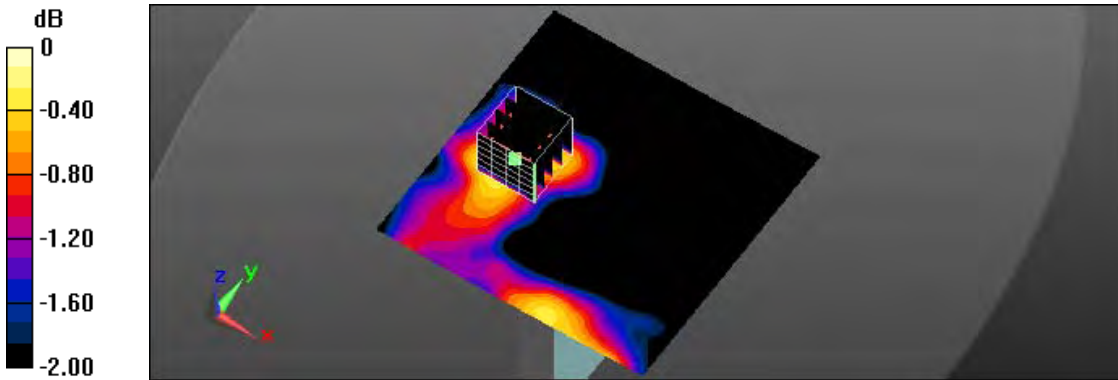
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0149 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 2.322 V/m; Power Drift = 0.19 dB
 Peak SAR (extrapolated) = 0.0170 W/kg

SAR(1 g) = 0.012 W/kg; SAR(10 g) = 0.00852 W/kg
 Maximum value of SAR (measured) = 0.0152 W/kg



0 dB = 0.0152 W/kg = -18.18 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 03:10:21 PM
 15_LTE Band2 CH 18700_QPSK_BW 20MHz_50 RB size 25 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

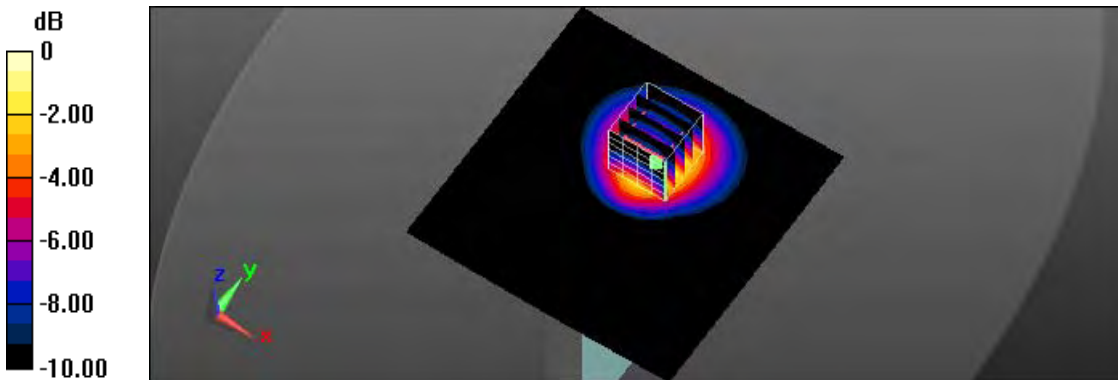
Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1860 \text{ MHz}$; $\sigma = 1.471 \text{ S/m}$; $\epsilon_r = 52.172$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.07 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 15.62 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.805 W/kg; SAR(10 g) = 0.492 W/kg
 Maximum value of SAR (measured) = 1.04 W/kg



0 dB = 1.04 W/kg = 0.17 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 01:11:46 PM
 10_LTE Band2 CH 18900_QPSK_BW 20MHz_50 RB size 25 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

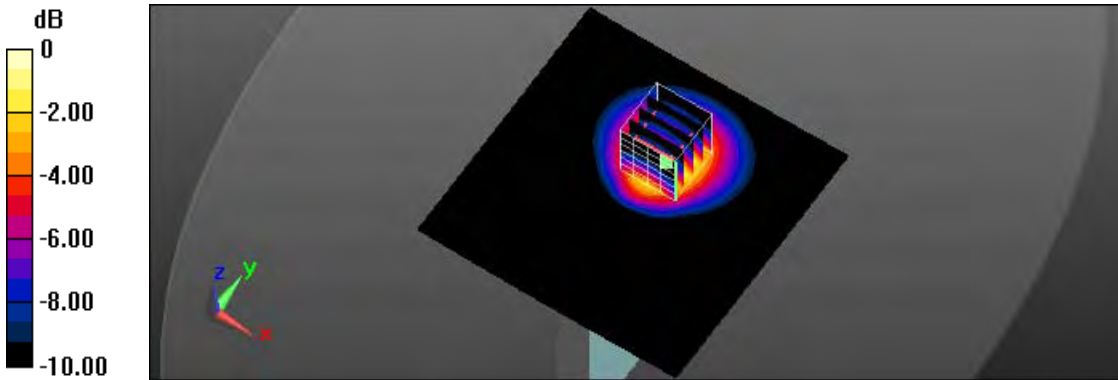
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.10 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 15.33 V/m; Power Drift = -0.18 dB
 Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.834 W/kg; SAR(10 g) = 0.508 W/kg
 Maximum value of SAR (measured) = 1.08 W/kg



0 dB = 1.08 W/kg = 0.33 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 02:45:19 PM
 14_LTE Band2 CH 19100_QPSK_BW 20MHz_50 RB size 25 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

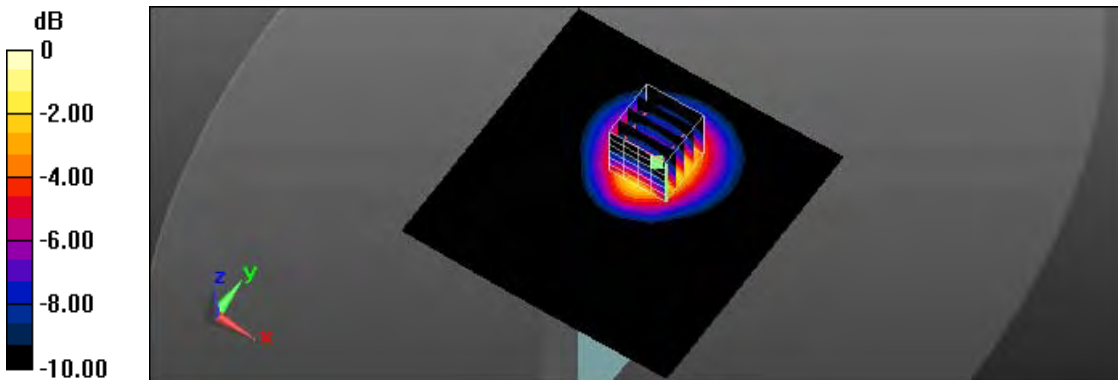
Communication System: UID 0, Generic LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.511 \text{ S/m}$; $\epsilon_r = 52.293$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.896 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 14.93 V/m; Power Drift = -0.19 dB
 Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.670 W/kg; SAR(10 g) = 0.405 W/kg
 Maximum value of SAR (measured) = 0.876 W/kg



0 dB = 0.876 W/kg = -0.57 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 04:43:06 PM
 18_LTE Band2 CH 18900_QPSK_BW 20MHz_50 RB size 25 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

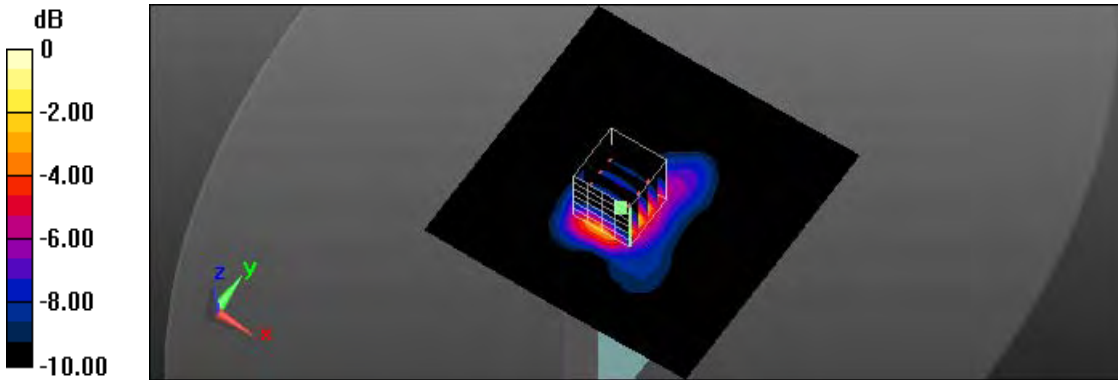
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.516 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 14.85 V/m; Power Drift = 0.15 dB
 Peak SAR (extrapolated) = 0.637 W/kg

SAR(1 g) = 0.381 W/kg; SAR(10 g) = 0.210 W/kg
 Maximum value of SAR (measured) = 0.514 W/kg



0 dB = 0.514 W/kg = -2.89 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/18 09:13:22 PM
 7_LTE Band2 CH 18700_QPSK_BW 20MHz_100 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

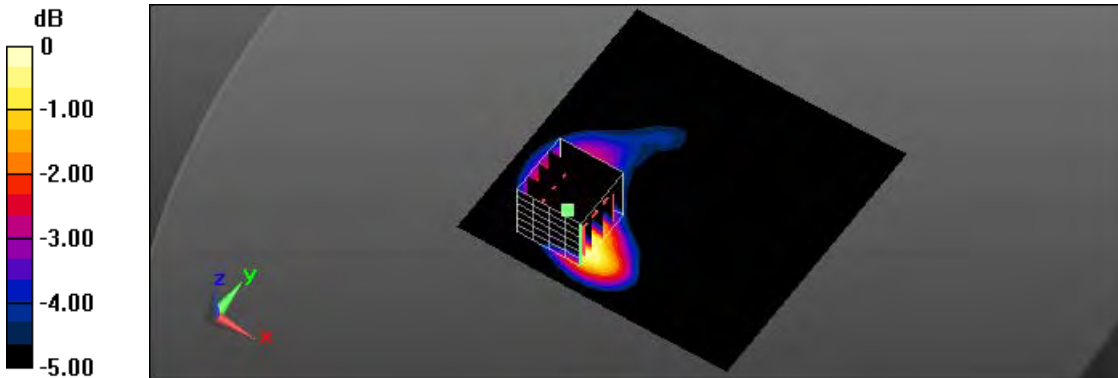
Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1860 \text{ MHz}$; $\sigma = 1.471 \text{ S/m}$; $\epsilon_r = 52.172$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (91x91x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.780 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.09 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.936 W/kg

SAR(1 g) = 0.593 W/kg; SAR(10 g) = 0.364 W/kg
 Maximum value of SAR (measured) = 0.774 W/kg



0 dB = 0.774 W/kg = -1.11 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 03:46:25 PM
 16_LTE Band2 CH 18700_QPSK_BW 20MHz_100 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

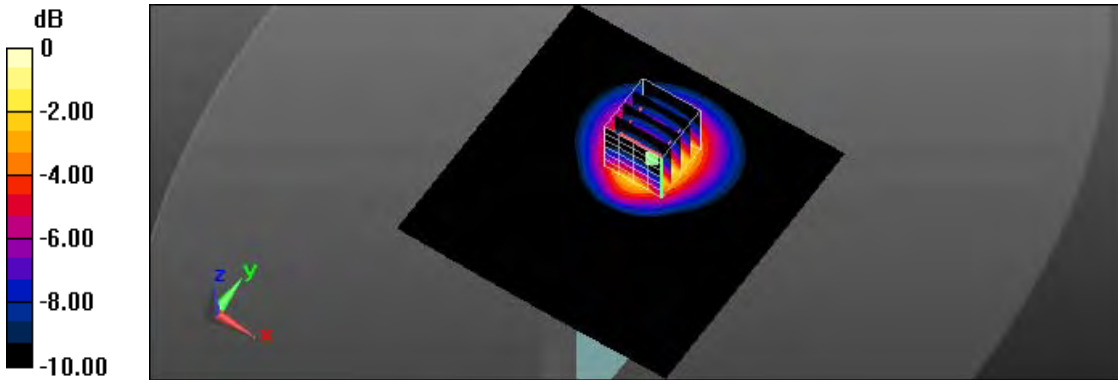
Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1860 \text{ MHz}$; $\sigma = 1.471 \text{ S/m}$; $\epsilon_r = 52.172$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.07 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 15.66 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.805 W/kg; SAR(10 g) = 0.493 W/kg
 Maximum value of SAR (measured) = 1.04 W/kg



0 dB = 1.04 W/kg = 0.17 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 03:54:01 PM
 71_LTE Band4 CH 20050_QPSK_BW 20MHz_1 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

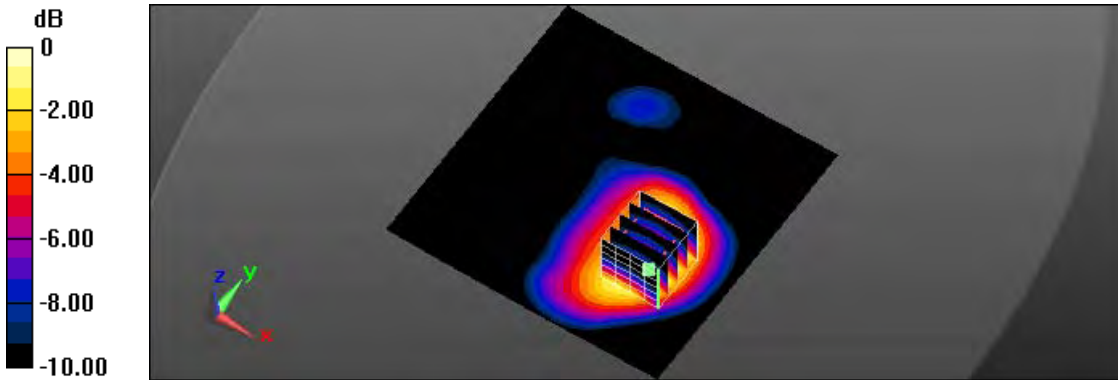
Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.02 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 12.93 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.781 W/kg; SAR(10 g) = 0.486 W/kg

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



0 dB = 1.01 W/kg = 0.04 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 03:16:36 PM

59_LTE Band4 CH 20175_QPSK_BW 20MHz_1 RB size 0 RB offset_side1_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

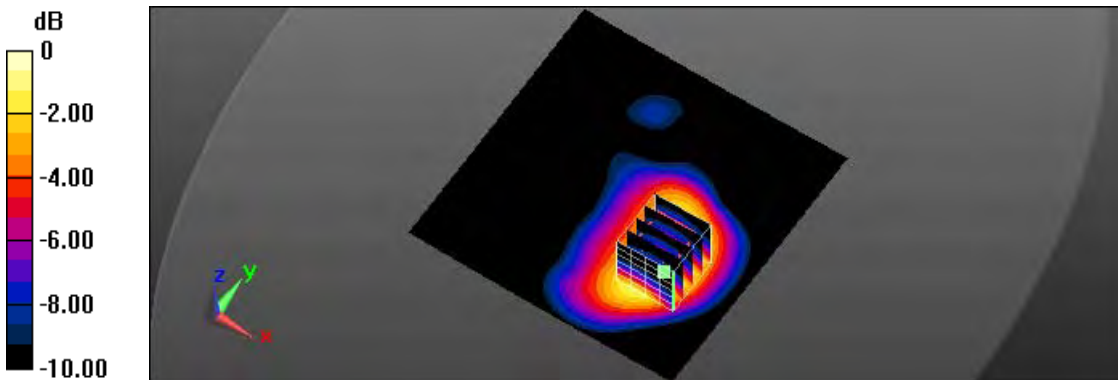
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.23 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.794 W/kg; SAR(10 g) = 0.492 W/kg

Maximum value of SAR (measured) = 1.03 W/kg



0 dB = 1.03 W/kg = 0.13 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 04:28:12 PM
 72_LTE Band4 CH 20300_QPSK_BW 20MHz_1 RB size 49 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

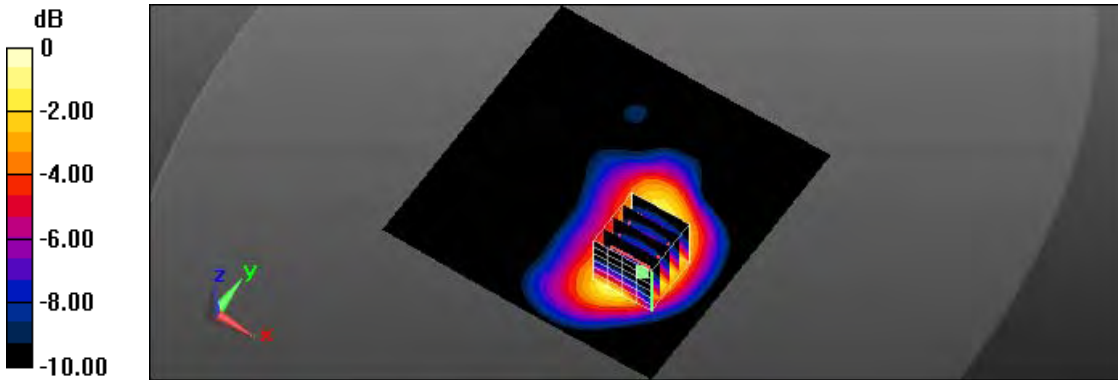
Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 54.05$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.02 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 13.03 V/m; Power Drift = -0.09 dB
 Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.773 W/kg; SAR(10 g) = 0.472 W/kg
 Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.01 W/kg = 0.04 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 05:42:53 PM
 74_LTE Band4 CH 20050_QPSK_BW 20MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

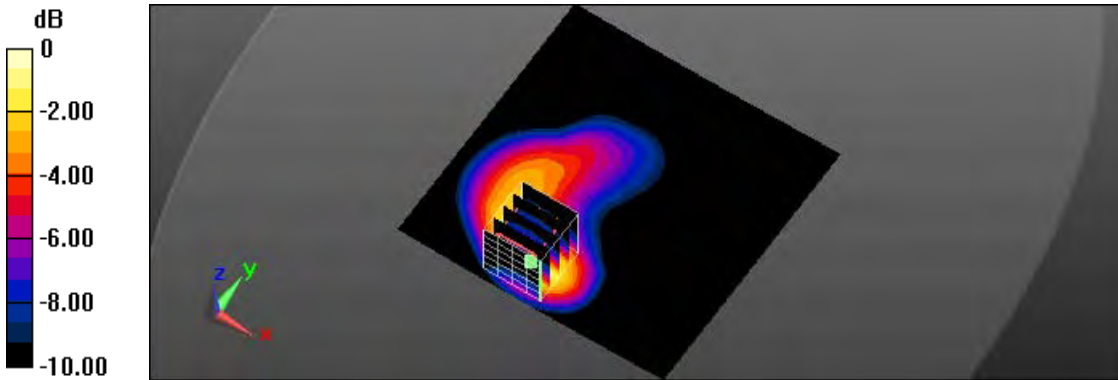
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.25 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 11.53 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.65 W/kg
SAR(1 g) = 0.977 W/kg; SAR(10 g) = 0.561 W/kg
 Maximum value of SAR (measured) = 1.31 W/kg



0 dB = 1.31 W/kg = 1.17 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 04:50:19 PM

60_LTE Band4 CH 20175_QPSK_BW 20MHz_1 RB size 0 RB offset_side2_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

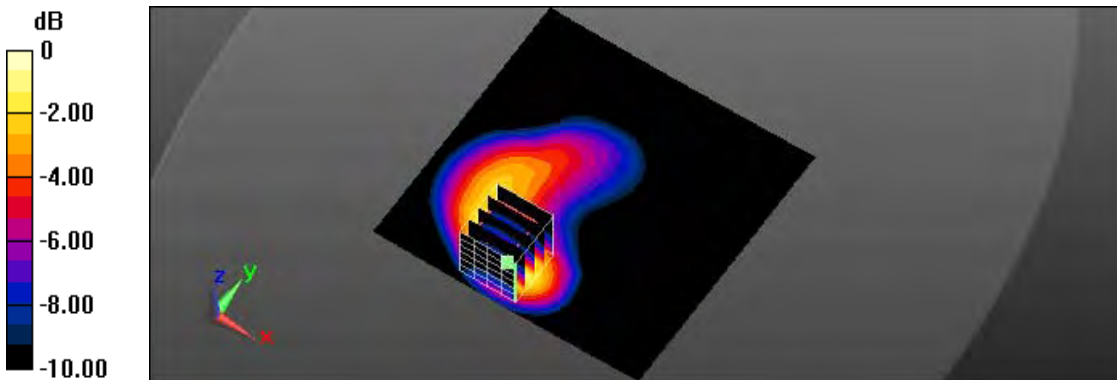
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.87 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.957 W/kg; SAR(10 g) = 0.550 W/kg

Maximum value of SAR (measured) = 1.27 W/kg



0 dB = 1.27 W/kg = 1.04 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 06:01:21 PM
 75_LTE Band4 CH 20300_QPSK_BW 20MHz_1 RB size 49 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

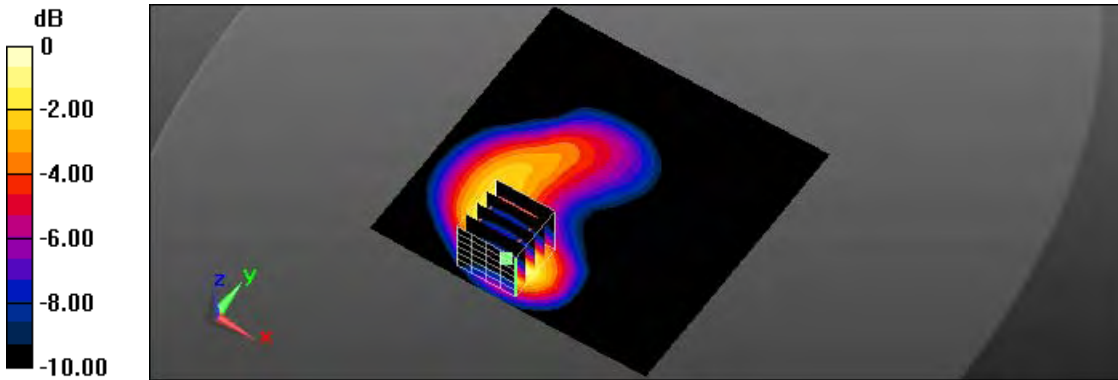
Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 54.05$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.12 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 12.27 V/m; Power Drift = 0.09 dB
 Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.884 W/kg; SAR(10 g) = 0.509 W/kg
 Maximum value of SAR (measured) = 1.18 W/kg



0 dB = 1.18 W/kg = 0.72 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 01:15:54 AM

61_LTE Band4 CH 20175_QPSK_BW 20MHz_1 RB size 0 RB offset_side3_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0167 W/kg

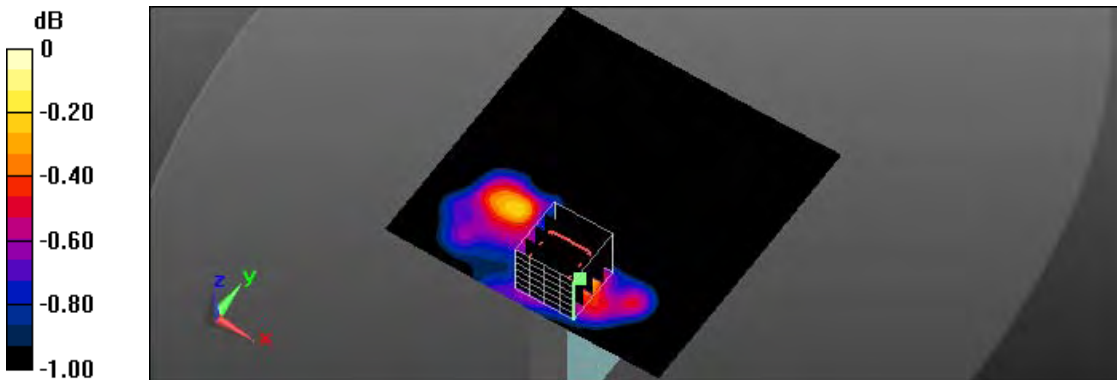
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.100 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.0200 W/kg

SAR(1 g) = 0.014 W/kg; SAR(10 g) = 0.00975 W/kg

Maximum value of SAR (measured) = 0.0173 W/kg



0 dB = 0.0173 W/kg = -17.62 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 08:40:51 PM

80_LTE Band4 CH 20050_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

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

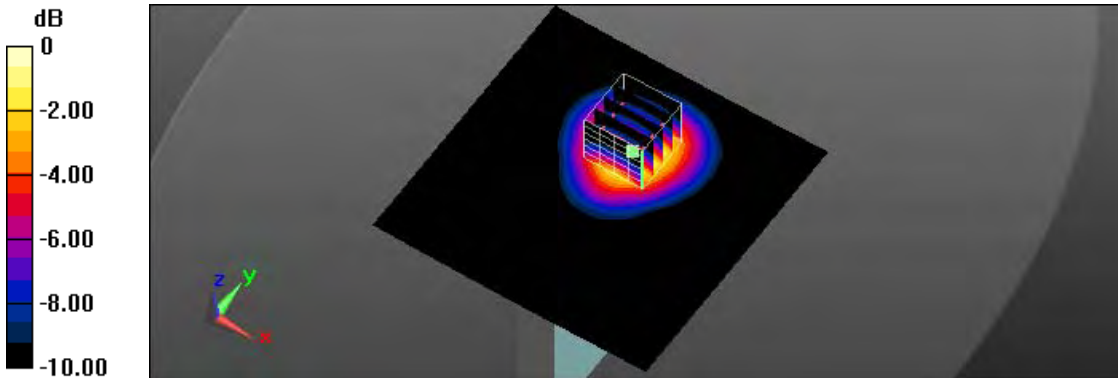
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.43 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.765 W/kg; SAR(10 g) = 0.459 W/kg

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



0 dB = 1.00 W/kg = 0.00 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 08:05:54 PM

62_LTE Band4 CH 20175_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.09 W/kg

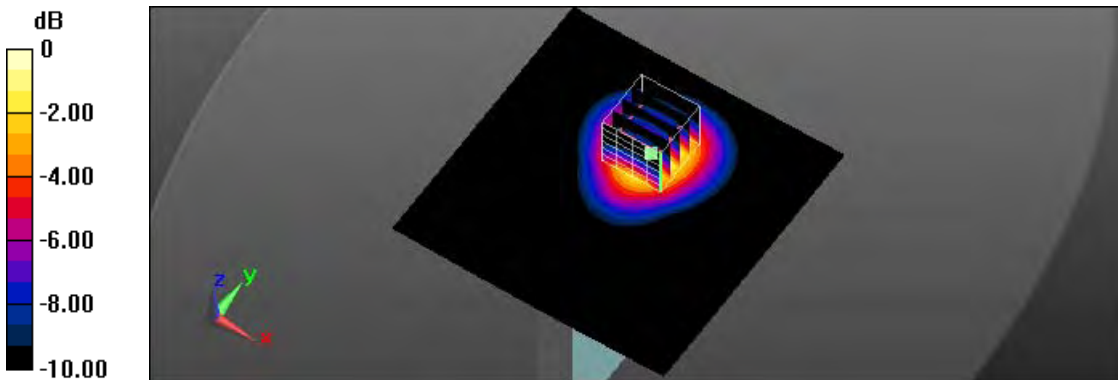
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.24 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.818 W/kg; SAR(10 g) = 0.489 W/kg

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



0 dB = 1.08 W/kg = 0.33 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 08:58:12 PM

81_LTE Band4 CH 20300_QPSK_BW 20MHz_1 RB size 49 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 54.05$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 1.09 W/kg

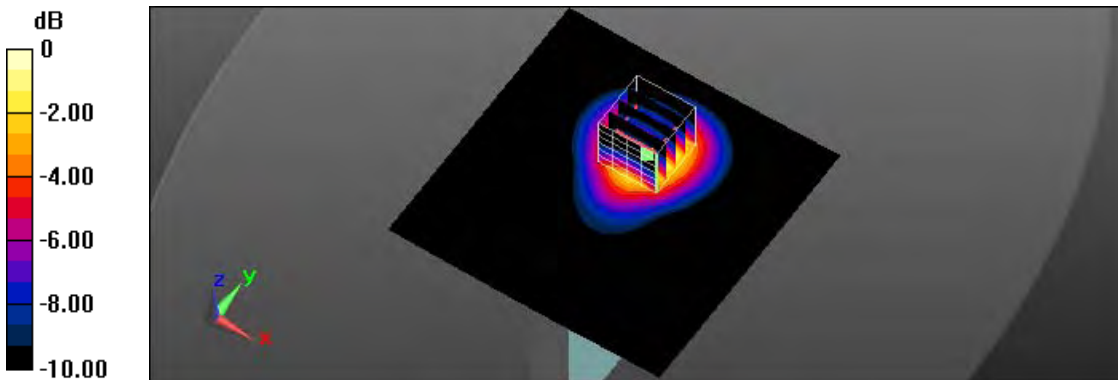
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.92 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.820 W/kg; SAR(10 g) = 0.489 W/kg

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



0 dB = 1.07 W/kg = 0.29 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 06:49:21 PM
 77_LTE Band4 CH 20050_QPSK_BW 20MHz_1 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

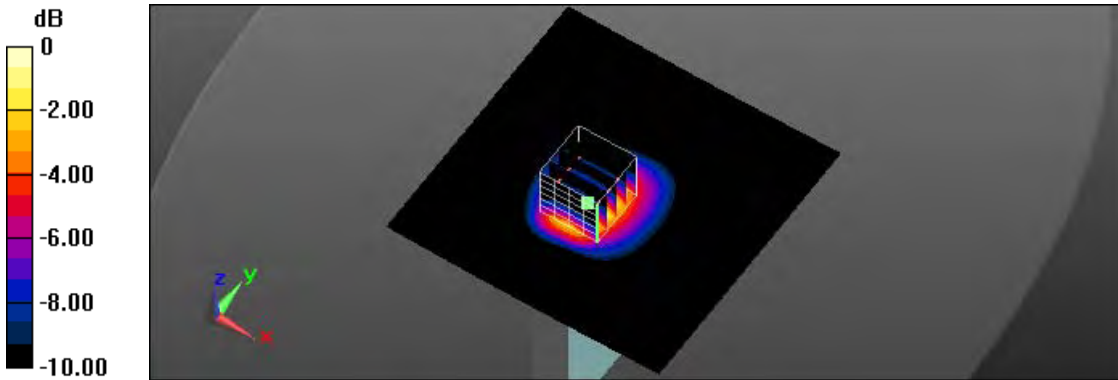
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.990 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 21.24 V/m; Power Drift = 0.06 dB
 Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.706 W/kg; SAR(10 g) = 0.397 W/kg
 Maximum value of SAR (measured) = 0.966 W/kg



0 dB = 0.966 W/kg = -0.15 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 06:26:49 PM
 63_LTE Band4 CH 20175_QPSK_BW 20MHz_1 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

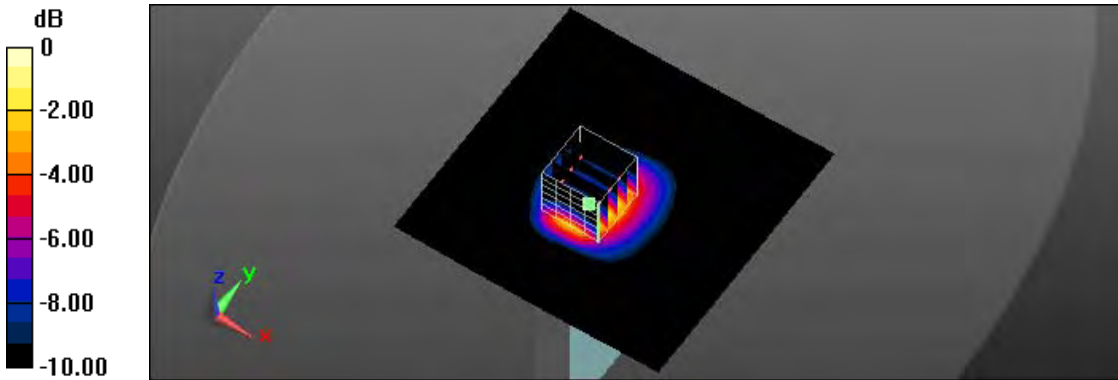
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.969 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 21.00 V/m; Power Drift = 0.06 dB
 Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.693 W/kg; SAR(10 g) = 0.388 W/kg
 Maximum value of SAR (measured) = 0.950 W/kg



0 dB = 0.950 W/kg = -0.22 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 07:07:22 PM

78_LTE Band4 CH 20300_QPSK_BW 20MHz_1 RB size 49 RB offset_side5_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 54.05$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.842 W/kg

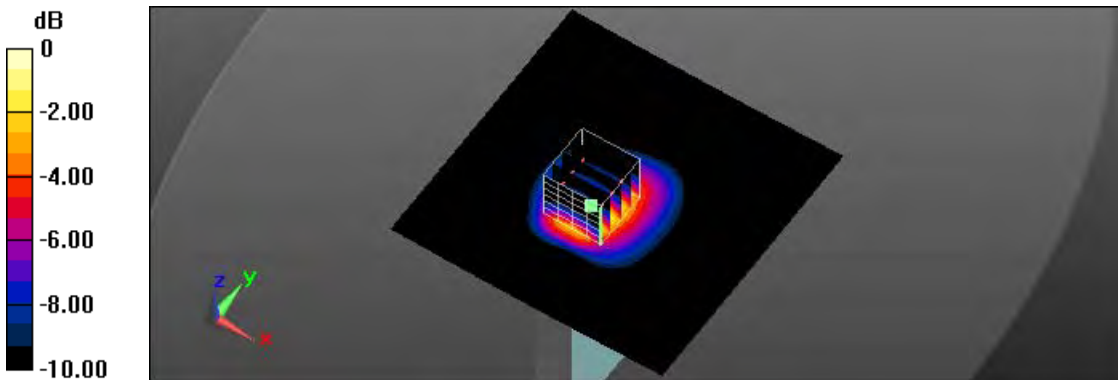
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.72 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.608 W/kg; SAR(10 g) = 0.341 W/kg

Maximum value of SAR (measured) = 0.833 W/kg



0 dB = 0.833 W/kg = -0.79 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 03:34:29 PM
 65_LTE Band4 CH 20175_QPSK_BW 20MHz_50 RB size 25 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

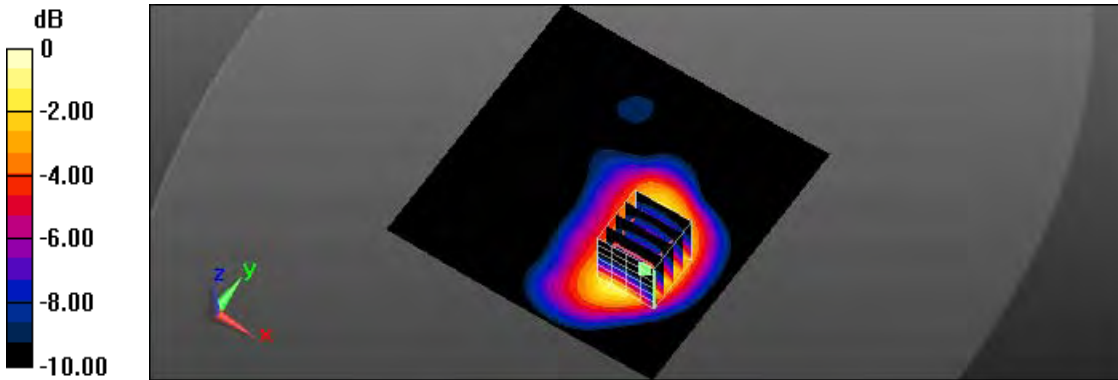
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.829 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 11.90 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.635 W/kg; SAR(10 g) = 0.391 W/kg
 Maximum value of SAR (measured) = 0.829 W/kg



0 dB = 0.829 W/kg = -0.81 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 05:08:10 PM
 66_LTE Band4 CH 20175_QPSK_BW 20MHz_50 RB size 25 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

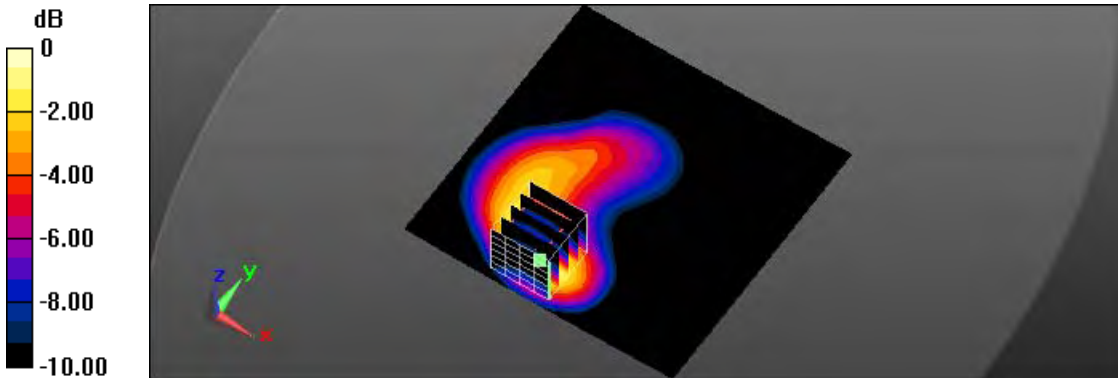
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.937 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 10.92 V/m; Power Drift = 0.00 dB
 Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.737 W/kg; SAR(10 g) = 0.424 W/kg
 Maximum value of SAR (measured) = 0.983 W/kg



0 dB = 0.983 W/kg = -0.07 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 12:09:23 AM
 67_LTE Band4 CH 20175_QPSK_BW 20MHz_50 RB size 25 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

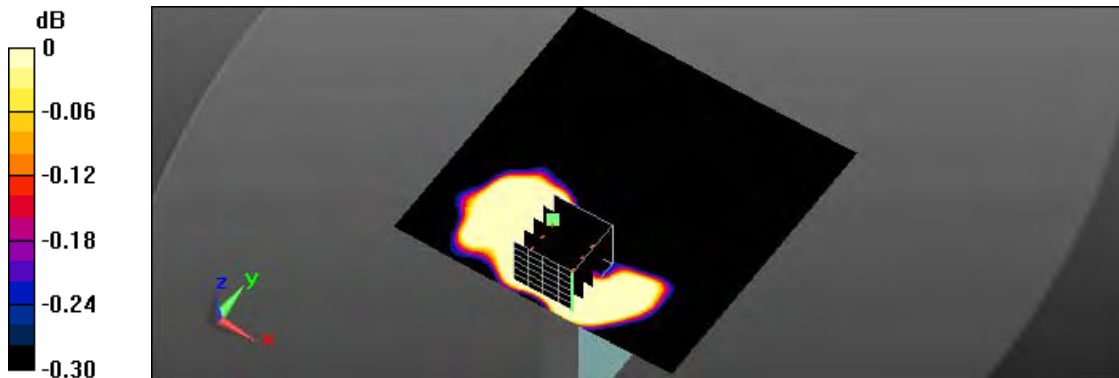
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.0148 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 2.022 V/m; Power Drift = -0.15 dB
 Peak SAR (extrapolated) = 0.0160 W/kg

SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.00743 W/kg
 Maximum value of SAR (measured) = 0.0130 W/kg



0 dB = 0.0130 W/kg = -18.86 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 08:23:00 PM
 68_LTE Band4 CH 20175_QPSK_BW 20MHz_50 RB size 25 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

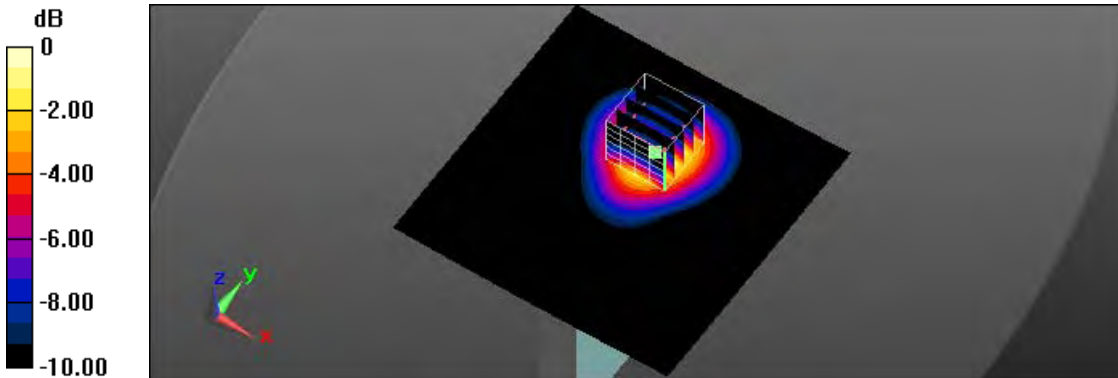
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.867 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 13.46 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.649 W/kg; SAR(10 g) = 0.387 W/kg
 Maximum value of SAR (measured) = 0.855 W/kg



0 dB = 0.855 W/kg = -0.68 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 07:24:44 PM
 69_LTE Band4 CH 20175_QPSK_BW 20MHz_50 RB size 25 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

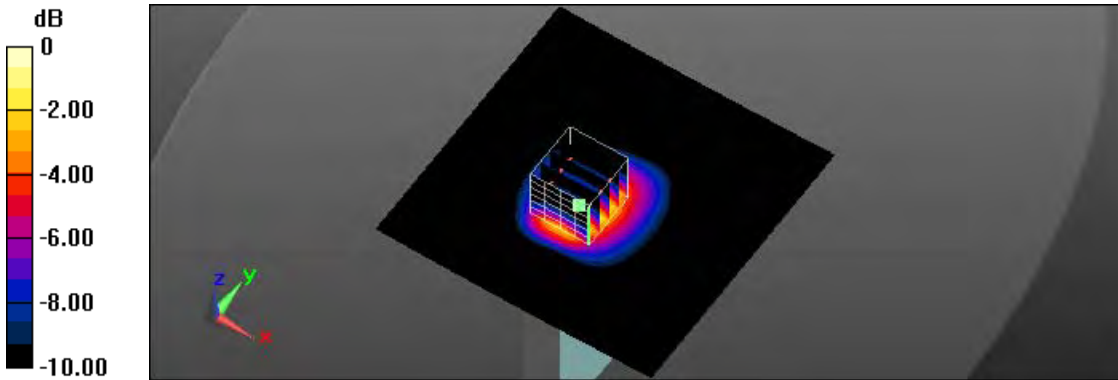
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.725 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 18.17 V/m; Power Drift = 0.09 dB
 Peak SAR (extrapolated) = 0.893 W/kg

SAR(1 g) = 0.520 W/kg; SAR(10 g) = 0.291 W/kg
 Maximum value of SAR (measured) = 0.712 W/kg



0 dB = 0.712 W/kg = -1.48 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 04:11:23 PM
 73_LTE Band4 CH 20050_QPSK_BW 20MHz_100 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

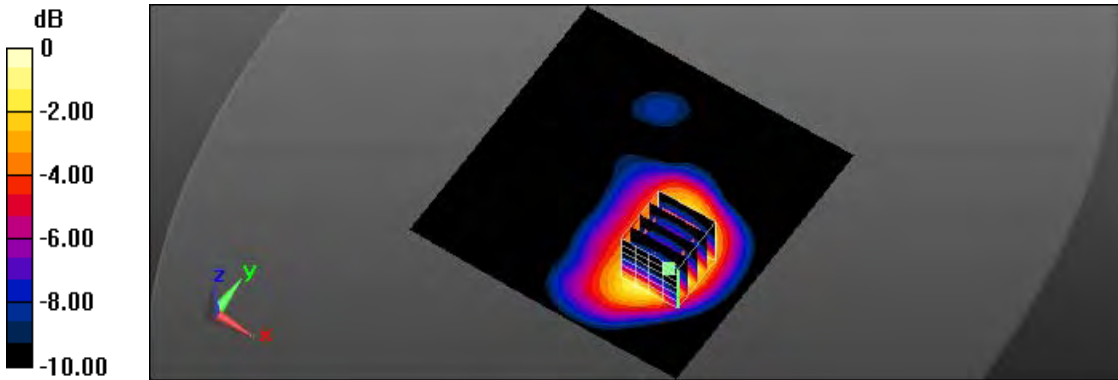
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.818 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 11.64 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.980 W/kg

SAR(1 g) = 0.623 W/kg; SAR(10 g) = 0.386 W/kg
 Maximum value of SAR (measured) = 0.812 W/kg



0 dB = 0.812 W/kg = -0.90 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 05:25:58 PM
 76_LTE Band4 CH 20050_QPSK_BW 20MHz_100 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

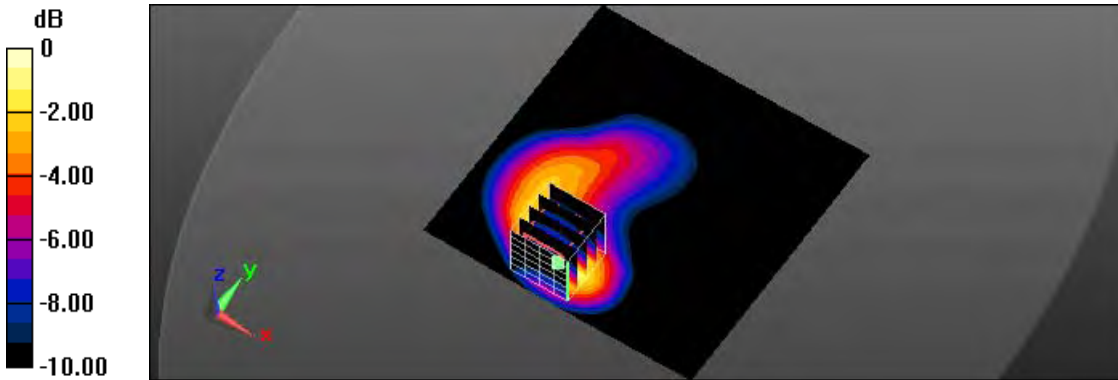
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.960 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.46 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.745 W/kg; SAR(10 g) = 0.429 W/kg
 Maximum value of SAR (measured) = 0.993 W/kg



0 dB = 0.993 W/kg = -0.03 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 09:15:40 PM
 82_LTE Band4 CH 20050_QPSK_BW 20MHz_100 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

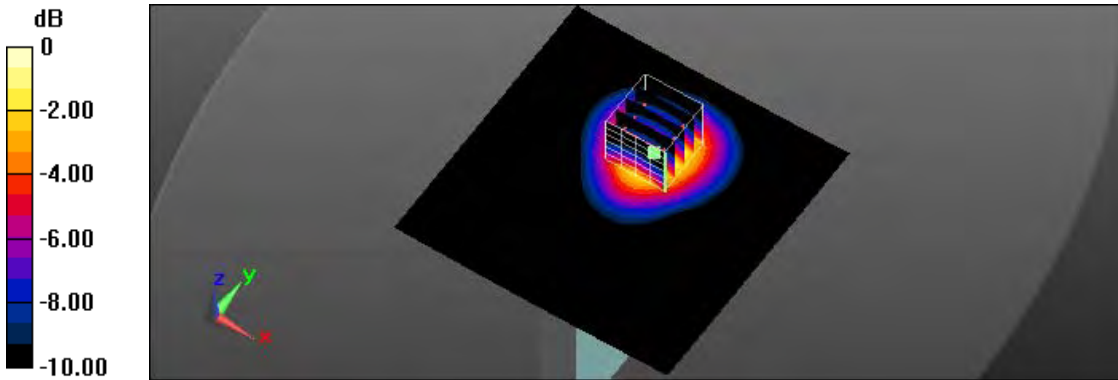
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.812 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 12.98 V/m; Power Drift = -0.09 dB
 Peak SAR (extrapolated) = 0.984 W/kg

SAR(1 g) = 0.613 W/kg; SAR(10 g) = 0.366 W/kg
 Maximum value of SAR (measured) = 0.805 W/kg



0 dB = 0.805 W/kg = -0.94 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 07:45:19 PM
 79_LTE Band4 CH 20050_QPSK_BW 20MHz_100 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

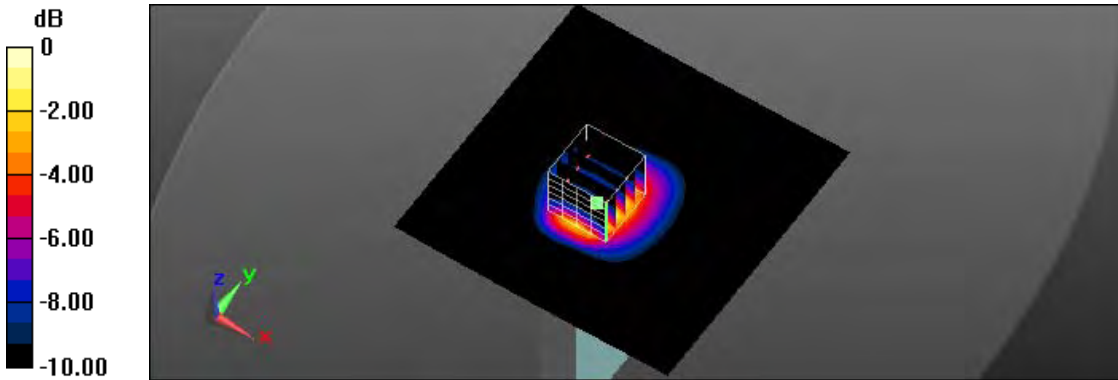
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.746 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 18.38 V/m; Power Drift = 0.09 dB
 Peak SAR (extrapolated) = 0.914 W/kg

SAR(1 g) = 0.533 W/kg; SAR(10 g) = 0.299 W/kg
 Maximum value of SAR (measured) = 0.730 W/kg



0 dB = 0.730 W/kg = -1.37 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 09:17:25 AM

90_LTE Band5 CH 20525_QPSK_BW 10MHz_1 RB size 0 RB offset_side1_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

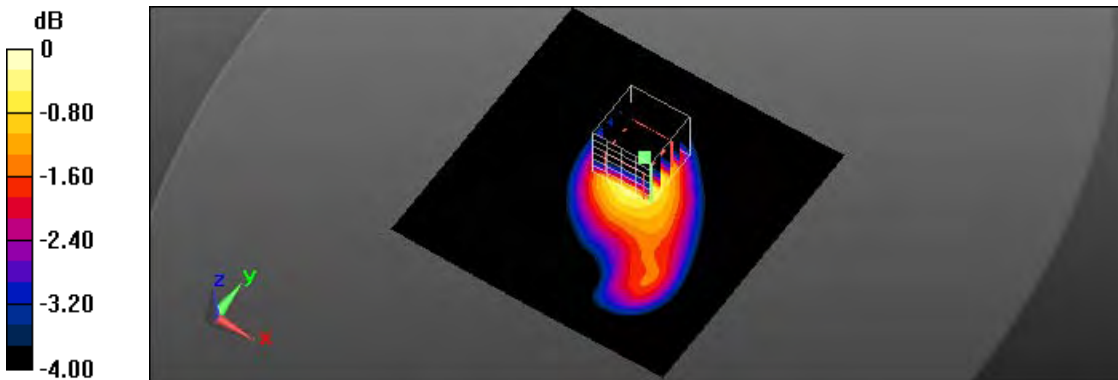
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.05 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.662 W/kg

SAR(1 g) = 0.501 W/kg; SAR(10 g) = 0.370 W/kg

Maximum value of SAR (measured) = 0.589 W/kg



0 dB = 0.589 W/kg = -2.30 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 06:48:08 PM
 125_LTE Band5 CH 20450_QPSK_BW 10MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

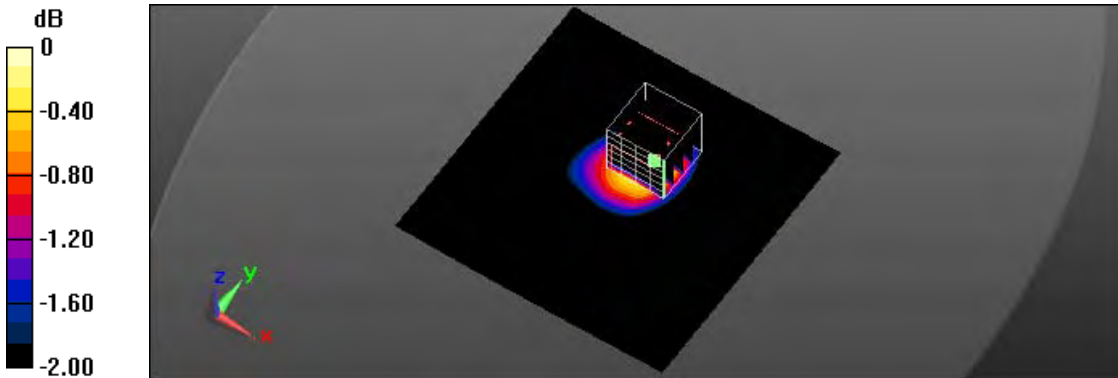
Communication System: UID 0, Generic LTE (0); Frequency: 829 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 829 \text{ MHz}$; $\sigma = 0.984 \text{ S/m}$; $\epsilon_r = 55.249$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.359 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 17.78 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 0.403 W/kg

SAR(1 g) = 0.307 W/kg; SAR(10 g) = 0.230 W/kg
 Maximum value of SAR (measured) = 0.360 W/kg



0 dB = 0.360 W/kg = -4.44 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 10:19:05 AM
 91_LTE Band5 CH 20525_QPSK_BW 10MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

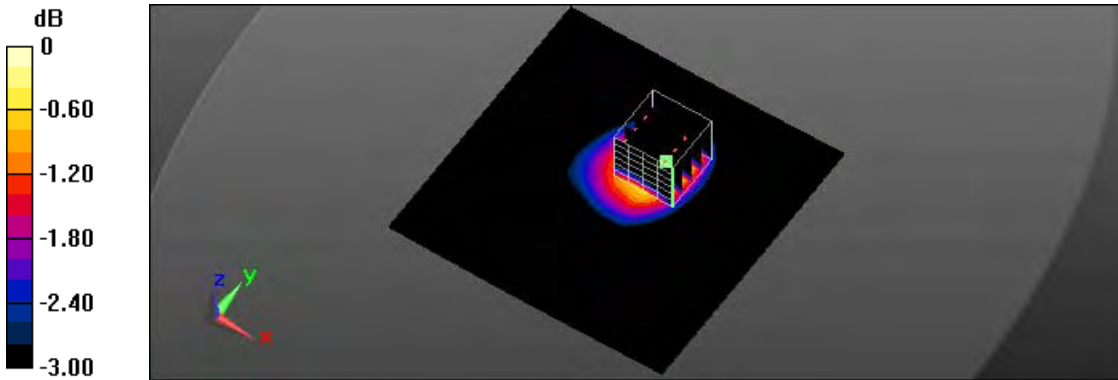
Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.804 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 24.54 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 0.898 W/kg

SAR(1 g) = 0.673 W/kg; SAR(10 g) = 0.494 W/kg
 Maximum value of SAR (measured) = 0.788 W/kg



0 dB = 0.788 W/kg = -1.03 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 07:05:18 PM
 126_LTE Band5 CH 20600_QPSK_BW 10MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

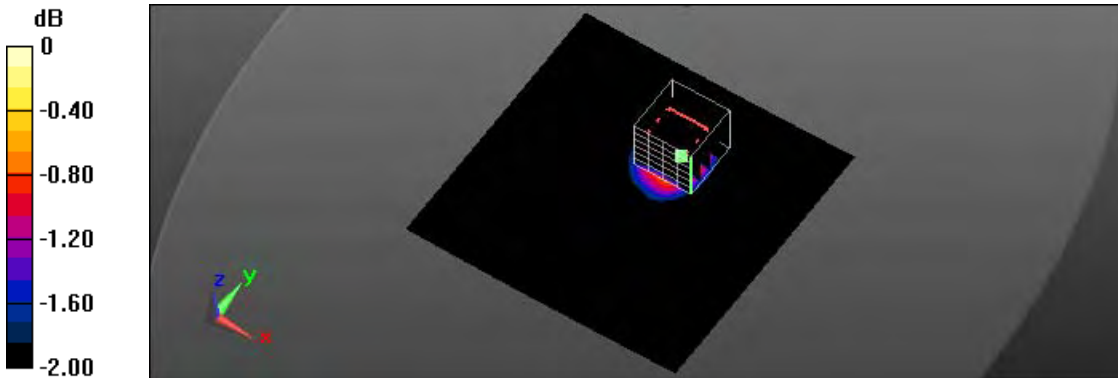
Communication System: UID 0, Generic LTE (0); Frequency: 844 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 844 \text{ MHz}$; $\sigma = 1.005 \text{ S/m}$; $\epsilon_r = 55.099$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.303 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 13.59 V/m; Power Drift = -0.07 dB
 Peak SAR (extrapolated) = 0.342 W/kg

SAR(1 g) = 0.252 W/kg; SAR(10 g) = 0.181 W/kg
 Maximum value of SAR (measured) = 0.303 W/kg



0 dB = 0.303 W/kg = -5.19 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 08:58:16 AM
 92_LTE Band5 CH 20525_QPSK_BW 10MHz_1 RB size 0 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

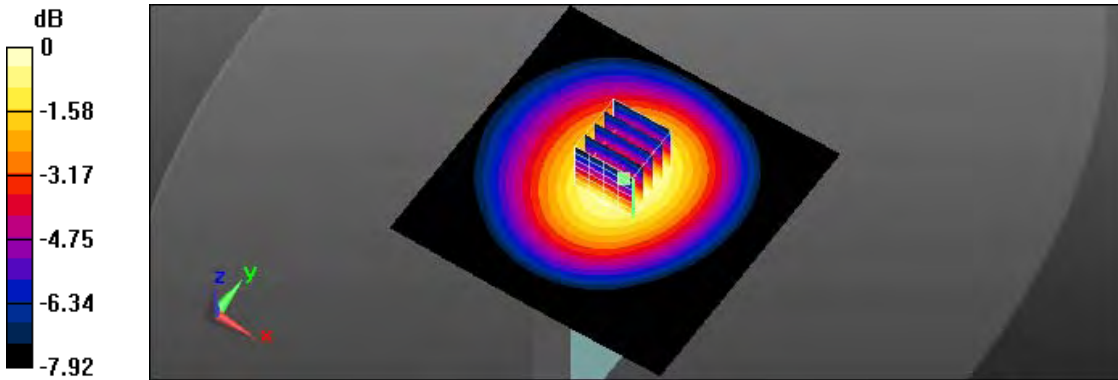
Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.188 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 13.74 V/m; Power Drift = 0.00 dB
 Peak SAR (extrapolated) = 0.208 W/kg

SAR(1 g) = 0.159 W/kg; SAR(10 g) = 0.118 W/kg
 Maximum value of SAR (measured) = 0.186 W/kg



0 dB = 0.186 W/kg = -7.30 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 07:50:17 AM

93_LTE Band5 CH 20525_QPSK_BW 10MHz_1 RB size 0 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.296 W/kg

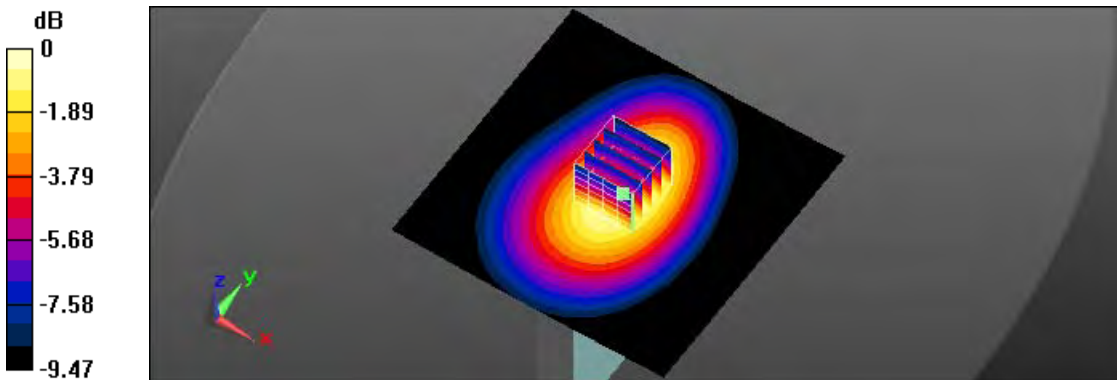
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.50 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.338 W/kg

SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.171 W/kg

Maximum value of SAR (measured) = 0.296 W/kg



0 dB = 0.296 W/kg = -5.29 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 06:57:15 AM

94_LTE Band5 CH 20525_QPSK_BW 10MHz_1 RB size 0 RB offset_side5_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.234 W/kg

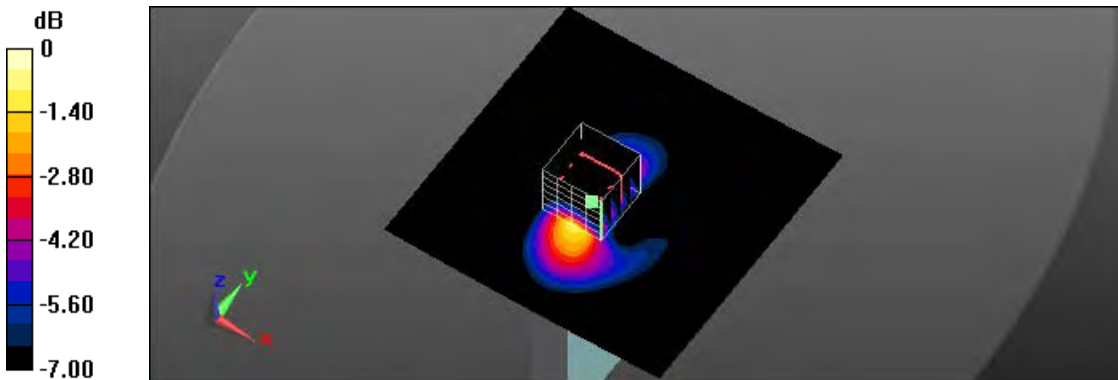
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.94 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.309 W/kg

SAR(1 g) = 0.177 W/kg; SAR(10 g) = 0.100 W/kg

Maximum value of SAR (measured) = 0.242 W/kg



0 dB = 0.242 W/kg = -6.16 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 09:40:59 AM
 96_LTE Band5 CH 20525_QPSK_BW 10MHz_25 RB size 12 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

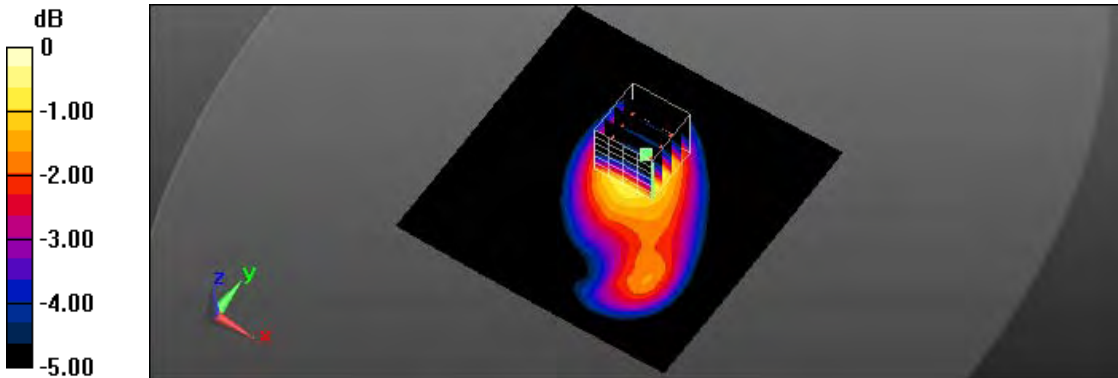
Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.455 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 19.46 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.512 W/kg

SAR(1 g) = 0.382 W/kg; SAR(10 g) = 0.278 W/kg
 Maximum value of SAR (measured) = 0.448 W/kg



0 dB = 0.448 W/kg = -3.49 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 10:01:47 AM
 97_LTE Band5 CH 20525_QPSK_BW 10MHz_25 RB size 12 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

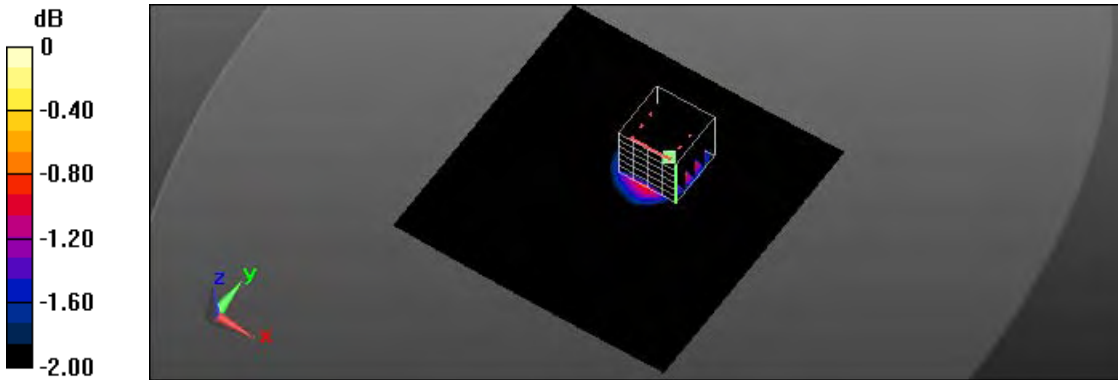
Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5 \text{ MHz}$; $\sigma = 0.995 \text{ S/m}$; $\epsilon_r = 55.169$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.594 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 19.99 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.665 W/kg

SAR(1 g) = 0.495 W/kg; SAR(10 g) = 0.358 W/kg
 Maximum value of SAR (measured) = 0.583 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 08:40:50 AM
 98_LTE Band5 CH 20525_QPSK_BW 10MHz_25 RB size 12 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

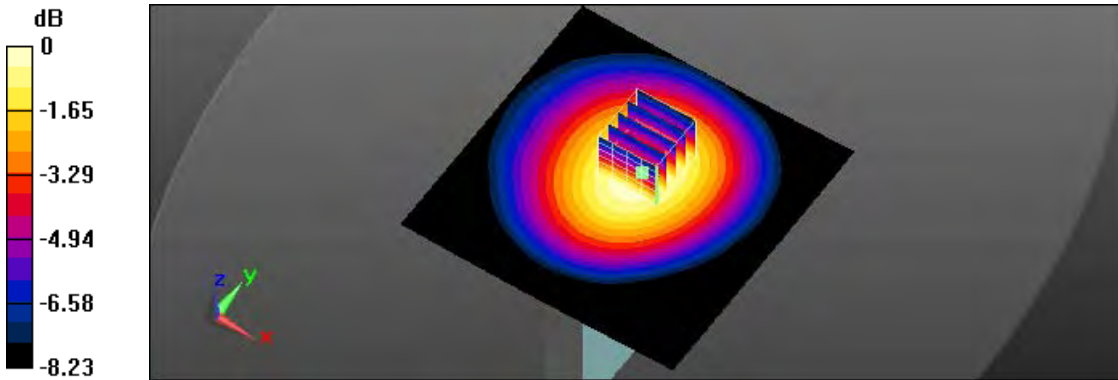
Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.145 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 11.97 V/m; Power Drift = 0.00 dB
 Peak SAR (extrapolated) = 0.161 W/kg

SAR(1 g) = 0.123 W/kg; SAR(10 g) = 0.091 W/kg
 Maximum value of SAR (measured) = 0.143 W/kg



0 dB = 0.143 W/kg = -8.45 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 07:33:04 AM
 99_LTE Band5 CH 20525_QPSK_BW 10MHz_25 RB size 12 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

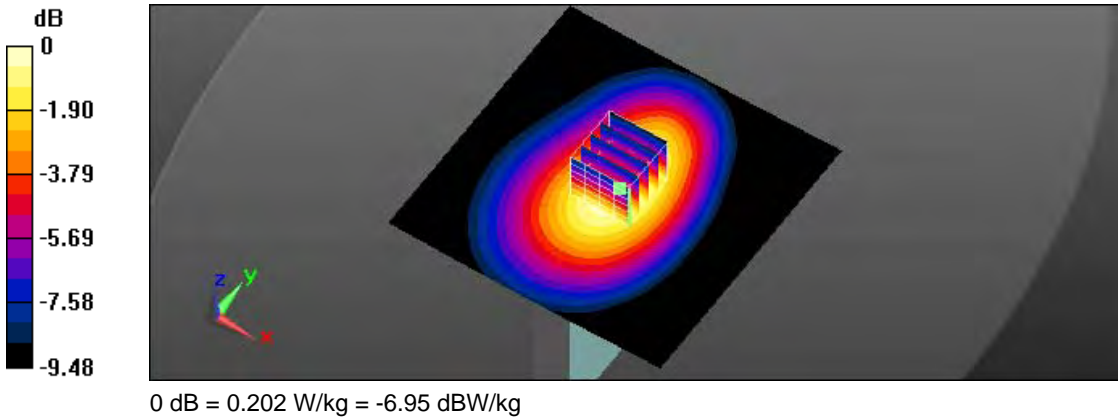
Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.202 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 14.50 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.232 W/kg

SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.117 W/kg
 Maximum value of SAR (measured) = 0.202 W/kg



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 07:14:25 AM

100_LTE Band5 CH 20525_QPSK_BW 10MHz_25 RB size 12 RB offset_side5_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.185 W/kg

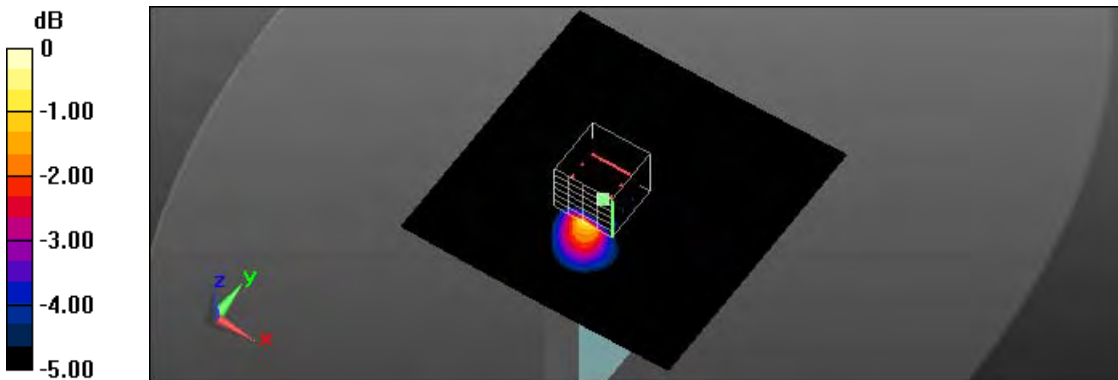
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.41 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.249 W/kg

SAR(1 g) = 0.141 W/kg; SAR(10 g) = 0.080 W/kg

Maximum value of SAR (measured) = 0.193 W/kg



0 dB = 0.193 W/kg = -7.14 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/24 07:24:05 PM
 127_LTE Band5 CH 20525_QPSK_BW 10MHz_50 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

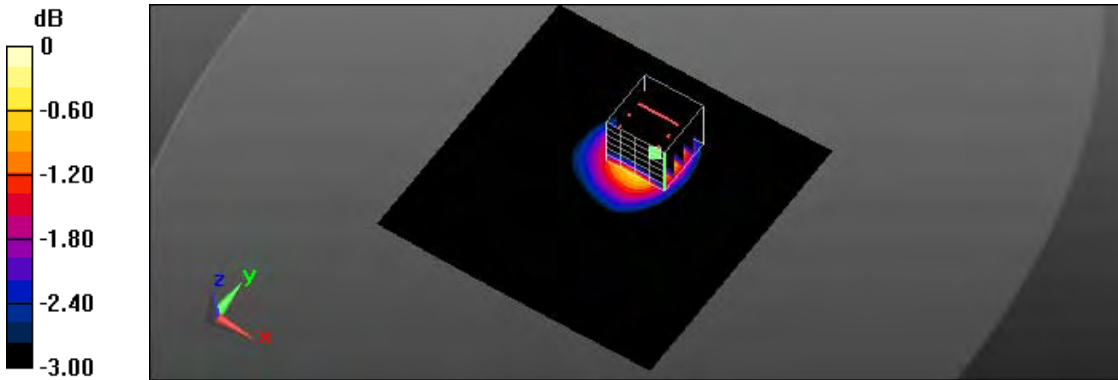
Communication System: UID 0, Generic LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.995$ S/m; $\epsilon_r = 55.169$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(9.68, 9.68, 9.68); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.339 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 14.96 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 0.380 W/kg

SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.205 W/kg
 Maximum value of SAR (measured) = 0.337 W/kg



0 dB = 0.337 W/kg = -4.72 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 12:39:13 AM
 49_LTE Band7 CH 20850_QPSK_BW 20MHz_1 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2510 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2510 \text{ MHz}$; $\sigma = 2.096 \text{ S/m}$; $\epsilon_r = 51.179$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

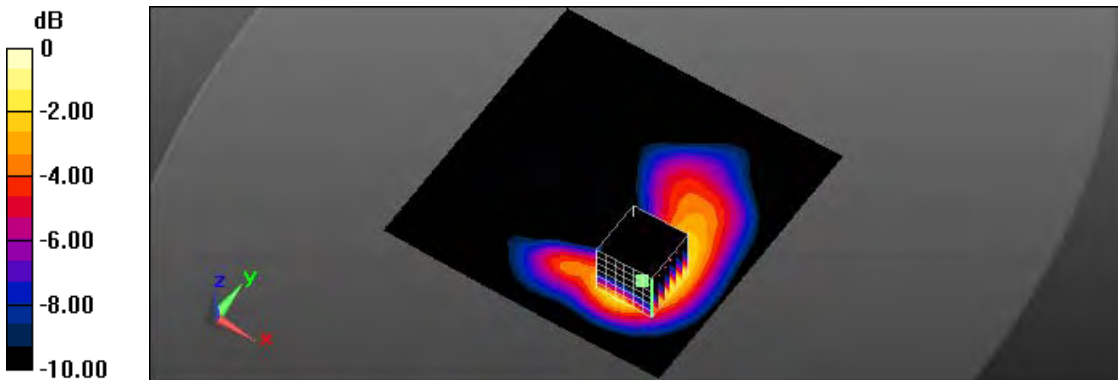
Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.19 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 4.662 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.866 W/kg; SAR(10 g) = 0.476 W/kg

Maximum value of SAR (measured) = 1.22 W/kg



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

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 06:03:58 PM
 37_LTE Band7 CH 21100_QPSK_BW 20MHz_1 RB size 49 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

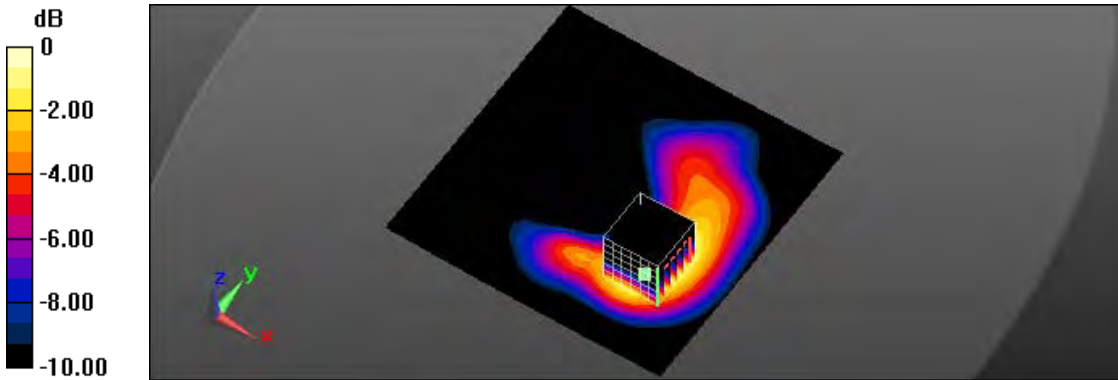
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.00 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 2.908 V/m; Power Drift = -0.08 dB
 Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.711 W/kg; SAR(10 g) = 0.390 W/kg
 Maximum value of SAR (measured) = 0.998 W/kg



0 dB = 0.998 W/kg = -0.01 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 12:01:13 AM

50_LTE Band7 CH 21350_QPSK_BW 20MHz_1 RB size 0 RB offset_side1_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 2.166$ S/m; $\epsilon_r = 51.085$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.15 W/kg

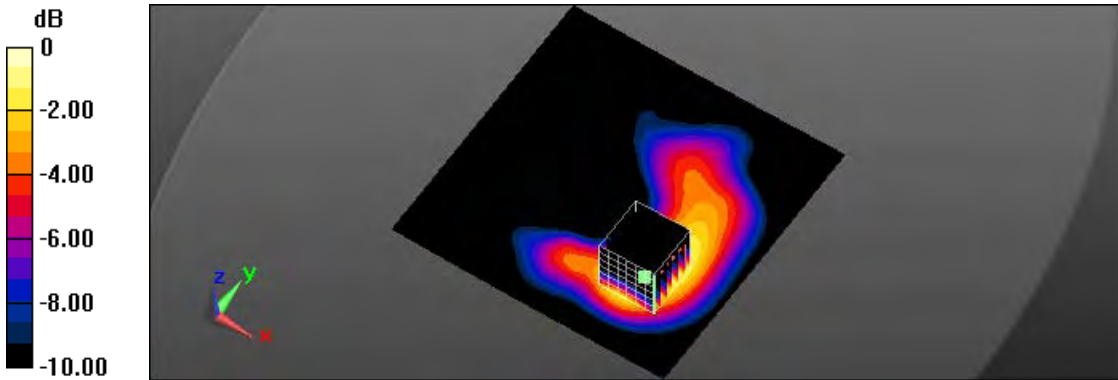
Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.366 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.51 W/kg

SAR(1 g) = 0.799 W/kg; SAR(10 g) = 0.440 W/kg

Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 1.13 W/kg = 0.53 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/20 08:18:48 PM

51_LTE Band7 CH 20850_QPSK_BW 20MHz_1 RB size 0 RB offset_side2_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510 \text{ MHz}$; $\sigma = 2.096 \text{ S/m}$; $\epsilon_r = 51.179$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.962 W/kg

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

Reference Value = 10.64 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.663 W/kg; SAR(10 g) = 0.338 W/kg

Maximum value of SAR (measured) = 0.977 W/kg

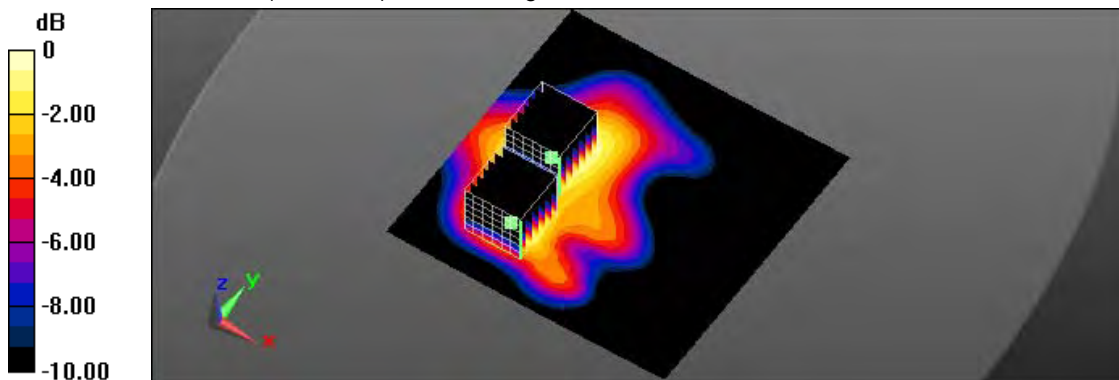
Flat/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.64 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.920 W/kg

SAR(1 g) = 0.512 W/kg; SAR(10 g) = 0.298 W/kg

Maximum value of SAR (measured) = 0.707 W/kg



0 dB = 0.707 W/kg = -1.51 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 07:29:01 PM
 38_LTE Band7 CH 21100_QPSK_BW 20MHz_1 RB size 49 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

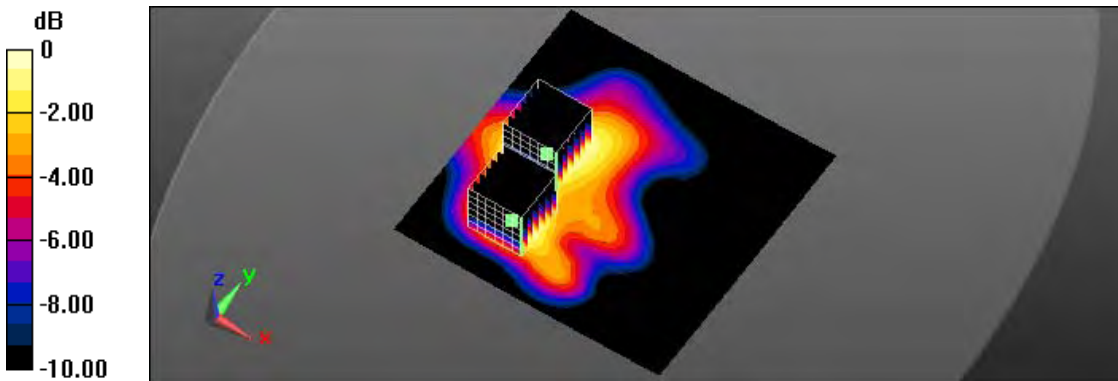
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.962 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.41 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.647 W/kg; SAR(10 g) = 0.325 W/kg
 Maximum value of SAR (measured) = 0.963 W/kg

Flat/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.41 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 0.881 W/kg
SAR(1 g) = 0.488 W/kg; SAR(10 g) = 0.280 W/kg
 Maximum value of SAR (measured) = 0.676 W/kg



0 dB = 0.676 W/kg = -1.70 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 09:03:53 PM
 52_LTE Band7 CH 21350_QPSK_BW 20MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

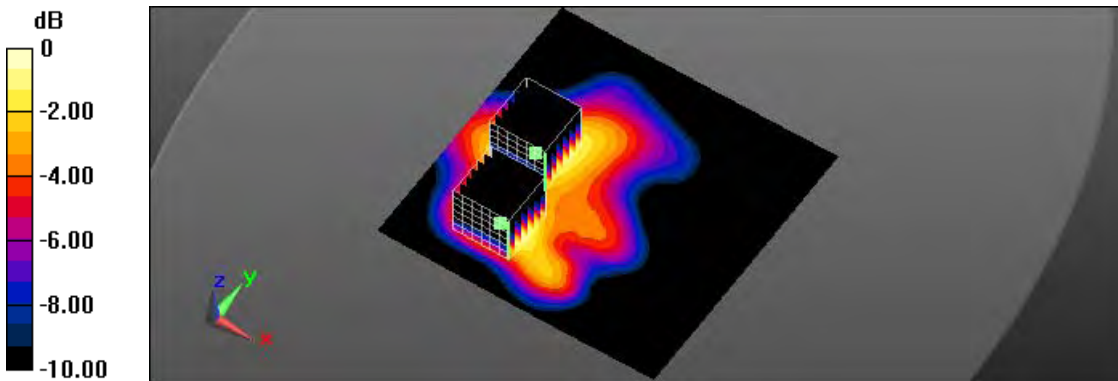
Communication System: UID 0, Generic LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2560 \text{ MHz}$; $\sigma = 2.166 \text{ S/m}$; $\epsilon_r = 51.085$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.08 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.42 V/m; Power Drift = 0.11 dB
 Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.734 W/kg; SAR(10 g) = 0.364 W/kg
 Maximum value of SAR (measured) = 1.09 W/kg

Flat/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.42 V/m; Power Drift = 0.11 dB
 Peak SAR (extrapolated) = 1.00 W/kg
SAR(1 g) = 0.550 W/kg; SAR(10 g) = 0.311 W/kg
 Maximum value of SAR (measured) = 0.767 W/kg



0 dB = 0.767 W/kg = -1.15 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 05:18:12 AM
 39_LTE Band7 CH 21100_QPSK_BW 20MHz_1 RB size 49 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

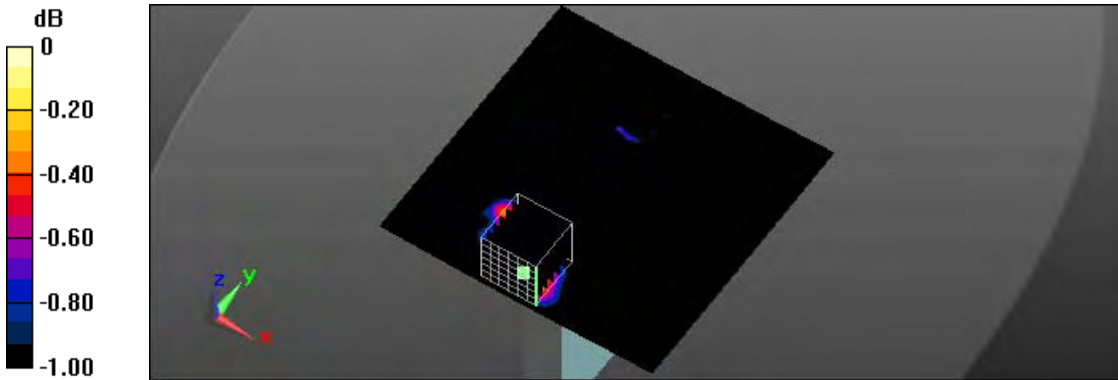
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0327 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 1.959 V/m; Power Drift = 0.10 dB
 Peak SAR (extrapolated) = 0.0440 W/kg

SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.015 W/kg
 Maximum value of SAR (measured) = 0.0337 W/kg



0 dB = 0.0337 W/kg = -14.72 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 09:13:24 AM
 55_LTE Band7 CH 20850_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2510 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2510 \text{ MHz}$; $\sigma = 2.096 \text{ S/m}$; $\epsilon_r = 51.179$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

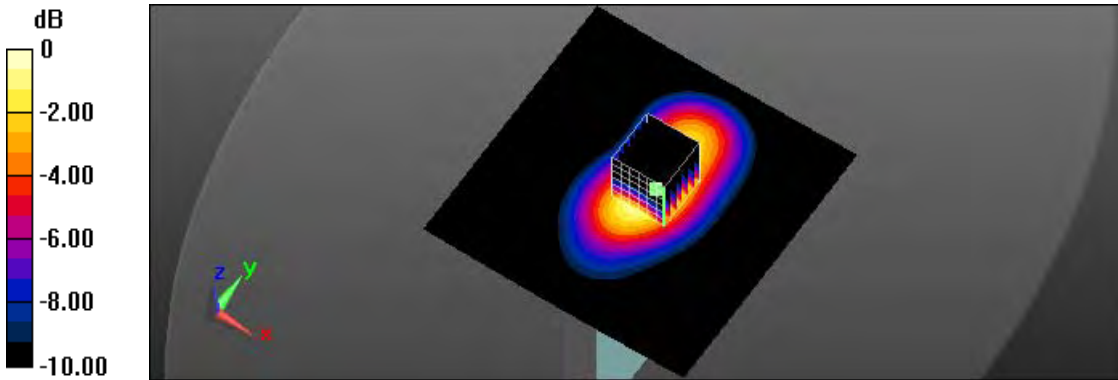
Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.17 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 22.94 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 0.827 W/kg; SAR(10 g) = 0.454 W/kg

Maximum value of SAR (measured) = 1.17 W/kg



0 dB = 1.17 W/kg = 0.68 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 06:00:27 AM

40_LTE Band7 CH 21100_QPSK_BW 20MHz_1 RB size 49 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.23 W/kg

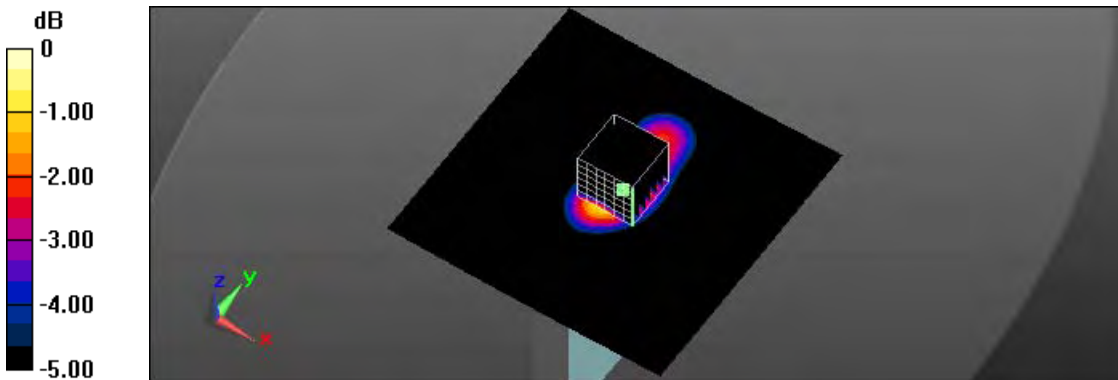
Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.08 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.871 W/kg; SAR(10 g) = 0.472 W/kg

Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg = 0.90 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 09:54:03 AM

56_LTE Band7 CH 21350_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 2.166$ S/m; $\epsilon_r = 51.085$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

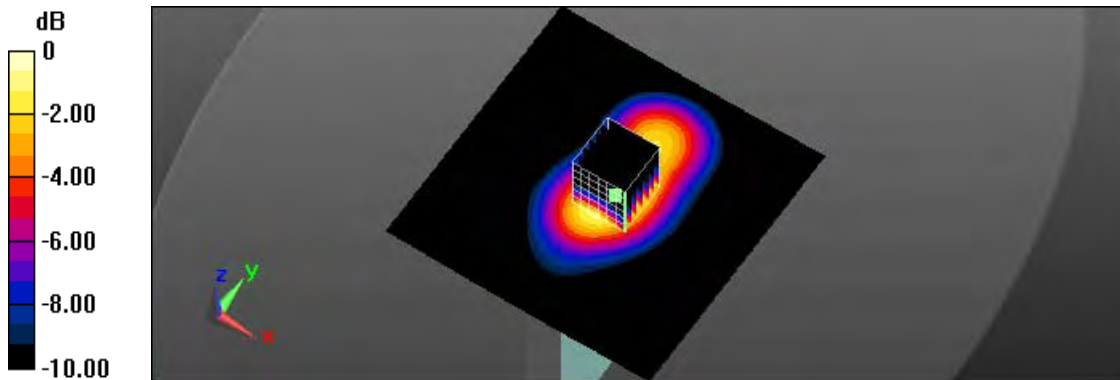
Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.35 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 0.873 W/kg; SAR(10 g) = 0.475 W/kg

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



0 dB = 1.24 W/kg = 0.93 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 01:31:03 AM
 41_LTE Band7 CH 21100_QPSK_BW 20MHz_1 RB size 49 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

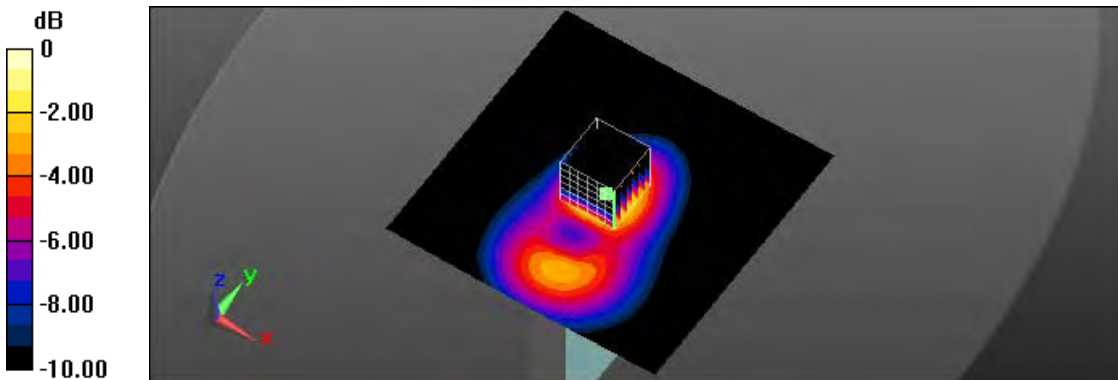
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.789 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 19.08 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.529 W/kg; SAR(10 g) = 0.277 W/kg
 Maximum value of SAR (measured) = 0.767 W/kg



0 dB = 0.767 W/kg = -1.15 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 06:50:26 PM
 43_LTE Band7 CH 21100_QPSK_BW 20MHz_50 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

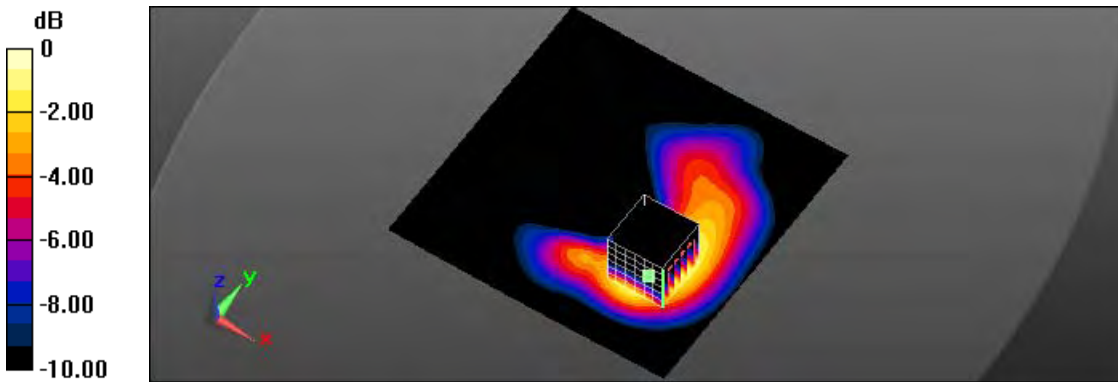
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.826 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 2.435 V/m; Power Drift = -0.08 dB
 Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.581 W/kg; SAR(10 g) = 0.318 W/kg
 Maximum value of SAR (measured) = 0.814 W/kg



0 dB = 0.814 W/kg = -0.89 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 09:50:19 PM
 44_LTE Band7 CH 21100_QPSK_BW 20MHz_50 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

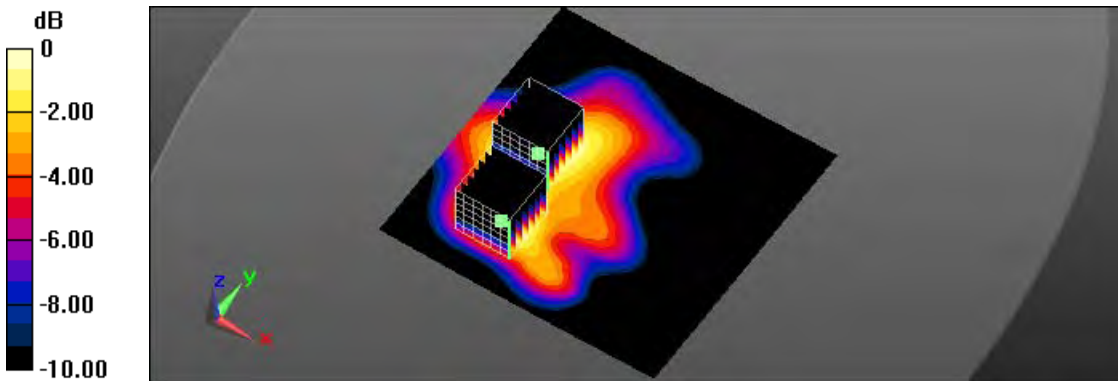
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.748 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 8.981 V/m; Power Drift = 0.14 dB
 Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.508 W/kg; SAR(10 g) = 0.256 W/kg
 Maximum value of SAR (measured) = 0.745 W/kg

Flat/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 8.981 V/m; Power Drift = 0.14 dB
 Peak SAR (extrapolated) = 0.700 W/kg
SAR(1 g) = 0.389 W/kg; SAR(10 g) = 0.224 W/kg
 Maximum value of SAR (measured) = 0.538 W/kg



0 dB = 0.538 W/kg = -2.69 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 02:54:52 AM
 45_LTE Band7 CH 21100_QPSK_BW 20MHz_50 RB size 0 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

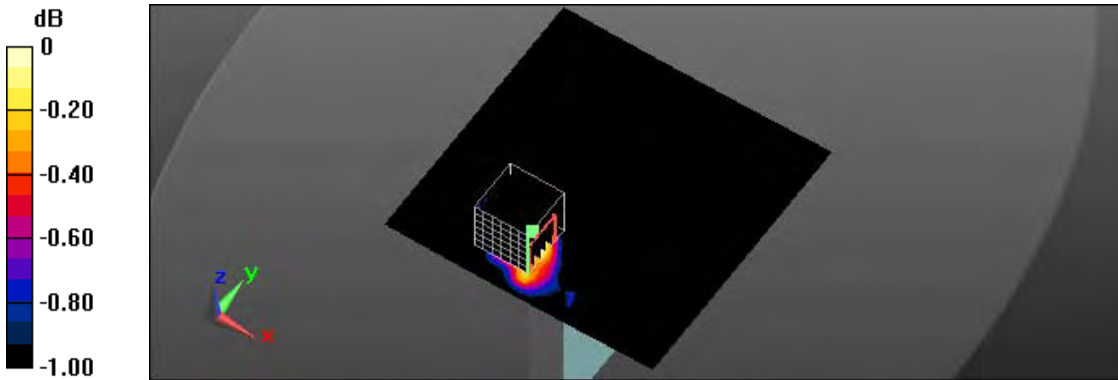
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0274 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 1.684 V/m; Power Drift = -0.08 dB
 Peak SAR (extrapolated) = 0.0370 W/kg

SAR(1 g) = 0.020 W/kg; SAR(10 g) = 0.012 W/kg
 Maximum value of SAR (measured) = 0.0272 W/kg



0 dB = 0.0272 W/kg = -15.65 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 06:33:50 AM
 46_LTE Band7 CH 21100_QPSK_BW 20MHz_50 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

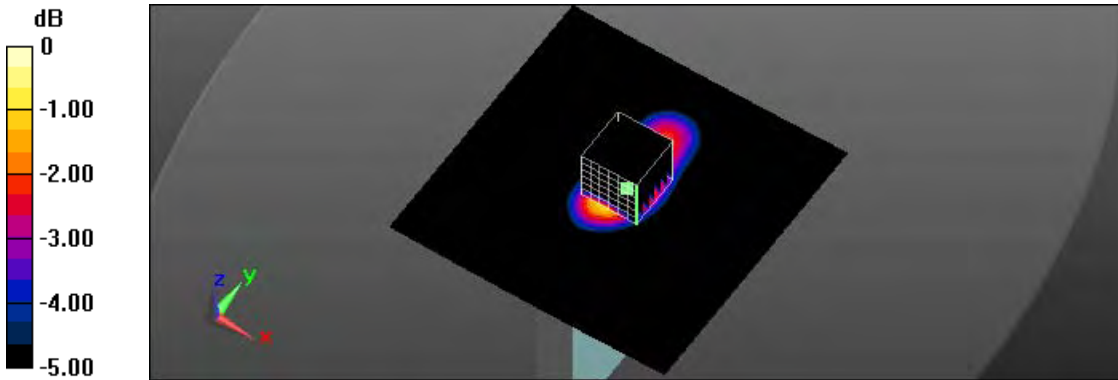
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.02 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 21.74 V/m; Power Drift = -0.10 dB
 Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.705 W/kg; SAR(10 g) = 0.381 W/kg
 Maximum value of SAR (measured) = 1.00 W/kg



0 dB = 1.00 W/kg = 0.00 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 02:05:45 AM
 47_LTE Band7 CH 21100_QPSK_BW 20MHz_50 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

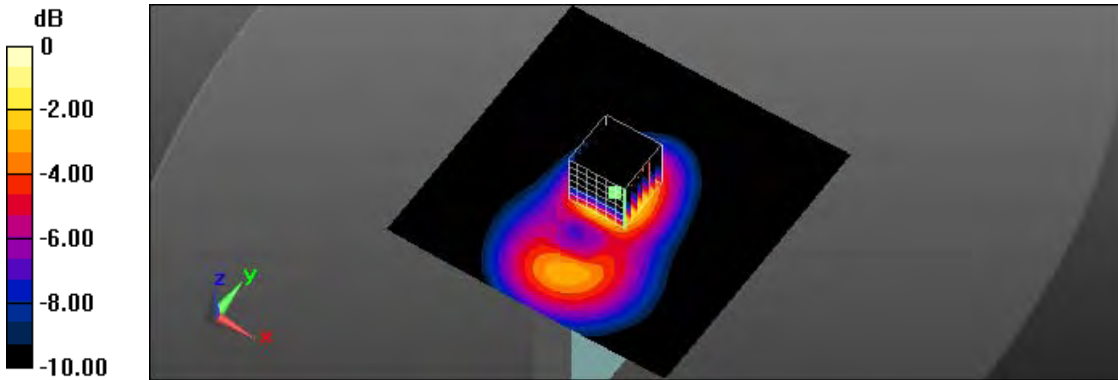
Communication System: UID 0, Generic LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 2.134 \text{ S/m}$; $\epsilon_r = 51.104$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.630 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 17.08 V/m; Power Drift = -0.10 dB
 Peak SAR (extrapolated) = 0.807 W/kg

SAR(1 g) = 0.419 W/kg; SAR(10 g) = 0.220 W/kg
 Maximum value of SAR (measured) = 0.605 W/kg



0 dB = 0.605 W/kg = -2.18 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 11:27:22 PM
 53_LTE Band7 CH 21350_QPSK_BW 20MHz_100 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

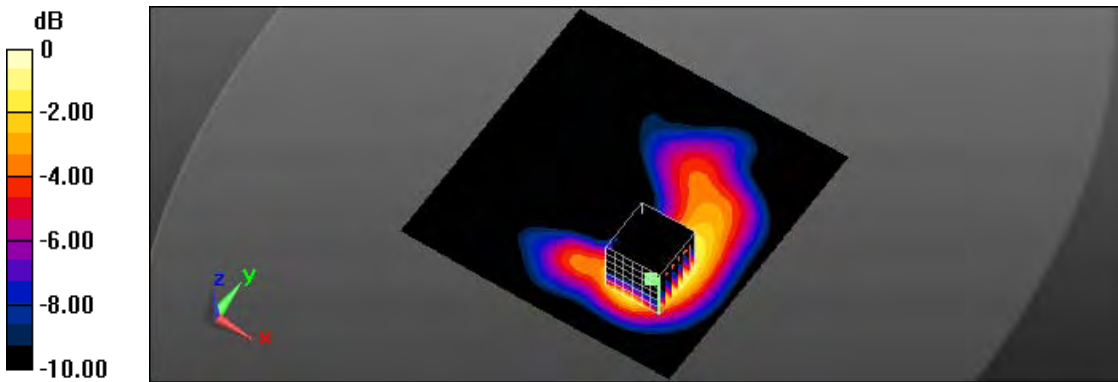
Communication System: UID 0, Generic LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2560 \text{ MHz}$; $\sigma = 2.166 \text{ S/m}$; $\epsilon_r = 51.085$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.895 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 2.660 V/m; Power Drift = 0.07 dB
 Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.617 W/kg; SAR(10 g) = 0.339 W/kg
 Maximum value of SAR (measured) = 0.876 W/kg



0 dB = 0.876 W/kg = -0.57 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/20 10:37:59 PM

54_LTE Band7 CH 21350_QPSK_BW 20MHz_100 RB size 0 RB offset_side2_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 2.166$ S/m; $\epsilon_r = 51.085$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.850 W/kg

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

Reference Value = 9.152 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.573 W/kg; SAR(10 g) = 0.287 W/kg

Maximum value of SAR (measured) = 0.848 W/kg

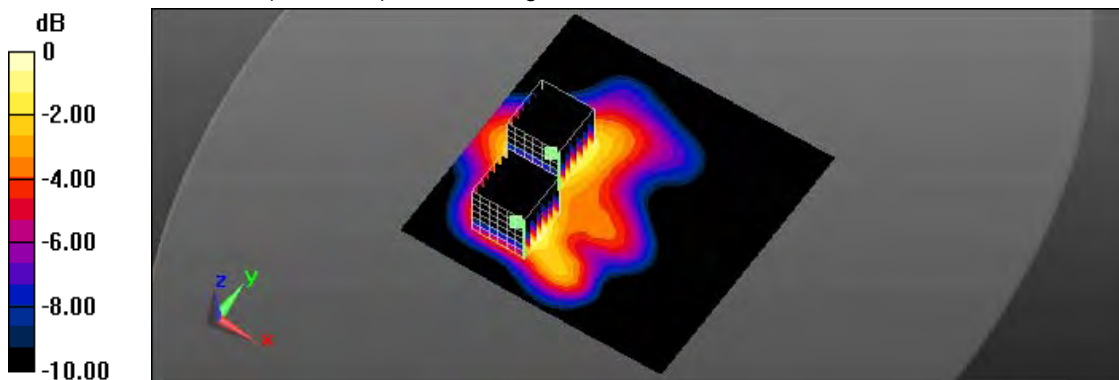
Flat/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.152 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.785 W/kg

SAR(1 g) = 0.431 W/kg; SAR(10 g) = 0.245 W/kg

Maximum value of SAR (measured) = 0.600 W/kg



0 dB = 0.600 W/kg = -2.22 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/21 10:43:43 AM
 57_LTE Band7 CH 21350_QPSK_BW 20MHz_100 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

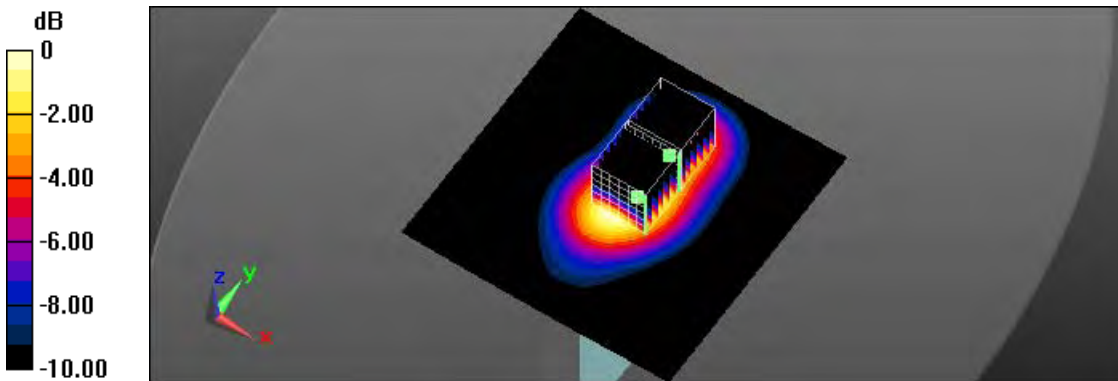
Communication System: UID 0, Generic LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2560 \text{ MHz}$; $\sigma = 2.166 \text{ S/m}$; $\epsilon_r = 51.085$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.957 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 20.49 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 1.26 W/kg
SAR(1 g) = 0.674 W/kg; SAR(10 g) = 0.366 W/kg
 Maximum value of SAR (measured) = 0.959 W/kg

Flat/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 20.49 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.509 W/kg; SAR(10 g) = 0.268 W/kg
 Maximum value of SAR (measured) = 0.800 W/kg



0 dB = 0.800 W/kg = -0.97 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 11:38:10 AM
 102_LTE Band12 CH 23095_QPSK_BW 10MHz_1 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

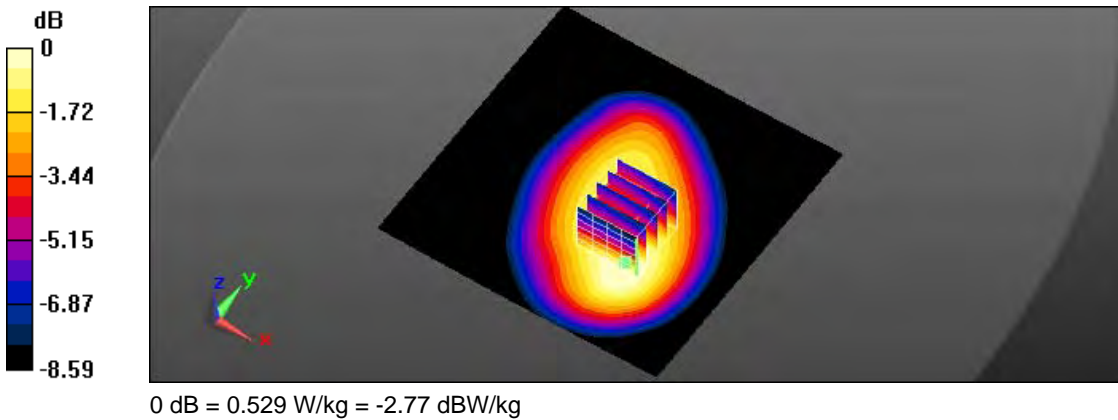
Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.538 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 22.11 V/m; Power Drift = -0.07 dB
 Peak SAR (extrapolated) = 0.611 W/kg

SAR(1 g) = 0.438 W/kg; SAR(10 g) = 0.329 W/kg
 Maximum value of SAR (measured) = 0.529 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 01:13:38 PM
 103_LTE Band12 CH 23095_QPSK_BW 10MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

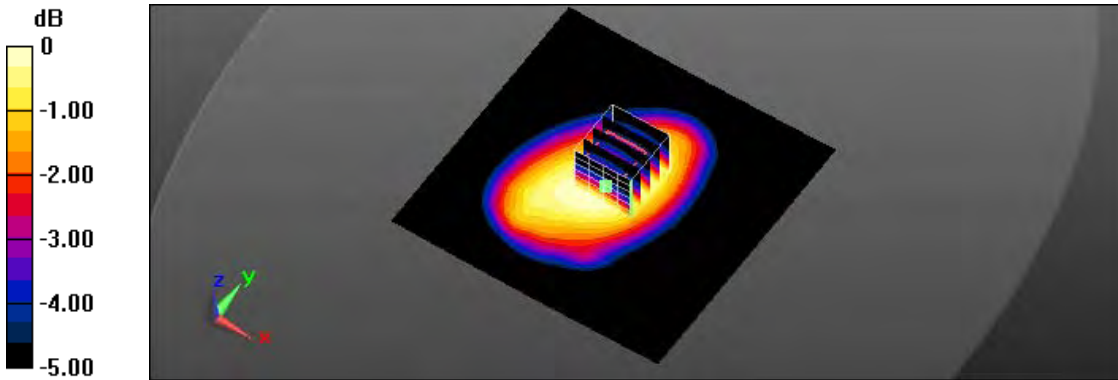
Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.557 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 24.65 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.600 W/kg

SAR(1 g) = 0.488 W/kg; SAR(10 g) = 0.380 W/kg
 Maximum value of SAR (measured) = 0.551 W/kg



0 dB = 0.551 W/kg = -2.59 dBW/kg

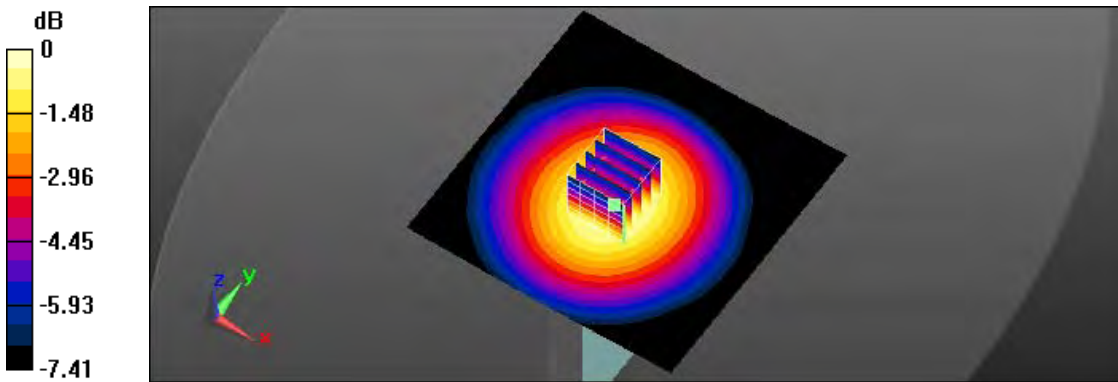
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 08:12:54 PM
 104_LTE Band12 CH 23095_QPSK_BW 10MHz_1 RB size 0 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0900 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 9.755 V/m; Power Drift = -0.00 dB
 Peak SAR (extrapolated) = 0.0990 W/kg
SAR(1 g) = 0.077 W/kg; SAR(10 g) = 0.058 W/kg
 Maximum value of SAR (measured) = 0.0896 W/kg



0 dB = 0.0896 W/kg = -10.48 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 09:06:22 PM
 105_LTE Band12 CH 23095_QPSK_BW 10MHz_1 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

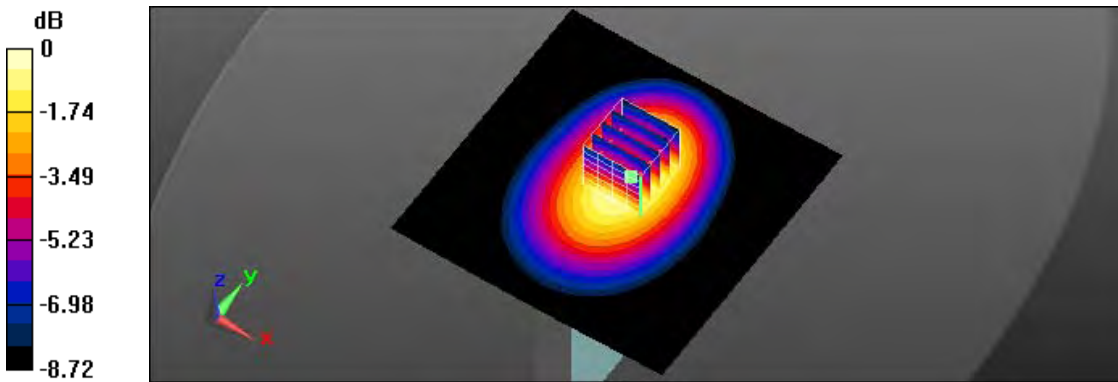
Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.213 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 14.71 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.238 W/kg

SAR(1 g) = 0.176 W/kg; SAR(10 g) = 0.127 W/kg
 Maximum value of SAR (measured) = 0.211 W/kg



0 dB = 0.211 W/kg = -6.76 dBW/kg

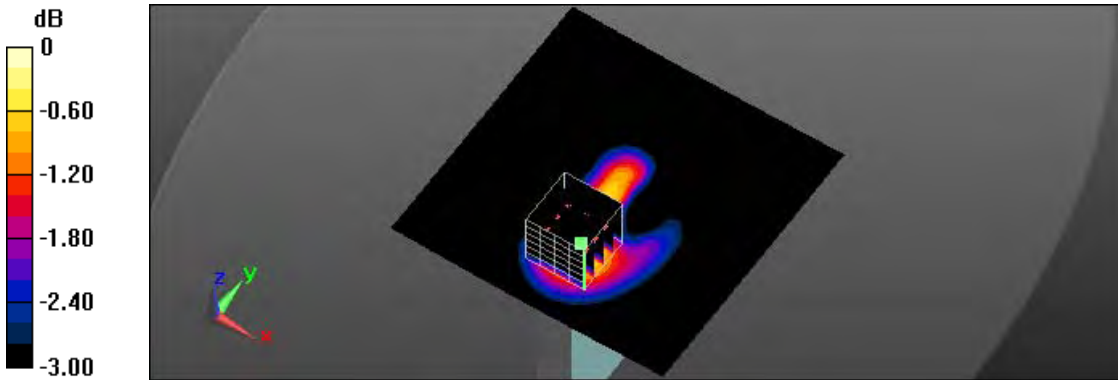
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 09:25:13 PM
 106_LTE Band12 CH 23095_QPSK_BW 10MHz_1 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0767 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 8.243 V/m; Power Drift = 0.06 dB
 Peak SAR (extrapolated) = 0.0970 W/kg
SAR(1 g) = 0.059 W/kg; SAR(10 g) = 0.040 W/kg
 Maximum value of SAR (measured) = 0.0741 W/kg



0 dB = 0.0741 W/kg = -11.30 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 12:15:45 PM

108_LTE Band12 CH 23095_QPSK_BW 10MHz_25 RB size 25 RB offset_side1_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.954$ S/m; $\epsilon_r = 54.61$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.383 W/kg

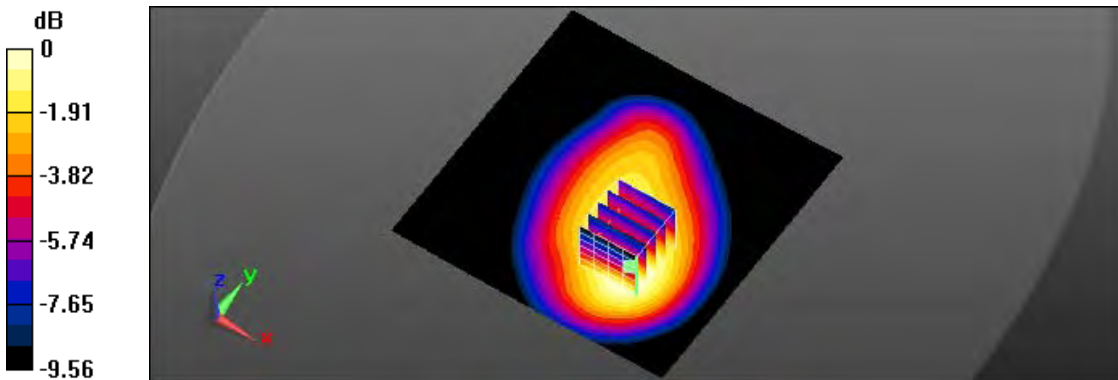
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.13 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.446 W/kg

SAR(1 g) = 0.310 W/kg; SAR(10 g) = 0.220 W/kg

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



0 dB = 0.377 W/kg = -4.24 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 12:42:11 PM
 109_LTE Band12 CH 23095_QPSK_BW 10MHz_25 RB size 25 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

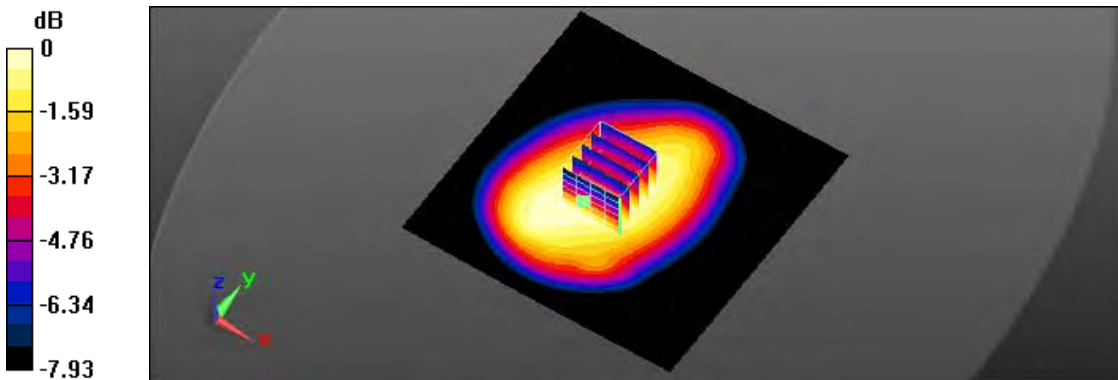
Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.351 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 19.15 V/m; Power Drift = 0.00 dB
 Peak SAR (extrapolated) = 0.398 W/kg

SAR(1 g) = 0.299 W/kg; SAR(10 g) = 0.230 W/kg
 Maximum value of SAR (measured) = 0.349 W/kg



0 dB = 0.349 W/kg = -4.57 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 08:30:00 PM
 110_LTE Band12 CH 23095_QPSK_BW 10MHz_25 RB size 25 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

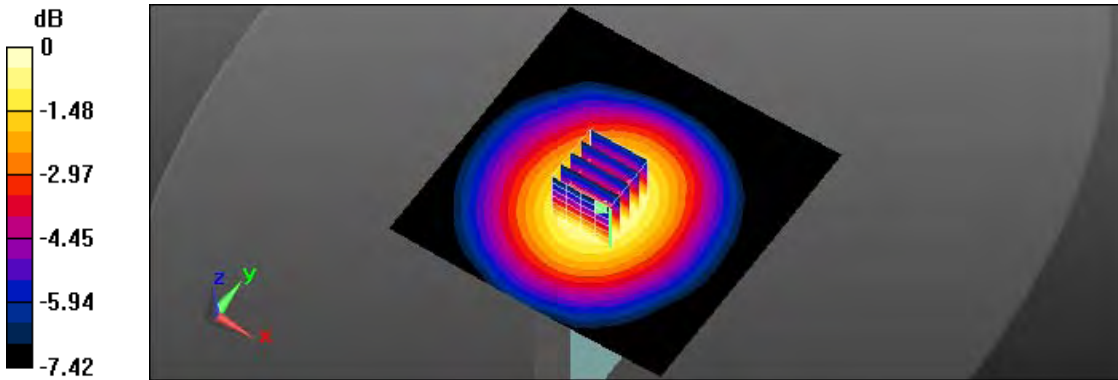
Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0575 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 7.745 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 0.0630 W/kg

SAR(1 g) = 0.049 W/kg; SAR(10 g) = 0.037 W/kg
 Maximum value of SAR (measured) = 0.0571 W/kg



0 dB = 0.0571 W/kg = -12.43 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 08:49:15 PM

111_LTE Band12 CH 23095_QPSK_BW 10MHz_25 RB size 25 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.151 W/kg

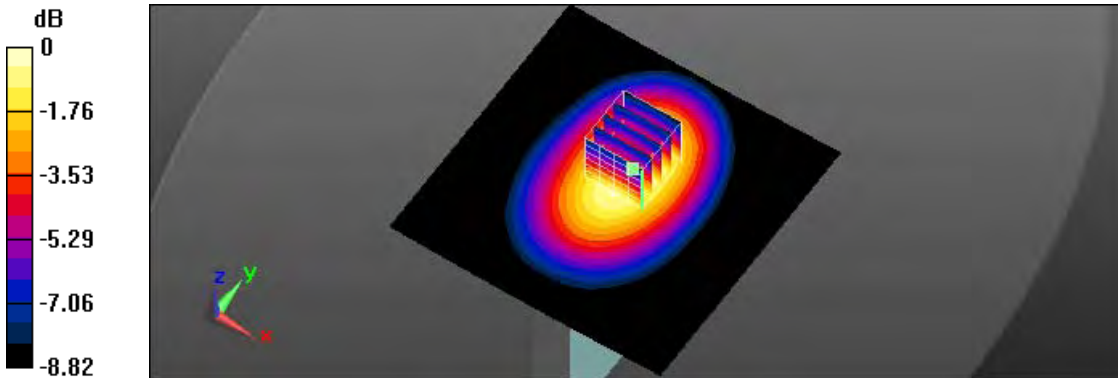
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.21 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.170 W/kg

SAR(1 g) = 0.125 W/kg; SAR(10 g) = 0.090 W/kg

Maximum value of SAR (measured) = 0.150 W/kg



0 dB = 0.150 W/kg = -8.24 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/22 09:48:37 PM
 112_LTE Band12 CH 23095_QPSK_BW 10MHz_25 RB size 25 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

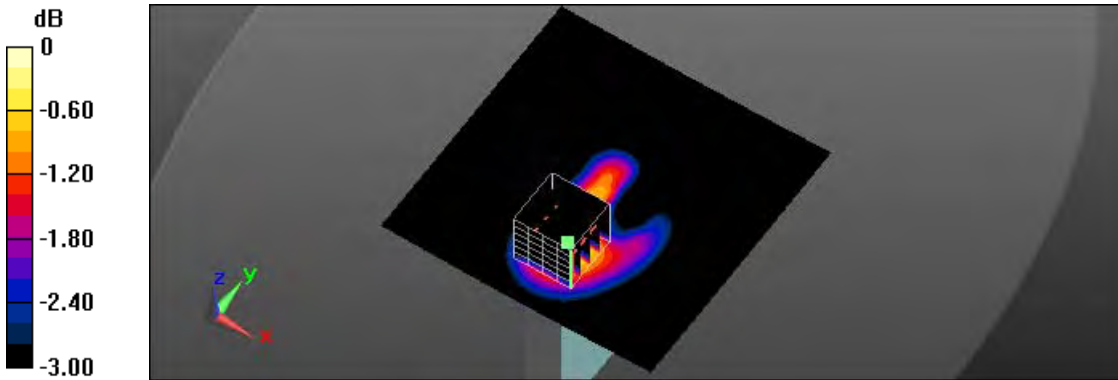
Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 54.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(10, 10, 10); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0627 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 7.248 V/m; Power Drift = 0.07 dB
 Peak SAR (extrapolated) = 0.0780 W/kg

SAR(1 g) = 0.048 W/kg; SAR(10 g) = 0.033 W/kg
 Maximum value of SAR (measured) = 0.0602 W/kg



0 dB = 0.0602 W/kg = -12.20 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 10:29:10 AM
 22_LTE Band30 CH 27710_QPSK_BW 10MHz_1 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

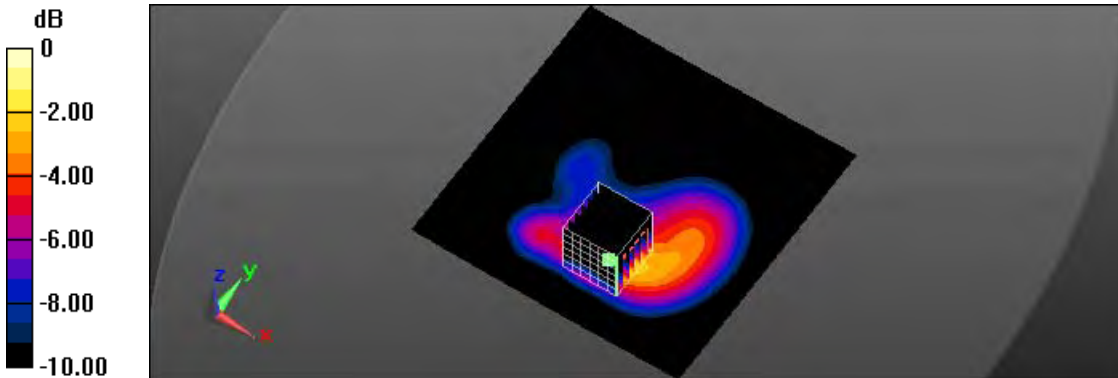
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.53 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 11.91 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.14 W/kg
SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.539 W/kg
 Maximum value of SAR (measured) = 1.62 W/kg



0 dB = 1.62 W/kg = 2.10 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 02:42:38 AM
 23_LTE Band30 CH 27710_QPSK_BW 10MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

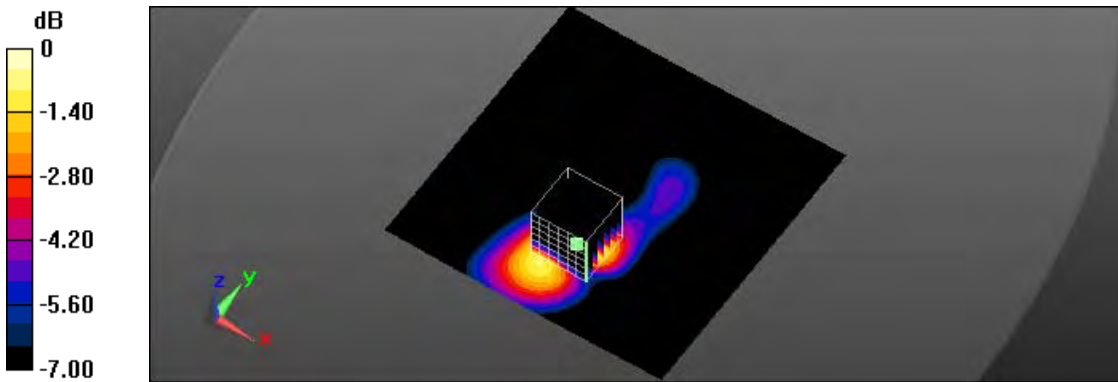
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.548 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 6.530 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 0.667 W/kg

SAR(1 g) = 0.395 W/kg; SAR(10 g) = 0.222 W/kg
 Maximum value of SAR (measured) = 0.537 W/kg



0 dB = 0.537 W/kg = -2.70 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 11:57:05 PM
 24_LTE Band30 CH 27710_QPSK_BW 10MHz_1 RB size 0 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

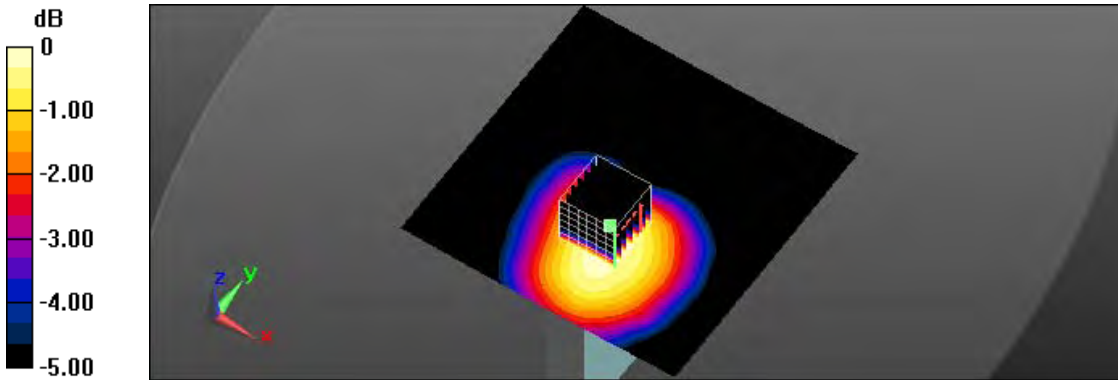
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.107 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 6.078 V/m; Power Drift = -0.07 dB
 Peak SAR (extrapolated) = 0.131 W/kg

SAR(1 g) = 0.078 W/kg; SAR(10 g) = 0.049 W/kg
 Maximum value of SAR (measured) = 0.105 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 09:12:17 AM
 25_LTE Band30 CH 27710_QPSK_BW 10MHz_1 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

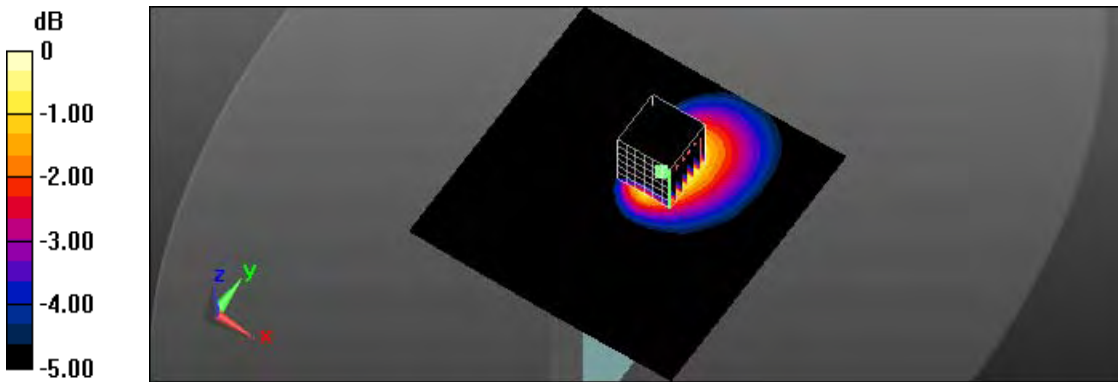
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.328 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 9.993 V/m; Power Drift = 0.16 dB
 Peak SAR (extrapolated) = 0.375 W/kg

SAR(1 g) = 0.221 W/kg; SAR(10 g) = 0.130 W/kg
 Maximum value of SAR (measured) = 0.298 W/kg



0 dB = 0.298 W/kg = -5.26 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 08:23:41 PM
 26_LTE Band30 CH 27710_QPSK_BW 10MHz_1 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

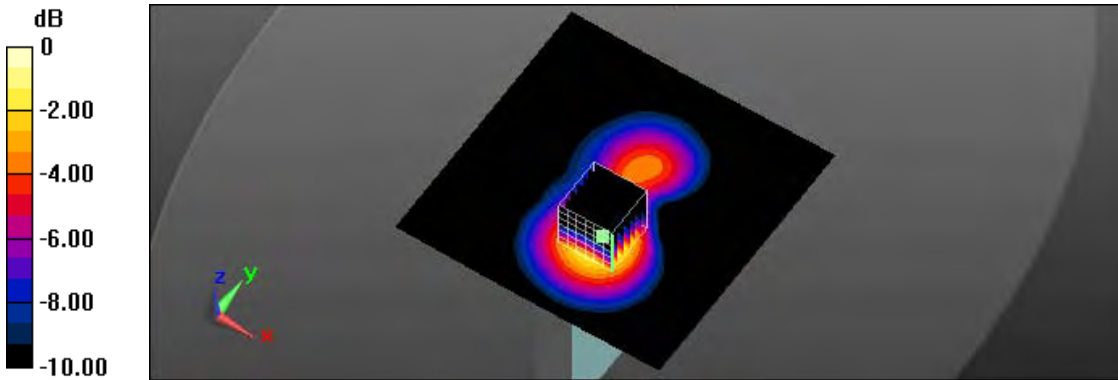
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.866 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 14.71 V/m; Power Drift = -0.10 dB
 Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.629 W/kg; SAR(10 g) = 0.355 W/kg
 Maximum value of SAR (measured) = 0.862 W/kg



0 dB = 0.862 W/kg = -0.64 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 01:13:57 PM
 28_LTE Band30 CH 27710_QPSK_BW 10MHz_25 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

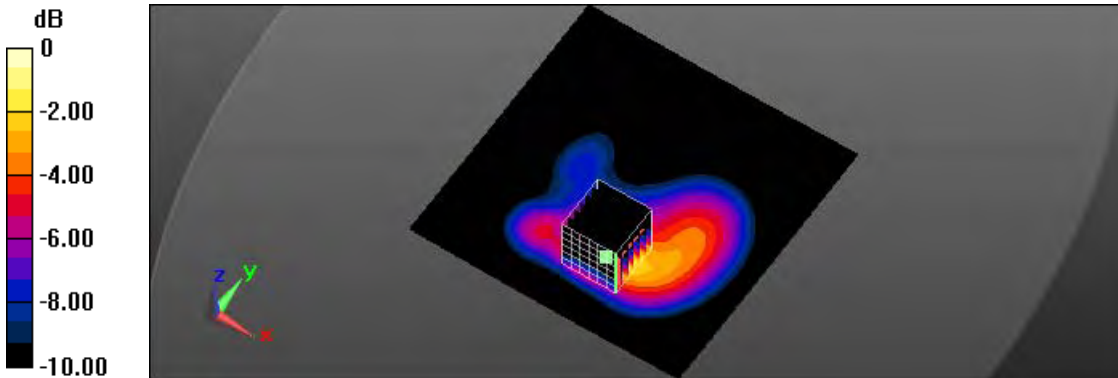
Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.19 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.59 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 0.854 W/kg; SAR(10 g) = 0.429 W/kg

Maximum value of SAR (measured) = 1.27 W/kg



0 dB = 1.27 W/kg = 1.04 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 03:16:32 AM
 29_LTE Band30 CH 27710_QPSK_BW 10MHz_25 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

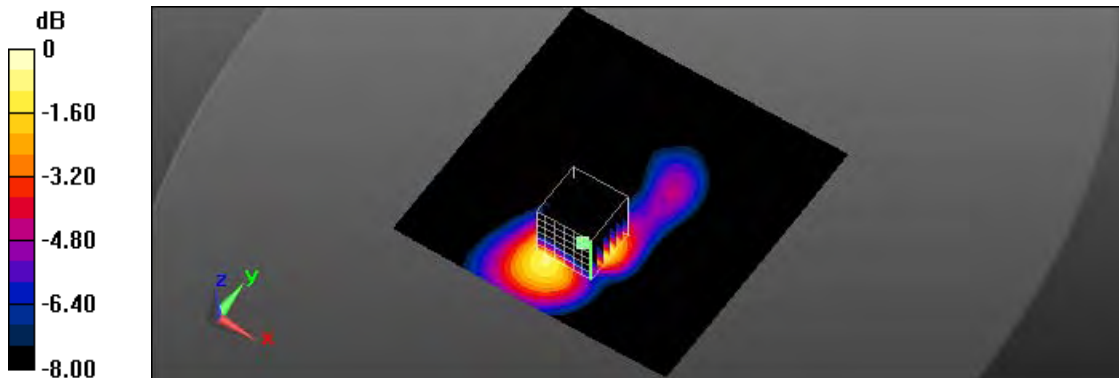
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.484 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 6.018 V/m; Power Drift = 0.17 dB
 Peak SAR (extrapolated) = 0.600 W/kg

SAR(1 g) = 0.352 W/kg; SAR(10 g) = 0.197 W/kg
 Maximum value of SAR (measured) = 0.482 W/kg



0 dB = 0.482 W/kg = -3.17 dBW/kg

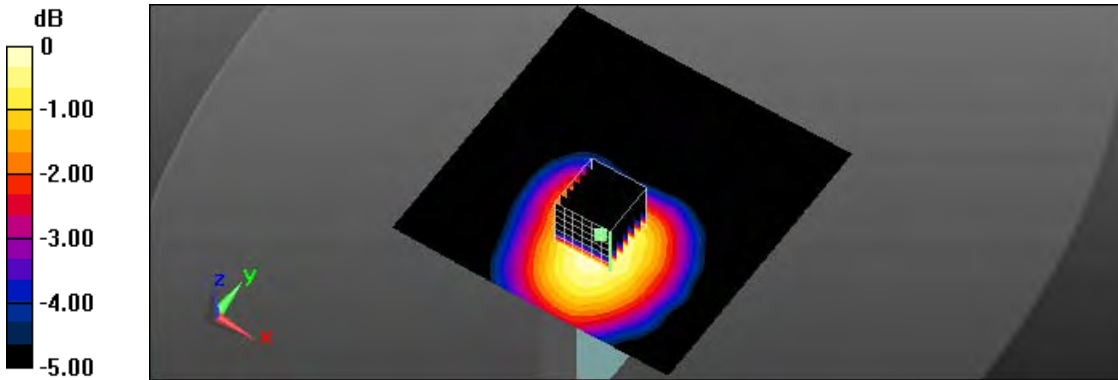
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 11:23:07 PM
 30_LTE Band30 CH 27710_QPSK_BW 10MHz_25 RB size 0 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0910 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 5.582 V/m; Power Drift = 0.04 dB
 Peak SAR (extrapolated) = 0.113 W/kg
SAR(1 g) = 0.068 W/kg; SAR(10 g) = 0.043 W/kg
 Maximum value of SAR (measured) = 0.0899 W/kg



0 dB = 0.0899 W/kg = -10.46 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 04:21:53 PM
 31_LTE Band30 CH 27710_QPSK_BW 10MHz_25 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

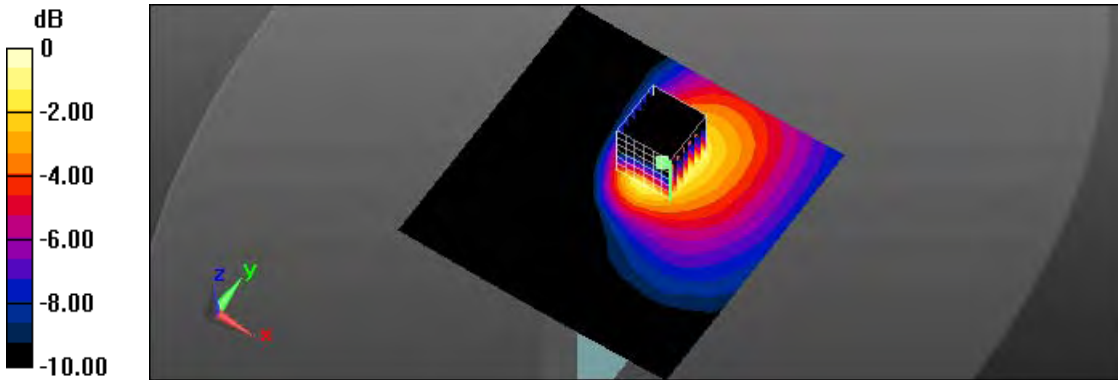
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.260 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 7.823 V/m; Power Drift = -0.13 dB
 Peak SAR (extrapolated) = 0.322 W/kg

SAR(1 g) = 0.191 W/kg; SAR(10 g) = 0.112 W/kg
 Maximum value of SAR (measured) = 0.256 W/kg



0 dB = 0.256 W/kg = -5.92 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 08:57:45 PM
 32_LTE Band30 CH 27710_QPSK_BW 10MHz_25 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

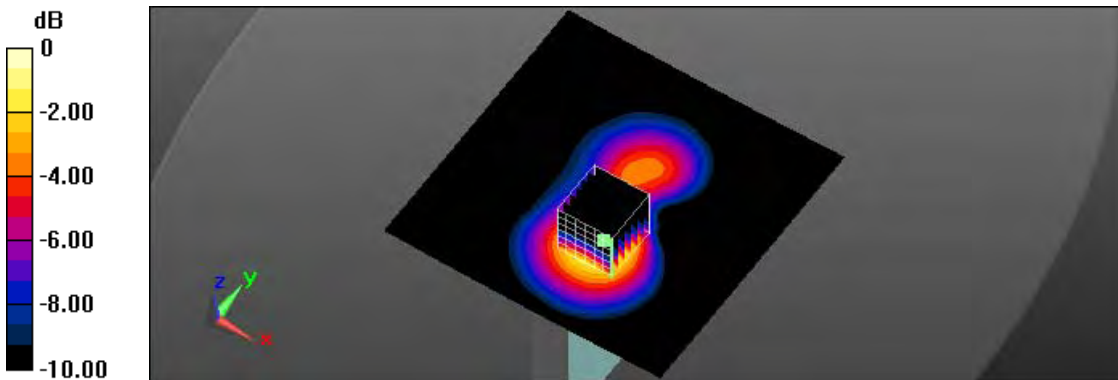
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310$ MHz; $\sigma = 1.756$ S/m; $\epsilon_r = 51.961$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.689 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 12.93 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 0.871 W/kg

SAR(1 g) = 0.498 W/kg; SAR(10 g) = 0.281 W/kg
 Maximum value of SAR (measured) = 0.685 W/kg



0 dB = 0.685 W/kg = -1.64 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/20 01:48:46 PM
 34_LTE Band30 CH 27710_QPSK_BW 10MHz_50 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

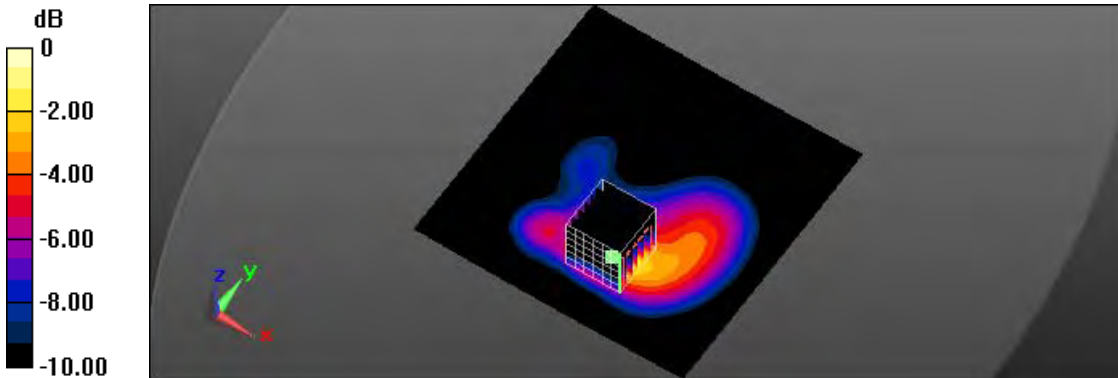
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.26 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 10.62 V/m; Power Drift = 0.13 dB
 Peak SAR (extrapolated) = 1.75 W/kg

SAR(1 g) = 0.888 W/kg; SAR(10 g) = 0.444 W/kg
 Maximum value of SAR (measured) = 1.32 W/kg



0 dB = 1.32 W/kg = 1.21 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/19 09:37:56 PM
 35_LTE Band30 CH 27710_QPSK_BW 10MHz_50 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

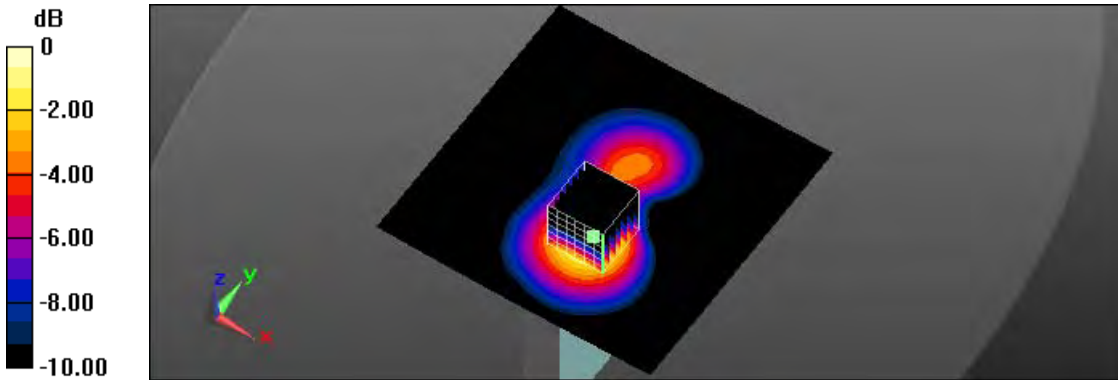
Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.687 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 12.92 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.873 W/kg

SAR(1 g) = 0.497 W/kg; SAR(10 g) = 0.280 W/kg
 Maximum value of SAR (measured) = 0.686 W/kg



0 dB = 0.686 W/kg = -1.64 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/27 10:20:09 AM
 140_LTE Band66 CH 132072_QPSK_BW 20MHz_1 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

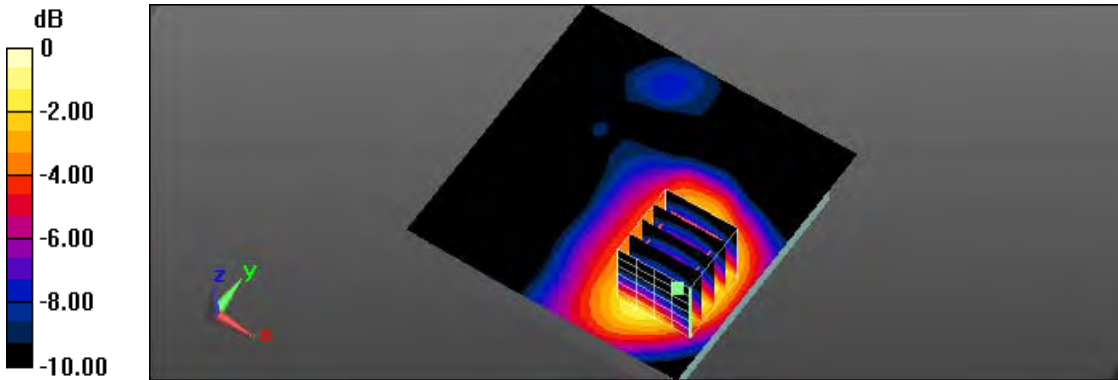
Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.830 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 12.06 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.653 W/kg; SAR(10 g) = 0.410 W/kg

Maximum value of SAR (measured) = 0.844 W/kg



0 dB = 0.844 W/kg = -0.74 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/26 02:26:09 PM
 128_LTE Band66 CH 132197_QPSK_BW 20MHz_1 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

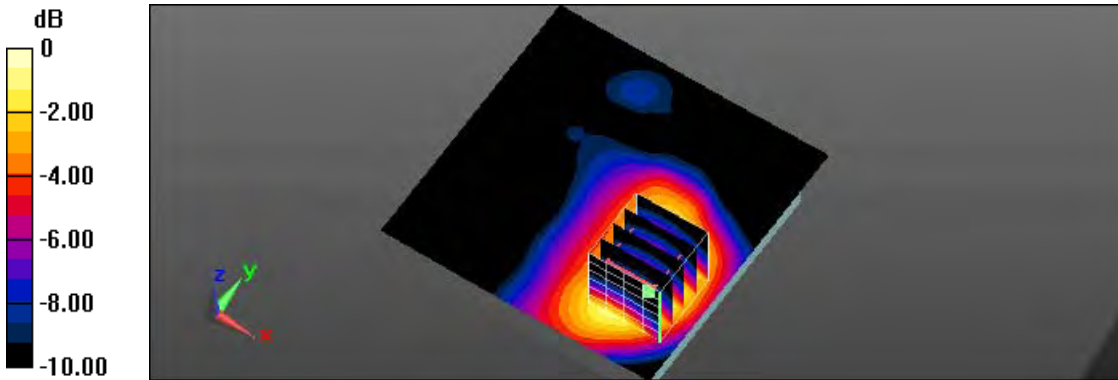
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5 \text{ MHz}$; $\sigma = 1.512 \text{ S/m}$; $\epsilon_r = 54.118$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.907 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 12.60 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.713 W/kg; SAR(10 g) = 0.440 W/kg
 Maximum value of SAR (measured) = 0.925 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/27 10:05:44 AM
 141_LTE Band66 CH 132322_QPSK_BW 20MHz_1 RB size 0 RB offset_side1_10mm
DUT: MR1100-320; Type: Mobile Router

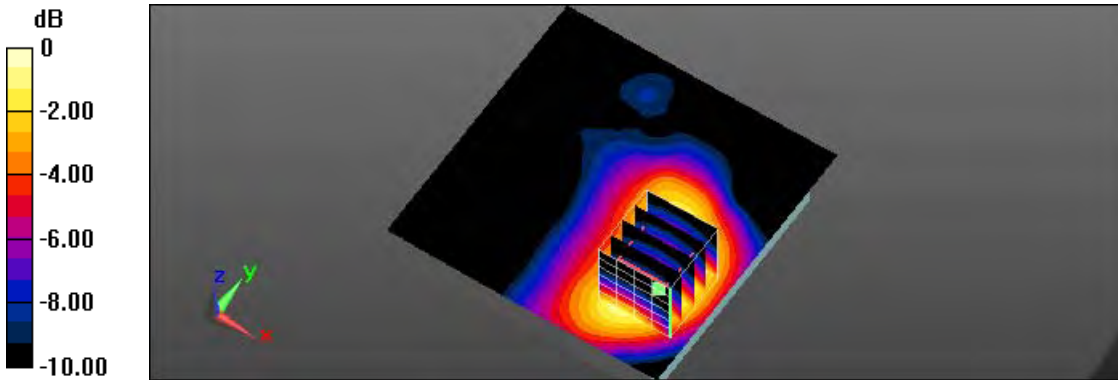
Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 54.05$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.825 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 12.18 V/m; Power Drift = -0.18 dB
 Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.636 W/kg; SAR(10 g) = 0.394 W/kg
 Maximum value of SAR (measured) = 0.825 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/27 11:20:02 AM
 143_LTE Band66 CH 132072_QPSK_BW 20MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

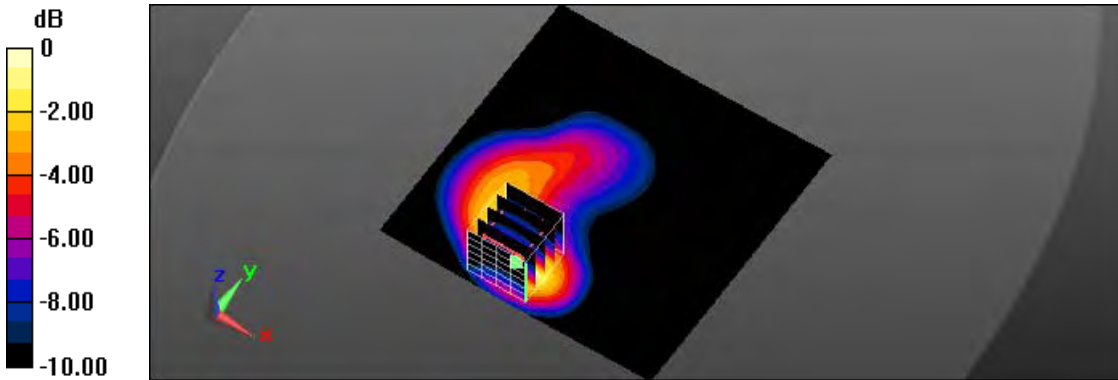
Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.04 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 11.32 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.808 W/kg; SAR(10 g) = 0.468 W/kg

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



0 dB = 1.08 W/kg = 0.33 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/26 03:25:28 PM
 129_LTE Band66 CH 132197_QPSK_BW 20MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

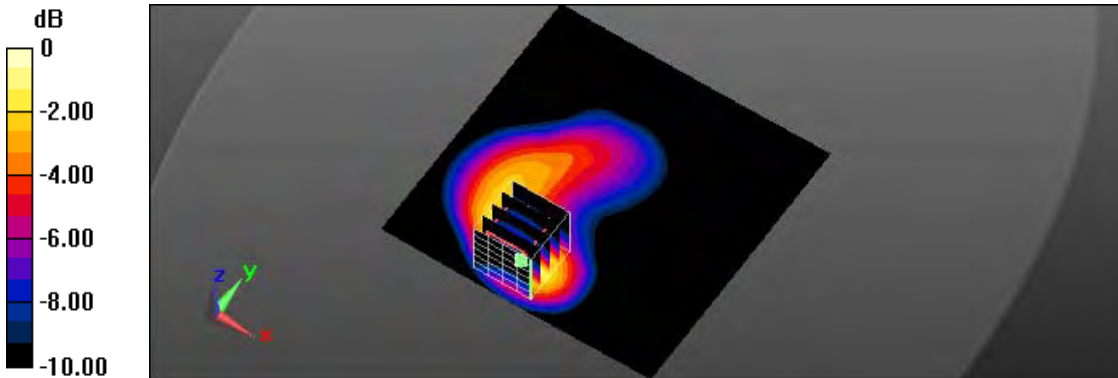
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 1.03 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 12.17 V/m; Power Drift = 0.04 dB
 Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 0.819 W/kg; SAR(10 g) = 0.471 W/kg
 Maximum value of SAR (measured) = 1.10 W/kg



0 dB = 1.10 W/kg = 0.41 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/27 11:40:14 AM
 144_LTE Band66 CH 132322_QPSK_BW 20MHz_1 RB size 0 RB offset_side2_10mm
DUT: MR1100-320; Type: Mobile Router

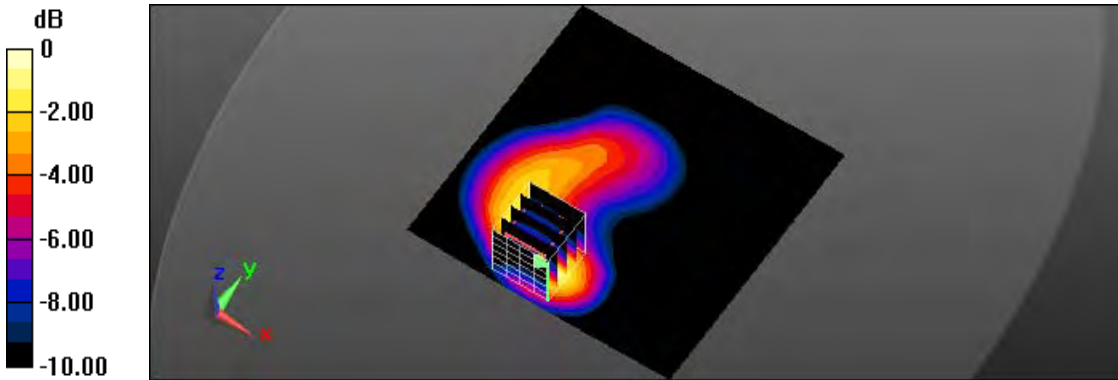
Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 54.05$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.962 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 11.83 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.739 W/kg; SAR(10 g) = 0.429 W/kg
 Maximum value of SAR (measured) = 0.988 W/kg



0 dB = 0.988 W/kg = -0.05 dBW/kg

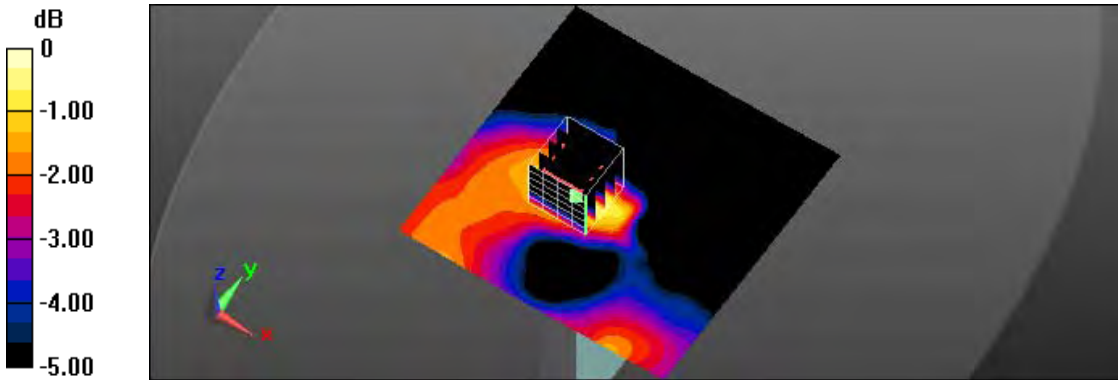
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/26 03:47:33 PM
 130_LTE Band66 CH 132197_QPSK_BW 20MHz_1 RB size 0 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.0168 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 2.657 V/m; Power Drift = 0.12 dB
 Peak SAR (extrapolated) = 0.0210 W/kg
SAR(1 g) = 0.014 W/kg; SAR(10 g) = 0.00876 W/kg
 Maximum value of SAR (measured) = 0.0173 W/kg



0 dB = 0.0173 W/kg = -17.62 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/27 01:32:38 PM
 146_LTE Band66 CH 132072_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

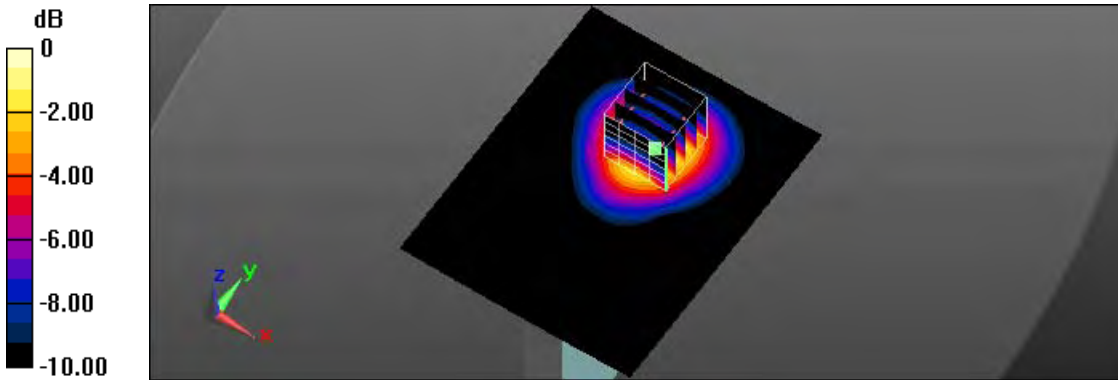
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.09 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 14.10 V/m; Power Drift = -0.18 dB
 Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.829 W/kg; SAR(10 g) = 0.497 W/kg
 Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/26 04:58:47 PM
 131_LTE Band66 CH 132197_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

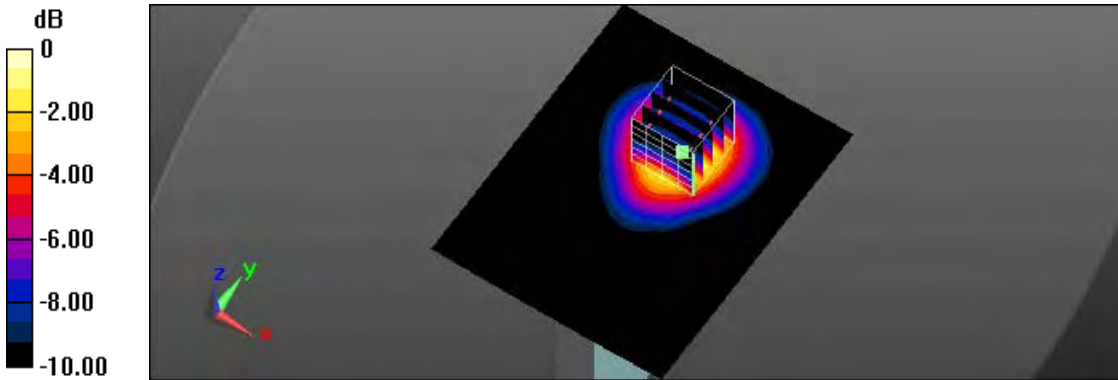
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 1.08 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 15.30 V/m; Power Drift = 0.09 dB
 Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.802 W/kg; SAR(10 g) = 0.479 W/kg.
 Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.06 W/kg = 0.25 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/27 02:08:37 PM
 147_LTE Band66 CH 132322_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm
DUT: MR1100-320; Type: Mobile Router

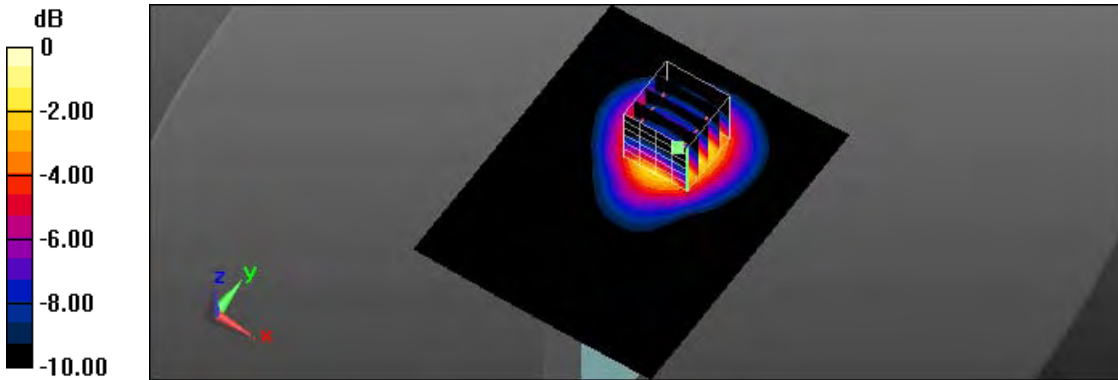
Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 54.05$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
 Maximum value of SAR (interpolated) = 1.10 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 13.89 V/m; Power Drift = -0.11 dB
 Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.831 W/kg; SAR(10 g) = 0.496 W/kg
 Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/26 05:17:38 PM
 132_LTE Band66 CH 132197_QPSK_BW 20MHz_1 RB size 0 RB offset_side5_10mm
DUT: MR1100-320; Type: Mobile Router

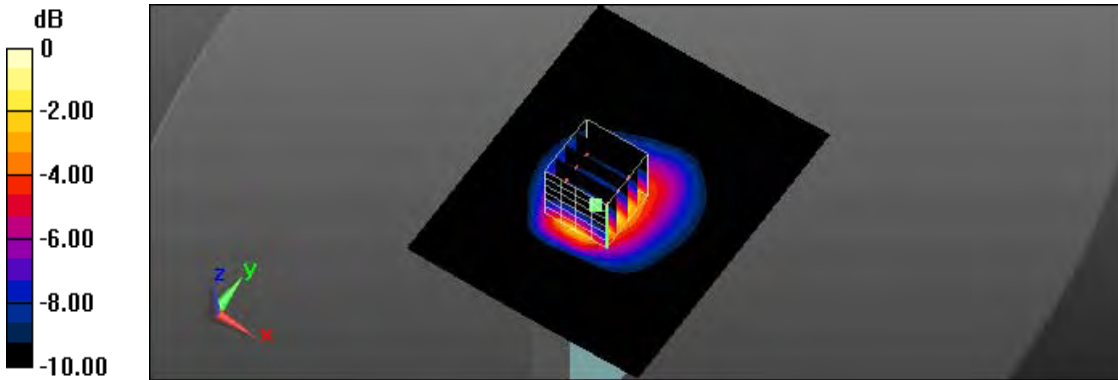
Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.726 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 18.43 V/m; Power Drift = -0.09 dB
 Peak SAR (extrapolated) = 0.900 W/kg

SAR(1 g) = 0.515 W/kg; SAR(10 g) = 0.287 W/kg
 Maximum value of SAR (measured) = 0.718 W/kg



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/26 02:41:47 PM

134_LTE Band66 CH 132197_QPSK_BW 20MHz_50 RB size 0 RB offset_side1_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

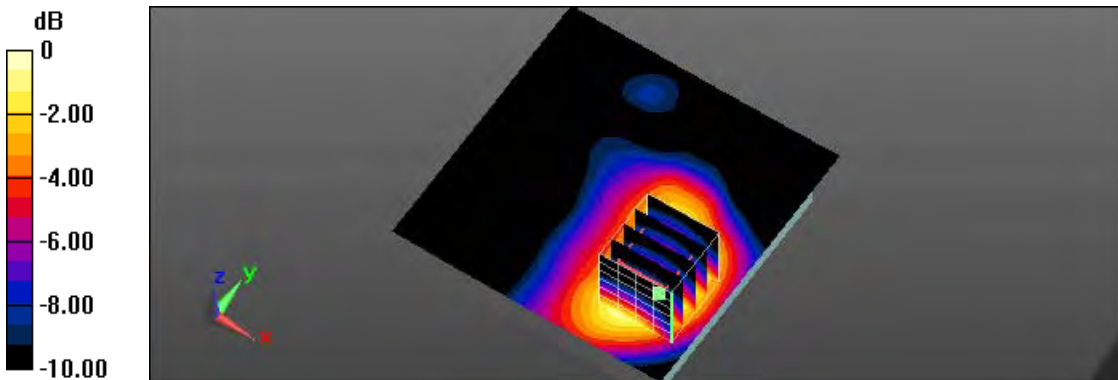
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.24 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.900 W/kg

SAR(1 g) = 0.566 W/kg; SAR(10 g) = 0.348 W/kg

Maximum value of SAR (measured) = 0.735 W/kg



0 dB = 0.735 W/kg = -1.34 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/26 03:07:18 PM

135_LTE Band66 CH 132197_QPSK_BW 20MHz_50 RB size 0 RB offset_side2_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.816 W/kg

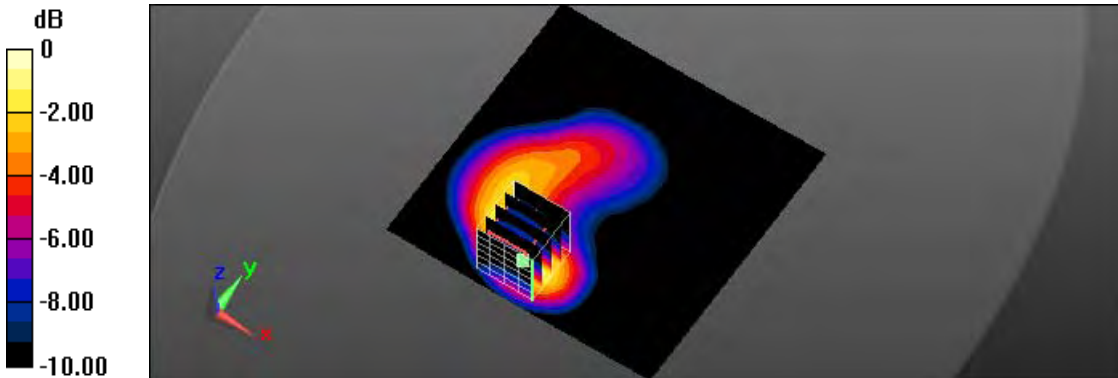
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.94 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.371 W/kg

Maximum value of SAR (measured) = 0.865 W/kg



0 dB = 0.865 W/kg = -0.63 dBW/kg

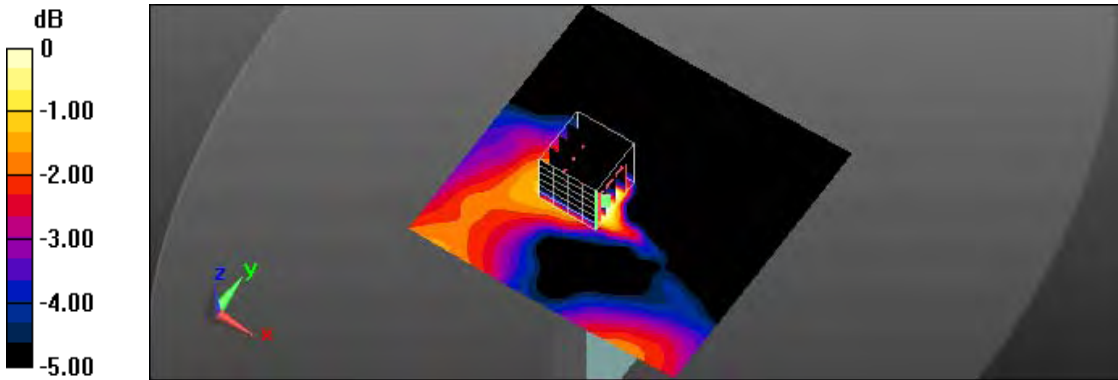
Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/26 04:10:09 PM
 136_LTE Band66 CH 132197_QPSK_BW 20MHz_50 RB size 0 RB offset_side3_10mm
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.0165 W/kg

Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 2.474 V/m; Power Drift = -0.11 dB
 Peak SAR (extrapolated) = 0.0180 W/kg
SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.00678 W/kg
 Maximum value of SAR (measured) = 0.0143 W/kg



0 dB = 0.0143 W/kg = -18.45 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/26 04:43:31 PM

137_LTE Band66 CH 132197_QPSK_BW 20MHz_50 RB size 0 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.839 W/kg

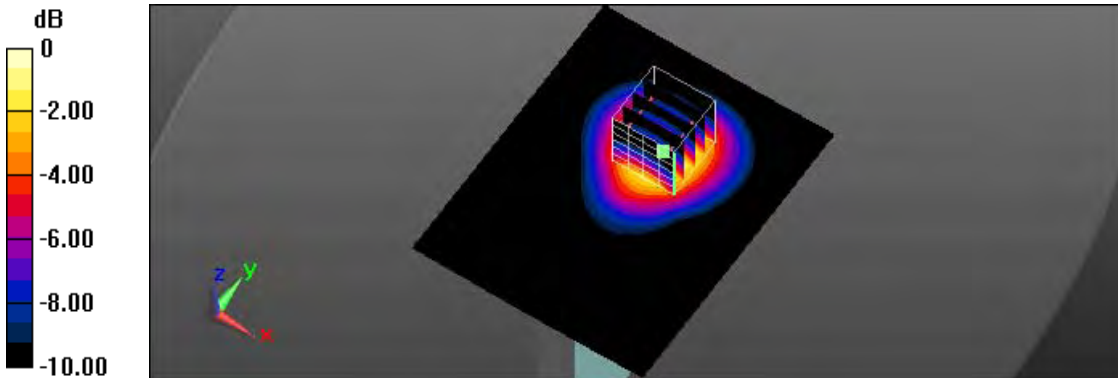
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.65 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.620 W/kg; SAR(10 g) = 0.370 W/kg

Maximum value of SAR (measured) = 0.821 W/kg



0 dB = 0.821 W/kg = -0.86 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/26 05:35:42 PM

138_LTE Band66 CH 132197_QPSK_BW 20MHz_50 RB size 0 RB offset_side5_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 54.118$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.549 W/kg

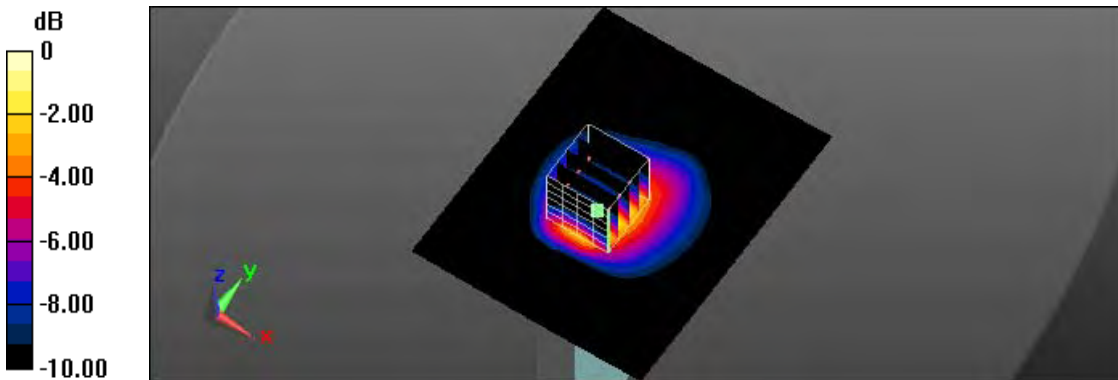
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.26 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.682 W/kg

SAR(1 g) = 0.394 W/kg; SAR(10 g) = 0.221 W/kg

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



0 dB = 0.543 W/kg = -2.65 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/27 10:33:56 AM

142_LTE Band66 CH 132072_QPSK_BW 20MHz_100 RB size 0 RB offset_side1_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.651 W/kg

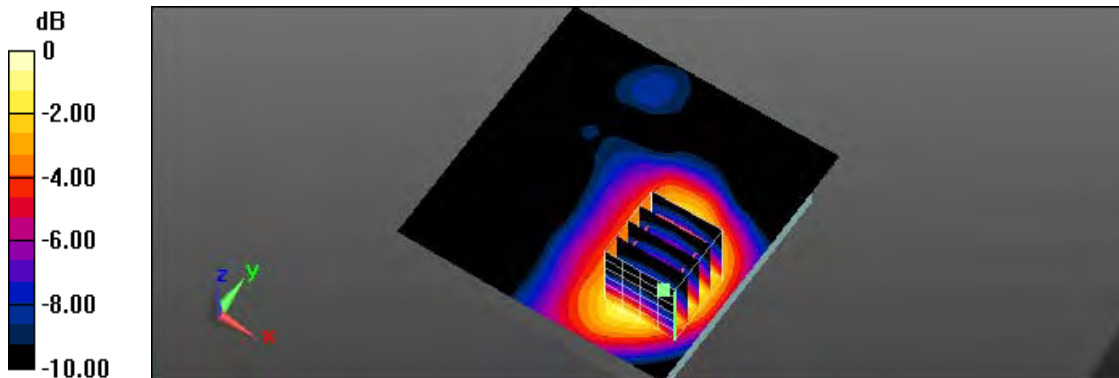
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.69 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.794 W/kg

SAR(1 g) = 0.509 W/kg; SAR(10 g) = 0.318 W/kg

Maximum value of SAR (measured) = 0.658 W/kg



0 dB = 0.658 W/kg = -1.82 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/27 11:00:50 AM

145_LTE Band66 CH 132072_QPSK_BW 20MHz_100 RB size 0 RB offset_side2_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.795 W/kg

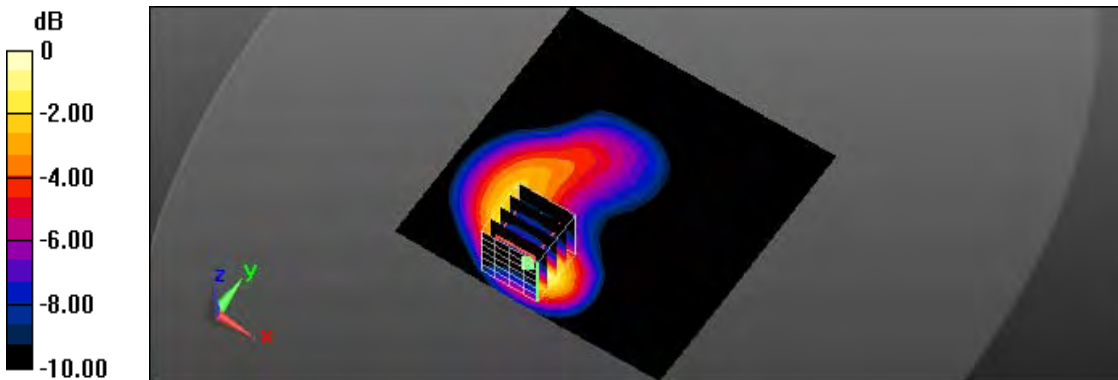
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.22 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.614 W/kg; SAR(10 g) = 0.356 W/kg

Maximum value of SAR (measured) = 0.822 W/kg



0 dB = 0.822 W/kg = -0.85 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/27 01:52:51 PM

148_LTE Band66 CH 132072_QPSK_BW 20MHz_100 RB size 0 RB offset_side4_10mm

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.870 W/kg

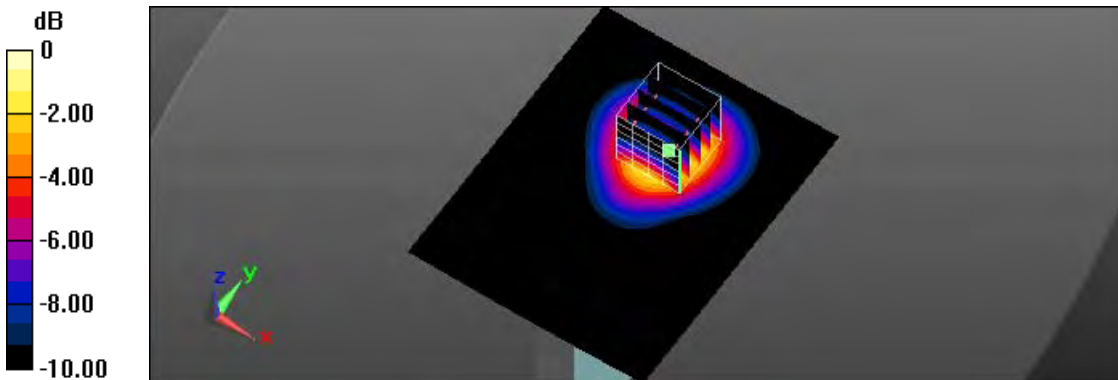
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.45 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.657 W/kg; SAR(10 g) = 0.392 W/kg

Maximum value of SAR (measured) = 0.865 W/kg



0 dB = 0.865 W/kg = -0.63 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/19 06:51:58 PM

21_LTE Band2 CH 18700_QPSK_BW 20MHz_1 RB size 49 RB offset_side4_10mm_original #12_measurement once

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1860 \text{ MHz}$; $\sigma = 1.471 \text{ S/m}$; $\epsilon_r = 52.172$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 1.28 W/kg

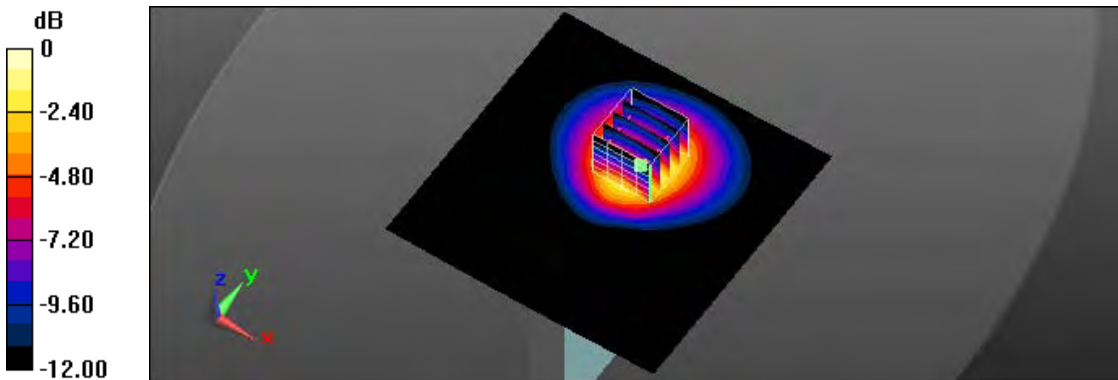
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.87 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.950 W/kg; SAR(10 g) = 0.582 W/kg

Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg = 0.90 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/22 01:50:43 AM

83_LTE Band4 CH 20050_QPSK_BW 20MHz_1 RB size 0 RB offset_side2_10mm_original #74_measurement once

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.498 \text{ S/m}$; $\epsilon_r = 54.154$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

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

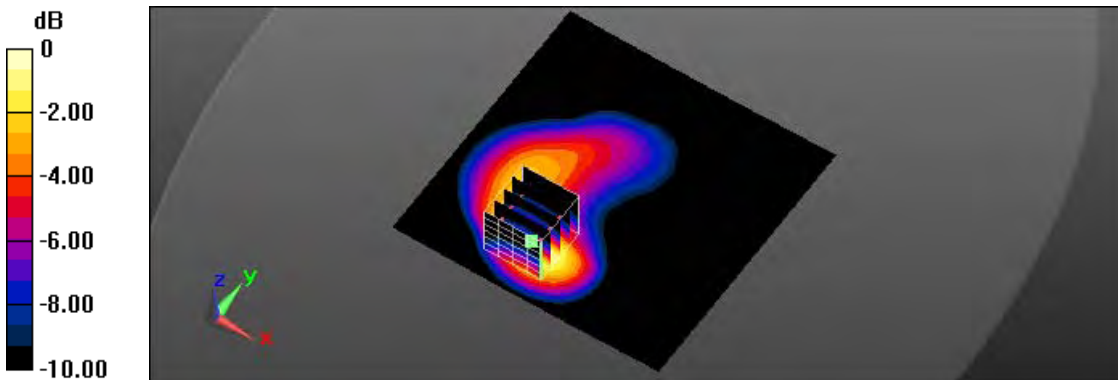
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.14 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.853 W/kg; SAR(10 g) = 0.489 W/kg

Maximum value of SAR (measured) = 1.14 W/kg



0 dB = 1.14 W/kg = 0.57 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/21 11:30:54 AM

58_LTE Band7 CH 21350_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm_original #56_measurement once

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560 \text{ MHz}$; $\sigma = 2.166 \text{ S/m}$; $\epsilon_r = 51.085$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.13, 7.13, 7.13); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.29 W/kg

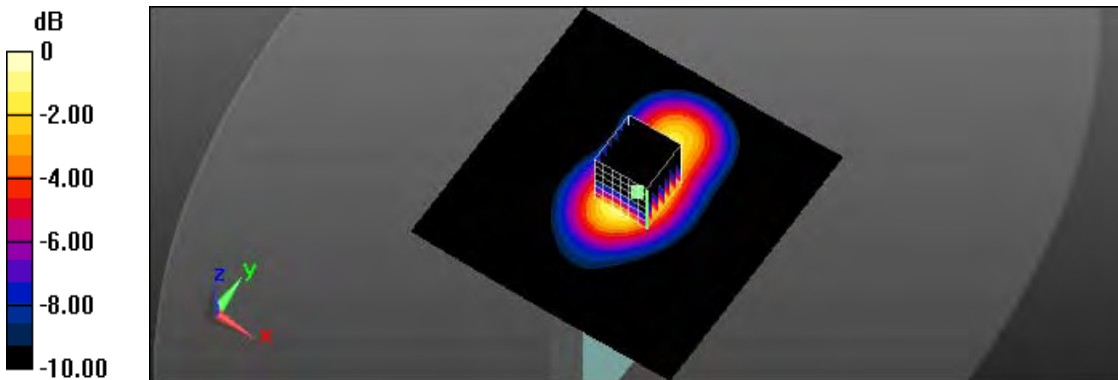
Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.05 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 0.911 W/kg; SAR(10 g) = 0.493 W/kg

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



0 dB = 1.30 W/kg = 1.14 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/20 03:39:35 PM

36_LTE Band30 CH 27710_QPSK_BW 10MHz_1 RB size 0 RB offset_side1_10mm_original #22_measurement once

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2310 \text{ MHz}$; $\sigma = 1.756 \text{ S/m}$; $\epsilon_r = 51.961$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.53, 7.53, 7.53); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.38 W/kg

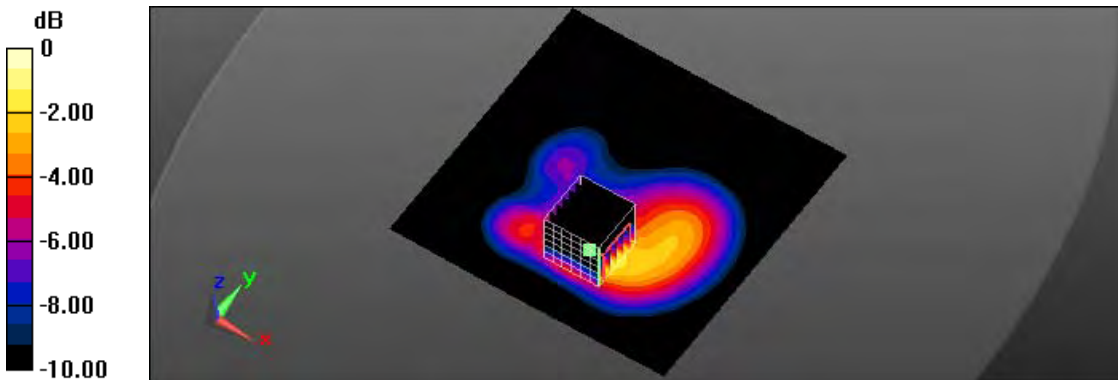
Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.59 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.86 W/kg

SAR(1 g) = 0.948 W/kg; SAR(10 g) = 0.476 W/kg

Maximum value of SAR (measured) = 1.36 W/kg



0 dB = 1.36 W/kg = 1.34 dBW/kg

Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/27 02:25:39 PM

149_LTE Band66 CH 132322_QPSK_BW 20MHz_1 RB size 0 RB offset_side4_10mm_original #147_measurement once

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 54.05$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.96, 7.96, 7.96); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (81x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 1.10 W/kg

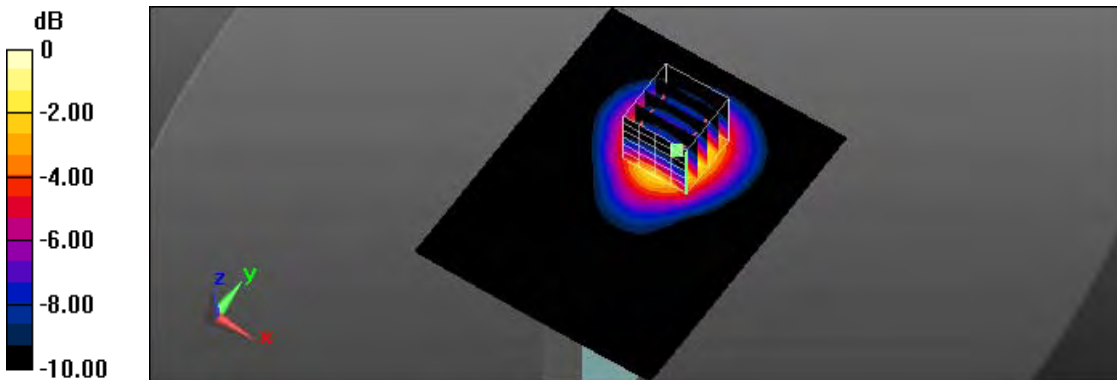
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.92 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.831 W/kg; SAR(10 g) = 0.496 W/kg

Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 03:26:10 AM
 162_IEEE 802.11b CH 11_1M_side1_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

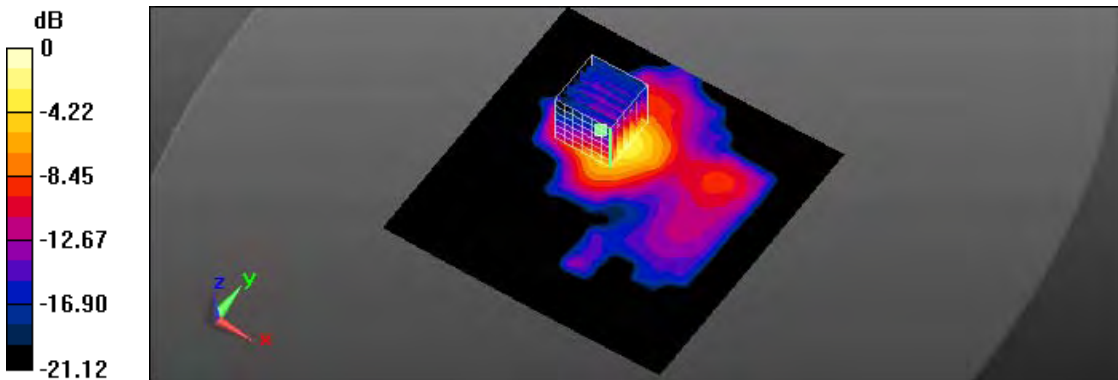
Communication System: UID 0, IEEE 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 52.329$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.198 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 2.655 V/m; Power Drift = 0.06 dB
 Peak SAR (extrapolated) = 0.287 W/kg

SAR(1 g) = 0.127 W/kg; SAR(10 g) = 0.056 W/kg
 Maximum value of SAR (measured) = 0.198 W/kg



0 dB = 0.198 W/kg = -7.03 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 04:10:09 AM
 163_IEEE 802.11b CH 11_1M_side2_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

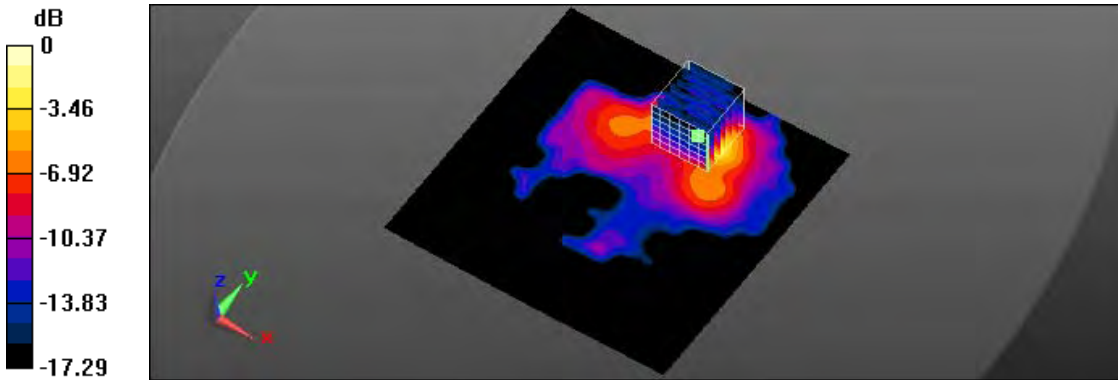
Communication System: UID 0, IEEE 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 52.329$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.110 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 1.304 V/m; Power Drift = 0.09 dB
 Peak SAR (extrapolated) = 0.152 W/kg

SAR(1 g) = 0.072 W/kg; SAR(10 g) = 0.032 W/kg
 Maximum value of SAR (measured) = 0.112 W/kg



0 dB = 0.112 W/kg = -9.51 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 04:51:08 AM
 164_IEEE 802.11b CH 11_1M_side4_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, IEEE 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 52.329$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

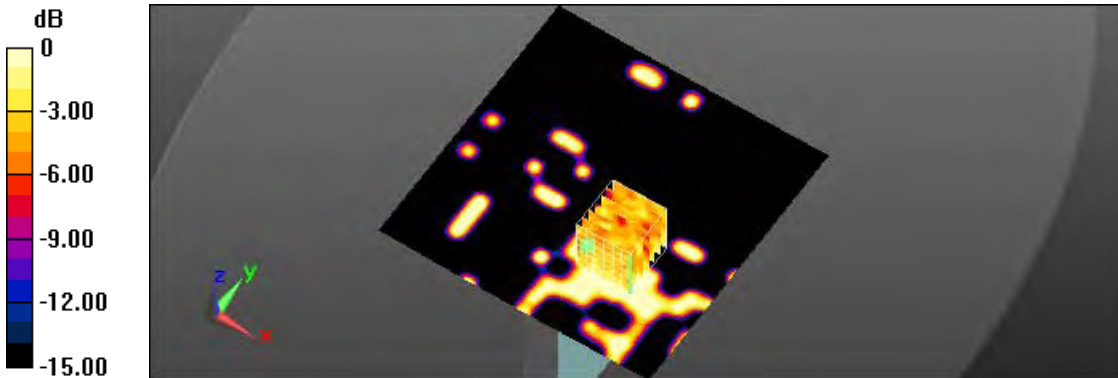
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0169 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 0.6760 V/m; Power Drift = 0.13 dB
 Peak SAR (extrapolated) = 0.00551 W/kg

SAR(1 g) = 0.00343 W/kg; SAR(10 g) = 0.00258 W/kg

Maximum value of SAR (measured) = 0.00482 W/kg



0 dB = 0.00482 W/kg = -23.17 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 11:25:13 AM
 165_IEEE 802.11b CH 11_1M_side5_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

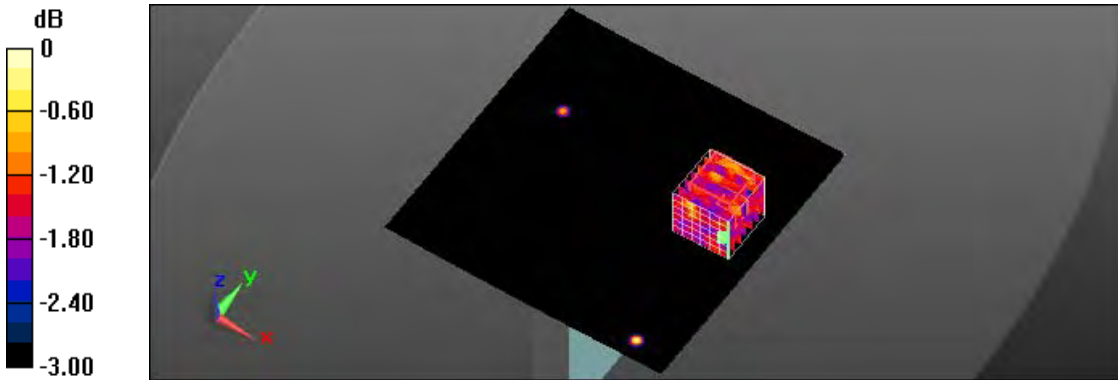
Communication System: UID 0, IEEE 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 52.329$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.156 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 4.816 V/m; Power Drift = 0.16 dB
 Peak SAR (extrapolated) = 0.0590 W/kg

SAR(1 g) = 0.047 W/kg; SAR(10 g) = 0.044 W/kg
 Maximum value of SAR (measured) = 0.0593 W/kg



0 dB = 0.0593 W/kg = -12.27 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 02:00:40 PM
 166_IEEE 802.11g CH 6_6M_side1_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

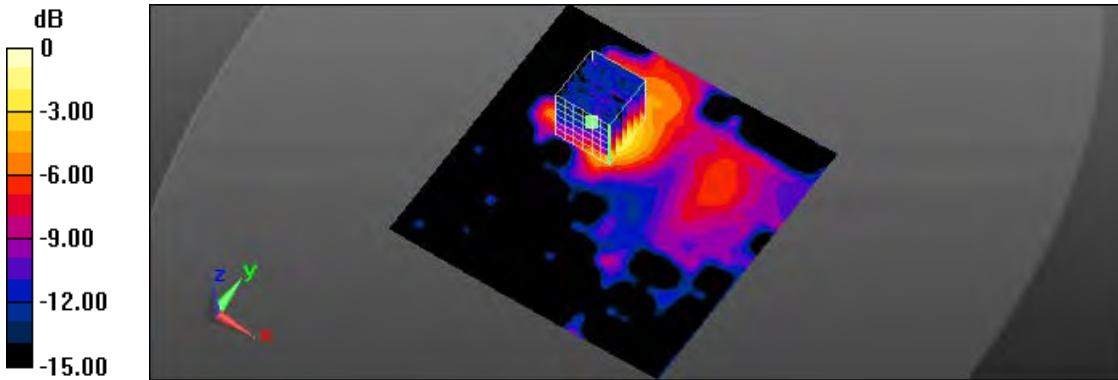
Communication System: UID 0, IEEE 802.11g (0); Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.953 \text{ S/m}$; $\epsilon_r = 52.484$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0514 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 1.605 V/m; Power Drift = -0.05 dB
 Peak SAR (extrapolated) = 0.0700 W/kg

SAR(1 g) = 0.035 W/kg; SAR(10 g) = 0.018 W/kg
 Maximum value of SAR (measured) = 0.0512 W/kg



0 dB = 0.0512 W/kg = -12.91 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 04:27:16 PM
 167_IEEE 802.11g CH 6_6M_side2_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, IEEE 802.11g (0); Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.953 \text{ S/m}$; $\epsilon_r = 52.484$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

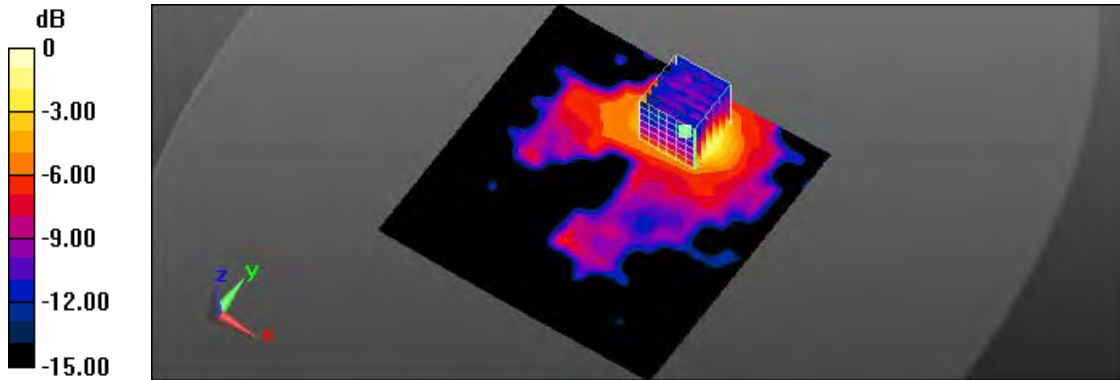
Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0415 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 1.159 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.0560 W/kg

SAR(1 g) = 0.029 W/kg; SAR(10 g) = 0.016 W/kg

Maximum value of SAR (measured) = 0.0423 W/kg



0 dB = 0.0423 W/kg = -13.74 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 05:03:10 PM
 168_IEEE 802.11g CH 6_6M_side4_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, IEEE 802.11g (0); Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.953 \text{ S/m}$; $\epsilon_r = 52.484$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

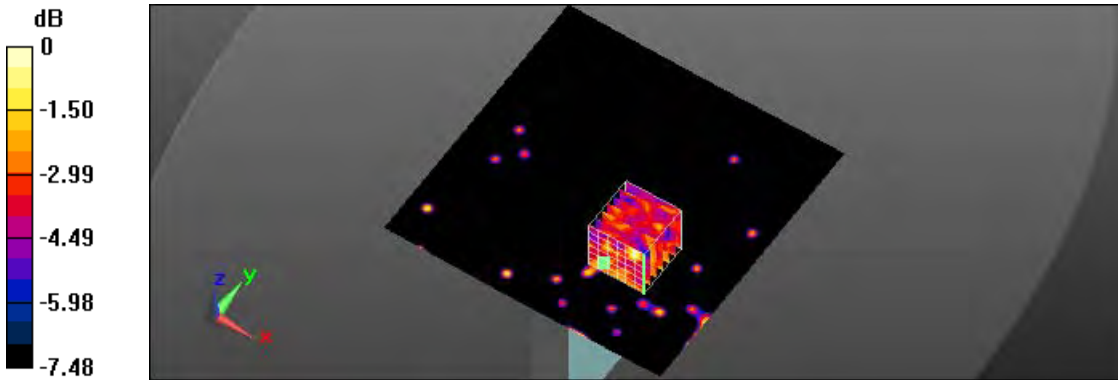
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.00453 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 0.9280 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.00522 W/kg

SAR(1 g) = 0.00309 W/kg; SAR(10 g) = 0.00248 W/kg

Maximum value of SAR (measured) = 0.00490 W/kg



0 dB = 0.00490 W/kg = -23.10 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/2 12:00:08 AM
 169_IEEE 802.11g CH 6_6M_side5_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

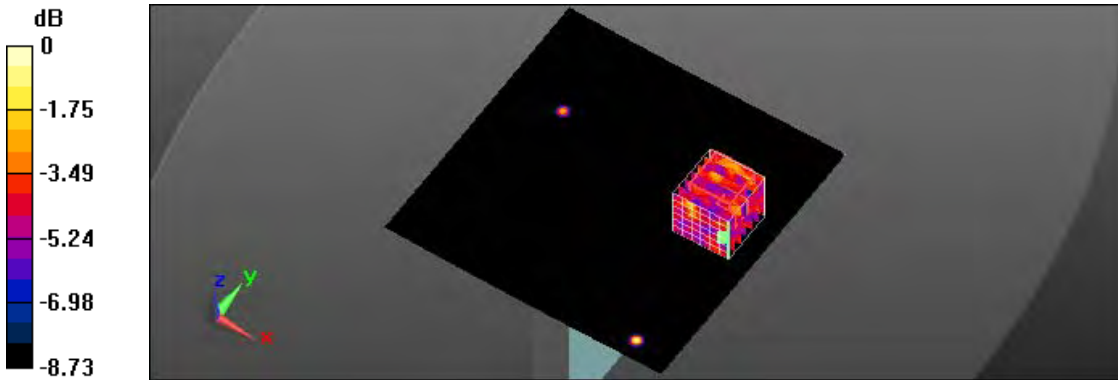
Communication System: UID 0, IEEE 802.11g (0); Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.953 \text{ S/m}$; $\epsilon_r = 52.484$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.00503 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 0.8890 V/m; Power Drift = 0.17 dB
 Peak SAR (extrapolated) = 0.00531 W/kg

SAR(1 g) = 0.00218 W/kg; SAR(10 g) = 0.0019 W/kg
 Maximum value of SAR (measured) = 0.00531 W/kg



0 dB = 0.00531 W/kg = -22.75 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 11:24:13 AM
 174_IEEE 802.11a CH 36_6M_side1_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

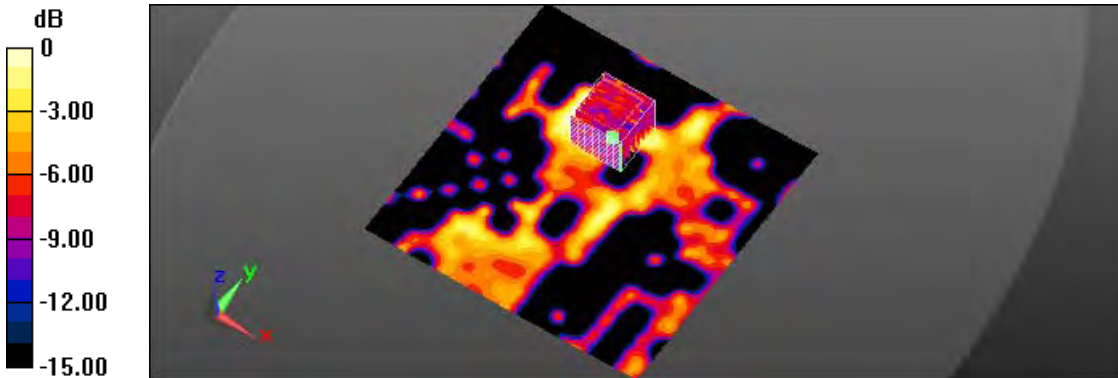
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 48.784$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0696 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 1.246 V/m; Power Drift = -0.13 dB
 Peak SAR (extrapolated) = 0.0700 W/kg

SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.012 W/kg
 Maximum value of SAR (measured) = 0.0417 W/kg



0 dB = 0.0417 W/kg = -13.80 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/28 03:52:20 PM
 150_IEEE 802.11a CH 36_6M_side2_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

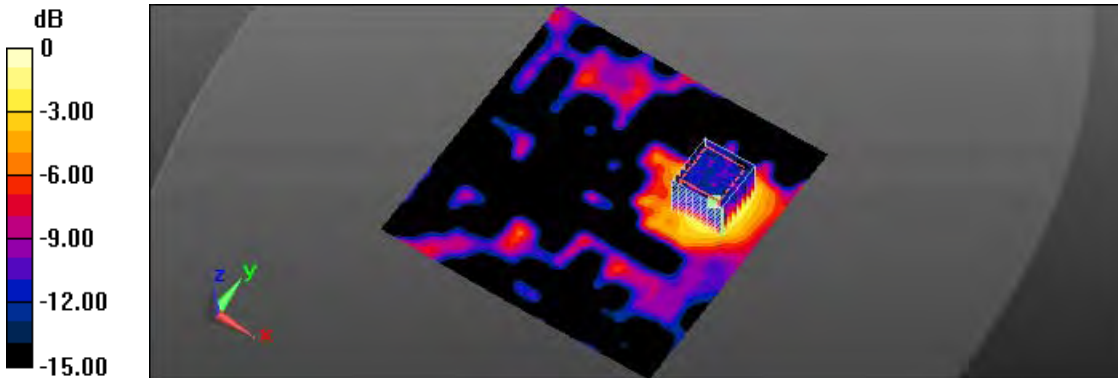
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 48.784$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0933 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 0.4700 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 0.199 W/kg

SAR(1 g) = 0.055 W/kg; SAR(10 g) = 0.027 W/kg
 Maximum value of SAR (measured) = 0.0901 W/kg



0 dB = 0.0901 W/kg = -10.45 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 02:36:33 PM
 151_IEEE 802.11a CH 36_6M_side4_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, IEEE 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 48.784$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

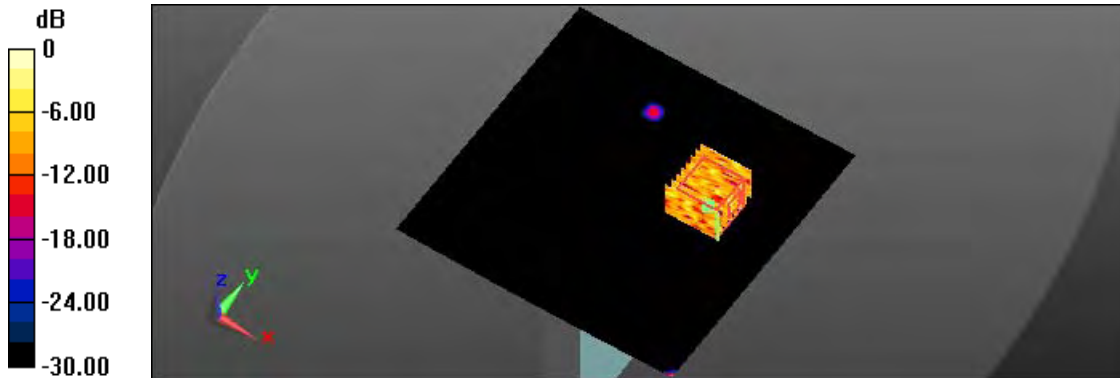
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0100 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 0.7820 V/m; Power Drift = -0.17 dB
 Peak SAR (extrapolated) = 0.0170 W/kg

SAR(1 g) = 0.00464 W/kg; SAR(10 g) = 0.00278 W/kg

Maximum value of SAR (measured) = 0.0114 W/kg



0 dB = 0.0114 W/kg = -19.43 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 03:25:59 PM
 152_IEEE 802.11a CH 36_6M_side5_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

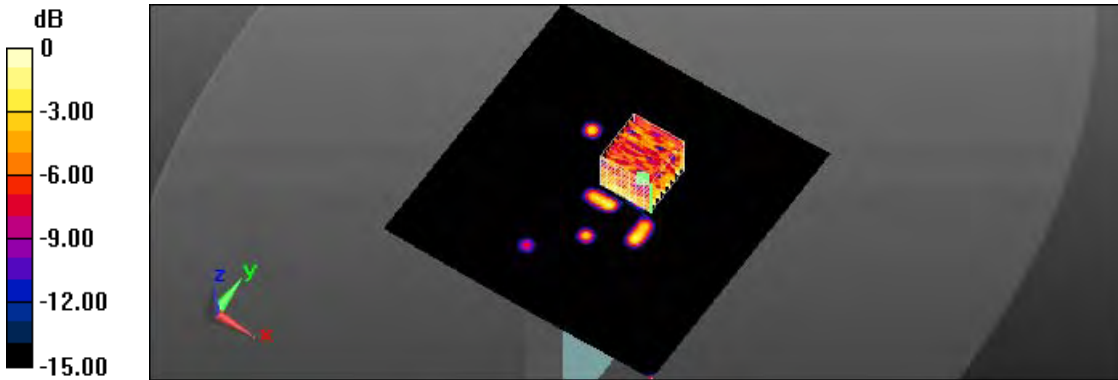
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 48.784$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0278 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 1.651 V/m; Power Drift = 0.19 dB
 Peak SAR (extrapolated) = 0.0440 W/kg

SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.00643 W/kg
 Maximum value of SAR (measured) = 0.0170 W/kg



0 dB = 0.0170 W/kg = -17.70 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 01:05:18 AM
 175_IEEE 802.11a CH 161_6M_side1_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

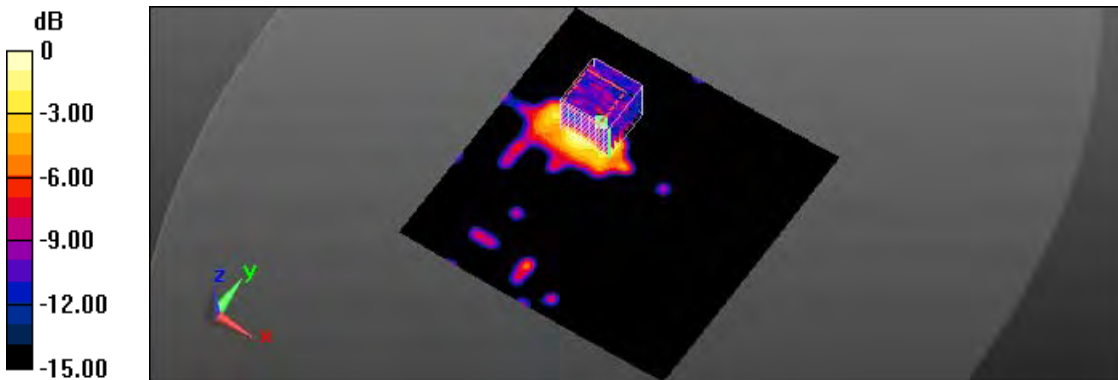
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5805 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5805$ MHz; $\sigma = 6.143$ S/m; $\epsilon_r = 47.269$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.114 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 0.9520 V/m; Power Drift = -0.17 dB
 Peak SAR (extrapolated) = 0.151 W/kg

SAR(1 g) = 0.046 W/kg; SAR(10 g) = 0.019 W/kg
 Maximum value of SAR (measured) = 0.0833 W/kg



0 dB = 0.0833 W/kg = -10.79 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 11:29:10 PM
 156_IEEE 802.11a CH 161_6M_side2_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

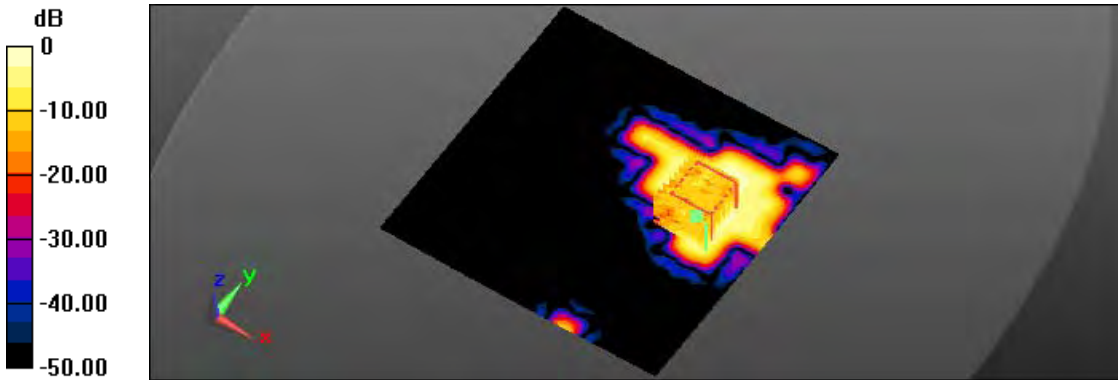
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5805 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5805$ MHz; $\sigma = 6.143$ S/m; $\epsilon_r = 47.269$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.152 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 0.4540 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.222 W/kg

SAR(1 g) = 0.078 W/kg; SAR(10 g) = 0.032 W/kg
 Maximum value of SAR (measured) = 0.134 W/kg



0 dB = 0.134 W/kg = -8.73 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 10:43:22 PM
 157_IEEE 802.11a CH 161_6M_side4_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, IEEE 802.11a (0); Frequency: 5805 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5805$ MHz; $\sigma = 6.143$ S/m; $\epsilon_r = 47.269$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

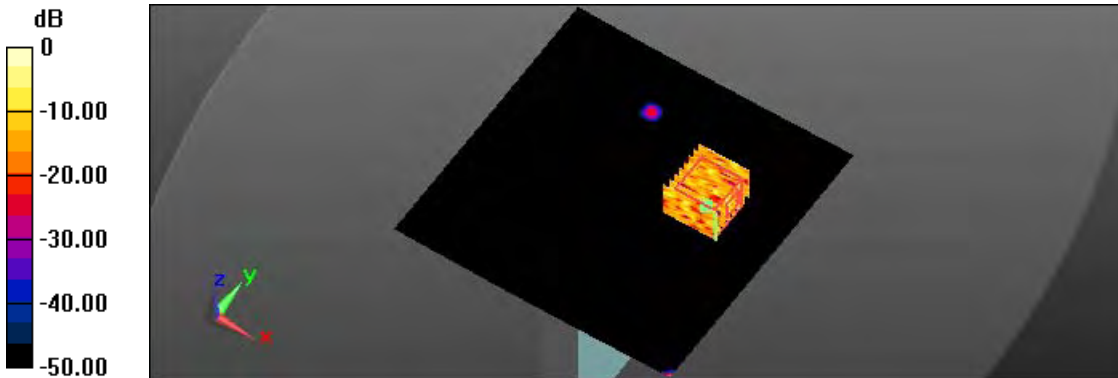
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.0127 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.0210 W/kg
SAR(1 g) = 0.00858 W/kg; SAR(10 g) = 0.00585 W/kg

Maximum value of SAR (measured) = 0.0194 W/kg



0 dB = 0.0194 W/kg = -17.12 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 09:30:59 PM
 158_IEEE 802.11a CH 161_6M_side5_10mm_Ant-0
DUT: MR1100-320; Type: Mobile Router

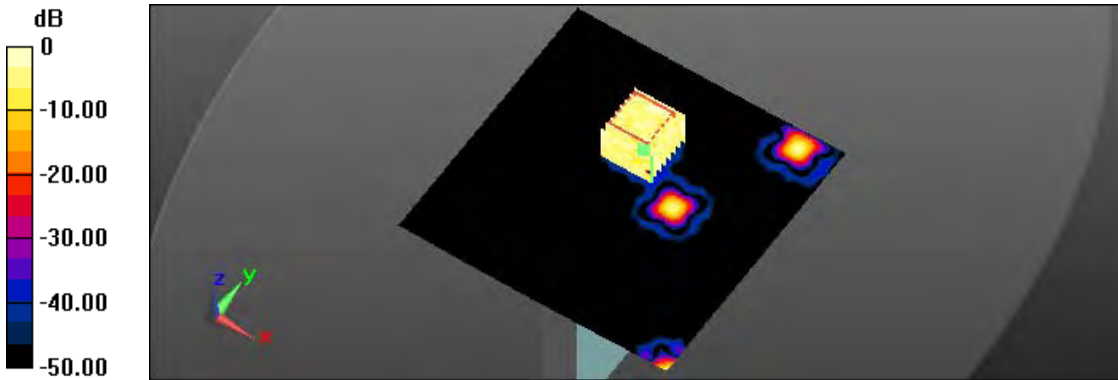
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5805 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5805$ MHz; $\sigma = 6.143$ S/m; $\epsilon_r = 47.269$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.0199 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 0.6130 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.0560 W/kg
SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.00702 W/kg
 Maximum value of SAR (measured) = 0.0202 W/kg



0 dB = 0.0202 W/kg = -16.95 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 02:49:10 PM
 170_IEEE 802.11g CH 11_6M_side1_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

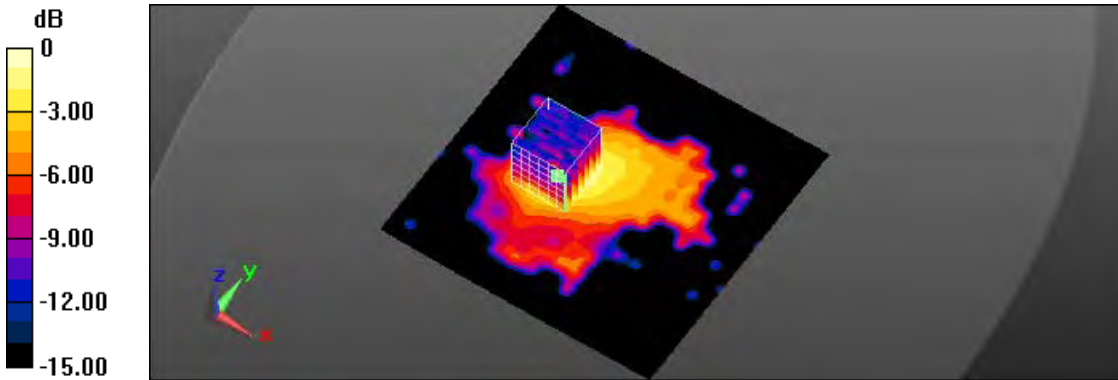
Communication System: UID 0, IEEE 802.11g (0); Frequency: 2462 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 52.329$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0341 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 2.985 V/m; Power Drift = -0.09 dB
 Peak SAR (extrapolated) = 0.0460 W/kg

SAR(1 g) = 0.023 W/kg; SAR(10 g) = 0.013 W/kg
 Maximum value of SAR (measured) = 0.0338 W/kg



Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 03:24:55 PM
 171_IEEE 802.11g CH 11_6M_side2_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, IEEE 802.11g (0); Frequency: 2462 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 52.329$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

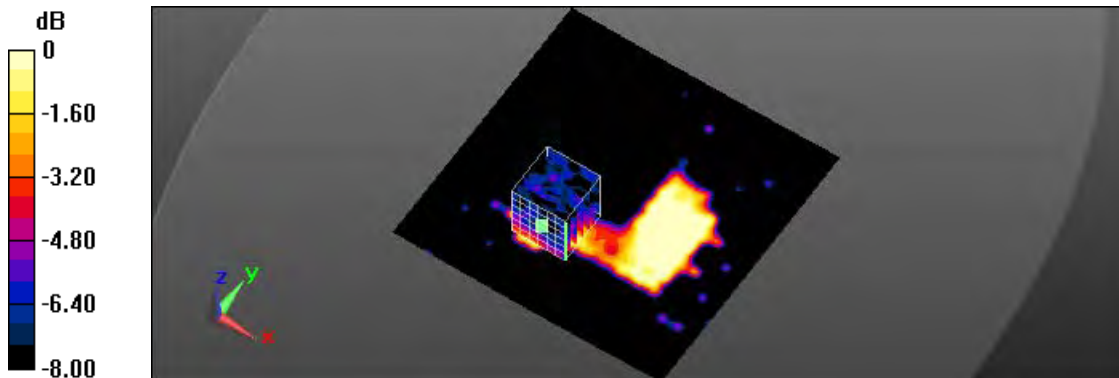
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0181 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 0.8600 V/m; Power Drift = -0.10 dB
 Peak SAR (extrapolated) = 0.0160 W/kg

SAR(1 g) = 0.0088 W/kg; SAR(10 g) = 0.00537 W/kg

Maximum value of SAR (measured) = 0.0114 W/kg



0 dB = 0.0114 W/kg = -19.43 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 07:40:15 PM
 172_IEEE 802.11g CH 11_6M_side4_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

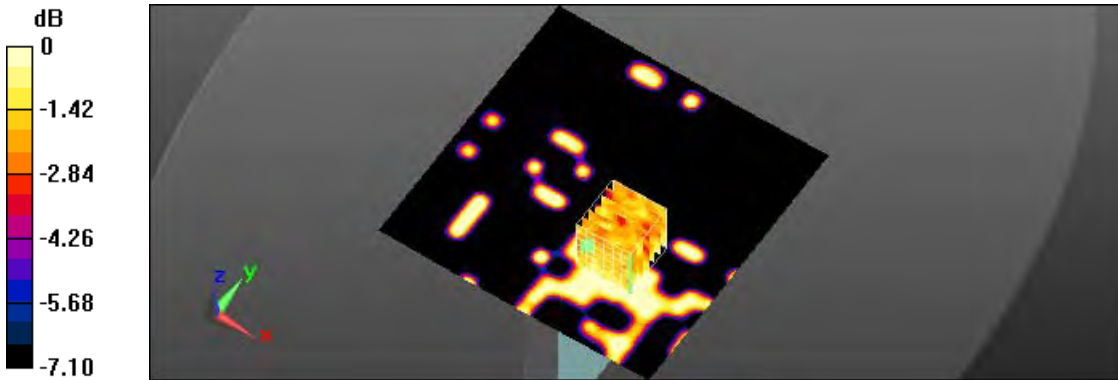
Communication System: UID 0, IEEE 802.11g (0); Frequency: 2462 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 52.329$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.00998 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 1.273 V/m; Power Drift = 0.02 dB
 Peak SAR (extrapolated) = 0.00517 W/kg

SAR(1 g) = 0.00315 W/kg; SAR(10 g) = 0.00269 W/kg
 Maximum value of SAR (measured) = 0.00433 W/kg



0 dB = 0.00433 W/kg = -23.64 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 09:12:35 PM
 173_IEEE 802.11g CH 11_6M_side5_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, IEEE 802.11g (0); Frequency: 2462 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.981 \text{ S/m}$; $\epsilon_r = 52.329$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

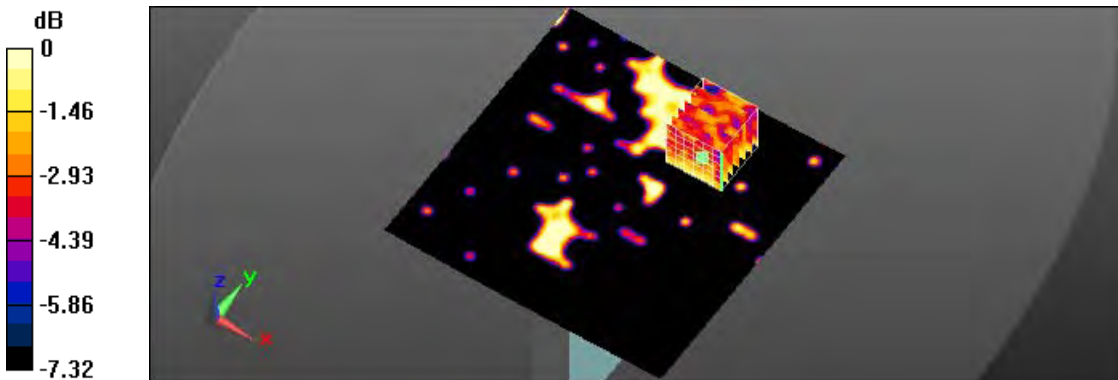
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.38, 7.38, 7.38); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0213 W/kg

Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 1.073 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 0.00804 W/kg

SAR(1 g) = 0.00499 W/kg; SAR(10 g) = 0.00401 W/kg

Maximum value of SAR (measured) = 0.00642 W/kg



0 dB = 0.00642 W/kg = -21.92 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 10:37:46 AM
 176_IEEE 802.11a CH 36_6M_side1_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

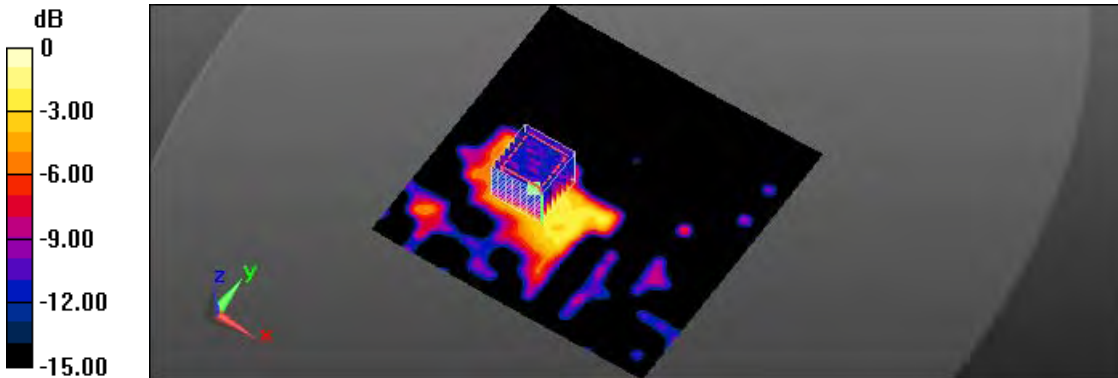
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 48.784$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0836 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 1.146 V/m; Power Drift = -0.18 dB
 Peak SAR (extrapolated) = 0.161 W/kg

SAR(1 g) = 0.054 W/kg; SAR(10 g) = 0.024 W/kg
 Maximum value of SAR (measured) = 0.0865 W/kg



0 dB = 0.0865 W/kg = -10.63 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 12:48:04 PM
 153_IEEE 802.11a CH 36_6M_side2_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

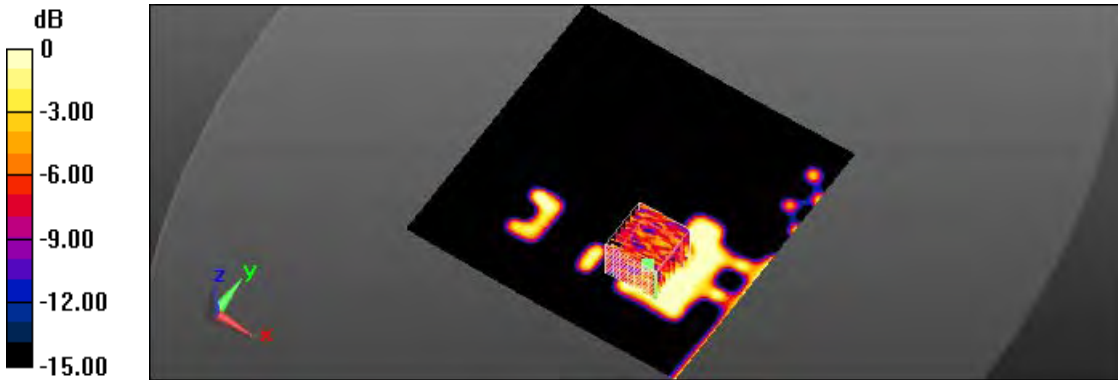
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 48.784$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0691 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 0.9790 V/m; Power Drift = -0.13 dB
 Peak SAR (extrapolated) = 0.0290 W/kg

SAR(1 g) = 0.00969 W/kg; SAR(10 g) = 0.00469 W/kg
 Maximum value of SAR (measured) = 0.0179 W/kg



0 dB = 0.0179 W/kg = -17.47 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 01:48:23 PM
 154_IEEE 802.11a CH 36_6M_side4_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, IEEE 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 48.784$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

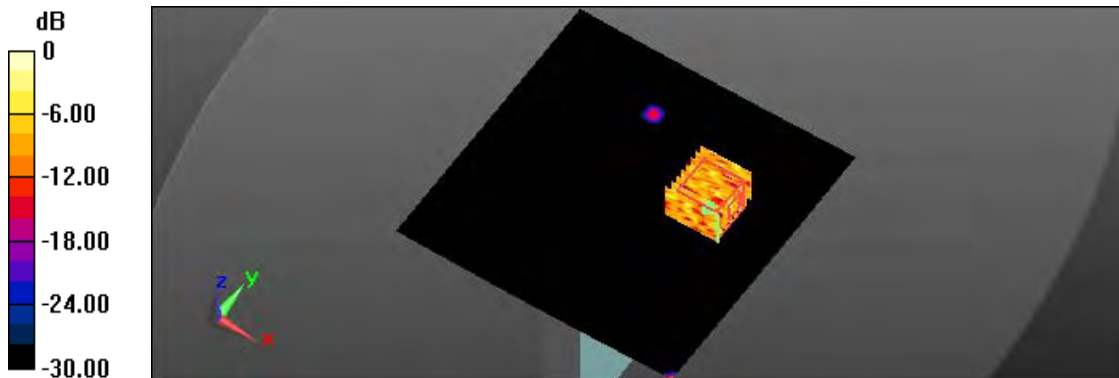
- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0113 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 0.09300 V/m; Power Drift = -0.11 dB
 Peak SAR (extrapolated) = 0.0330 W/kg

SAR(1 g) = 0.00303 W/kg; SAR(10 g) = 0.000716 W/kg

Maximum value of SAR (measured) = 0.0204 W/kg



0 dB = 0.0204 W/kg = -16.90 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 04:12:38 PM
 155_IEEE 802.11a CH 36_6M_side5_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

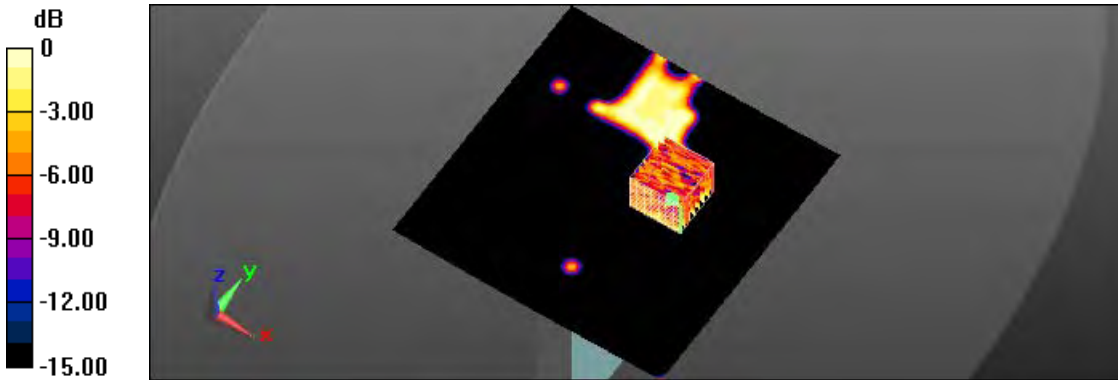
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 48.784$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.08, 5.08, 5.08); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
 Maximum value of SAR (interpolated) = 0.0430 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
 Reference Value = 1.100 V/m; Power Drift = 0.05 dB
 Peak SAR (extrapolated) = 0.0380 W/kg

SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.00579 W/kg
 Maximum value of SAR (measured) = 0.0189 W/kg



0 dB = 0.0189 W/kg = -17.24 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/8/1 02:11:07 AM
 177_IEEE 802.11a CH 149_6M_side1_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

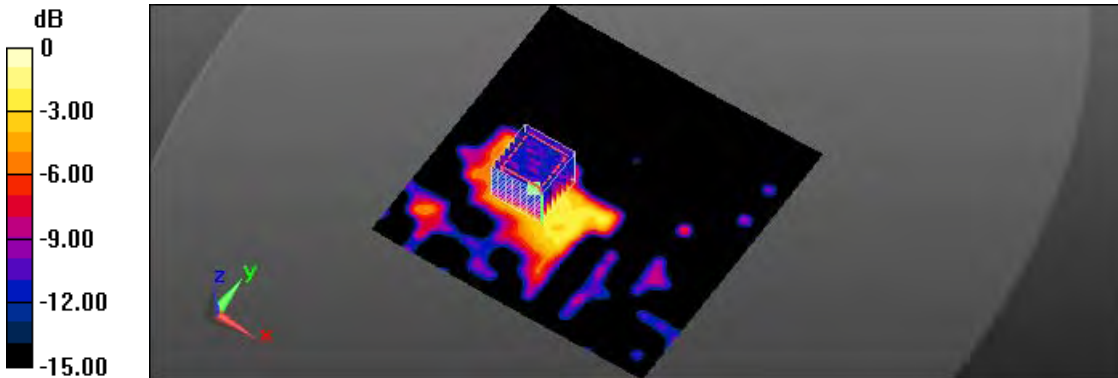
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5745 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 6.032$ S/m; $\epsilon_r = 47.484$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
 DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.130 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 0.8620 V/m; Power Drift = 0.14 dB
 Peak SAR (extrapolated) = 0.318 W/kg

SAR(1 g) = 0.059 W/kg; SAR(10 g) = 0.025 W/kg
 Maximum value of SAR (measured) = 0.105 W/kg



0 dB = 0.105 W/kg = -9.79 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 05:49:26 PM
 159_IEEE 802.11a CH 149_6M_side2_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

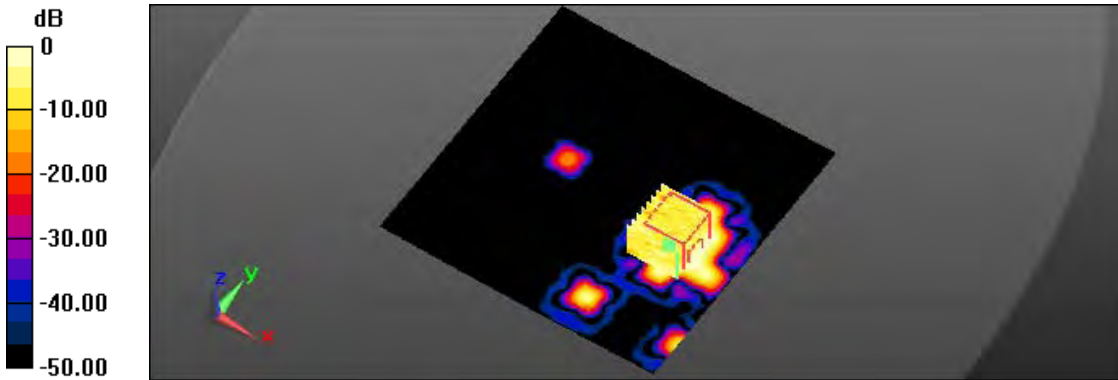
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5745 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 6.032$ S/m; $\epsilon_r = 47.484$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.0836 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 0.6790 V/m; Power Drift = -0.19 dB
 Peak SAR (extrapolated) = 0.0570 W/kg

SAR(1 g) = 0.020 W/kg; SAR(10 g) = 0.00933 W/kg
 Maximum value of SAR (measured) = 0.0339 W/kg



0 dB = 0.0339 W/kg = -14.70 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 07:27:41 PM
 160_IEEE 802.11a CH 149_6M_side4_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

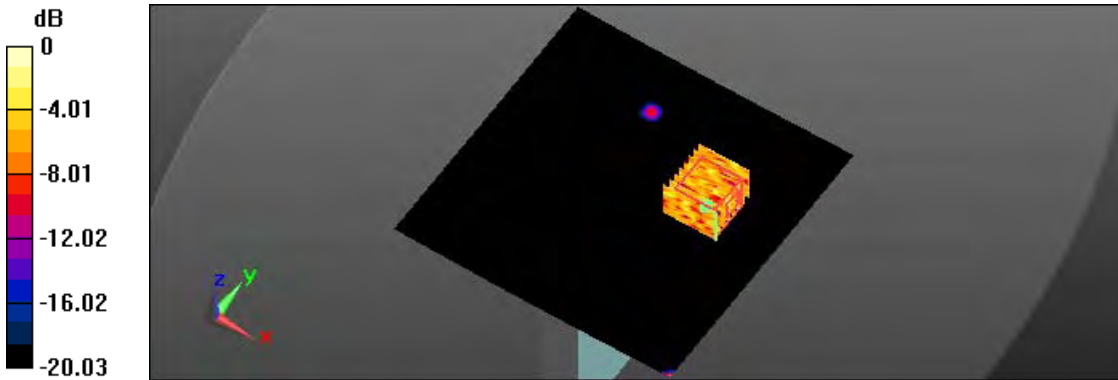
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5745 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 6.032$ S/m; $\epsilon_r = 47.484$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)
 DASYS5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.0156 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.0260 W/kg
SAR(1 g) = 0.00554 W/kg; SAR(10 g) = 0.00411 W/kg
 Maximum value of SAR (measured) = 0.0238 W/kg



0 dB = 0.0238 W/kg = -16.23 dBW/kg

Test Laboratory: A Test Lab Techno Corp.
 Date/Time: 2017/7/31 08:15:02 PM
 161_IEEE 802.11a CH 149_6M_side5_10mm_Ant-1
DUT: MR1100-320; Type: Mobile Router

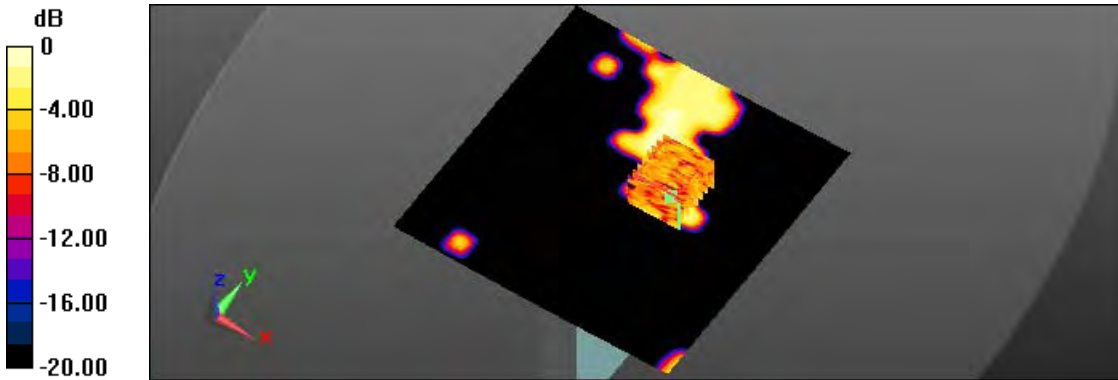
Communication System: UID 0, IEEE 802.11a (0); Frequency: 5745 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 6.032$ S/m; $\epsilon_r = 47.484$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)
 DASYS.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.31, 4.31, 4.31); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (151x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 0.0370 W/kg

Flat/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 1.147 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 0.0910 W/kg

SAR(1 g) = 0.015 W/kg; SAR(10 g) = 0.00869 W/kg
 Maximum value of SAR (measured) = 0.0295 W/kg



Test Laboratory: A Test Lab Techno Corp.

Date/Time: 2017/7/19 05:58:44 PM

19_LTE Band2 CH 18900_QPSK_BW 20MHz_1 RB size 49 RB offset_side4_10mm_w10-battery check

DUT: MR1100-320; Type: Mobile Router

Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.261$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.71, 7.71, 7.71); Calibrated: 2017/5/5;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2017/2/13
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASYS52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Flat/Area Scan (101x101x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 1.31 W/kg

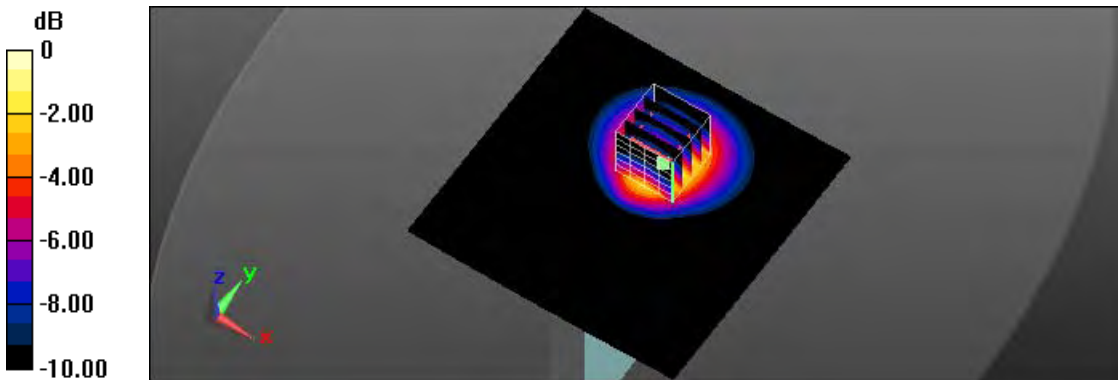
Flat/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.88 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 0.997 W/kg; SAR(10 g) = 0.614 W/kg

Maximum value of SAR (measured) = 1.31 W/kg



0 dB = 1.31 W/kg = 1.24 dBW/kg



Appendix C - Calibration

All of the instruments Calibration information are listed below.

- Dipole _ D750V3 SN:1004 Calibration No.Z16-97133
- Dipole _ D835V2 SN:4d082 Calibration No.Z16-97134
- Dipole _ D1750V2 SN:1023 Calibration No.D1750V2-1023_Jun17
- Dipole _ D1900V2 SN:5d111 Calibration No.Z16-97135
- Dipole _ D2300V2 SN:1005 Calibration No. Z16-97197
- Dipole _ D2450V2 SN:712 Calibration No. D2450V2-712_Mar17
- Dipole _ D2600V2 SN:1007 Calibration No.Z16-97198
- Dipole _ D5GHzV2 SN:1021 Calibration No.D5GHzV2-1021_Apr17
- Probe _ EX3DV4 SN:3847 Calibration No.EX3-3847_May17
- DAE _ DAE4 SN:541, Calibration No. DAE-541_Feb17



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Client **ATL**

Certificate No: **Z16-97133**

CALIBRATION CERTIFICATE

Object **D750V3 - SN: 1004**

Calibration Procedure(s)
FD-Z11-2-003-01
Calibration Procedures for dipole validation kits

Calibration date: **August 23, 2016**

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	27-Jun-16 (CTTL, No.J16X04777)	Jun-17
Power sensor NRP-Z91	101547	27-Jun-16 (CTTL, No.J16X04777)	Jun-17
Reference Probe EX3DV4	SN 3617	26-Aug-15(SPEAG,No.EX3-3617_Aug15)	Aug-16
DAE4	SN 777	26-Aug-15(SPEAG,No.DAE4-777_Aug15)	Aug-16
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	01-Feb-16 (CTTL, No.J16X00893)	Jan-17
Network Analyzer E5071C	MY46110673	26-Jan-16 (CTTL, No.J16X00894)	Jan-17

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Lu Bingsong	Deputy Director of the laboratory	

Issued: August 26, 2016

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: Z16-97133

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM _{x,y,z}
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) For hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:* SAR measured at the stated antenna input power.
- SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	52.8.8.1258
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.2 ± 6 %	0.88 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.10 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	8.50 mW / g ± 20.8 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.41 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	5.69 mW / g ± 20.4 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.1 ± 6 %	0.95 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.20 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	8.89 mW / g ± 20.8 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	1.49 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	6.01 mW / g ± 20.4 % (k=2)



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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.0Ω- 0.71jΩ
Return Loss	- 28.1dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.1Ω- 2.69jΩ
Return Loss	- 30.8dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.138 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 08.23.2016

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1004

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

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.878 \text{ S/m}$; $\epsilon_r = 42.21$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Center Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(9.98, 9.98, 9.98); Calibrated: 8/26/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn777; Calibrated: 2015-08-26
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1161/1
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7372)

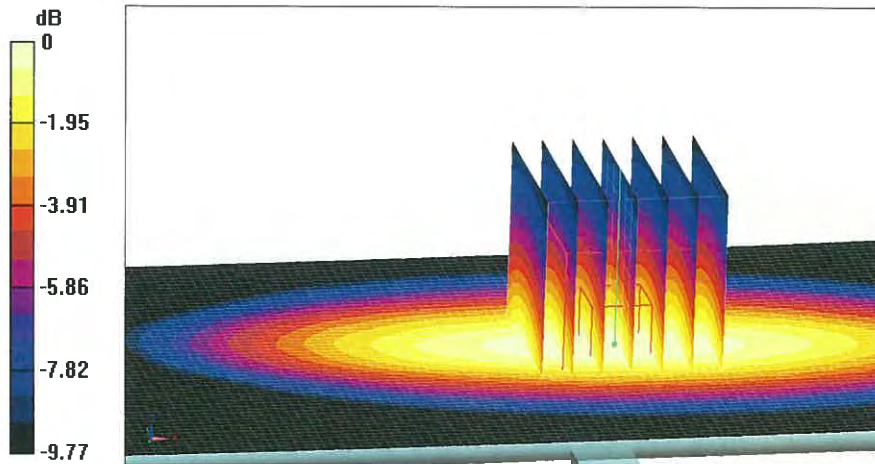
Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.82 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 3.09 W/kg

SAR(1 g) = 2.1 W/kg; SAR(10 g) = 1.41 W/kg

Maximum value of SAR (measured) = 2.64 W/kg



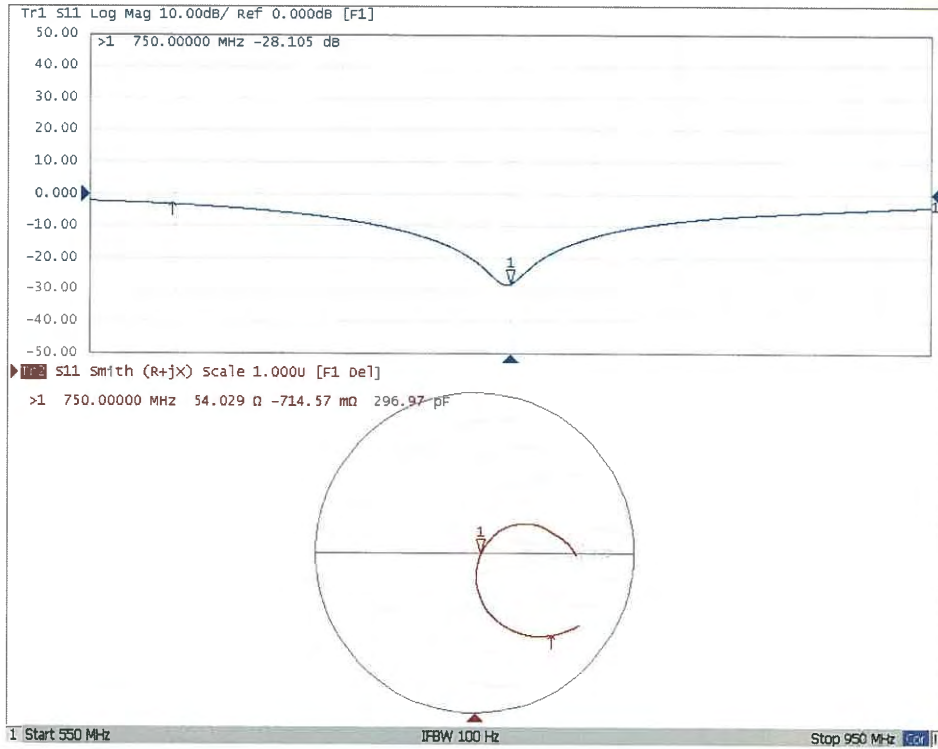
0 dB = 2.64 W/kg = 4.22 dBW/kg



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Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 08.23.2016

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1004

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

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.946 \text{ S/m}$; $\epsilon_r = 55.13$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Center Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(9.76,9.76, 9.76); Calibrated: 8/26/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn777; Calibrated: 2015-08-26
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1161/1
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7372)

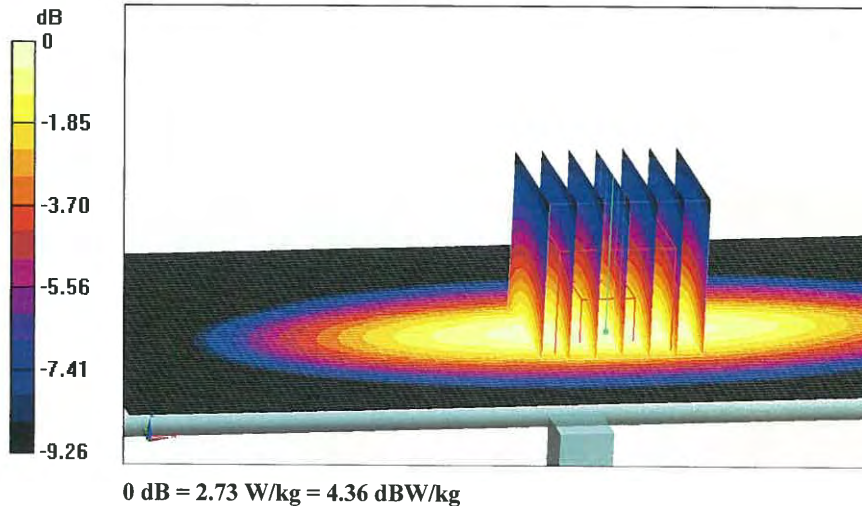
Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 53.56 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.14 W/kg

SAR(1 g) = 2.2 W/kg; SAR(10 g) = 1.49 W/kg

Maximum value of SAR (measured) = 2.73 W/kg

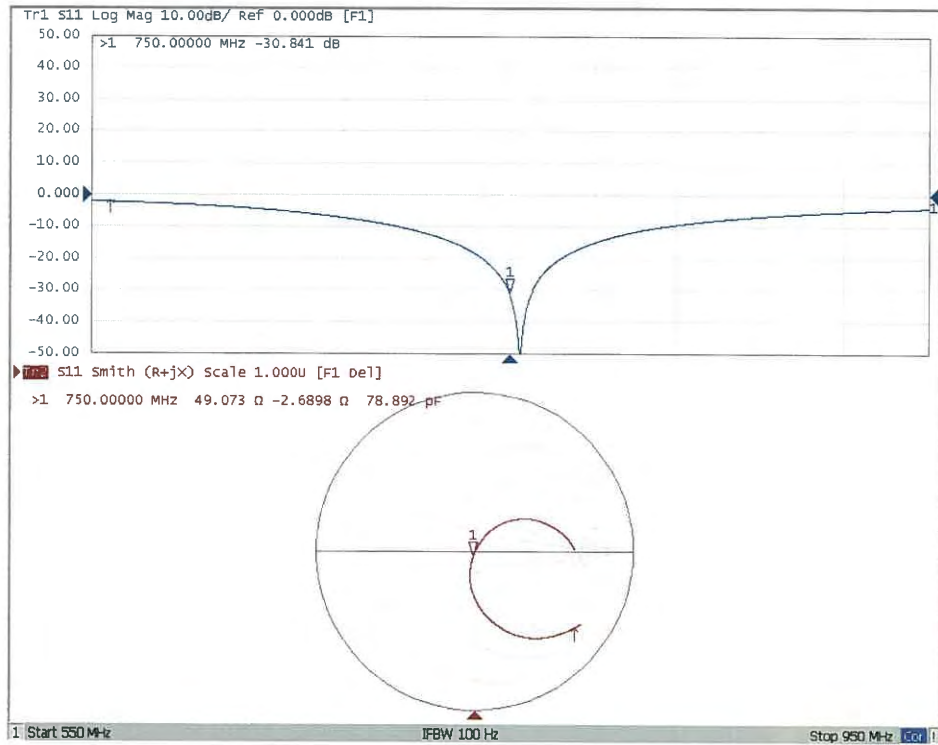




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Impedance Measurement Plot for Body TSL





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Client **ATL**

Certificate No: **Z16-97134**

CALIBRATION CERTIFICATE

Object: **D835V2 - SN: 4d082**

Calibration Procedure(s): **FD-Z11-2-003-01**
Calibration Procedures for dipole validation kits

Calibration date: **August 23, 2016**

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	27-Jun-16 (CTTL, No.J16X04777)	Jun-17
Power sensor NRP-Z91	101547	27-Jun-16 (CTTL, No.J16X04777)	Jun-17
Reference Probe EX3DV4	SN 3617	26-Aug-15(SPEAG,No.EX3-3617_Aug15)	Aug-16
DAE4	SN 777	26-Aug-15(SPEAG,No.DAE4-777_Aug15)	Aug-16
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	01-Feb-16 (CTTL, No.J16X00893)	Jan-17
Network Analyzer E5071C	MY46110673	26-Jan-16 (CTTL, No.J16X00894)	Jan-17

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Lu Bingsong	Deputy Director of the laboratory	

Issued: August 26, 2016

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Certificate No: Z16-97134

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM _{x,y,z}
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) For hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

- DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	52.8.8.1258
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.0 ± 6 %	0.92 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.38 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	9.43 mW /g ± 20.8 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.56 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	6.19 mW /g ± 20.4 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.9 ± 6 %	0.98 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.43 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	9.65 mW /g ± 20.8 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	1.62 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	6.44 mW /g ± 20.4 % (k=2)



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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.9Ω- 3.52jΩ
Return Loss	- 29.0dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.7Ω- 4.79jΩ
Return Loss	- 24.4dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.501 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 08.23.2016

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d082

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.915 \text{ S/m}$; $\epsilon_r = 41.98$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Center Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(9.56, 9.56,9.56); Calibrated: 8/26/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn777; Calibrated: 2015-08-26
- Phantom: Triple Flat Phantom 5.1C; Type: QD 000 P51 CA; Serial: 1161/1
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7372)

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

Reference Value = 58.25V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.55 W/kg

SAR(1 g) = 2.38 W/kg; SAR(10 g) = 1.56 W/kg

Maximum value of SAR (measured) = 3.02 W/kg

