

Variant SAR Test Report

Report No. : SF181024C21Q
Applicant : HON HAI Precision Ind. Co., Ltd.
Address : 5F-1, 5 Hsin-An Road Hsinchu, Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C
Product : Portable Computer - Tablet
FCC : MCLT77W968-D2
Brand : DELL
Model No. : T04J
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 616217 D04 v01r02, KDB 941225 D01 v03r01, KDB 941225 D05 v02r05, KDB 941225 D05A v01r02
Sample Received Date : Dec. 18, 2019
Date of Testing : Jan. 07, 2020 ~ Feb. 27, 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.

This report is issued as a supplementary report to BV CPS report no.: SC181024C21I. The difference compared with original report is adding WLAN module (Brand: Intel, Model: AX201NGW). Hence this report WWAN has worst case of original report (BV CPS report no.: SC181024C21I.) was verified for new WWAN module, WLAN also has worst case of original report (RF Exposure Lab report no.: SAR.20200208.) was verified for new WLAN module and the simultaneous transmission evaluation is analyzed and calculated based on the original report of the WLAN module and the WWAN data referred to the SAR report of this host laptop PC (IC ID: 2878D-T77W968, Report number: SC181024C21I, Issued date: Mar. 22, 2019).

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FCC Accredited No.: TW0003

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Release Control Record

Report No.	Reason for Change	Date Issued
SF181024C21Q	Initial release	Mar. 10, 2020

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1. Summary of Maximum SAR Value

Equipment Class	Mode	Highest Scaled SAR-1g Body (W/kg)	
		Tablet PC Mode	Laptop PC Mode
PCB	WCDMA II	0.82	0.01
	WCDMA IV	1.07	0.04
	WCDMA V	0.93	0.06
	LTE 2 & 25	1.14	0.10
	LTE 4 & 66	1.14	0.05
	LTE 5	0.88	0.06
	LTE 7	1.18	0.05
	LTE 12 & 17	1.14	0.05
	LTE 13	1.00	0.05
	LTE 14	0.92	0.06
	LTE 26	1.01	0.06
	LTE 30	0.99	0.02
	LTE 38 & 41	0.92	0.03
Equipment Class	Mode	Highest Scaled SAR-1g Body (W/kg)	
		AX201NGW	
		Tablet PC Mode	Laptop PC Mode
DTS	2.4G WLAN	1.13	0.00
NII	5.3G WLAN	0.98	0.00
	5.6G WLAN	0.87	0.00
	5.8G WLAN	1.02	0.00
DSS	Bluetooth	0.37	0.00

Highest Simultaneous Transmission SAR	Highest Scaled SAR-1g Body (W/kg)	
	AX201NGW	
	Tablet PC Mode	Laptop PC Mode
	1.54	1.30

Note:

- The SAR criteria (**Head & Body: SAR-1g 1.6 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.
- This device supports both LTE band 66 and band 4. The frequency span of LTE band 66 can completely cover LTE band 4, and they has the same tune-up power. SAR was tested for LTE band 66 only.
- This device supports both LTE band 25 and band 2. The frequency span of LTE band 25 can completely cover LTE band 2, and they has the same tune-up power. SAR was tested for LTE band 25 only.
- This device supports both LTE band 12 and band 17. The frequency span of LTE band 12 can completely cover LTE band 17, and they has the same tune-up power. SAR was tested for LTE band 12 only.
- This device supports both LTE band 41 and band 38. The frequency span of LTE band 41 can completely cover LTE band 38, and they has the same tune-up power. SAR was tested for LTE band 41 only.

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2. Description of Equipment Under Test

EUT Type	Portable Computer - Tablet
FCC ID	MCLT77W968-D2
Brand Name	DELL
Model Name	T04J
EUT Configurations	EUT 1: Non-Security SKU + Hong-Bo Antenna EUT 2: Security SKU + Hong-Bo Antenna
Tx Frequency Bands (Unit: MHz)	WCDMA Band II : 1852.4 ~ 1907.6 WCDMA Band IV : 1712.4 ~ 1752.6 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 13 : 779.5 ~ 784.5 (BW: 5M, 10M) LTE Band 14 : 790.5 ~ 795.5 (BW: 5M, 10M) LTE Band 17 : 706.5 ~ 713.5 (BW: 5M, 10M) LTE Band 25 : 1850.7 ~ 1914.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M) LTE Band 26 : 814.7 ~ 848.3 (BW: 1.4M, 3M, 5M, 10M, 15M) LTE Band 30 : 2307.5 ~ 2312.5 (BW: 5M, 10M) LTE Band 38 : 2572.5 ~ 2617.5 (BW: 5M, 10M, 15M, 20M) LTE Band 41 : 2498.5 ~ 2687.5 (BW: 5M, 10M, 15M, 20M) LTE Band 66 : 1710.7 ~ 1779.3 (BW: 1.4M, 3M, 5M, 10M, 15M, 20M)
Uplink Modulations	WCDMA : QPSK LTE : QPSK, 16QAM, 64QAM 802.11b : DSSS 802.11a/g/n/ac : OFDM 802.11ax : OFDMA Bluetooth : GFSK, $\pi/4$ -DQPSK, 8DPSK NFC : ASK
Maximum Tune-up Conducted Power (Unit: dBm)	Please refer to section 4.5.1 of this report
Antenna Type	Refer to Note as below
EUT Stage	Mass product

Note:

- The host laptop PC has implemented with one WWAN module (FCC ID: MCLT77W968-D2) and three optional WLAN modules (WLAN module 1 FCC ID: PD99560NG, WLAN module 2 FCC ID: PPD-QCNFA344AH, WLAN module 3 FCC ID: PD9AX200NG), and the applicant has added one new optional WLAN module (WLAN module 4 FCC ID: PD9AX201NG) that are evaluated in this report. Since all WLAN/BT radio modules have the same mechanical outline (e.g., the same package dimension and pin-out layout), use the same antenna component and have identical antenna structure, only supported WLAN RF specification is difference, it would not impact to WWAN radiation and exposure condition. Hence this report has worst case of original report (RF Exposure Lab report no.: SAR.20200208.) was verified for new optional WLAN module and the simultaneous transmission evaluation is analyzed and calculated based on the original report of the WLAN module and the WWAN data referred to the SAR report of this host laptop PC (FCC ID: MCLT77W968-D2, Report number: SA1181024C21H, Issued date: Mar. 22, 2019).
- The information of modules collocated in this EUT is listed as below.

Item	Brand Name	Model Name	Specification
WWAN module	FOXCONN	T77W968	WCDMA I/VI/VIII/IX/XIX, LTE 1/3/8/18/19/26/28/41/42
BT/WLAN module	Intel	AX201NGW	2T2R, 802.11a/b/g/n/ac/ax + Bluetooth

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3. The EUT contains two SKU which are listed as below.

SKU	Difference
Non-Security SKU	w/o NFC function
Security SKU	with NFC function

4. The antenna information is listed as below.

Antenna Type	Manuf.	Parts Number	Antenna Gain (dBi)													
			WCDMA II / LTE 2	WCDMA IV / LTE 4	WCDMA V / LTE 5	LTE 7	LTE 12	LTE 13	LTE 14	LTE 17	LTE 25	LTE 26	LTE 30	LTE 38	LTE 41	LTE 66
PIFA	Hong-Bo	Main Ant.: 260-24223 (DC33002680L) Aux. Ant.: 260-24224 (DC33002681L)	1.25	-3.32	-2.58	-6.15	0.61	-0.09	-0.69	0.43	1.25	-2.37	-3.35	-7.44	-4.86	-3.32

Ant. Type	Manufacturer	Parts Number	WLAN Antenna Gain (dBi)			
			WLAN 2.4 GHz	WLAN 5.15~5.35 GHz	WLAN 5.47~5.725 GHz	WLAN 5.725~5.85 GHz
PIFA	Hong-Bo	WLAN Main Antenna: 260-24224 (DC33002681L) WLAN Aux Antenna: 260-24224 (DC33002681L)	Main: 0.67 Aux.: 1.28	Main: 1.49 Aux.: 1.21	Main: 0.81 Aux.: 2.65	Main: 0.79 Aux.: 1.60

5. 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.

List of Accessory:

Battery	Brand Name	Dell
	Model Name	1FKCC
	Power Rating	7.6V, 4750mAh, 38Wh
	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:

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

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

SAR measurement can be related to the electrical field in the tissue by

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

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

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 from the optical into digital electric signal of the DAE and transfers data to the PC.

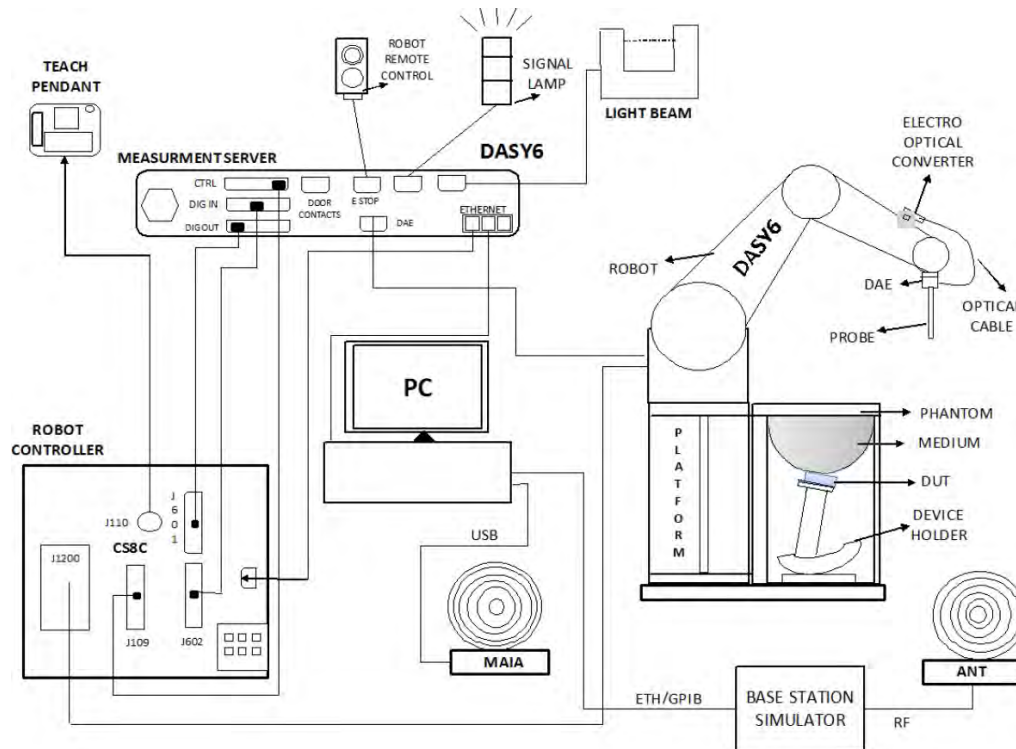


Fig-3.1 SPEAG DASY6 System Setup

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)

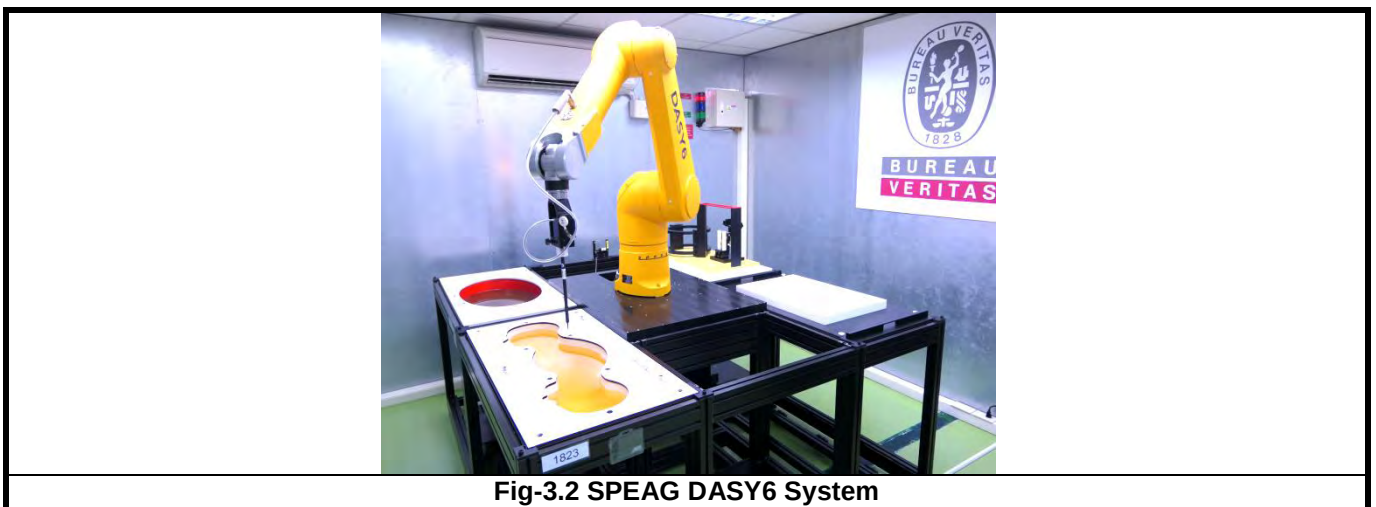


Fig-3.2 SPEAG DASY6 System

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3.2.2 Probes

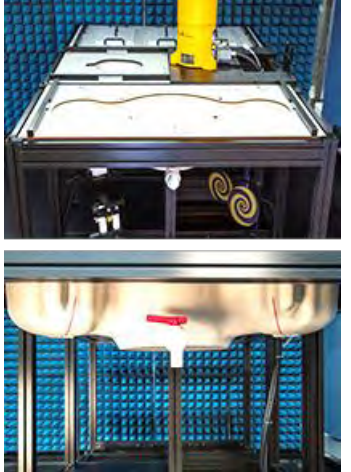
The SAR measurement is conducted with the dosimetric probe. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency.

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 μ W/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/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	

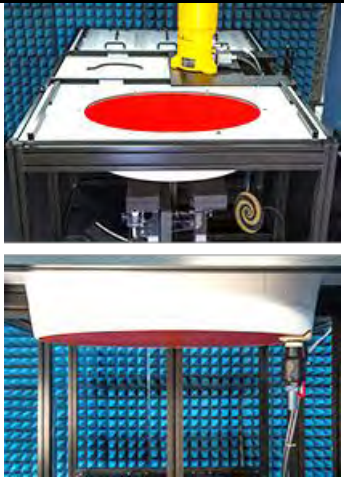
3.2.3 Data Acquisition Electronics (DAE)

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	$< 5\mu$ V (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	

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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	

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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 1/4 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 ($f < 1\text{GHz}$), > 40 W ($f > 1\text{GHz}$)	

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.	

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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.

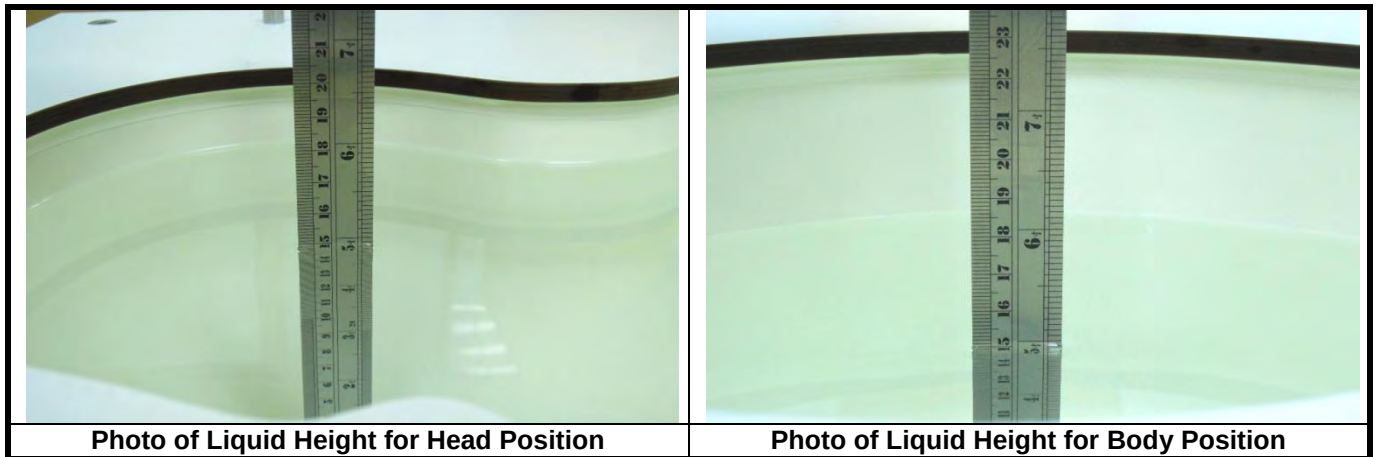


Table-3.1 Targets of Tissue Simulating Liquid

Frequency (MHz)	Target Permittivity	Range of $\pm 10\%$	Target Conductivity	Range of $\pm 10\%$
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

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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 $\pm 10\%$ 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 Δ 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.

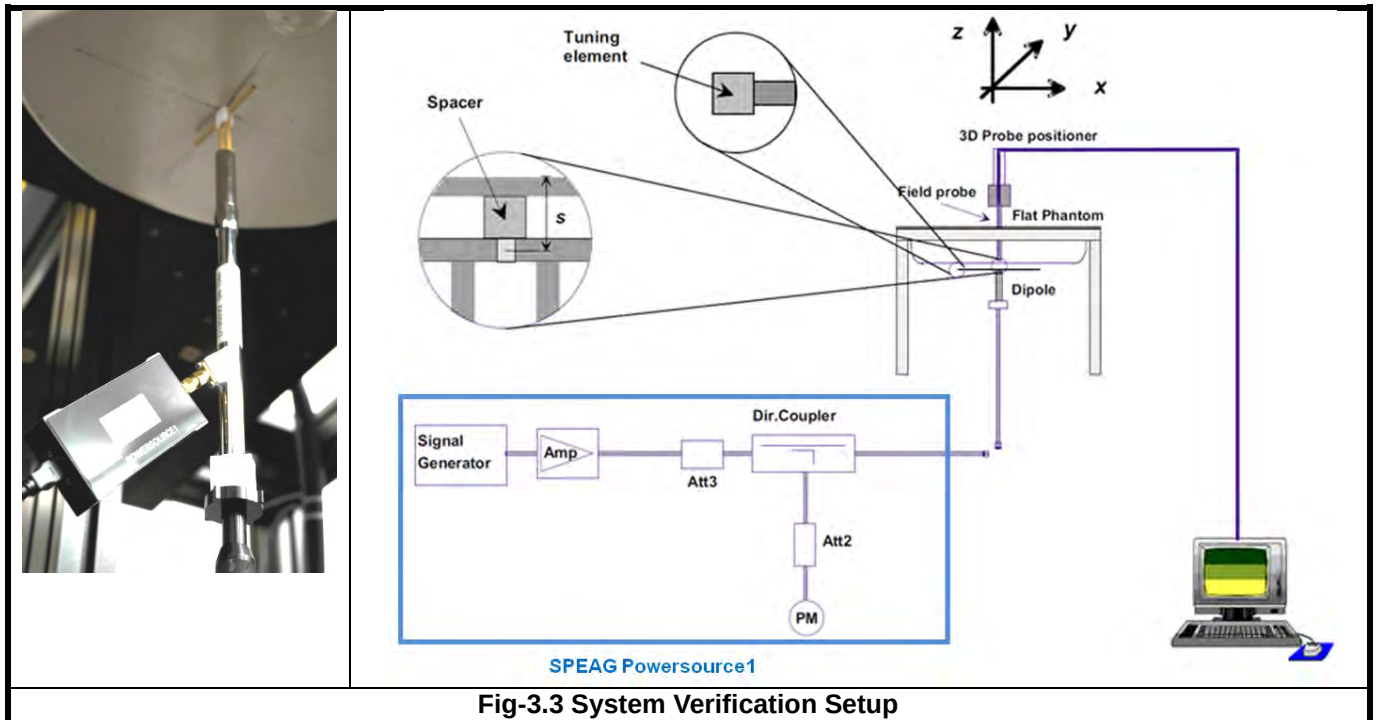


Fig-3.3 System Verification Setup

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:

- Power reference measurement
- Area scan
- Zoom scan
- Power drift measurement

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

- Make EUT to transmit maximum output power
- Measure conducted output power through RF cable
- Place the EUT in the specific position of phantom
- Perform SAR testing steps on the DASY system
- 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	$f \leq 3 \text{ GHz}$	$3 \text{ GHz} < f \leq 6 \text{ GHz}$
Maximum distance from closest measurement point to phantom surface	5 ± 1	$\delta \ln(2)/2 \pm 0.5$
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	$\leq 2 \text{ GHz: } \leq 15 \text{ mm}$ $2 - 3 \text{ GHz: } \leq 12 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 12 \text{ mm}$ $4 - 6 \text{ GHz: } \leq 10 \text{ mm}$

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).

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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		$f \leq 3 \text{ GHz}$	$3 \text{ GHz} < f \leq 6 \text{ GHz}$
Maximum zoom scan spatial resolution: $\Delta x_{\text{zoom}}, \Delta y_{\text{zoom}}$		$\leq 2 \text{ GHz: } \leq 8 \text{ mm}$ $2 - 3 \text{ GHz: } \leq 5 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 5 \text{ mm}$ $4 - 6 \text{ GHz: } \leq 4 \text{ mm}$
Maximum zoom scan spatial resolution, normal to phantom surface	<i>uniform grid:</i> $\Delta z_{\text{zoom}}(n)$	$\leq 5 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 4 \text{ mm}$ $4 - 5 \text{ GHz: } \leq 3 \text{ mm}$ $5 - 6 \text{ GHz: } \leq 2 \text{ mm}$
	<i>graded grids:</i> $\Delta z_{\text{zoom}}(1)$	$\leq 4 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 3.0 \text{ mm}$ $4 - 5 \text{ GHz: } \leq 2.5 \text{ mm}$ $5 - 6 \text{ GHz: } \leq 2.0 \text{ mm}$
	$\Delta z_{\text{zoom}}(n>1)$	$\leq 1.5 \cdot \Delta z_{\text{zoom}}(n-1) \text{ mm}$	
Minimum zoom scan volume (x, y, z)		$\geq 30 \text{ mm}$	$3 - 4 \text{ GHz: } \geq 28 \text{ mm}$ $4 - 5 \text{ GHz: } \geq 25 \text{ mm}$ $5 - 6 \text{ GHz: } \geq 22 \text{ mm}$

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 ($\Delta x, \Delta y$). This shall be checked for the measured zoom scan plane conformal to the phantom at the distance z_{M1} .
- (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 from 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.

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4. SAR Measurement Evaluation

4.1 EUT Configuration and Setting

<Considerations Related to Proximity Sensor>

The device supports WWAN, WLAN, and Bluetooth capabilities. It is designed with a proximity sensor which can trigger/not trigger power reduction for WCDMA and LTE on Rear Face and Top Side of EUT for SAR compliance. Others RF capability (WLAN and Bluetooth) have no power reduction. The power levels for all wireless technologies and the power reduction please refer to section 4.6 of this report.

Proximity Sensor Triggering Distances (KDB 616217 D04 §6.2)

The proximity sensor triggering distance was determined per KDB 616217 for rear face and applicable edge. Summary for power verification per distance was tabulated in the below table.

Output Power Verification in dBm for EUT Rear Face											
Distance (mm)	12	13	14	15	16	17	18	19	20	21	22
WCDMA II	17.4	17.5	17.5	17.5	17.2	17.5	23.8	23.9	23.6	23.8	23.5
WCDMA IV	17.7	17.6	17.7	17.8	17.6	17.8	23.9	23.7	24.1	24.0	23.8
WCDMA V	17.5	17.1	17.1	17.4	17.2	17.0	23.8	23.8	23.6	23.8	23.9
LTE 2	17.1	17.1	17.1	17.2	17.0	17.2	23.4	23.7	23.6	23.6	23.2
LTE 4	17.7	17.5	17.9	18.0	17.5	17.8	23.7	23.8	23.6	23.5	23.9
LTE 5	17.1	17.4	17.1	17.4	16.9	17.2	23.6	23.1	23.6	23.2	23.4
LTE 7	17.0	16.9	16.5	16.5	17.0	16.8	23.8	23.5	23.4	23.8	23.8
LTE 12	20.0	20.1	20.0	19.9	20.3	20.3	23.3	23.5	23.4	23.5	23.3
LTE 13	18.0	17.8	18.0	18.0	17.9	17.5	23.3	23.3	23.6	23.3	23.5
LTE 14	17.6	17.6	17.7	18.0	17.9	17.9	23.6	23.4	23.6	23.5	23.5
LTE 17	19.0	19.3	19.4	19.5	19.4	19.1	23.7	23.5	23.5	23.5	23.5
LTE 25	17.6	18.0	17.8	17.8	18.0	18.0	23.1	23.2	23.4	23.3	23.3
LTE 26	17.7	17.8	17.8	17.8	17.9	17.7	23.0	23.2	23.5	23.0	23.0
LTE 30	16.8	16.8	16.8	16.8	16.7	16.9	22.1	22.1	21.8	21.8	21.7
LTE 66	18.0	18.0	17.8	17.5	17.6	17.7	23.4	23.8	23.6	23.7	23.9
LTE 38	17.5	17.2	17.4	17.3	17.5	17.5	23.3	23.4	23.3	23.4	23.8
LTE 41	17.9	17.6	17.8	17.8	18.0	17.7	23.5	24.0	23.7	23.9	24.0

Output Power Verification in dBm for EUT Top Edge											
Distance (mm)	13	14	15	16	17	18	19	20	21	22	23
WCDMA II	17.3	17.1	17.2	17.0	17.4	17.2	24.0	23.5	23.6	23.6	23.6
WCDMA IV	18.0	17.6	17.8	17.8	17.5	18.0	24.1	24.1	23.8	23.8	23.8
WCDMA V	17.4	17.3	17.2	17.5	17.3	17.5	23.9	23.9	24.0	24.0	23.6
LTE 2	17.3	17.2	17.3	17.3	17.3	17.0	23.7	23.3	23.7	23.6	23.5
LTE 4	18.0	17.7	17.5	17.6	18.0	17.8	23.4	23.8	23.6	23.4	23.4
LTE 5	17.2	17.4	17.2	17.1	17.0	17.2	23.4	23.5	23.5	23.3	23.3
LTE 7	16.9	16.7	16.6	16.8	16.5	17.0	23.5	23.5	23.5	23.5	23.7
LTE 12	20.1	20.1	20.0	20.1	20.3	20.4	23.7	23.4	23.7	23.5	23.4
LTE 13	18.0	17.7	17.6	17.5	18.0	17.6	23.6	23.3	23.3	23.6	23.5
LTE 14	17.5	17.6	17.5	17.9	17.6	17.8	23.6	23.6	23.4	23.5	23.4
LTE 17	19.0	19.4	19.1	19.4	19.2	19.3	24.0	23.9	23.7	24.0	23.6
LTE 25	17.7	17.7	17.7	17.6	17.6	17.7	23.3	23.5	23.1	23.1	23.1
LTE 26	17.8	17.5	17.5	17.6	18.0	17.8	23.0	23.3	23.0	23.5	23.3
LTE 30	16.8	16.9	16.5	17.0	16.8	16.6	22.1	22.0	21.8	22.0	21.7
LTE 66	17.8	17.9	17.6	17.9	17.9	17.8	23.8	23.8	23.9	23.9	23.8
LTE 38	17.4	17.4	17.2	17.3	17.3	17.3	23.6	23.3	23.4	23.4	23.7
LTE 41	17.5	17.8	17.9	17.8	17.6	18.0	23.6	23.8	23.5	23.7	23.8

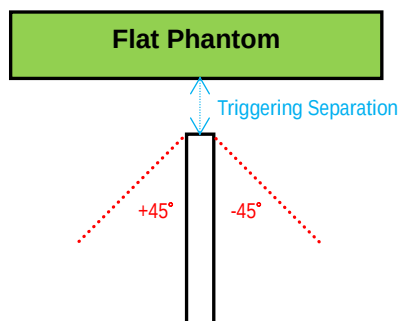
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Proximity Sensor Coverage (KDB 616217 D04 §6.3)

Since the proximity sensor is collocated with antenna in one component, the procedure for proximity sensor coverage is not required.

Proximity Sensor Tilt Angle Influences (KDB 616217 D04 §6.4)

The proximity sensor tilt angle influence was determined per KDB 616217 for applicable edge. Summary for proximity sensor tilt angle influence is shown in below.



Orientation	Separation Distance (mm)	Tilt Angle										
		-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
Top Edge	17	On	On	On	On	On	On	On	On	On	On	On

Summary for Proximity Sensor Triggering Test

According to the procedures noticed in KDB 616217 D04, the proximity sensor triggering distance is 17 mm for EUT Rear Face and Top Side. The separation distance of 17 mm determined by the smallest triggering distance on Bottom Side is used to access the tilt angle influence and the sensor does not release during ± 45 degree. Therefore, the smallest separation distance for tilt angle influence is 17 mm for the Top Side. The conservation triggering distances based on the separation distance for the sensor trigger / not triggered as EUT with power reduction at 0 mm, and EUT without power reduction at 16 mm for EUT Rear Face and Top Side were used to test SAR.

The power reduction is depends on the proximity sensor input. For a steady SAR test, the power reduction was enabled or disabled manually by engineering software during SAR testing.

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<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	$\beta_{HS}^{(1)(2)}$	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 $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$.
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 $\Delta_{NACK} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{HS} = 24/15 * \beta_c$.
Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only Ues that support HSDPA in release 6 and later releases.
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 20 signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Release 6 HSPA 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.

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Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	$\beta_{HS}^{(1)}$	β_{ec}	$\beta_{ed}^{(4)(5)}$	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_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	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 $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{HS} = 5/15 * \beta_c$.
Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCCH, HS-DPCCCH, E-DPDCH and E-DPCCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the 21 signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.
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.

HSPA+ SAR Guidance

The 3G SAR test reduction procedure is applied to HSPA+ (uplink) with 12.2 kbps RMC as the primary mode. Otherwise, when SAR is required for Rel. 6 HSPA, SAR is required for Rel. 7 HSPA+. Power is measured for HSPA+ that supports uplink 16QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.

Sub-test	$\beta_c^{(3)}$	β_d	$\beta_{HS}^{(1)}$	β_{ec}	$\beta_{ed}^{(4)}$ (2xSF2)	$\beta_{ed}^{(4)}$ (2xSF4)	CM ⁽²⁾ (dB)	MPR ⁽²⁾ (dB)	AG ⁽⁴⁾ Index	E-TFCI ⁽⁵⁾	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$.
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is 21 signaled to use the extrapolation algorithm.

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.

SAR Test Report

<Considerations Related to LTE for Setup and Testing>

This device contains LTE transmitter which follows 3GPP standards, is category 3, supports both QPSK and 16QAM 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 16QAM 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		
13			V	V		
14			V	V		
17			V	V		
25	V	V	V	V	V	V
26	V	V	V	V	V	
30			V	V		
38			V	V	V	V
41			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).

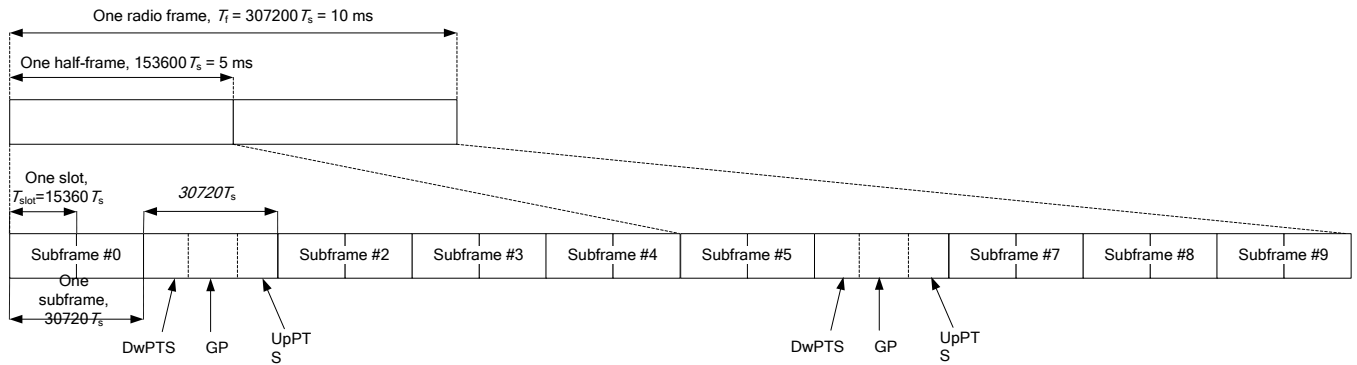
In addition, the device is compliant with additional maximum power reduction (A-MPR) requirements defined in 3GPP TS 36.101 section 6.2.4 that was disabled for all FCC compliance testing.

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.

SAR Test Report

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 • T _s	2192 • T _s	2560 • T _s	7680 • T _s	2192 • T _s	2560 • T _s
1	19760 • T _s			20480 • T _s		
2	21952 • T _s			23040 • T _s		
3	24144 • T _s			25600 • T _s		
4	26336 • T _s			7680 • T _s		
5	6592 • T _s	4384 • T _s	5120 • T _s	20480 • T _s	4384 • T _s	5120 • T _s
6	19760 • T _s			23040 • T _s		
7	21952 • T _s			12800 • T _s		
8	24144 • T _s			-	-	-
9	13168 • T _s			-	-	-

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

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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%

LTE Downlink Carrier Aggregation (CA) Setup Configurations

LTE Carrier Aggregation (CA) was defined in 3GPP release 10 and higher. The LTE device in CA mode has one Primary Component Carrier (PCC) and one or more Secondary Component Carriers (SCC). PCC acts as the anchor carrier and can optionally cross-schedule data transmission on SCC. The RRC connection is only handled by one cell, the PCC for downlink and uplink communications. After making a data connection to the PCC, the LTE device adds the SCC on the downlink only. All uplink communications and acknowledgements remain identical to release 8 specifications on the PCC. The combinations of downlink carrier aggregation supported by this device are listed in below.

LTE CA Configurations and Bandwidth Combination Sets defined for Intra-Band Contiguous CA

Downlink CA Configuration	Component carriers in order of increasing carrier frequency			Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
	Channel bandwidths for carrier-1 (MHz)	Channel bandwidths for carrier-2 (MHz)	Channel bandwidths for carrier-3 (MHz)		
CA_5B	5, 10	10		20	0
	10	5			
	3	5		8	1
	5	3			
CA_41C	10	20		40	0
	15	15, 20			
	20	10, 15, 20			
	5, 10	20		40	1
	15	15, 20			
	20	5, 10, 15, 20			
	10	15, 20		40	2
	15	10, 15, 20			
	20	10, 15, 20			
	10	20		40	3
	20	20			
CA_66B	5	5, 10, 15		20	0
	10	5, 10			
	15	5			
CA_66C	5	20		40	0
	10	15, 20			
	15	10, 15, 20			
	20	5, 10, 15, 20			

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Downlink CA Configuration	Component carriers in order of increasing carrier frequency			Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
	Channel bandwidths for carrier-1 (MHz)	Channel bandwidths for carrier-2 (MHz)	Channel bandwidths for carrier-3 (MHz)		
CA_66D	5	20		60	0
	20	5			
	20	20			
	10	20			
	15	20			
	10, 15, 20	15, 20			
	15, 20	10			
	15	15, 20			
	20	15, 20			
	20	10			

LTE CA Configurations and Bandwidth Combination Sets defined for Intra-Band Non-Contiguous CA

Downlink CA Configuration	Component Carriers in order of Increasing Carrier Frequency			Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
	Channel Bandwidths for Carrier-1 (MHz)	Channel Bandwidths for Carrier-2 (MHz)	Channel Bandwidths for Carrier-3 (MHz)		
CA_2A-2A	5, 10, 15, 20	5, 10, 15, 20		40	0
CA_4A-4A	5, 10, 15, 20	5, 10, 15, 20		40	0
	5, 10	5, 10		20	1
CA_25A-25A	5, 10	5, 10		20	0
	5, 10, 15, 20	5, 10, 15, 20		40	1
CA_66A-66A	5, 10, 15, 20	5, 10, 15, 20		40	0
CA_66A-66B	5, 10, 15, 20	Refer to CA_66B (BCS0)		40	0
	Refer to CA_66B (BCS0)		5, 10, 15, 20		
CA_66A-66C	5, 10, 15, 20	Refer to CA_66C (BCS0)		60	0
	Refer to CA_66C (BCS0)		5, 10, 15, 20		

LTE CA Configurations and Bandwidth Combination Sets defined for Inter-Band CA (Two Bands)

Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-4A	2	1.4, 3, 5, 10, 15, 20	40	0
	4	5, 10, 15, 20		
	2	5, 10	20	1
	4	5, 10		
	2	5, 10, 15, 20	40	2
	4	5, 10, 15, 20		
CA_2A-2A-4A	2	Refer to CA_2A-2A (BCS0)	60	0
	4	5, 10, 15, 20		
CA_2A-4A-4A	2	5, 10, 15, 20	60	0
	4	Refer to CA_4A-4A (BCS0)		
CA_2A-5A	2	5, 10, 15, 20	30	0
	5	5, 10		
	2	5, 10	20	1
	5	5, 10		
CA_2A-2A-5A	2	Refer to CA_2A-2A (BCS0)	50	0
	5	5, 10		
CA_2A-5B	2	5, 10, 15, 20	40	0
	5	Refer to CA_5B (BCS0)		

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Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-12A	2	5, 10, 15, 20	30	0
	12	5, 10		
	2	5, 10, 15, 20		
	12	3, 5, 10	30	1
	2	5, 10	20	2
	12	5, 10		
CA_2A-13A	2	5, 10, 15, 20	30	0
	13	10	20	1
	2	5, 10		
	13	10		
CA_2A-2A-13A	2	Refer to CA_2A-2A (BCS0)	50	0
	13	10		
CA_2A-14A	2	5, 10, 15, 20	30	0
	14	5, 10		
CA_2A-29A	2	5, 10	20	0
	29	3, 5, 10		
	2	5, 10	20	1
	29	5, 10		
	2	5, 10, 15, 20	30	2
	29	5, 10		
CA_2A-30A	2	5, 10, 15, 20	30	0
	30	5, 10		
CA_2A-2A-30A	2	Refer to CA_2A-2A (BCS0)	50	0
	30	5, 10		
CA_2A-46A	2	5, 10, 15, 20	40	0
	46	20		
CA_2A-46D	2	5, 10, 15, 20	80	0
	46	Refer to CA_46D (BCS0)		
CA_2A-66A	2	1.4, 3, 5, 10, 15, 20	40	0
	66	5, 10, 15, 20		
	2	5, 10	20	1
	66	5, 10		
	2	5, 10, 15, 20	40	2
	66	5, 10, 15, 20		
CA_2A-66B	2	5, 10, 15, 20	40	0
	66	Refer to CA_66B (BCS0)		
CA_2A-66C	2	5, 10, 15, 20	60	0
	66	Refer to CA_66C (BCS0)		
CA_2A-2A-66A	2	Refer to CA_2A-2A (BCS0)	60	0
	66	5, 10, 15, 20		
CA_2A-2A-66A-66A	2	Refer to CA_2A-2A (BCS0)	80	0
	66	Refer to CA_66A-66A (BCS0)		
CA_2A-66A-66A	2	5, 10, 15, 20	60	0
	66	Refer to CA_66A-66A (BCS0)		
CA_2A-2A-66B	2	Refer to CA_2A-2A (BCS0)	60	0
	66	Refer to CA_66B (BCS0)		
CA_2A-2A-66C	2	Refer to CA_2A-2A (BCS0)	80	0
	66	Refer to CA_66C (BCS0)		

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Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_4A-5A	4	5, 10	20	0
	5	5, 10		
	4	5, 10, 15, 20	30	1
	5	5, 10		
CA_4A-4A-5A	4	Refer to CA_4A-4A (BCS0)	50	0
	5	5, 10		
CA_4A-13A	4	5, 10, 15, 20	30	0
	13	10		
	4	5, 10	20	1
	13	10		
CA_4A-46A	4	5, 10, 15, 20	40	0
	46	20		
CA_5A-30A	5	5, 10	20	0
	30	5, 10		
CA_5B-30A	5	Refer to CA_5B (BCS0)	30	0
	30	5, 10		
CA_5A-66A	5	5, 10	30	0
	66	5, 10, 15, 20		
CA_5A-66A-66A	5	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		
CA_5A-66B	5	5, 10	30	0
	66	Refer to CA_66B (BCS0)		
CA_5A-66C	5	5, 10	50	0
	66	Refer to CA_66C (BCS0)		
CA_5B-66A	5	Refer to CA_5B (BCS0)	40	0
	66	5, 10, 15, 20		
CA_5B-66A-66A	5	Refer to CA_5B (BCS0)	60	0
	66	Refer to CA_66A-66A (BCS0)		
CA_5B-66C	5	Refer to CA_5B (BCS0)	60	0
	66	Refer to CA_66C (BCS0)		
CA_12A-30A	12	5, 10	20	0
	30	5, 10		
CA_12A-66A	12	5, 10	20	0
	66	1.4, 3, 5, 10		
	12	5, 10	30	1
	66	1.4, 3, 5, 10, 15, 20		
	12	3, 5, 10	30	2
	66	5, 10, 15, 20		
	12	5, 10	20	3
	66	5, 10		
	12	5, 10	30	4
	66	5, 10, 15, 20		
CA_12A-66A-66A	12	5	20	5
	66	5, 10, 15		
	12	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		

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Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_13A-46A	13	5, 10	30	0
	46	20		
CA_13A-66A	13	5, 10	30	0
	66	5, 10, 15, 20		
CA_13A-66A-66A	13	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		
CA_13A-66B	13	5, 10	30	0
	66	Refer to CA_66B (BCS0)		
CA_13A-66C	13	5, 10	50	0
	66	Refer to CA_66C (BCS0)		
CA_14A-66A	14	5, 10	30	0
	66	5,10,15,20		
CA_14A-66A-66A	14	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		
CA_14A-30A	14	5, 10	20	0
	30	5,10		
CA_25A-26A	25	3, 5, 10, 15, 20	35	0
	26	1.4, 3, 5, 10, 15		
	25	3, 5, 10	20	1
	26	3, 5, 10		
	25	5, 10	20	2
	26	5, 10		
CA_29A-30A	29	5, 10	20	0
	30	5, 10		
CA_29A-66A	29	5, 10	30	0
	66	5, 10, 15, 20		
CA_30A-66A	30	5, 10	30	0
	66	5, 10, 15, 20		
CA_30A-66A-66A	30	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		
CA_46A-66A	46	20	40	0
	66	5, 10, 15, 20		

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LTE CA Configurations and Bandwidth Combination Sets defined for Inter-Band CA (Three Bands)

Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-4A-5A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	5	5, 10		
CA_2A-4A-13A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	13	10		
CA_2A-2A-5A-66A	2	Refer to CA_2A-2A (BCS0)	70	0
	5	5, 10		
	66	5, 10, 15, 20		
CA_2A-2A-5A-66B	2	Refer to CA_2A-2A (BCS0)	70	0
	5	5, 10		
	66	Refer to CA_66B (BCS0)		
CA_2A-2A-5A-66C	2	Refer to CA_2A-2A (BCS0)	90	0
	5	5, 10		
	66	Refer to CA_66C (BCS0)		
CA_2A-2A-13A-66A	2	Refer to CA_2A-2A (BCS0)	70	0
	13	5, 10		
	66	5, 10, 15, 20		
CA_2A-5A-30A	2	5, 10, 15, 20	40	0
	5	5, 10		
	30	5, 10		
CA_2A-2A-5A-30A	2	Refer to CA_2A-2A (BCS0)	60	0
	5	5, 10		
	30	5, 10		
CA_2A-5B-30A	2	5, 10, 15, 20	50	0
	5	Refer to CA_5B (BCS0)		
	30	5, 10		
CA_2A-5A-66A	2	5, 10, 15, 20	50	0
	5	5, 10		
	66	5, 10, 15, 20		

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Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-5A-66A-66A	2	5, 10, 15, 20	70	0
	5	5, 10		
	66	Refer to CA_66A-66A (BCS0)		
CA_2A-5B-66A-66A	2	5, 10, 15, 20	80	0
	5	Refer to CA_5B (BCS0)		
	66	Refer to CA_66A-66A (BCS0)		
CA_2A-5A-66B	2	5, 10, 15, 20	50	0
	5	5, 10		
	66	Refer to CA_66B (BCS0)		
CA_2A-5A-66C	2	5, 10, 15, 20	70	0
	5	5, 10		
	66	Refer to CA_66C (BCS0)		
CA_2A-5B-66A	2	5, 10, 15, 20	60	0
	5	Refer to CA_5B (BCS0)		
	66	5, 10, 15, 20		
CA_2A-5B-66C	2	5, 10, 15, 20	80	0
	5	Refer to CA_5B (BCS0)		
	66	Refer to CA_66C (BCS0)		
CA_2A-12A-30A	2	5, 10, 15, 20	40	0
	12	5, 10		
	30	5, 10		
CA_2A-2A-12A-30A	2	Refer to CA_2A-2A (BCS0)	60	0
	12	5, 10		
	30	5, 10		
CA_2A-12A-66A	2	5, 10, 15, 20	50	0
	12	5, 10		
	66	5, 10, 15, 20		
	2	5, 10	40	1
	12	5, 10		
	66	5, 10, 15, 20		
CA_2A-2A-12A-66A	2	5, 10, 15, 20	70	0
	12	5, 10		
	66	Refer to 66A-66A (BCS0)		
CA_2A-12A-66A-66A	2	5, 10, 15, 20	70	0
	12	5, 10		
	66	Refer to 66A-66A (BCS0)		
CA_2A-13A-46D	2	5, 10, 15, 20	90	0
	13	5, 10		
	46	Refer to 46D (BCS0)		
CA_2A-13A-66A	2	5, 10, 15, 20	50	0
	13	5, 10		
	66	5, 10, 15, 20		
CA_2A-13A-66A-66A	2	5, 10, 15, 20	70	0
	13	5, 10		
	66	Refer to CA_66A-66A		
CA_2A-13A-66B	2	5, 10, 15, 20	50	0
	13	5, 10		
	66	Refer to CA_66B (BCS0)		
CA_2A-13A-66C	2	5, 10, 15, 20	70	0
	13	5, 10		
	66	Refer to CA_66C (BCS0)		
CA_2A-14A-30A	2	5, 10, 15, 20	40	0
	14	5, 10		
	30	5, 10		

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Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-2A-30A-66A	2	Refer to CA_2A-2A (BCS0)	70	0
	30	5, 10		
	66	5, 10, 15, 20		
CA_2A-30A-66A-66A	2	5, 10, 15, 20	70	0
	30	5, 10		
	66	Refer to CA_66A-6A (BCS0)		
CA_2A-30A-66A	2	5, 10, 15, 20	50	0
	30	5, 10		
	66	5, 10, 15, 20		
CA_2A-46D-66A	2	5, 10, 15, 20	100	0
	46	Refer to CA_46D (BCS0)		
	66	5, 10, 15, 20		
CA_5A-30A-66A	5	5, 10	40	0
	30	5, 10		
	66	5, 10, 15, 20		
CA_5A-30A-66A-66A	5	5, 10	60	0
	30	5, 10		
	66	Refer to CA_66A-66A (BCS0)		
CA_5B-30A-66A	5	Refer to CA_5B (BCS0)	50	0
	30	5, 10		
	66	5, 10, 15, 20		
CA_5B-30A-66A-66A	5	Refer to CA_5B (BCS0)	70	0
	30	5, 10		
	66	Refer to CA_66A-66A (BCS0)		
CA_12A-30A-66A	12	5, 10	40	0
	30	5, 10		
	66	5, 10, 15, 20		
CA_12A-30A-66A-66A	12	5, 10	60	0
	30	5, 10		
	66	Refer to CA_66A-66A (BCS0)		
CA_13A-46D-66A	13	5, 10	90	0
	46	Refer to CA_46D (BCS0)		
	66	5, 10, 15, 20		

LTE CA Configurations and Bandwidth Combination Sets defined for Inter-Band CA (For Bands)

Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-5A-30A-66A	2	5, 10, 15, 20	60	0
	5	5, 10		
	30	5, 10		
	66	5, 10, 15, 20		
CA_2A-5B-30A-66A	2	5, 10, 15, 20	70	0
	5	Refer to CA_5B (BCS0)		
	30	5, 10		
CA_2A-12A-30A-66A	66	5, 10, 15, 20	60	0
	2	5, 10, 15, 20		
	12	5, 10		
	30	5, 10		

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<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, 3bands/3CCs, 3bands/4CCs, 3bands/5CC, 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 and LTE Downlink CA (4*4 MIMO) table ; i.e., columns to the right correspond to increasing number of frequency bands and CCs.

	Intra Band		Inter Band							
	Contiguous	Non-Contiguous	2 Bands / 2CC	2 Bands / 3CC	2 Bands / 4CC	3 Bands / 3CC	3 Bands / 4CC	3 Bands / 5CC	4 Bands / 4CC	4 Bands / 5CC
	CA_5B	CA_2A-2A	CA_2A-5A	CA_2A-2A-5A		CA_2A-5A-30A	CA_2A-2A-5A-30A			
LTE Downlink CA-Configuration			CA_2A-5B	CA_2A-2A-5B		CA_2A-5A-66A	CA_2A-2A-5A-66A			
			CA_2A-30A	CA_2A-2A-30A			CA_2A-2A-30A-66A			
			CA_2A-66A	CA_2A-2A-66A	CA_2A-2A-66A-66A		CA_2A-5A-66A-66A	CA_2A-5B-66A-66A		
				CA_2A-66B	CA_2A-2A-66B		CA_2A-5A-66B	CA_2A-2A-5A-66B		
				CA_2A-66C	CA_2A-2A-66C		CA_2A-5A-66C	CA_2A-2A-5A-66C		
				CA_2A-5B			CA_2A-5B-30A			
				CA_2A-66A-66A			CA_2A-5B-66A	CA_2A-5B-66C		
	CA_66B	CA_66A-66A		CA_30A-66A-66A		CA_2A-30A-66A	CA_2A-30A-66A-66A			
	CA_66C	CA_66A-66B		CA_5A-66A-66A	CA_5B-66A-66A		CA_5A-30A-66A-66A			
	CA_66D	CA_66A-66C		CA_5A-66B	CA_5B-66C	CA_5A-30A-66A				
			CA_5A-30A	CA_5A-66C			CA_5B-30A-66A	CA_5B-30A-66A-66A		
			CA_5A-66A	CA_5B-30A						
			CA_30A-66A	CA_5B-66A						
			CA_2A-12A	CA_12A-66A-66A		CA_2A-12A-30A	CA_2A-2A-12A-30A			
			CA_12A-30A			CA_2A-12A-66A	CA_2A-2A-12A-66A		CA_2A-12A-30A-66A	
			CA_12A-66A			CA_12A-30A-66A	CA_2A-12A-66A-66A			
							CA_12A-30A-66A-66A			
			CA_2A-13A	CA_2A-2A-13A	CA_2A-46D			CA_2A-13A-46D		
			CA_13A-46A					CA_2A-46D-66A		
			CA_46A-66A							
			CA_13A-66A	CA_13A-66A-66A						
				CA_13A-66B				CA_13A-46D-66A		
				CA_13A-66C						
						CA_2A-13A-66A	CA_2A-2A-13A-66A			
							CA_2A-13A-66A-66A			
							CA_2A-13A-66B			
							CA_2A-13A-66C			
	CA_4A-4A	CA_2A-4A	CA_2A-2A-4A			CA_2A-4A-5A				
			CA_2A-4A-4A							
			CA_4A-4A-5A							
						CA_2A-4A-13A				
			CA_2A-14A			CA_2A-14A-30A				
			CA_14A-30A							
			CA_14A-66A	CA_14A-66A-66A						
			CA_2A-29A							
			CA_2A-46A							
			CA_4A-5A							
			CA_4A-13A							
			CA_4A-46A							
	CA_25A-25A		CA_25A-26A							
			CA_29A-30A							
			CA_29A-66A							
	CA_41C									

• Only yellow highlighted cells need power measurement.

4.2 EUT Testing Position

This variant report is made for verification. All the worst SAR configurations specified in the original SAR report was repeated and verified to ensure the device remains compliant.

4.2.1 Body Exposure Conditions

For laptop PC, according to KDB 616217 D04, SAR evaluation is required for the bottom surface of the keyboard. This EUT was tested in the base of EUT directly against the flat phantom. The required minimum test separation distance for incorporating transmitters and antennas into laptop computer display is determined with the display screen opened at an angle of 90° to the keyboard compartment.

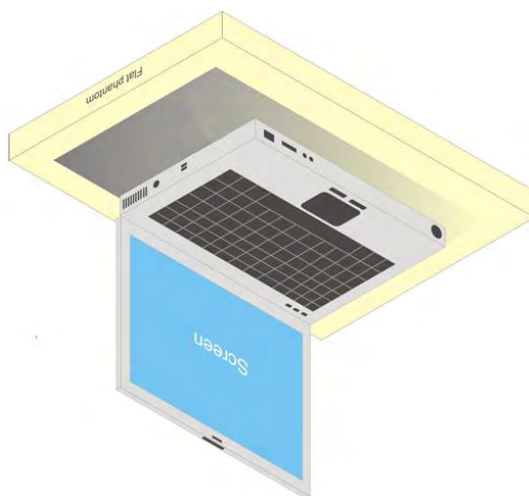


Fig-4.1 Illustration for Laptop Setup

For full-size tablet, according to KDB 616217 D04, SAR evaluation is required for back surface and edges of the devices. The back surface and edges of the tablet are tested with the tablet touching the phantom. Exposures from antennas through the front surface of the display section of a tablet are generally limited to the user's hands. Exposures to hands for typical consumer transmitters used in tablets are not expected to exceed the extremity SAR limit; therefore, SAR evaluation for the front surface of tablet display screens are generally not necessary. When voice mode is supported on a tablet and it is limited to speaker mode or headset operations only, additional SAR testing for this type of voice use is not required.

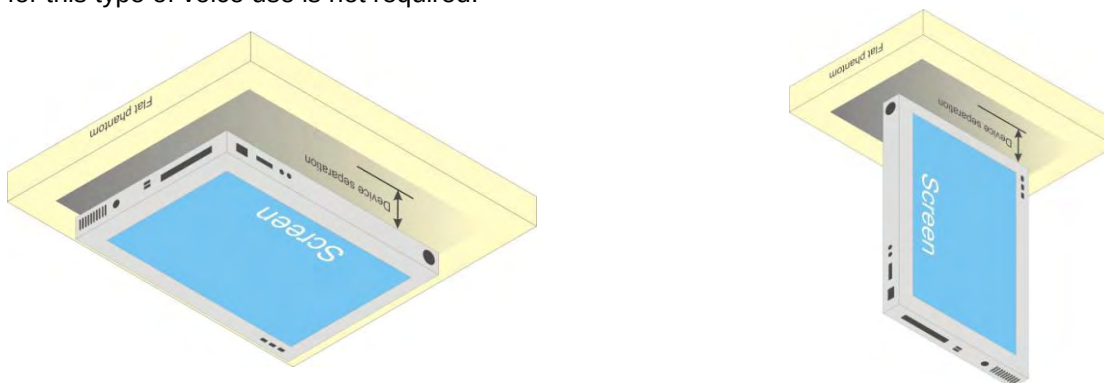


Fig-4.2 Illustration for Tablet Setup

SAR Test Report

4.2.2 SAR Test Exclusion Evaluations

According to KDB 447498 D01, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

- For the test separation distance ≤ 50 mm

$$\frac{\text{Max. Tune up Power}_{(\text{mW})}}{\text{Min. Test Separation Distance}_{(\text{mm})}} \times \sqrt{f_{(\text{GHz})}} \leq 3.0 \text{ for SAR-1g}, \leq 7.5 \text{ for SAR-10g}$$

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

- For the test separation distance > 50 mm, and the frequency at 100 MHz to 1500 MHz

$$\left[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times \left(\frac{f_{(\text{MHz})}}{150} \right) \right]_{(\text{mW})}$$

- For the test separation distance > 50 mm, and the frequency at > 1500 MHz to 6 GHz

$$[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50 \text{ mm}) \times 10]_{(\text{mW})}$$

Tablet PC Mode

<For WWAN>

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face			Top Side			Bottom Side			Left Side			Right Side		
			Ant. to Surface (mm)	Calculated Result	Require SAR Testing?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?	Ant. to Surface (mm)	Calculated Result	Require SAR Testing?
WCDMA II	24.5	282	5	77.9	Yes	2.5	77.9	Yes	196.6	1575 mW	No	29	13.43	Yes	184	1449 mW	No
WCDMA IV	24.5	282	5	74.67	Yes	2.5	74.67	Yes	196.6	1579 mW	No	29	12.87	Yes	184	1453 mW	No
WCDMA V	24.5	282	5	51.89	Yes	2.5	51.89	Yes	196.6	990 mW	No	29	8.95	Yes	184	919 mW	No
LTE 2	24.5	282	5	77.95	Yes	2.5	77.95	Yes	196.6	1575 mW	No	29	13.44	Yes	184	1449 mW	No
LTE 4	24.5	282	5	74.72	Yes	2.5	74.72	Yes	196.6	1579 mW	No	29	12.88	Yes	184	1453 mW	No
LTE 5	24.5	282	5	51.97	Yes	2.5	51.97	Yes	196.6	993 mW	No	29	8.96	Yes	184	921 mW	No
LTE 7	24.5	282	5	90.42	Yes	2.5	90.42	Yes	196.6	1560 mW	No	29	15.59	Yes	184	1434 mW	No
LTE 12	24.5	282	5	47.72	Yes	2.5	47.72	Yes	196.6	877 mW	No	29	8.23	Yes	184	817 mW	No
LTE 13	24.5	282	5	50.03	Yes	2.5	50.03	Yes	196.6	938 mW	No	29	8.63	Yes	184	872 mW	No
LTE 14	24.5	282	5	50.38	Yes	2.5	50.38	Yes	196.6	948 mW	No	29	8.69	Yes	184	881 mW	No
LTE 17	24.5	282	5	47.72	Yes	2.5	47.72	Yes	196.6	877 mW	No	29	8.23	Yes	184	817 mW	No
LTE 25	24.5	282	5	78.05	Yes	2.5	78.05	Yes	196.6	1574 mW	No	29	13.46	Yes	184	1448 mW	No
LTE 26	24.5	282	5	51.97	Yes	2.5	51.97	Yes	196.6	993 mW	No	29	8.96	Yes	184	921 mW	No
LTE 30	23	200	5	60.86	Yes	2.5	60.86	Yes	196.6	1565 mW	No	29	10.49	Yes	184	1439 mW	No
LTE 38	24.5	282	5	91.29	Yes	2.5	91.29	Yes	196.6	1559 mW	No	29	15.74	Yes	184	1433 mW	No
LTE 41	24.5	282	5	92.5	Yes	2.5	92.5	Yes	196.6	1557 mW	No	29	15.95	Yes	184	1431 mW	No
LTE 66	24.5	282	5	75.25	Yes	2.5	75.25	Yes	196.6	1578 mW	No	29	12.97	Yes	184	1452 mW	No

SAR Test Report

Laptop PC Mode

<For WWAN>

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Bottom Side		
			Ant. to Surface (mm)	Calculated Result	Require SAR Testing?
WCDMA II	24.5	282	196.6	1575 mW	No
WCDMA IV	24.5	282	196.6	1579 mW	No
WCDMA V	24.5	282	196.6	990 mW	No
LTE 2	24.5	282	196.6	1575 mW	No
LTE 4	24.5	282	196.6	1579 mW	No
LTE 5	24.5	282	196.6	993 mW	No
LTE 7	24.5	282	196.6	1560 mW	No
LTE 12	24.5	282	196.6	877 mW	No
LTE 13	24.5	282	196.6	938 mW	No
LTE 14	24.5	282	196.6	948 mW	No
LTE 17	24.5	282	196.6	877 mW	No
LTE 25	24.5	282	196.6	1574 mW	No
LTE 26	24.5	282	196.6	993 mW	No
LTE 30	23	200	196.6	1565 mW	No
LTE 38	24.5	282	196.6	1559 mW	No
LTE 41	24.5	282	196.6	1557 mW	No
LTE 66	24.5	282	196.6	1578 mW	No

SAR Test Report

4.3 Tissue Verification

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

Frequency (MHz)	Liquid Temp. (°C)	Measured Conductivity (σ)	Measured Permittivity (ϵ_r)	Target Conductivity (σ)	Target Permittivity (ϵ_r)	Conductivity Deviation (%)	Permittivity Deviation (%)	Test Date
750	23.3	0.892	42.799	0.89	41.9	0.22	2.15	Jan. 07, 2020
835	23.3	0.928	41.919	0.9	41.5	3.11	1.01	Jan. 07, 2020
1750	23.3	1.324	40.863	1.37	40.1	-3.36	1.90	Jan. 07, 2020
1900	23.3	1.453	40.451	1.4	40	3.79	1.13	Jan. 07, 2020
1900	23.1	1.461	39.134	1.4	40	4.36	-2.17	Jan. 08, 2020
1900	23.2	1.454	39.605	1.4	40	3.86	-0.99	Jan. 08, 2020
2300	23.3	1.737	38.907	1.67	39.5	4.01	-1.50	Jan. 07, 2020
2450	23.2	1.876	38.41	1.8	39.2	4.22	-2.02	Feb. 27, 2020
2600	23.3	2.056	37.803	1.96	39	4.90	-3.07	Jan. 07, 2020
5250	23.2	4.561	36.036	4.71	35.9	-3.16	0.38	Feb. 27, 2020
5600	23.2	4.889	35.563	5.07	35.5	-3.57	0.18	Feb. 27, 2020
5750	23.2	5.034	35.358	5.22	35.4	-3.56	-0.12	Feb. 27, 2020

Note:

The dielectric properties of the tissue simulating liquid have been measured within 24 hours before the SAR testing and within $\pm 10\%$ of the target values. Liquid temperature during the SAR testing has kept within $\pm 2^\circ\text{C}$.

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
Jan. 07, 2020	7537	750	0.892	42.799	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 07, 2020	7537	835	0.928	41.919	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 07, 2020	7537	1750	1.324	40.863	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 07, 2020	7537	1900	1.453	40.451	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 08, 2020	3650	1900	1.461	39.134	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 08, 2020	7537	1900	1.454	39.605	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 07, 2020	7537	2300	1.737	38.907	Pass	Pass	Pass	N/A	N/A	N/A
Feb. 27, 2020	7472	2450	1.876	38.41	Pass	Pass	Pass	N/A	N/A	N/A
Jan. 07, 2020	7537	2600	2.056	37.803	Pass	Pass	Pass	N/A	N/A	N/A
Feb. 27, 2020	7472	5250	4.561	36.036	Pass	Pass	Pass	N/A	N/A	N/A
Feb. 27, 2020	7472	5600	4.889	35.563	Pass	Pass	Pass	N/A	N/A	N/A
Feb. 27, 2020	7472	5750	5.034	35.358	Pass	Pass	Pass	N/A	N/A	N/A

SAR Test Report

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
Jan. 07, 2020	750	8.56	0.397	7.94	-7.24	1013	7537	1585
Jan. 07, 2020	835	9.61	0.491	9.82	2.19	4d121	7537	1585
Jan. 07, 2020	1750	37.00	1.69	33.80	-8.65	1055	7537	1585
Jan. 07, 2020	1900	40.20	1.88	37.60	-6.47	5d036	7537	1585
Jan. 08, 2020	1900	40.20	1.89	37.80	-5.97	5d036	3650	861
Jan. 08, 2020	1900	40.20	1.84	36.80	-8.46	5d036	7537	1585
Jan. 07, 2020	2300	49.10	12.6	50.40	2.65	1004	7537	1585
Feb. 27, 2020	2450	52.70	2.5	50.00	-5.12	737	7472	1431
Jan. 07, 2020	2600	57.30	2.92	58.40	1.92	1020	7537	1585
Feb. 27, 2020	5250	80.70	3.67	73.40	-9.05	1019	7472	1431
Feb. 27, 2020	5600	85.80	3.88	77.60	-9.56	1019	7472	1431
Feb. 27, 2020	5750	81.50	3.74	74.80	-8.22	1019	7472	1431

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.

SAR Test 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 (without Power Reduction)	WCDMA Band II (with Power Reduction & Laptop Mode)	Power Reduction (dB)
RMC 12.2K	24.5	17.5	7.0
HSDPA / HSUPA / DC-HSDPA	23.5	17.5	6.0

Mode	WCDMA Band IV (without Power Reduction)	WCDMA Band IV (with Power Reduction & Laptop Mode)	Power Reduction (dB)
RMC 12.2K	24.5	18.0	6.5
HSDPA / HSUPA / DC-HSDPA	23.5	18.0	5.5

Mode	WCDMA Band V (without Power Reduction)	WCDMA Band V (with Power Reduction & Laptop Mode)	Power Reduction (dB)
RMC 12.2K	24.5	17.5	7.0
HSDPA / HSUPA / DC-HSDPA	23.5	17.5	6.0

Mode	LTE 2 (without Power Reduction)	LTE 2 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	17.5	7.0

Mode	LTE 4 (without Power Reduction)	LTE 4 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	18.0	6.5

Mode	LTE 5 (without Power Reduction)	LTE 5 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	17.5	7.0

Mode	LTE 7 (without Power Reduction)	LTE 7 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	17.0	7.5

Mode	LTE 12 (without Power Reduction)	LTE 12 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	20.5	4.0

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Mode	LTE 13 (without Power Reduction)	LTE 13 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	18.0	6.5

Mode	LTE 14 (without Power Reduction)	LTE 14 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	18.0	6.5

Mode	LTE 17 (without Power Reduction)	LTE 17 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	19.5	5.0

Mode	LTE 25 (without Power Reduction)	LTE 25 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	18.0	6.5

Mode	LTE 26 (without Power Reduction)	LTE 26 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	18.0	6.5

Mode	LTE 30 (without Power Reduction)	LTE 30 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	23.0	17.0	6.0

Mode	LTE 38 (without Power Reduction)	LTE 38 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	17.5	7.0

Mode	LTE 41 (without Power Reduction)	LTE 41 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	18.0	6.5

Mode	LTE 66 (without Power Reduction)	LTE 66 (with Power Reduction & Laptop Mode)	Power Reduction (dB)
Maximum Target Power	24.5	18.0	6.5

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4.6.2 Measured Conducted Power Result

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

Band	WCDMA Band II			WCDMA Band IV			WCDMA Band V			3GPP MPR (dB)
Channel	9262	9400	9538	1312	1413	1513	4132	4182	4233	
Frequency (MHz)	1852.4	1880.0	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6	
EUT without Power Reduction (P-Sensor NOT Triggered)										
RMC 12.2K	23.76	23.97	23.76	24.11	23.99	23.77	23.76	23.97	23.75	-
HSDPA Subtest-1	22.78	22.99	22.78	22.62	22.50	22.28	22.78	22.99	22.77	0
HSDPA Subtest-2	22.82	23.03	22.82	23.11	22.99	22.77	22.82	23.03	22.81	0
HSDPA Subtest-3	22.27	22.48	22.27	22.62	22.50	22.28	22.28	22.49	22.27	0.5
HSDPA Subtest-4	22.28	22.49	22.28	22.21	22.09	21.87	22.27	22.48	22.26	0.5
DC-HSDPA Subtest-1	22.69	22.90	22.69	22.57	22.45	22.23	22.72	22.93	22.71	0
DC-HSDPA Subtest-2	22.73	22.94	22.73	23.06	22.94	22.72	22.76	22.97	22.75	0
DC-HSDPA Subtest-3	22.18	22.39	22.18	22.57	22.45	22.23	22.22	22.43	22.21	0.5
DC-HSDPA Subtest-4	22.19	22.40	22.19	22.16	22.04	21.82	22.21	22.42	22.20	0.5
HSUPA Subtest-1	22.81	23.02	22.81	23.15	23.03	22.81	22.81	23.02	22.80	0
HSUPA Subtest-2	20.81	21.02	20.81	21.09	20.97	20.75	20.81	21.02	20.80	2
HSUPA Subtest-3	21.80	22.01	21.80	22.11	21.99	21.77	21.80	22.01	21.79	1
HSUPA Subtest-4	20.81	21.02	20.81	21.09	20.97	20.75	20.80	21.01	20.79	2
HSUPA Subtest-5	22.79	23.00	22.79	23.12	23.00	22.78	22.77	22.98	22.76	0
EUT with Power Reduction (P-Sensor Triggered)										
RMC 12.2K	17.39	17.46	17.45	17.98	17.81	17.65	17.20	17.49	17.19	-
HSDPA Subtest-1	16.61	16.68	16.67	16.98	16.81	16.65	16.20	16.49	16.19	0
HSDPA Subtest-2	16.58	16.65	16.64	16.96	16.79	16.63	16.18	16.47	16.17	0
HSDPA Subtest-3	16.14	16.21	16.20	16.53	16.36	16.20	15.70	15.99	15.69	0.5
HSDPA Subtest-4	16.11	16.18	16.17	16.49	16.32	16.16	15.66	15.95	15.65	0.5
DC-HSDPA Subtest-1	16.53	16.60	16.59	16.93	16.76	16.60	16.11	16.40	16.10	0
DC-HSDPA Subtest-2	16.50	16.57	16.56	16.91	16.74	16.58	16.09	16.38	16.08	0
DC-HSDPA Subtest-3	16.06	16.13	16.12	16.48	16.31	16.15	15.61	15.90	15.60	0.5
DC-HSDPA Subtest-4	16.03	16.10	16.09	16.44	16.27	16.11	15.57	15.86	15.56	0.5
HSUPA Subtest-1	16.66	16.73	16.72	16.82	16.65	16.49	16.18	16.47	16.17	0
HSUPA Subtest-2	14.64	14.71	14.70	14.63	14.46	14.30	14.20	14.49	14.19	2
HSUPA Subtest-3	15.64	15.71	15.70	15.78	15.61	15.45	15.15	15.44	15.14	1
HSUPA Subtest-4	14.60	14.67	14.66	14.61	14.44	14.28	14.18	14.47	14.17	2
HSUPA Subtest-5	16.63	16.70	16.69	16.67	16.50	16.34	16.11	16.40	16.10	0

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LTE Band 2															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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	23.30	23.50	23.74	0	15M	QPSK	1	0	23.30	23.42	23.72	0
		1	50	23.22	23.42	23.66	0			1	37	23.18	23.33	23.63	0
		1	99	23.02	23.22	23.46	0			1	74	22.98	23.15	23.46	0
		50	0	22.36	22.56	22.80	1			36	0	22.26	22.49	22.79	1
		50	25	22.25	22.45	22.69	1			36	19	22.16	22.43	22.68	1
		50	50	22.18	22.38	22.62	1			36	39	22.16	22.32	22.59	1
		100	0	22.26	22.46	22.70	1			75	0	22.21	22.38	22.69	1
		1	0	22.26	22.47	22.71	1		16QAM	1	0	22.13	22.39	22.68	1
	16QAM	1	50	22.17	22.36	22.57	1			1	37	22.06	22.35	22.52	1
		1	99	21.92	22.22	22.44	1			1	74	21.99	22.10	22.44	1
		50	0	21.28	21.50	21.72	2			36	0	21.19	21.49	21.70	2
		50	25	21.18	21.37	21.69	2			36	19	21.13	21.40	21.60	2
		50	50	21.08	21.30	21.57	2			36	39	21.05	21.32	21.58	2
		100	0	21.23	21.41	21.62	2			75	0	21.09	21.37	21.56	2
		1	0	21.26	21.50	21.69	2		64QAM	1	0	21.12	21.34	21.61	2
	64QAM	1	50	21.14	21.33	21.63	2			1	37	21.10	21.34	21.51	2
		1	99	21.00	21.22	21.38	2			1	74	20.93	21.13	21.46	2
		50	0	20.32	20.47	20.73	3			36	0	20.25	20.41	20.75	3
		50	25	20.18	20.36	20.68	3			36	19	20.09	20.45	20.67	3
		50	50	20.18	20.32	20.59	3			36	39	20.06	20.31	20.61	3
		100	0	20.26	20.43	20.63	3			75	0	20.12	20.28	20.61	3
		1	0	20.26	20.43	20.63	3			75	0	20.12	20.28	20.61	3
10M	QPSK	1	0	23.09	23.38	23.59	0	5M	QPSK	1	0	23.14	23.36	23.47	0
		1	24	23.04	23.23	23.59	0			1	12	23.03	23.27	23.45	0
		1	49	22.89	23.17	23.27	0			1	24	22.86	23.12	23.18	0
		25	0	22.22	22.49	22.65	1			12	0	22.21	22.36	22.59	1
		25	12	22.15	22.31	22.54	1			12	6	22.07	22.31	22.49	1
		25	25	22.06	22.30	22.56	1			12	13	22.08	22.19	22.34	1
		50	0	22.16	22.33	22.51	1			25	0	22.17	22.28	22.49	1
		1	0	22.08	22.30	22.46	1		16QAM	1	0	22.16	22.29	22.42	1
	16QAM	1	24	22.04	22.13	22.48	1			1	12	22.07	22.24	22.42	1
		1	49	21.80	22.01	22.46	1			1	24	21.87	21.93	22.27	1
		25	0	21.16	21.54	21.53	2			12	0	21.16	21.32	21.70	2
		25	12	20.97	21.26	21.44	2			12	6	21.03	21.28	21.58	2
		25	25	20.91	21.26	21.37	2			12	13	21.07	21.08	21.48	2
		50	0	20.96	21.33	21.57	2			25	0	20.96	21.31	21.47	2
		1	0	21.09	21.48	21.53	2		64QAM	1	0	21.13	21.32	21.55	2
	64QAM	1	24	21.05	21.08	21.49	2			1	12	21.04	21.15	21.49	2
		1	49	20.85	21.11	21.30	2			1	24	20.88	21.14	21.32	2
		25	0	20.14	20.38	20.60	3			12	0	20.26	20.33	20.64	3
		25	12	20.04	20.34	20.46	3			12	6	20.19	20.35	20.48	3
		25	25	19.98	20.26	20.49	3			12	13	19.99	20.07	20.41	3
		50	0	20.13	20.21	20.52	3			25	0	20.12	20.30	20.47	3
		1	0	20.13	20.21	20.52	3			25	0	20.12	20.30	20.47	3
3M	QPSK	1	0	23.17	23.38	23.59	0	1.4M	QPSK	1	0	23.26	23.34	23.67	0
		1	7	22.99	23.32	23.47	0			1	2	23.12	23.33	23.66	0
		1	14	22.96	23.14	23.38	0			1	5	22.91	23.20	23.41	0
		8	0	22.30	22.50	22.74	1			3	0	23.25	23.49	23.61	0
		8	3	22.18	22.31	22.57	1			3	1	23.10	23.29	23.50	0
		8	7	22.00	22.29	22.47	1			3	3	23.03	23.33	23.54	0
		15	0	22.11	22.34	22.55	1			6	0	22.08	22.31	22.51	1
		1	0	22.10	22.32	22.47	1		16QAM	1	0	22.19	22.29	22.71	1
	16QAM	1	7	22.00	22.25	22.43	1			1	2	21.97	22.28	22.56	1
		1	14	21.72	22.09	22.25	1			1	5	21.97	22.01	22.23	1
		8	0	21.24	21.26	21.54	2			3	0	22.18	22.39	22.64	1
		8	3	21.13	21.19	21.58	2			3	1	21.95	22.26	22.42	1
		8	7	20.87	21.27	21.40	2			3	3	21.87	22.17	22.49	1
		15	0	21.12	21.17	21.50	2			6	0	21.17	21.28	21.48	2
		1	0	21.09	21.25	21.64	2		64QAM	1	0	21.13	21.33	21.62	2
	64QAM	1	7	21.15	21.14	21.54	2			1	2	21.08	21.28	21.51	2
		1	14	20.87	20.97	21.17	2			1	5	20.76	20.96	21.35	2
		8	0	20.10	20.42	20.59	3			3	0	21.11	21.30	21.62	2
		8	3	20.09	20.23	20.54	3			3	1	21.08	21.37	21.58	2
		8	7	19.93	20.13	20.32	3			3	3	20.95	21.17	21.33	2
		15	0	20.05	20.17	20.44	3			6	0	20.06	20.32	20.62	3
		1	0	20.05	20.17	20.44	3			6	0	20.06	20.32	20.62	3

SAR Test Report

LTE Band 2															
EUT with Power Reduction (P-Sensor Triggered)															
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	17.12	17.35	17.37	0	15M	QPSK	1	0	17.07	17.26	17.33	0
		1	50	16.98	17.21	17.23	0			1	37	16.89	17.20	17.19	0
		1	99	16.80	17.03	17.05	0			1	74	16.74	16.97	16.97	0
		50	0	17.04	17.27	17.29	0			36	0	16.98	17.26	17.19	0
		50	25	17.02	17.25	17.27	0			36	19	16.94	17.19	17.20	0
		50	50	16.94	17.17	17.19	0			36	39	16.92	17.10	17.11	0
		100	0	17.06	17.29	17.31	0			75	0	17.06	17.19	17.23	0
		1	0	17.05	17.29	17.34	0		16QAM	1	0	16.95	17.25	17.29	0
	16QAM	1	50	16.97	17.21	17.20	0			1	37	16.96	17.12	17.18	0
		1	99	16.78	17.02	17.04	0			1	74	16.65	16.91	16.97	0
		50	0	17.02	17.23	17.29	0			36	0	16.92	17.10	17.13	0
		50	25	17.00	17.23	17.17	0			36	19	16.89	17.13	17.18	0
		50	50	16.85	17.07	17.10	0			36	39	16.79	17.07	17.16	0
		100	0	16.98	17.27	17.31	0			75	0	16.95	17.20	17.20	0
		1	0	17.06	17.34	17.35	0		64QAM	1	0	17.02	17.20	17.32	0
	64QAM	1	50	16.97	17.11	17.19	0			1	37	16.93	17.11	17.08	0
		1	99	16.73	17.03	16.98	0			1	74	16.65	16.88	17.03	0
		50	0	17.04	17.18	17.29	0			36	0	16.94	17.17	17.27	0
		50	25	16.99	17.16	17.21	0			36	19	16.93	17.14	17.21	0
		50	50	16.89	17.16	17.15	0			36	39	16.79	17.03	17.13	0
		100	0	17.06	17.26	17.22	0			75	0	16.97	17.15	17.19	0
		1	0	16.93	17.02	17.34	0			1	0	17.11	17.08	17.39	0
10M	QPSK	1	24	16.90	17.13	17.36	0	5M	QPSK	1	12	16.80	17.05	17.34	0
		1	49	16.67	16.90	17.09	0			1	24	16.61	16.87	17.19	0
		25	0	16.94	17.18	17.45	0			12	0	16.93	17.16	17.31	0
		25	12	16.90	17.05	17.37	0			12	6	16.87	17.07	17.30	0
		25	25	16.88	17.00	17.29	0			12	13	16.70	17.15	17.16	0
		50	0	17.00	17.14	17.34	0			25	0	16.94	17.17	17.42	0
	16QAM	1	0	16.93	17.02	17.34	0		16QAM	1	0	17.11	17.08	17.39	0
		1	24	16.85	16.91	17.26	0			1	12	16.80	16.96	17.40	0
		1	49	16.74	16.93	17.13	0			1	24	16.73	16.91	17.13	0
		25	0	16.80	17.10	17.35	0			12	0	16.87	17.18	17.39	0
		25	12	16.76	17.04	17.33	0			12	6	16.75	17.05	17.31	0
		25	25	16.81	17.01	17.29	0			12	13	16.81	16.90	17.16	0
		50	0	16.82	17.19	17.32	0			25	0	16.81	17.11	17.54	0
		1	0	17.03	17.26	17.39	0		64QAM	1	0	16.92	17.21	17.42	0
	64QAM	1	24	16.92	17.08	17.32	0			1	12	16.76	17.10	17.30	0
		1	49	16.59	16.83	17.14	0			1	24	16.66	16.87	17.15	0
		25	0	17.01	17.11	17.30	0			12	0	16.88	17.13	17.36	0
		25	12	16.87	17.08	17.29	0			12	6	16.91	17.12	17.25	0
		25	25	16.85	16.95	17.17	0			12	13	16.68	16.96	17.24	0
		50	0	16.86	17.28	17.26	0			25	0	16.96	17.17	17.34	0
		1	0	16.91	17.28	17.55	0			1	0	16.88	17.20	17.49	0
3M	QPSK	1	7	16.76	17.20	17.38	0	1.4M	QPSK	1	2	16.92	17.11	17.31	0
		1	14	16.73	16.89	17.09	0			1	5	16.63	16.93	17.28	0
		8	0	16.80	17.09	17.37	0			3	0	16.88	17.02	17.39	0
		8	3	16.89	17.01	17.36	0			3	1	16.87	17.10	17.41	0
		8	7	16.79	17.03	17.35	0			3	3	16.84	17.01	17.30	0
		15	0	16.99	17.08	17.48	0			6	0	16.96	17.12	17.47	0
	16QAM	1	0	16.92	17.18	17.49	0		16QAM	1	0	16.81	17.28	17.38	0
		1	7	16.87	17.06	17.25	0			1	2	16.73	17.12	17.40	0
		1	14	16.69	16.88	17.13	0			1	5	16.64	16.85	17.18	0
		8	0	16.86	17.05	17.39	0			3	0	16.92	17.00	17.34	0
		8	3	16.88	17.14	17.35	0			3	1	16.94	17.17	17.31	0
		8	7	16.73	16.91	17.16	0			3	3	16.78	17.04	17.24	0
		15	0	16.84	17.07	17.36	0			6	0	16.91	17.16	17.48	0
		1	0	16.96	17.07	17.54	0		64QAM	1	0	16.95	17.08	17.49	0
	64QAM	1	7	16.70	17.01	17.30	0			1	2	16.85	17.02	17.24	0
		1	14	16.61	16.76	17.04	0			1	5	16.63	16.86	17.18	0
		8	0	16.79	17.17	17.31	0			3	0	16.85	17.16	17.39	0
		8	3	16.84	17.07	17.37	0			3	1	16.90	17.16	17.39	0
		8	7	16.72	16.95	17.17	0			3	3	16.66	17.10	17.21	0
		15	0	16.89	17.14	17.30	0			6	0	16.96	17.08	17.38	0

SAR Test Report

LTE Band 4															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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		20050	20175	20300				Channel		20025	20175	20325	
		Frequency (MHz)		1720.0	1732.5	1745.0				Frequency (MHz)		1717.5	1732.5	1747.5	
20M	QPSK	1	0	23.86	23.91	23.74	0	15M	QPSK	1	0	23.79	23.90	23.73	0
		1	50	23.59	23.64	23.47	0			1	37	23.50	23.61	23.41	0
		1	99	23.35	23.40	23.23	0			1	74	23.34	23.31	23.22	0
		50	0	22.78	22.83	22.66	1			36	0	22.74	22.79	22.58	1
		50	25	22.65	22.70	22.53	1			36	19	22.60	22.63	22.48	1
		50	50	22.58	22.63	22.46	1			36	39	22.48	22.56	22.42	1
		100	0	22.69	22.74	22.57	1			75	0	22.62	22.67	22.49	1
		1	0	22.84	22.83	22.74	1		16QAM	1	0	22.79	22.84	22.73	1
	16QAM	1	50	22.50	22.55	22.46	1			1	37	22.46	22.53	22.39	1
		1	99	22.31	22.36	22.17	1			1	74	22.18	22.25	22.21	1
		50	0	21.73	21.76	21.58	2			36	0	21.66	21.67	21.54	2
		50	25	21.61	21.65	21.46	2			36	19	21.48	21.61	21.44	2
		50	50	21.48	21.63	21.39	2			36	39	21.43	21.48	21.38	2
		100	0	21.61	21.71	21.49	2			75	0	21.52	21.64	21.48	2
		1	0	21.80	21.91	21.69	2		64QAM	1	0	21.71	21.76	21.66	2
	64QAM	1	50	21.51	21.57	21.46	2			1	37	21.50	21.57	21.39	2
		1	99	21.31	21.35	21.20	2			1	74	21.18	21.31	21.15	2
		50	0	20.72	20.82	20.58	3			36	0	20.67	20.72	20.60	3
		50	25	20.55	20.68	20.53	3			36	19	20.54	20.64	20.35	3
		50	50	20.50	20.63	20.42	3			36	39	20.49	20.49	20.35	3
		100	0	20.62	20.68	20.56	3			75	0	20.58	20.70	20.48	3
		1	0	20.62	20.68	20.56	3			75	0	20.58	20.70	20.48	3
10M	QPSK	1	0	23.75	23.77	23.51	0	5M	QPSK	1	0	23.70	23.79	23.46	0
		1	24	23.54	23.59	23.42	0			1	12	23.42	23.55	23.27	0
		1	49	23.13	23.27	23.10	0			1	24	23.31	23.30	22.96	0
		25	0	22.69	22.75	22.49	1			12	0	22.57	22.71	22.42	1
		25	12	22.55	22.62	22.42	1			12	6	22.48	22.50	22.23	1
		25	25	22.33	22.42	22.28	1			12	13	22.40	22.58	22.29	1
		50	0	22.60	22.57	22.54	1			25	0	22.66	22.63	22.39	1
		1	0	22.67	22.58	22.53	1		16QAM	1	0	22.73	22.77	22.58	1
	16QAM	1	24	22.31	22.35	22.29	1			1	12	22.42	22.42	22.28	1
		1	49	22.26	22.10	22.04	1			1	24	22.26	22.39	22.02	1
		25	0	21.67	21.72	21.52	2			12	0	21.56	21.64	21.49	2
		25	12	21.45	21.47	21.39	2			12	6	21.50	21.65	21.34	2
		25	25	21.46	21.52	21.25	2			12	13	21.45	21.42	21.38	2
		50	0	21.57	21.57	21.32	2			25	0	21.63	21.60	21.40	2
		1	0	21.76	21.79	21.62	2		64QAM	1	0	21.59	21.70	21.58	2
	64QAM	1	24	21.51	21.32	21.28	2			1	12	21.36	21.52	21.33	2
		1	49	21.18	21.17	21.10	2			1	24	21.24	21.20	21.08	2
		25	0	20.65	20.55	20.55	3			12	0	20.70	20.62	20.37	3
		25	12	20.50	20.62	20.43	3			12	6	20.55	20.57	20.32	3
		25	25	20.45	20.57	20.37	3			12	13	20.39	20.46	20.27	3
		50	0	20.50	20.69	20.29	3			25	0	20.43	20.53	20.44	3
		1	0	20.50	20.69	20.29	3			25	0	20.43	20.53	20.44	3
3M	QPSK	1	0	23.73	23.79	23.61	0	1.4M	QPSK	1	0	23.62	23.87	23.60	0
		1	7	23.47	23.53	23.28	0			1	2	23.53	23.45	23.37	0
		1	14	23.31	23.32	23.13	0			1	5	23.23	23.37	23.19	0
		8	0	22.63	22.80	22.51	1			3	0	23.69	23.80	23.48	0
		8	3	22.47	22.56	22.42	1			3	1	23.55	23.59	23.45	0
		8	7	22.44	22.39	22.36	1			3	3	23.42	23.46	23.41	0
		15	0	22.52	22.63	22.41	1			6	0	22.49	22.61	22.35	1
		1	0	22.61	22.70	22.66	1		16QAM	1	0	22.61	22.69	22.63	1
	16QAM	1	7	22.44	22.42	22.27	1			1	2	22.42	22.42	22.44	1
		1	14	22.14	22.09	22.09	1			1	5	22.16	22.16	22.10	1
		8	0	21.60	21.70	21.59	2			3	0	22.70	22.55	22.41	1
		8	3	21.48	21.59	21.43	2			3	1	22.57	22.55	22.37	1
		8	7	21.40	21.53	21.27	2			3	3	22.45	22.44	22.28	1
		15	0	21.54	21.53	21.37	2			6	0	21.55	21.65	21.40	2
		1	0	21.65	21.77	21.58	2		64QAM	1	0	21.67	21.59	21.46	2
	64QAM	1	7	21.35	21.50	21.34	2			1	2	21.42	21.49	21.42	2
		1	14	21.29	21.29	20.97	2			1	5	21.15	21.17	21.15	2
		8	0	20.58	20.66	20.52	3			3	0	21.60	21.65	21.53	2
		8	3	20.60	20.61	20.37	3			3	1	21.50	21.46	21.48	2
		8	7	20.44	20.37	20.35	3			3	3	21.43	21.46	21.37	2
		15	0	20.48	20.49	20.39	3			6	0	20.57	20.56	20.41	3
		15	0	20.48	20.49	20.39	3			6	0	20.57	20.56	20.41	3

SAR Test Report

LTE Band 4															
EUT with Power Reduction (P-Sensor Triggered)															
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		20050	20175	20300				Channel		20025	20175	20325	
		Frequency (MHz)		1720.0	1732.5	1745.0				Frequency (MHz)		1717.5	1732.5	1747.5	
20M	QPSK	1	0	17.95	17.96	17.92	0	15M	QPSK	1	0	17.90	17.93	17.91	0
		1	50	17.70	17.71	17.67	0			1	37	17.68	17.66	17.57	0
		1	99	17.51	17.52	17.48	0			1	74	17.44	17.47	17.44	0
		50	0	17.90	17.91	17.87	0			36	0	17.87	17.85	17.79	0
		50	25	17.82	17.83	17.79	0			36	19	17.82	17.83	17.73	0
		50	50	17.71	17.72	17.68	0			36	39	17.70	17.65	17.68	0
		100	0	17.81	17.82	17.78	0			75	0	17.81	17.78	17.68	0
		1	0	17.93	17.91	17.90	0			1	0	17.85	17.80	17.78	0
	1	50	17.69	17.71	17.67	0	1		37	17.67	17.58	17.57	0		
	1	99	17.48	17.47	17.40	0	1		74	17.40	17.42	17.45	0		
	50	0	17.81	17.87	17.87	0	36		0	17.75	17.79	17.77	0		
	50	25	17.75	17.79	17.71	0	36		19	17.81	17.81	17.68	0		
	50	50	17.61	17.72	17.66	0	36		39	17.65	17.67	17.54	0		
	100	0	17.72	17.78	17.76	0	75		0	17.75	17.71	17.66	0		
	64QAM	1	0	17.86	17.88	17.85	0		64QAM	1	0	17.77	17.80	17.85	0
		1	50	17.69	17.64	17.58	0			1	37	17.58	17.63	17.52	0
		1	99	17.41	17.44	17.43	0			1	74	17.46	17.51	17.35	0
		50	0	17.90	17.89	17.87	0			36	0	17.83	17.81	17.75	0
		50	25	17.81	17.77	17.74	0			36	19	17.81	17.74	17.69	0
		50	50	17.66	17.69	17.63	0			36	39	17.70	17.57	17.58	0
		100	0	17.80	17.80	17.73	0			75	0	17.71	17.69	17.64	0
		BW	MCS Index	RB Size	RB Offset	Low	Mid			High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset
Channel				20000	20175	20350	Channel		19975	20175				20375	
Frequency (MHz)				1715.0	1732.5	1750.0	Frequency (MHz)		1712.5	1732.5				1752.5	
10M	QPSK	1	0	17.75	17.72	17.83	0	5M	QPSK	1	0	17.90	17.90	17.88	0
		1	24	17.60	17.55	17.53	0			1	12	17.60	17.65	17.38	0
		1	49	17.45	17.28	17.37	0			1	24	17.31	17.35	17.33	0
		25	0	17.75	17.67	17.80	0			12	0	17.77	17.84	17.51	0
		25	12	17.76	17.73	17.60	0			12	6	17.69	17.77	17.55	0
		25	25	17.56	17.55	17.53	0			12	13	17.61	17.60	17.43	0
		50	0	17.73	17.75	17.67	0			25	0	17.63	17.77	17.62	0
		1	0	17.66	17.78	17.81	0			1	0	17.79	17.87	17.90	0
	1	24	17.52	17.46	17.45	0	1		12	17.57	17.65	17.53	0		
	1	49	17.42	17.29	17.32	0	1		24	17.35	17.28	17.42	0		
	25	0	17.67	17.85	17.70	0	12		0	17.71	17.65	17.74	0		
	25	12	17.66	17.59	17.60	0	12		6	17.73	17.62	17.70	0		
	25	25	17.56	17.60	17.42	0	12		13	17.54	17.50	17.53	0		
	50	0	17.58	17.66	17.63	0	25		0	17.59	17.62	17.64	0		
	64QAM	1	0	17.63	17.79	17.76	0		64QAM	1	0	17.73	17.80	17.78	0
		1	24	17.64	17.48	17.52	0			1	12	17.51	17.58	17.43	0
		1	49	17.26	17.36	17.40	0			1	24	17.27	17.26	17.29	0
		25	0	17.60	17.70	17.66	0			12	0	17.62	17.77	17.76	0
		25	12	17.68	17.62	17.61	0			12	6	17.66	17.71	17.67	0
		25	25	17.53	17.64	17.52	0			12	13	17.62	17.62	17.44	0
		50	0	17.61	17.74	17.68	0			25	0	17.72	17.59	17.53	0
		BW	MCS Index	RB Size	RB Offset	Low	Mid			High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset
Channel				19965	20175	20385	Channel		19957	20175				20393	
Frequency (MHz)				1711.5	1732.5	1753.5	Frequency (MHz)		1710.7	1732.5				1754.3	
3M	QPSK	1	0	17.78	17.76	17.69	0	1.4M	QPSK	1	0	17.94	17.77	17.75	0
		1	7	17.52	17.64	17.63	0			1	2	17.54	17.60	17.48	0
		1	14	17.35	17.46	17.38	0			1	5	17.40	17.51	17.36	0
		8	0	17.79	17.73	17.72	0			3	0	17.66	17.80	17.82	0
		8	3	17.73	17.74	17.56	0			3	1	17.71	17.63	17.68	0
		8	7	17.51	17.58	17.59	0			3	3	17.49	17.51	17.64	0
		15	0	17.72	17.70	17.72	0			6	0	17.68	17.72	17.68	0
		1	0	17.74	17.89	17.69	0			1	0	17.74	17.76	17.73	0
	1	7	17.61	17.47	17.61	0	1		2	17.57	17.52	17.62	0		
	1	14	17.36	17.25	17.27	0	1		5	17.35	17.33	17.24	0		
	8	0	17.76	17.76	17.57	0	3		0	17.62	17.64	17.76	0		
	8	3	17.65	17.77	17.57	0	3		1	17.74	17.62	17.52	0		
	8	7	17.47	17.66	17.55	0	3		3	17.64	17.56	17.54	0		
	15	0	17.51	17.76	17.62	0	6		0	17.61	17.62	17.54	0		
	64QAM	1	0	17.86	17.72	17.80	0		64QAM	1	0	17.81	17.79	17.85	0
		1	7	17.45	17.56	17.46	0			1	2	17.66	17.59	17.61	0
		1	14	17.28	17.32	17.31	0			1	5	17.37	17.41	17.27	0
		8	0	17.69	17.79	17.72	0			3	0	17.68	17.65	17.77	0
		8	3	17.66	17.60	17.74	0			3	1	17.61	17.64	17.73	0
		8	7	17.55	17.44	17.40	0			3	3	17.50	17.51	17.53	0
		15	0	17.63	17.62	17.56	0			6	0	17.64	17.69	17.68	0

SAR Test Report

LTE Band 5															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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	23.39	23.51	23.62	0	5M	QPSK	1	0	23.32	23.50	23.57	0
		1	24	23.38	23.50	23.61	0			1	12	23.31	23.42	23.54	0
		1	49	23.34	23.46	23.57	0			1	24	23.24	23.43	23.55	0
		25	0	22.47	22.59	22.70	1			12	0	22.47	22.52	22.65	1
		25	12	22.46	22.58	22.69	1			12	6	22.41	22.58	22.67	1
		25	25	22.40	22.52	22.63	1			12	13	22.32	22.45	22.62	1
		50	0	22.44	22.56	22.67	1			25	0	22.38	22.55	22.57	1
		50	12	22.44	22.56	22.67	1			25	12	22.38	22.55	22.57	1
	16QAM	1	0	22.35	22.42	22.56	1		16QAM	1	0	22.31	22.41	22.49	1
		1	24	22.37	22.45	22.53	1			1	12	22.19	22.38	22.45	1
		1	49	22.26	22.37	22.53	1			1	24	22.29	22.36	22.41	1
		25	0	21.46	21.57	21.60	2			12	0	21.30	21.54	21.61	2
		25	12	21.44	21.50	21.64	2			12	6	21.43	21.45	21.59	2
		25	25	21.40	21.49	21.59	2			12	13	21.31	21.48	21.59	2
		50	0	21.35	21.51	21.66	2			25	0	21.40	21.46	21.55	2
		50	12	21.35	21.51	21.66	2			25	12	21.40	21.46	21.55	2
	64QAM	1	0	21.37	21.42	21.55	2		64QAM	1	0	21.33	21.33	21.53	2
		1	24	21.33	21.47	21.57	2			1	12	21.25	21.32	21.53	2
		1	49	21.32	21.37	21.56	2			1	24	21.29	21.36	21.46	2
		25	0	20.43	20.54	20.62	3			12	0	20.36	20.45	20.68	3
		25	12	20.41	20.52	20.60	3			12	6	20.29	20.48	20.54	3
		25	25	20.31	20.48	20.56	3			12	13	20.22	20.42	20.51	3
		50	0	20.40	20.48	20.61	3			25	0	20.31	20.39	20.53	3
		50	12	20.40	20.48	20.61	3			25	12	20.31	20.39	20.53	3
3M	QPSK	1	0	23.23	23.35	23.43	0	1.4M	QPSK	1	0	23.30	23.45	23.47	0
		1	7	23.16	23.40	23.47	0			1	2	23.29	23.31	23.56	0
		1	14	23.29	23.32	23.46	0			1	5	23.22	23.34	23.47	0
		8	0	22.39	22.45	22.61	1			3	0	23.36	23.48	23.51	0
		8	3	22.33	22.49	22.52	1			3	1	23.34	23.49	23.50	0
		8	7	22.17	22.45	22.58	1			3	3	23.31	23.50	23.48	0
		15	0	22.34	22.44	22.56	1			6	0	22.21	22.33	22.61	1
		15	7	22.34	22.44	22.56	1			6	1	22.21	22.33	22.61	1
	16QAM	1	0	22.19	22.36	22.51	1		16QAM	1	0	22.15	22.31	22.54	1
		1	7	22.31	22.28	22.43	1			1	2	22.19	22.34	22.35	1
		1	14	22.30	22.36	22.33	1			1	5	22.16	22.33	22.36	1
		8	0	21.36	21.54	21.55	2			3	0	22.28	22.36	22.55	1
		8	3	21.34	21.34	21.54	2			3	1	22.37	22.43	22.56	1
		8	7	21.20	21.35	21.42	2			3	3	22.20	22.39	22.52	1
		15	0	21.16	21.43	21.48	2			6	0	21.28	21.46	21.45	2
		15	7	21.16	21.43	21.48	2			6	1	21.28	21.46	21.45	2
	64QAM	1	0	21.21	21.28	21.34	2		64QAM	1	0	21.26	21.33	21.34	2
		1	7	21.24	21.34	21.35	2			1	2	21.20	21.18	21.44	2
		1	14	21.15	21.25	21.33	2			1	5	21.12	21.19	21.30	2
		8	0	20.27	20.48	20.52	3			3	0	21.30	21.38	21.50	2
		8	3	20.21	20.38	20.56	3			3	1	21.24	21.37	21.52	2
		8	7	20.21	20.22	20.43	3			3	3	21.21	21.39	21.53	2
		15	0	20.18	20.33	20.62	3			6	0	20.29	20.28	20.45	3
		15	7	20.18	20.33	20.62	3			6	1	20.29	20.28	20.45	3

SAR Test Report

LTE Band 5															
EUT with Power Reduction (P-Sensor Triggered)															
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	17.25	17.30	17.44	0	5M	QPSK	1	0	17.16	17.22	17.41	0
		1	24	17.14	17.19	17.33	0			1	12	17.09	17.10	17.26	0
		1	49	17.12	17.17	17.31	0			1	24	17.03	17.08	17.25	0
		25	0	17.24	17.29	17.43	0			12	0	17.17	17.20	17.35	0
		25	12	17.13	17.18	17.32	0			12	6	17.08	17.08	17.31	0
		25	25	17.11	17.16	17.30	0			12	13	17.10	17.12	17.24	0
		50	0	17.20	17.25	17.39	0			25	0	17.18	17.18	17.33	0
	16QAM	1	0	17.24	17.27	17.34	0		16QAM	1	0	17.19	17.14	17.33	0
		1	24	17.07	17.18	17.31	0			1	12	17.07	17.05	17.19	0
		1	49	17.10	17.12	17.23	0			1	24	17.12	17.01	17.21	0
		25	0	17.23	17.22	17.42	0			12	0	17.23	17.18	17.28	0
		25	12	17.12	17.11	17.22	0			12	6	17.13	17.02	17.24	0
		25	25	17.08	17.16	17.29	0			12	13	17.01	17.14	17.21	0
		50	0	17.19	17.20	17.39	0			25	0	17.11	17.14	17.22	0
	64QAM	1	0	17.18	17.29	17.43	0		64QAM	1	0	17.10	17.16	17.32	0
		1	24	17.12	17.09	17.30	0			1	12	17.11	17.11	17.27	0
		1	49	17.05	17.17	17.21	0			1	24	17.03	17.11	17.25	0
		25	0	17.19	17.29	17.39	0			12	0	17.08	17.21	17.38	0
		25	12	17.11	17.11	17.24	0			12	6	17.07	17.13	17.17	0
		25	25	17.11	17.08	17.22	0			12	13	16.97	17.02	17.18	0
		50	0	17.15	17.24	17.33	0			25	0	17.08	17.20	17.38	0
		50	0	17.15	17.24	17.33	0			25	0	17.08	17.20	17.38	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		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	17.01	17.23	17.32	0	1.4M	QPSK	1	0	17.22	17.20	17.43	0
		1	7	17.07	17.09	17.25	0			1	2	17.06	17.03	17.10	0
		1	14	16.96	16.97	17.26	0			1	5	17.04	16.95	17.02	0
		8	0	17.13	17.13	17.31	0			3	0	17.07	17.21	17.28	0
		8	3	16.94	17.05	17.17	0			3	1	17.04	17.05	17.06	0
		8	7	16.93	16.97	17.10	0			3	3	16.97	16.99	17.09	0
		15	0	17.14	17.00	17.27	0			6	0	17.14	17.10	17.33	0
	16QAM	1	0	16.93	17.05	17.16	0		16QAM	1	0	17.03	17.07	17.32	0
		1	7	16.92	17.18	17.00	0			1	2	16.89	17.09	17.17	0
		1	14	16.98	16.99	17.09	0			1	5	16.97	16.92	17.09	0
		8	0	17.01	17.18	17.31	0			3	0	17.19	17.10	17.40	0
		8	3	16.84	16.99	17.09	0			3	1	16.85	17.07	17.06	0
		8	7	17.01	16.96	17.14	0			3	3	16.85	16.99	17.15	0
		15	0	17.11	16.98	17.17	0			6	0	17.03	17.09	17.23	0
	64QAM	1	0	17.13	16.98	17.20	0		64QAM	1	0	17.18	17.13	17.23	0
		1	7	16.92	16.95	17.21	0			1	2	16.87	16.96	17.19	0
		1	14	16.94	16.89	17.18	0			1	5	17.00	16.93	17.16	0
		8	0	16.91	17.12	17.25	0			3	0	16.93	17.07	17.17	0
		8	3	16.96	17.08	17.23	0			3	1	16.99	17.01	17.11	0
		8	7	16.87	17.03	17.15	0			3	3	16.91	17.02	17.03	0
		15	0	17.12	17.14	17.12	0			6	0	17.15	17.11	17.20	0
		15	0	17.12	17.14	17.12	0			6	0	17.15	17.11	17.20	0

SAR Test Report

LTE Band 7															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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	23.76	23.65	23.67	0	15M	QPSK	1	0	23.73	23.61	23.66	0
		1	50	23.62	23.51	23.53	0			1	37	23.57	23.43	23.51	0
		1	99	23.70	23.59	23.61	0			1	74	23.61	23.57	23.53	0
		50	0	22.74	22.63	22.65	1			36	0	22.65	22.60	22.63	1
		50	25	22.69	22.58	22.60	1			36	19	22.65	22.56	22.57	1
		50	50	22.67	22.56	22.58	1			36	39	22.62	22.50	22.57	1
		100	0	22.68	22.57	22.59	1			75	0	22.59	22.50	22.57	1
		1	0	22.71	22.59	22.65	1		16QAM	1	0	22.66	22.48	22.61	1
	16QAM	1	50	22.54	22.46	22.51	1			1	37	22.47	22.47	22.48	1
		1	99	22.69	22.51	22.52	1			1	74	22.61	22.56	22.47	1
		50	0	21.72	21.55	21.59	2			36	0	21.68	21.48	21.57	2
		50	25	21.62	21.56	21.52	2			36	19	21.56	21.44	21.49	2
		50	50	21.58	21.54	21.50	2			36	39	21.61	21.53	21.48	2
		100	0	21.68	21.49	21.58	2			75	0	21.65	21.51	21.46	2
		1	0	21.76	21.59	21.67	2		64QAM	1	0	21.76	21.56	21.54	2
	64QAM	1	50	21.53	21.49	21.44	2			1	37	21.50	21.47	21.46	2
		1	99	21.61	21.49	21.53	2			1	74	21.52	21.50	21.54	2
		50	0	20.71	20.57	20.55	3			36	0	20.70	20.46	20.52	3
		50	25	20.62	20.48	20.53	3			36	19	20.59	20.54	20.50	3
		50	50	20.66	20.53	20.49	3			36	39	20.58	20.50	20.47	3
		100	0	20.60	20.54	20.56	3			75	0	20.62	20.54	20.56	3
10M	QPSK	1	0	23.63	23.45	23.46	0	5M	QPSK	1	0	23.60	23.50	23.38	0
		1	24	23.43	23.34	23.43	0			1	12	23.50	23.42	23.27	0
		1	49	23.49	23.44	23.51	0			1	24	23.63	23.37	23.36	0
		25	0	22.61	22.43	22.47	1			12	0	22.60	22.49	22.46	1
		25	12	22.63	22.42	22.39	1			12	6	22.54	22.47	22.46	1
		25	25	22.53	22.49	22.44	1			12	13	22.58	22.40	22.39	1
		50	0	22.57	22.51	22.48	1			25	0	22.55	22.38	22.42	1
		1	0	22.50	22.47	22.45	1		16QAM	1	0	22.47	22.33	22.55	1
	16QAM	1	24	22.58	22.36	22.36	1			1	12	22.57	22.35	22.22	1
		1	49	22.52	22.33	22.49	1			1	24	22.49	22.37	22.52	1
		25	0	21.62	21.31	21.53	2			12	0	21.62	21.46	21.50	2
		25	12	21.61	21.46	21.50	2			12	6	21.48	21.36	21.49	2
		25	25	21.47	21.33	21.42	2			12	13	21.51	21.47	21.56	2
		50	0	21.46	21.43	21.37	2			25	0	21.48	21.45	21.44	2
		1	0	21.49	21.45	21.42	2		64QAM	1	0	21.62	21.44	21.55	2
	64QAM	1	24	21.34	21.33	21.34	2			1	12	21.45	21.23	21.37	2
		1	49	21.58	21.46	21.45	2			1	24	21.44	21.46	21.50	2
		25	0	20.61	20.48	20.51	3			12	0	20.42	20.51	20.47	3
		25	12	20.44	20.53	20.51	3			12	6	20.59	20.38	20.41	3
		25	25	20.51	20.33	20.43	3			12	13	20.58	20.45	20.41	3
		50	0	20.55	20.37	20.31	3			25	0	20.45	20.39	20.37	3

SAR Test Report

LTE Band 7																	
EUT with Power Reduction (P-Sensor Triggered)																	
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	16.96	16.79	16.91	0	15M	QPSK	1	0	16.88	16.79	16.90	0		
		1	50	16.78	16.61	16.73	0			1	37	16.69	16.56	16.63	0		
		1	99	16.91	16.74	16.86	0			1	74	16.85	16.71	16.83	0		
		50	0	16.90	16.73	16.85	0			36	0	16.82	16.69	16.80	0		
		50	25	16.83	16.66	16.78	0			36	19	16.82	16.61	16.73	0		
		50	50	16.82	16.65	16.77	0			36	39	16.79	16.63	16.77	0		
		100	0	16.85	16.68	16.80	0			75	0	16.81	16.59	16.76	0		
		16QAM	1	0	16.91	16.72	16.81			0	16QAM	1	0	16.83	16.76	16.80	0
	1		50	16.70	16.59	16.67	0		1	37		16.67	16.44	16.69	0		
	1		99	16.91	16.72	16.79	0		1	74		16.75	16.65	16.78	0		
	50		0	16.87	16.65	16.80	0		36	0		16.85	16.67	16.79	0		
	50		25	16.76	16.61	16.68	0		36	19		16.73	16.53	16.66	0		
	50		50	16.72	16.57	16.70	0		36	39		16.69	16.49	16.65	0		
	100		0	16.79	16.61	16.76	0		75	0		16.67	16.48	16.77	0		
	64QAM	1	0	16.91	16.69	16.86	0		64QAM	1	0	16.86	16.62	16.71	0		
		1	50	16.71	16.58	16.68	0			1	37	16.68	16.52	16.68	0		
		1	99	16.82	16.70	16.79	0			1	74	16.81	16.69	16.66	0		
		50	0	16.90	16.71	16.75	0			36	0	16.74	16.62	16.81	0		
		50	25	16.77	16.61	16.76	0			36	19	16.72	16.58	16.65	0		
		50	50	16.73	16.62	16.69	0			36	39	16.73	16.47	16.68	0		
		100	0	16.82	16.63	16.78	0			75	0	16.67	16.51	16.66	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		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	16.88	16.75	16.79	0	5M	QPSK	1	0	16.77	16.58	16.70	0		
		1	24	16.72	16.55	16.58	0			1	12	16.58	16.50	16.54	0		
		1	49	16.76	16.61	16.66	0			1	24	16.73	16.63	16.64	0		
		25	0	16.80	16.59	16.68	0			12	0	16.68	16.62	16.60	0		
		25	12	16.65	16.50	16.54	0			12	6	16.63	16.52	16.56	0		
		25	25	16.69	16.48	16.71	0			12	13	16.67	16.50	16.45	0		
		50	0	16.75	16.59	16.71	0			25	0	16.81	16.46	16.65	0		
		16QAM	1	0	16.84	16.57	16.75			0	16QAM	1	0	16.65	16.62	16.73	0
	1		24	16.63	16.40	16.54	0		1	12		16.58	16.46	16.47	0		
	1		49	16.87	16.61	16.59	0		1	24		16.68	16.55	16.72	0		
	25		0	16.77	16.57	16.67	0		12	0		16.60	16.62	16.72	0		
	25		12	16.71	16.44	16.56	0		12	6		16.63	16.42	16.62	0		
	25		25	16.70	16.41	16.57	0		12	13		16.63	16.44	16.64	0		
	50		0	16.60	16.44	16.67	0		25	0		16.81	16.53	16.63	0		
	64QAM		1	0	16.82	16.74	16.75		0	64QAM		1	0	16.74	16.55	16.71	0
		1	24	16.63	16.36	16.55	0		1		12	16.71	16.47	16.55	0		
		1	49	16.77	16.49	16.60	0		1		24	16.84	16.52	16.78	0		
		25	0	16.70	16.54	16.52	0		12		0	16.69	16.48	16.64	0		
		25	12	16.65	16.45	16.66	0		12		6	16.76	16.37	16.61	0		
		25	25	16.69	16.38	16.66	0		12		13	16.55	16.33	16.47	0		
		50	0	16.69	16.53	16.62	0		25		0	16.72	16.57	16.64	0		

SAR Test Report

LTE Band 12															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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	23.58	23.66	23.61	0	5M	QPSK	1	0	23.52	23.57	23.55	0
		1	24	23.70	23.78	23.73	0			1	12	23.63	23.76	23.72	0
		1	49	23.65	23.73	23.68	0			1	24	23.62	23.71	23.64	0
		25	0	22.68	22.76	22.71	1			12	0	22.59	22.75	22.63	1
		25	12	22.72	22.80	22.75	1			12	6	22.63	22.77	22.70	1
		25	25	22.50	22.58	22.53	1			12	13	22.44	22.58	22.51	1
		50	0	22.67	22.75	22.70	1			25	0	22.58	22.68	22.64	1
		1	0	22.58	22.65	22.56	1		16QAM	1	0	22.51	22.60	22.46	1
	16QAM	1	24	22.61	22.72	22.67	1			1	12	22.58	22.68	22.63	1
		1	49	22.62	22.65	22.59	1			1	24	22.58	22.67	22.51	1
		25	0	21.63	21.73	21.61	2			12	0	21.60	21.72	21.63	2
		25	12	21.63	21.70	21.71	2			12	6	21.66	21.79	21.71	2
		25	25	21.50	21.53	21.49	2			12	13	21.40	21.56	21.45	2
		50	0	21.58	21.70	21.68	2			25	0	21.52	21.57	21.58	2
		1	0	21.49	21.62	21.52	2		64QAM	1	0	21.50	21.58	21.47	2
	64QAM	1	24	21.62	21.70	21.65	2			1	12	21.58	21.64	21.58	2
		1	49	21.62	21.72	21.68	2			1	24	21.56	21.70	21.61	2
		25	0	20.65	20.73	20.66	3			12	0	20.54	20.73	20.63	3
		25	12	20.69	20.72	20.71	3			12	6	20.66	20.65	20.61	3
		25	25	20.47	20.56	20.53	3			12	13	20.40	20.52	20.44	3
		50	0	20.63	20.65	20.60	3			25	0	20.60	20.62	20.62	3
3M	QPSK	1	0	23.48	23.51	23.48	0	1.4M	QPSK	1	0	23.56	23.59	23.56	0
		1	7	23.61	23.66	23.60	0			1	2	23.66	23.67	23.60	0
		1	14	23.56	23.66	23.59	0			1	5	23.53	23.59	23.61	0
		8	0	22.54	22.60	22.62	1			3	0	23.48	23.67	23.61	0
		8	3	22.53	22.65	22.69	1			3	1	23.68	23.76	23.60	0
		8	7	22.34	22.34	22.42	1			3	3	23.44	23.43	23.37	0
		15	0	22.57	22.58	22.50	1			6	0	22.66	22.55	22.57	1
		1	0	22.38	22.48	22.53	1		16QAM	1	0	22.36	22.42	22.43	1
	16QAM	1	7	22.59	22.55	22.57	1			1	2	22.54	22.55	22.45	1
		1	14	22.54	22.53	22.48	1			1	5	22.59	22.51	22.53	1
		8	0	21.48	21.63	21.63	2			3	0	22.56	22.64	22.56	1
		8	3	21.50	21.58	21.69	2			3	1	22.50	22.60	22.49	1
		8	7	21.25	21.37	21.33	2			3	3	22.32	22.45	22.36	1
		15	0	21.58	21.54	21.57	2			6	0	21.47	21.55	21.59	2
		1	0	21.29	21.57	21.38	2		64QAM	1	0	21.37	21.42	21.37	2
	64QAM	1	7	21.49	21.46	21.57	2			1	2	21.57	21.70	21.54	2
		1	14	21.56	21.61	21.55	2			1	5	21.41	21.45	21.57	2
		8	0	20.62	20.64	20.56	3			3	0	21.49	21.63	21.52	2
		8	3	20.58	20.59	20.52	3			3	1	21.52	21.70	21.53	2
		8	7	20.32	20.37	20.29	3			3	3	21.36	21.44	21.32	2
		15	0	20.57	20.59	20.61	3			6	0	20.50	20.57	20.52	3

SAR Test Report

LTE Band 12															
EUT with Power Reduction (P-Sensor Triggered)															
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	20.09	20.20	20.15	0	5M	QPSK	1	0	20.07	20.10	20.05	0
		1	24	20.25	20.36	20.31	0			1	12	20.18	20.31	20.28	0
		1	49	20.16	20.27	20.22	0			1	24	20.14	20.22	20.16	0
		25	0	20.22	20.33	20.28	0			12	0	20.12	20.27	20.26	0
		25	12	20.23	20.34	20.29	0			12	6	20.23	20.33	20.26	0
		25	25	20.20	20.31	20.26	0			12	13	20.18	20.22	20.26	0
		50	0	20.16	20.27	20.22	0			25	0	20.14	20.20	20.19	0
		1	0	19.99	20.19	20.12	0		16QAM	1	0	20.08	20.12	20.03	0
	16QAM	1	24	20.21	20.34	20.31	0			1	12	20.18	20.31	20.19	0
		1	49	20.14	20.24	20.17	0			1	24	20.10	20.11	20.11	0
		25	0	20.17	20.28	20.28	0			12	0	20.14	20.28	20.24	0
		25	12	20.15	20.34	20.19	0			12	6	20.10	20.25	20.14	0
		25	25	20.13	20.22	20.24	0			12	13	20.09	20.18	20.10	0
		50	0	20.06	20.17	20.22	0			25	0	19.99	20.15	20.15	0
		1	0	20.04	20.12	20.07	0		64QAM	1	0	20.05	20.11	20.05	0
	64QAM	1	24	20.16	20.27	20.21	0			1	12	20.09	20.28	20.21	0
		1	49	20.06	20.20	20.17	0			1	24	20.00	20.12	20.13	0
		25	0	20.17	20.33	20.26	0			12	0	20.11	20.31	20.19	0
		25	12	20.16	20.26	20.26	0			12	6	20.09	20.18	20.19	0
		25	25	20.20	20.30	20.24	0			12	13	20.09	20.16	20.20	0
		50	0	20.09	20.26	20.16	0			25	0	20.04	20.19	20.10	0
		1	0	19.97	20.15	20.09	0		QPSK	1	0	19.97	20.11	19.86	0
3M	QPSK	1	7	20.20	20.26	20.21	0			1	2	20.15	20.25	20.14	0
		1	14	20.00	20.20	20.17	0			1	5	20.11	20.07	20.17	0
		8	0	20.07	20.23	20.24	0			3	0	20.09	20.10	20.17	0
		8	3	20.00	20.23	20.15	0			3	1	20.03	20.21	20.02	0
		8	7	20.02	20.14	20.17	0			3	3	20.09	20.19	20.15	0
		15	0	20.12	20.16	20.14	0			6	0	19.97	20.13	20.05	0
	16QAM	1	0	20.03	20.03	20.13	0		16QAM	1	0	19.92	20.06	19.93	0
		1	7	20.10	20.08	20.28	0			1	2	20.05	20.18	20.23	0
		1	14	19.95	20.20	20.15	0			1	5	19.85	20.12	20.08	0
		8	0	20.00	20.18	20.19	0			3	0	20.06	20.07	20.15	0
		8	3	20.12	20.07	20.16	0			3	1	20.14	20.22	20.05	0
		8	7	20.10	20.20	20.13	0			3	3	20.02	20.10	20.21	0
		15	0	20.05	20.09	20.10	0			6	0	20.03	20.04	19.99	0
		1	0	19.85	20.06	19.98	0		64QAM	1	0	19.92	20.10	20.01	0
	64QAM	1	7	20.03	20.17	20.16	0			1	2	20.14	20.15	20.05	0
		1	14	19.95	20.15	20.09	0			1	5	19.92	20.09	20.16	0
		8	0	20.09	20.19	20.09	0			3	0	20.11	20.17	20.18	0
		8	3	20.07	20.15	20.04	0			3	1	20.05	20.16	20.14	0
		8	7	20.05	20.08	20.03	0			3	3	20.05	20.12	20.20	0
		15	0	19.88	20.21	20.00	0			6	0	19.97	20.09	19.95	0

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LTE Band 13															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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			23230					Channel		23205	23230	23225	
		Frequency (MHz)			782.0					Frequency (MHz)		779.5	782.0	784.5	
10M	QPSK	1	0		23.80		0	5M	QPSK	1	0	23.68	23.73	23.69	0
		1	24		23.83		0			1	12	23.66	23.71	23.67	0
		1	49		23.7		0			1	24	23.56	23.61	23.57	0
		25	0		22.79		1			12	0	22.65	22.70	22.66	1
		25	12		22.86		1			12	6	22.72	22.77	22.73	1
		25	25		22.78		1			12	13	22.64	22.69	22.65	1
		50	0		22.83		1			25	0	22.69	22.74	22.70	1
	16QAM	1	0		22.71		1		16QAM	1	0	22.67	22.70	22.66	1
		1	24		22.80		1			1	12	22.61	22.67	22.58	1
		1	49		22.63		1			1	24	22.49	22.59	22.49	1
		25	0		21.69		2			12	0	21.57	21.70	21.56	2
		25	12		21.86		2			12	6	21.72	21.72	21.70	2
		25	25		21.75		2			12	13	21.64	21.60	21.65	2
	64QAM	50	0		21.77		2		64QAM	25	0	21.65	21.73	21.65	2
		1	0		21.70		2			1	0	21.59	21.71	21.65	2
		1	24		21.77		2			1	12	21.60	21.67	21.63	2
		1	49		21.64		2			1	24	21.48	21.55	21.56	2
		25	0		20.74		3			12	0	20.60	20.62	20.64	3
		25	12		20.82		3			12	6	20.69	20.74	20.71	3
		25	25		20.78		3			12	13	20.54	20.65	20.57	3
		50	0		20.75		3			25	0	20.67	20.67	20.65	3

LTE Band 13															
EUT with Power Reduction (P-Sensor Triggered)															
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								23230					
		Frequency (MHz)								782.0					
10M	QPSK	1	0		17.95		0	5M	QPSK	1	0	17.94	17.96	17.91	0
		1	24		17.99		0			1	12	17.90	17.92	17.87	0
		1	49		17.94		0			1	24	17.88	17.90	17.85	0
		25	0		17.82		0			12	0	17.68	17.70	17.65	0
		25	12		17.87		0			12	6	17.81	17.83	17.78	0
		25	25		17.83		0			12	13	17.77	17.79	17.74	0
		50	0		17.72		0			25	0	17.96	17.98	17.93	0
	16QAM	1	0		17.97		0		16QAM	1	0	17.91	17.93	17.88	0
		1	24		17.89		0			1	12	17.83	17.85	17.80	0
		1	49		17.94		0			1	24	17.88	17.90	17.85	0
		25	0		17.65		0			12	0	17.59	17.61	17.56	0
		25	12		17.86		0			12	6	17.80	17.82	17.77	0
		25	25		17.75		0			12	13	17.69	17.71	17.66	0
	64QAM	50	0		17.99		0		64QAM	25	0	17.93	17.95	17.90	0
		1	0		17.98		0			1	0	17.94	17.96	17.91	0
		1	24		17.90		0			1	12	17.84	17.86	17.81	0
		1	49		17.85		0			1	24	17.79	17.81	17.76	0
		25	0		17.73		0			12	0	17.67	17.69	17.64	0
		25	12		17.83		0			12	6	17.77	17.79	17.74	0
		25	25		17.73		0			12	13	17.67	17.69	17.64	0
	50	0		17.96		0	25		0	17.90	17.92	17.87	0		

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LTE Band 14															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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		23305	23330	23355	
		Frequency (MHz)			793.0					Frequency (MHz)		790.5	793.0	795.5	
10M	QPSK	1	0		23.67		0	5M	QPSK	1	0	23.65	23.62	23.59	0
		1	24		23.59		0			1	12	23.56	23.53	23.50	0
		1	49		23.51		0			1	24	23.48	23.45	23.42	0
		25	0		22.72		1			12	0	22.69	22.66	22.63	1
		25	12		22.69		1			12	6	22.66	22.63	22.60	1
		25	25		22.57		1			12	13	22.54	22.51	22.48	1
		50	0		22.62		1			25	0	22.59	22.56	22.53	1
	16QAM	1	0		22.59		1		16QAM	1	0	22.65	22.54	22.59	1
		1	24		22.59		1			1	12	22.51	22.44	22.45	1
		1	49		22.46		1			1	24	22.47	22.36	22.34	1
		25	0		21.70		2			12	0	21.59	21.64	21.62	2
		25	12		21.61		2			12	6	21.60	21.62	21.57	2
		25	25		21.56		2			12	13	21.48	21.50	21.41	2
	64QAM	50	0		21.61		2		64QAM	25	0	21.52	21.54	21.46	2
		1	0		21.63		2			1	0	21.56	21.60	21.52	2
		1	24		21.53		2			1	12	21.56	21.53	21.43	2
		1	49		21.42		2			1	24	21.40	21.41	21.37	2
		25	0		20.67		3			12	0	20.67	20.64	20.53	3
		25	12		20.66		3			12	6	20.61	20.58	20.53	3
		25	25		20.57		3			12	13	20.49	20.43	20.38	3
		50	0		20.60		3			25	0	20.57	20.55	20.51	3

LTE Band 14																
EUT with Power Reduction (P-Sensor Triggered)																
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								23305	23330					23355
		Frequency (MHz)								790.5	793.0					795.5
10M	QPSK	1	0		17.95		0	5M	QPSK	1	0	17.90	17.92	17.82	0	
		1	24		17.80		0			1	12	17.91	17.93	17.83	0	
		1	49		17.81		0			1	24	17.88	17.90	17.80	0	
		25	0		17.88		0			12	0	17.86	17.88	17.78	0	
		25	12		17.86		0			12	6	17.80	17.82	17.72	0	
		25	25		17.80		0			12	13	17.84	17.86	17.76	0	
		50	0		17.84		0			25	0	17.87	17.89	17.79	0	
	16QAM	1	0		17.92		0		16QAM	1	0	17.88	17.90	17.80	0	
		1	24		17.88		0			1	12	17.89	17.91	17.81	0	
		1	49		17.82		0			1	24	17.86	17.88	17.78	0	
		25	0		17.86		0			12	0	17.84	17.86	17.76	0	
		25	12		17.82		0			12	6	17.78	17.80	17.70	0	
		25	25		17.88		0			12	13	17.82	17.84	17.74	0	
	64QAM	50	0		17.83		0		64QAM	25	0	17.85	17.87	17.77	0	
		1	0		17.88		0			1	0	17.85	17.87	17.77	0	
		1	24		17.82		0			1	12	17.86	17.88	17.78	0	
		1	49		17.85		0			1	24	17.83	17.85	17.75	0	
		25	0		17.78		0			12	0	17.81	17.83	17.73	0	
		25	12		17.82		0			12	6	17.75	17.77	17.67	0	
		25	25		17.80		0			12	13	17.79	17.81	17.71	0	
	50	0		17.81		0	25		0	17.82	17.84	17.74	0			

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LTE Band 17															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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		23780	23790	23800				Channel		23755	23790	23825	
		Frequency (MHz)		709.0	710.0	711.0				Frequency (MHz)		706.5	710.0	713.5	
10M	QPSK	1	0	23.76	23.89	23.87	0	5M	QPSK	1	0	23.71	23.76	23.63	0
		1	24	23.91	24.04	24.02	0			1	12	23.70	23.89	23.91	0
		1	49	23.75	23.88	23.86	0			1	24	23.62	23.84	23.67	0
		25	0	22.88	23.01	22.99	1			12	0	22.82	22.87	22.81	1
		25	12	22.97	23.10	23.08	1			12	6	22.87	23.01	22.95	1
		25	25	22.92	23.05	23.03	1			12	13	22.79	22.91	22.82	1
		50	0	22.98	23.11	23.09	1			25	0	22.79	23.02	22.93	1
		1	0	22.66	22.85	22.77	1		16QAM	1	0	22.61	22.76	22.75	1
	16QAM	1	24	22.89	23.01	23.01	1			1	12	22.65	22.98	22.82	1
		1	49	22.73	22.88	22.81	1			1	24	22.55	22.68	22.72	1
		25	0	21.86	22.01	21.89	2			12	0	21.81	21.79	21.71	2
		25	12	21.87	22.09	22.04	2			12	6	21.75	21.98	21.83	2
		25	25	21.89	21.99	21.95	2			12	13	21.76	21.99	21.87	2
		50	0	21.88	22.03	22.07	2			25	0	21.76	21.81	21.81	2
		1	0	21.69	21.81	21.86	2		64QAM	1	0	21.73	21.76	21.76	2
	64QAM	1	24	21.82	22.01	21.94	2			1	12	21.73	21.90	21.82	2
		1	49	21.74	21.80	21.76	2			1	24	21.54	21.69	21.78	2
		25	0	20.87	20.93	20.96	3			12	0	20.79	20.91	20.95	3
		25	12	20.87	21.00	20.98	3			12	6	20.86	20.82	20.85	3
		25	25	20.91	20.96	20.93	3			12	13	20.74	20.84	20.93	3
		50	0	20.94	21.02	20.99	3			25	0	20.87	20.97	20.97	3

LTE Band 17															
EUT with Power Reduction (P-Sensor Triggered)															
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		23780	23790	23800				Channel		23755	23790	23825	
		Frequency (MHz)		709.0	710.0	711.0				Frequency (MHz)		706.5	710.0	713.5	
10M	QPSK	1	0	19.35	19.47	19.40	0	5M	QPSK	1	0	19.32	19.44	19.37	0
		1	24	19.32	19.44	19.37	0			1	12	19.29	19.41	19.34	0
		1	49	19.23	19.35	19.28	0			1	24	19.20	19.32	19.25	0
		25	0	19.31	19.43	19.36	1			12	0	19.28	19.40	19.33	1
		25	12	19.30	19.42	19.35	1			12	6	19.27	19.39	19.32	1
		25	25	19.21	19.33	19.26	1			12	13	19.18	19.30	19.23	1
		50	0	19.28	19.40	19.33	1			25	0	19.25	19.37	19.30	1
		1	0	19.32	19.44	19.37	1		16QAM	1	0	19.29	19.41	19.34	1
	16QAM	1	24	19.29	19.41	19.34	1			1	12	19.26	19.38	19.31	1
		1	49	19.20	19.32	19.25	1			1	24	19.17	19.29	19.22	1
		25	0	19.28	19.40	19.33	2			12	0	19.25	19.37	19.30	2
		25	12	19.27	19.39	19.32	2			12	6	19.24	19.36	19.29	2
		25	25	19.18	19.30	19.23	2			12	13	19.15	19.27	19.20	2
		50	0	19.25	19.37	19.30	2			25	0	19.22	19.34	19.27	2
		1	0	19.30	19.42	19.35	2		64QAM	1	0	19.27	19.39	19.32	2
	64QAM	1	24	19.27	19.39	19.32	2			1	12	19.24	19.36	19.29	2
		1	49	19.18	19.30	19.23	2			1	24	19.15	19.27	19.20	2
		25	0	19.26	19.38	19.31	3			12	0	19.23	19.35	19.28	3
		25	12	19.25	19.37	19.30	3			12	6	19.22	19.34	19.27	3
		25	25	19.16	19.28	19.21	3			12	13	19.13	19.25	19.18	3
		50	0	19.23	19.35	19.28	3			25	0	19.20	19.32	19.25	3

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LTE Band 25															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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		26140	26365	26590				Channel		26115	26365	26615	
		Frequency (MHz)		1860.0	1882.5	1905.0				Frequency (MHz)		1857.5	1882.5	1907.5	
20M	QPSK	1	0	23.11	23.39	23.46	0	15M	QPSK	1	0	23.07	23.33	23.42	0
		1	50	22.93	23.21	23.28	0			1	37	22.88	23.19	23.26	0
		1	99	22.76	23.04	23.11	0			1	74	22.71	23.03	23.11	0
		50	0	22.09	22.37	22.44	1			36	0	22.01	22.29	22.34	1
		50	25	22.01	22.29	22.36	1			36	19	21.96	22.29	22.32	1
		50	50	21.89	22.17	22.24	1			36	39	21.82	22.08	22.14	1
		100	0	21.99	22.27	22.34	1			75	0	21.98	22.27	22.32	1
		1	0	22.07	22.37	22.43	1		16QAM	1	0	21.93	22.22	22.41	1
	16QAM	1	50	21.91	22.15	22.21	1			1	37	21.93	22.11	22.25	1
		1	99	21.74	21.98	22.04	1			1	74	21.70	21.85	21.98	1
		50	0	21.04	21.33	21.40	2			36	0	20.89	21.22	21.34	2
		50	25	20.93	21.26	21.32	2			36	19	20.96	21.27	21.18	2
		50	50	20.84	21.15	21.19	2			36	39	20.81	21.05	21.12	2
		100	0	20.93	21.20	21.25	2			75	0	20.93	21.13	21.28	2
		1	0	21.09	21.39	21.46	2		64QAM	1	0	21.03	21.33	21.39	2
	64QAM	1	50	20.90	21.21	21.26	2			1	37	20.84	21.13	21.18	2
		1	99	20.75	20.95	21.03	2			1	74	20.65	20.89	21.02	2
		50	0	20.00	20.31	20.34	3			36	0	19.90	20.31	20.32	3
		50	25	19.95	20.29	20.26	3			36	19	19.89	20.14	20.22	3
		50	50	19.79	20.16	20.14	3			36	39	19.79	20.04	20.13	3
		100	0	19.98	20.21	20.32	3			75	0	19.92	20.18	20.28	3
10M	QPSK	1	0	23.06	23.19	23.33	0	5M	QPSK	1	0	23.02	23.34	23.31	0
		1	24	22.77	23.15	23.08	0			1	12	22.73	23.19	22.98	0
		1	49	22.62	23.00	22.94	0			1	24	22.74	22.87	22.84	0
		25	0	21.94	22.20	22.23	1			12	0	22.00	22.20	22.29	1
		25	12	21.83	22.08	22.21	1			12	6	21.98	22.09	22.18	1
		25	25	21.82	22.04	22.19	1			12	13	21.74	22.00	22.00	1
		50	0	21.89	22.10	22.28	1			25	0	21.77	22.14	22.17	1
		1	0	21.97	22.21	22.27	1		16QAM	1	0	21.96	22.33	22.29	1
	16QAM	1	24	21.75	22.06	22.16	1			1	12	21.72	22.00	22.03	1
		1	49	21.62	21.86	21.97	1			1	24	21.55	21.89	21.98	1
		25	0	21.06	21.16	21.30	2			12	0	20.96	21.27	21.27	2
		25	12	20.78	21.10	21.23	2			12	6	20.83	21.05	21.25	2
		25	25	20.77	20.97	21.09	2			12	13	20.65	21.04	20.99	2
		50	0	20.80	21.04	21.14	2			25	0	20.92	21.12	21.18	2
		1	0	20.89	21.13	21.39	2		64QAM	1	0	20.84	21.21	21.23	2
	64QAM	1	24	20.63	20.99	21.06	2			1	12	20.84	20.96	21.15	2
		1	49	20.58	20.79	20.94	2			1	24	20.60	20.98	21.04	2
		25	0	19.96	20.32	20.38	3			12	0	19.89	20.24	20.17	3
		25	12	19.87	20.07	20.18	3			12	6	19.75	20.21	20.13	3
		25	25	19.63	19.96	20.10	3			12	13	19.80	20.05	20.04	3
		50	0	19.69	20.00	20.04	3			25	0	19.80	20.19	20.15	3
3M	QPSK	1	0	23.03	23.27	23.44	0	1.4M	QPSK	1	0	22.97	23.32	23.32	0
		1	7	22.76	23.02	23.15	0			1	2	22.80	23.16	23.14	0
		1	14	22.66	22.89	23.10	0			1	5	22.60	22.95	23.07	0
		8	0	21.92	22.28	22.31	1			3	0	22.99	23.27	23.35	0
		8	3	21.84	22.17	22.13	1			3	1	22.93	23.21	23.20	0
		8	7	21.80	22.00	22.18	1			3	3	22.73	23.05	23.01	0
		15	0	21.78	22.10	22.22	1			6	0	21.80	22.15	22.15	1
		1	0	21.96	22.11	22.26	1		16QAM	1	0	21.94	22.20	22.22	1
	16QAM	1	7	21.78	22.10	22.08	1			1	2	21.70	22.04	22.06	1
		1	14	21.57	21.86	21.99	1			1	5	21.52	21.83	21.85	1
		8	0	20.81	21.26	21.23	2			3	0	21.81	22.21	22.22	1
		8	3	20.83	21.12	21.18	2			3	1	21.91	22.21	22.09	1
		8	7	20.79	21.01	21.00	2			3	3	21.72	22.03	22.07	1
		15	0	20.72	21.22	21.17	2			6	0	20.84	21.11	21.09	2
		1	0	21.06	21.18	21.40	2		64QAM	1	0	20.87	21.14	21.31	2
	64QAM	1	7	20.89	21.02	21.04	2			1	2	20.81	21.02	21.02	2
		1	14	20.51	20.84	20.94	2			1	5	20.66	20.96	21.07	2
		8	0	19.98	20.23	20.20	3			3	0	20.90	21.14	21.27	2
		8	3	19.84	20.22	20.27	3			3	1	20.88	21.11	21.24	2
		8	7	19.67	20.11	20.06	3			3	3	20.80	20.92	21.08	2
		15	0	19.90	20.10	20.22	3			6	0	19.72	20.03	20.24	3

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LTE Band 25															
EUT with Power Reduction (P-Sensor Triggered)															
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		26140	26365	26590				Channel		26115	26365	26615	
		Frequency (MHz)		1860.0	1882.5	1905.0				Frequency (MHz)		1857.5	1882.5	1907.5	
20M	QPSK	1	0	17.82	17.99	17.95	0	15M	QPSK	1	0	17.78	17.95	17.91	0
		1	50	17.71	17.88	17.84	0			1	37	17.67	17.84	17.80	0
		1	99	17.45	17.62	17.58	0			1	74	17.41	17.58	17.54	0
		50	0	17.79	17.96	17.92	0			36	0	17.75	17.92	17.88	0
		50	25	17.74	17.91	17.87	0			36	19	17.70	17.87	17.83	0
		50	50	17.68	17.85	17.81	0			36	39	17.64	17.81	17.77	0
		100	0	17.75	17.92	17.88	0			75	0	17.71	17.88	17.84	0
		1	0	17.80	17.97	17.93	0		16QAM	1	0	17.76	17.93	17.89	0
	16QAM	1	50	17.69	17.86	17.82	0			1	37	17.65	17.82	17.78	0
		1	99	17.43	17.60	17.56	0			1	74	17.39	17.56	17.52	0
		50	0	17.77	17.94	17.90	0			36	0	17.73	17.90	17.86	0
		50	25	17.72	17.89	17.85	0			36	19	17.68	17.85	17.81	0
		50	50	17.66	17.83	17.79	0			36	39	17.62	17.79	17.75	0
		100	0	17.73	17.90	17.86	0			75	0	17.69	17.86	17.82	0
		1	0	17.77	17.94	17.90	0		64QAM	1	0	17.73	17.90	17.86	0
	64QAM	1	50	17.66	17.83	17.79	0			1	37	17.62	17.79	17.75	0
		1	99	17.40	17.57	17.53	0			1	74	17.36	17.53	17.49	0
		50	0	17.74	17.91	17.87	0			36	0	17.70	17.87	17.83	0
		50	25	17.69	17.86	17.82	0			36	19	17.65	17.82	17.78	0
		50	50	17.63	17.80	17.76	0			36	39	17.59	17.76	17.72	0
		100	0	17.70	17.87	17.83	0			75	0	17.66	17.83	17.79	0
		1	0	17.76	17.93	17.89	0		QPSK	1	0	17.73	17.90	17.86	0
10M	QPSK	1	24	17.65	17.82	17.78	0			1	12	17.62	17.79	17.75	0
		1	49	17.39	17.56	17.52	0			1	24	17.36	17.53	17.49	0
		25	0	17.73	17.90	17.86	0			12	0	17.70	17.87	17.83	0
		25	12	17.68	17.85	17.81	0			12	6	17.65	17.82	17.78	0
		25	25	17.62	17.79	17.75	0			12	13	17.59	17.76	17.72	0
		50	0	17.69	17.86	17.82	0			25	0	17.66	17.83	17.79	0
	16QAM	1	0	17.74	17.91	17.87	0		16QAM	1	0	17.71	17.88	17.84	0
		1	24	17.63	17.80	17.76	0			1	12	17.60	17.77	17.73	0
		1	49	17.37	17.54	17.50	0			1	24	17.34	17.51	17.47	0
		25	0	17.71	17.88	17.84	0			12	0	17.68	17.85	17.81	0
		25	12	17.66	17.83	17.79	0			12	6	17.63	17.80	17.76	0
		25	25	17.60	17.77	17.73	0			12	13	17.57	17.74	17.70	0
		50	0	17.67	17.84	17.80	0			25	0	17.64	17.81	17.77	0
		1	0	17.71	17.88	17.84	0		64QAM	1	0	17.68	17.85	17.81	0
	64QAM	1	24	17.60	17.77	17.73	0			1	12	17.57	17.74	17.70	0
		1	49	17.34	17.51	17.47	0			1	24	17.31	17.48	17.44	0
		25	0	17.68	17.85	17.81	0			12	0	17.65	17.82	17.78	0
		25	12	17.63	17.80	17.76	0			12	6	17.60	17.77	17.73	0
		25	25	17.57	17.74	17.70	0			12	13	17.54	17.71	17.67	0
		50	0	17.64	17.81	17.77	0			25	0	17.61	17.78	17.74	0
		1	0	17.72	17.89	17.85	0		QPSK	v	0	17.70	17.87	17.83	0
3M	QPSK	1	7	17.61	17.78	17.74	0			1	2	17.59	17.76	17.72	0
		1	14	17.35	17.52	17.48	0			1	5	17.33	17.50	17.46	0
		8	0	17.69	17.86	17.82	0			3	0	17.67	17.84	17.80	0
		8	3	17.64	17.81	17.77	0			3	1	17.62	17.79	17.75	0
		8	7	17.58	17.75	17.71	0			3	3	17.56	17.73	17.69	0
		15	0	17.65	17.82	17.78	0			6	0	17.63	17.80	17.76	0
	16QAM	1	0	17.70	17.87	17.83	0		16QAM	1	0	17.68	17.85	17.81	0
		1	7	17.59	17.76	17.72	0			1	2	17.57	17.74	17.70	0
		1	14	17.33	17.50	17.46	0			1	5	17.31	17.48	17.44	0
		8	0	17.67	17.84	17.80	0			3	0	17.65	17.82	17.78	0
		8	3	17.62	17.79	17.75	0			3	1	17.60	17.77	17.73	0
		8	7	17.56	17.73	17.69	0			3	3	17.54	17.71	17.67	0
		15	0	17.63	17.80	17.76	0			6	0	17.61	17.78	17.74	0
		1	0	17.67	17.84	17.80	0		64QAM	1	0	17.65	17.82	17.78	0
	64QAM	1	7	17.56	17.73	17.69	0			1	2	17.54	17.71	17.67	0
		1	14	17.30	17.47	17.43	0			1	5	17.28	17.45	17.41	0
		8	0	17.64	17.81	17.77	0			3	0	17.62	17.79	17.75	0
		8	3	17.59	17.76	17.72	0			3	1	17.57	17.74	17.70	0
		8	7	17.53	17.70	17.66	0			3	3	17.51	17.68	17.64	0
		15	0	17.60	17.77	17.73	0			6	0	17.58	17.75	17.71	0

SAR Test Report

LTE Band 26															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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		26765	26865	26965				Channel		26740	26865	26990	
		Frequency (MHz)		821.5	831.5	841.5				Frequency (MHz)		819.0	831.5	844.0	
15M	QPSK	1	0	23.45	23.47	23.52	0	10M	QPSK	1	0	23.43	23.44	23.43	0
		1	37	23.49	23.51	23.48	0			1	24	23.44	23.46	23.50	0
		1	74	23.42	23.44	23.45	0			1	49	23.36	23.44	23.35	0
		36	0	22.47	22.49	22.50	1			25	0	22.41	22.47	22.48	1
		36	19	22.42	22.44	22.45	1			25	12	22.33	22.38	22.40	1
		36	39	22.44	22.46	22.47	1			25	25	22.36	22.37	22.45	1
		75	0	22.37	22.39	22.40	1			50	0	22.34	22.38	22.37	1
		1	0	22.39	22.47	22.45	1		16QAM	1	0	22.32	22.40	22.37	1
	16QAM	1	37	22.48	22.41	22.50	1			1	24	22.33	22.42	22.47	1
		1	74	22.37	22.37	22.38	1			1	49	22.26	22.31	22.32	1
		36	0	21.40	21.40	21.40	2			25	0	21.32	21.44	21.42	2
		36	19	21.41	21.39	21.40	2			25	12	21.27	21.33	21.34	2
		36	39	21.42	21.37	21.37	2			25	25	21.31	21.46	21.36	2
		75	0	21.34	21.37	21.34	2			50	0	21.22	21.34	21.38	2
		1	0	21.39	21.44	21.39	2		64QAM	1	0	21.33	21.40	21.42	2
	64QAM	1	37	21.47	21.48	21.45	2			1	24	21.37	21.50	21.39	2
		1	74	21.35	21.40	21.37	2			1	49	21.38	21.32	21.33	2
		36	0	20.45	20.42	20.41	3			25	0	20.31	20.39	20.41	3
		36	19	20.36	20.36	20.38	3			25	12	20.24	20.38	20.32	3
		36	39	20.41	20.46	20.45	3			25	25	20.33	20.32	20.45	3
		75	0	20.36	20.35	20.36	3			50	0	20.26	20.35	20.27	3
		1	0	21.19	21.31	21.19	2		QPSK	1	0	23.37	23.25	23.36	0
5M	QPSK	1	12	23.36	23.38	23.44	0			1	7	23.44	23.29	23.27	0
		1	24	23.32	23.37	23.31	0			1	14	23.41	23.31	23.19	0
		12	0	22.38	22.32	22.45	1			8	0	22.25	22.36	22.48	1
		12	6	22.31	22.33	22.28	1			8	3	22.35	22.31	22.23	1
		12	13	22.25	22.28	22.38	1			8	7	22.32	22.40	22.26	1
		25	0	22.33	22.23	22.22	1			15	0	22.33	22.28	22.27	1
	16QAM	1	0	22.25	22.31	22.29	1		16QAM	1	0	22.35	22.26	22.35	1
		1	12	22.38	22.24	22.25	1			1	7	22.29	22.32	22.39	1
		1	24	22.19	22.31	22.19	1			1	14	22.24	22.27	22.25	1
		12	0	21.19	21.24	21.23	2			8	0	21.31	21.37	21.27	2
		12	6	21.25	21.33	21.39	2			8	3	21.19	21.28	21.34	2
		12	13	21.32	21.28	21.27	2			8	7	21.24	21.25	21.31	2
		25	0	21.26	21.31	21.11	2			15	0	21.26	21.26	21.26	2
		1	0	21.19	21.31	21.19	2		64QAM	1	0	21.25	21.27	21.28	2
	64QAM	1	12	21.20	21.38	21.34	2			1	7	21.20	21.24	21.32	2
		1	24	21.15	21.29	21.22	2			1	14	21.22	21.30	21.31	2
		12	0	20.33	20.37	20.32	3			8	0	20.34	20.24	20.30	3
		12	6	20.21	20.23	20.27	3			8	3	20.23	20.22	20.25	3
		12	13	20.34	20.20	20.27	3			8	7	20.30	20.25	20.18	3
		25	0	20.31	20.26	20.23	3			15	0	20.15	20.22	20.14	3
		1	0	21.23	21.17	21.29	2		QPSK	1	0	23.38	23.38	23.35	0
1.4M	QPSK	1	2	23.40	23.36	23.30	0			1	2	23.40	23.36	23.30	0
		1	5	23.35	23.41	23.37	0			3	0	23.46	23.34	23.45	0
		3	0	23.33	23.25	23.44	0			3	1	23.33	23.25	23.44	0
		3	3	23.34	23.40	23.25	0			3	3	23.34	23.40	23.25	0
		6	0	22.14	22.23	22.34	1			6	0	22.14	22.23	22.34	1
	16QAM	1	0	22.34	22.32	22.28	1		16QAM	1	0	22.34	22.32	22.28	1
		1	2	22.38	22.41	22.31	1			1	2	22.38	22.41	22.31	1
		1	5	22.18	22.14	22.26	1			1	5	22.18	22.14	22.26	1
		3	0	22.25	22.32	22.34	1			3	0	22.25	22.32	22.34	1
		3	1	22.24	22.26	22.31	1			3	1	22.24	22.26	22.31	1
		3	3	22.32	22.31	22.39	1			3	3	22.32	22.31	22.39	1
		6	0	21.21	21.25	21.29	2			6	0	21.21	21.25	21.29	2
		1	0	21.23	21.17	21.29	2		64QAM	1	0	21.23	21.17	21.29	2
	64QAM	1	2	21.22	21.42	21.34	2			1	2	21.22	21.42	21.34	2
		1	5	21.27	21.29	21.33	2			1	5	21.27	21.29	21.33	2
		3	0	21.16	21.27	21.28	2			3	0	21.16	21.27	21.28	2
		3	1	21.23	21.23	21.23	2			3	1	21.23	21.23	21.23	2
		3	3	21.19	21.19	21.40	2			3	3	21.19	21.19	21.40	2
		6	0	20.20	20.08	20.15	3			6	0	20.20	20.08	20.15	3

SAR Test Report

LTE Band 26															
EUT with Power Reduction (P-Sensor Triggered)															
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		26765	26865	26965				Channel		26740	26865	26990	
		Frequency (MHz)		821.5	831.5	841.5				Frequency (MHz)		819.0	831.5	844.0	
15M	QPSK	1	0	17.90	17.98	17.95	0	10M	QPSK	1	0	17.87	17.95	17.92	0
		1	37	17.87	17.95	17.92	0			1	24	17.84	17.92	17.89	0
		1	74	17.84	17.92	17.89	0			1	49	17.81	17.89	17.86	0
		36	0	17.80	17.89	17.85	0			25	0	17.77	17.85	17.82	0
		36	19	17.78	17.86	17.83	0			25	12	17.75	17.83	17.80	0
		36	39	17.74	17.82	17.79	0			25	25	17.71	17.79	17.76	0
		75	0	17.81	17.88	17.86	0			50	0	17.78	17.86	17.83	0
		1	0	17.88	17.96	17.93	0		16QAM	1	0	17.85	17.93	17.90	0
	16QAM	1	37	17.85	17.93	17.90	0			1	24	17.82	17.90	17.87	0
		1	74	17.82	17.90	17.87	0			1	49	17.79	17.87	17.84	0
		36	0	17.78	17.86	17.83	0			25	0	17.75	17.83	17.80	0
		36	19	17.76	17.84	17.81	0			25	12	17.73	17.81	17.78	0
		36	39	17.72	17.80	17.77	0			25	25	17.69	17.77	17.74	0
		75	0	17.79	17.87	17.84	0			50	0	17.76	17.84	17.81	0
		1	0	17.87	17.95	17.92	0		64QAM	1	0	17.84	17.92	17.89	0
	64QAM	1	37	17.84	17.92	17.89	0			1	24	17.81	17.89	17.86	0
		1	74	17.81	17.89	17.86	0			1	49	17.78	17.86	17.83	0
		36	0	17.77	17.85	17.82	0			25	0	17.74	17.82	17.79	0
		36	19	17.75	17.83	17.80	0			25	12	17.72	17.80	17.77	0
		36	39	17.71	17.79	17.76	0			25	25	17.68	17.76	17.73	0
		75	0	17.78	17.86	17.83	0			50	0	17.75	17.83	17.80	0
		1	0	17.85	17.93	17.90	0		QPSK	1	0	17.83	17.91	17.88	0
5M	QPSK	1	12	17.82	17.90	17.87	0			1	7	17.80	17.88	17.85	0
		1	24	17.79	17.87	17.84	0			1	14	17.77	17.85	17.82	0
		12	0	17.75	17.83	17.80	0			8	0	17.73	17.81	17.78	0
		12	6	17.73	17.81	17.78	0			8	3	17.71	17.79	17.76	0
		12	13	17.69	17.77	17.74	0			8	7	17.67	17.75	17.72	0
		25	0	17.76	17.84	17.81	0			15	0	17.74	17.82	17.79	0
	16QAM	1	0	17.83	17.91	17.88	0		16QAM	1	0	17.81	17.89	17.86	0
		1	12	17.80	17.88	17.85	0			1	7	17.78	17.86	17.83	0
		1	24	17.77	17.85	17.82	0			1	14	17.75	17.83	17.80	0
		12	0	17.73	17.81	17.78	0			8	0	17.71	17.79	17.76	0
		12	6	17.71	17.79	17.76	0			8	3	17.69	17.77	17.74	0
		12	13	17.67	17.75	17.72	0			8	7	17.65	17.73	17.70	0
		25	0	17.74	17.82	17.79	0			15	0	17.72	17.80	17.77	0
		1	0	17.82	17.90	17.87	0		64QAM	1	0	17.80	17.88	17.85	0
	64QAM	1	12	17.79	17.87	17.84	0			1	7	17.77	17.85	17.82	0
		1	24	17.76	17.84	17.81	0			1	14	17.74	17.82	17.79	0
		12	0	17.72	17.80	17.77	0			8	0	17.70	17.78	17.75	0
		12	6	17.70	17.78	17.75	0			8	3	17.68	17.76	17.73	0
		12	13	17.66	17.74	17.71	0			8	7	17.64	17.72	17.69	0
		25	0	17.73	17.81	17.78	0			15	0	17.71	17.79	17.76	0
		1	0	17.82	17.90	17.87	0			1	0	17.82	17.90	17.87	0
1.4M	QPSK	1	2	17.79	17.87	17.84	0		QPSK	1	2	17.79	17.87	17.84	0
		1	5	17.76	17.84	17.81	0			1	5	17.76	17.84	17.81	0
		3	0	17.72	17.80	17.77	0			3	0	17.72	17.80	17.77	0
		3	1	17.70	17.78	17.75	0			3	1	17.70	17.78	17.75	0
		3	3	17.66	17.74	17.71	0			3	3	17.66	17.74	17.71	0
		6	0	17.73	17.81	17.78	0			6	0	17.73	17.81	17.78	0
	16QAM	1	0	17.80	17.88	17.85	0		16QAM	1	0	17.80	17.88	17.85	0
		1	2	17.77	17.85	17.82	0			1	2	17.77	17.85	17.82	0
		1	5	17.74	17.82	17.79	0			1	5	17.74	17.82	17.79	0
		3	0	17.70	17.78	17.75	0			3	0	17.70	17.78	17.75	0
		3	1	17.68	17.76	17.73	0			3	1	17.68	17.76	17.73	0
		3	3	17.64	17.72	17.69	0			3	3	17.64	17.72	17.69	0
		6	0	17.71	17.79	17.76	0			6	0	17.71	17.79	17.76	0
		1	0	17.79	17.87	17.84	0		64QAM	1	0	17.79	17.87	17.84	0
	64QAM	1	2	17.76	17.84	17.81	0			1	2	17.76	17.84	17.81	0
		1	5	17.73	17.81	17.78	0			1	5	17.73	17.81	17.78	0
		3	0	17.69	17.77	17.74	0			3	0	17.69	17.77	17.74	0
		3	1	17.67	17.75	17.72	0			3	1	17.67	17.75	17.72	0
		3	3	17.63	17.71	17.68	0			3	3	17.63	17.71	17.68	0
		6	0	17.70	17.78	17.75	0			6	0	17.70	17.78	17.75	0

SAR Test Report

LTE Band 30															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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		22.12		0	5M	QPSK	1	0	22.11	22.01	22.03	0
		1	24		21.97		0			1	12	21.96	21.86	21.88	0
		1	49		21.98		0			1	24	21.97	21.87	21.89	0
		25	0		21.07		1			12	0	21.06	20.96	20.98	1
		25	12		21.05		1			12	6	21.04	20.94	20.96	1
		25	25		21.03		1			12	13	21.02	20.92	20.94	1
		50	0		21.02		1			25	0	21.01	20.91	20.93	1
	16QAM	1	0		21.09		1		16QAM	1	0	21.08	20.92	21.01	1
		1	24		20.87		1			1	12	20.95	20.86	20.87	1
		1	49		20.90		1			1	24	20.94	20.80	20.81	1
		25	0		20.00		2			12	0	20.04	19.94	19.93	2
		25	12		20.02		2			12	6	20.02	19.89	19.95	2
		25	25		19.94		2			12	13	19.93	19.92	19.94	2
	64QAM	50	0		20.01		2		64QAM	25	0	20.00	19.83	19.88	2
		1	0		20.03		2			1	0	20.07	20.00	19.94	2
		1	24		19.97		2			1	12	19.88	19.78	19.79	2
		1	49		19.97		2			1	24	19.88	19.80	19.80	2
		25	0		18.98		3			12	0	18.99	18.92	18.96	3
		25	12		18.95		3			12	6	18.96	18.89	18.86	3
		25	25		18.95		3			12	13	19.02	18.85	18.88	3
		50	0		19.02		3			25	0	18.93	18.87	18.90	3

LTE Band 30															
EUT with Power Reduction (P-Sensor Triggered)															
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		16.97		0	5M	QPSK	1	0	16.93	16.81	16.86	0
		1	24		16.88		0			1	12	16.90	16.78	16.83	0
		1	49		16.72		0			1	24	16.82	16.70	16.75	0
		25	0		16.88		0			12	0	16.81	16.69	16.74	0
		25	12		16.87		0			12	6	16.77	16.65	16.70	0
		25	25		16.85		0			12	13	16.75	16.63	16.68	0
		50	0		16.90		0			25	0	16.94	16.82	16.87	0
	16QAM	1	0		16.93		0		16QAM	1	0	16.90	16.78	16.83	0
		1	24		16.84		0			1	12	16.87	16.75	16.80	0
		1	49		16.68		0			1	24	16.79	16.67	16.72	0
		25	0		16.84		0			12	0	16.78	16.66	16.71	0
		25	12		16.83		0			12	6	16.74	16.62	16.67	0
		25	25		16.81		0			12	13	16.72	16.60	16.65	0
		50	0		16.86		0			25	0	16.91	16.79	16.84	0
	64QAM	1	0		16.91		0		64QAM	1	0	16.88	16.76	16.81	0
		1	24		16.82		0			1	12	16.85	16.73	16.78	0
		1	49		16.66		0			1	24	16.77	16.65	16.70	0
		25	0		16.82		0			12	0	16.76	16.64	16.69	0
		25	12		16.81		0			12	6	16.72	16.60	16.65	0
		25	25		16.79		0			12	13	16.70	16.58	16.63	0
		50	0		16.84		0			25	0	16.89	16.77	16.82	0

SAR Test Report

LTE Band 38															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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		37850	38000	38150				Channel		37825	38000	38175	
		Frequency (MHz)		2580	2595	2610				Frequency (MHz)		2577.5	2595	2612.5	
20M	QPSK	1	0	23.81	23.84	23.69	0	15M	QPSK	1	0	23.79	23.76	23.62	0
		1	50	23.69	23.72	23.57	0			1	37	23.59	23.67	23.55	0
		1	99	23.53	23.56	23.41	0			1	74	23.53	23.52	23.39	0
		50	0	22.84	22.87	22.72	1			36	0	22.76	22.82	22.66	1
		50	25	22.76	22.79	22.64	1			36	19	22.70	22.78	22.63	1
		50	50	22.72	22.75	22.60	1			36	39	22.63	22.69	22.53	1
		100	0	22.78	22.81	22.66	1			75	0	22.74	22.81	22.63	1
		1	0	22.73	22.84	22.59	1		16QAM	1	0	22.72	22.77	22.56	1
	16QAM	1	50	22.59	22.66	22.47	1			1	37	22.59	22.63	22.43	1
		1	99	22.51	22.54	22.34	1			1	74	22.44	22.46	22.35	1
		50	0	21.77	21.85	21.67	2			36	0	21.68	21.80	21.64	2
		50	25	21.70	21.75	21.60	2			36	19	21.60	21.66	21.55	2
		50	50	21.69	21.75	21.56	2			36	39	21.64	21.67	21.41	2
		100	0	21.69	21.75	21.60	2			75	0	21.68	21.71	21.49	2
		1	0	21.76	21.75	21.67	2		64QAM	1	0	21.61	21.69	21.53	2
	64QAM	1	50	21.63	21.70	21.57	2			1	37	21.57	21.62	21.48	2
		1	99	21.43	21.47	21.39	2			1	74	21.52	21.45	21.28	2
		50	0	20.75	20.86	20.64	3			36	0	20.73	20.74	20.54	3
		50	25	20.76	20.70	20.64	3			36	19	20.60	20.65	20.53	3
		50	50	20.64	20.68	20.51	3			36	39	20.57	20.65	20.50	3
		100	0	20.70	20.74	20.56	3			75	0	20.63	20.74	20.63	3
10M	QPSK	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	5M	QPSK	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		37800	38000	38200				Channel		37775	38000	38225	
		Frequency (MHz)		2575	2595	2615				Frequency (MHz)		2572.5	2595	2617.5	
		1	0	23.65	23.66	23.53	0			1	0	23.61	23.62	23.31	0
		1	24	23.63	23.57	23.49	0			1	12	23.60	23.62	23.44	0
		1	49	23.41	23.33	23.38	0			1	24	23.35	23.35	23.16	0
		25	0	22.65	22.69	22.57	1			12	0	22.75	22.77	22.46	1
		25	12	22.59	22.70	22.54	1			12	6	22.59	22.67	22.40	1
	16QAM	25	25	22.71	22.72	22.51	1			12	13	22.66	22.63	22.51	1
		50	0	22.62	22.76	22.52	1			25	0	22.68	22.68	22.53	1
		1	0	22.76	22.67	22.39	1		16QAM	1	0	22.68	22.67	22.55	1
		1	24	22.42	22.66	22.38	1			1	12	22.52	22.57	22.32	1
		1	49	22.37	22.41	22.26	1			1	24	22.36	22.25	22.22	1
		25	0	21.73	21.69	21.60	2			12	0	21.69	21.69	21.51	2
		25	12	21.54	21.64	21.42	2			12	6	21.45	21.68	21.56	2
		25	25	21.54	21.61	21.52	2			12	13	21.58	21.58	21.51	2
		50	0	21.74	21.56	21.57	2			25	0	21.62	21.52	21.48	2
	64QAM	1	0	21.59	21.62	21.38	2		64QAM	1	0	21.67	21.71	21.59	2
		1	24	21.54	21.64	21.33	2			1	12	21.39	21.58	21.39	2
		1	49	21.27	21.43	21.32	2			1	24	21.21	21.41	21.40	2
		25	0	20.68	20.65	20.44	3			12	0	20.67	20.68	20.39	3
		25	12	20.60	20.57	20.58	3			12	6	20.47	20.55	20.52	3
		25	25	20.45	20.58	20.35	3			12	13	20.65	20.58	20.29	3
		50	0	20.60	20.60	20.43	3			25	0	20.64	20.66	20.36	3

SAR Test Report

LTE Band 38															
EUT with Power Reduction (P-Sensor Triggered)															
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		37850	38000	38150				Channel		37825	38000	38175	
		Frequency (MHz)		2580	2595	2610				Frequency (MHz)		2577.5	2595	2612.5	
20M	QPSK	1	0	17.44	17.49	17.46	0	15M	QPSK	1	0	17.42	17.47	17.44	0
		1	50	17.33	17.38	17.35	0			1	37	17.31	17.36	17.33	0
		1	99	17.29	17.34	17.31	0			1	74	17.27	17.32	17.29	0
		50	0	17.31	17.36	17.33	0			36	0	17.29	17.34	17.31	0
		50	25	17.30	17.35	17.32	0			36	19	17.28	17.33	17.30	0
		50	50	17.19	17.24	17.21	0			36	39	17.17	17.22	17.19	0
		100	0	17.39	17.44	17.41	0			75	0	17.37	17.42	17.39	0
		1	0	17.42	17.47	17.44	0		16QAM	1	0	17.40	17.45	17.42	0
	16QAM	1	50	17.31	17.36	17.33	0			1	37	17.29	17.34	17.31	0
		1	99	17.27	17.32	17.29	0			1	74	17.25	17.30	17.27	0
		50	0	17.29	17.34	17.31	0			36	0	17.27	17.32	17.29	0
		50	25	17.28	17.33	17.30	0			36	19	17.26	17.31	17.28	0
		50	50	17.17	17.22	17.19	0			36	39	17.15	17.20	17.17	0
		100	0	17.37	17.42	17.39	0			75	0	17.35	17.40	17.37	0
		1	0	17.40	17.45	17.42	0		64QAM	1	0	17.38	17.43	17.40	0
	64QAM	1	50	17.29	17.34	17.31	0			1	37	17.27	17.32	17.29	0
		1	99	17.25	17.30	17.27	0			1	74	17.23	17.28	17.25	0
		50	0	17.27	17.32	17.29	0			36	0	17.25	17.30	17.27	0
		50	25	17.26	17.31	17.28	0			36	19	17.24	17.29	17.26	0
		50	50	17.15	17.20	17.17	0			36	39	17.13	17.18	17.15	0
		100	0	17.35	17.40	17.37	0			75	0	17.33	17.38	17.35	0
		1	0	17.40	17.45	17.42	0			1	0	17.38	17.43	17.40	0
10M	QPSK	1	0	17.41	17.46	17.43	0	5M	QPSK	1	0	17.39	17.44	17.41	0
		1	24	17.30	17.35	17.32	0			1	12	17.28	17.33	17.30	0
		1	49	17.26	17.31	17.28	0			1	24	17.24	17.29	17.26	0
		25	0	17.28	17.33	17.30	0			12	0	17.26	17.31	17.28	0
		25	12	17.27	17.32	17.29	0			12	6	17.25	17.30	17.27	0
		25	25	17.16	17.21	17.18	0			12	13	17.14	17.19	17.16	0
		50	0	17.36	17.41	17.38	0			25	0	17.34	17.39	17.36	0
		1	0	17.39	17.44	17.41	0		16QAM	1	0	17.37	17.42	17.39	0
	16QAM	1	24	17.28	17.33	17.30	0			1	12	17.26	17.31	17.28	0
		1	49	17.24	17.29	17.26	0			1	24	17.22	17.27	17.24	0
		25	0	17.26	17.31	17.28	0			12	0	17.24	17.29	17.26	0
		25	12	17.25	17.30	17.27	0			12	6	17.23	17.28	17.25	0
		25	25	17.14	17.19	17.16	0			12	13	17.12	17.17	17.14	0
		50	0	17.34	17.39	17.36	0			25	0	17.32	17.37	17.34	0
		1	0	17.37	17.42	17.39	0		64QAM	1	0	17.35	17.40	17.37	0
	64QAM	1	24	17.26	17.31	17.28	0			1	12	17.24	17.29	17.26	0
		1	49	17.22	17.27	17.24	0			1	24	17.20	17.25	17.22	0
		25	0	17.24	17.29	17.26	0			12	0	17.22	17.27	17.24	0
		25	12	17.23	17.28	17.25	0			12	6	17.21	17.26	17.23	0
		25	25	17.12	17.17	17.14	0			12	13	17.10	17.15	17.12	0
		50	0	17.32	17.37	17.34	0			25	0	17.30	17.35	17.32	0

SAR Test Report

LTE Band 41																					
EUT without Power Reduction (P-Sensor NOT Triggered)																					
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High	3GPP MPR (dB)		
		Channel		39790	40185	40620	41055	41490				Channel		39765	40173	40620	41068	41515			
		Frequency (MHz)		2510.0	2549.5	2593.0	2636.5	2680.0				Frequency (MHz)		2507.5	2548.3	2593.0	2637.8	2682.5			
20M	QPSK	1	0	23.98	23.99	23.89	23.67	23.45	0	15M	QPSK	1	0	23.94	23.94	23.82	23.66	23.43	0		
		1	50	23.86	23.87	23.77	23.55	23.33	0			1	37	23.77	23.86	23.69	23.51	23.32	0		
		1	99	23.89	23.90	23.80	23.58	23.58	0			1	74	23.89	23.85	23.70	23.50	23.50	0		
		50	0	23.00	23.01	22.91	22.69	22.69	1			36	0	22.99	23.01	22.81	22.60	22.68	1		
		50	25	22.97	22.98	22.88	22.66	22.66	1			36	19	22.89	22.93	22.83	22.65	22.63	1		
		50	50	22.95	22.96	22.86	22.64	22.64	1			36	39	22.94	22.92	22.76	22.61	22.61	1		
		100	0	22.33	22.34	22.24	22.02	22.02	1			75	0	22.32	22.28	22.24	22.02	22.01	1		
		16QAM	1	0	22.95	22.89	22.84	22.58	22.43			1	16QAM	1	0	22.93	22.92	22.89	22.62	22.40	1
	1		50	22.80	22.84	22.77	22.49	22.33	1		1	37		22.79	22.80	22.72	22.45	22.28	1		
	1		99	22.85	22.89	22.75	22.53	22.53	1		1	74		22.88	22.86	22.80	22.58	22.52	1		
	50		0	21.95	21.99	21.88	21.65	21.68	2		36	0		21.90	21.91	21.81	21.61	21.68	2		
	50		25	21.91	21.89	21.86	21.61	21.58	2		36	19		21.91	21.88	21.79	21.59	21.61	2		
	50		50	21.94	21.91	21.79	21.57	21.62	2		36	39		21.91	21.96	21.78	21.59	21.60	2		
	64QAM	100	0	21.27	21.28	21.17	20.98	21.00	2		64QAM	75	0	21.25	21.24	21.14	20.94	20.92	2		
		1	0	21.95	21.90	21.82	21.60	21.45	2			1	0	21.89	21.89	21.81	21.57	21.39	2		
		1	50	21.78	21.82	21.71	21.45	21.28	2			1	37	21.85	21.77	21.69	21.51	21.32	2		
		1	99	21.83	21.88	21.77	21.52	21.54	2			1	74	21.81	21.87	21.78	21.51	21.51	2		
		50	0	20.92	20.95	20.82	20.59	20.66	3			36	0	20.98	21.00	20.90	20.60	20.66	3		
		50	25	20.88	20.95	20.86	20.56	20.64	3			36	19	20.87	20.98	20.83	20.61	20.56	3		
		50	50	20.93	20.92	20.83	20.59	20.58	3			36	39	20.89	20.95	20.84	20.60	20.62	3		
		100	0	20.27	20.25	20.20	19.99	19.92	3			75	0	20.23	20.27	20.19	19.98	20.00	3		
	BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High		3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High	3GPP MPR (dB)
			Channel		39740	40160	40620	41080	41540					Channel		39715	40148	40620	41093	41565	
			Frequency (MHz)		2505.0	2547.0	2593.0	2639.0	2685.0					Frequency (MHz)		2502.5	2545.8	2593.0	2640.3	2687.5	
10M	QPSK	1	0	23.93	23.93	23.72	23.62	23.30	0	5M	QPSK	1	0	23.89	23.83	23.90	23.80	23.63	0		
		1	24	23.77	23.73	23.64	23.42	23.22	0			1	12	23.75	23.78	23.77	23.64	23.42	0		
		1	49	23.82	23.77	23.73	23.44	23.53	0			1	24	23.84	23.85	23.84	23.68	23.52	0		
		25	0	22.91	22.89	22.86	22.52	22.57	1			12	0	22.90	22.90	22.90	22.86	22.53	1		
		25	12	22.80	22.89	22.71	22.61	22.61	1			12	6	22.82	22.92	22.84	22.77	22.59	1		
		25	25	22.88	22.90	22.77	22.62	22.55	1			12	13	22.81	22.81	22.87	22.77	22.53	1		
		50	0	22.29	22.27	22.24	21.92	21.92	1			25	0	22.20	22.24	22.15	22.14	21.92	1		
		16QAM	1	0	22.88	22.94	22.78	22.59	22.27			1	16QAM	1	0	22.85	22.80	22.85	22.74	22.58	1
	1		24	22.74	22.74	22.70	22.47	22.21	1		1	12		22.79	22.78	22.78	22.64	22.36	1		
	1		49	22.88	22.73	22.73	22.50	22.43	1		1	24		22.83	22.86	22.88	22.62	22.58	1		
	25		0	21.99	21.89	21.86	21.50	21.57	2		12	0		21.87	21.86	21.87	21.80	21.59	2		
	25		12	21.79	21.93	21.76	21.53	21.64	2		12	6		21.83	21.87	21.79	21.85	21.61	2		
	25		25	21.78	21.86	21.76	21.56	21.51	2		12	13		21.84	21.81	21.84	21.74	21.49	2		
	64QAM	50	0	21.27	21.23	21.21	20.93	20.92	2		64QAM	25	0	21.25	21.22	21.14	21.15	20.89	2		
		1	0	21.88	21.91	21.73	21.62	21.35	2			1	0	21.83	21.81	21.87	21.73	21.57	2		
		1	24	21.74	21.81	21.63	21.47	21.16	2			1	12	21.75	21.78	21.80	21.69	21.37	2		
		1	49	21.81	21.81	21.73	21.47	21.44	2			1	24	21.75	21.77	21.83	21.69	21.53	2		
		25	0	20.96	20.91	20.81	20.50	20.61	3			12	0	20.86	20.89	20.87	20.86	20.49	3		
		25	12	20.89	20.88	20.76	20.58	20.55	3			12	6	20.89	20.87	20.82	20.83	20.66	3		
		25	25	20.79	20.83	20.79	20.63	20.47	3			12	13	20.83	20.80	20.81	20.71	20.49	3		
		50	0	20.23	20.21	20.24	19.93	19.87	3			25	0	20.20	20.23	20.14	20.10	19.89	3		

SAR Test Report

LTE Band 41																					
EUT with Power Reduction (P-Sensor Triggered)																					
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High	3GPP MPR (dB)		
		Channel		39790	40185	40620	41055	41490				Channel		39765	40173	40620	41068	41515			
		Frequency (MHz)		2510.0	2549.5	2593.0	2636.5	2680.0				Frequency (MHz)		2507.5	2548.3	2593.0	2637.8	2682.5			
20M	QPSK	1	0	17.88	17.95	17.85	17.88	17.77	0	15M	QPSK	1	0	17.84	17.91	17.81	17.84	17.73	0		
		1	50	17.78	17.85	17.75	17.78	17.67	0			1	37	17.74	17.81	17.71	17.74	17.63	0		
		1	99	17.76	17.83	17.73	17.76	17.65	0			1	74	17.72	17.79	17.69	17.72	17.61	0		
		50	0	17.71	17.78	17.68	17.71	17.60	0			36	0	17.67	17.74	17.64	17.67	17.56	0		
		50	25	17.68	17.75	17.65	17.68	17.57	0			36	19	17.64	17.71	17.61	17.64	17.53	0		
		50	50	17.76	17.83	17.73	17.76	17.65	0			36	39	17.72	17.79	17.69	17.72	17.61	0		
		100	0	17.75	17.82	17.72	17.75	17.64	0			75	0	17.71	17.78	17.68	17.71	17.60	0		
		16QAM	1	0	17.86	17.93	17.83	17.86	17.75			0	16QAM	1	0	17.82	17.89	17.79	17.82	17.71	0
	1		50	17.76	17.83	17.73	17.76	17.65	0		1	37		17.72	17.79	17.69	17.72	17.61	0		
	1		99	17.74	17.81	17.71	17.74	17.63	0		1	74		17.70	17.77	17.67	17.70	17.59	0		
	50		0	17.69	17.76	17.66	17.69	17.58	0		36	0		17.65	17.72	17.62	17.65	17.54	0		
	50		25	17.66	17.73	17.63	17.66	17.55	0		36	19		17.62	17.69	17.59	17.62	17.51	0		
	50		50	17.74	17.81	17.71	17.74	17.63	0		36	39		17.70	17.77	17.67	17.70	17.59	0		
	64QAM	100	0	17.73	17.80	17.70	17.73	17.62	0		75	0	17.69	17.76	17.66	17.69	17.58	0			
		1	0	17.82	17.89	17.79	17.82	17.71	0		64QAM	1	0	17.78	17.85	17.75	17.78	17.67	0		
		1	50	17.72	17.79	17.69	17.72	17.61	0			1	37	17.68	17.75	17.65	17.68	17.57	0		
		1	99	17.70	17.77	17.67	17.70	17.59	0			1	74	17.66	17.73	17.63	17.66	17.55	0		
		50	0	17.65	17.72	17.62	17.65	17.54	0			36	0	17.61	17.68	17.58	17.61	17.50	0		
		50	25	17.62	17.69	17.59	17.62	17.51	0			36	19	17.58	17.65	17.55	17.58	17.47	0		
		50	50	17.70	17.77	17.67	17.70	17.59	0			36	39	17.66	17.73	17.63	17.66	17.55	0		
		100	0	17.69	17.76	17.66	17.69	17.58	0			75	0	17.65	17.72	17.62	17.65	17.54	0		
	BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High			3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High
			Channel		39740	40160	40620	41080	41540		Channel				39715	40148	40620	41093	41565		
			Frequency (MHz)		2505.0	2547.0	2593.0	2639.0	2685.0		Frequency (MHz)				2502.5	2545.8	2593.0	2640.3	2687.5		
10M	QPSK	1	0	17.80	17.87	17.77	17.80	17.69	0	5M	QPSK	1	0	17.78	17.85	17.75	17.78	17.67	0		
		1	24	17.70	17.77	17.67	17.70	17.59	0			1	12	17.68	17.75	17.65	17.68	17.57	0		
		1	49	17.68	17.75	17.65	17.68	17.57	0			1	24	17.66	17.73	17.63	17.66	17.55	0		
		25	0	17.63	17.70	17.60	17.63	17.52	0			12	0	17.61	17.68	17.58	17.61	17.50	0		
		25	12	17.60	17.67	17.57	17.60	17.49	0			12	6	17.58	17.65	17.55	17.58	17.47	0		
		25	25	17.68	17.75	17.65	17.68	17.57	0			12	13	17.66	17.73	17.63	17.66	17.55	0		
		50	0	17.67	17.74	17.64	17.67	17.56	0			25	0	17.65	17.72	17.62	17.65	17.54	0		
		16QAM	1	0	17.78	17.85	17.75	17.78	17.67			0	16QAM	1	0	17.76	17.83	17.73	17.76	17.65	0
	1		24	17.68	17.75	17.65	17.68	17.57	0		1	12		17.66	17.73	17.63	17.66	17.55	0		
	1		49	17.66	17.73	17.63	17.66	17.55	0		1	24		17.64	17.71	17.61	17.64	17.53	0		
	25		0	17.61	17.68	17.58	17.61	17.50	0		12	0		17.59	17.66	17.56	17.59	17.48	0		
	25		12	17.58	17.65	17.55	17.58	17.47	0		12	6		17.56	17.63	17.53	17.56	17.45	0		
	25		25	17.66	17.73	17.63	17.66	17.55	0		12	13		17.64	17.71	17.61	17.64	17.53	0		
	64QAM	50	0	17.65	17.72	17.62	17.65	17.54	0		25	0	17.63	17.70	17.60	17.63	17.52	0			
		1	0	17.74	17.81	17.71	17.74	17.63	0		64QAM	1	0	17.72	17.79	17.69	17.72	17.61	0		
		1	24	17.64	17.71	17.61	17.64	17.53	0			1	12	17.62	17.69	17.59	17.62	17.51	0		
		1	49	17.62	17.69	17.59	17.62	17.51	0			1	24	17.60	17.67	17.57	17.60	17.49	0		
		25	0	17.57	17.64	17.54	17.57	17.46	0			12	0	17.55	17.62	17.52	17.55	17.44	0		
		25	12	17.54	17.61	17.51	17.54	17.43	0			12	6	17.52	17.59	17.49	17.52	17.41	0		
		25	25	17.62	17.69	17.59	17.62	17.51	0			12	13	17.60	17.67	17.57	17.60	17.49	0		
		50	0	17.61	17.68	17.58	17.61	17.50	0			25	0	17.59	17.66	17.56	17.59	17.48	0		

SAR Test Report

LTE Band 66															
EUT without Power Reduction (P-Sensor NOT Triggered)															
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	23.71	23.89	23.67	0	15M	QPSK	1	0	23.66	23.79	23.60	0
		1	50	23.30	23.48	23.26	0			1	37	23.22	23.42	23.20	0
		1	99	23.21	23.39	23.17	0			1	74	23.14	23.39	23.17	0
		50	0	22.48	22.66	22.44	1			36	0	22.47	22.65	22.34	1
		50	25	22.39	22.57	22.35	1			36	19	22.33	22.57	22.35	1
		50	50	22.31	22.49	22.27	1			36	39	22.29	22.44	22.26	1
		100	0	22.40	22.58	22.36	1			75	0	22.32	22.48	22.36	1
	16QAM	1	0	22.67	22.88	22.65	1		16QAM	1	0	22.64	22.89	22.58	1
		1	50	22.25	22.41	22.18	1			1	37	22.22	22.31	22.17	1
		1	99	22.15	22.37	22.09	1			1	74	22.16	22.31	22.02	1
		50	0	21.42	21.58	21.35	2			36	0	21.44	21.58	21.39	2
		50	25	21.32	21.56	21.29	2			36	19	21.23	21.45	21.27	2
		50	50	21.31	21.44	21.18	2			36	39	21.16	21.40	21.18	2
	64QAM	100	0	21.30	21.51	21.26	2		75	0	21.33	21.54	21.22	2	
		1	0	21.64	21.82	21.62	2		64QAM	1	0	21.58	21.84	21.51	2
		1	50	21.20	21.42	21.19	2			1	37	21.20	21.36	21.11	2
		1	99	21.20	21.34	21.15	2			1	74	21.17	21.35	21.11	2
		50	0	20.46	20.62	20.39	3			36	0	20.44	20.62	20.33	3
		50	25	20.34	20.49	20.34	3			36	19	20.26	20.45	20.23	3
	50	50	20.27	20.49	20.25	3	36			39	20.19	20.40	20.16	3	
	100	0	20.40	20.49	20.31	3	75		0	20.37	20.54	20.33	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	23.66	23.76	23.64	0	5M	QPSK	1	0	23.63	23.74	23.44	0
		1	24	23.26	23.31	23.13	0			1	12	23.12	23.41	22.99	0
		1	49	23.09	23.38	23.04	0			1	24	23.11	23.24	22.92	0
		25	0	22.37	22.47	22.31	1			12	0	22.36	22.46	22.22	1
		25	12	22.17	22.43	22.29	1			12	6	22.28	22.40	22.21	1
		25	25	22.14	22.46	22.17	1			12	13	22.14	22.28	21.96	1
		50	0	22.31	22.34	22.30	1			25	0	22.39	22.51	22.07	1
	16QAM	1	0	22.48	22.67	22.47	1		16QAM	1	0	22.53	22.64	22.55	1
		1	24	22.03	22.38	22.03	1			1	12	22.09	22.21	22.20	1
		1	49	22.08	22.13	22.04	1			1	24	22.01	22.27	21.93	1
		25	0	21.25	21.53	21.38	2			12	0	21.23	21.39	21.26	2
		25	12	21.16	21.34	21.17	2			12	6	21.24	21.33	21.29	2
		25	25	21.06	21.25	21.08	2			12	13	21.09	21.31	21.11	2
	64QAM	50	0	21.28	21.32	21.20	2		25	0	21.30	21.49	21.14	2	
		1	0	21.55	21.79	21.45	2		64QAM	1	0	21.56	21.70	21.56	2
		1	24	21.11	21.35	21.06	2			1	12	21.09	21.38	21.06	2
		1	49	21.06	21.28	21.03	2			1	24	21.07	21.32	21.00	2
		25	0	20.32	20.41	20.36	3			12	0	20.32	20.50	20.34	3
		25	12	20.27	20.43	20.19	3			12	6	20.16	20.39	20.16	3
	25	25	19.99	20.29	20.17	3	12			13	20.15	20.41	20.07	3	
	50	0	20.26	20.38	20.20	3	25		0	20.29	20.43	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		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	23.73	23.58	0	1.4M	QPSK	1	0	23.70	23.80	23.52	0
		1	7	23.26	23.40	23.11	0			1	2	23.25	23.39	23.14	0
		1	14	23.16	23.38	23.06	0			1	5	23.08	23.30	22.99	0
		8	0	22.30	22.48	22.37	1			3	0	23.33	23.61	23.31	0
		8	3	22.36	22.49	22.14	1			3	1	23.32	23.50	23.31	0
		8	7	22.16	22.45	22.16	1			3	3	23.19	23.36	23.09	0
		15	0	22.19	22.50	22.27	1			6	0	22.27	22.48	22.22	1
	16QAM	1	0	22.59	22.69	22.51	1		16QAM	1	0	22.52	22.71	22.50	1
		1	7	22.29	22.23	22.09	1			1	2	22.14	22.25	22.04	1
		1	14	22.08	22.21	22.07	1			1	5	22.05	22.17	21.99	1
		8	0	21.30	21.54	21.38	2			3	0	22.29	22.54	22.31	1
		8	3	21.12	21.37	21.14	2			3	1	22.14	22.38	22.25	1
		8	7	21.09	21.36	21.12	2			3	3	22.08	22.25	22.13	1
	64QAM	15	0	21.14	21.36	21.09	2		6	0	21.12	21.34	21.15	2	
		1	0	21.53	21.68	21.43	2		64QAM	1	0	21.57	21.73	21.49	2
		1	7	21.21	21.34	21.18	2			1	2	21.25	21.33	21.02	2
		1	14	21.06	21.26	21.01	2			1	5	21.05	21.18	21.03	2
		8	0	20.25	20.43	20.23	3			3	0	21.36	21.45	21.28	2
		8	3	20.23	20.40	20.15	3			3	1	21.35	21.51	21.13	2
	8	7	20.04	20.19	20.11	3	3			3	21.04	21.33	21.22	2	
	15	0	20.25	20.46	20.23	3	6		0	20.28	20.49	20.19	3		

SAR Test Report

LTE Band 66																
EUT with Power Reduction (P-Sensor Triggered)																
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	17.95	17.99	17.93	0	15M	QPSK	1	0	17.93	17.97	17.91	0	
		1	50	17.88	17.92	17.86	0			1	37	17.86	17.90	17.84	0	
		1	99	17.86	17.90	17.84	0			1	74	17.84	17.88	17.82	0	
		50	0	17.84	17.88	17.82	0			36	0	17.82	17.86	17.80	0	
		50	25	17.81	17.85	17.79	0			36	19	17.79	17.83	17.77	0	
		50	50	17.76	17.80	17.74	0			36	39	17.74	17.78	17.72	0	
		100	0	17.87	17.91	17.85	0			75	0	17.85	17.89	17.83	0	
		1	0	17.93	17.97	17.91	0			1	0	17.91	17.95	17.89	0	
	16QAM	1	50	17.86	17.90	17.84	0			1	37	17.84	17.88	17.82	0	
		1	99	17.84	17.88	17.82	0			1	74	17.82	17.86	17.80	0	
		50	0	17.82	17.86	17.80	0			36	0	17.80	17.84	17.78	0	
		50	25	17.79	17.83	17.77	0			36	19	17.77	17.81	17.75	0	
		50	50	17.74	17.78	17.72	0			36	39	17.72	17.76	17.70	0	
		100	0	17.85	17.89	17.83	0			75	0	17.83	17.87	17.81	0	
		1	0	17.89	17.93	17.87	0			1	0	17.87	17.91	17.85	0	
		1	50	17.82	17.86	17.80	0			1	37	17.80	17.84	17.78	0	
	64QAM	1	99	17.80	17.84	17.78	0			1	74	17.78	17.82	17.76	0	
		50	0	17.78	17.82	17.76	0			36	0	17.76	17.80	17.74	0	
		50	25	17.75	17.79	17.73	0			36	19	17.73	17.77	17.71	0	
		50	50	17.70	17.74	17.68	0			36	39	17.68	17.72	17.66	0	
		100	0	17.81	17.85	17.79	0			75	0	17.79	17.83	17.77	0	
0M	QPSK	1	0	17.89	17.93	17.87	0	5M	QPSK	1	0	17.85	17.89	17.83	0	
		1	24	17.82	17.86	17.80	0			1	12	17.78	17.82	17.76	0	
		1	49	17.80	17.84	17.78	0			1	24	17.76	17.80	17.74	0	
		25	0	17.78	17.82	17.76	0			12	0	17.74	17.78	17.72	0	
		25	12	17.75	17.79	17.73	0			12	6	17.71	17.75	17.69	0	
		25	25	17.70	17.74	17.68	0			12	13	17.66	17.70	17.64	0	
		50	0	17.81	17.85	17.79	0			25	0	17.77	17.81	17.75	0	
		1	0	17.87	17.91	17.85	0			1	0	17.83	17.87	17.81	0	
	16QAM	1	24	17.80	17.84	17.78	0			1	12	17.76	17.80	17.74	0	
		1	49	17.78	17.82	17.76	0			1	24	17.74	17.78	17.72	0	
		25	0	17.76	17.80	17.74	0			12	0	17.72	17.76	17.70	0	
		25	12	17.73	17.77	17.71	0			12	6	17.69	17.73	17.67	0	
		25	25	17.68	17.72	17.66	0			12	13	17.64	17.68	17.62	0	
		50	0	17.79	17.83	17.77	0			25	0	17.75	17.79	17.73	0	
		1	0	17.83	17.87	17.81	0			1	0	17.79	17.83	17.77	0	
		1	24	17.76	17.80	17.74	0			1	12	17.72	17.76	17.70	0	
	64QAM	1	49	17.74	17.78	17.72	0			1	24	17.70	17.74	17.68	0	
		25	0	17.72	17.76	17.70	0			12	0	17.68	17.72	17.66	0	
		25	12	17.69	17.73	17.67	0			12	6	17.65	17.69	17.63	0	
		25	25	17.64	17.68	17.62	0			12	13	17.60	17.64	17.58	0	
		50	0	17.75	17.79	17.73	0			25	0	17.71	17.75	17.69	0	
3M	QPSK	1	0	17.81	17.85	17.79	0	1.4M	QPSK	1	0	19.26	19.30	19.29	0	
		1	7	17.74	17.78	17.72	0			1	2	19.14	18.87	19.12	0	
		1	14	17.72	17.76	17.70	0			1	5	19.08	19.06	19.16	0	
		8	0	17.70	17.74	17.68	0			3	0	19.23	19.15	19.28	0	
		8	3	17.67	17.71	17.65	0			3	1	19.18	19.06	19.22	0	
		8	7	17.62	17.66	17.60	0			3	3	19.17	19.08	19.12	0	
		15	0	17.73	17.77	17.71	0			6	0	19.26	19.13	19.15	0	
		1	0	17.79	17.83	17.77	0			1	0	19.18	19.17	19.39	0	
	16QAM	1	7	17.72	17.76	17.70	0			1	2	19.08	18.94	19.05	0	
		1	14	17.70	17.74	17.68	0			1	5	18.87	19.07	19.25	0	
		8	0	17.68	17.72	17.66	0			3	0	19.11	19.15	19.18	0	
		8	3	17.65	17.69	17.63	0			3	1	19.20	19.15	19.05	0	
		8	7	17.60	17.64	17.58	0			3	3	19.08	19.13	18.99	0	
		15	0	17.71	17.75	17.69	0			6	0	19.17	18.92	19.16	0	
		1	0	17.75	17.79	17.73	0			1	0	19.15	19.29	19.33	0	
		1	7	17.68	17.72	17.66	0			1	2	19.12	18.86	19.08	0	
	64QAM	1	14	17.66	17.70	17.64	0			1	5	19.00	19.11	19.15	0	
		8	0	17.64	17.68	17.62	0			3	0	19.09	19.12	19.11	0	
		8	3	17.61	17.65	17.59	0			3	1	19.25	19.00	19.11	0	
		8	7	17.56	17.60	17.54	0			3	3	19.13	18.96	19.07	0	
		15	0	17.67	17.71	17.65	0			6	0	19.27	18.96	19.17	0	

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 $\leq 1/4$ 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.

SAR Test Report

Power Measurements for Intra-Band Contiguous Downlink CA

CA Combination	PCC								SCC1				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)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
EUT without Power Reduction (P-Sensor NOT Triggered)														
CA_41C	41	20	40185	2549.5	1	0	40185	2549.5	41	20	40383	2569.3	23.52	23.80

CA Combination	PCC								SCC1				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)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
EUT with Power Reduction (P-Sensor Triggered)														
CA_41C	41	20	40185	2549.5	1	0	40185	2549.5	41	20	40383	2569.3	16.94	16.98

Power Measurements for Inter-Band Downlink CA

CA Combination	PCC								SCC1				SCC2				SCC3				SCC4				SCC2					
	LTE Band	BW (MHz)	LTE Band	LTE Band	LTE Band	LTE Band	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	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 with DL- CA Active (dBm)	Single Carrier Tx Power (dBm)
EUT without Power Reduction (P-Sensor NOT Triggered)																														
CA_2A-29A	2	20	19100	1900	1	0	1100	1980	29	10	9715	722.5																	23.66	23.99
CA_2A-46A	2	20	19100	1900	1	0	1100	1980	46	20	50665	5537.5																	23.71	23.99
CA_4A-5A	4	20	20175	1732.5	1	0	2175	2132.5	5	10	2525	881.5																	23.44	23.78
CA_4A-13A	4	20	20175	1732.5	1	0	2175	2132.5	13	10	5230	751																	23.51	23.78
CA_4A-46A	4	20	20175	1732.5	1	0	2175	2132.5	46	20	50665	5537.5																	23.25	23.78
CA_25A-26A	25	20	26140	1860	1	0	8140	1940	26	15	8865	876.5																	23.68	23.72
CA_29A-30A	30	10	27710	2310	1	0	9820	2355	29	10	9715	722.5																	21.86	22.13
CA_29A-66A	66	20	132322	1745	1	0	66786	2145	29	10	9715	722.5																	23.57	23.75
CA_14A-66A-66A	14	10	23330	793	1	0	5330	763	66	20	66786	2145	66	20	67036	2170													23.62	23.81
CA_2A-4A-5A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	5	10	2525	881.5													23.57	23.99
CA_2A-4A-13A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	13	10	5230	751													23.65	23.99
CA_2A-14A-30A	2	20	19100	1900	1	0	1100	1980	14	10	5330	763	30	10	9820	2355													23.47	23.99
CA_2A-2A-13A-66A	2	20	19100	1900	1	0	1100	1980	2	20	900	1960	13	10	5230	751	66	20	66786	2145									23.72	23.99
CA_2A-13A-66A-66A	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67036	2170									23.53	23.99
CA_2A-13A-66B	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3									23.60	23.99
CA_2A-13A-66C	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8									23.63	23.99
CA_2A-13A-46D	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	46	20	50665	5537.5	46	20	50863	5557.3	46	20	51061	5577.1					23.69	23.99
CA_2A-46D-66A	2	20	19100	1900	1	0	1100	1980	66	20	66786	2145	46	20	50665	5537.5	46	20	50863	5557.3	46	20	51061	5577.1					23.58	23.99
CA_13A-46D-66A	13	10	23230	782	1	24	5230	751	66	20	66786	2145	46	20	50665	5537.5	46	20	50863	5557.3	46	20	51061	5577.1					23.71	23.83
CA_2A-12A-30A-66A	2	20	19100	1900	1	0	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145									23.68	23.99
CA_2A-5B-30A-66A	2	20	19100	1900	1	0	1100	1980	66	20	66786	2145	30	10	9820	2355	5	10	2450	874	5	10	2549	883.9					23.49	23.99

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CA Combination	PCC								SCC1				SCC2				SCC3				SCC4				SCC2	
	LTE Band	BW (MHz)	LTE Band	LTE Band	LTE Band	LTE Band	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	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 with DL- CA Active (dBm)	Single Carrier Tx Power (dBm)
EUT with Power Reduction (P-Sensor Triggered)																										
CA_2A-29A	2	20	19100	1900	1	0	1100	1980	29	10	9715	722.5													18.81	18.95
CA_2A-46A	2	20	19100	1900	1	0	1100	1980	46	20	50665	5537.5													18.87	18.95
CA_4A-5A	4	20	20175	1732.5	1	0	2175	2132.5	5	10	2525	881.5													18.38	18.48
CA_4A-13A	4	20	20175	1732.5	1	0	2175	2132.5	13	10	5230	751													18.34	18.48
CA_4A-46A	4	20	20175	1732.5	1	0	2175	2132.5	46	20	50665	5537.5													18.43	18.48
CA_25A-26A	25	20	26140	1860	1	0	8140	1940	26	15	8865	876.5													19.81	19.99
CA_29A-30A	30	10	27710	2310	1	0	9820	2355	29	10	9715	722.5													16.72	16.95
CA_29A-66A	66	20	132572	1770	1	0	67036	2170	29	10	9715	722.5													19.33	19.48
CA_14A-66A-66A	14	10	23330	793	1	0	5330	763	66	20	66786	2145	66	20	67036	2170									19.29	19.47
CA_2A-4A-5A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	5	10	2525	881.5									18.81	18.95
CA_2A-4A-13A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	13	10	5230	751									18.79	18.95
CA_2A-14A-30A	2	20	19100	1900	1	0	1100	1980	14	10	5330	763	30	10	9820	2355									18.84	18.95
CA_2A-2A-13A-66A	2	20	19100	1900	1	0	1100	1980	2	20	900	1960	13	10	5230	751	66	20	66786	2145					18.82	18.95
CA_2A-13A-66A-66A	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67036	2170					18.91	18.95
CA_2A-13A-66B	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3					18.83	18.95
CA_2A-13A-66C	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8					18.79	18.95
CA_2A-13A-46D	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	46	20	50665	5537.5	46	20	50863	5557.3	46	20	51061	5577.1	18.92	18.95
CA_2A-46D-66A	2	20	19100	1900	1	0	1100	1980	66	20	66786	2145	46	20	50665	5537.5	46	20	50863	5557.3	46	20	51061	5577.1	18.83	18.95
CA_13A-46D-66A	13	10	23230	782	1	0	5230	751	66	20	66786	2145	46	20	50665	5537.5	46	20	50863	5557.3	46	20	51061	5577.1	19.42	19.46
CA_2A-12A-30A-66A	2	20	19100	1900	1	0	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145					18.78	18.95
CA_2A-5B-30A-66A	2	20	19100	1900	1	0	1100	1980	66	20	66786	2145	30	10	9820	2355	5	10	2450	874	5	10	2549	883.9	18.87	18.95

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.

SAR Test Report

4.7.2 SAR Results for Body Exposure Condition (Test Separation Distance is 0 mm)

Plot No.	Band	Mode	Test Position	Ch.	SKU	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
01	WCDMA II	RMC12.2K	Rear Face	9538	1	w/	17.50	17.45	1.01	-0.05	0.809	0.82
	WCDMA II	RMC12.2K	Rear Face	9400	1	w/	17.50	17.46	1.01	-0.01	0.794	0.80
	WCDMA II	RMC12.2K	Rear Face	9262	1	w/	17.50	17.39	1.03	-0.05	0.782	0.81
	WCDMA II	RMC12.2K	Rear Face	9538	1	w/	17.50	17.46	1.01	0.12	0.806	0.81
02	WCDMA IV	RMC12.2K	Rear Face	1312	1	w/	18.00	17.98	1.00	-0.02	1.01	1.01
	WCDMA IV	RMC12.2K	Rear Face	1413	1	w/	18.00	17.81	1.04	-0.03	0.965	1.00
	WCDMA IV	RMC12.2K	Rear Face	1513	1	w/	18.00	17.65	1.08	-0.06	0.898	0.97
	WCDMA IV	RMC12.2K	Rear Face	1312	1	w/	18.00	17.98	1.00	0.14	0.992	0.99
03	WCDMA V	RMC12.2K	Rear Face	4132	1	w/	17.50	17.20	1.07	-0.02	0.852	0.91
	WCDMA V	RMC12.2K	Rear Face	4182	1	w/	17.50	17.49	1.00	-0.04	0.830	0.83
	WCDMA V	RMC12.2K	Rear Face	4233	1	w/	17.50	17.19	1.07	-0.03	0.841	0.90
	WCDMA V	RMC12.2K	Rear Face	4132	1	w/	17.50	17.20	1.07	0.11	0.844	0.90

Plot No.	Band	Mode	Test Position	Ch.	RB#	RB Offset	SKU	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
04	LTE 5	QPSK10M	Rear Face	20600	1	0	1	w/	17.50	17.44	1.01	-0.04	0.764	0.77
05	LTE 7	QPSK20M	Rear Face	20850	1	0	1	w/	17.00	16.96	1.01	-0.02	0.978	0.99
	LTE 7	QPSK20M	Rear Face	21100	1	0	1	w/	17.00	16.79	1.05	0.01	0.875	0.92
	LTE 7	QPSK20M	Rear Face	21350	1	0	1	w/	17.00	16.91	1.02	-0.01	0.876	0.89
	LTE 7	QPSK20M	Rear Face	20850	1	0	1	w/	17.00	16.96	1.01	0.13	0.969	0.98
06	LTE 12	QPSK10M	Rear Face	23095	1	24	1	w/	20.50	20.36	1.03	-0.05	1.10	1.13
	LTE 12	QPSK10M	Rear Face	23060	1	24	1	w/	20.50	20.25	1.06	-0.03	1.03	1.09
	LTE 12	QPSK10M	Rear Face	23130	1	24	1	w/	20.50	20.31	1.04	-0.02	1.06	1.10
	LTE 12	QPSK10M	Rear Face	23130	1	24	1	w/	20.50	20.31	1.04	-0.09	1.04	1.08
07	LTE 13	QPSK10M	Rear Face	23230	1	24	1	w/	18.00	17.99	1.00	-0.02	0.832	0.83
	LTE 13	QPSK10M	Rear Face	23230	1	24	1	w/	18.00	17.99	1.00	0.11	0.822	0.82
08	LTE 14	QPSK10M	Rear Face	23330	1	0	1	w/	18.00	17.95	1.01	-0.02	0.888	0.90
	LTE 14	QPSK10M	Rear Face	23330	1	0	1	w/	18.00	17.95	1.01	0.03	0.872	0.88
09	LTE 25	QPSK20M	Top Side	26140	1	0	1	w/	18.00	17.82	1.04	-0.07	0.755	0.79
18	LTE 26	QPSK15M	Rear Face	26865	1	0	1	w/	18.00	17.98	1.00	-0.01	0.880	0.88
10	LTE 30	QPSK10M	Rear Face	27710	1	0	1	w/	17.00	16.97	1.01	-0.05	0.998	1.01
	LTE 30	QPSK10M	Rear Face	27710	1	0	1	w/	17.00	16.97	1.01	0.09	0.989	1.00
11	LTE 41	QPSK20M	Rear Face	40185	1	0	1	w/	18.00	17.95	1.01	0.04	0.739	0.75
12	LTE 66	QPSK20M	Rear Face	132572	1	0	1	w/	18.00	17.93	1.02	-0.02	1.04	1.06
	LTE 66	QPSK20M	Rear Face	132072	1	0	1	w/	18.00	17.95	1.01	-0.09	0.913	0.92
	LTE 66	QPSK20M	Rear Face	132322	1	0	1	w/	18.00	17.99	1.00	0	1.02	1.02
	LTE 66	QPSK20M	Rear Face	132072	1	0	1	w/	18.00	17.95	1.01	0.09	1.01	1.02

<WLAN module (AX201NGW)>

Plot No.	Band	Mode	Test Position	Ch.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
13	WLAN 2.4G	802.11b	Rear Face	6	13.00	13.00	1.00	0.08	0.757	0.76
14	WLAN 5.3G	802.11a	Top Side	56	11.50	11.50	1.00	-0.18	0.587	0.59
15	WLAN 5.6G	802.11a	Top Side	124	10.00	9.91	1.02	-0.16	0.693	0.71
16	WLAN 5.8G	802.11a	Top Side	165	10.00	10.00	1.00	-0.16	0.716	0.72
17	B T	BDR	Rear Face	39	12.00	11.97	1.01	0.08	0.252	0.25

Note: The SAR testing above was verified based on the worst case of original report. (RF Exposure Lab report no.: SAR.20200208.)

SAR Test Report

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 may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

Since all the measured SAR are less than 0.8 W/kg, the repeated measurement is not required.

4.7.4 Simultaneous Multi-band Transmission Evaluation

<Possibilities of Simultaneous Transmission>

The simultaneous transmission possibilities for this device are listed as below.

Simultaneous TX Combination	Capable Transmit Configurations	Body Exposure Condition
1	WWAN+WLAN2.4G_Ant0	Yes
2	WWAN+WLAN2.4G_Ant1	Yes
3	WWAN+WLAN5G_Ant0	Yes
4	WWAN+WLAN5G_Ant1	Yes
5	WWAN+BT_Ant1	Yes
6	WWAN+WLAN2.4G_Ant0+BT_Ant1	Yes
7	WWAN+WLAN5G_Ant0+BT_Ant1	Yes
8	WWAN+WLAN5G_Ant1+BT_Ant1	Yes
9	WWAN+WLAN5G_Ant0+WLAN5G_Ant1 + BT_Ant1	Yes

Note :

- Plot1 is covered by Plot6
- Plot3 is covered by Plot9
- Plot4 is covered by Plot9
- Plot5 is covered by Plot9
- Plot7 is covered by Plot9
- Plot8 is covered by Plot9
- The WLAN 2.4G and WLAN 5G cannot transmit simultaneously.

SAR Test Report

<Estimated SAR Calculation>

According to KDB 447498 D01, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR was estimated according to following formula to result in substantially conservative SAR values of ≤ 0.4 W/kg to determine simultaneous transmission SAR test exclusion.

$$\text{Estimated SAR} = \frac{\text{Max. Tune up Power}_{(\text{mW})}}{\text{Min. Test Separation Distance}_{(\text{mm})}} \times \frac{\sqrt{f_{(\text{GHz})}}}{7.5}$$

If the minimum test separation distance is < 5 mm, a distance of 5 mm is used for estimated SAR calculation. When the test separation distance is > 50 mm, the 0.4 W/kg is used for SAR-1g.

Mode / Band	Frequency (GHz)	Max. Tune-up Power (dBm)	Test Position	Separation Distance (mm)	Estimated SAR (W/kg)
WLAN 2.4GHz Ant 1	2.462	13	Front Face	5	0.40
WLAN 5GHz Ant 1	5.24	11.5	Front Face	5	0.40
WLAN 5GHz Ant 1	5.32	11.5	Front Face	5	0.40
WLAN 5GHz Ant 1	5.72	10	Front Face	5	0.40
WLAN 5GHz Ant 1	5.825	10	Front Face	5	0.40
WLAN 2.4GHz Ant 2	2.462	13	Front Face	5	0.40
WLAN 5GHz Ant 2	5.24	11.5	Front Face	5	0.40
WLAN 5GHz Ant 2	5.32	11.5	Front Face	5	0.40
WLAN 5GHz Ant 2	5.72	10	Front Face	5	0.40
WLAN 5GHz Ant 2	5.825	10	Front Face	5	0.40
BT	2.48	12	Front Face	5	0.40

Note:

1. The separation distance is determined from the outer housing of the EUT to the user.
2. When standalone SAR testing is not required, an estimated SAR can be applied to determine simultaneous transmission SAR test exclusion.

SAR Test Report

<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.

<Tablet mode>

Band	Position	1g SAR W/kg										Summing result 1g SAR W/kg				
		1 WWAN Ant 0	2 WLAN 2.4GHz Ant 0	3 WLAN 2.4GHz Ant 1	5 WLAN 5.3GHz Ant 0	6 WLAN 5.6GHz Ant 0	7 WLAN 5.8GHz Ant 0	8 WLAN 5.3GHz Ant 1	9 WLAN 5.6GHz Ant 1	10 WLAN 5.8GHz Ant 1	11 BT Ant 1	1+3	1+2+11	1+5+ 8+11	1+6+ 9+11	1+7+ 10+11
WCDMA II	Rear Face	0.82	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	1.82	2.32	2.69	2.18	2.35
	Left Side	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.07	0.07
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	0.47	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.87	0.85	2.34	2.05	2.30
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WCDMA IV	Rear Face	1.07	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	2.07	2.57	2.94	2.43	2.60
	Left Side	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.08	0.08
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	0.88	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	1.28	1.26	2.75	2.46	2.71
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WCDMA V	Rear Face	0.93	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	1.93	2.43	2.80	2.29	2.46
	Left Side	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.33	0.33	0.33	0.33
	Right Side	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.09	0.09
	Top Side	0.46	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.86	0.84	2.33	2.04	2.29
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTE 5	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	0.88	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	1.88	2.38	2.75	2.24	2.41
	Left Side	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.29	0.29	0.29	0.29
	Right Side	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.10	0.10
	Top Side	0.47	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.87	0.85	2.34	2.05	2.30
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTE 7	Rear Face	1.88	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	2.88	3.38	3.75	3.24	3.41
	Left Side	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.31	0.31	0.31	0.31
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	0.28	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.68	0.66	2.15	1.86	2.11
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SAR Test Report

Band	Position	1g SAR W/kg										Summing result 1g SAR W/kg				
		1	2	3	5	6	7	8	9	10	11	1+3	1+2+11	1+5+8+11	1+6+9+11	1+7+10+11
		WWAN Ant 0	WLAN 2.4GHz Ant 0	WLAN 2.4GHz Ant 1	WLAN 5.3GHz Ant 0	WLAN 5.6GHz Ant 0	WLAN 5.8GHz Ant 0	WLAN 5.3GHz Ant 1	WLAN 5.6GHz Ant 1	WLAN 5.8GHz Ant 1	BT Ant 1					
LTE 12	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	1.14	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	2.14	2.64	3.01	2.50	2.67
	Left Side	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.16	0.16
	Right Side	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.08	0.08
	Top Side	0.84	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	1.24	1.22	2.71	2.42	2.67
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTE 13	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	1.00	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	2.00	2.50	2.87	2.36	2.53
	Left Side	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.23	0.23
	Right Side	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14
	Top Side	0.59	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.99	0.97	2.46	2.17	2.42
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTE 14	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	0.92	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	1.92	2.42	2.79	2.28	2.45
	Left Side	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.16	0.16	0.16
	Right Side	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.12	0.12	0.12
	Top Side	0.55	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.95	0.93	2.42	2.13	2.38
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTE 25	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	0.80	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	1.80	2.30	2.67	2.16	2.33
	Left Side	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	1.14	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	1.54	1.52	3.01	2.72	2.97
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTE 26	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	1.01	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	2.01	2.51	2.88	2.37	2.54
	Left Side	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.14	0.14	0.14
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	0.59	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.99	0.97	2.46	2.17	2.42
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SAR Test Report

Band	Position	1g SAR W/kg										Summing result 1g SAR W/kg				
		1	2	3	5	6	7	8	9	10	11	1+3	1+2+11	1+5+8+11	1+6+9+11	1+7+10+11
		WWAN Ant 0	WLAN 2.4GHz Ant 0	WLAN 2.4GHz Ant 1	WLAN 5.3GHz Ant 0	WLAN 5.6GHz Ant 0	WLAN 5.8GHz Ant 0	WLAN 5.3GHz Ant 1	WLAN 5.6GHz Ant 1	WLAN 5.8GHz Ant 1	BT Ant 1					
LTE 30	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	0.99	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	1.99	2.49	2.86	2.35	2.52
	Left Side	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.25	0.25
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	0.28	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.68	0.66	2.15	1.86	2.11
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTE 41	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	0.92	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	1.92	2.42	2.79	2.28	2.45
	Left Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	0.26	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	0.66	0.64	2.13	1.84	2.09
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LTE 66	Front Face	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Rear Face	1.14	1.13	1.00	0.82	0.65	0.83	0.68	0.34	0.33	0.37	2.14	2.64	3.01	2.50	2.67
	Left Side	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.07	0.07
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	0.99	0.28	0.40	0.98	0.87	1.02	0.79	0.61	0.71	0.10	1.39	1.37	2.86	2.57	2.82
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SAR Test Report

<Laptop Mode>

Band	Position	1g SAR W/kg										Summing result 1g SAR W/kg				
		1	2	3	5	6	7	8	9	10	11	1+3	1+2+11	1+5+8+11	1+6+9+11	1+7+10+11
		WWAN Ant 0	WLAN 2.4GHz Ant 0	WLAN 2.4GHz Ant 1	WLAN 5.3GHz Ant 0	WLAN 5.6GHz Ant 0	WLAN 5.8GHz Ant 0	WLAN 5.3GHz Ant 1	WLAN 5.6GHz Ant 1	WLAN 5.8GHz Ant 1	BT Ant 1					
WCDMA II	Back of panel	0.01	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.81	1.21	1.21	1.21
	Top of panel	0.01	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.81	1.21	1.21	1.21
WCDMA IV	Back of panel	0.04	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.44	0.84	1.24	1.24	1.24
	Top of panel	0.03	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.83	1.23	1.23	1.23
WCDMA V	Back of panel	0.06	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.46	0.86	1.26	1.26	1.26
	Top of panel	0.03	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.83	1.23	1.23	1.23
LTE 5	Back of panel	0.06	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.46	0.86	1.26	1.26	1.26
	Top of panel	0.03	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.83	1.23	1.23	1.23
LTE 7	Back of panel	0.05	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.45	0.85	1.25	1.25	1.25
	Top of panel	0.01	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.81	1.21	1.21	1.21
LTE 12	Back of panel	0.05	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.45	0.85	1.25	1.25	1.25
	Top of panel	0.04	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.44	0.84	1.24	1.24	1.24
LTE 13	Back of panel	0.05	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.45	0.85	1.25	1.25	1.25
	Top of panel	0.03	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.83	1.23	1.23	1.23
LTE 14	Back of panel	0.06	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.46	0.86	1.26	1.26	1.26
	Top of panel	0.03	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.83	1.23	1.23	1.23
LTE 25	Back of panel	0.05	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.45	0.85	1.25	1.25	1.25
	Top of panel	0.10	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.50	0.90	1.30	1.30	1.30
LTE 26	Back of panel	0.06	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.46	0.86	1.26	1.26	1.26
	Top of panel	0.04	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.44	0.84	1.24	1.24	1.24
LTE 30	Back of panel	0.02	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.42	0.82	1.22	1.22	1.22
	Top of panel	0.01	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.81	1.21	1.21	1.21
LTE 41	Back of panel	0.03	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.83	1.23	1.23	1.23
	Top of panel	0.01	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.81	1.21	1.21	1.21
LTE 66	Back of panel	0.05	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.45	0.85	1.25	1.25	1.25
	Top of panel	0.05	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.45	0.85	1.25	1.25	1.25

SAR Test Report

<SAR to Peak Location Separation Ratio Analysis>

The simultaneous transmitting antennas in each operating mode and exposure condition combination are considered one pair at a time to determine the SPLSR. When SAR is measured for both antennas in the pair, the peak location separation distance is computed by the following formula.

$$\text{Peak Location Separation Distance} = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2}$$

Where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the area or zoom scans.

When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna. Due to curvatures on the SAM phantom, when SAR is estimated for one of the antennas in an antenna pair, the measured peak SAR location will be translated onto the test device to determine the peak location separation for the antenna pair.

The SPLSR is determined by the following formula.

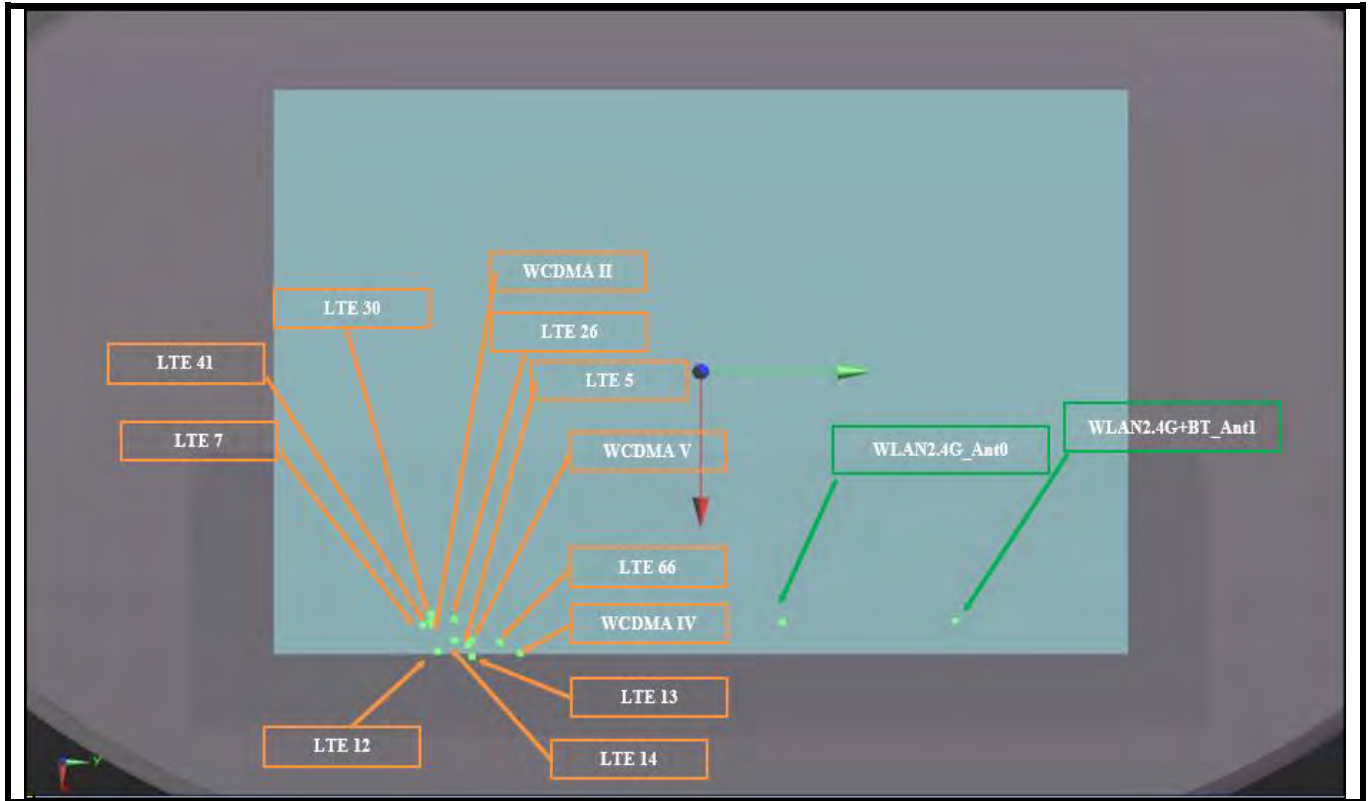
$$\text{SPLSR} = \frac{(\text{SAR}_1 + \text{SAR}_2)^{1.5}}{R_i}$$

Where SAR_1 and SAR_2 are the highest reported or estimated SAR for each antenna in the pair, and R_i is the separation distance between the peak SAR locations for the antenna pair in mm.

When the SPLSR is ≤ 0.04 , the simultaneous transmission SAR is not required. Otherwise, the enlarged zoom scan and volume scan post-processing procedures will be performed.

SAR Test Report

<Rear_WWAN+WLAN2.4G + BT>



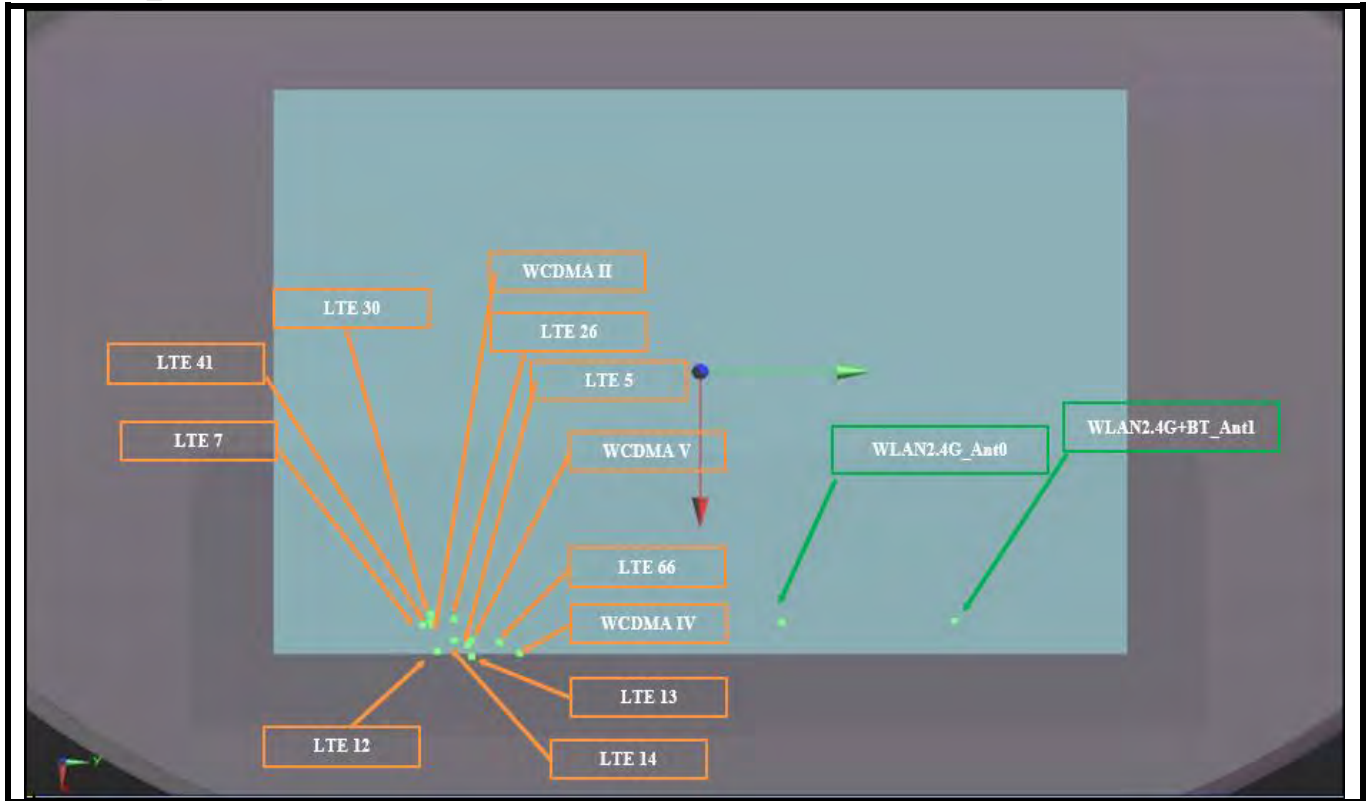
Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (Ri, mm)	SPLSR
				x	y	z		
WWAN (shortest distance with max SAR)	Body	Rear Face	1.18	103.85	-60.85	2.07	79.4	0.04
WLAN2.4G_(shortest distance with max SAR)Ant0			1.13	95	18	-1.52		
WWAN (shortest distance with max SAR)	Body	Rear Face	1.18	103.85	-60.85	2.07	167.7	0.02
WLAN2.4G_(shortest distance with max SAR)Ant1+BT			1.37	88	106	-2.07		
WLAN2.4G_(shortest distance with max SAR)Ant0	Body	Rear Face	1.13	95	18	-1.52	88.3	0.04
WLAN2.4G_(shortest distance with max SAR)Ant1+BT			1.37	88	106	-2.07		

Note :

1. In MIMO mode, the worst SAR of Antenna 1 is max WLAN2.4G+BT.
2. The SPLSR is evaluated by calculating the result with reference to the shortest distance of the hotspot and the maximum SAR.

SAR Test Report

<Rear Face_WWAN+WLAN2.4G + BT>



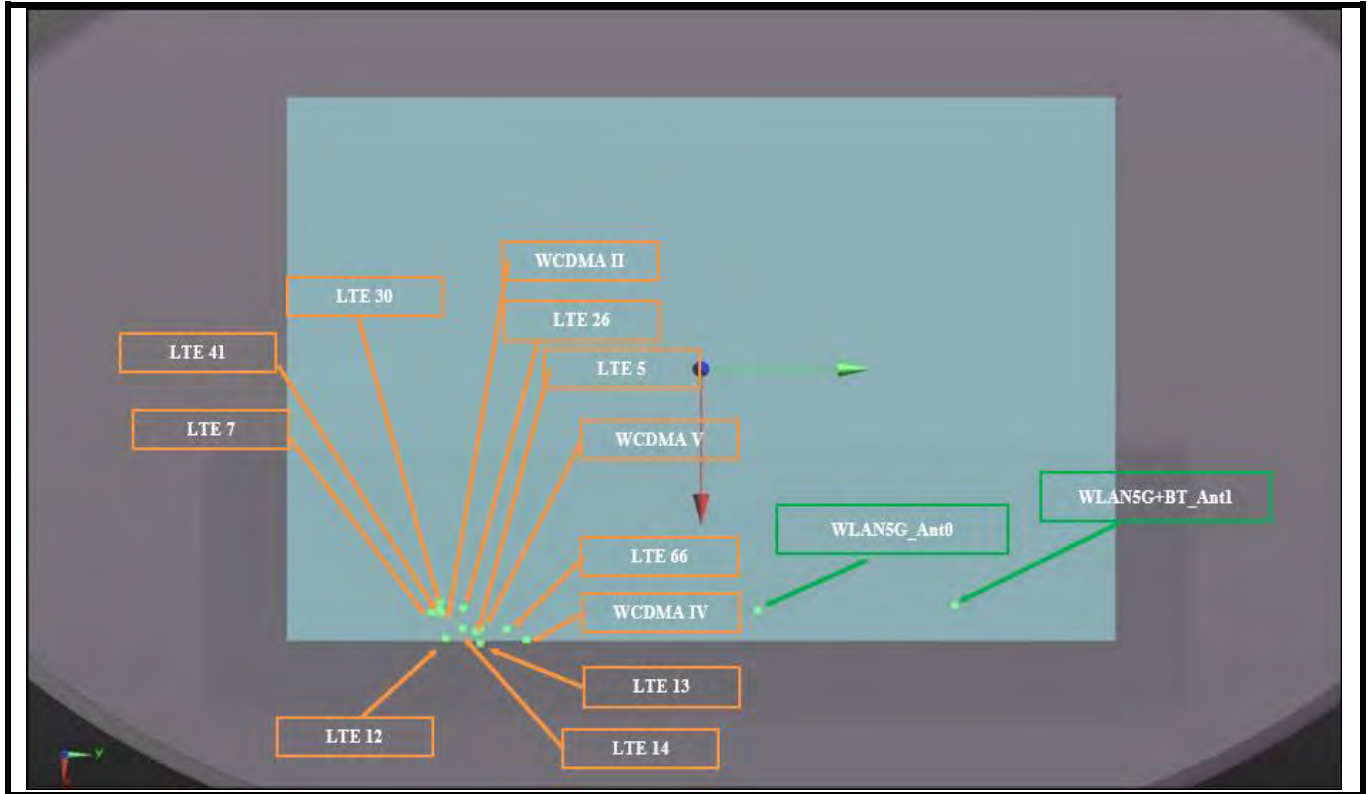
Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (Ri, mm)	SPLSR
				x	y	z		
WWAN (shortest distance with max SAR)	Body	Rear Face	1.18	103.85	-60.85	2.07	79.4	0.04
WLAN2.4G_(shortest distance with max SAR)Ant0			1.13	95	18	-1.52		
WWAN (shortest distance with max SAR)	Body	Rear Face	1.18	103.85	-60.85	2.07	167.7	0.02
WLAN2.4G_(shortest distance with max SAR)Ant1+BT			1.37	88	106	-2.07		
WLAN2.4G_(shortest distance with max SAR)Ant0	Body	Rear Face	1.13	95	18	-1.52	88.3	0.04
WLAN2.4G_(shortest distance with max SAR)Ant1+BT			1.37	88	106	-2.07		

Note :

1. In MIMO mode, the worst SAR of Antenna 1 is WLAN2.4G + BT.
2. The SPLSR is evaluated by calculating the result with reference to the shortest distance of the hotspot and the maximum SAR.

SAR Test Report

<Rear Face_WWAN+WLAN5G + BT>



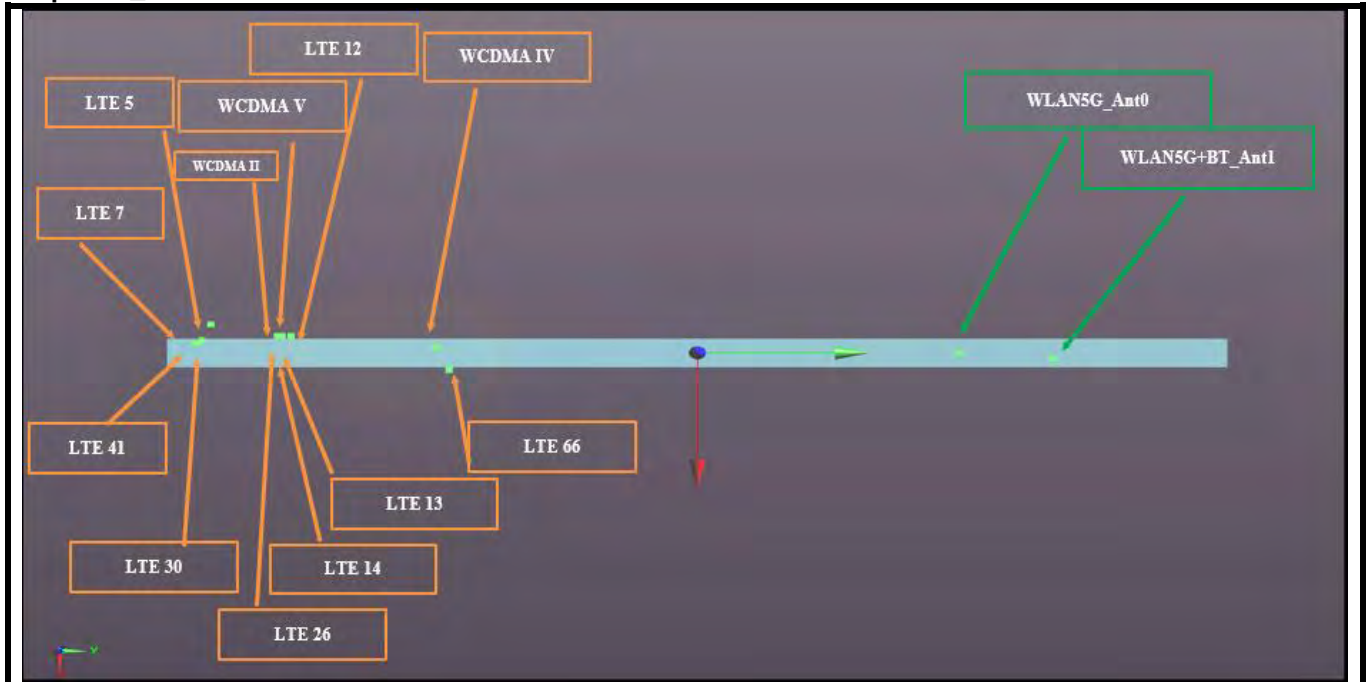
Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (Ri, mm)	SPLSR
				x	y	z		
WWAN (shortest distance with max SAR)	Body	Rear Face	1.18	103.85	-60.85	2.07	82.1	0.03
WLAN5G_(shortest distance with max SAR)Ant0			0.83	96.2	20.8	-2.18		
WWAN (shortest distance with max SAR)	Body	Rear Face	1.18	103.85	-60.85	2.07	168.9	0.02
WLAN5G_(shortest distance with max SAR)Ant1+BT			1.05	91.8	107.6	-1.69		
WLAN5G_(shortest distance with max SAR)Ant0	Body	Rear Face	0.83	96.2	20.8	-2.18	86.9	0.03
WLAN5G_(shortest distance with max SAR)Ant1+BT			1.05	91.8	107.6	-1.69		

Note :

1. In MIMO mode, the worst SAR of Antenna 1 is max WLAN5G + BT.
2. The SPLSR is evaluated by calculating the result with reference to the shortest distance of the hotspot and the maximum SAR.

SAR Test Report

<Top Side_WWAN+WLAN5G + BT>



Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (Ri, mm)	SPLSR
				x	y	z		
WWAN (shortest distance with max SAR)	Body	Top Side	0.99	0.8	-64.1	0.98	87.1	0.03
WLAN5G_(shortest distance with max SAR)Ant0			1.02	3.2	22.8	-4.17		
WWAN (shortest distance with max SAR)	Body	Top Side	0.99	0.8	-64.1	0.98	165.8	0.02
WLAN5G_(shortest distance with max SAR)Ant1+BT			0.89	3.6	101.6	-4.13		
WLAN5G_(shortest distance with max SAR)Ant0	Body	Top Side	1.02	3.2	22.8	-4.17	78.8	0.03
WLAN5G_(shortest distance with max SAR)Ant1+BT			0.89	3.6	101.6	-4.13		

Note :

1. In MIMO mode, the worst SAR of Antenna 1 is max WLAN5G + BT.
2. The SPLSR is evaluated by calculating the result with reference to the shortest distance of the hotspot and the maximum SAR.

Test Engineer : Kevin Yao, and Zeke Wang

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. 21, 2020	1 Year
System Validation Dipole	SPEAG	D2300V2	1004	Jan. 21, 2020	1 Year
System Validation Dipole	SPEAG	D2450V2	737	Aug. 26, 2019	1 Year
System Validation Dipole	SPEAG	D2600V2	1020	Aug. 26, 2019	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7472	Aug. 30, 2019	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3650	May. 20, 2019	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7537	Jun. 18, 2019	1 Year
Data Acquisition Electronics	SPEAG	DAE4	861	May. 08, 2019	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1585	Jun. 07, 2019	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1431	Mar. 25, 2019	1 Year
Radio Communication Analyzer	Anritsu	MT8821C	6201381727	Jun. 14, 2019	1 Year
Spectrum Analyzer	R&S	FSL6	102006	Mar. 26, 2019	1 Year
Thermometer	YFE	YF-160A	130504591	Mar. 22, 2019	1 Year
Attenuator	MTJ	MTJ6001-03	N/A	Sep. 05, 2019	1 Year
Dielectric Assessment Kit	SPEAG	DAKS-3.5	1092	May. 07, 2019	1 Year
Dielectric Assessment Kit	SPEAG	DAKS_VNA R140	0010917	May. 08, 2019	1 Year
Powersource1	SPEAG	SE_UMS_160 BA	4010	Aug. 21, 2019	1 Year

SAR Test Report

6. Measurement Uncertainty

Source of Uncertainty	Uncertainty (± %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (± %, 1g)	Standard Uncertainty (± %, 10g)	Vi
Measurement System								
Probe Calibration	6.0	Normal	1	1	1	6.0	6.0	∞
Axial Isotropy	4.7	Rectangular	√3	√0.5	√0.5	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	√0.5	√0.5	3.9	3.9	∞
Boundary Effect	1.0	Rectangular	√3	1	1	0.6	0.6	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.14	0.14	∞
Probe Modulation Response	4.8	Rectangular	√3	1	1	2.8	2.8	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient Conditions – Noise	3.0	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.02	Rectangular	√3	1	1	0.01	0.01	∞
Probe Positioning with Respect to Phantom	0.4	Rectangular	√3	1	1	0.2	0.2	∞
Post-processing	2.0	Rectangular	√3	1	1	1.2	1.2	∞
Test Sample Related								
Test Sample Positioning	2.82 / 1.60	Normal	1	1	1	2.8	1.6	35
Device Holder Uncertainty	2.55 / 2.76	Normal	1	1	1	2.6	2.8	7
Power Drift of Measurement	5.0	Rectangular	√3	1	1	2.9	2.9	∞
PowerScaling	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty (Shape and Thickness Tolerances)	5.7	Rectangular	√3	1	1	3.3	3.3	∞
Liquid Conductivity (Temperature Uncertainty)	2.58	Rectangular	√3	0.78	0.71	1.2	1.1	∞
Liquid Conductivity (Measured)	2.95	Normal	1	0.78	0.71	2.3	2.1	61
Liquid Permittivity (Temperature Uncertainty)	1.97	Rectangular	√3	0.23	0.26	0.3	0.3	∞
Liquid Permittivity (Measured)	3.04	Normal	1	0.23	0.26	0.7	0.8	47
Combined Standard Uncertainty						± 10.9 %	± 10.7 %	
Expanded Uncertainty (K=2)						± 21.8 %	± 21.4 %	

Head SAR Uncertainty Budget for Frequency Range of 300 MHz to 3 GHz

SAR Test Report

Source of Uncertainty	Uncertainty (± %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (± %, 1g)	Standard Uncertainty (± %, 10g)	Vi
Measurement System								
Probe Calibration	6.55	Normal	1	1	1	6.55	6.55	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	3.9	3.9	∞
Boundary Effect	2.0	Rectangular	√3	1	1	1.2	1.2	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.14	0.14	∞
Probe Modulation Response	4.8	Rectangular	√3	1	1	2.8	2.8	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient Conditions – Noise	3.0	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.04	Rectangular	√3	1	1	0.02	0.02	∞
Probe Positioning with Respect to Phantom	0.8	Rectangular	√3	1	1	0.5	0.5	∞
Post-processing	4.0	Rectangular	√3	1	1	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	2.82 / 1.60	Normal	1	1	1	2.8	1.6	35
Device Holder Uncertainty	2.55 / 2.76	Normal	1	1	1	2.6	2.8	7
Power Drift of Measurement	5.0	Rectangular	√3	1	1	2.9	2.9	∞
PowerScaling	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty (Shape and Thickness Tolerances)	6.2	Rectangular	√3	1	1	3.6	3.6	∞
Liquid Conductivity (Temperature Uncertainty)	2.58	Rectangular	√3	0.78	0.71	1.2	1.1	∞
Liquid Conductivity (Measured)	2.95	Normal	1	0.78	0.71	2.3	2.1	61
Liquid Permittivity (Temperature Uncertainty)	1.97	Rectangular	√3	0.23	0.26	0.3	0.3	∞
Liquid Permittivity (Measured)	3.04	Normal	1	0.23	0.26	0.7	0.8	47
Combined Standard Uncertainty						± 11.6 %	± 11.3 %	
Expanded Uncertainty (K=2)						± 23.2 %	± 22.6 %	

Head SAR Uncertainty Budget for Frequency Range of 3 GHz to 6 GHz

SAR Test Report

Source of Uncertainty	Uncertainty ($\pm$ %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty ($\pm$ %, 1g)	Standard Uncertainty ($\pm$ %, 10g)	Vi
Measurement System								
Probe Calibration	6.0	Normal	1	1	1	6.0	6.0	∞
Axial Isotropy	4.7	Rectangular	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	3.9	3.9	∞
Boundary Effect	1.0	Rectangular	$\sqrt{3}$	1	1	0.6	0.6	∞
Linearity	4.7	Rectangular	$\sqrt{3}$	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	$\sqrt{3}$	1	1	0.14	0.14	∞
Probe Modulation Response	4.8	Rectangular	$\sqrt{3}$	1	1	2.8	2.8	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0.0	Rectangular	$\sqrt{3}$	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	$\sqrt{3}$	1	1	1.0	1.0	∞
RF Ambient Conditions – Noise	3.0	Rectangular	$\sqrt{3}$	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	$\sqrt{3}$	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.02	Rectangular	$\sqrt{3}$	1	1	0.01	0.01	∞
Probe Positioning with Respect to Phantom	0.4	Rectangular	$\sqrt{3}$	1	1	0.2	0.2	∞
Post-processing	2.0	Rectangular	$\sqrt{3}$	1	1	1.2	1.2	∞
Test Sample Related								
Test Sample Positioning	3.68 / 1.73	Normal	1	1	1	3.7	1.7	29
Device Holder Uncertainty	2.55 / 2.76	Normal	1	1	1	2.6	2.8	7
Power Drift of Measurement	5.0	Rectangular	$\sqrt{3}$	1	1	2.9	2.9	∞
PowerScaling	0.0	Rectangular	$\sqrt{3}$	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty (Shape and Thickness Tolerances)	7.2	Rectangular	$\sqrt{3}$	1	1	4.2	4.2	∞
Liquid Conductivity (Temperature Uncertainty)	2.58	Rectangular	$\sqrt{3}$	0.78	0.71	1.2	1.1	∞
Liquid Conductivity (Measured)	2.95	Normal	1	0.78	0.71	2.3	2.1	61
Liquid Permittivity (Temperature Uncertainty)	1.97	Rectangular	$\sqrt{3}$	0.23	0.26	0.3	0.3	∞
Liquid Permittivity (Measured)	3.04	Normal	1	0.23	0.26	0.7	0.8	47
Combined Standard Uncertainty						± 11.5 %	± 11.0 %	
Expanded Uncertainty (K=2)						± 23.0 %	± 22.0 %	

Body SAR Uncertainty Budget for Frequency Range of 300 MHz to 3 GHz

SAR Test Report

Source of Uncertainty	Uncertainty (± %)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (± %, 1g)	Standard Uncertainty (± %, 10g)	Vi
Measurement System								
Probe Calibration	6.55	Normal	1	1	1	6.55	6.55	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	3.9	3.9	∞
Boundary Effect	2.0	Rectangular	√3	1	1	1.2	1.2	∞
Linearity	4.7	Rectangular	√3	1	1	2.7	2.7	∞
Detection Limits	0.25	Rectangular	√3	1	1	0.14	0.14	∞
Probe Modulation Response	4.8	Rectangular	√3	1	1	2.8	2.8	∞
Readout Electronics	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Integration Time	1.7	Rectangular	√3	1	1	1.0	1.0	∞
RF Ambient Conditions – Noise	3.0	Rectangular	√3	1	1	1.7	1.7	∞
RF Ambient Conditions – Reflections	3.0	Rectangular	√3	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.04	Rectangular	√3	1	1	0.02	0.02	∞
Probe Positioning with Respect to Phantom	0.8	Rectangular	√3	1	1	0.5	0.5	∞
Post-processing	4.0	Rectangular	√3	1	1	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	3.68 / 1.73	Normal	1	1	1	3.7	1.7	29
Device Holder Uncertainty	2.55 / 2.76	Normal	1	1	1	2.6	2.8	7
Power Drift of Measurement	5.0	Rectangular	√3	1	1	2.9	2.9	∞
PowerScaling	0.0	Rectangular	√3	1	1	0.0	0.0	∞
Phantom and Setup								
Phantom Uncertainty (Shape and Thickness Tolerances)	7.6	Rectangular	√3	1	1	4.4	4.4	∞
Liquid Conductivity (Temperature Uncertainty)	2.58	Rectangular	√3	0.78	0.71	1.2	1.1	∞
Liquid Conductivity (Measured)	2.95	Normal	1	0.78	0.71	2.3	2.1	61
Liquid Permittivity (Temperature Uncertainty)	1.97	Rectangular	√3	0.23	0.26	0.3	0.3	∞
Liquid Permittivity (Measured)	3.04	Normal	1	0.23	0.26	0.7	0.8	47
Combined Standard Uncertainty						± 12.1 %	± 11.6 %	
Expanded Uncertainty (K=2)						± 24.2 %	± 23.2 %	

Body SAR Uncertainty Budget for Frequency Range of 3 GHz to 6 GHz

SAR Test Report

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.

If you have any comments, please feel free to contact us at the following:

Taiwan Huaya Lab:

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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.

System Check_H750_200107

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

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: H06T09N1_0107 Medium parameters used: $f = 750$ MHz; $\sigma = 0.892$ S/m; $\epsilon_r = 42.799$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- 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) = 0.355 W/kg

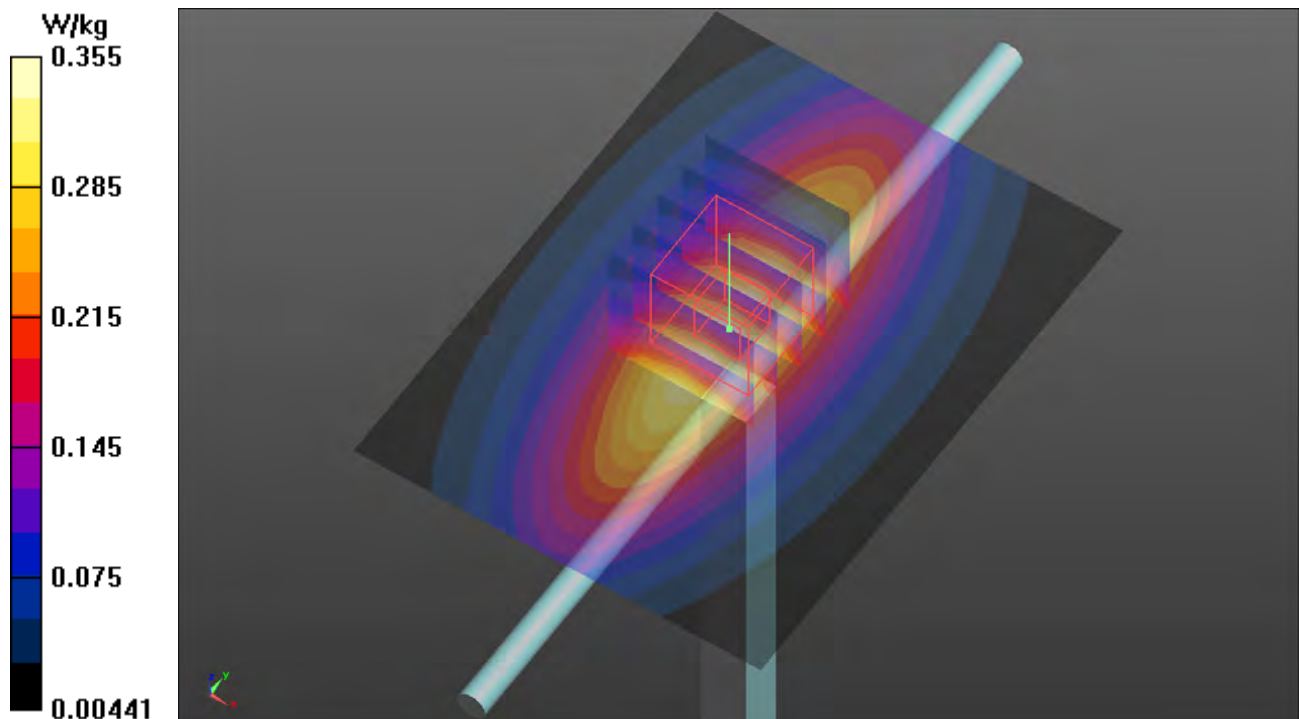
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.87 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.396 W/kg

SAR(1 g) = 0.397 W/kg; SAR(10 g) = 0.263 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.357 W/kg



System Check_H835_200107

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

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: H07T10N1_0107 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.928 \text{ S/m}$; $\epsilon_r = 41.919$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.8 \text{ }^\circ\text{C}$; Liquid Temperature : $23.3 \text{ }^\circ\text{C}$

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.569 W/kg

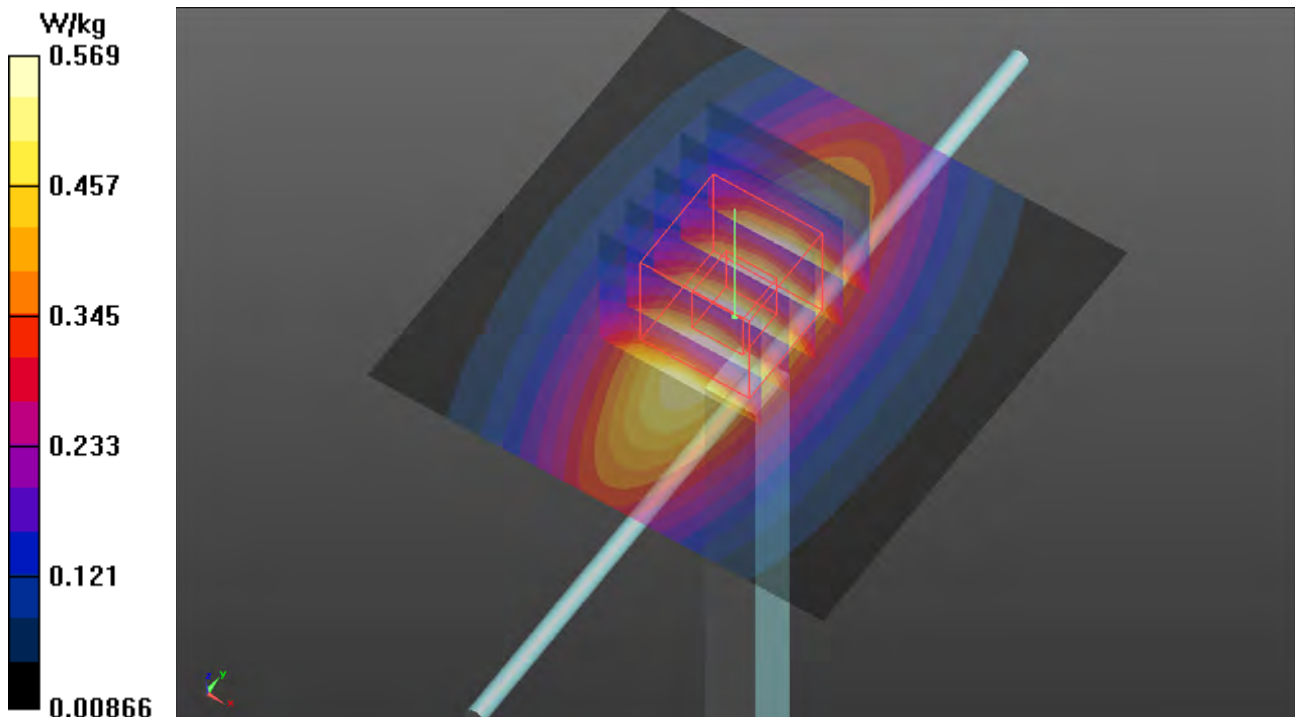
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.01 V/m ; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.805 W/kg

SAR(1 g) = 0.491 W/kg ; SAR(10 g) = 0.311 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.691 W/kg



System Check_H1750_200107

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

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: H16T20N1_0107 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.324$ S/m; $\epsilon_r = 40.863$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- 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) = 2.02 W/kg

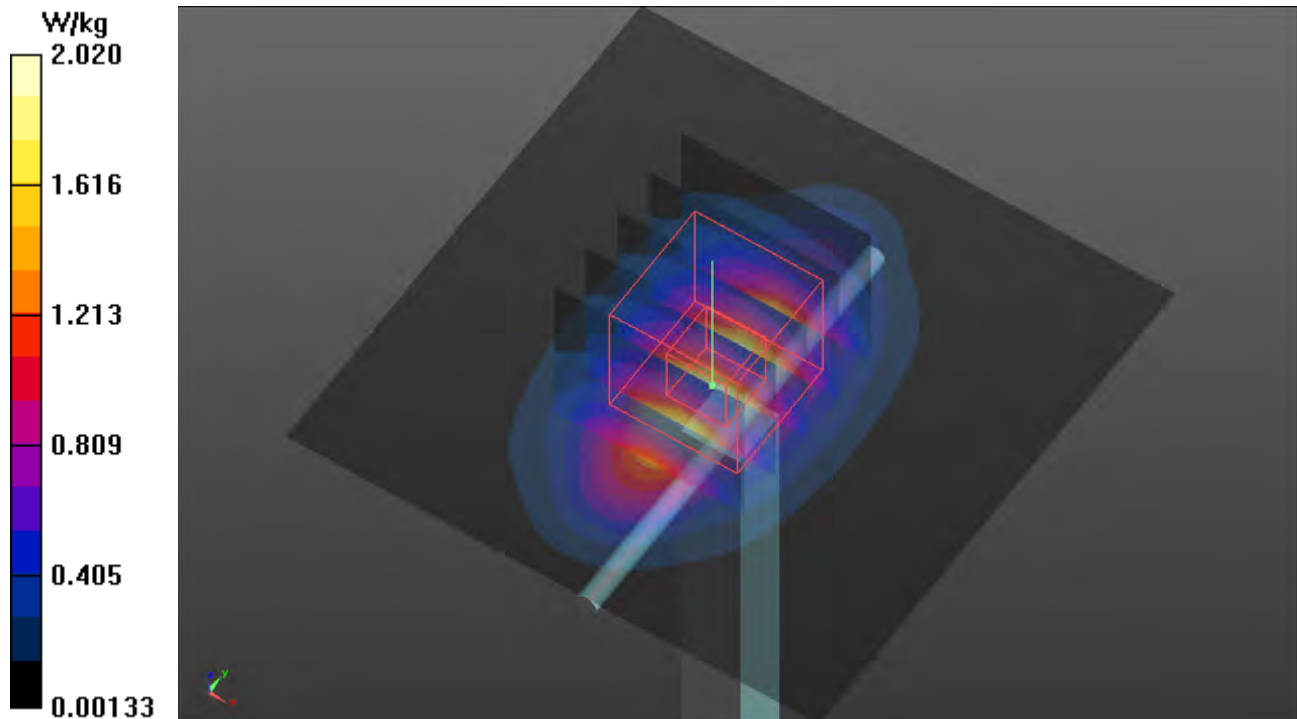
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 40.03 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 2.36 W/kg

SAR(1 g) = 1.69 W/kg; SAR(10 g) = 0.894 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.00 W/kg



System Check_H1900_200108

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

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: H16T20N1_0108 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.454$ S/m; $\epsilon_r = 39.605$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- 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) = 2.34 W/kg

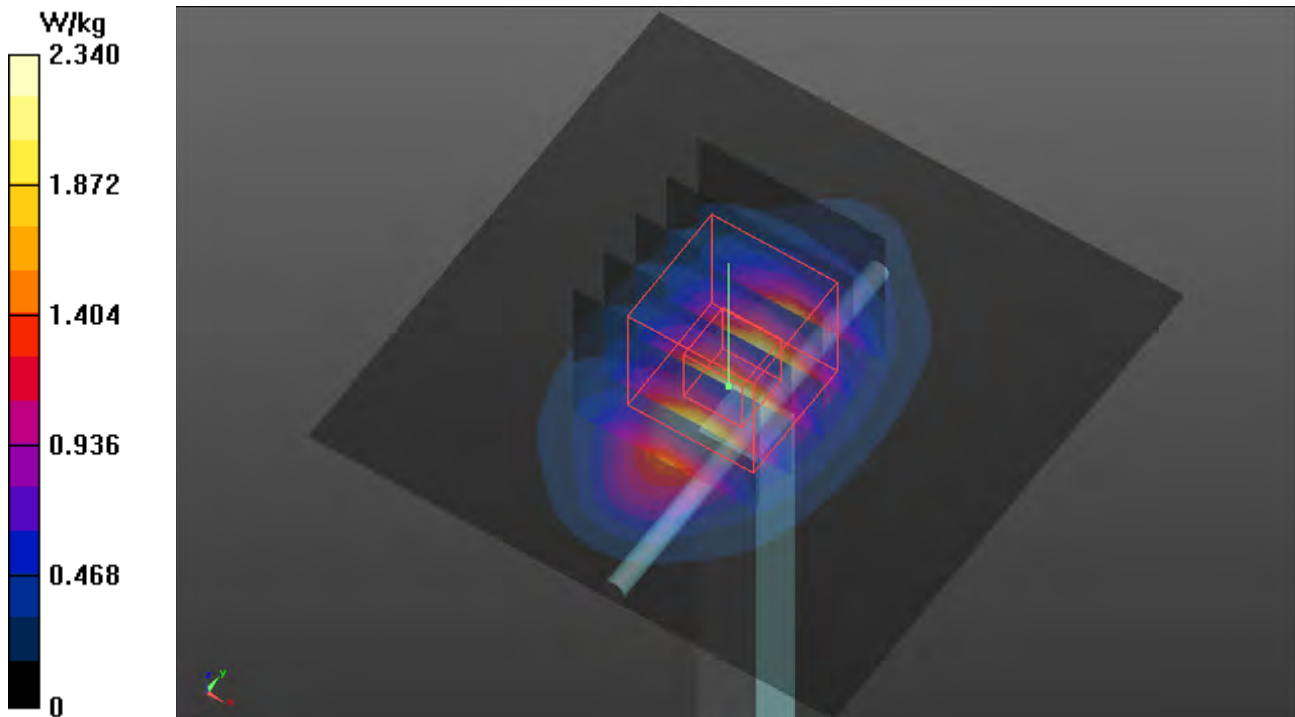
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 38.33 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 2.82 W/kg

SAR(1 g) = 1.84 W/kg; SAR(10 g) = 0.962 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.36 W/kg



System Check_H2300_200107

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

Communication System: CW; Frequency: 2300 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0107 Medium parameters used: $f = 2300$ MHz; $\sigma = 1.737$ S/m; $\epsilon_r = 38.907$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.75, 7.75, 7.75); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- 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) = 20.5 W/kg

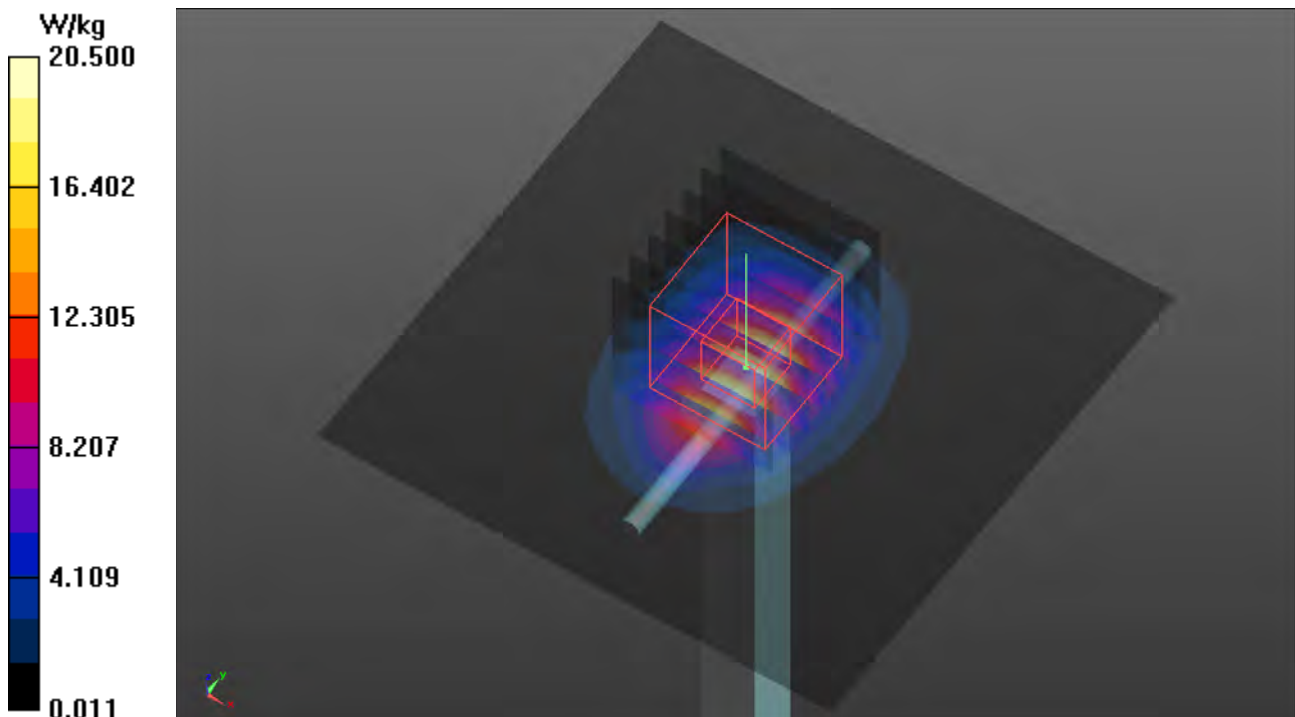
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 113.1 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 24.7 W/kg

SAR(1 g) = 12.6 W/kg; SAR(10 g) = 6.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 20.5 W/kg



System Check_H2450_200227

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

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N2_0227 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.876$ S/m; $\epsilon_r = 38.41$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(7.7, 7.7, 7.7); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: ELI Phantom_1206; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 4.12 W/kg

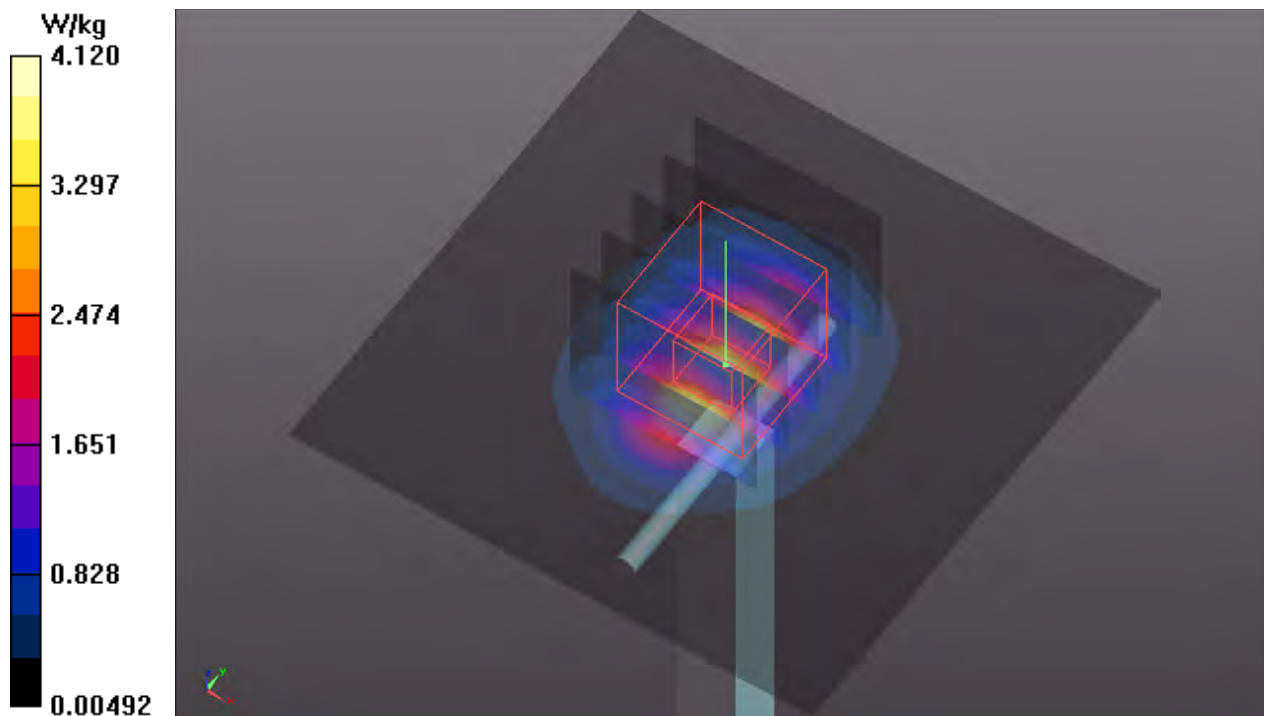
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.92 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 5.00 W/kg

SAR(1 g) = 2.5 W/kg; SAR(10 g) = 1.21 W/kg (SAR corrected for target medium)

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



System Check_H2600_200107

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

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0107 Medium parameters used: $f = 2600$ MHz; $\sigma = 2.056$ S/m; $\epsilon_r = 37.803$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.19, 7.19, 7.19); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- 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) = 5.18 W/kg

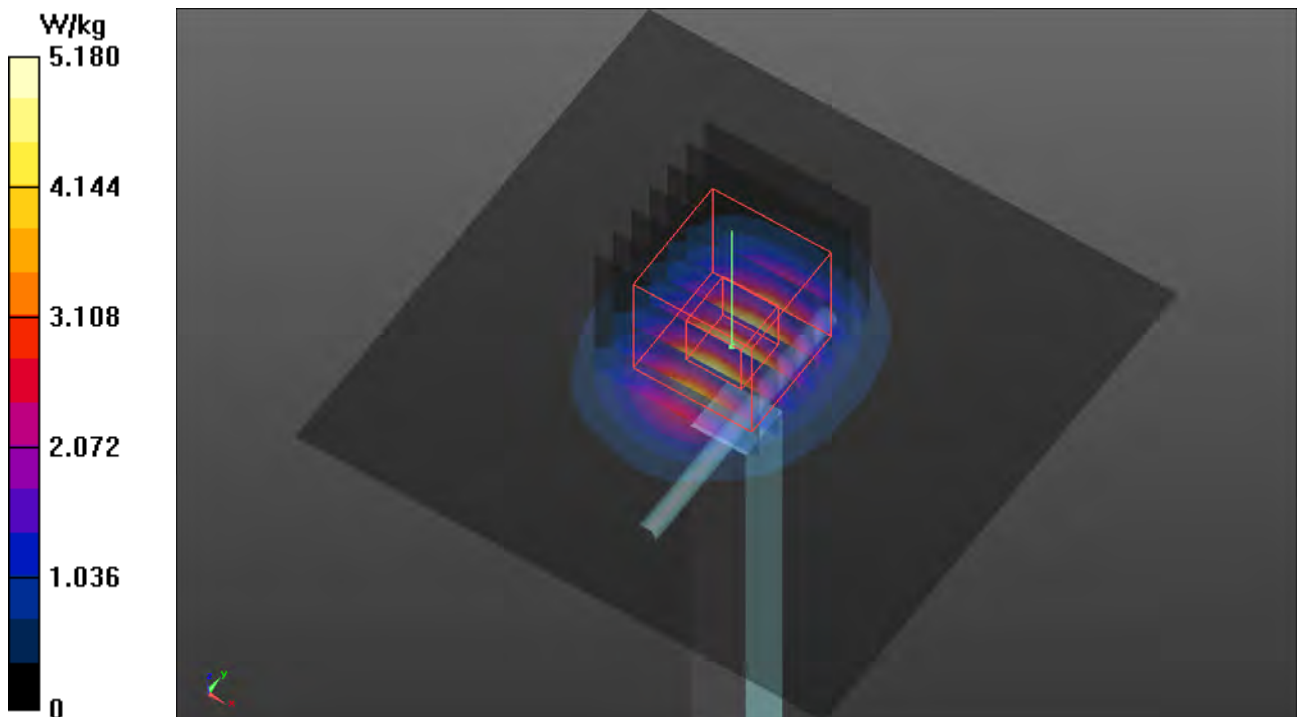
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 46.71 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 6.76 W/kg

SAR(1 g) = 2.92 W/kg; SAR(10 g) = 1.27 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.25 W/kg



System Check_H5250_200227

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

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: H34T60N2_0227 Medium parameters used: $f = 5250$ MHz; $\sigma = 4.561$ S/m; $\epsilon_r = 36.036$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

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: ELI Phantom_1206; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.100 mm, dy=1.100 mm

Maximum value of SAR (interpolated) = 8.57 W/kg

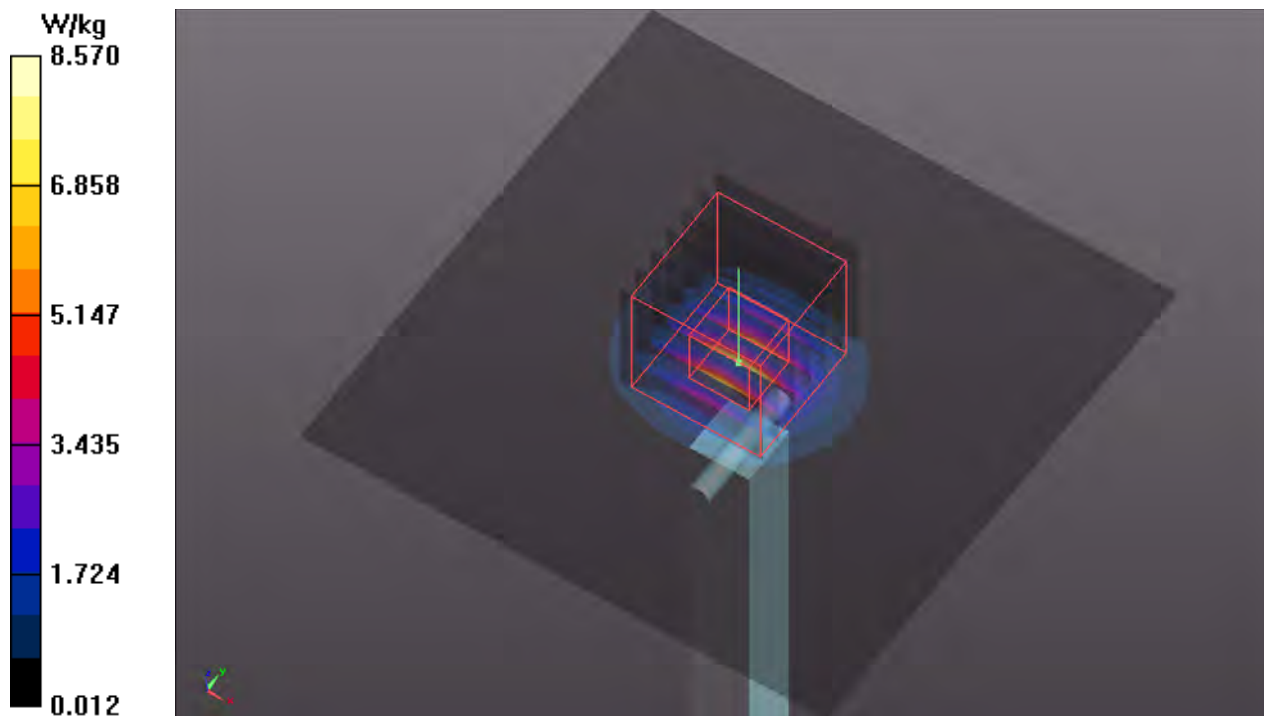
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.74 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 13.0 W/kg

SAR(1 g) = 3.67 W/kg; SAR(10 g) = 1.12 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 8.53 W/kg



System Check_H5600_200227

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

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: H34T60N2_0227 Medium parameters used: $f = 5600$ MHz; $\sigma = 4.889$ S/m; $\epsilon_r = 35.563$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(5.1, 5.1, 5.1); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: ELI Phantom_1206; Type: QDOVA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.100 mm, dy=1.100 mm

Maximum value of SAR (interpolated) = 9.55 W/kg

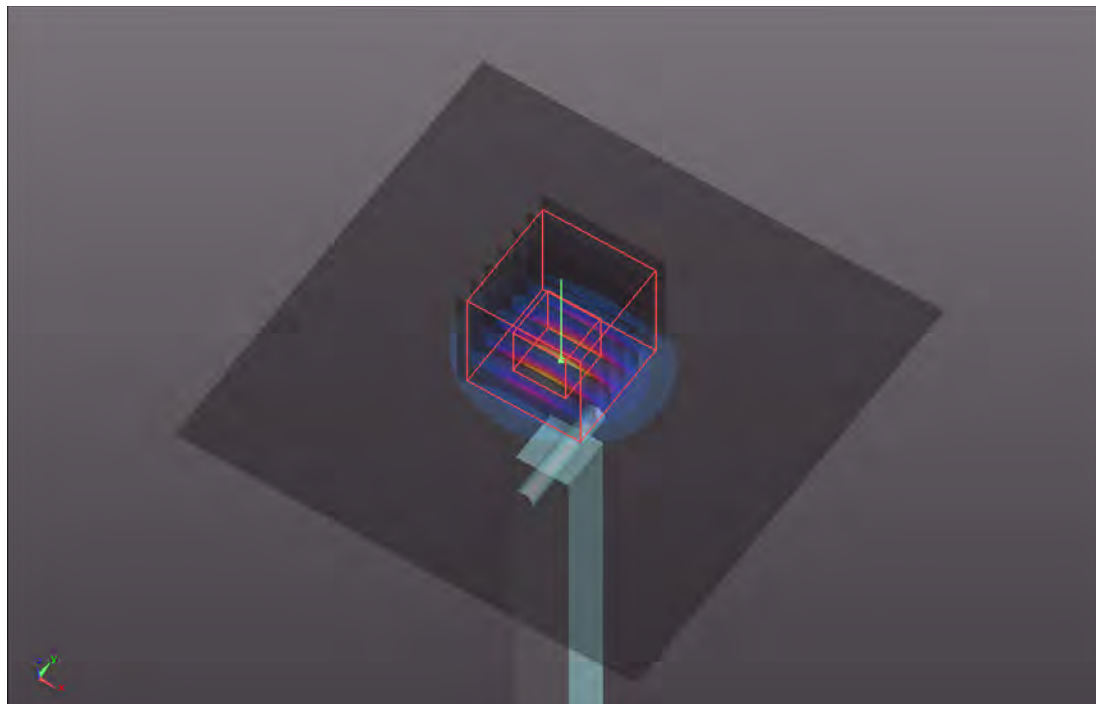
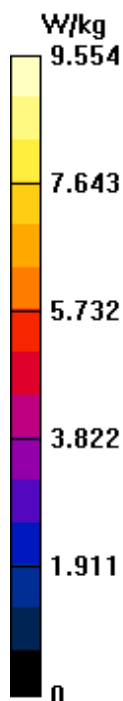
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.17 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 16.5 W/kg

SAR(1 g) = 3.88 W/kg; SAR(10 g) = 1.1 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 9.97 W/kg



System Check_H5750_200227

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

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: H34T60N2_0227 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.034$ S/m; $\epsilon_r = 35.358$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(5.23, 5.23, 5.23); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: ELI Phantom_1206; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.100 mm, dy=1.100 mm

Maximum value of SAR (interpolated) = 8.60 W/kg

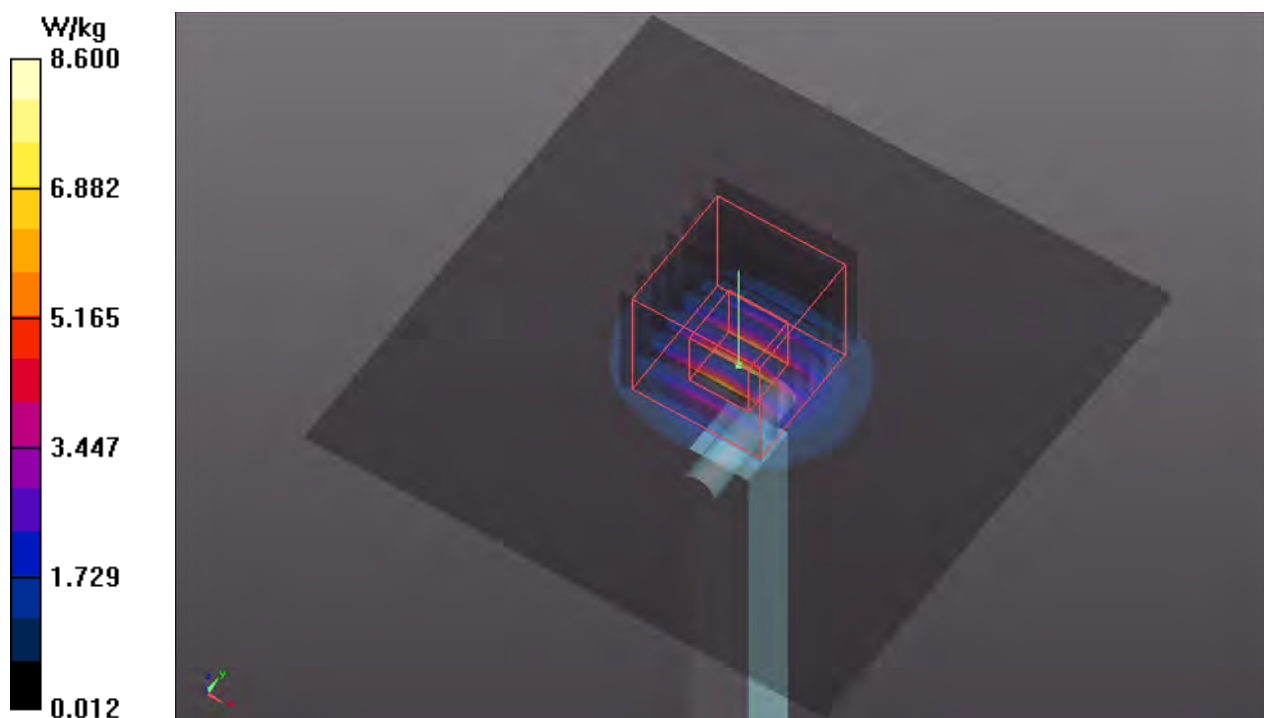
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 45.98 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 14.5 W/kg

SAR(1 g) = 3.74 W/kg; SAR(10 g) = 1.13 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 8.68 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.

P01 WCDMA II_RMC12.2K_Rear Face_0mm_Ch9538_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: UMTS-FDD (WCDMA); Frequency: 1907.6 MHz; Duty Cycle: 1:1.96
Medium: H16T20N3_0108 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.468$ S/m; $\epsilon_r = 39.102$; $\rho = 1000$ kg/m³
Ambient Temperature : 23.9 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.25, 8.25, 8.25); Calibrated: 2019/05/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2019/05/08
- Phantom: ELI Phantom_1043; Type: QDOVA;
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (61x231x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.87 W/kg

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

Reference Value = 32.21 V/m; Power Drift = -0.05 dB

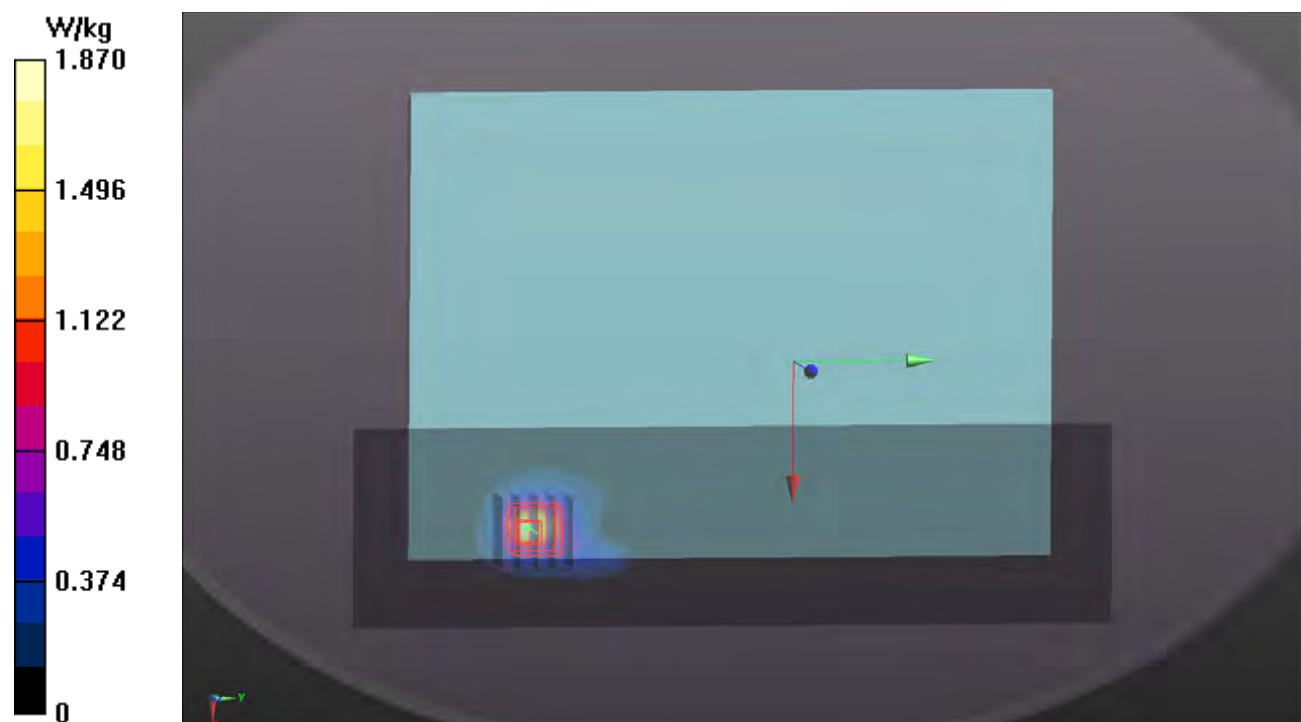
Peak SAR (extrapolated) = 2.52 W/kg

SAR(1 g) = 0.809 W/kg; SAR(10 g) = 0.458 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 55.8%

Maximum value of SAR (measured) = 1.88 W/kg



P02 WCDMA IV_RMC12.2K_Rear Face_0mm_Ch1312_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: UMTS-FDD (WCDMA); Frequency: 1712.4 MHz; Duty Cycle: 1:1.95
Medium: H16T20N1_0107 Medium parameters used: $f = 1712.4$ MHz; $\sigma = 1.295$ S/m; $\epsilon_r = 40.96$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (61x231x1):** Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.56 W/kg

- **Zoom Scan 2 (6x6x23)/Cube 0:** Measurement grid: $dx=6.5$ mm, $dy=6.5$ mm, $dz=1.4$ mm

Reference Value = 30.24 V/m; Power Drift = -0.02 dB

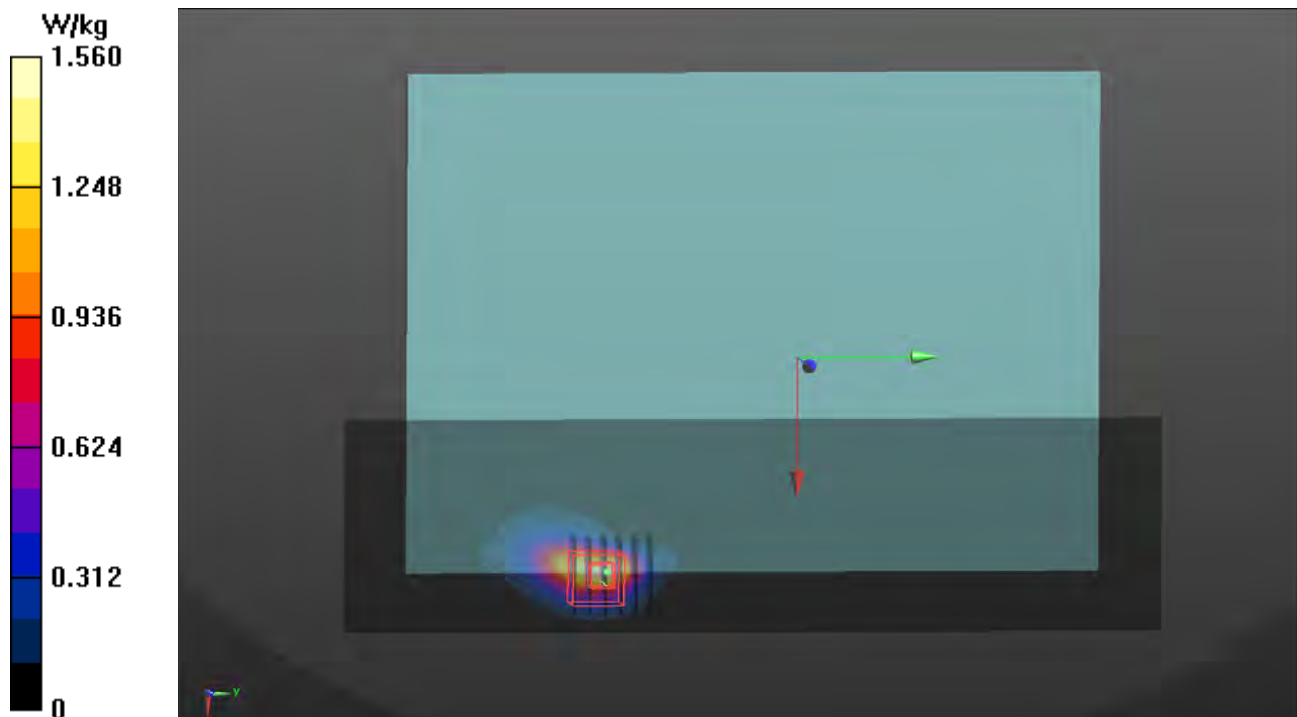
Peak SAR (extrapolated) = 2.38 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.411 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 84.9%

Maximum value of SAR (measured) = 1.59 W/kg



P03 WCDMA V_RMC12.2K_Rear Face_0mm_Ch4132_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: UMTS-FDD (WCDMA); Frequency: 826.4 MHz; Duty Cycle: 1:1.95
Medium: H07T10N1_0107 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.92$ S/m; $\epsilon_r = 42.024$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (61x231x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.35 W/kg

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

Reference Value = 36.94 V/m; Power Drift = -0.02 dB

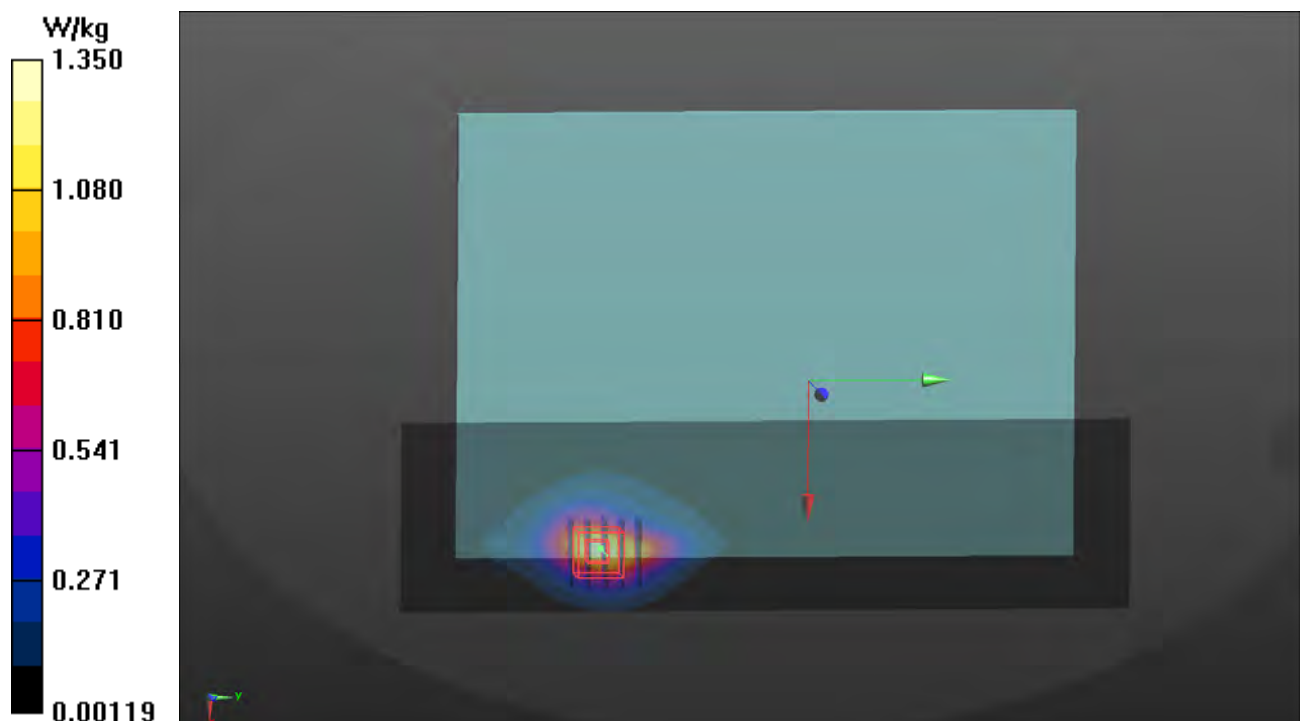
Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.852 W/kg; SAR(10 g) = 0.474 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 11.3 mm

Ratio of SAR at M2 to SAR at M1 = 52.3%

Maximum value of SAR (measured) = 1.31 W/kg



P04 LTE 5_QPSK10M_Rear Face_0mm_Ch20600_1RB_OS0_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 844 MHz; Duty Cycle: 1:3.74

Medium: H07T10N1_0107 Medium parameters used: $f = 844$ MHz; $\sigma = 0.936$ S/m; $\epsilon_r = 41.817$; $\rho = 1000$ kg/m³

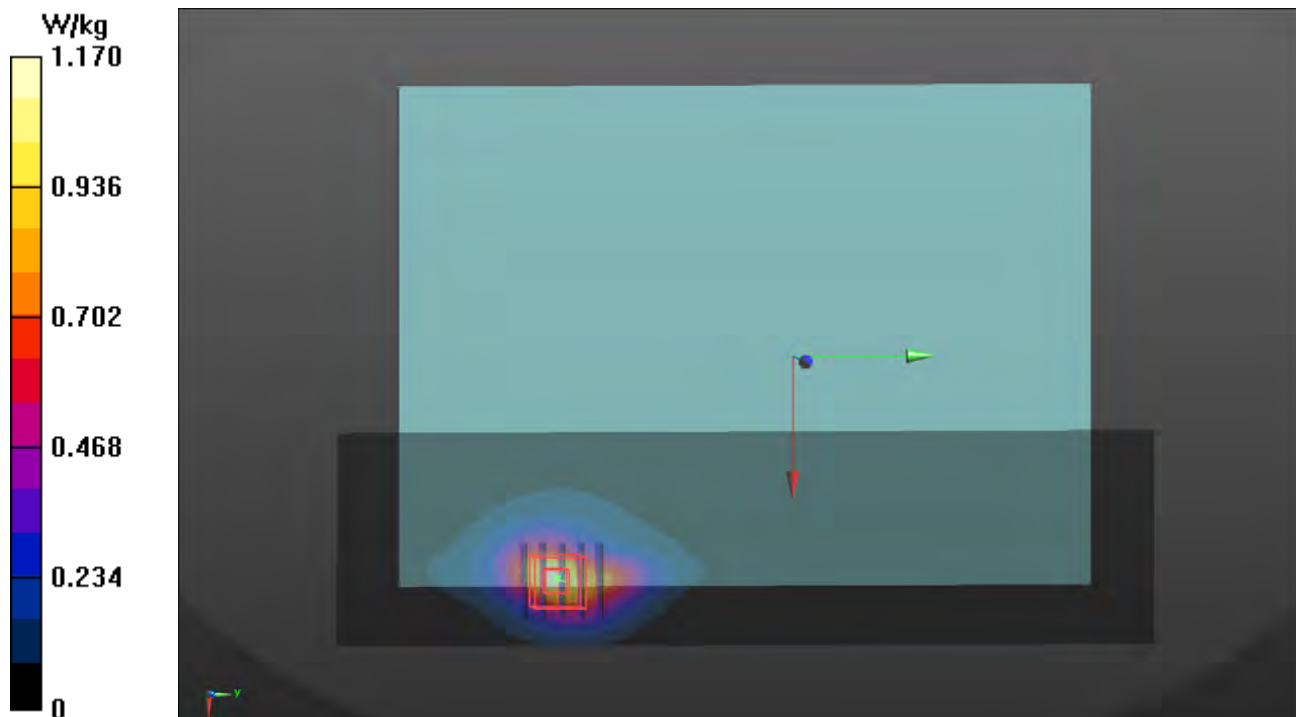
Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (61x231x1):** Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.17 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 34.44 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 0.764 W/kg; SAR(10 g) = 0.424 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 52.2%
Maximum value of SAR (measured) = 1.19 W/kg



P05 LTE 7_QPSK20M_Rear Face_0mm_Ch20850_1RB_OS0_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2510 MHz; Duty Cycle: 1:3.74

Medium: H19T27N1_0107 Medium parameters used: $f = 2510$ MHz; $\sigma = 1.959$ S/m; $\epsilon_r = 38.148$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.19, 7.19, 7.19); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (91x301x1)**: Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 0.841 W/kg

- **Zoom Scan 2 (12x12x8)/Cube 0**: Measurement grid: $dx=3$ mm, $dy=3$ mm, $dz=1.4$ mm

Reference Value = 19.65 V/m; Power Drift = -0.02 dB

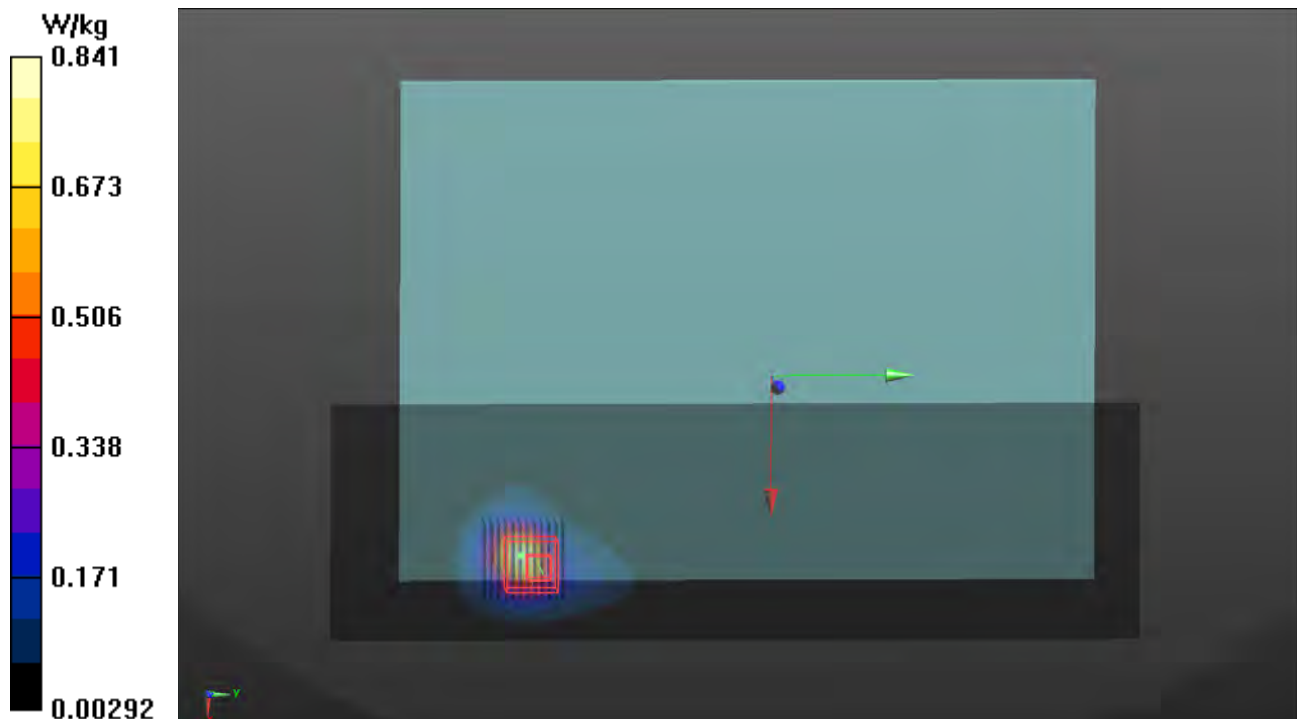
Peak SAR (extrapolated) = 3.22 W/kg

SAR(1 g) = 0.978 W/kg; SAR(10 g) = 0.388 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 4.2 mm

Ratio of SAR at M2 to SAR at M1 = 74.6%

Maximum value of SAR (measured) = 2.04 W/kg



P06 LTE 12_QPSK10M_Rear Face_0mm_Ch23095_1RB_OS24_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 707.5 MHz; Duty Cycle: 1:3.74

Medium: H06T09N1_0107 Medium parameters used: $f = 707.5$ MHz; $\sigma = 0.853$ S/m; $\epsilon_r = 43.379$; $\rho = 1000$ kg/m³

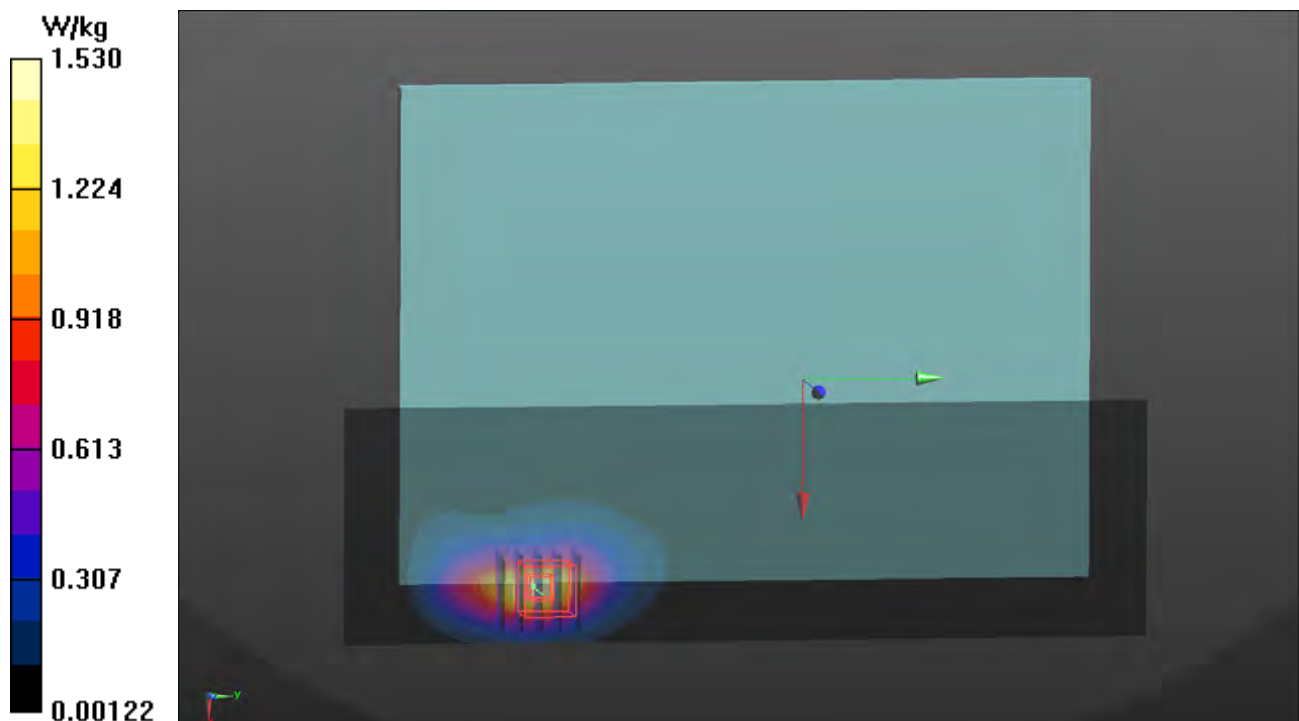
Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (71x231x1):** Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.53 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 40.61 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 2.20 W/kg
SAR(1 g) = 1.10 W/kg; SAR(10 g) = 0.607 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 46.3%
Maximum value of SAR (measured) = 1.77 W/kg



P07 LTE 13_QPSK10M_Rear Face_0mm_Ch23230_1RB_OS24_Sample1_Power Reduction_w**DUT: 191216C15**

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 782 MHz; Duty Cycle: 1:3.74

Medium: H06T09N1_0107 Medium parameters used: $f = 782$ MHz; $\sigma = 0.922$ S/m; $\epsilon_r = 42.389$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (71x231x1)**: Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.12 W/kg

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

Reference Value = 31.17 V/m; Power Drift = -0.02 dB

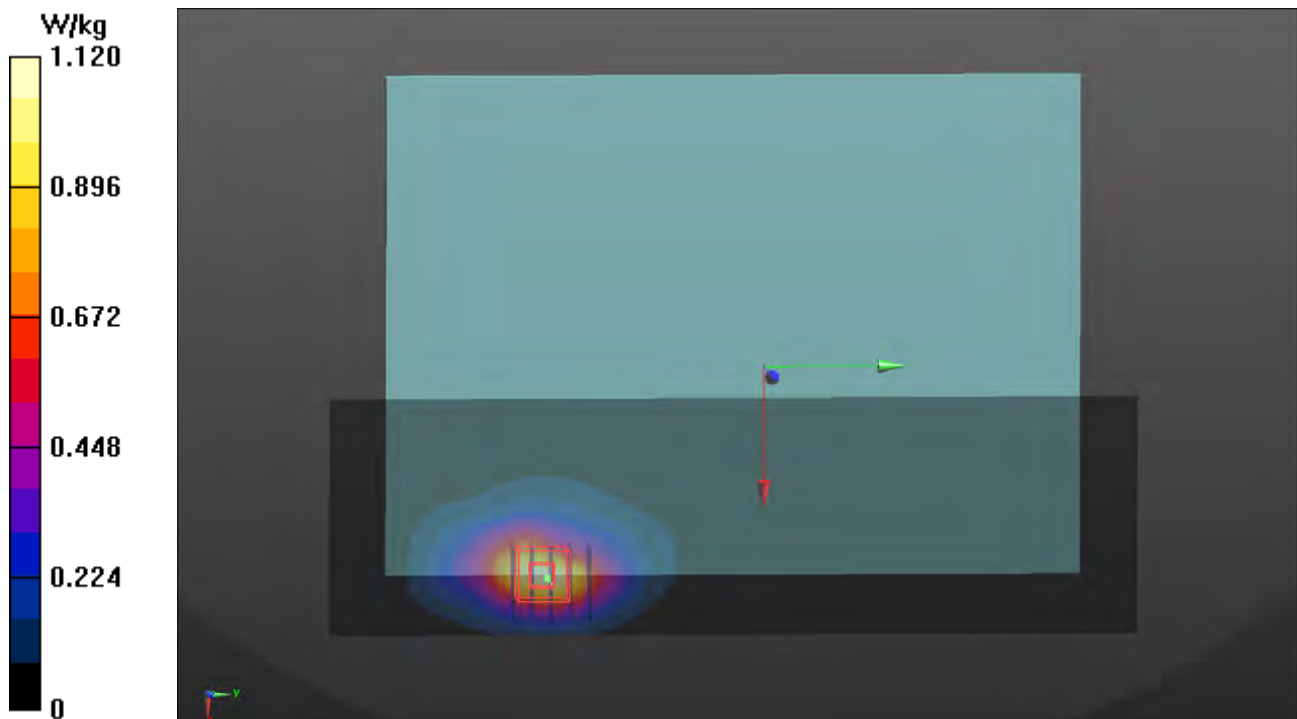
Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.832 W/kg; SAR(10 g) = 0.465 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 52.9%

Maximum value of SAR (measured) = 1.29 W/kg



P08 LTE 14_QPSK10M_Rear Face_0mm_Ch23330_1RB_OS0_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 793 MHz; Duty Cycle: 1:3.74

Medium: H06T09N1_0107 Medium parameters used: $f = 793$ MHz; $\sigma = 0.933$ S/m; $\epsilon_r = 42.255$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (71x231x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

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

Reference Value = 29.99 V/m; Power Drift = -0.02 dB

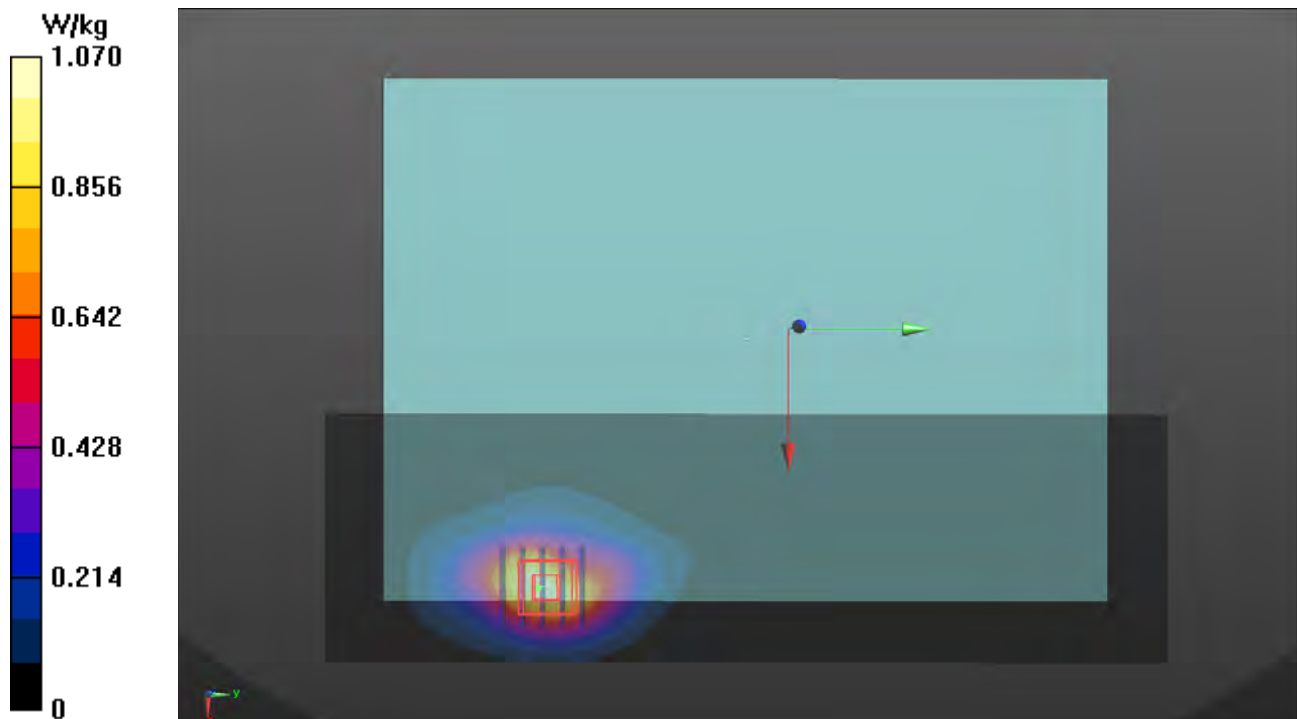
Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 0.888 W/kg; SAR(10 g) = 0.494 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 11.3 mm

Ratio of SAR at M2 to SAR at M1 = 53.6%

Maximum value of SAR (measured) = 1.37 W/kg



P09 LTE 25_QPSK20M_Top Side_0mm_Ch26140_1RB_OS0_Sample1_Power Reduction_w**DUT: 191216C15**

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1860 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1_0107 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.423$ S/m; $\epsilon_r = 40.52$; $\rho = 1000$ kg/m³

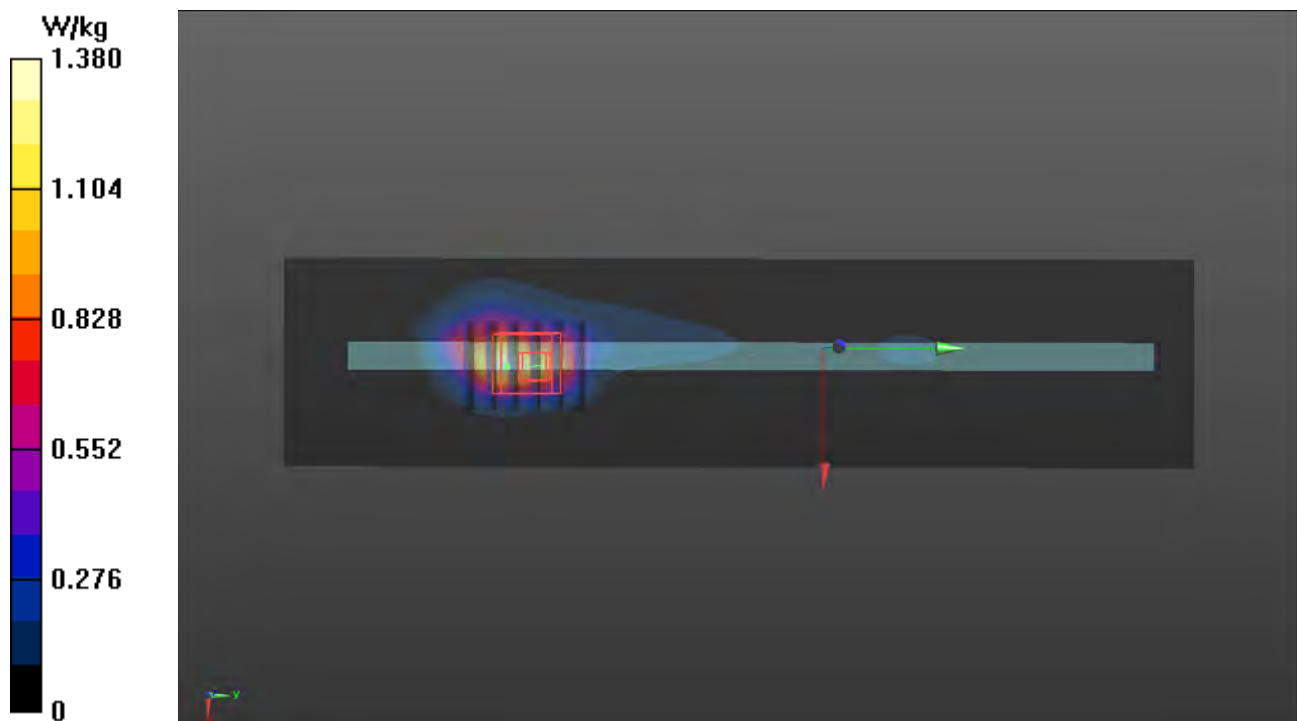
Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (51x221x1)**: Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.38 W/kg

- **Zoom Scan (5x6x7)/Cube 0**: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 22.86 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.755 W/kg; SAR(10 g) = 0.389 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 8.1 mm
Ratio of SAR at M2 to SAR at M1 = 48.4%
Maximum value of SAR (measured) = 1.25 W/kg



P18 LTE 26_QPSK15M_Rear Face_0mm_Ch26865_1RB_OS0_Sample1_Power Reduction_w**DUT: 191216C15**

Communication System: LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK); Frequency: 831.5 MHz; Duty Cycle: 1:3.74

Medium: H07T10N1_0107 Medium parameters used: $f = 831.5$ MHz; $\sigma = 0.925$ S/m; $\epsilon_r = 41.971$; $\rho = 1000$ kg/m³

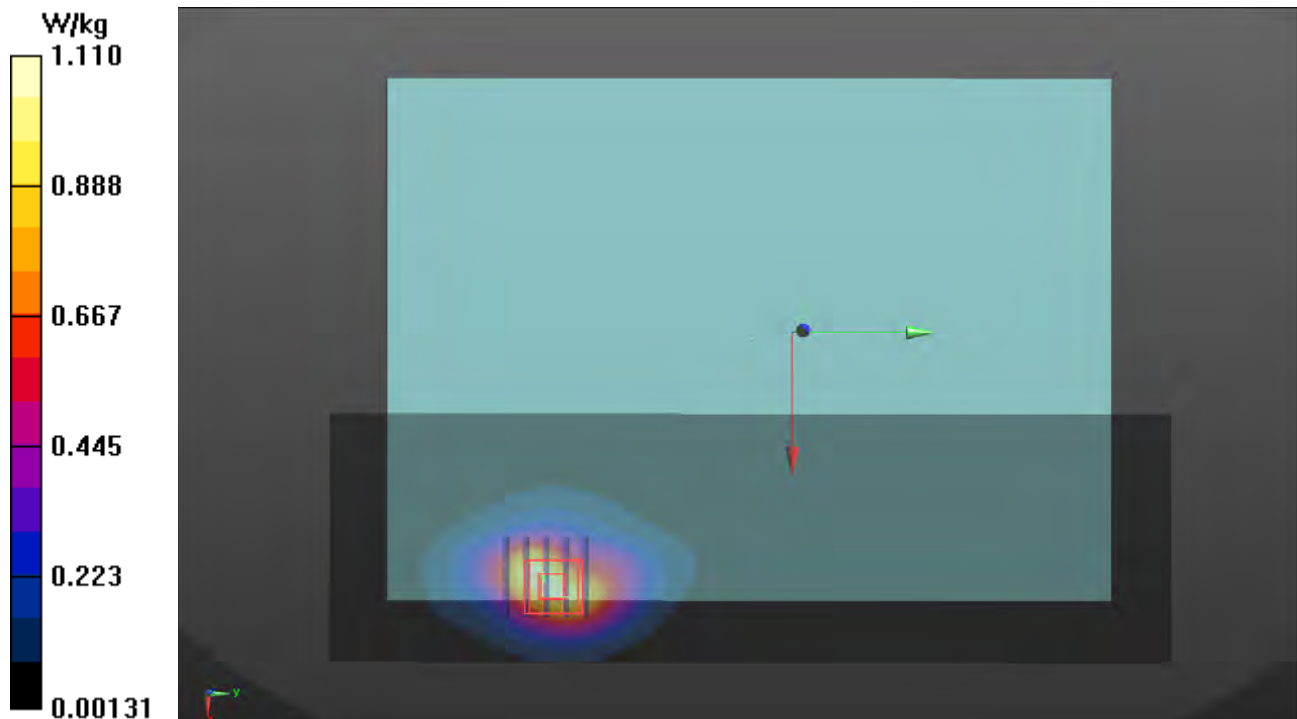
Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (71x231x1)**: Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.11 W/kg

- **Zoom Scan (5x5x7)/Cube 0**: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 31.49 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.66 W/kg
SAR(1 g) = 0.880 W/kg; SAR(10 g) = 0.494 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.7%
Maximum value of SAR (measured) = 1.30 W/kg



P10 LTE 30_QPSK10M_Rear Face_0mm_Ch27710_1RB_OS0_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 2310 MHz; Duty Cycle: 1:3.74

Medium: H19T27N1_0107 Medium parameters used: $f = 2310$ MHz; $\sigma = 1.747$ S/m; $\epsilon_r = 38.878$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.75, 7.75, 7.75); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (91x291x1)**: Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 1.66 W/kg

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

Reference Value = 29.33 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 2.60 W/kg

SAR(1 g) = 0.998 W/kg; SAR(10 g) = 0.441 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7.8 mm

Ratio of SAR at M2 to SAR at M1 = 36.3%

Maximum value of SAR (measured) = 1.78 W/kg



P11 LTE 41_QPSK20M_Rear Face_0mm_Ch40185_1RB_OS0_Sample1_Power Reduction_w

DUT: 191216C15

Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2549.5 MHz; Duty Cycle: 1:8.33

Medium: H19T27N1_0107 Medium parameters used: $f = 2550$ MHz; $\sigma = 2$ S/m; $\epsilon_r = 38.005$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.19, 7.19, 7.19); Calibrated: 2019/06/18
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2019/06/07
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (81x291x1)**: Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 1.17 W/kg

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

Reference Value = 22.95 V/m; Power Drift = 0.04 dB

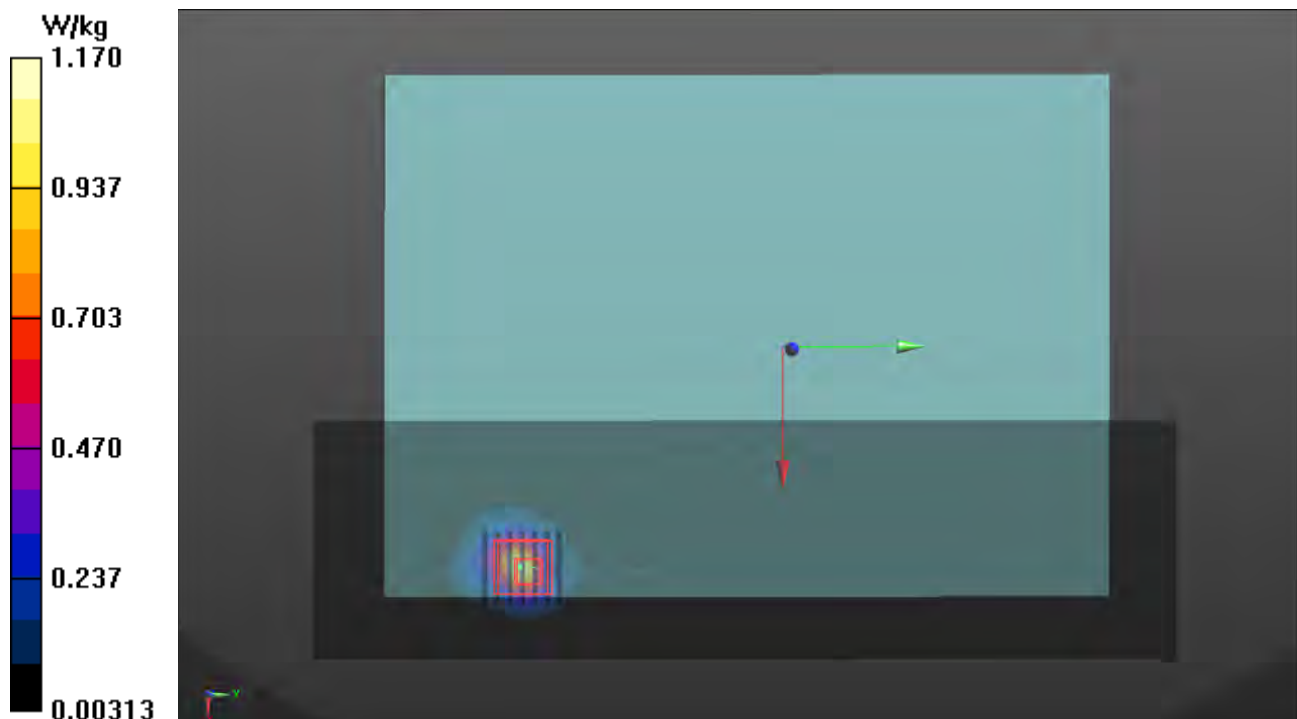
Peak SAR (extrapolated) = 2.28 W/kg

SAR(1 g) = 0.739 W/kg; SAR(10 g) = 0.289 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 5.4 mm

Ratio of SAR at M2 to SAR at M1 = 31.6%

Maximum value of SAR (measured) = 1.61 W/kg



P12 LTE 66_QPSK20M_Rear Face_0mm_Ch132572_1RB_OS0_Sample1_Power Reduction_w**DUT: 191216C15**

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1770 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1_0107 Medium parameters used: $f = 1720$ MHz; $\sigma = 1.337$ S/m; $\epsilon_r = 40.756$; $\rho = 1000$ kg/m³

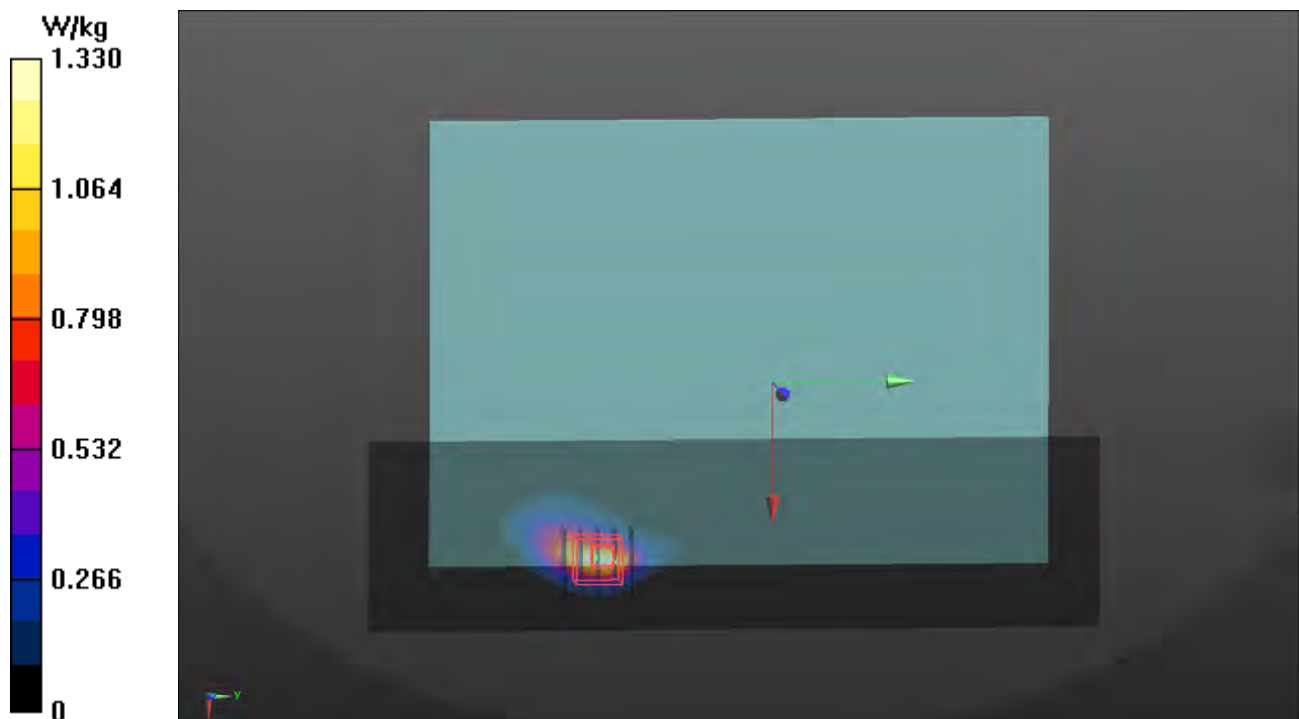
Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.3 °C

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: ELI Phantom_2105; Type: QD OVA 004 Ax; Serial: 2105
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

- **Area Scan (61x231x1)**: Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.33 W/kg

- **Zoom Scan (5x5x7)/Cube 0**: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 27.84 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.490 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.8%
Maximum value of SAR (measured) = 1.59 W/kg



P13 WLAN2.4G_802.11b_Rear Face_0mm_Ch6_Ant0**DUT: 191216C15**

Communication System: IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle);

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: H19T27N2_0227 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.862$ S/m; $\epsilon_r = 38.468$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(7.7, 7.7, 7.7); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: ELI Phantom_1206; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (71x251x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

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

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

Reference Value = 23.63 V/m; Power Drift = 0.08 dB

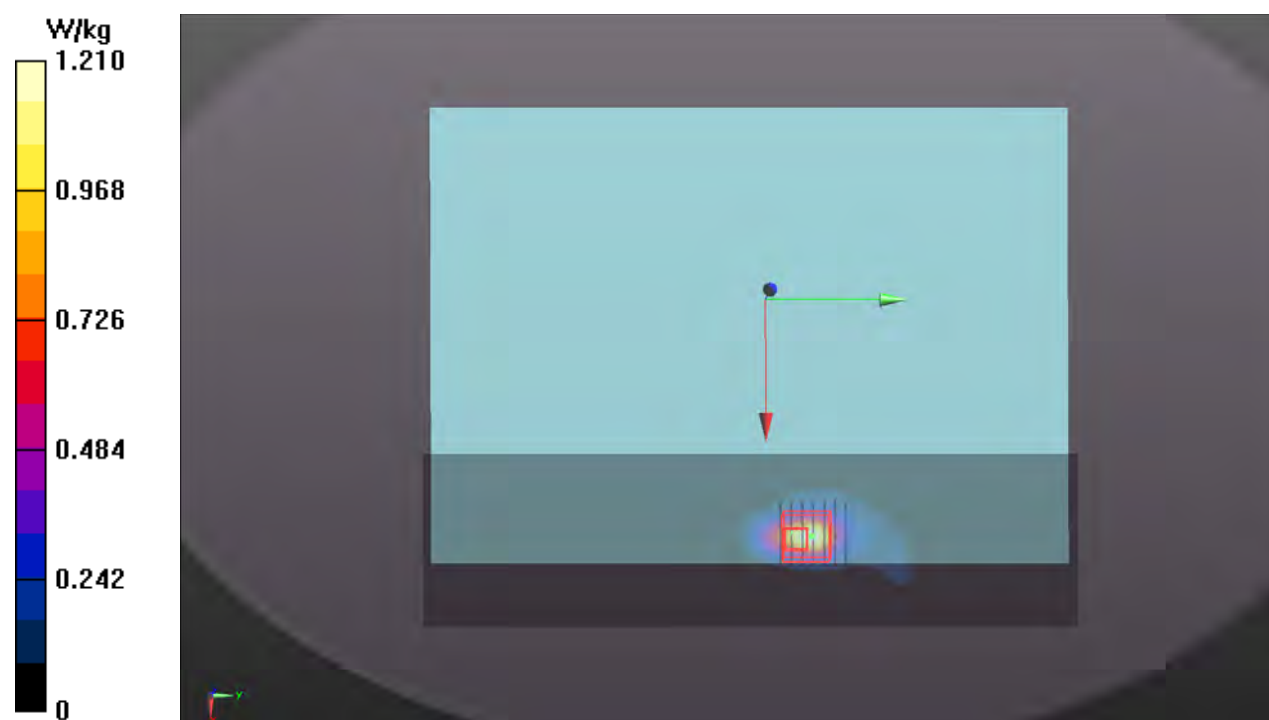
Peak SAR (extrapolated) = 2.12 W/kg

SAR(1 g) = 0.757 W/kg; SAR(10 g) = 0.334 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 6.7 mm

Ratio of SAR at M2 to SAR at M1 = 36.2%

Maximum value of SAR (measured) = 1.52 W/kg



P14 WLAN5.3G_802.11a_Top Side_0mm_Ch56_Ant0**DUT: 191216C15**

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5280 MHz; Duty Cycle: 1:1

Medium: H34T60N2_0227 Medium parameters used: $f = 5280$ MHz; $\sigma = 4.589$ S/m; $\epsilon_r = 36.013$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(5.23, 5.23, 5.23); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: ELI Phantom_1206; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x301x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.695 W/kg

- **Zoom Scan (9x9x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 11.88 V/m; Power Drift = -0.18 dB

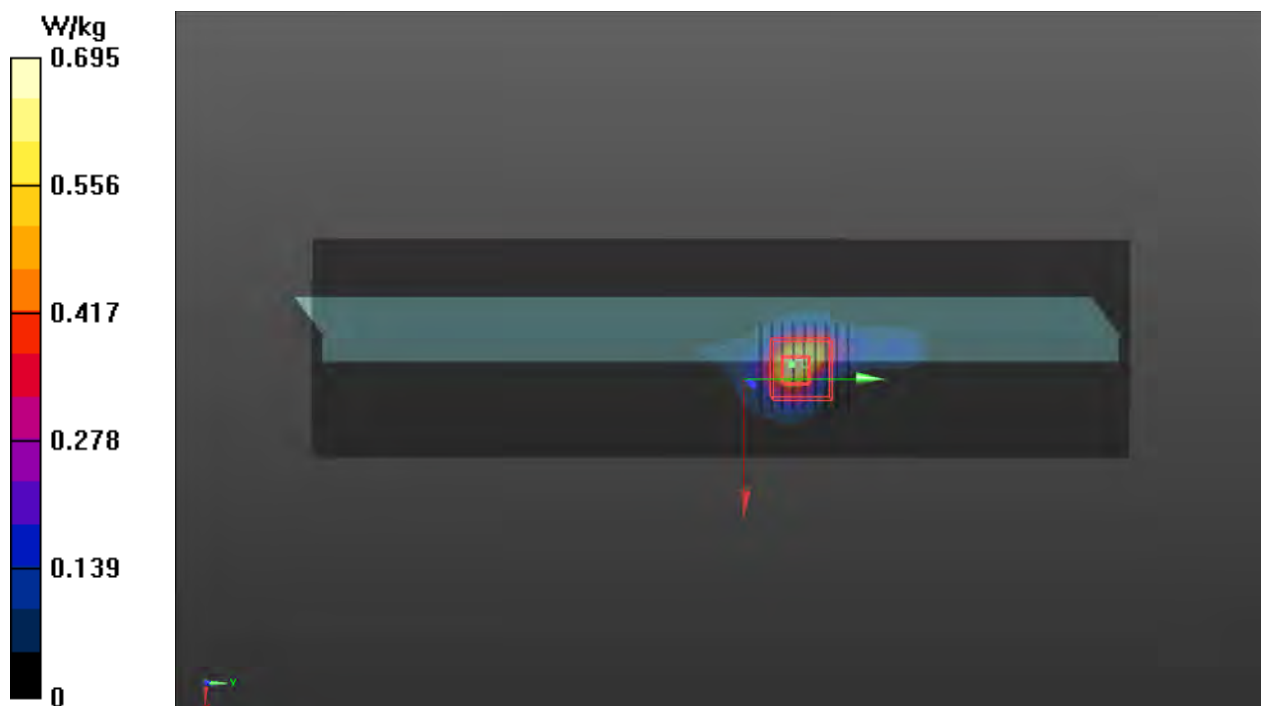
Peak SAR (extrapolated) = 2.23 W/kg

SAR(1 g) = 0.587 W/kg; SAR(10 g) = 0.176 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 6.1 mm

Ratio of SAR at M2 to SAR at M1 = 64%

Maximum value of SAR (measured) = 1.40 W/kg



P15 WLAN5.6G_802.11a_Top Side_0mm_Ch124_Ant0**DUT: 191216C15**

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5620 MHz; Duty Cycle: 1:1

Medium: H34T60N2_0227 Medium parameters used: $f = 5620$ MHz; $\sigma = 4.906$ S/m; $\epsilon_r = 35.531$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(5.1, 5.1, 5.1); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: ELI Phantom_1206; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x301x1):** Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

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

- **Zoom Scan (9x9x7)/Cube 0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 18.07 V/m; Power Drift = -0.16 dB

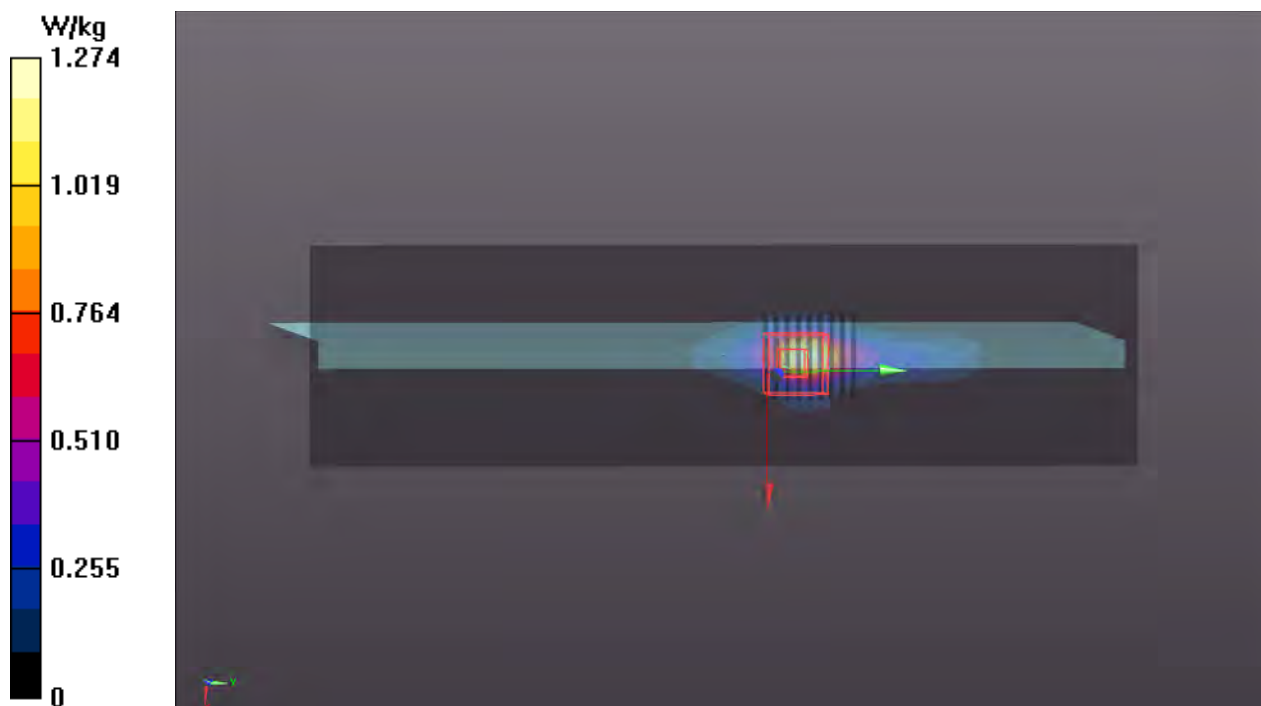
Peak SAR (extrapolated) = 3.00 W/kg

SAR(1 g) = 0.693 W/kg; SAR(10 g) = 0.202 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 6.1 mm

Ratio of SAR at M2 to SAR at M1 = 62.4%

Maximum value of SAR (measured) = 1.74 W/kg



P16 WLAN5.8G_802.11a_Top Side_0mm_Ch165_Ant0**DUT: 191216C15**

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle); Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: H34T60N2_0227 Medium parameters used: $f = 5825$ MHz; $\sigma = 5.106$ S/m; $\epsilon_r = 35.26$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(5.23, 5.23, 5.23); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: ELI Phantom_1206; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x301x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

- **Zoom Scan (9x9x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 18.01 V/m; Power Drift = -0.76 dB

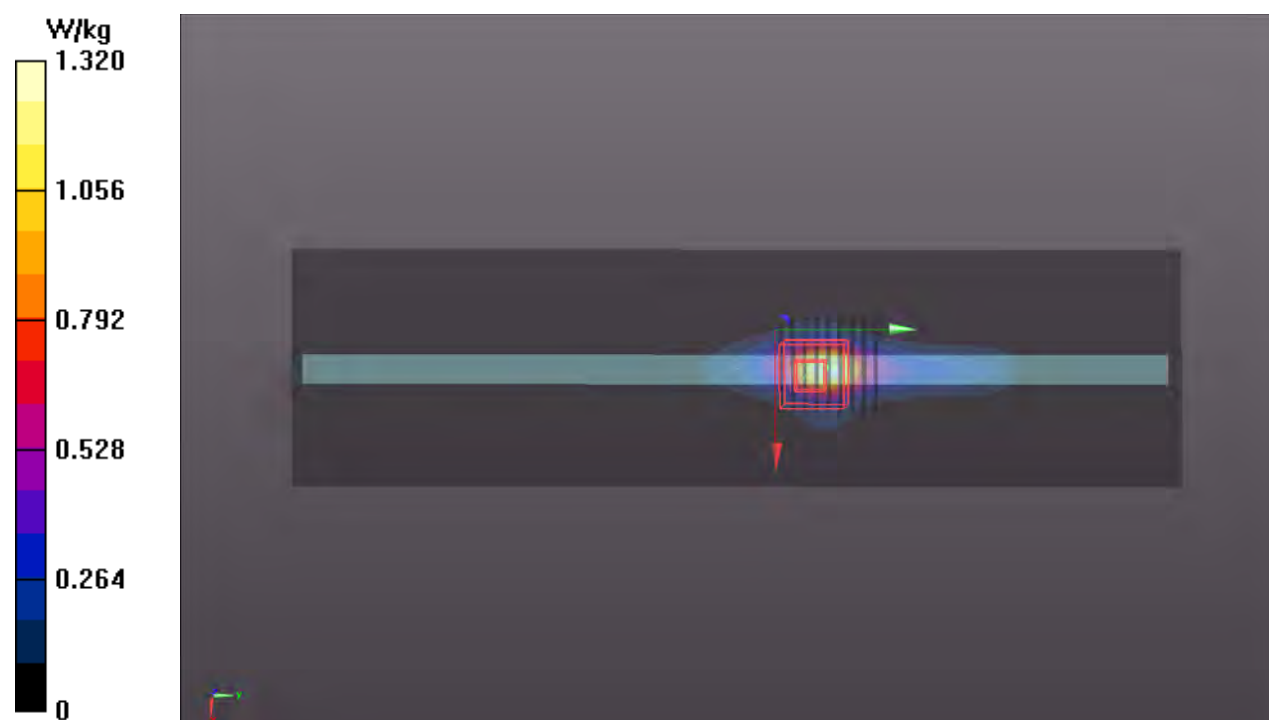
Peak SAR (extrapolated) = 3.10 W/kg

SAR(1 g) = 0.716 W/kg; SAR(10 g) = 0.209 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 6.1 mm

Ratio of SAR at M2 to SAR at M1 = 62.4%

Maximum value of SAR (measured) = 1.80 W/kg



P17 BT_BDR_Rear Face_0mm_Ch39_Ant1**DUT: 191216C15**

Communication System: IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2441 MHz; Duty Cycle: 1:1.3

Medium: H19T27N2_0227 Medium parameters used: $f = 2441$ MHz; $\sigma = 1.866$ S/m; $\epsilon_r = 38.446$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7472; ConvF(7.7, 7.7, 7.7); Calibrated: 2019/08/30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2019/03/25
- Phantom: ELI Phantom_1206; Type: QDOVA002AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (71x251x1):** Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 0.477 W/kg

- **Zoom Scan (7x8x7)/Cube 0:** Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 12.89 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.986 W/kg

SAR(1 g) = 0.252 W/kg; SAR(10 g) = 0.111 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7 mm

Ratio of SAR at M2 to SAR at M1 = 44.4%

Maximum value of SAR (measured) = 0.753 W/kg

