



中国认可
国际互认
检测
TESTING
CNAS L0310



FCC SAR Compliance Test Report

Product Name: Smart Phone

Model: MAR-LX3A

Report No.: SYBH(Z-SAR)20181219017001-2

FCC ID: QISMAR-LX3A

	APPROVED (Lab Manager)	PREPARED (Test Engineer)
BY	<i>Wei Huanbin</i>	<i>Lin Jiekai</i>
DATE	2019-02-12	2019-02-12

Reliability Laboratory of Huawei Technologies Co., Ltd.
(Global Compliance and Testing Center of Huawei Technologies Co., Ltd)

Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District,
Shenzhen, 518129, P.R.C
Tel: +86 755 28780808 Fax: +86 755 89652518

※ ※ **Notice** ※ ※

1. The laboratory has passed the accreditation by China National Accreditation Service for Conformity Assessment (CNAS). The accreditation number is L0310.
2. The laboratory has passed the accreditation by The American Association for Laboratory Accreditation (A2LA). The accreditation number is 2174.01 & 2174.02 & 2174.03
3. The laboratory (Reliability Lab of Huawei Technologies Co., Ltd) is also named “Global Compliance and Testing Center of Huawei Technologies Co., Ltd”, the both names have coexisted since 2009.
4. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
5. The test report is invalid if there is any evidence of erasure and/or falsification.
6. The test report is only valid for the test samples.
7. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory

Table of Contents

1	General Information.....	6
1.1	Statement of Compliance	6
1.2	RF exposure limits	7
1.3	EUT Description	8
1.3.1	General Description	10
1.4	Test specification(s)	11
1.5	Testing laboratory	11
1.6	Applicant and Manufacturer	11
1.7	Application details	11
1.8	Ambient Condition.....	11
2	SAR Measurement System	12
2.1	SAR Measurement Set-up	12
2.2	Test environment	13
2.3	Data Acquisition Electronics description.....	13
2.4	Probe description	14
2.5	Phantom description	15
2.6	Device holder description	16
2.7	Test Equipment List	17
3	SAR Measurement Procedure	19
3.1	Scanning procedure	19
3.2	Spatial Peak SAR Evaluation	20
3.3	Data Storage and Evaluation.....	21
4	System Verification Procedure	23
4.1	Tissue Verification.....	23
4.2	System Check.....	26
4.3	System check Procedure	27
5	SAR measurement variability and uncertainty	28
5.1	SAR measurement variability	28
5.2	SAR measurement uncertainty	28
6	SAR Test Configuration.....	29
6.1	Test Positions Configuration	29
6.1.1	General considerations.....	29
6.1.2	Head Exposure Condition	29
6.1.3	Body-worn Exposure Condition	30
6.1.4	Hotspot Exposure Condition	30
6.1.5	Product Specific 10-g SAR Exposure Condition.....	31
6.2	3G SAR Test Reduction Procedure	31
6.3	GSM Test Configuration	31
6.4	UMTS Test Configuration	32
6.5	LTE Test Configuration	37
6.6	WiFi Test Configuration	39
6.6.1	Initial Test Position Procedure	39
6.6.2	Initial Test Configuration Procedure	39
6.6.3	Sub Test Configuration Procedure	39
6.6.4	WiFi 2.4G SAR Test Procedures	40
6.7	LTE CA specification.....	41
6.7.1	LTE CA combinations specification	41
6.7.2	Test procedure for downlink CA	42
6.8	Dynamic antenna switching specification	43
6.9	Power Reduction Specification	44
6.9.1	Power reduction triggered by specific use conditions(2G&3G&4G Second/Main Antenna)	45
6.9.2	Power reduction triggered by Country Code(WiFi Antenna)	46
7	SAR Measurement Results	47
7.1	Conducted power measurements.....	47
7.1.1	Conducted power of GSM850(Second antenna).....	48
7.1.2	Conducted power of GSM850(Main antenna)	49
7.1.3	Conducted power of GSM1900(Second antenna).....	50
7.1.4	Conducted power of GSM1900(Main antenna)	51
7.1.5	Conducted power of UMTS Band II(Second antenna)	52

7.1.6	Conducted power of UMTS Band II(Main antenna).....	54
7.1.7	Conducted power of UMTS Band IV(Second antenna).....	55
7.1.8	Conducted power of UMTS Band IV(Main antenna).....	56
7.1.9	Conducted power of UMTS Band V(Second antenna).....	57
7.1.10	Conducted power of UMTS Band V(Main antenna).....	58
7.1.11	Conducted power of LTE Band 2(Second antenna).....	59
7.1.12	Conducted power of LTE Band 2(Main antenna).....	71
7.1.13	Conducted power of LTE Band 4(Second antenna).....	77
7.1.14	Conducted power of LTE Band 4(Main antenna).....	83
7.1.15	Conducted power of LTE Band 5(Second antenna).....	86
7.1.16	Conducted power of LTE Band 5(Main antenna).....	90
7.1.17	Conducted power of LTE Band 7(Second antenna).....	92
7.1.18	Conducted power of LTE Band 7(Main antenna).....	100
7.1.19	Conducted power of LTE Band 12(Second antenna).....	104
7.1.20	Conducted power of LTE Band 12(Main antenna).....	108
7.1.21	Conducted power of LTE Band 17(Second antenna).....	110
7.1.22	Conducted power of LTE Band 17(Main antenna).....	112
7.1.23	Conducted power of LTE Band 66(Second antenna).....	113
7.1.24	Conducted power of LTE Band 66(Main antenna).....	119
7.1.25	Conducted power of downlink LTE CA.....	122
7.1.26	Conducted power of WiFi 2.4G (FCC Country Code).....	125
7.1.27	Conducted power of WiFi 2.4G (CE Country Code).....	127
7.1.28	Conducted power of BT.....	129
7.2	SAR measurement Results.....	130
7.2.1	SAR measurement Results of GSM850.....	132
7.2.2	SAR measurement Results of GSM1900.....	135
7.2.3	SAR measurement Results of UMTS Band II.....	138
7.2.4	SAR measurement Results of UMTS Band IV.....	142
7.2.5	SAR measurement Results of UMTS Band V.....	145
7.2.6	SAR measurement Results of LTE Band 2.....	148
7.2.7	SAR measurement Results of LTE Band 4.....	152
7.2.8	SAR measurement Results of LTE Band 5.....	154
7.2.9	SAR measurement Results of LTE Band 7.....	157
7.2.10	SAR measurement Results of LTE Band 12.....	161
7.2.11	SAR measurement Results of LTE Band 17.....	164
7.2.12	SAR measurement Results of LTE Band 66.....	165
7.2.13	SAR measurement Results of WiFi 2.4G.....	168
7.2.14	SAR measurement Results of BT.....	170
7.3	Multiple Transmitter Evaluation.....	171
7.3.1	Stand-alone SAR test exclusion.....	171
7.3.2	Simultaneous Transmission Possibilities.....	173
7.3.3	SAR Summation Scenario.....	174
7.3.4	Simultaneous Transmission Conclusion.....	174
	Appendix A. System Check Plots.....	175
	Appendix B. SAR Measurement Plots.....	175
	Appendix C. Calibration Certificate.....	175
	Appendix D. Photo documentation.....	175
	Appendix E. Antenna Location.....	175

※ ※ Modified History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
Rev.1.0	Initial Test Report Release	2019-02-10	Lin Jiekai
Rev1.1	Update DL LTE CA combination in section 6.7 and conduted power of DL LTE CA in section 7.1.25	2019-02-12	Lin Jiekai

1 General Information

1.1 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing are below Table 1.

Band	Max Reported SAR(W/kg)			
	Head	Body Worn*	Hotspot	Product Specific 10-g**
GSM850	0.80	0.30	0.55	/
GSM1900	0.39	0.18	0.52	/
UMTS Band II	0.88	0.32	0.98	/
UMTS Band IV	0.74	0.31	0.60	/
UMTS Band V	0.74	0.37	0.68	/
LTE Band 2	0.94	0.27	0.81	/
LTE Band 4***	0.87	0.16	0.28	/
LTE Band 5	0.92	0.40	0.76	/
LTE Band 7	0.78	0.31	0.76	/
LTE Band 12	0.81	0.28	0.64	/
LTE Band 17***	/	/	/	/
LTE Band 66	0.81	0.35	0.70	/
WiFi 2.4G	0.20	0.09	0.31	/
BT	0.28	/	/	/
The highest reported SAR for Head, Body Worn, Hotspot and Simultaneous transmissio exposure conditions are 0.94W/kg, 0.40W/kg, 0.98W/kg and 1.29W/kg respectively per KDB690783 D01.				

Table 1: Summary of test result

Note:

1)* For body worn operation, this device has been tested and met FCC RF exposure guidelines when used with any accessory that contains no metal and that positions the handset a minimum of 15mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

2)** Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg per KDB 648474 D04 or the frequency band meets the SAR test exclusion thresholds per KDB447498D01.

3) *** According to TCB workshop October,2014 RF Exposure Procedures Update(Overlapping LTE Bands): SAR for Second/Main antenna LTE Band 17 (Frequency range:704-716 MHz) is covered by LTE Band 12 (Frequency range:699-716 MHz) due to similar frequency range,same maximum tune up limit and same channel bandwidth. SAR for Main antenna LTE Band 4 (Frequency range: 1710-1755 MHz) is covered by LTE Band 66 (Frequency range: 1710-1780 MHz) due to similar frequency range,same maximum tune up limit and same channel bandwidth.

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits according to the FCC rule §2.1093, the ANSI C95.1:1992/IEEE C95.1:1991, the NCRP Report Number 86 for uncontrolled environment, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

1.2 RF exposure limits

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR* (Brain/Body/Arms/Legs)	1.60 W/kg	8.00 W/kg
Spatial Average SAR** (Whole Body)	0.08 W/kg	0.40 W/kg
Spatial Peak SAR*** (Hands/Feet/Ankle/Wrist)	4.00 W/kg	20.00 W/kg

Table 2: RF exposure limits

The limit applied in this test report is shown in **bold** letters

Notes:

- * The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
- ** The Spatial Average value of the SAR averaged over the whole body.
- *** The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation

1.3 EUT Description

Device Information:			
Product Name:	Smart Phone		
Model:	MAR-LX3A		
FCC ID :	QISMAR-LX3A		
SN:	1#: A4NDU18C27000015 2#: A4NDU18C27000016 3#: A4NDU18C27000020 4#: A4NDU18C27000041 5#: A4NDU18C27000065 6#: A4NDU18C27000210 7#: A4NDU18C27000158 8#: A4NDU18C27000095		
Device Type :	Portable device		
Device Phase:	Identical Prototype		
Exposure Category:	Uncontrolled environment / general population		
Hardware Version :	HL1MARLM		
Software Version :	9.0.1.102(SP5C900E102R1P6)		
Antenna Type :	Internal antenna		
Other Accessories	Headset		
Device Operating Configurations:			
Supporting Mode(s)	GSM850/1900, UMTS Band II/IV/V, LTE Band 2/4/5/7/12/17/66, WiFi 2.4G, BT		
Test Modulation	GSM(GMSK/8PSK),UMTS(QPSK), LTE(QPSK/16QAM/64QAM), WiFi(DSSS/OFDM),BT(GFSK)		
Device Class	B		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM850	824-849	869 - 894
	GSM1900	1850-1910	1930-1990
	UMTS Band II	1850-1910	1930-1990
	UMTS Band IV	1710-1755	2110-2115
	UMTS Band V	824-849	869 - 894
	LTE Band 2	1850-1910	1930-1990
	LTE Band 4	1710-1755	2110-2155
	LTE Band 5	824-849	869-894
	LTE Band 7	2500-2570	2620 -2690
	LTE Band 12	699-716	729-746
	LTE Band 17	704-716	734-746
	LTE Band 66	1710-1780	2110-2200
	BT	2400-2483.5	
	WiFi 2.4G	2400-2472	
GPRS Multislot Class(12)	Max Number of Timeslots in Uplink:		4
	Max Number of Timeslots in Downlink:		4
	Max Total Timeslot:		5
EGPRS Multislot Class(12)	Max Number of Timeslots in Uplink:		4
	Max Number of Timeslots in Downlink:		4
	Max Total Timeslot:		5
HSDPA UE Category	14		
HSUPA UE Category	6		
DC-HSDPA UE Category	24		
Power Class:	4,tested with power level 5(GSM850)		
	1,tested with power level 0(GSM1900)		
	3, tested with power control “all 1”(UMTS Band II)		
	3, tested with power control “all 1”(UMTS Band IV)		

	3, tested with power control "all 1"(UMTS Band V)
	3, tested with power control all Max.(LTE Band 2)
	3, tested with power control all Max.(LTE Band 4)
	3, tested with power control all Max.(LTE Band 5)
	3, tested with power control all Max.(LTE Band 7)
	3, tested with power control all Max.(LTE Band 12)
	3, tested with power control all Max.(LTE Band 17)
	3, tested with power control all Max.(LTE Band 66)
Test Channels (low-mid-high):	128-190-251(GSM850)
	512-661-810(GSM1900)
	9262-9400-9538(UMTS Band II)
	1312-1413-1513(UMTS Band IV)
	4132-4182-4233(UMTS Band V)
	18607-18900-19193(LTE Band 2 BW=1.4MHz)
	18615-18900-19185(LTE Band 2 BW=3MHz)
	18625-18900-19175(LTE Band 2 BW=5MHz)
	18650-18900-19150(LTE Band 2 BW=10MHz)
	18675-18900-19125(LTE Band 2 BW=15MHz)
	18700-18900-19100(LTE Band 2 BW=20MHz)
	19957-20175-20393(LTE Band 4 BW=1.4MHz)
	19965-20175-20385(LTE Band 4 BW=3MHz)
	19975-20175-20375(LTE Band 4 BW=5MHz)
	20000-20175-20350(LTE Band 4 BW=10MHz)
	20025-20175-20325(LTE Band 4 BW=15MHz)
	20050-20175-20300(LTE Band 4 BW=20MHz)
	20407-20525-20643(LTE Band 5 BW=1.4MHz)
	20415-20525-20635(LTE Band 5 BW=3MHz)
	20425-20525-20625(LTE Band 5 BW=5MHz)
	20450-20525-20600(LTE Band 5 BW=10MHz)
	20775-21100-21425(LTE Band 7 BW=5MHz)
	20800-21100-21400(LTE Band 7 BW=10MHz)
	20825-21100-21375(LTE Band 7 BW=15MHz)
	20850-21100-21350(LTE Band 7 BW=20MHz)
	23017-23095-23173(LTE Band 12 BW=1.4MHz)
	23025-23095-23165(LTE Band 12 BW=3MHz)
	23035-23095-23155(LTE Band 12 BW=5MHz)
	23060-23095-23130(LTE Band 12 BW=10MHz)
	23755-23790-23825(LTE Band 17 BW=5MHz)
	23780-23790-23800(LTE Band 17 BW=10MHz)
	131979-132322-132665(LTE Band 66 BW=1.4MHz)
	131987-132322-132657(LTE Band 66 BW=3MHz)
	131997-132322-132647(LTE Band 66 BW=5MHz)
	132022-132322-132622(LTE Band 66 BW=10MHz)
	132047-132322-132597(LTE Band 66 BW=15MHz)
	132072-132322-132572(LTE Band 66 BW=20MHz)
	WiFi 2.4G:
	802.11b/g/n 20M:1-2-3-4-5-6-7-8-9-10-11-12-13
	40M:3-4-5-6-7-8-9-10-11
	BT : 0-19-39-78

Table 3: Device information and operating configuration

1.3.1 General Description

MAR-LX3A is subscriber equipment in the GSM/WCDMA/LTE system. The GSM frequency band includes GSM850 and GSM900 and DCS1800 and PCS1900. The UMTS frequency band is B1 and B2 and B4 and B5 and B8. The LTE frequency band is B1 and B2 and B3 and B4 and B5 and B7 and B8 and B12 and B17 and B28 and B66. But only GSM850 and GSM1900, UMTS frequency B2 and B4 and B5, LTE frequency B2 and B4 and B5 and B7 and B12 and B17 and B66 bands test data included in this report. The Mobile Phone implements such functions as RF signal receiving/transmitting, GSM/WCDMA/LTE protocol processing, voice, video MMS service, GPS and WIFI etc. Externally it provides one micro SD card interface (it can also used as SIM card interface), earphone port (to provide voice service) and one SIM card interface. MAR-LX3A are dual SIM and single SIM smart phones, Single SIM delete SIM only by software. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet with a PC, or to exchange data with other Bluetooth devices.

Battery information:

Model	Manufacture	Description
Rechargeable Li-ion	Huawei Technologies Co., Ltd. (Manufacturer: Sunwoda)	Battery Model: HB356687ECW Rated capacity: 3240mAh Nominal Voltage:  +3.82V Charging Voltage:  +4.40V
	Huawei Technologies Co., Ltd. (Manufacturer: Desay)	
	Huawei Technologies Co., Ltd. (Manufacturer: SCUD)	

1.4 Test specification(s)

ANSI C95.1:1992 /IEEE C95.1:1991	Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.
IEEE Std 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
KDB 941225 D01	3G SAR Procedures v03r01
KDB 941225 D05	SAR for LTE Devices v02r05
KDB 941225 D05A	LTE Rel.10 KDB Inquiry Sheet v01r02
KDB 941225 D06	Hotspot SAR v02r01
KDB 447498 D01	General RF Exposure Guidance v06
KDB 648474 D04	Handsets SAR v01r03
KDB 248227 D01	SAR Guidance for IEEE 802.11 Wi-Fi SAR v02r02
KDB 865664 D01	SAR measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02	RF Exposure Reporting v01r02
KDB 690783 D01	SAR Listings on Grants v01r03

1.5 Testing laboratory

Test Site	Reliability Laboratory of Huawei Technologies Co., Ltd.
Test Location	NO.2 New City Avenue Songshan Lake Sci. & Tech. Industry Park, Dongguan, Guangdong, P.R.C
Telephone	+86 755 28780808
Fax	+86 755 89652518
State of accreditation	The Test laboratory (area of testing) is accredited according to ISO/IEC 17025. CNAS Registration number: L0310 A2LA TESTING CERT # 2174.01 & 2174.02 & 2174.03

1.6 Applicant and Manufacturer

Company Name	HUAWEI TECHNOLOGIES CO., LTD
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.7 Application details

Start Date of test	2019-01-26
End Date of test	2019-02-01

1.8 Ambient Condition

Ambient temperature	18°C – 25°C
Relative Humidity	30% – 70%

2.2 Test environment

The DASY measurement system is placed at the head end of a room with dimensions: 5 x 2.5 x 3 m³, the SAM phantom is placed in a distance of 75 cm from the side walls and 1.1m from the rear wall. Above the test system a 1.5 x 1.5 m² array of pyramid absorbers is installed to reduce reflections from the ceiling.

Picture 1 of the photo documentation shows a complete view of the test environment.

The system allows the measurement of SAR values larger than 0.005 mW/g.

2.3 Data Acquisition Electronics description

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

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

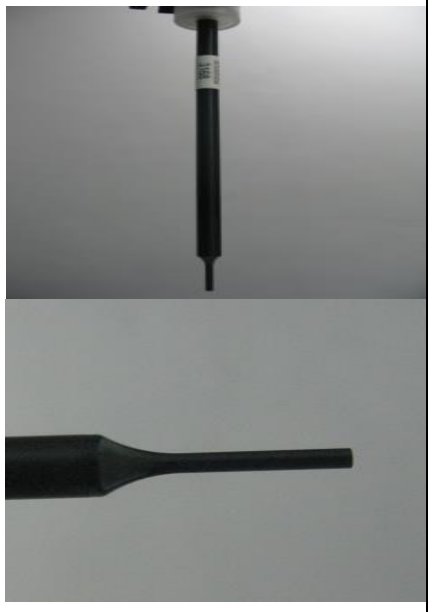
DAE

Input Impedance	200MOhm	
The Inputs	symmetrical and floating	
Common mode rejection	above 80 dB	

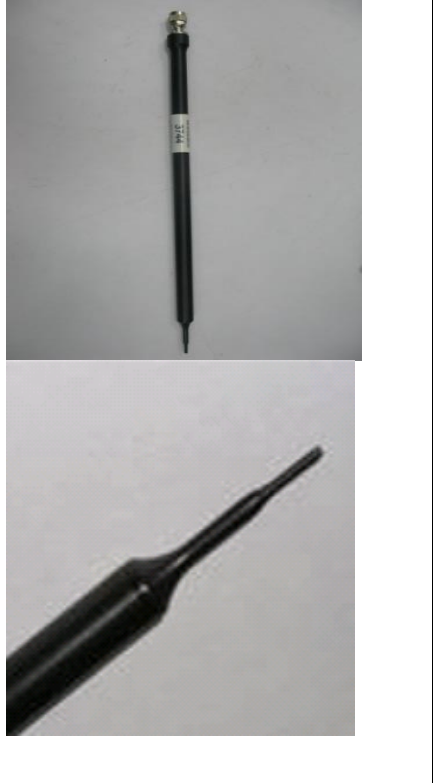
2.4 Probe description

These probes are specially designed and calibrated for use in liquids with high permittivities. They should not be used in air, since the spherical isotropy in air is poor (± 2 dB). The dosimetric probes have special calibrations in various liquids at different frequencies.

Isotropic E-Field Probe ES3DV3 for Dosimetric Measurements

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Calibration	ISO/IEC 17025 calibration service available.	
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)	
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)	
Dynamic range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm	
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones	

Isotropic E-Field Probe EX3DV4 for Dosimetric Measurements

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Calibration	ISO/IEC 17025 calibration service available.	
Frequency	10 MHz to >6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic range	10 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB (noise: typically <1 μ W/g)	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%	

2.5 Phantom description

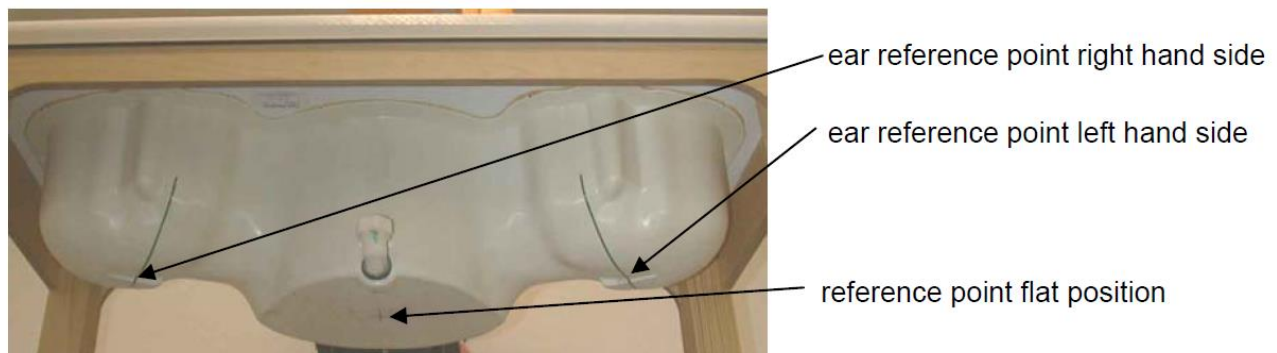
SAM Twin Phantom

Shell Thickness	2mm±0.2mm;The ear region:6.0±0.2mm	
Filling Volume	Approximately 25 liters	
Dimensions	Length:1000mm; Width:500mm; Height: adjustable feet	
Measurement Areas	Left hand Right hand Flat phantom	

The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections.

A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible. Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot.

The following figure shows the definition of reference point:



ELI4 Phantom

Shell Thickness	2mm±0.2mm	
Filling Volume	Approximately 30 liters	
Dimensions	Major axis:600mm; Minor axis:400mm;	
Measurement Areas	Flat phantom	

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6GHz. ELI4 is fully compatible with the latest draft of the standard IEC 62209-2 and all known tissue simulating liquids.

The phantom shell material is resistant to all ingredients used in the tissue-equivalent liquid recipes. The shell of the phantom including ear spacers is constructed from low permittivity and low loss material, with a relative permittivity $2 \leq \epsilon \leq 5$ at ≤ 3 GHz, $3 \leq \epsilon \leq 4$ at > 3 GHz and a loss tangent ≤ 0.05 .

Modular Triple Flat Phantom

Shell Thickness (bottom plate)	2mm±0.2mm	
Filling Volume (Module)	approx. 8.1 liters (filling height: 155 mm)	
Dimensions	Length: 292 mm Width: 178 mm Height: 178 mm Useable area: 280 × 175 mm	
Measurement Areas	Flat phantom	
The Modular Flat Phantom consists of three identical modules that can be installed and removed separately without emptying the liquid. It is used for compliance testing of small wireless devices in body-worn configurations according to IEC 62209-2, etc.		

2.6 Device holder description

The DASY device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65°. The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. This device holder is used for standard mobile phones or PDA's only. If necessary an additional support of polystyrene material is used.



The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon = 3$ and loss tangent $\sigma = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

The device holder permits the device to be positioned with a tolerance of $\pm 1^\circ$ in the tilt angle.

Larger DUT's (e.g. notebooks) cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values.

Therefore those devices are normally only tested at the flat part of the SAM.

2.7 Test Equipment List

This table gives a complete overview of the SAR measurement equipment.

Devices used during the test described are marked ☒

	Manufacturer	Device	Type	Serial number	Date of last calibration	Valid period*
☒	SPEAG	Dosimetric E-Field Probe	ES3DV3	3168	2018-09-27	One year
☒	SPEAG	Dosimetric E-Field Probe	EX3DV4	3736	2018-04-27	One year
☒	SPEAG	Dosimetric E-Field Probe	EX3DV4	3743	2018-11-19	One year
☒	SPEAG	Dosimetric E-Field Probe	EX3DV4	3744	2018-07-25	One year
☒	SPEAG	Dosimetric E-Field Probe	EX3DV4	7381	2018-09-28	One year
☒	SPEAG	Dosimetric E-Field Probe	EX3DV4	7505	2018-06-12	One year
☒	SPEAG	750 MHz Dipole	D750V3	1044	2018-09-18	Three years
☒	SPEAG	835 MHz Dipole	D835V2	4d126	2018-07-24	Three years
☒	SPEAG	835 MHz Dipole	D835V2	4d059	2016-04-20	Three years
☒	SPEAG	1750 MHz Dipole	D1750V2	1123	2017-07-27	Three years
☒	SPEAG	1900 MHz Dipole	D1900V2	5d091	2018-09-19	Three years
☒	SPEAG	2450 MHz Dipole	D2450V2	860	2018-11-17	Three years
☒	SPEAG	2600 MHz Dipole	D2600V2	1032	2018-09-17	Three years
☒	SPEAG	Data acquisition electronics	DAE4	851	2018-07-18	One year
☒	SPEAG	Data acquisition electronics	DAE4	852	2018-04-23	One year
☒	SPEAG	Data acquisition electronics	DAE4	1235	2018-11-14	One year
☒	SPEAG	Data acquisition electronics	DAE4	1236	2018-07-18	One year
☒	SPEAG	Data acquisition electronics	DAE4	1492	2018-11-14	One year
☒	SPEAG	Data acquisition electronics	DAE4	1554	2018-06-05	One year
☒	SPEAG	Software	DASY52	N/A	NCR	NCR
☒	SPEAG	Twin Phantom	SAM2	1474	NCR	NCR
☒	SPEAG	Twin Phantom	SAM3	1597	NCR	NCR
☒	SPEAG	Twin Phantom	SAM4	1620	NCR	NCR
☒	SPEAG	Twin Phantom	SAM5	1892	NCR	NCR
☒	SPEAG	Twin Phantom	SAM7	1594	NCR	NCR
☒	SPEAG	Twin Phantom	SAM8	1940	NCR	NCR
☒	SPEAG	Twin Phantom	SAM9	1958	NCR	NCR
☒	SPEAG	Triple Flat Phantom	MFP V5.1	1176/2	NCR	NCR
☒	SPEAG	EIL Flat Phantom	ELI V8.0	2076	NCR	NCR
☒	R & S	Universal Radio Communication Tester	CMW 500	158850	2018-05-08	One year
☒	R & S	Universal Radio Communication Tester	CMW 500	116265	2018-03-05	One year
☒	Anritsu	Singal Analyzer	MS2690A	6261767335	2018-03-15	One year
☒	Anritsu	Radio Communication Analyser	MT8821C	6201830585	2018-05-30	One year
☒	Agilent	Network Analyser	E5071C	MY46107368	2018-10-15	One year
☒	Agilent	Dielectric Probe Kit	85070E	2484	NCR	NCR
☒	Agilent	Signal Generator	N5181A	MY50145341	2018-12-18	One year
☒	MINI-CIRCUITS	Amplifier	ZHL-42W	QA1402001	NCR	NCR
☒	SHX	Dual Directional Coupler	DDTO-4-20	17121801	2018-12-13	One year
☒	AR	Directional Coupler	DC7144M1	04232641	2018-04-28	One year
☒	Keysight	Power Meter	E4417A	MY57160005	2018-03-15	One year
☒	Keysight	Power Meter Sensor	E9321A	MY57150002	2018-03-15	One year
☒	R & S	Power Meter	NRP	100740	2018-07-17	One year

☒	R & S	Power Meter Sensor	NRP-Z11	106288	2018-07-17	One year
-------------------------------------	-------	--------------------	---------	--------	------------	----------

Note:

1) Per KDB865664 D01 requirements for dipole calibration, the test laboratory has adopted three-year extended calibration interval. Each measured dipole is expected to evaluate with the following criteria at least on annual interval in Appendix C.

- a) There is no physical damage on the dipole;
- b) System check with specific dipole is within 10% of calibrated value;
- c) The most recent return-loss result, measured at least annually, deviates by no more than 20% from the previous measurement.
- d) The most recent measurement of the real or imaginary parts of the impedance, measured at least annually is within 5Ω from the previous measurement.

2) Network analyzer probe calibration against air, distilled water and a shorting block performed before measuring liquid parameters.

3) *All the equipment are within the valid period when the tests are performed.

3 SAR Measurement Procedure

3.1 Scanning procedure

The DASY installation includes predefined files with recommended procedures for measurements and system check. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

- The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT’s output power and should vary max. +/- 5 %.
- For power drift measurement, DASY software supports that the reference position can be either the selected section’s grid reference point or a user point. If the E-field of power reference measurement in the default grid reference point is very small, the test lab may set the reference position to the user point near the hotspot location to avoid large measurement uncertainty.
- The “surface check” measurement tests the optical surface detection system of the DASY system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above $\pm 0.1\text{mm}$). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within $\pm 30^\circ$.)
- The “area scan” measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strength is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The standard scan uses large grid spacing for faster measurement. Standard grid spacing for head measurements is 15 mm in x- and y- dimension ($\leq 2\text{GHz}$), 12 mm in x- and y- dimension (2-4 GHz) and 10mm in x- and y- dimension (4-6GHz). If a finer resolution is needed, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in orientation. Results of this coarse scan are shown in Appendix B.
- A “zoom scan” measures the field in a volume around the 2D peak SAR value acquired in the previous “coarse” scan. This is a fine grid with maximum scan spatial resolution: $\Delta x_{\text{zoom}}, \Delta y_{\text{zoom}} \leq 2\text{GHz} - \leq 8\text{mm}$, 2-4GHz - $\leq 5\text{ mm}$ and 4-6 GHz- $\leq 4\text{mm}$; $\Delta z_{\text{zoom}} \leq 3\text{GHz} - \leq 5\text{ mm}$, 3-4 GHz- $\leq 4\text{mm}$ and 4-6GHz- $\leq 2\text{mm}$ where the robot additionally moves the probe along the z-axis away from the bottom of the Phantom. DASY is also able to perform repeated zoom scans if more than 1 peak is found during area scan. In this document, the evaluated peak 1g and 10g averaged SAR values are shown in the 2D-graphics in Appendix B. Test results relevant for the specified standard (see chapter 1.4.) are shown in table form in chapter 7.2.
- A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 2 mm steps. This measurement shows the continuity of the liquid and can - depending in the field strength – also show the liquid depth. A z-axis scan of the measurement with maximum SAR value is shown in Appendix B.

The following table summarizes the area scan and zoom scan resolutions per FCC KDB865664 D01:

Frequency	Maximum Area Scan resolution ($\Delta x_{\text{area}}, \Delta y_{\text{area}}$)	Maximum Zoom Scan spatial resolution ($\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$)	Maximum Zoom Scan spatial resolution			Minimum zoom scan volume (x,y,z)
			Uniform Grid	Graded Grad		
			$\Delta z_{\text{Zoom}}(n)$	$\Delta z_{\text{Zoom}}(1)^*$	$\Delta z_{\text{Zoom}}(n>1)^*$	
≤2GHz	≤15mm	≤8mm	≤5mm	≤4mm	≤1.5* $\Delta z_{\text{Zoom}}(n-1)$	≥30mm
2-3GHz	≤12mm	≤5mm	≤5mm	≤4mm	≤1.5* $\Delta z_{\text{Zoom}}(n-1)$	≥30mm
3-4GHz	≤12mm	≤5mm	≤4mm	≤3mm	≤1.5* $\Delta z_{\text{Zoom}}(n-1)$	≥28mm
4-5GHz	≤10mm	≤4mm	≤3mm	≤2.5mm	≤1.5* $\Delta z_{\text{Zoom}}(n-1)$	≥25mm
5-6GHz	≤10mm	≤4mm	≤2mm	≤2mm	≤1.5* $\Delta z_{\text{Zoom}}(n-1)$	≥22mm

3.2 Spatial Peak SAR Evaluation

The spatial peak SAR - value for 1 and 10 g is evaluated after the Cube measurements have been done. The basis of the evaluation are the SAR values measured at the points of the fine cube grid consisting of 5 x 5 x 7 points (with 8mm horizontal resolution) or 7 x 7 x 7 points (with 5mm horizontal resolution) or 8 x 8 x 7 points (with 4mm horizontal resolution). The algorithm that finds the maximal averaged volume is separated into three different stages.

- The data between the dipole center of the probe and the surface of the phantom are extrapolated. This data cannot be measured since the center of the dipole is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is about 1 mm (see probe calibration sheet). The extrapolated data from a cube measurement can be visualized by selecting 'Graph Evaluated'.
- The maximum interpolated value is searched with a straight-forward algorithm. Around this maximum the SAR - values averaged over the spatial volumes (1g or 10 g) are computed using the 3d-spline interpolation algorithm. If the volume cannot be evaluated (i.e., if a part of the grid was cut off by the boundary of the measurement area) the evaluation will be started on the corners of the bottom plane of the cube.
- All neighboring volumes are evaluated until no neighboring volume with a higher average value is found.

Extrapolation

The extrapolation is based on a least square algorithm [W. Gander, Computermathematik, p.168-180]. Through the points in the first 3 cm along the z-axis, polynomials of order four are calculated. These polynomials are then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from each other.

Interpolation

The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the "Not a knot"-condition [W. Gander, Computermathematik, p.141-150] (x, y and z -direction) [Numerical Recipes in C, Second Edition, p.123ff].

Volume Averaging

At First the size of the cube is calculated. Then the volume is integrated with the trapezoidal algorithm. 8000 points (20x20x20) are interpolated to calculate the average.

Advanced Extrapolation

DASY uses the advanced extrapolation option which is able to compensate boundary effects on E-field probes.

3.3 Data Storage and Evaluation

Data Storage

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

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

Data Evaluation by SEMCAD

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

Probe parameters:	- Sensitivity	Norm _i , a _{i0} , a _{i1} , a _{i2}
	- Conversion factor	ConvF _i
	- Diode compression point	Dcpi
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	σ
	- Density	ρ

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

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

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

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

with	V _i	= compensated signal of channel i	(i = x, y, z)
	U _i	= input signal of channel i	(i = x, y, z)
	cf	= crest factor of exciting field	(DASY parameter)
	dcp _i	= diode compression point	(DASY parameter)

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

$$\begin{aligned} \text{E-field probes:} \quad E_i &= (V_i / \text{Norm}_i \cdot \text{ConvF})^{1/2} \\ \text{H-field probes:} \quad H_i &= (V_i)^{1/2} \cdot (a_{i0} + a_{i1}f + a_{i2}f^2)/f \end{aligned}$$

with V_i = compensated signal of channel i (i = x, y, z)
 Norm_i = sensor sensitivity of channel i (i = x, y, z)
 [mV/ (V/m)²] for E-field Probes
 ConvF = sensitivity enhancement in solution
 a_{ij} = sensor sensitivity factors for H-field probes
 f = carrier frequency [GHz]
 E_i = electric field strength of channel i in V/m
 H_i = magnetic field strength of channel i in A/m

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

$$E_{\text{tot}} = (E_x^2 + E_y^2 + E_z^2)^{1/2}$$

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

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

with SAR = local specific absorption rate in mW/g
 E_{tot} = total field strength in V/m
 σ = conductivity in [mho/m] or [Siemens/m]
 ρ = equivalent tissue density in g/cm³

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

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

with P_{pwe} = equivalent power density of a plane wave in mW/cm²
 E_{tot} = total electric field strength in V/m
 H_{tot} = total magnetic field strength in A/m

4 System Verification Procedure

4.1 Tissue Verification

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within $\pm 5\%$ of the target values.

The following materials are used for producing the tissue-equivalent materials.

Ingredients (% of weight)	Head Tissue					
Frequency Band (MHz)	750	835	1750	1900	2450	2600
Water	39.2	41.45	52.64	55.242	62.7	55.242
Salt (NaCl)	2.7	1.45	0.36	0.306	0.5	0.306
Sugar	57.0	56.0	0.0	0.0	0.0	0.0
HEC	0.0	1.0	0.0	0.0	0.0	0.0
Bactericide	0.0	0.1	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	47.0	44.542	36.8	44.452
Ingredients (% of weight)	Body Tissue					
Frequency Band (MHz)	750	835	1750	1900	2450	2600
Water	50.3	52.4	69.91	69.91	73.2	64.493
Salt (NaCl)	1.60	1.40	0.13	0.13	0.04	0.024
Sugar	47.0	45.0	0.0	0.0	0.0	0.0
HEC	0.0	1.0	0.0	0.0	0.0	0.0
Bactericide	0.0	0.1	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	29.96	29.96	26.7	32.252

Table 4: Tissue Dielectric Properties

Salt: 99+% Pure Sodium Chloride; Sugar: 98+% Pure Sucrose; Water: De-ionized, 16M Ω + resistivity
 HEC: Hydroxyethyl Cellulose; DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]
 Triton X-100(ultra pure): Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl)phenyl]ether

☒ Simulating Head Liquid (HBBL600-6000MHz), Manufactured by SPEAG:

Ingredients	(% by weight)
Water	50-65%
Esters, Emulsifiers, Inhibitors	10-30%
Sodium salt	8-25%

☒ Simulating Body Liquid (MBBL600-6000MHz), Manufactured by SPEAG:

Ingredients	(% by weight)
Water	60-80%
Esters, Emulsifiers, Inhibitors	20-40%
Sodium salt	0-1.5%

Tissue Type	Target Frequency	Target Tissue		Measured Tissue		Deviation (Within +/-5%)		Liquid Temp.	Test Date
		ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	$\Delta\epsilon_r$	$\Delta\sigma$		
750MHz Head	705	42.2	0.89	41.89	0.895	-0.73%	0.61%	22.2°C	2019/1/29
	710	42.1	0.89	41.88	0.897	-0.52%	0.80%		
	750	41.9	0.89	41.76	0.910	-0.33%	2.24%		
835MHz Head	825	41.6	0.90	42.29	0.927	1.66%	3.00%	22.0°C	2019/1/26
	835	41.5	0.90	42.26	0.932	1.83%	3.51%		
	850	41.5	0.92	42.22	0.937	1.73%	1.83%		
835MHz Head	825	41.6	0.90	40.81	0.926	-1.90%	2.90%	21.5°C	2019/1/28
	835	41.5	0.90	40.78	0.930	-1.73%	3.30%		
	850	41.5	0.92	40.74	0.936	-1.83%	1.70%		
835MHz Head	825	41.6	0.90	40.35	0.922	-3.00%	2.49%	22.5°C	2019/1/29
	835	41.5	0.90	40.32	0.926	-2.84%	2.93%		
	850	41.5	0.92	40.27	0.931	-2.96%	1.20%		
1750MHz Head	1710	40.1	1.35	39.37	1.355	-1.82%	0.37%	23°C	2019/1/27
	1730	40.1	1.36	39.34	1.365	-1.90%	0.37%		
	1750	40.1	1.37	39.31	1.375	-1.97%	0.36%		
	1800	40.0	1.40	39.28	1.404	-1.80%	0.29%		
1750MHz Head	1710	40.1	1.35	41.65	1.357	3.87%	0.52%	21.9°C	2019/1/30
	1730	40.1	1.36	41.64	1.370	3.84%	0.74%		
	1750	40.1	1.37	41.62	1.383	3.79%	0.95%		
	1800	40.0	1.40	41.52	1.419	3.80%	1.36%		
1900MHz Head	1850	40.0	1.40	39.18	1.434	-2.05%	2.43%	23°C	2019/1/27
	1880	40.0	1.40	39.12	1.451	-2.20%	3.64%		
	1900	40.0	1.40	39.07	1.463	-2.33%	4.50%		
	1910	40.0	1.40	39.05	1.468	-2.38%	4.86%		
1900MHz Head	1850	40.0	1.40	38.77	1.430	-3.07%	2.14%	22.5°C	2019/1/28
	1880	40.0	1.40	38.72	1.446	-3.20%	3.29%		
	1900	40.0	1.40	38.71	1.458	-3.23%	4.14%		
	1910	40.0	1.40	38.73	1.463	-3.18%	4.50%		
2450MHz Head	2410	39.3	1.76	37.75	1.709	-3.94%	-2.90%	22.3°C	2019/1/29
	2435	39.2	1.79	37.71	1.726	-3.80%	-3.58%		
	2450	39.2	1.80	37.66	1.741	-3.93%	-3.28%		
	2460	39.2	1.81	37.65	1.741	-3.95%	-3.81%		
2450MHz Head	2410	39.3	1.76	39.43	1.755	0.33%	-0.28%	22°C	2019/1/30
	2435	39.2	1.79	39.50	1.770	0.77%	-1.12%		
	2450	39.2	1.80	39.43	1.782	0.59%	-1.00%		
	2460	39.2	1.81	39.41	1.788	0.54%	-1.22%		
2600MHz Head	2510	39.1	1.87	38.78	1.883	-0.82%	0.70%	21.5°C	2019/1/27
	2535	39.1	1.89	38.77	1.907	-0.84%	0.90%		
	2560	39.1	1.92	38.79	1.917	-0.79%	-0.16%		
	2600	39.0	1.96	38.70	1.956	-0.77%	-0.20%		
750MHz Body	705	55.7	0.96	56.24	0.916	0.97%	-4.64%	22.1°C	2019/1/30
	710	55.7	0.96	56.22	0.917	0.93%	-4.48%		
	750	55.5	0.96	56.14	0.930	1.15%	-3.12%		

835MHz Body	825	55.2	0.97	53.09	0.936	-3.82%	-3.56%	21.5°C	2019/1/27
	835	55.2	0.97	53.07	0.939	-3.86%	-3.24%		
	850	55.2	0.99	53.02	0.944	-3.95%	-4.67%		
835MHz Body	825	55.2	0.97	53.78	0.939	-2.57%	-3.20%	22°C	2019/1/28
	835	55.2	0.97	53.76	0.942	-2.61%	-2.89%		
	850	55.2	0.99	53.71	0.947	-2.70%	-4.34%		
835MHz Body	825	55.2	0.97	56.28	0.947	1.96%	-2.35%	21.5°C	2019/1/29
	835	55.2	0.97	56.26	0.951	1.92%	-1.98%		
	850	55.2	0.99	56.22	0.957	1.85%	-3.36%		
1750MHz Body	1710	53.5	1.46	55.56	1.437	3.85%	-1.58%	22°C	2019/1/28
	1730	53.5	1.48	55.54	1.449	3.81%	-2.09%		
	1750	53.4	1.49	55.52	1.462	3.97%	-1.88%		
	1800	53.3	1.52	55.50	1.497	4.13%	-1.51%		
1750MHz Body	1710	53.5	1.46	53.50	1.442	0.00%	-1.23%	22.5°C	2019/1/29
	1730	53.5	1.48	53.48	1.456	-0.04%	-1.62%		
	1750	53.4	1.49	53.48	1.471	0.15%	-1.28%		
	1800	53.3	1.52	53.45	1.509	0.28%	-0.72%		
1900MHz Body	1850	53.3	1.52	55.46	1.538	4.05%	1.18%	22°C	2019/1/28
	1880	53.3	1.52	55.41	1.563	3.96%	2.83%		
	1900	53.3	1.52	55.36	1.580	3.86%	3.95%		
	1910	53.3	1.52	55.33	1.588	3.81%	4.47%		
1900MHz Body	1850	53.3	1.52	51.51	1.507	-3.36%	-0.86%	22.5°C	2019/1/29
	1880	53.3	1.52	51.42	1.527	-3.53%	0.46%		
	1900	53.3	1.52	51.37	1.541	-3.62%	1.38%		
	1910	53.3	1.52	51.35	1.547	-3.66%	1.78%		
2450MHz Body	2410	52.8	1.91	54.42	1.963	3.07%	2.77%	22°C	2019/1/30
	2435	52.7	1.94	54.48	1.982	3.38%	2.16%		
	2450	52.7	1.95	54.40	2.002	3.23%	2.67%		
	2460	52.7	1.96	54.38	2.010	3.19%	2.55%		
2600MHz Body	2510	52.6	2.04	51.20	2.028	-2.66%	-0.59%	22°C	2019/1/28
	2535	52.6	2.07	51.18	2.052	-2.70%	-0.87%		
	2560	52.6	2.11	51.13	2.074	-2.79%	-1.71%		
	2600	52.5	2.16	51.08	2.115	-2.70%	-2.08%		

Table 5: Measured Tissue Parameter

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

2)KDB865664 was ensured to be applied for probe calibration frequencies greater than or equal to 50MHz of the EUT frequencies.

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

4.2 System Check

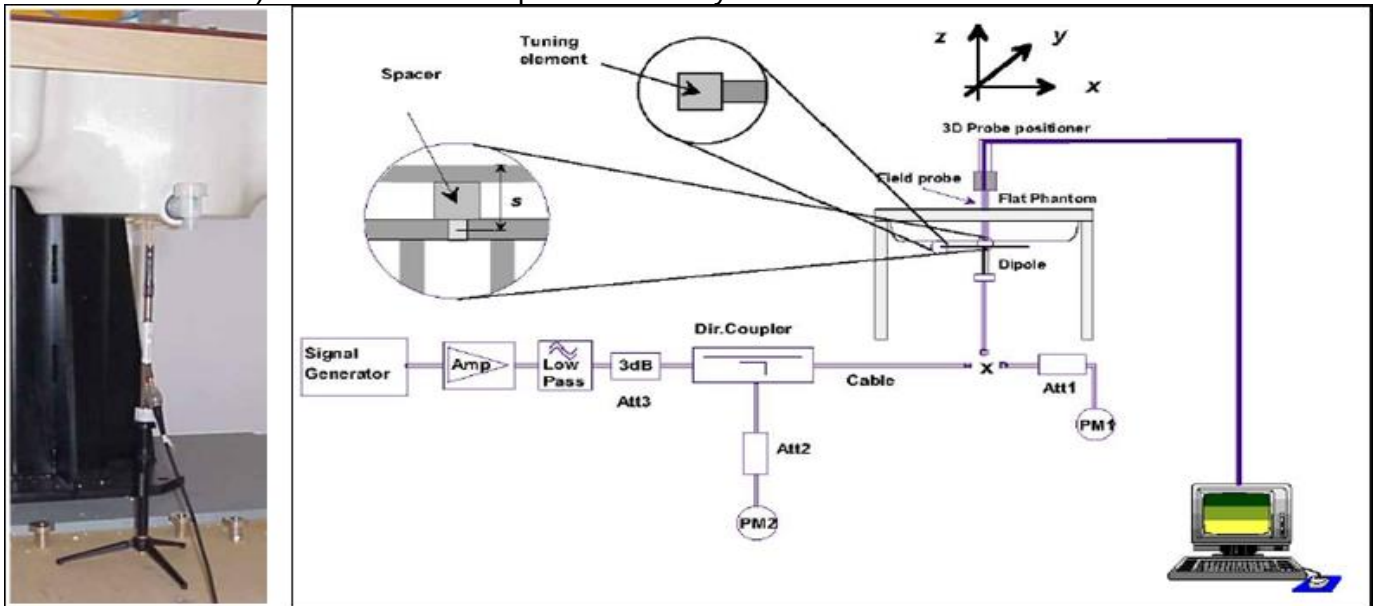
The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system check is performed with tissue equivalent material according to IEEE 1528 (described above). The following table shows system check results for all frequency bands and tissue liquids used during the tests (Graphic Plot(s) see Appendix A).

Dipole SN	System Check	Target SAR (Normalized to 1W)		Measured SAR (Normalized to 1W)		Deviation (Within +/-10%)		Test Date
		1-g (mW/g)	10-g (mW/g)	1-g (mW/g)	10-g (mW/g)	Δ 1-g	Δ 10-g	
1044	750MHz Head	8.24	5.34	8.36	5.52	1.46%	3.37%	2019/1/29
4d126	835MHz Head	9.44	6.06	9.64	6.28	2.12%	3.63%	2019/1/26
4d126	835MHz Head	9.44	6.06	9.64	6.28	2.12%	3.63%	2019/1/28
4d126	835MHz Head	9.44	6.06	9.48	6.20	0.42%	2.31%	2019/1/29
1123	1750MHz Head	36.60	19.40	34.28	18.12	-6.34%	-6.60%	2019/1/27
1123	1750MHz Head	36.60	19.40	35.12	18.80	-4.04%	-3.09%	2019/1/30
5d091	1900MHz Head	40.40	21.30	39.28	20.24	-2.77%	-4.98%	2019/1/27
5d091	1900MHz Head	40.40	21.30	40.80	21.40	0.99%	0.47%	2019/1/28
860	2450MHz Head	53.10	24.70	51.20	24.04	-3.58%	-2.67%	2019/1/29
860	2450MHz Head	53.10	24.70	52.40	24.64	-1.32%	-0.24%	2019/1/30
1032	2600MHz Head	56.40	25.20	56.80	26.16	0.71%	3.81%	2019/1/27
1044	750MHz Body	8.54	5.61	7.80	5.40	-8.67%	-3.74%	2019/1/30
4d126	835MHz Body	9.65	6.32	9.68	6.44	0.31%	1.90%	2019/1/27
4d126	835MHz Body	9.65	6.32	9.68	6.72	0.31%	6.33%	2019/1/28
4d059	835MHz Body	9.41	6.20	9.56	6.44	1.59%	3.87%	2019/1/29
1123	1750MHz Body	36.40	19.40	36.40	19.24	0%	-0.82%	2019/1/28
1123	1750MHz Body	36.40	19.40	34.60	18.68	-4.95%	-3.71%	2019/1/29
5d091	1900MHz Body	40.40	21.10	40.40	20.84	0.00%	-1.23%	2019/1/28
5d091	1900MHz Body	40.40	21.10	40.40	21.68	0.00%	2.75%	2019/1/29
860	2450MHz Body	51.60	24.20	51.60	24.40	0.00%	0.83%	2019/1/30
1032	2600MHz Body	55.10	24.50	55.20	25.20	0.18%	2.86%	2019/1/28

Table 6: System Check Results

4.3 System check Procedure

The system check is performed by using a system check dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a plexiglass spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SAM. It is fed with a power of 250 mW (below 3GHz) or 100mW (3-6GHz). To adjust this power, a power meter is used. The power sensor is connected to the cable before the system check to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the system check to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot). System check results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system.



5 SAR measurement variability and uncertainty

5.1 SAR measurement variability

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

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

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

The detailed repeated measurement results are shown in Section 7.2.

5.2 SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

6 SAR Test Configuration

6.1 Test Positions Configuration

6.1.1 General considerations

Per IEEE 1528-2013, two imaginary lines on the handset were established: the vertical centerline and the horizontal line (See Figure 1).

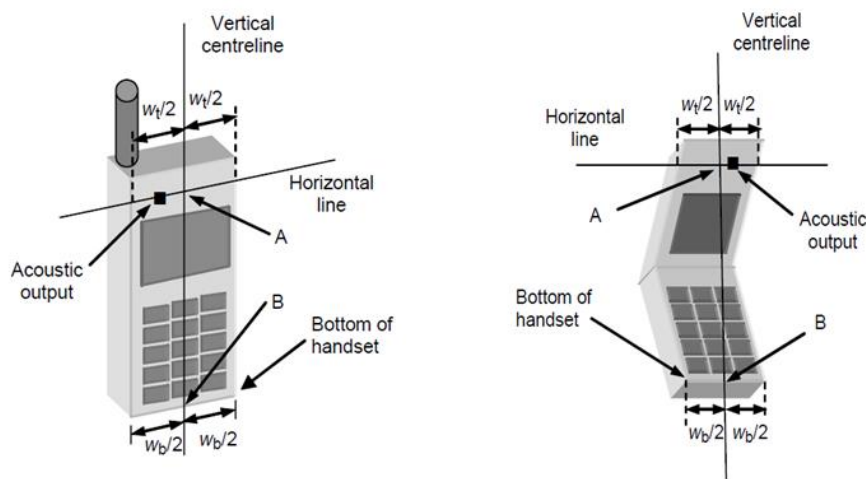


Figure 1 Hand Vertical Center & Horizontal Line Reference Points

6.1.2 Head Exposure Condition

Per IEEE 1528-2013, Head SAR measurements were made in the “cheek” position (See Figure 2) and the “tilt” position (See Figure 3). The device should be tested in both positions on left and right sides of the SAM phantom.

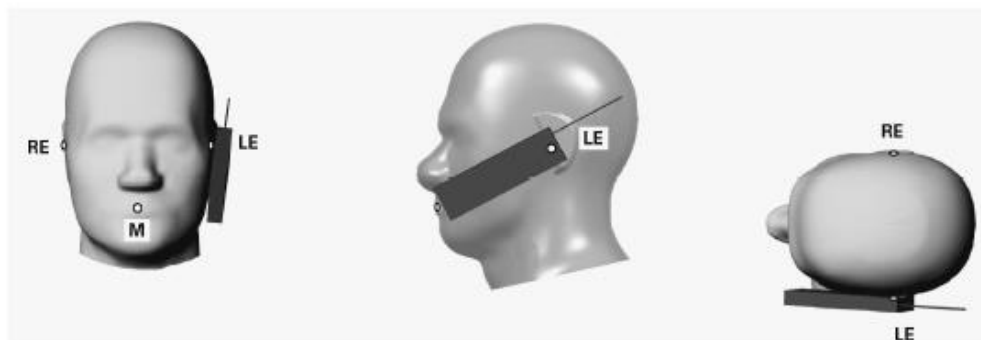


Figure 2 Front, Side and Top View of Cheek Position

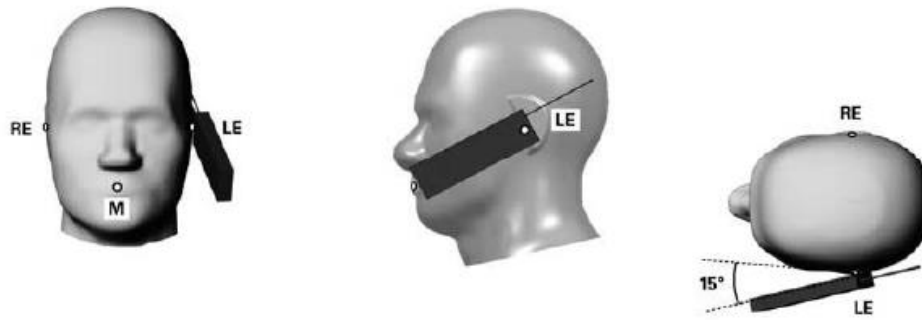


Figure 3 Front, Side and Top View of Tilt 15° Position

Note:

M Mouth reference point

LE Left ear reference point (ERP)

RE Right ear reference point(ERP)

6.1.3 Body-worn Exposure Condition

Body-worn operating configurations are tested with the holder attached to the device and positioned against a flat phantom with test separation distance of 15mm in a normal use configuration (See Figure 4). Per FCC KDB648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB447498 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is $> 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

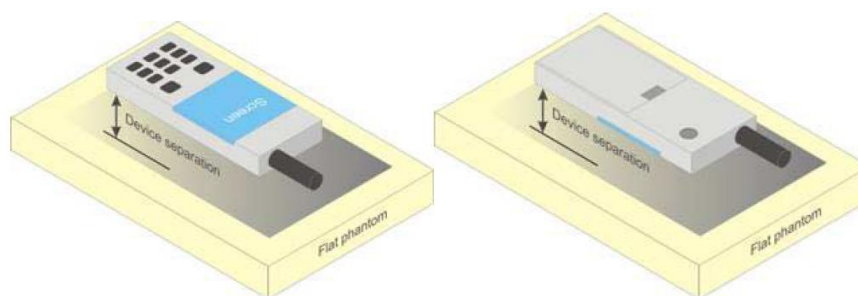


Figure 4 Test position for Body-Worn device

6.1.4 Hotspot Exposure Condition

Per FCC KDB941225 D06, the SAR test separation distance for hotspot mode is determined according to device form factor. When the overall length and width of a device is $> 9 \text{ cm} \times 5 \text{ cm}$, a test separation distance of 10 mm is required for hotspot mode SAR measurements. A test separation distance of 5 mm or less is required for smaller devices. 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. The SAR results are used to determine simultaneous transmission SAR test exclusion for hotspot mode; otherwise, simultaneous transmission SAR measurement is required.

6.1.5 Product Specific 10-g SAR Exposure Condition

Per FCC KDB648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the device is marketed as “Phablet”.

The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for Product Specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

6.2 3G SAR Test Reduction Procedure

Per KDB941225 D01, in the following procedures, the mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest *reported* SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

6.3 GSM Test Configuration

SAR tests for GSM850 and GSM1900, a communication link is set up with a base station by air link. The power lever is set to “5” and “0” in SAR of GSM850 and GSM1900. The tests in the band of GSM850 and GSM1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 12 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8 PSK.

6.4 UMTS Test Configuration

1) Output Power Verification

Maximum output power is verified on the high, middle and low channels according to procedures described in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all “1’s” for WCDMA/HSDPA or by applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) are required in the SAR report. All configurations that are not supported by the handset or cannot be measured due to technical or equipment limitations must be clearly identified.

2) WCDMA

a. Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode.

b. Body SAR Measurements

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode

3) HSDPA

SAR for body exposure configurations is measured according to the “Body SAR Measurements” procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest *reported* SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

Per KDB941225 D01, the 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures for the highest reported SAR body exposure configuration in 12.2 kbps RMC.

HSDPA should be configured according to UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HAPRQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. The β_c and β_d gain factors for DPCCH and DPDCH were set according to the values in the below table, β_{hs} for HS-DPCCH is set automatically to the correct value when ΔACK , $\Delta NACK$, $\Delta CQI = 8$. The variation of the β_c / β_d ratio causes a power reduction at sub-tests 2 - 4.

Sub-test [⌘]	β_c [⌘]	β_d [⌘]	β_d (SF) [⌘]	β_c/β_d [⌘]	$\beta_{hs}(1)$ [⌘]	CM(dB)(2) [⌘]	MPR (dB) [⌘]
1 [⌘]	2/15 [⌘]	15/15 [⌘]	64 [⌘]	2/15 [⌘]	4/15 [⌘]	0.0 [⌘]	0 [⌘]
2 [⌘]	12/15(3) [⌘]	15/15(3) [⌘]	64 [⌘]	12/15(3) [⌘]	24/15 [⌘]	1.0 [⌘]	0 [⌘]
3 [⌘]	15/15 [⌘]	8/15 [⌘]	64 [⌘]	15/8 [⌘]	30/15 [⌘]	1.5 [⌘]	0.5 [⌘]
4 [⌘]	15/15 [⌘]	4/15 [⌘]	64 [⌘]	15/4 [⌘]	30/15 [⌘]	1.5 [⌘]	0.5 [⌘]
Note 1: ΔACK , $\Delta NACK$ and $\Delta CQI = 8$ $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$ Note 2 : CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases. [⌘] Note 3 : For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$ [⌘]							

Table 7: Sub-tests for UMTS Release 5 HSDPA

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

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

Table 8: settings of required H-Set 1 QPSK acc. to 3GPP 34.121

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

16	15	1	27952	345600
----	----	---	-------	--------

Table 9: HSDPA UE category

4) HSUPA

SAR for body exposure configurations is measured according to the “Body SAR Measurements” procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

Per KDB941225 D01, the 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures for the highest reported body exposure SAR configuration in 12.2 kbps RMC.

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	β_{ec} (SF)	β_{ed} (code)	CM ⁽²⁾ (dB)	MP R ⁽³⁾ (dB)	AG ⁽⁴⁾ Index	E-TFC I
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}:47/15$ $\beta_{ed2}:47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ ACK, Δ NACK and Δ CQI = 8 $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference

Note 3 : For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$

Note 4 : For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$

Note 5 : Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g

Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Table 10: Subtests for UMTS Release 6 HSUPA

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

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

Table 11: HSUPA UE category

5) DC-HSDPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a Second serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0. A summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0

Table E.5.0: Levels for HSDPA connection setup

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

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.

The measurements were performed with a Fixed Reference Channel (FRC) H-Set 12 with QPSK

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

Table 12: settings of required H-Set 12 QPSK acc. to 3GPP 34.121

Note:

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

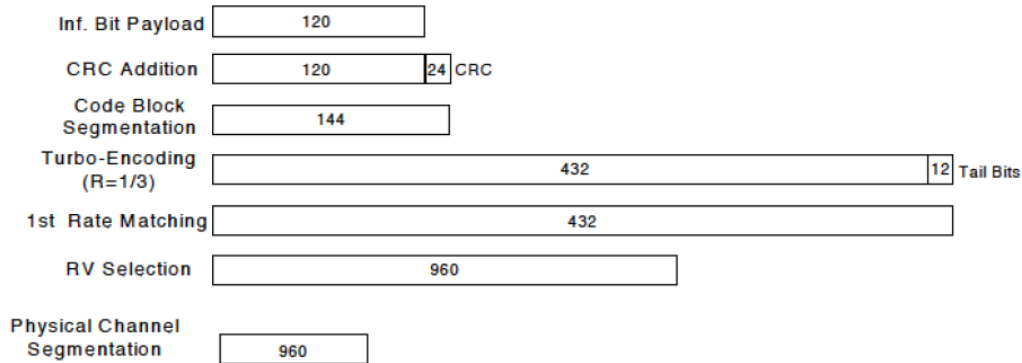


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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

Sub-test ¹	β_c ²	β_d ²	β_d (SF) ²	β_c/β_d ²	$\beta_{hs}(1)$ ²	CM(dB)(2) ²	MPR (dB) ²
1 ²	2/15 ²	15/15 ²	64 ²	2/15 ²	4/15 ²	0.0 ²	0 ²
2 ²	12/15(3) ²	15/15(3) ²	64 ²	12/15(3) ²	24/15 ²	1.0 ²	0 ²
3 ²	15/15 ²	8/15 ²	64 ²	15/8 ²	30/15 ²	1.5 ²	0.5 ²
4 ²	15/15 ²	4/15 ²	64 ²	15/4 ²	30/15 ²	1.5 ²	0.5 ²

Note 1: Δ ACK, Δ NACK and Δ CQI=8 $A_{hs} = \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$
Note 2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$

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

Note:

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

6.5 LTE Test Configuration

SAR for LTE band exposure configurations is measured according to the procedures of KDB941225 D05 SAR for LTE Devices. The CMW500 Wideband Radio Communication Tester was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR test were performed with the same number of RB and RB offsets transmitting on all TTI frames (Maximum TTI)

1) Spectrum Plots for RB configurations

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

2) MPR

When MPR is implemented permanently within the UE, regardless of network requirements, only those RB configurations allowed by 3GPP for the channel bandwidth and modulation combinations may be tested with MPR active. Configurations with RB allocations less than the RB thresholds required by 3GPP must be tested without MPR.

The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3

3) A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by using Network Signaling Value of "NS_01" on the base station simulator.

4) LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test requirements

i) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

ii) QPSK with 50% RB allocation

The procedures required for 1 RB allocation in i) are applied to measure the SAR for QPSK with 50% RB allocation.

iv) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in i) and ii) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

v) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

B) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is $> \frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

6.6 WiFi Test Configuration

For WiFi SAR testing, a communication link is set up with the testing software for WiFi mode test. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Per KDB248227 D01, a minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

6.6.1 Initial Test Position Procedure

For exposure condition with multiple test position, such as handsets operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all position in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is $\leq 0.4 \text{ W/kg}$, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is $\leq 0.8 \text{ W/kg}$ or all test position are measured. For all positions/configurations tested using the initial test position and subsequent test positions, when the *reported* SAR is $> 0.8 \text{ W/kg}$, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is $\leq 1.2 \text{ W/kg}$ or all required channels are tested.

6.6.2 Initial Test Configuration Procedure

An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. For configurations with the same specified or measured maximum output power, additional transmission mode and test channel selection procedures are required (see section 5.3.2 of KDB248227 D01). SAR test reduction of subsequent highest output test channels is based on the *reported* SAR of the initial test configuration.

For next to the ear, hotspot mode and UMC mini-tablet exposure configurations where multiple test positions are required, the initial test position procedure is applied to minimize the number of test positions required for SAR measurement using the initial test configuration transmission mode. For fixed exposure conditions that do not have multiple SAR test positions, SAR is measured in the transmission mode determined by the initial test configuration.

When the *reported* SAR of the initial test configuration is $> 0.8 \text{ W/kg}$, SAR measurement is required for the subsequent next highest measured output power channel(s) in the initial test configuration until the *reported* SAR is $\leq 1.2 \text{ W/kg}$ or all required channels are tested.

6.6.3 Sub Test Configuration Procedure

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units.

When the highest reported SAR for the initial test configuration, according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to

initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

6.6.4 WiFi 2.4G SAR Test Procedures

Separate SAR procedures are applied to DSSS and OFDM configurations in the 2.4 GHz band to simplify DSSS test requirements. For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.

A) 802.11b DSSS SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the *reported* SAR of the highest measured maximum output power channel (section 3.1 of of KDB248227 D01) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- 2) When the *reported* SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any *reported* SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

B) 2.4GHz 802.11g/n OFDM SAR Test Exclusion Requirements

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3 of of KDB248227 D01). SAR is not required for the following 2.4 GHz OFDM conditions.

- 1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
- 2) When the highest *reported* SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

6.7 LTE CA specification

6.7.1 LTE CA combinations specification

The device supports downlink LTE Carrier Aggregation (CA) for Intra-band and inter-band.

- The LTE release and version numbers of the 3GPP documents used to implement the specific device(s): Release 12, 3GPP TS 36.211 V12.3.0 (2015-09)
- The associated 3GPP release and version numbers required for power measurements and RF test setup conditions: Release 12, 3GPP TS 36.521-1 V12.3.0 (2015-09), 3GPP TS 36.101 V12.5.0 (2015-09)
- The device supports Intra-band and inter-band downlink LTE CA (See the table below)
- Other LTE Rel.10 or higher features are not supported, including Enhanced SC-FDMA, Uplink MIMO or other antenna diversity configurations, Wi-Fi offloading using LTE-U, LAA or LWA related protocols etc.

Intra-band contiguous CA operating bands

E-UTRA CA configuration / Bandwidth combination set							
E-UTRA CA configuration	Uplink CA configurations (NOTE 3)	Component carriers in order of increasing carrier frequency				Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_7C	NA	15	15			40	0
		20	20				
		10	20				
		15	15, 20			40	1
		20	10, 15, 20				
		15	10, 15				
CA_66C	NA	20	15, 20			40	2
		5	20				
		10	15, 20				
		15	10, 15, 20				
		20	5, 10, 15, 20				
CA_12B	NA	5	5, 10			15	0

Intra-band non-contiguous CA operating bands (with two sub-blocks)

E-UTRA CA configuration / Bandwidth combination set								
E-UTRACA configuration	Uplink CA configurations (NOTE 1)	Component carriers in order of increasing carrier frequency					Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_7A-7A	NA	5	15				40	0
		10	10, 15					
		15	15, 20					
		20	20					
		5, 10, 15, 20	5, 10, 15, 20				40	1
		5, 10, 15, 20	5, 10				30	2
		10, 15, 20	10, 15, 20				40	3

Inter-band CA operating bands (two bands)

E-UTRA CA configuration / Bandwidth combination set										
E-UTRA CA Configuration	Uplink CA configurations	E-UTRA Bands	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	Maximum aggregated bandwidth [MHz]	Bandwidth combination set
CA_2A-5A	NA	2			Yes	Yes	Yes	Yes	30	0
		5			Yes	Yes				
		2			Yes	Yes			20	1
		5			Yes	Yes				
CA_4A-7A	NA	4			Yes	Yes			30	0
		7			Yes	Yes	Yes	Yes		
		4			Yes	Yes	Yes	Yes	40	1
		7			Yes	Yes	Yes	Yes		
CA_5A-7A	NA	5	Yes	Yes	Yes	Yes			30	0
		7				Yes	Yes	Yes		
		5			Yes	Yes			30	1
		7				Yes	Yes	Yes		
CA_4A-5A	NA	4			Yes	Yes			20	0
		5			Yes	Yes				
		4			Yes	Yes	Yes	Yes	30	1
		5			Yes	Yes				
CA_7A-12A	NA	7			Yes	Yes	Yes	Yes	30	0
		12			Yes	Yes				
CA_2A-12A	NA	2			Yes	Yes	Yes	Yes	30	0
		12			Yes	Yes				
		2			Yes	Yes	Yes	Yes	30	1
		12		Yes	Yes	Yes				
		2			Yes	Yes			20	2
		12			Yes	Yes				
CA_4A-12A	NA	4	Yes	Yes	Yes	Yes			20	0
		12			Yes	Yes				
		4	Yes	Yes	Yes	Yes	Yes	Yes	30	1
		12			Yes	Yes				
		4			Yes	Yes	Yes	Yes	30	2
		12		Yes	Yes	Yes				
		4			Yes	Yes			20	3
		12			Yes	Yes				
		4			Yes	Yes	Yes	Yes	30	4
		12			Yes	Yes				
		4			Yes	Yes	Yes		20	5
		12			Yes					

6.7.2 Test procedure for downlink CA

According to 201804 FCC RF Exposure TCB workshop slides, the guidance does not consider Intra-band DL CA and inter-band DL CA separately.

In applying the power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the CA configuration with the largest aggregated DL CA bandwidth in each frequency band group need consideration (independently for contiguous and non-contiguous CA). When the same frequency band is used for both contiguous and non-contiguous CA, power may be measured using the configuration with the largest aggregated bandwidth “and” maximum output power among the contiguous and non-contiguous CA configurations, otherwise, these are considered separately.

6.8 Dynamic antenna switching specification

The device supports dynamic Tx antenna switching function for 2G/3G/4G bands. It can transmit from either Main Antenna or Second Antenna, but they can not transmit simultaneously (Refer to the Antenna location picture in the appendix for details).

SAR test procedure for dynamic antenna switching is as below:

During the SAR test, the Main Antenna and Second Antenna are set to the MAX transmit power level respectively and test the SAR respectively in all applicable RF exposure conditions. Some AT command are supplied to fix the operation state and choose the antenna so that only one TX antenna tested at a time. We can ensure that all independent antennas are completely covered by the appropriate SAR measurements and all simultaneous transmission possibilities are fully considered.

6.9 Power Reduction Specification

This device uses the following power reduction features to reduce the transmit power and ensure SAR compliance. These power reduction features are implemented using a single fixed level of reduction through static table look-up for some wireless operating modes or frequency bands and triggered by a single event or operation. The published RF exposure KDB procedures are applicable to the specific implementation and applied for testing. So PAG is not required for these features.

- 1) A fixed level power reduction is applied for some frequency bands when hotspot mode becomes active. When the hotspot is disabled, the power value will be recovered.
- 2) A fixed level power reduction is applied for some frequency bands when 2G/3G/4G and WIFI transmit simultaneously.
- 3) This device uses the receiver to indicate whether the user is making a voice call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. A fixed level power reduction is applied for some frequency bands when the audio receiver is on.
- 4) This device uses the mobile country code (MCC) to indicate whether the users in CE countries or FCC countries. The selection between CE countries and FCC countries power levels is based on the country code detection mechanism. It can determine the countries where users are and set the relevant power level for WiFi antennas accordingly.

Antenna	MCC OF CE COUNTRY (CE standard)	MCC OF FCC COUNTRY (FCC standard)
WiFi 2.4G Ant	Power Level A	Power Level B

6.9.1 Power reduction triggered by specific use conditions(2G&3G&4G Second/Main Antenna)

The following tables summarize the key power reduction information triggered by specific use conditions. The detailed full power and reduced conducted power measurement results are provided in Section 7 of this report:

2G&3G&4G Second antenna Power Reduction Level Amount (dB)											
Power Reduction Scenario	GSM 850	UMTS Band II	UMTS Band IV	UMTS Band V	LTE B2	LTE B4	LTE B5	LTE B7	LTE B12	LTE B17	LTE B66
Receiver off(body)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Receiver on(head)	1.5	4.4	4.0	2.5	4.2	2.5	1.7	5.1	1.0	1.0	3.5
Receiver off+ WiFi/BT(body)	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0
Receiver on+ WiFi/BT(head)	1.5	4.9	4.0	2.5	4.7	2.5	1.7	5.6	1.0	1.0	3.5

2G&3G&4G Main antenna Power Reduction Level Amount (dB)				
Power Reduction Scenario	UMTS Band II	UMTS Band IV	LTE B2	LTE B7
Receiver off(body)	0.5	0.5	1	1
Receiver on(head)	0	0	0	0

Note: For Head SAR test of 2G/3G/4G Second Antenna, standalone Head SAR should be evaluated with audio receiver on. The audio receiver only works in voice mode when the user is making a call in head scenario, lacking of the third-party VoIP server and the unstandardized VOIP operating characteristic, therefore, a test script is used to trigger the receiver on during the test. The test script is only used to trigger audio receiver on and simulate voice and VOIP usage scene. It can be ensured that the unmodified settings in production units, including maximum output power, amplifier gain and other RF performance or tuning parameters, are used for SAR measurement.

6.9.2 Power reduction triggered by Country Code(WiFi Antenna)

The following tables summarize the key power reduction information of WiFi antennas. For FCC SAR test, WiFi SAR test should be evaluated at the power level of FCC mobile country code for each exposure conditions of WIFI .The detailed full power and reduced conducted power measurement results are provided in section 7 of this report:

WiFi antenna Power Reduction Level Amount (dB)		
Power Reduction Scenario	MCC OF CE COUNTRY	MCC OF FCC COUNTRY
Receiver off(body)	0	802.11b: 0 802.11g(1CH/11CH): 4 802.11n 20M(1CH/11CH): 3.5 802.11n 40M(1CH/9CH): 5.5 Others Channel:0
Receiver on(head)	802.11b: 8 802.11g: 8 802.11n: 6.5	802.11b: 8 802.11g: 8 802.11n: 6.5

7 SAR Measurement Results

7.1 Conducted power measurements

For the measurements a Radio Communication Tester was used.

SAR drift measured at the same position in liquid before and after each SAR test as below 7.2 chapter.

Note: The Radio Communication Tester measures GSM peak and average output power for active timeslots. For SAR the timebased average power is relevant. The difference in between depends on the duty cycle of the TDMA signal:

No. of timeslots	1	2	3	4
Duty Cycle	1:8.3	1:4.1	1:2.77	1:2.08
timebased avg. power compared to slotted avg. power	-9.19dB	-6.13dB	-4.42dB	-3.18dB

The signalling modes differ as follows:

mode	coding scheme	modulation
GPRS	CS1 to CS4	GMSK
EDGE	MCS1 to MCS4	GMSK
EDGE	MCS5 to MCS9	8PSK

Apart from modulation change (GMSK/8PSK) coding schemes differ in code rate without influence on the RF signal. Therefore, one coding scheme per mode was selected for conducted power measurements.

The Radio Communication Tester was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing.

7.1.1 Conducted power of GSM850(Second antenna)

GSM850		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	128CH	190CH	251CH		Tune-up Max.	128CH	190CH	251CH
GSM (CS)		34.10	33.30	33.36	33.33	-9.19	24.91	24.11	24.17	24.14
GPRS (GMSK)	1 Tx Slot	34.10	33.30	33.34	33.32	-9.19	24.91	24.11	24.15	24.13
	2 Tx Slots	31.10	30.21	30.23	30.18	-6.13	24.97	24.08	24.10	24.05
	3 Tx Slots	29.30	28.45	28.45	28.39	-4.42	24.88	24.03	24.03	23.97
	4 Tx Slots	28.10	27.24	27.25	27.19	-3.18	24.92	24.06	24.07	24.01
EDGE (GMSK)	1 Tx Slot	34.10	33.27	33.33	33.32	-9.19	24.91	24.08	24.14	24.13
	2 Tx Slots	31.10	30.20	30.22	30.17	-6.13	24.97	24.07	24.09	24.04
	3 Tx Slots	29.30	28.43	28.44	28.38	-4.42	24.88	24.01	24.02	23.96
	4 Tx Slots	28.10	27.23	27.23	27.29	-3.18	24.92	24.05	24.05	24.11
EDGE (8PSK)	1 Tx Slot	29.00	26.35	26.22	26.08	-9.19	19.81	17.16	17.03	16.89
	2 Tx Slots	26.00	23.08	23.01	22.83	-6.13	19.87	16.95	16.88	16.70
	3 Tx Slots	24.20	21.20	21.11	21.00	-4.42	19.78	16.78	16.69	16.58
	4 Tx Slots	23.00	19.94	19.86	19.62	-3.18	19.82	16.76	16.68	16.44

Table 13: Test results conducted power measurement GSM850 (Receiver OFF)

GSM850		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	128CH	190CH	251CH		Tune-up Max.	128CH	190CH	251CH
GSM (CS)		32.60	31.79	31.82	31.80	-9.19	23.41	22.60	22.63	22.61
GPRS (GMSK)	1 Tx Slot	32.60	31.78	31.81	31.78	-9.19	23.41	22.59	22.62	22.59
	2 Tx Slots	29.60	28.71	28.73	28.67	-6.13	23.47	22.58	22.60	22.54
	3 Tx Slots	27.80	26.93	26.93	26.87	-4.42	23.38	22.51	22.51	22.45
	4 Tx Slots	26.60	25.72	25.73	25.67	-3.18	23.42	22.54	22.55	22.49
EDGE (GMSK)	1 Tx Slot	32.60	31.76	31.80	31.78	-9.19	23.41	22.57	22.61	22.59
	2 Tx Slots	29.60	28.71	28.71	28.66	-6.13	23.47	22.58	22.58	22.53
	3 Tx Slots	27.80	26.91	26.92	26.86	-4.42	23.38	22.49	22.50	22.44
	4 Tx Slots	26.60	25.71	25.71	25.67	-3.18	23.42	22.53	22.53	22.49
EDGE (8PSK)	1 Tx Slot	27.50	24.70	24.56	24.43	-9.19	18.31	15.51	15.37	15.24
	2 Tx Slots	24.50	21.57	21.53	21.34	-6.13	18.37	15.44	15.40	15.21
	3 Tx Slots	22.70	19.69	19.60	19.39	-4.42	18.28	15.27	15.18	14.97
	4 Tx Slots	21.50	18.38	18.31	18.08	-3.18	18.32	15.20	15.13	14.90

Table 14: Test results conducted power measurement GSM850 (Receiver ON)

Note:

- 1) The conducted power of GSM850 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- 3) The bolded GPRS 2 Tx Slots mode was selected for SAR testing according to the highest frame-averaged output power.

7.1.2 Conducted power of GSM850(Main antenna)

GSM850		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	128CH	190CH	251CH		Tune-up Max.	128CH	190CH	251CH
GSM (CS)		33.10	31.96	31.92	32.04	-9.19	23.91	22.77	22.73	22.85
GPRS (GMSK)	1 Tx Slot	33.10	31.91	31.91	32.03	-9.19	23.91	22.72	22.72	22.84
	2 Tx Slots	30.10	28.96	28.90	28.94	-6.13	23.97	22.83	22.77	22.81
	3 Tx Slots	28.30	27.14	27.10	27.15	-4.42	23.88	22.72	22.68	22.73
	4 Tx Slots	27.10	25.93	25.91	25.97	-3.18	23.92	22.75	22.73	22.79
EDGE (GMSK)	1 Tx Slot	33.10	31.94	31.90	32.02	-9.19	23.91	22.75	22.71	22.83
	2 Tx Slots	30.10	28.96	28.90	28.94	-6.13	23.97	22.83	22.77	22.81
	3 Tx Slots	28.30	27.14	27.09	27.14	-4.42	23.88	22.72	22.67	22.72
	4 Tx Slots	27.10	25.93	25.91	25.96	-3.18	23.92	22.75	22.73	22.78
EDGE (8PSK)	1 Tx Slot	28.00	25.15	25.23	25.32	-9.19	18.81	15.96	16.04	16.13
	2 Tx Slots	25.00	22.06	22.24	22.30	-6.13	18.87	15.93	16.11	16.17
	3 Tx Slots	23.20	20.20	20.33	20.40	-4.42	18.78	15.78	15.91	15.98
	4 Tx Slots	22.00	18.85	19.00	19.16	-3.18	18.82	15.67	15.82	15.98

Table 15: Test results conducted power measurement GSM850

Note:

- 1) The conducted power of GSM850 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- 3) The bolded GPRS 2 Tx Slots mode was selected for SAR testing according to the highest frame-averaged output power.

7.1.3 Conducted power of GSM1900(Second antenna)

GSM1900		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up	512CH	661CH	810CH		Tune-up	512CH	661CH	810CH
		Max.					Max.			
GSM (CS)		25.30	23.71	23.91	23.94	-9.19	16.11	14.52	14.72	14.75
GPRS (GMSK)	1 Tx Slot	25.30	23.71	23.91	23.94	-9.19	16.11	14.52	14.72	14.75
	2 Tx Slots	22.30	20.89	21.10	21.07	-6.13	16.17	14.76	14.97	14.94
	3 Tx Slots	20.50	19.16	19.36	19.33	-4.42	16.08	14.74	14.94	14.91
	4 Tx Slots	19.30	17.97	18.22	18.13	-3.18	16.12	14.79	15.04	14.95
EDGE (GMSK)	1 Tx Slot	25.30	23.70	23.91	23.93	-9.19	16.11	14.51	14.72	14.74
	2 Tx Slots	22.30	20.89	21.10	21.07	-6.13	16.17	14.76	14.97	14.94
	3 Tx Slots	20.50	19.15	19.36	19.32	-4.42	16.08	14.73	14.94	14.90
	4 Tx Slots	19.30	17.96	18.22	18.13	-3.18	16.12	14.78	15.04	14.95
EDGE (8PSK)	1 Tx Slot	21.00	19.39	19.47	19.53	-9.19	11.81	10.20	10.28	10.34
	2 Tx Slots	19.50	16.29	16.41	16.46	-6.13	13.37	10.16	10.28	10.33
	3 Tx Slots	17.70	13.56	14.46	14.49	-4.42	13.28	9.14	10.04	10.07
	4 Tx Slots	15.50	12.22	12.39	12.43	-3.18	12.32	9.04	9.21	9.25

Table 16: Test results conducted power measurement GSM1900

Note:

- 1) The conducted power of GSM1900 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- 3) The bolded GPRS 2 Tx Slots mode was selected for SAR testing according to the highest frame-averaged output power.

7.1.4 Conducted power of GSM1900(Main antenna)

GSM1900		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up	512CH	661CH	810CH		Tune-up	512CH	661CH	810CH
		Max.					Max.			
GSM (CS)		31.30	30.12	30.27	30.23	-9.19	22.11	20.93	21.08	21.04
GPRS (GMSK)	1 Tx Slot	31.30	30.12	30.28	30.24	-9.19	22.11	20.93	21.09	21.05
	2 Tx Slots	28.30	27.21	27.01	26.85	-6.13	22.17	21.08	20.88	20.72
	3 Tx Slots	26.50	25.36	25.18	25.01	-4.42	22.08	20.94	20.76	20.59
	4 Tx Slots	25.30	24.10	23.92	23.75	-3.18	22.12	20.92	20.74	20.57
EDGE (GMSK)	1 Tx Slot	31.30	30.09	30.26	30.23	-9.19	22.11	20.90	21.07	21.04
	2 Tx Slots	28.30	27.20	27.00	26.84	-6.13	22.17	21.07	20.87	20.71
	3 Tx Slots	26.50	25.36	25.17	25.00	-4.42	22.08	20.94	20.75	20.58
	4 Tx Slots	25.30	24.10	23.90	23.75	-3.18	22.12	20.92	20.72	20.57
EDGE (8PSK)	1 Tx Slot	27.50	25.32	25.16	25.17	-9.19	18.31	16.13	15.97	15.98
	2 Tx Slots	26.00	22.08	21.97	21.92	-6.13	19.87	15.95	15.84	15.79
	3 Tx Slots	24.20	20.27	20.08	19.98	-4.42	19.78	15.85	15.66	15.56
	4 Tx Slots	22.00	18.83	18.70	18.63	-3.18	18.82	15.65	15.52	15.45

Table 17: Test results conducted power measurement GSM1900

Note:

- 1) The conducted power of GSM1900 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- 3) The bolded GPRS 2 Tx Slots mode was selected for SAR testing according to the highest frame-averaged output power.

7.1.5 Conducted power of UMTS Band II(Second antenna)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	19.60	18.89	18.91	18.80
	12.2kbps AMR	19.60	18.83	18.84	18.73
HSDPA	Subtest 1	19.10	18.34	18.42	18.29
	Subtest 2	18.10	17.62	17.66	17.50
	Subtest 3	17.90	17.10	17.14	17.02
	Subtest 4	17.90	17.10	17.18	17.02
HSUPA	Subtest 1	18.10	16.72	16.99	16.76
	Subtest 2	17.10	16.06	15.88	15.67
	Subtest 3	18.10	17.13	16.54	16.57
	Subtest 4	17.60	15.96	16.01	15.79
	Subtest 5	19.60	18.63	18.66	18.54
DC-HSDPA	Subtest 1	19.10	18.39	18.40	18.24
	Subtest 2	18.10	17.59	17.58	17.42
	Subtest 3	17.90	17.12	17.06	16.93
	Subtest 4	17.90	17.09	17.07	16.92

Table 18: Test results conducted power measurement UMTS Band II (Receiver ON)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	24.00	23.78	23.78	23.66
	12.2kbps AMR	24.00	23.76	23.80	23.65
HSDPA	Subtest 1	23.50	23.24	23.24	23.14
	Subtest 2	22.50	22.43	22.47	22.40
	Subtest 3	22.30	21.98	22.01	21.89
	Subtest 4	22.30	21.95	22.04	21.87
HSUPA	Subtest 1	22.50	21.67	21.59	21.56
	Subtest 2	21.50	20.89	21.11	20.29
	Subtest 3	22.50	21.68	21.43	21.70
	Subtest 4	22.00	20.79	21.35	20.99
	Subtest 5	24.00	23.56	23.61	23.46
DC-HSDPA	Subtest 1	23.50	23.30	23.28	23.14
	Subtest 2	22.50	22.45	22.42	22.28
	Subtest 3	22.30	21.98	21.92	21.75
	Subtest 4	22.30	21.98	21.90	21.85

Table 19: Test results conducted power measurement UMTS Band II (Receiver OFF)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	23.50	23.29	23.25	23.13
	12.2kbps AMR	23.50	23.24	23.31	23.18
HSDPA	Subtest 1	23.00	22.75	22.77	22.61
	Subtest 2	22.00	21.89	21.93	21.88
	Subtest 3	21.80	21.46	21.51	21.31
	Subtest 4	21.80	21.46	21.53	21.34
HSUPA	Subtest 1	22.00	21.15	21.48	21.59
	Subtest 2	21.00	20.04	20.05	20.27
	Subtest 3	22.00	21.58	21.43	20.86
	Subtest 4	21.50	20.71	20.33	20.24
	Subtest 5	23.50	23.06	23.11	22.98
DC-HSDPA	Subtest 1	23.00	22.74	22.79	22.57
	Subtest 2	22.00	21.88	21.94	21.81
	Subtest 3	21.80	21.39	21.46	21.28
	Subtest 4	21.80	21.50	21.44	21.30

Table 20: Test results conducted power measurement UMTS Band II (Receiver OFF+WiFi/BT)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	19.10	18.39	18.41	18.32
	12.2kbps AMR	19.10	18.32	18.33	18.20
HSDPA	Subtest 1	18.60	17.86	17.90	17.79
	Subtest 2	17.60	17.10	17.17	16.92
	Subtest 3	17.40	16.62	16.66	16.45
	Subtest 4	17.40	16.65	16.67	16.42
HSUPA	Subtest 1	17.60	16.45	16.21	15.96
	Subtest 2	16.60	14.23	15.09	14.74
	Subtest 3	17.60	16.09	16.54	16.56
	Subtest 4	17.10	14.94	15.17	14.75
	Subtest 5	19.10	18.13	18.16	18.04
DC-HSDPA	Subtest 1	18.60	17.90	17.91	17.69
	Subtest 2	17.60	17.11	17.09	16.96
	Subtest 3	17.40	16.54	16.56	16.44
	Subtest 4	17.40	16.52	16.57	16.45

Table 21: Test results conducted power measurement UMTS Band II (Receiver ON+WiFi/BT)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is $\leq \frac{1}{4}$ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

7.1.6 Conducted power of UMTS Band II(Main antenna)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	24.50	23.55	23.58	23.54
	12.2kbps AMR	24.50	23.41	23.65	23.58
HSDPA	Subtest 1	24.00	22.97	23.13	23.05
	Subtest 2	23.00	22.22	22.35	22.29
	Subtest 3	22.80	21.73	21.88	21.76
	Subtest 4	22.80	21.70	21.90	21.78
HSUPA	Subtest 1	22.50	21.79	22.03	21.93
	Subtest 2	21.50	20.15	20.38	20.28
	Subtest 3	22.00	21.47	21.35	21.72
	Subtest 4	21.50	20.86	21.27	20.26
	Subtest 5	24.50	23.30	23.44	23.39
DC-HSDPA	Subtest 1	24.00	22.99	23.12	23.08
	Subtest 2	23.00	22.24	22.35	22.28
	Subtest 3	22.80	21.73	21.87	21.77
	Subtest 4	22.80	21.73	21.87	21.81

Table 22: Test results conducted power measurement UMTS Band II (Receiver ON)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	24.00	23.05	23.07	23.04
	12.2kbps AMR	24.00	23.02	23.16	23.08
HSDPA	Subtest 1	23.50	22.51	22.59	22.51
	Subtest 2	22.50	21.70	21.85	21.76
	Subtest 3	22.30	21.19	21.34	21.24
	Subtest 4	22.30	21.20	21.31	21.30
HSUPA	Subtest 1	22.50	21.14	20.98	21.10
	Subtest 2	21.50	20.09	19.97	19.95
	Subtest 3	22.00	20.96	20.67	21.41
	Subtest 4	21.50	20.01	19.92	19.75
	Subtest 5	24.50	22.81	22.93	22.90
DC-HSDPA	Subtest 1	23.50	22.53	22.62	22.55
	Subtest 2	22.50	21.72	21.87	21.75
	Subtest 3	22.30	21.22	21.37	21.26
	Subtest 4	22.30	21.21	21.34	21.25

Table 23: Test results conducted power measurement UMTS Band II (Receiver OFF)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is $\leq \frac{1}{4}$ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

7.1.7 Conducted power of UMTS Band IV(Second antenna)

UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	20.00	19.39	19.39	19.41
	12.2kbps AMR	20.00	19.44	19.41	19.45
HSDPA	Subtest 1	19.50	18.87	18.90	18.85
	Subtest 2	18.50	18.07	18.09	18.06
	Subtest 3	18.30	17.55	17.56	17.54
	Subtest 4	18.30	17.55	17.60	17.55
HSUPA	Subtest 1	18.50	17.55	17.82	17.68
	Subtest 2	17.00	16.59	16.15	15.96
	Subtest 3	18.00	17.26	17.81	17.88
	Subtest 4	17.00	16.39	16.33	16.22
	Subtest 5	20.00	19.16	19.20	19.19
DC-HSDPA	Subtest 1	19.50	18.88	18.87	18.87
	Subtest 2	18.50	18.05	18.07	18.06
	Subtest 3	18.30	17.57	17.59	17.54
	Subtest 4	18.30	17.55	17.57	17.53

Table 24: Test results conducted power measurement UMTS Band IV (Receiver ON)

UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	24.00	23.40	23.43	23.35
	12.2kbps AMR	24.00	23.32	23.34	23.35
HSDPA	Subtest 1	23.50	22.88	22.88	22.81
	Subtest 2	22.50	22.09	22.02	22.01
	Subtest 3	22.30	21.60	21.54	21.53
	Subtest 4	22.30	21.62	21.57	21.52
HSUPA	Subtest 1	22.50	21.36	21.82	21.65
	Subtest 2	21.00	20.25	19.87	20.05
	Subtest 3	22.00	21.79	21.65	21.78
	Subtest 4	21.00	20.98	20.25	20.23
	Subtest 5	24.00	23.20	23.22	23.22
DC-HSDPA	Subtest 1	23.50	22.88	22.90	22.82
	Subtest 2	22.50	22.10	22.04	22.06
	Subtest 3	22.30	21.61	21.55	21.53
	Subtest 4	22.30	21.60	21.57	21.52

Table 25: Test results conducted power measurement UMTS Band IV (Receiver OFF)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is $\leq \frac{1}{4}$ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

7.1.8 Conducted power of UMTS Band IV(Main antenna)

UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	24.00	23.14	23.10	23.04
	12.2kbps AMR	24.00	23.10	23.04	22.95
HSDPA	Subtest 1	23.50	22.63	22.57	22.51
	Subtest 2	22.50	21.85	21.81	21.75
	Subtest 3	22.30	21.37	21.34	21.22
	Subtest 4	22.30	21.36	21.35	21.23
HSUPA	Subtest 1	22.50	21.03	21.41	21.37
	Subtest 2	21.00	19.85	19.63	20.43
	Subtest 3	22.00	21.43	21.39	21.43
	Subtest 4	21.00	20.45	19.89	19.78
	Subtest 5	24.00	22.96	22.88	22.83
DC-HSDPA	Subtest 1	23.50	22.64	22.60	22.49
	Subtest 2	22.50	21.87	21.82	21.75
	Subtest 3	22.30	21.34	21.33	21.23
	Subtest 4	22.30	21.34	21.35	21.27

Table 26: Test results conducted power measurement UMTS Band IV (Receiver ON)

UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	23.50	22.66	22.63	22.53
	12.2kbps AMR	23.50	22.61	22.55	22.50
HSDPA	Subtest 1	23.00	22.15	22.11	22.04
	Subtest 2	22.00	21.35	21.30	21.24
	Subtest 3	21.80	20.87	20.82	20.73
	Subtest 4	21.80	20.88	20.83	20.73
HSUPA	Subtest 1	22.00	20.90	21.04	20.83
	Subtest 2	20.50	19.96	19.24	19.97
	Subtest 3	21.50	20.73	20.98	20.81
	Subtest 4	20.50	19.65	20.28	19.26
	Subtest 5	23.50	22.45	22.40	22.33
DC-HSDPA	Subtest 1	23.00	22.14	22.09	22.03
	Subtest 2	22.00	21.39	21.32	21.22
	Subtest 3	21.80	20.89	20.85	20.73
	Subtest 4	21.80	20.87	20.83	20.78

Table 27: Test results conducted power measurement UMTS Band IV (Receiver OFF)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is $\leq \frac{1}{4}$ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

7.1.9 Conducted power of UMTS Band V(Second antenna)

UMTS Band V		Tune-up	Average Power (dBm)		
		Max.	4132CH	4182CH	4233CH
WCDMA	12.2kbps RMC	22.50	21.72	21.74	21.74
	12.2kbps AMR	22.50	21.71	21.81	21.75
HSDPA	Subtest 1	22.00	21.21	21.23	21.18
	Subtest 2	21.50	20.70	20.81	20.74
	Subtest 3	20.80	20.30	20.40	20.34
	Subtest 4	20.80	20.33	20.40	20.39
HSUPA	Subtest 1	21.50	20.73	20.39	20.48
	Subtest 2	20.50	19.79	19.35	19.42
	Subtest 3	21.50	20.45	20.96	20.91
	Subtest 4	20.50	19.50	19.54	19.42
	Subtest 5	22.50	21.48	21.56	21.51
DC-HSDPA	Subtest 1	22.00	21.18	21.27	21.21
	Subtest 2	21.50	20.73	20.79	20.76
	Subtest 3	20.80	20.31	20.41	20.37
	Subtest 4	20.80	20.30	20.41	20.37

Table 28: Test results conducted power measurement UMTS Band V (Receiver ON)

UMTS Band V		Tune-up	Average Power (dBm)		
		Max.	4132CH	4182CH	4233CH
WCDMA	12.2kbps RMC	25.00	24.24	24.24	24.17
	12.2kbps AMR	25.00	24.26	24.22	24.20
HSDPA	Subtest 1	24.50	23.70	23.69	23.65
	Subtest 2	24.00	23.25	23.21	23.16
	Subtest 3	23.30	22.84	22.90	22.79
	Subtest 4	23.30	22.83	22.82	22.78
HSUPA	Subtest 1	24.00	22.76	23.12	23.45
	Subtest 2	23.00	21.60	21.98	22.18
	Subtest 3	24.00	23.16	22.98	22.99
	Subtest 4	23.00	22.22	21.87	21.77
	Subtest 5	25.00	24.01	24.07	24.06
DC-HSDPA	Subtest 1	24.50	23.70	23.77	23.62
	Subtest 2	24.00	23.25	23.26	23.16
	Subtest 3	23.30	22.84	22.84	22.79
	Subtest 4	23.30	22.83	22.83	22.78

Table 29: Test results conducted power measurement UMTS Band V (Receiver OFF)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is $\leq \frac{1}{4}$ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

7.1.10 Conducted power of UMTS Band V(Main antenna)

UMTS Band V		Tune-up	Average Power (dBm)		
		Max.	4132CH	4182CH	4233CH
WCDMA	12.2kbps RMC	25.00	24.15	24.25	24.14
	12.2kbps AMR	25.00	24.09	24.16	24.10
HSDPA	Subtest 1	24.50	23.64	23.73	23.68
	Subtest 2	24.00	23.16	23.23	23.17
	Subtest 3	23.30	22.77	22.85	22.77
	Subtest 4	23.30	22.77	22.86	22.79
HSUPA	Subtest 1	24.00	23.15	22.76	22.80
	Subtest 2	23.00	21.51	21.96	22.17
	Subtest 3	24.00	23.12	22.84	22.95
	Subtest 4	23.00	22.30	21.75	21.63
	Subtest 5	25.00	23.96	24.02	23.97
DC-HSDPA	Subtest 1	24.50	23.62	23.71	23.66
	Subtest 2	24.00	23.17	23.25	23.08
	Subtest 3	23.30	22.76	22.83	22.76
	Subtest 4	23.30	22.77	22.87	22.80

Table 30: Test results conducted power measurement UMTS Band V

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is $\leq \frac{1}{4}$ dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is $\leq 75\%$ of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

7.1.11 Conducted power of LTE Band 2(Second antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18607CH	18900CH	19193CH
1.4MHz	QPSK	1	0	24.00	23.32	23.24	22.97
		1	3	24.00	23.05	23.11	22.57
		1	5	24.00	23.31	23.17	22.92
		3	0	24.00	23.17	23.13	23.01
		3	2	24.00	23.11	23.10	22.75
		3	3	24.00	23.17	23.05	22.87
		6	0	23.00	22.16	22.21	21.91
	16QAM	1	0	23.00	22.24	22.22	21.89
		1	3	23.00	21.96	22.03	21.83
		1	5	23.00	22.24	22.31	22.03
		3	0	23.00	22.19	22.23	21.87
		3	2	23.00	22.12	22.01	21.95
		3	3	23.00	22.23	22.22	21.72
		6	0	22.00	21.12	21.08	20.91
	64QAM	1	0	22.00	21.22	21.26	20.74
		1	3	22.00	21.04	21.24	20.90
		1	5	22.00	21.11	21.29	20.92
		3	0	22.00	21.20	21.12	20.98
		3	2	22.00	21.10	21.27	20.83
		3	3	22.00	21.23	21.27	20.93
		6	0	21.00	20.15	20.06	19.78
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18615CH	18900CH	19185CH
3MHz	QPSK	1	0	24.00	23.19	23.17	22.89
		1	7	24.00	23.07	23.11	22.63
		1	14	24.00	23.29	23.24	22.90
		8	0	23.00	22.09	22.08	21.63
		8	4	23.00	22.16	22.15	21.86
		8	7	23.00	22.24	22.12	21.78
		15	0	23.00	22.29	22.13	21.84
	16QAM	1	0	23.00	22.41	22.36	21.69
		1	7	23.00	22.48	22.25	20.88
		1	14	23.00	22.39	22.33	22.00
		8	0	22.00	21.22	21.15	20.70
		8	4	22.00	21.17	21.20	20.63
		8	7	22.00	21.18	21.18	20.75
		15	0	22.00	21.16	21.09	20.74
	64QAM	1	0	22.00	21.20	21.39	21.06
		1	7	22.00	21.10	21.25	20.95
		1	14	22.00	21.02	21.02	20.92
		8	0	21.00	20.07	20.22	19.95
		8	4	21.00	20.07	20.15	20.01
		8	7	21.00	20.12	20.28	19.96
		15	0	21.00	20.03	20.15	19.90

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18625CH	18900CH	19175CH
5MHz	QPSK	1	0	24.00	23.18	23.11	22.75
		1	13	24.00	23.22	23.17	22.78
		1	24	24.00	23.16	23.13	22.81
		12	0	23.00	22.22	22.16	21.80
		12	6	23.00	22.18	22.20	21.78
		12	13	23.00	22.13	22.15	21.81
		25	0	23.00	22.26	22.07	21.74
	16QAM	1	0	23.00	22.19	22.47	22.01
		1	13	23.00	22.28	22.49	21.96
		1	24	23.00	22.21	22.44	22.01
		12	0	22.00	21.18	21.11	20.85
		12	6	22.00	21.13	21.13	20.81
		12	13	22.00	21.19	21.12	20.86
		25	0	22.00	21.09	20.99	20.84
	64QAM	1	0	22.00	21.19	21.17	20.88
		1	13	22.00	21.06	21.36	21.21
		1	24	22.00	21.07	21.40	21.10
		12	0	21.00	20.12	20.26	19.98
		12	6	21.00	20.11	20.16	20.06
		12	13	21.00	20.14	20.14	20.03
		25	0	21.00	20.09	20.18	19.87
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18650CH	18900CH	19150CH
10MHz	QPSK	1	0	24.00	23.01	23.19	22.92
		1	25	24.00	22.89	22.94	22.24
		1	49	24.00	23.17	23.09	22.84
		25	0	23.00	22.11	22.12	21.82
		25	13	23.00	22.08	22.10	21.72
		25	25	23.00	22.11	22.09	21.73
		50	0	23.00	22.21	22.08	21.77
	16QAM	1	0	23.00	22.10	22.40	21.99
		1	25	23.00	21.82	21.84	21.58
		1	49	23.00	22.04	22.27	21.92
		25	0	22.00	21.03	21.08	20.73
		25	13	22.00	21.01	21.09	20.64
		25	25	22.00	21.08	21.03	20.61
		50	0	22.00	21.05	20.98	20.65
	64QAM	1	0	22.00	21.16	21.31	21.20
		1	25	22.00	21.15	21.29	20.93
		1	49	22.00	21.14	21.19	21.08
		25	0	21.00	20.12	20.11	19.91
		25	13	21.00	20.12	20.09	19.90
		25	25	21.00	20.08	20.12	20.03
		50	0	21.00	20.10	20.06	19.82

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18675CH	18900CH	19125CH
15MHz	QPSK	1	0	24.00	23.04	23.00	23.04
		1	38	24.00	23.30	23.12	22.89
		1	74	24.00	23.05	23.07	22.61
		36	0	23.00	22.11	22.15	22.04
		36	18	23.00	22.13	22.11	21.86
		36	39	23.00	22.10	22.07	21.82
		75	0	23.00	22.27	22.08	21.76
	16QAM	1	0	23.00	22.15	22.29	22.18
		1	38	23.00	22.31	22.29	22.01
		1	74	23.00	22.25	22.18	21.83
		36	0	22.00	21.09	21.03	20.96
		36	18	22.00	21.07	21.10	20.72
		36	39	22.00	21.11	21.03	20.69
		75	0	22.00	21.01	20.98	20.70
	64QAM	1	0	22.00	21.21	21.21	21.13
		1	38	22.00	20.98	21.20	21.12
		1	74	22.00	20.99	21.44	21.01
		36	0	21.00	20.01	20.16	20.11
		36	18	21.00	20.07	20.04	19.98
		36	39	21.00	20.02	20.09	19.95
		75	0	21.00	20.15	20.18	19.97
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18700CH	18900CH	19100CH
20MHz	QPSK	1	0	24.00	23.10	23.01	23.00
		1	50	24.00	23.11	22.79	22.66
		1	99	24.00	23.26	23.22	22.89
		50	0	23.00	22.09	22.21	22.12
		50	25	23.00	22.18	22.06	21.87
		50	50	23.00	22.10	22.03	21.70
		100	0	23.00	22.20	22.07	21.91
	16QAM	1	0	23.00	22.31	22.31	22.19
		1	50	23.00	22.22	21.73	21.71
		1	99	23.00	22.54	22.28	22.03
		50	0	22.00	21.02	21.09	21.06
		50	25	22.00	21.06	21.04	20.85
		50	50	22.00	21.02	21.01	20.71
		100	0	22.00	21.05	21.02	20.88
	64QAM	1	0	22.00	20.93	21.23	21.13
		1	50	22.00	21.22	21.18	21.14
		1	99	22.00	21.03	21.37	21.13
		50	0	21.00	20.06	20.12	20.13
		50	25	21.00	20.06	20.15	20.10
		50	50	21.00	20.05	20.13	20.11
		100	0	21.00	20.02	20.20	19.99

Table 31: Test results conducted power measurement LTE Band 2 (Receiver OFF)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18607CH	18900CH	19193CH
1.4MHz	QPSK	1	0	19.80	19.02	18.96	18.71
		1	3	19.80	18.75	18.88	18.17
		1	5	19.80	19.05	19.00	18.69
		3	0	19.80	19.06	18.82	18.73
		3	2	19.80	18.88	18.99	18.38
		3	3	19.80	18.85	18.88	18.57
		6	0	19.80	18.87	18.91	18.62
	16QAM	1	0	19.80	18.97	19.15	18.71
		1	3	19.80	18.70	18.75	18.54
		1	5	19.80	19.00	19.03	18.79
		3	0	19.80	18.85	18.96	18.56
		3	2	19.80	18.88	18.75	18.72
		3	3	19.80	18.97	18.96	18.53
		6	0	19.80	18.85	18.83	18.55
	64QAM	1	0	19.80	18.82	18.99	18.69
		1	3	19.80	18.99	18.97	18.58
		1	5	19.80	19.04	18.91	18.71
		3	0	19.80	18.86	18.94	18.72
		3	2	19.80	18.90	18.98	18.68
		3	3	19.80	18.94	18.97	18.70
		6	0	19.80	18.78	18.83	18.46
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18615CH	18900CH	19185CH
3MHz	QPSK	1	0	19.80	18.97	19.06	18.61
		1	7	19.80	18.78	18.85	17.99
		1	14	19.80	18.99	19.10	18.54
		8	0	19.80	18.95	18.91	18.35
		8	4	19.80	18.87	18.93	18.49
		8	7	19.80	18.78	18.84	18.44
		15	0	19.80	19.00	18.97	18.49
	16QAM	1	0	19.80	19.18	19.22	18.39
		1	7	19.80	19.32	18.96	18.31
		1	14	19.80	19.18	19.06	18.40
		8	0	19.80	18.93	18.86	18.40
		8	4	19.80	18.89	18.89	18.43
		8	7	19.80	18.89	18.98	18.45
		15	0	19.80	18.89	18.84	18.46
	64QAM	1	0	19.80	18.87	19.01	18.79
		1	7	19.80	19.00	18.99	18.78
		1	14	19.80	18.95	19.08	18.64
		8	0	19.80	18.79	18.97	18.74
		8	4	19.80	18.82	18.89	18.74
		8	7	19.80	18.93	18.87	18.67
		15	0	19.80	18.86	18.88	18.66

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18625CH	18900CH	19175CH
5MHz	QPSK	1	0	19.80	18.99	18.92	18.57
		1	13	19.80	18.94	19.06	18.46
		1	24	19.80	18.91	18.90	18.53
		12	0	19.80	18.92	18.90	18.52
		12	6	19.80	18.91	18.96	18.49
		12	13	19.80	18.89	18.93	18.49
		25	0	19.80	18.97	18.83	18.45
	16QAM	1	0	19.80	18.96	19.25	18.86
		1	13	19.80	19.03	19.26	18.82
		1	24	19.80	19.02	19.17	18.70
		12	0	19.80	18.86	18.89	18.52
		12	6	19.80	18.99	18.90	18.56
		12	13	19.80	18.89	18.89	18.58
		25	0	19.80	18.80	18.85	18.52
	64QAM	1	0	19.80	18.88	19.08	18.67
		1	13	19.80	18.92	19.08	18.73
		1	24	19.80	18.91	19.17	18.73
		12	0	19.80	18.90	18.99	18.79
		12	6	19.80	18.90	18.97	18.74
		12	13	19.80	18.94	18.92	18.81
		25	0	19.80	18.87	18.86	18.63
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18650CH	18900CH	19150CH
10MHz	QPSK	1	0	19.80	18.85	18.92	18.63
		1	25	19.80	18.62	18.71	17.87
		1	49	19.80	18.88	18.82	18.52
		25	0	19.80	18.84	18.89	18.55
		25	13	19.80	18.83	18.97	18.44
		25	25	19.80	18.80	18.79	18.51
		50	0	19.80	18.87	18.82	18.51
	16QAM	1	0	19.80	18.88	19.16	18.74
		1	25	19.80	18.46	18.62	18.29
		1	49	19.80	18.77	19.01	18.66
		25	0	19.80	18.78	18.76	18.43
		25	13	19.80	18.69	18.85	18.41
		25	25	19.80	18.77	18.80	18.36
		50	0	19.80	18.75	18.76	18.42
	64QAM	1	0	19.80	18.90	18.93	18.82
		1	25	19.80	18.99	19.02	18.62
		1	49	19.80	18.85	18.88	18.80
		25	0	19.80	18.90	18.84	18.71
		25	13	19.80	18.91	18.82	18.62
		25	25	19.80	18.90	18.86	18.74
		50	0	19.80	18.87	18.87	18.69

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18675CH	18900CH	19125CH
15MHz	QPSK	1	0	19.80	18.85	18.77	18.78
		1	38	19.80	19.00	19.03	18.68
		1	74	19.80	18.77	18.83	18.33
		36	0	19.80	18.85	18.97	18.75
		36	18	19.80	18.82	18.94	18.56
		36	39	19.80	18.91	18.82	18.55
		75	0	19.80	18.95	18.81	18.55
	16QAM	1	0	19.80	18.94	18.90	18.87
		1	38	19.80	19.04	19.04	18.77
		1	74	19.80	19.00	18.85	18.59
		36	0	19.80	18.83	18.80	18.73
		36	18	19.80	18.85	18.87	18.48
		36	39	19.80	18.85	18.81	18.37
		75	0	19.80	18.76	18.72	18.41
	64QAM	1	0	19.80	18.86	18.96	18.54
		1	38	19.80	18.79	19.00	18.84
		1	74	19.80	18.66	18.76	18.91
		36	0	19.80	18.85	18.88	18.83
		36	18	19.80	18.92	18.88	18.76
		36	39	19.80	18.91	18.93	18.74
		75	0	19.80	18.75	18.89	18.67
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18700CH	18900CH	19100CH
20MHz	QPSK	1	0	19.80	18.84	18.86	18.68
		1	50	19.80	18.81	18.52	18.37
		1	99	19.80	19.03	18.98	18.61
		50	0	19.80	18.80	18.90	18.82
		50	25	19.80	18.87	18.81	18.57
		50	50	19.80	18.89	18.84	18.43
		100	0	19.80	18.97	18.85	18.62
	16QAM	1	0	19.80	19.09	19.01	19.00
		1	50	19.80	18.93	18.64	18.45
		1	99	19.80	19.28	18.99	18.78
		50	0	19.80	18.77	18.83	18.77
		50	25	19.80	18.80	18.84	18.52
		50	50	19.80	18.83	18.75	18.48
		100	0	19.80	18.77	18.75	18.62
	64QAM	1	0	19.80	18.87	18.93	18.91
		1	50	19.80	18.94	18.90	18.92
		1	99	19.80	18.99	18.93	18.68
		50	0	19.80	18.75	18.87	18.83
		50	25	19.80	18.78	18.88	18.85
		50	50	19.80	18.82	18.85	18.87
		100	0	19.80	18.81	18.79	18.79

Table 32: Test results conducted power measurement LTE Band 2 (Receiver ON)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18607CH	18900CH	19193CH
1.4MHz	QPSK	1	0	23.50	22.86	22.77	22.48
		1	3	23.50	22.55	22.62	21.93
		1	5	23.50	22.77	22.59	22.39
		3	0	23.50	22.79	22.63	22.50
		3	2	23.50	22.63	22.60	22.16
		3	3	23.50	22.64	22.55	22.32
		6	0	22.50	22.19	22.20	21.90
	16QAM	1	0	22.50	22.23	22.25	21.91
		1	3	22.50	21.91	22.04	21.63
		1	5	22.50	22.18	22.17	22.01
		3	0	22.50	22.06	22.15	21.87
		3	2	22.50	22.10	21.98	21.93
		3	3	22.50	22.36	22.19	21.70
		6	0	21.50	21.23	21.08	20.77
	64QAM	1	0	21.50	21.11	21.18	20.99
		1	3	21.50	21.28	21.22	20.99
		1	5	21.50	21.03	21.11	20.94
		3	0	21.50	21.12	21.24	20.92
		3	2	21.50	21.18	21.25	20.78
		3	3	21.50	21.15	21.19	20.91
		6	0	20.50	19.94	20.06	19.82
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18615CH	18900CH	19185CH
3MHz	QPSK	1	0	23.50	22.65	22.78	22.41
		1	7	23.50	22.15	22.59	22.16
		1	14	23.50	22.73	22.79	22.48
		8	0	22.50	22.20	22.10	21.68
		8	4	22.50	22.16	22.11	21.74
		8	7	22.50	21.94	22.09	21.69
		15	0	22.50	22.27	22.12	21.78
	16QAM	1	0	22.50	22.40	22.43	21.66
		1	7	22.50	22.34	22.23	21.52
		1	14	22.50	22.35	22.33	21.68
		8	0	21.50	21.18	21.20	20.63
		8	4	21.50	21.08	21.12	20.61
		8	7	21.50	21.16	21.09	20.66
		15	0	21.50	21.16	21.09	20.69
	64QAM	1	0	21.50	21.04	20.93	20.94
		1	7	21.50	21.09	21.25	20.99
		1	14	21.50	21.17	21.28	20.92
		8	0	20.50	20.05	20.28	19.96
		8	4	20.50	20.00	20.14	19.94
		8	7	20.50	20.10	20.22	19.92
		15	0	20.50	20.06	20.17	19.95

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18625CH	18900CH	19175CH
5MHz	QPSK	1	0	23.50	22.66	22.56	22.32
		1	13	23.50	22.79	22.77	22.27
		1	24	23.50	22.75	22.68	22.32
		12	0	22.50	22.22	22.16	21.76
		12	6	22.50	22.14	22.16	21.76
		12	13	22.50	22.19	22.16	21.77
		25	0	22.50	22.23	22.07	21.69
	16QAM	1	0	22.50	22.17	22.46	22.00
		1	13	22.50	22.24	22.24	22.03
		1	24	22.50	22.24	22.43	21.92
		12	0	21.50	21.18	21.10	20.83
		12	6	21.50	21.12	21.16	20.80
		12	13	21.50	21.19	21.11	20.86
		25	0	21.50	21.06	21.00	20.82
	64QAM	1	0	21.50	21.09	21.31	21.07
		1	13	21.50	21.17	21.34	20.99
		1	24	21.50	21.09	21.15	20.95
		12	0	20.50	20.09	20.28	20.02
		12	6	20.50	20.13	20.15	20.08
		12	13	20.50	20.08	20.12	19.99
		25	0	20.50	20.01	20.11	19.89
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18650CH	18900CH	19150CH
10MHz	QPSK	1	0	23.50	22.61	22.69	22.46
		1	25	23.50	22.33	22.44	21.71
		1	49	23.50	22.63	22.54	22.31
		25	0	22.50	22.06	22.16	21.80
		25	13	22.50	22.07	22.11	21.69
		25	25	22.50	22.06	22.06	21.82
		50	0	22.50	22.14	22.08	21.80
	16QAM	1	0	22.50	22.12	22.41	21.94
		1	25	22.50	21.75	21.85	21.45
		1	49	22.50	22.01	22.20	21.86
		25	0	21.50	21.03	21.06	20.71
		25	13	21.50	20.97	21.08	20.63
		25	25	21.50	21.05	21.01	20.57
		50	0	21.50	20.99	21.00	20.61
	64QAM	1	0	21.50	21.17	21.14	21.06
		1	25	21.50	21.00	21.42	21.06
		1	49	21.50	21.10	21.16	21.11
		25	0	20.50	20.08	20.12	19.97
		25	13	20.50	20.10	20.10	19.90
		25	25	20.50	20.08	20.13	20.03
		50	0	20.50	20.08	20.07	19.90

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18675CH	18900CH	19125CH
15MHz	QPSK	1	0	23.50	22.61	22.54	22.52
		1	38	23.50	22.76	22.72	22.43
		1	74	23.50	22.64	22.53	22.12
		36	0	22.50	22.11	22.15	22.03
		36	18	22.50	22.08	22.10	21.83
		36	39	22.50	22.10	22.07	21.79
		75	0	22.50	22.25	22.08	21.81
	16QAM	1	0	22.50	22.13	22.28	22.16
		1	38	22.50	22.28	22.26	21.99
		1	74	22.50	22.24	22.15	21.80
		36	0	21.50	21.10	21.03	20.99
		36	18	21.50	21.14	21.08	20.78
		36	39	21.50	21.15	21.01	20.68
		75	0	21.50	21.05	20.98	20.68
	64QAM	1	0	21.50	21.06	21.26	21.04
		1	38	21.50	20.99	21.20	21.08
		1	74	21.50	21.10	21.20	20.95
		36	0	20.50	20.03	20.18	20.05
		36	18	20.50	20.04	20.14	19.97
		36	39	20.50	19.98	20.07	20.04
		75	0	20.50	20.12	20.21	19.90
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18700CH	18900CH	19100CH
20MHz	QPSK	1	0	23.50	22.60	22.56	22.54
		1	50	23.50	22.61	22.24	22.10
		1	99	23.50	22.76	22.68	22.41
		50	0	22.50	22.04	22.18	22.09
		50	25	22.50	22.13	22.06	21.85
		50	50	22.50	22.08	22.07	21.69
		100	0	22.50	22.20	22.06	21.88
	16QAM	1	0	22.50	22.34	22.28	22.22
		1	50	22.50	22.29	21.72	21.70
		1	99	22.50	22.48	22.25	21.99
		50	0	21.50	21.02	21.08	21.07
		50	25	21.50	21.04	21.04	20.84
		50	50	21.50	21.14	21.02	20.74
		100	0	21.50	21.03	21.02	20.89
	64QAM	1	0	21.50	21.06	21.31	20.98
		1	50	21.50	21.21	21.23	21.05
		1	99	21.50	21.19	21.26	21.09
		50	0	20.50	20.02	20.11	20.10
		50	25	20.50	20.03	20.13	20.08
		50	50	20.50	20.03	20.14	20.08
		100	0	20.50	20.05	20.17	20.00

Table 33: Test results conducted power measurement LTE Band 2 (Receiver OFF+WiFi/BT)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18607CH	18900CH	19193CH
1.4MHz	QPSK	1	0	19.30	18.54	18.51	18.26
		1	3	19.30	18.26	18.14	17.74
		1	5	19.30	18.63	18.51	18.25
		3	0	19.30	18.60	18.36	18.30
		3	2	19.30	18.39	18.36	18.00
		3	3	19.30	18.42	18.41	18.10
		6	0	19.30	19.13	18.47	18.21
	16QAM	1	0	19.30	18.47	18.51	18.24
		1	3	19.30	18.23	18.27	17.89
		1	5	19.30	18.49	18.50	18.27
		3	0	19.30	18.40	18.43	18.13
		3	2	19.30	18.37	18.34	18.16
		3	3	19.30	18.54	18.28	18.07
		6	0	19.30	18.43	18.32	18.11
	64QAM	1	0	19.30	18.42	18.43	18.07
		1	3	19.30	18.44	18.43	18.26
		1	5	19.30	18.55	18.53	18.33
		3	0	19.30	18.43	18.50	18.25
		3	2	19.30	18.49	18.66	18.12
		3	3	19.30	18.26	18.48	18.08
		6	0	19.30	18.16	18.28	18.01
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18615CH	18900CH	19185CH
3MHz	QPSK	1	0	19.30	18.46	18.54	18.14
		1	7	19.30	17.93	18.40	17.56
		1	14	19.30	18.57	18.63	18.13
		8	0	19.30	18.53	18.39	17.86
		8	4	19.30	18.42	18.45	18.06
		8	7	19.30	18.35	18.44	17.98
		15	0	19.30	18.52	18.46	18.06
	16QAM	1	0	19.30	18.74	18.74	17.93
		1	7	19.30	18.91	18.58	17.84
		1	14	19.30	18.65	18.67	17.94
		8	0	19.30	18.38	18.44	17.94
		8	4	19.30	18.41	18.44	17.98
		8	7	19.30	18.38	18.50	17.97
		15	0	19.30	18.39	18.42	17.99
	64QAM	1	0	19.30	18.43	18.27	18.18
		1	7	19.30	18.36	18.36	18.11
		1	14	19.30	18.46	18.41	18.28
		8	0	19.30	18.33	18.39	18.12
		8	4	19.30	18.34	18.30	18.13
		8	7	19.30	18.35	18.43	18.14
		15	0	19.30	18.32	18.42	18.17

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18625CH	18900CH	19175CH
5MHz	QPSK	1	0	19.30	18.58	18.45	18.04
		1	13	19.30	18.53	18.57	18.04
		1	24	19.30	18.47	18.49	18.09
		12	0	19.30	18.45	18.43	18.06
		12	6	19.30	18.42	18.50	18.02
		12	13	19.30	18.39	18.53	18.05
		25	0	19.30	18.53	18.34	18.04
	16QAM	1	0	19.30	18.52	18.70	18.33
		1	13	19.30	18.52	18.84	18.30
		1	24	19.30	18.48	18.74	18.19
		12	0	19.30	18.40	18.39	18.14
		12	6	19.30	18.51	18.43	18.08
		12	13	19.30	18.46	18.39	18.10
		25	0	19.30	18.35	18.40	18.06
	64QAM	1	0	19.30	18.61	18.46	18.15
		1	13	19.30	18.61	18.43	18.34
		1	24	19.30	18.64	18.46	18.40
		12	0	19.30	18.36	18.47	18.26
		12	6	19.30	18.35	18.48	18.30
		12	13	19.30	18.33	18.46	18.28
		25	0	19.30	18.31	18.34	18.09
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18650CH	18900CH	19150CH
10MHz	QPSK	1	0	19.30	18.40	18.46	18.22
		1	25	19.30	18.09	18.12	17.43
		1	49	19.30	18.36	18.42	18.03
		25	0	19.30	18.37	18.43	18.08
		25	13	19.30	18.37	18.45	18.00
		25	25	19.30	18.40	18.40	17.99
		50	0	19.30	18.44	18.34	18.07
	16QAM	1	0	19.30	18.33	18.70	18.27
		1	25	19.30	18.03	18.17	17.91
		1	49	19.30	18.26	18.51	18.22
		25	0	19.30	18.29	18.33	18.01
		25	13	19.30	19.27	18.45	17.93
		25	25	19.30	18.34	18.25	17.89
		50	0	19.30	18.21	18.35	17.92
	64QAM	1	0	19.30	18.34	18.44	18.29
		1	25	19.30	18.44	18.50	18.46
		1	49	19.30	18.27	18.48	18.39
		25	0	19.30	18.35	18.40	18.22
		25	13	19.30	18.33	18.34	18.12
		25	25	19.30	18.30	18.37	18.18
		50	0	19.30	18.29	18.32	18.12

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18675CH	18900CH	19125CH
15MHz	QPSK	1	0	19.30	18.35	18.38	18.28
		1	38	19.30	18.46	18.53	18.13
		1	74	19.30	18.33	18.32	17.86
		36	0	19.30	18.37	18.41	18.29
		36	18	19.30	18.41	18.47	18.03
		36	39	19.30	18.40	18.31	18.05
		75	0	19.30	18.52	18.31	18.03
	16QAM	1	0	19.30	18.45	18.43	18.41
		1	38	19.30	18.58	18.61	18.28
		1	74	19.30	18.53	18.34	18.05
		36	0	19.30	18.29	18.40	18.21
		36	18	19.30	18.33	18.47	17.99
		36	39	19.30	18.34	18.26	17.87
		75	0	19.30	18.26	18.24	17.91
	64QAM	1	0	19.30	18.35	18.58	18.19
		1	38	19.30	18.20	18.39	18.22
		1	74	19.30	18.28	18.32	18.35
		36	0	19.30	18.42	18.34	18.36
		36	18	19.30	18.40	18.39	18.26
		36	39	19.30	18.40	18.38	18.22
		75	0	19.30	18.31	18.40	18.17
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18700CH	18900CH	19100CH
20MHz	QPSK	1	0	19.30	18.32	18.44	18.28
		1	50	19.30	18.37	18.04	17.88
		1	99	19.30	18.49	18.52	18.15
		50	0	19.30	18.38	18.43	18.36
		50	25	19.30	18.46	18.32	18.17
		50	50	19.30	18.37	18.32	17.98
		100	0	19.30	18.53	18.34	18.23
	16QAM	1	0	19.30	18.54	18.40	18.55
		1	50	19.30	18.46	18.00	18.00
		1	99	19.30	18.79	18.57	18.27
		50	0	19.30	18.27	18.32	18.28
		50	25	19.30	18.29	18.43	18.06
		50	50	19.30	18.41	18.29	17.98
		100	0	19.30	18.29	18.26	18.16
	64QAM	1	0	19.30	18.47	18.52	18.40
		1	50	19.30	18.35	18.59	18.46
		1	99	19.30	18.40	18.59	18.16
		50	0	19.30	18.26	18.39	18.41
		50	25	19.30	18.32	18.39	18.27
		50	50	19.30	18.31	18.37	18.27
		100	0	19.30	18.31	18.34	18.26

Table 34: Test results conducted power measurement LTE Band 2 (Receiver ON+WiFi/BT)

Note: The conducted power of LTE Band 2 is measured with RMS detector.

7.1.12 Conducted power of LTE Band 2(Main antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18607CH	18900CH	19193CH
1.4MHz	QPSK	1	0	24.00	22.92	22.92	22.76
		1	3	24.00	22.96	22.96	22.75
		1	5	24.00	22.98	22.95	22.75
		3	0	24.00	22.85	22.89	22.59
		3	2	24.00	22.97	22.97	22.64
		3	3	24.00	23.00	22.97	22.54
		6	0	23.00	21.90	21.87	21.59
	16QAM	1	0	23.00	22.06	22.03	21.88
		1	3	23.00	21.89	21.99	22.02
		1	5	23.00	22.25	21.92	21.80
		3	0	23.00	22.04	22.09	21.77
		3	2	23.00	21.90	21.92	21.67
		3	3	23.00	21.76	22.05	21.67
		6	0	22.00	20.82	20.90	20.60
	64QAM	1	0	22.00	20.93	21.18	20.92
		1	3	22.00	21.16	21.12	20.91
		1	5	22.00	21.00	20.92	20.92
		3	0	22.00	20.91	21.00	20.67
		3	2	22.00	20.90	21.06	20.82
		3	3	22.00	20.92	21.02	20.71
		6	0	21.00	19.85	19.90	19.56
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18615CH	18900CH	19185CH
3MHz	QPSK	1	0	24.00	23.04	22.95	22.62
		1	7	24.00	23.00	22.93	22.66
		1	14	24.00	22.97	22.91	22.72
		8	0	23.00	21.93	21.89	21.66
		8	4	23.00	21.97	21.88	21.55
		8	7	23.00	21.93	21.94	21.61
		15	0	23.00	21.97	21.81	21.79
	16QAM	1	0	23.00	22.15	22.01	21.87
		1	7	23.00	22.05	22.05	21.88
		1	14	23.00	21.98	22.00	21.78
		8	0	22.00	20.92	20.90	20.78
		8	4	22.00	20.86	20.85	20.69
		8	7	22.00	20.89	20.97	20.73
		15	0	22.00	20.87	20.84	20.82
	64QAM	1	0	22.00	21.01	21.07	20.87
		1	7	22.00	20.86	21.14	20.96
		1	14	22.00	21.09	20.92	20.75
		8	0	21.00	19.87	19.87	19.79
		8	4	21.00	19.84	19.88	19.70
		8	7	21.00	19.92	19.97	19.69
		15	0	21.00	19.93	19.84	19.75

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18625CH	18900CH	19175CH
5MHz	QPSK	1	0	24.00	22.92	22.94	22.73
		1	13	24.00	22.87	22.94	22.73
		1	24	24.00	22.89	22.89	22.58
		12	0	23.00	21.96	21.99	21.75
		12	6	23.00	21.95	21.94	21.76
		12	13	23.00	22.00	22.05	21.74
		25	0	23.00	21.97	21.89	21.67
	16QAM	1	0	23.00	22.06	22.15	21.95
		1	13	23.00	22.28	22.14	21.76
		1	24	23.00	21.98	22.12	21.93
		12	0	22.00	20.93	20.99	20.78
		12	6	22.00	20.97	20.92	20.84
		12	13	22.00	20.91	21.02	20.85
		25	0	22.00	20.85	20.83	20.77
	64QAM	1	0	22.00	21.29	21.04	20.96
		1	13	22.00	21.26	20.93	20.80
		1	24	22.00	21.17	20.99	20.74
		12	0	21.00	19.93	20.02	19.72
		12	6	21.00	19.94	20.03	19.75
		12	13	21.00	19.97	19.99	19.77
		25	0	21.00	19.94	19.97	19.69
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18650CH	18900CH	19150CH
10MHz	QPSK	1	0	24.00	22.85	22.97	22.73
		1	25	24.00	22.82	23.00	22.73
		1	49	24.00	22.80	22.95	22.71
		25	0	23.00	21.91	21.91	21.76
		25	13	23.00	21.88	21.87	21.75
		25	25	23.00	21.89	21.91	21.76
		50	0	23.00	21.91	21.88	21.64
	16QAM	1	0	23.00	22.04	21.96	21.94
		1	25	23.00	21.83	21.87	21.95
		1	49	23.00	21.90	21.93	21.92
		25	0	22.00	20.86	20.84	20.70
		25	13	22.00	20.85	20.83	20.66
		25	25	22.00	20.82	20.88	20.64
		50	0	22.00	20.79	20.79	20.66
	64QAM	1	0	22.00	20.76	21.18	20.89
		1	25	22.00	21.18	21.00	21.02
		1	49	22.00	21.07	21.15	20.82
		25	0	21.00	19.87	19.90	19.76
		25	13	21.00	19.87	19.91	19.74
		25	25	21.00	19.91	19.88	19.76
		50	0	21.00	19.86	19.96	19.67

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18675CH	18900CH	19125CH
15MHz	QPSK	1	0	24.00	22.84	22.90	22.86
		1	38	24.00	22.84	22.88	22.88
		1	74	24.00	22.85	22.92	22.87
		36	0	23.00	21.93	21.93	21.79
		36	18	23.00	22.01	21.95	21.82
		36	39	23.00	21.99	21.96	21.92
		75	0	23.00	21.95	21.85	21.64
	16QAM	1	0	23.00	21.79	22.07	22.08
		1	38	23.00	22.02	22.16	21.69
		1	74	23.00	21.75	22.03	21.94
		36	0	22.00	20.90	20.87	20.76
		36	18	22.00	20.85	20.87	20.77
		36	39	22.00	20.86	20.88	20.78
		75	0	22.00	20.85	20.87	20.67
	64QAM	1	0	22.00	20.73	20.96	20.85
		1	38	22.00	21.03	21.07	21.04
		1	74	22.00	20.98	20.92	20.88
		36	0	21.00	19.90	19.92	19.80
		36	18	21.00	19.83	19.89	19.80
		36	39	21.00	19.81	19.91	19.79
		75	0	21.00	19.89	19.94	19.68
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18700CH	18900CH	19100CH
20MHz	QPSK	1	0	24.00	22.94	23.00	22.77
		1	50	24.00	22.92	22.87	22.73
		1	99	24.00	22.92	22.86	22.72
		50	0	23.00	21.95	21.88	21.83
		50	25	23.00	21.88	21.90	21.82
		50	50	23.00	21.95	21.90	21.80
		100	0	23.00	21.94	21.91	21.76
	16QAM	1	0	23.00	22.09	22.20	22.07
		1	50	23.00	22.09	22.11	22.13
		1	99	23.00	22.01	22.16	21.97
		50	0	22.00	20.88	20.87	20.79
		50	25	22.00	20.84	20.89	20.82
		50	50	22.00	20.86	20.85	20.81
		100	0	22.00	20.80	20.80	20.69
	64QAM	1	0	22.00	21.01	21.03	20.96
		1	50	22.00	21.09	20.89	21.02
		1	99	22.00	21.08	20.77	21.04
		50	0	21.00	19.93	19.90	19.77
		50	25	21.00	19.94	19.86	19.79
		50	50	21.00	19.94	19.90	19.79
		100	0	21.00	19.90	19.86	19.75

Table 35: Test results conducted power measurement LTE Band 2 (Receiver ON)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18607CH	18900CH	19193CH
1.4MHz	QPSK	1	0	23.00	21.97	21.95	21.70
		1	3	23.00	22.02	21.93	21.72
		1	5	23.00	22.03	21.95	21.72
		3	0	23.00	21.87	21.97	21.67
		3	2	23.00	21.93	21.97	21.60
		3	3	23.00	21.92	21.94	21.59
		6	0	23.00	21.96	21.90	21.56
	16QAM	1	0	23.00	22.04	21.90	21.85
		1	3	23.00	22.10	21.94	21.73
		1	5	23.00	22.02	21.87	21.80
		3	0	22.00	21.83	21.99	21.87
		3	2	22.00	21.85	21.95	21.65
		3	3	22.00	21.90	21.96	21.52
		6	0	22.00	20.82	20.95	20.55
	64QAM	1	0	22.00	20.99	20.96	20.75
		1	3	22.00	21.17	21.09	20.74
		1	5	22.00	21.12	21.07	20.74
		3	0	22.00	20.93	20.90	20.66
		3	2	22.00	20.84	20.91	20.76
		3	3	22.00	20.94	21.00	20.67
		6	0	21.00	19.99	19.95	19.72
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18615CH	18900CH	19185CH
3MHz	QPSK	1	0	23.00	22.00	21.93	21.66
		1	7	23.00	21.99	21.92	21.70
		1	14	23.00	21.96	21.95	21.66
		8	0	23.00	21.93	21.88	21.61
		8	4	23.00	21.99	21.90	21.62
		8	7	23.00	21.87	21.92	21.69
		15	0	23.00	21.93	21.89	21.80
	16QAM	1	0	23.00	22.01	21.99	21.77
		1	7	23.00	22.09	22.14	21.69
		1	14	23.00	22.06	21.95	21.72
		8	0	22.00	20.83	20.91	20.69
		8	4	22.00	20.89	20.89	20.70
		8	7	22.00	20.91	20.98	20.74
		15	0	22.00	20.87	20.85	20.80
	64QAM	1	0	22.00	21.03	21.01	20.71
		1	7	22.00	20.99	21.00	20.95
		1	14	22.00	20.94	21.11	20.96
		8	0	21.00	19.82	19.87	19.66
		8	4	21.00	19.98	19.93	19.69
		8	7	21.00	19.88	19.88	19.65
		15	0	21.00	20.00	19.80	19.74

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18625CH	18900CH	19175CH
5MHz	QPSK	1	0	23.00	21.88	21.89	21.69
		1	13	23.00	21.86	21.89	21.71
		1	24	23.00	21.90	21.92	21.64
		12	0	23.00	21.95	21.93	21.75
		12	6	23.00	21.96	21.94	21.75
		12	13	23.00	21.96	22.05	21.74
		25	0	23.00	22.03	21.88	21.64
	16QAM	1	0	23.00	22.10	22.07	21.94
		1	13	23.00	22.25	22.13	21.90
		1	24	23.00	22.28	22.02	22.04
		12	0	22.00	20.94	20.94	20.78
		12	6	22.00	20.92	20.96	20.79
		12	13	22.00	20.96	21.07	20.77
		25	0	22.00	20.85	20.88	20.71
	64QAM	1	0	22.00	21.07	20.99	20.82
		1	13	22.00	21.10	20.97	20.73
		1	24	22.00	21.02	20.94	20.73
		12	0	21.00	19.96	19.92	19.79
		12	6	21.00	19.98	19.96	19.72
		12	13	21.00	20.00	19.93	19.76
		25	0	21.00	19.95	19.94	19.72
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18650CH	18900CH	19150CH
10MHz	QPSK	1	0	23.00	21.95	22.02	21.67
		1	25	23.00	21.95	22.02	21.68
		1	49	23.00	21.94	22.05	21.66
		25	0	23.00	21.91	21.94	21.75
		25	13	23.00	21.89	21.89	21.75
		25	25	23.00	21.84	21.93	21.75
		50	0	23.00	21.96	21.87	21.64
	16QAM	1	0	23.00	21.97	21.93	21.75
		1	25	23.00	21.91	21.99	21.93
		1	49	23.00	21.81	22.05	21.84
		25	0	22.00	20.86	20.87	20.71
		25	13	22.00	20.88	20.87	20.68
		25	25	22.00	20.86	20.86	20.63
		50	0	22.00	20.79	20.81	20.65
	64QAM	1	0	22.00	21.19	20.99	20.82
		1	25	22.00	20.83	21.19	20.94
		1	49	22.00	21.06	21.00	20.67
		25	0	21.00	19.91	19.88	19.74
		25	13	21.00	19.92	19.88	19.76
		25	25	21.00	19.90	19.89	19.75
		50	0	21.00	19.87	19.96	19.67

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18675CH	18900CH	19125CH
15MHz	QPSK	1	0	23.00	21.93	21.86	21.83
		1	38	23.00	21.92	21.82	21.85
		1	74	23.00	21.92	21.90	21.88
		36	0	23.00	21.91	21.94	21.79
		36	18	23.00	22.01	21.95	21.83
		36	39	23.00	21.99	21.96	21.92
		75	0	23.00	21.90	21.86	21.63
	16QAM	1	0	23.00	22.02	21.93	21.85
		1	38	23.00	21.86	21.99	21.79
		1	74	23.00	21.82	21.82	21.93
		36	0	22.00	20.87	20.83	20.78
		36	18	22.00	20.86	20.87	20.80
		36	39	22.00	20.89	20.91	20.73
		75	0	22.00	20.85	20.89	20.66
	64QAM	1	0	22.00	20.84	21.02	20.92
		1	38	22.00	20.87	20.97	20.95
		1	74	22.00	20.77	21.04	20.96
		36	0	21.00	19.83	19.85	19.78
		36	18	21.00	19.88	19.94	19.80
		36	39	21.00	19.89	19.84	19.81
		75	0	21.00	19.87	19.86	19.70
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	18700CH	18900CH	19100CH
20MHz	QPSK	1	0	23.00	21.91	21.92	21.78
		1	50	23.00	21.95	21.89	21.77
		1	99	23.00	21.99	21.87	21.75
		50	0	23.00	21.94	21.88	21.78
		50	25	23.00	21.87	21.90	21.82
		50	50	23.00	21.90	21.91	21.82
		100	0	23.00	21.92	21.87	21.75
	16QAM	1	0	23.00	21.98	22.11	22.14
		1	50	23.00	22.01	22.05	22.07
		1	99	23.00	22.09	22.33	22.07
		50	0	22.00	20.87	20.89	20.81
		50	25	22.00	20.84	20.85	20.80
		50	50	22.00	20.81	20.88	20.79
		100	0	22.00	20.79	20.81	20.69
	64QAM	1	0	22.00	21.12	21.00	20.85
		1	50	22.00	20.91	20.98	20.78
		1	99	22.00	21.14	20.83	21.03
		50	0	21.00	19.93	19.90	19.77
		50	25	21.00	19.93	19.88	19.78
		50	50	21.00	19.92	19.90	19.80
		100	0	21.00	19.90	19.85	19.72

Table 36: Test results conducted power measurement LTE Band 2 (Receiver OFF)

Note: The conducted power of LTE Band 2 is measured with RMS detector.

7.1.13 Conducted power of LTE Band 4(Second antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19957CH	20175CH	20393CH
1.4MHz	QPSK	1	0	23.50	22.93	22.86	23.01
		1	3	23.50	22.32	22.57	22.12
		1	5	23.50	22.89	22.93	23.07
		3	0	23.50	22.90	22.82	22.90
		3	2	23.50	22.82	22.42	22.81
		3	3	23.50	22.87	22.75	22.94
		6	0	22.50	21.84	21.81	21.84
	16QAM	1	0	22.50	21.93	22.33	22.12
		1	3	22.50	21.48	21.92	21.31
		1	5	22.50	21.86	22.20	22.11
		3	0	22.50	22.08	21.77	22.00
		3	2	22.50	22.05	21.85	21.85
		3	3	22.50	21.94	21.78	21.84
		6	0	21.50	20.77	20.86	20.79
	64QAM	1	0	21.50	20.68	20.91	20.86
		1	3	21.50	20.97	20.91	20.69
		1	5	21.50	20.97	20.94	20.76
		3	0	21.50	20.85	20.69	20.89
		3	2	21.50	20.83	20.79	20.86
		3	3	21.50	20.60	20.58	20.67
		6	0	20.50	19.53	19.63	19.61
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19965CH	20175CH	20385CH
3MHz	QPSK	1	0	23.50	22.97	22.88	22.98
		1	7	23.50	22.37	22.60	22.31
		1	14	23.50	22.80	22.96	22.91
		8	0	22.50	21.74	21.87	21.81
		8	4	22.50	21.86	21.90	21.77
		8	7	22.50	21.85	21.86	21.68
		15	0	22.50	21.94	21.93	21.88
	16QAM	1	0	22.50	22.24	21.93	21.85
		1	7	22.50	21.94	21.92	21.72
		1	14	22.50	22.24	22.10	21.88
		8	0	21.50	20.90	20.78	20.83
		8	4	21.50	20.96	20.82	20.85
		8	7	21.50	20.98	20.80	20.99
		15	0	21.50	20.92	20.81	20.75
	64QAM	1	0	21.50	20.96	21.02	20.95
		1	7	21.50	20.66	20.75	20.78
		1	14	21.50	20.76	21.07	20.77
		8	0	20.50	19.67	19.69	19.66
		8	4	20.50	19.62	19.67	19.70
		8	7	20.50	19.67	19.70	19.68
		15	0	20.50	19.69	19.68	19.74

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19975CH	20175CH	20375CH
5MHz	QPSK	1	0	23.50	22.96	22.99	22.84
		1	13	23.50	22.97	22.94	22.84
		1	24	23.50	23.04	22.87	22.93
		12	0	22.50	21.90	21.95	21.90
		12	6	22.50	21.78	21.99	21.88
		12	13	22.50	21.91	21.91	21.89
		25	0	22.50	21.90	21.83	21.85
	16QAM	1	0	22.50	22.00	22.21	22.01
		1	13	22.50	22.12	22.21	22.05
		1	24	22.50	22.01	22.21	22.06
		12	0	21.50	20.82	20.94	20.92
		12	6	21.50	20.79	20.94	20.88
		12	13	21.50	20.93	20.99	20.83
		25	0	21.50	20.89	20.79	20.78
	64QAM	1	0	21.50	20.93	20.87	20.61
		1	13	21.50	20.99	20.80	20.82
		1	24	21.50	20.76	20.85	20.83
		12	0	20.50	19.80	19.65	19.74
		12	6	20.50	19.74	19.68	19.72
		12	13	20.50	19.75	19.68	19.68
		25	0	20.50	19.61	19.77	19.65
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20000CH	20175CH	20350CH
10MHz	QPSK	1	0	23.50	22.80	22.91	22.84
		1	25	23.50	22.38	22.57	22.37
		1	49	23.50	22.86	22.82	22.94
		25	0	22.50	21.85	21.89	21.85
		25	13	22.50	21.97	21.92	21.93
		25	25	22.50	21.84	21.83	21.83
		50	0	22.50	21.88	21.85	21.83
	16QAM	1	0	22.50	21.85	22.09	21.93
		1	25	22.50	21.67	21.95	21.94
		1	49	22.50	21.83	22.14	21.94
		25	0	21.50	20.82	20.76	20.73
		25	13	21.50	20.77	20.80	20.74
		25	25	21.50	20.88	20.89	20.73
		50	0	21.50	20.85	20.79	20.74
	64QAM	1	0	21.50	20.82	20.65	20.64
		1	25	21.50	20.65	20.68	20.74
		1	49	21.50	20.85	20.71	20.76
		25	0	20.50	19.61	19.77	19.72
		25	13	20.50	19.63	19.77	19.75
		25	25	20.50	19.62	19.71	19.71
		50	0	20.50	19.58	19.58	19.77

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20025CH	20175CH	20325CH
15MHz	QPSK	1	0	23.50	22.70	22.82	22.71
		1	38	23.50	22.95	22.95	22.92
		1	74	23.50	22.88	22.82	22.89
		36	0	22.50	21.82	21.94	21.82
		36	18	22.50	21.88	21.89	21.96
		36	39	22.50	21.85	21.96	21.80
		75	0	22.50	21.83	21.95	21.83
	16QAM	1	0	22.50	22.06	21.90	21.87
		1	38	22.50	22.12	22.07	22.03
		1	74	22.50	22.00	21.96	21.88
		36	0	21.50	20.78	20.82	20.77
		36	18	21.50	20.78	20.91	20.79
		36	39	21.50	20.79	20.90	20.78
		75	0	21.50	20.77	20.81	20.74
	64QAM	1	0	21.50	20.56	20.56	20.68
		1	38	21.50	20.71	20.51	20.73
		1	74	21.50	20.56	20.94	20.73
		36	0	20.50	19.61	19.60	19.67
		36	18	20.50	19.61	19.56	19.68
		36	39	20.50	19.63	19.58	19.66
		75	0	20.50	19.59	19.59	19.64
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20050CH	20175CH	20300CH
20MHz	QPSK	1	0	23.50	22.79	22.81	22.82
		1	50	23.50	22.52	22.74	22.71
		1	99	23.50	22.95	22.92	23.12
		50	0	22.50	21.81	21.93	21.81
		50	25	22.50	21.82	21.89	21.92
		50	50	22.50	21.84	21.87	21.94
		100	0	22.50	21.86	21.91	21.93
	16QAM	1	0	22.50	22.04	21.88	22.06
		1	50	22.50	21.96	21.83	21.84
		1	99	22.50	22.12	22.07	22.06
		50	0	21.50	20.72	20.72	20.69
		50	25	21.50	20.81	20.89	20.74
		50	50	21.50	20.75	20.78	20.74
		100	0	21.50	20.89	20.71	20.72
	64QAM	1	0	21.50	20.58	20.68	20.88
		1	50	21.50	20.60	20.73	20.81
		1	99	21.50	20.82	20.74	20.65
		50	0	20.50	19.64	19.59	19.70
		50	25	20.50	19.61	19.57	19.69
		50	50	20.50	19.61	19.57	19.72
		100	0	20.50	19.63	19.59	19.69

Table 37: Test results conducted power measurement LTE Band 4 (Receiver OFF)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19957CH	20175CH	20393CH
1.4MHz	QPSK	1	0	21.00	20.52	20.47	20.41
		1	3	21.00	19.81	20.09	19.76
		1	5	21.00	20.41	20.50	20.47
		3	0	21.00	20.11	20.39	20.31
		3	2	21.00	20.33	19.92	19.87
		3	3	21.00	20.47	20.27	20.25
		6	0	21.00	20.31	20.32	20.28
	16QAM	1	0	21.00	20.44	20.79	20.44
		1	3	21.00	19.93	20.47	20.25
		1	5	21.00	20.52	20.74	20.52
		3	0	21.00	20.53	20.27	20.42
		3	2	21.00	20.39	20.31	20.65
		3	3	21.00	20.49	20.36	20.29
		6	0	21.00	19.98	20.34	20.19
	64QAM	1	0	21.00	20.27	20.40	20.48
		1	3	21.00	20.51	20.30	20.49
		1	5	21.00	20.30	20.31	20.36
		3	0	21.00	20.19	20.09	20.27
		3	2	21.00	19.99	20.22	20.20
		3	3	21.00	20.16	20.24	20.17
		6	0	20.50	19.48	19.81	19.74
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19965CH	20175CH	20385CH
3MHz	QPSK	1	0	21.00	20.40	20.43	20.35
		1	7	21.00	19.95	19.81	19.78
		1	14	21.00	20.48	20.48	20.35
		8	0	21.00	20.30	20.35	20.38
		8	4	21.00	20.37	20.42	20.44
		8	7	21.00	20.34	20.37	20.37
		15	0	21.00	20.37	20.47	20.43
	16QAM	1	0	21.00	20.80	20.56	20.58
		1	7	21.00	19.88	20.30	19.95
		1	14	21.00	20.63	20.61	20.49
		8	0	21.00	20.43	20.29	20.36
		8	4	21.00	20.41	20.32	20.37
		8	7	21.00	20.31	20.29	20.51
		15	0	21.00	20.41	20.30	20.28
	64QAM	1	0	21.00	20.37	20.47	20.20
		1	7	21.00	20.49	20.30	20.22
		1	14	21.00	20.19	20.45	20.36
		8	0	20.50	19.68	19.76	19.73
		8	4	20.50	19.66	19.69	19.68
		8	7	20.50	19.67	19.66	19.72
		15	0	20.50	19.65	19.73	19.74

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19975CH	20175CH	20375CH
5MHz	QPSK	1	0	21.00	20.53	20.44	20.45
		1	13	21.00	20.59	20.48	20.51
		1	24	21.00	20.53	20.48	20.39
		12	0	21.00	20.43	20.48	20.49
		12	6	21.00	20.34	20.34	20.49
		12	13	21.00	20.51	20.41	20.50
		25	0	21.00	20.34	20.41	20.38
	16QAM	1	0	21.00	20.64	20.69	20.60
		1	13	21.00	20.75	20.73	20.64
		1	24	21.00	20.65	20.67	20.72
		12	0	21.00	20.29	20.44	20.46
		12	6	21.00	20.31	20.44	20.36
		12	13	21.00	20.44	20.52	20.34
		25	0	21.00	20.45	20.29	20.29
	64QAM	1	0	21.00	20.14	20.25	20.22
		1	13	21.00	20.15	20.15	20.22
		1	24	21.00	20.15	20.26	20.27
		12	0	20.50	19.71	19.64	19.71
		12	6	20.50	19.75	19.64	19.75
		12	13	20.50	19.73	19.67	19.67
		25	0	20.50	19.66	19.75	19.74
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20000CH	20175CH	20350CH
10MHz	QPSK	1	0	21.00	20.40	20.39	20.42
		1	25	21.00	19.83	20.09	19.90
		1	49	21.00	20.26	20.48	20.39
		25	0	21.00	20.42	20.42	20.43
		25	13	21.00	20.48	20.43	20.49
		25	25	21.00	20.44	20.45	20.44
		50	0	21.00	20.46	20.41	20.29
	16QAM	1	0	21.00	20.48	20.69	20.45
		1	25	21.00	20.20	20.40	20.42
		1	49	21.00	20.44	20.79	20.58
		25	0	21.00	20.33	20.26	20.27
		25	13	21.00	20.26	20.42	20.24
		25	25	21.00	20.42	20.37	20.23
		50	0	21.00	20.38	20.30	20.25
	64QAM	1	0	21.00	20.49	20.42	20.18
		1	25	21.00	20.16	20.23	20.50
		1	49	21.00	20.33	20.36	20.26
		25	0	20.50	19.63	19.78	19.73
		25	13	20.50	19.63	19.74	19.74
		25	25	20.50	19.62	19.77	19.71
		50	0	20.50	19.61	19.58	19.75

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20025CH	20175CH	20325CH
15MHz	QPSK	1	0	21.00	20.32	20.39	20.30
		1	38	21.00	20.40	20.50	20.51
		1	74	21.00	20.20	20.39	20.29
		36	0	21.00	20.40	20.43	20.29
		36	18	21.00	20.46	20.43	20.32
		36	39	21.00	20.45	20.48	20.44
		75	0	21.00	20.42	20.42	20.46
	16QAM	1	0	21.00	20.62	20.32	20.39
		1	38	21.00	20.75	20.61	20.62
		1	74	21.00	20.55	20.48	20.48
		36	0	21.00	20.28	20.34	20.38
		36	18	21.00	20.37	20.41	20.31
		36	39	21.00	20.25	20.37	20.28
		75	0	21.00	20.31	20.31	20.26
	64QAM	1	0	21.00	20.42	20.16	20.19
		1	38	21.00	20.07	20.24	20.35
		1	74	21.00	20.40	20.22	20.14
		36	0	20.50	19.62	19.56	19.65
		36	18	20.50	19.61	19.65	19.68
		36	39	20.50	19.60	19.59	19.69
		75	0	20.50	19.57	19.59	19.66
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20050CH	20175CH	20300CH
20MHz	QPSK	1	0	21.00	20.43	20.38	20.41
		1	50	21.00	20.02	20.17	20.20
		1	99	21.00	20.44	20.52	20.59
		50	0	21.00	20.38	20.41	20.33
		50	25	21.00	20.41	20.41	20.29
		50	50	21.00	20.32	20.36	20.31
		100	0	21.00	20.39	20.39	20.41
	16QAM	1	0	21.00	20.44	20.51	20.62
		1	50	21.00	20.46	20.36	20.39
		1	99	21.00	20.78	20.58	20.73
		50	0	21.00	20.24	20.24	20.33
		50	25	21.00	20.34	20.39	20.21
		50	50	21.00	20.25	20.32	20.26
		100	0	21.00	20.32	20.20	20.24
	64QAM	1	0	21.00	20.32	20.39	20.35
		1	50	21.00	20.19	20.26	20.54
		1	99	21.00	20.18	20.00	20.21
		50	0	20.50	19.65	19.59	19.68
		50	25	20.50	19.58	19.59	19.70
		50	50	20.50	19.66	19.60	19.68
		100	0	20.50	19.60	19.60	19.62

Table 38: Test results conducted power measurement LTE Band 4 (Receiver ON)

Note: The conducted power of LTE Band 4 is measured with RMS detector.

7.1.14 Conducted power of LTE Band 4(Main antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19957CH	20175CH	20393CH
1.4MHz	QPSK	1	0	23.50	21.91	21.97	21.94
		1	3	23.50	21.92	21.94	21.93
		1	5	23.50	22.06	22.04	21.92
		3	0	23.50	21.91	21.90	22.01
		3	2	23.50	21.82	21.90	21.90
		3	3	23.50	21.99	21.98	21.91
		6	0	22.50	20.89	20.98	20.96
	16QAM	1	0	22.50	20.89	20.96	21.29
		1	3	22.50	21.01	21.00	21.15
		1	5	22.50	20.90	20.94	20.83
		3	0	22.50	20.83	20.99	21.02
		3	2	22.50	20.92	21.07	20.95
		3	3	22.50	20.84	20.94	20.92
		6	0	21.50	19.74	19.88	19.92
	64QAM	1	0	21.50	19.87	20.21	20.09
		1	3	21.50	20.03	20.04	20.02
		1	5	21.50	19.95	20.13	19.83
		3	0	21.50	20.02	19.98	19.95
		3	2	21.50	19.94	20.09	20.05
		3	3	21.50	20.07	20.12	20.17
		6	0	20.50	18.87	18.87	18.94
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19965CH	20175CH	20385CH
3MHz	QPSK	1	0	23.50	21.86	21.93	21.90
		1	7	23.50	21.91	21.94	21.91
		1	14	23.50	21.89	21.94	21.94
		8	0	22.50	21.01	20.95	20.86
		8	4	22.50	20.94	20.92	20.93
		8	7	22.50	20.97	20.99	20.83
		15	0	22.50	21.03	20.95	21.07
	16QAM	1	0	22.50	20.94	21.12	20.93
		1	7	22.50	20.81	21.10	20.99
		1	14	22.50	21.22	20.99	21.05
		8	0	21.50	19.84	19.93	19.83
		8	4	21.50	19.86	19.86	19.85
		8	7	21.50	19.89	19.85	19.89
		15	0	21.50	19.82	19.96	19.83
	64QAM	1	0	21.50	19.94	20.03	20.11
		1	7	21.50	20.10	19.98	20.04
		1	14	21.50	20.19	19.97	20.01
		8	0	20.50	18.91	18.93	18.89
		8	4	20.50	18.83	18.86	18.96
		8	7	20.50	18.94	18.91	18.92
		15	0	20.50	18.92	18.99	19.01

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	19975CH	20175CH	20375CH
5MHz	QPSK	1	0	23.50	21.90	21.94	21.97
		1	13	23.50	21.98	22.07	21.96
		1	24	23.50	21.96	21.90	21.99
		12	0	22.50	20.92	20.96	21.09
		12	6	22.50	20.94	20.99	20.97
		12	13	22.50	21.06	20.97	20.95
		25	0	22.50	21.04	20.98	20.90
	16QAM	1	0	22.50	21.09	21.10	21.10
		1	13	22.50	21.16	21.14	21.13
		1	24	22.50	21.16	21.04	21.14
		12	0	21.50	19.87	19.84	19.92
		12	6	21.50	19.87	19.79	19.88
		12	13	21.50	19.86	19.87	19.91
		25	0	21.50	19.82	19.92	19.87
	64QAM	1	0	21.50	19.96	20.02	19.93
		1	13	21.50	20.00	19.88	20.13
		1	24	21.50	20.00	19.90	19.85
		12	0	20.50	18.96	18.94	18.94
		12	6	20.50	18.90	18.87	18.84
		12	13	20.50	18.91	18.94	18.96
		25	0	20.50	18.91	18.89	18.87
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20000CH	20175CH	20350CH
10MHz	QPSK	1	0	23.50	21.95	21.86	21.93
		1	25	23.50	21.88	21.84	21.79
		1	49	23.50	21.84	21.93	21.82
		25	0	22.50	20.88	21.03	20.95
		25	13	22.50	20.89	21.02	20.95
		25	25	22.50	20.90	21.02	20.94
		50	0	22.50	20.96	21.00	20.86
	16QAM	1	0	22.50	20.99	20.72	20.89
		1	25	22.50	20.97	20.69	20.91
		1	49	22.50	20.98	20.85	21.02
		25	0	21.50	19.83	19.78	19.84
		25	13	21.50	19.82	19.81	19.84
		25	25	21.50	19.74	19.77	19.81
		50	0	21.50	19.78	19.78	19.81
	64QAM	1	0	21.50	19.78	19.67	19.98
		1	25	21.50	19.94	19.84	20.18
		1	49	21.50	19.82	19.91	20.03
		25	0	20.50	18.89	19.00	18.89
		25	13	20.50	18.81	19.00	18.89
		25	25	20.50	18.86	18.85	18.88
		50	0	20.50	18.83	18.84	18.85

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20025CH	20175CH	20325CH
15MHz	QPSK	1	0	23.50	22.00	21.96	21.86
		1	38	23.50	21.84	21.98	21.86
		1	74	23.50	21.86	21.94	21.92
		36	0	22.50	20.88	20.87	20.92
		36	18	22.50	20.87	20.87	20.96
		36	39	22.50	20.92	20.87	20.90
		75	0	22.50	21.03	20.85	20.92
	16QAM	1	0	22.50	20.89	21.08	20.94
		1	38	22.50	20.93	20.90	20.94
		1	74	22.50	20.83	21.13	20.81
		36	0	21.50	19.80	19.82	19.91
		36	18	21.50	19.83	19.83	19.88
		36	39	21.50	19.83	19.83	19.86
		75	0	21.50	19.82	19.78	19.83
	64QAM	1	0	21.50	19.86	19.79	20.07
		1	38	21.50	19.83	19.78	19.84
		1	74	21.50	19.82	19.80	19.74
		36	0	20.50	18.83	18.81	18.88
		36	18	20.50	18.83	18.83	18.84
		36	39	20.50	18.82	18.86	18.89
		75	0	20.50	18.81	18.85	18.88
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20050CH	20175CH	20300CH
20MHz	QPSK	1	0	23.50	21.87	21.83	21.83
		1	50	23.50	21.95	21.83	21.87
		1	99	23.50	21.96	21.82	21.89
		50	0	22.50	20.93	20.92	20.95
		50	25	22.50	20.93	20.92	20.93
		50	50	22.50	20.89	20.88	20.89
		100	0	22.50	21.00	20.92	20.89
	16QAM	1	0	22.50	21.02	20.96	21.10
		1	50	22.50	21.06	21.12	21.32
		1	99	22.50	21.00	21.06	21.08
		50	0	21.50	19.84	19.80	19.87
		50	25	21.50	19.86	19.80	19.86
		50	50	21.50	19.79	19.80	19.87
		100	0	21.50	19.86	19.82	19.82
	64QAM	1	0	21.50	19.95	19.97	19.89
		1	50	21.50	19.95	19.83	19.97
		1	99	21.50	19.85	20.09	20.11
		50	0	20.50	18.89	18.87	18.86
		50	25	20.50	18.83	18.82	18.90
		50	50	20.50	18.89	18.81	18.85
		100	0	20.50	18.84	18.82	18.83

Table 39: Test results conducted power measurement LTE Band 4

Note: The conducted power of LTE Band 4 is measured with RMS detector.

7.1.15 Conducted power of LTE Band 5(Second antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20407CH	20525CH	20643CH
1.4MHz	QPSK	1	0	24.50	23.60	23.66	23.61
		1	3	24.50	23.30	23.36	23.10
		1	5	24.50	23.65	23.72	23.69
		3	0	24.50	23.64	23.68	23.37
		3	2	24.50	23.33	23.15	23.41
		3	3	24.50	23.48	23.54	23.60
		6	0	23.50	22.03	21.95	21.93
	16QAM	1	0	23.50	22.12	22.39	22.39
		1	3	23.50	21.83	22.14	22.06
		1	5	23.50	22.10	22.41	22.40
		3	0	23.50	22.26	22.28	21.98
		3	2	23.50	22.34	22.21	21.74
		3	3	23.50	22.13	22.35	21.98
		6	0	22.50	21.09	21.14	20.96
	64QAM	1	0	22.50	21.16	21.13	20.93
		1	3	22.50	21.02	21.19	21.00
		1	5	22.50	20.89	21.13	20.87
		3	0	22.50	21.02	20.84	20.80
		3	2	22.50	20.92	20.85	20.79
		3	3	22.50	20.88	20.87	20.84
		6	0	21.50	19.72	19.94	19.64
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20415CH	20525CH	20635CH
3MHz	QPSK	1	0	24.50	23.64	23.78	23.65
		1	7	24.50	23.34	24.04	23.22
		1	14	24.50	23.72	23.69	23.52
		8	0	23.50	22.02	22.17	21.95
		8	4	23.50	22.14	21.96	21.97
		8	7	23.50	22.08	21.91	21.94
		15	0	23.50	22.18	22.05	22.14
	16QAM	1	0	23.50	22.64	22.07	22.32
		1	7	23.50	22.29	21.83	21.54
		1	14	23.50	22.35	22.32	22.00
		8	0	22.50	21.19	21.03	21.04
		8	4	22.50	21.14	21.03	21.11
		8	7	22.50	21.05	21.18	21.20
		15	0	22.50	21.15	21.11	21.08
	64QAM	1	0	22.50	21.04	20.91	20.82
		1	7	22.50	20.97	20.96	20.98
		1	14	22.50	21.07	20.97	20.90
		8	0	21.50	19.91	19.81	19.85
		8	4	21.50	19.90	19.88	19.76
		8	7	21.50	19.93	19.89	19.85
		15	0	21.50	19.95	19.85	19.76

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20425CH	20525CH	20625CH
5MHz	QPSK	1	0	24.50	23.61	23.62	23.58
		1	13	24.50	23.73	23.73	23.62
		1	24	24.50	23.65	23.61	23.48
		12	0	23.50	22.12	22.15	22.10
		12	6	23.50	22.09	22.14	22.00
		12	13	23.50	22.12	22.16	22.13
		25	0	23.50	22.17	22.11	22.04
	16QAM	1	0	23.50	22.04	22.18	22.26
		1	13	23.50	22.19	22.27	22.25
		1	24	23.50	22.09	22.24	22.26
		12	0	22.50	21.05	21.09	21.13
		12	6	22.50	21.10	21.04	21.19
		12	13	22.50	21.04	21.10	21.06
		25	0	22.50	21.06	21.04	21.13
	64QAM	1	0	22.50	20.89	20.94	20.90
		1	13	22.50	20.88	20.93	21.05
		1	24	22.50	20.92	21.02	20.90
		12	0	21.50	19.92	19.82	19.89
		12	6	21.50	20.04	19.94	19.92
		12	13	21.50	19.96	19.88	19.89
		25	0	21.50	19.76	19.79	19.79
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20450CH	20525CH	20600CH
10MHz	QPSK	1	0	24.50	23.50	23.54	23.56
		1	25	24.50	23.39	23.23	23.37
		1	49	24.50	23.75	23.79	23.74
		25	0	23.50	22.00	21.97	22.15
		25	13	23.50	22.07	22.03	22.06
		25	25	23.50	22.01	22.00	22.02
		50	0	23.50	22.06	22.00	22.10
	16QAM	1	0	23.50	22.20	22.49	22.28
		1	25	23.50	21.86	22.18	21.91
		1	49	23.50	22.30	22.49	22.29
		25	0	22.50	21.06	20.97	21.04
		25	13	22.50	20.97	21.02	20.96
		25	25	22.50	21.01	21.12	20.93
		50	0	22.50	21.08	21.07	20.99
	64QAM	1	0	22.50	20.94	20.94	20.81
		1	25	22.50	21.08	20.97	20.99
		1	49	22.50	21.26	21.10	20.88
		25	0	21.50	19.92	19.83	19.89
		25	13	21.50	19.98	19.78	19.90
		25	25	21.50	19.92	19.75	19.80
		50	0	21.50	19.72	19.79	19.74

Table 40: Test results conducted power measurement LTE Band 5 (Receiver OFF)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20407CH	20525CH	20643CH
1.4MHz	QPSK	1	0	22.80	22.04	22.02	21.97
		1	3	22.80	21.70	21.58	21.57
		1	5	22.80	21.95	22.02	21.98
		3	0	22.80	21.83	21.82	21.98
		3	2	22.80	21.55	21.61	21.58
		3	3	22.80	21.84	21.73	21.89
		6	0	22.80	21.73	21.74	21.62
	16QAM	1	0	22.80	22.13	22.13	22.16
		1	3	22.80	21.96	21.86	21.55
		1	5	22.80	21.92	22.15	22.12
		3	0	22.80	21.98	21.92	21.84
		3	2	22.80	21.99	21.83	21.47
		3	3	22.80	21.94	21.94	21.73
		6	0	22.50	21.16	21.13	21.00
	64QAM	1	0	22.50	21.12	21.07	20.96
		1	3	22.50	21.15	21.00	21.10
		1	5	22.50	20.92	21.26	21.04
		3	0	22.50	20.85	20.82	20.79
		3	2	22.50	20.96	20.87	20.79
		3	3	22.50	21.00	20.87	20.86
		6	0	21.50	19.78	19.77	19.73
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20415CH	20525CH	20635CH
3MHz	QPSK	1	0	22.80	22.05	21.98	21.97
		1	7	22.80	21.79	22.30	21.05
		1	14	22.80	21.99	21.94	21.93
		8	0	22.80	21.73	21.85	21.71
		8	4	22.80	21.91	21.72	21.75
		8	7	22.80	21.80	21.67	21.68
		15	0	22.80	21.91	21.80	21.89
	16QAM	1	0	22.80	22.17	22.08	22.08
		1	7	22.80	22.02	21.58	21.26
		1	14	22.80	22.37	21.87	22.06
		8	0	22.50	21.06	21.03	21.08
		8	4	22.50	21.01	21.04	20.97
		8	7	22.50	21.06	21.13	21.00
		15	0	22.50	21.15	21.08	21.08
	64QAM	1	0	22.50	21.03	20.98	20.78
		1	7	22.50	21.05	20.84	20.97
		1	14	22.50	20.88	20.88	21.06
		8	0	21.50	19.98	19.83	19.77
		8	4	21.50	19.85	19.91	19.72
		8	7	21.50	19.95	19.89	19.83
		15	0	21.50	19.96	19.79	19.76

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20425CH	20525CH	20625CH
5MHz	QPSK	1	0	22.80	21.99	21.97	21.91
		1	13	22.80	21.96	22.04	21.98
		1	24	22.80	22.00	21.93	21.78
		12	0	22.80	22.04	21.93	21.85
		12	6	22.80	21.93	21.90	21.76
		12	13	22.80	21.86	21.94	21.91
		25	0	22.80	21.92	21.85	21.80
		25	13	22.80	21.96	22.03	21.96
	16QAM	1	0	22.80	21.96	22.03	21.96
		1	13	22.80	21.99	22.05	22.20
		1	24	22.80	21.84	22.02	22.00
		12	0	22.50	21.07	21.09	21.11
		12	6	22.50	21.10	21.05	21.18
		12	13	22.50	21.05	21.09	21.08
		25	0	22.50	21.07	21.03	21.12
		25	13	22.50	21.07	21.03	21.12
	64QAM	1	0	22.50	20.99	20.93	20.92
		1	13	22.50	20.73	20.72	20.93
		1	24	22.50	21.05	20.70	21.07
		12	0	21.50	19.91	19.88	19.86
		12	6	21.50	20.04	19.86	19.91
		12	13	21.50	19.97	19.90	19.90
		25	0	21.50	19.75	19.83	19.77
		25	13	21.50	19.75	19.83	19.77
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20450CH	20525CH	20600CH
10MHz	QPSK	1	0	22.80	21.88	21.84	21.88
		1	25	22.80	21.62	21.50	21.60
		1	49	22.80	22.04	22.07	22.08
		25	0	22.80	21.75	21.73	21.88
		25	13	22.80	21.82	21.80	21.84
		25	25	22.80	21.76	21.79	21.73
		50	0	22.80	21.84	21.78	21.89
		50	13	22.80	21.84	21.78	21.89
	16QAM	1	0	22.80	21.97	22.26	22.05
		1	25	22.80	21.70	21.88	21.55
		1	49	22.80	22.09	22.20	22.07
		25	0	22.50	21.07	20.98	21.04
		25	13	22.50	20.97	21.03	21.00
		25	25	22.50	21.01	21.11	20.93
		50	0	22.50	21.09	21.08	21.00
		50	13	22.50	21.09	21.08	21.00
	64QAM	1	0	22.50	21.08	21.03	20.96
		1	25	22.50	21.17	21.20	20.88
		1	49	22.50	21.01	20.88	20.96
		25	0	21.50	19.92	19.85	19.89
		25	13	21.50	19.95	19.83	19.90
		25	25	21.50	19.98	19.82	19.91
		50	0	21.50	19.71	19.78	19.70
		50	13	21.50	19.71	19.78	19.70

Table 41: Test results conducted power measurement LTE Band 5 (Receiver ON)

Note: The conducted power of LTE Band 5 is measured with RMS detector.

7.1.16 Conducted power of LTE Band 5(Main antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20407CH	20525CH	20643CH
1.4MHz	QPSK	1	0	24.50	22.85	22.96	22.83
		1	3	24.50	22.90	22.86	22.88
		1	5	24.50	22.87	22.93	22.84
		3	0	24.50	22.88	22.82	22.78
		3	2	24.50	22.99	22.83	22.83
		3	3	24.50	22.89	22.84	22.83
		6	0	23.50	21.42	21.24	21.35
	16QAM	1	0	23.50	21.56	21.58	21.51
		1	3	23.50	21.53	21.53	21.50
		1	5	23.50	21.66	21.72	21.31
		3	0	23.50	21.44	21.41	21.53
		3	2	23.50	21.41	21.44	21.36
		3	3	23.50	21.42	21.47	21.37
		6	0	22.50	20.19	20.17	20.25
	64QAM	1	0	22.50	20.49	20.27	20.32
		1	3	22.50	20.26	20.44	20.18
		1	5	22.50	20.46	20.32	20.41
		3	0	22.50	20.32	20.41	20.24
		3	2	22.50	20.49	20.35	20.29
		3	3	22.50	20.26	20.28	20.35
		6	0	21.50	19.21	19.16	19.19
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20415CH	20525CH	20635CH
3MHz	QPSK	1	0	24.50	22.89	22.88	22.90
		1	7	24.50	22.96	22.90	22.87
		1	14	24.50	22.90	22.85	22.89
		8	0	23.50	21.35	21.30	21.41
		8	4	23.50	21.31	21.37	21.37
		8	7	23.50	21.31	21.34	21.39
		15	0	23.50	21.42	21.42	21.35
	16QAM	1	0	23.50	21.49	21.56	21.54
		1	7	23.50	21.37	21.66	21.41
		1	14	23.50	21.61	21.34	21.28
		8	0	22.50	20.39	20.33	20.30
		8	4	22.50	20.33	20.43	20.25
		8	7	22.50	20.33	20.36	20.29
		15	0	22.50	20.22	20.40	20.25
	64QAM	1	0	22.50	20.48	20.65	20.22
		1	7	22.50	20.66	20.57	20.56
		1	14	22.50	20.59	20.51	20.27
		8	0	21.50	19.36	19.30	19.28
		8	4	21.50	19.26	19.43	19.40
		8	7	21.50	19.43	19.36	19.33
		15	0	21.50	19.40	19.36	19.34

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20425CH	20525CH	20625CH
5MHz	QPSK	1	0	24.50	22.82	22.83	22.84
		1	13	24.50	22.83	22.84	22.85
		1	24	24.50	22.84	22.77	22.84
		12	0	23.50	21.33	21.39	21.45
		12	6	23.50	21.33	21.39	21.46
		12	13	23.50	21.34	21.39	21.47
		25	0	23.50	21.29	21.50	21.38
	16QAM	1	0	23.50	21.63	21.54	21.59
		1	13	23.50	21.44	21.73	21.43
		1	24	23.50	21.59	21.55	21.51
		12	0	22.50	20.38	20.39	20.34
		12	6	22.50	20.28	20.37	20.39
		12	13	22.50	20.36	20.36	20.38
		25	0	22.50	20.27	20.34	20.26
	64QAM	1	0	22.50	20.49	20.23	20.55
		1	13	22.50	20.55	20.29	20.46
		1	24	22.50	20.41	20.42	20.39
		12	0	21.50	19.53	19.51	19.54
		12	6	21.50	19.51	19.54	19.57
		12	13	21.50	19.38	19.46	19.41
		25	0	21.50	19.26	19.35	19.33
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20450CH	20525CH	20600CH
10MHz	QPSK	1	0	24.50	22.88	22.90	22.86
		1	25	24.50	22.86	22.92	22.88
		1	49	24.50	22.88	22.83	22.86
		25	0	23.50	21.52	21.31	21.26
		25	13	23.50	21.41	21.29	21.36
		25	25	23.50	21.33	21.30	21.36
		50	0	23.50	21.35	21.39	21.31
	16QAM	1	0	23.50	21.38	21.49	21.41
		1	25	23.50	21.42	21.29	21.49
		1	49	23.50	21.49	21.35	21.42
		25	0	22.50	20.37	20.28	20.37
		25	13	22.50	20.36	20.27	20.40
		25	25	22.50	20.37	20.29	20.29
		50	0	22.50	20.35	20.26	20.29
	64QAM	1	0	22.50	20.41	20.46	20.39
		1	25	22.50	20.54	20.36	20.45
		1	49	22.50	20.45	20.66	20.38
		25	0	21.50	19.45	19.26	19.33
		25	13	21.50	19.45	19.31	19.37
		25	25	21.50	19.36	19.32	19.42
		50	0	21.50	19.34	19.29	19.29

Table 42: Test results conducted power measurement LTE Band 5

Note: The conducted power of LTE Band 5 is measured with RMS detector.

7.1.17 Conducted power of LTE Band 7(Second antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20775CH	21100CH	21425CH
5MHz	QPSK	1	0	22.00	21.06	21.34	21.15
		1	13	22.00	21.33	21.45	21.25
		1	24	22.00	21.30	21.32	21.29
		12	0	22.00	21.30	21.43	21.25
		12	6	22.00	21.15	21.42	21.42
		12	13	22.00	21.14	21.41	21.27
		25	0	22.00	21.27	21.38	21.26
	16QAM	1	0	22.00	21.01	21.00	20.81
		1	13	22.00	20.99	20.99	20.96
		1	24	22.00	21.05	21.13	20.80
		12	0	22.00	20.91	21.24	21.06
		12	6	22.00	20.91	21.27	21.16
		12	13	22.00	20.96	21.28	21.06
		25	0	22.00	20.87	21.18	21.01
	64QAM	1	0	22.00	21.41	21.51	21.21
		1	13	22.00	21.24	21.74	21.32
		1	24	22.00	21.32	21.43	21.06
		12	0	21.00	20.08	20.49	20.27
		12	6	21.00	20.14	20.46	20.24
		12	13	21.00	20.14	20.46	20.23
		25	0	21.00	20.15	20.43	20.20
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20800CH	21100CH	21400CH
10MHz	QPSK	1	0	22.00	21.28	21.33	21.11
		1	25	22.00	21.28	21.50	21.45
		1	49	22.00	21.09	21.40	21.20
		25	0	22.00	21.16	21.37	21.30
		25	13	22.00	21.27	21.34	21.42
		25	25	22.00	21.09	21.39	21.27
		50	0	22.00	21.28	21.42	21.45
	16QAM	1	0	22.00	21.02	21.42	21.19
		1	25	22.00	21.11	21.50	21.34
		1	49	22.00	21.13	21.33	21.14
		25	0	22.00	21.02	21.43	21.17
		25	13	22.00	21.05	21.25	21.16
		25	25	22.00	21.08	21.50	21.11
		50	0	22.00	21.25	21.29	21.25
	64QAM	1	0	22.00	20.78	21.25	21.69
		1	25	22.00	21.02	21.39	20.92
		1	49	22.00	21.11	21.40	21.61
		25	0	21.00	20.17	20.39	20.27
		25	13	21.00	20.10	20.36	20.47
		25	25	21.00	20.09	20.37	20.48
		50	0	21.00	20.30	20.41	20.38

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20825CH	21100CH	21375CH
15MHz	QPSK	1	0	22.00	21.11	21.31	21.30
		1	38	22.00	21.13	21.39	21.35
		1	74	22.00	21.12	21.39	21.36
		36	0	22.00	21.13	21.49	21.30
		36	18	22.00	21.13	21.49	21.32
		36	39	22.00	21.12	21.48	21.30
		75	0	22.00	21.30	21.47	21.49
	16QAM	1	0	22.00	21.01	21.19	20.80
		1	38	22.00	20.84	21.11	21.06
		1	74	22.00	20.93	21.17	21.00
		36	0	22.00	20.84	21.15	20.98
		36	18	22.00	20.97	21.15	21.00
		36	39	22.00	20.87	21.13	20.99
		75	0	22.00	21.07	21.15	21.17
	64QAM	1	0	22.00	21.26	21.37	21.27
		1	38	22.00	20.92	21.44	21.40
		1	74	22.00	21.23	21.58	21.24
		36	0	21.00	20.16	20.34	20.28
		36	18	21.00	20.11	20.36	20.30
		36	39	21.00	20.18	20.38	20.29
		75	0	21.00	20.31	20.42	20.58
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20850CH	21100CH	21350CH
20MHz	QPSK	1	0	22.00	21.03	21.17	21.16
		1	50	22.00	21.21	21.19	21.34
		1	99	22.00	21.22	21.15	21.36
		50	0	22.00	21.53	21.56	21.52
		50	25	22.00	21.29	21.58	21.48
		50	50	22.00	21.51	21.57	21.49
		100	0	22.00	21.41	21.60	21.77
	16QAM	1	0	22.00	20.87	21.14	20.85
		1	50	22.00	21.00	21.03	21.14
		1	99	22.00	20.85	21.14	21.02
		50	0	22.00	21.09	21.29	21.18
		50	25	22.00	21.05	21.29	21.16
		50	50	22.00	21.06	21.30	21.17
		100	0	22.00	21.21	21.36	21.27
	64QAM	1	0	22.00	21.00	21.50	21.00
		1	50	22.00	21.27	21.15	21.14
		1	99	22.00	21.24	21.61	21.34
		50	0	21.00	20.53	20.60	20.48
		50	25	21.00	20.55	20.58	20.46
		50	50	21.00	20.51	20.62	20.49
		100	0	21.00	20.33	20.67	20.57

Table 43: Test results conducted power measurement LTE Band 7 (Receiver OFF)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20775CH	21100CH	21425CH
5MHz	QPSK	1	0	16.90	16.17	16.31	16.24
		1	13	16.90	16.12	16.30	16.34
		1	24	16.90	16.06	16.25	16.21
		12	0	16.90	16.12	16.39	16.31
		12	6	16.90	16.14	16.33	16.35
		12	13	16.90	16.17	16.38	16.35
		25	0	16.90	16.12	16.30	16.20
	16QAM	1	0	16.90	16.27	16.36	16.14
		1	13	16.90	16.18	16.43	16.35
		1	24	16.90	16.25	16.31	16.40
		12	0	16.90	16.18	16.22	16.24
		12	6	16.90	16.15	16.25	16.23
		12	13	16.90	16.16	16.29	16.27
		25	0	16.90	16.07	16.24	16.14
	64QAM	1	0	16.90	16.32	16.33	16.37
		1	13	16.90	16.09	16.08	16.13
		1	24	16.90	16.25	16.28	16.25
		12	0	16.90	16.10	16.32	16.36
		12	6	16.90	16.05	16.35	16.37
		12	13	16.90	16.07	16.36	16.38
		25	0	16.90	16.04	16.24	16.07
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20800CH	21100CH	21400CH
10MHz	QPSK	1	0	16.90	16.02	16.28	16.28
		1	25	16.90	16.13	16.25	16.28
		1	49	16.90	16.10	16.30	16.32
		25	0	16.90	15.97	16.30	16.35
		25	13	16.90	16.12	16.24	16.23
		25	25	16.90	16.01	16.31	16.33
		50	0	16.90	16.10	16.29	16.25
	16QAM	1	0	16.90	16.05	16.28	16.44
		1	25	16.90	16.00	16.29	16.30
		1	49	16.90	16.05	16.35	16.43
		25	0	16.90	16.08	16.13	16.18
		25	13	16.90	16.10	16.12	16.20
		25	25	16.90	16.05	16.12	16.19
		50	0	16.90	15.97	16.26	16.21
	64QAM	1	0	16.90	16.01	16.16	16.42
		1	25	16.90	16.13	16.20	16.48
		1	49	16.90	16.10	16.26	16.29
		25	0	16.90	16.00	16.17	16.27
		25	13	16.90	16.10	16.32	16.22
		25	25	16.90	15.99	16.28	16.26
		50	0	16.90	16.06	16.24	16.27

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20825CH	21100CH	21375CH
15MHz	QPSK	1	0	16.90	15.97	16.26	16.27
		1	38	16.90	16.06	16.18	16.30
		1	74	16.90	16.06	16.19	16.30
		36	0	16.90	16.14	16.23	16.38
		36	18	16.90	16.17	16.35	16.37
		36	39	16.90	16.17	16.33	16.40
		75	0	16.90	16.09	16.27	16.37
	16QAM	1	0	16.90	15.99	16.50	16.35
		1	38	16.90	15.93	16.28	16.35
		1	74	16.90	15.98	16.03	16.29
		36	0	16.90	16.06	16.22	16.26
		36	18	16.90	16.06	16.22	16.32
		36	39	16.90	16.07	16.22	16.27
		75	0	16.90	15.96	16.21	16.25
	64QAM	1	0	16.90	16.27	16.42	16.32
		1	38	16.90	16.23	16.16	16.21
		1	74	16.90	16.17	16.23	16.26
		36	0	16.90	16.05	16.31	16.32
		36	18	16.90	16.07	16.16	16.23
		36	39	16.90	16.11	16.28	16.24
		75	0	16.90	16.09	16.26	16.24
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20850CH	21100CH	21350CH
20MHz	QPSK	1	0	16.90	16.05	16.18	16.34
		1	50	16.90	16.13	16.19	16.39
		1	99	16.90	16.08	16.19	16.35
		50	0	16.90	16.28	16.46	16.39
		50	25	16.90	16.29	16.39	16.39
		50	50	16.90	16.15	16.40	16.39
		100	0	16.90	16.27	16.44	16.43
	16QAM	1	0	16.90	16.09	16.36	16.41
		1	50	16.90	16.26	16.30	16.47
		1	99	16.90	16.15	16.06	16.44
		50	0	16.90	16.22	16.39	16.46
		50	25	16.90	16.22	16.37	16.44
		50	50	16.90	16.16	16.37	16.45
		100	0	16.90	16.06	16.40	16.34
	64QAM	1	0	16.90	15.96	16.26	16.33
		1	50	16.90	16.24	16.21	16.45
		1	99	16.90	16.24	16.35	16.34
		50	0	16.90	16.12	16.31	16.49
		50	25	16.90	16.10	16.30	16.49
		50	50	16.90	16.11	16.43	16.46
		100	0	16.90	16.17	16.36	16.40

Table 44: Test results conducted power measurement LTE Band 7 (Receiver ON)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20775CH	21100CH	21425CH
5MHz	QPSK	1	0	21.50	20.51	20.88	20.67
		1	13	21.50	20.54	20.86	20.70
		1	24	21.50	20.57	20.88	20.79
		12	0	21.50	20.82	20.91	20.75
		12	6	21.50	20.78	20.92	20.77
		12	13	21.50	20.64	20.90	20.74
		25	0	21.50	20.84	20.96	20.77
	16QAM	1	0	21.50	20.47	20.65	20.48
		1	13	21.50	20.33	20.64	20.56
		1	24	21.50	20.46	20.68	20.34
		12	0	21.50	20.37	20.76	20.58
		12	6	21.50	20.44	20.77	20.59
		12	13	21.50	20.42	20.72	20.60
		25	0	21.50	20.33	20.82	20.53
	64QAM	1	0	21.50	20.64	20.86	20.74
		1	13	21.50	20.83	20.83	21.10
		1	24	21.50	21.02	20.84	20.61
		12	0	20.50	20.14	20.36	20.23
		12	6	20.50	20.12	20.45	20.32
		12	13	20.50	20.06	20.38	20.18
		25	0	20.50	20.27	20.42	20.19
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20800CH	21100CH	21400CH
10MHz	QPSK	1	0	21.50	20.64	20.86	20.91
		1	25	21.50	20.75	20.99	20.83
		1	49	21.50	20.61	20.91	21.06
		25	0	21.50	20.75	20.87	20.73
		25	13	21.50	20.75	20.86	20.74
		25	25	21.50	20.60	20.84	20.72
		50	0	21.50	20.74	20.90	20.81
	16QAM	1	0	21.50	20.50	20.90	20.80
		1	25	21.50	20.60	20.79	20.81
		1	49	21.50	20.66	20.96	20.93
		25	0	21.50	20.57	20.78	20.67
		25	13	21.50	20.57	20.79	20.66
		25	25	21.50	20.52	20.80	20.71
		50	0	21.50	20.73	20.84	20.75
	64QAM	1	0	21.50	20.66	20.76	20.45
		1	25	21.50	20.47	20.79	20.91
		1	49	21.50	20.72	20.89	20.95
		25	0	20.50	20.14	20.45	20.29
		25	13	20.50	20.20	20.41	20.26
		25	25	20.50	20.11	20.37	20.44
		50	0	20.50	20.30	20.42	20.44

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20825CH	21100CH	21375CH
15MHz	QPSK	1	0	21.50	20.63	20.88	20.76
		1	38	21.50	20.61	20.89	20.83
		1	74	21.50	20.60	20.85	20.84
		36	0	21.50	20.62	20.99	20.92
		36	18	21.50	20.60	21.01	20.97
		36	39	21.50	20.59	20.84	20.97
		75	0	21.50	20.77	21.05	21.02
	16QAM	1	0	21.50	20.42	20.58	20.66
		1	38	21.50	20.48	20.67	20.38
		1	74	21.50	20.43	20.62	20.49
		36	0	21.50	20.35	20.68	20.59
		36	18	21.50	20.32	20.67	20.50
		36	39	21.50	20.33	20.69	20.46
		75	0	21.50	20.54	20.70	20.64
	64QAM	1	0	21.50	20.69	20.98	20.64
		1	38	21.50	20.58	20.75	20.95
		1	74	21.50	20.68	21.08	20.95
		36	0	20.50	20.11	20.36	20.40
		36	18	20.50	20.09	20.48	20.45
		36	39	20.50	20.29	20.39	20.41
		75	0	20.50	20.19	20.44	20.46
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20850CH	21100CH	21350CH
20MHz	QPSK	1	0	21.50	20.49	20.73	20.81
		1	50	21.50	20.73	20.72	20.63
		1	99	21.50	20.71	20.70	20.80
		50	0	21.50	21.02	21.09	20.97
		50	25	21.50	20.82	21.10	20.95
		50	50	21.50	20.78	21.10	20.96
		100	0	21.50	20.92	21.11	21.17
	16QAM	1	0	21.50	20.13	20.53	20.38
		1	50	21.50	20.13	20.59	20.32
		1	99	21.50	20.34	20.39	20.29
		50	0	21.50	20.56	20.88	20.65
		50	25	21.50	20.53	20.86	20.65
		50	50	21.50	20.54	20.89	20.68
		100	0	21.50	20.69	20.84	20.74
	64QAM	1	0	21.50	20.54	20.76	21.06
		1	50	21.50	20.64	20.61	21.07
		1	99	21.50	20.79	20.79	20.71
		50	0	20.50	20.41	20.48	20.48
		50	25	20.50	20.42	20.48	20.45
		50	50	20.50	20.43	20.47	20.48
		100	0	20.50	20.35	20.46	20.43

Table 45: Test results conducted power measurement LTE Band 7 (Receiver OFF+WiFi/BT)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20775CH	21100CH	21425CH
5MHz	QPSK	1	0	16.40	15.64	15.75	15.79
		1	13	16.40	15.61	15.79	15.87
		1	24	16.40	15.57	15.77	15.84
		12	0	16.40	15.64	15.83	15.86
		12	6	16.40	15.65	15.82	15.86
		12	13	16.40	15.65	15.82	15.86
		25	0	16.40	15.62	15.77	15.76
	16QAM	1	0	16.40	15.75	15.91	15.81
		1	13	16.40	15.66	15.85	15.91
		1	24	16.40	15.48	15.81	15.81
		12	0	16.40	15.56	15.84	15.78
		12	6	16.40	15.57	15.73	15.82
		12	13	16.40	15.63	15.89	15.79
		25	0	16.40	15.50	15.71	15.71
	64QAM	1	0	16.40	15.57	15.86	15.89
		1	13	16.40	15.59	15.99	15.93
		1	24	16.40	15.82	15.82	15.78
		12	0	16.40	15.57	15.82	15.77
		12	6	16.40	15.60	15.83	15.79
		12	13	16.40	15.66	15.82	15.75
		25	0	16.40	15.56	15.80	15.66
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20800CH	21100CH	21400CH
10MHz	QPSK	1	0	16.40	15.58	15.73	15.85
		1	25	16.40	15.58	15.83	15.80
		1	49	16.40	15.57	15.81	15.90
		25	0	16.40	15.54	15.81	15.84
		25	13	16.40	15.65	15.79	15.73
		25	25	16.40	15.53	15.81	15.79
		50	0	16.40	15.60	15.78	15.80
	16QAM	1	0	16.40	15.62	15.85	15.84
		1	25	16.40	15.67	15.78	15.78
		1	49	16.40	15.51	15.70	15.75
		25	0	16.40	15.60	15.71	15.74
		25	13	16.40	15.60	15.74	15.70
		25	25	16.40	15.54	15.73	15.71
		50	0	16.40	15.52	15.74	15.70
	64QAM	1	0	16.40	15.69	15.77	15.96
		1	25	16.40	15.46	15.83	15.76
		1	49	16.40	15.44	15.74	15.88
		25	0	16.40	15.63	15.79	15.81
		25	13	16.40	15.62	15.79	15.80
		25	25	16.40	15.59	15.78	15.86
		50	0	16.40	15.56	15.77	15.83

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20825CH	21100CH	21375CH
15MHz	QPSK	1	0	16.40	15.60	15.69	15.81
		1	38	16.40	15.60	15.72	15.79
		1	74	16.40	15.59	15.72	15.82
		36	0	16.40	15.49	15.85	15.87
		36	18	16.40	15.60	15.69	15.82
		36	39	16.40	15.60	15.75	15.92
		75	0	16.40	15.59	15.77	15.84
	16QAM	1	0	16.40	15.54	15.91	15.87
		1	38	16.40	15.53	15.76	16.07
		1	74	16.40	15.58	15.71	15.86
		36	0	16.40	15.57	15.74	15.83
		36	18	16.40	15.60	15.72	15.80
		36	39	16.40	15.63	15.70	15.82
		75	0	16.40	15.53	15.77	15.73
	64QAM	1	0	16.40	15.44	15.53	15.90
		1	38	16.40	15.79	15.85	15.74
		1	74	16.40	15.50	15.78	15.80
		36	0	16.40	15.59	15.77	15.80
		36	18	16.40	15.60	15.76	15.72
		36	39	16.40	15.55	15.77	15.74
		75	0	16.40	15.58	15.80	15.77
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20850CH	21100CH	21350CH
20MHz	QPSK	1	0	16.40	15.57	15.75	15.87
		1	50	16.40	15.55	15.72	15.89
		1	99	16.40	15.58	15.74	15.84
		50	0	16.40	15.79	15.79	15.91
		50	25	16.40	15.71	15.91	15.92
		50	50	16.40	15.64	15.92	15.93
		100	0	16.40	15.69	15.97	15.98
	16QAM	1	0	16.40	15.79	15.81	15.96
		1	50	16.40	15.56	15.58	15.95
		1	99	16.40	15.55	15.67	15.81
		50	0	16.40	15.71	15.92	15.93
		50	25	16.40	15.70	15.89	15.94
		50	50	16.40	15.66	15.87	15.94
		100	0	16.40	15.68	15.86	15.87
	64QAM	1	0	16.40	15.57	15.73	15.83
		1	50	16.40	15.65	15.66	15.92
		1	99	16.40	15.60	15.86	15.90
		50	0	16.40	15.69	15.90	15.97
		50	25	16.40	15.67	15.90	15.95
		50	50	16.40	15.70	15.90	15.98
		100	0	16.40	15.72	15.89	15.93

Table 46: Test results conducted power measurement LTE Band 7 (Receiver ON+WiFi/BT)

Note: The conducted power of LTE Band 7 is measured with RMS detector.

7.1.18 Conducted power of LTE Band 7(Main antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20775CH	21100CH	21425CH
5MHz	QPSK	1	0	24.00	22.23	22.43	22.33
		1	13	24.00	22.26	22.44	22.34
		1	24	24.00	22.26	22.34	22.31
		12	0	23.00	20.82	20.95	20.87
		12	6	23.00	20.83	20.97	20.85
		12	13	23.00	20.80	20.97	20.75
		25	0	23.00	20.84	20.96	20.95
	16QAM	1	0	23.00	21.28	21.32	21.20
		1	13	23.00	21.33	21.14	20.91
		1	24	23.00	21.24	21.28	20.95
		12	0	22.00	20.06	20.26	20.07
		12	6	22.00	20.14	20.35	20.15
		12	13	22.00	20.10	20.36	20.12
		25	0	22.00	20.09	20.22	20.05
	64QAM	1	0	22.00	20.58	20.47	20.38
		1	13	22.00	20.32	20.56	20.28
		1	24	22.00	20.68	20.44	20.44
		12	0	21.00	19.30	19.54	19.28
		12	6	21.00	19.49	19.54	19.34
		12	13	21.00	19.59	19.57	19.32
		25	0	21.00	19.37	19.50	19.30
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20800CH	21100CH	21400CH
10MHz	QPSK	1	0	24.00	22.48	22.60	22.25
		1	25	24.00	22.31	22.52	22.40
		1	49	24.00	22.33	22.52	22.34
		25	0	23.00	20.78	21.07	20.87
		25	13	23.00	20.89	20.93	20.98
		25	25	23.00	20.94	21.07	20.78
		50	0	23.00	20.78	21.07	21.09
	16QAM	1	0	23.00	21.07	21.34	21.09
		1	25	23.00	21.36	21.39	21.24
		1	49	23.00	21.31	21.05	21.09
		25	0	22.00	20.30	20.44	20.18
		25	13	22.00	20.15	20.46	20.19
		25	25	22.00	20.32	20.31	20.14
		50	0	22.00	20.23	20.38	20.52
	64QAM	1	0	22.00	20.19	20.43	20.36
		1	25	22.00	20.25	20.49	20.33
		1	49	22.00	20.17	20.42	20.02
		25	0	21.00	19.44	19.46	19.48
		25	13	21.00	19.50	19.48	19.45
		25	25	21.00	19.43	19.53	19.50
		50	0	21.00	19.36	19.41	19.46

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20825CH	21100CH	21375CH
15MHz	QPSK	1	0	24.00	22.32	22.39	22.38
		1	38	24.00	22.30	22.40	22.41
		1	74	24.00	22.30	22.40	22.39
		36	0	23.00	20.78	20.89	20.82
		36	18	23.00	20.77	20.92	20.82
		36	39	23.00	20.79	20.91	20.82
		75	0	23.00	20.85	21.05	21.22
	16QAM	1	0	23.00	21.10	21.32	21.01
		1	38	23.00	21.09	21.24	20.83
		1	74	23.00	21.01	21.31	21.05
		36	0	22.00	20.14	20.20	20.12
		36	18	22.00	20.10	20.20	20.10
		36	39	22.00	20.11	20.21	20.11
		75	0	22.00	20.19	20.20	20.16
	64QAM	1	0	22.00	20.37	20.38	20.45
		1	38	22.00	20.21	20.46	20.42
		1	74	22.00	20.39	20.49	20.52
		36	0	21.00	19.30	19.53	19.32
		36	18	21.00	19.33	19.54	19.30
		36	39	21.00	19.27	19.52	19.29
		75	0	21.00	19.30	19.46	19.52
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20850CH	21100CH	21350CH
20MHz	QPSK	1	0	24.00	22.40	22.49	22.20
		1	50	24.00	22.18	22.46	22.25
		1	99	24.00	22.24	22.50	22.23
		50	0	23.00	20.97	21.12	21.20
		50	25	23.00	20.99	21.12	21.03
		50	50	23.00	21.00	21.10	21.04
		100	0	23.00	21.04	21.29	21.30
	16QAM	1	0	23.00	21.13	21.07	21.09
		1	50	23.00	20.92	21.07	21.07
		1	99	23.00	20.98	21.15	21.15
		50	0	22.00	20.24	20.34	20.23
		50	25	22.00	20.25	20.34	20.25
		50	50	22.00	20.25	20.36	20.25
		100	0	22.00	20.43	20.43	20.43
	64QAM	1	0	22.00	20.38	20.38	20.12
		1	50	22.00	20.27	20.32	20.41
		1	99	22.00	20.31	20.28	20.34
		50	0	21.00	19.48	19.61	19.73
		50	25	21.00	19.50	19.66	19.66
		50	50	21.00	19.52	19.61	19.71
		100	0	21.00	19.65	19.68	19.65

Table 47: Test results conducted power measurement LTE Band 7 (Receiver ON)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20775CH	21100CH	21425CH
5MHz	QPSK	1	0	23.00	21.33	21.45	21.29
		1	13	23.00	21.27	21.42	21.31
		1	24	23.00	21.30	21.41	21.27
		12	0	23.00	20.87	21.00	20.88
		12	6	23.00	20.88	20.99	20.86
		12	13	23.00	20.84	20.98	20.84
		25	0	23.00	20.81	20.99	20.80
	16QAM	1	0	23.00	21.15	21.14	21.18
		1	13	23.00	21.18	21.22	20.93
		1	24	23.00	21.16	21.31	21.21
		12	0	22.00	20.13	20.16	20.18
		12	6	22.00	20.12	20.39	20.16
		12	13	22.00	20.04	20.40	20.10
		25	0	22.00	20.21	20.29	20.06
	64QAM	1	0	22.00	20.14	20.43	20.53
		1	13	22.00	20.02	20.54	20.34
		1	24	22.00	20.36	20.58	20.37
		12	0	21.00	19.46	19.70	19.32
		12	6	21.00	19.29	19.55	19.36
		12	13	21.00	19.44	19.55	19.29
		25	0	21.00	19.38	19.53	19.32
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20800CH	21100CH	21400CH
10MHz	QPSK	1	0	23.00	21.45	21.33	21.47
		1	25	23.00	21.37	21.49	21.37
		1	49	23.00	21.31	21.57	21.39
		25	0	23.00	20.79	21.10	20.89
		25	13	23.00	20.98	20.96	20.81
		25	25	23.00	20.77	21.07	21.01
		50	0	23.00	20.87	21.07	20.95
	16QAM	1	0	23.00	21.45	21.35	21.47
		1	25	23.00	21.24	21.50	21.03
		1	49	23.00	21.41	21.47	21.31
		25	0	22.00	20.35	20.51	20.26
		25	13	22.00	20.20	20.46	20.22
		25	25	22.00	20.22	20.49	20.30
		50	0	22.00	20.33	20.39	20.51
	64QAM	1	0	22.00	20.05	20.25	20.26
		1	25	22.00	20.27	20.41	20.16
		1	49	22.00	20.37	20.49	19.99
		25	0	21.00	19.27	19.56	19.44
		25	13	21.00	19.28	19.46	19.51
		25	25	21.00	19.45	19.45	19.47
		50	0	21.00	19.36	19.43	19.62

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20825CH	21100CH	21375CH
15MHz	QPSK	1	0	23.00	21.29	21.37	21.36
		1	38	23.00	21.30	21.38	21.34
		1	74	23.00	21.28	21.40	21.34
		36	0	23.00	20.84	20.93	20.88
		36	18	23.00	20.81	20.94	20.83
		36	39	23.00	20.80	20.93	20.87
		75	0	23.00	21.06	21.07	21.21
	16QAM	1	0	23.00	21.04	21.30	21.03
		1	38	23.00	20.83	21.19	21.14
		1	74	23.00	21.20	21.17	20.77
		36	0	22.00	20.13	20.27	20.14
		36	18	22.00	20.15	20.25	20.14
		36	39	22.00	20.19	20.24	20.11
		75	0	22.00	20.19	20.21	20.39
	64QAM	1	0	22.00	20.21	20.25	20.41
		1	38	22.00	20.46	20.24	20.33
		1	74	22.00	20.35	20.25	20.30
		36	0	21.00	19.29	19.52	19.36
		36	18	21.00	19.37	19.56	19.29
		36	39	21.00	19.30	19.54	19.34
		75	0	21.00	19.33	19.52	19.64
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	20850CH	21100CH	21350CH
20MHz	QPSK	1	0	23.00	21.19	21.31	21.21
		1	50	23.00	21.16	21.28	21.48
		1	99	23.00	21.14	21.24	21.23
		50	0	23.00	21.02	21.12	21.28
		50	25	23.00	21.01	21.13	21.27
		50	50	23.00	21.03	21.13	21.26
		100	0	23.00	21.09	21.32	21.21
	16QAM	1	0	23.00	21.11	21.11	21.09
		1	50	23.00	21.05	21.21	21.15
		1	99	23.00	20.99	21.10	20.96
		50	0	22.00	20.31	20.34	20.26
		50	25	22.00	20.30	20.32	20.26
		50	50	22.00	20.31	20.30	20.24
		100	0	22.00	20.33	20.41	20.29
	64QAM	1	0	22.00	20.44	20.20	20.38
		1	50	22.00	20.26	20.22	20.15
		1	99	22.00	20.40	20.17	20.34
		50	0	21.00	19.52	19.65	19.68
		50	25	21.00	19.51	19.67	19.67
		50	50	21.00	19.52	19.64	19.74
		100	0	21.00	19.62	19.66	19.62

Table 48: Test results conducted power measurement LTE Band 7 (Receiver OFF)

Note: The conducted power of LTE Band 7 is measured with RMS detector.

7.1.19 Conducted power of LTE Band 12(Second antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23017CH	23095CH	23173CH
1.4MHz	QPSK	1	0	24.50	23.86	23.74	23.81
		1	3	24.50	23.50	23.64	23.54
		1	5	24.50	23.90	23.81	23.79
		3	0	24.50	23.66	23.56	23.87
		3	2	24.50	23.67	23.29	23.76
		3	3	24.50	23.75	23.61	23.57
		6	0	23.50	22.73	22.82	22.59
	16QAM	1	0	23.50	22.99	22.95	22.98
		1	3	23.50	22.44	22.88	22.33
		1	5	23.50	22.96	23.16	22.92
		3	0	23.50	22.84	22.69	22.71
		3	2	23.50	22.88	22.64	22.81
		3	3	23.50	22.81	22.77	22.66
		6	0	22.50	21.85	21.51	21.70
	64QAM	1	0	22.50	21.81	21.48	21.62
		1	3	22.50	21.77	21.63	21.51
		1	5	22.50	22.00	21.55	21.49
		3	0	22.50	21.58	21.46	21.33
		3	2	22.50	21.63	21.32	21.54
		3	3	22.50	21.52	21.38	21.51
		6	0	21.50	20.50	20.34	20.45
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23025CH	23095CH	23165CH
3MHz	QPSK	1	0	24.50	23.81	23.60	23.73
		1	7	24.50	23.28	23.70	23.82
		1	14	24.50	23.62	23.74	23.74
		8	0	23.50	22.66	22.56	22.80
		8	4	23.50	22.68	22.63	22.61
		8	7	23.50	22.74	22.62	22.70
		15	0	23.50	22.81	22.69	22.77
	16QAM	1	0	23.50	23.02	23.01	22.67
		1	7	23.50	22.83	22.34	22.04
		1	14	23.50	22.86	22.94	22.66
		8	0	22.50	21.67	21.76	21.78
		8	4	22.50	21.74	21.70	21.75
		8	7	22.50	21.72	21.68	21.73
		15	0	22.50	21.62	21.61	21.68
	64QAM	1	0	22.50	21.84	21.45	21.47
		1	7	22.50	21.85	21.50	21.42
		1	14	22.50	21.62	21.66	21.74
		8	0	21.50	20.39	20.45	20.38
		8	4	21.50	20.48	20.46	20.30
		8	7	21.50	20.49	20.39	20.40
		15	0	21.50	20.41	20.32	20.47

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23035CH	23095CH	23155CH
5MHz	QPSK	1	0	24.50	23.94	23.69	23.70
		1	13	24.50	23.69	23.77	23.82
		1	24	24.50	23.73	23.73	23.75
		12	0	23.50	22.84	22.67	22.80
		12	6	23.50	22.74	22.62	22.67
		12	13	23.50	22.79	22.70	22.73
		25	0	23.50	22.79	22.63	22.75
	16QAM	1	0	23.50	22.95	23.13	22.88
		1	13	23.50	22.76	23.11	22.92
		1	24	23.50	22.84	23.18	22.98
		12	0	22.50	21.77	21.55	21.73
		12	6	22.50	21.59	21.60	21.73
		12	13	22.50	21.78	21.60	21.67
		25	0	22.50	21.69	21.75	21.70
	64QAM	1	0	22.50	21.83	21.54	21.22
		1	13	22.50	21.66	21.61	21.35
		1	24	22.50	21.59	21.31	21.58
		12	0	21.50	20.47	20.46	20.56
		12	6	21.50	20.54	20.51	20.57
		12	13	21.50	20.55	20.53	20.59
		25	0	21.50	20.48	20.32	20.47
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23060CH	23095CH	23130CH
10MHz	QPSK	1	0	24.50	23.86	23.62	23.70
		1	25	24.50	23.42	23.48	23.36
		1	49	24.50	23.99	24.03	24.11
		25	0	23.50	22.75	22.66	22.62
		25	13	23.50	22.78	22.74	22.70
		25	25	23.50	22.69	22.76	22.79
		50	0	23.50	22.76	22.76	22.76
	16QAM	1	0	23.50	22.92	22.85	22.65
		1	25	23.50	22.72	22.75	22.65
		1	49	23.50	23.14	23.15	23.02
		25	0	22.50	21.59	21.70	21.60
		25	13	22.50	21.62	21.60	21.62
		25	25	22.50	21.58	21.62	21.67
		50	0	22.50	21.63	21.67	21.71
	64QAM	1	0	22.50	21.40	21.45	21.31
		1	25	22.50	21.66	21.36	21.52
		1	49	22.50	21.47	21.41	21.59
		25	0	21.50	20.41	20.41	20.44
		25	13	21.50	20.41	20.49	20.47
		25	25	21.50	20.43	20.47	20.40
		50	0	21.50	20.35	20.34	20.34

Table 49: Test results conducted power measurement LTE Band 12 (Receiver OFF)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23017CH	23095CH	23173CH
1.4MHz	QPSK	1	0	23.50	22.87	22.82	22.82
		1	3	23.50	22.57	22.57	22.42
		1	5	23.50	22.80	22.80	22.92
		3	0	23.50	22.68	22.51	22.90
		3	2	23.50	22.71	22.38	22.78
		3	3	23.50	22.76	22.70	22.65
		6	0	23.50	22.71	22.82	22.69
	16QAM	1	0	23.50	22.99	22.97	23.00
		1	3	23.50	22.43	22.78	22.34
		1	5	23.50	22.97	23.20	22.93
		3	0	23.50	22.66	22.71	22.70
		3	2	23.50	22.64	22.63	22.85
		3	3	23.50	22.81	22.66	22.64
		6	0	22.50	21.78	21.56	21.69
	64QAM	1	0	22.50	21.89	21.50	21.58
		1	3	22.50	21.45	21.73	21.40
		1	5	22.50	21.86	21.45	21.53
		3	0	22.50	21.67	21.48	21.35
		3	2	22.50	21.69	21.49	22.41
		3	3	22.50	21.59	21.49	21.46
		6	0	21.50	20.58	20.39	20.42
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23025CH	23095CH	23165CH
3MHz	QPSK	1	0	23.50	22.72	22.77	22.91
		1	7	23.50	22.66	22.42	22.87
		1	14	23.50	22.73	22.90	22.89
		8	0	23.50	22.79	22.58	22.65
		8	4	23.50	22.66	22.60	22.77
		8	7	23.50	22.75	22.68	22.75
		15	0	23.50	22.74	22.68	22.77
	16QAM	1	0	23.50	23.02	23.01	22.91
		1	7	23.50	22.76	22.30	22.10
		1	14	23.50	22.78	22.93	22.60
		8	0	22.50	21.66	21.65	21.84
		8	4	22.50	21.68	21.70	21.76
		8	7	22.50	21.63	21.68	21.70
		15	0	22.50	21.60	21.59	21.63
	64QAM	1	0	22.50	21.88	21.62	21.57
		1	7	22.50	21.93	21.62	21.42
		1	14	22.50	21.81	21.60	21.53
		8	0	21.50	20.47	20.41	20.46
		8	4	21.50	20.51	20.49	20.42
		8	7	21.50	20.48	20.43	20.39
		15	0	21.50	20.41	20.38	20.44

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23035CH	23095CH	23155CH
5MHz	QPSK	1	0	23.50	22.94	22.79	22.79
		1	13	23.50	22.69	22.85	22.89
		1	24	23.50	22.81	22.81	22.83
		12	0	23.50	22.84	22.68	22.80
		12	6	23.50	22.74	22.61	22.67
		12	13	23.50	22.78	22.70	22.78
		25	0	23.50	22.78	22.61	22.75
	16QAM	1	0	23.50	23.01	23.12	22.86
		1	13	23.50	22.78	23.08	22.98
		1	24	23.50	22.88	23.17	22.98
		12	0	22.50	21.76	21.58	21.75
		12	6	22.50	21.61	21.57	21.71
		12	13	22.50	21.80	21.60	21.70
		25	0	22.50	21.70	21.76	21.69
	64QAM	1	0	22.50	21.77	21.58	21.56
		1	13	22.50	21.68	21.63	21.55
		1	24	22.50	21.58	21.59	21.48
		12	0	21.50	20.49	20.46	20.56
		12	6	21.50	20.45	20.52	20.59
		12	13	21.50	20.51	20.46	20.52
		25	0	21.50	20.47	20.33	20.46
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23060CH	23095CH	23130CH
10MHz	QPSK	1	0	23.50	22.84	22.74	22.75
		1	25	23.50	22.35	22.50	22.36
		1	49	23.50	23.08	23.04	23.13
		25	0	23.50	22.71	22.66	22.62
		25	13	23.50	22.78	22.73	22.72
		25	25	23.50	22.69	22.76	22.79
		50	0	23.50	22.75	22.76	22.76
	16QAM	1	0	23.50	22.92	22.86	22.65
		1	25	23.50	22.76	22.78	22.60
		1	49	23.50	23.25	23.15	23.04
		25	0	22.50	21.59	21.72	21.61
		25	13	22.50	21.63	21.61	21.62
		25	25	22.50	21.59	21.64	21.67
		50	0	22.50	21.62	21.69	21.72
	64QAM	1	0	22.50	21.46	21.46	21.37
		1	25	22.50	21.50	21.59	21.53
		1	49	22.50	21.47	21.31	21.32
		25	0	21.50	20.43	20.45	20.44
		25	13	21.50	20.43	20.44	20.47
		25	25	21.50	20.41	20.48	20.38
		50	0	21.50	20.35	20.36	20.36

Table 50: Test results conducted power measurement LTE Band 12 (Receiver ON)

Note: The conducted power of LTE Band 12 is measured with RMS detector.

7.1.20 Conducted power of LTE Band 12(Main antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23017CH	23095CH	23173CH
1.4MHz	QPSK	1	0	24.50	23.01	22.89	22.94
		1	3	24.50	22.98	22.83	22.86
		1	5	24.50	23.05	22.83	22.90
		3	0	24.50	22.86	22.84	22.82
		3	2	24.50	22.84	22.81	22.82
		3	3	24.50	22.89	22.81	22.84
		6	0	23.50	21.97	21.83	21.82
	16QAM	1	0	23.50	22.03	21.81	22.07
		1	3	23.50	22.01	21.96	21.98
		1	5	23.50	22.00	21.94	22.16
		3	0	23.50	21.92	21.93	21.87
		3	2	23.50	21.93	21.97	21.77
		3	3	23.50	21.94	21.85	21.64
		6	0	22.50	20.67	20.73	20.83
	64QAM	1	0	22.50	21.09	20.96	20.83
		1	3	22.50	21.17	20.97	20.93
		1	5	22.50	21.21	20.96	21.07
		3	0	22.50	20.95	20.72	20.94
		3	2	22.50	20.89	20.78	20.82
		3	3	22.50	20.95	20.81	20.83
		6	0	21.50	19.75	19.72	19.73
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23025CH	23095CH	23165CH
3MHz	QPSK	1	0	24.50	22.91	22.79	22.85
		1	7	24.50	23.01	22.79	22.87
		1	14	24.50	23.00	22.76	22.88
		8	0	23.50	21.95	21.83	21.83
		8	4	23.50	21.77	21.72	21.79
		8	7	23.50	21.93	21.85	21.83
		15	0	23.50	21.80	21.88	21.85
	16QAM	1	0	23.50	22.08	21.96	22.09
		1	7	23.50	22.12	22.18	21.96
		1	14	23.50	21.98	21.81	21.82
		8	0	22.50	20.88	20.70	20.87
		8	4	22.50	20.89	20.76	20.74
		8	7	22.50	20.86	20.92	20.78
		15	0	22.50	20.79	20.74	20.80
	64QAM	1	0	22.50	21.19	20.79	21.03
		1	7	22.50	21.07	20.90	20.96
		1	14	22.50	20.99	21.12	20.79
		8	0	21.50	19.91	19.80	19.59
		8	4	21.50	19.97	19.81	19.77
		8	7	21.50	19.83	19.83	19.88
		15	0	21.50	19.71	19.82	19.77

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23035CH	23095CH	23155CH
5MHz	QPSK	1	0	24.50	22.87	22.77	22.81
		1	13	24.50	22.95	22.79	22.81
		1	24	24.50	22.93	22.78	22.78
		12	0	23.50	22.00	21.95	21.90
		12	6	23.50	21.87	21.92	21.90
		12	13	23.50	21.85	21.93	21.93
		25	0	23.50	21.84	21.80	21.82
	16QAM	1	0	23.50	22.09	22.18	22.18
		1	13	23.50	22.04	21.95	22.05
		1	24	23.50	22.00	22.17	21.94
		12	0	22.50	20.83	20.81	20.83
		12	6	22.50	20.85	20.91	20.87
		12	13	22.50	20.80	20.75	20.89
		25	0	22.50	20.83	20.90	20.74
	64QAM	1	0	22.50	21.09	20.86	20.75
		1	13	22.50	20.92	20.98	20.96
		1	24	22.50	21.01	20.81	20.95
		12	0	21.50	19.85	19.85	19.89
		12	6	21.50	19.85	19.90	19.89
		12	13	21.50	19.83	19.90	19.97
		25	0	21.50	19.78	19.75	19.78
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23060CH	23095CH	23130CH
10MHz	QPSK	1	0	24.50	22.87	22.78	22.78
		1	25	24.50	22.85	22.77	22.76
		1	49	24.50	22.88	22.75	22.74
		25	0	23.50	21.78	21.90	21.80
		25	13	23.50	21.76	21.91	21.90
		25	25	23.50	21.76	21.88	21.92
		50	0	23.50	21.75	21.73	21.78
	16QAM	1	0	23.50	21.85	21.74	21.78
		1	25	23.50	21.93	21.80	22.02
		1	49	23.50	21.79	21.83	21.98
		25	0	22.50	20.69	20.82	20.70
		25	13	22.50	20.75	20.85	20.76
		25	25	22.50	20.74	20.75	20.72
		50	0	22.50	20.62	20.83	20.78
	64QAM	1	0	22.50	21.02	20.91	21.00
		1	25	22.50	21.06	20.86	20.91
		1	49	22.50	21.05	20.77	20.94
		25	0	21.50	19.79	19.83	19.88
		25	13	21.50	19.76	19.73	19.85
		25	25	21.50	19.78	19.83	19.91
		50	0	21.50	19.71	19.84	19.70

Table 51: Test results conducted power measurement LTE Band 12

Note: The conducted power of LTE Band 12 is measured with RMS detector.

7.1.21 Conducted power of LTE Band 17(Second antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23755CH	23790CH	23825CH
5MHz	QPSK	1	0	24.50	23.44	23.48	23.48
		1	13	24.50	23.52	23.50	23.49
		1	24	24.50	23.47	23.48	23.50
		12	0	23.50	22.54	22.61	22.60
		12	6	23.50	22.55	22.51	22.60
		12	13	23.50	22.53	22.51	22.59
		25	0	23.50	22.57	22.47	22.42
	16QAM	1	0	23.50	22.70	22.67	22.75
		1	13	23.50	22.78	22.59	22.84
		1	24	23.50	22.71	22.44	22.74
		12	0	22.50	21.42	21.40	21.51
		12	6	22.50	21.43	21.46	21.54
		12	13	22.50	21.52	21.47	21.57
		25	0	22.50	21.36	21.36	21.54
	64QAM	1	0	22.50	21.51	21.46	21.79
		1	13	22.50	21.70	21.49	21.56
		1	24	22.50	21.72	21.52	21.68
		12	0	21.50	20.52	20.49	20.52
		12	6	21.50	20.52	20.52	20.61
		12	13	21.50	20.47	20.52	20.57
		25	0	21.50	20.39	20.43	20.48
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23780CH	23790CH	23800CH
10MHz	QPSK	1	0	24.50	23.50	23.53	23.47
		1	25	24.50	23.46	23.55	23.49
		1	49	24.50	23.49	23.56	23.48
		25	0	23.50	22.58	22.57	22.39
		25	13	23.50	22.59	22.55	22.55
		25	25	23.50	22.56	22.52	22.57
		50	0	23.50	22.45	22.45	22.48
	16QAM	1	0	23.50	22.60	22.47	22.33
		1	25	23.50	22.62	22.47	22.55
		1	49	23.50	22.42	22.47	22.41
		25	0	22.50	21.45	21.53	21.36
		25	13	22.50	21.32	21.50	21.43
		25	25	22.50	21.48	21.41	21.31
		50	0	22.50	21.37	21.33	21.34
	64QAM	1	0	22.50	21.70	21.64	21.36
		1	25	22.50	21.58	21.48	21.56
		1	49	22.50	21.35	21.58	21.62
		25	0	21.50	20.50	20.40	20.46
		25	13	21.50	20.49	20.38	20.43
		25	25	21.50	20.50	20.40	20.46
		50	0	21.50	20.36	20.40	20.33

Table 52: Test results conducted power measurement LTE Band 17 (Receiver OFF)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23755CH	23790CH	23825CH
5MHz	QPSK	1	0	23.50	22.59	22.55	22.59
		1	13	23.50	22.57	22.55	22.59
		1	24	23.50	22.57	22.51	22.60
		12	0	23.50	22.47	22.53	22.60
		12	6	23.50	22.56	22.52	22.60
		12	13	23.50	22.54	22.51	22.60
		25	0	23.50	22.60	22.46	22.48
	16QAM	1	0	23.50	22.68	22.68	22.74
		1	13	23.50	22.72	22.81	22.89
		1	24	23.50	22.64	22.56	22.58
		12	0	22.50	21.46	21.42	21.44
		12	6	22.50	21.50	21.47	21.59
		12	13	22.50	21.46	21.48	21.59
		25	0	22.50	21.41	21.43	21.51
	64QAM	1	0	22.50	21.69	21.61	21.53
		1	13	22.50	21.57	21.57	21.52
		1	24	22.50	21.53	21.50	21.73
		12	0	21.50	20.56	20.54	20.47
		12	6	21.50	20.56	20.49	20.64
		12	13	21.50	20.41	20.52	20.60
		25	0	21.50	20.43	20.46	20.47
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23780CH	23790CH	23800CH
10MHz	QPSK	1	0	23.50	22.44	22.42	22.58
		1	25	23.50	22.48	22.47	22.59
		1	49	23.50	22.48	22.44	22.61
		25	0	23.50	22.59	22.56	22.40
		25	13	23.50	22.59	22.57	22.54
		25	25	23.50	22.54	22.55	22.54
		50	0	23.50	22.45	22.42	22.42
	16QAM	1	0	23.50	22.46	22.52	22.63
		1	25	23.50	22.44	22.38	22.42
		1	49	23.50	22.43	22.57	22.60
		25	0	22.50	21.48	21.51	21.37
		25	13	22.50	21.35	21.53	21.31
		25	25	22.50	21.49	21.41	21.38
		50	0	22.50	21.37	21.29	21.33
	64QAM	1	0	22.50	21.50	21.49	21.30
		1	25	22.50	21.62	21.55	21.54
		1	49	22.50	21.45	21.59	21.56
		25	0	21.50	20.48	20.43	20.46
		25	13	21.50	20.48	20.41	20.47
		25	25	21.50	20.50	20.44	20.43
		50	0	21.50	20.36	20.40	20.36

Table 53: Test results conducted power measurement LTE Band 17 (Receiver ON)

Note: The conducted power of LTE Band 17 is measured with RMS detector.

7.1.22 Conducted power of LTE Band 17(Main antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23755CH	23790CH	23825CH
5MHz	QPSK	1	0	24.50	23.46	23.52	23.54
		1	13	24.50	23.51	23.50	23.46
		1	24	24.50	23.46	23.53	23.45
		12	0	23.50	22.60	22.50	22.54
		12	6	23.50	22.49	22.50	22.54
		12	13	23.50	22.50	22.49	22.67
		25	0	23.50	22.48	22.47	22.50
	16QAM	1	0	23.50	22.89	22.61	22.61
		1	13	23.50	22.63	22.65	22.67
		1	24	23.50	22.50	22.77	22.69
		12	0	22.50	21.47	21.44	21.61
		12	6	22.50	21.57	21.35	21.60
		12	13	22.50	21.53	21.42	21.59
		25	0	22.50	21.37	21.41	21.55
	64QAM	1	0	22.50	21.60	21.48	21.70
		1	13	22.50	21.65	21.42	21.42
		1	24	22.50	21.38	21.38	21.55
		12	0	21.50	20.62	20.51	20.45
		12	6	21.50	20.54	20.48	20.54
		12	13	21.50	20.60	20.48	20.50
		25	0	21.50	20.38	20.41	20.35
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	23780CH	23790CH	23800CH
10MHz	QPSK	1	0	24.50	23.45	23.42	23.44
		1	25	24.50	23.47	23.45	23.40
		1	49	24.50	23.48	23.41	23.41
		25	0	23.50	22.46	22.54	22.50
		25	13	23.50	22.44	22.54	22.46
		25	25	23.50	22.43	22.45	22.57
		50	0	23.50	22.46	22.39	22.41
	16QAM	1	0	23.50	22.52	22.55	22.69
		1	25	23.50	22.46	22.41	22.69
		1	49	23.50	22.45	22.52	22.56
		25	0	22.50	21.35	21.38	21.45
		25	13	22.50	21.37	21.36	21.50
		25	25	22.50	21.43	21.46	21.35
		50	0	22.50	21.29	21.31	21.28
	64QAM	1	0	22.50	21.63	21.64	21.57
		1	25	22.50	21.60	21.45	21.46
		1	49	22.50	21.52	21.48	21.48
		25	0	21.50	20.53	20.44	20.50
		25	13	21.50	20.53	20.44	20.49
		25	25	21.50	20.42	20.46	20.46
		50	0	21.50	20.36	20.40	20.43

Table 54: Test results conducted power measurement LTE Band 17

Note: The conducted power of LTE Band 17 is measured with RMS detector.

7.1.23 Conducted power of LTE Band 66(Second antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131979CH	132322CH	132665CH
1.4MHz	QPSK	1	0	23.50	22.66	22.58	22.66
		1	3	23.50	22.43	22.40	22.35
		1	5	23.50	22.66	22.52	22.80
		3	0	23.50	22.86	22.67	22.81
		3	2	23.50	22.83	22.49	22.67
		3	3	23.50	22.72	22.74	22.66
		6	0	22.50	21.67	21.51	21.68
	16QAM	1	0	22.50	21.76	21.85	21.70
		1	3	22.50	21.60	21.33	21.64
		1	5	22.50	21.59	21.66	21.70
		3	0	22.50	21.81	21.48	21.76
		3	2	22.50	21.56	21.74	21.64
		3	3	22.50	21.68	21.58	21.63
		6	0	21.50	20.59	20.75	20.57
	64QAM	1	0	21.50	20.70	20.68	20.63
		1	3	21.50	20.37	20.54	20.43
		1	5	21.50	20.65	20.74	20.59
		3	0	21.50	20.69	20.63	20.57
		3	2	21.50	20.83	20.51	20.69
		3	3	21.50	20.77	20.63	20.56
		6	0	20.50	19.66	19.56	19.69
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131987CH	132322CH	132657CH
3MHz	QPSK	1	0	23.50	22.64	22.58	22.58
		1	7	23.50	22.48	22.49	22.49
		1	14	23.50	22.72	22.65	22.90
		8	0	22.50	21.79	21.81	21.67
		8	4	22.50	21.70	21.73	21.67
		8	7	22.50	21.61	21.58	21.59
		15	0	22.50	21.84	21.72	21.62
	16QAM	1	0	22.50	21.73	21.61	21.86
		1	7	22.50	21.39	21.42	21.50
		1	14	22.50	21.54	21.64	21.96
		8	0	21.50	20.86	20.59	20.91
		8	4	21.50	20.50	20.46	20.82
		8	7	21.50	20.61	20.50	20.60
		15	0	21.50	20.73	20.73	20.75
	64QAM	1	0	21.50	20.69	20.72	20.82
		1	7	21.50	20.46	20.31	20.64
		1	14	21.50	20.55	20.66	20.62
		8	0	20.50	19.71	19.68	19.75
		8	4	20.50	19.70	19.60	19.75
		8	7	20.50	19.64	19.58	19.67
		15	0	20.50	19.71	19.63	19.68

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131997CH	132322CH	132647CH
5MHz	QPSK	1	0	23.50	22.54	22.77	22.80
		1	13	23.50	22.48	22.38	22.46
		1	24	23.50	22.59	22.77	22.79
		12	0	22.50	21.79	21.54	21.80
		12	6	22.50	21.68	21.64	21.65
		12	13	22.50	21.62	21.79	21.73
		25	0	22.50	21.69	21.76	21.54
	16QAM	1	0	22.50	21.59	21.57	21.87
		1	13	22.50	21.53	21.50	21.52
		1	24	22.50	21.53	21.78	21.99
		12	0	21.50	20.78	20.73	20.63
		12	6	21.50	20.67	20.74	20.65
		12	13	21.50	20.68	20.51	20.79
		25	0	21.50	20.79	20.58	20.61
	64QAM	1	0	21.50	20.77	20.56	20.65
		1	13	21.50	20.47	20.53	20.50
		1	24	21.50	20.69	20.74	20.70
		12	0	20.50	19.74	19.74	19.56
		12	6	20.50	19.84	19.51	19.83
		12	13	20.50	19.60	19.70	19.72
		25	0	20.50	19.58	19.74	19.71
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132022CH	132322CH	132622CH
10MHz	QPSK	1	0	23.50	22.75	22.66	22.62
		1	25	23.50	22.43	22.52	22.39
		1	49	23.50	22.52	22.49	22.84
		25	0	22.50	21.78	21.67	21.57
		25	13	22.50	21.58	21.71	21.56
		25	25	22.50	21.57	21.59	21.73
		50	0	22.50	21.66	21.67	21.79
	16QAM	1	0	22.50	21.52	21.68	21.68
		1	25	22.50	21.50	21.32	21.58
		1	49	22.50	21.69	21.86	21.73
		25	0	21.50	20.72	20.69	20.90
		25	13	21.50	20.64	20.66	20.80
		25	25	21.50	20.76	20.75	20.62
		50	0	21.50	20.80	20.59	20.73
	64QAM	1	0	21.50	20.76	20.83	20.69
		1	25	21.50	20.30	20.31	20.39
		1	49	21.50	20.54	20.66	20.56
		25	0	20.50	19.72	19.52	19.62
		25	13	20.50	19.83	19.71	19.82
		25	25	20.50	19.59	19.61	19.57
		50	0	20.50	19.75	19.77	19.81

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132047CH	132322CH	132597CH
15MHz	QPSK	1	0	23.50	22.74	22.75	22.62
		1	38	23.50	22.32	22.54	22.32
		1	74	23.50	22.51	22.58	22.69
		36	0	22.50	21.98	21.74	21.59
		36	18	22.50	21.68	21.72	21.64
		36	39	22.50	21.61	21.84	21.75
		75	0	22.50	21.91	21.77	21.62
	16QAM	1	0	22.50	21.63	21.66	21.65
		1	38	22.50	21.58	21.57	21.75
		1	74	22.50	21.55	21.80	21.83
		36	0	21.50	20.72	20.49	20.88
		36	18	21.50	20.63	20.58	20.82
		36	39	21.50	20.58	20.66	20.77
		75	0	21.50	20.58	20.73	20.66
	64QAM	1	0	21.50	20.78	20.73	20.68
		1	38	21.50	20.34	20.29	20.46
		1	74	21.50	20.56	20.64	20.81
		36	0	20.50	19.65	19.54	19.57
		36	18	20.50	19.63	19.50	19.78
		36	39	20.50	19.78	19.46	19.82
		75	0	20.50	19.60	19.60	19.66
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132072CH	132322CH	132572CH
20MHz	QPSK	1	0	23.50	22.68	22.67	22.69
		1	50	23.50	22.42	22.43	22.44
		1	99	23.50	22.60	22.64	22.75
		50	0	22.50	21.84	21.68	21.70
		50	25	22.50	21.73	21.63	21.67
		50	50	22.50	21.68	21.70	21.65
		100	0	22.50	21.78	21.66	21.65
	16QAM	1	0	22.50	21.63	21.71	21.74
		1	50	22.50	21.50	21.43	21.61
		1	99	22.50	21.67	21.77	21.84
		50	0	21.50	20.75	20.63	20.76
		50	25	21.50	20.58	20.61	20.73
		50	50	21.50	20.69	20.60	20.74
		100	0	21.50	20.72	20.65	20.64
	64QAM	1	0	21.50	20.64	20.85	20.93
		1	50	21.50	20.60	20.50	20.62
		1	99	21.50	20.85	20.82	20.82
		50	0	20.50	19.71	19.70	19.87
		50	25	20.50	19.70	19.69	19.80
		50	50	20.50	19.70	19.71	19.74
		100	0	20.50	19.73	19.70	19.77

Table 55: Test results conducted power measurement LTE Band 66 (Receiver OFF)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131979CH	132322CH	132665CH
1.4MHz	QPSK	1	0	20.00	19.06	18.20	19.16
		1	3	20.00	18.91	18.79	18.83
		1	5	20.00	19.12	19.24	19.16
		3	0	20.00	19.29	19.05	19.20
		3	2	20.00	19.16	19.20	19.18
		3	3	20.00	19.18	19.17	19.17
		6	0	20.00	19.28	19.19	19.18
	16QAM	1	0	20.00	19.08	18.19	19.02
		1	3	20.00	18.92	18.71	18.92
		1	5	20.00	19.27	19.02	19.16
		3	0	20.00	19.20	19.16	19.27
		3	2	20.00	19.16	19.20	19.18
		3	3	20.00	19.18	19.17	19.17
		6	0	20.00	19.28	19.19	19.18
	64QAM	1	0	20.00	19.23	18.35	19.05
		1	3	20.00	18.84	18.74	18.94
		1	5	20.00	18.97	19.02	19.19
		3	0	20.00	19.17	19.19	19.24
		3	2	20.00	19.16	19.20	19.18
		3	3	20.00	19.18	19.17	19.17
		6	0	20.00	19.28	19.19	19.18
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131987CH	132322CH	132657CH
3MHz	QPSK	1	0	20.00	19.01	18.29	18.95
		1	7	20.00	18.96	18.60	18.83
		1	14	20.00	19.14	18.99	19.02
		8	0	20.00	19.31	19.33	19.34
		8	4	20.00	19.16	19.20	19.18
		8	7	20.00	19.18	19.17	19.17
		15	0	20.00	19.28	19.19	19.18
	16QAM	1	0	20.00	19.08	18.19	19.02
		1	7	20.00	18.92	18.71	18.92
		1	14	20.00	19.27	19.02	19.16
		8	0	20.00	19.20	19.16	19.27
		8	4	20.00	19.16	19.20	19.18
		8	7	20.00	19.18	19.17	19.17
		15	0	20.00	19.28	19.19	19.18
	64QAM	1	0	20.00	19.23	18.35	19.05
		1	7	20.00	18.84	18.74	18.94
		1	14	20.00	18.97	19.02	19.19
		8	0	20.00	19.17	19.19	19.24
		8	4	20.00	19.16	19.20	19.18
		8	7	20.00	19.18	19.17	19.17
		15	0	20.00	19.28	19.19	19.18

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131997CH	132322CH	132647CH
5MHz	QPSK	1	0	20.00	19.07	18.25	19.21
		1	13	20.00	18.76	18.75	18.83
		1	24	20.00	19.17	19.09	19.27
		12	0	20.00	19.17	19.19	19.24
		12	6	20.00	19.16	19.20	19.18
		12	13	20.00	19.18	19.17	19.17
		25	0	20.00	19.28	19.19	19.18
	16QAM	1	0	20.00	19.08	18.19	19.02
		1	13	20.00	18.92	18.71	18.92
		1	24	20.00	19.27	19.02	19.16
		12	0	20.00	19.20	19.16	19.27
		12	6	20.00	19.16	19.20	19.18
		12	13	20.00	19.18	19.17	19.17
		25	0	20.00	19.28	19.19	19.18
	64QAM	1	0	20.00	19.23	18.35	19.05
		1	13	20.00	18.84	18.74	18.94
		1	24	20.00	18.97	19.02	19.19
		12	0	20.00	19.17	19.19	19.24
		12	6	20.00	19.16	19.20	19.18
		12	13	20.00	19.18	19.17	19.17
		25	0	20.00	19.28	19.19	19.18
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132022CH	132322CH	132622CH
10MHz	QPSK	1	0	20.00	19.05	18.35	19.20
		1	25	20.00	18.83	18.80	18.78
		1	49	20.00	19.18	19.02	18.99
		25	0	20.00	19.07	19.06	19.09
		25	13	20.00	19.16	19.20	19.18
		25	25	20.00	19.18	19.17	19.17
		50	0	20.00	19.28	19.19	19.18
	16QAM	1	0	20.00	19.08	18.19	19.02
		1	25	20.00	18.92	18.71	18.92
		1	49	20.00	19.27	19.02	19.16
		25	0	20.00	19.20	19.16	19.27
		25	13	20.00	19.16	19.20	19.18
		25	25	20.00	19.18	19.17	19.17
		50	0	20.00	19.28	19.19	19.18
	64QAM	1	0	20.00	19.23	18.35	19.05
		1	25	20.00	18.84	18.74	18.94
		1	49	20.00	18.97	19.02	19.19
		25	0	20.00	19.17	19.19	19.24
		25	13	20.00	19.16	19.20	19.18
		25	25	20.00	19.18	19.17	19.17
		50	0	20.00	19.28	19.19	19.18

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132047CH	132322CH	132597CH
15MHz	QPSK	1	0	20.00	19.01	18.18	19.17
		1	38	20.00	18.82	18.60	18.81
		1	74	20.00	19.22	18.98	19.04
		36	0	20.00	19.17	19.19	19.24
		36	18	20.00	19.16	19.20	19.18
		36	39	20.00	19.18	19.17	19.17
		75	0	20.00	19.28	19.19	19.18
	16QAM	1	0	20.00	19.08	18.19	19.02
		1	38	20.00	18.92	18.71	18.92
		1	74	20.00	19.27	19.02	19.16
		36	0	20.00	19.20	19.16	19.27
		36	18	20.00	19.16	19.20	19.18
		36	39	20.00	19.18	19.17	19.17
		75	0	20.00	19.28	19.19	19.18
	64QAM	1	0	20.00	19.23	18.35	19.05
		1	38	20.00	18.84	18.74	18.94
		1	74	20.00	18.97	19.02	19.19
		36	0	20.00	19.17	19.19	19.24
		36	18	20.00	19.16	19.20	19.18
		36	39	20.00	19.18	19.17	19.17
		75	0	20.00	19.28	19.19	19.18
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132072CH	132322CH	132572CH
20MHz	QPSK	1	0	20.00	19.12	18.29	19.10
		1	50	20.00	18.87	18.70	18.84
		1	99	20.00	19.12	19.10	19.12
		50	0	20.00	19.17	19.19	19.24
		50	25	20.00	19.16	19.20	19.18
		50	50	20.00	19.18	19.17	19.17
		100	0	20.00	19.28	19.19	19.18
	16QAM	1	0	20.00	19.08	18.19	19.02
		1	50	20.00	18.92	18.71	18.92
		1	99	20.00	19.27	19.02	19.16
		50	0	20.00	19.20	19.16	19.27
		50	25	20.00	19.16	19.20	19.18
		50	50	20.00	19.18	19.17	19.17
		100	0	20.00	19.28	19.19	19.18
	64QAM	1	0	20.00	19.23	18.35	19.05
		1	50	20.00	18.84	18.74	18.94
		1	99	20.00	18.97	19.02	19.19
		50	0	20.00	19.17	19.19	19.24
		50	25	20.00	19.16	19.20	19.18
		50	50	20.00	19.18	19.17	19.17
		100	0	20.00	19.28	19.19	19.18

Table 56: Test results conducted power measurement LTE Band 66 (Receiver ON)

Note: The conducted power of LTE Band 66 is measured with RMS detector.

7.1.24 Conducted power of LTE Band 66(Main antenna)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131979CH	132322CH	132665CH
1.4MHz	QPSK	1	0	23.50	22.68	22.62	22.39
		1	3	23.50	22.25	22.30	22.07
		1	5	23.50	22.42	22.40	22.51
		3	0	23.50	22.40	22.44	22.66
		3	2	23.50	22.52	22.44	22.33
		3	3	23.50	22.53	22.43	22.41
		6	0	22.50	21.46	21.54	21.41
	16QAM	1	0	22.50	21.72	21.69	21.42
		1	3	22.50	21.53	21.07	21.01
		1	5	22.50	21.46	21.48	21.40
		3	0	22.50	21.42	21.38	21.51
		3	2	22.50	21.36	21.40	21.49
		3	3	22.50	21.57	21.24	21.41
		6	0	21.50	20.57	20.38	20.38
	64QAM	1	0	21.50	20.45	20.43	20.50
		1	3	21.50	20.44	20.00	20.12
		1	5	21.50	20.48	20.43	20.41
		3	0	21.50	20.35	20.46	20.37
		3	2	21.50	20.38	20.35	20.40
		3	3	21.50	20.47	20.50	20.28
		6	0	20.50	19.45	19.34	19.41
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131987CH	132322CH	132657CH
3MHz	QPSK	1	0	23.50	22.80	22.72	22.68
		1	7	23.50	22.21	22.20	22.25
		1	14	23.50	22.49	22.21	22.35
		8	0	22.50	21.62	21.55	21.30
		8	4	22.50	21.53	21.33	21.40
		8	7	22.50	21.63	21.36	21.44
		15	0	22.50	21.62	21.44	21.48
	16QAM	1	0	22.50	21.69	21.47	21.58
		1	7	22.50	21.52	21.15	21.16
		1	14	22.50	21.48	21.52	21.43
		8	0	21.50	20.59	20.51	20.58
		8	4	21.50	20.49	20.40	20.40
		8	7	21.50	20.49	20.30	20.38
		15	0	21.50	20.60	20.43	20.37
	64QAM	1	0	21.50	20.37	20.34	20.44
		1	7	21.50	20.39	20.09	20.22
		1	14	21.50	20.49	20.50	20.30
		8	0	20.50	19.52	19.41	19.54
		8	4	20.50	19.30	19.30	19.34
		8	7	20.50	19.33	19.56	19.36
		15	0	20.50	19.43	19.41	19.49

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	131997CH	132322CH	132647CH
5MHz	QPSK	1	0	23.50	22.76	22.45	22.57
		1	13	23.50	22.47	22.14	22.12
		1	24	23.50	22.35	22.35	22.43
		12	0	22.50	21.57	21.46	21.45
		12	6	22.50	21.52	21.31	21.47
		12	13	22.50	21.40	21.36	21.41
		25	0	22.50	21.61	21.38	21.40
	16QAM	1	0	22.50	21.55	21.59	21.58
		1	13	22.50	21.42	21.33	21.09
		1	24	22.50	21.57	21.40	21.33
		12	0	21.50	20.33	20.47	20.42
		12	6	21.50	20.30	20.44	20.48
		12	13	21.50	20.43	20.29	20.43
		25	0	21.50	20.45	20.39	20.31
	64QAM	1	0	21.50	20.49	20.36	20.19
		1	13	21.50	20.34	20.18	20.14
		1	24	21.50	20.49	20.44	20.37
		12	0	20.50	20.44	20.48	20.33
		12	6	20.50	20.42	20.45	20.44
		12	13	20.50	20.48	20.29	20.36
		25	0	20.50	20.46	20.40	20.43
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132022CH	132322CH	132622CH
10MHz	QPSK	1	0	23.50	22.67	22.58	22.50
		1	25	23.50	22.24	22.20	22.14
		1	49	23.50	22.40	22.13	22.61
		25	0	22.50	21.79	21.28	21.50
		25	13	22.50	21.42	21.43	21.38
		25	25	22.50	21.66	21.35	21.25
		50	0	22.50	21.51	21.41	21.59
	16QAM	1	0	22.50	21.45	21.73	21.47
		1	25	22.50	21.48	21.01	21.05
		1	49	22.50	21.48	21.59	21.27
		25	0	21.50	20.63	20.45	20.61
		25	13	21.50	20.15	20.28	20.29
		25	25	21.50	20.45	20.37	20.37
		50	0	21.50	20.66	20.24	20.36
	64QAM	1	0	21.50	20.40	20.45	20.49
		1	25	21.50	20.48	20.21	20.27
		1	49	21.50	20.45	20.50	20.46
		25	0	20.50	20.48	20.49	20.25
		25	13	20.50	20.49	20.36	20.46
		25	25	20.50	20.48	20.33	20.44
		50	0	20.50	20.47	20.24	20.37

Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132047CH	132322CH	132597CH
15MHz	QPSK	1	0	23.50	22.47	22.43	22.45
		1	38	23.50	22.65	22.54	22.60
		1	74	23.50	22.50	22.39	22.39
		36	0	22.50	21.60	21.58	21.54
		36	18	22.50	21.52	21.57	21.49
		36	39	22.50	21.55	21.46	21.46
		75	0	22.50	21.48	21.50	21.48
	16QAM	1	0	22.50	21.70	21.43	21.36
		1	38	22.50	21.35	21.25	21.09
		1	74	22.50	21.40	21.58	21.29
		36	0	21.50	20.60	20.31	20.64
		36	18	21.50	20.45	20.20	20.47
		36	39	21.50	20.51	20.40	20.49
		75	0	21.50	20.55	20.51	20.43
	64QAM	1	0	21.50	20.46	20.49	20.48
		1	38	21.50	20.40	20.11	20.18
		1	74	21.50	20.46	20.35	20.26
		36	0	20.50	20.37	20.50	20.50
		36	18	20.50	20.43	20.37	20.32
		36	39	20.50	20.34	20.30	20.40
		75	0	20.50	20.43	20.26	20.46
Bandwidth	Modulation	RB size	RB offset	Tune-up	Channel	Channel	Channel
				Max.	132072CH	132322CH	132572CH
20MHz	QPSK	1	0	23.50	22.64	22.49	22.49
		1	50	23.50	22.34	22.23	22.13
		1	99	23.50	22.44	22.36	22.47
		50	0	22.50	21.56	21.48	21.55
		50	25	22.50	21.48	21.40	21.46
		50	50	22.50	21.54	21.39	21.44
		100	0	22.50	21.51	21.40	21.48
	16QAM	1	0	22.50	21.58	21.57	21.50
		1	50	22.50	21.43	21.21	21.10
		1	99	22.50	21.49	21.51	21.38
		50	0	21.50	20.48	20.38	20.50
		50	25	21.50	20.42	20.33	20.38
		50	50	21.50	20.45	20.30	20.39
		100	0	21.50	20.57	20.37	20.45
	64QAM	1	0	21.50	20.45	20.42	20.49
		1	50	21.50	20.34	20.12	20.24
		1	99	21.50	20.41	20.50	20.40
		50	0	20.50	19.49	19.39	19.48
		50	25	20.50	19.43	19.36	19.39
		50	50	20.50	19.38	19.44	19.37
		100	0	20.50	19.45	19.34	19.41

Table 57: Test results conducted power measurement LTE Band 66

Note: The conducted power of LTE Band 66 is measured with RMS detector.

7.1.25 Conducted power of downlink LTE CA

The following conducted power measurement results of downlink LTE carrier aggregation are provided to quantify downlink only carrier aggregation SAR test exclusion per KDB 941225 D05A.

Uplink maximum output power is measured with downlink carrier aggregation active, using the channel with highest measured maximum output power when downlink carrier aggregation is inactive, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼dB higher than the maximum output power measured when downlink carrier aggregation inactive.

Power test equipment: R&S Radio Communication Tester CMW500 and/or Anritsu Radio Communication Analyzer MT8821C were used.

The power measurements result are in the table as below:

Antenna	EUT State	DL LTE CA Class	PCC							SCC1			Power		
			PCC Band	PCC Bandwidth (MHz)	Modulation	PCC UL RB size	PCC UL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTE Tx Power (dBm)	DL LTE CA Tx Power (dBm)	Tune-up
Second Antenna	Receiver OFF	CA_7C	7	20M	QPSK	100	0	21350	3350	7	20M	3152	21.77	21.72	22.00
Second Antenna	Receiver ON	CA_7C	7	20M	64QAM	50	0	21350	3350	7	20M	3152	16.49	16.41	16.90
Second Antenna	Receiver OFF+WiFi/BT	CA_7C	7	20M	QPSK	100	0	21350	3350	7	20M	3152	21.17	21.13	21.50
Second Antenna	Receiver ON+WiFi/BT	CA_7C	7	20M	QPSK	100	0	21350	3350	7	20M	3152	15.98	15.97	16.40
Main Antenna	Receiver ON	CA_7C	7	20M	QPSK	1	99	21100	3100	7	20M	3298	22.50	22.23	24.00
Main Antenna	Receiver ON	CA_7C	7	20M	QPSK	1	99	21100	3100	7	20M	2902	22.50	22.30	24.00
Main Antenna	Receiver OFF	CA_7C	7	20M	QPSK	1	50	21350	3350	7	20M	3152	21.48	21.06	23.00
Second Antenna	Receiver OFF	CA_12B	12	10M	QPSK	1	49	23130	5130	12	5M	23058	24.11	24.10	24.50
Second Antenna	Receiver ON	CA_12B	12	10M	16AQM	1	49	23060	5060	12	5M	23132	23.25	23.15	23.50
Main Antenna	Full Power	CA_12B	12	10M	QPSK	1	49	23060	5060	12	5M	23132	22.88	22.60	24.50
Second Antenna	Receiver OFF	CA_66C	66	20M	QPSK	1	99	132572	67036	66	20M	67234	22.75	22.59	23.50
Second Antenna	Receiver ON	CA_66C	66	20M	QPSK	100	0	132072	66536	66	20M	66734	19.28	19.15	20.00
Main Antenna	Full Power	CA_66C	66	20M	QPSK	1	0	132072	66536	66	20M	66734	22.64	22.50	23.50
Second Antenna	Receiver OFF	CA_7A-7A	7	20M	QPSK	100	0	21350	3350	7	20M	2850	21.77	21.82	22.00

Second Antenna	Receiver ON	CA_7A-7A	7	20M	64QAM	50	0	21350	3350	7	20M	2850	16.49	16.48	16.90
Second Antenna	Receiver OFF+WiFi/BT	CA_7A-7A	7	20M	QPSK	100	0	21350	3350	7	20M	2850	21.17	21.15	21.50
Second Antenna	Receiver ON+WiFi/BT	CA_7A-7A	7	20M	QPSK	100	0	21350	3350	7	20M	2850	15.98	15.97	16.40
Main Antenna	Receiver ON	CA_7A-7A	7	20M	QPSK	1	99	21100	3100	7	20M	3350	22.50	22.36	24.00
Main Antenna	Receiver ON	CA_7A-7A	7	20M	QPSK	1	99	21100	3100	7	20M	2850	22.50	22.21	24.00
Main Antenna	Receiver OFF	CA_7A-7A	7	20M	QPSK	1	50	21350	3350	7	20M	2850	21.48	21.42	23.00
Second Antenna	Receiver OFF	CA_2A-5A	2	20M	QPSK	1	99	18700	700	5	10M	2525	23.26	22.58	24.00
			5	10M	QPSK	1	49	20525	2525	2	20M	900	23.79	23.34	24.50
Second Antenna	Receiver ON	CA_2A-5A	2	20M	16QAM	1	99	18700	700	5	10M	2525	19.28	18.97	19.80
			5	10M	16QAM	1	0	20525	2525	2	20M	900	22.26	21.68	22.80
Second Antenna	Receiver OFF+WiFi/BT	CA_2A-5A	2	20M	QPSK	1	99	18700	700	5	10M	2525	22.76	22.68	23.50
Second Antenna	Receiver ON+WiFi/BT	CA_2A-5A	2	20M	16QAM	1	99	18700	700	5	10M	2525	18.79	18.78	19.30
Main Antenna	Receiver ON	CA_2A-5A	2	20M	QPSK	1	0	18900	900	5	10M	2525	23.00	22.40	24.00
			5	10M	QPSK	1	25	20525	2525	2	20M	900	22.92	22.87	24.50
Main Antenna	Receiver OFF	CA_2A-5A	2	20M	16QAM	1	99	18900	900	5	10M	2525	22.33	21.86	23.00
Second Antenna	Receiver OFF	CA_2A-12A	2	20M	QPSK	1	99	18700	700	12	10M	5095	23.26	22.36	24.00
			12	10M	QPSK	1	49	23130	5130	2	20M	900	24.11	24.10	24.50
Second Antenna	Receiver ON	CA_2A-12A	2	20M	16QAM	1	99	18700	700	12	10M	5095	19.28	18.99	19.80
			12	10M	16AQM	1	49	23060	5060	2	20M	900	23.25	23.16	23.50
Second Antenna	Receiver OFF+WiFi/BT	CA_2A12A	2	20M	QPSK	1	99	18700	700	12	10M	5095	22.76	22.70	23.50
Second Antenna	Receiver ON+WiFi/BT	CA_2A-12A	2	20M	16QAM	1	99	18700	700	12	10M	5095	18.79	18.80	19.30
Main Antenna	Receiver ON	CA_2A-12A	2	20M	QPSK	1	0	18900	900	12	10M	5095	23.00	22.80	24.00
			12	10M	QPSK	1	49	23060	5060	2	20M	900	22.88	22.85	24.50
Main Antenna	Receiver OFF	CA_2A-12A	2	20M	16QAM	1	99	18900	900	12	10M	5095	22.33	22.21	23.00
Second Antenna	Receiver OFF	CA_4A-5A	4	20M	QPSK	1	99	20300	2300	5	10M	2525	23.12	22.86	23.50
			5	10M	QPSK	1	49	20525	2525	4	20M	2175	23.79	23.44	24.50
Second Antenna	Receiver ON	CA_4A-5A	4	20M	16QAM	1	99	20050	2050	5	10M	2525	20.78	20.53	21.00
			5	10M	16QAM	1	0	20525	2525	4	20M	2175	22.26	22.25	22.80
Main Antenna	Full Power	CA_4A-5A	4	10M	QPSK	1	0	20050	2050	5	10M	2525	21.96	21.84	23.50
			5	10M	QPSK	1	25	20525	2525	4	20M	2175	22.92	22.69	24.50
Second Antenna	Receiver OFF	CA_4A-7A	4	20M	QPSK	1	99	20300	2300	7	20M	3100	23.12	22.52	23.50
			7	20M	QPSK	100	0	21350	3350	4	20M	2175	21.77	21.64	22.00
Second Antenna	Receiver ON	CA_4A-7A	4	20M	16QAM	1	99	20050	2050	7	20M	3100	20.78	20.63	21.00
			7	20m	64QAM	50	0	21350	3350	4	20M	2175	16.49	16.41	16.90
Second Antenna	Receiver OFF+WiFi/BT	CA_4A-7A	7	20M	QPSK	100	0	21350	3350	4	20M	2175	21.17	21.16	21.50

Second Antenna	Receiver ON+WiFi/BT	CA_4A-7A	7	20M	QPSK	100	0	21350	3350	4	20M	2175	15.98	15.93	16.40
Main Antenna	Receiver ON	CA_4A-7A	4	10M	QPSK	1	0	20050	2050	7	20M	3100	21.96	21.86	23.50
			7	20M	QPSK	1	99	21100	3100	4	20M	2175	22.50	22.48	24.00
Main Antenna	Receiver OFF	CA_4A-7A	7	20M	QPSK	1	50	21350	3350	4	20M	2175	21.48	21.39	23.00
Second Antenna	Receiver OFF	CA_4A-12A	4	20M	QPSK	1	99	20300	2300	5	10M	2525	23.12	22.95	23.50
			12	10M	QPSK	1	49	23130	5130	4	20M	2175	24.11	24.10	24.50
Second Antenna	Receiver ON	CA_4A-12A	4	20M	16QAM	1	99	20050	2050	5	10M	2525	20.78	20.65	21.00
			12	10M	16AQM	1	49	23060	5060	4	20M	2175	23.25	23.15	23.50
Main Antenna	Full Power	CA_4A-12A	4	10M	QPSK	1	0	20050	2050	5	10M	2525	21.96	21.89	23.50
			12	10M	QPSK	1	49	23060	5060	4	20M	2175	22.88	22.90	24.50
Second Antenna	Receiver OFF	CA_5A-7A	5	10M	QPSK	1	49	20525	2525	7	20M	3100	23.79	23.54	24.50
			7	20M	QPSK	100	0	21350	3350	5	10M	2525	21.77	21.72	22.00
Second Antenna	Receiver ON	CA_5A-7A	5	10M	16QAM	1	0	20525	2525	7	20M	3100	22.26	22.18	22.80
			7	20M	64QAM	50	0	21350	3350	5	10M	2525	16.49	16.47	16.90
Main Antenna	Receiver ON	CA_5A-7A	5	10M	QPSK	1	25	20525	2525	7	20M	3100	22.92	22.86	24.50
			7	20M	QPSK	1	99	21100	3100	5	10M	2525	22.50	22.45	24.00
Main Antenna	Receiver OFF	CA_5A-7A	7	20M	QPSK	1	50	21350	3350	5	10M	2525	21.48	21.39	23.00
Second Antenna	Receiver OFF+WiFi/BT	CA_5A-7A	7	20M	QPSK	100	0	21350	3350	5	10M	2525	21.17	21.18	21.50
Second Antenna	Receiver ON+WiFi/BT	CA_5A-7A	7	20M	QPSK	100	0	21350	3350	5	10M	2525	15.98	15.93	16.40
Second Antenna	Receiver OFF	CA_7A-12A	7	20M	QPSK	100	0	21350	3350	12	10M	5095	21.77	21.80	22.00
			12	10M	QPSK	1	49	23130	5130	7	20M	3100	24.11	24.10	24.50
Second Antenna	Receiver ON	CA_7A-12A	7	20M	64QAM	50	0	21350	3350	12	10M	5095	16.49	16.52	16.90
			12	10M	16AQM	1	49	23060	5060	7	20M	3100	23.25	23.15	23.50
Second Antenna	Receiver OFF+WiFi/BT	CA_7A-12A	7	20M	QPSK	100	0	21350	3350	12	10M	5095	21.17	21.10	21.50
Second Antenna	Receiver ON+WiFi/BT	CA_7A-12A	7	20M	QPSK	100	0	21350	3350	12	10M	5095	15.98	15.88	16.40
Main Antenna	Receiver ON	CA_7A-12A	7	20M	QPSK	1	99	21100	3100	12	10M	5095	22.50	22.40	24.00
			12	10M	QPSK	1	49	23060	5060	7	20M	3100	22.88	22.60	24.50
Main Antenna	Receiver OFF	CA_7A-12A	7	20M	QPSK	1	50	21350	3350	12	10M	5095	21.48	21.35	23.00

Table 58: Test results conducted power measurement LTE CA(DL)

7.1.26 Conducted power of WiFi 2.4G (FCC Country Code)

Mode	Duty cycle	Channel	Frequency (MHz)	Data Rate (Mbps)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
					Max.		
802.11b	99%	1	2412	1Mbps	20.10	18.29	Yes
		2	2417		20.10	18.20	No
		3	2422		20.10	18.19	No
		4	2427		20.10	18.20	No
		5	2432		20.10	17.99	No
		6	2437		19.10	17.76	Yes
		7	2442		19.10	16.81	No
		8	2447		19.10	17.13	No
		9	2452		19.60	17.32	No
		10	2457		19.60	17.82	No
		11	2462		19.60	17.85	Yes
802.11g	98%	1	2412	6Mbps	16.00	15.04	No
		2	2417		20.00	17.98	No
		3	2422		20.00	18.65	No
		4	2427		20.00	18.49	No
		5	2432		20.00	18.25	No
		6	2437		19.00	18.60	No
		7	2442		19.00	17.77	No
		8	2447		19.00	18.15	No
		9	2452		19.50	18.37	No
		10	2457		19.50	17.76	No
		11	2462		15.50	15.23	No
802.11n SISO 20M	98%	1	2412	MCS0	15.00	12.9	No
		2	2417		18.50	16.03	No
		3	2422		18.50	16.28	No
		4	2427		18.50	16.38	No
		5	2432		18.50	16.81	No
		6	2437		17.50	16.59	No
		7	2442		17.50	15.75	No
		8	2447		17.50	16.10	No
		9	2452		18.00	15.28	No
		10	2457		18.00	15.05	No
		11	2462		14.50	12.80	No
802.11n SISO 40M	97%	3	2422	MCS0	13.00	12.10	No
		4	2427		17.50	17.11	No
		5	2432		17.50	17.14	No
		6	2437		17.50	16.00	No
		7	2442		17.50	16.69	No
		8	2447		17.50	16.75	No
		9	2452		12.70	11.30	No

Table 59: Test results conducted power measurement WiFi 2.4G (FCC Country Code) (Receiver OFF)

Mode	Duty cycle	Channel	Frequency (MHz)	Data Rate (Mbps)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
					Max.		
802.11b	99%	1	2412	1Mbps	12.10	10.95	Yes
		2	2417		12.10	9.70	No
		3	2422		12.10	10.17	No
		4	2427		12.10	10.12	No
		5	2432		12.10	10.34	No
		6	2437		11.10	10.35	Yes
		7	2442		11.10	9.33	No
		8	2447		11.10	9.44	No
		9	2452		11.60	9.36	No
		10	2457		11.60	10.00	No
		11	2462		11.60	9.63	Yes
802.11g	98%	1	2412	6Mbps	12.00	10.25	No
		2	2417		12.00	11.48	No
		3	2422		12.00	10.60	No
		4	2427		12.00	10.84	No
		5	2432		12.00	11.07	No
		6	2437		11.00	10.92	No
		7	2442		11.00	10.62	No
		8	2447		11.00	10.99	No
		9	2452		11.50	11.50	No
		10	2457		11.50	11.28	No
		11	2462		11.50	9.50	No
802.11n SISO 20M	98%	1	2412	MCS0	12.00	9.50	No
		2	2417		12.00	9.91	No
		3	2422		12.00	9.83	No
		4	2427		12.00	9.96	No
		5	2432		12.00	10.64	No
		6	2437		11.00	10.35	No
		7	2442		11.00	9.76	No
		8	2447		11.00	10.10	No
		9	2452		11.50	10.01	No
		10	2457		11.50	9.85	No
		11	2462		11.50	9.70	No
802.11n SISO 40M	97%	3	2422	MCS0	12.00	10.70	No
		4	2427		11.00	10.52	No
		5	2432		11.00	10.37	No
		6	2437		11.00	10.42	No
		7	2442		11.00	10.81	No
		8	2447		11.00	10.90	No
		9	2452		11.50	9.80	No

Table 60: Test results conducted power measurement WiFi 2.4G (FCC Country Code) (Receiver ON)

Note: 1) The Average conducted power of WiFi is measured with RMS detector.

2) As different maximum tune-up output power is specified across the different channels range. So the additional conducted power measurement for the adjacent channel of each power level stage is also performed in this report to ensure compliance.

7.1.27 Conducted power of WiFi 2.4G (CE Country Code)

Mode	Duty cycle	Channel	Frequency (MHz)	Data Rate (Mbps)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
					Max.		
802.11b	99%	1	2412	1Mbps	20.10	18.29	No
		2	2417		20.10	18.20	No
		3	2422		20.10	18.19	No
		4	2427		20.10	18.20	No
		5	2432		20.10	17.99	No
		6	2437		19.10	17.76	No
		7	2442		19.10	16.81	No
		8	2447		19.60	17.13	No
		9	2452		19.60	17.32	No
		10	2457		19.60	17.82	No
		11	2462		19.60	17.85	No
		12	2467		19.60	16.14	No
		13	2472		19.60	17.02	No
802.11g	98%	1	2412	6Mbps	20.00	18.55	No
		2	2417		20.00	17.98	No
		3	2422		20.00	18.65	No
		4	2427		20.00	18.49	No
		5	2432		20.00	18.25	No
		6	2437		19.00	18.60	No
		7	2442		19.00	17.77	No
		8	2447		19.00	18.15	No
		9	2452		19.50	18.37	No
		10	2457		19.50	17.76	No
		11	2462		19.50	17.68	No
		12	2467		19.50	17.63	No
		13	2472		19.50	17.85	No
802.11n SISO 20M	98%	1	2412	MCS0	18.50	16.53	No
		2	2417		18.50	16.03	No
		3	2422		18.50	16.28	No
		4	2427		18.50	16.38	No
		5	2432		18.50	16.81	No
		6	2437		17.50	16.59	No
		7	2442		17.50	15.75	No
		8	2447		17.50	16.10	No
		9	2452		18.00	15.28	No
		10	2457		18.00	14.82	No
		11	2462		18.00	14.92	No
		12	2467		18.00	14.73	No
		13	2472		18.00	15.01	No
802.11n SISO 40M	97%	3	2422	MCS0	18.50	16.65	No
		4	2427		17.50	17.11	No
		5	2432		17.50	17.14	No
		6	2437		17.50	16.00	No
		7	2442		17.50	16.69	No
		8	2447		17.50	16.75	No
		9	2452		18.00	16.50	No
		10	2457		18.00	15.73	No
		11	2462		18.00	15.86	No

Table 61: Test results conducted power measurement WiFi 2.4G CE (Receiver OFF)

Mode	Duty cycle	Channel	Frequency (MHz)	Data Rate (Mbps)	Tune-up	Average Power (dBm)	SAR Test (Yes/No)
					Max.		
802.11b	99%	1	2412	1Mbps	12.10	10.95	No
		2	2417		12.10	9.70	No
		3	2422		12.10	10.17	No
		4	2427		12.10	10.12	No
		5	2432		12.10	10.34	No
		6	2437		11.10	10.35	No
		7	2442		11.10	9.33	No
		8	2447		11.10	9.44	No
		9	2452		11.60	9.36	No
		10	2457		11.60	10.00	No
		11	2462		11.60	9.63	No
		12	2467		11.60	10.43	No
		13	2472		11.60	10.77	No
802.11g	98%	1	2412	6Mbps	12.00	10.25	No
		2	2417		12.00	11.48	No
		3	2422		12.00	10.60	No
		4	2427		12.00	10.84	No
		5	2432		12.00	11.07	No
		6	2437		11.00	10.92	No
		7	2442		11.00	10.62	No
		8	2447		11.00	10.99	No
		9	2452		11.50	11.50	No
		10	2457		11.50	11.28	No
		11	2462		11.50	9.50	No
		12	2467		11.50	11.47	No
		13	2472		11.50	11.07	No
802.11n SISO 20M	98%	1	2412	MCS0	12.00	9.50	No
		2	2417		12.00	9.91	No
		3	2422		12.00	9.83	No
		4	2427		12.00	9.96	No
		5	2432		12.00	10.64	No
		6	2437		11.00	10.35	No
		7	2442		11.00	9.76	No
		8	2447		11.00	10.10	No
		9	2452		11.50	10.01	No
		10	2457		11.50	9.85	No
		12	2467		11.50	9.70	No
		13	2472		11.50	9.34	No
		11	2462		11.50	10.63	No
802.11n SISO 40M	97%	3	2422	MCS0	12.00	10.70	No
		4	2427		11.00	10.52	No
		5	2432		11.00	10.37	No
		6	2437		11.00	10.42	No
		7	2442		11.00	10.81	No
		8	2447		11.00	10.90	No
		9	2452		11.50	9.80	No
		10	2457		11.50	9.08	No
		11	2462		11.50	9.20	No

Table 62: Test results conducted power measurement WiFi 2.4G CE (Receiver ON)

Note:1) The bolded mode was selected for SAR testing.

2) As different maximum tune-up output power is specified across the different channels range. So the additional conducted power measurement for the adjacent channel of each power level stage is also performed in this report to ensure compliance.

7.1.28 Conducted power of BT

BT	Duty cycle	Tune-up	Average Power (dBm)		
		Max.	0CH	39CH	78CH
DH5	77%	12.40	10.70	11.48	10.41
2DH5	77%	10.40	8.80	9.60	8.45
3DH5	77%	10.40	8.81	9.61	8.44
BT	Duty cycle	Tune-up	Average Power (dBm)		
		Max.	0CH	19CH	39CH
BLE	60%	9.40	7.91	8.82	7.95

Table 63: Test results conducted power measurement BT

Note: The conducted power of BT is measured with RMS detector.

Figure: Bluetooth Transmission Plot



So the actual bluetooth duty cycle is calculated as below:

$$\text{Duty Cycle} = \text{pulse width} \times 100\% = \frac{2.88\text{ms}}{3.75\text{ms}} \times 100\% = 77\%$$

7.2 SAR measurement Results

General Notes:

- 1) Per KDB 447498 D01, all SAR measurement results are scaled to the maximum tune-up tolerance limit to demonstrate SAR compliance.
- 2) Per KDB 447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - $\leq 0.8\text{W/kg}$ for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is $\leq 100\text{MHz}$.
 - $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.When the maximum output power variation across the required test channels is $> \frac{1}{2}\text{ dB}$, instead of the middle channel, the highest output power channel must be used.
- 3) Per KDB 865664 D01, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$; if the deviation among the repeated measurement is $\leq 20\%$, and the measured SAR $< 1.45\text{W/kg}$, only one repeated measurement is required.
- 4) Per KDB 941225 D06, the DUT Dimension is bigger than 9 cm x 5 cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.
- 5) Per KDB 648474 D04, SAR is evaluated without a headset connected to the device. When the standalone reported body-worn SAR is $\leq 1.2\text{ W/kg}$, no additional SAR evaluations using a headset are required.
- 6) Per KDB 865664 D02, SAR plot is only required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination; Plots are also required when the measured SAR is $> 1.5\text{ W/kg}$, or $> 7.0\text{ W/kg}$ for occupational exposure. The published RF exposure KDB procedures may require additional plots; for example, to support SAR to peak location separation ratio test exclusion and/or volume scan post-processing (Refer to appendix B for details).
- 7) Per KDB 648474 D04, Body-worn accessories that do not contain metallic or conductive components is tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.

GSM Notes:

- 1) Per KDB941225 D01, SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.
- 2) Per KDB 648474 D04, the device does not support DTM function. Body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.

UMTS Notes:

1) Per KDB 941225 D01, When the maximum output power and tune-up tolerance specified for production units in a Second mode is $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of Second to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the Second mode.

LTE Notes:

1) The LTE test configurations are determined according to KDB 941225 D05 SAR for LTE Devices. The general test procedures used for SAR testing can be found in Section 6.5.

2) A-MPR was disabled for all SAR test by setting NS_01 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI)

WiFi Notes:

Per KDB 248227D01:

1) When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is ≤ 0.8 W/kg or all test position are measured. For all positions/configurations tested using the initial test position and subsequent test positions, when the *reported* SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the *reported* SAR is ≤ 1.2 W/kg or all required channels are tested..

2) When the DSSS *reported* SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

3) When the highest *reported* SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations

4) The highest SAR measured for the initial test position or initial test configuration should be used to determine SAR test exclusion according to the sum of 1-g SAR and SAR peak to location ratio provisions in KDB 447498. In addition, a test lab may also choose to perform standalone SAR measurements for test positions and 802.11 configurations that are not required by the initial test position or initial test configuration procedures and apply the results to determine simultaneous transmission SAR test exclusion, according to sum of 1-g and SAR peak to location ratio requirements to reduce the number of simultaneous transmission SAR measurements.

7.2.1 SAR measurement Results of GSM850

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	190/836.6	GSM	0.605	0.314	-0.19	31.82	32.60	0.724	Battery 1#	/
Left tilt	190/836.6	GSM	0.488	0.246	0.16	31.82	32.60	0.584	Battery 1#	/
Right cheek	190/836.6	GSM	0.638	0.395	0.01	31.82	32.60	0.764	Battery 1#	/
Right tilt	190/836.6	GSM	0.533	0.280	0.01	31.82	32.60	0.638	Battery 1#	/
Right cheek	190/836.6	GSM	0.664	0.393	0.04	31.82	32.60	0.795	Battery 2#	Yes
Right cheek	190/836.6	GSM	0.624	0.370	-0.02	31.82	32.60	0.747	Battery 3#	/
Right cheek	190/836.6	GSM	0.626	0.370	0.00	31.82	32.60	0.749	With SIM2	/
Right cheek	128/824.2	GSM	0.567	0.355	-0.05	31.79	32.60	0.683	Battery 2#	/
Right cheek	251/848.8	GSM	0.470	0.297	-0.02	31.80	32.60	0.565	Battery 2#	/
Main Antenna										
Left cheek	190/836.6	GSM	0.045	0.030	0.17	31.92	33.10	0.059	Battery 1#	/
Left tilt	190/836.6	GSM	0.025	0.018	0.08	31.92	33.10	0.033	Battery 1#	/
Right cheek	190/836.6	GSM	0.062	0.048	0.17	31.92	33.10	0.081	Battery 1#	/
Right tilt	190/836.6	GSM	0.027	0.019	0.14	31.92	33.10	0.035	Battery 1#	/
Right cheek	190/836.6	GSM	0.066	0.052	-0.11	31.92	33.10	0.087	Battery 2#	Yes
Right cheek	190/836.6	GSM	0.051	0.035	-0.11	31.92	33.10	0.067	Battery 3#	/
Right cheek	190/836.6	GSM	0.066	0.051	-0.17	31.92	33.10	0.086	With SIM2	/
Right cheek	128/824.2	GSM	0.052	0.040	-0.13	31.96	33.10	0.067	Battery 2#	/
Right cheek	251/848.8	GSM	0.040	0.031	-0.09	32.04	33.10	0.051	Battery 2#	/

Table 64: Head SAR test results of GSM850

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	190/836.6	GSM	0.236	0.190	-0.16	33.36	34.10	0.280	Battery 1#	/
Back Side	15mm	190/836.6	GSM	0.249	0.200	-0.18	33.36	34.10	0.295	Battery 1#	Yes
Back Side	15mm	190/836.6	GSM	0.242	0.194	-0.13	33.36	34.10	0.287	Battery 2#	/
Back Side	15mm	190/836.6	GSM	0.227	0.160	-0.18	33.36	34.10	0.269	Battery 3#	/
Back Side	15mm	190/836.6	GSM	0.225	0.159	-0.12	33.36	34.10	0.267	With SIM2	/
Back Side	15mm	128/824.2	GSM	0.212	0.149	-0.13	33.30	34.10	0.255	Battery 1#	/
Back Side	15mm	251/848.8	GSM	0.204	0.143	-0.12	33.33	34.10	0.244	Battery 1#	/
Main Antenna											
Front Side	15mm	190/836.6	GSM	0.138	0.091	-0.14	31.92	33.10	0.181	Battery 1#	/
Back Side	15mm	190/836.6	GSM	0.177	0.131	-0.18	31.92	33.10	0.232	Battery 1#	/
Back Side	15mm	190/836.6	GSM	0.192	0.139	-0.15	31.92	33.10	0.252	Battery 2#	Yes
Back Side	15mm	190/836.6	GSM	0.165	0.108	-0.09	31.92	33.10	0.217	Battery 3#	/
Back Side	15mm	190/836.6	GSM	0.164	0.107	-0.15	31.92	33.10	0.215	With SIM2	/
Back Side	15mm	128/824.2	GSM	0.169	0.125	-0.15	31.96	33.10	0.220	Battery 2#	/
Back Side	15mm	251/848.8	GSM	0.148	0.095	-0.07	32.04	33.10	0.189	Battery 2#	/

Table 65: Body Worn SAR test results of GSM850

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	190/836.6	GPRS 2TS	0.206	0.146	-0.12	30.23	31.10	0.252	Battery 1#	/
Back Side	10mm	190/836.6	GPRS 2TS	0.278	0.178	-0.13	30.23	31.10	0.340	Battery 1#	/
Left Side	10mm	190/836.6	GPRS 2TS	0.335	0.226	-0.19	30.23	31.10	0.409	Battery 1#	/
Right Side	10mm	190/836.6	GPRS 2TS	0.196	0.132	-0.11	30.23	31.10	0.239	Battery 1#	/
Top Side	10mm	190/836.6	GPRS 2TS	0.187	0.085	-0.05	30.23	31.10	0.228	Battery 1#	/
Left Side	10mm	190/836.6	GPRS 2TS	0.366	0.263	0.00	30.23	31.10	0.447	Battery 2#	Yes
Left Side	10mm	190/836.6	GPRS 2TS	0.348	0.233	-0.08	30.23	31.10	0.425	Battery 3#	/
Left Side	10mm	190/836.6	GPRS 2TS	0.358	0.258	-0.05	30.23	31.10	0.437	With SIM2	/
Left Side	10mm	128/824.2	GPRS 2TS	0.360	0.242	-0.19	30.21	31.10	0.442	Battery 2#	/
Left Side	10mm	251/848.8	GPRS 2TS	0.296	0.213	-0.01	30.18	31.10	0.366	Battery 2#	/
Main Antenna											
Front Side	10mm	190/836.6	GPRS 2TS	0.280	0.183	-0.10	28.90	30.10	0.369	Battery 1#	/
Back Side	10mm	190/836.6	GPRS 2TS	0.357	0.221	-0.13	28.90	30.10	0.471	Battery 1#	/
Left Side	10mm	190/836.6	GPRS 2TS	0.118	0.062	-0.06	28.90	30.10	0.156	Battery 1#	/
Right Side	10mm	190/836.6	GPRS 2TS	0.055	0.036	-0.16	28.90	30.10	0.072	Battery 1#	/
Bottom Side	10mm	190/836.6	GPRS 2TS	0.190	0.099	0.16	28.90	30.10	0.250	Battery 1#	/
Back Side	10mm	190/836.6	GPRS 2TS	0.390	0.232	0.03	28.90	30.10	0.514	Battery 2#	/
Back Side	10mm	190/836.6	GPRS 2TS	0.370	0.224	-0.13	28.90	30.10	0.488	Battery 3#	/
Back Side	10mm	190/836.6	GPRS 2TS	0.365	0.223	0.11	28.90	30.10	0.481	With SIM2	/
Back Side	10mm	128/824.2	GPRS 2TS	0.426	0.258	-0.01	28.96	30.10	0.554	Battery 2#	Yes
Back Side	10mm	251/848.8	GPRS 2TS	0.314	0.206	-0.18	28.94	30.10	0.410	Battery 2#	/

Table 66: Hotspot SAR test results of GSM850

Note: Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.

7.2.2 SAR measurement Results of GSM1900

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	661/1880	GSM	0.117	0.069	0.09	23.91	25.30	0.161	Battery 1#	/
Left tilt	661/1880	GSM	0.066	0.037	0.03	23.91	25.30	0.090	Battery 1#	/
Right cheek	661/1880	GSM	0.244	0.142	0.02	23.91	25.30	0.336	Battery 1#	/
Right tilt	661/1880	GSM	0.124	0.069	0.07	23.91	25.30	0.171	Battery 1#	/
Right cheek	661/1880	GSM	0.284	0.163	0.03	23.91	25.30	0.391	Battery 2#	/
Right cheek	661/1880	GSM	0.243	0.140	0.04	23.91	25.30	0.335	Battery 3#	/
Right cheek	661/1880	GSM	0.247	0.142	0.11	23.91	25.30	0.340	With SIM2	/
Right cheek	512/1850.2	GSM	0.219	0.126	0.06	23.71	25.30	0.316	Battery 2#	/
Right cheek	810/1909.8	GSM	0.286	0.164	0.04	23.94	25.30	0.391	Battery 2#	Yes
Main Antenna										
Left cheek	661/1880	GSM	0.101	0.064	0.16	30.27	31.30	0.128	Battery 1#	/
Left tilt	661/1880	GSM	0.071	0.039	0.11	30.27	31.30	0.090	Battery 1#	/
Right cheek	661/1880	GSM	0.076	0.048	0.12	30.27	31.30	0.096	Battery 1#	/
Right tilt	661/1880	GSM	0.067	0.036	0.06	30.27	31.30	0.085	Battery 1#	/
Left cheek	661/1880	GSM	0.104	0.067	0.05	30.27	31.30	0.132	Battery 2#	/
Left cheek	661/1880	GSM	0.109	0.070	0.12	30.27	31.30	0.138	Battery 3#	/
Left cheek	661/1880	GSM	0.109	0.070	0.07	30.27	31.30	0.138	With SIM2	/
Left cheek	512/1850.2	GSM	0.091	0.058	0.18	30.12	31.30	0.119	Battery 3#	/
Left cheek	810/1909.8	GSM	0.118	0.075	0.05	30.23	31.30	0.151	Battery 3#	Yes

Table 67: Head SAR test results of GSM1900

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	661/1880	GSM	0.010	0.007	-0.05	23.91	25.30	0.014	Battery 1#	/
Back Side	15mm	661/1880	GSM	0.011	0.005	-0.15	23.91	25.30	0.015	Battery 1#	/
Back Side	15mm	661/1880	GSM	0.013	0.008	0.06	23.91	25.30	0.017	Battery 2#	/
Back Side	15mm	661/1880	GSM	0.012	0.007	-0.08	23.91	25.30	0.016	Battery 3#	/
Back Side	15mm	661/1880	GSM	0.012	0.007	0.19	23.91	25.30	0.016	With SIM2	/
Back Side	15mm	512/1850.2	GSM	0.009	0.005	0.16	23.71	25.30	0.013	Battery 2#	/
Back Side	15mm	810/1909.8	GSM	0.019	0.011	0.08	23.94	25.30	0.025	Battery 2#	Yes
Main Antenna											
Front Side	15mm	661/1880	GSM	0.136	0.083	0.19	30.27	31.30	0.172	Battery 1#	/
Back Side	15mm	661/1880	GSM	0.129	0.080	-0.19	30.27	31.30	0.164	Battery 1#	/
Front Side	15mm	661/1880	GSM	0.136	0.082	0.15	30.27	31.30	0.172	Battery 2#	/
Front Side	15mm	661/1880	GSM	0.135	0.082	0.13	30.27	31.30	0.171	Battery 3#	/
Front Side	15mm	661/1880	GSM	0.140	0.085	0.17	30.27	31.30	0.177	With SIM2	/
Front Side	15mm	512/1850.2	GSM	0.128	0.079	0.14	30.12	31.30	0.168	With SIM2	/
Front Side	15mm	810/1909.8	GSM	0.142	0.086	0.15	30.23	31.30	0.182	With SIM2	Yes

Table 68: Body Worn SAR test results of GSM1900

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	661/1880	GPRS 2TS	0.014	0.007	0.14	21.10	22.30	0.018	Battery 1#	/
Back Side	10mm	661/1880	GPRS 2TS	0.026	0.016	0.17	21.10	22.30	0.034	Battery 1#	/
Left Side	10mm	661/1880	GPRS 2TS	0.018	0.011	0.10	21.10	22.30	0.024	Battery 1#	/
Right Side	10mm	661/1880	GPRS 2TS	<0.001	0.000	0.13	21.10	22.30	0.001	Battery 1#	/
Top Side	10mm	661/1880	GPRS 2TS	0.022	0.011	0.11	21.10	22.30	0.029	Battery 1#	/
Back Side	10mm	661/1880	GPRS 2TS	0.024	0.015	0.09	21.10	22.30	0.032	Battery 2#	/
Back Side	10mm	661/1880	GPRS 2TS	0.024	0.014	0.19	21.10	22.30	0.031	Battery 3#	/
Back Side	10mm	661/1880	GPRS 2TS	0.024	0.014	-0.06	21.10	22.30	0.032	With SIM2	/
Back Side	10mm	512/1850.2	GPRS 2TS	0.018	0.011	0.18	20.89	22.30	0.025	Battery 1#	/
Back Side	10mm	810/1909.8	GPRS 2TS	0.033	0.020	0.03	21.07	22.30	0.044	Battery 1#	Yes
Main Antenna											
Front Side	10mm	661/1880	GPRS 2TS	0.223	0.129	0.19	27.01	28.30	0.300	Battery 1#	/
Back Side	10mm	661/1880	GPRS 2TS	0.238	0.139	0.07	27.01	28.30	0.320	Battery 1#	/
Left Side	10mm	661/1880	GPRS 2TS	0.113	0.063	0.13	27.01	28.30	0.152	Battery 1#	/
Right Side	10mm	661/1880	GPRS 2TS	0.075	0.042	0.16	27.01	28.30	0.101	Battery 1#	/
Bottom Side	10mm	661/1880	GPRS 2TS	0.382	0.217	0.15	27.01	28.30	0.514	Battery 1#	/
Bottom Side	10mm	661/1880	GPRS 2TS	0.389	0.219	0.08	27.01	28.30	0.524	Battery 2#	Yes
Bottom Side	10mm	661/1880	GPRS 2TS	0.377	0.213	0.11	27.01	28.30	0.507	Battery 3#	/
Bottom Side	10mm	661/1880	GPRS 2TS	0.377	0.213	0.15	27.01	28.30	0.507	With SIM2	/
Bottom Side	10mm	512/1850.2	GPRS 2TS	0.387	0.220	0.05	27.21	28.30	0.497	Battery 2#	/
Bottom Side	10mm	810/1909.8	GPRS 2TS	0.357	0.202	0.11	26.85	28.30	0.499	Battery 2#	/

Table 69: Hotspot SAR test results of GSM1900

Note: Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.

7.2.3 SAR measurement Results of UMTS Band II

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	9400/1880	RMC	0.339	0.197	-0.02	18.91	19.60	0.397	Battery 1#	/
Left tilt	9400/1880	RMC	0.207	0.119	0.02	18.91	19.60	0.243	Battery 1#	/
Right cheek	9400/1880	RMC	0.702	0.411	-0.01	18.91	19.60	0.823	Battery 1#	/
Right tilt	9400/1880	RMC	0.360	0.208	0.00	18.91	19.60	0.422	Battery 1#	/
Right cheek	9400/1880	RMC	0.581	0.342	0.03	18.91	19.60	0.681	Battery 2#	/
Right cheek	9400/1880	RMC	0.725	0.422	-0.01	18.91	19.60	0.850	Battery 3#	/
Right cheek	9400/1880	RMC	0.723	0.421	-0.02	18.91	19.60	0.847	With SIM2	/
Right cheek	9262/1852.4	RMC	0.685	0.403	-0.01	18.89	19.60	0.807	Battery 3#	/
Right cheek	9538/1907.6	RMC	0.733	0.427	0.04	18.80	19.60	0.881	Battery 3#	Yes
Main Antenna										
Left cheek	9400/1880	RMC	0.196	0.122	0.04	23.58	24.50	0.242	Battery 1#	/
Left tilt	9400/1880	RMC	0.105	0.059	0.07	23.58	24.50	0.130	Battery 1#	/
Right cheek	9400/1880	RMC	0.138	0.086	0.18	23.58	24.50	0.171	Battery 1#	/
Right tilt	9400/1880	RMC	0.085	0.050	0.05	23.58	24.50	0.104	Battery 1#	/
Left cheek	9400/1880	RMC	0.197	0.123	0.18	23.58	24.50	0.243	Battery 2#	Yes
Left cheek	9400/1880	RMC	0.195	0.122	0.19	23.58	24.50	0.241	Battery 3#	/
Left cheek	9400/1880	RMC	0.195	0.122	0.06	23.58	24.50	0.241	With SIM2	/
Left cheek	9262/1852.4	RMC	0.172	0.108	-0.16	23.55	24.50	0.214	Battery 2#	/
Left cheek	9538/1907.6	RMC	0.145	0.089	0.17	23.54	24.50	0.181	Battery 2#	/

Table 70: Head SAR test results of UMTS Band II

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	9400/1880	RMC	0.101	0.063	0.16	23.78	24.00	0.106	Battery 1#	/
Back Side	15mm	9400/1880	RMC	0.113	0.073	-0.01	23.78	24.00	0.119	Battery 1#	/
Back Side	15mm	9400/1880	RMC	0.113	0.073	-0.05	23.78	24.00	0.119	Battery 2#	/
Back Side	15mm	9400/1880	RMC	0.115	0.075	-0.09	23.78	24.00	0.121	Battery 3#	/
Back Side	15mm	9400/1880	RMC	0.116	0.075	-0.03	23.78	24.00	0.122	With SIM2	Yes
Back Side	15mm	9262/1852.4	RMC	0.115	0.075	-0.05	23.78	24.00	0.121	With SIM2	/
Back Side	15mm	9538/1907.6	RMC	0.110	0.071	-0.04	23.66	24.00	0.119	With SIM2	/
Main Antenna											
Front Side	15mm	9400/1880	RMC	0.212	0.127	-0.11	23.07	24.00	0.263	Battery 1#	/
Back Side	15mm	9400/1880	RMC	0.225	0.136	-0.10	23.07	24.00	0.279	Battery 1#	/
Back Side	15mm	9400/1880	RMC	0.233	0.140	-0.08	23.07	24.00	0.289	Battery 2#	/
Back Side	15mm	9400/1880	RMC	0.227	0.136	-0.05	23.07	24.00	0.281	Battery 3#	/
Back Side	15mm	9400/1880	RMC	0.228	0.137	-0.07	23.07	24.00	0.282	With SIM2	/
Back Side	15mm	9262/1852.4	RMC	0.196	0.117	-0.08	23.05	24.00	0.244	Battery 2#	/
Back Side	15mm	9538/1907.6	RMC	0.255	0.153	-0.05	23.04	24.00	0.318	Battery 2#	Yes

Table 71: Body Worn SAR test results of UMTS Band II

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	9400/1880	RMC	0.157	0.102	0.03	23.25	23.50	0.166	Battery 1#	/
Back Side	10mm	9400/1880	RMC	0.232	0.143	-0.04	23.25	23.50	0.246	Battery 1#	/
Left Side	10mm	9400/1880	RMC	0.227	0.131	-0.10	23.25	23.50	0.240	Battery 1#	/
Right Side	10mm	9400/1880	RMC	0.042	0.024	-0.18	23.25	23.50	0.045	Battery 1#	/
Top Side	10mm	9400/1880	RMC	0.217	0.108	-0.01	23.25	23.50	0.230	Battery 1#	/
Back Side	10mm	9400/1880	RMC	0.221	0.136	0.01	23.25	23.50	0.234	Battery 2#	/
Back Side	10mm	9400/1880	RMC	0.227	0.140	-0.03	23.25	23.50	0.240	Battery 3#	/
Back Side	10mm	9400/1880	RMC	0.232	0.141	-0.04	23.25	23.50	0.246	With SIM2	/
Back Side	10mm	9262/1852.4	RMC	0.227	0.142	0.00	23.29	23.50	0.238	Battery 1#	/
Back Side	10mm	9538/1907.6	RMC	0.237	0.145	-0.08	23.13	23.50	0.258	Battery 1#	Yes
Main Antenna											
Front Side	10mm	9400/1880	RMC	0.430	0.241	-0.01	23.07	24.00	0.533	Battery 1#	/
Back Side	10mm	9400/1880	RMC	0.451	0.259	-0.08	23.07	24.00	0.559	Battery 1#	/
Left Side	10mm	9400/1880	RMC	0.212	0.116	-0.07	23.07	24.00	0.263	Battery 1#	/
Right Side	10mm	9400/1880	RMC	0.140	0.079	-0.11	23.07	24.00	0.173	Battery 1#	/
Bottom Side	10mm	9400/1880	RMC	0.677	0.372	-0.15	23.07	24.00	0.839	Battery 1#	/
Bottom Side	10mm	9400/1880	RMC	0.715	0.392	-0.15	23.07	24.00	0.886	Battery 2#	/
Bottom Side	10mm	9400/1880	RMC	0.704	0.387	-0.12	23.07	24.00	0.872	Battery 3#	/
Bottom Side	10mm	9400/1880	RMC	0.685	0.378	-0.11	23.07	24.00	0.849	With SIM2	/
Bottom Side	10mm	9262/1852.4	RMC	0.619	0.341	-0.05	23.05	24.00	0.770	Battery 2#	/
Bottom Side	10mm	9538/1907.6	RMC	0.786	0.434	-0.11	23.04	24.00	0.980	Battery 2#	Yes

Table 72: Hotspot SAR test results of UMTS Band II

Per KDB648474D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Max Power Without Reduction	Scaled-up 1-g SAR (W/kg)	Product Specific 10-g SAR Exclusion
				1-g	10-g					
Second Antenna										
Front Side	10mm	9400/1880	RMC	0.157	0.102	0.03	23.25	24.00	0.187	Yes
Back Side	10mm	9400/1880	RMC	0.232	0.143	-0.04	23.25	24.00	0.276	Yes
Left Side	10mm	9400/1880	RMC	0.227	0.131	-0.10	23.25	24.00	0.270	Yes
Right Side	10mm	9400/1880	RMC	0.042	0.024	-0.18	23.25	24.00	0.050	Yes
Top Side	10mm	9400/1880	RMC	0.217	0.108	-0.01	23.25	24.00	0.258	Yes
Back Side	10mm	9400/1880	RMC	0.221	0.136	0.01	23.25	24.00	0.263	Yes
Back Side	10mm	9400/1880	RMC	0.227	0.140	-0.03	23.25	24.00	0.270	Yes
Back Side	10mm	9400/1880	RMC	0.232	0.141	-0.04	23.25	24.00	0.276	Yes
Back Side	10mm	9262/1852.4	RMC	0.227	0.142	0.00	23.29	24.00	0.267	Yes
Back Side	10mm	9538/1907.6	RMC	0.237	0.145	-0.08	23.13	24.00	0.290	Yes

Table 73: Product Specific 10-g SAR test reduction evaluation of UMTS Band 2

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

7.2.4 SAR measurement Results of UMTS Band IV

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	1413/1732.6	RMC	0.385	0.227	0.18	19.39	20.00	0.443	Battery 1#	/
Left tilt	1413/1732.6	RMC	0.270	0.149	0.13	19.39	20.00	0.311	Battery 1#	/
Right cheek	1413/1732.6	RMC	0.584	0.355	0.06	19.39	20.00	0.672	Battery 1#	/
Right tilt	1413/1732.6	RMC	0.342	0.204	0.12	19.39	20.00	0.394	Battery 1#	/
Right cheek	1413/1732.6	RMC	0.592	0.359	-0.03	19.39	20.00	0.681	Battery 2#	/
Right cheek	1413/1732.6	RMC	0.643	0.390	0.00	19.39	20.00	0.740	Battery 3#	Yes
Right cheek	1413/1732.6	RMC	0.567	0.344	-0.06	19.39	20.00	0.653	With SIM2	/
Right cheek	1312/1712.4	RMC	0.561	0.340	-0.03	19.39	20.00	0.646	Battery 3#	/
Right cheek	1513/1752.6	RMC	0.603	0.367	-0.05	19.41	20.00	0.691	Battery 3#	/
Main Antenna										
Left cheek	1413/1732.6	RMC	0.178	0.115	0.16	23.10	24.00	0.219	Battery 1#	/
Left tilt	1413/1732.6	RMC	0.096	0.060	0.06	23.10	24.00	0.118	Battery 1#	/
Right cheek	1413/1732.6	RMC	0.165	0.104	0.15	23.10	24.00	0.203	Battery 1#	/
Right tilt	1413/1732.6	RMC	0.075	0.043	0.05	23.10	24.00	0.092	Battery 1#	/
Left cheek	1413/1732.6	RMC	0.174	0.113	-0.13	23.10	24.00	0.214	Battery 2#	/
Left cheek	1413/1732.6	RMC	0.175	0.113	-0.17	23.10	24.00	0.215	Battery 3#	/
Left cheek	1413/1732.6	RMC	0.168	0.109	0.14	23.10	24.00	0.207	With SIM2	/
Left cheek	1312/1712.4	RMC	0.165	0.107	-0.06	23.14	24.00	0.201	Battery 1#	/
Left cheek	1513/1752.6	RMC	0.188	0.120	-0.14	23.04	24.00	0.235	Battery 1#	Yes

Table 74: Head SAR test results of UMTS Band IV

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	1413/1732.6	RMC	0.148	0.100	0.06	23.43	24.00	0.169	Battery 1#	/
Back Side	15mm	1413/1732.6	RMC	0.147	0.098	-0.03	23.43	24.00	0.168	Battery 1#	/
Front Side	15mm	1413/1732.6	RMC	0.150	0.101	-0.06	23.43	24.00	0.171	Battery 2#	Yes
Front Side	15mm	1413/1732.6	RMC	0.148	0.100	0.06	23.43	24.00	0.169	Battery 3#	/
Front Side	15mm	1413/1732.6	RMC	0.148	0.099	-0.02	23.43	24.00	0.169	With SIM2	/
Front Side	15mm	1312/1712.4	RMC	0.144	0.097	0.01	23.40	24.00	0.165	Battery 2#	/
Front Side	15mm	1513/1752.6	RMC	0.137	0.092	-0.09	23.35	24.00	0.159	Battery 2#	/
Main Antenna											
Front Side	15mm	1413/1732.6	RMC	0.250	0.166	-0.07	22.63	23.50	0.305	Battery 1#	Yes
Back Side	15mm	1413/1732.6	RMC	0.250	0.165	-0.05	22.63	23.50	0.305	Battery 1#	/
Front Side	15mm	1413/1732.6	RMC	0.236	0.156	-0.17	22.63	23.50	0.288	Battery 2#	/
Front Side	15mm	1413/1732.6	RMC	0.236	0.156	-0.06	22.63	23.50	0.288	Battery 3#	/
Front Side	15mm	1413/1732.6	RMC	0.225	0.149	-0.01	22.63	23.50	0.275	With SIM2	/
Front Side	15mm	1312/1712.4	RMC	0.225	0.149	-0.08	22.66	23.50	0.273	Battery 1#	/
Front Side	15mm	1513/1752.6	RMC	0.221	0.146	-0.05	22.53	23.50	0.276	Battery 1#	/

Table 75: Body Worn SAR test results of UMTS Band IV

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	1413/1732.6	RMC	0.223	0.140	0.03	23.43	24.00	0.254	Battery 1#	/
Back Side	10mm	1413/1732.6	RMC	0.253	0.168	-0.03	23.43	24.00	0.288	Battery 1#	/
Left Side	10mm	1413/1732.6	RMC	0.185	0.111	0.04	23.43	24.00	0.211	Battery 1#	/
Right Side	10mm	1413/1732.6	RMC	0.069	0.034	0.14	23.43	24.00	0.079	Battery 1#	/
Top Side	10mm	1413/1732.6	RMC	0.226	0.106	-0.05	23.43	24.00	0.258	Battery 1#	/
Back Side	10mm	1413/1732.6	RMC	0.259	0.171	-0.06	23.43	24.00	0.295	Battery 2#	/
Back Side	10mm	1413/1732.6	RMC	0.265	0.174	-0.04	23.43	24.00	0.302	Battery 3#	/
Back Side	10mm	1413/1732.6	RMC	0.244	0.162	-0.06	23.43	24.00	0.278	With SIM2	/
Back Side	10mm	1312/1712.4	RMC	0.271	0.177	0.06	23.40	24.00	0.311	Battery 3#	Yes
Back Side	10mm	1513/1752.6	RMC	0.252	0.167	-0.06	23.35	24.00	0.293	Battery 3#	/
Main Antenna											
Front Side	10mm	1413/1732.6	RMC	0.405	0.268	-0.09	22.63	23.50	0.495	Battery 1#	/
Back Side	10mm	1413/1732.6	RMC	0.446	0.295	-0.06	22.63	23.50	0.545	Battery 1#	/
Left Side	10mm	1413/1732.6	RMC	0.209	0.112	-0.06	22.63	23.50	0.255	Battery 1#	/
Right Side	10mm	1413/1732.6	RMC	0.126	0.075	-0.15	22.63	23.50	0.154	Battery 1#	/
Bottom Side	10mm	1413/1732.6	RMC	0.494	0.283	0.04	22.63	23.50	0.604	Battery 1#	/
Bottom Side	10mm	1413/1732.6	RMC	0.487	0.280	-0.05	22.63	23.50	0.595	Battery 2#	/
Bottom Side	10mm	1413/1732.6	RMC	0.488	0.280	-0.05	22.63	23.50	0.596	Battery 3#	/
Bottom Side	10mm	1413/1732.6	RMC	0.487	0.280	-0.04	22.63	23.50	0.595	With SIM2	/
Bottom Side	10mm	1312/1712.4	RMC	0.495	0.285	-0.05	22.66	23.50	0.601	Battery 1#	Yes
Bottom Side	10mm	1513/1752.6	RMC	0.473	0.270	-0.05	22.53	23.50	0.591	Battery 1#	/

Table 76: Hotspot SAR test results of UMTS Band IV

Note: Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.

7.2.5 SAR measurement Results of UMTS Band V

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	4182/836.4	RMC	0.459	0.297	-0.01	21.74	22.50	0.547	Battery 1#	/
Left tilt	4182/836.4	RMC	0.323	0.207	0.07	21.74	22.50	0.385	Battery 1#	/
Right cheek	4182/836.4	RMC	0.521	0.331	0.01	21.74	22.50	0.621	Battery 1#	/
Right tilt	4182/836.4	RMC	0.443	0.280	0.05	21.74	22.50	0.528	Battery 1#	/
Right cheek	4182/836.4	RMC	0.524	0.339	-0.11	21.74	22.50	0.624	Battery 2#	/
Right cheek	4182/836.4	RMC	0.578	0.361	-0.05	21.74	22.50	0.689	Battery 3#	/
Right cheek	4182/836.4	RMC	0.622	0.382	-0.03	21.74	22.50	0.741	With SIM2	Yes
Right cheek	4132/826.4	RMC	0.585	0.357	-0.02	21.72	22.50	0.700	With SIM2	/
Right cheek	4233/846.6	RMC	0.602	0.372	0.00	21.74	22.50	0.717	With SIM2	/
Main Antenna										
Left cheek	4182/836.4	RMC	0.050	0.035	-0.17	24.25	25.00	0.060	Battery 1#	/
Left tilt	4182/836.4	RMC	0.035	0.023	0.10	24.25	25.00	0.041	Battery 1#	/
Right cheek	4182/836.4	RMC	0.063	0.049	0.14	24.25	25.00	0.075	Battery 1#	/
Right tilt	4182/836.4	RMC	0.026	0.018	-0.03	24.25	25.00	0.031	Battery 1#	/
Right cheek	4182/836.4	RMC	0.065	0.050	-0.14	24.25	25.00	0.077	Battery 2#	Yes
Right cheek	4182/836.4	RMC	0.060	0.047	0.12	24.25	25.00	0.071	Battery 3#	/
Right cheek	4182/836.4	RMC	0.059	0.046	0.13	24.25	25.00	0.070	With SIM2	/
Right cheek	4132/826.4	RMC	0.059	0.040	0.19	24.15	25.00	0.072	Battery 2#	/
Right cheek	4233/846.6	RMC	0.052	0.036	0.16	24.14	25.00	0.063	Battery 2#	/

Table 77: Head SAR test results of UMTS Band V

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	4182/836.4	RMC	0.220	0.156	0.00	24.24	25.00	0.262	Battery 1#	/
Back Side	15mm	4182/836.4	RMC	0.258	0.200	0.07	24.24	25.00	0.307	Battery 1#	/
Back Side	15mm	4182/836.4	RMC	0.256	0.199	-0.02	24.24	25.00	0.305	Battery 2#	/
Back Side	15mm	4182/836.4	RMC	0.257	0.200	-0.06	24.24	25.00	0.306	Battery 3#	/
Back Side	15mm	4182/836.4	RMC	0.257	0.200	-0.03	24.24	25.00	0.306	With SIM2	/
Back Side	15mm	4132/826.4	RMC	0.234	0.182	-0.06	24.24	25.00	0.279	Battery 1#	/
Back Side	15mm	4233/846.6	RMC	0.259	0.201	-0.14	24.17	25.00	0.314	Battery 1#	Yes
Main Antenna											
Front Side	15mm	4182/836.4	RMC	0.251	0.169	0.09	24.25	25.00	0.298	Battery 1#	/
Back Side	15mm	4182/836.4	RMC	0.302	0.200	0.16	24.25	25.00	0.359	Battery 1#	/
Back Side	15mm	4182/836.4	RMC	0.312	0.205	0.19	24.25	25.00	0.371	Battery 2#	Yes
Back Side	15mm	4182/836.4	RMC	0.305	0.201	0.19	24.25	25.00	0.362	Battery 3#	/
Back Side	15mm	4182/836.4	RMC	0.301	0.200	0.09	24.25	25.00	0.358	With SIM2	/
Back Side	15mm	4132/826.4	RMC	0.285	0.187	0.01	24.15	25.00	0.347	Battery 2#	/
Back Side	15mm	4233/846.6	RMC	0.252	0.166	-0.09	24.14	25.00	0.307	Battery 2#	/

Table 78: Body Worn SAR test results of UMTS Band V

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	4182/836.4	RMC	0.229	0.150	-0.02	24.24	25.00	0.273	Battery 1#	/
Back Side	10mm	4182/836.4	RMC	0.271	0.212	-0.04	24.24	25.00	0.323	Battery 1#	/
Left Side	10mm	4182/836.4	RMC	0.350	0.243	-0.11	24.24	25.00	0.417	Battery 1#	/
Right Side	10mm	4182/836.4	RMC	0.211	0.142	-0.07	24.24	25.00	0.251	Battery 1#	/
Top Side	10mm	4182/836.4	RMC	0.173	0.087	-0.03	24.24	25.00	0.206	Battery 1#	/
Left Side	10mm	4182/836.4	RMC	0.354	0.246	0.11	24.24	25.00	0.422	Battery 2#	/
Left Side	10mm	4182/836.4	RMC	0.382	0.266	-0.10	24.24	25.00	0.455	Battery 3#	Yes
Left Side	10mm	4182/836.4	RMC	0.377	0.263	-0.18	24.24	25.00	0.449	With SIM2	/
Left Side	10mm	4132/826.4	RMC	0.368	0.249	-0.16	24.24	25.00	0.438	Battery 3#	/
Left Side	10mm	4233/846.6	RMC	0.366	0.254	-0.11	24.17	25.00	0.443	Battery 3#	/
Main Antenna											
Front Side	10mm	4182/836.4	RMC	0.405	0.251	-0.01	24.25	25.00	0.481	Battery 1#	/
Back Side	10mm	4182/836.4	RMC	0.573	0.336	0.03	24.25	25.00	0.681	Battery 1#	Yes
Left Side	10mm	4182/836.4	RMC	0.181	0.100	0.00	24.25	25.00	0.215	Battery 1#	/
Right Side	10mm	4182/836.4	RMC	0.057	0.038	-0.03	24.25	25.00	0.068	Battery 1#	/
Bottom Side	10mm	4182/836.4	RMC	0.266	0.138	0.07	24.25	25.00	0.316	Battery 1#	/
Back Side	10mm	4182/836.4	RMC	0.522	0.310	0.03	24.25	25.00	0.620	Battery 2#	/
Back Side	10mm	4182/836.4	RMC	0.508	0.342	0.04	24.25	25.00	0.604	Battery 3#	/
Back Side	10mm	4182/836.4	RMC	0.536	0.352	-0.05	24.25	25.00	0.637	With SIM2	/
Back Side	10mm	4132/826.4	RMC	0.526	0.344	-0.04	24.15	25.00	0.640	Battery 1#	/
Back Side	10mm	4233/846.6	RMC	0.461	0.277	0.02	24.14	25.00	0.562	Battery 1#	/

Table 79: Hotspot SAR test results of UMTS Band V

Note: Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.

7.2.6 SAR measurement Results of LTE Band 2

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	18700/1860	20M QPSK 1RB#99	0.360	0.215	0.18	19.03	19.80	0.430	Battery 1#	/
Left tilt	18700/1860	20M QPSK 1RB#99	0.236	0.137	0.03	19.03	19.80	0.282	Battery 1#	/
Right cheek	18700/1860	20M QPSK 1RB#99	0.721	0.435	-0.19	19.03	19.80	0.861	Battery 1#	/
Right tilt	18700/1860	20M QPSK 1RB#99	0.569	0.322	0.10	19.03	19.80	0.679	Battery 1#	/
Left cheek	18900/1880	20M QPSK 50%RB#0	0.335	0.199	-0.02	18.90	19.80	0.412	Battery 1#	/
Left tilt	18900/1880	20M QPSK 50%RB#0	0.248	0.143	0.07	18.90	19.80	0.305	Battery 1#	/
Right cheek	18900/1880	20M QPSK 50%RB#0	0.724	0.439	-0.10	18.90	19.80	0.891	Battery 1#	/
Right tilt	18900/1880	20M QPSK 50%RB#0	0.595	0.322	-0.05	18.90	19.80	0.732	Battery 1#	/
Right cheek	18900/1880	20M QPSK 50%RB#0	0.747	0.446	-0.01	18.90	19.80	0.919	Battery 2#	/
Right cheek	18900/1880	20M QPSK 50%RB#0	0.563	0.334	0.12	18.90	19.80	0.693	Battery 3#	/
Right cheek	18900/1880	20M QPSK 50%RB#0	0.724	0.429	-0.04	18.90	19.80	0.890	With SIM2	/
Right cheek	18700/1860	20M QPSK 50%RB#50	0.507	0.303	0.00	18.89	19.80	0.625	Battery 2#	/
Right cheek	19100/1900	20M QPSK 50%RB#0	0.752	0.447	0.18	18.82	19.80	0.942	Battery 2#	Yes
Right cheek	18700/1860	20M QPSK 100%RB#0	0.630	0.368	0.00	18.97	19.80	0.763	Battery 2#	/
Main Antenna										
Left cheek	18700/1860	20M QPSK 1RB#0	0.176	0.111	0.13	22.94	24.00	0.225	Battery 1#	/
Left tilt	18700/1860	20M QPSK 1RB#0	0.092	0.052	0.11	22.94	24.00	0.117	Battery 1#	/
Right cheek	18700/1860	20M QPSK 1RB#0	0.115	0.073	0.17	22.94	24.00	0.147	Battery 1#	/
Right tilt	18700/1860	20M QPSK 1RB#0	0.085	0.049	0.17	22.94	24.00	0.108	Battery 1#	/
Left cheek	18700/1860	20M QPSK 50%RB#0	0.141	0.090	-0.10	21.95	23.00	0.180	Battery 1#	/
Left tilt	18700/1860	20M QPSK 50%RB#0	0.068	0.039	0.03	21.95	23.00	0.086	Battery 1#	/
Right cheek	18700/1860	20M QPSK 50%RB#0	0.085	0.049	0.17	21.95	23.00	0.108	Battery 1#	/
Right tilt	18700/1860	20M QPSK 50%RB#0	0.064	0.036	0.18	21.95	23.00	0.082	Battery 1#	/
Left cheek	18700/1860	20M QPSK 1RB#0	0.174	0.107	0.17	22.94	24.00	0.222	Battery 2#	/
Left cheek	18700/1860	20M QPSK 1RB#0	0.185	0.114	0.03	22.94	24.00	0.236	Battery 3#	/
Left cheek	18700/1860	20M QPSK 1RB#0	0.184	0.113	0.06	22.94	24.00	0.235	With SIM2	/
Left cheek	18900/1880	20M QPSK 1RB#0	0.207	0.125	-0.04	23.00	24.00	0.261	Battery 3#	/
Left cheek	19100/1900	20M QPSK 1RB#0	0.232	0.143	0.11	22.77	24.00	0.308	Battery 3#	Yes

Table 80: Head SAR test results of LTE Band 2

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	18700/1860	20M QPSK 1RB#99	0.118	0.076	0.09	23.26	24.00	0.140	Battery 1#	/
Back Side	15mm	18700/1860	20M QPSK 1RB#99	0.120	0.079	-0.07	23.26	24.00	0.142	Battery 1#	Yes
Front Side	15mm	18900/1880	20M QPSK 50%RB#0	0.089	0.056	0.05	22.21	23.00	0.107	Battery 1#	/
Back Side	15mm	18900/1880	20M QPSK 50%RB#0	0.097	0.061	-0.05	22.21	23.00	0.117	Battery 1#	/
Back Side	15mm	18700/1860	20M QPSK 1RB#99	0.119	0.077	-0.15	23.26	24.00	0.141	Battery 2#	/
Back Side	15mm	18700/1860	20M QPSK 1RB#99	0.118	0.077	-0.05	23.26	24.00	0.140	Battery 3#	/
Back Side	15mm	18700/1860	20M QPSK 1RB#99	0.117	0.074	-0.06	23.26	24.00	0.139	With SIM2	/
Back Side	15mm	18900/1880	20M QPSK 1RB#99	0.115	0.075	-0.09	23.22	24.00	0.138	Battery 1#	/
Back Side	15mm	19100/1900	20M QPSK 1RB#0	0.113	0.074	-0.05	23.00	24.00	0.142	Battery 1#	/
Main Antenna											
Front Side	15mm	18700/1860	20M QPSK 1RB#99	0.182	0.109	-0.05	21.99	23.00	0.230	Battery 1#	/
Back Side	15mm	18700/1860	20M QPSK 1RB#99	0.189	0.114	-0.06	21.99	23.00	0.238	Battery 1#	/
Front Side	15mm	18700/1860	20M QPSK 50%RB#0	0.171	0.100	-0.05	21.94	23.00	0.218	Battery 1#	/
Back Side	15mm	18700/1860	20M QPSK 50%RB#0	0.170	0.102	-0.16	21.94	23.00	0.217	Battery 1#	/
Back Side	15mm	18700/1860	20M QPSK 1RB#99	0.203	0.122	-0.06	21.99	23.00	0.256	Battery 2#	/
Back Side	15mm	18700/1860	20M QPSK 1RB#99	0.191	0.115	-0.05	21.99	23.00	0.241	Battery 3#	/
Back Side	15mm	18700/1860	20M QPSK 1RB#99	0.191	0.115	-0.09	21.99	23.00	0.241	With SIM2	/
Back Side	15mm	18900/1880	20M QPSK 1RB#0	0.189	0.113	-0.07	21.92	23.00	0.242	Battery 2#	/
Back Side	15mm	19100/1900	20M QPSK 1RB#0	0.207	0.125	-0.08	21.78	23.00	0.274	Battery 2#	Yes

Table 81: Body Worn SAR test results of LTE Band 2

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	18700/1860	20M QPSK 1RB#99	0.145	0.077	-0.02	22.76	23.50	0.172	Battery 1#	/
Back Side	10mm	18700/1860	20M QPSK 1RB#99	0.213	0.130	-0.11	22.76	23.50	0.253	Battery 1#	/
Left Side	10mm	18700/1860	20M QPSK 1RB#99	0.221	0.129	-0.06	22.76	23.50	0.262	Battery 1#	/
Right Side	10mm	18700/1860	20M QPSK 1RB#99	0.038	0.021	-0.12	22.76	23.50	0.045	Battery 1#	/
Top Side	10mm	18700/1860	20M QPSK 1RB#99	0.227	0.113	-0.06	22.76	23.50	0.269	Battery 1#	Yes
Front Side	10mm	18900/1880	20M QPSK 50%RB#0	0.141	0.085	0.14	22.18	22.50	0.152	Battery 1#	/
Back Side	10mm	18900/1880	20M QPSK 50%RB#0	0.207	0.121	0.03	22.18	22.50	0.223	Battery 1#	/
Left Side	10mm	18900/1880	20M QPSK 50%RB#0	0.194	0.109	-0.01	22.18	22.50	0.209	Battery 1#	/
Right Side	10mm	18900/1880	20M QPSK 50%RB#0	0.036	0.020	-0.13	22.18	22.50	0.039	Battery 1#	/
Top Side	10mm	18900/1880	20M QPSK 50%RB#0	0.195	0.096	-0.08	22.18	22.50	0.210	Battery 1#	/
Top Side	10mm	18700/1860	20M QPSK 1RB#99	0.208	0.105	-0.07	22.76	23.50	0.247	Battery 2#	/
Top Side	10mm	18700/1860	20M QPSK 1RB#99	0.207	0.104	-0.07	22.76	23.50	0.245	Battery 3#	/
Top Side	10mm	18700/1860	20M QPSK 1RB#99	0.195	0.103	-0.10	22.76	23.50	0.231	With SIM2	/
Top Side	10mm	18900/1880	20M QPSK 1RB#99	0.188	0.100	-0.05	22.68	23.50	0.227	Battery 1#	/
Top Side	10mm	19100/1900	20M QPSK 1RB#0	0.198	0.099	-0.07	22.54	23.50	0.247	Battery 1#	/
Main Antenna											
Front Side	10mm	18700/1860	20M QPSK 1RB#99	0.382	0.211	-0.05	21.99	23.00	0.482	Battery 1#	/
Back Side	10mm	18700/1860	20M QPSK 1RB#99	0.379	0.208	-0.06	21.99	23.00	0.478	Battery 1#	/
Left Side	10mm	18700/1860	20M QPSK 1RB#99	0.171	0.098	0.00	21.99	23.00	0.216	Battery 1#	/
Right Side	10mm	18700/1860	20M QPSK 1RB#99	0.132	0.072	-0.11	21.99	23.00	0.167	Battery 1#	/
Bottom Side	10mm	18700/1860	20M QPSK 1RB#99	0.553	0.306	-0.02	21.99	23.00	0.698	Battery 1#	/
Front Side	10mm	18700/1860	20M QPSK 50%RB#0	0.342	0.189	-0.09	21.94	23.00	0.437	Battery 1#	/
Back Side	10mm	18700/1860	20M QPSK 50%RB#0	0.336	0.184	-0.07	21.94	23.00	0.429	Battery 1#	/
Left Side	10mm	18700/1860	20M QPSK 50%RB#0	0.152	0.087	-0.19	21.94	23.00	0.194	Battery 1#	/
Right Side	10mm	18700/1860	20M QPSK 50%RB#0	0.114	0.063	-0.05	21.94	23.00	0.146	Battery 1#	/
Bottom Side	10mm	18700/1860	20M QPSK 50%RB#0	0.487	0.269	-0.06	21.94	23.00	0.622	Battery 1#	/
Bottom Side	10mm	18700/1860	20M QPSK 1RB#99	0.592	0.326	-0.03	21.99	23.00	0.747	Battery 2#	/
Bottom Side	10mm	18700/1860	20M QPSK 1RB#99	0.567	0.313	-0.06	21.99	23.00	0.715	Battery 3#	/
Bottom Side	10mm	18700/1860	20M QPSK 1RB#99	0.569	0.314	-0.05	21.99	23.00	0.718	With SIM2	/
Bottom Side	10mm	18900/1880	20M QPSK 1RB#0	0.517	0.285	-0.10	21.92	23.00	0.663	Battery 2#	/
Bottom Side	10mm	19100/1900	20M QPSK 1RB#0	0.614	0.338	0.18	21.78	23.00	0.813	Battery 2#	Yes
Bottom Side	10mm	18700/1860	20M QPSK 100%RB#0	0.513	0.284	-0.04	21.92	23.00	0.658	Battery 2#	/

Table 82: Hotspot SAR test results of LTE Band 2

Per KDB648474D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Max Power Without Reduction	Scaled-up 1-g SAR (W/kg)	Product Specific 10-g SAR Exclusion
				1-g	10-g					
Second Antenna										
Front Side	10mm	18700/1860	20M QPSK 1RB#99	0.145	0.077	-0.02	22.76	24.00	0.193	Yes
Back Side	10mm	18700/1860	20M QPSK 1RB#99	0.213	0.130	-0.11	22.76	24.00	0.283	Yes
Left Side	10mm	18700/1860	20M QPSK 1RB#99	0.221	0.129	-0.06	22.76	24.00	0.294	Yes
Right Side	10mm	18700/1860	20M QPSK 1RB#99	0.038	0.021	-0.12	22.76	24.00	0.050	Yes
Top Side	10mm	18700/1860	20M QPSK 1RB#99	0.227	0.113	-0.06	22.76	24.00	0.302	Yes
Front Side	10mm	18900/1880	20M QPSK 50%RB#0	0.141	0.085	0.14	22.18	23.00	0.170	Yes
Back Side	10mm	18900/1880	20M QPSK 50%RB#0	0.207	0.121	0.03	22.18	23.00	0.250	Yes
Left Side	10mm	18900/1880	20M QPSK 50%RB#0	0.194	0.109	-0.01	22.18	23.00	0.234	Yes
Right Side	10mm	18900/1880	20M QPSK 50%RB#0	0.036	0.020	-0.13	22.18	23.00	0.044	Yes
Top Side	10mm	18900/1880	20M QPSK 50%RB#0	0.195	0.096	-0.08	22.18	23.00	0.236	Yes
Top Side	10mm	18700/1860	20M QPSK 1RB#99	0.208	0.105	-0.07	22.76	24.00	0.277	Yes
Top Side	10mm	18700/1860	20M QPSK 1RB#99	0.207	0.104	-0.07	22.76	24.00	0.275	Yes
Top Side	10mm	18700/1860	20M QPSK 1RB#99	0.195	0.103	-0.10	22.76	24.00	0.259	Yes
Top Side	10mm	18900/1880	20M QPSK 1RB#99	0.188	0.100	-0.05	22.68	24.00	0.255	Yes
Top Side	10mm	19100/1900	20M QPSK 1RB#0	0.198	0.099	-0.07	22.54	24.00	0.277	Yes

Table 83: Product Specific 10-g SAR test reduction evaluation of LTE Band 2

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

7.2.7 SAR measurement Results of LTE Band 4

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	20300/1745	20M QPSK 1RB#99	0.438	0.261	-0.04	20.59	21.00	0.481	Battery 1#	/
Left tilt	20300/1745	20M QPSK 1RB#99	0.330	0.191	0.04	20.59	21.00	0.363	Battery 1#	/
Right cheek	20300/1745	20M QPSK 1RB#99	0.788	0.492	0.00	20.59	21.00	0.866	Battery 1#	Yes
Right cheek	20050/1720	20M QPSK 1RB#99	0.728	0.436	0.00	20.44	21.00	0.828	Battery 1#	/
Right cheek	20175/1732.5	20M QPSK 1RB#99	0.733	0.438	0.03	20.52	21.00	0.819	Battery 1#	/
Right tilt	20300/1745	20M QPSK 1RB#99	0.440	0.263	0.07	20.59	21.00	0.484	Battery 1#	/
Left cheek	20050/1720	20M QPSK 50%RB#25	0.427	0.253	0.02	20.41	21.00	0.489	Battery 1#	/
Left tilt	20050/1720	20M QPSK 50%RB#25	0.347	0.200	0.03	20.41	21.00	0.397	Battery 1#	/
Right cheek	20050/1720	20M QPSK 50%RB#25	0.688	0.413	0.03	20.41	21.00	0.788	Battery 1#	/
Right tilt	20050/1720	20M QPSK 50%RB#25	0.407	0.243	0.15	20.41	21.00	0.466	Battery 1#	/
Right cheek	20300/1745	20M QPSK 100%RB#0	0.698	0.416	0.02	20.41	21.00	0.800	Battery 1#	/
Right cheek	20300/1745	20M QPSK 1RB#99	0.752	0.472	0.03	20.59	21.00	0.826	Battery 2#	/
Right cheek	20300/1745	20M QPSK 1RB#99	0.715	0.425	0.03	20.59	21.00	0.786	Battery 3#	/
Right cheek	20300/1745	20M QPSK 1RB#99	0.621	0.371	0.04	20.59	21.00	0.682	With SIM2	/

Table 84: Head SAR test results of LTE Band 4

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot
				1-g	10-g						
Second Antenna											
Front Side	15mm	20300/1745	20M QPSK 1RB#99	0.142	0.096	0.03	23.12	23.50	0.155	Battery 1#	Yes
Back Side	15mm	20300/1745	20M QPSK 1RB#99	0.126	0.084	0.01	23.12	23.50	0.138	Battery 1#	/
Front Side	15mm	20300/1745	20M QPSK 50%RB#50	0.111	0.074	0.01	21.94	22.50	0.126	Battery 1#	/
Back Side	15mm	20300/1745	20M QPSK 50%RB#50	0.097	0.065	-0.07	21.94	22.50	0.110	Battery 1#	/
Front Side	15mm	20300/1745	20M QPSK 1RB#99	0.132	0.089	-0.12	23.12	23.50	0.144	Battery 2#	/
Front Side	15mm	20300/1745	20M QPSK 1RB#99	0.135	0.091	-0.02	23.12	23.50	0.147	Battery 3#	/
Front Side	15mm	20300/1745	20M QPSK 1RB#99	0.136	0.091	0.04	23.12	23.50	0.148	With SIM2	/
Front Side	15mm	20175/1732.5	20M QPSK 1RB#99	0.139	0.093	-0.03	22.92	23.50	0.159	Battery 1#	/
Front Side	15mm	20050/1720	20M QPSK 1RB#99	0.137	0.092	-0.06	22.95	23.50	0.155	Battery 1#	/

Table 85: Body Worn SAR test results of LTE Band 4

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	20300/1745	20M QPSK 1RB#99	0.199	0.136	-0.04	23.12	23.50	0.217	Battery 1#	/
Back Side	10mm	20300/1745	20M QPSK 1RB#99	0.225	0.151	-0.03	23.12	23.50	0.246	Battery 1#	/
Left Side	10mm	20300/1745	20M QPSK 1RB#99	0.177	0.106	-0.03	23.12	23.50	0.193	Battery 1#	/
Right Side	10mm	20300/1745	20M QPSK 1RB#99	0.070	0.039	-0.12	23.12	23.50	0.076	Battery 1#	/
Top Side	10mm	20300/1745	20M QPSK 1RB#99	0.233	0.116	0.00	23.12	23.50	0.254	Battery 1#	/
Front Side	10mm	20300/1745	20M QPSK 50%RB#50	0.155	0.106	-0.01	21.94	22.50	0.176	Battery 1#	/
Back Side	10mm	20300/1745	20M QPSK 50%RB#50	0.181	0.121	0.01	21.94	22.50	0.206	Battery 1#	/
Left Side	10mm	20300/1745	20M QPSK 50%RB#50	0.132	0.079	0.02	21.94	22.50	0.150	Battery 1#	/
Right Side	10mm	20300/1745	20M QPSK 50%RB#50	0.052	0.029	0.01	21.94	22.50	0.059	Battery 1#	/
Top Side	10mm	20300/1745	20M QPSK 50%RB#50	0.174	0.086	0.00	21.94	22.50	0.198	Battery 1#	/
Top Side	10mm	20300/1745	20M QPSK 1RB#99	0.239	0.118	-0.03	23.12	23.50	0.261	Battery 2#	/
Top Side	10mm	20300/1745	20M QPSK 1RB#99	0.254	0.125	0.01	23.12	23.50	0.277	Battery 3#	Yes
Top Side	10mm	20300/1745	20M QPSK 1RB#99	0.240	0.119	0.00	23.12	23.50	0.262	With SIM2	/
Top Side	10mm	20175/1732.5	20M QPSK 1RB#99	0.223	0.110	0.03	22.92	23.50	0.255	Battery 3#	/
Top Side	10mm	20050/1720	20M QPSK 1RB#99	0.206	0.101	-0.03	22.95	23.50	0.234	Battery 3#	/

Table 86: Hotspot SAR test results of LTE Band 4

Note:

- 1)Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.
- 2)Note:SAR for Main antenna LTE Band 4 (Frequency range: 1710-1755 MHz) is covered by LTE Band 66 (Frequency range: 1710–1780 MHz) due to similar frequency range,same maximum tune up limit and same channel bandwidth.

7.2.8 SAR measurement Results of LTE Band 5

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	20600/844	10M QPSK 1RB#49	0.644	0.343	-0.08	22.08	22.80	0.760	Battery 1#	/
Left tilt	20600/844	10M QPSK 1RB#49	0.614	0.351	-0.03	22.08	22.80	0.725	Battery 1#	/
Right cheek	20600/844	10M QPSK 1RB#49	0.749	0.450	-0.03	22.08	22.80	0.884	Battery 1#	/
Right cheek	20450/829	10M QPSK 1RB#49	0.750	0.450	-0.06	22.04	22.80	0.893	Battery 1#	Yes
Right cheek	20525/836.5	10M QPSK 1RB#49	0.748	0.451	0.03	22.07	22.80	0.885	Battery 1#	/
Right tilt	20600/844	10M QPSK 1RB#49	0.628	0.299	-0.08	22.08	22.80	0.741	Battery 1#	/
Left cheek	20600/844	10M QPSK 50%RB#0	0.565	0.305	0.04	21.88	22.80	0.698	Battery 1#	/
Left tilt	20600/844	10M QPSK 50%RB#0	0.587	0.338	0.01	21.88	22.80	0.726	Battery 1#	/
Right cheek	20600/844	10M QPSK 50%RB#0	0.740	0.441	0.03	21.88	22.80	0.915	Battery 1#	/
Right cheek	20450/829	10M QPSK 50%RB#13	0.695	0.415	-0.12	21.82	22.80	0.871	Battery 1#	/
Right cheek	20525/836.5	10M QPSK 50%RB#13	0.720	0.432	-0.15	21.80	22.80	0.906	Battery 1#	/
Right tilt	20600/844	10M QPSK 50%RB#0	0.608	0.288	0.01	21.88	22.80	0.751	Battery 1#	/
Right cheek	20600/844	10M QPSK 50%RB#0	0.696	0.432	-0.04	21.88	22.80	0.860	Battery 2#	/
Right cheek	20600/844	10M QPSK 50%RB#0	0.691	0.420	-0.06	21.88	22.80	0.854	Battery 3#	/
Right cheek	20600/844	10M QPSK 50%RB#0	0.728	0.437	-0.09	21.88	22.80	0.900	With SIM2	/
Right cheek	20600/844	10M QPSK 100%RB#0	0.594	0.393	0.04	21.89	22.80	0.732	Battery 1#	/
Main Antenna										
Left cheek	20525/836.5	10M QPSK 1RB#25	0.050	0.034	-0.08	22.92	24.50	0.072	Battery 1#	/
Left tilt	20525/836.5	10M QPSK 1RB#25	0.026	0.017	0.15	22.92	24.50	0.037	Battery 1#	/
Right cheek	20525/836.5	10M QPSK 1RB#25	0.053	0.040	0.14	22.92	24.50	0.076	Battery 1#	/
Right tilt	20525/836.5	10M QPSK 1RB#25	0.024	0.016	-0.13	22.92	24.50	0.034	Battery 1#	/
Left cheek	20450/829	10M QPSK 50%RB#0	0.037	0.025	-0.16	21.52	23.50	0.059	Battery 1#	/
Left tilt	20450/829	10M QPSK 50%RB#0	0.022	0.015	0.10	21.52	23.50	0.035	Battery 1#	/
Right cheek	20450/829	10M QPSK 50%RB#0	0.041	0.028	0.16	21.52	23.50	0.065	Battery 1#	/
Right tilt	20450/829	10M QPSK 50%RB#0	0.018	0.012	0.14	21.52	23.50	0.028	Battery 1#	/
Right cheek	20525/836.5	10M QPSK 1RB#25	0.051	0.039	0.14	22.92	24.50	0.074	Battery 2#	/
Right cheek	20525/836.5	10M QPSK 1RB#25	0.050	0.039	-0.15	22.92	24.50	0.073	Battery 3#	/
Right cheek	20525/836.5	10M QPSK 1RB#25	0.049	0.038	-0.05	22.92	24.50	0.071	With SIM2	/
Right cheek	20450/829	10M QPSK 1RB#0	0.062	0.047	0.16	22.88	24.50	0.089	Battery 1#	Yes
Right cheek	20600/844	10M QPSK 1RB#25	0.046	0.035	0.11	22.88	24.50	0.066	Battery 1#	/

Table 87: Head SAR test results of LTE Band 5

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	20525/836.5	10M QPSK 1RB#49	0.163	0.115	-0.07	23.79	24.50	0.192	Battery 1#	/
Back Side	15mm	20525/836.5	10M QPSK 1RB#49	0.219	0.171	0.04	23.79	24.50	0.258	Battery 1#	/
Front Side	15mm	20600/844	10M QPSK 50%RB#0	0.113	0.080	-0.11	22.15	23.50	0.154	Battery 1#	/
Back Side	15mm	20600/844	10M QPSK 50%RB#0	0.137	0.097	-0.01	22.15	23.50	0.187	Battery 1#	/
Back Side	15mm	20525/836.5	10M QPSK 1RB#49	0.237	0.184	-0.06	23.79	24.50	0.279	Battery 2#	/
Back Side	15mm	20525/836.5	10M QPSK 1RB#49	0.243	0.189	-0.05	23.79	24.50	0.286	Battery 3#	Yes
Back Side	15mm	20525/836.5	10M QPSK 1RB#49	0.238	0.185	-0.03	23.79	24.50	0.280	With SIM2	/
Back Side	15mm	20450/829	10M QPSK 1RB#49	0.220	0.171	-0.11	23.75	24.50	0.261	Battery 3#	/
Back Side	15mm	20600/844	10M QPSK 1RB#49	0.234	0.182	0.00	23.74	24.50	0.279	Battery 3#	/
Main Antenna											
Front Side	15mm	20525/836.5	10M QPSK 1RB#25	0.215	0.139	0.02	22.92	24.50	0.309	Battery 1#	/
Back Side	15mm	20525/836.5	10M QPSK 1RB#25	0.254	0.171	0.14	22.92	24.50	0.365	Battery 1#	/
Front Side	15mm	20450/829	10M QPSK 50%RB#0	0.161	0.104	-0.12	21.52	23.50	0.254	Battery 1#	/
Back Side	15mm	20450/829	10M QPSK 50%RB#0	0.190	0.125	0.08	21.52	23.50	0.300	Battery 1#	/
Back Side	15mm	20525/836.5	10M QPSK 1RB#25	0.250	0.167	0.16	22.92	24.50	0.360	Battery 2#	/
Back Side	15mm	20525/836.5	10M QPSK 1RB#25	0.250	0.168	0.14	22.92	24.50	0.360	Battery 3#	/
Back Side	15mm	20525/836.5	10M QPSK 1RB#25	0.251	0.169	0.01	22.92	24.50	0.361	With SIM2	/
Back Side	15mm	20450/829	10M QPSK 1RB#0	0.275	0.186	0.04	22.88	24.50	0.399	Battery 1#	Yes
Back Side	15mm	20600/844	10M QPSK 1RB#25	0.231	0.157	0.12	22.88	24.50	0.335	Battery 1#	/

Table 88: Body Worn SAR test results of LTE Band 5

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	20525/836.5	10M QPSK 1RB#49	0.181	0.125	0.02	23.79	24.50	0.213	Battery 1#	/
Back Side	10mm	20525/836.5	10M QPSK 1RB#49	0.275	0.215	-0.01	23.79	24.50	0.324	Battery 1#	Yes
Left Side	10mm	20525/836.5	10M QPSK 1RB#49	0.266	0.177	-0.01	23.79	24.50	0.313	Battery 1#	/
Right Side	10mm	20525/836.5	10M QPSK 1RB#49	0.161	0.108	-0.04	23.79	24.50	0.190	Battery 1#	/
Top Side	10mm	20525/836.5	10M QPSK 1RB#49	0.140	0.076	0.14	23.79	24.50	0.165	Battery 1#	/
Front Side	10mm	20600/844	10M QPSK 50%RB#0	0.132	0.093	0.04	22.15	23.50	0.180	Battery 1#	/
Back Side	10mm	20600/844	10M QPSK 50%RB#0	0.176	0.124	0.01	22.15	23.50	0.240	Battery 1#	/
Left Side	10mm	20600/844	10M QPSK 50%RB#0	0.184	0.123	0.00	22.15	23.50	0.251	Battery 1#	/
Right Side	10mm	20600/844	10M QPSK 50%RB#0	0.110	0.073	-0.09	22.15	23.50	0.150	Battery 1#	/
Top Side	10mm	20600/844	10M QPSK 50%RB#0	0.090	0.051	-0.07	22.15	23.50	0.123	Battery 1#	/
Back Side	10mm	20525/836.5	10M QPSK 1RB#49	0.266	0.209	-0.09	23.79	24.50	0.313	Battery 2#	/
Back Side	10mm	20525/836.5	10M QPSK 1RB#49	0.274	0.215	-0.11	23.79	24.50	0.323	Battery 3#	/
Back Side	10mm	20525/836.5	10M QPSK 1RB#49	0.254	0.200	0.02	23.79	24.50	0.299	With SIM2	/
Back Side	10mm	20450/829	10M QPSK 1RB#49	0.217	0.170	0.02	23.75	24.50	0.258	Battery 1#	/
Back Side	10mm	20600/844	10M QPSK 1RB#49	0.250	0.197	-0.02	23.74	24.50	0.298	Battery 1#	/
Main Antenna											
Front Side	10mm	20525/836.5	10M QPSK 1RB#25	0.338	0.213	-0.02	22.92	24.50	0.486	Battery 1#	/
Back Side	10mm	20525/836.5	10M QPSK 1RB#25	0.491	0.294	0.19	22.92	24.50	0.706	Battery 1#	/
Left Side	10mm	20525/836.5	10M QPSK 1RB#25	0.184	0.101	0.13	22.92	24.50	0.265	Battery 1#	/
Right Side	10mm	20525/836.5	10M QPSK 1RB#25	0.057	0.038	0.00	22.92	24.50	0.082	Battery 1#	/
Bottom Side	10mm	20525/836.5	10M QPSK 1RB#25	0.185	0.094	-0.16	22.92	24.50	0.266	Battery 1#	/
Front Side	10mm	20450/829	10M QPSK 50%RB#0	0.279	0.175	-0.16	21.52	23.50	0.440	Battery 1#	/
Back Side	10mm	20450/829	10M QPSK 50%RB#0	0.404	0.257	0.01	21.52	23.50	0.637	Battery 1#	/
Left Side	10mm	20450/829	10M QPSK 50%RB#0	0.147	0.081	0.06	21.52	23.50	0.232	Battery 1#	/
Right Side	10mm	20450/829	10M QPSK 50%RB#0	0.050	0.034	0.03	21.52	23.50	0.080	Battery 1#	/
Bottom Side	10mm	20450/829	10M QPSK 50%RB#0	0.147	0.073	-0.18	21.52	23.50	0.232	Battery 1#	/
Back Side	10mm	20525/836.5	10M QPSK 1RB#25	0.455	0.267	0.07	22.92	24.50	0.655	Battery 2#	/
Back Side	10mm	20525/836.5	10M QPSK 1RB#25	0.529	0.311	0.09	22.92	24.50	0.761	Battery 3#	Yes
Back Side	10mm	20525/836.5	10M QPSK 1RB#25	0.441	0.268	0.18	22.92	24.50	0.635	With SIM2	/
Back Side	10mm	20450/829	10M QPSK 1RB#0	0.513	0.306	0.06	22.88	24.50	0.745	Battery 3#	/
Back Side	10mm	20600/844	10M QPSK 1RB#25	0.410	0.265	0.08	22.88	24.50	0.595	Battery 3#	/

Table 89: Hotspot SAR test results of LTE Band 5

Note: Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.

7.2.9 SAR measurement Results of LTE Band 7

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	21350/2560	20M QPSK 1RB#50	0.193	0.101	0.02	16.39	16.90	0.217	Battery 1#	/
Left tilt	21350/2560	20M QPSK 1RB#50	0.131	0.070	-0.08	16.39	16.90	0.147	Battery 1#	/
Right cheek	21350/2560	20M QPSK 1RB#50	0.602	0.305	-0.03	16.39	16.90	0.677	Battery 1#	/
Right tilt	21350/2560	20M QPSK 1RB#50	0.351	0.175	0.06	16.39	16.90	0.395	Battery 1#	/
Left cheek	21100/2535	20M QPSK 50%RB#0	0.195	0.102	-0.11	16.46	16.90	0.216	Battery 1#	/
Left tilt	21100/2535	20M QPSK 50%RB#0	0.138	0.074	-0.13	16.46	16.90	0.153	Battery 1#	/
Right cheek	21100/2535	20M QPSK 50%RB#0	0.639	0.323	0.02	16.46	16.90	0.707	Battery 1#	/
Right tilt	21100/2535	20M QPSK 50%RB#0	0.359	0.182	-0.02	16.46	16.90	0.397	Battery 1#	/
Right cheek	21100/2535	20M QPSK 50%RB#0	0.704	0.353	-0.04	16.46	16.90	0.779	Battery 2#	Yes
Right cheek	21100/2535	20M QPSK 50%RB#0	0.588	0.300	-0.06	16.46	16.90	0.651	Battery 3#	/
Right cheek	21100/2535	20M QPSK 50%RB#0	0.644	0.323	-0.14	16.46	16.90	0.713	With SIM2	/
Right cheek	20850/2510	20M QPSK 50%RB#25	0.524	0.269	-0.07	16.29	16.90	0.603	Battery 2#	/
Right cheek	21350/2560	20M QPSK 50%RB#0	0.586	0.300	-0.04	16.39	16.90	0.659	Battery 2#	/
Main Antenna										
Left cheek	21100/2535	20M QPSK 1RB#99	0.338	0.192	0.05	22.50	24.00	0.477	Battery 1#	Yes
Left tilt	21100/2535	20M QPSK 1RB#99	0.170	0.091	0.05	22.50	24.00	0.240	Battery 1#	/
Right cheek	21100/2535	20M QPSK 1RB#99	0.218	0.126	0.15	22.50	24.00	0.308	Battery 1#	/
Right tilt	21100/2535	20M QPSK 1RB#99	0.090	0.047	0.09	22.50	24.00	0.128	Battery 1#	/
Left cheek	21350/2560	20M QPSK 50%RB#0	0.223	0.116	0.12	21.20	23.00	0.338	Battery 1#	/
Left tilt	21350/2560	20M QPSK 50%RB#0	0.115	0.056	-0.09	21.20	23.00	0.174	Battery 1#	/
Right cheek	21350/2560	20M QPSK 50%RB#0	0.140	0.076	0.12	21.20	23.00	0.212	Battery 1#	/
Right tilt	21350/2560	20M QPSK 50%RB#0	0.072	0.036	0.09	21.20	23.00	0.109	Battery 1#	/
Left cheek	21100/2535	20M QPSK 1RB#99	0.261	0.145	0.14	22.50	24.00	0.369	Battery 2#	/
Left cheek	21100/2535	20M QPSK 1RB#99	0.255	0.139	0.09	22.50	24.00	0.360	Battery 3#	/
Left cheek	21100/2535	20M QPSK 1RB#99	0.283	0.155	0.06	22.50	24.00	0.400	With SIM2	/
Left cheek	20850/2510	20M QPSK 1RB#0	0.222	0.112	-0.18	22.40	24.00	0.321	Battery 1#	/
Left cheek	21350/2560	20M QPSK 1RB#50	0.252	0.137	-0.11	22.25	24.00	0.377	Battery 1#	/

Table 90: Head SAR test results of LTE Band 7

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	21350/2560	20M QPSK 1RB#99	0.147	0.090	0.04	21.36	22.00	0.170	Battery 1#	/
Back Side	15mm	21350/2560	20M QPSK 1RB#99	0.180	0.105	-0.03	21.36	22.00	0.209	Battery 1#	/
Front Side	15mm	21100/2535	20M QPSK 50%RB#25	0.127	0.072	-0.04	21.58	22.00	0.140	Battery 1#	/
Back Side	15mm	21100/2535	20M QPSK 50%RB#25	0.166	0.119	-0.16	21.58	22.00	0.183	Battery 1#	/
Back Side	15mm	21350/2560	20M QPSK 1RB#99	0.172	0.101	-0.11	21.36	22.00	0.199	Battery 2#	/
Back Side	15mm	21350/2560	20M QPSK 1RB#99	0.190	0.112	0.08	21.36	22.00	0.220	Battery 3#	Yes
Back Side	15mm	21350/2560	20M QPSK 1RB#99	0.189	0.109	0.17	21.36	22.00	0.219	With SIM2	/
Back Side	15mm	20850/2510	20M QPSK 1RB#99	0.181	0.105	0.10	21.22	22.00	0.217	Battery 3#	/
Back Side	15mm	21100/2535	20M QPSK 1RB#50	0.166	0.092	0.09	21.19	22.00	0.200	Battery 3#	/
Main Antenna											
Front Side	15mm	21350/2560	20M QPSK 1RB#50	0.188	0.103	-0.05	21.48	23.00	0.267	Battery 1#	/
Back Side	15mm	21350/2560	20M QPSK 1RB#50	0.217	0.121	-0.07	21.48	23.00	0.308	Battery 1#	Yes
Front Side	15mm	21350/2560	20M QPSK 50%RB#0	0.184	0.101	-0.05	21.28	23.00	0.273	Battery 1#	/
Back Side	15mm	21350/2560	20M QPSK 50%RB#0	0.202	0.110	-0.03	21.28	23.00	0.300	Battery 1#	/
Back Side	15mm	21350/2560	20M QPSK 1RB#50	0.203	0.115	0.14	21.48	23.00	0.288	Battery 2#	/
Back Side	15mm	21350/2560	20M QPSK 1RB#50	0.192	0.108	0.06	21.48	23.00	0.272	Battery 3#	/
Back Side	15mm	21350/2560	20M QPSK 1RB#50	0.191	0.107	-0.18	21.48	23.00	0.271	With SIM2	/
Back Side	15mm	20850/2510	20M QPSK 1RB#0	0.161	0.089	-0.03	21.19	23.00	0.244	Battery 1#	/
Back Side	15mm	21100/2535	20M QPSK 1RB#0	0.168	0.092	0.10	21.31	23.00	0.248	Battery 1#	/

Table 91: Body Worn SAR test results of LTE Band 7

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	21350/2560	20M QPSK 1RB#0	0.197	0.109	0.04	20.81	21.50	0.231	Battery 1#	/
Back Side	10mm	21350/2560	20M QPSK 1RB#0	0.309	0.177	-0.06	20.81	21.50	0.362	Battery 1#	/
Left Side	10mm	21350/2560	20M QPSK 1RB#0	0.281	0.143	-0.11	20.81	21.50	0.329	Battery 1#	/
Right Side	10mm	21350/2560	20M QPSK 1RB#0	0.031	0.015	0.15	20.81	21.50	0.036	Battery 1#	/
Top Side	10mm	21350/2560	20M QPSK 1RB#0	0.171	0.075	-0.04	20.81	21.50	0.200	Battery 1#	/
Front Side	10mm	21100/2535	20M QPSK 50%RB#50	0.203	0.113	0.14	21.10	21.50	0.223	Battery 1#	/
Back Side	10mm	21100/2535	20M QPSK 50%RB#50	0.258	0.148	0.01	21.10	21.50	0.283	Battery 1#	/
Left Side	10mm	21100/2535	20M QPSK 50%RB#50	0.318	0.167	-0.04	21.10	21.50	0.349	Battery 1#	Yes
Right Side	10mm	21100/2535	20M QPSK 50%RB#50	0.032	0.016	-0.06	21.10	21.50	0.035	Battery 1#	/
Top Side	10mm	21100/2535	20M QPSK 50%RB#50	0.132	0.059	-0.18	21.10	21.50	0.145	Battery 1#	/
Back Side	10mm	21350/2560	20M QPSK 1RB#0	0.267	0.153	0.01	20.81	21.50	0.313	Battery 2#	/
Back Side	10mm	21350/2560	20M QPSK 1RB#0	0.279	0.159	0.10	20.81	21.50	0.327	Battery 3#	/
Back Side	10mm	21350/2560	20M QPSK 1RB#0	0.253	0.147	-0.11	20.81	21.50	0.297	With SIM2	/
Back Side	10mm	20850/2510	20M QPSK 1RB#50	0.230	0.135	-0.14	20.73	21.50	0.275	Battery 1#	/
Back Side	10mm	21100/2535	20M QPSK 1RB#0	0.226	0.134	0.00	20.73	21.50	0.270	Battery 1#	/
Main Antenna											
Front Side	10mm	21350/2560	20M QPSK 1RB#50	0.386	0.208	0.00	21.48	23.00	0.548	Battery 1#	/
Back Side	10mm	21350/2560	20M QPSK 1RB#50	0.381	0.207	0.03	21.48	23.00	0.541	Battery 1#	/
Left Side	10mm	21350/2560	20M QPSK 1RB#50	0.189	0.098	0.06	21.48	23.00	0.268	Battery 1#	/
Right Side	10mm	21350/2560	20M QPSK 1RB#50	0.062	0.036	0.10	21.48	23.00	0.088	Battery 1#	/
Bottom Side	10mm	21350/2560	20M QPSK 1RB#50	0.516	0.266	-0.04	21.48	23.00	0.732	Battery 1#	/
Front Side	10mm	21350/2560	20M QPSK 50%RB#0	0.349	0.188	-0.05	21.28	23.00	0.519	Battery 1#	/
Back Side	10mm	21350/2560	20M QPSK 50%RB#0	0.361	0.191	0.01	21.28	23.00	0.536	Battery 1#	/
Left Side	10mm	21350/2560	20M QPSK 50%RB#0	0.168	0.088	0.05	21.28	23.00	0.250	Battery 1#	/
Right Side	10mm	21350/2560	20M QPSK 50%RB#0	0.062	0.036	0.17	21.28	23.00	0.092	Battery 1#	/
Bottom Side	10mm	21350/2560	20M QPSK 50%RB#0	0.480	0.243	-0.03	21.28	23.00	0.713	Battery 1#	/
Bottom Side	10mm	21350/2560	20M QPSK 1RB#50	0.527	0.272	-0.05	21.48	23.00	0.748	Battery 2#	/
Bottom Side	10mm	21350/2560	20M QPSK 1RB#50	0.532	0.273	-0.06	21.48	23.00	0.755	Battery 3#	Yes
Bottom Side	10mm	21350/2560	20M QPSK 1RB#50	0.467	0.238	-0.05	21.48	23.00	0.663	With SIM2	/
Bottom Side	10mm	20850/2510	20M QPSK 1RB#0	0.413	0.211	-0.07	21.19	23.00	0.627	Battery 2#	/
Bottom Side	10mm	21100/2535	20M QPSK 1RB#0	0.417	0.213	-0.07	21.31	23.00	0.615	Battery 2#	/

Table 92: Hotspot SAR test results of LTE Band 7

Per KDB648474D04, when hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold:

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Max Power Without Reduction	Scaled-up 1-g SAR (W/kg)	Product Specific 10-g SAR Exclusion
				1-g	10-g					
Second Antenna										
Front Side	10mm	21350/2560	20M QPSK 1RB#0	0.197	0.109	0.04	20.81	22.00	0.259	Yes
Back Side	10mm	21350/2560	20M QPSK 1RB#0	0.309	0.177	-0.06	20.81	22.00	0.406	Yes
Left Side	10mm	21350/2560	20M QPSK 1RB#0	0.281	0.143	-0.11	20.81	22.00	0.370	Yes
Right Side	10mm	21350/2560	20M QPSK 1RB#0	0.031	0.015	0.15	20.81	22.00	0.041	Yes
Top Side	10mm	21350/2560	20M QPSK 1RB#0	0.171	0.075	-0.04	20.81	22.00	0.225	Yes
Front Side	10mm	21100/2535	20M QPSK 50%RB#50	0.203	0.113	0.14	21.10	22.00	0.250	Yes
Back Side	10mm	21100/2535	20M QPSK 50%RB#50	0.258	0.148	0.01	21.10	22.00	0.317	Yes
Left Side	10mm	21100/2535	20M QPSK 50%RB#50	0.318	0.167	-0.04	21.10	22.00	0.391	Yes
Right Side	10mm	21100/2535	20M QPSK 50%RB#50	0.032	0.016	-0.06	21.10	22.00	0.039	Yes
Top Side	10mm	21100/2535	20M QPSK 50%RB#50	0.132	0.059	-0.18	21.10	22.00	0.162	Yes
Back Side	10mm	21350/2560	20M QPSK 1RB#0	0.267	0.153	0.01	20.81	22.00	0.351	Yes
Back Side	10mm	21350/2560	20M QPSK 1RB#0	0.279	0.159	0.10	20.81	22.00	0.367	Yes
Back Side	10mm	21350/2560	20M QPSK 1RB#0	0.253	0.147	-0.11	20.81	22.00	0.333	Yes
Back Side	10mm	20850/2510	20M QPSK 1RB#50	0.230	0.135	-0.14	20.73	22.00	0.308	Yes
Back Side	10mm	21100/2535	20M QPSK 1RB#0	0.226	0.134	0.00	20.73	22.00	0.303	Yes

Table 93: Product Specific 10-g SAR test reduction evaluation of LTE Band 7

Note: According to the table above, Product Specific 10-g SAR test is not required for this frequency band.

7.2.10 SAR measurement Results of LTE Band 12

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	23130/711	10M QPSK 1RB#49	0.624	0.323	0.08	23.13	23.50	0.679	Battery 1#	/
Left tilt	23130/711	10M QPSK 1RB#49	0.559	0.290	0.05	23.13	23.50	0.609	Battery 1#	/
Right cheek	23130/711	10M QPSK 1RB#49	0.516	0.332	0.05	23.13	23.50	0.562	Battery 1#	/
Right tilt	23130/711	10M QPSK 1RB#49	0.653	0.366	0.04	23.13	23.50	0.711	Battery 1#	/
Left cheek	23130/711	10M QPSK 50%RB#25	0.599	0.309	0.03	22.79	23.50	0.705	Battery 1#	/
Left tilt	23130/711	10M QPSK 50%RB#25	0.523	0.269	0.02	22.79	23.50	0.616	Battery 1#	/
Right cheek	23130/711	10M QPSK 50%RB#25	0.686	0.375	0.07	22.79	23.50	0.808	Battery 1#	Yes
Right tilt	23130/711	10M QPSK 50%RB#25	0.595	0.311	0.11	22.79	23.50	0.701	Battery 1#	/
Right cheek	23130/711	10M QPSK 50%RB#25	0.655	0.417	-0.15	22.79	23.50	0.771	Battery 2#	/
Right cheek	23130/711	10M QPSK 50%RB#25	0.564	0.322	0.13	22.79	23.50	0.664	Battery 3#	/
Right cheek	23130/711	10M QPSK 50%RB#25	0.568	0.323	0.11	22.79	23.50	0.669	With SIM2	/
Right cheek	23060/704	10M QPSK 50%RB#13	0.521	0.294	-0.03	22.78	23.50	0.615	Battery 1#	/
Right cheek	23095/707.5	10M QPSK 50%RB#25	0.571	0.323	0.19	22.76	23.50	0.677	Battery 1#	/
Right cheek	23130/711	10M QPSK 100%RB#0	0.580	0.327	-0.08	22.76	23.50	0.688	Battery 1#	/
Main Antenna										
Left cheek	23060/704	10M QPSK 1RB#49	0.042	0.029	0.02	22.88	24.50	0.061	Battery 1#	/
Left tilt	23060/704	10M QPSK 1RB#49	0.028	0.020	0.00	22.88	24.50	0.041	Battery 1#	/
Right cheek	23060/704	10M QPSK 1RB#49	0.049	0.038	0.13	22.88	24.50	0.071	Battery 1#	/
Right tilt	23060/704	10M QPSK 1RB#49	0.048	0.038	0.11	22.88	24.50	0.070	Battery 1#	/
Left cheek	23130/711	10M QPSK 50%RB#25	0.035	0.024	-0.04	21.92	23.50	0.050	Battery 1#	/
Left tilt	23130/711	10M QPSK 50%RB#25	0.023	0.016	0.03	21.92	23.50	0.033	Battery 1#	/
Right cheek	23130/711	10M QPSK 50%RB#25	0.034	0.024	0.13	21.92	23.50	0.048	Battery 1#	/
Right tilt	23130/711	10M QPSK 50%RB#25	0.034	0.024	0.15	21.92	23.50	0.049	Battery 1#	/
Right cheek	23060/704	10M QPSK 1RB#49	0.050	0.039	0.14	22.88	24.50	0.073	Battery 2#	Yes
Right cheek	23060/704	10M QPSK 1RB#49	0.039	0.030	0.13	22.88	24.50	0.056	Battery 3#	/
Right cheek	23060/704	10M QPSK 1RB#49	0.036	0.028	0.15	22.88	24.50	0.052	With SIM2	/
Right cheek	23095/707.5	10M QPSK 1RB#0	0.032	0.026	0.14	22.78	24.50	0.047	Battery 2#	/
Right cheek	23130/711	10M QPSK 1RB#0	0.034	0.028	0.11	22.78	24.50	0.051	Battery 2#	/

Table 94: Head SAR test results of LTE Band 12

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	23130/711	10M QPSK 1RB#49	0.180	0.134	0.12	24.11	24.50	0.197	Battery 1#	/
Back Side	15mm	23130/711	10M QPSK 1RB#49	0.250	0.205	-0.11	24.11	24.50	0.273	Battery 1#	Yes
Front Side	15mm	23130/711	10M QPSK 50%RB#25	0.130	0.093	0.12	22.79	23.50	0.153	Battery 1#	/
Back Side	15mm	23130/711	10M QPSK 50%RB#25	0.163	0.117	-0.10	22.79	23.50	0.192	Battery 1#	/
Back Side	15mm	23130/711	10M QPSK 1RB#49	0.215	0.153	-0.09	24.11	24.50	0.235	Battery 2#	/
Back Side	15mm	23130/711	10M QPSK 1RB#49	0.220	0.157	-0.11	24.11	24.50	0.241	Battery 3#	/
Back Side	15mm	23130/711	10M QPSK 1RB#49	0.222	0.158	0.06	24.11	24.50	0.243	With SIM2	/
Back Side	15mm	23060/704	10M QPSK 1RB#49	0.203	0.128	-0.11	23.99	24.50	0.228	Battery 1#	/
Back Side	15mm	23095/707.5	10M QPSK 1RB#49	0.210	0.150	-0.05	24.03	24.50	0.234	Battery 1#	/
Main Antenna											
Front Side	15mm	23060/704	10M QPSK 1RB#49	0.140	0.091	-0.09	22.88	24.50	0.203	Battery 1#	/
Back Side	15mm	23060/704	10M QPSK 1RB#49	0.180	0.120	-0.10	22.88	24.50	0.261	Battery 1#	/
Front Side	15mm	23130/711	10M QPSK 50%RB#25	0.108	0.070	-0.14	21.92	23.50	0.155	Battery 1#	/
Back Side	15mm	23130/711	10M QPSK 50%RB#25	0.149	0.097	0.00	21.92	23.50	0.214	Battery 1#	/
Back Side	15mm	23060/704	10M QPSK 1RB#49	0.178	0.119	-0.06	22.88	24.50	0.258	Battery 2#	/
Back Side	15mm	23060/704	10M QPSK 1RB#49	0.179	0.120	-0.11	22.88	24.50	0.260	Battery 3#	/
Back Side	15mm	23060/704	10M QPSK 1RB#49	0.176	0.122	-0.03	22.88	24.50	0.256	With SIM2	/
Back Side	15mm	23095/707.5	10M QPSK 1RB#0	0.154	0.101	-0.12	22.78	24.50	0.229	Battery 1#	/
Back Side	15mm	23130/711	10M QPSK 1RB#0	0.185	0.124	0.09	22.78	24.50	0.275	Battery 1#	Yes

Table 95: Body Worn SAR test results of LTE Band 12

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	23130/711	10M QPSK 1RB#49	0.234	0.161	-0.09	24.11	24.50	0.256	Battery 1#	/
Back Side	10mm	23130/711	10M QPSK 1RB#49	0.236	0.156	0.00	24.11	24.50	0.258	Battery 1#	/
Left Side	10mm	23130/711	10M QPSK 1RB#49	0.357	0.261	-0.07	24.11	24.50	0.391	Battery 1#	Yes
Right Side	10mm	23130/711	10M QPSK 1RB#49	0.153	0.105	-0.04	24.11	24.50	0.167	Battery 1#	/
Top Side	10mm	23130/711	10M QPSK 1RB#49	0.222	0.118	-0.10	24.11	24.50	0.243	Battery 1#	/
Front Side	10mm	23130/711	10M QPSK 50%RB#25	0.172	0.118	-0.12	22.79	23.50	0.203	Battery 1#	/
Back Side	10mm	23130/711	10M QPSK 50%RB#25	0.182	0.125	-0.11	22.79	23.50	0.214	Battery 1#	/
Left Side	10mm	23130/711	10M QPSK 50%RB#25	0.251	0.171	-0.11	22.79	23.50	0.296	Battery 1#	/
Right Side	10mm	23130/711	10M QPSK 50%RB#25	0.113	0.077	-0.04	22.79	23.50	0.133	Battery 1#	/
Top Side	10mm	23130/711	10M QPSK 50%RB#25	0.159	0.084	-0.09	22.79	23.50	0.187	Battery 1#	/
Left Side	10mm	23130/711	10M QPSK 1RB#49	0.315	0.216	-0.13	24.11	24.50	0.345	Battery 2#	/
Left Side	10mm	23130/711	10M QPSK 1RB#49	0.324	0.223	-0.09	24.11	24.50	0.354	Battery 3#	/
Left Side	10mm	23130/711	10M QPSK 1RB#49	0.321	0.221	-0.10	24.11	24.50	0.351	With SIM2	/
Left Side	10mm	23060/704	10M QPSK 1RB#49	0.318	0.215	-0.10	23.99	24.50	0.358	Battery 1#	/
Left Side	10mm	23095/707.5	10M QPSK 1RB#49	0.321	0.221	-0.12	24.03	24.50	0.358	Battery 1#	/
Main Antenna											
Front Side	10mm	23060/704	10M QPSK 1RB#49	0.268	0.171	-0.15	22.88	24.50	0.389	Battery 1#	/
Back Side	10mm	23060/704	10M QPSK 1RB#49	0.355	0.215	0.18	22.88	24.50	0.515	Battery 1#	/
Left Side	10mm	23060/704	10M QPSK 1RB#49	0.165	0.098	0.00	22.88	24.50	0.240	Battery 1#	/
Right Side	10mm	23060/704	10M QPSK 1RB#49	0.069	0.048	-0.08	22.88	24.50	0.100	Battery 1#	/
Bottom Side	10mm	23060/704	10M QPSK 1RB#49	0.207	0.103	-0.07	22.88	24.50	0.301	Battery 1#	/
Front Side	10mm	23130/711	10M QPSK 50%RB#25	0.184	0.118	-0.09	21.92	23.50	0.265	Battery 1#	/
Back Side	10mm	23130/711	10M QPSK 50%RB#25	0.291	0.185	-0.11	21.92	23.50	0.419	Battery 1#	/
Left Side	10mm	23130/711	10M QPSK 50%RB#25	0.133	0.079	-0.12	21.92	23.50	0.191	Battery 1#	/
Right Side	10mm	23130/711	10M QPSK 50%RB#25	0.054	0.037	-0.08	21.92	23.50	0.077	Battery 1#	/
Bottom Side	10mm	23130/711	10M QPSK 50%RB#25	0.157	0.078	0.00	21.92	23.50	0.226	Battery 1#	/
Back Side	10mm	23060/704	10M QPSK 1RB#49	0.409	0.248	-0.07	22.88	24.50	0.594	Battery 2#	/
Back Side	10mm	23060/704	10M QPSK 1RB#49	0.388	0.248	-0.12	22.88	24.50	0.563	Battery 3#	/
Back Side	10mm	23060/704	10M QPSK 1RB#49	0.439	0.264	-0.16	22.88	24.50	0.637	With SIM2	Yes
Back Side	10mm	23095/707.5	10M QPSK 1RB#0	0.353	0.222	-0.19	22.78	24.50	0.525	With SIM2	/
Back Side	10mm	23130/711	10M QPSK 1RB#0	0.373	0.234	0.10	22.78	24.50	0.554	With SIM2	/

Table 96: Hotspot SAR test results of LTE Band 12

Note: Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.

7.2.11 SAR measurement Results of LTE Band 17

Note:SAR for Second/Main antenna LTE Band 17 (Frequency range:704-716 MHz) is covered by LTE Band 12 (Frequency range:699-716 MHz), due to similar frequency range, same maximum tune up limit and same channel bandwidth.

7.2.12 SAR measurement Results of LTE Band 66

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g						
Second Antenna										
Left cheek	132072/1720	20M QPSK 1RB#0	0.465	0.279	0.04	19.12	20.00	0.569	Battery 1#	/
Left tilt	132072/1720	20M QPSK 1RB#0	0.236	0.134	0.05	19.12	20.00	0.289	Battery 1#	/
Right cheek	132072/1720	20M QPSK 1RB#0	0.663	0.395	-0.02	19.12	20.00	0.812	Battery 1#	Yes
Right tilt	132072/1720	20M QPSK 1RB#0	0.374	0.225	-0.09	19.12	20.00	0.458	Battery 1#	/
Left cheek	132572/1770	20M QPSK 50%RB#0	0.384	0.228	-0.02	19.24	20.00	0.457	Battery 1#	/
Left tilt	132572/1770	20M QPSK 50%RB#0	0.225	0.128	-0.07	19.24	20.00	0.268	Battery 1#	/
Right cheek	132572/1770	20M QPSK 50%RB#0	0.661	0.397	0.05	19.24	20.00	0.787	Battery 1#	/
Right tilt	132572/1770	20M QPSK 50%RB#0	0.337	0.199	-0.02	19.24	20.00	0.401	Battery 1#	/
Right cheek	132072/1720	20M QPSK 1RB#0	0.555	0.340	0.00	19.12	20.00	0.680	Battery 2#	/
Right cheek	132072/1720	20M QPSK 1RB#0	0.575	0.349	-0.02	19.12	20.00	0.704	Battery 3#	/
Right cheek	132072/1720	20M QPSK 1RB#0	0.491	0.313	-0.03	19.12	20.00	0.601	With SIM2	/
Right cheek	132322/1745	20M QPSK 50%RB#25	0.571	0.350	-0.03	19.20	20.00	0.686	Battery 1#	/
Right cheek	132572/1770	20M QPSK 50%RB#0	0.589	0.362	-0.15	19.24	20.00	0.702	Battery 1#	/
Right cheek	132072/1720	20M QPSK 100%RB#0	0.609	0.364	0.01	19.28	20.00	0.719	Battery 1#	/
Main Antenna										
Left cheek	132072/1720	20M QPSK 1RB#0	0.155	0.103	0.04	22.64	23.50	0.189	Battery 1#	/
Left tilt	132072/1720	20M QPSK 1RB#0	0.088	0.056	-0.18	22.64	23.50	0.108	Battery 1#	/
Right cheek	132072/1720	20M QPSK 1RB#0	0.142	0.092	0.12	22.64	23.50	0.173	Battery 1#	/
Right tilt	132072/1720	20M QPSK 1RB#0	0.077	0.046	-0.06	22.64	23.50	0.094	Battery 1#	/
Left cheek	132072/1720	20M QPSK 50%RB#0	0.121	0.080	0.15	21.56	22.50	0.150	Battery 1#	/
Left tilt	132072/1720	20M QPSK 50%RB#0	0.076	0.048	0.09	21.56	22.50	0.094	Battery 1#	/
Right cheek	132072/1720	20M QPSK 50%RB#0	0.108	0.070	0.17	21.56	22.50	0.134	Battery 1#	/
Right tilt	132072/1720	20M QPSK 50%RB#0	0.057	0.034	-0.03	21.56	22.50	0.071	Battery 1#	/
Left cheek	132072/1720	20M QPSK 1RB#0	0.150	0.098	-0.14	22.64	23.50	0.183	Battery 2#	/
Left cheek	132072/1720	20M QPSK 1RB#0	0.156	0.102	0.07	22.64	23.50	0.190	Battery 3#	Yes
Left cheek	132072/1720	20M QPSK 1RB#0	0.148	0.097	0.11	22.64	23.50	0.180	With SIM2	/
Left cheek	132322/1745	20M QPSK 1RB#0	0.148	0.095	0.04	22.49	23.50	0.187	Battery 3#	/
Left cheek	132572/1770	20M QPSK 1RB#0	0.148	0.095	-0.02	22.49	23.50	0.187	Battery 3#	/

Table 97: Head SAR test results of LTE Band 66

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	15mm	132572/1770	20M QPSK 1RB#99	0.117	0.080	-0.14	22.75	23.50	0.139	Battery 1#	Yes
Back Side	15mm	132572/1770	20M QPSK 1RB#99	0.106	0.073	-0.05	22.75	23.50	0.126	Battery 1#	/
Front Side	15mm	132072/1720	20M QPSK 50%RB#0	0.092	0.064	0.16	21.84	22.50	0.107	Battery 1#	/
Back Side	15mm	132072/1720	20M QPSK 50%RB#0	0.091	0.063	0.02	21.84	22.50	0.106	Battery 1#	/
Front Side	15mm	132572/1770	20M QPSK 1RB#99	0.108	0.074	-0.03	22.75	23.50	0.128	Battery 2#	/
Front Side	15mm	132572/1770	20M QPSK 1RB#99	0.111	0.076	0.18	22.75	23.50	0.132	Battery 3#	/
Front Side	15mm	132572/1770	20M QPSK 1RB#99	0.110	0.075	0.02	22.75	23.50	0.131	With SIM2	/
Front Side	15mm	132072/1720	20M QPSK 1RB#0	0.112	0.078	0.04	22.68	23.50	0.135	Battery 1#	/
Front Side	15mm	132322/1745	20M QPSK 1RB#0	0.109	0.076	0.06	22.67	23.50	0.132	Battery 1#	/
Main Antenna											
Front Side	15mm	132072/1720	20M QPSK 1RB#0	0.280	0.189	0.03	22.64	23.50	0.341	Battery 1#	/
Back Side	15mm	132072/1720	20M QPSK 1RB#0	0.275	0.187	0.14	22.64	23.50	0.335	Battery 1#	/
Front Side	15mm	132072/1720	20M QPSK 50%RB#0	0.216	0.146	0.17	21.56	22.50	0.268	Battery 1#	/
Back Side	15mm	132072/1720	20M QPSK 50%RB#0	0.214	0.145	0.10	21.56	22.50	0.266	Battery 1#	/
Front Side	15mm	132072/1720	20M QPSK 1RB#0	0.284	0.193	0.10	22.64	23.50	0.346	Battery 2#	Yes
Front Side	15mm	132072/1720	20M QPSK 1RB#0	0.283	0.192	0.11	22.64	23.50	0.345	Battery 3#	/
Front Side	15mm	132072/1720	20M QPSK 1RB#0	0.280	0.190	0.10	22.64	23.50	0.341	With SIM2	/
Front Side	15mm	132322/1745	20M QPSK 1RB#0	0.255	0.173	0.07	22.49	23.50	0.322	Battery 2#	/
Front Side	15mm	132572/1770	20M QPSK 1RB#0	0.236	0.160	0.16	22.49	23.50	0.298	Battery 2#	/

Table 98: Body Worn SAR test results of LTE Band 66

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g						
Second Antenna											
Front Side	10mm	132572/1770	20M QPSK 1RB#99	0.186	0.128	0.02	22.75	23.50	0.221	Battery 1#	/
Back Side	10mm	132572/1770	20M QPSK 1RB#99	0.172	0.119	-0.13	22.75	23.50	0.204	Battery 1#	/
Left Side	10mm	132572/1770	20M QPSK 1RB#99	0.222	0.133	0.01	22.75	23.50	0.264	Battery 1#	/
Right Side	10mm	132572/1770	20M QPSK 1RB#99	0.057	0.030	0.15	22.75	23.50	0.068	Battery 1#	/
Top Side	10mm	132572/1770	20M QPSK 1RB#99	0.239	0.123	0.14	22.75	23.50	0.284	Battery 1#	Yes
Front Side	10mm	132072/1720	20M QPSK 50%RB#0	0.154	0.109	0.06	21.84	22.50	0.179	Battery 1#	/
Back Side	10mm	132072/1720	20M QPSK 50%RB#0	0.204	0.137	-0.03	21.84	22.50	0.237	Battery 1#	/
Left Side	10mm	132072/1720	20M QPSK 50%RB#0	0.115	0.073	0.11	21.84	22.50	0.134	Battery 1#	/
Right Side	10mm	132072/1720	20M QPSK 50%RB#0	0.051	0.024	0.19	21.84	22.50	0.059	Battery 1#	/
Top Side	10mm	132072/1720	20M QPSK 50%RB#0	0.152	0.077	0.18	21.84	22.50	0.177	Battery 1#	/
Top Side	10mm	132572/1770	20M QPSK 1RB#99	0.235	0.121	0.19	22.75	23.50	0.279	Battery 2#	/
Top Side	10mm	132572/1770	20M QPSK 1RB#99	0.220	0.115	-0.19	22.75	23.50	0.261	Battery 3#	/
Top Side	10mm	132572/1770	20M QPSK 1RB#99	0.214	0.111	0.15	22.75	23.50	0.254	With SIM2	/
Top Side	10mm	132072/1720	20M QPSK 1RB#0	0.173	0.090	0.12	22.68	23.50	0.209	Battery 1#	/
Top Side	10mm	132322/1745	20M QPSK 1RB#0	0.199	0.102	0.16	22.67	23.50	0.241	Battery 1#	/
Main Antenna											
Front Side	10mm	132072/1720	20M QPSK 1RB#0	0.472	0.318	0.10	22.64	23.50	0.575	Battery 1#	/
Back Side	10mm	132072/1720	20M QPSK 1RB#0	0.450	0.305	0.07	22.64	23.50	0.549	Battery 1#	/
Left Side	10mm	132072/1720	20M QPSK 1RB#0	0.210	0.114	-0.04	22.64	23.50	0.256	Battery 1#	/
Right Side	10mm	132072/1720	20M QPSK 1RB#0	0.099	0.057	-0.03	22.64	23.50	0.120	Battery 1#	/
Bottom Side	10mm	132072/1720	20M QPSK 1RB#0	0.543	0.317	-0.06	22.64	23.50	0.662	Battery 1#	/
Front Side	10mm	132072/1720	20M QPSK 50%RB#0	0.331	0.210	0.04	21.56	22.50	0.411	Battery 1#	/
Back Side	10mm	132072/1720	20M QPSK 50%RB#0	0.362	0.232	0.02	21.56	22.50	0.449	Battery 1#	/
Left Side	10mm	132072/1720	20M QPSK 50%RB#0	0.165	0.093	0.12	21.56	22.50	0.205	Battery 1#	/
Right Side	10mm	132072/1720	20M QPSK 50%RB#0	0.077	0.045	0.06	21.56	22.50	0.096	Battery 1#	/
Bottom Side	10mm	132072/1720	20M QPSK 50%RB#0	0.413	0.242	0.00	21.56	22.50	0.513	Battery 1#	/
Bottom Side	10mm	132072/1720	20M QPSK 1RB#0	0.488	0.288	0.13	22.64	23.50	0.595	Battery 2#	/
Bottom Side	10mm	132072/1720	20M QPSK 1RB#0	0.488	0.287	0.00	22.64	23.50	0.595	Battery 3#	/
Bottom Side	10mm	132072/1720	20M QPSK 1RB#0	0.478	0.282	0.00	22.64	23.50	0.583	With SIM2	/
Bottom Side	10mm	132322/1745	20M QPSK 1RB#0	0.506	0.295	0.03	22.49	23.50	0.638	Battery 1#	/
Bottom Side	10mm	132572/1770	20M QPSK 1RB#0	0.554	0.321	0.08	22.49	23.50	0.699	Battery 1#	Yes

Table 99: Hotspot SAR test results of LTE Band 66

Note: Per KDB 648474 D04, Product Specific 10-g SAR test is not required for this frequency band since hotspot mode 1-g reported SAR < 1.2 W/kg.

7.2.13 SAR measurement Results of WiFi 2.4G

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Area Scan 1-g SAR (W/kg)	Measured SAR(W/kg)		Power Drift (dB)	Actual duty cycle	Scaled 1-g SAR (W/kg)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
				1-g	10-g								
Left cheek	1/2412	802.11b	0.091	0.094	0.039	-0.08	99%	0.095	10.95	12.10	0.124	Battery 1#	/
Left tilt	1/2412	802.11b	0.039	/	/	-0.11	99%	/	10.95	12.10	/	Battery 1#	/
Right cheek	1/2412	802.11b	0.019	/	/	0.01	99%	/	10.95	12.10	/	Battery 1#	/
Right tilt	1/2412	802.11b	0.015	/	/	0.18	99%	/	10.95	12.10	/	Battery 1#	/
Left cheek	1/2412	802.11b	0.135	0.131	0.053	-0.07	99%	0.132	10.95	12.10	0.172	Battery 2#	Yes
Left cheek	1/2412	802.11b	0.090	0.092	0.038	-0.01	99%	0.093	10.95	12.10	0.122	Battery 3#	/
Left cheek	6/2437	802.11b	0.087	0.092	0.038	0.01	99%	0.093	10.35	11.10	0.110	Battery 2#	/
Left cheek	11/2462	802.11b	0.119	0.124	0.051	-0.02	99%	0.125	9.63	11.60	0.197	Battery 2#	/

Table 100: Head SAR test results of WiFi 2.4G

WiFi 2.4G	Tune-upLimit (dBm)	Tune-upLimit (mW)	Highest Reported SAR(W/kg)	Adjusted SAR (W/kg)	SAR test
802.11b	12.10	16.22	0.197	/	Yes
802.11g	12.00	15.85	/	0.193	No
802.11n 20M	12.00	15.85	/	0.193	No
802.11n 40M	12.00	15.85	/	0.193	No

Table 101: Adjusted SAR calculation results of WiFi 2.4G(Receiver ON)

Note: Per KDB248227D01, for Head SAR test of WiFi 2.4G, SAR is measured for 2.4 GHz 802.11b DSSS using the initial test position procedure. The highest reported SAR for DSSS is adjusted by the ratio of OFDM 802.11g/n to DSSS specified maximum output power and the adjusted SAR is < 1.2 W/kg, so SAR for 802.11g/n is not required.

Test Position of Body-Worn	Dist.	Test Channel /Freq.(MHz)	Test Mode	Area Scan 1-g SAR (W/kg)	Measured SAR(W/kg)		Power Drift (dB)	Actual duty cycle	Scaled 1-g SAR (W/kg)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
					1-g	10-g								
Front Side	15mm	1/2412	802.11b	0.024	/	/	0.04	99%	/	18.29	20.10	/	Battery 1#	/
Back Side	15mm	1/2412	802.11b	0.032	0.033	0.018	-0.04	99%	0.034	18.29	20.10	0.051	Battery 1#	/
Back Side	15mm	1/2412	802.11b	0.034	0.037	0.020	-0.07	99%	0.037	18.29	20.10	0.057	Battery 2#	/
Back Side	15mm	1/2412	802.11b	0.060	0.056	0.034	-0.11	99%	0.057	18.29	20.10	0.086	Battery 3#	/
Back Side	15mm	6/2437	802.11b	0.044	0.048	0.026	-0.03	99%	0.048	17.76	19.10	0.065	Battery 3#	/
Back Side	15mm	11/2462	802.11b	0.060	0.062	0.033	-0.13	99%	0.062	17.85	19.60	0.093	Battery 3#	Yes

Table 102: Body Worn SAR test results of WiFi 2.4G

Test Position of Hotspot	Dist.	Test Channel /Freq.(MHz)	Test Mode	Area Scan 1-g SAR (W/kg)	Measured SAR(W/kg)		Power Drift (dB)	Actual duty cycle	Scaled 1-g SAR (W/kg)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
					1-g	10-g								
Front Side	10mm	1/2412	802.11b	0.052	0.057	0.031	0.11	99%	0.057	18.29	20.10	0.087	Battery 1#	/
Back Side	10mm	1/2412	802.11b	0.096	0.095	0.044	0.15	99%	0.096	18.29	20.10	0.145	Battery 1#	/
Right Side	10mm	1/2412	802.11b	0.100	0.135	0.059	-0.16	99%	0.136	18.29	20.10	0.207	Battery 1#	/
Top Side	10mm	1/2412	802.11b	0.033	/	/	-0.01	99%	/	18.29	20.10	/	Battery 1#	/
Right Side	10mm	1/2412	802.11b	0.116	0.133	0.059	0.02	99%	0.134	18.29	20.10	0.204	Battery 2#	/
Right Side	10mm	1/2412	802.11b	0.165	0.190	0.080	-0.02	99%	0.192	18.29	20.10	0.291	Battery 3#	/
Right Side	10mm	6/2437	802.11b	0.147	0.173	0.074	-0.14	99%	0.175	17.76	19.10	0.238	Battery 3#	/
Right Side	10mm	11/2462	802.11b	0.177	0.204	0.088	-0.09	99%	0.206	17.85	19.60	0.308	Battery 3#	Yes

Table 103: Hotspot SAR test results of WiFi 2.4G

WiFi 2.4G	Tune-upLimit (dBm)	Tune-upLimit (mW)	Highest Reported SAR(W/kg)	Adjusted SAR (W/kg)	SAR test
802.11b	20.10	102.33	0.308	/	Yes
802.11g	20.00	100.00	/	0.301	No
802.11n 20M	18.50	70.79	/	0.213	No
802.11n 40M	17.50	56.23	/	0.169	No

Table 104: Adjusted SAR calculation results of WiFi 2.4G(Receiver OFF)

Note:

- 1) Per KDB248227D01, for Body-Worn/Hotspot SAR test of WiFi 2.4G, SAR is measured for 2.4 GHz 802.11b DSSS using the initial test position procedure. The highest *reported* SAR for DSSS is adjusted by the ratio of OFDM 802.11g/n to DSSS specified maximum output power and the adjusted SAR is < 1.2 W/kg, so SAR for 802.11g/n is not required.
- 2) Per KDB 648474 D04, Product Specific 10-g SAR test is not required for WiFi 2.4G since hotspot mode 1-g reported SAR < 1.2 W/kg.

7.2.14 SAR measurement Results of BT

Test Position of Head	Test Channel /Freq.(MHz)	Test Mode	Measured SAR(W/kg)		Power Drift (dB)	Actual duty cycle	Scaled 1-g SAR (W/kg)	Conducted Power (dBm)	Tune-up Power (dBm)	Reported 1-g SAR (W/kg)	Accessory Information	SAR Plot.
			1-g	10-g								
Left cheek	39/2441	DH5	0.103	0.038	0.00	77%	0.134	11.48	12.40	0.165	Battery 1#	/
Left tilt	39/2441	DH5	0.029	0.015	-0.06	77%	0.038	11.48	12.40	0.047	Battery 1#	/
Right cheek	39/2441	DH5	0.016	0.008	-0.04	77%	0.021	11.48	12.40	0.026	Battery 1#	/
Right tilt	39/2441	DH5	0.011	0.006	-0.14	77%	0.015	11.48	12.40	0.018	Battery 1#	/
Left cheek	39/2441	DH5	0.102	0.037	0.09	77%	0.132	11.48	12.40	0.164	Battery 2#	/
Left cheek	39/2441	DH5	0.105	0.032	-0.03	77%	0.136	11.48	12.40	0.169	Battery 3#	/
Left cheek	0/2402	DH5	0.086	0.032	-0.04	77%	0.112	10.70	12.40	0.166	Battery 3#	/
Left cheek	78/2480	DH5	0.137	0.053	0.15	77%	0.178	10.41	12.40	0.281	Battery 3#	Yes

Table 105: Head SAR test results of BT

7.3 Multiple Transmitter Evaluation

The detailed location of the Tx antennas inside the device refers to Appendix E.

The list information of following tables which is relevant for the decision if a simultaneous transmit evaluation is necessary according to FCC KDB 447498 D01 General RF Exposure Guidance.

Mode	Exposure Condition	Front Side	Back Side	Left Side	Right Side	Top Side	Bottom Side
Main ant	Hotspot	Yes	Yes	Yes	Yes	No	Yes
Second ant	Hotspot	Yes	Yes	Yes	Yes	Yes	No
WiFi Ant/BT	Hotspot	Yes	Yes	No	Yes	Yes	No

Table 106: Sides for Hotspot testing

Note:

1) Per KDB 941225 D06 and KDB 648474 D04, particular DUT edges were not required to be evaluated for Hotspot SAR if the antenna-to-edge distance is greater than 2.5cm;

7.3.1 Stand-alone SAR test exclusion

Per FCC KDB 447498 D01, the 1-g SAR and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

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

Mode	Position	P_{max} (dBm)*	P_{max} (mW)	Distance (mm)	f (GHz)	Calculation Result	SAR Exclusion threshold	SAR test exclusion
BT	Body-Worn	12.40	17.38	15	2.480	1.82	3.00	No
BT	Product Specific 10-g	12.40	17.38	5	2.480	5.47	7.50	No

Table 107: Standalone SAR test exclusion for BT

Note:

1)* - maximum possible output power declared by manufacturer

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm}) \cdot$

$[\sqrt{f(\text{GHz})/x}] \text{ W/kg}$ for test separation distances ≤ 50 mm, where $x = 7.5$ for 1-g SAR and $x = 18.75$ for 10-g SAR.

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

Mode	Position	$P_{\max}$ (dBm)*	$P_{\max}$ (mW)	Distance (mm)	f (GHz)	X	Estimated SAR (W/kg)*
BT	Body-worn	12.40	17.38	15	2.480	7.50	0.243
BT	Product Specific 10-g	12.40	17.38	5	2.480	18.75	0.292

Table 108: Estimated SAR calculation for BT

Note:

1) * - maximum possible output power declared by manufacturer

7.3.2 Simultaneous Transmission Possibilities

The Simultaneous Transmission Possibilities of this device are as below:

NO.	Simultaneous Tx Combination	Head	BodyWorn	Hotspot	Product Specific 10-g SAR
1	GSM Voice(Ant 1) + BT	Yes	Yes	N/A	Yes
2	GSM DATA(Ant 1) + BT	N/A	Yes	N/A	Yes
3	GSM Voice(Ant 2) + BT	Yes	Yes	N/A	Yes
4	GSM DATA (Ant 2)+ BT	N/A	Yes	N/A	Yes
5	GSM Voice(Ant 1) + WiFi 2.4G	Yes	Yes	N/A	Yes
6	GSM DATA(Ant 1) + WiFi 2.4G	N/A	Yes	Yes	Yes
7	GSM Voice(Ant 2) + WiFi 2.4G	Yes	Yes	N/A	Yes
8	GSM DATA(Ant 2) + WiFi 2.4G	N/A	Yes	Yes	Yes
9	UMTS (Ant 1) + BT	Yes	Yes	N/A	Yes
10	UMTS (Ant 2) + BT	Yes	Yes	N/A	Yes
11	UMTS (Ant 1) + WiFi 2.4G	Yes	Yes	Yes	Yes
12	UMTS (Ant 2) + WiFi 2.4G	Yes	Yes	Yes	Yes
13	LTE (Ant 1) + WiFi 2.4G	Yes	Yes	Yes	Yes
14	LTE(Ant 1) + BT	Yes	Yes	N/A	Yes
15	LTE (Ant 2) + WiFi 2.4G	Yes	Yes	Yes	Yes
16	LTE (Ant 2) + BT	Yes	Yes	N/A	Yes

Table 109: Simultaneous Transmission Possibilities

Note:

- 1) WiFi 2.4G and Bluetooth share the same Tx antenna and can't transmit simultaneously.
- 2) The device does not support DTM function.
- 3) * VOIP 3rd party applications may possibly be installed and used by the user.
- 4) The Main Antenna and Second Antenna can't transmit simultaneously.
- 5) The device supports VoWiFi function.
- 6) The device supports VOLTE function.

7.3.3 SAR Summation Scenario

Test Position		Second Antenna											WiFi/BT antenna		ΣSAR
		GSM850	GSM1900	UMTS Band II	UMTS Band IV	UMTS Band V	LTE B2	LTE B4	LTE B5	LTE B7	LTE B12	LTE B66	WiFi 2.4G	BT	
Head	Left cheek	0.724	0.161	0.397	0.443	0.547	0.430	0.489	0.760	0.217	0.705	0.569	0.197	0.281	1.041
	Left tilt	0.584	0.090	0.243	0.311	0.385	0.305	0.397	0.726	0.153	0.616	0.289	0.197	0.047	0.923
	Right cheek	0.795	0.391	0.881	0.740	0.741	0.942	0.866	0.915	0.779	0.808	0.812	0.197	0.026	1.139
	Right tilt	0.638	0.171	0.422	0.394	0.528	0.732	0.484	0.751	0.397	0.711	0.458	0.197	0.018	0.948
Body Worn	Front side	0.280	0.014	0.106	0.171	0.262	0.140	0.159	0.192	0.170	0.197	0.139	0.093	0.243	0.523
	Back side	0.295	0.025	0.122	0.168	0.314	0.142	0.138	0.286	0.220	0.273	0.126	0.093	0.243	0.557
Hotspot	Front side	0.252	0.018	0.166	0.254	0.273	0.172	0.217	0.213	0.231	0.256	0.221	0.087	/	0.515
	Back side	0.340	0.044	0.258	0.311	0.323	0.253	0.246	0.324	0.362	0.258	0.237	0.145	/	0.604
	Left side	0.447	0.024	0.240	0.211	0.455	0.262	0.193	0.313	0.349	0.391	0.264	0.308	/	0.763
	Right side	0.239	0.001	0.045	0.079	0.251	0.045	0.076	0.190	0.036	0.167	0.068	0.308	/	0.559
	Top side	0.228	0.029	0.230	0.258	0.206	0.269	0.277	0.165	0.200	0.243	0.284	0.308	/	0.592
	Bottom side	/	/	/	/	/	/	/	/	/	/	/	0.308	/	0.308

Table 110: SAR Simultaneous Tx Combination of Second antenna and WiFi/BT antenna.

Test Position		Main Antenna										WiFi/BT antenna		ΣSAR
		GSM850	GSM1900	UMTS Band II	UMTS Band IV	UMTS Band V	LTE B2	LTE B5	LTE B7	LTE B12	LTE B66	WiFi 2.4G	BT	
Head	Left cheek	0.059	0.151	0.243	0.235	0.060	0.308	0.072	0.477	0.061	0.190	0.197	0.281	0.758
	Left tilt	0.033	0.090	0.130	0.118	0.041	0.117	0.037	0.240	0.041	0.108	0.197	0.047	0.437
	Right cheek	0.087	0.096	0.171	0.203	0.077	0.147	0.089	0.308	0.073	0.173	0.197	0.026	0.505
	Right tilt	0.035	0.085	0.104	0.092	0.031	0.108	0.034	0.128	0.070	0.094	0.197	0.018	0.325
Body Worn	Front side	0.181	0.182	0.263	0.305	0.298	0.230	0.309	0.273	0.203	0.346	0.093	0.243	0.589
	Back side	0.252	0.164	0.318	0.305	0.371	0.274	0.399	0.308	0.275	0.335	0.093	0.243	0.642
Hotspot	Front side	0.369	0.300	0.533	0.495	0.481	0.482	0.486	0.548	0.389	0.575	0.087	/	0.817
	Back side	0.554	0.320	0.559	0.545	0.681	0.478	0.761	0.541	0.637	0.549	0.145	/	1.003
	Left side	0.156	0.152	0.263	0.255	0.215	0.216	0.265	0.268	0.240	0.256	0.308	/	0.576
	Right side	0.072	0.101	0.173	0.154	0.068	0.167	0.082	0.092	0.100	0.120	0.308	/	0.481
	Top side	/	/	/	/	/	/	/	/	/	/	0.308	/	0.308
	Bottom side	0.250	0.524	0.980	0.604	0.316	0.813	0.266	0.755	0.301	0.699	0.308	/	1.288

Table 111: SAR Simultaneous Tx Combination of Main antenna and WiFi/BT antenna.

7.3.4 Simultaneous Transmission Conclusion

The above numeral summed SAR results is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore simultaneous transmission SAR with Volume Scans is not required per KDB 447498 D01.

Appendix A. System Check Plots

(Please See Appendix No.: SYBH(Z-SAR)20181219017001-2A, total: 29 pages)

Appendix B. SAR Measurement Plots

(Please See Appendix No.: SYBH(Z-SAR)20181219017001-2B, total: 70 pages)

Appendix C. Calibration Certificate

(Please See Appendix No.: SYBH(Z-SAR)20181219017001-2C, total: 215 pages)

Appendix D. Photo documentation

(Please See Appendix No.: SYBH(Z-SAR)20181219017001-2D, total: 5 pages)

Appendix E. Antenna Location

(Please See Appendix No.: SYBH(Z-SAR)20181219017001-2E, total: 1 page)

End