FCC SAR Test Report

FCC ID: PU5-LN300WG3D

Report No.	:	BTL-FCC SAR-1-2102T172A
Equipment	:	Notebook Computer
Model Name	:	Lenovo 300w Gen 3xxxxxxxx (The "x" in model name can be 0 to 9, A to Z, a to z, "-" or blank, for marketing purpose only)
Brand Name	:	Lenovo
Applicant	:	Wistron Corporation
Address	:	21F, No. 88, Sec. 1, Hsin Tai Wu Rd., Hsichih Dist, New Taipei City 221, Taiwan
Manufacturer	:	Lenovo PC HK Limited
Address	:	23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong, P.R. China
Radio Function	:	WLAN 2.4G, WLAN 5G, Bluetooth, WCDMA Band II, IV, V and LTE Band 2, 4, 5, 7, 12, 13, 17, 26, 30, 41, 66
Standard(s)	:	**KDB941225 D01** 3G SAR Procedures v03r01 **KDB941225 D05** SAR for LTE Devices v02r05 **KDB447498 D01** General RF Exposure Guidance v06 **KDB248227 D01** 802.11 Wi-Fi SAR v02r02 **KDB865664 D01** SAR measurement 100 MHz to 6 GHz v01r04 **KDB865664 D02** SAR Reporting v01r02 **KDB616217 D04** SAR for laptop and Tablets
Date of Receipt	:	2021/3/18
Date of Test	:	2021/3/29 ~ 2021/4/1
Issued Date	:	2021/6/10

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by :

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Approved by :

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	2021/4/8
R01	Revised TCB command	2021/5/7
R02	Revised TCB command	2021/6/10

1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

Equipment	Notebook Computer		
Model Name	Lenovo 300w Gen 3xxxxxxxx (The "x" in model name can be 0 to 9, A to Z, a to z, "-" or blank, for marketing purpose only)		
Brand Name	Lenovo		
Model Difference	Different model distribute to different area.		
Power Source	DC voltage supplied from External Power Supply. (Lenovo/ADLX45YLC3D)		
Power Rating	I/P:100 -240V~1.3A 50-60Hz O/P: 20.0V 2.25A 45.0W, 15.0V 3.0A, 9.0V 2.0A / 5.0V 2.0A 10.0W		
Battery Information	Brand / Model:Lenovo / L20C3PG0 Model: Rating: 4080mAh / 47Wh		
WIFI+BT Module	Intel® Wi-Fi 6 AX200 / AX200NGW		
WWAN Module	Fibocom / L850-GL		
Operation Frequency	Function	Band	Frequency (MHz)
	WiFi	2.4G	TX : 2412 - 2472
		5G_UNII 1	TX : 5180 - 5240
		5G_UNII 2a	TX : 5250 - 5350
		5G_UNII 2c	TX : 5500 - 5700
		5G_UNII 3	TX : 5745 - 5825
	Bluetooth	Basic Rate (BR)	TX : 2402 - 2480
		Enhance Data Rate	TX : 2402 - 2480
		Bluetooth Low Energy	TX : 2402 - 2480
	WCDMA	UMTS Band II	TX : 1850 - 1910
		UMTS Band IV	TX : 1710 - 1755
		UMTS Band V	TX : 824 - 849
	LTE	LTE Band 2	TX : 1850 - 1910
		LTE Band 4	TX : 1710 - 1755
		LTE Band 5	TX : 824 - 849
		LTE Band 7	TX : 2500 - 2570
		LTE Band 12	TX : 699 - 716
		LTE Band 13	TX : 777 - 787
		LTE Band 17	TX : 704 - 716
		LTE Band 26	TX : 814 - 824
		LTE Band 30	TX : 2305 - 2315
		LTE Band 41	TX : 2496 - 2690
		LTE Band 66	TX : 1710 - 1780
Test Model	Lenovo 300w Gen 3		
Sample Status	Engineering Sample		
EUT Modification(s)	N/A		

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCC-SAR-1-2102T172A) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF SAR MEASUREMENT

2.1. TEST FACILITY

The test facilities used to collect the test data in this report is **SAR Test room** at the location of No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan.

2.2. MEASUREMENT UNCERTAINTY

Uncertainty Budget for Frequency range of 300 MHz to 3 GHz

Error Description	Uncertainty Value (± %)		Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)	Vi V_{eff}
Measurement System									
Probe Calibration	6.05		Normal	1	1	1	± 6.05 %	± 6.05 %	∞
Axial Isotropy	4.7		Rectangular	$\sqrt{3}$	0.7	0.7	± 1.9 %	± 1.9 %	∞
Hemispherical Isotropy	9.6		Rectangular	$\sqrt{3}$	0.7	0.7	± 3.9 %	± 3.9 %	∞
Boundary Effects	1		Rectangular	$\sqrt{3}$	1	1	± 0.6 %	± 0.6 %	∞
Linearity	4.7		Rectangular	$\sqrt{3}$	1	1	± 2.7 %	± 2.7 %	∞
Detection Limits	1		Rectangular	$\sqrt{3}$	1	1	± 0.6 %	± 0.6 %	∞
Modulation response	2.4		Rectangular	$\sqrt{3}$	1	1	±1.4 %	±1.4 %	∞
Readout Electronics	0.3		Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response Time	0.8		Rectangular	$\sqrt{3}$	1	1	± 0.5%	± 0.5 %	∞
Integration Time	2.6		Rectangular	$\sqrt{3}$	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient – Noise	3		Rectangular	$\sqrt{3}$	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient– Reflections	3		Rectangula	$\sqrt{3}$	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	0.4		Rectangular	$\sqrt{3}$	1	1	± 0.2 %	± 0.2 %	∞
Probe Positioning	2.9		Rectangular	$\sqrt{3}$	1	1	± 1.7 %	±1.7 %	∞
Post-processing	4		Rectangular	$\sqrt{3}$	1	1	± 2.3 %	± 2.3 %	∞
Max.SAR Evaluation	2		Rectangular	$\sqrt{3}$	1	1	± 1.15 %	± 1.15 %	∞
Test Sample Related									
Device Positioning	1.6	1.8	Normal	1	1	1	± 1.6 %	± 1.8 %	145
Device Holder	1.5	1.7	Normal	1	1	1	± 1.5 %	± 1.7 %	5
Power Drift	5.0		Rectangular	$\sqrt{3}$	1	1	± 2.9 %	± 2.9 %	∞
Phantom and Setup									
Phantom Production Tolerances	6.1		Rectangular	$\sqrt{3}$	1	1	3.52	3.52	∞
SAR correction	1.9		Rectangular	$\sqrt{3}$	1	0.84	1.10	1.10	
Liquid Conductivity (mea.)	2.4		Rectangular	$\sqrt{3}$	0.78	0.71	1.08	1.08	∞
Liquid Permittivity (mea.)	2.4		Rectangular	$\sqrt{3}$	0.26	0.26	0.36	0.36	∞
Temp. unc. - Conductivity	3.4		Rectangular	$\sqrt{3}$	0.78	0.71	1.53	1.53	∞
Temp. unc. - Permittivity	0.4		Rectangular	$\sqrt{3}$	0.23	0.26	0.05	0.05	∞
Combined Standard Uncertainty (K = 1)							± 10.42 %	± 10.48 %	361
Expanded Uncertainty (K = 2)							**± 20.84 %**	**± 20.97 %**	

Uncertainty Budget for Frequency range of 3 GHz to 6 GHz

Error Description	Uncertainty Value (± %)		Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)	Vi V_{eff}
Measurement System									
Probe Calibration	6.65		Normal	1	1	1	± 6.65 %	± 6.65 %	∞
Axial Isotropy	4.7		Rectangular	$\sqrt{3}$	0.7	0.7	± 1.9 %	± 1.9 %	∞
Hemispherical Isotropy	9.6		Rectangular	$\sqrt{3}$	0.7	0.7	± 3.9 %	± 3.9 %	∞
Boundary Effects	2		Rectangular	$\sqrt{3}$	1	1	± 1.2 %	± 1.2 %	∞
Linearity	4.7		Rectangular	$\sqrt{3}$	1	1	± 2.7 %	± 2.7 %	∞
Detection Limits	1		Rectangular	$\sqrt{3}$	1	1	± 0.6 %	± 0.6 %	∞
Modulation response	2.4		Rectangular	$\sqrt{3}$	1	1	±1.4 %	±1.4 %	∞
Readout Electronics	0.3		Normal	1	1	1	± 0.3 %	± 0.3 %	∞
Response Time	0.8		Rectangular	$\sqrt{3}$	1	1	± 0.5%	± 0.5 %	∞
Integration Time	2.6		Rectangular	$\sqrt{3}$	1	1	± 1.5 %	± 1.5 %	∞
RF Ambient – Noise	3		Rectangular	$\sqrt{3}$	1	1	± 1.7 %	± 1.7 %	∞
RF Ambient– Reflections	3		Rectangular	$\sqrt{3}$	1	1	± 1.7 %	± 1.7 %	∞
Probe Positioner	0.4		Rectangular	$\sqrt{3}$	1	1	± 0.2 %	± 0.2 %	∞
Probe Positioning	6.7		Rectangular	$\sqrt{3}$	1	1	± 3.9 %	±3.9 %	∞
Post-processing	4		Rectangular	$\sqrt{3}$	1	1	± 2.3 %	± 2.3 %	∞
Max.SAR Evaluation	4		Rectangular	$\sqrt{3}$	1	1	± 2.3 %	± 2.3 %	∞
Test Sample Related									
Device Positioning	1.6	1.8	Normal	1	1	1	±1.6 %	± 1.8 %	145
Device Holder	1.5	1.7	Normal	1	1	1	± 1.5 %	± 1.7 %	5
Power Drift	5.0		Rectangular	$\sqrt{3}$	1	1	± 2.9 %	± 2.9 %	∞
Phantom and Setup									
Phantom Production Tolerances	6.6		Rectangular	$\sqrt{3}$	1	1	3.81	3.81	∞
SAR correction	1.9		Rectangular	$\sqrt{3}$	1	0.84	1.10	0.92	
Liquid Conductivity (mea.)	2.4		Rectangular	$\sqrt{3}$	0.78	0.71	1.08	0.98	∞
Liquid Permittivity (mea.)	2.4		Rectangular	$\sqrt{3}$	0.26	0.26	0.36	0.36	∞
Temp. unc. - Conductivity	3.4		Rectangular	$\sqrt{3}$	0.78	0.71	1.53	1.39	∞
Temp. unc. - Permittivity	0.4		Rectangular	$\sqrt{3}$	0.23	0.26	0.05	0.06	∞
Combined Standard Uncertainty (K = 1)							± 11.65 %	± 11.66 %	361
Expanded Uncertainty (K = 2)							**± 23.29 %**	**± 23.33 %**	

2.3 WLAN Antenna Information:

Antenna	Manufacture	Part Number	Type	Connector	Frequency Range (MHz)	Gain (dBi)
Main	INPAQ Corporation	025.901U1.0001	PIFA	I-PEX	2400-2500	-1.26
					5150-5350	0.41
					5470-5725	0.28
					5725-5850	1.06
Aux	INPAQ Corporation	025.901U2.0001	PIFA	I-PEX	2400-2500	-1.46
					5150-5350	0.65
					5740-5725	-0.25
					5725-5850	0.15

Antenna	Manufacture	Part Number	Type	Connector	Frequency Range (MHz)	Gain (dBi)
Main	AWAN	025.901U3.0001	PIFA	I-PEX	2400-2500	0.93
					5150-5350	0.58
					5470-5725	1.68
					5725-5850	0.86
Aux	AWAN	025.901U4.0001	PIFA	I-PEX	2400-2500	1.52
					5150-5350	0.62
					5740-5725	0.93
					5725-5850	0.93

2.4 WWAN Antenna Information:

Antenna	Manufacture	P/N	Type	Connector	Gain (dBi)	Note
Main	INPAQ Corporation	025.901TX.0001	PIFA	I-PEX	0.74	UMTS-Band II
					-0.22	UMTS-Band IV
					-5.74	UMTS-Band V
					0.74	LTE Band 2
					-0.22	LTE Band 4
					-5.74	LTE Band 5
					1.88	LTE Band 7
					-6.73	LTE Band 12
					-5.59	LTE Band 13
					-7.84	LTE Band 17
					-5.67	LTE Band 26
					2.14	LTE Band 30
					1.95	LTE Band 41
					-0.22	LTE Band 66
Aux	INPAQ Corporation	025.901TY.0001	PIFA	I-PEX	-	RX only

2.4 The Maximum SAR 1g Values

Band	Mode	Highest Body Reported SAR-1g(W/kg)
FHSS	Bluetooth	0.380
DTS	Wi-Fi 2.4G	0.950
UNII	Wi-Fi 5.2 & 5.3G	1.168
	Wi-Fi 5.6G	1.125
	Wi-Fi 5.8G	1.087

Ant	Mode	Distance(mm)	Highest Body Reported SAR-1g(W/kg)
PCE	UMTS Band II	0	0.698
	UMTS Band IV	0	0.791
	UMTS Band V	0	0.790
	LTE Band 2	0	0.644
	LTE Band 4	0	0.530
	LTE Band 5	0	0.336
	LTE Band 7	0	0.566
	LTE Band 12	0	0.322
	LTE Band 13	7	0.388
	LTE Band 17	0	0.308
	LTE Band 26	0	0.315
	LTE Band 30	0	0.580
	LTE Band 41	0	0.280
	LTE Band 66	0	0.489

Note:

1.The device is in compliance with Specific Absorption Rate(SAR)for general population uncontrolled exposure limits according to the FCC rule §2.1093, the ANSI C95.1:2019/IEEE C95.1:2019, the NCRP Report Number 86 for uncontrolled environment and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 .

2.5 Laboratory Environment

Temperature	Min. = 18ºC, Max. = 25ºC
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2.6 Main Test Instruments

Item	Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Interval
1	Data Acquisition Electronics	Speag	DAE4	1486	June. 04, 2020	1 Year
2	E-field Probe	Speag	EX3DV4	7369	May. 29, 2020	1 Year
3	System Validation Dipole	Speag	D2450V2	973	Sep. 21, 2018	3 Year
4	System Validation Dipole	Speag	D5GHzV2	1221	Sep. 28, 2018	3 Year
5	System Validation Dipole	Speag	D750V3	1145	June. 12, 2019	3 Year
6	System Validation Dipole	Speag	D900V2	1d185	June. 13, 2019	3 Year
7	System Validation Dipole	Speag	D1800V2	2d210	June. 11, 2019	3 Year
8	System Validation Dipole	Speag	D1900V2	5d208	June. 11, 2019	3 Year
9	System Validation Dipole	Speag	D2600V2	1111	June. 10, 2019	3 Year
10	ELI4 Phantom	Speag	ELI4 Phantom V5.0	1240	N/A	N/A
11	ENA Network Analyzer	Agilent	E5071C	MY46524658	Apr. 07, 2020	1 Year
12	EXG Vector Signal Generator	Agilent	N5172B	MY53051229	Jun. 20, 2020	1 Year
13	Spectrum Analyzer	Keysight	N9010A	MY54200240	Jun. 11, 2020	1 Year
14	Power Meter	Anritsu	ML2495A	1128008	Jun. 11, 2020	1 Year
15	Power Sensor	Anritsu	MA2411B	1126001	Jun. 11, 2020	1 Year
16	Dielectric Probe Kit	Agilent	85070E	2593	N/A	N/A
17	Low pass filter	Mini-Circuits	SLP-2950+	M108294	N/A	N/A
18	Power Amplifier	Mini-Circuits	ZVE-2W-272+	N650001538	N/A	N/A
19	Power Amplifier	Mini-Circuits	ZVE-8G+	N628801631	N/A	N/A
20	Thermometer	PA	O-230PK	N/A	Apr. 09, 2020	1 Year

Remark: “N/A” denotes no model name, serial No. or calibration specified.

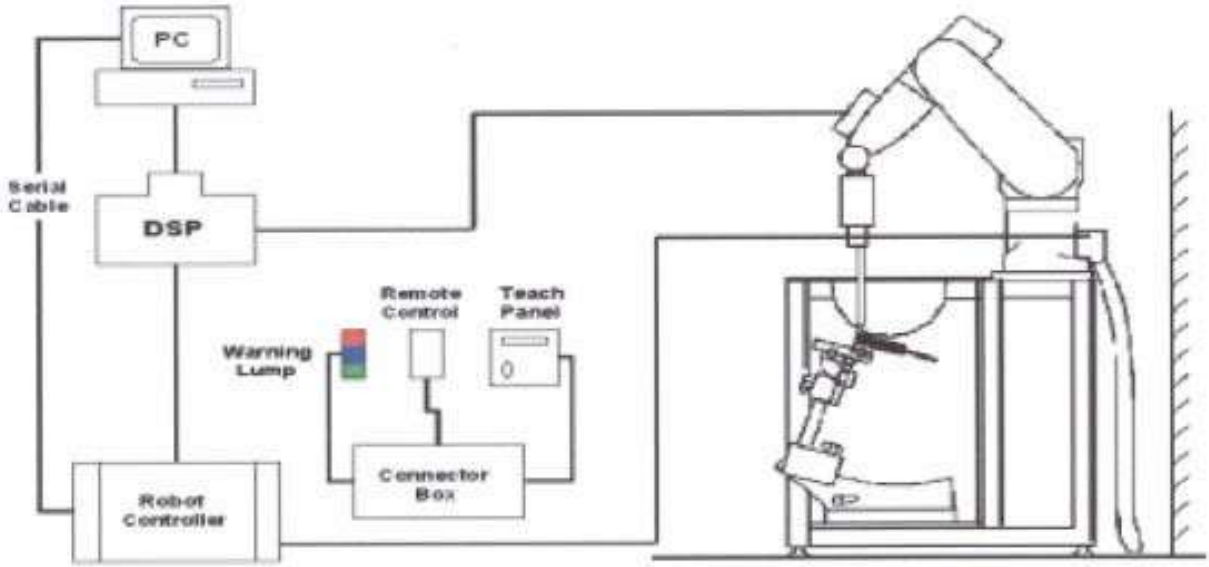
3. SAR MEASUREMENTS SYSTEM CONFIGURATION

3.1. SAR Measurement Setup

The DASY5 system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. A unit to operate the optical surface detector which is connected to the EOC.
5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
6. The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows.
7. DASY5 software and SEMCAD data evaluation software.
8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
9. The generic twin phantom enabling the testing of left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. System validation dipoles allowing to validate the proper functioning of the system.

3.1.1. TEST SETUP LAYOUT

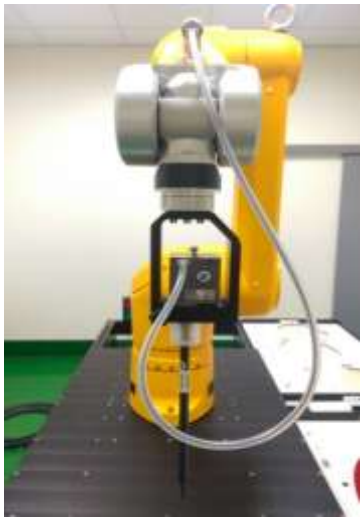


3.2. DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

3.2.1. EX3DV4 PROBE SPECIFICATION

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Distance from probe tip to dipole centers: 1.0 mm



EX3DV4 E-field Probe

3.2.2. E-FIELD PROBE CALIBRATION

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than ±10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

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

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

Where: Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

ΔT = Temperature increase due to RF exposure.

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

Where: σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m3).

3.2.3. OTHER TEST EQUIPMENT

3.2.3.1. DEVICE HOLDER FOR TRANSMITTERS

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. The extension is fully compatible with the Twin SAM, ELI4 and SAM v6.0 Phantoms.
Material: POM, Acrylic glass, Foam

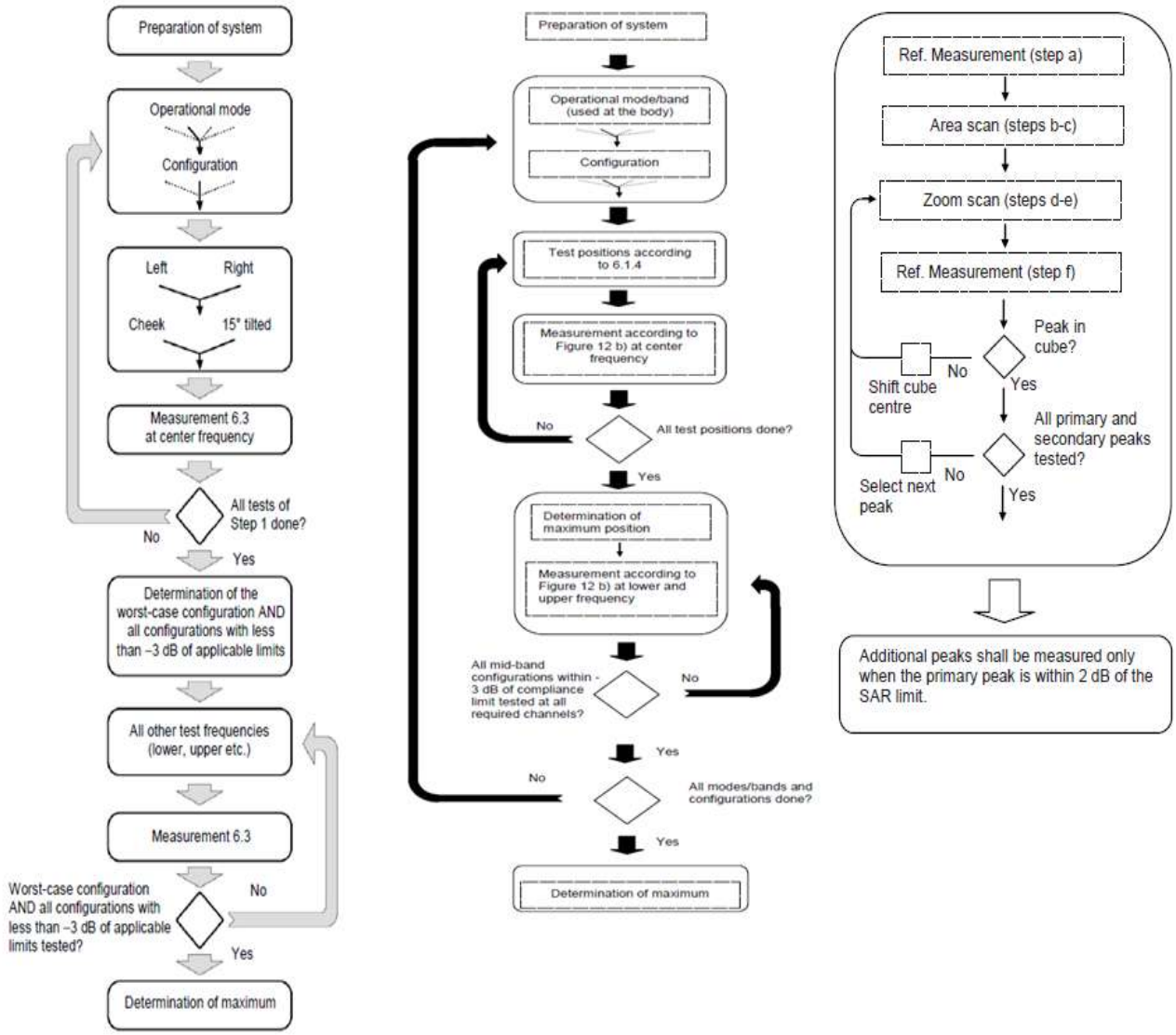
3.2.3.2 PHANTOM

Model	ELI4 Phantom	
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.	
Shell Thickness	2±0.1 mm	
Filling Volume	Approx. 30 liters	
Dimensions	Length: 600 mm ; Width: 190mm Height: adjustable feet	
Aailable	Special	

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.	
Shell Thickness	2 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length:1000mm; Width: 500mm Height: adjustable feet	
Aailable	Special	

3.2.4. SCANNING PROCEDURE

The SAR test against the head and body-worn phantom was carried out as follow:



After an area scan has been done at a fixed distance of 1.4mm from the surface of the phantom on the source side, a 3D scan is set up around the location of the maximum spot SAR. First, a point within the scan area is visited by the probe and a SAR reading taken at the start of testing. At the end of testing, the probe is returned to the same point and a second reading is taken. Comparison between these start and end readings enables the power drift during measurement to be assessed.

Above is the scanning procedure flow chart and table from the IEEE1528 standard.

This is the procedure for which all compliant testing should be carried out to ensure that all variations of the device position and transmission behavior are tested.

3.2.5. DATA STORAGE AND EVALUATION

3.2.5.1 DATA STORAGE

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension “DAE4”. The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

3.2.6. DATA EVALUATION BY SEMCAD

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

Probe parameters:	Sensitivity	Normi, a_{i0}, a_{i1}, a_{i2}
	Conversion factor	$ConvF_i$
	Diode compression point	Dcp_i
Device parameters:	Frequency	f
	Crest factor	cf
Media parameters:	Conductivity	
	Density	

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot cf / dcpi$$

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

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

E-field probes: $E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$

H-field probes: $H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$

With V_i = compensated signal of channel i (i = x, y, z)

$Norm_i$ = sensor sensitivity of channel i (i = x, y, z)
[mV/(V/m)^2] for E-field Probes

ConvF = sensitivity enhancement in solution

aij = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

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

$$E_{tot} = (E_X^2 + E_Y^2 + E_Z^2)^{1/2}$$

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

$$SAR = (E_{tot})^2 \cdot \sigma / (\rho \cdot 1000)$$

With SAR = local specific absorption rate in mW/g

E_{tot} = total field strength in V/m
= conductivity in [mho/m] or [Siemens/m]
= equivalent tissue density in g/cm^3

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \text{ or } Ppwe = H_{tot}^2 \cdot 37.7$$

With P_{pwe} = equivalent power density of a plane wave in mW/cm^2

E_{tot} = total field strength in V/m
H_{tot} = total magnetic field strength in A/m

4. TISSUE-EQUIVALENT LIQUID

4.1. Tissue-equivalent Liquid Ingredients

The liquid is consisted of water, salt and Glycol, Sugar, Preventol and Cellulose. The liquid has previously been proven to be suited for worst-case. The measured conductivity and relative permittivity should be within ±5% of the target values. The below table shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEC 62209.

Composition of the Tissue Equivalent Matter

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
Head 750	0.2	-	0.2	1.5	56.0	-	42.1	-
Head 900	0.2	-	0.2	1.4	58.0	-	40.2	-
Head 1800	-	44.5	-	0.3	-	-	55.2	-
Head 1900	-	44.5	-	0.2	-	-	55.3	-
Head 2450	-	45.0	-	0.1	-	-	54.9	-
Head 2600	-	45.1	-	0.1	-	-	54.8	-
Head 5G	-	-	-	-	-	17.2	65.5	17.3

4.2. Tissue-equivalent Liquid Properties

Dielectric Performance of Tissue Simulating Liquid

Tissue Verification									
Date	Tissue Type	Frequency (MHz)	Conductivity (σ)	Permittivity (εr)	Targeted Conductivity (σ)	Targeted Permittivity (εr)	Deviation Conductivity (σ) (%)	Deviation Permittivity (εr) (%)	Limit (%) ±5
2021/3/29	Head	750	0.88	40.83	0.89	41.94	-1.95	-2.64	±5
2021/3/29	Head	900	0.96	42.11	0.97	41.50	-1.44	1.47	±5
2021/3/29	Head	1800	1.38	41.09	1.40	40.00	-1.79	2.72	±5
2021/3/30	Head	1900	1.41	40.65	1.40	40.00	0.50	1.62	±5
2021/3/31	Head	2600	2.02	37.45	1.96	39.01	2.92	-3.99	±5

Tissue Verification									
Date	Tissue Type	Frequency (MHz)	Conductivity (σ)	Permittivity (εr)	Targeted Conductivity (σ)	Targeted Permittivity (εr)	Deviation Conductivity (σ) (%)	Deviation Permittivity (εr) (%)	Limit (%) ±5
2021/3/31	Head	2402	1.79	37.96	1.76	39.29	1.61	-3.38	±5
2021/3/31	Head	2412	1.80	37.92	1.77	39.27	1.72	-3.43	±5
2021/3/31	Head	2422	1.81	37.88	1.78	39.25	1.88	-3.48	±5
2021/3/31	Head	2437	1.83	37.83	1.79	39.22	2.07	-3.56	±5
2021/3/31	Head	2441	1.83	37.81	1.79	39.21	2.09	-3.57	±5
2021/3/31	Head	2450	1.84	37.78	1.80	39.20	2.22	-3.64	±5
2021/3/31	Head	2452	1.84	37.77	1.80	39.19	2.20	-3.63	±5
2021/3/31	Head	2457	1.85	37.75	1.81	39.19	2.23	-3.68	±5
2021/3/31	Head	2462	1.85	37.73	1.81	39.18	2.25	-3.71	±5
2021/3/31	Head	2467	1.86	37.71	1.82	39.17	2.22	-3.73	±5
2021/3/31	Head	2472	1.86	37.69	1.82	39.17	2.24	-3.78	±5
2021/3/31	Head	2480	1.87	37.66	1.83	39.16	2.23	-3.84	±5
2021/4/1	Head	5180	4.67	35.58	4.64	36.02	0.58	-1.21	±5
2021/4/1	Head	5200	4.70	35.48	4.66	36.00	0.79	-1.45	±5
2021/4/1	Head	5220	4.71	35.48	4.68	35.98	0.70	-1.38	±5
2021/4/1	Head	5240	4.74	35.43	4.70	35.96	0.77	-1.46	±5
2021/4/1	Head	5260	4.76	35.39	4.72	35.94	0.84	-1.54	±5
2021/4/1	Head	5280	4.78	35.34	4.74	35.92	0.90	-1.63	±5
2021/4/1	Head	5300	4.82	35.23	4.76	35.90	1.20	-1.86	±5
2021/4/1	Head	5320	4.83	35.24	4.78	35.88	1.03	-1.79	±5
2021/4/1	Head	5500	5.04	34.79	4.96	35.60	1.60	-2.28	±5
2021/4/1	Head	5520	5.06	34.74	4.98	35.58	1.62	-2.36	±5
2021/4/1	Head	5540	5.09	34.69	5.00	35.56	1.64	-2.44	±5
2021/4/1	Head	5560	5.11	34.64	5.03	35.54	1.66	-2.53	±5
2021/4/1	Head	5580	5.13	34.59	5.05	35.52	1.68	-2.61	±5
2021/4/1	Head	5600	5.15	34.39	5.07	35.50	1.60	-3.12	±5
2021/4/1	Head	5620	5.18	34.49	5.09	35.48	1.76	-2.78	±5
2021/4/1	Head	5640	5.20	34.44	5.11	35.46	1.82	-2.87	±5
2021/4/1	Head	5660	5.23	34.39	5.13	35.44	1.88	-2.95	±5
2021/4/1	Head	5680	5.25	34.34	5.15	35.42	1.93	-3.04	±5
2021/4/1	Head	5700	5.27	34.29	5.17	35.40	1.99	-3.12	±5
2021/4/1	Head	5720	5.30	34.24	5.19	35.38	2.05	-3.21	±5
2021/4/1	Head	5745	5.33	34.18	5.22	35.35	2.12	-3.30	±5
2021/4/1	Head	5765	5.35	34.13	5.24	35.33	2.17	-3.39	±5
2021/4/1	Head	5785	5.37	34.08	5.26	35.31	2.23	-3.47	±5
2021/4/1	Head	5800	5.39	33.95	5.27	35.30	2.28	-3.84	±5
2021/4/1	Head	5805	5.40	34.03	5.28	35.29	2.28	-3.56	±5
2021/4/1	Head	5825	5.42	33.98	5.30	35.27	2.32	-3.65	±5

Note:

1)The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.

2)KDB 865664 was ensured to be applied for probe calibration frequencies greater than or equal to 50MHz of the EUT frequencies.

3)The above measured tissue parameters were used in the DASY software to perform interpolation via the DASY software to determine actual dielectric parameters at the test frequencies. The SAR test plots may slightly differ from the table above since the DASY rounds to three significant digits.

4) According to FCC TCB workshop April, 2019 RF Exposure Procedures Update(Effective February 19,2019, FCC has permitted the use of single head-tissue simulating liquid specified in IEEE 62209-1- for all SAR tests.

5. SYSTEM CHECK

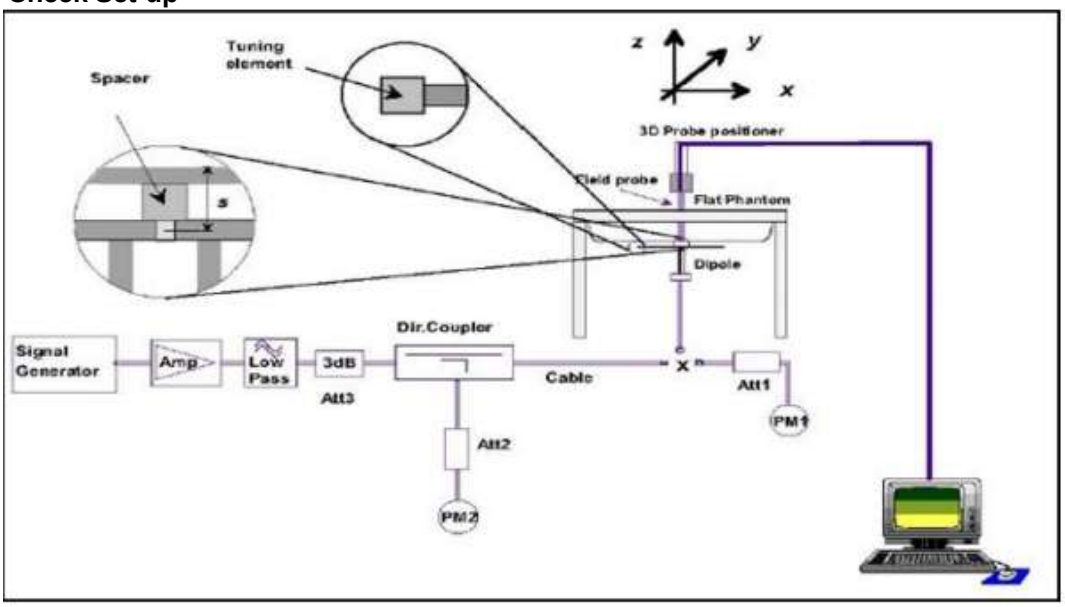
5.1. DESCRIPTION OF SYSTEM CHECK

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulants were measured every day using the dielectric probe kit and the network analyzer. A system check measurement was made following the determination of the dielectric parameters of the simulant, using the dipole validation kit. A power level of 250 mW(below 3GHz) or 100mW(3-6GHz), which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in the 6.2.

System check results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system (±10 %).

System check is performed regularly on all frequency bands where tests are performed with the DASY5 system.

System Check Set-up



5.2. DESCRIPTION OF SYSTEM CHECK

System Check in Tissue Simulating Liquid

The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system check is performed with tissue equivalent material according to IEEE P1528 (described above). The following table shows system check results for all frequency bands and tissue liquids used during the tests.

Date	System Dipole			Parameters	Target [W/kg]	Measured [W/kg]	Deviation [%]	Limited [%]
	Type	Serial No.	Liquid					
2021/3/29	D750V3	1145	Head	1g SAR	8.65	8.44	-2.43	± 10
2021/3/29	D900V2	1d185	Head	1g SAR	10.80	11.24	4.07	± 10
2021/3/29	D1800V2	2d210	Head	1g SAR	38.30	40.00	4.44	± 10
2021/3/30	D1900V2	5d208	Head	1g SAR	39.50	38.76	-1.87	± 10
2021/3/31	D2600V2	1111	Head	1g SAR	57.90	54.40	-6.04	± 10
2021/3/31	D2450V2	973	Head	1g SAR	51.90	51.60	-0.58	± 10
2021/4/1	D5GHzV2 (5.2GHz)	1221	Head	1g SAR	76.80	77.40	0.78	± 10
2021/4/1	D5GHzV2 (5.3GHz)	1221	Head	1g SAR	79.00	78.10	-1.14	± 10
2021/4/1	D5GHzV2 (5.6GHz)	1221	Head	1g SAR	80.30	83.60	4.11	± 10
2021/4/1	D5GHzV2 (5.8GHz)	1221	Head	1g SAR	76.90	81.20	5.59	± 10

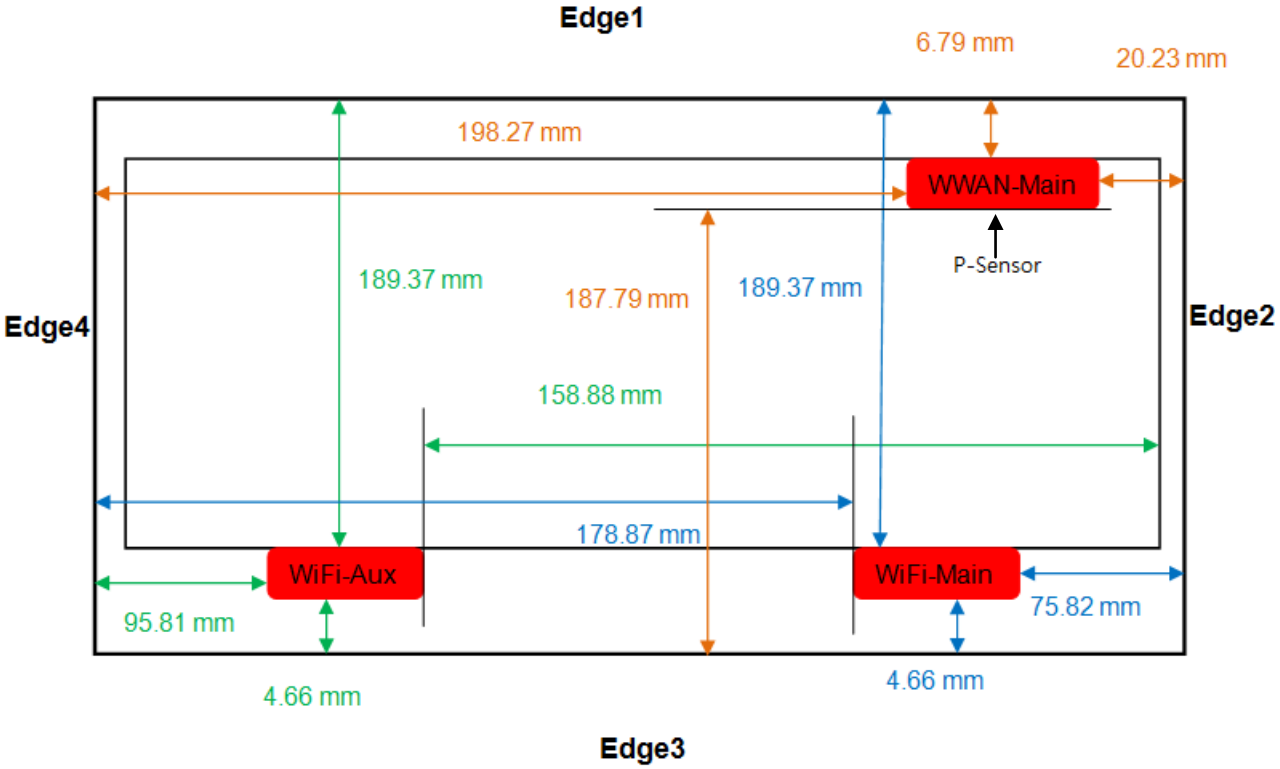
6. OPERATIONAL CONDITIONS DURING TEST

6.1. General Description of Test Procedures

Connection to the EUT is established via air interface with base station An, and the EUT is Set to maximum output power by base station. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. The antenna connected to the output of the base station simulator shall be placed at least 50cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30dB.

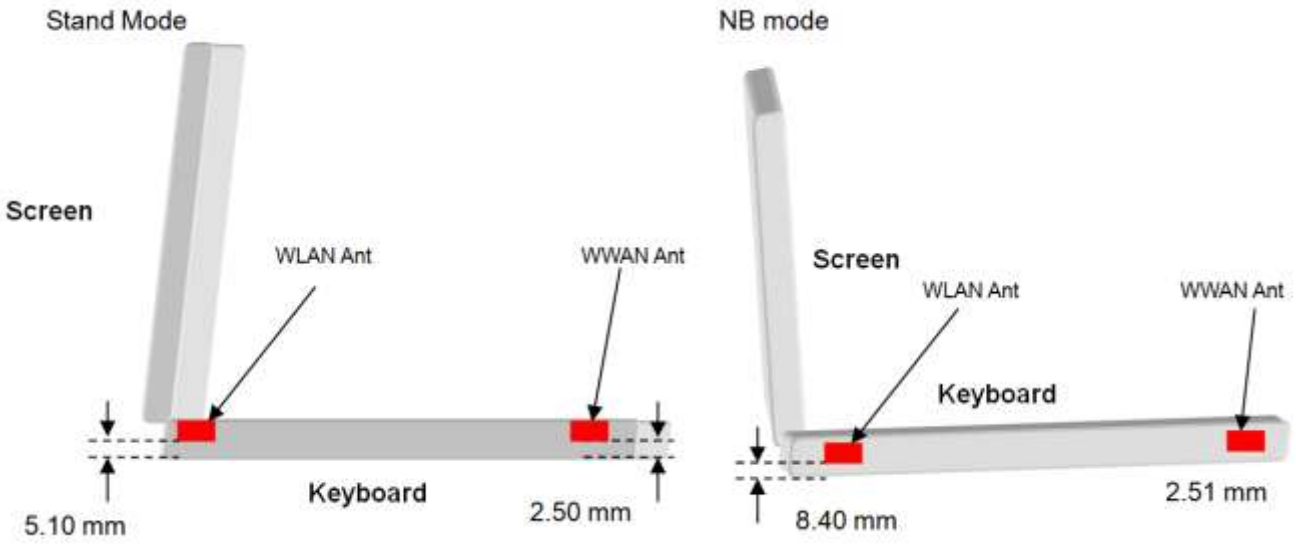
6.2. Test Position of Portable Devices

Tablet Mode



Note:
The P-Sensor is designed inside WWAN antenna.

Front


Stand Mode
Screen
WLAN Ant
WWAN Ant
Keyboard
5.10 mm
2.50 mm
NB mode
Screen
WLAN Ant
WWAN Ant
Keyboard
8.40 mm
2.51 mm

6.3. Test Position of Portable Devices

Minimum Separation Distance				
Mode	**Antenna**	**Position**	**Distance (mm)**	**Evaluation Test**
WiFi	Main	Edge1	189.37	No
		Edge2	75.82	No
		Edge3	4.66	Yes
		Edge4	178.87	No
		Rear	5.10	Yes
		Stand	5.10	Yes
		Bottom	8.40	Yes
	Aux	Edge1	189.37	No
		Edge2	158.88	No
		Edge3	4.66	Yes
		Edge4	95.81	No
		Rear	5.10	Yes
		Stand	5.10	Yes
		Bottom	8.40	Yes
Bluetooth	Aux	Edge1	189.37	No
		Edge2	158.88	No
		Edge3	4.66	Yes
		Edge4	95.81	No
		Rear	5.10	Yes
		Stand	5.10	Yes
		Bottom	8.40	No

Note:
For the test position that the rear mode distance is same as stand mode, so we performed the SAR testing on rear mode. The test result can be meet stand mode.

Minimum Separation Distance					
P-Sensor	**Mode**	**Antenna**	**Position**	**Distance (mm)**	**Evaluation Test**
on	WWAN	Main	Edge1	6.79	Yes
			Rear	2.50	Yes
			Stand	2.50	Yes
			Bottom	2.51	Yes
off			Edge1	14.79	Yes
			Edge2	20.23	Yes
			Edge3	187.79	No
			Edge4	198.27	No
			Rear	21.50	Yes
			Stand	22.50	Yes
			Bottom	23.51	Yes

Note:
For the test position that the rear mode distance is same as stand mode, so we performed the SAR testing on rear mode. The test result can be meet stand mode.

6.4. Test position

6.4.1.Body test configuration

The SAR Exclusion Threshold in KDB 447498 D01can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an EUT edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned adjacent the phantom and the edge containing the antenna positioned perpendicular to the phantom.

SAR test reduction and exclusion guidance

(1)The SAR exclusion threshold for distances<50mm is defined by the following equation:

$$\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{\text{Frequency (GHz)}} \leq 3.0$$

The test exclusions are applicable only when the minimum test separation distance is ≤50mm and for transmission frequencies between 100MHz and 6GHz. When the minimum test separation distance is<5mm, a distance of 5mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

(2)The SAR exclusion threshold for distances>50mm is defined by the following equation, as illustrated in KDB 447498 D01 Appendix B:

a) at 100 MHz to1500 MHz

[Power allowed at numeric Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · ($f_{(MHz)}$/150)] mW

b) at >1500MHz and ≤6GHz

[Power allowed at numeric Threshold at 50 mm in step 1) + (test separation distance - 50 mm) ·10] mW

6.5 SAR Exclusion Calculations for WLAN Antenna < 50mm from the User

According to KDB 447498 v06 in section 4.3.1, if the calculated threshold value is > 3 then SAR testing is required.

Antenna	Band	Frequency (MHz)	Output Power		Separation Distances(mm)							Caculated Threshold Value						
			dBm	mW	Edge1	Edge2	Edge3	Edge4	Rear	Bottom	Stand	Edge1	Edge2	Edge3	Edge4	Rear	Bottom	Stand
Main	2.4GHz	2462	14.50	28.18	189.37	75.82	4.66	178.87	5.10	8.40	5.10	>50mm	>50mm	9.49	>50mm	8.67	5.26	8.67
	5.2GHz	5250	12.00	15.85	189.37	75.82	4.66	178.87	5.10	8.40	5.10	>50mm	>50mm	7.79	>50mm	7.12	4.32	7.12
	5.3GHz	5250	12.00	15.85	189.37	75.82	4.66	178.87	5.10	8.40	5.10	>50mm	>50mm	7.79	>50mm	7.12	4.32	7.12
	5.6GHz	5570	12.00	15.85	189.37	75.82	4.66	178.87	5.10	8.40	5.10	>50mm	>50mm	8.03	>50mm	7.33	4.45	7.33
	5.8GHz	5775	12.00	15.85	189.37	75.82	4.66	178.87	5.10	8.40	5.10	>50mm	>50mm	8.17	>50mm	7.47	4.53	7.47
Aux	2.4GHz	2462	14.50	28.18	189.37	158.88	4.66	95.81	5.10	8.40	5.10	>50mm	>50mm	9.49	>50mm	8.67	5.26	8.67
	5.2GHz	5250	12.00	15.85	189.37	158.88	4.66	95.81	5.10	8.40	5.10	>50mm	>50mm	7.79	>50mm	7.12	4.32	7.12
	5.3GHz	5250	12.00	15.85	189.37	158.88	4.66	95.81	5.10	8.40	5.10	>50mm	>50mm	7.79	>50mm	7.12	4.32	7.12
	5.6GHz	5570	12.00	15.85	189.37	158.88	4.66	95.81	5.10	8.40	5.10	>50mm	>50mm	8.03	>50mm	7.33	4.45	7.33
	5.8GHz	5775	12.00	15.85	189.37	158.88	4.66	95.81	5.10	8.40	5.10	>50mm	>50mm	8.17	>50mm	7.47	4.53	7.47
	Bluetooth	2480	11.00	12.59	189.37	158.88	4.66	95.81	5.10	8.40	5.10	>50mm	>50mm	3.97	>50mm	3.89	2.36	3.89

6.6 SAR Exclusion Calculations for WWAN Antenna < 50mm from the User

According to KDB 447498 v06 in section 4.3.1, if the calculated threshold value is > 3 then SAR testing is required.

P-Sensor off

Antenna	Band	Frequency (MHz)	Output Power		Separation Distances(mm)							Calculated Threshold Value						
			dBm	mW	Edge1	Edge2	Edge3	Edge4	Rear	Stand	Bottom	Edge1	Edge2	Edge3	Edge4	Rear	Stand	Bottom
WWAN Main	UMTS Band II	1880	24.00	251.19	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	23.29	17.02	**>50mm**	**>50mm**	16.02	15.31	14.65
	UMTS Band IV	1752.6	24.00	251.19	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	22.48	16.44	**>50mm**	**>50mm**	15.47	14.78	14.14
	UMTS Band V	836.6	24.00	251.19	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	15.53	11.36	**>50mm**	**>50mm**	10.69	10.21	9.77
	LTE Band 2	1860	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	18.40	13.45	**>50mm**	**>50mm**	12.66	12.09	11.57
	LTE Band 4	1732.5	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	17.76	12.98	**>50mm**	**>50mm**	12.22	11.67	11.17
	LTE Band 5	844	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	12.39	9.06	**>50mm**	**>50mm**	8.53	8.15	7.80
	LTE Band 7	2560	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	21.59	15.78	**>50mm**	**>50mm**	14.85	14.19	13.58
	LTE Band 12	707.5	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	11.35	8.30	**>50mm**	**>50mm**	7.81	7.46	7.14
	LTE Band 13	782	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	11.93	8.72	**>50mm**	**>50mm**	8.21	7.84	7.51
	LTE Band 17	709	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	11.36	8.30	**>50mm**	**>50mm**	7.81	7.47	7.15
	LTE Band 26	831	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	12.30	8.99	**>50mm**	**>50mm**	8.46	8.08	7.74
	LTE Band 30	2310	21.00	125.89	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	12.94	9.46	**>50mm**	**>50mm**	8.90	8.50	8.14
	LTE Band 41	2593	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	21.72	15.88	**>50mm**	**>50mm**	14.94	14.28	13.67
	LTE Band 66	1745	23.00	199.53	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	17.82	13.03	**>50mm**	**>50mm**	12.26	11.71	11.21

P-Sensor on

Antenna	Band	Frequency (MHz)	Output Power		Separation Distances(mm)							Calculated Threshold Value						
			dBm	mW	Edge1	Edge2	Edge3	Edge4	Rear	Stand	Bottom	Edge1	Edge2	Edge3	Edge4	Rear	Stand	Bottom
WWAN Main	UMTS Band II	1880	16.00	39.81	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.69	2.70	**>50mm**	**>50mm**	2.54	2.43	2.32
	UMTS Band IV	1752.6	16.00	39.81	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.56	2.61	**>50mm**	**>50mm**	2.45	2.34	2.24
	UMTS Band V	836.6	18.00	63.10	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.90	2.85	**>50mm**	**>50mm**	2.68	2.57	2.45
	LTE Band 2	1860	16.00	39.81	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.67	2.68	**>50mm**	**>50mm**	2.53	2.41	2.31
	LTE Band 4	1732.5	16.00	39.81	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.54	2.59	**>50mm**	**>50mm**	2.44	2.33	2.23
	LTE Band 5	844	18.00	63.10	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.92	2.87	**>50mm**	**>50mm**	2.70	2.58	2.47
	LTE Band 7	2560	16.00	39.81	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	4.31	3.15	**>50mm**	**>50mm**	2.96	2.83	2.71
	LTE Band 12	707.5	18.00	63.10	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.59	2.62	**>50mm**	**>50mm**	2.47	2.36	2.26
	LTE Band 13	782	18.00	63.10	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.77	2.76	**>50mm**	**>50mm**	2.60	2.48	2.37
	LTE Band 17	709	18.00	63.10	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.59	2.63	**>50mm**	**>50mm**	2.47	2.36	2.26
	LTE Band 26	831	18.00	63.10	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.89	2.84	**>50mm**	**>50mm**	2.68	2.56	2.45
	LTE Band 30	2310	16.00	39.81	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	4.09	2.99	**>50mm**	**>50mm**	2.81	2.69	2.57
	LTE Band 41	2593	16.00	39.81	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	4.33	3.17	**>50mm**	**>50mm**	2.98	2.85	2.73
	LTE Band 66	1745	16.00	39.81	14.79	20.23	**187.79**	**198.27**	**21.50**	**22.50**	23.51	3.56	2.60	**>50mm**	**>50mm**	2.45	2.34	2.24

6.6 SAR Exclusion Calculations for WLAN Antenna > 50mm from the User

According to KDB 447498 v06, if the calculated Power threshold is less than the output power then SAR testing is required.

Antenna	Band	Frequency (MHz)	Output Power		Separation Distances(mm)							Calculated Threshold Value						
			dBm	mW	Edge1	Edge2	Edge3	Edge4	Rear	Bottom	Stand	Edge1	Edge2	Edge3	Edge4	Rear	Bottom	Stand
Main	2.4GHz	2462	14.50	28.00	189.37	75.82	4.66	178.87	5.10	8.40	5.10	**1489.30**	**353.80**	**<50mm**	**1384.30**	**<50mm**	**<50mm**	**<50mm**
	5.2GHz	5250	12.00	16.00	189.37	75.82	4.66	178.87	5.10	8.40	5.10	**1459.17**	**323.67**	**<50mm**	**1354.17**	**<50mm**	**<50mm**	**<50mm**
	5.3GHz	5250	12.00	16.00	189.37	75.82	4.66	178.87	5.10	8.40	5.10	**1459.17**	**323.67**	**<50mm**	**1354.17**	**<50mm**	**<50mm**	**<50mm**
	5.6GHz	5570	12.00	16.00	189.37	75.82	4.66	178.87	5.10	8.40	5.10	**1457.26**	**321.76**	**<50mm**	**1352.26**	**<50mm**	**<50mm**	**<50mm**
	5.8GHz	5775	12.00	16.00	189.37	75.82	4.66	178.87	5.10	8.40	5.10	**1456.12**	**320.62**	**<50mm**	**1351.12**	**<50mm**	**<50mm**	**<50mm**
Aux	2.4GHz	2462	14.50	28.00	189.37	158.88	4.66	95.81	5.10	8.40	5.10	**1489.30**	**1184.40**	**<50mm**	**553.70**	**<50mm**	**<50mm**	**<50mm**
	5.2GHz	5250	12.00	16.00	189.37	158.88	4.66	95.81	5.10	8.40	5.10	**1459.17**	**1154.27**	**<50mm**	**523.57**	**<50mm**	**<50mm**	**<50mm**
	5.3GHz	5250	12.00	16.00	189.37	158.88	4.66	95.81	5.10	8.40	5.10	**1459.17**	**1154.27**	**<50mm**	**523.57**	**<50mm**	**<50mm**	**<50mm**
	5.6GHz	5570	12.00	16.00	189.37	158.88	4.66	95.81	5.10	8.40	5.10	**1457.26**	**1152.36**	**<50mm**	**521.66**	**<50mm**	**<50mm**	**<50mm**
	5.8GHz	5775	12.00	16.00	189.37	158.88	4.66	95.81	5.10	8.40	5.10	**1456.12**	**1151.22**	**<50mm**	**520.52**	**<50mm**	**<50mm**	**<50mm**
	Bluetooth	2480	11.00	13.00	189.37	158.88	4.66	95.81	5.10	8.40	5.10	**1488.95**	**1184.05**	**<50mm**	**553.35**	**<50mm**	**<50mm**	**<50mm**

6.7 SAR Exclusion Calculations for WWAN Antenna > 50mm from the User

According to KDB 447498 v06, if the calculated Power threshold is less than the output power then SAR testing is required.

P-Sensor off

Antenna	Band	Frequency (MHz)	Output Power		Separation Distances(mm)							Calculated Threshold Value						
			dBm	mW	Edge1	Edge2	Edge3	Edge4	Rear	Stand	Bottom	Edge1	Edge2	Edge3	Edge4	Rear	Stand	Bottom
WWAN Main	UMTS Band II	1880	24.00	251.19	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1487.3	1592.10	<50mm	<50mm	<50mm
	UMTS Band IV	1752.6	24.00	251.19	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1491.2	1596.01	<50mm	<50mm	<50mm
	UMTS Band V	836.6	24.00	251.19	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	932.5	990.95	<50mm	<50mm	<50mm
	LTE Band 2	1860	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1487.9	1592.69	<50mm	<50mm	<50mm
	LTE Band 4	1732.5	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1491.9	1826.48	<50mm	<50mm	<50mm
	LTE Band 5	844	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	938.57	997.54	<50mm	<50mm	<50mm
	LTE Band 7	2560	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1471.7	1576.45	<50mm	<50mm	<50mm
	LTE Band 12	707.5	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1556.2	877.67	<50mm	<50mm	<50mm
	LTE Band 13	782	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	887.97	942.61	<50mm	<50mm	<50mm
	LTE Band 17	709	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	829.43	878.97	<50mm	<50mm	<50mm
	LTE Band 26	831	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	927.9	985.96	<50mm	<50mm	<50mm
	LTE Band 30	2310	21.00	125.89	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1476.6	1581.39	<50mm	<50mm	<50mm
	LTE Band 41	2593	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1471.1	1575.85	<50mm	<50mm	<50mm
	LTE Band 66	1745	23.00	199.53	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1491.5	1596.25	<50mm	<50mm	<50mm

P-Sensor on

Antenna	Band	Frequency (MHz)	Output Power		Separation Distances(mm)							Calculated Threshold Value						
			dBm	mW	Edge1	Edge2	Edge3	Edge4	Rear	Stand	Bottom	Edge1	Edge2	Edge3	Edge4	Rear	Stand	Bottom
WWAN Main	UMTS Band II	1880	16.0	39.81	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1487.3	1592.10	<50mm	<50mm	<50mm
	UMTS Band IV	1752.6	16.0	39.81	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1491.21	1596.01	<50mm	<50mm	<50mm
	UMTS Band V	836.6	18.0	63.10	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	932.496	990.95	<50mm	<50mm	<50mm
	LTE Band 2	1860	16.0	39.81	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1487.89	1592.69	<50mm	<50mm	<50mm
	LTE Band 4	1732.5	16.0	39.81	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1491.86	1826.48	<50mm	<50mm	<50mm
	LTE Band 5	844	18.0	63.10	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	938.574	997.54	<50mm	<50mm	<50mm
	LTE Band 7	2560	16.0	39.81	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1471.65	1576.45	<50mm	<50mm	<50mm
	LTE Band 12	707.5	18.0	63.10	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1556.23	877.67	<50mm	<50mm	<50mm
	LTE Band 13	782	18.0	63.10	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	887.969	942.61	<50mm	<50mm	<50mm
	LTE Band 17	709	18.0	63.10	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	829.43	878.97	<50mm	<50mm	<50mm
	LTE Band 26	831	18.0	63.10	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	927.904	985.96	<50mm	<50mm	<50mm
	LTE Band 30	2310	16.0	39.81	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1476.59	1581.39	<50mm	<50mm	<50mm
	LTE Band 41	2593	16.0	39.81	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1471.05	1575.85	<50mm	<50mm	<50mm
	LTE Band 66	1745	16.0	39.81	14.79	20.23	187.79	198.27	21.50	22.50	23.51	<50mm	<50mm	1491.45	1596.25	<50mm	<50mm	<50mm

7. SAR MEASUREMENT VARIABILITY AND UNCERTAINTY

7.1. SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

The detailed repeated measurement results are shown in Section 8.2.

7.2. WCDMA Test Configuration

1. Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the procedures description in section 5.2 of 3GPP TS 34.121,using the appropriate RMC or AMR with TPC(transmit power control) set to all “1s” for WCDMA/HSDPA or applying the required inner loop power control procedure to maintain maximum output power while HSUPA is active. Result for all applicable physical channel configurations(DPCCH,DPDCHn and spreading codes, HSDPA, HSPA)
Should be tabulated in the SAR report .All configuration that are not supported by the DUT or cannot be measured due to technical or equipment limitation should be clearly identified.

2. WCDMA

(1).Head SAR Measurements
SAR for Head exposure configurations in voice mode is measured using a 12.2 kbps RMC with TPC bits configured to all “1s”. SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2 kbps AMR is less than ¼ dB higher than that measured in 12.2 kbps RMC. Otherwise SAR is measured on the maximum output channel in 12.2 kbps AMR with 3.4kbps SRB(signalling radio bearer) using the exposure configuration that results in the highest SAR in12.2kbps RMC for that RF channel.

(2).Body SAR Measurements
SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits configured to all “1s”. SAR for other spreading codes and multiple DPDCHn, when supported by the EUT, are not required when the maximum average outputs of each RF channel, for each spreading code and DPDCHn configuration, are less than ¼ dB higher than those measured in 12.2 kbps RMC.

3. HSDPA

SAR for body exposure configurations is measured according to the “Body SAR Measurements”“ procedures of 3G device. In addition, body SAR is also measured for HSDPA when the maximum average outputs of each RF channel with HSDPA active is at ¼ dB higher than that measured without HSDPA using 12.2kbps RMC or the maximum SAR 12.2kbps RMC is above 75% of the SAR limit. Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2 kbps RMC without HSDPA.
HSDPA should be configured according to UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HAPRQ 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 condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. The β_c and β_d gain factors for DPCCH and DPDCH were set according to the values in the below table, β_{hs} for HS-DPCCH is set automatically to the correct value when △ACK, △NACK, △CQI = 8. The variation of the β_c /β_d ratio causes a power reduction at sub-tests 2 - 4.

Sub-test	β_c	β_d	β_d (SF)	β_c /β_d	β_{hs} (1)	CM(dB)(2)	MPR (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0	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: △ACK, △NACK and △CQI = 8 $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$
Note 2 : 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 3 : 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

The measurements were performed with a Fixed Reference Channel (FRC) and H-Set 1 QPSK.

Settings of required H-Set 1 QPSK acc. to 3GPP 34.121

Parameter	Value
Nominal average inf. bit rate	534 kbit/s
Inter-TTI Distance	3 TTI"s
Number of HARQ Processes	2 Processes
Information Bit Payload	3202 Bits
MAC-d PDU size	336 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	4800 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	9600 SMLs
Coding Rate	0.67
Number of Physical Channel Codes	5

HSDPA UE category

HS-DSCH Category	Maximum HS-DSCH Codes Received	Minimum Inter-TTI Interval	Maximum HS-DSCH Transport Block Bits/HS-DSCH TTI	Total Soft Channel Bits
1	5	3	7298	19200
2	5	3	7298	28800
3	5	2	7298	28800
4	5	2	7298	38400
5	5	1	7298	57600
6	5	1	7298	67200
7	10	1	14411	115200
8	10	1	14411	134400
9	15	1	25251	172800
10	15	1	27952	172800
11	5	2	3630	14400
12	5	1	3630	28800
13	15	1	34800	259200
14	15	1	42196	259200
15	15	1	23370	345600
16	15	1	27952	345600

4. HSUPA

SAR for Body exposure configurations is measured according to the “Body SAR Measurements” procedures of 3G device. When the maximum output power is ≤¼ dB higher than the primary mode or when the SAR of the primary mode is scaled by the ratio of specified maximum output power and SAR is ≤ 75% SAR Limit, SAR measurement is not required for the secondary mode.

The 3G SAR test reduction procedures is applied to HSPA(HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures for the highest reported body exposure SAR configuration in 12.2 kbps RMC.

Due to inner loop power control requirements in HSUPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSDPA should be configured according to the values indicated below as well as other applicable procedures described in the “WCDMA Handset" and „Release 5 HSDPA Data Device” sections of 3G device.

Subtests for WCDMA Release 6 HSUPA

WCDMA General Settings	Mode	HSPA	HSPA	HSPA	HSPA	HSPA
	Subtest	1	2	3	4	5
	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	15/15	15/15
	βec	209/225	12/15	30/15	2/15	24/15
	βc/βd	11/15	6/15	9/15	2/15	15/15
	βhs	22/15	12/15	30/15	4/15	30/15
	βed	1309/225	94/75	47/15	56/75	134/15
	CM (dB)	1	3	2	3	1
	MPR (dB)	0	2	1	2	0

HSUPA UE category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCH TTI(ms)	Minimum Speading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592
4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	10	2SF2&2SF4	11484	5.76
	4	4	2		20000	2.00
7 (No DPDCH)	4	8	2	2SF2&2SF4	22996	?
	4	4	10		20000	?

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4.UE categories 1 to 6 support QPSK only. UE category 7 supports QPSK and 16QAM.(TS25.306-7.3.0).

5. DC-HSDPA

In DC-HSDPA implementation of this device, the uplink parameters are the same as HSDPA. No additiona channels and modulations (16 QAM, and 64 QAM) are supported in uplink. The difference is only in the downlink parameters, where two carriers are supported. HSDPA settings were used on uplink.

For Rel. 8 DC-HSDPA apply the four subtests from HSDPA Release 5 except use fixed reference channe H-Set 12 for DC-HSDPA. And we can apply the same SAR test exclusion criteria used for Rel. 6 HSPA fc Rel. 7 HSPA+ and Rel. 8 DC-HSDPA. That is, if the HSPA, HSPA+, or the DC-HSDPA maximum output i not more than 0.25 dB higher than WCDMA, SAR measurement for those modes is not required.
The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0. summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0
Levels for HSDPA connection setup

Parameter During Connection setup	Unit	Value
P-CPICH_Ec/Ior	dB	-10
P-CCPCH and SCH_Ec/Ior	dB	-12
PICH _Ec/Ior	dB	-15
HS-PDSCH	dB	off
HS-SCCH_1	dB	off
DPCH_Ec/Ior	dB	-5
OCNS_Ec/Ior	dB	-3.1

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13
The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121 annex C for FDD and 3GPP TS 34.122.
The measurements were performed with a Fixed Reference Channel (FRC) H-Set 12 with QPSK

Parameter	Value
Nominal average inf. bit rate	60 kbit/s
Inter-TTI Distance	1 TTI"s
Number of HARQ Processes	6 Processes
Information Bit Payload	120 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	960 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	3200 SMLs
Coding Rate	0.15
Number of Physical Channel Codes	1

Note:
1. The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table above.
2. Maximum number of transmission is limited to 1,i.e.,retransmission is not allowed. The redundancy and constellation version 0 shall be used.

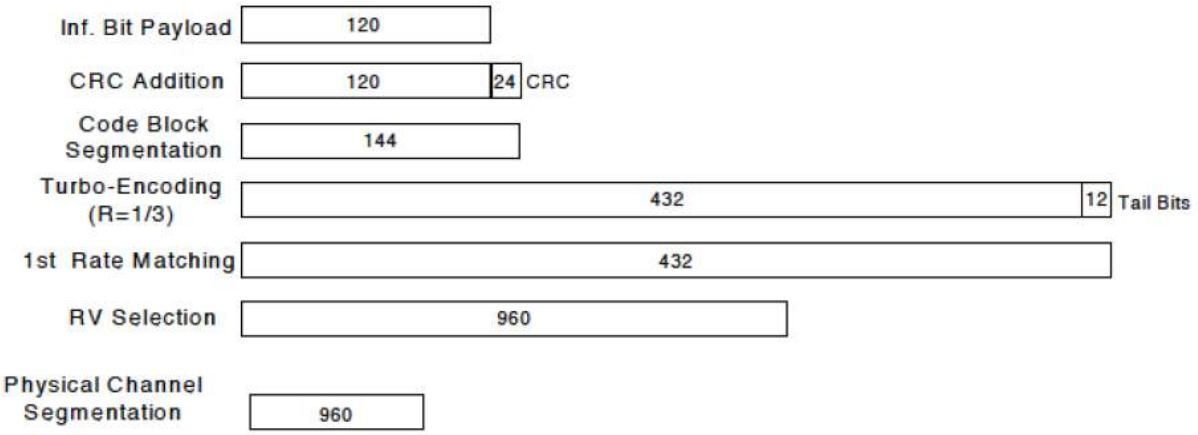


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

The following 4 Sub-tests for HSDPA were completed according to Release 5 procedures. A summary of subtest settings are illustrated below:

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	CM(dB)(2)	MPR (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0	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 = 8 $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$

Note 2: 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 3: 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

Up commands are set continuously to set the UE to Max power.

Note:
1.The Dual Carriers transmission only applies to HSDPA physical channels
2.The Dual Carriers belong to the same Node and are on adjacent carriers.
3.The Dual Carriers do not support MIMO to serve UEs configured for dual cell operation
4.The Dual Carriers operate in the same frequency band .
5.The device doesn't support the modulation of 16QAM in uplink but 64QAM in downlink for DC-HSDPA mode.
6.The device doesn’t support carrier aggregation for it just can operate in Release 8.

7.3. LTE Test Configuration

Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. The RS CMW500 was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI(transmit time interval) supported by the device in each LTE configuration.

1)Spectrum Plots for RB configurations
A properly configured base station simulator was used for LTE output power measurements and SAR testing. Therefore, spectrum plots for RB configurations were not required to be included in this report.

2) MPR
MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3-6.2.5 under Table 6.2.3-1.

3)A-MPR
A-MPR(Additional MPR) has been disabled for all SAR tests by using Network Signaling Value of “NS=01”on the base station simulator.

4)SAR test requirements
The LTE SAR test is choice the max power mode and start with the max power channel.
A) Largest channel bandwidth standalone SAR test requirements
i) QPSK with 1 RB allocation
When the SAR is ≤ 1 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the 10-g SAR of a required test channel is > 1.8 W/kg, SAR is required for all three RB offset configurations for that required test channel.

8. POWER REDUCTION BY PROXIMITY SENSING

A proximity sensor for power reduction is implemented in this device to address RF exposure compliance when the cellular antenna is positioned close to the user's body. The sensor's mechanical structure is designed to fit within the enclosure design used in this device and also extended around the edge and top of the antenna element in order to optimize sensitivity in these orientations. This design combines the antenna printed directly on a plastic part and proximity sensor FPC (Flexible Printed Circuit) bonded together into one piece. According to KDB 616217 D04 SAR for laptop and tablets v01r02)

8.1. procedures for detrmining proximity sensor triggering distances

The following procedures should be applied to determine proximity sensor triggering distances for the back surface and individual edges of a tablet. Conducted power is monitored qualitatively to identify the general triggering characteristics and recorded quantitatively, versus spacing, as required by the procedures. Unless there is built-in test software that reports the triggering conditions and enables the power levels to be confirmed separately, monitoring of conducted power during the triggering tests typically requires internal access to the antenna ports inside the tablet, which may interfere with the triggering tests.

1. The relevant transmitter should be set to operate at its normal maximum output power.

2. The entire back surface or edge of the tablet is positioned below a flat phantom filled with the required tissue-equivalent medium, and positioned at least 20 mm further than the distance that triggers power reduction.

3. It should be ensured that the cables required for power measurements are not interfering with the proximity sensor. Cable losses should be properly compensated to report the measured power results.

4. The back surface or edge is moved toward the phantom in 3 mm steps until the sensor triggers.

5. The back surface or edge is then moved back (further away) from the phantom by at least 5 mm or until maximum output power is returned to the normal maximum level.

6. The back surface or edge is again moved toward the phantom, but in 1 mm steps, until it is at least 5 mm past the triggering point or touching the phantom. If 1 mm resolution is not suitable for the sensor triggering sensitivity, a KDB inquiry should be submitted to determine alternative test configurations.

7. If the tablet is not touching the phantom, it is moved in 3 mm steps until it touches the phantom to confirm that the sensor remains triggered and the maximum power stays reduced.

8. The process is then reversed by moving the tablet away from the phantom according to steps 4) to 7), to determine triggering release, until it is at least 10 mm beyond the point that triggers the return of normal maximum power.

9. The measured output power within ± 5 mm of the triggering points, or until the tablet is touching the phantom, for movements to and from the phantom should be tabulated in the SAR report.

10. If the sensor design and implementation allow additional variations for triggering distance tolerances, multiple samples should be tested to determine the most conservative distance required for SAR evaluation.

11. To ensure all production units are compliant, it is generally necessary to reduce the triggering distance determined from the triggering tests by 1 mm, or more if it is necessary, and use the smallest distance for movements to and from the phantom, minus 1 mm, as the sensor triggering distance for determining the SAR measurement distance.

8.2. procedures for detrmining antenna and proximity sensor coverage

The sensing regions are usually limited to areas near the sensor element. If a sensor is spatially offset from the antenna(s), it is necessary to verify sensor triggering for conditions where the antenna is next to the user but the sensor is laterally further away to ensure sensor coverage is sufficient for reducing the power to maintain compliance. The following are used to determine if additional SAR measurements may be necessary due to sensor and antenna offset. 25 These procedures do not apply and are not required for configurations where the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor.

1. The back surface or edge of the tablet is positioned at a test separation distance less than or equal to the distance required for back surface or edge triggering, with both the antenna and sensor pad located at least 20 mm laterally outside the edge (boundary) of the phantom, along the direction of maximum antenna and sensor offset. For the back surface, if the direction of maximum offset is not aligned with the tablet coordinates (physical edges) the tablet test position would not be aligned with the phantom coordinates (orientations). Each applicable tablet edge should be positioned perpendicularly to the phantom to determine sensor coverage. For antennas and/or sensors located near the corner of a tablet, both adjacent edges must be considered.

2. The similar sequence of steps applied to determine sensor triggering distance in section 6.2 are used to verify back surface and edge sensor coverage by moving the tablet (sensor and antenna) horizontally toward the phantom while maintaining the same vertical separation between the back surface or edge and the phantom.

3. After the exact location where triggering of power reduction is determined, with respect to the sensor and antenna, the tablet movement should be continued, in 3 mm increments, until both the sensor and antenna(s) are fully under the phantom and at least 20 mm inside the phantom edge.

4. The process is then repeated from the opposite direction, starting at the other end of the maximum antenna and sensor offset, by rotating the tablet 180° along the vertical axis.

5. The triggering points should be documented graphically, with the antenna and sensor clearly identified, along with all relevant dimensions.

If the subsequently measured peak SAR location for the antenna is not between the triggering points, established by the sensor coverage tests from opposite ends of the antenna and sensor, additional SAR tests may be required for conditions where only part of the back surface or edge of a tablet corresponding to the antenna is in proximity to the user and the sensor may not be triggering as desired. A KDB inquiry must be submitted by the test lab to determine if additional tests are required and the proper test configurations to use for testing. This may include situations where the sensor coverage region is too small for the antenna, the sensor is located too far away from the antenna, the sensor location is insufficient to cover multiple antennas or the antenna is at the corner of a tablet etc.

8.3. proximity sensor status table of trigger distance

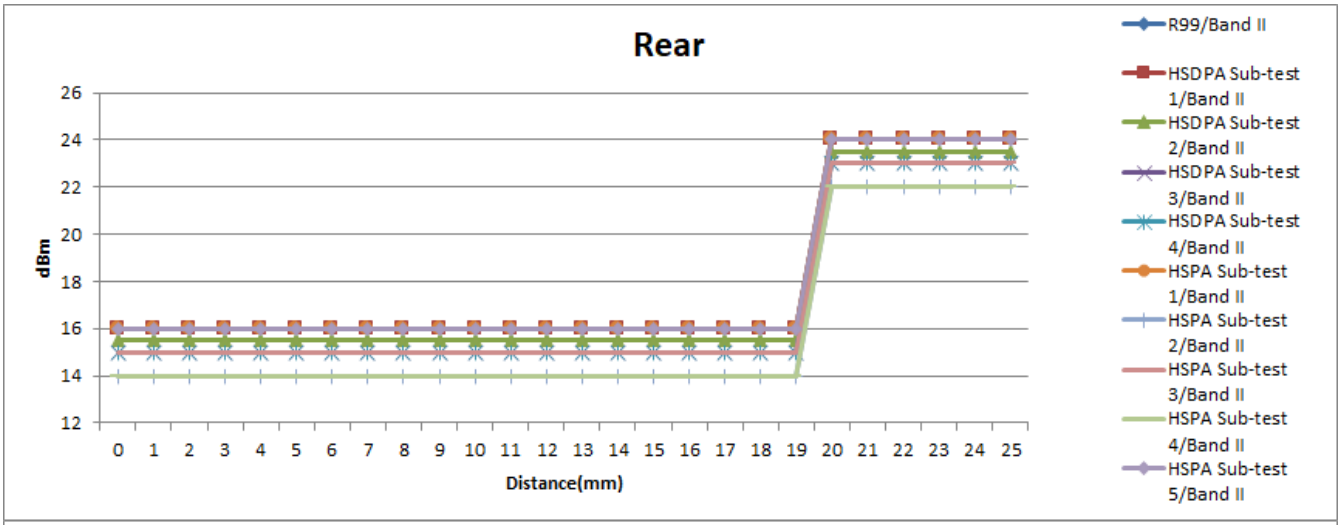
As per the KDB 616217 D04 SAR for laptop and tablets v01r02, section 6.2, the following procedure is used to determine the triggering distances.

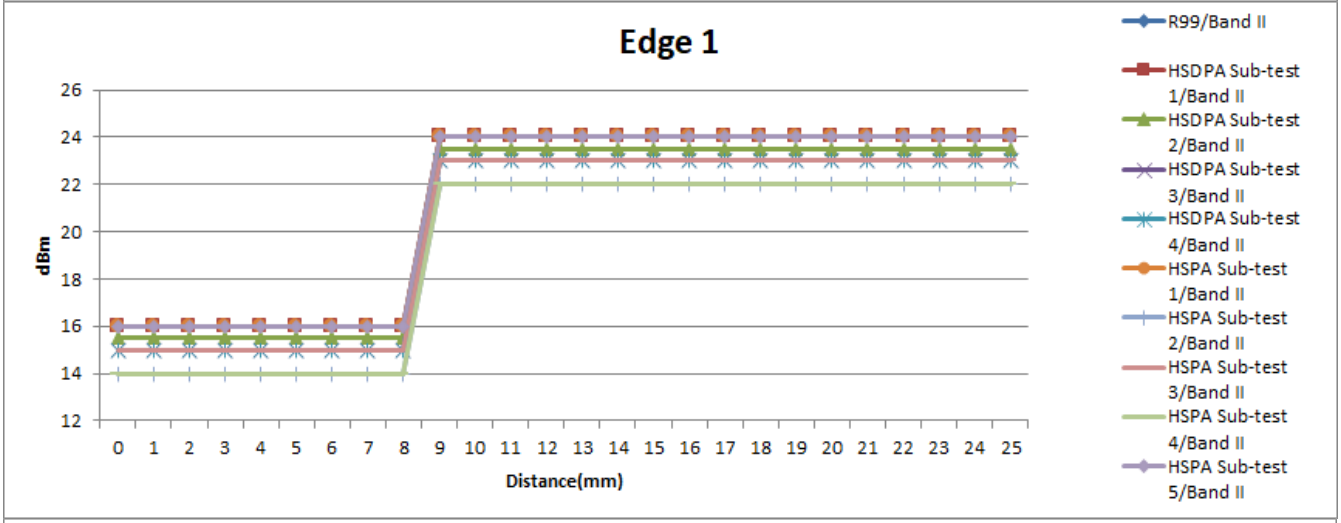
Proximity Sensor Status Table when DUT is moving towards the phantom

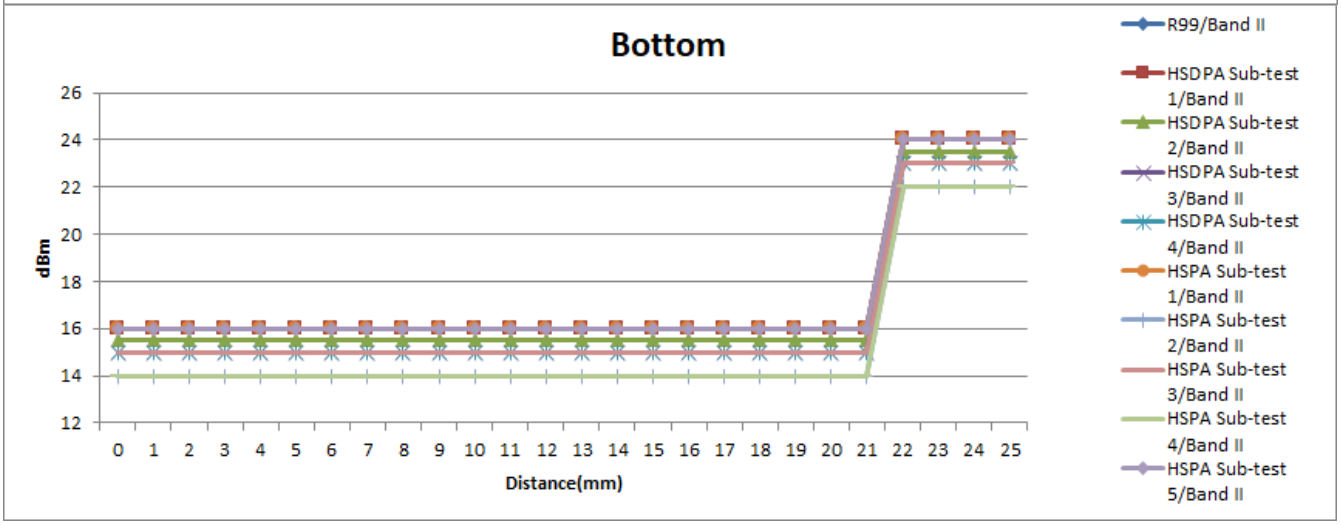
Distance to the DUT (mm)	Proximity Sensor Status – Rear	Distance to the DUT (mm)	Proximity Sensor Status – Edge1	Distance to the DUT (mm)	Proximity Sensor Status – Bottom
30	OFF	30	OFF	30	OFF
27	OFF	27	OFF	27	OFF
25	OFF	25	OFF	25	OFF
24	OFF	24	OFF	24	OFF
23	OFF	23	OFF	23	OFF
22	OFF	22	OFF	22	OFF
21	OFF	21	OFF	21	ON
20	OFF	20	OFF	20	ON
19	ON	19	OFF	19	ON
18	ON	18	OFF	18	ON
17	ON	17	OFF	17	ON
16	ON	16	OFF	16	ON
15	ON	15	OFF	15	ON
14	ON	14	OFF	14	ON
13	ON	13	OFF	13	ON
12	ON	12	OFF	12	ON
11	ON	11	OFF	11	ON
10	ON	10	OFF	10	ON
9	ON	9	OFF	9	ON
8	ON	8	ON	8	ON
7	ON	7	ON	7	ON
6	ON	6	ON	6	ON
5	ON	5	ON	5	ON
4	ON	4	ON	4	ON
3	ON	3	ON	3	ON
2	ON	2	ON	2	ON
1	ON	1	ON	1	ON
0	ON	0	ON	0	ON

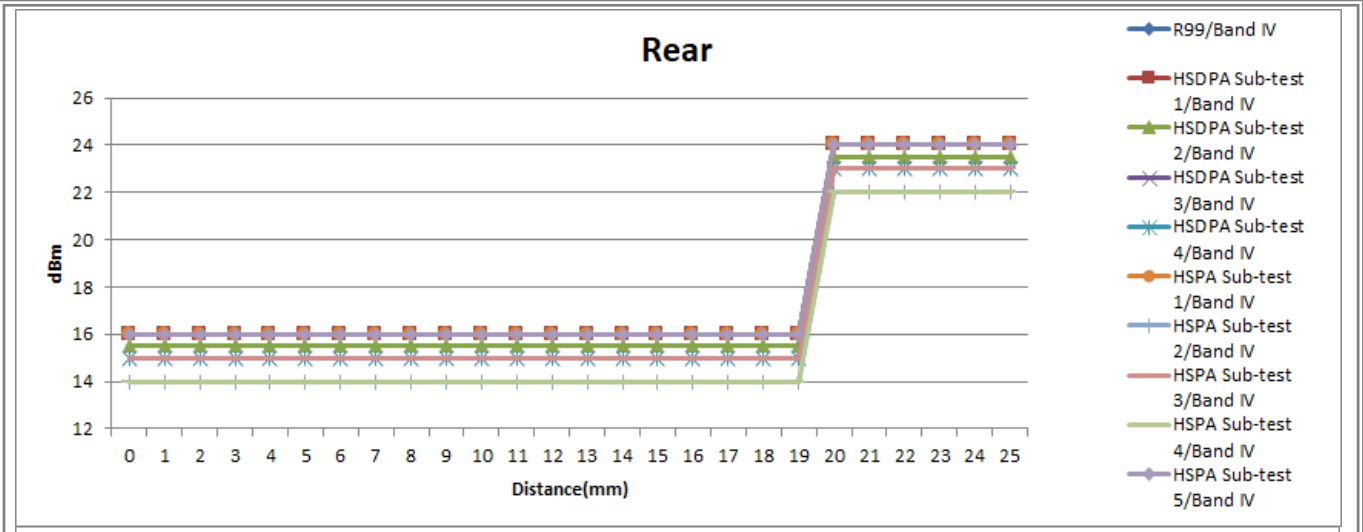
8.4. power reduction per air-interface

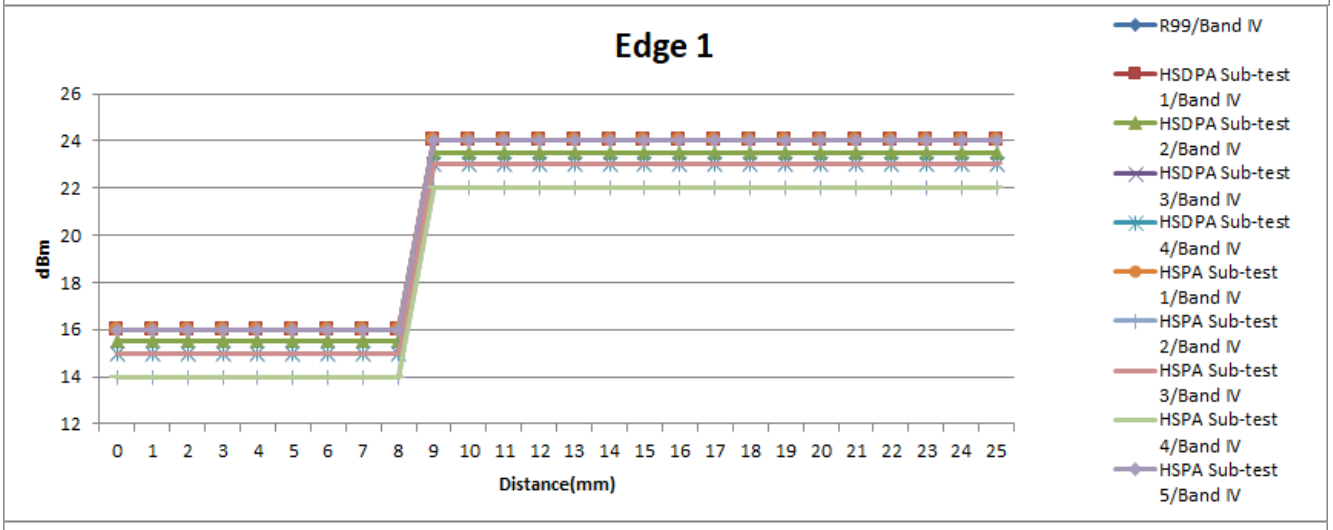
The following graphs show the power level and the distance from the DUT to the flat phantom for the Rear, Bottom and Edge1 Mode Surface.

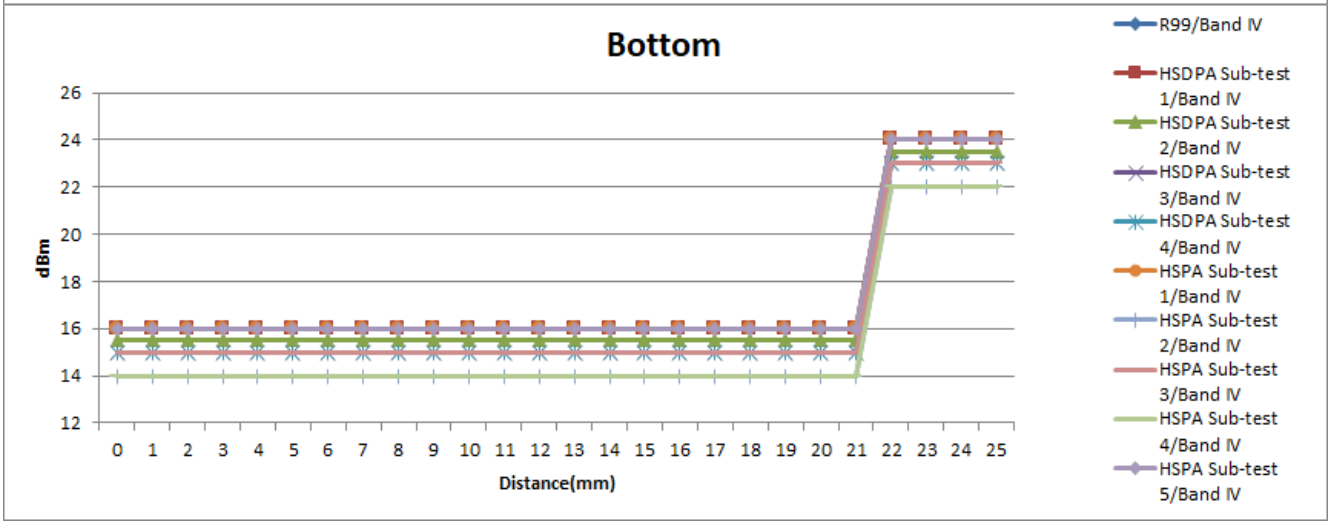


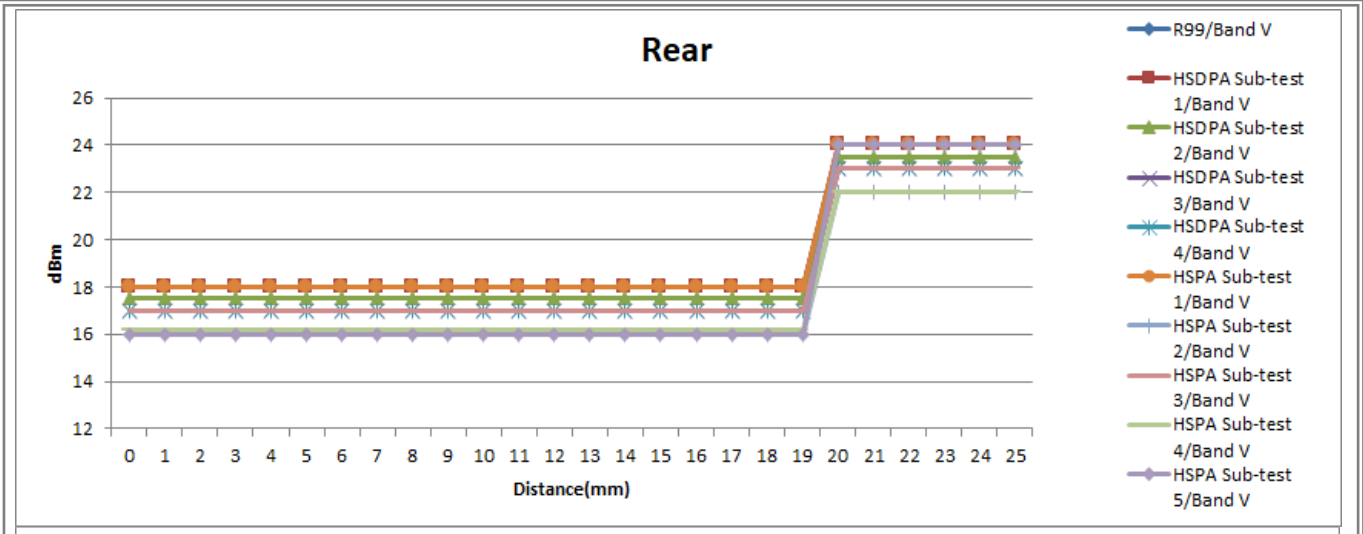


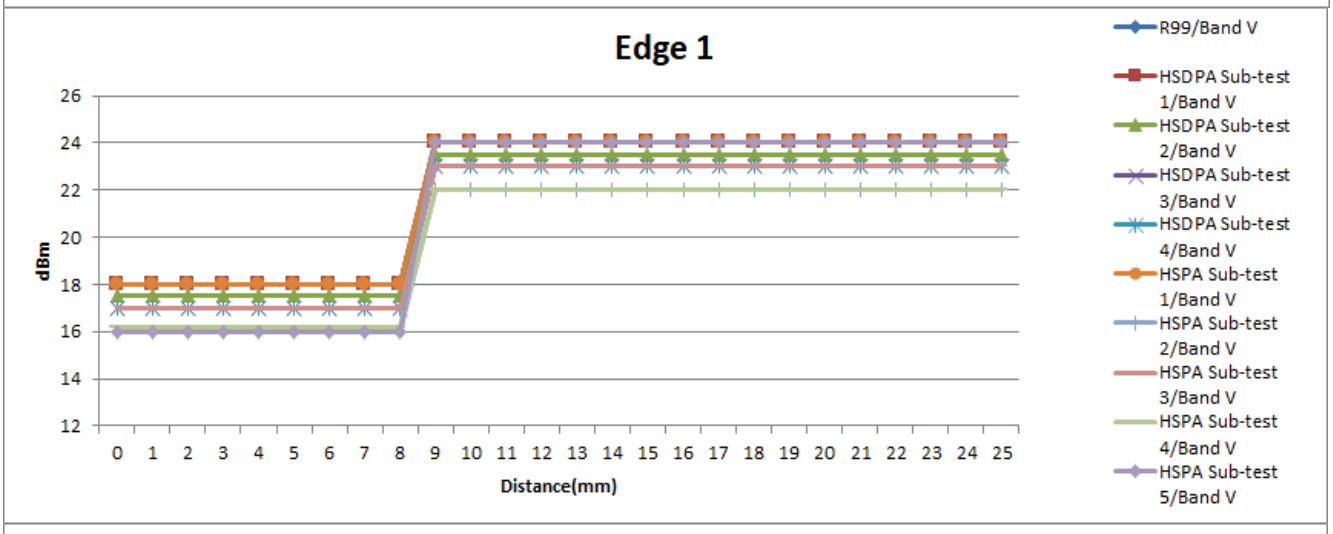


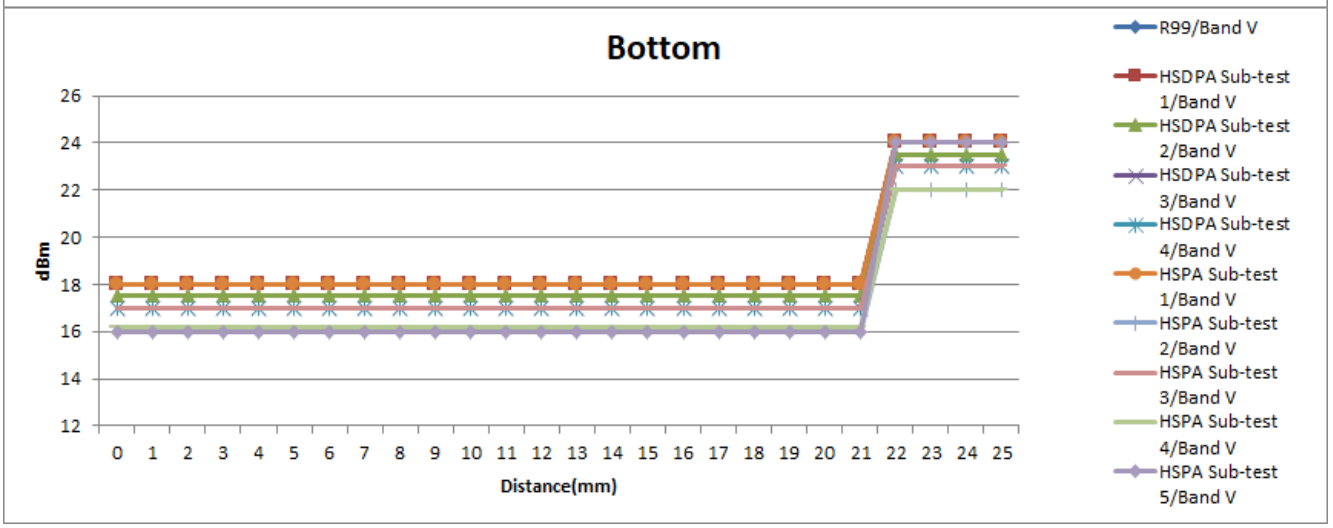

Rear
dBm
Distance(mm)
R99/Band IV
HSDPA Sub-test 1/Band IV
HSDPA Sub-test 2/Band IV
HSDPA Sub-test 3/Band IV
HSDPA Sub-test 4/Band IV
HSPA Sub-test 1/Band IV
HSPA Sub-test 2/Band IV
HSPA Sub-test 3/Band IV
HSPA Sub-test 4/Band IV
HSPA Sub-test 5/Band IV

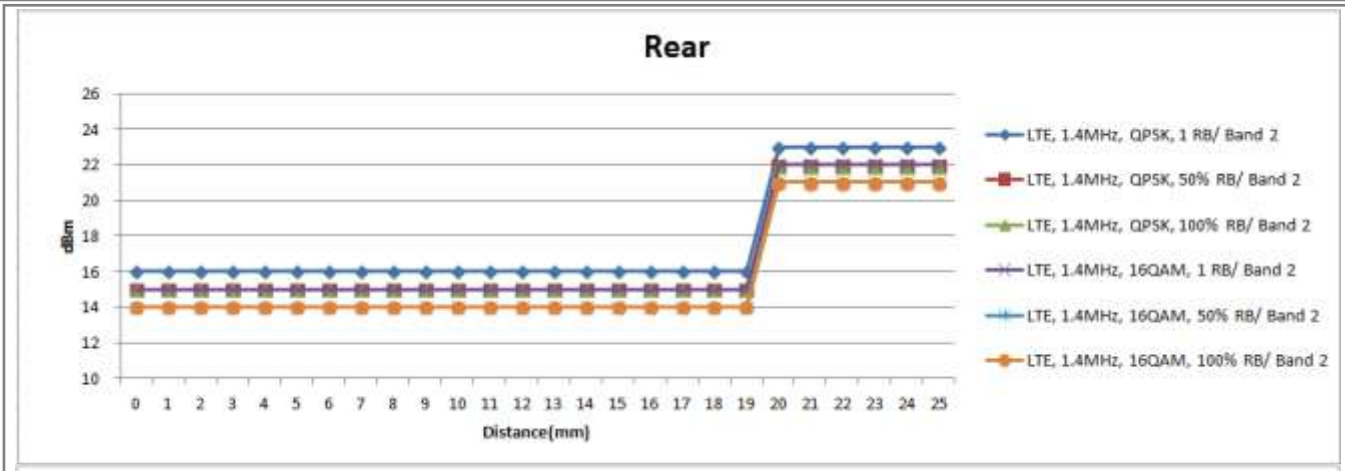

Edge 1
dBm
Distance(mm)
R99/Band IV
HSDPA Sub-test 1/Band IV
HSDPA Sub-test 2/Band IV
HSDPA Sub-test 3/Band IV
HSDPA Sub-test 4/Band IV
HSPA Sub-test 1/Band IV
HSPA Sub-test 2/Band IV
HSPA Sub-test 3/Band IV
HSPA Sub-test 4/Band IV
HSPA Sub-test 5/Band IV

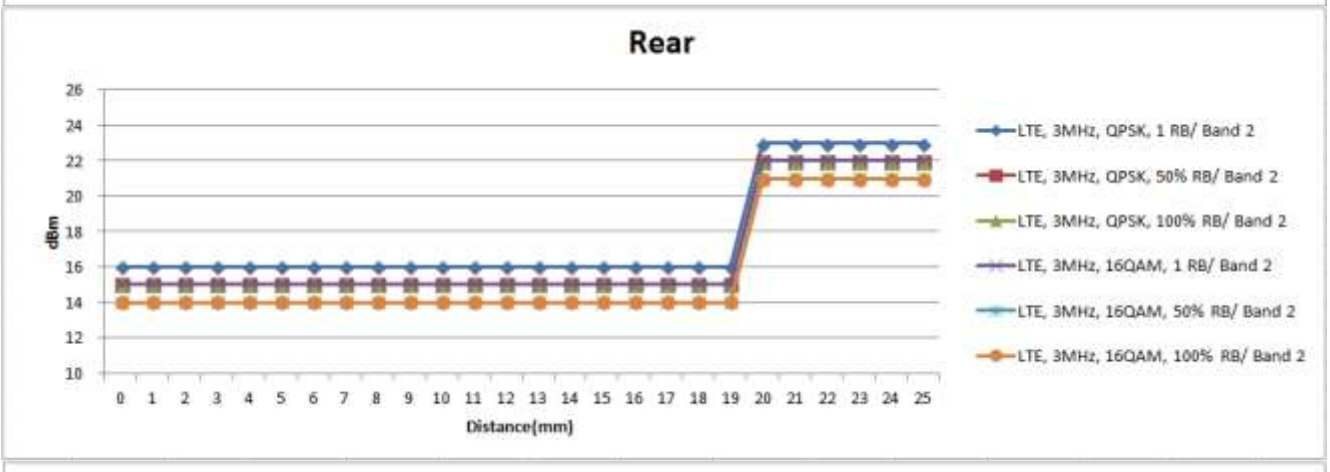

Bottom
dBm
Distance(mm)
R99/Band IV
HSDPA Sub-test 1/Band IV
HSDPA Sub-test 2/Band IV
HSDPA Sub-test 3/Band IV
HSDPA Sub-test 4/Band IV
HSPA Sub-test 1/Band IV
HSPA Sub-test 2/Band IV
HSPA Sub-test 3/Band IV
HSPA Sub-test 4/Band IV
HSPA Sub-test 5/Band IV

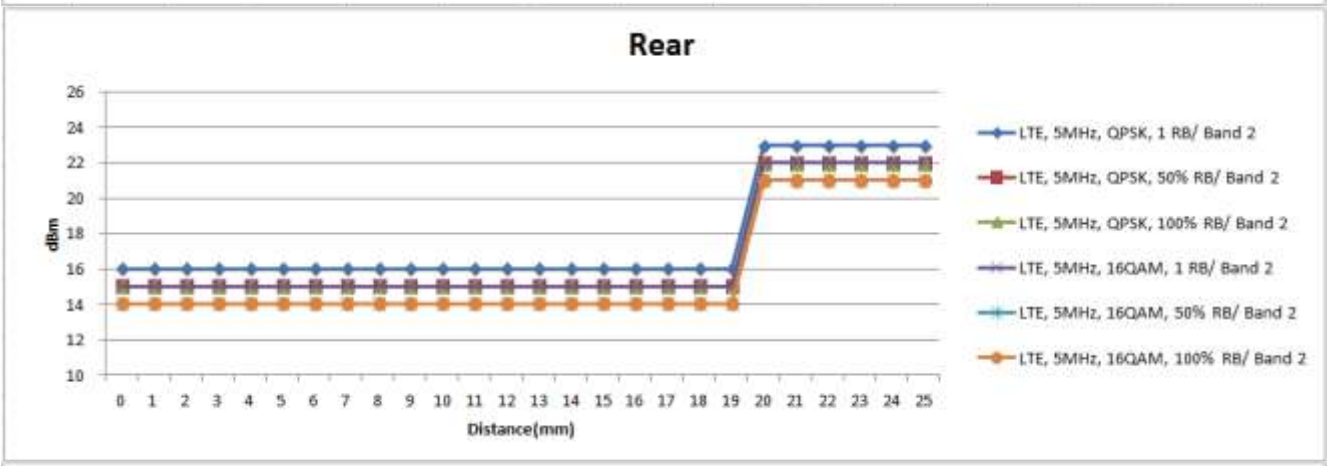

Rear
dBm
Distance(mm)
R99/Band V
HSDPA Sub-test 1/Band V
HSDPA Sub-test 2/Band V
HSDPA Sub-test 3/Band V
HSDPA Sub-test 4/Band V
HSPA Sub-test 1/Band V
HSPA Sub-test 2/Band V
HSPA Sub-test 3/Band V
HSPA Sub-test 4/Band V
HSPA Sub-test 5/Band V

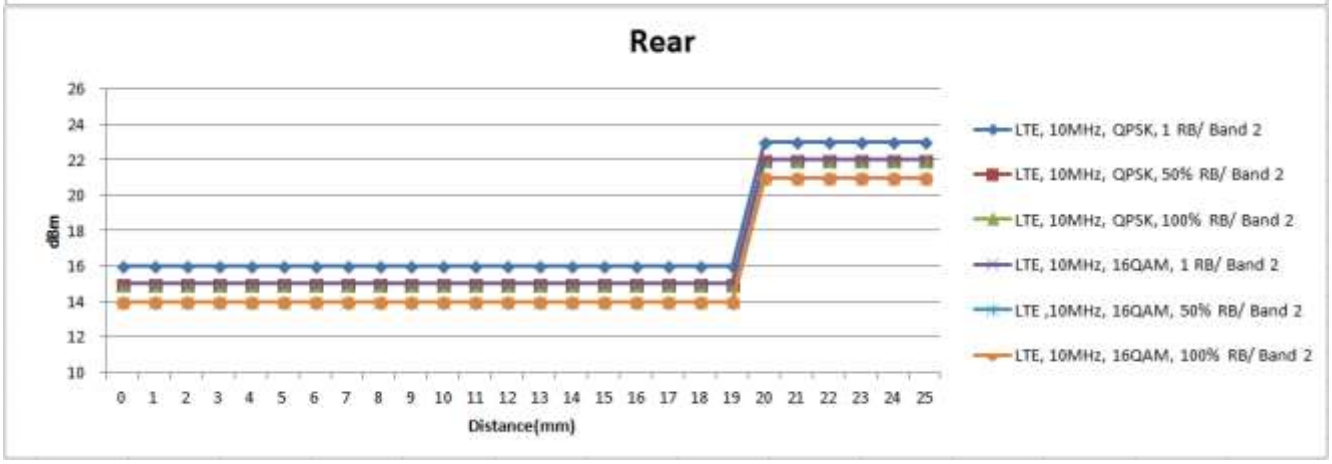

Edge 1
dBm
Distance(mm)
R99/Band V
HSDPA Sub-test 1/Band V
HSDPA Sub-test 2/Band V
HSDPA Sub-test 3/Band V
HSDPA Sub-test 4/Band V
HSPA Sub-test 1/Band V
HSPA Sub-test 2/Band V
HSPA Sub-test 3/Band V
HSPA Sub-test 4/Band V
HSPA Sub-test 5/Band V

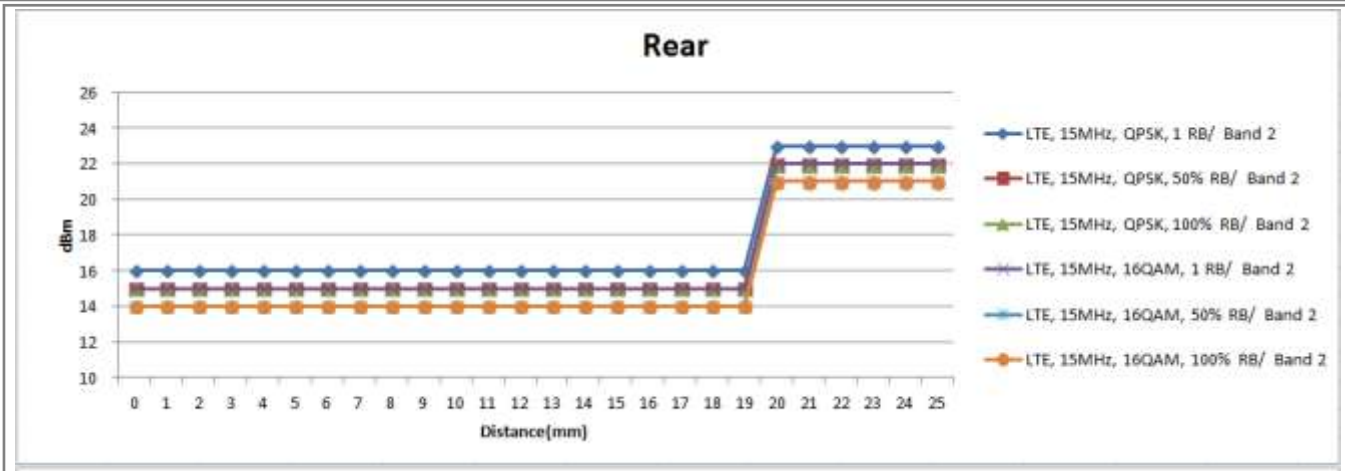

Bottom
dBm
Distance(mm)
R99/Band V
HSDPA Sub-test 1/Band V
HSDPA Sub-test 2/Band V
HSDPA Sub-test 3/Band V
HSDPA Sub-test 4/Band V
HSPA Sub-test 1/Band V
HSPA Sub-test 2/Band V
HSPA Sub-test 3/Band V
HSPA Sub-test 4/Band V
HSPA Sub-test 5/Band V

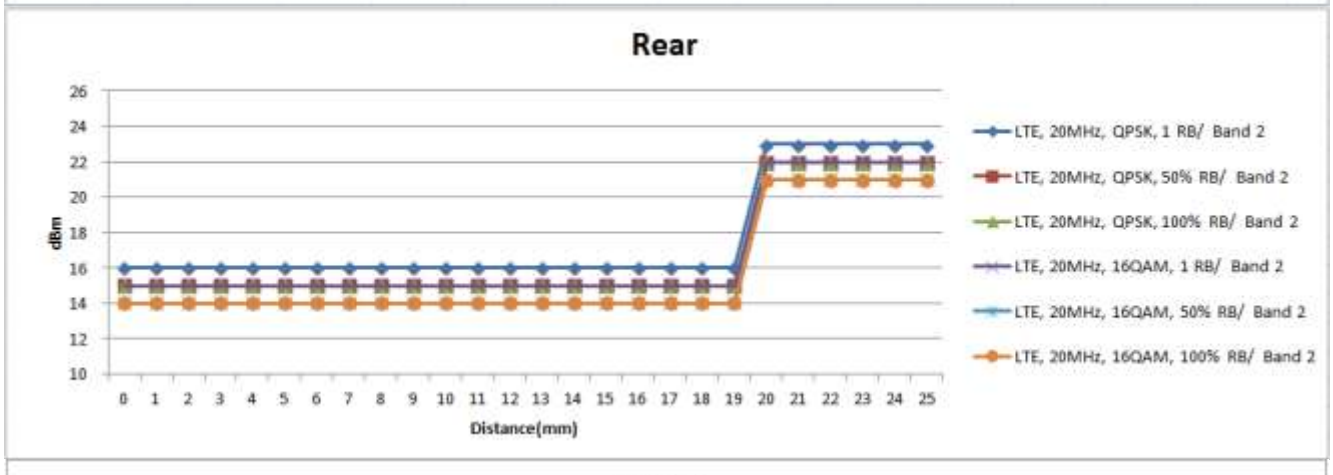

Rear
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 2
LTE, 1.4MHz, QPSK, 50% RB/ Band 2
LTE, 1.4MHz, QPSK, 100% RB/ Band 2
LTE, 1.4MHz, 16QAM, 1 RB/ Band 2
LTE, 1.4MHz, 16QAM, 50% RB/ Band 2
LTE, 1.4MHz, 16QAM, 100% RB/ Band 2

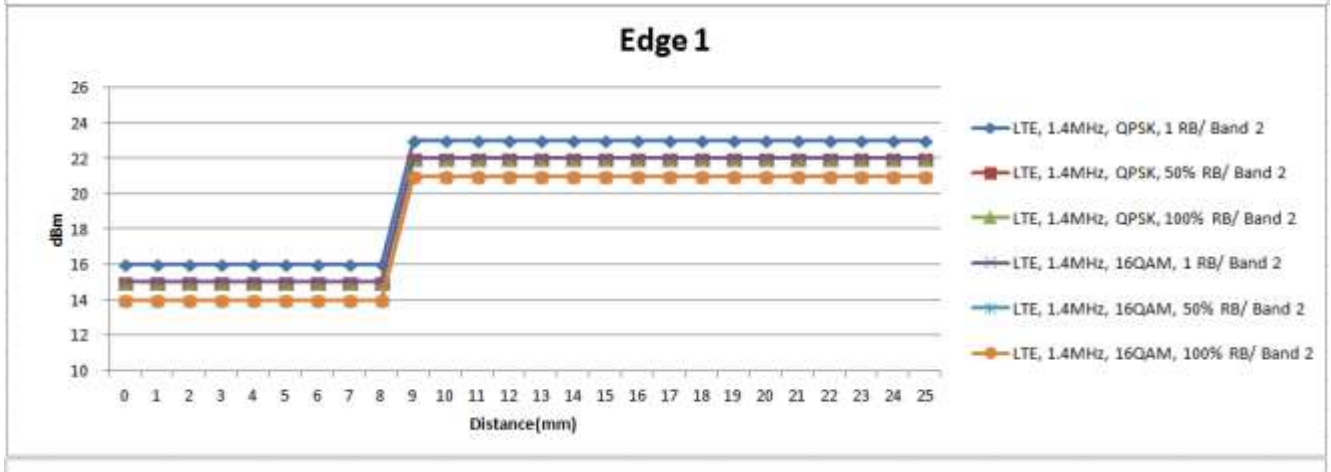

Rear
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 2
LTE, 3MHz, QPSK, 50% RB/ Band 2
LTE, 3MHz, QPSK, 100% RB/ Band 2
LTE, 3MHz, 16QAM, 1 RB/ Band 2
LTE, 3MHz, 16QAM, 50% RB/ Band 2
LTE, 3MHz, 16QAM, 100% RB/ Band 2

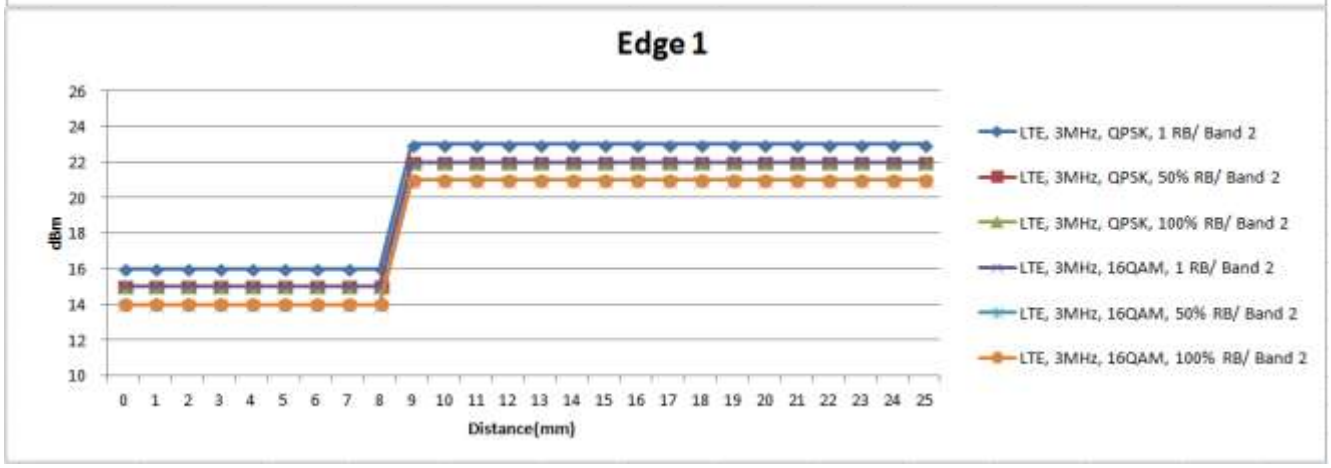

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 2
LTE, 5MHz, QPSK, 50% RB/ Band 2
LTE, 5MHz, QPSK, 100% RB/ Band 2
LTE, 5MHz, 16QAM, 1 RB/ Band 2
LTE, 5MHz, 16QAM, 50% RB/ Band 2
LTE, 5MHz, 16QAM, 100% RB/ Band 2

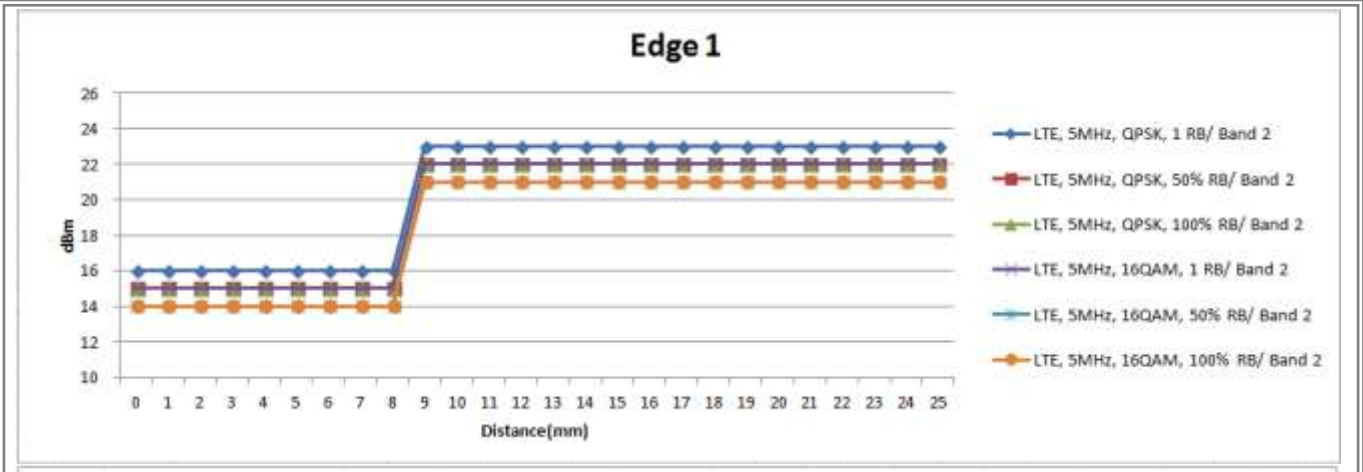

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 2
LTE, 10MHz, QPSK, 50% RB/ Band 2
LTE, 10MHz, QPSK, 100% RB/ Band 2
LTE, 10MHz, 16QAM, 1 RB/ Band 2
LTE ,10MHz, 16QAM, 50% RB/ Band 2
LTE, 10MHz, 16QAM, 100% RB/ Band 2


Rear
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 2
LTE, 15MHz, QPSK, 50% RB/ Band 2
LTE, 15MHz, QPSK, 100% RB/ Band 2
LTE, 15MHz, 16QAM, 1 RB/ Band 2
LTE, 15MHz, 16QAM, 50% RB/ Band 2
LTE, 15MHz, 16QAM, 100% RB/ Band 2


Rear
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 2
LTE, 20MHz, QPSK, 50% RB/ Band 2
LTE, 20MHz, QPSK, 100% RB/ Band 2
LTE, 20MHz, 16QAM, 1 RB/ Band 2
LTE, 20MHz, 16QAM, 50% RB/ Band 2
LTE, 20MHz, 16QAM, 100% RB/ Band 2


Edge 1
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 2
LTE, 1.4MHz, QPSK, 50% RB/ Band 2
LTE, 1.4MHz, QPSK, 100% RB/ Band 2
LTE, 1.4MHz, 16QAM, 1 RB/ Band 2
LTE, 1.4MHz, 16QAM, 50% RB/ Band 2
LTE, 1.4MHz, 16QAM, 100% RB/ Band 2


Edge 1
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 2
LTE, 3MHz, QPSK, 50% RB/ Band 2
LTE, 3MHz, QPSK, 100% RB/ Band 2
LTE, 3MHz, 16QAM, 1 RB/ Band 2
LTE, 3MHz, 16QAM, 50% RB/ Band 2
LTE, 3MHz, 16QAM, 100% RB/ Band 2


Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 2
LTE, 5MHz, QPSK, 50% RB/ Band 2
LTE, 5MHz, QPSK, 100% RB/ Band 2
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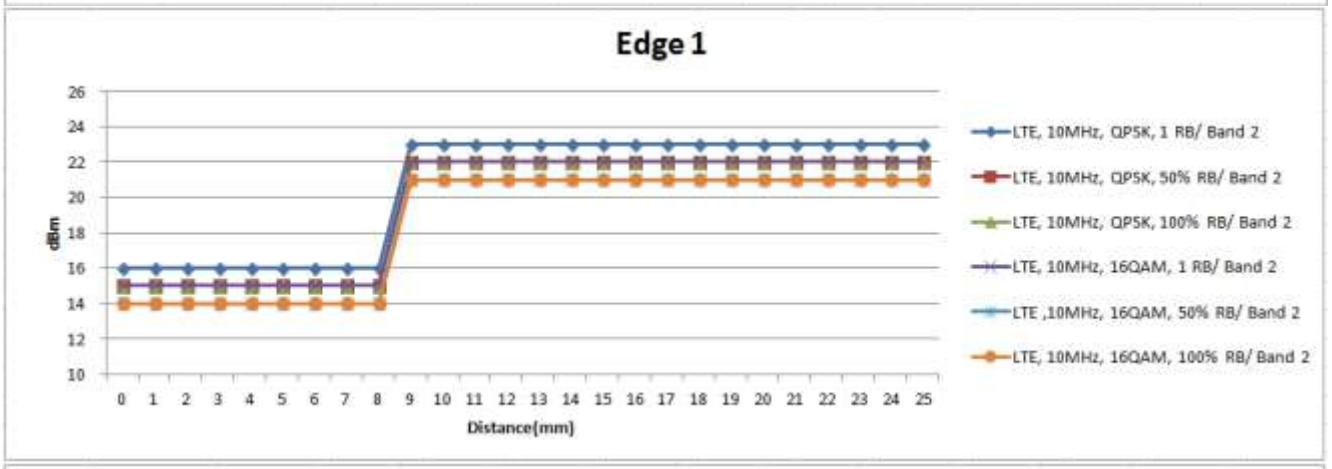
LTE, 5MHz, 16QAM, 100% RB/ Band 2


Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 2
LTE, 10MHz, QPSK, 50% RB/ Band 2
LTE, 10MHz, QPSK, 100% RB/ Band 2
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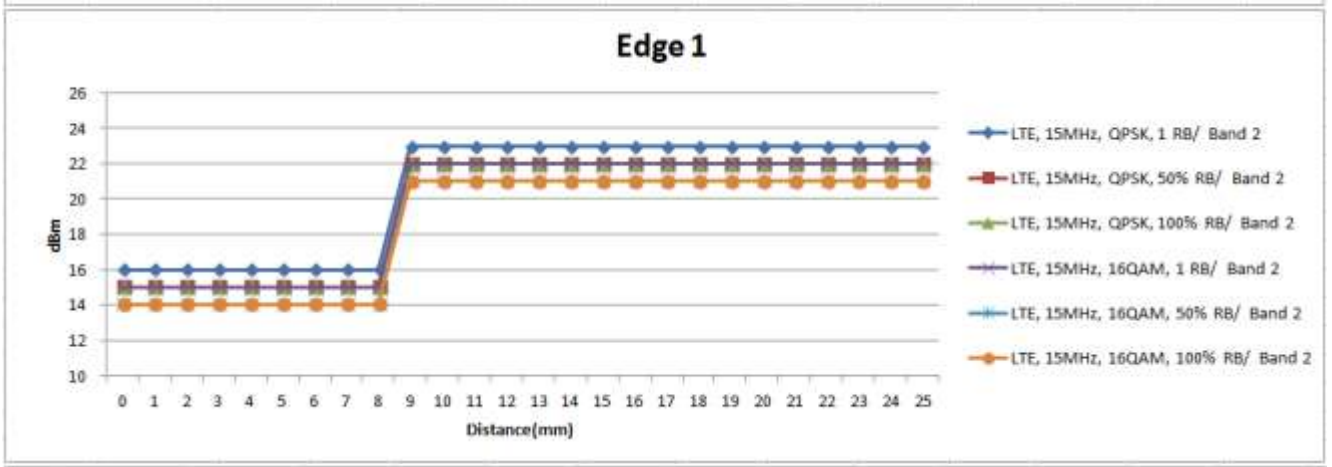
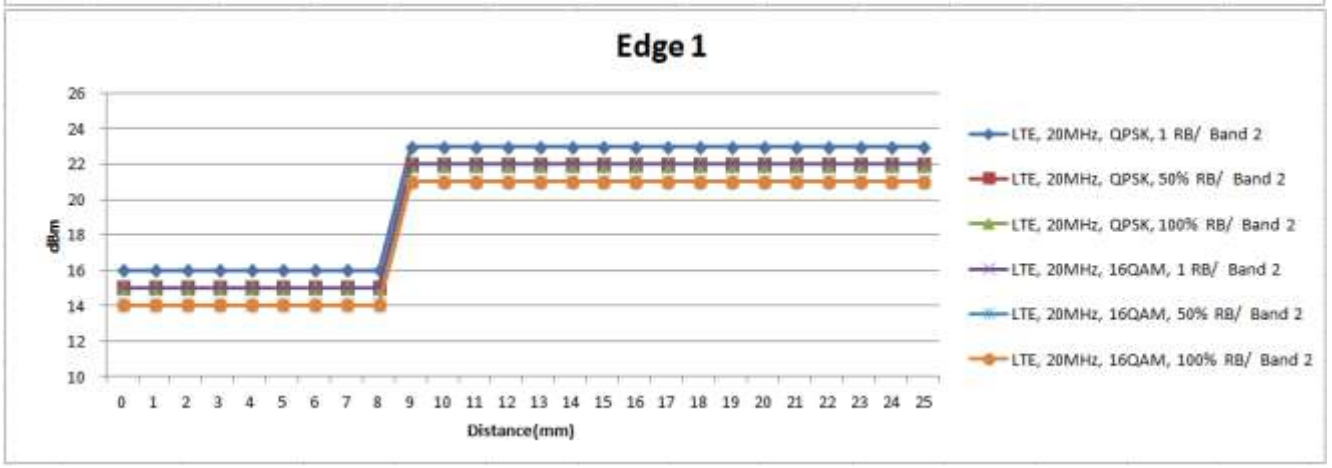
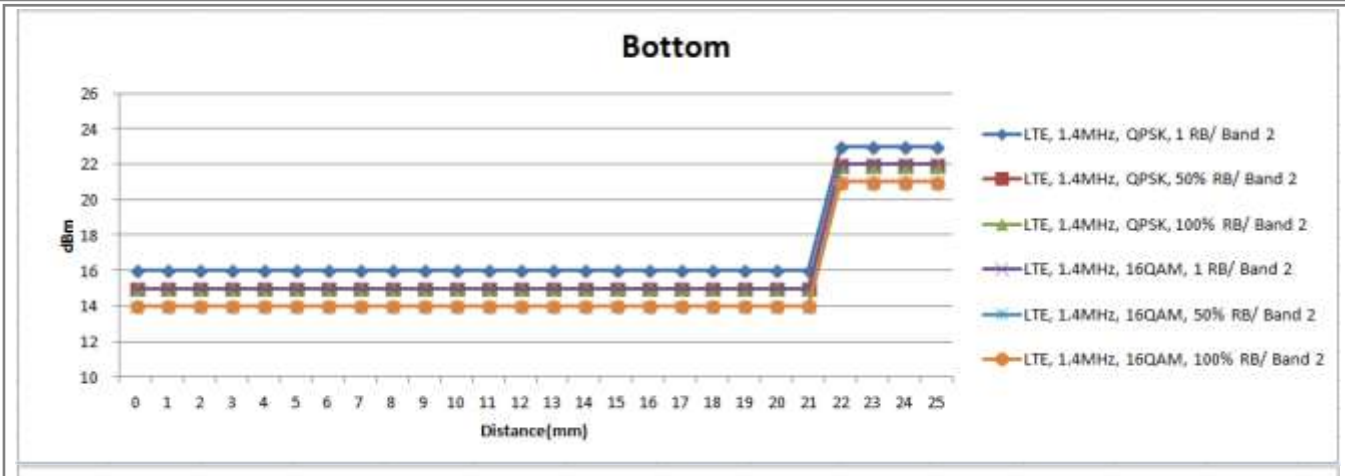
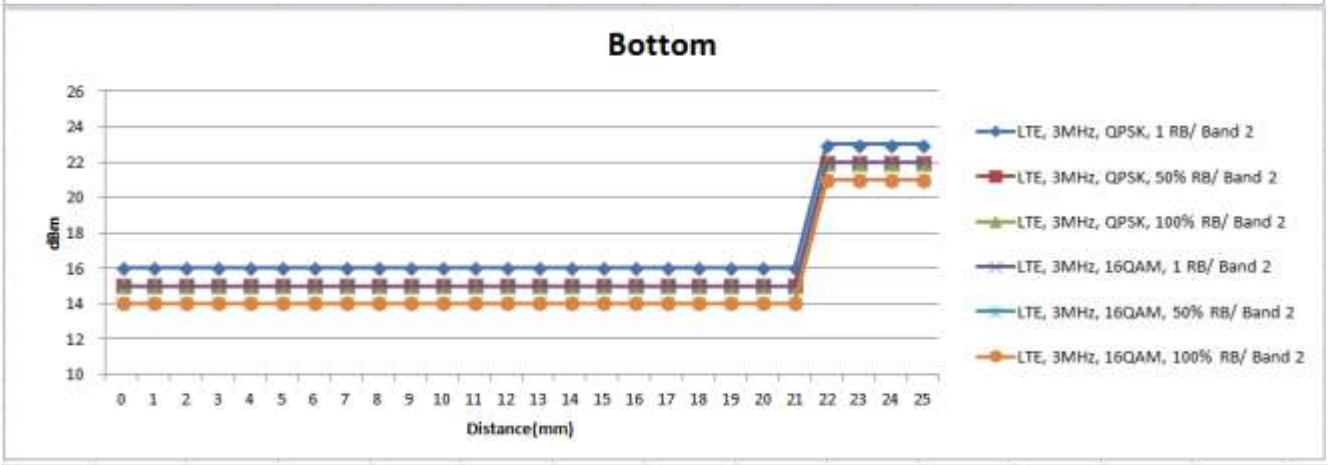
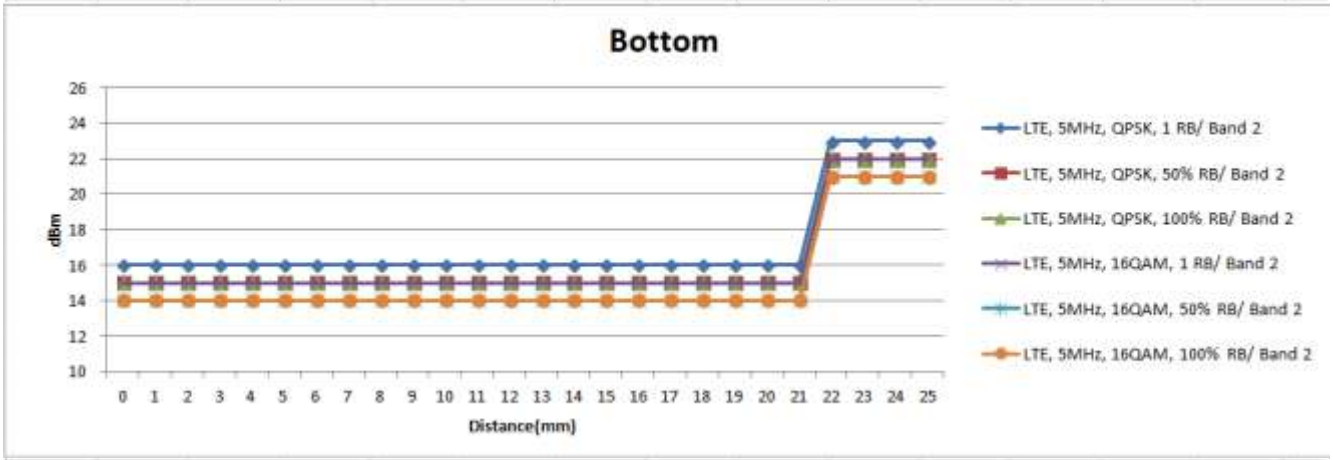
LTE ,10MHz, 16QAM, 50% RB/ Band 2
LTE, 10MHz, 16QAM, 100% RB/ Band 2

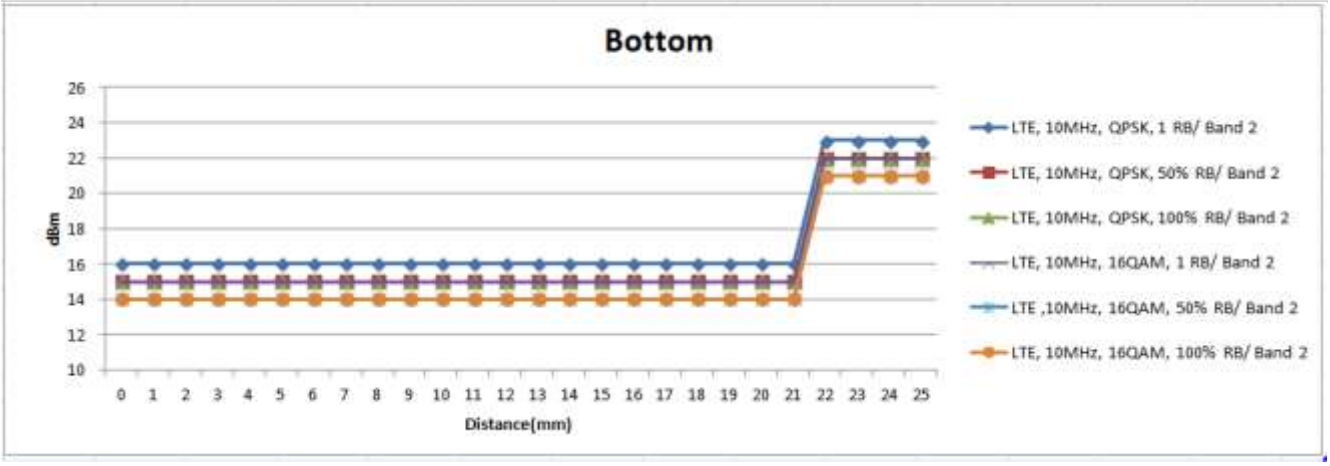

Edge 1
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 2
LTE, 15MHz, QPSK, 50% RB/ Band 2
LTE, 15MHz, QPSK, 100% RB/ Band 2
LTE, 15MHz, 16QAM, 1 RB/ Band 2
LTE, 15MHz, 16QAM, 50% RB/ Band 2
LTE, 15MHz, 16QAM, 100% RB/ Band 2

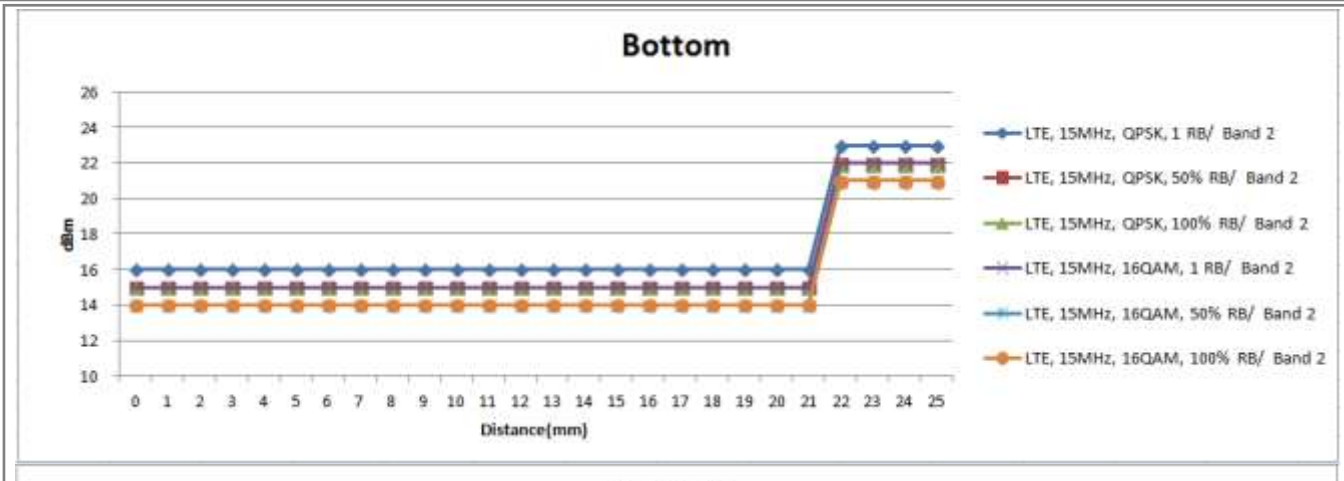

Edge 1
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 2
LTE, 20MHz, QPSK, 50% RB/ Band 2
LTE, 20MHz, QPSK, 100% RB/ Band 2
LTE, 20MHz, 16QAM, 1 RB/ Band 2
LTE, 20MHz, 16QAM, 50% RB/ Band 2
LTE, 20MHz, 16QAM, 100% RB/ Band 2

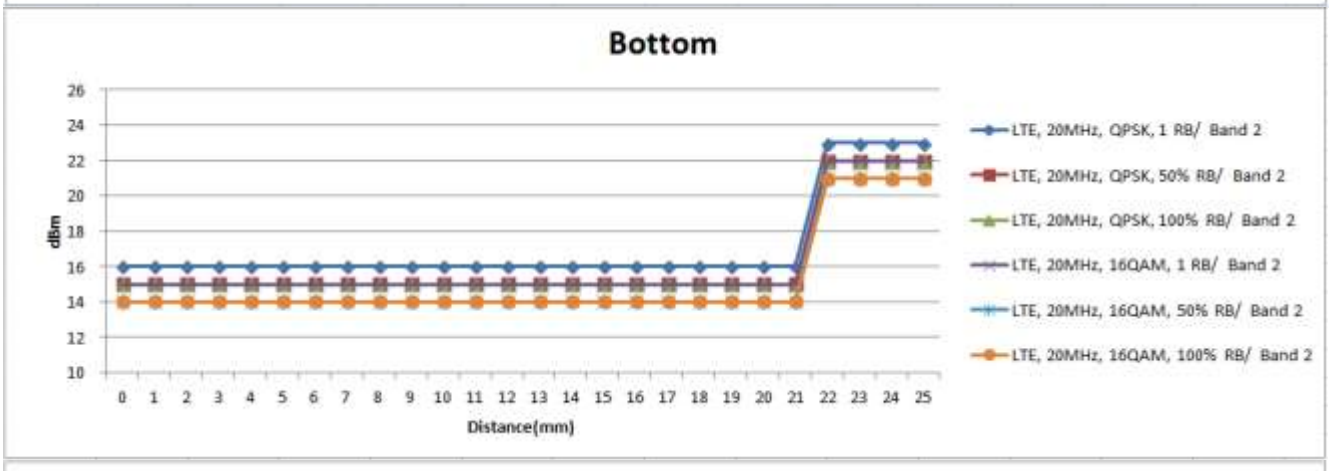

Bottom
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 2
LTE, 1.4MHz, QPSK, 50% RB/ Band 2
LTE, 1.4MHz, QPSK, 100% RB/ Band 2
LTE, 1.4MHz, 16QAM, 1 RB/ Band 2
LTE, 1.4MHz, 16QAM, 50% RB/ Band 2
LTE, 1.4MHz, 16QAM, 100% RB/ Band 2

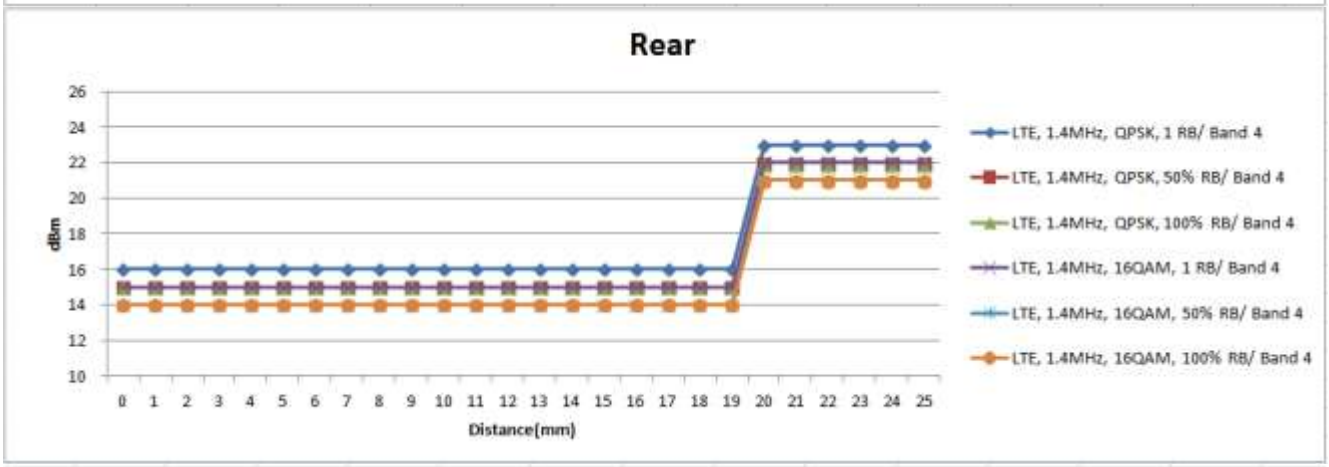

Bottom
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 2
LTE, 3MHz, QPSK, 50% RB/ Band 2
LTE, 3MHz, QPSK, 100% RB/ Band 2
LTE, 3MHz, 16QAM, 1 RB/ Band 2
LTE, 3MHz, 16QAM, 50% RB/ Band 2
LTE, 3MHz, 16QAM, 100% RB/ Band 2

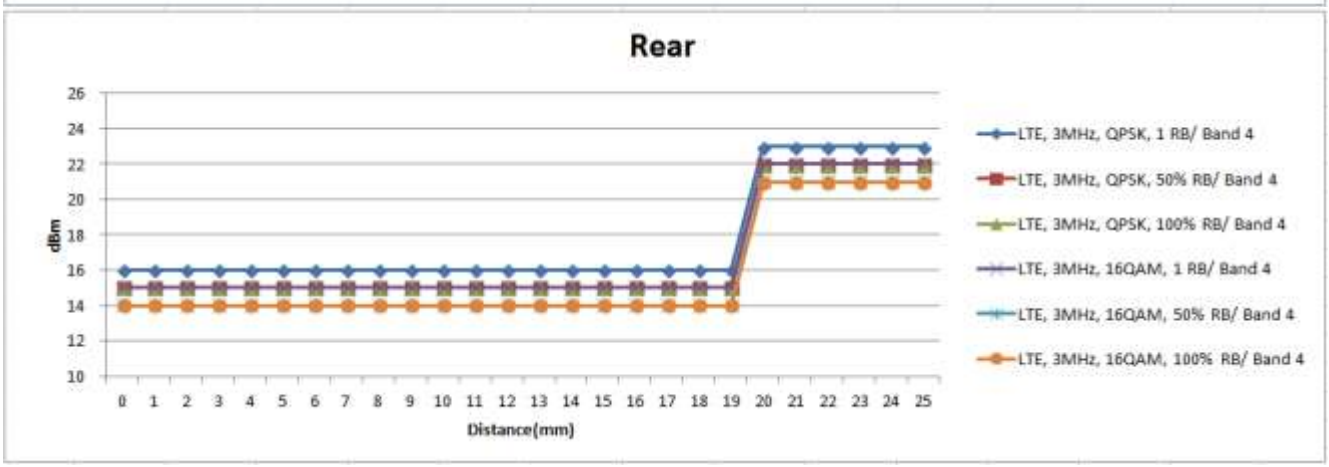

Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 2
LTE, 5MHz, QPSK, 50% RB/ Band 2
LTE, 5MHz, QPSK, 100% RB/ Band 2
LTE, 5MHz, 16QAM, 1 RB/ Band 2
LTE, 5MHz, 16QAM, 50% RB/ Band 2
LTE, 5MHz, 16QAM, 100% RB/ Band 2

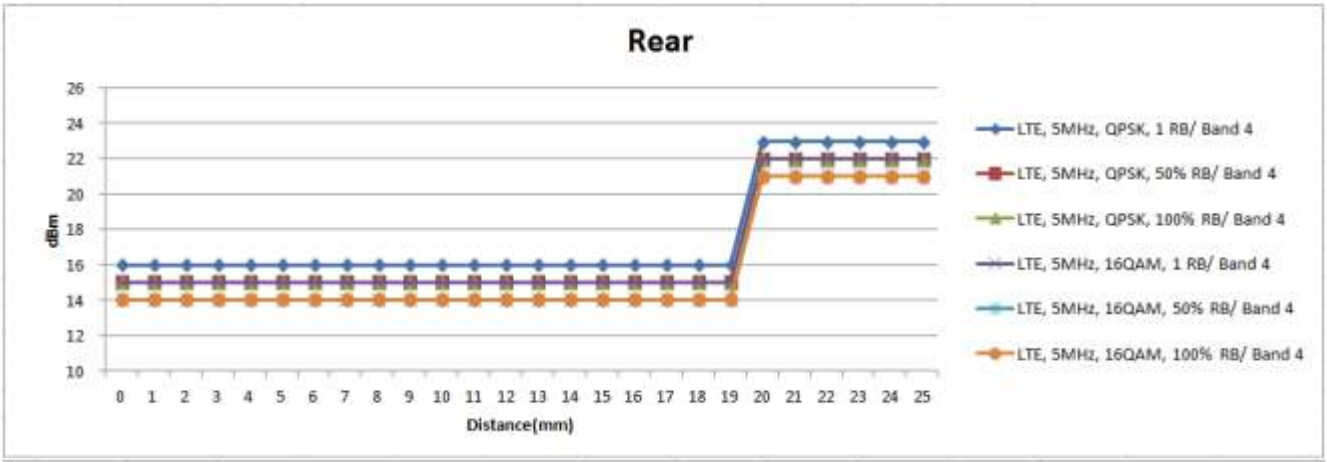

Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 2
LTE, 10MHz, QPSK, 50% RB/ Band 2
LTE, 10MHz, QPSK, 100% RB/ Band 2
LTE, 10MHz, 16QAM, 1 RB/ Band 2
LTE ,10MHz, 16QAM, 50% RB/ Band 2
LTE, 10MHz, 16QAM, 100% RB/ Band 2

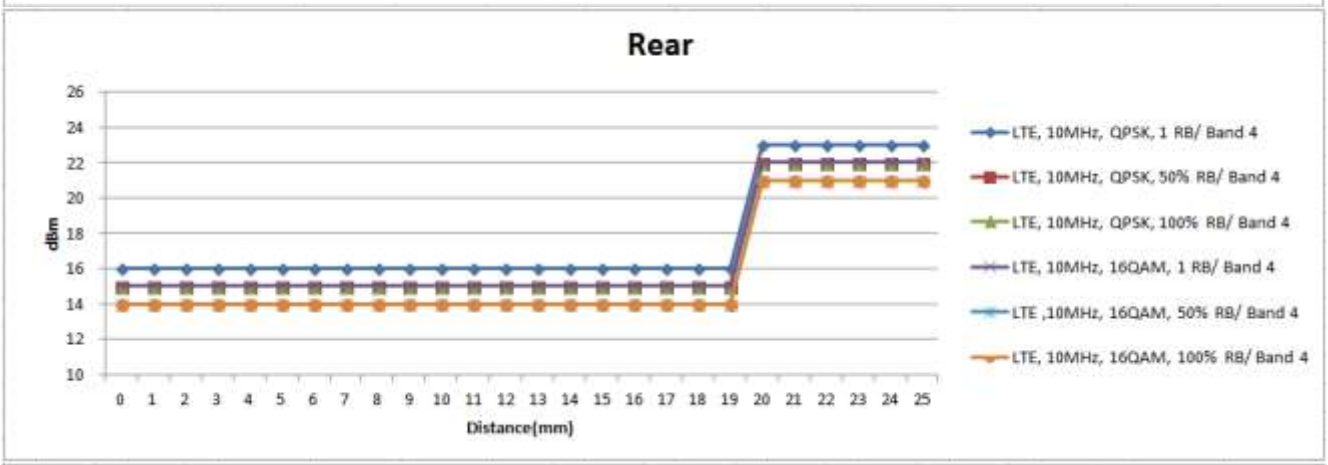

Bottom
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 2
LTE, 15MHz, QPSK, 50% RB/ Band 2
LTE, 15MHz, QPSK, 100% RB/ Band 2
LTE, 15MHz, 16QAM, 1 RB/ Band 2
LTE, 15MHz, 16QAM, 50% RB/ Band 2
LTE, 15MHz, 16QAM, 100% RB/ Band 2

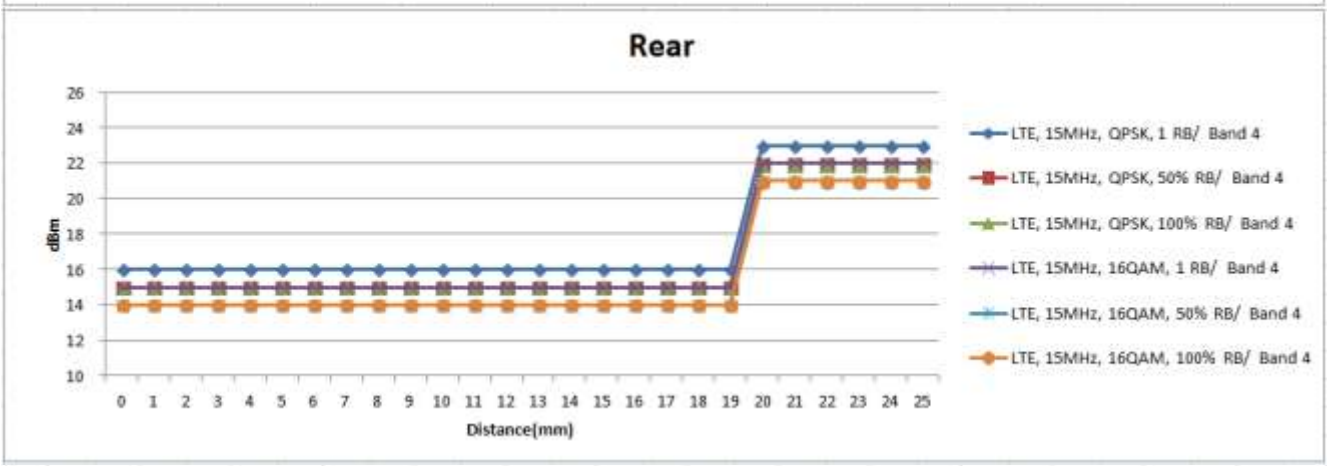

Bottom
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 2
LTE, 20MHz, QPSK, 50% RB/ Band 2
LTE, 20MHz, QPSK, 100% RB/ Band 2
LTE, 20MHz, 16QAM, 1 RB/ Band 2
LTE, 20MHz, 16QAM, 50% RB/ Band 2
LTE, 20MHz, 16QAM, 100% RB/ Band 2

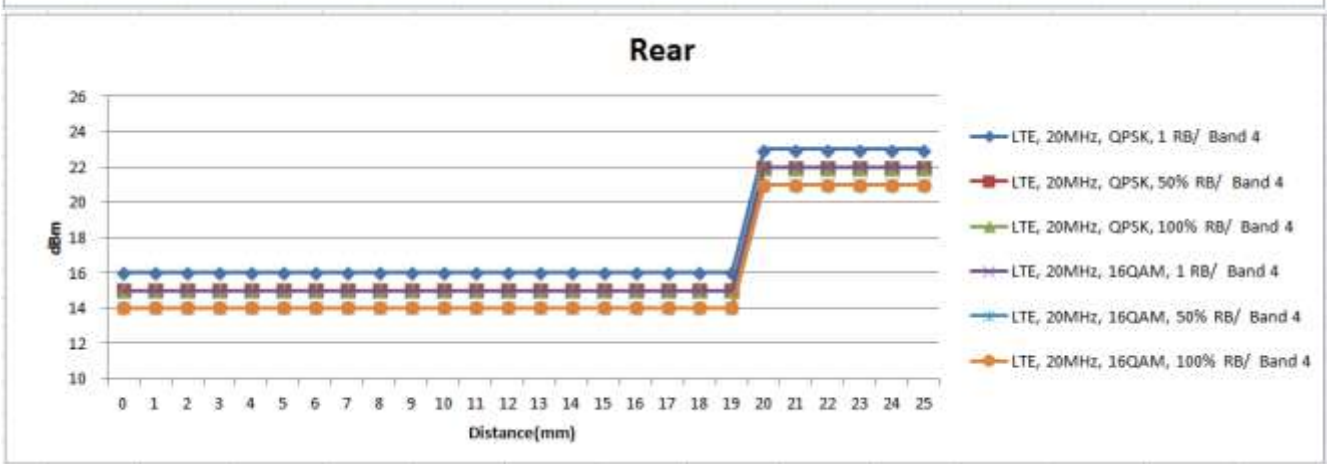

Rear
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 4
LTE, 1.4MHz, QPSK, 50% RB/ Band 4
LTE, 1.4MHz, QPSK, 100% RB/ Band 4
LTE, 1.4MHz, 16QAM, 1 RB/ Band 4
LTE, 1.4MHz, 16QAM, 50% RB/ Band 4
LTE, 1.4MHz, 16QAM, 100% RB/ Band 4

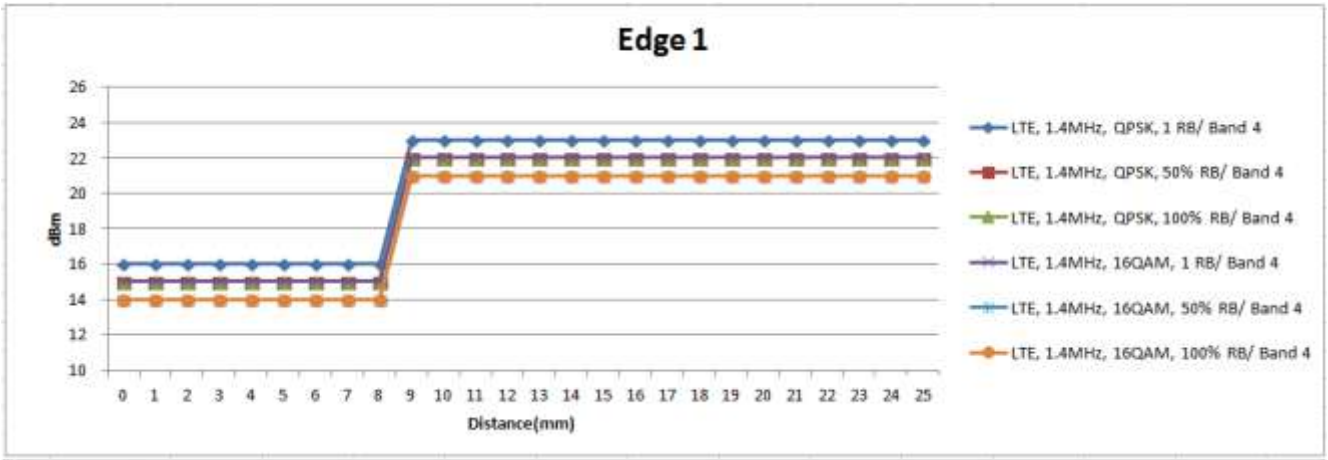

Rear
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 4
LTE, 3MHz, QPSK, 50% RB/ Band 4
LTE, 3MHz, QPSK, 100% RB/ Band 4
LTE, 3MHz, 16QAM, 1 RB/ Band 4
LTE, 3MHz, 16QAM, 50% RB/ Band 4
LTE, 3MHz, 16QAM, 100% RB/ Band 4

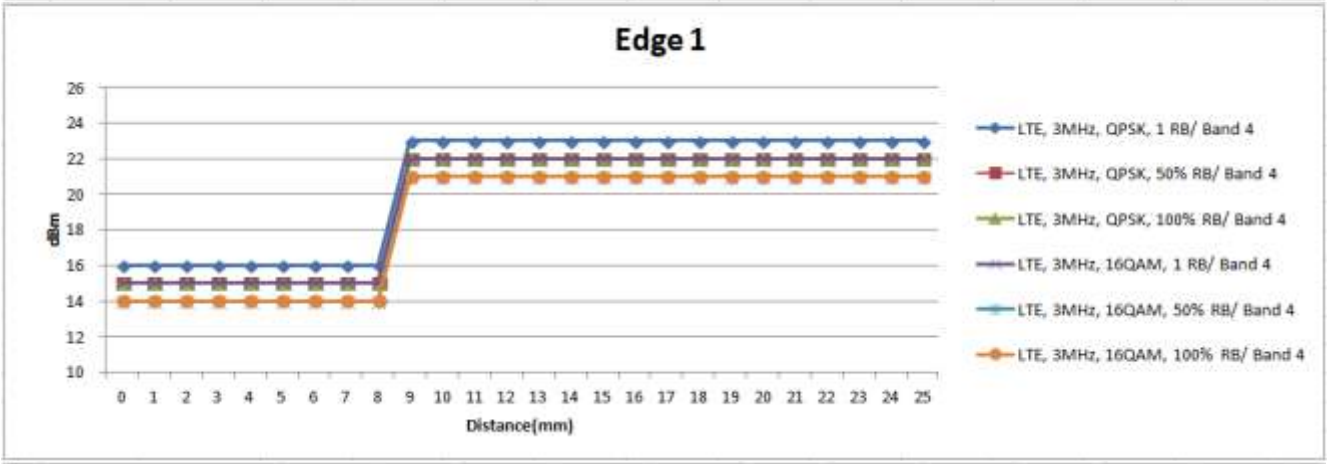

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 4
LTE, 5MHz, QPSK, 50% RB/ Band 4
LTE, 5MHz, QPSK, 100% RB/ Band 4
LTE, 5MHz, 16QAM, 1 RB/ Band 4
LTE, 5MHz, 16QAM, 50% RB/ Band 4
LTE, 5MHz, 16QAM, 100% RB/ Band 4

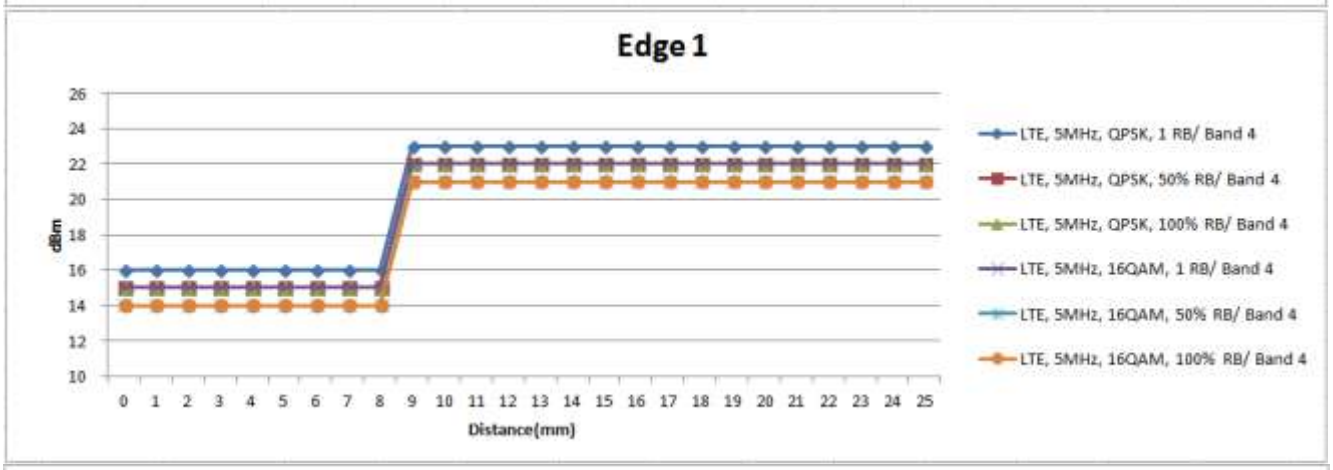

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 4
LTE, 10MHz, QPSK, 50% RB/ Band 4
LTE, 10MHz, QPSK, 100% RB/ Band 4
LTE, 10MHz, 16QAM, 1 RB/ Band 4
LTE ,10MHz, 16QAM, 50% RB/ Band 4
LTE, 10MHz, 16QAM, 100% RB/ Band 4

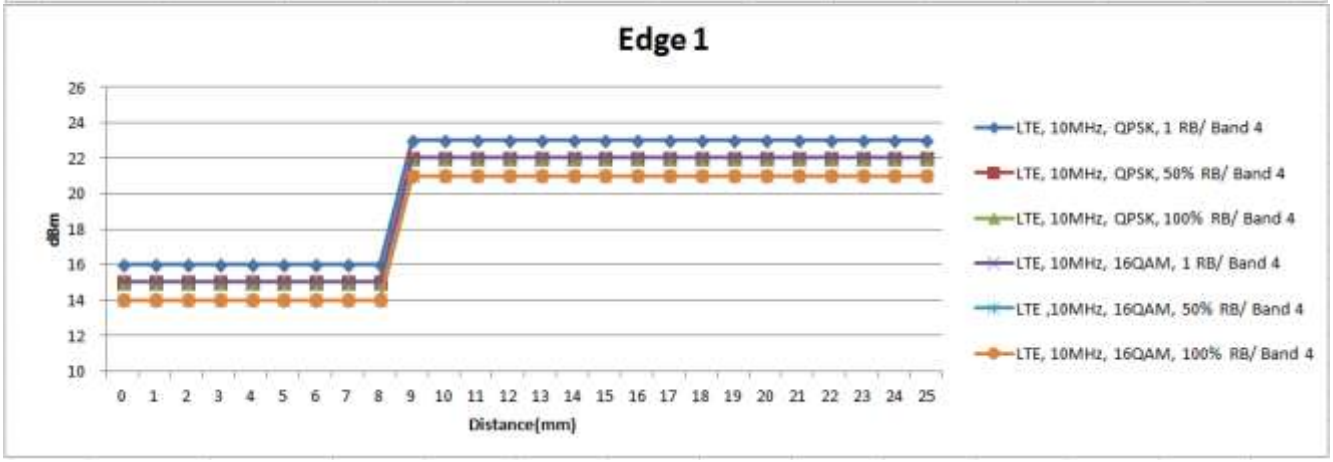

Rear
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 4
LTE, 15MHz, QPSK, 50% RB/ Band 4
LTE, 15MHz, QPSK, 100% RB/ Band 4
LTE, 15MHz, 16QAM, 1 RB/ Band 4
LTE, 15MHz, 16QAM, 50% RB/ Band 4
LTE, 15MHz, 16QAM, 100% RB/ Band 4

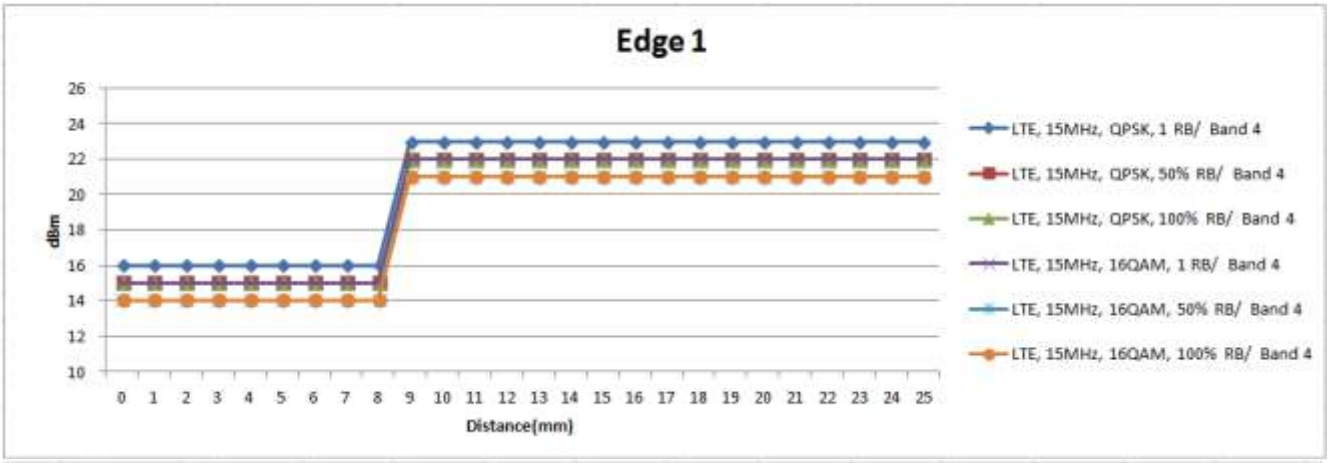

Rear
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 4
LTE, 20MHz, QPSK, 50% RB/ Band 4
LTE, 20MHz, QPSK, 100% RB/ Band 4
LTE, 20MHz, 16QAM, 1 RB/ Band 4
LTE, 20MHz, 16QAM, 50% RB/ Band 4
LTE, 20MHz, 16QAM, 100% RB/ Band 4

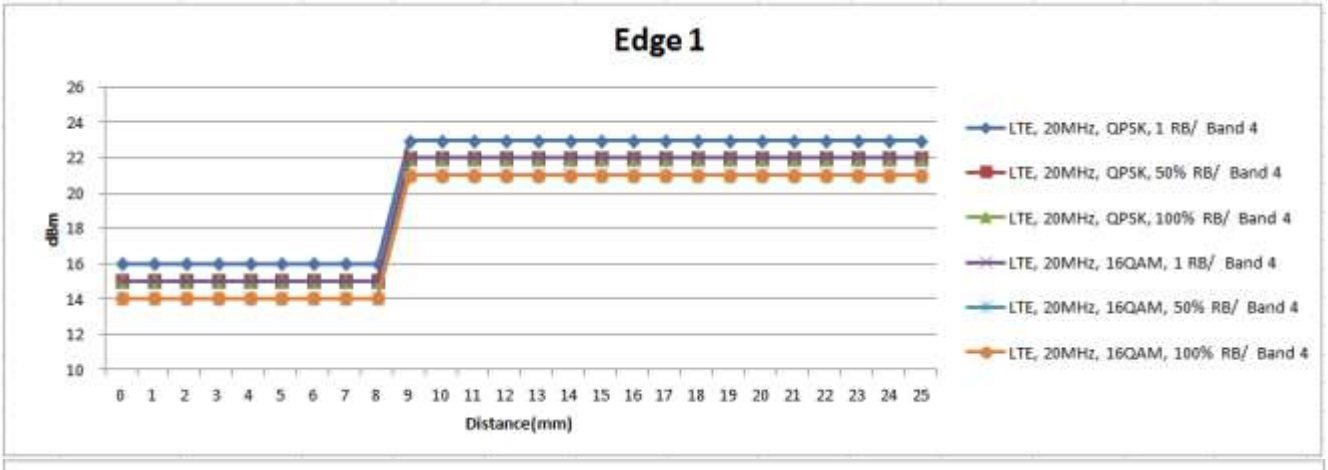

Edge 1
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 4
LTE, 1.4MHz, QPSK, 50% RB/ Band 4
LTE, 1.4MHz, QPSK, 100% RB/ Band 4
LTE, 1.4MHz, 16QAM, 1 RB/ Band 4
LTE, 1.4MHz, 16QAM, 50% RB/ Band 4
LTE, 1.4MHz, 16QAM, 100% RB/ Band 4

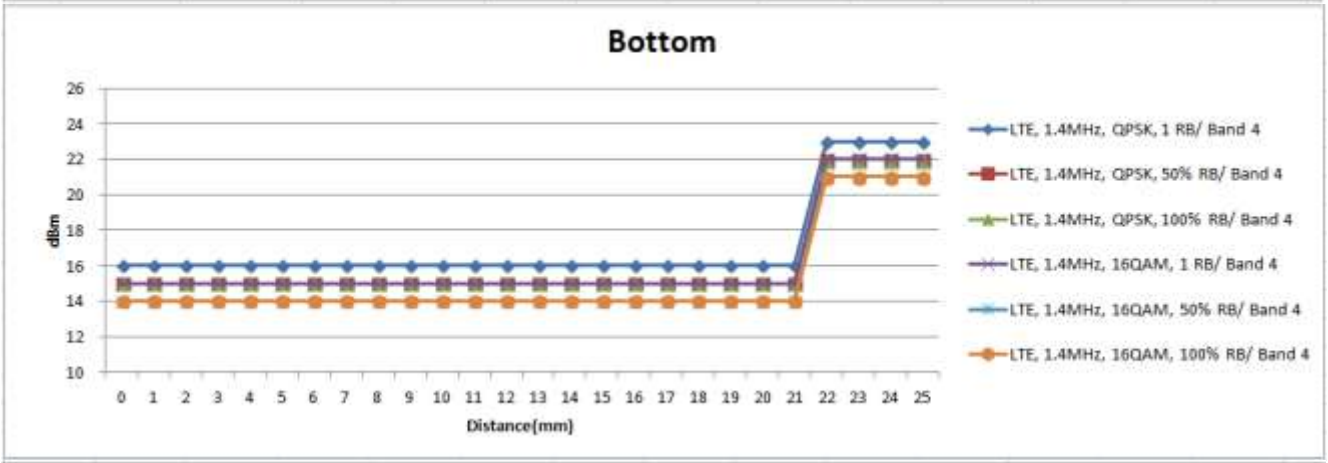

Edge 1
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 4
LTE, 3MHz, QPSK, 50% RB/ Band 4
LTE, 3MHz, QPSK, 100% RB/ Band 4
LTE, 3MHz, 16QAM, 1 RB/ Band 4
LTE, 3MHz, 16QAM, 50% RB/ Band 4
LTE, 3MHz, 16QAM, 100% RB/ Band 4

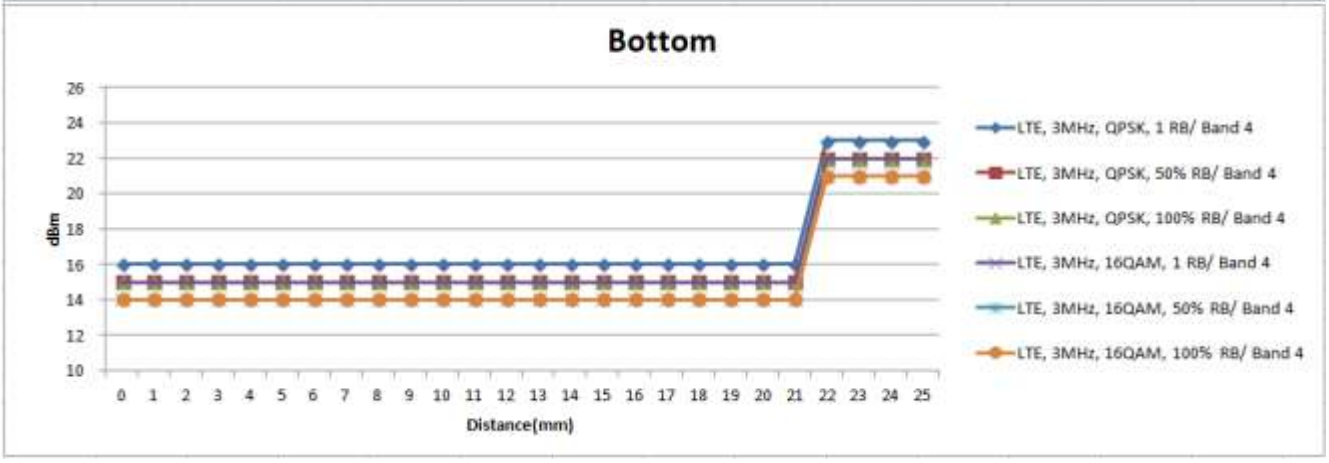

Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 4
LTE, 5MHz, QPSK, 50% RB/ Band 4
LTE, 5MHz, QPSK, 100% RB/ Band 4
LTE, 5MHz, 16QAM, 1 RB/ Band 4
LTE, 5MHz, 16QAM, 50% RB/ Band 4
LTE, 5MHz, 16QAM, 100% RB/ Band 4

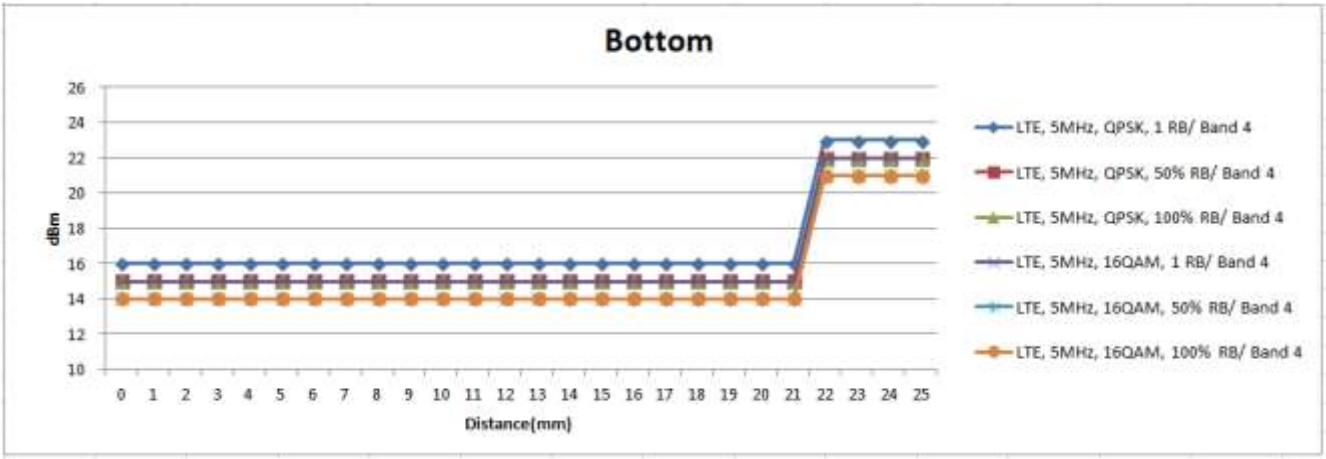

Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 4
LTE, 10MHz, QPSK, 50% RB/ Band 4
LTE, 10MHz, QPSK, 100% RB/ Band 4
LTE, 10MHz, 16QAM, 1 RB/ Band 4
LTE ,10MHz, 16QAM, 50% RB/ Band 4
LTE, 10MHz, 16QAM, 100% RB/ Band 4

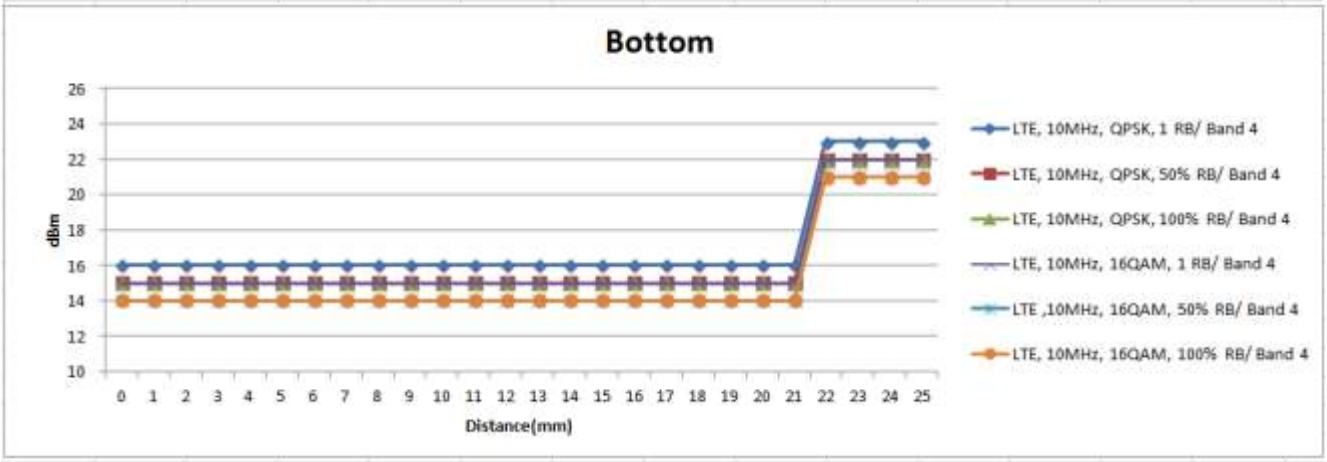

Edge 1
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 4
LTE, 15MHz, QPSK, 50% RB/ Band 4
LTE, 15MHz, QPSK, 100% RB/ Band 4
LTE, 15MHz, 16QAM, 1 RB/ Band 4
LTE, 15MHz, 16QAM, 50% RB/ Band 4
LTE, 15MHz, 16QAM, 100% RB/ Band 4

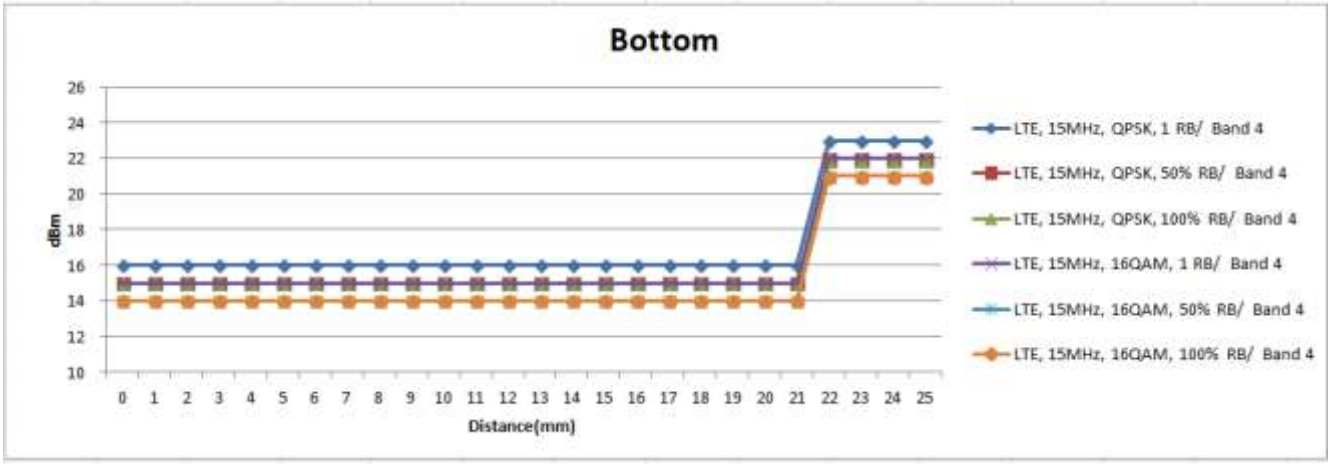

Edge 1
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 4
LTE, 20MHz, QPSK, 50% RB/ Band 4
LTE, 20MHz, QPSK, 100% RB/ Band 4
LTE, 20MHz, 16QAM, 1 RB/ Band 4
LTE, 20MHz, 16QAM, 50% RB/ Band 4
LTE, 20MHz, 16QAM, 100% RB/ Band 4

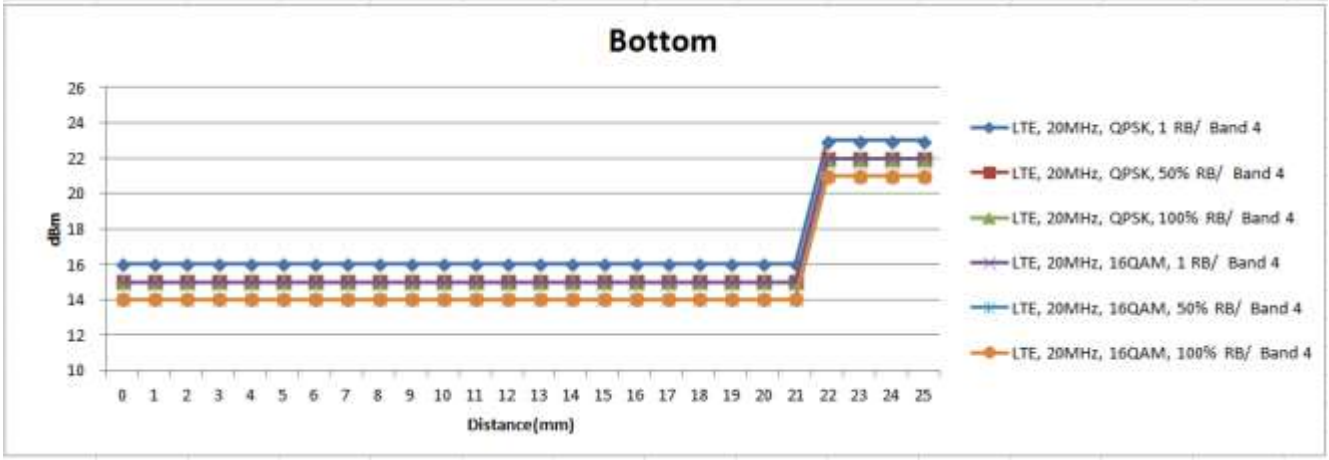

Bottom
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 4
LTE, 1.4MHz, QPSK, 50% RB/ Band 4
LTE, 1.4MHz, QPSK, 100% RB/ Band 4
LTE, 1.4MHz, 16QAM, 1 RB/ Band 4
LTE, 1.4MHz, 16QAM, 50% RB/ Band 4
LTE, 1.4MHz, 16QAM, 100% RB/ Band 4

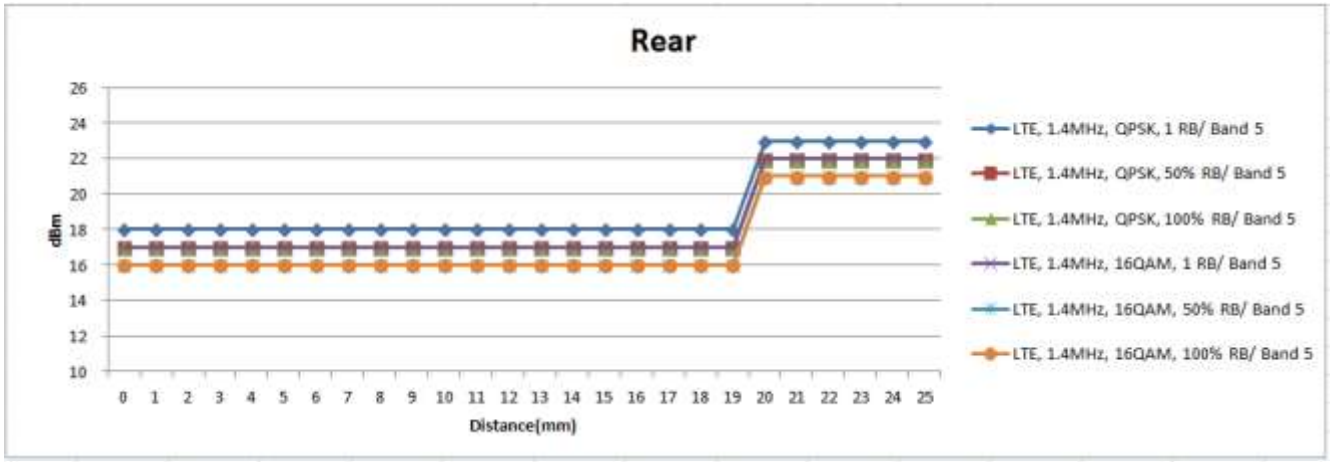

Bottom
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 4
LTE, 3MHz, QPSK, 50% RB/ Band 4
LTE, 3MHz, QPSK, 100% RB/ Band 4
LTE, 3MHz, 16QAM, 1 RB/ Band 4
LTE, 3MHz, 16QAM, 50% RB/ Band 4
LTE, 3MHz, 16QAM, 100% RB/ Band 4

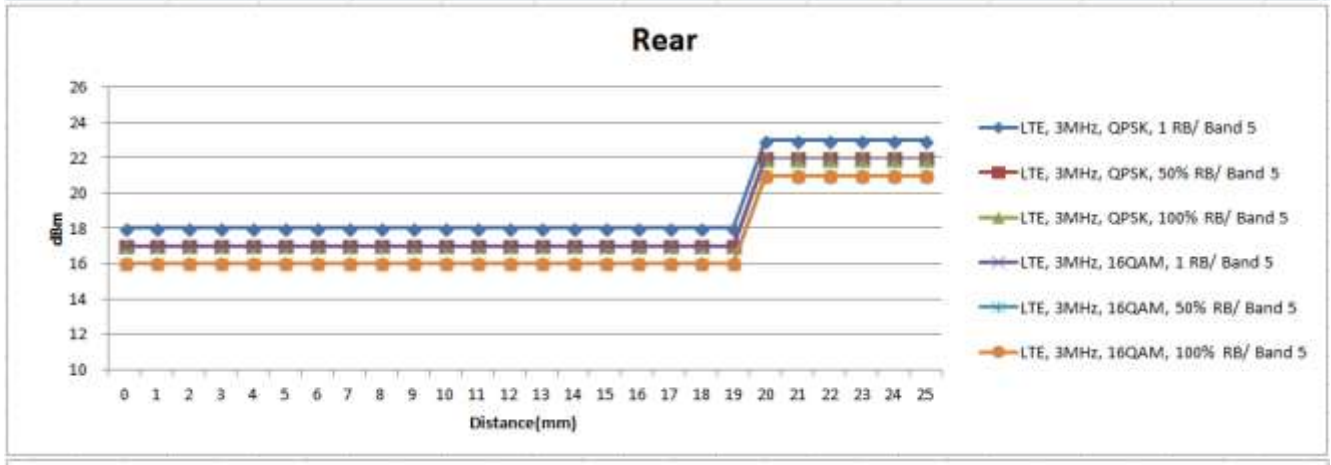

Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 4
LTE, 5MHz, QPSK, 50% RB/ Band 4
LTE, 5MHz, QPSK, 100% RB/ Band 4
LTE, 5MHz, 16QAM, 1 RB/ Band 4
LTE, 5MHz, 16QAM, 50% RB/ Band 4
LTE, 5MHz, 16QAM, 100% RB/ Band 4

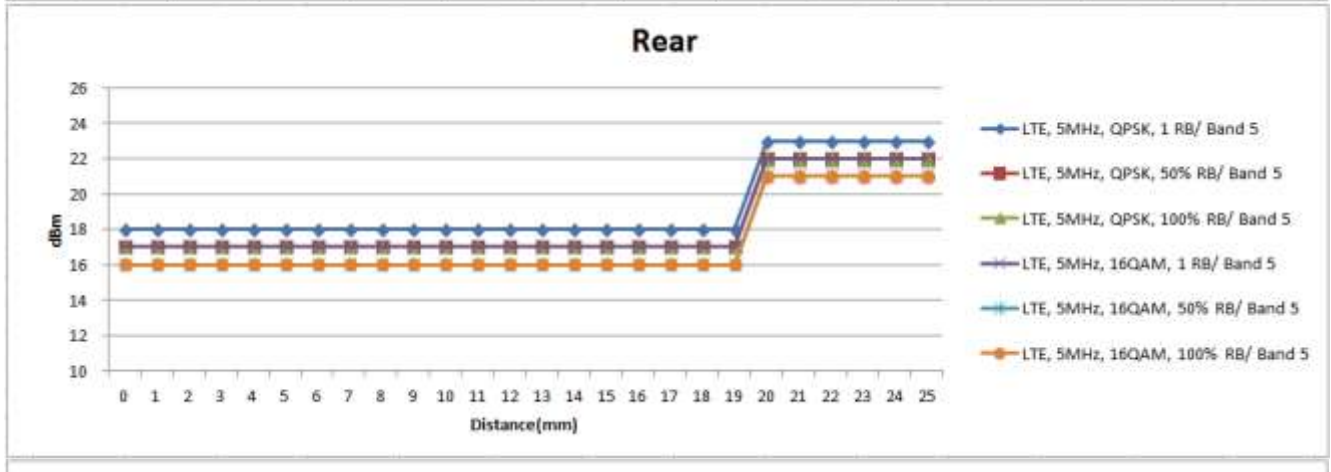

Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 4
LTE, 10MHz, QPSK, 50% RB/ Band 4
LTE, 10MHz, QPSK, 100% RB/ Band 4
LTE, 10MHz, 16QAM, 1 RB/ Band 4
LTE ,10MHz, 16QAM, 50% RB/ Band 4
LTE, 10MHz, 16QAM, 100% RB/ Band 4

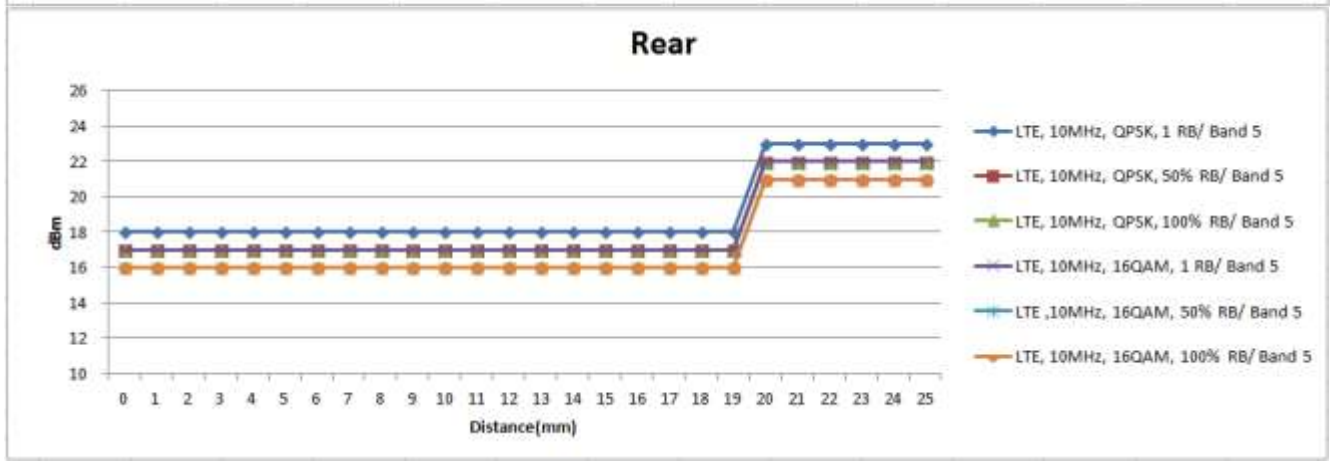

Bottom
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 4
LTE, 15MHz, QPSK, 50% RB/ Band 4
LTE, 15MHz, QPSK, 100% RB/ Band 4
LTE, 15MHz, 16QAM, 1 RB/ Band 4
LTE, 15MHz, 16QAM, 50% RB/ Band 4
LTE, 15MHz, 16QAM, 100% RB/ Band 4

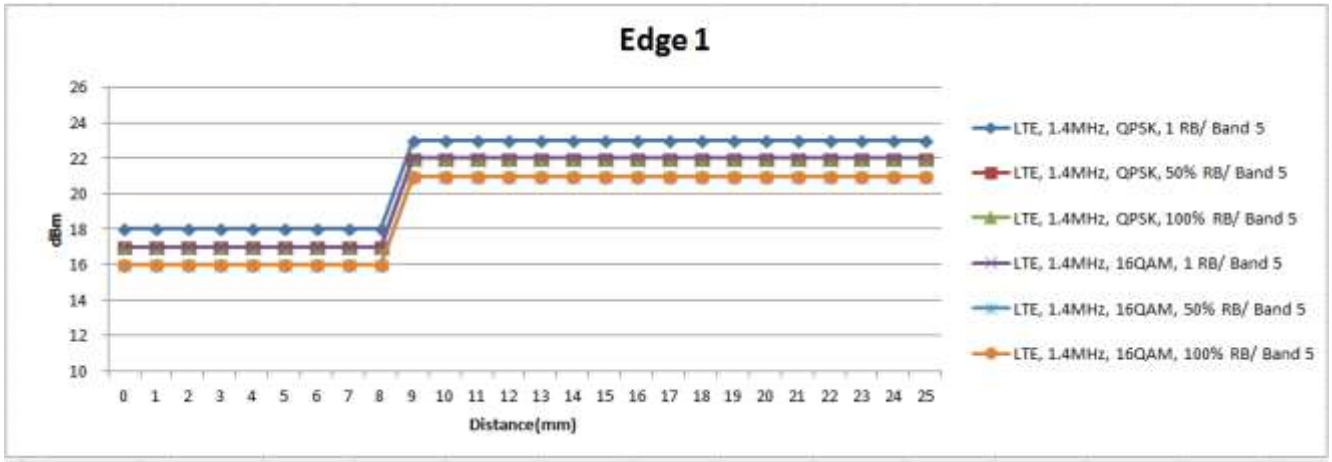

Bottom
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 4
LTE, 20MHz, QPSK, 50% RB/ Band 4
LTE, 20MHz, QPSK, 100% RB/ Band 4
LTE, 20MHz, 16QAM, 1 RB/ Band 4
LTE, 20MHz, 16QAM, 50% RB/ Band 4
LTE, 20MHz, 16QAM, 100% RB/ Band 4

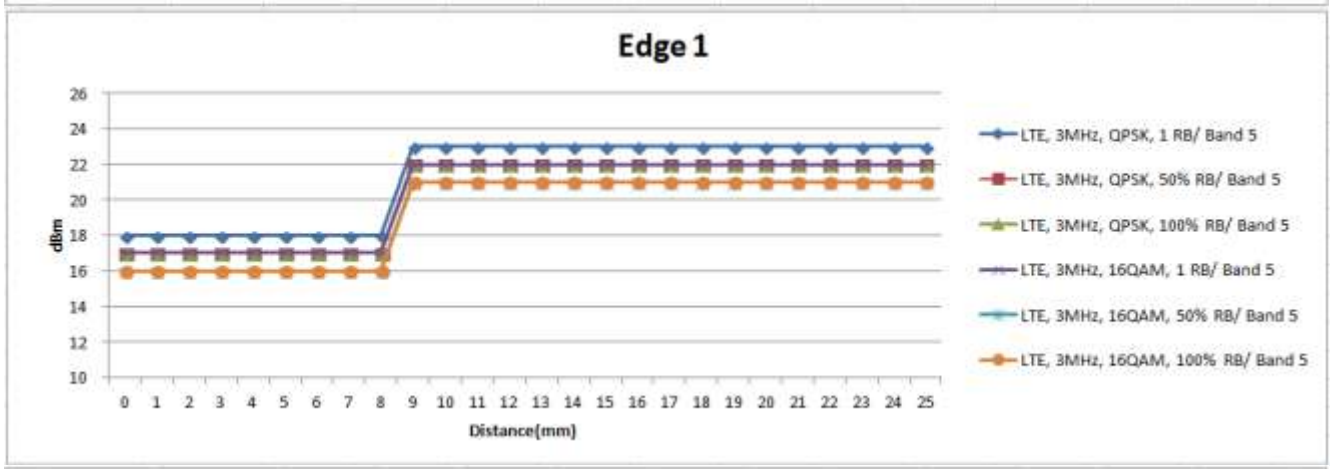

Rear
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 5
LTE, 1.4MHz, QPSK, 50% RB/ Band 5
LTE, 1.4MHz, QPSK, 100% RB/ Band 5
LTE, 1.4MHz, 16QAM, 1 RB/ Band 5
LTE, 1.4MHz, 16QAM, 50% RB/ Band 5
LTE, 1.4MHz, 16QAM, 100% RB/ Band 5

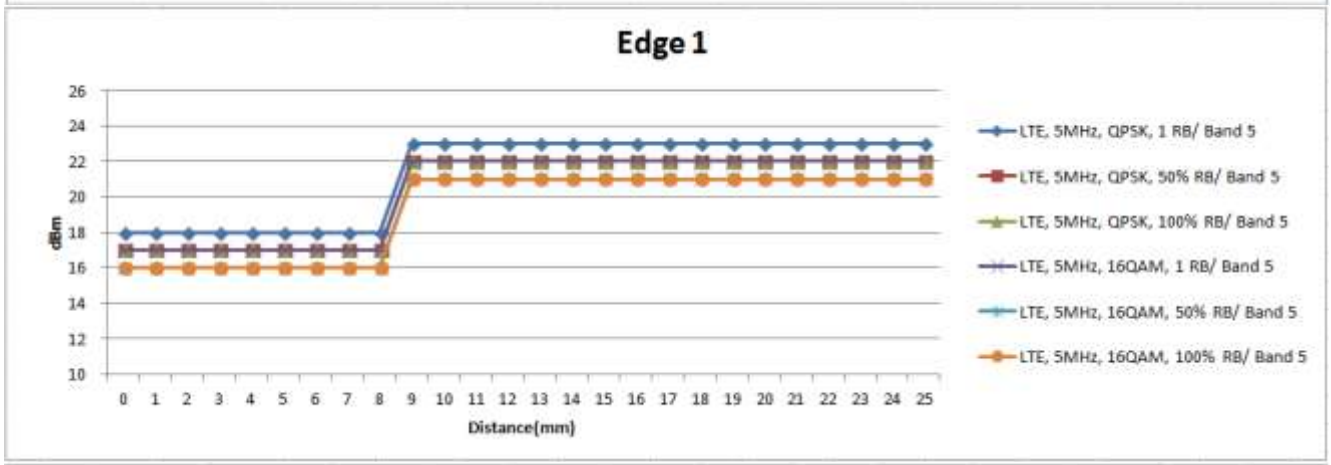

Rear
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 5
LTE, 3MHz, QPSK, 50% RB/ Band 5
LTE, 3MHz, QPSK, 100% RB/ Band 5
LTE, 3MHz, 16QAM, 1 RB/ Band 5
LTE, 3MHz, 16QAM, 50% RB/ Band 5
LTE, 3MHz, 16QAM, 100% RB/ Band 5

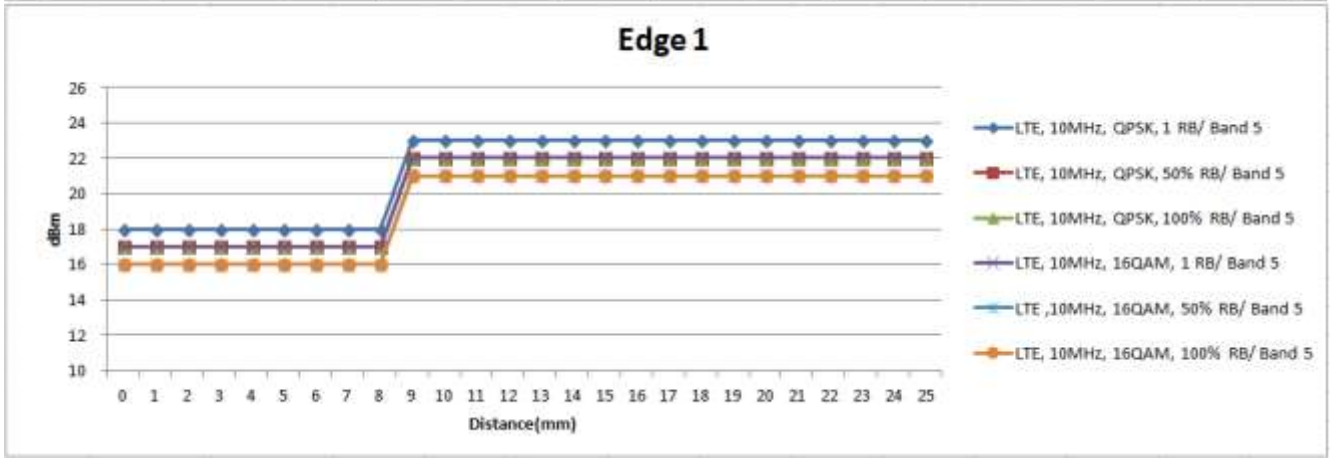

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 5
LTE, 5MHz, QPSK, 50% RB/ Band 5
LTE, 5MHz, QPSK, 100% RB/ Band 5
LTE, 5MHz, 16QAM, 1 RB/ Band 5
LTE, 5MHz, 16QAM, 50% RB/ Band 5
LTE, 5MHz, 16QAM, 100% RB/ Band 5

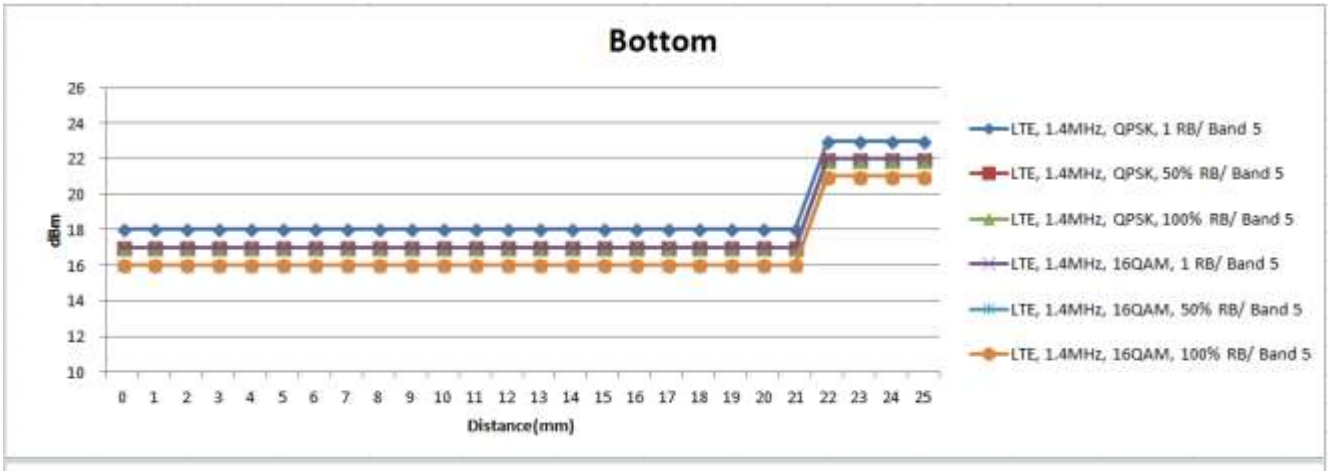

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 5
LTE, 10MHz, QPSK, 50% RB/ Band 5
LTE, 10MHz, QPSK, 100% RB/ Band 5
LTE, 10MHz, 16QAM, 1 RB/ Band 5
LTE ,10MHz, 16QAM, 50% RB/ Band 5
LTE, 10MHz, 16QAM, 100% RB/ Band 5

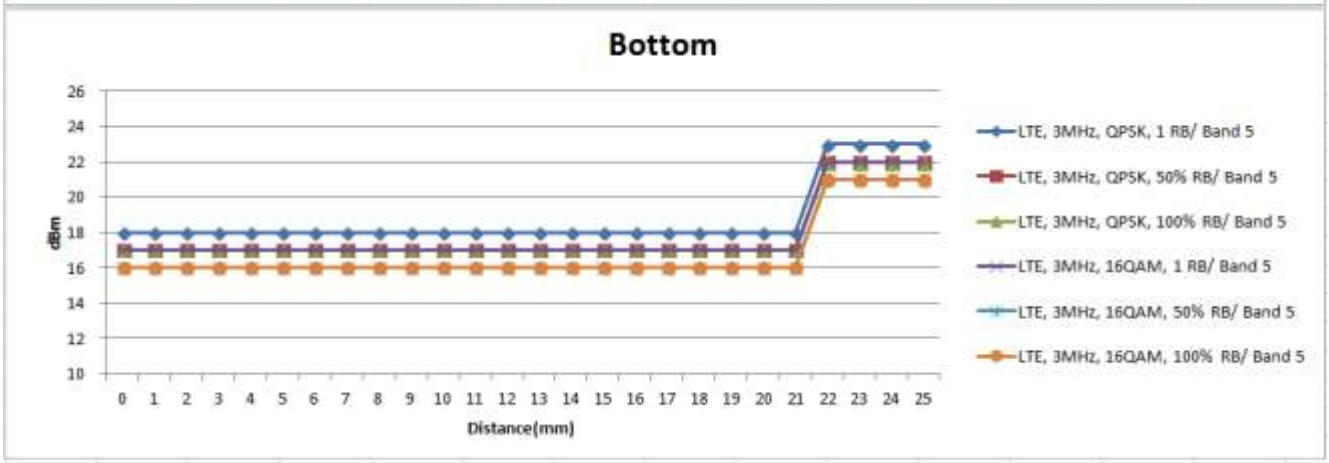

Edge 1
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 5
LTE, 1.4MHz, QPSK, 50% RB/ Band 5
LTE, 1.4MHz, QPSK, 100% RB/ Band 5
LTE, 1.4MHz, 16QAM, 1 RB/ Band 5
LTE, 1.4MHz, 16QAM, 50% RB/ Band 5
LTE, 1.4MHz, 16QAM, 100% RB/ Band 5

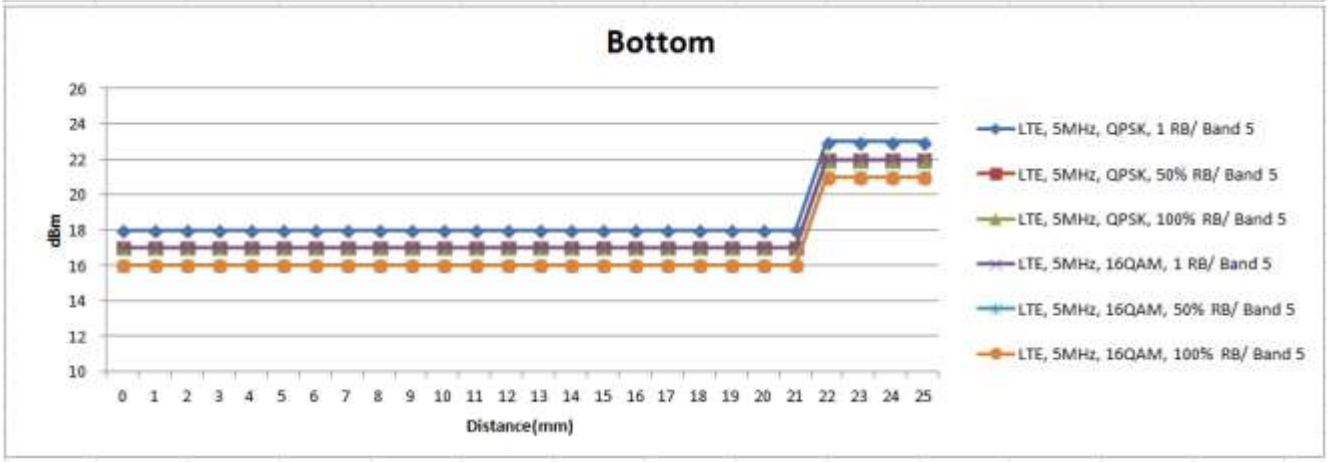

Edge 1
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 5
LTE, 3MHz, QPSK, 50% RB/ Band 5
LTE, 3MHz, QPSK, 100% RB/ Band 5
LTE, 3MHz, 16QAM, 1 RB/ Band 5
LTE, 3MHz, 16QAM, 50% RB/ Band 5
LTE, 3MHz, 16QAM, 100% RB/ Band 5

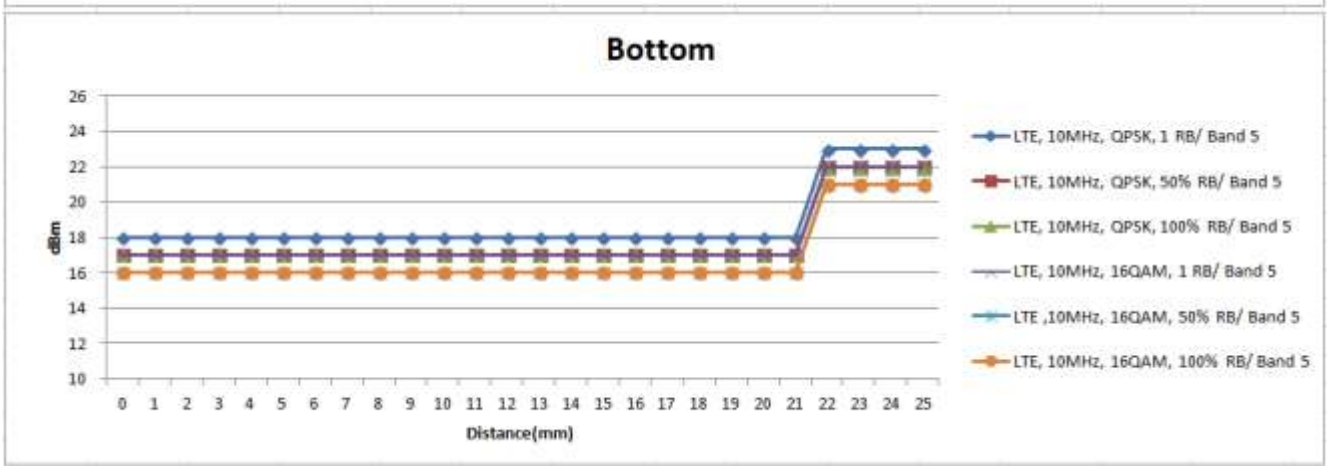

Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 5
LTE, 5MHz, QPSK, 50% RB/ Band 5
LTE, 5MHz, QPSK, 100% RB/ Band 5
LTE, 5MHz, 16QAM, 1 RB/ Band 5
LTE, 5MHz, 16QAM, 50% RB/ Band 5
LTE, 5MHz, 16QAM, 100% RB/ Band 5

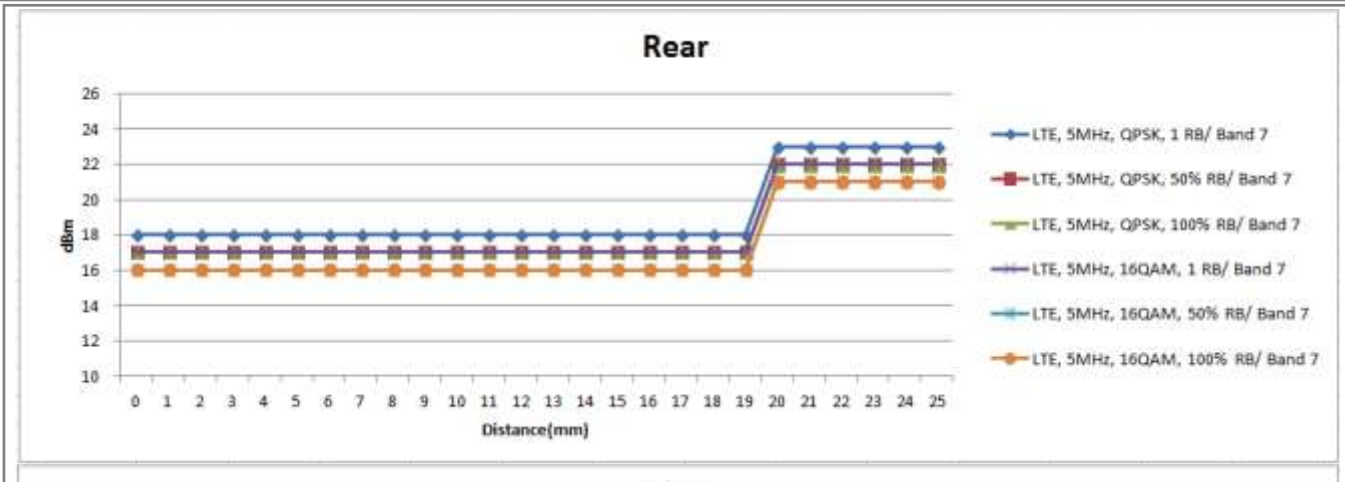

Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 5
LTE, 10MHz, QPSK, 50% RB/ Band 5
LTE, 10MHz, QPSK, 100% RB/ Band 5
LTE, 10MHz, 16QAM, 1 RB/ Band 5
LTE ,10MHz, 16QAM, 50% RB/ Band 5
LTE, 10MHz, 16QAM, 100% RB/ Band 5

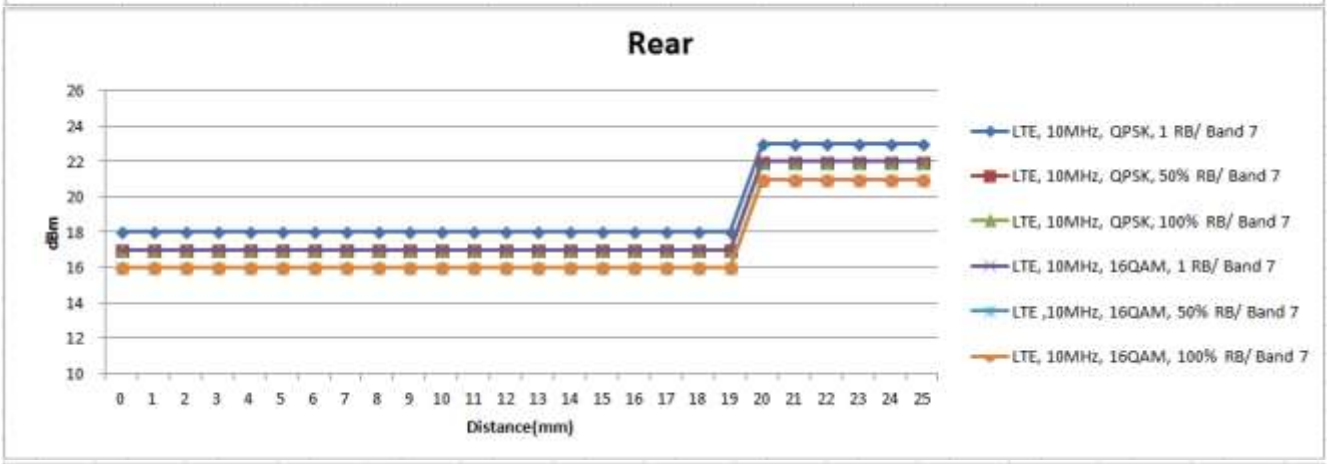

Bottom
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 5
LTE, 1.4MHz, QPSK, 50% RB/ Band 5
LTE, 1.4MHz, QPSK, 100% RB/ Band 5
LTE, 1.4MHz, 16QAM, 1 RB/ Band 5
LTE, 1.4MHz, 16QAM, 50% RB/ Band 5
LTE, 1.4MHz, 16QAM, 100% RB/ Band 5

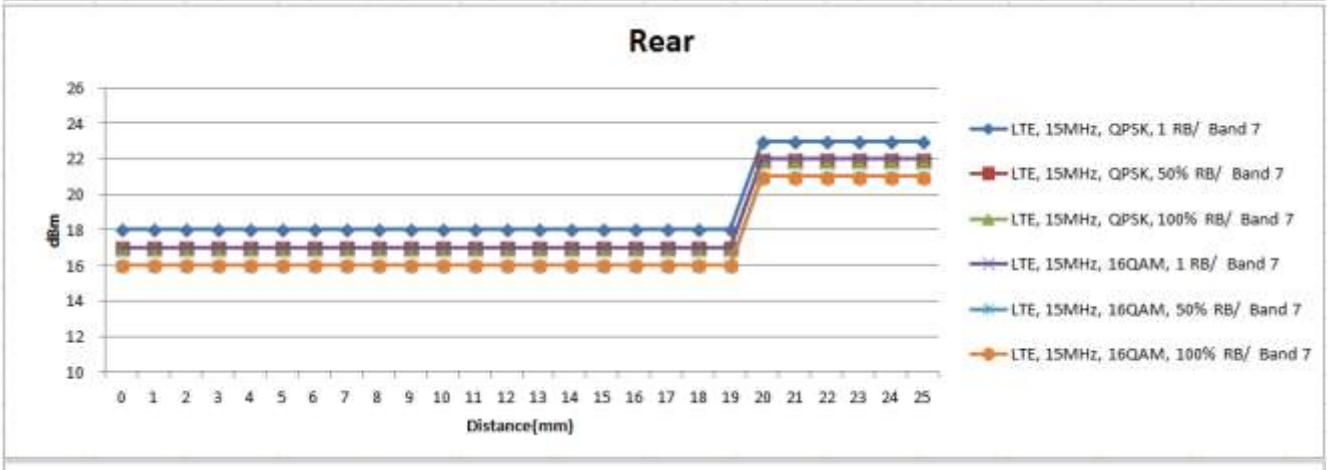

Bottom
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 5
LTE, 3MHz, QPSK, 50% RB/ Band 5
LTE, 3MHz, QPSK, 100% RB/ Band 5
LTE, 3MHz, 16QAM, 1 RB/ Band 5
LTE, 3MHz, 16QAM, 50% RB/ Band 5
LTE, 3MHz, 16QAM, 100% RB/ Band 5

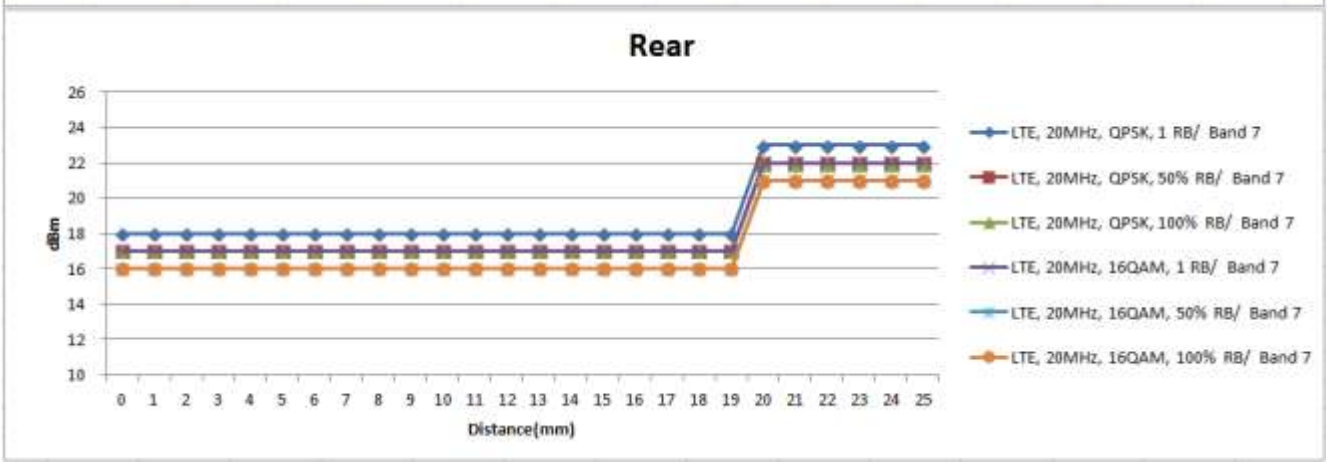

Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 5
LTE, 5MHz, QPSK, 50% RB/ Band 5
LTE, 5MHz, QPSK, 100% RB/ Band 5
LTE, 5MHz, 16QAM, 1 RB/ Band 5
LTE, 5MHz, 16QAM, 50% RB/ Band 5
LTE, 5MHz, 16QAM, 100% RB/ Band 5

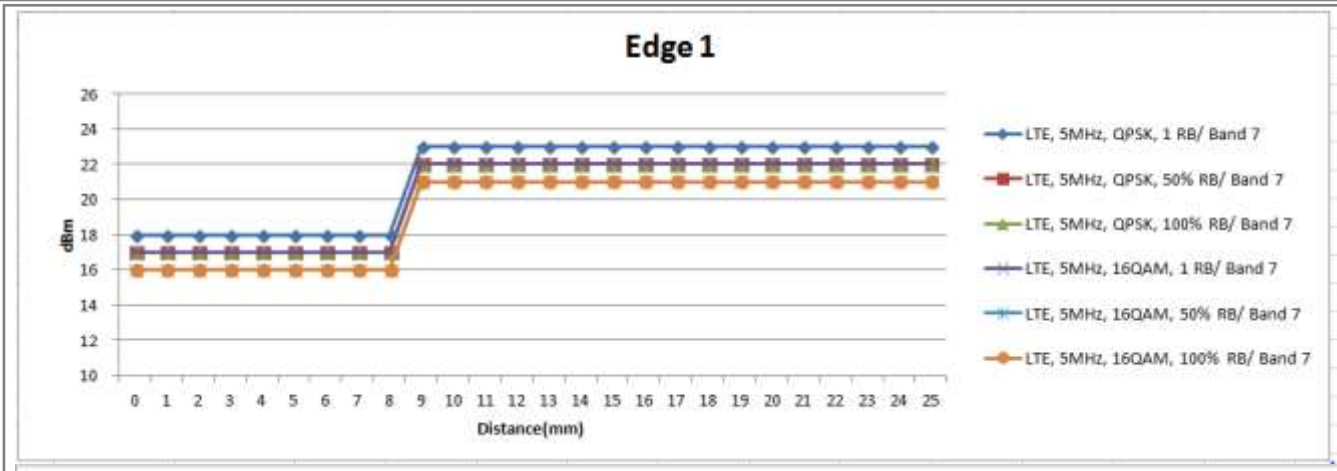

Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 5
LTE, 10MHz, QPSK, 50% RB/ Band 5
LTE, 10MHz, QPSK, 100% RB/ Band 5
LTE, 10MHz, 16QAM, 1 RB/ Band 5
LTE ,10MHz, 16QAM, 50% RB/ Band 5
LTE, 10MHz, 16QAM, 100% RB/ Band 5

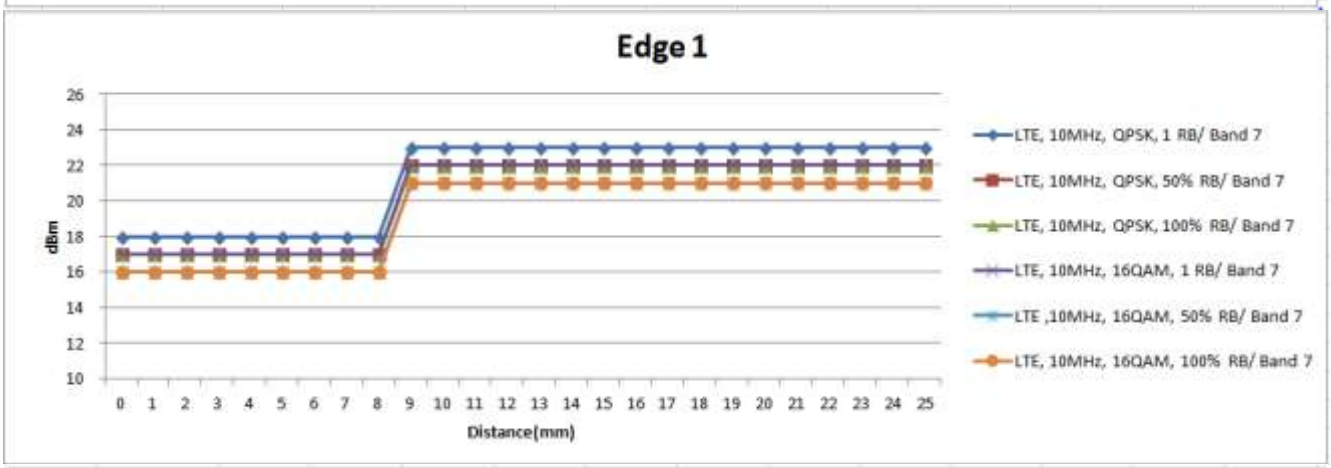

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 7
LTE, 5MHz, QPSK, 50% RB/ Band 7
LTE, 5MHz, QPSK, 100% RB/ Band 7
LTE, 5MHz, 16QAM, 1 RB/ Band 7
LTE, 5MHz, 16QAM, 50% RB/ Band 7
LTE, 5MHz, 16QAM, 100% RB/ Band 7

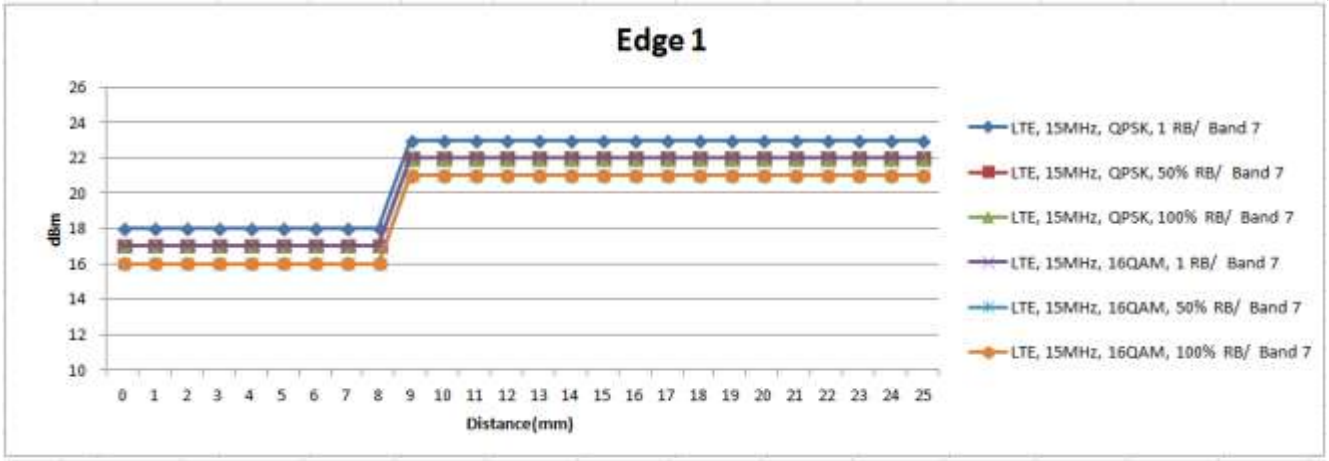

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 7
LTE, 10MHz, QPSK, 50% RB/ Band 7
LTE, 10MHz, QPSK, 100% RB/ Band 7
LTE, 10MHz, 16QAM, 1 RB/ Band 7
LTE ,10MHz, 16QAM, 50% RB/ Band 7
LTE, 10MHz, 16QAM, 100% RB/ Band 7

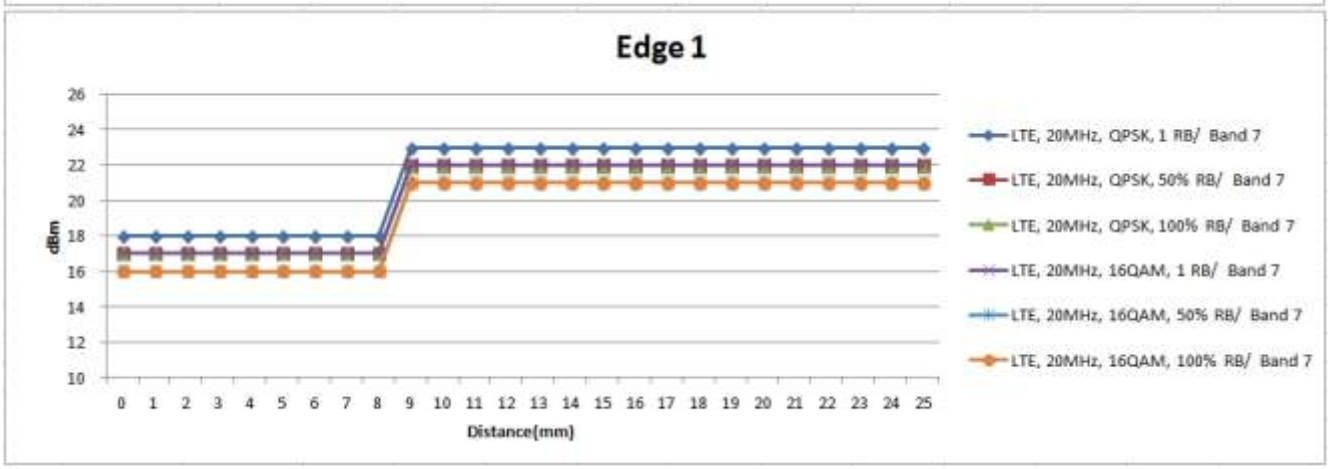

Rear
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 7
LTE, 15MHz, QPSK, 50% RB/ Band 7
LTE, 15MHz, QPSK, 100% RB/ Band 7
LTE, 15MHz, 16QAM, 1 RB/ Band 7
LTE, 15MHz, 16QAM, 50% RB/ Band 7
LTE, 15MHz, 16QAM, 100% RB/ Band 7


Rear
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 7
LTE, 20MHz, QPSK, 50% RB/ Band 7
LTE, 20MHz, QPSK, 100% RB/ Band 7
LTE, 20MHz, 16QAM, 1 RB/ Band 7
LTE, 20MHz, 16QAM, 50% RB/ Band 7
LTE, 20MHz, 16QAM, 100% RB/ Band 7

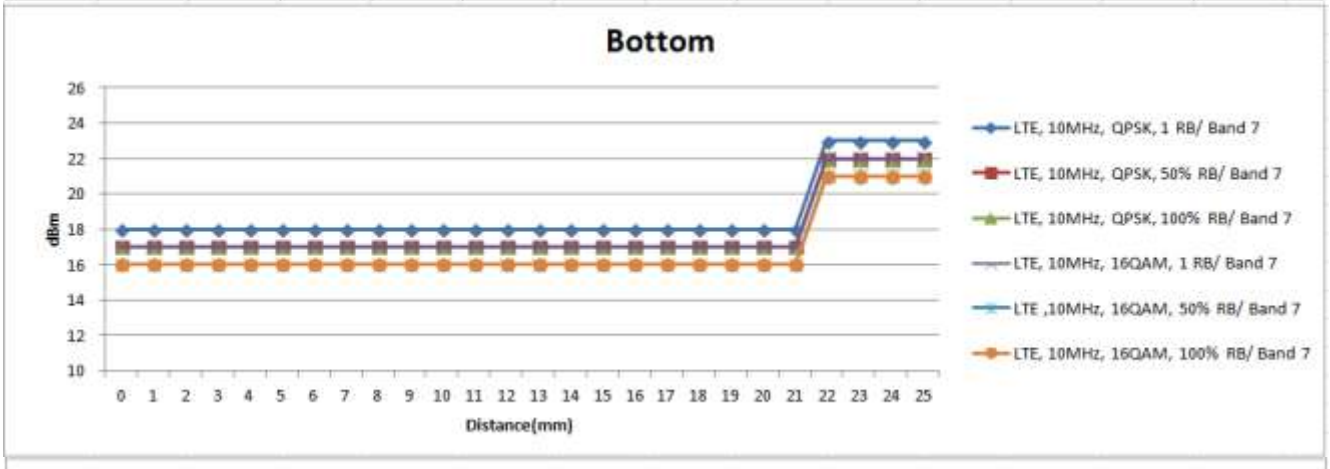

Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 7
LTE, 5MHz, QPSK, 50% RB/ Band 7
LTE, 5MHz, QPSK, 100% RB/ Band 7
LTE, 5MHz, 16QAM, 1 RB/ Band 7
LTE, 5MHz, 16QAM, 50% RB/ Band 7
LTE, 5MHz, 16QAM, 100% RB/ Band 7

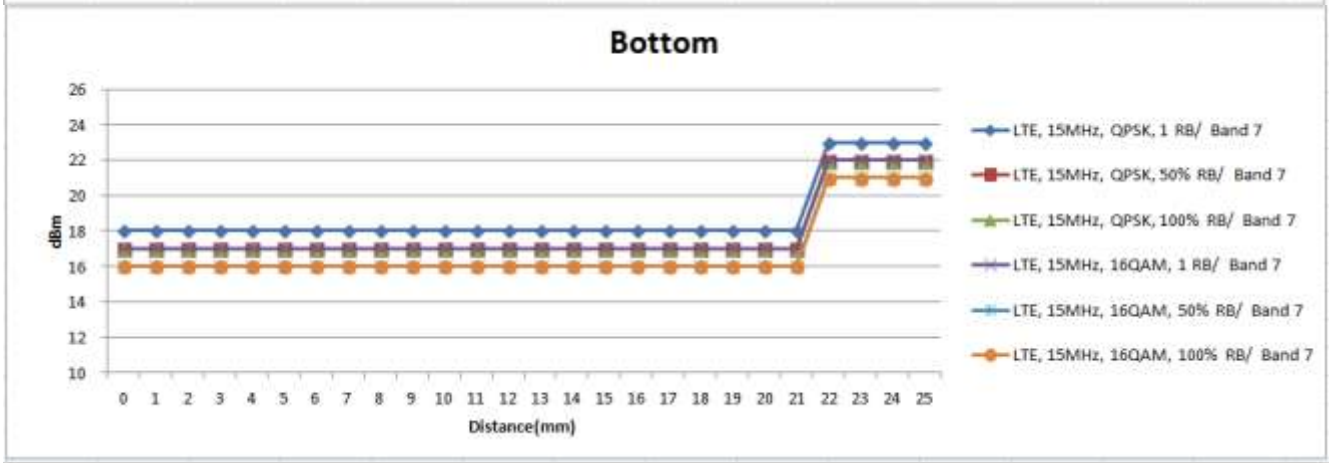

Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 7
LTE, 10MHz, QPSK, 50% RB/ Band 7
LTE, 10MHz, QPSK, 100% RB/ Band 7
LTE, 10MHz, 16QAM, 1 RB/ Band 7
LTE ,10MHz, 16QAM, 50% RB/ Band 7
LTE, 10MHz, 16QAM, 100% RB/ Band 7

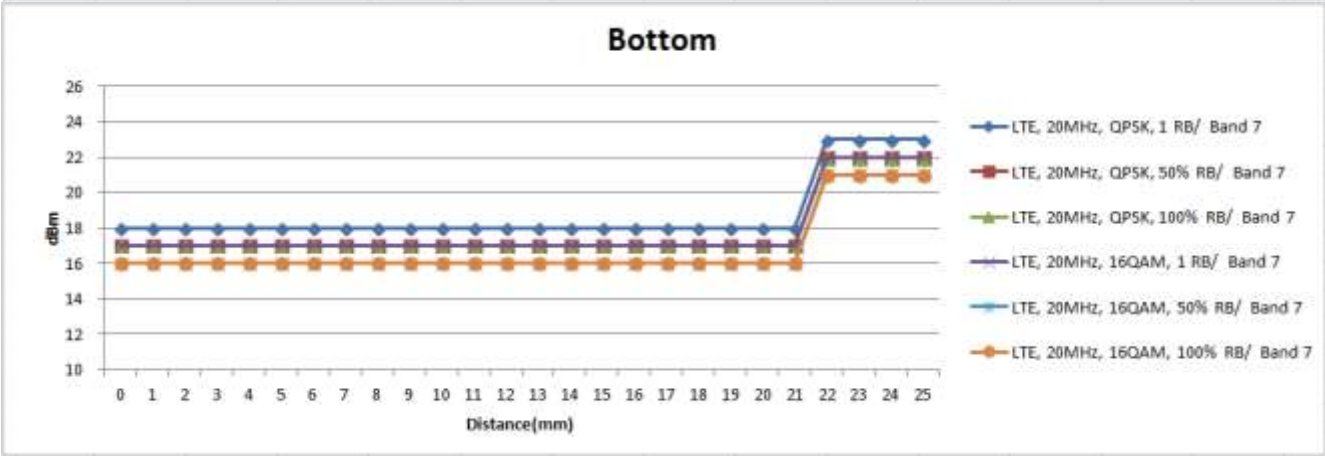

Edge 1
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 7
LTE, 15MHz, QPSK, 50% RB/ Band 7
LTE, 15MHz, QPSK, 100% RB/ Band 7
LTE, 15MHz, 16QAM, 1 RB/ Band 7
LTE, 15MHz, 16QAM, 50% RB/ Band 7
LTE, 15MHz, 16QAM, 100% RB/ Band 7

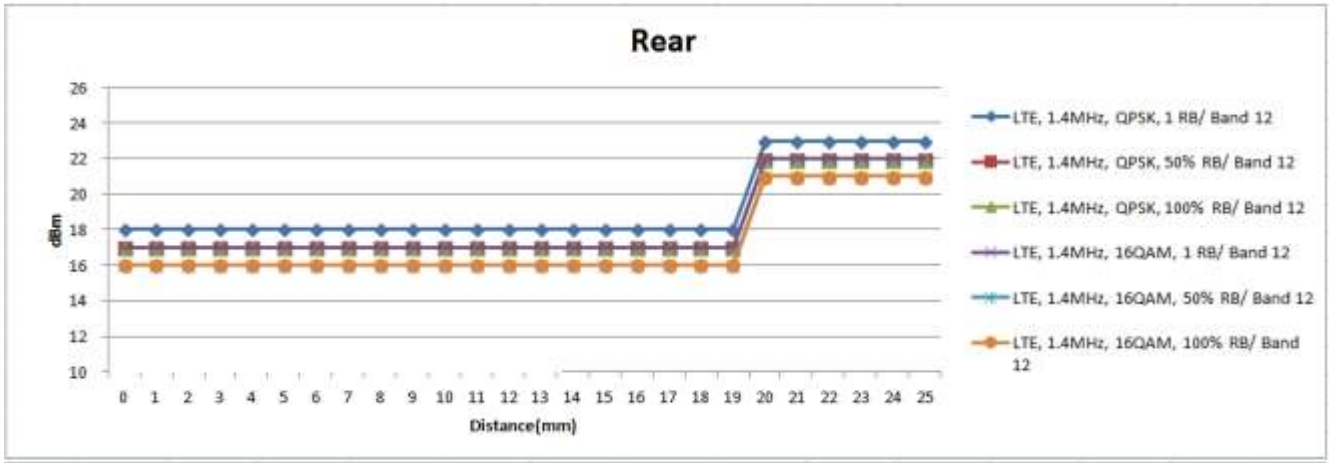

Edge 1
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 7
LTE, 20MHz, QPSK, 50% RB/ Band 7
LTE, 20MHz, QPSK, 100% RB/ Band 7
LTE, 20MHz, 16QAM, 1 RB/ Band 7
LTE, 20MHz, 16QAM, 50% RB/ Band 7
LTE, 20MHz, 16QAM, 100% RB/ Band 7

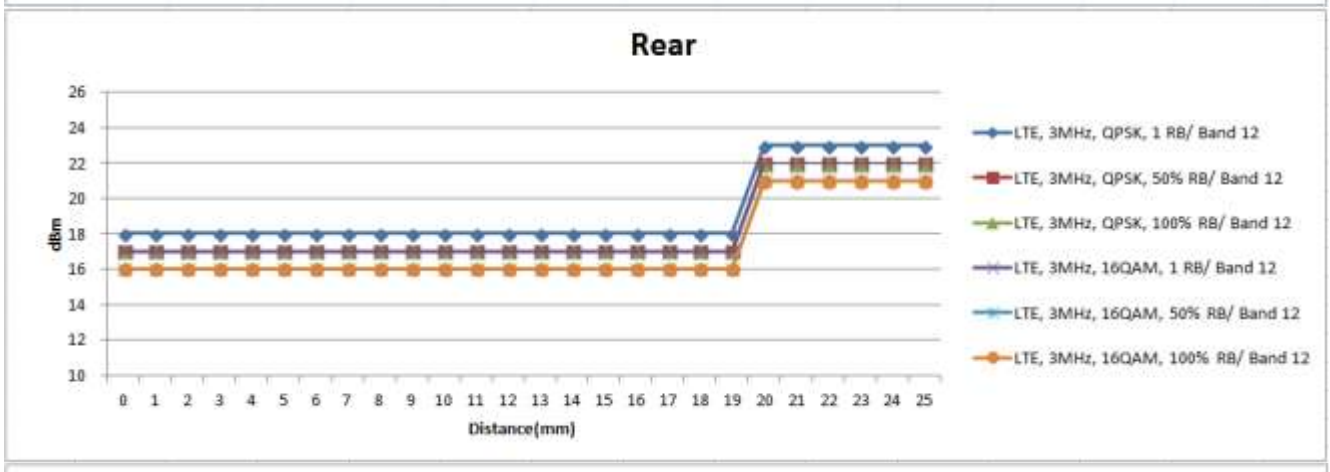

Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 7
LTE, 5MHz, QPSK, 50% RB/ Band 7
LTE, 5MHz, QPSK, 100% RB/ Band 7
LTE, 5MHz, 16QAM, 1 RB/ Band 7
LTE, 5MHz, 16QAM, 50% RB/ Band 7
LTE, 5MHz, 16QAM, 100% RB/ Band 7

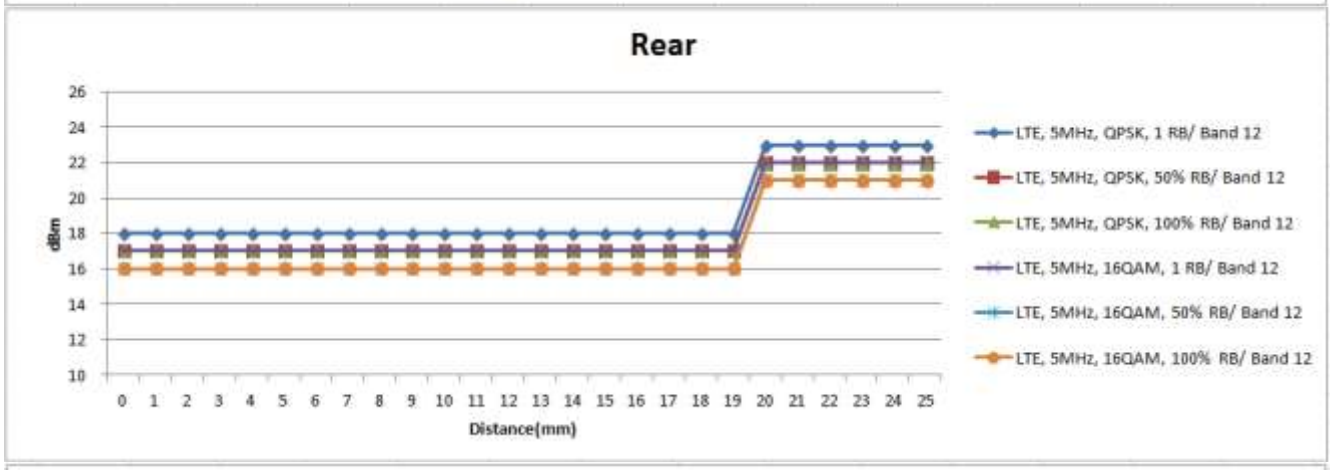

Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 7
LTE, 10MHz, QPSK, 50% RB/ Band 7
LTE, 10MHz, QPSK, 100% RB/ Band 7
LTE, 10MHz, 16QAM, 1 RB/ Band 7
LTE ,10MHz, 16QAM, 50% RB/ Band 7
LTE, 10MHz, 16QAM, 100% RB/ Band 7

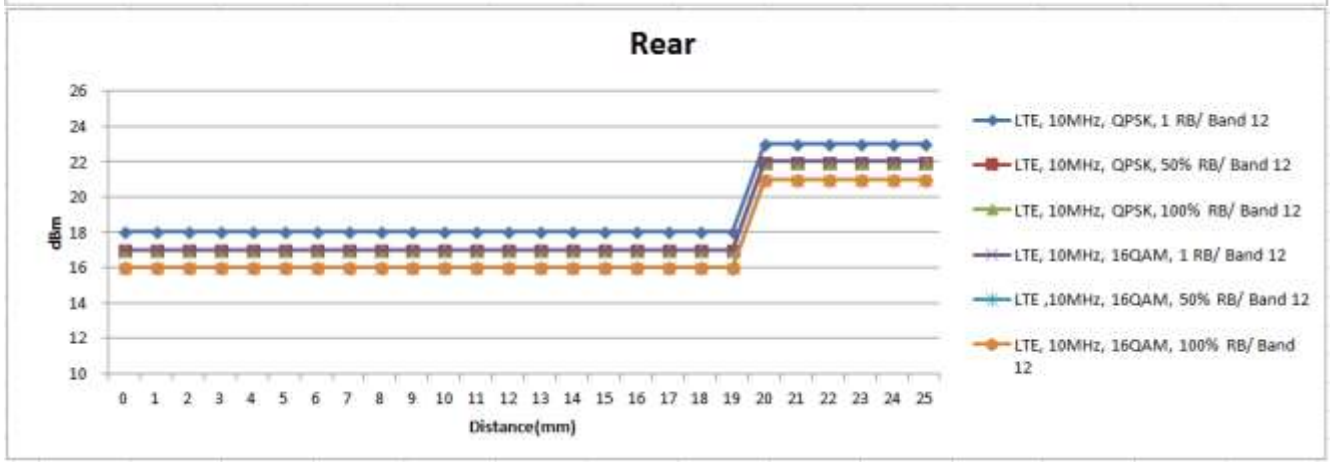

Bottom
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 7
LTE, 15MHz, QPSK, 50% RB/ Band 7
LTE, 15MHz, QPSK, 100% RB/ Band 7
LTE, 15MHz, 16QAM, 1 RB/ Band 7
LTE, 15MHz, 16QAM, 50% RB/ Band 7
LTE, 15MHz, 16QAM, 100% RB/ Band 7

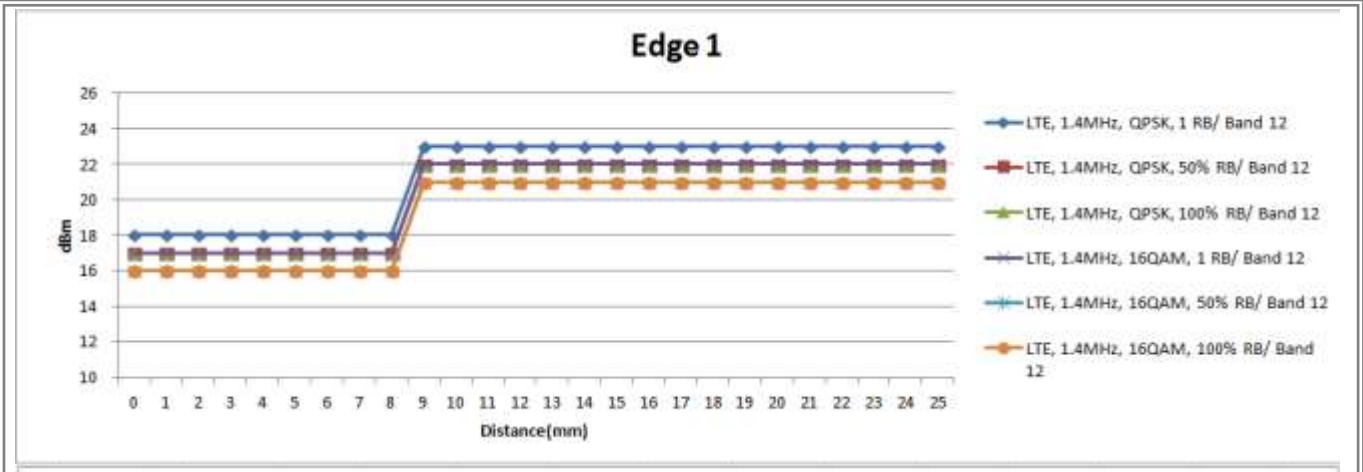

Bottom
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 7
LTE, 20MHz, QPSK, 50% RB/ Band 7
LTE, 20MHz, QPSK, 100% RB/ Band 7
LTE, 20MHz, 16QAM, 1 RB/ Band 7
LTE, 20MHz, 16QAM, 50% RB/ Band 7
LTE, 20MHz, 16QAM, 100% RB/ Band 7

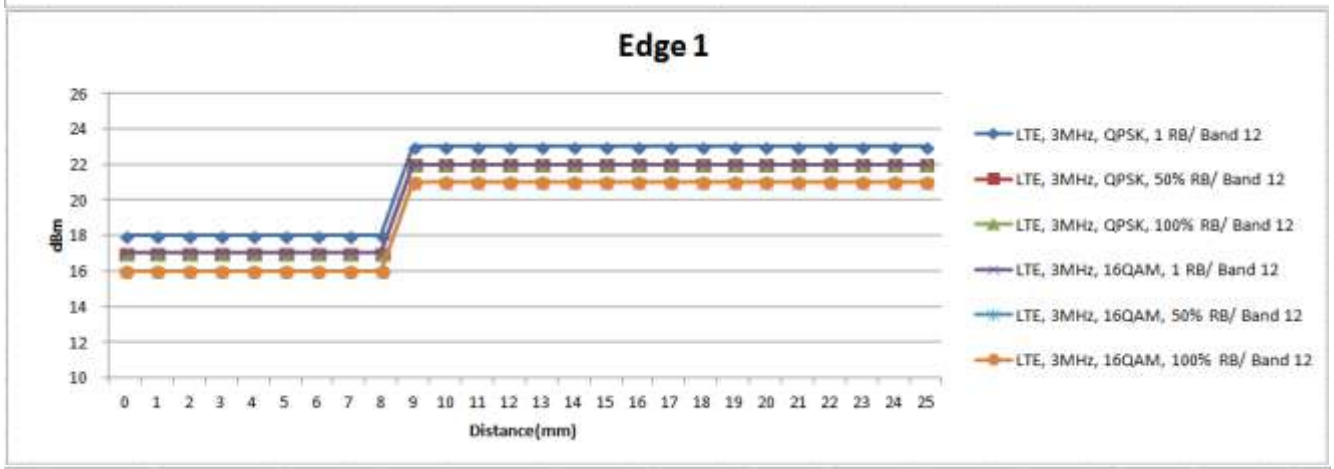

Rear
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 12
LTE, 1.4MHz, QPSK, 50% RB/ Band 12
LTE, 1.4MHz, QPSK, 100% RB/ Band 12
LTE, 1.4MHz, 16QAM, 1 RB/ Band 12
LTE, 1.4MHz, 16QAM, 50% RB/ Band 12
LTE, 1.4MHz, 16QAM, 100% RB/ Band 12

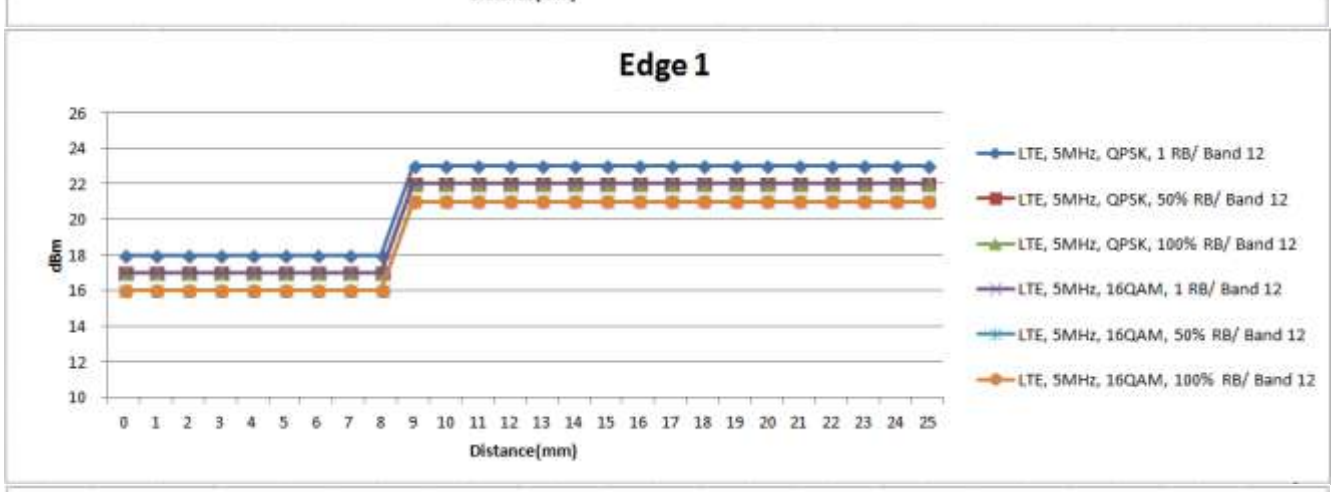

Rear
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 12
LTE, 3MHz, QPSK, 50% RB/ Band 12
LTE, 3MHz, QPSK, 100% RB/ Band 12
LTE, 3MHz, 16QAM, 1 RB/ Band 12
LTE, 3MHz, 16QAM, 50% RB/ Band 12
LTE, 3MHz, 16QAM, 100% RB/ Band 12

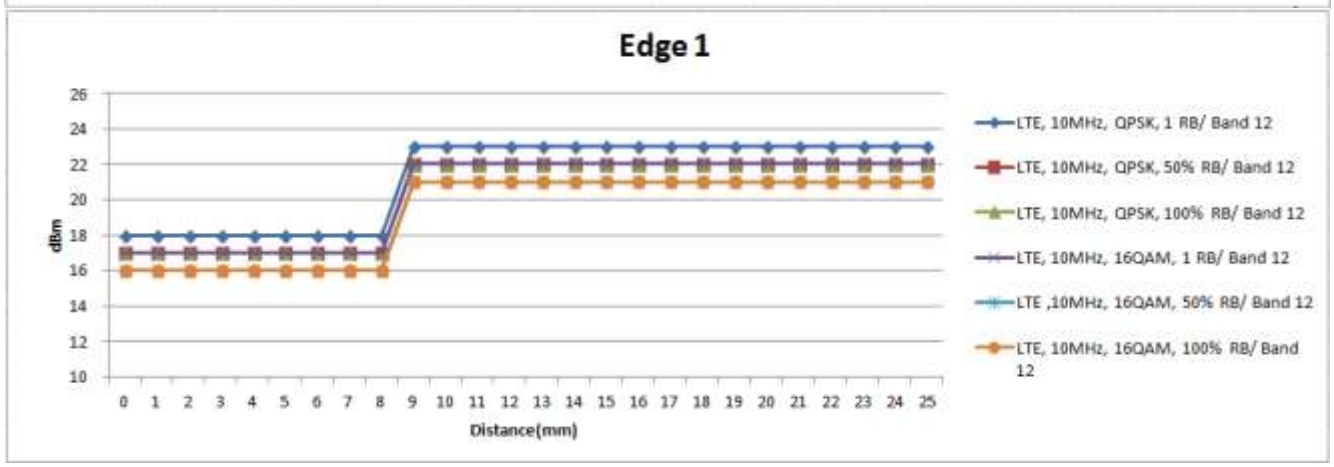

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 12
LTE, 5MHz, QPSK, 50% RB/ Band 12
LTE, 5MHz, QPSK, 100% RB/ Band 12
LTE, 5MHz, 16QAM, 1 RB/ Band 12
LTE, 5MHz, 16QAM, 50% RB/ Band 12
LTE, 5MHz, 16QAM, 100% RB/ Band 12

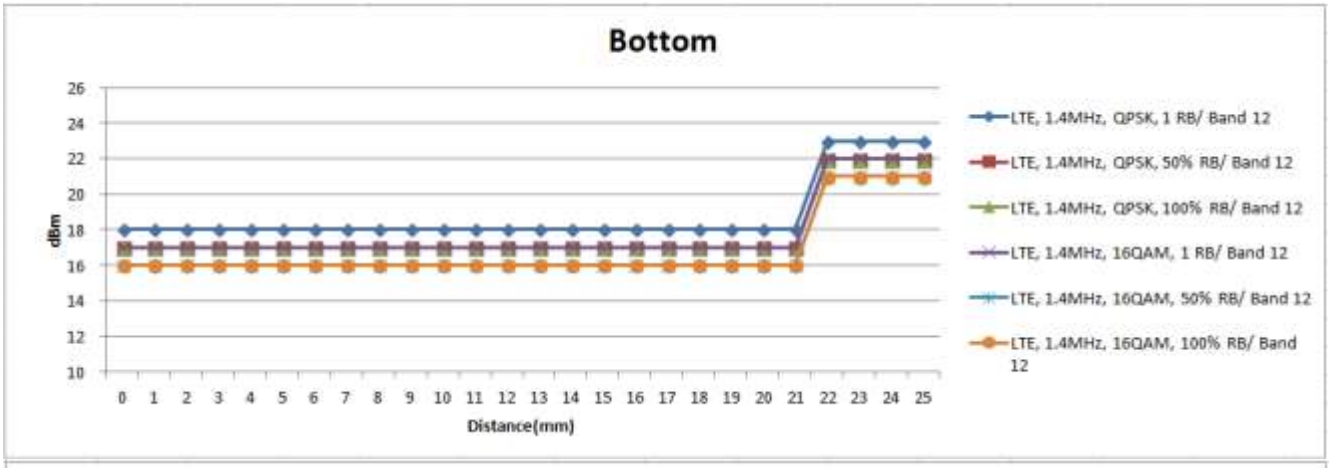

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 12
LTE, 10MHz, QPSK, 50% RB/ Band 12
LTE, 10MHz, QPSK, 100% RB/ Band 12
LTE, 10MHz, 16QAM, 1 RB/ Band 12
LTE ,10MHz, 16QAM, 50% RB/ Band 12
LTE, 10MHz, 16QAM, 100% RB/ Band 12

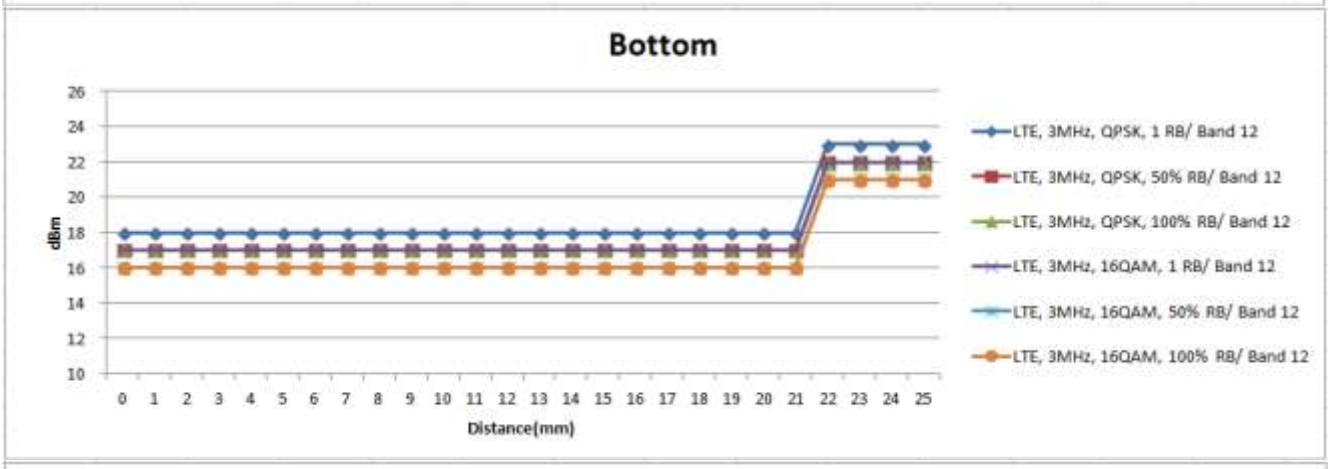

Edge 1
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 12
LTE, 1.4MHz, QPSK, 50% RB/ Band 12
LTE, 1.4MHz, QPSK, 100% RB/ Band 12
LTE, 1.4MHz, 16QAM, 1 RB/ Band 12
LTE, 1.4MHz, 16QAM, 50% RB/ Band 12
LTE, 1.4MHz, 16QAM, 100% RB/ Band 12

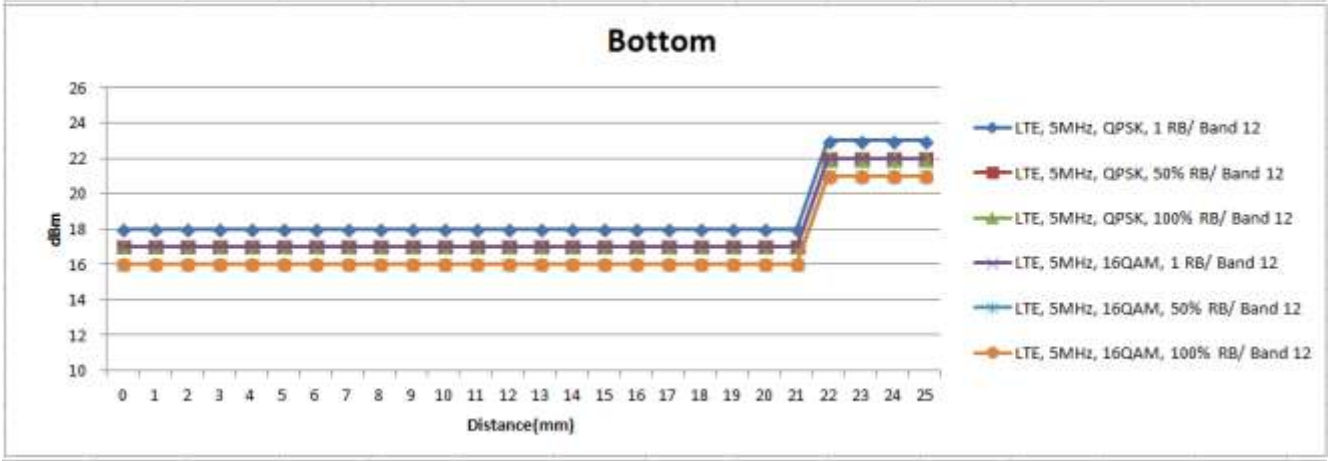

Edge 1
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 12
LTE, 3MHz, QPSK, 50% RB/ Band 12
LTE, 3MHz, QPSK, 100% RB/ Band 12
LTE, 3MHz, 16QAM, 1 RB/ Band 12
LTE, 3MHz, 16QAM, 50% RB/ Band 12
LTE, 3MHz, 16QAM, 100% RB/ Band 12

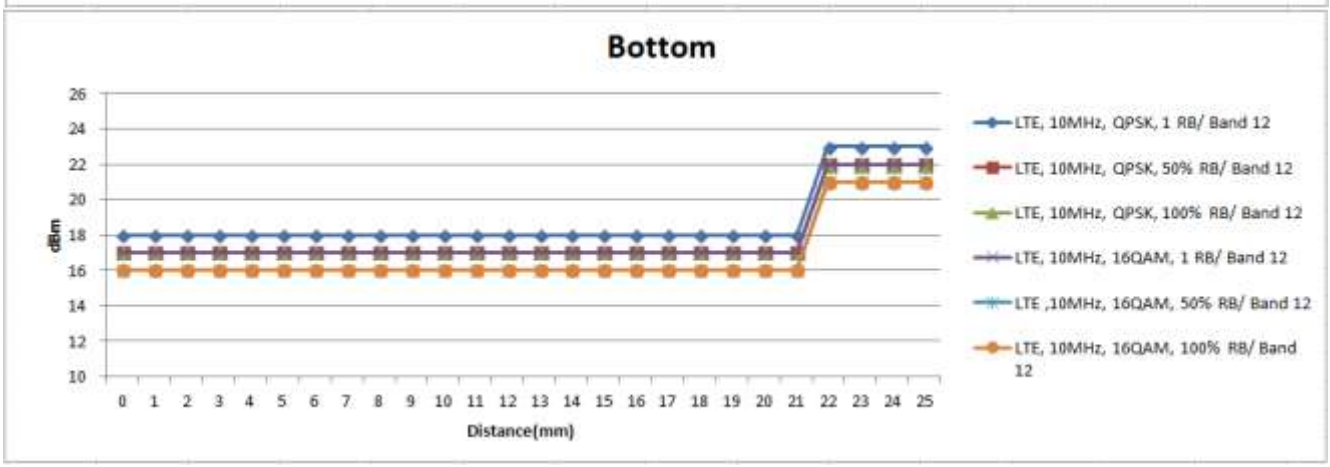

Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 12
LTE, 5MHz, QPSK, 50% RB/ Band 12
LTE, 5MHz, QPSK, 100% RB/ Band 12
LTE, 5MHz, 16QAM, 1 RB/ Band 12
LTE, 5MHz, 16QAM, 50% RB/ Band 12
LTE, 5MHz, 16QAM, 100% RB/ Band 12

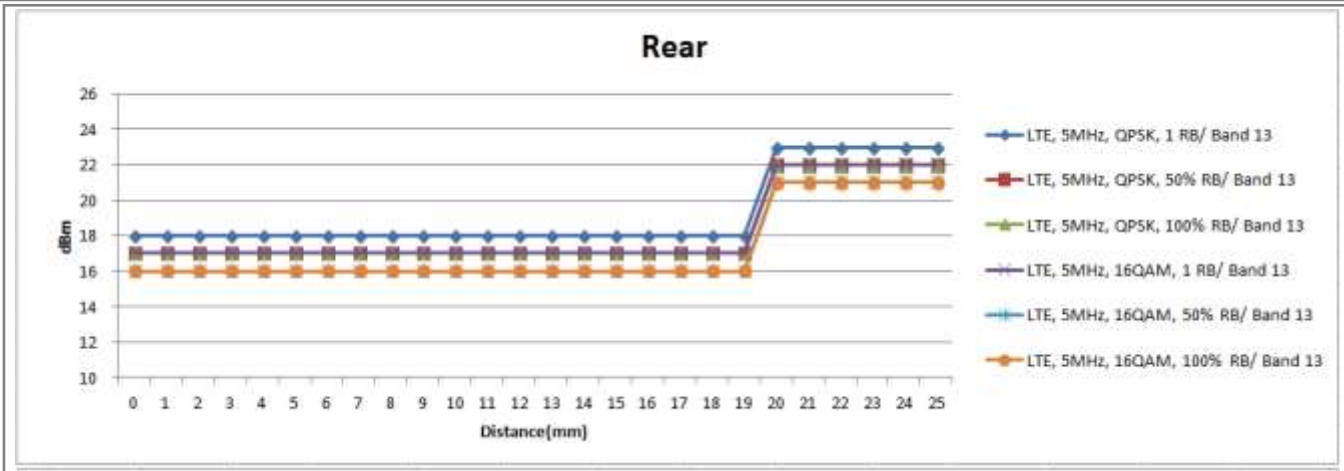

Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 12
LTE, 10MHz, QPSK, 50% RB/ Band 12
LTE, 10MHz, QPSK, 100% RB/ Band 12
LTE, 10MHz, 16QAM, 1 RB/ Band 12
LTE ,10MHz, 16QAM, 50% RB/ Band 12
LTE, 10MHz, 16QAM, 100% RB/ Band 12

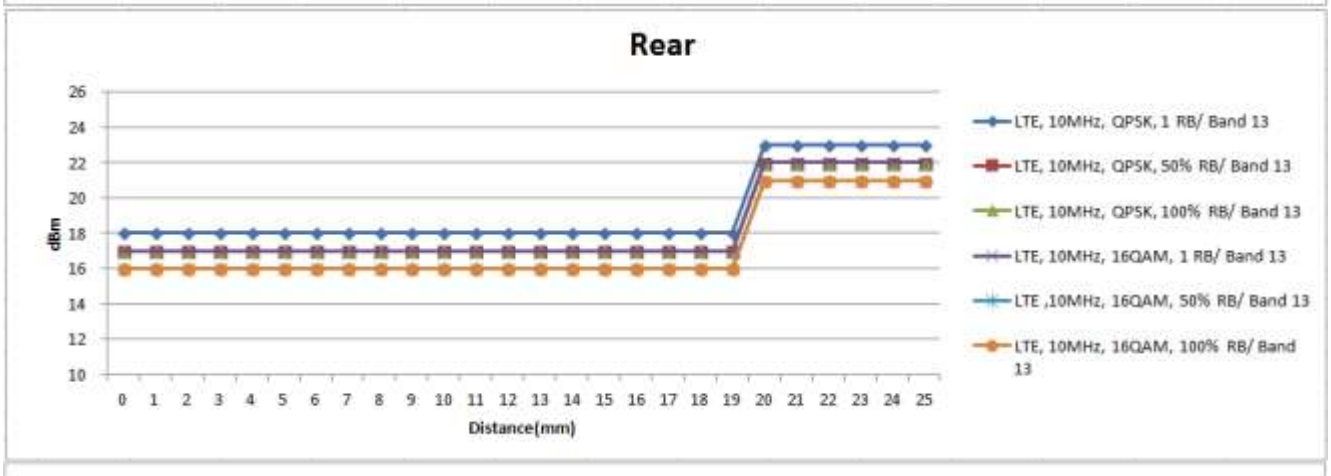

Bottom
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 12
LTE, 1.4MHz, QPSK, 50% RB/ Band 12
LTE, 1.4MHz, QPSK, 100% RB/ Band 12
LTE, 1.4MHz, 16QAM, 1 RB/ Band 12
LTE, 1.4MHz, 16QAM, 50% RB/ Band 12
LTE, 1.4MHz, 16QAM, 100% RB/ Band 12

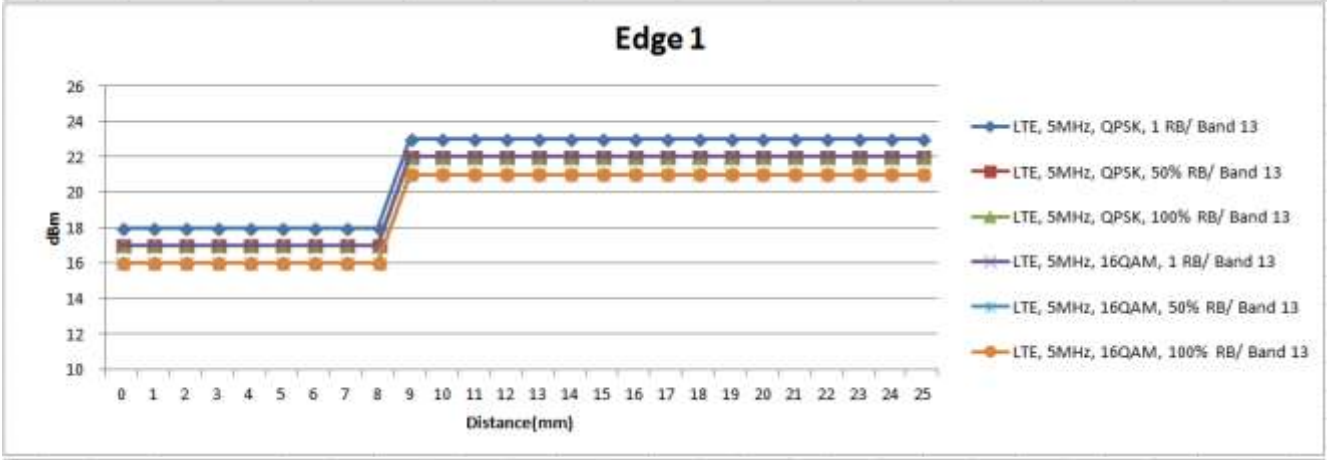

Bottom
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 12
LTE, 3MHz, QPSK, 50% RB/ Band 12
LTE, 3MHz, QPSK, 100% RB/ Band 12
LTE, 3MHz, 16QAM, 1 RB/ Band 12
LTE, 3MHz, 16QAM, 50% RB/ Band 12
LTE, 3MHz, 16QAM, 100% RB/ Band 12

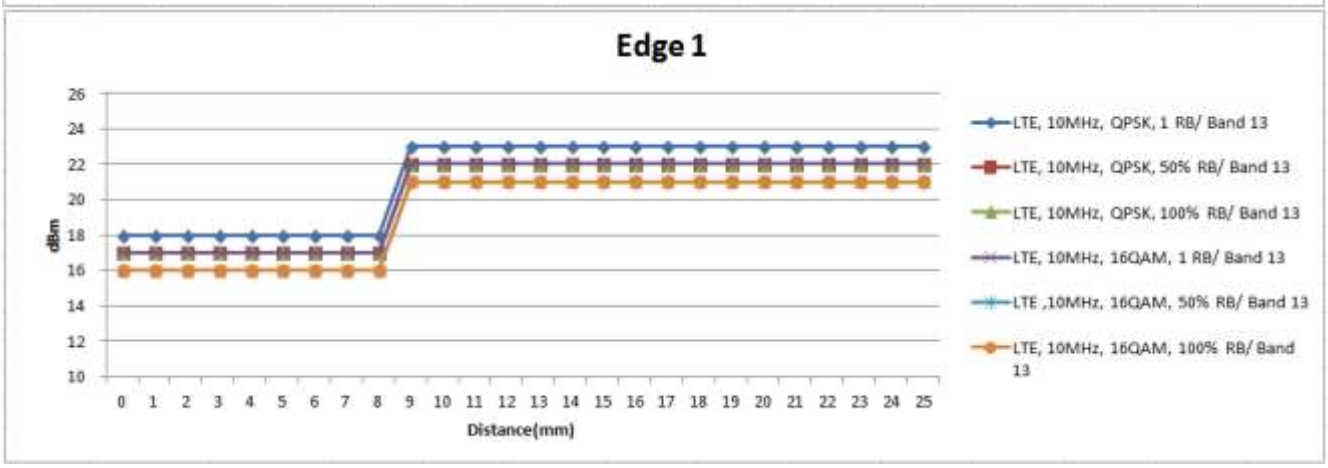

Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 12
LTE, 5MHz, QPSK, 50% RB/ Band 12
LTE, 5MHz, QPSK, 100% RB/ Band 12
LTE, 5MHz, 16QAM, 1 RB/ Band 12
LTE, 5MHz, 16QAM, 50% RB/ Band 12
LTE, 5MHz, 16QAM, 100% RB/ Band 12

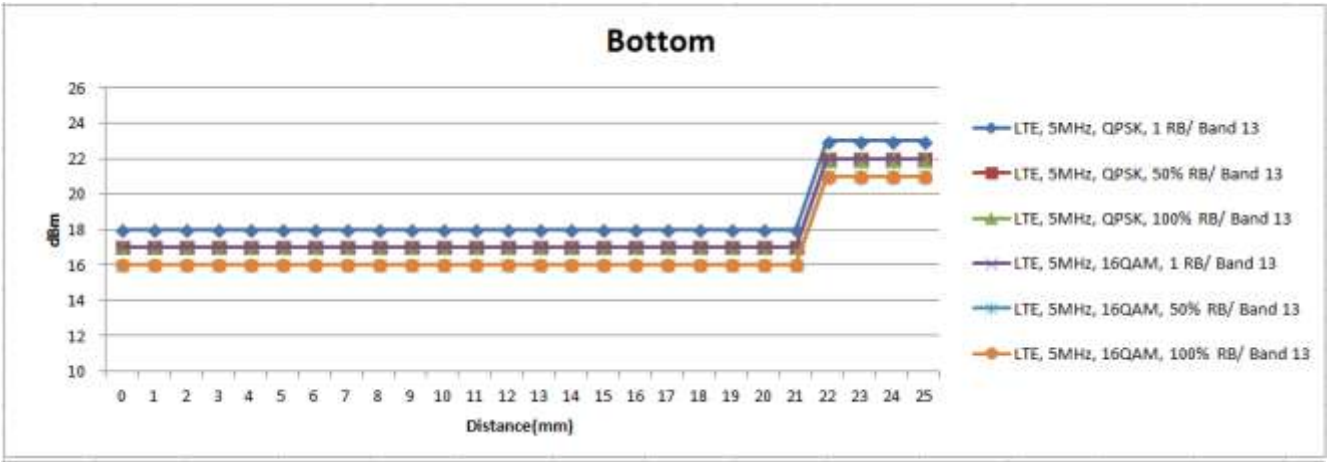

Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 12
LTE, 10MHz, QPSK, 50% RB/ Band 12
LTE, 10MHz, QPSK, 100% RB/ Band 12
LTE, 10MHz, 16QAM, 1 RB/ Band 12
LTE ,10MHz, 16QAM, 50% RB/ Band 12
LTE, 10MHz, 16QAM, 100% RB/ Band 12

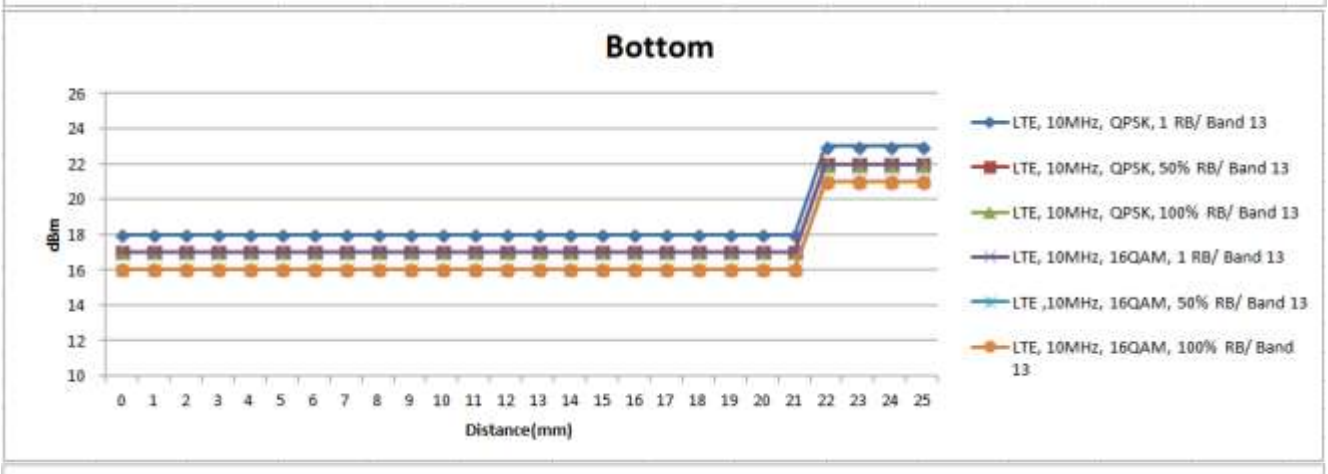

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 13
LTE, 5MHz, QPSK, 50% RB/ Band 13
LTE, 5MHz, QPSK, 100% RB/ Band 13
LTE, 5MHz, 16QAM, 1 RB/ Band 13
LTE, 5MHz, 16QAM, 50% RB/ Band 13
LTE, 5MHz, 16QAM, 100% RB/ Band 13

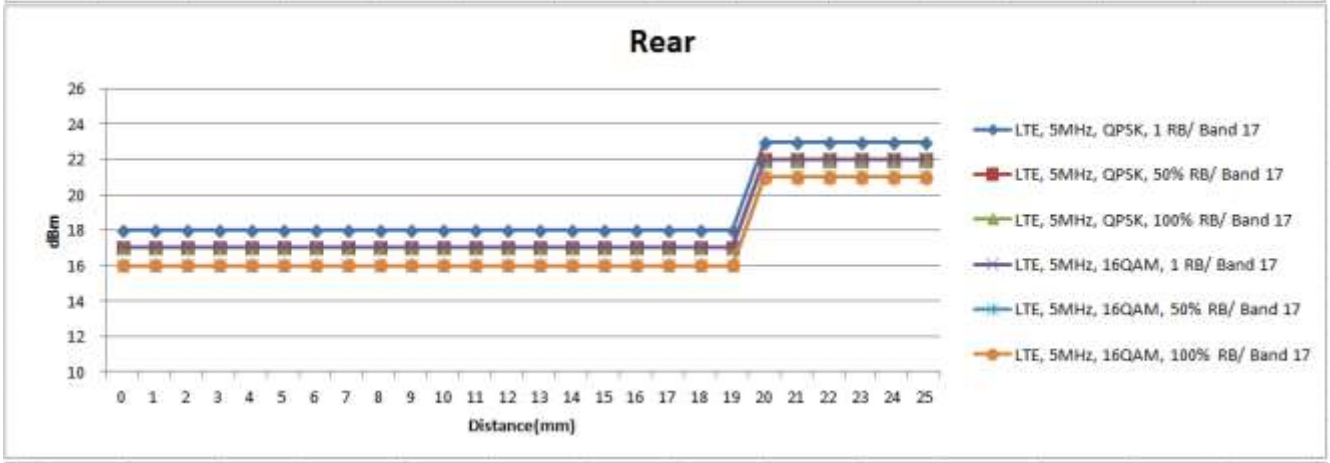

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 13
LTE, 10MHz, QPSK, 50% RB/ Band 13
LTE, 10MHz, QPSK, 100% RB/ Band 13
LTE, 10MHz, 16QAM, 1 RB/ Band 13
LTE ,10MHz, 16QAM, 50% RB/ Band 13
LTE, 10MHz, 16QAM, 100% RB/ Band 13

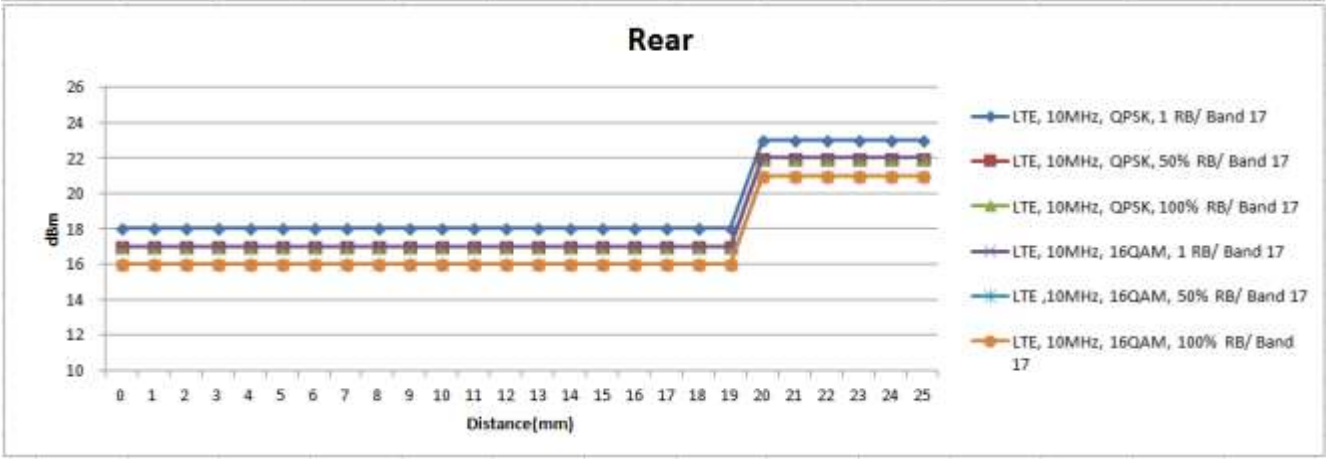

Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 13
LTE, 5MHz, QPSK, 50% RB/ Band 13
LTE, 5MHz, QPSK, 100% RB/ Band 13
LTE, 5MHz, 16QAM, 1 RB/ Band 13
LTE, 5MHz, 16QAM, 50% RB/ Band 13
LTE, 5MHz, 16QAM, 100% RB/ Band 13

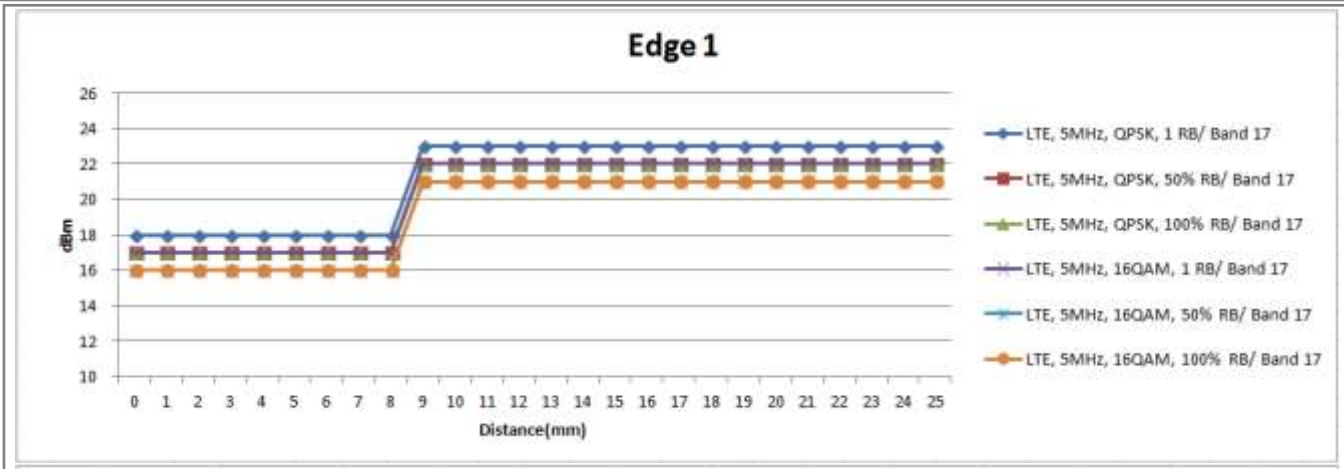

Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 13
LTE, 10MHz, QPSK, 50% RB/ Band 13
LTE, 10MHz, QPSK, 100% RB/ Band 13
LTE, 10MHz, 16QAM, 1 RB/ Band 13
LTE ,10MHz, 16QAM, 50% RB/ Band 13
LTE, 10MHz, 16QAM, 100% RB/ Band 13

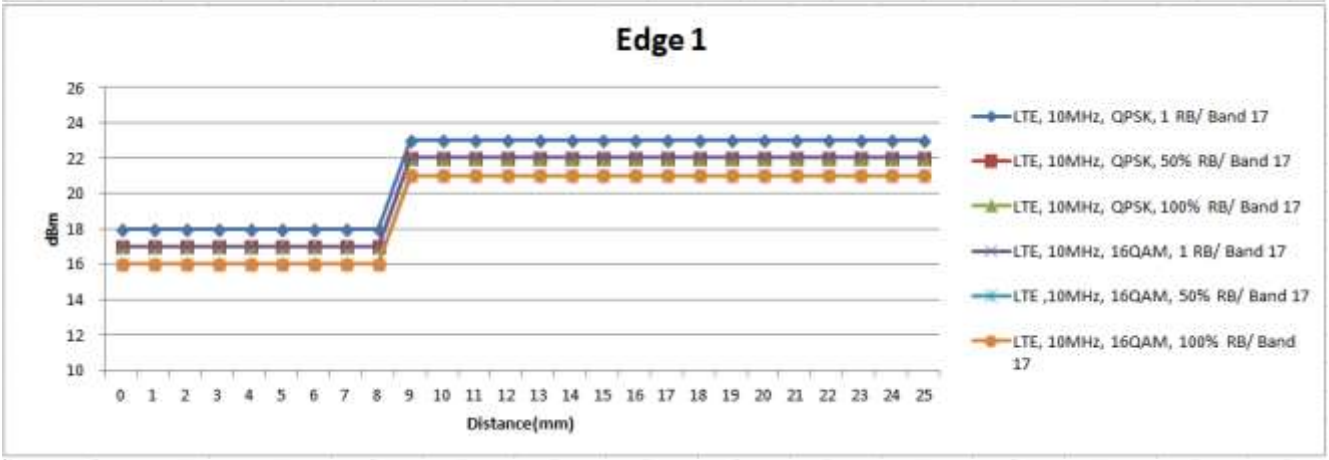

Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 13
LTE, 5MHz, QPSK, 50% RB/ Band 13
LTE, 5MHz, QPSK, 100% RB/ Band 13
LTE, 5MHz, 16QAM, 1 RB/ Band 13
LTE, 5MHz, 16QAM, 50% RB/ Band 13
LTE, 5MHz, 16QAM, 100% RB/ Band 13

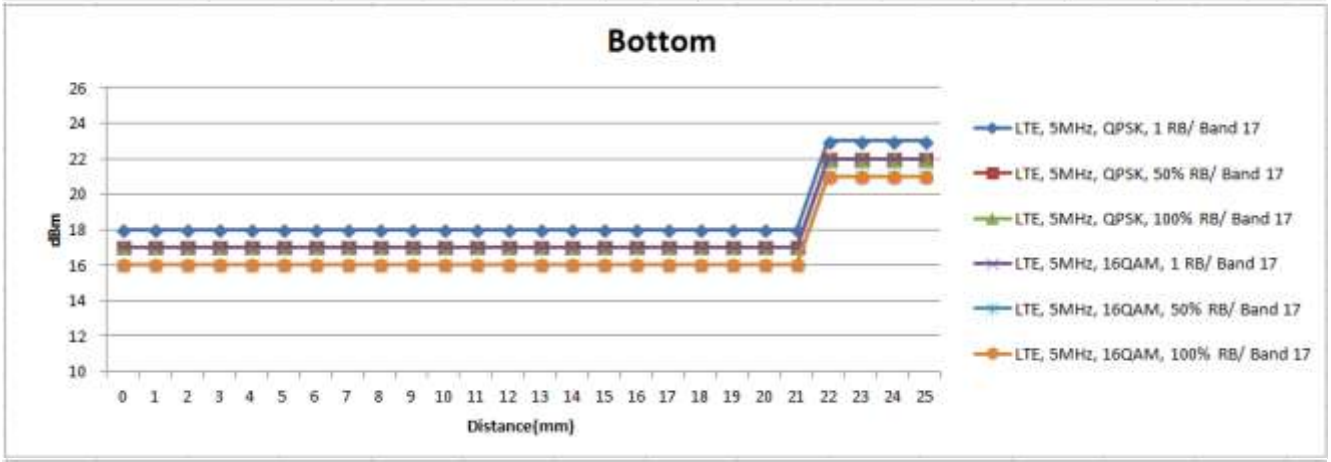

Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 13
LTE, 10MHz, QPSK, 50% RB/ Band 13
LTE, 10MHz, QPSK, 100% RB/ Band 13
LTE, 10MHz, 16QAM, 1 RB/ Band 13
LTE ,10MHz, 16QAM, 50% RB/ Band 13
LTE, 10MHz, 16QAM, 100% RB/ Band 13

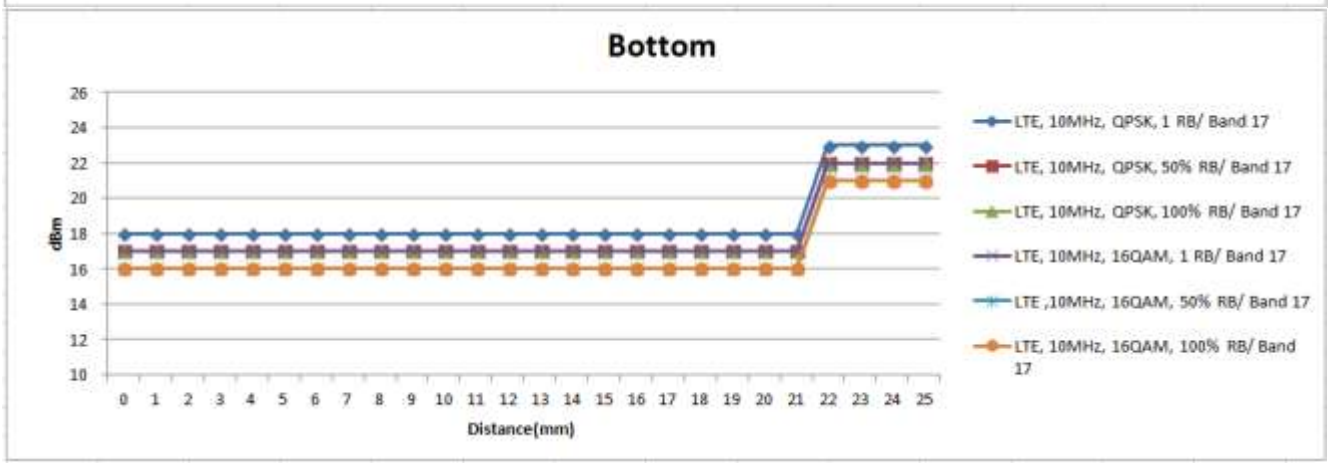

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 17
LTE, 5MHz, QPSK, 50% RB/ Band 17
LTE, 5MHz, QPSK, 100% RB/ Band 17
LTE, 5MHz, 16QAM, 1 RB/ Band 17
LTE, 5MHz, 16QAM, 50% RB/ Band 17
LTE, 5MHz, 16QAM, 100% RB/ Band 17

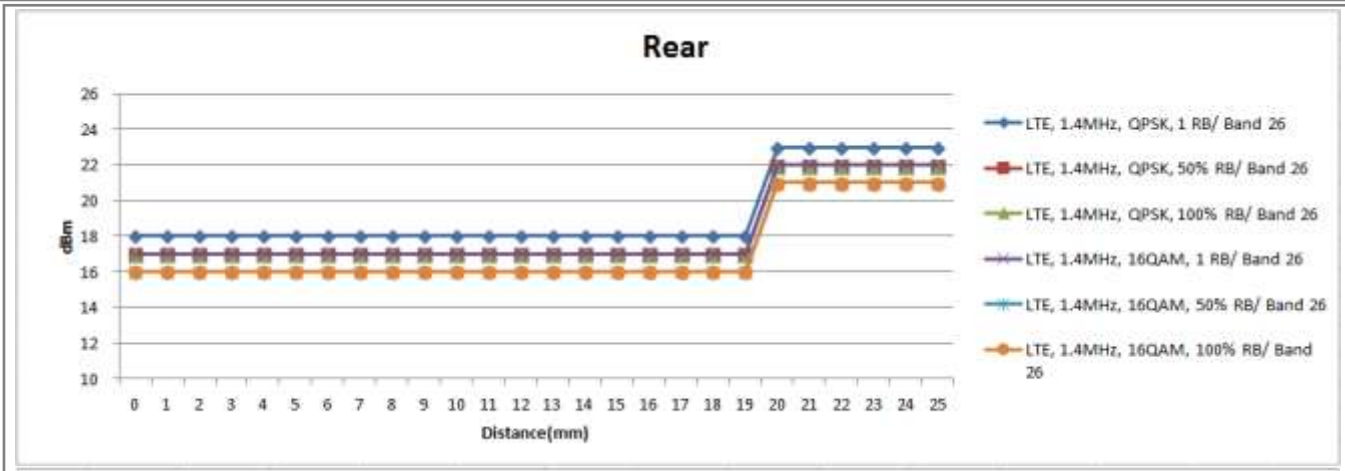

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 17
LTE, 10MHz, QPSK, 50% RB/ Band 17
LTE, 10MHz, QPSK, 100% RB/ Band 17
LTE, 10MHz, 16QAM, 1 RB/ Band 17
LTE ,10MHz, 16QAM, 50% RB/ Band 17
LTE, 10MHz, 16QAM, 100% RB/ Band 17

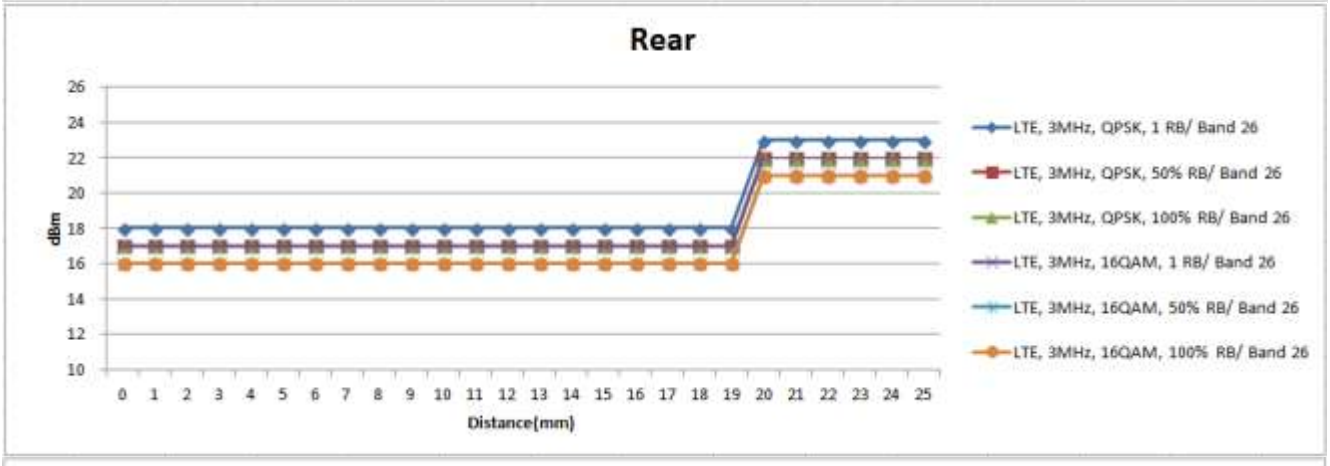

Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 17
LTE, 5MHz, QPSK, 50% RB/ Band 17
LTE, 5MHz, QPSK, 100% RB/ Band 17
LTE, 5MHz, 16QAM, 1 RB/ Band 17
LTE, 5MHz, 16QAM, 50% RB/ Band 17
LTE, 5MHz, 16QAM, 100% RB/ Band 17

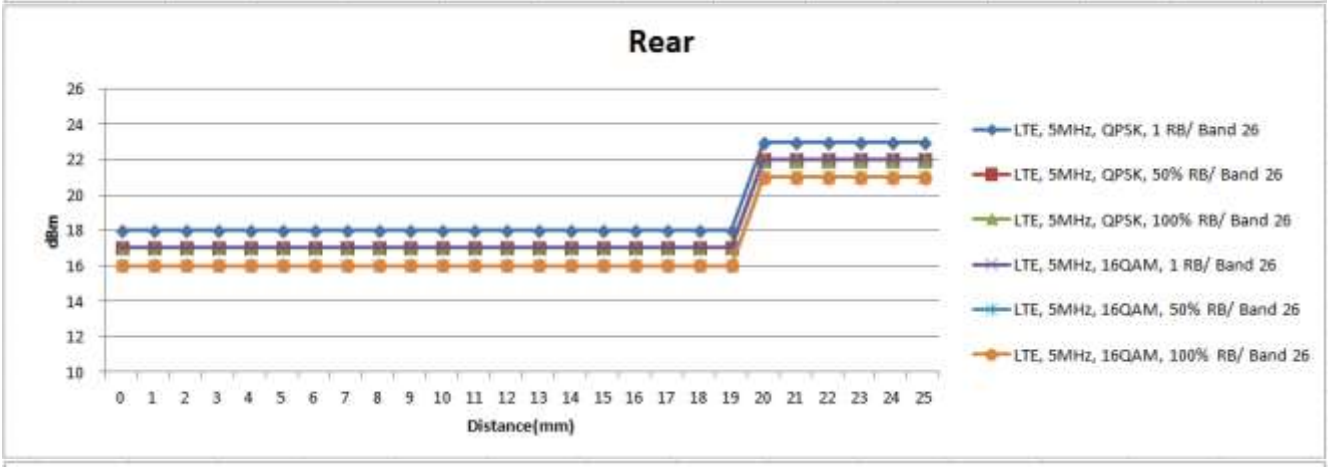

Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 17
LTE, 10MHz, QPSK, 50% RB/ Band 17
LTE, 10MHz, QPSK, 100% RB/ Band 17
LTE, 10MHz, 16QAM, 1 RB/ Band 17
LTE ,10MHz, 16QAM, 50% RB/ Band 17
LTE, 10MHz, 16QAM, 100% RB/ Band 17

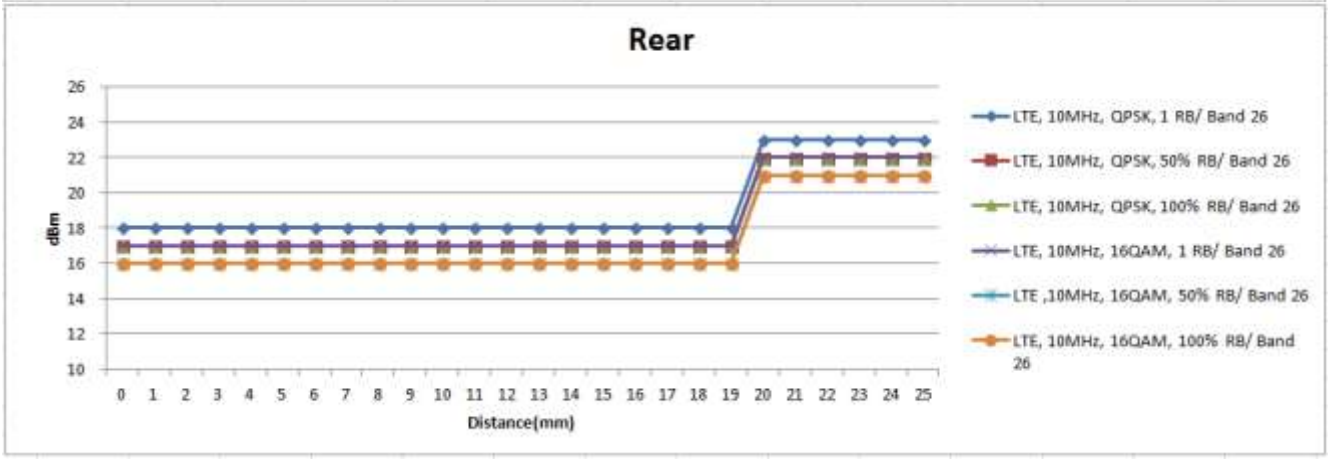

Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 17
LTE, 5MHz, QPSK, 50% RB/ Band 17
LTE, 5MHz, QPSK, 100% RB/ Band 17
LTE, 5MHz, 16QAM, 1 RB/ Band 17
LTE, 5MHz, 16QAM, 50% RB/ Band 17
LTE, 5MHz, 16QAM, 100% RB/ Band 17

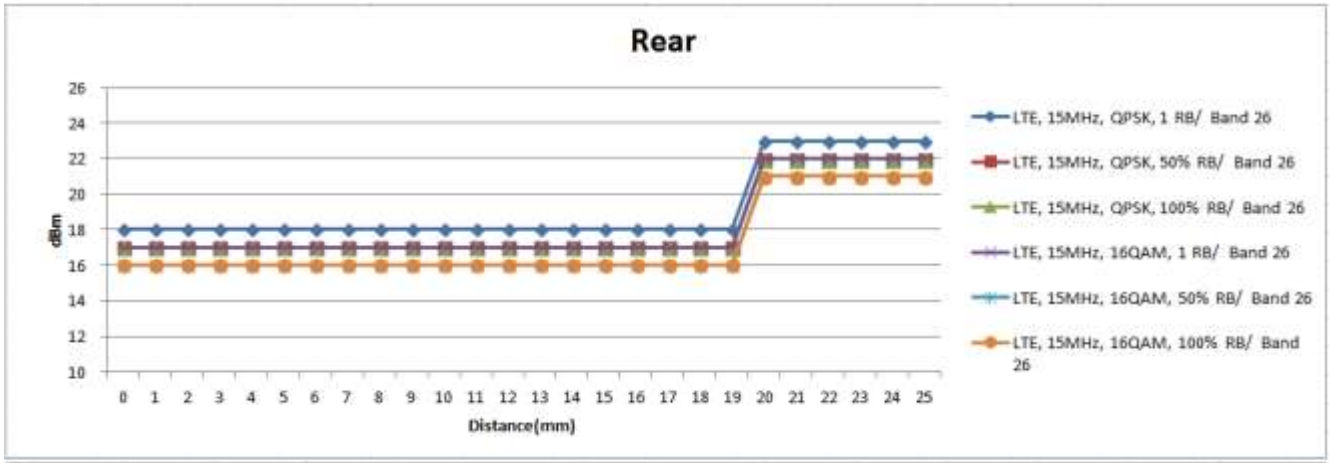

Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 17
LTE, 10MHz, QPSK, 50% RB/ Band 17
LTE, 10MHz, QPSK, 100% RB/ Band 17
LTE, 10MHz, 16QAM, 1 RB/ Band 17
LTE ,10MHz, 16QAM, 50% RB/ Band 17
LTE, 10MHz, 16QAM, 100% RB/ Band 17

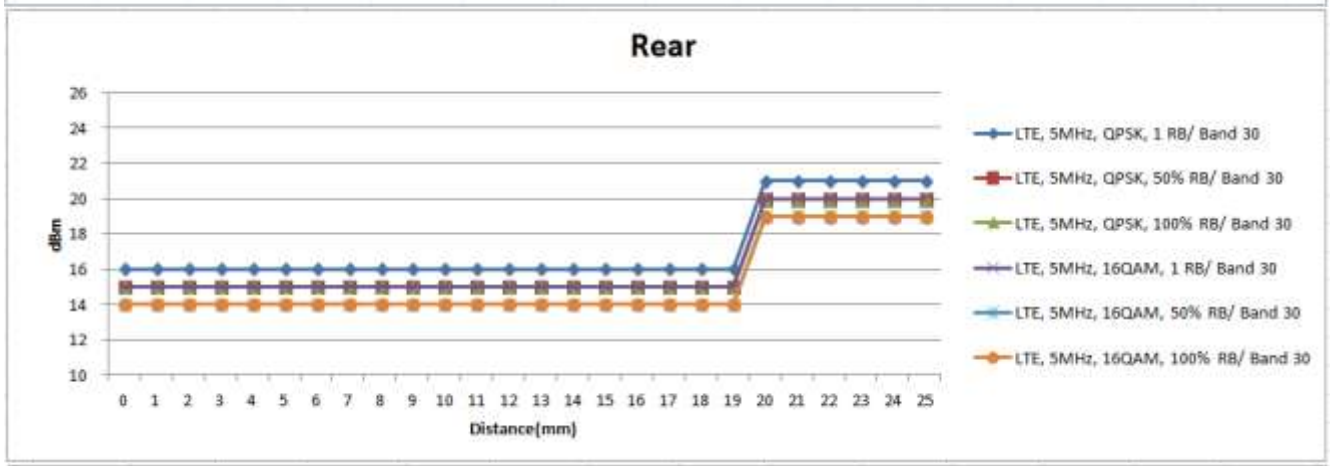

Rear
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 26
LTE, 1.4MHz, QPSK, 50% RB/ Band 26
LTE, 1.4MHz, QPSK, 100% RB/ Band 26
LTE, 1.4MHz, 16QAM, 1 RB/ Band 26
LTE, 1.4MHz, 16QAM, 50% RB/ Band 26
LTE, 1.4MHz, 16QAM, 100% RB/ Band 26

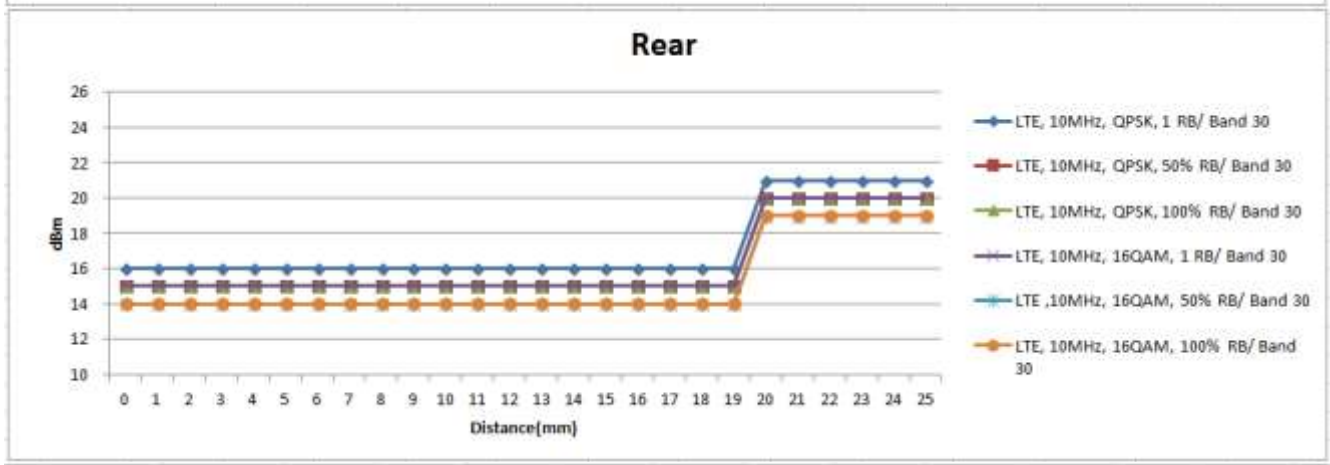

Rear
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 26
LTE, 3MHz, QPSK, 50% RB/ Band 26
LTE, 3MHz, QPSK, 100% RB/ Band 26
LTE, 3MHz, 16QAM, 1 RB/ Band 26
LTE, 3MHz, 16QAM, 50% RB/ Band 26
LTE, 3MHz, 16QAM, 100% RB/ Band 26

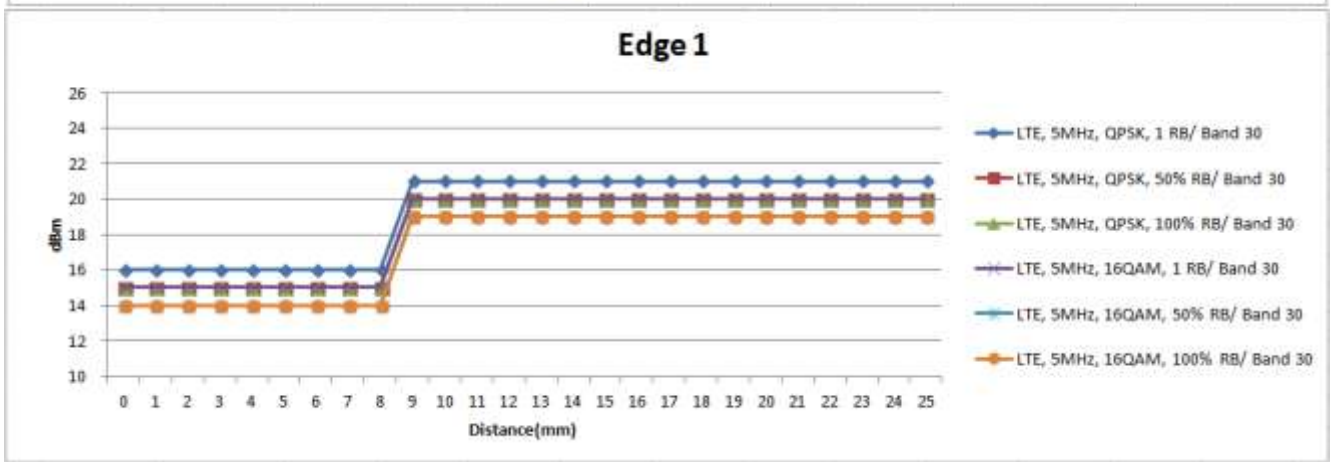

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 26
LTE, 5MHz, QPSK, 50% RB/ Band 26
LTE, 5MHz, QPSK, 100% RB/ Band 26
LTE, 5MHz, 16QAM, 1 RB/ Band 26
LTE, 5MHz, 16QAM, 50% RB/ Band 26
LTE, 5MHz, 16QAM, 100% RB/ Band 26


Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 26
LTE, 10MHz, QPSK, 50% RB/ Band 26
LTE, 10MHz, QPSK, 100% RB/ Band 26
LTE, 10MHz, 16QAM, 1 RB/ Band 26
LTE ,10MHz, 16QAM, 50% RB/ Band 26
LTE, 10MHz, 16QAM, 100% RB/ Band 26

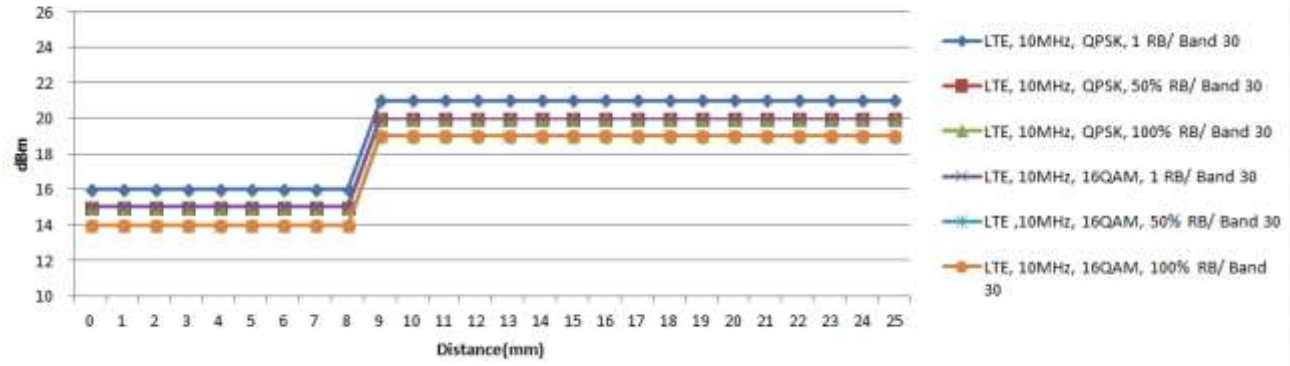

Rear
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 26
LTE, 15MHz, QPSK, 50% RB/ Band 26
LTE, 15MHz, QPSK, 100% RB/ Band 26
LTE, 15MHz, 16QAM, 1 RB/ Band 26
LTE, 15MHz, 16QAM, 50% RB/ Band 26
LTE, 15MHz, 16QAM, 100% RB/ Band 26


Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 30
LTE, 5MHz, QPSK, 50% RB/ Band 30
LTE, 5MHz, QPSK, 100% RB/ Band 30
LTE, 5MHz, 16QAM, 1 RB/ Band 30
LTE, 5MHz, 16QAM, 50% RB/ Band 30
LTE, 5MHz, 16QAM, 100% RB/ Band 30

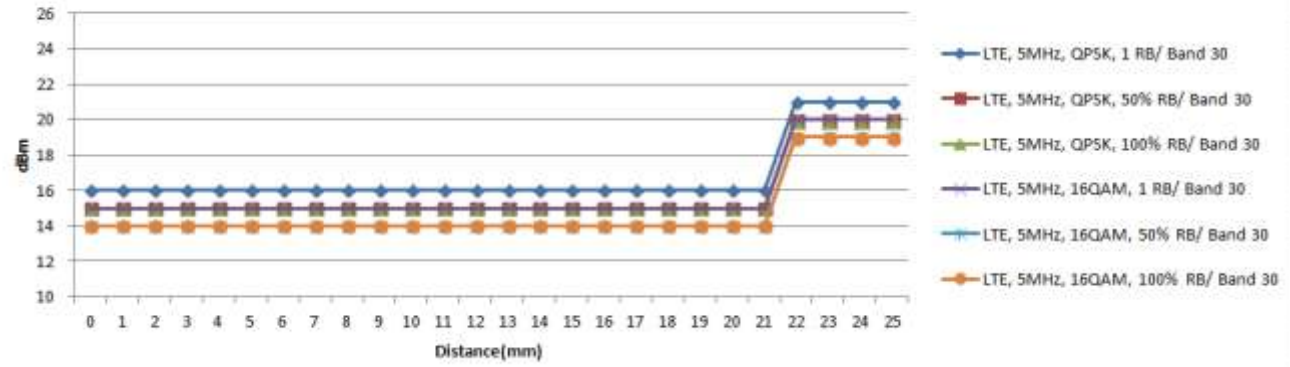

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 30
LTE, 10MHz, QPSK, 50% RB/ Band 30
LTE, 10MHz, QPSK, 100% RB/ Band 30
LTE, 10MHz, 16QAM, 1 RB/ Band 30
LTE ,10MHz, 16QAM, 50% RB/ Band 30
LTE, 10MHz, 16QAM, 100% RB/ Band 30


Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 30
LTE, 5MHz, QPSK, 50% RB/ Band 30
LTE, 5MHz, QPSK, 100% RB/ Band 30
LTE, 5MHz, 16QAM, 1 RB/ Band 30
LTE, 5MHz, 16QAM, 50% RB/ Band 30
LTE, 5MHz, 16QAM, 100% RB/ Band 30

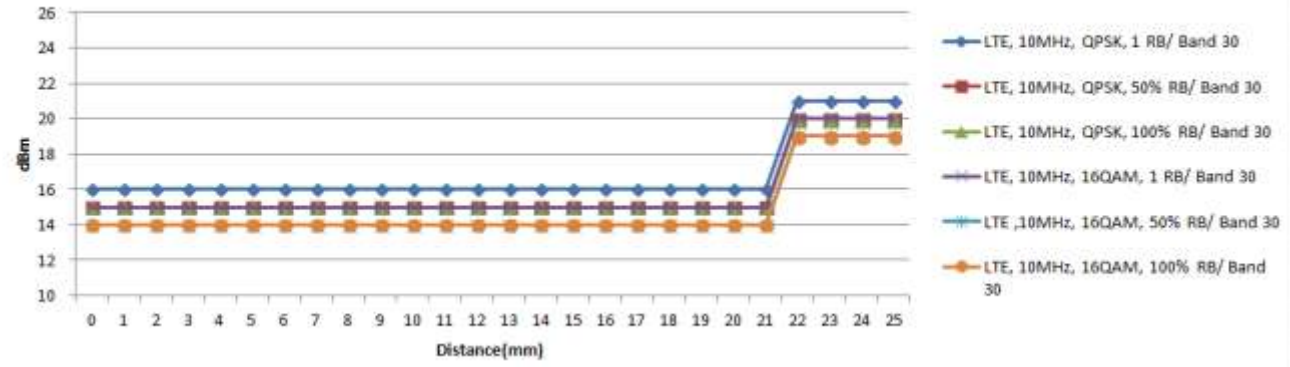
Edge 1



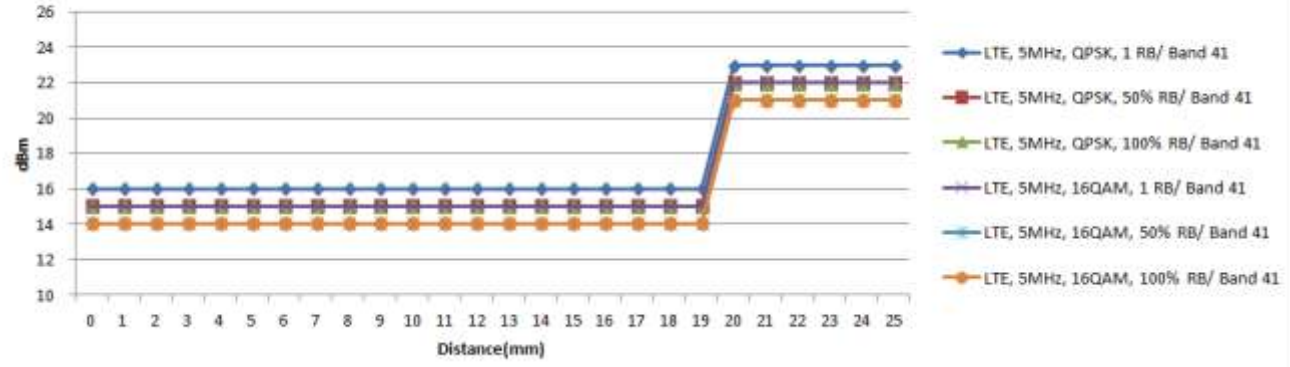
Bottom

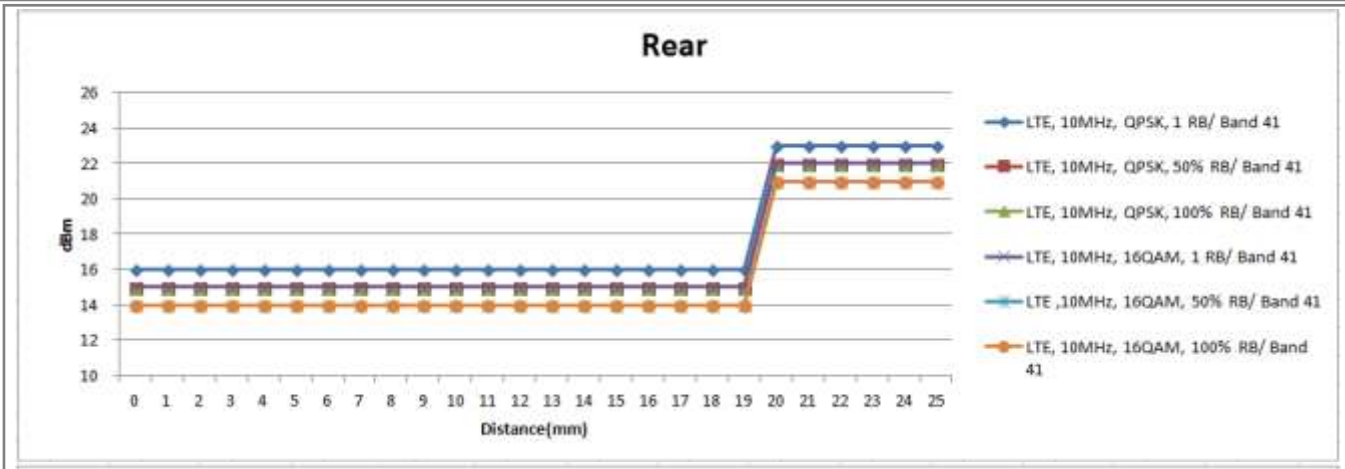


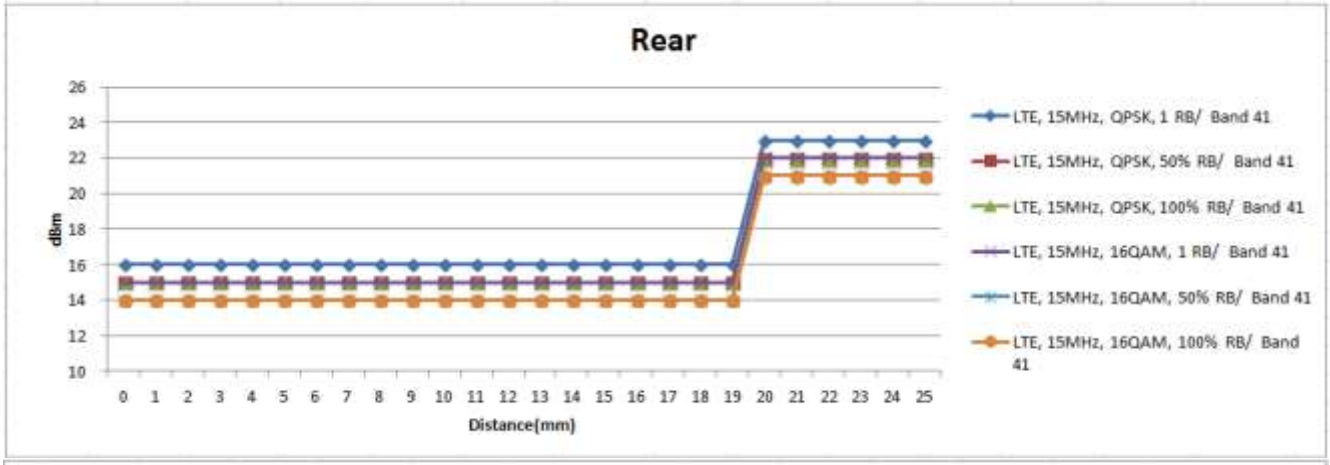
Bottom

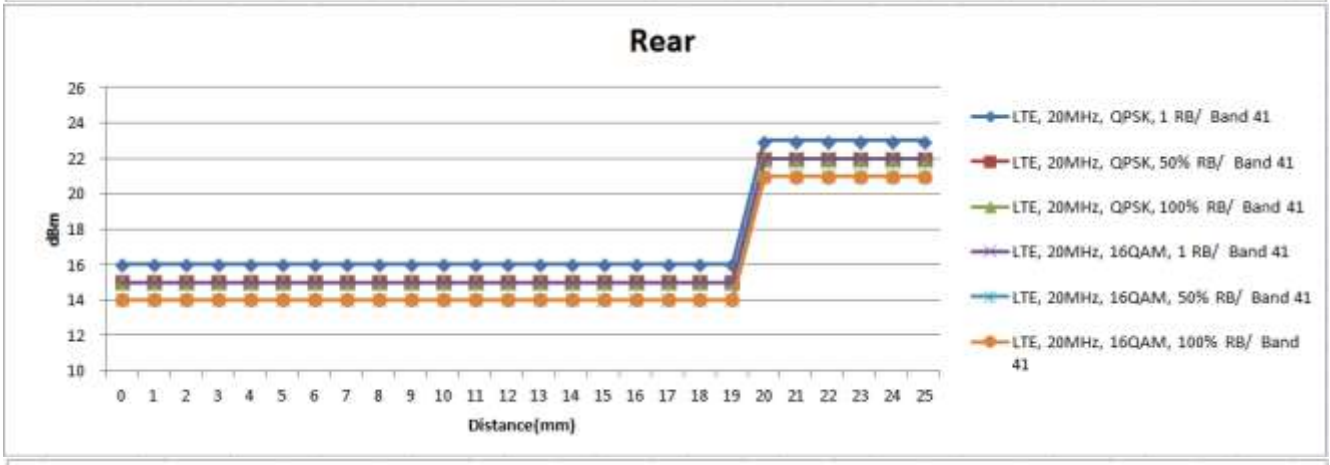


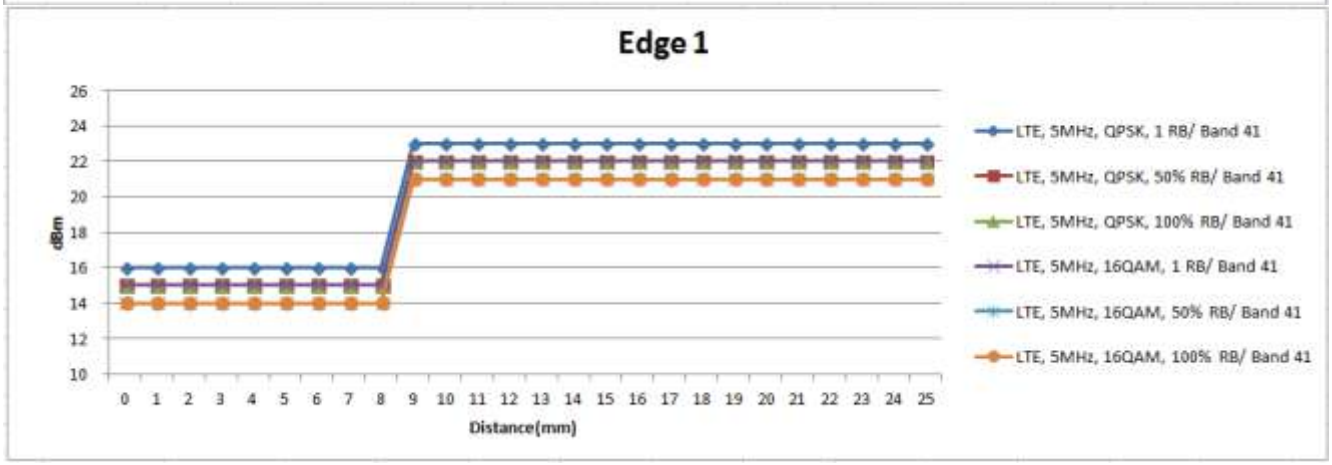
Rear

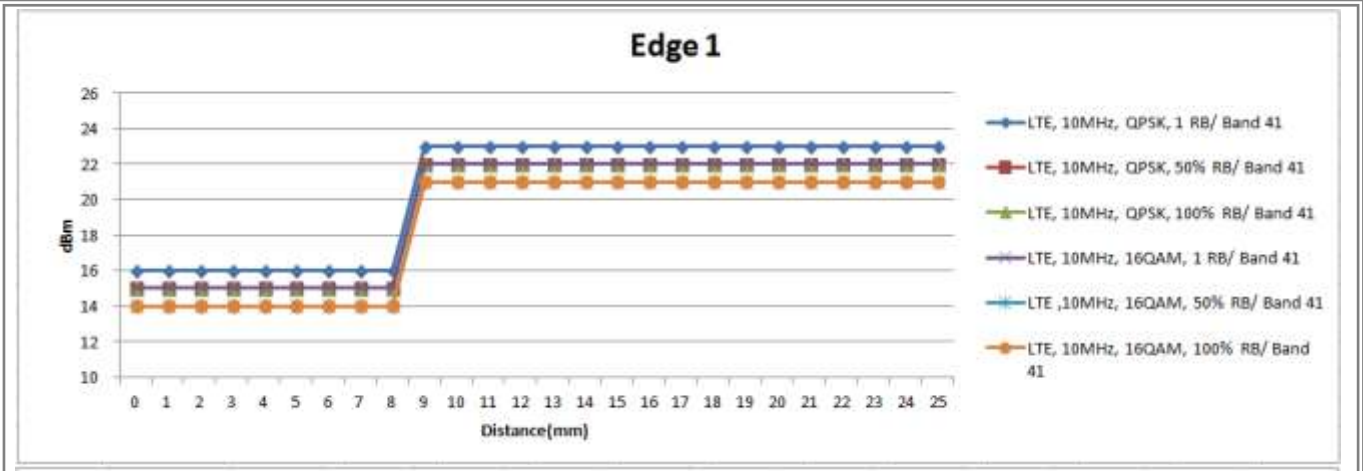


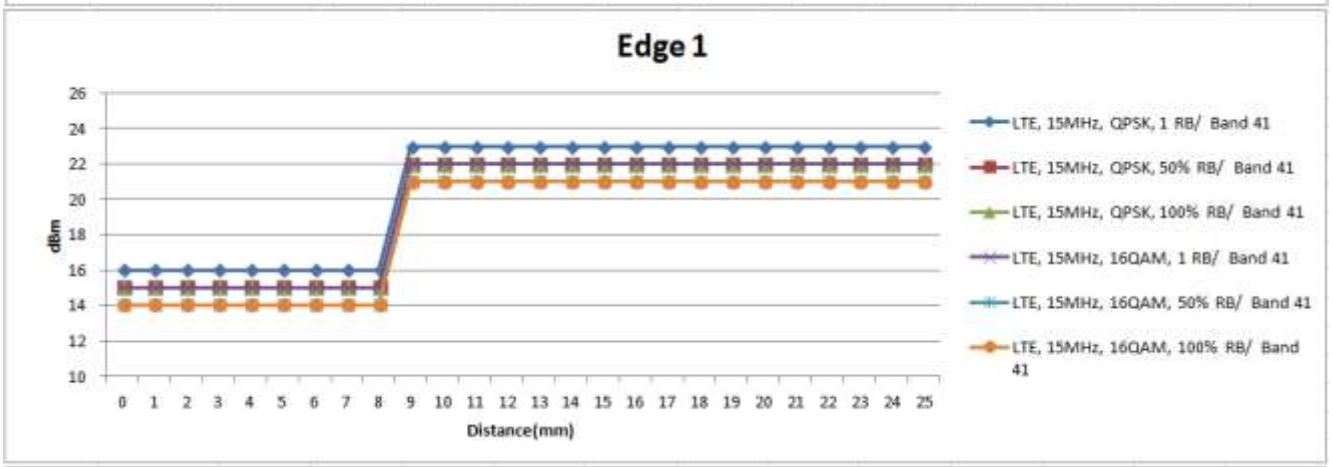

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 41
LTE, 10MHz, QPSK, 50% RB/ Band 41
LTE, 10MHz, QPSK, 100% RB/ Band 41
LTE, 10MHz, 16QAM, 1 RB/ Band 41
LTE ,10MHz, 16QAM, 50% RB/ Band 41
LTE, 10MHz, 16QAM, 100% RB/ Band 41

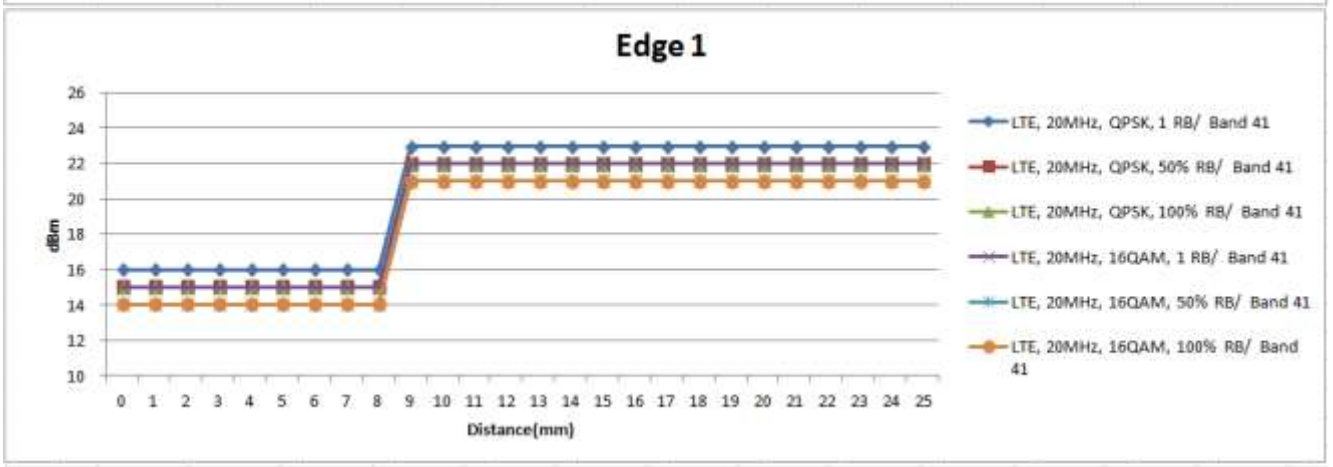

Rear
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 41
LTE, 15MHz, QPSK, 50% RB/ Band 41
LTE, 15MHz, QPSK, 100% RB/ Band 41
LTE, 15MHz, 16QAM, 1 RB/ Band 41
LTE, 15MHz, 16QAM, 50% RB/ Band 41
LTE, 15MHz, 16QAM, 100% RB/ Band 41

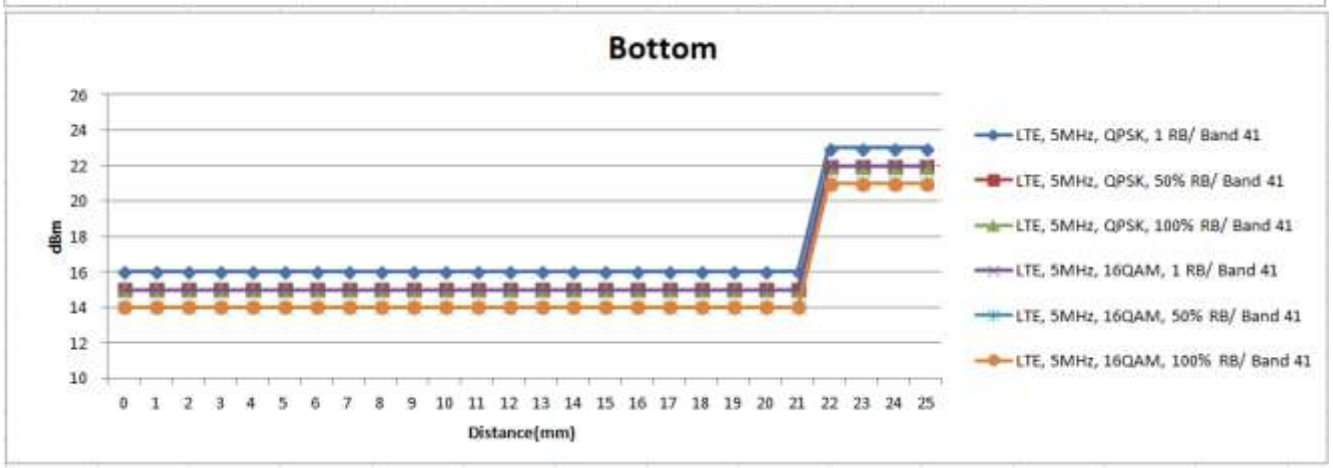

Rear
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 41
LTE, 20MHz, QPSK, 50% RB/ Band 41
LTE, 20MHz, QPSK, 100% RB/ Band 41
LTE, 20MHz, 16QAM, 1 RB/ Band 41
LTE, 20MHz, 16QAM, 50% RB/ Band 41
LTE, 20MHz, 16QAM, 100% RB/ Band 41

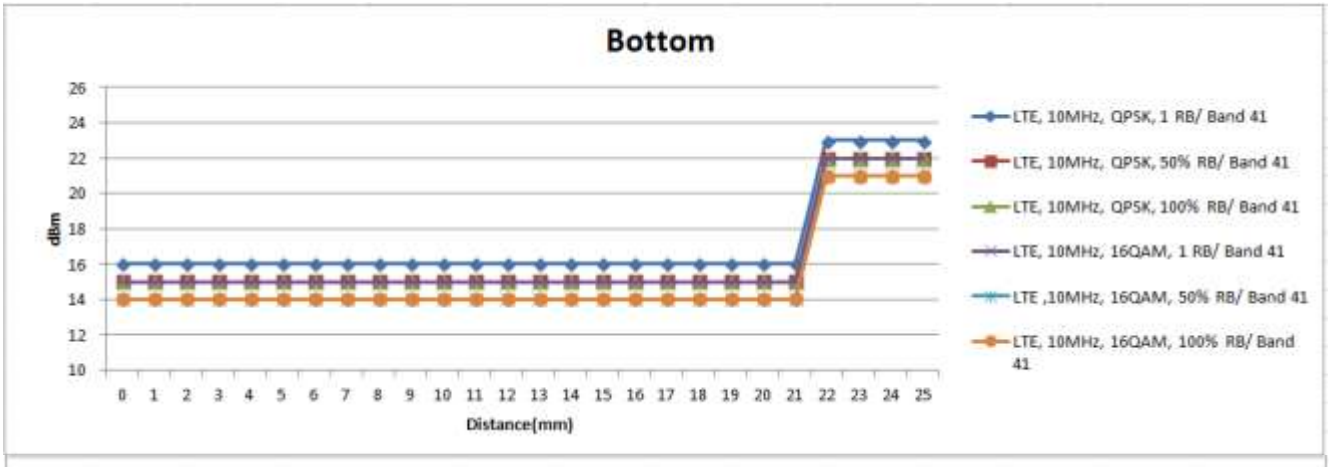

Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 41
LTE, 5MHz, QPSK, 50% RB/ Band 41
LTE, 5MHz, QPSK, 100% RB/ Band 41
LTE, 5MHz, 16QAM, 1 RB/ Band 41
LTE, 5MHz, 16QAM, 50% RB/ Band 41
LTE, 5MHz, 16QAM, 100% RB/ Band 41

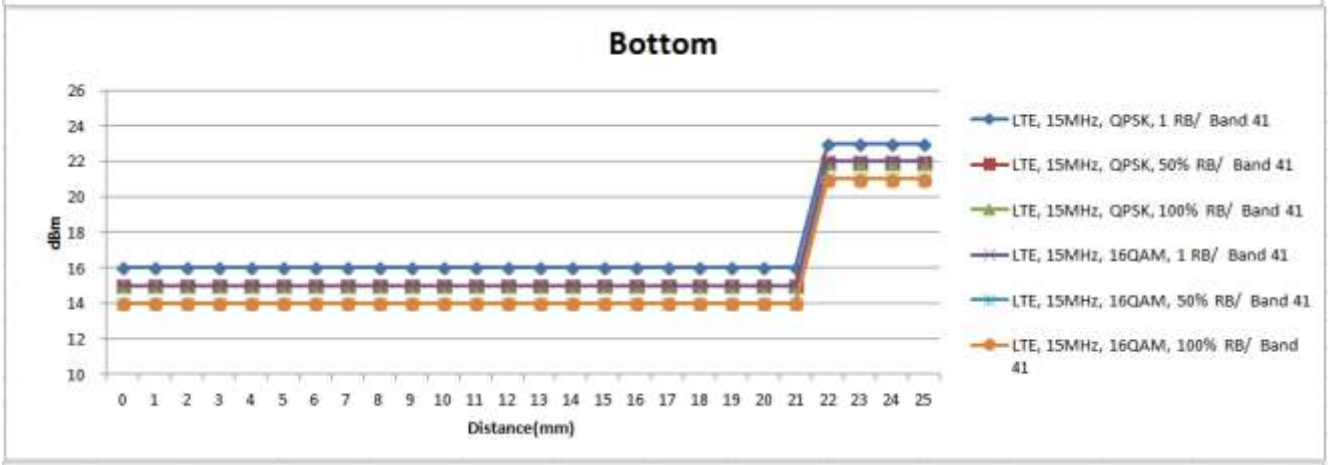

Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 41
LTE, 10MHz, QPSK, 50% RB/ Band 41
LTE, 10MHz, QPSK, 100% RB/ Band 41
LTE, 10MHz, 16QAM, 1 RB/ Band 41
LTE ,10MHz, 16QAM, 50% RB/ Band 41
LTE, 10MHz, 16QAM, 100% RB/ Band 41

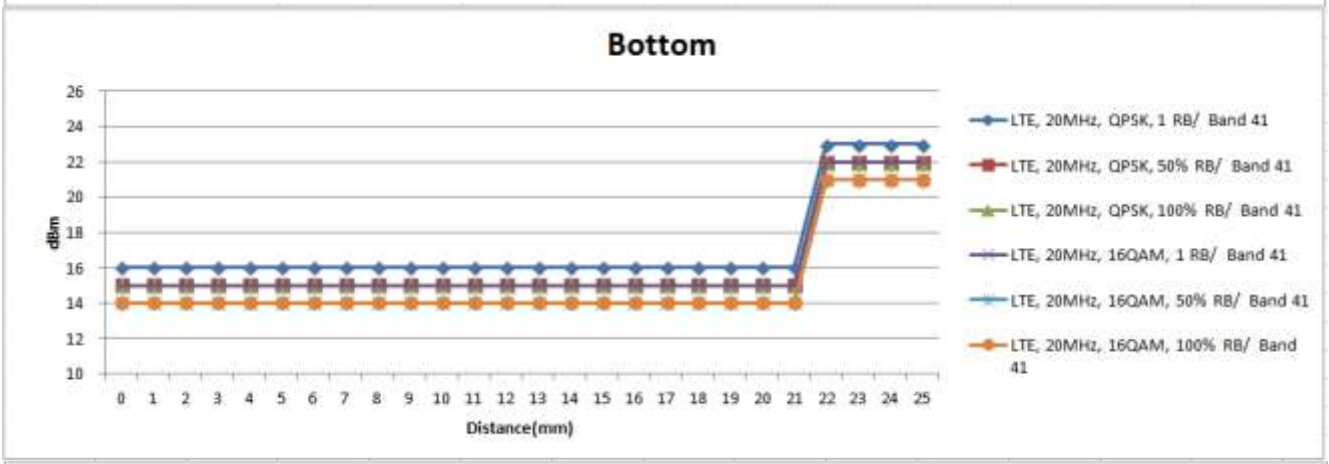

Edge 1
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 41
LTE, 15MHz, QPSK, 50% RB/ Band 41
LTE, 15MHz, QPSK, 100% RB/ Band 41
LTE, 15MHz, 16QAM, 1 RB/ Band 41
LTE, 15MHz, 16QAM, 50% RB/ Band 41
LTE, 15MHz, 16QAM, 100% RB/ Band 41

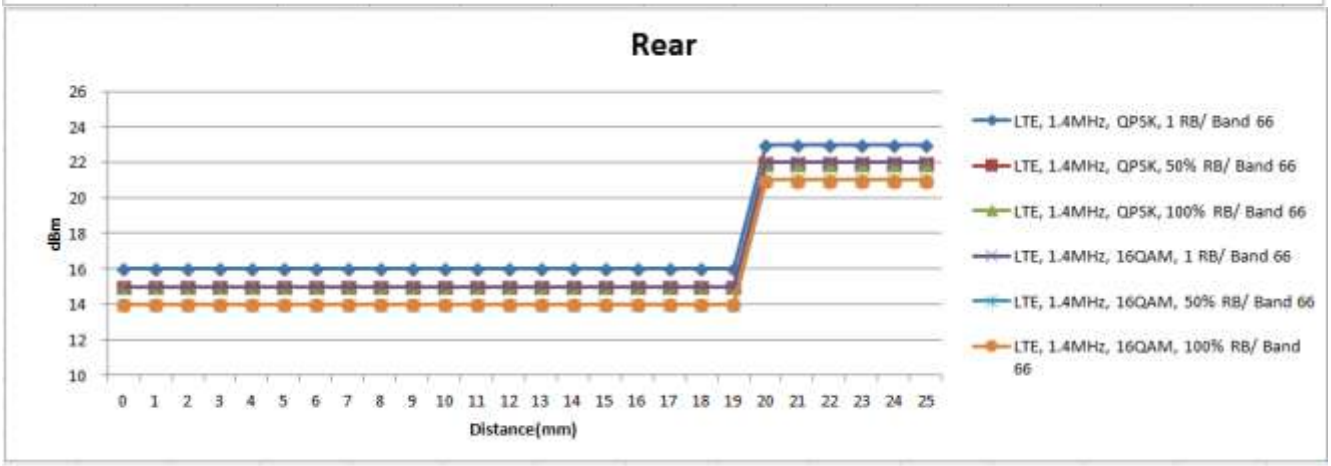

Edge 1
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 41
LTE, 20MHz, QPSK, 50% RB/ Band 41
LTE, 20MHz, QPSK, 100% RB/ Band 41
LTE, 20MHz, 16QAM, 1 RB/ Band 41
LTE, 20MHz, 16QAM, 50% RB/ Band 41
LTE, 20MHz, 16QAM, 100% RB/ Band 41

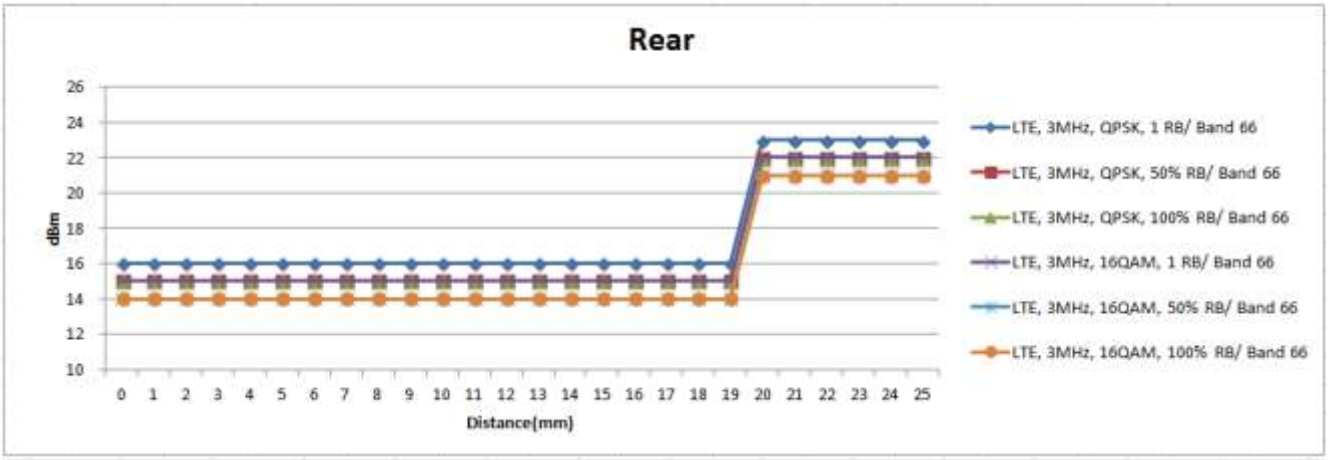

Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 41
LTE, 5MHz, QPSK, 50% RB/ Band 41
LTE, 5MHz, QPSK, 100% RB/ Band 41
LTE, 5MHz, 16QAM, 1 RB/ Band 41
LTE, 5MHz, 16QAM, 50% RB/ Band 41
LTE, 5MHz, 16QAM, 100% RB/ Band 41

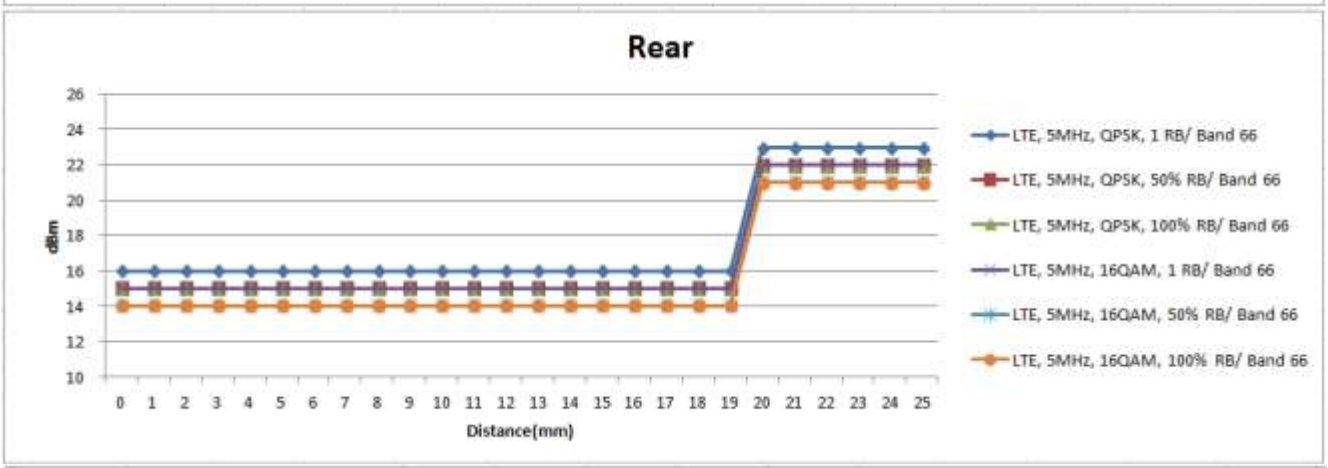

Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 41
LTE, 10MHz, QPSK, 50% RB/ Band 41
LTE, 10MHz, QPSK, 100% RB/ Band 41
LTE, 10MHz, 16QAM, 1 RB/ Band 41
LTE ,10MHz, 16QAM, 50% RB/ Band 41
LTE, 10MHz, 16QAM, 100% RB/ Band 41

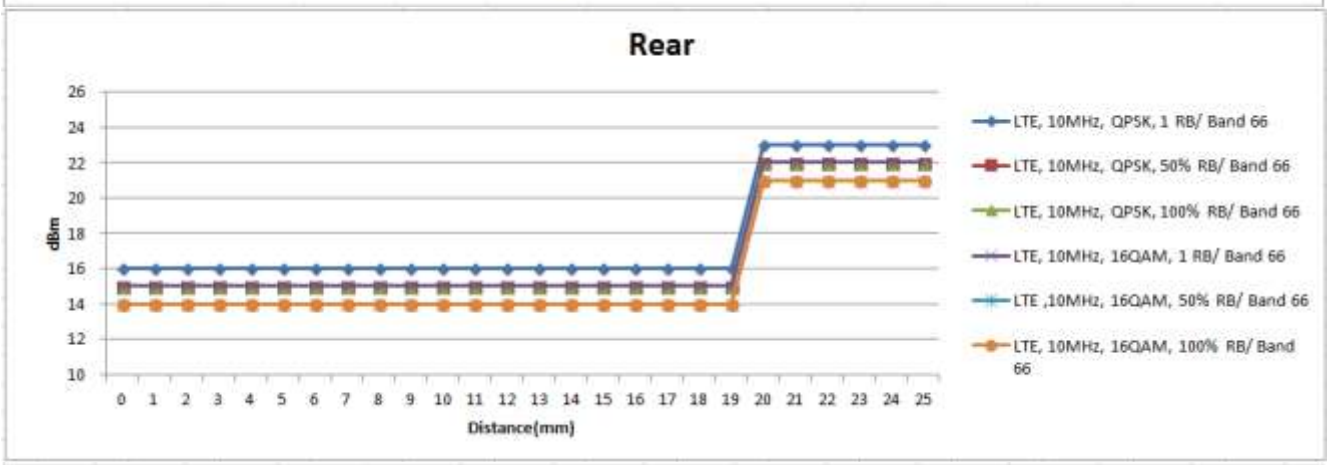

Bottom
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 41
LTE, 15MHz, QPSK, 50% RB/ Band 41
LTE, 15MHz, QPSK, 100% RB/ Band 41
LTE, 15MHz, 16QAM, 1 RB/ Band 41
LTE, 15MHz, 16QAM, 50% RB/ Band 41
LTE, 15MHz, 16QAM, 100% RB/ Band 41

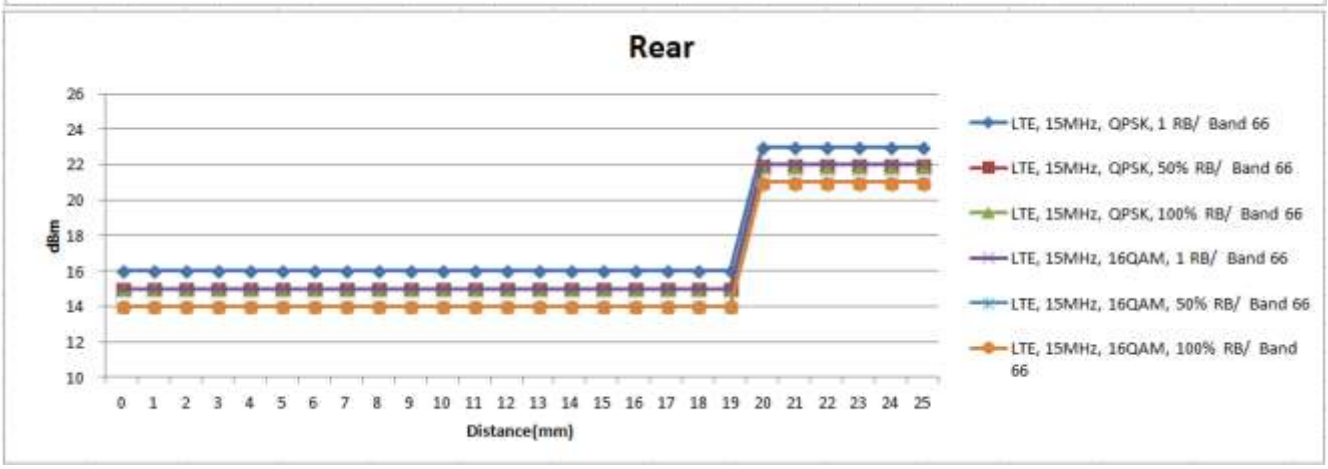

Bottom
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 41
LTE, 20MHz, QPSK, 50% RB/ Band 41
LTE, 20MHz, QPSK, 100% RB/ Band 41
LTE, 20MHz, 16QAM, 1 RB/ Band 41
LTE, 20MHz, 16QAM, 50% RB/ Band 41
LTE, 20MHz, 16QAM, 100% RB/ Band 41

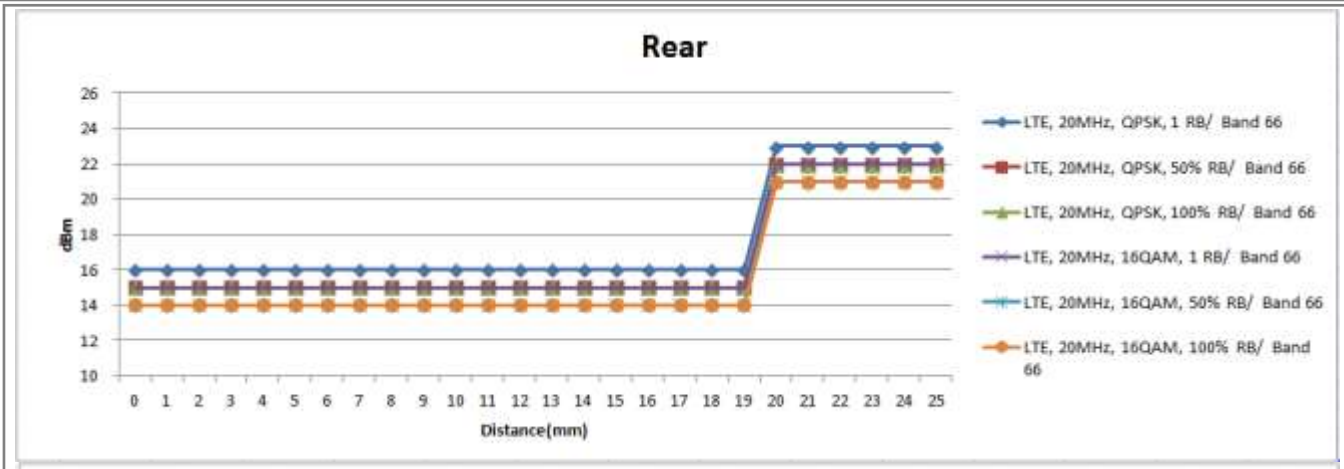

Rear
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 66
LTE, 1.4MHz, QPSK, 50% RB/ Band 66
LTE, 1.4MHz, QPSK, 100% RB/ Band 66
LTE, 1.4MHz, 16QAM, 1 RB/ Band 66
LTE, 1.4MHz, 16QAM, 50% RB/ Band 66
LTE, 1.4MHz, 16QAM, 100% RB/ Band 66

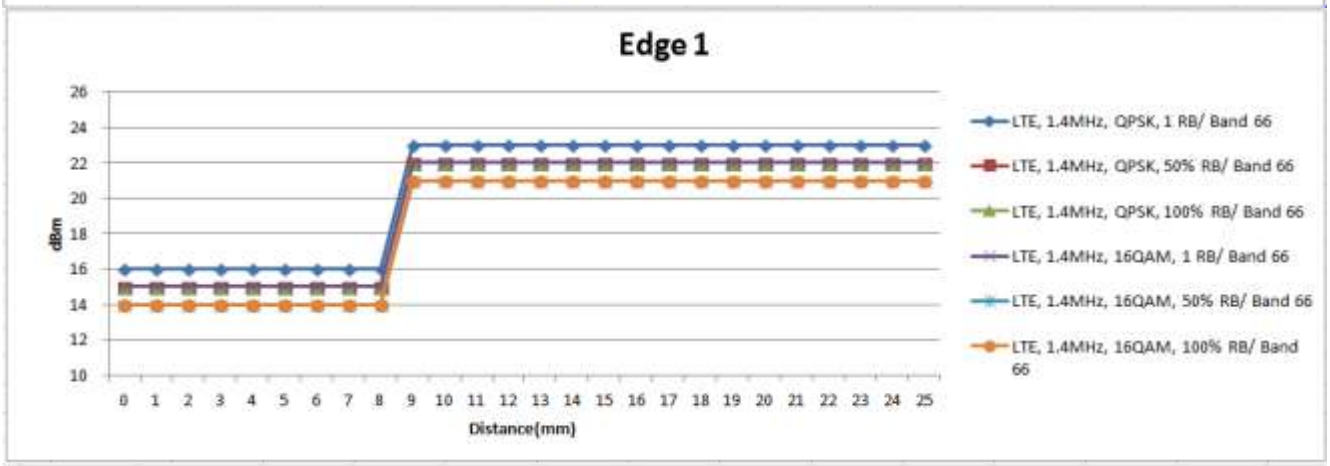

Rear
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 66
LTE, 3MHz, QPSK, 50% RB/ Band 66
LTE, 3MHz, QPSK, 100% RB/ Band 66
LTE, 3MHz, 16QAM, 1 RB/ Band 66
LTE, 3MHz, 16QAM, 50% RB/ Band 66
LTE, 3MHz, 16QAM, 100% RB/ Band 66

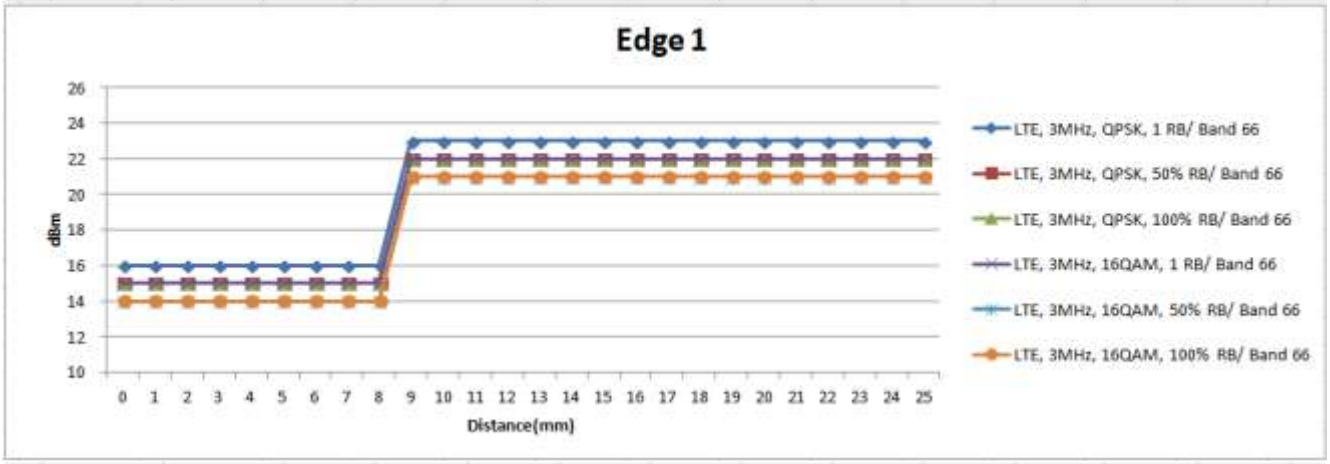

Rear
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 66
LTE, 5MHz, QPSK, 50% RB/ Band 66
LTE, 5MHz, QPSK, 100% RB/ Band 66
LTE, 5MHz, 16QAM, 1 RB/ Band 66
LTE, 5MHz, 16QAM, 50% RB/ Band 66
LTE, 5MHz, 16QAM, 100% RB/ Band 66

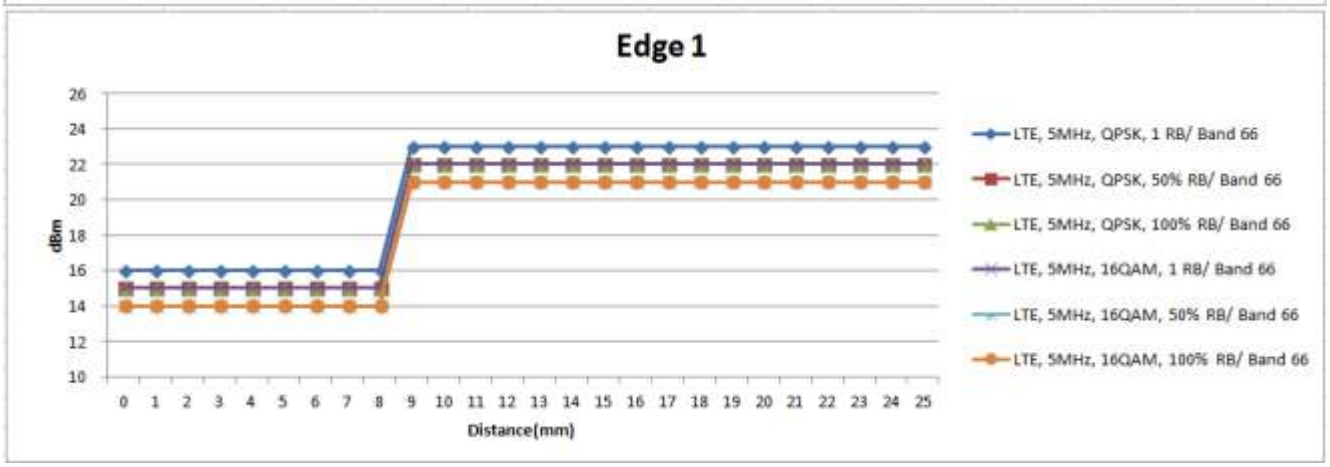

Rear
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 66
LTE, 10MHz, QPSK, 50% RB/ Band 66
LTE, 10MHz, QPSK, 100% RB/ Band 66
LTE, 10MHz, 16QAM, 1 RB/ Band 66
LTE ,10MHz, 16QAM, 50% RB/ Band 66
LTE, 10MHz, 16QAM, 100% RB/ Band 66

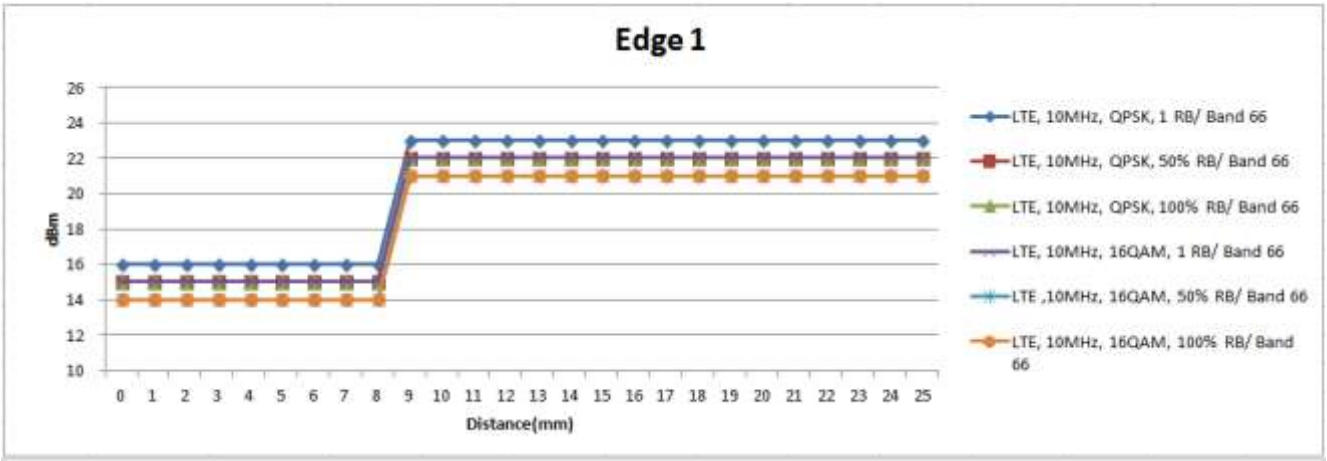

Rear
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 66
LTE, 15MHz, QPSK, 50% RB/ Band 66
LTE, 15MHz, QPSK, 100% RB/ Band 66
LTE, 15MHz, 16QAM, 1 RB/ Band 66
LTE, 15MHz, 16QAM, 50% RB/ Band 66
LTE, 15MHz, 16QAM, 100% RB/ Band 66

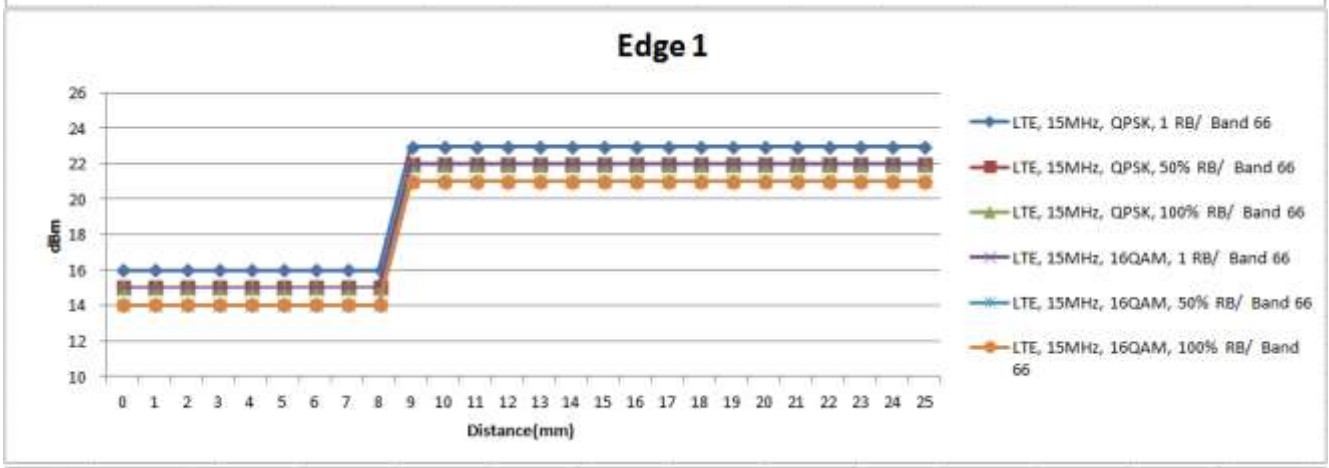

Rear
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 66
LTE, 20MHz, QPSK, 50% RB/ Band 66
LTE, 20MHz, QPSK, 100% RB/ Band 66
LTE, 20MHz, 16QAM, 1 RB/ Band 66
LTE, 20MHz, 16QAM, 50% RB/ Band 66
LTE, 20MHz, 16QAM, 100% RB/ Band 66

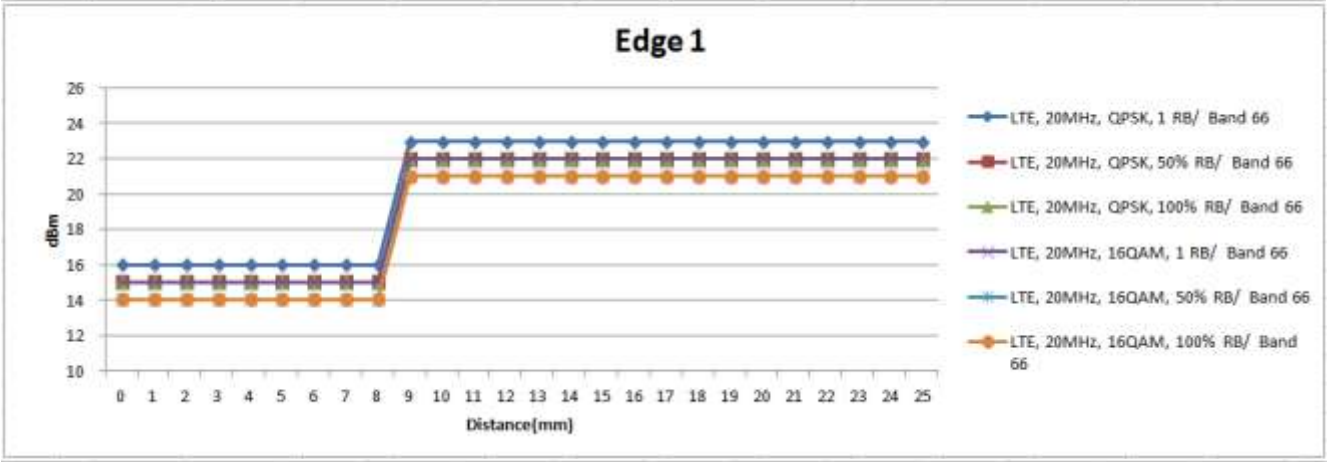

Edge 1
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 66
LTE, 1.4MHz, QPSK, 50% RB/ Band 66
LTE, 1.4MHz, QPSK, 100% RB/ Band 66
LTE, 1.4MHz, 16QAM, 1 RB/ Band 66
LTE, 1.4MHz, 16QAM, 50% RB/ Band 66
LTE, 1.4MHz, 16QAM, 100% RB/ Band 66

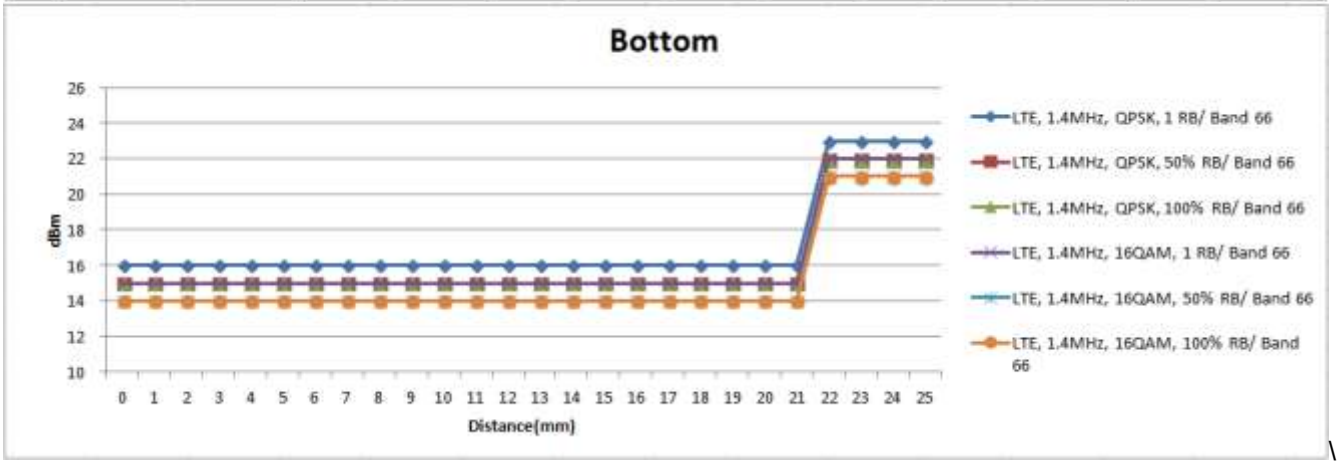

Edge 1
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 66
LTE, 3MHz, QPSK, 50% RB/ Band 66
LTE, 3MHz, QPSK, 100% RB/ Band 66
LTE, 3MHz, 16QAM, 1 RB/ Band 66
LTE, 3MHz, 16QAM, 50% RB/ Band 66
LTE, 3MHz, 16QAM, 100% RB/ Band 66


Edge 1
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 66
LTE, 5MHz, QPSK, 50% RB/ Band 66
LTE, 5MHz, QPSK, 100% RB/ Band 66
LTE, 5MHz, 16QAM, 1 RB/ Band 66
LTE, 5MHz, 16QAM, 50% RB/ Band 66
LTE, 5MHz, 16QAM, 100% RB/ Band 66


Edge 1
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 66
LTE, 10MHz, QPSK, 50% RB/ Band 66
LTE, 10MHz, QPSK, 100% RB/ Band 66
LTE, 10MHz, 16QAM, 1 RB/ Band 66
LTE ,10MHz, 16QAM, 50% RB/ Band 66
LTE, 10MHz, 16QAM, 100% RB/ Band 66


Edge 1
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 66
LTE, 15MHz, QPSK, 50% RB/ Band 66
LTE, 15MHz, QPSK, 100% RB/ Band 66
LTE, 15MHz, 16QAM, 1 RB/ Band 66
LTE, 15MHz, 16QAM, 50% RB/ Band 66
LTE, 15MHz, 16QAM, 100% RB/ Band 66


Edge 1
dBm
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 66
LTE, 20MHz, QPSK, 50% RB/ Band 66
LTE, 20MHz, QPSK, 100% RB/ Band 66
LTE, 20MHz, 16QAM, 1 RB/ Band 66
LTE, 20MHz, 16QAM, 50% RB/ Band 66
LTE, 20MHz, 16QAM, 100% RB/ Band 66


Bottom
dBm
Distance(mm)
LTE, 1.4MHz, QPSK, 1 RB/ Band 66
LTE, 1.4MHz, QPSK, 50% RB/ Band 66
LTE, 1.4MHz, QPSK, 100% RB/ Band 66
LTE, 1.4MHz, 16QAM, 1 RB/ Band 66
LTE, 1.4MHz, 16QAM, 50% RB/ Band 66
LTE, 1.4MHz, 16QAM, 100% RB/ Band 66

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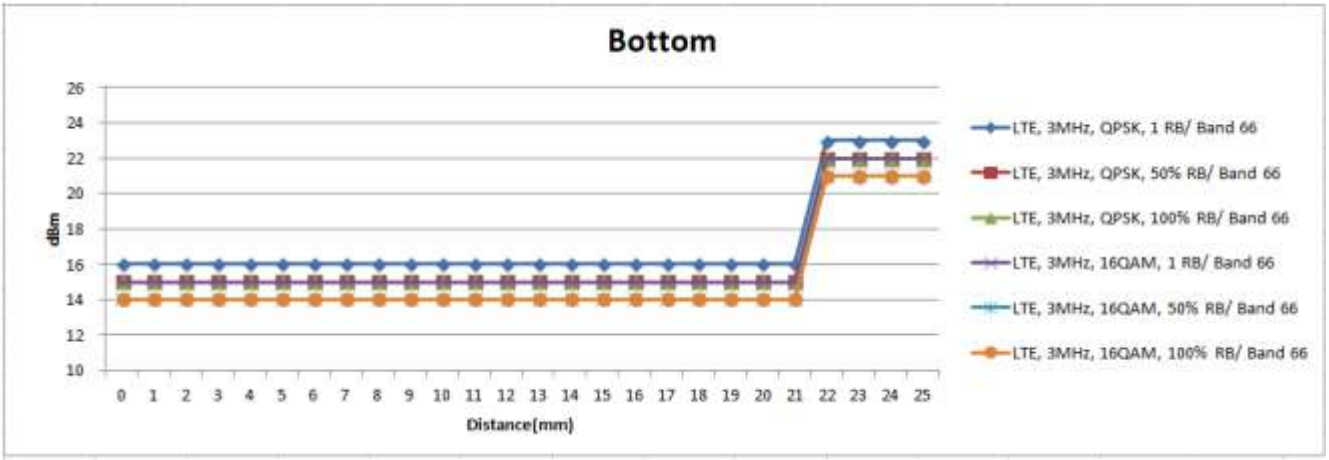
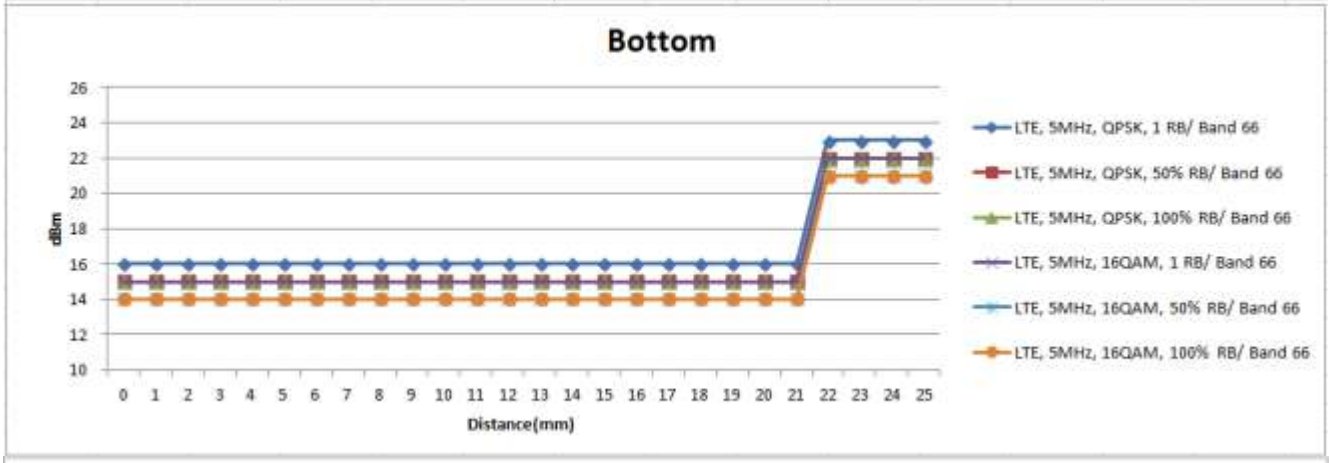
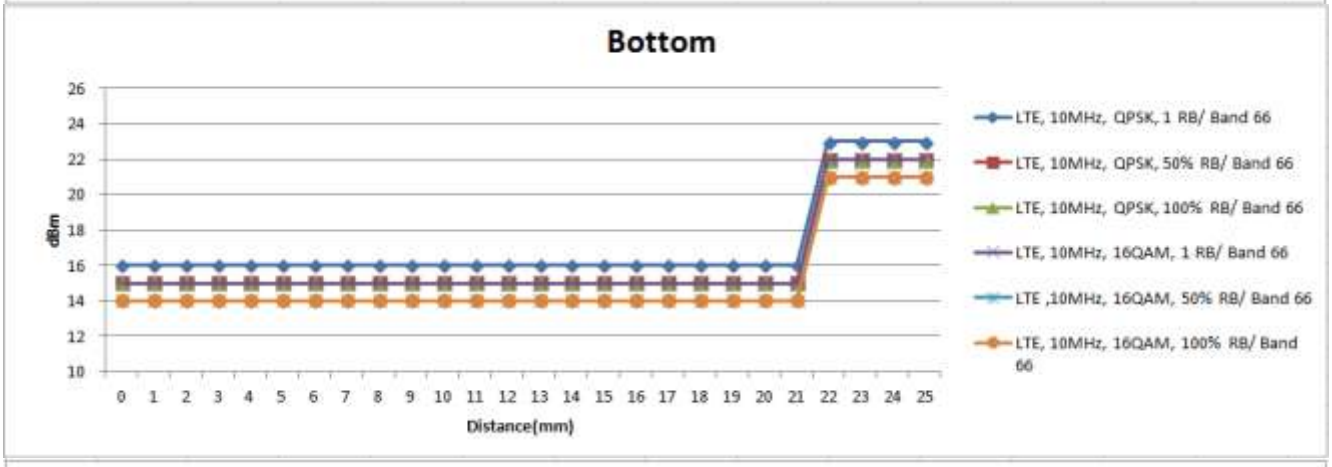
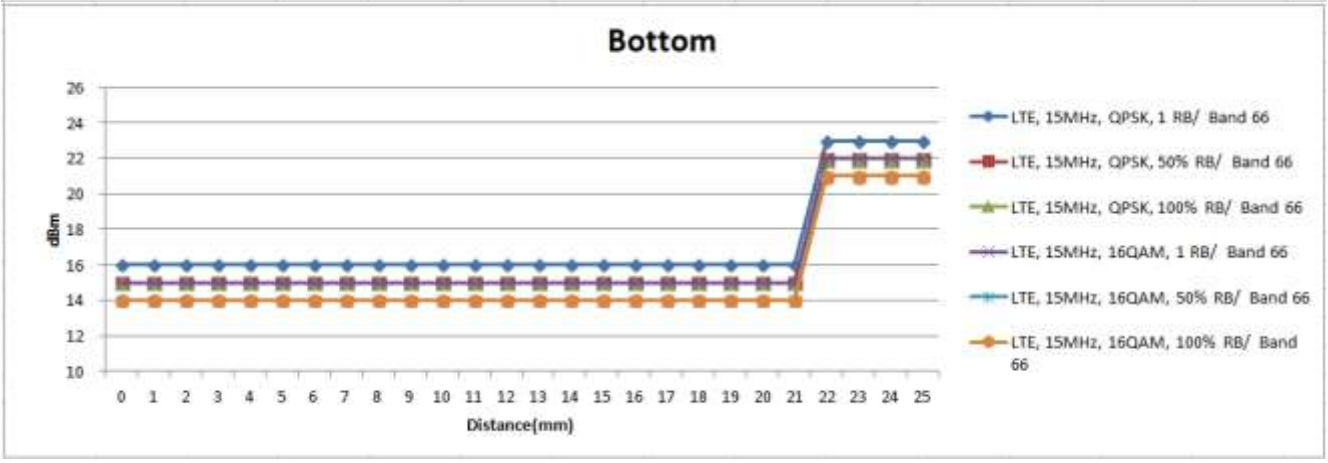
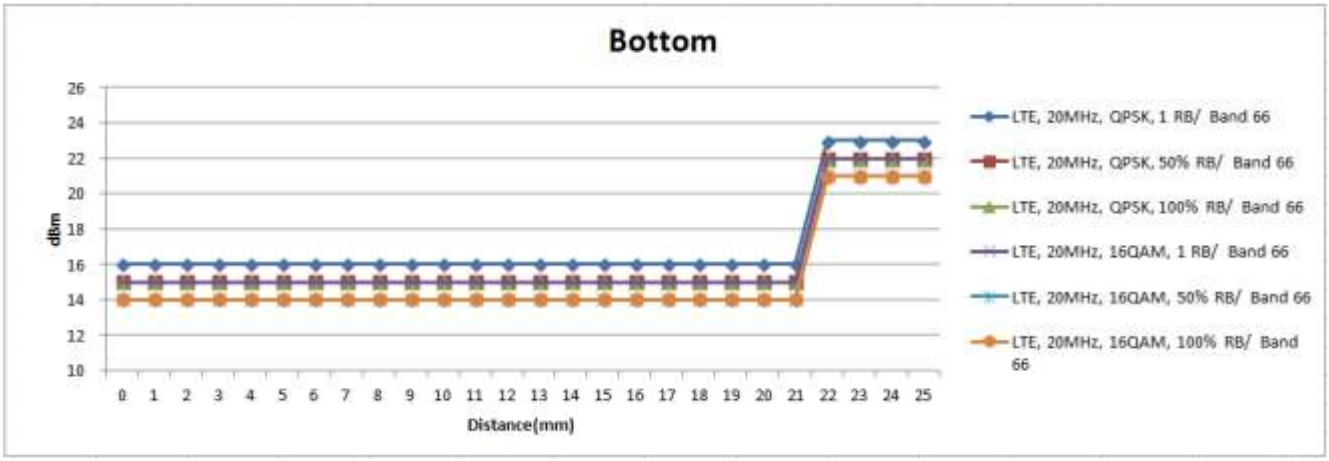

Bottom
dBm
Distance(mm)
LTE, 3MHz, QPSK, 1 RB/ Band 66
LTE, 3MHz, QPSK, 50% RB/ Band 66
LTE, 3MHz, QPSK, 100% RB/ Band 66
LTE, 3MHz, 16QAM, 1 RB/ Band 66
LTE, 3MHz, 16QAM, 50% RB/ Band 66
LTE, 3MHz, 16QAM, 100% RB/ Band 66


Bottom
dBm
Distance(mm)
LTE, 5MHz, QPSK, 1 RB/ Band 66
LTE, 5MHz, QPSK, 50% RB/ Band 66
LTE, 5MHz, QPSK, 100% RB/ Band 66
LTE, 5MHz, 16QAM, 1 RB/ Band 66
LTE, 5MHz, 16QAM, 50% RB/ Band 66
LTE, 5MHz, 16QAM, 100% RB/ Band 66


Bottom
dBm
Distance(mm)
LTE, 10MHz, QPSK, 1 RB/ Band 66
LTE, 10MHz, QPSK, 50% RB/ Band 66
LTE, 10MHz, QPSK, 100% RB/ Band 66
LTE, 10MHz, 16QAM, 1 RB/ Band 66
LTE ,10MHz, 16QAM, 50% RB/ Band 66
LTE, 10MHz, 16QAM, 100% RB/ Band 66


Bottom
dBm
Distance(mm)
LTE, 15MHz, QPSK, 1 RB/ Band 66
LTE, 15MHz, QPSK, 50% RB/ Band 66
LTE, 15MHz, QPSK, 100% RB/ Band 66
LTE, 15MHz, 16QAM, 1 RB/ Band 66
LTE, 15MHz, 16QAM, 50% RB/ Band 66
LTE, 15MHz, 16QAM, 100% RB/ Band 66


Bottom
dBm
26
24
22
20
18
16
14
12
10
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Distance(mm)
LTE, 20MHz, QPSK, 1 RB/ Band 66
LTE, 20MHz, QPSK, 50% RB/ Band 66
LTE, 20MHz, QPSK, 100% RB/ Band 66
LTE, 20MHz, 16QAM, 1 RB/ Band 66
LTE, 20MHz, 16QAM, 50% RB/ Band 66
LTE, 20MHz, 16QAM, 100% RB/ Band 66

8.5. Proximity Sensor Coverage Area

According to KDB 616217 D04, Proximity Sensor Coverage Area of not request when the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor.

9. CONDUCTED POWER RESULTS

9.1. UMTS Band

P-sensor off

Band	UMTS Band II Average Conducted Power(dBm)			
Tx Channel	Max. Tune-up power (dBm)	9262	9400	9538
Rx Channel		9662	9800	9938
Frequency		1852.4MHz	1880MHz	1907.6MHz
RMC 12.2K	24.00	23.26	23.43	23.51
HSDPA Subtest-1	24.00	23.24	23.40	23.48
HSDPA Subtest-2	23.50	22.76	22.92	23.00
HSDPA Subtest-3	23.00	22.34	22.50	22.58
HSDPA Subtest-4	23.00	22.25	22.41	22.49
HSUPA Subtest-1	24.00	23.12	23.37	23.40
HSUPA Subtest-2	22.00	21.17	21.42	21.45
HSUPA Subtest-3	23.00	22.26	22.51	22.54
HSUPA Subtest-4	22.00	21.40	21.65	21.68
HSUPA Subtest-5	24.00	23.05	23.30	23.33

P-sensor on

Band	UMTS Band II Average Conducted Power(dBm)			
Tx Channel	Max. Tune-up power (dBm)	9262	9400	9538
Rx Channel		9662	9800	9938
Frequency		1852.4MHz	1880MHz	1907.6MHz
RMC 12.2K	16.00	15.30	15.55	15.50
HSDPA Subtest-1	16.00	15.22	15.47	15.43
HSDPA Subtest-2	15.50	14.72	14.99	14.93
HSDPA Subtest-3	15.00	14.23	14.50	14.48
HSDPA Subtest-4	15.00	14.27	14.54	14.45
HSUPA Subtest-1	16.00	15.17	15.39	15.39
HSUPA Subtest-2	14.00	13.19	13.44	13.40
HSUPA Subtest-3	15.00	14.22	14.43	14.40
HSUPA Subtest-4	14.00	13.22	13.40	13.42
HSUPA Subtest-5	16.00	15.12	15.32	15.30

P-sensor off

Band	UMTS Band IV Average Conducted Power(dBm)			
Tx Channel	Max. Tune-up power (dBm)	1312	1413	1513
Rx Channel		1537	1652	1738
Frequency		1712.4MHz	1732.6MHz	1752.6MHz
RMC 12.2K	24.00	23.35	23.10	23.28
HSDPA Subtest-1	24.00	23.32	23.08	23.19
HSDPA Subtest-2	23.50	22.87	22.63	22.74
HSDPA Subtest-3	23.00	22.42	22.18	22.29
HSDPA Subtest-4	23.00	22.34	22.11	22.22
HSUPA Subtest-1	24.00	23.24	23.06	23.25
HSUPA Subtest-2	22.00	21.30	21.12	21.31
HSUPA Subtest-3	23.00	22.36	22.18	22.37
HSUPA Subtest-4	22.00	21.24	21.06	21.25
HSUPA Subtest-5	24.00	23.22	22.97	23.16

P-sensor on

Band	UMTS Band IV Average Conducted Power(dBm)			
Tx Channel	Max. Tune-up power (dBm)	1312	1413	1513
Rx Channel		1537	1652	1738
Frequency		1712.4MHz	1732.6MHz	1752.6MHz
RMC 12.2K	16.00	15.72	15.69	15.74
HSDPA Subtest-1	16.00	15.61	15.60	15.67
HSDPA Subtest-2	15.50	15.11	15.12	15.17
HSDPA Subtest-3	15.00	14.62	14.63	14.72
HSDPA Subtest-4	15.00	14.66	14.67	14.69
HSUPA Subtest-1	16.00	15.48	15.52	15.58
HSUPA Subtest-2	14.00	13.50	13.57	13.59
HSUPA Subtest-3	15.00	14.53	14.56	14.59
HSUPA Subtest-4	14.00	13.53	13.53	13.61
HSUPA Subtest-5	16.00	15.43	15.45	15.49

P-sensor off

Band	UMTS Band V Average Conducted Power(dBm)			
Tx Channel	Max. Tune-up power (dBm)	4132	4183	4233
Rx Channel		4357	4407	4458
Frequency		826.4MHz	836.6MHz	846.6MHz
RMC 12.2K	24.00	23.10	23.51	23.35
HSDPA Subtest-1	24.00	23.08	23.47	23.31
HSDPA Subtest-2	23.50	22.63	23.02	22.86
HSDPA Subtest-3	23.00	22.13	22.52	22.36
HSDPA Subtest-4	23.00	22.18	22.57	22.41
HSUPA Subtest-1	24.00	23.02	23.46	23.29
HSUPA Subtest-2	22.00	21.14	21.58	21.41
HSUPA Subtest-3	23.00	22.14	22.58	22.41
HSUPA Subtest-4	22.00	21.16	21.60	21.43
HSUPA Subtest-5	24.00	22.93	23.37	23.20

P-sensor on

Band	UMTS Band V Average Conducted Power(dBm)			
Tx Channel	Max. Tune-up power (dBm)	4132	4183	4233
Rx Channel		4357	4407	4458
Frequency		826.4MHz	826.4MHz	1977.4MHz
RMC 12.2K	18.00	17.77	17.82	17.66
HSDPA Subtest-1	18.00	17.71	17.77	17.59
HSDPA Subtest-2	17.50	17.21	17.29	17.09
HSDPA Subtest-3	17.00	16.72	16.80	16.64
HSDPA Subtest-4	17.00	16.76	16.84	16.61
HSUPA Subtest-1	18.00	17.63	17.72	17.48
HSUPA Subtest-2	16.00	15.65	15.77	15.49
HSUPA Subtest-3	17.00	16.68	16.76	16.49
HSUPA Subtest-4	16.00	15.68	15.73	15.51
HSUPA Subtest-5	18.00	17.58	17.65	17.39

9.2. LTE Band

LTE Band 2

P-sensor off

LTE B2/BW=1.4M		Average Conducted Power(dBm)				LTE B2/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			18607/ 1850.7	18900/ 1880.0	19192/ 1909.2				18615/ 1851.5	18900/ 1880.0	19184/ 1908.4
QPSK	1/0	23.00	22.11	22.21	22.1	QPSK	1/0	23.00	22.16	22.26	22.2
	1/2	23.00	21.96	22.11	22.1		1/7	23.00	22.01	22.16	22.2
	1/5	23.00	21.77	22.10	22.1		1/14	23.00	21.82	22.15	22.1
	3/0	22.00	22.11	22.21	22.1		8/0	22.00	21.31	21.37	21.3
	3/1	22.00	21.96	22.11	22.1		8/4	22.00	21.09	21.20	21.2
	3/2	22.00	21.77	22.10	22.1		8/7	22.00	21.04	21.33	21.3
	6/0	22.00	20.87	21.27	21.2		15/0	22.00	20.92	21.32	21.2
16QAM	1/0	22.00	21.33	21.39	21.3	16QAM	1/0	22.00	21.38	21.44	21.4
	1/2	22.00	21.14	21.35	21.3		1/7	22.00	21.19	21.40	21.3
	1/5	22.00	20.88	21.17	21.1		1/14	22.00	20.93	21.22	21.2
	3/0	21.00	21.33	21.39	21.3		8/0	21.00	20.21	20.27	20.2
	3/1	21.00	21.14	21.35	21.3		8/4	21.00	20.19	20.30	20.3
	3/2	21.00	20.88	21.17	21.1		8/7	21.00	19.89	20.18	20.1
	6/0	21.00	19.96	20.50	20.6		15/0	21.00	20.01	21.30	21.1
LTE B2/BW=5M		Average Conducted Power(dBm)				LTE B2/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			18625/ 1852.5	18900/ 1880	19175/ 1907.5				18650/ 1855	18900/ 1880	19150/ 1905
QPSK	1/0	23.00	22.21	22.31	22.43	QPSK	1/0	23.00	22.26	22.36	22.28
	1/12	23.00	22.06	22.38	22.48		1/12	23.00	22.11	22.43	22.25
	1/24	23.00	21.87	22.20	22.31		1/49	23.00	21.92	22.25	22.20
	12/0	22.00	21.36	21.42	21.54		25/0	22.00	21.41	21.47	21.39
	12/6	22.00	21.14	21.42	21.52		25/12	22.00	21.19	21.47	21.29
	12/11	22.00	21.09	21.38	21.49		25/24	22.00	21.14	21.43	21.38
	25/0	22.00	20.97	21.37	21.49		50/0	22.00	21.02	21.42	21.34
16QAM	1/0	22.00	21.43	21.49	21.61	16QAM	1/0	22.00	21.48	21.54	21.46
	1/12	22.00	21.24	21.45	21.57		1/24	22.00	21.29	21.50	21.42
	1/24	22.00	20.98	21.27	21.38		1/49	22.00	21.03	21.32	21.27
	12/0	21.00	20.26	20.32	20.44		25/0	21.00	20.31	20.37	20.29
	12/6	21.00	20.24	20.52	20.62		25/12	21.00	20.29	20.57	20.39
	12/11	21.00	19.94	20.23	20.34		25/24	21.00	19.99	20.28	20.23
	25/0	21.00	20.06	20.46	20.58		50/0	21.00	20.11	20.51	20.43

LTE B2/BW=15M		Average Conducted Power(dBm)				LTE B2/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			18675/ 1857.5	18900/ 1880	19125/ 1902.5				18700/ 1860	18900/ 1880	19100/ 1900
QPSK	1/0	23.00	22.31	22.41	22.33	QPSK	1/0	23.00	22.36	22.42	22.34
	1/37	23.00	22.16	22.48	22.30		1/49	23.00	22.21	22.49	22.31
	1/74	23.00	21.97	22.30	22.25		1/99	23.00	22.02	22.31	22.26
	36/0	22.00	21.46	21.52	21.44		50/0	22.00	21.47	21.53	21.45
	36/18	22.00	21.24	21.52	21.34		50/24	22.00	21.25	21.53	21.35
	36/35	22.00	21.19	21.48	21.43		50/49	22.00	21.20	21.49	21.44
	75/0	22.00	21.07	21.47	21.39		100/0	22.00	21.08	21.48	21.40
16QAM	1/0	22.00	21.53	21.59	21.51	16QAM	1/0	22.00	21.54	21.60	21.52
	1/37	22.00	21.34	21.55	21.47		1/49	22.00	21.35	21.56	21.48
	1/74	22.00	21.08	21.37	21.32		1/99	22.00	21.09	21.38	21.33
	36/0	21.00	20.36	20.42	20.34		50/0	21.00	20.37	20.43	20.35
	36/18	21.00	20.34	20.62	20.44		50/24	21.00	20.35	20.63	20.45
	36/35	21.00	20.04	20.33	20.28		50/49	21.00	20.05	20.34	20.29
	75/0	21.00	20.16	20.56	20.48		100/0	21.00	20.17	20.57	20.49

P-sensor on

LTE B2/BW=1.4M		Average Conducted Power(dBm)				LTE B2/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			18607/ 1850.7	18900/ 1880.0	19192/ 1909.2				18615/ 1851.5	18900/ 1880.0	19184/ 1908.4
QPSK	1/0	16.00	15.51	15.45	15.43	QPSK	1/0	16.00	15.55	15.49	15.47
	1/2	16.00	15.32	15.42	15.26		1/7	16.00	15.36	15.46	15.30
	1/5	16.00	15.15	15.42	15.37		1/14	16.00	15.19	15.46	15.41
	3/0	15.00	14.60	14.54	14.52		8/0	15.00	14.64	14.58	14.56
	3/1	15.00	14.37	14.47	14.31		8/4	15.00	14.41	14.51	14.35
	3/2	15.00	14.22	14.49	14.44		8/7	15.00	14.26	14.53	14.48
	6/0	15.00	14.55	14.49	14.47		15/0	15.00	14.59	14.53	14.51
16QAM	1/0	15.00	14.58	14.52	14.50	16QAM	1/0	15.00	14.62	14.56	14.54
	1/2	15.00	14.40	14.50	14.34		1/7	15.00	14.44	14.54	14.38
	1/5	15.00	14.25	14.52	14.47		1/14	15.00	14.29	14.56	14.51
	3/0	14.00	13.66	13.60	13.58		8/0	14.00	13.70	13.64	13.62
	3/1	14.00	13.40	13.50	13.34		8/4	14.00	13.44	13.54	13.38
	3/2	14.00	13.25	13.52	13.47		8/7	14.00	13.29	13.56	13.51
	6/0	14.00	13.58	13.52	13.50		15/0	14.00	13.62	13.56	13.54

LTE B2/BW=5M		Average Conducted Power(dBm)				LTE B2/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			18625/ 1852.5	18900/ 1880	19175/ 1907.5				18650/ 1855	18900/ 1880	19150/ 1905
QPSK	1/0	16.00	15.63	15.57	15.55	QPSK	1/0	16.00	15.70	15.64	15.62
	1/12	16.00	15.44	15.54	15.38		1/12	16.00	15.51	15.61	15.45
	1/24	16.00	15.27	15.54	15.49		1/49	16.00	15.34	15.61	15.56
	12/0	15.00	14.72	14.66	14.64		25/0	15.00	14.79	14.73	14.71
	12/6	15.00	14.49	14.59	14.43		25/12	15.00	14.56	14.66	14.50
	12/11	15.00	14.34	14.61	14.56		25/24	15.00	14.41	14.68	14.63
	25/0	15.00	14.67	14.61	14.59		50/0	15.00	14.74	14.68	14.66
16QAM	1/0	15.00	14.70	14.64	14.62	16QAM	1/0	15.00	14.77	14.71	14.69
	1/12	15.00	14.52	14.62	14.46		1/24	15.00	14.59	14.69	14.53
	1/24	15.00	14.37	14.64	14.59		1/49	15.00	14.44	14.71	14.66
	12/0	14.00	13.78	13.72	13.70		25/0	14.00	13.85	13.79	13.77
	12/6	14.00	13.52	13.62	13.46		25/12	14.00	13.59	13.69	13.53
	12/11	14.00	13.37	13.64	13.59		25/24	14.00	13.44	13.71	13.66
	25/0	14.00	13.70	13.64	13.62		50/0	14.00	13.77	13.71	13.69
LTE B2/BW=15M		Average Conducted Power(dBm)				LTE B2/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			18675/ 1857.5	18900/ 1880	19125/ 1902.5				18700/ 1860	18900/ 1880	19100/ 1900
QPSK	1/0	16.00	15.75	15.69	15.67	QPSK	1/0	16.00	15.88	15.82	15.80
	1/37	16.00	15.56	15.66	15.50		1/49	16.00	15.69	15.79	15.63
	1/74	16.00	15.39	15.66	15.61		1/99	16.00	15.52	15.79	15.74
	36/0	15.00	14.84	14.78	14.76		50/0	15.00	14.97	14.91	14.89
	36/18	15.00	14.61	14.71	14.55		50/24	15.00	14.74	14.84	14.68
	36/35	15.00	14.46	14.73	14.68		50/49	15.00	14.59	14.86	14.81
	75/0	15.00	14.79	14.73	14.71		100/0	15.00	14.92	14.86	14.84
16QAM	1/0	15.00	14.82	14.76	14.74	16QAM	1/0	15.00	14.95	14.89	14.87
	1/37	15.00	14.64	14.74	14.58		1/49	15.00	14.77	14.87	14.71
	1/74	15.00	14.49	14.76	14.71		1/99	15.00	14.62	14.89	14.84
	36/0	14.00	13.90	13.84	13.82		50/0	14.00	14.03	13.97	13.95
	36/18	14.00	13.64	13.74	13.58		50/24	14.00	13.77	13.87	13.71
	36/35	14.00	13.49	13.76	13.71		50/49	14.00	13.62	13.89	13.84
	75/0	14.00	13.82	13.76	13.74		100/0	14.00	13.95	13.89	13.87

LTE Band 4

P-sensor off

LTE B4/BW=1.4M		Average Conducted Power(dBm)				LTE B4/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			19957/ 1710.7	20175/ 1732.5	20392/ 1754.2				19965/ 1711.5	20175/ 1732.5	20384/ 1753.4
QPSK	1/0	23.00	22.47	22.58	22.48	QPSK	1/0	23.00	22.52	22.63	22.53
	1/2	23.00	22.27	22.51	22.39		1/7	23.00	22.32	22.56	22.44
	1/5	23.00	22.25	22.55	22.27		1/14	23.00	22.30	22.60	22.32
	3/0	22.00	22.47	22.58	22.48		8/0	22.00	21.63	21.74	21.64
	3/1	22.00	22.27	22.51	22.39		8/4	22.00	21.36	21.60	21.48
	3/2	22.00	22.25	22.55	22.27		8/7	22.00	21.48	21.78	21.50
	6/0	22.00	21.53	21.64	21.54		15/0	22.00	21.58	21.69	21.59
16QAM	1/0	22.00	21.65	21.76	21.66	16QAM	1/0	22.00	21.70	21.81	21.71
	1/2	22.00	21.61	21.72	21.62		1/7	22.00	21.66	21.77	21.67
	1/5	22.00	21.32	21.62	21.34		1/14	22.00	21.37	21.67	21.39
	3/0	21.00	21.65	21.76	21.66		8/0	21.00	20.53	20.64	20.54
	3/1	21.00	21.61	21.72	21.62		8/4	21.00	20.46	20.70	20.58
	3/2	21.00	21.32	21.62	21.34		8/7	21.00	20.33	20.63	20.35
	6/0	21.00	20.62	20.50	20.60		15/0	21.00	20.67	20.78	20.68
LTE B4/BW=5M		Average Conducted Power(dBm)				LTE B4/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			19975/ 1712.5	20175/ 1732.5	20375/ 1752.5				20000/ 1715	20175/ 1732.5	20350/ 1750
QPSK	1/0	23.00	22.57	22.68	22.58	QPSK	1/0	23.00	22.62	22.73	22.63
	1/12	23.00	22.37	22.61	22.49		1/12	23.00	22.42	22.66	22.54
	1/24	23.00	22.35	22.65	22.37		1/49	23.00	22.40	22.70	22.42
	12/0	22.00	21.68	21.79	21.69		25/0	22.00	21.73	21.84	21.74
	12/6	22.00	21.41	21.65	21.53		25/12	22.00	21.46	21.70	21.58
	12/11	22.00	21.53	21.83	21.55		25/24	22.00	21.58	21.88	21.60
	25/0	22.00	21.63	21.74	21.64		50/0	22.00	21.68	21.79	21.69
16QAM	1/0	22.00	21.75	21.86	21.76	16QAM	1/0	22.00	21.80	21.91	21.81
	1/12	22.00	21.71	21.82	21.72		1/24	22.00	21.76	21.87	21.77
	1/24	22.00	21.42	21.72	21.44		1/49	22.00	21.47	21.77	21.49
	12/0	21.00	20.58	20.69	20.59		25/0	21.00	20.63	20.74	20.64
	12/6	21.00	20.51	20.75	20.63		25/12	21.00	20.56	20.80	20.68
	12/11	21.00	20.38	20.68	20.40		25/24	21.00	20.43	20.73	20.45
	25/0	21.00	20.72	20.83	20.73		50/0	21.00	20.77	20.88	20.78

LTE B4/BW=15M		Average Conducted Power(dBm)				LTE B4/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20025/ 1717.5	20175/ 1732.5	20325/ 1747.5				20050/ 1720	20175/ 1732.5	20300/ 1745
QPSK	1/0	23.00	22.67	22.78	22.68	QPSK	1/0	23.00	22.72	22.83	22.73
	1/37	23.00	22.47	22.71	22.59		1/49	23.00	22.52	22.76	22.64
	1/74	23.00	22.45	22.75	22.47		1/99	23.00	22.50	22.80	22.52
	36/0	22.00	21.78	21.89	21.79		50/0	22.00	21.83	21.94	21.84
	36/18	22.00	21.51	21.75	21.63		50/24	22.00	21.56	21.80	21.68
	36/35	22.00	21.63	21.93	21.65		50/49	22.00	21.68	21.98	21.70
	75/0	22.00	21.73	21.84	21.74		100/0	22.00	21.78	21.89	21.79
16QAM	1/0	22.00	21.85	21.96	21.86	16QAM	1/0	22.00	21.90	22.01	21.91
	1/37	22.00	21.81	21.92	21.82		1/49	22.00	21.86	21.97	21.87
	1/74	22.00	21.52	21.82	21.54		1/99	22.00	21.57	21.87	21.59
	36/0	21.00	20.68	20.79	20.69		50/0	21.00	20.73	20.84	20.74
	36/18	21.00	20.61	20.85	20.73		50/24	21.00	20.66	20.90	20.78
	36/35	21.00	20.48	20.78	20.50		50/49	21.00	20.53	20.83	20.55
	75/0	21.00	20.82	20.93	20.83		100/0	21.00	20.87	20.98	20.88

P-sensor on

LTE B4/BW=1.4M		Average Conducted Power(dBm)				LTE B4/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			18607/ 1850.7	18900/ 1880.0	19192/ 1909.2				18615/ 1851.5	18900/ 1880.0	19184/ 1908.4
QPSK	1/0	16.00	15.46	15.53	15.39	QPSK	1/0	16.00	15.54	15.61	15.47
	1/2	16.00	15.23	15.43	15.24		1/7	16.00	15.31	15.51	15.32
	1/5	16.00	15.40	15.37	15.13		1/14	16.00	15.48	15.45	15.21
	3/0	15.00	14.55	14.57	14.48		8/0	15.00	14.63	14.65	14.56
	3/1	15.00	14.28	14.50	14.29		8/4	15.00	14.36	14.58	14.37
	3/2	15.00	14.47	14.44	14.20		8/7	15.00	14.55	14.52	14.28
	6/0	15.00	14.50	14.57	14.43		15/0	15.00	14.58	14.65	14.51
16QAM	1/0	15.00	14.53	14.60	14.46	16QAM	1/0	15.00	14.61	14.68	14.54
	1/2	15.00	14.31	14.51	14.32		1/7	15.00	14.39	14.59	14.40
	1/5	15.00	14.50	14.47	14.23		1/14	15.00	14.58	14.55	14.31
	3/0	14.00	13.61	13.68	13.54		8/0	14.00	13.69	13.76	13.62
	3/1	14.00	13.31	13.51	13.32		8/4	14.00	13.39	13.59	13.40
	3/2	14.00	13.50	13.47	13.23		8/7	14.00	13.58	13.55	13.31
	6/0	14.00	13.53	13.60	13.46		15/0	14.00	13.61	13.68	13.54

LTE B4/BW=5M		Average Conducted Power(dBm)				LTE B4/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			19975/ 1712.5	20175/ 1732.5	20375/ 1752.5				20000/ 1715	20175/ 1732.5	20350/ 1750
QPSK	1/0	16.00	15.59	15.66	15.52	QPSK	1/0	16.00	15.63	15.70	15.56
	1/12	16.00	15.36	15.56	15.37		1/12	16.00	15.40	15.60	15.41
	1/24	16.00	15.53	15.50	15.26		1/49	16.00	15.57	15.54	15.30
	12/0	15.00	14.68	14.70	14.61		25/0	15.00	14.72	14.74	14.65
	12/6	15.00	14.41	14.63	14.42		25/12	15.00	14.45	14.67	14.46
	12/11	15.00	14.60	14.57	14.33		25/24	15.00	14.64	14.61	14.37
	25/0	15.00	14.63	14.70	14.56		50/0	15.00	14.67	14.74	14.60
16QAM	1/0	15.00	14.66	14.73	14.59	16QAM	1/0	15.00	14.70	14.77	14.63
	1/12	15.00	14.44	14.64	14.45		1/24	15.00	14.48	14.68	14.49
	1/24	15.00	14.63	14.60	14.36		1/49	15.00	14.67	14.64	14.40
	12/0	14.00	13.74	13.81	13.67		25/0	14.00	13.78	13.85	13.71
	12/6	14.00	13.44	13.64	13.45		25/12	14.00	13.48	13.68	13.49
	12/11	14.00	13.63	13.60	13.36		25/24	14.00	13.67	13.64	13.40
	25/0	14.00	13.66	13.73	13.59		50/0	14.00	13.70	13.77	13.63
LTE B4/BW=15M		Average Conducted Power(dBm)				LTE B4/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20025/ 1717.5	20175/ 1732.5	20325/ 1747.5				20050/ 1720	20175/ 1732.5	20300/ 1745
QPSK	1/0	16.00	15.72	15.79	15.65	QPSK	1/0	16.00	15.85	15.92	15.78
	1/37	16.00	15.49	15.69	15.50		1/49	16.00	15.62	15.82	15.63
	1/74	16.00	15.66	15.63	15.39		1/99	16.00	15.79	15.76	15.52
	36/0	15.00	14.81	14.83	14.74		50/0	15.00	14.94	14.96	14.87
	36/18	15.00	14.54	14.76	14.55		50/24	15.00	14.67	14.89	14.68
	36/35	15.00	14.73	14.70	14.46		50/49	15.00	14.86	14.83	14.59
	75/0	15.00	14.76	14.83	14.69		100/0	15.00	14.89	14.96	14.82
16QAM	1/0	15.00	14.79	14.86	14.72	16QAM	1/0	15.00	14.92	14.99	14.85
	1/37	15.00	14.57	14.77	14.58		1/49	15.00	14.70	14.90	14.71
	1/74	15.00	14.76	14.73	14.49		1/99	15.00	14.89	14.86	14.62
	36/0	14.00	13.87	13.94	13.80		50/0	14.00	14.00	14.07	13.93
	36/18	14.00	13.57	13.77	13.58		50/24	14.00	13.70	13.90	13.71
	36/35	14.00	13.76	13.73	13.49		50/49	14.00	13.89	13.86	13.62
	75/0	14.00	13.79	13.86	13.72		100/0	14.00	13.92	13.99	13.85

LTE Band 5

P-sensor off

LTE B5/BW=1.4M		Average Conducted Power(dBm)				LTE B5/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20407/ 824.7	20525/ 836.5	20642/ 848.2				20415/ 825.5	20525/ 836.5	20634/ 847.4
QPSK	1/0	23.00	22.22	22.16	22.25	QPSK	1/0	23.00	22.27	22.21	22.30
	1/2	23.00	22.05	22.03	22.11		1/7	23.00	22.10	22.08	22.16
	1/5	23.00	21.96	21.88	21.86		1/14	23.00	22.01	21.93	21.91
	3/0	22.00	22.22	22.16	22.25		8/0	22.00	21.38	21.32	21.41
	3/1	22.00	22.05	22.03	22.11		8/4	22.00	21.14	21.12	21.20
	3/2	22.00	21.96	21.88	21.86		8/7	22.00	21.19	21.11	21.09
	6/0	22.00	21.28	21.22	21.31		15/0	22.00	21.33	21.27	21.36
16QAM	1/0	22.00	21.40	21.34	21.43	16QAM	1/0	22.00	21.45	21.39	21.48
	1/2	22.00	21.36	21.30	21.39		1/7	22.00	21.41	21.35	21.44
	1/5	22.00	21.03	20.95	20.93		1/14	22.00	21.08	21.00	20.98
	3/0	21.00	21.40	21.34	21.43		8/0	21.00	20.28	20.22	20.31
	3/1	21.00	21.36	21.30	21.39		8/4	21.00	20.24	20.22	20.30
	3/2	21.00	21.03	20.95	20.93		8/7	21.00	20.04	19.96	19.94
	6/0	21.00	20.37	20.50	20.60		15/0	21.00	20.42	20.36	20.45
LTE B5/BW=5M		**Average Conducted Power(dBm)**				**LTE B5/BW=10M**		**Average Conducted Power(dBm)**			
Modula-tion	**RB Size/ Offset**	**Max. Tune-up (dBm)**	**Channel/Frequency(MHz)**			**Modula-tion**	**RB Size/ Offset**	**Max. Tune-up (dBm)**	**Channel/Frequency(MHz)**		
			20415/ 825.5	**20525/ 836.5**	**20634/ 847.4**				**20450/ 829**	**20525/ 836.5**	**20600/ 844**
QPSK	1/0	23.00	22.32	22.26	22.35	QPSK	1/0	23.00	22.37	22.31	22.40
	1/12	23.00	22.15	22.13	22.21		1/12	23.00	22.20	22.18	22.26
	1/24	23.00	22.06	21.98	21.96		1/49	23.00	22.11	22.03	22.01
	12/0	22.00	21.43	21.37	21.46		25/0	22.00	21.48	21.42	21.51
	12/6	22.00	21.19	21.17	21.25		25/12	22.00	21.24	21.22	21.30
	12/11	22.00	21.24	21.16	21.14		25/24	22.00	21.29	21.21	21.19
	25/0	22.00	21.38	21.32	21.41		50/0	22.00	21.43	21.37	21.46
16QAM	1/0	22.00	21.50	21.44	21.53	16QAM	1/0	22.00	21.55	21.49	21.58
	1/12	22.00	21.46	21.40	21.49		1/24	22.00	21.51	21.45	21.54
	1/24	22.00	21.13	21.05	21.03		1/49	22.00	21.18	21.10	21.08
	12/0	21.00	20.33	20.27	20.36		25/0	21.00	20.38	20.32	20.41
	12/6	21.00	20.29	20.27	20.35		25/12	21.00	20.34	20.32	20.40
	12/11	21.00	20.09	20.01	19.99		25/24	21.00	20.14	20.06	20.04
	25/0	21.00	20.47	20.41	20.50		50/0	21.00	20.52	20.46	20.55

P-sensor on

LTE B5/BW=1.4M		Average Conducted Power(dBm)				LTE B5/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20407/ 824.7	20525/ 836.5	20642/ 848.2				20415/ 825.5	20525/ 836.5	20634/ 847.4
QPSK	1/0	18.00	17.38	17.39	17.43	QPSK	1/0	18.00	17.45	17.46	17.50
	1/2	18.00	17.30	17.38	17.22		1/7	18.00	17.37	17.45	17.29
	1/5	18.00	17.27	17.29	17.19		1/14	18.00	17.34	17.36	17.26
	3/0	17.00	16.47	16.48	16.52		8/0	17.00	16.54	16.55	16.59
	3/1	17.00	16.35	16.43	16.27		8/4	17.00	16.42	16.50	16.34
	3/2	17.00	16.34	16.36	16.26		8/7	17.00	16.41	16.43	16.33
	6/0	17.00	16.42	16.43	16.47		15/0	17.00	16.49	16.50	16.54
16QAM	1/0	17.00	16.45	16.46	16.50	16QAM	1/0	17.00	16.52	16.53	16.57
	1/2	17.00	16.38	16.46	16.30		1/7	17.00	16.45	16.53	16.37
	1/5	17.00	16.37	16.39	16.29		1/14	17.00	16.44	16.46	16.36
	3/0	16.00	15.53	15.54	15.58		8/0	16.00	15.60	15.61	15.65
	3/1	16.00	15.38	15.46	15.30		8/4	16.00	15.45	15.53	15.37
	3/2	16.00	15.37	15.39	15.29		8/7	16.00	15.44	15.46	15.36
	6/0	16.00	15.45	15.46	15.50		15/0	16.00	15.52	15.53	15.57

LTE B5/BW=5M		Average Conducted Power(dBm)				LTE B5/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20415/ 825.5	20525/ 836.5	20634/ 847.4				20450/ 829	20525/ 836.5	20600/ 844
QPSK	1/0	18.00	17.54	17.55	17.59	QPSK	1/0	18.00	17.59	17.60	17.64
	1/12	18.00	17.46	17.54	17.38		1/12	18.00	17.51	17.59	17.43
	1/24	18.00	17.43	17.45	17.35		1/49	18.00	17.48	17.50	17.40
	12/0	17.00	16.63	16.64	16.68		25/0	17.00	16.68	16.69	16.73
	12/6	17.00	16.51	16.59	16.43		25/12	17.00	16.56	16.64	16.48
	12/11	17.00	16.50	16.52	16.42		25/24	17.00	16.55	16.57	16.47
	25/0	17.00	16.58	16.59	16.63		50/0	17.00	16.63	16.64	16.68
16QAM	1/0	17.00	16.61	16.62	16.66	16QAM	1/0	17.00	16.66	16.67	16.71
	1/12	17.00	16.54	16.62	16.46		1/24	17.00	16.59	16.67	16.51
	1/24	17.00	16.53	16.55	16.45		1/49	17.00	16.58	16.60	16.50
	12/0	16.00	15.69	15.70	15.74		25/0	16.00	15.74	15.75	15.79
	12/6	16.00	15.54	15.62	15.46		25/12	16.00	15.59	15.67	15.51
	12/11	16.00	15.53	15.55	15.45		25/24	16.00	15.58	15.60	15.50
	25/0	16.00	15.61	15.62	15.66		50/0	16.00	15.66	15.67	15.71

LTE Band 7

P-sensor off

LTE B7/BW=5M		Average Conducted Power(dBm)				LTE B7/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20775/ 2502.5	21100/ 2535	21425/ 2567.5				20800/ 2505	21100/ 2535	21400/ 2565
QPSK	1/0	23.00	22.69	22.79	23.05	QPSK	1/0	23.00	22.74	22.84	23.10
	1/12	23.00	22.79	22.89	23.34		1/24	23.00	22.84	22.94	23.39
	1/24	23.00	22.64	22.92	23.44		1/49	23.00	22.69	22.97	23.49
	12/0	22.00	21.77	21.91	22.16		25/0	22.00	21.82	21.96	22.21
	12/6	22.00	21.97	21.99	22.48		25/12	22.00	22.02	22.04	22.53
	12/11	22.00	21.73	22.02	22.57		25/24	22.00	21.78	22.07	22.62
	25/0	22.00	21.75	22.09	22.61		50/0	22.00	21.80	22.14	22.66
16QAM	1/0	22.00	21.89	21.91	22.16	16QAM	1/0	22.00	21.94	21.96	22.21
	1/12	22.00	21.87	22.04	22.45		1/24	22.00	21.92	22.09	22.50
	1/24	22.00	21.84	22.13	22.61		1/49	22.00	21.89	22.18	22.66
	12/0	21.00	20.79	20.91	21.16		25/0	21.00	20.84	20.96	21.21
	12/6	21.00	20.88	21.10	21.43		25/12	21.00	20.93	21.15	21.48
	12/11	21.00	20.71	20.99	21.56		25/24	21.00	20.76	21.04	21.61
	25/0	21.00	20.76	21.10	21.52		50/0	21.00	20.81	21.15	21.57
LTE B7/BW=15M		Average Conducted Power(dBm)				LTE B7/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20825/ 2507.5	21100/ 2535	21375/ 2562.5				20850/ 2510	21100/ 2535	21350/ 2560
QPSK	1/0	23.00	22.79	22.89	23.15	QPSK	1/0	23.00	22.29	22.42	22.32
	1/37	23.00	22.89	22.99	23.44		1/49	23.00	22.21	22.26	22.21
	1/74	23.00	22.74	23.02	23.54		1/99	23.00	21.87	22.10	22.03
	36/0	22.00	21.87	22.01	22.26		50/0	22.00	21.40	21.53	21.43
	36/18	22.00	22.07	22.09	22.58		50/24	22.00	21.25	21.30	21.25
	36/35	22.00	21.83	22.12	22.67		50/49	22.00	21.05	21.28	21.21
	75/0	22.00	21.85	22.19	22.71		100/0	22.00	21.35	21.48	21.38
16QAM	1/0	22.00	21.99	22.01	22.26	16QAM	1/0	22.00	21.47	21.60	21.50
	1/37	22.00	21.97	22.14	22.55		1/59	22.00	21.43	21.56	21.46
	1/74	22.00	21.94	22.23	22.71		1/99	22.00	20.94	21.17	21.10
	36/0	21.00	20.89	21.01	21.26		50/0	21.00	20.30	20.43	20.33
	36/18	21.00	20.98	21.20	21.53		50/24	21.00	20.35	20.40	20.35
	36/35	21.00	20.81	21.09	21.66		50/49	21.00	19.90	20.13	20.06
	75/0	21.00	20.86	21.20	21.62		100/0	21.00	20.44	20.57	20.47

P-sensor on

LTE B7/BW=5M		Average Conducted Power(dBm)				LTE B7/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20775/ 2502.5	21100/ 2535	21425/ 2567.5				20800/ 2505	21100/ 2535	21400/ 2565
QPSK	1/0	16.00	15.43	15.48	15.39	QPSK	1/0	16.00	15.51	15.56	15.47
	1/12	16.00	15.34	15.34	15.34		1/24	16.00	15.42	15.42	15.42
	1/24	16.00	15.20	15.26	15.31		1/49	16.00	15.28	15.34	15.39
	12/0	15.00	14.52	14.57	14.48		25/0	15.00	14.60	14.65	14.56
	12/6	15.00	14.39	14.39	14.39		25/12	15.00	14.47	14.47	14.47
	12/11	15.00	14.27	14.33	14.38		25/24	15.00	14.35	14.41	14.46
	25/0	15.00	14.47	14.52	14.43		50/0	15.00	14.55	14.60	14.51
16QAM	1/0	15.00	14.50	14.55	14.46	16QAM	1/0	15.00	14.58	14.63	14.54
	1/12	15.00	14.42	14.42	14.42		1/24	15.00	14.50	14.50	14.50
	1/24	15.00	14.30	14.36	14.41		1/49	15.00	14.38	14.44	14.49
	12/0	14.00	13.58	13.63	13.54		25/0	14.00	13.66	13.71	13.62
	12/6	14.00	13.42	13.42	13.42		25/12	14.00	13.50	13.50	13.50
	12/11	14.00	13.30	13.36	13.41		25/24	14.00	13.38	13.44	13.49
	25/0	14.00	13.50	13.55	13.46		50/0	14.00	13.58	13.63	13.54
LTE B7/BW=15M		Average Conducted Power(dBm)				LTE B7/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			20825/ 2507.5	21100/ 2535	21375/ 2562.5				20850/ 2510	21100/ 2535	21350/ 2560
QPSK	1/0	16.00	15.60	15.65	15.56	QPSK	1/0	16.00	15.72	15.77	15.68
	1/37	16.00	15.51	15.51	15.51		1/49	16.00	15.63	15.63	15.63
	1/74	16.00	15.37	15.43	15.48		1/99	16.00	15.49	15.55	15.60
	36/0	15.00	14.69	14.74	14.65		50/0	15.00	14.81	14.86	14.77
	36/18	15.00	14.56	14.56	14.56		50/24	15.00	14.68	14.68	14.68
	36/35	15.00	14.44	14.50	14.55		50/49	15.00	14.56	14.62	14.67
	75/0	15.00	14.64	14.69	14.60		100/0	15.00	14.76	14.81	14.72
16QAM	1/0	15.00	14.67	14.72	14.63	16QAM	1/0	15.00	14.79	14.84	14.75
	1/37	15.00	14.59	14.59	14.59		1/49	15.00	14.71	14.71	14.71
	1/74	15.00	14.47	14.53	14.58		1/99	15.00	14.59	14.65	14.70
	36/0	14.00	13.75	13.80	13.71		50/0	14.00	13.87	13.92	13.83
	36/18	14.00	13.59	13.59	13.59		50/24	14.00	13.71	13.71	13.71
	36/35	14.00	13.47	13.53	13.58		50/49	14.00	13.59	13.65	13.70
	75/0	14.00	13.67	13.72	13.63		100/0	14.00	13.79	13.84	13.75

LTE Band 12

P-sensor off

LTE B12/BW=1.4M		Average Conducted Power(dBm)				LTE B12/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			23017/ 699.7	23095/ 707.5	23173/ 715.3				23025/ 700.5	23095/ 707.5	23165/ 714.5
QPSK	1/0	23.00	22.14	22.28	22.12	QPSK	1/0	23.00	22.19	22.33	22.17
	1/2	23.00	22.01	22.12	22.01		1/7	23.00	22.06	22.17	22.06
	1/5	23.00	21.79	22.16	21.88		1/14	23.00	21.84	22.21	21.93
	3/0	22.00	22.14	22.28	22.12		8/0	22.00	21.30	21.44	21.28
	3/1	22.00	22.01	22.12	22.01		8/4	22.00	21.10	21.21	21.10
	3/2	22.00	21.79	22.16	21.88		8/7	22.00	21.02	21.39	20.97
	6/0	22.00	21.20	21.34	21.18		15/0	22.00	21.25	21.39	21.23
16QAM	1/0	22.00	21.32	21.46	21.30	16QAM	1/0	22.00	21.37	21.51	21.35
	1/2	22.00	21.28	21.42	21.26		1/7	22.00	21.33	21.47	21.31
	1/5	22.00	20.86	21.23	20.95		1/14	22.00	20.91	21.28	21.00
	3/0	21.00	21.32	21.46	21.30		8/0	21.00	20.20	20.34	20.18
	3/1	21.00	21.28	21.42	21.26		8/4	21.00	20.20	20.31	20.20
	3/2	21.00	20.86	21.23	20.95		8/7	21.00	19.87	20.24	19.96
	6/0	21.00	20.29	20.50	20.60		15/0	21.00	20.34	20.48	20.32

LTE B12/BW=5M		Average Conducted Power(dBm)				LTE B12/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			23035/ 701.5	23095/ 707.5	23155/ 713.5				23060/ 704	23095/ 707.5	23130/ 711
QPSK	1/0	23.00	22.24	22.38	22.22	QPSK	1/0	23.00	22.29	22.43	22.27
	1/12	23.00	22.11	22.22	22.11		1/12	23.00	22.16	22.27	22.16
	1/24	23.00	21.89	22.26	21.98		1/49	23.00	21.94	22.31	22.03
	12/0	22.00	21.35	21.49	21.33		25/0	22.00	21.40	21.54	21.38
	12/6	22.00	21.15	21.26	21.15		25/12	22.00	21.20	21.31	21.20
	12/11	22.00	21.07	21.44	21.02		25/24	22.00	21.12	21.49	21.07
	25/0	22.00	21.30	21.44	21.28		50/0	22.00	21.35	21.49	21.33
16QAM	1/0	22.00	21.42	21.56	21.40	16QAM	1/0	22.00	21.47	21.61	21.45
	1/12	22.00	21.38	21.52	21.36		1/24	22.00	21.43	21.57	21.41
	1/24	22.00	20.96	21.33	21.05		1/49	22.00	21.01	21.38	21.10
	12/0	21.00	20.25	20.39	20.23		25/0	21.00	20.30	20.44	20.28
	12/6	21.00	20.25	20.36	20.25		25/12	21.00	20.30	20.41	20.30
	12/11	21.00	19.92	20.29	20.01		25/24	21.00	19.97	20.34	20.06
	25/0	21.00	20.39	20.53	20.37		50/0	21.00	20.44	20.58	20.42

P-sensor on

LTE B12/BW=1.4M		Average Conducted Power(dBm)				LTE B12/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			23017/ 699.7	23095/ 707.5	23173/ 715.3				23025/ 700.5	23095/ 707.5	23165/ 714.5
QPSK	1/0	18.00	17.39	17.53	17.33	QPSK	1/0	18.00	17.50	17.64	17.44
	1/2	18.00	17.37	17.47	17.26		1/7	18.00	17.48	17.58	17.37
	1/5	18.00	17.32	17.42	17.23		1/14	18.00	17.43	17.53	17.34
	3/0	17.00	16.48	16.62	16.42		8/0	17.00	16.59	16.73	16.53
	3/1	17.00	16.42	16.52	16.31		8/4	17.00	16.53	16.63	16.42
	3/2	17.00	16.39	16.49	16.30		8/7	17.00	16.50	16.60	16.41
	6/0	17.00	16.43	16.57	16.37		15/0	17.00	16.54	16.68	16.48
16QAM	1/0	17.00	16.46	16.60	16.40	16QAM	1/0	17.00	16.57	16.71	16.51
	1/2	17.00	16.45	16.55	16.34		1/7	17.00	16.56	16.66	16.45
	1/5	17.00	16.42	16.52	16.33		1/14	17.00	16.53	16.63	16.44
	3/0	16.00	15.54	15.68	15.48		8/0	16.00	15.65	15.79	15.59
	3/1	16.00	15.45	15.55	15.34		8/4	16.00	15.56	15.66	15.45
	3/2	16.00	15.42	15.52	15.33		8/7	16.00	15.53	15.63	15.44
	6/0	16.00	15.46	15.60	15.40		15/0	16.00	15.57	15.71	15.51
LTE B12/BW=5M		Average Conducted Power(dBm)				LTE B12/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			23035/ 701.5	23095/ 707.5	23155/ 713.5				23060/ 704	23095/ 707.5	23130/ 711
QPSK	1/0	18.00	17.57	17.71	17.51	QPSK	1/0	18.00	17.65	17.79	17.59
	1/12	18.00	17.55	17.65	17.44		1/12	18.00	17.63	17.73	17.52
	1/24	18.00	17.50	17.60	17.41		1/49	18.00	17.58	17.68	17.49
	12/0	17.00	16.66	16.80	16.60		25/0	17.00	16.74	16.88	16.68
	12/6	17.00	16.60	16.70	16.49		25/12	17.00	16.68	16.78	16.57
	12/11	17.00	16.57	16.67	16.48		25/24	17.00	16.65	16.75	16.56
	25/0	17.00	16.61	16.75	16.55		50/0	17.00	16.69	16.83	16.63
16QAM	1/0	17.00	16.64	16.78	16.58	16QAM	1/0	17.00	16.72	16.86	16.66
	1/12	17.00	16.63	16.73	16.52		1/24	17.00	16.71	16.81	16.60
	1/24	17.00	16.60	16.70	16.51		1/49	17.00	16.68	16.78	16.59
	12/0	16.00	15.72	15.86	15.66		25/0	16.00	15.80	15.94	15.74
	12/6	16.00	15.63	15.73	15.52		25/12	16.00	15.71	15.81	15.60
	12/11	16.00	15.60	15.70	15.51		25/24	16.00	15.68	15.78	15.59
	25/0	16.00	15.64	15.78	15.58		50/0	16.00	15.72	15.86	15.66

LTE Band 13

P-sensor off

LTE B13/BW=5M		Average Conducted Power(dBm)				LTE B13/BW=10M		Average Conducted Power(dBm)	
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)
			23205/ 779.5	23230/ 782	23155/ 784.5				23230/ 782
QPSK	1/0	23.00	22.56	22.78	22.69	QPSK	1/0	23.00	22.81
	1/12	23.00	22.32	22.50	22.41		1/12	23.00	22.53
	1/24	23.00	22.20	22.43	22.36		1/49	23.00	22.46
	12/0	22.00	21.78	21.89	21.77		25/0	22.00	21.92
	12/6	22.00	21.32	21.54	21.43		25/12	22.00	21.57
	12/11	22.00	21.40	21.61	21.51		25/24	22.00	21.64
	25/0	22.00	21.62	21.84	21.62		50/0	22.00	21.87
16QAM	1/0	22.00	21.72	21.96	21.74	16QAM	1/0	22.00	21.99
	1/12	22.00	21.70	21.92	21.81		1/24	22.00	21.95
	1/24	22.00	21.31	21.50	21.40		1/49	22.00	21.53
	12/0	21.00	20.58	20.79	20.68		25/0	21.00	20.82
	12/6	21.00	20.44	20.64	20.51		25/12	21.00	20.67
	12/11	21.00	20.22	20.46	20.37		25/24	21.00	20.49
	25/0	21.00	20.93	20.93	20.93		50/0	21.00	20.96

P-sensor on

LTE B13/BW=5M		Average Conducted Power(dBm)				LTE B13/BW=10M		Average Conducted Power(dBm)	
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)
			23205/ 779.5	23230/ 782	23155/ 784.5				23230/ 782
QPSK	1/0	18.00	17.52	17.60	17.57	QPSK	1/0	18.00	17.68
	1/12	18.00	17.44	17.52	17.49		1/12	18.00	17.60
	1/24	18.00	17.47	17.55	17.52		1/49	18.00	17.63
	12/0	17.00	16.61	16.69	16.66		25/0	17.00	16.77
	12/6	17.00	16.49	16.57	16.54		25/12	17.00	16.65
	12/11	17.00	16.54	16.62	16.59		25/24	17.00	16.70
	25/0	17.00	16.56	16.64	16.61		50/0	17.00	16.72
16QAM	1/0	17.00	16.59	16.67	16.64	16QAM	1/0	17.00	16.75
	1/12	17.00	16.52	16.60	16.57		1/24	17.00	16.68
	1/24	17.00	16.57	16.65	16.62		1/49	17.00	16.73
	12/0	16.00	15.67	15.75	15.72		25/0	16.00	15.83
	12/6	16.00	15.52	15.60	15.57		25/12	16.00	15.68
	12/11	16.00	15.57	15.65	15.62		25/24	16.00	15.73
	25/0	16.00	15.59	15.67	15.64		50/0	16.00	15.75

LTE Band 17

P-sensor off

LTE B17/BW=5M		Average Conducted Power(dBm)				LTE B17/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			23780/ 706.5	23790/ 710	23800/ 713.5				23780/ 709.0	23790/ 710	23800/ 711.0
QPSK	1/0	23.00	22.48	22.46	22.44	QPSK	1/0	23.00	22.53	22.51	22.49
	1/12	23.00	22.22	22.40	22.36		1/12	23.00	22.27	22.45	22.41
	1/24	23.00	22.24	22.18	22.26		1/49	23.00	22.29	22.23	22.31
	12/0	22.00	21.59	21.57	21.55		25/0	22.00	21.64	21.62	21.60
	12/6	22.00	21.26	21.44	21.40		25/12	22.00	21.31	21.49	21.45
	12/11	22.00	21.42	21.36	21.44		25/24	22.00	21.47	21.41	21.49
	25/0	22.00	21.54	21.52	21.50		50/0	22.00	21.59	21.57	21.55
16QAM	1/0	22.00	21.66	21.64	21.62	16QAM	1/0	22.00	21.71	21.69	21.67
	1/12	22.00	21.62	21.60	21.58		1/24	22.00	21.67	21.65	21.63
	1/24	22.00	21.31	21.25	21.33		1/49	22.00	21.36	21.30	21.38
	12/0	21.00	20.49	20.47	20.45		25/0	21.00	20.54	20.52	20.50
	12/6	21.00	20.36	20.54	20.50		25/12	21.00	20.41	20.59	20.55
	12/11	21.00	20.27	20.21	20.29		25/24	21.00	20.32	20.26	20.34
	25/0	21.00	20.63	20.61	20.59		50/0	21.00	20.68	20.66	20.64

P-sensor on

LTE B17/BW=5M		Average Conducted Power(dBm)				LTE B17/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			23780/ 706.5	23790/ 710	23800/ 713.5				23780/ 709.0	23790/ 710	23800/ 711.0
QPSK	1/0	18.00	17.77	17.70	17.76	QPSK	1/0	18.00	17.89	17.82	17.88
	1/12	18.00	17.63	17.57	17.68		1/12	18.00	17.75	17.69	17.80
	1/24	18.00	17.66	17.59	17.66		1/49	18.00	17.78	17.71	17.78
	12/0	17.00	16.86	16.79	16.85		25/0	17.00	16.98	16.91	16.97
	12/6	17.00	16.68	16.62	16.73		25/12	17.00	16.80	16.74	16.85
	12/11	17.00	16.73	16.66	16.73		25/24	17.00	16.85	16.78	16.85
	25/0	17.00	16.81	16.74	16.80		50/0	17.00	16.93	16.86	16.92
16QAM	1/0	17.00	16.84	16.77	16.83	16QAM	1/0	17.00	16.96	16.89	16.95
	1/12	17.00	16.71	16.65	16.76		1/24	17.00	16.83	16.77	16.88
	1/24	17.00	16.76	16.69	16.76		1/49	17.00	16.88	16.81	16.88
	12/0	16.00	15.92	15.85	15.91		25/0	16.00	16.04	15.97	16.03
	12/6	16.00	15.71	15.65	15.76		25/12	16.00	15.83	15.77	15.88
	12/11	16.00	15.76	15.69	15.76		25/24	16.00	15.88	15.81	15.88
	25/0	16.00	15.84	15.77	15.83		50/0	16.00	15.96	15.89	15.95

LTE Band 26

P-sensor off

LTE B26/BW=1.4M		Average Conducted Power(dBm)				LTE B26/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			26797/ 824.7	26915/ 836.5	27033/ 848.3				26805/ 825.5	26915/ 836.5	27025/ 847.5
QPSK	1/0	23.00	22.12	22.01	22.07	QPSK	1/0	23.00	22.22	22.11	22.17
	1/2	23.00	21.97	21.87	21.83		1/7	23.00	22.07	21.97	21.93
	1/5	23.00	21.83	21.81	21.74		1/14	23.00	21.93	21.91	21.84
	3/0	22.00	22.12	22.01	22.07		8/0	22.00	21.33	21.22	21.28
	3/1	22.00	21.97	21.87	21.83		8/4	22.00	21.11	21.01	20.97
	3/2	22.00	21.83	21.81	21.74		8/7	22.00	21.11	21.09	21.02
	6/0	22.00	21.18	21.07	21.13		15/0	22.00	21.28	21.17	21.23
16QAM	1/0	22.00	21.30	21.19	21.25	16QAM	1/0	22.00	21.40	21.29	21.35
	1/2	22.00	21.26	21.15	21.21		1/7	22.00	21.36	21.25	21.31
	1/5	22.00	20.90	20.88	20.81		1/14	22.00	21.00	20.98	20.91
	3/0	21.00	21.30	21.19	21.25		8/0	21.00	20.23	20.12	20.18
	3/1	21.00	21.26	21.15	21.21		8/4	21.00	20.21	20.11	20.07
	3/2	21.00	20.90	20.88	20.81		8/7	21.00	19.96	19.94	19.87
	6/0	21.00	20.27	20.50	20.60		15/0	21.00	20.37	20.26	20.32

LTE B26/BW=5M		Average Conducted Power(dBm)				LTE B26/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			26715/ 816.5	26865/ 831.0	26990/ 846.5				26740/ 819.0	26865/ 831.0	26990/ 844.0
QPSK	1/0	23.00	22.21	22.09	22.13	QPSK	1/0	23.00	22.26	22.14	22.18
	1/12	23.00	22.11	22.02	22.07		1/24	23.00	22.16	22.07	22.12
	1/24	23.00	22.02	21.93	22.03		1/49	23.00	22.07	21.98	22.08
	12/0	22.00	21.32	21.20	21.24		25/0	22.00	21.37	21.25	21.29
	12/6	22.00	21.15	21.06	21.11		25/12	22.00	21.20	21.11	21.16
	12/11	22.00	21.20	21.11	21.21		25/24	22.00	21.25	21.16	21.26
	25/0	22.00	21.27	21.15	21.19		50/0	22.00	21.32	21.20	21.24
16QAM	1/0	22.00	21.39	21.27	21.31	16QAM	1/0	22.00	21.44	21.32	21.36
	1/12	22.00	21.35	21.23	21.27		1/24	22.00	21.40	21.28	21.32
	1/24	22.00	21.09	21.00	21.10		1/49	22.00	21.14	21.05	21.15
	12/0	21.00	20.22	20.10	20.14		25/0	21.00	20.27	20.15	20.19
	12/6	21.00	20.25	20.16	20.21		25/12	21.00	20.30	20.21	20.26
	12/11	21.00	20.05	19.96	20.06		25/24	21.00	20.10	20.01	20.11
	25/0	21.00	20.36	20.24	20.28		50/0	21.00	20.41	20.29	20.33

LTE B26/BW=15M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			26865/ 831.5	26915/ 836.5	26965/ 841.5
QPSK	1/0	23.00	22.31	22.19	22.23
	1/37	23.00	22.21	22.12	22.17
	1/74	23.00	22.12	22.03	22.13
	36/0	22.00	21.42	21.30	21.34
	36/18	22.00	21.25	21.16	21.21
	36/35	22.00	21.30	21.21	21.31
	75/0	22.00	21.37	21.25	21.29
16QAM	1/0	22.00	21.49	21.37	21.41
	1/37	22.00	21.45	21.33	21.37
	1/74	22.00	21.19	21.10	21.20
	36/0	21.00	20.32	20.20	20.24
	36/18	21.00	20.35	20.26	20.31
	36/35	21.00	20.15	20.06	20.16
	75/0	21.00	20.46	20.34	20.38

P-sensor on

LTE B26/BW=1.4M		Average Conducted Power(dBm)				LTE B26/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			26797/ 824.7	26915/ 836.5	27033/ 848.3				26805/ 825.5	26915/ 836.5	27025/ 847.5
QPSK	1/0	18.00	17.48	17.32	17.39	QPSK	1/0	18.00	17.55	17.39	17.46
	1/2	18.00	17.42	17.29	17.31		1/7	18.00	17.49	17.36	17.38
	1/5	18.00	17.37	17.27	17.24		1/14	18.00	17.44	17.34	17.31
	3/0	17.00	16.57	16.41	16.48		8/0	17.00	16.64	16.48	16.55
	3/1	17.00	16.47	16.34	16.36		8/4	17.00	16.54	16.41	16.43
	3/2	17.00	16.44	16.34	16.31		8/7	17.00	16.51	16.41	16.38
	6/0	17.00	16.52	16.36	16.43		15/0	17.00	16.59	16.43	16.50
16QAM	1/0	17.00	16.55	16.39	16.46	16QAM	1/0	17.00	16.62	16.46	16.53
	1/2	17.00	16.50	16.37	16.39		1/7	17.00	16.57	16.44	16.46
	1/5	17.00	16.47	16.37	16.34		1/14	17.00	16.54	16.44	16.41
	3/0	16.00	15.63	15.47	15.54		8/0	16.00	15.70	15.54	15.61
	3/1	16.00	15.50	15.37	15.39		8/4	16.00	15.57	15.44	15.46
	3/2	16.00	15.47	15.37	15.34		8/7	16.00	15.54	15.44	15.41
	6/0	16.00	15.55	15.39	15.46		15/0	16.00	15.62	15.46	15.53
LTE B26/BW=5M		Average Conducted Power(dBm)				LTE B26/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			26715/ 816.5	26865/ 831.0	26990/ 846.5				26740/ 819.0	26865/ 831.0	26990/ 844.0
QPSK	1/0	18.00	17.59	17.43	17.50	QPSK	1/0	18.00	17.71	17.55	17.62
	1/12	18.00	17.53	17.40	17.42		1/24	18.00	17.65	17.52	17.54
	1/24	18.00	17.48	17.38	17.35		1/49	18.00	17.60	17.50	17.47
	12/0	17.00	16.68	16.52	16.59		25/0	17.00	16.80	16.64	16.71
	12/6	17.00	16.58	16.45	16.47		25/12	17.00	16.70	16.57	16.59
	12/11	17.00	16.55	16.45	16.42		25/24	17.00	16.67	16.57	16.54
	25/0	17.00	16.63	16.47	16.54		50/0	17.00	16.75	16.59	16.66
16QAM	1/0	17.00	16.66	16.50	16.57	16QAM	1/0	17.00	16.78	16.62	16.69
	1/12	17.00	16.61	16.48	16.50		1/24	17.00	16.73	16.60	16.62
	1/24	17.00	16.58	16.48	16.45		1/49	17.00	16.70	16.60	16.57
	12/0	16.00	15.74	15.58	15.65		25/0	16.00	15.86	15.70	15.77
	12/6	16.00	15.61	15.48	15.50		25/12	16.00	15.73	15.60	15.62
	12/11	16.00	15.58	15.48	15.45		25/24	16.00	15.70	15.60	15.57
	25/0	16.00	15.66	15.50	15.57		50/0	16.00	15.78	15.62	15.69

LTE B26/BW=15M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			26865/ 831.5	26915/ 836.5	26965/ 841.5
QPSK	1/0	18.00	17.79	17.63	17.70
	1/37	18.00	17.73	17.60	17.62
	1/74	18.00	17.68	17.58	17.55
	36/0	17.00	16.88	16.72	16.79
	36/18	17.00	16.78	16.65	16.67
	36/35	17.00	16.75	16.65	16.62
	75/0	17.00	16.83	16.67	16.74
16QAM	1/0	17.00	16.86	16.70	16.77
	1/37	17.00	16.81	16.68	16.70
	1/74	17.00	16.78	16.68	16.65
	36/0	16.00	15.94	15.78	15.85
	36/18	16.00	15.81	15.68	15.70
	36/35	16.00	15.78	15.68	15.65
	75/0	16.00	15.86	15.70	15.77

LTE Band 30

P-sensor off

LTE B30/BW=5M		Average Conducted Power(dBm)				LTE B30/BW=10M		Average Conducted Power(dBm)	
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)
			27685/ 2307.5	27710/ 2310	27734/ 2312.4				27710/ 2310
QPSK	1/0	21.00	20.45	20.81	20.62	QPSK	1/0	21.00	20.84
	1/12	21.00	20.28	20.69	20.47		1/12	21.00	20.72
	1/24	21.00	20.17	20.58	20.36		1/49	21.00	20.61
	12/0	20.00	19.70	19.92	19.80		25/0	20.00	19.95
	12/6	20.00	19.51	19.73	19.51		25/12	20.00	19.76
	12/11	20.00	19.54	19.76	19.54		25/24	20.00	19.79
	25/0	20.00	19.62	19.87	19.65		50/0	20.00	19.90
16QAM	1/0	20.00	19.77	19.99	19.78	16QAM	1/0	20.00	20.02
	1/12	20.00	19.71	19.95	19.72		1/24	20.00	19.98
	1/24	20.00	19.42	19.65	19.42		1/49	20.00	19.68
	12/0	19.00	18.60	18.82	18.60		25/0	19.00	18.85
	12/6	19.00	18.61	18.83	18.61		25/12	19.00	18.86
	12/11	19.00	18.40	18.61	18.40		25/24	19.00	18.64
	25/0	19.00	18.71	18.96	18.72		50/0	19.00	18.99

P-sensor on

LTE B30/BW=5M		Average Conducted Power(dBm)				LTE B30/BW=10M		Average Conducted Power(dBm)	
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)
			27685/ 2307.5	27710/ 2310	27734/ 2312.4				27710/ 2310
QPSK	1/0	16.00	15.91	15.88	15.92	QPSK	1/0	16.00	15.99
	1/12	16.00	15.85	15.82	15.86		1/12	16.00	15.93
	1/24	16.00	15.74	15.71	15.75		1/49	16.00	15.82
	12/0	15.00	14.92	14.89	14.93		25/0	15.00	15.00
	12/6	15.00	14.90	14.87	14.91		25/12	15.00	14.98
	12/11	15.00	14.81	14.78	14.82		25/24	15.00	14.89
	25/0	15.00	14.95	14.92	14.96		50/0	15.00	15.03
16QAM	1/0	15.00	14.98	14.95	14.99	16QAM	1/0	15.00	15.06
	1/12	15.00	14.93	14.90	14.94		1/24	15.00	15.01
	1/24	15.00	14.84	14.81	14.85		1/49	15.00	14.92
	12/0	14.00	14.06	14.03	14.07		25/0	14.00	14.14
	12/6	14.00	13.93	13.90	13.94		25/12	14.00	14.01
	12/11	14.00	13.84	13.81	13.85		25/24	14.00	13.92
	25/0	14.00	13.98	13.95	13.99		50/0	14.00	14.06

LTE Band 41

P-sensor off

LTE B41/BW=5M		Average Conducted Power(dBm)				LTE B41/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			39675/ 2498.5	40620/ 2593	41565/ 2687.5				39700/ 2501	40620/ 2593	41515/ 2682.5
QPSK	1/0	23.00	22.44	22.83	22.91	QPSK	1/0	23.00	22.49	22.88	22.96
	1/12	23.00	22.62	22.93	23.06		1/24	23.00	22.67	22.98	23.11
	1/24	23.00	22.58	22.54	22.84		1/49	23.00	22.63	22.59	22.89
	12/0	22.00	21.57	21.98	22.03		25/0	22.00	21.62	22.03	22.08
	12/6	22.00	21.72	22.06	22.21		25/12	22.00	21.77	22.11	22.26
	12/11	22.00	21.67	21.69	21.95		25/24	22.00	21.72	21.74	22.00
	25/0	22.00	21.67	21.73	21.98		50/0	22.00	21.72	21.78	22.03
16QAM	1/0	22.00	21.54	21.92	22.00	16QAM	1/0	22.00	21.59	21.97	22.05
	1/12	22.00	21.67	22.03	22.19		1/24	22.00	21.72	22.08	22.24
	1/24	22.00	21.63	21.67	21.93		1/49	22.00	21.68	21.72	21.98
	12/0	21.00	20.57	20.99	21.03		25/0	21.00	20.62	21.04	21.08
	12/6	21.00	20.69	21.01	21.14		25/12	21.00	20.74	21.06	21.19
	12/11	21.00	20.64	20.67	20.93		25/24	21.00	20.69	20.72	20.98
	25/0	21.00	20.68	20.70	20.97		50/0	21.00	20.73	20.75	21.02
LTE B41/BW=15M		Average Conducted Power(dBm)				LTE B41/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			39750/ 2506	40620/ 2593	41490/ 2680				39750/ 2506	40620/ 2593	41490/ 2680
QPSK	1/0	23.00	22.54	22.93	23.01	QPSK	1/0	23.00	22.31	22.19	22.35
	1/37	23.00	22.72	23.03	23.16		1/49	23.00	22.29	22.03	22.20
	1/74	23.00	22.68	22.64	22.94		1/99	23.00	22.14	21.87	22.13
	36/0	22.00	21.67	22.08	22.13		50/0	22.00	21.42	21.30	21.46
	36/18	22.00	21.82	22.16	22.31		50/24	22.00	21.33	21.07	21.24
	36/35	22.00	21.77	21.79	22.05		50/49	22.00	21.32	21.05	21.31
	75/0	22.00	21.77	21.83	22.08		100/0	22.00	21.37	21.25	21.41
16QAM	1/0	22.00	21.64	22.02	22.10	16QAM	1/0	22.00	21.49	21.37	21.53
	1/37	22.00	21.77	22.13	22.29		1/49	22.00	21.45	21.33	21.49
	1/74	22.00	21.73	21.77	22.03		1/99	22.00	21.21	20.94	21.20
	36/0	21.00	20.67	21.09	21.13		50/0	21.00	20.32	20.20	20.36
	36/18	21.00	20.79	21.11	21.24		50/24	21.00	20.43	20.17	20.34
	36/35	21.00	20.74	20.77	21.03		50/49	21.00	20.17	19.90	20.16
	75/0	21.00	20.78	20.80	21.07		100/0	21.00	20.46	20.34	20.50

P-sensor on

LTE B41/BW=5M		Average Conducted Power(dBm)				LTE B41/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			39675/ 2498.5	40620/ 2593	41565/ 2687.5				39700/ 2501	40620/ 2593	41515/ 2682.5
QPSK	1/0	16.00	15.18	15.28	15.33	QPSK	1/0	16.00	15.27	15.37	15.42
	1/12	16.00	15.00	15.25	15.29		1/24	16.00	15.09	15.34	15.38
	1/24	16.00	15.01	15.19	15.08		1/49	16.00	15.10	15.28	15.17
	12/0	15.00	14.27	14.37	14.42		25/0	15.00	14.36	14.46	14.51
	12/6	15.00	14.05	14.30	14.34		25/12	15.00	14.14	14.39	14.43
	12/11	15.00	14.08	14.26	14.15		25/24	15.00	14.17	14.35	14.24
	25/0	15.00	14.22	14.32	14.37		50/0	15.00	14.31	14.41	14.46
16QAM	1/0	15.00	14.25	14.35	14.40	16QAM	1/0	15.00	14.34	14.44	14.49
	1/12	15.00	14.08	14.33	14.37		1/24	15.00	14.17	14.42	14.46
	1/24	15.00	14.11	14.29	14.18		1/49	15.00	14.20	14.38	14.27
	12/0	14.00	13.33	13.43	13.48		25/0	14.00	13.42	13.52	13.57
	12/6	14.00	13.08	13.33	13.37		25/12	14.00	13.17	13.42	13.46
	12/11	14.00	13.11	13.29	13.18		25/24	14.00	13.20	13.38	13.27
	25/0	14.00	13.25	13.35	13.40		50/0	14.00	13.34	13.44	13.49

LTE B41/BW=15M		Average Conducted Power(dBm)				LTE B41/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			39750/ 2506	40620/ 2593	41490/ 2680				39750/ 2506	40620/ 2593	41490/ 2680
QPSK	1/0	16.00	15.40	15.50	15.55	QPSK	1/0	16.00	15.48	15.58	15.63
	1/37	16.00	15.22	15.47	15.51		1/49	16.00	15.30	15.55	15.59
	1/74	16.00	15.23	15.41	15.30		1/99	16.00	15.31	15.49	15.38
	36/0	15.00	14.49	14.59	14.64		50/0	15.00	14.57	14.67	14.72
	36/18	15.00	14.27	14.52	14.56		50/24	15.00	14.35	14.60	14.64
	36/35	15.00	14.30	14.48	14.37		50/49	15.00	14.38	14.56	14.45
	75/0	15.00	14.44	14.54	14.59		100/0	15.00	14.52	14.62	14.67
16QAM	1/0	15.00	14.47	14.57	14.62	16QAM	1/0	15.00	14.55	14.65	14.70
	1/37	15.00	14.30	14.55	14.59		1/49	15.00	14.38	14.63	14.67
	1/74	15.00	14.33	14.51	14.40		1/99	15.00	14.41	14.59	14.48
	36/0	14.00	13.55	13.65	13.70		50/0	14.00	13.63	13.73	13.78
	36/18	14.00	13.30	13.55	13.59		50/24	14.00	13.38	13.63	13.67
	36/35	14.00	13.33	13.51	13.40		50/49	14.00	13.41	13.59	13.48
	75/0	14.00	13.47	13.57	13.62		100/0	14.00	13.55	13.65	13.70

LTE Band 66

P-sensor off

LTE B66/BW=1.4M		Average Conducted Power(dBm)				LTE B66/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			131979/ 1710.7	132322/ 1745.0	132664/ 1779.2				131987/ 1711.5	132322/ 1745.0	132656/ 1778.4
QPSK	1/0	23.00	22.21	22.31	22.29	QPSK	1/0	23.00	22.33	22.43	22.41
	1/2	23.00	22.08	22.13	22.03		1/7	23.00	22.20	22.25	22.15
	1/5	23.00	21.92	22.01	21.86		1/14	23.00	22.04	22.13	21.98
	3/0	22.00	21.32	21.42	21.40		8/0	22.00	21.44	21.54	21.52
	3/1	22.00	21.12	21.17	21.07		8/4	22.00	21.24	21.29	21.19
	3/2	22.00	21.10	21.19	21.04		8/7	22.00	21.22	21.31	21.16
	6/0	22.00	21.27	21.37	21.35		15/0	22.00	21.39	21.49	21.47
16QAM	1/0	22.00	21.39	21.49	21.47	16QAM	1/0	22.00	21.51	21.61	21.59
	1/2	22.00	21.35	21.45	21.43		1/7	22.00	21.47	21.57	21.55
	1/5	22.00	20.99	21.08	20.93		1/14	22.00	21.11	21.20	21.05
	3/0	21.00	20.22	20.32	20.30		8/0	21.00	20.34	20.44	20.42
	3/1	21.00	20.22	20.27	20.17		8/4	21.00	20.34	20.39	20.29
	3/2	21.00	19.95	20.04	19.89		8/7	21.00	20.07	20.16	20.01
	6/0	21.00	20.36	20.46	20.44		15/0	21.00	20.48	20.58	20.56

LTE B66/BW=5M		Average Conducted Power(dBm)				LTE B66/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			131997/ 1712.5	132322/ 1745	132647/ 1777.5				132022/ 1715	132322/ 1745	132621/ 1775
QPSK	1/0	23.00	22.61	22.74	22.66	QPSK	1/0	23.00	22.66	22.79	22.71
	1/12	23.00	22.48	22.67	22.57		1/12	23.00	22.53	22.72	22.62
	1/24	23.00	22.39	22.58	22.44		1/49	23.00	22.44	22.63	22.49
	12/0	22.00	21.72	21.85	21.77		25/0	22.00	21.77	21.90	21.82
	12/6	22.00	21.52	21.71	21.61		25/12	22.00	21.57	21.76	21.66
	12/11	22.00	21.57	21.76	21.62		25/24	22.00	21.62	21.81	21.67
	25/0	22.00	21.67	21.80	21.72		50/0	22.00	21.72	21.85	21.77
16QAM	1/0	22.00	21.79	21.92	21.84	16QAM	1/0	22.00	21.84	21.97	21.89
	1/12	22.00	21.75	21.88	21.80		1/24	22.00	21.80	21.93	21.85
	1/24	22.00	21.46	21.65	21.51		1/49	22.00	21.51	21.70	21.56
	12/0	21.00	20.62	20.75	20.67		25/0	21.00	20.67	20.80	20.72
	12/6	21.00	20.62	20.81	20.71		25/12	21.00	20.67	20.86	20.76
	12/11	21.00	20.42	20.61	20.47		25/24	21.00	20.47	20.66	20.52
	25/0	21.00	20.76	20.89	20.81		50/0	21.00	20.81	20.94	20.86

LTE B66/BW=15M		Average Conducted Power(dBm)				LTE B66/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			132047/ 1717.5	132322/ 1745	132597/ 1772.5				132072/ 1720	132322/ 1745	132572/ 1770
QPSK	1/0	23.00	22.71	22.84	22.76	QPSK	1/0	23.00	22.76	22.89	22.81
	1/37	23.00	22.58	22.77	22.67		1/49	23.00	22.63	22.82	22.72
	1/74	23.00	22.49	22.68	22.54		1/99	23.00	22.54	22.73	22.59
	36/0	22.00	21.82	21.95	21.87		50/0	22.00	21.87	22.00	21.92
	36/18	22.00	21.62	21.81	21.71		50/24	22.00	21.67	21.86	21.76
	36/35	22.00	21.67	21.86	21.72		50/49	22.00	21.72	21.91	21.77
	75/0	22.00	21.77	21.90	21.82		100/0	22.00	21.82	21.95	21.87
16QAM	1/0	22.00	21.89	22.02	21.94	16QAM	1/0	22.00	21.94	22.07	21.99
	1/37	22.00	21.85	21.98	21.90		1/49	22.00	21.90	22.03	21.95
	1/74	22.00	21.56	21.75	21.61		1/99	22.00	21.61	21.80	21.66
	36/0	21.00	20.72	20.85	20.77		50/0	21.00	20.77	20.90	20.82
	36/18	21.00	20.72	20.91	20.81		50/24	21.00	20.77	20.96	20.86
	36/35	21.00	20.52	20.71	20.57		50/49	21.00	20.57	20.76	20.62
	75/0	21.00	20.86	20.99	20.91		100/0	21.00	20.91	21.04	20.96

P-sensor on

LTE B66/BW=1.4M		Average Conducted Power(dBm)				LTE B66/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			131979/ 1710.7	132322/ 1745.0	132664/ 1779.2				26805/ 825.5	26915/ 836.5	131979/ 1710.7
QPSK	1/0	16.00	15.24	15.30	15.26	QPSK	1/0	16.00	15.29	15.35	15.31
	1/12	16.00	15.15	15.28	15.24		1/24	16.00	15.20	15.33	15.29
	1/24	16.00	15.05	15.15	15.08		1/49	16.00	15.10	15.20	15.13
	12/0	15.00	14.33	14.39	14.35		25/0	15.00	14.38	14.44	14.40
	12/6	15.00	14.20	14.33	14.29		25/12	15.00	14.25	14.38	14.34
	12/11	15.00	14.12	14.22	14.15		25/24	15.00	14.17	14.27	14.20
	25/0	15.00	14.28	14.34	14.30		50/0	15.00	14.33	14.39	14.35
16QAM	1/0	15.00	14.31	14.37	14.33	16QAM	1/0	15.00	14.36	14.42	14.38
	1/12	15.00	14.23	14.36	14.32		1/24	15.00	14.28	14.41	14.37
	1/24	15.00	14.15	14.25	14.18		1/49	15.00	14.20	14.30	14.23
	12/0	14.00	13.39	13.45	13.41		25/0	14.00	13.44	13.50	13.46
	12/6	14.00	13.23	13.36	13.32		25/12	14.00	13.28	13.41	13.37
	12/11	14.00	13.15	13.25	13.18		25/24	14.00	13.20	13.30	13.23
	25/0	14.00	13.31	13.37	13.33		50/0	14.00	13.36	13.42	13.38

LTE B66/BW=5M		Average Conducted Power(dBm)				LTE B66/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			131997/ 1712.5	132322/ 1745	132647/ 1777.5				132022/ 1715	132322/ 1745	132621/ 1775
QPSK	1/0	16.00	15.37	15.43	15.39	QPSK	1/0	16.00	15.43	15.49	15.45
	1/12	16.00	15.28	15.41	15.37		1/24	16.00	15.34	15.47	15.43
	1/24	16.00	15.18	15.28	15.21		1/49	16.00	15.24	15.34	15.27
	12/0	15.00	14.46	14.52	14.48		25/0	15.00	14.52	14.58	14.54
	12/6	15.00	14.33	14.46	14.42		25/12	15.00	14.39	14.52	14.48
	12/11	15.00	14.25	14.35	14.28		25/24	15.00	14.31	14.41	14.34
	25/0	15.00	14.41	14.47	14.43		50/0	15.00	14.47	14.53	14.49
16QAM	1/0	15.00	14.44	14.50	14.46	16QAM	1/0	15.00	14.50	14.56	14.52
	1/12	15.00	14.36	14.49	14.45		1/24	15.00	14.42	14.55	14.51
	1/24	15.00	14.28	14.38	14.31		1/49	15.00	14.34	14.44	14.37
	12/0	14.00	13.52	13.58	13.54		25/0	14.00	13.58	13.64	13.60
	12/6	14.00	13.36	13.49	13.45		25/12	14.00	13.42	13.55	13.51
	12/11	14.00	13.28	13.38	13.31		25/24	14.00	13.34	13.44	13.37
	25/0	14.00	13.44	13.50	13.46		50/0	14.00	13.50	13.56	13.52

LTE B66/BW=15M		Average Conducted Power(dBm)				LTE B66/BW=20M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up (dBm)	Channel/Frequency(MHz)		
			132047/ 1717.5	132322/ 1745	132597/ 1772.5				132072/ 1720	132322/ 1745	132572/ 1770
QPSK	1/0	16.00	15.50	15.56	15.52	QPSK	1/0	16.00	15.58	15.64	15.60
	1/37	16.00	15.41	15.54	15.50		1/49	16.00	15.49	15.62	15.58
	1/74	16.00	15.31	15.41	15.34		1/99	16.00	15.39	15.49	15.42
	36/0	15.00	14.59	14.65	14.61		50/0	15.00	14.67	14.73	14.69
	36/18	15.00	14.46	14.59	14.55		50/24	15.00	14.54	14.67	14.63
	36/35	15.00	14.38	14.48	14.41		50/49	15.00	14.46	14.56	14.49
	75/0	15.00	14.54	14.60	14.56		100/0	15.00	14.62	14.68	14.64
16QAM	1/0	15.00	14.57	14.63	14.59	16QAM	1/0	15.00	14.65	14.71	14.67
	1/37	15.00	14.49	14.62	14.58		1/49	15.00	14.57	14.70	14.66
	1/74	15.00	14.41	14.51	14.44		1/99	15.00	14.49	14.59	14.52
	36/0	14.00	13.65	13.71	13.67		50/0	14.00	13.73	13.79	13.75
	36/18	14.00	13.49	13.62	13.58		50/24	14.00	13.57	13.70	13.66
	36/35	14.00	13.41	13.51	13.44		50/49	14.00	13.49	13.59	13.52
	75/0	14.00	13.57	13.63	13.59		100/0	14.00	13.65	13.71	13.67

9.3. Conducted power measurement results of Bluetooth

Band	Mode	Channel	Frequency (MHz)	Max Power (dBm)	AVG Power (dBm)
BR	DH5	0	2402	11.00	10.81
		39	2441	11.00	10.83
		78	2480	11.00	10.98
EDR	2DH5	0	2402	10.00	9.81
		39	2441	10.00	9.45
		78	2480	10.00	9.66
	3DH5	0	2402	10.00	9.84
		39	2441	10.00	9.48
		78	2480	10.00	9.68
BLE	1M	0	2402	6.00	Not Require
		19	2440	6.00	
		39	2480	6.00	
	2M	0	2402	6.00	
		19	2440	6.00	
		39	2480	6.00	

Note:

1. As per FCC OET KDB 447498 D01, conducted output power and SAR testing are not required for BLE channels when the Max power is under 10 dBm and the separation distance is 5mm.

9.4. Conducted power measurements of Wi-Fi 2.4GHz Band

Band	Mode	Channel	Frequency (MHz)	Data Rate	Max Tune-Up Power (dBm)	AVG Power (dBm)	
						Main	Aux
2.4G	802.11b	1	2412	1	14.50	14.37	
		6	2437	1	14.50	14.40	
		11	2462	1	14.50	14.48	
		12	2467	1	14.50	14.44	
		13	2472	1	14.50	14.46	
	802.11g	1-13	2412-2462	6	14.50	Not Required	
	802.11n20	1-13	2412-2462	HT0	14.50		
	802.11n40	3	2422	HT0	14.50	14.36	
		6	2437	HT0	14.50	14.39	
		9	2452	HT0	14.50	14.48	
		10	2457	HT0	14.50	14.45	
		11	2462	HT0	14.50	13.88	
	802.11ax20	1-13	2412-2462	HE0	14.50	Not Required	
	802.11ax40	3-11	2422-2452	HE0	14.50		
	802.11b	1	2412	1	14.50		14.43
		6	2437	1	14.50		14.44
		11	2462	1	14.50		14.49
		12	2467	1	14.50		14.45
		13	2472	1	14.50		14.47
	802.11g	1-13	2412-2462	6	14.50	Not Required	
	802.11n20	1-13	2412-2462	HT0	14.50		
	802.11n40	3	2422	HT0	14.50		14.43
		6	2437	HT0	14.50		14.39
		9	2452	HT0	14.50		14.48
		10	2457	HT0	14.50		14.45
		11	2462	HT0	14.50		14.37
	802.11ax20	1-13	2412-2462	HE0	14.50	Not Required	
	802.11ax40	3-11	2422-2452	HE0	14.50		

Note:

1. As per FCC OET KDB 248227 D01, conducted output power and SAR testing are not required for 802.11g/n20/ax20/ax40 channels when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2W/kg.

9.5. Conducted power measurements of 5G UNII_1

Band	Mode	Channel	Frequency (MHz)	Data Rate	Max Tune-Up Power (dBm)	AVG Power (dBm)	
						Main	Aux
UNII_1	802.11a	36-48	5180-5240	6	12.00	Not Required	
	802.11 n20	36-48	5180-5240	HT0	12.00		
	802.11 n40	38-46	5190-5230	HT0	12.00		
	802.11 ac80	42	5210	VHT0	12.00	11.93	
	802.11 ax20	36-48	5180-5240	HE0	12.00	Not Required	
	802.11 ax40	38-46	5190-5230	HE0	12.00		
	802.11 ax80	42	5210	HE0	12.00		
UNII_1	802.11a	36	5180	6	12.00	Not Required	
	802.11 n20	36-48	5180-5240	HT0	12.00		
	802.11 n40	38-46	5190-5230	HT0	12.00		
	802.11 ac80	42	5210	VHT0	12.00		11.90
	802.11 ax20	36-48	5180-5240	HE0	12.00	Not Required	
	802.11 ax40	38-46	5190-5230	HE0	12.00		
	802.11 ax80	42	5210	HE0	12.00		

Note:

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 (see §B.5.2 in this document).
2. The initial test configuration for 2.4 GHz and 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance, in each standalone and aggregated frequency band. SAR for the initial test configuration is measured using the highest maximum output power channel determined by the default power measurement procedures. When multiple transmission modes (802.11a/g/n/ac/ax) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, lowest order 802.11 mode is selected (i.e. a, g, n, ac then ax).

9.6. CONDUCTED POWER MEASUREMENTS OF 5G UNII_2A

Band	Mode	Channel	Frequency (MHz)	Data Rate	Max Tune-Up Power (dBm)	AVG Power (dBm)	
						Main	Aux
UNII_2a	802.11a	52-64	5260-5320	6	12.00	Not Required	
	802.11 n20	52-64	5260-5320	HT0	12.00		
	802.11 n40	54-62	5270-5310	HT0	12.00		
	802.11 ac80	58	5290	VHT0	12.00	11.85	
	802.11 ac160	50	5250	VHT0	12.00	11.97	
	802.11 ax20	52-64	5260-5320	HE0	12.00	Not Required	
	802.11 ax40	54-62	5270-5310	HE0	12.00		
	802.11 ax80	58	5290	HE0	12.00		
	802.11 ax160	50	5250	HE0	12.00		
UNII_2a	802.11a	52-64	5260-5320	6	12.00	Not Required	
	802.11 n20	52-64	5260-5320	HT0	12.00		
	802.11 n40	54-62	5270-5310	HT0	12.00		
	802.11 ac80	58	5290	VHT0	12.00		11.90
	802.11 ac160	50	5250	VHT0	12.00		11.95
	802.11 ax20	52-64	5260-5320	HE0	12.00	Not Required	
	802.11 ax40	54-62	5270-5310	HE0	12.00		
	802.11 ax80	58	5290	HE0	12.00		
	802.11 ax160	50	5250	HE0	12.00		

Note:

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 (see §B.5.2 in this document).
2. The initial test configuration for 2.4 GHz and 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance, in each standalone and aggregated frequency band. SAR for the initial test configuration is measured using the highest maximum output power channel determined by the default power measurement procedures. When multiple transmission modes (802.11a/g/n/ac/ax) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, lowest order 802.11 mode is selected (i.e. a, g, n, ac then ax).
3. Largest channel bandwidth is worse than lowest order modulation.

9.7. CONDUCTED POWER MEASUREMENTS OF 5G UNII_2C

Band	Mode	Channel	Frequency (MHz)	Data Rate	Max Tune-Up Power (dBm)	AVG Power (dBm)	
						Main	Aux
UNII_2c	802.11a	100-128	5500-5640	6	12.00	Not Required	
	802.11 n20	100-128	5500-5640	HT0	12.00		
	802.11 n40	102-126	5510-5630	HT0	12.00		
	802.11 ac80	106	5530	VHT0	12.00	11.94	
	802.11 ac80	122	5610	VHT0	12.00	11.93	
	802.11 ac160	114	5570	VHT0	12.00	11.98	
	802.11 ax20	100-128	5500-5640	HE0	12.00	Not Required	
	802.11 ax40	102-126	5510-5630	HE0	12.00		
	802.11 ax80	106-122	5530-5610	HE0	12.00		
	802.11 ax160	114	5570	HE0	12.00		
UNII_2c	802.11a	100-128	5500-5640	6	12.00	Not Required	
	802.11 n20	100-128	5500-5640	HT0	12.00		
	802.11 n40	102-126	5510-5630	HT0	12.00		
	802.11 ac80	106	5530	VHT0	12.00		11.96
	802.11 ac80	122	5610	VHT0	12.00		11.89
	802.11 ac160	114	5570	VHT0	12.00		11.90
	802.11 ax20	100-128	5500-5640	HE0	12.00	Not Required	
	802.11 ax40	102-126	5510-5630	HE0	12.00		
	802.11 ax80	106-122	5530-5610	HE0	12.00		
	802.11 ax160	114	5570	HE0	12.00		

Note:

1. When band gap channels between U-NII-2C and U-NII-3 band are supported channels in U-NII-2C band below 5.65 GHz are considered as one band and channels above 5.65 GHz, together with channels in 5.8 GHz U-NII-3 or §15.247 band, are considered as a separate band
2. The initial test configuration for 2.4 GHz and 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance,in each standalone and aggregated frequency band. SAR for the initial test configuration is measured using the highest maximum output power channel determined by the default power measurement procedures. When multiple transmission modes (802.11a/g/n/ac/ax) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, lowest order 802.11 mode is selected (i.e. a, g, n, ac then ax).
3. Largest channel bandwidth is worse than lowest order modulation.

9.8. CONDUCTED POWER MEASUREMENTS OF 5G UNII_3

Band	Mode	Channel	Frequency (MHz)	Data Rate	Max Tune-Up Power (dBm)	AVG Power (dBm)	
						Main	Aux
5.8 UNII_3	802.11a	132-165	5660-5825	6	12.00	Not Required	
	802.11 n20	132-165	5660-5825	HT0	12.00		
	802.11 n40	151	5755	HT0	12.00	11.93	
	802.11 n40	159	5795	HT0	12.00	11.91	
	802.11 ac80	155	5775	VHT0	12.00	11.97	
	802.11 ax20	132-165	5660-5825	HE0	12.00	Not Required	
	802.11 ax40	134-159	5670-5795	HE0	12.00		
	802.11 ax80	155	5775	HE0	12.00		
5.8 UNII_3	802.11a	132-165	5660-5825	6	12.00	Not Required	
	802.11 n20	132-165	5660-5825	HT0	12.00		
	802.11 n40	151	5755	HT0	12.00		11.85
	802.11 n40	159	5795	HT0	12.00		11.93
	802.11 ac80	155	5775	VHT0	12.00		11.92
	802.11 ax20	132-165	5660-5825	HE0	12.00	Not Required	
	802.11 ax40	134-159	5670-5795	HE0	12.00		
	802.11 ax80	138-155	5530-5690	HE0	12.00		

Note:
1. When band gap channels between U-NII-2C and U-NII-3 band are supported channels in U-NII-2C band below 5.65 GHz are considered as one band and channels above 5.65 GHz, together with channels in 5.8 GHz U-NII-3 or §15.247 band, are considered as a separate band
2. The initial test configuration for 2.4 GHz and 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance, in each standalone and aggregated frequency band. SAR for the initial test configuration is measured using the highest maximum output power channel determined by the default power measurement procedures. When multiple transmission modes (802.11a/g/n/ac/ax) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, lowest order 802.11 mode is selected (i.e. a, g, n, ac then ax)
3. Largest channel bandwidth is worse than lowest order modulation.

9.2. SARTEST RESULTS

General Notes:

1. Per KDB447498 D01, all measurement SAR results are scaled to the maximum tune-up tolerance limit to demonstrate compliant.

2. Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:≤0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is≤100 MHz. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

3. Per KDB865664 D01,for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg; if the deviation among the repeated measurement is ≤20%,and the measured SAR <1.45W/kg, only one repeated measurement is required.

WLAN Notes:

1. For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated(peak) SAR is used as the initial test position. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.

2. Justification for test configurations for WLAN per KDB Publication 248227 for 2.4GHz WIFI single transmission chain operations, the highest measured maximum output power Channel for DSSS was selected for SAR measurement. SAR for OFDM modes(2.4GHz 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section7.1.4 for more information.

3. Justification for test configurations for WLAN per KDB Publication 248227 for 5GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed power. Other transmission mode was not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than1.2W/kg. See Section 7.1.4 for more information.

10. SAR TEST RESULTS

10.1. Body SAR test results

1. SAR test results of Bluetooth

Mode	Channel	Test Position	Ant Vendor	Ant	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan 1g	SAR 1g	Reported SAR 1g	Note
Bluetooth_DH5	78	Rear	AWAN	Aux	11.00	10.98	0.430	0.378	**0.380**	
	78	Edge3		Aux	11.00	10.98	0.088	0.070	0.071	
	78	Rear	INPAQ	Aux	11.00	10.98	0.351	0.349	0.351	1

Note:
1.The result used an other antenna to spot check for worst channel of the original antenna that the SAR result can be meet and compliant.

2. SAR test results of WiFi 2.4G

Mode	Channel	Test Position	Ant Vendor	Ant	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan 1g	SAR 1g	Reported SAR 1g	Note
802.11 b	11	Bottom	AWAN	Main	14.50	14.48	0.117	0.110	0.111	
	11	Rear		Main	14.50	14.48	0.858	0.822	0.826	
	11	Edge3		Main	14.50	14.48	0.155	0.143	0.144	
	1	Rear		Main	14.50	14.37	0.843	0.824	**0.849**	1
	6	Rear		Main	14.50	14.40	0.840	0.824	0.843	1
	12	Rear		Main	14.50	14.44	0.817	0.801	0.812	1
	13	Rear		Main	14.50	14.46	0.800	0.791	0.798	1
802.11 b	11	Bottom	AWAN	Aux	14.50	14.49	0.978	0.092	0.092	
	11	Rear		Aux	14.50	14.49	1.020	0.931	0.933	
	11	Edge3		Aux	14.50	14.49	0.168	0.153	0.153	
	1	Rear		Aux	14.50	14.43	0.992	0.903	0.918	1
	6	Rear		Aux	14.50	14.44	0.989	0.927	0.940	1
	12	Rear		Aux	14.50	14.45	1.020	0.937	**0.948**	1
	13	Rear		Aux	14.50	14.47	0.980	0.904	0.910	1
802.11 n40	9	Bottom	AWAN	Main	14.50	14.48	0.118	0.114	0.115	
	9	Rear		Main	14.50	14.48	0.819	0.838	0.842	
	9	Edge3		Main	14.50	14.48	0.159	0.146	0.147	
	3	Rear		Main	14.50	14.36	0.818	0.817	**0.844**	1
	6	Rear		Main	14.50	14.39	0.784	0.778	0.798	1
	10	Rear		Main	14.50	14.45	0.786	0.784	0.793	1
	11	Rear		Main	14.50	13.88	0.704	0.705	0.813	1
802.11 n40	9	Bottom	AWAN	Aux	14.50	14.48	0.090	0.086	0.086	
	9	Rear		Aux	14.50	14.48	1.010	0.932	0.936	
	9	Edge3		Aux	14.50	14.48	0.161	0.146	0.147	
	3	Rear		Aux	14.50	14.43	0.997	0.930	0.945	1
	6	Rear		Aux	14.50	14.39	0.998	0.926	**0.950**	1
	10	Rear		Aux	14.50	14.45	0.997	0.914	0.925	1
	11	Rear		Aux	14.50	14.37	0.966	0.905	0.932	1
802.11 n40	6	Rear	INPAQ	Aux	14.50	14.45	0.869	0.807	0.816	3
			AWAN		14.50	14.45	0.981	0.857	0.867	2

Note:
1.Highest reported SAR is > 0.8 W/kg. Added second highest power channel for this test position
2.Repeated measurements are required only when the measured SAR is ≥0.80 W/kg. If the measured SAR values are < 1.45 W/kg with ≤20% variation, only one repeated measurement is required to reaffirm that the results are not expected to have substantial variations, which may introduce significant compliance concerns. (Per KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04)
Original SAR = 0.926 W/kg, therefore second times repeat SAR is required.
Repeat SAR = 0.857 W/kg < 1.45W/kg
SAR variation= -7.45% < 20%
3.The result used an other antenna to spot check for worst channel of the original antenna that the SAR result can be meet and compliant.

3. SAR test results of WiFi 5G

Band	Mode	Channel	Test Position	Ant Vendor	Ant	Max une-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
5G UNII 1&2a	802.11 ac160	50	Bottom	AWAN	Main	12.00	11.97	0.287	0.357	0.359	
		50	Rear		Main	12.00	11.97	0.990	1.160	**1.168**	
		50	Edge3		Main	12.00	11.97	0.296	0.340	0.342	
	802.11 ac80	42	Rear		Main	12.00	11.93	0.891	1.070	1.087	
		58	Rear		Main	12.00	11.85	0.812	1.010	1.045	
	802.11 ac160	50	Bottom		Aux	12.00	11.95	0.411	0.480	0.486	
		50	Rear		Aux	12.00	11.95	0.813	1.060	**1.072**	
		50	Edge3		Aux	12.00	11.95	0.281	0.332	0.336	
	802.11 ac80	42	Rear		Aux	12.00	11.90	0.779	0.975	0.998	
		58	Rear		Aux	12.00	11.90	0.822	1.010	1.034	
5G UNII 2c	802.11 ac160	114	Bottom	AWAN	Main	12.00	11.98	0.285	0.372	0.374	
		114	Rear		Main	12.00	11.98	0.935	1.120	**1.125**	
		114	Edge3		Main	12.00	11.98	0.236	0.273	0.274	
	802.11 ac80	106	Rear		Main	12.00	11.94	0.870	1.070	1.085	
		122	Rear		Main	12.00	11.93	0.729	0.976	0.992	
	802.11 ac160	114	Bottom		Aux	12.00	11.90	0.380	0.459	0.470	
		114	Rear		Aux	12.00	11.90	0.853	1.060	**1.085**	
		114	Edge3		Aux	12.00	11.90	0.266	0.320	0.327	
	802.11 ac80	106	Rear		Aux	12.00	11.96	0.816	1.040	1.050	
		122	Rear		Aux	12.00	11.89	0.790	1.010	1.036	
5G UNII 3	802.11 ac80	155	Bottom	AWAN	Main	12.00	11.97	0.303	0.391	0.394	
		155	Rear		Main	12.00	11.97	0.728	1.080	**1.087**	
		155	Edge3		Main	12.00	11.97	0.208	0.233	0.235	
	802.11 n40	151	Rear		Main	12.00	11.93	0.723	0.996	1.012	
		159	Rear		Main	12.00	11.91	0.723	0.990	1.011	
	802.11 ac80	155	Bottom		Aux	12.00	11.92	0.440	0.532	0.542	
		155	Rear		Aux	12.00	11.92	0.780	1.020	**1.039**	
		155	Edge3		Aux	12.00	11.92	0.224	0.279	0.284	
	802.11 n40	151	Rear		Aux	12.00	11.85	0.738	0.970	1.004	
		159	Rear		Aux	12.00	11.93	0.686	0.805	0.818	
5G UNII 1&2a	802.11 ac160	50	Rear	AWAN	Main	12.00	11.97	0.930	1.050	1.057	2
		50	Rear	INPAQ	Main	12.00	11.97	0.746	0.841	0.847	1

Note:
1.The result used an other antenna to spot check for worst channel of the original antenna that the SAR result can be meet and compliant.
2.Repeated measurements are required only when the measured SAR is ≥0.80 W/kg. If the measured SAR values are < 1.45 W/kg with ≤20% variation, only one repeated measurement is required to reaffirm that the results are not expected to have substantial variations, which may introduce significant compliance concerns. (Per KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04)
Original SAR = 1.160 W/kg, therefore second times repeat SAR is required.
Repeat SAR = 1.050 W/kg < 1.45W/kg
SAR variation= -9.48% < 20%

4. SAR test results of WWAN-WCDMA

P-Sensor	Band	Mode	channel	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	UMTS Band II	RMC12.2K	9400	0	Rear	16.00	15.55	0.288	0.352	0.390	
		RMC12.2K	9400	0	Edge1	16.00	15.55	0.023	0.022	0.025	
		RMC12.2K	9400	0	Bottom	16.00	15.55	0.585	0.629	**0.698**	
off		RMC12.2K	9538	18	Rear	24.00	23.51	0.165	0.167	0.187	
		RMC12.2K	9538	7	Edge1	24.00	23.51	0.057	0.057	0.064	
		RMC12.2K	9538	0	Edge2	24.00	23.51	0.090	0.088	0.098	
		RMC12.2K	9538	20	Bottom	24.00	23.51	0.052	0.049	0.055	
on	UMTS Band IV	RMC12.2K	1513	0	Rear	16.00	15.74	0.237	0.275	0.292	
		RMC12.2K	1513	0	Edge1	16.00	15.74	0.181	0.177	0.188	
		RMC12.2K	1513	0	Bottom	16.00	15.74	0.665	0.745	**0.791**	
off		RMC12.2K	1513	18	Rear	24.00	23.28	0.154	0.148	0.175	
		RMC12.2K	1513	7	Edge1	24.00	23.28	0.415	0.389	0.459	
		RMC12.2K	1513	0	Edge2	24.00	23.28	0.087	0.083	0.098	
		RMC12.2K	1513	20	Bottom	24.00	23.28	0.178	0.176	0.208	
on	UMTS Band V	RMC12.2K	4183	0	Rear	18.00	17.82	0.269	0.222	0.231	
		RMC12.2K	4183	0	Edge1	18.00	17.82	0.037	0.027	0.028	
		RMC12.2K	4183	0	Bottom	18.00	17.82	0.906	0.758	**0.790**	
off		RMC12.2K	4183	18	Rear	24.00	23.51	0.206	0.205	0.229	
		RMC12.2K	4183	7	Edge1	24.00	23.51	0.284	0.276	0.309	
		RMC12.2K	4183	0	Edge2	24.00	23.51	0.007	0.004	0.004	
		RMC12.2K	4183	20	Bottom	24.00	23.51	0.268	0.258	0.289	

5. SAR test results of WWAN-LTE

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 2	QPSK20M	18700	1	0	0	Rear	16.00	15.88	0.552	0.592	0.609	
		QPSK20M	18700	1	0	0	Edge1	16.00	15.88	0.026	0.022	0.022	
		QPSK20M	18700	1	0	0	Bottom	16.00	15.88	0.609	0.626	**0.644**	
off		QPSK20M	18900	1	0	18	Rear	23.00	22.42	0.160	0.169	0.193	
		QPSK20M	18900	1	0	7	Edge1	23.00	22.42	0.030	0.032	0.036	
		QPSK20M	18900	1	0	0	Edge2	23.00	22.42	0.088	0.085	0.097	
		QPSK20M	18900	1	0	20	Bottom	23.00	22.42	0.036	0.035	0.040	
on	LTE Band 2	QPSK20M	18700	50	0	0	Rear	15.00	14.97	0.507	0.541	0.545	
		QPSK20M	18700	50	0	0	Edge1	15.00	14.97	0.020	0.018	0.018	
		QPSK20M	18700	50	0	0	Bottom	15.00	14.97	0.496	0.508	0.512	
off		QPSK20M	18900	50	0	18	Rear	22.00	21.53	0.147	0.155	0.173	
		QPSK20M	18900	50	0	7	Edge1	22.00	21.53	0.032	0.034	0.037	
		QPSK20M	18900	50	0	0	Edge2	22.00	21.53	0.045	0.054	0.061	
		QPSK20M	18900	50	0	20	Bottom	22.00	21.53	0.036	0.038	0.042	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 4	QPSK20M	20175	1	0	0	Rear	16.00	15.92	0.518	0.520	**0.530**	
		QPSK20M	20175	1	0	0	Edge1	16.00	15.92	0.388	0.294	0.299	
		QPSK20M	20175	1	0	0	Bottom	16.00	15.92	0.459	0.493	0.502	
off		QPSK20M	20175	1	0	18	Rear	23.00	22.83	0.184	0.185	0.192	
		QPSK20M	20175	1	0	7	Edge1	23.00	22.83	0.473	0.464	0.483	
		QPSK20M	20175	1	0	0	Edge2	23.00	22.83	0.086	0.082	0.085	
		QPSK20M	20175	1	0	20	Bottom	23.00	22.83	0.239	0.236	0.245	
on	LTE Band 4	QPSK20M	20175	50	0	0	Rear	15.00	14.96	0.434	0.434	0.438	
		QPSK20M	20175	50	0	0	Edge1	15.00	14.96	0.261	0.218	0.220	
		QPSK20M	20175	50	0	0	Bottom	15.00	14.96	0.273	0.323	0.326	
off		QPSK20M	20175	50	0	18	Rear	22.00	21.94	0.158	0.157	0.159	
		QPSK20M	20175	50	0	7	Edge1	22.00	21.94	0.386	0.377	0.382	
		QPSK20M	20175	50	0	0	Edge2	22.00	21.94	0.044	0.053	0.054	
		QPSK20M	20175	50	0	20	Bottom	22.00	21.94	0.194	0.193	0.196	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 5	QPSK10M	20600	1	0	0	Rear	18.00	17.64	0.211	0.202	0.219	
		QPSK10M	20600	1	0	0	Edge1	18.00	17.64	0.333	0.222	0.241	
		QPSK10M	20600	1	0	0	Bottom	18.00	17.64	0.311	0.309	**0.336**	
off		QPSK10M	20600	1	0	18	Rear	23.00	22.40	0.164	0.163	0.187	
		QPSK10M	20600	1	0	7	Edge1	23.00	22.40	0.192	0.189	0.217	
		QPSK10M	20600	1	0	0	Edge2	23.00	22.40	0.052	0.047	0.054	
		QPSK10M	20600	1	0	20	Bottom	23.00	22.40	0.192	0.190	0.218	
on	LTE Band 5	QPSK10M	20600	25	0	0	Rear	17.00	16.73	0.178	0.170	0.181	
		QPSK10M	20600	25	0	0	Edge1	17.00	16.73	0.213	0.186	0.198	
		QPSK10M	20600	25	0	0	Bottom	17.00	16.73	0.301	0.263	0.280	
off		QPSK10M	20600	25	0	18	Rear	22.00	21.51	0.162	0.159	0.178	
		QPSK10M	20600	25	0	7	Edge1	22.00	21.51	0.206	0.200	0.224	
		QPSK10M	20600	25	0	0	Edge2	22.00	21.51	0.057	0.050	0.056	
		QPSK10M	20600	25	0	20	Bottom	22.00	21.51	0.208	0.199	0.223	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 7	QPSK20M	21100	1	0	0	Rear	16.00	15.77	0.535	0.488	0.515	
		QPSK20M	21100	1	0	0	Edge1	16.00	15.77	0.147	0.171	0.180	
		QPSK20M	21100	1	0	0	Bottom	16.00	15.77	0.581	0.537	**0.566**	
off		QPSK20M	21100	1	0	18	Rear	23.00	22.42	0.149	0.184	0.210	
		QPSK20M	21100	1	0	7	Edge1	23.00	22.42	0.207	0.271	0.310	
		QPSK20M	21100	1	0	0	Edge2	23.00	22.42	0.052	0.048	0.055	
		QPSK20M	21100	1	0	20	Bottom	23.00	22.42	0.126	0.196	0.224	
on	LTE Band 7	QPSK20M	21100	50	0	0	Rear	15.00	14.86	0.451	0.395	0.408	
		QPSK20M	21100	50	0	0	Edge1	15.00	14.86	0.129	0.145	0.150	
		QPSK20M	21100	50	0	0	Bottom	15.00	14.86	0.441	0.431	0.445	
off		QPSK20M	21100	50	0	18	Rear	22.00	21.53	0.150	0.186	0.207	
		QPSK20M	21100	50	0	7	Edge1	22.00	21.53	0.209	0.275	0.306	
		QPSK20M	21100	50	0	0	Edge2	22.00	21.53	0.060	0.052	0.058	
		QPSK20M	21100	50	0	20	Bottom	22.00	21.53	0.126	0.198	0.221	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 12	QPSK10M	23095	1	0	0	Rear	18.00	17.79	0.300	0.307	**0.322**	
		QPSK10M	23095	1	0	0	Edge1	18.00	17.79	0.125	0.129	0.135	
		QPSK10M	23095	1	0	0	Bottom	18.00	17.79	0.310	0.232	0.243	
off		QPSK10M	23095	1	0	18	Rear	23.00	22.43	0.144	0.141	0.161	
		QPSK10M	23095	1	0	7	Edge1	23.00	22.43	0.155	0.156	0.178	
		QPSK10M	23095	1	0	0	Edge2	23.00	22.43	0.041	0.025	0.028	
		QPSK10M	23095	1	0	20	Bottom	23.00	22.43	0.127	0.132	0.151	
on	LTE Band 12	QPSK10M	23095	25	0	0	Rear	17.00	16.88	0.294	0.299	0.307	
		QPSK10M	23095	25	0	0	Edge1	17.00	16.88	0.104	0.107	0.110	
		QPSK10M	23095	25	0	0	Bottom	17.00	16.88	0.257	0.157	0.161	
off		QPSK10M	23095	25	0	18	Rear	22.00	21.54	0.124	0.149	0.166	
		QPSK10M	23095	25	0	7	Edge1	22.00	21.54	0.163	0.168	0.187	
		QPSK10M	23095	25	0	0	Edge2	22.00	21.54	0.024	0.027	0.030	
		QPSK10M	23095	25	0	20	Bottom	22.00	21.54	0.119	0.124	0.138	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 13	QPSK10M	23230	1	0	0	Rear	18.00	17.68	0.332	0.339	0.365	
		QPSK10M	23230	1	0	0	Edge1	18.00	17.68	0.230	0.233	0.251	
		QPSK10M	23230	1	0	0	Bottom	18.00	17.68	0.399	0.334	0.360	
off		QPSK10M	23230	1	0	18	Rear	23.00	22.81	0.173	0.205	0.214	
		QPSK10M	23230	1	0	7	Edge1	23.00	22.81	0.373	0.357	0.373	
		QPSK10M	23230	1	0	0	Edge2	23.00	22.81	0.051	0.046	0.048	
		QPSK10M	23230	1	0	20	Bottom	23.00	22.81	0.286	0.293	0.306	
on	LTE Band 13	QPSK10M	23230	25	0	0	Rear	17.00	16.77	0.261	0.266	0.280	
		QPSK10M	23230	25	0	0	Edge1	17.00	16.77	0.186	0.187	0.197	
		QPSK10M	23230	25	0	0	Bottom	17.00	16.77	0.320	0.266	0.280	
off		QPSK10M	23230	25	0	18	Rear	22.00	21.92	0.164	0.194	0.198	
		QPSK10M	23230	25	0	7	Edge1	22.00	21.92	0.382	0.381	**0.388**	
		QPSK10M	23230	25	0	0	Edge2	22.00	21.92	0.055	0.049	0.050	
		QPSK10M	23230	25	0	20	Bottom	22.00	21.92	0.273	0.281	0.286	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 17	QPSK10M	23780	1	0	0	Rear	18.00	17.89	0.299	0.300	**0.308**	
		QPSK10M	23780	1	0	0	Edge1	18.00	17.89	0.132	0.133	0.136	
		QPSK10M	23780	1	0	0	Bottom	18.00	17.89	0.309	0.259	0.266	
off		QPSK10M	23780	1	0	18	Rear	23.00	22.53	0.124	0.148	0.165	
		QPSK10M	23780	1	0	7	Edge1	23.00	22.53	0.164	0.164	0.183	
		QPSK10M	23780	1	0	0	Edge2	23.00	22.53	0.012	0.009	0.010	
		QPSK10M	23780	1	0	20	Bottom	23.00	22.53	0.127	0.130	0.145	
on	LTE Band 17	QPSK10M	23780	25	0	0	Rear	17.00	16.98	0.231	0.237	0.238	
		QPSK10M	23780	25	0	0	Edge1	17.00	16.98	0.106	0.108	0.108	
		QPSK10M	23780	25	0	0	Bottom	17.00	16.98	0.249	0.164	0.165	
off		QPSK10M	23780	25	0	18	Rear	22.00	21.64	0.126	0.149	0.162	
		QPSK10M	23780	25	0	7	Edge1	22.00	21.64	0.163	0.165	0.179	
		QPSK10M	23780	25	0	0	Edge2	22.00	21.64	0.006	0.004	0.005	
		QPSK10M	23780	25	0	20	Bottom	22.00	21.64	0.117	0.121	0.131	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 26	QPSK15M	26865	1	0	0	Rear	18.00	17.79	0.217	0.205	0.215	
		QPSK15M	26865	1	0	0	Edge1	18.00	17.79	0.250	0.218	0.229	
		QPSK15M	26865	1	0	0	Bottom	18.00	17.79	0.353	0.300	**0.315**	
off		QPSK15M	26865	1	0	18	Rear	23.00	22.31	0.150	0.147	0.172	
		QPSK15M	26865	1	0	7	Edge1	23.00	22.31	0.188	0.183	0.215	
		QPSK15M	26865	1	0	0	Edge2	23.00	22.31	0.051	0.046	0.054	
		QPSK15M	26865	1	0	20	Bottom	23.00	22.31	0.020	0.194	0.227	
on	LTE Band 26	QPSK15M	26865	36	0	0	Rear	17.00	16.88	0.167	0.160	0.164	
		QPSK15M	26865	36	0	0	Edge1	17.00	16.88	0.255	0.173	0.178	
		QPSK15M	26865	36	0	0	Bottom	17.00	16.88	0.285	0.239	0.246	
off		QPSK15M	26865	36	0	18	Rear	22.00	21.42	0.147	0.145	0.166	
		QPSK15M	26865	36	0	7	Edge1	22.00	21.42	0.189	0.184	0.210	
		QPSK15M	26865	36	0	0	Edge2	22.00	21.42	0.030	0.020	0.022	
		QPSK15M	26865	36	0	20	Bottom	22.00	21.42	0.197	0.191	0.218	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 30	QPSK10M	27710	1	0	0	Rear	16.00	15.99	0.293	0.273	0.274	
		QPSK10M	27710	1	0	0	Edge1	16.00	15.99	0.137	0.131	0.131	
		QPSK10M	27710	1	0	0	Bottom	16.00	15.99	0.669	0.579	**0.580**	
off		QPSK10M	27710	1	0	18	Rear	21.00	20.84	0.124	0.125	0.130	
		QPSK10M	27710	1	0	7	Edge1	21.00	20.84	0.344	0.339	0.352	
		QPSK10M	27710	1	0	0	Edge2	21.00	20.84	0.133	0.125	0.130	
		QPSK10M	27710	1	0	20	Bottom	21.00	20.84	0.179	0.181	0.188	
on	LTE Band 30	QPSK10M	27710	25	0	0	Rear	15.00	15.00	0.210	0.194	0.194	
		QPSK10M	27710	25	0	0	Edge1	15.00	15.00	0.117	0.111	0.111	
		QPSK10M	27710	25	0	0	Bottom	15.00	15.00	0.539	0.459	0.459	
off		QPSK10M	27710	25	0	18	Rear	20.00	19.95	0.102	0.105	0.106	
		QPSK10M	27710	25	0	7	Edge1	20.00	19.95	0.350	0.339	0.343	
		QPSK10M	27710	25	0	0	Edge2	20.00	19.95	0.123	0.119	0.120	
		QPSK10M	27710	25	0	20	Bottom	20.00	19.95	0.169	0.180	0.182	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 41	QPSK20M	41490	1	0	0	Rear	16.00	15.63	0.258	0.257	**0.280**	
		QPSK20M	41490	1	0	0	Edge1	16.00	15.63	0.104	0.112	0.122	
		QPSK20M	41490	1	0	0	Bottom	16.00	15.63	0.252	0.253	0.275	
off		QPSK20M	41490	1	0	18	Rear	23.00	22.35	0.096	0.106	0.123	
		QPSK20M	41490	1	0	7	Edge1	23.00	22.35	0.084	0.133	0.154	
		QPSK20M	41490	1	0	0	Edge2	23.00	22.35	0.024	0.017	0.019	
		QPSK20M	41490	1	0	20	Bottom	23.00	22.35	0.063	0.097	0.112	
on	LTE Band 41	QPSK20M	41490	50	0	0	Rear	15.00	14.72	0.209	0.212	0.226	
		QPSK20M	41490	50	0	0	Edge1	15.00	14.72	0.084	0.077	0.082	
		QPSK20M	41490	50	0	0	Bottom	15.00	14.72	0.205	0.215	0.229	
off		QPSK20M	41490	50	0	18	Rear	22.00	21.46	0.081	0.105	0.119	
		QPSK20M	41490	50	0	7	Edge1	22.00	21.46	0.081	0.129	0.146	
		QPSK20M	41490	50	0	0	Edge2	22.00	21.46	0.026	0.018	0.020	
		QPSK20M	41490	50	0	20	Bottom	22.00	21.46	0.086	0.095	0.107	

P-sensor	Band	Mode	channel	RB	Offset	distance (mm)	Test Position	Max Tune-up (dBm)	AVG Power (dBm)	Area Scan	SAR 1g	Reported SAR 1g	Note
on	LTE Band 66	QPSK20M	132322	1	0	0	Rear	16.00	15.64	0.467	0.450	**0.489**	
		QPSK20M	132322	1	0	0	Edge1	16.00	15.64	0.171	0.207	0.225	
		QPSK20M	132322	1	0	0	Bottom	16.00	15.64	0.257	0.316	0.343	
off		QPSK20M	132322	1	0	18	Rear	23.00	22.89	0.165	0.162	0.166	
		QPSK20M	132322	1	0	7	Edge1	23.00	22.89	0.325	0.316	0.324	
		QPSK20M	132322	1	0	0	Edge2	23.00	22.89	0.087	0.083	0.085	
		QPSK20M	132322	1	0	20	Bottom	23.00	22.89	0.169	0.165	0.169	
on	LTE Band 66	QPSK20M	132322	50	0	0	Rear	15.00	14.73	0.434	0.421	0.448	
		QPSK20M	132322	50	0	0	Edge1	15.00	14.73	0.172	0.164	0.175	
		QPSK20M	132322	50	0	0	Bottom	15.00	14.73	0.199	0.255	0.271	
off		QPSK20M	132322	50	0	18	Rear	22.00	22.00	0.148	0.146	0.146	
		QPSK20M	132322	50	0	7	Edge1	22.00	22.00	0.283	0.274	0.274	
		QPSK20M	132322	50	0	0	Edge2	22.00	22.00	0.045	0.054	0.054	
		QPSK20M	132322	50	0	20	Bottom	22.00	22.00	0.147	0.144	0.144	

11. MULTIPLE TRANSMITTER EVALUATION

11.1 Stand-alone SAR test exclusion

No.	Configuration	Body
1	WWAN+WLAN2.4G	Yes
2	WWAN+BT	Yes
3	WWAN+WLAN5G	Yes
4	WWAN+WLAN5G+BT	Yes

Note:
1.UMTS & LTE share the same antenna and can't transmit simultaneously.

11.2 Simultaneous transmission conditions

KDB 447498 D01 General RF Exposure Guidance v06, introduces a new formula for calculating the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

A new threshold of 0.04 is also introduced in the KDB. Thus, in order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:
$(SAR_1 + SAR_2)^{1.5} / R_i \leq 0.04$

$SPLSR = (SAR_1 + SAR_2)^{1.5} / R_i$
Where:

SAR_1 is the highest Reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR_2 is the highest Reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

R_i is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$

11.3 ESTIMATED SAR FOR SIMULTANEOUS TRANSMISSION SAR ANALYSIS

Considerations for SAR estimation

1. When standalone SAR test exclusion applies, standalone SAR must also be estimated to determine simultaneous transmission SAR test exclusion.
2. Dedicated Host Approach criteria for SAR test exclusion is likewise applied to SAR estimation, with certain distinctions between test exclusion and SAR estimation:

- When the separation distance from the antenna to an adjacent edge is ≤ 5 mm, a distance of 5 mm is applied for SAR estimation; this is the same between test exclusion and SAR estimation calculations.
- When the separation distance from the antenna to an adjacent edge is > 5 mm but ≤ 50 mm, the actual antenna-to-edge separation distance is applied for SAR estimation.
- When the minimum test separation distance is > 50 mm, the estimated SAR value is 0.4 W/kg

11.3.1 ESTIMATED SAR FOR BLUETOOTH

According to section 8.1, the Bluetooth must be estimated according to following to determine simultaneous transmission SAR test exclusion:

- *(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)]·[√f(GHz)/x]* W/kg for test separation distances ≤ 50 mm; where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.
- 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is > 50 mm.

NB Mode

Mode	Band	Frequency (MHz)	Output Power		Separation Distances(mm)	Estimated 1-g SAR (W/Kg)
			dBm	mW	NB Bottom	NB Bottom
Bluetooth	2.4GHz	2480	11.45	14.00	8.40	**0.350**

Stand Mode

Mode	Band	Frequency (MHz)	Output Power		Separation Distances(mm)	Estimated 1-g SAR (W/Kg)
			dBm	mW	Stand	Stand
Bluetooth	2.4GHz	2480	11.45	14.00	5.10	**0.576**

Tablet Mode

Mode	Band	Frequency (MHz)	Output Power		Separation Distances(mm)					Estimated 1-g SAR (W/Kg)				
			dBm	mW	Edge1	Edge2	Edge3	Edge4	Rear	Edge1	Edge2	Edge3	Edge4	Rear
Bluetooth	2.4GHz	2480	11.45	14.00	189.37	158.88	4.66	95.81	5.10	**0.016**	**0.019**	**Test**	**0.031**	**Test**

11.3 About BT/WiFi and WWAN

Test Position / SAR1g(W/kg)	Rear	Edge1	Edge2	Edge3	Bottom
UMTS Band II	0.390	0.064	0.098		0.698
UMTS Band IV	0.292	0.459	0.098		0.791
UMTS Band V	0.231	0.309	0.004		0.790
LTE B2	0.609	0.037	0.097		0.644
LTE B4	0.530	0.483	0.085		0.530
LTE B5	0.219	0.241	0.056		0.336
LTE B7	0.515	0.310	0.058		0.566
LTE B12	0.322	0.187	0.030		0.243
LTE B13	0.365	0.388	0.050		0.360
LTE B17	0.308	0.183	0.010		0.266
LTE B26	0.215	0.229	0.054		0.315
LTE B30	0.274	0.352	0.130		0.580
LTE B41	0.280	0.154	0.020		0.275
LTE B66	0.489	0.324	0.085		0.343
2.4GWiFi_Main	0.849			0.147	0.115
2.4GWiFi_Aux	0.950			0.153	0.092
5.2 & 5.3G WiFi_Main	1.168			0.342	0.359
5.2 & 5.3G WiFi_Aux	1.072			0.336	0.486
5.6G WiFi_Main	1.125			0.274	0.374
5.6G WiFi_Aux	1.085			0.327	0.470
5.8G WiFi_Main	1.087			0.235	0.394
5.8G WiFi_Aux	1.039			0.284	0.542
BT	0.380	0.016	0.019	0.071	0.350
WLAN+WLAN(Main+Aux) MAX$\sum SAR_{1g}$	2.253			0.678	0.936
WWAN+WLAN MAX$\sum SAR_{1g}$	1.777	0.483	0.130	0.342	1.333
WWAN+BT MAX$\sum SAR_{1g}$	0.989	0.499	0.149		1.141
WLAN+BT MAX$\sum SAR_{1g}$	1.548			0.413	0.744

Note:
1. MAX. $\sum SAR_{1g}$= 2.253 W/Kg>1.6 W/Kg, so Peak location SAR are required.
2. We select WWAN (Main) and WLAN (Aux) for Peak location SAR,because both antennas are closer in Appendix E.

12. Test Layout

Specific Absorption Rate Test Layout

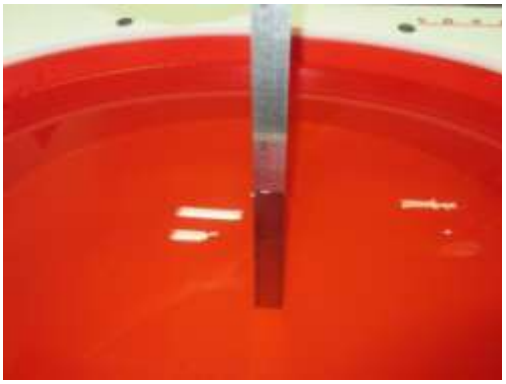
Liquid depth in the flat Phantom (≥15cm depth)

HSL(750MHz)

HSL(900MHz)

HSL(1750-2600MHz)

HSL(5GHz)



Appendix A. SAR Plots of System Verification

(Pls See BTL-FCC SAR-1-2102T172A_Appendix A.)

Appendix B. SAR Plots of SAR Measurement

(Pls See BTL-FCC SAR-1-2102T172A_Appendix B.)

Appendix C. Calibration Certificate

(Pls See BTL-FCC SAR-1-2102T172A_Appendix C.)

Appendix D. Photographs of the Test Set-Up

(Pls See BTL-FCC SAR-1-2102T172A_Appendix D.)

Appendix E. SAR SPLSR

(Pls See BTL-FCC SAR-1-2102T172A_Appendix E.)

End of Test Report