

# TEST REPORT FOR SAR TESTING

Report No.: SRTC2021-9004(F)-21082803(H)

Product Name: Smart Phone

Product Model: TA- 1361

Applicant: HMD Global Oy

Manufacturer: HMD Global Oy

Specification: Part 2.1093

IEEE Std 1528

KDB Procedures

FCC ID: 2AJOTTA-1361

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## **1. GENERAL INFORMATION**

### **1.1 Notes of the test report**

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written permission of The State Radio\_monitoring\_center Testing Center (SRTC).

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)
Address:	15 <sup>th</sup> Building, No.30 Shixing Street, Shijingshan District, Beijing P.R. China
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### **1.3 Applicant's details**

Company:	HMD Global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland

### **1.4 Manufacturer's details**

Company:	HMD Global Oy
Address:	Bertel Jungin aukio 9, 02600 Espoo, Finland

## 1.5 Test Environment

Date of Receipt of test sample at SRTC:	2021.08.22
Testing Start Date:	2021.09.01
Testing End Date:	2021.09.02

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient	24	38

Normal Supply Voltage (Vdc.):	3.85
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## 2. DESCRIPTION OF THE DEVICE UNDER TEST

### 2.1 Final Equipment Build Status

Wireless Technology and Frequency Bands	<input checked="" type="checkbox"/> GSM Band: GSM850/1900 <input checked="" type="checkbox"/> WCDMA Band: FDD II/V <input checked="" type="checkbox"/> LTE Band: 5/7/38/41 <input checked="" type="checkbox"/> NR Band: 5/7/38/41/78 <input checked="" type="checkbox"/> Wi-Fi Band: 2.4GHz <input checked="" type="checkbox"/> Wi-Fi Band: 5GHz UNII-1/2A/2C/3 <input checked="" type="checkbox"/> Bluetooth/BLE
Mode	GSM <input checked="" type="checkbox"/> GPRS (GMSK) <input checked="" type="checkbox"/> EGPRS (GMSK/8PSK) WCDMA <input checked="" type="checkbox"/> UMTS Rel. 99 <input checked="" type="checkbox"/> HSDPA (Rel. 5) <input checked="" type="checkbox"/> HSUPA (Rel. 6) <input checked="" type="checkbox"/> HSPA+ (Rel.7) <input checked="" type="checkbox"/> DC-HSDPA (Rel.8) Wi-Fi <input checked="" type="checkbox"/> 802.11a <input checked="" type="checkbox"/> 802.11b <input checked="" type="checkbox"/> 802.11g <input checked="" type="checkbox"/> 802.11n HT20 <input checked="" type="checkbox"/> 802.11n HT40 <input checked="" type="checkbox"/> 802.11ac VHT20 <input checked="" type="checkbox"/> 802.11ac VHT40 <input checked="" type="checkbox"/> 802.11ac VHT80 LTE <input checked="" type="checkbox"/> QPSK <input checked="" type="checkbox"/> 16QAM <input checked="" type="checkbox"/> 64QAM <input checked="" type="checkbox"/> 256QAM NR <input checked="" type="checkbox"/> DFT-s-OFDM (PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM) <input checked="" type="checkbox"/> CP-OFDM (QPSK, 16QAM, 64QAM, 256QAM)
Duty Cycle*	GPRS EDGE(GMSK/8PSK): 12.5% (1 Slot), 25% (2 Slots), 37.5% (3 Slots), 50% (4 Slots) WCDMA: 100% LTE(FDD): 100%    LTE(TDD): 63.3% maximum BT: DH5:76.9% 2DH5:63.47% 3DH5:77.07% BLE: 1M:62.9% BLE: 2M:33.33% WIFI2.4GHz: 11b:99.41% 11g:98.54% 11n 20:98.44% 11n 40:94.9% WIFI5GHz: 11a:98.18% 11n 20: 97.93% 11n 40: 96.88% 11ac 20:98.45% 11ac 40:96.91% 11ac 80:93.88%

Multi-Slot Class for GPRS/EDGE	<input type="checkbox"/> Class 8 - One Up <input type="checkbox"/> Class 10 - Two Up <input type="checkbox"/> Class 12 - Four Up <input checked="" type="checkbox"/> Class 33- Four Up
Mobile Phone Capability	<input type="checkbox"/> Class A - Mobile phones can be connected to both GPRS and GSM services simultaneously. <input checked="" type="checkbox"/> Class B - Mobile phones can be attached to both GPRS and GSM services, using one service at a time. <input type="checkbox"/> 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.
H/W Version	V1.0
S/W Version	000T_0_315
IMEI	358855150052434 / 358855150052665

**Remark:**

This report deleted WCDMA B4, LTE B2/4/12/13/17/66 and NR Band n2/66 on the basis of the original report (SRTC2021-9004(F)-21082802(H)), everything else is the same. According to the difference, variant shares the same test data of original report and additional SAR tests are performed based on the SAR worst case for each band.

**2.2 Support Equipment**

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

Equipment	Battery
Manufacturer	Guangdong Fenghua New Energy Co., Ltd.
Model Number	P660

Equipment	Headset
Manufacturer	DongGuan LongTa Xin Electronics Co.,Ltd.
Model Number	LTX-LH021

### **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 648474 D04	v01r03	Handset SAR
KDB 941225 D01	v03r01	3G SAR Procedures
KDB 941225 D06	v02r01	Hotspot Mode SAR
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  $15.0 \pm 0.5$  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  $\pm 0.02$ mm. 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.

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  $\pm 10\%$  below 3GHz and  $\pm 5\%$  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.

<b>Tissue Stimulant Recipes</b>	
Name	Broadband tissue-equivalent liquid
Type	HBBL600-10000V6 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 x 15 mm (equal or less than 2GHz), 12 mm x 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 DASYS 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 trivariate 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 SUMMARY

The maximum reported SAR values for Head/Body-Worn/Hotspot exposure conditions 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 Summary(1g- SAR)						
Exposure Position	Frequency Band	Reported SAR Result(W/kg)	Highest Reported SAR Result(W/kg)		Limit(W/kg)	Result
Head	GSM850	0.25	0.79			
	GSM1900	<b>0.79</b>				
	WCDMA Band II	0.74				
	WCDMA Band V	0.21				
	LTE Band 5	0.20				
	LTE Band 7	<0.10				
	LTE Band 38	0.74				
	LTE Band 41	0.50				
	NR Band n5	0.17				
	NR Band n7	0.53				
	NR Band n38	0.59				
	NR Band n41	0.30				
	NR Band n78	0.25				
	WIFI 2.4G	0.30				
	WIFI 5G	0.69				
Bluetooth	0.22					
Body-Worn (10mm Gap)	GSM850	0.51	1.01	1.22	1.60	Pass
	GSM1900	0.71				
	WCDMA Band II	0.96				
	WCDMA Band V	0.44				
	LTE Band 5	0.48				
	LTE Band 7	<b>1.01</b>				
	LTE Band 38	0.53				
	LTE Band 41	0.43				
	NR Band n5	0.35				
	NR Band n7	0.56				
	NR Band n38	0.16				
	NR Band n41	0.14				
	NR Band n78	0.28				
	WIFI 2.4G	0.22				
	WIFI 5G	0.20				
Bluetooth	<0.10					
Hotspot (10mm Gap)	GSM850	0.86	1.22			
	GSM1900	0.85				
	WCDMA Band II	0.96				
	WCDMA Band V	0.44				
	LTE Band 5	0.48				
	LTE Band 7	<b>1.22</b>				
	LTE Band 38	0.70				
	LTE Band 41	0.58				
NR Band n5	0.35					

	NR Band n7	0.50			
	NR Band n38	0.30			
	NR Band n41	0.18			
	NR Band n78	0.43			
	WIFI 2.4G	0.29			
	WIFI 5G	0.26			
	Bluetooth	<0.10			

Standalone Transmission Summary(10g- SAR)					
Exposure Position	Frequency Band	Reported SAR Result(W/kg)	Highest Reported SAR Result(W/kg)	Limit(W/kg)	Result
Limb	LTE Band 7	<b>1.39</b>	1.39	4.0	Pass
	WIFI 5G	1.09			

### Simultaneous Transmission Summary

Simultaneous Transmission Summary(1g- SAR)				
Exposure Position	Reported SAR Result(W/kg)	Highest Reported SAR Result(W/kg)	Limit(W/kg)	Result
Head	1.44	1.44	1.60	pass
Body-Worn	1.25			
Hotspot	1.22			

Simultaneous Transmission Summary(10g- SAR)			
Exposure Position	Highest Reported SAR Result(W/kg)	Limit(W/kg)	Result
Limb	1.39	4.0	pass

This Test Report Is Approved by: Mr. Peng Zhen	Review by: Mr. Li Bin
Tested and issued by: Mr. He Shaowei	Approved date:

## 6 TEST RESULT

### 6.1 Manufacturing Tolerance

#### GSM

##### GSM850

Carrier frequency (MHz)	Channel No.	Tune up Tolerance (dBm)
824.2	128	33.5
836.6	190	
848.8	251	

##### GPRS/EGPRS (GMSK):

Carrier frequency (MHz)	Channel No.	TX Mode	Tune up Tolerance (dBm)
824.2	128	4Downlink1uplink	33.5
836.6	190		
848.8	251		
824.2	128	3Downlink2uplink	32.0
836.6	190		
848.8	251		
824.2	128	2Downlink3uplink	30.0
836.6	190		
848.8	251		
824.2	128	1Downlink4uplink	27.5
836.6	190		
848.8	251		

##### EGPRS (8PSK):

Carrier frequency (MHz)	Channel No.	TX Mode	Tune up Tolerance (dBm)
824.2	128	8PSK 4Downlink1uplink	28.0
836.6	190		
848.8	251		
824.2	128	8PSK 3Downlink2uplink	27.0
836.6	190		
848.8	251		
824.2	128	8PSK 2Downlink3uplink	25.5
836.6	190		
848.8	251		
824.2	128	8PSK 1Downlink4uplink	23.0
836.6	190		
848.8	251		

PCS1900:

Carrier frequency (MHz)	Channel No.	Tune up Tolerance (dBm)	
		Receiver off	Receiver on
1850.2	512	30.5	26.0
1880.0	661		
1909.8	810		

GPRS/EGPRS (GMSK):

Carrier frequency (MHz)	Channel No.	TX Mode	Tune up Tolerance (dBm)	
			Receiver off	Receiver on
1850.2	512	4Downlink1uplink	30.5	26.0
1880.0	661			
1909.8	810			
1850.2	512	3Downlink2uplink	29.0	24.5
1880.0	661			
1909.8	810			
1850.2	512	2Downlink3uplink	27.0	22.5
1880.0	661			
1909.8	810			
1850.2	512	1Downlink4uplink	25.0	20.5
1880.0	661			
1909.8	810			

EGPRS (8PSK):

Carrier frequency (MHz)	Channel No.	TX Mode	Tune up Tolerance (dBm)	
			Receiver off	Receiver on
1850.2	512	8PSK 4Downlink1uplink	26.4	21.9
1880.0	661			
1909.8	810			
1850.2	512	8PSK 3Downlink2uplink	24.5	20.0
1880.0	661			
1909.8	810			
1850.2	512	8PSK 2Downlink3uplink	22.4	17.9
1880.0	661			
1909.8	810			
1850.2	512	8PSK 1Downlink4uplink	20.7	16.2
1880.0	661			
1909.8	810			



### WCDMA

#### WCDMA band II

Mode		Carrier frequency (MHz)	Channel No.	Tune up Tolerance (dBm)	
				Receiver off	Receiver on
Release 99	RMC,12.2kbps	1852.4	9262	24.0	18.0
		1880.0	9400		
		1907.6	9538		
HSDPA	Subtest 1	1852.4	9262	22.7	16.7
		1880.0	9400		
		1907.6	9538		
	Subtest 2	1852.4	9262	22.6	16.6
		1880.0	9400		
		1907.6	9538		
	Subtest 3	1852.4	9262	22.0	16.0
		1880.0	9400		
		1907.6	9538		
	Subtest 4	1852.4	9262	22.3	16.3
		1880.0	9400		
		1907.6	9538		
HSUPA	Subtest 1	1852.4	9262	22.6	16.6
		1880.0	9400		
		1907.6	9538		
	Subtest 2	1852.4	9262	20.6	14.6
		1880.0	9400		
		1907.6	9538		
	Subtest 3	1852.4	9262	21.6	15.6
		1880.0	9400		
		1907.6	9538		
	Subtest 4	1852.4	9262	20.5	14.5
		1880.0	9400		
		1907.6	9538		
	Subtest 5	1852.4	9262	22.7	16.7
		1880.0	9400		
		1907.6	9538		
DC-HSDPA	Subtest 1	1852.4	9262	23.0	17.0
		1880.0	9400		
		1907.6	9538		
	Subtest 2	1852.4	9262	23.0	17.0
		1880.0	9400		
		1907.6	9538		
	Subtest 3	1852.4	9262	23.0	17.0
		1880.0	9400		
		1907.6	9538		
	Subtest 4	1852.4	9262	23.0	17.0
		1880.0	9400		
		1907.6	9538		
HSPA+	16QAM	1852.4	9262	22.8	16.8
		1880.0	9400		
		1907.6	9538		

WCDMA band IV

Mode		Carrier frequency (MHz)	Channel No.	Tune up Tolerance (dBm)	
				Receiver off	Receiver on
Release 99	RMC,12.2kbps	1712.4	1312	24.0	18.0
		1732.4	1412		
		1752.6	1513		
HSDPA	Subtest 1	1712.4	1312	22.7	16.7
		1732.4	1412		
		1752.6	1513		
	Subtest 2	1712.4	1312	22.6	16.6
		1732.4	1412		
		1752.6	1513		
	Subtest 3	1712.4	1312	22.0	16.0
		1732.4	1412		
		1752.6	1513		
	Subtest 4	1712.4	1312	22.3	16.3
		1732.4	1412		
		1752.6	1513		
HSUPA	Subtest 1	1712.4	1312	22.6	16.6
		1732.4	1412		
		1752.6	1513		
	Subtest 2	1712.4	1312	20.6	14.6
		1732.4	1412		
		1752.6	1513		
	Subtest 3	1712.4	1312	21.6	15.6
		1732.4	1412		
		1752.6	1513		
	Subtest 4	1712.4	1312	20.5	14.5
		1732.4	1412		
		1752.6	1513		
	Subtest 5	1712.4	1312	22.7	16.7
		1732.4	1412		
		1752.6	1513		
DC-HSDPA	Subtest 1	1712.4	1312	23.0	17.0
		1732.4	1412		
		1752.6	1513		
	Subtest 2	1712.4	1312	23.0	17.0
		1732.4	1412		
		1752.6	1513		
	Subtest 3	1712.4	1312	23.0	17.0
		1732.4	1412		
		1752.6	1513		
	Subtest 4	1712.4	1312	23.0	17.0
		1732.4	1412		
		1752.6	1513		
HSPA+	16QAM	1712.4	1312	22.8	16.8
		1732.4	1412		
		1752.6	1513		

WCDMA band V

Mode		Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
Release 99	RMC,12.2kbps	826.4	4132	24.0
		836.4	4182	
		846.6	4233	
HSDPA	Subtest 1	826.4	4132	23.5
		836.4	4182	
		846.6	4233	
	Subtest 2	826.4	4132	23.5
		836.4	4182	
		846.6	4233	
	Subtest 3	826.4	4132	23.0
		836.4	4182	
		846.6	4233	
	Subtest 4	826.4	4132	23.0
		836.4	4182	
		846.6	4233	
HSUPA	Subtest 1	826.4	4132	22.5
		836.4	4182	
		846.6	4233	
	Subtest 2	826.4	4132	21.5
		836.4	4182	
		846.6	4233	
	Subtest 3	826.4	4132	22.0
		836.4	4182	
		846.6	4233	
	Subtest 4	826.4	4132	21.5
		836.4	4182	
		846.6	4233	
	Subtest 5	826.4	4132	22.8
		836.4	4182	
		846.6	4233	
DC-HSDPA	Subtest 1	826.4	4132	23.0
		836.4	4182	
		846.6	4233	
	Subtest 2	826.4	4132	23.0
		836.4	4182	
		846.6	4233	
	Subtest 3	826.4	4132	23.0
		836.4	4182	
		846.6	4233	
	Subtest 4	826.4	4132	23.0
		836.4	4182	
		846.6	4233	
HSPA+	16QAM	826.4	4132	22.8
		836.4	4182	
		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), and for LTE Band 41 the Frequency Range are divided to 5 ranges (Low1, Low2, Mid, High1, High2)

### Band 5

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)
All Bandwidth	QPSK	1	Low	24.0
			Mid	
			High	
		50%	Low	23.0
			Mid	
			High	
		100%	Low	23.0
			Mid	
			High	
	16QAM	1	Low	23.0
			Mid	
			High	
		50%	Low	22.0
			Mid	
			High	
		100%	Low	22.0
			Mid	
			High	
	64QAM	1	Low	22.0
			Mid	
			High	
		50%	Low	21.0
			Mid	
			High	
100%		Low	21.0	
		Mid		
		High		
256QAM	1	Low	19.0	
		Mid		
		High		
	50%	Low	19.0	
		Mid		
		High		
	100%	Low	19.0	
		Mid		
		High		

**Band 5(EN\_DC)**

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)
All Bandwidth	QPSK	1	Low	22.0
			Mid	
			High	
		50%	Low	21.0
			Mid	
			High	
		100%	Low	21.0
			Mid	
			High	
	16QAM	1	Low	21.0
			Mid	
			High	
		50%	Low	20.0
			Mid	
			High	
		100%	Low	20.0
			Mid	
			High	
	64QAM	1	Low	20.0
			Mid	
			High	
		50%	Low	19.0
			Mid	
			High	
100%		Low	19.0	
		Mid		
		High		
256QAM	1	Low	17.0	
		Mid		
		High		
	50%	Low	17.0	
		Mid		
		High		
	100%	Low	17.0	
		Mid		
		High		

### Band 7

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)	
				Full power	Hotspot on
All Bandwidth	QPSK	1	Low	24.0	22.0
			Mid		
			High		
		50%	Low	23.0	21.0
			Mid		
			High		
		100%	Low	23.0	21.0
			Mid		
			High		
	16QAM	1	Low	23.0	21.0
			Mid		
			High		
		50%	Low	22.0	20.0
			Mid		
			High		
		100%	Low	22.0	20.0
			Mid		
			High		
	64QAM	1	Low	22.0	20.0
			Mid		
			High		
		50%	Low	21.0	19.0
			Mid		
			High		
100%		Low	21.0	19.0	
		Mid			
		High			
256QAM	1	Low	19.0	17.0	
		Mid			
		High			
	50%	Low	19.0	17.0	
		Mid			
		High			
	100%	Low	19.0	17.0	
		Mid			
		High			

**Band 7(EN\_DC)**

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)	
				Full power	Hotspot on
All Bandwidth	QPSK	1	Low	22.0	19.0
			Mid		
			High		
		50%	Low	21.0	18.0
			Mid		
			High		
		100%	Low	21.0	18.0
			Mid		
			High		
	16QAM	1	Low	21.0	18.0
			Mid		
			High		
		50%	Low	20.0	17.0
			Mid		
			High		
		100%	Low	20.0	17.0
			Mid		
			High		
	64QAM	1	Low	20.0	17.0
			Mid		
			High		
		50%	Low	19.0	16.0
			Mid		
			High		
100%		Low	19.0	16.0	
		Mid			
		High			
256QAM	1	Low	17.0	14.0	
		Mid			
		High			
	50%	Low	17.0	14.0	
		Mid			
		High			
	100%	Low	17.0	14.0	
		Mid			
		High			

**Band 38**

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)	
				Receiver off	Receiver on
All Bandwidth	QPSK	1	Low	24.0	20.0
			Mid		
			High		
		50%	Low	23.0	19.0
			Mid		
			High		
		100%	Low	23.0	19.0
			Mid		
			High		
	16QAM	1	Low	23.0	19.0
			Mid		
			High		
		50%	Low	22.0	18.0
			Mid		
			High		
		100%	Low	22.0	18.0
			Mid		
			High		
	64QAM	1	Low	22.0	18.0
			Mid		
			High		
		50%	Low	21.0	17.0
			Mid		
			High		
		100%	Low	21.0	17.0
			Mid		
			High		
256QAM	1	Low	19.0	15.0	
		Mid			
		High			
	50%	Low	19.0	15.0	
		Mid			
		High			
	100%	Low	19.0	15.0	
		Mid			
		High			



**Band 41**

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)	
				Receiver off	Receiver on
All Bandwidth	QPSK	1	Low	24.0	20.0
			Mid		
			High		
		50%	Low	23.0	19.0
			Mid		
			High		
		100%	Low	23.0	19.0
			Mid		
			High		
	16QAM	1	Low	23.0	19.0
			Mid		
			High		
		50%	Low	22.0	18.0
			Mid		
			High		
		100%	Low	22.0	18.0
			Mid		
			High		
	64QAM	1	Low	22.0	18.0
			Mid		
			High		
		50%	Low	21.0	17.0
			Mid		
			High		
100%		Low	21.0	17.0	
		Mid			
		High			
256QAM	1	Low	19.0	15.0	
		Mid			
		High			
	50%	Low	19.0	15.0	
		Mid			
		High			
	100%	Low	19.0	15.0	
		Mid			
		High			

### 5G NR

#### N5

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)
All Bandwidth	DFT-s-OFDM PI/2 BPSK	1	Low	24.0
			Mid	
			High	
		50%	Low	24.0
			Mid	
			High	
		100%	Low	23.0
			Mid	
			High	
	DFT-s-OFDM QPSK	1	Low	24.0
			Mid	
			High	
		50%	Low	24.0
			Mid	
			High	
		100%	Low	23.0
			Mid	
			High	
	DFT-s-OFDM 16QAM	1	Low	23.0
			Mid	
			High	
	DFT-s-OFDM 64QAM	1	Low	21.5
			Mid	
			High	
DFT-s-OFDM 256QAM	1	Low	19.5	
		Mid		
		High		
CP-OFDM QPSK	1	Low	22.5	
		Mid		
		High		

**N7**

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)		
				Full power	Receiver on	Hotspot on& Sensor on
All Bandwidth	DFT-s-OFDM PI/2 BPSK	1	Low	23.5	19.0	21.5
			Mid			
			High			
		50%	Low	23.5	19.0	21.5
			Mid			
			High			
		100%	Low	22.5	19.0	21.5
			Mid			
			High			
	DFT-s-OFDM QPSK	1	Low	23.5	19.0	21.5
			Mid			
			High			
		50%	Low	23.5	19.0	21.5
			Mid			
			High			
		100%	Low	22.5	19.0	21.5
			Mid			
			High			
	DFT-s-OFDM 16QAM	1	Low	22.5	19.0	21.5
			Mid			
			High			
	DFT-s-OFDM 64QAM	1	Low	21.0	19.0	21.0
			Mid			
			High			
DFT-s-OFDM 256QAM	1	Low	19.0	19.0	19.0	
		Mid				
		High				
CP-OFDM QPSK	1	Low	22.0	19.0	21.5	
		Mid				
		High				

**N38**

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)
All Bandwidth	DFT-s-OFDM PI/2 BPSK	1	Low	23.5
			Mid	
			High	
		50%	Low	23.5
			Mid	
			High	
	100%	Low	22.5	
		Mid		
		High		
	DFT-s-OFDM QPSK	1	Low	23.5
			Mid	
			High	
		50%	Low	23.5
			Mid	
			High	
	100%	Low	22.5	
		Mid		
		High		
	DFT-s-OFDM 16QAM	1	Low	22.5
			Mid	
			High	
	DFT-s-OFDM 64QAM	1	Low	21.0
			Mid	
			High	
DFT-s-OFDM 256QAM	1	Low	19.0	
		Mid		
		High		
CP-OFDM QPSK	1	Low	22.0	
		Mid		
		High		

**N41**

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)
All Bandwidth	DFT-s-OFDM PI/2 BPSK	1	Low	23.5
			Mid	
			High	
		50%	Low	23.5
			Mid	
			High	
	100%	Low	22.5	
		Mid		
		High		
	DFT-s-OFDM QPSK	1	Low	23.5
			Mid	
			High	
		50%	Low	23.5
			Mid	
			High	
	100%	Low	22.5	
		Mid		
		High		
	DFT-s-OFDM 16QAM	1	Low	22.5
			Mid	
			High	
	DFT-s-OFDM 64QAM	1	Low	21.0
			Mid	
			High	
DFT-s-OFDM 256QAM	1	Low	19.0	
		Mid		
		High		
CP-OFDM QPSK	1	Low	22.0	
		Mid		
		High		

### N78(Class 2)

BW	Modulation	RB allocation with different offset	Frequency range	Tune up Tolerance (dBm)	
				Full power	Receiver on
All Bandwidth	DFT-s-OFDM PI/2 BPSK	1	Low	26.0	23.0
			Mid		
			High		
		50%	Low	26.0	23.0
			Mid		
			High		
	100%	Low	25.0	23.0	
		Mid			
		High			
	DFT-s-OFDM QPSK	1	Low	26.0	23.0
			Mid		
			High		
		50%	Low	26.0	23.0
			Mid		
			High		
	100%	Low	25.0	23.0	
		Mid			
		High			
	DFT-s-OFDM 16QAM	1	Low	25.0	23.0
			Mid		
			High		
	DFT-s-OFDM 64QAM	1	Low	23.5	23.0
			Mid		
			High		
DFT-s-OFDM 256QAM	1	Low	21.5	21.5	
		Mid			
		High			
CP-OFDM QPSK	1	Low	24.5	23.0	
		Mid			
		High			

### Bluetooth

Modulation type	Tune up Tolerance (dBm)		
	2402MHz(Ch0)	2441MHz(Ch39)	2480MHz(Ch78)
GFSK	13.0		
$\pi/4$ DQPSK	10.0		
8DPSK	10.0		

### Bluetooth (BLE)

Modulation type	Tune up Tolerance (dBm)		
	2402MHz (Ch0)	2440MHz (Ch19)	2480MHz (Ch39)
GFSK (LE 1Mbps)	7.5		
GFSK (LE 2Mbps)	7.5		

### WLAN 2.4GHz

Modulation type	Tune up Tolerance (dBm)					
	Receiver off			Receiver on		
	2412MHz	2437MHz	2462MHz	2412MHz	2437MHz	2462MHz
802.11b	19.0	19.0	19.0	16.0	16.0	16.0
802.11g	18.0	18.0	18.0	15.0	15.0	15.0
802.11n HT20	18.0	18.0	18.0	15.0	15.0	15.0
802.11n HT40	17.0	17.0	17.0	14.0	14.0	14.0

### WLAN 5GHz U-NII-1

Mode	Freq (MHz)	Tune up Tolerance (dBm)	
		Receiver off	Receiver on
802.11a	5180	18.0	15.0
	5200		
	5220		
	5240		
802.11n20M	5180	18.0	15.0
	5200		
	5220		
	5240		
802.11n40M	5190	17.0	14.0
	5230		
802.11ac20M	5180	17.0	14.0
	5200		
	5220		
	5240		
802.11ac40M	5190	17.0	14.0
	5230		
802.11ac80M	5210	17.0	14.0



**WLAN 5GHz U-NII-2A**

Mode	Freq (MHz)	Tune up Tolerance (dBm)	
		Receiver off	Receiver on
802.11a	5260	18.0	15.0
	5280		
	5300		
	5320		
802.11n20M	5260	18.0	15.0
	5280		
	5300		
	5320		
802.11n40M	5270	17.0	14.0
	5310		
802.11ac20M	5260	17.0	14.0
	5280		
	5300		
	5320		
802.11ac40M	5270	17.0	14.0
	5310		
802.11ac80M	5290	17.0	14.0

**WLAN 5GHz U-NII-2C**

Mode	Freq (MHz)	Tune up Tolerance (dBm)	
		Receiver off	Receiver on
802.11a	5500	18.0	15.0
	5520		
	5540		
	5560		
	5580		
	5600		
	5620		
	5640		
	5660		
	5680		
	5700		
	5720		
802.11n20M	5500	18.0	15.0
	5520		
	5540		
	5560		
	5580		
	5600		
	5620		
	5640		
	5660		
	5680		
	5700		
	5720		
802.11n40M	5510	17.0	14.0
	5550		
	5590		
	5630		
	5670		
	5710		
802.11ac20M	5500	17.0	14.0
	5520		
	5540		
	5560		
	5580		

	5600		
	5620		
	5640		
	5660		
	5680		
	5700		
	5720		
802.11ac40M	5510	17.0	14.0
	5550		
	5590		
	5630		
	5670		
	5710		
802.11ac80M	5530	17.0	14.0
	5610		
	5690		

### WLAN 5GHz U-NII-3

Mode	Freq (MHz)	Tune up Tolerance (dBm)	
		Receiver off	Receiver on
802.11a	5745	18.0	15.0
	5765		
	5785		
	5805		
	5825		
802.11n20M	5745	18.0	15.0
	5765		
	5785		
	5805		
	5825		
802.11n40M	5755	17.0	14.0
	5795		
802.11ac20M	5745	17.0	14.0
	5765		
	5785		
	5805		
	5825		
802.11ac40M	5755	17.0	14.0
	5795		
802.11ac80M	5775	17.0	14.0

## 6.2 GSM Measurement result

GSM850

GSM Measured Power:

Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)	Frame average power(dBm)
824.2	128	32.63	23.44
836.6	190	32.69	23.50
848.8	251	32.81	23.62

GPRS/EGPRS (GMSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)	Frame average power(dBm)
824.2	128	4Downlink1uplink	32.48	23.29
836.6	190		32.66	23.47
848.8	251		32.73	23.54
824.2	128	3Downlink2uplink	30.84	24.66
836.6	190		30.94	24.76
848.8	251		30.96	24.78
824.2	128	2Downlink3uplink	28.83	24.41
836.6	190		28.83	24.41
848.8	251		28.80	24.38
824.2	128	1Downlink4uplink	26.25	23.08
836.6	190		26.19	23.02
848.8	251		26.13	22.96

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)	Frame average power(dBm)
824.2	128	8PSK 4Downlink1uplink	26.02	16.83
836.6	190		26.41	17.22
848.8	251		26.51	17.32
824.2	128	8PSK 3Downlink2uplink	25.92	19.74
836.6	190		26.01	19.83
848.8	251		26.45	20.27
824.2	128	8PSK 2Downlink3uplink	23.96	19.54
836.6	190		24.58	20.16
848.8	251		24.70	20.28
824.2	128	8PSK 1Downlink4uplink	22.24	19.07
836.6	190		22.45	19.28
848.8	251		22.77	19.60

PCS1900

GSM Measured Power:

Carrier frequency (MHz)	Channel No.	Receiver off		Receiver on	
		RF Power Output (dBm)	Frame average power(dBm)	RF Power Output (dBm)	Frame average power(dBm)
1850.2	512	29.40	20.21	24.28	15.09
1880.0	661	29.32	20.13	24.22	15.03
1909.8	810	29.48	20.29	24.23	15.04

GPRS/EGPRS (GMSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	Receiver off		Receiver on	
			RF Power Output (dBm)	Frame average power(dBm)	RF Power Output (dBm)	Frame average power(dBm)
1850.2	512	4Downlink1uplink	29.38	20.19	24.26	15.07
1880.0	661		29.31	20.12	24.22	15.03
1909.8	810		29.47	20.28	24.24	15.05
1850.2	512	3Downlink2uplink	27.45	21.27	22.93	16.75
1880.0	661		27.58	21.40	22.89	16.71
1909.8	810		27.37	21.19	22.59	16.41
1850.2	512	2Downlink3uplink	25.85	24.13	21.28	16.86
1880.0	661		26.25	21.83	21.52	17.10
1909.8	810		25.61	21.19	20.96	16.54
1850.2	512	1Downlink4uplink	24.15	20.98	19.41	16.24
1880.0	661		24.00	20.83	19.65	16.48
1909.8	810		23.85	20.68	19.45	16.28

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	Receiver off		Receiver on	
			RF Power Output (dBm)	Frame average power(dBm)	RF Power Output (dBm)	Frame average power(dBm)
1850.2	512	8PSK 4Downlink1uplink	25.53	16.34	20.70	11.51
1880.0	661		25.45	16.26	20.40	11.21
1909.8	810		25.33	16.14	20.80	11.61
1850.2	512	8PSK 3Downlink2uplink	23.21	17.03	19.23	13.05
1880.0	661		23.41	17.23	19.46	13.28
1909.8	810		23.21	17.03	18.59	12.41
1850.2	512	8PSK 2Downlink3uplink	21.15	16.73	16.34	11.92
1880.0	661		20.50	16.08	16.02	11.60
1909.8	810		20.74	16.32	16.09	11.67
1850.2	512	8PSK 1Downlink4uplink	20.40	17.23	15.12	11.95
1880.0	661		20.45	17.28	14.92	11.75
1909.8	810		20.41	17.24	15.03	11.86

**Division Factors (for Measured Power and Frame Average Power):**

To average the power, the division factor is as follows:

1TX-slot (1uplink) = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.19dB

2TX-slots(2uplink) = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.18dB

3TX-slots (3uplink) = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.42dB

4TX-slots (4uplink) = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.17dB

According to the frame average conducted power, Body-worn SAR measurements are performed with **2TXslots (2uplink)** of GMSK for GPRS850 and **2Txslots (2uplink)** of GMSK for GPRS1900

### 6.3 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
	$\beta_c/\beta_d$	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	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{hs}^{(1)}$	CM(dB) <sup>(2)</sup>
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 <sup>(3)</sup>	15/15 <sup>(3)</sup>	64	12/15 <sup>(3)</sup>	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:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$ .

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

Note3: For subtest 2 the  $\beta_c/\beta_d$  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  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .



## Release 6

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

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (S F)	$\beta_c/\beta_d$	$\beta_{hs}^{(1)}$	$\beta_{ec}$	$\beta_{ed}$	$\beta_{ed}$ (S F)	$\beta_{ed}$ (code s)	CM <sup>(2)</sup> (dB)	MP R (dB)	AG <sup>(4)</sup> Index	E-TF CI
1	11/15 <sup>(3)</sup>	15/15 <sup>(3)</sup>	64	11/15 <sup>(3)</sup>	22/15	209/25	1039/25	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	$\beta_{ed1}:47/15$ $\beta_{ed2}:47/15$	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 <sup>(4)</sup>	15/15 <sup>(4)</sup>	64	15/15 <sup>(4)</sup>	30/15	24/15	134/15	4	1	1.0	2.0	21	81

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

Note2: CM=1 for  $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$ . 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  $\beta_c/\beta_d$  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  $\beta_c = 10/15$  and  $\beta_d = 15/15$ .

Note4: For subtest 5 the  $\beta_c/\beta_d$  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  $\beta_c = 14/15$  and  $\beta_d = 15/15$ .

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:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.

Release 7

The following 1 Sub-test was completed according to Release 7 procedures in section 5.2 of 3GPP TS34.121.

**Table C.11.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM**

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

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{hs} = 30/15 * \beta_c$ .

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).

Note 3: DPDCH is not configured, therefore the  $\beta_c$  is set to 1 and  $\beta_d = 0$  by default.

Note 4:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.

Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

Release 8

**Table E.5.0: Levels for HSDPA connection setup**

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

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

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload ( $N_{INF}$ )	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK

Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.

Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.

Inf. Bit Payload

CRC Addition   CRC

Code Block Segmentation

Turbo-Encoding (R=1/3)   Tail Bits

1st Rate Matching

RV Selection

Physical Channel Segmentation

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

The following 4 Sub-tests for HSDPA were completed according to Release 8 procedures in section 5.2 of 3GPP TS34.121.

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{hs}^{(1)}$	CM(dB) <sup>(2)</sup>
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 <sup>(3)</sup>	15/15 <sup>(3)</sup>	64	12/15 <sup>(3)</sup>	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:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$ .

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

Note3: For subtest 2 the  $\beta_c/\beta_d$  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  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .

### WCDMA band II

Mode		Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)	
				Receiver off	Receiver on
Release 99	RMC,12.2kbps	1852.4	9262	23.07	17.01
		1880	9400	23.06	16.96
		1907.6	9538	23.15	17.07
HSDPA	Subtest1	1852.4	9262	21.69	15.68
		1880	9400	21.70	15.58
		1907.6	9538	21.78	15.68
	Subtest2	1852.4	9262	21.66	15.65
		1880	9400	21.71	15.59
		1907.6	9538	21.67	15.57
	Subtest3	1852.4	9262	21.05	14.94
		1880	9400	21.01	14.94
		1907.6	9538	21.10	15.02
	Subtest4	1852.4	9262	21.31	15.20
		1880	9400	21.29	15.22
		1907.6	9538	21.26	15.21
HSUPA	Subtest1	1852.4	9262	21.59	15.52
		1880	9400	21.54	15.51
		1907.6	9538	21.62	15.48
	Subtest2	1852.4	9262	19.64	13.59
		1880	9400	19.64	13.50
		1907.6	9538	19.72	13.63
	Subtest3	1852.4	9262	20.63	14.59
		1880	9400	20.63	14.47
		1907.6	9538	20.71	14.58
	Subtest4	1852.4	9262	19.45	13.37
		1880	9400	19.51	13.45
		1907.6	9538	19.47	13.44
	Subtest5	1852.4	9262	21.73	15.67
		1880	9400	21.68	15.64
		1907.6	9538	21.80	15.67
DC-HSDPA	Subtest1	1852.4	9262	21.97	15.95
		1880	9400	21.94	15.91
		1907.6	9538	21.95	15.92
	Subtest2	1852.4	9262	22.13	16.08
		1880	9400	22.16	16.02
		1907.6	9538	22.18	16.16
	Subtest3	1852.4	9262	22.11	16.01
		1880	9400	22.05	16.08
		1907.6	9538	22.14	16.03
	Subtest4	1852.4	9262	22.03	15.93
		1880	9400	21.99	15.93
		1907.6	9538	22.11	16.02
HSPA+	16QAM	1852.4	9262	21.89	15.84
		1880	9400	21.90	15.80
		1907.6	9538	21.95	15.80

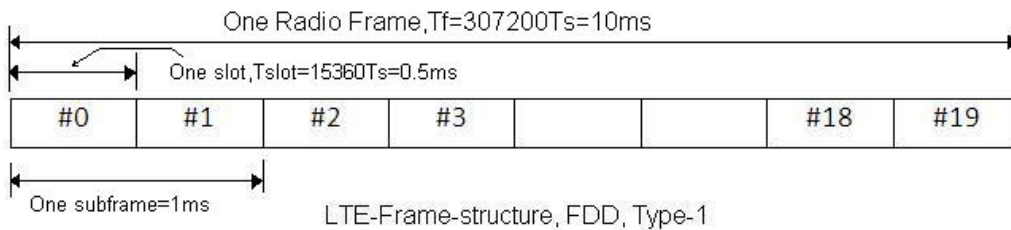
WCDMA band V

Mode		Carrier frequency	Channel No.	RF Power Output
Release 99	RMC,12.2kbps	826.4	4132	23.04
		836.4	4182	23.05
		846.6	4233	22.99
HSDPA	Subtest1	826.4	4132	21.69
		836.4	4182	21.71
		846.6	4233	21.64
	Subtest2	826.4	4132	21.69
		836.4	4182	21.64
		846.6	4233	21.61
	Subtest3	826.4	4132	21.06
		836.4	4182	21.02
		846.6	4233	21.09
	Subtest4	826.4	4132	21.25
		836.4	4182	21.22
		846.6	4233	21.21
HSUPA	Subtest1	826.4	4132	21.54
		836.4	4182	21.51
		846.6	4233	21.52
	Subtest2	826.4	4132	19.55
		836.4	4182	19.56
		846.6	4233	19.50
	Subtest3	826.4	4132	20.55
		836.4	4182	20.56
		846.6	4233	20.51
	Subtest4	826.4	4132	19.56
		836.4	4182	19.54
		846.6	4233	19.55
	Subtest5	826.4	4132	21.66
		836.4	4182	21.69
		846.6	4233	21.65
DC-HSDPA	Subtest1	826.4	4132	21.94
		836.4	4182	21.96
		846.6	4233	21.94
	Subtest2	826.4	4132	22.09
		836.4	4182	22.13
		846.6	4233	22.05
	Subtest3	826.4	4132	22.05
		836.4	4182	22.06
		846.6	4233	22.04
	Subtest4	826.4	4132	21.94
		836.4	4182	21.95
		846.6	4233	21.94
HSPA+	16QAM	826.4	4132	21.91
		836.4	4182	21.90
		846.6	4233	21.86

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.

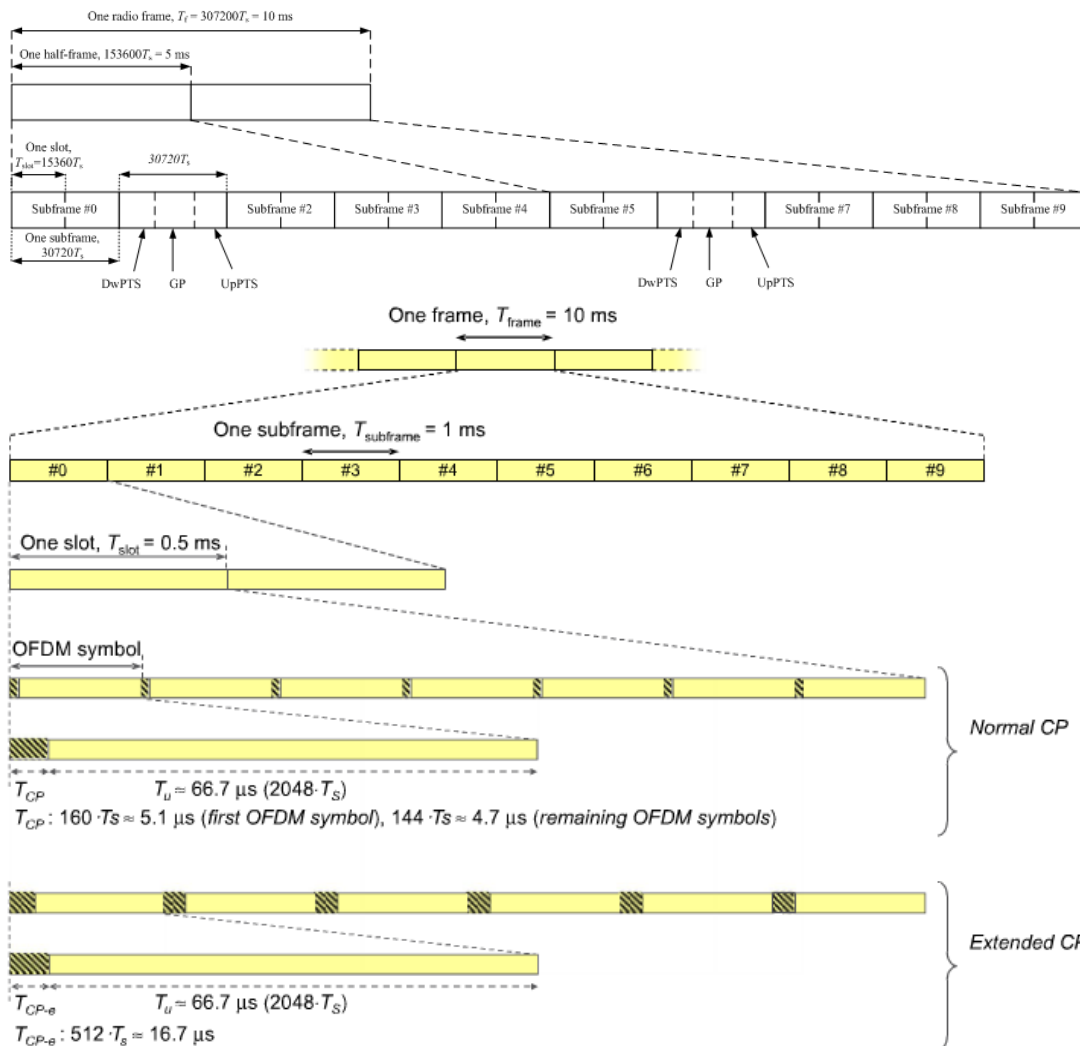
## 6.4 LTE Measurement result

### General description: FDD-LTE frame structure



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 as 100%

### TDD-LTE frame structure



### Uplink-downlink configuration

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

### Special sub-frame configuration

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			-		
8	$24144 \cdot T_s$			-		

### Special sub-frame with cyclic prefix uplink

Special sub-frame configuration		Duty factor with normal cyclic prefix in uplink	Duty factor with extended cyclic prefix in uplink
Normal cyclic prefix in downlink	0~4	7.13%	8.33%
	5~9	14.3%	16.7%
Extended cyclic prefix in downlink	0~3	7.13%	8.33%
	4~7	14.3%	16.7%

So we perform SAR test with maximum duty factor equal to 63.3% by using uplink-downlink configuration 0.

Note: One sub-frame is  $30720T_s=1\text{ms}$ , when Up PTS (uplink) in special sub-frame with extended cyclic prefix, duty factor =  $5120/30720=0.167$ . There are 5 sub-frames in half frame (3up link), so the final duty factor is  $(30720 \cdot 3 + 5120) / (30720 \cdot 5) = 63.3\%$  which we used to evaluate the SAR compliance (worst case)

### LTE Band 5

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	824.7	20407	1.4MHz	1	0	22.72
				1	2	22.69
				1	5	22.72
				3	0	22.74
				3	2	22.79
				3	3	22.72
	6	0		21.75		
	1	0		22.69		
	1	2		22.58		
	1	5		22.46		
	3	0		22.71		
	3	2		22.65		
	3	3		22.72		
	6	0		21.78		
	1	0		22.42		
	1	2		22.72		
	1	5		22.64		
	3	0		22.60		
3	2	22.67				
3	3	22.58				
6	0	21.69				
16QAM	824.7	20407	1	0	21.87	
			1	2	22.17	
			1	5	22.00	
			3	0	21.84	
			3	2	21.82	
			3	3	21.87	
	6	0	20.88			
	1	0	22.30			
	1	2	21.88			
	1	5	22.15			
	3	0	21.95			
	3	2	21.92			
	3	3	21.85			
	6	0	20.67			
	1	0	21.79			
	1	2	21.58			
	1	5	21.62			
	3	0	21.81			
3	2	21.80				
3	3	21.59				
6	0	20.83				



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	824.7	20407	1.4MHz	1	0	20.62
				1	2	20.67
				1	5	20.68
				3	0	20.70
				3	2	20.76
				3	3	20.69
	6	0		19.65		
	836.5	20525		1	0	20.59
				1	2	20.48
				1	5	20.39
				3	0	20.69
				3	2	20.60
				3	3	20.63
	848.3	20643		6	0	19.68
				1	0	20.33
				1	2	20.63
				1	5	20.55
				3	0	20.56
3			2	20.57		
256QAM	824.7	20407	3	3	20.55	
			6	0	19.63	
			1	0	17.77	
			1	2	18.12	
			1	5	17.94	
			3	0	17.76	
	836.5	20525	3	2	17.72	
			3	3	17.78	
			6	0	17.78	
			1	0	18.28	
			1	2	17.85	
			1	5	18.07	
	848.3	20643	3	0	17.86	
			3	2	17.87	
			3	3	17.79	
			6	0	17.63	
			1	0	17.76	
			1	2	17.52	
			1	5	17.54	
			3	0	17.78	
			3	2	17.71	
			3	3	17.54	
			6	0	17.79	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	825.5	20415	3MHz	1	0	22.75
				1	7	22.70
				1	14	22.62
				8	0	21.70
				8	4	21.89
				8	7	21.79
	15	0		21.76		
	836.5	20525		1	0	22.79
				1	7	22.61
				1	14	22.64
				8	0	21.75
				8	4	21.78
				8	7	21.83
	847.5	20635		15	0	21.80
				1	0	22.58
1			7	22.63		
1			14	22.77		
8			0	21.75		
8			4	21.57		
16QAM	825.5	20415	8	7	21.72	
			15	0	21.79	
			1	0	22.35	
			1	7	22.17	
			1	14	22.03	
			8	0	21.06	
	836.5	20525	8	4	20.89	
			8	7	21.05	
			15	0	20.87	
			1	0	22.04	
			1	7	22.13	
			1	14	21.75	
	847.5	20635	8	0	20.84	
			8	4	20.79	
			8	7	20.89	
15			0	20.72		
1			0	22.14		
1			7	21.48		
			1	14	22.12	
			8	0	20.82	
			8	4	20.77	
			8	7	20.67	
			15	0	20.85	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	825.5	20415	3MHz	1	0	20.71
				1	7	20.67
				1	14	20.52
				8	0	19.62
				8	4	19.83
				8	7	19.69
	15	0		19.73		
	836.5	20525		1	0	20.73
				1	7	20.54
				1	14	20.60
				8	0	19.73
				8	4	19.73
				8	7	19.73
	847.5	20635		15	0	19.76
				1	0	20.50
				1	7	20.56
				1	14	20.70
				8	0	19.65
8			4	19.52		
256QAM	825.5	20415	8	7	19.64	
			15	0	19.70	
			1	0	18.30	
			1	7	18.11	
			1	14	17.93	
			8	0	18.00	
	836.5	20525	8	4	17.81	
			8	7	17.98	
			15	0	17.77	
			1	0	18.02	
			1	7	18.06	
			1	14	17.73	
	847.5	20635	8	0	17.82	
			8	4	17.70	
			8	7	17.85	
			15	0	17.65	
			1	0	18.11	
			1	7	17.46	
			1	14	18.09	
			8	0	17.72	
			8	4	17.73	
			8	7	17.62	
			15	0	17.80	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	826.5	20425	5MHz	1	0	22.85
				1	13	22.91
				1	24	22.57
				12	0	21.80
				12	6	21.82
				12	13	21.69
	25	0		21.83		
	836.5	20525		1	0	22.75
				1	13	22.70
				1	24	22.55
				12	0	21.80
				12	6	21.78
				12	13	21.78
	25	0		21.71		
	846.5	20625		1	0	22.83
				1	13	22.78
				1	24	22.67
				12	0	21.71
12			6	21.70		
12			13	21.80		
16QAM	826.5	20425	25	0	21.64	
			1	0	21.83	
			1	13	22.13	
			1	24	22.00	
			12	0	21.01	
			12	6	20.84	
	12	13	20.90			
	25	0	20.90			
	836.5	20525	1	0	22.02	
			1	13	22.59	
			1	24	22.21	
			12	0	20.69	
			12	6	20.93	
			12	13	20.68	
	25	0	20.71			
	846.5	20625	1	0	21.95	
			1	13	22.10	
			1	24	22.23	
12			0	20.76		
12			6	20.80		
12			13	20.81		
25	0	20.71				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	826.5	20425	5MHz	1	0	20.82
				1	13	20.82
				1	24	20.48
				12	0	19.77
				12	6	19.74
				12	13	19.63
	25	0		19.81		
	836.5	20525		1	0	20.73
				1	13	20.68
				1	24	20.46
				12	0	19.74
				12	6	19.71
				12	13	19.68
	25	0		19.69		
	846.5	20625		1	0	20.76
				1	13	20.68
				1	24	20.63
				12	0	19.69
12			6	19.60		
12			13	19.73		
256QAM	826.5	20425	25	0	19.62	
			1	0	17.74	
			1	13	18.11	
			1	24	17.95	
			12	0	17.91	
			12	6	17.74	
	12	13	17.81			
	25	0	17.82			
	836.5	20525	1	0	17.92	
			1	13	18.56	
			1	24	18.17	
			12	0	17.61	
			12	6	17.87	
			12	13	17.66	
	25	0	17.64			
	846.5	20625	1	0	17.90	
			1	13	18.03	
			1	24	18.20	
12			0	17.68		
12			6	17.78		
12			13	17.77		
25	0	17.64				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	829	20450	10MHz	1	0	22.71
				1	25	22.72
				1	49	22.63
				25	0	21.74
				25	13	21.79
				25	25	21.74
	50	0		21.76		
	836.5	20525		1	0	22.72
				1	25	22.80
				1	49	22.69
				25	0	21.82
				25	13	21.77
				25	25	21.76
	844	20600		50	0	21.77
				1	0	22.63
				1	25	22.65
				1	49	22.65
				25	0	21.68
25			13	21.78		
16QAM	829	20450	25	25	21.78	
			25	25	21.78	
			50	0	21.82	
			1	0	22.15	
			1	25	22.25	
			1	49	22.33	
	836.5	20525	25	0	20.79	
			25	13	20.82	
			25	25	20.81	
			50	0	20.92	
			1	0	22.17	
			1	25	22.24	
	844	20600	1	49	22.21	
			25	0	20.79	
			25	13	20.80	
			25	25	20.58	
			50	0	20.89	
			1	0	22.51	
			1	25	21.98	
			1	49	21.53	
			25	0	20.73	
			25	13	20.85	
			25	25	20.59	
			50	0	20.68	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	829	20450	10MHz	1	0	20.66
				1	25	20.62
				1	49	20.55
				25	0	19.66
				25	13	19.71
				25	25	19.66
	50	0		19.71		
	836.5	20525		1	0	20.70
				1	25	20.78
				1	49	20.65
				25	0	19.78
				25	13	19.72
				25	25	19.68
	50	0		19.73		
	844	20600		1	0	20.59
				1	25	20.58
				1	49	20.57
				25	0	19.66
25			13	19.72		
25			25	19.70		
256QAM	829	20450	50	0	19.78	
			1	0	18.12	
			1	25	18.19	
			1	49	18.26	
			25	0	17.72	
			25	13	17.72	
	25	25	17.76			
	50	0	17.83			
	836.5	20525	1	0	18.11	
			1	25	18.20	
			1	49	18.11	
			25	0	17.70	
			25	13	17.78	
			25	25	17.50	
	50	0	17.82			
	844	20600	1	0	18.49	
			1	25	17.94	
			1	49	17.49	
25			0	17.64		
25			13	17.76		
25			25	17.54		
50	0	17.65				

### LTE Band 5(EN\_DC)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	824.7	20407	1.4MHz	1	0	20.95
				1	2	20.92
				1	5	20.92
				3	0	20.94
				3	2	21.00
				3	3	20.92
	836.5	20525		6	0	19.96
				1	0	20.89
				1	2	20.80
				1	5	20.70
				3	0	20.91
				3	2	20.86
	848.3	20643		3	3	20.97
				6	0	20.02
				1	0	20.63
				1	2	20.94
				1	5	20.86
				3	0	20.81
16QAM	824.7	20407	3	2	20.90	
			3	3	20.80	
			6	0	19.92	
			1	0	20.07	
			1	2	20.40	
			1	5	20.24	
	836.5	20525	3	0	20.07	
			3	2	20.07	
			3	3	20.09	
			6	0	19.08	
			1	0	20.51	
			1	2	20.12	
	848.3	20643	1	5	20.40	
			3	0	20.19	
			3	2	20.15	
			3	3	20.05	
			6	0	18.88	
			1	0	19.99	
			1	2	19.83	
			1	5	19.87	
			3	0	20.04	
			3	2	20.00	
			3	3	19.82	
			6	0	19.03	



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	824.7	20407	1.4MHz	1	0	18.88
				1	2	18.84
				1	5	18.90
				3	0	18.86
				3	2	18.92
				3	3	18.86
	6	0		17.87		
	836.5	20525		1	0	18.80
				1	2	18.77
				1	5	18.64
				3	0	18.87
				3	2	18.82
				3	3	18.94
	848.3	20643		6	0	17.99
				1	0	18.54
				1	2	18.85
				1	5	18.77
				3	0	18.72
3			2	18.80		
256QAM	824.7	20407	3	3	18.78	
			6	0	17.83	
			1	0	16.04	
			1	2	16.32	
			1	5	16.14	
			3	0	16.00	
	836.5	20525	3	2	15.98	
			3	3	15.99	
			6	0	16.01	
			1	0	16.47	
			1	2	16.04	
			1	5	16.35	
	848.3	20643	3	0	16.15	
			3	2	16.10	
			3	3	16.03	
			6	0	15.79	
			1	0	15.95	
			1	2	15.74	
			1	5	15.82	
			3	0	15.99	
			3	2	15.92	
			3	3	15.72	
			6	0	15.97	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	825.5	20415	3MHz	1	0	20.99
				1	7	20.93
				1	14	20.85
				8	0	19.91
				8	4	20.09
				8	7	20.03
	15	0		19.96		
	836.5	20525		1	0	21.01
				1	7	20.85
				1	14	20.85
				8	0	19.95
				8	4	20.01
				8	7	20.04
	847.5	20635		15	0	20.00
				1	0	20.78
1			7	20.88		
1			14	20.98		
8			0	19.99		
8			4	19.81		
16QAM	825.5	20415	8	7	19.93	
			15	0	19.99	
			1	0	20.60	
			1	7	20.38	
			1	14	20.26	
			8	0	19.30	
	836.5	20525	8	4	19.10	
			8	7	19.25	
			15	0	19.07	
			1	0	20.26	
			1	7	20.33	
			1	14	19.99	
	847.5	20635	8	0	19.04	
			8	4	19.00	
			8	7	19.09	
15			0	18.93		
1			0	20.34		
1			7	19.70		
			1	14	20.37	
			8	0	19.02	
			8	4	18.97	
			8	7	18.92	
			15	0	19.07	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	825.5	20415	3MHz	1	0	18.89
				1	7	18.83
				1	14	18.80
				8	0	17.86
				8	4	18.04
				8	7	17.98
	15	0		17.90		
	836.5	20525		1	0	18.93
				1	7	18.76
				1	14	18.75
				8	0	17.88
				8	4	17.96
				8	7	17.98
	847.5	20635		15	0	17.97
				1	0	18.69
1			7	18.86		
1			14	18.88		
8			0	17.97		
8			4	17.72		
256QAM	825.5	20415	8	7	17.90	
			15	0	17.95	
			1	0	16.55	
			1	7	16.31	
			1	14	16.18	
			8	0	16.27	
	836.5	20525	8	4	16.08	
			8	7	16.19	
			15	0	16.03	
			1	0	16.24	
			1	7	16.26	
			1	14	15.92	
	847.5	20635	8	0	16.02	
			8	4	15.94	
			8	7	15.99	
15			0	15.84		
1			0	16.26		
1			7	15.62		
			1	14	16.35	
			8	0	15.98	
			8	4	15.92	
			8	7	15.86	
			15	0	16.03	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	826.5	20425	5MHz	1	0	21.08
				1	13	21.16
				1	24	20.78
				12	0	20.02
				12	6	20.03
				12	13	19.93
	25	0		20.04		
	1	0		20.96		
	1	13		20.91		
	1	24		20.78		
	12	0		20.03		
	12	6		20.00		
	12	13		19.99		
	25	0		19.95		
	1	0		21.06		
	1	13		21.01		
	1	24		20.87		
	12	0		19.93		
12	6	19.91				
12	13	20.00				
25	0	19.89				
16QAM	826.5	20425	1	0	20.04	
			1	13	20.38	
			1	24	20.24	
			12	0	19.25	
			12	6	19.09	
			12	13	19.12	
	25	0	19.13			
	1	0	20.22			
	1	13	20.82			
	1	24	20.45			
	12	0	18.90			
	12	6	19.17			
	12	13	18.93			
	25	0	18.91			
	1	0	20.16			
	1	13	20.32			
	1	24	20.46			
	12	0	18.97			
12	6	19.05				
12	13	19.05				
25	0	18.95				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	826.5	20425	5MHz	1	0	19.05
				1	13	19.12
				1	24	18.68
				12	0	17.99
				12	6	17.99
				12	13	17.85
	25	0		17.96		
	836.5	20525		1	0	18.92
				1	13	18.84
				1	24	18.68
				12	0	17.98
				12	6	17.90
				12	13	17.93
	25	0		17.93		
	846.5	20625		1	0	19.02
				1	13	18.93
				1	24	18.81
				12	0	17.91
12			6	17.81		
12			13	17.93		
256QAM	826.5	20425	25	0	17.83	
			1	0	15.94	
			1	13	16.35	
			1	24	16.14	
			12	0	16.23	
			12	6	16.04	
	12	13	16.08			
	836.5	20525	25	0	16.09	
			1	0	16.20	
			1	13	16.72	
			1	24	16.42	
			12	0	15.84	
			12	6	16.15	
	12	13	15.87			
	846.5	20625	25	0	15.83	
			1	0	16.07	
			1	13	16.22	
			1	24	16.42	
12			0	15.90		
12			6	15.95		
12	13	16.03				
25	0	15.87				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	829	20450	10MHz	1	0	20.95
				1	25	20.95
				1	49	20.88
				25	0	19.95
				25	13	20.03
				25	25	19.97
	50	0		19.97		
	836.5	20525		1	0	20.92
				1	25	21.03
				1	49	20.91
				25	0	20.06
				25	13	20.00
				25	25	19.96
	844	20600		50	0	19.99
				1	0	20.84
				1	25	20.88
				1	49	20.89
				25	0	19.91
25			13	19.99		
16QAM	829	20450	25	25	20.01	
			50	0	20.06	
			1	0	20.38	
			1	25	20.46	
			1	49	20.54	
			25	0	19.02	
	836.5	20525	25	13	19.04	
			25	25	19.04	
			50	0	19.12	
			1	0	20.38	
			1	25	20.46	
			1	49	20.42	
	844	20600	25	0	19.02	
			25	13	19.03	
			25	25	18.82	
			50	0	19.13	
			1	0	20.71	
			1	25	20.22	
			1	49	19.74	
			25	0	18.94	
			25	13	19.10	
			25	25	18.79	
			50	0	18.93	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	829	20450	10MHz	1	0	18.91
				1	25	18.90
				1	49	18.84
				25	0	17.91
				25	13	17.96
				25	25	17.94
	50	0		17.87		
	836.5	20525		1	0	18.83
				1	25	18.99
				1	49	18.88
				25	0	18.01
				25	13	17.91
				25	25	17.87
	844	20600		50	0	17.95
				1	0	18.74
				1	25	18.86
				1	49	18.79
				25	0	17.86
25			13	17.90		
256QAM	829	20450	25	25	17.97	
			50	0	18.02	
			1	0	16.33	
			1	25	16.43	
			1	49	16.44	
			25	0	15.95	
	836.5	20525	25	13	15.96	
			25	25	15.99	
			50	0	16.02	
			1	0	16.29	
			1	25	16.39	
			1	49	16.39	
	844	20600	25	0	15.99	
			25	13	16.01	
			25	25	15.75	
			50	0	16.04	
			1	0	16.64	
			1	25	16.14	
			1	49	15.68	
			25	0	15.87	
			25	13	16.05	
			25	25	15.73	
			50	0	15.90	

### LTE Band 7(Full power)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2502.5	20775	5MHz	1	0	22.86
				1	13	22.91
				1	24	22.84
				12	0	21.79
				12	6	21.84
				12	13	21.88
	25	0		21.74		
	2535	21100		1	0	22.60
				1	13	22.56
				1	24	22.68
				12	0	21.53
				12	6	21.56
				12	13	21.48
	25	0		21.44		
	2567.5	21425		1	0	22.16
1			13	22.15		
1			24	22.07		
12			0	21.16		
12			6	21.21		
12			13	21.23		
25	0	21.23				
16QAM	2502.5	20775	1	0	22.29	
			1	13	21.94	
			1	24	21.92	
			12	0	20.81	
			12	6	20.81	
			12	13	20.84	
	25	0	20.78			
	2535	21100	1	0	21.75	
			1	13	22.34	
			1	24	21.76	
			12	0	20.58	
			12	6	20.60	
			12	13	20.70	
	25	0	20.58			
	2567.5	21425	1	0	21.82	
1			13	21.51		
1			24	21.68		
12			0	20.38		
12			6	20.39		
12			13	20.47		
25	0	20.42				



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2502.5	20775	5MHz	1	0	21.19
				1	13	20.84
				1	24	20.83
				12	0	19.75
				12	6	19.78
				12	13	19.79
	2535	21100		25	0	19.73
				1	0	20.71
				1	13	21.31
				1	24	20.68
				12	0	19.50
				12	6	19.50
	2567.5	21425		12	13	19.62
				25	0	19.51
				1	0	20.80
				1	13	20.44
				1	24	20.63
				12	0	19.36
256QAM	2502.5	20775	12	6	19.32	
			12	13	19.41	
			25	0	19.34	
			1	0	18.23	
			1	13	17.87	
			1	24	17.87	
	2535	21100	12	0	17.72	
			12	6	17.71	
			12	13	17.76	
			25	0	17.74	
			1	0	17.67	
			1	13	18.26	
	2567.5	21425	1	24	17.70	
			12	0	17.50	
			12	6	17.54	
			12	13	17.67	
			25	0	17.49	
			1	0	17.79	
		1	13	17.41		
		1	24	17.66		
		12	0	17.30		
		12	6	17.30		
		12	13	17.45		
		25	0	17.38		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2505	20800	10MHz	1	0	22.86
				1	25	22.61
				1	49	22.90
				25	0	21.76
				25	13	21.83
				25	25	21.84
	50	0		21.79		
	2535	21100		1	0	22.60
				1	25	22.46
				1	49	22.08
				25	0	21.57
				25	13	21.47
				25	25	21.62
	2565	21400		50	0	21.49
				1	0	22.29
				1	25	22.11
				1	49	22.47
				25	0	21.29
25			13	21.28		
16QAM	2505	20800	25	25	21.35	
			50	0	21.40	
			1	0	22.21	
			1	25	21.62	
			1	49	21.79	
			25	0	20.84	
	25	13	20.91			
	2535	21100	25	25	20.88	
			50	0	20.81	
			1	0	21.96	
			1	25	22.11	
			1	49	21.75	
			25	0	20.68	
	2565	21400	25	13	20.48	
			25	25	20.47	
			50	0	20.56	
			1	0	21.75	
			1	25	21.46	
1			49	21.81		
25	0	20.34				
25	13	20.22				
25	25	20.27				
50	0	20.30				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2505	20800	10MHz	1	0	21.11
				1	25	20.55
				1	49	20.74
				25	0	19.75
				25	13	19.84
				25	25	19.84
	50	0		19.77		
	2535	21100		1	0	20.88
				1	25	21.01
				1	49	20.65
				25	0	19.66
				25	13	19.44
				25	25	19.38
	2565	21400		50	0	19.47
				1	0	20.68
				1	25	20.41
				1	49	20.76
				25	0	19.29
25			13	19.20		
256QAM	2505	20800	25	25	19.17	
			50	0	19.27	
			1	0	18.16	
			1	25	17.53	
			1	49	17.72	
			25	0	17.82	
	2535	21100	25	13	17.84	
			25	25	17.82	
			50	0	17.72	
			1	0	17.90	
			1	25	18.05	
			1	49	17.66	
	2565	21400	25	0	17.64	
			25	13	17.44	
			25	25	17.44	
			50	0	17.50	
			1	0	17.65	
			1	25	17.44	
			1	49	17.72	
			25	0	17.32	
			25	13	17.19	
			25	25	17.25	
			50	0	17.23	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2507.5	20825	15MHz	1	0	22.88
				1	38	22.86
				1	74	22.94
				36	0	22.16
				36	18	22.10
				36	39	22.14
	75	0		22.16		
	2535	21100		1	0	22.88
				1	38	22.74
				1	74	22.72
				36	0	21.99
				36	18	21.85
				36	39	21.95
	2562.5	21375		75	0	21.90
				1	0	22.69
				1	38	22.71
				1	74	22.52
				36	0	21.66
36			18	21.61		
16QAM	2507.5	20825	36	39	21.54	
			75	0	21.77	
			1	0	22.39	
			1	38	22.24	
			1	74	22.48	
			36	0	21.05	
	2535	21100	36	18	21.06	
			36	39	21.30	
			75	0	21.20	
			1	0	22.54	
			1	38	22.50	
			1	74	22.17	
	2562.5	21375	36	0	21.08	
			36	18	20.84	
			36	39	20.84	
			75	0	20.90	
			1	0	21.87	
			1	38	21.83	
		1	74	22.09		
		36	0	20.72		
		36	18	20.79		
		36	39	20.61		
		75	0	20.73		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2507.5	20825	15MHz	1	0	21.34
				1	38	21.14
				1	74	21.45
				36	0	20.02
				36	18	20.04
				36	39	20.26
				75	0	20.13
	2535	21100		1	0	21.50
				1	38	21.42
				1	74	21.12
				36	0	20.00
				36	18	19.82
				36	39	19.77
				75	0	19.83
	2562.5	21375		1	0	20.83
				1	38	20.80
				1	74	21.01
				36	0	19.65
				36	18	19.72
				36	39	19.56
				75	0	19.69
256QAM	2507.5	20825	1	0	18.32	
			1	38	18.20	
			1	74	18.41	
			36	0	17.98	
			36	18	18.02	
			36	39	18.26	
			75	0	18.15	
	2535	21100	1	0	18.44	
			1	38	18.48	
			1	74	18.15	
			36	0	18.01	
			36	18	17.76	
			36	39	17.77	
			75	0	17.85	
	2562.5	21375	1	0	17.80	
			1	38	17.80	
			1	74	18.07	
			36	0	17.65	
			36	18	17.69	
			36	39	17.56	
			75	0	17.71	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2510	20850	20MHz	1	0	23.01
				1	50	23.08
				1	99	22.99
				50	0	22.07
				50	25	22.03
				50	50	22.06
	100	0		22.52		
	2535	21100		1	0	22.98
				1	50	23.17
				1	99	23.01
				50	0	22.10
				50	25	22.04
				50	50	22.13
	2560	21350		100	0	22.18
				1	0	22.95
				1	50	23.32
				1	99	22.90
				50	0	22.18
50			25	22.03		
16QAM	2510	20850	50	50	21.96	
			100	0	21.92	
			1	0	22.40	
			1	50	22.75	
			1	99	22.45	
			50	0	21.45	
	2535	21100	50	25	21.35	
			50	50	21.41	
			100	0	21.35	
			1	0	22.56	
			1	50	22.32	
			1	99	22.74	
	2560	21350	50	0	21.35	
			50	25	21.21	
			50	50	21.19	
			100	0	21.26	
			1	0	22.09	
			1	50	21.96	
			1	99	21.89	
			50	0	21.03	
			50	25	21.07	
			50	50	20.91	
			100	0	20.98	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2510	20850	20MHz	1	0	21.35
				1	50	21.71
				1	99	21.37
				50	0	20.41
				50	25	20.29
				50	50	20.31
	100	0		20.25		
	2535	21100		1	0	21.53
				1	50	21.26
				1	99	21.70
				50	0	20.27
				50	25	20.13
				50	50	20.14
	2560	21350		100	0	20.22
				1	0	21.00
				1	50	20.89
				1	99	20.83
				50	0	19.97
50			25	20.05		
256QAM	2510	20850	50	50	19.87	
			100	0	19.95	
			1	0	18.35	
			1	50	18.69	
			1	99	18.40	
			50	0	18.41	
	2535	21100	50	25	18.30	
			50	50	18.39	
			100	0	18.29	
			1	0	18.51	
			1	50	18.28	
			1	99	18.65	
	2560	21350	50	0	18.28	
			50	25	18.12	
			50	50	18.16	
			100	0	18.19	
			1	0	18.05	
			1	50	17.87	
		1	99	17.81		
		50	0	17.98		
		50	25	18.03		
		50	50	17.89		
		100	0	17.91		

### LTE Band 7(Hotspot on)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2502.5	20775	5MHz	1	0	20.76
				1	13	20.81
				1	24	20.79
				12	0	19.71
				12	6	19.78
				12	13	19.78
	2535	21100		25	0	19.66
				1	0	20.53
				1	13	20.51
				1	24	20.60
				12	0	19.44
				12	6	19.51
	2567.5	21425		12	13	19.38
				25	0	19.37
				1	0	20.09
				1	13	20.06
				1	24	20.12
				12	0	19.10
16QAM	2502.5	20775	12	6	19.13	
			12	13	19.17	
			25	0	19.16	
			1	0	20.24	
			1	13	19.89	
			1	24	19.82	
	2535	21100	12	0	18.72	
			12	6	18.73	
			12	13	18.78	
			25	0	18.68	
			1	0	19.68	
			1	13	20.28	
	2567.5	21425	1	24	19.69	
			12	0	18.51	
			12	6	18.52	
			12	13	18.61	
			25	0	18.53	
			1	0	19.75	
			1	13	19.41	
			1	24	19.61	
			12	0	18.32	
			12	6	18.31	
			12	13	18.39	
			25	0	18.37	



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2502.5	20775	5MHz	1	0	18.68
				1	13	18.73
				1	24	18.74
				12	0	17.66
				12	6	17.74
				12	13	17.74
	2535	21100		25	0	17.61
				1	0	18.50
				1	13	18.47
				1	24	18.51
				12	0	17.34
				12	6	17.44
	2567.5	21425		12	13	17.36
				25	0	17.32
				1	0	18.09
				1	13	18.00
				1	24	18.06
				12	0	17.00
256QAM	2502.5	20775	12	6	17.05	
			12	13	17.07	
			25	0	17.08	
			1	0	16.18	
			1	13	15.81	
			1	24	15.74	
	2535	21100	12	0	15.62	
			12	6	15.63	
			12	13	15.73	
			25	0	15.58	
			1	0	15.59	
			1	13	16.24	
	2567.5	21425	1	24	15.60	
			12	0	15.46	
			12	6	15.48	
			12	13	15.51	
			25	0	15.51	
			1	0	15.69	
			1	13	15.33	
			1	24	15.59	
			12	0	15.25	
			12	6	15.23	
			12	13	15.29	
			25	0	15.35	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2505	20800	10MHz	1	0	20.81
				1	25	20.54
				1	49	20.81
				25	0	19.66
				25	13	19.78
				25	25	19.79
	50	0		19.74		
	2535	21100		1	0	20.55
				1	25	20.37
				1	49	20.00
				25	0	19.48
				25	13	19.42
				25	25	19.53
	2565	21400		50	0	19.41
				1	0	20.19
				1	25	20.03
				1	49	20.39
				25	0	19.23
25			13	19.20		
16QAM	2505	20800	25	25	19.29	
			50	0	19.35	
			1	0	20.16	
			1	25	19.54	
			1	49	19.73	
			25	0	18.74	
	25	13	18.86			
	2535	21100	25	25	18.83	
			50	0	18.71	
			1	0	19.89	
			1	25	20.02	
			1	49	19.66	
			25	0	18.61	
	2565	21400	25	13	18.43	
			25	25	18.40	
			50	0	18.49	
			1	0	19.67	
			1	25	19.40	
1			49	19.72		
25	0	18.28				
25	13	18.16				
25	25	18.19				
50	0	18.22				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2505	20800	10MHz	1	0	18.71
				1	25	18.45
				1	49	18.75
				25	0	17.61
				25	13	17.73
				25	25	17.73
	50	0		17.66		
	2535	21100		1	0	18.52
				1	25	18.27
				1	49	18.07
				25	0	17.40
				25	13	17.38
				25	25	17.47
	2565	21400		50	0	17.32
				1	0	18.09
				1	25	18.00
				1	49	18.37
				25	0	17.17
25			13	17.10		
256QAM	2505	20800	25	25	17.23	
			50	0	17.32	
			1	0	16.07	
			1	25	15.52	
			1	49	15.63	
			25	0	15.64	
	2535	21100	25	13	15.80	
			25	25	15.75	
			50	0	15.68	
			1	0	15.79	
			1	25	15.98	
			1	49	15.58	
	2565	21400	25	0	15.55	
			25	13	15.36	
			25	25	15.30	
			50	0	15.44	
			1	0	15.58	
			1	25	15.30	
			1	49	15.65	
			25	0	15.24	
			25	13	15.10	
			25	25	15.13	
			50	0	15.13	
			50	0	15.13	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2507.5	20825	15MHz	1	0	20.80
				1	38	20.78
				1	74	20.87
				36	0	20.07
				36	18	20.05
				36	39	20.04
	75	0		20.11		
	2535	21100		1	0	20.79
				1	38	20.69
				1	74	20.62
				36	0	19.90
				36	18	19.78
				36	39	19.90
	2562.5	21375		75	0	19.80
				1	0	20.60
				1	38	20.66
				1	74	20.62
				36	0	19.56
36			18	19.53		
16QAM	2507.5	20825	36	39	19.82	
			75	0	19.67	
			1	0	20.30	
			1	38	20.15	
			1	74	20.43	
			36	0	18.95	
	2535	21100	36	18	18.97	
			36	39	19.21	
			75	0	19.12	
			1	0	20.46	
			1	38	20.41	
			1	74	20.07	
	2562.5	21375	36	0	18.98	
			36	18	18.75	
			36	39	18.74	
			75	0	18.82	
			1	0	19.78	
			1	38	19.77	
			1	74	20.04	
			36	0	18.66	
			36	18	18.70	
			36	39	18.54	
			75	0	18.64	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2507.5	20825	15MHz	1	0	18.72
				1	38	18.73
				1	74	18.80
				36	0	18.00
				36	18	17.99
				36	39	18.01
	75	0		18.02		
	2535	21100		1	0	18.75
				1	38	18.64
				1	74	18.54
				36	0	17.85
				36	18	17.68
				36	39	17.84
	2562.5	21375		75	0	17.74
				1	0	18.57
				1	38	18.60
				1	74	18.54
				36	0	17.47
36			18	17.47		
256QAM	2507.5	20825	36	39	17.79	
			75	0	17.61	
			1	0	16.23	
			1	38	16.12	
			1	74	16.34	
			36	0	15.88	
	2535	21100	36	18	15.87	
			36	39	16.13	
			75	0	16.10	
			1	0	16.43	
			1	38	16.37	
			1	74	16.05	
	2562.5	21375	36	0	15.92	
			36	18	15.71	
			36	39	15.72	
			75	0	15.76	
			1	0	15.74	
			1	38	15.70	
		1	74	16.01		
		36	0	15.64		
		36	18	15.62		
		36	39	15.52		
		75	0	15.61		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2510	20850	20MHz	1	0	20.91
				1	50	21.00
				1	99	20.89
				50	0	20.17
				50	25	20.15
				50	50	20.16
	100	0		20.33		
	2535	21100		1	0	20.91
				1	50	20.99
				1	99	20.92
				50	0	20.15
				50	25	20.08
				50	50	20.05
	2560	21350		100	0	20.12
				1	0	20.88
				1	50	21.11
				1	99	20.85
				50	0	20.18
50			25	19.93		
16QAM	2510	20850	50	50	19.86	
			100	0	19.84	
			1	0	20.34	
			1	50	20.69	
			1	99	20.35	
			50	0	19.40	
	2535	21100	50	25	19.30	
			50	50	19.33	
			100	0	19.29	
			1	0	20.50	
			1	50	20.22	
			1	99	20.66	
	2560	21350	50	0	19.25	
			50	25	19.13	
			50	50	19.09	
			100	0	19.21	
			1	0	20.03	
			1	50	19.91	
		1	99	19.81		
		50	0	18.96		
		50	25	18.97		
		50	50	18.86		
		100	0	18.88		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2510	20850	20MHz	1	0	18.86
				1	50	18.86
				1	99	18.83
				50	0	18.15
				50	25	18.06
				50	50	18.07
	100	0		18.28		
	2535	21100		1	0	18.86
				1	50	18.83
				1	99	18.85
				50	0	18.11
				50	25	18.05
				50	50	18.00
	2560	21350		100	0	18.09
				1	0	18.80
				1	50	18.95
				1	99	18.76
				50	0	18.14
50			25	17.90		
256QAM	2510	20850	50	50	17.77	
			100	0	17.81	
			1	0	16.24	
			1	50	16.65	
			1	99	16.30	
			50	0	16.31	
	2535	21100	50	25	16.24	
			50	50	16.29	
			100	0	16.26	
			1	0	16.43	
			1	50	16.13	
			1	99	16.59	
	2560	21350	50	0	16.15	
			50	25	16.03	
			50	50	16.06	
			100	0	16.14	
			1	0	16.00	
			1	50	15.85	
		1	99	15.73		
		50	0	15.86		
		50	25	15.89		
		50	50	15.83		
		100	0	15.80		

### LTE Band 7(EN\_DC Full power)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2502.5	20775	5MHz	1	0	21.11
				1	13	21.15
				1	24	21.05
				12	0	20.04
				12	6	20.04
				12	13	20.11
	25	0		19.96		
	2535	21100		1	0	20.85
				1	13	20.79
				1	24	20.93
				12	0	19.73
				12	6	19.79
				12	13	19.71
	25	0		19.66		
	2567.5	21425		1	0	20.40
				1	13	20.38
				1	24	20.28
				12	0	19.38
12			6	19.42		
12			13	19.48		
25	0	19.47				
16QAM	2502.5	20775	1	0	20.51	
			1	13	20.14	
			1	24	20.13	
			12	0	19.03	
			12	6	19.05	
			12	13	19.05	
	25	0	19.01			
	2535	21100	1	0	19.99	
			1	13	20.56	
			1	24	19.96	
			12	0	18.80	
			12	6	18.82	
			12	13	18.95	
	25	0	18.79			
	2567.5	21425	1	0	20.06	
			1	13	19.76	
			1	24	19.90	
			12	0	18.59	
12			6	18.64		
12			13	18.70		
25	0	18.64				



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2502.5	20775	5MHz	1	0	19.08
				1	13	19.13
				1	24	18.98
				12	0	17.99
				12	6	17.94
				12	13	18.09
	25	0		17.87		
	2535	21100		1	0	18.78
				1	13	18.73
				1	24	18.84
				12	0	17.71
				12	6	17.77
				12	13	17.61
	25	0		17.58		
	2567.5	21425		1	0	18.37
				1	13	18.33
				1	24	18.26
				12	0	17.35
12			6	17.32		
12			13	17.40		
25	0	17.44				
256QAM	2502.5	20775	1	0	16.47	
			1	13	16.08	
			1	24	16.10	
			12	0	15.97	
			12	6	16.01	
			12	13	16.03	
	25	0	15.96			
	2535	21100	1	0	15.91	
			1	13	16.49	
			1	24	15.90	
			12	0	15.73	
			12	6	15.79	
			12	13	15.93	
	25	0	15.72			
	2567.5	21425	1	0	16.00	
			1	13	15.70	
			1	24	15.88	
			12	0	15.56	
12			6	15.60		
12			13	15.61		
25	0	15.57				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2505	20800	10MHz	1	0	21.08
				1	25	20.85
				1	49	21.13
				25	0	19.98
				25	13	20.05
				25	25	20.08
	50	0		20.00		
	2535	21100		1	0	20.82
				1	25	20.67
				1	49	20.33
				25	0	19.78
				25	13	19.67
				25	25	19.86
	2565	21400		50	0	19.71
				1	0	20.51
				1	25	20.32
				1	49	20.71
				25	0	19.54
25			13	19.49		
16QAM	2505	20800	25	25	19.57	
			50	0	19.65	
			1	0	20.43	
			1	25	19.86	
			1	49	20.00	
			25	0	19.08	
	2535	21100	25	13	19.15	
			25	25	19.09	
			50	0	19.02	
			1	0	20.21	
			1	25	20.31	
			1	49	19.95	
	2565	21400	25	0	18.88	
			25	13	18.69	
			25	25	18.68	
			50	0	18.78	
			1	0	19.96	
			1	25	19.67	
			1	49	20.05	
			25	0	18.56	
			25	13	18.47	
			25	25	18.47	
			50	0	18.54	
			50	0	18.54	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2505	20800	10MHz	1	0	18.98
				1	25	18.75
				1	49	19.05
				25	0	17.92
				25	13	18.00
				25	25	18.06
	50	0		17.98		
	2535	21100		1	0	18.80
				1	25	18.58
				1	49	18.24
				25	0	17.68
				25	13	17.59
				25	25	17.76
	2565	21400		50	0	17.65
				1	0	18.48
				1	25	18.26
				1	49	18.66
				25	0	17.44
25			13	17.40		
256QAM	2505	20800	25	25	17.50	
			50	0	17.61	
			1	0	16.35	
			1	25	15.76	
			1	49	15.90	
			25	0	16.00	
	2535	21100	25	13	16.08	
			25	25	15.99	
			50	0	16.00	
			1	0	16.19	
			1	25	16.26	
			1	49	15.89	
	2565	21400	25	0	15.79	
			25	13	15.62	
			25	25	15.64	
			50	0	15.71	
			1	0	15.90	
			1	25	15.60	
			1	49	15.96	
			25	0	15.51	
			25	13	15.43	
			25	25	15.38	
			50	0	15.47	
			50	0	15.47	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2507.5	20825	15MHz	1	0	21.10
				1	38	21.09
				1	74	21.17
				36	0	20.37
				36	18	20.31
				36	39	20.35
	75	0		20.40		
	1	0		21.12		
	1	38		20.97		
	1	74		20.97		
	36	0		20.24		
	36	18		20.05		
	36	39		20.18		
	75	0		20.10		
	1	0		20.91		
	1	38		20.95		
	1	74		20.73		
	16QAM	2507.5		20825	15MHz	36
36			18			19.83
36			39			19.78
75			0			20.02
1			0			20.64
1			38			20.44
1		74	20.71			
36		0	19.28			
36		18	19.31			
36		39	19.52			
75		0	19.45			
1		0	20.75			
1		38	20.74			
1		74	20.41			
36		0	19.31			
36		18	19.08			
36		39	19.05			
75		0	19.14			
2562.5	21375	21375	15MHz	1	0	20.07
				1	38	20.06
				1	74	20.32
				36	0	18.97
				36	18	19.03
				36	39	18.86
				75	0	18.96

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2507.5	20825	15MHz	1	0	19.00
				1	38	19.02
				1	74	19.09
				36	0	18.33
				36	18	18.21
				36	39	18.29
	75	0		18.36		
	2535	21100		1	0	19.02
				1	38	18.94
				1	74	18.91
				36	0	18.16
				36	18	17.95
				36	39	18.10
	2562.5	21375		75	0	18.01
				1	0	18.88
				1	38	18.93
				1	74	18.66
				36	0	17.86
36			18	17.79		
256QAM	2507.5	20825	36	39	17.69	
			75	0	17.99	
			1	0	16.59	
			1	38	16.42	
			1	74	16.68	
			36	0	16.18	
	2535	21100	36	18	16.22	
			36	39	16.46	
			75	0	16.38	
			1	0	16.65	
			1	38	16.66	
			1	74	16.31	
	2562.5	21375	36	0	16.22	
			36	18	16.06	
			36	39	15.97	
			75	0	16.08	
			1	0	15.98	
			1	38	16.02	
		1	74	16.27		
		36	0	15.91		
		36	18	16.00		
		36	39	15.80		
		75	0	15.91		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2510	20850	20MHz	1	0	21.27
				1	50	21.22
				1	99	20.32
				50	0	20.28
				50	25	20.29
				50	50	20.65
	100	0		20.65		
	2535	21100		1	0	21.25
				1	50	21.24
				1	99	20.34
				50	0	20.24
				50	25	20.38
				50	50	20.40
	2560	21350		100	0	20.79
				1	0	21.30
				1	50	21.10
				1	99	20.39
				50	0	20.27
50			25	20.17		
16QAM	2510	20850	50	50	20.12	
			100	0	20.29	
			1	0	20.96	
			1	50	20.66	
			1	99	19.67	
			50	0	19.57	
	2535	21100	50	25	19.66	
			50	50	19.57	
			100	0	19.53	
			1	0	20.55	
			1	50	20.94	
			1	99	19.59	
	2560	21350	50	0	19.41	
			50	25	19.44	
			50	50	19.51	
			100	0	19.49	
			1	0	20.21	
			1	50	20.13	
			1	99	19.26	
			50	0	19.31	
			50	25	19.16	
			50	50	19.23	
			100	0	19.27	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2510	20850	20MHz	1	0	19.23
				1	50	19.18
				1	99	18.26
				50	0	18.23
				50	25	18.25
				50	50	18.58
	100	0		18.55		
	2535	21100		1	0	19.23
				1	50	19.17
				1	99	18.31
				50	0	18.19
				50	25	18.30
				50	50	18.35
	2560	21350		100	0	18.71
				1	0	19.23
				1	50	19.06
				1	99	18.29
				50	0	18.21
50			25	18.14		
256QAM	2510	20850	50	50	18.04	
			100	0	18.27	
			1	0	16.90	
			1	50	16.58	
			1	99	15.64	
			50	0	16.55	
	2535	21100	50	25	16.56	
			50	50	16.54	
			100	0	16.48	
			1	0	16.53	
			1	50	16.85	
			1	99	15.54	
	2560	21350	50	0	16.32	
			50	25	16.36	
			50	50	16.47	
			100	0	16.41	
			1	0	16.12	
			1	50	16.04	
			1	99	15.17	
			50	0	16.25	
			50	25	16.08	
			50	50	16.19	
			100	0	16.24	

### LTE Band 7(EN\_DC Hotspot on)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2502.5	20775	5MHz	1	0	18.06
				1	13	18.06
				1	24	17.99
				12	0	16.97
				12	6	17.00
				12	13	17.02
	25	0		16.89		
	2535	21100		1	0	17.79
				1	13	17.73
				1	24	17.89
				12	0	16.71
				12	6	16.69
				12	13	16.64
	2567.5	21425		25	0	16.62
				1	0	17.32
				1	13	17.30
				1	24	17.19
				12	0	16.29
12			6	16.38		
16QAM	2502.5	20775	12	13	16.43	
			25	0	16.40	
			1	0	17.43	
			1	13	17.05	
			1	24	17.09	
			12	0	16.00	
	2535	21100	12	6	15.95	
			12	13	15.96	
			25	0	15.94	
			1	0	16.89	
			1	13	17.48	
			1	24	16.87	
	2567.5	21425	12	0	15.77	
			12	6	15.74	
			12	13	15.89	
			25	0	15.69	
			1	0	17.04	
			1	13	16.68	
		1	24	16.82		
		12	0	15.56		
		12	6	15.61		
		12	13	15.64		
		25	0	15.58		



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2502.5	20775	5MHz	1	0	16.03
				1	13	16.10
				1	24	15.96
				12	0	14.94
				12	6	14.84
				12	13	15.07
	25	0		14.83		
	1	0		15.72		
	1	13		15.64		
	1	24		15.82		
	12	0		14.63		
	12	6		14.71		
	12	13		14.52		
	25	0		14.55		
	1	0		15.27		
	1	13		15.25		
	1	24		15.16		
	256QAM	2502.5		20775	12	0
12			6		14.22	
12			13		14.36	
25			0		14.39	
1			0		13.39	
1			13		13.05	
1		24	13.07			
12		0	12.95			
12		6	12.92			
12		13	12.94			
25		0	12.87			
1		0	12.86			
1		13	13.43			
1		24	12.86			
12		0	12.64			
12		6	12.72			
12		13	12.90			
25		0	12.67			
256QAM	2535	21100	1	0	12.93	
			1	13	12.66	
			1	24	12.86	
			12	0	12.48	
			12	6	12.53	
			12	13	12.54	
256QAM	2567.5	21425	25	0	12.48	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2505	20800	10MHz	1	0	17.99
				1	25	17.78
				1	49	18.10
				25	0	16.94
				25	13	17.01
				25	25	17.06
	50	0		16.93		
	2535	21100		1	0	17.72
				1	25	17.63
				1	49	17.30
				25	0	16.71
				25	13	16.61
				25	25	16.82
	2565	21400		50	0	16.65
				1	0	17.46
				1	25	17.24
				1	49	17.69
				25	0	16.51
25			13	16.46		
16QAM	2505	20800	25	25	16.55	
			50	0	16.56	
			1	0	17.41	
			1	25	16.76	
			1	49	16.95	
			25	0	16.00	
	2535	21100	25	13	16.11	
			25	25	16.04	
			50	0	15.93	
			1	0	17.13	
			1	25	17.25	
			1	49	16.86	
	2565	21400	25	0	15.85	
			25	13	15.61	
			25	25	15.64	
			50	0	15.68	
			1	0	16.90	
			1	25	16.65	
			1	49	16.96	
			25	0	15.54	
			25	13	15.45	
			25	25	15.38	
			50	0	15.48	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2505	20800	10MHz	1	0	15.94
				1	25	15.70
				1	49	16.02
				25	0	14.84
				25	13	14.98
				25	25	14.99
	50	0		14.88		
	2535	21100		1	0	15.73
				1	25	15.52
				1	49	15.22
				25	0	14.65
				25	13	14.57
				25	25	14.70
	2565	21400		50	0	14.63
				1	0	15.43
				1	25	15.19
				1	49	15.62
				25	0	14.42
25			13	14.33		
256QAM	2505	20800	25	25	14.46	
			50	0	14.56	
			1	0	13.26	
			1	25	12.73	
			1	49	12.80	
			25	0	12.91	
	2535	21100	25	13	13.01	
			25	25	12.93	
			50	0	12.98	
			1	0	13.13	
			1	25	13.17	
			1	49	12.82	
	2565	21400	25	0	12.75	
			25	13	12.59	
			25	25	12.62	
			50	0	12.62	
			1	0	12.86	
			1	25	12.51	
			1	49	12.86	
			25	0	12.45	
			25	13	12.38	
			25	25	12.30	
			50	0	12.45	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2507.5	20825	15MHz	1	0	18.01
				1	38	18.02
				1	74	18.09
				36	0	17.29
				36	18	17.21
				36	39	17.26
	75	0		17.37		
	2535	21100		1	0	18.02
				1	38	17.91
				1	74	17.95
				36	0	17.18
				36	18	16.95
				36	39	17.16
	2562.5	21375		75	0	17.01
				1	0	17.89
				1	38	17.91
				1	74	17.70
				36	0	16.81
36			18	16.77		
16QAM	2507.5	20825	36	39	16.72	
			75	0	17.00	
			1	0	17.57	
			1	38	17.40	
			1	74	17.69	
			36	0	16.22	
	2535	21100	36	18	16.22	
			36	39	16.47	
			75	0	16.39	
			1	0	17.65	
			1	38	17.64	
			1	74	17.32	
	2562.5	21375	36	0	16.22	
			36	18	16.03	
			36	39	15.99	
			75	0	16.12	
			1	0	16.99	
			1	38	17.04	
		1	74	17.29		
		36	0	15.92		
		36	18	15.96		
		36	39	15.84		
		75	0	15.86		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2507.5	20825	15MHz	1	0	15.98
				1	38	15.97
				1	74	16.03
				36	0	15.25
				36	18	15.19
				36	39	15.22
	75	0		15.33		
	1	0		15.96		
	1	38		15.90		
	1	74		15.89		
	36	0		15.13		
	36	18		14.90		
	36	39		15.05		
	75	0		14.94		
	1	0		15.84		
	1	38		15.84		
	1	74		15.59		
	36	0		14.83		
36	18	14.69				
36	39	14.59				
75	0	14.90				
256QAM	2507.5	20825	1	0	13.53	
			1	38	13.39	
			1	74	13.62	
			36	0	13.09	
			36	18	13.17	
			36	39	13.43	
	75	0	13.31			
	1	0	13.60			
	1	38	13.57			
	1	74	13.23			
	36	0	13.20			
	36	18	13.00			
	36	39	12.95			
	75	0	13.02			
	1	0	12.91			
	1	38	12.97			
	1	74	13.23			
	36	0	12.87			
36	18	12.98				
36	39	12.74				
75	0	12.88				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2510	20850	20MHz	1	0	18.21
				1	50	18.18
				1	99	17.29
				50	0	17.25
				50	25	17.26
				50	50	17.60
	100	0		17.59		
	2535	21100		1	0	18.15
				1	50	18.22
				1	99	17.24
				50	0	17.22
				50	25	17.28
				50	50	17.37
	2560	21350		100	0	17.70
				1	0	18.25
				1	50	18.08
				1	99	17.35
				50	0	17.22
50			25	17.09		
16QAM	2510	20850	50	50	17.10	
			100	0	17.23	
			1	0	17.93	
			1	50	17.56	
			1	99	16.60	
			50	0	16.51	
	2535	21100	50	25	16.63	
			50	50	16.47	
			100	0	16.48	
			1	0	17.51	
			1	50	17.87	
			1	99	16.53	
	2560	21350	50	0	16.36	
			50	25	16.38	
			50	50	16.43	
			100	0	16.47	
			1	0	17.19	
			1	50	17.03	
			1	99	16.24	
			50	0	16.26	
			50	25	16.12	
			50	50	16.15	
			100	0	16.17	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2510	20850	20MHz	1	0	16.14
				1	50	16.13
				1	99	15.18
				50	0	15.21
				50	25	15.21
				50	50	15.54
	100	0		15.48		
	2535	21100		1	0	16.20
				1	50	16.07
				1	99	15.29
				50	0	15.17
				50	25	15.26
				50	50	15.29
	2560	21350		100	0	15.68
				1	0	16.13
				1	50	15.98
				1	99	15.23
				50	0	15.13
50			25	15.07		
256QAM	2510	20850	50	50	14.96	
			100	0	15.17	
			1	0	13.87	
			1	50	13.55	
			1	99	12.58	
			50	0	13.46	
	2535	21100	50	25	13.49	
			50	50	13.52	
			100	0	13.44	
			1	0	13.49	
			1	50	13.79	
			1	99	12.46	
	2560	21350	50	0	13.29	
			50	25	13.27	
			50	50	13.41	
			100	0	13.35	
			1	0	13.09	
			1	50	13.00	
		1	99	12.13		
		50	0	13.16		
		50	25	13.04		
		50	50	13.16		
		100	0	13.19		

**LTE Band 38(Receiver off)**

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2572.5	37775	5MHz	1	0	22.42
				1	13	22.41
				1	24	22.40
				12	0	21.53
				12	6	21.56
				12	13	21.48
	25	0		21.48		
	2595	38000		1	0	22.25
				1	13	22.20
				1	24	22.05
				12	0	21.37
				12	6	21.33
				12	13	21.23
	25	0		21.24		
	2617.5	38225		1	0	22.04
				1	13	22.00
				1	24	22.02
				12	0	21.09
12			6	21.05		
12			13	21.10		
16QAM	2572.5	37775	25	0	21.02	
			1	0	21.50	
			1	13	21.38	
			1	24	21.48	
			12	0	20.51	
			12	6	20.47	
	12	13	20.46			
	25	0	20.54			
	2595	38000	1	0	21.25	
			1	13	21.36	
			1	24	21.30	
			12	0	20.29	
			12	6	20.22	
			12	13	20.12	
	25	0	20.34			
	2617.5	38225	1	0	21.24	
			1	13	21.20	
			1	24	21.19	
12			0	20.39		
12			6	20.30		
12			13	20.23		
25	0	20.24				



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2572.5	37775	5MHz	1	0	20.48
				1	13	20.28
				1	24	20.40
				12	0	19.45
				12	6	19.41
				12	13	19.38
	25	0		19.45		
	2595	38000		1	0	20.17
				1	13	20.31
				1	24	20.27
				12	0	19.24
				12	6	19.13
				12	13	19.03
	25	0		19.30		
	2617.5	38225		1	0	20.19
				1	13	20.18
				1	24	20.16
				12	0	19.29
12			6	19.24		
12			13	19.15		
256QAM	2572.5	37775	25	0	19.17	
			1	0	17.48	
			1	13	17.32	
			1	24	17.45	
			12	0	17.48	
			12	6	17.42	
	12	13	17.41			
	25	0	17.50			
	2595	38000	1	0	17.19	
			1	13	17.31	
			1	24	17.27	
			12	0	17.24	
			12	6	17.16	
			12	13	17.08	
	25	0	17.29			
	2617.5	38225	1	0	17.15	
			1	13	17.12	
			1	24	17.17	
12			0	17.35		
12			6	17.26		
12			13	17.19		
25	0	17.19				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2575	37800	10MHz	1	0	22.36
				1	25	22.42
				1	49	22.35
				25	0	21.47
				25	13	21.54
				25	25	21.44
	50	0		21.50		
	1	0		22.13		
	1	25		22.23		
	1	49		22.22		
	25	0		21.32		
	25	13		21.40		
	25	25		21.29		
	50	0		21.42		
	1	0		22.02		
	1	25		22.08		
	1	49		22.15		
	25	0		21.29		
25	13	21.29				
25	25	21.27				
50	0	21.23				
16QAM	2575	37800	1	0	21.57	
			1	25	21.65	
			1	49	21.53	
			25	0	20.61	
			25	13	20.52	
			25	25	20.55	
	50	0	20.57			
	1	0	21.43			
	1	25	21.50			
	1	49	21.44			
	25	0	20.54			
	25	13	20.61			
	25	25	20.50			
	50	0	20.50			
	1	0	21.31			
	1	25	21.59			
	1	49	21.27			
	25	0	20.39			
25	13	20.34				
25	25	20.14				
50	0	20.33				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2575	37800	10MHz	1	0	20.48
				1	25	20.63
				1	49	20.51
				25	0	19.54
				25	13	19.44
				25	25	19.47
	50	0		19.50		
	2595	38000		1	0	20.35
				1	25	20.42
				1	49	20.35
				25	0	19.51
				25	13	19.56
				25	25	19.44
	2615	38200		50	0	19.46
				1	0	20.23
				1	25	20.52
				1	49	20.18
				25	0	19.37
25			13	19.25		
256QAM	2575	37800	25	25	19.08	
			50	0	19.30	
			1	0	17.53	
			1	25	17.56	
			1	49	17.51	
			25	0	17.58	
	2595	38000	25	13	17.45	
			25	25	17.53	
			50	0	17.55	
			1	0	17.38	
			1	25	17.46	
			1	49	17.35	
	2615	38200	25	0	17.51	
			25	13	17.57	
			25	25	17.41	
			50	0	17.46	
			1	0	17.22	
			1	25	17.56	
			1	49	17.22	
			25	0	17.32	
			25	13	17.25	
			25	25	17.08	
			50	0	17.26	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2577.5	37825	15MHz	1	0	22.55
				1	38	22.39
				1	74	22.48
				36	0	21.61
				36	18	21.51
				36	39	21.41
	75	0		21.47		
	2595	38000		1	0	22.24
				1	38	22.30
				1	74	22.23
				36	0	21.33
				36	18	21.48
				36	39	21.30
	2612.5	38175		75	0	21.46
				1	0	22.25
				1	38	22.03
				1	74	22.11
				36	0	21.21
36			18	21.28		
16QAM	2577.5	37825	36	39	21.27	
			75	0	21.25	
			1	0	21.70	
			1	38	21.62	
			1	74	21.60	
			36	0	20.64	
	2595	38000	36	18	20.50	
			36	39	20.51	
			75	0	20.60	
			1	0	21.57	
			1	38	21.56	
			1	74	21.37	
	2612.5	38175	36	0	20.43	
			36	18	20.40	
			36	39	20.33	
			75	0	20.43	
			1	0	21.30	
			1	38	21.38	
			1	74	21.33	
			36	0	20.14	
			36	18	20.28	
			36	39	20.22	
			75	0	20.26	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2577.5	37825	15MHz	1	0	20.67
				1	38	20.58
				1	74	20.57
				36	0	19.54
				36	18	19.46
				36	39	19.47
				75	0	19.55
	2595	38000		1	0	20.53
				1	38	20.54
				1	74	20.31
				36	0	19.40
				36	18	19.37
				36	39	19.24
				75	0	19.37
	2612.5	38175		1	0	20.27
				1	38	20.30
				1	74	20.31
				36	0	19.06
				36	18	19.22
				36	39	19.15
				75	0	19.21
256QAM	2577.5	37825	1	0	17.61	
			1	38	17.57	
			1	74	17.51	
			36	0	17.62	
			36	18	17.48	
			36	39	17.43	
			75	0	17.50	
	2595	38000	1	0	17.53	
			1	38	17.49	
			1	74	17.33	
			36	0	17.33	
			36	18	17.33	
			36	39	17.28	
			75	0	17.38	
	2612.5	38175	1	0	17.25	
			1	38	17.36	
			1	74	17.27	
			36	0	17.12	
			36	18	17.20	
			36	39	17.15	
			75	0	17.20	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2580	37850	20MHz	1	0	22.30
				1	50	22.32
				1	99	22.30
				50	0	21.47
				50	25	21.45
				50	50	21.46
	100	0		21.53		
	2595	38000		1	0	22.04
				1	50	22.01
				1	99	22.34
				50	0	21.50
				50	25	21.19
				50	50	21.02
	2610	38150		100	0	21.18
				1	0	22.05
				1	50	22.01
				1	99	22.10
				50	0	21.01
50			25	21.15		
16QAM	2580	37850	50	50	21.16	
			100	0	21.00	
			1	0	21.72	
			1	50	21.60	
			1	99	21.64	
			50	0	20.66	
	2595	38000	50	25	20.52	
			50	50	20.16	
			100	0	20.18	
			1	0	21.27	
			1	50	21.08	
			1	99	21.18	
	2610	38150	50	0	20.20	
			50	25	20.18	
			50	50	20.10	
			100	0	20.19	
			1	0	21.14	
			1	50	21.07	
			1	99	21.07	
			50	0	20.01	
			50	25	20.10	
			50	50	20.01	
			100	0	20.10	
			100	0	20.10	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2580	37850	20MHz	1	0	20.68
				1	50	20.58
				1	99	20.54
				50	0	19.61
				50	25	19.44
				50	50	19.12
	100	0		19.11		
	2595	38000		1	0	20.19
				1	50	20.01
				1	99	20.13
				50	0	19.17
				50	25	19.16
				50	50	19.08
	100	0		19.10		
	2610	38150		1	0	20.07
				1	50	20.04
				1	99	20.08
				50	0	19.04
50			25	19.01		
50			50	19.06		
256QAM	2580	37850	100	0	19.01	
			1	0	17.69	
			1	50	17.50	
			1	99	17.58	
			50	0	17.64	
			50	25	17.42	
	50	50	17.12			
	2595	38000	100	0	17.11	
			1	0	17.18	
			1	50	17.00	
			1	99	17.08	
			50	0	17.14	
			50	25	17.09	
	50	50	17.04			
	2610	38150	100	0	17.12	
			1	0	17.09	
			1	50	17.05	
			1	99	17.04	
50			0	17.04		
50			25	17.07		
50	50	17.04				
100	0	17.08				

### LTE Band 38(Receiver on)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2572.5	37775	5MHz	1	0	18.46
				1	13	18.46
				1	24	18.36
				12	0	17.56
				12	6	17.54
				12	13	17.49
	25	0		17.52		
	1	0		18.30		
	1	13		18.20		
	1	24		18.03		
	12	0		17.34		
	12	6		17.32		
	12	13		17.22		
	25	0		17.26		
	1	0		18.08		
	1	13		18.00		
	1	24		18.07		
	12	0		17.13		
12	6	17.03				
12	13	17.12				
25	0	17.00				
16QAM	2572.5	37775	1	0	17.46	
			1	13	17.39	
			1	24	17.46	
			12	0	16.53	
			12	6	16.47	
			12	13	16.45	
	25	0	16.49			
	1	0	17.23			
	1	13	17.36			
	1	24	17.31			
	12	0	16.32			
	12	6	16.26			
	12	13	16.16			
	25	0	16.34			
	1	0	17.21			
	1	13	17.22			
	1	24	17.16			
	12	0	16.40			
12	6	16.28				
12	13	16.23				
25	0	16.24				
2617.5	38225	1	0	17.21		
		1	13	17.22		
		1	24	17.16		
		12	0	16.40		
		12	6	16.28		
		12	13	16.23		
25	0	16.24				



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2572.5	37775	5MHz	1	0	16.41
				1	13	16.43
				1	24	16.27
				12	0	15.47
				12	6	15.44
				12	13	15.43
	25	0		15.44		
	2595	38000		1	0	16.25
				1	13	16.15
				1	24	16.06
				12	0	15.30
				12	6	15.25
				12	13	15.13
	25	0		15.23		
	2617.5	38225		1	0	16.08
				1	13	16.05
				1	24	16.05
				12	0	15.06
12			6	15.01		
12			13	15.07		
256QAM	2572.5	37775	25	0	15.03	
			1	0	13.38	
			1	13	13.31	
			1	24	13.37	
			12	0	13.51	
			12	6	13.42	
	12	13	13.39			
	25	0	13.47			
	2595	38000	1	0	13.19	
			1	13	13.32	
			1	24	13.27	
			12	0	13.23	
			12	6	13.22	
			12	13	13.10	
	25	0	13.28			
	2617.5	38225	1	0	13.15	
			1	13	13.16	
			1	24	13.12	
12			0	13.32		
12			6	13.23		
12			13	13.15		
25	0	13.14				

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2575	37800	10MHz	1	0	18.35
				1	25	18.43
				1	49	18.31
				25	0	17.45
				25	13	17.55
				25	25	17.43
	50	0		17.45		
	2595	38000		1	0	18.11
				1	25	18.20
				1	49	18.25
				25	0	17.32
				25	13	17.35
				25	25	17.30
	2615	38200		50	0	17.46
				1	0	18.00
				1	25	18.05
				1	49	18.12
				25	0	17.33
25			13	17.29		
16QAM	2575	37800	25	25	17.29	
			50	0	17.18	
			1	0	17.55	
			1	25	17.65	
			1	49	17.54	
			25	0	16.59	
	2595	38000	25	13	16.48	
			25	25	16.53	
			50	0	16.52	
			1	0	17.46	
			1	25	17.48	
			1	49	17.49	
	2615	38200	25	0	16.53	
			25	13	16.58	
			25	25	16.53	
			50	0	16.49	
			1	0	17.34	
			1	25	17.62	
			1	49	17.25	
			25	0	16.42	
			25	13	16.37	
			25	25	16.18	
			50	0	16.28	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2575	37800	10MHz	1	0	16.31
				1	25	16.33
				1	49	16.27
				25	0	15.41
				25	13	15.50
				25	25	15.35
	50	0		15.36		
	2595	38000		1	0	16.07
				1	25	16.11
				1	49	16.18
				25	0	15.28
				25	13	15.29
				25	25	15.22
	2615	38200		50	0	15.43
				1	0	16.06
				1	25	16.03
				1	49	16.10
				25	0	15.31
25			13	15.19		
256QAM	2575	37800	25	25	15.24	
			50	0	15.11	
			1	0	13.51	
			1	25	13.59	
			1	49	13.49	
			25	0	13.56	
	2595	38000	25	13	13.46	
			25	25	13.49	
			50	0	13.46	
			1	0	13.41	
			1	25	13.39	
			1	49	13.47	
	2615	38200	25	0	13.50	
			25	13	13.48	
			25	25	13.48	
			50	0	13.44	
			1	0	13.26	
			1	25	13.55	
			1	49	13.23	
			25	0	13.38	
			25	13	13.29	
			25	25	13.08	
			50	0	13.24	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2577.5	37825	15MHz	1	0	18.53
				1	38	18.34
				1	74	18.46
				36	0	17.58
				36	18	17.48
				36	39	17.44
	75	0		17.47		
	2595	38000		1	0	18.28
				1	38	18.25
				1	74	18.24
				36	0	17.28
				36	18	17.44
				36	39	17.28
	2612.5	38175		75	0	17.41
				1	0	18.30
				1	38	18.03
				1	74	18.06
				36	0	17.17
36			18	17.30		
16QAM	2577.5	37825	36	39	17.32	
			75	0	17.25	
			1	0	17.67	
			1	38	17.67	
			1	74	17.55	
			36	0	16.64	
	2595	38000	36	18	16.46	
			36	39	16.56	
			75	0	16.62	
			1	0	17.57	
			1	38	17.57	
			1	74	17.38	
	2612.5	38175	36	0	16.47	
			36	18	16.41	
			36	39	16.28	
			75	0	16.44	
			1	0	17.29	
			1	38	17.34	
		1	74	17.38		
		36	0	16.18		
		36	18	16.25		
		36	39	16.26		
		75	0	16.22		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2577.5	37825	15MHz	1	0	16.47
				1	38	16.24
				1	74	16.36
				36	0	15.52
				36	18	15.44
				36	39	15.42
	75	0		15.43		
	2595	38000		1	0	16.20
				1	38	16.23
				1	74	16.16
				36	0	15.22
				36	18	15.35
				36	39	15.23
	2612.5	38175		75	0	15.36
				1	0	16.25
				1	38	16.09
				1	74	16.02
				36	0	15.14
36			18	15.23		
256QAM	2577.5	37825	36	39	15.24	
			75	0	15.21	
			1	0	13.64	
			1	38	13.59	
			1	74	13.47	
			36	0	13.62	
	2595	38000	36	18	13.39	
			36	39	13.53	
			75	0	13.58	
			1	0	13.49	
			1	38	13.47	
			1	74	13.30	
	2612.5	38175	36	0	13.43	
			36	18	13.36	
			36	39	13.22	
			75	0	13.36	
			1	0	13.20	
			1	38	13.25	
		1	74	13.32		
		36	0	13.10		
		36	18	13.15		
		36	39	13.19		
		75	0	13.16		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2580	37850	20MHz	1	0	18.32
				1	50	18.29
				1	99	18.33
				50	0	17.58
				50	25	17.56
				50	50	17.48
	100	0		17.51		
	2595	38000		1	0	18.00
				1	50	18.05
				1	99	18.34
				50	0	17.59
				50	25	17.15
				50	50	17.04
	2610	38150		100	0	17.17
				1	0	18.10
				1	50	18.06
				1	99	18.20
				50	0	17.04
50			25	17.17		
16QAM	2580	37850	50	50	17.21	
			100	0	17.03	
			1	0	17.75	
			1	50	17.63	
			1	99	17.68	
			50	0	16.71	
	2595	38000	50	25	16.56	
			50	50	16.11	
			100	0	16.13	
			1	0	17.25	
			1	50	17.05	
			1	99	17.21	
	2610	38150	50	0	16.17	
			50	25	16.17	
			50	50	16.09	
			100	0	16.23	
			1	0	17.13	
			1	50	17.05	
			1	99	17.12	
			50	0	16.05	
			50	25	16.09	
			50	50	16.05	
			100	0	16.11	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2580	37850	20MHz	1	0	16.25
				1	50	16.23
				1	99	16.29
				50	0	15.50
				50	25	15.52
				50	50	15.45
	100	0		15.42		
	2595	38000		1	0	16.08
				1	50	16.05
				1	99	16.24
				50	0	15.50
				50	25	15.05
				50	50	15.02
	2610	38150		100	0	15.14
				1	0	16.08
				1	50	16.01
				1	99	16.13
				50	0	15.07
50			25	15.11		
256QAM	2580	37850	50	50	15.16	
			100	0	15.06	
			1	0	13.67	
			1	50	13.59	
			1	99	13.58	
			50	0	13.65	
	2595	38000	50	25	13.46	
			50	50	13.01	
			100	0	13.10	
			1	0	13.15	
			1	50	13.03	
			1	99	13.13	
	2610	38150	50	0	13.08	
			50	25	13.09	
			50	50	13.06	
			100	0	13.16	
			1	0	13.11	
			1	50	13.01	
			1	99	13.06	
			50	0	13.08	
			50	25	13.05	
			50	50	13.02	
			100	0	13.05	
			100	0	13.05	

### LTE Band 41(Receiver off)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2498.5	39675	5MHz	1	0	23.06
				1	13	23.07
				1	24	22.96
				12	0	22.20
				12	6	22.26
				12	13	22.08
				25	0	22.19
	2545.8	40148		1	0	22.97
				1	13	22.97
				1	24	22.91
				12	0	22.15
				12	6	22.19
				12	13	22.02
				25	0	22.11
	2593	40620		1	0	23.06
				1	13	23.02
				1	24	22.97
				12	0	22.21
				12	6	22.27
				12	13	22.12
				25	0	22.17
	2640.3	41093		1	0	22.88
				1	13	22.92
				1	24	22.84
12			0	22.08		
12			6	22.12		
12			13	21.94		
25			0	22.04		
2687.5	41565	1	0	22.90		
		1	13	22.90		
		1	24	22.86		
		12	0	22.09		
		12	6	22.11		
		12	13	21.96		
		25	0	22.06		
16QAM	2498.5	39675	1	0	22.29	
			1	13	22.35	
			1	24	22.33	
			12	0	21.09	
			12	6	21.27	
			12	13	21.04	
			25	0	21.29	
	2545.8	40148	1	0	22.24	
			1	13	22.29	
			1	24	22.28	
			12	0	21.00	
			12	6	21.20	
			12	13	20.98	



	2593	40620	25	0	21.20
			1	0	22.32
			1	13	22.35
			1	24	22.33
			12	0	21.08
			12	6	21.25
	12	13	21.05		
	25	0	21.25		
	2640.3	41093	1	0	22.17
			1	13	22.20
			1	24	22.22
			12	0	20.93
			12	6	21.10
			12	13	20.89
	2687.5	41565	25	0	21.12
			1	0	22.17
			1	13	22.22
			1	24	22.22
12			0	20.92	
12			6	21.14	
12	13	20.92			
25	0	21.11			

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2498.5	39675	5MHz	1	0	21.00
				1	13	21.03
				1	24	20.88
				12	0	20.18
				12	6	20.20
				12	13	19.99
	25	0		20.17		
	2545.8	40148		1	0	20.91
				1	13	20.87
				1	24	20.85
				12	0	20.09
				12	6	20.13
				12	13	19.95
	2593	40620		25	0	20.03
				1	0	20.99
				1	13	20.92
				1	24	20.93
				12	0	20.15
				12	6	20.18
	12	13		20.02		
	25	0		20.10		
	2640.3	41093		1	0	20.82
				1	13	20.82
				1	24	20.82
12			0	19.98		
12	6	20.04				

	2687.5	41565		12	13	19.84
				25	0	19.95
				1	0	20.82
				1	13	20.81
				1	24	20.79
				12	0	20.04
				12	6	20.07
				12	13	19.87
				25	0	20.04
				1	0	18.23
	2498.5	39675		1	13	18.30
				1	24	18.25
				12	0	18.05
				12	6	18.19
				12	13	18.00
				25	0	18.27
				1	0	18.15
				1	13	18.25
				1	24	18.21
				12	0	17.91
	2545.8	40148		12	6	18.15
				12	13	17.92
				25	0	18.10
				1	0	18.29
				1	13	18.25
				1	24	18.24
				12	0	18.02
				12	6	18.20
				12	13	18.00
				25	0	18.15
256QAM	2593	40620		1	0	18.09
				1	13	18.16
				1	24	18.19
				12	0	17.86
				12	6	18.08
				12	13	17.82
				25	0	18.08
				1	0	18.15
				1	13	18.19
				1	24	18.20
	2640.3	41093		12	0	17.82
				12	6	18.10
				12	13	17.82
				25	0	18.08
				1	0	18.15
				1	13	18.19
				1	24	18.20
				12	0	17.82
				12	6	18.10
				12	13	17.82
	2687.5	41565		25	0	18.07

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2501	39700	10MHz	1	0	23.18
				1	25	23.09
				1	49	23.13
				25	0	22.41

	2547	40160	25	13	22.39
			25	25	22.49
			50	0	22.49
			1	0	23.14
			1	25	23.19
			1	49	23.16
			25	0	22.24
			25	13	22.33
			25	25	22.16
			50	0	22.20
	2593	40620	1	0	23.21
			1	25	23.15
			1	49	23.16
			25	0	22.32
			25	13	22.43
			25	25	22.26
			50	0	22.30
			1	0	23.09
			1	25	23.10
			1	49	23.09
2638	41080	25	0	22.14	
		25	13	22.26	
		25	25	22.10	
		50	0	22.12	
		1	0	23.04	
		1	25	23.13	
		1	49	23.10	
		25	0	22.18	
		25	13	22.27	
		25	25	22.10	
2685	41540	50	0	22.14	
		1	0	22.58	
		1	25	22.20	
		1	49	22.52	
		25	0	21.54	
		25	13	21.43	
		25	25	21.50	
		50	0	21.46	
		1	0	22.39	
		1	25	22.16	
16QAM	2547	40160	1	49	22.25
			25	0	21.36
			25	13	21.31
			25	25	21.32
			50	0	21.33
			1	0	22.47
			1	25	22.24
			1	49	22.35
			25	0	21.41
			25	13	21.36
2593	40620	25	25	21.37	

	2638	41080		50	0	21.41
				1	0	22.30
				1	25	22.06
				1	49	22.16
				25	0	21.31
				25	13	21.22
				25	25	21.26
	2685	41540		50	0	21.27
				1	0	22.32
				1	25	22.11
				1	49	22.17
				25	0	21.26
				25	13	21.26
				25	25	21.25
			50	0	21.24	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2501	39700	10MHz	1	0	21.15
				1	25	20.99
				1	49	21.07
				25	0	20.38
				25	13	20.37
				25	25	20.41
				50	0	20.40
	2547	40160		1	0	21.12
				1	25	21.17
				1	49	21.11
				25	0	20.20
				25	13	20.27
				25	25	20.10
				50	0	20.11
	2593	40620		1	0	21.11
				1	25	21.11
				1	49	21.06
				25	0	20.26
				25	13	20.41
				25	25	20.23
				50	0	20.28
	2638	41080		1	0	21.07
				1	25	21.08
				1	49	20.99
				25	0	20.05
				25	13	20.18
				25	25	20.04
				50	0	20.06
2685	41540	1	0	21.00		
		1	25	21.06		
		1	49	21.08		
		25	0	20.12		
		25	13	20.19		

				25	25	20.04	
				50	0	20.05	
256QAM	2501	39700		1	0	18.54	
				1	25	18.13	
				1	49	18.50	
				25	0	18.51	
				25	13	18.33	
				25	25	18.48	
				50	0	18.36	
				1	0	18.33	
	2547	40160			1	25	18.11
					1	49	18.19
					25	0	18.27
					25	13	18.23
					25	25	18.25
					50	0	18.28
					1	0	18.45
					1	25	18.20
	2593	40620			1	49	18.29
					25	0	18.37
					25	13	18.33
					25	25	18.33
					50	0	18.34
					1	0	18.21
					1	25	18.02
					1	49	18.06
	2638	41080			25	0	18.25
					25	13	18.16
					25	25	18.16
					50	0	18.25
1			0		18.27		
1			25		18.06		
1			49		18.14		
25			0		18.19		
2685	41540		25	13	18.23		
			25	25	18.22		
			50	0	18.19		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2503.5	39725	15MHz	1	0	23.09
				1	38	23.04
				1	74	23.13
				36	0	22.28
				36	18	22.35
				36	39	22.09
	2548.3	40173		75	0	22.31
				1	0	23.01
				1	38	22.96
				1	74	23.07
				36	0	22.20

			36	18	22.25			
			36	39	22.04			
			75	0	22.25			
			1	0	23.08			
			1	38	23.01			
			1	74	23.14			
			36	0	22.29			
			36	18	22.34			
			36	39	22.09			
			75	0	22.33			
			1	0	22.96			
			1	38	22.86			
			1	74	23.01			
			36	0	22.11			
			36	18	22.15			
36	39	21.97						
75	0	22.15						
			1	0	22.91			
			1	38	22.91			
			1	74	23.02			
			36	0	22.11			
			36	18	22.19			
			36	39	21.98			
			75	0	22.20			
			1	0	22.49			
			1	38	22.29			
			1	74	22.15			
			36	0	21.34			
			36	18	21.30			
			36	39	21.28			
			75	0	21.24			
						1	0	22.44
1	38	22.24						
1	74	22.07						
36	0	21.24						
36	18	21.24						
36	39	21.22						
75	0	21.16						
1	0	22.54						
1	38	22.29						
1	74	22.16						
36	0	21.31						
36	18	21.31						
36	39	21.31						
75	0	21.23						
						1	0	22.35
			1	38	22.16			
			1	74	21.97			
			36	0	21.14			
			36	18	21.18			
			36	39	21.15			
			16QAM	2503.5	39725	36	18	21.34
						36	39	21.28
						75	0	21.24
						1	0	22.44
						1	38	22.24
				2548.3	40173	1	74	22.07
						36	0	21.24
						36	18	21.24
						36	39	21.22
75	0	21.16						
2593	40620	1		0	22.54			
		1		38	22.29			
		1		74	22.16			
		36		0	21.31			
		36		18	21.31			
2637.8	41068	36	39	21.31				
		75	0	21.23				
		1	0	22.35				
		1	38	22.16				
		1	74	21.97				

	2682.5	41515		75	0	21.11
				1	0	22.37
				1	38	22.16
				1	74	22.00
				36	0	21.19
				36	18	21.18
				36	39	21.17
				75	0	21.11

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2503.5	39750	15MHz	1	0	21.05
				1	38	20.95
				1	74	21.03
				36	0	20.21
				36	18	20.30
				36	39	20.03
				75	0	20.24
	2548.3	40185		1	0	20.92
				1	38	20.94
				1	74	21.02
				36	0	20.14
				36	18	20.21
				36	39	20.00
				75	0	20.17
	2593	40620		1	0	21.02
				1	38	20.94
				1	74	21.11
				36	0	20.23
				36	18	20.29
				36	39	20.05
				75	0	20.25
	2637.8	41055		1	0	20.94
				1	38	20.83
				1	74	20.98
				36	0	20.05
				36	18	20.12
				36	39	19.95
				75	0	20.11
	2682.5	41490		1	0	20.82
				1	38	20.89
				1	74	20.98
				36	0	20.03
				36	18	20.09
				36	39	19.91
				75	0	20.16
	256QAM	2503.5		39750	1	0
1			38		18.19	
1			74		18.13	
36			0		18.28	
36			18		18.27	

	2548.3	40185	36	39	18.24
			75	0	18.14
			1	0	18.38
			1	38	18.16
			1	74	18.02
			36	0	18.18
			36	18	18.20
			36	39	18.19
			75	0	18.08
	2593	40620	1	0	18.45
			1	38	18.27
			1	74	18.11
			36	0	18.27
			36	18	18.26
			36	39	18.26
			75	0	18.21
			1	0	18.31
			1	38	18.09
	2637.8	41055	1	74	17.95
			36	0	18.07
			36	18	18.11
36			39	18.09	
75			0	18.07	
1			0	18.34	
1			38	18.09	
1			74	17.90	
36			0	18.15	
2682.5	41490	36	18	18.09	
		36	39	18.15	
		75	0	18.06	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2506	39750	20MHz	1	0	22.87
				1	50	22.99
				1	99	23.07
				50	0	22.06
				50	25	22.01
				50	50	21.86
				100	0	21.86
				1	0	22.82
				1	50	22.94
	1	99		23.02		
	2549.5	40185		50	0	21.98
				50	25	21.96
				50	50	21.79
				100	0	21.78
				1	0	22.91
				1	50	23.04
				1	99	23.20
				50	0	22.07
2593			40620	1	0	22.91
	1	50		23.04		
	1	99		23.20		



	2636.5	41055	50	25	22.04
			50	50	21.86
			100	0	21.86
			1	0	22.72
			1	50	22.89
			1	99	22.95
			50	0	21.93
			50	25	21.91
			50	50	21.71
			100	0	21.70
			1	0	22.89
			1	50	22.95
			1	99	22.96
			50	0	21.90
	2680	41490	50	25	21.74
			50	50	21.71
			100	0	21.89
			1	0	22.05
			1	50	21.90
			1	99	21.95
			50	0	20.84
			50	25	20.98
			50	50	20.86
			100	0	20.89
			1	0	21.99
			1	50	21.80
			1	99	21.89
			50	0	20.78
16QAM	2506	39750	50	25	20.89
			50	50	20.81
			100	0	20.83
			1	0	22.04
			1	50	21.89
			1	99	21.99
			50	0	20.85
			50	25	20.94
			50	50	20.86
			100	0	20.93
			1	0	21.94
			1	50	21.72
			1	99	21.81
			50	0	20.73
	2549.5	40185	50	25	20.83
			50	50	20.74
			100	0	20.75
			1	0	21.72
			1	50	21.80
			1	99	21.68
			50	0	20.79
			50	25	20.73
			50	50	20.74
			100	0	20.74
			1	0	21.72
			1	50	21.80
			1	99	21.68
			50	0	20.79
	2593	40620	50	25	20.73
			50	50	20.73
			100	0	20.73
			1	0	21.72
			1	50	21.80
			1	99	21.68
			50	0	20.79
			50	25	20.73
			50	50	20.74
			100	0	20.74
			1	0	21.72
			1	50	21.80
			1	99	21.68
			50	0	20.79
	2636.5	41055	50	25	20.73
			50	50	20.73
			100	0	20.73
			1	0	21.72
			1	50	21.80
			1	99	21.68
			50	0	20.79
			50	25	20.73
			50	50	20.74
			100	0	20.74
			1	0	21.72
			1	50	21.80
			1	99	21.68
			50	0	20.79
	2680	41490	50	25	20.73
			50	50	20.73
			100	0	20.73
			1	0	21.72
			1	50	21.80
			1	99	21.68
			50	0	20.79
			50	25	20.73
			50	50	20.74
			100	0	20.74
			1	0	21.72
			1	50	21.80
			1	99	21.68
			50	0	20.79

				100	0	20.94
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Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2506	39750	20MHz	1	0	20.81
				1	50	20.91
				1	99	21.03
				50	0	19.97
				50	25	19.91
				50	50	19.83
				100	0	19.76
	2549.5	40185		1	0	20.73
				1	50	20.84
				1	99	20.92
				50	0	19.88
				50	25	19.88
				50	50	19.69
				100	0	19.75
	2593	40620		1	0	20.84
				1	50	20.94
				1	99	21.18
				50	0	19.98
				50	25	19.96
				50	50	19.77
				100	0	19.79
	2636.5	41055		1	0	20.69
				1	50	20.79
				1	99	20.93
				50	0	19.84
				50	25	19.82
				50	50	19.63
				100	0	19.62
	2680	41490		1	0	20.87
				1	50	20.86
				1	99	20.88
				50	0	19.86
				50	25	19.68
				50	50	19.63
				100	0	19.85
	256QAM	2506		39750	1	0
1			50		17.85	
1			99		17.86	
50			0		17.81	
50			25		17.93	
50			50		17.82	
100			0		17.79	
2549.5		40185	1	0	17.93	
			1	50	17.78	
			1	99	17.82	
			50	0	17.68	
			50	25	17.82	

	2593	40620	50	50	17.76
			100	0	17.75
			1	0	18.01
			1	50	17.86
			1	99	17.95
			50	0	17.77
			50	25	17.85
			50	50	17.81
			100	0	17.88
			1	0	17.86
	2636.5	41055	1	50	17.63
			1	99	17.76
			50	0	17.71
			50	25	17.76
			50	50	17.66
			100	0	17.70
			1	0	17.68
			1	50	17.76
			1	99	17.59
			50	0	17.75
2680	41490	50	25	17.69	
		50	50	17.68	
		100	0	17.87	

**LTE Band 41(Receiver on)**

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2498.5	39675	5MHz	1	0	19.04
				1	13	19.07
				1	24	18.96
				12	0	18.21
				12	6	18.29
				12	13	18.08
				25	0	18.22
	2545.8	40148		1	0	19.00
				1	13	18.99
				1	24	18.96
				12	0	18.13
				12	6	18.23
				12	13	18.06
				25	0	18.13
	2593	40620		1	0	19.11
				1	13	19.00
				1	24	18.97
				12	0	18.20
				12	6	18.32
				12	13	18.12
				25	0	18.16
	2640.3	41093		1	0	18.91
				1	13	18.88
				1	24	18.87
12			0	18.13		
12			6	18.07		
12			13	17.96		
25			0	18.04		
2687.5	41565	1	0	18.89		
		1	13	18.88		
		1	24	18.87		
		12	0	18.13		
		12	6	18.13		
		12	13	17.98		
		25	0	18.05		
16QAM	2498.5	39675	1	0	18.31	
			1	13	18.36	
			1	24	18.35	
			12	0	17.04	
			12	6	17.23	
			12	13	17.09	
			25	0	17.27	
	2545.8	40148	1	0	18.26	
			1	13	18.32	
			1	24	18.31	
			12	0	17.02	
			12	6	17.23	
			12	13	16.97	

	2593	40620		25	0	17.19
				1	0	18.30
				1	13	18.35
				1	24	18.36
				12	0	17.07
				12	6	17.29
				12	13	17.08
	25	0		17.28		
	2640.3	41093		1	0	18.12
				1	13	18.16
				1	24	18.25
				12	0	16.90
				12	6	17.14
				12	13	16.91
				25	0	17.15
2687.5	41565	1	0	18.19		
		1	13	18.25		
		1	24	18.21		
		12	0	16.89		
		12	6	17.13		
		12	13	16.91		
		25	0	17.10		

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2498.5	39675	5MHz	1	0	17.00
				1	13	16.97
				1	24	16.87
				12	0	16.17
				12	6	16.26
				12	13	16.06
				25	0	16.13
	2545.8	40148		1	0	16.90
				1	13	16.97
				1	24	16.92
				12	0	16.06
				12	6	16.15
				12	13	16.00
				25	0	16.05
	2593	40620		1	0	17.06
				1	13	16.92
				1	24	16.92
				12	0	16.16
				12	6	16.22
				12	13	16.03
25			0	16.12		
2640.3	41093	1	0	16.82		
		1	13	16.80		
		1	24	16.77		
		12	0	16.11		
		12	6	16.02		

	2687.5	41565	12	13	15.91
			25	0	15.97
			1	0	16.84
			1	13	16.78
			1	24	16.82
			12	0	16.07
			12	6	16.07
			12	13	15.90
			25	0	16.01
			1	0	14.27
				2498.5	39675
1	24	14.31			
12	0	13.99			
12	6	14.20			
12	13	14.03			
25	0	14.19			
1	0	14.20			
1	13	14.27			
1	24	14.22			
12	0	13.96			
	2545.8	40148			
			12	13	13.90
			25	0	14.10
			1	0	14.22
			1	13	14.33
			1	24	14.32
			12	0	14.02
			12	6	14.26
			12	13	14.04
			25	0	14.20
				2593	40620
1	13	14.12			
1	24	14.19			
12	0	13.84			
12	6	14.07			
12	13	13.89			
25	0	14.13			
1	0	14.14			
1	13	14.19			
1	24	14.12			
	2640.3	41093			
			12	6	14.08
			12	13	13.83
			25	0	14.07
			1	0	14.14
			1	13	14.19
			1	24	14.12
			12	0	13.85
			12	6	14.08
			12	13	13.83
				2687.5	41565

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2501	39700	10MHz	1	0	19.23
				1	25	19.12
				1	49	19.12
				25	0	18.43

	2547	40160	25	13	18.38
			25	25	18.54
			50	0	18.53
			1	0	19.12
			1	25	19.19
			1	49	19.15
			25	0	18.19
			25	13	18.31
			25	25	18.12
			50	0	18.22
	2593	40620	1	0	19.22
			1	25	19.12
			1	49	19.18
			25	0	18.33
			25	13	18.46
			25	25	18.23
			50	0	18.25
			1	0	19.13
			1	25	19.07
			1	49	19.12
2638	41080	25	0	18.12	
		25	13	18.26	
		25	25	18.14	
		50	0	18.16	
		1	0	19.03	
		1	25	19.11	
		1	49	19.12	
		25	0	18.13	
		25	13	18.24	
		25	25	18.13	
2685	41540	50	0	18.12	
		1	0	18.57	
		1	25	18.25	
		1	49	18.55	
		25	0	17.50	
		25	13	17.48	
		25	25	17.46	
		50	0	17.45	
		1	0	18.42	
		1	25	18.15	
16QAM	2547	40160	1	49	18.20
			25	0	17.33
			25	13	17.31
			25	25	17.36
			50	0	17.36
			1	0	18.45
			1	25	18.26
			1	49	18.34
			25	0	17.37
			25	13	17.32
	2593	40620	25	25	17.34

	2638	41080		50	0	17.37
				1	0	18.29
				1	25	18.01
				1	49	18.15
				25	0	17.26
				25	13	17.20
				25	25	17.30
	2685	41540		50	0	17.26
				1	0	18.36
				1	25	18.09
				1	49	18.16
				25	0	17.29
				25	13	17.24
				25	25	17.30
			50	0	17.22	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2501	39700	10MHz	1	0	17.13
				1	25	17.08
				1	49	17.09
				25	0	16.38
				25	13	16.30
				25	25	16.50
				50	0	16.50
	2547	40160		1	0	17.03
				1	25	17.12
				1	49	17.11
				25	0	16.12
				25	13	16.24
				25	25	16.10
				50	0	16.16
	2593	40620		1	0	17.16
				1	25	17.04
				1	49	17.13
				25	0	16.26
				25	13	16.37
				25	25	16.14
				50	0	16.20
	2638	41080		1	0	17.08
				1	25	17.01
				1	49	17.08
				25	0	16.07
				25	13	16.18
				25	25	16.06
				50	0	16.12
	2685	41540		1	0	16.94
				1	25	17.05
				1	49	17.09
				25	0	16.07
25			13	16.21		



256QAM	2501	39700	25	25	16.08
			50	0	16.04
			1	0	14.50
			1	25	14.18
			1	49	14.46
			25	0	14.45
			25	13	14.44
			25	25	14.37
	2547	40160	50	0	14.38
			1	0	14.34
			1	25	14.09
			1	49	14.14
			25	0	14.23
			25	13	14.26
			25	25	14.28
			50	0	14.31
	2593	40620	1	0	14.43
			1	25	14.23
			1	49	14.24
			25	0	14.35
			25	13	14.23
			25	25	14.32
			50	0	14.33
			2638	41080	1
	1	25			13.98
	1	49			14.08
	25	0			14.22
	25	13			14.13
25	25	14.23			
50	0	14.20			
2685	41540	1			0
		1	25	13.99	
		1	49	14.09	
		25	0	14.27	
		25	13	14.17	
		25	25	14.23	
		50	0	14.20	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
QPSK	2503.5	39725	15MHz	1	0	19.09
				1	38	19.04
				1	74	19.14
				36	0	18.26
				36	18	18.36
				36	39	18.05
	2548.3	40173		75	0	18.36
				1	0	18.98
				1	38	19.00
				1	74	19.03
				36	0	18.18

			36	18	18.25
			36	39	18.07
			75	0	18.23
			1	0	19.11
			1	38	18.96
			1	74	19.09
			36	0	18.33
			36	18	18.36
			36	39	18.10
			75	0	18.36
			1	0	18.98
			1	38	18.83
			1	74	18.97
			36	0	18.07
			36	18	18.10
36	39	18.02			
			75	0	18.10
			1	0	18.94
			1	38	18.91
			1	74	19.00
			36	0	18.13
			36	18	18.17
			36	39	17.96
			75	0	18.19
			1	0	18.45
			1	38	18.29
			1	74	18.15
			36	0	17.31
			36	18	17.30
			36	39	17.28
			16QAM		
1	0	18.39			
1	38	18.20			
1	74	18.05			
36	0	17.23			
36	18	17.28			
36	39	17.20			
75	0	17.17			
1	0	18.49			
1	38	18.32			
1	74	18.20			
36	0	17.33			
36	18	17.35			
36	39	17.29			
			1	0	18.32
			1	38	18.21
			1	74	17.93
			36	0	17.16
			36	18	17.17
			36	39	17.20

	2682.5	41515		75	0	17.07
				1	0	18.37
				1	38	18.13
				1	74	17.95
				36	0	17.24
				36	18	17.19
				36	39	17.19
				75	0	17.06

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2503.5	39750	15MHz	1	0	17.03
				1	38	17.01
				1	74	17.12
				36	0	16.22
				36	18	16.34
				36	39	16.00
				75	0	16.34
	2548.3	40185		1	0	16.94
				1	38	16.98
				1	74	16.94
				36	0	16.13
				36	18	16.15
				36	39	16.05
				75	0	16.13
	2593	40620		1	0	17.07
				1	38	16.91
				1	74	17.00
				36	0	16.27
				36	18	16.31
				36	39	16.02
				75	0	16.34
	2637.8	41055		1	0	16.88
				1	38	16.75
				1	74	16.88
				36	0	15.98
				36	18	16.00
				36	39	15.95
				75	0	16.07
	2682.5	41490		1	0	16.89
				1	38	16.83
				1	74	16.92
				36	0	16.05
				36	18	16.12
				36	39	15.90
				75	0	16.09
	256QAM	2503.5		39750	1	0
1			38		14.19	
1			74		14.12	
36			0		14.23	
36			18		14.24	

	2548.3	40185	36	39	14.22
			75	0	14.25
			1	0	14.33
			1	38	14.17
			1	74	13.95
			36	0	14.21
			36	18	14.24
			36	39	14.17
			75	0	14.14
	2593	40620	1	0	14.39
			1	38	14.26
			1	74	14.16
			36	0	14.31
			36	18	14.29
			36	39	14.19
			75	0	14.21
			1	0	14.26
			1	38	14.18
	2637.8	41055	1	74	13.88
			36	0	14.11
			36	18	14.10
36			39	14.15	
75			0	14.02	
1			0	14.33	
1			38	14.03	
1			74	13.92	
36			0	14.14	
2682.5	41490	36	18	14.15	
		36	39	14.16	
		75	0	14.03	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)		
QPSK	2506	39750	20MHz	1	0	18.88		
				1	50	19.01		
				1	99	19.02		
				50	0	18.03		
				50	25	18.01		
				50	50	17.81		
				100	0	17.90		
				1	0	18.78		
				1	50	18.90		
	2549.5	40185		1	99	19.01		
				50	0	17.94		
				50	25	17.94		
				50	50	17.83		
				100	0	17.83		
				2593	40620	1	0	18.96
						1	50	19.02
						1	99	19.20
						50	0	18.10

	2636.5	41055	50	25	18.09			
			50	50	17.81			
			100	0	17.91			
			1	0	18.70			
			1	50	18.86			
			1	99	19.00			
			50	0	17.92			
			50	25	17.87			
			50	50	17.76			
			100	0	17.68			
			1	0	18.84			
			1	50	18.93			
			1	99	18.95			
			50	0	17.86			
	2680	41490	50	25	17.78			
			50	50	17.67			
			100	0	17.87			
			1	0	18.08			
			1	50	17.95			
			1	99	17.99			
			50	0	16.79			
			50	25	17.02			
			50	50	16.89			
			100	0	16.94			
			1	0	17.97			
			1	50	17.77			
			1	99	17.90			
			50	0	16.79			
16QAM	2549.5	40185	50	25	16.90			
			50	50	16.79			
			100	0	16.86			
			1	0	18.04			
			1	50	17.87			
			1	99	17.94			
			50	0	16.82			
			50	25	16.96			
			50	50	16.87			
			100	0	16.90			
			1	0	17.99			
			1	50	17.67			
			1	99	17.81			
			50	0	16.71			
	2593	40620	50	25	16.81			
			50	50	16.73			
			100	0	16.74			
			1	0	17.71			
			1	50	17.79			
			1	99	17.63			
			50	0	16.75			
			50	25	16.78			
			50	50	16.76			
				2636.5	41055	50	25	16.76
						50	50	16.76
						100	0	16.74
						1	0	17.71
						1	50	17.79
1	99	17.63						
50	0	16.75						
50	25	16.78						
50	50	16.76						
	2680	41490				50	25	16.78
						50	50	16.78
						100	0	16.74
						1	0	17.71
						1	50	17.79
			1	99	17.63			
			50	0	16.75			
			50	25	16.78			
			50	50	16.76			

				100	0	16.92
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Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
64QAM	2506	39750	20MHz	1	0	16.80
				1	50	16.96
				1	99	17.00
				50	0	15.99
				50	25	15.93
				50	50	15.71
	100	0		15.83		
	2549.5	40185		1	0	16.76
				1	50	16.83
				1	99	16.95
				50	0	15.91
				50	25	15.87
				50	50	15.78
	100	0		15.81		
	2593	40620		1	0	16.94
				1	50	16.95
				1	99	17.11
				50	0	16.03
				50	25	16.00
				50	50	15.79
	100	0		15.83		
	2636.5	41055		1	0	16.67
				1	50	16.81
				1	99	16.94
50			0	15.83		
50			25	15.84		
50			50	15.67		
100	0	15.60				
2680	41490	1	0	16.77		
		1	50	16.89		
		1	99	16.90		
		50	0	15.79		
		50	25	15.75		
		50	50	15.59		
100	0	15.83				
256QAM	2506	39750	1	0	14.05	
			1	50	13.85	
			1	99	13.94	
			50	0	13.75	
			50	25	13.97	
			50	50	13.79	
	100	0	13.91			
	2549.5	40185	1	0	13.90	
			1	50	13.68	
			1	99	13.80	
			50	0	13.72	
			50	25	13.84	
50			50	13.84		

	2593	40620	50	50	13.72
			100	0	13.82
			1	0	13.99
			1	50	13.85
			1	99	13.92
			50	0	13.80
			50	25	13.89
			50	50	13.84
			100	0	13.88
			1	0	13.90
	2636.5	41055	1	50	13.61
			1	99	13.77
			50	0	13.67
			50	25	13.78
			50	50	13.67
			100	0	13.70
			1	0	13.62
			1	50	13.70
	2680	41490	1	99	13.56
			50	0	13.66
50			25	13.69	
50			50	13.66	
100			0	13.86	

## LTE UL CA and DL CA

### Uplink CA:

Combination	Modulation	PCC						SCC					Full power		Hotspot on	
		Band	BW (MHz)	UL Channel	UL# RB	UL RB Offset	DL Channel	Band	BW (MHz)	UL Channel	UL# RB	UL RB Offset	Power	Tune-up(dBm)	Power	Tune-up(dBm)
CA_7C	QPSK	7	20	20850	1	99	2850	7	20	21048	1	0	23.15	24.00	20.85	22.00
CA_7C	QPSK	7	20	21100	1	99	3100	7	20	21298	1	0	23.10	24.00	20.84	22.00
CA_7C	QPSK	7	20	21100	1	0	3100	7	20	20902	1	99	23.13	24.00	20.86	22.00
CA_7C	QPSK	7	20	21350	1	0	3350	7	20	21152	1	99	23.16	24.00	20.95	22.00

Combination	Modulation	PCC						SCC					Receiver off		Receiver on	
		Band	BW (MHz)	UL Channel	UL# RB	UL RB Offset	DL Channel	Band	BW (MHz)	UL Channel	UL# RB	UL RB Offset	Power	Tune-up(dBm)	Power	Power
CA_38C	QPSK	38	20	37850	1	99	37850	38	20	38048	1	0	22.07	24.00	18.15	20.00
CA_38C	QPSK	38	20	37901	1	99	37901	38	20	38099	1	0	22.01	24.00	18.14	20.00
CA_38C	QPSK	38	20	38099	1	0	38099	38	20	37901	1	99	22.06	24.00	18.10	20.00
CA_38C	QPSK	38	20	38150	1	0	38150	38	20	37952	1	99	22.04	24.00	18.16	20.00

Combination	Modulation	PCC						SCC					Receiver off		Receiver on	
		Band	BW (MHz)	UL Channel	UL# RB	UL RB Offset	DL Channel	Band	BW (MHz)	UL Channel	UL# RB	UL RB Offset	Power	Tune-up(dBm)	Power	Tune-up(dBm)
CA_41C	QPSK	41	20	39750	1	99	39750	41	20	39948	1	0	23.06	24.00	18.82	20.00
CA_41C	QPSK	41	20	40185	1	99	40185	41	20	40383	1	0	23.05	24.00	19.00	20.00
CA_41C	QPSK	41	20	40620	1	99	40620	41	20	40818	1	0	22.89	24.00	18.91	20.00
CA_41C	QPSK	41	20	41055	1	99	41055	41	20	40857	1	0	22.90	24.00	18.98	20.00
CA_41C	QPSK	41	20	41490	1	99	41490	41	20	41292	1	0	22.85	24.00	18.88	20.00
CA_41C	QPSK	41	20	39750	1	0	39750	41	20	39948	1	99	22.94	24.00	18.98	20.00
CA_41C	QPSK	41	20	40185	1	0	40185	41	20	40383	1	99	22.74	24.00	18.81	20.00
CA_41C	QPSK	41	20	40620	1	0	40620	41	20	40818	1	99	22.95	24.00	18.75	20.00
CA_41C	QPSK	41	20	41055	1	0	41055	41	20	40857	1	99	22.85	24.00	18.76	20.00
CA_41C	QPSK	41	20	41490	1	0	41490	41	20	41292	1	99	22.87	24.00	18.89	20.00

### Note:

- 1) This device supports uplink carrier aggregation for LTE CA\_7C, CA\_38C, CA\_41C with a maximum of two 20MHz component carriers.
- 2) According to FCC guidance, the output power with uplink CA active was measured for the high / middle / low channel configuration with the highest reported SAR for each exposure condition, the power was measured with wideband signal integration over both component carriers.
- 3) In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs.
- 4) Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05.



## 6.5 5G NR Measurement result

1. For this report, NR Band n5/n7/n38/n41/n78 support SN and NSA mode. NSA mode operations are possible only with LTE under EN-DC mode and the operations are possible as following table:

Band/Antenna		N78	N38	N41	N5	N7
		Ant2	Ant1	Ant1	Ant4	Ant1
LTE B7	Ant4	v			v	
LTE B2	Ant5	v		v		v
LTE B5	Ant4	v	v			v
LTE B12	Ant4	v	v	v		v
LTE B13	Ant4	v				
LTE B66	Ant5	v		v	v	
LTE B4	Ant5			v		

2. The general information supported by the NR band is as following table:

Band		n5	n7	n38	n41	n78
NR mode		SA	Yes	Yes	Yes	Yes
		NSA	Yes	Yes	Yes	Yes
Modulation	DFT-s-OFDM	PI/2 BPSK	Yes	Yes	Yes	Yes
		QPSK	Yes	Yes	Yes	Yes
		16QAM	Yes	Yes	Yes	Yes
		64QAM	Yes	Yes	Yes	Yes
		256QAM	Yes	Yes	Yes	Yes
	CP-OFDM	QPSK	Yes	Yes	Yes	Yes
		16QAM	Yes	Yes	Yes	Yes
		64QAM	Yes	Yes	Yes	Yes
		256QAM	Yes	Yes	Yes	Yes
		Duty Cycle		100%	100%	25%

Band	SCS	Bandwidth												
		5Mhz	10Mhz	15Mhz	20Mhz	25Mhz	30Mhz	40Mhz	50Mhz	60Mhz	70Mhz	80Mhz	90Mhz	100Mhz
n5	15KHZ	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n7	15KHZ	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n38	15KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A
n41	15KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes
n78	15KHZ	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30KHZ	N/A	N/A	N/A	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
- a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 3GPP 38.101 maximum power reduction for power class 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not  $\frac{1}{2}$  dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is  $\leq 1.45$  W/kg; CP-OFDM testing is not required.
  - b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class 3, for PI/2 BPSK/16QAM/64QMA/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the PI/2 BPSK/16QAM/64QMA/256QAM and smaller bandwidth output power will not  $\frac{1}{2}$  dB higher than the same configuration in the largest supported bandwidth.
  - c. SAR testing start with the largest SCS and largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
  - d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
  - e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are  $\leq 0.8$  W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
  - f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not  $\frac{1}{2}$  dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM/64QAM/256QAM SAR testing are not required.
  - g. Smaller SCS/bandwidth output power for each RB allocation configuration for this device will not  $\frac{1}{2}$  dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is  $\leq 1.45$  W/kg, smaller bandwidth SAR testing is not required for this device.

#### 4. MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS 38.101-1 Section 6.2.2 under Table 6.2.2 -1.

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	PI/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
		$\leq 0.5^2$	$\leq 0.5^2$	$0^2$
	QPSK	$\leq 1$		0
	16 QAM	$\leq 2$		$\leq 1$
	64 QAM	$\leq 2.5$		
	256 QAM	$\leq 4.5$		
CP-OFDM	QPSK	$\leq 3$		$\leq 1.5$
	16 QAM	$\leq 3$		$\leq 2$
	64 QAM	$\leq 3.5$		
	256 QAM	$\leq 6.5$		

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability powerBoosting-pi2BPSK and if the IE powerBoostPi2BPSK is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE powerBoostPi2BPSK is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

5. For FDD NR Band operation does not have the fixed UL/DL frame structure, but during the transmitting/receiving it can be operated in the slot structure of 100% UL duty cycle, we are proposing the conservative way to evaluate SAR at 100% duty cycle. For the purpose of test NR Band standalone SAR, and also test SAR level at 100% TX duty cycle.

6. For 5G NR Sub6GHz SISO Mode, SAR Test plan as below:

1) For 5G NR NSA mode with the same UL EN\_DC combination but different DL EN\_DC combinations, eg: EN-DC configuration: UL DC\_7A\_n5 (UL two bands) with DL DC\_7C\_n5 (DL two bands)

a) The UL EN-DC configuration, including the Tx antenna configuration, RF path, the channel bandwidth and other operating parameters are the same.

b) The maximum output power, including tolerance, for the UL EN-DC configuration with DL two or more bands must be  $\leq$  the same UL EN-DC configuration with DL two bands only to qualify for the SAR test exclusion.

7. For EN-DC SAR, as the existing SAR test system cannot test the multiple different frequency bands simultaneous Transmission SAR at the same time, we suggest that the conservative "max + max" multi-Tx and SAR scaling method can be used to evaluate the inter-band Uplink EN-DC SAR from standalone SAR test results of each LTE and NR EN-DC component band and the conservative "max + max" multi-Tx method to combine the scaled SAR value from each EN-DC component band as the inter-band Uplink EN-DC SAR. All Simultaneous Transmission Scenarios will be evaluated independently in the final SAR report.

8. When the reported SAR for and EN DC configuration is greater than 1.2 W/kg, EN DC SAR is also required for other NR based test channels.

9. EN DC SAR is also required for standalone NR configurations greater than 1.2 W/kg when scaled to the EN DC power level.

**N5**

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
DFT-s-OFDM PI/2 BPSK	834	166800	20MHz	1	1	22.08
				1	53	22.42
				1	104	22.04
				50	0	21.78
				50	28	22.35
				50	56	21.83
	100	0		21.85		
	836.5	167300		1	1	22.12
				1	53	22.44
				1	104	22.08
				50	0	21.78
				50	28	22.38
				50	56	21.84
	839	167800		100	0	21.88
				1	1	22.07
				1	53	22.42
				1	104	22.03
				50	0	21.76
50			28	22.38		
DFT-s-OFDM QPSK	834	166800	50	56	21.84	
			100	0	21.83	
			1	1	22.13	
			1	53	22.46	
			1	104	22.10	
			50	0	21.73	
	836.5	167300	50	28	22.38	
			50	56	21.64	
			100	0	21.65	
			1	1	22.16	
			1	53	22.49	
			1	104	22.15	
	839	167800	50	0	21.74	
			50	28	22.40	
			50	56	21.65	
			100	0	21.66	
			1	1	22.15	
			1	53	22.46	
DFT-s-OFDM 16QAM	834	166800	1	104	22.11	
	836.5	167300	50	0	21.74	
	839	167800	50	28	22.37	
DFT-s-OFDM 64QAM	834	166800	50	56	21.65	
	836.5	167300	100	0	21.66	
	839	167800	1	1	22.18	
DFT-s-OFDM 256QAM	834	166800	1	1	21.18	
	836.5	167300	1	1	21.23	
	839	167800	1	1	21.22	
DFT-s-OFDM 256QAM	834	166800	1	1	20.92	
	836.5	167300	1	1	20.96	
	839	167800	1	1	20.95	
DFT-s-OFDM 256QAM	834	166800	1	1	18.91	
	836.5	167300	1	1	18.95	
	839	167800	1	1	18.94	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
						(dBm)
CP-OFDM QPSK	834	166800	20MHz	1	1	21.45
	836.5	167300		1	1	21.50
	839	167800		1	1	21.40
DFT-s-OFDM QPSK	831.5	166300	15MHz	1	1	22.44
	836.5	167300		1	1	22.45
	841.5	168300		1	1	22.36
DFT-s-OFDM QPSK	829	165800	10MHz	1	1	22.35
	836.5	167300		1	1	22.41
	844	168800		1	1	22.34
DFT-s-OFDM QPSK	826.5	165300	5MHz	1	1	22.35
	836.5	167300		1	1	22.43
	846.5	169300		1	1	22.34

### N7(Full power)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
DFT-s-OFDM PI/2 BPSK	2510	502000	20MHz	1	1	22.81
				1	53	22.71
				1	104	22.61
				50	0	21.72
				50	28	22.53
				50	56	21.60
	100	0		21.55		
	2535	507000		1	1	22.82
				1	53	22.75
				1	104	22.65
				50	0	21.76
				50	28	22.56
				50	56	21.64
	100	0		21.56		
	2560	512000		1	1	22.80
				1	53	22.70
				1	104	22.64
				50	0	21.71
50			28	22.51		
50			56	21.61		
100	0	21.51				
DFT-s-OFDM QPSK	2510	502000	1	1	22.82	
			1	53	22.72	
			1	104	22.51	
			50	0	21.71	
			50	28	22.51	
			50	56	21.59	
	100	0	21.52			
	2535	507000	1	1	22.83	
			1	53	22.75	
			1	104	22.56	
			50	0	21.74	

	2560	512000	50	28	22.55
			50	56	21.60
			100	0	21.56
			1	1	22.82
			1	53	22.73
			1	104	22.53
			50	0	21.72
			50	28	22.55
			50	56	21.57
			100	0	21.56
DFT-s-OFDM 16QAM	2510	502000	1	1	22.12
	2535	507000	1	1	22.23
	2560	512000	1	1	22.20
DFT-s-OFDM 64QAM	2510	502000	1	1	20.89
	2535	507000	1	1	21.00
	2560	512000	1	1	20.92
DFT-s-OFDM 256QAM	2510	502000	1	1	18.83
	2535	507000	1	1	18.95
	2560	512000	1	1	18.96

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
						(dBm)
CP-OFDM QPSK	2510	502000	20MHz	1	1	21.98
	2535	507000		1	1	21.90
	2560	512000		1	1	21.99
DFT-s-OFDM QPSK	2507.5	501500	15MHz	1	1	22.65
	2535	507000		1	1	22.65
	2562.5	512500		1	1	22.41
DFT-s-OFDM QPSK	2505	501000	10MHz	1	1	22.45
	2535	507000		1	1	22.41
	2565	513000		1	1	22.60
DFT-s-OFDM QPSK	2502.5	500500	5MHz	1	1	22.60
	2535	507000		1	1	22.66
	2567.5	513500		1	1	22.74

### N7(Receiver on)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
DFT-s-OFDM PI/2 BPSK	2510	502000	20MHz	1	1	18.27
				1	53	18.19
				1	104	18.03
				50	0	18.24
				50	28	18.01
				50	56	18.16
	100	0		18.08		
	2535	507000		1	1	18.26
				1	53	18.19
				1	104	18.07
				50	0	18.31
				50	28	17.98
				50	56	18.21
				100	0	18.13
				2560	512000	1

			1	53	18.14
			1	104	18.07
			50	0	18.29
			50	28	17.93
			50	56	18.17
			100	0	18.09
DFT-s-OFDM QPSK	2510	502000	1	1	18.29
			1	53	18.17
			1	104	17.98
			50	0	18.25
			50	28	17.95
			50	56	18.12
	100	0	18.04		
	2535	507000	1	1	18.30
			1	53	18.20
			1	104	17.99
			50	0	18.27
			50	28	18.01
			50	56	18.15
	100	0	18.11		
	2560	512000	1	1	18.29
			1	53	18.17
			1	104	17.96
			50	0	18.27
50			28	18.03	
50			56	18.15	
100	0	18.14			
DFT-s-OFDM 16QAM	2510	502000	1	1	18.69
	2535	507000	1	1	18.77
	2560	512000	1	1	18.72
DFT-s-OFDM 64QAM	2510	502000	1	1	18.42
	2535	507000	1	1	18.43
	2560	512000	1	1	18.51
DFT-s-OFDM 256QAM	2510	502000	1	1	18.79
	2535	507000	1	1	18.75
	2560	512000	1	1	18.85

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
						(dBm)
CP-OFDM QPSK	2510	502000	20MHz	1	1	18.51
	2535	507000		1	1	18.47
	2560	512000		1	1	18.54
DFT-s-OFDM QPSK	2507.5	501500	15MHz	1	1	18.12
	2535	507000		1	1	18.08
	2562.5	512500		1	1	17.87
DFT-s-OFDM QPSK	2505	501000	10MHz	1	1	17.91
	2535	507000		1	1	17.86
	2565	513000		1	1	18.05
DFT-s-OFDM QPSK	2502.5	500500	5MHz	1	1	18.08
	2535	507000		1	1	18.12
	2567.5	513500		1	1	18.21

**N7(Hotspot on)**

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
DFT-s-OFDM PI/2 BPSK	2510	502000	20MHz	1	1	20.89
				1	53	20.74
				1	104	20.63
				50	0	20.75
				50	28	20.55
				50	56	20.67
	100	0		20.62		
	2535	507000		1	1	20.84
				1	53	20.83
				1	104	20.73
				50	0	20.79
				50	28	20.62
				50	56	20.69
	100	0		20.64		
	2560	512000		1	1	20.87
				1	53	20.75
				1	104	20.66
				50	0	20.78
50			28	20.59		
50			56	20.65		
100	0	20.53				
DFT-s-OFDM QPSK	2510	502000	1	1	20.87	
			1	53	20.77	
			1	104	20.59	
			50	0	20.78	
			50	28	20.58	
			50	56	20.64	
	100	0	20.58			
	2535	507000	1	1	20.90	
			1	53	20.82	
			1	104	20.63	
			50	0	20.80	
			50	28	20.57	
			50	56	20.65	
	100	0	20.62			
	2560	512000	1	1	20.88	
			1	53	20.79	
			1	104	20.57	
			50	0	20.79	
50			28	20.57		
50			56	20.61		
100	0	20.59				
DFT-s-OFDM 16QAM	2510	502000	1	1	20.17	
	2535	507000	1	1	20.30	
	2560	512000	1	1	20.23	
DFT-s-OFDM 64QAM	2510	502000	1	1	20.88	
	2535	507000	1	1	20.97	
	2560	512000	1	1	20.86	
DFT-s-OFDM 256QAM	2510	502000	1	1	18.79	
	2535	507000	1	1	18.91	
	2560	512000	1	1	18.87	



Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
						(dBm)
CP-OFDM QPSK	2510	502000	20MHz	1	1	20.04
	2535	507000		1	1	20.05
	2560	512000		1	1	20.07
DFT-s-OFDM QPSK	2507.5	501500	15MHz	1	1	20.71
	2535	507000		1	1	20.70
	2562.5	512500		1	1	20.47
DFT-s-OFDM QPSK	2505	501000	10MHz	1	1	20.53
	2535	507000		1	1	20.62
	2565	513000		1	1	20.73
DFT-s-OFDM QPSK	2502.5	500500	5MHz	1	1	20.64
	2535	507000		1	1	20.72
	2567.5	513500		1	1	20.82

### N38

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
DFT-s-OFDM PI/2 BPSK	2590	518000	40MHz	1	1	22.63
				1	108	22.71
				1	214	22.52
				108	0	21.62
				108	54	22.51
				108	108	21.56
	2595	519000		216	0	21.54
				1	1	22.63
				1	108	22.74
				1	214	22.56
				108	0	21.65
				108	54	22.56
	2600	520000		108	108	21.56
				216	0	21.55
				1	1	22.68
				1	108	22.75
				1	214	22.57
				108	0	21.68
DFT-s-OFDM QPSK	2590	518000	108	54	22.61	
			108	108	21.58	
			216	0	21.60	
	2595	519000	1	1	22.56	
			1	108	22.74	
			1	214	22.56	
			108	0	21.52	
			108	54	22.41	
			108	108	21.54	
216	0	21.53				
1	1	22.59				

			1	108	22.79
			1	214	22.61
			108	0	21.55
			108	54	22.44
			108	108	21.56
			216	0	21.55
			1	1	22.59
	2600	520000	1	108	22.77
			1	214	22.62
			108	0	21.60
			108	54	22.43
			108	108	21.60
			216	0	21.59
			1	1	22.34
DFT-s-OFDM 16QAM	2590	518000	1	1	22.41
	2595	519000	1	1	22.36
	2600	520000	1	1	20.88
DFT-s-OFDM 64QAM	2590	518000	1	1	20.91
	2595	519000	1	1	20.93
	2600	520000	1	1	18.84
DFT-s-OFDM 256QAM	2590	518000	1	1	18.89
	2595	519000	1	1	18.93
	2600	520000	1	1	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
						(dBm)
CP-OFDM QPSK	2590	518000	40MHz	1	1	21.75
	2595	519000		1	1	21.89
	2600	520000		1	1	21.90
DFT-s-OFDM QPSK	2585	517000	30MHz	1	1	22.60
	2595	519000		1	1	22.65
	2605	521000		1	1	22.70
DFT-s-OFDM QPSK	2580	516000	20MHz	1	1	22.51
	2595	519000		1	1	22.56
	2610	522000		1	1	22.65

#### N41

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
DFT-s-OFDM PI/2 BPSK	2546.01	509202	100MHz	1	1	22.54
				1	137	22.40
				1	271	22.45
				135	0	21.58
				135	69	22.44
				135	138	21.46
				270	0	21.43
	2569.5	513900		1	1	22.45
				1	137	22.40

			1	271	22.45						
			135	0	21.51						
			135	69	22.36						
			135	138	21.43						
			270	0	21.35						
			1	1	22.45						
			1	137	22.35						
			1	271	22.40						
			135	0	21.49						
			135	69	22.35						
			135	138	21.39						
			270	0	21.35						
			1	1	22.48						
			1	137	22.39						
			1	271	22.41						
			135	0	21.50						
			135	69	22.35						
			135	138	21.42						
			270	0	21.40						
			2592.99	518598		1	1	22.55			
1	137	22.45									
1	271	22.47									
135	0	21.58									
135	69	22.44									
135	138	21.45									
270	0	21.41									
1	1	22.51									
1	137	22.45									
1	271	22.48									
135	0	21.59									
135	69	22.42									
135	138	21.46									
270	0	21.64									
1	1	22.49									
1	137	22.37									
1	271	22.45									
135	0	21.52									
135	69	22.36									
135	138	21.45									
270	0	21.55									
2616.51	523302		1	1	22.55						
			1	137	22.36						
			1	271	22.41						
			135	0	21.51						
			135	69	22.45						
			135	138	21.41						
			270	0	21.55						
			1	1	22.49						
			1	137	22.38						
			1	271	22.41						
			135	0	21.51						
			135	69	22.45						
			135	138	21.41						
			270	0	21.55						
			1	1	22.49						
			1	137	22.38						
			2640	528000		1	1	22.51			
						1	137	22.45			
						1	271	22.48			
						135	0	21.59			
135	69	22.42									
135	138	21.46									
270	0	21.64									
1	1	22.49									
1	137	22.37									
1	271	22.45									
135	0	21.52									
135	69	22.36									
135	138	21.45									
270	0	21.55									
1	1	22.55									
1	137	22.36									
1	271	22.41									
DFT-s-OFDM QPSK	2546.01	509202				135	0	21.51			
						135	69	22.45			
						135	138	21.41			
			270	0	21.55						
			1	1	22.49						
			1	137	22.38						
			1	271	22.41						
			2569.5	513900		135	0	21.51			
						135	69	22.45			
						135	138	21.41			
						270	0	21.55			
						1	1	22.49			
						1	137	22.38			
						1	271	22.41			
						2592.99	518598		135	0	21.51
									135	69	22.45
									135	138	21.41
									270	0	21.55
									1	1	22.49
									1	137	22.38
1	271	22.41									
2616.51	523302								135	0	21.51
									135	69	22.45
									135	138	21.41
									270	0	21.55
									1	1	22.49
									1	137	22.38
			1	271	22.41						

	2640	528000	1	271	22.41
			135	0	21.54
			135	69	22.37
			135	138	21.45
			270	0	21.59
			1	1	22.54
			1	137	22.45
			1	271	22.51
			135	0	21.56
			135	69	22.44
			135	138	21.48
			270	0	21.65
			1	271	22.45
			1	271	22.35
DFT-s-OFDM 16QAM	2546.01	509202	1	271	22.41
	2569.5	513900	1	271	22.36
	2592.99	518598	1	271	22.36
	2616.51	523302	1	271	22.12
	2640	528000	1	271	22.12
DFT-s-OFDM 64QAM	2546.01	509202	1	271	20.82
	2569.5	513900	1	271	20.85
	2592.99	518598	1	271	20.95
	2616.51	523302	1	271	20.97
	2640	528000	1	271	20.82
DFT-s-OFDM 256QAM	2546.01	509202	1	271	18.89
	2569.5	513900	1	271	18.55
	2592.99	518598	1	271	18.65
	2616.51	523302	1	271	18.70
	2640	528000	1	271	18.65

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
CP-OFDM QPSK	2546.01	509202	100MHz	1	271	21.85
	2569.5	513900		1	271	21.95
	2592.99	518598		1	271	21.84
	2616.51	523302		1	271	21.81
	2640	528000		1	271	21.85
DFT-s-OFDM QPSK	2541	508200	90MHz	1	271	22.41
	2567.01	513402		1	271	22.40
	2592.99	518598		1	271	22.35
	2619	523800		1	271	22.34
	2644.98	528996		1	271	22.35
DFT-s-OFDM QPSK	2536.02	507204	80MHz	1	271	22.15
	2564.52	512904		1	271	22.25
	2592.99	518598		1	271	22.15
	2621.49	524298		1	271	22.30
	2649.99	529998		1	271	22.31
DFT-s-OFDM QPSK	2526	505200	60MHz	1	271	22.30
	2559.51	511902		1	271	22.41
	2592.99	518598		1	271	22.33
	2626.5	525300		1	271	22.34
	2659.98	531996		1	271	22.24
DFT-s-OFDM	2521.02	504202	50MHz	1	271	22.34

QPSK	2557	511400		1	271	22.41
	2592.99	518598		1	271	22.34
	2628.99	525798		1	271	22.33
	2664.99	532998		1	271	22.34
DFT-s-OFDM QPSK	2516.01	503202	40MHz	1	271	22.35
	2554.5	510900		1	271	22.36
	2592.99	518598		1	271	22.31
	2631.495	526299		1	271	22.40
	2670	534000		1	271	22.34
DFT-s-OFDM QPSK	2511	502204	30MHz	1	271	22.22
	2552.005	510401		1	271	22.37
	2592.99	518598		1	271	22.19
	2624.55	526797		1	271	22.42
	2674.98	534996		1	271	22.47
DFT-s-OFDM QPSK	2506.02	501204	20MHz	1	271	22.31
	2549.505	509901		1	271	22.33
	2592.99	518598		1	271	22.30
	2636.49	527298		1	271	22.34
	2679.99	535998		1	271	22.41

### N78(Class 2 Full power)

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
DFT-s-OFDM PI/2 BPSK	/	/	100MHz	1	1	/
				1	137	/
				1	271	/
				135	0	/
				135	69	/
				135	138	/
				270	0	/
	1	1		24.88		
	1	137		24.74		
	1	271		24.69		
	135	0		23.90		
	135	69		24.77		
	135	138		23.82		
	270	0		23.41		
	1	1		/		
	1	137		/		
	1	271		/		
	135	0		/		
	135	69		/		
	135	138		/		
	270	0		/		
DFT-s-OFDM QPSK	/	/	1	1	/	
			1	137	/	
			1	271	/	
			135	0	/	
			135	69	/	
	135	138	/			
	270	0	/			
	1	1	24.84			
	1	137	24.66			
3500	633334					

			1	271	24.90
			135	0	23.52
			135	69	24.89
			135	138	23.29
			270	0	23.83
			1	1	/
			1	137	/
			1	271	/
	/	/	135	0	/
	/	/	135	69	/
	/	/	135	138	/
	/	/	270	0	/
DFT-s-OFDM 16QAM	/	/	1	1	/
	3500	633334	1	1	23.89
	/	/	1	1	/
DFT-s-OFDM 64QAM	/	/	1	1	/
	3500	633334	1	1	22.88
	/	/	1	1	/
DFT-s-OFDM 256QAM	/	/	1	1	/
	3500	633334	1	1	20.98
	/	/	1	1	/

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
						(dBm)
CP-OFDM QPSK	/	/	100MHz	1	1	/
	3500	633334		1	1	23.12
	/	/		1	1	/
DFT-s-OFDM QPSK	3495	633000	90MHz	1	1	24.82
	3500	633334		1	1	24.79
	3505.02	633668		1	1	24.78
DFT-s-OFDM QPSK	3490.02	632668	80MHz	1	1	24.81
	3500	633334		1	1	24.82
	3510	634000		1	1	24.85
DFT-s-OFDM QPSK	3485.01	632334	70MHz	1	1	24.80
	3500	633334		1	1	24.85
	3515.01	634334		1	1	24.81
DFT-s-OFDM QPSK	3480	632000	60MHz	1	1	24.83
	3500	633334		1	1	24.76
	3520.02	634668		1	1	24.81
DFT-s-OFDM QPSK	3475.02	631668	50MHz	1	1	24.87
	3500	633334		1	1	24.81
	3525	635000		1	1	24.82
DFT-s-OFDM QPSK	3470.01	631334	40MHz	1	1	24.86
	3500	633334		1	1	24.84
	3530.01	635334		1	1	24.79
DFT-s-OFDM QPSK	3465	631000	30MHz	1	1	24.80
	3500	633334		1	1	24.85
	3535.02	635668		1	1	24.81
DFT-s-OFDM QPSK	3460.02	630668	20MHz	1	1	24.80
	3500	633334		1	1	24.85
	3540	636000		1	1	24.81

**N78(Class 2 Receiver on)**

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
DFT-s-OFDM PI/2 BPSK	/	/	100MHz	1	1	/
				1	137	/
				1	271	/
				135	0	/
				135	69	/
				135	138	/
				270	0	/
	3500	633334		1	1	21.92
				1	137	21.82
				1	271	21.75
				135	0	21.86
				135	69	21.84
				135	138	21.79
				270	0	21.38
	/	/		1	1	/
				1	137	/
				1	271	/
				135	0	/
				135	69	/
				135	138	/
				270	0	/
DFT-s-OFDM QPSK	/	/	1	1	/	
			1	137	/	
			1	271	/	
			135	0	/	
			135	69	/	
			135	138	/	
			270	0	/	
	3500	633334	1	1	21.91	
			1	137	21.71	
			1	271	21.98	
			135	0	21.48	
			135	69	21.93	
			135	138	21.26	
			270	0	21.79	
	/	/	1	1	/	
			1	137	/	
			1	271	/	
			135	0	/	
			135	69	/	
			135	138	/	
			270	0	/	
DFT-s-OFDM 16QAM	/	/	1	1	/	
	3500	633334	1	1	21.86	
	/	/	1	1	/	
DFT-s-OFDM 64QAM	/	/	1	1	/	
	3500	633334	1	1	21.82	
	/	/	1	1	/	
DFT-s-OFDM 256QAM	/	/	1	1	/	
	3500	633334	1	1	20.98	
	/	/	1	1	/	

Modulation	Carrier frequency(MHz)	UL Channel	Bandwidth	RB size	RB offset	Conducted Power(dBm)
						(dBm)
CP-OFDM QPSK	1860	/	100MHz	1	1	/
	1880	633334		1	1	21.60
	1900	/		1	1	/
DFT-s-OFDM QPSK	3495	633000	90MHz	1	1	21.78
	3500	633334		1	1	21.72
	3505.02	633668		1	1	21.75
DFT-s-OFDM QPSK	3490.02	632668	80MHz	1	1	21.78
	3500	633334		1	1	21.75
	3510	634000		1	1	21.78
DFT-s-OFDM QPSK	3485.01	632334	70MHz	1	1	21.73
	3500	633334		1	1	21.79
	3515.01	634334		1	1	21.75
DFT-s-OFDM QPSK	3480	632000	60MHz	1	1	21.79
	3500	633334		1	1	21.70
	3520.02	634668		1	1	21.76
DFT-s-OFDM QPSK	3475.02	631668	50MHz	1	1	21.82
	3500	633334		1	1	21.75
	3525	635000		1	1	21.75
DFT-s-OFDM QPSK	3470.01	631334	40MHz	1	1	21.81
	3500	633334		1	1	21.82
	3530.01	635334		1	1	21.76
DFT-s-OFDM QPSK	3465	631000	30MHz	1	1	21.73
	3500	633334		1	1	21.79
	3535.02	635668		1	1	21.75
DFT-s-OFDM QPSK	3460.02	630668	20MHz	1	1	21.73
	3500	633334		1	1	21.79
	3540	636000		1	1	21.75



## 6.5 Bluetooth Measurement result

### BT

#### Duty Cycle

Modulation Type	Frequency (MHz)	Duty Cycle
GFSK(DH5)	2402	76.9%
$\pi$ 4/DQPSK(2DH5)	2402	63.47%
8DPSK(3DH5)	2402	77.07%

#### Conducted Power

Modulation type	Conducted Average Power(dBm)		
	2402MHz	2441MHz	2480MHz
GFSK	11.84	11.89	11.85
$\pi$ 4DQPSK	9.54	9.84	9.66
8DPSK	9.67	9.97	9.95

### BLE

#### Duty Cycle

Modulation Type	Frequency (MHz)	Duty Cycle
GFSK (LE 1Mbps)	2402	62.9%
GFSK (LE 2Mbps)	2402	33.33%

#### Conducted Power

Modulation type	Conducted Average Power(dBm)		
	2402MHz	2440MHz	2480MHz
GFSK (LE 1Mbps)	6.24	6.85	7.48
GFSK (LE 2Mbps)	5.16	5.97	7.44

## 6.6 Wi-Fi Measurement result

### WIFI 2.4GHz

#### Duty Cycle

Modulation Type	Frequency (MHz)	Duty Cycle
802.11b	2412	99.41%
802.11g	2412	98.54%
802.11n HT20	2412	98.44%
802.11n HT40	2412	94.9%

#### Conducted power

Mode	Freq(MHz)	Conducted average power output(dBm)	
		Receiver off	Receiver on
802.11b	2412MHz	18.01	14.80
	2437MHz	18.10	14.84
	2462MHz	17.67	14.47
802.11g	2412MHz	16.39	13.42
	2437MHz	15.91	12.98
	2462MHz	15.82	12.86
802.11n20M	2412MHz	16.21	13.29
	2437MHz	15.83	12.85
	2462MHz	15.78	12.81
802.11n40M	2422MHz	15.52	12.57
	2437MHz	15.58	12.66
	2452MHz	15.77	12.84

### WIFI 5GHz(U-NII-1)

#### Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)
802.11a	5180	98.18%
802.11n HT20	5180	97.93%
802.11n HT40	5190	96.88%
802.11ac VHT20	5180	98.45%
802.11ac VHT40	5190	96.91%
802.11ac VHT80	5210	93.88%

#### Conducted power

mode	Freq (MHz)	Conducted average power output(dBm)	
		Receiver off	Receiver on
802.11a	5180	16.08	13.15
	5200	16.47	13.55
	5220	16.82	13.93
	5240	16.88	13.96
802.11n-HT20	5180	16.02	13.08
	5200	16.31	13.37
	5220	16.74	13.82
	5240	16.79	13.86
802.11n-HT40	5190	15.36	12.41
	5230	15.97	13.01
802.11ac 20M	5180	15.03	12.09
	5200	15.21	12.25
	5220	15.50	12.55
	5240	15.49	12.56
802.11ac 40M	5190	15.19	12.26
	5230	15.67	12.70
802.11ac 80M	5210	15.19	12.27

### WIFI 5GHz(U-NII-2A)

#### Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)
802.11a	5260	98.18%
802.11n HT20	5260	97.93%
802.11n HT40	5270	96.88%
802.11ac VHT20	5260	98.45%
802.11ac VHT40	5270	96.91%
802.11ac VHT80	5290	93.88%

#### Conducted power

mode	Freq (MHz)	Conducted average power output(dBm)	
		Receiver off	Receiver on
802.11a	5260	16.78	13.95
	5280	16.45	13.51
	5300	16.65	13.97
	5320	16.79	14.03
802.11n-HT20	5260	16.48	13.52
	5280	16.43	13.51
	5300	16.18	13.26
	5320	16.16	13.22
802.11n-HT40	5270	15.98	13.05
	5310	15.49	12.51
802.11ac 20M	5260	15.57	12.64
	5280	15.50	12.53
	5300	15.29	12.34
	5320	15.15	12.22
802.11ac 40M	5270	15.65	12.72
	5310	15.34	12.41
802.11ac 80M	5290	15.28	12.30

### WIFI 5GHz(U-NII-2C)

#### Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)
802.11a	5500	98.18%
802.11n HT20	5500	97.93%
802.11n HT40	5510	96.88%
802.11ac VHT20	5500	98.45%
802.11ac VHT40	5510	96.91%
802.11ac VHT80	5530	93.88%

#### Conducted power

mode	Freq (MHz)	Conducted average power output(dBm)	
		Receiver off	Receiver on
802.11a	5500	16.16	13.24
	5520	16.11	13.18
	5540	16.03	13.11
	5560	16.02	13.04
	5580	16.01	13.08
	5600	16.02	13.09
	5620	16.04	13.12
	5640	16.04	13.10
	5660	16.39	13.42
	5680	16.54	13.60
	5700	16.88	13.95
802.11n-HT20	5500	16.04	13.10
	5520	16.04	13.06
	5540	16.03	13.08
	5560	16.05	13.12
	5580	16.02	13.07
	5600	16.01	13.08
	5620	16.06	13.12
	5640	16.03	13.08
	5660	16.08	13.15
	5680	16.24	13.30
	5700	16.48	13.54
802.11n-HT40	5510	15.15	12.20
	5550	15.05	12.13
	5590	15.02	12.05
	5630	15.34	12.37
	5670	15.47	12.54
	5710	15.86	12.90
802.11ac 20M	5500	15.01	12.05
	5520	15.02	12.07
	5540	15.08	12.15

	5560	15.06	12.09
	5580	15.04	12.08
	5600	15.01	12.09
	5620	15.04	12.12
	5640	15.08	12.15
	5660	15.12	12.17
	5680	15.16	12.22
	5700	15.39	12.46
	5720	15.59	12.65
802.11ac 40M	5510	15.05	12.07
	5550	15.04	12.06
	5590	15.06	12.10
	5630	15.24	12.29
	5670	15.30	12.35
	5710	15.65	12.69
802.11ac 80M	5530	15.11	12.13
	5610	15.02	12.09
	5690	15.27	12.34

### WIFI 5GHz(U-NII-3)

#### Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)
802.11a	5745	98.18%
802.11n HT20	5745	97.93%
802.11n HT40	5755	96.88%
802.11ac VHT20	5745	98.45%
802.11ac VHT40	5755	96.91%
802.11ac VHT80	5775	93.88%

#### Conducted power

mode	Freq (MHz)	Conducted average power output(dBm)	
		Receiver off	Receiver on
802.11a	5745	16.93	13.90
	5765	16.87	13.87
	5785	16.82	13.87
	5805	16.49	13.51
	5825	16.47	13.54
802.11n-HT20	5745	16.54	13.58
	5765	16.62	13.65
	5785	16.55	13.61
	5805	16.39	13.44
	5825	16.29	13.35
802.11n-HT40	5755	15.78	12.81
	5795	15.86	12.91
802.11ac 20M	5745	15.33	12.36
	5765	15.47	12.50
	5785	15.57	12.62
	5805	15.30	12.32
	5825	15.17	12.23
802.11ac 40M	5755	15.49	12.55
	5795	15.59	12.61
802.11ac 80M	5775	15.35	12.37

## 6.7 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 $\leq 50$ mm

#### Method1:

According to the KDB447498 4.3.1 (1)

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

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

- $f(\text{GHz})$  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  $\leq 50$  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  $[(\text{max. power of channel, including tune-up tolerance, mW}) / (60 / \sqrt{f} (\text{GHz}) \text{ mW})] \cdot [20 \text{ mm} / (\text{min. test separation distance, mm})] \leq 1.0$  for 1-g SAR; also see Appendix A for approximate exclusion threshold values at selected frequencies and distances.



**Method2:**

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.

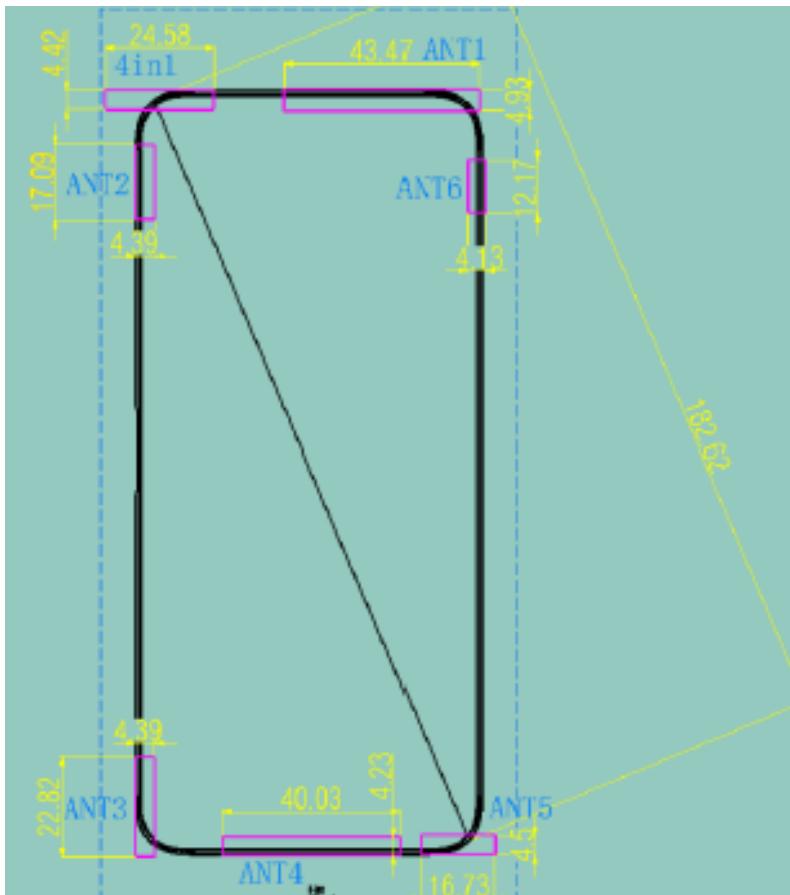
MHz	5	10	15	20	25	mm
150	39	77	116	155	194	<i>SAR Test Exclusion Threshold (mW)</i>
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19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

**Summary of Transmitters**

Band/Mode	Max conducted power adjusted for tune-up tolerance(mW)	Exposure condition	SAR test exclusion threshold (mW)	Standalone SAR Required
BT/BLE	20.0	Head	10	Yes
		Body-worn/Hotspot	19	Yes
Wi-Fi 2.4GHz	39.8	Head	10	Yes
		Body-worn/Hotspot	19	Yes
Wi-Fi 5GHz (U-NII-1)	31.6	Head	7	Yes
		Body-worn/Hotspot	13	Yes
Wi-Fi 5GHz (U-NII-2A)	31.6	Head	7	Yes
		Body-worn/Hotspot	13	Yes
Wi-Fi 5GHz (U-NII-2C)	31.6	Head	6	Yes
		Body-worn/Hotspot	13	Yes
Wi-Fi 5GHz (U-NII-3)	31.6	Head	6	Yes
		Body-worn/Hotspot	12	Yes

## 6.8 RF exposure conditions

Refer to the follow picture “Antenna information” for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.



All of Implementation antenna

Antenna	Support Band
Ant1	GSM1900,WCDMA B2,LTE B38/41,NR Band 7/38/41
Ant2	NR Band 78
Ant3	Only RX
Ant4	GSM850,WCDMA B5,LTE B5/7,NR Band 5
Ant5	Only RX
Ant6	Only RX
Ant7	WIFI 2.4G,WIFI 5G,BT

Note: we defined these position when we face the screen of EUT, the reason why we perform SAR test for these edges is that the structures of antennas is close to our body, and for the other edges do not necessary cause we already consider the worst case.

### 6.8.1 Head Exposure Conditions For WWAN

Test Configurations	SAR Required	Note
Left Touch	Yes	/
Left Tilt (15°)	Yes	/
Right Touch	Yes	/
Right Tilt (15°)	Yes	/

#### For WLAN

Test Configurations	SAR Required	Note
Left Touch	Yes	/
Left Tilt (15°)	Yes	/
Right Touch	Yes	/
Right Tilt (15°)	Yes	/

#### For BT/BLE

Test Configurations	SAR Required	Note
Left Touch	Yes	/
Left Tilt (15°)	Yes	/
Right Touch	Yes	/
Right Tilt (15°)	Yes	/

### 6.8.2 Body Worn Exposure conditions

#### For WWAN

Test Configurations	SAR Required	Note
Back	Yes	/
Front	Yes	/

#### For WLAN

Test Configurations	SAR Required	Note
Back	Yes	/
Front	Yes	/

#### For BT/BLE

Test Configurations	SAR Required	Note
Back	Yes	/
Front	Yes	/

### 6.8.3 Hotspot Exposure conditions For WWAN ANT1

Test Configurations	SAR Required	Antenna-to-edge(s) distances
Back	Yes*	<25mm
Front	Yes*	<25mm
Top	Yes	<25mm
Bottom	No	>25mm
Left	Yes	<25mm
Right	Yes	<25mm

### For WWAN ANT2

Test Configurations	SAR Required	Antenna-to-edge(s) distances
Back	Yes*	<25mm
Front	Yes*	<25mm
Top	Yes	<25mm
Bottom	No	>25mm
Left	No	>25mm
Right	Yes	<25mm

### For WWAN ANT4

Test Configurations	SAR Required	Antenna-to-edge(s) distances
Back	Yes*	<25mm
Front	Yes*	<25mm
Top	No	>25mm
Bottom	Yes	<25mm
Left	Yes	<25mm
Right	Yes	<25mm

### For WLAN ANT5

Test Configurations	SAR Required	Antenna-to-edge(s) distances
Back	Yes*	<25mm
Front	Yes*	<25mm
Top	No	>25mm
Bottom	Yes	<25mm
Left	Yes	<25mm
Right	No	>25mm

**For BT/BLE**

Test Configurations	SAR Required	Antenna-to-edge(s) distances
Back	Yes	<25mm
Front	Yes	<25mm
Top	Yes	<25mm
Bottom	No	>25mm
Left	No	>25mm
Right	Yes	<25mm

**Note\*:** For hotspot mode, it's not necessary test Rear and Front position for several bands which there is no "hotspot power reduction" scheme. Because we already test these positions without hotspot mode in Body Exposure conditions.

## 6.9 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.

Freq. (MHz)	Liquid parameters	measured	Target	Delta (%)	Tolerance (%)	Verdict	Measured Date
835	$\epsilon_r$	40.524	41.5	-2.35	$\pm 5$	Pass	2021/9/1
	$\sigma$ [S/m]	0.903	0.9	0.33	$\pm 5$	Pass	
1800	$\epsilon_r$	40.205	40	0.51	$\pm 5$	Pass	2021/9/1
	$\sigma$ [S/m]	1.350	1.4	-3.57	$\pm 5$	Pass	
2000	$\epsilon_r$	38.396	40	-4.01	$\pm 5$	Pass	2021/9/1
	$\sigma$ [S/m]	1.457	1.4	4.07	$\pm 5$	Pass	
2450	$\epsilon_r$	39.702	39.2	1.28	$\pm 5$	Pass	2021/9/1
	$\sigma$ [S/m]	1.798	1.8	-0.11	$\pm 5$	Pass	
2600	$\epsilon_r$	37.689	39	-3.36	$\pm 5$	Pass	2021/9/1
	$\sigma$ [S/m]	1.934	1.96	-1.33	$\pm 5$	Pass	
3500	$\epsilon_r$	38.257	37.9	0.94	$\pm 5$	Pass	2021/9/2
	$\sigma$ [S/m]	2.960	2.91	1.72	$\pm 5$	Pass	
5200	$\epsilon_r$	36.571	36	1.59	$\pm 5$	Pass	2021/9/2
	$\sigma$ [S/m]	4.707	4.66	1.01	$\pm 5$	Pass	
5300	$\epsilon_r$	36.278	35.9	1.05	$\pm 5$	Pass	2021/9/2
	$\sigma$ [S/m]	4.826	4.76	1.39	$\pm 5$	Pass	
5600	$\epsilon_r$	35.507	35.5	0.02	$\pm 5$	Pass	2021/9/2
	$\sigma$ [S/m]	5.179	5.07	2.15	$\pm 5$	Pass	
5800	$\epsilon_r$	35.003	35.3	-0.84	$\pm 5$	Pass	2021/9/2
	$\sigma$ [S/m]	5.412	5.27	2.69	$\pm 5$	Pass	

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.

Freq.(MHz)	SAR measured		Target	Delta (%)	Tolerance (%)	Verdict	Measured Date
	(normalized to 1W)		(Ref. Value)				
835	1g	10.08	9.38	7.46	±10	Pass	2021/9/1
	10g	6.56	6.25	4.96	±10	Pass	
1800	1g	37.36	38.90	-3.96	±10	Pass	2021/9/1
	10g	19.88	20.30	-2.07	±10	Pass	
2000	1g	41.20	41.00	0.49	±10	Pass	2021/9/1
	10g	21.16	20.50	3.22	±10	Pass	
2450	1g	52.40	53.00	-1.13	±10	Pass	2021/9/1
	10g	24.28	24.50	-0.90	±10	Pass	
2600	1g	53.20	56.50	-5.84	±10	Pass	2021/9/1
	10g	23.60	25.40	-7.09	±10	Pass	
3500	1g	68.80	67.40	2.08	±10	Pass	20.21-09-02
	10g	26.10	25.30	3.16	±10	Pass	
5200	1g	78.10	75.90	2.90	±10	Pass	20.21-09-02
	10g	22.50	21.40	5.14	±10	Pass	
5300	1g	82.80	78.00	6.15	±10	Pass	20.21-09-02
	10g	23.90	22.00	8.64	±10	Pass	
5600	1g	77.70	80.00	-2.88	±10	Pass	20.21-09-02
	10g	21.90	22.60	-3.10	±10	Pass	
5800	1g	81.70	78.50	4.08	±10	Pass	20.21-09-02
	10g	23.33	21.90	6.53	±10	Pass	

## 6.10 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.,  $N_c > 3$ ), 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  $\leq 0.8$ W/kg, other channels SAR testing are not necessary.

3. The distance between the EUT and the phantom bottom is 10mm.

4. The EN-DC is reduced by XdB therefore power (the power reduced can be refer to Appendix E) and SAR was estimated based on standalone results.

5. The Simultaneous is reduced by XdB therefore power (the power reduced can be refer to Appendix E) and SAR was estimated based on standalone results.



Mode		Duty cycle	Duty factor	Note
Licensed Frequency	GSM 850	25%	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"
	GSM 1900	37.5%		
	WCDMA Band	100%		
	FDD-LTE Band	100%		
	TDD-LTE Band	63.3%		
Unlicensed Frequency	BT DH5	76.9%	1.3	SRTC perform SAR test with non-signaling mode, and duty factor shall be considered because of the uncertainty of data traffic.
	WIFI 2.4GHz 802.11b	99.41%	1.006	
	WIFI 5GHz 802.11a	98.18%	1.018	

The measured and reported Head/body SAR values for the test device are tabulated below:

Mode: GSM 850

fL(MHz)=824.2MHz

fM(MHz)=836.6MHz

fH(MHz)= 848.8MHz

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

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
GSM	Head	Left cheek	L	32.63	33.50	1.222	---	---	---	---
			M	32.69	33.50	1.205	<b>0.208</b>	---	0.251	---
			H	32.81	33.50	1.172	---	---	---	---
		Left tilted	L	32.63	33.50	1.222	---	---	---	---
			M	32.69	33.50	1.205	0.084	---	0.102	---
			H	32.81	33.50	1.172	---	---	---	---
		Right cheek	L	32.63	33.50	1.222	---	---	---	---
			M	32.69	33.50	1.205	0.137	---	0.165	---
			H	32.81	33.50	1.172	---	---	---	---
		Right tilted	L	32.63	33.50	1.222	---	---	---	---
			M	32.69	33.50	1.205	0.080	---	0.097	---
			H	32.81	33.50	1.172	---	---	---	---
	Body-worn	Back	L	32.63	33.50	1.222	---	---	---	---
			M	32.69	33.50	1.205	0.281	---	0.339	---
			H	32.81	33.50	1.172	---	---	---	---
		Front	L	32.63	33.50	1.222	---	---	---	---
			M	32.69	33.50	1.205	0.425	---	0.512	---
			H	32.81	33.50	1.172	---	---	---	---
GPRS/EDGE GMSK 2TxSlots	Hotspot	Back	L	30.84	32.00	1.306	---	---	---	---
			M	30.94	32.00	1.276	0.520	---	0.664	---
			H	30.96	32.00	1.271	---	---	---	---
		Front	L	30.84	32.00	1.306	0.641	---	0.837	---
			M	30.94	32.00	1.276	0.655	---	0.836	---
			H	30.96	32.00	1.271	0.675	---	0.858	---
		Top	L	30.84	32.00	1.306	---	---	---	---
			M	30.94	32.00	1.276	---	---	---	---
			H	30.96	32.00	1.271	---	---	---	---
		Bottom	L	30.84	32.00	1.306	---	---	---	---
			M	30.94	32.00	1.276	0.323	---	0.412	---
			H	30.96	32.00	1.271	---	---	---	---
		Left	L	30.84	32.00	1.306	---	---	---	---
			M	30.94	32.00	1.276	0.046	---	0.058	---
			H	30.96	32.00	1.271	---	---	---	---
		Right	L	30.84	32.00	1.306	---	---	---	---
			M	30.94	32.00	1.276	0.206	---	0.263	---
			H	30.96	32.00	1.271	---	---	---	---

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Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
GSM	Head	Left cheek	L	32.63	33.50	1.222	---	---	---	---
			M	32.69	33.50	1.205	<b>0.126</b>	---	0.152	---
			H	32.81	33.50	1.172	---	---	---	---
	Body-worn	Front	L	32.63	33.50	1.222	---	---	---	---
			M	32.69	33.50	1.205	0.343	---	0.413	---
			H	32.81	33.50	1.172	---	---	---	---
GPRS/EDGE GMSK 2TxSlots	Hotspot	Front	L	30.84	32.00	1.306	---	---	---	---
			M	30.94	32.00	1.276	---	---	---	---
			H	30.96	32.00	1.271	0.493	---	0.626	---

(Variant)

Mode: GSM 1900

fL (MHz)=1850.2MHz fM (MHz)=1880.0MHz

fH (MHz)=1909.8MHz

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

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
GSM	Head	Left cheek	L	24.28	26.00	1.486	---	---	---	---
			M	24.22	26.00	1.507	0.309	---	0.466	---
			H	24.23	26.00	1.503	---	---	---	---
		Left tilted	L	24.28	26.00	1.486	---	---	---	---
			M	24.22	26.00	1.507	0.348	---	0.524	---
			H	24.23	26.00	1.503	---	---	---	---
		Right cheek	L	24.28	26.00	1.486	---	---	---	---
			M	24.22	26.00	1.507	0.523	---	0.788	---
			H	24.23	26.00	1.503	---	---	---	---
		Right tilted	L	24.28	26.00	1.486	---	---	---	---
			M	24.22	26.00	1.507	0.499	---	0.752	---
			H	24.23	26.00	1.503	---	---	---	---
	Body-worn	Back	L	29.40	30.50	1.288	---	---	---	---
			M	29.32	30.50	1.312	0.511	---	0.671	---
			H	29.48	30.50	1.265	---	---	---	---
Front		L	29.40	30.50	1.288	---	---	---	---	
		M	29.32	30.50	1.312	0.388	---	0.509	---	
		H	29.48	30.50	1.265	---	---	---	---	
GPRS/EDGE GMSK 2TxSlots	Hotspot	Back	L	27.45	29.00	1.429	0.597	---	0.853	---
			M	27.58	29.00	1.387	0.611	---	0.847	---
			H	27.37	29.00	1.455	0.547	---	0.796	---
		Front	L	27.45	29.00	1.429	---	---	---	---
			M	27.58	29.00	1.387	0.538	---	0.746	---
			H	27.37	29.00	1.455	---	---	---	---
		Top	L	27.45	29.00	1.429	---	---	---	---
			M	27.58	29.00	1.387	0.547	---	0.759	---
			H	27.37	29.00	1.455	---	---	---	---
		Bottom	L	27.45	29.00	1.429	---	---	---	---
			M	27.58	29.00	1.387	---	---	---	---
			H	27.37	29.00	1.455	---	---	---	---
		Left	L	27.45	29.00	1.429	---	---	---	---
			M	27.58	29.00	1.387	0.228	---	0.316	---
			H	27.37	29.00	1.455	---	---	---	---
		Right	L	27.45	29.00	1.429	---	---	---	---
			M	27.58	29.00	1.387	0.086	---	0.119	---
			H	27.37	29.00	1.455	---	---	---	---

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Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
GSM	Head	Right cheek	L	24.28	26.00	1.486	---	---	---	---
			M	24.22	26.00	1.507	0.406	---	0.612	---
			H	24.23	26.00	1.503	---	---	---	---
	Body-worn	Back	L	29.40	30.50	1.288	---	---	---	---
			M	29.32	30.50	1.312	0.541	---	0.710	---
			H	29.48	30.50	1.265	---	---	---	---
GPRS/EDGE GMSK 2TxSlots	Hotspot	Back	L	27.45	29.00	1.429	0.400	---	0.572	---
			M	27.58	29.00	1.387	---	---	---	---
			H	27.37	29.00	1.455	---	---	---	---

(Variant)

**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)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
RMC	Head	Left cheek	L	17.01	18.00	1.256	---	---	---	---
			M	16.96	18.00	1.271	0.210	---	0.267	---
			H	17.07	18.00	1.239	---	---	---	---
		Left tilted	L	17.01	18.00	1.256	---	---	---	---
			M	16.96	18.00	1.271	0.199	---	0.253	---
			H	17.07	18.00	1.239	---	---	---	---
		Right cheek	L	17.01	18.00	1.256	---	---	---	---
			M	16.96	18.00	1.271	0.584	---	0.742	---
			H	17.07	18.00	1.239	---	---	---	---
		Right tilted	L	17.01	18.00	1.256	---	---	---	---
			M	16.96	18.00	1.271	0.547	---	0.695	---
			H	17.07	18.00	1.239	---	---	---	---
	Body-worn	Back	L	23.07	24.00	1.239	0.776	---	0.961	---
			M	23.06	24.00	1.242	0.773	---	0.960	---
			H	23.15	24.00	1.216	0.732	---	0.890	---
		Front	L	23.07	24.00	1.239	---	---	---	---
			M	23.06	24.00	1.242	0.596	---	0.740	---
			H	23.15	24.00	1.216	---	---	---	---
	Hotspot	Back	L	23.07	24.00	1.239	0.776	---	0.961	---
			M	23.06	24.00	1.242	0.773	---	0.960	---
			H	23.15	24.00	1.216	0.732	---	0.890	---
		Front	L	23.07	24.00	1.239	---	---	---	---
			M	23.06	24.00	1.242	0.596	---	0.740	---
			H	23.15	24.00	1.216	---	---	---	---
		Top	L	23.07	24.00	1.239	---	---	---	---
			M	23.06	24.00	1.242	0.580	---	0.720	---
			H	23.15	24.00	1.216	---	---	---	---
		Bottom	L	23.07	24.00	1.239	---	---	---	---
			M	23.06	24.00	1.242	---	---	---	---
			H	23.15	24.00	1.216	---	---	---	---
		Left	L	23.07	24.00	1.239	---	---	---	---
			M	23.06	24.00	1.242	0.259	---	0.322	---
			H	23.15	24.00	1.216	---	---	---	---
		Right	L	23.07	24.00	1.239	---	---	---	---
			M	23.06	24.00	1.242	0.086	---	0.107	---
			H	23.15	24.00	1.216	---	---	---	---

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
RMC	Head	Right cheek	L	17.01	18.00	1.256	---	---	---	---
			M	16.96	18.00	1.271	0.503	---	0.639	---
			H	17.07	18.00	1.239	---	---	---	---
	Body-worn	Back	L	23.07	24.00	1.239	0.726	---	0.899	---
			M	23.06	24.00	1.242	---	---	---	---
			H	23.15	24.00	1.216	---	---	---	---
	Hotspot	Back	L	23.07	24.00	1.239	0.726	---	0.899	---
			M	23.06	24.00	1.242	---	---	---	---
			H	23.15	24.00	1.216	---	---	---	---

**(Variant)**

**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)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
RMC	Head	Left cheek	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.097	---	0.121	---
			H	22.99	24.00	1.262	---	---	---	---
		Left tilted	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.075	---	0.094	---
			H	22.99	24.00	1.262	---	---	---	---
		Right cheek	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.171	---	0.213	---
			H	22.99	24.00	1.262	---	---	---	---
		Right tilted	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.083	---	0.103	---
			H	22.99	24.00	1.262	---	---	---	---
	Body-worn	Back	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.238	---	0.296	---
			H	22.99	24.00	1.262	---	---	---	---
		Front	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.352	---	0.438	---
			H	22.99	24.00	1.262	---	---	---	---
	Hotspot	Back	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.238	---	0.296	---
			H	22.99	24.00	1.262	---	---	---	---
		Front	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.352	---	0.438	---
			H	22.99	24.00	1.262	---	---	---	---
		Top	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	---	---	---	---
			H	22.99	24.00	1.262	---	---	---	---
		Bottom	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.206	---	0.256	---
			H	22.99	24.00	1.262	---	---	---	---
		Left	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.028	---	0.034	---
			H	22.99	24.00	1.262	---	---	---	---
		Right	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.165	---	0.205	---
			H	22.99	24.00	1.262	---	---	---	---

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
RMC	Head	Right cheek	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.133	---	0.166	---
			H	22.99	24.00	1.262	---	---	---	---
	Body-worn	Front	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.319	---	0.397	---
			H	22.99	24.00	1.262	---	---	---	---
	Hotspot	Front	L	23.04	24.00	1.247	---	---	---	---
			M	23.05	24.00	1.245	0.319	---	0.397	---
			H	22.99	24.00	1.262	---	---	---	---

**(Variant)**

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)

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)		
Mode	Exposure condition	Position	Channel				First	Second	First	Second	
QPSK 1RB	Head	Left cheek	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.086	---	0.114	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Left tilted	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.055	---	0.073	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Right cheek	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.155	---	0.204	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Right tilted	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.098	---	0.129	---	
			H	22.65	24.00	1.365	---	---	---	---	
	Body-worn	Back	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.299	---	0.394	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Front	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.366	---	0.482	---	
			H	22.65	24.00	1.365	---	---	---	---	
	Hotspot	Back	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.299	---	0.394	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Front	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.366	---	0.482	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Top	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	---	---	---	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Bottom	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.171	---	0.225	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Left	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.029	---	0.038	---	
			H	22.65	24.00	1.365	---	---	---	---	
		Right	L	22.72	24.00	1.343	---	---	---	---	
			M	22.80	24.00	1.318	0.117	---	0.154	---	
			H	22.65	24.00	1.365	---	---	---	---	
	QPSK 50%RB	Head	Left cheek	L	21.79	23.00	1.321	---	---	---	---
				M	21.82	23.00	1.312	0.090	---	0.117	---
				H	21.78	23.00	1.324	---	---	---	---
			Left tilted	L	21.79	23.00	1.321	---	---	---	---
				M	21.82	23.00	1.312	0.054	---	0.071	---
				H	21.78	23.00	1.324	---	---	---	---
			Right cheek	L	21.79	23.00	1.321	---	---	---	---
				M	21.82	23.00	1.312	0.129	---	0.169	---
				H	21.78	23.00	1.324	---	---	---	---
			Right tilted	L	21.79	23.00	1.321	---	---	---	---
				M	21.82	23.00	1.312	0.082	---	0.108	---
				H	21.78	23.00	1.324	---	---	---	---
Body-worn		Back	L	21.79	23.00	1.321	---	---	---	---	
			M	21.82	23.00	1.312	0.200	---	0.262	---	
			H	21.78	23.00	1.324	---	---	---	---	

	Hotspot	Front	L	21.79	23.00	1.321	---	---	---	---
			M	21.82	23.00	1.312	0.296	---	0.388	---
			H	21.78	23.00	1.324	---	---	---	---
		Back	L	21.79	23.00	1.321	---	---	---	---
			M	21.82	23.00	1.312	0.200	---	0.262	---
			H	21.78	23.00	1.324	---	---	---	---
		Front	L	21.79	23.00	1.321	---	---	---	---
			M	21.82	23.00	1.312	0.296	---	0.388	---
			H	21.78	23.00	1.324	---	---	---	---
	Top	L	21.79	23.00	1.321	---	---	---	---	
		M	21.82	23.00	1.312	---	---	---	---	
		H	21.78	23.00	1.324	---	---	---	---	
	Bottom	L	21.79	23.00	1.321	---	---	---	---	
		M	21.82	23.00	1.312	0.142	---	0.186	---	
		H	21.78	23.00	1.324	---	---	---	---	
	Left	L	21.79	23.00	1.321	---	---	---	---	
		M	21.82	23.00	1.312	0.025	---	0.033	---	
		H	21.78	23.00	1.324	---	---	---	---	
Right	L	21.79	23.00	1.321	---	---	---	---		
	M	21.82	23.00	1.312	0.098	---	0.128	---		
	H	21.78	23.00	1.324	---	---	---	---		

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 1RB	Head	Right cheek	L	22.72	24.00	1.343	---	---	---	---
			M	22.80	24.00	1.318	0.113	---	0.149	---
			H	22.65	24.00	1.365	---	---	---	---
	Body-worn	Front	L	22.72	24.00	1.343	---	---	---	---
			M	22.80	24.00	1.318	0.313	---	0.413	---
			H	22.65	24.00	1.365	---	---	---	---
	Hotspot	Front	L	22.72	24.00	1.343	---	---	---	---
			M	22.80	24.00	1.318	0.313	---	0.413	---
			H	22.65	24.00	1.365	---	---	---	---

**(Variant)**

Mode: LTE Band 7

fL (MHz)=2510 MHz

fM (MHz)=2535MHz

fH (MHz)= 2560MHz

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

Mode	Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)		
	Exposure condition	Position	Channel				First	Second	First	Second	
QPSK 1RB	Head	Left cheek	L	23.17	24.00	1.211	---	---	---	---	
			M	23.17	24.00	1.211	---	---	---	---	
			H	23.18	24.00	1.208	0.004	---	0.005	---	
		Left tilted	L	23.17	24.00	1.211	---	---	---	---	
			M	23.17	24.00	1.211	---	---	---	---	
			H	23.18	24.00	1.208	0.008	---	0.009	---	
		Right cheek	L	23.17	24.00	1.211	---	---	---	---	
			M	23.17	24.00	1.211	---	---	---	---	
			H	23.18	24.00	1.208	0.019	---	0.023	---	
		Right tilted	CA	23.16	24.00	1.213	0.016	---	0.019	---	
			L	23.17	24.00	1.211	---	---	---	---	
			M	23.17	24.00	1.211	---	---	---	---	
	Body-worn	Back	H	23.18	24.00	1.208	0.002	---	0.002	---	
			L	23.17	24.00	1.211	0.637	---	0.771	---	
			M	23.17	24.00	1.211	0.614	---	0.743	---	
		Front	H	23.18	24.00	1.208	0.712	---	0.860	---	
			L	23.17	24.00	1.211	0.816	---	0.988	---	
			M	23.17	24.00	1.211	0.837	---	1.013	---	
	Hotspot	Back	H	23.18	24.00	1.208	0.803	---	0.970	---	
			L	21.00	22.00	1.259	---	---	---	---	
			M	20.93	22.00	1.279	---	---	---	---	
			H	21.11	22.00	1.227	0.352	---	0.432	---	
			L	21.00	22.00	1.259	---	---	---	---	
			M	20.93	22.00	1.279	---	---	---	---	
		Front	H	21.11	22.00	1.227	0.401	---	0.492	---	
			L	21.00	22.00	1.259	---	---	---	---	
			M	20.93	22.00	1.279	---	---	---	---	
		Top	L	21.00	22.00	1.259	---	---	---	---	
			M	20.93	22.00	1.279	---	---	---	---	
			H	21.11	22.00	1.227	---	---	---	---	
		Bottom	L	21.00	22.00	1.259	0.946	---	1.191	---	
			M	20.93	22.00	1.279	0.954	0.937	1.221	1.199	
			CA	20.86	22.00	1.300	0.928	---	1.207	---	
			H	21.11	22.00	1.227	0.952	---	1.169	---	
			L	21.00	22.00	1.259	---	---	---	---	
			M	20.93	22.00	1.279	---	---	---	---	
		Left	H	21.11	22.00	1.227	0.002	---	0.003	---	
			L	21.00	22.00	1.259	---	---	---	---	
			M	20.93	22.00	1.279	---	---	---	---	
		Right	L	21.00	22.00	1.259	---	---	---	---	
			M	20.93	22.00	1.279	---	---	---	---	
			H	21.11	22.00	1.227	0.018	---	0.022	---	
	QPSK 50%RB	Head	Left cheek	L	22.07	23.00	1.239	---	---	---	---
				M	22.13	23.00	1.222	---	---	---	---
				H	22.18	23.00	1.208	0.001	---	0.001	---
			Left tilted	L	22.07	23.00	1.239	---	---	---	---
				M	22.13	23.00	1.222	---	---	---	---
				H	22.18	23.00	1.208	0.003	---	0.003	---
Right cheek			L	22.07	23.00	1.239	---	---	---	---	
			M	22.13	23.00	1.222	---	---	---	---	
			H	22.18	23.00	1.208	0.007	---	0.008	---	
Right tilted			L	22.07	23.00	1.239	---	---	---	---	
			M	22.13	23.00	1.222	---	---	---	---	
			H	22.18	23.00	1.208	0.001	---	0.001	---	
Body-worn		Back	L	22.07	23.00	1.239	---	---	---	---	
			M	22.13	23.00	1.222	---	---	---	---	
			H	22.18	23.00	1.208	0.593	---	0.716	---	
		Front	L	22.07	23.00	1.239	0.735	---	0.911	---	
			M	22.13	23.00	1.222	0.673	---	0.822	---	
			H	22.18	23.00	1.208	0.745	---	0.900	---	
Hotspot		Back	L	20.17	21.00	1.211	---	---	---	---	
			M	20.15	21.00	1.216	---	---	---	---	
			H	20.18	21.00	1.208	0.278	---	0.336	---	
		Front	L	20.17	21.00	1.211	---	---	---	---	
			M	20.15	21.00	1.216	---	---	---	---	
			H	20.18	21.00	1.208	0.296	---	0.358	---	
Top	L	20.17	21.00	1.211	---	---	---	---			



		Bottom	M	20.15	21.00	1.216	---	---	---	---
			H	20.18	21.00	1.208	---	---	---	---
			L	20.17	21.00	1.211	0.890	---	1.077	---
			M	20.15	21.00	1.216	0.878	---	1.068	---
			H	20.18	21.00	1.208	0.812	---	0.981	---
			L	20.17	21.00	1.211	---	---	---	---
		Left	M	20.15	21.00	1.216	---	---	---	---
			H	20.18	21.00	1.208	0.002	---	0.002	---
			L	20.17	21.00	1.211	---	---	---	---
		Right	M	20.15	21.00	1.216	---	---	---	---
			H	20.18	21.00	1.208	0.017	---	0.020	---
			L	20.17	21.00	1.211	---	---	---	---
QPSK 100%RB	Body-worn	Back	L	22.52	23.00	1.117	0.571	---	0.638	---
			M	22.18	23.00	1.208	---	---	---	---
			H	21.92	23.00	1.282	---	---	---	---
		Front	L	22.52	23.00	1.117	0.754	---	0.842	---
			M	22.18	23.00	1.208	---	---	---	---
			H	21.92	23.00	1.282	---	---	---	---
	Hotspot	Back	L	20.33	21.00	1.167	---	---	---	---
			M	20.12	21.00	1.225	---	---	---	---
			H	19.84	21.00	1.306	---	---	---	---
		Front	L	20.33	21.00	1.167	---	---	---	---
			M	20.12	21.00	1.225	---	---	---	---
			H	19.84	21.00	1.306	---	---	---	---
		Top	L	20.33	21.00	1.167	---	---	---	---
			M	20.12	21.00	1.225	---	---	---	---
			H	19.84	21.00	1.306	---	---	---	---
		Bottom	L	20.33	21.00	1.167	0.823	---	0.960	---
			M	20.12	21.00	1.225	---	---	---	---
			H	19.84	21.00	1.306	---	---	---	---
		Left	L	20.33	21.00	1.167	---	---	---	---
			M	20.12	21.00	1.225	---	---	---	---
			H	19.84	21.00	1.306	---	---	---	---
	Right	L	20.33	21.00	1.167	---	---	---	---	
		M	20.12	21.00	1.225	---	---	---	---	
		H	19.84	21.00	1.306	---	---	---	---	
QPSK 1RB	0mm	Back	L	23.17	24.00	1.211	---	---	---	---
			M	23.17	24.00	1.211	---	---	---	---
			H	23.18	24.00	1.208	---	---	---	---
		Front	L	23.17	24.00	1.211	---	---	---	---
			M	23.17	24.00	1.211	---	---	---	---
			H	23.18	24.00	1.208	---	---	---	---
		Top	L	23.17	24.00	1.211	---	---	---	---
			M	23.17	24.00	1.211	---	---	---	---
			H	23.18	24.00	1.208	---	---	---	---
		Bottom	L	23.17	24.00	1.211	---	---	---	---
			M	23.17	24.00	1.211	---	---	---	---
			H	23.18	24.00	1.208	1.150	---	1.389	---
		CA	L	23.16	24.00	1.213	1.120	---	1.359	---
			M	23.17	24.00	1.211	---	---	---	---
			H	23.18	24.00	1.208	---	---	---	---
		Left	L	23.17	24.00	1.211	---	---	---	---
			M	23.17	24.00	1.211	---	---	---	---
			H	23.18	24.00	1.208	---	---	---	---
Right	L	23.17	24.00	1.211	---	---	---	---		
	M	23.17	24.00	1.211	---	---	---	---		
	H	23.18	24.00	1.208	---	---	---	---		
QPSK 50%RB	0mm	Back	L	22.07	23.00	1.239	---	---	---	---
			M	22.13	23.00	1.222	---	---	---	---
			H	22.18	23.00	1.208	---	---	---	---
		Front	L	22.07	23.00	1.239	---	---	---	---
			M	22.13	23.00	1.222	---	---	---	---
			H	22.18	23.00	1.208	---	---	---	---
		Top	L	22.07	23.00	1.239	---	---	---	---
			M	22.13	23.00	1.222	---	---	---	---
			H	22.18	23.00	1.208	---	---	---	---
		Bottom	L	22.07	23.00	1.239	---	---	---	---
			M	22.13	23.00	1.222	---	---	---	---
			H	22.18	23.00	1.208	0.996	---	1.203	---
		Left	L	22.07	23.00	1.239	---	---	---	---
			M	22.13	23.00	1.222	---	---	---	---
			H	22.18	23.00	1.208	---	---	---	---
		Right	L	22.07	23.00	1.239	---	---	---	---

			M	22.13	23.00	1.222	---	---	---	---
			H	22.18	23.00	1.208	---	---	---	---

**Original report(Report No.:XZR/2021/5002601)**

**EN\_DC**

Mode	Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)		
	Exposure condition	Position	Channel				First	Second	First	Second	
QPSK 1RB	Head	Left cheek	L	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	
		Left tilted	L	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---
		Right cheek	L	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---
		Right tilted	L	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---
	Body-worn	Back	L	23.17	22.00	0.764	0.637	---	0.487	---	
			M	23.17	22.00	0.764	0.614	---	0.469	---	
			H	23.18	22.00	0.762	0.712	---	0.543	---	
		Front	L	23.17	22.00	0.764	0.816	---	0.623	---	
			M	23.17	22.00	0.764	0.837	---	0.639	---	
			H	23.18	22.00	0.762	0.803	---	0.612	---	
	Hotspot	Back	L	21.00	19.00	0.631	---	---	---	---	
			M	20.93	19.00	0.641	---	---	---	---	
			H	21.11	19.00	0.615	0.352	---	0.217	---	
		Front	L	21.00	19.00	0.631	---	---	---	---	
			M	20.93	19.00	0.641	---	---	---	---	
			H	21.11	19.00	0.615	0.401	---	0.247	---	
		Top	L	21.00	19.00	0.631	---	---	---	---	
			M	20.93	19.00	0.641	---	---	---	---	
			H	21.11	19.00	0.615	---	---	---	---	
		Bottom	L	21.00	19.00	0.631	0.946	---	0.597	---	
			M	20.93	19.00	0.641	0.954	---	0.612	---	
			H	21.11	19.00	0.615	0.952	---	0.586	---	
		Left	L	21.00	19.00	0.631	---	---	---	---	
			M	20.93	19.00	0.641	---	---	---	---	
			H	21.11	19.00	0.615	0.002	---	0.001	---	
		Right	L	21.00	19.00	0.631	---	---	---	---	
			M	20.93	19.00	0.641	---	---	---	---	
			H	21.11	19.00	0.615	0.018	---	0.011	---	
	QPSK 50%RB	Head	Left cheek	L	---	---	---	---	---	---	---
				M	---	---	---	---	---	---	---
				H	---	---	---	---	---	---	---
			Left tilted	L	---	---	---	---	---	---	---
				M	---	---	---	---	---	---	---
				H	---	---	---	---	---	---	---
			Right cheek	L	---	---	---	---	---	---	---
				M	---	---	---	---	---	---	---
				H	---	---	---	---	---	---	---
			Right tilted	L	---	---	---	---	---	---	---
				M	---	---	---	---	---	---	---
				H	---	---	---	---	---	---	---
Body-worn		Back	L	22.07	22.00	0.984	---	---	---	---	
			M	22.10	22.00	0.977	---	---	---	---	
			H	22.18	22.00	0.959	0.593	---	0.569	---	
		Front	L	22.07	22.00	0.984	0.735	---	0.723	---	
			M	22.10	22.00	0.977	0.673	---	0.658	---	
			H	22.18	22.00	0.959	0.745	---	0.715	---	
Hotspot		Back	L	20.17	19.00	0.764	---	---	---	---	
			M	20.15	19.00	0.767	---	---	---	---	
			H	20.18	19.00	0.762	0.278	---	0.212	---	
		Front	L	20.17	19.00	0.764	---	---	---	---	
			M	20.15	19.00	0.767	---	---	---	---	
			H	20.18	19.00	0.762	0.296	---	0.226	---	
Top	L	20.17	19.00	0.764	---	---	---	---			

		Bottom	M	20.15	19.00	0.767	---	---	---	---		
			H	20.18	19.00	0.762	---	---	---	---		
			L	20.17	19.00	0.764	0.890	---	0.680	---		
		Left	M	20.15	19.00	0.767	0.878	---	0.674	---		
			H	20.18	19.00	0.762	0.812	---	0.619	---		
			L	20.17	19.00	0.764	---	---	---	---		
		Right	M	20.15	19.00	0.767	---	---	---	---		
			H	20.18	19.00	0.762	0.002	---	0.002	---		
			L	20.17	19.00	0.764	---	---	---	---		
		QPSK 100%RB	Body-worn	Back	M	20.15	19.00	0.767	---	---	---	---
					H	20.18	19.00	0.762	0.017	---	0.013	---
					L	22.52	22.00	0.887	0.571	---	0.507	---
Front	M			---	---	---	---	---	---	---		
	H			---	---	---	---	---	---	---		
	L			22.52	22.00	0.887	0.754	---	0.669	---		
Hotspot	Back		M	---	---	---	---	---	---	---		
			H	---	---	---	---	---	---	---		
			L	20.33	19.00	0.736	---	---	---	---		
	Front		M	---	---	---	---	---	---	---		
			H	---	---	---	---	---	---	---		
			L	20.33	19.00	0.736	---	---	---	---		
	Top		M	---	---	---	---	---	---	---		
			H	---	---	---	---	---	---	---		
			L	20.33	19.00	0.736	---	---	---	---		
	Bottom		M	---	---	---	---	---	---	---		
			H	---	---	---	---	---	---	---		
			L	20.33	19.00	0.736	0.823	---	0.606	---		
Left	M		---	---	---	---	---	---	---			
	H		---	---	---	---	---	---	---			
	L		20.33	19.00	0.736	---	---	---	---			
Right	M		---	---	---	---	---	---	---			
	H		---	---	---	---	---	---	---			
	L		20.33	19.00	0.736	---	---	---	---			

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 1RB	Head	Right cheek	L	23.17	24.00	1.211	---	---	---	---
			M	23.17	24.00	1.211	---	---	---	---
			H	23.18	24.00	1.208	0.026	---	0.031	---
	Body-worn	Front	L	23.17	24.00	1.211	---	---	---	---
			M	23.17	24.00	1.211	0.779	---	0.943	---
			H	23.18	24.00	1.208	---	---	---	---
	Hotspot	Bottom	L	21.00	22.00	1.259	---	---	---	---
			M	20.93	22.00	1.279	0.844	---	1.080	---
			H	21.11	22.00	1.227	---	---	---	---
QPSK 1RB	0mm	Bottom	L	23.17	24.00	1.211	---	---	---	---
			M	23.17	24.00	1.211	---	---	---	---
			H	23.18	24.00	1.208	0.919	---	1.110	---

**(Variant)**

Mode: LTE Band 38

fL (MHz)= 2580 MHz      fM (MHz)= 2595MHz      fH (MHz)= 2610MHz

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

Test case				Meas power(dBm)	Tune-up	Scaling	Meas SAR(w/kg)		Report SAR(w/kg)		
Mode	Exposure condition	Position	Channel		(dBm)	factor	First	Second	First	Second	
QPSK 1RB	Head	Left cheek	L	18.33	20.00	1.469	---	---	---	---	
			M	18.34	20.00	1.466	0.232	---	0.340	---	
			H	17.91	20.00	1.618	---	---	---	---	
		Left tilted	L	18.33	20.00	1.469	---	---	---	---	
			M	18.34	20.00	1.466	0.244	---	0.358	---	
			H	17.91	20.00	1.618	---	---	---	---	
		Right cheek	L	18.33	20.00	1.469	---	---	---	---	
			M	18.34	20.00	1.466	0.355	---	0.520	---	
			H	17.91	20.00	1.618	---	---	---	---	
		Right tilted	L	18.33	20.00	1.469	---	---	---	---	
			M	18.34	20.00	1.466	0.507	---	0.743	---	
			CA	18.14	20.00	1.535	0.479	---	0.735	---	
	H		17.91	20.00	1.618	---	---	---	---		
	Body-worn	Back	L	22.33	24.00	1.469	---	---	---	---	
			M	22.34	24.00	1.466	0.297	---	0.435	---	
			CA	22.01	24.00	1.581	0.256	---	0.405	---	
		Front	L	22.33	24.00	1.469	---	---	---	---	
			M	22.34	24.00	1.466	0.182	---	0.267	---	
			H	22.1	24.00	1.549	---	---	---	---	
	Hotspot	Back	L	22.33	24.00	1.469	---	---	---	---	
			M	22.34	24.00	1.466	0.297	---	0.435	---	
			H	22.1	24.00	1.549	---	---	---	---	
		Front	L	22.33	24.00	1.469	---	---	---	---	
			M	22.34	24.00	1.466	0.182	---	0.267	---	
			H	22.1	24.00	1.549	---	---	---	---	
		Top	L	22.33	24.00	1.469	---	---	---	---	
			M	22.34	24.00	1.466	0.465	---	0.681	---	
			CA	22.01	24.00	1.581	0.358	---	0.566	---	
		Bottom	L	22.33	24.00	1.469	---	---	---	---	
			M	22.34	24.00	1.466	---	---	---	---	
			H	22.1	24.00	1.549	---	---	---	---	
		Left	L	22.33	24.00	1.469	---	---	---	---	
			M	22.34	24.00	1.466	0.036	---	0.052	---	
			H	22.1	24.00	1.549	---	---	---	---	
		Right	L	22.33	24.00	1.469	---	---	---	---	
			M	22.34	24.00	1.466	0.030	---	0.044	---	
			H	22.1	24.00	1.549	---	---	---	---	
	QPSK 50%RB	Head	Left cheek	L	17.58	19.00	1.387	---	---	---	---
				M	17.59	19.00	1.384	0.196	---	0.271	---
				H	17.21	19.00	1.510	---	---	---	---
			Left tilted	L	17.58	19.00	1.387	---	---	---	---
				M	17.59	19.00	1.384	0.201	---	0.278	---
				H	17.21	19.00	1.510	---	---	---	---
			Right cheek	L	17.58	19.00	1.387	---	---	---	---
				M	17.59	19.00	1.384	0.304	---	0.421	---
				H	17.21	19.00	1.510	---	---	---	---
			Right tilted	L	17.58	19.00	1.387	---	---	---	---
				M	17.59	19.00	1.384	0.381	---	0.527	---
H				17.21	19.00	1.510	---	---	---	---	

	Body-worn	Back	L	21.47	23.00	1.422	---	---	---	---
			M	21.50	23.00	1.413	0.246	---	0.347	---
			H	21.16	23.00	1.528	---	---	---	---
		Front	L	21.47	23.00	1.422	---	---	---	---
			M	21.50	23.00	1.413	0.148	---	0.209	---
			H	21.16	23.00	1.528	---	---	---	---
	Hotspot	Back	L	21.47	23.00	1.422	---	---	---	---
			M	21.50	23.00	1.413	0.246	---	0.347	---
			H	21.16	23.00	1.528	---	---	---	---
		Front	L	21.47	23.00	1.422	---	---	---	---
			M	21.50	23.00	1.413	0.148	---	0.209	---
			H	21.16	23.00	1.528	---	---	---	---
		Top	L	21.47	23.00	1.422	---	---	---	---
			M	21.50	23.00	1.413	0.386	---	0.545	---
			H	21.16	23.00	1.528	---	---	---	---
		Bottom	L	21.47	23.00	1.422	---	---	---	---
			M	21.50	23.00	1.413	---	---	---	---
			H	21.16	23.00	1.528	---	---	---	---
		Left	L	21.47	23.00	1.422	---	---	---	---
			M	21.50	23.00	1.413	0.029	---	0.040	---
			H	21.16	23.00	1.528	---	---	---	---
		Right	L	21.47	23.00	1.422	---	---	---	---
			M	21.50	23.00	1.413	0.021	---	0.030	---
			H	21.16	23.00	1.528	---	---	---	---

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 1RB	Head	Right tilted	L	18.33	20.00	1.469	---	---	---	---
			M	18.34	20.00	1.466	0.505	---	0.740	---
			H	17.91	20.00	1.618	---	---	---	---
	Body-worn	Back	L	22.33	24.00	1.469	---	---	---	---
			M	22.34	24.00	1.466	0.361	---	0.529	---
			H	22.1	24.00	1.549	---	---	---	---
	Hotspot	Top	L	22.33	24.00	1.469	---	---	---	---
			M	22.34	24.00	1.466	0.478	---	0.701	---
			H	22.1	24.00	1.549	---	---	---	---

**(Variant)**

**Mode: LTE Band 41**

fL1 (MHz)= 2506 MHz    fL2 (MHz)= 2549.5 MHz    fM (MHz)= 2593MHz    fH1 (MHz)= 2636.5MHz    fH2 (MHz)= 2680MHz

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

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)			
Mode	Exposure condition	Position	Channel				First	Second	First	Second		
QPSK 1RB	Head	Left cheek	L1	19.02	20.00	1.253	---	---	---	---		
			L2	19.01	20.00	1.256	---	---	---	---		
			M	19.20	20.00	1.202	0.195	---	0.234	---		
			H1	19.00	20.00	1.259	---	---	---	---		
			H2	18.95	20.00	1.274	---	---	---	---		
		Left tilted	L1	19.02	20.00	1.253	---	---	---	---		
			L2	19.01	20.00	1.256	---	---	---	---		
			M	19.20	20.00	1.202	0.240	---	0.289	---		
			H1	19.00	20.00	1.259	---	---	---	---		
			H2	18.95	20.00	1.274	---	---	---	---		
		Right cheek	L1	19.02	20.00	1.253	---	---	---	---		
			L2	19.01	20.00	1.256	---	---	---	---		
			M	19.20	20.00	1.202	0.397	---	0.477	---		
			CA	18.91	20.00	1.285	0.356	---	0.458	---		
			H1	19.00	20.00	1.259	---	---	---	---		
			H2	18.95	20.00	1.274	---	---	---	---		
			Right tilted	L1	19.02	20.00	1.253	---	---	---	---	
				L2	19.01	20.00	1.256	---	---	---	---	
				M	19.20	20.00	1.202	0.394	---	0.474	---	
				H1	19.00	20.00	1.259	---	---	---	---	
	H2	18.95		20.00	1.274	---	---	---	---			
	Body-worn	Back	L1	23.07	24.00	1.239	---	---	---	---		
			L2	23.02	24.00	1.253	---	---	---	---		
			M	23.20	24.00	1.202	0.285	---	0.343	---		
			CA	22.89	24.00	1.291	0.245	---	0.316	---		
			H1	22.95	24.00	1.274	---	---	---	---		
			H2	22.96	24.00	1.271	---	---	---	---		
			Front	L1	23.07	24.00	1.239	---	---	---	---	
				L2	23.02	24.00	1.253	---	---	---	---	
		M		23.20	24.00	1.202	0.203	---	0.244	---		
		H1		22.95	24.00	1.274	---	---	---	---		
		H2		22.96	24.00	1.271	---	---	---	---		
		Hotspot		Back	L1	23.07	24.00	1.239	---	---	---	---
					L2	23.02	24.00	1.253	---	---	---	---
					M	23.20	24.00	1.202	0.285	---	0.343	---
			H1		22.95	24.00	1.274	---	---	---	---	
H2			22.96		24.00	1.271	---	---	---	---		
Front	L1		23.07		24.00	1.239	---	---	---	---		
	L2		23.02	24.00	1.253	---	---	---	---			
	M		23.20	24.00	1.202	<b>0.203</b>	---	0.244	---			
	H1		22.95	24.00	1.274	---	---	---	---			
	H2		22.96	24.00	1.271	---	---	---	---			
	Top		L1	23.07	24.00	1.239	---	---	---	---		
L2			23.02	24.00	1.253	---	---	---	---			
M		23.20	24.00	1.202	0.432	---	0.519	---				
CA		22.89	24.00	1.291	0.356	---	0.460	---				
H1		22.95	24.00	1.274	---	---	---	---				
H2		22.96	24.00	1.271	---	---	---	---				
Bottom	L1	23.07	24.00	1.239	---	---	---	---				
	L2	23.02	24.00	1.253	---	---	---	---				

		Left	M	23.20	24.00	1.202	---	---	---	---		
			H1	22.95	24.00	1.274	---	---	---	---		
			H2	22.96	24.00	1.271	---	---	---	---		
			L1	23.07	24.00	1.239	---	---	---	---		
			L2	23.02	24.00	1.253	---	---	---	---		
			M	23.20	24.00	1.202	0.034	---	0.041	---		
			H1	22.95	24.00	1.274	---	---	---	---		
			H2	22.96	24.00	1.271	---	---	---	---		
			Right	L1	23.07	24.00	1.239	---	---	---	---	
		L2	23.02	24.00	1.253	---	---	---	---			
		M	23.20	24.00	1.202	0.023	---	0.027	---			
		H1	22.95	24.00	1.274	---	---	---	---			
		H2	22.96	24.00	1.271	---	---	---	---			
		QPSK 50%RB	Head	Left cheek	L1	18.03	19.00	1.250	---	---	---	---
					L2	17.94	19.00	1.276	---	---	---	---
M	18.10				19.00	1.230	0.164	---	0.202	---		
H1	17.92				19.00	1.282	---	---	---	---		
H2	17.86				19.00	1.300	---	---	---	---		
Left tilted	L1				18.03	19.00	1.250	---	---	---	---	
L2	17.94			19.00	1.276	---	---	---	---			
M	18.10			19.00	1.230	0.202	---	0.249	---			
H1	17.92			19.00	1.282	---	---	---	---			
H2	17.86			19.00	1.300	---	---	---	---			
Right cheek	L1			18.03	19.00	1.250	---	---	---	---		
	L2			17.94	19.00	1.276	---	---	---	---		
	M			18.10	19.00	1.230	0.381	---	0.469	---		
	H1			17.92	19.00	1.282	---	---	---	---		
	H2			17.86	19.00	1.300	---	---	---	---		
	Right tilted			L1	18.03	19.00	1.250	---	---	---	---	
L2	17.94			19.00	1.276	---	---	---	---			
M	18.10			19.00	1.230	0.374	---	0.460	---			
H1	17.92			19.00	1.282	---	---	---	---			
H2	17.86			19.00	1.300	---	---	---	---			
Body-worn	Back			L1	22.06	23.00	1.242	---	---	---	---	
				L2	21.98	23.00	1.265	---	---	---	---	
				M	22.07	23.00	1.239	0.239	---	0.296	---	
				H1	21.93	23.00	1.279	---	---	---	---	
		H2	21.90	23.00	1.288	---	---	---	---			
		Front	L1	22.06	23.00	1.242	---	---	---	---		
	L2	21.98	23.00	1.265	---	---	---	---				
	M	22.07	23.00	1.239	0.162	---	0.201	---				
	H1	21.93	23.00	1.279	---	---	---	---				
	H2	21.90	23.00	1.288	---	---	---	---				
	Hotspot	Back	L1	22.06	23.00	1.242	---	---	---	---		
			L2	21.98	23.00	1.265	---	---	---	---		
M			22.07	23.00	1.239	0.239	---	0.296	---			
H1			21.93	23.00	1.279	---	---	---	---			
H2			21.90	23.00	1.288	---	---	---	---			
Front			L1	22.06	23.00	1.242	---	---	---	---		
L2		21.98	23.00	1.265	---	---	---	---				
M		22.07	23.00	1.239	0.162	---	0.201	---				
H1		21.93	23.00	1.279	---	---	---	---				
H2		21.90	23.00	1.288	---	---	---	---				
Top		L1	22.06	23.00	1.242	---	---	---	---			
L2		21.98	23.00	1.265	---	---	---	---				
M	22.07	23.00	1.239	0.386	---	0.478	---					
H1	21.93	23.00	1.279	---	---	---	---					
H2	21.90	23.00	1.288	---	---	---	---					

		Bottom	L1	22.06	23.00	1.242	---	---	---	---
			L2	21.98	23.00	1.265	---	---	---	---
			M	22.07	23.00	1.239	---	---	---	---
			H1	21.93	23.00	1.279	---	---	---	---
			H2	21.90	23.00	1.288	---	---	---	---
		Left	L1	22.06	23.00	1.242	---	---	---	---
			L2	21.98	23.00	1.265	---	---	---	---
			M	22.07	23.00	1.239	0.029	---	0.036	---
			H1	21.93	23.00	1.279	---	---	---	---
		Right	H2	21.90	23.00	1.288	---	---	---	---
			L1	22.06	23.00	1.242	---	---	---	---
			L2	21.98	23.00	1.265	---	---	---	---
M	22.07		23.00	1.239	0.018	---	0.022	---		
H1	21.93		23.00	1.279	---	---	---	---		
			H2	21.90	23.00	1.288	---	---	---	---

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 1RB	Head	Right cheek	L1	19.02	20.00	1.253	---	---	---	---
			L2	19.01	20.00	1.256	---	---	---	---
			M	19.20	20.00	1.202	0.419	---	0.504	---
			H1	19.00	20.00	1.259	---	---	---	---
			H2	18.95	20.00	1.274	---	---	---	---
	Body-worn	Back	L1	23.07	24.00	1.239	---	---	---	---
			L2	23.02	24.00	1.253	---	---	---	---
			M	23.20	24.00	1.202	0.361	---	0.434	---
			H1	22.95	24.00	1.274	---	---	---	---
			H2	22.96	24.00	1.271	---	---	---	---
	Hotspot	Top	L1	23.07	24.00	1.239	---	---	---	---
			L2	23.02	24.00	1.253	---	---	---	---
			M	23.20	24.00	1.202	0.482	---	0.579	---
			H1	22.95	24.00	1.274	---	---	---	---
			H2	22.96	24.00	1.271	---	---	---	---

**(Variant)**



Mode: 5G NR n5

fL (MHz)= 834 MHz      fM (MHz)= 836.5MHz      fH (MHz)= 839MHz

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

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)		
Mode	Exposure condition	Position	Channel				First	Second	First	Second	
QPSK 1RB	Head	Left cheek	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.068	---	0.096	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Left tilted	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.038	---	0.054	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Right cheek	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.097	---	0.138	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Right tilted	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.038	---	0.054	---	
			H	22.46	24.00	1.426	---	---	---	---	
	Body-worn	Back	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.199	---	0.282	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Front	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.182	---	0.258	---	
			H	22.46	24.00	1.426	---	---	---	---	
	Hotspot	Back	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.199	---	0.282	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Front	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.182	---	0.258	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Top	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	---	---	---	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Bottom	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.141	---	0.200	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Left	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.027	---	0.039	---	
			H	22.46	24.00	1.426	---	---	---	---	
		Right	L	22.46	24.00	1.426	---	---	---	---	
			M	22.49	24.00	1.416	0.101	---	0.143	---	
			H	22.46	24.00	1.426	---	---	---	---	
	QPSK 50%RB	Head	Left cheek	L	22.38	24.00	1.452	---	---	---	---
				M	22.40	24.00	1.445	0.077	---	0.112	---
				H	22.37	24.00	1.455	---	---	---	---
			Left tilted	L	22.38	24.00	1.452	---	---	---	---
				M	22.40	24.00	1.445	0.045	---	0.066	---
				H	22.37	24.00	1.455	---	---	---	---
			Right cheek	L	22.38	24.00	1.452	---	---	---	---
				M	22.40	24.00	1.445	0.120	---	0.173	---
				H	22.37	24.00	1.455	---	---	---	---
			Right tilted	L	22.38	24.00	1.452	---	---	---	---
				M	22.40	24.00	1.445	0.038	---	0.055	---
				H	22.37	24.00	1.455	---	---	---	---
Body-worn		Back	L	22.38	24.00	1.452	---	---	---	---	
			M	22.40	24.00	1.445	0.231	---	0.334	---	
			H	22.37	24.00	1.455	---	---	---	---	

	Hotspot	Front	L	22.38	24.00	1.452	---	---	---	---
			M	22.40	24.00	1.445	0.214	---	0.309	---
			H	22.37	24.00	1.455	---	---	---	---
		Back	L	22.38	24.00	1.452	---	---	---	---
			M	22.40	24.00	1.445	0.231	---	0.334	---
			H	22.37	24.00	1.455	---	---	---	---
		Front	L	22.38	24.00	1.452	---	---	---	---
			M	22.40	24.00	1.445	0.214	---	0.309	---
			H	22.37	24.00	1.455	---	---	---	---
	Top	L	22.38	24.00	1.452	---	---	---	---	
		M	22.40	24.00	1.445	---	---	---	---	
		H	22.37	24.00	1.455	---	---	---	---	
	Bottom	L	22.38	24.00	1.452	---	---	---	---	
		M	22.40	24.00	1.445	0.175	---	0.253	---	
		H	22.37	24.00	1.455	---	---	---	---	
	Left	L	22.38	24.00	1.452	---	---	---	---	
		M	22.40	24.00	1.445	0.021	---	0.030	---	
		H	22.37	24.00	1.455	---	---	---	---	
Right	L	22.38	24.00	1.452	---	---	---	---		
	M	22.40	24.00	1.445	0.115	---	0.166	---		
	H	22.37	24.00	1.455	---	---	---	---		

Original report(Report No.:XZR/2021/5002601)

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 50%RB	Head	Right cheek	L	22.38	24.00	1.452	---	---	---	---
			M	22.40	24.00	1.445	0.093	---	0.134	---
			H	22.37	24.00	1.455	---	---	---	---
	Body-worn	Back	L	22.38	24.00	1.452	---	---	---	---
			M	22.40	24.00	1.445	0.241	---	0.348	---
			H	22.37	24.00	1.455	---	---	---	---
	Hotspot	Back	L	22.38	24.00	1.452	---	---	---	---
			M	22.40	24.00	1.445	0.241	---	0.348	---
			H	22.37	24.00	1.455	---	---	---	---

(Variant)

Mode: 5G NR n7

fL (MHz)= 2525 MHz      fM (MHz)= 2535MHz      fH (MHz)= 2545MHz

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

Test case				Meas power(dBm)	Tune-up	Scaling	Meas SAR(w/kg)		Report SAR(w/kg)		
Mode	Exposure condition	Position	Channel		(dBm)	factor	First	Second	First	Second	
QPSK 1RB	Head	Left cheek	L	18.29	19.00	1.178	---	---	---	---	
			M	18.30	19.00	1.175	0.222	---	0.261	---	
			H	18.29	19.00	1.178	---	---	---	---	
		Left tilted	L	18.29	19.00	1.178	---	---	---	---	
			M	18.30	19.00	1.175	0.266	---	0.313	---	
			H	18.29	19.00	1.178	---	---	---	---	
		Right cheek	L	18.29	19.00	1.178	---	---	---	---	
			M	18.30	19.00	1.175	0.350	---	0.411	---	
			H	18.29	19.00	1.178	---	---	---	---	
		Right tilted	L	18.29	19.00	1.178	---	---	---	---	
			M	18.30	19.00	1.175	0.383	---	0.450	---	
			H	18.29	19.00	1.178	---	---	---	---	
	Body-worn	Back	L	22.82	23.50	1.169	---	---	---	---	
			M	22.83	23.50	1.167	0.426	---	0.497	---	
			H	22.82	23.50	1.169	---	---	---	---	
		Front	L	22.82	23.50	1.169	---	---	---	---	
			M	22.83	23.50	1.167	0.352	---	0.411	---	
			H	22.82	23.50	1.169	---	---	---	---	
	Hotspot	Back	L	20.87	21.50	1.156	---	---	---	---	
			M	20.90	21.50	1.148	0.210	---	0.241	---	
			H	20.88	21.50	1.153	---	---	---	---	
		Front	L	20.87	21.50	1.156	---	---	---	---	
			M	20.90	21.50	1.148	0.127	---	0.146	---	
			H	20.88	21.50	1.153	---	---	---	---	
		Top	L	20.87	21.50	1.156	---	---	---	---	
			M	20.90	21.50	1.148	0.381	---	0.437	---	
			H	20.88	21.50	1.153	---	---	---	---	
		Bottom	L	20.87	21.50	1.156	---	---	---	---	
			M	20.90	21.50	1.148	---	---	---	---	
			H	20.88	21.50	1.153	---	---	---	---	
		Left	L	20.87	21.50	1.156	---	---	---	---	
			M	20.90	21.50	1.148	0.057	---	0.065	---	
			H	20.88	21.50	1.153	---	---	---	---	
		Right	L	20.87	21.50	1.156	---	---	---	---	
			M	20.90	21.50	1.148	0.028	---	0.032	---	
			H	20.88	21.50	1.153	---	---	---	---	
	QPSK 50%RB	Head	Left cheek	L	18.27	19.00	1.183	---	---	---	---
				M	18.27	19.00	1.183	0.232	---	0.274	---
				H	18.27	19.00	1.183	---	---	---	---
			Left tilted	L	18.27	19.00	1.183	---	---	---	---
				M	18.27	19.00	1.183	0.290	---	0.343	---
				H	18.27	19.00	1.183	---	---	---	---
			Right cheek	L	18.27	19.00	1.183	---	---	---	---
				M	18.27	19.00	1.183	0.307	---	0.363	---
				H	18.27	19.00	1.183	---	---	---	---
			Right tilted	L	18.27	19.00	1.183	---	---	---	---
				M	18.27	19.00	1.183	0.376	---	0.445	---
				H	18.27	19.00	1.183	---	---	---	---
Body-worn		Back	L	22.51	23.50	1.256	---	---	---	---	
			M	22.55	23.50	1.245	0.452	---	0.563	---	
			H	22.55	23.50	1.245	---	---	---	---	

	Front	L	22.51	23.50	1.256	---	---	---	---
		M	22.55	23.50	1.245	0.399	---	0.497	---
		H	22.55	23.50	1.245	---	---	---	---
	Back	L	20.78	21.50	1.180	---	---	---	---
		M	20.80	21.50	1.175	0.221	---	0.260	---
		H	20.79	21.50	1.178	---	---	---	---
	Front	L	20.78	21.50	1.180	---	---	---	---
		M	20.80	21.50	1.175	0.142	---	0.167	---
		H	20.79	21.50	1.178	---	---	---	---
	Top	L	20.78	21.50	1.180	---	---	---	---
		M	20.80	21.50	1.175	0.397	---	0.466	---
		H	20.79	21.50	1.178	---	---	---	---
	Bottom	L	20.78	21.50	1.180	---	---	---	---
		M	20.80	21.50	1.175	---	---	---	---
		H	20.79	21.50	1.178	---	---	---	---
	Left	L	20.78	21.50	1.180	---	---	---	---
		M	20.80	21.50	1.175	0.061	---	0.072	---
		H	20.79	21.50	1.178	---	---	---	---
Right	L	20.78	21.50	1.180	---	---	---	---	
	M	20.80	21.50	1.175	0.021	---	0.024	---	
	H	20.79	21.50	1.178	---	---	---	---	

Original report(Report No.:XZR/2021/5002601)

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 1RB	Head	Right tilted	L	18.29	19.00	1.178	---	---	---	---
			M	18.30	19.00	1.175	0.457	---	0.537	---
			H	18.29	19.00	1.178	---	---	---	---
QPSK 50%RB	Body-worn	Back	L	22.51	23.50	1.256	---	---	---	---
			M	22.55	23.50	1.245	0.454	---	0.565	---
			H	22.55	23.50	1.245	---	---	---	---
	Hotspot	Top	L	20.78	21.50	1.180	---	---	---	---
			M	20.80	21.50	1.175	0.437	---	0.513	---
			H	20.79	21.50	1.178	---	---	---	---

(Variant)

Mode: 5G NR n38

fL (MHz)= 2590 MHz      fM (MHz)= 2595MHz      fH (MHz)= 2600MHz

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

Mode	Test case			Meas power(dBm)	Tune-up	Scaling	Meas SAR(w/kg)		Report SAR(w/kg)		
	Exposure condition	Position	Channel		(dBm)	factor	First	Second	First	Second	
QPSK 1RB	Head	Left cheek	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.250	---	0.294	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Left tilted	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.304	---	0.358	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Right cheek	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.371	---	0.437	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Right tilted	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.403	---	0.475	---	
			H	22.77	23.50	1.183	---	---	---	---	
	Body-worn	Back	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.138	---	0.163	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Front	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.097	---	0.114	---	
			H	22.77	23.50	1.183	---	---	---	---	
	Hotspot	Back	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.138	---	0.163	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Front	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.097	---	0.114	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Top	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.249	---	0.293	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Bottom	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	---	---	---	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Left	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.015	---	0.018	---	
			H	22.77	23.50	1.183	---	---	---	---	
		Right	L	22.74	23.50	1.191	---	---	---	---	
			M	22.79	23.50	1.178	0.006	---	0.007	---	
			H	22.77	23.50	1.183	---	---	---	---	
	QPSK 50%RB	Head	Left cheek	L	22.41	23.50	1.285	---	---	---	---
				M	22.44	23.50	1.276	0.265	---	0.338	---
				H	22.43	23.50	1.279	---	---	---	---
			Left tilted	L	22.41	23.50	1.285	---	---	---	---
				M	22.44	23.50	1.276	0.332	---	0.424	---
				H	22.43	23.50	1.279	---	---	---	---
			Right cheek	L	22.41	23.50	1.285	---	---	---	---
				M	22.44	23.50	1.276	0.418	---	0.534	---
				H	22.43	23.50	1.279	---	---	---	---
			Right tilted	L	22.41	23.50	1.285	---	---	---	---
				M	22.44	23.50	1.276	0.453	---	0.578	---
				H	22.43	23.50	1.279	---	---	---	---
Body-worn		Back	L	22.41	23.50	1.285	---	---	---	---	
			M	22.44	23.50	1.276	0.115	---	0.147	---	
			H	22.43	23.50	1.279	---	---	---	---	

	Hotspot	Front	L	22.41	23.50	1.285	---	---	---	---
			M	22.44	23.50	1.276	0.082	---	0.105	---
			H	22.43	23.50	1.279	---	---	---	---
		Back	L	22.41	23.50	1.285	---	---	---	---
			M	22.44	23.50	1.276	0.115	---	0.147	---
			H	22.43	23.50	1.279	---	---	---	---
		Front	L	22.41	23.50	1.285	---	---	---	---
			M	22.44	23.50	1.276	0.082	---	0.105	---
			H	22.43	23.50	1.279	---	---	---	---
	Top	L	22.41	23.50	1.285	---	---	---	---	
		M	22.44	23.50	1.276	0.236	---	0.301	---	
		H	22.43	23.50	1.279	---	---	---	---	
	Bottom	L	22.41	23.50	1.285	---	---	---	---	
		M	22.44	23.50	1.276	---	---	---	---	
		H	22.43	23.50	1.279	---	---	---	---	
	Left	L	22.41	23.50	1.285	---	---	---	---	
		M	22.44	23.50	1.276	0.013	---	0.016	---	
		H	22.43	23.50	1.279	---	---	---	---	
Right	L	22.41	23.50	1.285	---	---	---	---		
	M	22.44	23.50	1.276	0.007	---	0.009	---		
	H	22.43	23.50	1.279	---	---	---	---		

Original report(Report No.:XZR/2021/5002601)

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 1RB	Body-worn	Back	L	22.74	23.50	1.191	---	---	---	---
			M	22.79	23.50	1.178	0.125	---	0.147	---
			H	22.77	23.50	1.183	---	---	---	---
QPSK 50%RB	Head	Right tilted	L	22.41	23.50	1.285	---	---	---	---
			M	22.44	23.50	1.276	0.461	---	0.588	---
			H	22.43	23.50	1.279	---	---	---	---
	Hotspot	Top	L	22.41	23.50	1.285	---	---	---	---
			M	22.44	23.50	1.276	0.229	---	0.292	---
			H	22.43	23.50	1.279	---	---	---	---

(Variant)

**Mode: 5G NR n41**

fL1 (MHz)= 2546.01 MHz    fL2 (MHz)= 2569.5 MHz    fM (MHz)= 2592.99MHz    fH1 (MHz)= 2616.51MHz    fH2 (MHz)= 2640MHz

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

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)		
Mode	Exposure condition	Position	Channel				First	Second	First	Second	
QPSK 1RB	Head	Left cheek	L1	22.51	23.50	1.256	---	---	---	---	
			L2	22.49	23.50	1.262	---	---	---	---	
			M	22.55	23.50	1.245	0.124	---	0.154	---	
			H1	22.49	23.50	1.262	---	---	---	---	
			H2	22.54	23.50	1.247	---	---	---	---	
		Left tilted	L1	22.51	23.50	1.256	---	---	---	---	
			L2	22.49	23.50	1.262	---	---	---	---	
			M	22.55	23.50	1.245	0.173	---	0.215	---	
			H1	22.49	23.50	1.262	---	---	---	---	
			H2	22.54	23.50	1.247	---	---	---	---	
		Right cheek	L1	22.51	23.50	1.256	---	---	---	---	
			L2	22.49	23.50	1.262	---	---	---	---	
			M	22.55	23.50	1.245	0.174	---	0.217	---	
			H1	22.49	23.50	1.262	---	---	---	---	
			H2	22.54	23.50	1.247	---	---	---	---	
		Right tilted	L1	22.51	23.50	1.256	---	---	---	---	
			L2	22.49	23.50	1.262	---	---	---	---	
			M	22.55	23.50	1.245	0.192	---	0.239	---	
			H1	22.49	23.50	1.262	---	---	---	---	
			H2	22.54	23.50	1.247	---	---	---	---	
	Body-worn	Back	L1	22.51	23.50	1.256	---	---	---	---	
			L2	22.49	23.50	1.262	---	---	---	---	
			M	22.55	23.50	1.245	0.089	---	0.111	---	
			H1	22.49	23.50	1.262	---	---	---	---	
			H2	22.54	23.50	1.247	---	---	---	---	
			Front	L1	22.51	23.50	1.256	---	---	---	---
				L2	22.49	23.50	1.262	---	---	---	---
				M	22.55	23.50	1.245	0.034	---	0.043	---
				H1	22.49	23.50	1.262	---	---	---	---
				H2	22.54	23.50	1.247	---	---	---	---
		Hotspot	Back	L1	22.51	23.50	1.256	---	---	---	---
				L2	22.49	23.50	1.262	---	---	---	---
				M	22.55	23.50	1.245	0.089	---	0.111	---
				H1	22.49	23.50	1.262	---	---	---	---
				H2	22.54	23.50	1.247	---	---	---	---
			Front	L1	22.51	23.50	1.256	---	---	---	---
				L2	22.49	23.50	1.262	---	---	---	---
				M	22.55	23.50	1.245	0.034	---	0.043	---
				H1	22.49	23.50	1.262	---	---	---	---
				H2	22.54	23.50	1.247	---	---	---	---
Top	L1		22.51	23.50	1.256	---	---	---	---		
	L2		22.49	23.50	1.262	---	---	---	---		
	M		22.55	23.50	1.245	0.114	---	0.142	---		
	H1		22.49	23.50	1.262	---	---	---	---		
	H2		22.54	23.50	1.247	---	---	---	---		
Bottom	L1	22.51	23.50	1.256	---	---	---	---			
	L2	22.49	23.50	1.262	---	---	---	---			
	M	22.55	23.50	1.245	---	---	---	---			
	H1	22.49	23.50	1.262	---	---	---	---			
	H2	22.54	23.50	1.247	---	---	---	---			

	Left	L1	22.51	23.50	1.256	---	---	---	---		
		L2	22.49	23.50	1.262	---	---	---	---		
		M	22.55	23.50	1.245	0.012	---	0.014	---		
		H1	22.49	23.50	1.262	---	---	---	---		
		H2	22.54	23.50	1.247	---	---	---	---		
		Right	L1	22.51	23.50	1.256	---	---	---	---	
			L2	22.49	23.50	1.262	---	---	---	---	
			M	22.55	23.50	1.245	0.004	---	0.005	---	
			H1	22.49	23.50	1.262	---	---	---	---	
			H2	22.54	23.50	1.247	---	---	---	---	
	QPSK 50%RB	Head	Left cheek	L1	22.42	23.50	1.282	---	---	---	---
				L2	22.36	23.50	1.300	---	---	---	---
				M	22.45	23.50	1.274	0.106	---	0.135	---
				H1	22.37	23.50	1.297	---	---	---	---
				H2	22.44	23.50	1.276	---	---	---	---
			Left tilted	L1	22.42	23.50	1.282	---	---	---	---
				L2	22.36	23.50	1.300	---	---	---	---
				M	22.45	23.50	1.274	0.139	---	0.177	---
				H1	22.37	23.50	1.297	---	---	---	---
				H2	22.44	23.50	1.276	---	---	---	---
Right cheek		L1	22.42	23.50	1.282	---	---	---	---		
		L2	22.36	23.50	1.300	---	---	---	---		
		M	22.45	23.50	1.274	0.183	---	0.233	---		
		H1	22.37	23.50	1.297	---	---	---	---		
		H2	22.44	23.50	1.276	---	---	---	---		
Right tilted		L1	22.42	23.50	1.282	---	---	---	---		
		L2	22.36	23.50	1.300	---	---	---	---		
		M	22.45	23.50	1.274	0.234	---	0.298	---		
		H1	22.37	23.50	1.297	---	---	---	---		
		H2	22.44	23.50	1.276	---	---	---	---		
Body-worn	Back	L1	22.42	23.50	1.282	---	---	---	---		
		L2	22.36	23.50	1.300	---	---	---	---		
		M	22.45	23.50	1.274	0.063	---	0.080	---		
		H1	22.37	23.50	1.297	---	---	---	---		
		H2	22.44	23.50	1.276	---	---	---	---		
	Front	L1	22.42	23.50	1.282	---	---	---	---		
		L2	22.36	23.50	1.300	---	---	---	---		
		M	22.45	23.50	1.274	0.028	---	0.035	---		
		H1	22.37	23.50	1.297	---	---	---	---		
		H2	22.44	23.50	1.276	---	---	---	---		
Hotspot	Back	L1	22.42	23.50	1.282	---	---	---	---		
		L2	22.36	23.50	1.300	---	---	---	---		
		M	22.45	23.50	1.274	0.063	---	0.080	---		
		H1	22.37	23.50	1.297	---	---	---	---		
		H2	22.44	23.50	1.276	---	---	---	---		
	Front	L1	22.42	23.50	1.282	---	---	---	---		
		L2	22.36	23.50	1.300	---	---	---	---		
		M	22.45	23.50	1.274	0.028	---	0.035	---		
		H1	22.37	23.50	1.297	---	---	---	---		
		H2	22.44	23.50	1.276	---	---	---	---		
	Top	L1	22.42	23.50	1.282	---	---	---	---		
		L2	22.36	23.50	1.300	---	---	---	---		
		M	22.45	23.50	1.274	0.069	---	0.088	---		
		H1	22.37	23.50	1.297	---	---	---	---		
		H2	22.44	23.50	1.276	---	---	---	---		
Bottom	L1	22.42	23.50	1.282	---	---	---	---			
	L2	22.36	23.50	1.300	---	---	---	---			
	M	22.45	23.50	1.274	---	---	---	---			



		Left	H1	22.37	23.50	1.297	---	---	---	---
			H2	22.44	23.50	1.276	---	---	---	---
			L1	22.42	23.50	1.282	---	---	---	---
			L2	22.36	23.50	1.300	---	---	---	---
			M	22.45	23.50	1.274	0.010	---	0.013	---
			H1	22.37	23.50	1.297	---	---	---	---
		Right	H2	22.44	23.50	1.276	---	---	---	---
			L1	22.42	23.50	1.282	---	---	---	---
			L2	22.36	23.50	1.300	---	---	---	---
			M	22.45	23.50	1.274	0.002	---	0.003	---
			H1	22.37	23.50	1.297	---	---	---	---
			H2	22.44	23.50	1.276	---	---	---	---

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 1RB	Body-worn	Back	L1	22.51	23.50	1.256	---	---	---	---
			L2	22.49	23.50	1.262	---	---	---	---
			M	22.55	23.50	1.245	0.110	---	0.137	---
			H1	22.49	23.50	1.262	---	---	---	---
			H2	22.54	23.50	1.247	---	---	---	---
	Hotspot	Top	L1	22.51	23.50	1.256	---	---	---	---
			L2	22.49	23.50	1.262	---	---	---	---
			M	22.55	23.50	1.245	0.147	---	0.183	---
QPSK 50%RB	Head	Right tilted	L1	22.42	23.50	1.282	---	---	---	---
			L2	22.36	23.50	1.300	---	---	---	---
			M	22.45	23.50	1.274	0.235	---	0.299	---
			H1	22.37	23.50	1.297	---	---	---	---
			H2	22.44	23.50	1.276	---	---	---	---

**(Variant)**

Mode: 5G NR n78

fL (MHz)= 3500 MHz fM (MHz)= 3500MHz fH (MHz)= 3500MHz

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

Test case				Meas power(dBm)	Tune-up	Scaling	Meas SAR(w/kg)		Report SAR(w/kg)			
Mode	Exposure condition	Position	Channel		(dBm)	factor	First	Second	First	Second		
QPSK 1RB	Head	Left cheek	L	---	---	---	---	---	---	---		
			M	21.98	23.00	1.265	0.159	---	0.201	---		
			H	---	---	---	---	---	---	---		
		Left tilted	L	---	---	---	---	---	---	---	---	
			M	21.98	23.00	1.265	0.082	---	---	0.103	---	
			H	---	---	---	---	---	---	---	---	
		Right cheek	L	---	---	---	---	---	---	---	---	
			M	21.98	23.00	1.265	0.039	---	---	0.050	---	
			H	---	---	---	---	---	---	---	---	
		Right tilted	L	---	---	---	---	---	---	---	---	
			M	21.98	23.00	1.265	0.029	---	---	0.037	---	
			H	---	---	---	---	---	---	---	---	
	Body-worn	Back	L	---	---	---	---	---	---	---		
			M	24.90	26.00	1.288	0.131	---	---	0.169	---	
			H	---	---	---	---	---	---	---	---	
		Front	L	---	---	---	---	---	---	---	---	
			M	24.90	26.00	1.288	0.035	---	---	0.044	---	
			H	---	---	---	---	---	---	---	---	
	Hotspot	Back	L	---	---	---	---	---	---	---		
			M	24.90	26.00	1.288	<b>0.131</b>	---	---	0.169	---	
			H	---	---	---	---	---	---	---	---	
			Front	L	---	---	---	---	---	---	---	---
				M	24.90	26.00	1.288	0.035	---	---	0.044	---
				H	---	---	---	---	---	---	---	---
		Top	L	---	---	---	---	---	---	---	---	
			M	24.90	26.00	1.288	0.023	---	---	0.030	---	
			H	---	---	---	---	---	---	---	---	
		Bottom	L	---	---	---	---	---	---	---	---	
			M	24.90	26.00	1.288	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	
		Left	L	---	---	---	---	---	---	---	---	
			M	24.90	26.00	1.288	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	
		Right	L	---	---	---	---	---	---	---	---	
			M	24.90	26.00	1.288	0.240	---	---	0.309	---	
			H	---	---	---	---	---	---	---	---	
QPSK 50%RB	Head	Left cheek	L	---	---	---	---	---	---	---		
			M	21.93	23.00	1.279	0.174	---	0.223	---		
			H	---	---	---	---	---	---	---	---	
		Left tilted	L	---	---	---	---	---	---	---	---	
			M	21.93	23.00	1.279	0.105	---	---	0.134	---	
			H	---	---	---	---	---	---	---	---	
		Right cheek	L	---	---	---	---	---	---	---	---	
			M	21.93	23.00	1.279	0.052	---	---	0.066	---	
			H	---	---	---	---	---	---	---	---	
		Right tilted	L	---	---	---	---	---	---	---	---	
			M	21.93	23.00	1.279	0.040	---	---	0.051	---	
			H	---	---	---	---	---	---	---	---	
	Body-worn	Back	L	---	---	---	---	---	---	---		
			M	24.89	26.00	1.291	0.157	---	---	0.203	---	
			H	---	---	---	---	---	---	---	---	

	Hotspot	Front	L	---	---	---	---	---	---	---
			M	24.89	26.00	1.291	0.047	---	0.061	---
			H	---	---	---	---	---	---	---
		Back	L	---	---	---	---	---	---	---
			M	24.89	26.00	1.291	0.157	---	0.203	---
			H	---	---	---	---	---	---	---
		Front	L	---	---	---	---	---	---	---
			M	24.89	26.00	1.291	0.047	---	0.061	---
			H	---	---	---	---	---	---	---
	Top	L	---	---	---	---	---	---	---	
		M	24.89	26.00	1.291	0.033	---	0.043	---	
		H	---	---	---	---	---	---	---	
	Bottom	L	---	---	---	---	---	---	---	
		M	24.89	26.00	1.291	---	---	---	---	
		H	---	---	---	---	---	---	---	
	Left	L	---	---	---	---	---	---	---	
		M	24.89	26.00	1.291	---	---	---	---	
		H	---	---	---	---	---	---	---	
Right	L	---	---	---	---	---	---	---		
	M	24.89	26.00	1.291	0.331	---	0.427	---		
	H	---	---	---	---	---	---	---		

Original report(Report No.:XZR/2021/5002601)

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel				First	Second	First	Second
QPSK 50%RB	Head	Left cheek	L	---	---	---	---	---	---	---
			M	21.93	23.00	1.279	0.192	---	0.246	---
			H	---	---	---	---	---	---	---
	Body-worn	Back	L	---	---	---	---	---	---	---
			M	24.89	26.00	1.291	0.216	---	0.279	---
			H	---	---	---	---	---	---	---
	Hotspot	Right	L	---	---	---	---	---	---	---
			M	24.89	26.00	1.291	0.306	---	0.395	---
			H	---	---	---	---	---	---	---

(Variant)

Mode: Wi-Fi 2.4GHz

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

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

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)		
Mode	Exposure condition	Position	Channel					First	Second	First	Second	
802.11b	Head	Left cheek	L	14.80	16.00	---	---	---	---	---	---	
			M	14.84	16.00	1.306	1.006	0.207	---	0.272	---	
			H	14.47	16.00	---	---	---	---	---	---	
		Left tilted	L	14.80	16.00	---	---	---	---	---	---	---
			M	14.84	16.00	1.306	1.006	0.226	---	0.297	---	
			H	14.47	16.00	---	---	---	---	---	---	
		Right cheek	L	14.80	16.00	---	---	---	---	---	---	---
			M	14.84	16.00	1.306	1.006	0.068	---	0.089	---	
			H	14.47	16.00	---	---	---	---	---	---	
		Right tilted	L	14.80	16.00	---	---	---	---	---	---	---
			M	14.84	16.00	1.306	1.006	0.080	---	0.105	---	
			H	14.47	16.00	---	---	---	---	---	---	
	Body-worn	Back	L	18.01	19.00	---	---	---	---	---	---	
			M	18.10	19.00	1.230	1.006	0.167	---	0.207	---	
			H	17.67	19.00	---	---	---	---	---	---	
		Front	L	18.01	19.00	---	---	---	---	---	---	
			M	18.10	19.00	1.230	1.006	0.067	---	0.083	---	
			H	17.67	19.00	---	---	---	---	---	---	
	Hotspot	Back	L	18.01	19.00	---	---	---	---	---	---	
			M	18.10	19.00	1.230	1.006	0.167	---	0.207	---	
			H	17.67	19.00	---	---	---	---	---	---	
			L	18.01	19.00	---	---	---	---	---	---	
			M	18.10	19.00	1.230	1.006	0.067	---	0.083	---	
			H	17.67	19.00	---	---	---	---	---	---	
		Top	L	18.01	19.00	---	---	---	---	---	---	
			M	18.10	19.00	1.230	1.006	0.186	---	0.230	---	
			H	17.67	19.00	---	---	---	---	---	---	
		Bottom	L	18.01	19.00	---	---	---	---	---	---	
			M	18.10	19.00	1.230	1.006	---	---	---	---	
			H	17.67	19.00	---	---	---	---	---	---	
		Left	L	18.01	19.00	---	---	---	---	---	---	
			M	18.10	19.00	1.230	1.006	---	---	---	---	
			H	17.67	19.00	---	---	---	---	---	---	
		Right	L	18.01	19.00	---	---	---	---	---	---	
			M	18.10	19.00	1.230	1.006	0.056	---	0.069	---	
			H	17.67	19.00	---	---	---	---	---	---	

Original report(Report No.:XZR/2021/5002601)

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel					First	Second	First	Second
802.11b	Head	Left tilted	L	14.80	16.00	---	---	---	---	---	---
			M	14.84	16.00	1.306	1.006	0.228	---	0.300	---
			H	14.47	16.00	---	---	---	---	---	---
	Body-worn	Back	L	18.01	19.00	---	---	---	---	---	---
			M	18.10	19.00	1.230	1.006	0.176	---	0.218	---
			H	17.67	19.00	---	---	---	---	---	---
	Hotspot	Top	L	18.01	19.00	---	---	---	---	---	---
			M	18.10	19.00	1.230	1.006	0.234	---	0.290	---
			H	17.67	19.00	---	---	---	---	---	---

(Variant)

Mode: Wi-Fi 5GHz U-NII-1  
Limit of SAR (W/kg): <1.6W/kg (1g Average)

Mode	Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)			
	Exposure condition	Position	Channel					First	Second	First	Second		
802.11a	Head	Left cheek	L	---	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	---	
		Left tilted	L	---	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---	---
		Right cheek	L	---	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---	---
		Right tilted	L	---	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---	---
	Body-worn	Back	L	---	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	---	
		Front	L	---	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	---	
	Hotspot	Back	L	16.08	18.00	---	---	---	---	---	---	---	
			M	16.47	18.00	---	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	0.092	---	0.122	---		
		Front	L	16.08	18.00	---	---	---	---	---	---	---	
			M	16.47	18.00	---	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	0.102	---	0.134	---		
		Top	L	16.08	18.00	---	---	---	---	---	---	---	
			M	16.47	18.00	---	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	0.184	---	0.243	---		
		Bottom	L	16.08	18.00	---	---	---	---	---	---	---	
			M	16.47	18.00	---	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	---	---	---	---		
		Left	L	16.08	18.00	---	---	---	---	---	---	---	
			M	16.47	18.00	---	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	---	---	---	---		
		Right	L	16.08	18.00	---	---	---	---	---	---	---	
			M	16.47	18.00	---	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	0.115	---	0.152	---		

Original report(Report No.:XZR/2021/5002601)

**Mode: Wi-Fi 5GHz U-NII-2A**

Limit of SAR (W/kg): <1.6W/kg (1g Average) <4.0W/kg (10g Average)

Mode	Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)		
	Exposure condition	Position	Channel					First	Second	First	Second	
802.11a	Head	Left cheek	L	13.95	15.00	---	---	---	---	---	---	
			M	13.97	15.00	---	---	---	---	---	---	
			H	14.03	15.00	1.250	1.019	0.432	---	0.550	---	
		Left tilted	L	13.95	15.00	---	---	---	---	---	---	---
			M	13.97	15.00	---	---	---	---	---	---	---
			H	14.03	15.00	1.250	1.019	0.492	---	0.627	---	
		Right cheek	L	13.95	15.00	---	---	---	---	---	---	---
			M	13.97	15.00	---	---	---	---	---	---	---
			H	14.03	15.00	1.250	1.019	0.287	---	0.365	---	
		Right tilted	L	13.95	15.00	---	---	---	---	---	---	---
			M	13.97	15.00	---	---	---	---	---	---	---
			H	14.03	15.00	1.250	1.019	0.337	---	0.429	---	
	Body-worn	Back	L	16.78	18.00	---	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---	---
			H	16.79	18.00	1.321	1.019	0.092	---	0.124	---	
		Front	L	16.78	18.00	---	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---	---
			H	16.79	18.00	1.321	1.019	0.114	---	0.153	---	
	Hotspot	Back	L	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---
		Front	L	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---
		Top	L	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---
		Bottom	L	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---
		Left	L	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---
		Right	L	---	---	---	---	---	---	---	---	---
			M	---	---	---	---	---	---	---	---	---
			H	---	---	---	---	---	---	---	---	---
	Product specific 10g SAR	Back	L	16.78	18.00	---	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---	---
			H	16.79	18.00	1.321	1.019	0.485	---	0.653	---	
		Front	L	16.78	18.00	---	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---	---
			H	16.79	18.00	1.321	1.019	0.363	---	0.489	---	
		Top	L	16.78	18.00	---	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---	---
			H	16.79	18.00	1.321	1.019	0.664	---	0.894	---	
		Bottom	L	16.78	18.00	---	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---	---
			H	16.79	18.00	---	---	---	---	---	---	---
		Left	L	16.78	18.00	---	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---	---
			H	16.79	18.00	---	---	---	---	---	---	---
		Right	L	16.78	18.00	---	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---	---
			H	16.79	18.00	1.321	1.019	0.322	---	0.433	---	

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel					First	Second	First	Second
802.11a	Head	Left tilted	L	13.95	15.00	---	---	---	---	---	---
			M	13.97	15.00	---	---	---	---	---	---
			H	14.03	15.00	1.250	1.019	0.541	---	0.689	---
	Body-worn	Front	L	16.78	18.00	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---
			H	16.79	18.00	1.321	1.019	0.147	---	0.198	---
802.11a	Product specific 10g SAR	Top side	L	16.78	18.00	---	---	---	---	---	---
			M	16.65	18.00	---	---	---	---	---	---
			H	16.79	18.00	1.321	1.019	0.806	---	1.085	---

**(Variant)**

**Mode: Wi-Fi 5GHz U-NII-2C**

Limit of SAR (W/kg): <1.6W/kg (1g Average) <4.0W/kg (10g Average)

Mode	Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)		
	Exposure condition	Position	Channel					First	Second	First	Second	
802.11a	Head	Left cheek	L	13.24	15.00	---	---	---	---	---	---	
			M	13.09	15.00	---	---	---	---	---	---	
			H	13.95	15.00	1.274	1.019	0.219	---	0.284	---	
		Left tilted	L	13.24	15.00	---	---	---	---	---	---	
			M	13.09	15.00	---	---	---	---	---	---	
			H	13.95	15.00	1.274	1.019	0.251	---	0.326	---	
		Right cheek	L	13.24	15.00	---	---	---	---	---	---	
			M	13.09	15.00	---	---	---	---	---	---	
			H	13.95	15.00	1.274	1.019	0.192	---	0.249	---	
		Right tilted	L	13.24	15.00	---	---	---	---	---	---	
			M	13.09	15.00	---	---	---	---	---	---	
			H	13.95	15.00	1.274	1.019	0.204	---	0.265	---	
		Body-worn	Back	L	16.16	18.00	---	---	---	---	---	---
				M	16.02	18.00	---	---	---	---	---	---
				H	16.88	18.00	1.294	1.019	0.071	---	0.094	---
			Front	L	16.16	18.00	---	---	---	---	---	---
				M	16.02	18.00	---	---	---	---	---	---
				H	16.88	18.00	1.294	1.019	0.064	---	0.085	---
	Hotspot	Back	L	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	
		Front	L	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	
		Top	L	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	
		Bottom	L	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	
		Left	L	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	
		Right	L	---	---	---	---	---	---	---	---	
			M	---	---	---	---	---	---	---	---	
			H	---	---	---	---	---	---	---	---	
	Product specific 10g SAR	Back	L	16.16	18.00	---	---	---	---	---	---	
			M	16.02	18.00	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	0.171	---	0.225	---	
		Front	L	16.16	18.00	---	---	---	---	---	---	
			M	16.02	18.00	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	0.181	---	0.239	---	
		Top	L	16.16	18.00	---	---	---	---	---	---	
			M	16.02	18.00	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	0.322	---	0.424	---	
		Bottom	L	16.16	18.00	---	---	---	---	---	---	
			M	16.02	18.00	---	---	---	---	---	---	
			H	16.88	18.00	---	---	---	---	---	---	
		Left	L	16.16	18.00	---	---	---	---	---	---	
			M	16.02	18.00	---	---	---	---	---	---	
			H	16.88	18.00	---	---	---	---	---	---	
		Right	L	16.16	18.00	---	---	---	---	---	---	
			M	16.02	18.00	---	---	---	---	---	---	
			H	16.88	18.00	1.294	1.019	0.236	---	0.311	---	

**Original report(Report No.:XZR/2021/5002601)**



**Mode: Wi-Fi 5GHz U-NII-3**

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

Mode	Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)	
	Exposure condition	Position	Channel					First	Second	First	Second
802.11a	Head	Left cheek	L	13.90	15.00	1.288	1.019	0.203	---	0.266	---
			M	13.87	15.00	---	---	---	---	---	---
			H	13.54	15.00	---	---	---	---	---	---
		Left tilted	L	13.90	15.00	1.288	1.019	0.329	---	0.432	---
			M	13.87	15.00	---	---	---	---	---	---
			H	13.54	15.00	---	---	---	---	---	---
		Right cheek	L	13.90	15.00	1.288	1.019	0.213	---	0.279	---
			M	13.87	15.00	---	---	---	---	---	---
			H	13.54	15.00	---	---	---	---	---	---
		Right tilted	L	13.90	15.00	1.288	1.019	0.238	---	0.312	---
			M	13.87	15.00	---	---	---	---	---	---
			H	13.54	15.00	---	---	---	---	---	---
	Body-worn	Back	L	16.93	18.00	1.279	1.019	0.077	---	0.100	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---
		Front	L	16.93	18.00	1.279	1.019	0.075	---	0.098	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---
	Hotspot	Back	L	16.93	18.00	1.279	1.019	0.077	---	0.100	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---
			L	16.93	18.00	1.279	1.019	0.075	---	0.098	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---
		Top	L	16.93	18.00	1.279	1.019	0.192	---	0.250	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---
		Bottom	L	16.93	18.00	1.279	1.019	---	---	---	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---
		Left	L	16.93	18.00	1.279	1.019	---	---	---	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---
		Right	L	16.93	18.00	1.279	1.019	0.169	---	0.220	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---

**Original report(Report No.:XZR/2021/5002601)**

Mode	Test case			Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)	
	Exposure condition	Position	Channel					First	Second	First	Second
802.11a	Hotspot	Top	L	16.93	18.00	1.279	1.019	0.201	---	0.262	---
			M	16.82	18.00	---	---	---	---	---	---
			H	16.47	18.00	---	---	---	---	---	---

**(Variant)**

**Mode: Bluetooth**

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

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel					First	Second	First	Second
DH5	Head	Left cheek	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.081	---	0.137	---
			H	11.85	13.00	---	---	---	---	---	---
		Left tilted	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.095	---	0.160	---
			H	11.85	13.00	---	---	---	---	---	---
		Right cheek	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.033	---	0.055	---
			H	11.85	13.00	---	---	---	---	---	---
		Right tilted	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.048	---	0.080	---
			H	11.85	13.00	---	---	---	---	---	---
	Body-worn	Back	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.037	---	0.062	---
			H	11.85	13.00	---	---	---	---	---	---
		Front	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.009	---	0.015	---
			H	11.85	13.00	---	---	---	---	---	---
	Hotspot	Back	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.037	---	0.062	---
			H	11.85	13.00	---	---	---	---	---	---
		Front	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.009	---	0.015	---
			H	11.85	13.00	---	---	---	---	---	---
		Top	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.036	---	0.060	---
			H	11.85	13.00	---	---	---	---	---	---
		Bottom	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	---	---	---	---
			H	11.85	13.00	---	---	---	---	---	---
		Left	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	---	---	---	---
			H	11.85	13.00	---	---	---	---	---	---
		Right	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.012	---	0.020	---
			H	11.85	13.00	---	---	---	---	---	---

**Original report(Report No.:XZR/2021/5002601)**

Test case				Meas power(dBm)	Tune-up (dBm)	Scaling factor	Duty factor	Meas SAR(w/kg)		Report SAR(w/kg)	
Mode	Exposure condition	Position	Channel					First	Second	First	Second
DH5	Head	Left tilted	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.132	---	0.222	---
			H	11.85	13.00	---	---	---	---	---	---
	Body-worn	Back	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.020	---	0.034	---
			H	11.85	13.00	---	---	---	---	---	---
	Hotspot	Back	L	11.84	13.00	---	---	---	---	---	---
			M	11.89	13.00	1.291	1.300	0.020	---	0.034	---
			H	11.85	13.00	---	---	---	---	---	---

**(Variant)**

## 6.11 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  $\geq 0.80$  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  $\geq 1.45$  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  $\geq 1.5$  W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .

## 6.12 Simultaneous Transmission SAR Analysis

WWAN +WLAN		
1	WWAN + WIFI 2.4G	Y
2	WWAN + WIFI 5G	Y
3	WWAN + BT	Y
4	WWAN + WIFI 5G + BT	Y
WLAN		
1	WIFI 5G + BT	Y

### EN-DC SAR:

#### Head:

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n5	EN_DC Summed SAR
				Ant4	
Band 7	Left Touch	0.005	/	0.112	0.117
	Left Tilt	0.009	/	0.066	0.075
	Right Touch	0.031	/	0.173	0.204
	Right Tilt	0.002	/	0.055	0.057

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n7	EN_DC Summed SAR
				Ant1	
Band 5	Left Touch	0.117	/	0.274	0.391
	Left Tilt	0.073	/	0.343	0.416
	Right Touch	0.204	/	0.411	0.615
	Right Tilt	0.129	/	0.537	0.666

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n38	EN_DC Summed SAR
				Ant1	
Band 5	Left Touch	0.117	/	0.338	0.455
	Left Tilt	0.073	/	0.424	0.497
	Right Touch	0.204	/	0.534	0.738
	Right Tilt	0.129	/	0.588	0.717

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n78	EN_DC Summed SAR
				Ant2	
Band 5	Left Touch	0.117	/	0.246	0.363
	Left Tilt	0.073	/	0.134	0.207
	Right Touch	0.204	/	0.066	0.270
	Right Tilt	0.129	/	0.051	0.180
Band 7	Left Touch	0.005	/	0.246	0.251
	Left Tilt	0.009	/	0.134	0.143
	Right Touch	0.031	/	0.066	0.097
	Right Tilt	0.002	/	0.051	0.053

**Body-worn:**

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n5	EN_DC Summed SAR
				Ant4	
Band 7	Front side	0.723	/	0.309	1.032
	Back side	0.569	/	0.348	0.917

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n7	EN_DC Summed SAR
				Ant1	
Band 5	Front side	0.482	/	0.497	0.979
	Back side	0.394	/	0.565	0.959

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n38	EN_DC Summed SAR
				Ant1	
Band 5	Front side	0.482	/	0.114	0.596
	Back side	0.394	/	0.163	0.557

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n78	EN_DC Summed SAR
				Ant2	
Band 5	Front side	0.482	/	0.061	0.543
	Back side	0.394	/	0.279	0.673
Band 7	Front side	0.723	/	0.061	0.784
	Back side	0.569	/	0.279	0.848

**Hotspot:**

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n5	EN_DC Summed SAR
				Ant4	
Band 7	Front side	0.247	/	0.309	0.556
	Back side	0.217	/	0.348	0.565
	Left side	0.002	/	0.039	0.041
	Right side	0.013	/	0.166	0.179
	Top side	0.000	/	0.000	0.000
	Bottom side	0.680	/	0.253	0.933

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n7	EN_DC Summed SAR
				Ant1	
Band 5	Front side	0.482	/	0.167	0.649
	Back side	0.394	/	0.260	0.654
	Left side	0.038	/	0.072	0.110
	Right side	0.154	/	0.032	0.186
	Top side	0.000	/	0.513	0.513
	Bottom side	0.225	/	0.000	0.225

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n38	EN_DC Summed SAR
				Ant1	
Band 5	Front side	0.482	/	0.267	0.749
	Back side	0.394	/	0.435	0.829
	Left side	0.038	/	0.052	0.090
	Right side	0.154	/	0.044	0.198
	Top side	0.000	/	0.701	0.701
	Bottom side	0.225	/	0.000	0.225

LTE Band (EN_DC)	Exposure position	Ant4	Ant5	n78	EN_DC Summed SAR
				Ant2	
Band 5	Front side	0.482	/	0.061	0.543
	Back side	0.394	/	0.203	0.597
	Left side	0.038	/	0.000	0.038
	Right side	0.154	/	0.395	0.549
	Top side	0.000	/	0.043	0.043
	Bottom side	0.225	/	0.000	0.225
Band 7	Front side	0.247	/	0.061	0.308
	Back side	0.217	/	0.203	0.420
	Left side	0.002	/	0.000	0.002
	Right side	0.013	/	0.395	0.408
	Top side	0.000	/	0.043	0.043
	Bottom side	0.680	/	0.000	0.680

**Simultaneous Transmission SAR Summation Scenario:**

**Head:**

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant1	WiFi 2.4G	WiFi 5G	BT	1+2	1+3	1+4	1+3+4
GSM1900	Left Touch	0.466	0.272	0.550	0.137	0.738	1.016	0.603	1.153
	Left Tilt	0.524	0.300	0.689	0.222	0.824	1.213	0.746	1.435
	Right Touch	0.788	0.089	0.365	0.055	0.877	1.153	0.843	1.208
	Right Tilt	0.752	0.105	0.429	0.080	0.857	1.181	0.832	1.261
WCAMA Band II	Left Touch	0.267	0.272	0.550	0.137	0.539	0.817	0.404	0.954
	Left Tilt	0.253	0.300	0.689	0.222	0.553	0.942	0.475	1.164
	Right Touch	0.742	0.089	0.365	0.055	0.831	1.107	0.797	1.162
	Right Tilt	0.695	0.105	0.429	0.080	0.800	1.124	0.775	1.204
LTE Band 38	Left Touch	0.340	0.272	0.550	0.137	0.612	0.890	0.477	1.027
	Left Tilt	0.358	0.300	0.689	0.222	0.658	1.047	0.580	1.269
	Right Touch	0.520	0.089	0.365	0.055	0.609	0.885	0.575	0.940
	Right Tilt	0.743	0.105	0.429	0.080	0.848	1.172	0.823	1.252
LTE Band 41	Left Touch	0.234	0.272	0.550	0.137	0.506	0.784	0.371	0.921
	Left Tilt	0.289	0.300	0.689	0.222	0.589	0.978	0.511	1.200
	Right Touch	0.504	0.089	0.365	0.055	0.593	0.869	0.559	0.924
	Right Tilt	0.474	0.105	0.429	0.080	0.579	0.903	0.554	0.983
N7	Left Touch	0.274	0.272	0.550	0.137	0.546	0.824	0.411	0.961
	Left Tilt	0.343	0.300	0.689	0.222	0.643	1.032	0.565	1.254
	Right Touch	0.411	0.089	0.365	0.055	0.500	0.776	0.466	0.831
	Right Tilt	0.537	0.105	0.429	0.080	0.642	0.966	0.617	1.046
N38	Left Touch	0.338	0.272	0.550	0.137	0.610	0.888	0.475	1.025
	Left Tilt	0.424	0.300	0.689	0.222	0.724	1.113	0.646	1.335
	Right Touch	0.534	0.089	0.365	0.055	0.623	0.899	0.589	0.954
	Right Tilt	0.588	0.105	0.429	0.080	0.693	1.017	0.668	1.097
N41	Left Touch	0.154	0.272	0.550	0.137	0.426	0.704	0.291	0.841
	Left Tilt	0.215	0.300	0.689	0.222	0.515	0.904	0.437	1.126
	Right Touch	0.233	0.089	0.365	0.055	0.322	0.598	0.288	0.653
	Right Tilt	0.299	0.105	0.429	0.080	0.404	0.728	0.379	0.808

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant2	WiFi 2.4G	WiFi 5G	BT	1+2	1+3	1+4	1+3+4
N78	Left Touch	0.246	0.272	0.550	0.137	0.518	0.796	0.383	0.933
	Left Tilt	0.134	0.300	0.689	0.222	0.434	0.823	0.356	1.045
	Right Touch	0.066	0.089	0.365	0.055	0.155	0.431	0.121	0.486
	Right Tilt	0.051	0.105	0.429	0.080	0.156	0.480	0.131	0.560

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant4	WiFi 2.4G	WiFi 5G	BT	1+2	1+3	1+4	1+3+4
GSM850	Left Touch	0.251	0.272	0.550	0.137	0.523	0.801	0.388	0.938
	Left Tilt	0.102	0.300	0.689	0.222	0.402	0.791	0.324	1.013
	Right Touch	0.165	0.089	0.365	0.055	0.254	0.530	0.220	0.585
	Right Tilt	0.097	0.105	0.429	0.080	0.202	0.526	0.177	0.606
WCAMA Band V	Left Touch	0.121	0.272	0.550	0.137	0.393	0.671	0.258	0.808
	Left Tilt	0.094	0.300	0.689	0.222	0.394	0.783	0.316	1.005
	Right Touch	0.213	0.089	0.365	0.055	0.302	0.578	0.268	0.633
	Right Tilt	0.103	0.105	0.429	0.080	0.208	0.532	0.183	0.612
LTE Band 5	Left Touch	0.117	0.272	0.550	0.137	0.389	0.667	0.254	0.804
	Left Tilt	0.073	0.300	0.689	0.222	0.373	0.762	0.295	0.984
	Right Touch	0.204	0.089	0.365	0.055	0.293	0.569	0.259	0.624

	Right Tilt	0.129	0.105	0.429	0.080	0.234	0.558	0.209	0.638
LTE Band 7	Left Touch	0.005	0.272	0.550	0.137	0.277	0.555	0.142	0.692
	Left Tilt	0.009	0.300	0.689	0.222	0.309	0.698	0.231	0.920
	Right Touch	0.031	0.089	0.365	0.055	0.120	0.396	0.086	0.451
	Right Tilt	0.002	0.105	0.429	0.080	0.107	0.431	0.082	0.511
N5	Left Touch	0.112	0.272	0.550	0.137	0.384	0.662	0.249	0.799
	Left Tilt	0.066	0.300	0.689	0.222	0.366	0.755	0.288	0.977
	Right Touch	0.173	0.089	0.365	0.055	0.262	0.538	0.228	0.593
	Right Tilt	0.055	0.105	0.429	0.080	0.160	0.484	0.135	0.564

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		ENDC	WiFi 2.4G	WiFi 5G	BT	1+2	1+3	1+4	1+3+4
DC_7A_n5A	Left Touch	0.117	0.272	0.550	0.137	0.389	0.667	0.254	0.804
	Left Tilt	0.075	0.300	0.689	0.222	0.375	0.764	0.297	0.986
	Right Touch	0.204	0.089	0.365	0.055	0.293	0.569	0.259	0.624
	Right Tilt	0.057	0.105	0.429	0.080	0.162	0.486	0.137	0.566
DC_5A_n7A	Left Touch	0.391	0.272	0.550	0.137	0.663	0.941	0.528	1.078
	Left Tilt	0.416	0.300	0.689	0.222	0.716	1.105	0.638	1.327
	Right Touch	0.615	0.089	0.365	0.055	0.704	0.980	0.670	1.035
	Right Tilt	0.666	0.105	0.429	0.080	0.771	1.095	0.746	1.175
DC_5A_n38A	Left Touch	0.455	0.272	0.550	0.137	0.727	1.005	0.592	1.142
	Left Tilt	0.497	0.300	0.689	0.222	0.797	1.186	0.719	1.408
	Right Touch	0.738	0.089	0.365	0.055	0.827	1.103	0.793	1.158
	Right Tilt	0.717	0.105	0.429	0.080	0.822	1.146	0.797	1.226
DC_5A_n78A	Left Touch	0.363	0.272	0.550	0.137	0.635	0.913	0.500	1.050
	Left Tilt	0.207	0.300	0.689	0.222	0.507	0.896	0.429	1.118
	Right Touch	0.270	0.089	0.365	0.055	0.359	0.635	0.325	0.690
	Right Tilt	0.180	0.105	0.429	0.080	0.285	0.609	0.260	0.689
DC_7A_n78A	Left Touch	0.251	0.272	0.550	0.137	0.523	0.801	0.388	0.938
	Left Tilt	0.143	0.300	0.689	0.222	0.443	0.832	0.365	1.054
	Right Touch	0.097	0.089	0.365	0.055	0.186	0.462	0.152	0.517
	Right Tilt	0.053	0.105	0.429	0.080	0.158	0.482	0.133	0.562

**Body-worn:**

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant1	WiFi 2.4G	WiFi 5G	BT	1+2	1+3	1+4	1+3+4
GSM1900	Front side	0.509	0.083	0.198	0.015	0.592	0.707	0.524	0.722
	Back side	0.710	0.218	0.124	0.062	0.928	0.834	0.772	0.896
WCAMA Band II	Front side	0.740	0.083	0.198	0.015	0.823	0.938	0.755	0.953
	Back side	0.961	0.218	0.124	0.062	1.179	1.085	1.023	1.147
LTE Band 38	Front side	0.267	0.083	0.198	0.015	0.350	0.465	0.282	0.480
	Back side	0.529	0.218	0.124	0.062	0.747	0.653	0.591	0.715
LTE Band 41	Front side	0.244	0.083	0.198	0.015	0.327	0.442	0.259	0.457
	Back side	0.434	0.218	0.124	0.062	0.652	0.558	0.496	0.620
N7	Front side	0.497	0.083	0.198	0.015	0.580	0.695	0.512	0.710
	Back side	0.565	0.218	0.124	0.062	0.783	0.689	0.627	0.751
N38	Front side	0.114	0.083	0.198	0.015	0.197	0.312	0.129	0.327
	Back side	0.163	0.218	0.124	0.062	0.381	0.287	0.225	0.349
N41	Front side	0.043	0.083	0.198	0.015	0.126	0.241	0.058	0.256
	Back side	0.137	0.218	0.124	0.062	0.355	0.261	0.199	0.323



Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant2	WiFi 2.4G	WiFi 5G	BT				
N78	Front side	0.061	0.083	0.198	0.015	0.144	0.259	0.076	0.274
	Back side	0.279	0.218	0.124	0.062	0.497	0.403	0.341	0.465

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant4	WiFi 2.4G	WiFi 5G	BT				
GSM850	Front side	0.512	0.083	0.198	0.015	0.595	0.710	0.527	0.725
	Back side	0.339	0.218	0.124	0.062	0.557	0.463	0.401	0.525
WCAMA Band V	Front side	0.438	0.083	0.198	0.015	0.521	0.636	0.453	0.651
	Back side	0.296	0.218	0.124	0.062	0.514	0.420	0.358	0.482
LTE Band 5	Front side	0.482	0.083	0.198	0.015	0.565	0.680	0.497	0.695
	Back side	0.394	0.218	0.124	0.062	0.612	0.518	0.456	0.580
LTE Band 7	Front side	1.013	0.083	0.198	0.015	1.096	1.211	1.028	1.226
	Back side	0.860	0.218	0.124	0.062	1.078	0.984	0.922	1.046
N5	Front side	0.309	0.083	0.198	0.015	0.392	0.507	0.324	0.522
	Back side	0.348	0.218	0.124	0.062	0.566	0.472	0.410	0.534

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		ENDC	WiFi 2.4G	WiFi 5G	BT				
DC_7A_n5A	Front side	1.032	0.083	0.198	0.015	1.115	1.230	1.047	1.245
	Back side	0.917	0.218	0.124	0.062	1.135	1.041	0.979	1.103
DC_5A_n7A	Front side	0.979	0.083	0.198	0.015	1.062	1.177	0.994	1.192
	Back side	0.959	0.218	0.124	0.062	1.177	1.083	1.021	1.145
DC_5A_n38A	Front side	0.596	0.083	0.198	0.015	0.679	0.794	0.611	0.809
	Back side	0.557	0.218	0.124	0.062	0.775	0.681	0.619	0.743
DC_5A_n78A	Front side	0.543	0.083	0.198	0.015	0.626	0.741	0.558	0.756
	Back side	0.673	0.218	0.124	0.062	0.891	0.797	0.735	0.859
DC_7A_n78A	Front side	0.784	0.083	0.198	0.015	0.867	0.982	0.799	0.997
	Back side	0.848	0.218	0.124	0.062	1.066	0.972	0.910	1.034

**Hotspot:**

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant1	WiFi 2.4G	WiFi 5G	BT				
GSM1900	Front side	0.746	0.083	0.134	0.015	0.829	0.880	0.761	0.895
	Back side	0.853	0.207	0.122	0.062	1.060	0.975	0.915	1.037
	Left side	0.316	/	/	/	0.316	0.316	0.316	0.316
	Right side	0.119	0.069	0.220	0.020	0.188	0.339	0.139	0.359
	Top side	0.759	0.290	0.262	0.060	1.049	1.021	0.819	1.081
	Bottom side	/	/	/	/	/	/	/	/
WCAMA Band II	Front side	0.740	0.083	0.134	0.015	0.823	0.874	0.755	0.889
	Back side	0.961	0.207	0.122	0.062	1.168	1.083	1.023	1.145
	Left side	0.322	/	/	/	0.322	0.322	0.322	0.322
	Right side	0.107	0.069	0.220	0.020	0.176	0.327	0.127	0.347
	Top side	0.720	0.290	0.262	0.060	1.010	0.982	0.780	1.042
	Bottom side	/	/	/	/	/	/	/	/
LTE Band 38	Front side	0.267	0.083	0.134	0.015	0.350	0.401	0.282	0.416
	Back side	0.435	0.207	0.122	0.062	0.642	0.557	0.497	0.619
	Left side	0.052	/	/	/	0.052	0.052	0.052	0.052
	Right side	0.044	0.069	0.220	0.020	0.113	0.264	0.064	0.284
	Top side	0.701	0.290	0.262	0.060	0.991	0.963	0.761	1.023
	Bottom side	/	/	/	/	/	/	/	/
LTE Band 41	Front side	0.244	0.083	0.134	0.015	0.327	0.378	0.259	0.393
	Back side	0.343	0.207	0.122	0.062	0.550	0.465	0.405	0.527
	Left side	0.041	/	/	/	0.041	0.041	0.041	0.041
	Right side	0.027	0.069	0.220	0.020	0.096	0.247	0.047	0.267
	Top side	0.579	0.290	0.262	0.060	0.869	0.841	0.639	0.901
	Bottom side	/	/	/	/	/	/	/	/
N7	Front side	0.167	0.083	0.134	0.015	0.250	0.301	0.182	0.316
	Back side	0.260	0.207	0.122	0.062	0.467	0.382	0.322	0.444
	Left side	0.072	/	/	/	0.072	0.072	0.072	0.072
	Right side	0.032	0.069	0.220	0.020	0.101	0.252	0.052	0.272
	Top side	0.513	0.290	0.262	0.060	0.803	0.775	0.573	0.835
	Bottom side	/	/	/	/	/	/	/	/
N38	Front side	0.114	0.083	0.134	0.015	0.197	0.248	0.129	0.263
	Back side	0.163	0.207	0.122	0.062	0.370	0.285	0.225	0.347
	Left side	0.018	/	/	/	0.018	0.018	0.018	0.018
	Right side	0.009	0.069	0.220	0.020	0.078	0.229	0.029	0.249
	Top side	0.301	0.290	0.262	0.060	0.591	0.563	0.361	0.623
	Bottom side	/	/	/	/	/	/	/	/
N41	Front side	0.043	0.083	0.134	0.015	0.126	0.177	0.058	0.192
	Back side	0.111	0.207	0.122	0.062	0.318	0.233	0.173	0.295
	Left side	0.014	/	/	/	0.014	0.014	0.014	0.014
	Right side	0.005	0.069	0.220	0.020	0.074	0.225	0.025	0.245
	Top side	0.183	0.290	0.262	0.060	0.473	0.445	0.243	0.505
	Bottom side	/	/	/	/	/	/	/	/

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant2	WiFi 2.4G	WiFi 5G	BT				
N78	Front side	0.061	0.083	0.134	0.015	0.144	0.195	0.076	0.210
	Back side	0.203	0.207	0.122	0.062	0.410	0.325	0.265	0.387
	Left side	/	/	/	/	/	/	/	/
	Right side	0.395	0.069	0.220	0.020	0.464	0.615	0.415	0.635
	Top side	0.043	0.290	0.262	0.060	0.333	0.305	0.103	0.365
	Bottom side	/	/	/	/	/	/	/	/

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant4	WiFi 2.4G	WiFi 5G	BT				
GSM850	Front side	0.858	0.083	0.134	0.015	0.941	0.992	0.873	1.007
	Back side	0.664	0.207	0.122	0.062	0.871	0.786	0.726	0.848
	Left side	0.058	/	/	/	0.058	0.058	0.058	0.058
	Right side	0.263	0.069	0.220	0.020	0.332	0.483	0.283	0.503
	Top side	/	0.290	0.262	0.060	0.290	0.262	0.060	0.322
	Bottom side	0.412	/	/	/	0.412	0.412	0.412	0.412
WCAMA Band V	Front side	0.438	0.083	0.134	0.015	0.521	0.572	0.453	0.587
	Back side	0.296	0.207	0.122	0.062	0.503	0.418	0.358	0.480
	Left side	0.034	/	/	/	0.034	0.034	0.034	0.034
	Right side	0.205	0.069	0.220	0.020	0.274	0.425	0.225	0.445
	Top side	/	0.290	0.262	0.060	0.290	0.262	0.060	0.322
	Bottom side	0.256	/	/	/	0.256	0.256	0.256	0.256
LTE Band 5	Front side	0.482	0.083	0.134	0.015	0.565	0.616	0.497	0.631
	Back side	0.394	0.207	0.122	0.062	0.601	0.516	0.456	0.578
	Left side	0.038	/	/	/	0.038	0.038	0.038	0.038
	Right side	0.154	0.069	0.220	0.020	0.223	0.374	0.174	0.394
	Top side	/	0.290	0.262	0.060	0.290	0.262	0.060	0.322
	Bottom side	0.225	/	/	/	0.225	0.225	0.225	0.225
LTE Band 7	Front side	0.492	0.083	0.134	0.015	0.575	0.626	0.507	0.641
	Back side	0.432	0.207	0.122	0.062	0.639	0.554	0.494	0.616
	Left side	0.003	/	/	/	0.003	0.003	0.003	0.003
	Right side	0.022	0.069	0.220	0.020	0.091	0.242	0.042	0.262
	Top side	/	0.290	0.262	0.060	0.290	0.262	0.060	0.322
	Bottom side	1.221	/	/	/	1.221	1.221	1.221	1.221
N5	Front side	0.309	0.083	0.134	0.015	0.392	0.443	0.324	0.458
	Back side	0.348	0.207	0.122	0.062	0.555	0.470	0.410	0.532
	Left side	0.039	/	/	/	0.039	0.039	0.039	0.039
	Right side	0.166	0.069	0.220	0.020	0.235	0.386	0.186	0.406
	Top side	/	0.290	0.262	0.060	0.290	0.262	0.060	0.322
	Bottom side	0.253	/	/	/	0.253	0.253	0.253	0.253

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		ENDC	WiFi 2.4G	WiFi 5G	BT				
DC_7A_n5A	Front side	0.556	0.083	0.134	0.015	0.639	0.690	0.571	0.705
	Back side	0.565	0.207	0.122	0.062	0.772	0.687	0.627	0.749
	Left side	0.041	/	/	/	0.041	0.041	0.041	0.041
	Right side	0.179	0.069	0.220	0.020	0.248	0.399	0.199	0.419
	Top side	/	0.290	0.262	0.060	0.290	0.262	0.060	0.322
	Bottom side	0.933	/	/	/	0.933	0.933	0.933	0.933
DC_5A_n7A	Front side	0.649	0.083	0.134	0.015	0.732	0.783	0.664	0.798
	Back side	0.654	0.207	0.122	0.062	0.861	0.776	0.716	0.838
	Left side	0.110	/	/	/	0.110	0.110	0.110	0.110
	Right side	0.186	0.069	0.220	0.020	0.255	0.406	0.206	0.426
	Top side	0.513	0.290	0.262	0.060	0.803	0.775	0.573	0.835
	Bottom side	0.225	/	/	/	0.225	0.225	0.225	0.225
DC_5A_n38A	Front side	0.749	0.083	0.134	0.015	0.832	0.883	0.764	0.898
	Back side	0.829	0.207	0.122	0.062	1.036	0.951	0.891	1.013
	Left side	0.090	/	/	/	0.090	0.090	0.090	0.090
	Right side	0.198	0.069	0.220	0.020	0.267	0.418	0.218	0.438
	Top side	0.701	0.290	0.262	0.060	0.991	0.963	0.761	1.023
	Bottom side	0.225	/	/	/	0.225	0.225	0.225	0.225
DC_5A_n78A	Front side	0.543	0.083	0.134	0.015	0.626	0.677	0.558	0.692
	Back side	0.597	0.207	0.122	0.062	0.804	0.719	0.659	0.781
	Left side	0.038	/	/	/	0.038	0.038	0.038	0.038
	Right side	0.549	0.069	0.220	0.020	0.618	0.769	0.569	0.789
	Top side	0.043	0.290	0.262	0.060	0.333	0.305	0.103	0.365
	Bottom side	0.225	/	/	/	0.225	0.225	0.225	0.225
DC_7A_n78A	Front side	0.308	0.083	0.134	0.015	0.391	0.442	0.323	0.457
	Back side	0.420	0.207	0.122	0.062	0.627	0.542	0.482	0.604
	Left side	0.002	/	/	/	0.002	0.002	0.002	0.002
	Right side	0.408	0.069	0.220	0.020	0.477	0.628	0.428	0.648
	Top side	0.043	0.290	0.262	0.060	0.333	0.305	0.103	0.365
	Bottom side	0.680	/	/	/	0.680	0.680	0.680	0.680

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

**Product specific 10g SAR:**

Band	Exposure position	SARmax (W/kg)				Summed SAR	Summed SAR	Summed SAR	Summed SAR
		1	2	3	4				
		Ant4	WiFi 2.4G	WiFi 5G	BT				
LTE Band 7	Front side	/	/	0.489	/	/	0.489	/	0.489
	Back side	/	/	0.653	/	/	0.653	/	0.653
	Left side	/	/	/	/	/	/	/	/
	Right side	/	/	0.433	/	/	0.433	/	0.433
	Top side	/	/	1.085	/	/	1.085	/	1.085
	Bottom side	1.389	/	/	/	1.389	1.389	1.389	1.389

According to the above tables, SAR values < 4.0W/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)	( $v_i$ ) $v_{eff}$
<b>Measurement System</b>								
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 <sup>m</sup>	±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 %	∞
<b>Test Sample Related</b>								
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 <sup>P</sup>	±0 %	R	$\sqrt{3}$	1	1	±0.0 %	±0.0 %	∞
<b>Phantom and Setup</b>								
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.) <sup>DAK</sup>	±2.5 %	R	$\sqrt{3}$	0.78	0.71	±1.1 %	±1.0 %	∞
Liquid Permittivity (mea.) <sup>DAK</sup>	±2.5 %	R	$\sqrt{3}$	0.26	0.26	±0.3 %	±0.4 %	∞
Temp. unc. - Conductivity <sup>BB</sup>	±3.4 %	R	$\sqrt{3}$	0.78	0.71	±1.5 %	±1.4 %	∞
Temp. unc. - Permittivity <sup>BB</sup>	±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.	( $c_1$ ) 1g	( $c_2$ ) 10g	Std. Unc. (1g)	Std. Unc. (10g)	( $v_i$ ) $v_{eff}$
<b>Measurement System</b>								
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 <sup>m</sup>	±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 %	∞
<b>Test Sample Related</b>								
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 <sup>P</sup>	±0 %	R	$\sqrt{3}$	1	1	±0.0 %	±0.0 %	∞
<b>Phantom and Setup</b>								
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.) <sup>DAK</sup>	±2.5 %	R	$\sqrt{3}$	0.78	0.71	±1.1 %	±1.0 %	∞
Liquid Permittivity (mea.) <sup>DAK</sup>	±2.5 %	R	$\sqrt{3}$	0.26	0.26	±0.3 %	±0.4 %	∞
Temp. unc. - Conductivity <sup>BB</sup>	±3.4 %	R	$\sqrt{3}$	0.78	0.71	±1.5 %	±1.4 %	∞
Temp. unc. - Permittivity <sup>BB</sup>	±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	2020.11.11	2021.11.10
Dosimetric E-field Probe	EX3DV4	3708	2020.10.30	2021.10.29
Dipole Validation Kit	D835V2	4d023	2020.10.16	2023.10.15
Dipole Validation Kit	D1800V2	2d084	2020.09.18	2023.09.17
Dipole Validation Kit	D2000V2	1009	2020.10.14	2023.10.13
Dipole Validation Kit	D2450V2	738	2020.10.13	2023.10.12
Dipole Validation Kit	D2600V2	1166	2019.11.08	2022.11.07
Dipole Validation Kit	D3500V2	1090	2019.11.11	2022.11.10
Dipole Validation Kit	D5GHzV2	1079	2020.10.10	2023.10.09

Additional test equipment used in testing:

Test Equipment	Model	Serial Number	Calibration date	Calibration Due data
Signal Generator	E4428C	MY45280865	2020.08.20	2021.08.19
Signal Generator	SML 03	103514	2020.08.20	2021.08.19
Power meter	E4417A	MY45101182	2020.08.20	2021.08.19
Power Sensor	E4412A	MY41502214	2020.08.20	2021.08.19
Power Sensor	E4412A	MY41502130	2020.08.20	2021.08.19
Power meter	E4417A	MY45101004	2020.08.20	2021.08.19
Power Sensor	E9300B	MY41496001	2020.08.20	2021.08.19
Power Sensor	E9300B	MY41496003	2020.08.20	2021.08.19
Communication Tester	E5515C	MY48367401	2020.08.20	2021.08.19
Communication Tester	CMW500	161702	2020.08.20	2021.08.19
Communication Tester	MT8820C	6201300660	2020.08.20	2021.08.19
Communication Tester	MT8821C	6201547819	2020.08.20	2021.08.19
Vector Network Analyzer	VNA R140	0011213	2020.09.18	2021.09.17
Dielectric Parameter Probe	DAKS-3.5	1042	2020.09.17	2021.09.16

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: $\pm 0.2$ dB (30 MHz to 6 GHz)
Optical Surface Detection	$\pm 0.3$ 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 $\mu$ W/g to > 100 W/kg Linearity: $\pm 0.2$ dB (noise: typically < 1 $\mu$ W/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 $\times$ 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  $\Omega$  from the previous measurement



## Dipole

### 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  $\Omega$  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)

Dipole750 TSL Parameters		
Parameters	Measured data	Target (Ref. Value)
Impedance	53.8 $\Omega$ -4.02j $\Omega$	53.7 $\Omega$ -1.63j $\Omega$
Return loss	-25.5 dB	-28.2dB

Dipole835 TSL Parameters		
Parameters	Measured data	Target (Ref. Value)
Impedance	54.5 $\Omega$ -6.16j $\Omega$	52.6 $\Omega$ -2.37j $\Omega$
Return loss	-34.1 dB	-29.3dB

Dipole1800 TSL Parameters		
Parameters	Measured data	Target (Ref. Value)
Impedance	44.2 $\Omega$ +5.06j $\Omega$	48.9 $\Omega$ -2.71j $\Omega$
Return loss	-31.8 dB	-30.6dB

Dipole2000 TSL Parameters		
Parameters	Measured data	Target (Ref. Value)
Impedance	51.9 $\Omega$ -3.37j $\Omega$	49.4 $\Omega$ -2.46j $\Omega$
Return loss	-28.4 dB	-31.9dB

Dipole2450 TSL Parameters		
Parameters	Measured data	Target (Ref. Value)
Impedance	53.2 $\Omega$ -9.98j $\Omega$	53.3 $\Omega$ +6.38j $\Omega$
Return loss	-19.9 dB	-23.1dB

Dipole2600 TSL Parameters		
Parameters	Measured data	Target (Ref. Value)
Impedance	50.4 $\Omega$ +6.71j $\Omega$	47.9 $\Omega$ -7.80j $\Omega$
Return loss	-23.5 dB	-21.7dB

Dipole5GHz TSL Parameters (5200MHz)		
Parameters	Measured data	Target (Ref. Value)
Impedance	51.2 $\Omega$ +13.89j $\Omega$	50.2 $\Omega$ -10.0j $\Omega$
Return loss	-17.0 dB	-20.0dB

Dipole5GHz TSL Parameters (5300MHz)		
Parameters	Measured data	Target (Ref. Value)
Impedance	52.0Ω-11.40jΩ	47.2Ω-7.33jΩ
Return loss	-18.4 dB	-21.9dB

Dipole5GHz TSL Parameters (5500MHz)		
Parameters	Measured data	Target (Ref. Value)
Impedance	51.6Ω+6.61jΩ	52.0Ω-7.96jΩ
Return loss	-18.6 dB	-21.9dB

Dipole5GHz TSL Parameters (5600MHz)		
Parameters	Measured data	Target (Ref. Value)
Impedance	53.6Ω+7.31jΩ	55.7Ω-3.78jΩ
Return loss	-22.1 dB	-23.8dB

Dipole5GHz TSL Parameters (5800MHz)		
Parameters	Measured data	Target (Ref. Value)
Impedance	51.6Ω-5.96jΩ	53.7Ω-5.87jΩ
Return loss	-19.0 dB	-23.5dB

## **ANNEX A – TEST PLOTS**

Please refer to the attachment.