Certificate Number: 5055.02

TEST REPORT FOR SAR TESTING

Report No.: SRTC2020-9004(F)-20050601(H)

Product Name: Mobile Broadband Internet Device

Product Model: K87CA

Applicant: ZTE Corporation

Manufacturer: ZTE Corporation

Specification: Part 2.1093

IEEE Std 1528

KDB Procedures

FCC ID: SRQ-K87CA

The State Radio_monitoring_center Testing Center (SRTC)

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1. GENERAL INFORMATION

1.1 Notes of the test report

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The test results relate only to individual items of the samples which have been tested.
The certification and accreditation identifiers used in this report shall not be applicable to the tested or calibrated samples thereof. The manufacturer shall not mark the tested samples or items (or a separate part of the item) with the identifiers of certification and accreditation to mislead relevant parties about the tested samples or items.

1.2 Information about the testing laboratory

Company:	The State Radio_monitoring_center Testing Center (SRTC)
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City:	Shenzhen
Country or Region:	P.R.China
Contacted person:	Zhao Yang
Tel:	+86-029-83637990
Email:	zhao.yangxa@zte.com.cn

1.5 Test Environment

Date of Receipt of test sample at SRTC:	2020.05.06
Testing Start Date:	2020.05.10
Testing End Date:	2020.06.10

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient	25	40

Normal Supply Voltage (Vdc.):	3.8

2. DESCRIPTION OF THE DEVICE UNDER TEST

2.1 Final Equipment Build Status

Wireless Technology and Frequency Bands	☐GSM Band: GSM850/GSM1900 ☒WCDMA Band: FDD II/IV/V ☒LTE Band: 2/4/5/7/12/13/66 ☒Wi-Fi Band: 2.4GHz ☒BT/BLE
Mode	GSM ☐GPRS (GMSK) ☐EGPRS (GMSK/8PSK) WCDMA ☒UMTS Rel. 99 ☒HSDPA (Rel. 5) ☒HSUPA (Rel. 6) ☒HSPA+ (Rel.7) ☒DC-HSDPA (Rel.8) LTE ☒QPSK ☒16QAM ☒64QAM Bluetooth ☒BR(GFSK) ☒EDR(π/4 DQPSK , 8-DPSK) ☒BLE(GFSK) Wi-Fi 2.4GHz ☒802.11b ☒802.11g ☒802.11n HT20
Duty Cycle*	GPRS: 12.5% (1 Slot), 25% (2 Slots), 37.5% (3 Slots), 50% (4 Slots) EDGE(GMSK/8PSK) 12.5% (1 Slot), 25% (2 Slots), 37.5% (3 Slots), 50% (4 Slots) WCDMA: 100% LTE(FDD): 100% LTE(TDD): maximum63.3% 802.11b:97.6% 802.11g:87.3% 802.11n20:87.2% BT BR 1M:46.5% BT EDR 2M:46.6% BT EDR 3M:46.3% BLE:62.2%
Multi-Slot Class for GPRS/EDGE	☐Class 8 - One Up ☐Class 10 - Two Up ☐Class 12 - Four Up ☐Class 33- Four Up
Mobile Phone Capability	☐Class A - Mobile phones can be connected to both GPRS and GSM services simultaneously. ☐Class B - Mobile phones can be attached to both GPRS and GSM services, using one service at a time. ☐Class C - Mobile phones are attached to either GPRS or GSM voice service. You need to switch manually between

	services
DTM	Not Supported
Note	For licensed cellular network duty cycle is inherent. For unlicensed network WLAN Duty cycle is depends on the data traffic, and the traffic allocation in operating mode could be the most conservative condition which with 100% duty cycle. SAR measurement also use non signalling mode, so the duty factor shall be taken into consideration.

2.2 Support Equipment

The following support equipment was used to exercise the DUT during testing:

State of sample	Normal
H/W Version S/W Version	K87CAHW1.0 K87CAV1.0.0B01
IMEI	Sample1:862750040002013 Sample2:862750040002252
Notes	As the information described above, we use test sample offered by the customer. The relevant tests have been performed in order to verify in which combination case the EUT would have the worst features.

3. REFERENCE SPECIFICATION

Specification	Version	Title
Part 2.1093	2019	Radiofrequency radiation exposure evaluation: portable devices.
IEEE Std 1528	2013	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
KDB 447498 D01	v06	General RF Exposure Guidance
KDB 447498 D02	v02r01	SAR MEASUREMENT PROCEDURES FOR USB DONGLE TRANSMITTERS
KDB 616217 D04	v01r02	SAR for laptop and tablets
KDB 648474 D04	v01r03	Handset SAR
KDB 941225 D01	v03r01	3G SAR Procedures
KDB 248227 D01	v02r02	SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS
KDB 865664 D01	v01r04	SAR Measurement from 100 MHz to 6 GHz
KDB 865664 D02	v01r02	RF Exposure Reporting
KDB 941225 D05	v02r05	SAR for LTE Devices

4. TEST CONDITIONS

4.1 Picture to demonstrate the required liquid depth

The liquid depth is large than 15cm in the used SAM phantoms in flat section, and the depth of the tissue simulant was 15.0 ± 0.5 cm measured from the ear reference point during system checking and device measurements.

Liquid depth for SAR Measurement

4.2 Test Signal, Frequencies and Output Power

The device was put into operation by using a call tester. Communication between the device and the call tester was established by air link.
The device output power was set to maximum power level for all tests; a fully charged battery was used for every test sequence.
In all operating bands the measurements were performed on middle channel, and few of them were also performed on lowest and highest channels.

4.3 SAR Measurement Set-up

The system is based on a high precision robot (working range greater than 0.9m), which positions the probes with a positional repeatability of better than ± 0.02mm. Special E-field probes have been developed for measurements

close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines (length =300mm) to the data acquisition unit. A cell controller system contains the power supply, robot controller, teaches pendant (Joystick), and remote control, is used to drive the robot motors.
The PC consists of the Micron Pentium IV computer with Win7 system and SAR Measurement Software DASY5 Professional, A/D interface card, monitor, mouse, and keyboard. The Stäubli Robot is connected to the cell controller to allow software manipulation of the robot.
A data acquisition electronic (DAE) circuit performs the signal amplification; signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card. The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines.
The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection
The robot uses its own controller with a built in VME-bus computer.

4.4 Phantoms

The phantom used for all tests i.e. for both system checks and device testing, was the twin headed "SAM Phantom", manufactured by SPEAG. The phantom conforms to the requirements of IEEE 1528.
System checking was performed using the flat section, whilst Head SAR tests used the left and right head profile sections. Body SAR testing also used the flat section between the head profiles. **There is no need for shifting because radiating structures are small compared to both the DUT and the phantom and/or the first area scan shows that the SAR distribution is entirely captured within the scanning area.**

The SPEAG device holder was used to position the device in all tests whilst a tripod was used to position the validation dipoles against the flat section of phantom.

4.5 Tissue Simulants

Recommended values for the dielectric parameters of the tissue simulants are given in IEEE 1528. All tests were carried out using simulants whose dielectric parameters were within

± 10% below 3GHz and ± 5% above 3GHz of the recommended values when use DASY system according to KDB865664D01. All tests were carried out within 24 hours of measuring the dielectric parameters.

Tissue Stimulant Recipes	
Name	Broadband tissue-equivalent liquid
Type	HBBL600-6000V6 Simulating Liquid
Note: The stimulant could be the same for head and body.	

4.6 DESCRIPTION OF THE TEST PROCEDURE

4.6.1 Device Holder

The device was placed in the device holder (illustrated below) that is supplied by SPEAG as an integral part of the Dasy system.

Device holder supplied by SPEAG

4.6.2 Test Exposure Conditions

4.6.2.1 Head Configuration

Measurements were made in “cheek” and “tilt” positions on both the left hand and right-hand sides of the phantom.

The positions used in the measurements were according to IEEE 1528 "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques".

4.6.2.2 Body Worn Configuration

The device was placed in the SPEAG holder below the flat section of the phantom. The distance between the device and the phantom was kept at the separation distance using a separate flat spacer that was removed before the start of the measurements. And the distance is normally determined according to the actual scene which might be the worst use condition for general exposure. The device’s front and rear were oriented facing the phantom since these orientations give higher results for most regular portable devices.

4.6.2.3 Hotspot Configuration

Hotspot mode SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge; for the data modes, wireless technologies and frequency bands supporting hotspot mode.

4.6.3 Scan Procedure

First, area scans were used for determination of the field distribution and the approximate location of the local peak SAR values. The SAR distribution is scanned along the inside surface, at least for an area larger than the projection of the handset and antenna. The angle between the probe axis and the surface normal line is recommended but not required to be less than 30°. The SAR distribution is first measured on a 2-D coarse grid. The scan region should cover all areas that are exposed and encompassed by the projection of the handset. There are 15 mm × 15 mm (equal or less than 2GHz), 12 mm × 12 mm (from 2GHz~4GHz) and 10mm x 10mm (from 4GHz~6GHz) measurement grid used when two staggered one-dimensional cubic splines are used to estimate the maximum SAR location.

When the reported 1g-SAR estimated by area scan is less than 1.40 w/kg.

Zoom scan was performed by using the configuration mentioned below or more conservative scan area and step to determine the averaged SAR value. Drift was determined by measuring the same point at the start of the area scan and again at the end of the zoom scan.

Below 3GHz：32mmX32mmX30mm scan area with 8 mm X8 mm X5 mm steps

2GHz-3GHz：32mmX32mmX30mm scan area with 8 mm X8 mm X5 mm steps

3GHz-4GHz：28mmX28mmX28mm scan area with 7 mm X7 mm X4 mm steps

4GHz-5GHz： 25mmX25mmX24mm scan area with 5 mm X5 mm X3 mm steps
5GHz-6GHz： 25mmX25mmX22mm scan area with 5 mm X5 mm X2 mm steps

4.6.4 SAR Averaging Methods

The maximum SAR value was averaged over a cube of tissue using interpolation and extrapolation.
The interpolation, extrapolation and maximum search routines within DASY5 are all based on the modified Quadratic Shepard's method (Robert J. Renka, Multivariate Interpolation of Large Sets of Scattered Data", University of North Texas ACM Transactions on Mathematical Software, vol. 14, no. 2, June 1988, pp. 139-148).
The interpolation scheme combines a least-square fitted function method with a weighted average method. A triradiate 3-D / bivariate 2-D quadratic function is computed for each measurement point and fitted to neighboring points by a least-square method. For the zoom scan, inverse distance weighting is incorporated to fit distant points more accurately. The interpolating function is finally calculated as a weighted average of the quadratics.
In the zoom scan, the interpolation function is used to extrapolate the Peak SAR from the deepest measurement points to the inner surface of the phantom.

5 RESULT SUMMAR

The maximum reported SAR values for Body configuration are given as follows. The device conforms to the requirements of the standard(s) when the maximum reported SAR value is less than or equal to the limit.

Standalone Transmission

Exposure Position	Frequency Band	1g-SAR Result(W/kg)	Highest 1g-SAR Result(W/kg)	Limit(W/kg)/1g	Result
Body (0mm)	WCDMA Band II	1.12	1.16	1.60	Pass
	WCDMA Band IV	1.08			
	WCDMA Band V	0.93			
	LTE Band 2	0.93			
	LTE Band 4	1.16			
	LTE Band 5	0.97			
	LTE Band 7	1.13			
	LTE Band 12	0.95			
	LTE Band 13	0.95			
	LTE Band 66	1.02			
	WLAN 2.4GHz	0.72			

Simultaneous Transmission(worst case)

Exposure Position	Frequency Band	Highest 1g-SAR Result(W/kg)	Limit (W/kg)/1g	Result
Body(0mm)	LTE & Wi-Fi	1.55	1.60	Pass

This Test Report Is Approved by: Mr. Peng Zhen	Review by: Mr. Li Bin
Tested and issued by: Mr. Chang Tianyu	Approved date: 2020/06/18

6 TEST RESULT

6.1 Manufacturing Tolerance

WCDMA

WCDMA band II

Mode		Carrier frequency (MHz)	Channel No.	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
Release 99	RMC,12.2kbps	1852.4	9262	24.0	15.0
		1880.0	9400		
		1907.6	9538		
	RMC,64kbps	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
	RMC,144kbps	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
	RMC,384kbps	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
	AMR,12.2kbps	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
HSDPA	Subtest 1	1852.4	9262	23.0	14.0
		1880.0	9400		
		1907.6	9538		
	Subtest 2	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
	Subtest 3	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
	Subtest 4	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
HSUPA	Subtest 1	1852.4	9262	23.0	14.0
		1880.0	9400		
		1907.6	9538		
	Subtest 2	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
	Subtest 3	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
	Subtest 4	1852.4	9262		
		1880.0	9400		
		1907.6	9538		
	Subtest 5	1852.4	9262		
		1880.0	9400		
		1907.6	9538		

WCDMA band IV

Mode		Carrier frequency (MHz)	Channel No.	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
Release 99	RMC,12.2kbps	1712.4	1312	24.0	16.0
		1732.4	1412		
		1752.6	1513		
	RMC,64kbps	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
	RMC,144kbps	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
	RMC,384kbps	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
	AMR,12.2kbps	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
HSDPA	Subtest 1	1712.4	1312	23.0	15.0
		1732.4	1412		
		1752.6	1513		
	Subtest 2	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
	Subtest 3	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
	Subtest 4	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
HSUPA	Subtest 1	1712.4	1312	23.0	15.0
		1732.4	1412		
		1752.6	1513		
	Subtest 2	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
	Subtest 3	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
	Subtest 4	1712.4	1312		
		1732.4	1412		
		1752.6	1513		
	Subtest 5	1712.4	1312		
		1732.4	1412		
		1752.6	1513		

WCDMA band V

Mode		Carrier frequency (MHz)	Channel No.	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
Release 99	RMC,12.2kbps	826.4	4132	24.0	20.0
		836.6	4183		
		846.6	4233		
	RMC,64kbps	826.4	4132		
		836.6	4183		
		846.6	4233		
	RMC,144kbps	826.4	4132		
		836.6	4183		
		846.6	4233		
	RMC,384kbps	826.4	4132		
		836.6	4183		
		846.6	4233		
	AMR,12.2kbps	826.4	4132		
		836.6	4183		
		846.6	4233		
HSDPA	Subtest 1	826.4	4132	23.0	19.0
		836.6	4183		
		846.6	4233		
	Subtest 2	826.4	4132		
		836.6	4183		
		846.6	4233		
	Subtest 3	826.4	4132		
		836.6	4183		
		846.6	4233		
	Subtest 4	826.4	4132		
		836.6	4183		
		846.6	4233		
HSUPA	Subtest 1	826.4	4132	23.0	19.0
		836.6	4183		
		846.6	4233		
	Subtest 2	826.4	4132		
		836.6	4183		
		846.6	4233		
	Subtest 3	826.4	4132		
		836.6	4183		
		846.6	4233		
	Subtest 4	826.4	4132		
		836.6	4183		
		846.6	4233		
	Subtest 5	826.4	4132		
		836.6	4183		
		846.6	4233		

LTE

Note: RB allocation mentioned below is for all Bandwidths, and the Frequency Range are divided to 3 ranges (Low, Mid, High)

Band 2

BW	Modulation	RB allocation with different offset	Frequency range	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
All Bandwidth	QPSK	1	Low	24.0	15.0
			Mid		
			High		
		50%	Low	23.0	14.0
			Mid		
			High		
		100%	Low	23.0	14.0
			Mid		
			High		
	16QAM	1	Low	23.0	14.0
			Mid		
			High		
		50%	Low	22.0	13.0
			Mid		
			High		
		100%	Low	22.0	13.0
			Mid		
			High		
	64QAM	1	Low	23.0	14.0
			Mid		
			High		
		50%	Low	22.0	13.0
			Mid		
			High		
		100%	Low	22.0	13.0
			Mid		
			High		

Band 4

BW	Modulation	RB allocation with different offset	Frequency range	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
All Bandwidth	QPSK	1	Low	25.0	17.5
			Mid		
			High		
		50%	Low	23.5	16.0
			Mid		
			High		
		100%	Low	23.5	16.0
			Mid		
			High		
	16QAM	1	Low	23.5	16.0
			Mid		
			High		
		50%	Low	22.5	15.0
			Mid		
			High		
		100%	Low	22.5	15.0
			Mid		
			High		
	64QAM	1	Low	23.5	16.0
			Mid		
			High		
		50%	Low	22.5	15.0
			Mid		
			High		
		100%	Low	22.5	15.0
			Mid		
			High		

Band 5

BW	Modulation	RB allocation with different offset	Frequency range	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
All Bandwidth	QPSK	1	Low	25.0	21.0
			Mid		
			High		
		50%	Low	23.5	19.5
			Mid		
			High		
		100%	Low	23.5	19.5
			Mid		
			High		
	16QAM	1	Low	23.0	19.0
			Mid		
			High		
		50%	Low	23.0	19.0
			Mid		
			High		
		100%	Low	23.0	19.0
			Mid		
			High		
	64QAM	1	Low	23.0	19.0
			Mid		
			High		
		50%	Low	23.0	19.0
			Mid		
			High		
		100%	Low	23.0	19.0
			Mid		
			High		

Band 7

BW	Modulation	RB allocation with different offset	Frequency range	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
All Bandwidth	QPSK	1	Low	25.0	15.5
			Mid		
			High		
		50%	Low	24.0	14.5
			Mid		
			High		
		100%	Low	24.0	14.5
			Mid		
			High		
	16QAM	1	Low	24.5	15.0
			Mid		
			High		
		50%	Low	24.0	14.5
			Mid		
			High		
		100%	Low	24.0	14.5
			Mid		
			High		
	64QAM	1	Low	24.5	15.0
			Mid		
			High		
		50%	Low	24.0	14.5
			Mid		
			High		
		100%	Low	24.0	14.5
			Mid		
			High		

Band 12

BW	Modulation	RB allocation with different offset	Frequency range	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
All Bandwidth	QPSK	1	Low	24.5	18.5
			Mid		
			High		
		50%	Low	23.5	17.5
			Mid		
			High		
		100%	Low	23.5	17.5
			Mid		
			High		
	16QAM	1	Low	23.0	17.0
			Mid		
			High		
		50%	Low	22.5	16.5
			Mid		
			High		
		100%	Low	22.5	16.5
			Mid		
			High		
	64QAM	1	Low	23.0	17.0
			Mid		
			High		
		50%	Low	22.5	16.5
			Mid		
			High		
		100%	Low	22.5	16.5
			Mid		
			High		

Band 13

BW	Modulation	RB allocation with different offset	Frequency range	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
All Bandwidth	QPSK	1	Low	24.5	19.5
			Mid		
			High		
		50%	Low	23.5	18.5
			Mid		
			High		
		100%	Low	23.5	18.5
			Mid		
			High		
	16QAM	1	Low	23.0	18.0
			Mid		
			High		
		50%	Low	22.5	17.5
			Mid		
			High		
		100%	Low	22.5	17.5
			Mid		
			High		
	64QAM	1	Low	23.0	18.0
			Mid		
			High		
		50%	Low	22.5	17.5
			Mid		
			High		
		100%	Low	22.5	17.5
			Mid		
			High		

Band 66

BW	Modulation	RB allocation with different offset	Frequency range	Full power Tune-up limit (dBm)	Reduced Power Tune-up limit (dBm)
All Bandwidth	QPSK	1	Low	23.5	15.5
			Mid		
			High		
		50%	Low	23.0	15.0
			Mid		
			High		
		100%	Low	23.0	15.0
			Mid		
			High		
	16QAM	1	Low	23.5	15.5
			Mid		
			High		
		50%	Low	23.0	15.0
			Mid		
			High		
		100%	Low	23.0	15.0
			Mid		
			High		
	64QAM	1	Low	23.5	15.5
			Mid		
			High		
		50%	Low	23.0	15.0
			Mid		
			High		
		100%	Low	23.0	15.0
			Mid		
			High		

Bluetooth

Modulation type	Tune-up limit (dBm)		
	2402MHz(Ch0)	2441MHz(Ch39)	2480MHz(Ch78)
GFSK	8		
π/4DQPSK	6		
8DPSK	6		

Bluetooth (BLE)

Modulation type	Tune-up limit (dBm)		
	2402MHz (Ch0)	2440MHz (Ch19)	2480MHz (Ch39)
GFSK (LE 1Mbps)	0.5		

WLAN 2.4GHz

Modulation type	Full power Tune-up limit (dBm)		
	2412MHz	2437MHz	2462MHz
11b	17.0		
11g	14.0		
11n HT20	12.5		

Modulation type	Reduced Power Tune-up limit (dBm)		
	2412MHz	2437MHz	2462MHz
11b	12.0		
11g	11.0		
11n HT20	11.5		

6.2 WCDMA Measurement result

Release 99

The following procedures are according to FCC KDB Publication 941225 D01. The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 1
	RMC mode AMR mode	12.2kbps RMC 12.2kbps RMC in 3.4 kbps SRB
	Power Control Algorithm	Algorithm2
	βc/βd	8/15

Release 5

The following 4 Sub-tests were completed according to Release 5 procedures in section 5.2 of 3GPP TS34.121.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	CM(dB) (2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0
3	15/15	8/15	64	15/18	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} =8⇔ $A_{hs}=\beta_{hs}/\beta_c=30/15 \Leftrightarrow \beta_{hs}=30/15*\beta_c$.

Note2:CM=1 for $\beta_c/\beta_d=12/15$, $\beta_{hs}/\beta_c=24/15$.

Note3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period(TF1,TF0) is achieved by setting the signaled gain factors for the reference TFC(TF1,TF1) to β_c=11/15 and β_d=15/15.

Release 6

The following 5 Sub-tests were completed according to Release 6 procedures in section 5.2 of 3GPP TS34.121.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM(2) (dB)	MPR (dB)	AG(4) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	22/15	209/225	1039/225	4	1	1.0	2.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	2.0	2.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15(4)	15/15(4)	64	15/15(4)	30/15	24/15	134/15	4	1	1.0	2.0	21	81

Note1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} =8⇔A_{hs}=β_{hs}/β_c=30/15⇔β_{hs}=30/15*β_c.

Note2: CM=1 for β_c/β_d =12/15,β_{hs}/β_c=24/15.For all other combinations of DPDCH,DPCCH,HS-DPCCH,E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period(TF1,TF0) is achieved by setting the signaled gain factors for the reference TFC(TF1,TF1) to β_c=10/15 and β_d=15/15.

Note4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period(TF1,TF0) is achieved by setting the signaled gain factors for the reference TFC(TF1,TF1) to β_c=14/15 and β_d=15/15.

NOTE5: Testing UE using E-DPDCH Physical layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.

NOTE6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

WCDMA band II

Test results conducted power measurement (Full Power)

Mode		Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
Release 99	RMC,12.2kbps	1852.4	9262	23.67
		1880.0	9400	23.54
		1907.6	9538	23.61
	RMC,64kbps	1852.4	9262	23.36
		1880.0	9400	23.13
		1907.6	9538	23.46
	RMC,144kbps	1852.4	9262	23.66
		1880.0	9400	23.20
		1907.6	9538	23.29
	RMC,384kbps	1852.4	9262	23.62
		1880.0	9400	23.50
		1907.6	9538	23.47
	AMR,12.2kbps	1852.4	9262	23.65
		1880.0	9400	23.53
		1907.6	9538	23.59
HSDPA	Subtest 1	1852.4	9262	22.55
		1880.0	9400	22.43
		1907.6	9538	22.49
	Subtest 2	1852.4	9262	22.61
		1880.0	9400	22.34
		1907.6	9538	22.45
	Subtest 3	1852.4	9262	22.52
		1880.0	9400	22.48
		1907.6	9538	22.61
	Subtest 4	1852.4	9262	22.64
		1880.0	9400	22.52
		1907.6	9538	22.42
HSUPA	Subtest 1	1852.4	9262	22.63
		1880.0	9400	22.40
		1907.6	9538	22.41
	Subtest 2	1852.4	9262	22.63
		1880.0	9400	22.45
		1907.6	9538	22.56
	Subtest 3	1852.4	9262	22.64
		1880.0	9400	22.48
		1907.6	9538	22.44
	Subtest 4	1852.4	9262	22.51
		1880.0	9400	22.42
		1907.6	9538	22.53
	Subtest 5	1852.4	9262	22.50
		1880.0	9400	22.37
		1907.6	9538	22.54

Test results conducted power measurement (Reduced Power)

Mode		Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
Release 99	RMC,12.2kbps	1852.4	9262	14.67
		1880.0	9400	14.54
		1907.6	9538	14.61
	RMC,64kbps	1852.4	9262	14.36
		1880.0	9400	14.13
		1907.6	9538	14.46
	RMC,144kbps	1852.4	9262	14.66
		1880.0	9400	14.20
		1907.6	9538	14.29
	RMC,384kbps	1852.4	9262	14.62
		1880.0	9400	14.50
		1907.6	9538	14.47
	AMR,12.2kbps	1852.4	9262	14.65
		1880.0	9400	14.53
		1907.6	9538	14.59
HSDPA	Subtest 1	1852.4	9262	13.55
		1880.0	9400	13.43
		1907.6	9538	13.49
	Subtest 2	1852.4	9262	13.61
		1880.0	9400	13.34
		1907.6	9538	13.45
	Subtest 3	1852.4	9262	13.52
		1880.0	9400	13.48
		1907.6	9538	13.61
	Subtest 4	1852.4	9262	13.64
		1880.0	9400	13.52
		1907.6	9538	13.42
HSUPA	Subtest 1	1852.4	9262	13.63
		1880.0	9400	13.40
		1907.6	9538	13.41
	Subtest 2	1852.4	9262	13.63
		1880.0	9400	13.45
		1907.6	9538	13.56
	Subtest 3	1852.4	9262	13.64
		1880.0	9400	13.48
		1907.6	9538	13.44
	Subtest 4	1852.4	9262	13.51
		1880.0	9400	13.42
		1907.6	9538	13.53
	Subtest 5	1852.4	9262	13.50
		1880.0	9400	13.37
		1907.6	9538	13.54

WCDMA band IV

Test results conducted power measurement (Full Power)

Mode		Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
Release 99	RMC,12.2kbps	1712.4	1312	23.72
		1732.4	1412	23.70
		1752.6	1513	23.62
	RMC,64kbps	1712.4	1312	23.59
		1732.4	1412	23.33
		1752.6	1513	23.25
	RMC,144kbps	1712.4	1312	23.26
		1732.4	1412	23.27
		1752.6	1513	23.49
	RMC,384kbps	1712.4	1312	23.66
		1732.4	1412	23.53
		1752.6	1513	23.27
	AMR,12.2kbps	1712.4	1312	23.50
		1732.4	1412	23.40
		1752.6	1513	23.34
HSDPA	Subtest 1	1712.4	1312	22.53
		1732.4	1412	22.60
		1752.6	1513	22.47
	Subtest 2	1712.4	1312	22.67
		1732.4	1412	22.55
		1752.6	1513	22.55
	Subtest 3	1712.4	1312	22.65
		1732.4	1412	22.68
		1752.6	1513	22.44
	Subtest 4	1712.4	1312	22.71
		1732.4	1412	22.61
		1752.6	1513	22.48
HSUPA	Subtest 1	1712.4	1312	22.71
		1732.4	1412	22.52
		1752.6	1513	22.50
	Subtest 2	1712.4	1312	22.63
		1732.4	1412	22.66
		1752.6	1513	22.42
	Subtest 3	1712.4	1312	22.57
		1732.4	1412	22.55
		1752.6	1513	22.47
	Subtest 4	1712.4	1312	22.57
		1732.4	1412	22.62
		1752.6	1513	22.44
	Subtest 5	1712.4	1312	22.64
		1732.4	1412	22.57
		1752.6	1513	22.57

Test results conducted power measurement (Reduced Power)

Mode		Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
Release 99	RMC,12.2kbps	1712.4	1312	15.72
		1732.4	1412	15.70
		1752.6	1513	15.62
	RMC,64kbps	1712.4	1312	15.59
		1732.4	1412	15.33
		1752.6	1513	15.25
	RMC,144kbps	1712.4	1312	15.26
		1732.4	1412	15.27
		1752.6	1513	15.49
	RMC,384kbps	1712.4	1312	15.66
		1732.4	1412	15.53
		1752.6	1513	15.27
	AMR,12.2kbps	1712.4	1312	15.50
		1732.4	1412	15.40
		1752.6	1513	15.34
HSDPA	Subtest 1	1712.4	1312	14.53
		1732.4	1412	14.60
		1752.6	1513	14.47
	Subtest 2	1712.4	1312	14.67
		1732.4	1412	14.55
		1752.6	1513	14.55
	Subtest 3	1712.4	1312	14.65
		1732.4	1412	14.68
		1752.6	1513	14.44
	Subtest 4	1712.4	1312	14.71
		1732.4	1412	14.61
		1752.6	1513	14.48
HSUPA	Subtest 1	1712.4	1312	14.71
		1732.4	1412	14.52
		1752.6	1513	14.50
	Subtest 2	1712.4	1312	14.63
		1732.4	1412	14.66
		1752.6	1513	14.42
	Subtest 3	1712.4	1312	14.57
		1732.4	1412	14.55
		1752.6	1513	14.47
	Subtest 4	1712.4	1312	14.57
		1732.4	1412	14.62
		1752.6	1513	14.44
	Subtest 5	1712.4	1312	14.64
		1732.4	1412	14.57
		1752.6	1513	14.57

WCDMA band V

Test results conducted power measurement (Full Power)

Mode		Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
Release 99	RMC,12.2kbps	826.4	4132	23.98
		836.6	4183	23.83
		846.6	4233	23.83
	RMC,64kbps	826.4	4132	23.60
		836.6	4183	23.75
		846.6	4233	23.42
	RMC,144kbps	826.4	4132	23.69
		836.6	4183	23.38
		846.6	4233	23.79
	RMC,384kbps	826.4	4132	23.58
		836.6	4183	23.62
		846.6	4233	23.48
	AMR,12.2kbps	826.4	4132	23.81
		836.6	4183	23.40
		846.6	4233	23.67
HSDPA	Subtest 1	826.4	4132	22.96
		836.6	4183	22.69
		846.6	4233	22.75
	Subtest 2	826.4	4132	22.98
		836.6	4183	22.75
		846.6	4233	22.70
	Subtest 3	826.4	4132	22.80
		836.6	4183	22.82
		846.6	4233	22.70
	Subtest 4	826.4	4132	22.91
		836.6	4183	22.69
		846.6	4233	22.79
HSUPA	Subtest 1	826.4	4132	22.86
		836.6	4183	22.75
		846.6	4233	22.70
	Subtest 2	826.4	4132	22.96
		836.6	4183	22.64
		846.6	4233	22.79
	Subtest 3	826.4	4132	22.91
		836.6	4183	22.78
		846.6	4233	22.64
	Subtest 4	826.4	4132	22.83
		836.6	4183	22.80
		846.6	4233	22.74
	Subtest 5	826.4	4132	22.89
		836.6	4183	22.81
		846.6	4233	22.74

Test results conducted power measurement (Reduced Power)

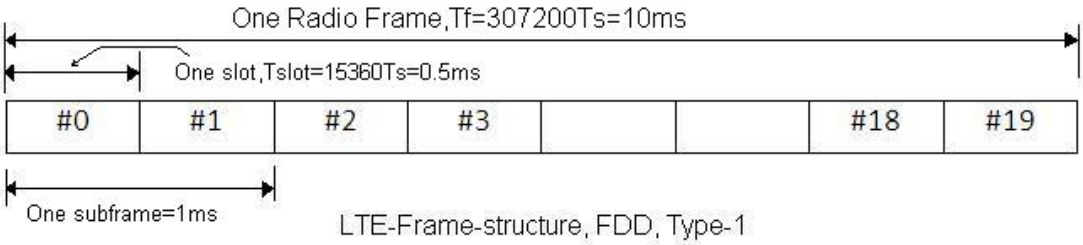
Mode		Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
Release 99	RMC,12.2kbps	826.4	4132	19.98
		836.6	4183	19.83
		846.6	4233	19.83
	RMC,64kbps	826.4	4132	19.60
		836.6	4183	19.75
		846.6	4233	19.42
	RMC,144kbps	826.4	4132	19.69
		836.6	4183	19.38
		846.6	4233	19.79
	RMC,384kbps	826.4	4132	19.58
		836.6	4183	19.62
		846.6	4233	19.48
	AMR,12.2kbps	826.4	4132	19.81
		836.6	4183	19.40
		846.6	4233	19.67
HSDPA	Subtest 1	826.4	4132	18.96
		836.6	4183	18.69
		846.6	4233	18.75
	Subtest 2	826.4	4132	18.98
		836.6	4183	18.75
		846.6	4233	18.70
	Subtest 3	826.4	4132	18.80
		836.6	4183	18.82
		846.6	4233	18.70
	Subtest 4	826.4	4132	18.91
		836.6	4183	18.69
		846.6	4233	18.79
HSUPA	Subtest 1	826.4	4132	18.86
		836.6	4183	18.75
		846.6	4233	18.70
	Subtest 2	826.4	4132	18.96
		836.6	4183	18.64
		846.6	4233	18.79
	Subtest 3	826.4	4132	18.91
		836.6	4183	18.78
		846.6	4233	18.64
	Subtest 4	826.4	4132	18.83
		836.6	4183	18.80
		846.6	4233	18.74
	Subtest 5	826.4	4132	18.89
		836.6	4183	18.81
		846.6	4233	18.74

Note: UMTS SAR was tested under Rel.99 RMC 12.2kbps mode per KDB Publication 941225 D01.for other higher release configuration, SAR was not required since any average output power was not more than 0.25 dB higher than the RMC level and the adjusted SAR was less than 1.2 W/kg.

6.3 LTE Measurement result

General description:

FDD-LTE frame structure



LTE-Frame-structure, FDD, Type-1

Type 1 is used as LTE FDD frame structure. As shown in the figure above, an LTE TDD frame is made of total 20 slots, each of 0.5ms. Two consecutive time slots will form one subframe. 10 such subframes form one radio frame. One subframe duration is about 1 ms.and the duty cycle is inherent as100%

LTE Band 2

Test results conducted power measurement (Full Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1850.7	18607	1.4	1	0	23.53
				1	5	23.35
				3	2	22.55
				6	0	22.34
	1880	18900		1	0	23.69
				1	5	23.57
				3	2	22.49
				6	0	22.58
	1909.3	19193		1	0	23.35
				1	5	23.35
				3	2	22.42
				6	0	22.36
16QAM	1850.7	18607	1.4	1	0	22.44
				1	5	22.48
				3	2	21.50
				6	0	21.41
	1880	18900		1	0	22.18
				1	5	22.31
				3	2	21.60
				6	0	21.59
	1909.3	19193		1	0	22.85
				1	5	22.10
				3	2	21.43
				6	0	21.40
64QAM	1850.7	18607	1.4	1	0	22.15
				1	5	21.95
				3	2	21.37
				6	0	21.37
	1880	18900		1	0	22.12
				1	5	21.67
				3	2	21.49
				6	0	21.52
	1909.3	19193		1	0	21.79
				1	5	21.67
				3	2	21.44
				6	0	21.34

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1851.5	18615	3	1	0	23.49
				1	14	23.30
				8	4	22.51
				15	0	22.44
	1880	18900		1	0	23.76
				1	14	23.57
				8	4	22.57
				15	0	22.53
	1908.5	19185		1	0	23.31
				1	14	23.32
				8	4	22.40
				15	0	22.33
16QAM	1851.5	18615	3	1	0	22.47
				1	14	22.43
				8	4	21.55
				15	0	21.45
	1880	18900		1	0	22.20
				1	14	22.22
				8	4	21.67
				15	0	21.54
	1908.5	19185		1	0	22.78
				1	14	22.08
				8	4	21.40
				15	0	21.37
64QAM	1851.5	18615	3	1	0	22.13
				1	14	21.91
				8	4	21.45
				15	0	21.41
	1880	18900		1	0	22.08
				1	14	21.68
				8	4	21.46
				15	0	21.51
	1908.5	19185		1	0	21.83
				1	14	21.65
				8	4	21.47
				15	0	21.40

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1852.5	18625	5	1	0	23.60
				1	24	23.42
				12	6	22.53
				25	0	22.37
	1880	18900		1	0	23.77
				1	24	23.60
				12	6	22.53
				25	0	22.61
	1907.5	19175		1	0	23.31
				1	24	23.44
				12	6	22.43
				25	0	22.34
16QAM	1852.5	18625	5	1	0	22.41
				1	24	22.51
				12	6	21.57
				25	0	21.44
	1880	18900		1	0	22.17
				1	24	22.24
				12	6	21.64
				25	0	21.56
	1907.5	19175		1	0	22.76
				1	24	22.10
				12	6	21.40
				25	0	21.33
64QAM	1852.5	18625	5	1	0	22.05
				1	24	21.96
				12	6	21.47
				25	0	21.42
	1880	18900		1	0	22.16
				1	24	21.79
				12	6	21.48
				25	0	21.51
	1907.5	19175		1	0	21.85
				1	24	21.73
				12	6	21.40
				25	0	21.37

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1855	18650	10	1	0	23.63
				1	49	23.40
				24	12	22.61
				50	0	22.40
	1880	18900		1	0	23.66
				1	49	23.57
				24	12	22.60
				50	0	22.53
	1905	19150		1	0	23.25
				1	49	23.39
				24	12	22.38
				50	0	22.32
16QAM	1855	18650	10	1	0	22.42
				1	49	22.44
				24	12	21.49
				50	0	21.44
	1880	18900		1	0	22.21
				1	49	22.20
				24	12	21.66
				50	0	21.55
	1905	19150		1	0	22.74
				1	49	22.09
				24	12	21.37
				50	0	21.32
64QAM	1855	18650	10	1	0	22.12
				1	49	21.94
				24	12	21.45
				50	0	21.36
	1880	18900		1	0	22.06
				1	49	21.71
				24	12	21.52
				50	0	21.56
	1905	19150		1	0	21.78
				1	49	21.70
				24	12	21.45
				50	0	21.47

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1857.5	18675	15	1	0	23.54
				1	74	23.32
				40	18	22.58
				75	0	22.39
	1880	18900		1	0	23.67
				1	74	23.57
				40	18	22.61
				75	0	22.52
	1902.5	19125		1	0	23.25
				1	74	23.43
				40	18	22.36
				75	0	22.42
16QAM	1857.5	18675	15	1	0	22.43
				1	74	22.53
				40	18	21.45
				75	0	21.40
	1880	18900		1	0	22.12
				1	74	22.21
				40	18	21.68
				75	0	21.62
	1902.5	19125		1	0	22.78
				1	74	22.05
				40	18	21.32
				75	0	21.26
64QAM	1857.5	18675	15	1	0	22.09
				1	74	21.93
				40	18	21.49
				75	0	21.42
	1880	18900		1	0	22.08
				1	74	21.65
				40	18	21.59
				75	0	21.49
	1902.5	19125		1	0	21.92
				1	74	21.71
				40	18	21.49
				75	0	21.42

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1860	18700	20	1	0	**23.63**
				1	99	23.43
				50	25	**22.62**
				100	0	**22.47**
	1880	18900		1	0	**23.79**
				1	99	23.61
				50	25	**22.62**
				100	0	**22.65**
	1900	19100		1	0	23.39
				1	99	**23.47**
				50	25	**22.47**
				100	0	**22.43**
16QAM	1860	18700	20	1	0	22.49
				1	99	22.55
				50	25	21.57
				100	0	21.53
	1880	18900		1	0	22.22
				1	99	22.34
				50	25	21.73
				100	0	21.67
	1900	19100		1	0	22.87
				1	99	22.15
				50	25	21.47
				100	0	21.41
64QAM	1860	18700	20	1	0	22.16
				1	99	22.05
				50	25	21.51
				100	0	21.45
	1880	18900		1	0	22.19
				1	99	21.79
				50	25	21.61
				100	0	21.57
	1900	19100		1	0	21.93
				1	99	21.76
				50	25	21.54
				100	0	21.48

Test results conducted power measurement (Reduced Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1850.7	18607	1.4	1	0	14.53
				1	5	14.35
				3	2	13.55
				6	0	13.34
	1880	18900		1	0	14.69
				1	5	14.57
				3	2	13.49
				6	0	13.58
	1909.3	19193		1	0	14.35
				1	5	14.35
				3	2	13.42
				6	0	13.36
16QAM	1850.7	18607	1.4	1	0	13.44
				1	5	13.48
				3	2	12.50
				6	0	12.41
	1880	18900		1	0	13.18
				1	5	13.31
				3	2	12.60
				6	0	12.59
	1909.3	19193		1	0	13.85
				1	5	13.10
				3	2	12.43
				6	0	12.40
64QAM	1850.7	18607	1.4	1	0	13.15
				1	5	12.95
				3	2	12.37
				6	0	12.37
	1880	18900		1	0	13.12
				1	5	12.67
				3	2	12.49
				6	0	12.52
	1909.3	19193		1	0	12.79
				1	5	12.67
				3	2	12.44
				6	0	12.34

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1851.5	18615	3	1	0	14.49
				1	14	14.30
				8	4	13.51
				15	0	13.44
	1880	18900		1	0	14.76
				1	14	14.57
				8	4	13.57
				15	0	13.53
	1908.5	19185		1	0	14.31
				1	14	14.32
				8	4	13.40
				15	0	13.33
16QAM	1851.5	18615	3	1	0	13.47
				1	14	13.43
				8	4	12.55
				15	0	12.45
	1880	18900		1	0	13.20
				1	14	13.22
				8	4	12.67
				15	0	12.54
	1908.5	19185		1	0	13.78
				1	14	13.08
				8	4	12.40
				15	0	12.37
64QAM	1851.5	18615	3	1	0	13.13
				1	14	12.91
				8	4	12.45
				15	0	12.41
	1880	18900		1	0	13.08
				1	14	12.68
				8	4	12.46
				15	0	12.51
	1908.5	19185		1	0	12.83
				1	14	12.65
				8	4	12.47
				15	0	12.40

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1852.5	18625	5	1	0	14.60
				1	24	14.42
				12	6	13.53
				25	0	13.37
	1880	18900		1	0	14.77
				1	24	14.60
				12	6	13.53
				25	0	13.61
	1907.5	19175		1	0	14.31
				1	24	14.44
				12	6	13.43
				25	0	13.34
16QAM	1852.5	18625	5	1	0	13.41
				1	24	13.51
				12	6	12.57
				25	0	12.44
	1880	18900		1	0	13.17
				1	24	13.24
				12	6	12.64
				25	0	12.56
	1907.5	19175		1	0	13.76
				1	24	13.10
				12	6	12.40
				25	0	12.33
64QAM	1852.5	18625	5	1	0	13.05
				1	24	12.96
				12	6	12.47
				25	0	12.42
	1880	18900		1	0	13.16
				1	24	12.79
				12	6	12.48
				25	0	12.51
	1907.5	19175		1	0	12.85
				1	24	12.73
				12	6	12.40
				25	0	12.37

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1855	18650	10	1	0	14.63
				1	49	14.40
				24	12	13.61
				50	0	13.40
	1880	18900		1	0	14.66
				1	49	14.57
				24	12	13.60
				50	0	13.53
	1905	19150		1	0	14.25
				1	49	14.39
				24	12	13.38
				50	0	13.32
16QAM	1855	18650	10	1	0	13.42
				1	49	13.44
				24	12	12.49
				50	0	12.44
	1880	18900		1	0	13.21
				1	49	13.20
				24	12	12.66
				50	0	12.55
	1905	19150		1	0	13.74
				1	49	13.09
				24	12	12.37
				50	0	12.32
64QAM	1855	18650	10	1	0	13.12
				1	49	12.94
				24	12	12.45
				50	0	12.36
	1880	18900		1	0	13.06
				1	49	12.71
				24	12	12.52
				50	0	12.56
	1905	19150		1	0	12.78
				1	49	12.70
				24	12	12.45
				50	0	12.47

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1857.5	18675	15	1	0	14.54
				1	74	14.32
				40	18	13.58
				75	0	13.39
	1880	18900		1	0	14.67
				1	74	14.57
				40	18	13.61
				75	0	13.52
	1902.5	19125		1	0	14.25
				1	74	14.43
				40	18	13.36
				75	0	13.42
16QAM	1857.5	18675	15	1	0	13.43
				1	74	13.53
				40	18	12.45
				75	0	12.40
	1880	18900		1	0	13.12
				1	74	13.21
				40	18	12.68
				75	0	12.62
	1902.5	19125		1	0	13.78
				1	74	13.05
				40	18	12.32
				75	0	12.26
64QAM	1857.5	18675	15	1	0	13.09
				1	74	12.93
				40	18	12.49
				75	0	12.42
	1880	18900		1	0	13.08
				1	74	12.65
				40	18	12.59
				75	0	12.49
	1902.5	19125		1	0	12.92
				1	74	12.71
				40	18	12.49
				75	0	12.42

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1860	18700	20	1	0	**14.63**
				1	99	14.43
				50	25	**13.62**
				100	0	**13.47**
	1880	18900		1	0	**14.79**
				1	99	14.61
				50	25	**13.62**
				100	0	**13.65**
	1900	19100		1	0	14.39
				1	99	**14.47**
				50	25	**13.47**
				100	0	**13.43**
16QAM	1860	18700	20	1	0	13.49
				1	99	13.55
				50	25	12.57
				100	0	12.53
	1880	18900		1	0	13.22
				1	99	13.34
				50	25	12.73
				100	0	12.67
	1900	19100		1	0	13.87
				1	99	13.15
				50	25	12.47
				100	0	12.41
64QAM	1860	18700	20	1	0	13.16
				1	99	13.05
				50	25	12.51
				100	0	12.45
	1880	18900		1	0	13.19
				1	99	12.79
				50	25	12.61
				100	0	12.57
	1900	19100		1	0	12.93
				1	99	12.76
				50	25	12.54
				100	0	12.48

LTE Band 4

Test results conducted power measurement (Full Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1710.7	19957	1.4	1	0	24.08
				1	5	24.18
				3	2	23.14
				6	0	23.04
	1732.5	20175		1	0	24.38
				1	5	24.47
				3	2	23.00
				6	0	23.26
	1754.3	20393		1	0	24.50
				1	5	24.39
				3	2	23.18
				6	0	23.12
16QAM	1710.7	19957	1.4	1	0	23.28
				1	5	23.24
				3	2	22.22
				6	0	22.16
	1732.5	20175		1	0	23.25
				1	5	23.12
				3	2	22.10
				6	0	22.13
	1754.3	20393		1	0	23.80
				1	5	23.45
				3	2	22.40
				6	0	22.21
64QAM	1710.7	19957	1.4	1	0	22.44
				1	5	22.35
				3	2	22.00
				6	0	21.95
	1732.5	20175		1	0	22.79
				1	5	23.01
				3	2	22.23
				6	0	22.21
	1754.3	20393		1	0	22.66
				1	5	22.82
				3	2	22.29
				6	0	22.29

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	19965	3	1	0	24.09
				1	14	24.20
				8	4	23.06
				15	0	23.01
	1732.5	20175		1	0	24.34
				1	14	24.38
				8	4	22.99
				15	0	23.19
	1753.5	20385		1	0	24.54
				1	14	24.35
				8	4	23.23
				15	0	23.23
16QAM	1711.5	19965	3	1	0	23.30
				1	14	23.15
				8	4	22.16
				15	0	22.18
	1732.5	20175		1	0	23.36
				1	14	23.23
				8	4	22.05
				15	0	22.22
	1753.5	20385		1	0	23.77
				1	14	23.35
				8	4	22.32
				15	0	22.22
64QAM	1711.5	19965	3	1	0	22.40
				1	14	22.35
				8	4	21.93
				15	0	22.04
	1732.5	20175		1	0	22.73
				1	14	23.02
				8	4	22.16
				15	0	22.23
	1753.5	20385		1	0	22.81
				1	14	22.80
				8	4	22.29
				15	0	22.20

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	19975	5	1	0	24.14
				1	24	24.17
				12	6	23.05
				25	0	23.04
	1732.5	20175		1	0	24.32
				1	24	24.39
				12	6	23.12
				25	0	23.22
	1752.5	20375		1	0	24.48
				1	24	24.40
				12	6	23.19
				25	0	23.23
16QAM	1712.5	19975	5	1	0	23.27
				1	24	23.19
				12	6	22.21
				25	0	22.23
	1732.5	20175		1	0	23.21
				1	24	23.15
				12	6	22.03
				25	0	22.20
	1752.5	20375		1	0	23.84
				1	24	23.32
				12	6	22.32
				25	0	22.32
64QAM	1712.5	19975	5	1	0	22.32
				1	24	22.30
				12	6	22.03
				25	0	22.01
	1732.5	20175		1	0	22.76
				1	24	23.02
				12	6	22.22
				25	0	22.20
	1752.5	20375		1	0	22.79
				1	24	22.81
				12	6	22.21
				25	0	22.17

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	20000	10	1	0	24.06
				1	49	24.23
				24	12	23.11
				50	0	23.15
	1732.5	20175		1	0	24.36
				1	49	24.42
				24	12	23.00
				50	0	23.17
	1750	20350		1	0	24.44
				1	49	24.32
				24	12	23.16
				50	0	23.15
16QAM	1715	20000	10	1	0	23.22
				1	49	23.23
				24	12	22.22
				50	0	22.14
	1732.5	20175		1	0	23.31
				1	49	23.13
				24	12	22.10
				50	0	22.22
	1750	20350		1	0	23.82
				1	49	23.32
				24	12	22.36
				50	0	22.21
64QAM	1715	20000	10	1	0	22.42
				1	49	22.44
				24	12	21.92
				50	0	22.09
	1732.5	20175		1	0	22.80
				1	49	22.95
				24	12	22.19
				50	0	22.18
	1750	20350		1	0	22.76
				1	49	22.71
				24	12	22.27
				50	0	22.21

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	20025	15	1	0	24.03
				1	74	24.19
				40	18	23.06
				75	0	23.03
	1732.5	20175		1	0	24.28
				1	74	24.44
				40	18	23.04
				75	0	23.20
	1747.5	20325		1	0	24.51
				1	74	24.34
				40	18	23.24
				75	0	23.23
16QAM	1717.5	20025	15	1	0	23.31
				1	74	23.14
				40	18	22.16
				75	0	22.15
	1732.5	20175		1	0	23.28
				1	74	23.22
				40	18	21.97
				75	0	22.19
	1747.5	20325		1	0	23.86
				1	74	23.37
				40	18	22.45
				75	0	22.31
64QAM	1717.5	20025	15	1	0	22.41
				1	74	22.35
				40	18	22.02
				75	0	22.00
	1732.5	20175		1	0	22.80
				1	74	22.93
				40	18	22.19
				75	0	22.27
	1747.5	20325		1	0	22.72
				1	74	22.75
				40	18	22.23
				75	0	22.18

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	20050	20	1	0	24.18
				1	99	**24.31**
				50	25	**23.18**
				100	0	**23.15**
	1732.5	20175		1	0	24.39
				1	99	**24.49**
				50	25	**23.14**
				100	0	**23.28**
	1745	20300		1	0	**24.56**
				1	99	24.45
				50	25	**23.31**
				100	0	**23.24**
16QAM	1720	20050	20	1	0	23.33
				1	99	23.24
				50	25	22.29
				100	0	22.27
	1732.5	20175		1	0	23.36
				1	99	23.26
				50	25	22.11
				100	0	22.28
	1745	20300		1	0	23.90
				1	99	23.47
				50	25	22.45
				100	0	22.33
64QAM	1720	20050	20	1	0	22.46
				1	99	22.45
				50	25	22.04
				100	0	22.09
	1732.5	20175		1	0	22.81
				1	99	23.06
				50	25	22.23
				100	0	22.32
	1745	20300		1	0	22.81
				1	99	22.86
				50	25	22.30
				100	0	22.32

Test results conducted power measurement (Reduced Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1710.7	19957	1.4	1	0	16.58
				1	5	16.68
				3	2	15.64
				6	0	15.54
	1732.5	20175		1	0	16.88
				1	5	16.97
				3	2	15.50
				6	0	15.76
	1754.3	20393		1	0	17.00
				1	5	16.89
				3	2	15.68
				6	0	15.62
16QAM	1710.7	19957	1.4	1	0	15.78
				1	5	15.74
				3	2	14.72
				6	0	14.66
	1732.5	20175		1	0	15.75
				1	5	15.62
				3	2	14.60
				6	0	14.63
	1754.3	20393		1	0	16.30
				1	5	15.95
				3	2	14.90
				6	0	14.71
64QAM	1710.7	19957	1.4	1	0	14.94
				1	5	14.85
				3	2	14.50
				6	0	14.45
	1732.5	20175		1	0	15.29
				1	5	15.51
				3	2	14.73
				6	0	14.71
	1754.3	20393		1	0	15.16
				1	5	15.32
				3	2	14.79
				6	0	14.79

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	19965	3	1	0	16.59
				1	14	16.70
				8	4	15.56
				15	0	15.51
	1732.5	20175		1	0	16.84
				1	14	16.88
				8	4	15.49
				15	0	15.69
	1753.5	20385		1	0	17.04
				1	14	16.85
				8	4	15.73
				15	0	15.73
16QAM	1711.5	19965	3	1	0	15.80
				1	14	15.65
				8	4	14.66
				15	0	14.68
	1732.5	20175		1	0	15.86
				1	14	15.73
				8	4	14.55
				15	0	14.72
	1753.5	20385		1	0	16.27
				1	14	15.85
				8	4	14.82
				15	0	14.72
64QAM	1711.5	19965	3	1	0	14.90
				1	14	14.85
				8	4	14.43
				15	0	14.54
	1732.5	20175		1	0	15.23
				1	14	15.52
				8	4	14.66
				15	0	14.73
	1753.5	20385		1	0	15.31
				1	14	15.30
				8	4	14.79
				15	0	14.70

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	19975	5	1	0	16.64
				1	24	16.67
				12	6	15.55
				25	0	15.54
	1732.5	20175		1	0	16.82
				1	24	16.89
				12	6	15.62
				25	0	15.72
	1752.5	20375		1	0	16.98
				1	24	16.90
				12	6	15.69
				25	0	15.73
16QAM	1712.5	19975	5	1	0	15.77
				1	24	15.69
				12	6	14.71
				25	0	14.73
	1732.5	20175		1	0	15.71
				1	24	15.65
				12	6	14.53
				25	0	14.70
	1752.5	20375		1	0	16.34
				1	24	15.82
				12	6	14.82
				25	0	14.82
64QAM	1712.5	19975	5	1	0	14.82
				1	24	14.80
				12	6	14.53
				25	0	14.51
	1732.5	20175		1	0	15.26
				1	24	15.52
				12	6	14.72
				25	0	14.70
	1752.5	20375		1	0	15.29
				1	24	15.31
				12	6	14.71
				25	0	14.67

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	20000	10	1	0	16.56
				1	49	16.73
				24	12	15.61
				50	0	15.65
	1732.5	20175		1	0	16.86
				1	49	16.92
				24	12	15.50
				50	0	15.67
	1750	20350		1	0	16.94
				1	49	16.82
				24	12	15.66
				50	0	15.65
16QAM	1715	20000	10	1	0	15.72
				1	49	15.73
				24	12	14.72
				50	0	14.64
	1732.5	20175		1	0	15.81
				1	49	15.63
				24	12	14.60
				50	0	14.72
	1750	20350		1	0	16.32
				1	49	15.82
				24	12	14.86
				50	0	14.71
64QAM	1715	20000	10	1	0	14.92
				1	49	14.94
				24	12	14.42
				50	0	14.59
	1732.5	20175		1	0	15.30
				1	49	15.45
				24	12	14.69
				50	0	14.68
	1750	20350		1	0	15.26
				1	49	15.21
				24	12	14.77
				50	0	14.71

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	20025	15	1	0	16.53
				1	74	16.69
				40	18	15.56
				75	0	15.53
	1732.5	20175		1	0	16.78
				1	74	16.94
				40	18	15.54
				75	0	15.70
	1747.5	20325		1	0	17.01
				1	74	16.84
				40	18	15.74
				75	0	15.73
16QAM	1717.5	20025	15	1	0	15.81
				1	74	15.64
				40	18	14.66
				75	0	14.65
	1732.5	20175		1	0	15.78
				1	74	15.72
				40	18	14.47
				75	0	14.69
	1747.5	20325		1	0	16.36
				1	74	15.87
				40	18	14.95
				75	0	14.81
64QAM	1717.5	20025	15	1	0	14.91
				1	74	14.85
				40	18	14.52
				75	0	14.50
	1732.5	20175		1	0	15.30
				1	74	15.43
				40	18	14.69
				75	0	14.77
	1747.5	20325		1	0	15.22
				1	74	15.25
				40	18	14.73
				75	0	14.68

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	20050	20	1	0	16.68
				1	99	**16.81**
				50	25	**15.68**
				100	0	**15.65**
	1732.5	20175		1	0	16.89
				1	99	**16.99**
				50	25	**15.64**
				100	0	**15.78**
	1745	20300		1	0	**17.06**
				1	99	16.95
				50	25	**15.81**
				100	0	**15.74**
16QAM	1720	20050	20	1	0	15.83
				1	99	15.74
				50	25	14.79
				100	0	14.77
	1732.5	20175		1	0	15.86
				1	99	15.76
				50	25	14.61
				100	0	14.78
	1745	20300		1	0	16.40
				1	99	15.97
				50	25	14.95
				100	0	14.83
64QAM	1720	20050	20	1	0	14.96
				1	99	14.95
				50	25	14.54
				100	0	14.59
	1732.5	20175		1	0	15.31
				1	99	15.56
				50	25	14.73
				100	0	14.82
	1745	20300		1	0	15.31
				1	99	15.36
				50	25	14.80
				100	0	14.82

LTE Band 5

Test results conducted power measurement (Full Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	824.7	20407	1.4	1	0	24.50
				1	5	24.25
				3	2	23.04
				6	0	23.08
	836.5	20525		1	0	24.19
				1	5	24.64
				3	2	23.15
				6	0	23.16
	848.3	20643		1	0	24.24
				1	5	24.38
				3	2	23.21
				6	0	23.06
16QAM	824.7	20407	1.4	1	0	22.06
				1	5	22.20
				3	2	21.79
				6	0	22.09
	836.5	20525		1	0	22.61
				1	5	22.58
				3	2	22.24
				6	0	22.35
	848.3	20643		1	0	22.61
				1	5	22.70
				3	2	22.26
				6	0	22.19
64QAM	824.7	20407	1.4	1	0	22.17
				1	5	22.14
				3	2	22.06
				6	0	22.13
	836.5	20525		1	0	22.54
				1	5	22.71
				3	2	22.20
				6	0	22.30
	848.3	20643		1	0	22.31
				1	5	22.39
				3	2	22.05
				6	0	22.17

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	825.5	20415	3	1	0	24.48
				1	14	24.32
				8	4	23.00
				15	0	23.05
	836.5	20525		1	0	24.19
				1	14	24.56
				8	4	23.14
				15	0	23.24
	847.5	20635		1	0	24.35
				1	14	24.46
				8	4	23.19
				15	0	23.03
16QAM	825.5	20415	3	1	0	22.04
				1	14	22.27
				8	4	21.82
				15	0	22.11
	836.5	20525		1	0	22.60
				1	14	22.69
				8	4	22.27
				15	0	22.42
	847.5	20635		1	0	22.60
				1	14	22.68
				8	4	22.13
				15	0	22.23
64QAM	825.5	20415	3	1	0	22.24
				1	14	22.05
				8	4	22.06
				15	0	22.15
	836.5	20525		1	0	22.54
				1	14	22.62
				8	4	22.30
				15	0	22.24
	847.5	20635		1	0	22.38
				1	14	22.38
				8	4	22.07
				15	0	22.29

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	826.5	20425	5	1	0	24.41
				1	24	24.34
				12	6	23.06
				25	0	23.06
	836.5	20525		1	0	24.21
				1	24	24.64
				12	6	23.18
				25	0	23.24
	846.5	20625		1	0	24.36
				1	24	24.48
				12	6	23.19
				25	0	23.03
16QAM	826.5	20425	5	1	0	22.00
				1	24	22.25
				12	6	21.86
				25	0	22.15
	836.5	20525		1	0	22.55
				1	24	22.67
				12	6	22.22
				25	0	22.29
	846.5	20625		1	0	22.61
				1	24	22.77
				12	6	22.16
				25	0	22.20
64QAM	826.5	20425	5	1	0	22.26
				1	24	22.10
				12	6	22.08
				25	0	22.09
	836.5	20525		1	0	22.63
				1	24	22.57
				12	6	22.27
				25	0	22.27
	846.5	20625		1	0	22.33
				1	24	22.43
				12	6	22.12
				25	0	22.25

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	829	20450	10	1	0	**24.55**
				1	49	24.40
				24	12	**23.08**
				50	0	**23.17**
	836.5	20525		1	0	24.33
				1	49	**24.71**
				24	12	**23.20**
				50	0	**23.27**
	844	20600		1	0	24.37
				1	49	**24.49**
				24	12	**23.29**
				50	0	**23.11**
16QAM	829	20450	10	1	0	22.13
				1	49	22.29
				24	12	21.88
				50	0	22.16
	836.5	20525		1	0	22.69
				1	49	22.72
				24	12	22.34
				50	0	22.43
	844	20600		1	0	22.65
				1	49	22.78
				24	12	22.28
				50	0	22.27
64QAM	829	20450	10	1	0	22.28
				1	49	22.17
				24	12	22.10
				50	0	22.21
	836.5	20525		1	0	22.66
				1	49	22.71
				24	12	22.35
				50	0	22.38
	844	20600		1	0	22.39
				1	49	22.44
				24	12	22.17
				50	0	22.30

Test results conducted power measurement (Reduced Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	824.7	20407	1.4	1	0	20.50
				1	5	20.25
				3	2	19.04
				6	0	19.08
	836.5	20525		1	0	20.19
				1	5	20.64
				3	2	19.15
				6	0	19.16
	848.3	20643		1	0	20.24
				1	5	20.38
				3	2	19.21
				6	0	19.06
16QAM	824.7	20407	1.4	1	0	18.06
				1	5	18.20
				3	2	17.79
				6	0	18.09
	836.5	20525		1	0	18.61
				1	5	18.58
				3	2	18.24
				6	0	18.35
	848.3	20643		1	0	18.61
				1	5	18.70
				3	2	18.26
				6	0	18.19
64QAM	824.7	20407	1.4	1	0	18.17
				1	5	18.14
				3	2	18.06
				6	0	18.13
	836.5	20525		1	0	18.54
				1	5	18.71
				3	2	18.20
				6	0	18.30
	848.3	20643		1	0	18.31
				1	5	18.39
				3	2	18.05
				6	0	18.17

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	825.5	20415	3	1	0	20.48
				1	14	20.32
				8	4	19.00
				15	0	19.05
	836.5	20525		1	0	20.19
				1	14	20.56
				8	4	19.14
				15	0	19.24
	847.5	20635		1	0	20.35
				1	14	20.46
				8	4	19.19
				15	0	19.03
16QAM	825.5	20415	3	1	0	18.04
				1	14	18.27
				8	4	17.82
				15	0	18.11
	836.5	20525		1	0	18.60
				1	14	18.69
				8	4	18.27
				15	0	18.42
	847.5	20635		1	0	18.60
				1	14	18.68
				8	4	18.13
				15	0	18.23
64QAM	825.5	20415	3	1	0	18.24
				1	14	18.05
				8	4	18.06
				15	0	18.15
	836.5	20525		1	0	18.54
				1	14	18.62
				8	4	18.30
				15	0	18.24
	847.5	20635		1	0	18.38
				1	14	18.38
				8	4	18.07
				15	0	18.29

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	826.5	20425	5	1	0	20.41
				1	24	20.34
				12	6	19.06
				25	0	19.06
	836.5	20525		1	0	20.21
				1	24	20.64
				12	6	19.18
				25	0	19.24
	846.5	20625		1	0	20.36
				1	24	20.48
				12	6	19.19
				25	0	19.03
16QAM	826.5	20425	5	1	0	18.00
				1	24	18.25
				12	6	17.86
				25	0	18.15
	836.5	20525		1	0	18.55
				1	24	18.67
				12	6	18.22
				25	0	18.29
	846.5	20625		1	0	18.61
				1	24	18.77
				12	6	18.16
				25	0	18.20
64QAM	826.5	20425	5	1	0	18.26
				1	24	18.10
				12	6	18.08
				25	0	18.09
	836.5	20525		1	0	18.63
				1	24	18.57
				12	6	18.27
				25	0	18.27
	846.5	20625		1	0	18.33
				1	24	18.43
				12	6	18.12
				25	0	18.25

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	829	20450	10	1	0	**20.55**
				1	49	20.40
				24	12	**19.08**
				50	0	**19.17**
	836.5	20525		1	0	20.33
				1	49	**20.71**
				24	12	**19.20**
				50	0	**19.27**
	844	20600		1	0	20.37
				1	49	**20.49**
				24	12	**19.29**
				50	0	**19.11**
16QAM	829	20450	10	1	0	18.13
				1	49	18.29
				24	12	17.88
				50	0	18.16
	836.5	20525		1	0	18.69
				1	49	18.72
				24	12	18.34
				50	0	18.43
	844	20600		1	0	18.65
				1	49	18.78
				24	12	18.28
				50	0	18.27
64QAM	829	20450	10	1	0	18.28
				1	49	18.17
				24	12	18.10
				50	0	18.21
	836.5	20525		1	0	18.66
				1	49	18.71
				24	12	18.35
				50	0	18.38
	844	20600		1	0	18.39
				1	49	18.44
				24	12	18.17
				50	0	18.30

LTE Band 7

Test results conducted power measurement (Full Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2502.5	20775	5	1	0	24.19
				1	24	24.57
				12	6	23.41
				25	0	23.37
	2535	21100		1	0	24.33
				1	24	24.38
				12	6	23.40
				25	0	23.37
	2567.5	21425		1	0	24.13
				1	24	24.40
				12	6	23.77
				25	0	23.13
16QAM	2502.5	20775	5	1	0	24.00
				1	24	23.28
				12	6	22.43
				25	0	22.45
	2535	21100		1	0	22.75
				1	24	22.53
				12	6	22.33
				25	0	22.48
	2567.5	21425		1	0	23.06
				1	24	22.94
				12	6	22.41
				25	0	22.14
64QAM	2502.5	20775	5	1	0	23.05
				1	24	23.29
				12	6	22.43
				25	0	22.50
	2535	21100		1	0	22.62
				1	24	22.83
				12	6	22.23
				25	0	22.28
	2567.5	21425		1	0	22.98
				1	24	22.92
				12	6	22.30
				25	0	22.16

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2505	20800	10	1	0	24.26
				1	49	24.66
				24	12	23.36
				50	0	23.39
	2535	21100		1	0	24.44
				1	49	24.35
				24	12	23.33
				50	0	23.34
	2565	21400		1	0	24.13
				1	49	24.43
				24	12	23.67
				50	0	23.13
16QAM	2505	20800	10	1	0	24.04
				1	49	23.32
				24	12	22.43
				50	0	22.37
	2535	21100		1	0	22.65
				1	49	22.60
				24	12	22.30
				50	0	22.36
	2565	21400		1	0	23.16
				1	49	22.84
				24	12	22.45
				50	0	22.10
64QAM	2505	20800	10	1	0	23.04
				1	49	23.25
				24	12	22.46
				50	0	22.59
	2535	21100		1	0	22.67
				1	49	22.80
				24	12	22.31
				50	0	22.18
	2565	21400		1	0	23.02
				1	49	22.81
				24	12	22.40
				50	0	22.18

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2507.5	20825	15	1	0	24.31
				1	74	24.56
				40	18	23.47
				75	0	23.34
	2535	21100		1	0	24.31
				1	74	24.42
				40	18	23.40
				75	0	23.45
	2562.5	21375		1	0	24.10
				1	74	24.35
				40	18	23.72
				75	0	23.23
16QAM	2507.5	20825	15	1	0	23.96
				1	74	23.40
				40	18	22.38
				75	0	22.47
	2535	21100		1	0	22.67
				1	74	22.52
				40	18	22.35
				75	0	22.34
	2562.5	21375		1	0	23.07
				1	74	22.82
				40	18	22.44
				75	0	22.09
64QAM	2507.5	20825	15	1	0	23.01
				1	74	23.27
				40	18	22.39
				75	0	22.47
	2535	21100		1	0	22.71
				1	74	22.77
				40	18	22.22
				75	0	22.17
	2562.5	21375		1	0	22.97
				1	74	22.95
				40	18	22.39
				75	0	22.14

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2510	20850	20	1	0	24.33
				1	99	**24.68**
				50	25	**23.51**
				100	0	**23.48**
	2535	21100		1	0	**24.44**
				1	99	24.43
				50	25	**23.43**
				100	0	**23.46**
	2560	21350		1	0	24.22
				1	99	**24.44**
				50	25	**23.78**
				100	0	**23.26**
16QAM	2510	20850	20	1	0	24.05
				1	99	23.41
				50	25	22.47
				100	0	22.52
	2535	21100		1	0	22.76
				1	99	22.62
				50	25	22.35
				100	0	22.49
	2560	21350		1	0	23.21
				1	99	22.95
				50	25	22.53
				100	0	22.19
64QAM	2510	20850	20	1	0	23.13
				1	99	23.36
				50	25	22.54
				100	0	22.59
	2535	21100		1	0	22.73
				1	99	22.85
				50	25	22.35
				100	0	22.31
	2560	21350		1	0	23.07
				1	99	22.96
				50	25	22.41
				100	0	22.24

Test results conducted power measurement (Reduced Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2502.5	20775	5	1	0	14.69
				1	24	15.07
				12	6	13.91
				25	0	13.87
	2535	21100		1	0	14.83
				1	24	14.88
				12	6	13.90
				25	0	13.87
	2567.5	21425		1	0	14.63
				1	24	14.90
				12	6	14.27
				25	0	13.63
16QAM	2502.5	20775	5	1	0	14.50
				1	24	13.78
				12	6	12.93
				25	0	12.95
	2535	21100		1	0	13.25
				1	24	13.03
				12	6	12.83
				25	0	12.98
	2567.5	21425		1	0	13.56
				1	24	13.44
				12	6	12.91
				25	0	12.64
64QAM	2502.5	20775	5	1	0	13.55
				1	24	13.79
				12	6	12.93
				25	0	13.00
	2535	21100		1	0	13.12
				1	24	13.33
				12	6	12.73
				25	0	12.78
	2567.5	21425		1	0	13.48
				1	24	13.42
				12	6	12.80
				25	0	12.66

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2505	20800	10	1	0	14.76
				1	49	15.16
				24	12	13.86
				50	0	13.89
	2535	21100		1	0	14.94
				1	49	14.85
				24	12	13.83
				50	0	13.84
	2565	21400		1	0	14.63
				1	49	14.93
				24	12	14.17
				50	0	13.63
16QAM	2505	20800	10	1	0	14.54
				1	49	13.82
				24	12	12.93
				50	0	12.87
	2535	21100		1	0	13.15
				1	49	13.10
				24	12	12.80
				50	0	12.86
	2565	21400		1	0	13.66
				1	49	13.34
				24	12	12.95
				50	0	12.60
64QAM	2505	20800	10	1	0	13.54
				1	49	13.75
				24	12	12.96
				50	0	13.09
	2535	21100		1	0	13.17
				1	49	13.30
				24	12	12.81
				50	0	12.68
	2565	21400		1	0	13.52
				1	49	13.31
				24	12	12.90
				50	0	12.68

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2507.5	20825	15	1	0	14.81
				1	74	15.06
				40	18	13.97
				75	0	13.84
	2535	21100		1	0	14.81
				1	74	14.92
				40	18	13.90
				75	0	13.95
	2562.5	21375		1	0	14.60
				1	74	14.85
				40	18	14.22
				75	0	13.73
16QAM	2507.5	20825	15	1	0	14.46
				1	74	13.90
				40	18	12.88
				75	0	12.97
	2535	21100		1	0	13.17
				1	74	13.02
				40	18	12.85
				75	0	12.84
	2562.5	21375		1	0	13.57
				1	74	13.32
				40	18	12.94
				75	0	12.59
64QAM	2507.5	20825	15	1	0	13.51
				1	74	13.77
				40	18	12.89
				75	0	12.97
	2535	21100		1	0	13.21
				1	74	13.27
				40	18	12.72
				75	0	12.67
	2562.5	21375		1	0	13.47
				1	74	13.45
				40	18	12.89
				75	0	12.64

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	2510	20850	20	1	0	14.83
				1	99	**15.18**
				50	25	**14.01**
				100	0	**13.98**
	2535	21100		1	0	**14.94**
				1	99	14.93
				50	25	**13.93**
				100	0	**13.96**
	2560	21350		1	0	14.72
				1	99	**14.94**
				50	25	**14.28**
				100	0	**13.76**
16QAM	2510	20850	20	1	0	14.55
				1	99	13.91
				50	25	12.97
				100	0	13.02
	2535	21100		1	0	13.26
				1	99	13.12
				50	25	12.85
				100	0	12.99
	2560	21350		1	0	13.71
				1	99	13.45
				50	25	13.03
				100	0	12.69
64QAM	2510	20850	20	1	0	13.63
				1	99	13.86
				50	25	13.04
				100	0	13.09
	2535	21100		1	0	13.23
				1	99	13.35
				50	25	12.85
				100	0	12.81
	2560	21350		1	0	13.57
				1	99	13.46
				50	25	12.91
				100	0	12.74

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Test results conducted power measurement (Full Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	699.7	23017	1.4	1	0	23.98
				1	5	24.27
				3	2	22.85
				6	0	22.98
	707.5	23095		1	0	24.02
				1	5	24.25
				3	2	23.07
				6	0	22.90
	715.3	23173		1	0	24.08
				1	5	24.15
				3	2	22.95
				6	0	23.11
16QAM	699.7	23017	1.4	1	0	22.04
				1	5	22.23
				3	2	21.78
				6	0	21.92
	707.5	23095		1	0	22.70
				1	5	22.79
				3	2	21.73
				6	0	22.01
	715.3	23173		1	0	22.51
				1	5	22.48
				3	2	22.02
				6	0	22.05
64QAM	699.7	23017	1.4	1	0	22.49
				1	5	22.71
				3	2	22.10
				6	0	22.07
	707.5	23095		1	0	22.94
				1	5	22.73
				3	2	22.33
				6	0	22.06
	715.3	23173		1	0	22.52
				1	5	22.59
				3	2	22.08
				6	0	22.16

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	700.5	23025	3	1	0	23.96
				1	14	24.22
				8	4	22.93
				15	0	22.91
	707.5	23095		1	0	24.02
				1	14	24.29
				8	4	23.11
				15	0	22.96
	714.5	23165		1	0	24.15
				1	14	24.13
				8	4	22.95
				15	0	23.04
16QAM	700.5	23025	3	1	0	22.10
				1	14	22.23
				8	4	21.78
				15	0	21.91
	707.5	23095		1	0	22.73
				1	14	22.88
				8	4	21.86
				15	0	22.05
	714.5	23165		1	0	22.49
				1	14	22.43
				8	4	21.97
				15	0	22.07
64QAM	700.5	23025	3	1	0	22.49
				1	14	22.60
				8	4	22.08
				15	0	21.98
	707.5	23095		1	0	22.82
				1	14	22.73
				8	4	22.25
				15	0	22.11
	714.5	23165		1	0	22.60
				1	14	22.67
				8	4	22.14
				15	0	22.10

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	701.5	23035	5	1	0	23.96
				1	24	24.25
				12	6	22.90
				25	0	23.01
	707.5	23095		1	0	24.05
				1	24	24.26
				12	6	23.15
				25	0	22.97
	713.5	23155		1	0	24.19
				1	24	24.12
				12	6	22.93
				25	0	23.04
16QAM	701.5	23035	5	1	0	22.05
				1	24	22.18
				12	6	21.82
				25	0	21.92
	707.5	23095		1	0	22.66
				1	24	22.82
				12	6	21.74
				25	0	22.05
	713.5	23155		1	0	22.48
				1	24	22.48
				12	6	21.96
				25	0	22.16
64QAM	701.5	23035	5	1	0	22.42
				1	24	22.61
				12	6	22.02
				25	0	22.02
	707.5	23095		1	0	22.91
				1	24	22.62
				12	6	22.27
				25	0	22.06
	713.5	23155		1	0	22.61
				1	24	22.73
				12	6	22.06
				25	0	22.15

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	704	23060	10	1	0	24.02
				1	49	**24.28**
				24	12	**22.95**
				50	0	**23.03**
	707.5	23095		1	0	24.13
				1	49	**24.34**
				24	12	**23.16**
				50	0	**23.02**
	711	23130		1	0	24.21
				1	49	**24.24**
				24	12	**23.01**
				50	0	**23.11**
16QAM	704	23060	10	1	0	22.18
				1	49	22.25
				24	12	21.92
				50	0	21.99
	707.5	23095		1	0	22.74
				1	49	22.92
				24	12	21.88
				50	0	22.07
	711	23130		1	0	22.52
				1	49	22.58
				24	12	22.08
				50	0	22.19
64QAM	704	23060	10	1	0	22.56
				1	49	22.71
				24	12	22.11
				50	0	22.08
	707.5	23095		1	0	22.96
				1	49	22.75
				24	12	22.35
				50	0	22.12
	711	23130		1	0	22.63
				1	49	22.74
				24	12	22.18
				50	0	22.17

Test results conducted power measurement (Reduced Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	699.7	23017	1.4	1	0	17.98
				1	5	18.27
				3	2	16.85
				6	0	16.98
	707.5	23095		1	0	18.02
				1	5	18.25
				3	2	17.07
				6	0	16.90
	715.3	23173		1	0	18.08
				1	5	18.15
				3	2	16.95
				6	0	17.11
16QAM	699.7	23017	1.4	1	0	16.04
				1	5	16.23
				3	2	15.78
				6	0	15.92
	707.5	23095		1	0	16.70
				1	5	16.79
				3	2	15.73
				6	0	16.01
	715.3	23173		1	0	16.51
				1	5	16.48
				3	2	16.02
				6	0	16.05
64QAM	699.7	23017	1.4	1	0	16.49
				1	5	16.71
				3	2	16.10
				6	0	16.07
	707.5	23095		1	0	16.94
				1	5	16.73
				3	2	16.33
				6	0	16.06
	715.3	23173		1	0	16.52
				1	5	16.59
				3	2	16.08
				6	0	16.16

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	700.5	23025	3	1	0	17.96
				1	14	18.22
				8	4	16.93
				15	0	16.91
	707.5	23095		1	0	18.02
				1	14	18.29
				8	4	17.11
				15	0	16.96
	714.5	23165		1	0	18.15
				1	14	18.13
				8	4	16.95
				15	0	17.04
16QAM	700.5	23025	3	1	0	16.10
				1	14	16.23
				8	4	15.78
				15	0	15.91
	707.5	23095		1	0	16.73
				1	14	16.88
				8	4	15.86
				15	0	16.05
	714.5	23165		1	0	16.49
				1	14	16.43
				8	4	15.97
				15	0	16.07
64QAM	700.5	23025	3	1	0	16.49
				1	14	16.60
				8	4	16.08
				15	0	15.98
	707.5	23095		1	0	16.82
				1	14	16.73
				8	4	16.25
				15	0	16.11
	714.5	23165		1	0	16.60
				1	14	16.67
				8	4	16.14
				15	0	16.10

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	701.5	23035	5	1	0	17.96
				1	24	18.25
				12	6	16.90
				25	0	17.01
	707.5	23095		1	0	18.05
				1	24	18.26
				12	6	17.15
				25	0	16.97
	713.5	23155		1	0	18.19
				1	24	18.12
				12	6	16.93
				25	0	17.04
16QAM	701.5	23035	5	1	0	16.05
				1	24	16.18
				12	6	15.82
				25	0	15.92
	707.5	23095		1	0	16.66
				1	24	16.82
				12	6	15.74
				25	0	16.05
	713.5	23155		1	0	16.48
				1	24	16.48
				12	6	15.96
				25	0	16.16
64QAM	701.5	23035	5	1	0	16.42
				1	24	16.61
				12	6	16.02
				25	0	16.02
	707.5	23095		1	0	16.91
				1	24	16.62
				12	6	16.27
				25	0	16.06
	713.5	23155		1	0	16.61
				1	24	16.73
				12	6	16.06
				25	0	16.15

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	704	23060	10	1	0	18.02
				1	49	**18.28**
				24	12	**16.95**
				50	0	**17.03**
	707.5	23095		1	0	18.13
				1	49	**18.34**
				24	12	**17.16**
				50	0	**17.02**
	711	23130		1	0	18.21
				1	49	**18.24**
				24	12	**17.01**
				50	0	**17.11**
16QAM	704	23060	10	1	0	16.18
				1	49	16.25
				24	12	15.92
				50	0	15.99
	707.5	23095		1	0	16.74
				1	49	16.92
				24	12	15.88
				50	0	16.07
	711	23130		1	0	16.52
				1	49	16.58
				24	12	16.08
				50	0	16.19
64QAM	704	23060	10	1	0	16.56
				1	49	16.71
				24	12	16.11
				50	0	16.08
	707.5	23095		1	0	16.96
				1	49	16.75
				24	12	16.35
				50	0	16.12
	711	23130		1	0	16.63
				1	49	16.74
				24	12	16.18
				50	0	16.17

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Test results conducted power measurement (Full Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	779.5	23205	5	1	0	24.08
				1	24	24.17
				12	6	23.14
				25	0	23.04
	782	23230		1	0	24.16
				1	24	24.06
				12	6	23.17
				25	0	22.98
	784.5	23255		1	0	24.07
				1	24	24.18
				12	6	23.03
				25	0	22.98
16QAM	779.5	23205	5	1	0	23.59
				1	24	22.81
				12	6	22.01
				25	0	22.13
	782	23230		1	0	22.98
				1	24	22.94
				12	6	22.21
				25	0	22.18
	784.5	23255		1	0	22.45
				1	24	22.76
				12	6	21.83
				25	0	22.09
64QAM	779.5	23205	5	1	0	23.24
				1	24	22.67
				12	6	21.88
				25	0	22.16
	782	23230		1	0	22.95
				1	24	22.84
				12	6	21.87
				25	0	22.12
	784.5	23255		1	0	22.44
				1	24	22.72
				12	6	21.75
				25	0	21.94

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	782	23230	10	1	0	24.26
				1	49	**24.34**
				24	12	**23.05**
				50	0	**22.98**
16QAM	782	23230	10	1	0	22.27
				1	49	22.26
				24	12	22.06
				50	0	22.02
64QAM	782	23230	10	1	0	22.51
				1	49	22.54
				24	12	22.14
				50	0	22.13

Test results conducted power measurement (Reduced Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	779.5	23205	5	1	0	19.08
				1	24	19.17
				12	6	18.14
				25	0	18.04
	782	23230		1	0	19.16
				1	24	19.06
				12	6	18.17
				25	0	17.98
	784.5	23255		1	0	19.07
				1	24	19.18
				12	6	18.03
				25	0	17.98
16QAM	779.5	23205	5	1	0	18.59
				1	24	17.81
				12	6	17.01
				25	0	17.13
	782	23230		1	0	17.98
				1	24	17.94
				12	6	17.21
				25	0	17.18
	784.5	23255		1	0	17.45
				1	24	17.76
				12	6	16.83
				25	0	17.09
64QAM	779.5	23205	5	1	0	18.24
				1	24	17.67
				12	6	16.88
				25	0	17.16
	782	23230		1	0	17.95
				1	24	17.84
				12	6	16.87
				25	0	17.12
	784.5	23255		1	0	17.44
				1	24	17.72
				12	6	16.75
				25	0	16.94

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	782	23230	10	1	0	19.26
				1	49	**19.34**
				24	12	**18.05**
				50	0	**17.98**
16QAM	782	23230	10	1	0	17.27
				1	49	17.26
				24	12	17.06
				50	0	17.02
64QAM	782	23230	10	1	0	17.51
				1	49	17.54
				24	12	17.14
				50	0	17.13

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Test results conducted power measurement (Full Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1710.7	131979	1.4	1	0	22.82
				1	5	22.97
				3	2	21.93
				6	0	21.85
	1745	132322		1	0	23.16
				1	5	23.10
				3	2	22.42
				6	0	22.22
	1779.3	132665		1	0	23.13
				1	5	23.16
				3	2	22.26
				6	0	22.17
16QAM	1710.7	131979	1.4	1	0	21.27
				1	5	21.34
				3	2	20.94
				6	0	20.96
	1745	132322		1	0	21.22
				1	5	21.32
				3	2	21.08
				6	0	21.09
	1779.3	132665		1	0	22.79
				1	5	22.67
				3	2	21.19
				6	0	21.10
64QAM	1710.7	131979	1.4	1	0	21.49
				1	5	21.60
				3	2	20.86
				6	0	20.92
	1745	132322		1	0	21.57
				1	5	22.05
				3	2	21.25
				6	0	21.21
	1779.3	132665		1	0	22.14
				1	5	21.02
				3	2	21.28
				6	0	21.31

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	131987	3	1	0	22.89
				1	14	22.86
				8	4	21.88
				15	0	21.77
	1745	132322		1	0	23.05
				1	14	23.16
				8	4	22.51
				15	0	22.27
	1778.5	132657		1	0	23.24
				1	14	23.27
				8	4	22.23
				15	0	22.19
16QAM	1711.5	131987	3	1	0	21.30
				1	14	21.40
				8	4	20.93
				15	0	21.02
	1745	132322		1	0	21.29
				1	14	21.30
				8	4	21.10
				15	0	21.09
	1778.5	132657		1	0	22.75
				1	14	22.56
				8	4	21.31
				15	0	21.04
64QAM	1711.5	131987	3	1	0	21.48
				1	14	21.62
				8	4	20.82
				15	0	21.02
	1745	132322		1	0	21.55
				1	14	22.02
				8	4	21.27
				15	0	21.26
	1778.5	132657		1	0	22.18
				1	14	21.07
				8	4	21.33
				15	0	21.27

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	131997	5	1	0	22.86
				1	24	22.97
				12	6	21.88
				25	0	21.88
	1745	132322		1	0	23.07
				1	24	23.11
				12	6	22.53
				25	0	22.19
	1777.5	132647		1	0	23.18
				1	24	23.18
				12	6	22.14
				25	0	22.20
16QAM	1712.5	131997	5	1	0	21.27
				1	24	21.42
				12	6	20.92
				25	0	20.97
	1745	132322		1	0	21.26
				1	24	21.40
				12	6	21.21
				25	0	21.14
	1777.5	132647		1	0	22.70
				1	24	22.61
				12	6	21.24
				25	0	21.12
64QAM	1712.5	131997	5	1	0	21.53
				1	24	21.67
				12	6	20.84
				25	0	21.02
	1745	132322		1	0	21.54
				1	24	21.96
				12	6	21.33
				25	0	21.24
	1777.5	132647		1	0	22.16
				1	24	20.98
				12	6	21.35
				25	0	21.26

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	132022	10	1	0	22.81
				1	49	22.90
				24	12	21.82
				50	0	21.78
	1745	132322		1	0	23.04
				1	49	23.09
				24	12	22.50
				50	0	22.22
	1775	132622		1	0	23.21
				1	49	23.22
				24	12	22.26
				50	0	22.14
16QAM	1715	132022	10	1	0	21.38
				1	49	21.36
				24	12	20.81
				50	0	20.92
	1745	132322		1	0	21.34
				1	49	21.36
				24	12	21.17
				50	0	21.08
	1775	132622		1	0	22.80
				1	49	22.63
				24	12	21.20
				50	0	21.13
64QAM	1715	132022	10	1	0	21.49
				1	49	21.64
				24	12	20.81
				50	0	20.95
	1745	132322		1	0	21.58
				1	49	21.96
				24	12	21.31
				50	0	21.28
	1775	132622		1	0	22.15
				1	49	21.10
				24	12	21.35
				50	0	21.24

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	132047	15	1	0	22.89
				1	74	22.88
				40	18	21.91
				75	0	21.84
	1745	132322		1	0	23.17
				1	74	23.07
				40	18	22.40
				75	0	22.15
	1772.5	132597		1	0	23.13
				1	74	23.19
				40	18	22.17
				75	0	22.24
16QAM	1717.5	132047	15	1	0	21.36
				1	74	21.45
				40	18	20.91
				75	0	21.02
	1745	132322		1	0	21.27
				1	74	21.29
				40	18	21.14
				75	0	21.03
	1772.5	132597		1	0	22.81
				1	74	22.55
				40	18	21.24
				75	0	21.18
64QAM	1717.5	132047	15	1	0	21.48
				1	74	21.56
				40	18	20.91
				75	0	20.89
	1745	132322		1	0	21.59
				1	74	22.03
				40	18	21.25
				75	0	21.23
	1772.5	132597		1	0	22.15
				1	74	21.06
				40	18	21.34
				75	0	21.28

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	132072	20	1	0	22.91
				1	99	**22.98**
				50	25	**21.97**
				100	0	**21.89**
	1745	132322		1	0	**23.18**
				1	99	23.16
				50	25	**22.53**
				100	0	**22.28**
	1770	132572		1	0	23.26
				1	99	**23.31**
				50	25	**22.27**
				100	0	**22.26**
16QAM	1720	132072	20	1	0	21.42
				1	99	21.47
				50	25	20.95
				100	0	21.04
	1745	132322		1	0	21.35
				1	99	21.41
				50	25	21.22
				100	0	21.17
	1770	132572		1	0	22.81
				1	99	22.68
				50	25	21.31
				100	0	21.19
64QAM	1720	132072	20	1	0	21.57
				1	99	21.68
				50	25	20.93
				100	0	21.04
	1745	132322		1	0	21.69
				1	99	22.07
				50	25	21.39
				100	0	21.31
	1770	132572		1	0	22.27
				1	99	21.12
				50	25	21.37
				100	0	21.34

Test results conducted power measurement (Reduced Power)

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1710.7	131979	1.4	1	0	14.82
				1	5	14.97
				3	2	13.93
				6	0	13.85
	1745	132322		1	0	15.16
				1	5	15.10
				3	2	14.42
				6	0	14.22
	1779.3	132665		1	0	15.13
				1	5	15.16
				3	2	14.26
				6	0	14.17
16QAM	1710.7	131979	1.4	1	0	13.27
				1	5	13.34
				3	2	12.94
				6	0	12.96
	1745	132322		1	0	13.22
				1	5	13.32
				3	2	13.08
				6	0	13.09
	1779.3	132665		1	0	14.79
				1	5	14.67
				3	2	13.19
				6	0	13.10
64QAM	1710.7	131979	1.4	1	0	13.49
				1	5	13.60
				3	2	12.86
				6	0	12.92
	1745	132322		1	0	13.57
				1	5	14.05
				3	2	13.25
				6	0	13.21
	1779.3	132665		1	0	14.14
				1	5	13.02
				3	2	13.28
				6	0	13.31

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1711.5	131987	3	1	0	14.89
				1	14	14.86
				8	4	13.88
				15	0	13.77
	1745	132322		1	0	15.05
				1	14	15.16
				8	4	14.51
				15	0	14.27
	1778.5	132657		1	0	15.24
				1	14	15.27
				8	4	14.23
				15	0	14.19
16QAM	1711.5	131987	3	1	0	13.30
				1	14	13.40
				8	4	12.93
				15	0	13.02
	1745	132322		1	0	13.29
				1	14	13.30
				8	4	13.10
				15	0	13.09
	1778.5	132657		1	0	14.75
				1	14	14.56
				8	4	13.31
				15	0	13.04
64QAM	1711.5	131987	3	1	0	13.48
				1	14	13.62
				8	4	12.82
				15	0	13.02
	1745	132322		1	0	13.55
				1	14	14.02
				8	4	13.27
				15	0	13.26
	1778.5	132657		1	0	14.18
				1	14	13.07
				8	4	13.33
				15	0	13.27

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1712.5	131997	5	1	0	14.86
				1	24	14.97
				12	6	13.88
				25	0	13.88
	1745	132322		1	0	15.07
				1	24	15.11
				12	6	14.53
				25	0	14.19
	1777.5	132647		1	0	15.18
				1	24	15.18
				12	6	14.14
				25	0	14.20
16QAM	1712.5	131997	5	1	0	13.27
				1	24	13.42
				12	6	12.92
				25	0	12.97
	1745	132322		1	0	13.26
				1	24	13.40
				12	6	13.21
				25	0	13.14
	1777.5	132647		1	0	14.70
				1	24	14.61
				12	6	13.24
				25	0	13.12
64QAM	1712.5	131997	5	1	0	13.53
				1	24	13.67
				12	6	12.84
				25	0	13.02
	1745	132322		1	0	13.54
				1	24	13.96
				12	6	13.33
				25	0	13.24
	1777.5	132647		1	0	14.16
				1	24	12.98
				12	6	13.35
				25	0	13.26

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1715	132022	10	1	0	14.81
				1	49	14.90
				24	12	13.82
				50	0	13.78
	1745	132322		1	0	15.04
				1	49	15.09
				24	12	14.50
				50	0	14.22
	1775	132622		1	0	15.21
				1	49	15.22
				24	12	14.26
				50	0	14.14
16QAM	1715	132022	10	1	0	13.38
				1	49	13.36
				24	12	12.81
				50	0	12.92
	1745	132322		1	0	13.34
				1	49	13.36
				24	12	13.17
				50	0	13.08
	1775	132622		1	0	14.80
				1	49	14.63
				24	12	13.20
				50	0	13.13
64QAM	1715	132022	10	1	0	13.49
				1	49	13.64
				24	12	12.81
				50	0	12.95
	1745	132322		1	0	13.58
				1	49	13.96
				24	12	13.31
				50	0	13.28
	1775	132622		1	0	14.15
				1	49	13.10
				24	12	13.35
				50	0	13.24

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1717.5	132047	15	1	0	14.89
				1	74	14.88
				40	18	13.91
				75	0	13.84
	1745	132322		1	0	15.17
				1	74	15.07
				40	18	14.40
				75	0	14.15
	1772.5	132597		1	0	15.13
				1	74	15.19
				40	18	14.17
				75	0	14.24
16QAM	1717.5	132047	15	1	0	13.36
				1	74	13.45
				40	18	12.91
				75	0	13.02
	1745	132322		1	0	13.27
				1	74	13.29
				40	18	13.14
				75	0	13.03
	1772.5	132597		1	0	14.81
				1	74	14.55
				40	18	13.24
				75	0	13.18
64QAM	1717.5	132047	15	1	0	13.48
				1	74	13.56
				40	18	12.91
				75	0	12.89
	1745	132322		1	0	13.59
				1	74	14.03
				40	18	13.25
				75	0	13.23
	1772.5	132597		1	0	14.15
				1	74	13.06
				40	18	13.34
				75	0	13.28

Modulation	Carrier frequency (MHz)	UL Channel	BW	RB Size	RB Offset	Conducted power (dBm)
QPSK	1720	132072	20	1	0	14.91
				1	99	**14.98**
				50	25	**13.97**
				100	0	**13.89**
	1745	132322		1	0	**15.18**
				1	99	15.16
				50	25	**14.53**
				100	0	**14.28**
	1770	132572		1	0	15.26
				1	99	**15.31**
				50	25	**14.27**
				100	0	**14.26**
16QAM	1720	132072	20	1	0	13.42
				1	99	13.47
				50	25	12.95
				100	0	13.04
	1745	132322		1	0	13.35
				1	99	13.41
				50	25	13.22
				100	0	13.17
	1770	132572		1	0	14.81
				1	99	14.68
				50	25	13.31
				100	0	13.19
64QAM	1720	132072	20	1	0	13.57
				1	99	13.68
				50	25	12.93
				100	0	13.04
	1745	132322		1	0	13.69
				1	99	14.07
				50	25	13.39
				100	0	13.31
	1770	132572		1	0	14.27
				1	99	13.12
				50	25	13.37
				100	0	13.34

6.4 Bluetooth Measurement result

BT

Test results conducted power measurement (Full Power)

Modulation type	Average Power Output (dBm)		
	2402MHz(Ch0)	2441MHz(Ch39)	2480MHz(Ch78)
GFSK	7.69	7.57	6.27
π/4DQPSK	5.68	5.72	4.06
8DPSK	5.69	5.78	4.04

BLE

Test results conducted power measurement (Full Power)

Modulation type	Average Power Output (dBm)		
	2402MHz (Ch0)	2440MHz (Ch19)	2480MHz (Ch39)
GFSK (LE 1Mbps)	-0.08	0.46	-1.05

6.5 Wi-Fi Measurement result

Test results conducted power measurement (Full Power)

Modulation type	Average power output (dBm)		
	2412MHz	2437MHz	2462MHz
11b	16.39	16.54	15.98
11g	13.89	13.92	13.47
11n HT20	11.97	12.12	11.71

Test results conducted power measurement (Reduced Power)

Modulation type	Average power output (dBm)		
	2412MHz	2437MHz	2462MHz
11b	11.39	11.54	10.98
11g	10.89	10.92	10.47
11n HT20	10.97	11.12	10.71

6.6 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm

Mothod1:
According to the KDB447498 4.3.1 (1)

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f (GHz)] ≤ 3.0 for 1-g SAR, where

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

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

This is equivalent to [(max. power of channel, including tune-up tolerance, mW)/(60/√f(GHz) mW)] ·[20 mm/(min.test separation distance, mm)] ≤ 1.0 for 1-g SAR; also see Appendix A for approximate exclusion threshold values at selected frequencies and distances.

Mothod2:
According to the KDB447498 appendix A

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

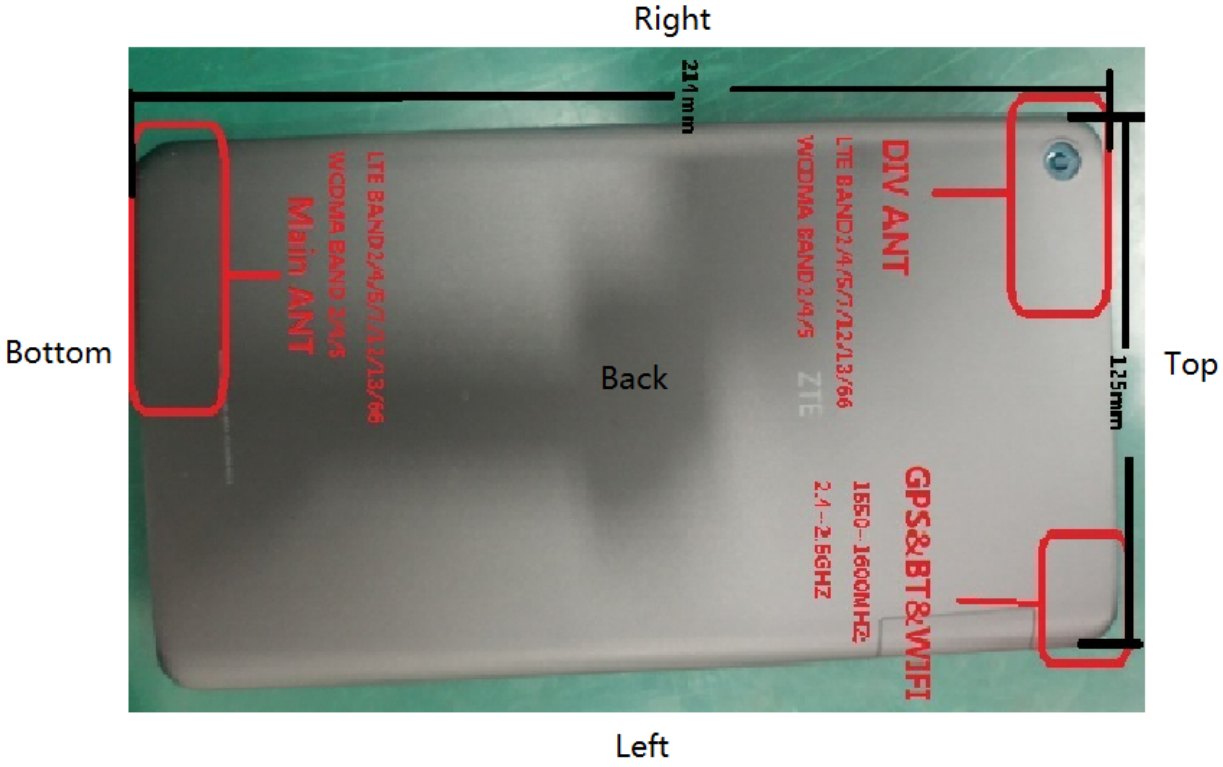
MHz	5	10	15	20	25	mm
150	39	77	116	155	194	*SAR Test Exclusion Threshold* (mW)
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

Summary of Transmitters

Band/Mode	Max conducted Full power adjusted for tune-up tolerance(mW)	Max conducted reduced power adjusted for tune-up tolerance(mW)	Position	SAR test exclusion threshold (mW)	Standalone SAR Required
2.4GHz BT/BLE	6.31	NA	Body	10	No

6.7 RF exposure conditions

Refer to the follow picture “Antenna information”.



MAIN ANT	Max Gain
LTE BAND 2	1.2dBi
LTE BAND 4	0.8dBi
LTE BAND 5	-0.6dBi
LTE BAND 7	0.3dBi
LTE BAND 12	-2dBi
LTE BAND 13	-1dBi
LTE BAND 66	0.8dBi
WCDMA B2	1.2dBi
WCDMA B4	0.8dBi
WCDMA B5	-0.6dBi

DIV ANT	Max Gain
LTE BAND 2	1.3dBi
LTE BAND 4	1.9dBi
LTE BAND 5	-2dBi
LTE BAND 7	1dBi
LTE BAND 12	-2dBi
LTE BAND 13	-2dBi
LTE BAND 66	1.9dBi
WCDMA B2	1.3dBi
WCDMA B4	1.9dBi
WCDMA B5	-2dBi

GPS&WIFI&BT ANT	Max Gain
GPS	1.4dBi
WIFI	0.6dBi
BT	0.6dBi

Note: we defined these positions when we face the screen of EUT.

Body Exposure conditions

For WWAN

Test Configurations	SAR Required
Back	Yes
Front	No
Top	Yes
Bottom	Yes
Left	Yes
Right	Yes

For WLAN

Test Configurations	SAR Required
Back	Yes
Front	No
Top	Yes
Bottom	Yes
Left	Yes
Right	Yes

For BT/BLE

Test Configurations	SAR evaluation
Back	Excluded
Front	
Top	
Bottom	
Left	
Right	

Note: According to KDB 616217 section4.3, The antennas embedded in tablets are ≤ 5mm from the outer housing, When the dedicated host approach is applied, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. Edge testing is necessary for considering simultaneous transmission. But extremity SAR evaluation for the front surface of tablet display is not necessary because tablet that is not designed to require continuous operations with the hand(s) next to the antenna(s).

6.8 System Checking

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulants were measured every day using the dielectric probe kit and the network analyser.

For the measurement of the following parameters the SPEAG DAKS-3.5 dielectric parameter probe is used, representing the open-ended coaxial probe measurement procedure.

Date Tested	Freq. (MHz)	Liquid parameters	measured	Target	Delta (%)	Tolerance (%)
2020.05.18	750	εr	41.352	41.90	-1.3	±10
		σ[S/m]	0.923	0.89	3.7	±10
2020.05.20	835	εr	40.266	41.50	-3.0	±10
		σ[S/m]	0.911	0.90	1.2	±10
2020.05.22	1800	εr	40.688	40.00	1.7	±10
		σ[S/m]	1.418	1.40	1.3	±10
2020.05.24	2000	εr	39.844	40.00	-0.4	±10
		σ[S/m]	1.427	1.40	1.9	±10
2020.06.04	2450	εr	38.343	39.20	-2.2	±10
		σ[S/m]	1.866	1.80	3.7	±10
2020.06.06	2600	εr	39.672	39.00	1.7	±10
		σ[S/m]	1.951	1.96	-0.5	±10

Note: For DASY system, the conservative tolerance 5% could expand to 10% when the frequency under 3GHz

A system check measurement was made following once the determination of the dielectric parameters of the simulant, using the dipole validation kit. The system checking results (dielectric parameters and SAR values) are given in the table below.

Date Tested	System dipole	T.S. Liquid	SAR measured (normalized to 1W)		Target (Ref. Value)	Delta (%)	Tolerance (%)
2020.05.18	D750V3	Head	1g	8.24	8.26	-0.2	±10
2020.05.20	D835V2	Head	1g	9.56	9.37	2.0	±10
2020.05.22	D1800V2	Head	1g	37.96	38.9	-2.4	±10
2020.05.24	D2000V2	Head	1g	39.28	40.3	-2.5	±10
2020.06.04	D2450V2	Head	1g	54.0	52.4	3.1	±10
2020.06.06	D2600V2	Head	1g	56.4	56.6	-0.4	±10

6.9 SAR TEST RESULT

In order to determine the largest value of the peak spatial-average SAR of a handset, all device positions, configurations, and operational modes should be tested for each frequency band according to Steps 1 to 3 below.
Step 1: The tests should be performed at the channel that is closest to the center of the transmit frequency band.
a) All device positions (cheek and tilt, for both left and right sides of the SAM phantom),
b) All configurations for each device position in a), e.g., antenna extended and retracted, and
c) All operational modes for each device position in item a) and configuration in item b) in each frequency band, e.g., analog and digital, If more than three frequencies need to be tested (i.e., Nc > 3), then all frequencies, configurations and modes shall be tested for all of the above test conditions.
Step 2: For the condition providing the highest peak spatial-average SAR determined in Step 1 for each frequency, perform all tests at all other test frequency channels, e.g., lowest and highest frequencies. In addition, for all other conditions (device position, configuration, and operational mode) where the peak spatial-average SAR value determined in Step 1 is within 3 dB of the applicable SAR limit, it is recommended that all other test frequencies should be tested as well.
Step 3: Examine all data to determine the largest value of the peak.
Note:
1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
Scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
Duty Factor = 1 / Duty Cycle(%)
For cellular network:
Reported SAR (W/kg) = Measured SAR (W/kg) * Scaling Factor
For WLAN
Reported SAR (W/kg) = Measured SAR (W/kg) * Scaling Factor*Duty factor
2. Per KDB 447498 D01v06, for each exposure position, if the highest output channel reported SAR ≤0.8W/kg, other channels SAR testing are not necessary.
3. The distance between the EUT and the phantom bottom is 0mm.

Mode		Duty cycle	Duty factor	Note
Licensed Frequency	WCDMA Band	100%	NA	According to the theory, we configured duty cycle with relevant value on the communication tester, so correction factor do not need such as “duty factor”
	FDD-LTE Band	100%		
Unlicensed Frequency	WIFI 2.4GHz 802.11b	97.6%	1.02	SRTC perform SAR test with non-signaling mode, and duty cycle is variant in practice, so duty factor shall be considered because of the uncertainty of data traffic.

Refers to KDB 616217 D04 Section6 procedure for determining triggering distances/ sensor coverage/ tilt angle influences

Note: the furthest detection distance of sensor is greater than trigger distance (with power reduction) to avoid the uncertainty, when the backlight off (not intend to use), sensor remain previous state, and manufacturer reserves the right to interpret.

1: Proximity sensor triggering distances

Band	Trigger distance-Front Side		Trigger distance-Back Side		Trigger distance-Bottom Side		Trigger distance-Right Side	
	Moving toward phantom	Moving away from phantom	Moving toward phantom	Moving away from phantom	Moving toward phantom	Moving away from phantom	Moving toward phantom	Moving away from phantom
W2	10	10	15	15	15	15	10	10
W4	10	10	15	15	15	15	10	10
W5	10	10	15	15	15	15	10	10
L2	10	10	15	15	15	15	10	10
L4	10	10	15	15	15	15	10	10
L5	10	10	15	15	15	15	10	10
L7	10	10	15	15	15	15	10	10
L12	10	10	15	15	15	15	10	10
L13	10	10	15	15	15	15	10	10
L66	10	10	15	15	15	15	10	10

Band	Trigger distance-Front Side		Trigger distance-Back Side		Trigger distance-Top Side		Trigger distance-Left Side	
	Moving toward phantom	Moving away from phantom	Moving toward phantom	Moving away from phantom	Moving toward phantom	Moving away from phantom	Moving toward phantom	Moving away from phantom
2.4GHz	5	5	10	10	5	5	5	5

WWAN


Trigger distance evaluation (Front moving towards phantom)
power/dBm
distance/mm
WCDMA B2
WCDMA B4
WCDMA B5
LTE B2
LTE B4
LTE B5
LTE B7
LTE B12
LTE B13
LTE B66
Trigger distance evaluation (Front moving away from phantom)
power/dBm
distance/mm
WCDMA B2
WCDMA B4
WCDMA B5
LTE B2
LTE B4
LTE B5
LTE B7
LTE B12
LTE B13
LTE B66

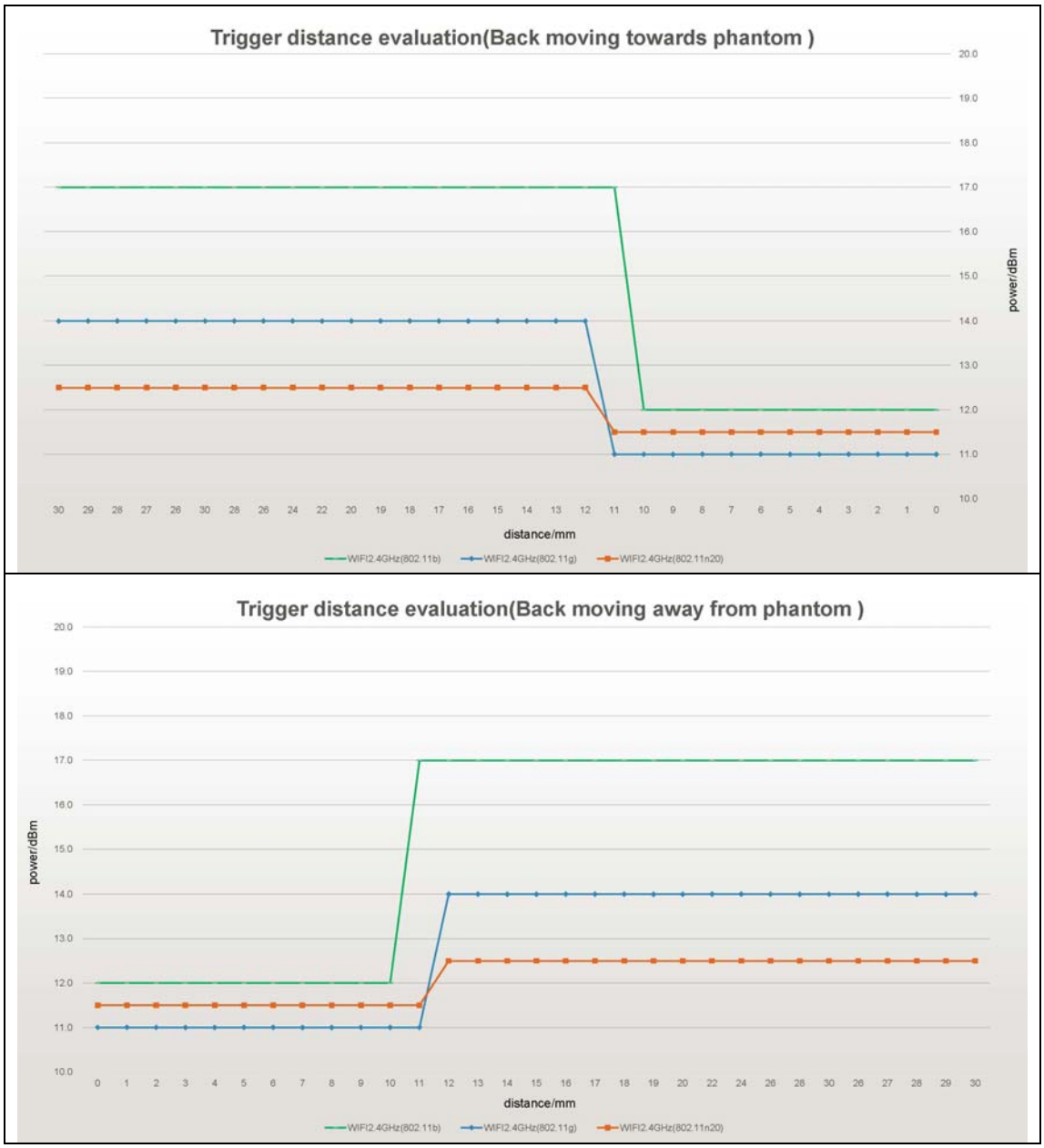

Trigger distance evaluation(Back moving towards phantom)
power/dBm
distance/mm
WCDMA B2
WCDMA B4
WCDMA B5
LTE B2
LTE B4
LTE B5
LTE B7
LTE B12
LTE B13
LTE B66
Trigger distance evaluation(Back moving away from phantom)
power/dBm
distance/mm
WCDMA B2
WCDMA B4
WCDMA B5
LTE B2
LTE B4
LTE B5
LTE B7
LTE B12
LTE B13
LTE B66


Trigger distance evaluation(Bottom moving towards phantom)
power/dBm
distance/mm
WCDMA B2
WCDMA B4
WCDMA B5
LTE B2
LTE B4
LTE B5
LTE B7
LTE B12
LTE B13
LTE B66
Trigger distance evaluation(Bottom moving away from phantom)
power/dBm
distance/mm
WCDMA B2
WCDMA B4
WCDMA B5
LTE B2
LTE B4
LTE B5
LTE B7
LTE B12
LTE B13
LTE B66


Trigger distance evaluation(Right moving towards phantom)
power/dBm
distance/mm
WCDMA B2
WCDMA B4
WCDMA B5
LTE B2
LTE B4
LTE B5
LTE B7
LTE B12
LTE B13
LTE B66
Trigger distance evaluation(Right moving away from phantom)
power/dBm
distance/mm
WCDMA B2
WCDMA B4
WCDMA B5
LTE B2
LTE B4
LTE B5
LTE B7
LTE B12
LTE B13
LTE B66

WLAN


Trigger distance evaluation(Front moving towards phantom)
power/dBm
distance/mm
WIFI2.4GHz(802.11b)
WIFI2.4GHz(802.11g)
WIFI2.4GHz(802.11n20)
Trigger distance evaluation(Front moving away from phantom)
power/dBm
distance/mm
WIFI2.4GHz(802.11b)
WIFI2.4GHz(802.11g)
WIFI2.4GHz(802.11n20)

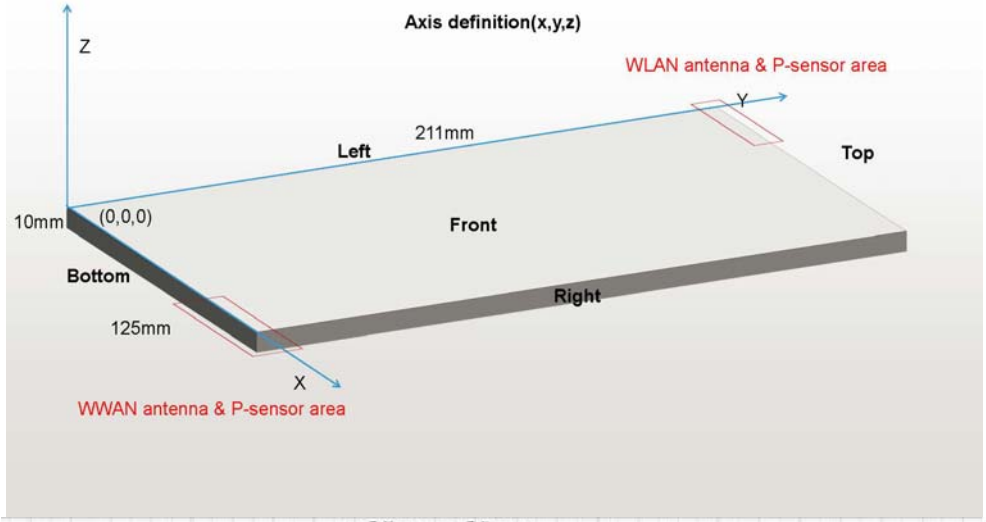

Trigger distance evaluation(Back moving towards phantom)
power/dBm
distance/mm
WIFI2.4GHz(802.11b)
WIFI2.4GHz(802.11g)
WIFI2.4GHz(802.11n20)
Trigger distance evaluation(Back moving away from phantom)
power/dBm
distance/mm
WIFI2.4GHz(802.11b)
WIFI2.4GHz(802.11g)
WIFI2.4GHz(802.11n20)

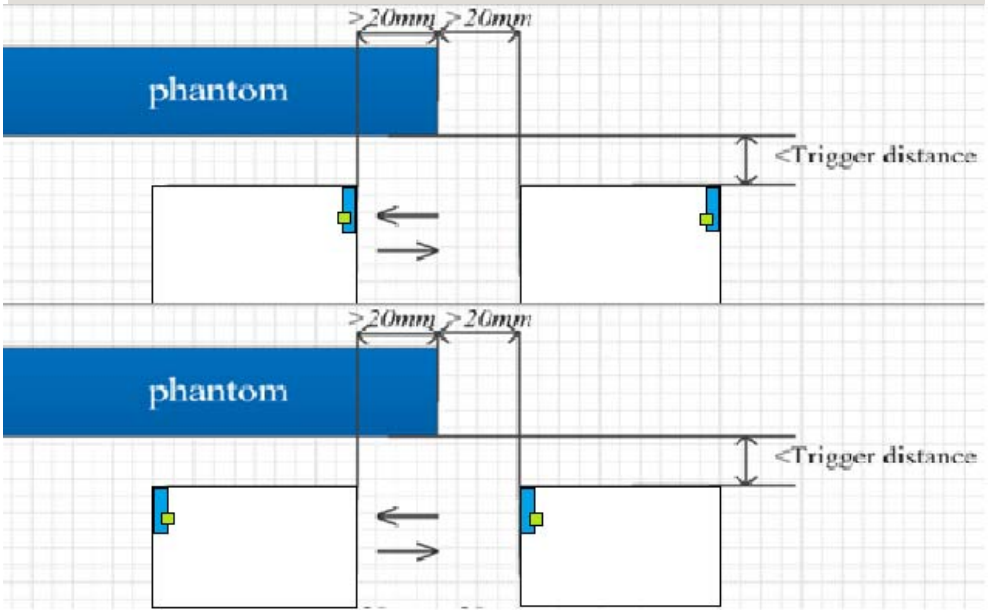

Trigger distance evaluation(Top moving towards phantom)
power/dBm
distance/mm
WIFI2.4GHz(802.11b)
WIFI2.4GHz(802.11g)
WIFI2.4GHz(802.11n20)
Trigger distance evaluation(Top moving away from phantom)
power/dBm
distance/mm
WIFI2.4GHz(802.11b)
WIFI2.4GHz(802.11g)
WIFI2.4GHz(802.11n20)


Trigger distance evaluation(Left moving towards phantom)
power/dBm
distance/mm
WIFI2.4GHz(802.11b)
WIFI2.4GHz(802.11g)
WIFI2.4GHz(802.11n20)
Trigger distance evaluation(Left moving away from phantom)
power/dBm
distance/mm
WIFI2.4GHz(802.11b)
WIFI2.4GHz(802.11g)
WIFI2.4GHz(802.11n20)

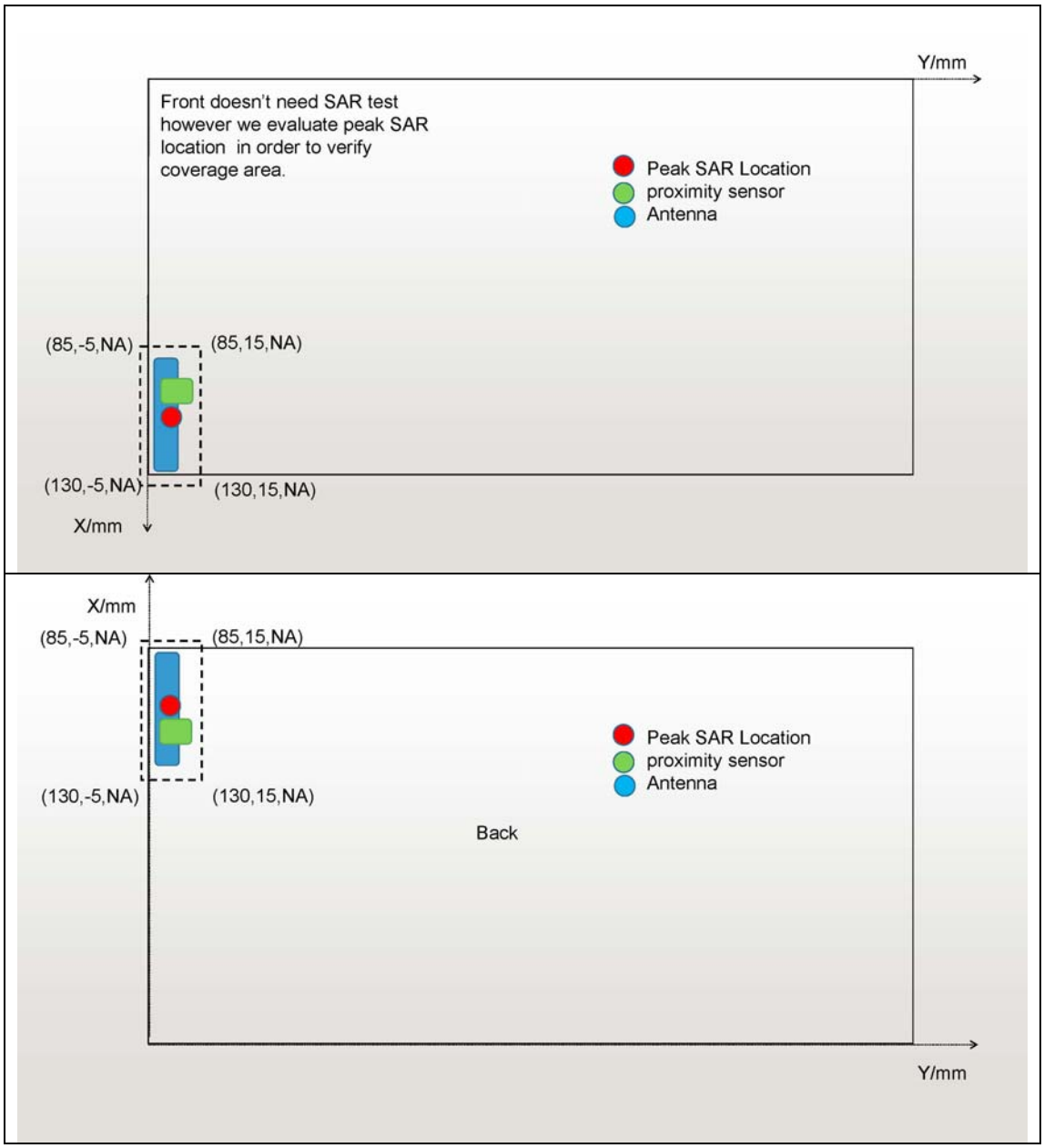
2: Proximity sensor coverage

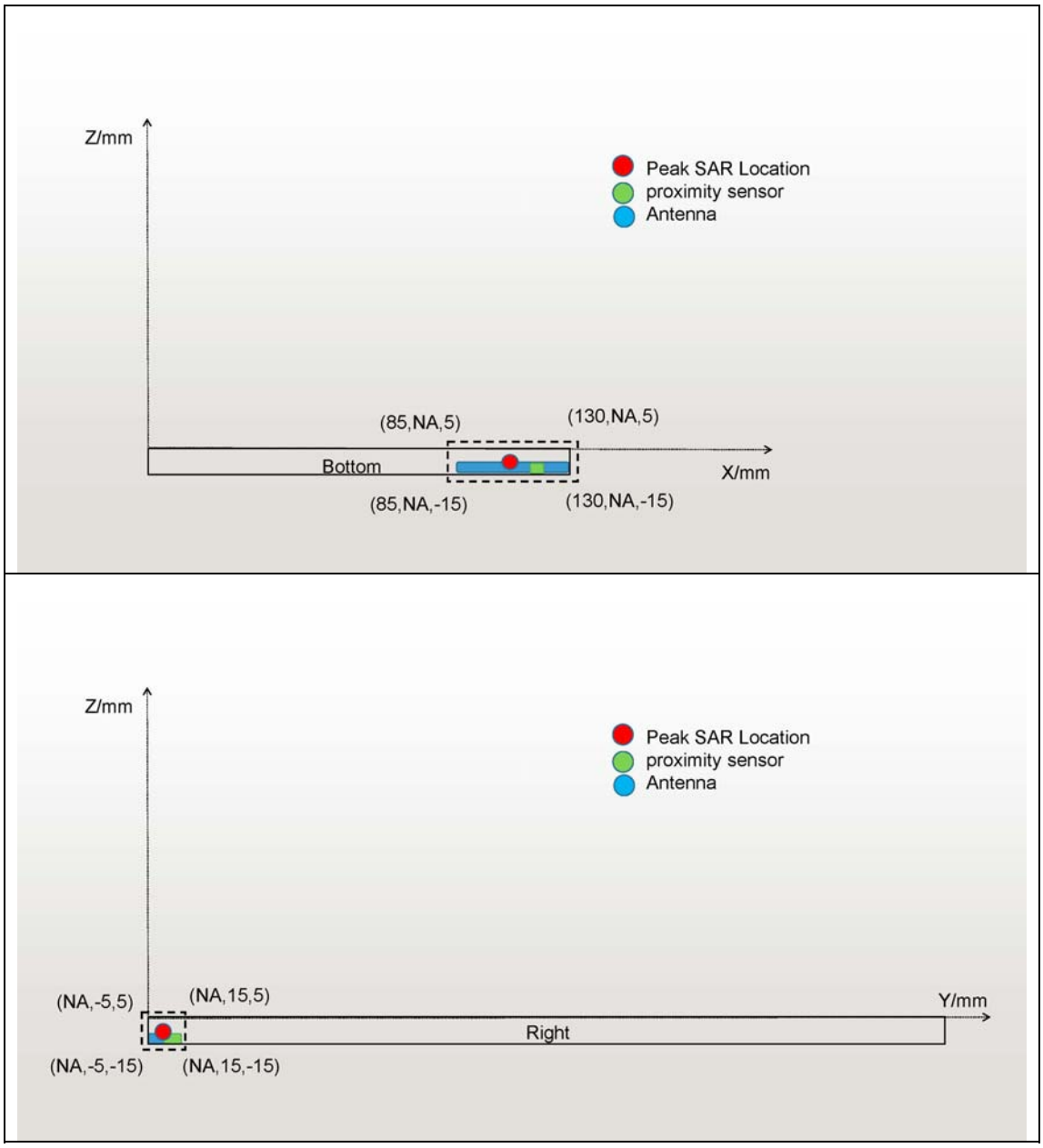
Proximity sensor cannot fully overwrite antenna (physically), so the proximity sensor coverage need to be assessed. There is tiny difference of peak SAR location of each frequency band but at least the sensor trigger coverage area contain peak SAR.



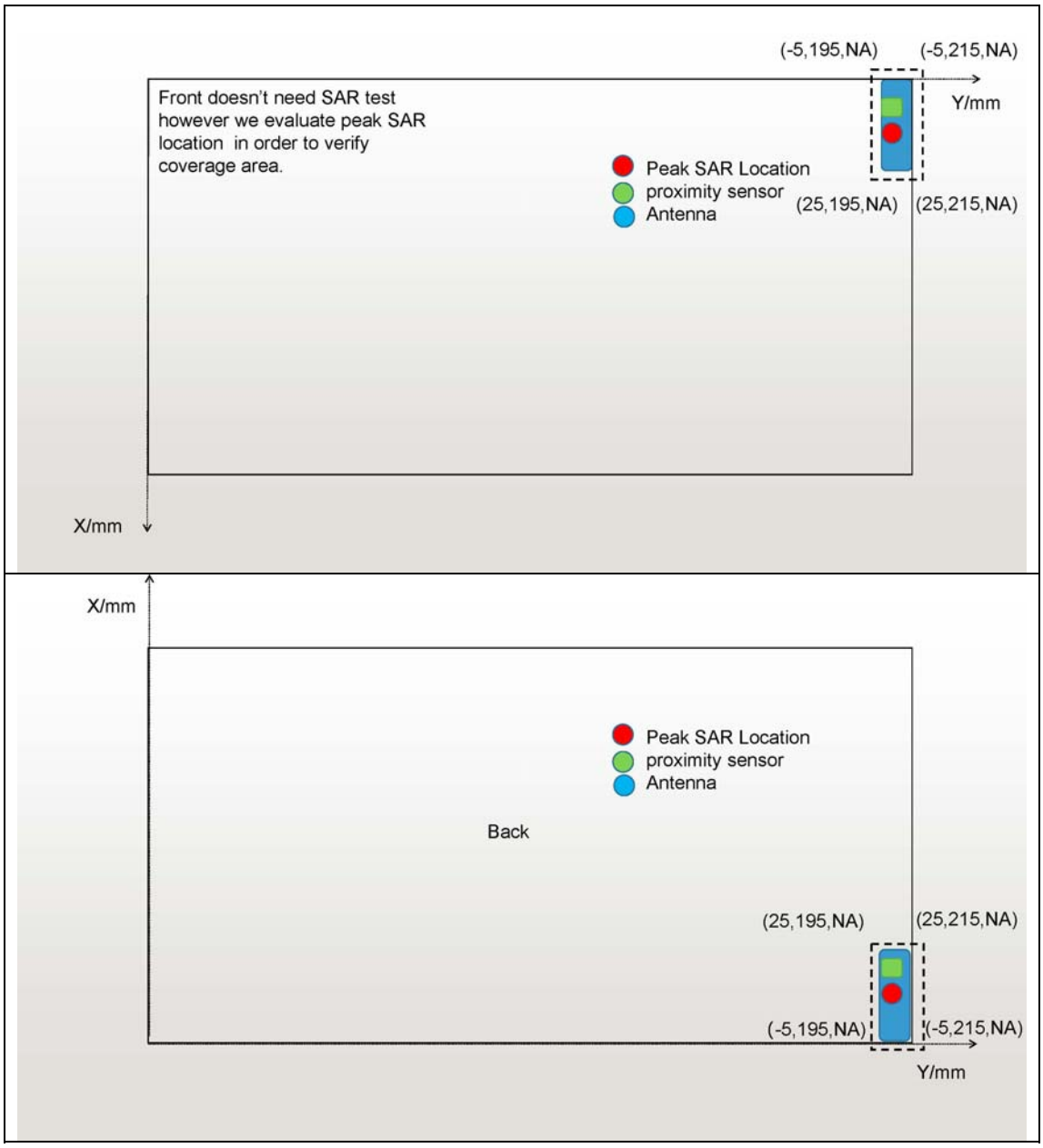


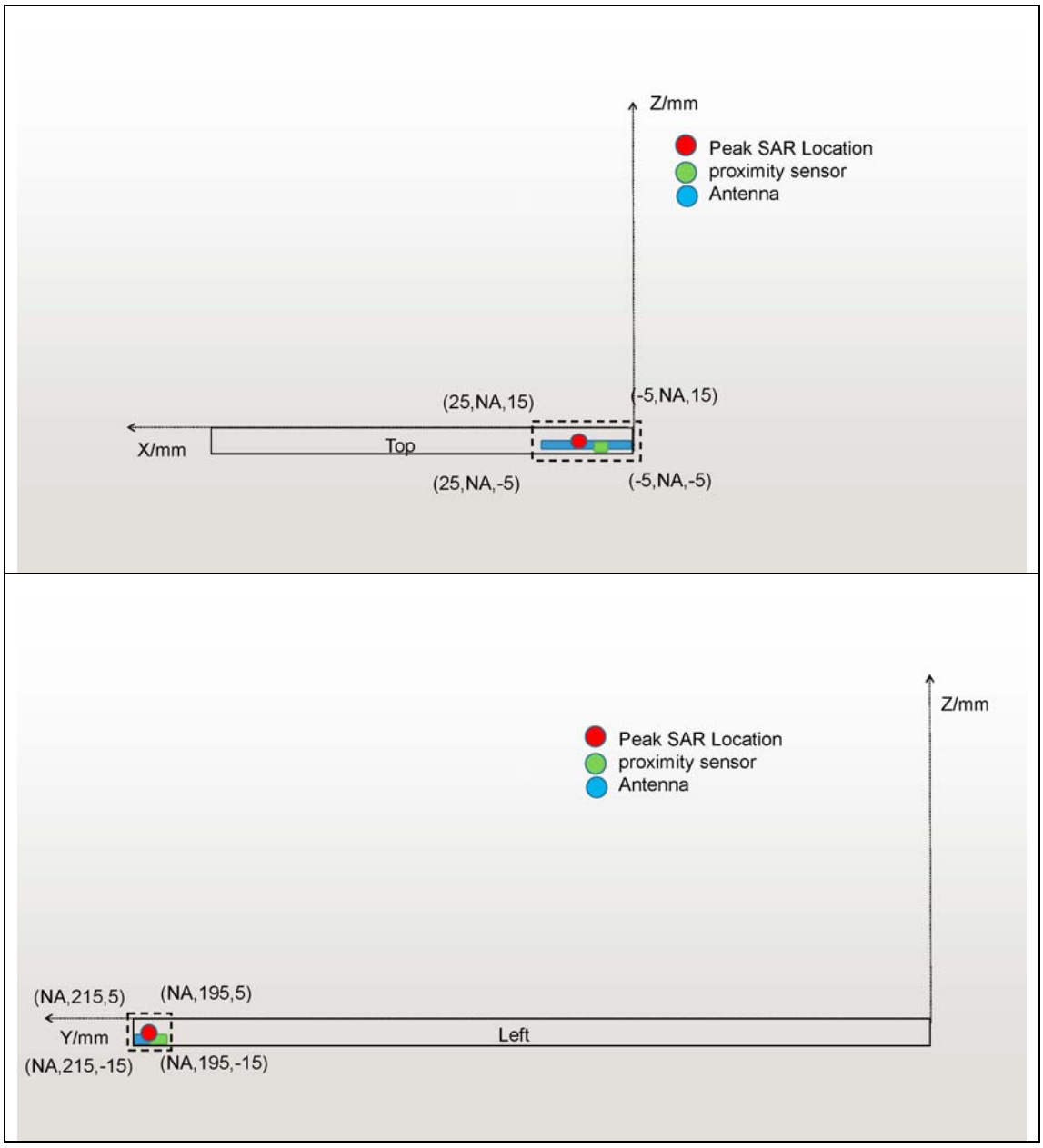
WWAN


Y/mm
Front doesn't need SAR test
however we evaluate peak SAR
location in order to verify
coverage area.
Peak SAR Location
proximity sensor
Antenna
(85,-5,NA)
(85,15,NA)
(130,-5,NA)
(130,15,NA)
X/mm
X/mm
(85,-5,NA)
(85,15,NA)
Peak SAR Location
proximity sensor
Antenna
(130,-5,NA)
(130,15,NA)
Back
Y/mm

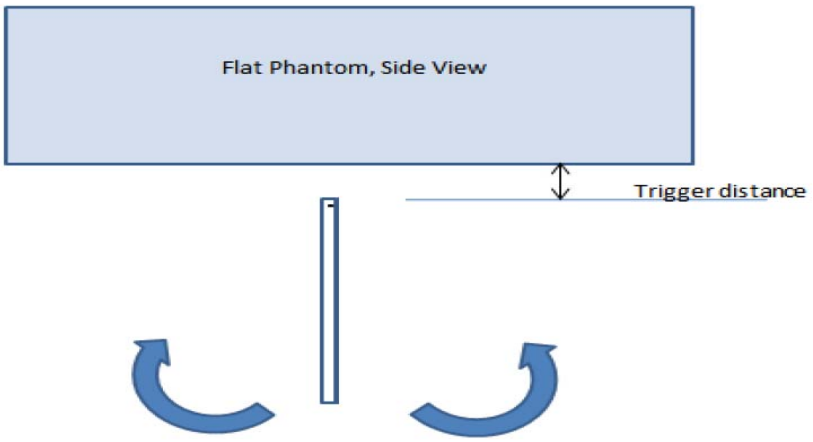

Z/mm
Peak SAR Location
proximity sensor
Antenna
(85,NA,5)
(130,NA,5)
Bottom
X/mm
(85,NA,-15)
(130,NA,-15)
Z/mm
Peak SAR Location
proximity sensor
Antenna
(NA,-5,5)
(NA,15,5)
Y/mm
Right
(NA,-5,-15)
(NA,15,-15)

WLAN


(-5,195,NA)
(-5,215,NA)
Y/mm
Front doesn't need SAR test however we evaluate peak SAR location in order to verify coverage area.
Peak SAR Location
proximity sensor
Antenna
(25,195,NA)
(25,215,NA)
X/mm
X/mm
Peak SAR Location
proximity sensor
Antenna
Back
(25,195,NA)
(25,215,NA)
(-5,195,NA)
(-5,215,NA)
Y/mm


Z/mm
Peak SAR Location
proximity sensor
Antenna
(25,NA,15)
(-5,NA,15)
X/mm
Top
(25,NA,-5)
(-5,NA,-5)
Z/mm
Peak SAR Location
proximity sensor
Antenna
(NA,215,5)
(NA,195,5)
Y/mm
Left
(NA,215,-15)
(NA,195,-15)

3: **Tilt angle influences to proximity sensor triggering**



Position	Band(MHz)	Minimum trigger distance at which power reduction was maintained over ±45°	Power Reduction Status										
			-45°	-35°	-25°	-15°	-5°	0°	5°	15°	25°	35°	45°
Bottom	W2	15	on	on	on	on	on	on	on	on	on	on	on
	W4	15	on	on	on	on	on	on	on	on	on	on	on
	W5	15	on	on	on	on	on	on	on	on	on	on	on
	L2	15	on	on	on	on	on	on	on	on	on	on	on
	L4	15	on	on	on	on	on	on	on	on	on	on	on
	L5	15	on	on	on	on	on	on	on	on	on	on	on
	L7	15	on	on	on	on	on	on	on	on	on	on	on
	L12	15	on	on	on	on	on	on	on	on	on	on	on
	L13	15	on	on	on	on	on	on	on	on	on	on	on
	L66	15	on	on	on	on	on	on	on	on	on	on	on
Right	W2	10	on	on	on	on	on	on	on	on	on	on	on
	W4	10	on	on	on	on	on	on	on	on	on	on	on
	W5	10	on	on	on	on	on	on	on	on	on	on	on
	L2	10	on	on	on	on	on	on	on	on	on	on	on
	L4	10	on	on	on	on	on	on	on	on	on	on	on
	L5	10	on	on	on	on	on	on	on	on	on	on	on
	L7	10	on	on	on	on	on	on	on	on	on	on	on
	L12	10	on	on	on	on	on	on	on	on	on	on	on
	L13	10	on	on	on	on	on	on	on	on	on	on	on
	L66	10	on	on	on	on	on	on	on	on	on	on	on

Position	Band(MHz)	Minimum trigger distance at which power reduction was maintained over ±45°	Power Reduction Status										
			-45°	-35°	-25°	-15°	-5°	0°	5°	15°	25°	35°	45°
Top	2.4GHz	5	on	on	on	on	on	on	on	on	on	on	on
Left	2.4GHz	5	on	on	on	on	on	on	on	on	on	on	on

Proximity sensor Power Reduction Scheme

Mode	Power reduction symbol	Power reduction amount(dB)	Note
WWAN	D0	0	Full power
	D1	4	Reduced power
	D2	5	
	D3	6	
	D4	7.5	
	D5	8	
	D6	9	
	D7	9.5	
WLAN	d0	0	Full power
	d1	1	Reduced power
	d2	3	
	d3	5	

WWAN antenna			
Band	Test position	Sensor Trigger	Power
		Distance range(DUT to Phantom)	Reduction symbol
WCDMA Band2	Back side	0≤distance≤15mm	D6
		15<distance	D0
	Front side	0≤distance≤10mm	D6
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D6
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D6
		10<distance	D0
WCDMA Band4	Back side	0≤distance≤15mm	D5
		15<distance	D0

	Front side	0≤distance≤10mm	D5
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D5
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D5
		10<distance	D0
WCDMA Band5	Back side	0≤distance≤15mm	D1
		15<distance	D0
	Front side	0≤distance≤10mm	D1
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D1
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D1
		10<distance	D0
LTE Band2	Back side	0≤distance≤15mm	D6
		15<distance	D0
	Front side	0≤distance≤10mm	D6
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D6
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D6

		10<distance	D0
LTE Band4	Back side	0≤distance≤15mm	D4
		15<distance	D0
	Front side	0≤distance≤10mm	D4
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D4
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D4
		10<distance	D0
LTE Band5	Back side	0≤distance≤15mm	D1
		15<distance	D0
	Front side	0≤distance≤10mm	D1
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D1
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D1
		10<distance	D0
LTE Band7	Back side	0≤distance≤15mm	D7
		15<distance	D0
	Front side	0≤distance≤10mm	D7
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D7

		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D7
		10<distance	D0
LTE Band12	Back side	0≤distance≤15mm	D3
		15<distance	D0
	Front side	0≤distance≤10mm	D3
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D3
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D3
		10<distance	D0
LTE Band13	Back side	0≤distance≤15mm	D2
		15<distance	D0
	Front side	0≤distance≤10mm	D2
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D2
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D2
		10<distance	D0
LTE Band66	Back side	0≤distance≤15mm	D5
		15<distance	D0

	Front side	0≤distance≤10mm	D5
		10<distance	D0
	Top side	ALL	D0
	Bottom side	0≤distance≤15mm	D5
		15<distance	D0
	Left side	ALL	D0
	Right side	0≤distance≤10mm	D5
		10<distance	D0

WLAN antenna				
Band	Test position	Sensor Trigger	Mode	Power
		Distance range(DUT to Phantom)	802.11 Protocol type	Reduction symbol
2.4GHz	Back side	0≤distance≤10mm	802.11b	d3
			802.11g	d2
			802.11n20	d1
		10<distance	ALL	d0
	Front side	0≤distance≤5mm	802.11b	d3
			802.11g	d2
			802.11n20	d1
		5<distance	ALL	d0
	Top side	0≤distance≤5mm	802.11b	d3
			802.11g	d2
			802.11n20	d1
		5<distance	ALL	d0
	Bottom side	ALL	ALL	d0
	Left side	0≤distance≤5mm	802.11b	d3
			802.11g	d2
			802.11n20	d1
		5<distance	ALL	d0
	Right side	ALL	ALL	d0

The measured and reported body SAR values for the test device are tabulated below: Power reduction scheme works well under trigger distance when product unit suddenly approach or away from torso, and SRTC also evaluated the SAR value under separation distance equal to trigger distance-1 (different for each surface) with full power mode, there is no risk for this condition and 0mm is the worst case.

Mode: WCDMA BAND II

fL (MHz)= 1852.4MHz fM (MHz)= 1880.0MHz fH (MHz)= 1907.6MHz

Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
Rel.99	Back	L	14.67	15.00	1.08	---	---	---	---
		M	14.54	15.00	1.11	0.710	---	0.788	---
		H	14.61	15.00	1.09	---	---	---	---
	Front	L	14.67	15.00	1.08	---	---	---	---
		M	14.54	15.00	1.11	---	---	---	---
		H	14.61	15.00	1.09	---	---	---	---
	Top	L	23.67	24.00	1.08	---	---	---	---
		M	23.54	24.00	1.11	0.001	---	0.001	---
		H	23.61	24.00	1.09	---	---	---	---
	Bottom	L	14.67	15.00	1.08	1.000	1.000	1.080	1.080
		M	14.54	15.00	1.11	1.010	1.010	1.121	1.121
		H	14.61	15.00	1.09	0.926	0.926	1.009	1.009
	Left	L	23.67	24.00	1.08	---	---	---	---
		M	23.54	24.00	1.11	0.055	---	0.061	---
		H	23.61	24.00	1.09	---	---	---	---
	Right	L	14.67	15.00	1.08	---	---	---	---
		M	14.54	15.00	1.11	0.313	---	0.347	---
		H	14.61	15.00	1.09	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
Rel.99	Back	L	23.67	24.00	1.08	---	---	---	---
		M	23.54	24.00	1.11	0.415	---	0.461	---
		H	23.61	24.00	1.09	---	---	---	---
	Front	L	23.67	24.00	1.08	---	---	---	---
		M	23.54	24.00	1.11	---	---	---	---
		H	23.61	24.00	1.09	---	---	---	---
	Bottom	L	23.67	24.00	1.08	---	---	---	---
		M	23.54	24.00	1.11	0.426	---	0.473	---
		H	23.61	24.00	1.09	---	---	---	---
	Right	L	23.67	24.00	1.08	---	---	---	---
		M	23.54	24.00	1.11	0.246	---	0.273	---
		H	23.61	24.00	1.09	---	---	---	---

Mode: WCDMA BAND IV

fL (MHz)=1712.4MHz fM (MHz)=1732.4MHz fH (MHz)= 1752.6MHz

Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
Rel.99	Back	L	15.72	16.00	1.07	---	---	---	---
		M	15.70	16.00	1.07	0.710	---	0.760	---
		H	15.62	16.00	1.09	---	---	---	---
	Front	L	15.72	16.00	1.07	---	---	---	---
		M	15.70	16.00	1.07	---	---	---	---
		H	15.62	16.00	1.09	---	---	---	---
	Top	L	23.72	24.00	1.07	---	---	---	---
		M	23.70	24.00	1.07	0.001	---	0.001	---
		H	23.62	24.00	1.09	---	---	---	---
	Bottom	L	15.72	16.00	1.07	0.935	0.933	1.000	0.998
		M	15.70	16.00	1.07	1.010	1.000	1.081	1.070
		H	15.62	16.00	1.09	0.949	0.942	1.034	1.027
	Left	L	23.72	24.00	1.07	---	---	---	---
		M	23.70	24.00	1.07	0.049	---	0.052	---
		H	23.62	24.00	1.09	---	---	---	---
	Right	L	15.72	16.00	1.07	---	---	---	---
		M	15.70	16.00	1.07	0.504	---	0.539	---
		H	15.62	16.00	1.09	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
Rel.99	Back	L	23.72	24.00	1.07	---	---	---	---
		M	23.70	24.00	1.07	0.292	---	0.312	---
		H	23.62	24.00	1.09	---	---	---	---
	Front	L	23.72	24.00	1.07	---	---	---	---
		M	23.70	24.00	1.07	---	---	---	---
		H	23.62	24.00	1.09	---	---	---	---
	Bottom	L	23.72	24.00	1.07	---	---	---	---
		M	23.70	24.00	1.07	0.301	---	0.322	---
		H	23.62	24.00	1.09	---	---	---	---
	Right	L	23.72	24.00	1.07	---	---	---	---
		M	23.70	24.00	1.07	0.290	---	0.310	---
		H	23.62	24.00	1.09	---	---	---	---

Mode: WCDMA BAND V
fL (MHz)=826.4MHz fM (MHz)=836.4MHz fH (MHz)= 846.6MHz
Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
Rel.99	Back	L	19.98	20.00	1.00	0.896	0.895	0.896	0.895
		M	19.83	20.00	1.04	0.898	0.892	0.934	0.928
		H	19.83	20.00	1.04	0.856	0.855	0.890	0.889
	Front	L	19.98	20.00	1.00	---	---	---	---
		M	19.83	20.00	1.04	---	---	---	---
		H	19.83	20.00	1.04	---	---	---	---
	Top	L	23.98	24.00	1.00	---	---	---	---
		M	23.83	24.00	1.04	0.048	---	0.050	---
		H	23.83	24.00	1.04	---	---	---	---
	Bottom	L	19.98	20.00	1.00	---	---	---	---
		M	19.83	20.00	1.04	0.775	---	0.806	---
		H	19.83	20.00	1.04	---	---	---	---
	Left	L	23.98	24.00	1.00	---	---	---	---
		M	23.83	24.00	1.04	0.001	---	0.001	---
		H	23.83	24.00	1.04	---	---	---	---
	Right	L	19.98	20.00	1.00	---	---	---	---
		M	19.83	20.00	1.04	0.642	---	0.668	---
		H	19.83	20.00	1.04	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
Rel.99	Back	L	23.98	24.00	1.00	---	---	---	---
		M	23.83	24.00	1.04	0.313	---	0.326	---
		H	23.83	24.00	1.04	---	---	---	---
	Front	L	23.98	24.00	1.00	---	---	---	---
		M	23.83	24.00	1.04	---	---	---	---
		H	23.83	24.00	1.04	---	---	---	---
	Bottom	L	23.98	24.00	1.00	---	---	---	---
		M	23.83	24.00	1.04	0.297	---	0.309	---
		H	23.83	24.00	1.04	---	---	---	---
	Right	L	23.98	24.00	1.00	---	---	---	---
		M	23.83	24.00	1.04	0.215	---	0.224	---
		H	23.83	24.00	1.04	---	---	---	---

Mode: LTE Band 2

fL (MHz)= 1860MHz fM (MHz)= 1880MHz fH (MHz)= 1900MHz

Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	14.63	15.00	1.09	---	---	---	---
		M	14.79	15.00	1.05	0.507	---	0.532	---
		H	14.47	15.00	1.13	---	---	---	---
	Front	L	14.63	15.00	1.09	---	---	---	---
		M	14.79	15.00	1.05	---	---	---	---
		H	14.47	15.00	1.13	---	---	---	---
	Top	L	23.63	24.00	1.09	---	---	---	---
		M	23.79	24.00	1.05	0.001	---	0.001	---
		H	23.47	24.00	1.13	---	---	---	---
	Bottom	L	14.63	15.00	1.09	0.855	0.854	0.932	0.931
		M	14.79	15.00	1.05	0.862	0.860	0.905	0.903
		H	14.47	15.00	1.13	0.801	0.700	0.905	0.791
	Left	L	23.63	24.00	1.09	---	---	---	---
		M	23.79	24.00	1.05	0.001	---	0.001	---
		H	23.47	24.00	1.13	---	---	---	---
	Right	L	14.63	15.00	1.09	---	---	---	---
		M	14.79	15.00	1.05	0.284	---	---	---
		H	14.47	15.00	1.13	---	---	---	---
QPSK 50%RB	Back	L	13.62	14.00	1.09	---	---	---	---
		M	13.62	14.00	1.09	0.483	---	0.526	---
		H	13.47	14.00	1.13	---	---	---	---
	Front	L	13.62	14.00	1.09	---	---	---	---
		M	13.62	14.00	1.09	---	---	---	---
		H	13.47	14.00	1.13	---	---	---	---
	Top	L	22.62	23.00	1.09	---	---	---	---
		M	22.62	23.00	1.09	0.001	---	0.001	---
		H	22.47	23.00	1.13	---	---	---	---
	Bottom	L	13.62	14.00	1.09	---	---	---	---
		M	13.62	14.00	1.09	0.799	---	0.871	---
		H	13.47	14.00	1.13	---	---	---	---
	Left	L	22.62	23.00	1.09	---	---	---	---
		M	22.62	23.00	1.09	0.001	---	0.001	---
		H	22.47	23.00	1.13	---	---	---	---
	Right	L	13.62	14.00	1.09	---	---	---	---
		M	13.62	14.00	1.09	0.217	---	0.237	---
		H	13.47	14.00	1.13	---	---	---	---

QPSK 100%RB	Back	L	13.47	14.00	1.13	---	---	---	---
		M	13.65	14.00	1.08	0.481	---	0.519	---
		H	13.43	14.00	1.14	---	---	---	---
	Front	L	13.47	14.00	1.13	---	---	---	---
		M	13.65	14.00	1.08	---	---	---	---
		H	13.43	14.00	1.14	---	---	---	---
	Top	L	22.47	23.00	1.13	---	---	---	---
		M	22.65	23.00	1.08	0.001	---	0.001	---
		H	22.43	23.00	1.14	---	---	---	---
	Bottom	L	13.47	14.00	1.13	---	---	---	---
		M	13.65	14.00	1.08	0.764	---	0.825	---
		H	13.43	14.00	1.14	---	---	---	---
	Left	L	22.47	23.00	1.13	---	---	---	---
		M	22.65	23.00	1.08	0.001	---	0.001	---
		H	22.43	23.00	1.14	---	---	---	---
	Right	L	13.47	14.00	1.13	---	---	---	---
		M	13.65	14.00	1.08	0.192	---	0.207	---
		H	13.43	14.00	1.14	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	23.63	24.00	1.09	---	---	---	---
		M	23.79	24.00	1.05	0.455	---	0.478	---
		H	23.47	24.00	1.13	---	---	---	---
	Front	L	23.63	24.00	1.09	---	---	---	---
		M	23.79	24.00	1.05	---	---	---	---
		H	23.47	24.00	1.13	---	---	---	---
	Bottom	L	23.63	24.00	1.09	---	---	---	---
		M	23.79	24.00	1.05	0.402	---	0.422	---
		H	23.47	24.00	1.13	---	---	---	---
	Right	L	23.63	24.00	1.09	---	---	---	---
		M	23.79	24.00	1.05	0.210	---	0.221	---
		H	23.47	24.00	1.13	---	---	---	---
QPSK 50%RB	Back	L	22.62	23.00	1.09	---	---	---	---
		M	22.62	23.00	1.09	0.440	---	0.480	---
		H	22.47	23.00	1.13	---	---	---	---
	Front	L	22.62	23.00	1.09	---	---	---	---
		M	22.62	23.00	1.09	---	---	---	---
		H	22.47	23.00	1.13	---	---	---	---
	Bottom	L	22.62	23.00	1.09	---	---	---	---
		M	22.62	23.00	1.09	0.396	---	0.432	---
		H	22.47	23.00	1.13	---	---	---	---
	Right	L	22.62	23.00	1.09	---	---	---	---
		M	22.62	23.00	1.09	0.208	---	0.227	---
		H	22.47	23.00	1.13	---	---	---	---

Mode: LTE Band 4
fL (MHz)= 1720MHz fM (MHz)= 1732.5MHz fH (MHz)= 1745MHz
Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	16.81	17.50	1.17	---	---	---	---
		M	16.99	17.50	1.12	0.742	---	0.831	---
		H	17.06	17.50	1.11	---	---	---	---
	Front	L	16.81	17.50	1.17	---	---	---	---
		M	16.99	17.50	1.12	---	---	---	---
		H	17.06	17.50	1.11	---	---	---	---
	Top	L	24.31	25.00	1.17	---	---	---	---
		M	24.49	25.00	1.12	0.001	---	0.001	---
		H	24.56	25.00	1.11	---	---	---	---
	Bottom	L	16.81	17.50	1.17	0.993	0.990	1.162	1.158
		M	16.99	17.50	1.12	1.000	0.997	1.120	1.117
		H	17.06	17.50	1.11	0.990	0.988	1.099	1.097
	Left	L	24.31	25.00	1.17	---	---	---	---
		M	24.49	25.00	1.12	0.001	---	0.001	---
		H	24.56	25.00	1.11	---	---	---	---
	Right	L	16.81	17.50	1.17	---	---	---	---
		M	16.99	17.50	1.12	0.373	---	0.418	---
		H	17.06	17.50	1.11	---	---	---	---
QPSK 50%RB	Back	L	15.68	16.00	1.08	---	---	---	---
		M	15.64	16.00	1.09	0.682	---	0.743	---
		H	15.81	16.00	1.04	---	---	---	---
	Front	L	15.68	16.00	1.08	---	---	---	---
		M	15.64	16.00	1.09	---	---	---	---
		H	15.81	16.00	1.04	---	---	---	---
	Top	L	23.18	23.50	1.08	---	---	---	---
		M	23.14	23.50	1.09	0.001	---	0.001	---
		H	23.31	23.50	1.04	---	---	---	---
	Bottom	L	15.68	16.00	1.08	---	---	---	---
		M	15.64	16.00	1.09	0.782	---	0.852	---
		H	15.81	16.00	1.04	---	---	---	---
	Left	L	23.18	23.50	1.08	---	---	---	---
		M	23.14	23.50	1.09	0.001	---	0.001	---
		H	23.31	23.50	1.04	---	---	---	---
	Right	L	15.68	16.00	1.08	---	---	---	---
		M	15.64	16.00	1.09	0.263	---	0.287	---
		H	15.81	16.00	1.04	---	---	---	---

QPSK 100%RB	Back	L	15.65	16.00	1.08	---	---	---	---
		M	15.78	16.00	1.05	0.674	---	0.708	---
		H	15.74	16.00	1.06	---	---	---	---
	Front	L	15.65	16.00	1.08	---	---	---	---
		M	15.78	16.00	1.05	---	---	---	---
		H	15.74	16.00	1.06	---	---	---	---
	Top	L	23.15	23.50	1.08	---	---	---	---
		M	23.28	23.50	1.05	0.001	---	0.001	---
		H	23.24	23.50	1.06	---	---	---	---
	Bottom	L	15.65	16.00	1.08	---	---	---	---
		M	15.78	16.00	1.05	0.766	---	0.804	---
		H	15.74	16.00	1.06	---	---	---	---
	Left	L	23.15	23.50	1.08	---	---	---	---
		M	23.28	23.50	1.05	0.001	---	0.001	---
		H	23.24	23.50	1.06	---	---	---	---
	Right	L	15.65	16.00	1.08	---	---	---	---
		M	15.78	16.00	1.05	0.248	---	0.260	---
		H	15.74	16.00	1.06	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	24.31	25.00	1.17	---	---	---	---
		M	24.49	25.00	1.12	0.310	---	0.347	---
		H	24.56	25.00	1.11	---	---	---	---
	Front	L	24.31	25.00	1.17	---	---	---	---
		M	24.49	25.00	1.12	---	---	---	---
		H	24.56	25.00	1.11	---	---	---	---
	Bottom	L	24.31	25.00	1.17	---	---	---	---
		M	24.49	25.00	1.12	0.304	---	0.340	---
		H	24.56	25.00	1.11	---	---	---	---
	Right	L	24.31	25.00	1.17	---	---	---	---
		M	24.49	25.00	1.12	0.347	---	0.389	---
		H	24.56	25.00	1.11	---	---	---	---
QPSK 50%RB	Back	L	23.18	23.50	1.08	---	---	---	---
		M	23.14	23.50	1.09	0.308	---	0.336	---
		H	23.31	23.50	1.04	---	---	---	---
	Front	L	23.18	23.50	1.08	---	---	---	---
		M	23.14	23.50	1.09	---	---	---	---
		H	23.31	23.50	1.04	---	---	---	---
	Bottom	L	23.18	23.50	1.08	---	---	---	---
		M	23.14	23.50	1.09	0.297	---	0.324	---
		H	23.31	23.50	1.04	---	---	---	---
	Right	L	23.18	23.50	1.08	---	---	---	---
		M	23.14	23.50	1.09	0.342	---	0.373	---
		H	23.31	23.50	1.04	---	---	---	---

Mode: LTE Band 5
fL (MHz)=829 MHz fM (MHz)=836.5MHz fH (MHz)= 844MHz
Limit of SAR (W/kg) : <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	20.55	21.00	1.11	0.856	0.852	0.950	0.946
		M	20.71	21.00	1.07	0.904	0.901	0.967	0.964
		H	20.49	21.00	1.12	0.821	0.820	0.920	0.918
	Front	L	20.55	21.00	1.11	---	---	---	---
		M	20.71	21.00	1.07	---	---	---	---
		H	20.49	21.00	1.12	---	---	---	---
	Top	L	24.55	25.00	1.11	---	---	---	---
		M	24.71	25.00	1.07	0.001	---	0.001	---
		H	24.49	25.00	1.12	---	---	---	---
	Bottom	L	20.55	21.00	1.11	---	---	---	---
		M	20.71	21.00	1.07	0.746	---	0.798	---
		H	20.49	21.00	1.12	---	---	---	---
	Left	L	24.55	25.00	1.11	---	---	---	---
		M	24.71	25.00	1.07	0.001	---	0.001	---
		H	24.49	25.00	1.12	---	---	---	---
	Right	L	20.55	21.00	1.11	---	---	---	---
		M	20.71	21.00	1.07	0.736	---	0.788	---
		H	20.49	21.00	1.12	---	---	---	---
QPSK 50%RB	Back	L	19.08	19.50	1.10	---	---	---	---
		M	19.20	19.50	1.07	0.784	---	0.839	---
		H	19.29	19.50	1.05	---	---	---	---
	Front	L	19.08	19.50	1.10	---	---	---	---
		M	19.20	19.50	1.07	---	---	---	---
		H	19.29	19.50	1.05	---	---	---	---
	Top	L	23.08	23.50	1.10	---	---	---	---
		M	23.20	23.50	1.07	0.001	---	0.001	---
		H	23.29	23.50	1.05	---	---	---	---
	Bottom	L	19.08	19.50	1.10	---	---	---	---
		M	19.20	19.50	1.07	0.578	---	0.618	---
		H	19.29	19.50	1.05	---	---	---	---
	Left	L	23.08	23.50	1.10	---	---	---	---
		M	23.20	23.50	1.07	0.001	---	0.001	---
		H	23.29	23.50	1.05	---	---	---	---
	Right	L	19.08	19.50	1.10	---	---	---	---
		M	19.20	19.50	1.07	0.588	---	0.629	---
		H	19.29	19.50	1.05	---	---	---	---

QPSK 100%RB	Back	L	19.17	19.50	1.08	---	---	---	---
		M	19.27	19.50	1.05	0.772	---	0.811	---
		H	19.11	19.50	1.09	---	---	---	---
	Front	L	19.17	19.50	1.08	---	---	---	---
		M	19.27	19.50	1.05	---	---	---	---
		H	19.11	19.50	1.09	---	---	---	---
	Top	L	23.17	23.50	1.08	---	---	---	---
		M	23.27	23.50	1.05	0.001	---	0.001	---
		H	23.11	23.50	1.09	---	---	---	---
	Bottom	L	19.17	19.50	1.08	---	---	---	---
		M	19.27	19.50	1.05	0.564	---	0.592	---
		H	19.11	19.50	1.09	---	---	---	---
	Left	L	23.17	23.50	1.08	---	---	---	---
		M	23.27	23.50	1.05	0.001	---	0.001	---
		H	23.11	23.50	1.09	---	---	---	---
	Right	L	19.17	19.50	1.08	---	---	---	---
		M	19.27	19.50	1.05	0.576	---	0.605	---
		H	19.11	19.50	1.09	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	24.55	25.00	1.11	---	---	---	---
		M	24.71	25.00	1.07	0.289	---	0.309	---
		H	24.49	25.00	1.12	---	---	---	---
	Front	L	24.55	25.00	1.11	---	---	---	---
		M	24.71	25.00	1.07	---	---	---	---
		H	24.49	25.00	1.12	---	---	---	---
	Bottom	L	24.55	25.00	1.11	---	---	---	---
		M	24.71	25.00	1.07	0.213	---	0.228	---
		H	24.49	25.00	1.12	---	---	---	---
	Right	L	24.55	25.00	1.11	---	---	---	---
		M	24.71	25.00	1.07	0.173	---	0.185	---
		H	24.49	25.00	1.12	---	---	---	---
QPSK 50%RB	Back	L	23.08	23.50	1.10	---	---	---	---
		M	23.20	23.50	1.07	0.276	---	0.295	---
		H	23.29	23.50	1.05	---	---	---	---
	Front	L	23.08	23.50	1.10	---	---	---	---
		M	23.20	23.50	1.07	---	---	---	---
		H	23.29	23.50	1.05	---	---	---	---
	Bottom	L	23.08	23.50	1.10	---	---	---	---
		M	23.20	23.50	1.07	0.202	---	0.216	---
		H	23.29	23.50	1.05	---	---	---	---
	Right	L	23.08	23.50	1.10	---	---	---	---
		M	23.20	23.50	1.07	0.171	---	0.183	---
		H	23.29	23.50	1.05	---	---	---	---

Mode: LTE Band 7
fL (MHz)=2510 MHz fM (MHz)=2535MHz fH (MHz)= 2560MHz
Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	15.18	15.50	1.08	---	---	---	---
		M	14.94	15.50	1.14	0.786	---	0.896	---
		H	14.94	15.50	1.14	---	---	---	---
	Front	L	15.18	15.50	1.08	---	---	---	---
		M	14.94	15.50	1.14	---	---	---	---
		H	14.94	15.50	1.14	---	---	---	---
	Top	L	24.68	25.00	1.08	---	---	---	---
		M	24.44	25.00	1.14	0.001	---	0.001	---
		H	24.44	25.00	1.14	---	---	---	---
	Bottom	L	15.18	15.50	1.08	0.971	0.970	1.049	1.048
		M	14.94	15.50	1.14	0.993	0.992	1.132	1.131
		H	14.94	15.50	1.14	0.811	0.808	0.925	0.921
	Left	L	24.68	25.00	1.08	---	---	---	---
		M	24.44	25.00	1.14	0.031	---	0.035	---
		H	24.44	25.00	1.14	---	---	---	---
	Right	L	15.18	15.50	1.08	---	---	---	---
		M	14.94	15.50	1.14	0.082	---	0.093	---
		H	14.94	15.50	1.14	---	---	---	---
QPSK 50%RB	Back	L	14.01	14.50	1.12	---	---	---	---
		M	13.93	14.50	1.14	0.784	---	0.894	---
		H	14.28	14.50	1.05	---	---	---	---
	Front	L	14.01	14.50	1.12	---	---	---	---
		M	13.93	14.50	1.14	---	---	---	---
		H	14.28	14.50	1.05	---	---	---	---
	Top	L	23.51	24.00	1.12	---	---	---	---
		M	23.43	24.00	1.14	0.001	---	0.001	---
		H	23.78	24.00	1.05	---	---	---	---
	Bottom	L	14.01	14.50	1.12	0.970	0.969	1.086	1.085
		M	13.93	14.50	1.14	0.988	0.986	1.126	1.124
		H	14.28	14.50	1.05	0.808	0.808	0.848	0.848
	Left	L	23.51	24.00	1.12	---	---	---	---
		M	23.43	24.00	1.14	0.030	---	0.034	---
		H	23.78	24.00	1.05	---	---	---	---
	Right	L	14.01	14.50	1.12	---	---	---	---
		M	13.93	14.50	1.14	0.079	---	0.090	---
		H	14.28	14.50	1.05	---	---	---	---

QPSK 100%RB	Back	L	13.98	14.50	1.13	---	---	---	---
		M	13.96	14.50	1.13	0.781	---	0.883	---
		H	13.76	14.50	1.19	---	---	---	---
	Front	L	13.98	14.50	1.13	---	---	---	---
		M	13.96	14.50	1.13	---	---	---	---
		H	13.76	14.50	1.19	---	---	---	---
	Top	L	23.48	24.00	1.13	---	---	---	---
		M	23.46	24.00	1.13	0.001	---	0.001	---
		H	23.26	24.00	1.19	---	---	---	---
	Bottom	L	13.98	14.50	1.13	0.966	0.965	1.092	1.090
		M	13.96	14.50	1.13	0.972	0.966	1.098	1.092
		H	13.76	14.50	1.19	0.805	0.802	0.958	0.954
	Left	L	23.48	24.00	1.13	---	---	---	---
		M	23.46	24.00	1.13	0.025	---	0.028	---
		H	23.26	24.00	1.19	---	---	---	---
	Right	L	13.98	14.50	1.13	---	---	---	---
		M	13.96	14.50	1.13	0.064	---	0.072	---
		H	13.76	14.50	1.19	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	24.68	25.00	1.08	---	---	---	---
		M	24.44	25.00	1.14	0.753	---	0.858	---
		H	24.44	25.00	1.14	---	---	---	---
	Front	L	24.68	25.00	1.08	---	---	---	---
		M	24.44	25.00	1.14	---	---	---	---
		H	24.44	25.00	1.14	---	---	---	---
	Bottom	L	24.68	25.00	1.08	0.801	0.794	0.865	0.858
		M	24.44	25.00	1.14	0.842	0.832	0.960	0.948
		H	24.44	25.00	1.14	0.802	0.792	0.914	0.903
	Right	L	24.68	25.00	1.08	---	---	---	---
		M	24.44	25.00	1.14	0.080	---	0.091	---
		H	24.44	25.00	1.14	---	---	---	---
QPSK 50%RB	Back	L	23.51	24.00	1.12	---	---	---	---
		M	23.43	24.00	1.14	0.732	---	0.834	---
		H	23.78	24.00	1.05	---	---	---	---
	Front	L	23.51	24.00	1.12	---	---	---	---
		M	23.43	24.00	1.14	---	---	---	---
		H	23.78	24.00	1.05	---	---	---	---

	Bottom	L	23.51	24.00	1.12	0.833	0.832	0.933	0.932
		M	23.43	24.00	1.14	0.863	0.860	0.984	0.980
		H	23.78	24.00	1.05	0.832	0.831	0.874	0.873
	Right	L	23.51	24.00	1.12	---	---	---	---
		M	23.43	24.00	1.14	0.084	---	0.096	---
		H	23.78	24.00	1.05	---	---	---	---
QPSK 100%RB	Back	L	23.48	24.00	1.13	---	---	---	---
		M	23.46	24.00	1.13	0.745	---	0.842	---
		H	23.26	24.00	1.19	---	---	---	---
	Front	L	23.48	24.00	1.13	---	---	---	---
		M	23.46	24.00	1.13	---	---	---	---
		H	23.26	24.00	1.19	---	---	---	---
	Bottom	L	23.48	24.00	1.13	0.828	0.827	0.936	0.935
		M	23.46	24.00	1.13	0.865	0.865	0.977	0.977
		H	23.26	24.00	1.19	0.836	0.833	0.995	0.991
	Right	L	23.48	24.00	1.13	---	---	---	---
		M	23.46	24.00	1.13	0.086	---	0.097	---
		H	23.26	24.00	1.19	---	---	---	---

Mode: LTE Band 12

fL (MHz)=704 MHz fM (MHz)=707.5MHz fH (MHz)= 711MHz

Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	18.28	18.50	1.05	0.819	0.816	0.860	0.857
		M	18.34	18.50	1.04	0.910	0.905	0.946	0.941
		H	18.24	18.50	1.06	0.813	0.811	0.862	0.860
	Front	L	18.28	18.50	1.05	---	---	---	---
		M	18.34	18.50	1.04	---	---	---	---
		H	18.24	18.50	1.06	---	---	---	---
	Top	L	24.28	24.50	1.05	---	---	---	---
		M	24.34	24.50	1.04	0.001	---	0.001	---
		H	24.24	24.50	1.06	---	---	---	---
	Bottom	L	18.28	18.50	1.05	---	---	---	---
		M	18.34	18.50	1.04	0.775	---	0.806	---
		H	18.24	18.50	1.06	---	---	---	---
	Left	L	24.28	24.50	1.05	---	---	---	---
		M	24.34	24.50	1.04	0.001	---	0.001	---
		H	24.24	24.50	1.06	---	---	---	---
	Right	L	18.28	18.50	1.05	---	---	---	---
		M	18.34	18.50	1.04	0.419	---	0.436	---
		H	18.24	18.50	1.06	---	---	---	---
QPSK 50%RB	Back	L	16.95	17.50	1.14	---	---	---	---
		M	17.16	17.50	1.08	0.789	---	0.852	---
		H	17.01	17.50	1.12	---	---	---	---
	Front	L	16.95	17.50	1.14	---	---	---	---
		M	17.16	17.50	1.08	---	---	---	---
		H	17.01	17.50	1.12	---	---	---	---
	Top	L	22.95	23.50	1.14	---	---	---	---
		M	23.16	23.50	1.08	0.001	---	0.001	---
		H	23.01	23.50	1.12	---	---	---	---
	Bottom	L	16.95	17.50	1.14	---	---	---	---
		M	17.16	17.50	1.08	0.682	---	0.737	---
		H	17.01	17.50	1.12	---	---	---	---
	Left	L	22.95	23.50	1.14	---	---	---	---
		M	23.16	23.50	1.08	0.001	---	0.001	---
		H	23.01	23.50	1.12	---	---	---	---
	Right	L	16.95	17.50	1.14	---	---	---	---
		M	17.16	17.50	1.08	0.355	---	0.383	---
		H	17.01	17.50	1.12	---	---	---	---
QPSK	Back	L	17.03	17.50	1.11	---	---	---	---

100%RB		M	17.02	17.50	1.12	0.784	---	0.878	---
		H	17.11	17.50	1.09	---	---	---	---
	Front	L	17.03	17.50	1.11	---	---	---	---
		M	17.02	17.50	1.12	---	---	---	---
		H	17.11	17.50	1.09	---	---	---	---
	Top	L	23.03	23.50	1.11	---	---	---	---
		M	23.02	23.50	1.12	0.001	---	0.001	---
		H	23.11	23.50	1.09	---	---	---	---
	Botto m	L	17.03	17.50	1.11	---	---	---	---
		M	17.02	17.50	1.12	0.663	---	0.743	---
		H	17.11	17.50	1.09	---	---	---	---
	Left	L	23.03	23.50	1.11	---	---	---	---
		M	23.02	23.50	1.12	0.001	---	0.001	---
		H	23.11	23.50	1.09	---	---	---	---
	Right	L	17.03	17.50	1.11	---	---	---	---
		M	17.02	17.50	1.12	0.342	---	0.383	---
		H	17.11	17.50	1.09	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	24.28	24.50	1.05	---	---	---	---
		M	24.34	24.50	1.04	0.154	---	0.160	---
		H	24.24	24.50	1.06	---	---	---	---
	Front	L	24.28	24.50	1.05	---	---	---	---
		M	24.34	24.50	1.04	---	---	---	---
		H	24.24	24.50	1.06	---	---	---	---
	Bottom	L	24.28	24.50	1.05	---	---	---	---
		M	24.34	24.50	1.04	0.091	---	0.095	---
		H	24.24	24.50	1.06	---	---	---	---
	Right	L	24.28	24.50	1.05	---	---	---	---
		M	24.34	24.50	1.04	0.088	---	0.092	---
		H	24.24	24.50	1.06	---	---	---	---
QPSK 50%RB	Back	L	22.95	23.50	1.14	---	---	---	---
		M	23.16	23.50	1.08	0.142	---	0.153	---
		H	23.01	23.50	1.12	---	---	---	---
	Front	L	22.95	23.50	1.14	---	---	---	---
		M	23.16	23.50	1.08	---	---	---	---
		H	23.01	23.50	1.12	---	---	---	---
	Bottom	L	22.95	23.50	1.14	---	---	---	---
		M	23.16	23.50	1.08	0.085	---	0.092	---
		H	23.01	23.50	1.12	---	---	---	---
	Right	L	22.95	23.50	1.14	---	---	---	---
		M	23.16	23.50	1.08	0.072	---	0.078	---
		H	23.01	23.50	1.12	---	---	---	---

Mode: LTE Band 13
fL (MHz)=782 MHz fM (MHz)=782MHz fH (MHz)= 782MHz
Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	19.34	19.50	1.04	0.918	0.916	0.955	0.953
		M	19.34	19.50	1.04	0.918	0.916	0.955	0.953
		H	19.34	19.50	1.04	0.918	0.916	0.955	0.953
	Front	L	19.34	19.50	1.04	---	---	---	---
		M	19.34	19.50	1.04	---	---	---	---
		H	19.34	19.50	1.04	---	---	---	---
	Top	L	24.34	24.50	1.04	---	---	---	---
		M	24.34	24.50	1.04	0.001	---	0.001	---
		H	24.34	24.50	1.04	---	---	---	---
	Bottom	L	19.34	19.50	1.04	---	---	---	---
		M	19.34	19.50	1.04	0.572	---	0.595	---
		H	19.34	19.50	1.04	---	---	---	---
	Left	L	24.34	24.50	1.04	---	---	---	---
		M	24.34	24.50	1.04	0.001	---	0.001	---
		H	24.34	24.50	1.04	---	---	---	---
	Right	L	19.34	19.50	1.04	---	---	---	---
		M	19.34	19.50	1.04	0.752	---	0.782	---
		H	19.34	19.50	1.04	---	---	---	---
QPSK 50%RB	Back	L	18.05	18.50	1.11	---	---	---	---
		M	18.05	18.50	1.11	0.778	---	0.864	---
		H	18.05	18.50	1.11	---	---	---	---
	Front	L	18.05	18.50	1.11	---	---	---	---
		M	18.05	18.50	1.11	---	---	---	---
		H	18.05	18.50	1.11	---	---	---	---
	Top	L	23.05	23.50	1.11	---	---	---	---
		M	23.05	23.50	1.11	0.001	---	0.001	---
		H	23.05	23.50	1.11	---	---	---	---
	Bottom	L	18.05	18.50	1.11	---	---	---	---
		M	18.05	18.50	1.11	0.462	---	0.513	---
		H	18.05	18.50	1.11	---	---	---	---
	Left	L	23.05	23.50	1.11	---	---	---	---
		M	23.05	23.50	1.11	0.001	---	0.001	---
		H	23.05	23.50	1.11	---	---	---	---
	Right	L	18.05	18.50	1.11	---	---	---	---
		M	18.05	18.50	1.11	0.662	---	0.735	---
		H	18.05	18.50	1.11	---	---	---	---
QPSK	Back	L	17.98	18.50	1.13	---	---	---	---

100%RB		M	17.98	18.50	1.13	0.765	---	0.864	---
		H	17.98	18.50	1.13	---	---	---	---
	Front	L	17.98	18.50	1.13	---	---	---	---
		M	17.98	18.50	1.13	---	---	---	---
		H	17.98	18.50	1.13	---	---	---	---
	Top	L	22.98	23.50	1.13	---	---	---	---
		M	22.98	23.50	1.13	0.001	---	0.001	---
		H	22.98	23.50	1.13	---	---	---	---
	Botto m	L	17.98	18.50	1.13	---	---	---	---
		M	17.98	18.50	1.13	0.446	---	0.504	---
		H	17.98	18.50	1.13	---	---	---	---
	Left	L	22.98	23.50	1.13	---	---	---	---
		M	22.98	23.50	1.13	0.001	---	0.001	---
		H	22.98	23.50	1.13	---	---	---	---
	Right	L	17.98	18.50	1.13	---	---	---	---
		M	17.98	18.50	1.13	0.651	---	0.736	---
		H	17.98	18.50	1.13	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	24.34	24.50	1.04	---	---	---	---
		M	24.34	24.50	1.04	0.237	---	0.246	---
		H	24.34	24.50	1.04	---	---	---	---
	Front	L	24.34	24.50	1.04	---	---	---	---
		M	24.34	24.50	1.04	---	---	---	---
		H	24.34	24.50	1.04	---	---	---	---
	Bottom	L	24.34	24.50	1.04	---	---	---	---
		M	24.34	24.50	1.04	0.141	---	0.147	---
		H	24.34	24.50	1.04	---	---	---	---
	Right	L	24.34	24.50	1.04	---	---	---	---
		M	24.34	24.50	1.04	0.144	---	0.150	---
		H	24.34	24.50	1.04	---	---	---	---
QPSK 50%RB	Back	L	23.05	23.50	1.11	---	---	---	---
		M	23.05	23.50	1.11	0.228	---	0.253	---
		H	23.05	23.50	1.11	---	---	---	---
	Front	L	23.05	23.50	1.11	---	---	---	---
		M	23.05	23.50	1.11	---	---	---	---
		H	23.05	23.50	1.11	---	---	---	---
	Bottom	L	23.05	23.50	1.11	---	---	---	---
		M	23.05	23.50	1.11	0.136	---	0.151	---
		H	23.05	23.50	1.11	---	---	---	---
	Right	L	23.05	23.50	1.11	---	---	---	---
		M	23.05	23.50	1.11	0.140	---	0.155	---
		H	23.05	23.50	1.11	---	---	---	---

Mode: LTE Band 66

fL (MHz)=1720 MHz fM (MHz)=1745MHz fH (MHz)= 1770MHz

Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	14.98	15.50	1.13	---	---	---	---
		M	15.18	15.50	1.08	0.732	---	0.791	---
		H	15.31	15.50	1.04	---	---	---	---
	Front	L	14.98	15.50	1.13	---	---	---	---
		M	15.18	15.50	1.08	---	---	---	---
		H	15.31	15.50	1.04	---	---	---	---
	Top	L	22.98	23.50	1.13	---	---	---	---
		M	23.18	23.50	1.08	0.085	---	0.092	---
		H	23.31	23.50	1.04	---	---	---	---
	Bottom	L	14.98	15.50	1.13	0.851	0.850	0.962	0.961
		M	15.18	15.50	1.08	0.949	0.949	1.025	1.025
		H	15.31	15.50	1.04	0.944	0.940	0.982	0.978
	Left	L	22.98	23.50	1.13	---	---	---	---
		M	23.18	23.50	1.08	0.001	---	0.001	---
		H	23.31	23.50	1.04	---	---	---	---
	Right	L	14.98	15.50	1.13	---	---	---	---
		M	15.18	15.50	1.08	0.607	---	0.656	---
		H	15.31	15.50	1.04	---	---	---	---
QPSK 50%RB	Back	L	13.97	15.00	1.27	---	---	---	---
		M	14.53	15.00	1.11	0.657	---	0.729	---
		H	14.27	15.00	1.18	---	---	---	---
	Front	L	13.97	15.00	1.27	---	---	---	---
		M	14.53	15.00	1.11	---	---	---	---
		H	14.27	15.00	1.18	---	---	---	---
	Top	L	21.97	23.00	1.27	---	---	---	---
		M	22.53	23.00	1.11	0.063	---	0.070	---
		H	22.27	23.00	1.18	---	---	---	---
	Bottom	L	13.97	15.00	1.27	---	---	---	---
		M	14.53	15.00	1.11	0.793	---	0.880	---
		H	14.27	15.00	1.18	---	---	---	---
	Left	L	21.97	23.00	1.27	---	---	---	---
		M	22.53	23.00	1.11	0.001	---	0.001	---
		H	22.27	23.00	1.18	---	---	---	---
	Right	L	13.97	15.00	1.27	---	---	---	---
		M	14.53	15.00	1.11	0.561	---	0.623	---
		H	14.27	15.00	1.18	---	---	---	---
QPSK	Back	L	13.89	15.00	1.29	---	---	---	---

100%RB		M	14.28	15.00	1.18	0.641	---	0.756	---
		H	14.26	15.00	1.19	---	---	---	---
	Front	L	13.89	15.00	1.29	---	---	---	---
		M	14.28	15.00	1.18	---	---	---	---
		H	14.26	15.00	1.19	---	---	---	---
	Top	L	21.89	23.00	1.29	---	---	---	---
		M	22.28	23.00	1.18	0.059	---	0.070	---
		H	22.26	23.00	1.19	---	---	---	---
	Botto m	L	13.89	15.00	1.29	---	---	---	---
		M	14.28	15.00	1.18	0.771	---	0.910	---
		H	14.26	15.00	1.19	---	---	---	---
	Left	L	21.89	23.00	1.29	---	---	---	---
		M	22.28	23.00	1.18	0.001	---	0.001	---
		H	22.26	23.00	1.19	---	---	---	---
	Right	L	13.89	15.00	1.29	---	---	---	---
		M	14.28	15.00	1.18	0.538	---	0.635	---
		H	14.26	15.00	1.19	---	---	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up(dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Position	Channel				First	Second	First	Second
QPSK 1RB	Back	L	22.98	23.50	1.13	---	---	---	---
		M	23.18	23.50	1.08	0.259	---	0.280	---
		H	23.31	23.50	1.04	---	---	---	---
	Front	L	22.98	23.50	1.13	---	---	---	---
		M	23.18	23.50	1.08	---	---	---	---
		H	23.31	23.50	1.04	---	---	---	---
	Bottom	L	22.98	23.50	1.13	---	---	---	---
		M	23.18	23.50	1.08	0.272	---	0.294	---
		H	23.31	23.50	1.04	---	---	---	---
	Right	L	22.98	23.50	1.13	---	---	---	---
		M	23.18	23.50	1.08	0.246	---	0.266	---
		H	23.31	23.50	1.04	---	---	---	---
QPSK 50%RB	Back	L	21.97	23.00	1.27	---	---	---	---
		M	22.53	23.00	1.11	0.243	---	0.270	---
		H	22.27	23.00	1.18	---	---	---	---
	Front	L	21.97	23.00	1.27	---	---	---	---
		M	22.53	23.00	1.11	---	---	---	---
		H	22.27	23.00	1.18	---	---	---	---
	Bottom	L	21.97	23.00	1.27	---	---	---	---
		M	22.53	23.00	1.11	0.239	---	0.265	---
		H	22.27	23.00	1.18	---	---	---	---
	Right	L	21.97	23.00	1.27	---	---	---	---
		M	22.53	23.00	1.11	0.228	---	0.253	---
		H	22.27	23.00	1.18	---	---	---	---

Mode: BT

Limit of SAR (W/kg): <1.6W/kg (1g Average)

Estimated SAR			
MAX power		Calculated distance	SAR result
dBm	mw	mm	w/kg
8.00	6.31	5	0.265

- $(max.\ power\ of\ channel,\ including\ tune\text{-}up\ tolerance,\ mW)/(min.\ test\ separation\ distance,\ mm)]\cdot[\sqrt{f_{(GHz)}}/x]$ W/kg for $test\ separation\ distances \le 50$ mm;
  where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.

Note: Test separation distance is 0mm, so 5mm apply for evaluation.

Mode: Wi-Fi 2.4GHz

fL (MHz)=2412MHz fM (MHz)=2437MHz fH (MHz)= 2462MHz

Limit of SAR (W/kg): <1.6W/kg (1g Average)

0mm with p-sensor on (reduced power for relevant surfaces)

Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)	Report SAR(w/kg)
Mode	Position	Channel					First	First
802.11b	Back	L	11.39	12.00	1.15	1.02	---	---
		M	11.54	12.00	1.11	1.02	0.637	0.721
		H	10.98	12.00	1.26	1.02	---	---
	Front	L	11.39	12.00	1.15	1.02	---	---
		M	11.54	12.00	1.11	1.02	---	---
		H	10.98	12.00	1.26	1.02	---	---
	Top	L	11.39	12.00	1.15	1.02	---	---
		M	11.54	12.00	1.11	1.02	0.082	0.093
		H	10.98	12.00	1.26	1.02	---	---
	Bottom	L	16.39	17.00	1.15	1.02	---	---
		M	16.54	17.00	1.11	1.02	0.001	0.001
		H	15.98	17.00	1.26	1.02	---	---
	Left	L	11.39	12.00	1.15	1.02	---	---
		M	11.54	12.00	1.11	1.02	0.483	0.547
		H	10.98	12.00	1.26	1.02	---	---
	Right	L	16.39	17.00	1.15	1.02	---	---
		M	16.54	17.00	1.11	1.02	0.001	0.001
		H	15.98	17.00	1.26	1.02	---	---

(Trigger distance-1) mm with p-sensor off (full power for all surfaces)

Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)	Report SAR(w/kg)
Mode	Position	Channel					First	First
802.11b	Back	L	16.39	17.00	1.15	1.02	---	---
		M	16.54	17.00	1.11	1.02	0.360	0.408
		H	15.98	17.00	1.26	1.02	---	---
	Front	L	16.39	17.00	1.15	1.02	---	---
		M	16.54	17.00	1.11	1.02	---	---
		H	15.98	17.00	1.26	1.02	---	---
	Top	L	16.39	17.00	1.15	1.02	---	---
		M	16.54	17.00	1.11	1.02	0.352	0.399
		H	15.98	17.00	1.26	1.02	---	---
	Left	L	16.39	17.00	1.15	1.02	---	---
		M	16.54	17.00	1.11	1.02	0.442	0.500
		H	15.98	17.00	1.26	1.02	---	---

6.10 SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.
The following procedures are applied to determine if repeated measurements are required.
1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

The Highest Reported/Estimated SAR configuration in Each Frequency Band

Frequency band	Air interface	Max Body SAR(w/kg)
Below 1GHz	GSM850 WCDMA BANDV LTE BAND5 LTE BAND12 LTE BAND13	>0.8
1GHz-2GHz	GSM1900 WCDMA BANDII WCDMA BANDIV LTE BAND2 LTE BAND4 LTE BAND66	>0.8
2GHz-3GHz	BT WIFI 2.4GHz LTE BAND7	>0.8

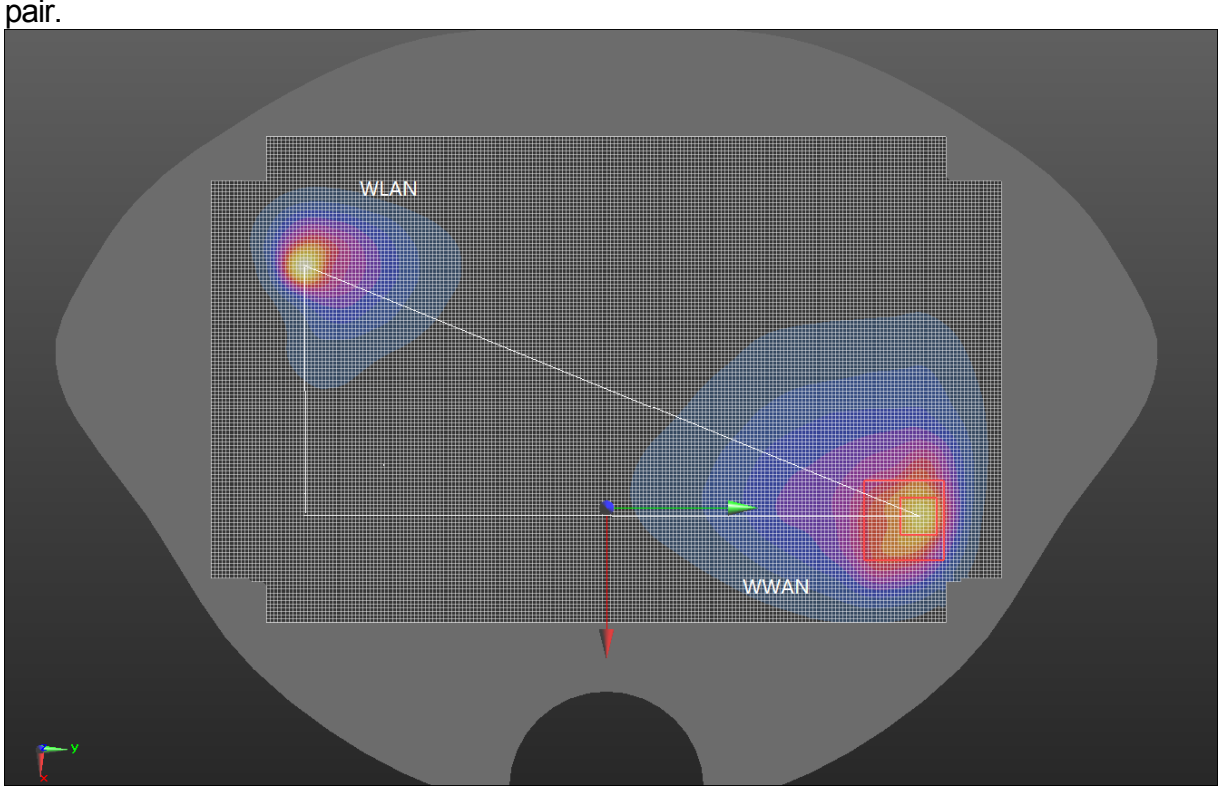
6.11 Simultaneous Transmission SAR Analysis

Antenna numbers of Simultaneous Transmission	Antennas of Simultaneous Transmission	Simultaneous Transmission Modes
2	MAIN ANT+ WLAN/BT ANT	Celluar2/3/4G+ WIFI 2.4GHz Celluar2/3/4G+BT

Note: BT and WLAN share the same antenna and work in the same frequency range. So they can't transmit together.

The worst case for 2TX simultaneous transmission happened in back position

The summation of following condition exceed limit 1.6, but this method is the most conservative which is over estimate. So according to KDB447498D01 4.3.2.c)
When the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio. The ratio is determined by (SAR1 + SAR2)^1.5/Ri, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion. SAR1 and SAR2 are the highest reported or estimated SAR values for each antenna in the pair, and Ri is the separation distance in mm between the peak SAR locations for the antenna pair.



Distance ≈225mm

SAR1=0.934(WCDMA5)/0.967(LTE5)/SAR1=0.896(LTE7)/SAR1=0.946(LTE12)/SAR1=0.955(LTE13), SAR2=0.721

Splsr(WCDMA BAND 5+WIFI2.4GHz) =(0.934+0.721)^1.5/225=0.01<0.04

Splsr(LTE BAND 5+WIFI2.4GHz) =(0.967+0.721)^1.5/225=0.01<0.04

Splsr(LTE BAND 7+WIFI2.4GHz) =(0.896+0.721)^1.5/225=0.01<0.04

Splsr(LTE BAND 12+WIFI2.4GHz) =(0.946+0.721)^1.5/225=0.01<0.04

Splsr(LTE BAND 13+WIFI2.4GHz) =(0.955+0.721)^1.5/225=0.01<0.04

The worst combined result is similar to standalone SAR value. So there is no risk for the condition mentioned above. The antenna pairs qualify for simultaneous transmission SAR test exclusion, enlarged zoom scan and volume scan post-processing procedures do not apply. And we adopt the following result which using summation method as final worst case for Simultaneous Transmission

Position of worst case	Licensed band	Unlicensed band	Simultaneous SAR(w/kg)
Back	LTE Band4	WIFI 2.4G	1.552

According to the above tables, SAR values＜1.6W/kg meet the compliance.

7 MEASUREMENT UNCERTAINTY

(0.3 - 3 GHz range)								
Error Description	Uncert. value	Prob. Dist.	Div.	(c_i) 1g	(c_i) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v_i) v_{eff}
Measurement System								
Probe Calibration	±6.0%	N	1	1	1	±6.0%	±6.0%	∞
Axial Isotropy	±4.7%	R	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Modulation Response^m	±2.4%	R	$\sqrt{3}$	1	1	±1.4%	±1.4%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.4%	R	$\sqrt{3}$	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Max. SAR Eval.	±2.0%	R	$\sqrt{3}$	1	1	±1.2%	±1.2%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Power Scaling^p	±0%	R	$\sqrt{3}$	1	1	±0.0%	±0.0%	∞
Phantom and Setup								
Phantom Uncertainty	±6.1%	R	$\sqrt{3}$	1	1	±3.5%	±3.5%	∞
SAR correction	±1.9%	R	$\sqrt{3}$	1	0.84	±1.1%	±0.9%	∞
Liquid Conductivity (mea.)^{DAK}	±2.5%	R	$\sqrt{3}$	0.78	0.71	±1.1%	±1.0%	∞
Liquid Permittivity (mea.) ^{DAK}	±2.5%	R	$\sqrt{3}$	0.26	0.26	±0.3%	±0.4%	∞
Temp. unc. - Conductivity ^{BB}	±3.4%	R	$\sqrt{3}$	0.78	0.71	±1.5%	±1.4%	∞
Temp. unc. - Permittivity ^{BB}	±0.4%	R	$\sqrt{3}$	0.23	0.26	±0.1%	±0.1%	∞
Combined Std. Uncertainty						±11.2%	±11.1%	361
Expanded STD Uncertainty						**±22.3%**	**±22.2%**	

(3 - 6 GHz range)								
Error Description	Uncert. value	Prob. Dist.	Div.	(c_i) 1g	(c_i) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v_i) v_{eff}
Measurement System								
Probe Calibration	±6.55 %	N	1	1	1	±6.55 %	±6.55 %	∞
Axial Isotropy	±4.7 %	R	$\sqrt{3}$	0.7	0.7	±1.9 %	±1.9 %	∞
Hemispherical Isotropy	±9.6 %	R	$\sqrt{3}$	0.7	0.7	±3.9 %	±3.9 %	∞
Boundary Effects	±2.0 %	R	$\sqrt{3}$	1	1	±1.2 %	±1.2 %	∞
Linearity	±4.7 %	R	$\sqrt{3}$	1	1	±2.7 %	±2.7 %	∞
System Detection Limits	±1.0 %	R	$\sqrt{3}$	1	1	±0.6 %	±0.6 %	∞
Modulation Response^{m}	±2.4 %	R	$\sqrt{3}$	1	1	±1.4 %	±1.4 %	∞
Readout Electronics	±0.3 %	N	1	1	1	±0.3 %	±0.3 %	∞
Response Time	±0.8 %	R	$\sqrt{3}$	1	1	±0.5 %	±0.5 %	∞
Integration Time	±2.6 %	R	$\sqrt{3}$	1	1	±1.5 %	±1.5 %	∞
RF Ambient Noise	±3.0 %	R	$\sqrt{3}$	1	1	±1.7 %	±1.7 %	∞
RF Ambient Reflections	±3.0 %	R	$\sqrt{3}$	1	1	±1.7 %	±1.7 %	∞
Probe Positioner	±0.8 %	R	$\sqrt{3}$	1	1	±0.5 %	±0.5 %	∞
Probe Positioning	±6.7 %	R	$\sqrt{3}$	1	1	±3.9 %	±3.9 %	∞
Max. SAR Eval.	±4.0 %	R	$\sqrt{3}$	1	1	±2.3 %	±2.3 %	∞
Test Sample Related								
Device Positioning	±2.9 %	N	1	1	1	±2.9 %	±2.9 %	145
Device Holder	±3.6 %	N	1	1	1	±3.6 %	±3.6 %	5
Power Drift	±5.0 %	R	$\sqrt{3}$	1	1	±2.9 %	±2.9 %	∞
Power Scaling^{p}	±0 %	R	$\sqrt{3}$	1	1	±0.0 %	±0.0 %	∞
Phantom and Setup								
Phantom Uncertainty	±6.6 %	R	$\sqrt{3}$	1	1	±3.8 %	±3.8 %	∞
SAR correction	±1.9 %	R	$\sqrt{3}$	1	0.84	±1.1 %	±0.9 %	∞
Liquid Conductivity (mea.)^{DAK}	±2.5 %	R	$\sqrt{3}$	0.78	0.71	±1.1 %	±1.0 %	∞
Liquid Permittivity (mea.) ^{DAK}	±2.5 %	R	$\sqrt{3}$	0.26	0.26	±0.3 %	±0.4 %	∞
Temp. unc. - Conductivity ^{BB}	±3.4 %	R	$\sqrt{3}$	0.78	0.71	±1.5 %	±1.4 %	∞
Temp. unc. - Permittivity ^{BB}	±0.4 %	R	$\sqrt{3}$	0.23	0.26	±0.1 %	±0.1 %	∞
Combined Std. Uncertainty						±12.3 %	±12.2 %	748
Expanded STD Uncertainty						**±24.6 %**	**±24.5 %**	

8 TEST EQUIPMENTS

The measurements were performed using an automated near-field scanning system, DASY5, manufactured by Schmid & Partner Engineering AG (SPEAG) in Switzerland. The SAR extrapolation algorithm used in all measurements was the 'advanced extrapolation' algorithm.

The following table lists calibration dates of SPEAG components:

Test Equipment	Model	Serial Number	Calibration date	Calibration Due data
DAE	DAE4	546	2019.08.28	2020.08.27
Dosimetric E-field Probe	ES3DV3	3127	2019.08.27	2020.08.26
Dipole Validation Kit	D750V3	4d023	2017.09.13	2020.09.12
Dipole Validation Kit	D835V2	4d023	2017.09.13	2020.09.12
Dipole Validation Kit	D1800V2	2d084	2017.09.15	2020.09.14
Dipole Validation Kit	D2000V2	1009	2018.02.01	2021.01.31
Dipole Validation Kit	D2450V2	738	2017.09.18	2020.09.17
Dipole Validation Kit	D2600V2	1166	2019.11.08	2022.11.08

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration date	Calibration Due data
Signal Generator	E4428C	MY45280865	2019.08.20	2020.08.19
Signal Generator	SML 03	103514	2019.08.20	2020.08.19
Power meter	E4417A	MY45101182	2019.08.20	2020.08.19
Power Sensor	E4412A	MY41502214	2019.08.20	2020.08.19
Power Sensor	E4412A	MY41502130	2019.08.20	2020.08.19
Power meter	E4417A	MY45101004	2019.08.20	2020.08.19
Power Sensor	E9300B	MY41496001	2019.08.20	2020.08.19
Power Sensor	E9300B	MY41496003	2019.08.20	2020.08.19
Communication Tester	E5515C	MY48367401	2019.08.20	2020.08.19
Communication Tester	MT8820C	6201300660	2019.08.20	2020.08.19
Communication Tester	MT8821C	6201547819	2019.08.20	2020.08.19
Vector Network Analyzer	VNA R140	0011213	2019.09.18	2020.09.17
Dielectric Parameter Probe	DAKS-3.5	1042	2019.09.17	2020.09.16

Detailed information of Isotropic E-field Probe Type ES3DV3

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Calibration certificate in Appendix C
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Optical Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm
Dynamic Range	5 µW/g to > 100 W/kg; Linearity: ± 0.2 dB
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones

Detailed information of Isotropic E-field Probe Type EX3DV4

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Calibration certificate in Appendix C
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Optical Surface Detection	± 0.3 mm repeatability in air and clear liquids over diffuse reflecting surfaces
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
Dynamic Range	10 µW/g to > 100 W/kg Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
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%.

According to KDB 865664 D01 section 3.2.2, instead of the typical annual calibration recommended by measurement standards, longer calibration intervals of up to three years may be considered when it is demonstrated that the **SAR target**, **impedance** and **return loss** of a dipole have remain stable according to the following requirements.

1) The test laboratory must ensure that the required supporting information and documentation are included in the SAR report to qualify for the three-year extended calibration interval; otherwise, the IEEE Std 1528-2013 recommended annual calibration applies.
2) Immediate re-calibration is required for the following conditions.
a) After a dipole is damaged and properly repaired to meet required specifications.
b) When the measured SAR deviates from the calibrated SAR value by more than 10% due to changes in physical, mechanical, electrical or other relevant dipole conditions; i.e., the error is not introduced by incorrect measurement procedures or other issues relating to the SAR measurement system.
c) When the most recent return-loss result, measured at least annually, deviates by more than 20% from the previous measurement (i.e. value in dB×0.2) or not meeting the required 20 dB minimum return-loss requirement.
d) When the most recent measurement of the real or imaginary parts of the impedance, measured at least annually, deviates by more than 5 Ω from the previous measurement.

Dipole 750

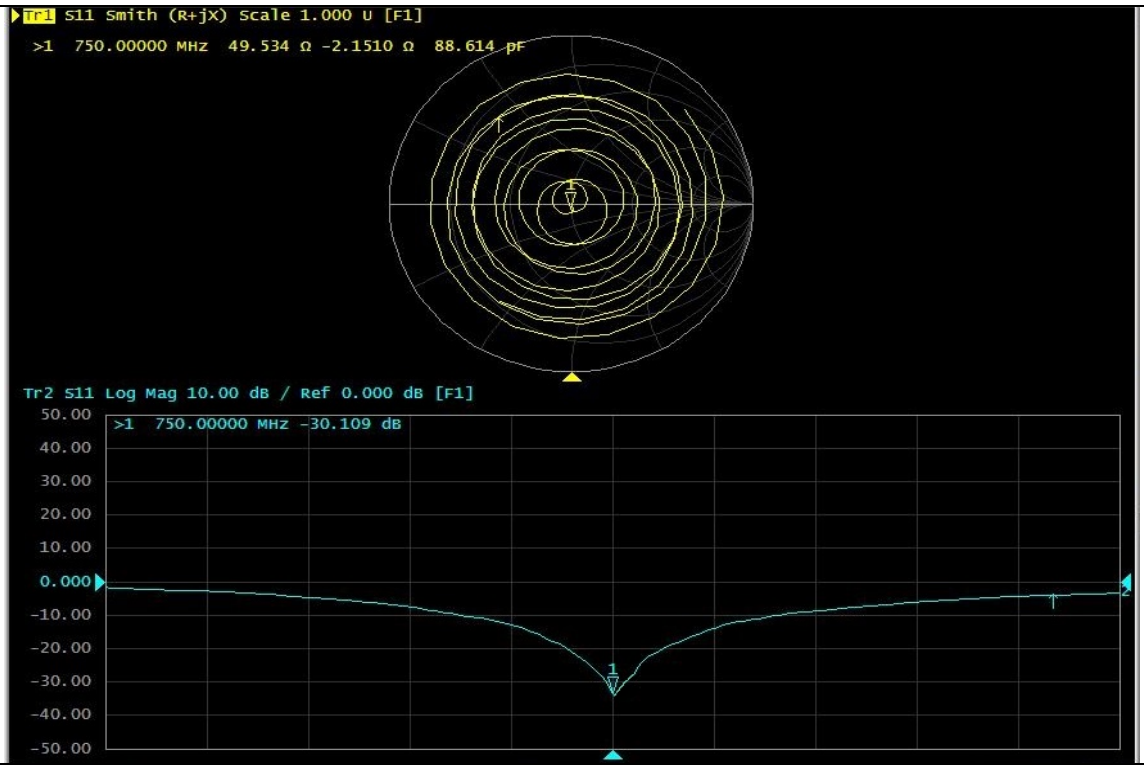
SAR target

Refers to system check, measured SAR (1g and 10g) deviates from the Target SAR value of calibration report within 10%.

Impedance and Return loss measured by Network analyzer

The most recent measurement of the real or imaginary parts of the impedance, deviates within 5 Ω from the previous measurement. (Data from the last calibration report)
The most recent return-loss result deviates within 20% from the previous measurement. (Data from the last calibration report)

Head TSL Parameters			
Parameters	Target (Ref. Value)	Measured data	Deviation
Impedance	53.9Ω+0.24jΩ	49.5Ω-2.15jΩ	<5Ω
Return loss	-28.4dB	-29.8dB	<20%



Head TSL Parameters

Dipole 835

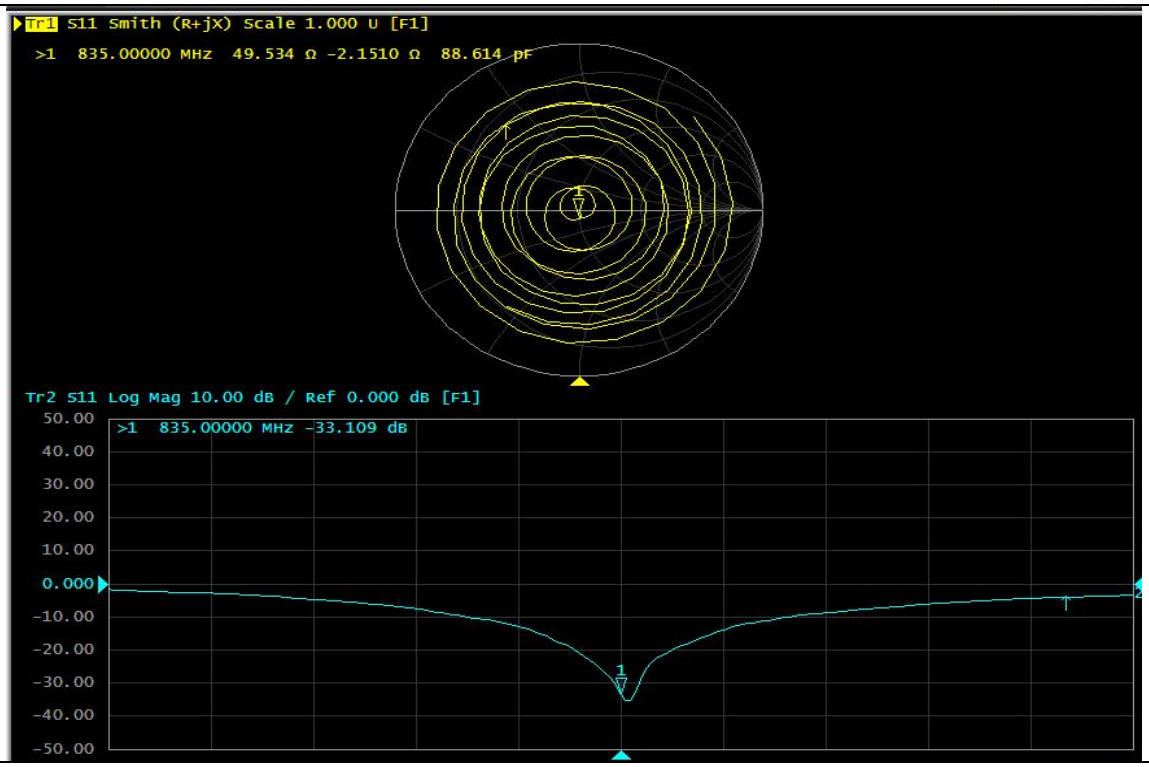
SAR target

Refers to system check, measured SAR (1g and 10g) deviates from the Target SAR value of calibration report within 10%.

Impedance and Return loss measured by Network analyzer

The most recent measurement of the real or imaginary parts of the impedance, deviates within 5 Ω from the previous measurement. (Data from the last calibration report)
The most recent return-loss result deviates within 20% from the previous measurement. (Data from the last calibration report)

TSL Parameters			
Parameters	Target (Ref. Value)	Measured data	Deviation
Impedance	51.0Ω-2.79jΩ	49.5Ω-2.15jΩ	<5Ω
Return loss	-30.7 dB	-33.1 dB	<20%



TSL Parameters

Dipole1800

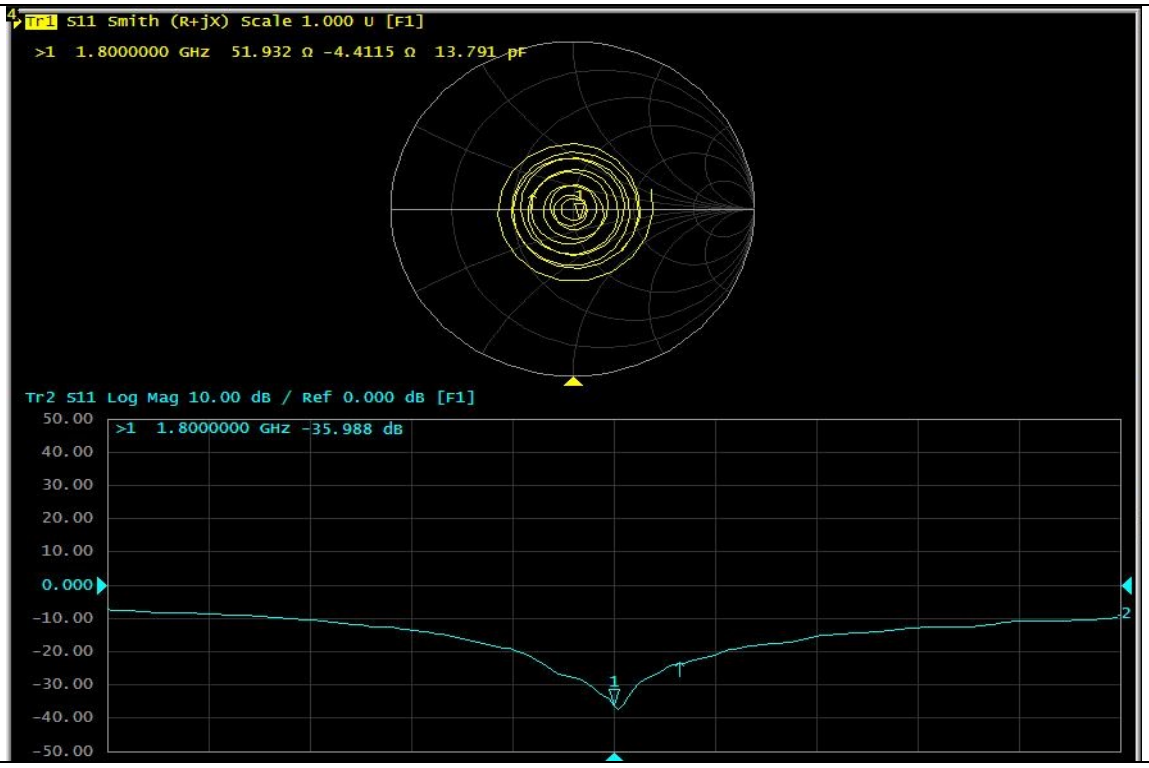
SAR target

Refers to system check, measured SAR (1g and 10g) deviates from the Target SAR value of calibration report within 10%.

Impedance and Return loss measured by Network analyzer

The most recent measurement of the real or imaginary parts of the impedance, deviates within 5 Ω from the previous measurement. (Data from the last calibration report)
The most recent return-loss result deviates within 20% from the previous measurement. (Data from the last calibration report)

TSL Parameters			
Parameters	Target (Ref. Value)	Measured data	Deviation
Impedance	49.3Ω-1.55jΩ	51.9Ω-4.41jΩ	<5Ω
Return loss	-35.4 dB	-36.0dB	<20%



TSL Parameters

Dipole2000

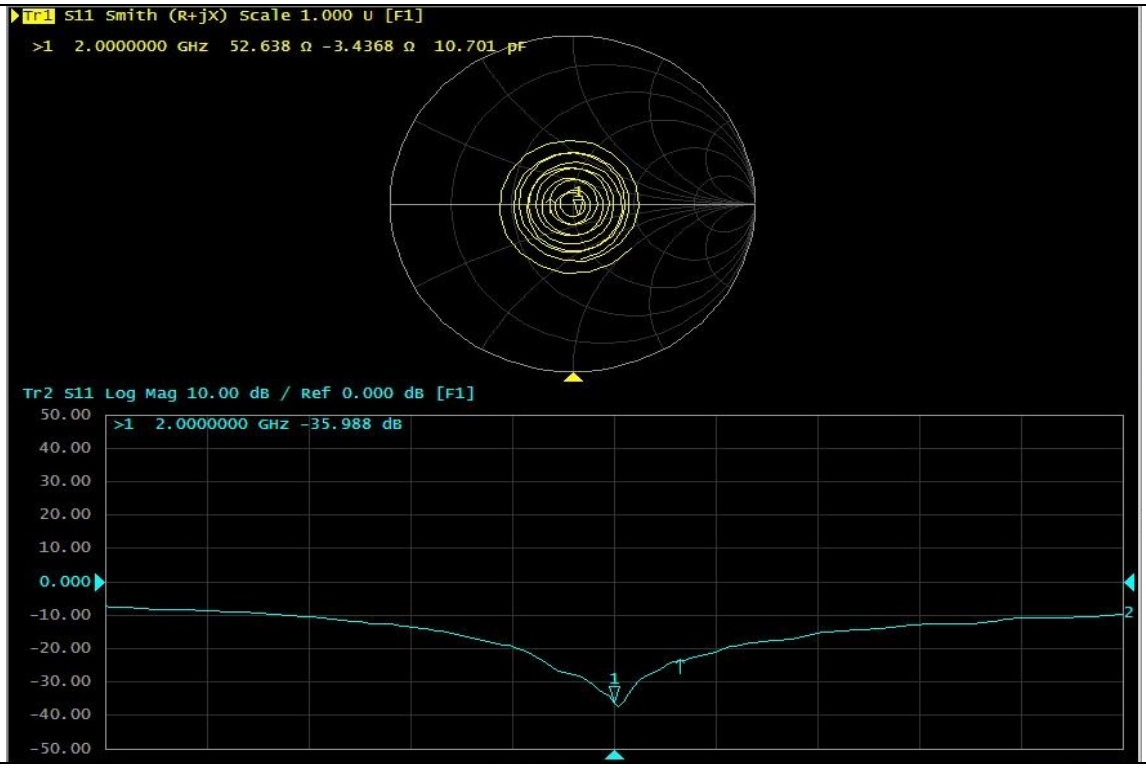
SAR target

Refers to system check, measured SAR (1g and 10g) deviates from the Target SAR value of calibration report within 10%.

Impedance and Return loss measured by Network analyzer

The most recent measurement of the real or imaginary parts of the impedance, deviates within 5 Ω from the previous measurement. (Data from the last calibration report)
The most recent return-loss result deviates within 20% from the previous measurement. (Data from the last calibration report)

TSL Parameters			
Parameters	Target (Ref. Value)	Measured data	Deviation
Impedance	49.8Ω-2.08jΩ	52.6Ω-3.44jΩ	<5Ω
Return loss	-33.6dB	-36.0dB	<20%



TSL Parameters

Dipole2450

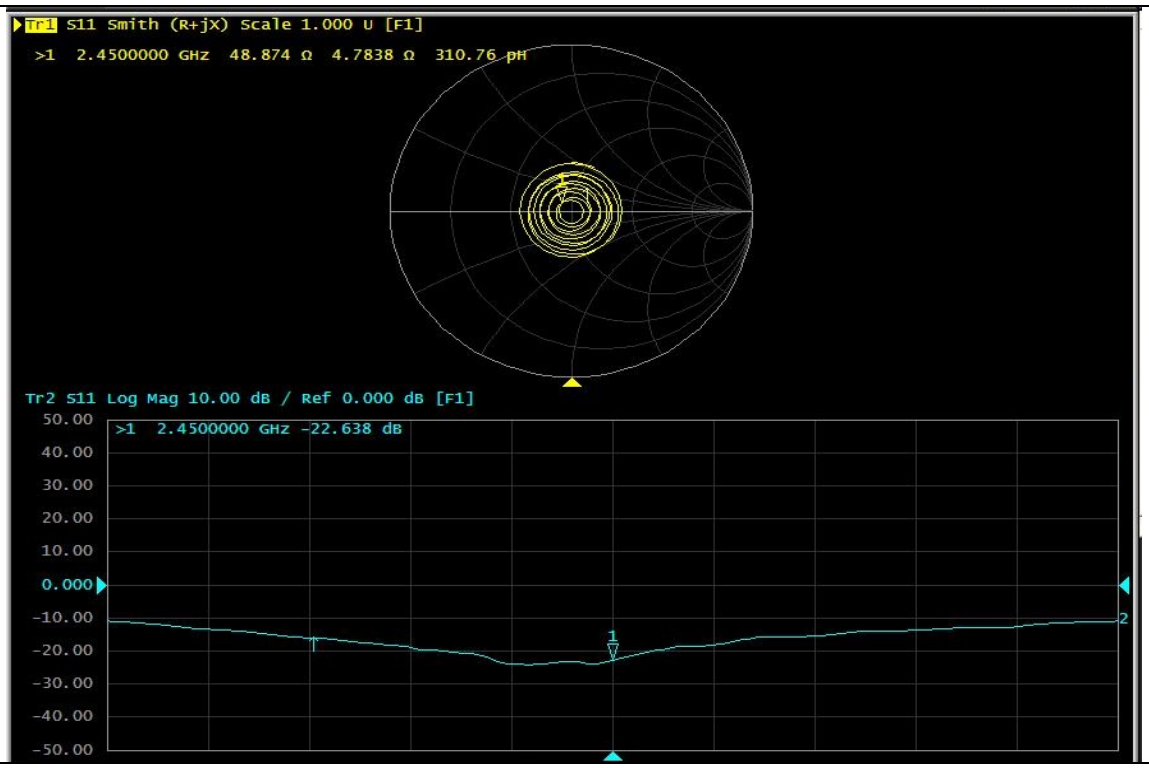
SAR target

Refers to system check, measured SAR (1g and 10g) deviates from the Target SAR value of calibration report within 10%.

Impedance and Return loss measured by Network analyzer

The most recent measurement of the real or imaginary parts of the impedance deviates within 5 Ω from the previous measurement. (Data from the last calibration report)
The most recent return-loss result deviates within 20% from the previous measurement. (Data from the last calibration report)

TSL Parameters			
Parameters	Target (Ref. Value)	Measured data	Deviation
Impedance	51.3Ω+5.92jΩ	48.9Ω+4.78jΩ	<5Ω
Return loss	-24.5 dB	-22.6dB	<20%



TSL Parameters

ANNEX A – TEST PLOTS

Please refer to the attachment.

ANNEX B – RELEVANT PAGES FROM CALIBRATION REPORTS

Please refer to the attachment.