



FCC

SAR EVALUATION REPORT

For

FCC ID : 2AH25TF701

Model: TF701

Report Type : C2PC Report Product Name : WIRELESS DATA TERMIN							
Report Number: <u>RXZ211221004SA01</u>	Report Number: <u>RXZ211221004SA01</u>						
Report Date: <u>2022-01-25</u>							
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Brand (Trade) Name	SUNMI			
Product (Equipment) Name	WIRELESS DATA TERMINAL			
Model Name	TF701			
Serial Model Name	N/A			
Serial Number	RXZ211221004-01			
Test Date	2022/01/05 ~ 2022/01/21			

Statement of Compliance

Measurement Procedures and Standards Used:

- ⊠ IEEE1528:2013
- □ FCC 47 CFR part 2.1091
- ⊠ FCC 47 CFR part 2.1093
- ⊠ IEC 62209-1:2016
- □ EN 62209-2:2010+A1:2019
- KDB 447498 D01 General RF Exposure Guidance v06
- ⊠ KDB 648474 D04 Handset SAR v01r03
- KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- ☑ KDB 865664 D02 RF Exposure Reporting v01r02
- KDB 941225 D01 3G SAR Procedures v03r01
- ☑ KDB 941225 D05 SAR for LTE Devices v02r05
- 🖾 KDB 248227 D01 802.11 Wi-Fi SAR v02r02

The measurement results in this report were performed at Bay Area Compliance Laboratories Corp. (New

Taipei Laboratory)

Any unauthorized alteration, forgery or falsification of the content or appearance of this document is

unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

The determination of the test results does not require consideration of the uncertainty of the measurement,

unless the assessment is required by customer agreement, regulation or standard document specification.

Report Issued Date: 2022-01-25

Project Engineer: Anson Lu Anson Lu

Reviewed By: <u>Gimmy Tsai</u> Gummy Tsai

Revision History

Revision Number	Report Number	Description of Revision	Date of Revision	
1	RKSA200706001-20A	Original Report	2021.04.26	
2	RXZ211221004SA01	C2PC Report	2022.01.25	

Notes:

This is to request a Class II permission change to our product name: WIRELESS DATA TERMINAL, Model TF701 (FCC ID: 2AH25TF701), the device is identical to the previously certified except for the changes as below for details:

Additional code scanner (Model: N4603 and NG002), please refer to page 130, two different scanner products not affecting RF characteristics.

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EUT RESULTS

Attestation of Test Results					
Frequency Band	Max. SAR Level(s) Reported(W/kg) Limit(W/kg)				
WCDMA Band II	1g Body SAR	0.51			
WCDMA Band IV	1g Body SAR	0.74			
WCDMA Band V	1g Body SAR	0.39			
LTE Band 12 & 17	1g Body SAR	0.49			
LTE Band 13	1g Body SAR	0.42			
LTE Band 14	1g Body SAR	0.39			
LTE Band 26	1g Body SAR	0.47			
LTE Band 7	1g Body SAR	0.79			
LTE Band 2 & 25	1g Body SAR	0.29			
LTE Band 4 & 66	1g Body SAR	0.39	1.6		
LTE Band 71	1g Body SAR	0.36			
LTE Band 41	1g Body SAR	0.58			
Bluetooth	1g Body SAR	0.02			
WLAN 2.4GHz_Chain 0	1g Body SAR	0.76			
WLAN 2.4GHz_Chain 1	1g Body SAR	0.12			
WLAN 5GHz_Chain 0	1g Body SAR	0.69			
WLAN 5GHz_Chain 1	1g Body SAR	0.31			
Simultaneous	1g Body SAR	1.34(Hotspot)			
Simultaneous	1g Body SAR	1.34			

Note: This wireless device has been shown to be capable of compliance for localized specific absorption rate (SAR) for General Population/Uncontrolled Exposure limits specified in FCC 47 CFR part 2.1093 and has been tested in accordance with the measurement procedures specified in IEEE 1528-2013 and RF exposure KDB procedures. **The results and statements contained in this report pertain only to the device(s) evaluated.**

EUT DESCRIPTION

Technical Specifica	tion		
Applicant	WIRELESS DATA TERMINAL		
Exposure Category	Population / Uncontrolled		
Antonno Trino(a)	FPC Antenna for WCDMA and LTE		
Antenna Type(s)	FPC Antenna for WLAN and Bluetooth		
	WCDMA: BPSK,QPSK,16QAM; LTE: QPSK,16QAM		
Modulation Type	2.4G Wi-Fi: DSSS,OFDM; 5G Wi-Fi: OFDM		
	BT3.0: GFSK, $\pi/4$ -DQPSK,8DPSK; BLE: GFSK		
	WCDMA Band II: 1850 ~ 1910 MHz(TX)		
	WCDMA Band IV: 1710 ~ 1755 MHz(TX)		
	WCDMA Band V: 824 ~ 849 MHz(TX)		
	LTE Band 2: 1850 ~ 1910 MHz(TX)		
	LTE Band 4: 1710 ~ 1755 MHz(TX)		
	LTE Band 7: 2500 ~ 2570 MHz(TX)		
	LTE Band 12: 699 ~ 716 MHz(TX)		
	LTE Band 13: 777 ~ 787 MHz(TX)		
Frequency Band	LTE Band 14: 788 ~ 798 MHz(TX)		
	LTE Band 17: 704 ~ 716 MHz(TX)		
	LTE Band 25: 1850 ~ 1915 MHz(TX)		
	LTE Band 26: 814 ~ 849 MHz(TX)		
	LTE Band 41: 2555 ~ 2655 MHz(TX)		
	LTE Band 66: 1710 ~ 1780 MHz(TX)		
	LTE Band 71: 663 ~ 698 MHz(TX)		
	2.4G Wi-Fi: 2412 ~ 2462 MHz(b/g/n20) ; 2422 ~ 2452 MHz(n40)		
	BT/BLE: 2402 ~ 2480 MHz		
	5G UNII-1: 5150 ~ 5250 MHz, 5G UNII-3: 5725 ~ 5850 MHz		
	WCDMA Band 2: 23.0 dBm		
	WCDMA Band 4: 23.0 dBm		
	WCDMA Band 5: 23.0 dBm		
Conducted RF	LTE Band 2 & 25: 22.8 dBm		
Power	LTE Band 66 & 4: 22.8 dBm		
(Avg/Tune Up)	LTE Band 12 & 17: 22.8 dBm		
	LTE Band 7: 22.5 dBm		
	LTE Band 13: 22.8 dBm		
	LTE Band 14: 22.8 dBm		

	LTE Band 26: 22.8 dBm
	LTE Band 41: 22.5 dBm
	LTE Band 66: 22.8 dBm
	LTE Band 71: 22.8 dBm
	Wi-Fi 2.4GHz_Chain 0: 13.6 dBm ; Wi-Fi 2.4GHz_Chain 1: 13.3 dBm
	Wi-Fi 5GHz UNII-1_Chain 0: 9.0 dBm ; Wi-Fi 5GHz UNII-1_Chain 1: 10.0 dBm
	Wi-Fi 5GHz UNII-3_Chain 0: 8.0 dBm ; Wi-Fi 5GHz UNII-3_Chain 1: 8.1 dBm
Conducted RF	Plustooth: 11.0 dBm
Power	Bluetooth, 11.0 dBm
(Peak/Tune Up)	
Domon Common	DC 3.85V from Battery
Fower Source	DC 5.0 / 9.0 / 12.0 / 3.6 ~ 6.0 /6.0 ~ 9.0 / 9.0 ~ 12.0 V from adapter

Note:

All measurement and test data in this report was gathered from production sample serial number: RXZ211221004-01(Assigned by BACL(New Taipei Laboratory)). The EUT supplied by the applicant was received on 2021/12/14.

REFERENCE, STANDARDS, AND GUIDELINES

FCC:

The Report and Order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g as recommended by the ANSI/IEEE standard C95.1 [6] for an uncontrolled environment (Paragraph 65). According to the Supplement C of OET Bulletin 65 "Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in North America is 1.6 mW/g average over 1 gram of tissue mass.

FCC Limit					
	SAR (W/kg)				
EXPOSURE LIMITS	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)			
Spatial Average (averaged over the whole body)	0.08	0.4			
Spatial Peak (averaged over any 1 g of tissue)	1.60	8.0			
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0			

SAR Limits

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

Occupational/Controlled Environments are defined as locations where there is exposure that maybe incurred by people who are aware of the potential for exposure (i.e. as a result of employmentor occupation).

General Population/Uncontrolled environments Spatial Peak limit 1.6W/kg (FCC) & 2.0 W/kg (CE) applied to the EUT.

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DESCRIPTION OF TEST SYSTEM

These measurements were performed with the automated near-field scanning system DASY6 from Schmid& Partner Engineering AG (SPEAG) which is the Fifth generation of the system shown in the figure hereinafter:



DASY6 System Description

The DASY6 system for performing compliance tests consists of the following items:



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- A standard high precision 6-axis robot (Staubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal application, 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.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 professional operating system and the DASY52 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

DASY6 Measurement Server

The DASY6 measurement server is based on a PC/104 CPU board with a 400 MHz Intel ULV Celeron, 128 MB chip-disk and 128 MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) electronics box, as well as the 16-bit AD converter system for optical detection and digital I/O interface are contained on the DASY6 I/O board, which is directly connected to the PC/104 bus of the CPU board.



The measurement server performs all real-time data evaluations of

field measurements and surface detection, controls robot movements, and handles safety operations. The PC operating system cannot interfere with these time-critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program- controlled robot movements. Furthermore, the measurement server is equipped with an expansion port, which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Connection of devices from any other supplier could seriously damage the measurement server.

Data Acquisition Electronics

The data acquisition electronics (DAE4) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of both the DAE4 as well as of the DAE3 box is 200MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

EASD V 4 E-1 Iciu	
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	 ± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

EX3DV4 E-Field Probes

SAM Twin Phantom

The SAM Twin Phantom (shown in front of DASY6) is a fiberglass shell phantom with shell thickness 2 mm, except in the ear region where the thickness is increased to 6 mm. The phantom has three measurement areas: 1) Left Head, 2) Right Head, and 3) Flat Section. For larger devices, the use of the ELI-Phantom (shown behind DASY6) is required. For devices such as glasses with a wireless link, the Face Down Phantom is the most suitable (between the SAM Twin and ELI phantoms).

When the phantom is mounted inside allocated slot of the DASY6 platform, phantom reference points can be taught directly in the DASY5 V5.2 software. When the DASY6 platform is used to mount the





Phantom, some of the phantom teaching points cannot be reached by the robot in DASY5 V5.2. A special tool called P1a-P2aX-Former is provided to transform two of the three points, P1 and P2, to reachable locations. To use these new teaching points, a revised phantom configuration file is required.

In addition to our standard broadband liquids, the phantom can be used with the following tissue simulating liquids:

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Sugar-water-based liquids can be left permanently in the phantom. Always cover the liquid when the system is not in use to prevent changes in liquid parameters due to water evaporation. DGBE-based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom, and the phantom should be dried when the system is not in use (desirable at least once a week).

Do not use other organic solvents without previously testing the solvent resistivity of the phantom. Approximately 25 liters of liquid is required to fill the SAM Twin phantom.

ELI Phantom

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6 GHz. ELI is fully compatible with the latest draft of the standard IEC 62209-2 and the use of all known tissue simulating liquids. ELI has been optimized for performance and can be integrated into a SPEAG standard phantom table. A cover is provided to prevent evaporation of water and changes in liquid parameters. 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 can be used with the following tissue simulating liquids:

- Sugar-water-based liquids can be left permanently in the phantom. Always cover the liquid when the system is not in use to prevent changes in liquid parameters due to water evaporation.
- DGBE-based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom, and the phantom should be dried when the system is not in use (desirable at least once a week).
- Do not use other organic solvents without previously testing the solvent resistivity of the phantom.

Approximately 25 liters of liquid is required to fill the ELI phantom



Robots

The DASY6 system uses the high-precision industrial robots TX60L, TX90XL, and RX160L from StaubliSA (France). The TX robot family - the successor of the well-known RX robot family - continues to offer the features important for DASY6 applications:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchrony motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

The robots are controlled by the Staubli CS8c robot controllers. All information regarding the use and maintenance of the robot arm and the robot controller is provided

Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 15mm2 step integral, with 1.5mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

Zoom Scan (Cube Scan Averaging)

The averaging zoom scan volume utilized in the DASY6 software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/m^3 is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 10mm, with the side length of the 10g cube is 21.5mm.

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 7 x7 x 7 (5mmx5mm) providing a volume of 30 mm in the X & Y & Z axis.

Recommended Tissue Dielectric Parameters for Head and Body

Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEC 62209-1:2016

Recommended Tissue Dielectric Parameters for Head liquid

Table A.3 – Dielectric properties of the head tissue-equivalent liquid

Frequency	Relative permittivity	Conductivity (<i>o</i>)
MHz	ε,	S/m
300	45,3	0,87
450	43,5	0,87
750	41,9	0,89
835	41,5	0,90
900	41,5	0,97
1 450	40,5	1,20
1 500	40, 4	1,23
1 640	40,2	1,31
1 750	40, 1	1,37
1 800	40,0	1,40
1 900	40,0	1,40
2 000	40,0	1,40
2 100	39,8	1,49
2 300	39,5	1,67
2 450	39,2	1,80
2 600	39,0	1,96
3 000	38,5	2,40
3 500	37,9	2,91
4 000	37,4	3, 43
4 500	36,8	3,94
5 000	36,2	4,45
5 200	36,0	4,66
5 400	35,8	4,86
5 600	35,5	5,07
5 800	35, 3	5, 27
6 000	35, 1	5,48

NOTE For convenience, permittivity and conductivity values at those frequencies which are not part of the original data provided by Drossos et al. [33] or the extension to 5 800 MHz are provided (i.e. the values shown *in italics*). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6 000 MHz that were linearly extrapolated from the values at 3 000 MHz and 5 800 MHz.

EQUIPMENT LIST AND CALIBRATION

Equipment's List & Calibration Information

Equipment	Model	S/N	Calibration Date	Calibration Due Date
Robot	TX90	TX90 5N26A1 N.C.R		N.C.R
DASY5 Test Software	DASY5.2	N/A	N.C.R	N.C.R
DASY6 Measurement Server	DASY 6.0	1588	N/A	N/A
Data Acquisition Electronics	DAE3	393	2021/04/09	2022/04/08
E-Field Probe	EX3DV4	3887	2021/10/22	2022/10/21
Dipole, 750 MHz	D750V3	1079	2020/11/06	2023/11/05
Dipole, 835 MHz	D835V2	454	2020/11/18	2023/11/17
Dipole, 1800 MHz	D1800V2	2d207	2020/11/09	2023/11/08
Dipole, 1900 MHz	D1900V2	5d207	2020/11/11	2023/11/10
Dipole, 2450 MHz	D2450V2	1068	2021/10/11	2024/10/10
Dipole, 2600 MHz	D2600V2	1174	2020/11/18	2023/11/17
Dipole, 5GHz	D5GHzV2	1336	2021/10/12	2024/10/11
Twin SAM	Twin SAM V5.0	1368	N/A	N/A
Twin ELI	Twin ELI V8.0	2088 N/A		N/A
Simulated Tissue 0.6G~6GHz Head	TS-6GHz-H	/	Each Time	/
Wideband Radio Communication Tester	CMU-200	106868	2021/04/07	2022/04/06
Functional radio communication tester	CMW 290	101741	2021/08/07	2022/08/06
Mounting Device	N/A	SD 000 H01 KA	N/A	N/A
Network Analyzer	E5063A	MY54402093	2021/12/15	2022/12/14
Dielectric probe kit	83570B	50207	/	/
MXG Signal Generator	N5183A	MY50140330	2021/12/15	2022/12/14
USB Wideband Power Sensor	U2021XA	MY58140006	2021/11/2	2022/11/1
Power Amplifier	ZVE-8G+	365701647	2021/1/8	2022/1/7
Power Amplifier	ZHL-42W+	329401642	2021/1/8	2022/1/7
Power Amplifier	ZVE-8G+	365701647	2022/1/13	2023/1/12
Power Amplifier	ZHL-42W+	329401642	2022/1/13	2023/1/12
Temperature and Humidity Recoder	HTC-1	005	2021/10/27	2022/10/26
Directional Coupler	488Z	810	N.C.R	N.C.R
Attenuator	20dB, 100W	1453	N.C.R	N.C.R

SAR MEASUREMENT SYSTEM VERIFICATION

Liquid Verification



Liquid Verification Setup Block Diagram

Liquid Verification Results

Test Frequency Date (MHz)	Frequency	Liquid	Liquid parameter		Target Value		Delta (%)		Tolerance
	Туре	O' (S/m)	8r	O' (S/m)	Er	O (S/m)	Er	(%)	
	835	HSL	0.931	41.924	0.9	41.50	3.44	1.02	±5
2022/01/05	836.6	HSL	0.932	41.912	0.9	41.50	3.56	0.99	±5
	831.5	HSL	0.930	41.956	0.9	41.52	3.33	1.05	±5

Test	Frequency	Liquid	Liquid parameter		Target	Value	Delta	a (%)	Tolerance
Date	(MHz)	Туре	O' (S/m)	Er	O' (S/m)	8r	O (S/m)	Er	(%)
	750	HSL	0.907	42.146	0.89	41.9	1.91	0.59	±5
	707.5	HSL	0.895	42.439	0.89	42.13	0.56	0.73	±5
2022/01/06	782	HSL	0.925	42.147	0.89	41.75	3.93	0.95	±5
	793	HSL	0.928	42.141	0.90	41.70	3.11	1.06	±5
	680.5	HSL	0.891	42.446	0.89	42.27	0.11	0.42	±5

Test	Frequency	cy Liquid	Liquid parameter		Target Value		Delta (%)		Tolerance
Date	(MHz)	Туре	O (S/m)	Er	O' (S/m)	Er	O' (S/m)	Er	(%)
	2600	HSL	1.901	39.147	1.96	39.00	-3.01	0.38	±5
2022/01/07	2560	HSL	1.871	39.225	1.92	39.05	-2.55	0.45	±5
	2605	HSL	1.904	39.144	1.97	38.99	-3.35	0.39	±5

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Test Date	Frequency (MHz)	ncy Liquid z) Type	Liquid parameter		Target Value		Delta	ı (%)	Tolerance
			O' (S/m)	8r	O (S/m)	Er	O' (S/m)	8r	(%)
	1800	HSL	1.336	38.877	1.40	40.00	-4.57	-2.81	±5
2022/01/18	1752.6	HSL	1.307	38.997	1.37	40.07	-4.60	-2.68	±5
	1745	HSL	1.303	39.018	1.37	40.08	-4.89	-2.65	±5

Test	Frequency	Liquid	Liquid parameter		Target Value		Delta (%)		Tolerance
Date	(MHz)	Туре	O' (S/m)	8r	O' (S/m)	8r	O' (S/m)	8r	(%)
2022/01/10	1900	HSL	1.399	39.138	1.4	40	-0.07	-2.16	±5
2022/01/19	1880	HSL	1.388	39.185	1.4	40	-0.86	-2.04	±5

Test	Frequency (MHz)	y Liquid Type	Liquid parameter		Target Value		Delta (%)		Tolerance
Date			O' (S/m)	Er	O' (S/m)	Er	O (S/m)	Er	(%)
	2450	HSL	1.791	39.448	1.80	39.20	-0.50	0.63	±5
2022/01/20	2412	HSL	1.755	39.473	1.77	39.27	-0.85	0.52	±5
	2480	HSL	1.809	39.389	1.83	39.16	-1.15	0.58	±5

Test	Frequency	Liquid	Liquid parameter		Target Value		Delta (%)		Tolerance
Date	(MHz)	Туре	O' (S/m)	8r	O' (S/m)	8r	O' (S/m)	8r	(%)
2022/01/21	5250	HSL	4.70	35.092	4.71	35.95	-0.21	-2.39	±5
2022/01/21	5240	HSL	4.683	35.090	4.70	35.96	-0.36	-2.42	±5

Test	Frequency	Liquid	Liquid parameter		Target Value		Delta (%)		Tolerance
Date	(MHz)	Туре	O (S/m)	8r	O' (S/m)	8r	O' (S/m)	8r	(%)
2022/01/21	5800	HSL	5.378	33.978	5.27	35.30	2.05	-3.75	±5
2022/01/21	5755	HSL	5.333	34.020	5.23	35.35	1.97	-3.76	±5

System Accuracy Verification

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of $\pm 10\%$. The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

The spacing distances in the **System Verification Setup Block Diagram** is given by the following:

- a) $s = 15 \text{ mm} \pm 0.2 \text{ mm}$ for 300 MHz $\leq f \leq 1 \text{ 000 MHz}$;
- b) $s = 10 \text{ mm} \pm 0.2 \text{ mm}$ for 1 000 MHz < f \leq 3 000 MHz;
- c) $s=10~mm\pm0,2~mm$ for 3 000 MHz $< f \le 6$ 000 MHz.

System Verification Setup Block Diagram



Test Date	Frequency Band (MHz)	Liquid Type	Input Power (mW)	Me ('	easured SAR W/kg)	T V (V	arget ⁷ alue V/kg)	Nor 1 (V	malized to 1W W/kg)	Delta (%)	Tolerance (%)
2022/01/05	835	HSL	250	1g	2.23	1g	9.38	1g	8.92	-4.90	±10
2022/01/06	750	HSL	250	1g	2.02	1g	8.25	1g	8.08	-2.06	±10
2022/01/07	2600	HSL	250	1g	13.0	1g	55.3	1g	52.0	-5.97	±10
2022/01/18	1800	HSL	250	1g	9.42	1g	38.9	1g	37.68	-3.14	±10
2022/01/19	1900	HSL	250	1g	9.87	1g	-40.1	1g	39.48	-1.55	±10
2022/01/20	2450	HSL	250	1g	13.9	1g	54.2	1g	55.6	2.58	±10
2022/01/21	5250	HSL	100	1g	8.14	1g	81.9	1g	81.4	-0.61	±10
2022/01/21	5800	HSL	100	1g	8.31	1g	83.3	1g	83.1	-0.24	±10

System Accuracy Check Results

Note:

1) Below 5GHz, The power inputted to dipole is 0.25Watt; the SAR values are normalized to 1 Watt forward power by multiplying 4 times.

2) Above 5GHz, The power inputted to dipole is 0.10Watt; the SAR values are normalized to 1 Watt forward power by multiplying 10 times.

No.: RXZ211221004SA01

SAR SYSTEM VALIDATION DATA

Test Laboratory:BACL.SAR TestingLab

System Check_Head_835MHz

DUT: D835V2-454

Communication System: UID 0, CW; Frequency: 835 MHz;Duty Cycle: 1:1 Medium: HSL835 Medium parameters used: f = 835 MHz; $\sigma = 0.931$ S/m; $\varepsilon_r = 41.924$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3887; ConvF(9.38, 9.38, 9.38) @ 835 MHz; Calibrated: 10/22/2021

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn393; Calibrated: 4/9/2021
- Phantom: ELI-Righr-ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (41x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm Maximum value of SAR (interpolated) = 2.84 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 53.10 V/m; Power Drift = -0.05 dB Peak SAR (extrapolated) = 3.35 W/kg SAR(1 g) = 2.23 W/kg; SAR(10 g) = 1.46 W/kg Smallest distance from peaks to all points 3 dB below = 17.6 mm Ratio of SAR at M2 to SAR at M1 = 66.6% Maximum value of SAR (measured) = 2.83 W/kg



System Check_Head_750MHz

DUT: D750V3-1079

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1 Medium: HSL_750 Medium parameters used: f = 750 MHz; $\sigma = 0.907$ S/m; $\epsilon_r = 42.146$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 SN3887; ConvF(9.58, 9.58, 9.58) @ 750 MHz; Calibrated: 10/22/2021
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 4/9/2021
- Phantom: ELI-Righr-ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (41x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm Maximum value of SAR (interpolated) = 2.52 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 50.38 V/m; Power Drift = 0.00 dB Peak SAR (extrapolated) = 2.96 W/kg SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.34 W/kg Smallest distance from peaks to all points 3 dB below = 17.6 mm Ratio of SAR at M2 to SAR at M1 = 68% Maximum value of SAR (measured) = 2.52 W/kg



System Check_Head_2600MHz

DUT: D2600V2-1174

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1 Medium: HSL_2600 Medium parameters used: f = 2600 MHz; $\sigma = 1.901$ S/m; $\epsilon_r = 39.147$; $\rho = 1000$

kg/m³

DASY5 Configuration:

- Probe: EX3DV4 SN3887; ConvF(7.24, 7.24, 7.24) @ 2600 MHz; Calibrated: 10/22/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 4/9/2021
- Phantom: ELI-Righr-ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm Maximum value of SAR (interpolated) = 22.3 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 105.0 V/m; Power Drift = -0.06 dB Peak SAR (extrapolated) = 27.6 W/kg SAR(1 g) = 13 W/kg; SAR(10 g) = 5.88 W/kg Smallest distance from peaks to all points 3 dB below = 9 mm Ratio of SAR at M2 to SAR at M1 = 47.7% Maximum value of SAR (measured) = 22.1 W/kg



System Check_Head_1800MHz

DUT: D1800V2-2d207

Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1 Medium: HSL1800 Medium parameters used: f = 1800 MHz; $\sigma = 1.336$ S/m; $\epsilon_r = 38.877$; $\rho = 1000$

kg/m³

DASY5 Configuration:

- Probe: EX3DV4 SN3887; ConvF(8.42, 8.42, 8.42) @ 1800 MHz; Calibrated: 10/22/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 4/9/2021
- Phantom: ELI-Righr-ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm Maximum value of SAR (interpolated) = 14.6 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 106.7 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 17.5 W/kg SAR(1 g) = 9.42 W/kg; SAR(10 g) = 4.94 W/kg Smallest distance from peaks to all points 3 dB below = 9.6 mm Ratio of SAR at M2 to SAR at M1 = 53.9% Maximum value of SAR (measured) = 14.6 W/kg



System Check_Head_1900MHz

DUT: Dipole 1900 MHz D1900V2

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1 Medium: HSL 1900 Medium parameters used: f = 1900 MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.138$; $\rho = 1000$

kg/m³

DASY5 Configuration:

- Probe: EX3DV4 SN3887; ConvF(8.2, 8.2, 8.2) @ 1900 MHz; Calibrated: 10/22/2021
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 4/9/2021
- Phantom: ELI-Righr-ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm Maximum value of SAR (interpolated) = 14.0 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 87.46 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 18.2 W/kg SAR(1 g) = 9.87 W/kg; SAR(10 g) = 5.15 W/kg Smallest distance from peaks to all points 3 dB below = 10.1 mm Ratio of SAR at M2 to SAR at M1 = 54.8% Maximum value of SAR (measured) = 13.9 W/kg



System Check_Body_2450MHz

DUT: D2450V2-1068

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1 Medium: HSL2450 Medium parameters used: f = 2450 MHz; $\sigma = 1.791$ S/m; $\epsilon_r = 39.448$; $\rho = 1000$

kg/m³

DASY5 Configuration:

- Probe: EX3DV4 SN3887; ConvF(7.48, 7.48, 7.48) @ 2450 MHz; Calibrated: 10/22/2021
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 4/9/2021
- Phantom: ELI-Righr-ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm Maximum value of SAR (interpolated) = 18.6 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 98.42 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 28.7 W/kg SAR(1 g) = 13.9 W/kg; SAR(10 g) = 6.54 W/kg Smallest distance from peaks to all points 3 dB below = 9.8 mm Ratio of SAR at M2 to SAR at M1 = 49.8% Maximum value of SAR (measured) = 18.3 W/kg



System Check_Head_5250MHz

DUT: D5GHzV2-1336-5250

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1 Medium: HSL_5G Medium parameters used: f = 5250 MHz; $\sigma = 4.7$ S/m; $\epsilon_r = 35.092$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 SN3887; ConvF(4.8, 4.8, 4.8) @ 5250 MHz; Calibrated: 10/22/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 4/9/2021
- Phantom: ELI-Righr-ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 19.7 W/kg

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 69.27 V/m; Power Drift = -0.10 dB Peak SAR (extrapolated) = 31.9 W/kg SAR(1 g) = 8.14 W/kg; SAR(10 g) = 2.26 W/kg Smallest distance from peaks to all points 3 dB below = 7.4 mm Ratio of SAR at M2 to SAR at M1 = 65.3% Maximum value of SAR (measured) = 20.2 W/kg

W/kg 20.200		
- 16.162		
12.124		
8.086		
4.047		
0.00922	Γ,	

System Check_Head_5800MHz

DUT: D5GHzV2-1336-5800

Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1 Medium: HSL_5G Medium parameters used: f = 5800 MHz; $\sigma = 5.378$ S/m; $\epsilon_r = 33.978$; $\rho = 1000$

kg/m³

DASY5 Configuration:

- Probe: EX3DV4 SN3887; ConvF(4.39, 4.39, 4.39) @ 5800 MHz; Calibrated: 10/22/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn393; Calibrated: 4/9/2021
- Phantom: ELI-Righr-ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 21.4 W/kg

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 66.97 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 37.3 W/kg SAR(1 g) = 8.31 W/kg; SAR(10 g) = 2.29 W/kg Smallest distance from peaks to all points 3 dB below = 7.5 mm

Smallest distance from peaks to all points 3 dB below = 7.5 mr Ratio of SAR at M2 to SAR at M1 = 61.3%Maximum value of SAR (measured) = 21.6 W/kg



EUT TEST STRATEGY AND METHODOLOGY

Test Positions for Device Operating Next to a Person's Ear

This category includes most wireless handsets with fixed, retractable or internal antennas located toward the top half of the device, with or without a foldout, sliding or similar keypad cover. The handset should have its earpiece located within the upper ¹/₄ of the device, either along the centerline or off-centered, as perceived by its users. This type of handset should be positioned in a normal operating position with the "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point". The "test device reference point" should be located at the same level as the center of the earpiece region. The "vertical centerline" should bisect the front surface of the handset at its top and bottom edges. A "ear reference point" is located on the outer surface of the head phantom on each ear spacer. It is located 1.5 cm above the center of the ear canal entrance in the "phantom reference plane" defined by the three lines joining the center of each "ear reference point" (left and right) and the tip of the mouth.

A handset should be initially positioned with the earpiece region pressed against the ear spacer of a head phantom. For the SCC-34/SC-2 head phantom, the device should be positioned parallel to the "N-F" line defined along the base of the ear spacer that contains the "ear reference point". For interim head phantoms, the device hould be positioned parallel to the cheek for maximum RF energy coupling. The "test device reference point" is aligned to the "ear reference point" on the head phantom and the "vertical centerline" is aligned to the "phantom reference plane". This is called the "initial ear position". While maintaining these three alignments, the body of the handset is gradually adjusted to each of the following positions for evaluating SAR:



Cheek/Touch Position

The device is brought toward the mouth of the head phantom by pivoting against the "ear reference point" or along the "N-F" line for the SCC-34/SC-2 head phantom.

This test position is established:

When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.

(or) When any portion of a foldout, sliding or similar keypad cover opened to its intended selfadjusting normal use position is in contact with the cheek or mouth of the phantom.

For existing head phantoms – when the handset loses contact with the phantom at the pivoting point, rotation should continue until the device touches the cheek of the phantom or breaks its last contact from the ear spacer.



Ear/Tilt Position

With the handset aligned in the "Cheek/Touch Position":

1) If the earpiece of the handset is not in full contact with the phantom's ear spacer (in the "Cheek/Touch position") and the peak SAR location for the "Cheek/Touch" position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the "initial ear position" by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.

2) (otherwise) The handset should be moved (translated) away from the cheek perpendicular to the line passes through both "ear reference points" (note: one of these ear reference points may not physically exist on a split head model) for approximate 2-3 cm. While it is in this position, the device handset is tilted away from the mouth with respect to the "test device reference point" until the inside angle between the vertical centerline on the front surface of the phone and the horizontal line passing through the ear reference point is by 15 80°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both "ear reference points" until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously. This test position may require a device holder or positioner to achieve the translation and tilting with acceptable positioning repeatability.

If a device is also designed to transmit with its keypad cover closed for operating in the head position, such positions should also be considered in the SAR evaluation. The device should be tested on the left and right side of the head phantom in the "Cheek/Touch" and "Ear/Tilt" positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tilt/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s). If the transmission band of the test device is less than 10 MHz, testing at the high and low frequency channels is optional.

Note: It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (New Taipei Laboratory)



Test positions for body-worn and other configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.



Figure 5 – Test positions for body-worn devices

Test Distance for SAR Evaluation

For this case the EUT(Equipment Under Test) is set 10mm away from the phantom, the test distance is 10mm.

Note: It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (New Taipei Laboratory)

SAR Evaluation Procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the SAR value at a fixed location above the ear point or central position was used as a reference value for assessing the power drop. The SAR at this point is measured at the start of the test and then again at the end of the testing.

Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 4 mm from the inner surface of the shell. The area covered the entire dimension of the head or radiating structures of the EUT, the horizontal grid spacing was 15 mm x 15 mm, and the SAR distribution was determined by integrated grid of 1.5mm x 1.5mm. Based on these data, the area of the maximum absorption was determined by spline interpolation. The first Area Scan covers the entire dimension of the EUT to ensure that the hotspot was correctly identified.

Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7x 7 x 7 points. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

1) The data at the surface were extrapolated, since the center of the dipoles is 1.2 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

2) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one dimensional splines with the "Not a knot"-condition (in x, y and z-directions). The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the averages.

All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

CONDUCTED OUTPUT POWER MEASUREMENT

Provision Applicable

The measured peak output power should be greater and within 5% than EMI measurement.

Test Procedure

The RF output of the transmitter was connected to the input of the EMI Test Receiver through sufficient attenuation.



GSM & 3G & LTE

WCDMA Release 99

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

	Loopback Mode	Test Mode 1
WCDMA General	Rel99 RMC	12.2kbps RMC
Settings	Power Control Algorithm	Algorithm2
	βc / βd	8/15

HSDPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subset	1	2	3	4
	Loopback Mode			Test Mode 1	
	Rel99 RMC			12.2kbps RM	С
	HSDPA FRC			H-Set1	
WCDMA	Power Control Algorithm			Algorithm2	
General	βc	2/15	12/15	15/15	15/15
Settings	βd	15/15	15/15	8/15	4/15
	βd (SF)			64	
	βc/βd	2/15	12/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	MPR(dB)	0	0	0.5	0.5
	DACK			8	
	DNAK			8	
HSDPA	DCQI			8	
Specific	Ack-Nack repetition factor			3	
Settings	CQI Feedback			4ms	
	CQI Repetition Factor			2	
	Ahs=βhs/ βc			30/15	

HSUPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA				
	Subset	1	2	3	4	5				
	Loopback Mode			Test Mode 1		•				
	Rel99 RMC			12.2kbps RMC						
	HSDPA FRC			H-Set1						
	HSUPA Test		H	SUPA Loopbac	ck					
WCDMA	Power Control Algorithm			Algorithm2						
Conorol	βc	11/15	6/15	15/15	2/15	15/15				
Settings	βd	15/15	15/15	9/15	15/15	0				
Settings	βec	209/225	12/15	30/15	2/15	5/15				
	βc/βd	11/15	6/15	15/9	2/15	-				
	βhs	22/15	12/15	30/15	4/15	5/15				
	CM(dB)	1.0	3.0	2.0	3.0	1.0				
	MPR(dB)	0	2	1	2	0				
	DACK			8						
	DNAK			8						
нерра	DCQI	8								
HSDPA Specific Settings	Ack-Nack repetition			3						
	factor	factor								
	CQI Feedback	4ms								
	CQI Repetition Factor	2								
	Ahs=βhs/ βc	30/15								
	DE-DPCCH	6	8	8	5	7				
	DHARQ	0	0	0	0	0				
	AG Index	20	12	15	17	21				
	ETFCI	75	67	92	71	81				
	Associated Max UL Data	242.1	174.9	482.8	205.8	308.9				
	Rate kbps		17.05		20010	2000				
		E-TFC	II 11 E		E-TFC	II 11 E				
HSUPA Specific		E-TFC	I PO 4	E-TFCI	E-TFC	CI PO 4				
Specific		E-TF	CI 67	11	E-TF	CI 67				
Settings		E-TFCI	I PO 18	E-TFCI	E-TFC	I PO 18				
e e e e e e e e e e e e e e e e e e e	Deference E ECIs	E-TF	CI 71	PO4	E-TF	CI 71				
	Reference E_FCIS	E-TFC	I PO23	E-TFCI	E-TFC	I PO23				
		E-TF	CI 75	92	E-TF	CI 75				
		E-TFC	I PO26	E-TFCI	E-TFCI PO26 E-TFCI 81					
		E-TF	CI 81	PO 18						
		E-TFCl	PO 27		E-TFC	I PO 27				

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DC-HSDPA

The following tests were conducted according to the test requirements in Table C.8.1.12 of 3GPP TS 34.121-1

	Parameter	Unit	Value					
Nominal	Avg. Inf. Bit Rate	kbps	60					
Inter-TTI	Distance	TTI's	1					
Number of	of HARQ Processes	Proces	6					
		ses	0					
Informatio	on Bit Payload (N_{INF})	Bits	120					
Number (Code Blocks	Blocks	1					
Binary Cl	nannel Bits Per TTI	Bits	960					
Total Ava	ilable SML's in UE	SML's	19200					
Number of	of SML's per HARQ Proc.	SML's	3200					
Coding R	ate		0.15					
Number of	of Physical Channel Codes	Codes	1					
Modulatio	n		QPSK					
Note 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.								
Note 2:	Note 2: Maximum number of transmission is limited to 1, i.e							
retransmission is not allowed. The redundancy ar								
constellation version 0 shall be used.								

Table C.8.1.12: Fixed Reference Channel H-Set 12

HSPA+

Sub- test	β _c (Note3)	βd	β _{нs} (Note1)	β _{ec}	β _{ed} (2xSF2) (Note 4)	β _{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β _{ed} 1: 30/15 β _{ed} 2: 30/15	β _{ed} 3: 24/15 β _{ed} 4: 24/15	3.5	2.5	14	105	105
$\beta_{ed}2: 30/15$ $\beta_{ed}4: 24/15$ Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0). Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default. Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value. Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extraoolation allocation.											

The following tests were conducted according to the test requirements in Table C.11.1.4 of 3GPP TS 34.121-1

LTE

For UE Power Class 1 and 3, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table6.2.2-1due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table6.2.3-1.

Modulation	Cha	MPR (dB)					
	1.4	3.0	5	10	15	20	
	MHz	MHz	MHz	MHz	MHz	MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1 and 3

For UE Power Class 1 and 3 the specific requirements and identified subclauses are specified in Table 6.2.4-1 alongwith the allowed A-MPR values that may be used to meet these requirements. The allowed A-MPR values specifiedbelow in Table 6.2.4-1 to 6.2.4-15 are in addition to the allowed MPR requirements specified in subclause

Network Signalling value	Requirements (subclause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N _{RB})	A-MPR (dB)
NS_01	6.6.2.1.1 Table 5.5-1		1.4, 3, 5, 10, 15, 20	Table 5.6-1	N/A
		2, 4,10, 23, 25,	3	>5	≤ 1
			5	>6	≤1
NS_03	6.6.2.2.1		10	>6	≤1
		55, 50	15	>8	≤ 1
			20	>10	≤ 1
NS 04	66222	41	5	>6	≤ 1
110_04	0.0.2.2.2	41	10, 15, 20	Table	6.2.4-4
NS_05	6.6.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	N/A
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40 > 55	≤ 1 ≤ 2
NS 10		20	15, 20	Table	6.2.4-3
NS_11	6.6.2.2.1	23	1.4, 3, 5, 10, 15, 20	Table 6.2.4-5	
NS_12	6.6.3.3.5	26	1.4, 3, 5	Table	6.2.4-6
NS_13	6.6.3.3.6	26	5	Table	6.2.4-7
NS_14	6.6.3.3.7	26	10, 15	Table	6.2.4-8
NS_15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4-9 Table 6.2.4-10	
NS_16	6.6.3.3.9	27	3, 5, 10	Table 6.2.4-11, Table 6.2.4-12 Table 6.2.4-13	
NS_17	6.6.3.3.10	28	5, 10	Table 5.6-1	N/A
NS_18	6.6.3.3.11	28	5 10, 15, 20	≥2 ≥1	≤ 1 ≤ 4
NS 19	6.6.3.3.12	44	10, 15, 20	Table 6 2 4-14	
NS_20	6.2.2 6.6.2.2.1 6.6.3.2	23	5, 10, 15, 20	Table 6.2.4-15	
NS_32	-	-	-	-	-

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)
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Uplink-Downlink	Downlink-to-Uplink	Banno		2 1-17	S	Subfram	e Numb	ber	11-11-1		
Configuration	Switch-Point Periodicity	0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

3GPP TS 36.211 Uplink-Downlink Configurations

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

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

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

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Proximity Sensor Operation

Triggering distances (Per KDB 616717)

- Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (6000MHz) and lowest (600MHz) frequency was used for proximity sensor triggering testing. It should be applied to determine proximity sensor triggering distances for the back surface and individual edges of a tablet.
- 2. Capacitive proximity sensor placed coincident with antenna elements at the left end of the pad are utilized to determine when the device comes in proximity of the user's body at the front or back or left side surface of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support. sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
- 3. The device employs proximity sensors that detect the presence of the user's body or handhold at the the front or back or left side of the device. When back surface or edge of body worn condition is detected, WCDMA II /WCDMA IV/ LTE Band 7 / LTE Band 12<E Band 17 / LTE Band 25<E Band 2 / LTE Band 66<E Band 4 reduced power will be active. Other mode or frequency band can't be active. (P-sensor can't work at detecting presence of the user's body at the bottom, top, right edges of the device.)



Proximity Sensor Triggering Distance(mm) and Triggering Power(dBm)

WCDMA Band II:

Dist	ance	0	5	8	10	11	12	13	14	15	16	21	22	23	24	25	26	30
Front	Toward	13	13	13	13	13	13	13	23	23	23	23	23	23	23	23	23	23
edge	Away	13	13	13	13	13	13	13	13	13	23	23	23	23	23	23	23	23
Back	Toward	13	13	13	13	13	13	13	13	23	23	23	23	23	23	23	23	23
edge	Away	13	13	13	13	13	13	13	13	13	13	23	23	23	23	23	23	23
Left	Toward	13	13	13	13	13	13	13	13	13	13	13	13	13	13	23	23	23
edge	Away	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	23

WCDMA Band IV

Dist	ance	0	5	8	10	11	12	13	14	15	16	21	22	23	24	25	26	30
Front	Toward	15.7	15.7	15.7	15.7	15.7	15.7	15.7	23	23	23	23	23	23	23	23	23	23
edge	Away	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	23	23	23	23	23	23	23	23
Back	Toward	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	23	23	23	23	23	23	23	23	23
edge	Away	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	23	23	23	23	23	23	23
Left	Toward	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	23	23	23
edge	Away	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	23	23

LTE Band 2 & 25 :

Dist	ance	0	5	8	10	11	12	13	14	15	16	21	22	23	24	25	26	30
Front	Toward	12.7	12.7	12.7	12.7	12.7	12.7	12.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
edge	Away	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
Back	Toward	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
edge	Away	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8
Left	Toward	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	22.8	22.8	22.8
edge	Away	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	22.8	22.8

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Dist	ance	0	5	8	10	11	12	13	14	15	16	21	22	23	24	25	26	30
Front	Toward	15.8	15.8	15.8	15.8	15.8	15.8	15.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
edge	Away	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
Back	Toward	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
edge	Away	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
Left	Toward	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	22.8	22.8	22.8
edge	Away	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	22.8	22.8

LTE Band 12 & 17 :

Dist	ance	0	5	8	10	11	12	13	14	15	16	21	22	23	24	25	26	30
Front	Toward	19.7	19.7	19.7	19.7	19.7	19.7	19.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
edge	Away	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
Back	Toward	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
edge	Away	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	22.8	22.8	22.8	22.8	22.8	22.8	22.8
Left	Toward	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	22.8	22.8	22.8
edge	Away	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	22.8	22.8

LTE Band 7:

Dist	ance	0	5	8	10	11	12	13	14	15	16	21	22	23	24	25	26	30
Front	Toward	20.5	20.5	20.5	20.5	20.5	20.5	20.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
edge	Away	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Back	Toward	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
edge	Away	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Left	Toward	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	22.5	22.5	22.5
edge	Away	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	22.5	22.5

Note: each side minimum detection distance was performed with below: Toward: moving toward the phantom Away: Moving away from the phantom

Summary of Trigger distances:

	Back	edge	Front	edge	Left e	dge
Band	(m	m)	(m	m)	(mr	n)
	Toward	Away	Toward	Away	Toward	Away
LTE Band	14	16	13	15	24	25

Note: The SAR sensor located in WCDMA II / WCDMA IV/ LTE Band 7 / LTE Band 12 & LTE Band 17/ LTE Band 25& LTE Band 2 / LTE Band 66& LTE Band 4 antenna.

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Tilt Angle:

The influence of device tilt angles to proximity sensor triggering was determined by positioning each device edge that contains a transmitting antenna, perpendicular to the flat phantom, at 12 mm separation.

Rotating the device around the edge next to the phantom in $\leq 10^{\circ}$ increments until the device is $\pm 45^{\circ}$ from the vertical position at 0°. And the maximum output power remains in the reduced mode.



Proximity Sensor Status Table :

Minimum Distance(mm)	-45	-40	-30	-20	-10	0	10	20	30	40	45
13	on	on	on	on	on	on	on	on	on	on	on

Wireless	Desition	Triggering	Worst case distance
Technologies	POSITION	Distance(mm)	For SAR(mm)
	Front	13	12
WWAN	Back	14	13
	Left	24	23

Max Target Power(dBm)							
Mode / Band	Low Channel	Low Channel Middle Channel High Channe					
WCDMA Band 2	23.0	23.0	23.0				
WCDMA Band 4	23.0	23.0	23.0				
WCDMA Band 5	23.0	23.0	23.0				
LTE Band 2 & 25	22.8	22.8	22.8				
LTE Band 66 & 4	22.8	22.8	22.8				
LTE Band 7	22.5	22.5	22.5				
LTE Band 12 & 17	22.8	22.8	22.8				
LTE Band 13	22.8	22.8	22.8				
LTE Band 14	22.8	22.8	22.8				
LTE Band 26	22.8	22.8	22.8				
LTE Band 41	22.5	22.5	22.5				
LTE Band 71	22.8	22.8	22.8				
WiFi 2.4GHz_Chain 0	13.6	13.3	12.7				
WiFi 2.4GHz_Chain 1	13.3	13.3	13.3				
Bluetooth	11.0	11.0	11.0				
Bluetooth LE	0.5	0.5	0.5				
WiFi 5.2GHz_Chain 0	9.	8.8	9				
WiFi 5.2GHz_Chain 1	10	10	10				
WiFi 5.8GHz_Chain 0	8	8	8				
WiFi 5.8GHz_Chain 1	8.1	8.1	8.1				

Maximum Target Output Power

Reduction Target Power

Max Target Power(dBm)						
Mode / Band	Mode / Band Low Channel Middle Channel High Channel					
WCDMA Band 2	13	13	13			
WCDMA Band 4	15.7	15.7	15.7			
LTE Band 2	12.7	12.7	12.7			
LTE Band 4	15.8	15.8	15.8			
LTE Band 7	20.5	20.5	20.5			
LTE Band 12	19.7	19.7	19.7			
LTE Band 17	19.7	19.7	19.7			
LTE Band 25	12.7	12.7	12.7			
LTE Band 66	15.8	15.8	15.8			

Test Results

Channel List

WCDMA

WCDMA Band	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
II	1852.4	1880	1907.6
IV	1712.4	1732.6	1752.6
V	826.4	836.6	846.6

LTE

LTE	Operation	Lowest	Middle	Highest
Band	Bandwidth(MHz)	Frequency(MHz)	Frequency(MHz)	Frequency(MHz)
	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
2	5	1852.5	1880	1907.5
Z	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
4	5	1712.5	1732.5	1752.5
4	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
	5	2502.5	2535	2567.5
7	10	2505	2535	2565
/	15	2507.5	2535	2562.5
	20	2510	2535	2560
	1.4	699.7	707.5	715.3
10	3	700.5	707.5	714.5
12	5	701.5	707.5	713.5
	10	704	707.5	711

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LTE Band		Op Bandw	eration idth(MHz)	Fr	Lowest	Middle Frequency(MHz)	Highest Frequency(MHz)
Danu		5			779 5	782	784.5
13		10			782		
			5		790.5	793	795.5
14			10			793	
			5		706.5	710	713.5
17			10		709	710	711
			1.4		1850.7	1882.5	1914.3
			3		1851.5	1882.5	1913.5
			5		1852.5	1882.5	1912.5
25			10		1855	1882.5	1910
			15		1857.5	1882.5	1907.5
			20		1860	1882.5	1905
			1.4		814.7	831.5	848.3
		3		815.5		831.5	847.5
26		5			816.5	831.5	846.5
		10			819	831.5	844
			15		821.5	831.5	841.5
		1.4			1710.7	1745	1779.3
		3			1711.5	1745	1778.5
66		5			1712.5	1745	1777.5
00		10			1715	1745	1775
			15	1717.5		1745	1775.5
			20	1720		1745	1770
			5		665.5	680.5	695.5
71			10		668	680.5	693
/1			15		670.5	680.5	690.5
			20		673	680.5	688
LTE	Opera	ation	Lowest		Low	Middle	Highest
Band	Bandw	width	Frequenc	y	Frequency	Frequency	Frequency
	(MH	Hz)	(MHz)		(MHz)	(MHz)	(MHz)
	5		2498.5		2545.8	2595	2687.5
41	10)	2501		2547	2595	2685
	15	5	2595		2548.3	2595	2682.5
)	2580		2593	2605	2645

WCDMA WWAN Antenna Full Power

WCDMA Band II

		3GPP	Averaged Mean Power			
Test Condition	Test Mode	Sub	(dBm)			
		Test	Low Channel	Mid Channel	High Channel	
	Rel 99 RMC	1	22.33	22.84	22.52	
		1	22.25	21.99	22.01	
	HSDPA	2	22.24	21.91	22.05	
		3	22.01	21.89	22.07	
		4	21.99	21.95	22.11	
Normal	HSUPA	1	22.11	21.92	22.02	
		2	22.14	21.99	21.98	
		3	22.13	21.85	22.15	
		4	22.22	21.91	22.12	
		5	22.14	22.03	22.02	
	HSPA+	1	22.03	21.98	22.05	

Note:

1. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model 1.

2. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/HSPA+ when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

Test Condition	Test Mode	3GPP Sub	P Averaged Mean Power (dBm)		
		Test	Low Channel	Mid Channel	High Channel
	Rel 99 RMC	1	22.24	22.68	22.53
		1	22.22	21.98	22.09
	HSDPA	2	22.20	21.99	21.98
		3	22.17	21.98	22.09
		4	22.12	22.11	22.03
Normal		1	22.09	22.01	22.13
		2	22.16	21.90	22.15
	HSUPA	3	22.15	21.99	22.02
		4	22.31	21.91	22.05
		5	22.08	21.90	21.98
	HSPA+	1	22.11	21.94	22.14

WCDMA Band IV

Note:

1. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model 1.

2. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/HSPA+ when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

Test Condition	Test Mode	3GPP Sub	Averaged Mean Power (dBm)		
		Test	Low Channel	Mid Channel	High Channel
	Rel 99 RMC	1	22.56	22.75	22.36
		1	21.85	21.94	22.06
	HSDPA	2	21.95	21.97	21.98
		3	21.91	21.92	21.99
		4	22.03	22.00	21.89
Normal	HSUPA	1	22.02	22.02	21.99
		2	21.79	22.06	21.97
		3	21.88	21.88	21.89
		4	21.87	21.85	21.91
		5	21.78	22.04	22.03
	HSPA+	1	21.89	21.88	22.05

WCDMA Band V

Note:

1. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model 1.

2. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/HSPA+ when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

LTE: Full Power

LTE Band 2 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.62	21.88	21.79
		RB1#3	21.56	21.87	21.88
		RB1#5	21.61	21.79	21.96
	QPSK	RB3#0	21.57	21.76	22.05
		RB3#1	21.64	21.64	22.04
		RB3#3	21.59	21.69	22.03
1 <i>4</i> M		RB6#0	21.56	21.62	22.10
1.411		RB1#0	21.60	21.66	21.92
		RB1#3	21.65	21.64	22.08
		RB1#5	21.52	21.66	21.92
	16-QAM	RB3#0	21.63	21.58	22.08
		RB3#1	21.65	21.60	22.16
		RB3#3	21.60	21.50	22.11
		RB6#0	21.52	21.37	22.04
		RB1#0	21.54	21.46	21.96
		RB1#7	21.47	21.51	21.93
		RB1#14	21.41	21.62	22.07
	QPSK	RB8#0	21.33	21.53	21.99
		RB8#4	21.20	21.57	22.17
		RB8#7	21.10	21.39	22.13
214		RB15#0	21.09	21.34	22.13
5101		RB1#0	21.16	21.43	22.19
		RB1#7	21.15	21.38	22.26
		RB1#14	21.12	21.44	22.24
	16-QAM	RB8#0	21.16	21.47	22.31
		RB8#4	21.21	21.52	22.22
		RB8#7	21.10	21.51	22.23
		RB15#0	21.23	21.57	22.20

LTE Band 2 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.19	21.58	22.21
		RB1#12	21.18	21.61	22.38
		RB1#24	21.21	21.71	22.33
	QPSK	RB12#0	21.24	21.74	22.32
		RB12#6	21.23	21.78	22.39
		RB12#11	21.23	21.84	22.24
514		RB25#0	21.32	21.75	22.30
JIVI		RB1#0	21.33	21.79	22.37
		RB1#12	21.44	21.70	21.17
		RB1#24	21.39	21.74	22.34
	16-QAM	RB12#0	21.43	21.71	22.27
		RB12#6	21.28	21.73	22.30
		RB12#11	21.23	21.77	22.32
		RB25#0	21.21	21.64	22.29
		RB1#0	21.25	21.72	22.37
		RB1#24	21.28	21.70	22.23
		RB1#49	21.27	21.66	22.28
	QPSK	RB25#0	21.15	21.71	22.25
		RB25#12	21.15	21.73	22.12
		RB25#24	21.13	21.76	22.15
10M		RB50#0	21.13	21.80	22.30
TOIVI		RB1#0	21.07	21.84	22.20
		RB1#24	21.03	21.88	22.14
		RB1#49	21.04	21.88	22.11
	16-QAM	RB25#0	20.98	21.89	22.07
		RB25#12	20.91	21.91	21.94
		RB25#24	20.93	21.89	21.92
		RB50#0	20.87	21.89	21.88

LTE Band 2 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	20.82	21.97	21.90
		RB1#37	20.85	21.84	21.88
		RB1#74	20.94	21.70	21.91
	QPSK	RB36#0	20.86	21.77	21.84
		RB36#17	20.73	21.78	21.81
		RB36#35	20.70	21.79	21.75
1514		RB75#0	20.71	21.84	21.70
15101		RB1#0	20.70	21.79	21.69
		RB1#37	20.85	21.66	21.50
		RB1#74	20.86	21.74	21.54
	16-QAM	RB36#0	20.95	21.60	21.56
		RB36#17	20.92	21.70	21.70
		RB36#35	20.94	21.76	21.73
		RB75#0	20.86	21.85	21.76
		RB1#0	22.28	22.42	22.40
		RB1#49	21.12	21.96	21.82
		RB1#99	21.01	21.92	21.87
	QPSK	RB50#0	22.13	22.23	22.08
		RB50#24	20.93	21.98	21.93
		RB50#49	20.93	21.92	21.96
2014		RB100#0	20.93	22.05	21.94
2014		RB1#0	20.92	22.09	21.85
		RB1#49	20.76	22.26	21.88
		RB1#99	20.88	22.05	21.83
	16-QAM	RB50#0	20.85	22.02	21.76
		RB50#24	20.84	22.09	21.90
		RB50#49	20.86	22.07	21.89
		RB100#0	20.85	22.14	21.92

LTE Band 4 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.58	21.90	21.75
		RB1#3	21.70	21.88	21.71
		RB1#5	21.70	21.87	21.65
	QPSK	RB3#0	21.64	21.94	21.68
		RB3#1	21.64	21.91	21.58
		RB3#3	21.61	21.98	21.49
1 414		RB6#0	21.63	21.90	21.54
1.411		RB1#0	21.53	22.02	21.41
		RB1#3	21.44	22.05	21.35
		RB1#5	21.42	22.03	21.42
	16-QAM	RB3#0	21.52	22.06	21.40
		RB3#1	21.48	21.94	21.25
		RB3#3	21.33	21.96	21.15
		RB6#0	21.32	22.01	21.21
		RB1#0	21.38	22.09	21.37
		RB1#7	21.31	22.16	21.29
		RB1#14	21.43	22.18	21.25
	QPSK	RB8#0	21.33	22.26	21.29
		RB8#4	21.26	22.15	21.19
		RB8#7	21.20	22.19	21.10
214		RB15#0	21.24	22.21	21.17
5101		RB1#0	21.19	22.13	21.22
		RB1#7	21.20	22.03	21.21
		RB1#14	21.25	22.02	21.16
	16-QAM	RB8#0	21.27	22.07	21.22
		RB8#4	21.18	22.16	21.19
		RB8#7	21.14	22.10	21.25
		RB15#0	21.16	22.10	21.28

LTE Band 4 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.27	22.11	21.33
		RB1#12	21.28	21.99	21.44
		RB1#24	21.34	21.88	21.33
	QPSK	RB12#0	21.38	21.86	21.40
		RB12#6	21.31	21.91	21.52
5M		RB12#11	21.36	21.99	21.47
514		RB25#0	21.47	InnelMiddle Channel (dBm)722.11321.99421.88321.86121.91521.99721.99721.84021.87321.95521.88721.91322.06322.05521.99421.94322.05521.99421.94322.05521.99421.94322.05521.99322.00921.97922.05821.98922.02021.97522.00521.99	21.49
JIVI		RB1#0	cc Block offset Low Channel (dBm) Middle Channel (dBm) 1#0 21.27 22.11 1#12 21.28 21.99 1#24 21.34 21.88 12#0 21.38 21.86 12#6 21.31 21.99 2#11 21.36 21.99 2#11 21.36 21.99 2#11 21.36 21.99 1#0 21.47 21.99 1#12 21.50 21.87 1#24 21.38 21.95 12#0 21.45 21.88 12#6 21.57 21.91 2#11 21.53 22.06 25#0 21.48 22.05 1#0 21.56 21.99 1#24 21.48 22.00 5#12 21.48 22.00 5#12 21.48 22.00 5#12 21.48 22.00 5#24 21.49 21.97 50#0 21.72 22.02	21.37	
		RB1#12	21.50	21.87	21.46
		RB1#24	21.38	21.95	21.41
	16-QAM	RB12#0	21.45	21.88	21.31
		RB12#6	21.57	21.91	21.42
		RB12#11	21.53	22.06	21.28
		Resource Block Low Channel Middl k RB offset (dBm) (d RB1#0 21.27 2 RB1#12 21.28 2 RB1#24 21.34 2 RB1#24 21.34 2 RB12#0 21.38 2 RB12#0 21.38 2 RB12#6 21.31 2 RB12#6 21.47 2 RB12#11 21.36 2 RB12#12 21.50 2 RB1#12 21.50 2 RB1#12 21.50 2 RB1#24 21.47 2 RB1#24 21.47 2 RB1#24 21.45 2 RB1#24 21.45 2 RB12#11 21.53 2 RB12#12 21.45 2 RB1#24 21.48 2 RB1#24 21.48 2 RB25#12 21.48 2 RB25#12 21.48	22.05	21.44	
		RB1#0	21.56	21.99	21.29
		RB1#24	21.44	21.94	21.25
		RB1#49	21.38	22.13	21.17
	QPSK	RB25#0	21.45	Channel Bm)Middle Channel (dBm)1.2722.111.2821.991.3421.881.3821.861.3121.911.3621.991.4721.991.4721.841.5021.871.3821.951.4521.881.5721.911.5322.061.4822.051.5621.991.4421.941.3822.131.4521.991.4421.941.3822.131.4521.991.4421.991.4521.991.4822.001.4921.971.5922.051.6821.981.7922.021.8021.971.8522.001.7621.991.8522.10	21.34
		RB25#12	Source Block C RB offsetLow Channel (dBm)Middle Channel (dBm)RB 1#021.2722.111RB 1#1221.2821.991RB 1#2421.3421.881RB 12#021.3821.861RB 12#021.3121.911RB 12#121.3621.991RB 12#121.3621.991RB 12#121.3621.991RB 12#121.5021.871RB 1#1221.5021.871RB 1#2421.3821.951RB 12#021.4721.911RB 12#021.4521.911RB 12#121.5322.061RB 12#221.4822.051RB 12#321.4421.941RB 12#421.3822.131RB 12#421.4421.941RB 12#421.4822.001RB 12#421.4921.971RB 12#421.4921.971RB 12#421.7222.051RB 12#421.7922.021RB 12#421.7922.021RB 12#421.8021.971RB 12#421.8021.971RB 12#421.7621.991RB 12#421.8021.971RB 12#421.8021.971RB 12#421.8021.971RB 12#421.8021	21.28	
		RB25#24		21.17	
10M		RB50#0		21.21	
TOIVI		RB1#0	21.72	22.05	21.14
		RB1#24	21.68	21.98	21.12
		RB1#49	21.79	22.02	21.11
	16-QAM	RB25#0	21.80	21.97	21.16
10M		RB25#12	21.85	22.00	21.09
		RB25#24	21.76	21.99	21.19
		RB50#0	21.85	22.10	21.28

LTE Band 4 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.80	22.09	21.33
		RB1#37	21.80	22.27	21.40
		RB1#74	21.77	22.18	21.44
15M	QPSK	RB36#0	21.82	22.28	21.32
		RB36#17	21.87	22.30	21.34
		RB36#35	21.85	22.30	21.15
1514		RB75#0	Block offset Low Channel (dBm) Middle Channel (dBm) #0 21.80 22.09 1 #37 21.80 22.27 1 #74 21.77 22.18 1 5#0 21.82 22.28 1 #17 21.87 22.30 1 #35 21.85 22.30 1 #0 21.82 22.18 1 #0 21.82 22.18 1 #0 21.82 22.15 1 #35 21.92 22.20 1 #40 21.92 22.30 1 #47 21.92 22.30 1 #47 21.93 22.30 1 #49 21.92 22.31 1 5#0 22.03 22.33 1 #49 22.02 22.18 1 #49 22.01 22.18 1 #49 21.92 22.25 1 0#0	21.15	
15101		RB1#0	21.82	22.15	21.27
		RB1#37	21.92	22.20	21.22
		RB1#74	21.98	22.30	21.27
	16-QAM	RB36#0	21.99	22.35	21.26
	Test Resonance Modulation & H Modulation & H QPSK R QPSK R R R QPSK R R R <tr< td=""><td>RB36#17</td><td>22.08</td><td>22.33</td><td>21.23</td></tr<>	RB36#17	22.08	22.33	21.23
		RB36#35	22.02	22.31	21.37
		RB75#0	22.03	22.23	21.24
		RB1#0	22.16	22.38	22.22
		RB1#49	22.02	22.18	21.24
		RB1#99	22.08	22.15	21.30
	QPSK	Resource Block & RB offsetLow Channel (dBm)Middle Channel (dBm)RB1#021.8022.09RB1#3721.8022.27RB1#7421.7722.18RB36#021.8222.28RB36#1721.8722.30RB36#3521.8522.30RB75#021.7622.18RB1#7421.9222.20RB1#7721.9222.20RB1#7821.9222.30RB36#1721.9222.30RB1#7421.9822.30RB36#021.9922.35RB36#1722.0822.33RB36#3522.0222.31RB75#022.0322.23RB1#022.1622.38RB1#4922.0222.18RB1#4922.0022.15RB50#022.0122.18RB50#2422.0022.18RB50#4921.9222.25RB100#021.8722.10RB1#4922.0022.10RB1#4922.0022.10RB50#4921.9922.09RB1#4922.0022.10RB1#4922.0022.10RB1#4922.0022.10RB1#4922.0022.10RB1#4922.0022.10RB50#2421.9722.20RB50#2421.9722.20RB50#2421.9722.17RB50#4921.9222.20RB50#4921.9222.20RB50#4921.9722.17	22.18	21.28	
	IthTestResource BlockLowModulation& RB offset0& RB1#0RB1#37RB1#37RB1#74QPSKRB36#0RB36#17RB36#35RB1#0RB1#37RB1#0RB1#37RB1#37RB1#37RB1#37RB1#37RB1#37RB1#37RB1#37RB1#37RB1#37RB36#17RB36#35RB36#35RB36#35RB36#35RB1#0RB1#49RB190#0RB100#0RB1#49RB1#49RB1#49RB1#49RB50#24RB50#24RB50#24RB50#24RB100#0RB50#49RB100#0RB50#49RB100#0RB100#0RB100#0RB100#0 <td>22.00</td> <td>22.18</td> <td>21.28</td>	22.00	22.18	21.28	
		RB50#49	21.92	22.25	21.23
2014	estTestResource BlockLow ChannelMidwidthModulation& RB offset(dBm)MidNRB1#021.80RB1#3721.80RB1#7421.77RB36#021.82RB36#1721.87RB36#3521.85RB75#021.76RB1#3721.92RB1#3721.92RB1#3721.92RB1#3721.92RB36#3522.02RB36#3522.02RB75#022.03RB75#022.03RB75#022.03RB1#022.16RB1#922.02RB1#922.00RB1#921.92RB10#021.87RB10#021.99RB10#021.90RB1#021.99RB1#021.99RB1#021.99RB1#021.90RB1#021.90RB1#021.90RB50#2421.90RB50#2421.97RB50#2421.97RB50#2421.97RB50#2421.95RB100#021.94	22.16	21.40		
20101		RB1#0	21.99	22.09	21.43
		RB1#49	22.00	22.10	21.49
		RB1#99	22.00	22.14	21.50
	16-QAM	RB50#0	21.90	22.20	21.64
20M		RB50#24	21.97	22.17	21.56
		RB50#49	21.95	22.20	21.49
		RB100#0	21.94	22.26	21.53

LTE Band 7 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.67	21.88	20.98
		RB1#12	21.61	21.45	21.48
		RB1#24	21.60	21.28	21.46
	QPSK	RB12#0	21.60	21.66	21.77
		RB12#6	22.15	21.53	20.95
5M		RB12#11	21.20	21.83	21.65
514		RB25#0	22.04	Channel Bm)Middle Channel (dBm)1.6721.881.6121.451.6021.281.6021.281.6021.662.1521.531.2021.832.0421.151.8521.971.9021.561.8721.841.6921.141.6021.701.3621.251.3521.691.3621.181.4421.781.5921.761.4421.551.1221.761.5221.251.3521.111.4921.560.9921.660.9821.271.0921.72	21.46
JIVI		RB1#0	Esource Block & RB offset Low Channel (dBm) Middle Channel (dBm) RB1#0 21.67 21.88 RB1#12 21.61 21.45 RB1#24 21.60 21.28 RB12#0 21.60 21.28 RB12#0 21.60 21.28 RB12#0 21.60 21.66 RB12#1 21.20 21.83 RB25#0 22.04 21.15 RB1#0 21.85 21.97 RB1#12 21.90 21.56 RB1#24 21.87 21.84 RB12#0 21.69 21.14 RB12#1 21.36 21.25 RB1#24 21.35 21.69 RB1#11 21.36 21.25 RB25#0 21.35 21.69 RB1#24 21.44 21.70 RB1#24 21.44 21.78 RB1#24 21.44 21.76 RB1#25 21.41 21.35 RB1#49 21.42 21.76 RB1#0 <t< td=""><td>21.94</td></t<>	21.94	
		RB1#12	21.90	21.56	21.50
		RB1#24	21.87	21.84	21.83
	16-QAM	RB12#0	21.69	21.14	21.01
		RB12#6	21.60	21.70	21.76
		RB12#11	21.36	21.25	21.61
		TestResource Block & RB offsetModulation& RB offsetRB1#01RB1#121RB1#121RB1#241RB12#01RB12#111RB25#01RB1#121RB1#121RB1#241RB1#241RB1#241RB1#241RB12#01RB12#01RB12#111RB12#111RB25#01RB1#241RB1#241RB1#241RB1#241RB1#241RB1#241RB1#241RB1#241RB1#241RB1#491RB25#121RB1#01RB50#01RB1#491RB1#491RB1#491RB1#491RB1#491RB1#491RB1#491RB1#491RB1#491RB1#491RB25#121RB25#121RB25#121RB1#491RB1#491RB1#491RB1#491RB1#491RB1#491RB1#491RB1#491RB25#121RB25#121RB50#01	21.35	21.69	21.34
		RB1#0	21.36	21.18	22.02
		RB1#24	21.44	21.78	22.03
		RB1#49	21.59	21.76	22.15
	QPSK	RB25#0	21.44	Middle Channel (dBm)3m)Middle Channel (dBm).6721.88.6121.45.6021.28.6021.28.6021.66.1521.53.2021.83.0421.15.8521.97.9021.56.8721.84.6921.14.6021.70.3621.25.3521.69.3621.18.4421.78.5921.76.4421.44.4121.35.7621.55.1221.76.5221.25.3521.11.4921.56.9921.66.9921.62.9821.27.5921.92.0921.72	21.96
		RB25#12	Block offset Low Channel (dBm) Middle Channel (dBm) #0 21.67 21.88 #12 21.61 21.45 #24 21.60 21.28 2#0 21.60 21.66 2#6 22.15 21.53 #11 21.20 21.83 #0 22.04 21.15 #0 21.85 21.97 #12 21.90 21.56 #24 21.69 21.14 #0 21.69 21.14 #12 21.90 21.56 #24 21.69 21.14 2#6 21.35 21.69 #11 21.36 21.25 #40 21.35 21.69 #24 21.44 21.76 #49 21.59 21.76 #49 21.59 21.76 #24 21.76 21.55 0#0 21.52 21.25 #49 21.52 21.56 #49	21.52	
		RB25#24		21.63	
10M		RB50#0		22.01	
TOIVI		RB1#0	21.52	21.25	21.58
		RB1#24	21.35	21.11	21.59
		RB1#49	21.49	21.56	21.92
10M	16-QAM	RB25#0	20.99	21.66	22.08
		RB25#12	20.98	21.27	22.13
		RB25#24	21.59	21.92	21.64
		RB50#0	21.09	21.72	21.29

LTE Band 7 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.46	20.96	21.41
		RB1#37	21.46	21.49	21.24
		RB1#74	21.51	21.46	21.11
	QPSK	RB36#0	21.34	21.66	21.89
		RB36#17	21.58	21.51	21.23
15M		RB36#35	21.18	21.67	21.04
15) (RB75#0	21.17	Middle Channel (dBm) 20.96 21.49 21.40 21.46 21.67 21.67 21.63 21.75 21.72 21.90 21.29 21.12 21.90 21.29 21.14 21.79 21.43 22.28 21.56 21.43 22.15 21.65 21.63 21.43 22.15 21.43 21.56 21.43 22.15 21.63 21.65 21.65 21.65 21.65 21.63 21.65 21.63 21.65 21.63 21.63 21.65 21.65 21.65 21.65 21.65 21.65 21.65 21.65 21.13	21.47
15101		Resource Block & RB offset Low Channel (dBm) Middle Channel (dBm) RB 1#0 21.46 20.96 RB 1#37 21.46 21.49 RB 1#74 21.51 21.46 RB 36#0 21.34 21.66 RB 36#17 21.58 21.51 RB 36#35 21.18 21.67 RB 75#0 21.17 21.63 RB 1#0 20.79 21.75 RB 1#37 21.61 21.12 RB 1#37 21.61 21.12 RB 1#37 21.63 21.19 RB 1#37 21.63 21.19 RB 1#37 21.63 21.19 RB 1#37 21.63 21.14 RB 36#17 21.63 21.14 RB 36#35 21.61 21.79 RB 1#0 22.16 22.28 RB 1#49 21.41 21.56 RB 1#49 20.91 22.15 RB 50#24 21.44 21.63 RB 1#0 21.63 20.97	21.26		
		RB1#37	21.61	21.12	21.96
		RB1#74	21.47	21.90	21.45
	16-QAM	RB36#0	21.35	21.29	21.29
		RB36#17	21.63	21.14	21.08
		RB36#35	21.61	21.79	21.75
		Resource Block Low Channel Middl & RB offset (dBm) (d RB1#0 21.46 2 RB1#37 21.46 2 RB1#74 21.51 2 RB36#0 21.34 2 RB36#17 21.58 2 RB36#35 21.18 2 RB75#0 21.17 2 RB1#74 21.61 2 RB1#37 21.61 2 RB36#17 21.63 2 RB36#0 21.35 2 RB36#17 21.63 2 RB36#17 21.63 2 RB36#35 21.61 2 RB36#35 21.61 2 RB75#0 21.06 2 RB75#0 21.06 2 RB1#0 22.16 2 RB1#99 21.24 2 RB50#0 20.91 2 RB50#49 21.53 2 RB100#0 21.68	21.84	21.52	
		RB1#0	22.16	22.28	22.19
		RB1#49	21.41	21.56	21.52
		RB1#99	21.24	21.43	21.66
	QPSK	RB50#0	20.91	W Channel (dBm)Middle Channel (dBm)21.4620.9621.4621.4921.5121.4621.3421.6621.3421.6121.5821.5121.1721.6320.7921.7521.6121.1221.4721.9021.3521.2921.6321.1421.6121.7921.6321.1421.6121.7921.6321.1421.6422.2821.4121.5621.2421.4320.9122.1521.4421.6521.5321.6321.6820.9721.2621.4120.9721.0221.7521.1321.0321.5921.2421.4320.9521.1321.0321.5921.2421.4120.9521.1321.0321.5921.2421.5820.8920.82	21.04
		RB50#24	21.44		20.81
		RB50#49	Low Channel RB offset Middle Channel (dBm) Middle Channel (dBm) RB1#0 21.46 20.96 1 RB1#37 21.46 21.49 1 RB1#74 21.51 21.46 1 RB36#0 21.34 21.66 1 RB36#17 21.58 21.51 1 RB36#35 21.18 21.67 1 RB36#35 21.17 21.63 1 RB1#0 20.79 21.75 1 RB1#37 21.61 21.12 1 RB1#37 21.63 21.19 1 RB1#37 21.63 21.19 1 RB1#47 21.63 21.19 1 RB36#0 21.35 21.29 1 RB36#17 21.63 21.14 1 RB36#35 21.61 21.79 1 RB36#17 21.63 21.61 1 RB36#17 21.63 21.61 1 RB36#17 21.63	21.49	
2014		RB100#0		21.37	
20101		RB1#0	21.26	21.41	21.02
		RB1#49	20.97	21.02	21.29
		RB1#99	20.75	21.13	21.01
	16-QAM	RB50#0	21.03	21.59	20.84
		RB50#24	21.52	21.18	21.54
		RB50#49	21.21	21.58	21.15
		RB100#0	20.89	20.82	21.19

LTE Band 12 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.63	21.89	21.76
		RB1#3	21.69	21.90	21.70
		RB1#5	21.52	21.76	21.78
	QPSK	RB3#0	21.59	21.79	21.72
		RB3#1	21.51	21.87	21.64
		RB3#3	21.46	21.93	21.66
1 414		RB6#0	Block set Low Channel (dBm) Middle Channel (dBm) 21.63 21.89 21.69 21.90 21.52 21.76 21.52 21.76 21.51 21.87 21.46 21.93 21.46 21.93 21.51 21.87 21.53 21.93 21.54 21.93 21.55 21.93 21.58 22.01 21.58 22.01 21.57 21.90 21.58 22.01 21.57 21.90 21.55 21.91 21.60 21.95 21.55 21.98 21.55 21.98 21.53 22.01 21.58 22.03 4 21.57 21.98 2 21.58 22.03 4 21.57 21.91 2 21.58 22.03 21.58 22.03 21.68 22.02	21.49	
1.4M		RB1#0		21.66	
		RB1#3	21.57	21.90	21.59
		RB1#5	21.58	22.01	21.62
	16-QAM	RB3#0	21.57	21.91	21.56
	A RB3#3 RB3#3 RB6#0 RB1#0 RB1#3 RB1#3 RB1#5 RB3#1 RB3#1 RB3#3 RB6#0 RB6#0 RB1#7 RB1#14 RB1#1	RB3#1	21.60	21.95	21.47
		RB3#3	21.69	21.99	21.44
		21.55	21.98	21.40	
		RB1#0	21.53	22.01	21.42
		RB1#7	21.58	22.03	21.46
		RB1#14	21.57	22.02	21.53
	QPSK	tResource BlockLow ChannelMiddle ChannelIation& RB offset(dBm)(dBm)(dBm)(dBm)RB1#021.6321.892RB1#321.6921.901RB1#521.5221.761RB3#021.5921.791RB3#121.5121.871RB3#321.4621.931RB6#021.4721.931RB1#321.5721.901RB1#321.5721.901RB1#321.5721.911RB3#321.6921.911RB3#321.6921.911RB3#321.6921.991RB3#321.6921.991RB4#021.5322.011RB1#1421.5722.021RB1#1421.5722.021RB1#1421.6322.031RB1#1421.6322.011RB1#1421.6322.021RB1#1421.6322.021RB1#1421.6322.021RB1#1421.6322.031RB1#1421.6322.031RB1#1421.6322.031RB1#1421.6322.031RB1#1421.6322.031RB1#1421.6322.031RB1#1421.6322.031RB1#1421.6322.031 <td>21.51</td>	21.51		
			21.51		
	RB1#0 21.63 21.89 RB1#3 21.69 21.90 RB1#5 21.52 21.76 RB1#5 21.52 21.76 RB3#0 21.59 21.79 RB3#1 21.51 21.87 RB3#3 21.46 21.93 RB6#0 21.47 21.93 RB6#0 21.47 21.93 RB1#3 21.57 21.90 RB1#3 21.57 21.90 RB1#5 21.58 22.01 RB1#5 21.58 22.01 RB1#5 21.58 22.01 RB3#3 21.60 21.95 RB3#3 21.60 21.95 RB3#3 21.69 21.99 RB6#0 21.55 21.98 RB1#14 21.57 22.02 QPSK RB1#14 21.58 22.03 RB1#14 21.58 22.02 21.91 RB1#0 21.68 22.02 21.68 RB1#14	22.00	21.60		
214		RB15#0	t (dBm) (dBm) 21.63 21.89 21.69 21.90 21.52 21.76 21.59 21.76 21.51 21.87 21.46 21.93 21.51 21.87 21.46 21.93 21.58 22.01 21.57 21.90 21.58 22.01 21.57 21.90 21.58 22.01 21.57 21.91 21.60 21.95 21.61 21.93 21.55 21.91 21.63 22.01 21.55 21.98 21.55 21.98 21.55 21.98 21.58 22.03 21.58 22.03 21.58 22.03 21.58 22.03 21.68 22.02 21.68 22.02 21.68 22.02 21.63 22.05 21.63 22.03	21.77	
5101		RB1#0	21.68	22.01	21.62
		RB1#7	21.63	22.05	21.65
		RB1#14	21.61	22.09	21.73
	16-QAM	RB8#0	21.63	22.03	21.60
		RB8#4	21.60	22.16	21.58
		RB8#7	21.53	22.19	21.48
		RB15#0	21.53	22.30	21.52

LTE Band 12 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.42	22.34	21.61
		RB1#12	21.49	22.33	21.75
		RB1#24	21.42	22.40	21.72
5M	QPSK	RB12#0	21.38	22.32	21.65
		RB12#6	21.30	22.15	21.78
		RB12#11	21.32	22.16	21.79
5) (RB25#0	21.29	22.15	21.87
JM		RB1#0	Irce Block B offsetLow Channel (dBm)Middle Channel (dBm)(B1#021.4222.34B1#1221.4922.33B1#2421.4222.40B12#021.3822.32B12#621.3022.15312#1121.3222.16B25#021.2922.15B1#2421.4822.00B1#1221.4121.97B1#2421.3821.94B1#2421.3121.96B12#621.4122.04B1#2421.3821.94B12#021.3121.96B12#621.4122.04312#1121.4722.01B25#021.6122.07RB1#022.3822.41B1#2421.5521.97B1#4921.6622.01B25#021.6421.97325#1221.6421.97325#2421.6721.87B50#021.8221.84B1#4921.7321.83B1#4921.7921.73B25#021.8421.82B25#1221.9021.87B25#2421.9021.87B25#2421.9921.97B50#021.9921.97B50#021.9921.94	21.89	
		RB1#12	21.41	21.97	21.91
		RB1#24	21.38	21.94	22.04
	16-QAM	RB12#0	21.31	21.96	22.03
		RB12#6	21.41	22.04	22.01
		RB12#11	21.47	22.01	22.11
		RB25#0	21.61	Channel (dBm)Middle Channel (dBm)21.4222.3421.4922.3321.4222.4021.3822.3221.3022.1521.3222.1621.2922.1521.4121.9721.3821.9421.3121.9621.4122.0021.4122.0121.4122.0121.4122.0421.4122.0421.4122.0421.4122.0421.4122.0421.4122.0721.6122.0721.6221.9721.6421.9721.6521.9721.6421.9721.6421.9721.6521.8121.7321.8321.7921.7321.8421.8221.9021.8721.9921.94	22.08
		RB1#0	22.38	22.41	22.32
		RB1#24	21.55	21.97	22.07
	Nodulation & RB offset Down RB1#0 2 RB1#12 2 RB1#12 2 RB1#12 2 RB1#24 2 RB1#24 2 RB12#0 2 RB12#0 2 RB12#11 2 RB25#0 2 RB1#12 2 RB12#11 2 RB1#12 2 RB1#12 2 RB1#24 2 RB1#24 2 RB1#24 2 RB12#11 2 RB1#24 2 RB1#24 2 RB1#49 2 RB1#49 2	21.66	22.01	22.07	
	QPSK	RB25#0	21.64	ow Channel (dBm)Middle Channel (dBm)21.4222.3421.4922.3321.4222.4021.3822.3221.3022.1521.3222.1621.2922.1521.4822.0021.4121.9721.3821.9421.3121.9621.4122.0121.4122.0121.4222.0121.4122.0121.4122.0421.4122.0421.4122.0121.6122.0721.6221.9721.6422.0921.6421.9721.6521.8221.7121.7621.7321.8321.7921.7321.8421.8221.9021.8721.9921.94	22.00
		RB25#12	21.64		22.08
		RB25#24	Low Channel (dBm) Middle Channel (dBm) 21.42 22.34 21.49 22.33 21.42 22.40 21.38 22.32 21.30 22.15 21.32 22.16 21.48 22.00 21.41 21.97 21.38 21.94 21.41 21.97 21.41 21.97 21.41 22.00 21.41 21.97 21.41 21.97 21.41 22.01 21.41 22.01 21.41 22.04 21.41 22.04 21.41 22.04 21.41 22.04 21.41 22.04 21.41 22.04 21.41 22.04 21.41 22.04 21.41 22.04 21.41 22.07 21.61 22.07 21.61 22.01 21.62 21.97 21.64 21.97	22.14	
10M		RB50#0		22.04	
TOM		RB1#0	21.71	21.76	22.06
		RB1#24	21.73	21.83	22.15
		RB1#49	21.79	21.73	22.13
	16-QAM	RB25#0	21.84	21.82	22.24
		RB25#12	21.90	21.87	22.19
		RB25#24	21.98	21.97	22.15
		RB50#0	21.99	21.94	22.29

LTE Band 13 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.20	21.85	21.34
		RB1#12	22.14	21.42	21.12
		RB1#24	21.50	21.29	20.93
Test Bandwidth	QPSK	RB12#0	21.87	21.77	21.06
		RB12#6	21.44	21.62	21.39
		RB12#11	21.51	21.24	21.25
514		RB25#0	21.86	21.49	21.83
5101		RB1#0	21.21	Middle Channel (dBm) 21.85 21.42 21.29 21.77 21.62 21.74 21.62 21.77 21.77 21.62 21.76 21.76 21.78 21.78 21.82 21.82 21.82 21.85 21.86 21.67 22.32 21.87 21.75 22.02 21.75 21.08 21.75 21.08 21.75 21.08 21.75 21.02 21.75 21.08 21.59 21.52 21.52 21.52 21.21 21.39	21.22
		RB1#12	21.74	21.78	21.43
		RB1#24	21.37	21.09	21.55
	16-QAM	RB12#0	21.97	21.82	21.60
		RB12#6	21.73	21.35	21.46
		RB12#11	21.87	21.86	21.06
		RB25#0	21.72	Middle Channel (dBm) 21.85 21.42 21.29 21.77 21.62 21.74 21.77 21.62 21.76 21.76 21.78 21.09 21.76 21.78 21.09 21.82 21.35 21.86 21.67 22.32 21.87 21.75 22.02 21.75 22.02 21.75 21.08 21.59 21.52 21.52 21.52 21.21 21.35	21.75
		RB1#0	/	22.32	/
		RB1#24	/	21.87	/
		RB1#49	/	21.75	/
	QPSK	RB25#0	/	Middle Channel (dBm) 21.85 21.42 21.29 21.77 21.62 21.24 21.24 21.49 21.76 21.78 21.78 21.09 21.82 21.35 21.86 21.67 22.32 21.87 21.67 22.32 21.87 21.75 22.02 21.78 21.75 22.02 21.78 21.75 22.02 21.78 21.75 22.02 21.78 21.75 22.02 21.78 21.52 21.52 21.52 22.00 21.21 21.39	/
		RB25#12	/		/
		RB25#24	/		/
10M		RB50#0	/		/
1011		RB1#0	/	21.28	/
		RB1#24	/	21.59	/
		RB1#49	/	21.52	/
	16-QAM	RB25#0	/	21.52	/
		RB25#12	/	22.00	/
		RB25#24	/	21.21	/
		RB50#0	/	21.39	/

LTE Band 14 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
Test Bandwidth 5M		RB1#0	21.42	21.14	21.56
		RB1#12	22.09	21.98	21.64
		RB1#24	21.54	21.25	21.66
Test Bandwidth	QPSK	RB12#0	21.17	21.87	21.11
		RB12#6	22.16	21.38	21.18
		RB12#11	22.13	21.62	21.69
514		RB25#0	21.39	21.90	21.46
JIVI		RB1#0	21.71	Middle Channel (dBm) 21.14 21.98 21.25 21.87 21.38 21.62 21.62 21.62 21.79 21.68 21.79 21.74 21.79 21.79 21.71 21.73 21.73 21.73 21.11 22.30 21.12 21.62 22.20 21.37 21.67 21.04 21.27 21.10 21.20 21.10 21.32 21.73	21.28
		RB1#12	21.40	21.69	21.50
		RB1#24	21.73	21.79	21.65
	16-QAM	RB12#0	21.71	21.34	21.12
		RB12#6	21.66	21.54	21.01
		RB12#11	21.27	21.73	21.64
		RB25#0	22.08	Middle Channel (dBm) 21.14 21.98 21.25 21.87 21.38 21.62 21.62 21.63 21.79 21.79 21.34 21.79 21.34 21.73 21.73 21.11 22.30 21.12 21.62 22.20 21.37 21.67 21.04 21.27 21.32 21.21	21.38
		RB1#0	/	22.30	/
		RB1#24	/	21.12	/
		RB1#49	/	21.62	/
	QPSK	RB25#0	/	Middle Channel (dBm) 21.14 21.98 21.25 21.87 21.38 21.62 21.69 21.79 21.34 21.73 21.74 21.73 21.73 21.73 21.73 21.73 21.73 21.73 21.11 22.30 21.12 21.62 22.20 21.37 21.67 21.04 21.27 21.30 21.21	/
		RB25#12	/		/
		RB25#24	/		/
10M		RB50#0	/		/
1011		RB1#0	/	21.20	/
		RB1#24	/	21.10	/
		RB1#49	/	21.32	/
	16-QAM	RB25#0	/	21.27	/
		RB25#12	/	21.86	/
		RB25#24	/	21.78	/
		RB50#0	/	21.75	/

LTE Band 17 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.62	21.07	21.77
		RB1#12	21.66	21.17	21.07
		RB1#24	21.63	21.31	21.12
	QPSK	RB12#0	21.15	21.91	21.57
		RB12#6	21.32	22.01	21.12
		RB12#11	21.27	21.57	21.09
514		RB25#0	21.89	W Channel (dBm)Middle Channel (dBm)21.6221.0721.6321.1721.6321.3121.1521.9121.3222.0121.2721.5721.8921.7921.2321.9421.6421.4222.0221.6521.9821.6321.8421.4122.0321.3821.5721.2622.1022.0221.2321.6921.2422.0121.2522.0121.2522.0121.2621.1721.3721.1621.4321.8121.4021.8121.4321.0921.4421.0921.4521.0921.2621.5021.2321.3921.0921.09	21.38
JIVI		RB1#0	21.23		21.29
		RB1#12	21.64	21.42	21.76
		RB1#24	22.02	21.65	21.60
	16-QAM	RB12#0	21.98	21.63	21.66
		RB12#6	21.84	21.41	21.82
		RB12#11	22.03	21.38	21.10
		Resource Block & RB offset Low Channel (dBm) Middle C (dBr RB1#0 21.62 21.0 RB1#12 21.66 21.1 RB1#24 21.63 21.3 RB12#0 21.15 21.9 RB12#0 21.15 21.9 RB12#1 21.27 21.5 RB25#0 21.89 21.7 RB1#12 21.64 21.9 RB1#12 21.64 21.4 RB12#1 22.02 21.6 RB1#24 22.03 21.3 RB12#6 21.84 21.4 RB12#1 22.03 21.3 RB12#1 22.03 21.1 RB1#24 21.43 21.6 RB1#24 21.43 21.6 RB1#49 21.23 21.1 RB25#12 21.37 <td< td=""><td>21.26</td><td>21.16</td></td<>	21.26	21.16	
		RB1#0	22.10	22.02	22.09
		RB1#24	21.28	21.69	22.03
		Resource Block Low Channel Middle ulation & RB offset (dBm) (d RB1#0 21.62 2 RB1#12 21.66 2 RB1#24 21.63 2 RB12#0 21.15 2 RB12#6 21.32 2 RB12#6 21.32 2 RB12#6 21.32 2 RB12#11 21.27 2 RB12#6 21.89 2 RB1#12 21.64 2 QAM RB12#0 21.98 2 RB1#12 21.64 2 2 RB1#12 21.64 2 2 RB1#24 22.02 2 2 RB1#26 21.84 2 2 RB12#1 22.03 2 2 RB12#10 21.57 2 2 RB1#49 21.25 2 2 RB1#49 21.23 2 2 RB50#0	22.01	21.98	
	QPSK	RB25#0	21.23	nannelMiddle Channel (dBm)6221.076621.176321.311521.913222.012721.578921.792321.946421.420221.659821.638421.410321.385721.261022.022821.692522.012321.173721.164321.824021.815121.094621.854321.124521.092621.502321.390921.09	21.92
		RB25#12	21.37		21.98
		RB25#24	21.43		22.01
10M		RB50#0	21.40		22.01
TON		RB1#0	21.51	21.09	22.03
		RB1#24	21.46	21.85	21.88
		RB1#49	21.43	21.12	21.77
10M	16-QAM	RB25#0	21.45	21.09	21.78
		RB25#12	21.26	21.50	21.73
		RB25#24	21.23	21.39	21.74
		RB50#0	21.09	21.09	21.66

LTE Band 25 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.54	21.88	21.76
		RB1#3	21.57	21.87	21.80
		RB1#5	21.60	21.83	21.62
1.4M	QPSK	RB3#0	21.56	21.89	21.62
		RB3#1	21.63	21.79	21.70
		RB3#3	21.63	21.66	21.62
1 <i>4</i> M		RB6#0	Low Channel (dBm) Middle Channel (dBm) 21.54 21.88 21.57 21.87 21.60 21.83 21.61 21.89 21.62 21.89 21.63 21.79 21.63 21.79 21.55 21.80 21.55 21.76 21.55 21.76 21.46 21.83 21.46 21.83 21.46 21.73 21.41 21.72 21.38 21.78 21.34 21.78 21.35 21.83 21.36 21.83 21.36 21.83 21.31 21.76 21.25 21.82 21.12 21.80 21.13 21.67 21.14 21.69 21.13 21.69 21.14 21.69 21.15 21.64 21.13 21.64 21.07 21.50 21.03 21.69	21.62	
1.411		Resource Block & RB offset Low Channel (dBm) Middle Channel (dBm) RB1#0 21.54 21.88 RB1#3 21.57 21.87 RB1#5 21.60 21.83 RB3#0 21.56 21.89 RB3#1 21.63 21.79 RB3#3 21.63 21.60 RB3#3 21.63 21.79 RB3#3 21.63 21.80 RB6#0 21.51 21.80 RB1#3 21.46 21.83 RB1#3 21.46 21.73 RB3#0 21.41 21.72 RB3#1 21.38 21.73 RB3#3 21.36 21.83 RB1#5 21.46 21.83 RB3#3 21.36 21.83 RB3#3 21.36 21.83 RB40 21.12 21.79 RB1#0 21.25 21.80 RB1#14 21.12 21.67 RB8#4 21.13 21.69 RB1#7 21.13	21.70		
		RB1#3	21.46	21.83	21.73
		RB1#5	21.46	21.73	21.84
	16-QAM	RB3#0	21.41	21.72	21.79
	Test R Ith Modulation	RB3#1	21.38	21.78	21.84
		RB3#3	21.36	21.83	21.84
		RB6#0	21.34	21.76	21.74
		RB1#0	21.25	21.82	21.83
		RB1#7	21.26	21.86	21.93
		RB1#14	21.12	21.79	21.81
	QPSK	RB8#0	ource Block Low Channel Middle Channel RB offset (dBm) (dBm) RB 1#0 21.54 21.88 RB 1#3 21.57 21.87 RB 1#5 21.60 21.83 RB 3#0 21.56 21.89 RB 3#1 21.63 21.79 RB 3#3 21.63 21.79 RB 3#3 21.55 21.76 RB 1#3 21.46 21.83 RB 1#3 21.46 21.73 RB 1#3 21.46 21.73 RB 1#3 21.46 21.73 RB 3#3 21.38 21.72 RB 3#3 21.36 21.83 RB 1#3 21.46 21.73 RB 3#3 21.36 21.83 RB 3#3 21.36 21.83 RB 4 21.38 21.76 RB 1#1 21.25 21.80 RB 4 21.13 21.67 RB 4 21.13 21.67 RB 4 21.13 21.	21.87	
		Resource Block & RB offset Low Channel (dBm) Middle Channel (dBm) RB1#0 21.54 21.88 RB1#3 21.57 21.87 RB1#5 21.60 21.83 RB3#0 21.56 21.89 RB3#1 21.63 21.79 RB3#3 21.63 21.79 RB3#3 21.63 21.79 RB46#0 21.51 21.80 RB6#0 21.55 21.76 RB1#3 21.46 21.83 RB1#3 21.46 21.73 RB3#1 21.38 21.78 RB3#3 21.36 21.73 RB3#1 21.38 21.78 RB3#3 21.36 21.83 RB1#5 21.46 21.73 RB3#1 21.38 21.78 RB3#3 21.36 21.82 RB1#0 21.25 21.82 RB1#14 21.12 21.79 RB8#1 21.13 21.67 RB8#4 21.13	21.98		
		RB8#7	Bource Block & RB offset Low Channel (dBm) Middle Channel (dBm) RB 1#0 21.54 21.88 I RB 1#3 21.57 21.87 I RB 1#5 21.60 21.83 I RB 3#0 21.56 21.89 I RB 3#1 21.63 21.69 I RB 3#3 21.63 21.60 I RB 3#3 21.63 21.60 I RB 5 21.63 21.60 I RB 3#3 21.63 21.60 I RB 1#0 21.55 21.76 I RB 1#3 21.46 21.73 I RB 1#3 21.46 21.73 I RB 3#3 21.34 21.76 I RB 3#3 21.36 21.83 I RB 3#1 21.34 21.76 I RB 3#1 21.25 21.80 I RB 1#14 21.12 21.80 I RB 3#4 21.13 21.67 </td <td>21.95</td>	21.95	
214		RB15#0		21.96	
5171		RB1#0	21.23	21.64	22.02
		RB1#7	21.12	21.51	21.94
		RB1#14	21.07	21.50	21.94
	16-QAM	RB8#0	21.09	21.55	21.84
3M		RB8#4	21.03	21.69	21.86
		RB8#7	20.98	21.67	21.97
		RB15#0	21.11	21.79	21.95

LTE Band 25 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.04	21.85	21.80
		RB1#12	21.09	21.81	21.80
		RB1#24	21.20	21.81	21.86
Test Bandwidth	QPSK	RB12#0	21.13	21.76	21.78
		RB12#6	21.22	21.77	21.66
		RB12#11	21.20	21.83	21.49
514		RB25#0	21.23	21.76	21.59
JIVI		RB1#0	Irce Block B offsetLow Channel (dBm)Middle Channel (dBm)RB1#021.0421.85B1#1221.0921.81B1#1221.0021.81B1#2421.2021.81B12#021.1321.76B12#621.2221.77B12#1121.2021.83B25#021.2321.76RB1#021.2721.74B1#1221.2121.72B1#2421.3021.75B12#021.2921.74B1#2421.3021.75B12#021.2921.74B12#621.4421.75B12#121.3421.76B25#021.4621.81RB1#021.4421.83B1#2421.4521.85B1#4921.4821.94B25#1221.4521.91B25#2421.5321.92B50#021.4421.91B1#2421.4321.94B1#4921.5021.97B25#1221.4321.94B1#4921.5021.97B25#021.4621.96B25#1221.3321.94B1#4921.5021.97B25#021.4621.96B1#4921.5021.97B50#021.4621.96B25#1221.3321.94B1#4921.5021.93B50#021.2021.78	21.46	
		RB1#12	21.21	21.72	21.54
		RB1#24	21.30	21.75	21.50
	16-QAM	RB12#0	21.29	21.74	21.49
		RB12#6	21.44	21.75	21.50
		RB12#11	21.34	21.76	21.49
		RB25#0	Jource Block Low Channel (dBm) Middle Channel (dBm) RB offset (dBm) (dBm) RB 1#0 21.04 21.85 RB1#12 21.09 21.81 RB1#24 21.20 21.81 RB12#0 21.13 21.76 RB12#6 21.22 21.77 RB12#11 21.20 21.83 RB25#0 21.23 21.76 RB1#0 21.27 21.74 RB1#12 21.21 21.72 RB1#24 21.30 21.75 RB1#24 21.30 21.75 RB1#24 21.30 21.75 RB12#12 21.44 21.75 RB12#11 21.44 21.76 RB25#0 21.44 21.81 RB12#11 21.44 21.81 RB1#24 21.45 21.81 RB1#24 21.44 21.83 RB1#24 21.45 21.91 RB25#12 21.45 21.91 RB25#12	21.42	
		RB1#0	21.44	21.83	21.34
		RB1#24	21.45	21.85	21.15
		RB1#49	21.48	21.88	21.21
	QPSK	RB25#0	21.48	Low Channel (dBm)Middle Channel (dBm)21.0421.8521.0921.8121.2021.8121.2121.7621.2221.7721.2021.8321.2121.7621.2221.7621.2321.7621.2421.7221.3021.7521.4421.7521.4421.7521.4421.8321.4521.8121.4421.8321.4521.8521.4821.9421.4921.9121.4321.9121.4421.9121.4521.9121.4321.9121.4321.9221.4421.9121.4521.9121.4321.9421.4421.9121.4521.9121.4621.9421.2021.78	21.09
		RB25#12	21.45		21.10
		RB25#24	21.53		21.11
10M		RB50#0	21.49		21.14
10141		RB1#0	21.44	21.91	21.20
		RB1#24	21.43	21.94	21.30
		RB1#49	21.50	21.97	21.23
	16-QAM	RB25#0	21.46	21.96	21.26
10M		RB25#12	21.33	21.94	21.27
		RB25#24	21.21	21.93	21.36
		RB50#0	21.20	21.78	21.32

LTE Band 25 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.45	21.43	21.59
		RB1#37	21.39	21.43	21.46
		RB1#74	20.96	21.49	21.22
	QPSK	RB36#0	21.29	20.96	21.56
		RB36#17	21.64	21.41	22.01
		RB36#35	20.72	21.35	21.08
1514		RB75#0	21.56	21.75	21.23
15101		st ation Resource Block & RB offset Low Channel (dBm) I RB1#0 21.45 1 RB1#37 21.39 1 RB1#37 21.39 1 RB1#74 20.96 1 RB36#0 21.29 1 RB36#17 21.64 1 RB36#35 20.72 1 RB75#0 21.56 1 RB1#37 21.30 1 RB1#37 21.50 1 RB1#37 21.50 1 RB1#37 21.50 1 RB1#37 21.50 1 RB1#37 21.49 1 RB1#74 20.83 1 AM RB36#0 20.72 1 RB36#17 21.49 1 1 RB36#35 21.01 1 1 RB75#0 20.72 1 1 RB1#49 21.71 1 1 RB1#99 21.56 1 1 <td>21.38</td> <td>21.21</td>	21.38	21.21	
		RB1#37	21.50	21.43	21.62
		RB1#74	20.83	21.49	21.70
	16-QAM	RB36#0	20.72	21.38	21.86
		RB36#17	21.49	21.91	21.53
		RB36#35	21.01	21.18	21.86
		RB75#0	20.72	21.20	21.03
		RB1#0	21.92	22.13	22.10
		RB1#49	21.71	21.30	20.74
		RB1#99	21.75	21.18	21.11
	QPSK	RB50#0	21.03	Low Channel (dBm)Middle Channel (dBm)21.4521.4321.3921.4320.9621.4921.2920.9621.6421.4120.7221.3521.5621.7521.3021.3821.5021.4320.8321.4920.7221.3821.4921.9121.0121.1820.7221.3021.9222.1321.4921.9121.0121.1820.7221.3021.9222.1321.9321.0121.9421.9121.9521.3021.9521.3021.7521.1821.0322.0321.7521.3121.6621.3021.5621.3021.5621.3021.5521.3121.6621.3021.5521.3121.6621.5920.8321.3521.5121.0720.8521.6020.7821.5721.7021.11	22.03
		RB50#24	21.23		20.73
		RB50#49	Low Channel (dBm) Middle Channel (dBm) 21.45 21.43 21.39 21.43 20.96 21.49 21.29 20.96 21.64 21.41 20.72 21.35 21.56 21.75 21.30 21.43 20.72 21.35 21.56 21.75 21.30 21.43 20.72 21.38 21.43 20.83 21.49 21.49 20.72 21.38 21.49 21.91 21.01 21.18 20.72 21.30 21.92 22.13 21.92 22.13 21.92 21.30 21.75 21.18 21.03 22.03 21.56 21.30 21.56 21.30 21.56 21.30 21.56 21.30 21.66 21.30 21.66 21.59 20.83 21.57	20.87	
20M		RB100#0		21.21	
20101		RB1#0	21.35	21.31	20.76
		RB1#49	21.66	21.59	21.57
		RB1#99	20.83	21.35	21.00
	16-QAM	RB50#0	21.51	21.07	20.85
20M		RB50#24	20.85	21.60	21.53
		RB50#49	20.78	21.57	21.52
		RB100#0	21.70	21.11	21.26

LTE Band 26 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
	QPSK	RB1#0	21.54	21.87	21.76
		RB1#3	21.52	21.97	21.75
		RB1#5	21.59	21.99	21.65
		RB3#0	21.49	22.06	21.68
		RB3#1	21.52	22.02	21.71
		RB3#3	21.47	22.03	21.60
1 <i>4</i> M		RB6#0	21.32	21.88	21.58
1.411		RB1#0	21.32	21.98	21.59
		RB1#3	21.40	21.90	21.47
		RB1#5	21.33	21.92	21.45
	16-QAM	RB3#0	21.46	21.84	21.51
		RB3#1	21.44	21.92	21.53
		RB3#3	21.43	21.86	21.49
		RB6#0	21.39	21.93	21.39
	QPSK	RB1#0	21.44	22.01	21.37
		RB1#7	21.44	21.99	21.29
		RB1#14	21.45	21.91	21.13
		RB8#0	21.47	22.01	21.10
		RB8#4	21.61	22.07	20.98
		RB8#7	21.54	22.11	20.91
2M		RB15#0	21.57	22.16	20.78
5101		RB1#0	21.58	22.07	20.76
		RB1#7	21.63	22.09	20.73
		RB1#14	21.54	22.07	20.74
	16-QAM	RB8#0	21.54	22.14	20.62
		RB8#4	21.48	22.12	20.63
		RB8#7	21.47	22.09	20.69
		RB15#0	21.61	22.02	20.53

LTE Band 26 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
	QPSK	RB1#0	21.68	22.00	20.60
		RB1#12	21.58	21.95	20.59
		RB1#24	21.64	21.99	20.66
		RB12#0	21.57	21.98	20.71
		RB12#6	21.54	21.97	20.71
		RB12#11	21.53	21.88	20.81
514		RB25#0	21.59	21.86	20.73
SIVI		RB1#0	21.65	21.96	20.77
		RB1#12	21.69	21.92	20.77
		RB1#24	21.58	21.96	20.85
	16-QAM	RB12#0	21.50	22.04	20.80
		RB12#6	21.55	22.14	20.81
		RB12#11	21.58	22.09	20.80
		RB25#0	21.67	22.13	20.84
		RB1#0	21.75	22.18	20.85
	QPSK	RB1#24	21.84	22.03	20.95
		RB1#49	21.87	22.14	21.04
		RB25#0	21.73	21.98	21.11
		RB25#12	21.65	22.02	21.06
		RB25#24	21.61	21.93	20.91
10M		RB50#0	21.56	21.93	20.97
1011		RB1#0	21.55	21.98	20.92
		RB1#24	21.48	22.05	20.89
		RB1#49	21.34	22.15	20.80
	16-QAM	RB25#0	21.40	22.23	20.72
		RB25#12	21.24	22.25	20.73
		RB25#24	21.26	22.23	20.75
		RB50#0	21.28	22.22	20.78

LTE Band 26 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	22.19	22.29	22.21
		RB1#37	20.84	21.34	21.23
		RB1#74	21.46	21.05	21.24
	QPSK	RB36#0	20.83	21.79	21.36
		RB36#17	21.02	21.76	21.23
		RB36#35	21.17	21.17	21.88
1514		RB75#0	21.55	21.89	21.77
1.5101		RB1#0	21.59	21.34	21.68
	16-QAM	RB1#37	21.39	21.70	21.77
		RB1#74	21.61	21.60	21.02
		RB36#0	21.02	21.41	21.66
		RB36#17	21.29	21.17	21.47
		RB36#35	20.70	21.36	21.11
		RB75#0	20.89	21.12	21.25

LTE Band 41 part1:

T 4	Tra et	Resource	Lowest	Low	Middle	High
Test Domdaridah	Test Madada tian	Block &	Channel	Channel	Channel	Channel
Bandwidth	Modulation	RB offset	(dBm)	(dBm)	(dBm)	(dBm)
	QPSK	RB1#0	21.41	20.99	21.43	21.37
		RB1#12	21.50	21.20	21.76	21.06
		RB1#24	21.23	20.83	21.29	21.89
		RB12#0	21.35	20.99	21.48	21.75
		RB12#6	21.26	21.06	21.72	21.13
		RB12#11	22.13	21.34	21.42	21.38
514		RB25#0	22.09	21.57	21.93	21.23
5111		RB1#0	21.98	21.25	21.39	21.73
		RB1#12	21.70	21.20	21.57	21.74
		RB1#24	22.13	21.28	21.30	21.37
	16-QAM	RB12#0	21.66	21.03	21.26	21.05
		RB12#6	22.14	21.28	21.29	21.60
		RB12#11	21.16	20.88	21.45	21.50
		RB25#0	21.54	21.05	21.41	20.92
The second s	Test	Resource	Lowest	Low	Middle	High
Tost	Tost		2011050			8
Test	Test	Block &	Channel	Channel	Channel	Channel
Test Bandwidth	Test Modulation	Block & RB offset	Channel (dBm)	Channel (dBm)	Channel (dBm)	Channel (dBm)
Test Bandwidth	Test Modulation	Block & RB offset RB1#0	Channel (dBm) 21.18	Channel (dBm) 20.81	Channel (dBm) 21.29	Channel (dBm) 21.86
Test Bandwidth	Test Modulation	Block & RB offset RB1#0 RB1#24	Channel (dBm) 21.18 21.74	Channel (dBm) 20.81 21.37	Channel (dBm) 21.29 21.87	Channel (dBm) 21.86 22.15
Test Bandwidth	Test Modulation	Block & RB offset RB1#0 RB1#24 RB1#49	Channel (dBm) 21.18 21.74 20.97	Channel (dBm) 20.81 21.37 20.75	Channel (dBm) 21.29 21.87 21.38	Channel (dBm) 21.86 22.15 21.62
Test Bandwidth	Test Modulation QPSK	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0	Channel (dBm) 21.18 21.74 20.97 21.48	Channel (dBm) 20.81 21.37 20.75 21.12	Channel (dBm) 21.29 21.87 21.38 21.63	Channel (dBm) 21.86 22.15 21.62 22.09
Test Bandwidth	Test Modulation QPSK	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0 RB25#12	Channel (dBm) 21.18 21.74 20.97 21.48 21.86	Channel (dBm) 20.81 21.37 20.75 21.12 21.46	Channel (dBm) 21.29 21.87 21.38 21.63 21.93	Channel (dBm) 21.86 22.15 21.62 22.09 21.77
Test Bandwidth	Test Modulation QPSK	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0 RB25#12 RB25#24	Channel (dBm) 21.18 21.74 20.97 21.48 21.86 21.02	Channel (dBm) 20.81 21.37 20.75 21.12 21.46 20.73	Channel (dBm) 21.29 21.87 21.38 21.63 21.93 21.28	Channel (dBm) 21.86 22.15 21.62 22.09 21.77 21.91
Test Bandwidth	Test Modulation QPSK	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0 RB25#12 RB25#24 RB50#0	Channel (dBm) 21.18 21.74 20.97 21.48 21.86 21.02 21.92	Channel (dBm) 20.81 21.37 20.75 21.12 21.46 20.73 21.38	Channel (dBm) 21.29 21.87 21.38 21.63 21.93 21.28 21.72	Channel (dBm) 21.86 22.15 21.62 22.09 21.77 21.91 21.66
Test Bandwidth	Test Modulation QPSK	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0 RB25#12 RB25#24 RB50#0 RB1#0	Channel (dBm) 21.18 21.74 20.97 21.48 21.86 21.02 21.92 20.96	Channel (dBm) 20.81 21.37 20.75 21.12 21.46 20.73 21.38 20.60	Channel (dBm) 21.29 21.87 21.38 21.63 21.93 21.28 21.72 21.09	Channel (dBm) 21.86 22.15 21.62 22.09 21.77 21.91 21.66 21.71
Test Bandwidth	Test Modulation QPSK	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0 RB25#12 RB25#24 RB50#0 RB1#0 RB1#0 RB1#24	Channel (dBm) 21.18 21.74 20.97 21.48 21.02 21.92 20.96 21.16	Channel (dBm) 20.81 21.37 20.75 21.12 21.46 20.73 21.38 20.60 20.90	Channel (dBm) 21.29 21.87 21.38 21.63 21.93 21.28 21.72 21.09 21.50	Channel (dBm) 21.86 22.15 21.62 22.09 21.77 21.91 21.66 21.71 22.02
Test Bandwidth	Test Modulation QPSK	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0 RB25#12 RB25#24 RB50#0 RB1#0 RB1#24 RB1#24 RB50#0 RB1#0 RB1#24 RB1#24	Channel (dBm) 21.18 21.74 20.97 21.48 21.02 21.92 20.96 21.16 21.17	Channel (dBm) 20.81 21.37 20.75 21.12 21.46 20.73 21.38 20.60 20.90 20.83	Channel (dBm) 21.29 21.87 21.38 21.63 21.93 21.28 21.72 21.09 21.50 21.33	Channel (dBm) 21.86 22.15 21.62 22.09 21.77 21.91 21.66 21.71 22.02 22.15
Test Bandwidth	Test Modulation QPSK 16-QAM	Block & RB offset RB 1#0 RB1#24 RB1#49 RB25#0 RB25#12 RB25#24 RB50#0 RB1#24 RB1#0 RB1#25 RB50#0 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#49 RB25#0	Channel (dBm) 21.18 21.74 20.97 21.48 21.02 21.92 20.96 21.16 21.17 21.71	Channel (dBm) 20.81 21.37 20.75 21.12 21.46 20.73 21.38 20.60 20.90 20.83 21.15	Channel (dBm) 21.29 21.87 21.38 21.63 21.93 21.28 21.72 21.09 21.50 21.33 21.46	Channel (dBm) 21.86 22.15 21.62 22.09 21.77 21.91 21.66 21.71 22.02 22.15 21.55
Test Bandwidth	Test Modulation QPSK 16-QAM	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0 RB25#12 RB50#0 RB1#24 RB1#0 RB1#24 RB50#0 RB1#0 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#24 RB1#49 RB25#0 RB25#12	Channel (dBm) 21.18 21.74 20.97 21.48 21.02 21.92 20.96 21.16 21.17 21.71 21.91	Channel (dBm) 20.81 21.37 20.75 21.12 21.46 20.73 21.38 20.60 20.90 20.83 21.15 21.28	Channel (dBm) 21.29 21.87 21.38 21.63 21.93 21.28 21.72 21.09 21.50 21.33 21.46 21.51	Channel (dBm) 21.86 22.15 21.62 22.09 21.77 21.91 21.66 21.71 22.02 22.15 21.55 21.99
Test Bandwidth	Test Modulation QPSK	Block & RB offset RB1#0 RB1#24 RB1#49 RB25#0 RB25#12 RB25#24 RB50#0 RB1#24 RB1#49 RB25#0 RB25#0 RB25#12 RB25#12 RB25#24	Channel (dBm) 21.18 21.74 20.97 21.48 21.02 21.92 20.96 21.16 21.17 21.17 21.18	Channel (dBm) 20.81 21.37 20.75 21.12 21.46 20.73 21.38 20.60 20.90 20.83 21.15 21.28 21.01	Channel (dBm) 21.29 21.87 21.38 21.63 21.63 21.28 21.28 21.72 21.09 21.50 21.33 21.46 21.51 21.06	Channel (dBm) 21.86 22.15 21.62 22.09 21.77 21.91 21.66 21.71 22.02 22.15 21.71 22.02 22.15 21.55 21.99 21.83

Note: The lowest channel frequency, middle channel frequency and high channel frequency is low, middle and high test frequencies corresponding

to different bandwidths within the frequency range 2555MHz~2655MHz, and the low channel frequency is 2580MHz.

LTE Band 41 part2:

Tost	Test	Resource	Lowest	Low	Middle	High
Iest Dondwidth	Iest	Block & RB	Channel	Channel	Channel	Channel
Danuwiuui	Wiouulation	offset	(dBm)	(dBm)	(dBm)	(dBm)
	QPSK	RB1#0	20.68	20.41	20.97	21.85
		RB1#37	21.43	20.95	21.33	21.10
		RB1#74	21.15	20.85	21.41	21.10
		RB36#0	21.46	21.05	21.49	21.19
		RB36#17	20.75	20.88	21.87	21.62
		RB36#35	21.57	21.28	21.86	22.03
15M		RB75#0	21.47	20.84	21.07	21.81
13101		RB1#0	21.26	20.94	21.47	21.48
		RB1#37	21.34	20.75	21.00	21.43
		RB1#74	21.59	21.15	21.58	21.58
	16-QAM	RB36#0	20.87	20.79	21.55	21.62
		RB36#17	20.96	20.74	21.37	21.10
		RB36#35	21.15	21.01	21.72	21.75
		RB75#0	20.68	20.84	21.85	21.21
TT (Test	-	_			
Test	Tost	Resource	Lowest	Low	Middle	High
Test	Test	Resource Block & RB	Lowest Channel	Low Channel	Middle Channel	High Channel
Test Bandwidth	Test Modulation	Resource Block & RB offset	Lowest Channel (dBm)	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
Test Bandwidth	Test Modulation	Resource Block & RB offset RB1#0	Lowest Channel (dBm) 22.23	Low Channel (dBm) 21.81	Middle Channel (dBm) 22.28	High Channel (dBm) 22.16
Test Bandwidth	Test Modulation	Resource Block & RB offset RB1#0 RB1#49	Lowest Channel (dBm) 22.23 20.93	Low Channel (dBm) 21.81 20.51	Middle Channel (dBm) 22.28 20.92	High Channel (dBm) 22.16 20.70
Test Bandwidth	Test Modulation	Resource Block & RB offset RB1#0 RB1#49 RB1#99	Lowest Channel (dBm) 22.23 20.93 21.52	Low Channel (dBm) 21.81 20.51 21.20	Middle Channel (dBm) 22.28 20.92 21.75	High Channel (dBm) 22.16 20.70 21.62
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#99 RB50#0	Lowest Channel (dBm) 22.23 20.93 21.52 22.05	Low Channel (dBm) 21.81 20.51 21.20 21.59	Middle Channel (dBm) 22.28 20.92 21.75 22.01	High Channel (dBm) 22.16 20.70 21.62 22.11
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#99 RB50#0 RB50#24	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#99 RB50#0 RB50#24 RB50#49	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33 21.62	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05 21.07	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62 21.37	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57 21.63
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#99 RB50#0 RB50#24 RB50#49 RB100#0	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33 21.62 21.60	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05 21.07 21.09	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62 21.37 21.45	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57 21.63 21.59
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#99 RB50#0 RB50#24 RB50#49 RB100#0 RB100#0 RB1#0	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33 21.62 21.60 21.71	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05 21.05 21.07 21.09 21.01	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62 21.37 21.45 21.16	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57 21.63 21.59 20.78
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#49 RB50#0 RB50#24 RB50#49 RB100#0 RB1#0 RB1#0 RB1#0 RB11#0 RB100#0 RB1#0 RB1#0 RB1#49	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33 21.62 21.60 21.71 20.78	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05 21.07 21.07 21.09 21.01 20.39	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62 21.37 21.45 21.16 20.83	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57 21.63 21.59 20.78 21.42
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#49 RB50#0 RB50#24 RB50#49 RB100#0 RB1#0 RB1#49 RB1#49 RB1#0 RB1#0 RB1#49	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33 21.62 21.60 21.71 20.78 20.94	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05 21.07 21.09 21.01 20.39 20.53	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62 21.37 21.45 21.16 20.83 20.96	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57 21.63 21.59 20.78 21.42 20.84
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#99 RB50#0 RB50#24 RB50#49 RB100#0 RB1#0 RB1 RB1 RB1 RB1 RB1 RB1 RB1	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33 21.62 21.60 21.71 20.78 20.94 21.12	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05 21.07 21.09 21.01 20.39 20.53 20.61	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62 21.37 21.45 21.16 20.83 20.96 20.94	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57 21.63 21.59 20.78 21.42 20.84 20.87
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#99 RB50#0 RB50#49 RB100#0 RB1#0 RB1#0 RB1#0 RB1#0 RB1#00 RB1	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33 21.62 21.60 21.71 20.78 20.94 21.12 21.50	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05 21.07 21.09 21.01 20.39 20.53 20.61 20.94	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62 21.37 21.45 21.16 20.83 20.96 20.94 21.23	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57 21.63 21.59 20.78 21.42 20.84 20.87 21.35
Test Bandwidth	Test Modulation QPSK	Resource Block & RB offset RB1#0 RB1#49 RB1#49 RB50#0 RB50#24 RB50#49 RB100#0 RB1#0 RB1#0 RB1#0 RB50#0 RB1#49 RB100#0 RB1#0 RB1#0 RB1#0 RB1#49 RB50#0 RB50#0 RB50#24 RB50#24 RB50#24	Lowest Channel (dBm) 22.23 20.93 21.52 22.05 21.33 21.62 21.60 21.71 20.78 20.94 21.12 21.50 21.04	Low Channel (dBm) 21.81 20.51 21.20 21.59 21.05 21.05 21.07 21.09 21.01 20.39 20.53 20.61 20.94 20.53	Middle Channel (dBm) 22.28 20.92 21.75 22.01 21.62 21.37 21.45 21.16 20.83 20.96 20.94 21.23 20.85	High Channel (dBm) 22.16 20.70 21.62 22.11 21.57 21.63 21.59 20.78 21.42 20.84 20.87 21.35 21.47

Note: The lowest channel frequency, middle channel frequency and high channel frequency is low, middle and high test frequencies corresponding

to different bandwidths within the frequency range 2555MHz~2655MHz, and the low channel frequency is 2580MHz.

LTE Band 66 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
	QPSK	RB1#0	21.53	21.86	21.71
		RB1#3	21.56	21.79	21.81
		RB1#5	21.54	21.85	21.82
		RB3#0	21.49	21.89	21.83
		RB3#1	21.53	21.97	21.82
		RB3#3	21.41	22.11	21.73
1 414		RB6#0	21.44	22.19	21.78
1.4M		RB1#0	21.55	22.21	21.93
		RB1#3	21.57	22.20	21.94
		RB1#5	21.49	22.17	22.06
	16-QAM	RB3#0	21.51	22.20	21.97
		RB3#1	21.54	22.21	21.98
		RB3#3	21.47	22.19	21.95
		RB6#0	21.40	22.31	21.92
	QPSK	RB1#0	21.54	22.33	21.82
		RB1#7	21.53	22.21	21.73
		RB1#14	21.55	22.30	21.74
		RB8#0	21.58	22.26	21.76
		RB8#4	21.68	22.27	21.76
		RB8#7	21.66	22.34	21.86
2) (RB15#0	21.73	22.31	21.87
31/1		RB1#0	21.72	22.31	21.83
		RB1#7	21.60	22.33	21.88
		RB1#14	21.75	22.24	21.97
	16-QAM	RB8#0	21.78	22.23	21.86
		RB8#4	21.67	22.36	21.84
		RB8#7	21.67	22.36	21.87
		RB15#0	21.65	22.33	21.81

LTE Band 66 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
	QPSK	RB1#0	21.63	22.22	21.82
		RB1#12	21.49	22.29	21.80
		RB1#24	21.55	22.22	21.79
		RB12#0	21.57	22.31	21.85
		RB12#6	21.55	22.36	21.83
		RB12#11	21.65	22.34	21.84
514		RB25#0	21.53	22.29	21.79
5101		RB1#0	21.53	22.24	21.75
		RB1#12	21.64	22.23	21.71
		RB1#24	21.63	22.23	21.75
	16-QAM	RB12#0	21.52	22.25	21.87
		RB12#6	21.46	22.25	21.94
		RB12#11	21.53	22.21	22.06
		RB25#0	21.42	22.20	22.14
	QPSK	RB1#0	21.46	22.31	22.20
		RB1#24	21.43	22.29	22.19
		RB1#49	21.37	22.37	22.23
		RB25#0	21.34	22.35	22.29
		RB25#12	21.34	22.30	22.33
		RB25#24	21.37	22.21	22.37
10M		RB50#0	21.31	22.33	22.44
10141		RB1#0	21.28	22.25	22.41
		RB1#24	21.29	22.23	22.41
		RB1#49	21.27	22.15	22.33
	16-QAM	RB25#0	21.15	22.17	22.32
		RB25#12	21.26	22.15	22.26
		RB25#24	21.17	22.14	22.36
		RB50#0	21.09	22.05	22.44
LTE Band 66 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.04	21.96	22.33
		RB1#37	21.14	21.90	22.32
		RB1#74	21.10	21.85	22.31
Test Bandwidth	QPSK	RB36#0	21.15	21.92	22.26
		RB36#17	21.14	21.92	22.20
		RB36#35	21.21	21.99	22.28
15M		RB75#0	21.06	21.94	22.20
13101		RB1#0	21.04	21.90	22.22
		RB1#37	20.97	21.86	22.28
		RB1#74	20.95	21.83	22.24
	16-QAM	RB36#0	21.01	21.81	22.24
	QPSK	RB36#17	20.97	21.69	22.30
		RB36#35	20.85	21.73	22.38
		RB75#0	20.85	21.91	22.41
		RB1#0	22.02	22.49	22.50
		RB1#49	20.82	21.76	22.38
15M 20M		RB1#99	20.79	21.86	22.41
	QPSK	RB50#0	21.16	22.29	22.23
		RB50#24	20.66	21.97	22.36
		RB50#49	20.67	22.07	22.44
20M		RB100#0	Low Channel (dBm) Middle Channel (dBm) 21.04 21.96 21.14 21.90 21.15 21.92 21.14 21.92 21.15 21.92 21.14 21.92 21.15 21.92 21.14 21.92 21.15 21.92 21.14 21.92 21.15 21.92 21.14 21.92 21.15 21.92 21.14 21.92 21.91 21.91 21.02 21.91 20.97 21.86 20.97 21.83 21.01 21.81 20.97 21.69 20.85 21.73 20.82 21.76 20.82 21.76 20.79 21.86 21.16 22.29 20.67 22.07 20.67 22.07 20.61 22.02 20.61 22.08 20.62 22.02	22.33	
20141		RB1#0	20.57	22.07	22.35
		RB1#49	20.61	22.08	22.43
		RB1#99	20.64	22.08	22.45
	16-QAM	RB50#0	20.62	22.02	22.41
		RB50#24	20.67	22.06	22.41
		RB50#49	20.60	22.07	22.37
		RB100#0	20.70	22.05	22.28

LTE Band 71 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	21.33	21.23	21.59
		RB1#12	21.75	21.30	21.10
		RB1#24	21.51	21.57	21.31
Test Bandwidth	QPSK	RB12#0	21.44	21.79	21.60
		RB12#6	22.03	21.55	21.24
		RB12#11	21.19	21.43	20.97
514		RB25#0	21.68	21.88	21.62
JIVI		RB1#0	21.45	21.71	21.06
		RB1#12	21.57	21.64	21.17
		RB1#24	22.10	21.87	21.07
	16-QAM	RB12#0	21.91	21.99	21.67
		RB12#6	21.35	21.45	21.54
		RB12#11	21.75	21.78	21.26
		RB25#0	22.06	21.39	21.65
		RB1#0	21.49	21.82	21.55
		RB1#24	21.85	21.09	21.80
		RB1#49	21.64	21.61	22.09
	QPSK	RB25#0	21.02	21.24	21.28
		RB25#12	21.09	21.23	22.22
		RB25#24	21.68	21.91	21.60
10M		RB50#0	21.22	21.50	22.18
10141		RB1#0	21.36	21.68	21.51
		RB1#24	21.27	21.88	21.67
		RB1#49	21.79	21.95	21.24
	16-QAM	RB25#0	21.54	21.64	22.04
		RB25#12	21.45	21.83	22.02
		RB25#24	21.23	21.24	21.49
		RB50#0	21.19	21.69	21.75

LTE Band 71 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	20.86	21.89	21.64
		RB1#37	21.52	21.83	21.54
		RB1#74	20.92	21.89	21.60
Test Bandwidth	QPSK	RB36#0	20.74	21.02	21.15
		RB36#17	21.35	21.50	21.11
		RB36#35	20.78	21.92	21.67
15M		RB75#0	20.88	21.72	21.35
15101		RB1#0	21.26	21.35	21.84
		RB1#37	20.75	21.91	21.64
		RB1#74	20.75	21.79	21.55
	16-QAM	RB36#0	21.29	21.02	21.10
	16-QAM	RB36#17	21.66	21.14	21.87
		RB36#35	20.78	21.08	21.35
		RB75#0	20.83	21.43	21.11
		RB1#0	22.14	22.28	22.25
		RB1#49	21.12	21.67	21.55
15M 20M		RB1#99	21.00	21.78	20.84
	QPSK	RB50#0	22.09	22.26	22.20
		RB50#24	21.35	21.66	21.56
		RB50#49	21.69	21.78	21.65
20M		RB100#0	20.85	21.36	21.21
20141		RB1#0	21.26	21.06	21.53
		RB1#49	21.05	21.14	20.92
		RB1#99	20.98	21.49	20.86
	16-QAM	RB50#0	21.20	21.30	20.83
		RB50#24	21.26	20.87	20.99
		RB50#49	20.85	21.30	21.25
		RB100#0	21.53	21.54	21.26

Mode	Channel	Freq.(MHz)	Conducted Power(Peak/dBm)
	Low	2402	10.07
GFSK	Middle	2441	10.18
	High	2480	10.53
	Low	2402	9.62
π/4 DQPSK	Middle	2441	9.53
	High	2480	10.11
	Low	2402	9.78
8DPSK	Middle	2441	9.74
	High	2480	10.28
	Low	2402	-0.35
LE 1M	Middle	2440	-0.97
	High	2480	-0.38
	Low	2402	-0.38
LE 2M	Middle	2440	-0.99
	High	2480	-0.42

Bluetooth Power:

WiFi 2.4G Power:

		Frequency		Chain 0	Chain 1	Total
Mode	Channel	(MH _z)	Data Rate	Conducted Power	Conducted Power	Conducted Power
		(IVITIZ)		(Avg/dBm)	(Avg/dBm)	(Avg/dBm)
	Low	2412		13.45	13.14	
802.11b	Middle	2437	1Mbps	13.15	13.15	
	High	2462		12.35	13.01	
	Low	2412		9.47	9.27	
802.11g	Middle	2437	6Mbps	9.27	9.13	
	High	2462		8.48	9.11	
	Low	2412		9.38	9.09	12.25
802.11n20	Middle	2437	MCS0	8.79	8.89	11.85
	High	2462		8.41	9.25	11.86
	Low	2422		9.64	9.29	12.48
802.11n40	Middle	2437	MCS0	9.29	9.29	12.30
	High	2452		9.17	9.21	12.20

WiFi 5GHz Power:

			T	Chain 0	Chain 1	Total
Band	Mode	Channel	F requency	Conducted Power	Conducted Power	Conducted Power
			(MHZ)	(Avg/dBm)	(Avg/dBm)	(Avg/dBm)
		Low	5180	8.45	7.58	
	802.11a	Middle	5200	8.37	8.11	
		High	5240	8.70	9.45	
		Low	5180	7.49	7.25	10.38
	802.11nHT20	Middle	5200	7.39	8.19	10.82
		High	5240	7.93	8.82	11.41
5 2CU-	902 11 mUT 40	Low	5190	7.43	7.31	10.38
3.20HZ	802.11IIH140	High	5230	7.99	8.23	11.12
		Low	5180	7.30	7.31	10.32
	802.11ac20	Middle	5200	7.48	7.94	10.73
		High	5240	7.95	8.71	11.36
	802.11ac40	Low	5190	7.59	7.19	10.40
		High	5230	8.10	8.24	11.18
	802.11ac80	Low	5210	7.52	7.63	10.59
	802.11a	Low	5745	7.41	7.44	
		Middle	5785	7.27	7.15	
		High	5825	7.17	7.78	
		Low	5745	7.27	7.35	10.32
	802.11nHT20	Middle	5785	7.12	7.49	10.32
		High	5825	7.11	7.74	10.45
5 %CU7	802 11 ₀ UT40	Low	5755	7.81	7.94	10.89
3.80HZ	802.11IIH140	High	5795	7.16	7.59	10.39
		Low	5745	7.29	7.14	10.23
	802.11ac20	Middle	5785	7.00	7.40	10.21
		High	5825	7.12	7.77	10.47
	202 11aa 40	Low	5755	7.52	7.70	10.62
	802.11ac40	High	5795	7.18	7.78	10.50
	802.11ac80	Low	5775	7.43	7.48	10.47

No.: RXZ211221004SA01

Duty Cycle: Chain0:

802.11b Mode Middle Channel





802.11n-HT20 Mode Middle Channel

802.11n-HT40 Mode Middle Channel



Chain1:



802.11b Mode Middle Channel



802.11n-HT20 Mode Middle Channel

802.11n-HT40 Mode Middle Channel





BLE(1Mbps) Mode Middle Channel

BLE(2Mbps) Mode Middle Channel



Chain	Mode	Duty Cycle (%)	T(ms)	l/T(kHz)	10log(1/x)
	802.11b	100	/	/	0
Chain0	802.11g	100	/	/	0
Chamo	802.11n-HT20	100	/	/	0
	802.11n-HT40	100	/	/	0
	802.11b	100	/	/	0
Chain1	802.11g	100	/	/	0
Chain1	802.11n-HT20	100	/	/	0
	802.11n-HT40	100	/	/	0
/	BLE(1Mbps)	67.35	0.423	2.364	1.717
/	BLE(2Mbps)	37.56	0.237	4.219	4.253

Note: "x" means the Duty Cycle.

Duty Cycle (Chain0) 5150~5250MHz Band:



802.11a mode

802.11n-HT20 mode



802.11 ac40 mode



802.11n-HT40 mode



802.11 ac80 mode



Duty Cycle (Chain1) 5150~5250MHz Band:



802.11n-HT20 mode



802.11 ac40 mode







No.: RXZ211221004SA01

Duty Cycle (Chain0) 5725~5850MHz Band: 802.11a mode



802.11n-HT20 mode



802.11 ac40 mode



-3

-4

-5

-70

Center

5.775 GHz

No.: RXZ211221004SA01





Note: It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (New Taipei Laboratory)

10 ma/

Duty Cycle (Chain1) 5725~5850MHz Band: 802.11a mode



802.11n-HT20 mode



802.11 ac40 mode



802.11n-HT40 mode



802.11n- ac80 mode



Chain 0:

Mode	Frequency Range (MHz)	Duty Cycle (%)	T (ms)	1/T (kHz)	10log(1/x)
802.11a		100	/	/	0
802.11ac20		100	/	/	0
802.11n-HT20	5150 5250	100	/	/	0
802.11ac40	5150-5250	100	/	/	0
802.11n-HT40		100	/	/	0
802.11ac80		100	/	/	0
802.11a		100	/	/	0
802.11ac20		100	/	/	0
802.11n-HT20	5705 5850	100	1	/	0
802.11ac40	3723-3830	100	1	/	0
802.11n-HT40		100	1	/	0
802.11ac80		100	/	1	0

Chain 1:

Mode	Frequency Range (MHz)	Duty Cycle (%)	T (ms)	1/T (kHz)	10log(1/x)
802.11a		100	1	/	0
802.11ac20		100	1	/	0
802.11n-HT20	5150 5250	100	1	/	0
802.11ac40	5150-5250	100	1	/	0
802.11n-HT40		100	1	/	0
802.11ac80		100	/	/	0
802.11a		100	/	/	0
802.11ac20		100	1	/	0
802.11n-HT20	5705 5850	100	1	/	0
802.11ac40	5725-5850	100	/	/	0
802.11n-HT40		100	1	/	0
802.11ac80		100	/	/	0

Note: "x" means duty cycle.

WWAN Antenna Reduction Power

WCDMA Band II

	Test Mode	3GPP	Averaged Mean Power		
Test Condition		Sub	(dBm)		
		Test	Low Channel	Mid Channel	High Channel
	Rel 99 RMC	1	12.26	12.66	12.41
		1	11.86	11.86	11.95
	HSDPA	2	11.93	11.74	11.93
		3	11.79	11.67	12.06
		4	11.77	11.84	11.95
Normal		1	11.74	11.67	11.97
		2	11.78	11.73	11.96
	HSUPA	3	11.81	11.63	12.02
		4	11.90	11.72	11.97
		5	11.90	11.71	11.99
	HSPA+	1	11.84	11.81	12.01

WCDMA Band IV

	Test Mode	3GPP	Averaged Mean Power		
Test Condition		Sub	(dBm)		
		Test	Low Channel	Mid Channel	High Channel
	Rel 99 RMC	1	14.67	14.44	14.23
		1	14.61	13.78	13.71
	HSDPA	2	14.61	13.79	13.64
		3	14.56	13.76	13.75
		4	14.50	13.84	13.70
Normal		1	14.44	13.76	13.75
	HSUPA	2	14.51	13.72	13.78
		3	14.47	13.84	13.73
		4	14.62	13.72	13.77
		5	14.40	13.70	13.73
	HSPA+	1	14.50	13.89	13.77

LTE Band 7 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	19.17	18.64	18.39
		RB1#12	19.05	18.38	17.98
		RB1#24	19.09	18.21	17.92
Test Bandwidth 5M	QPSK	RB12#0	19.11	18.14	17.81
		RB12#6	18.97	18.22	17.75
		RB12#11	18.91	18.25	17.56
514		RB25#0	18.83	17.96	17.36
3101		RB1#0	18.82	17.73	17.64
		RB1#12	18.75	17.56	17.55
		RB1#24	18.68	17.53	17.46
	16-QAM	RB12#0	18.63	17.49	17.42
		RB12#6	18.47	17.51	17.28
		RB12#11	18.21	17.23	17.16
		RB25#0	Resource Block Low Channel (dBm) N RB offset (dBm) 1 RB1#0 19.17 1 RB1#12 19.05 1 RB1#24 19.09 1 RB12#0 19.11 1 RB12#0 19.11 1 RB12#1 18.97 1 RB12#1 18.91 1 RB12#1 18.91 1 RB12#1 18.83 1 RB1#12 18.75 1 RB1#24 18.63 1 RB12#0 18.63 1 RB12#1 18.21 1 RB12#1 18.02 1 RB12#1 19.03 1 RB1#24 19.03 1 RB1#25 19.03 1 RB25#0 19.12 1 RB25#12 19.03 1 RB25#24 18.95 1 RB1#0 18.76 1 RB1#0 18.74 <td< td=""><td>17.17</td><td>17.15</td></td<>	17.17	17.15
		RB1#0	19.13	18.67	18.48
		RB1#24	19.03	18.56	18.27
		RB1#49	19.06	18.55	18.24
	QPSK	RB25#0	19.12	18.21	18.16
		RB25#12	19.03	18.14	18.07
		RB25#24	18.95	18.3	17.95
10M		RB50#0	18.76	18.43	17.96
10141		RB1#0	18.74	17.96	17.85
		RB1#24	19.01	17.87	17.45
		RB1#49	19.05	18.44	17.27
	16-QAM	RB25#0	18.84	18.21	17.16
		RB25#12	18.88	17.94	17.06
		RB25#24	18.79	17.77	16.98
		RB50#0	18.68	17.62	16.92

LTE Band 7 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	19.15	18.42	18.43
		RB1#37	19.06	17.94	18.28
		RB1#74	18.94	17.78	18.11
	QPSK	RB36#0	18.76	17.68	17.92
		RB36#17	18.66	17.59	17.84
		RB36#35	18.43	17.45	17.74
15M		RB75#0	18.41	17.35	18.06
13101		RB1#0	18.27	17.39	17.88
		RB1#37	18.17	17.52	17.67
		RB1#74	18.15	17.59	17.63
	16-QAM	RB36#0	18.31	17.27	17.76
		RB36#17	18.19	17.18	17.52
		RB36#35	18.12	17.11	17.38
		RB75#0	17.82	17.05	17.19
	QPSK	RB1#0	19.27	18.88	18.62
		RB1#49	19.25	18.06	18.58
		RB1#99	18.98	17.92	17.93
		RB50#0	18.38	18.81	18.33
		RB50#24	19.15	18.08	17.02
		RB50#49	19.08	18.1	17.56
20M		RB100#0	19.06	17.51	17.42
20141		RB1#0	19.12	18.03	16.96
		RB1#49	18.88	17.63	17.15
		RB1#99	18.62	17.73	16.86
	16-QAM	RB50#0	18.83	18.18	16.54
		RB50#24	19.05	17.76	17.37
		RB50#49	18.78	18.15	16.88
		RB100#0	18.46	17.73	17.52

No.: RXZ211221004SA01

LTE Band 12 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	19.16	19.23	19.27
		RB1#3	19.05	19.21	19.19
		RB1#5	19.15	19.26	19.19
	QPSK	RB3#0	19.20	19.23	19.00
		RB3#1	19.13	19.17	19.10
		RB3#3	19.26	19.26	19.12
1 414		RB6#0	19.20	19.17	19.09
1.4M		RB1#0	19.19	19.27	19.21
		RB1#3	19.26	19.25	19.11
		RB1#5	19.11	19.21	19.25
	16-QAM	RB3#0	19.12	19.16	19.15
		RB3#1	19.06	19.23	19.18
		RB3#3	18.96	19.18	19.28
		RB6#0	18.92	19.21	19.35
	QPSK	RB1#0	19.19	19.32	19.34
		RB1#7	19.16	19.27	19.39
		RB1#14	19.03	19.28	19.32
		RB8#0	19.02	19.28	19.29
		RB8#4	19.06	19.25	19.22
		RB8#7	18.95	19.20	19.25
2) (RB15#0	18.89	19.20	19.29
3M		RB1#0	18.97	19.15	19.21
		RB1#7	18.99	19.08	19.17
		RB1#14	19.05	19.11	19.29
	16-QAM	RB8#0	18.99	19.09	19.33
		RB8#4	18.98	19.15	19.28
		RB8#7	18.97	19.16	19.33
		RB15#0	18.98	19.25	19.14

LTE Band 12 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	19.21	19.39	19.33
		RB1#12	19.15	19.22	19.26
		RB1#24	19.15	19.18	19.13
	QPSK	RB12#0	19.08	19.02	19.04
		RB12#6	18.98	18.93	18.93
		RB12#11	18.88	18.86	18.82
514		RB25#0	18.86	18.75	18.72
JIVI		RB1#0	18.70	18.65	18.64
		RB1#12	18.66	18.58	18.53
		RB1#24	18.39	18.33	18.41
	16-QAM	RB12#0	18.29	18.26	18.35
		RB12#6	18.21	18.14	18.35
		RB12#11	18.18	18.04	18.41
		RB25#0	18.27	18.15	18.45
	QPSK	RB1#0	19.31	19.50	19.50
		RB1#24	19.20	19.32	19.35
		RB1#49	19.18	19.25	19.28
		RB25#0	19.32	19.41	19.41
		RB25#12	19.26	19.34	19.29
		RB25#24	19.16	19.14	19.13
10M		RB50#0	19.12	19.06	19.05
1011		RB1#0	19.22	19.42	19.43
		RB1#24	19.11	19.28	19.29
		RB1#49	19.06	19.19	19.23
	16-QAM	RB25#0	18.97	19.01	19.03
		RB25#12	18.91	18.92	18.96
		RB25#24	18.84	18.81	18.86
		RB50#0	18.72	18.75	18.81

LTE Band 25 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	11.71	11.80	11.74
		RB1#3	11.69	11.80	11.77
		RB1#5	11.59	11.80	11.73
	QPSK	RB3#0	11.62	11.85	11.73
		RB3#1	11.62	11.69	11.81
		RB3#3	11.67	11.70	11.69
1 414		RB6#0	11.65	11.77	11.76
1.4M		RB1#0	11.69	11.75	11.81
		RB1#3	11.63	11.83	11.71
		RB1#5	11.65	11.70	11.79
	16-QAM	RB3#0	11.78	11.77	11.76
		RB3#1	11.83	11.75	11.77
		RB3#3	11.84	11.71	11.58
		RB6#0	11.85	11.75	11.50
	QPSK	RB1#0	11.87	11.71	11.43
		RB1#7	11.81	11.64	11.55
		RB1#14	11.65	11.73	11.54
		RB8#0	11.56	11.73	11.74
		RB8#4	11.51	11.78	11.72
		RB8#7	11.55	11.84	11.66
214		RB15#0	11.51	11.77	11.67
5171		RB1#0	11.57	11.76	11.79
		RB1#7	11.53	11.71	11.82
		RB1#14	11.42	11.69	11.80
	16-QAM	RB8#0	11.47	11.64	11.85
		RB8#4	11.49	11.67	11.75
		RB8#7	11.41	11.62	11.86
		RB15#0	11.46	11.70	11.90

LTE Band 25 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	11.41	12.03	11.24
		RB1#12	11.39	12.03	11.40
		RB1#24	11.44	11.96	11.42
	QPSK	RB12#0	11.47	12.04	11.43
		RB12#6	11.38	12.06	11.31
		RB12#11	11.40	12.12	11.30
514		RB25#0	11.39	12.09	11.37
5101		RB1#0	11.39	12.05	11.42
		RB1#12	11.33	12.02	11.50
		RB1#24	11.45	12.04	11.56
	16-QAM	RB12#0	11.42	12.07	11.42
		RB12#6	11.49	12.03	11.38
		RB12#11	11.46	12.06	11.35
		RB25#0	11.55	12.06	11.40
	QPSK	RB1#0	11.63	12.01	11.35
		RB1#24	11.59	12.06	11.33
		RB1#49	11.62	12.10	11.38
		RB25#0	11.62	12.10	11.48
		RB25#12	11.62	12.02	11.41
		RB25#24	11.64	12.00	11.28
10M		RB50#0	11.68	11.95	11.35
10M		RB1#0	11.80	11.95	11.31
		RB1#24	11.68	12.05	11.38
		RB1#49	11.53	12.00	11.33
	16-QAM	RB25#0	11.59	11.99	11.40
		RB25#12	11.62	12.09	11.37
		RB25#24	11.64	12.20	11.47
		RB50#0	11.68	12.11	11.48

LTE Band 25 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	12.02	11.84	11.90
		RB1#37	11.85	11.92	11.82
		RB1#74	11.69	11.46	11.75
	QPSK	RB36#0	11.70	11.56	11.63
		RB36#17	11.57	11.64	11.53
		RB36#35	11.44	11.57	11.36
15M		RB75#0	11.47	11.61	11.25
15101		RB1#0	11.15	11.45	11.36
		RB1#37	11.97	11.31	11.41
		RB1#74	11.77	11.20	11.54
	16-QAM	RB36#0	11.66	11.27	11.57
		RB36#17	11.54	11.35	11.47
		RB36#35	11.57	11.46	11.40
		RB75#0	11.62	11.66	11.53
	QPSK	RB1#0	12.12	12.37	12.42
		RB1#49	12.09	12.14	12.33
		RB1#99	11.88	12.09	12.29
		RB50#0	11.79	11.85	12.22
		RB50#24	11.81	11.86	12.14
		RB50#49	11.72	11.82	12.13
2014		RB100#0	11.66	11.72	12.07
20101		RB1#0	11.45	11.67	12.12
		RB1#49	11.36	11.61	11.75
		RB1#99	11.41	11.43	11.66
	16-QAM	RB50#0	11.32	11.21	11.73
		RB50#24	11.28	11.17	11.51
		RB50#49	11.12	11.13	11.56
		RB100#0	11.16	11.23	11.37

LTE Band 66 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	14.65	14.79	14.72
		RB1#3	14.77	14.64	14.79
		RB1#5	14.78	14.74	14.83
	QPSK	RB3#0	14.86	14.82	14.78
		RB3#1	14.75	14.77	14.86
		RB3#3	14.84	14.86	14.85
1 414		RB6#0	14.8	14.81	14.78
1.4M		RB1#0	14.74	14.67	14.8
		RB1#3	14.69	14.6	14.7
		RB1#5	14.82	14.68	14.69
	16-QAM	RB3#0	14.71	14.74	14.7
		RB3#1	14.85	14.8	14.71
		RB3#3	14.8	14.82	14.68
		RB6#0	14.8	14.86	14.65
	QPSK	RB1#0	14.87	14.82	14.56
		RB1#7	14.76	14.66	14.62
		RB1#14	14.7	14.57	14.71
		RB8#0	14.71	14.62	14.68
		RB8#4	14.63	14.71	14.65
		RB8#7	14.45	14.75	14.71
214		RB15#0	14.4	14.66	14.79
5171		RB1#0	14.45	14.6	14.8
		RB1#7	14.35	14.65	14.65
		RB1#14	14.46	14.66	14.72
	16-QAM	RB8#0	14.52	14.69	14.62
		RB8#4	14.44	14.76	14.54
		RB8#7	14.46	14.78	14.59
		RB15#0	14.38	14.7	14.52

LTE Band 66 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	14.43	14.50	15.11
		RB1#12	14.38	14.64	15.06
		RB1#24	14.49	14.67	14.95
	QPSK	RB12#0	14.51	14.77	14.97
		RB12#6	14.52	14.79	14.96
		RB12#11	14.46	14.68	14.99
514		RB25#0	14.39	14.73	14.86
JIVI		RB1#0	14.47	14.82	14.92
		RB1#12	14.55	14.75	14.95
		RB1#24	14.53	14.75	14.96
	16-QAM	RB12#0	14.61	14.84	14.99
		RB12#6	14.62	14.95	15.03
		RB12#11	14.67	14.98	15.12
		RB25#0	14.71	14.98	15.18
	QPSK	RB1#0	14.60	14.96	15.16
		RB1#24	14.53	14.82	15.11
		RB1#49	14.65	14.82	15.19
		RB25#0	14.63	14.74	15.18
		RB25#12	14.68	14.72	15.07
		RB25#24	14.67	14.60	15.03
10M		RB50#0	14.67	14.54	14.96
TOM		RB1#0	14.64	14.55	14.92
		RB1#24	14.64	14.65	14.85
		RB1#49	14.66	14.53	14.70
	16-QAM	RB25#0	14.59	14.65	14.66
		RB25#12	14.68	14.61	14.69
		RB25#24	14.71	14.69	14.63
		RB50#0	14.68	14.82	14.59

LTE Band 66 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	14.88	14.87	15.01
		RB1#37	14.82	14.92	15.00
		RB1#74	14.73	14.87	15.03
	QPSK	RB36#0	14.72	14.85	14.94
		RB36#17	14.68	14.97	15.03
		RB36#35	14.58	15.10	14.99
15M		RB75#0	14.52	15.09	14.78
15101		RB1#0	14.46	15.07	14.68
		RB1#37	14.38	15.21	14.63
		RB1#74	14.32	15.22	14.52
	16-QAM	RB36#0	14.22	15.21	14.52
		RB36#17	14.25	15.25	14.67
		RB36#35	14.31	15.31	14.78
		RB75#0	14.26	15.36	14.89
	QPSK	RB1#0	15.37	15.53	15.47
		RB1#49	15.35	15.46	15.24
		RB1#99	15.27	15.44	15.14
		RB50#0	15.19	15.38	15.11
		RB50#24	15.08	15.33	15.03
		RB50#49	15.06	15.28	14.96
20M		RB100#0	14.96	15.23	14.86
20141		RB1#0	14.85	15.19	14.73
		RB1#49	14.72	15.12	14.72
		RB1#99	14.68	15.04	14.52
	16-QAM	RB50#0	14.55	14.96	14.37
		RB50#24	14.49	14.91	14.31
		RB50#49	14.36	14.81	14.21
		RB100#0	14.29	14.86	14.26
LTE Band 2 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	11.54	11.81	11.66
		RB1#3	11.48	11.83	11.69
RB1#0 RB1#3 RB1#3 RB1#5 QPSK RB3#0 RB3#1 RB3#3 RB6#0 1.4M RB1#0 RB1#0 RB1#0 RB1#3 RB1#3 RB1#3 RB1#3 RB1#3 RB1#5 16-QAM RB3#1 RB3#3 RB3#3 RB6#0 RB3#1 RB3#3 RB6#0 RB3#3 RB6#0 RB1#0 RB1#0 RB1#0 RB1#0 RB1#0 RB1#0 RB1#0	RB1#5	11.36	11.91	11.66	
	QPSK	RB3#0	11.36	11.9	11.63
		RB3#1	11.25	11.91	11.74
		RB3#3	11.31	11.89	11.7
1 414		RB6#0	11.32	11.9	11.84
1.4M		RB1#0	11.41	11.81	11.76
		RB1#3	11.38	11.84	11.71
		RB1#5	11.3	11.93	11.57
	16-QAM	RB3#0	11.37	11.89	11.72
		RB3#1	11.3	11.94	11.8
		RB3#3	11.33	11.86	11.73
		RB1#0 11.54 11.81 RB1#3 11.48 11.81 RB1#5 11.36 11.91 RB3#0 11.36 11.91 RB3#1 11.25 11.91 RB3#3 11.31 11.89 RB3#3 11.31 11.89 RB6#0 11.32 11.9 RB1#5 11.3 11.89 RB1#3 11.38 11.84 RB1#3 11.37 11.89 RB3#1 11.3 11.93 RB3#3 11.33 11.94 RB4#0 11.34 11.93 RB1#0 11.34 11.93 RB1#14 11.46 11.93 RB1#14 11.42 11.73 RB8#7 11.43 11.57 RB1#0 11.43 11.57	11.81		
		RB1#0	11.34	11.93	11.72
	A QPSK QPSK A 16-QAM	RB1#7	11.47	11.98	11.83
		ion & RB offset (dBm) (dl RB1#0 11.54 11 RB1#3 11.48 11 RB1#5 11.36 11 RB3#0 11.36 11 RB3#1 11.25 11 RB3#3 11.31 11 RB3#3 11.31 11 RB6#0 11.32 1 RB1#3 11.38 11 RB1#3 11.38 11 RB1#3 11.33 11 RB1#3 11.33 11 RB1#3 11.33 11 RB1#4 11.3 11 RB3#3 11.33 11 RB3#4 11.3 11 RB6#0 11.31 11 RB1#7 11.47 11 RB1#4 11.42 11 RB1#4 11.42 11 RB15#0 11.43 11 RB1#7 11.45 11 RB1#14 11.42	11.93	11.99	
	QPSK		11.79	11.85	
	Modulation& RB offset(dBm)RB1#011.54RB1#311.54RB1#311.48RB1#511.36RB3#011.36RB3#111.25RB3#311.31RB6#011.32RB1#011.41RB1#311.38RB1#311.38RB1#511.3RB1#511.3RB3#311.33RB3#311.33RB3#311.33RB3#311.33RB3#311.33RB6#011.31RB1#111.47RB1#1411.46QPSKRB8#0RB8#111.43RB1#1411.45RB1#1411.45RB1#1011.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.45RB1#1411.42RB8#711.45RB8#711.42RB8#711.42RB8#711.42RB15#011.54	11.73	11.95		
		RB8#7	11.47	11.62	11.87
214		RB15#0	11.43	11.57	11.79
5101		RB1#0	11.46	11.66	11.81
		RB1#7	11.45	11.69	11.84
		RB1#14	11.42	11.65	11.79
	16-QAM	RB8#0	11.45	11.69	11.84
		RB8#4	11.51	11.72	11.79
		RB8#7	11.42	11.73	11.63
		RB15#0	11.54	11.78	11.53

LTE Band 2 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	11.63	12.05	11.56
		RB1#12	11.59	12.02	11.6
	Test andwidth Test Modulation Resource Block & RB offset Low Chan (dBm) Ambuilt Modulation & RB offset (dBm) RB1#0 11.63 RB1#12 11.59 RB1#12 11.59 RB1#24 11.68 RB1#24 11.68 RB12#0 11.76 RB12#0 11.76 RB12#6 11.69 RB12#6 11.69 RB12#11 11.58 RB25#0 11.57 RB1#24 11.36 RB1#12 11.41 RB1#24 11.36 RB12#0 11.42 RB1#24 11.36 16-QAM RB12#0 11.42 RB12#11 11.51 RB12#11 11.51 RB12#0 11.66 RB12#11 11.51 RB25#0 11.61 RB1#24 11.61 RB1#49 11.68 RB1#49 11.68 RB1#49 11.61 RB25#12 11.57 RB25#12 11.51 RB25#12 11.51 RB25#12 11.61 RB50#0	11.68	11.97	11.61	
	QPSK	RB12#0	11.76	11.98	11.67
		RB12#6	11.69	12.05	11.58
		RB12#11	11.58	12.01	11.59
514		RB25#0	11.57	11.91	11.68
5101		RB1#0	11.49	11.83	11.66
		RB1#12	11.41	11.73	11.71
		RB1#24	11.36	11.66	11.78
	16-QAM	RB12#0	11.42	11.68	11.85
		RB12#6	11.46	11.78	11.8
	RB12#11	11.51	11.76	11.76	
		& RB offset (dBm) (dI RB1#0 11.63 12 RB1#12 11.59 12 RB1#24 11.68 11 RB1#24 11.68 11 RB1#24 11.69 12 RB12#0 11.76 11 RB12#1 11.58 12 RB12#1 11.58 12 RB12#1 11.57 11 RB12#1 11.57 11 RB1#12 11.41 11 RB1#24 11.36 11 RB1#24 11.36 11 RB12#0 11.42 11 RB12#0 11.42 11 RB12#1 11.51 11 RB12#1 11.56 12 RB1#24 11.63 11 RB1#24 11.61 11 RB25#12 11.61 11 RB25#12 11.57 11 RB1#0 11.61 11 RB1#49 11.38	12.07	12.14	
		RB1#0	11.6	11.94	11.97
		RB1#24	11.75	11.86	11.83
		RB1#49	11.68	11.58	11.77
	QPSK	Ation & RB offset Induition Mathematical (dBm) Ation & RB offset (dBm) (dBm) RB1#0 11.63 12.02 RB1#12 11.59 12.02 RB1#12 11.59 12.02 RB1#12 11.59 12.02 RB1#24 11.68 11.97 RB12#0 11.76 11.98 RB12#6 11.69 12.02 RB12#11 11.58 12.01 RB12#6 11.69 12.02 RB12#11 11.58 12.01 RB12#11 11.58 12.01 RB1#24 11.36 11.66 RB1#24 11.36 11.66 RB12#11 11.51 11.76 RB12#11 11.56 12.07 RB12#11 11.56 12.07 RB12#11 11.51 11.76 RB12#11 11.51 11.76 RB12#11 11.51 11.76 RB12#11 11.51 11.76	11.52	11.71	
			11.54	11.71	
		RB25#24	11.57	11.51	11.85
10M		RB50#0	11.61	11.41	11.79
TON		RB1#0	11.58	11.43	11.82
		RB1#24	11.47	11.38	11.81
		RB1#49	11.38	11.27	11.69
	16-QAM	RB25#0	11.36	11.19	11.67
		RB25#12	11.29	11.11	11.65
		RB25#24	11.38	11.14	11.66
		RB50#0	11.63	12.05	11.56

LTE Band 2 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	11.67	12.01	12.09
		RB1#37	11.65	11.98	11.99
		RB1#74	11.67	12.02	12.02
	Test Test I Indwidth Modulation I QPSK I I 15M I I 15M I I 16-QAM I I I I I 20M I I	RB36#0	11.7	11.98	12.05
		RB36#17	11.62	11.95	11.92
		RB36#35	11.72	12.04	11.98
15M		RB75#0	11.7	11.99	11.88
15101		RB1#0	11.62	11.91	11.81
		RB1#37	11.61	11.81	11.72
		RB1#74	11.63	11.82	11.65
	16-QAM	RB36#0	11.55	11.77	11.58
		RB36#17	11.47	11.73	11.52
	RB36#35	11.39	11.83	11.45	
		& RB offset(dBm)(dBm)RB1#011.6712.01RB1#3711.6511.98RB1#7411.6712.02RB36#011.711.98RB36#1711.6211.95RB36#3511.7212.04RB75#011.711.99RB1#011.6211.91RB1#3711.6111.81RB1#7411.6311.82RB36#011.5511.77RB36#1711.4711.73RB36#3511.3911.83RB75#011.5311.81RB17411.6811.94RB36#3511.3911.83RB75#011.5311.81RB1#011.7812.08RB1#4911.6611.92RB50#011.6911.99RB50#2411.6611.92RB1000011.5911.92RB1#4911.6111.72RB1#4911.6111.72RB1#4911.6111.72RB1#4911.6111.72RB1#4911.6111.72RB1#4911.6111.72RB1#4911.6111.72RB1#4911.6111.72RB50#2411.5311.67RB50#4911.4911.62RB50#4911.4911.62RB50#4911.4911.62RB100#011.5711.57	11.47		
		RB1#0	11.78	12.08	12.18
	Modulation& RB offsetRB1#0RB1#37RB1#37RB1#74QPSKRB36#35RB16RB17RB1#0RB1#74RB1#74RB1#71RB36#35RB36#35RB36#35RB36#35RB36#35RB36#35RB36#35RB36#35RB36#35RB36#35RB36#35RB1#0RB1#0RB1#99QPSKRB50#24RB50#49RB100#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#0RB1#49RB1#0RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB1#49RB50#24RB50#24RB50#49RB50#49RB50#49RB50#49RB50#49RB50#49RB50#49RB50#49RB50#49	RB1#49	11.78	12.01	12.14
		Inlation & RB offset (dBm) (d RB1#0 11.67 1 RB1#37 11.65 1 RB1#74 11.67 1 RB36#0 11.7 1 RB36#17 11.62 1 RB36#35 11.72 1 RB36#35 11.72 1 RB36#35 11.72 1 RB36#35 11.72 1 RB75#0 11.7 1 RB1#37 11.61 1 RB1#37 11.61 1 RB1#37 11.61 1 RB1#37 11.63 1 RB1#37 11.63 1 RB1#37 11.63 1 RB36#17 11.47 1 RB36#35 11.39 1 RB36#35 11.39 1 RB1#9 11.68 1 RB1#9 11.68 1 RB1#99 11.69 1 RB50#24 11.69 <td>11.94</td> <td>12.12</td>	11.94	12.12	
	QPSK		11.99	12.14	
			11.92	12.04	
		RB50#49	11.64	11.91	11.98
2014		RB100#0	11.59	11.92	11.99
2014		RB1#0	11.72	11.82	11.93
		RB1#49	11.61	11.72	11.82
		RB1#99	11.52	11.62	11.73
	16-QAM	RB50#0	11.58	11.67	11.69
		RB50#24	11.53	11.72	11.74
		RB50#49	11.49	11.62	11.75
		RB100#0	11.57	11.57	11.66

LTE Band 4 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	14.50	14.73	14.63
		RB1#3	14.60	14.72	14.56
	Test Test 1 ndwidth Modulation	RB1#5	14.65	14.70	14.60
	QPSK	RB3#0	14.51	14.72	14.53
		RB3#3	14.43	14.67	14.57
1 4 14		RB6#0	14.36	14.67	14.49
1.411		RB1#0	14.35	14.57	14.60
		RB1#3	14.34	14.61	14.71
	16 OAM	RB1#5	14.24	14.67	14.69
16-	10-QAM	RB3#0	14.15	14.59	14.71
		RB3#3	14.22	14.65	14.79
		Aulation & RB offset (dBm) (d RB1#0 14.50 1 RB1#3 14.60 1 RB1#5 14.65 1 RB1#5 14.65 1 RB3#0 14.51 1 RB3#3 14.43 1 RB6#0 14.36 1 RB6#0 14.35 1 RB1#3 14.34 1 RB1#3 14.34 1 RB1#3 14.34 1 RB1#3 14.24 1 RB3#3 14.22 1 RB3#3 14.22 1 RB3#3 14.22 1 RB6#0 14.12 1 RB6#0 14.12 1 RB1#14 14.28 1 RB6#9 14.19 1 RB6#9 14.19 1 RB1#8 14.02 1 RB1#8 14.02 1 RB1#8 14.02 1	14.64	14.74	
		RB1#0	14.12	14.55	14.68
		RB1#8	14.17	14.65	14.58
	ODSV	kion & RB offset (dBm) (d RB1#0 14.50 1 RB1#3 14.60 1 RB1#5 14.65 1 RB3#0 14.51 1 RB3#3 14.43 1 RB6#0 14.36 1 RB6#0 14.36 1 RB6#0 14.36 1 RB1#3 14.43 1 RB6#0 14.36 1 RB1#3 14.34 1 RB1#3 14.34 1 RB1#3 14.24 1 RB1#5 14.24 1 RB3#3 14.22 1 RB3#3 14.22 1 RB6#0 14.12 1 RB6#0 14.12 1 RB1#8 14.17 1 RB6#9 14.13 1 RB6#9 14.19 1 RB1#8 14.02 1 RB1#8 14.02 1	14.68	14.62	
	QPSK		14.58	14.65	
		RB6#9	14.19	14.55	14.61
214		RB15#0	14.14	14.62	14.70
5101		RB1#0	14.05	14.53	14.73
		RB1#8	14.02	14.62	14.76
	16 O M	RB1#14	14.04	14.69	14.64
3M	10-QAM	RB6#0	13.93	14.65	14.67
		RB6#9	13.89	14.66	14.66
		RB15#0	13.82	14.56	14.69

LTE Band 4 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	14.30	14.82	14.64
		RB1#12	14.39	14.85	14.74
		RB1#24	14.35	14.85	14.63
	QPSK	RB12#0	14.42	14.91	14.62
		RB12#6	14.49	14.97	14.73
		RB12#11	14.42	14.90	14.60
514		RB25#0	14.50	14.79	14.68
SM		RB1#0	14.54	14.70	14.62
		RB1#12	14.56	14.81	14.75
		RB1#24	14.64	14.86	14.78
	16-QAM	RB12#0	14.66	14.81	14.68
		RB12#6	14.89	14.72	14.72
	RB12#11	14.77	14.67	14.53	
		tion& RB offset(dBm)RB1#014.30RB1#1214.39RB1#1214.39RB1#2414.35RB12#014.42RB12#614.49RB12#614.49RB12#1114.42RB25#014.50RB1#1214.54RB1#1214.56RB1#2414.64MRB12#014.66RB12#614.89RB12#614.89RB12#614.66RB12#614.66RB12#1114.77RB25#014.66RB1#2414.63RB1#2414.63RB1#2414.71RB25#1214.71RB25#1214.70RB1#014.79RB1#2414.71RB50#014.70RB1#2414.71RB1#2414.71RB1#2414.71RB1#2414.70RB1#2414.70RB1#2414.71RB25#1214.82RB25#1214.82RB25#1214.82RB25#1214.82RB25#1214.67	14.66	14.70	14.61
		RB1#0	14.68	15.03	14.54
		RB1#24	14.63	14.86	14.62
		RB1#49	14.76	14.93	14.65
	QPSK	RB25#0	14.66	14.92	14.73
		Resource block Low Chainer alation & RB offset (dBm) RB1#0 14.30 RB1#2 RB1#12 14.39 RB1#24 RB1#24 14.35 RB1#2 PSK RB12#0 14.42 RB12#1 14.42 RB12#1 RB12#1 14.42 RB12#1 RB12#1 14.50 RB1#2 RB12#1 14.54 RB1#2 RB1#12 14.56 RB1#2 QAM RB12#0 14.64 RB12#1 14.56 RB1#2 RB12#2 14.64 RB1#2 QAM RB12#6 14.89 RB12#11 14.77 RB25#0 RB12#11 14.66 RB1#24 RB1#24 14.63 RB1#24 RB1#49 14.66 RB25#12 RB1#49 14.70 RB25#24 RB50#0 14.70 RB1#49 RB1#24 14.71 RB1#49 RB1#49 14.80 RB1#3	14.89	14.66	
		RB25#24	14.75	15.05	14.62
10M		RB50#0	14.70	15.18	14.65
10101		RB1#0	14.79	14.86	14.47
		RB1#24	14.71	14.89	14.61
		RB1#49	14.80	14.79	14.71
	16-QAM	RB25#0	14.77	14.72	14.66
		RB25#12	14.82	14.67	14.75
		RB25#24	14.70	14.61	14.66
		RB50#0	14.67	14.57	14.56

LTE Band 4 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	15.45	15.07	14.71
		RB1#37	15.51	15.02	14.57
		RB1#74	15.48	14.96	14.57
	QPSK	RB36#0	15.48	14.92	14.57
		RB36#17	15.53	14.81	14.64
		RB36#35	15.41	14.73	14.45
1514		RB75#0	15.35	14.71	14.47
15101		RB1#0	15.33	15.11	14.54
		RB1#37	15.36	15.02	14.54
		RB1#74	15.25	15.07	14.53
	16-QAM	RB36#0	15.26	14.98	14.49
		RB36#17	15.21	14.92	14.42
	RB36#35	15.11	14.91	14.49	
		RB36#17 15. RB36#17 15. RB36#35 15. RB75#0 15. RB75#0 15. RB1#0 15. RB1#0 15. RB1#37 15. RB1#37 15. RB1#37 15. RB1#74 15. RB36#0 15. RB36#17 15. RB36#17 15. RB36#35 15. RB75#0 15. RB1#0 15. RB1#49 15. RB1#49 15. RB50#24 15. RB50#49 15. RB100#0 15. RB1#0 15. RB1#0 15. RB1#0 15. RB1#49 15.	15.06	14.96	14.43
		RB1#0	15.62	15.15	15.36
	idth Modulation QPSK 16-QAM 16-QAM 16-QAM	RB1#49	15.52	15.02	15.26
		ation& RB offset(dBm)RB1#015.45RB1#3715.51RB1#3715.51RB1#7415.48RB36#015.48RB36#1715.53RB36#3515.41RB75#015.35RB1#015.33RB1#7415.25RB1#7415.25RB1#7415.25RB1#7415.25RB1#7415.26RB36#1715.26RB36#1715.21RB36#3515.11RB75#015.06RB1#015.62RB1#015.62RB1#4915.52RB1#4915.62RB50#4915.69RB50#4915.62RB100#015.19RB1#015.19RB1#015.19RB1#4915.14RB1#9915.15RB1#9915.15RB1#9915.15RB1#9915.15RB1#9915.15RB1#9915.15RB1#9915.15RB1#9915.15RB1#9915.15RB1#9915.15RB50#4914.88RB100#014.79	14.99	15.17	
	QPSK		14.95	15.11	
	Modulation& RB offsetRB1#0RB1#37RB1#37RB1#74QPSKRB36#0RB36#35RB75#0RB1#0RB1#1RB1#0RB36#17RB1#7416-QAMRB36#17RB36#35RB75#0RB1#0RB36#35RB75#0RB1#0RB1#0RB1#1RB1#0RB1#0RB1#0RB1#0RB1#1RB1#1RB1#1RB1RB1RB1RB1RB1RB1RB1RB1RB1RB1RB1RB1RB1RB1#0RB1#49 </td <td>15.68</td> <td>14.87</td> <td>15.03</td>	15.68	14.87	15.03	
		RB50#49	15.62	14.87	14.93
2014		RB100#0	15.19	14.97	14.89
2014		RB1#0	15.19	14.98	14.15
		RB1#49	15.14	15.04	14.18
		RB1#99	15.15	14.89	14.05
	16-QAM	RB50#0	15.05	14.98	14.24
		RB50#24	14.97	14.88	14.23
		RB50#49	14.88	14.83	14.22
		RB100#0	14.79	14.72	14.27

LTE Band 17 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
		RB1#0	18.69	18.73	18.70
		RB1#12	18.66	18.79	18.83
		RB1#24	18.61	18.69	18.83
	QPSK	RB12#0	18.61	18.77	18.97
		RB12#6	17.85	18.81	19.03
		RB12#11	18.73	18.76	19.07
514		RB25#0	18.54	18.70	19.10
5101		RB1#0	18.52	18.64	18.99
		RB1#12	18.58	18.62	18.86
		RB1#24	18.52	18.57	18.76
	16-QAM	RB12#0	18.53	18.61	18.73
		RB12#6	18.47	18.52	18.61
	RB12#11	18.60	18.62	18.67	
		RB25#0	18.61	18.67	18.58
		RB1#0	19.41	19.50	18.75
		RB1#24	19.27	19.26	18.65
		RB1#49	19.08	19.15	18.48
	QPSK	Iation & RB offset (dBm) (d RB1#0 18.69 1 RB1#12 18.66 1 RB1#24 18.61 1 RB1#24 18.61 1 RB12#0 18.61 1 RB12#1 18.63 1 RB12#1 18.61 1 RB12#1 18.61 1 RB12#1 18.73 1 RB25#0 18.54 1 RB1#12 18.58 1 RB1#24 18.52 1 RB1#24 18.52 1 RB1#24 18.53 1 RB12#1 18.60 1 RB1#24 19.27 1 RB1#24 19.27 1 RB1#49 19.08 1 RB1#49 18.62	19.09	18.41	
	Modulation& RB offsetRB1#0RB1#12RB1#12RB1#24RB12#0RB12#6RB12#11RB1#0RB1#12RB1#12RB1#12RB1#24RB1#24RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB12#6RB1#0RB1#24RB25#12RB1#0RB1#0RB1#49RB1#49RB1#49RB1#49RB25#12RB25#12RB25#12RB25#12RB25#12RB25#12RB25#12RB25#12RB25#24RB50#0	18.76	18.99	18.31	
		RB25#24	18.69	18.72	18.21
10M		RB50#0	18.59	18.53	18.12
TON		RB1#0	18.62	18.49	18.65
		RB1#24	18.62	18.58	18.55
		RB1#49	18.72	18.53	18.60
	16-QAM	RB25#0	18.77	18.70	18.70
		RB25#12	18.75	18.53	18.60
		RB25#24	18.82	18.50	18.61
		RB50#0	18.85	17.58	18.55

STANDALONE SAR TEST EXCLUSION CONSIDERATIONS

Antennas Location:



Antenna Distance To Edge

Antonno	Antenna Distance to Edge(mm)							
Antenna	Back	Front	Left	Right	Тор	Bottom		
WWAN Chain 1	<5	<5	145	<5	<5	202		
WWAN Chain 0	<5	<5	<5	153	205	<5		
WiFi/BT Ant 0	<5	<5	<5	141	<5	231		
WiFi/BT Ant 1	<5	<5	65	70	<5	234		

Each antenna supports the following frequency bands:

WWAN Chain 0: WCDMA II / WCDMA IV / LTE Band 2 / LTE Band 4 / LTE Band 7 / LTE Band 12 / LTE Band 17 /

LTE Band 25 / LTE Band 66

WWAN Chain 1 : WCDMA V / LTE Band 13 / LTE Band 14 / LTE Band 26 / LTE Band 71 LTE Band 41

WIFI/BT Ant 0 : WIFI 2.4G/WIFI 5G / BT

WIFI/BT Ant 1: WIFI 2.4G/WIFI 5G

	Frequency	Pavg	Pavg	Test Exclusion
Mode	(MHz)	(dBm)	(m W)	Distance (mm)
WCDMA Band 2	1907.6	23	200	60
WCDMA Band 4	1752.6	23	200	60
WCDMA Band 5	846.6	23	200	57
LTE Band 7	2560	22.5	178	59
LTE Band 12	711	22.8	191	53
LTE Band 13	782	22.8	191	54
LTE Band 14	793	22.8	191	54
LTE Band 25	1905	22.8	191	56
LTE Band 26	841.5	22.8	191	55
LTE Band 41	2645	22.5	178	59
LTE Band 66	1770	22.5	178	57
LTE Band 71	688	22.8	191	56
WiFi 2.4GHz_Ant 0	2412	13.6	23	13
WiFi 2.4GHz_Ant 1	2462	13.3	21	11
Bluetooth	2480	11	13	7
WiFi 5.2GHz_Ant 0	5240	9	8	7
WiFi 5.2GHz_Ant 1	5240	10	10	8
WiFi 5.8GHz_Ant 0	5825	8	6	6
WiFi 5.8GHz_Ant 1	5825	8.1	6	6

Standalone SAR test exclusion considerations (for Ant. to Top Distance > 50mm)

Mode	Front Face	Back Face	Left Side	Right Side	Top Side	Bottom Side
WCDMA Band 2	0	0	0	X	Х	0
WCDMA Band 4	0	0	0	X	Х	0
WCDMA Band 5	0	0	X	0	0	Х
LTE Band 7	0	0	0	X	Х	0
LTE Band 12	0	0	0	X	Х	0
LTE Band 13	0	0	Х	0	0	X
LTE Band 14	0	0	Х	0	0	X
LTE Band 25	0	0	0	Х	Х	0
LTE Band 26	0	0	Х	0	0	X
LTE Band 41	0	0	Х	0	0	X
LTE Band 66	0	0	0	Х	Х	0
LTE Band 71	0	0	X	0	0	X
WiFi 2.4GHz_Ant 0	0	0	0	X	0	X
WiFi 2.4GHz_Ant 1	0	0	X	X	0	X
Bluetooth	0	0	0	X	0	X
WiFi 5.2GHz_Ant 0	0	0	0	X	0	X
WiFi 5.2GHz_Ant 1	0	0	Х	X	0	X
WiFi 5.8GHz_Ant 0	0	0	0	X	0	X
WiFi 5.8GHz_Ant 1	0	0	Х	X	0	X

SAR test exclusion for the EUT edge considerations Result (Required: O / Exclusion: X)

Note:

Required: The distance is less than Test Exclusion Distance, testing is required.

Exclusion*: SAR test exclusion evaluation has been done above.

Exclusion: The distance is larger than Test Exclusion Distance, testing is not required.

SAR test exclusion for the EUT edge considerations detail :

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* \leq 50 mm are determined by:

 $[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] \cdot [\sqrt{f_{(GHz)}}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,¹⁶ where

- f_(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum *test separation distance* is \leq 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is \leq 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

- At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, and as illustrated in Appendix B:¹⁸
 - a) [Threshold at 50 mm in step 1) + (test separation distance 50 mm) ($\rm f_{(MHz)}/150)$] mW, at 100 MHz to 1500 MHz
 - b) [Threshold at 50 mm in step 1) + (test separation distance 50 mm) \cdot 10] mW at > 1500 MHz and \leq 6 GHz

SAR MEASUREMENT RESULTS

This page summarizes the results of the performed diametric evaluation.

SAR Test Data

Environmental Conditions

Test Date	2022/01/05	2022/01/06	2022/01/07	2022/01/18
Freq. Band(MHz)	835	750	2600	1800
Temperature	23.8°C	22.5°C	20.5°C	20.7°C
Relative Humidity	67 %	65 %	65 %	65 %
Test Engineer	Nike Wu	Nike Wu / Rory Cheng	Nike Wu	Nike Wu

Test Date	2022/01/19	2022/01/20	2022/01/21	2022/01/21
Freq. Band(MHz)	1900	2450	5250	5800
Temperature	20.2°C	20.3°C	20.7°C	20.7°C
Relative Humidity	63 %	67 %	65 %	65 %
Test Engineer	Nike Wu / Rory Cheng	Nike Wu	Nike Wu / Rory Cheng	Nike Wu

Note:

EUT adds scanner head, but this does not affect the RF characteristics, Including transmit frequency, transmit power, etc; During SAR testing, according to the original report of the worst channel for each frequency band, for this evaluation.

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WCDMA Band 2:

EUT	Frequency	Test		Max. Meas.	Max. Rated		1g S	SAR (W/Kg)		
Position	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body	1990	DMC	ON	12.66	12.00	1 091	0.460	0.507	1.6	C
Left(0mm)	1000	KWC	ON	12.00	13.00	1.001	0.409	0.507	1.0	2

WCDMA Band 4:

EUT	Frequency	Test		Max. Meas.	Max. Rated		1g S	SAR (W/Kg)		
Position	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Left(0mm)	1732.6	RMC	ON	14.23	15.70	1.403	0.529	0.742	1.6	4

WCDMA Band 5:

EUT	Frequency	Test		Max. Meas.	Max. Rated		1g S	SAR (W/Kg)		
Position	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Front(0mm)	836.6	RMC	OFF	22.75	23.00	1.059	0.365	0.387	1.6	5

LTE FDD Band 12 & Band 17 :

EUT	Frequency	Bandwidth	Test	~~~~~~	Max. Meas.	Max. Rated		1g S	AR (W/Kg	()	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Front(0mm)	707.5	10	1 RB	ON	19.50	19.70	1.047	0.469	0.491	1.6	7

LTE FDD Band 13:

EUT	Frequency	Bandwidth	Test		Max. Meas.	Max. Rated		1g S	AR (W/Kg)	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Front(0mm)	782	10	1 RB	OFF	22.32	22.80	1.117	0.379	0.423	1.6	11

LTE FDD Band 14:

EUT	Frequency	Bandwidth	Test		Max. Meas.	Max. Rated		1g S	AR (W/Kg)	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Top(0mm)	793	10	1 RB	OFF	22.30	22.80	1.122	0.351	0.394	1.6	16

LTE FDD Band 26:

EUT	Frequency	Bandwidth	Test		Max. Meas.	Max. Rated		1g S	AR (W/Kg	.)	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Front(0mm)	831.5	15	1 RB	OFF	22.29	22.80	1.125	0.419	0.471	1.6	19

LTE FDD Band 7:

ЕПД	Frequency	Bandwidth	Test		Max. Meas	Max. Rated		1g S	AR (W/Kg)	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Left(0mm)	2560	20	1 RB	ON	18.62	20.50	1.542	0.510	0.786	1.6	24

LTE FDD Band 2 & Band 25 :

EUT	Frequency	Bandwidth	Test	~~~~~~	Max. Meas.	Max. Rated		1g S	AR (W/Kg)	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Left(0mm)	1880	20	1 RB	ON	12.08	12.70	1.153	0.247	0.285	1.6	28

LTE FDD Band 4 & Band 66 :

EUT	Frequency	Bandwidth	Test	~~~~~	Max. Meas.	Max. Rated		1g S	AR (W/Kg)	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Left(0mm)	1745	20	1 RB	ON	15.15	15.80	1.161	0.339	0.394	1.6	32

LTE FDD Band 71:

EUT	Frequency	Bandwidth	Test		Max. Meas.	Max. Rated		1g S	AR (W/Kg)	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Front(0mm)	680.5	20	1 RB	OFF	22.28	22.80	1.127	0.319	0.360	1.6	35

LTE TDD Band 41:

EUT	Frequency	Bandwidth	Test	~~~~~~	Max. Meas.	Max. Rated		1g S	SAR (W/Kg)	
Position	(MHz)	(MHz)	Mode	SENSOR	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Right(0mm)	2605	20	1 RB	OFF	22.28	22.50	1.052	0.547	0.575	1.6	40

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WiFi 2.4GHz Chain 0 :

EUT	Frequency	Modulation	Max. Meas.	Max. Rated		1g SA	R (W/Kg)		
Position	(MHz)	Туре	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Top(0mm)	2412	802.11b	13.45	13.60	1.035	0.737	0.763	1.6	44

WiFi 2.4GHz Chain 1:

EUT	Frequency	Modulation	ion Max. Max. Neas Rated		1g SAR (W/Kg)					
Position	(MHz)	Туре	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot	
Body Front(0mm)	2412	802.11b	13.14	13.30	1.038	0.114	0.118	1.6	45	

Bluetooth :

EUT	Frequency	Modulation	on Max. Max. Neas Rated		1g SAR (W/Kg)					
Position	(MHz)	Туре	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot	
Body Left(0mm)	2480	DH5 1Mbps	10.53	11.00	1.114	0.014	0.015	1.6	48	

WiFi 5.2GHz Chain 0 :

EUT	Frequency	Modulation Meas Rated 1		1g SA	SAR (W/Kg)				
Position	(MHz)	Туре	Power Power (dBm) (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot	
Body Front(0mm)	5240	802.11a	8.70	9.00	1.072	0.646	0.693	1.6	49

WiFi 5.2GHz Chain 1:

EUT	Frequency	Modulation	Modulation Max. Max. Rated			1g SAR (W/Kg)				
Position	(MHz)	Туре	Power (dBm) (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot		
Body Top(0mm)	5240	802.11a	9.45	10.00	1.135	0.262	0.297	1.6	52	

WiFi 5.8GHz Chain 0 :

EUT	FUT Frequency		Modulation Max. Meas		1g SAR (W/Kg)				
Position	(MHz)	Туре	Power Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Top(0mm)	5755	802.11n HT40	7.81	8.00	1.045	0.421	0.440	1.6	54

WiFi 5.8GHz Chain 1 :

EUT	Frequency	Modulation	Max. Meas.	Max. Rated		1g SA	R (W/Kg)		
Position	(MHz)	Туре	Power Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot	
Body Top(0mm)	5755	802.11n HT40	7.94	8.10	1.038	0.299	0.310	1.6	56

Note:

- 1. When the 1-g SAR is \leq 0.8W/Kg, testing for other channels are optional.
- 2. SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02.
- 3. KDB941225D05-SAR for higher order modulation is required only when the highest maximum output power for the configuration in the higher order modulation is > 0.5 dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg
- 4. KDB941225D05-For QPSK with 100% RB allocation, when the reported SAR measured for the Highest output power channel is <1.45 W/kg, tests for the remaining required test channels are optional.
- 5 .KDB941225D05- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
- 6. KDB941225D05- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offset the upper edge, middle and lower edge of each required test channel.
- 7. KDB941225D05- other channel bandwidths SAR test is required when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > 0.5 dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.
- 8. Worst case SAR for 50% RB allocation is selected to be tested.
- 9. According KDB865664 D01 Repeated measurements are required only when the measured SAR is ≥ 0.80 W/kg. If the measured SAR value of the initial repeated measurement is < 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. A second repeated measurement is required only if the measured result for the initial repeated measurement is within 10% of the SAR limit and vary by more than 20%..</p>

SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

Simultaneous Transmission:

Description of Simultaneous Transmit Capabilities								
Transmitter Combination	Simultaneous?	Hotspot						
WWAN(WCDMA/LTE) + WLAN 2.4G Chain0+WLAN2.4G Chain1	\checkmark	\checkmark						
WWAN(WCDMA/LTE) + WLAN 5G Chain0+WLAN5G Chain1	\checkmark	\checkmark						
WWAN + Bluetooth	\checkmark	×						

Simultaneous Transmission Consideration Detail

Transmitter			Max SAR(W/kg)				
Combination	Position	WWAN	WLAN Chain0	WLAN Chain1	∑SAR<1.6W/kg		
	Body Front(0mm)	0.491	0.410 *	0.118	1.019		
	Body Back(0mm)	0.504 *	0.264 *	0.032 *	0.800		
WWAN +	Body Left(0mm)	0.786	0.091 *	N/A *	0.877		
WLAN 2.4G Chain0 + WLAN 2.4G Chain1	Body Right(0mm)	0.575	N/A *	N/A *	0.575		
	Body Top10mm)	0.394	0.763	0.108 *	1.265		
	Body Bottom(10mm)	0.159 *	N/A *	N/A *	0.159		

Transmitter		Max SAR		
Combination	Position	WWAN	Bluetooth	∑SAR<1.6W/kg
	Body Front(0mm)	0.491	0.050 *	0.541
	Body Back(0mm)	0.504 *	0.035 *	0.539
WWAN +	Body Left(0mm)	0.786	0.015	0.621
Bluetooth	Body Right(0mm)	0.575	N/A *	0.575
	Body Top10mm)	0.394	0.104 *	0.498
	Body Bottom(10mm)	0.159 *	N/A *	0.159

Transmitter					
Combination	Position	WWAN	WLAN Chain0	WLAN Chain1	∑SAR<1.6W/kg
	Body Front(0mm)	0.491	0.693	0.047 *	1.231
	Body Back(0mm)	0.504 *	0.112 *	0.048 *	0.664
WWAN +	Body Left(0mm)	0.786	0.155 *	N/A *	0.941
WLAN 5.2G Chain0 + WLAN 5.2G Chain1	Body Right(0mm)	0.575	N/A *	N/A *	0.575
	Body Top10mm)	0.394	0.645 *	0.297	1.336
	Body Bottom(10mm)	0.159 *	N/A *	N/A *	0.159

Transmitter			Max SAR(W/kg)				
Combination	Position	WWAN	WLAN Chain0	WLAN Chain1	∑SAR<1.6W/kg		
	Body Front(0mm)	0.491	0.480 *	0.185 *	1.156		
	Body Back(0mm)	0.504 *	0.061 *	0.099 *	0.664		
WWAN +	Body Left(0mm)	0.786	0.100 *	N/A *	0.886		
WLAN 5.8G Chain0 + WLAN 5.8G Chain1	Body Right(0mm)	0.575	N/A *	N/A *	0.575		
	Body Top10mm)	0.394	0.440	0.310	1.144		
	Body Bottom(10mm)	0.159 *	N/A *	N/A *	0.159		

Note: * Because this SAR testing only evaluates the worst channel and does not evaluate all positions per Band, some data quoted from SAR original test report.

Conclusion:

Sum of SAR: Σ SAR \leq 1.6 W/kg for 1g Body SAR, therefore simultaneous transmission SAR with Volume Scans is not required.

APPENDIX A MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

Measurement uncertainty evaluation for IEEE1528 SAR test							
Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.6	6.6
Axial Isotropy	4.7	R	√3	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	√3	0	0	0.0	0.0
Boundary effect	1.0	R	√3	1	1	0.6	0.6
Linearity	4.7	R	√3	1	1	2.7	2.7
Detection limits	1.0	R	√3	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	√3	1	1	0.0	0.0
Integration time	0.0	R	$\sqrt{3}$	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	√3	1	1	0.6	0.6
RF ambient conditions- reflections	1.0	R	√3	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	$\sqrt{3}$	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	$\sqrt{3}$	1	1	3.9	3.9
Post-processing	2.0	R	√3	1	1	1.2	1.2
		Test sample	related				
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Device holder uncertainty	6.3	N	1	1	1	6.3	6.3
Drift of output power	5.0	R	√3	1	1	2.9	2.9
		Phantom and	d set-up				
Phantom uncertainty (shape and thickness tolerances)	4.0	R	$\sqrt{3}$	1	1	2.3	2.3
Liquid conductivity target)	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2
Liquid conductivity meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity target)	5.0	R	√3	0.6	0.49	1.7	1.4
Liquid permittivity meas.)	2.5	Ν	1	0.6	0.49	1.5	1.2
Combined standard uncertainty		RSS				12.2	12.0
Expanded uncertainty 95 % confidence interval)						24.3	23.9

APPENDIX B EUT TEST POSITION PHOTOS

Liquid depth ≥ 15cm



No.: RXZ211221004SA01



SAR Setup Photo for WWAN

No.: RXZ211221004SA01



SAR Setup Photo for WLAN

No.: RXZ211221004SA01



SAR EUT Photo



Scanner Model: NG002

Scanner Model: N4603





APPENDIX C SAR PLOTS OF SAR MEASUREMENT

Please Refer to the Attachment APPENDIX C SAR PLOTS OF SAR MEASUREMEN

APPENDIX D PROBE & DAE CALIBRATION CERTIFICATES

Please refer to the file document PROBE & DAE CALIBRATION CERTIFICATES

APPENDIX E DIPOLE CALIBRATION CERTIFICATES

Please refer to the file document DIPOLE CALIBRATION CERTIFICATES

***** END OF REPORT *****