SAR Test Report

Report No.	:	**SF191031C08**
Applicant	:	**Netgear, Inc.**
Address	:	**350 E. Plumeria Drive, San Jose CA 95134, USA**
Product	:	**5G MHS Travel Router**
FCC ID	:	**PY319400469**
Brand	:	**NETGEAR**
Model No.	:	**MR5100**
Standards	:	**FCC 47 CFR Part 2 (2.1093), IEEE C95.1:1992, IEEE Std 1528:2013 KDB 865664 D01 v01r04, KDB 865664 D02 v01r02, KDB 248227 D01 v02r02, KDB 447498 D01 v06, KDB 941225 D01 v03r01, KDB 941225 D05 v02r05, KDB 941225 D05A v01r02, KDB 941225 D06 v02r01**
Sample Received Date	:	**Nov. 04, 2019**
Date of Testing	:	**Dec. 02, 2019 ~ Jan. 11, 2020**
Lab Address	:	**No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan**
Test Location	:	**No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City, Taiwan**

CERTIFICATION: The above equipment have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch–Lin Kou Laboratories**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by TAF or any government agencies.

Prepared By : Rona Chen / Specialist

Approved By : Gordon Lin / Manager

FCC Accredited No.: TW0003

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Release Control Record

Report No.	Reason for Change	Date Issued
SF191031C08	Initial release	Jan. 20, 2020

1. Summary of Maximum SAR Value

Equipment Class	Mode	Highest SAR-1g Hotspot Tested at 10 mm (W/kg)
PCB	WCDMA II	1.09
	WCDMA V	0.80
	LTE 2	1.18
	LTE 4	0.74
	LTE 5	0.61
	LTE 7	1.19
	LTE 12	0.60
	LTE 14	0.64
	LTE 30	0.94
	LTE 48	0.70
	LTE 66	1.19
	5G NR n2	0.38
	5G NR n5	0.44
	5G NR n66	0.45
DTS	2.4G WLAN	0.06
NII	5.2G WLAN	0.12
	5.8G WLAN	0.16

Highest Simultaneous Transmission SAR	Highest SAR-1g Hotspot Tested at 10 mm (W/kg)
	1.59

Note:

1. The SAR criteria **(Head & Body: SAR-1g1.6 W/kg, and Extremity: SAR-10g 4.0 W/kg)**for general population/uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992.
2. The 5G NR only support NSA mode.

2. Description of Equipment Under Test

EUT Type	5G MHS Travel Router
FCC ID	PY319400469
Brand Name	NETGEAR
Model Name	MR5100
Hardware Version	DV2.2
Firmware Version	Post-FC3
Tx Frequency Bands (Unit: MHz)	WCDMA Band II : 1852.4 ~ 1907.6 WCDMA Band V : 826.4 ~ 846.6 LTE Band 2 : 1850.7 ~ 1909.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M) LTE Band 4 : 1710.7 ~ 1754.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M) LTE Band 5 : 824.7 ~ 848.3 (BW: 1.4M, 3M, 5M, 10M) LTE Band 7 : 2502.5 ~ 2567.5 (BW: 5M, 10M, 15M, 20M) LTE Band 12 : 699.7 ~ 715.3 (BW: 1.4M, 3M, 5M, 10M) LTE Band 14 : 790.5 ~ 795.5 (BW: 5M, 10M) LTE Band 29 : 717 ~ 728(Rx only) LTE Band 30 : 2307.5 ~ 2312.5 (BW: 5M, 10M) LTE Band 46 : 5150 ~ 5925(Rx only) LTE Band 48 : 3552.5 ~ 3697.5 (BW: 5M, 10M, 15M, 20M) LTE Band 66 : 1710.7 ~ 1779.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M) 5G NR n2 : 1852.5 ~ 1907.5 (BW: 5M, 10M, 15M, 20M) 5G NR n5 : 826.5 ~ 846.5 (BW: 5M, 10M, 15M, 20M) 5G NR n66 : 1712.5 ~ 1777.5 (BW: 5M, 10M, 15M, 20M) WLAN : 2412 ~ 2462, 5180 ~ 5240, 5745 ~ 5825
Uplink Modulations	WCDMA : QPSK LTE : QPSK, 16QAM, 64QAM 5G NR : DFT-s-OFDM / CP-OFDM_QPSK, 16QAM, 64QAM 802.11b : DSSS 802.11a/g/n/ac : OFDM 802.11ax : OFDMA
5G NR FR1 SCS	15 kHz
EN-DC Uplink Combinations	2A-n5A, 30A-n5A, 66A-n5A, 5A-n66A, 12A-n66A, 12A-n2A
Maximum Tune-up Conducted Power (Unit: dBm)	Please refer to section 4.6.1 of this report
Antenna Type	Internal IFA Antenna
EUT Stage	Engineering Sample

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.
2. The 5G NR are only support NSA mode. The test results complied with 3GPP 38.521-3 chapter 5.2B.4 for inter band EN-DC within FR1. Please refer to the chapter 4.6 and 4.7 for the detail in the report.

List of Accessory:

Battery	**Brand Name**	NETGEAR
	Model Name	W-20
	Power Rating	3.85Vdc, 5040mAh
	Type	Li-ion

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ).The equation description is as below:

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

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

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

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

3.2 SPEAG DASY6 System

DASY6 system consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY6 software defined. The DASY6 software can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion form the optical into digital electric signal of the DAE and transfers data to the PC.

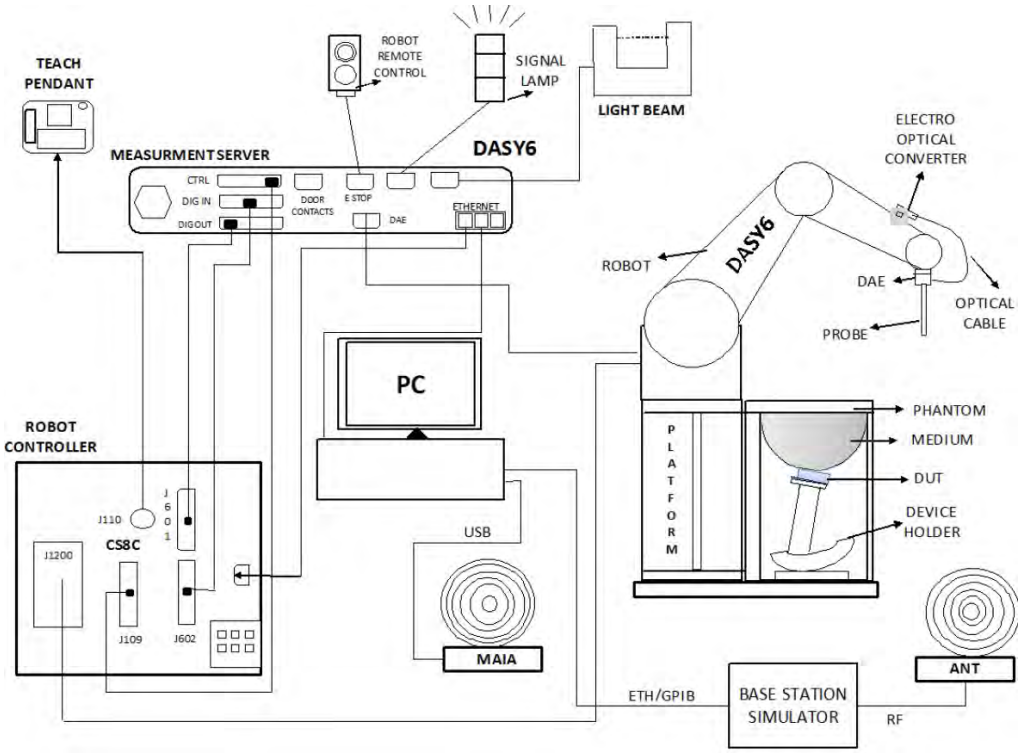


Fig-3.1 SPEAG DASY6 System Setup

3.2.1 Robot

The DASY6 systems use the high precision robots from Stäubli SA (France). For the 6-axis controller system, the robot controller version of CS8c from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability ±0.035 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

Fig-3.2 SPEAG DASY6 System

3.2.2 Probes

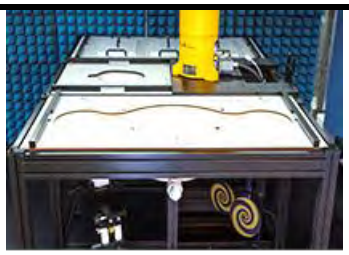
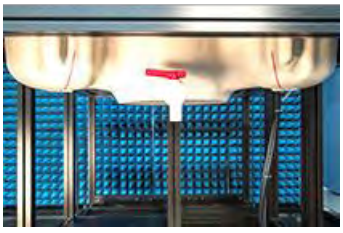
The SAR measurement is conducted with the dosimetric probe. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency.

Model	EX3DV4	
Construction	Symmetrical design with triangular core. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	4 MHz to 10 GHz Linearity: ± 0.2 dB	
Directivity	± 0.1 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 µW/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	
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	

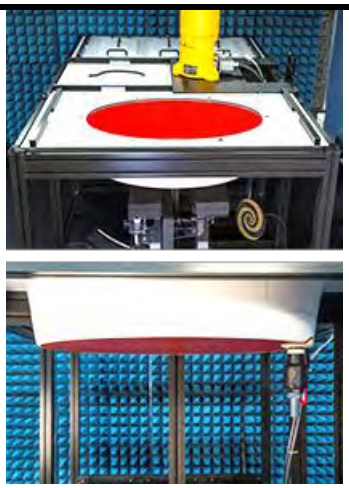
3.2.3 Data Acquisition Electronics (DAE)

Model	DAE3, DAE4	
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY 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	< 5µV (with auto zero)	
Input Bias Current	< 50 fA	
Dimensions	60 x 60 x 68 mm	

3.2.4 Phantoms

Model	SAM-Twin Phantom	 
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE Std 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone 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 teaching three points with the robot.	
Material	Vinylester, fiberglass reinforced (VE-GF)	
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)	
Dimensions	Length: 1000 mm Width: 500 mm Height: adjustable feet	
Filling Volume	approx. 25 liters	

Model	ELI
Construction	The ELI phantom is used for compliance testing of handheld and body-mounted wireless devices. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.
Material	Vinylester, fiberglass reinforced (VE-GF)
Shell Thickness	2.0 ± 0.2 mm (bottom plate)
Dimensions	Major axis: 600 mm Minor axis: 400 mm
Filling Volume	approx. 30 liters



3.2.5 Device Holder

Model	MD4HHTV5 - Mounting Device for Hand-Held Transmitters
Construction	In combination with the Twin SAM or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat).
Material	Polyoxymethylene (POM)

Model	MDA4WTV5 - Mounting Device Adaptor for Ultra Wide Transmitters
Construction	An upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.
Material	Polyoxymethylene (POM)

Model	MDA4SPV6 - Mounting Device Adaptor for Smart Phones
Construction	The solid low-density MDA4SPV6 adaptor assuring no impact on the DUT radiation performance and is conform with any DUT design and shape.
Material	ROHACELL

Model	MD4LAPV5 - Mounting Device for Laptops and other Body-Worn Transmitters	
Construction	In combination with the Twin SAM or ELI phantoms, the Mounting Device (Body-Worn) enables testing of transmitter devices according to IEC 62209-2 specifications. The device holder can be locked for positioning at a flat phantom section.	
Material	Polyoxymethylene (POM), PET-G, Foam	

3.2.6 System Validation Dipoles

Model	D-Serial	
Construction	Symmetrical dipole with l/4 balun. Enables measurement of feed point impedance with NWA. Matched for use near flat phantoms filled with tissue simulating solutions.	
Frequency	750 MHz to 5800 MHz	
Return Loss	> 20 dB	
Power Capability	> 100 W (f < 1GHz), > 40 W (f > 1GHz)	

3.2.7 Power Source

Model	Powersource1	
Signal Type	Continuous Wave	
Operating Frequencies	600 MHz to 5850 MHz	
Output Power	-5.0 dBm to +17.0 dBm	
Power Supply	5V DC, via USB jack	
Power Consumption	<3 W	
Applications	System performance check and validation with a CW signal.	

3.2.8 Tissue Simulating Liquids

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 10 % are listed in Table-3.1.

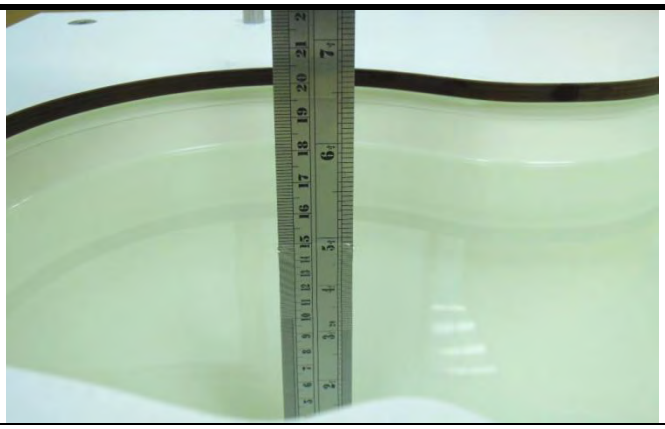


Photo of Liquid Height for Head Position

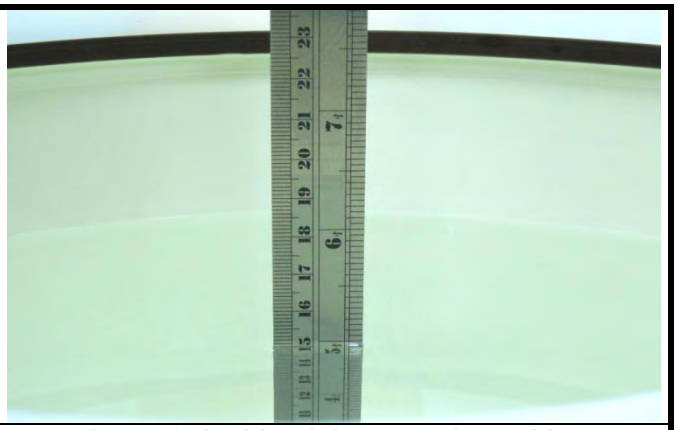


Photo of Liquid Height for Body Position

Table-3.1 Targets of Tissue Simulating Liquid

Frequency (MHz)	Target Permittivity	Range of ±10 %	Target Conductivity	Range of ±10 %
450	43.5	39.2 ~ 47.9	0.87	0.78 ~ 0.96
750	41.9	37.7 ~ 46.1	0.89	0.80 ~ 0.98
835	41.5	37.4 ~ 45.7	0.90	0.81 ~ 0.99
900	41.5	37.4 ~ 45.7	0.97	0.87 ~ 1.07
1450	40.5	36.5 ~ 44.6	1.20	1.08 ~ 1.32
1500	40.4	36.4 ~ 44.4	1.23	1.11 ~ 1.35
1640	40.2	36.2 ~ 44.2	1.31	1.18 ~ 1.44
1750	40.1	36.1 ~ 44.1	1.37	1.23 ~ 1.51
1800	40.0	36.0 ~ 44.0	1.40	1.26 ~ 1.54
1900	40.0	36.0 ~ 44.0	1.40	1.26 ~ 1.54
2000	40.0	36.0 ~ 44.0	1.40	1.26 ~ 1.54
2100	39.8	35.8 ~ 43.8	1.49	1.34 ~ 1.64
2300	39.5	35.6 ~ 43.5	1.67	1.50 ~ 1.84
2450	39.2	35.3 ~ 43.1	1.80	1.62 ~ 1.98
2600	39.0	35.1 ~ 42.9	1.96	1.76 ~ 2.16
3000	38.5	34.7 ~ 42.4	2.40	2.16 ~ 2.64
3500	37.9	34.1 ~ 41.7	2.91	2.62 ~ 3.20
4000	37.4	33.7 ~ 41.1	3.43	3.09 ~ 3.77
4500	36.8	33.1 ~ 40.5	3.94	3.55 ~ 4.33
5000	36.2	32.6 ~ 39.8	4.45	4.01 ~ 4.90
5200	36.0	32.4 ~ 39.6	4.66	4.19 ~ 5.13
5400	35.8	32.2 ~ 39.4	4.86	4.37 ~ 5.35
5600	35.5	32.0 ~ 39.1	5.07	4.56 ~ 5.58
5800	35.3	31.8 ~ 38.8	5.27	4.74 ~ 5.80
6000	35.1	31.6 ~ 38.6	5.48	4.93 ~ 6.03

The dielectric properties of the tissue simulating liquids are defined in IEC 62209-1 and IEC 62209-2. The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using a dielectric assessment kit and a network analyzer.

Since the range of ±10 % of the required target values is used to measure relative permittivity and conductivity, the SAR correction procedure is applied to correct measured SAR for the deviations in permittivity and conductivity. Only positive correction has been used to scale up the measured SAR, and SAR result would not be corrected if the correction △SAR has a negative sign.

The following table gives the recipes for tissue simulating liquids.

Table-3.2 Recipes of Tissue Simulating Liquid

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
H750	0.2	-	0.2	1.5	56.0	-	42.1	-
H835	0.2	-	0.2	1.5	57.0	-	41.1	-
H900	0.2	-	0.2	1.4	58.0	-	40.2	-
H1450	-	43.3	-	0.6	-	-	56.1	-
H1640	-	45.8	-	0.5	-	-	53.7	-
H1750	-	47.0	-	0.4	-	-	52.6	-
H1800	-	44.5	-	0.3	-	-	55.2	-
H1900	-	44.5	-	0.2	-	-	55.3	-
H2000	-	44.5	-	0.1	-	-	55.4	-
H2300	-	44.9	-	0.1	-	-	55.0	-
H2450	-	45.0	-	0.1	-	-	54.9	-
H2600	-	45.1	-	0.1	-	-	54.8	-
H3500	-	8.0	-	0.2	-	20.0	71.8	-
H5G	-	-	-	-	-	17.2	65.5	17.3

3.3 SAR System Verification

The system check verifies that the system operates within its specifications. It is performed daily or before every SAR measurement. The system check uses normal SAR measurements in the flat section of the phantom with a matched dipole at a specified distance. The system verification setup is shown as below.

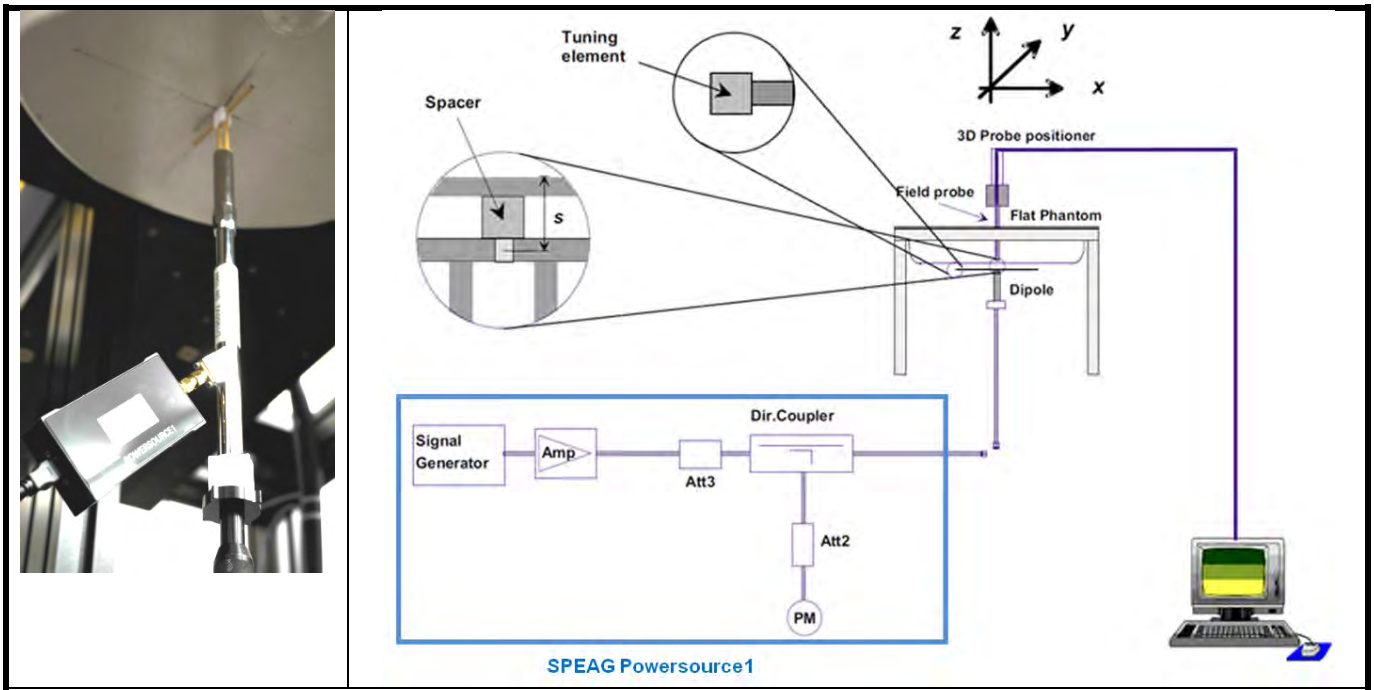


Fig-3.3 System Verification Setup

The SPEAG Powersource1 is a portable and very stable RF source providing a continuous wave (CW) signal. It is designed for conducting SAR system checks and SAR system validation of DASY and is compatible with IEC 62209-1, IEC 62209-2 and IEEE Std 1528 standards. The Powersource1 has been calibrated by SPEAG's ISO/IEC 17025-accredited calibration center. When using Powersource1, the setup can be simplified, as shown in Fig-3.3. The signal purity is warranted by design. Since the Powersource1 is calibrated, no additional equipment is needed and the Powersource1 can directly be connected to the SMA connector of the dipole without a cable as all separate components (signal generator, amplifier, coupler and power meter) are built into the unit.

The validation dipole is placed beneath the flat phantom with the specific spacer in place. The distance spacer is touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The Powersource1 is adjusted for the desired forward power of 17 dBm at the dipole connector and the RF output power would be turned on. After system check testing, the SAR result will be normalized to 1W forward input power and compared with the reference SAR value derived from validation dipole certificate report. The deviation of system check should be within 10 %.

3.4 SAR Measurement Procedure

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

(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

The SAR measurement procedures for each of test conditions are as follows:

(a) Make EUT to transmit maximum output power
(b) Measure conducted output power through RF cable
(c) Place the EUT in the specific position of phantom
(d) Perform SAR testing steps on the DASY system
(e) Record the SAR value

3.4.1 Area Scan and Zoom Scan Procedure

First area scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an area scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, zoom scan is required. The zoom scan is performed around the highest E-field value to determine the averaged SAR-distribution.

Measure the local SAR at a test point at 1.4 mm of the inner surface of the phantom recommended by SEPAG. The area scan (two-dimensional SAR distribution) is performed cover at least an area larger than the projection of the EUT or antenna. The measurement resolution and spatial resolution for interpolation shall be chosen to allow identification of the local peak locations to within one-half of the linear dimension of the corresponding side of the zoom scan volume. Following table provides the measurement parameters required for the area scan.

Parameter	$f \leqq$ 3 GHz	3 GHz < $f \leqq$ 6 GHz
Maximum distance from closest measurement point to phantom surface	5 ± 1	$\delta \ln(2)/2$ ±0.5
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ±1°	20° ±1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≦2 GHz: ≦15 mm 2 – 3 GHz: ≦12 mm	3 – 4 GHz: ≦12 mm 4 – 6 GHz: ≦10 mm

From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that will not be within the zoom scan of other peaks. Additional peaks shall be measured only when the primary peak is within 2 dB of the SAR compliance limit (e.g. 1 W/kg for 1.6 W/kg, 1 g limit; or 1.26 W/kg for 2 W/kg, 10 g limit).

The zoom scan (three-dimensional SAR distribution) is performed at the local maxima locations identified in previous area scan procedure. The zoom scan volume must be larger than the required minimum dimensions. When graded grids are used, which only applies in the direction normal to the phantom surface, the initial grid separation closest to the phantom surface and subsequent graded grid increment ratios must satisfy the required protocols. The 1-g SAR averaging volume must be fully contained within the zoom scan measurement volume boundaries; otherwise, the measurement must be repeated by shifting or expanding the zoom scan volume. The similar requirements also apply to 10-g SAR measurements. Following table provides the measurement parameters required for the zoom scan.

Parameter		$f \leqq 3$ GHz	3 GHz < $f \leqq 6$ GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}		≦2 GHz: ≦8 mm 2 – 3 GHz: ≦5 mm	3 – 4 GHz: ≦5 mm 4 – 6 GHz: ≦4 mm
Maximum zoom scan spatial resolution, normal to phantom surface	*uniform grid:* $\Delta z_{Zoom}(n)$	≦5 mm	3 – 4 GHz: ≦4 mm 4 – 5 GHz: ≦3 mm 5 – 6 GHz: ≦2 mm
	graded grids: $\Delta z_{Zoom}(1)$	≦4 mm	3 – 4 GHz: ≦3.0 mm 4 – 5 GHz: ≦2.5 mm 5 – 6 GHz: ≦2.0 mm
	$\Delta z_{Zoom}(n>1)$	≦1.5·$\Delta z_{Zoom}(n-1)$ mm	
Minimum zoom scan volume (x, y, z)		≥30 mm	3 – 4 GHz: ≥28 mm 4 – 5 GHz: ≥25 mm 5 – 6 GHz: ≥22 mm

Per IEC 62209-2 AMD1, the successively higher resolution zoom scan is required if the zoom scan measured as defined above complies with both of the following criteria, or if the peak spatial-average SAR is below 0.1 W/kg, no additional measurements are needed:

(1) The smallest horizontal distance from the local SAR peaks to all points 3 dB below the SAR peak shall be larger than the horizontal grid steps in both x and y directions (Δx, Δy). This shall be checked for the measured zoom scan plane conformal to the phantom at the distance zM1.

(2) The ratio of the SAR at the second measured point (M2) to the SAR at the closest measured point (M1) at the x-y location of the measured maximum SAR value shall be at least 30 %.

If one or both of the above criteria are not met, the zoom scan measurement shall be repeated using a finer resolution. New horizontal and vertical grid steps shall be determined from the measured SAR distribution so that the above criteria are met. Compliance with the above two criteria shall be demonstrated for the new measured zoom scan.

3.4.2 Volume Scan Procedure

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 EUT 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.

3.4.3 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT 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.

3.4.4 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:

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

3.4.5 SAR Averaged Methods

In DASY, 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.

4. SAR Measurement Evaluation

4.1 EUT Configuration and Setting

<Connections between EUT and System Simulator>

For WWAN SAR testing, the EUT was linked and controlled by base station emulator. Communication between the EUT and the emulator was established by air link. The distance between the EUT and the communicating antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of EUT. The EUT was set from the emulator to radiate maximum output power during SAR testing.

<Considerations Related to WCDMA for Setup and Testing>

Release 5 HSDPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA.HSDPA is configured according to the applicable 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 and 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}) are set according to values indicated in below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS}(1)(2)	CM(3) (dB)	MPR (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 Δ_{CQI} = 30/15 with β_{HS} =30/15*β_c.

Note 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 Δ_{NACK} = 30/15 with β_{HS} =30/15*β_c, and Δ_{CQI}=24/15 with β_{HS} =24/15*β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{HS}/β_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.

Note 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 signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d= 15/15.

Release 6 HSUPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, 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 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode. Otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing. Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in below.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS}(1)	β_{ec}	β_{ed}(4)(5)	β_{ed} (SF)	β_{ed} (Codes)	CM(2) (dB)	MPR(2)(6) (dB)	AG(5) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	22/15	209/225	1309/225	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	β_{ed}1: 47/15 β_{ed}2: 47/15	4 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	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1:For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 withβ_{HS} =30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 withβ_{HS} =5/15*β_c.
Note 2:CM = 1 forβ_c/β_d =12/15,β_{HS}/β_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.
Note 3:For subtest 1 theβ_c/β_dratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) toβ_c = 10/15 andβ_d = 15/15.
Note 4:In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.
Note 5:β_{ed}can not be set directly; it is set by Absolute Grant Value.
Note 6:For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

DC-HSDPA SAR Guidance

The 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Otherwise, when SAR is required for Rel. 5 HSDPA, SAR is required for Rel. 8 DC-HSDPA. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

<Considerations Related to LTE for Setup and Testing>

This device contains LTE transmitter which follows 3GPP standards, is category 3, supports both QPSK and QAM modulations, and supported LTE band and channel bandwidth is listed in below. The output power was tested per 3GPP TS 36.521-1 maximum transmit procedures for both QPSK and QAM modulation. The results please refer to section 4.6 of this report.

EUT Supported LTE Band and Channel Bandwidth						
LTE Band	**BW 1.4 MHz**	**BW 3 MHz**	**BW 5 MHz**	**BW 10 MHz**	**BW 15 MHz**	**BW 20 MHz**
2	**V**	**V**	**V**	**V**	**V**	**V**
4	**V**	**V**	**V**	**V**	**V**	**V**
5	**V**	**V**	**V**	**V**		
7			**V**	**V**	**V**	**V**
12	**V**	**V**	**V**	**V**		
14			**V**	**V**		
30			**V**	**V**		
48			**V**	**V**	**V**	**V**
66	**V**	**V**	**V**	**V**	**V**	**V**

The LTE maximum power reduction (MPR) in accordance with 3GPP TS 36.101 is active all times during LTE operation. The allowed MPR for the maximum output power is specified in below.

Modulation	**Channel Bandwidth / RB Configurations**						**LTE MPR Setting (dB)**
	BW 1.4 MHz	**BW 3 MHz**	**BW 5 MHz**	**BW 10 MHz**	**BW 15 MHz**	**BW 20 MHz**	
QPSK	**> 5**	**> 4**	**> 8**	**> 12**	**> 16**	**> 18**	**1**
16QAM	**<= 5**	**<= 4**	**<= 8**	**<= 12**	**<= 16**	**<= 18**	**1**
16QAM	**> 5**	**> 4**	**> 8**	**> 12**	**> 16**	**> 18**	**2**
64QAM	**<= 5**	**<= 4**	**<= 8**	**<= 12**	**<= 16**	**<= 18**	**2**
64QAM	**> 5**	**> 4**	**> 8**	**> 12**	**> 16**	**> 18**	**3**

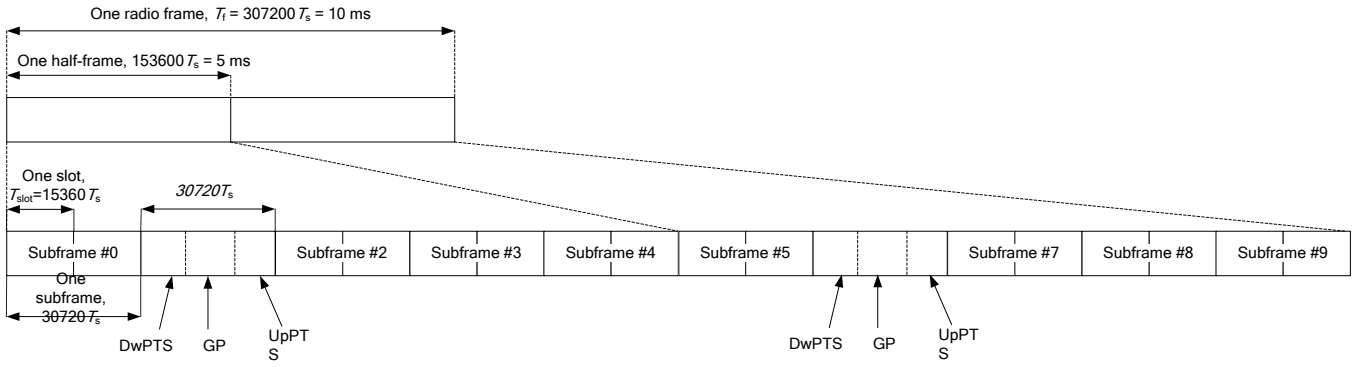
Note: MPR is according to the standard and implemented in the circuit (mandatory).

In addition, the device is compliant with additional maximum power reduction (A-MPR) requirements defined in 3GPP TS 36.101 section 6.2.4 that was disabled for all FCC compliance testing.

During LTE SAR testing, the related parameters of operating band, channel bandwidth, uplink channel number, modulation type, and RB was set in base station simulator. When the EUT has registered and communicated to base station simulator, the simulator set to make EUT transmitting the maximum radiated power.

TDD-LTE Setup Configurations

According to KDB 941225 D05, SAR testing for TDD-LTE device must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP TDD-LTE configurations. The TDD-LTE of this device supports frame structure type 2 defined in 3GPP TS 36.211 section 4.2, and the frame structure configuration can be referred to below.



3GPP TS 36.211 Figure 4.2-1: Frame Structure Type 2

Special Subframe Configuration	Normal Cyclic Prefix in Downlink			Extended Cyclic Prefix in Downlink		
	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 • Ts	2192 • Ts	2560 • Ts	7680 • Ts	2192 • Ts	2560 • Ts
1	19760 • Ts			20480 • Ts		
2	21952 • Ts			23040 • Ts		
3	24144 • Ts			25600 • Ts		
4	26336 • Ts			7680 • Ts	4384 • Ts	5120 • Ts
5	6592 • Ts	4384 • Ts	5120 • Ts	20480 • Ts		
6	19760 • Ts			23040 • Ts		
7	21952 • Ts			12800 • Ts		
8	24144 • Ts			-	-	-
9	13168 • Ts			-	-	-

3GPP TS 36.211 Table 4.2-1: Configuration of Special Subframe

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-Point Periodicity	Subframe Number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

3GPP TS 36.211 Table 4.2-2: Uplink-Downlink Configurations

The variety of different TD-LTE uplink-downlink configurations allows a network operator to allocate the network's capacity between uplink and downlink traffic to meet the needs of the network. The uplink duty cycle of these seven configurations can readily be computed and shown in below.

UL-DL Configuration	0	1	2	3	4	5	6
Highest Duty-Cycle	63.33%	43.33%	23.33%	31.67%	21.67%	11.67%	53.33%

Considering the highest transmission duty cycle, TDD-LTE was tested using Uplink-Downlink Configuration 0 with 6 uplink subframe and 2 special subframe. The special subframe was set to special subframe configuration 7 using extended cyclic prefix uplink. Therefore, SAR testing for TDD-LTE was performed at the maximum output power with highest transmission duty cycle of 63.33%.

<SAR Test Exclusion Evaluations for LTE Downlink CA>

According to Nov 2017 TCB Workshop, SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number of component carriers (CCs) supported by the product implementation. The downlink Carrier Aggregation configurations are tabulated in separate columns. DL CA would be listed in the columns corresponding to Intra Band contiguous, Intra Band Non-contiguous, 2bands/2CCs, 2bands/3CCs, 2bands/4CCs, 2bands/5CCs, 2bands/6CCs, 3bands/3CCs, 3bands/4CCs, 3bands/6CC, 4bands/4CCs and 4bands/5CC. The CA/CC combinations in each columns are sorted so that frequency bands listed in subsequent columns on each row are ascending subsets, as following LTE Downlink CA table, LTE Downlink CA (4*4 MIMO) table, and LTE Downlink CA (EN-DC) Configure ; i.e., columns to the right correspond to increasing number of frequency bands and CCs.

LTE Downlink CA-Configure									
Intra Band	**Inter Band**								
2CC Non-Contiguous	2 Bands / 2CC	2 Bands / 3CC	2 Bands / 4CC	3 Bands / 3CC	3 Bands / 4CC	3 Bands / 5CC	3 Bands / 6CC	4 Bands / 4CC	4 Bands / 5CC
2A-2A	5A-30A	2A-2A-5A		5A-30A-66A	2A-2A-5A-30A				
	5A-66A	2A-2A-30A			2A-2A-5A-66A				2A-2A-5A-30A-66A
	30A-66A	2A-2A-66A			2A-2A-30A-66A				
	12A-30A	2A-2A-12A		12A-30A-66A	2A-2A-12A-30A				2A-2A-12A-30A-66A
	12A-66A				2A-2A-12A-66A				
66A-66A	2A-5A	2A-66A-66A		2A-5A-30A	2A-5A-66A-66A				
	2A-30A	5A-66A-66A			2A-30A-66A-66A				2A-5A-30A-66A-66A
		30A-66A-66A			5A-30A-66A-66A				
	2A-66A	2A-5B		2A-5A-66A	2A-5B-30A			2A-5A-30A-66A	
		5B-30A		2A-30A-66A	2A-5B-66A				2A-5B-30A-66A
		5B-66A			5B-30A-66A				
	2A-12A	12A-66A-66A		2A-12A-30A	12A-30A-66A-66A				2A-12A-30A-66A-66A
					2A-12A-66A-66A				
				2A-12A-66A				2A-12A-30A-66A	
							2A-46E-66A		
			2A-46D			2A-46D-66A			
		2A-46C			2A-46C-66A				
	2A-29A			2A-29A-30A					
	30A-29A								

LTE Downlink CA-Configure				
Inter Band				
2 Bands / 2CC	2 Bands / 3CC	2 Bands / 4CC	2 Bands / 5CC	3 Bands / 3CC
2A-46A				2A-46A-66A
46A-66A				
			46D-66A-66A	
			2A-2A-46D	
		2A-2A-46C		
		46C-66A-66A		
		46D-66A		
	46A-66A-66A			
	46C-66A			
	2A-2A-46A			

* Only yellow highlighted cells need power measurement.

LTE Downlink CA (EN-DC) Configure							
Intra Band		Inter Band					
3CC Contiguous	2CC Non-Contiguous	2 Bands / 3CC	2 Bands / 4CC	3 Bands / 4CC	3 Bands/5CC	3 Bands / 6CC	4 Bands / 5CC
12A-n66A		2A-12A-n66A					
				2A-12A-66A-n66A			2A-12A-30A-66A-n66A
				12A-30A-66A-n66A			
				5A-30A-66A-n66A			
						2A-5A-30A-66A-n66A	
		2A-5A-n66A		2A-5A-30A-n66A			
2A-n5A	66A-66A-n5A	2A-30A-n5A	30A-66A-66A-n5A			2A-30A-66A-66A-n5A	
		12A-30A-n66A	2A-2A-12A-n66A			2A-2A-12A-30A-n66A	
		12A-66A-n66A				2A-2A-12A-66A-n66A	
			2A-2A-5A-n66A		2A-2A-5A-66A-n66A		
	2A-2A-n5A			2A-2A-30A-n5A			
12A-n2A		2A-12A-n2A					
				2A-12A-66A-n2A			
		12A-66A-n2A					
5A-n66A		2A-5A-n66A		2A-5A-30A-n66A			
		5A-30A-n66A					
		5A-66A-n66A		2A-5A-66A-n66A			
66A-n5A							
30A-n5A				2A-30A-66A-n5A			
				2A-2A-5A-30A-n66A			
			2A-66A-66A-n5A				
		2A-66A-n5A	2A-2A-66A-n5A				
		30A-66A-n5A					

* Only yellow highlighted cells need power measurement.

<Considerations Related to WLAN for Setup and Testing>

In general, various vendor specific external test software and chipset based internal test modes are typically used for SAR measurement. These chipset based test mode utilities are generally hardware and manufacturer dependent, and often include substantial flexibility to reconfigure or reprogram a device. A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement. The test frequencies established using test mode must correspond to the actual channel frequencies. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. In addition, a periodic transmission duty factor is required for current generation SAR systems to measure SAR correctly. The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

According to KDB 248227 D01,this device has installed WLAN engineering testing software which can provide continuous transmitting RF signal. During WLAN SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

Initial Test Configuration

An initial test configuration is determined for OFDM transmission modes in 2.4 GHz and 5 GHz bands according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.

Subsequent Test Configuration

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. 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.

SAR Test Configuration and Channel Selection

When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is using largest channel bandwidth, lowest order modulation, lowest data rate, and lowest order 802.11 mode (i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n).After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following.

1) The channel closest to mid-band frequency is selected for SAR measurement.

2) For channels with equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement.

Test Reduction for U-NII-1 (5.2 GHz) and U-NII-2A (5.3 GHz) Bands

For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following.

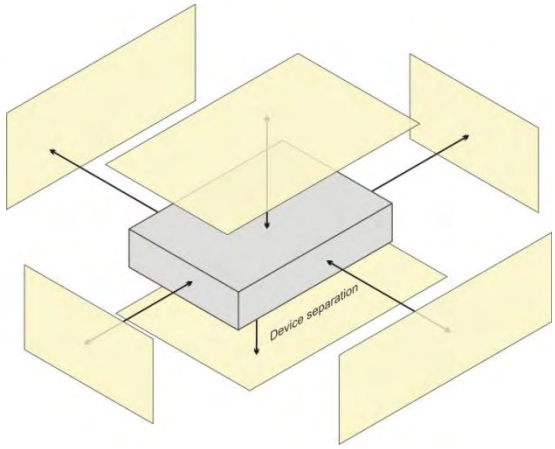
1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition).

2) When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration.

4.2 EUT Testing Position

4.2.1 Hotspot Mode Exposure Conditions

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing functions, the relevant hand and body exposure conditions are tested according to the hotspot SAR procedures in KDB 941225 D06. A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge. When the form factor of a handset is smaller than 9 cm x 5 cm, a test separation distance of 5 mm (instead of 10 mm) is required for testing hotspot mode. When the separation distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).



Based on the antenna location shown on appendix D of this report, the SAR testing required for hotspot mode is listed as below.

Antenna	Front Face	Rear Face	Left Side	Right Side	Top Side	Bottom Side
Ant 1 (for WWAN)	V	V	V	V	V	V
Ant 2 (for WWAN)	V	V	V	V	V	V
Ant 3 (for WLAN)	V	V	V	V	V	V
Ant 4 (for WLAN)	V	V	V	V	V	V

The supported bands of antenna is listed as below.
Ant 1 : WCDMA II/V, LTE 2/4/5/7/12/14/30/66, FR1 n5/n66
Ant 2 : LTE 4/48, 2/66(For EN-DC mode only), FR1 n2/n5/n66
Ant 3 : WLAN 2.4G, WLAN 5G
Ant 4 : WLAN 2.4G, WLAN 5G

4.3 Tissue Verification

The measuring results for tissue simulating liquid are shown as below.

Frequency (MHz)	Liquid Temp. (℃)	Measured Conductivity (σ)	Measured Permittivity (ε_r)	Target Conductivity (σ)	Target Permittivity (ε_r)	Conductivity Deviation (%)	Permittivity Deviation (%)	Test Date
750	23.3	0.886	43.438	0.89	41.9	-0.45	3.67	Dec. 02, 2019
750	23.3	0.89	43.198	0.89	41.9	0.00	3.10	Dec. 18, 2019
750	23.3	0.895	42.84	0.89	41.9	0.56	2.24	Jan. 10, 2020
835	23.2	0.901	42.636	0.9	41.5	0.11	2.74	Dec. 03, 2019
835	23.3	0.926	42.363	0.9	41.5	2.89	2.08	Dec. 19, 2019
835	23.3	0.937	43.169	0.9	41.5	4.11	4.02	Jan. 10, 2020
1750	23.3	1.332	39.529	1.37	40.1	-2.77	-1.42	Jan. 10, 2020
1750	23.1	1.32	39.168	1.37	40.1	-3.65	-2.32	Jan. 11, 2020
1900	23.2	1.456	39.705	1.4	40	4.00	-0.74	Dec. 03, 2019
1900	23.3	1.463	38.426	1.4	40	4.50	-3.94	Dec. 19, 2019
1900	23.3	1.461	40.973	1.4	40	4.36	2.43	Jan. 09, 2020
1900	23.3	1.459	39.001	1.4	40	4.21	-2.50	Jan. 10, 2020
2300	23.3	1.73	39.008	1.67	39.5	3.59	-1.25	Dec. 19, 2019
2450	23.1	1.883	38.286	1.8	39.2	4.61	-2.33	Dec. 09, 2019
2450	23.3	1.885	38.34	1.8	39.2	4.72	-2.19	Jan. 07, 2020
2600	23.2	2.051	37.811	1.96	39	4.64	-3.05	Dec. 03, 2019
2600	23.2	2.038	37.264	1.96	39	3.98	-4.45	Dec. 17, 2019
3500	23.3	2.962	37.276	2.91	37.9	1.79	-1.65	Dec. 19, 2019
3700	23.2	3.112	37.091	3.12	37.7	-0.26	-1.62	Dec. 19, 2019
5250	23.1	4.796	37.265	4.71	35.9	1.83	3.80	Dec. 09, 2019
5250	23.3	4.76	35.003	4.71	35.9	1.06	-2.50	Jan. 08, 2020
5600	23.1	5.14	36.704	5.07	35.5	1.38	3.39	Dec. 09, 2019
5600	23.3	5.128	34.518	5.07	35.5	1.14	-2.77	Jan. 08, 2020
5750	23.2	5.387	35.889	5.22	35.4	3.20	1.38	Dec. 05, 2019
5750	23.1	5.287	36.324	5.22	35.4	1.28	2.61	Dec. 09, 2019

Note:

The dielectric properties of the tissue simulating liquid have been measured within 24 hours before the SAR testing and within ±10 % of the target values. Liquid temperature during the SAR testing has kept within ±2 ℃.

4.4 System Validation

The SAR measurement system was validated according to procedures in KDB 865664 D01. The validation status in tabulated summary is as below.

Test Date	Probe S/N	Calibration Point	Measured Conductivity (σ)	Measured Permittivity (ε_r)	Validation for CW			Validation for Modulation		
					Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR
Dec. 02, 2019	7537	750	0.886	43.438	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 18, 2019	7472	750	0.89	43.198	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 10, 2020	7537	750	0.895	42.84	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 03, 2019	7537	835	0.901	42.636	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 19, 2019	7472	835	0.926	42.363	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 10, 2020	7537	835	0.937	43.169	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 10, 2020	7537	1750	1.332	39.529	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 11, 2020	7537	1750	1.32	39.168	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 03, 2019	7537	1900	1.456	39.705	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 19, 2019	7472	1900	1.463	38.426	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 09, 2020	7537	1900	1.461	40.973	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 10, 2020	7537	1900	1.459	39.001	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 19, 2019	7472	2300	1.73	39.008	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 09, 2019	7537	2450	1.883	38.286	Pass	Pass	Pass	OFDM	N/A	Pass
Jan. 07, 2020	3971	2450	1.885	38.34	Pass	Pass	Pass	OFDM	N/A	Pass
Dec. 03, 2019	7537	2600	2.051	37.811	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 17, 2019	7472	2600	2.038	37.264	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 19, 2019	7472	3500	2.962	37.276	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 19, 2019	7472	3700	3.112	37.091	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 09, 2019	7537	5250	4.796	37.265	Pass	Pass	Pass	OFDM	N/A	Pass
Jan. 08, 2020	7472	5250	4.76	35.003	Pass	Pass	Pass	OFDM	N/A	Pass
Dec. 09, 2019	7537	5600	5.14	36.704	Pass	Pass	Pass	OFDM	N/A	Pass
Jan. 08, 2020	7472	5600	5.128	34.518	Pass	Pass	Pass	OFDM	N/A	Pass
Dec. 05, 2019	7537	5750	5.387	35.889	Pass	Pass	Pass	OFDM	N/A	Pass
Dec. 09, 2019	7537	5750	5.287	36.324	Pass	Pass	Pass	OFDM	N/A	Pass

4.5 System Verification

The measuring result for system verification is tabulated as below.

Test Date	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Dec. 02, 2019	750	8.56	0.398	7.96	-7.01	1013	7537	1585
Dec. 18, 2019	750	8.56	0.398	7.96	-7.01	1013	7472	579
Jan. 10, 2020	750	8.56	0.395	7.90	-7.71	1013	7537	1585
Dec. 03, 2019	835	9.61	0.47	9.40	-2.19	4d121	7537	1585
Dec. 19, 2019	835	9.61	0.468	9.36	-2.60	4d121	7472	579
Jan. 10, 2020	835	9.61	0.485	9.70	0.94	4d121	7537	1585
Jan. 10, 2020	1750	37.00	1.76	35.20	-4.86	1055	7537	1585
Jan. 11, 2020	1750	37.00	1.75	35.00	-5.41	1055	7537	1585
Dec. 03, 2019	1900	40.20	2.03	40.60	1.00	5d036	7537	1585
Dec. 19, 2019	1900	40.20	2.01	40.20	0.00	5d036	7472	579
Jan. 09, 2020	1900	40.20	1.97	39.40	-1.99	5d036	7537	1585
Jan. 10, 2020	1900	40.20	1.95	39.00	-2.99	5d036	7537	1585
Dec. 19, 2019	2300	49.10	2.28	45.60	-7.13	1004	7472	579
Dec. 09, 2019	2450	52.70	2.61	52.20	-0.95	737	7537	1585
Jan. 07, 2020	2450	52.70	2.59	51.80	-1.71	737	3971	579
Dec. 03, 2019	2600	57.30	2.77	55.40	-3.32	1020	7537	1585
Dec. 17, 2019	2600	57.30	2.75	55.00	-4.01	1020	7472	579
Dec. 19, 2019	3500	66.60	3.23	64.60	-3.00	1007	7472	579
Dec. 19, 2019	3700	67.20	3.43	68.60	2.08	1017	7472	579
Dec. 09, 2019	5250	80.70	3.72	74.40	-7.81	1019	7537	1585
Jan. 08, 2020	5250	80.70	3.83	76.60	-5.08	1019	7472	1431
Dec. 09, 2019	5600	85.80	3.99	79.80	-6.99	1019	7537	1585
Jan. 08, 2020	5600	85.80	4.07	81.40	-5.13	1019	7472	1431
Dec. 05, 2019	5750	81.50	3.77	75.40	-7.48	1019	7537	1585
Dec. 09, 2019	5750	81.50	3.81	76.20	-6.50	1019	7537	1585

Note:

Comparing to the reference SAR value provided by SPEAG in dipole calibration certificate, the deviation of system check results is within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots please refer to Appendix A of this report.

4.6 Maximum Output Power

4.6.1 Maximum Target Conducted Power

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

Mode	WCDMA Band II	WCDMA Band V
RMC 12.2K	24.0	24.0
HSDPA / HSUPA / DC-HSDPA	23.0	23.0

Mode	LTE 2	LTE 4	LTE 5
Maximum Target Power	23.0	24.0	24.0

Mode	LTE 7	LTE 12	LTE 14
Maximum Target Power	24.0	24.0	24.0

Mode	LTE 30	LTE 48	LTE 66
Maximum Target Power	23.0	24.0	24.0

Mode	5G NR n2	5G NR n5	5G NR n66
Maximum Target Power	23.0	24.0	24.0

<Power for EN-DC>

Mode	LTE 2	LTE 5	LTE 12
Maximum Target Power	20.0	21.0	21.0

Mode	LTE 30	LTE 66
Maximum Target Power	20.0	21.0

Mode	5G NR n2	5G NR n5	5G NR n66
Maximum Target Power	20.0	21.0	21.0

<WLAN 2.4G>

Mode	Channel	Frequency (MHz)	Tune- Power (Ant-4)	Tune- Power (Ant-3)	Tune- Power (Ant-4 + Ant-3)
802.11b	1	2412	10.0	10.0	-
	6	2437	10.0	10.0	-
	11	2462	10.0	10.0	-
802.11g	1	2412	10.0	10.0	-
	6	2437	10.0	10.0	-
	11	2462	10.0	10.0	-
802.11n (HT20)	1	2412	10.0	10.0	13.0
	6	2437	10.0	10.0	13.0
	11	2462	10.0	10.0	13.0
802.11n (HT40)	3	2422	10.0	10.0	13.0
	6	2437	10.0	10.0	13.0
	9	2452	10.0	10.0	13.0
802.11ac (VHT20)	1	2412	10.0	10.0	13.0
	6	2437	10.0	10.0	13.0
	11	2462	10.0	10.0	13.0
802.11ac (VHT40)	3	2422	10.0	10.0	13.0
	6	2437	10.0	10.0	13.0
	9	2452	10.0	10.0	13.0
802.11ax (HE20)	1	2412	10.0	10.0	13.0
	6	2437	10.0	10.0	13.0
	11	2462	10.0	10.0	13.0
802.11 ax (HE40)	3	2422	10.0	10.0	13.0
	6	2437	10.0	10.0	13.0
	9	2452	10.0	10.0	13.0

<WLAN 5.2G>

Mode	Channel	Frequency (MHz)	Tune- Power (Ant-4)	Tune- Power (Ant-3)	Tune- Power (Ant-4 + Ant-3)
802.11a	36	5180	10.0	10.0	13.0
	40	5200	10.0	10.0	13.0
	44	5220	10.0	10.0	13.0
	48	5240	10.0	10.0	13.0
802.11n (HT20)	36	5180	10.0	10.0	13.0
	40	5200	10.0	10.0	13.0
	44	5220	10.0	10.0	13.0
	48	5240	10.0	10.0	13.0
802.11n (HT40)	38	5190	10.0	10.0	13.0
	46	5230	10.0	10.0	13.0
802.11ac (VHT20)	36	5180	10.0	10.0	13.0
	40	5200	10.0	10.0	13.0
	44	5220	10.0	10.0	13.0
	48	5240	10.0	10.0	13.0
802.11ac (VHT40)	38	5190	10.0	10.0	13.0
	46	5230	10.0	10.0	13.0
802.11ac (VHT80)	42	5210	10.0	10.0	13.0
802.11ax (HE20)	36	5180	10.0	10.0	13.0
	40	5200	10.0	10.0	13.0
	44	5220	10.0	10.0	13.0
	48	5240	10.0	10.0	13.0
802.11ax (HE40)	38	5190	10.0	10.0	13.0
	46	5230	10.0	10.0	13.0
802.11ax (HE80)	42	5210	10.0	10.0	13.0

<WLAN 5.8G>

Mode	Channel	Frequency (MHz)	Tune- Power (Ant-4)	Tune- Power (Ant-3)	Tune- Power (Ant-4 + Ant-3)
802.11a	149	5745	10.0	10.0	13.0
	153	5765	10.0	10.0	13.0
	157	5785	10.0	10.0	13.0
	161	5805	10.0	10.0	13.0
	165	5825	10.0	10.0	13.0
802.11n (HT20)	149	5745	10.0	10.0	13.0
	153	5765	10.0	10.0	13.0
	157	5785	10.0	10.0	13.0
	161	5805	10.0	10.0	13.0
	165	5825	10.0	10.0	13.0
802.11n (HT40)	151	5755	10.0	10.0	13.0
	159	5795	10.0	10.0	13.0
802.11ac (VHT20)	149	5745	10.0	10.0	13.0
	153	5765	10.0	10.0	13.0
	157	5785	10.0	10.0	13.0
	161	5805	10.0	10.0	13.0
	165	5825	10.0	10.0	13.0
802.11ac (VHT40)	151	5755	10.0	10.0	13.0
	159	5795	10.0	10.0	13.0
802.11ac (VHT80)	155	5775	10.0	10.0	13.0
802.11ax (HE20)	149	5745	10.0	10.0	13.0
	153	5765	10.0	10.0	13.0
	157	5785	10.0	10.0	13.0
	161	5805	10.0	10.0	13.0
	165	5825	10.0	10.0	13.0
802.11ax (HE40)	151	5755	10.0	10.0	13.0
	159	5795	10.0	10.0	13.0
802.11ax (HE80)	155	5775	10.0	10.0	13.0

4.6.2 Measured Conducted Power Result

The measuring conducted average power (Unit: dBm) is shown as below.

Band	WCDMA Band II			WCDMA Band V			3GPP MPR (dB)
Channel	9262	9400	9538	4132	4182	4233	
Frequency (MHz)	1852.4	1880.0	1907.6	826.4	836.4	846.6	
RMC 12.2K	23.09	23.59	23.16	23.58	23.79	23.77	-
HSDPA Subtest-1	22.01	22.51	22.08	22.56	22.77	22.75	0
HSDPA Subtest-2	21.99	22.49	22.06	22.54	22.75	22.73	0
HSDPA Subtest-3	21.53	22.03	21.60	22.05	22.26	22.24	0.5
HSDPA Subtest-4	21.52	22.02	21.59	22.04	22.25	22.23	0.5
DC-HSDPA Subtest-1	21.93	22.43	22.00	22.45	22.66	22.64	0
DC-HSDPA Subtest-2	21.91	22.41	21.98	22.43	22.64	22.62	0
DC-HSDPA Subtest-3	21.45	21.95	21.52	21.94	22.15	22.13	0.5
DC-HSDPA Subtest-4	21.44	21.94	21.51	21.93	22.14	22.12	0.5
HSUPA Subtest-1	22.00	22.50	22.07	22.57	22.78	22.76	0
HSUPA Subtest-2	19.72	20.22	19.79	20.53	20.74	20.72	2
HSUPA Subtest-3	20.71	21.21	20.78	21.70	21.91	21.89	1
HSUPA Subtest-4	19.75	20.25	19.82	20.55	20.76	20.74	2
HSUPA Subtest-5	21.71	22.21	21.78	22.60	22.81	22.79	0

LTE Band 2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		18700	18900	19100				Channel		18675	18900	19125	
		Frequency (MHz)		1860.0	1880.0	1900.0				Frequency (MHz)		1857.5	1880.0	1902.5	
20M	QPSK	1	0	22.71	22.75	22.89	0	15M	QPSK	1	0	22.67	22.67	22.85	0
		1	50	22.81	22.85	**22.99**	0			1	37	22.80	22.83	22.90	0
		1	99	22.67	22.71	22.85	0			1	74	22.63	22.64	22.78	0
		50	0	21.79	21.83	**21.97**	1			36	0	21.78	21.76	21.93	1
		50	25	21.76	21.80	21.94	1			36	19	21.74	21.76	21.86	1
		50	50	21.77	21.81	21.95	1			36	39	21.77	21.77	21.86	1
		100	0	21.71	21.75	**21.89**	1			75	0	21.66	21.70	21.85	1
	16QAM	1	0	21.69	21.73	21.87	1		16QAM	1	0	21.69	21.69	21.83	1
		1	50	21.79	21.83	21.97	1			1	37	21.72	21.75	21.87	1
		1	99	21.65	21.69	21.83	1			1	74	21.65	21.64	21.81	1
		50	0	20.77	20.81	20.95	2			36	0	20.72	20.79	20.92	2
		50	25	20.74	20.78	20.92	2			36	19	20.74	20.70	20.84	2
		50	50	20.75	20.79	20.93	2			36	39	20.74	20.76	20.83	2
		100	0	20.69	20.73	20.87	2			75	0	20.68	20.68	20.84	2
	64QAM	1	0	20.68	20.72	20.86	2		64QAM	1	0	20.60	20.63	20.82	2
		1	50	20.78	20.82	20.96	2			1	37	20.72	20.82	20.93	2
		1	99	20.64	20.68	20.82	2			1	74	20.57	20.63	20.81	2
		50	0	19.76	19.80	19.94	3			36	0	19.71	19.80	19.89	3
		50	25	19.73	19.77	19.91	3			36	19	19.64	19.72	19.88	3
		50	50	19.74	19.78	19.92	3			36	39	19.73	19.77	19.90	3
		100	0	19.68	19.72	19.86	3			75	0	19.61	19.62	19.84	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		18650	18900	19150				Channel		18625	18900	19175	
		Frequency (MHz)		1855.0	1880.0	1905.0				Frequency (MHz)		1852.5	1880.0	1907.5	
10M	QPSK	1	0	22.64	22.68	22.79	0	5M	QPSK	1	0	22.67	22.68	22.55	0
		1	24	22.67	22.70	22.88	0			1	12	22.75	22.65	22.62	0
		1	49	22.57	22.49	22.71	0			1	24	22.50	22.60	22.50	0
		25	0	21.62	21.66	21.79	1			12	0	21.70	21.72	21.81	1
		25	12	21.60	21.72	21.75	1			12	6	21.58	21.64	21.65	1
		25	25	21.54	21.74	21.88	1			12	13	21.74	21.75	21.85	1
		50	0	21.60	21.64	21.72	1			25	0	21.55	21.72	21.62	1
	16QAM	1	0	21.51	21.63	21.74	1		16QAM	1	0	21.44	21.65	21.77	1
		1	24	21.71	21.65	21.86	1			1	12	21.61	21.63	21.83	1
		1	49	21.49	21.60	21.67	1			1	24	21.59	21.51	21.62	1
		25	0	20.68	20.57	20.78	2			12	0	20.63	20.68	20.77	2
		25	12	20.64	20.77	20.83	2			12	6	20.67	20.65	20.84	2
		25	25	20.58	20.69	20.76	2			12	13	20.62	20.75	20.88	2
		50	0	20.55	20.61	20.75	2			25	0	20.60	20.57	20.74	2
	64QAM	1	0	20.59	20.70	20.72	2		64QAM	1	0	20.51	20.57	20.66	2
		1	24	20.61	20.74	20.81	2			1	12	20.72	20.66	20.81	2
		1	49	20.60	20.54	20.70	2			1	24	20.46	20.59	20.68	2
		25	0	19.73	19.66	19.80	3			12	0	19.74	19.77	19.80	3
		25	12	19.57	19.63	19.89	3			12	6	19.65	19.59	19.84	3
		25	25	19.64	19.70	19.80	3			12	13	19.62	19.67	19.76	3
		50	0	19.51	19.56	19.71	3			25	0	19.57	19.49	19.76	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		18615	18900	19185				Channel		18607	18900	19193	
		Frequency (MHz)		1851.5	1880.0	1908.5				Frequency (MHz)		1850.7	1880.0	1909.3	
3M	QPSK	1	0	22.53	22.51	22.87	0	1.4M	QPSK	1	0	22.55	22.56	22.74	0
		1	7	22.74	22.70	22.85	0			1	2	22.69	22.70	22.86	0
		1	14	22.50	22.60	22.73	0			1	5	22.47	22.48	22.78	0
		8	0	21.62	21.66	21.82	1			3	0	22.65	22.64	22.88	0
		8	3	21.62	21.74	21.88	1			3	1	22.75	22.71	22.82	0
		8	7	21.67	21.72	21.74	1			3	3	22.69	22.67	22.87	0
		15	0	21.57	21.65	21.78	1			6	0	21.57	21.63	21.73	1
	16QAM	1	0	21.65	21.66	21.68	1		16QAM	1	0	21.61	21.72	21.65	1
		1	7	21.64	21.69	21.91	1			1	2	21.67	21.81	21.83	1
		1	14	21.61	21.62	21.69	1			1	5	21.46	21.68	21.70	1
		8	0	20.66	20.68	20.82	2			3	0	21.69	21.78	21.84	1
		8	3	20.63	20.66	20.74	2			3	1	21.67	21.65	21.87	1
		8	7	20.52	20.69	20.90	2			3	3	21.60	21.60	21.85	1
		15	0	20.46	20.57	20.71	2			6	0	20.47	20.63	20.85	2
	64QAM	1	0	20.66	20.59	20.69	2		64QAM	1	0	20.52	20.55	20.84	2
		1	7	20.64	20.79	20.81	2			1	2	20.76	20.64	20.76	2
		1	14	20.48	20.65	20.73	2			1	5	20.57	20.57	20.73	2
		8	0	19.59	19.63	19.87	3			3	0	20.63	20.72	20.79	2
		8	3	19.69	19.74	19.77	3			3	1	20.64	20.66	20.77	2
		8	7	19.67	19.62	19.78	3			3	3	20.55	20.59	20.85	2
		15	0	19.66	19.62	19.62	3			6	0	19.54	19.61	19.80	3

LTE Band 2 (Power for EN-DC)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		18700	18900	19100				Channel		18675	18900	19125	
		Frequency (MHz)		1860.0	1880.0	1900.0				Frequency (MHz)		1857.5	1880.0	1902.5	
20M	QPSK	1	0	19.23	**19.98**	19.69	0	15M	QPSK	1	0	19.18	19.92	19.64	0
		1	50	19.03	19.78	19.49	0			1	37	18.99	19.68	19.45	0
		1	99	18.82	19.57	19.28	0			1	74	18.72	19.51	19.25	0
		50	0	19.14	**19.89**	19.60	0			36	0	19.13	19.84	19.54	0
		50	25	18.97	19.72	19.43	0			36	19	18.95	19.68	19.38	0
		50	50	18.79	19.54	19.25	0			36	39	18.69	19.47	19.21	0
		100	0	18.89	**19.64**	19.35	0			75	0	18.81	19.63	19.26	0
	16QAM	1	0	18.10	18.85	18.56	1		16QAM	1	0	18.05	18.79	18.55	1
		1	50	17.88	18.63	18.34	1			1	37	17.79	18.57	18.26	1
		1	99	17.57	18.32	18.03	1			1	74	17.50	18.28	17.93	1
		50	0	18.08	18.83	18.54	1			36	0	18.07	18.76	18.48	1
		50	25	17.86	18.61	18.32	1			36	19	17.84	18.53	18.26	1
		50	50	17.56	18.31	18.02	1			36	39	17.50	18.31	17.92	1
		100	0	17.81	18.56	18.27	1			75	0	17.81	18.52	18.19	1
	64QAM	1	0	17.21	17.96	17.67	2		64QAM	1	0	17.11	17.95	17.62	2
		1	50	16.90	17.65	17.36	2			1	37	16.86	17.63	17.36	2
		1	99	16.72	17.47	17.18	2			1	74	16.62	17.46	17.18	2
		50	0	17.13	17.88	17.59	2			36	0	17.06	17.79	17.58	2
		50	25	16.88	17.63	17.34	2			36	19	16.86	17.55	17.31	2
		50	50	16.70	17.45	17.16	2			36	39	16.69	17.41	17.08	2
		100	0	16.86	17.61	17.32	2			75	0	16.81	17.51	17.28	2
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		18650	18900	19150				Channel		18625	18900	19175	
		Frequency (MHz)		1855.0	1880.0	1905.0				Frequency (MHz)		1852.5	1880.0	1907.5	
10M	QPSK	1	0	19.01	19.82	19.58	0	5M	QPSK	1	0	19.09	19.83	19.50	0
		1	24	18.95	19.65	19.39	0			1	12	18.87	19.66	19.41	0
		1	49	18.64	19.44	19.09	0			1	24	18.72	19.36	19.17	0
		25	0	19.07	19.80	19.49	0			12	0	19.04	19.72	19.44	0
		25	12	18.92	19.56	19.18	0			12	6	18.78	19.57	19.24	0
		25	25	18.67	19.35	19.20	0			12	13	18.78	19.37	19.05	0
		50	0	18.80	19.41	19.16	0			25	0	18.83	19.57	19.04	0
	16QAM	1	0	17.95	18.71	18.50	1		16QAM	1	0	17.97	18.80	18.42	1
		1	24	17.74	18.43	18.12	1			1	12	17.67	18.46	18.19	1
		1	49	17.44	18.19	17.95	1			1	24	17.45	18.11	17.90	1
		25	0	17.96	18.65	18.44	1			12	0	17.92	18.65	18.38	1
		25	12	17.65	18.55	18.14	1			12	6	17.77	18.56	18.25	1
		25	25	17.43	18.15	17.90	1			12	13	17.52	18.28	17.91	1
		50	0	17.66	18.42	18.20	1			25	0	17.74	18.40	18.14	1
	64QAM	1	0	17.02	17.80	17.49	2		64QAM	1	0	17.18	17.86	17.47	2
		1	24	16.78	17.53	17.31	2			1	12	16.71	17.56	17.32	2
		1	49	16.56	17.41	17.18	2			1	24	16.57	17.35	17.14	2
		25	0	17.05	17.71	17.48	2			12	0	17.05	17.81	17.52	2
		25	12	16.80	17.48	17.21	2			12	6	16.74	17.47	17.23	2
		25	25	16.48	17.36	17.07	2			12	13	16.51	17.36	17.09	2
		50	0	16.72	17.49	17.23	2			25	0	16.84	17.53	17.16	2
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		18615	18900	19185				Channel		18607	18900	19193	
		Frequency (MHz)		1851.5	1880.0	1908.5				Frequency (MHz)		1850.7	1880.0	1909.3	
3M	QPSK	1	0	19.16	19.84	19.66	0	1.4M	QPSK	1	0	19.04	19.82	19.58	0
		1	7	18.91	19.72	19.41	0			1	2	18.93	19.66	19.40	0
		1	14	18.59	19.48	19.16	0			1	5	18.70	19.45	19.28	0
		8	0	18.99	19.75	19.57	0			3	0	19.07	19.80	19.39	0
		8	3	18.86	19.61	19.25	0			3	1	18.80	19.57	19.33	0
		8	7	18.66	19.48	19.16	0			3	3	18.78	19.36	19.15	0
		15	0	18.84	19.53	19.20	0			6	0	18.83	19.47	19.24	0
	16QAM	1	0	17.95	18.74	18.54	1		16QAM	1	0	17.97	18.68	18.40	1
		1	7	17.65	18.54	18.28	1			1	2	17.81	18.56	18.23	1
		1	14	17.42	18.25	17.96	1			1	5	17.42	18.20	17.94	1
		8	0	17.99	18.70	18.45	1			3	0	18.00	18.66	18.51	1
		8	3	17.66	18.45	18.15	1			3	1	17.74	18.45	18.17	1
		8	7	17.40	18.09	17.89	1			3	3	17.53	18.12	17.91	1
		15	0	17.75	18.32	18.05	1			6	0	17.65	18.38	18.24	1
	64QAM	1	0	17.09	17.92	17.49	2		64QAM	1	0	17.12	17.83	17.55	2
		1	7	16.80	17.56	17.12	2			1	2	16.71	17.60	17.17	2
		1	14	16.56	17.43	17.09	2			1	5	16.58	17.42	17.04	2
		8	0	17.00	17.83	17.52	2			3	0	16.91	17.84	17.47	2
		8	3	16.78	17.57	17.13	2			3	1	16.75	17.53	17.27	2
		8	7	16.54	17.36	17.14	2			3	3	16.63	17.39	17.02	2
		15	0	16.70	17.57	17.16	2			6	0	16.77	17.51	17.15	2

Note : The test results of LTE 2 are only used to evaluate EN-DC mode.

LTE Band 4

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20050	20175	20300	
		Frequency (MHz)		1720.0	1732.5	1745.0	
20M	QPSK	1	0	23.61	23.77	23.92	0
		1	50	23.63	23.79	**23.94**	0
		1	99	23.46	23.62	23.77	0
		50	0	22.55	22.71	22.86	1
		50	25	22.62	22.78	**22.93**	1
		50	50	22.42	22.58	22.73	1
		100	0	22.07	22.23	**22.38**	1
	16QAM	1	0	22.58	22.74	22.89	1
		1	50	22.60	22.76	22.91	1
		1	99	22.43	22.59	22.74	1
		50	0	21.52	21.68	21.83	2
		50	25	21.59	21.75	21.90	2
		50	50	21.39	21.55	21.70	2
		100	0	21.04	21.20	21.35	2
	64QAM	1	0	21.56	21.72	21.87	2
		1	50	21.58	21.74	21.89	2
		1	99	21.41	21.57	21.72	2
		50	0	20.50	20.66	20.81	3
		50	25	20.57	20.73	20.88	3
		50	50	20.37	20.53	20.68	3
		100	0	20.02	20.18	20.33	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20025	20175	20325	
		Frequency (MHz)		1717.5	1732.5	1747.5	
15M	QPSK	1	0	23.52	23.71	23.87	0
		1	37	23.59	23.71	23.85	0
		1	74	23.44	23.60	23.76	0
		36	0	22.52	22.63	22.77	1
		36	19	22.55	22.73	22.91	1
		36	39	22.40	22.51	22.69	1
		75	0	22.05	22.23	22.36	1
	16QAM	1	0	22.57	22.71	22.79	1
		1	37	22.50	22.74	22.85	1
		1	74	22.35	22.50	22.74	1
		36	0	21.45	21.67	21.78	2
		36	19	21.53	21.73	21.87	2
		36	39	21.35	21.46	21.64	2
		75	0	21.01	21.13	21.35	2
	64QAM	1	0	21.52	21.63	21.84	2
		1	37	21.57	21.73	21.81	2
		1	74	21.34	21.57	21.71	2
		36	0	20.40	20.62	20.80	3
		36	19	20.53	20.63	20.79	3
		36	39	20.34	20.51	20.62	3
		75	0	19.92	20.14	20.23	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20000	20175	20350	
		Frequency (MHz)		1715.0	1732.5	1750.0	
10M	QPSK	1	0	23.37	23.62	23.67	0
		1	24	23.56	23.65	23.79	0
		1	49	23.31	23.44	23.61	0
		25	0	22.44	22.67	22.77	1
		25	12	22.42	22.64	22.75	1
		25	25	22.38	22.46	22.63	1
		50	0	21.94	22.14	22.29	1
	16QAM	1	0	22.47	22.69	22.79	1
		1	24	22.49	22.70	22.83	1
		1	49	22.35	22.43	22.61	1
		25	0	21.46	21.56	21.70	2
		25	12	21.43	21.55	21.71	2
		25	25	21.26	21.43	21.55	2
		50	0	20.94	21.05	21.19	2
	64QAM	1	0	21.31	21.50	21.69	2
		1	24	21.36	21.59	**21.75**	2
		1	49	21.27	21.42	21.48	2
		25	0	20.41	20.56	20.70	3
		25	12	20.52	20.67	20.70	3
		25	25	20.23	20.43	20.62	3
		50	0	19.85	19.95	20.24	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		19975	20175	20375	
		Frequency (MHz)		1712.5	1732.5	1752.5	
5M	QPSK	1	0	23.55	23.57	23.71	0
		1	12	23.49	23.70	23.72	0
		1	24	23.36	23.58	23.69	0
		12	0	22.37	22.60	22.67	1
		12	6	22.58	22.63	22.69	1
		12	13	22.28	22.42	22.63	1
		25	0	21.89	22.03	22.05	1
	16QAM	1	0	22.44	22.51	22.80	1
		1	12	22.47	22.57	22.79	1
		1	24	22.34	22.35	22.68	1
		12	0	21.32	21.50	21.67	2
		12	6	21.44	21.58	21.85	2
		12	13	21.28	21.42	21.59	2
		25	0	20.96	21.19	21.21	2
	64QAM	1	0	21.42	21.65	21.73	2
		1	12	21.38	21.56	**21.75**	2
		1	24	21.16	21.48	21.62	2
		12	0	20.34	20.57	20.64	3
		12	6	20.44	20.53	20.83	3
		12	13	20.21	20.38	20.50	3
		25	0	19.79	19.93	20.16	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		19965	20175	20385	
		Frequency (MHz)		1711.5	1732.5	1753.5	
3M	QPSK	1	0	23.46	23.64	23.81	0
		1	7	23.53	23.66	23.80	0
		1	14	23.25	23.40	23.69	0
		8	0	22.37	22.59	22.76	1
		8	3	22.51	22.64	22.75	1
		8	7	22.25	22.42	22.60	1
		15	0	21.89	22.14	22.31	1
	16QAM	1	0	22.54	22.68	22.80	1
		1	7	22.43	22.63	22.86	1
		1	14	22.23	22.46	22.67	1
		8	0	21.39	21.58	21.68	2
		8	3	21.45	21.66	21.83	2
		8	7	21.32	21.45	21.48	2
		15	0	20.87	21.04	21.29	2
	64QAM	1	0	21.40	21.50	21.73	2
		1	7	21.52	21.52	21.71	2
		1	14	21.18	21.44	21.66	2
		8	0	20.38	20.49	20.68	3
		8	3	20.41	20.69	20.77	3
		8	7	20.25	20.38	20.52	3
		15	0	19.87	19.96	20.20	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		19957	20175	20393	
		Frequency (MHz)		1710.7	1732.5	1754.3	
1.4M	QPSK	1	0	23.45	23.69	23.83	0
		1	2	23.49	23.67	23.74	0
		1	5	23.38	23.59	23.73	0
		3	0	23.52	23.69	23.84	0
		3	1	23.52	23.65	23.76	0
		3	3	23.30	23.49	23.64	0
		6	0	21.89	22.14	22.18	1
	16QAM	1	0	22.47	22.70	22.77	1
		1	2	22.42	22.62	22.81	1
		1	5	22.22	22.43	22.64	1
		3	0	22.29	22.46	22.70	1
		3	1	22.50	22.54	22.80	1
		3	3	22.23	22.34	22.64	1
		6	0	20.90	21.10	21.17	2
	64QAM	1	0	21.44	21.64	**21.76**	2
		1	2	21.35	21.71	21.76	2
		1	5	21.31	21.46	21.67	2
		3	0	21.45	21.59	21.73	2
		3	1	21.33	21.58	21.67	2
		3	3	21.14	21.32	21.59	2
		6	0	19.94	19.99	20.17	3

LTE Band 5

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20450	20525	20600	
		Frequency (MHz)		829.0	836.5	844.0	
10M	QPSK	1	0	23.27	23.32	23.45	0
		1	24	23.30	23.35	23.48	0
		1	49	23.34	23.39	**23.52**	0
		25	0	22.23	22.28	22.41	1
		25	12	22.26	22.31	22.44	1
		25	25	22.28	22.33	**22.46**	1
		50	0	22.24	22.29	**22.42**	1
	16QAM	1	0	22.26	22.31	22.44	1
		1	24	22.29	22.34	22.47	1
		1	49	22.33	22.38	**22.51**	1
		25	0	21.22	21.27	21.40	2
		25	12	21.25	21.30	21.43	2
		25	25	21.27	21.32	21.45	2
		50	0	21.23	21.28	21.41	2
	64QAM	1	0	21.24	21.29	21.42	2
		1	24	21.27	21.32	21.45	2
		1	49	21.31	21.36	**21.49**	2
		25	0	20.20	20.25	20.38	3
		25	12	20.23	20.28	20.41	3
		25	25	20.25	20.30	20.43	3
		50	0	20.21	20.26	20.39	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20425	20525	20625	
		Frequency (MHz)		826.5	836.5	846.5	
5M	QPSK	1	0	23.06	23.21	23.24	0
		1	12	23.21	23.17	23.24	0
		1	24	23.20	23.26	23.23	0
		12	0	22.05	22.14	22.40	1
		12	6	22.12	22.08	22.12	1
		12	13	22.08	22.29	22.39	1
		25	0	22.08	22.26	22.25	1
	16QAM	1	0	22.18	22.20	22.35	1
		1	12	22.12	22.25	22.36	1
		1	24	22.24	22.22	22.48	1
		12	0	21.12	21.19	21.20	2
		12	6	21.10	21.15	21.37	2
		12	13	21.17	21.29	21.43	2
		25	0	21.01	21.11	21.25	2
	64QAM	1	0	21.13	21.14	21.28	2
		1	12	21.24	21.23	21.40	2
		1	24	21.14	21.32	**21.41**	2
		12	0	20.14	20.04	20.15	3
		12	6	20.07	20.18	20.29	3
		12	13	20.23	20.29	20.34	3
		25	0	20.02	20.06	20.22	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20415	20525	20635	
		Frequency (MHz)		825.5	836.5	847.5	
3M	QPSK	1	0	23.18	23.27	23.43	0
		1	7	23.20	23.14	23.35	0
		1	14	23.26	23.18	23.48	0
		8	0	22.14	22.07	22.25	1
		8	3	22.08	22.14	22.22	1
		8	7	22.12	22.21	22.35	1
		15	0	22.07	22.17	22.32	1
	16QAM	1	0	22.14	22.16	22.25	1
		1	7	22.12	22.13	22.34	1
		1	14	22.30	22.28	22.45	1
		8	0	21.11	21.10	21.24	2
		8	3	21.08	21.10	21.25	2
		8	7	21.23	21.22	21.26	2
		15	0	21.07	21.17	21.26	2
	64QAM	1	0	21.08	21.20	21.20	2
		1	7	21.16	21.20	21.23	2
		1	14	21.24	21.24	**21.38**	2
		8	0	20.04	20.16	20.24	3
		8	3	20.03	20.15	20.24	3
		8	7	20.11	20.23	20.21	3
		15	0	20.03	20.16	20.23	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20407	20525	20643	
		Frequency (MHz)		824.7	836.5	848.3	
1.4M	QPSK	1	0	23.26	23.27	23.28	0
		1	2	23.12	23.22	23.42	0
		1	5	23.28	23.34	23.40	0
		3	0	23.18	23.20	23.26	0
		3	1	23.21	23.18	23.34	0
		3	3	23.17	23.22	23.44	0
		6	0	22.09	22.14	22.35	1
	16QAM	1	0	22.12	22.22	22.29	1
		1	2	22.14	22.14	22.33	1
		1	5	22.20	22.26	**22.34**	1
		3	0	22.05	22.25	22.19	1
		3	1	22.12	22.17	22.21	1
		3	3	22.14	22.14	22.24	1
		6	0	21.02	21.13	21.35	2
	64QAM	1	0	21.12	21.25	21.20	2
		1	2	21.18	21.18	21.32	2
		1	5	21.11	21.11	**21.33**	2
		3	0	20.96	21.15	21.31	2
		3	1	21.12	21.12	21.29	2
		3	3	21.09	21.15	21.25	2
		6	0	20.00	20.15	20.26	3

LTE Band 5 (Power for EN-DC)																
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20450	20525	20600				Channel		20425	20525	20625	
		Frequency (MHz)		829.0	836.5	844.0				Frequency (MHz)		826.5	836.5	846.5	
10M	QPSK	1	0	20.76	20.13	20.56	0	5M	QPSK	1	0	20.68	20.09	20.52	0
		1	24	**20.92**	20.87	20.61	0			1	12	20.90	20.80	20.52	0
		1	49	20.74	20.69	20.43	0			1	24	20.74	20.59	20.43	0
		25	0	20.58	20.53	20.27	0			12	0	20.48	20.51	20.21	0
		25	12	**20.91**	20.86	20.60	0			12	6	20.87	20.85	20.60	0
		25	25	20.89	20.84	20.58	0			12	13	20.82	20.83	20.50	0
		50	0	**20.79**	20.74	20.48	0			25	0	20.79	20.72	20.43	0
	16QAM	1	0	19.41	19.36	19.10	1		16QAM	1	0	19.41	19.26	19.10	1
		1	24	19.99	19.98	19.72	1			1	12	19.92	19.95	19.65	1
		1	49	19.97	19.92	19.66	1			1	24	19.92	19.87	19.56	1
		25	0	19.57	19.52	19.26	1			12	0	19.55	19.51	19.19	1
		25	12	19.94	19.89	19.63	1			12	6	19.92	19.85	19.55	1
		25	25	19.91	19.86	19.60	1			12	13	19.82	19.78	19.51	1
		50	0	19.84	19.79	19.53	1			25	0	19.79	19.76	19.43	1
	64QAM	1	0	18.28	18.23	17.97	2		64QAM	1	0	18.28	18.19	17.93	2
		1	24	18.98	18.96	18.70	2			1	12	18.88	18.94	18.65	2
		1	49	18.84	18.79	18.53	2			1	24	18.84	18.72	18.53	2
		25	0	18.64	18.59	18.33	2			12	0	18.59	18.52	18.30	2
		25	12	18.98	18.93	18.67	2			12	6	18.95	18.85	18.59	2
		25	25	18.95	18.90	18.64	2			12	13	18.86	18.87	18.60	2
		50	0	18.92	18.87	18.61	2			25	0	18.85	18.87	18.52	2
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20415	20525	20635				Channel		20407	20525	20643	
		Frequency (MHz)		825.5	836.5	847.5				Frequency (MHz)		824.7	836.5	848.3	
3M	QPSK	1	0	20.62	20.01	20.44	0	1.4M	QPSK	1	0	20.66	20.05	20.43	0
		1	7	20.76	20.71	20.49	0			1	2	20.77	20.78	20.58	0
		1	14	20.68	20.53	20.40	0			1	5	20.65	20.60	20.23	0
		8	0	20.43	20.44	20.12	0			3	0	20.36	20.38	20.12	0
		8	3	20.88	20.84	20.42	0			3	1	20.74	20.65	20.38	0
		8	7	20.74	20.68	20.43	0			3	3	20.70	20.74	20.50	0
		15	0	20.60	20.57	20.43	0			6	0	20.66	20.65	20.34	0
	16QAM	1	0	19.27	19.21	19.01	1		16QAM	1	0	19.26	19.20	19.00	1
		1	7	19.99	19.77	19.53	1			1	2	19.85	19.77	19.50	1
		1	14	19.76	19.78	19.53	1			1	5	19.81	19.70	19.63	1
		8	0	19.34	19.36	19.12	1			3	0	19.45	19.39	19.09	1
		8	3	19.84	19.70	19.41	1			3	1	19.82	19.71	19.49	1
		8	7	19.68	19.76	19.48	1			3	3	19.90	19.78	19.46	1
		15	0	19.69	19.71	19.42	1			6	0	19.72	19.56	19.38	1
	64QAM	1	0	18.04	18.11	17.77	2		64QAM	1	0	18.14	18.14	17.74	2
		1	7	18.92	18.94	18.59	2			1	2	18.85	18.77	18.60	2
		1	14	18.72	18.62	18.45	2			1	5	18.62	18.63	18.39	2
		8	0	18.60	18.47	18.18	2			3	0	18.45	18.54	18.15	2
		8	3	18.74	18.81	18.58	2			3	1	18.79	18.80	18.51	2
		8	7	18.81	18.71	18.47	2			3	3	18.81	18.71	18.50	2
		15	0	18.82	18.79	18.56	2			6	0	18.80	18.73	18.47	2

Note : The test results of LTE 5 are only used to evaluate EN-DC mode.

LTE Band 7

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20850	21100	21350				Channel		20825	21100	21375	
		Frequency (MHz)		2510.0	2535.0	2560.0				Frequency (MHz)		2507.5	2535.0	2562.5	
20M	QPSK	1	0	22.62	**23.96**	23.61	0	15M	QPSK	1	0	22.61	23.92	23.21	0
		1	50	22.59	23.93	23.25	0			1	37	22.51	23.92	23.17	0
		1	99	22.57	23.91	23.23	0			1	74	22.54	23.81	23.16	0
		50	0	22.13	**22.98**	22.30	1			36	0	21.57	22.97	22.23	1
		50	25	22.97	22.92	22.24	1			36	19	21.56	22.90	22.20	1
		50	50	22.94	22.89	22.21	1			36	39	21.47	22.87	22.11	1
		100	0	22.84	**22.96**	22.28	1			75	0	21.57	22.87	22.18	1
	16QAM	1	0	21.79	22.93	22.21	1		16QAM	1	0	21.78	22.89	22.19	1
		1	50	21.76	22.90	22.18	1			1	37	21.69	22.85	22.16	1
		1	99	21.74	22.88	22.16	1			1	74	21.71	22.79	22.09	1
		50	0	20.81	21.95	21.23	2			36	0	20.77	21.87	21.16	2
		50	25	20.75	21.89	21.17	2			36	19	20.67	21.79	21.14	2
		50	50	20.72	21.86	21.14	2			36	39	20.62	21.76	21.09	2
		100	0	20.79	21.93	21.21	2			75	0	20.74	21.84	21.13	2
	64QAM	1	0	20.71	21.95	21.29	2		64QAM	1	0	20.70	21.89	21.29	2
		1	50	20.68	21.92	21.26	2			1	37	20.58	21.87	21.21	2
		1	99	20.66	21.90	21.24	2			1	74	20.64	21.87	21.23	2
		50	0	19.73	20.97	20.31	3			36	0	19.71	20.92	20.21	3
		50	25	19.67	20.91	20.25	3			36	19	19.59	20.82	20.22	3
		50	50	19.64	20.88	20.22	3			36	39	19.54	20.86	20.14	3
		100	0	19.71	20.95	20.29	3			75	0	19.63	20.86	20.20	3
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20800	21100	21400				Channel		20775	21100	21425	
		Frequency (MHz)		2505.0	2535.0	2565.0				Frequency (MHz)		2502.5	2535.0	2567.5	
10M	QPSK	1	0	22.40	23.85	23.22	0	5M	QPSK	1	0	22.51	23.85	23.07	0
		1	24	22.52	23.87	23.16	0			1	12	22.44	23.89	23.03	0
		1	49	22.34	23.85	23.14	0			1	24	22.47	23.84	23.08	0
		25	0	21.46	22.89	22.17	1			12	0	21.52	22.94	22.07	1
		25	12	21.57	22.79	22.08	1			12	6	21.43	22.76	22.20	1
		25	25	21.45	22.72	22.10	1			12	13	21.42	22.81	22.14	1
		50	0	21.44	22.92	22.06	1			25	0	21.48	22.93	22.03	1
	16QAM	1	0	21.72	22.89	22.10	1		16QAM	1	0	21.64	22.83	22.03	1
		1	24	21.58	22.82	22.03	1			1	12	21.55	22.86	21.98	1
		1	49	21.62	22.73	22.06	1			1	24	21.61	22.82	21.93	1
		25	0	20.64	21.84	21.13	2			12	0	20.66	21.79	21.15	2
		25	12	20.53	21.67	21.00	2			12	6	20.62	21.72	21.05	2
		25	25	20.59	21.75	21.00	2			12	13	20.62	21.73	21.08	2
		50	0	20.69	21.82	21.15	2			25	0	20.66	21.79	20.99	2
	64QAM	1	0	20.51	21.78	21.11	2		64QAM	1	0	20.63	21.92	21.23	2
		1	24	20.53	21.75	21.16	2			1	12	20.63	21.75	21.03	2
		1	49	20.46	21.65	21.06	2			1	24	20.45	21.82	21.16	2
		25	0	19.63	20.82	20.23	3			12	0	19.52	20.94	20.15	3
		25	12	19.60	20.82	20.09	3			12	6	19.62	20.82	20.13	3
		25	25	19.55	20.74	20.09	3			12	13	19.44	20.85	20.03	3
		50	0	19.52	20.93	20.16	3			25	0	19.55	20.94	20.06	3

LTE Band 12

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23060	23095	23130	
		Frequency (MHz)		704.0	707.5	711.0	
10M	QPSK	1	0	23.62	23.58	23.64	0
		1	24	23.67	23.63	**23.69**	0
		1	49	23.65	23.61	23.67	0
		25	0	22.59	22.55	22.61	1
		25	12	22.65	22.61	**22.67**	1
		25	25	22.63	22.59	22.65	1
		50	0	22.62	22.58	**22.64**	1
	16QAM	1	0	22.59	22.55	22.61	1
		1	24	22.64	22.60	22.66	1
		1	49	22.62	22.58	22.64	1
		25	0	21.56	21.52	21.58	2
		25	12	21.62	21.58	21.64	2
		25	25	21.60	21.56	21.62	2
		50	0	21.59	21.55	21.61	2
	64QAM	1	0	21.58	21.54	21.60	2
		1	24	21.63	21.59	21.65	2
		1	49	21.61	21.57	21.63	2
		25	0	20.55	20.51	20.57	3
		25	12	20.61	20.57	20.63	3
		25	25	20.59	20.55	20.61	3
		50	0	20.58	20.54	20.60	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23035	23095	23155	
		Frequency (MHz)		701.5	707.5	713.5	
5M	QPSK	1	0	23.54	23.48	23.61	0
		1	12	23.59	23.54	23.66	0
		1	24	23.65	23.59	23.59	0
		12	0	22.59	22.53	22.60	1
		12	6	22.61	22.60	22.57	1
		12	13	22.60	22.52	22.62	1
		25	0	22.54	22.58	22.59	1
	16QAM	1	0	22.50	22.53	22.57	1
		1	12	22.60	22.51	22.64	1
		1	24	22.55	22.54	22.64	1
		12	0	21.54	21.44	21.53	2
		12	6	21.53	21.48	21.56	2
		12	13	21.53	21.54	21.60	2
		25	0	21.52	21.53	21.51	2
	64QAM	1	0	21.50	21.48	21.58	2
		1	12	21.53	21.56	21.55	2
		1	24	21.58	21.49	21.59	2
		12	0	20.55	20.45	20.53	3
		12	6	20.58	20.55	20.60	3
		12	13	20.49	20.53	20.59	3
		25	0	20.53	20.52	20.59	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23025	23095	23165	
		Frequency (MHz)		700.5	707.5	714.5	
3M	QPSK	1	0	23.58	23.48	23.46	0
		1	7	23.56	23.57	23.56	0
		1	14	23.53	23.50	23.54	0
		8	0	22.38	22.36	22.47	1
		8	3	22.51	22.47	22.60	1
		8	7	22.49	22.46	22.61	1
		15	0	22.41	22.57	22.51	1
	16QAM	1	0	22.38	22.42	22.43	1
		1	7	22.61	22.42	22.44	1
		1	14	22.58	22.48	22.45	1
		8	0	21.52	21.46	21.51	2
		8	3	21.58	21.53	21.47	2
		8	7	21.45	21.51	21.57	2
		15	0	21.34	21.52	21.54	2
	64QAM	1	0	21.34	21.43	21.53	2
		1	7	21.40	21.55	21.46	2
		1	14	21.48	21.50	21.50	2
		8	0	20.37	20.44	20.42	3
		8	3	20.43	20.55	20.57	3
		8	7	20.44	20.43	20.54	3
		15	0	20.48	20.38	20.49	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23017	23095	23173	
		Frequency (MHz)		699.7	707.5	715.3	
1.4M	QPSK	1	0	23.46	23.41	23.45	0
		1	2	23.67	23.47	23.66	0
		1	5	23.60	23.58	23.64	0
		3	0	23.50	23.37	23.42	0
		3	1	23.49	23.50	23.59	0
		3	3	23.53	23.55	23.64	0
		6	0	22.57	22.46	22.50	1
	16QAM	1	0	22.59	22.49	22.41	1
		1	2	22.48	22.43	22.51	1
		1	5	22.48	22.51	22.57	1
		3	0	22.44	22.47	22.47	1
		3	1	22.44	22.39	22.59	1
		3	3	22.45	22.41	22.50	1
		6	0	21.53	21.43	21.45	2
	64QAM	1	0	21.48	21.48	21.48	2
		1	2	21.51	21.43	21.60	2
		1	5	21.55	21.35	21.41	2
		3	0	21.50	21.42	21.54	2
		3	1	21.48	21.46	21.50	2
		3	3	21.36	21.42	21.54	2
		6	0	20.38	20.47	20.58	3

LTE Band 12 (Power for EN-DC)															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23060	23095	23130				Channel		23035	23095	23155	
		Frequency (MHz)		704.0	707.5	711.0				Frequency (MHz)		701.5	707.5	713.5	
10M	QPSK	1	0	**20.98**	20.95	20.87	0	5M	QPSK	1	0	**20.98**	20.87	20.77	0
		1	24	20.96	20.93	20.85	0			1	12	20.88	20.85	20.79	0
		1	49	20.85	20.82	20.74	0			1	24	20.79	20.81	20.73	0
		25	0	**20.97**	20.94	20.86	0			12	0	20.97	20.90	20.76	0
		25	12	20.94	20.91	20.83	0			12	6	20.94	20.88	20.82	0
		25	25	20.92	20.89	20.81	0			12	13	20.87	20.81	20.73	0
		50	0	**20.90**	20.87	20.79	0			25	0	20.83	20.79	20.75	0
	16QAM	1	0	20.36	20.33	20.25	0		16QAM	1	0	20.26	20.30	20.23	0
		1	24	20.77	20.74	20.66	0			1	12	20.72	20.64	20.65	0
		1	49	20.19	20.16	20.08	0			1	24	20.18	20.06	19.98	0
		25	0	20.44	20.41	20.33	0			12	0	20.44	20.32	20.32	0
		25	12	20.52	20.49	20.41	0			12	6	20.51	20.39	20.32	0
		25	25	20.34	20.31	20.23	0			12	13	20.29	20.29	20.13	0
		50	0	20.35	20.32	20.24	0			25	0	20.35	20.28	20.24	0
	64QAM	1	0	19.54	19.51	19.43	1		64QAM	1	0	19.48	19.45	19.36	1
		1	24	19.89	19.86	19.78	1			1	12	19.84	19.78	19.75	1
		1	49	19.14	19.11	19.03	1			1	24	19.11	19.10	19.02	1
		25	0	19.59	19.56	19.48	1			12	0	19.56	19.51	19.41	1
		25	12	19.79	19.76	19.68	1			12	6	19.74	19.70	19.60	1
		25	25	19.49	19.46	19.38	1			12	13	19.42	19.41	19.30	1
		50	0	19.64	19.61	19.53	1			25	0	19.60	19.56	19.53	1
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23025	23095	23165				Channel		23017	23095	23173	
		Frequency (MHz)		700.5	707.5	714.5				Frequency (MHz)		699.7	707.5	715.3	
3M	QPSK	1	0	20.84	20.91	20.74	0	1.4M	QPSK	1	0	20.77	20.71	20.83	0
		1	7	20.88	20.72	20.70	0			1	2	20.93	20.85	20.82	0
		1	14	20.72	20.65	20.69	0			1	5	20.70	20.72	20.63	0
		8	0	20.88	20.76	20.80	0			3	0	20.74	20.89	20.80	0
		8	3	20.85	20.81	20.75	0			3	1	20.76	20.75	20.68	0
		8	7	20.76	20.72	20.67	0			3	3	20.70	20.82	20.73	0
		15	0	20.68	20.76	20.66	0			6	0	20.80	20.84	20.78	0
	16QAM	1	0	20.17	20.13	20.08	0		16QAM	1	0	20.19	20.24	20.14	0
		1	7	20.69	20.61	20.54	0			1	2	20.60	20.58	20.45	0
		1	14	20.18	20.03	19.98	0			1	5	20.00	19.94	19.96	0
		8	0	20.41	20.33	20.19	0			3	0	20.40	20.28	20.24	0
		8	3	20.37	20.24	20.28	0			3	1	20.39	20.41	20.25	0
		8	7	20.17	20.31	20.13	0			3	3	20.12	20.08	20.02	0
		15	0	20.28	20.18	20.02	0			6	0	20.22	20.14	20.15	0
	64QAM	1	0	19.45	19.46	19.19	1		64QAM	1	0	19.40	19.45	19.39	1
		1	7	19.75	19.79	19.68	1			1	2	19.76	19.68	19.72	1
		1	14	19.14	19.08	18.91	1			1	5	19.00	19.02	18.85	1
		8	0	19.55	19.53	19.28	1			3	0	19.43	19.49	19.32	1
		8	3	19.67	19.67	19.61	1			3	1	19.68	19.74	19.58	1
		8	7	19.44	19.34	19.23	1			3	3	19.35	19.28	19.32	1
		15	0	19.45	19.59	19.33	1			6	0	19.46	19.42	19.39	1

Note : The test results of LTE 12 are only used to evaluate EN-DC mode.

LTE Band 14															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel			23330					Channel			23330		
		Frequency (MHz)			793.0					Frequency (MHz)			793.0		
10M	QPSK	1	0		22.96		0	5M	QPSK	1	0	22.65	22.90	22.76	0
		1	24		23.09		0			1	12	22.78	23.03	22.89	0
		1	49		**23.14**		0			1	24	22.83	23.08	22.94	0
		25	0		22.06		1			12	0	21.75	22.00	21.86	1
		25	12		22.16		1			12	6	21.85	22.10	21.96	1
		25	25		**22.17**		1			12	13	21.86	22.11	21.97	1
		50	0		**22.05**		1			25	0	21.74	21.99	21.85	1
	16QAM	1	0		21.92		1		16QAM	1	0	21.61	21.86	21.72	1
		1	24		22.05		1			1	12	21.74	21.99	21.85	1
		1	49		22.10		1			1	24	21.79	22.04	21.90	1
		25	0		21.02		2			12	0	20.71	20.96	20.82	2
		25	12		21.12		2			12	6	20.81	21.06	20.92	2
		25	25		21.13		2			12	13	20.82	21.07	20.93	2
		50	0		21.01		2			25	0	20.70	20.95	20.81	2
	64QAM	1	0		20.90		2		64QAM	1	0	20.56	20.81	20.67	2
		1	24		21.03		2			1	12	20.69	20.94	20.80	2
		1	49		21.08		2			1	24	20.74	20.99	20.85	2
		25	0		20.00		3			12	0	19.66	19.91	19.77	3
		25	12		20.10		3			12	6	19.76	20.01	19.87	3
		25	25		20.11		3			12	13	19.77	20.02	19.88	3
		50	0		19.99		3			25	0	19.65	19.90	19.76	3

LTE Band 30																
BW	MCS Index	RB Size	RB Offset		Mid		3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel			27710					Channel		27685	27710	27735	
		Frequency (MHz)			2310.0					Frequency (MHz)		2307.5	2310.0	2312.5	
10M	QPSK	1	0		**22.65**		0	5M	QPSK	1	0	22.42	**22.65**	22.58	0
		1	24		22.47		0			1	12	22.24	22.47	22.40	0
		1	49		22.46		0			1	24	22.23	22.46	22.39	0
		25	0		21.49		1			12	0	21.26	21.49	21.42	1
		25	12		**21.56**		1			12	6	21.33	21.56	21.49	1
		25	25		21.50		1			12	13	21.27	21.50	21.43	1
		50	0		**21.46**		1			25	0	21.23	21.46	21.39	1
	16QAM	1	0		21.60		1		16QAM	1	0	21.37	21.60	21.53	1
		1	24		21.42		1			1	12	21.19	21.42	21.35	1
		1	49		21.41		1			1	24	21.18	21.41	21.34	1
		25	0		20.44		2			12	0	20.21	20.44	20.37	2
		25	12		20.51		2			12	6	20.28	20.51	20.44	2
		25	25		20.45		2			12	13	20.22	20.45	20.38	2
		50	0		20.41		2			25	0	20.18	20.41	20.34	2
	64QAM	1	0		20.59		2		64QAM	1	0	20.35	20.58	20.51	2
		1	24		20.41		2			1	12	20.17	20.40	20.33	2
		1	49		20.40		2			1	24	20.16	20.39	20.32	2
		25	0		19.43		3			12	0	19.19	19.42	19.35	3
		25	12		19.50		3			12	6	19.26	19.49	19.42	3
		25	25		19.44		3			12	13	19.20	19.43	19.36	3
		50	0		19.40		3			25	0	19.16	19.39	19.32	3

LTE Band 30 (Power for EN-DC)																
BW	MCS Index	RB Size	RB Offset		Mid		3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel			27710					Channel		27685	27710	27735	
		Frequency (MHz)			2310.0					Frequency (MHz)		2307.5	2310.0	2312.5	
10M	QPSK	1	0		19.12		0	5M	QPSK	1	0	18.86	19.04	18.95	0
		1	24		19.85		0			1	12	19.59	19.77	19.68	0
		1	49		***19.98***		0			1	24	19.72	19.90	19.81	0
		25	0		19.53		0			12	0	19.27	19.45	19.36	0
		25	12		19.83		0			12	6	19.57	19.75	19.66	0
		25	25		**19.97**		0			12	13	19.71	19.89	19.80	0
		50	0		**19.74**		0			25	0	19.48	19.66	19.57	0
	16QAM	1	0		18.12		1		16QAM	1	0	17.86	18.04	17.95	1
		1	24		18.89		1			1	12	18.63	18.81	18.72	1
		1	49		18.95		1			1	24	18.69	18.87	18.78	1
		25	0		18.34		1			12	0	18.08	18.26	18.17	1
		25	12		18.76		1			12	6	18.50	18.68	18.59	1
		25	25		18.97		1			12	13	18.71	18.89	18.80	1
		50	0		18.71		1			25	0	18.45	18.63	18.54	1
	64QAM	1	0		17.11		2		64QAM	1	0	16.85	17.03	16.94	2
		1	24		17.63		2			1	12	17.37	17.55	17.46	2
		1	49		17.91		2			1	24	17.65	17.83	17.74	2
		25	0		17.23		2			12	0	16.97	17.15	17.06	2
		25	12		17.55		2			12	6	17.29	17.47	17.38	2
		25	25		17.89		2			12	13	17.63	17.81	17.72	2
		50	0		17.63		2			25	0	17.37	17.55	17.46	2

Note : The test results of LTE 30 are only used to evaluate EN-DC mode.

LTE Band 48

BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	High	3GPP MPR (dB)
		Channel		55340	55780	56210	56640	
		Frequency (MHz)		3560.0	3603.0	3647.0	3690.0	
20M	QPSK	1	0	23.48	23.78	23.88	23.91	0
		1	50	23.42	23.76	23.86	23.85	0
		1	99	23.62	23.96	23.91	**23.96**	0
		50	0	22.35	22.68	22.79	22.72	1
		50	25	22.45	22.74	22.88	22.90	1
		50	50	22.58	22.90	22.92	**22.94**	1
		100	0	22.24	22.51	22.66	**22.67**	1
	16QAM	1	0	22.39	22.77	22.91	**22.90**	1
		1	50	22.38	22.73	22.88	22.84	1
		1	99	22.66	22.91	22.89	22.87	1
		50	0	21.33	21.65	21.78	21.72	2
		50	25	21.40	21.68	21.88	21.84	2
		50	50	21.56	21.93	21.94	21.95	2
		100	0	21.21	21.48	21.66	21.62	2
	64QAM	1	0	21.45	21.77	20.63	21.87	2
		1	50	21.38	21.71	20.65	21.79	2
		1	99	21.60	**21.97**	20.95	**21.96**	2
		50	0	20.29	20.64	19.81	20.81	3
		50	25	20.48	20.71	19.93	20.89	3
		50	50	20.54	20.90	20.15	20.94	3
		100	0	20.20	20.47	19.76	20.63	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	High	3GPP MPR (dB)
		Channel		55315	55765	56215	56665	
		Frequency (MHz)		3557.5	3602.5	3647.5	3692.5	
15M	QPSK	1	0	23.44	23.68	23.87	23.81	0
		1	37	23.33	23.76	23.77	23.77	0
		1	74	23.60	23.90	23.91	**23.92**	0
		36	0	22.34	22.62	22.71	22.69	1
		36	19	22.41	22.69	22.88	22.83	1
		36	39	22.51	22.89	22.93	22.95	1
		75	0	22.18	22.47	22.56	22.58	1
	16QAM	1	0	22.38	22.78	22.80	22.84	1
		1	37	22.42	22.72	22.85	22.84	1
		1	74	22.56	22.86	**22.89**	**22.90**	1
		36	0	21.35	21.61	21.69	21.63	2
		36	19	21.37	21.74	21.78	21.86	2
		36	39	21.58	21.83	21.84	21.88	2
		75	0	21.24	21.43	21.64	21.62	2
	64QAM	1	0	21.40	21.73	21.78	21.82	2
		1	37	21.41	21.75	21.85	21.84	2
		1	74	21.59	**21.91**	21.89	**21.92**	2
		36	0	20.29	20.66	20.77	20.72	3
		36	19	20.41	20.66	20.83	20.86	3
		36	39	20.55	20.90	20.95	20.98	3
		75	0	20.15	20.41	20.59	20.64	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	High	3GPP MPR (dB)
		Channel		55290	55750	56220	56690	
		Frequency (MHz)		3555.0	3601.0	3648.0	3695.0	
10M	QPSK	1	0	23.42	23.75	23.80	23.83	0
		1	24	23.37	23.69	23.85	23.72	0
		1	49	23.50	23.85	23.94	**23.96**	0
		25	0	22.22	22.57	22.72	22.54	1
		25	12	22.39	22.64	22.88	22.86	1
		25	25	22.56	22.82	22.97	22.99	1
		50	0	22.12	22.41	22.60	22.57	1
	16QAM	1	0	22.39	22.73	22.70	22.73	1
		1	24	22.37	22.67	22.85	22.75	1
		1	49	22.46	22.90	**22.94**	**22.99**	1
		25	0	21.18	21.57	21.72	21.61	2
		25	12	21.32	21.59	21.87	21.85	2
		25	25	21.55	21.78	21.97	21.95	2
		50	0	21.18	21.37	21.52	21.52	2
	64QAM	1	0	21.34	21.77	21.70	21.74	2
		1	24	21.29	21.69	21.80	21.79	2
		1	49	21.43	21.86	**21.99**	**21.97**	2
		25	0	20.25	20.56	20.67	20.60	3
		25	12	20.32	20.64	20.84	20.80	3
		25	25	20.47	20.78	20.94	21.00	3
		50	0	20.11	20.40	20.56	20.59	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	High	3GPP MPR (dB)
		Channel		55265	55745	56235	56715	
		Frequency (MHz)		3552.5	3600.5	3649.5	3697.5	
5M	QPSK	1	0	23.42	23.66	23.71	23.82	0
		1	12	23.27	23.63	23.70	23.82	0
		1	24	23.48	23.82	**23.94**	**24.00**	0
		12	0	22.25	22.56	22.77	22.57	1
		12	6	22.38	22.72	22.83	22.75	1
		12	13	22.47	22.89	22.97	22.95	1
		25	0	22.19	22.42	22.53	22.52	1
	16QAM	1	0	22.46	22.60	22.78	22.78	1
		1	12	22.32	22.58	22.74	22.78	1
		1	24	22.52	22.80	22.96	**22.95**	1
		12	0	21.30	21.60	21.77	21.63	2
		12	6	21.41	21.66	21.82	21.77	2
		12	13	21.56	21.81	21.96	21.90	2
		25	0	21.20	21.37	21.55	21.56	2
	64QAM	1	0	21.46	21.62	21.78	21.73	2
		1	12	21.29	21.58	21.72	21.80	2
		1	24	21.51	21.84	**21.88**	**21.91**	2
		12	0	20.23	20.54	20.68	20.55	3
		12	6	20.39	20.67	20.84	20.75	3
		12	13	20.51	20.81	20.91	20.89	3
		25	0	20.14	20.41	20.54	20.50	3

LTE Band 66

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		132072	132322	132572				Channel		132047	132322	132597	
		Frequency (MHz)		1720.0	1745.0	1770.0				Frequency (MHz)		1717.5	1745.0	1772.5	
20M	QPSK	1	0	23.79	23.82	23.85	0	15M	QPSK	1	0	23.78	23.76	23.79	0
		1	50	23.86	23.89	**23.92**	0			1	37	23.78	23.81	23.89	0
		1	99	23.74	23.77	23.80	0			1	74	23.70	23.69	23.76	0
		50	0	22.76	22.79	22.82	1			36	0	22.68	22.70	22.73	1
		50	25	22.82	22.85	**22.88**	1			36	19	22.75	22.82	22.81	1
		50	50	22.80	22.83	22.86	1			36	39	22.77	22.77	22.79	1
		100	0	22.79	22.82	**22.85**	1			75	0	22.75	22.77	22.85	1
	16QAM	1	0	22.76	22.79	22.82	1		16QAM	1	0	22.72	22.70	22.81	1
		1	50	22.83	22.86	22.89	1			1	37	22.78	22.77	22.88	1
		1	99	22.71	22.74	22.77	1			1	74	22.71	22.64	22.77	1
		50	0	21.73	21.76	21.79	2			36	0	21.69	21.66	21.74	2
		50	25	21.79	21.82	21.85	2			36	19	21.69	21.80	21.80	2
		50	50	21.77	21.80	21.83	2			36	39	21.72	21.76	21.74	2
		100	0	21.76	21.79	21.82	2			75	0	21.76	21.75	21.78	2
	64QAM	1	0	21.75	21.78	21.81	2		64QAM	1	0	21.70	21.73	21.75	2
		1	50	21.82	21.85	21.88	2			1	37	21.72	21.77	21.84	2
		1	99	21.70	21.73	21.76	2			1	74	21.70	21.70	21.67	2
		50	0	20.72	20.75	20.78	3			36	0	20.65	20.73	20.76	3
		50	25	20.78	20.81	20.84	3			36	19	20.76	20.72	20.77	3
		50	50	20.76	20.79	20.82	3			36	39	20.74	20.76	20.79	3
		100	0	20.75	20.78	20.81	3			75	0	20.65	20.73	20.79	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		132022	132322	132622				Channel		131997	132322	132647	
		Frequency (MHz)		1715.0	1745.0	1775.0				Frequency (MHz)		1712.5	1745.0	1777.5	
10M	QPSK	1	0	23.69	23.71	23.69	0	5M	QPSK	1	0	23.61	23.78	23.72	0
		1	24	23.69	23.75	23.86	0			1	12	23.70	23.78	23.60	0
		1	49	23.71	23.77	23.66	0			1	24	23.62	23.53	23.72	0
		25	0	22.63	22.65	22.69	1			12	0	22.61	22.63	22.62	1
		25	12	22.76	22.74	22.82	1			12	6	22.70	22.71	22.70	1
		25	25	22.74	22.69	22.72	1			12	13	22.71	22.74	22.65	1
		50	0	22.68	22.66	22.76	1			25	0	22.60	22.66	22.66	1
	16QAM	1	0	22.61	22.58	22.75	1		16QAM	1	0	22.65	22.65	22.63	1
		1	24	22.75	22.70	22.77	1			1	12	22.71	22.76	22.75	1
		1	49	22.60	22.64	22.68	1			1	24	22.57	22.72	22.67	1
		25	0	21.64	21.61	21.72	2			12	0	21.52	21.66	21.75	2
		25	12	21.63	21.72	21.76	2			12	6	21.57	21.71	21.73	2
		25	25	21.54	21.69	21.60	2			12	13	21.71	21.61	21.75	2
		50	0	21.57	21.57	21.65	2			25	0	21.73	21.58	21.78	2
	64QAM	1	0	21.70	21.75	21.68	2		64QAM	1	0	21.63	21.55	21.75	2
		1	24	21.75	21.80	21.86	2			1	12	21.66	21.65	21.70	2
		1	49	21.47	21.63	21.68	2			1	24	21.57	21.52	21.73	2
		25	0	20.63	20.56	20.61	3			12	0	20.59	20.62	20.64	3
		25	12	20.64	20.71	20.67	3			12	6	20.59	20.67	20.72	3
		25	25	20.62	20.70	20.72	3			12	13	20.65	20.73	20.65	3
		50	0	20.66	20.61	20.66	3			25	0	20.66	20.77	20.64	3

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		131987	132322	132657				Channel		131979	132322	132665	
		Frequency (MHz)		1711.5	1745.5	1778.5				Frequency (MHz)		1710.7	1745.0	1779.3	
3M	QPSK	1	0	23.63	23.68	23.73	0	1.4M	QPSK	1	0	23.57	23.63	23.72	0
		1	7	23.75	23.80	23.83	0			1	2	23.67	23.80	23.75	0
		1	14	23.63	23.67	23.67	0			1	5	23.63	23.74	23.70	0
		8	0	22.64	22.71	22.66	1			3	0	23.64	23.67	23.72	0
		8	3	22.69	22.75	22.74	1			3	1	23.60	23.64	23.81	0
		8	7	22.58	22.67	22.70	1			3	3	23.64	23.71	23.68	0
		15	0	22.64	22.64	22.65	1			6	0	22.79	22.69	22.60	1
	16QAM	1	0	22.66	22.67	22.77	1		16QAM	1	0	22.60	22.57	22.70	1
		1	7	22.69	22.67	22.72	1			1	2	22.66	22.75	22.78	1
		1	14	22.50	22.60	22.70	1			1	5	22.66	22.62	22.57	1
		8	0	21.57	21.58	21.67	2			3	0	22.55	22.66	22.59	1
		8	3	21.56	21.71	21.81	2			3	1	22.66	22.73	22.64	1
		8	7	21.63	21.71	21.65	2			3	3	22.70	22.59	22.67	1
		15	0	21.60	21.78	21.78	2			6	0	21.66	21.66	21.72	2
	64QAM	1	0	21.66	21.59	21.61	2		64QAM	1	0	21.67	21.63	21.76	2
		1	7	21.76	21.66	21.67	2			1	2	21.64	21.77	21.78	2
		1	14	21.52	21.67	21.55	2			1	5	21.49	21.55	21.74	2
		8	0	20.48	20.56	20.71	3			3	0	21.55	21.55	21.65	2
		8	3	20.62	20.65	20.66	3			3	1	21.66	21.70	21.70	2
		8	7	20.63	20.55	20.69	3			3	3	21.62	21.65	21.67	2
		15	0	20.55	20.72	20.60	3			6	0	20.65	20.55	20.71	3

LTE Band 66 (Power for EN-DC)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		132072	132322	132572	
		Frequency (MHz)		1720.0	1745.0	1770.0	
20M	QPSK	1	0	20.12	20.67	**20.71**	0
		1	50	20.06	20.61	20.65	0
		1	99	19.58	20.13	20.17	0
		50	0	20.11	20.66	**20.70**	0
		50	25	20.03	20.58	20.62	0
		50	50	19.88	20.43	20.47	0
		100	0	19.96	20.51	**20.55**	0
	16QAM	1	0	19.36	19.91	19.95	1
		1	50	19.30	19.85	19.89	1
		1	99	18.90	19.45	19.49	1
		50	0	19.31	19.86	19.90	1
		50	25	19.18	19.73	19.77	1
		50	50	19.01	19.56	19.60	1
		100	0	19.10	19.65	19.69	1
	64QAM	1	0	18.34	18.89	18.93	2
		1	50	18.26	18.81	18.85	2
		1	99	17.72	18.27	18.31	2
		50	0	18.34	18.89	18.93	2
		50	25	18.28	18.83	18.87	2
		50	50	18.16	18.71	18.75	2
		100	0	18.27	18.82	18.86	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		132047	132322	132597	
		Frequency (MHz)		1717.5	1745.0	1772.5	
15M	QPSK	1	0	20.09	20.64	20.68	0
		1	37	20.03	20.58	20.62	0
		1	74	19.55	20.10	20.14	0
		36	0	20.08	20.63	20.67	0
		36	19	20.00	20.55	20.59	0
		36	39	19.85	20.40	20.44	0
		75	0	19.93	20.48	20.52	0
	16QAM	1	0	19.33	19.88	19.92	1
		1	37	19.27	19.82	19.86	1
		1	74	18.87	19.42	19.46	1
		36	0	19.28	19.83	19.87	1
		36	19	19.15	19.70	19.74	1
		36	39	18.98	19.53	19.57	1
		75	0	19.07	19.62	19.66	1
	64QAM	1	0	18.31	18.86	18.90	2
		1	37	18.23	18.78	18.82	2
		1	74	17.69	18.24	18.28	2
		36	0	18.31	18.86	18.90	2
		36	19	18.25	18.80	18.84	2
		36	39	18.13	18.68	18.72	2
		75	0	18.24	18.79	18.83	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		132022	132322	132622	
		Frequency (MHz)		1715.0	1745.0	1775.0	
10M	QPSK	1	0	20.05	20.60	20.64	0
		1	24	19.99	20.54	20.58	0
		1	49	19.51	20.06	20.10	0
		25	0	20.04	20.59	20.63	0
		25	12	19.96	20.51	20.55	0
		25	25	19.81	20.36	20.40	0
		50	0	19.89	20.44	20.48	0
	16QAM	1	0	19.29	19.84	19.88	1
		1	24	19.23	19.78	19.82	1
		1	49	18.83	19.38	19.42	1
		25	0	19.24	19.79	19.83	1
		25	12	19.11	19.66	19.70	1
		25	25	18.94	19.49	19.53	1
		50	0	19.03	19.58	19.62	1
	64QAM	1	0	18.27	18.82	18.86	2
		1	24	18.19	18.74	18.78	2
		1	49	17.65	18.20	18.24	2
		25	0	18.27	18.82	18.86	2
		25	12	18.21	18.76	18.80	2
		25	25	18.09	18.64	18.68	2
		50	0	18.20	18.75	18.79	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		131997	132322	132647	
		Frequency (MHz)		1712.5	1745.0	1777.5	
5M	QPSK	1	0	20.02	20.57	20.61	0
		1	12	19.96	20.51	20.55	0
		1	24	19.48	20.03	20.07	0
		12	0	20.01	20.56	20.60	0
		12	6	19.93	20.48	20.52	0
		12	13	19.78	20.33	20.37	0
		25	0	19.86	20.41	20.45	0
	16QAM	1	0	19.26	19.81	19.85	1
		1	12	19.20	19.75	19.79	1
		1	24	18.80	19.35	19.39	1
		12	0	19.21	19.76	19.80	1
		12	6	19.08	19.63	19.67	1
		12	13	18.91	19.46	19.50	1
		25	0	19.00	19.55	19.59	1
	64QAM	1	0	18.24	18.79	18.83	2
		1	12	18.16	18.71	18.75	2
		1	24	17.62	18.17	18.21	2
		12	0	18.24	18.79	18.83	2
		12	6	18.18	18.73	18.77	2
		12	13	18.06	18.61	18.65	2
		25	0	18.17	18.72	18.76	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		131987	132322	132657	
		Frequency (MHz)		1711.5	1745.5	1778.5	
3M	QPSK	1	0	19.97	20.52	20.56	0
		1	7	19.91	20.46	20.50	0
		1	14	19.43	19.98	20.02	0
		8	0	19.96	20.51	20.55	0
		8	3	19.88	20.43	20.47	0
		8	7	19.73	20.28	20.32	0
		15	0	19.81	20.36	20.40	0
	16QAM	1	0	19.21	19.76	19.80	1
		1	7	19.15	19.70	19.74	1
		1	14	18.75	19.30	19.34	1
		8	0	19.16	19.71	19.75	1
		8	3	19.03	19.58	19.62	1
		8	7	18.86	19.41	19.45	1
		15	0	18.95	19.50	19.54	1
	64QAM	1	0	18.19	18.74	18.78	2
		1	7	18.11	18.66	18.70	2
		1	14	17.57	18.12	18.16	2
		8	0	18.19	18.74	18.78	2
		8	3	18.13	18.68	18.72	2
		8	7	18.01	18.56	18.60	2
		15	0	18.12	18.67	18.71	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		131979	132322	132665	
		Frequency (MHz)		1710.7	1745.0	1779.3	
1.4M	QPSK	1	0	19.95	20.50	20.54	0
		1	2	19.89	20.44	20.48	0
		1	5	19.41	19.96	20.00	0
		3	0	19.94	20.49	20.53	0
		3	1	19.86	20.41	20.45	0
		3	3	19.71	20.26	20.30	0
		6	0	19.79	20.34	20.38	0
	16QAM	1	0	19.19	19.74	19.78	1
		1	2	19.13	19.68	19.72	1
		1	5	18.73	19.28	19.32	1
		3	0	19.14	19.69	19.73	1
		3	1	19.01	19.56	19.60	1
		3	3	18.84	19.39	19.43	1
		6	0	18.93	19.48	19.52	1
	64QAM	1	0	18.17	18.72	18.76	2
		1	2	18.09	18.64	18.68	2
		1	5	17.55	18.10	18.14	2
		3	0	18.17	18.72	18.76	2
		3	1	18.11	18.66	18.70	2
		3	3	17.99	18.54	18.58	2
		6	0	18.10	18.65	18.69	2

Note : The test results of LTE 66 are only used to evaluate EN-DC mode.

5G NR n2 (SCS 15kHz) (Power for EN-DC)																
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		372000	376000	380000				Channel		371500	376000	380500	
		Frequency (MHz)		1860.0	1880.0	1900.0				Frequency (MHz)		1857.5	1880.0	1902.5	
20M	DFT-s-OFDM QPSK	1	0	19.09	19.43	19.36	0	15M	DFT-s-OFDM QPSK	1	0	19.06	19.40	19.33	0
		1	53	19.18	19.52	19.45	0			1	39	19.15	19.49	19.42	0
		1	105	19.31	**19.65**	19.58	0			1	78	19.28	19.62	19.55	0
		50	0	18.98	19.32	19.25	0			39	0	18.95	19.29	19.22	0
		50	25	19.02	19.36	19.29	0			39	19	18.99	19.33	19.26	0
		50	50	19.17	**19.51**	19.44	0			39	40	19.14	19.48	19.41	0
		100	0	18.99	**19.33**	19.26	0			79	0	18.96	19.30	19.23	0
	DFT-s-OFDM 16QAM	1	0	19.07	19.41	19.34	0		DFT-s-OFDM 16QAM	1	0	19.04	19.38	19.31	0
		1	53	19.08	19.42	19.35	0			1	39	19.05	19.39	19.32	0
		1	105	19.12	19.46	19.39	0			1	78	19.09	19.43	19.36	0
		50	0	18.98	19.32	19.25	0			39	0	18.95	19.29	19.22	0
		50	25	19.01	19.35	19.28	0			39	19	18.98	19.32	19.25	0
		50	50	19.08	19.42	19.35	0			39	40	19.05	19.39	19.32	0
		100	0	19.04	19.38	19.31	0			79	0	19.01	19.35	19.28	0
	DFT-s-OFDM 64QAM	1	0	19.01	19.35	19.28	0		DFT-s-OFDM 64QAM	1	0	18.98	19.32	19.25	0
		1	53	19.09	19.43	19.36	0			1	39	19.06	19.40	19.33	0
		1	105	19.13	19.47	19.40	0			1	78	19.10	19.44	19.37	0
		50	0	18.98	19.32	19.25	0			39	0	18.95	19.29	19.22	0
		50	25	19.07	19.41	19.34	0			39	19	19.04	19.38	19.31	0
		50	50	19.12	19.46	19.39	0			39	40	19.09	19.43	19.36	0
		100	0	19.11	19.45	19.38	0			79	0	19.08	19.42	19.35	0
	CP-OFDM QPSK	1	0	19.08	19.42	19.35	0		CP-OFDM QPSK	1	0	19.05	19.39	19.32	0
		1	53	19.10	19.44	19.37	0			1	39	19.07	19.41	19.34	0
		1	105	19.17	19.51	19.44	0			1	78	19.14	19.48	19.41	0
		50	0	18.97	19.31	19.24	0			39	0	18.94	19.28	19.21	0
		53	26	19.08	19.42	19.35	0			39	19	19.05	19.39	19.32	0
		50	50	19.11	**19.45**	19.38	0			39	40	19.08	19.42	19.35	0
		106	0	19.04	**19.38**	19.31	0			79	0	19.01	19.35	19.28	0
	CP-OFDM 16QAM	1	0	18.97	19.31	19.24	0		CP-OFDM 16QAM	1	0	18.94	19.28	19.21	0
		1	53	19.02	19.36	19.29	0			1	39	18.99	19.33	19.26	0
		1	105	18.94	19.28	19.21	0			1	78	18.91	19.25	19.18	0
		50	0	18.95	19.29	19.22	0			39	0	18.92	19.26	19.19	0
		53	26	18.99	19.33	19.26	0			39	19	18.96	19.30	19.23	0
		50	50	18.95	19.29	19.22	0			39	40	18.92	19.26	19.19	0
		106	0	18.93	19.27	19.20	0			79	0	18.90	19.24	19.17	0
	CP-OFDM 64QAM	1	0	18.72	19.06	18.99	0		CP-OFDM 64QAM	1	0	18.69	19.03	18.96	0
		1	53	18.87	19.21	19.14	0			1	39	18.84	19.18	19.11	0
		1	105	18.98	19.32	19.25	0			1	78	18.95	19.29	19.22	0
		50	0	18.83	19.17	19.10	0			39	0	18.80	19.14	19.07	0
		53	26	18.91	19.25	19.18	0			39	19	18.88	19.22	19.15	0
		50	50	18.97	19.31	19.24	0			39	40	18.94	19.28	19.21	0
		106	0	18.95	19.29	19.22	0			79	0	18.92	19.26	19.19	0

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		371000	376000	381000				Channel		370500	376000	381500	
		Frequency (MHz)		1855.0	1880.0	1905.0				Frequency (MHz)		1852.5	1880.0	1907.5	
10M	DFT-s-OFDM QPSK	1	0	19.02	19.36	19.29	0	5M	DFT-s-OFDM QPSK	1	0	19.00	19.34	19.27	0
		1	26	19.11	19.45	19.38	0			1	12	19.09	19.43	19.36	0
		1	51	19.24	19.58	19.51	0			1	24	19.22	19.56	19.49	0
		26	0	18.91	19.25	19.18	0			12	0	18.89	19.23	19.16	0
		26	13	18.95	19.29	19.22	0			12	6	18.93	19.27	19.20	0
		26	26	19.10	19.44	19.37	0			12	13	19.08	19.42	19.35	0
		52	0	18.92	19.26	19.19	0			25	0	18.90	19.24	19.17	0
	DFT-s-OFDM 16QAM	1	0	19.00	19.34	19.27	0		DFT-s-OFDM 16QAM	1	0	18.98	19.32	19.25	0
		1	26	19.01	19.35	19.28	0			1	12	18.99	19.33	19.26	0
		1	51	19.05	19.39	19.32	0			1	24	19.03	19.37	19.30	0
		26	0	18.91	19.25	19.18	0			12	0	18.89	19.23	19.16	0
		26	13	18.94	19.28	19.21	0			12	6	18.92	19.26	19.19	0
		26	26	19.01	19.35	19.28	0			12	13	18.99	19.33	19.26	0
		52	0	18.97	19.31	19.24	0			25	0	18.95	19.29	19.22	0
	DFT-s-OFDM 64QAM	1	0	18.94	19.28	19.21	0		DFT-s-OFDM 64QAM	1	0	18.92	19.26	19.19	0
		1	26	19.02	19.36	19.29	0			1	12	19.00	19.34	19.27	0
		1	51	19.06	19.40	19.33	0			1	24	19.04	19.38	19.31	0
		26	0	18.91	19.25	19.18	0			12	0	18.89	19.23	19.16	0
		26	13	19.00	19.34	19.27	0			12	6	18.98	19.32	19.25	0
		26	26	19.05	19.39	19.32	0			12	13	19.03	19.37	19.30	0
		52	0	19.04	19.38	19.31	0			25	0	19.02	19.36	19.29	0
	CP-OFDM QPSK	1	0	19.01	19.35	19.28	0		CP-OFDM QPSK	1	0	18.99	19.33	19.26	0
		1	26	19.03	19.37	19.30	0			1	12	19.01	19.35	19.28	0
		1	51	19.10	19.44	19.37	0			1	24	19.08	19.42	19.35	0
		26	0	18.90	19.24	19.17	0			12	0	18.88	19.22	19.15	0
		26	13	19.01	19.35	19.28	0			12	6	18.99	19.33	19.26	0
		26	26	19.04	19.38	19.31	0			12	13	19.02	19.36	19.29	0
		52	0	18.97	19.31	19.24	0			25	0	18.95	19.29	19.22	0
	CP-OFDM 16QAM	1	0	18.90	19.24	19.17	0		CP-OFDM 16QAM	1	0	18.88	19.22	19.15	0
		1	26	18.95	19.29	19.22	0			1	12	18.93	19.27	19.20	0
		1	51	18.87	19.21	19.14	0			1	24	18.85	19.19	19.12	0
		26	0	18.88	19.22	19.15	0			12	0	18.86	19.20	19.13	0
		26	13	18.92	19.26	19.19	0			12	6	18.90	19.24	19.17	0
		26	26	18.88	19.22	19.15	0			12	13	18.86	19.20	19.13	0
		52	0	18.86	19.20	19.13	0			25	0	18.84	19.18	19.11	0
	CP-OFDM 64QAM	1	0	18.65	18.99	18.92	0		CP-OFDM 64QAM	1	0	18.63	18.97	18.90	0
		1	26	18.80	19.14	19.07	0			1	12	18.78	19.12	19.05	0
		1	51	18.91	19.25	19.18	0			1	24	18.89	19.23	19.16	0
		26	0	18.76	19.10	19.03	0			12	0	18.74	19.08	19.01	0
		26	13	18.84	19.18	19.11	0			12	6	18.82	19.16	19.09	0
		26	26	18.90	19.24	19.17	0			12	13	18.88	19.22	19.15	0
		52	0	18.88	19.22	19.15	0			25	0	18.86	19.20	19.13	0

Note : The test results of 5G NR n2 are only used to evaluate EN-DC mode.

5G NR n5 (SCS 15kHz) (Power for EN-DC)																
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		166800	167300	167800				Channel		166300	167300	19.68	
		Frequency (MHz)		834.0	836.5	839.0				Frequency (MHz)		831.5	836.5	841.5	
20M	DFT-s-OFDM QPSK	1	0	19.88	19.91	19.92	0	15M	DFT-s-OFDM QPSK	1	0	19.91	19.94	19.88	0
		1	53	19.95	**19.98**	19.93	0			1	39	19.84	19.87	19.88	0
		1	105	19.72	19.75	19.85	0			1	78	19.68	19.71	19.81	0
		50	0	19.79	19.82	19.70	0			39	0	19.89	19.92	19.65	0
		50	25	19.93	**19.96**	19.72	0			39	19	19.75	19.78	19.86	0
		50	50	19.81	19.84	19.76	0			39	40	19.77	19.80	19.72	0
		100	0	19.90	**19.93**	19.78	0			79	0	19.86	19.89	19.74	0
	DFT-s-OFDM 16QAM	1	0	19.88	19.91	19.91	0		DFT-s-OFDM 16QAM	1	0	19.90	19.93	19.83	0
		1	53	19.84	**19.97**	19.87	0			1	39	19.84	19.87	19.87	0
		1	105	19.71	19.74	19.85	0			1	78	19.67	19.70	19.81	0
		50	0	19.93	19.96	19.68	0			39	0	19.89	19.92	19.64	0
		50	25	19.90	19.93	19.90	0			39	19	19.86	19.89	19.86	0
		50	50	19.85	19.88	19.87	0			39	40	19.81	19.84	19.83	0
		100	0	19.90	19.93	19.82	0			79	0	19.86	19.89	19.78	0
	DFT-s-OFDM 64QAM	1	0	19.92	19.95	19.87	0		DFT-s-OFDM 64QAM	1	0	19.88	19.91	19.83	0
		1	53	19.74	19.77	19.89	0			1	39	19.70	19.73	19.85	0
		1	105	19.62	19.65	19.71	0			1	78	19.58	19.61	19.67	0
		50	0	19.86	19.89	19.59	0			39	0	19.82	19.85	19.55	0
		50	25	19.91	19.94	19.83	0			39	19	19.87	19.90	19.79	0
		50	50	19.88	19.91	19.88	0			39	40	19.84	19.87	19.84	0
		100	0	19.90	19.93	19.85	0			79	0	19.86	19.89	19.81	0
	CP-OFDM QPSK	1	0	19.94	**19.97**	19.87	0		CP-OFDM QPSK	1	0	19.90	**19.93**	19.83	0
		1	53	19.93	19.96	19.91	0			1	39	19.89	19.92	19.87	0
		1	105	19.70	19.73	19.90	0			1	78	19.66	19.69	19.86	0
		50	0	19.88	**19.91**	19.67	0			39	0	19.84	19.87	19.63	0
		53	26	19.80	19.83	19.85	0			39	19	19.76	19.79	19.81	0
		50	50	19.75	19.78	19.77	0			39	40	19.71	19.74	19.73	0
		106	0	19.82	**19.85**	19.72	0			79	0	19.78	19.81	19.68	0
	CP-OFDM 16QAM	1	0	19.94	**19.97**	19.79	0		CP-OFDM 16QAM	1	0	19.90	**19.93**	19.75	0
		1	53	19.89	19.92	19.91	0			1	39	19.85	19.88	19.87	0
		1	105	19.93	19.96	19.86	0			1	78	19.89	19.92	19.82	0
		50	0	19.92	19.95	19.90	0			39	0	19.88	19.91	19.86	0
		53	26	19.88	19.91	19.89	0			39	19	19.84	19.87	19.85	0
		50	50	19.80	19.83	19.85	0			39	40	19.76	19.79	19.81	0
		106	0	19.88	19.91	19.77	0			79	0	19.84	19.87	19.73	0
	CP-OFDM 64QAM	1	0	19.70	19.73	19.85	0		CP-OFDM 64QAM	1	0	19.66	19.69	19.81	0
		1	53	19.57	19.60	19.67	0			1	39	19.53	19.56	19.63	0
		1	105	19.36	19.39	19.54	0			1	78	19.32	19.35	19.50	0
		50	0	19.74	19.77	19.33	0			39	0	19.70	19.73	19.29	0
		53	26	19.66	19.69	19.71	0			39	19	19.62	19.65	19.67	0
		50	50	19.67	19.70	19.63	0			39	40	19.63	19.66	19.59	0
		106	0	19.71	19.74	19.64	0			79	0	19.67	19.70	19.60	0

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		165800	167300	168800				Channel		165300	167300	169300	
		Frequency (MHz)		829.0	836.5	844.0				Frequency (MHz)		826.5	836.5	846.5	
10M	DFT-s-OFDM QPSK	1	0	19.89	19.92	19.86	0	5M	DFT-s-OFDM QPSK	1	0	19.86	19.89	19.83	0
		1	26	19.82	19.85	19.86	0			1	12	19.79	19.82	19.83	0
		1	51	19.66	19.69	19.79	0			1	24	19.63	19.66	19.76	0
		26	0	19.87	19.90	19.63	0			12	0	19.84	19.87	19.60	0
		26	13	19.73	19.76	19.84	0			12	6	19.70	19.73	19.81	0
		26	26	19.75	19.78	19.70	0			12	13	19.72	19.75	19.67	0
		52	0	19.84	19.87	19.72	0			25	0	19.81	19.84	19.69	0
	DFT-s-OFDM 16QAM	1	0	19.88	19.91	19.81	0		DFT-s-OFDM 16QAM	1	0	19.85	**19.88**	19.78	0
		1	26	19.82	19.85	19.85	0			1	12	19.79	19.82	19.82	0
		1	51	19.65	19.68	19.79	0			1	24	19.62	19.65	19.76	0
		26	0	19.87	19.90	19.62	0			12	0	19.84	19.87	19.59	0
		26	13	19.84	19.87	19.84	0			12	6	19.81	19.84	19.81	0
		26	26	19.79	19.82	19.81	0			12	13	19.76	19.79	19.78	0
		52	0	19.84	19.87	19.76	0			25	0	19.81	19.84	19.73	0
	DFT-s-OFDM 64QAM	1	0	19.86	19.89	19.81	0		DFT-s-OFDM 64QAM	1	0	19.83	19.86	19.78	0
		1	26	19.68	19.71	19.83	0			1	12	19.65	19.68	19.80	0
		1	51	19.56	19.59	19.65	0			1	24	19.53	19.56	19.62	0
		26	0	19.80	19.83	19.53	0			12	0	19.77	19.80	19.50	0
		26	13	19.85	19.88	19.77	0			12	6	19.82	19.85	19.74	0
		26	26	19.82	19.85	19.82	0			12	13	19.79	19.82	19.79	0
		52	0	19.84	19.87	19.79	0			25	0	19.81	19.84	19.76	0
	CP-OFDM QPSK	1	0	19.88	**19.91**	19.81	0		CP-OFDM QPSK	1	0	19.85	**19.88**	19.78	0
		1	26	19.87	19.90	19.85	0			1	12	19.84	19.87	19.82	0
		1	51	19.64	19.67	19.84	0			1	24	19.61	19.64	19.81	0
		26	0	19.82	19.85	19.61	0			12	0	19.79	19.82	19.58	0
		26	13	19.74	19.77	19.79	0			12	6	19.71	19.74	19.76	0
		26	26	19.69	19.72	19.71	0			12	13	19.66	19.69	19.68	0
		52	0	19.76	19.79	19.66	0			25	0	19.73	19.76	19.63	0
	CP-OFDM 16QAM	1	0	19.88	**19.91**	19.73	0		CP-OFDM 16QAM	1	0	19.85	**19.88**	19.70	0
		1	26	19.83	19.86	19.85	0			1	12	19.80	19.83	19.82	0
		1	51	19.87	19.90	19.80	0			1	24	19.84	19.87	19.77	0
		26	0	19.86	19.89	19.84	0			12	0	19.83	19.86	19.81	0
		26	13	19.82	19.85	19.83	0			12	6	19.79	19.82	19.80	0
		26	26	19.74	19.77	19.79	0			12	13	19.71	19.74	19.76	0
		52	0	19.82	19.85	19.71	0			25	0	19.79	19.82	19.68	0
	CP-OFDM 64QAM	1	0	19.64	19.67	19.79	0		CP-OFDM 64QAM	1	0	19.61	19.64	19.76	0
		1	26	19.51	19.54	19.61	0			1	12	19.48	19.51	19.58	0
		1	51	19.30	19.33	19.48	0			1	24	19.27	19.30	19.45	0
		26	0	19.68	19.71	19.27	0			12	0	19.65	19.68	19.24	0
		26	13	19.60	19.63	19.65	0			12	6	19.57	19.60	19.62	0
		26	26	19.61	19.64	19.57	0			12	13	19.58	19.61	19.54	0
		52	0	19.65	19.68	19.58	0			25	0	19.62	19.65	19.55	0

Note : The test results of 5G NR n5 are only used to evaluate EN-DC mode.

5G NR n66 (SCS 15kHz) (Power for EN-DC)																
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		344000	349000	354000				Channel		343500	349000	354500	
		Frequency (MHz)		1720.0	1745.0	1770.0				Frequency (MHz)		1717.5	1745.0	1772.5	
20M	DFT-s-OFDM QPSK	1	0	19.16	19.51	19.38	0	15M	DFT-s-OFDM QPSK	1	0	19.48	19.83	19.70	0
		1	53	19.51	**19.86**	19.78	0			1	39	19.13	19.48	19.35	0
		1	105	19.06	19.31	19.18	0			1	78	19.03	19.28	19.15	0
		50	0	19.40	19.75	19.62	0			39	0	19.43	19.78	19.65	0
		50	25	19.46	19.81	19.68	0			39	19	19.37	19.72	19.59	0
		50	50	19.26	19.61	19.48	0			39	40	19.23	19.58	19.45	0
		100	0	19.31	19.66	19.53	0			79	0	19.28	19.63	19.50	0
	DFT-s-OFDM 16QAM	1	0	19.41	19.76	19.63	0		DFT-s-OFDM 16QAM	1	0	19.44	**19.79**	19.66	0
		1	53	19.47	**19.82**	19.69	0			1	39	19.38	19.73	19.60	0
		1	105	19.27	19.62	19.49	0			1	78	19.24	19.59	19.46	0
		50	0	19.42	19.77	19.64	0			39	0	19.39	19.74	19.61	0
		50	25	19.33	19.68	19.55	0			39	19	19.30	19.65	19.52	0
		50	50	19.26	19.61	19.48	0			39	40	19.23	19.58	19.45	0
		100	0	19.34	19.69	19.56	0			79	0	19.31	19.66	19.53	0
	DFT-s-OFDM 64QAM	1	0	19.33	19.68	19.55	0		DFT-s-OFDM 64QAM	1	0	19.30	19.65	19.52	0
		1	53	19.26	19.61	19.48	0			1	39	19.23	19.58	19.45	0
		1	105	19.24	19.59	19.46	0			1	78	19.21	19.56	19.43	0
		50	0	19.31	19.66	19.53	0			39	0	19.28	19.63	19.50	0
		50	25	19.26	19.61	19.48	0			39	19	19.23	19.58	19.45	0
		50	50	19.24	19.59	19.46	0			39	40	19.21	19.56	19.43	0
		100	0	19.28	19.63	19.50	0			79	0	19.25	19.60	19.47	0
	CP-OFDM QPSK	1	0	19.46	**19.81**	19.68	0		CP-OFDM QPSK	1	0	19.43	**19.78**	19.65	0
		1	53	19.42	19.77	19.64	0			1	39	19.39	19.74	19.61	0
		1	105	19.46	19.75	19.68	0			1	78	19.43	19.71	19.65	0
		50	0	19.26	19.61	19.48	0			39	0	19.23	19.58	19.45	0
		53	26	19.22	19.57	19.44	0			39	19	19.19	19.54	19.41	0
		50	50	19.14	19.49	19.36	0			39	40	19.11	19.46	19.33	0
		106	0	19.20	19.55	19.42	0			79	0	19.17	19.52	19.39	0
	CP-OFDM 16QAM	1	0	19.23	**19.58**	19.45	0		CP-OFDM 16QAM	1	0	19.20	**19.55**	19.42	0
		1	53	19.01	19.36	19.23	0			1	39	19.08	19.33	19.20	0
		1	105	19.05	19.31	19.18	0			1	78	19.02	19.28	19.15	0
		50	0	19.20	19.55	19.42	0			39	0	19.17	19.52	19.39	0
		53	26	19.11	19.46	19.33	0			39	19	19.08	19.43	19.30	0
		50	50	19.06	19.41	19.28	0			39	40	19.03	19.38	19.25	0
		106	0	19.08	19.43	19.30	0			79	0	19.05	19.40	19.27	0
	CP-OFDM 64QAM	1	0	19.14	19.49	19.36	0		CP-OFDM 64QAM	1	0	19.11	19.46	19.33	0
		1	53	19.02	19.37	19.24	0			1	39	19.09	19.34	19.21	0
		1	105	19.13	19.28	19.15	0			1	78	19.10	19.25	19.12	0
		50	0	19.12	19.47	19.34	0			39	0	19.09	19.44	19.31	0
		53	26	19.10	19.45	19.32	0			39	19	19.07	19.42	19.29	0
		50	50	19.06	19.41	19.28	0			39	40	19.03	19.38	19.25	0
		106	0	19.08	19.43	19.30	0			79	0	19.05	19.40	19.27	0

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		343000	349000	355000	
		Frequency (MHz)		1715.0	1745.0	1775.0	
10M	DFT-s-OFDM QPSK	1	0	19.45	**19.80**	19.67	0
		1	26	19.10	19.45	19.32	0
		1	51	19.01	19.25	19.12	0
		26	0	19.40	19.75	19.62	0
		26	13	19.34	19.69	19.56	0
		26	26	19.20	19.55	19.42	0
		52	0	19.25	19.60	19.47	0
	DFT-s-OFDM 16QAM	1	0	19.41	19.76	19.63	0
		1	26	19.35	19.70	19.57	0
		1	51	19.21	19.56	19.43	0
		26	0	19.36	19.71	19.58	0
		26	13	19.27	19.62	19.49	0
		26	26	19.20	19.55	19.42	0
		52	0	19.28	19.63	19.50	0
	DFT-s-OFDM 64QAM	1	0	19.27	19.62	19.49	0
		1	26	19.20	19.55	19.42	0
		1	51	19.18	19.53	19.40	0
		26	0	19.25	19.60	19.47	0
		26	13	19.20	19.55	19.42	0
		26	26	19.18	19.53	19.40	0
		52	0	19.22	19.57	19.44	0
	CP-OFDM QPSK	1	0	19.40	**19.75**	19.62	0
		1	26	19.36	19.71	19.58	0
		1	51	19.40	19.68	19.62	0
		26	0	19.20	19.55	19.42	0
		26	13	19.16	19.51	19.38	0
		26	26	19.08	19.43	19.30	0
		52	0	19.14	19.49	19.36	0
	CP-OFDM 16QAM	1	0	19.17	19.52	19.39	0
		1	26	19.05	19.30	19.17	0
		1	51	19.09	19.25	19.12	0
		26	0	19.14	19.49	19.36	0
		26	13	19.05	19.40	19.27	0
		26	26	19.02	19.35	19.22	0
		52	0	19.02	19.37	19.24	0
	CP-OFDM 64QAM	1	0	19.08	19.43	19.30	0
		1	26	19.06	19.31	19.18	0
		1	51	19.07	19.22	19.09	0
		26	0	19.06	19.41	19.28	0
		26	13	19.04	19.39	19.26	0
		26	26	19.03	19.35	19.22	0
		52	0	19.02	19.37	19.24	0

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		342500	349000	355500	
		Frequency (MHz)		1712.5	1745.0	1777.5	
5M	DFT-s-OFDM QPSK	1	0	19.43	**19.78**	19.65	0
		1	12	19.08	19.43	19.30	0
		1	24	19.02	19.23	19.10	0
		12	0	19.38	19.73	19.60	0
		12	6	19.32	19.67	19.54	0
		12	13	19.18	19.53	19.40	0
		25	0	19.23	19.58	19.45	0
	DFT-s-OFDM 16QAM	1	0	19.39	19.74	19.61	0
		1	12	19.33	19.68	19.55	0
		1	24	19.19	19.54	19.41	0
		12	0	19.34	19.69	19.56	0
		12	6	19.25	19.60	19.47	0
		12	13	19.18	19.53	19.40	0
		25	0	19.26	19.61	19.48	0
	DFT-s-OFDM 64QAM	1	0	19.25	19.60	19.47	0
		1	12	19.18	19.53	19.40	0
		1	24	19.16	19.51	19.38	0
		12	0	19.23	19.58	19.45	0
		12	6	19.18	19.53	19.40	0
		12	13	19.16	19.51	19.38	0
		25	0	19.20	19.55	19.42	0
	CP-OFDM QPSK	1	0	19.38	**19.73**	19.60	0
		1	12	19.34	19.69	19.56	0
		1	24	19.38	19.65	19.60	0
		12	0	19.18	19.53	19.40	0
		12	6	19.14	19.49	19.36	0
		12	13	19.06	19.41	19.28	0
		25	0	19.12	19.47	19.34	0
	CP-OFDM 16QAM	1	0	19.15	19.50	19.37	0
		1	12	19.03	19.28	19.15	0
		1	24	19.01	19.23	19.10	0
		12	0	19.12	19.47	19.34	0
		12	6	19.03	19.38	19.25	0
		12	13	19.05	19.33	19.20	0
		25	0	19.02	19.35	19.22	0
	CP-OFDM 64QAM	1	0	19.06	19.41	19.28	0
		1	12	19.04	19.29	19.16	0
		1	24	19.05	19.20	19.07	0
		12	0	19.04	19.39	19.26	0
		12	6	19.02	19.37	19.24	0
		12	13	19.03	19.33	19.20	0
		25	0	19.01	19.35	19.22	0

Note : The test results of 5G NR n66 are only used to evaluate EN-DC mode.

5G NR n2 (SCS 15kHz)							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		372000	376000	380000	
		Frequency (MHz)		1860.0	1880.0	1900.0	
20M	DFT-s-OFDM QPSK	1	0	22.65	22.21	**22.74**	0
		1	53	22.58	22.14	22.67	0
		1	105	22.16	21.72	22.25	0
		50	0	22.27	21.83	**22.47**	0
		50	25	22.25	21.81	22.34	0
		50	50	21.93	21.49	22.02	0
		100	0	21.91	21.47	**22.12**	0

5G NR n5 (SCS 15kHz)							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		166800	167300	167800	
		Frequency (MHz)		834.0	836.5	839.0	
20M	DFT-s-OFDM QPSK	1	0	22.21	22.42	22.01	0
		1	53	23.74	**23.95**	23.54	0
		1	105	22.36	22.57	22.16	0
		50	0	22.42	22.63	22.22	0
		50	25	23.71	**23.92**	23.51	0
		50	50	22.31	22.52	22.11	0
		100	0	22.74	**22.89**	22.44	0

5G NR n66 (SCS 15kHz)							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		344000	349000	354000	
		Frequency (MHz)		1720.0	1745.0	1770.0	
20M	DFT-s-OFDM QPSK	1	0	21.34	22.12	21.41	0
		1	53	22.54	**23.32**	22.61	0
		1	105	22.15	22.93	22.22	0
		50	0	21.23	22.01	21.30	0
		50	25	22.33	23.11	22.40	0
		50	50	21.90	22.68	21.97	0
		100	0	21.77	22.55	21.84	0

Note : According to the TCB Workshop April 2019_5G New Radio(NR)Sub 6GHz, the test results of 5G NR n2 are measured by FTM(Factory Test Mode). The measurement of modulation are refer to the 5G NR EN-DC FR1 of highest power.

<WLAN 2.4G>

Mode	Channel	Frequency (MHz)	Average Power (Ant-4)	Average Power (Ant-3)	Average Power (Ant-4 + Ant-3)
802.11b	1	2412	9.99	9.95	-
	6	2437	9.90	9.99	-
	11	2462	9.95	9.97	-
802.11n (HT40)	3	2422	-	-	12.98
	6	2437	-	-	12.96
	9	2452	-	-	12.97

<WLAN 5.2G>

Mode	Channel	Frequency (MHz)	Average Power (Ant-4)	Average Power (Ant-3)	Average Power (Ant-4 + Ant-3)
802.11ac (VHT80)	42	5210	9.90	9.60	12.76

<WLAN 5.8G>

Mode	Channel	Frequency (MHz)	Average Power (Ant-4)	Average Power (Ant-3)	Average Power (Ant-4 + Ant-3)
802.11ac (VHT80)	155	5775	9.85	9.99	12.93

4.7 SAR Testing Results

4.7.1 SAR Test Reduction Considerations

<KDB 447498 D01, General RF Exposure Guidance>

Testing of other required channels within the operating mode of a frequency band is not required when the reported SAR for the mid-band or highest output power channel is:

(1) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz

(2) ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz

(3) ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

When SAR is not measured at the maximum power level allowed for production units, the measured SAR will be scaled to the maximum tune-up tolerance limit to determine compliance. The scaling factor for the tune-up power is defined as maximum tune-up limit (mW) / measured conducted power (mW). The reported SAR would be calculated by measured SAR x tune-up power scaling factor.

The SAR has been measured with highest transmission duty factor supported by the test mode tools for WLAN and/or Bluetooth. When the transmission duty factor could not achieve 100%, the reported SAR will be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up power. The scaling factor for the duty factor is defined as 100% / transmission duty cycle (%). The reported SAR would be calculated by measured SAR x tune-up power scaling factor x duty cycle scaling factor.

<KDB 941225 D01, 3G SAR Measurement Procedures>

The mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ 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.

<KDB 941225 D05, SAR Evaluation Considerations for LTE Devices>

(1) QPSK with 1 RB and 50% RB allocation

Start with the largest channel bandwidth and measure SAR, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required; 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. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

(2) 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 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.

(3) Higher order modulations

SAR is required only when the highest maximum output power for the configuration in the higher order modulation is >1/2 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

(4) Other channel bandwidth

SAR is required when the highest maximum output power of the smaller channel bandwidth is >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.

<Power Confirmation for SAR Test Exclusion for LTE Downlink CA>

According to KDB 941225 D05A, the uplink maximum output power below was measured with downlink CA active on the channel with highest measured maximum output power when downlink CA is inactive. The downlink SCC channel was paired with the uplink channel as normal operation. For intra-band contiguous CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing per section 5.4.1A of 3GPP TS36.521. For intra-band non-contiguous CA, the downlink channel spacing between the component carriers was set to maximum separation from PCC and remain fully within the downlink transmission band. For Inter-band CA, the SCC downlink channel was set to near the middle of its transmission band.

Power Measurements for Inter Band Downlink CA

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power withDL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2A-2A-46A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	46	20	50665	5537.5	22.12	22.81
CA_46A-66A-66A	66	20	132072	1720	1	50	66536	2120	66	20	67036	2170	46	20	50665	5537.5	23.81	23.86
CA_46C-66A	66	20	132572	1770	1	50	67036	2170	46	20	50692	5540.2	46	20	50890	5560	23.84	23.92

Power Measurements for Inter-Band Downlink CA

CA Combination	PCC								SCC1				SCC2				SCC3				SCC4				SCC5				Power	
	LTE Band	BW (MHz)	UL Ch.	UL Freq. (MHz)	RB Size	RB Offset	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	Tx Power withDL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2A-29A-30A	2	20	19100	1900	1	50	1100	1980	29	10	9715	722.5	30	10	9820	2355													22.06	22.99
CA_2A-46A-66A	2	20	19100	1900	1	50	1100	1980	46	20	50665	5537.5	66	20	66786	2145													22.12	22.99
CA_2A-2A-46C	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	46	20	50692	5540.2	46	20	50890	5560									22.17	22.81
CA_46C-66A-66A	66	20	132072	1720	1	50	66536	2120	66	20	67036	2170	46	20	50692	5540.2	46	20	50890	5560									23.85	23.86
CA_46D-66A	66	20	132572	1770	1	50	67036	2170	46	20	50492	5520.2	46	20	50690	5540	46	20	50888	5559.8									23.90	23.92
CA_2A-12A-30A-66A	2	20	19100	1900	1	50	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145									22.21	22.99
CA_2A-46C-66A	2	20	19100	1900	1	50	1100	1980	46	20	50692	5540.2	46	20	50890	5560	66	20	66786	2145									22.19	22.99
CA_46D-66A-66A	66	20	132072	1720	1	50	66536	2120	66	20	67036	2170	46	20	50492	5520.2	46	20	50690	5540	46	20	50888	5559.8					23.86	23.86
CA_2A-2A-46D	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	46	20	50492	5520.2	46	20	50690	5540	46	20	50888	5559.8					22.06	22.81
CA_2A-2A-5A-30A-66A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145					22.09	22.81
CA_2A-2A-12A-30A-66A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145					22.08	22.81
CA_2A-5A-30A-66A-66A	2	20	19100	1900	1	50	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66536	2120	66	20	67036	2170					22.09	22.99
CA_2A-5B-30A-66A	2	20	19100	1900	1	50	1100	1980	5	10	2501	879.1	5	10	2600	889	30	10	9820	2355	66	20	66786	2145					22.14	22.99
CA_2A-12A-30A-66A-66A	2	20	19100	1900	1	50	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66536	2120	66	20	67036	2170					22.15	22.99
CA_2A-46D-66A	2	20	19100	1900	1	50	1100	1980	46	20	50692	5540.2	46	20	50890	5560	46	20	51088	5579.8	66	20	66786	2145					22.23	22.99
CA_2A-46E-66A	2	20	19100	1900	1	50	1100	1980	46	20	50665	5537.5	46	20	50863	5557.3	46	20	51061	5577.1	46	20	51259	5596.9	66	20	66786	2145	22.67	22.99

Power Measurements for Inter-Band Downlink CA (Sub 6_EN-DC)

CA Combination	PCC								SCC1				SCC2				SCC3				SCC4				Power	
	LTE Band	BW (MHz)	UL Ch.	UL Freq. (MHz)	RB Size	RB Offset	DL Ch.	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	LTE / 5G NR Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	LTE / 5G NR Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	5G NR Band	BW (MHz)	DL Ch.	DL Freq. (MHz)	Tx Power withDL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_30A-66A-n5A	30	10	27710	2310	1	0	9820	2355	66	20	66786	2145	n5	20	176300	881.5									22.55	22.65
CA_2A-66A-66A-n5A	2	20	19100	1900	1	50	1100	1980	66	20	66536	2120	66	20	67036	2170	n5	20	176300	881.5					22.90	22.99
CA_2A-2A-66A-n5A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	66	20	66536	2120	n5	20	176300	881.5					22.95	22.99
CA_2A-5A-30A-n66A	2	20	19100	1900	1	50	1100	1980	5	10	2525	881.5	30	10	9820	2355	n66	20	429000	2145					22.99	22.99
CA_2A-12A-66A-n2A	2	20	19100	1900	1	50	1100	1980	12	10	5095	737.5	66	20	66536	2120	n2	20	392000	1960					22.36	22.81
CA_2A-5A-66A-n66A	2	20	19100	1900	1	50	1100	1980	5	10	2525	881.5	66	20	66786	2145	n66	20	429000	2145					22.57	22.99
CA_2A-30A-66A-n5A	2	20	19100	1900	1	50	1100	1980	30	10	9820	2355	66	20	66786	2145	n5	20	176300	881.5					22.94	22.99
CA_2A-2A-30A-n5A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	30	10	9820	2355	n5	20	176300	881.5					22.53	22.81
CA_2A-5A-30A-66A-n66A	2	20	19100	1900	1	50	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	67036	2170	n66	20	429000	2145	22.89	22.99
CA_2A-30A-66A-66A-n5A	2	20	19100	1900	1	50	1100	1980	30	10	9820	2355	66	20	66536	2120	66	20	67036	2170	n5	20	176300	881.5	22.96	22.99
CA_2A-2A-12A-30A-n66A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	n66	20	429000	2145	22.54	22.81
CA_2A-2A-12A-66A-n66A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	n66	20	429000	2145	22.18	22.81
CA_2A-2A-5A-66A-n66A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	n66	20	429000	2145	22.23	22.81
CA_2A-2A-5A-30A-n66A	2	20	18700	1860	1	50	700	1940	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	n66	20	429000	2145	22.31	22.81
CA_2A-12A-30A-66A-n66A	2	20	19100	1900	1	50	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	n66	20	429000	2145	22.26	22.99

Summary for SAR Test Exclusion for LTE Downlink CA

Per power confirmation results in above, the uplink maximum output power with downlink CA active remains within the specified tune-up tolerance and not more than 0.25 dB higher than the maximum output power with downlink CA inactive. According to KDB 941225 D05A, the SAR test exclusion applies to LTE downlink CA operation.

<Power Confirmation for SAR Testing for LTE Uplink CA>

The conducted power for uplink CA active was measured on the highest reported SAR configuration for each exposure condition with both two carrier components was set to largest channel bandwidth.

Intra-Band Uplink CA															
PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Tx Power with UL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_5B															
5	10	QPSK	1	0	20450	829	5	10	QPSK	1	49	20549	838.9	13.29	23.27
			1	49						1	0			23.20	23.34
5	10	QPSK	1	0	20476	831.6	5	10	QPSK	1	49	20575	841.5	13.15	23.31
			1	49						1	0			23.26	23.38
5	10	QPSK	1	0	20501	834.1	5	10	QPSK	1	49	20600	844	12.94	23.45
			1	49						1	0			23.38	23.52

Inter-Band Uplink CA															
PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Tx Power with UL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2A-12A															
2	20	QPSK	1	0	18700	1860	12	10	QPSK	1	49	23095	707.5	23.67	22.71
			1	99						1	0			23.27	22.67
2	20	QPSK	1	0	18900	1880	12	10	QPSK	1	49	23095	707.5	23.64	22.75
			1	99						1	0			23.33	22.71
2	20	QPSK	1	0	19100	1900	12	10	QPSK	1	49	23095	707.5	23.70	22.89
			1	99						1	0			23.04	22.85
CA_2A-66A															
2	20	QPSK	1	0	18700	1860	66	20	QPSK	1	99	132322	1745	24.83	22.71
			1	99						1	0			24.65	22.67
2	20	QPSK	1	0	18900	1880	66	20	QPSK	1	99	132322	1745	25.05	22.75
			1	99						1	0			24.57	22.71
2	20	QPSK	1	0	19100	1900	66	20	QPSK	1	99	132322	1745	24.90	22.89
			1	99						1	0			24.36	22.85
CA_4A-12A															
4	20	QPSK	1	0	20050	1720	12	10	QPSK	1	49	23095	707.5	23.43	23.61
			1	99						1	0			23.11	23.46
4	20	QPSK	1	0	20175	1732.5	12	10	QPSK	1	49	23095	707.5	23.54	23.77
			1	99						1	0			22.83	23.62
4	20	QPSK	1	0	20300	1745	12	10	QPSK	1	49	23095	707.5	23.28	23.92
			1	99						1	0			23.11	23.77
CA_12A-66A															
12	10	QPSK	1	0	23060	704	66	20	QPSK	1	99	132322	1745	23.23	23.62
			1	49						1	0			23.26	23.65
12	10	QPSK	1	0	23095	707.5	66	20	QPSK	1	99	132322	1745	23.38	23.58
			1	49						1	0			23.44	23.61
12	10	QPSK	1	0	23130	711	66	20	QPSK	1	99	132322	1745	23.48	23.64
			1	49						1	0			23.66	23.67
CA_2A-5A															
2	20	QPSK	1	0	18700	1860	5	10	QPSK	1	49	20525	836.5	23.84	22.71
			1	99						1	0			24.22	22.67
2	20	QPSK	1	0	18900	1880	5	10	QPSK	1	49	20525	836.5	23.86	22.75
			1	99						1	0			24.12	22.71
2	20	QPSK	1	0	19100	1900	5	10	QPSK	1	49	20525	836.5	23.70	22.89
			1	99						1	0			23.90	22.85

SAR Measurements for Intra-Band Contiguous CA

The SAR testing was performed with the single carrier (uplink CA is inactive) for all test positions for each exposure condition. The LTE uplink CA active was verified with maximum output power on the highest SAR configuration of single carrier for each exposure condition. For intra-band contiguous CA, the SCC channel was set to closest available contiguous channel.

<KDB 248227 D01, SAR Guidance for Wi-Fi Transmitters>

(1) For handsets operating next to ear, hotspot mode or mini-tablet configurations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When the reported SAR of initial test position is <= 0.4 W/kg, SAR testing for remaining test positions is not required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is <= 0.8 W/kg or all test positions are measured.

(2) For WLAN 2.4 GHz, the highest measured maximum output power channel for DSSS was selected for SAR measurement. When the reported SAR is <= 0.8 W/kg, no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel. When any reported SAR is >1.2 W/kg, SAR is required for the third channel. For OFDM modes (802.11g/n),SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is <= 1.2 W/kg.

(3) For WLAN 5GHz, the initial test configuration was selected according to the transmission mode with the highest maximum output power. When the reported SAR of initial test configuration is > 0.8 W/kg, SAR is required for the subsequent highest measured output power channel until the reported SAR result is <=1.2 W/kg or all required channels are measured. For other transmission modes, SAR is not required when the highest reported SAR for initial test configuration is adjusted by the ratio of subsequent test configuration to initial test configuration specified maximum output power and it is <= 1.2 W/kg.

(4) For WLAN MIMO mode, the power-based standalone SAR test exclusion or the sum of SAR provision in KDB 447498to determine simultaneous transmission SAR test exclusion should be applied. Otherwise, SAR for MIMO mode will be measured with all applicable antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

4.7.2 SAR Results for Hotspot Exposure Condition (Test Separation Distance is 10 mm)

Plot No.	Band	Mode	Test Position	Ch.	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	WCDMA II	RMC12.2K	Front Face	9400	Ant 1	-	24.0	23.59	1.10	0.07	0.903	0.99
	WCDMA II	RMC12.2K	Rear Face	9400	Ant 1	-	24.0	23.59	1.10	-0.05	0.978	1.08
	WCDMA II	RMC12.2K	Left Side	9400	Ant 1	-	24.0	23.59	1.10	-0.05	0.717	0.79
	WCDMA II	RMC12.2K	Right Side	9400	Ant 1	-	24.0	23.59	1.10	0.19	0.072	0.08
	WCDMA II	RMC12.2K	Top Side	9400	Ant 1	-	24.0	23.59	1.10	0.15	0.813	0.89
	WCDMA II	RMC12.2K	Bottom Side	9400	Ant 1	-	24.0	23.59	1.10	-0.15	0.068	0.07
	WCDMA II	RMC12.2K	Front Face	9262	Ant 1	-	24.0	23.09	1.23	0.14	0.813	1.00
01	WCDMA II	RMC12.2K	Front Face	9538	Ant 1	-	24.0	23.16	1.21	0.02	0.901	**1.09**
	WCDMA II	RMC12.2K	Rear Face	9262	Ant 1	-	24.0	23.09	1.23	-0.03	0.837	1.03
	WCDMA II	RMC12.2K	Rear Face	9538	Ant 1	-	24.0	23.16	1.21	-0.02	0.886	1.07
	WCDMA II	RMC12.2K	Top Side	9262	Ant 1	-	24.0	23.09	1.23	-0.05	0.731	0.90
	WCDMA II	RMC12.2K	Top Side	9538	Ant 1	-	24.0	23.16	1.21	0.03	0.765	0.93
	WCDMA II	RMC12.2K	Rear Face	9400	Ant 1	-	24.0	23.59	1.10	0.04	0.945	1.04
	WCDMA V	RMC12.2K	Front Face	4182	Ant 1	-	24.0	23.79	1.05	-0.01	0.730	0.77
	WCDMA V	RMC12.2K	Rear Face	4182	Ant 1	-	24.0	23.79	1.05	0.03	0.683	0.72
	WCDMA V	RMC12.2K	Left Side	4182	Ant 1	-	24.0	23.79	1.05	0.01	0.361	0.38
	WCDMA V	RMC12.2K	Right Side	4182	Ant 1	-	24.0	23.79	1.05	0.12	0.055	0.06
	WCDMA V	RMC12.2K	Top Side	4182	Ant 1	-	24.0	23.79	1.05	-0.03	0.202	0.21
	WCDMA V	RMC12.2K	Bottom Side	4182	Ant 1	-	24.0	23.79	1.05	0.05	0.105	0.11
02	WCDMA V	RMC12.2K	Front Face	4132	Ant 1	-	24.0	23.58	1.10	-0.01	0.724	**0.80**
	WCDMA V	RMC12.2K	Front Face	4233	Ant 1	-	24.0	23.77	1.05	-0.14	0.593	0.62

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 2	QPSK20M	Front Face	19100	1	50	Ant 1	-	23.0	22.99	1.00	-0.12	0.658	0.66
	LTE 2	QPSK20M	Rear Face	19100	1	50	Ant 1	-	23.0	22.99	1.00	-0.16	0.631	0.63
	LTE 2	QPSK20M	Left Side	19100	1	50	Ant 1	-	23.0	22.99	1.00	-0.04	0.507	0.51
	LTE 2	QPSK20M	Right Side	19100	1	50	Ant 1	-	23.0	22.99	1.00	0.12	0.041	0.04
	LTE 2	QPSK20M	Top Side	19100	1	50	Ant 1	-	23.0	22.99	1.00	0.08	0.489	0.49
	LTE 2	QPSK20M	Bottom Side	19100	1	50	Ant 1	-	23.0	22.99	1.00	0.04	0.069	0.07
	LTE 2	QPSK20M	Front Face	19100	50	0	Ant 1	-	22.0	21.97	1.01	0.02	0.568	0.57
	LTE 2	QPSK20M	Rear Face	19100	50	0	Ant 1	-	22.0	21.97	1.01	-0.05	0.528	0.53
	LTE 2	QPSK20M	Left Side	19100	50	0	Ant 1	-	22.0	21.97	1.01	-0.04	0.439	0.44
	LTE 2	QPSK20M	Right Side	19100	50	0	Ant 1	-	22.0	21.97	1.01	-0.05	0.032	0.03
	LTE 2	QPSK20M	Top Side	19100	50	0	Ant 1	-	22.0	21.97	1.01	0.08	0.433	0.44
	LTE 2	QPSK20M	Bottom Side	19100	50	0	Ant 1	-	22.0	21.97	1.01	-0.01	0.053	0.05
	LTE 2	QPSK20M	Front Face	18700	1	50	Ant 1	-	23.0	22.81	1.04	0.03	0.636	0.66
03	LTE 2	QPSK20M	Front Face	18900	1	50	Ant 1	-	23.0	22.85	1.04	0.10	0.686	**0.71**
For EN-DC														
	LTE 2	QPSK20M	Front Face	19100	1	50	Ant 1	w/	20.0	22.99	0.50	-0.12	0.658	0.33
	LTE 2	QPSK20M	Rear Face	19100	1	50	Ant 1	w/	20.0	22.99	0.50	-0.16	0.631	0.32
	LTE 2	QPSK20M	Left Side	19100	1	50	Ant 1	w/	20.0	22.99	0.50	-0.04	0.507	0.25
	LTE 2	QPSK20M	Right Side	19100	1	50	Ant 1	w/	20.0	22.99	0.50	0.12	0.041	0.02
	LTE 2	QPSK20M	Top Side	19100	1	50	Ant 1	w/	20.0	22.99	0.50	0.08	0.489	0.24
	LTE 2	QPSK20M	Bottom Side	19100	1	50	Ant 1	w/	20.0	22.99	0.50	0.04	0.069	0.03
	LTE 2	QPSK20M	Front Face	19100	50	0	Ant 1	w/	19.0	21.97	0.50	0.02	0.568	0.28
	LTE 2	QPSK20M	Rear Face	19100	50	0	Ant 1	w/	19.0	21.97	0.50	-0.05	0.528	0.26
	LTE 2	QPSK20M	Left Side	19100	50	0	Ant 1	w/	19.0	21.97	0.50	-0.04	0.439	0.22
	LTE 2	QPSK20M	Right Side	19100	50	0	Ant 1	w/	19.0	21.97	0.50	-0.05	0.032	0.02
	LTE 2	QPSK20M	Top Side	19100	50	0	Ant 1	w/	19.0	21.97	0.50	0.08	0.433	0.22
	LTE 2	QPSK20M	Bottom Side	19100	50	0	Ant 1	w/	19.0	21.97	0.50	-0.01	0.053	0.03
	LTE 2	QPSK20M	Front Face	18700	1	50	Ant 1	w/	20.0	22.81	0.52	0.03	0.636	0.33
	LTE 2	QPSK20M	Front Face	18900	1	50	Ant 1	w/	20.0	22.85	0.52	0.10	0.732	0.38

Note : The standalone of LTE 2 SAR had been tested and the results had been scaled to the EN-DC mode power level, the tune up of LTE 2 is 20dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 2	QPSK20M	Front Face	19100	1	50	Ant 2	-	23.0	22.99	1.00	0.04	0.993	0.99
	LTE 2	QPSK20M	Rear Face	19100	1	50	Ant 2	-	23.0	22.99	1.00	0.01	0.972	0.97
	LTE 2	QPSK20M	Left Side	19100	1	50	Ant 2	-	23.0	22.99	1.00	0.00	<0.001	0.00
	LTE 2	QPSK20M	Right Side	19100	1	50	Ant 2	-	23.0	22.99	1.00	-0.10	0.856	0.86
	LTE 2	QPSK20M	Top Side	19100	1	50	Ant 2	-	23.0	22.99	1.00	-0.06	0.686	0.69
	LTE 2	QPSK20M	Bottom Side	19100	1	50	Ant 2	-	23.0	22.99	1.00	0.16	0.039	0.04
	LTE 2	QPSK20M	Front Face	19100	50	0	Ant 2	-	22.0	21.97	1.01	0.01	0.973	0.98
	LTE 2	QPSK20M	Rear Face	19100	50	0	Ant 2	-	22.0	21.97	1.01	0.07	0.928	0.94
	LTE 2	QPSK20M	Left Side	19100	50	0	Ant 2	-	22.0	21.97	1.01	0.00	<0.001	0.00
	LTE 2	QPSK20M	Right Side	19100	50	0	Ant 2	-	22.0	21.97	1.01	0.17	0.819	0.83
	LTE 2	QPSK20M	Top Side	19100	50	0	Ant 2	-	22.0	21.97	1.01	-0.09	0.671	0.68
	LTE 2	QPSK20M	Bottom Side	19100	50	0	Ant 2	-	22.0	21.97	1.01	-0.12	0.039	0.04
	LTE 2	QPSK20M	Front Face	18700	1	50	Ant 2	-	23.0	22.81	1.04	0.10	0.856	0.89
04	LTE 2	QPSK20M	Front Face	18900	1	50	Ant 2	-	23.0	22.85	1.04	-0.10	1.13	**1.18**
	LTE 2	QPSK20M	Rear Face	18700	1	50	Ant 2	-	23.0	22.81	1.04	0.05	0.831	0.86
	LTE 2	QPSK20M	Rear Face	18900	1	50	Ant 2	-	23.0	22.85	1.04	-0.08	1.02	1.06
	LTE 2	QPSK20M	Right Side	18700	1	50	Ant 2	-	23.0	22.81	1.04	0.09	0.661	0.69
	LTE 2	QPSK20M	Right Side	18900	1	50	Ant 2	-	23.0	22.85	1.04	0.13	0.873	0.91
	LTE 2	QPSK20M	Front Face	18700	50	0	Ant 2	-	22.0	21.79	1.05	0.05	0.822	0.86
	LTE 2	QPSK20M	Front Face	18900	50	0	Ant 2	-	22.0	21.83	1.04	-0.02	0.989	1.03
	LTE 2	QPSK20M	Rear Face	18700	50	0	Ant 2	-	22.0	21.79	1.05	0.08	0.631	0.66
	LTE 2	QPSK20M	Rear Face	18900	50	0	Ant 2	-	22.0	21.83	1.04	0.07	0.852	0.89
	LTE 2	QPSK20M	Right Side	18700	50	0	Ant 2	-	22.0	21.79	1.05	-0.11	0.601	0.63
	LTE 2	QPSK20M	Right Side	18900	50	0	Ant 2	-	22.0	21.83	1.04	0.05	0.823	0.86
	LTE 2	QPSK20M	Front Face	19100	100	0	Ant 2	-	22.0	21.89	1.03	-0.02	0.974	1.00
	LTE 2	QPSK20M	Rear Face	19100	100	0	Ant 2	-	22.0	21.89	1.03	0.02	0.841	0.87
	LTE 2	QPSK20M	Right Side	19100	100	0	Ant 2	-	22.0	21.89	1.03	-0.03	0.818	0.84
	LTE 2	QPSK20M	Front Face	18900	1	50	Ant 2	-	23.0	22.85	1.04	0.04	1.06	1.10
For EN-DC														
	LTE 2	QPSK20M	Front Face	19100	1	50	Ant 2	w/	20.0	22.99	0.50	0.04	0.993	0.50
	LTE 2	QPSK20M	Rear Face	19100	1	50	Ant 2	w/	20.0	22.99	0.50	0.01	0.972	0.49
	LTE 2	QPSK20M	Left Side	19100	1	50	Ant 2	w/	20.0	22.99	0.50	0.00	<0.001	0.00
	LTE 2	QPSK20M	Right Side	19100	1	50	Ant 2	w/	20.0	22.99	0.50	-0.10	0.856	0.43
	LTE 2	QPSK20M	Top Side	19100	1	50	Ant 2	w/	20.0	22.99	0.50	-0.06	0.686	0.34
	LTE 2	QPSK20M	Bottom Side	19100	1	50	Ant 2	w/	20.0	22.99	0.50	0.16	0.039	0.02
	LTE 2	QPSK20M	Front Face	19100	50	0	Ant 2	w/	19.0	21.97	0.50	0.01	0.973	0.49
	LTE 2	QPSK20M	Rear Face	19100	50	0	Ant 2	w/	19.0	21.97	0.50	0.07	0.928	0.46
	LTE 2	QPSK20M	Left Side	19100	50	0	Ant 2	w/	19.0	21.97	0.50	0.00	<0.001	0.00
	LTE 2	QPSK20M	Right Side	19100	50	0	Ant 2	w/	19.0	21.97	0.50	0.17	0.819	0.41
	LTE 2	QPSK20M	Top Side	19100	50	0	Ant 2	w/	19.0	21.97	0.50	-0.09	0.671	0.34
	LTE 2	QPSK20M	Bottom Side	19100	50	0	Ant 2	w/	19.0	21.97	0.50	-0.12	0.039	0.02
	LTE 2	QPSK20M	Front Face	18700	1	50	Ant 2	w/	20.0	22.81	0.52	0.10	0.856	0.45
	LTE 2	QPSK20M	Front Face	18900	1	50	Ant 2	w/	20.0	22.85	0.52	-0.10	1.13	0.59
	LTE 2	QPSK20M	Rear Face	18700	1	50	Ant 2	w/	20.0	22.81	0.52	0.05	0.831	0.43
	LTE 2	QPSK20M	Rear Face	18900	1	50	Ant 2	w/	20.0	22.85	0.52	-0.08	1.02	0.53
	LTE 2	QPSK20M	Right Side	18700	1	50	Ant 2	w/	20.0	22.81	0.52	0.09	0.661	0.34
	LTE 2	QPSK20M	Right Side	18900	1	50	Ant 2	w/	20.0	22.85	0.52	0.13	0.873	0.45
	LTE 2	QPSK20M	Front Face	18700	50	0	Ant 2	w/	19.0	21.79	0.53	0.05	0.822	0.44
	LTE 2	QPSK20M	Front Face	18900	50	0	Ant 2	w/	19.0	21.83	0.52	-0.02	0.989	0.51
	LTE 2	QPSK20M	Rear Face	18700	50	0	Ant 2	w/	19.0	21.79	0.53	0.08	0.631	0.33
	LTE 2	QPSK20M	Rear Face	18900	50	0	Ant 2	w/	19.0	21.83	0.52	0.07	0.852	0.44

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 2	QPSK20M	Right Side	18700	50	0	Ant 2	w/	19.0	21.79	0.53	-0.11	0.601	0.32
	LTE 2	QPSK20M	Right Side	18900	50	0	Ant 2	w/	19.0	21.83	0.52	0.05	0.823	0.43
	LTE 2	QPSK20M	Front Face	19100	100	0	Ant 2	w/	19.0	21.89	0.51	-0.02	0.974	0.50
	LTE 2	QPSK20M	Rear Face	19100	100	0	Ant 2	w/	19.0	21.89	0.51	0.02	0.841	0.43
	LTE 2	QPSK20M	Right Side	19100	100	0	Ant 2	w/	19.0	21.89	0.51	-0.03	0.818	0.42
	LTE 2	QPSK20M	Front Face	18900	1	50	Ant 2	w/	20.0	22.85	0.52	0.04	1.06	0.55

Note:

1. The "< 0.001" means there is no SAR value or the SAR is too low to be measured.
2. The antenna2 of LTE2 only can work on the EN-DC and CA UL mode. The Antenna2 standalone SAR of LTE 2 had been tested and the results had been scaled to the EN-DC and CA UL mode power level(20dBm) for SAR evaluation.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 4	QPSK20M	Front Face	20300	1	50	Ant 1	-	24.0	23.94	1.01	-0.04	0.539	0.54
	LTE 4	QPSK20M	Rear Face	20300	1	50	Ant 1	-	24.0	23.94	1.01	-0.07	0.627	0.63
	LTE 4	QPSK20M	Left Side	20300	1	50	Ant 1	-	24.0	23.94	1.01	0.17	0.417	0.42
	LTE 4	QPSK20M	Right Side	20300	1	50	Ant 1	-	24.0	23.94	1.01	0.02	0.041	0.04
	LTE 4	QPSK20M	Top Side	20300	1	50	Ant 1	-	24.0	23.94	1.01	0.12	0.485	0.49
	LTE 4	QPSK20M	Bottom Side	20300	1	50	Ant 1	-	24.0	23.94	1.01	-0.08	0.048	0.05
	LTE 4	QPSK20M	Front Face	20300	50	25	Ant 1	-	23.0	22.93	1.02	-0.04	0.402	0.41
	LTE 4	QPSK20M	Rear Face	20300	50	25	Ant 1	-	23.0	22.93	1.02	-0.06	0.541	0.55
	LTE 4	QPSK20M	Left Side	20300	50	25	Ant 1	-	23.0	22.93	1.02	-0.02	0.368	0.38
	LTE 4	QPSK20M	Right Side	20300	50	25	Ant 1	-	23.0	22.93	1.02	0.13	0.039	0.04
	LTE 4	QPSK20M	Top Side	20300	50	25	Ant 1	-	23.0	22.93	1.02	0.10	0.404	0.41
	LTE 4	QPSK20M	Bottom Side	20300	50	25	Ant 1	-	23.0	22.93	1.02	-0.08	0.043	0.04
	LTE 4	QPSK20M	Rear Face	20050	1	50	Ant 1	-	24.0	23.63	1.09	-0.05	0.472	0.51
05	LTE 4	QPSK20M	Rear Face	20175	1	50	Ant 1	-	24.0	23.79	1.05	0.03	0.639	**0.67**
	LTE 4	QPSK20M	Front Face	20300	1	50	Ant 2	-	24.0	23.94	1.01	-0.06	0.631	0.64
	LTE 4	QPSK20M	Rear Face	20300	1	50	Ant 2	-	24.0	23.94	1.01	-0.14	0.649	0.66
	LTE 4	QPSK20M	Left Side	20300	1	50	Ant 2	-	24.0	23.94	1.01	0.03	0.061	0.06
	LTE 4	QPSK20M	Right Side	20300	1	50	Ant 2	-	24.0	23.94	1.01	0.01	0.491	0.50
	LTE 4	QPSK20M	Top Side	20300	1	50	Ant 2	-	24.0	23.94	1.01	0.03	0.552	0.56
	LTE 4	QPSK20M	Bottom Side	20300	1	50	Ant 2	-	24.0	23.94	1.01	-0.02	0.061	0.06
	LTE 4	QPSK20M	Front Face	20300	50	25	Ant 2	-	23.0	22.93	1.02	-0.14	0.621	0.63
	LTE 4	QPSK20M	Rear Face	20300	50	25	Ant 2	-	23.0	22.93	1.02	-0.13	0.629	0.64
	LTE 4	QPSK20M	Left Side	20300	50	25	Ant 2	-	23.0	22.93	1.02	-0.02	0.058	0.06
	LTE 4	QPSK20M	Right Side	20300	50	25	Ant 2	-	23.0	22.93	1.02	0.01	0.484	0.49
	LTE 4	QPSK20M	Top Side	20300	50	25	Ant 2	-	23.0	22.93	1.02	0.03	0.547	0.56
	LTE 4	QPSK20M	Bottom Side	20300	50	25	Ant 2	-	23.0	22.93	1.02	0.08	0.056	0.06
06	LTE 4	QPSK20M	Rear Face	20050	1	50	Ant 2	-	24.0	23.63	1.09	-0.10	0.680	**0.74**
	LTE 4	QPSK20M	Rear Face	20175	1	50	Ant 2	-	24.0	23.79	1.05	-0.07	0.577	0.61

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 5	QPSK10M	Front Face	20600	1	49	Ant 1	-	24.0	23.52	1.12	0.03	0.523	0.59
	LTE 5	QPSK10M	Rear Face	20600	1	49	Ant 1	-	24.0	23.52	1.12	-0.01	0.519	0.58
	LTE 5	QPSK10M	Left Side	20600	1	49	Ant 1	-	24.0	23.52	1.12	-0.11	0.316	0.35
	LTE 5	QPSK10M	Right Side	20600	1	49	Ant 1	-	24.0	23.52	1.12	-0.02	0.049	0.05
	LTE 5	QPSK10M	Top Side	20600	1	49	Ant 1	-	24.0	23.52	1.12	0.07	0.206	0.23
	LTE 5	QPSK10M	Bottom Side	20600	1	49	Ant 1	-	24.0	23.52	1.12	-0.08	0.085	0.10
	LTE 5	QPSK10M	Front Face	20600	25	25	Ant 1	-	23.0	22.46	1.13	-0.05	0.486	0.55
	LTE 5	QPSK10M	Rear Face	20600	25	25	Ant 1	-	23.0	22.46	1.13	-0.10	0.435	0.49
	LTE 5	QPSK10M	Left Side	20600	25	25	Ant 1	-	23.0	22.46	1.13	0.01	0.216	0.24
	LTE 5	QPSK10M	Right Side	20600	25	25	Ant 1	-	23.0	22.46	1.13	0.02	0.041	0.05
	LTE 5	QPSK10M	Top Side	20600	25	25	Ant 1	-	23.0	22.46	1.13	0.04	0.161	0.18
	LTE 5	QPSK10M	Bottom Side	20600	25	25	Ant 1	-	23.0	22.46	1.13	0.05	0.069	0.08
07	LTE 5	QPSK10M	Front Face	20450	1	49	Ant 1	-	24.0	23.34	1.16	-0.10	0.525	**0.61**
	LTE 5	QPSK10M	Front Face	20525	1	49	Ant 1	-	24.0	23.39	1.15	-0.03	0.515	0.59
	LTE 5 CA	QPSK10M	Front Face	PCC:20501 SCC:20600	PCC:1 SCC:1	PCC:49 SCC:0	Ant1	-	24.0	23.38	1.15	-0.12	0.497	0.57
For EN-DC														
	LTE 5	QPSK10M	Front Face	20600	1	49	Ant 1	w/	21.0	23.52	0.56	0.03	0.523	0.29
	LTE 5	QPSK10M	Rear Face	20600	1	49	Ant 1	w/	21.0	23.52	0.56	-0.01	0.519	0.29
	LTE 5	QPSK10M	Left Side	20600	1	49	Ant 1	w/	21.0	23.52	0.56	-0.11	0.316	0.18
	LTE 5	QPSK10M	Right Side	20600	1	49	Ant 1	w/	21.0	23.52	0.56	-0.02	0.049	0.03
	LTE 5	QPSK10M	Top Side	20600	1	49	Ant 1	w/	21.0	23.52	0.56	0.07	0.206	0.12
	LTE 5	QPSK10M	Bottom Side	20600	1	49	Ant 1	w/	21.0	23.52	0.56	-0.08	0.085	0.05
	LTE 5	QPSK10M	Front Face	20600	25	25	Ant 1	w/	20.0	22.46	0.57	-0.05	0.486	0.28
	LTE 5	QPSK10M	Rear Face	20600	25	25	Ant 1	w/	20.0	22.46	0.57	-0.10	0.435	0.25
	LTE 5	QPSK10M	Left Side	20600	25	25	Ant 1	w/	20.0	22.46	0.57	0.01	0.216	0.12
	LTE 5	QPSK10M	Right Side	20600	25	25	Ant 1	w/	20.0	22.46	0.57	0.02	0.041	0.02
	LTE 5	QPSK10M	Top Side	20600	25	25	Ant 1	w/	20.0	22.46	0.57	0.04	0.161	0.09
	LTE 5	QPSK10M	Bottom Side	20600	25	25	Ant 1	w/	20.0	22.46	0.57	0.05	0.069	0.04
	LTE 5	QPSK10M	Front Face	20450	1	49	Ant 1	w/	21.0	23.34	0.58	-0.10	0.525	0.30
	LTE 5	QPSK10M	Front Face	20525	1	49	Ant 1	w/	21.0	23.39	0.58	-0.03	0.515	0.30

Note : The standalone of LTE 5 SAR had been tested and the results had been scaled to the EN-DC mode power level, the tune up of LTE 5 is 21dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 7	QPSK20M	Front Face	21100	1	0	Ant 1	-	24.0	23.96	1.01	-0.06	1.03	1.04
	LTE 7	QPSK20M	Rear Face	21100	1	0	Ant 1	-	24.0	23.96	1.01	0.02	1.02	1.03
	LTE 7	QPSK20M	Left Side	21100	1	0	Ant 1	-	24.0	23.96	1.01	0.01	0.985	0.99
	LTE 7	QPSK20M	Right Side	21100	1	0	Ant 1	-	24.0	23.96	1.01	-0.05	0.122	0.12
	LTE 7	QPSK20M	Top Side	21100	1	0	Ant 1	-	24.0	23.96	1.01	-0.03	0.675	0.68
	LTE 7	QPSK20M	Bottom Side	21100	1	0	Ant 1	-	24.0	23.96	1.01	0.03	0.075	0.08
	LTE 7	QPSK20M	Front Face	21100	50	0	Ant 1	-	23.0	22.98	1.00	-0.10	0.877	0.88
	LTE 7	QPSK20M	Rear Face	21100	50	0	Ant 1	-	23.0	22.98	1.00	-0.12	0.964	0.96
	LTE 7	QPSK20M	Left Side	21100	50	0	Ant 1	-	23.0	22.98	1.00	0.18	0.868	0.87
	LTE 7	QPSK20M	Right Side	21100	50	0	Ant 1	-	23.0	22.98	1.00	-0.11	0.103	0.10
	LTE 7	QPSK20M	Top Side	21100	50	0	Ant 1	-	23.0	22.98	1.00	-0.01	0.552	0.55
	LTE 7	QPSK20M	Bottom Side	21100	50	0	Ant 1	-	23.0	22.98	1.00	0.08	0.061	0.06
	LTE 7	QPSK20M	Front Face	20850	1	0	Ant 1	-	24.0	22.62	1.37	-0.04	0.818	1.12
	LTE 7	QPSK20M	Front Face	21350	1	0	Ant 1	-	24.0	23.61	1.09	-0.04	0.892	0.97
	LTE 7	QPSK20M	Rear Face	20850	1	0	Ant 1	-	24.0	22.62	1.37	-0.07	0.870	1.19
08	LTE 7	QPSK20M	Rear Face	21350	1	0	Ant 1	-	24.0	23.61	1.09	-0.03	1.09	**1.19**
	LTE 7	QPSK20M	Left Side	20850	1	0	Ant 1	-	24.0	22.62	1.37	0.11	0.754	1.03
	LTE 7	QPSK20M	Left Side	21350	1	0	Ant 1	-	24.0	23.61	1.09	0.16	0.979	1.07
	LTE 7	QPSK20M	Front Face	20850	50	0	Ant 1	-	23.0	22.13	1.22	0.01	0.922	1.12
	LTE 7	QPSK20M	Front Face	21350	50	0	Ant 1	-	23.0	22.30	1.17	-0.03	0.611	0.71
	LTE 7	QPSK20M	Rear Face	20850	50	0	Ant 1	-	23.0	22.13	1.22	-0.13	0.970	1.18
	LTE 7	QPSK20M	Rear Face	21350	50	0	Ant 1	-	23.0	22.30	1.17	-0.04	0.633	0.74
	LTE 7	QPSK20M	Left Side	20850	50	0	Ant 1	-	23.0	22.13	1.22	-0.06	0.706	0.86
	LTE 7	QPSK20M	Left Side	21350	50	0	Ant 1	-	23.0	22.30	1.17	-0.02	0.682	0.80
	LTE 7	QPSK20M	Front Face	21100	100	0	Ant 1	-	23.0	22.96	1.01	0.03	0.913	0.92
	LTE 7	QPSK20M	Rear Face	21100	100	0	Ant 1	-	23.0	22.96	1.01	-0.01	0.956	0.97
	LTE 7	QPSK20M	Left Side	21100	100	0	Ant 1	-	23.0	22.96	1.01	-0.06	0.862	0.87
	LTE 7	QPSK20M	Rear Face	21350	1	0	Ant 1	-	24.0	23.61	1.09	0.01	1.06	1.16

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
09	LTE 12	QPSK10M	Front Face	23130	1	24	Ant 1	-	24.0	23.69	1.07	0.06	0.562	**0.60**
	LTE 12	QPSK10M	Rear Face	23130	1	24	Ant 1	-	24.0	23.69	1.07	0.01	0.541	0.58
	LTE 12	QPSK10M	Left Side	23130	1	24	Ant 1	-	24.0	23.69	1.07	-0.02	0.185	0.20
	LTE 12	QPSK10M	Right Side	23130	1	24	Ant 1	-	24.0	23.69	1.07	0.16	0.062	0.07
	LTE 12	QPSK10M	Top Side	23130	1	24	Ant 1	-	24.0	23.69	1.07	-0.03	0.258	0.28
	LTE 12	QPSK10M	Bottom Side	23130	1	24	Ant 1	-	24.0	23.69	1.07	0.06	0.028	0.03
	LTE 12	QPSK10M	Front Face	23130	25	12	Ant 1	-	23.0	22.67	1.08	-0.01	0.498	0.54
	LTE 12	QPSK10M	Rear Face	23130	25	12	Ant 1	-	23.0	22.67	1.08	-0.09	0.449	0.48
	LTE 12	QPSK10M	Left Side	23130	25	12	Ant 1	-	23.0	22.67	1.08	-0.03	0.128	0.14
	LTE 12	QPSK10M	Right Side	23130	25	12	Ant 1	-	23.0	22.67	1.08	-0.08	0.059	0.06
	LTE 12	QPSK10M	Top Side	23130	25	12	Ant 1	-	23.0	22.67	1.08	0.01	0.192	0.21
	LTE 12	QPSK10M	Bottom Side	23130	25	12	Ant 1	-	23.0	22.67	1.08	-0.03	0.019	0.02
	LTE 12	QPSK10M	Front Face	23060	1	24	Ant 1	-	24.0	23.67	1.08	-0.13	0.559	0.60
	LTE 12	QPSK10M	Front Face	23095	1	24	Ant 1	-	24.0	23.63	1.09	-0.15	0.538	0.59
For EN-DC														
	LTE 12	QPSK10M	Front Face	23130	1	24	Ant 1	w/	21.0	23.69	0.54	0.06	0.635	0.34
	LTE 12	QPSK10M	Rear Face	23130	1	24	Ant 1	w/	21.0	23.69	0.54	0.01	0.541	0.29
	LTE 12	QPSK10M	Left Side	23130	1	24	Ant 1	w/	21.0	23.69	0.54	-0.02	0.185	0.10
	LTE 12	QPSK10M	Right Side	23130	1	24	Ant 1	w/	21.0	23.69	0.54	0.16	0.062	0.03
	LTE 12	QPSK10M	Top Side	23130	1	24	Ant 1	w/	21.0	23.69	0.54	-0.03	0.258	0.14
	LTE 12	QPSK10M	Bottom Side	23130	1	24	Ant 1	w/	21.0	23.69	0.54	0.06	0.028	0.02
	LTE 12	QPSK10M	Front Face	23130	25	12	Ant 1	w/	20.0	22.67	0.54	-0.01	0.498	0.27
	LTE 12	QPSK10M	Rear Face	23130	25	12	Ant 1	w/	20.0	22.67	0.54	-0.09	0.449	0.24
	LTE 12	QPSK10M	Left Side	23130	25	12	Ant 1	w/	20.0	22.67	0.54	-0.03	0.128	0.07
	LTE 12	QPSK10M	Right Side	23130	25	12	Ant 1	w/	20.0	22.67	0.54	-0.08	0.059	0.03
	LTE 12	QPSK10M	Top Side	23130	25	12	Ant 1	w/	20.0	22.67	0.54	0.01	0.192	0.10
	LTE 12	QPSK10M	Bottom Side	23130	25	12	Ant 1	w/	20.0	22.67	0.54	-0.03	0.019	0.01
	LTE 12	QPSK10M	Front Face	23060	1	24	Ant 1	w/	21.0	23.67	0.54	-0.13	0.559	0.30
	LTE 12	QPSK10M	Front Face	23095	1	24	Ant 1	w/	21.0	23.63	0.55	-0.15	0.538	0.30
10	LTE 14	QPSK10M	Front Face	23330	1	49	Ant 1	-	24.0	23.14	1.22	-0.11	0.521	**0.64**
	LTE 14	QPSK10M	Rear Face	23330	1	49	Ant 1	-	24.0	23.14	1.22	-0.01	0.473	0.58
	LTE 14	QPSK10M	Left Side	23330	1	49	Ant 1	-	24.0	23.14	1.22	-0.01	0.271	0.33
	LTE 14	QPSK10M	Right Side	23330	1	49	Ant 1	-	24.0	23.14	1.22	0.01	0.047	0.06
	LTE 14	QPSK10M	Top Side	23330	1	49	Ant 1	-	24.0	23.14	1.22	0.00	0.080	0.10
	LTE 14	QPSK10M	Bottom Side	23330	1	49	Ant 1	-	24.0	23.14	1.22	-0.07	0.050	0.06
	LTE 14	QPSK10M	Front Face	23330	25	25	Ant 1	-	23.0	22.17	1.21	-0.10	0.427	0.52
	LTE 14	QPSK10M	Rear Face	23330	25	25	Ant 1	-	23.0	22.17	1.21	-0.04	0.404	0.49
	LTE 14	QPSK10M	Left Side	23330	25	25	Ant 1	-	23.0	22.17	1.21	0.00	0.221	0.27
	LTE 14	QPSK10M	Right Side	23330	25	25	Ant 1	-	23.0	22.17	1.21	-0.02	0.039	0.05
	LTE 14	QPSK10M	Top Side	23330	25	25	Ant 1	-	23.0	22.17	1.21	-0.05	0.00944	0.01
	LTE 14	QPSK10M	Bottom Side	23330	25	25	Ant 1	-	23.0	22.17	1.21	-0.01	0.028	0.03

Note : The standalone of LTE 12 SAR had been tested and the results had been scaled to the EN-DC mode power level, the tune up of LTE 12 is 21dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 30	QPSK10M	Front Face	27710	1	0	Ant 1	-	23.0	22.65	1.08	-0.12	0.857	0.93
11	LTE 30	QPSK10M	Rear Face	27710	1	0	Ant 1	-	23.0	22.65	1.08	-0.05	0.874	**0.94**
	LTE 30	QPSK10M	Left Side	27710	1	0	Ant 1	-	23.0	22.65	1.08	-0.12	0.660	0.71
	LTE 30	QPSK10M	Right Side	27710	1	0	Ant 1	-	23.0	22.65	1.08	0.03	0.074	0.08
	LTE 30	QPSK10M	Top Side	27710	1	0	Ant 1	-	23.0	22.65	1.08	-0.16	0.559	0.60
	LTE 30	QPSK10M	Bottom Side	27710	1	0	Ant 1	-	23.0	22.65	1.08	0.05	0.086	0.09
	LTE 30	QPSK10M	Front Face	27710	25	12	Ant 1	-	22.0	21.56	1.11	-0.06	0.687	0.76
	LTE 30	QPSK10M	Rear Face	27710	25	12	Ant 1	-	22.0	21.56	1.11	-0.01	0.735	0.82
	LTE 30	QPSK10M	Left Side	27710	25	12	Ant 1	-	22.0	21.56	1.11	-0.16	0.534	0.59
	LTE 30	QPSK10M	Right Side	27710	25	12	Ant 1	-	22.0	21.56	1.11	-0.12	0.061	0.07
	LTE 30	QPSK10M	Top Side	27710	25	12	Ant 1	-	22.0	21.56	1.11	-0.16	0.452	0.50
	LTE 30	QPSK10M	Bottom Side	27710	25	12	Ant 1	-	22.0	21.56	1.11	0.05	0.069	0.08
	LTE 30	QPSK10M	Front Face	27710	50	0	Ant 1	-	22.0	21.46	1.13	-0.17	0.736	0.83
	LTE 30	QPSK10M	Rear Face	27710	50	0	Ant 1	-	22.0	21.46	1.13	-0.07	0.743	0.84
	LTE 30	QPSK10M	Rear Face	27710	1	0	Ant 1	-	23.0	22.65	1.08	0.01	0.863	0.93
For EN-DC														
	LTE 30	QPSK10M	Front Face	27710	1	0	Ant 1	w/	20.0	22.65	0.54	-0.12	0.857	0.46
	LTE 30	QPSK10M	Rear Face	27710	1	0	Ant 1	w/	20.0	22.65	0.54	-0.05	0.874	0.47
	LTE 30	QPSK10M	Left Side	27710	1	0	Ant 1	w/	20.0	22.65	0.54	-0.12	0.660	0.36
	LTE 30	QPSK10M	Right Side	27710	1	0	Ant 1	w/	20.0	22.65	0.54	0.03	0.074	0.04
	LTE 30	QPSK10M	Top Side	27710	1	0	Ant 1	w/	20.0	22.65	0.54	-0.16	0.559	0.30
	LTE 30	QPSK10M	Bottom Side	27710	1	0	Ant 1	w/	20.0	22.65	0.54	0.05	0.086	0.05
	LTE 30	QPSK10M	Front Face	27710	25	12	Ant 1	w/	19.0	21.56	0.55	-0.06	0.687	0.38
	LTE 30	QPSK10M	Rear Face	27710	25	12	Ant 1	w/	19.0	21.56	0.55	-0.01	0.735	0.40
	LTE 30	QPSK10M	Left Side	27710	25	12	Ant 1	w/	19.0	21.56	0.55	-0.16	0.534	0.29
	LTE 30	QPSK10M	Right Side	27710	25	12	Ant 1	w/	19.0	21.56	0.55	-0.12	0.061	0.03
	LTE 30	QPSK10M	Top Side	27710	25	12	Ant 1	w/	19.0	21.56	0.55	-0.16	0.452	0.25
	LTE 30	QPSK10M	Bottom Side	27710	25	12	Ant 1	w/	19.0	21.56	0.55	0.05	0.069	0.04
	LTE 30	QPSK10M	Front Face	27710	50	0	Ant 1	w/	19.0	21.46	0.57	-0.17	0.736	0.42
	LTE 30	QPSK10M	Rear Face	27710	50	0	Ant 1	w/	19.0	21.46	0.57	-0.07	0.743	0.42
	LTE 30	QPSK10M	Rear Face	27710	1	0	Ant 1	w/	20.0	22.65	0.54	0.01	0.863	0.47
	LTE 48	QPSK20M	Front Face	56640	1	99	Ant 2	-	24.0	23.96	1.01	-0.04	0.490	0.49
	LTE 48	QPSK20M	Rear Face	56640	1	99	Ant 2	-	24.0	23.96	1.01	-0.06	0.511	0.52
	LTE 48	QPSK20M	Left Side	56640	1	99	Ant 2	-	24.0	23.96	1.01	0.05	0.163	0.16
	LTE 48	QPSK20M	Right Side	56640	1	99	Ant 2	-	24.0	23.96	1.01	-0.13	0.343	0.35
	LTE 48	QPSK20M	Top Side	56640	1	99	Ant 2	-	24.0	23.96	1.01	-0.05	0.213	0.22
	LTE 48	QPSK20M	Bottom Side	56640	1	99	Ant 2	-	24.0	23.96	1.01	-0.02	0.081	0.08
	LTE 48	QPSK20M	Front Face	56640	50	50	Ant 2	-	23.0	22.94	1.01	0.01	0.385	0.39
	LTE 48	QPSK20M	Rear Face	56640	50	50	Ant 2	-	23.0	22.94	1.01	-0.03	0.399	0.40
	LTE 48	QPSK20M	Left Side	56640	50	50	Ant 2	-	23.0	22.94	1.01	0.03	0.169	0.17
	LTE 48	QPSK20M	Right Side	56640	50	50	Ant 2	-	23.0	22.94	1.01	-0.11	0.296	0.30
	LTE 48	QPSK20M	Top Side	56640	50	50	Ant 2	-	23.0	22.94	1.01	-0.15	0.177	0.18
	LTE 48	QPSK20M	Bottom Side	56640	50	50	Ant 2	-	23.0	22.94	1.01	-0.07	0.061	0.06
	LTE 48	QPSK20M	Rear Face	55340	1	99	Ant 2	-	24.0	23.62	1.09	-0.03	0.481	0.52
12	LTE 48	QPSK20M	Rear Face	55780	1	99	Ant 2	-	24.0	23.96	1.01	-0.19	0.691	**0.70**
	LTE 48	QPSK20M	Rear Face	56210	1	99	Ant 2	-	24.0	23.91	1.02	-0.15	0.567	0.58

Note : The standalone of LTE 30 SAR had been tested and the results had been scaled to the EN-DC mode power level, the tune up of LTE 30 is 20dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 66	QPSK20M	Front Face	132572	1	50	Ant 1	-	24.0	23.92	1.02	-0.10	0.593	0.60
13	LTE 66	QPSK20M	Rear Face	132572	1	50	Ant 1	-	24.0	23.92	1.02	-0.02	0.658	**0.67**
	LTE 66	QPSK20M	Left Side	132572	1	50	Ant 1	-	24.0	23.92	1.02	0.08	0.449	0.46
	LTE 66	QPSK20M	Right Side	132572	1	50	Ant 1	-	24.0	23.92	1.02	-0.03	0.082	0.08
	LTE 66	QPSK20M	Top Side	132572	1	50	Ant 1	-	24.0	23.92	1.02	0.03	0.412	0.42
	LTE 66	QPSK20M	Bottom Side	132572	1	50	Ant 1	-	24.0	23.92	1.02	0.08	0.069	0.07
	LTE 66	QPSK20M	Front Face	132572	50	25	Ant 1	-	23.0	22.88	1.03	0.07	0.475	0.49
	LTE 66	QPSK20M	Rear Face	132572	50	25	Ant 1	-	23.0	22.88	1.03	0.05	0.528	0.54
	LTE 66	QPSK20M	Left Side	132572	50	25	Ant 1	-	23.0	22.88	1.03	-0.09	0.324	0.33
	LTE 66	QPSK20M	Right Side	132572	50	25	Ant 1	-	23.0	22.88	1.03	-0.08	0.066	0.07
	LTE 66	QPSK20M	Top Side	132572	50	25	Ant 1	-	23.0	22.88	1.03	0.01	0.302	0.31
	LTE 66	QPSK20M	Bottom Side	132572	50	25	Ant 1	-	23.0	22.88	1.03	0.02	0.055	0.06
	LTE 66	QPSK20M	Rear Face	132072	1	50	Ant 1	-	24.0	23.86	1.03	-0.09	0.553	0.57
	LTE 66	QPSK20M	Rear Face	132322	1	50	Ant 1	-	24.0	23.89	1.03	-0.13	0.513	0.53
For EN-DC														
	LTE 66	QPSK20M	Front Face	132572	1	50	Ant 1	w/	21.0	23.92	0.51	-0.10	0.593	0.30
	LTE 66	QPSK20M	Rear Face	132572	1	50	Ant 1	w/	21.0	23.92	0.51	-0.02	0.658	0.34
	LTE 66	QPSK20M	Left Side	132572	1	50	Ant 1	w/	21.0	23.92	0.51	0.08	0.449	0.23
	LTE 66	QPSK20M	Right Side	132572	1	50	Ant 1	w/	21.0	23.92	0.51	-0.03	0.082	0.04
	LTE 66	QPSK20M	Top Side	132572	1	50	Ant 1	w/	21.0	23.92	0.51	0.03	0.412	0.21
	LTE 66	QPSK20M	Bottom Side	132572	1	50	Ant 1	w/	21.0	23.92	0.51	0.08	0.069	0.04
	LTE 66	QPSK20M	Front Face	132572	50	25	Ant 1	w/	20.0	22.88	0.52	0.07	0.475	0.25
	LTE 66	QPSK20M	Rear Face	132572	50	25	Ant 1	w/	20.0	22.88	0.52	0.05	0.528	0.27
	LTE 66	QPSK20M	Left Side	132572	50	25	Ant 1	w/	20.0	22.88	0.52	-0.09	0.324	0.17
	LTE 66	QPSK20M	Right Side	132572	50	25	Ant 1	w/	20.0	22.88	0.52	-0.08	0.066	0.03
	LTE 66	QPSK20M	Top Side	132572	50	25	Ant 1	w/	20.0	22.88	0.52	0.01	0.302	0.16
	LTE 66	QPSK20M	Bottom Side	132572	50	25	Ant 1	w/	20.0	22.88	0.52	0.02	0.055	0.03
	LTE 66	QPSK20M	Rear Face	132072	1	50	Ant 1	w/	21.0	23.86	0.52	-0.09	0.553	0.29
	LTE 66	QPSK20M	Rear Face	132322	1	50	Ant 1	w/	21.0	23.89	0.51	-0.13	0.513	0.26

Note : The standalone of LTE 66 SAR had been tested and the results had been scaled to the EN-DC mode power level, the tune up of LTE 66 is 21dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
14	LTE 66	QPSK20M	Front Face	132572	1	50	Ant 2	-	24	23.92	1.02	-0.15	1.17	**1.19**
	LTE 66	QPSK20M	Rear Face	132572	1	50	Ant 2	-	24	23.92	1.02	-0.06	1.02	1.04
	LTE 66	QPSK20M	Left Side	132572	1	50	Ant 2	-	24	23.92	1.02	-0.17	0.087	0.09
	LTE 66	QPSK20M	Right Side	132572	1	50	Ant 2	-	24	23.92	1.02	-0.06	0.616	0.63
	LTE 66	QPSK20M	Top Side	132572	1	50	Ant 2	-	24	23.92	1.02	0.11	0.661	0.67
	LTE 66	QPSK20M	Bottom Side	132572	1	50	Ant 2	-	24	23.92	1.02	-0.06	0.066	0.07
	LTE 66	QPSK20M	Front Face	132572	50	25	Ant 2	-	23	22.88	1.03	-0.01	0.913	0.94
	LTE 66	QPSK20M	Rear Face	132572	50	25	Ant 2	-	23	22.88	1.03	-0.03	0.805	0.83
	LTE 66	QPSK20M	Left Side	132572	50	25	Ant 2	-	23	22.88	1.03	-0.14	0.080	0.08
	LTE 66	QPSK20M	Right Side	132572	50	25	Ant 2	-	23	22.88	1.03	-0.06	0.670	0.69
	LTE 66	QPSK20M	Top Side	132572	50	25	Ant 2	-	23	22.88	1.03	0.12	0.673	0.69
	LTE 66	QPSK20M	Bottom Side	132572	50	25	Ant 2	-	23	22.88	1.03	-0.06	0.065	0.07
	LTE 66	QPSK20M	Front Face	132072	1	50	Ant 2	-	24	23.86	1.03	-0.10	0.959	0.99
	LTE 66	QPSK20M	Front Face	132322	1	50	Ant 2	-	24	23.89	1.03	0.01	0.889	0.92
	LTE 66	QPSK20M	Rear Face	132072	1	50	Ant 2	-	24	23.86	1.03	-0.04	0.950	0.98
	LTE 66	QPSK20M	Rear Face	132322	1	50	Ant 2	-	24	23.89	1.03	-0.01	0.902	0.93
	LTE 66	QPSK20M	Front Face	132072	50	25	Ant 2	-	23	22.82	1.04	0.02	1.00	1.04
	LTE 66	QPSK20M	Front Face	132322	50	25	Ant 2	-	23	22.85	1.04	-0.08	0.945	0.98
	LTE 66	QPSK20M	Rear Face	132072	50	25	Ant 2	-	23	22.82	1.04	-0.06	0.994	1.03
	LTE 66	QPSK20M	Rear Face	132322	50	25	Ant 2	-	23	22.85	1.04	-0.02	0.925	0.96
	LTE 66	QPSK20M	Front Face	132572	100	0	Ant 2	-	23	22.85	1.04	-0.04	0.915	0.95
	LTE 66	QPSK20M	Rear Face	132572	100	0	Ant 2	-	23	22.85	1.04	-0.01	0.825	0.86
	LTE 66	QPSK20M	Front Face	132572	1	50	Ant 2	-	24	23.92	1.02	-0.03	1.10	1.12
For EN-DC														
	LTE 66	QPSK20M	Front Face	132572	1	50	Ant 2	w/	21.0	23.92	0.51	-0.15	1.17	0.60
	LTE 66	QPSK20M	Rear Face	132572	1	50	Ant 2	w/	21.0	23.92	0.51	-0.06	1.02	0.52
	LTE 66	QPSK20M	Left Side	132572	1	50	Ant 2	w/	21.0	23.92	0.51	-0.17	0.087	0.04
	LTE 66	QPSK20M	Right Side	132572	1	50	Ant 2	w/	21.0	23.92	0.51	-0.06	0.616	0.31
	LTE 66	QPSK20M	Top Side	132572	1	50	Ant 2	w/	21.0	23.92	0.51	0.11	0.661	0.34
	LTE 66	QPSK20M	Bottom Side	132572	1	50	Ant 2	w/	21.0	23.92	0.51	-0.06	0.066	0.03
	LTE 66	QPSK20M	Front Face	132572	50	25	Ant 2	w/	20.0	22.88	0.52	-0.01	0.913	0.47
	LTE 66	QPSK20M	Rear Face	132572	50	25	Ant 2	w/	20.0	22.88	0.52	-0.03	0.805	0.42
	LTE 66	QPSK20M	Left Side	132572	50	25	Ant 2	w/	20.0	22.88	0.52	-0.14	0.080	0.04
	LTE 66	QPSK20M	Right Side	132572	50	25	Ant 2	w/	20.0	22.88	0.52	-0.06	0.670	0.35
	LTE 66	QPSK20M	Top Side	132572	50	25	Ant 2	w/	20.0	22.88	0.52	0.12	0.673	0.35
	LTE 66	QPSK20M	Bottom Side	132572	50	25	Ant 2	w/	20.0	22.88	0.52	-0.06	0.065	0.03
	LTE 66	QPSK20M	Front Face	132072	1	50	Ant 2	w/	21.0	23.86	0.52	-0.10	0.959	0.50
	LTE 66	QPSK20M	Front Face	132322	1	50	Ant 2	w/	21.0	23.89	0.51	0.01	0.889	0.45
	LTE 66	QPSK20M	Rear Face	132072	1	50	Ant 2	w/	21.0	23.86	0.52	-0.04	0.950	0.49
	LTE 66	QPSK20M	Rear Face	132322	1	50	Ant 2	w/	21.0	23.89	0.51	-0.01	0.902	0.46
	LTE 66	QPSK20M	Front Face	132072	50	25	Ant 2	w/	20.0	22.82	0.52	0.02	1.00	0.52
	LTE 66	QPSK20M	Front Face	132322	50	25	Ant 2	w/	20.0	22.85	0.52	-0.08	0.945	0.49
	LTE 66	QPSK20M	Rear Face	132072	50	25	Ant 2	w/	20.0	22.82	0.52	-0.06	0.994	0.52
	LTE 66	QPSK20M	Rear Face	132322	50	25	Ant 2	w/	20.0	22.85	0.52	-0.02	0.925	0.48
	LTE 66	QPSK20M	Front Face	132572	100	0	Ant 2	w/	20.0	22.85	0.52	-0.04	0.915	0.48
	LTE 66	QPSK20M	Rear Face	132572	100	0	Ant 2	w/	20.0	22.85	0.52	-0.01	0.825	0.43
	LTE 66	QPSK20M	Front Face	132572	1	50	Ant 2	w/	21.0	23.92	0.51	-0.03	1.10	0.56

Note : The antenna2 of LTE66 only can work on the EN-DC and CA UL mode. The Antenna2 standalone SAR of LTE 66 had been tested and the results had been scaled to the EN-DC and CA UL mode power level(21dBm) for SAR evaluation.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	n2	DFT-S_QPSK	Front Face	380000	1	0	Ant 2	-	23.0	22.74	1.06	-0.01	0.714	0.76
	n2	DFT-S_QPSK	Rear Face	380000	1	0	Ant 2	-	23.0	22.74	1.06	0.06	0.645	0.68
	n2	DFT-S_QPSK	Left Side	380000	1	0	Ant 2	-	23.0	22.74	1.06	0	<0.001	0.00
	n2	DFT-S_QPSK	Right Side	380000	1	0	Ant 2	-	23.0	22.74	1.06	-0.03	0.461	0.49
	n2	DFT-S_QPSK	Top Side	380000	1	0	Ant 2	-	23.0	22.74	1.06	0.07	0.397	0.42
	n2	DFT-S_QPSK	Bottom Side	380000	1	0	Ant 2	-	23.0	22.74	1.06	0.02	0.032	0.03
	n2	DFT-S_QPSK	Front Face	372000	50	0	Ant 2	-	23.0	22.47	1.13	-0.05	0.661	0.75
	n2	DFT-S_QPSK	Rear Face	380000	50	0	Ant 2	-	23.0	22.47	1.13	0.02	0.603	0.68
	n2	DFT-S_QPSK	Left Side	380000	50	0	Ant 2	-	23.0	22.47	1.13	0	<0.001	0.00
	n2	DFT-S_QPSK	Right Side	380000	50	0	Ant 2	-	23.0	22.47	1.13	0.01	0.412	0.47
	n2	DFT-S_QPSK	Top Side	380000	50	0	Ant 2	-	23.0	22.47	1.13	-0.03	0.376	0.42
	n2	DFT-S_QPSK	Bottom Side	380000	50	0	Ant 2	-	23.0	22.47	1.13	-0.08	0.035	0.04
	n2	DFT-S_QPSK	Front Face	372000	1	0	Ant 2	-	23.0	22.65	1.08	0.01	0.545	0.59
	n2	DFT-S_QPSK	Front Face	376000	1	0	Ant 2	-	23.0	22.21	1.2	0.05	0.494	0.59
For EN-DC														
15	n2	DFT-S_QPSK	Front Face	380000	1	0	Ant 2	w/	20.0	22.74	0.53	-0.01	0.714	**0.38**
	n2	DFT-S_QPSK	Rear Face	380000	1	0	Ant 2	w/	20.0	22.74	0.53	0.06	0.645	0.34
	n2	DFT-S_QPSK	Left Side	380000	1	0	Ant 2	w/	20.0	22.74	0.53	0.00	<0.001	0.00
	n2	DFT-S_QPSK	Right Side	380000	1	0	Ant 2	w/	20.0	22.74	0.53	-0.03	0.461	0.24
	n2	DFT-S_QPSK	Top Side	380000	1	0	Ant 2	w/	20.0	22.74	0.53	0.07	0.397	0.21
	n2	DFT-S_QPSK	Bottom Side	380000	1	0	Ant 2	w/	20.0	22.74	0.53	0.02	0.032	0.02
	n2	DFT-S_QPSK	Front Face	372000	50	0	Ant 2	w/	20.0	22.47	0.57	-0.05	0.661	0.38
	n2	DFT-S_QPSK	Rear Face	380000	50	0	Ant 2	w/	20.0	22.47	0.57	0.02	0.603	0.34
	n2	DFT-S_QPSK	Left Side	380000	50	0	Ant 2	w/	20.0	22.47	0.57	0.00	<0.001	0.00
	n2	DFT-S_QPSK	Right Side	380000	50	0	Ant 2	w/	20.0	22.47	0.57	0.01	0.412	0.23
	n2	DFT-S_QPSK	Top Side	380000	50	0	Ant 2	w/	20.0	22.47	0.57	-0.03	0.376	0.21
	n2	DFT-S_QPSK	Bottom Side	380000	50	0	Ant 2	w/	20.0	22.47	0.57	-0.08	0.035	0.02
	n2	DFT-S_QPSK	Front Face	372000	1	0	Ant 2	w/	20.0	22.65	0.54	0.01	0.545	0.29
	n2	DFT-S_QPSK	Front Face	376000	1	0	Ant 2	w/	20.0	22.21	0.60	0.05	0.494	0.30

Note:

1. The "< 0.001" means there is no SAR value or the SAR is too low to be measured.
2. The standalone of 5G NR n2 SAR had been tested and there are no standalone mode in this device, thus the results had been scaled to the EN-DC mode power level, the tune up of 5G NR n2 is 20dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	n5	DFT-S_QPSK	Front Face	167300	1	53	Ant 1		24.0	23.95	1.01	-0.07	0.464	0.47
	n5	DFT-S_QPSK	Rear Face	167300	1	53	Ant 1		24.0	23.95	1.01	-0.03	0.392	0.40
	n5	DFT-S_QPSK	Left Side	167300	1	53	Ant 1		24.0	23.95	1.01	0.05	0.237	0.24
	n5	DFT-S_QPSK	Right Side	167300	1	53	Ant 1		24.0	23.95	1.01	0.03	0.035	0.04
	n5	DFT-S_QPSK	Top Side	167300	1	53	Ant 1		24.0	23.95	1.01	-0.01	0.139	0.14
	n5	DFT-S_QPSK	Bottom Side	167300	1	53	Ant 1		24.0	23.95	1.01	0.07	0.053	0.05
	n5	DFT-S_QPSK	Front Face	167300	50	25	Ant 1		24.0	23.92	1.02	0.12	0.438	0.45
	n5	DFT-S_QPSK	Rear Face	167300	50	25	Ant 1		24.0	23.92	1.02	-0.05	0.381	0.39
	n5	DFT-S_QPSK	Left Side	167300	50	25	Ant 1		24.0	23.92	1.02	0.08	0.235	0.24
	n5	DFT-S_QPSK	Right Side	167300	50	25	Ant 1		24.0	23.92	1.02	-0.09	0.031	0.03
	n5	DFT-S_QPSK	Top Side	167300	50	25	Ant 1		24.0	23.92	1.02	0.01	0.128	0.13
	n5	DFT-S_QPSK	Bottom Side	167300	50	25	Ant 1		24.0	23.92	1.02	0.05	0.051	0.05
	n5	DFT-S_QPSK	Front Face	166800	1	53	Ant 1		24.0	23.74	1.06	-0.03	0.384	0.41
	n5	DFT-S_QPSK	Front Face	167800	1	53	Ant 1		24.0	23.54	1.11	0.07	0.425	0.47
For EN-DC														
16	n5	DFT-S_QPSK	Front Face	167300	1	53	Ant 1	w/	21.0	23.95	0.51	-0.07	0.464	**0.24**
	n5	DFT-S_QPSK	Rear Face	167300	1	53	Ant 1	w/	21.0	23.95	0.51	-0.03	0.392	0.20
	n5	DFT-S_QPSK	Left Side	167300	1	53	Ant 1	w/	21.0	23.95	0.51	0.05	0.237	0.12
	n5	DFT-S_QPSK	Right Side	167300	1	53	Ant 1	w/	21.0	23.95	0.51	0.03	0.035	0.02
	n5	DFT-S_QPSK	Top Side	167300	1	53	Ant 1	w/	21.0	23.95	0.51	-0.01	0.139	0.07
	n5	DFT-S_QPSK	Bottom Side	167300	1	53	Ant 1	w/	21.0	23.95	0.51	0.07	0.053	0.03
	n5	DFT-S_QPSK	Front Face	167300	50	25	Ant 1	w/	21.0	23.92	0.51	0.12	0.438	0.22
	n5	DFT-S_QPSK	Rear Face	167300	50	25	Ant 1	w/	21.0	23.92	0.51	-0.05	0.381	0.19
	n5	DFT-S_QPSK	Left Side	167300	50	25	Ant 1	w/	21.0	23.92	0.51	0.08	0.235	0.12
	n5	DFT-S_QPSK	Right Side	167300	50	25	Ant 1	w/	21.0	23.92	0.51	-0.09	0.031	0.02
	n5	DFT-S_QPSK	Top Side	167300	50	25	Ant 1	w/	21.0	23.92	0.51	0.01	0.128	0.07
	n5	DFT-S_QPSK	Bottom Side	167300	50	25	Ant 1	w/	21.0	23.92	0.51	0.05	0.051	0.03
	n5	DFT-S_QPSK	Front Face	166800	1	53	Ant 1	w/	21.0	23.74	0.53	-0.03	0.384	0.20
	n5	DFT-S_QPSK	Front Face	167800	1	53	Ant 1	w/	21.0	23.54	0.56	0.07	0.425	0.24

Note: The standalone of 5G NR n5 SAR had been tested and there are no standalone mode in this device, thus the results had been scaled to the EN-DC mode power level, the tune up of 5G NR n5 is 21dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	n5	DFT-S_QPSK	Front Face	167300	1	53	Ant 2		24.0	23.95	1.01	-0.1	0.858	0.87
	n5	DFT-S_QPSK	Rear Face	167300	1	53	Ant 2		24.0	23.95	1.01	-0.05	0.811	0.82
	n5	DFT-S_QPSK	Left Side	167300	1	53	Ant 2		24.0	23.95	1.01	0.13	0.088	0.09
	n5	DFT-S_QPSK	Right Side	167300	1	53	Ant 2		24.0	23.95	1.01	0.08	0.341	0.34
	n5	DFT-S_QPSK	Top Side	167300	1	53	Ant 2		24.0	23.95	1.01	-0.06	0.279	0.28
	n5	DFT-S_QPSK	Bottom Side	167300	1	53	Ant 2		24.0	23.95	1.01	0.01	0.103	0.10
	n5	DFT-S_QPSK	Front Face	167300	50	25	Ant 2		24.0	23.92	1.02	0.08	0.836	0.85
	n5	DFT-S_QPSK	Rear Face	167300	50	25	Ant 2		24.0	23.92	1.02	-0.12	0.789	0.8
	n5	DFT-S_QPSK	Left Side	167300	50	25	Ant 2		24.0	23.92	1.02	0.06	0.083	0.08
	n5	DFT-S_QPSK	Right Side	167300	50	25	Ant 2		24.0	23.92	1.02	-0.01	0.331	0.34
	n5	DFT-S_QPSK	Top Side	167300	50	25	Ant 2		24.0	23.92	1.02	0.07	0.282	0.29
	n5	DFT-S_QPSK	Bottom Side	167300	50	25	Ant 2		24.0	23.92	1.02	0.02	0.091	0.09
	n5	DFT-S_QPSK	Front Face	166800	1	53	Ant 2		24.0	23.74	1.06	-0.05	0.802	0.85
	n5	DFT-S_QPSK	Front Face	167800	1	53	Ant 2		24.0	23.54	1.11	0.03	0.771	0.86
For EN-DC														
17	n5	DFT-S_QPSK	Front Face	167300	1	53	Ant 2	w/	21.0	23.95	0.51	-0.10	0.858	**0.44**
	n5	DFT-S_QPSK	Rear Face	167300	1	53	Ant 2	w/	21.0	23.95	0.51	-0.05	0.811	0.41
	n5	DFT-S_QPSK	Left Side	167300	1	53	Ant 2	w/	21.0	23.95	0.51	0.13	0.088	0.04
	n5	DFT-S_QPSK	Right Side	167300	1	53	Ant 2	w/	21.0	23.95	0.51	0.08	0.341	0.17
	n5	DFT-S_QPSK	Top Side	167300	1	53	Ant 2	w/	21.0	23.95	0.51	-0.06	0.279	0.14
	n5	DFT-S_QPSK	Bottom Side	167300	1	53	Ant 2	w/	21.0	23.95	0.51	0.01	0.103	0.05
	n5	DFT-S_QPSK	Front Face	167300	50	25	Ant 2	w/	21.0	23.92	0.51	0.08	0.836	0.43
	n5	DFT-S_QPSK	Rear Face	167300	50	25	Ant 2	w/	21.0	23.92	0.51	-0.12	0.789	0.40
	n5	DFT-S_QPSK	Left Side	167300	50	25	Ant 2	w/	21.0	23.92	0.51	0.06	0.083	0.04
	n5	DFT-S_QPSK	Right Side	167300	50	25	Ant 2	w/	21.0	23.92	0.51	-0.01	0.331	0.17
	n5	DFT-S_QPSK	Top Side	167300	50	25	Ant 2	w/	21.0	23.92	0.51	0.07	0.282	0.14
	n5	DFT-S_QPSK	Bottom Side	167300	50	25	Ant 2	w/	21.0	23.92	0.51	0.02	0.091	0.05
	n5	DFT-S_QPSK	Front Face	166800	1	53	Ant 2	w/	21.0	23.74	0.53	-0.05	0.802	0.43
	n5	DFT-S_QPSK	Front Face	167800	1	53	Ant 2	w/	21.0	23.54	0.56	0.03	0.771	0.43

Note: The standalone of 5G NR n5 SAR had been tested and there are no standalone mode in this device, thus the results had been scaled to the EN-DC mode power level, the tune up of 5G NR n5 is 21dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	n66	DFT-S_QPSK	Front Face	349000	1	53	Ant 1		24.0	23.32	1.17	-0.17	0.608	0.71
	n66	DFT-S_QPSK	Rear Face	349000	1	53	Ant 1		24.0	23.32	1.17	0.07	0.577	0.68
	n66	DFT-S_QPSK	Left Side	349000	1	53	Ant 1		24.0	23.32	1.17	-0.05	0.475	0.56
	n66	DFT-S_QPSK	Right Side	349000	1	53	Ant 1		24.0	23.32	1.17	0.14	0.046	0.05
	n66	DFT-S_QPSK	Top Side	349000	1	53	Ant 1		24.0	23.32	1.17	0.03	0.474	0.55
	n66	DFT-S_QPSK	Bottom Side	349000	1	53	Ant 1		24.0	23.32	1.17	-0.02	0.051	0.06
	n66	DFT-S_QPSK	Front Face	349000	50	25	Ant 1		24.0	23.11	1.23	-0.07	0.532	0.65
	n66	DFT-S_QPSK	Rear Face	349000	50	25	Ant 1		24.0	23.11	1.23	0.01	0.521	0.64
	n66	DFT-S_QPSK	Left Side	349000	50	25	Ant 1		24.0	23.11	1.23	-0.06	0.441	0.54
	n66	DFT-S_QPSK	Right Side	349000	50	25	Ant 1		24.0	23.11	1.23	0.05	0.038	0.05
	n66	DFT-S_QPSK	Top Side	349000	50	25	Ant 1		24.0	23.11	1.23	0.01	0.415	0.51
	n66	DFT-S_QPSK	Bottom Side	349000	50	25	Ant 1		24.0	23.11	1.23	0.07	0.042	0.05
	n66	DFT-S_QPSK	Front Face	344000	1	53	Ant 1		24.0	22.54	1.4	0.03	0.411	0.58
	n66	DFT-S_QPSK	Front Face	354000	1	53	Ant 1		24.0	22.61	1.38	0.12	0.513	0.71
For EN-DC														
18	n66	DFT-S_QPSK	Front Face	349000	1	53	Ant 1	w/	21.0	23.32	0.59	-0.17	0.608	**0.36**
	n66	DFT-S_QPSK	Rear Face	349000	1	53	Ant 1	w/	21.0	23.32	0.59	0.07	0.577	0.34
	n66	DFT-S_QPSK	Left Side	349000	1	53	Ant 1	w/	21.0	23.32	0.59	-0.05	0.475	0.28
	n66	DFT-S_QPSK	Right Side	349000	1	53	Ant 1	w/	21.0	23.32	0.59	0.14	0.046	0.03
	n66	DFT-S_QPSK	Top Side	349000	1	53	Ant 1	w/	21.0	23.32	0.59	0.03	0.474	0.28
	n66	DFT-S_QPSK	Bottom Side	349000	1	53	Ant 1	w/	21.0	23.32	0.59	-0.02	0.051	0.03
	n66	DFT-S_QPSK	Front Face	349000	50	25	Ant 1	w/	21.0	23.11	0.62	-0.07	0.532	0.33
	n66	DFT-S_QPSK	Rear Face	349000	50	25	Ant 1	w/	21.0	23.11	0.62	0.01	0.521	0.32
	n66	DFT-S_QPSK	Left Side	349000	50	25	Ant 1	w/	21.0	23.11	0.62	-0.06	0.441	0.27
	n66	DFT-S_QPSK	Right Side	349000	50	25	Ant 1	w/	21.0	23.11	0.62	0.05	0.038	0.02
	n66	DFT-S_QPSK	Top Side	349000	50	25	Ant 1	w/	21.0	23.11	0.62	0.01	0.415	0.26
	n66	DFT-S_QPSK	Bottom Side	349000	50	25	Ant 1	w/	21.0	23.11	0.62	0.07	0.042	0.03
	n66	DFT-S_QPSK	Front Face	344000	1	53	Ant 1	w/	21.0	22.54	0.70	0.03	0.411	0.29
	n66	DFT-S_QPSK	Front Face	354000	1	53	Ant 1	w/	21.0	22.61	0.69	0.12	0.513	0.35

Note : The standalone of 5G NR n66 SAR had been tested and there are no standalone mode in this device, thus the results had been scaled to the EN-DC mode power level, the tune up of 5G NR n66 is 21dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	TX Antenna	EN-DC	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	n66	DFT-S_QPSK	Front Face	349000	1	53	Ant 2		24.0	23.32	1.17	-0.03	0.770	0.90
	n66	DFT-S_QPSK	Rear Face	349000	1	53	Ant 2		24.0	23.32	1.17	-0.09	0.721	0.84
	n66	DFT-S_QPSK	Left Side	349000	1	53	Ant 2		24.0	23.32	1.17	0.03	0.054	0.06
	n66	DFT-S_QPSK	Right Side	349000	1	53	Ant 2		24.0	23.32	1.17	-0.06	0.581	0.68
	n66	DFT-S_QPSK	Top Side	349000	1	53	Ant 2		24.0	23.32	1.17	0.02	0.569	0.67
	n66	DFT-S_QPSK	Bottom Side	349000	1	53	Ant 2		24.0	23.32	1.17	0.07	0.051	0.06
	n66	DFT-S_QPSK	Front Face	349000	50	25	Ant 2		24.0	23.11	1.23	0.01	0.671	0.83
	n66	DFT-S_QPSK	Rear Face	349000	50	25	Ant 2		24.0	23.11	1.23	-0.05	0.668	0.82
	n66	DFT-S_QPSK	Left Side	349000	50	25	Ant 2		24.0	23.11	1.23	0.02	0.053	0.07
	n66	DFT-S_QPSK	Right Side	349000	50	25	Ant 2		24.0	23.11	1.23	-0.07	0.566	0.70
	n66	DFT-S_QPSK	Top Side	349000	50	25	Ant 2		24.0	23.11	1.23	0.03	0.562	0.69
	n66	DFT-S_QPSK	Bottom Side	349000	50	25	Ant 2		24.0	23.11	1.23	-0.05	0.048	0.06
	n66	DFT-S_QPSK	Front Face	344000	1	53	Ant 2		24.0	22.54	1.4	-0.03	0.641	0.90
	n66	DFT-S_QPSK	Front Face	354000	1	53	Ant 2		24.0	22.61	1.38	-0.08	0.644	0.89
For EN-DC														
19	n66	DFT-S_QPSK	Front Face	349000	1	53	Ant 2	w/	21.0	23.32	0.59	-0.03	0.770	**0.45**
	n66	DFT-S_QPSK	Rear Face	349000	1	53	Ant 2	w/	21.0	23.32	0.59	-0.09	0.721	0.43
	n66	DFT-S_QPSK	Left Side	349000	1	53	Ant 2	w/	21.0	23.32	0.59	0.03	0.054	0.03
	n66	DFT-S_QPSK	Right Side	349000	1	53	Ant 2	w/	21.0	23.32	0.59	-0.06	0.581	0.34
	n66	DFT-S_QPSK	Top Side	349000	1	53	Ant 2	w/	21.0	23.32	0.59	0.02	0.569	0.34
	n66	DFT-S_QPSK	Bottom Side	349000	1	53	Ant 2	w/	21.0	23.32	0.59	0.07	0.051	0.03
	n66	DFT-S_QPSK	Front Face	349000	50	25	Ant 2	w/	21.0	23.11	0.62	0.01	0.671	0.42
	n66	DFT-S_QPSK	Rear Face	349000	50	25	Ant 2	w/	21.0	23.11	0.62	-0.05	0.668	0.41
	n66	DFT-S_QPSK	Left Side	349000	50	25	Ant 2	w/	21.0	23.11	0.62	0.02	0.053	0.03
	n66	DFT-S_QPSK	Right Side	349000	50	25	Ant 2	w/	21.0	23.11	0.62	-0.07	0.566	0.35
	n66	DFT-S_QPSK	Top Side	349000	50	25	Ant 2	w/	21.0	23.11	0.62	0.03	0.562	0.35
	n66	DFT-S_QPSK	Bottom Side	349000	50	25	Ant 2	w/	21.0	23.11	0.62	-0.05	0.048	0.03
	n66	DFT-S_QPSK	Front Face	344000	1	53	Ant 2	w/	21.0	22.54	0.70	-0.03	0.641	0.45
	n66	DFT-S_QPSK	Front Face	354000	1	53	Ant 2	w/	21.0	22.61	0.69	-0.08	0.644	0.44

Note : The standalone of 5G NR n66 SAR had been tested and there are no standalone mode in this device, thus the results had been scaled to the EN-DC mode power level, the tune up of 5G NR n66 is 21dBm in NSA mode.

Plot No.	Band	Mode	Test Position	Ch.	TX Antenna	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
20	WLAN2.4G	802.11b	Front Face	1	Ant 4	96.30	1.04	10.0	9.99	1.00	-0.06	0.059	**0.06**
	WLAN2.4G	802.11b	Rear Face	1	Ant 4	96.30	1.04	10.0	9.99	1.00	-0.04	0.033	0.03
	WLAN2.4G	802.11b	Left Side	1	Ant 4	96.30	1.04	10.0	9.99	1.00	0.02	0.00218	0.00
	WLAN2.4G	802.11b	Right Side	1	Ant 4	96.30	1.04	10.0	9.99	1.00	-0.08	0.047	0.05
	WLAN2.4G	802.11b	Top Side	1	Ant 4	96.30	1.04	10.0	9.99	1.00	0.04	0.00328	0.00
	WLAN2.4G	802.11b	Bottom Side	1	Ant 4	96.30	1.04	10.0	9.99	1.00	-0.01	0.020	0.02
	WLAN2.4G	802.11b	Front Face	6	Ant 3	97.40	1.03	10.0	9.99	1.00	-0.08	0.044	0.05
	WLAN2.4G	802.11b	Rear Face	6	Ant 3	97.40	1.03	10.0	9.99	1.00	-0.11	0.042	0.04
	WLAN2.4G	802.11b	Left Side	6	Ant 3	97.40	1.03	10.0	9.99	1.00	0.01	0.031	0.03
	WLAN2.4G	802.11b	Right Side	6	Ant 3	97.40	1.03	10.0	9.99	1.00	-0.06	0.00241	0.00
	WLAN2.4G	802.11b	Top Side	6	Ant 3	97.40	1.03	10.0	9.99	1.00	0.16	0.00204	0.00
	WLAN2.4G	802.11b	Bottom Side	6	Ant 3	97.40	1.03	10.0	9.99	1.00	-0.13	0.022	0.02
	WLAN2.4G	802.11b	Front Face	6	Ant 4	96.30	1.04	10.0	9.90	1.02	-0.08	0.056	0.06
	WLAN2.4G	802.11b	Front Face	11	Ant 4	96.30	1.04	10.0	9.95	1.01	-0.13	0.054	0.06

Plot No.	Band	Mode	Test Position	Ch.	TX Antenna	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
21	WLAN5.2G	802.11ac VHT80	Front Face	42	Ant 4	100.00	1.00	10.0	9.90	1.02	0.01	0.116	**0.12**
	WLAN5.2G	802.11ac VHT80	Rear Face	42	Ant 4	100.00	1.00	10.0	9.90	1.02	0.05	0.035	0.04
	WLAN5.2G	802.11ac VHT80	Left Side	42	Ant 4	100.00	1.00	10.0	9.90	1.02	0.00	0.001	0.00
	WLAN5.2G	802.11ac VHT80	Right Side	42	Ant 4	100.00	1.00	10.0	9.90	1.02	0.02	0.088	0.09
	WLAN5.2G	802.11ac VHT80	Top Side	42	Ant 4	100.00	1.00	10.0	9.90	1.02	0.00	0.001	0.00
	WLAN5.2G	802.11ac VHT80	Bottom Side	42	Ant 4	100.00	1.00	10.0	9.90	1.02	0.12	0.019	0.02
	WLAN5.2G	802.11ac VHT80	Front Face	42	Ant 3	99.80	1.00	10.0	9.60	1.10	0.06	0.048	0.05
	WLAN5.2G	802.11ac VHT80	Rear Face	42	Ant 3	99.80	1.00	10.0	9.60	1.10	0.09	0.024	0.03
	WLAN5.2G	802.11ac VHT80	Left Side	42	Ant 3	99.80	1.00	10.0	9.60	1.10	0.01	0.018	0.02
	WLAN5.2G	802.11ac VHT80	Right Side	42	Ant 3	99.80	1.00	10.0	9.60	1.10	0.00	0.001	0.00
	WLAN5.2G	802.11ac VHT80	Top Side	42	Ant 3	99.80	1.00	10.0	9.60	1.10	0.00	0.001	0.00
	WLAN5.2G	802.11ac VHT80	Bottom Side	42	Ant 3	99.80	1.00	10.0	9.60	1.10	0.01	0.015	0.02
22	WLAN5.8G	802.11ac VHT80	Front Face	155	Ant 4	100.00	1.00	10.0	9.85	1.04	-0.13	0.157	**0.16**
	WLAN5.8G	802.11ac VHT80	Rear Face	155	Ant 4	100.00	1.00	10.0	9.85	1.04	-0.12	0.059	0.06
	WLAN5.8G	802.11ac VHT80	Left Side	155	Ant 4	100.00	1.00	10.0	9.85	1.04	0.00	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Right Side	155	Ant 4	100.00	1.00	10.0	9.85	1.04	0.05	0.092	0.10
	WLAN5.8G	802.11ac VHT80	Top Side	155	Ant 4	100.00	1.00	10.0	9.85	1.04	0.00	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Bottom Side	155	Ant 4	100.00	1.00	10.0	9.85	1.04	0.08	0.018	0.02
	WLAN5.8G	802.11ac VHT80	Front Face	155	Ant 3	99.80	1.00	10.0	9.99	1.00	0.07	0.107	0.11
	WLAN5.8G	802.11ac VHT80	Rear Face	155	Ant 3	99.80	1.00	10.0	9.99	1.00	0.03	0.069	0.07
	WLAN5.8G	802.11ac VHT80	Left Side	155	Ant 3	99.80	1.00	10.0	9.99	1.00	-0.12	0.096	0.10
	WLAN5.8G	802.11ac VHT80	Right Side	155	Ant 3	99.80	1.00	10.0	9.99	1.00	0.00	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Top Side	155	Ant 3	99.80	1.00	10.0	9.99	1.00	0.00	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Bottom Side	155	Ant 3	99.80	1.00	10.0	9.99	1.00	0.07	0.043	0.04

Note: The "< 0.001" means there is no SAR value or the SAR is too low to be measured.

4.7.3 SAR Measurement Variability

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

SAR repeated measurement procedure:

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

Band	Mode	Test Position	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
WCDMA II	RMC12.2K	Rear Face	9400	0.978	0.945	1.03	N/A	N/A	N/A	N/A
LTE 7	QPSK20M	Rear Face	21350	1.09	1.06	1.03	N/A	N/A	N/A	N/A
LTE 30	QPSK10M	Rear Face	27710	0.874	0.863	1.01	N/A	N/A	N/A	N/A

4.7.4 Simultaneous Multi-band Transmission Evaluation

Simultaneous TX Combination	Capable Transmit Configurations	Body Exposure Condition
1	WWAN + WLAN 2.4G_Ant 3	Yes
2	WWAN + WLAN 5G_Ant 3	Yes
3	WWAN + WLAN 2.4G_Ant 4	Yes
4	WWAN + WLAN 5G_Ant 4	Yes
5	WLAN 2.4G_Ant 3 + WLAN 5G_Ant 4	Yes
6	WLAN 2.4G_Ant 4 + WLAN 5G_Ant 3	Yes
7	EN-DC (LTE+FR1)	Yes
8	WWAN + WLAN 2.4G_Ant 3 + WLAN 5G_Ant 4	Yes
9	WWAN + WLAN 2.4G_Ant 4 + WLAN 5G_Ant 3	Yes
10	WWAN+ WLAN 2.4G_Ant 4+3 (MIMO)	Yes
11	WWAN+ WLAN 5G_Ant 4+3 (MIMO)	Yes
12	EN-DC (LTE+FR1) +WLAN 2.4G_Ant 3	Yes
13	EN-DC (LTE+FR1) +WLAN 2.4G_Ant 4	Yes
14	EN-DC (LTE+FR1) +WLAN 5G_Ant 3	Yes
15	EN-DC (LTE+FR1) +WLAN 5G_Ant 4	Yes
16	EN-DC (LTE+FR1) + WLAN 2.4G_Ant 4+3 (MIMO)	Yes
17	EN-DC (LTE+FR1) + WLAN 5G_Ant 4+3 (MIMO)	Yes

Note :

1. Configuration 1 is covered by Configuration 8.
2. Configuration 2 is covered by Configuration 9.
3. Configuration 3 is covered by Configuration 9.
4. Configuration 4 is covered by Configuration 8.
5. Configuration 5 is covered by Configuration 8.
6. Configuration 6 is covered by Configuration 9.
7. Configuration 7 is covered by Configuration 12.
8. Configuration 12 is covered by Configuration 16.
9. Configuration 13 is covered by Configuration 16.
10. Configuration 14 is covered by Configuration 17.
11. Configuration 15 is covered by Configuration 17.

<SAR Summation Analysis>

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

Band	Position	1g SAR W/kg					Summing Result 1g SAR W/kg			
		Max WWAN	WLAN 2.4GHz Ant 4	WLAN 2.4GHz Ant 3	WLAN 5GHz Ant 4	WLAN 5GHz Ant 3	1+3+4	1+2+5	1+2+3	1+4+5
		1	2	3	4	5				
WCDMA II	Front Face	1.09	0.06	0.05	0.16	0.11	1.30	1.26	1.20	1.36
	Rear Face	1.08	0.03	0.04	0.06	0.07	1.18	1.18	1.15	1.21
	Left Side	0.79	0.00	0.03	0.00	0.10	0.82	0.89	0.82	0.89
	Right Side	0.08	0.05	0.00	0.10	0.00	0.18	0.13	0.13	0.18
	Top Side	0.93	0.00	0.00	0.00	0.00	0.93	0.93	0.93	0.93
	Bottom Side	0.07	0.02	0.02	0.02	0.04	0.11	0.13	0.11	0.13
WCDMA V	Front Face	0.80	0.06	0.05	0.16	0.11	1.01	0.97	0.91	1.07
	Rear Face	0.72	0.03	0.04	0.06	0.07	0.82	0.82	0.79	0.85
	Left Side	0.38	0.00	0.03	0.00	0.10	0.41	0.48	0.41	0.48
	Right Side	0.06	0.05	0.00	0.10	0.00	0.16	0.11	0.11	0.16
	Top Side	0.21	0.00	0.00	0.00	0.00	0.21	0.21	0.21	0.21
	Bottom Side	0.11	0.02	0.02	0.02	0.04	0.15	0.17	0.15	0.17
LTE 2	Front Face	0.71	0.06	0.05	0.16	0.11	0.92	0.88	0.82	0.98
	Rear Face	0.63	0.03	0.04	0.06	0.07	0.73	0.73	0.7	0.76
	Left Side	0.51	0.00	0.03	0.00	0.10	0.54	0.61	0.54	0.61
	Right Side	0.04	0.05	0.00	0.10	0.00	0.14	0.09	0.09	0.14
	Top Side	0.49	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.49
	Bottom Side	0.07	0.02	0.02	0.02	0.04	0.11	0.13	0.11	0.13
LTE 4	Front Face	0.64	0.06	0.05	0.16	0.11	0.85	0.81	0.75	0.91
	Rear Face	0.67	0.03	0.04	0.06	0.07	0.77	0.77	0.74	0.80
	Left Side	0.42	0.00	0.03	0.00	0.10	0.45	0.52	0.45	0.52
	Right Side	0.50	0.05	0.00	0.10	0.00	0.60	0.55	0.55	0.60
	Top Side	0.56	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.56
	Bottom Side	0.06	0.02	0.02	0.02	0.04	0.10	0.12	0.10	0.12
LTE 5	Front Face	0.61	0.06	0.05	0.16	0.11	0.82	0.78	0.72	0.88
	Rear Face	0.58	0.03	0.04	0.06	0.07	0.68	0.68	0.65	0.71
	Left Side	0.35	0.00	0.03	0.00	0.10	0.38	0.45	0.38	0.45
	Right Side	0.05	0.05	0.00	0.10	0.00	0.15	0.10	0.10	0.15
	Top Side	0.23	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.23
	Bottom Side	0.10	0.02	0.02	0.02	0.04	0.14	0.16	0.14	0.16

Band	Position	1g SAR W/kg					Summing Result 1g SAR W/kg			
		Max WWAN	WLAN 2.4GHz Ant 4	WLAN 2.4GHz Ant 3	WLAN 5GHz Ant 4	WLAN 5GHz Ant 3	1+3+4	1+2+5	1+2+3	1+4+5
		1	2	3	4	5				
LTE 7	Front Face	1.12	0.06	0.05	0.16	0.11	1.33	1.29	1.23	1.39
	Rear Face	1.19	0.03	0.04	0.06	0.07	1.29	1.29	1.26	1.32
	Left Side	1.07	0.00	0.03	0.00	0.10	1.10	1.17	1.10	1.17
	Right Side	0.12	0.05	0.00	0.10	0.00	0.22	0.17	0.17	0.22
	Top Side	0.68	0.00	0.00	0.00	0.00	0.68	0.68	0.68	0.68
	Bottom Side	0.08	0.02	0.02	0.02	0.04	0.12	0.14	0.12	0.14
LTE 12	Front Face	0.60	0.06	0.05	0.16	0.11	0.81	0.77	0.71	0.87
	Rear Face	0.58	0.03	0.04	0.06	0.07	0.68	0.68	0.65	0.71
	Left Side	0.20	0.00	0.03	0.00	0.10	0.23	0.3	0.23	0.3
	Right Side	0.07	0.05	0.00	0.10	0.00	0.17	0.12	0.12	0.17
	Top Side	0.28	0.00	0.00	0.00	0.00	0.28	0.28	0.28	0.28
	Bottom Side	0.03	0.02	0.02	0.02	0.04	0.07	0.09	0.07	0.09
LTE 14	Front Face	0.64	0.06	0.05	0.16	0.11	0.85	0.81	0.75	0.91
	Rear Face	0.58	0.03	0.04	0.06	0.07	0.68	0.68	0.65	0.71
	Left Side	0.33	0.00	0.03	0.00	0.10	0.36	0.43	0.36	0.43
	Right Side	0.06	0.05	0.00	0.10	0.00	0.16	0.11	0.11	0.16
	Top Side	0.10	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.10
	Bottom Side	0.06	0.02	0.02	0.02	0.04	0.10	0.12	0.10	0.12
LTE 30	Front Face	0.93	0.06	0.05	0.16	0.11	1.14	1.10	1.04	1.20
	Rear Face	0.94	0.03	0.04	0.06	0.07	1.04	1.04	1.01	1.07
	Left Side	0.71	0.00	0.03	0.00	0.10	0.74	0.81	0.74	0.81
	Right Side	0.08	0.05	0.00	0.10	0.00	0.18	0.13	0.13	0.18
	Top Side	0.60	0.00	0.00	0.00	0.00	0.60	0.60	0.60	0.60
	Bottom Side	0.09	0.02	0.02	0.02	0.04	0.13	0.15	0.13	0.15
LTE 48	Front Face	0.49	0.06	0.05	0.16	0.11	0.70	0.66	0.60	0.76
	Rear Face	0.70	0.03	0.04	0.06	0.07	0.80	0.80	0.77	0.83
	Left Side	0.17	0.00	0.03	0.00	0.10	0.20	0.27	0.20	0.27
	Right Side	0.35	0.05	0.00	0.10	0.00	0.45	0.40	0.40	0.45
	Top Side	0.22	0.00	0.00	0.00	0.00	0.22	0.22	0.22	0.22
	Bottom Side	0.08	0.02	0.02	0.02	0.04	0.12	0.14	0.12	0.14
LTE 66	Front Face	0.60	0.06	0.05	0.16	0.11	0.81	0.77	0.71	0.87
	Rear Face	0.67	0.03	0.04	0.06	0.07	0.77	0.77	0.74	0.80
	Left Side	0.46	0.00	0.03	0.00	0.10	0.49	0.56	0.49	0.56
	Right Side	0.08	0.05	0.00	0.10	0.00	0.18	0.13	0.13	0.18
	Top Side	0.42	0.00	0.00	0.00	0.00	0.42	0.42	0.42	0.42
	Bottom Side	0.07	0.02	0.02	0.02	0.04	0.11	0.13	0.11	0.13

< Analysis For EN-DC Configuration>

Band Position		1g SAR W/kg						Summing Result 1g SAR W/kg	
		5G NR	Max LTE IN EN-DC	WLAN 2.4GHz Ant 4	WLAN 2.4GHz Ant 3	WLAN 5GHz Ant 4	WLAN 5GHz Ant 3	1+2+3+4	1+2+5+6
		1	2	3	4	5	6		
n2	Front Face	0.38	0.60	0.06	0.05	0.16	0.11	1.09	1.25
	Rear Face	0.34	0.53	0.03	0.04	0.06	0.07	0.94	1
	Left Side	0.00	0.36	0.00	0.03	0.00	0.10	0.39	0.46
	Right Side	0.24	0.45	0.05	0.00	0.10	0.00	0.74	0.79
	Top Side	0.21	0.35	0.00	0.00	0.00	0.00	0.56	0.56
	Bottom Side	0.02	0.05	0.02	0.02	0.02	0.04	0.11	0.13
n5	Front Face	0.44	0.59	0.06	0.05	0.16	0.11	1.14	1.3
	Rear Face	0.41	0.53	0.03	0.04	0.06	0.07	1.01	1.07
	Left Side	0.12	0.36	0.00	0.03	0.00	0.10	0.51	0.58
	Right Side	0.17	0.45	0.05	0.00	0.10	0.00	0.67	0.72
	Top Side	0.14	0.34	0.00	0.00	0.00	0.00	0.48	0.48
	Bottom Side	0.05	0.05	0.02	0.02	0.02	0.04	0.14	0.16
n66	Front Face	0.45	0.59	0.06	0.05	0.16	0.11	1.15	1.31
	Rear Face	0.43	0.53	0.03	0.04	0.06	0.07	1.03	1.09
	Left Side	0.28	0.36	0.00	0.03	0.00	0.10	0.67	0.74
	Right Side	0.35	0.45	0.05	0.00	0.10	0.00	0.85	0.9
	Top Side	0.35	0.34	0.00	0.00	0.00	0.00	0.69	0.69
	Bottom Side	0.03	0.05	0.02	0.02	0.02	0.04	0.12	0.14

Note :

According to the Nov.2019 TCB workshop, the test result could meet case1.Single uplink 1-g SAR values for each band are less than 0.8 w/kg and the algebraic summation of the 1-g SAR values are less than 1.45 w/kg.

< Analysis For Inter Band CA UL Configuration>

Band Position	1	3	4	5	6	7	8	7+8	10	11	10+11	13					
	LTE 2	LTE 4	LTE 5	LTE 12	LTE 66	WLAN 2.4GHz Ant 4	WLAN 2.4GHz Ant 3	WLAN 2.4GHz Ant 4+3	WLAN 5GHz Ant 4	WLAN 5GHz Ant 3	WLAN 5GHz Ant 4+3	Max WLAN	1+5+13	1+6+13	3+5+13	5+6+13	1+4+13
	1g SAR W/kg												Summing result 1g SAR W/kg				
Front Face	0.71	0.64	0.61	0.60	0.60	0.06	0.05	0.11	0.16	0.11	0.27	0.27	1.58	1.58	1.51	1.47	**1.59**
Rear Face	0.63	0.67	0.58	0.58	0.67	0.03	0.04	0.07	0.06	0.07	0.13	0.13	1.34	1.43	1.38	1.38	1.34
Left Side	0.51	0.42	0.35	0.20	0.46	0.00	0.03	0.03	0.00	0.10	0.10	0.10	0.81	1.07	0.72	0.76	0.96
Right Side	0.04	0.50	0.05	0.07	0.08	0.05	0.00	0.05	0.10	0.00	0.10	0.10	0.21	0.22	0.67	0.25	0.19
Top Side	0.49	0.56	0.23	0.28	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.91	0.84	0.7	0.72
Bottom Side	0.07	0.06	0.10	0.03	0.07	0.02	0.02	0.04	0.02	0.04	0.06	0.06	0.16	0.2	0.15	0.16	0.23

Choosing the worst co-SAR value of combination to prove LTE and WiFi antenna are spatially de-coupled.

Test Engineer： Isaac Liao, and Willy Chang

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D750V3	1013	Aug. 23, 2019	1 Year
System Validation Dipole	SPEAG	D835V2	4d121	Aug. 23, 2019	1 Year
System Validation Dipole	SPEAG	D1750V2	1055	Aug. 23, 2019	1 Year
System Validation Dipole	SPEAG	D1900V2	5d036	Jan. 25, 2019	1 Year
System Validation Dipole	SPEAG	D2300V2	1004	Jan. 28, 2019	1 Year
System Validation Dipole	SPEAG	D2450V2	737	Aug. 26, 2019	1 Year
System Validation Dipole	SPEAG	D2600V2	1020	Aug. 26, 2019	1 Year
System Validation Dipole	SPEAG	D3500V2	1007	Jan. 29, 2019	1 Year
System Validation Dipole	SPEAG	D3700V2	1017	Sep. 24, 2019	1 Year
System Validation Dipole	SPEAG	D5GHzV2	1019	Mar. 21, 2019	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3971	Mar. 29, 2019	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7472	Aug. 30, 2019	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7537	Jun. 18, 2019	1 Year
Data Acquisition Electronics	SPEAG	DAE3	579	Aug. 27, 2019	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1431	Mar. 25, 2019	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1585	Jun. 07, 2019	1 Year
Radio Communication Analyzer	Anritsu	MT8820C	6201010285	Aug. 05, 2019	1 Year
Universal Radio Communication Tester	Anritsu	MT8821C	6201502978	Jun. 13, 2019	1 Year
Spectrum Analyzer	R&S	FSL6	102006	Mar. 26, 2019	1 Year
Dielectric Assessment Kit	SPEAG	DAKS-3.5	1092	May. 07, 2019	1 Year
Dielectric Assessment Kit	SPEAG	DAKS_VNA R140	0010917	Aug. 20, 2019	1 Year
Powersource1	SPEAG	SE_UMS_160 BA	4010	Aug. 21, 2019	1 Year
Thermometer	YFE	YF-160A	130504591	Mar. 22, 2019	1 Year

6. Measurement Uncertainty

According to KDB 865664 D01, SAR measurement uncertainty analysis is required in SAR reports only when the highest measured SAR in a frequency band is ≥ 1.5 W/kg for 1-g SAR, and ≥ 3.75 W/kg for 10-g SAR. The procedures described in IEEE Std 1528-2013should be applied. The expanded SAR measurement uncertainty must be ≤ 30%,for a confidence interval of k = 2. When the highest measured SAR within a frequency band is < 1.5 W/kg for 1-g and < 3.75 W/kg for 10-g, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. Hence, the measurement uncertainty analysis is not required in this SAR report because the test result met the condition.

7. Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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Web Site: https://ee.bureauveritas.com.tw/BVInternet/Default

The road map of all our labs can be found in our web site also.

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Appendix A. SAR Plots of System Verification

The plots for system verification with largest deviation for each SAR system combination are shown as follows.

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2020/01/10

System Check_H750_200110

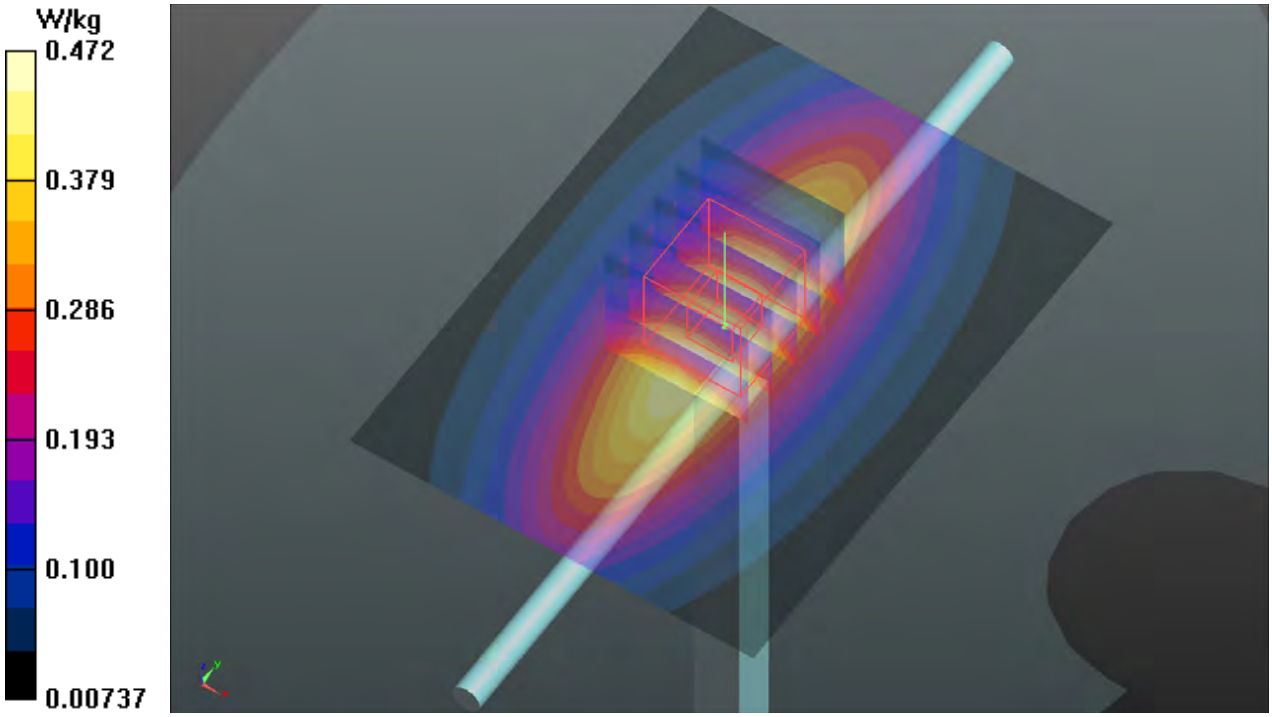
DUT: Dipole 750 MHz; Type: D750V3; SN: 1013

Communication System: CW; Frequency: 750 MHz;Duty Cycle: 1:1
Medium: H06T09N1_0110 Medium parameters used: f = 750 MHz; σ = 0.895 S/m; ε_r = 42.84; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(10.77, 10.77, 10.77); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.472 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.29 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.532 W/kg
SAR(1 g) = 0.395 W/kg; SAR(10 g) = 0.264 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.479 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/19

System Check_H835_191219

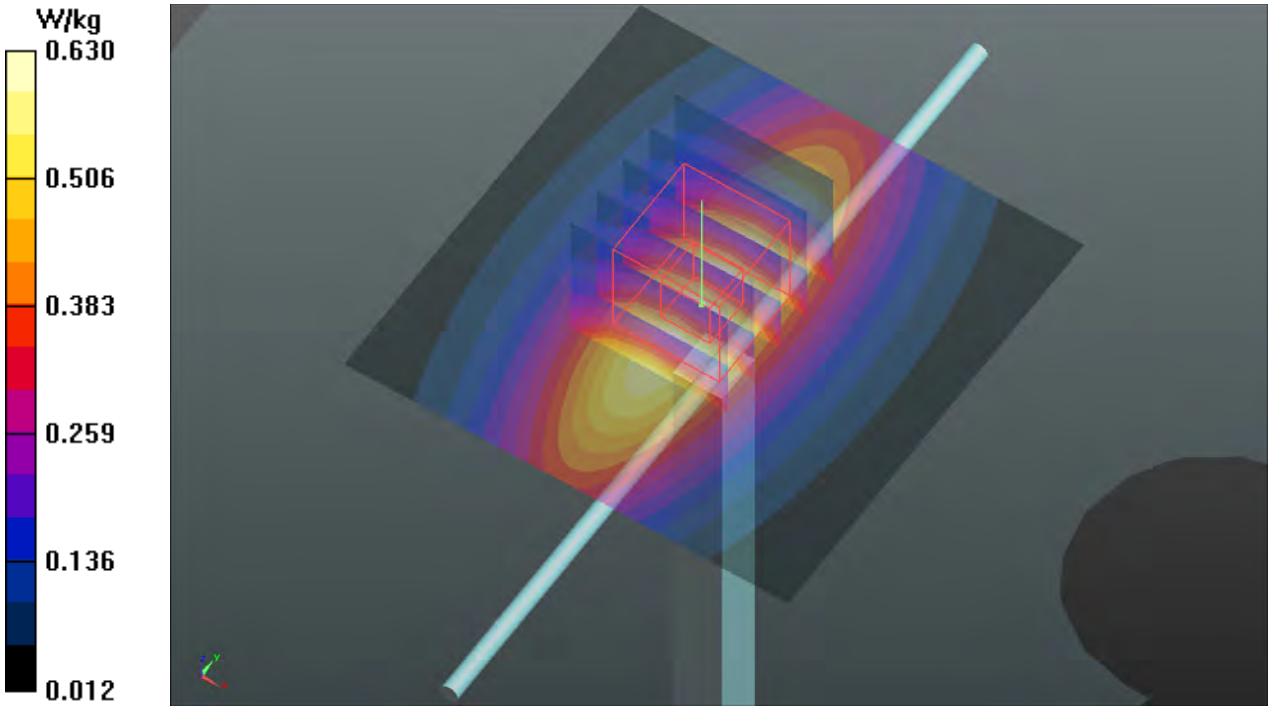
DUT: Dipole 835 MHz; Type: D835V2; SN: 4d121

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: H07T10N2_1219 Medium parameters used: f = 835 MHz; σ = 0.926 S/m; ε_r = 42.363; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(10.18, 10.18, 10.18); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.630 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.36 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.712 W/kg
SAR(1 g) = 0.468 W/kg; SAR(10 g) = 0.306 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.633 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2020/01/11

System Check_H1750_200111

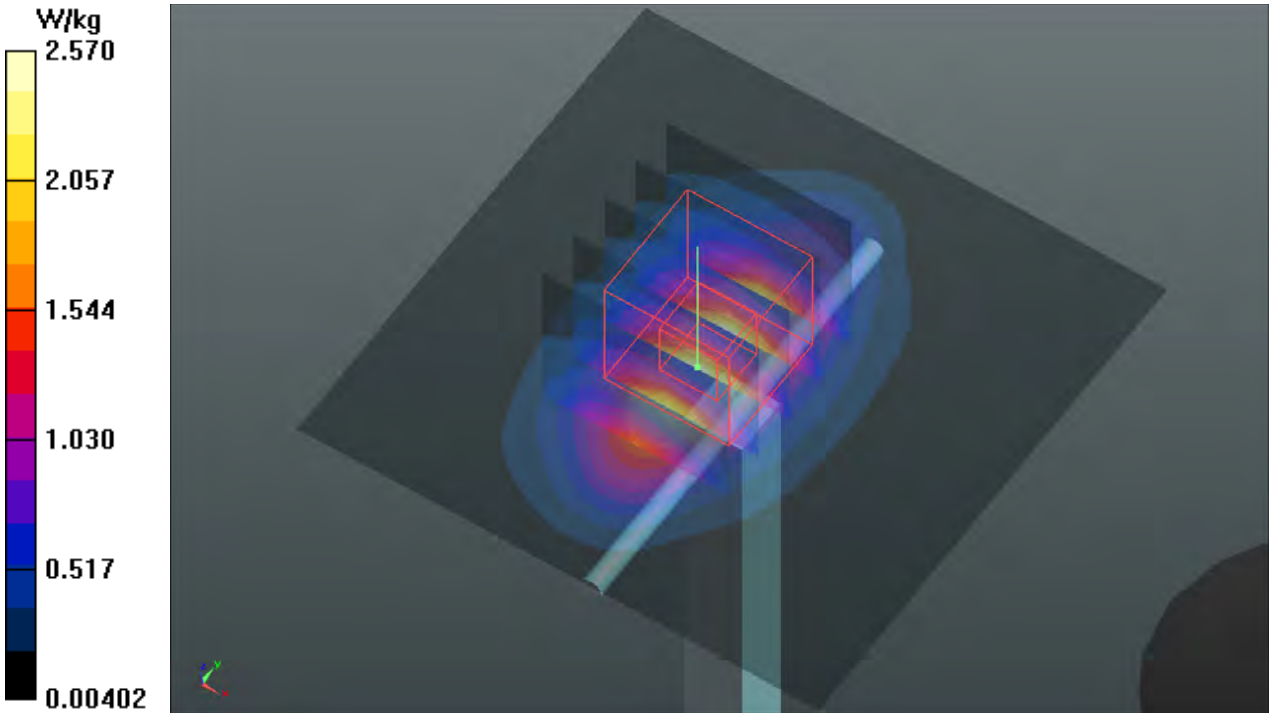
DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: H16T20N1_0111 Medium parameters used: f = 1750 MHz; σ = 1.32 S/m; ε_r = 39.168; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃ ； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.44, 8.44, 8.44); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.57 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 44.86 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 3.05 W/kg
SAR(1 g) = 1.75 W/kg; SAR(10 g) = 0.941 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.58 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2020/01/10

System Check_H1900_200110

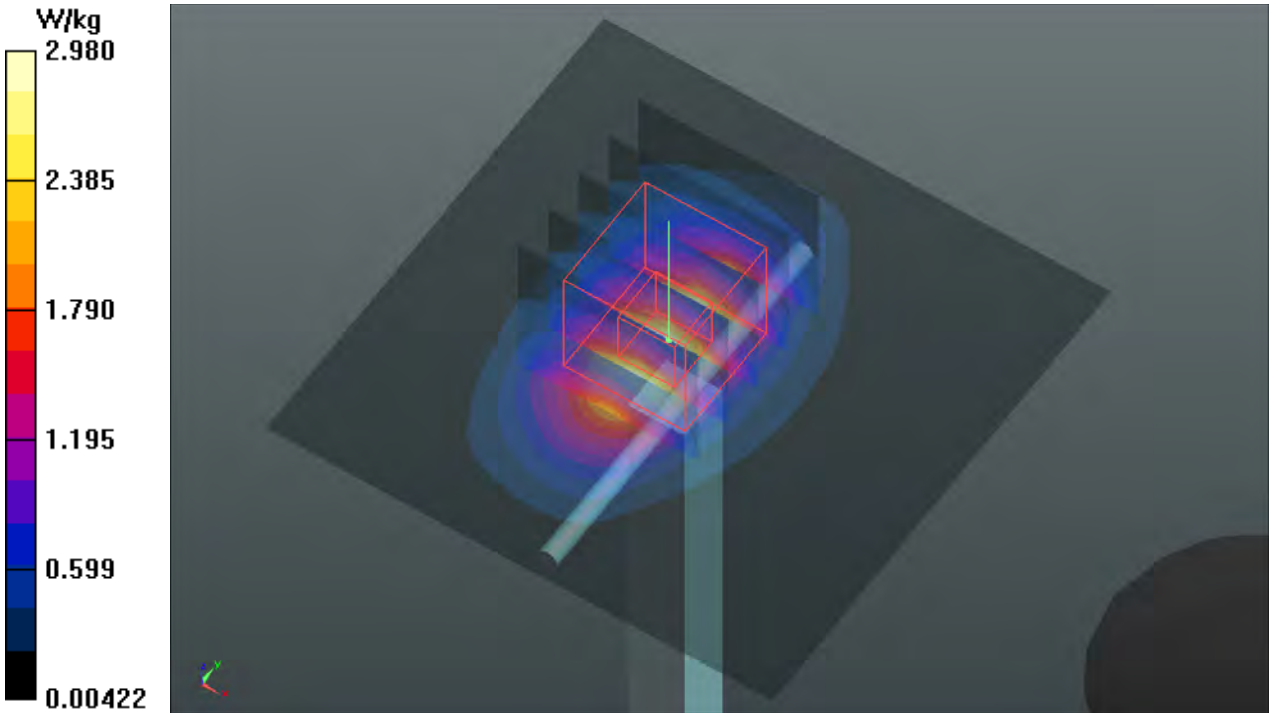
DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: H16T20N1_0110 Medium parameters used: f = 1900 MHz; σ = 1.459 S/m; ε_r = 39.001; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.13, 8.13, 8.13); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.98 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.92 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 3.65 W/kg
SAR(1 g) = 1.95 W/kg; SAR(10 g) = 1.04 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 3.09 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/19

System Check_H2300_191219

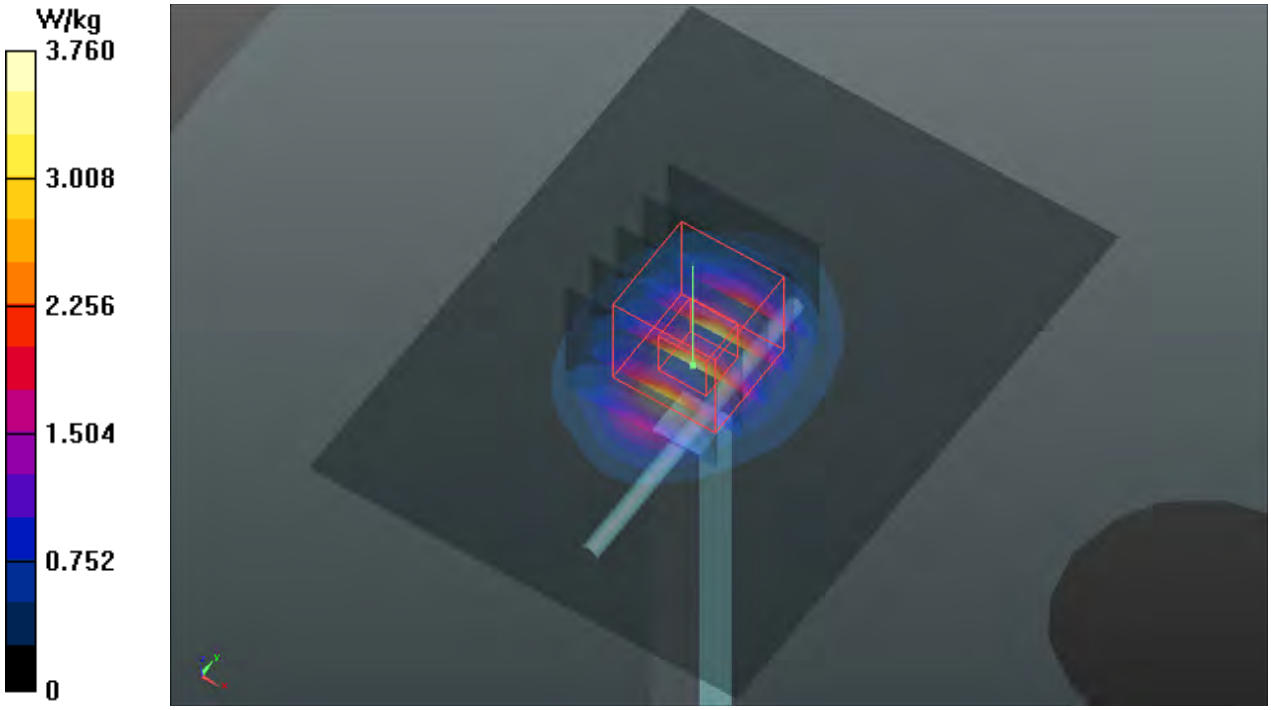
DUT: Dipole 2300 MHz; Type: D2300V2; SN:1004

Communication System: CW; Frequency: 2300 MHz;Duty Cycle: 1:1
Medium: H19T27N1_1219 Medium parameters used: f = 2300 MHz; σ = 1.73 S/m; ε_r = 39.008; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(8.11, 8.11, 8.11); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.76 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.92 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 4.59 W/kg
SAR(1 g) = 2.28 W/kg; SAR(10 g) = 1.08 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 3.72 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2020/01/07

System Check_H2450_200107

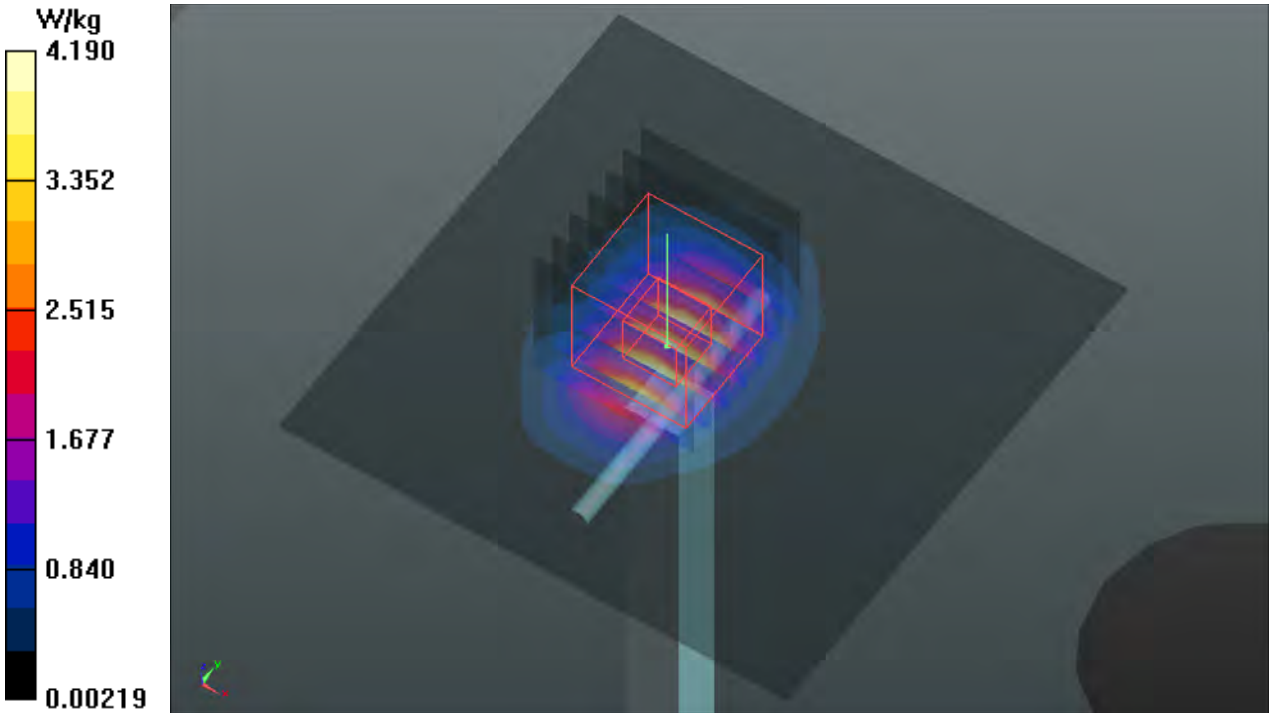
DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: H19T27N1_0107 Medium parameters used: f = 2450 MHz; σ = 1.885 S/m; ε_r = 38.34; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3971; ConvF(7.65, 7.65, 7.65); Calibrated: 2019/03/29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.19 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 40.27 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 5.29 W/kg
SAR(1 g) = 2.59 W/kg; SAR(10 g) = 1.23 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 4.30 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/17

System Check_H2600_191217

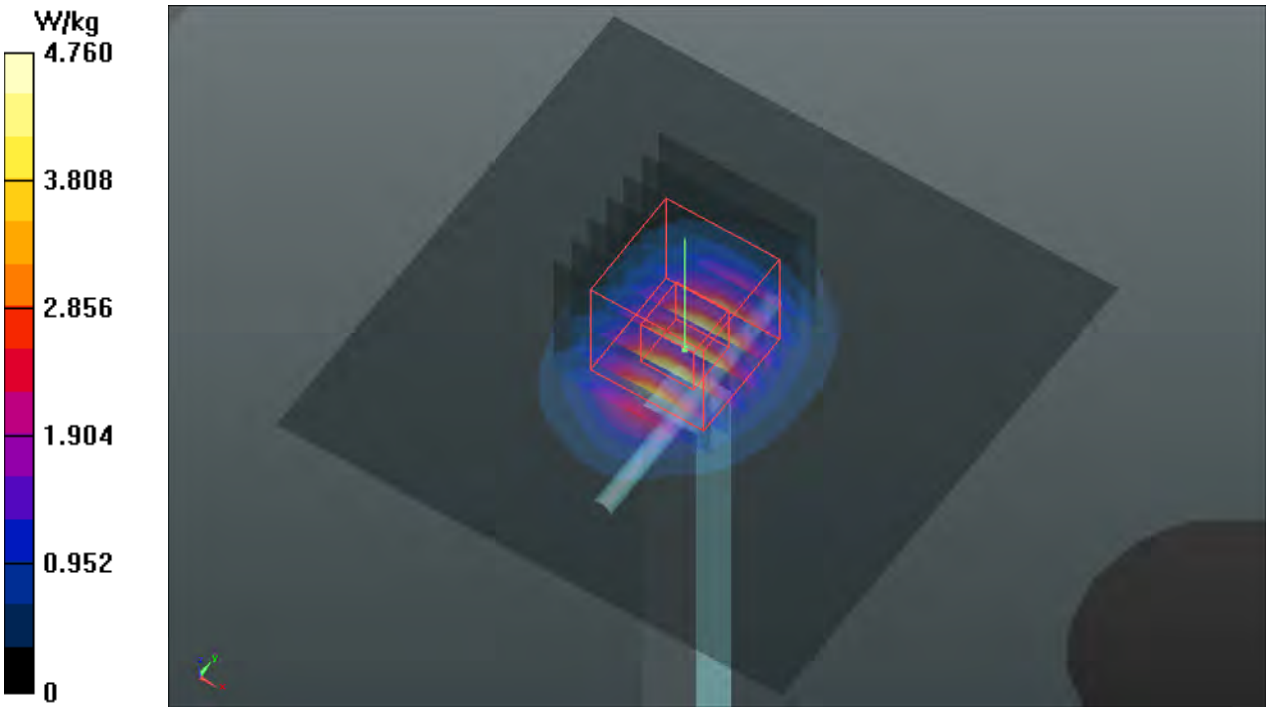
DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1020

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: H19T27N1_1217 Medium parameters used: f = 2600 MHz; σ = 2.038 S/m; ε_r = 37.264; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(7.64, 7.64, 7.64); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.76 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.38 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 6.07 W/kg
SAR(1 g) = 2.75 W/kg; SAR(10 g) = 1.25 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 4.87 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/19

System Check_H3500_191219

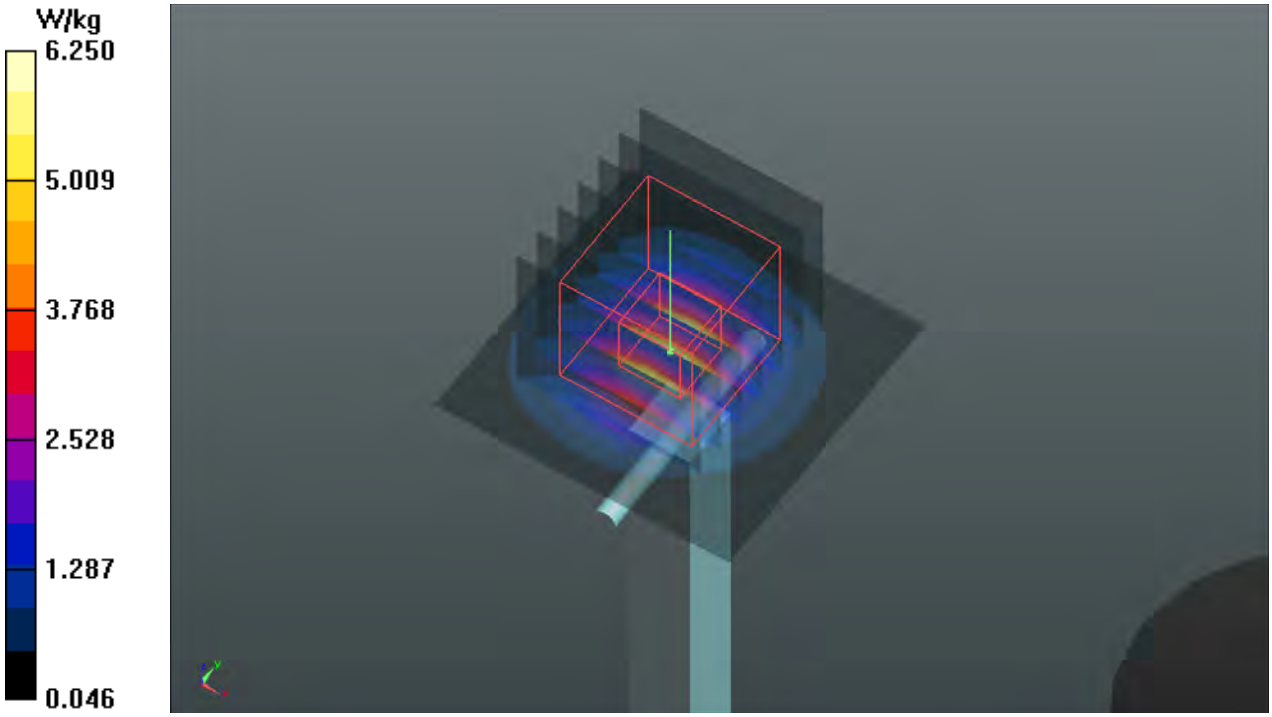
DUT: Dipole 3500 MHz; Type: D3500V2; SN: 1007

Communication System: CW; Frequency: 3500 MHz;Duty Cycle: 1:1
Medium: H34T38N1_1219 Medium parameters used: f = 3500 MHz; σ = 2.962 S/m; ε_r = 37.276; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(7.21, 7.21, 7.21); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (41x41x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 6.25 W/kg

Pin=50mW/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2.5mm
Reference Value = 43.51 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 8.55 W/kg
SAR(1 g) = 3.23 W/kg; SAR(10 g) = 1.22 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 6.36 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/19

System Check_H3700_191219

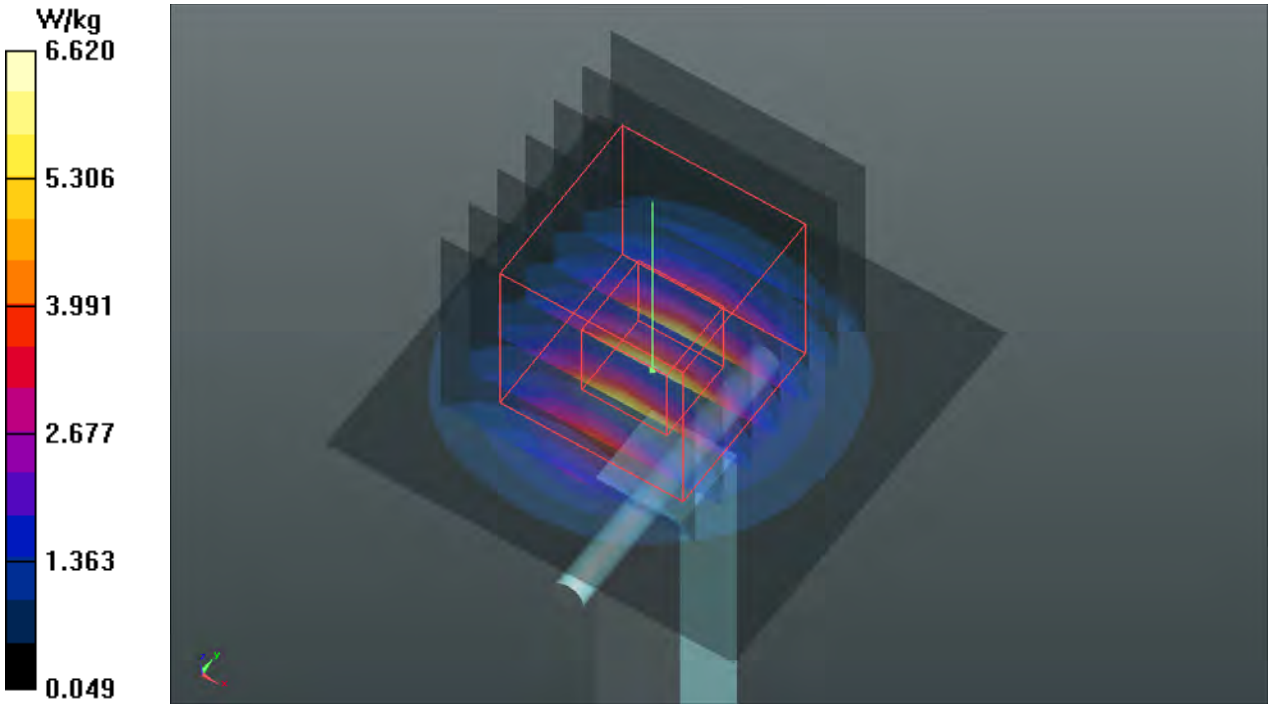
DUT: Dipole 3700 MHz; Type: D3700V2; SN: 1017

Communication System: CW; Frequency: 3700 MHz;Duty Cycle: 1:1
Medium: H34T38N1_1219 Medium parameters used: f = 3700 MHz; σ = 3.112 S/m; ε_r = 37.091; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃ ； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(7.11, 7.11, 7.11); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (41x41x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 6.62 W/kg

Pin=50mW/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2.5mm
Reference Value = 43.81 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 9.04 W/kg
SAR(1 g) = 3.43 W/kg; SAR(10 g) = 1.29 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 6.74 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/09

System Check_H5250_191209

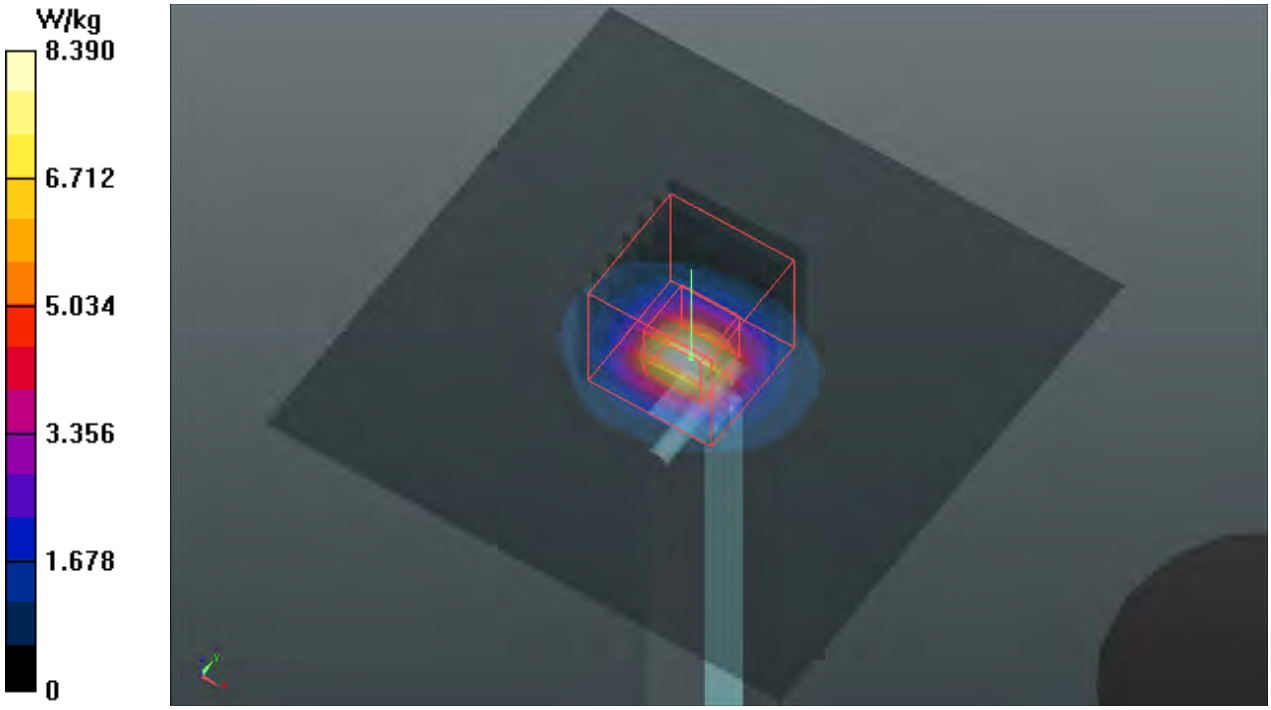
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: CW; Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: H34T60N1_1209 Medium parameters used: f = 5250 MHz; σ = 4.796 S/m; ε_r = 37.265; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃ ； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(5.36, 5.36, 5.36); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.39 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 47.81 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 14.0 W/kg
SAR(1 g) = 3.72 W/kg; SAR(10 g) = 1.09 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 9.07 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/09

System Check_H5600_191209

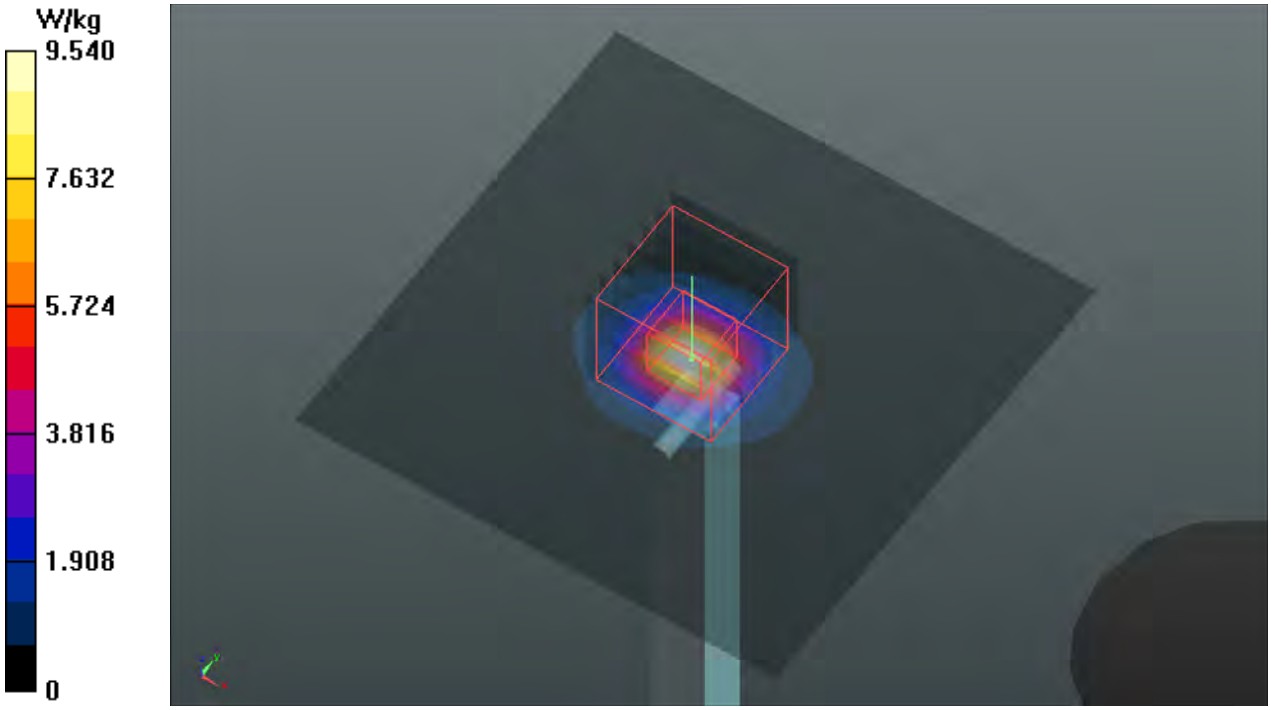
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: H34T60N1_1209 Medium parameters used: f = 5600 MHz; σ = 5.14 S/m; ε_r = 36.704; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃ ； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(4.75, 4.75, 4.75); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.54 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 42.68 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 17.0 W/kg
SAR(1 g) = 3.99 W/kg; SAR(10 g) = 1.15 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 10.2 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/05

System Check_H5750_191205

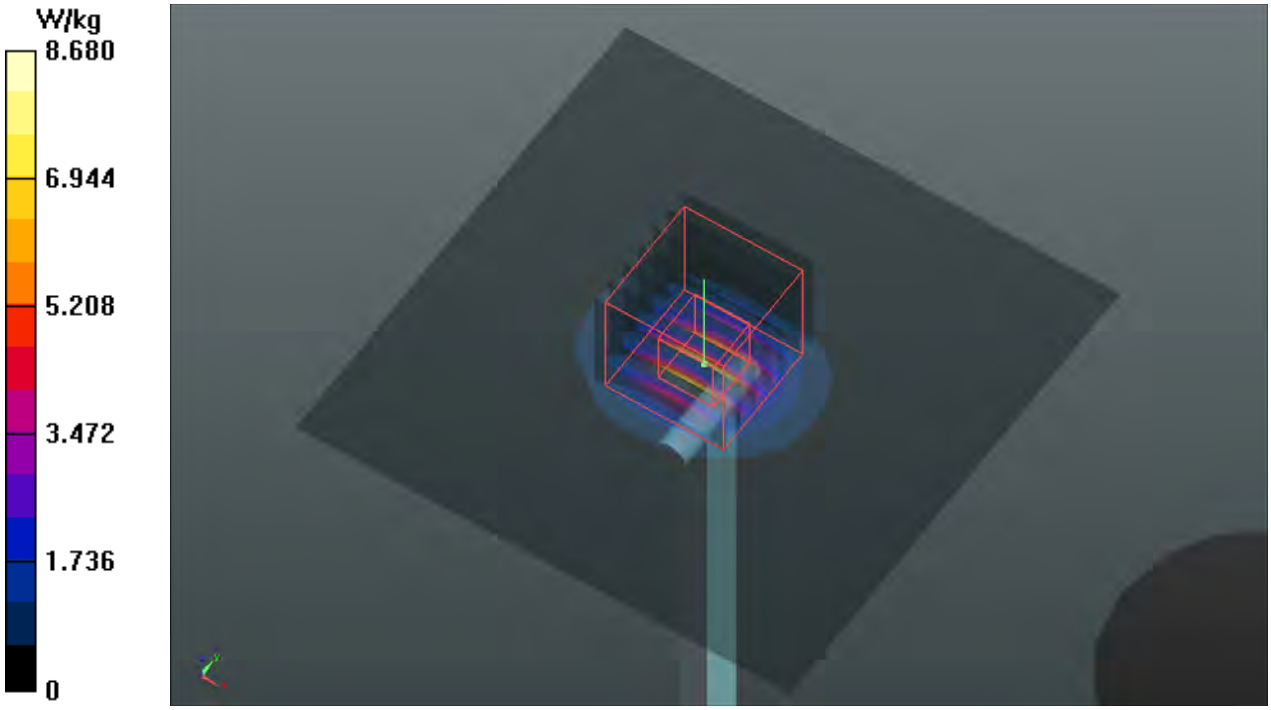
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: CW; Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: H34T60N4_1205 Medium parameters used: f = 5750 MHz; σ = 5.387 S/m; ε_r = 35.889; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃ ； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(4.99, 4.99, 4.99); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.68 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 45.75 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 15.9 W/kg
SAR(1 g) = 3.77 W/kg; SAR(10 g) = 1.15 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 9.37 W/kg



Appendix B. SAR Plots of SAR Measurement

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination, and measured SAR > 1.5 W/kg are shown as follows.

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/19

P01 WCDMA II_RMC12.2K_Front Face_10mm_Ch9538_Ant1

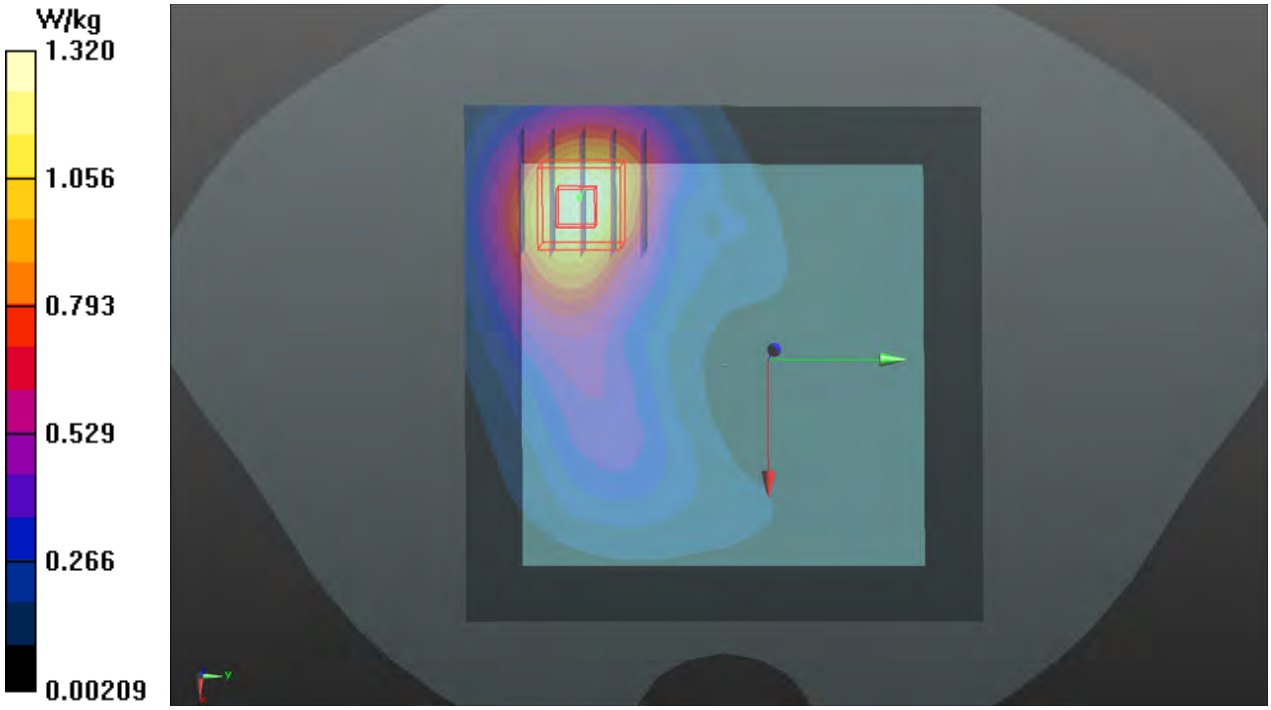
DUT: 191031C08

Communication System: UMTS-FDD (WCDMA); Frequency: 1907.6 MHz;Duty Cycle: 1:1.95
Medium: H16T20N1_1219 Medium parameters used: f = 1908 MHz; σ = 1.461 S/m; ε_r = 38.391; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(8.34, 8.34, 8.34); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.32 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.63 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.901 W/kg; SAR(10 g) = 0.547 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 18.1 mm
Ratio of SAR at M2 to SAR at M1 = 60.2%
Maximum value of SAR (measured) = 1.31 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/19

P02 WCDMA V_RMC12.2K_Front Face_10mm_Ch4132_Ant1

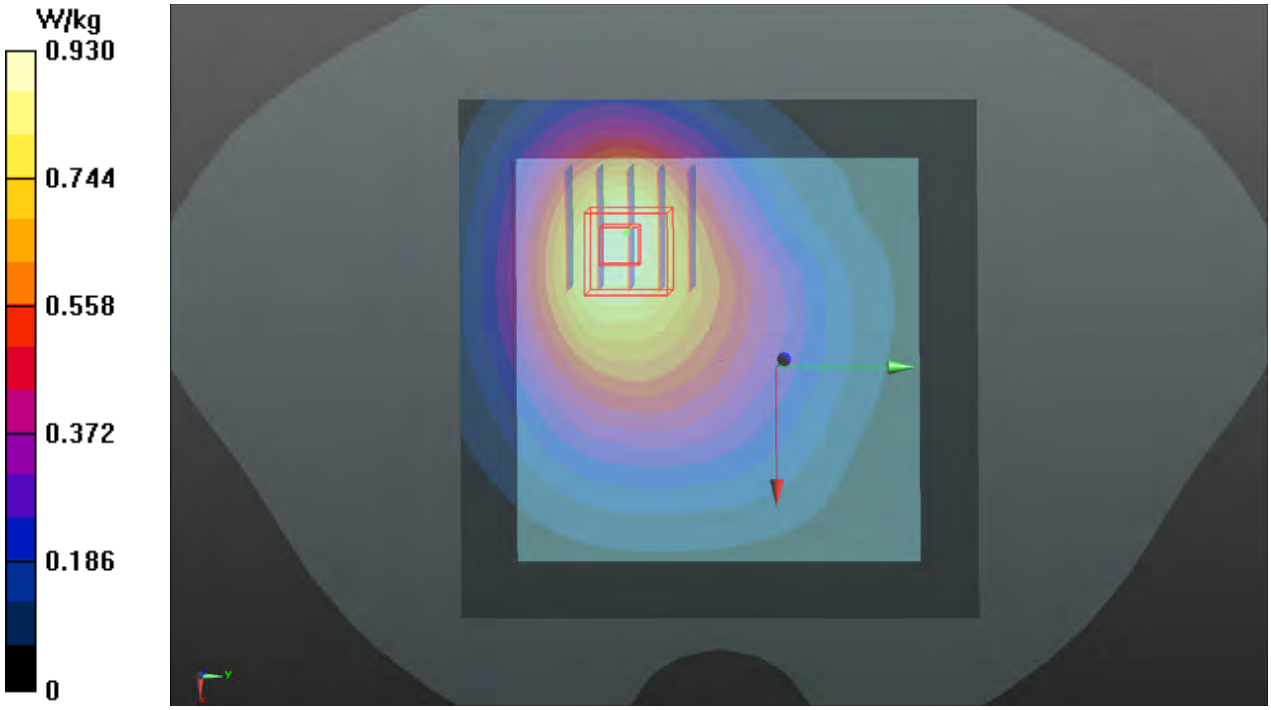
DUT: 191031C08

Communication System: UMTS-FDD (WCDMA); Frequency: 826.4 MHz;Duty Cycle: 1:1.95
Medium: H07T10N2_1219 Medium parameters used: f = 826.4 MHz; σ = 0.918 S/m; ε_r = 42.49; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(10.18, 10.18, 10.18); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.930 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.57 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.724 W/kg; SAR(10 g) = 0.502 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 22.7 mm
Ratio of SAR at M2 to SAR at M1 = 69.7%
Maximum value of SAR (measured) = 0.930 W/kg



P03 LTE 2_QPSK20M_Front Face_10mm_Ch18900_1RB_OS50_Ant1

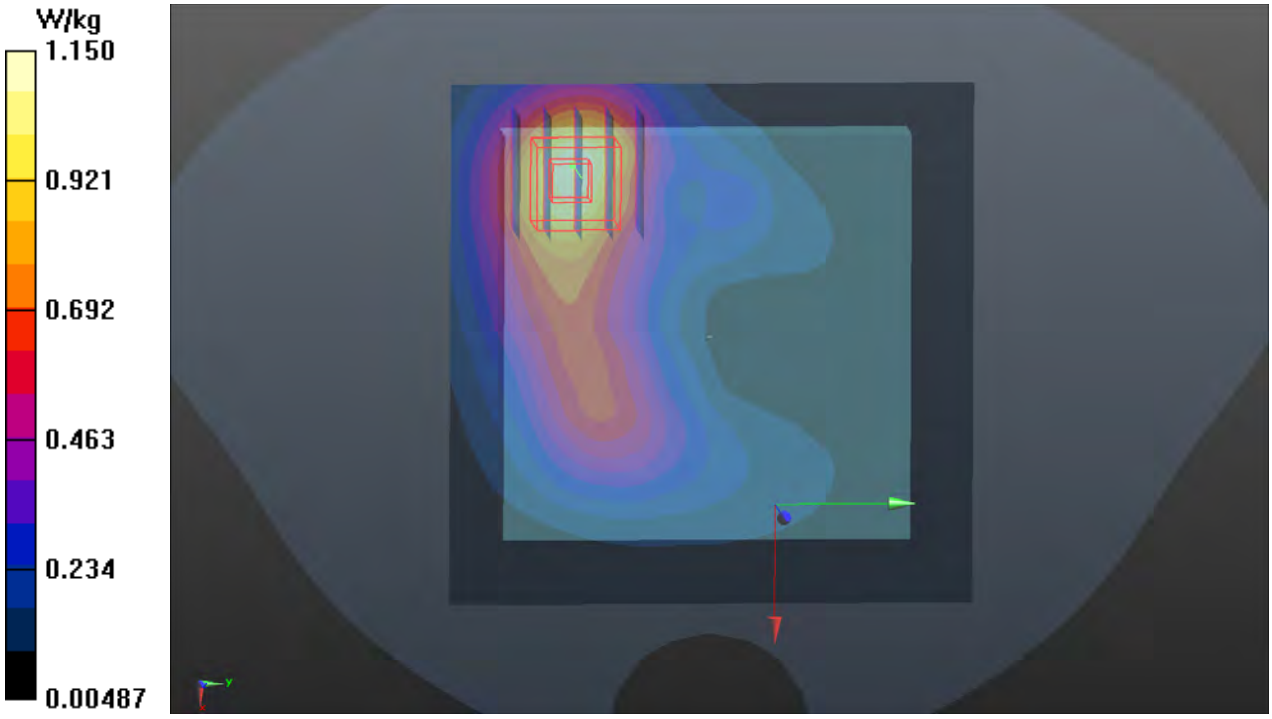
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1880 MHz;Duty Cycle: 1:3.74
Medium: H16T20N2_0109 Medium parameters used: f = 1880 MHz; σ = 1.447 S/m; ε_r = 40.937; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.13, 8.13, 8.13); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.15 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.18 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.686 W/kg; SAR(10 g) = 0.384 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 18.1 mm
Ratio of SAR at M2 to SAR at M1 = 63.9%
Maximum value of SAR (measured) = 1.12 W/kg



P04 LTE 2_QPSK20M_Front Face_10mm_Ch18900_1RB_OS50_Ant2

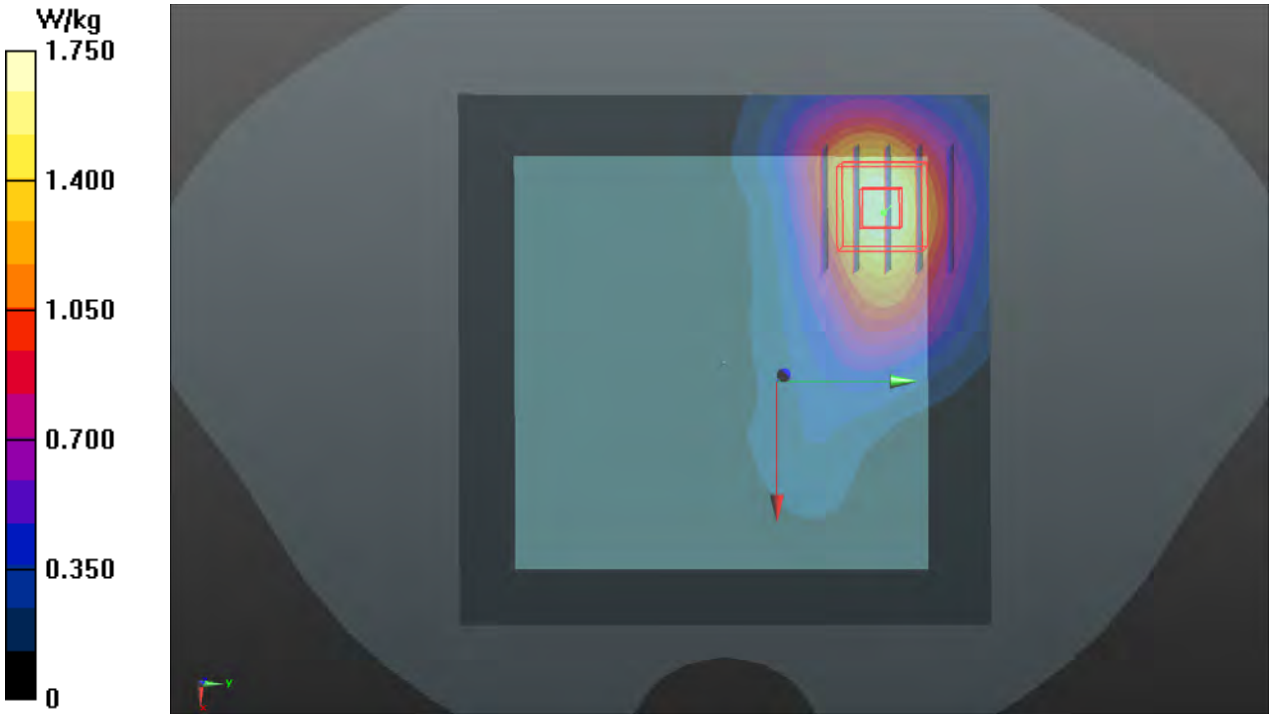
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1880 MHz;Duty Cycle: 1:3.74
Medium: H16T20N2_0109 Medium parameters used: f = 1880 MHz; σ = 1.447 S/m; ε_r = 40.937; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.13, 8.13, 8.13); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.75 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 35.44 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.97 W/kg
SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.765 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 64%
Maximum value of SAR (measured) = 1.72 W/kg



P05 LTE 4_QPSK20M_Rear Face_10mm_Ch20175_1RB_OS50_Ant1

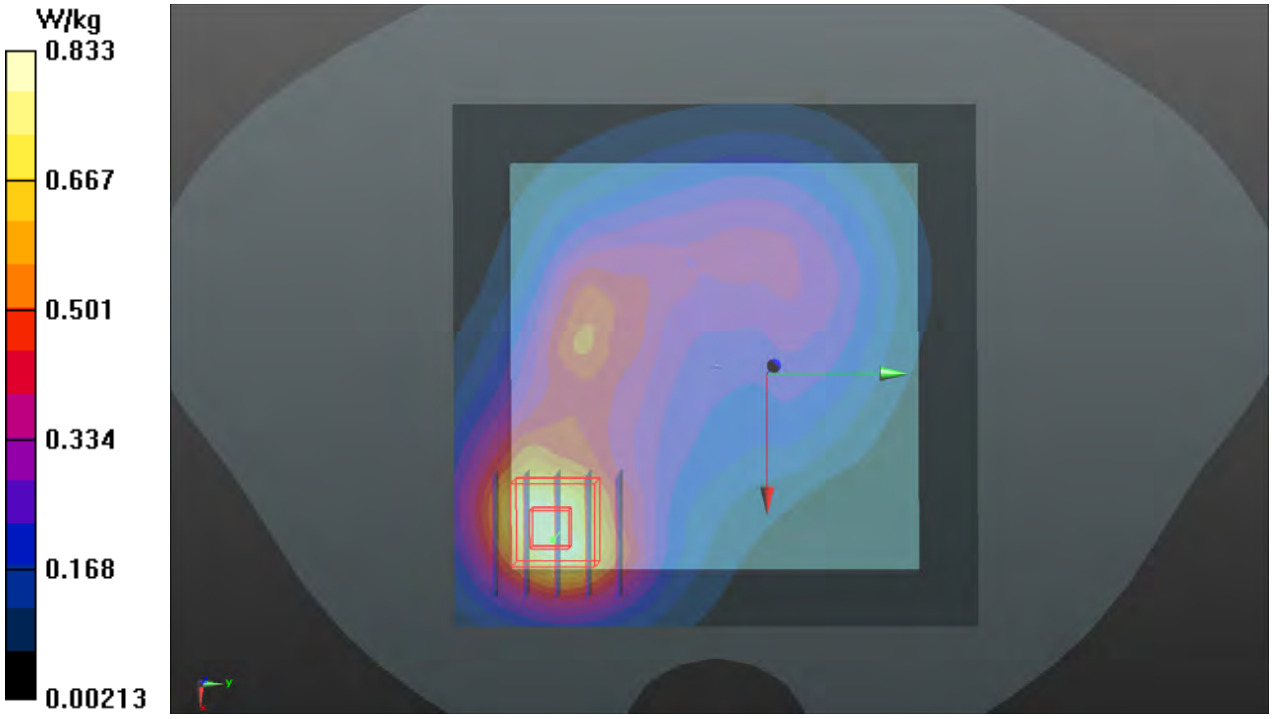
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1732.5 MHz;Duty Cycle: 1:3.74
Medium: H16T20N1_0110 Medium parameters used: f = 1733 MHz; σ = 1.319 S/m; ε_r = 39.612; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.44, 8.44, 8.44); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.833 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.48 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.990 W/kg
SAR(1 g) = 0.639 W/kg; SAR(10 g) = 0.387 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 15.8 mm
Ratio of SAR at M2 to SAR at M1 = 63.6%
Maximum value of SAR (measured) = 0.858 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2020/01/10

P06 LTE 4_QPSK20M_Rear Face_10mm_Ch20050_1RB_OS50_Ant2

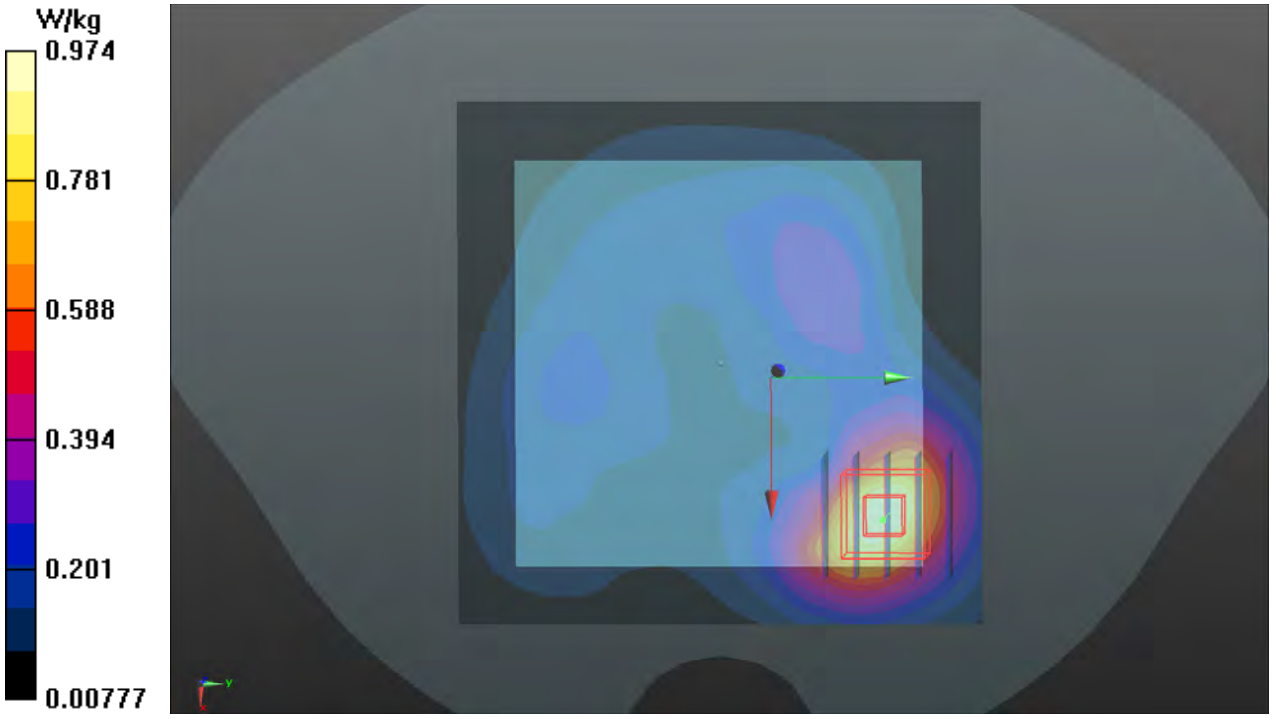
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1720 MHz;Duty Cycle: 1:3.74
Medium: H16T20N1_0110 Medium parameters used: f = 1720 MHz; σ = 1.307 S/m; ε_r = 39.671; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.44, 8.44, 8.44); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.974 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.51 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.680 W/kg; SAR(10 g) = 0.404 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 14.3 mm
Ratio of SAR at M2 to SAR at M1 = 63.5%
Maximum value of SAR (measured) = 0.923 W/kg



P07 LTE 5_QPSK10M_Front Face_10mm_Ch20450_1RB_OS49_Ant1

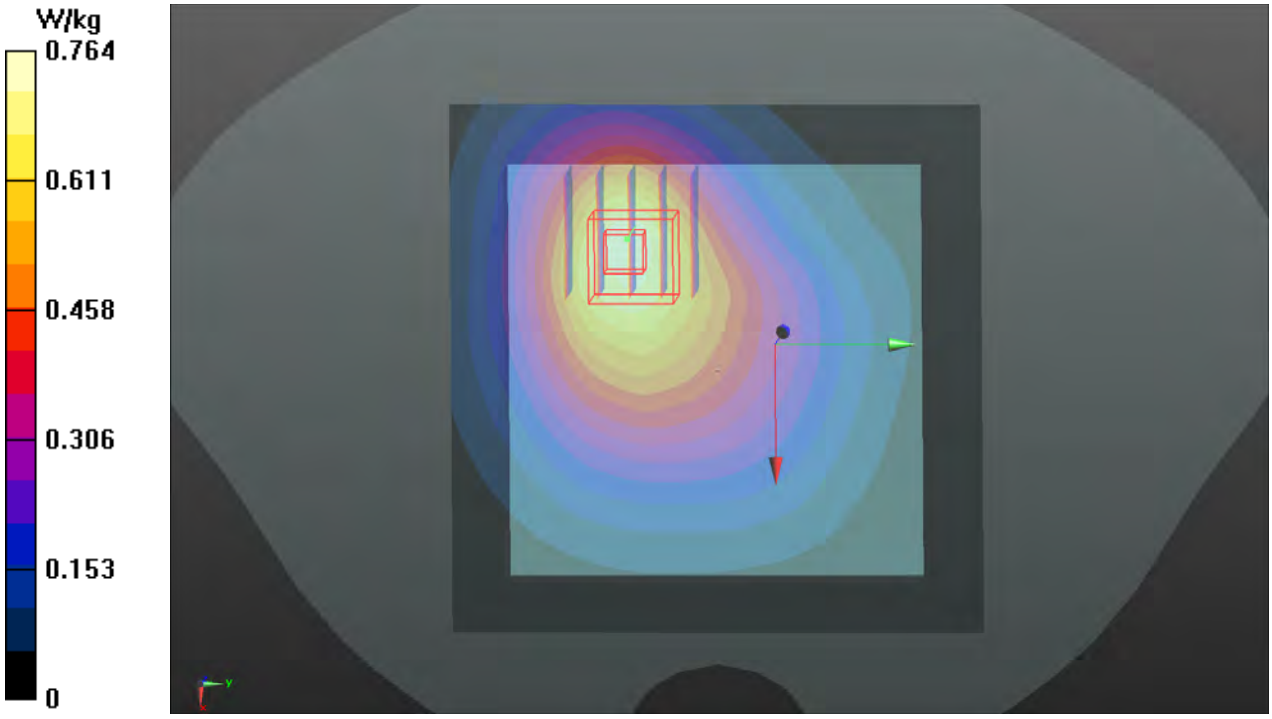
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 829 MHz;Duty Cycle: 1:3.74
Medium: H07T10N1_0110 Medium parameters used: f = 829 MHz; σ = 0.931 S/m; ε_r = 43.243; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(10.48, 10.48, 10.48); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.764 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.99 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.857 W/kg
SAR(1 g) = 0.525 W/kg; SAR(10 g) = 0.341 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 21.5 mm
Ratio of SAR at M2 to SAR at M1 = 70.7%
Maximum value of SAR (measured) = 0.770 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/17

P08 LTE 7_QPSK20M_Rear Face_10mm_Ch21350_1RB_OS0_Ant1

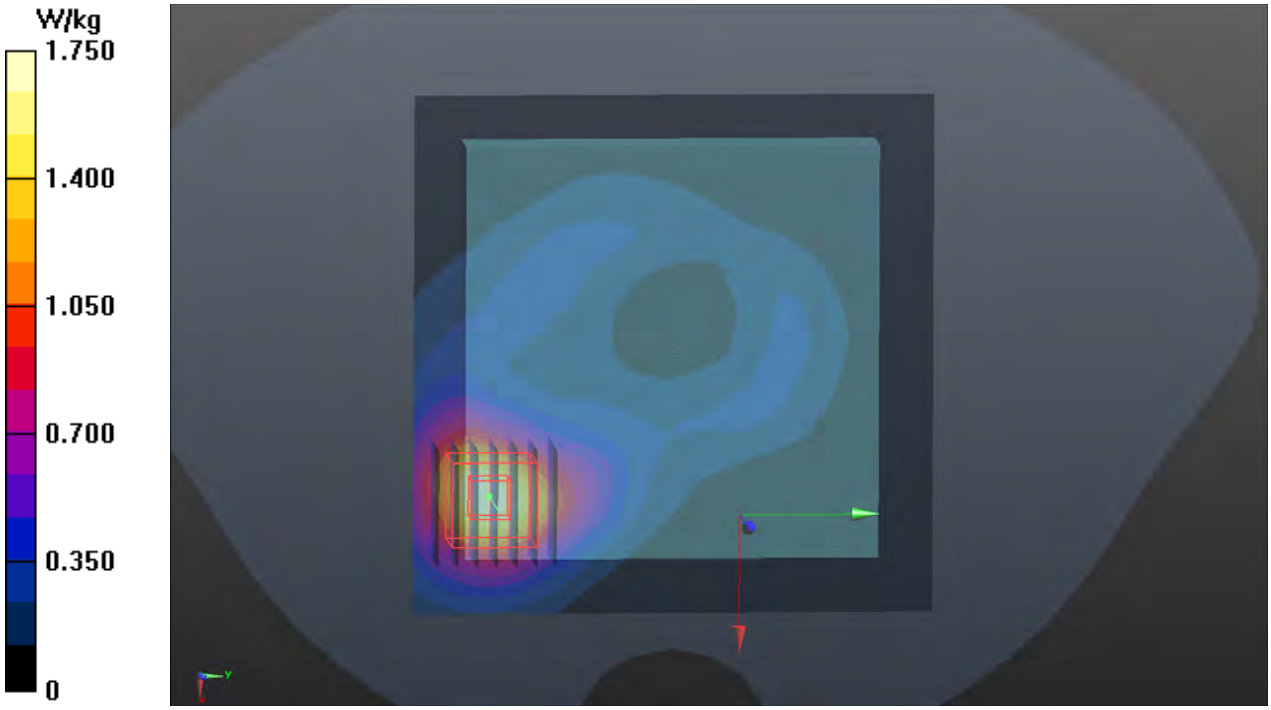
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2560 MHz;Duty Cycle: 1:3.74
Medium: H19T27N1_1217 Medium parameters used: f = 2560 MHz; σ = 1.996 S/m; ε_r = 37.392; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(7.64, 7.64, 7.64) ; Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (111x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.75 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.03 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.579 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 14.8 mm
Ratio of SAR at M2 to SAR at M1 = 53.3%
Maximum value of SAR (measured) = 1.72 W/kg



P09 LTE 12_QPSK10M_Front Face_10mm_Ch23130_1RB_OS24_Ant1

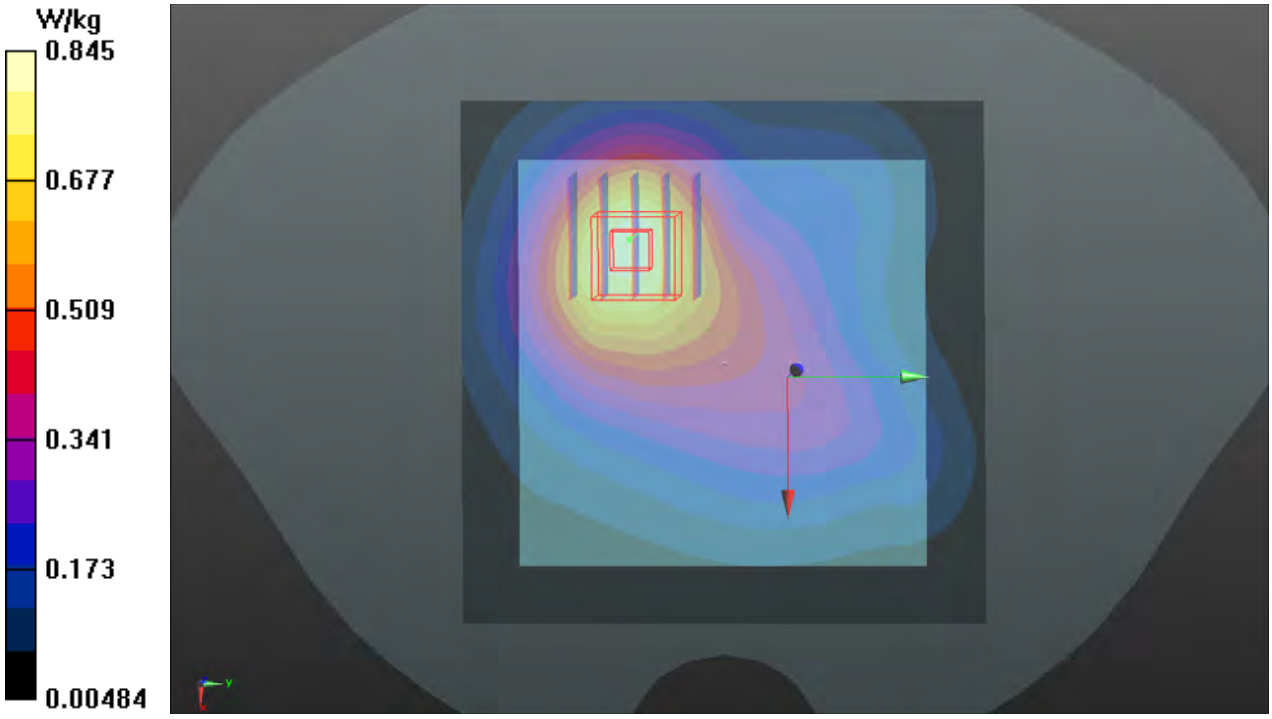
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 711 MHz;Duty Cycle: 1:3.74
Medium: H06T09N1_0110 Medium parameters used: f = 711 MHz; σ = 0.861 S/m; ε_r = 43.329; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(10.77, 10.77, 10.77); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.845 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.53 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.923 W/kg
SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.354 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 20.4 mm
Ratio of SAR at M2 to SAR at M1 = 74.2%
Maximum value of SAR (measured) = 0.846 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/02

P10 LTE 14_QPSK10M_Front Face_10mm_Ch23330_1RB_OS49_Ant1

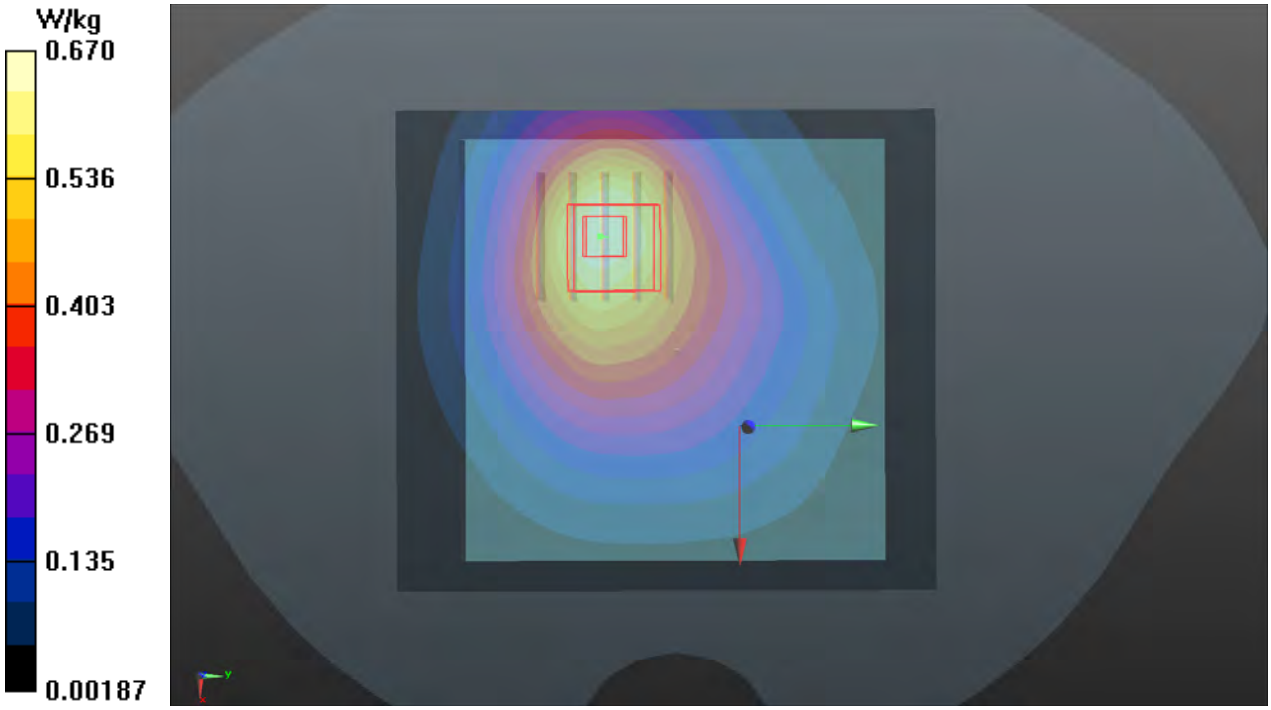
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK);
Frequency: 793 MHz;Duty Cycle: 1:3.73
Medium: H06T09N1_1202 Medium parameters used: f = 793 MHz; σ = 0.928 S/m; ε_r = 42.916; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(10.77, 10.77, 10.77); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (81x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.670 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.82 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.717 W/kg
SAR(1 g) = 0.521 W/kg; SAR(10 g) = 0.369 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 21.8 mm
Ratio of SAR at M2 to SAR at M1 = 72.4%
Maximum value of SAR (measured) = 0.654 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/19

P11 LTE 30_QPSK10M_Rear Face_10mm_Ch27710_1RB_OS0_Ant1

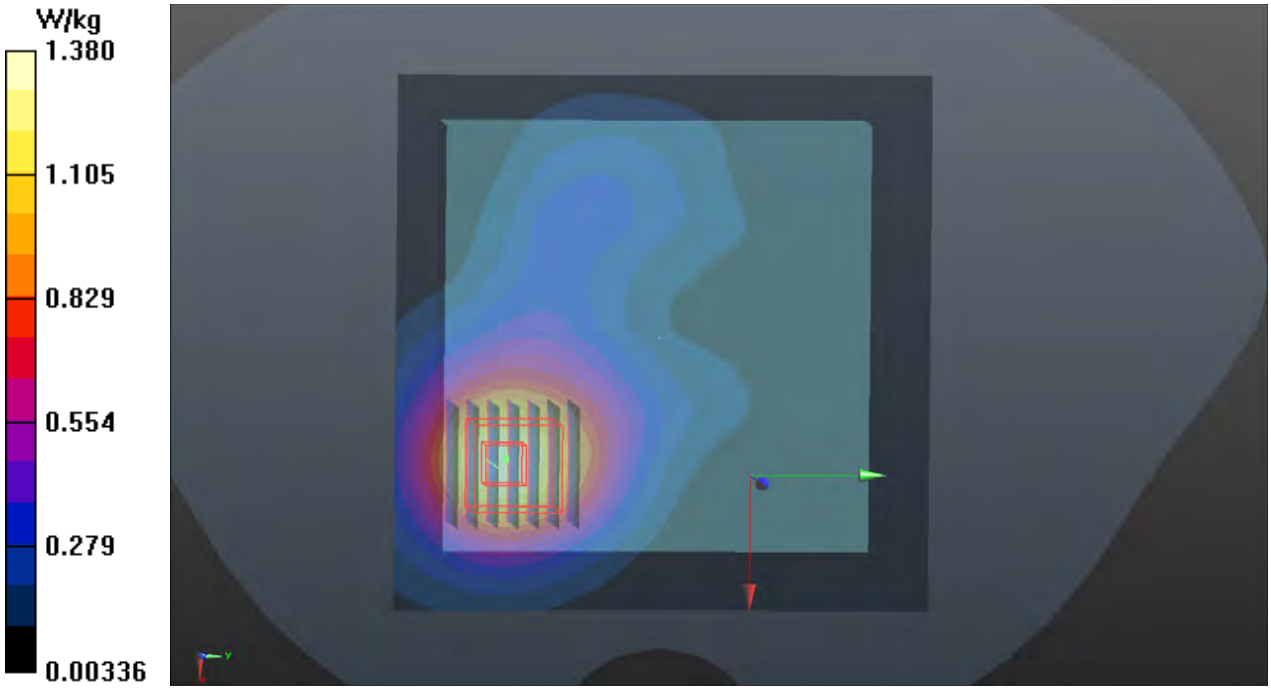
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 2310 MHz;Duty Cycle: 1:3.74
Medium: H19T27N1_1219 Medium parameters used: f = 2310 MHz; σ = 1.739 S/m; ε_r = 38.965; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(8.11, 8.11, 8.11); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (111x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.38 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.61 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 2.02 W/kg
SAR(1 g) = 0.874 W/kg; SAR(10 g) = 0.512 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 5.2 mm
Ratio of SAR at M2 to SAR at M1 = 55.4%
Maximum value of SAR (measured) = 1.32 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2019/12/19

P12 LTE 48_QPSK20M_Rear Face_10mm_Ch55780_1RB_OS99_Ant2

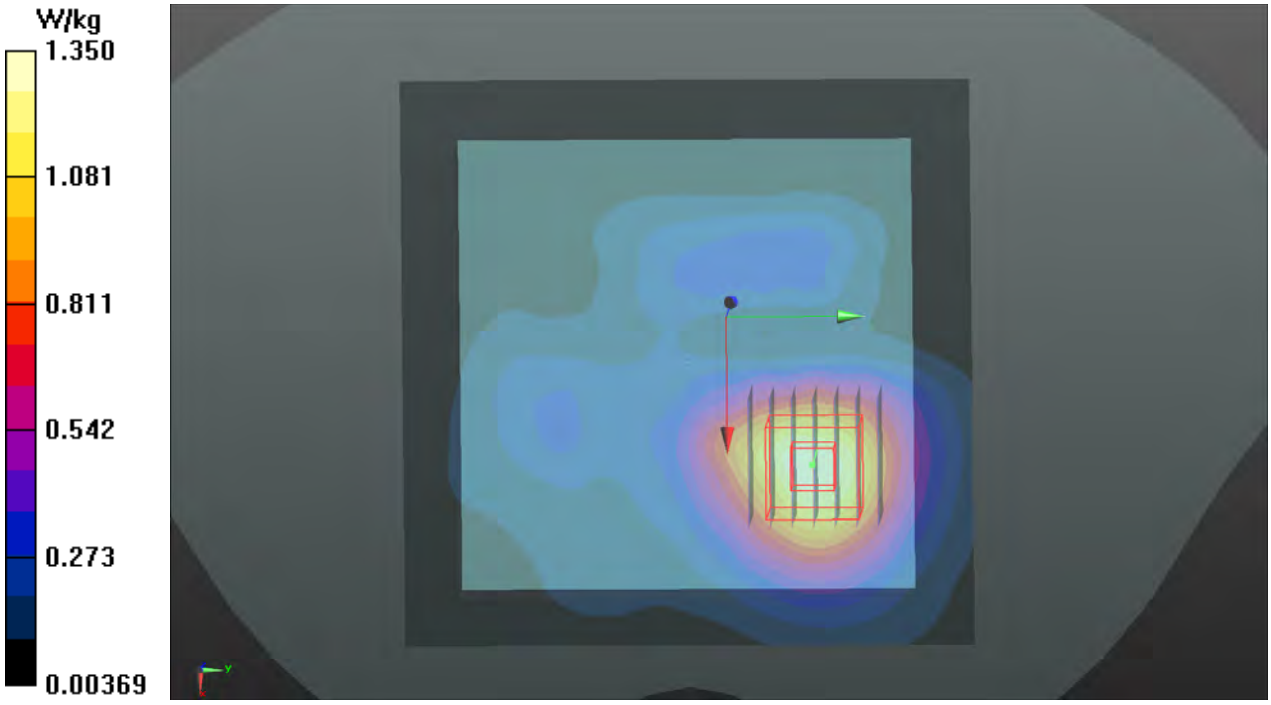
DUT: 191031C08

Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 3603 MHz;Duty Cycle: 1:8.34
Medium: H34T38N1_1219 Medium parameters used: f = 3603 MHz; σ = 3.036 S/m; ε_r = 37.166; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃ ； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(7.11, 7.11, 7.11); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2019/08/27
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (111x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.35 W/kg

- Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2.5mm
Reference Value = 19.23 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 0.691 W/kg; SAR(10 g) = 0.353 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 20 mm
Ratio of SAR at M2 to SAR at M1 = 64.6%
Maximum value of SAR (measured) = 1.16 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2020/01/10

P13 LTE 66_QPSK20M_Rear Face_10mm_Ch132572_1RB_OS50_Ant1

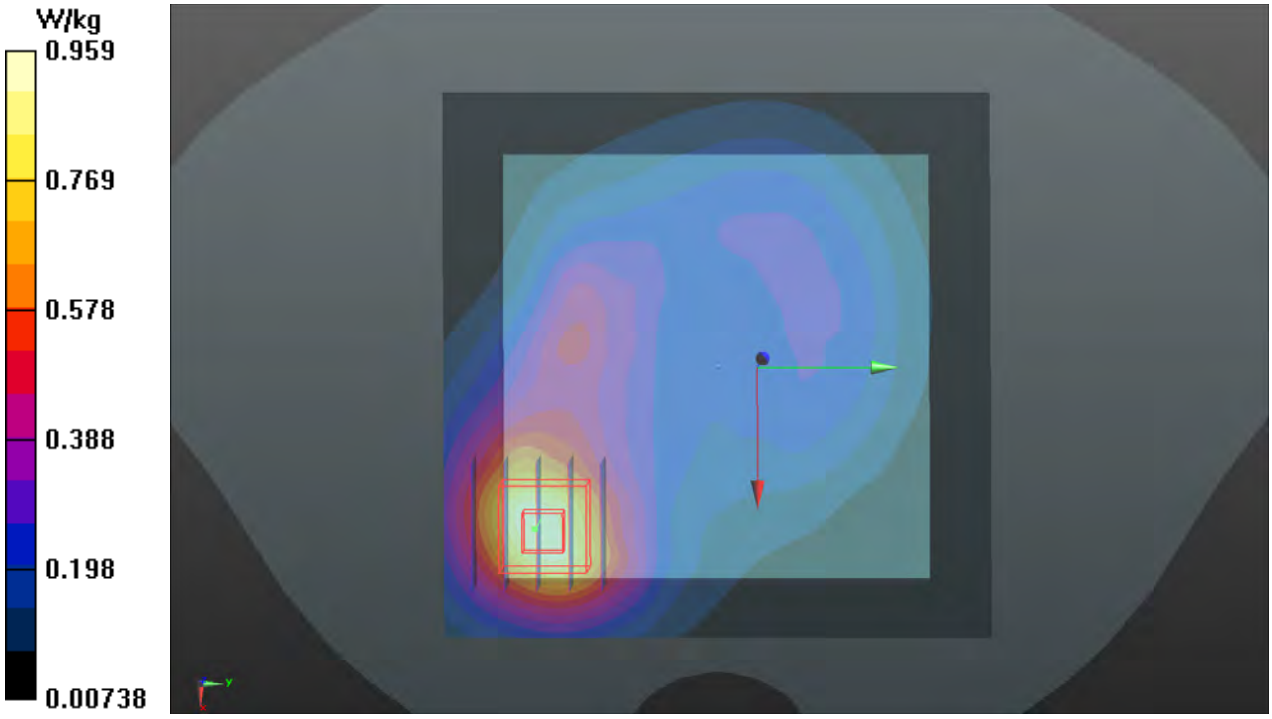
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1770 MHz;Duty Cycle: 1:3.74
Medium: H16T20N1_0110 Medium parameters used: f = 1770 MHz; σ = 1.346 S/m; ε_r = 39.441; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.44, 8.44, 8.44); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.959 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.04 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.658 W/kg; SAR(10 g) = 0.401 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 17 mm
Ratio of SAR at M2 to SAR at M1 = 63.1%
Maximum value of SAR (measured) = 0.994 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2020/01/10

P14 LTE 66_QPSK20M_Front Face_10mm_Ch132572_1RB_OS50_Ant2

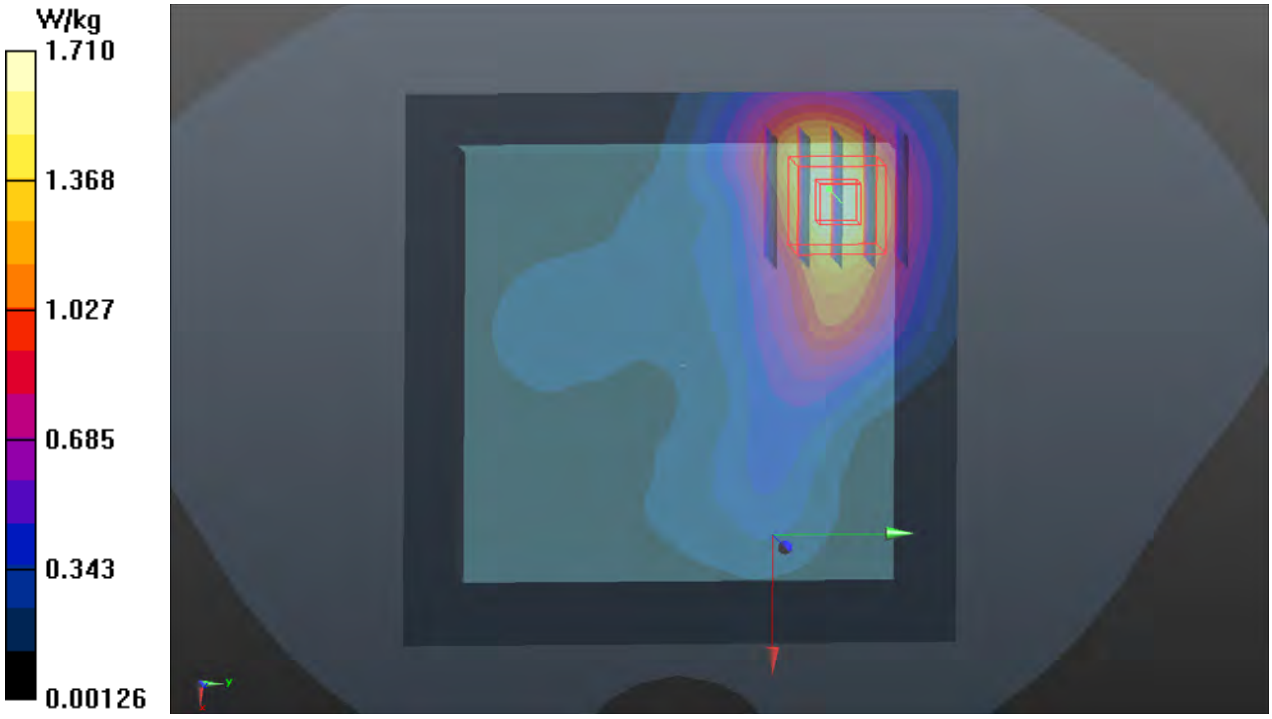
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1770 MHz;Duty Cycle: 1:3.74
Medium: H16T20N1_0110 Medium parameters used: f = 1770 MHz; σ = 1.346 S/m; ε_r = 39.441; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.44, 8.44, 8.44); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.71 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 34.70 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.726 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 16.3 mm
Ratio of SAR at M2 to SAR at M1 = 64.6%
Maximum value of SAR (measured) = 1.66 W/kg



P15 n2_DFT-S_QPSK_Front Face_10mm_Ch380000_1RB_OS0_Ant2_ENDC_w

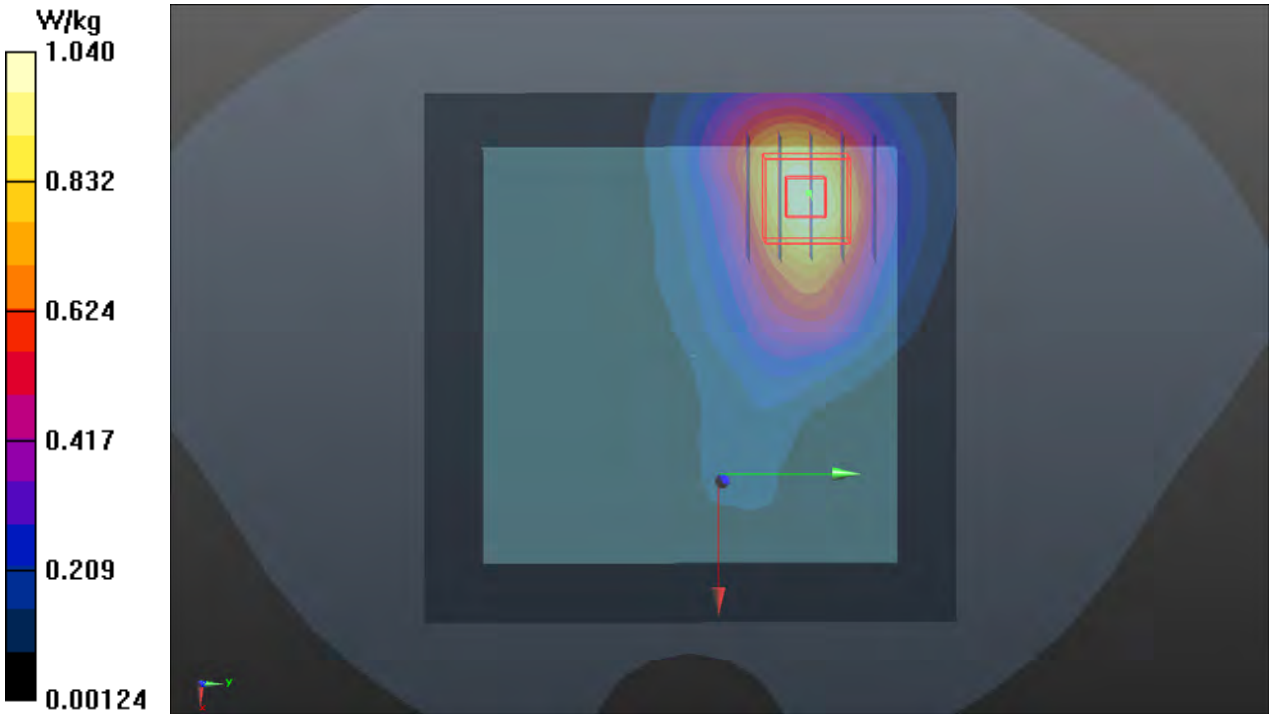
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1900 MHz;Duty Cycle: 1:3.74
Medium: H16T20N1_0110 Medium parameters used: f = 1900 MHz; σ = 1.459 S/m; ε_r = 39.001; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.13, 8.13, 8.13); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.04 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.08 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.714 W/kg; SAR(10 g) = 0.443 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 63.1%
Maximum value of SAR (measured) = 1.02 W/kg



P16 n5_DFT-S_QPSK_Front Face_10mm_Ch167300_1RB_OS53_Ant1_EN-DC_w

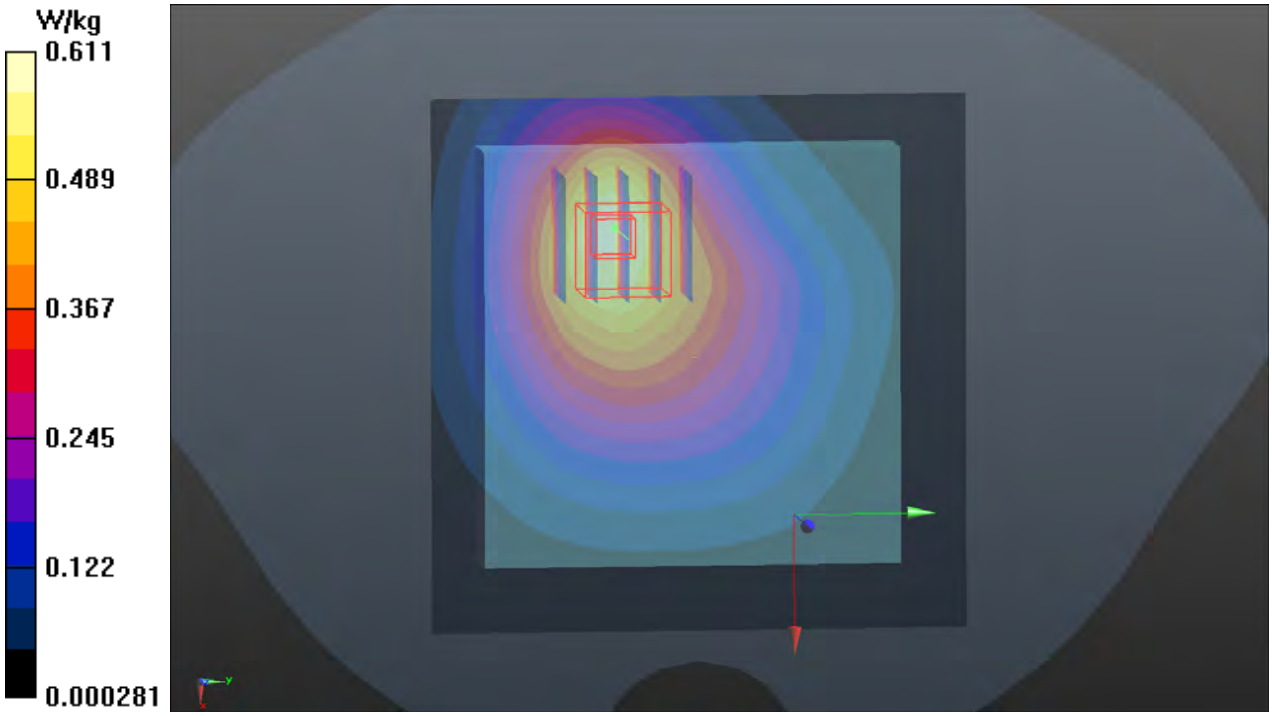
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 836.5 MHz;Duty Cycle: 1:3.74
Medium: H07T10N1_0110 Medium parameters used: f = 836.5 MHz; σ = 0.938 S/m; ε_r = 43.151; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(10.48, 10.48, 10.48); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.611 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.13 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.656 W/kg
SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.326 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 22.7 mm
Ratio of SAR at M2 to SAR at M1 = 71.9%
Maximum value of SAR (measured) = 0.596 W/kg



P17 n5_DFT-S_QPSK_Front Face_10mm_Ch167300_1RB_OS53_Ant2_EN-DC_w

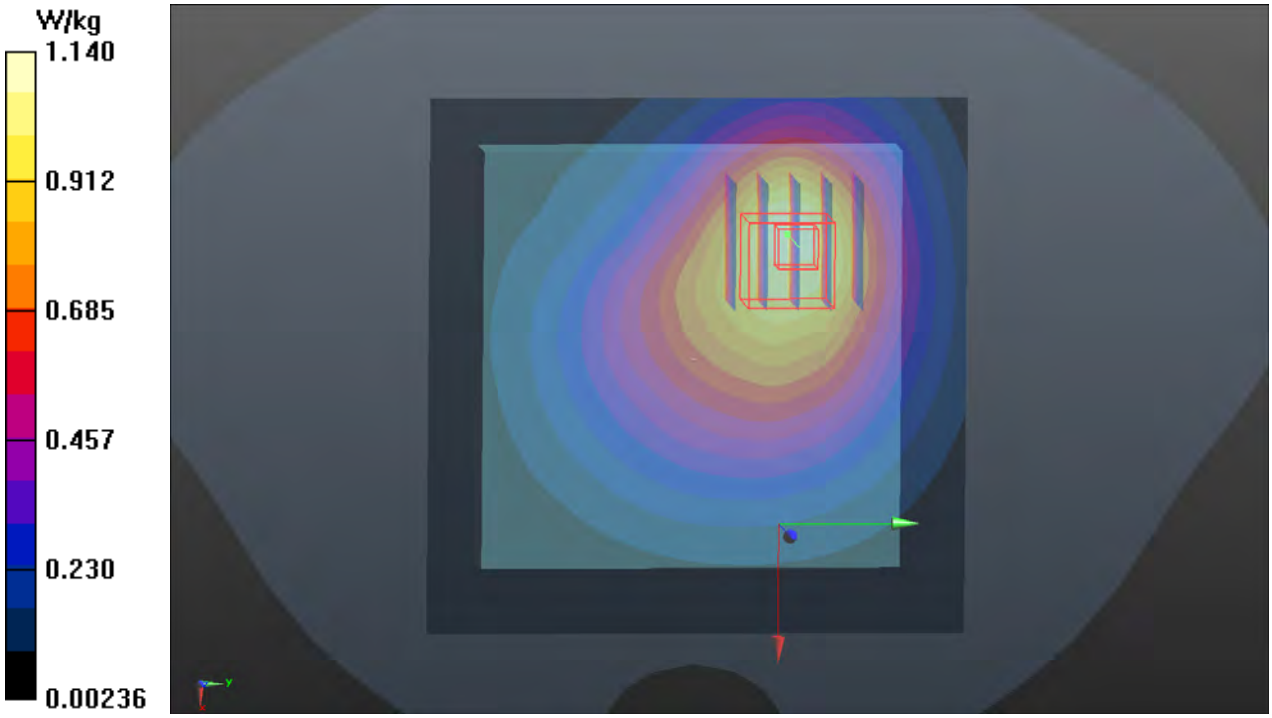
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 836.5 MHz;Duty Cycle: 1:3.74
Medium: H07T10N1_0110 Medium parameters used: f = 836.5 MHz; σ = 0.938 S/m; ε_r = 43.151; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(10.48, 10.48, 10.48); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.14 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 33.78 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.858 W/kg; SAR(10 g) = 0.612 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 21.8 mm
Ratio of SAR at M2 to SAR at M1 = 71.5%
Maximum value of SAR (measured) = 1.10 W/kg



P18 n66_DFT-S_QPSK_Front Face_10mm_Ch349000_1RB_OS53_Ant1_EN-DC_w

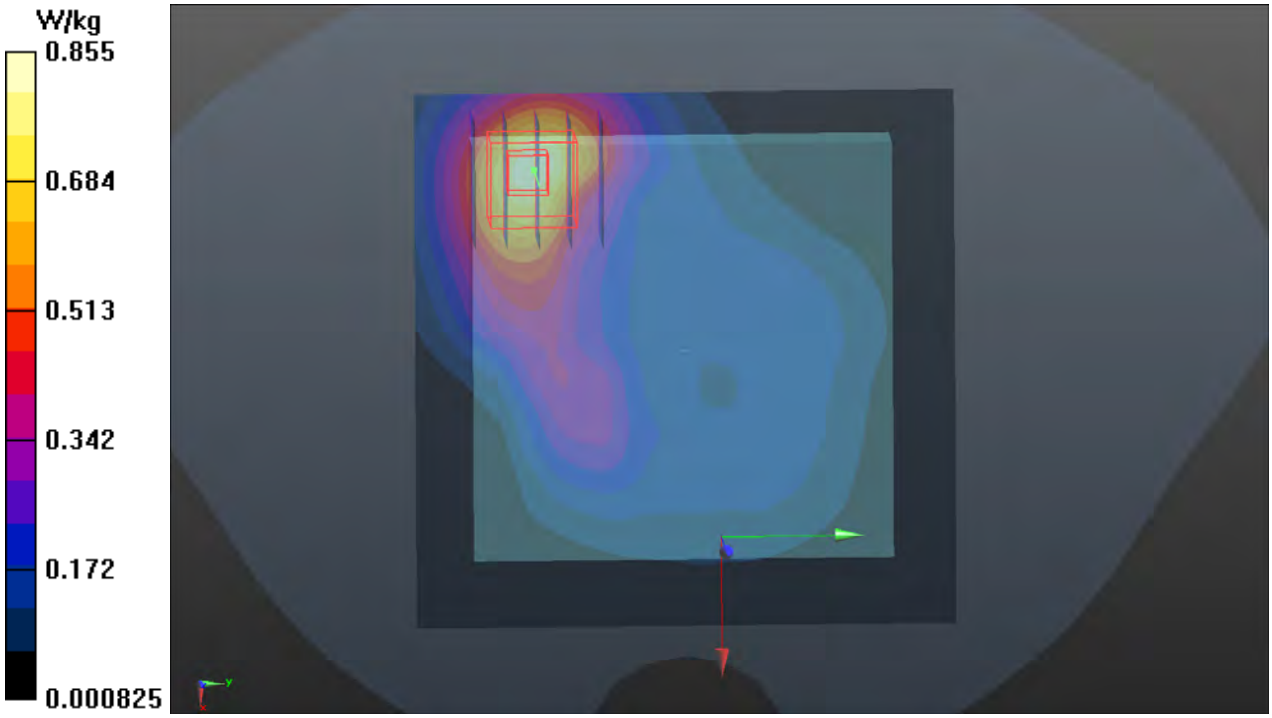
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1745 MHz;Duty Cycle: 1:3.74
Medium: H16T20N1_0110 Medium parameters used: f = 1745 MHz; σ = 1.328 S/m; ε_r = 39.549; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.44, 8.44, 8.44); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.855 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.21 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.927 W/kg
SAR(1 g) = 0.608 W/kg; SAR(10 g) = 0.374 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 64.9%
Maximum value of SAR (measured) = 0.810 W/kg



P19 n66_DFT-S_QPSK_Front Face_10mm_Ch349000_1RB_OS53_Ant2_EN-DC_w

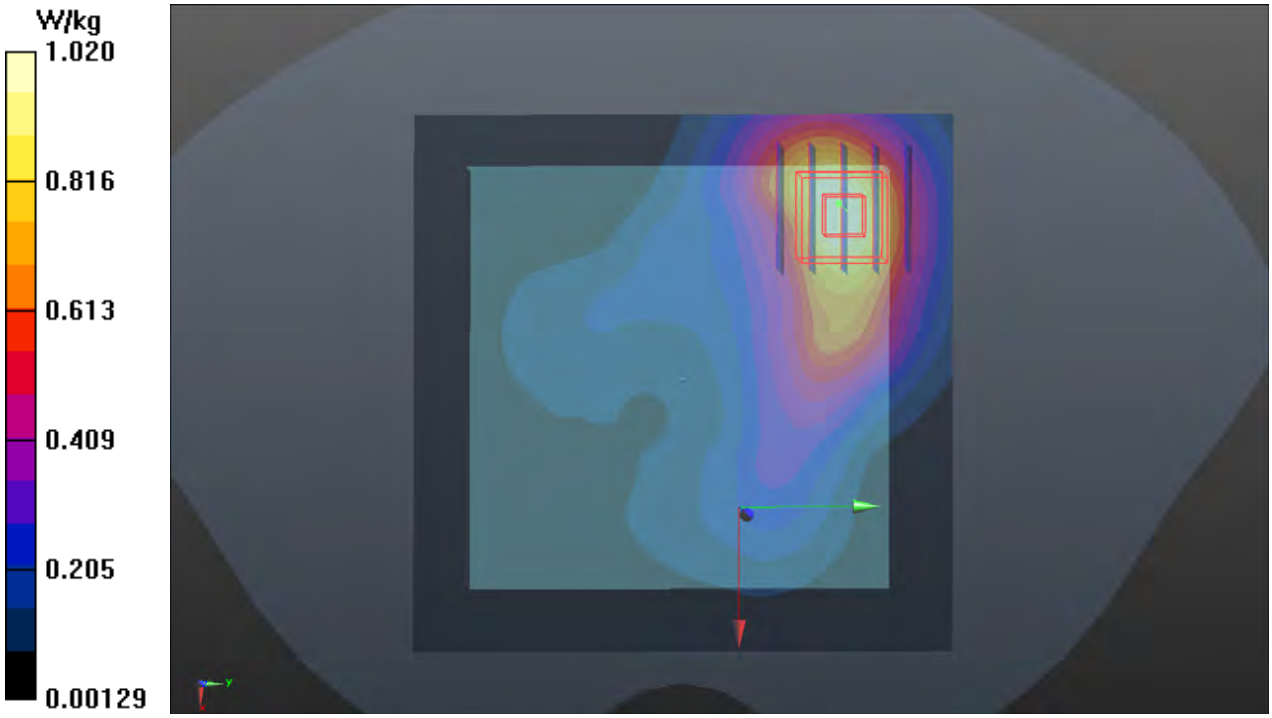
DUT: 191031C08

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1745 MHz;Duty Cycle: 1:3.74
Medium: H16T20N1_0110 Medium parameters used: f = 1745 MHz; σ = 1.328 S/m; ε_r = 39.549; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(8.44, 8.44, 8.44); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (91x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.02 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.78 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.770 W/kg; SAR(10 g) = 0.483 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 16.7 mm
Ratio of SAR at M2 to SAR at M1 = 65%
Maximum value of SAR (measured) = 1.02 W/kg



P20 WLAN2.4G_802.11b_Front Face_10mm_Ch1_Ant 4

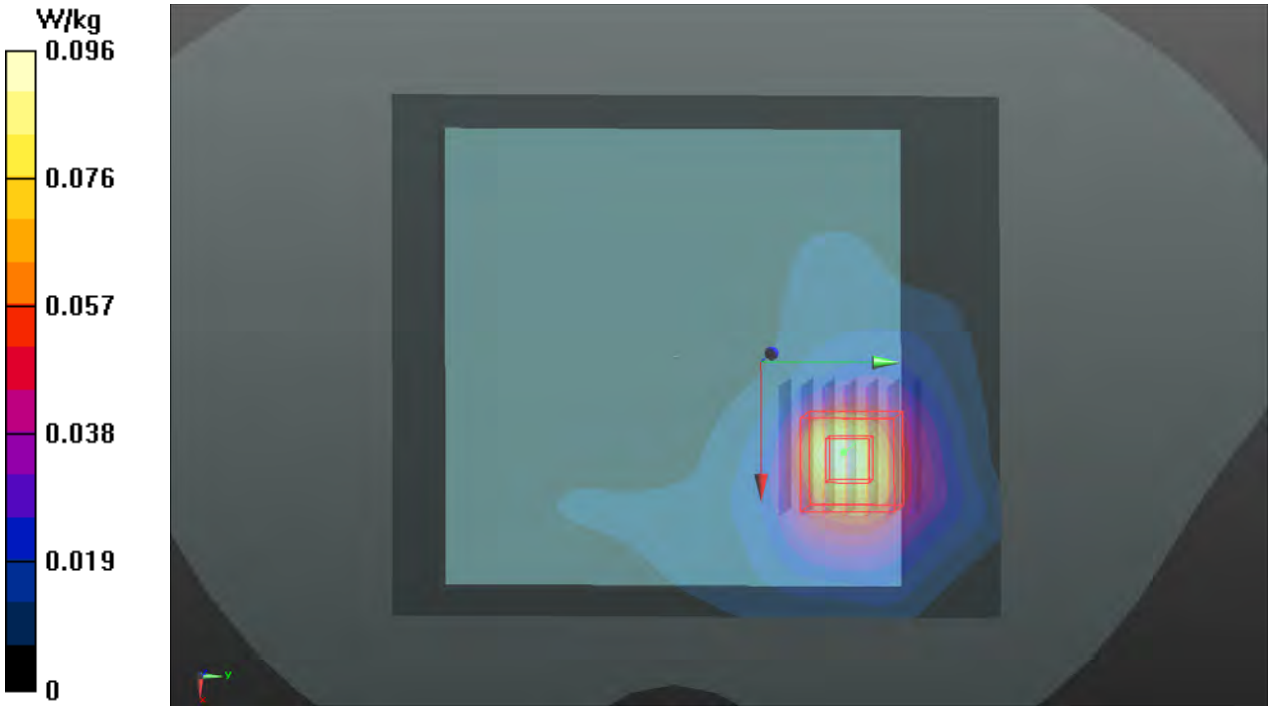
DUT: 191031C08

Communication System: IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle);
Frequency: 2412 MHz;Duty Cycle: 1:1.04
Medium: H19T27N1_1209 Medium parameters used: f = 2412 MHz; σ = 1.851 S/m; ε_r = 38.447; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(7.39, 7.39, 7.39); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (101x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0956 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.481 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.105 W/kg
SAR(1 g) = 0.059 W/kg; SAR(10 g) = 0.033 W/kg (SAR corrected for target medium)
Ratio of SAR at M2 to SAR at M1 = 57.6%
Maximum value of SAR (measured) = 0.0870 W/kg



P21 WLAN5.2G_802.11ac VHT80_Front Face_10mm_Ch42_Ant 4

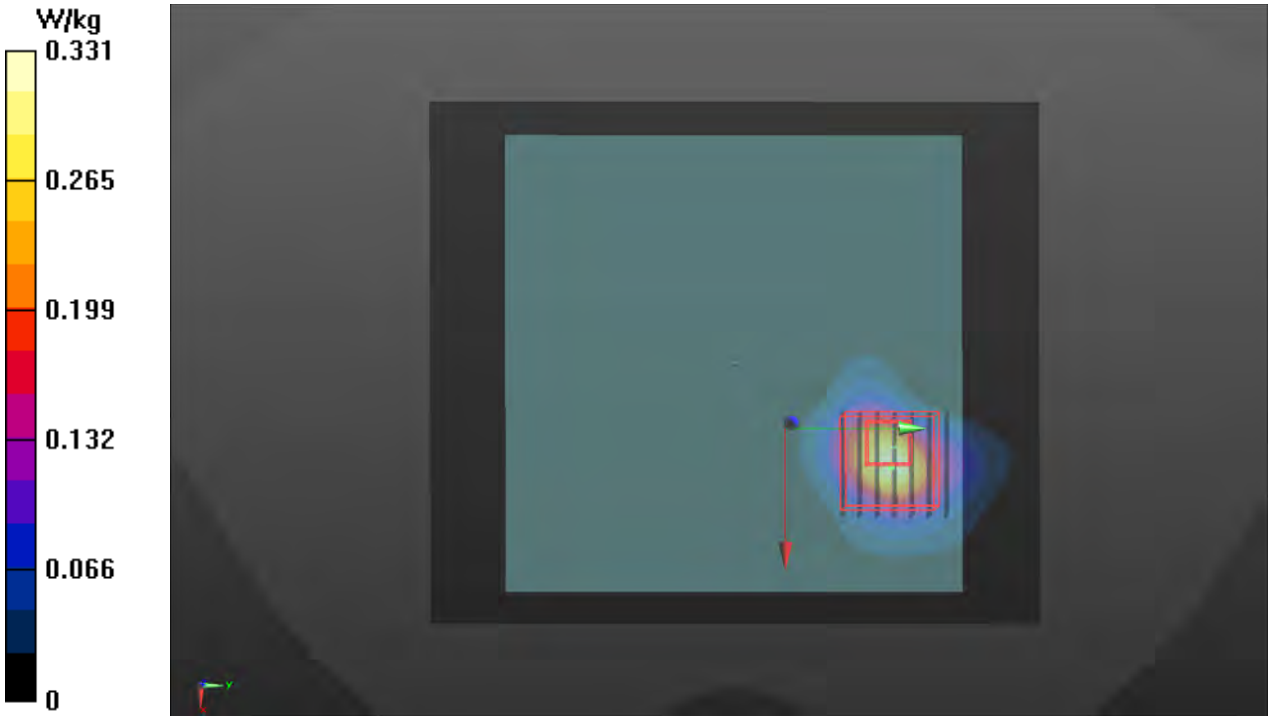
DUT: 191031C08

Communication System: IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle); Frequency: 5210 MHz;Duty Cycle: 1:1
Medium: H34T60N1_0108 Medium parameters used: f = 5210 MHz; σ = 4.719 S/m; ε_r = 35.112; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃ ； Liquid Temperature：23.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7472; ConvF(5.67, 5.67, 5.67); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: Twin SAM Phantom_1823; Type: QD 000 P40 CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (121x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.331 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 6.896 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.435 W/kg
SAR(1 g) = 0.116 W/kg; SAR(10 g) = 0.035 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 63%
Maximum value of SAR (measured) = 0.288 W/kg



P22 WLAN5.8G_802.11ac VHT80_Front Face_10mm_Ch155_Ant 4

DUT: 191031C08

Communication System: IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle); Frequency: 5775 MHz;Duty Cycle: 1:1
Medium: H34T60N1_1209 Medium parameters used: f = 5775 MHz; σ = 5.343 S/m; ε_r = 36.324; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7537; ConvF(4.99, 4.99, 4.99); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: Twin SAM Phantom_1823; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- Area Scan (121x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.782 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 7.426 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.594 W/kg
SAR(1 g) = 0.157 W/kg; SAR(10 g) = 0.063 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 10.4 mm
Ratio of SAR at M2 to SAR at M1 = 64%
Maximum value of SAR (measured) = 0.349 W/kg