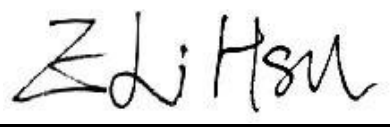


FCC SAR Test Report

Report No. : SA180629C15
Applicant : Lenovo(Shanghai) Electronics Technology Co., Ltd.
Address : NO.68 BUILDING, 199 FENJU RD, China (Shanghai) Pilot Free Trade Zone,
200131, CHINA
Product : Gigabit RF Card
FCC ID : O57YOGAC630
Brand : FOXCONN
Model No. : T77W980
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 : Jun. 29, 2018
Date of Testing : Jul. 31, 2018 ~ Aug. 14, 2018
Lab Address : No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Test Location : No. 19, Hwa Ya 2nd Rd, Wen Hwa Vil, Kwei Shan Dist., Taoyuan City 33383, Taiwan (R.O.C)

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

Prepared By : 
Rona Chen / Specialist

Approved By : 
Eli Hsu / Senior Engineer



FCC Accredited No.: TW0003

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.

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- Appendix B. SAR Plots of SAR Measurement
- Appendix C. Calibration Certificate for Probe and Dipole
- Appendix D. Photographs of EUT and Setup

1. Summary of Maximum SAR Value

Equipment Class	Mode	Highest SAR-1g Body (W/kg)	
		Laptop PC Mode	Tablet PC Mode
PCB	WCDMA II	0.24	0.66
	WCDMA IV	0.23	0.66
	WCDMA V	0.67	0.63
	LTE 2	NA	0.56
	LTE 4	0.53	0.52
	LTE 5	0.63	0.68
	LTE 7	0.27	0.90
	LTE 12	0.60	0.48
	LTE 13	0.70	0.50
	LTE 14	0.74	0.61
	LTE 17	0.55	NA
	LTE 25	0.55	0.66
	LTE 26	0.72	0.66
	LTE 30	0.46	0.66
	LTE 38	0.27	0.66
LTE 41	0.37	0.73	
LTE 66	0.71	0.46	
DTS	2.4G WLAN	0.64	0.76
NII	5.2G WLAN	0.63	0.75
	5.6G WLAN	0.76	0.78
	5.8G WLAN	0.77	0.82
DSS	Bluetooth	0.00	0.07
Highest Simultaneous Transmission SAR		Laptop PC Mode	Tablet PC Mode
		1.51	1.58

Note:

1. 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.
2. 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.(for Tablet PC mode)
3. 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.(for Laptop PC mode)

2. Description of Equipment Under Test

EUT Type	Gigabit RF Card																																																						
FCC ID	O57YOGAC630																																																						
Brand Name	FOXCONN																																																						
Model Name	T77W980																																																						
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 CDMA : QPSK LTE : QPSK, 16QAM, 64QAM																																																						
LTE MPR permanently built-in by design	<table border="1"> <thead> <tr> <th rowspan="2">Modulation</th> <th colspan="6">Channel Bandwidth / RB Configurations</th> <th rowspan="2">LTE MPR Setting (dB)</th> </tr> <tr> <th>BW 1.4 MHz</th> <th>BW 3 MHz</th> <th>BW 5 MHz</th> <th>BW 10 MHz</th> <th>BW 15 MHz</th> <th>BW 20 MHz</th> </tr> </thead> <tbody> <tr> <td>QPSK¹</td> <td>> 5¹</td> <td>> 4¹</td> <td>> 8¹</td> <td>> 12¹</td> <td>> 16¹</td> <td>> 18¹</td> <td>1¹</td> </tr> <tr> <td>16QAM¹</td> <td><= 5¹</td> <td><= 4¹</td> <td><= 8¹</td> <td><= 12¹</td> <td><= 16¹</td> <td><= 18¹</td> <td>1¹</td> </tr> <tr> <td>64QAM¹</td> <td>> 5¹</td> <td>> 4¹</td> <td>> 8¹</td> <td>> 12¹</td> <td>> 16¹</td> <td>> 18¹</td> <td>2¹</td> </tr> <tr> <td>64QAM¹</td> <td><= 5¹</td> <td><= 4¹</td> <td><= 8¹</td> <td><= 12¹</td> <td><= 16¹</td> <td><= 18¹</td> <td>2¹</td> </tr> <tr> <td>64QAM¹</td> <td>> 5¹</td> <td>> 4¹</td> <td>> 8¹</td> <td>> 12¹</td> <td>> 16¹</td> <td>> 18¹</td> <td>3¹</td> </tr> </tbody> </table> <p>Note: MPR is according to the standard and implemented in the circuit (mandatory).^{1,2}</p>	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 ¹	> 5 ¹	> 4 ¹	> 8 ¹	> 12 ¹	> 16 ¹	> 18 ¹	1 ¹	16QAM ¹	<= 5 ¹	<= 4 ¹	<= 8 ¹	<= 12 ¹	<= 16 ¹	<= 18 ¹	1 ¹	64QAM ¹	> 5 ¹	> 4 ¹	> 8 ¹	> 12 ¹	> 16 ¹	> 18 ¹	2 ¹	64QAM ¹	<= 5 ¹	<= 4 ¹	<= 8 ¹	<= 12 ¹	<= 16 ¹	<= 18 ¹	2 ¹	64QAM ¹	> 5 ¹	> 4 ¹	> 8 ¹	> 12 ¹	> 16 ¹	> 18 ¹	3 ¹
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The device operation	LTE MPR is applied first, then orientation- and proximity-sensor power reduction applies the additional fixed reduction level.																																																						
Maximum Tune-up Conducted Power (Unit: dBm)	Please refer to section 4.6.1 of this report																																																						
Antenna Type	Refer to Note as below																																																						
EUT Stage	Identical Prototype																																																						

Note:

- The change list for EUT is listed as below.
 - Adding a specific host.
 - Changing antenna.
 - Changing SW (to disable LTE Band 71 and to disable CA_38C for configurations of CA).
- The EUT is authorized for use in specific End-product. Please refer to below table for more details.

Product	Brand	Model
Notebook Computer	Lenovo	YOGA C630-13Q50*****, 81JL*****, (*=0~9, A~Z, a~z, "-" or blank, for marketing use only, with no impact on RF compliance of the product)

- The WLAN function of End-product is listed as below.

WLAN function	
Tx Frequency Bands (Unit: MHz)	WLAN : 2412 ~ 2462, 5180 ~ 5240, 5260 ~ 5320, 5500 ~ 5720, 5745 ~ 5825 Bluetooth : 2402 ~ 2480
Uplink Modulations	802.11b : DSSS 802.11a/g/n/ac : OFDM Bluetooth : GFSK, π/4-DQPSK, 8-DPSK
FCC ID	O57YOGAC630

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4. The information of antenna of End-product is listed as below.

Ant. Type	Manuf.	Part No.	WWAN 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	ACON	ANF6Y-100046 (DC330026L00)	NB: 0.15 TB: -4.24	NB: 1.89 TB: -0.38	NB: -0.62 TB: -6.37	NB: 1.99 TB: 1.77	NB: 1.69 TB: -3.40	NB: 0.95 TB: -4.02	NB: -0.55 TB: -4.02	NB: 1.34 TB: -4.32	NB: 0.15 TB: -4.24	NB: -0.62 TB: -5.65	NB: -1.34 TB: -4.23	NB: 1.75 TB: -0.53	NB: 1.99 TB: 1.77	NB: 1.89 TB: -0.38

* "NB" means Notebook mode.
* "TB" means Tablet mode.

Antenna Type	Manuf.	Part No.	Mode	WLAN Antenna Gain (dBi)			
				WLAN 2.4G / BT	WLAN 5150 ~ 5350 MHz	WLAN 5470 ~ 5725 MHz	WLAN 5725 ~ 5850 MHz
PIFA	ACON	Main Antenna: ANF6Y-200023 Aux. Antenna: ANF6Y-200024	NB	Ant 0: -0.11 Ant 1: 0.79	Ant 0: 0.15 Ant 1: 0.21	Ant 0: 0.53 Ant 1: 0.58	Ant 0: 0.93 Ant 1: 0.91
			TB	Ant 0: -0.89 Ant 1: 0.37	Ant 0: 0.22 Ant 1: 0.26	Ant 0: 0.51 Ant 1: 0.19	Ant 0: 0.82 Ant 1: 0.41

* "NB" means Notebook mode.
* "TB" means Tablet mode.

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	Lenovo
	Model Name	L17M4PH3
	Power Rating	7.68Vdc,7680mAh
	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:

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

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

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

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

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

3.2 SPEAG DASY52 System

DASY52 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 DASY52 software defined. The DASY52 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.

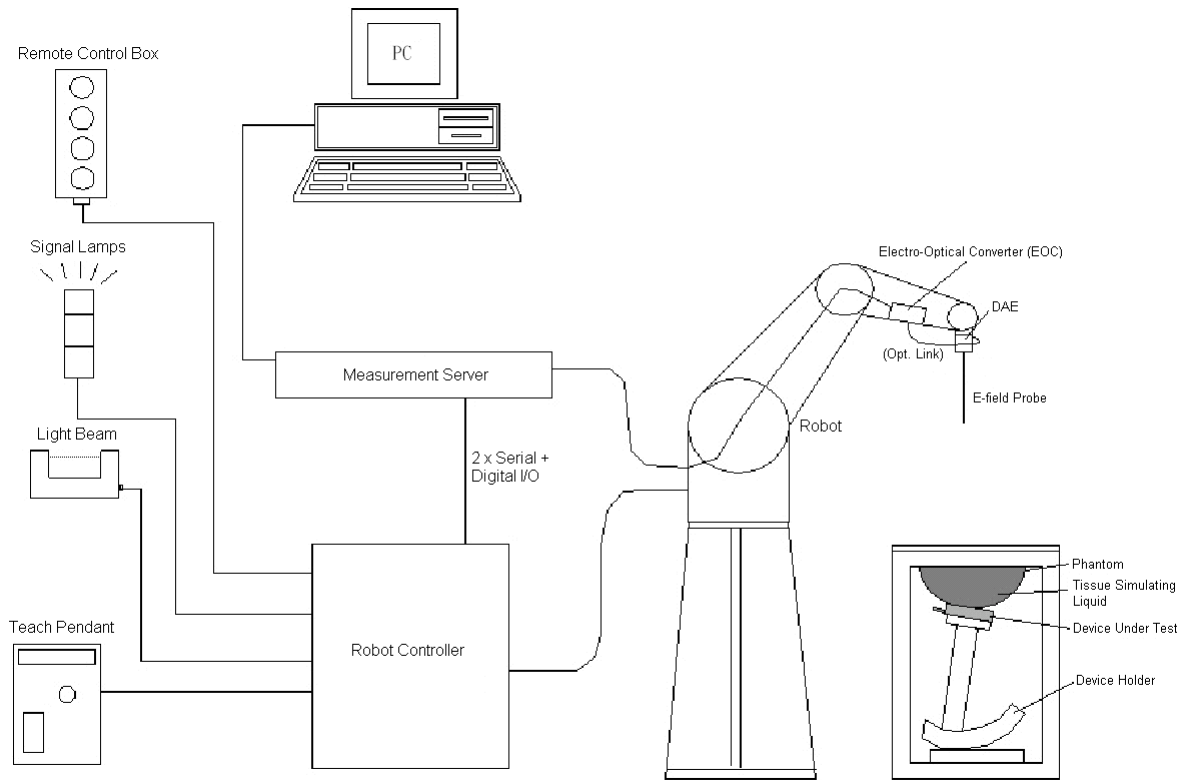


Fig-3.1 SPEAG DASY52 System Setup

3.2.1 Robot

The DASY52 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 DASY52 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	10 MHz to 6 GHz Linearity: ± 0.2 dB	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (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	

Model	ES3DV3	
Construction	Symmetrical design with triangular core. Interleaved sensors. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	10 MHz to 4 GHz Linearity: ± 0.2 dB	
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	5 μ W/g to 100 mW/g Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm	


Model	ET3DV6	
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz to 2.3 GHz; Linearity: ± 0.2 dB	
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.4 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 μ W/g to 100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (Tip: 16 mm) Tip diameter: 6.8 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.7 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	

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3.2.4 Phantoms


Model	Twin SAM	
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 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, glass fiber reinforced (VE-GF)	
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)	
Dimensions	Length: 1000 mm Width: 500 mm Height: adjustable feet	
Filling Volume	approx. 25 liters	

Model	ELI	
Construction	Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. 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, glass fiber 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	


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3.2.5 Device Holder

Model	Mounting Device	
Construction	In combination with the Twin SAM Phantom or ELI4, the Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Rotation point is the ear opening point. Transmitter devices can be easily and accurately positioned according to IEC, IEEE, FCC or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat).	
Material	POM	

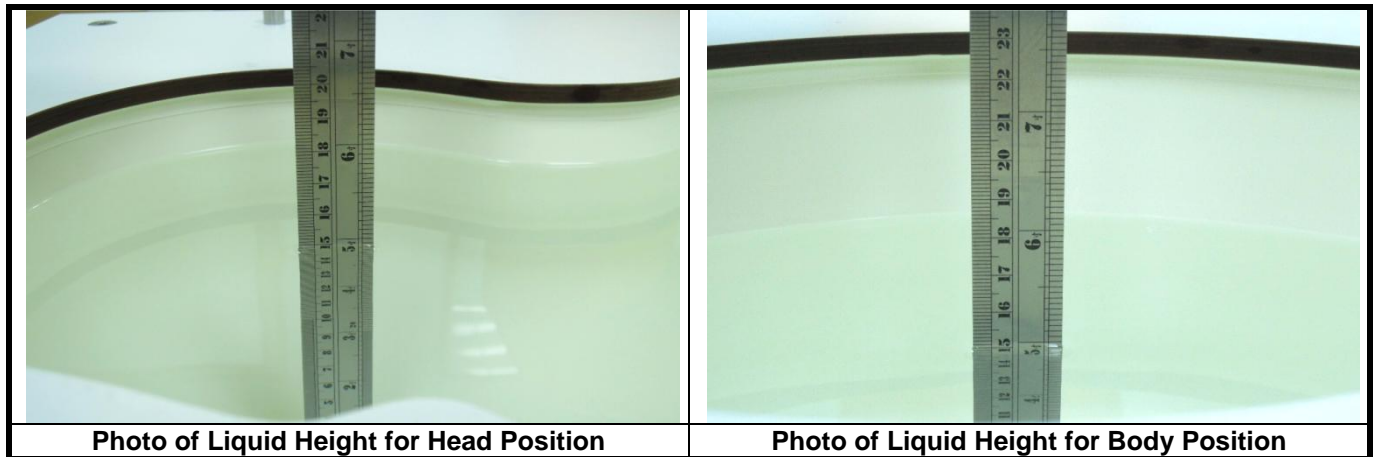
Model	Laptop Extensions Kit	
Construction	Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.). It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner.	
Material	POM, Acrylic glass, 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 < 1GHz), > 40 W (f > 1GHz)	

3.2.7 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 5% are listed in Table-3.1.



The dielectric properties of the head tissue simulating liquids are defined in IEEE 1528, and KDB 865664 D01 Appendix A. For the body tissue simulating liquids, the dielectric properties are defined in KDB 865664 D01 Appendix A. The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using a dielectric assessment kit and a network analyzer.

Table-3.1 Targets of Tissue Simulating Liquid

Frequency (MHz)	Target Permittivity	Range of $\pm 5\%$	Target Conductivity	Range of $\pm 5\%$
For Head				
750	41.9	39.8 ~ 44.0	0.89	0.85 ~ 0.93
835	41.5	39.4 ~ 43.6	0.90	0.86 ~ 0.95
900	41.5	39.4 ~ 43.6	0.97	0.92 ~ 1.02
1450	40.5	38.5 ~ 42.5	1.20	1.14 ~ 1.26
1640	40.3	38.3 ~ 42.3	1.29	1.23 ~ 1.35
1750	40.1	38.1 ~ 42.1	1.37	1.30 ~ 1.44
1800	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
1900	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2000	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2300	39.5	37.5 ~ 41.5	1.67	1.59 ~ 1.75
2450	39.2	37.2 ~ 41.2	1.80	1.71 ~ 1.89
2600	39.0	37.1 ~ 41.0	1.96	1.86 ~ 2.06
3500	37.9	36.0 ~ 39.8	2.91	2.76 ~ 3.06
5200	36.0	34.2 ~ 37.8	4.66	4.43 ~ 4.89
5300	35.9	34.1 ~ 37.7	4.76	4.52 ~ 5.00
5500	35.6	33.8 ~ 37.4	4.96	4.71 ~ 5.21
5600	35.5	33.7 ~ 37.3	5.07	4.82 ~ 5.32
5800	35.3	33.5 ~ 37.1	5.27	5.01 ~ 5.53
For Body				
750	55.5	52.7 ~ 58.3	0.96	0.91 ~ 1.01
835	55.2	52.4 ~ 58.0	0.97	0.92 ~ 1.02
900	55.0	52.3 ~ 57.8	1.05	1.00 ~ 1.10
1450	54.0	51.3 ~ 56.7	1.30	1.24 ~ 1.37
1640	53.8	51.1 ~ 56.5	1.40	1.33 ~ 1.47
1750	53.4	50.7 ~ 56.1	1.49	1.42 ~ 1.56
1800	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
1900	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
2000	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
2300	52.9	50.3 ~ 55.5	1.81	1.72 ~ 1.90
2450	52.7	50.1 ~ 55.3	1.95	1.85 ~ 2.05
2600	52.5	49.9 ~ 55.1	2.16	2.05 ~ 2.27
3500	51.3	48.7 ~ 53.9	3.31	3.14 ~ 3.48
5200	49.0	46.6 ~ 51.5	5.30	5.04 ~ 5.57
5300	48.9	46.5 ~ 51.3	5.42	5.15 ~ 5.69
5500	48.6	46.2 ~ 51.0	5.65	5.37 ~ 5.93
5600	48.5	46.1 ~ 50.9	5.77	5.48 ~ 6.06
5800	48.2	45.8 ~ 50.6	6.00	5.70 ~ 6.30

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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
B750	0.2	-	0.2	0.8	48.8	-	50.0	-
B835	0.2	-	0.2	0.9	48.5	-	50.2	-
B900	0.2	-	0.2	0.9	48.2	-	50.5	-
B1450	-	34.0	-	0.3	-	-	65.7	-
B1640	-	32.5	-	0.3	-	-	67.2	-
B1750	-	31.0	-	0.2	-	-	68.8	-
B1800	-	29.5	-	0.4	-	-	70.1	-
B1900	-	29.5	-	0.3	-	-	70.2	-
B2000	-	30.0	-	0.2	-	-	69.8	-
B2300	-	31.0	-	0.1	-	-	68.9	-
B2450	-	31.4	-	0.1	-	-	68.5	-
B2600	-	31.8	-	0.1	-	-	68.1	-
B3500	-	28.8	-	0.1	-	-	71.1	-
B5G	-	-	-	-	-	10.7	78.6	10.7

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.

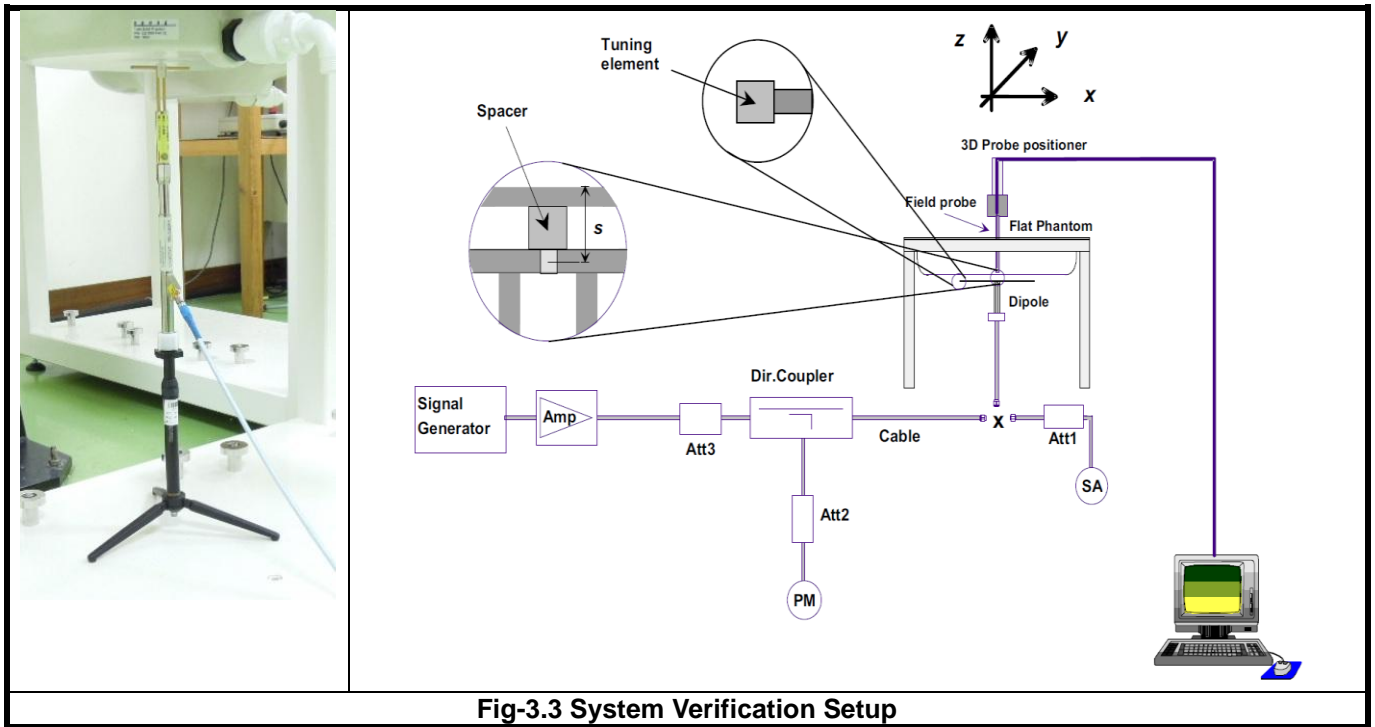


Fig-3.3 System Verification Setup

The 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 spectrum analyzer measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power (250 mW is used for 700 MHz to 3 GHz, 100 mW is used for 3.5 GHz to 6 GHz) at the dipole connector and the power meter is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter.

After system check testing, the SAR result will be normalized to 1W forward input power and compared with the reference SAR value derived from validation dipole certificate report. The deviation of system check should be within 10 %.

3.4 SAR Measurement Procedure

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

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

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

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

3.4.1 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. According to KDB 865664 D01, the resolution for Area and Zoom scan is specified in the table below.

Items	<= 2 GHz	2-3 GHz	3-4 GHz	4-5 GHz	5-6 GHz
Area Scan ($\Delta x, \Delta y$)	<= 15 mm	<= 12 mm	<= 12 mm	<= 10 mm	<= 10 mm
Zoom Scan ($\Delta x, \Delta y$)	<= 8 mm	<= 5 mm	<= 5 mm	<= 4 mm	<= 4 mm
Zoom Scan (Δz)	<= 5 mm	<= 5 mm	<= 4 mm	<= 3 mm	<= 2 mm
Zoom Scan Volume	>= 30 mm	>= 30 mm	>= 28 mm	>= 25 mm	>= 22 mm

Note:

When zoom scan is required and report SAR is <= 1.4 W/kg, the zoom scan resolution of $\Delta x / \Delta y$ (2-3GHz: <= 8 mm, 3-4GHz: <= 7 mm, 4-6GHz: <= 5 mm) may be applied.

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.

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 WWAN and WLAN on Rear Face, Right Side, and Top Side of EUT SAR compliance. Others RF capability (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)	21	22	23	24	25	26	27	28	29	30	31
WCDMA II	10.4	10.2	10.5	10.1	10.1	10.4	23.8	23.3	23.7	23.5	23.4
WCDMA IV	9.9	10.0	10.3	10.2	10.0	10.2	23.3	23.5	23.4	23.5	23.3
WCDMA V	17.2	17.2	17.3	17.5	17.5	17.6	23.8	23.7	23.6	23.6	23.8
LTE 2	10.3	9.9	10.2	10.2	10.2	10.1	23.7	23.6	23.5	23.7	23.8
LTE 4	10.5	10.3	10.5	10.4	10.4	10.3	23.0	23.4	23.1	23.4	23.2
LTE 5	17.5	17.6	17.9	17.9	17.7	17.5	23.5	23.7	23.3	23.3	23.3
LTE 7	10.8	10.8	10.5	10.6	10.8	10.9	23.1	23.5	23.5	23.1	23.0
LTE 12	16.7	16.4	16.7	16.6	16.8	16.6	22.9	23.4	23.3	23.2	23.0
LTE 13	14.9	14.9	14.7	14.7	14.7	15.1	23.2	23.1	23.3	23.3	23.0
LTE 14	15.9	15.9	15.8	15.9	15.8	16.1	23.5	23.3	23.4	23.3	23.4
LTE 17	16.5	16.7	16.5	16.3	16.6	16.3	23.0	23.4	23.4	23.4	23.2
LTE 25	11.3	11.3	10.8	10.9	11.0	10.9	23.4	23.3	23.0	23.0	23.4
LTE 26	18.0	17.9	17.7	18.2	18.2	17.7	23.5	23.5	23.4	23.6	23.6
LTE 30	10.7	10.8	10.6	10.8	10.6	10.7	22.2	22.4	22.6	22.5	22.5
LTE 38	10.5	10.2	10.4	10.1	10.2	10.0	23.4	23.4	23.6	23.7	23.3
LTE 41	10.4	10.6	10.3	10.3	10.4	10.7	23.3	23.7	23.3	23.6	23.5
LTE 66	10.0	9.9	10.1	10.1	9.9	9.9	23.0	22.9	22.6	22.7	23.0
WLAN2.4G(Ant0)	9.4	9.8	9.5	9.8	9.4	9.4	17.9	17.5	17.9	17.7	17.6
WLAN 5.2G(Ant0)	8.9	8.9	8.4	8.7	8.7	8.7	17.4	17.6	17.8	17.5	17.9
WLAN 5.3G(Ant0)	8.6	8.6	8.9	9.0	8.5	9.0	17.5	17.5	17.9	18.0	17.6
WLAN 5.6G(Ant0)	8.4	8.4	8.5	8.9	8.8	8.9	17.7	17.4	17.8	17.8	17.5
WLAN 5.8G(Ant0)	7.8	7.6	7.7	7.8	7.3	7.6	17.6	17.7	17.9	17.5	18.0
WLAN2.4G(Ant1)	9.4	9.6	9.7	9.5	9.3	9.8	17.7	17.6	17.4	17.7	17.3
WLAN 5.2G(Ant1)	9.2	9.2	9.3	9.0	8.9	8.8	17.4	17.8	17.8	17.5	17.6
WLAN 5.3G(Ant1)	8.9	9.3	9.1	9.1	9.0	8.9	17.3	17.6	17.4	17.5	17.3
WLAN 5.6G(Ant1)	8.2	8.3	8.1	8.2	8.4	7.9	17.8	17.4	17.3	17.3	17.6
WLAN 5.8G(Ant1)	8.8	8.8	8.9	8.6	8.6	8.7	17.6	17.8	17.6	17.5	17.6
WLAN2.4G(Ant0+1)	12.2	12.2	12.3	12.3	12.0	11.9	17.8	17.5	17.9	17.8	17.7
WLAN 5.2G(Ant0+1)	11.7	11.8	11.8	12.0	12.0	11.8	20.6	20.5	20.4	20.2	20.4
WLAN 5.3G(Ant0+1)	11.7	12.1	12.1	12.1	11.6	11.8	17.8	18.0	18.0	17.8	18.1
WLAN 5.6G(Ant0+1)	11.3	11.7	11.2	11.6	11.6	11.5	17.6	17.7	17.8	17.5	17.8
WLAN 5.8G(Ant0+1)	11.1	10.7	10.7	11.1	10.6	11.1	17.4	17.8	17.6	17.7	17.7

Output Power Verification in dBm for EUT Right Side											
Distance (mm)	16	17	18	19	20	21	22	23	24	25	26
WCDMA II	10.2	10.1	10.2	10.4	10.4	10.5	23.3	23.4	23.5	23.5	23.4
WCDMA IV	10.0	10.1	10.2	10.2	10.1	10.1	23.5	23.3	23.5	23.7	23.4
WCDMA V	17.7	17.3	17.2	17.2	17.7	17.3	23.9	23.7	23.6	23.4	23.6
LTE 2	10.1	9.9	9.8	10.1	10.0	10.3	23.5	23.5	23.4	23.8	23.6
LTE 4	10.1	10.4	10.4	10.6	10.4	10.3	23.1	23.1	23.4	23.0	23.3
LTE 5	17.4	17.8	17.7	17.8	17.7	17.7	23.4	23.7	23.6	23.7	23.3
LTE 7	10.9	10.5	10.5	10.4	10.6	10.5	23.4	23.5	23.5	23.3	23.3
LTE 12	16.9	16.4	16.6	16.4	16.8	16.8	23.3	22.9	22.9	23.2	23.0
LTE 13	15.2	15.0	15.0	14.8	14.8	14.7	23.0	23.3	23.1	23.5	23.1
LTE 14	16.1	15.8	16.1	16.2	15.8	15.8	23.3	23.2	23.2	23.6	23.7
LTE 17	16.3	16.6	16.8	16.5	16.7	16.8	23.4	23.4	23.2	23.3	23.4
LTE 25	11.1	11.0	11.0	11.3	11.2	10.8	23.2	23.0	23.2	23.4	22.9
LTE 26	17.9	17.9	18.1	18.1	18.1	18.0	23.6	23.6	23.4	23.2	23.3
LTE 30	10.7	10.5	10.5	10.6	10.8	10.7	22.6	22.2	22.6	22.2	22.3
LTE 38	10.0	10.5	10.5	10.4	10.0	10.0	23.4	23.6	23.3	23.6	23.7
LTE 41	10.5	10.3	10.2	10.6	10.4	10.5	23.8	23.5	23.5	23.5	23.8
LTE 66	9.9	10.0	10.0	10.2	9.9	10.0	22.9	22.9	23.1	23.1	22.8
WLAN2.4G(Ant0)	9.4	9.9	9.9	9.8	9.9	9.7	17.6	17.4	17.7	17.8	17.8
WLAN 5.2G(Ant0)	8.4	8.5	8.5	8.4	8.5	8.9	17.9	17.4	17.4	17.9	17.7
WLAN 5.3G(Ant0)	8.6	9.0	8.7	8.9	8.9	8.8	17.6	18.0	18.0	17.5	17.7
WLAN 5.6G(Ant0)	8.6	8.8	8.4	8.8	8.5	8.4	17.5	17.5	17.9	17.7	17.8
WLAN 5.8G(Ant0)	7.3	7.8	7.7	7.5	7.8	7.5	18.0	18.0	17.7	17.5	17.5
WLAN2.4G(Ant1)	9.7	9.3	9.3	9.8	9.5	9.3	17.4	17.3	17.4	17.3	17.2
WLAN 5.2G(Ant1)	9.1	9.3	9.0	9.2	8.9	9.2	17.4	17.5	17.7	17.6	17.4
WLAN 5.3G(Ant1)	9.1	9.4	9.2	8.9	9.2	9.2	17.4	17.5	17.6	17.2	17.2
WLAN 5.6G(Ant1)	8.3	8.0	8.2	8.2	7.9	7.9	17.3	17.3	17.4	17.4	17.8
WLAN 5.8G(Ant1)	8.7	8.5	8.7	8.7	8.7	8.6	17.8	17.8	17.5	17.4	17.5
WLAN2.4G(Ant0+1)	11.8	12.2	12.3	11.9	12.2	12.0	17.9	17.6	17.4	17.8	17.5
WLAN 5.2G(Ant0+1)	12.1	11.7	11.8	11.9	11.8	11.6	20.4	20.6	20.4	20.2	20.5
WLAN 5.3G(Ant0+1)	12.1	11.6	11.8	11.9	11.8	11.6	18.0	18.2	18.1	17.9	18.2
WLAN 5.6G(Ant0+1)	11.7	11.2	11.2	11.5	11.4	11.5	17.6	17.7	17.6	17.4	17.6
WLAN 5.8G(Ant0+1)	10.7	10.6	11.1	10.9	11.0	11.1	17.7	17.9	17.5	17.6	17.5

Output Power Verification in dBm for EUT Top Side											
Distance (mm)	9	10	11	12	13	14	15	16	17	18	19
WCDMA II	10.5	10.1	10.3	10.0	10.3	10.5	23.8	23.4	23.7	23.7	23.5
WCDMA IV	10.0	10.0	10.0	10.3	10.3	10.0	23.6	23.5	23.4	23.6	23.7
WCDMA V	17.3	17.6	17.6	17.6	17.7	17.5	23.4	23.5	23.9	23.8	23.8
LTE 2	10.3	10.1	9.8	10.3	10.3	9.8	23.4	23.9	23.8	23.9	23.8
LTE 4	10.6	10.4	10.4	10.3	10.6	10.2	23.2	23.4	23.1	23.4	23.2
LTE 5	17.4	17.5	17.9	17.9	17.4	17.8	23.3	23.4	23.2	23.5	23.4
LTE 7	10.6	10.8	10.4	10.7	10.4	10.6	23.3	23.2	23.4	23.1	23.2
LTE 12	16.5	16.4	16.9	16.8	16.9	16.9	23.4	23.1	23.2	23.2	23.4
LTE 13	14.7	14.7	14.8	15.1	14.7	14.9	23.1	23.4	23.3	23.4	23.4
LTE 14	15.7	16.1	15.8	15.8	15.9	16.0	23.3	23.7	23.2	23.2	23.5
LTE 17	16.3	16.8	16.3	16.5	16.8	16.8	23.5	23.5	23.1	23.3	23.3
LTE 25	11.3	10.9	10.8	11.1	11.0	11.2	22.9	23.3	23.4	23.3	23.2
LTE 26	17.9	17.9	17.9	17.7	17.7	17.7	23.3	23.4	23.4	23.2	23.6
LTE 30	10.5	10.7	10.7	10.8	10.4	10.8	22.6	22.2	22.2	22.5	22.6
LTE 41	10.2	10.5	10.5	10.4	10.2	10.3	23.6	23.6	23.7	23.7	23.3
WLAN2.4G(Ant0)	9.9	9.5	9.5	9.7	9.4	9.8	17.4	17.8	17.9	17.7	17.5
WLAN 5.2G(Ant0)	8.7	8.4	8.9	8.6	8.8	8.9	17.6	17.4	17.5	17.6	17.8
WLAN 5.3G(Ant0)	8.5	8.6	8.7	8.5	8.8	8.6	17.7	18.0	17.9	17.5	17.7
WLAN 5.6G(Ant0)	8.8	8.8	8.4	8.8	8.5	8.7	17.7	17.7	17.8	17.6	17.8
WLAN 5.8G(Ant0)	7.5	7.5	7.7	7.5	7.3	7.8	17.7	17.7	17.9	17.9	17.6
WLAN2.4G(Ant1)	9.5	9.8	9.7	9.5	9.8	9.4	17.7	17.4	17.7	17.3	17.2
WLAN 5.2G(Ant1)	8.9	9.1	8.8	9.2	8.9	9.0	17.9	17.4	17.8	17.6	17.7
WLAN 5.3G(Ant1)	8.9	9.2	9.2	8.9	9.1	9.2	17.7	17.7	17.7	17.7	17.7
WLAN 5.6G(Ant1)	8.2	8.0	8.1	8.2	8.0	8.4	17.6	17.4	17.5	17.6	17.5
WLAN 5.8G(Ant1)	8.9	8.9	8.7	8.7	8.7	8.9	17.4	17.6	17.7	17.8	17.6
WLAN2.4G(Ant0+1)	11.8	12.3	12.1	11.9	11.8	11.8	17.6	17.8	17.6	17.4	17.9
WLAN 5.2G(Ant0+1)	11.8	11.9	11.9	11.8	11.9	11.6	20.6	20.5	20.6	20.5	20.6
WLAN 5.3G(Ant0+1)	12.0	11.8	11.8	11.6	11.6	11.9	17.9	17.8	18.2	17.9	17.9
WLAN 5.6G(Ant0+1)	11.7	11.3	11.3	11.5	11.4	11.3	17.8	17.4	17.6	17.8	17.9
WLAN 5.8G(Ant0+1)	11.0	10.7	10.6	10.6	10.6	10.8	17.5	17.7	17.5	17.6	17.9

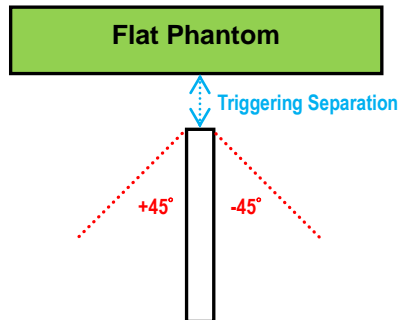
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Proximity Sensor Coverage (KDB 616217 D04 §6.3)

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°
Right Side	21	On	On	On	On	On	On	On	On	On	On	On
Top Side	14	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 26 mm for EUT Rear Face, 21 mm for Right Side and 14 mm for Top Side. The separation distance of 21 mm determined by the smallest triggering distance on Right 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 21 mm for the Right Side. The separation distance of 14 mm determined by the smallest triggering distance on Top 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 14 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 25 mm for EUT Rear Face, 20 mm for EUT Right Side, and 13 mm for 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.

<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>

Handsets with Release 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the “Release 6 HSPA Data Devices”, for the highest reported body-worn exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn measurements is tested for next to the ear head exposure.

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

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Release 6 HSUPA Data Devices

The 3G SAR test reduction procedure is applied to body SAR with 12.2 kbps RMC as the primary mode. Otherwise, body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode. Otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing. Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in below.

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	$\beta_{HS}^{(1)}$	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 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, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH 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 signalled 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 signalled 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.

<Considerations Related to LTE for Setup and Testing>

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

EUT Supported LTE Band and Channel Bandwidth						
LTE Band	BW 1.4 MHz	BW 3 MHz	BW 5 MHz	BW 10 MHz	BW 15 MHz	BW 20 MHz
2	V	V	V	V	V	V
4	V	V	V	V	V	V
5	V	V	V	V		
7			V	V	V	V
12	V	V	V	V		
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).

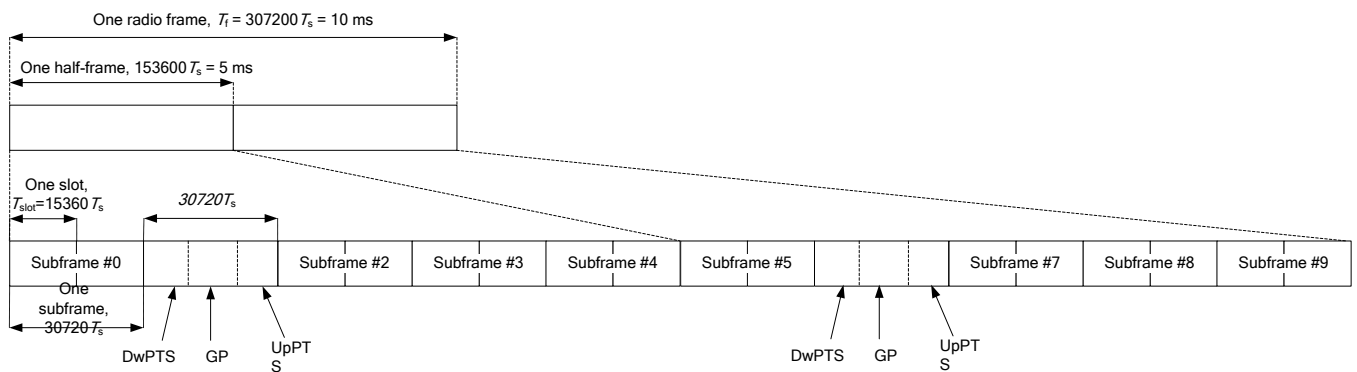
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In addition, the device is compliant with additional maximum power reduction (A-MPR) requirements defined in 3GPP TS 36.101 section 6.2.4 that was disabled for all FCC compliance testing.

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

TDD-LTE Setup Configurations

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



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

Special Subframe Configuration	Normal Cyclic Prefix in Downlink			Extended Cyclic Prefix in Downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal Cyclic Prefix in Uplink	Extended Cyclic Prefix in Uplink		Normal Cyclic Prefix in Uplink	Extended Cyclic Prefix in Uplink
0	6592 · Ts	2192 · Ts	2560 · Ts	7680 · Ts	2192 · Ts	2560 · Ts
1	19760 · Ts			20480 · Ts		
2	21952 · Ts			23040 · Ts		
3	24144 · Ts			25600 · Ts		
4	26336 · Ts			7680 · Ts		
5	6592 · Ts	4384 · Ts	5120 · Ts	20480 · Ts	4384 · Ts	5120 · Ts
6	19760 · Ts			23040 · Ts		
7	21952 · Ts			12800 · Ts		
8	24144 · Ts	-	-	-	-	-
9	13168 · Ts	-	-	-	-	-

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

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

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

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

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

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

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_2C	5	20		40	0
	10	15, 20			
	15	10, 15, 20			
	20	5, 10, 15, 20			
CA_5B	5, 10	10		20	0
	10	5			
CA_41C	10	20		40	0
	15	15, 20			
	20	10, 15, 20			
	5, 10	20			
	15	15, 20		40	1
	20	5, 10, 15, 20			
	10	15, 20			
	15	10, 15, 20			
20	10, 15, 20		40	2	
10	20				
20	20		40	3	
10	20	15			
CA_41D	10	15, 20	20	60	0
	15	20	10, 15		
	15	10, 15, 20	20		
	20	15, 20	10		
	20	10, 15, 20	15, 20		
	20	10, 15, 20	15, 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			
CA_66D	5	20	20	60	0
	20	5	20		
	20	20	5		
	10	20	15		
	15	20	10		
	10, 15, 20	15, 20	20		
	15, 20	10	20		
	15	15, 20	15		
	20	15, 20	10, 15		
	20	10	15		

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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_41A-41A	10, 15, 20	10, 15, 20		40	0
	5, 10, 15, 20	5, 10, 15, 20		40	1
CA_41A-41C	5, 10, 15, 20	Refer to CA_41C (BCS1)		60	0
	Refer to CA_41C (BCS1)		5, 10, 15, 20		
CA_41A-41D	5, 10, 15, 20	Refer to CA_66B (BCS0)		40	0
	Refer to CA_41D (BCS0)				
CA_66A-66A	5, 10, 15, 20	5, 10, 15, 20		40	0

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		
CA_2A-2A-4A	2	5, 10, 15, 20	40	2
	4	5, 10, 15, 20		
CA_2A-4A-4A	2	Refer to CA_2A-2A (BCS0)	60	0
	4	5, 10, 15, 20		
CA_2A-5A	4	Refer to CA_4A-4A (BCS0)	60	0
	2	5, 10, 15, 20		
	5	5, 10		
CA_2A-2A-5A	2	5, 10	30	0
	5	5, 10		
CA_2A-5B	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)		
CA_2A-7A	2	5, 10, 15, 20	40	0
	7	5, 10, 15, 20		
CA_2A-7A-7A	2	5, 10, 15, 20	60	0
	7	Refer to CA_7A-7A (BCS1)		
CA_2A-2A-12A	2	Refer to CA_2A-2A (BCS0)	50	0
	12	5, 10		
CA_2A-13A	2	5, 10, 15, 20	30	0
	13	10		
	2	5, 10	20	1
	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-17A	2	5, 10	20	0
	17	5, 10		
CA_2A-30A	2	5, 10, 15, 20	30	0
	30	5, 10		

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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		
CA_2A-66B	2	5, 10, 15, 20	40	2
	66	5, 10, 15, 20		
CA_2A-66C	2	5, 10, 15, 20	40	0
	66	Refer to CA_66B (BCS0)		
CA_2A-2A-66A	2	5, 10, 15, 20	60	0
	66	Refer to CA_2A-2A (BCS0)		
CA_2A-2A-66A-66A	2	5, 10, 15, 20	60	0
	66	Refer to CA_66A-66A (BCS0)		
CA_2A-2A-66C	2	5, 10, 15, 20	80	0
	66	Refer to CA_2A-2A (BCS0)		
CA_4A-5A	2	5, 10, 15, 20	60	0
	66	Refer to CA_66A-66A (BCS0)		
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	5, 10, 15, 20	50	0
	5	Refer to CA_4A-4A (BCS0)		
CA_4A-7A	4	5, 10	30	0
	7	5, 10, 15, 20		
	4	5, 10, 15, 20	40	1
	7	5, 10, 15, 20		
CA_4A-7A-7A	4	5, 10, 15, 20	60	0
	7	Refer to the CA_7A-7A (BCS1)		
CA_4A-12A	4	1.4, 3, 5, 10	20	0
	12	5, 10		
	4	1.4, 3, 5, 10, 15, 20	30	1
	12	5, 10		
	4	5, 10, 15, 20	30	2
	12	3, 5, 10		
	4	5, 10	20	3
	12	5, 10		
	4	5, 10, 15, 20	30	4
	12	5, 10		
4	5, 10, 15	20	5	
12	5			
CA_4A-4A-12A	4	5, 10, 15, 20	50	0
	12	Refer to CA_4A-4A (BCS0)		
CA_4A-12B	4	5, 10, 15, 20	35	0
	12	Refer to CA_12B (BCS0)		
CA_4A-13A	4	5, 10, 15, 20	30	0
	13	10		
	4	5, 10	20	1
13	10			
CA_4A-4A-13A	4	5, 10, 15, 20	50	0
	13	Refer to CA_4A-4A (BCS0)		
CA_4A-17A	4	5, 10	20	0
	17	5, 10		
CA_4A-30A	4	5, 10, 15, 20	30	0
	30	5, 10		

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CA_4A-4A-30A	4	Refer to CA_4A-4A (BCS0)	50	0
	30	5, 10		
CA_5A-7A	5	1.4, 3, 5, 10	30	0
	7	10, 15, 20		
	5	5, 10	30	1
	7	10, 15, 20		
CA_5A-30A	5	5, 10	20	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_7A-12A	7	5, 10, 15, 20	30	0
	12	5, 10		
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		
	12	5	20	5
66	5, 10, 15			
CA_12A-66A-66A	12	5, 10	50	0
	66	Refer to CA_66A-66A (BCS0)		
CA_12A-66C	12	5, 10	50	0
	66	Refer to CA_66C (BCS0)		
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		

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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_25A-41A	25	5, 10, 15, 20	40	0
	41	5, 10, 15, 20		
CA_25A-41C	25	5, 10, 15, 20	60	0
	41	Refer to CA_41C (BCS1)		
CA_25A-41D	25	5, 10, 15, 20	80	0
	41	Refer to CA_41D (BCS0)		
CA_26A-41A	26	5, 10, 15	35	0
	41	5, 10, 15, 20		
CA_26A-41C	26	5, 10, 15	55	0
	41	Refer to CA_41C (BCS1)		
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)		

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-7A-7A	2	5, 10, 15, 20	80	0
	4	5, 10, 15, 20		
	7	Refer to the CA_7A-7A (BCS1)		
CA_2A-4A-7C	2	5, 10, 15, 20	80	0
	4	5, 10, 15, 20		
	7	Refer to CA_7C (BCS1)		
CA_2A-4A-4A-12A	2	5, 10, 15, 20	70	0
	4	Refer to CA_4A-4A (BCS0)		
	12	5, 10		
CA_2A-4A-13A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	13	10		
CA_2A-4A-30A	2	5, 10, 15, 20	50	0
	4	5, 10, 15, 20		
	30	5, 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-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-5B-30A	2	5, 10, 15, 20	50	0
	5	Refer to CA_5B (BCS0)		
	30	5, 10		

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CA_2A-5A-66A	2	5, 10, 15, 20	50	0
	5	5, 10		
	66	5, 10, 15, 20		
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-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	Refer to CA_2A-2A (BCS0)	70	0
	12	5, 10		
	66	5, 10, 15, 20		
CA_2A-12A-66A-66A	2	5, 10, 15, 20	70	0
	12	5, 10		
	66	Refer to 66A-66A (BCS0)		
CA_2A-12A-66C	2	5, 10, 15, 20	70	0
	12	5, 10		
	66	Refer to CA_66C (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		
CA_2A-30A-66A	2	5, 10, 15, 20	50	0
	30	5, 10		
	66	5, 10, 15, 20		

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CA_4A-5A-30A	4	5, 10, 15, 20	40	0
	5	5, 10		
	30	5, 10		
CA_4A-7A-12A	4	5, 10	40	0
	7	5, 10, 15, 20		
	12	5, 10		
	4	5, 10, 15, 20	50	1
	7	5, 10, 15, 20		
12	5, 10			
CA_4A-12A-30A	4	5, 10, 15, 20	40	0
	12	5, 10		
	30	5, 10		
CA_4A-4A-12A-30A	4	Refer to CA_4A-4A (BCS0)	60	0
	12	5, 10		
	30	5, 10		
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)		

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

Downlink CA Configuration	LTE Bands	Channel Bandwidths for Carrier (MHz)	Maximum Aggregated Bandwidth (MHz)	Bandwidth Combination Set
CA_2A-2A-5A-30A-66A	2	Refer to CA_2A-2A (BCS0)	80	0
	5	5, 10		
	30	5, 10		
	66	5, 10, 15, 20		
CA_2A-4A-5A-30A	2	5, 10, 15, 20	60	0
	4	5, 10, 15, 20		
	5	5, 10		
	30	5, 10		
CA_2A-4A-7A-12A	2	5, 10, 15, 20	70	0
	4	5, 10, 15, 20		
	7	5, 10, 15, 20		
	12	5, 10		
CA_2A-4A-12A-30A	2	5, 10, 15, 20	60	0
	4	5, 10, 15, 20		
	12	5, 10		
	30	5, 10		
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		
	66	5, 10, 15, 20		
CA_2A-7A-12A-66A	2	5, 10, 15, 20	70	0
	7	5, 10, 15, 20		
	12	5, 10		
	66	5, 10, 15, 20		
CA_2A-12A-30A-66A	2	5, 10, 15, 20	60	0
	12	5, 10		
	30	5, 10		
	66	5, 10, 15, 20		

<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.

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	Intra Band		Inter Band							
	Contiguous	Non-Contiguous	2 Bands / 2CC	2 Bands / 3CC	3 Bands / 3CC	Bands / 3CC	3 Bands / 4CC	3 Bands / 5CC	4 Bands / 4CC	4 Bands / 5CC
LTE Downlink CA-Configure	CA_2C			CA_2A-5B	CA_2A-2A-5B		CA_2A-5B-30A			
	CA_5B			CA_5B-66A	CA_5B-66A-66A		CA_2A-5B-66A	CA_2A-5B-66A-6A		
				CA_5A-66C			CA_5B-30A-66A	CA_5B-30A-66A-66A		
				CA_2A-66B			CA_2A-5A-66B			
				CA_5A-66B						
	CA_66B		CA_2A-66A	CA_2A-2A-66A	CA_2A-2A-66A-6A	CA_2A-5A-66A	CA_2A-5A-66A-6A		CA_2A-5A-30A-66A	
	CA_66C		CA_5A-66A	CA_5A-66A-66A		CA_5A-30A-66A	CA_5A-30A-66A-66A			
	CA_66D	CA_66A-66C	CA_30A-66A	CA_30A-66A-66A		CA_2A-30A-66A	CA_2A-5A-66C			
		CA_2A-2A	CA_2A-4A	CA_2A-2A-4A		CA_2A-4A-5A	CA_2A-2A-5A-30A			
			CA_2A-5A	CA_2A-2A-5A			CA_2A-2A-5A-66A			
		CA_4A-4A		CA_2A-4A-4A			CA_2A-4A-4A-12A		CA_2A-4A-5A-30A	
			CA_4A-5A	CA_4A-4A-5A						
			CA_4A-30A	CA_4A-4A-30A		CA_4A-5A-30A				
			CA_5A-30A		CA_2A-2A-66C	CA_2A-5A-30A				
		CA_66A-66A	CA_2A-12A	CA_2A-2A-12A			CA_2A-2A-12A-30A			
				CA_2A-66C			CA_2A-2A-12A-6A			
				CA_12A-66C		CA_2A-12A-66A	CA_2A-12A-66C		CA_2A-12A-30A-66A	
				CA_2A-66A-66A		CA_12A-30A-6A	CA_12A-30A-6A-66A			
			CA_12A-66A	CA_12A-66A-66A			CA_2A-12A-66A-66A			
			CA_2A-7A	CA_2A-7A-7A		CA_2A-4A-7A				
			CA_7A-12A			CA_2A-7A-12A	CA_2A-4A-7C		CA_2A-4A-7A-12A	
			CA_4A-7A	CA_4A-7A-7A		CA_4A-7A-12A	CA_2A-4A-7A-7A			
			CA_4A-12A	CA_4A-4A-12A		CA_4A-12A-30A	CA_4A-4A-12A-30A			
				CA_4A-12B		CA_2A-4A-30A			CA_2A-4A-12A-30A	
			CA_12A-30A			CA_2A-12A-30A				
			CA_13A-66A	CA_13A-66A-66A	CA_13A-66C	CA_2A-13A-66A	CA_2A-13A-66C			
							CA_2A-13A-66A-66A			
				CA_13A-66B			CA_2A-13A-66B			
			CA_2A-13A	CA_2A-2A-13A			CA_2A-2A-13A-66A			
			CA_4A-13A	CA_4A-4A-13A		CA_2A-4A-13A				
			CA_2A-14A							
			CA_2A-30A			CA_2A-14A-30A				
			CA_14A-30A							
CA_41C	CA_41A-41A									
CA_41D	CA_41A-41C	CA_25A-41A	CA_25A-41C	CA_25A-41D						
	CA_41A-41D									
		CA_14A-66A	CA_14A-66A-66A							
		CA_26A-41A	CA_26A-41C							
		CA_2A-17A								
		CA_4A-17A								
		CA_5A-7A								

• Only yellow highlighted cells need power measurement.

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	Intra Band(4*4 MIMO)		Inter Band (4*4 MIMO)				
	Contiguous	Non-Contiguous	2 Bands / 2CC	2 Bands / 3CC	3 Bands / 3CC	2 Bands / 4CC	3 Bands / 4CC
LTE Downlink CA(4*4 MIMO)- Configure	CA_2C	CA_2A-2A	CA_2A-4A	CA_2A-2A-4A		CA_2A-2A-66C	
		CA_4A-4A	CA_4A-7A	CA_2A-4A-4A	CA_2A-4A-7A		CA_2A-4A-7C
	CA_7C	CA_7A-7A		CA_2A-7A-7A			
			CA_2A-5A	CA_2A-2A-5A		CA_2A-4A-5A	CA_2A-5A-66C
			CA_5A-30A		CA_2A-5A-30A		CA_2A-5B-30A
			CA_2A-66A	CA_2A-5B	CA_2A-5A-66A	CA_5B-66A-66A	
			CA_5A-66A	CA_5A-66A-66A			CA_2A-5B-66A
				CA_5A-66B			
				CA_5A-66C			
				CA_2A-2A-66A	CA_2A-12A-66A		
				CA_2A-66A-66A			CA_2A-12A-66C
			CA_12A-66A	CA_12A-66A-66A			
				CA_12A-66C			
	CA_66B			CA_2A-66B			CA_2A-13A-66B
	CA_66C			CA_2A-66C	CA_2A-13A-66A	CA_2A-2A-66C	
	CA_66D	CA_66A-66A	CA_13A-66A	CA_13A-66A-66A			CA_2A-13A-66C
				CA_13A-66B			
				CA_13A-66C			
			CA_25A-41A	CA_25A-41C			
	CA_41C	CA_41A-41A				CA_25A-41D	
	CA_41D	CA_41A-41C					
		CA_41A-41D					
			CA_2A-12A	CA_2A-2A-12A	CA_2A-4A-12A		
			CA_4A-12A				
			CA_2A-13A	CA_2A-2A-13A	CA_2A-4A-13A		
			CA_4A-13A				
			CA_2A-30A		CA_2A-4A-30A		
			CA_12A-30A		CA_2A-12A-30A		
					CA_2A-30A-66A		
			CA_2A-14A		CA_2A-14A-30A		
		CA_2A-7A		CA_2A-7A-12A			
		CA_7A-12A					
		CA_5A-7A	CA_5A-7A-7A				
		CA_2A-17A					
		CA_4A-5A					
		CA_4A-17A					
		CA_25A-26A					
	CA_66A-66C						

• Only yellow highlighted cells need power measurement.

LTE Uplink Carrier Aggregation (CA) Setup Configurations

This device supports LTE uplink CA for band 41 only with a maximum of two 20 MHz carrier components in the uplink. The maximum output power for uplink intra-band contiguous CA specified in Table 6.2.2A-1 of 3GPP TS 36.101 is the same as single carrier specified in Table 6.2.2-1 of 3GPP TS 36.101. In Table 6.2.3A-1 of 3GPP TS 36.101, the MPR (maximum power reduction) for several dB is allowed due to modulation and contiguously aggregated transmit bandwidth configuration. All the RF parameters in this device have followed above 3GPP criteria.

Uplink 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			
CA_7C	15	15		40	0
	20	20			
	10	20		40	1
	15	15, 20			
	20	10, 15, 20		40	2
	15	10, 15			
CA_41C	20	15, 20		40	0
	10	20			
	15	15, 20			
	20	10, 15, 20		40	1
	5, 10	20			
	15	15, 20			
	20	5, 10, 15, 20		40	2
	10	15, 20			
	15	10, 15, 20			
	20	10, 15, 20		40	3
10	20				
20	20				

This device does not support full CA (Carrier Aggregation) features on 3GPP release 12. Its capability for LTE CA is for LTE band 41 only and supported configuration is shown in above. For network enhancement features, it does not support Wi-Fi Offloading, Enhanced SC-FDMA, Uplink MIMO, CoMP, HetNet, Relay, SON, Cross-Carrier Scheduling, eICIC, Enhanced Downlink MIMO, MBMS, M2M/D2D. All other uplink communications are identical to the LTE Release 8 specifications.

<Considerations Related to WLAN for Setup and Testing>

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

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

Initial Test Configuration

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

Subsequent Test Configuration

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. When the highest reported SAR for the initial test configuration according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

SAR Test Configuration and Channel Selection

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

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

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

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

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

<Considerations Related to Bluetooth for Setup and Testing>

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

The Bluetooth call box has been used during SAR measurement and the EUT was set to DH5 mode at the maximum output power. Its duty factor was calculated as below and the measured SAR for Bluetooth would be scaled to the 100% transmission duty factor to determine compliance.

4.2 EUT Testing Position

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.

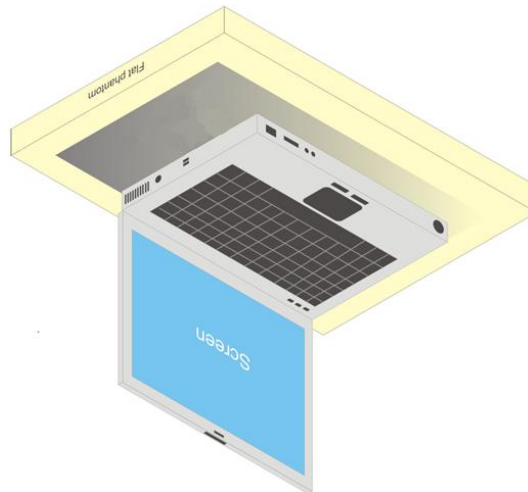


Fig-4.1 Illustration for Laptop Setup

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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.

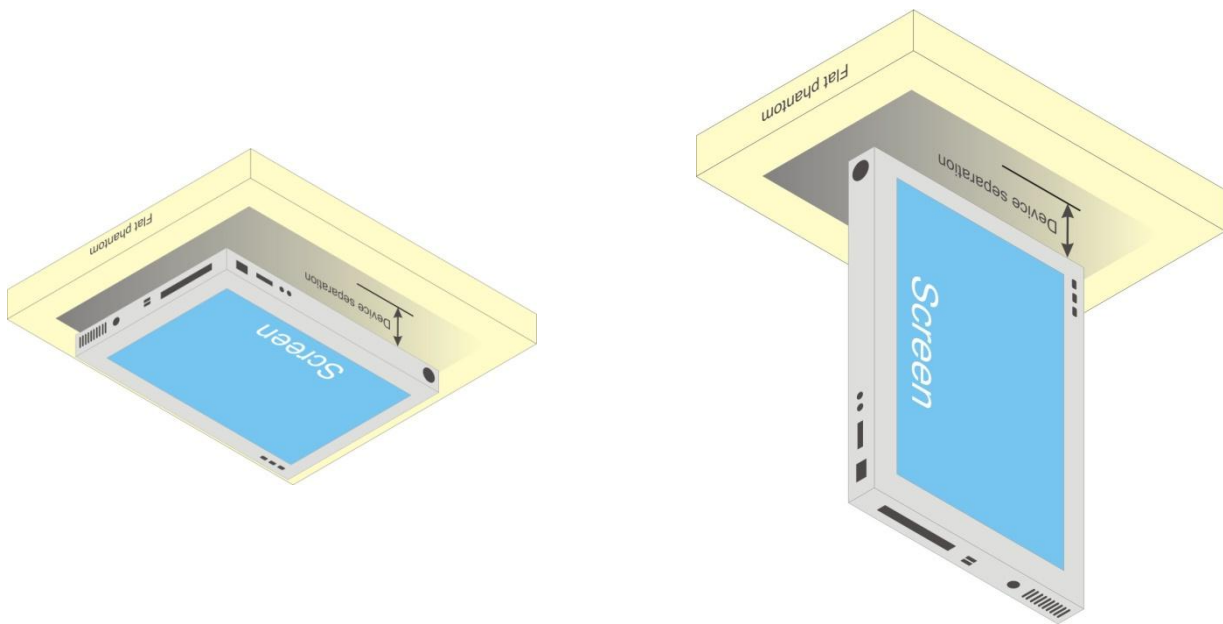


Fig-4.2 Illustration for Tablet Setup

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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.

1. For the test separation distance ≤ 50 mm

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

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

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

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

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

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

<For WWAN Ant>

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face			Left Side			Right Side			Top Side			Bottom 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	292	2529 mW	No	1.8	77.9	Yes	4.98	77.9	Yes	135.4	963 mW	No
WCDMA IV	24	251	5	66.46	Yes	292	2533 mW	No	5	66.46	Yes	5	66.46	Yes	135.4	967 mW	No
WCDMA V	24.5	282	5	51.89	Yes	292	1529 mW	No	1.8	51.89	Yes	4.98	51.89	Yes	135.4	645 mW	No
LTE 2	24.5	282	5	77.95	Yes	292	2529 mW	No	1.8	77.95	Yes	4.98	77.95	Yes	135.4	963 mW	No
LTE 4	24	251	5	66.5	Yes	292	2533 mW	No	5	66.5	Yes	5	66.5	Yes	135.4	967 mW	No
LTE 5	24.5	282	5	51.97	Yes	292	1533 mW	No	1.8	51.97	Yes	4.98	51.97	Yes	135.4	646 mW	No
LTE 7	24.0	251	5	80.48	Yes	292	2514 mW	No	1.8	80.48	Yes	4.98	80.48	Yes	135.4	948 mW	No
LTE 12	24.5	282	5	47.72	Yes	292	1332 mW	No	1.8	47.72	Yes	4.98	47.72	Yes	135.4	585 mW	No
LTE 13	24.5	282	5	50.03	Yes	292	1439 mW	No	1.8	50.03	Yes	4.98	50.03	Yes	135.4	617 mW	No
LTE 14	24.5	282	5	50.38	Yes	292	1455 mW	No	1.8	50.38	Yes	4.98	50.38	Yes	135.4	622 mW	No
LTE 17	24.5	282	5	47.72	Yes	292	1332 mW	No	1.8	47.72	Yes	4.98	47.72	Yes	135.4	585 mW	No
LTE 25	24.0	251	5	69.47	Yes	292	2528 mW	No	1.8	69.47	Yes	4.98	69.47	Yes	135.4	962 mW	No
LTE 26	24.5	282	5	51.97	Yes	292	1533 mW	No	1.8	51.97	Yes	4.98	51.97	Yes	135.4	646 mW	No
LTE 30	23	200	5	60.86	Yes	292	2519 mW	No	5	60.86	Yes	5	60.86	Yes	135.4	953 mW	No
LTE 38	24.0	251	5	81.26	Yes	292	2513 mW	No	1.8	81.26	Yes	4.98	81.26	Yes	135.4	947 mW	No
LTE 41	24.0	251	5	82.33	Yes	292	2511 mW	No	1.8	82.33	Yes	4.98	82.33	Yes	135.4	945 mW	No
LTE 66	24	251	5	66.98	Yes	292	2532 mW	No	5	66.98	Yes	5	66.98	Yes	135.4	966 mW	No

FCC SAR Test Report

<For BT/WLAN SISO Ant-0>

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face			Left Side			Right Side			Top Side			Bottom 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?
WLAN 2.4G	18.0	63	5	19.77	Yes	226.35	1859 mW	No	32.45	3.05	Yes	2.73	19.77	Yes	198.65	1582 mW	No
WLAN 5.2G	18.0	63	5	28.84	Yes	226.35	1829 mW	No	32.45	4.44	Yes	2.73	28.84	Yes	198.65	1552 mW	No
WLAN 5.3G	18.0	63	5	29.06	Yes	226.35	1829 mW	No	32.45	4.48	Yes	2.73	29.06	Yes	198.65	1552 mW	No
WLAN 5.6G	18.0	63	5	30.13	Yes	226.35	1826 mW	No	32.45	4.64	Yes	2.73	30.13	Yes	198.65	1549 mW	No
WLAN 5.8G	18.0	63	5	30.41	Yes	226.35	1826 mW	No	32.45	4.69	Yes	2.73	30.41	Yes	198.65	1549 mW	No
BT	6.0	4	5	1.26	No	226.35	1859 mW	No	32.45	0.19	No	2.73	1.26	No	198.65	1582 mW	No

<For WLAN SISO Ant-1>

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face			Left Side			Right Side			Top Side			Bottom 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?
WLAN 2.4G	18.0	63	5	19.77	Yes	32.45	3.05	Yes	226.35	1859 mW	No	2.73	19.77	Yes	198.65	1582 mW	No
WLAN 5.2G	18.0	63	5	28.84	Yes	32.45	4.44	Yes	226.35	1829 mW	No	2.73	28.84	Yes	198.65	1552 mW	No
WLAN 5.3G	18.0	63	5	29.06	Yes	32.45	4.48	Yes	226.35	1829 mW	No	2.73	29.06	Yes	198.65	1552 mW	No
WLAN 5.6G	18.0	63	5	30.13	Yes	32.45	4.64	Yes	226.35	1826 mW	No	2.73	30.13	Yes	198.65	1549 mW	No
WLAN 5.8G	18.0	63	5	30.41	Yes	32.45	4.69	Yes	226.35	1826 mW	No	2.73	30.41	Yes	198.65	1549 mW	No

<For WLAN MIMO Ant-0 + Ant-1>

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face			Left Side			Right Side			Top Side			Bottom 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?
WLAN 2.4G	18.0	63	5	19.77	Yes	32.45	3.05	Yes	32.45	3.05	Yes	2.73	19.77	Yes	198.65	1582 mW	No
WLAN 5.2G	21.0	126	5	57.69	Yes	32.45	8.89	Yes	32.45	8.89	Yes	2.73	57.69	Yes	198.65	1552 mW	No
WLAN 5.3G	18.5	71	5	32.75	Yes	32.45	5.05	Yes	32.45	5.05	Yes	2.73	32.75	Yes	198.65	1552 mW	No
WLAN 5.6G	18.0	63	5	30.13	Yes	32.45	4.64	Yes	32.45	4.64	Yes	2.73	30.13	Yes	198.65	1549 mW	No
WLAN 5.8G	18.0	63	5	30.41	Yes	32.45	4.69	Yes	32.45	4.69	Yes	2.73	30.41	Yes	198.65	1549 mW	No

4.3 Tissue Verification

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

Test Date	Tissue Type	Frequency (MHz)	Liquid Temp. (°C)	Measured Conductivity (σ)	Measured Permittivity (ε _r)	Target Conductivity (σ)	Target Permittivity (ε _r)	Conductivity Deviation (%)	Permittivity Deviation (%)
Aug. 03, 2018	Body	750	23.5	0.972	54.365	0.96	55.5	1.25	-2.05
Aug. 06, 2018	Body	750	23.3	0.959	56.412	0.96	55.5	-0.10	1.64
Aug. 09, 2018	Body	750	23.3	0.957	55.472	0.96	55.5	-0.31	-0.05
Jul. 31, 2018	Body	835	23.5	0.979	56.29	0.97	55.2	0.93	1.97
Aug. 03, 2018	Body	835	23.5	0.976	57.737	0.97	55.2	0.62	4.60
Aug. 06, 2018	Body	835	23.4	0.968	57.125	0.97	55.2	-0.21	3.49
Aug. 03, 2018	Body	1750	23.3	1.43	51.827	1.49	53.4	-4.03	-2.95
Aug. 06, 2018	Body	1750	23.4	1.442	51.949	1.49	53.4	-3.22	-2.72
Aug. 03, 2018	Body	1900	23.5	1.569	51.455	1.52	53.3	3.22	-3.46
Aug. 06, 2018	Body	1900	23.4	1.581	51.565	1.52	53.3	4.01	-3.26
Aug. 03, 2018	Body	2300	23.5	1.861	51.032	1.81	52.9	2.82	-3.53
Aug. 04, 2018	Body	2450	23.5	1.996	52.533	1.95	52.7	2.36	-0.32
Aug. 09, 2018	Body	2450	23.3	2.017	51.297	1.95	52.7	3.44	-2.66
Aug. 11, 2018	Body	2450	23.6	2.036	51.372	1.95	52.7	4.41	-2.52
Aug. 14, 2018	Body	2450	23.3	2.022	51.629	1.95	52.7	3.69	-2.03
Aug. 14, 2018	Body	2450	23.5	2.024	50.609	1.95	52.7	3.79	-3.97
Aug. 01, 2018	Body	2600	23.2	2.169	52.144	2.16	52.5	0.42	-0.68
Aug. 02, 2018	Body	2600	23.4	2.206	51.522	2.16	52.5	2.13	-1.86
Aug. 03, 2018	Body	2600	23.3	2.188	50.163	2.16	52.5	1.30	-4.45
Aug. 06, 2018	Body	2600	23.4	2.192	50.121	2.16	52.5	1.48	-4.53
Aug. 09, 2018	Body	2600	23.3	2.194	50.921	2.16	52.5	1.57	-3.01
Aug. 08, 2018	Body	5250	23.3	5.351	49.105	5.36	48.9	-0.17	0.42
Aug. 09, 2018	Body	5250	23.3	5.35	49.103	5.36	48.9	-0.19	0.42
Aug. 10, 2018	Body	5250	23.3	5.34	49.053	5.36	48.9	-0.37	0.31
Aug. 08, 2018	Body	5600	23.3	5.828	48.581	5.77	48.5	1.01	0.17
Aug. 09, 2018	Body	5600	23.3	5.827	48.58	5.77	48.5	0.99	0.16
Aug. 11, 2018	Body	5600	23.6	5.894	46.75	5.77	48.5	2.15	-3.61
Aug. 08, 2018	Body	5800	23.3	6.074	48.636	6	48.2	1.23	0.90
Aug. 09, 2018	Body	5800	23.3	6.071	48.635	6	48.2	1.18	0.90
Aug. 11, 2018	Body	5800	23.6	6.171	46.415	6	48.2	2.85	-3.70

Note:

The dielectric properties of the tissue simulating liquid must be measured within 24 hours before the SAR testing and within ±5% of the target values. Liquid temperature during the SAR testing must be within ±2 °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
Aug. 03, 2018	7346	Body	750	0.972	54.365	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 06, 2018	7346	Body	750	0.959	56.412	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 09, 2018	7346	Body	750	0.957	55.472	Pass	Pass	Pass	N/A	N/A	N/A
Jul. 31, 2018	7346	Body	835	0.979	56.29	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 03, 2018	7346	Body	835	0.976	57.737	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 06, 2018	7346	Body	835	0.968	57.125	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 03, 2018	7346	Body	1750	1.43	51.827	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 06, 2018	7346	Body	1750	1.442	51.949	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 03, 2018	7346	Body	1900	1.569	51.455	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 06, 2018	7346	Body	1900	1.581	51.565	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 03, 2018	7346	Body	2300	1.861	51.032	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 04, 2018	7346	Body	2450	1.996	52.533	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 09, 2018	7346	Body	2450	2.017	51.297	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 11, 2018	3898	Body	2450	2.036	51.372	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 14, 2018	3971	Body	2450	2.022	51.629	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 14, 2018	3971	Body	2450	2.024	50.609	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 01, 2018	7346	Body	2600	2.169	52.144	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 02, 2018	7346	Body	2600	2.206	51.522	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 03, 2018	7346	Body	2600	2.188	50.163	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 06, 2018	7346	Body	2600	2.192	50.121	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 09, 2018	7346	Body	2600	2.194	50.921	Pass	Pass	Pass	N/A	N/A	N/A
Aug. 08, 2018	7346	Body	5250	5.351	49.105	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 09, 2018	7346	Body	5250	5.35	49.103	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 10, 2018	3898	Body	5250	5.34	49.053	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 08, 2018	7346	Body	5600	5.828	48.581	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 09, 2018	7346	Body	5600	5.827	48.58	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 11, 2018	3898	Body	5600	5.894	46.75	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 08, 2018	7346	Body	5800	6.074	48.636	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 09, 2018	7346	Body	5800	6.071	48.635	Pass	Pass	Pass	OFDM	N/A	Pass
Aug. 11, 2018	3898	Body	5800	6.171	46.415	Pass	Pass	Pass	OFDM	N/A	Pass

4.5 System Verification

The measuring result for system verification is tabulated as below.

Test Date	Mode	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
Aug. 03, 2018	Body	750	8.72	2.15	8.60	-1.38	1013	7346	679
Aug. 06, 2018	Body	750	8.72	2.12	8.48	-2.75	1013	7346	679
Aug. 09, 2018	Body	750	8.72	2.3	9.20	5.50	1013	7346	679
Jul. 31, 2018	Body	835	9.61	2.43	9.72	1.14	4d121	7346	679
Aug. 03, 2018	Body	835	9.61	2.32	9.28	-3.43	4d121	7346	679
Aug. 06, 2018	Body	835	9.61	2.23	8.92	-7.18	4d121	7346	679
Aug. 03, 2018	Body	1750	37.10	9.16	36.64	-1.24	1055	7346	679
Aug. 06, 2018	Body	1750	37.10	8.96	35.84	-3.40	1055	7346	679
Aug. 03, 2018	Body	1900	40.20	10.4	41.60	3.48	5d036	7346	679
Aug. 06, 2018	Body	1900	40.20	9.97	39.88	-0.80	5d036	7346	679
Aug. 03, 2018	Body	2300	47.30	11.3	45.20	-4.44	1004	7346	679
Aug. 04, 2018	Body	2450	49.70	12.2	48.80	-1.81	737	7346	679
Aug. 09, 2018	Body	2450	49.70	12.4	49.60	-0.20	737	7346	679
Aug. 11, 2018	Body	2450	49.70	12.5	50.00	0.60	737	3898	1277
Aug. 14, 2018	Body	2450	49.70	12.3	49.20	-1.01	737	3971	1431
Aug. 14, 2018	Body	2450	49.70	13.1	52.40	5.43	737	3971	1431
Aug. 01, 2018	Body	2600	54.30	13.6	54.40	0.18	1020	7346	679
Aug. 02, 2018	Body	2600	54.30	14.6	58.40	7.55	1020	7346	679
Aug. 03, 2018	Body	2600	54.30	14.10	56.40	3.87	1020	7346	679
Aug. 06, 2018	Body	2600	54.30	14.2	56.80	4.60	1020	7346	679
Aug. 09, 2018	Body	2600	54.30	13.8	55.20	1.66	1020	7346	679
Aug. 08, 2018	Body	5250	74.90	7.79	77.90	4.01	1019	7346	679
Aug. 09, 2018	Body	5250	74.90	7.61	76.10	1.60	1019	7346	679
Aug. 10, 2018	Body	5250	74.90	7.62	76.20	1.74	1019	3898	1277
Aug. 08, 2018	Body	5600	79.30	8.3	83.00	4.67	1019	7346	679
Aug. 09, 2018	Body	5600	79.30	7.98	79.80	0.63	1019	7346	679
Aug. 11, 2018	Body	5600	79.30	8.09	80.90	2.02	1019	3898	1277
Aug. 08, 2018	Body	5800	75.20	7.47	74.70	-0.66	1019	7346	679
Aug. 09, 2018	Body	5800	75.20	7.3	73.00	-2.93	1019	7346	679
Aug. 11, 2018	Body	5800	75.20	8.02	80.20	6.65	1019	3898	1277

Note:

Comparing to the reference SAR value provided by SPEAG, the validation data should be within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots can be referred to Appendix A of this report.

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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.

Laptop PC Mode

Mode	WCDMA Band II	WCDMA Band IV	WCDMA Band V
RMC 12.2K	13.5	13.5	18.5
HSDPA / HSUPA / DC-HSDPA	12.5	12.5	17.5

Mode	LTE 2	LTE 4	LTE 5	LTE 12
Maximum Target Power	13.5	13.5	18.0	18.0

Mode	LTE 13	LTE 14	LTE 17	LTE 25
Maximum Target Power	17.0	18.5	19.5	13.5

Mode	LTE 26	LTE 30	LTE 38	LTE 41
Maximum Target Power	18.5	15.0	14.0	14.0

Mode	LTE 66
Maximum Target Power	16.5

Mode	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
802.11b	SISO Ant-0: 10.0 SISO Ant-1: 10.0 MIMO Ant-0+1: 12.5	N/A	N/A	N/A	N/A
802.11g	SISO Ant-0: 10.0 SISO Ant-1: 10.0 MIMO Ant-0+1: 12.5	N/A	N/A	N/A	N/A
802.11a	N/A	SISO Ant-0: 9.0 SISO Ant-1: 9.5 MIMO Ant-0+1: 12.5	SISO Ant-0: 9.0 SISO Ant-1: 9.5 MIMO Ant-0+1: 12.5	SISO Ant-0: 8.0 SISO Ant-1: 9.0 MIMO Ant-0+1: 12.0	SISO Ant-0: 8.5 SISO Ant-1: 9.0 MIMO Ant-0+1: 11.5
802.11n HT20	SISO Ant-0: 10.0 SISO Ant-1: 10.0 MIMO Ant-0+1: 12.5	N/A	N/A	N/A	N/A
802.11n HT40	SISO Ant-0: 10.0 SISO Ant-1: 10.0 MIMO Ant-0+1: 12.5	N/A	N/A	N/A	N/A
802.11ac VHT20	N/A	SISO Ant-0: 9.0 SISO Ant-1: 9.5 MIMO Ant-0+1: 12.5	SISO Ant-0: 9.0 SISO Ant-1: 9.5 MIMO Ant-0+1: 12.5	SISO Ant-0: 8.0 SISO Ant-1: 9.0 MIMO Ant-0+1: 12.0	SISO Ant-0: 8.5 SISO Ant-1: 9.0 MIMO Ant-0+1: 11.5
802.11ac VHT40	N/A	SISO Ant-0: 9.0 SISO Ant-1: 9.5 MIMO Ant-0+1: 12.5	SISO Ant-0: 9.0 SISO Ant-1: 9.5 MIMO Ant-0+1: 12.5	SISO Ant-0: 8.0 SISO Ant-1: 9.0 MIMO Ant-0+1: 12.0	SISO Ant-0: 8.5 SISO Ant-1: 9.0 MIMO Ant-0+1: 11.5
802.11ac VHT80	N/A	SISO Ant-0: 9.0 SISO Ant-1: 9.5 MIMO Ant-0+1: 12.5	SISO Ant-0: 9.0 SISO Ant-1: 9.5 MIMO Ant-0+1: 12.5	SISO Ant-0: 9.0 SISO Ant-1: 9.0 MIMO Ant-0+1: 12.0	SISO Ant-0: 8.5 SISO Ant-1: 9.0 MIMO Ant-0+1: 11.5

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Mode	2.4G Bluetooth
Bluetooth DH	6.0
Bluetooth LE	6.0

Tablet PC Mode

Mode	WCDMA Band II (without Power Reduction)	WCDMA Band II (with Power Reduction)	Power Reduction (dB)
RMC 12.2K	24.5	11.0	13.5
HSDPA / HSUPA / DC-HSDPA	23.5	11.0	12.5

Mode	WCDMA Band IV (without Power Reduction)	WCDMA Band IV (with Power Reduction)	Power Reduction (dB)
RMC 12.2K	24	11.0	13
HSDPA / HSUPA / DC-HSDPA	23	11.0	12

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

Mode	LTE 2 (without Power Reduction)	LTE 2 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.5	10.5	14.0

Mode	LTE 4 (without Power Reduction)	LTE 4 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24	10.7	13.3

Mode	LTE 5 (without Power Reduction)	LTE 5 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.5	18.0	6.5

Mode	LTE 7 (without Power Reduction)	LTE 7 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.0	11.0	13.0

Mode	LTE 12 (without Power Reduction)	LTE 12 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.5	17.0	7.5

Mode	LTE 13 (without Power Reduction)	LTE 13 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.5	16.0	8.5

Mode	LTE 14 (without Power Reduction)	LTE 14 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.5	17.0	7.5

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Mode	LTE 25 (without Power Reduction)	LTE 25 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.0	11.5	12.5

Mode	LTE 26 (without Power Reduction)	LTE 26 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.5	18.5	6.0

Mode	LTE 30 (without Power Reduction)	LTE 30 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	23.0	11.0	12.0

Mode	LTE 38 (without Power Reduction)	LTE 38 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.0	11.0	13.0

Mode	LTE 41 (without Power Reduction)	LTE 41 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24.0	11.0	13.0

Mode	LTE 66 (without Power Reduction)	LTE 66 (with Power Reduction)	Power Reduction (dB)
Maximum Target Power	24	10.5	13.5

Mode	Tx Antenna	2.4G WLAN (without Power Reduction)	2.4G WLAN (with Power Reduction)	Power Reduction (dB)
802.11b	SISO Ant-0	17.0	10.0	7.0
	SISO Ant-1	17.0	10.0	7.0
	MIMO Ant-0+Ant-1	17.0	12.5	4.5
802.11g	SISO Ant-0	18.0	10.0	8.0
	SISO Ant-1	18.0	10.0	8.0
	MIMO Ant-0+Ant-1	18.0	12.5	5.5
802.11n HT20	SISO Ant-0	18.0	10.0	8.0
	SISO Ant-1	18.0	10.0	8.0
	MIMO Ant-0+Ant-1	18.0	12.5	5.5
802.11n HT40	SISO Ant-0	15.5	10.0	5.5
	SISO Ant-1	15.5	10.0	5.5
	MIMO Ant-0+Ant-1	15.5	12.5	3.0

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Mode	Tx Antenna	5.2G WLAN (without Power Reduction)	5.2G WLAN (with Power Reduction)	Power Reduction (dB)
802.11a	SISO Ant-0	18.0	9.0	9.0
	SISO Ant-1	18.0	9.5	8.5
	MIMO Ant-0+Ant-1	21.0	12.5	8.5
802.11ac VHT20	SISO Ant-0	17.0	9.0	8.0
	SISO Ant-1	17.0	9.5	7.5
	MIMO Ant-0+Ant-1	21.0	12.5	8.5
802.11ac VHT40	SISO Ant-0	18.0	9.0	9.0
	SISO Ant-1	18.0	9.5	8.5
	MIMO Ant-0+Ant-1	18.0	12.5	5.5
802.11ac VHT80	SISO Ant-0	18.0	9.0	9.0
	SISO Ant-1	18.0	9.5	8.5
	MIMO Ant-0+Ant-1	18.0	12.5	5.5

Mode	Tx Antenna	5.3G WLAN (without Power Reduction)	5.3G WLAN (with Power Reduction)	Power Reduction (dB)
802.11a	SISO Ant-0	18.0	9.0	9.0
	SISO Ant-1	18.0	9.5	8.5
	MIMO Ant-0+Ant-1	18.5	12.5	6.0
802.11ac VHT20	SISO Ant-0	17.0	9.0	8.0
	SISO Ant-1	17.0	9.5	7.5
	MIMO Ant-0+Ant-1	18.0	12.5	5.5
802.11ac VHT40	SISO Ant-0	18.0	9.0	9.0
	SISO Ant-1	18.0	9.5	8.5
	MIMO Ant-0+Ant-1	18.0	12.5	5.5
802.11ac VHT80	SISO Ant-0	18.0	9.0	9.0
	SISO Ant-1	18.0	9.5	8.5
	MIMO Ant-0+Ant-1	18.0	12.5	5.5

Mode	Tx Antenna	5.6G WLAN (without Power Reduction)	5.6G WLAN (with Power Reduction)	Power Reduction (dB)
802.11a	SISO Ant-0	18.0	8.0	10.0
	SISO Ant-1	18.0	9.0	9.0
	MIMO Ant-0+Ant-1	18.0	12.0	6.0
802.11ac VHT20	SISO Ant-0	17.0	8.0	9.0
	SISO Ant-1	17.0	9.0	8.0
	MIMO Ant-0+Ant-1	17.0	12.0	5.0
802.11ac VHT40	SISO Ant-0	18.0	8.0	10.0
	SISO Ant-1	18.0	9.0	9.5
	MIMO Ant-0+Ant-1	18.0	12.0	6.0
802.11ac VHT80	SISO Ant-0	18.0	9.0	9.0
	SISO Ant-1	18.0	9.0	9.0
	MIMO Ant-0+Ant-1	18.0	12.0	6.0

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Mode	Tx Antenna	5.8G WLAN		Power Reduction (dB)
		(without Power Reduction)	(with Power Reduction)	
802.11a	SISO Ant-0	18.0	8.5	9.5
	SISO Ant-1	18.0	9.0	9.0
	MIMO Ant-0+Ant-1	18.0	11.5	6.5
802.11ac VHT20	SISO Ant-0	18.0	8.5	9.5
	SISO Ant-1	18.0	9.0	9.0
	MIMO Ant-0+Ant-1	18.0	11.5	6.5
802.11ac VHT40	SISO Ant-0	18.0	8.5	9.5
	SISO Ant-1	18.0	9.0	9.0
	MIMO Ant-0+Ant-1	18.0	11.5	6.5
802.11ac VHT80	SISO Ant-0	18.0	8.5	9.5
	SISO Ant-1	18.0	9.0	9.0
	MIMO Ant-0+Ant-1	18.0	11.5	6.5

Mode	2.4G Bluetooth
Bluetooth DH	6.0
Bluetooth LE	6.0

4.6.2 Measured Conducted Power Result

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

Laptop PC Mode

Band Channel Frequency (MHz)	WCDMA Band II			WCDMA Band IV			WCDMA Band V			3GPP MPR (dB)
	9262	9400	9538	1312	1413	1513	4132	4182	4233	
	1852.4	1880.0	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6	
RMC 12.2K	13.18	13.19	13.44	13.26	13.41	13.15	18.46	18.44	18.27	-
HSDPA Subtest-1	12.17	12.18	12.43	12.27	12.42	12.16	17.47	17.45	17.28	0
HSDPA Subtest-2	12.15	12.16	12.41	12.24	12.39	12.13	17.45	17.43	17.26	0
HSDPA Subtest-3	11.76	11.77	11.98	11.82	11.97	11.71	17.00	16.98	16.81	0.5
HSDPA Subtest-4	11.72	11.73	11.98	11.80	11.95	11.69	16.98	16.96	16.79	0.5
DC-HSDPA Subtest-1	12.08	12.09	12.34	12.15	12.30	12.04	17.34	17.32	17.15	0
DC-HSDPA Subtest-2	12.06	12.07	12.32	12.12	12.27	12.01	17.32	17.30	17.13	0
DC-HSDPA Subtest-3	11.67	11.68	11.89	11.70	11.85	11.59	16.87	16.85	16.68	0.5
DC-HSDPA Subtest-4	11.63	11.64	11.89	11.68	11.83	11.57	16.85	16.83	16.66	0.5
HSUPA Subtest-1	12.13	12.14	12.39	12.24	12.39	12.13	17.45	17.43	17.26	0
HSUPA Subtest-2	10.18	10.19	10.44	10.06	10.21	9.95	15.49	15.47	15.32	2
HSUPA Subtest-3	11.12	11.13	11.38	11.20	11.35	11.09	16.50	16.48	16.31	1
HSUPA Subtest-4	10.16	10.17	10.42	10.14	10.29	10.03	15.46	15.47	15.30	2
HSUPA Subtest-5	12.15	12.16	12.41	12.28	12.43	12.17	17.49	17.48	17.32	0

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Laptop PC Mode

LTE Band 4																	
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	13.28	13.22	13.21	0	15M	QPSK	1	0	13.25	13.16	13.19	0		
		1	50	13.08	13.02	13.01	0			1	37	13.00	12.99	13.00	0		
		1	99	12.99	12.93	12.92	0			1	74	12.98	12.83	12.88	0		
		50	0	13.24	13.18	13.17	0			36	0	13.18	13.10	13.10	0		
		50	25	13.18	13.12	13.11	0			36	19	13.15	13.05	13.02	0		
		50	50	13.07	13.01	13.00	0			36	39	13.01	12.98	12.97	0		
	100	0	13.17	13.11	13.10	0	75		0	13.08	13.04	13.07	0				
	16QAM	1	0	13.23	13.21	13.20	0		16QAM	1	0	13.20	13.09	13.11	0		
		1	50	13.05	12.95	12.92	0			1	37	12.99	12.98	12.87	0		
		1	99	12.90	12.85	12.85	0			1	74	12.89	12.91	12.80	0		
		50	0	13.17	13.16	13.13	0			36	0	13.16	13.09	13.15	0		
		50	25	13.10	13.09	13.03	0			36	19	13.13	13.02	12.98	0		
		50	50	13.01	13.01	12.99	0			36	39	12.95	12.94	12.96	0		
	100	0	13.13	13.04	13.07	0	75		0	13.14	13.09	12.95	0				
	64QAM	1	0	13.24	13.18	13.20	0		64QAM	1	0	13.19	13.09	13.09	0		
		1	50	13.07	13.00	12.92	0			1	37	12.96	12.86	12.81	0		
		1	99	12.93	12.90	12.91	0			1	74	12.85	12.75	12.79	0		
		50	0	13.24	13.15	13.14	0			36	0	13.16	13.07	13.04	0		
		50	25	13.12	13.04	13.11	0			36	19	13.10	13.01	13.04	0		
		50	50	13.04	12.92	12.93	0			36	39	12.89	12.83	12.96	0		
	100	0	13.16	13.02	13.02	0	75		0	13.06	13.02	12.99	0				
	10M	QPSK	1	0	13.14	13.01	13.13		0	5M	QPSK	1	0	13.14	13.09	13.01	0
			1	24	12.98	12.93	12.78		0			1	12	12.94	13.00	12.69	0
			1	49	12.80	12.74	12.74		0			1	24	12.96	12.88	12.81	0
25			0	13.11	13.09	13.07	0	12	0			13.18	13.07	12.97	0		
25			12	13.02	13.08	13.01	0	12	6			13.02	12.94	12.87	0		
25			25	12.83	12.82	12.92	0	12	13			13.02	12.94	12.90	0		
50		0	13.05	13.05	12.90	0	25	0	12.97		12.89	12.81	0				
16QAM		1	0	13.10	13.01	13.03	0	16QAM	1		0	13.13	13.07	13.07	0		
		1	24	12.89	12.74	12.90	0		1		12	12.88	12.78	12.92	0		
		1	49	12.87	12.64	12.76	0		1		24	12.84	12.79	12.77	0		
		25	0	13.05	13.07	13.03	0		12		0	13.16	13.00	13.03	0		
		25	12	13.07	12.99	12.85	0		12		6	13.01	12.95	13.05	0		
		25	25	12.93	12.85	12.81	0		12		13	12.83	12.77	12.82	0		
50		0	13.00	12.92	12.93	0	25	0	13.07		12.94	12.97	0				
64QAM		1	0	13.08	13.18	13.08	0	64QAM	1		0	13.02	12.96	12.96	0		
		1	24	12.88	12.83	12.85	0		1		12	12.77	12.67	12.81	0		
		1	49	12.87	12.70	12.65	0		1		24	12.73	12.68	12.66	0		
		25	0	13.03	12.97	12.94	0		12		0	13.05	12.89	12.92	0		
		25	12	12.99	12.88	12.94	0		12		6	12.90	12.84	12.94	0		
		25	25	12.94	12.83	12.84	0		12		13	12.72	12.66	12.71	0		
50		0	13.06	12.88	12.89	0	25	0	12.96		12.83	12.86	0				
3M		QPSK	1	0	13.16	12.99	13.17	0	1.4M		QPSK	1	0	13.18	13.15	12.98	0
			1	7	12.95	12.94	12.83	0				1	2	12.87	12.88	12.86	0
			1	14	12.96	12.71	12.90	0				1	5	12.89	12.75	12.78	0
	8		0	13.24	13.09	12.97	0	3		0		13.03	12.98	13.10	0		
	8		3	13.00	12.96	12.88	0	3		1		13.13	12.99	12.94	0		
	8		7	12.97	12.84	12.85	0	3		3		12.96	12.90	12.96	0		
	15	0	13.02	13.02	12.97	0	6	0		13.07	12.98	12.99	0				
	16QAM	1	0	13.10	13.01	12.97	0	16QAM		1	0	13.03	12.98	13.06	0		
		1	7	12.96	12.85	12.85	0			1	2	12.89	12.85	12.85	0		
		1	14	12.67	12.82	12.84	0			1	5	12.79	12.81	12.66	0		
		8	0	13.14	12.96	12.93	0			3	0	13.07	13.07	12.95	0		
		8	3	12.92	13.04	12.94	0			3	1	12.90	12.85	12.89	0		
		8	7	12.96	12.81	12.76	0			3	3	12.72	12.79	12.78	0		
	15	0	12.93	12.94	13.00	0	6	0		12.96	12.87	12.98	0				
	64QAM	1	0	13.09	13.04	13.12	0	64QAM		1	0	13.01	13.11	12.93	0		
		1	7	12.83	12.87	12.77	0			1	2	12.88	12.88	12.79	0		
		1	14	12.81	12.64	12.68	0			1	5	12.78	12.71	12.65	0		
		8	0	13.17	12.98	12.96	0			3	0	13.04	13.00	12.94	0		
		8	3	13.05	13.04	12.91	0			3	1	13.02	12.90	12.91	0		
		8	7	12.81	12.78	12.81	0			3	3	12.85	12.92	12.89	0		
	15	0	13.01	12.88	12.96	0	6	0		13.09	13.02	12.86	0				

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LTE Band 5															
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	17.96	17.92	17.93	0	5M	QPSK	1	0	17.91	17.72	17.72	0
		1	24	17.95	17.91	17.88	0			1	12	17.85	17.85	17.76	0
		1	49	17.94	17.90	17.87	0			1	24	17.70	17.72	17.67	0
		25	0	17.83	17.79	17.76	0			12	0	17.59	17.63	17.62	0
		25	12	17.81	17.77	17.74	0			12	6	17.65	17.62	17.59	0
		25	25	17.79	17.75	17.72	0			12	13	17.67	17.60	17.63	0
	16QAM	50	0	17.88	17.84	17.81	0		25	0	17.72	17.78	17.70	0	
		1	0	17.95	17.88	17.84	0		16QAM	1	0	17.78	17.65	17.73	0
		1	24	17.88	17.81	17.82	0			1	12	17.81	17.67	17.72	0
		1	49	17.94	17.87	17.77	0			1	24	17.70	17.74	17.61	0
		25	0	17.82	17.70	17.68	0			12	0	17.65	17.56	17.56	0
		25	12	17.73	17.74	17.72	0			12	6	17.57	17.63	17.66	0
	25	25	17.74	17.73	17.63	0	12			13	17.62	17.50	17.59	0	
	64QAM	50	0	17.85	17.77	17.75	0		25	0	17.72	17.73	17.63	0	
		1	0	17.95	17.86	17.84	0		64QAM	1	0	17.82	17.72	17.67	0
		1	24	17.85	17.91	17.78	0			1	12	17.84	17.73	17.65	0
		1	49	17.84	17.90	17.83	0			1	24	17.72	17.83	17.78	0
		25	0	17.76	17.71	17.68	0			12	0	17.66	17.48	17.64	0
25		12	17.72	17.70	17.73	0	12	6		17.66	17.69	17.66	0		
25	25	17.69	17.70	17.63	0	12	13	17.55		17.70	17.51	0			
3M	QPSK	50	0	17.85	17.74	17.72	0	1.4M	QPSK	25	0	17.62	17.60	17.57	0
		1	0	17.77	17.77	17.70	0			1	0	17.89	17.83	17.80	0
		1	7	17.88	17.73	17.73	0			1	2	17.85	17.76	17.79	0
		1	14	17.93	17.69	17.70	0			1	5	17.74	17.83	17.77	0
		8	0	17.61	17.66	17.68	0			3	0	17.73	17.67	17.62	0
		8	3	17.58	17.65	17.62	0			3	1	17.77	17.68	17.55	0
	16QAM	8	7	17.69	17.59	17.58	0		3	3	17.58	17.65	17.61	0	
		15	0	17.77	17.72	17.71	0		6	0	17.78	17.81	17.72	0	
		1	0	17.85	17.80	17.78	0		16QAM	1	0	17.78	17.71	17.66	0
		1	7	17.66	17.72	17.74	0			1	2	17.76	17.70	17.71	0
		1	14	17.75	17.78	17.70	0			1	5	17.76	17.75	17.64	0
		8	0	17.62	17.63	17.57	0			3	0	17.71	17.65	17.48	0
	8	3	17.68	17.56	17.51	0	3			1	17.63	17.63	17.61	0	
	8	7	17.70	17.53	17.49	0	3			3	17.66	17.50	17.59	0	
	64QAM	15	0	17.69	17.75	17.56	0		6	0	17.64	17.62	17.56	0	
		1	0	17.73	17.72	17.76	0		64QAM	1	0	17.65	17.58	17.53	0
		1	7	17.79	17.68	17.67	0			1	2	17.63	17.57	17.58	0
		1	14	17.82	17.68	17.83	0			1	5	17.63	17.62	17.51	0
8		0	17.54	17.69	17.71	0	3	0		17.58	17.52	17.35	0		
8		3	17.76	17.59	17.45	0	3	1		17.50	17.50	17.48	0		
8	7	17.60	17.66	17.61	0	3	3	17.53		17.37	17.46	0			
		15	0	17.61	17.66	17.71	0	6	0	17.51	17.49	17.43	0		

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LTE Band 7																	
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)		
		Channel		20850	21100	21350				Channel		20825	21100	21375			
		Frequency (MHz)		2510.0	2535.0	2560.0				Frequency (MHz)		2507.5	2535.0	2562.5			
20M	QPSK	1	0	11.41	11.32	11.43	0	15M	QPSK	1	0	11.31	11.26	11.40	0		
		1	50	11.36	11.27	11.38	0			1	37	11.30	11.17	11.37	0		
		1	99	11.39	11.30	11.41	0			1	74	11.37	11.27	11.32	0		
		50	0	11.40	11.31	11.42	0			36	0	11.40	11.24	11.39	0		
		50	25	11.37	11.28	11.39	0			36	19	11.35	11.26	11.37	0		
		50	50	11.30	11.21	11.32	0			36	39	11.26	11.14	11.27	0		
	16QAM	100	0	11.38	11.29	11.40	0		75	0	11.28	11.27	11.33	0			
		1	0	11.40	11.30	11.35	0		1	0	11.28	11.32	11.36	0			
		1	50	11.31	11.23	11.34	0		1	37	11.27	11.22	11.24	0			
		1	99	11.31	11.23	11.34	0		1	74	11.22	11.24	11.30	0			
		50	0	11.40	11.29	11.36	0		36	0	11.27	11.11	11.32	0			
		50	25	11.29	11.18	11.38	0		36	19	11.35	11.18	11.39	0			
	64QAM	50	50	11.29	11.13	11.26	0		36	39	11.16	11.02	11.15	0			
		100	0	11.31	11.21	11.39	0		75	0	11.25	11.18	11.30	0			
		1	0	11.37	11.32	11.41	0		1	0	11.25	11.20	11.33	0			
		1	50	11.36	11.19	11.34	0		1	37	11.31	11.24	11.30	0			
		1	99	11.34	11.28	11.31	0		1	74	11.38	11.18	11.36	0			
		50	0	11.30	11.31	11.40	0		36	0	11.34	11.15	11.29	0			
	10M	QPSK	50	25	11.37	11.23	11.38		0	5M	QPSK	36	19	11.28	11.21	11.30	0
			50	50	11.28	11.11	11.23		0			36	39	11.18	11.05	11.22	0
			100	0	11.28	11.25	11.30		0			75	0	11.37	11.17	11.20	0
			1	0	11.27	11.16	11.23		0			1	0	11.25	11.27	11.26	0
			1	24	11.19	11.11	11.22		0			1	12	11.26	11.26	11.24	0
			1	49	11.17	11.25	11.34		0			1	24	11.31	11.18	11.28	0
16QAM		25	0	11.27	11.13	11.28	0	12	0		11.25	11.18	11.22	0			
		25	12	11.28	11.13	11.22	0	12	6		11.34	11.14	11.05	0			
		25	25	11.19	11.05	11.17	0	12	13		11.10	11.18	11.09	0			
		50	0	11.15	11.22	11.39	0	25	0		11.36	11.25	11.28	0			
		1	0	11.31	11.27	11.21	0	1	0		11.19	11.05	11.31	0			
		1	24	11.12	11.05	11.26	0	1	12		11.24	11.09	11.17	0			
64QAM		1	49	11.19	11.19	11.18	0	1	24		11.10	11.23	11.28	0			
		25	0	11.14	11.09	11.17	0	12	0		11.25	11.10	11.19	0			
		25	12	11.08	11.05	11.20	0	12	6		11.32	11.18	11.32	0			
		25	25	11.10	10.88	11.19	0	12	13		11.01	11.04	11.20	0			
		50	0	11.10	11.25	11.15	0	25	0		11.16	11.11	11.20	0			
		1	0	11.08	11.09	11.28	0	1	0		10.10	10.26	10.36	0			

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LTE Band 12																	
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	17.85	17.88	17.98	0	5M	QPSK	1	0	17.77	17.79	17.87	0		
		1	24	17.75	17.78	17.86	0			1	12	17.68	17.63	17.70	0		
		1	49	17.78	17.81	17.89	0			1	24	17.65	17.68	17.67	0		
		25	0	17.83	17.86	17.94	0			12	0	17.73	17.65	17.75	0		
		25	12	17.82	17.85	17.93	0			12	6	17.69	17.76	17.71	0		
		25	25	17.79	17.82	17.90	0			12	13	17.68	17.60	17.75	0		
	16QAM	50	0	17.90	17.93	17.94	0		25	0	17.74	17.80	17.66	0			
		1	0	17.80	17.82	17.96	0		1	0	17.66	17.68	17.79	0			
		1	24	17.72	17.77	17.86	0		1	12	17.52	17.65	17.62	0			
		1	49	17.75	17.76	17.89	0		1	24	17.53	17.57	17.63	0			
		25	0	17.82	17.85	17.90	0		12	0	17.59	17.65	17.70	0			
		25	12	17.73	17.77	17.91	0		12	6	17.61	17.56	17.80	0			
	64QAM	25	25	17.79	17.81	17.81	0		12	13	17.59	17.64	17.74	0			
		50	0	17.83	17.85	17.92	0		25	0	17.79	17.66	17.73	0			
		1	0	17.78	17.85	17.96	0		1	0	17.60	17.72	17.77	0			
		1	24	17.73	17.75	17.78	0		1	12	17.60	17.59	17.82	0			
		1	49	17.78	17.72	17.87	0		1	24	17.61	17.69	17.69	0			
		25	0	17.79	17.85	17.85	0		12	0	17.70	17.60	17.85	0			
	3M Bandwidth Section	QPSK	25	12	17.75	17.83	17.92		0	12	6	17.65	17.69	17.81	0		
			25	25	17.70	17.73	17.87		0	12	13	17.59	17.61	17.74	0		
			50	0	17.86	17.91	17.90		0	25	0	17.62	17.78	17.81	0		
3M			QPSK	1	0	17.65	17.75	17.87	0	1.4M	QPSK	1	0	17.64	17.66	17.80	0
				1	7	17.59	17.69	17.73	0			1	2	17.66	17.62	17.75	0
				1	14	17.73	17.68	17.81	0			1	5	17.69	17.73	17.76	0
	8	0		17.76	17.72	17.84	0	3	0			17.66	17.71	17.83	0		
	8	3		17.61	17.73	17.81	0	3	1			17.73	17.68	17.82	0		
	8	7		17.61	17.75	17.70	0	3	3			17.64	17.71	17.75	0		
	16QAM	15	0	17.81	17.84	17.76	0	6	0		17.77	17.74	17.88	0			
		1	0	17.64	17.83	17.78	0	1	0		17.65	17.81	17.71	0			
		1	7	17.52	17.74	17.64	0	1	2		17.58	17.68	17.75	0			
		1	14	17.67	17.63	17.79	0	1	5		17.57	17.70	17.68	0			
		8	0	17.67	17.61	17.84	0	3	0		17.63	17.70	17.69	0			
		8	3	17.59	17.74	17.81	0	3	1		17.67	17.72	17.76	0			
	64QAM	8	7	17.62	17.61	17.70	0	3	3		17.78	17.74	17.63	0			
		15	0	17.73	17.78	17.82	0	6	0		17.74	17.67	17.64	0			
		1	0	17.72	17.68	17.84	0	1	0		14.91	15.38	15.13	0			
		1	7	17.48	17.65	17.68	0	1	2		14.83	15.35	15.03	0			
		1	14	17.51	17.61	17.79	0	1	5		14.78	15.22	14.86	0			
		8	0	17.76	17.72	17.70	0	3	0		15.92	16.23	16.13	0			
	1.4M Bandwidth Section	QPSK	8	3	17.73	17.64	17.66	0	3		1	14.97	15.41	15.16	0		
			8	7	17.67	17.53	17.76	0	3		3	15.01	15.48	15.31	0		
			15	0	17.63	17.82	17.72	0	6		0	14.97	15.43	15.09	0		



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LTE Band 13																			
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		16.89		0	5M	QPSK	1	0	16.73	16.78	16.43	0				
		1	24		16.79		0			1	12	16.53	16.65	16.32	0				
		1	49		16.77		0			1	24	16.70	16.74	16.40	0				
		25	0		16.86		0			12	0	16.71	16.77	16.49	0				
		25	12		16.78		0			12	6	16.52	16.57	16.22	0				
		25	25		16.76		0			12	13	16.52	16.57	16.22	0				
	16QAM	50	0		16.83		0		25	0	16.66	16.73	16.34	0					
		1	0		16.87		0		16QAM	1	0	16.64	16.66	16.53	0				
		1	24		16.78		0			1	12	16.59	16.62	16.46	0				
		1	49		16.69		0			1	24	16.39	16.45	16.35	0				
		25	0		16.78		0			12	0	16.59	16.66	16.46	0				
		25	12		16.78		0			12	6	16.67	16.72	16.56	0				
	25	25		16.68		0	12			13	16.61	16.64	16.52	0					
	64QAM	50	0		16.78		0		64QAM	25	0	16.65	16.69	16.61	0				
		1	0		16.81		0			1	0	16.66	16.78	16.71	0				
		1	24		16.69		0			1	12	16.55	16.70	16.66	0				
		1	49		16.71		0			1	24	16.48	16.60	16.56	0				
		25	0		16.78		0			12	0	16.59	16.75	16.68	0				
		25	12		16.71		0			12	6	16.40	16.51	16.44	0				
	25	25		16.70		0	12		13	16.41	16.53	16.45	0						
	50	0		16.74		0	25		0	16.46	16.59	16.51	0						

LTE Band 14																			
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)				
		Channel								23330	Channel					23305	23330	23355	
		Frequency (MHz)								793.0	Frequency (MHz)					790.5	793.0	795.5	
10M	QPSK	1	0		18.25		0	5M	QPSK	1	0	18.18	18.22	18.20	0				
		1	24		18.12		0			1	12	17.99	18.04	18.02	0				
		1	49		18.07		0			1	24	17.83	17.87	17.85	0				
		25	0		18.21		0			12	0	18.08	18.13	18.11	0				
		25	12		18.17		0			12	6	18.00	18.05	18.03	0				
		25	25		18.16		0			12	13	17.95	17.99	17.97	0				
	16QAM	50	0		18.18		0		25	0	18.10	18.14	18.12	0					
		1	0		18.18		0		16QAM	1	0	18.03	18.05	18.05	0				
		1	24		18.12		0			1	12	17.94	17.96	17.96	0				
		1	49		18.07		0			1	24	17.84	17.86	17.86	0				
		25	0		18.12		0			12	0	18.03	18.05	18.05	0				
		25	12		18.07		0			12	6	18.03	18.05	18.05	0				
	25	25		18.15		0	12			13	17.99	18.01	18.01	0					
	64QAM	50	0		18.15		0		64QAM	25	0	18.04	18.07	18.07	0				
		1	0		18.19		0			1	0	18.09	18.12	18.05	0				
		1	24		18.12		0			1	12	18.01	18.03	17.95	0				
		1	49		18.03		0			1	24	17.85	17.89	17.82	0				
		25	0		18.12		0			12	0	18.04	18.06	17.98	0				
		25	12		18.10		0			12	6	17.98	18.01	17.91	0				
	25	25		18.10		0	12		13	17.91	17.95	17.89	0						
	50	0		18.17		0	25		0	17.95	17.98	17.90	0						

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LTE Band 17

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	19.19	18.97	18.98	0	5M	QPSK	1	0	19.07	18.78	18.72	0
		1	24	19.16	19.04	19.05	0			1	12	19.02	19.01	18.76	0
		1	49	19.17	19.05	19.06	0			1	24	19.03	18.98	18.90	0
		25	0	19.07	19.03	19.01	0			12	0	18.99	18.86	18.80	0
		25	12	19.04	19.06	18.97	0			12	6	18.97	18.87	18.73	0
		25	25	19.05	19.03	19.04	0			12	13	18.90	18.89	18.96	0
	16QAM	50	0	19.17	19.05	19.06	0		25	0	19.09	18.85	18.85	0	
		1	0	19.17	18.92	18.91	0		16QAM	1	0	19.06	18.82	18.76	0
		1	24	19.11	18.99	19.05	0			1	12	18.94	18.88	18.91	0
		1	49	19.12	18.99	19.00	0			1	24	19.01	18.87	18.91	0
		25	0	19.03	19.03	18.95	0			12	0	18.90	18.88	18.92	0
		25	12	19.04	18.97	18.95	0			12	6	18.88	18.93	18.90	0
	25	25	19.05	19.01	18.95	0	12			13	18.80	18.89	18.79	0	
	64QAM	50	0	19.08	18.99	18.96	0		25	0	18.97	18.84	18.85	0	
		1	0	19.09	18.88	18.90	0		64QAM	1	0	18.97	18.73	18.85	0
		1	24	19.12	18.98	18.99	0			1	12	18.95	18.86	18.89	0
		1	49	19.17	19.04	18.97	0			1	24	19.01	18.82	18.85	0
		25	0	18.98	18.97	18.97	0			12	0	18.82	18.83	18.83	0
		25	12	18.99	19.01	18.94	0			12	6	18.75	18.98	18.80	0
	25	25	19.01	18.97	19.01	0	12			13	18.87	18.92	18.80	0	
			50	0	19.11	19.00	19.06		0	25	0	18.96	18.88	18.87	0

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LTE Band 25															
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	13.07	13.03	13.24	0	15M	QPSK	1	0	13.06	13.03	13.19	0
		1	50	12.99	12.95	13.14	0			1	37	12.95	12.93	13.13	0
		1	99	12.93	12.89	13.08	0			1	74	12.90	12.82	13.02	0
		50	0	13.08	13.04	13.22	0			36	0	13.03	12.96	13.22	0
		50	25	13.00	12.96	13.15	0			36	19	12.94	12.89	13.06	0
		50	50	12.98	12.94	13.13	0			36	39	12.88	12.94	13.09	0
	100	0	13.04	13.00	13.19	0	75		0	13.04	12.98	13.19	0		
	16QAM	1	0	13.03	12.93	13.17	0		16QAM	1	0	12.94	12.93	13.23	0
		1	50	12.90	12.94	13.12	0			1	37	12.85	12.91	13.03	0
		1	99	12.91	12.86	12.99	0			1	74	12.83	12.75	13.00	0
		50	0	13.02	12.99	13.14	0			36	0	12.95	12.93	13.09	0
		50	25	12.99	12.86	13.15	0			36	19	12.95	12.84	13.07	0
		50	50	12.98	12.90	13.11	0			36	39	12.92	12.89	13.02	0
	100	0	13.04	12.94	13.11	0	75		0	12.92	12.80	13.06	0		
	64QAM	1	0	12.97	13.01	13.19	0		64QAM	1	0	13.07	12.88	13.17	0
		1	50	12.93	12.86	13.12	0			1	37	12.86	12.88	13.00	0
		1	99	12.91	12.88	13.02	0			1	74	12.77	12.70	12.97	0
		50	0	13.07	12.98	13.15	0			36	0	12.95	12.96	13.08	0
50		25	12.91	12.96	13.11	0	36	19		12.90	12.87	13.09	0		
50		50	12.96	12.88	13.06	0	36	39		12.85	12.83	13.08	0		
100	0	12.98	13.00	13.14	0	75	0	12.87	12.93	13.02	0				
10M	QPSK	1	0	13.00	12.78	13.05	0	5M	QPSK	1	0	12.98	12.94	13.07	0
		1	24	12.82	12.89	12.94	0			1	12	12.91	12.93	12.95	0
		1	49	12.73	12.72	12.96	0			1	24	12.80	12.82	12.89	0
		25	0	12.98	12.89	13.00	0			12	0	13.03	12.87	12.98	0
		25	12	12.92	12.86	13.10	0			12	6	12.89	12.72	13.09	0
		25	25	12.85	12.86	12.91	0			12	13	12.88	12.77	13.07	0
	50	0	12.91	12.80	13.17	0	25		0	12.96	12.93	12.84	0		
	16QAM	1	0	12.94	12.87	13.17	0		16QAM	1	0	13.04	12.83	13.04	0
		1	24	12.85	12.82	12.98	0			1	12	12.86	12.74	12.85	0
		1	49	12.62	12.72	12.78	0			1	24	12.73	12.71	12.94	0
		25	0	12.92	12.97	13.00	0			12	0	12.88	12.86	13.08	0
		25	12	12.86	12.83	12.95	0			12	6	12.84	12.89	12.93	0
		25	25	12.74	12.66	13.02	0			12	13	12.84	12.76	12.99	0
	50	0	12.85	12.91	13.08	0	25		0	12.93	12.78	12.96	0		
	64QAM	1	0	12.81	12.76	13.17	0		64QAM	1	0	12.92	12.71	12.92	0
		1	24	12.83	12.83	13.08	0			1	12	12.74	12.62	12.73	0
		1	49	12.65	12.78	12.84	0			1	24	12.61	12.59	12.82	0
		25	0	12.90	12.82	13.01	0			12	0	12.76	12.74	12.96	0
25		12	12.82	12.76	13.07	0	12	6		12.72	12.77	12.81	0		
25		25	12.86	12.74	12.92	0	12	13		12.72	12.64	12.87	0		
50	0	12.82	12.83	12.97	0	25	0	12.81	12.66	12.84	0				
3M	QPSK	1	0	12.96	12.85	13.22	0	1.4M	QPSK	1	0	12.90	12.97	13.14	0
		1	7	12.84	12.81	13.08	0			1	2	12.90	12.82	12.96	0
		1	14	12.79	12.73	12.85	0			1	5	12.82	12.81	12.90	0
		8	0	12.92	12.89	13.14	0			3	0	12.92	12.88	13.14	0
		8	3	12.77	12.81	13.06	0			3	1	12.93	12.84	13.01	0
		8	7	12.91	12.84	12.97	0			3	3	12.96	12.74	13.12	0
	15	0	12.87	12.93	13.11	0	6		0	13.00	12.89	13.13	0		
	16QAM	1	0	12.87	12.84	13.10	0		16QAM	1	0	12.88	12.89	13.03	0
		1	7	12.80	12.77	12.97	0			1	2	12.74	12.72	12.92	0
		1	14	12.64	12.68	12.92	0			1	5	12.74	12.75	12.92	0
		8	0	12.81	12.98	13.10	0			3	0	13.00	12.83	13.06	0
		8	3	12.72	12.68	12.99	0			3	1	12.79	12.70	12.98	0
		8	7	12.86	12.74	13.07	0			3	3	12.87	12.80	12.92	0
	15	0	12.90	12.85	12.94	0	6		0	12.88	12.85	13.00	0		
	64QAM	1	0	12.83	12.91	13.13	0		64QAM	1	0	12.88	12.89	13.07	0
		1	7	12.67	12.76	13.10	0			1	2	12.87	12.87	13.02	0
		1	14	12.71	12.67	13.01	0			1	5	12.85	12.70	12.91	0
		8	0	13.03	12.74	13.13	0			3	0	12.92	12.89	13.02	0
8		3	12.94	12.80	12.95	0	3	1		12.73	12.73	12.95	0		
8		7	12.89	12.77	12.91	0	3	3		12.84	12.83	13.04	0		
15	0	12.96	12.78	13.14	0	6	0	12.96	12.75	12.91	0				

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LTE Band 26															
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	18.17	18.24	18.22	0	10M	QPSK	1	0	18.12	18.19	18.17	0
		1	37	18.13	18.21	18.18	0			1	24	18.08	18.16	18.13	0
		1	74	18.12	18.18	18.16	0			1	49	18.06	18.13	18.11	0
		36	0	18.15	18.22	18.19	0			25	0	18.09	18.17	18.15	0
		36	19	18.10	18.15	18.13	0			25	12	18.05	18.10	18.08	0
		36	39	18.06	18.13	18.11	0			25	25	18.01	18.08	18.06	0
		75	0	18.05	18.12	18.10	0			50	0	18.00	18.07	18.03	0
	16QAM	1	0	18.11	18.21	18.19	0		1	0	18.06	18.16	18.14	0	
		1	37	18.09	18.19	18.17	0		1	24	18.04	18.14	18.12	0	
		1	74	18.09	18.19	18.17	0		1	49	18.04	18.14	18.12	0	
		36	0	18.05	18.15	18.09	0		25	0	18.00	18.10	18.06	0	
		36	19	18.13	18.23	18.21	0		25	12	18.11	18.18	18.15	0	
		36	39	18.10	18.20	18.18	0		25	25	18.05	18.15	18.13	0	
		75	0	18.08	18.18	18.16	0		50	0	18.03	18.13	18.09	0	
	64QAM	1	0	18.12	18.19	18.16	0		1	0	18.07	18.14	18.11	0	
		1	37	18.10	18.17	18.14	0		1	24	18.05	18.12	18.09	0	
		1	74	18.09	18.16	18.13	0		1	49	18.04	18.11	18.08	0	
		36	0	18.13	18.19	18.16	0		25	0	18.08	18.14	18.11	0	
		36	19	18.11	18.18	18.15	0		25	12	18.04	18.13	18.09	0	
		36	39	18.05	18.12	18.09	0		25	25	18.00	18.07	18.03	0	
		75	0	18.06	18.13	18.10	0		50	0	18.01	18.08	18.06	0	
5M	QPSK	1	0	18.07	18.14	18.12	0	3M	QPSK	1	0	18.02	18.09	18.07	0
		1	12	18.03	18.11	18.08	0			1	7	17.98	18.06	18.03	0
		1	24	18.01	18.08	18.05	0			1	14	17.96	18.03	18.01	0
		12	0	18.07	18.12	18.10	0			8	0	18.00	18.07	18.04	0
		12	6	17.99	18.05	18.03	0			8	3	17.94	18.00	17.98	0
		12	13	17.96	18.03	18.01	0			8	7	17.91	17.98	17.96	0
		25	0	17.95	18.02	17.98	0			15	0	17.90	17.97	17.94	0
	16QAM	1	0	18.01	18.11	18.09	0		1	0	17.96	18.06	18.04	0	
		1	12	17.99	18.09	18.07	0		1	7	17.94	18.04	18.02	0	
		1	24	17.99	18.09	18.07	0		1	14	17.94	18.04	18.02	0	
		12	0	17.96	18.05	17.99	0		8	0	17.92	18.00	17.96	0	
		12	6	18.07	18.13	18.11	0		8	3	18.00	18.08	18.06	0	
		12	13	18.00	18.10	18.08	0		8	7	17.95	18.05	18.03	0	
		25	0	17.98	18.08	18.06	0		15	0	17.93	18.03	17.97	0	
	64QAM	1	0	18.02	18.09	18.06	0		1	0	17.97	18.04	18.01	0	
		1	12	18.00	18.07	18.04	0		1	7	17.95	18.02	17.99	0	
		1	24	17.99	18.06	18.02	0		1	14	17.94	18.01	17.98	0	
		12	0	18.02	18.09	18.07	0		8	0	17.97	18.04	18.02	0	
		12	6	18.01	18.08	18.04	0		8	3	17.94	18.03	18.00	0	
		12	13	17.95	18.02	17.99	0		8	7	17.90	17.97	17.94	0	
		25	0	17.96	18.03	18.01	0		15	0	17.91	17.98	17.95	0	
1.4M	QPSK	1	0	17.97	18.04	18.02	0	3M	QPSK	1	0	17.97	18.04	18.02	0
		1	2	17.95	18.01	17.98	0			1	7	17.95	18.02	17.99	0
		1	5	17.92	17.98	17.95	0			1	14	17.94	18.01	17.98	0
		3	0	17.96	18.02	17.99	0			8	0	17.92	18.00	17.96	0
		3	1	17.89	17.95	17.93	0			8	3	18.00	18.08	18.06	0
		3	3	17.86	17.93	17.91	0			8	7	17.95	18.05	18.03	0
		6	0	17.85	17.92	17.89	0			15	0	17.93	18.03	17.97	0
	16QAM	1	0	17.91	18.01	17.99	0		1	0	17.97	18.04	18.01	0	
		1	2	17.89	17.99	17.97	0		1	7	17.95	18.02	17.99	0	
		1	5	17.89	17.99	17.97	0		1	14	17.94	18.01	17.98	0	
		3	0	17.86	17.95	17.92	0		8	0	17.92	18.00	17.96	0	
		3	1	17.97	18.03	18.00	0		8	3	18.00	18.08	18.06	0	
		3	3	17.91	18.00	17.98	0		8	7	17.95	18.05	18.03	0	
		6	0	17.88	17.98	17.95	0		15	0	17.93	18.03	17.97	0	
	64QAM	1	0	17.92	17.99	17.96	0		1	0	17.97	18.04	18.01	0	
		1	2	17.90	17.97	17.94	0		1	7	17.95	18.02	17.99	0	
		1	5	17.89	17.96	17.92	0		1	14	17.94	18.01	17.98	0	
		3	0	17.93	17.99	17.97	0		8	0	17.97	18.04	18.02	0	
		3	1	17.89	17.98	17.94	0		8	3	17.94	18.03	18.00	0	
		3	3	17.85	17.92	17.89	0		8	7	17.90	17.97	17.94	0	
		6	0	17.87	17.93	17.91	0		15	0	17.91	17.98	17.95	0	

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LTE Band 30															
BW	MCS Index	RB Size	RB Offset	Channel			3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Channel			3GPP MPR (dB)
				27710								27685			
				2310.0								2307.5			
Frequency (MHz)			Low	Mid	High	Frequency (MHz)			Low	Mid	High				
10M	QPSK	1	0		14.65		0	5M	QPSK	1	0	14.32	14.52	14.41	0
		1	24		14.54		0			1	12	14.24	14.44	14.32	0
		1	49		14.56		0			1	24	14.29	14.48	14.35	0
		25	0		14.65		0			12	0	14.35	14.51	14.44	0
		25	12		14.63		0			12	6	14.30	14.50	14.36	0
		25	25		14.61		0			12	13	14.33	14.51	14.41	0
		50	0		14.63		0			25	0	14.24	14.44	14.31	0
	16QAM	1	0		14.62		0		16QAM	1	0	14.21	14.47	14.33	0
		1	24		14.48		0			1	12	14.09	14.37	14.18	0
		1	49		14.49		0			1	24	14.12	14.41	14.27	0
		25	0		14.63		0			12	0	14.21	14.46	14.34	0
		25	12		14.53		0			12	6	14.16	14.44	14.29	0
		25	25		14.56		0			12	13	14.22	14.46	14.32	0
		50	0		14.60		0			25	0	14.10	14.37	14.16	0
	64QAM	1	0		14.58		0		64QAM	1	0	14.07	14.42	14.23	0
		1	24		14.47		0			1	12	13.97	14.26	14.06	0
		1	49		14.52		0			1	24	13.99	14.33	14.17	0
		25	0		14.63		0			12	0	14.06	14.41	14.28	0
		25	12		14.54		0			12	6	14.04	14.37	14.17	0
		25	25		14.56		0			12	13	14.09	14.41	14.23	0
		50	0		14.55		0			25	0	13.96	14.26	14.02	0

LTE Band 38															
BW	MCS Index	RB Size	RB Offset	Channel			3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Channel			3GPP MPR (dB)
				37850								37825			
				2580.0								2577.5			
Frequency (MHz)			Low	Mid	High	Frequency (MHz)			Low	Mid	High				
20M	QPSK	1	0	13.61	13.86	13.57	0	15M	QPSK	1	0	13.57	13.81	13.50	0
		1	50	13.53	13.78	13.49	0			1	37	13.50	13.68	13.41	0
		1	99	13.50	13.75	13.46	0			1	74	13.50	13.70	13.46	0
		50	0	13.59	13.84	13.55	0			36	0	13.56	13.82	13.54	0
		50	25	13.56	13.81	13.52	0			36	19	13.46	13.80	13.47	0
		50	50	13.52	13.77	13.48	0			36	39	13.50	13.69	13.44	0
		100	0	13.57	13.82	13.53	0			75	0	13.51	13.73	13.52	0
	16QAM	1	0	13.60	13.81	13.54	0		16QAM	1	0	13.53	13.76	13.46	0
		1	50	13.45	13.75	13.40	0			1	37	13.48	13.69	13.42	0
		1	99	13.46	13.65	13.42	0			1	74	13.37	13.60	13.44	0
		50	0	13.49	13.80	13.52	0			36	0	13.45	13.74	13.51	0
		50	25	13.55	13.77	13.50	0			36	19	13.42	13.70	13.41	0
		50	50	13.48	13.72	13.47	0			36	39	13.43	13.59	13.31	0
		100	0	13.51	13.82	13.49	0			75	0	13.45	13.76	13.36	0
	64QAM	1	0	13.59	13.80	13.57	0		64QAM	1	0	13.55	13.76	13.48	0
		1	50	13.47	13.77	13.43	0			1	37	13.40	13.71	13.45	0
		1	99	13.45	13.66	13.45	0			1	74	13.40	13.61	13.37	0
		50	0	13.59	13.78	13.50	0			36	0	13.55	13.78	13.42	0
		50	25	13.50	13.81	13.44	0			36	19	13.48	13.76	13.47	0
		50	50	13.42	13.75	13.43	0			36	39	13.36	13.69	13.36	0
		100	0	13.50	13.81	13.44	0			75	0	13.46	13.71	13.49	0
10M	QPSK	1	0	13.54	13.70	13.51	0	5M	QPSK	1	0	13.55	13.73	13.50	0
		1	24	13.36	13.74	13.37	0			1	12	13.48	13.66	13.22	0
		1	49	13.35	13.59	13.42	0			1	24	13.40	13.53	13.17	0
		25	0	13.41	13.66	13.46	0			12	0	13.47	13.69	13.28	0
		25	12	13.39	13.66	13.48	0			12	6	13.32	13.69	13.36	0
		25	25	13.40	13.65	13.29	0			12	13	13.44	13.61	13.28	0
		50	0	13.49	13.74	13.39	0			25	0	13.47	13.70	13.23	0
	16QAM	1	0	13.51	13.72	13.38	0		16QAM	1	0	13.49	13.67	13.43	0
		1	24	13.39	13.60	13.43	0			1	12	13.29	13.68	13.31	0
		1	49	13.32	13.54	13.31	0			1	24	13.31	13.70	13.18	0
		25	0	13.46	13.69	13.38	0			12	0	13.55	13.56	13.36	0
		25	12	13.29	13.60	13.47	0			12	6	13.43	13.56	13.23	0
		25	25	13.31	13.58	13.28	0			12	13	13.27	13.49	13.29	0
		50	0	13.31	13.59	13.26	0			25	0	13.49	13.75	13.43	0
	64QAM	1	0	13.52	13.71	13.45	0		64QAM	1	0	13.41	13.59	13.35	0
		1	24	13.38	13.61	13.35	0			1	12	13.21	13.60	13.23	0
		1	49	13.32	13.58	13.30	0			1	24	13.23	13.62	13.10	0
		25	0	13.39	13.81	13.53	0			12	0	13.47	13.48	13.28	0
		25	12	13.35	13.62	13.40	0			12	6	13.35	13.48	13.15	0
		25	25	13.38	13.60	13.27	0			12	13	13.19	13.41	13.21	0
		50	0	13.45	13.62	13.25	0			25	0	13.41	13.67	13.35	0

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LTE Band 41 (Power Class 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		39750	40185	40620	41055	41490				Channel		39725	40173	40620	41068	41515			
		Frequency (MHz)		2506.0	2549.5	2593.0	2636.5	2680.0				Frequency (MHz)		2503.5	2548.3	2593.0	2637.8	2682.5			
20M	QPSK	1	0	13.57	13.61	13.91	13.58	13.36	0	15M	QPSK	1	0	13.47	13.53	13.81	13.54	13.27	0		
		1	50	13.31	13.35	13.65	13.32	13.10	0			1	37	13.22	13.33	13.56	13.25	13.00	0		
		1	99	13.17	13.21	13.51	13.18	12.96	0			1	74	13.16	13.17	13.46	13.18	12.96	0		
		50	0	13.25	13.29	13.59	13.26	13.04	0			36	0	13.18	13.27	13.59	13.17	12.94	0		
		50	25	13.16	13.20	13.50	13.17	12.95	0			36	19	13.07	13.15	13.48	13.17	12.91	0		
		50	50	13.05	13.09	13.39	13.06	12.84	0			36	39	12.99	13.03	13.35	13.01	12.74	0		
	100	0	13.14	13.18	13.48	13.15	12.93	0	75		0	13.08	13.11	13.38	13.08	12.93	0				
	16QAM	1	0	13.56	13.60	13.84	13.52	13.36	0		1	0	13.56	13.61	13.85	13.56	13.28	0			
		1	50	13.26	13.30	13.55	13.29	13.10	0		1	37	13.27	13.29	13.65	13.22	13.10	0			
		1	99	13.16	13.14	13.42	13.14	12.89	0		1	74	13.07	13.21	13.48	13.15	12.86	0			
		50	0	13.23	13.26	13.55	13.21	12.94	0		36	0	13.17	13.27	13.58	13.19	13.00	0			
		50	25	13.15	13.10	13.48	13.11	12.95	0		36	19	13.12	13.11	13.46	13.17	12.90	0			
		50	50	13.01	13.05	13.30	13.01	12.75	0		36	39	12.95	13.04	13.35	12.96	12.76	0			
	100	0	13.07	13.14	13.47	13.10	12.92	0	75		0	13.11	13.16	13.41	13.09	12.84	0				
	64QAM	1	0	13.47	13.55	13.85	13.53	13.35	0		1	0	13.57	13.60	13.83	13.54	13.35	0			
		1	50	13.31	13.25	13.65	13.31	13.08	0		1	37	13.24	13.31	13.57	13.28	13.09	0			
		1	99	13.09	13.17	13.51	13.12	12.94	0		1	74	13.14	13.20	13.51	13.14	12.94	0			
		50	0	13.18	13.20	13.55	13.19	13.00	0		36	0	13.18	13.29	13.57	13.20	13.04	0			
		50	25	13.13	13.18	13.40	13.10	12.95	0		36	19	13.16	13.15	13.45	13.15	12.88	0			
		50	50	12.99	13.01	13.39	12.99	12.77	0		36	39	13.03	13.01	13.35	12.99	12.75	0			
	100	0	13.11	13.17	13.46	13.05	12.86	0	75		0	13.10	13.16	13.42	13.06	12.89	0				
	10M	QPSK	1	0	13.44	13.52	13.79	13.54	13.22		0	5M	QPSK	1	0	13.49	13.52	13.88	13.47	13.26	0
			1	24	13.17	13.27	13.56	13.21	13.04		0			1	12	13.24	13.29	13.56	13.18	12.97	0
			1	49	13.13	13.05	13.43	13.17	12.81		0			1	24	13.05	13.20	13.48	13.11	12.83	0
25			0	13.20	13.19	13.53	13.07	12.94	0	12	0			13.14	13.20	13.48	13.15	12.95	0		
25			12	13.00	13.11	13.44	13.01	12.92	0	12	6			13.16	13.11	13.38	13.07	12.75	0		
25			25	12.92	13.07	13.26	12.99	12.79	0	12	13			13.00	13.05	13.30	12.93	12.72	0		
50		0	13.03	13.11	13.41	12.97	12.77	0	25	0	13.12		13.15	13.30	13.10	12.80	0				
16QAM		1	0	13.50	13.43	13.78	13.57	13.20	0	1	0		13.47	13.49	13.79	13.52	13.26	0			
		1	24	13.15	13.22	13.60	13.22	13.08	0	1	12		13.21	13.28	13.63	13.18	12.97	0			
		1	49	13.06	13.09	13.38	13.11	12.78	0	1	24		13.07	13.13	13.45	13.09	12.81	0			
		25	0	13.15	13.14	13.51	13.11	12.92	0	12	0		13.16	13.13	13.48	13.12	12.92	0			
		25	12	13.02	13.15	13.37	13.06	12.86	0	12	6		13.08	13.09	13.42	13.01	12.85	0			
		25	25	12.94	12.99	13.24	12.99	12.74	0	12	13		12.97	13.04	13.24	12.95	12.76	0			
50		0	13.02	13.10	13.38	13.00	12.83	0	25	0	13.07		13.17	13.36	13.01	12.86	0				
64QAM		1	0	13.52	13.49	13.80	13.48	13.25	0	1	0		13.24	12.80	12.82	13.41	13.28	0			
		1	24	13.17	13.20	13.55	13.16	13.05	0	1	12		13.33	12.88	12.94	13.60	13.44	0			
		1	49	13.07	13.09	13.45	13.11	12.82	0	1	24		13.48	13.04	13.11	13.67	13.63	0			
		25	0	13.19	13.16	13.53	13.13	12.99	0	12	0		13.61	13.20	13.24	13.82	13.71	0			
		25	12	13.00	13.14	13.42	13.05	12.89	0	12	6		13.76	13.28	13.34	13.86	13.83	0			
		25	25	12.95	13.03	13.23	13.03	12.76	0	12	13		13.51	13.11	13.15	13.71	13.60	0			
50		0	12.96	13.08	13.39	12.98	12.77	0	25	0	13.11		12.74	12.80	13.41	13.30	0				

FCC SAR Test Report

LTE Band 66

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		132072	132322	132572				Channel		132047	132322	132597	
		Frequency (MHz)		1720.0	1745.0	1770.0				Frequency (MHz)		1717.5	1745.0	1772.5	
20M	QPSK	1	0	16.32	16.28	16.25	0	15M	QPSK	1	0	16.19	16.15	16.12	0
		1	50	16.18	16.14	16.11	0			1	37	16.05	16.01	15.98	0
		1	99	16.12	16.08	16.05	0			1	74	15.99	15.95	15.92	0
		50	0	16.28	16.24	16.21	0			36	0	16.15	16.11	16.08	0
		50	25	16.14	16.10	16.07	0			36	19	16.01	15.97	15.94	0
		50	50	16.11	16.07	16.04	0			36	39	15.98	15.94	15.91	0
	100	0	16.16	16.12	16.09	0	75		0	16.03	15.99	15.96	0		
	16QAM	1	0	16.20	16.16	16.13	0		16QAM	1	0	16.07	16.03	16.00	0
		1	50	16.06	16.02	15.99	0			1	37	15.93	15.89	15.86	0
		1	99	16.00	15.96	15.93	0			1	74	15.87	15.83	15.80	0
		50	0	16.16	16.12	16.09	0			36	0	16.03	15.99	15.96	0
		50	25	16.02	15.98	15.95	0			36	19	15.89	15.85	15.82	0
		50	50	15.99	15.95	15.92	0			36	39	15.86	15.82	15.79	0
	100	0	16.04	16.00	15.97	0	75		0	15.91	15.87	15.84	0		
	64QAM	1	0	16.12	16.08	16.05	0		64QAM	1	0	15.99	15.95	15.92	0
		1	50	15.98	15.94	15.91	0			1	37	15.85	15.81	15.78	0
		1	99	15.92	15.88	15.85	0			1	74	15.79	15.75	15.72	0
		50	0	16.08	16.04	16.01	0			36	0	15.95	15.91	15.88	0
50		25	15.94	15.90	15.87	0	36	19		15.81	15.77	15.74	0		
50		50	15.91	15.87	15.84	0	36	39		15.78	15.74	15.71	0		
100	0	15.96	15.92	15.89	0	75	0	15.83	15.79	15.76	0				
10M	QPSK	1	0	16.13	16.09	16.06	0	5M	QPSK	1	0	16.00	15.96	15.93	0
		1	24	15.99	15.95	15.92	0			1	12	15.86	15.82	15.79	0
		1	49	15.93	15.89	15.86	0			1	24	15.80	15.76	15.73	0
		25	0	16.09	16.05	16.02	0			12	0	15.96	15.92	15.89	0
		25	12	15.95	15.91	15.88	0			12	6	15.82	15.78	15.75	0
		25	25	15.92	15.88	15.85	0			12	13	15.79	15.75	15.72	0
	50	0	15.97	15.93	15.90	0	25		0	15.84	15.80	15.77	0		
	16QAM	1	0	16.01	15.97	15.94	0		16QAM	1	0	15.88	15.84	15.81	0
		1	24	15.87	15.83	15.80	0			1	12	15.74	15.70	15.67	0
		1	49	15.81	15.77	15.74	0			1	24	15.68	15.64	15.61	0
		25	0	15.97	15.93	15.90	0			12	0	15.84	15.80	15.77	0
		25	12	15.83	15.79	15.76	0			12	6	15.70	15.66	15.63	0
		25	25	15.80	15.76	15.73	0			12	13	15.67	15.63	15.60	0
	50	0	15.85	15.81	15.78	0	25		0	15.72	15.68	15.65	0		
	64QAM	1	0	15.93	15.89	15.86	0		64QAM	1	0	15.80	15.76	15.73	0
		1	24	15.79	15.75	15.72	0			1	12	15.66	15.62	15.59	0
		1	49	15.73	15.69	15.66	0			1	24	15.60	15.56	15.53	0
		25	0	15.89	15.85	15.82	0			12	0	15.76	15.72	15.69	0
25		12	15.75	15.71	15.68	0	12	6		15.62	15.58	15.55	0		
25		25	15.72	15.68	15.65	0	12	13		15.59	15.55	15.52	0		
50	0	15.77	15.73	15.70	0	25	0	15.64	15.60	15.57	0				
3M	QPSK	1	0	15.92	15.88	15.85	0	1.4M	QPSK	1	0	15.81	15.77	15.74	0
		1	7	15.78	15.74	15.71	0			1	2	15.67	15.63	15.60	0
		1	14	15.72	15.68	15.65	0			1	5	15.61	15.57	15.54	0
		8	0	15.88	15.84	15.81	0			3	0	15.77	15.73	15.70	0
		8	3	15.74	15.70	15.67	0			3	1	15.63	15.59	15.56	0
		8	7	15.71	15.67	15.64	0			3	3	15.60	15.56	15.53	0
	15	0	15.76	15.72	15.69	0	6		0	15.65	15.61	15.58	0		
	16QAM	1	0	15.80	15.76	15.73	0		16QAM	1	0	15.69	15.65	15.62	0
		1	7	15.66	15.62	15.59	0			1	2	15.55	15.51	15.48	0
		1	14	15.60	15.56	15.53	0			1	5	15.49	15.45	15.42	0
		8	0	15.76	15.72	15.69	0			3	0	15.65	15.61	15.58	0
		8	3	15.62	15.58	15.55	0			3	1	15.51	15.47	15.44	0
		8	7	15.59	15.55	15.52	0			3	3	15.48	15.44	15.41	0
	15	0	15.64	15.60	15.57	0	6		0	15.53	15.49	15.46	0		
	64QAM	1	0	15.72	15.68	15.65	0		64QAM	1	0	15.61	15.57	15.54	0
		1	7	15.58	15.54	15.51	0			1	2	15.47	15.43	15.40	0
		1	14	15.52	15.48	15.45	0			1	5	15.41	15.37	15.34	0
		8	0	15.68	15.64	15.61	0			3	0	15.57	15.53	15.50	0
8		3	15.54	15.50	15.47	0	3	1		15.43	15.39	15.36	0		
8		7	15.51	15.47	15.44	0	3	3		15.40	15.36	15.33	0		
15	0	15.56	15.52	15.49	0	6	0	15.45	15.41	15.38	0				

FCC SAR Test Report

Laptop PC Mode

<WLAN 2.4G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
802.11b	1	2412	9.75	9.72	12.21
	6	2437	9.86	9.76	12.34
	11	2462	9.70	9.68	12.15

<WLAN 5.3G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
802.11ac (VHT80)	58	5290	8.96	9.31	12.10

<WLAN 5.6G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
802.11ac (VHT80)	106	5530	8.86	8.31	11.63
	122	5610	7.88	8.30	11.60

<WLAN 5.8G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
802.11ac (VHT80)	155	5775	7.76	8.95	11.13

<Bluetooth>

Mode	Channel	Frequency (MHz)	Average Power
Bluetooth EDR	0	2402	5.29
	39	2441	4.17
	78	2480	5.94
Bluetooth LE	0	2402	4.94
	19	2440	4.04
	39	2480	5.89

FCC SAR Test Report

Tablet PC Mode

Band Channel Frequency (MHz)	WCDMA Band II			WCDMA Band IV			WCDMA Band V			3GPP MPR (dB)
	9262 1852.4	9400 1880.0	9538 1907.6	1312 1712.4	1413 1732.6	1513 1752.6	4132 826.4	4182 836.4	4233 846.6	
EUT without Power Reduction (P-Sensor NOT Triggered)										
RMC 12.2K	23.43	23.35	23.77	23.55	23.65	23.36	23.91	23.87	23.72	-
HSDPA Subtest-1	22.31	22.23	22.65	22.64	22.74	22.45	22.75	22.71	22.56	0
HSDPA Subtest-2	22.30	22.22	22.64	22.61	22.71	22.42	22.68	22.64	22.49	0
HSDPA Subtest-3	21.98	21.90	22.32	22.13	22.23	21.94	22.27	22.23	22.08	0.5
HSDPA Subtest-4	21.97	21.89	22.31	22.12	22.22	21.93	22.26	22.22	22.07	0.5
DC-HSDPA Subtest-1	22.19	22.11	22.53	22.55	22.65	22.36	22.63	22.59	22.44	0
DC-HSDPA Subtest-2	22.18	22.10	22.52	22.52	22.62	22.33	22.56	22.52	22.37	0
DC-HSDPA Subtest-3	21.86	21.78	22.20	22.04	22.14	21.85	22.15	22.11	21.96	0.5
DC-HSDPA Subtest-4	21.85	21.77	22.19	22.03	22.13	21.84	22.14	22.10	21.95	0.5
HSUPA Subtest-1	22.34	22.26	22.68	22.64	22.74	22.45	22.75	22.71	22.56	0
HSUPA Subtest-2	20.39	20.31	20.73	20.62	20.72	20.43	20.77	20.73	20.58	2
HSUPA Subtest-3	21.37	21.29	21.71	21.66	21.76	21.47	21.76	21.72	21.57	1
HSUPA Subtest-4	20.38	20.30	20.72	20.67	20.77	20.48	20.79	20.75	20.60	2
HSUPA Subtest-5	22.41	22.33	22.75	22.63	22.73	22.44	22.76	22.72	22.57	0
EUT with Power Reduction (P-Sensor Triggered)										
RMC 12.2K	10.32	10.21	10.51	10.40	10.42	10.33	17.67	17.62	17.48	-
HSDPA Subtest-1	10.30	10.18	10.49	10.28	10.32	10.23	16.66	16.61	16.47	0
HSDPA Subtest-2	10.28	10.17	10.47	10.31	10.33	10.25	16.64	16.59	16.45	0
HSDPA Subtest-3	10.26	10.15	10.45	10.21	10.24	10.17	16.17	16.12	15.98	0.5
HSDPA Subtest-4	10.25	10.14	10.44	10.17	10.21	10.13	16.16	16.11	15.97	0.5
DC-HSDPA Subtest-1	10.20	10.09	10.39	10.26	10.28	10.19	16.53	16.48	16.34	0
DC-HSDPA Subtest-2	10.18	10.06	10.37	10.14	10.18	10.09	16.51	16.46	16.32	0
DC-HSDPA Subtest-3	10.16	10.05	10.35	10.17	10.19	10.11	16.04	15.99	15.85	0.5
DC-HSDPA Subtest-4	10.14	10.03	10.33	10.07	10.10	10.03	16.03	15.98	15.84	0.5
HSUPA Subtest-1	10.13	10.02	10.32	10.03	10.07	9.99	16.79	16.74	16.60	0
HSUPA Subtest-2	8.22	8.12	8.41	8.23	8.25	8.16	14.77	14.72	14.58	2
HSUPA Subtest-3	9.31	9.15	9.45	9.22	9.24	9.15	15.79	15.74	15.60	1
HSUPA Subtest-4	8.24	8.14	8.42	8.25	8.27	8.17	14.78	14.73	14.59	2
HSUPA Subtest-5	10.23	10.10	10.40	10.18	10.22	10.14	16.86	16.81	16.67	0

FCC SAR Test Report

Tablet PC Mode

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	23.22	23.31	23.89	0	15M	QPSK	1	0	23.17	23.26	23.84	0
		1	50	23.12	23.21	23.79	0			1	37	23.07	23.16	23.74	0
		1	99	23.06	23.15	23.73	0			1	74	23.01	23.10	23.68	0
		50	0	22.27	22.36	22.94	1			36	0	22.22	22.31	22.89	1
		50	25	22.17	22.26	22.84	1			36	19	22.12	22.21	22.79	1
		50	50	22.08	22.17	22.75	1			36	39	22.02	22.11	22.70	1
	100	0	22.20	22.29	22.87	1	75		0	22.15	22.24	22.82	1		
	16QAM	1	0	22.23	22.32	22.90	1		16QAM	1	0	22.18	22.27	22.85	1
		1	50	22.13	22.22	22.80	1			1	37	22.08	22.17	22.75	1
		1	99	22.07	22.16	22.74	1			1	74	22.02	22.11	22.69	1
		50	0	21.28	21.37	21.95	2			36	0	21.23	21.32	21.90	2
		50	25	21.18	21.27	21.85	2			36	19	21.13	21.22	21.80	2
		50	50	21.09	21.18	21.76	2			36	39	21.04	21.13	21.71	2
	100	0	21.21	21.30	21.88	2	75		0	21.16	21.25	21.83	2		
	64QAM	1	0	21.22	21.31	21.89	2		64QAM	1	0	21.17	21.26	21.84	2
		1	50	21.12	21.21	21.79	2			1	37	21.07	21.16	21.74	2
		1	99	21.06	21.15	21.73	2			1	74	21.01	21.10	21.68	2
		50	0	20.27	20.36	20.94	3			36	0	20.22	20.31	20.89	3
50		25	20.17	20.26	20.84	3	36	19		20.12	20.21	20.79	3		
50		50	20.08	20.17	20.75	3	36	39		20.03	20.12	20.70	3		
100	0	20.20	20.29	20.87	3	75	0	20.15	20.24	20.82	3				
10M	QPSK	1	0	23.10	23.19	23.77	0	5M	QPSK	1	0	23.07	23.16	23.74	0
		1	24	23.00	23.09	23.67	0			1	12	22.97	23.06	23.64	0
		1	49	22.94	23.03	23.61	0			1	24	22.91	23.00	23.58	0
		25	0	22.15	22.24	22.82	1			12	0	22.12	22.21	22.79	1
		25	12	22.05	22.14	22.72	1			12	6	22.02	22.11	22.69	1
		25	25	21.96	22.05	22.63	1			12	13	21.93	22.02	22.60	1
	50	0	22.08	22.17	22.75	1	25		0	22.05	22.14	22.72	1		
	16QAM	1	0	22.11	22.20	22.78	1		16QAM	1	0	22.08	22.17	22.75	1
		1	24	22.01	22.10	22.68	1			1	12	21.98	22.07	22.65	1
		1	49	21.95	22.04	22.62	1			1	24	21.92	22.01	22.59	1
		25	0	21.16	21.25	21.83	2			12	0	21.13	21.22	21.80	2
		25	12	21.06	21.15	21.73	2			12	6	21.03	21.12	21.70	2
		25	25	20.97	21.06	21.64	2			12	13	20.94	21.03	21.61	2
	50	0	21.09	21.18	21.76	2	25		0	21.06	21.15	21.73	2		
	64QAM	1	0	21.10	21.19	21.77	2		64QAM	1	0	21.07	21.16	21.74	2
		1	24	21.00	21.09	21.67	2			1	12	20.97	21.06	21.64	2
		1	49	20.94	21.03	21.61	2			1	24	20.91	21.00	21.58	2
		25	0	20.15	20.24	20.82	3			12	0	20.12	20.21	20.79	3
25		12	20.05	20.14	20.72	3	12	6		20.02	20.11	20.69	3		
25		25	19.96	20.05	20.63	3	12	13		19.93	20.02	20.60	3		
50	0	20.08	20.17	20.75	3	25	0	20.05	20.14	20.72	3				
3M	QPSK	1	0	23.02	23.11	23.69	0	1.4M	QPSK	1	0	22.97	23.06	23.64	0
		1	7	22.92	23.01	23.59	0			1	2	22.87	22.96	23.54	0
		1	14	22.86	22.95	23.53	0			1	5	22.81	22.90	23.48	0
		8	0	22.07	22.16	22.74	1			3	0	22.72	22.81	23.39	0
		8	3	21.97	22.06	22.64	1			3	1	22.62	22.71	23.29	0
		8	7	21.88	21.97	22.55	1			3	3	22.53	22.62	23.20	0
	15	0	22.00	22.09	22.67	1	6		0	21.95	22.04	22.62	1		
	16QAM	1	0	22.03	22.12	22.70	1		16QAM	1	0	22.03	22.12	22.70	1
		1	7	21.93	22.02	22.60	1			1	2	21.88	21.97	22.55	1
		1	14	21.87	21.96	22.54	1			1	5	21.82	21.91	22.49	1
		8	0	21.08	21.17	21.75	2			3	0	21.73	21.82	22.40	1
		8	3	20.98	21.07	21.65	2			3	1	21.63	21.72	22.30	1
		8	7	20.89	20.98	21.56	2			3	3	21.54	21.63	22.21	1
	15	0	21.01	21.10	21.68	2	6		0	20.96	21.05	21.63	2		
	64QAM	1	0	21.02	21.11	21.69	2		64QAM	1	0	20.97	21.06	21.64	2
		1	7	20.92	21.01	21.59	2			1	2	20.87	20.96	21.54	2
		1	14	20.86	20.95	21.53	2			1	5	20.81	20.90	21.48	2
		8	0	20.07	20.16	20.74	3			3	0	20.72	20.81	21.39	2
8		3	19.97	20.06	20.64	3	3	1		20.62	20.71	21.29	2		
8		7	19.88	19.97	20.55	3	3	3		20.53	20.62	21.20	2		
15	0	20.00	20.09	20.67	3	6	0	19.95	20.04	20.62	3				

FCC 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	9.83	9.94	10.34	0	15M	QPSK	1	0	9.72	9.87	10.29	0
		1	50	9.73	9.81	10.13	0			1	37	9.57	9.70	10.05	0
		1	99	9.75	9.88	10.28	0			1	74	9.63	9.81	10.22	0
		50	0	9.80	9.90	10.30	0			36	0	9.67	9.83	10.25	0
		50	25	9.76	9.86	10.26	0			36	19	9.61	9.76	10.22	0
		50	50	9.74	9.85	10.16	0			36	39	9.60	9.74	10.09	0
	100	0	9.81	9.87	10.27	0	75		0	9.68	9.79	10.21	0		
	16QAM	1	0	8.83	8.97	9.39	0		16QAM	1	0	8.71	8.89	9.34	0
		1	50	8.67	8.80	9.24	0			1	37	8.53	8.67	9.09	0
		1	99	8.74	8.89	9.30	0			1	74	8.60	8.81	9.23	0
		50	0	8.79	8.92	9.34	0			36	0	8.72	8.84	9.29	0
		50	25	8.73	8.86	9.31	0			36	19	8.57	8.77	9.27	0
		50	50	8.70	8.85	9.20	0			36	39	8.56	8.74	9.23	0
	100	0	8.73	8.88	9.31	0	75		0	8.64	8.80	9.26	0		
	64QAM	1	0	9.72	10.10	9.66	0		64QAM	1	0	9.63	10.05	9.56	0
		1	50	9.62	9.95	9.52	0			1	37	9.48	9.89	9.41	0
		1	99	9.56	9.94	9.50	0			1	74	9.46	9.86	9.37	0
		50	0	9.55	9.93	9.49	0			36	0	9.45	9.85	9.35	0
50		25	9.50	9.91	9.45	0	36	19		9.38	9.83	9.32	0		
50		50	9.43	9.83	9.39	0	36	39		9.31	9.74	9.25	0		
100	0	9.56	9.86	9.41	0	75	0	9.35	9.77	9.29	0				
10M	QPSK	1	0	9.60	9.78	10.24	0	5M	QPSK	1	0	9.49	9.66	10.18	0
		1	24	9.42	9.57	10.00	0			1	12	9.26	9.46	9.95	0
		1	49	9.47	9.69	10.12	0			1	24	9.35	9.58	10.07	0
		25	0	9.55	9.72	10.20	0			12	0	9.40	9.61	10.10	0
		25	12	9.51	9.65	10.12	0			12	6	9.33	9.54	10.03	0
		25	25	9.45	9.63	10.11	0			12	13	9.30	9.51	9.91	0
	50	0	9.51	9.67	10.15	0	25		0	9.38	9.56	10.05	0		
	16QAM	1	0	8.57	8.79	9.29	0		16QAM	1	0	8.46	8.69	9.23	0
		1	24	8.36	8.52	9.09	0			1	12	8.25	8.42	8.92	0
		1	49	8.46	8.69	9.19	0			1	24	8.31	8.60	9.11	0
		25	0	8.58	8.72	9.22	0			12	0	8.46	8.64	9.18	0
		25	12	8.43	8.63	9.17	0			12	6	8.32	8.52	9.11	0
		25	25	8.39	8.61	9.13	0			12	13	8.28	8.49	9.02	0
	50	0	8.48	8.65	9.17	0	25		0	8.38	8.58	9.15	0		
	64QAM	1	0	9.56	10.00	9.49	0		64QAM	1	0	9.44	9.92	9.38	0
		1	24	9.42	9.85	9.32	0			1	12	9.34	9.77	9.17	0
		1	49	9.35	9.82	9.26	0			1	24	9.26	9.76	9.13	0
		25	0	9.33	9.80	9.24	0			12	0	9.23	9.73	9.11	0
25		12	9.31	9.78	9.17	0	12	6		9.13	9.70	9.05	0		
25		25	9.13	9.68	9.10	0	12	13		9.05	9.58	8.96	0		
50	0	9.31	9.71	9.19	0	25	0	9.20	9.64	9.02	0				
3M	QPSK	1	0	9.37	9.60	10.13	0	1.4M	QPSK	1	0	9.26	9.50	10.08	0
		1	7	9.11	9.32	9.88	0			1	2	8.96	9.22	9.74	0
		1	14	9.20	9.52	10.03	0			1	5	9.07	9.42	9.91	0
		8	0	9.40	9.56	10.07	0			3	0	9.22	9.45	10.04	0
		8	3	9.22	9.46	9.97	0			3	1	9.05	9.34	10.01	0
		8	7	9.15	9.43	9.84	0			3	3	9.01	9.31	9.87	0
	15	0	9.29	9.48	9.97	0	6		0	9.16	9.39	9.96	0		
	16QAM	1	0	8.33	8.64	9.18	0		16QAM	1	0	8.24	8.55	9.14	0
		1	7	8.06	8.23	8.85	0			1	2	7.92	8.20	8.77	0
		1	14	8.17	8.51	9.03	0			1	5	8.04	8.41	8.96	0
		8	0	8.29	8.57	9.13	0			3	0	8.20	8.46	9.08	0
		8	3	8.14	8.43	9.10	0			3	1	8.01	8.33	9.02	0
		8	7	8.09	8.40	8.99	0			3	3	7.95	8.28	8.83	0
	15	0	8.23	8.48	9.08	0	6		0	8.11	8.37	9.02	0		
	64QAM	1	0	9.39	9.90	9.32	0		64QAM	1	0	9.27	9.85	9.20	0
		1	7	9.25	9.74	9.07	0			1	2	9.14	9.67	8.93	0
		1	14	9.19	9.69	9.03	0			1	5	9.02	9.63	8.87	0
		8	0	9.16	9.67	8.99	0			3	0	8.99	9.59	8.82	0
8		3	9.12	9.64	8.88	0	3	1		8.91	9.53	8.72	0		
8		7	8.93	9.52	8.81	0	3	3		8.76	9.39	8.64	0		
15	0	8.97	9.57	8.87	0	6	0	9.05	9.45	8.68	0				

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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	23.47	23.43	23.41	0	15M	QPSK	1	0	23.41	23.37	23.35	0		
		1	50	23.21	23.17	23.19	0			1	37	23.15	23.11	23.13	0		
		1	99	23.09	23.05	23.07	0			1	74	23.03	22.99	23.01	0		
		50	0	22.40	22.36	22.38	1			36	0	22.34	22.30	22.32	1		
		50	25	22.29	22.25	22.27	1			36	19	22.23	22.19	22.21	1		
		50	50	22.21	22.17	22.19	1			36	39	22.15	22.11	22.13	1		
	100	0	22.31	22.27	22.29	1	75		0	22.25	22.21	22.23	1				
	16QAM	1	0	22.46	22.42	22.40	1		1	0	22.40	22.36	22.34	1			
		1	50	22.20	22.16	22.18	1		1	37	22.14	22.10	22.12	1			
		1	99	22.08	22.04	22.06	1		1	74	22.02	21.98	22.00	1			
		50	0	21.39	21.35	21.37	2		36	0	21.33	21.29	21.31	2			
		50	25	21.28	21.24	21.26	2		36	19	21.22	21.18	21.20	2			
		50	50	21.20	21.16	21.18	2		36	39	21.14	21.10	21.12	2			
	100	0	21.30	21.26	21.28	2	75		0	21.24	21.20	21.22	2				
	64QAM	1	0	21.48	21.44	21.42	2		1	0	21.42	21.38	21.36	2			
		1	50	21.22	21.18	21.20	2		1	37	21.16	21.12	21.14	2			
		1	99	21.10	21.06	21.08	2		1	74	21.04	21.00	21.02	2			
		50	0	20.41	20.37	20.39	3		36	0	20.35	20.31	20.33	3			
		50	25	20.30	20.26	20.28	3		36	19	20.24	20.20	20.22	3			
		50	50	20.22	20.18	20.20	3		36	39	20.16	20.12	20.14	3			
	100	0	20.32	20.28	20.30	3	75		0	20.26	20.22	20.24	3				
	10M	QPSK	1	0	23.33	23.29	23.27		0	5M	QPSK	1	0	23.30	23.26	23.24	0
			1	24	23.07	23.03	23.05		0			1	12	23.04	23.00	23.02	0
			1	49	22.95	22.91	22.93		0			1	24	22.92	22.88	22.90	0
25			0	22.26	22.22	22.24	1	12	0			22.23	22.19	22.21	1		
25			12	22.15	22.11	22.13	1	12	6			22.12	22.08	22.10	1		
25			25	22.07	22.03	22.05	1	12	13			22.04	22.00	22.02	1		
50		0	22.17	22.13	22.15	1	25	0	22.14		22.10	22.12	1				
16QAM		1	0	22.32	22.28	22.26	1	1	0		22.29	22.25	22.23	1			
		1	24	22.06	22.02	22.04	1	1	12		22.03	21.99	22.01	1			
		1	49	21.94	21.90	21.92	1	1	24		21.91	21.87	21.89	1			
		25	0	21.25	21.21	21.23	2	12	0		21.22	21.18	21.20	2			
		25	12	21.14	21.10	21.12	2	12	6		21.11	21.07	21.09	2			
		25	25	21.06	21.02	21.04	2	12	13		21.03	20.99	21.01	2			
50		0	21.16	21.12	21.14	2	25	0	21.13		21.09	21.11	2				
64QAM		1	0	21.34	21.30	21.28	2	1	0		21.31	21.27	21.25	2			
		1	24	21.08	21.04	21.06	2	1	12		21.05	21.01	21.03	2			
		1	49	20.96	20.92	20.94	2	1	24		20.93	20.89	20.91	2			
		25	0	20.27	20.23	20.25	3	12	0		20.24	20.20	20.22	3			
		25	12	20.16	20.12	20.14	3	12	6		20.13	20.09	20.11	3			
		25	25	20.08	20.04	20.06	3	12	13		20.05	20.01	20.03	3			
50		0	20.18	20.14	20.16	3	25	0	20.15		20.11	20.13	3				
3M		QPSK	1	0	23.27	23.23	23.21	0	1.4M		QPSK	1	0	23.22	23.18	23.16	0
			1	7	23.01	22.97	22.99	0				1	2	22.96	22.92	22.94	0
			1	14	22.89	22.85	22.87	0				1	5	22.84	22.80	22.82	0
	8		0	22.20	22.16	22.18	1	3		0		22.85	22.81	22.83	0		
	8		3	22.09	22.05	22.07	1	3		1		22.74	22.70	22.72	0		
	8		7	22.01	21.97	21.99	1	3		3		22.66	22.62	22.64	0		
	15	0	22.11	22.07	22.09	1	6	0		22.06	22.02	22.04	1				
	16QAM	1	0	22.26	22.22	22.20	1	1		0	22.21	22.17	22.15	1			
		1	7	22.00	21.96	21.98	1	1		2	21.95	21.91	21.93	1			
		1	14	21.88	21.84	21.86	1	1		5	21.83	21.79	21.81	1			
		8	0	21.19	21.15	21.17	2	3		0	21.84	21.80	21.82	1			
		8	3	21.08	21.04	21.06	2	3		1	21.73	21.69	21.71	1			
		8	7	21.00	20.96	20.98	2	3		3	21.65	21.61	21.63	1			
	15	0	21.10	21.06	21.08	2	6	0		21.05	21.01	21.03	2				
	64QAM	1	0	21.28	21.24	21.22	2	1		0	21.23	21.19	21.17	2			
		1	7	21.02	20.98	21.00	2	1		2	20.97	20.93	20.95	2			
		1	14	20.90	20.86	20.88	2	1		5	20.85	20.81	20.83	2			
		8	0	20.21	20.17	20.19	3	3		0	20.86	20.82	20.84	2			
		8	3	20.10	20.06	20.08	3	3		1	20.75	20.71	20.73	2			
		8	7	20.02	19.98	20.00	3	3		3	20.67	20.63	20.65	2			
	15	0	20.12	20.08	20.10	3	6	0		20.07	20.03	20.05	3				

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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)		
				20050	20175	20300						20025	20175	20325			
		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	10.62	10.40	10.33	0	15M	QPSK	1	0	10.25	9.99	9.51	0		
		1	50	10.35	10.12	9.68	0			1	37	10.29	10.01	9.59	0		
		1	99	10.21	9.98	9.60	0			1	74	10.10	9.86	9.43	0		
		50	0	10.33	10.11	9.66	0			36	0	10.24	10.00	9.55	0		
		50	25	10.29	10.05	9.61	0			36	19	10.20	9.93	9.48	0		
		50	50	10.22	10.04	9.60	0			36	39	10.11	9.92	9.45	0		
		100	0	10.32	10.13	9.67	0			75	0	10.27	10.02	9.58	0		
	16QAM	1	0	10.42	10.58	10.35	0		16QAM	1	0	10.37	10.53	10.30	0		
		1	50	10.29	10.38	10.14	0			1	37	10.20	10.33	10.03	0		
		1	99	10.18	10.32	10.09	0			1	74	10.07	10.26	9.99	0		
		50	0	10.11	10.29	10.05	0			36	0	10.00	10.21	9.95	0		
		50	25	10.08	10.23	9.99	0			36	19	9.95	10.14	9.81	0		
		50	50	9.94	10.12	9.89	0			36	39	9.80	10.02	9.77	0		
		100	0	10.02	10.19	9.94	0			75	0	9.99	10.10	9.83	0		
	64QAM	1	0	10.32	10.57	10.33	0		64QAM	1	0	10.27	10.52	10.28	0		
		1	50	9.99	10.24	10.01	0			1	37	9.88	10.18	9.92	0		
		1	99	10.02	10.27	10.09	0			1	74	9.94	10.22	10.00	0		
		50	0	9.98	10.25	10.01	0			36	0	9.88	10.19	9.92	0		
		50	25	9.95	10.20	9.97	0			36	19	9.81	10.14	9.85	0		
		50	50	9.94	10.19	9.95	0			36	39	9.79	10.13	9.81	0		
		100	0	10.01	10.26	10.10	0			75	0	9.90	10.21	10.00	0		
	10M	QPSK	1	0	10.21	9.90	9.38		0	5M	QPSK	1	0	10.16	9.81	9.29	0
			1	24	10.25	9.95	9.44		0			1	12	10.20	9.86	9.32	0
			1	49	10.09	9.74	9.25		0			1	24	9.99	9.64	9.10	0
25			0	10.24	9.92	9.46	0	12	0			10.14	9.84	9.28	0		
25			12	10.14	9.83	9.34	0	12	6			10.07	9.74	9.20	0		
25			25	10.11	9.80	9.30	0	12	13			10.04	9.72	9.15	0		
50			0	10.23	9.98	9.53	0	25	0			10.14	9.88	9.43	0		
16QAM		1	0	10.32	10.48	10.24	0	16QAM	1		0	10.27	10.43	10.16	0		
		1	24	10.06	10.28	9.94	0		1		12	9.96	10.21	9.89	0		
		1	49	10.00	10.20	9.93	0		1		24	9.91	10.13	9.76	0		
		25	0	9.97	10.16	9.78	0		12		0	9.82	10.08	9.71	0		
		25	12	9.80	10.10	9.69	0		12		6	9.66	10.02	9.55	0		
		25	25	9.73	9.93	9.63	0		12		13	9.50	9.84	9.48	0		
		50	0	9.87	10.04	9.72	0		25		0	9.63	9.94	9.56	0		
64QAM		1	0	10.21	10.47	10.23	0	64QAM	1		0	10.15	10.42	10.17	0		
		1	24	9.76	10.10	9.81	0		1		12	9.61	10.01	9.71	0		
		1	49	9.84	10.16	9.95	0		1		24	9.72	10.09	9.76	0		
		25	0	9.76	10.11	9.81	0		12		0	9.64	10.03	9.71	0		
		25	12	9.67	10.05	9.70	0		12		6	9.53	9.96	9.57	0		
		25	25	9.64	10.03	9.67	0		12		13	9.50	9.93	9.53	0		
		50	0	9.81	10.13	9.85	0		25		0	9.71	10.06	9.76	0		
3M		QPSK	1	0	10.07	9.71	9.13	0	1.4M		QPSK	1	0	10.04	9.62	8.97	0
			1	7	10.14	9.76	9.19	0				1	2	10.09	9.70	9.01	0
			1	14	9.91	9.53	8.94	0				1	5	9.89	9.44	8.84	0
	8		0	10.07	9.72	9.27	0	3		0		10.07	9.66	9.08	0		
	8		3	9.97	9.65	9.05	0	3		1		9.98	9.57	8.91	0		
	8		7	9.88	9.60	9.01	0	3		3		9.82	9.52	8.87	0		
	15		0	10.10	9.78	9.23	0	6		0		10.08	9.74	9.19	0		
	16QAM	1	0	10.21	10.38	10.11	0	16QAM		1	0	10.14	10.31	10.02	0		
		1	7	9.89	10.16	9.77	0			1	2	9.76	10.06	9.65	0		
		1	14	9.84	10.06	9.66	0			1	5	9.65	9.94	9.50	0		
		8	0	9.72	10.03	9.57	0			3	0	9.62	9.89	9.38	0		
		8	3	9.62	9.93	9.44	0			3	1	9.44	9.80	9.33	0		
		8	7	9.41	9.77	9.30	0			3	3	9.28	9.55	9.17	0		
		15	0	9.69	9.86	9.35	0			6	0	9.42	9.72	9.22	0		
	64QAM	1	0	10.09	10.36	10.11	0	64QAM		1	0	10.03	10.31	10.06	0		
		1	7	9.49	9.90	9.54	0			1	2	9.38	9.84	9.48	0		
		1	14	9.58	10.01	9.61	0			1	5	9.52	9.96	9.63	0		
		8	0	9.54	9.94	9.56	0			3	0	9.42	9.87	9.48	0		
		8	3	9.41	9.85	9.43	0			3	1	9.24	9.80	9.30	0		
		8	7	9.35	9.82	9.41	0			3	3	9.19	9.74	9.24	0		
		15	0	9.54	9.98	9.68	0			6	0	9.34	9.92	9.58	0		

FCC 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	23.68	23.56	23.66	0	5M	QPSK	1	0	23.60	23.48	23.58	0		
		1	24	23.64	23.52	23.62	0			1	12	23.56	23.44	23.54	0		
		1	49	23.59	23.47	23.57	0			1	24	23.51	23.39	23.49	0		
		25	0	22.74	22.62	22.72	1			12	0	22.66	22.54	22.64	1		
		25	12	22.71	22.59	22.69	1			12	6	22.63	22.51	22.61	1		
		25	25	22.69	22.57	22.67	1			12	13	22.61	22.49	22.59	1		
		50	0	22.70	22.58	22.68	1			25	0	22.62	22.50	22.60	1		
	16QAM	1	0	22.65	22.53	22.63	1		16QAM	1	0	22.57	22.45	22.55	1		
		1	24	22.61	22.49	22.59	1			1	12	22.53	22.41	22.51	1		
		1	49	22.56	22.44	22.54	1			1	24	22.48	22.36	22.46	1		
		25	0	21.71	21.59	21.69	2			12	0	21.63	21.51	21.61	2		
		25	12	21.68	21.56	21.66	2			12	6	21.60	21.48	21.58	2		
		25	25	21.66	21.54	21.64	2			12	13	21.58	21.46	21.56	2		
		50	0	21.67	21.55	21.65	2			25	0	21.59	21.47	21.57	2		
	64QAM	1	0	21.67	21.55	21.65	2		64QAM	1	0	21.59	21.47	21.57	2		
		1	24	21.63	21.51	21.61	2			1	12	21.55	21.43	21.53	2		
		1	49	21.58	21.46	21.56	2			1	24	21.50	21.38	21.48	2		
		25	0	20.73	20.61	20.71	3			12	0	20.65	20.53	20.63	3		
		25	12	20.70	20.58	20.68	3			12	6	20.62	20.50	20.60	3		
		25	25	20.68	20.56	20.66	3			12	13	20.60	20.48	20.58	3		
		50	0	20.69	20.57	20.67	3			25	0	20.61	20.49	20.59	3		
	3M	QPSK	1	0	23.55	23.43	23.53		0	1.4M	QPSK	1	0	23.49	23.37	23.47	0
			1	7	23.51	23.39	23.49		0			1	2	23.45	23.33	23.43	0
			1	14	23.46	23.34	23.44		0			1	5	23.40	23.28	23.38	0
8			0	22.61	22.49	22.59	1	3	0			23.25	23.13	23.23	0		
8			3	22.58	22.46	22.56	1	3	1			23.22	23.10	23.20	0		
8			7	22.56	22.44	22.54	1	3	3			23.20	23.08	23.18	0		
15			0	22.57	22.45	22.55	1	6	0			23.21	23.09	23.19	1		
16QAM		1	0	22.52	22.40	22.50	1	16QAM	1		0	22.46	22.34	22.44	1		
		1	7	22.48	22.36	22.46	1		1		2	22.42	22.30	22.40	1		
		1	14	22.43	22.31	22.41	1		1		5	22.37	22.25	22.35	1		
		8	0	21.58	21.46	21.56	2		3		0	22.22	22.10	22.20	1		
		8	3	21.55	21.43	21.53	2		3		1	22.19	22.07	22.17	1		
		8	7	21.53	21.41	21.51	2		3		3	22.17	22.05	22.15	1		
		15	0	21.54	21.42	21.52	2		6		0	21.48	21.36	21.46	2		
64QAM		1	0	21.54	21.42	21.52	2	64QAM	1		0	21.48	21.36	21.46	2		
		1	7	21.50	21.38	21.48	2		1		2	21.44	21.32	21.42	2		
		1	14	21.45	21.33	21.43	2		1		5	21.39	21.27	21.37	2		
		8	0	20.60	20.48	20.58	3		3		0	21.24	21.12	21.22	2		
		8	3	20.57	20.45	20.55	3		3		1	21.21	21.09	21.19	2		
		8	7	20.55	20.43	20.53	3		3		3	21.19	21.07	21.17	2		
		15	0	20.56	20.44	20.54	3		6		0	20.50	20.38	20.48	3		

FCC 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	17.89	17.47	17.52	0	5M	QPSK	1	0	17.76	17.34	17.39	0
		1	24	17.43	17.44	17.50	0			1	12	17.30	17.31	17.37	0
		1	49	17.42	17.43	17.47	0			1	24	17.29	17.30	17.34	0
		25	0	17.59	17.52	17.55	0			12	0	17.46	17.39	17.42	0
		25	12	17.53	17.38	17.44	0			12	6	17.40	17.25	17.31	0
		25	25	17.41	17.32	17.33	0			12	13	17.28	17.19	17.20	0
	50	0	17.35	17.31	17.32	0	25		0	17.22	17.18	17.19	0		
	16QAM	1	0	16.86	16.44	16.49	0		16QAM	1	0	16.73	16.31	16.36	0
		1	24	16.40	16.41	16.47	0			1	12	16.27	16.28	16.34	0
		1	49	16.39	16.40	16.44	0			1	24	16.26	16.27	16.31	0
		25	0	16.56	16.49	16.52	0			12	0	16.43	16.36	16.39	0
		25	12	16.50	16.35	16.41	0			12	6	16.37	16.22	16.28	0
		25	25	16.38	16.29	16.30	0			12	13	16.25	16.16	16.17	0
	50	0	16.32	16.28	16.29	0	25		0	16.19	16.15	16.16	0		
	64QAM	1	0	17.45	17.76	17.49	0		64QAM	1	0	17.32	17.71	17.38	0
		1	24	17.44	17.75	17.48	0			1	12	17.31	17.70	17.36	0
		1	49	17.52	17.83	17.65	0			1	24	17.37	17.78	17.47	0
		25	0	17.34	17.65	17.38	0			12	0	17.20	17.57	17.23	0
25		12	17.44	17.74	17.49	0	12	6		17.31	17.69	17.43	0		
25		25	17.34	17.65	17.39	0	12	13		17.19	17.57	17.28	0		
50	0	17.33	17.64	17.37	0	25	0	17.18	17.56	17.21	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	17.67	17.25	17.30	0	1.4M	QPSK	1	0	17.56	17.14	17.19	0
		1	7	17.21	17.22	17.28	0			1	2	17.10	17.11	17.17	0
		1	14	17.20	17.21	17.25	0			1	5	17.09	17.10	17.14	0
		8	0	17.37	17.30	17.33	0			3	0	17.26	17.19	17.22	0
		8	3	17.31	17.16	17.22	0			3	1	17.20	17.05	17.11	0
		8	7	17.19	17.10	17.11	0			3	3	17.08	16.99	17.00	0
	15	0	17.13	17.09	17.10	0	6		0	17.02	16.98	16.99	0		
	16QAM	1	0	16.64	16.22	16.27	0		16QAM	1	0	16.53	16.11	16.16	0
		1	7	16.18	16.19	16.25	0			1	2	16.07	16.08	16.14	0
		1	14	16.17	16.18	16.22	0			1	5	16.06	16.07	16.11	0
		8	0	16.34	16.27	16.30	0			3	0	16.23	16.16	16.19	0
		8	3	16.28	16.13	16.19	0			3	1	16.17	16.02	16.08	0
		8	7	16.16	16.07	16.08	0			3	3	16.15	16.06	16.07	0
	15	0	16.10	16.06	16.07	0	6		0	16.09	16.05	16.06	0		
	64QAM	1	0	17.25	17.65	17.32	0		64QAM	1	0	17.14	17.61	17.23	0
		1	7	17.22	17.63	17.28	0			1	2	17.11	17.59	17.17	0
		1	14	17.32	17.72	17.44	0			1	5	17.23	17.68	17.32	0
		8	0	17.05	17.52	17.12	0			3	0	16.92	17.46	17.01	0
8		3	17.15	17.61	17.28	0	3	1		17.09	17.56	17.23	0		
8		7	17.04	17.52	17.18	0	3	3		16.92	17.46	17.04	0		
15	0	17.03	17.49	17.10	0	6	0	16.89	17.39	16.98	0				

FCC 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	23.43	23.36	23.48	0	15M	QPSK	1	0	23.36	23.29	23.41	0
		1	50	23.40	23.33	23.45	0			1	37	23.33	23.26	23.38	0
		1	99	23.34	23.27	23.39	0			1	74	23.27	23.20	23.32	0
		50	0	22.39	22.32	22.44	1			36	0	22.32	22.25	22.37	1
		50	25	22.36	22.29	22.41	1			36	19	22.29	22.22	22.34	1
		50	50	22.33	22.26	22.38	1			36	39	22.26	22.19	22.31	1
		100	0	22.36	22.29	22.41	1			75	0	22.29	22.22	22.34	1
	16QAM	1	0	22.41	22.34	22.46	1		16QAM	1	0	22.34	22.27	22.39	1
		1	50	22.38	22.31	22.43	1			1	37	22.31	22.24	22.36	1
		1	99	22.32	22.25	22.37	1			1	74	22.25	22.18	22.30	1
		50	0	21.37	21.30	21.42	2			36	0	21.30	21.23	21.35	2
		50	25	21.34	21.27	21.39	2			36	19	21.27	21.20	21.32	2
		50	50	21.31	21.24	21.36	2			36	39	21.24	21.17	21.29	2
		100	0	21.34	21.27	21.39	2			75	0	21.27	21.20	21.32	2
	64QAM	1	0	21.43	21.36	21.48	2		64QAM	1	0	21.36	21.29	21.41	2
		1	50	21.40	21.33	21.45	2			1	37	21.33	21.26	21.38	2
		1	99	21.34	21.27	21.39	2			1	74	21.27	21.20	21.32	2
		50	0	20.39	20.32	20.44	3			36	0	20.32	20.25	20.37	3
		50	25	20.36	20.29	20.41	3			36	19	20.29	20.22	20.34	3
		50	50	20.33	20.26	20.38	3			36	39	20.26	20.19	20.31	3
		100	0	20.36	20.29	20.41	3			75	0	20.29	20.22	20.34	3
	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	23.31	23.24	23.36	0	5M	QPSK	1	0	23.26	23.19	23.31	0
		1	24	23.28	23.21	23.33	0			1	12	23.23	23.16	23.28	0
		1	49	23.22	23.15	23.27	0			1	24	23.17	23.10	23.22	0
		25	0	22.27	22.20	22.32	1			12	0	22.22	22.15	22.27	1
		25	12	22.24	22.17	22.29	1			12	6	22.19	22.12	22.24	1
		25	25	22.21	22.14	22.26	1			12	13	22.16	22.09	22.21	1
		50	0	22.24	22.17	22.29	1			25	0	22.19	22.12	22.24	1
	16QAM	1	0	22.29	22.22	22.34	1		16QAM	1	0	22.24	22.17	22.29	1
		1	24	22.26	22.19	22.31	1			1	12	22.21	22.14	22.26	1
		1	49	22.20	22.13	22.25	1			1	24	22.15	22.08	22.20	1
		25	0	21.25	21.18	21.30	2			12	0	21.20	21.13	21.25	2
		25	12	21.22	21.15	21.27	2			12	6	21.17	21.10	21.22	2
		25	25	21.19	21.12	21.24	2			12	13	21.14	21.07	21.19	2
		50	0	21.22	21.15	21.27	2			25	0	21.17	21.10	21.22	2
	64QAM	1	0	21.31	21.24	21.36	2		64QAM	1	0	21.26	21.19	21.31	2
		1	24	21.28	21.21	21.33	2			1	12	21.23	21.16	21.28	2
		1	49	21.22	21.15	21.27	2			1	24	21.17	21.10	21.22	2
		25	0	20.27	20.20	20.32	3			12	0	20.22	20.15	20.27	3
		25	12	20.24	20.17	20.29	3			12	6	20.19	20.12	20.24	3
		25	25	20.21	20.14	20.26	3			12	13	20.16	20.09	20.21	3
		50	0	20.24	20.17	20.29	3			25	0	20.19	20.12	20.24	3

FCC 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	10.75	10.77	10.89	0	15M	QPSK	1	0	10.52	10.61	10.84	0
		1	50	10.42	10.58	10.75	0			1	37	10.28	10.51	10.72	0
		1	99	10.29	10.36	10.56	0			1	74	10.16	10.23	10.58	0
		50	0	10.47	10.53	10.74	0			36	0	10.35	10.43	10.66	0
		50	25	10.40	10.44	10.63	0			36	19	10.18	10.32	10.54	0
		50	50	10.26	10.33	10.55	0			36	39	10.13	10.19	10.49	0
	16QAM	100	0	10.24	10.32	10.48	0		75	0	10.09	10.18	10.38	0	
		1	0	10.55	10.56	10.70	0		1	0	10.48	10.49	10.65	0	
		1	50	10.39	10.47	10.63	0		1	37	10.38	10.40	10.53	0	
		1	99	10.24	10.25	10.34	0		1	74	10.11	10.12	10.39	0	
		50	0	10.40	10.42	10.55	0		36	0	10.27	10.33	10.46	0	
		50	25	10.31	10.33	10.42	0		36	19	10.17	10.21	10.39	0	
	64QAM	50	50	10.21	10.22	10.41	0		36	39	10.07	10.08	10.31	0	
		100	0	10.20	10.21	10.29	0		75	0	10.05	10.07	10.22	0	
		1	0	10.33	10.45	10.52	0		1	0	10.25	10.39	10.46	0	
		1	50	10.25	10.36	10.47	0		1	37	10.19	10.29	10.39	0	
		1	99	10.03	10.14	10.26	0		1	74	9.93	10.02	10.18	0	
		50	0	10.15	10.31	10.38	0		36	0	10.09	10.23	10.27	0	
10M	QPSK	50	25	10.05	10.22	10.29	0	36	19	9.93	10.11	10.20	0		
		50	50	10.03	10.11	10.18	0	36	39	9.85	9.98	10.11	0		
		100	0	9.98	10.10	10.16	0	75	0	9.83	9.96	10.03	0		
		1	0	10.41	10.53	10.78	0	1	0	10.34	10.46	10.74	0		
		1	24	10.21	10.40	10.68	0	1	12	10.26	10.31	10.65	0		
		1	49	10.00	10.10	10.48	0	1	24	9.88	10.00	10.21	0		
	16QAM	25	0	10.23	10.33	10.62	0	12	0	10.14	10.24	10.56	0		
		25	12	10.15	10.21	10.53	0	12	6	10.02	10.11	10.42	0		
		25	25	10.00	10.06	10.38	0	12	13	9.85	9.93	10.34	0		
		50	0	9.95	10.04	10.24	0	25	0	9.80	9.92	10.16	0		
		1	0	10.42	10.44	10.60	0	1	0	10.33	10.37	10.55	0		
		1	24	10.30	10.32	10.52	0	1	12	10.13	10.20	10.44	0		
	64QAM	1	49	9.96	9.99	10.08	0	1	24	9.85	9.88	10.03	0		
		25	0	10.15	10.23	10.40	0	12	0	10.09	10.14	10.37	0		
		25	12	10.05	10.08	10.26	0	12	6	9.95	10.00	10.28	0		
		25	25	9.93	9.94	10.21	0	12	13	9.77	9.80	10.08	0		
		50	0	9.90	9.93	10.12	0	25	0	9.75	9.77	9.97	0		
		1	0	10.17	10.32	10.40	0	1	0	10.10	10.26	10.36	0		
16QAM	1	24	10.03	10.22	10.28	0	1	12	9.96	10.17	10.21	0			
	1	49	9.79	9.89	10.06	0	1	24	9.66	9.76	10.01	0			
	25	0	9.96	10.13	10.21	0	12	0	9.80	10.06	10.15	0			
	25	12	9.87	10.01	10.12	0	12	6	9.63	9.88	9.98	0			
	25	25	9.73	9.84	10.00	0	12	13	9.55	9.73	9.91	0			
	50	0	9.68	9.82	9.89	0	25	0	9.53	9.70	9.82	0			

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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	23.31	23.26	23.39	0	5M	QPSK	1	0	23.23	23.18	23.31	0		
		1	24	23.30	23.25	23.38	0			1	12	23.22	23.17	23.30	0		
		1	49	23.27	23.22	23.35	0			1	24	23.19	23.14	23.27	0		
		25	0	22.42	22.37	22.50	1			12	0	22.34	22.29	22.42	1		
		25	12	22.41	22.36	22.49	1			12	6	22.33	22.28	22.41	1		
		25	25	22.37	22.32	22.45	1			12	13	22.29	22.24	22.37	1		
	50	0	22.38	22.33	22.46	1	25		0	22.30	22.25	22.38	1				
	16QAM	1	0	22.33	22.28	22.41	1		16QAM	1	0	22.25	22.20	22.33	1		
		1	24	22.32	22.27	22.40	1			1	12	22.24	22.19	22.32	1		
		1	49	22.29	22.24	22.37	1			1	24	22.21	22.16	22.29	1		
		25	0	21.44	21.39	21.52	2			12	0	21.36	21.31	21.44	2		
		25	12	21.43	21.38	21.51	2			12	6	21.35	21.30	21.43	2		
		25	25	21.39	21.34	21.47	2			12	13	21.31	21.26	21.39	2		
	50	0	21.40	21.35	21.48	2	25		0	21.32	21.27	21.40	2				
	64QAM	1	0	21.31	21.26	21.39	2		64QAM	1	0	21.23	21.18	21.31	2		
		1	24	21.30	21.25	21.38	2			1	12	21.22	21.17	21.30	2		
		1	49	21.27	21.22	21.35	2			1	24	21.19	21.14	21.27	2		
		25	0	20.42	20.37	20.50	3			12	0	20.34	20.29	20.42	3		
		25	12	20.41	20.36	20.49	3			12	6	20.33	20.28	20.41	3		
		25	25	20.37	20.32	20.45	3			12	13	20.29	20.24	20.37	3		
	50	0	20.38	20.33	20.46	3	25		0	20.30	20.25	20.38	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		23025	23095	23165					Channel		23017	23095	23173	
			Frequency (MHz)		700.5	707.5	714.5					Frequency (MHz)		699.7	707.5	715.3	
3M	QPSK	1	0	23.16	23.11	23.24	0	1.4M	QPSK	1	0	23.11	23.06	23.19	0		
		1	7	23.15	23.10	23.23	0			1	2	23.10	23.05	23.18	0		
		1	14	23.12	23.07	23.20	0			1	5	23.07	23.02	23.15	0		
		8	0	22.27	22.22	22.35	1			3	0	22.72	22.67	22.80	0		
		8	3	22.26	22.21	22.34	1			3	1	22.71	22.66	22.79	0		
		8	7	22.22	22.17	22.30	1			3	3	22.67	22.62	22.75	0		
	15	0	22.23	22.18	22.31	1	6		0	22.18	22.13	22.26	1				
	16QAM	1	0	22.18	22.13	22.26	1		16QAM	1	0	22.13	22.08	22.21	1		
		1	7	22.17	22.12	22.25	1			1	2	22.12	22.07	22.20	1		
		1	14	22.14	22.09	22.22	1			1	5	22.09	22.04	22.17	1		
		8	0	21.29	21.24	21.37	2			3	0	21.74	21.69	21.82	1		
		8	3	21.28	21.23	21.36	2			3	1	21.73	21.68	21.81	1		
		8	7	21.24	21.19	21.32	2			3	3	21.69	21.64	21.77	1		
	15	0	21.25	21.20	21.33	2	6		0	21.20	21.15	21.28	2				
	64QAM	1	0	21.16	21.11	21.24	2		64QAM	1	0	21.11	21.06	21.19	2		
		1	7	21.15	21.10	21.23	2			1	2	21.10	21.05	21.18	2		
		1	14	21.12	21.07	21.20	2			1	5	21.07	21.02	21.15	2		
		8	0	20.27	20.22	20.35	3			3	0	20.72	20.67	20.80	2		
		8	3	20.26	20.21	20.34	3			3	1	20.71	20.66	20.79	2		
		8	7	20.22	20.17	20.30	3			3	3	20.67	20.62	20.75	2		
	15	0	20.23	20.18	20.31	3	6		0	20.18	20.13	20.26	3				

FCC 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	16.33	16.21	16.89	0	5M	QPSK	1	0	15.87	15.76	15.98	0
		1	24	15.94	15.86	16.05	0			1	12	15.82	15.73	15.95	0
		1	49	15.81	15.77	15.95	0			1	24	15.73	15.62	15.86	0
		25	0	16.73	16.66	16.83	0			12	0	16.65	16.59	16.75	0
		25	12	15.95	15.89	16.06	0			12	6	15.85	15.77	16.00	0
		25	25	16.01	15.93	16.10	0			12	13	15.96	15.82	16.04	0
	16QAM	50	0	15.94	15.90	16.04	0		25	0	15.87	15.79	16.02	0	
		1	0	15.66	15.74	15.65	0		16QAM	1	0	15.57	15.68	15.54	0
		1	24	15.65	15.72	15.60	0			1	12	15.54	15.66	15.47	0
		1	49	15.56	15.63	15.54	0			1	24	15.43	15.51	15.39	0
		25	0	16.46	16.52	16.35	0			12	0	16.43	16.47	16.30	0
		25	12	15.67	15.75	15.66	0			12	6	15.60	15.69	15.57	0
	25	25	15.75	15.79	15.70	0	12			13	15.66	15.73	15.64	0	
	64QAM	50	0	15.69	15.76	15.67	0		25	0	15.60	15.70	15.58	0	
		1	0	15.32	15.60	15.42	0		64QAM	1	0	15.17	15.53	15.32	0
		1	24	15.31	15.58	15.36	0			1	12	15.12	15.50	15.27	0
		1	49	15.24	15.49	15.30	0			1	24	15.06	15.40	15.18	0
		25	0	16.07	16.38	16.23	0			12	0	16.08	16.33	16.20	0
25		12	15.34	15.61	15.39	0	12	6		15.19	15.54	15.28	0		
25	25	15.39	15.65	15.49	0	12	13	15.31		15.58	15.40	0			
3M	QPSK	50	0	15.34	15.62	15.44	0	25	0	15.22	15.55	15.28	0		
		1	0	15.78	15.61	15.91	0	1.4M	QPSK	1	0	15.67	15.49	15.85	0
		1	7	15.74	15.56	15.86	0			1	2	15.61	15.45	15.72	0
		1	14	15.58	15.47	15.78	0			1	5	15.41	15.33	15.59	0
		8	0	16.63	16.56	16.70	0			3	0	16.61	16.48	16.66	0
		8	3	15.78	15.63	15.89	0			3	1	15.62	15.52	15.85	0
	8	7	15.86	15.71	15.97	0	3			3	15.79	15.61	15.91	0	
	16QAM	15	0	15.82	15.67	15.96	0		6	0	15.64	15.54	15.78	0	
		1	0	15.42	15.58	15.40	0		16QAM	1	0	15.32	15.50	15.28	0
		1	7	15.38	15.56	15.32	0			1	2	15.27	15.45	15.16	0
		1	14	15.30	15.37	15.25	0			1	5	15.14	15.22	15.09	0
		8	0	16.37	16.42	16.25	0			3	0	16.27	16.37	16.19	0
		8	3	15.46	15.59	15.42	0			3	1	15.39	15.52	15.32	0
	8	7	15.54	15.66	15.52	0	3			3	15.43	15.59	15.42	0	
	64QAM	15	0	15.49	15.62	15.46	0		6	0	15.39	15.55	15.34	0	
		1	0	15.04	15.43	15.18	0		64QAM	1	0	14.91	15.38	15.13	0
		1	7	14.96	15.39	15.12	0			1	2	14.83	15.35	15.03	0
		1	14	14.95	15.27	15.02	0			1	5	14.78	15.22	14.86	0
8		0	15.89	16.28	16.13	0	3			0	15.92	16.23	16.13	0	
8		3	15.06	15.44	15.18	0	3	1		14.97	15.41	15.16	0		
8	7	15.12	15.51	15.30	0	3	3	15.01		15.48	15.31	0			
15	0	15.06	15.46	15.18	0	6	0	14.97	15.43	15.09	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		23.49		0	5M	QPSK	1	0	23.39	23.43	23.41	0				
		1	24		23.38		0			1	12	23.34	23.38	23.36	0				
		1	49		23.36		0			1	24	23.29	23.33	23.31	0				
		25	0		22.48		1			12	0	22.43	22.47	22.45	1				
		25	12		22.46		1			12	6	22.41	22.45	22.43	1				
		25	25		22.41		1			12	13	22.38	22.42	22.40	1				
	16QAM	50	0		22.43		1		25	0	22.39	22.43	22.41	1					
		1	0		22.47		1		16QAM	1	0	22.36	22.40	22.38	1				
		1	24		22.36		1			1	12	22.31	22.35	22.33	1				
		1	49		22.34		1			1	24	22.26	22.30	22.28	1				
		25	0		21.46		2			12	0	21.40	21.44	21.42	2				
		25	12		21.44		2			12	6	21.38	21.42	21.40	2				
	25	25		21.39		2	12			13	21.35	21.39	21.37	2					
	64QAM	50	0		21.41		2		25	0	21.36	21.40	21.38	2					
		1	0		21.49		2		64QAM	1	0	21.38	21.42	21.40	2				
		1	24		21.38		2			1	12	21.33	21.37	21.35	2				
		1	49		21.36		2			1	24	21.28	21.32	21.30	2				
		25	0		20.48		3			12	0	20.42	20.46	20.44	3				
		25	12		20.46		3			12	6	20.40	20.44	20.42	3				
	25	25		20.41		3	12			13	20.37	20.41	20.39	3					
	50	0		20.43		3	25		0	20.38	20.42	20.40	3						
	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	Channel					23205	23230
Frequency (MHz)			782.0	Frequency (MHz)				779.5				782.0	784.5						
10M	QPSK	1	0		15.21		0	5M	QPSK	1	0	15.06	15.08	15.03	0				
		1	24		15.18		0			1	12	15.02	15.04	14.99	0				
		1	49		15.13		0			1	24	14.96	14.98	14.93	0				
		25	0		15.14		0			12	0	14.97	14.99	14.94	0				
		25	12		15.18		0			12	6	15.02	15.04	14.99	0				
		25	25		15.20		0			12	13	15.05	15.07	15.02	0				
	16QAM	50	0		15.19		0		25	0	15.03	15.05	15.00	0					
		1	0		15.16		0		16QAM	1	0	15.16	15.12	15.17	0				
		1	24		15.18		0			1	12	15.13	15.15	15.10	0				
		1	49		15.13		0			1	24	15.05	15.07	15.02	0				
		25	0		15.12		0			12	0	15.10	15.12	15.07	0				
		25	12		15.19		0			12	6	15.14	15.18	15.11	0				
	25	25		15.17		0	12			13	15.19	15.17	15.16	0					
	64QAM	50	0		15.14		0		25	0	15.12	15.14	15.09	0					
		1	0		15.16		0		64QAM	1	0	15.13	15.18	15.12	0				
		1	24		15.19		0			1	12	15.17	15.13	15.18	0				
		1	49		15.12		0			1	24	15.18	15.17	15.14	0				
		25	0		15.16		0			12	0	15.13	15.16	15.13	0				
		25	12		15.18		0			12	6	15.14	15.13	15.19	0				
	25	25		15.17		0	12			13	15.16	15.18	15.17	0					
	50	0		15.13		0	25		0	15.12	15.12	15.16	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		23.68		0	5M	QPSK	1	0	23.56	23.57	23.53	0				
		1	24		23.52		0			1	12	23.51	23.52	23.48	0				
		1	49		23.39		0			1	24	23.48	23.49	23.45	0				
		25	0		22.58		1			12	0	22.57	22.58	22.54	1				
		25	12		22.56		1			12	6	22.56	22.57	22.53	1				
		25	25		22.51		1			12	13	22.51	22.52	22.48	1				
		50	0		22.53		1			25	0	22.55	22.56	22.52	1				
	16QAM	1	0		22.66		1		16QAM	1	0		22.51	22.52	22.48	1			
		1	24		22.50		1			1	12	22.46	22.47	22.43	1				
		1	49		22.37		1			1	24	22.43	22.44	22.40	1				
		25	0		21.56		2			12	0	21.52	21.53	21.49	2				
		25	12		21.54		2			12	6	21.51	21.52	21.48	2				
		25	25		21.49		2			12	13	21.46	21.47	21.43	2				
		50	0		21.51		2			25	0	21.50	21.51	21.47	2				
	64QAM	1	0		21.67		2		64QAM	1	0		21.56	21.57	21.53	2			
		1	24		21.51		2			1	12	21.51	21.52	21.48	2				
		1	49		21.38		2			1	24	21.48	21.49	21.45	2				
		25	0		20.57		3			12	0	20.57	20.58	20.54	3				
		25	12		20.55		3			12	6	20.56	20.57	20.53	3				
		25	25		20.50		3			12	13	20.51	20.52	20.48	3				
		50	0		20.52		3			25	0	20.55	20.56	20.52	3				
	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									23330	Channel					23305	23330
Frequency (MHz)			793.0	Frequency (MHz)				790.5				793.0	795.5						
10M	QPSK	1	0		16.23		0	5M	QPSK	1	0	16.18	16.20	16.19	0				
		1	24		16.16		0			1	12	16.11	16.13	16.12	0				
		1	49		16.11		0			1	24	16.06	16.08	16.07	0				
		25	0		16.14		0			12	0	16.09	16.11	16.10	0				
		25	12		16.05		0			12	6	16.00	16.02	16.01	0				
		25	25		16.03		0			12	13	15.98	16.00	15.99	0				
		50	0		16.12		0			25	0	16.07	16.09	16.08	0				
	16QAM	1	0		16.17		0		16QAM	1	0		16.12	16.14	16.13	0			
		1	24		16.10		0			1	12	16.05	16.07	16.06	0				
		1	49		16.05		0			1	24	16.00	16.02	16.01	0				
		25	0		16.08		0			12	0	16.03	16.05	16.04	0				
		25	12		15.99		0			12	6	15.94	15.96	15.95	0				
		25	25		15.97		0			12	13	15.92	15.94	15.93	0				
		50	0		16.06		0			25	0	16.01	16.03	16.02	0				
	64QAM	1	0		16.14		0		64QAM	1	0		16.09	16.11	16.10	0			
		1	24		16.07		0			1	12	16.02	16.04	16.03	0				
		1	49		16.02		0			1	24	15.97	15.99	15.98	0				
		25	0		16.05		0			12	0	16.00	16.02	16.01	0				
		25	12		15.96		0			12	6	15.91	15.93	15.92	0				
		25	25		15.94		0			12	13	15.89	15.91	15.90	0				
		50	0		16.03		0			25	0	15.98	16.00	15.99	0				

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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	22.82	23.03	23.36	0	15M	QPSK	1	0	22.75	22.96	23.29	0
		1	50	22.67	22.88	23.21	0			1	37	22.60	22.81	23.14	0
		1	99	22.61	22.82	23.15	0			1	74	22.54	22.75	23.08	0
		50	0	21.71	21.92	22.25	1			36	0	21.64	21.85	22.18	1
		50	25	21.62	21.83	22.16	1			36	19	21.55	21.76	22.09	1
		50	50	21.61	21.82	22.15	1			36	39	21.54	21.75	22.08	1
		100	0	21.64	21.85	22.18	1			75	0	21.57	21.78	22.11	1
	16QAM	1	0	21.80	22.01	22.34	1		16QAM	1	0	21.73	21.94	22.27	1
		1	50	21.65	21.86	22.19	1			1	37	21.58	21.79	22.12	1
		1	99	21.59	21.80	22.13	1			1	74	21.52	21.73	22.06	1
		50	0	20.69	20.90	21.23	2			36	0	20.62	20.83	21.16	2
		50	25	20.60	20.81	21.14	2			36	19	20.53	20.74	21.07	2
		50	50	20.59	20.80	21.13	2			36	39	20.52	20.73	21.06	2
		100	0	20.62	20.83	21.16	2			75	0	20.55	20.76	21.09	2
	64QAM	1	0	20.72	20.93	21.26	2		64QAM	1	0	20.65	20.86	21.19	2
		1	50	20.57	20.78	21.11	2			1	37	20.50	20.71	21.04	2
		1	99	20.51	20.72	21.05	2			1	74	20.44	20.65	20.98	2
		50	0	19.61	19.82	20.15	3			36	0	19.54	19.75	20.08	3
		50	25	19.52	19.73	20.06	3			36	19	19.45	19.66	19.99	3
		50	50	19.51	19.72	20.05	3			36	39	19.44	19.65	19.98	3
		100	0	19.54	19.75	20.08	3			75	0	19.47	19.68	20.01	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		26090	26365	26640				Channel		26065	26365	26665	
		Frequency (MHz)		2855.0	1882.5	1910.0				Frequency (MHz)		1852.5	1882.5	1912.5	
10M	QPSK	1	0	22.69	22.90	23.23	0	5M	QPSK	1	0	22.64	22.85	23.18	0
		1	24	22.54	22.75	23.08	0			1	12	22.49	22.70	23.03	0
		1	49	22.48	22.69	23.02	0			1	24	22.43	22.64	22.97	0
		25	0	21.58	21.79	22.12	1			12	0	21.53	21.74	22.07	1
		25	12	21.49	21.70	22.03	1			12	6	21.44	21.65	21.98	1
		25	25	21.48	21.69	22.02	1			12	13	21.43	21.64	21.97	1
		50	0	21.51	21.72	22.05	1			25	0	21.46	21.67	22.00	1
	16QAM	1	0	21.67	21.88	22.21	1		16QAM	1	0	21.62	21.83	22.16	1
		1	24	21.52	21.73	22.06	1			1	12	21.47	21.68	22.01	1
		1	49	21.46	21.67	22.00	1			1	24	21.41	21.62	21.95	1
		25	0	20.56	20.77	21.10	2			12	0	20.51	20.72	21.05	2
		25	12	20.47	20.68	21.01	2			12	6	20.42	20.63	20.96	2
		25	25	20.46	20.67	21.00	2			12	13	20.41	20.62	20.95	2
		50	0	20.49	20.70	21.03	2			25	0	20.44	20.65	20.98	2
	64QAM	1	0	20.59	20.80	21.13	2		64QAM	1	0	20.54	20.75	21.08	2
		1	24	20.44	20.65	20.98	2			1	12	20.39	20.60	20.93	2
		1	49	20.38	20.59	20.92	2			1	24	20.33	20.54	20.87	2
		25	0	19.48	19.69	20.02	3			12	0	19.43	19.64	19.97	3
		25	12	19.39	19.60	19.93	3			12	6	19.34	19.55	19.88	3
		25	25	19.38	19.59	19.92	3			12	13	19.33	19.54	19.87	3
		50	0	19.41	19.62	19.95	3			25	0	19.36	19.57	19.90	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		26055	26365	26675				Channel		26047	26365	26683	
		Frequency (MHz)		1851.5	1882.5	1913.5				Frequency (MHz)		1850.7	1882.5	1914.3	
3M	QPSK	1	0	22.59	22.80	23.13	0	1.4M	QPSK	1	0	23.49	23.37	23.47	0
		1	7	22.44	22.65	22.98	0			1	2	23.45	23.33	23.43	0
		1	14	22.38	22.59	22.92	0			1	5	23.40	23.28	23.38	0
		8	0	21.48	21.69	22.02	1			3	0	22.55	22.43	22.53	0
		8	3	21.39	21.60	21.93	1			3	1	22.52	22.40	22.50	0
		8	7	21.38	21.59	21.92	1			3	3	22.50	22.38	22.48	0
		15	0	21.41	21.62	21.95	1			6	0	22.51	22.39	22.49	1
	16QAM	1	0	21.57	21.78	22.11	1		16QAM	1	0	22.46	22.34	22.44	1
		1	7	21.42	21.63	21.96	1			1	2	22.42	22.30	22.40	1
		1	14	21.36	21.57	21.90	1			1	5	22.37	22.25	22.35	1
		8	0	20.46	20.67	21.00	2			3	0	21.52	21.40	21.50	1
		8	3	20.37	20.58	20.91	2			3	1	21.49	21.37	21.47	1
		8	7	20.36	20.57	20.90	2			3	3	21.47	21.35	21.45	1
		15	0	20.39	20.60	20.93	2			6	0	21.48	21.36	21.46	2
	64QAM	1	0	20.49	20.70	21.03	2		64QAM	1	0	21.48	21.36	21.46	2
		1	7	20.34	20.55	20.88	2			1	2	21.44	21.32	21.42	2
		1	14	20.28	20.49	20.82	2			1	5	21.39	21.27	21.37	2
		8	0	19.38	19.59	19.92	3			3	0	20.54	20.42	20.52	2
		8	3	19.29	19.50	19.83	3			3	1	20.51	20.39	20.49	2
		8	7	19.28	19.49	19.82	3			3	3	20.49	20.37	20.47	2
		15	0	19.31	19.52	19.85	3			6	0	20.50	20.38	20.48	3

FCC SAR Test Report

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	10.87	11.00	11.33	0	15M	QPSK	1	0	10.78	10.92	11.28	0
		1	50	10.63	10.74	11.04	0			1	37	10.50	10.64	11.03	0
		1	99	10.68	10.80	11.12	0			1	74	10.55	10.71	11.05	0
		50	0	10.62	10.74	11.04	0			36	0	10.48	10.64	10.97	0
		50	25	10.56	10.65	10.99	0			36	19	10.37	10.53	10.90	0
		50	50	10.46	10.62	10.96	0			36	39	10.35	10.50	10.84	0
		100	0	10.42	10.55	10.82	0			75	0	10.27	10.41	10.77	0
	16QAM	1	0	10.67	10.61	10.52	0		1	0	10.62	10.57	10.48	0	
		1	50	10.25	10.20	10.03	0		1	37	10.10	10.05	9.90	0	
		1	99	10.32	10.27	10.09	0		1	74	10.26	10.15	9.96	0	
		50	0	10.35	10.28	10.17	0		36	0	10.27	10.21	10.07	0	
		50	25	10.32	10.25	10.05	0		36	19	10.21	10.11	9.94	0	
		50	50	10.02	9.95	9.85	0		36	39	9.87	9.82	9.71	0	
		100	0	10.12	10.09	9.93	0		75	0	9.99	9.96	9.82	0	
	64QAM	1	0	10.65	10.62	10.47	0		1	0	10.60	10.57	10.42	0	
		1	50	10.36	10.33	10.19	0		1	37	10.32	10.28	10.13	0	
		1	99	10.42	10.38	10.25	0		1	74	10.36	10.33	10.18	0	
		50	0	10.46	10.44	10.29	0		36	0	10.42	10.39	10.23	0	
		50	25	10.48	10.45	10.31	0		36	19	10.43	10.40	10.27	0	
		50	50	10.30	10.25	10.13	0		36	39	10.24	10.20	10.05	0	
		100	0	10.33	10.31	10.17	0		75	0	10.28	10.26	10.12	0	
10M	QPSK	1	0	10.70	10.86	11.23	0	5M	QPSK	1	0	10.59	10.80	11.18	0
		1	24	10.40	10.56	10.89	0			1	12	10.28	10.44	10.84	0
		1	49	10.54	10.62	11.01	0			1	24	10.33	10.51	10.93	0
		25	0	10.38	10.56	10.98	0			12	0	10.22	10.44	10.84	0
		25	12	10.29	10.47	10.87	0			12	6	10.14	10.31	10.76	0
		25	25	10.19	10.42	10.81	0			12	13	10.03	10.25	10.68	0
		50	0	10.15	10.33	10.71	0			25	0	9.98	10.15	10.64	0
	16QAM	1	0	10.65	10.62	10.47	0		1	0	10.60	10.56	10.41	0	
		1	24	10.35	10.33	10.19	0		1	12	10.25	10.23	10.04	0	
		1	49	10.41	10.38	10.21	0		1	24	10.34	10.29	10.10	0	
		25	0	10.46	10.44	10.27	0		12	0	10.41	10.36	10.17	0	
		25	12	10.48	10.45	10.35	0		12	6	10.42	10.37	10.26	0	
		25	25	10.27	10.25	10.11	0		12	13	10.21	10.14	9.95	0	
		50	0	10.33	10.31	10.20	0		25	0	10.24	10.21	10.07	0	
	64QAM	1	0	10.55	10.52	10.37	0		1	0	10.50	10.47	10.32	0	
		1	24	10.28	10.23	10.10	0		1	12	10.22	10.18	10.03	0	
		1	49	10.32	10.28	10.14	0		1	24	10.25	10.23	10.08	0	
		25	0	10.37	10.34	10.19	0		12	0	10.32	10.29	10.12	0	
		25	12	10.38	10.35	10.25	0		12	6	10.33	10.30	10.15	0	
		25	25	10.20	10.15	10.02	0		12	13	10.15	10.10	9.97	0	
		50	0	10.23	10.21	10.09	0		25	0	10.18	10.16	10.04	0	
3M	QPSK	1	0	10.77	10.74	10.65	0	1.4M	QPSK	1	0	10.71	10.68	10.59	0
		1	7	10.41	10.39	10.32	0			1	2	10.32	10.27	10.17	0
		1	14	10.46	10.44	10.33	0			1	5	10.38	10.34	10.21	0
		8	0	10.48	10.45	10.39	0			3	0	10.41	10.35	10.26	0
		8	3	10.45	10.43	10.28	0			3	1	10.38	10.32	10.11	0
		8	7	10.29	10.23	10.16	0			3	3	10.13	10.08	9.99	0
		15	0	10.35	10.33	10.24	0			6	0	10.23	10.20	10.11	0
	16QAM	1	0	10.55	10.51	10.35	0		1	0	10.50	10.45	10.28	0	
		1	7	10.21	10.15	9.91	0		1	2	10.11	10.02	9.73	0	
		1	14	10.27	10.22	10.00	0		1	5	10.13	10.11	9.82	0	
		8	0	10.32	10.29	10.04	0		3	0	10.25	10.21	9.87	0	
		8	3	10.36	10.30	10.10	0		3	1	10.31	10.23	10.06	0	
		8	7	10.10	9.98	9.80	0		3	3	9.90	9.85	9.66	0	
		15	0	10.16	10.12	9.88	0		6	0	10.02	9.99	9.76	0	
	64QAM	1	0	10.45	10.42	10.27	0		1	0	10.40	10.37	10.22	0	
		1	7	10.17	10.13	9.99	0		1	2	10.12	10.08	9.94	0	
		1	14	10.20	10.18	10.04	0		1	5	10.18	10.13	9.96	0	
		8	0	10.27	10.24	10.08	0		3	0	10.22	10.19	10.03	0	
		8	3	10.28	10.25	10.13	0		3	1	10.23	10.20	10.07	0	
		8	7	10.11	10.05	9.91	0		3	3	10.05	10.00	9.85	0	
		15	0	10.13	10.11	10.00	0		6	0	10.08	10.06	9.93	0	

FCC 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	23.58	23.66	23.61	0	10M	QPSK	1	0	23.51	23.59	23.54	0		
		1	37	23.47	23.55	23.50	0			1	24	23.40	23.48	23.43	0		
		1	74	23.35	23.43	23.38	0			1	49	23.28	23.36	23.31	0		
		36	0	22.40	22.48	22.43	1			25	0	22.33	22.41	22.36	1		
		36	19	22.35	22.43	22.38	1			25	12	22.28	22.36	22.31	1		
		36	39	22.33	22.41	22.36	1			25	25	22.26	22.34	22.29	1		
		75	0	22.34	22.42	22.37	1			50	0	22.27	22.35	22.30	1		
		1	0	22.55	22.63	22.58	1			1	0	22.48	22.56	22.51	1		
	16QAM	1	37	22.44	22.52	22.47	1		1	24	22.37	22.45	22.40	1			
		1	74	22.32	22.40	22.35	1		1	49	22.25	22.33	22.28	1			
		36	0	21.37	21.45	21.40	2		25	0	21.30	21.38	21.33	2			
		36	19	21.32	21.40	21.35	2		25	12	21.25	21.33	21.28	2			
		36	39	21.30	21.38	21.33	2		25	25	21.23	21.31	21.26	2			
		75	0	21.31	21.39	21.34	2		50	0	21.24	21.32	21.27	2			
		64QAM	1	0	21.53	21.61	21.56		2	1	0	21.46	21.54	21.49	2		
			1	37	21.42	21.50	21.45		2	1	24	21.35	21.43	21.38	2		
	1		74	21.30	21.38	21.33	2		1	49	21.23	21.31	21.26	2			
	36		0	20.35	20.43	20.38	3		25	0	20.28	20.36	20.31	3			
	36		19	20.30	20.38	20.33	3		25	12	20.23	20.31	20.26	3			
	36		39	20.28	20.36	20.31	3		25	25	20.21	20.29	20.24	3			
	75		0	20.29	20.37	20.32	3		50	0	20.22	20.30	20.25	3			
	5M		QPSK	1	0	23.46	23.54		23.49	0	3M	QPSK	1	0	23.41	23.49	23.44
		1		12	23.35	23.43	23.38		0	1			7	23.30	23.38	23.33	0
		1		24	23.23	23.31	23.26		0	1			14	23.18	23.26	23.21	0
12		0		22.28	22.36	22.31	1	8	0	22.23			22.31	22.26	1		
12		6		22.23	22.31	22.26	1	8	3	22.18			22.26	22.21	1		
12		13		22.21	22.29	22.24	1	8	7	22.16			22.24	22.19	1		
25		0		22.22	22.30	22.25	1	15	0	22.17			22.25	22.20	1		
1		0		22.43	22.51	22.46	1	1	0	22.38			22.46	22.41	1		
16QAM		1	12	22.32	22.40	22.35	1	1	7	22.27		22.35	22.30	1			
		1	24	22.20	22.28	22.23	1	1	14	22.15		22.23	22.18	1			
		12	0	21.25	21.33	21.28	2	8	0	21.20		21.28	21.23	2			
		12	6	21.20	21.28	21.23	2	8	3	21.15		21.23	21.18	2			
		12	13	21.18	21.26	21.21	2	8	7	21.13		21.21	21.16	2			
		25	0	21.19	21.27	21.22	2	15	0	21.14		21.22	21.17	2			
		64QAM	1	0	21.41	21.49	21.44	2	1	0		21.36	21.44	21.39	2		
			1	12	21.30	21.38	21.33	2	1	7		21.25	21.33	21.28	2		
1			24	21.18	21.26	21.21	2	1	14	21.13		21.21	21.16	2			
12			0	20.23	20.31	20.26	3	8	0	20.18		20.26	20.21	3			
12			6	20.18	20.26	20.21	3	8	3	20.13		20.21	20.16	3			
12			13	20.16	20.24	20.19	3	8	7	20.11		20.19	20.14	3			
25			0	20.17	20.25	20.20	3	15	0	20.12		20.20	20.15	3			
1.4M			QPSK	1	0	23.33	23.41	23.36	0	[Empty]		QPSK	1	0	23.33	23.41	23.36
		1		2	23.22	23.30	23.25	0	1				2	23.22	23.30	23.25	0
		1		5	23.10	23.18	23.13	0	1				5	23.10	23.18	23.13	0
	3	0		22.65	22.73	22.68	0	3	0		22.65		22.73	22.68	0		
	3	1		22.60	22.68	22.63	0	3	1		22.60		22.68	22.63	0		
	3	3		22.58	22.66	22.61	0	3	3		22.58		22.66	22.61	0		
	6	0		22.09	22.17	22.12	1	6	0		22.09		22.17	22.12	1		
	1	0		22.30	22.38	22.33	1	1	0		22.30		22.38	22.33	1		
	16QAM	1	2	22.19	22.27	22.22	1	1	2		22.19	22.27	22.22	1			
		1	5	22.07	22.15	22.10	1	1	5		22.07	22.15	22.10	1			
		3	0	21.62	21.70	21.65	1	3	0		21.62	21.70	21.65	1			
		3	1	21.57	21.65	21.60	1	3	1		21.57	21.65	21.60	1			
		3	3	21.55	21.63	21.58	1	3	3		21.55	21.63	21.58	1			
		6	0	21.06	21.14	21.09	2	6	0		21.06	21.14	21.09	2			
		64QAM	1	0	21.28	21.36	21.31	2	1		0	21.28	21.36	21.31	2		
			1	2	21.17	21.25	21.20	2	1		2	21.17	21.25	21.20	2		
	1		5	21.05	21.13	21.08	2	1	5		21.05	21.13	21.08	2			
	3		0	20.60	20.68	20.63	2	3	0		20.60	20.68	20.63	2			
	3		1	20.55	20.63	20.58	2	3	1		20.55	20.63	20.58	2			
	3		3	20.53	20.61	20.56	2	3	3		20.53	20.61	20.56	2			
	6		0	20.04	20.12	20.07	3	6	0		20.04	20.12	20.07	3			

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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	18.37	18.44	18.42	0	10M	QPSK	1	0	18.32	18.39	18.37	0
		1	37	18.33	18.41	18.38	0			1	24	18.28	18.36	18.33	0
		1	74	18.32	18.38	18.36	0			1	49	18.26	18.33	18.31	0
		36	0	18.35	18.42	18.39	0			25	0	18.29	18.37	18.35	0
		36	19	18.30	18.35	18.33	0			25	12	18.25	18.30	18.28	0
		36	39	18.26	18.33	18.31	0			25	25	18.21	18.28	18.26	0
		75	0	18.25	18.32	18.30	0			50	0	18.20	18.27	18.23	0
	16QAM	1	0	18.31	18.41	18.39	0		16QAM	1	0	18.26	18.36	18.34	0
		1	37	18.29	18.39	18.37	0			1	24	18.24	18.34	18.32	0
		1	74	18.29	18.39	18.37	0			1	49	18.24	18.34	18.32	0
		36	0	18.25	18.35	18.29	0			25	0	18.20	18.30	18.26	0
		36	19	18.33	18.43	18.41	0			25	12	18.31	18.38	18.35	0
		36	39	18.30	18.40	18.38	0			25	25	18.25	18.35	18.33	0
		75	0	18.28	18.38	18.36	0			50	0	18.23	18.33	18.29	0
	64QAM	1	0	18.32	18.39	18.36	0		64QAM	1	0	18.27	18.34	18.31	0
		1	37	18.30	18.37	18.34	0			1	24	18.25	18.32	18.29	0
		1	74	18.29	18.36	18.33	0			1	49	18.24	18.31	18.28	0
		36	0	18.33	18.39	18.36	0			25	0	18.28	18.34	18.31	0
		36	19	18.31	18.38	18.35	0			25	12	18.24	18.33	18.29	0
		36	39	18.25	18.32	18.29	0			25	25	18.20	18.27	18.23	0
		75	0	18.26	18.33	18.30	0			50	0	18.21	18.28	18.26	0
5M	QPSK	1	0	18.27	18.34	18.32	0	3M	QPSK	1	0	18.22	18.29	18.27	0
		1	12	18.23	18.31	18.28	0			1	7	18.18	18.26	18.23	0
		1	24	18.21	18.28	18.25	0			1	14	18.16	18.23	18.21	0
		12	0	18.27	18.32	18.30	0			8	0	18.20	18.27	18.24	0
		12	6	18.19	18.25	18.23	0			8	3	18.14	18.20	18.18	0
		12	13	18.16	18.23	18.21	0			8	7	18.11	18.18	18.16	0
		25	0	18.15	18.22	18.18	0			15	0	18.10	18.17	18.14	0
	16QAM	1	0	18.21	18.31	18.29	0		16QAM	1	0	18.16	18.26	18.24	0
		1	12	18.19	18.29	18.27	0			1	7	18.14	18.24	18.22	0
		1	24	18.19	18.29	18.27	0			1	14	18.14	18.24	18.22	0
		12	0	18.16	18.25	18.19	0			8	0	18.12	18.20	18.16	0
		12	6	18.27	18.33	18.31	0			8	3	18.20	18.28	18.26	0
		12	13	18.20	18.30	18.28	0			8	7	18.15	18.25	18.23	0
		25	0	18.18	18.28	18.26	0			15	0	18.13	18.23	18.17	0
	64QAM	1	0	18.22	18.29	18.26	0		64QAM	1	0	18.17	18.24	18.21	0
		1	12	18.20	18.27	18.24	0			1	7	18.15	18.22	18.19	0
		1	24	18.19	18.26	18.22	0			1	14	18.14	18.21	18.18	0
		12	0	18.22	18.29	18.27	0			8	0	18.17	18.24	18.22	0
		12	6	18.21	18.28	18.24	0			8	3	18.14	18.23	18.20	0
		12	13	18.15	18.22	18.19	0			8	7	18.10	18.17	18.14	0
		25	0	18.16	18.23	18.21	0			15	0	18.11	18.18	18.15	0
1.4M	QPSK	1	0	18.17	18.24	18.22	0	1.4M	QPSK	1	0	18.17	18.24	18.22	0
		1	2	18.15	18.21	18.18	0			1	2	18.15	18.21	18.18	0
		1	5	18.12	18.18	18.15	0			1	5	18.09	18.19	18.17	0
		3	0	18.16	18.22	18.19	0			3	0	18.16	18.22	18.19	0
		3	1	18.09	18.15	18.13	0			3	1	18.09	18.15	18.13	0
		3	3	18.06	18.13	18.11	0			3	3	18.06	18.13	18.11	0
		6	0	18.05	18.12	18.09	0			6	0	18.05	18.12	18.09	0
	16QAM	1	0	18.11	18.21	18.19	0		16QAM	1	0	18.11	18.21	18.19	0
		1	2	18.09	18.19	18.17	0			1	2	18.09	18.19	18.17	0
		1	5	18.09	18.19	18.17	0			1	5	18.09	18.19	18.17	0
		3	0	18.06	18.15	18.12	0			3	0	18.06	18.15	18.12	0
		3	1	18.17	18.23	18.20	0			3	1	18.17	18.23	18.20	0
		3	3	18.11	18.20	18.18	0			3	3	18.11	18.20	18.18	0
		6	0	18.08	18.18	18.15	0			6	0	18.08	18.18	18.15	0
	64QAM	1	0	18.12	18.19	18.16	0		64QAM	1	0	18.12	18.19	18.16	0
		1	2	18.10	18.17	18.14	0			1	2	18.10	18.17	18.14	0
		1	5	18.09	18.16	18.12	0			1	5	18.09	18.16	18.12	0
		3	0	18.13	18.19	18.17	0			3	0	18.13	18.19	18.17	0
		3	1	18.09	18.18	18.14	0			3	1	18.09	18.18	18.14	0
		3	3	18.05	18.12	18.09	0			3	3	18.05	18.12	18.09	0
		6	0	18.07	18.13	18.11	0			6	0	18.07	18.13	18.11	0

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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	22.62	0	5M	QPSK	1	0	22.46	22.57	22.55	0		
		1	24	22.55	0			1	12	22.44	22.55	22.53	0		
		1	49	22.53	0			1	24	22.42	22.53	22.51	0		
		25	0	21.62	1			12	0	21.50	21.61	21.59	1		
		25	12	21.61	1			12	6	21.48	21.59	21.57	1		
		25	25	21.58	1			12	13	21.46	21.57	21.55	1		
		50	0	21.59	1			25	0	21.47	21.58	21.56	1		
	16QAM	1	0	21.59	1		16QAM	1	0	21.47	21.58	21.56	1		
		1	24	21.52	1			1	12	21.45	21.56	21.54	1		
		1	49	21.50	1			1	24	21.43	21.54	21.52	1		
		25	0	20.59	2			12	0	20.51	20.62	20.60	2		
		25	12	20.58	2			12	6	20.49	20.60	20.58	2		
		25	25	20.55	2			12	13	20.47	20.58	20.56	2		
		50	0	20.56	2			25	0	20.48	20.59	20.57	2		
	64QAM	1	0	20.57	2		64QAM	1	0	20.42	20.53	20.51	2		
		1	24	20.50	2			1	12	20.40	20.51	20.49	2		
		1	49	20.48	2			1	24	20.38	20.49	20.47	2		
		25	0	19.57	3			12	0	19.46	19.57	19.55	3		
		25	12	19.56	3			12	6	19.44	19.55	19.53	3		
		25	25	19.53	3			12	13	19.42	19.53	19.51	3		
		50	0	19.54	3			25	0	19.43	19.54	19.52	3		
	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	10.75	0	5M	QPSK	1	0	10.68	10.70	10.63	0		
		1	24	10.73	0			1	12	10.66	10.68	10.61	0		
		1	49	10.72	0			1	24	10.64	10.67	10.60	0		
		25	0	10.74	0			12	0	10.67	10.69	10.64	0		
		25	12	10.73	0			12	6	10.65	10.68	10.60	0		
		25	25	10.70	0			12	13	10.63	10.65	10.58	0		
		50	0	10.68	0			25	0	10.59	10.63	10.56	0		
	16QAM	1	0	10.70	0		16QAM	1	0	10.63	10.65	10.58	0		
		1	24	10.67	0			1	12	10.61	10.63	10.56	0		
		1	49	10.69	0			1	24	10.60	10.62	10.55	0		
		25	0	10.70	0			12	0	10.62	10.64	10.57	0		
		25	12	10.66	0			12	6	10.60	10.63	10.56	0		
		25	25	10.63	0			12	13	10.58	10.60	10.54	0		
		50	0	10.63	0			25	0	10.56	10.58	10.51	0		
	64QAM	1	0	10.65	0		64QAM	1	0	10.58	10.60	10.53	0		
		1	24	10.62	0			1	12	10.56	10.58	10.51	0		
		1	49	10.64	0			1	24	10.53	10.57	10.50	0		
		25	0	10.65	0			12	0	10.57	10.59	10.54	0		
		25	12	10.61	0			12	6	10.55	10.58	10.50	0		
		25	25	10.58	0			12	13	10.53	10.55	10.49	0		
		50	0	10.58	0			25	0	10.50	10.53	10.46	0		

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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)	2580.0	2595.0						2610.0	Frequency (MHz)	2577.5		2595.0	2612.5
20M	QPSK	1	0	23.68	23.82	23.76	0	15M	QPSK	1	0	23.62	23.76	23.70	0		
		1	50	23.57	23.71	23.65	0			1	37	23.51	23.65	23.59	0		
		1	99	23.45	23.59	23.53	0			1	74	23.39	23.53	23.47	0		
		50	0	22.74	22.88	22.82	1			36	0	22.68	22.82	22.76	1		
		50	25	22.68	22.82	22.76	1			36	19	22.62	22.76	22.70	1		
		50	50	22.61	22.75	22.69	1			36	39	22.55	22.69	22.63	1		
		100	0	22.67	22.81	22.75	1			75	0	22.61	22.75	22.69	1		
	16QAM	1	0	22.66	22.80	22.74	1		16QAM	1	0	22.60	22.74	22.68	1		
		1	50	22.55	22.69	22.63	1			1	37	22.49	22.63	22.57	1		
		1	99	22.43	22.57	22.51	1			1	74	22.37	22.51	22.45	1		
		50	0	21.72	21.86	21.80	2			36	0	21.66	21.80	21.74	2		
		50	25	21.66	21.80	21.74	2			36	19	21.60	21.74	21.68	2		
		50	50	21.59	21.73	21.67	2			36	39	21.53	21.67	21.61	2		
		100	0	21.65	21.79	21.73	2			75	0	21.59	21.73	21.67	2		
	64QAM	1	0	21.61	21.75	21.69	2		64QAM	1	0	21.49	21.63	21.57	2		
		1	50	21.50	21.64	21.58	2			1	37	21.38	21.52	21.46	2		
		1	99	21.38	21.52	21.46	2			1	74	21.26	21.40	21.34	2		
		50	0	20.67	20.81	20.75	3			36	0	20.55	20.69	20.63	3		
		50	25	20.61	20.75	20.69	3			36	19	20.49	20.63	20.57	3		
		50	50	20.54	20.68	20.62	3			36	39	20.42	20.56	20.50	3		
		100	0	20.60	20.74	20.68	3			75	0	20.48	20.62	20.56	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	37800	38000						38200	Channel	37775		38000	38225
				Frequency (MHz)	2575.0	2595.0						2615.0	Frequency (MHz)	2572.5		2595.0	2617.5
10M	QPSK	1	0	23.55	23.69	23.63	0	5M	QPSK	1	0	23.48	23.62	23.56	0		
		1	24	23.44	23.58	23.52	0			1	12	23.37	23.51	23.45	0		
		1	49	23.32	23.46	23.40	0			1	24	23.25	23.39	23.33	0		
		25	0	22.61	22.75	22.69	1			12	0	22.54	22.68	22.62	1		
		25	12	22.55	22.69	22.63	1			12	6	22.48	22.62	22.56	1		
		25	25	22.48	22.62	22.56	1			12	13	22.41	22.55	22.49	1		
		50	0	22.54	22.68	22.62	1			25	0	22.47	22.61	22.55	1		
	16QAM	1	0	22.53	22.67	22.61	1		16QAM	1	0	22.46	22.60	22.54	1		
		1	24	22.42	22.56	22.50	1			1	12	22.35	22.49	22.43	1		
		1	49	22.30	22.44	22.38	1			1	24	22.23	22.37	22.31	1		
		25	0	21.59	21.73	21.67	2			12	0	21.52	21.66	21.60	2		
		25	12	21.53	21.67	21.61	2			12	6	21.46	21.60	21.54	2		
		25	25	21.46	21.60	21.54	2			12	13	21.39	21.53	21.47	2		
		50	0	21.52	21.66	21.60	2			25	0	21.45	21.59	21.53	2		
	64QAM	1	0	21.36	21.50	21.44	2		64QAM	1	0	21.27	21.41	21.35	2		
		1	24	21.25	21.39	21.33	2			1	12	21.16	21.30	21.24	2		
		1	49	21.13	21.27	21.21	2			1	24	21.04	21.18	21.12	2		
		25	0	20.42	20.56	20.50	3			12	0	20.33	20.47	20.41	3		
		25	12	20.36	20.50	20.44	3			12	6	20.27	20.41	20.35	3		
		25	25	20.29	20.43	20.37	3			12	13	20.20	20.34	20.28	3		
		50	0	20.35	20.49	20.43	3			25	0	20.26	20.40	20.34	3		

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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)		
				37850	38000	38150						37825	38000	38175			
		Channel	2580.0	2595.0	2610.0	Channel	2577.5			2595.0	2612.5						
20M	QPSK	1	0	10.41	10.53	10.47	0	15M	QPSK	1	0	10.36	10.48	10.42	0		
		1	50	10.39	10.51	10.45	0			1	37	10.34	10.46	10.40	0		
		1	99	10.19	10.31	10.25	0			1	74	10.14	10.26	10.20	0		
		50	0	10.36	10.48	10.42	0			36	0	10.31	10.43	10.37	0		
		50	25	10.25	10.37	10.31	0			36	19	10.20	10.32	10.26	0		
		50	50	10.20	10.32	10.26	0			36	39	10.15	10.27	10.21	0		
		100	0	10.26	10.38	10.32	0			75	0	10.21	10.33	10.27	0		
	16QAM	1	0	10.33	10.45	10.39	0		1	0	10.28	10.40	10.34	0			
		1	50	10.31	10.43	10.37	0		1	37	10.26	10.38	10.32	0			
		1	99	10.11	10.23	10.17	0		1	74	10.06	10.18	10.12	0			
		50	0	10.28	10.40	10.34	0		36	0	10.23	10.35	10.29	0			
		50	25	10.17	10.29	10.23	0		36	19	10.12	10.24	10.18	0			
		50	50	10.12	10.24	10.18	0		36	39	10.07	10.19	10.13	0			
		100	0	10.18	10.30	10.24	0		75	0	10.13	10.25	10.19	0			
	64QAM	1	0	10.27	10.39	10.33	0		1	0	10.22	10.34	10.28	0			
		1	50	10.25	10.37	10.31	0		1	37	10.20	10.32	10.26	0			
		1	99	10.05	10.17	10.11	0		1	74	10.00	10.12	10.06	0			
		50	0	10.22	10.34	10.28	0		36	0	10.17	10.29	10.23	0			
		50	25	10.11	10.23	10.17	0		36	19	10.06	10.18	10.12	0			
		50	50	10.06	10.18	10.12	0		36	39	10.01	10.13	10.07	0			
		100	0	10.12	10.24	10.18	0		75	0	10.07	10.19	10.13	0			
	10M	QPSK	1	0	10.29	10.41	10.35		0	5M	QPSK	1	0	10.23	10.35	10.29	0
			1	24	10.27	10.39	10.33		0			1	12	10.21	10.33	10.27	0
			1	49	10.07	10.19	10.13		0			1	24	10.01	10.13	10.07	0
25			0	10.24	10.36	10.30	0	12	0			10.18	10.30	10.24	0		
25			12	10.13	10.25	10.19	0	12	6			10.07	10.19	10.13	0		
25			25	10.08	10.20	10.14	0	12	13			10.02	10.14	10.08	0		
50			0	10.14	10.26	10.20	0	25	0			10.08	10.20	10.14	0		
16QAM		1	0	10.21	10.33	10.27	0	1	0		10.15	10.27	10.21	0			
		1	24	10.19	10.31	10.25	0	1	12		10.13	10.25	10.19	0			
		1	49	9.99	10.11	10.05	0	1	24		9.93	10.05	9.99	0			
		25	0	10.16	10.28	10.22	0	12	0		10.10	10.22	10.16	0			
		25	12	10.05	10.17	10.11	0	12	6		9.99	10.11	10.05	0			
		25	25	10.00	10.12	10.06	0	12	13		9.94	10.06	10.00	0			
		50	0	10.06	10.18	10.12	0	25	0		10.00	10.12	10.06	0			
64QAM		1	0	10.15	10.27	10.21	0	1	0		10.09	10.21	10.15	0			
		1	24	10.13	10.25	10.19	0	1	12		10.07	10.19	10.13	0			
		1	49	9.93	10.05	9.99	0	1	24		9.87	9.99	9.93	0			
		25	0	10.10	10.22	10.16	0	12	0		10.04	10.16	10.10	0			
		25	12	9.99	10.11	10.05	0	12	6		9.93	10.05	9.99	0			
		25	25	9.94	10.06	10.00	0	12	13		9.88	10.00	9.94	0			
		50	0	10.00	10.12	10.06	0	25	0		9.94	10.06	10.00	0			

FCC SAR Test Report

LTE Band 41 (Power Class 3)																					
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		39750	40185	40620	41055	41490				Channel		39725	40173	40620	41068	41515			
		Frequency (MHz)		2506.0	2549.5	2593.0	2636.5	2680.0				Frequency (MHz)		2503.5	2548.3	2593.0	2637.8	2682.5			
20M	QPSK	1	0	23.51	23.56	23.82	23.55	23.43	0	15M	QPSK	1	0	23.46	23.51	23.77	23.50	23.38	0		
		1	50	23.22	23.27	23.53	23.26	23.14	0			1	37	23.17	23.22	23.48	23.21	23.09	0		
		1	99	23.16	23.21	23.47	23.20	23.08	0			1	74	23.11	23.16	23.42	23.15	23.03	0		
		50	0	22.34	22.39	22.65	22.38	22.26	1			36	0	22.29	22.34	22.60	22.33	22.21	1		
		50	25	22.27	22.32	22.58	22.31	22.19	1			36	19	22.22	22.27	22.53	22.26	22.14	1		
		50	50	22.22	22.27	22.53	22.26	22.14	1			36	39	22.17	22.22	22.48	22.21	22.09	1		
	16QAM	100	0	22.26	22.31	22.57	22.30	22.18	1		75	0	22.21	22.26	22.52	22.25	22.13	1			
		1	0	22.46	22.51	22.77	22.50	22.38	1		16QAM	1	0	22.41	22.46	22.72	22.45	22.33	1		
		1	50	22.17	22.22	22.48	22.21	22.09	1			1	37	22.12	22.17	22.43	22.16	22.04	1		
		1	99	22.11	22.16	22.42	22.15	22.03	1			1	74	22.06	22.11	22.37	22.10	21.98	1		
		50	0	21.29	21.34	21.60	21.33	21.21	2			36	0	21.24	21.29	21.55	21.28	21.16	2		
		50	25	21.22	21.27	21.53	21.26	21.14	2			36	19	21.17	21.22	21.48	21.21	21.09	2		
	50	50	21.17	21.22	21.48	21.21	21.09	2	36			39	21.12	21.17	21.43	21.16	21.04	2			
	64QAM	100	0	21.21	21.26	21.52	21.25	21.13	2		75	0	21.16	21.21	21.47	21.20	21.08	2			
		1	0	21.44	21.49	21.75	21.48	21.36	2		64QAM	1	0	21.31	21.36	21.62	21.35	21.23	2		
		1	50	21.15	21.20	21.46	21.19	21.07	2			1	37	21.02	21.07	21.33	21.06	20.94	2		
		1	99	21.09	21.14	21.40	21.13	21.01	2			1	74	20.96	21.01	21.27	21.00	20.88	2		
		50	0	20.27	20.32	20.58	20.31	20.19	3			36	0	20.14	20.19	20.45	20.18	20.06	3		
		50	25	20.20	20.25	20.51	20.24	20.12	3			36	19	20.07	20.12	20.38	20.11	19.99	3		
	50	50	20.15	20.20	20.46	20.19	20.07	3	36			39	20.02	20.07	20.33	20.06	19.94	3			
	10M	QPSK	100	0	20.19	20.24	20.50	20.23	20.11		3	5M	QPSK	1	0	20.06	20.11	20.37	20.10	19.98	3
			1	0	23.39	23.44	23.70	23.43	23.31		0			1	0	23.31	23.36	23.62	23.35	23.23	0
			1	24	23.10	23.15	23.41	23.14	23.02		0			1	12	23.02	23.07	23.33	23.06	22.94	0
			1	49	23.04	23.09	23.35	23.08	22.96		0			1	24	22.96	23.01	23.27	23.00	22.88	0
25			0	22.22	22.27	22.53	22.26	22.14	1	12	0			22.14	22.19	22.45	22.18	22.06	1		
25			12	22.15	22.20	22.46	22.19	22.07	1	12	6			22.07	22.12	22.38	22.11	21.99	1		
16QAM		25	25	22.10	22.15	22.41	22.14	22.02	1	12	13		22.02	22.07	22.33	22.06	21.94	1			
		50	0	22.14	22.19	22.45	22.18	22.06	1	25	0		22.06	22.11	22.37	22.10	21.98	1			
		1	0	22.34	22.39	22.65	22.38	22.26	1	16QAM	1		0	22.26	22.31	22.57	22.30	22.18	1		
		1	24	22.05	22.10	22.36	22.09	21.97	1		1		12	21.97	22.02	22.28	22.01	21.89	1		
		1	49	21.99	22.04	22.30	22.03	21.91	1		1		24	21.91	21.96	22.22	21.95	21.83	1		
		25	0	21.17	21.22	21.48	21.21	21.09	2		12		0	21.09	21.14	21.40	21.13	21.01	2		
25		12	21.10	21.15	21.41	21.14	21.02	2	12		6		21.02	21.07	21.33	21.06	20.94	2			
25		25	21.05	21.10	21.36	21.09	20.97	2	12		13		20.97	21.02	21.28	21.01	20.89	2			
64QAM		50	0	21.09	21.14	21.40	21.13	21.01	2	25	0		21.01	21.06	21.32	21.05	20.93	2			
		1	0	21.17	21.22	21.48	21.21	21.09	2	64QAM	1		0	21.06	21.11	21.37	21.10	20.98	2		
		1	24	20.88	20.93	21.19	20.92	20.80	2		1		12	20.77	20.82	21.08	20.81	20.69	2		
		1	49	20.82	20.87	21.13	20.86	20.74	2		1		24	20.71	20.76	21.02	20.75	20.63	2		
		25	0	20.00	20.05	20.31	20.04	19.92	3		12		0	19.89	19.94	20.20	19.93	19.81	3		
		25	12	19.93	19.98	20.24	19.97	19.85	3		12		6	19.82	19.87	20.13	19.86	19.74	3		
25		25	19.88	19.93	20.19	19.92	19.80	3	12		13		19.77	19.82	20.08	19.81	19.69	3			
			50	0	19.92	19.97	20.23	19.96	19.84	3	25		0	19.81	19.86	20.12	19.85	19.73	3		

FCC SAR Test Report

LTE Band 41 (Power Class 3)																					
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		39750	40185	40620	41055	41490				Channel		39725	40173	40620	41068	41515			
		Frequency (MHz)		2506.0	2549.5	2593.0	2636.5	2680.0				Frequency (MHz)		2503.5	2548.3	2593.0	2637.8	2682.5			
20M	QPSK	1	0	10.54	10.38	10.96	10.65	10.62	0	15M	QPSK	1	0	10.52	10.36	10.75	10.63	10.60	0		
		1	50	10.42	10.36	10.65	10.54	10.50	0			1	37	10.40	10.34	10.63	10.52	10.48	0		
		1	99	10.40	10.34	10.63	10.52	10.48	0			1	74	10.38	10.32	10.61	10.50	10.46	0		
		50	0	10.37	10.31	10.60	10.49	10.45	0			36	0	10.35	10.29	10.58	10.47	10.43	0		
		50	25	10.32	10.26	10.55	10.44	10.40	0			36	19	10.30	10.24	10.53	10.42	10.38	0		
		50	50	10.20	10.14	10.43	10.32	10.28	0			36	39	10.18	10.12	10.41	10.30	10.26	0		
		100	0	10.70	10.64	10.82	10.63	10.78	0			75	0	10.68	10.62	10.91	10.80	10.76	0		
	16QAM	1	0	10.52	10.36	10.75	10.63	10.60	0		1	0	10.50	10.34	10.73	10.61	10.58	0			
		1	50	10.40	10.34	10.63	10.52	10.48	0		1	37	10.38	10.32	10.61	10.50	10.46	0			
		1	99	10.38	10.32	10.61	10.50	10.46	0		1	74	10.36	10.30	10.59	10.48	10.44	0			
		50	0	10.35	10.29	10.58	10.47	10.43	0		36	0	10.33	10.27	10.56	10.45	10.41	0			
		50	25	10.30	10.24	10.53	10.42	10.38	0		36	19	10.28	10.22	10.51	10.40	10.36	0			
		50	50	10.18	10.12	10.41	10.30	10.26	0		36	39	10.16	10.10	10.39	10.28	10.24	0			
		100	0	10.68	10.62	10.91	10.80	10.76	0		75	0	10.66	10.60	10.89	10.78	10.74	0			
	64QAM	1	0	10.50	10.34	10.73	10.61	10.58	0		1	0	10.48	10.32	10.71	10.59	10.56	0			
		1	50	10.38	10.32	10.61	10.50	10.46	0		1	37	10.36	10.30	10.59	10.48	10.44	0			
		1	99	10.36	10.30	10.59	10.48	10.44	0		1	74	10.34	10.28	10.57	10.46	10.42	0			
		50	0	10.33	10.27	10.56	10.45	10.41	0		36	0	10.31	10.25	10.54	10.43	10.39	0			
		50	25	10.28	10.22	10.51	10.40	10.36	0		36	19	10.26	10.20	10.49	10.38	10.34	0			
		50	50	10.16	10.10	10.39	10.28	10.24	0		36	39	10.14	10.08	10.37	10.26	10.22	0			
		100	0	10.66	10.60	10.89	10.78	10.74	0		75	0	10.64	10.58	10.87	10.76	10.72	0			
	10M	QPSK	1	0	10.48	10.32	10.71	10.59	10.56		0	5M	QPSK	1	0	10.45	10.29	10.68	10.56	10.53	0
			1	24	10.36	10.30	10.59	10.48	10.44		0			1	12	10.33	10.27	10.56	10.45	10.41	0
			1	49	10.34	10.28	10.57	10.46	10.42		0			1	24	10.31	10.25	10.54	10.43	10.39	0
25			0	10.31	10.25	10.54	10.43	10.39	0	12	0			10.28	10.22	10.51	10.40	10.36	0		
25			12	10.26	10.20	10.49	10.38	10.34	0	12	6			10.23	10.17	10.46	10.35	10.31	0		
25			25	10.14	10.08	10.37	10.26	10.22	0	12	13			10.11	10.05	10.34	10.23	10.19	0		
50			0	10.64	10.58	10.87	10.76	10.72	0	25	0			10.61	10.55	10.84	10.73	10.69	0		
16QAM		1	0	10.46	10.30	10.69	10.57	10.54	0	1	0		10.43	10.27	10.66	10.54	10.51	0			
		1	24	10.34	10.28	10.57	10.46	10.42	0	1	12		10.31	10.25	10.54	10.43	10.39	0			
		1	49	10.32	10.26	10.55	10.44	10.40	0	1	24		10.29	10.23	10.52	10.41	10.37	0			
		25	0	10.29	10.23	10.52	10.41	10.37	0	12	0		10.26	10.20	10.49	10.38	10.34	0			
		25	12	10.24	10.18	10.47	10.36	10.32	0	12	6		10.21	10.15	10.44	10.33	10.29	0			
		25	25	10.12	10.06	10.35	10.24	10.20	0	12	13		10.09	10.03	10.32	10.21	10.17	0			
		50	0	10.62	10.56	10.85	10.74	10.70	0	25	0		10.59	10.53	10.82	10.71	10.67	0			
64QAM		1	0	10.44	10.28	10.67	10.55	10.52	0	1	0		10.43	10.32	10.14	10.60	10.47	0			
		1	24	10.32	10.26	10.55	10.44	10.40	0	1	12		10.31	10.19	10.07	10.47	10.31	0			
		1	49	10.30	10.24	10.53	10.42	10.38	0	1	24		10.27	10.17	9.97	10.45	10.28	0			
		25	0	10.27	10.21	10.50	10.39	10.35	0	12	0		10.35	10.14	9.94	10.40	10.25	0			
		25	12	10.22	10.16	10.45	10.34	10.30	0	12	6		10.21	10.08	9.90	10.34	10.23	0			
		25	25	10.10	10.04	10.33	10.22	10.18	0	12	13		10.10	9.91	9.82	10.20	10.05	0			
		50	0	10.60	10.54	10.83	10.72	10.68	0	25	0		10.06	10.43	10.40	10.77	10.70	0			

FCC 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	
		Frequency (MHz)	1720.0	1745.0	1770.0	Frequency (MHz)	1717.5			1745.0	1772.5				
20M	QPSK	1	0	23.08	23.12	23.01	0	15M	QPSK	1	0	23.03	23.07	22.96	0
		1	50	22.93	22.97	22.86	0			1	37	22.88	22.92	22.81	0
		1	99	22.87	22.91	22.80	0			1	74	22.82	22.86	22.75	0
		50	0	22.09	22.13	22.02	1			36	0	22.04	22.08	21.97	1
		50	25	22.02	22.06	21.95	1			36	19	21.97	22.01	21.90	1
		50	50	21.92	21.96	21.85	1			36	39	21.87	21.91	21.80	1
	100	0	22.02	22.06	21.95	1	75		0	21.97	22.01	21.90	1		
	16QAM	1	0	22.05	22.09	21.98	1		16QAM	1	0	22.00	22.04	21.93	1
		1	50	21.90	21.94	21.83	1			1	37	21.85	21.89	21.78	1
		1	99	21.84	21.88	21.77	1			1	74	21.79	21.83	21.72	1
		50	0	21.06	21.10	20.99	2			36	0	21.01	21.05	20.94	2
		50	25	20.99	21.03	20.92	2			36	19	20.94	20.98	20.87	2
		50	50	20.89	20.93	20.82	2			36	39	20.84	20.88	20.77	2
	100	0	20.99	21.03	20.92	2	75		0	20.94	20.98	20.87	2		
	64QAM	1	0	21.00	21.04	20.93	2		64QAM	1	0	20.95	20.99	20.88	2
		1	50	20.85	20.89	20.78	2			1	37	20.80	20.84	20.73	2
		1	99	20.79	20.83	20.72	2			1	74	20.74	20.78	20.67	2
		50	0	20.01	20.05	19.94	3			36	0	19.96	20.00	19.89	3
50		25	19.94	19.98	19.87	3	36	19		19.89	19.93	19.82	3		
50		50	19.84	19.88	19.77	3	36	39		19.79	19.83	19.72	3		
100	0	19.94	19.98	19.87	3	75	0	19.89	19.93	19.82	3				
10M	QPSK	1	0	22.96	23.00	22.89	0	5M	QPSK	1	0	22.91	22.95	22.84	0
		1	24	22.81	22.85	22.74	0			1	12	22.76	22.80	22.69	0
		1	49	22.75	22.79	22.68	0			1	24	22.70	22.74	22.63	0
		25	0	21.97	22.01	21.90	1			12	0	21.92	21.96	21.85	1
		25	12	21.90	21.94	21.83	1			12	6	21.85	21.89	21.78	1
		25	25	21.80	21.84	21.73	1			12	13	21.75	21.79	21.68	1
	50	0	21.90	21.94	21.83	1	25		0	21.85	21.89	21.78	1		
	16QAM	1	0	21.93	21.97	21.86	1		16QAM	1	0	21.88	21.92	21.81	1
		1	24	21.78	21.82	21.71	1			1	12	21.73	21.77	21.66	1
		1	49	21.72	21.76	21.65	1			1	24	21.67	21.71	21.60	1
		25	0	20.94	20.98	20.87	2			12	0	20.89	20.93	20.82	2
		25	12	20.87	20.91	20.80	2			12	6	20.82	20.86	20.75	2
		25	25	20.77	20.81	20.70	2			12	13	20.72	20.76	20.65	2
	50	0	20.87	20.91	20.80	2	25		0	20.82	20.86	20.75	2		
	64QAM	1	0	20.88	20.92	20.81	2		64QAM	1	0	20.83	20.87	20.76	2
		1	24	20.73	20.77	20.66	2			1	12	20.68	20.72	20.61	2
		1	49	20.67	20.71	20.60	2			1	24	20.62	20.66	20.55	2
		25	0	19.89	19.93	19.82	3			12	0	19.84	19.88	19.77	3
25		12	19.82	19.86	19.75	3	12	6		19.77	19.81	19.70	3		
25		25	19.72	19.76	19.65	3	12	13		19.67	19.71	19.60	3		
50	0	19.82	19.86	19.75	3	25	0	19.77	19.81	19.70	3				
3M	QPSK	1	0	22.88	22.92	22.81	0	1.4M	QPSK	1	0	22.83	22.87	22.76	0
		1	7	22.73	22.77	22.66	0			1	2	22.68	22.72	22.61	0
		1	14	22.67	22.71	22.60	0			1	5	22.62	22.66	22.55	0
		8	0	21.89	21.93	21.82	1			3	0	22.74	22.78	22.67	0
		8	3	21.82	21.86	21.75	1			3	1	22.67	22.71	22.60	0
		8	7	21.72	21.76	21.65	1			3	3	22.57	22.61	22.51	0
	15	0	21.82	21.86	21.75	1	6		0	21.77	21.81	21.70	1		
	16QAM	1	0	21.85	21.89	21.78	1		16QAM	1	0	21.80	21.84	21.73	1
		1	7	21.70	21.74	21.63	1			1	2	21.65	21.69	21.58	1
		1	14	21.64	21.68	21.57	1			1	5	21.59	21.63	21.52	1
		8	0	20.86	20.90	20.79	2			3	0	21.71	21.75	21.64	1
		8	3	20.79	20.83	20.72	2			3	1	21.64	21.68	21.57	1
		8	7	20.69	20.73	20.62	2			3	3	21.54	21.58	21.51	1
	15	0	20.79	20.83	20.72	2	6		0	20.74	20.78	20.67	2		
	64QAM	1	0	20.80	20.84	20.73	2		64QAM	1	0	20.75	20.79	20.68	2
		1	7	20.65	20.69	20.58	2			1	2	20.60	20.64	20.53	2
		1	14	20.59	20.63	20.52	2			1	5	20.54	20.58	20.51	2
		8	0	19.81	19.85	19.74	3			3	0	20.66	20.70	20.59	2
8		3	19.74	19.78	19.67	3	3	1		20.59	20.63	20.52	2		
8		7	19.64	19.68	19.57	3	3	3		20.52	20.53	20.51	2		
15	0	19.74	19.78	19.67	3	6	0	19.69	19.73	19.62	3				

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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	
		Frequency (MHz)	1720.0	1745.0	1770.0	Frequency (MHz)	1717.5			1745.0	1772.5				
20M	QPSK	1	0	10.28	10.25	10.22	0	15M	QPSK	1	0	10.20	10.23	10.17	0
		1	50	10.27	10.24	10.21	0			1	37	10.22	10.19	10.16	0
		1	99	10.24	10.22	10.19	0			1	74	10.19	10.17	10.14	0
		50	0	10.27	10.24	10.22	0			36	0	10.21	10.18	10.15	0
		50	25	10.26	10.23	10.20	0			36	19	10.22	10.19	10.17	0
		50	50	10.20	10.14	10.08	0			36	39	10.12	10.09	10.07	0
	100	0	10.11	10.08	10.05	0	75		0	10.07	10.03	10.00	0		
	16QAM	1	0	10.22	10.23	10.18	0		1	0	10.17	10.18	10.13	0	
		1	50	10.20	10.21	10.16	0		1	37	10.14	10.16	10.11	0	
		1	99	10.18	10.19	10.14	0		1	74	10.12	10.14	10.10	0	
		50	0	10.21	10.22	10.19	0		36	0	10.16	10.17	10.13	0	
		50	25	10.20	10.21	10.16	0		36	19	10.15	10.16	10.11	0	
		50	50	10.20	10.21	10.16	0		36	39	10.15	10.16	10.11	0	
	100	0	10.17	10.18	10.13	0	75		0	10.11	10.13	10.08	0		
	64QAM	1	0	10.20	10.21	10.19	0		1	0	10.15	10.16	10.14	0	
		1	50	10.16	10.17	10.15	0		1	37	10.11	10.12	10.10	0	
		1	99	10.14	10.15	10.13	0		1	74	10.09	10.10	10.08	0	
		50	0	10.12	10.13	10.11	0		36	0	10.07	10.08	10.06	0	
50		25	10.16	10.17	10.14	0	36	19	10.11	10.12	10.09	0			
50		50	10.08	10.09	10.05	0	36	39	10.03	10.04	10.01	0			
100	0	10.03	10.04	10.02	0	75	0	9.98	9.99	9.97	0				
10M	QPSK	1	0	10.15	10.18	10.12	0	5M	QPSK	1	0	10.12	10.13	10.07	0
		1	24	10.17	10.14	10.11	0			1	12	10.12	10.09	10.06	0
		1	49	10.15	10.12	10.09	0			1	24	10.09	10.07	10.04	0
		25	0	10.16	10.13	10.10	0			12	0	10.11	10.08	10.05	0
		25	12	10.17	10.14	10.12	0			12	6	10.12	10.09	10.07	0
		25	25	10.09	10.04	10.02	0			12	13	10.01	9.99	9.96	0
	50	0	10.04	9.98	9.95	0	25		0	9.99	9.93	9.91	0		
	16QAM	1	0	10.12	10.13	10.08	0		1	0	10.07	10.08	10.03	0	
		1	24	10.10	10.11	10.06	0		1	12	10.05	10.06	10.00	0	
		1	49	10.08	10.09	10.05	0		1	24	10.01	10.04	10.00	0	
		25	0	10.11	10.12	10.07	0		12	0	10.06	10.07	10.04	0	
		25	12	10.10	10.11	10.06	0		12	6	10.05	10.06	10.01	0	
		25	25	10.10	10.11	10.06	0		12	13	10.05	10.06	10.01	0	
	50	0	10.06	10.08	10.03	0	25		0	10.02	10.03	9.99	0		
	64QAM	1	0	10.10	10.11	10.09	0		1	0	10.05	10.06	10.04	0	
		1	24	10.06	10.07	10.05	0		1	12	10.01	10.02	10.00	0	
		1	49	10.04	10.05	10.03	0		1	24	9.99	10.00	9.98	0	
		25	0	10.02	10.03	10.01	0		12	0	9.97	9.98	9.96	0	
25		12	10.06	10.07	10.05	0	12	6	10.01	10.02	9.99	0			
25		25	9.98	9.99	9.97	0	12	13	9.93	9.94	9.92	0			
50	0	9.93	9.94	9.92	0	25	0	9.88	9.89	9.87	0				
3M	QPSK	1	0	10.05	10.08	10.02	0	1.4M	QPSK	1	0	10.00	10.03	9.97	0
		1	7	10.07	10.04	10.01	0			1	2	10.02	9.99	9.96	0
		1	14	10.05	10.02	9.99	0			1	5	10.00	9.97	9.94	0
		8	0	10.06	10.03	10.00	0			3	0	10.01	9.98	9.95	0
		8	3	10.07	10.04	10.02	0			3	1	10.02	9.99	9.97	0
		8	7	9.99	9.94	9.91	0			3	3	9.91	9.89	9.85	0
	15	0	9.94	9.88	9.85	0	6		0	9.87	9.83	9.80	0		
	16QAM	1	0	10.02	10.03	9.98	0		1	0	9.97	9.98	9.93	0	
		1	7	9.99	10.01	9.95	0		1	2	9.94	9.96	9.90	0	
		1	14	9.97	9.99	9.95	0		1	5	9.91	9.94	9.90	0	
		8	0	10.01	10.02	9.98	0		3	0	9.96	9.97	9.93	0	
		8	3	10.00	10.01	9.96	0		3	1	9.95	9.96	9.91	0	
		8	7	10.00	10.01	9.96	0		3	3	9.95	9.96	9.91	0	
	15	0	9.97	9.98	9.94	0	6		0	9.91	9.93	9.88	0		
	64QAM	1	0	10.00	10.01	9.99	0		1	0	9.95	9.96	9.94	0	
		1	7	9.96	9.97	9.95	0		1	2	9.91	9.92	9.90	0	
		1	14	9.94	9.95	9.93	0		1	5	9.89	9.90	9.88	0	
		8	0	9.92	9.93	9.91	0		3	0	9.87	9.88	9.86	0	
8		3	9.96	9.97	9.95	0	3	1	9.91	9.92	9.89	0			
8		7	9.88	9.89	9.86	0	3	3	9.83	9.84	9.81	0			
15	0	9.83	9.84	9.82	0	6	0	9.78	9.79	9.77	0				

FCC SAR Test Report

Tablet PC Mode

<WLAN 2.4G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
EUT without Power Reduction (P-Sensor NOT Triggered)					
802.11b	1	2412	16.62	16.53	16.87
	6	2437	16.85	16.65	16.57
	11	2462	16.76	16.63	16.70
EUT with Power Reduction (P-Sensor Triggered)					
802.11b	1	2412	9.75	9.72	12.21
	6	2437	9.86	9.76	12.34
	11	2462	9.70	9.68	12.15

<WLAN 5.2G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
EUT without Power Reduction (P-Sensor NOT Triggered)					
802.11a	36	5180	-	-	20.67
	40	5200	-	-	20.62
	44	5220	-	-	20.66
	48	5240	-	-	20.67

<WLAN 5.3G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
EUT without Power Reduction (P-Sensor NOT Triggered)					
802.11ac (VHT80)	58	5290	17.95	17.70	-
EUT with Power Reduction (P-Sensor Triggered)					
802.11ac (VHT80)	58	5290	8.96	9.31	12.10

<WLAN 5.6G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
EUT without Power Reduction (P-Sensor NOT Triggered)					
802.11ac (VHT80)	106	5530	17.82	17.77	17.62
	122	5610	17.75	17.66	17.66
EUT with Power Reduction (P-Sensor Triggered)					
802.11ac (VHT80)	106	5530	8.86	8.31	11.63
	122	5610	7.88	8.30	11.60

<WLAN 5.8G>

Mode	Channel	Frequency (MHz)	Average Power SISO (Ant-0)	Average Power SISO (Ant-1)	Average Power MIMO (Ant-0 + Ant-1)
EUT without Power Reduction (P-Sensor NOT Triggered)					
802.11ac (VHT80)	155	5775	17.65	17.57	17.61
EUT with Power Reduction (P-Sensor Triggered)					
802.11ac (VHT80)	155	5775	7.76	8.95	11.13

<Bluetooth>

Mode	Channel	Frequency (MHz)	Average Power
Bluetooth EDR	0	2402	5.29
	39	2441	4.17
	78	2480	5.94
Bluetooth LE	0	2402	4.94
	19	2440	4.04
	39	2480	5.89

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.

FCC SAR Test Report

<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.

Laptop PC Mode

Power Measurements for Intra-Band Contiguous Downlink CA

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2C	2	20	19100	1900	1	0	1100	1980	2	20	902	1960.2					13.44	13.46
CA_66D	66	20	132072	1720	1	0	66536	2120	66	20	66734	2139.8	66	20	66932	2159.6	13.29	16.32

Power Measurements for Intra-Band Non-Contiguous Downlink CA

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_41A-41D	41	20	39750	2506	1	0	39750	2506	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	13.91	13.86
CA_66A-66C	66	20	132072	1720	1	0	66536	2120	66	20	66786	2145	66	20	66984	2164.8					16.32	13.29

FCC SAR Test Report

Power Measurements for Inter-Band Downlink CA

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2A-17A	2	10	19150	1905	1	0	1150	1985	17	10	5790	740									13.33	13.31
CA_4A-17A	4	10	20000	1715	1	0	2000	2115	17	10	5790	740									13.14	13.09
CA_5A-7A	5	10	20600	844	1	0	2600	889	7	20	3100	2655									17.93	17.90
CA_25A-26A	25	20	26590	1950	1	0	8590	1985	26	15	8865	876.5									13.24	13.22
CA_14A-66A-66A	14	10	23330	793	1	0	5330	763	66	20	66536	2120	66	20	67036	2170					18.25	18.21
CA_26A-41C	26	15	26865	831.5	1	0	8865	867.5	41	20	40620	2593	41	20	40818	2612.8					18.24	18.19
CA_2A-4A-13A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	13	10	5230	751					13.46	13.44
CA_2A-14A-30A	2	20	19100	1900	1	0	1100	1980	14	10	5330	763	30	10	9820	2355					13.46	13.43
CA_25A-41D	25	20	26590	1905	1	0	8590	1985	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	13.24	13.18
CA_2A-2A-13A-66A	2	20	19100	1900	1	0	1100	1980	2	20	700	1940	13	10	5230	751	66	20	66786	2145	13.46	13.45
CA_2A-13A-66A-66A	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66536	2120	66	20	67036	2170	13.46	13.40
CA_2A-13A-66A-C	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	13.46	13.43
CA_2A-13A-66A-B	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	10	66837	2150.1	66	10	66936	2160	13.46	13.42
CA_2A-4A-5A-30A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	5	10	2515	880.5	30	10	9820	2355	13.46	13.43
CA_2A-4A-7A-12A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	7	20	3100	2655	12	10	5095	737.5	13.46	13.44
CA_2A-4A-12A-30A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	30	10	9820	2355	13.46	13.45
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	13.46	13.46

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2A-5B-30A-66A	2	20	19100	1900	1	0	1100	1980	5	10	2501	879.1	5	10	2600	889	13.46	13.42
									SCC3				SCC4					
									LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)		
								30	10	9820	2355	66	20	66786	2145			

FCC SAR Test Report

Tablet PC Mode

Without Power Reduction

Power Measurements for Intra-Band Contiguous Downlink CA

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2C	2	20	19100	1900	1	0	1100	1980	2	20	902	1960.2	-	-	-	-	23.89	23.79
CA_66D	66	20	132072	1720	1	0	66536	2120	66	20	66734	2139.8	66	20	66932	2159.6	23.08	23.05

Power Measurements for Intra-Band Non-Contiguous Downlink CA

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_41A-41D	41	20	39750	2506	1	0	39750	2506	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	23.82	23.81
CA_66A-66C	66	20	132072	1720	1	0	66536	2120	66	20	66786	2145	66	20	66984	2164.8	-	-	-	-	23.08	22.98

Power Measurements for Inter-Band Downlink CA

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2A-17A	2	10	19150	1905	1	0	1150	1985	17	10	5790	740	-	-	-	-	-	-	-	-	23.78	23.54
CA_4A-17A	4	10	20000	1715	1	0	2000	2115	17	10	5790	740	-	-	-	-	-	-	-	-	23.67	23.67
CA_5A-7A	5	10	20600	844	1	0	2600	889	7	20	3100	2655	-	-	-	-	-	-	-	-	23.47	23.38
CA_25A-26A	25	20	26590	1950	1	0	8590	1985	26	15	8865	876.5	-	-	-	-	-	-	-	-	23.36	23.24
CA_14A-66A-66A	14	10	23330	793	1	0	5330	763	66	20	66536	2120	66	20	67036	2170	-	-	-	-	23.68	23.66
CA_26A-41C	26	15	26865	831.5	1	0	8865	867.5	41	20	40620	2593	41	20	40818	2612.8	-	-	-	-	23.66	23.58
CA_2A-4A-13A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	13	10	5230	751	-	-	-	-	23.89	23.88
CA_2A-14A-30A	2	20	19100	1900	1	0	1100	1980	14	10	5330	763	30	10	9820	2355	-	-	-	-	23.89	23.87
CA_25A-41D	25	20	26590	1905	1	0	8590	1985	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	23.36	23.30
CA_2A-2A-13A-66A	2	20	19100	1900	1	0	1100	1980	2	20	700	1940	13	10	5230	751	66	20	66786	2145	23.89	23.88
CA_2A-13A-66A-66A	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66536	2120	66	20	67036	2170	23.89	23.83
CA_2A-13A-66A-66A	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	23.89	23.76
CA_2A-13A-66A-66A	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	10	66837	2150.1	66	10	66936	2160	23.89	23.83
CA_2A-4A-5A-30A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	5	10	2515	880.5	30	10	9820	2355	23.89	23.80
CA_2A-4A-7A-12A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	7	20	3100	2655	12	10	5095	737.5	23.89	23.79
CA_2A-4A-12A-30A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	30	10	9820	2355	23.89	23.77
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	23.89	23.81

FCC SAR Test Report

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2A-5B-30A-66 A	2	20	19100	1900	1	0	1100	1980	5	10	2501	879.1	5	10	2600	889	23.36	23.30
									SCC3				SCC4					
									LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)		
									30	10	9820	2355	66	20	66786	2145		

With Power Reduction

Power Measurements for Intra-Band Contiguous Downlink CA

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2C	2	20	19100	1900	1	0	1100	1980	2	20	902	1960.2	-	-	-	-	10.34	10.29
CA_66D	66	20	132072	1720	1	0	66536	2120	66	20	66734	2139.8	66	20	66932	2159.6	10.28	10.12

Power Measurements for Intra-Band Non-Contiguous Downlink CA

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_41A-41D	41	20	39750	2506	1	0	39750	2506	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	10.54	10.36
CA_66A-66C	66	20	132072	1720	1	0	66536	2120	66	20	66786	2145	66	20	66984	2164.8	-	-	-	-	10.28	10.12

FCC SAR Test Report

Power Measurements for Inter-Band Downlink CA

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2A-17A	2	10	19150	1905	1	0	1150	1985	17	10	5790	740	-	-	-	-	-	-	-	-	10.24	10.03
CA_4A-17A	4	10	20000	1715	1	0	2000	2115	17	10	5790	740	-	-	-	-	-	-	-	-	10.21	10.12
CA_5A-7A	5	10	20600	844	1	0	2600	889	7	20	3100	2655	-	-	-	-	-	-	-	-	17.89	17.59
CA_25A-26A	25	20	26590	1950	1	0	8590	1985	26	15	8865	876.5	-	-	-	-	-	-	-	-	11.33	11.00
CA_14A-66A-66A	14	10	23330	793	1	0	5330	763	66	20	66536	2120	66	20	67036	2170	-	-	-	-	16.23	16.13
CA_26A-41C	26	15	26865	831.5	1	0	8865	867.5	41	20	40620	2593	41	20	40818	2612.8	-	-	-	-	18.24	18.12
CA_2A-4A-13A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	13	10	5230	751	-	-	-	-	10.34	10.05
CA_2A-14A-30A	2	20	19100	1900	1	0	1100	1980	14	10	5330	763	30	10	9820	2355	-	-	-	-	10.34	10.01
CA_25A-41D	25	20	26590	1905	1	0	8590	1985	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	11.33	10.95
CA_2A-2A-13A-66A	2	20	19100	1900	1	0	1100	1980	2	20	700	1940	13	10	5230	751	66	20	66786	2145	10.34	9.79
CA_2A-13A-66A-66A	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66536	2120	66	20	67036	2170	10.34	9.92
CA_2A-13A-66A-C	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	10.34	9.93
CA_2A-13A-66A-B	2	20	19100	1900	1	0	1100	1980	13	10	5230	751	66	10	66837	2150.1	66	10	66936	2160	10.34	9.95
CA_2A-4A-5A-30A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	5	10	2515	880.5	30	10	9820	2355	10.34	9.95
CA_2A-4A-7A-12A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	7	20	3100	2655	12	10	5095	737.5	10.34	9.86
CA_2A-4A-12A-30A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	30	10	9820	2355	10.34	9.89
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	10.34	9.91

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2A-5B-30A-66A	2	20	19100	1900	1	0	1100	1980	5	10	2501	879.1	5	10	2600	889	10.34	9.91
									SCC3				SCC4					
									LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)		
								30	10	9820	2355	66	20	66786	2145			

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.

FCC SAR Test Report

<Power Confirmation for SAR Testing for LTE Uplink CA>

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

Laptop PC Mode

PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
5	10	QPSK	1	0	20450	829	5	10	QPSK	1	49	20549	838.9	17.96	12.56
			1	49						17.94	17.92				
5	10	QPSK	1	0	20476	831.6	5	10	QPSK	1	49	20575	841.2	17.92	13.03
			1	49						17.9	17.56				
5	10	QPSK	1	0	20501	834.1	5	10	QPSK	1	49	20600	844	17.93	12.69
			1	49						17.87	17.72				
7	20	QPSK	1	0	20850	2510	7	20	QPSK	1	99	21048	2529.8	11.41	10.74
			1	99						11.39	11.17				
7	20	QPSK	1	0	21100	2535	7	20	QPSK	1	99	21298	2554.8	11.32	11.27
			1	99						11.3	11.24				
7	20	QPSK	1	0	21152	2540.2	7	20	QPSK	1	99	21350	2560	11.43	11.19
			1	99						11.41	11.38				
41	20	QPSK	1	0	39750	2506	41	20	QPSK	1	99	39948	2525.8	13.57	13.26
			1	99						13.17	13.14				
41	20	QPSK	1	0	40185	2549.5	41	20	QPSK	1	99	40383	2569.3	13.61	13.32
			1	99						13.21	13.16				
41	20	QPSK	1	0	40620	2593	41	20	QPSK	1	99	40818	2612.8	13.91	13.38
			1	99						13.51	13.27				
41	20	QPSK	1	0	41055	2636.5	41	20	QPSK	1	99	41253	2656.3	13.58	13.25
			1	99						13.18	13.12				
41	20	QPSK	1	0	41292	2660.2	41	20	QPSK	1	99	41490	2680	13.36	13.15
			1	99						12.96	12.87				

Tablet PC Mode

Power Measurements Tablet Mode without triggering P-sensor for Uplink Intra-Band Contiguous CA															
PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
5	10	QPSK	1	0	20450	829	5	10	QPSK	1	49	20549	838.9	23.68	12.50
			1	49						23.59	23.55				
5	10	QPSK	1	0	20476	831.6	5	10	QPSK	1	49	20575	841.2	23.56	12.70
			1	49						23.47	23.25				
5	10	QPSK	1	0	20501	834.1	5	10	QPSK	1	49	20600	844	23.33	12.64
			1	49						23.57	23.41				
Power Measurements Tablet Mode with triggering P-sensor for Uplink Intra-Band Contiguous CA															
PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
5	10	QPSK	1	0	20450	829	5	10	QPSK	1	49	20549	838.9	17.89	12.78
			1	49						17.42	17.28				
5	10	QPSK	1	0	20476	831.6	5	10	QPSK	1	49	20575	841.2	17.47	13.48
			1	49						17.43	17.21				
5	10	QPSK	1	0	20501	834.1	5	10	QPSK	1	49	20600	844	17.52	12.85
			1	49						17.47	17.37				

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Power Measurements Tablet Mode without triggering P-sensor for Uplink Intra-Band Contiguous CA															
PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
7	20	QPSK	1	0	20850	2510	7	20	QPSK	1	99	21048	2529.8	23.43	14.15
			1	99						23.34	23.31				
7	20	QPSK	1	0	21100	2535	7	20	QPSK	1	99	21298	2554.8	23.36	14.20
			1	99						23.27	23.12				
7	20	QPSK	1	0	21152	2540.2	7	20	QPSK	1	99	21350	2560	23.48	14.28
			1	99						23.39	23.28				

Power Measurements Tablet Mode with triggering P-sensor for Uplink Intra-Band Contiguous CA															
PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
7	20	QPSK	1	0	20850	2510	7	20	QPSK	1	99	21048	2529.8	10.75	10.02
			1	99						10.29	10.04				
7	20	QPSK	1	0	21100	2535	7	20	QPSK	1	99	21298	2554.8	10.77	9.74
			1	99						10.36	10.21				
7	20	QPSK	1	0	21152	2540.2	7	20	QPSK	1	99	21350	2560	10.89	9.84
			1	99						10.56	10.13				

Power Measurements Tablet Mode without triggering P-sensor for Uplink Intra-Band Contiguous CA															
PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
41	20	QPSK	1	0	39750	2506	41	20	QPSK	1	99	39948	2525.8	23.51	15.23
			1	99						23.16	23.13				
41	20	QPSK	1	0	40185	2549.5	41	20	QPSK	1	99	40383	2569.3	23.56	15.25
			1	99						23.21	23.21				
41	20	QPSK	1	0	40620	2593	41	20	QPSK	1	99	40818	2612.8	23.82	15.33
			1	99						23.47	23.45				
41	20	QPSK	1	0	41055	2636.5	41	20	QPSK	1	99	41253	2656.3	23.55	14.93
			1	99						23.2	23.08				
41	20	QPSK	1	0	41292	2660.2	41	20	QPSK	1	99	41490	2680	23.43	14.83
			1	99						23.08	23.06				

Power Measurements Tablet Mode with triggering P-sensor for Uplink Intra-Band Contiguous CA															
PCC							SCC							Power	
Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
41	20	QPSK	1	0	39750	2506	41	20	QPSK	1	99	39948	2525.8	10.54	10.49
			1	99						10.4	10.52				
41	20	QPSK	1	0	40185	2549.5	41	20	QPSK	1	99	40383	2569.3	10.38	10.37
			1	99						10.34	10.40				
41	20	QPSK	1	0	40620	2593	41	20	QPSK	1	99	40818	2612.8	10.96	10.46
			1	99						10.63	10.63				
41	20	QPSK	1	0	41055	2636.5	41	20	QPSK	1	99	41253	2656.3	10.65	10.58
			1	99						10.52	10.60				
41	20	QPSK	1	0	41292	2660.2	41	20	QPSK	1	99	41490	2680	10.62	10.53
			1	99						10.48	10.54				

SAR Measurements for Intra-Band Contiguous CA

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

FCC SAR Test Report

<May 2017 TCB Workshop, SAR Test Exclusion for LTE DL 4x4 MIMO>

Per FCC guidance, SAR testing for LTE DL 4x4 MIMO is not required when the uplink maximum output power with downlink MIMO active remains within the specified tune-up tolerance and not more than 0.25 dB higher than the maximum output power with downlink MIMO inactive. Per power confirmation results, the SAR test exclusion applies to LTE downlink MIMO operation.

Laptop PC Mode

Power Measurements for Intra-Band Contiguous Downlink CA (4*4 MIMO)

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2C	2	20	19100	1900	1	0	1100	1980	2	20	902	1960.2	-	-	-	-	13.46	13.44
CA_66D	66	20	132072	1720	1	0	66536	2120	66	20	66734	2139.8	66	20	66932	2159.6	16.32	16.30

Power Measurements for Intra-Band Non-Contiguous Downlink CA (4*4 MIMO)

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_41A-41D	41	20	39750	2506	1	0	39750	2506	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	13.91	13.86
CA_66A-66C	66	20	132072	1720	1	0	66536	2120	66	20	66786	2145	66	20	66984	2164.8	-	-	-	-	16.32	13.29

Power Measurements for Inter-Band Downlink CA (4*4 MIMO)

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2A-17A	2	10	19150	1905	1	0	1150	1985	17	10	5790	740	-	-	-	-	-	-	-	-	13.33	13.32
CA_4A-5A	4	20	20050	1720	1	0	2050	2120	5	10	2515	880.5	-	-	-	-	-	-	-	-	13.28	13.25
CA_4A-17A	4	10	20000	1715	1	0	2000	2115	17	10	5790	740	-	-	-	-	-	-	-	-	13.14	13.10
CA_25A-26A	25	20	26590	1950	1	0	8590	1985	26	15	8865	876.5	-	-	-	-	-	-	-	-	13.24	13.16
CA_5A-7A-7A	5	10	20600	844	1	0	2600	889	7	20	2850	2630	7	20	3350	2680	-	-	-	-	17.93	17.91
CA_2A-4A-12A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	-	-	-	-	13.46	13.45
CA_2A-4A-13A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	13	10	5230	751	-	-	-	-	13.46	13.38
CA_2A-4A-30A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	30	10	9820	2355	-	-	-	-	13.46	13.40
CA_2A-7A-12A	2	20	19100	1900	1	0	1100	1980	7	20	2850	2630	12	10	5095	737.5	-	-	-	-	13.46	13.42
CA_2A-12A-30A	2	20	19100	1900	1	0	1100	1980	12	10	5095	737.5	30	10	9820	2355	-	-	-	-	13.46	13.44
CA_2A-14A-30A	2	20	19100	1900	1	0	1100	1980	14	10	5330	763	30	10	9820	2355	-	-	-	-	13.46	13.42
CA_2A-30A-66A	2	20	19100	1900	1	0	1100	1980	30	10	9820	2355	66	20	66786	2145	-	-	-	-	13.46	13.45
CA_25A-41D	25	20	26590	1905	1	0	8590	1985	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	13.24	13.20
CA_2A-4A-7C	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	7	20	3100	2655	7	20	3298	2674.8	13.46	13.45
CA_2A-5A-66C	2	20	19100	1900	1	0	1100	1980	5	10	2515	880.5	66	20	66786	2145	66	20	66984	2164.8	13.46	13.46
CA_2A-5B-30A	2	20	19100	1900	1	0	1100	1980	5	10	2501	879.1	5	10	2600	889	30	10	9820	2355	13.46	13.46
CA_2A-5B-66A	2	20	19100	1900	1	0	1100	1980	5	10	2501	879.1	5	10	2600	889	66	20	66786	2145	13.46	13.42
CA_2A-12A-66C	2	20	19100	1900	1	0	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	13.46	13.43
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	13.46	13.40

FCC SAR Test Report

Tablet PC Mode

Without Power Reduction

Power Measurements for Intra-Band Contiguous Downlink CA (4*4 MIMO)

CA Combination	PCC								SCC1				SCC2				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2C	2	20	19100	1900	1	0	1100	1980	2	20	902	1960.2	-	-	-	-	23.89	23.79
CA_66D	66	20	132072	1720	1	0	66536	2120	66	20	66734	2139.8	66	20	66932	2159.6	23.08	23.05

Power Measurements for Intra-Band Non-Contiguous Downlink CA (4*4 MIMO)

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_41A-41D	41	20	39750	2506	1	0	39750	2506	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	23.82	23.81
CA_66A-66C	66	20	132072	1720	1	0	66536	2120	66	20	66786	2145	66	20	66984	2164.8	-	-	-	-	23.08	22.98

Power Measurements for Inter-Band Downlink CA (4*4 MIMO)

CA Combination	PCC								SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Single Carrier Tx Power (dBm)	Tx Power with DL-CA Active (dBm)
CA_2A-17A	2	10	19150	1905	1	0	1150	1985	17	10	5790	740	-	-	-	-	-	-	-	-	23.78	22.56
CA_4A-5A	4	20	20050	1720	1	0	2050	2120	5	10	2515	880.5	-	-	-	-	-	-	-	-	23.77	22.73
CA_4A-17A	4	10	20000	1715	1	0	2000	2115	17	10	5790	740	-	-	-	-	-	-	-	-	23.67	23.6
CA_25A-26A	25	20	26590	1950	1	0	8590	1985	26	15	8865	876.5	-	-	-	-	-	-	-	-	23.36	23.22
CA_5A-7A-7A	5	10	20600	844	1	0	2600	889	7	20	2850	2630	7	20	3350	2680	-	-	-	-	23.47	23.44
CA_2A-4A-12A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	-	-	-	-	23.89	23.84
CA_2A-4A-13A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	13	10	5230	751	-	-	-	-	23.89	23.79
CA_2A-4A-30A	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	30	10	9820	2355	-	-	-	-	23.89	23.81
CA_2A-7A-12A	2	20	19100	1900	1	0	1100	1980	7	20	2850	2630	12	10	5095	737.5	-	-	-	-	23.89	23.83
CA_2A-12A-30A	2	20	19100	1900	1	0	1100	1980	12	10	5095	737.5	30	10	9820	2355	-	-	-	-	23.89	23.78
CA_2A-14A-30A	2	20	19100	1900	1	0	1100	1980	14	10	5330	763	30	10	9820	2355	-	-	-	-	23.89	23.77
CA_2A-30A-66A	2	20	19100	1900	1	0	1100	1980	30	10	9820	2355	66	20	66786	2145	-	-	-	-	23.89	23.78
CA_25A-41D	25	20	26590	1905	1	0	8590	1985	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	23.36	23.33
CA_2A-4A-7C	2	20	19100	1900	1	0	1100	1980	4	20	2175	2132.5	7	20	3100	2655	7	20	3298	2674.8	23.89	23.15
CA_2A-5A-66C	2	20	19100	1900	1	0	1100	1980	5	10	2515	880.5	66	20	66786	2145	66	20	66984	2164.8	23.89	23.88
CA_2A-5B-30A	2	20	19100	1900	1	0	1100	1980	5	10	2501	879.1	5	10	2600	889	30	10	9820	2355	23.89	23.82
CA_2A-5B-66A	2	20	19100	1900	1	0	1100	1980	5	10	2501	879.1	5	10	2600	889	66	20	66786	2145	23.89	23.79
CA_2A-12A-66C	2	20	19100	1900	1	0	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	23.89	23.76
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	23.89	23.77