FCC SAR Test Report

FCC ID: R9C-CPH2015

Project No.	:	1911C066
Equipment	:	Mobile Phone
Brand Name	:	OPPO
Test Model	:	CPH2015
Series Model	:	N/A
Date of Receipt	:	Nov. 12, 2019
Date of Test	:	Nov. 28, 2019 ~ Dec. 18, 2019
Issued Date	:	Dec. 26, 2019
Report Version	:	R01
Test Sample	:	Engineering Sample No.: DG2019112572, DG2019112570
Standard(s)	:	Please refer to page 2.
Applicant	:	GuangDong Oppo Mobile Telecommunications Corp., Ltd.
Address	:	NO. 18 HaiBin Road, WuSha village, Chang An Town, DongGuan City,Guangdong,China.
Manufacturer	:	GuangDong Oppo Mobile Telecommunications Corp., Ltd.
Address	:	NO. 18 HaiBin Road, WuSha village, Chang An Town, DongGuan City,Guangdong,China.
Factory	:	GuangDong Oppo Mobile Telecommunications Corp., Ltd.
Address	:	NO. 18 HaiBin Road, WuSha village, Chang An Town, DongGuan City,Guangdong,China.

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

Prepared by : Rot Liang

Approved by : Herbort Liu

Certificate #5123.02

Add: No.3, Jinshagang 1st Road, Shixia, Dalang Town,Dongguan, Guangdong, China.
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Web: www.newbtl.com

Standard(s) : **ANSI Std C95.1-1992** Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.(IEEE Std C95.1-1991)

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

KDB941225 D01 3G SAR Procedures v03r01
KDB941225 D05 SAR for LTE Devices v02r05
KDB941225 D06 Hotspot Mode V02r01
KDB447498 D01 General RF Exposure Guidance v06
KDB648474 D04 Handset SAR v01r03
KDB248227 D01 802. 11 Wi-Fi SAR v02r02
KDB865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
KDB865664 D02 SAR Reporting v01r02
KDB690783 D01 SAR Listings on Grants v01r03

Declaration

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

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

The report must not be used by the client to claim product certification, approval, or endorsement by NIST, A2LA, or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

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

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

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

Limitation

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

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

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Dec. 24, 2019
R01	Updated the data and description in section 2.2.	Dec. 26, 2019

1. RF EMISSIONS MEASUREMENT

1.1 TEST FACILITY

The test facilities used to collect the test data in this report is **SAR room** at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

1.2 MEASUREMENT UNCERTAINTY

Note: 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.

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Mobile Phone		
Brand Name	OPPO		
Model Name	CPH2015		
IMEI Code	Sample 1	867898040019712	
	Sample 2	867898040019936	
Hardware Version	11		
Software Version	ColorOS V6.1.2		
Modulation	GSM(GMSK/8PSK), UMTS(QPSK), LTE(QPSK/16QAM/64QAM), WiFi(DSSS/OFDM), BT(GFSK/π/4-DQPSK/8-DPSK)		
Operation Frequency Range(s)	Band	TX (MHz)	RX (MHz)
	GSM850	824~849	869~894
	GSM1900	1850~1910	1930~1990
	UMTS B2	1850~1910	1930~1990
	UMTS B4	1710~1755	2110~2155
	UMTS B5	824~849	869~894
	LTE B2	1850~1910	1930~1990
	LTE B4	1710~1755	2110~2155
	LTE B5	824~849	869~894
	LTE B7	2500~2570	2620~2690
	LTE B66	1710~1780	2110~2180
	LTE B38	2570~2620	
	LTE B41	2535~2655	
	Bluetooth	2400~2483.5	
	2.4G WLAN	2400~2483.5	
	5.2G WLAN	5150~5250	
	5.3G WLAN	5250~5350	
	5.6G WLAN	5470~5725	
	5.8G WLAN	5725~5850	
GPRS/EDGE Multislot Class(12)	Max Number of Timeslots in Uplink:	4	
	Max Number of Timeslots in Downlink:	4	
	Max Total Timeslot:	5	
GSM Device class	Class B		
HSDPA UE Category	14		
HSUPA UE Category	6		
DC-HSDPA Category	24		
Power Class	4,tested with power level 5(GSM850)		
	1,tested with power level 0(GSM1900)		
	3, tested with power control “all up bits” (UMTS B2/4/5)		
	3, tested with power control “all Max” (LTE B2/4/5/7/38/41/66)		

<table>
<tr><td rowspan="16">Test Channels
(low-mid-high)</td><td colspan="5">128-190-251 (GSM850)</td></tr>
<tr><td colspan="5">512-661-810 (GSM1900)</td></tr>
<tr><td colspan="5">9262-9400-9538 (UMTS B2)</td></tr>
<tr><td colspan="5">1312-1413-1513 (UMTS B4)</td></tr>
<tr><td colspan="5">4132-4182-4233 (UMTS B5)</td></tr>
<tr><td colspan="5">18700-18900-19100 (LTE B2 BW=20MHz)</td></tr>
<tr><td colspan="5">20050-20175-20300 (LTE B4 BW=20MHz)</td></tr>
<tr><td colspan="5">20450-20525-20600 (LTE B5 BW=10MHz)</td></tr>
<tr><td colspan="5">20850-21100-21350 (LTE B7 BW=20MHz)</td></tr>
<tr><td colspan="5">37850-38000-38150 (LTE B38 BW=20MHz)</td></tr>
<tr><td colspan="5">40140-40440-40840-41140 (LTE B41 BW=20MHz)</td></tr>
<tr><td colspan="5">132072-132322-132572 (LTE B66 BW=15MHz)</td></tr>
<tr><td colspan="5">0-39-78 (BT)</td></tr>
<tr><td colspan="5">0-19-39 (BLE)</td></tr>
<tr><td colspan="5">1-6-11 (2.4G WIFI 802.11b)</td></tr>
<tr><td colspan="5">1-2-6-10-11 (2.4G WIFI 802.11g/n HT20)</td></tr>
<tr><td>5G WIFI</td><td>5.2G</td><td>5.3G</td><td>5.6G</td><td>5.8G</td></tr>
<tr><td>802.11a/n HT20/
ac VHT20</td><td>36-40-44-48</td><td>52-56-60-64</td><td>100-104-108-
112-116-132-
136-140</td><td>149-153-157-
161-165</td></tr>
<tr><td>802.11n HT40/
ac VHT40</td><td>38-46</td><td>54-62</td><td>102-110-118-
126-134</td><td>151-159</td></tr>
<tr><td>802.11ac VHT80</td><td>42</td><td>58</td><td>106-122</td><td>155</td></tr>
<tr><td rowspan="17">Antenna Gain</td><td>Band</td><td>Main antenna(dBi)</td><td>Second antenna(dBi)</td><td>WiFi antenna(dBi)</td></tr>
<tr><td>GSM 850</td><td>-2.90</td><td>-2.90</td><td>/</td></tr>
<tr><td>GSM 1900</td><td>-1.53</td><td>-1.53</td><td>/</td></tr>
<tr><td>UMTS B2</td><td>-1.53</td><td>-1.53</td><td>/</td></tr>
<tr><td>UMTS B4</td><td>-1.53</td><td>-1.53</td><td>/</td></tr>
<tr><td>UMTS B5</td><td>-3.40</td><td>-3.40</td><td>/</td></tr>
<tr><td>LTE B2</td><td>-1.53</td><td>-1.53</td><td>/</td></tr>
<tr><td>LTE B4</td><td>-1.53</td><td>-1.53</td><td>/</td></tr>
<tr><td>LTE B5</td><td>-3.40</td><td>-3.40</td><td>/</td></tr>
<tr><td>LTE B7</td><td>0.68</td><td>0.68</td><td>/</td></tr>
<tr><td>LTE B38</td><td>1.39</td><td>1.39</td><td>/</td></tr>
<tr><td>LTE B41</td><td>0.68</td><td>0.68</td><td>/</td></tr>
<tr><td>LTE B66</td><td>-1.53</td><td>-1.53</td><td>/</td></tr>
<tr><td>Bluetooth</td><td>/</td><td>/</td><td>0.77</td></tr>
<tr><td>WLAN 2.4G</td><td>/</td><td>/</td><td>0.77</td></tr>
<tr><td>WLAN 5G</td><td>/</td><td>/</td><td>1.04</td></tr>
<tr><td colspan="5">Other Information</td></tr>
<tr><td rowspan="3">Battery</td><td>Power Rating</td><td colspan="3">3.85Vdc, 4100mAh/15.78Wh</td></tr>
<tr><td rowspan="3">Factory / Model</td><td colspan="3">1# Desay / BLP673 (DD-P673-935)</td></tr>
<tr><td colspan="3">2# Desay / BLP673 (DA-P673-940)</td></tr>
<tr><td colspan="3">3# Scud / BLP673 (FA-P673-93)</td></tr>
<tr><td>With Earphone(Yes/No)</td><td colspan="4">No</td></tr>
</table>

2.2 STATEMENT OF COMPLIANCE

Mode	Highest Reported Head SAR-1g (W/kg)	Highest Reported Body-worn (15mm) SAR-1g (W/kg)	Highest Reported Hotspot (10mm) SAR-1g (W/kg)	Highest Reported Product Specific (0mm) SAR-10g (W/kg)
GSM850	0.79	0.20	0.49	/
GSM1900	0.79	0.27	0.94	/
UMTS B2	0.75	0.26	1.13	/
UMTS B4	0.87	0.35	0.88	/
UMTS B5	0.95	0.22	0.31	/
LTE B2	0.78	0.40	1.04	/
LTE B4	0.81	0.51	1.09	/
LTE B5	0.71	0.19	0.29	/
LTE B7	0.61	0.37	1.06	/
LTE B38	0.74	0.44	1.09	/
LTE B41	0.55	0.35	1.09	/
LTE B66	0.90	0.45	1.05	/
2.4G WLAN	0.59	0.07	0.14	/
5.2G WLAN	/	/	1.02	/
5.3G WLAN	0.77	0.52	/	1.80
5.6G WLAN	0.82	0.60	/	1.49
5.8G WLAN	0.68	0.70	0.78	/
Bluetooth	0.17	0.18	/	0.40

Note:
1) The highest reported SAR for head, body-worn, hotspot and product Specific SAR-10g are 0.95W/kg, 0.70W/kg, 1.13W/kg and 1.80W/kg respectively.
2) The highest simultaneous SAR are 1.47W/kg(head), 1.10W/kg(body-worn), 1.49W/kg(hotspot) and 1.80W/kg(product specific 10g SAR) respectively.

Note: 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 .

2.3 LABORATORY ENVIRONMENT

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

2.4 MAIN TEST INSTRUMENTS

Item	Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Interval
1	Data Acquisition Electronics	Speag	DAE4	1390	May 25, 2019	1 Year
2	Data Acquisition Electronics	Speag	DAE3	420	Jun. 21, 2019	1 Year
3	E-field Probe	Speag	ES3DV3	3162	Apr. 12, 2019	1 Year
4	E-field Probe	Speag	EX3DV4	7544	Sep. 09, 2019	1 Year
5	System Validation Dipole	Speag	D835V2	4d160	Jun. 05, 2018	3 Years
6	System Validation Dipole	Speag	D1750V2	1101	Jun. 07, 2018	3 Years
7	System Validation Dipole	Speag	D1900V2	5d179	Jun. 07, 2018	3 Years
8	System Validation Dipole	Speag	D2450V2	919	Jun. 11, 2018	3 Years
9	System Validation Dipole	Speag	D2600V2	1067	Jun. 11, 2018	3 Years
10	System Validation Dipole	Speag	D5GHzV2	1160	Jun. 20, 2018	3 Years
11	Twin Sam Phantom	Speag	Twin Sam Phantom V5.0	1784	N/A	N/A
12	8960 Series 10 Wireless Com Test set	Agilent	E5515E	MY52112163	Aug. 03, 2019	1 Year
13	Radio Communication Analver	Anritsu	MT8820C	6201525877	Aug. 03, 2019	1 Year
14	Wideband radio communication tester	R&S	CMW500	152372	Mar. 10, 2019	1 Year
15	CMW500-Wideband Radio Communication Tester	R&S	CMW500	153883	Mar. 10, 2019	1 Year
16	Bluetooth Test Set	Anritsu	Mt8852B-042	1132009	Aug. 03, 2019	1 Year
17	Power Amplifier	Mini-Circuits	ZHL-42W+	QA1333003	Feb. 25, 2019	1 Year
18	Power Amplifier	Mini-Circuits	ZVE-8G+	520701341	Feb. 25, 2019	1 Year
19	DC Source	Iteck	OT6154	M00157	Aug. 03, 2019	1 Year
20	ENA Network Analyzer	Agilent	E5071C	MY46102965	Mar. 10, 2019	1 Year
21	MXG Analog Signal Generator	Agilent	N5181A	MY49060710	Aug. 03, 2019	1 Year
22	Signal Generator	Agilent	E4438C	MY4907131	Mar. 10, 2019	1 Year
23	P-series Power Meter	Agilent	N1911A	MY45100473	Sep. 23, 2019	1 Year
24	Wideband Power Sensor	Agilent	N1921A	MY51100041	Sep. 23, 2019	1 Year
25	Smart Power Sensor	R&S	NRP-Z21	102209	Mar. 01, 2019	1 Year
26	Dielectric Assessment Kit	Speag	DAK-3.5	1226	N/A	N/A
27	Dual directional coupler	Woken	TS-PCC0M-05	107090019	Mar. 10, 2019	1 Year
28	Coupler	Woken	0110A05601O-10	COM5BNW1A2	Mar. 10, 2019	1 Year
29	Digital Themometer	LKM	DTM3000	3519	Jul. 08, 2019	1 Year

Remark:
1. “N/A” denotes no model name, serial No. or calibration specified.
2. * These test equipments have been recalibrated between the test periods. All these test equipments were within the valid period when the tests were performed.
3. 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 short block performed before measuring liquid parameters.

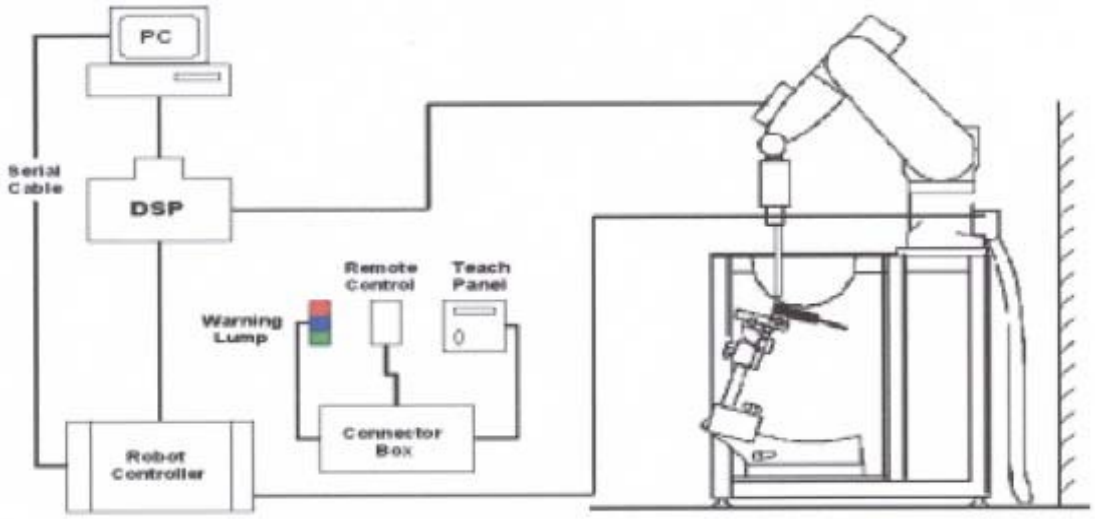
3. SAR MEASUREMENTS SYSTEM CONFIGURATION

3.1 SAR MEASUREMENT SET-UP

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

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. A unit to operate the optical surface detector which is connected to the EOC.
5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
6. TheDASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 7
7. DASY5 software and SEMCAD data evaluation software.
8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
9. The generic twin phantom enabling the testing of left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. System validation dipoles allowing to validate the proper functioning of the system.

3.1.1 TEST SETUP LAYOUT



3.2 DASY5 E-FIELD PROBE SYSTEM

The SAR measurements were conducted with the dosimetric probe EX3DV4 and ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

3.2.1 PROBE SPECIFICATION

EX3DV4

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

ES3DV3

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 4 GHz Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	5 µW/g to > 100 mW/g Linearity:± 0.2dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 4 mm (Body: 12 mm) Distance from probe tip to dipole centers: 1.0 mm

E-field Probe

3.2.2 E-FIELD PROBE CALIBRATION

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

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

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

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

Where: Δt = Exposure time (30 seconds),

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

ΔT = Temperature increase due to RF exposure.

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

Where: σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m3).

3.2.3 OTHER TEST EQUIPMENT

3.2.3.1. Device Holder for Transmitters

Construction: Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices (e.g., laptops, cameras, etc.) It is light weight and fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin SAM, ELI4 and SAM v6.0 Phantoms.
Material: POM, Acrylic glass, Foam

3.2.3.2 Phantom

Model	Twin SAM	
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.	
Shell Thickness	2 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length:1000mm; Width: 500mm Height: adjustable feet	
Aailable	Special	

3.2.4 SCANNING PROCEDURE

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. 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 %.

The “surface check” measurement tests the optical surface detection system of the DASY5 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 ± 0.1mm). 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 ± 30°.)

- Area Scan

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 (≤2GHz), 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.

- Zoom Scan

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: Δx_{zoom}, Δy_{zoom}≤2GHz -≤8mm, 2-4GHz -≤5 mm and 4-6 GHz-≤4mm; Δz_{zoom}≤3GHz -≤5 mm, 3-4 GHz-≤4mm and 4-6GHz-≤2mm 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.

The following table summarizes the area scan and zoom scan resolutions per FCC KDB 865664D01:

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

3.2.5 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, Computer mathematik, 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

DASY5 uses the advanced extrapolation option which is able to compansate boundary effects on E-field probes.

3.2.6 DATA STORAGE AND EVALUATION

3.2.6.1 Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension “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.

3.2.7 DATA EVALUATION BY SEMCAD

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

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

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multi meter 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:

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

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

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

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

ConvF = sensitivity enhancement in solution

aij = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

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

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

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

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

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

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

With SAR = local specific absorption rate in mW/g

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

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

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

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

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

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

4. SYSTEM VERIFICATION PROCEDURE

4.1 TISSUE VERIFICATION

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectic parameter are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within ± 5% of the target values.

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

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
Head 835	0.2	-	0.2	1.5	57.0	-	41.1	-
Head 1750	-	47.0	-	0.4	-	-	52.6	-
Head 1900	-	44.5	-	0.2	-	-	55.3	-
Head 2450	-	45.0	-	0.1	-	-	54.9	-
Head 2600	-	45.1	-	0.1	-	-	54.8	-
Head 5G	-	-	-	-	-	17.2	65.5	17.3

Salt: 99+% Pure Sodium Chloride; Sugar: 98+% Pure Sucrose; Water: De-ionized, 16M + 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

Tissue Verification									
Tissue Type	Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (εr)	Targeted Conductivity (σ)	Targeted Permittivity (εr)	Deviation Conductivity (σ) (%)	Deviation Permittivity (εr) (%)	Date
Head	835	22.4	0.891	43.061	0.90	41.5	-1.00	3.76	Nov. 28, 2019
Head	835	22.5	0.881	43.263	0.90	41.5	-2.11	4.25	Nov. 29, 2019
Head	835	22.3	0.934	42.911	0.90	41.5	3.78	3.40	Nov. 30, 2019
Head	1750	22.4	1.356	40.578	1.37	40.1	-1.02	1.19	Nov. 30, 2019
Head	1750	22.3	1.321	40.137	1.37	40.1	-3.58	0.09	Dec. 01, 2019
Head	1750	22.3	1.387	41.439	1.37	40.1	1.24	3.34	Dec. 02, 2019
Head	1750	22.4	1.405	41.336	1.37	40.1	2.55	3.08	Dec. 16, 2019
Head	1750	22.3	1.372	41.150	1.37	40.1	0.15	2.62	Dec. 17, 2019
Head	1900	22.3	1.370	39.990	1.40	40.0	-2.14	-0.02	Dec. 02, 2019
Head	1900	22.5	1.392	39.529	1.40	40.0	-0.57	-1.18	Dec. 03, 2019
Head	1900	22.4	1.365	39.636	1.40	40.0	-2.50	-0.91	Dec. 15, 2019
Head	1900	22.4	1.443	39.720	1.40	40.0	3.07	-0.70	Dec. 16, 2019
Head	2450	22.3	1.859	38.018	1.80	39.2	3.28	-3.02	Dec. 05, 2019
Head	2600	22.5	2.028	37.451	1.96	39.0	3.47	-3.97	Dec. 03, 2019
Head	2600	22.4	2.051	37.628	1.96	39.0	4.64	-3.52	Dec. 04, 2019
Head	2600	22.3	2.024	38.655	1.96	39.0	3.27	-0.88	Dec. 05, 2019
Head	2600	22.5	2.053	38.335	1.96	39.0	4.74	-1.71	Dec. 17, 2019
Head	2600	22.5	2.003	37.660	1.96	39.0	2.19	-3.44	Dec. 18, 2019
Head	5200	22.3	4.704	36.194	4.66	36.0	0.94	0.54	Dec. 06, 2019
Head	5200	22.1	4.863	36.108	4.66	36.0	4.36	0.30	Dec. 18, 2019
Head	5300	22.3	4.815	35.943	4.76	35.9	1.16	0.12	Dec. 06, 2019
Head	5500	22.3	5.037	35.486	4.96	35.6	1.55	-0.32	Dec. 06, 2019
Head	5600	22.3	5.159	35.272	5.07	35.5	1.76	-0.64	Dec. 06, 2019
Head	5800	22.3	5.411	34.835	5.27	35.3	2.68	-1.32	Dec. 06, 2019
Head	5800	22.1	5.530	35.199	5.27	35.3	4.93	-0.29	Dec. 18, 2019

Note:
1) The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.
2) KDB 865664 was ensured to be applied for probe calibration frequencies greater than or equal to 50MHz of the EUT frequencies.
3) The above measured tissue parameters were used in the DASY software to perform interpolation via the DASY software to determine actual dielectric parameters at the test frequencies. The SAR test plots may slightly differ from the table above since the DASY rounds to three significant digits.

4.2 SYSTEM CHECK

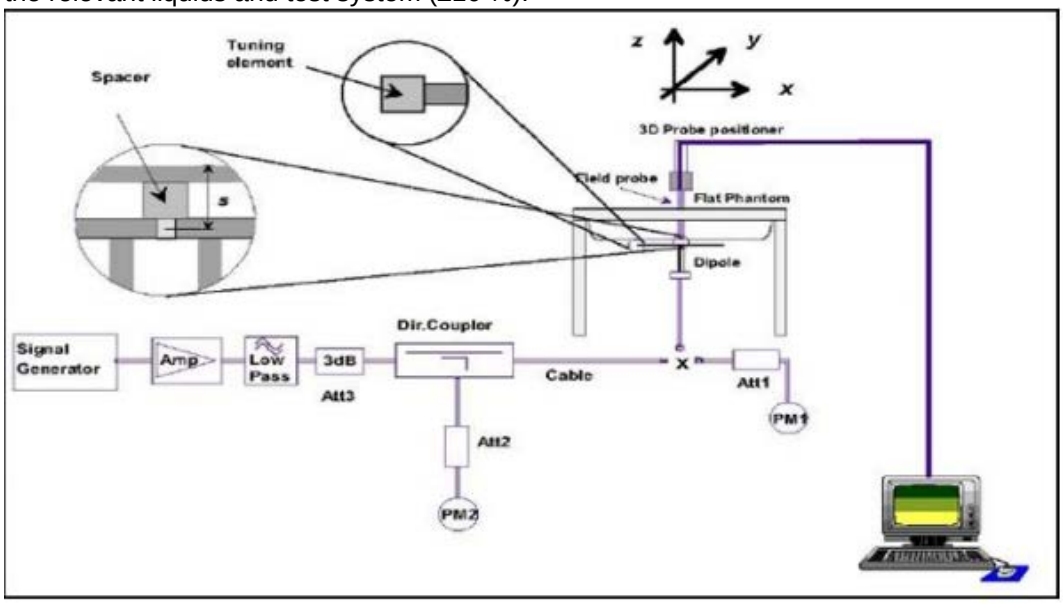
The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system check is performed with tissue equivalent material according to IEEE Std 1528 (described above). The following table shows system check results for all frequency bands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

System Check	Date	Frequency (MHz)	Targeted SAR-1g (W/kg)	Measured SAR-1g (W/kg)	normalized SAR-1g (W/kg)	Deviation (%)	Dipole S/N
Head	Nov. 28, 2019	835	9.23	2.30	9.20	-0.33	4d160
Head	Nov. 29, 2019	835	9.23	2.34	9.36	1.41	4d160
Head	Nov. 30, 2019	835	9.23	2.39	9.56	3.58	4d160
Head	Nov. 30, 2019	1750	37.00	9.27	37.08	0.22	1101
Head	Dec. 01, 2019	1750	37.00	9.37	37.48	1.30	1101
Head	Dec. 02, 2019	1750	37.00	9.70	38.80	4.86	1101
Head	Dec. 16, 2019	1750	37.00	9.61	38.44	3.89	1101
Head	Dec. 17, 2019	1750	37.00	8.88	35.52	-4.00	1101
Head	Dec. 02, 2019	1900	39.50	9.50	38.00	-3.80	5d179
Head	Dec. 03, 2019	1900	39.50	10.10	40.40	2.28	5d179
Head	Dec. 15, 2019	1900	39.50	9.41	37.64	-4.71	5d179
Head	Dec. 16, 2019	1900	39.50	10.20	40.80	3.29	5d179
Head	Dec. 05, 2019	2450	52.10	12.70	50.80	-2.50	919
Head	Dec. 03, 2019	2600	56.10	14.20	56.80	1.25	1067
Head	Dec. 04, 2019	2600	56.10	14.70	58.80	4.81	1067
Head	Dec. 05, 2019	2600	56.10	14.30	57.20	1.96	1067
Head	Dec. 17, 2019	2600	56.10	14.60	58.40	4.10	1067
Head	Dec. 18, 2019	2600	56.10	14.00	56.00	-0.18	1067
Head	Dec. 06, 2019	5200	75.30	7.29	72.90	-3.19	1160
Head	Dec. 18, 2019	5200	75.30	7.83	78.30	3.98	1160
Head	Dec. 06, 2019	5300	76.80	7.81	78.10	1.69	1160
Head	Dec. 06, 2019	5500	80.80	8.36	83.60	3.47	1160
Head	Dec. 06, 2019	5600	78.60	7.96	79.60	1.27	1160
Head	Dec. 06, 2019	5800	77.90	7.83	78.30	0.51	1160
Head	Dec. 18, 2019	5800	77.90	8.07	80.70	3.59	1160

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 SMA. It is fed with a power of 250mW (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.

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 (±10 %).



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.

6. OPERATIONAL CONDITIONS DURING TEST

6.1 SAR TEST CONFIGURATION

6.1.1 GSM TEST CONFIGURATION

SAR tests for GSM850 and GSM1900, a communication link is set up with a base station by air link.
Using 8960 Series 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 8PSK.

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot.

The allowed power reduction in the multi-slot configuration is as following:

Number of timeslots in uplink assignment		Reduction of maximum output power (dB)		
Band	Time Slots	GPRS (GMSK)	EGPRS (GMSK)	EGPRS (8PSK)
GSM850	1 TX slot	0.0	0.0	6.4
	2 TX slots	3.0	3.0	9.4
	3 TX slots	4.8	4.8	11.2
	4 TX slots	6.0	6.0	12.4
GSM1900	1 TX slot	0.0	0.0	4.3
	2 TX slots	3.0	3.0	7.3
	3 TX slots	4.8	4.8	9.1
	4 TX slots	6.0	6.0	10.3

6.1.2 UMTS TEST CONFIGURATION

1. Output Power Verification

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

2. WCDMA

(1).Head SAR Measurements

SAR for next to ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR with 3.4kbps SRB(signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

(2).Body SAR Measurements

SAR for body-worn accessory is measured using the 12.2 kbps RMC with the TPC bits configured to all “1s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by 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 ≤ ¼ 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 ≤ 1.2W/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,ΔNACK,ΔCQI = 8. The variation of the β_c /β_d ratio causes a power reduction at sub-tests 2 - 4.

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

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

Note 2 : CM=1 for β_c/β_d= 12/15, β_{hs}/β_c = 24/15. For all other combinations of DPDCH,DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 3 : For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to β_c = 11/15 and β_d = 15/15

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

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

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

HSDPA UE category

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

4. HSUPA

SAR for Body exposure configurations is measured according to the “Body SAR Measurements” procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ 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 ≤ 1.2W/kg, SAR measurement is not required for the secondary mode.

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

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

Subtests for WCDMA Release 6 HSUPA

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	β_{ec}	β_{ed}	β_e (SF)	β_{ed} (code)	CM(2) (dB)	MPR (dB)	AG(4) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	22/15	209/225	1039/225	4	1	1.0	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	β_{ed1}:47/15 β_{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.

HSUPA UE category

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

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

5. DC-HSDPA

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
Levels for HSDPA connection setup

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

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

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

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

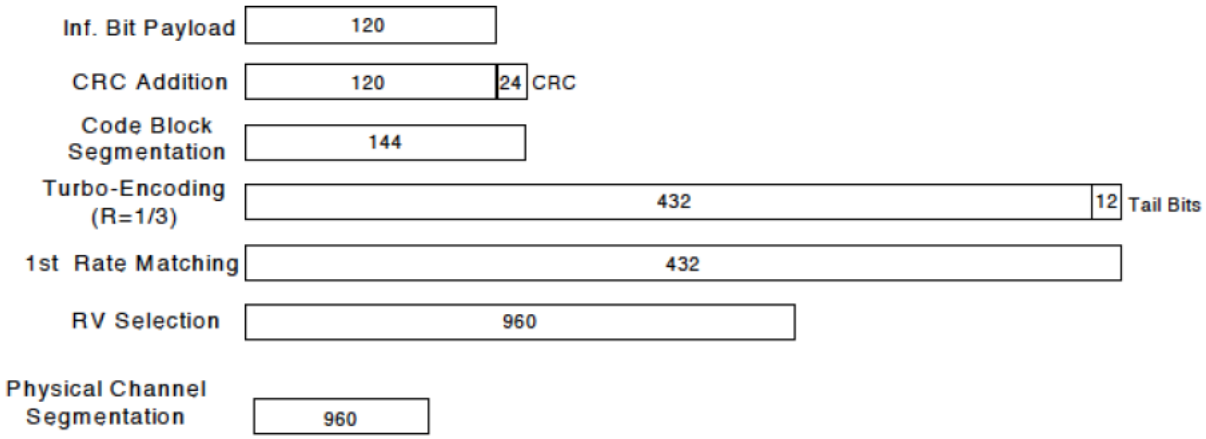


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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

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

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

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

Note:
1. The Dual Carriers transmission support HSDPA and HSUPA 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.

6.1.3 LTE TEST CONFIGURATION

SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices. The CMW500 Wide Band 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 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

3. A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by using Network Signalling 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.

iii) 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.

iv) 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 > ½ 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 > ½ 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.

LTE (TDD) Test Configuration

According to KDB 941225 D05 SAR for LTE Devices V02r05, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.
TDD LTE B38/41 supports 3GPP TS 36 for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.
TDD LTE B38/41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Figure 4.2-1: Frame structure type 2

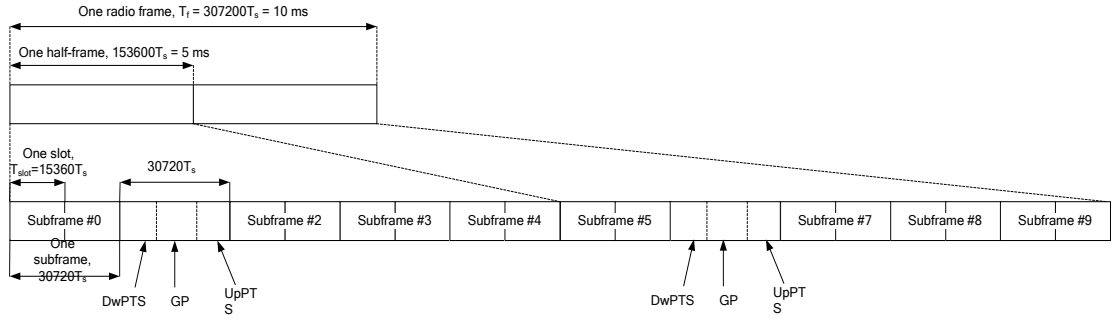


Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Table 4.2-2: Uplink-downlink configurations

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

According to Figure 4.2-1, one radio frame is configured by 10 subframes, which consist of Uplink-subframe, Downlink-subframe and Special subframe. For TDD-LTE, the Duty Cycle should be calculated on Uplink-subframes and Special subframes, due to Special subframe containing both Uplink transmissions. So for one radio frame, Duty Cycle can be calculated with formula as below. The count of Uplink subframes are according to Table 4.2-2:

Duty cycle =(30720Ts*Ups+Uplink Component*Specials)/(307200Ts)

About the uplink component of Special subframes, we can figure out by Table 4.2-1:

Uplink Component=UpPTS

In conclusion, for the TDD LTE B38/41, Duty Cycle can be calculated with formula as below .all these sets are ok when we test, or we can set as below.

Duty cycle =[(30720Ts*Ups)+ UpPTS *Specials]/(307200Ts)

And we can get different Duty cycles under different configurations:

Uplink-downlink configuratin	Subframe number			Configuration of special subframe							
				Normal cyclic prefix in downlink				Extended cyclic prefix in downlink			
				Normal cyclic prefix in uplink		Extended cyclic prefix in uplink		Normal cyclic prefix in uplink		Extended cyclic prefix in uplink	
	D	S	U	configuration 0-4	configuration 5-9	configuration 0-4	configuration 5-9	configuration 0-3	configuration 4-7	configuration 0-3	configuration
0	2	2	6	61.43%	62.85%	61.67%	63.33%	61.43%	62.85%	61.67%	63.33%
1	4	2	4	41.43%	42.85%	41.67%	43.33%	41.43%	42.85%	41.67%	43.33%
2	6	2	2	21.43%	22.85%	21.67%	23.33%	21.43%	22.85%	21.67%	23.33%
3	6	1	3	30.71%	31.43%	30.83%	31.67%	30.71%	31.43%	30.83%	31.67%
4	7	1	2	20.71%	21.43%	20.83%	21.67%	20.71%	21.43%	20.83%	21.67%
5	8	1	1	10.71%	11.43%	10.83%	11.67%	10.71%	11.43%	10.83%	11.67%
6	3	2	5	51.43%	52.85%	51.67%	53.33%	51.43%	52.85%	51.67%	53.33%

For TDD LTE, SAR should be tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7 for Frame structure type 2.

6.1.4 WIFI TEST CONFIGURATION

For WLAN SAR testing, WLAN engineering testing software installed on the DUT can provide continuous transmitting RF signal.
2.4G

Mode	802.11b	802.11g	802.11n HT20
Duty cycle	100%		
Crest factor	1		

5G

Mode	802.11a	802.11n HT20	802.11n HT40	802.11ac HT20	802.11ac HT40	802.11ac VH80
Duty cycle	100%					
Crest factor	1					

For WiFi SAR testing, a communication link is set up with the test mode software for WiFi mode test. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. The RF signal utilized in SAR measurement has 100% duty cycle and its crest factor is 1. The test procedures in KDB 248227 D01 are applied.

6.1.4.1 2.4G SAR Test Requirements

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 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.

2.4 GHz 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. 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.

SAR Test Requirements for OFDM configurations

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

6.1.4.2 5G SAR Test Requirements

✧ **U-NII-1 and U-NII-2A Band**

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, both bands are tested independently for SAR. When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, both bands are tested independently for SAR.

✧ **U-NII-2C, U-NII-3 Bands**

The frequency range covered by these bands is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification.
Unless band gap channels are permanently disabled, they must be considered for SAR testing.
To maintain SAR measurement accuracy and to facilitate test reduction, the channels in U-NII-2C band above 5.65 GHz may be grouped with the 5.8 GHz channels in U-NII-3 or §15.247 band to enable two SAR probe calibration frequency points to cover the bands, including the band gap channels.11 When band gap channels are supported and the bands are not aggregated for SAR testing, band gap channels must be considered independently in each band according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

6.1.4.3 OFDM transmission mode and SAR test channel selection

For the 2.4GHz and 5GHz bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations (for example 802.11a, 802.11n and 802.11ac, or 802.11g and 802.11n, with the same channel bandwidth, modulation, and data rate, etc.), the lower order 802.11 mode (i.e.802.11a then 802.11n and 802.11ac, or 802.11g then 802.11n) is used for SAR measurement. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

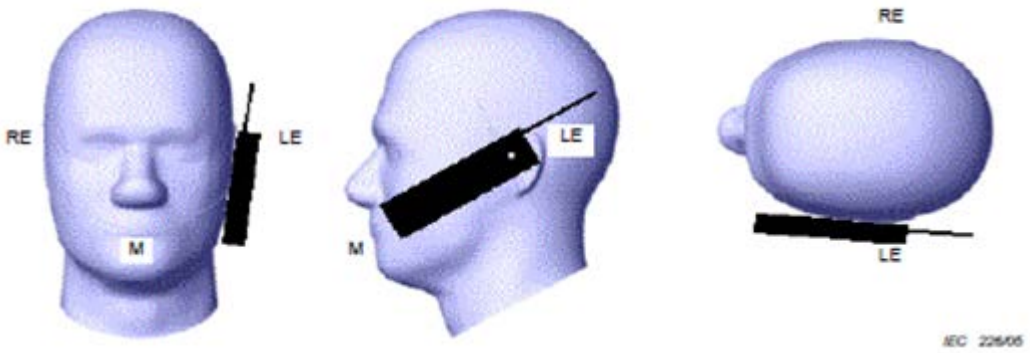
6.1.4.4 Initial test configuration procedure

For OFDM, in both 2.4GHz and 5GHz bands, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, and lowest data rate. If the average RF output powers of the highest identical transmission modes are within 0.25 dB of each other, mid channel of the transmission mode with highest average RF output powers is the initial test channel. Otherwise, the channel of the transmission mode with the highest average RF output power will be the initial test configuration.
When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurement.

6.2 TEST POSITION

6.2.1 HEAD TEST CONFIGURATION

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

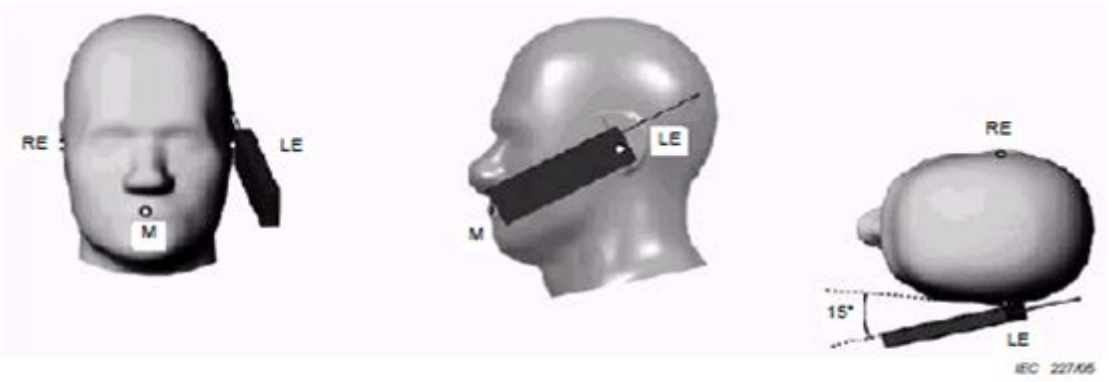


Key

M	Mouth reference point
LE	Left ear reference point (ERP)
RE	Right ear reference point (ERP)

Figure 1 Cheek position of the wireless device on the left side of SAM

Note1: Cheek position of the wireless device on Right side of SAM also is similar to the left side represented above.



Key

M	Mouth reference point
LE	Left ear reference point (ERP)
RE	Right ear reference point (ERP)

Figure 2 Tilt position of the wireless device on the left side of SAM

Note2: Tilt position of the wireless device on Right side of SAM also is similar to the left side represented above.

6.2.2 BODY-WORN TEST CONFIGURATION

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. The distance between the device and the phantom was kept 15mm.

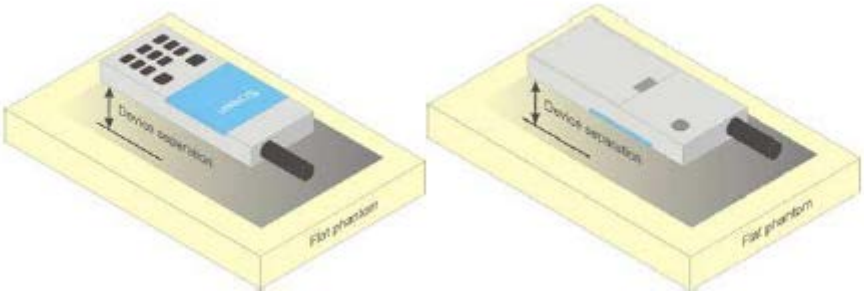


Figure 3 Test positions for body-worn device

6.2.3 HOTSPOT TEST CONFIGURATION

Per FCC KDB 941225D06, 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 > 9cm×5cm, a test separation distance of 10mm is required for hotspot mode SAR measurements. A test separation distance of 5mm 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 25mm 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.

6.2.4 PRODUCT SPECIFIC 10-G SAR TEST CONFIGURATION

Per KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0cm or an overall diagonal dimension > 16.0cm 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-tablets procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25mm 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 > 1.2W/kg; 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.

The location of the antenna inside EUT and the test position judgment of Hotspot/Specific 10g SAR, please refer to Appendix E.

6.3 GENERAL DESCRIPTION OF TEST PROCEDURES

Connection to the EUT is established via air interface with Agilent 8960 & R&S CMW500 & Anritsu MT8820C, and the EUT is set to maximum output power by Agilent 8960 & R&S CMW500 & Anritsu MT8820C. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. The antenna connected to the output of the base station simulator shall be placed at least 50cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30dB.

6.4 RECEIVER DETECTION MECHANISM

6.4.1 GENERAL DESCRIPTION OF RECEIVER DETECTION MECHANISM OF 2G&3G&4G

The device supports the receiver detection mechanism. The main purpose is to minimize triggering associated with power reduction scenarios by receiver detection mechanisms and provide enhanced user experience.
This device uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G antenna accordingly.

Table: Summery of Receiver detection mechanism

Antenna	Receiver on (Head)	Receiver off (Body-worn & Hotspot & Specific 10g SAR)
2G&3G&4G second ant	Power Level A1	Power Level B1
2G&3G&4G main ant	Power Level A2	Power Level B2

Main Antenna (Unit: dBm)												
Power scenario	GSM 850	GSM 1900	UMTS B2	UMTS B4	UMTS B5	LTE B2	LTE B4	LTE B5	LTE B7	LTE B38	LTE B41	LTE B66
Receiver on (Head)	33	30.5	23.5	23.5	23.5	23.5	23	23	23.5	23	23.5	23
Receiver off (Body-worn & Hotspot & Specific 10g SAR)	33	30.5	20.5	23.5	23.5	21.5	23	23	21.5	23	23.5	23

Second Antenna (Unit: dBm)												
Power scenario	GSM 850	GSM 1900	UMTS B2	UMTS B4	UMTS B5	LTE B2	LTE B4	LTE B5	LTE B7	LTE B38	LTE B41	LTE B66
Receiver on (Head)	31.5	26	18	17	23.5	18	16.5	23	15	19.5	19	17
Receiver off (Body-worn & Hotspot & Specific 10g SAR)	32.5	29.5	21.5	21	23.5	23	23	23	17.5	23	22.5	23

6.4.2 GENERAL DESCRIPTION OF RECEIVER DETECTION MECHANISM OF WIFI

Users will be in full power when using WiFi alone. When WiFi+2G/3G/4G are used simultaneously, WiFi power reduction will be triggered, i.e. WiFi will be in power level B3 state.

Antenna	WiFi Power Reduction	
	WiFi only	WiFi Antenna Simultaneous with 2G&3G&4G
WiFi ant	Power Level A3	Power Level B3

Power scenario	2.4G (Unit: dBm)			5G (Unit: dBm) (5150MHz~5250MHz)				5G (Unit: dBm) (5750MHz~5850MHz)			
	802.11 b	802.11 g	802.11 n20	802.11 a	802.11 n20/ac20	802.11 n40/ac40	802.11 ac80	802.11 a	802.11 n20/ac20	802.11 n40/ac40	802.11 ac80
Full power (WiFi only)	17.5	18	18	15.5	15.5	15.5	11	16	16	16	15.5
WiFi Antenna Simultaneous with 2G&3G&4G	17.5	18	18	14	14	14	11	14	14	14	13.5

Power scenario	2.4G (Unit: dBm)		5G (Unit: dBm) (5260MHz~5350MHz)				5G (Unit: dBm) (5500MHz~5700MHz)			
	BT	BLE	802.11 a	802.11 n20/ac20	802.11 n40/ac40	802.11 ac80	802.11 a	802.11 n20/ac20	802.11 n40/ac40	802.11 ac80
Full power (WiFi only)	11	8.5	15.5	15.5	15.5	11	16	16	15.5	15.5
WiFi Antenna Simultaneous with 2G&3G&4G	11	8.5	15.5	15.5	15.5	11	16	16	15.5	15.5

6.4.3 MORE DETAILS INFORMATION FOLLOWINGS

For head SAR test,
1) Standalone Head SAR of 2G&3G&4G second ant is evaluated at power level A1;
2) Standalone Head SAR of 2G&3G&4G Main ant is evaluated at power level A2;
3) Standalone Head SAR of WiFi only is evaluated at power level A3;
4) Standalone Head SAR of WiFi Antenna Simultaneous with 2G&3G&4G is evaluated at power level B3;
Note: As the receiver only works in voice mode when the user is making a call in head scenario, In LTE Data/ WCDMA RMC (Data) mode, the mobile phone won't ring and answer, it just can be connected with the test instrument. Therefore, for Head SAR test of UMTS and LTE, we're planning to test LTE Data/ WCDMA RMC (Data) mode through triggering the receiver on by XML test scripts in order to simulate the users' scene (LTE VOIP, WCDMA VOIP).

For body-worn & hotspot & specific 10g SAR test,
1) Standalone body-worn & hotspot & specific 10g SAR of 2G&3G&4G second ant is evaluated at power level B1;
2) Standalone body-worn & hotspot & specific 10g SAR of 2G&3G&4G Main ant is evaluated at power level B2;
3) Standalone body-worn & hotspot & specific 10g SAR of WiFi only is evaluated at power level A3;
4) Standalone body-worn & hotspot & specific 10g SAR of WiFi Antenna Simultaneous with 2G&3G&4G is evaluated at power level B3;
Note: As the receiver will not work during body-worn voice mode operation with the headset connected. When the receiver is off, the power level with headset connected is the same as those without headset connected. So body-worn & hotspot SAR with headset is tested at the body-worn & hotspot & specific 10g SAR worst case without headset connected at the same power level.

7. TEST RESULT

7.1 CONDUCTED POWER RESULTS

7.1.1 CONDUCTED POWER MEASUREMENTS OF GSM

1. Main antenna

GSM850		Max Burst Average Power (dBm)				Max Frame Average Power (dBm)			
		Max. Tune-up	Channel/Frequency(MHz)			Max. Tune-up	Channel/Frequency(MHz)		
			128/ 824.2	190/ 836.6	251/ 848.8		128/ 824.2	190/ 836.6	251/ 848.8
GSM (CS)		33.00	32.86	**32.95**	32.90	23.81	23.67	**23.76**	23.71
GPRS/EDGE (GMSK)	1 Tx Slot	33.00	32.87	32.94	32.89	23.81	23.68	23.75	23.70
	2 Tx Slot	31.00	30.54	30.66	30.62	24.87	24.41	24.53	24.49
	3 Tx Slot	29.50	28.98	29.10	29.05	25.08	24.56	24.68	24.63
	4 Tx Slot	28.50	27.97	**28.11**	28.03	25.32	24.79	**24.93**	24.85
EDGE (8PSK)	1 Tx Slot	28.00	27.57	27.79	27.74	18.81	18.38	18.60	18.55
	2 Tx Slot	26.00	25.50	25.43	25.66	19.87	19.37	19.30	19.53
	3 Tx Slot	25.00	24.36	24.37	24.71	20.58	19.94	19.95	20.29
	4 Tx Slot	24.00	23.66	23.80	23.95	20.82	20.48	20.62	20.77
GSM1900		Max Burst Average Power (dBm)				Max Frame Average Power (dBm)			
		Max. Tune-up	Channel/Frequency(MHz)			Max. Tune-up	Channel/Frequency(MHz)		
			512/ 1850.2	661/ 1880	810/ 1909.8		512/ 1850.2	661/ 1880	810/ 1909.8
GSM (CS)		30.50	29.70	**29.88**	30.07	21.31	20.51	**20.69**	20.88
GPRS/EDGE (GMSK)	1 Tx Slot	30.50	29.71	29.89	30.09	21.31	20.52	20.70	20.90
	2 Tx Slot	28.00	27.17	27.35	27.62	21.87	21.04	21.22	21.49
	3 Tx Slot	26.50	25.59	25.79	26.05	22.08	21.17	21.37	21.63
	4 Tx Slot	25.50	24.55	**24.76**	25.01	22.32	21.37	**21.58**	21.83
EDGE (8PSK)	1 Tx Slot	27.00	26.39	26.35	26.68	17.81	17.20	17.16	17.49
	2 Tx Slot	25.00	24.54	24.48	24.77	18.87	18.41	18.35	18.64
	3 Tx Slot	24.00	23.72	23.55	23.78	19.58	19.30	19.13	19.36
	4 Tx Slot	23.00	22.82	22.77	22.99	19.82	19.64	19.59	19.81

2. Second antenna_Receiver on

GSM850		Max Burst Average Power (dBm)				Max Frame Average Power (dBm)			
		Max. Tune-up	Channel/Frequency(MHz)			Max. Tune-up	Channel/Frequency(MHz)		
			128/ 824.2	190/ 836.6	251/ 848.8		128/ 824.2	190/ 836.6	251/ 848.8
GSM (CS)		31.50	31.36	**31.38**	31.31	22.31	22.17	**22.19**	22.12
GPRS/EDGE (GMSK)	1 Tx Slot	31.50	31.36	31.38	31.31	22.31	22.17	22.19	22.12
	2 Tx Slot	29.00	28.68	28.71	28.55	22.87	22.55	22.58	22.42
	3 Tx Slot	27.00	26.91	26.94	26.83	22.58	22.49	22.52	22.41
	4 Tx Slot	26.00	25.67	25.71	25.59	22.82	22.49	22.53	22.41
EDGE (8PSK)	1 Tx Slot	26.00	25.61	25.83	25.86	16.81	16.42	16.64	16.67
	2 Tx Slot	23.00	22.46	22.63	22.71	16.87	16.33	16.50	16.58
	3 Tx Slot	21.00	20.67	20.73	20.92	16.58	16.25	16.31	16.50
	4 Tx Slot	19.50	19.07	19.27	19.26	16.32	15.89	16.09	16.08
GSM1900		Max Burst Average Power (dBm)				Max Frame Average Power (dBm)			
		Max. Tune-up	Channel/Frequency(MHz)			Max. Tune-up	Channel/Frequency(MHz)		
			512/ 1850.2	661/ 1880	810/ 1909.8		512/ 1850.2	661/ 1880	810/ 1909.8
GSM (CS)		26.00	25.70	**25.68**	25.84	16.81	16.51	**16.49**	16.65
GPRS/EDGE (GMSK)	1 Tx Slot	26.00	25.70	25.68	25.84	16.81	16.51	16.49	16.65
	2 Tx Slot	23.00	22.69	22.66	22.83	16.87	16.56	16.53	16.70
	3 Tx Slot	21.50	20.95	20.93	21.14	17.08	16.53	16.51	16.72
	4 Tx Slot	20.00	19.71	19.67	19.88	16.82	16.53	16.49	16.70
EDGE (8PSK)	1 Tx Slot	22.50	22.14	22.05	22.08	13.31	12.95	12.86	12.89
	2 Tx Slot	19.00	18.95	18.74	18.83	12.87	12.82	12.61	12.70
	3 Tx Slot	17.50	17.12	17.07	17.11	13.08	12.70	12.65	12.69
	4 Tx Slot	16.50	15.96	15.78	15.82	13.32	12.78	12.60	12.64

3. Second antenna_Receiver off

GSM850		Max Burst Average Power (dBm)				Max Frame Average Power (dBm)			
		Max. Tune-up	Channel/Frequency(MHz)			Max. Tune-up	Channel/Frequency(MHz)		
			128/ 824.2	190/ 836.6	251/ 848.8		128/ 824.2	190/ 836.6	251/ 848.8
GSM (CS)		32.50	32.41	**32.42**	32.32	23.31	23.22	**23.23**	23.13
GPRS/EDGE (GMSK)	1 Tx Slot	32.50	32.41	32.42	32.32	23.31	23.22	23.23	23.13
	2 Tx Slot	30.50	30.09	30.11	30.08	24.37	23.96	23.98	23.95
	3 Tx Slot	29.00	28.68	28.71	28.56	24.58	24.26	24.29	24.14
	4 Tx Slot	28.00	27.66	**27.68**	27.61	24.82	24.48	**24.50**	24.43
EDGE (8PSK)	1 Tx Slot	28.00	27.24	27.27	27.37	18.81	18.05	18.08	18.18
	2 Tx Slot	25.50	24.83	25.08	25.14	19.37	18.70	18.95	19.01
	3 Tx Slot	24.50	23.73	24.04	23.97	20.08	19.31	19.62	19.55
	4 Tx Slot	23.50	23.05	23.26	23.36	20.32	19.87	20.08	20.18
GSM1900		Max Burst Average Power (dBm)				Max Frame Average Power (dBm)			
		Max. Tune-up	Channel/Frequency(MHz)			Max. Tune-up	Channel/Frequency(MHz)		
			512/ 1850.2	661/ 1880	810/ 1909.8		512/ 1850.2	661/ 1880	810/ 1909.8
GSM (CS)		29.50	29.38	**29.35**	29.39	20.31	20.19	**20.16**	20.20
GPRS/EDGE (GMSK)	1 Tx Slot	29.50	29.38	29.35	29.39	20.31	20.19	20.16	20.20
	2 Tx Slot	27.50	27.06	27.09	27.23	21.37	20.93	20.96	21.10
	3 Tx Slot	26.00	25.55	25.51	25.68	21.58	21.13	21.09	21.26
	4 Tx Slot	25.00	**24.53**	**24.52**	**24.66**	21.82	**21.35**	**21.34**	**21.48**
EDGE (8PSK)	1 Tx Slot	27.00	26.53	26.36	25.84	17.81	17.34	17.17	16.65
	2 Tx Slot	25.00	24.47	24.46	24.38	18.87	18.34	18.33	18.25
	3 Tx Slot	23.50	23.23	23.15	23.03	19.08	18.81	18.73	18.61
	4 Tx Slot	22.50	22.38	22.34	22.29	19.32	19.20	19.16	19.11

Note:
1) The conducted power of GSM 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 time slots.
3) The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:
Frame-averaged power=10 x log (Burst-averaged power mW x Slot used/8)
4) The tested channels are marks in bold.
5) The receiver on/off power of 2G main antenna is the same.

7.1.2 CONDUCTED POWER MEASUREMENTS OF UMTS

1. Main antenna_Receiver on

Band	UMTS B2 Average Conducted Power(dBm)				UMTS B4 Average Conducted Power(dBm)			
Tx Channel	Max.	9262	9400	9538	Max.	1312	1413	1513
Frequency(MHz)	Tune-up	1852.4	1880	1907.6	Tune-up	1712.4	1732.6	1752.6
AMR Voice	23.50	23.10	23.14	23.20	23.50	23.07	23.06	23.02
RMC 12.2K	23.50	23.10	**23.14**	23.20	23.50	**23.07**	**23.06**	**23.02**
RMC 64K	23.50	23.11	23.16	23.21	23.50	23.11	23.07	23.05
RMC 144K	23.50	23.13	23.18	23.23	23.50	23.09	23.02	23.06
RMC 384K	23.50	23.12	23.17	23.22	23.50	23.10	23.04	23.03
HSDPA Subtest-1	23.00	22.69	22.76	22.82	23.00	22.61	22.58	22.62
HSDPA Subtest-2	23.00	22.65	22.70	22.77	23.00	22.65	22.57	22.57
HSDPA Subtest-3	22.50	22.17	22.23	22.27	22.50	22.13	22.10	22.11
HSDPA Subtest-4	22.50	22.18	22.25	22.29	22.50	22.13	22.09	22.09
HSUPA Subtest-1	21.50	21.25	21.27	21.28	21.50	21.15	21.12	21.13
HSUPA Subtest-2	21.50	21.24	21.26	21.29	21.50	21.14	21.11	21.12
HSUPA Subtest-3	22.50	22.20	22.24	22.29	22.50	22.12	22.07	22.08
HSUPA Subtest-4	21.00	20.79	20.81	20.85	21.00	20.67	20.63	20.64
HSUPA Subtest-5	22.50	22.16	22.21	22.24	22.50	22.08	22.03	22.05
DC-HSDPA Subtest-1	23.00	22.69	22.76	22.82	23.00	22.61	22.58	22.62
DC-HSDPA Subtest-2	23.00	22.65	22.70	22.77	23.00	22.65	22.57	22.57
DC-HSDPA Subtest-3	22.50	22.17	22.23	22.27	22.50	22.13	22.10	22.11
DC-HSDPA Subtest-4	22.50	22.18	22.25	22.29	22.50	22.13	22.09	22.09

Band	UMTS B5 Average Conducted Power(dBm)			
Tx Channel	Max.	4132	4182	4233
Frequency(MHz)	Tune-up	826.4	836.4	846.6
AMR Voice	23.50	22.91	22.93	22.95
RMC 12.2K	23.50	22.91	**22.93**	22.95
RMC 64K	23.50	22.94	22.97	23.00
RMC 144K	23.50	22.92	22.95	22.97
RMC 384K	23.50	22.93	22.96	22.94
HSDPA Subtest-1	23.00	22.42	22.44	22.49
HSDPA Subtest-2	23.00	22.38	22.46	22.45
HSDPA Subtest-3	22.50	21.90	21.94	21.97
HSDPA Subtest-4	22.50	21.89	21.96	21.95
HSUPA Subtest-1	21.50	20.90	20.94	20.99
HSUPA Subtest-2	21.50	20.91	20.95	21.01
HSUPA Subtest-3	22.50	21.89	21.94	21.96
HSUPA Subtest-4	21.00	20.45	20.45	20.49
HSUPA Subtest-5	22.50	21.84	21.89	21.92
DC-HSDPA Subtest-1	23.00	22.42	22.44	22.49
DC-HSDPA Subtest-2	23.00	22.38	22.46	22.45
DC-HSDPA Subtest-3	22.50	21.90	21.94	21.97
DC-HSDPA Subtest-4	22.50	21.89	21.96	21.95

2. Main antenna_Receiver off

Band	UMTS B2 Average Conducted Power(dBm)			
Tx Channel	Max.	9262	9400	9538
Frequency(MHz)	Tune-up	1852.4	1880	1907.6
AMR Voice	20.50	20.22	20.28	20.33
RMC 12.2K	20.50	**20.22**	**20.28**	**20.33**
RMC 64K	20.50	20.20	20.27	20.29
RMC 144K	20.50	20.26	20.33	20.36
RMC 384K	20.50	20.22	20.25	20.27
HSDPA Subtest-1	20.50	20.23	20.27	20.31
HSDPA Subtest-2	20.50	20.16	20.19	20.24
HSDPA Subtest-3	20.00	19.68	19.71	19.76
HSDPA Subtest-4	20.00	19.67	19.69	19.77
HSUPA Subtest-1	18.50	18.25	18.32	18.29
HSUPA Subtest-2	18.50	18.19	18.27	18.33
HSUPA Subtest-3	19.50	19.21	19.24	19.27
HSUPA Subtest-4	18.00	17.77	17.84	17.82
HSUPA Subtest-5	19.50	19.25	19.29	19.27
DC-HSDPA Subtest-1	20.50	20.23	20.27	20.31
DC-HSDPA Subtest-2	20.50	20.16	20.19	20.24
DC-HSDPA Subtest-3	20.00	19.68	19.71	19.76
DC-HSDPA Subtest-4	20.00	19.67	19.69	19.77

3. Second antenna_Receiver on

Band	UMTS B2 Average Conducted Power(dBm)				UMTS B4 Average Conducted Power(dBm)			
Tx Channel	Max.	9262	9400	9538	Max.	1312	1413	1513
Frequency(MHz)	Tune-up	1852.4	1880	1907.6	Tune-up	1712.4	1732.6	1752.6
AMR Voice	18.00	17.82	17.76	17.77	17.00	16.55	16.52	16.49
RMC 12.2K	18.00	17.82	**17.76**	17.77	17.00	**16.55**	**16.52**	**16.49**
RMC 64K	18.00	17.84	17.78	17.82	17.00	16.59	16.61	16.54
RMC 144K	18.00	17.83	17.75	17.87	17.00	16.63	16.59	16.58
RMC 384K	18.00	17.81	17.73	17.79	17.00	16.64	16.62	16.55
HSDPA Subtest-1	18.00	17.78	17.83	17.77	17.00	16.58	16.55	16.51
HSDPA Subtest-2	18.00	17.72	17.77	17.75	17.00	16.52	16.49	16.46
HSDPA Subtest-3	17.50	17.28	17.32	17.28	16.50	16.08	16.03	16.02
HSDPA Subtest-4	17.50	17.22	17.25	17.27	16.50	16.06	16.01	15.99
HSUPA Subtest-1	16.50	15.73	16.21	15.74	15.50	14.53	15.08	14.62
HSUPA Subtest-2	16.00	15.72	15.82	15.67	15.00	14.65	14.69	14.64
HSUPA Subtest-3	16.50	16.14	16.22	16.17	16.00	15.66	15.68	15.56
HSUPA Subtest-4	15.50	15.33	15.37	15.28	14.50	14.11	14.18	14.09
HSUPA Subtest-5	17.00	16.76	16.82	16.73	16.00	15.64	15.62	15.57
DC-HSDPA Subtest-1	18.00	17.78	17.83	17.77	17.00	16.58	16.55	16.51
DC-HSDPA Subtest-2	18.00	17.72	17.77	17.75	17.00	16.52	16.49	16.46
DC-HSDPA Subtest-3	17.50	17.28	17.32	17.28	16.50	16.08	16.03	16.02
DC-HSDPA Subtest-4	17.50	17.22	17.25	17.27	16.50	16.06	16.01	15.99

Band	UMTS B5 Average Conducted Power(dBm)			
Tx Channel	Max.	4132	4182	4233
Frequency(MHz)	Tune-up	826.4	836.4	846.6
AMR Voice	23.50	22.94	23.01	23.03
RMC 12.2K	23.50	**22.94**	**23.01**	**23.03**
RMC 64K	23.50	23.04	22.97	23.06
RMC 144K	23.50	22.97	23.03	23.11
RMC 384K	23.50	22.97	23.01	23.08
HSDPA Subtest-1	23.00	22.52	22.53	22.56
HSDPA Subtest-2	23.00	22.42	22.49	22.56
HSDPA Subtest-3	22.50	21.96	22.01	21.98
HSDPA Subtest-4	22.50	21.92	21.95	21.97
HSUPA Subtest-1	21.50	20.84	20.86	20.89
HSUPA Subtest-2	21.50	20.97	21.01	20.97
HSUPA Subtest-3	22.50	21.56	21.54	21.59
HSUPA Subtest-4	21.00	20.49	20.51	20.49
HSUPA Subtest-5	22.50	21.92	21.94	22.03
DC-HSDPA Subtest-1	23.00	22.52	22.53	22.56
DC-HSDPA Subtest-2	23.00	22.42	22.49	22.56
DC-HSDPA Subtest-3	22.50	21.96	22.01	21.98
DC-HSDPA Subtest-4	22.50	21.92	21.95	21.97

4. Second antenna_Receiver off

Band	UMTS B2 Average Conducted Power(dBm)				UMTS B4 Average Conducted Power(dBm)			
Tx Channel	Max.	9262	9400	9538	Max.	1312	1413	1513
Frequency(MHz)	Tune-up	1852.4	1880	1907.6	Tune-up	1712.4	1732.6	1752.6
AMR Voice	21.50	21.19	21.28	21.33	21.00	20.59	20.57	20.61
RMC 12.2K	21.50	21.19	**21.28**	21.33	21.00	20.59	**20.57**	20.61
RMC 64K	21.50	21.25	21.26	21.36	21.00	20.62	20.59	20.64
RMC 144K	21.50	21.33	21.27	21.34	21.00	20.56	20.62	20.65
RMC 384K	21.50	21.25	21.28	21.32	21.00	20.52	20.55	20.59
HSDPA Subtest-1	21.50	21.29	21.33	21.38	21.00	20.65	20.62	20.58
HSDPA Subtest-2	21.50	21.22	21.28	21.36	21.00	20.58	20.56	20.53
HSDPA Subtest-3	21.00	20.74	20.77	20.88	20.50	20.08	20.12	20.06
HSDPA Subtest-4	21.00	20.69	20.74	20.85	20.50	20.03	20.06	20.01
HSUPA Subtest-1	19.50	19.26	19.28	19.29	19.50	19.06	19.11	19.08
HSUPA Subtest-2	19.50	19.25	19.32	19.34	19.00	18.63	18.67	18.62
HSUPA Subtest-3	20.50	20.18	20.25	20.32	20.00	19.58	19.57	19.61
HSUPA Subtest-4	19.00	18.74	18.82	18.85	18.50	18.13	18.16	18.10
HSUPA Subtest-5	20.50	20.22	20.28	20.35	20.00	19.56	19.64	19.68
DC-HSDPA Subtest-1	21.50	21.29	21.33	21.38	21.00	20.65	20.62	20.58
DC-HSDPA Subtest-2	21.50	21.22	21.28	21.36	21.00	20.58	20.56	20.53
DC-HSDPA Subtest-3	21.00	20.74	20.77	20.88	20.50	20.08	20.12	20.06
DC-HSDPA Subtest-4	21.00	20.69	20.74	20.85	20.50	20.03	20.06	20.01

Note:
1) The conducted power of UMTS is measured with RMS detector.
2) Note: Per KDB941225 D01, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ 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.
3) The tested channels are marks in bold.
4) The power of single channel and double channel is smaller than RMC12.2K, so SAR need not be tested.
5) The receiver on/off power of 3G main antenna B4&B5 are the same.
The receiver on/off power of 3G second antenna B5 is the same.

7.1.3 CONDUCTED POWER MEASUREMENTS OF LTE

1. Conducted power measurement results of LTE B2

1) Main antenna_Receiver on

LTE B2/BW=1.4M		Average Conducted Power(dBm)				LTE B2/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18607/ 1850.7	18900/ 1880	19193/ 1909.3				18615/ 1851.5	18900/ 1880	19185/ 1908.5
QPSK	1/0	23.50	21.89	21.99	21.98	QPSK	1/0	23.50	21.89	21.97	21.97
	1/2	23.50	22.00	22.11	22.11		1/7	23.50	22.04	22.12	22.08
	1/5	23.50	21.90	21.96	21.98		1/14	23.50	21.91	21.95	21.92
	3/0	23.50	22.96	22.97	23.05		8/0	22.50	21.96	21.98	21.98
	3/1	23.50	23.03	23.02	**23.08**		8/3	22.50	21.96	22.00	22.00
	3/3	23.50	23.03	22.98	23.05		8/7	22.50	21.91	21.94	21.95
	6/0	22.50	22.03	22.05	22.04		15/0	22.50	21.95	21.91	21.96
16QAM	1/0	22.50	20.94	21.00	21.30	16QAM	1/0	22.50	20.88	21.26	21.04
	1/2	22.50	21.04	21.11	21.43		1/7	22.50	21.01	21.41	21.14
	1/5	22.50	20.98	20.99	21.34		1/14	22.50	20.88	21.25	20.98
	3/0	22.50	22.12	21.91	22.17		8/0	21.50	21.09	20.99	21.02
	3/1	22.50	22.18	21.98	22.19		8/3	21.50	21.09	21.01	21.06
	3/3	22.50	22.14	21.93	22.19		8/7	21.50	21.03	20.96	20.99
	6/0	21.50	21.18	21.10	20.94		15/0	21.50	20.97	20.91	20.93
64QAM	1/0	21.50	20.30	20.05	20.11	64QAM	1/0	21.50	20.24	20.05	20.19
	1/2	21.50	20.48	20.20	20.24		1/7	21.50	20.35	20.20	20.32
	1/5	21.50	20.31	20.03	20.14		1/14	21.50	20.18	20.08	20.12
	3/0	21.50	21.24	21.02	20.94		8/0	20.50	20.02	19.99	19.96
	3/1	21.50	21.32	21.07	20.98		8/3	20.50	20.05	20.04	19.98
	3/3	21.50	21.27	21.03	20.96		8/7	20.50	19.97	20.00	19.93
	6/0	20.50	20.01	20.28	20.09		15/0	20.50	19.92	19.93	19.99

LTE B2/BW=5M		Average Conducted Power(dBm)				LTE B2/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18625/ 1852.5	18900/ 1880	19175/ 1907.5				18650/ 1855	18900/ 1880	19150/ 1905
QPSK	1/0	23.50	21.95	21.89	21.94	QPSK	1/0	23.50	21.92	22.01	21.99
	1/12	23.50	22.06	21.98	22.06		1/24	23.50	22.06	22.14	22.10
	1/24	23.50	21.92	21.90	21.91		1/49	23.50	21.89	22.01	21.92
	12/0	22.50	21.97	21.92	21.97		25/0	22.50	22.06	21.97	22.01
	12/6	22.50	21.99	21.98	22.02		25/12	22.50	22.04	22.02	22.05
	12/13	22.50	21.94	21.95	21.98		25/25	22.50	22.00	22.02	22.01
	25/0	22.50	21.95	21.91	21.94		50/0	22.50	22.06	21.97	22.03
16QAM	1/0	22.50	21.01	21.32	21.00	16QAM	1/0	22.50	20.89	21.31	21.06
	1/12	22.50	21.18	21.42	21.10		1/24	22.50	21.06	21.40	21.18
	1/24	22.50	21.03	21.33	20.97		1/49	22.50	20.95	21.30	20.96
	12/0	21.50	21.02	20.97	21.02		25/0	21.50	21.10	20.95	21.10
	12/6	21.50	21.05	21.05	21.02		25/12	21.50	21.07	21.00	21.17
	12/13	21.50	21.01	21.01	20.99		25/25	21.50	21.04	21.03	21.09
	25/0	21.50	20.99	20.92	20.90		50/0	21.50	21.08	20.96	21.09
64QAM	1/0	21.50	19.78	20.16	20.15	64QAM	1/0	21.50	20.25	20.08	20.25
	1/12	21.50	19.93	20.27	20.23		1/24	21.50	20.42	20.22	20.36
	1/24	21.50	19.76	20.14	20.12		1/49	21.50	20.28	20.08	20.13
	12/0	20.50	19.98	19.84	19.99		25/0	20.50	20.10	20.00	20.15
	12/6	20.50	20.04	19.94	20.05		25/12	20.50	20.11	20.09	20.16
	12/13	20.50	19.98	19.87	19.99		25/25	20.50	20.10	20.03	20.07
	25/0	20.50	19.92	19.89	20.00		50/0	20.50	20.11	20.02	20.08

LTE B2/BW=15M		Average Conducted Power(dBm)				LTE B2/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18675/ 1857.5	18900/ 1880	19125/ 1902.5				18700/ 1860	18900/ 1880	19100/ 1900
QPSK	1/0	23.50	21.82	21.90	21.94	QPSK	1/0	23.50	21.70	21.68	21.70
	1/37	23.50	21.92	21.98	22.07		1/50	23.50	22.20	**22.21**	22.15
	1/74	23.50	21.82	21.83	21.87		1/99	23.50	21.65	21.66	21.66
	36/0	22.50	22.03	22.00	22.03		50/0	22.50	22.08	21.89	**22.15**
	36/19	22.50	21.97	22.04	22.02		50/25	22.50	22.01	21.98	22.07
	36/39	22.50	21.99	21.99	22.02		50/50	22.50	22.07	21.92	22.04
	75/0	22.50	22.00	22.00	22.05		100/0	22.50	22.08	21.90	22.02
16QAM	1/0	22.50	20.80	21.22	21.45	16QAM	1/0	22.50	21.17	21.22	21.20
	1/37	22.50	20.98	21.26	21.47		1/50	22.50	21.64	21.57	21.69
	1/74	22.50	20.84	21.13	21.26		1/99	22.50	21.20	21.18	21.10
	36/0	21.50	21.01	20.95	20.97		50/0	21.50	21.16	20.88	21.16
	36/19	21.50	20.97	20.99	20.98		50/25	21.50	21.07	20.98	21.11
	36/39	21.50	20.93	20.91	20.94		50/50	21.50	21.14	20.90	21.11
	75/0	21.50	21.02	20.94	21.06		100/0	21.50	21.13	20.91	21.14
64QAM	1/0	21.50	20.15	20.03	20.57	64QAM	1/0	21.50	20.04	20.34	19.95
	1/37	21.50	20.29	20.07	20.64		1/50	21.50	20.48	20.67	20.42
	1/74	21.50	20.14	19.91	20.41		1/99	21.50	20.02	20.28	19.88
	36/0	20.50	20.02	19.99	20.03		50/0	20.50	20.21	19.93	20.23
	36/19	20.50	20.04	20.05	20.04		50/25	20.50	20.12	19.99	20.14
	36/39	20.50	20.01	20.01	19.99		50/50	20.50	20.17	19.87	20.15
	75/0	20.50	20.04	19.97	20.10		100/0	20.50	20.16	19.85	20.17

2) Main antenna_Receiver off

LTE B2/BW=1.4M		Average Conducted Power(dBm)				LTE B2/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18607/ 1850.7	18900/ 1880	19193/ 1909.3				18615/ 1851.5	18900/ 1880	19185/ 1908.5
QPSK	1/0	21.50	20.21	20.28	20.28	QPSK	1/0	21.50	20.26	20.33	20.24
	1/2	21.50	20.35	20.37	20.37		1/7	21.50	20.43	20.46	20.36
	1/5	21.50	20.26	20.26	20.26		1/14	21.50	20.32	20.32	20.23
	3/0	21.50	21.31	21.29	21.30		8/0	21.50	21.28	21.28	21.29
	3/1	21.50	21.35	21.33	21.35		8/3	21.50	21.30	21.31	21.28
	3/3	21.50	21.35	21.29	21.29		8/7	21.50	21.25	21.27	21.26
	6/0	21.50	21.34	21.33	21.33		15/0	21.50	21.27	21.25	21.26
16QAM	1/0	21.50	20.65	20.27	20.35	16QAM	1/0	21.50	20.29	20.65	20.26
	1/2	21.50	20.75	20.35	20.43		1/7	21.50	20.39	20.79	20.44
	1/5	21.50	20.65	20.29	20.35		1/14	21.50	20.25	20.66	20.27
	3/0	21.50	21.30	21.30	21.20		8/0	21.50	20.90	20.86	20.83
	3/1	21.50	21.33	21.36	21.24		8/3	21.50	20.92	20.88	20.85
	3/3	21.50	21.38	21.31	21.20		8/7	21.50	20.87	20.83	20.81
	6/0	21.50	20.76	20.96	20.92		15/0	21.50	20.79	20.76	20.72
64QAM	1/0	21.50	19.91	20.12	19.89	64QAM	1/0	21.50	20.10	19.89	19.98
	1/2	21.50	19.99	20.26	20.02		1/7	21.50	20.27	20.02	20.13
	1/5	21.50	19.97	20.15	19.89		1/14	21.50	20.11	19.92	19.93
	3/0	21.50	20.72	21.02	20.88		8/0	21.50	19.89	19.84	19.76
	3/1	21.50	20.80	21.06	20.94		8/3	21.50	19.93	19.88	19.79
	3/3	21.50	20.76	21.03	20.91		8/7	21.50	19.87	19.83	19.73
	6/0	21.50	19.91	19.80	20.10		15/0	21.50	19.80	19.80	19.81

LTE B2/BW=5M		Average Conducted Power(dBm)				LTE B2/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18625/ 1852.5	18900/ 1880	19175/ 1907.5				18650/ 1855	18900/ 1880	19150/ 1905
QPSK	1/0	21.50	20.29	20.26	20.25	QPSK	1/0	21.50	20.25	20.24	20.22
	1/12	21.50	20.42	20.31	20.34		1/24	21.50	20.46	20.44	20.41
	1/24	21.50	20.30	20.23	20.27		1/49	21.50	20.26	20.28	20.29
	12/0	21.50	21.29	21.23	21.32		25/0	21.50	21.31	21.24	21.32
	12/6	21.50	21.32	21.31	21.37		25/12	21.50	21.32	21.33	21.37
	12/13	21.50	21.26	21.28	21.31		25/25	21.50	21.32	21.25	21.34
	25/0	21.50	21.23	21.22	21.27		50/0	21.50	21.31	21.21	21.33
16QAM	1/0	21.50	20.35	20.41	20.73	16QAM	1/0	21.50	20.25	20.63	20.38
	1/12	21.50	20.45	20.49	20.84		1/24	21.50	20.45	20.83	20.49
	1/24	21.50	20.48	20.40	20.72		1/49	21.50	20.31	20.64	20.29
	12/0	21.50	20.80	20.77	20.89		25/0	21.50	20.94	20.78	20.93
	12/6	21.50	20.90	20.83	20.93		25/12	21.50	20.90	20.84	20.97
	12/13	21.50	20.83	20.80	20.92		25/25	21.50	20.89	20.76	20.91
	25/0	21.50	20.82	20.73	20.84		50/0	21.50	20.89	20.74	20.88
64QAM	1/0	21.50	19.69	20.00	19.96	64QAM	1/0	21.50	20.10	19.89	20.03
	1/12	21.50	19.80	20.11	20.04		1/24	21.50	20.28	20.07	20.13
	1/24	21.50	19.73	20.00	20.04		1/49	21.50	20.10	19.90	20.00
	12/0	21.50	19.82	19.67	19.78		25/0	21.50	19.91	19.83	19.89
	12/6	21.50	19.88	19.75	19.87		25/12	21.50	19.92	19.90	19.94
	12/13	21.50	19.85	19.71	19.82		25/25	21.50	19.85	19.82	19.85
	25/0	21.50	19.76	19.71	19.76		50/0	21.50	19.86	19.77	19.79

LTE B2/BW=15M		Average Conducted Power(dBm)				LTE B2/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18675/ 1857.5	18900/ 1880	19125/ 1902.5				18700/ 1860	18900/ 1880	19100/ 1900
QPSK	1/0	21.50	20.24	20.28	20.22	QPSK	1/0	21.50	20.10	20.08	20.04
	1/37	21.50	20.31	20.39	20.33		1/50	21.50	**20.53**	**20.70**	**20.44**
	1/74	21.50	20.25	20.26	20.20		1/99	21.50	20.10	20.05	20.02
	36/0	21.50	21.40	20.26	21.35		50/0	21.50	**21.42**	**21.29**	**21.43**
	36/19	21.50	21.37	21.37	21.35		50/25	21.50	21.36	21.27	21.38
	36/39	21.50	21.36	21.30	21.38		50/50	21.50	21.40	21.19	21.38
	75/0	21.50	21.41	21.33	21.36		100/0	21.50	21.40	21.20	**21.42**
16QAM	1/0	21.50	20.21	20.60	20.72	16QAM	1/0	21.50	20.53	20.65	20.56
	1/37	21.50	20.35	20.70	20.82		1/50	21.50	20.95	20.88	21.01
	1/74	21.50	20.25	20.54	20.65		1/99	21.50	20.53	20.57	20.53
	36/0	21.50	20.90	20.54	20.83		50/0	21.50	20.90	20.75	20.96
	36/19	21.50	20.88	20.85	20.84		50/25	21.50	20.86	20.80	20.91
	36/39	21.50	20.86	20.78	20.81		50/50	21.50	20.88	20.65	20.93
	75/0	21.50	20.91	20.81	20.83		100/0	21.50	20.90	20.71	20.95
64QAM	1/0	21.50	20.08	19.86	20.35	64QAM	1/0	21.50	19.77	19.93	20.18
	1/37	21.50	20.19	19.97	20.43		1/50	21.50	20.20	19.90	20.67
	1/74	21.50	20.16	19.80	20.36		1/99	21.50	19.76	19.87	20.16
	36/0	21.50	19.92	19.80	19.84		50/0	21.50	20.01	19.81	19.99
	36/19	21.50	19.94	19.87	19.88		50/25	21.50	19.91	19.84	19.93
	36/39	21.50	19.86	19.83	19.82		50/50	21.50	19.90	19.72	19.93
	75/0	21.50	19.92	19.81	19.91		100/0	21.50	19.95	19.76	19.96

3) Second antenna_Receiver on

LTE B2/BW=1.4M		Average Conducted Power(dBm)				LTE B2/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18607/ 1850.7	18900/ 1880	19193/ 1909.3				18615/ 1851.5	18900/ 1880	19185/ 1908.5
QPSK	1/0	18.00	17.43	17.30	17.39	QPSK	1/0	18.00	17.36	17.45	17.36
	1/2	18.00	17.53	17.41	17.46		1/7	18.00	17.51	17.58	17.50
	1/5	18.00	17.43	17.33	17.35		1/14	18.00	17.42	17.43	17.34
	3/0	18.00	17.42	17.42	17.39		8/0	18.00	17.41	17.37	17.38
	3/1	18.00	17.49	17.47	17.44		8/3	18.00	17.44	17.42	17.41
	3/3	18.00	17.42	17.46	17.39		8/7	18.00	17.39	17.39	17.37
	6/0	18.00	17.47	17.43	17.44		15/0	18.00	17.40	17.36	17.35
16QAM	1/0	18.00	17.37	17.44	17.65	16QAM	1/0	18.00	17.32	17.69	17.34
	1/2	18.00	17.42	17.53	17.74		1/7	18.00	17.44	17.73	17.49
	1/5	18.00	17.36	17.44	17.65		1/14	18.00	17.31	17.69	17.31
	3/0	18.00	17.53	17.39	17.50		8/0	18.00	17.47	17.43	17.34
	3/1	18.00	17.58	17.41	17.53		8/3	18.00	17.49	17.46	17.37
	3/3	18.00	17.53	17.38	17.51		8/7	18.00	17.46	17.40	17.33
	6/0	18.00	17.57	17.53	17.28		15/0	18.00	17.37	17.33	17.25
64QAM	1/0	18.00	17.41	17.44	17.60	64QAM	1/0	18.00	17.62	17.40	17.47
	1/2	18.00	17.53	17.52	17.76		1/7	18.00	17.76	17.55	17.61
	1/5	18.00	17.38	17.45	17.59		1/14	18.00	17.64	17.45	17.41
	3/0	18.00	17.42	17.25	17.55		8/0	18.00	17.39	17.35	17.24
	3/1	18.00	17.48	17.29	17.57		8/3	18.00	17.41	17.38	17.25
	3/3	18.00	17.44	17.26	17.53		8/7	18.00	17.38	17.36	17.22
	6/0	18.00	17.64	17.41	17.28		15/0	18.00	17.30	17.31	17.27

LTE B2/BW=5M		Average Conducted Power(dBm)				LTE B2/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18625/ 1852.5	18900/ 1880	19175/ 1907.5				18650/ 1855	18900/ 1880	19150/ 1905
QPSK	1/0	18.00	17.40	17.33	17.34	QPSK	1/0	18.00	17.37	17.42	17.37
	1/12	18.00	17.47	17.41	17.44		1/24	18.00	17.53	17.62	17.51
	1/24	18.00	17.40	17.32	17.34		1/49	18.00	17.39	17.43	17.33
	12/0	18.00	17.39	17.32	17.31		25/0	18.00	17.46	17.33	17.35
	12/6	18.00	17.41	17.41	17.41		25/12	18.00	17.44	17.46	17.42
	12/13	18.00	17.38	17.39	17.36		25/25	18.00	17.35	17.37	17.38
	25/0	18.00	17.34	17.33	17.33		50/0	18.00	17.39	17.34	17.36
16QAM	1/0	18.00	17.47	17.67	17.39	16QAM	1/0	18.00	17.30	17.69	17.39
	1/12	18.00	17.58	17.76	17.49		1/24	18.00	17.49	17.72	17.52
	1/24	18.00	17.50	17.74	17.38		1/49	18.00	17.34	17.66	17.29
	12/0	18.00	17.39	17.38	17.30		25/0	18.00	17.44	17.32	17.43
	12/6	18.00	17.43	17.47	17.37		25/12	18.00	17.41	17.42	17.49
	12/13	18.00	17.41	17.43	17.35		25/25	18.00	17.35	17.32	17.44
	25/0	18.00	17.33	17.36	17.24		50/0	18.00	17.35	17.31	17.37
64QAM	1/0	18.00	17.19	17.54	17.44	64QAM	1/0	18.00	17.60	17.42	17.55
	1/12	18.00	17.30	17.61	17.55		1/24	18.00	17.72	17.60	17.66
	1/24	18.00	17.25	17.52	17.44		1/49	18.00	17.64	17.42	17.45
	12/0	18.00	17.31	17.18	17.25		25/0	18.00	17.43	17.34	17.36
	12/6	18.00	17.36	17.27	17.34		25/12	18.00	17.42	17.44	17.44
	12/13	18.00	17.33	17.25	17.31		25/25	18.00	17.35	17.38	17.39
	25/0	18.00	17.26	17.23	17.25		50/0	18.00	17.35	17.32	17.33

LTE B2/BW=15M		Average Conducted Power(dBm)				LTE B2/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18675/ 1857.5	18900/ 1880	19125/ 1902.5				18700/ 1860	18900/ 1880	19100/ 1900
QPSK	1/0	18.00	17.34	17.35	17.38	QPSK	1/0	18.00	17.38	17.36	17.32
	1/37	18.00	17.41	17.47	17.45		1/50	18.00	17.68	17.59	**17.79**
	1/74	18.00	17.30	17.36	17.31		1/99	18.00	17.36	17.32	17.28
	36/0	18.00	17.51	17.36	17.45		50/0	18.00	17.52	17.32	**17.55**
	36/19	18.00	17.48	17.43	17.43		50/25	18.00	17.43	17.37	17.39
	36/39	18.00	17.41	17.40	17.43		50/50	18.00	17.39	17.28	17.45
	75/0	18.00	17.43	17.38	17.42		100/0	18.00	17.47	17.32	17.49
16QAM	1/0	18.00	17.23	17.62	17.76	16QAM	1/0	18.00	17.56	17.65	17.48
	1/37	18.00	17.35	17.71	17.72		1/50	18.00	17.64	17.42	17.75
	1/74	18.00	17.28	17.56	17.69		1/99	18.00	17.63	17.57	17.43
	36/0	18.00	17.43	17.56	17.33		50/0	18.00	17.53	17.30	17.50
	36/19	18.00	17.40	17.39	17.35		50/25	18.00	17.45	17.34	17.39
	36/39	18.00	17.36	17.33	17.33		50/50	18.00	17.42	17.23	17.40
	75/0	18.00	17.42	17.34	17.37		100/0	18.00	17.47	17.26	17.52
64QAM	1/0	18.00	17.58	17.40	17.65	64QAM	1/0	18.00	17.26	17.41	17.67
	1/37	18.00	17.70	17.45	17.76		1/50	18.00	17.69	17.37	17.35
	1/74	18.00	17.58	17.32	17.78		1/99	18.00	17.32	17.36	17.63
	36/0	18.00	17.45	17.32	17.38		50/0	18.00	17.49	17.29	17.51
	36/19	18.00	17.43	17.40	17.36		50/25	18.00	17.39	17.33	17.42
	36/39	18.00	17.39	17.34	17.38		50/50	18.00	17.37	17.24	17.41
	75/0	18.00	17.40	17.35	17.42		100/0	18.00	17.44	17.26	17.46

4) Second antenna_Receiver off

LTE B2/BW=1.4M		Average Conducted Power(dBm)				LTE B2/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18607/ 1850.7	18900/ 1880	19193/ 1909.3				18615/ 1851.5	18900/ 1880	19185/ 1908.5
QPSK	1/0	23.00	21.66	21.73	21.77	QPSK	1/0	23.00	21.72	21.77	21.74
	1/2	23.00	21.78	21.81	21.90		1/7	23.00	21.85	21.90	21.85
	1/5	23.00	21.68	21.71	21.76		1/14	23.00	21.74	21.77	21.73
	3/0	23.00	22.75	22.73	22.78		8/0	22.00	21.76	21.73	21.76
	3/1	23.00	22.82	22.74	22.82		8/3	22.00	21.78	21.77	21.79
	3/3	23.00	**22.84**	22.73	22.78		8/7	22.00	21.72	21.73	21.74
	6/0	22.00	21.80	21.78	21.80		15/0	22.00	21.74	21.70	21.73
16QAM	1/0	22.00	20.73	20.78	21.06	16QAM	1/0	22.00	20.67	21.06	20.79
	1/2	22.00	20.78	20.90	21.17		1/7	22.00	20.78	21.20	20.92
	1/5	22.00	20.73	20.80	21.07		1/14	22.00	20.64	21.05	20.75
	3/0	22.00	21.88	21.71	21.91		8/0	21.00	20.83	20.81	20.80
	3/1	22.00	21.94	21.75	21.94		8/3	21.00	20.83	20.81	20.82
	3/3	22.00	21.91	21.71	21.91		8/7	21.00	20.80	20.75	20.76
	6/0	21.00	20.93	20.87	20.70		15/0	21.00	20.73	20.71	20.70
64QAM	1/0	21.00	19.87	19.90	20.15	64QAM	1/0	21.00	20.05	19.86	19.98
	1/2	21.00	20.00	20.00	20.27		1/7	21.00	20.20	19.97	20.09
	1/5	21.00	19.87	19.88	20.11		1/14	21.00	20.07	19.90	19.89
	3/0	21.00	20.86	20.66	20.94		8/0	20.00	19.83	19.78	19.74
	3/1	21.00	20.90	20.71	20.98		8/3	20.00	19.85	19.84	19.76
	3/3	21.00	20.89	20.68	20.92		8/7	20.00	19.79	19.79	19.71
	6/0	20.00	19.95	19.90	19.79		15/0	20.00	19.73	19.75	19.79

LTE B2/BW=5M		Average Conducted Power(dBm)				LTE B2/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18625/ 1852.5	18900/ 1880	19175/ 1907.5				18650/ 1855	18900/ 1880	19150/ 1905
QPSK	1/0	23.00	21.76	21.70	21.74	QPSK	1/0	23.00	21.75	21.69	21.77
	1/12	23.00	21.82	21.74	21.83		1/24	23.00	21.90	21.92	21.87
	1/24	23.00	21.75	21.67	21.73		1/49	23.00	21.71	21.75	21.71
	12/0	22.00	21.75	21.66	21.74		25/0	22.00	21.86	21.66	21.78
	12/6	22.00	21.79	21.74	21.81		25/12	22.00	21.82	21.77	21.83
	12/13	22.00	21.70	21.74	21.80		25/25	22.00	21.78	21.69	21.81
	25/0	22.00	21.72	21.66	21.73		50/0	22.00	21.83	21.66	21.84
16QAM	1/0	22.00	20.88	21.14	20.81	16QAM	1/0	22.00	20.71	21.06	20.84
	1/12	22.00	20.93	21.20	20.90		1/24	22.00	20.89	21.21	20.93
	1/24	22.00	20.88	21.10	20.79		1/49	22.00	20.74	21.02	20.74
	12/0	21.00	20.74	20.77	20.75		25/0	21.00	20.89	20.68	20.89
	12/6	21.00	20.84	20.84	20.83		25/12	21.00	20.83	20.78	20.93
	12/13	21.00	20.77	20.81	20.79		25/25	21.00	20.80	20.69	20.90
	25/0	21.00	20.68	20.73	20.70		50/0	21.00	20.83	20.66	20.86
64QAM	1/0	21.00	19.67	20.01	19.93	64QAM	1/0	21.00	20.06	19.87	20.02
	1/12	21.00	19.75	20.06	20.02		1/24	21.00	20.26	20.05	20.11
	1/24	21.00	19.66	19.96	19.93		1/49	21.00	20.02	19.87	19.96
	12/0	20.00	19.78	19.63	19.73		25/0	20.00	19.90	19.79	19.88
	12/6	20.00	19.84	19.70	19.83		25/12	20.00	19.90	19.88	19.93
	12/13	20.00	19.78	19.69	19.80		25/25	20.00	19.80	19.79	19.85
	25/0	20.00	19.71	19.67	19.73		50/0	20.00	19.84	19.76	19.78

LTE B2/BW=15M		Average Conducted Power(dBm)				LTE B2/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			18675/ 1857.5	18900/ 1880	19125/ 1902.5				18700/ 1860	18900/ 1880	19100/ 1900
QPSK	1/0	23.00	21.69	21.70	21.70	QPSK	1/0	23.00	21.57	21.49	21.47
	1/37	23.00	21.79	21.79	21.81		1/50	23.00	**21.93**	**21.79**	**21.88**
	1/74	23.00	21.62	21.62	21.72		1/99	23.00	21.51	21.48	21.47
	36/0	22.00	21.87	21.62	21.83		50/0	22.00	21.89	21.77	**21.90**
	36/19	22.00	21.84	21.79	21.83		50/25	22.00	21.82	21.72	21.85
	36/39	22.00	21.82	21.76	21.85		50/50	22.00	21.79	21.59	21.83
	75/0	22.00	21.85	21.75	21.87		100/0	22.00	21.86	21.64	**21.89**
16QAM	1/0	22.00	20.58	21.06	21.18	16QAM	1/0	22.00	21.01	21.03	21.00
	1/37	22.00	20.73	21.11	21.32		1/50	22.00	21.45	20.86	21.48
	1/74	22.00	20.64	20.96	21.07		1/99	22.00	21.00	20.91	20.99
	36/0	21.00	20.81	20.96	20.80		50/0	21.00	20.93	20.68	20.95
	36/19	21.00	20.79	20.78	20.79		50/25	21.00	20.86	20.72	20.93
	36/39	21.00	20.77	20.72	20.81		50/50	21.00	20.86	20.60	20.89
	75/0	21.00	20.83	20.74	20.84		100/0	21.00	20.90	20.64	20.95
64QAM	1/0	21.00	20.00	19.83	20.34	64QAM	1/0	21.00	19.85	20.17	19.75
	1/37	21.00	20.12	19.90	20.41		1/50	21.00	20.27	19.87	20.21
	1/74	21.00	19.99	19.74	20.26		1/99	21.00	19.88	20.14	19.72
	36/0	20.00	19.89	19.74	19.87		50/0	20.00	20.00	19.74	19.99
	36/19	20.00	19.86	19.83	19.86		50/25	20.00	19.89	19.78	19.91
	36/39	20.00	19.85	19.79	19.80		50/50	20.00	19.87	19.67	19.93
	75/0	20.00	19.84	19.77	19.91		100/0	20.00	19.92	19.69	19.98

Note: The tested channels are marks in bold.

2. Conducted power measurement results of LTE B4

1) Main antenna

LTE B4/BW=1.4M		Average Conducted Power(dBm)				LTE B4/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			19957/ 1710.7	20175/ 1732.5	20393/ 1754.3				19965/ 1711.5	20175/ 1732.5	20385/ 1753.5
QPSK	1/0	23.00	21.69	21.74	21.60	QPSK	1/0	23.00	21.78	21.86	21.71
	1/2	23.00	21.80	21.85	21.75		1/7	23.00	21.85	21.93	21.73
	1/5	23.00	21.72	21.75	21.63		1/14	23.00	21.77	21.83	21.63
	3/0	23.00	22.79	22.83	22.77		8/0	22.00	21.77	21.75	21.64
	3/1	23.00	22.85	**22.87**	22.82		8/3	22.00	21.79	21.79	21.66
	3/3	23.00	22.85	22.84	22.76		8/7	22.00	21.74	21.74	21.63
	6/0	22.00	21.81	21.75	21.65		15/0	22.00	21.76	21.76	21.67
16QAM	1/0	22.00	21.14	20.81	20.78	16QAM	1/0	22.00	20.74	21.24	20.81
	1/2	22.00	21.21	20.92	20.89		1/7	22.00	20.84	21.32	20.86
	1/5	22.00	21.11	20.80	20.80		1/14	22.00	20.72	21.22	20.73
	3/0	22.00	21.99	21.98	21.81		8/0	21.00	20.86	20.88	20.71
	3/1	22.00	21.94	21.90	21.84		8/3	21.00	20.90	20.94	20.76
	3/3	22.00	21.91	21.95	21.81		8/7	21.00	20.85	20.86	20.70
	6/0	21.00	20.71	20.91	20.83		15/0	21.00	20.79	20.82	20.68
64QAM	1/0	21.00	20.15	19.92	19.84	64QAM	1/0	21.00	20.10	19.95	19.97
	1/2	21.00	20.33	20.06	19.95		1/7	21.00	20.23	20.08	20.04
	1/5	21.00	20.18	19.91	19.88		1/14	21.00	20.10	19.97	19.86
	3/0	21.00	20.98	20.94	20.69		8/0	20.00	19.85	19.84	19.66
	3/1	21.00	20.92	20.99	20.73		8/3	20.00	19.88	19.88	19.68
	3/3	21.00	20.95	20.95	20.71		8/7	20.00	19.82	19.82	19.63
	6/0	20.00	19.81	19.92	19.79		15/0	20.00	19.76	19.81	19.75

LTE B4/BW=5M		Average Conducted Power(dBm)				LTE B4/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			19975/ 1712.5	20175/ 1732.5	20375/ 1752.5				20000/ 1715	20175/ 1732.5	20350/ 1750
QPSK	1/0	23.00	21.79	21.79	21.67	QPSK	1/0	23.00	21.78	21.81	21.67
	1/12	23.00	21.85	21.81	21.71		1/24	23.00	21.84	21.97	21.76
	1/24	23.00	21.75	21.76	21.70		1/49	23.00	21.75	21.79	21.60
	12/0	22.00	21.78	21.80	21.69		25/0	22.00	21.84	21.86	21.73
	12/6	22.00	21.81	21.85	21.74		25/12	22.00	21.79	21.87	21.74
	12/13	22.00	21.80	21.83	21.74		25/25	22.00	21.79	21.92	21.76
	25/0	22.00	21.80	21.81	21.70		50/0	22.00	21.81	21.91	21.78
16QAM	1/0	22.00	20.94	21.29	20.80	16QAM	1/0	22.00	20.75	21.23	20.80
	1/12	22.00	21.00	21.34	20.82		1/24	22.00	20.85	21.35	20.89
	1/24	22.00	20.90	21.25	20.76		1/49	22.00	20.75	21.17	20.71
	12/0	21.00	20.82	20.97	20.78		25/0	21.00	20.86	20.93	20.89
	12/6	21.00	20.88	20.99	20.81		25/12	21.00	20.81	20.92	20.88
	12/13	21.00	20.89	20.98	20.84		25/25	21.00	20.82	20.95	20.92
	25/0	21.00	20.80	20.92	20.71		50/0	21.00	20.79	20.92	20.87
64QAM	1/0	21.00	19.72	20.09	19.91	64QAM	1/0	21.00	20.13	19.98	19.96
	1/12	21.00	19.79	20.17	19.99		1/24	21.00	20.22	20.12	20.01
	1/24	21.00	19.65	20.08	19.86		1/49	21.00	20.12	19.97	19.88
	12/0	20.00	19.81	19.72	19.75		25/0	20.00	19.90	19.95	19.80
	12/6	20.00	19.84	19.78	19.83		25/12	20.00	19.88	19.95	19.85
	12/13	20.00	19.84	19.77	19.81		25/25	20.00	19.85	19.96	19.83
	25/0	20.00	19.77	19.79	19.74		50/0	20.00	19.83	19.93	19.77

LTE B4/BW=15M		Average Conducted Power(dBm)				LTE B4/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20025/ 1717.5	20175/ 1732.5	20325/ 1747.5				20050/ 1720	20175/ 1732.5	20300/ 1745
QPSK	1/0	23.00	21.70	21.77	21.66	QPSK	1/0	23.00	21.58	21.52	21.46
	1/37	23.00	21.74	21.84	21.68		1/50	23.00	**22.04**	22.01	21.88
	1/74	23.00	21.58	21.72	21.54		1/99	23.00	21.53	21.45	21.35
	36/0	22.00	21.79	21.79	21.72		50/0	22.00	21.80	21.82	21.72
	36/19	22.00	21.78	21.80	21.72		50/25	22.00	21.84	21.86	21.80
	36/39	22.00	21.78	21.86	21.76		50/50	22.00	21.76	**21.90**	21.83
	75/0	22.00	21.85	21.82	21.72		100/0	22.00	21.80	21.84	21.78
16QAM	1/0	22.00	20.68	21.17	21.25	16QAM	1/0	22.00	21.07	21.06	21.06
	1/37	22.00	20.73	21.21	21.22		1/50	22.00	21.44	21.49	21.31
	1/74	22.00	20.65	21.05	21.05		1/99	22.00	21.06	21.02	20.84
	36/0	21.00	20.74	20.82	20.67		50/0	21.00	20.83	20.88	20.78
	36/19	21.00	20.74	20.86	20.69		50/25	21.00	20.87	20.91	20.84
	36/39	21.00	20.73	20.88	20.73		50/50	21.00	20.79	20.90	20.79
	75/0	21.00	20.79	20.84	20.77		100/0	21.00	20.84	20.85	20.83
64QAM	1/0	21.00	20.02	19.93	20.43	64QAM	1/0	21.00	20.25	20.29	20.34
	1/37	21.00	20.06	19.99	20.40		1/50	21.00	20.11	20.31	20.65
	1/74	21.00	19.97	19.82	20.23		1/99	21.00	19.91	19.83	20.14
	36/0	20.00	19.79	19.89	19.77		50/0	20.00	19.78	19.90	19.89
	36/19	20.00	19.79	19.87	19.75		50/25	20.00	19.86	19.94	19.92
	36/39	20.00	19.81	19.92	19.72		50/50	20.00	19.82	19.93	19.86
	75/0	20.00	19.82	19.88	19.78		100/0	20.00	19.85	19.90	19.86

2) Second antenna_Receiver on

LTE B4/BW=1.4M		Average Conducted Power(dBm)				LTE B4/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			19957/ 1710.7	20175/ 1732.5	20393/ 1754.3				19965/ 1711.5	20175/ 1732.5	20385/ 1753.5
QPSK	1/0	16.50	16.01	15.99	15.98	QPSK	1/0	16.50	15.94	16.08	16.00
	1/2	16.50	16.14	16.13	16.11		1/7	16.50	16.12	16.23	16.12
	1/5	16.50	16.01	15.96	15.98		1/14	16.50	16.03	16.08	15.95
	3/0	16.50	16.03	16.06	16.01		8/0	16.50	15.99	16.03	16.02
	3/1	16.50	16.08	16.11	16.08		8/3	16.50	16.02	16.06	16.06
	3/3	16.50	15.96	16.10	16.03		8/7	16.50	15.97	16.01	16.01
	6/0	16.50	16.06	16.08	16.08		15/0	16.50	15.97	16.01	16.00
16QAM	1/0	16.50	15.99	16.13	16.20	16QAM	1/0	16.50	15.95	16.28	16.04
	1/2	16.50	16.09	16.26	16.23		1/7	16.50	16.08	16.17	16.16
	1/5	16.50	16.01	16.15	16.20		1/14	16.50	15.95	16.30	15.98
	3/0	16.50	16.17	16.11	16.11		8/0	16.50	16.10	16.12	16.03
	3/1	16.50	16.23	16.14	16.13		8/3	16.50	16.12	16.17	16.08
	3/3	16.50	16.18	16.09	16.11		8/7	16.50	16.07	16.10	16.03
	6/0	16.50	16.21	16.22	15.93		15/0	16.50	15.98	16.03	15.94
64QAM	1/0	16.50	16.07	16.18	16.25	64QAM	1/0	16.50	16.29	16.13	16.19
	1/2	16.50	16.26	16.32	16.22		1/7	16.50	16.32	16.20	16.22
	1/5	16.50	16.08	16.19	16.26		1/14	16.50	16.29	16.17	16.11
	3/0	16.50	16.12	16.00	16.23		8/0	16.50	16.03	16.06	15.96
	3/1	16.50	16.17	16.07	16.27		8/3	16.50	16.09	16.11	15.98
	3/3	16.50	16.12	16.06	16.22		8/7	16.50	16.02	16.07	15.93
	6/0	16.50	16.33	16.16	16.02		15/0	16.50	15.95	16.03	16.00

LTE B4/BW=5M		Average Conducted Power(dBm)				LTE B4/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			19975/ 1712.5	20175/ 1732.5	20375/ 1752.5				20000/ 1715	20175/ 1732.5	20350/ 1750
QPSK	1/0	16.50	15.98	15.95	15.94	QPSK	1/0	16.50	15.97	16.04	15.99
	1/12	16.50	16.13	16.06	16.08		1/24	16.50	16.16	16.22	16.13
	1/24	16.50	15.97	15.99	15.94		1/49	16.50	16.01	16.06	15.95
	12/0	16.50	15.99	16.01	15.98		25/0	16.50	15.98	15.97	15.96
	12/6	16.50	16.03	16.08	16.06		25/12	16.50	16.03	16.04	15.99
	12/13	16.50	16.03	16.06	16.00		25/25	16.50	15.99	16.06	15.98
	25/0	16.50	15.97	16.01	15.98		50/0	16.50	16.00	16.00	15.98
16QAM	1/0	16.50	16.09	16.33	16.03	16QAM	1/0	16.50	15.97	16.29	15.99
	1/12	16.50	16.22	16.24	16.15		1/24	16.50	16.12	16.25	16.16
	1/24	16.50	16.15	16.36	16.04		1/49	16.50	16.03	16.30	15.97
	12/0	16.50	16.03	16.11	16.01		25/0	16.50	16.04	16.05	16.05
	12/6	16.50	16.08	16.18	16.07		25/12	16.50	16.08	16.11	16.10
	12/13	16.50	16.09	16.20	16.06		25/25	16.50	16.02	16.11	16.08
	25/0	16.50	15.98	16.08	15.94		50/0	16.50	15.99	16.06	16.00
64QAM	1/0	16.50	15.81	16.25	16.13	64QAM	1/0	16.50	16.26	16.14	16.15
	1/12	16.50	16.01	16.28	16.16		1/24	16.50	16.31	16.22	16.21
	1/24	16.50	15.88	16.26	16.12		1/49	16.50	16.21	16.10	16.01
	12/0	16.50	15.97	15.93	16.02		25/0	16.50	16.05	16.07	16.04
	12/6	16.50	16.04	15.99	16.07		25/12	16.50	16.07	16.13	16.08
	12/13	16.50	16.04	16.00	16.06		25/25	16.50	16.05	16.15	16.04
	25/0	16.50	15.93	15.97	16.00		50/0	16.50	15.99	16.07	15.97

LTE B4/BW=15M		Average Conducted Power(dBm)				LTE B4/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20025/ 1717.5	20175/ 1732.5	20325/ 1747.5				20050/ 1720	20175/ 1732.5	20300/ 1745
QPSK	1/0	16.50	15.85	16.03	15.96	QPSK	1/0	16.50	15.78	15.77	15.79
	1/37	16.50	16.00	16.10	16.04		1/50	16.50	**16.38**	16.10	16.24
	1/74	16.50	15.89	15.96	15.92		1/99	16.50	15.79	15.75	15.69
	36/0	16.50	16.05	15.96	15.99		50/0	16.50	16.03	16.03	15.99
	36/19	16.50	16.05	16.06	16.07		50/25	16.50	16.06	16.06	16.00
	36/39	16.50	16.03	16.10	16.04		50/50	16.50	**16.10**	**16.12**	**16.03**
	75/0	16.50	15.98	16.03	16.01		100/0	16.50	16.03	**16.06**	15.98
16QAM	1/0	16.50	15.87	16.11	16.22	16QAM	1/0	16.50	16.25	16.32	16.26
	1/37	16.50	15.98	16.20	16.28		1/50	16.50	16.31	16.05	16.24
	1/74	16.50	15.91	16.06	16.14		1/99	16.50	16.27	16.25	16.21
	36/0	16.50	15.99	16.26	15.94		50/0	16.50	16.09	16.05	15.95
	36/19	16.50	16.01	16.08	15.99		50/25	16.50	16.08	16.05	16.03
	36/39	16.50	15.98	16.10	15.97		50/50	16.50	16.05	16.13	16.01
	75/0	16.50	15.98	16.01	15.96		100/0	16.50	16.06	16.04	16.00
64QAM	1/0	16.50	16.21	16.08	16.16	64QAM	1/0	16.50	16.06	16.34	15.99
	1/37	16.50	16.31	16.15	16.21		1/50	16.50	16.22	16.10	16.33
	1/74	16.50	16.19	16.03	16.35		1/99	16.50	16.12	16.27	15.90
	36/0	16.50	15.99	16.03	15.96		50/0	16.50	16.13	16.05	15.96
	36/19	16.50	16.03	16.09	15.99		50/25	16.50	16.11	16.06	16.01
	36/39	16.50	16.04	16.10	15.98		50/50	16.50	16.10	16.13	16.02
	75/0	16.50	15.97	16.02	16.03		100/0	16.50	16.08	16.06	16.00

3) Second antenna_Receiver off

LTE B4/BW=1.4M		Average Conducted Power(dBm)				LTE B4/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			19957/ 1710.7	20175/ 1732.5	20393/ 1754.3				19965/ 1711.5	20175/ 1732.5	20385/ 1753.5
QPSK	1/0	23.00	21.46	21.51	21.41	QPSK	1/0	23.00	21.42	21.53	21.45
	1/2	23.00	21.54	21.61	21.52		1/7	23.00	21.57	21.68	21.58
	1/5	23.00	21.42	21.50	21.39		1/14	23.00	21.47	21.53	21.38
	3/0	23.00	22.48	22.57	22.54		8/0	22.00	21.47	21.49	21.47
	3/1	23.00	22.53	**22.65**	22.60		8/3	22.00	21.48	21.54	21.50
	3/3	23.00	22.47	22.55	22.59		8/7	22.00	21.42	21.48	21.46
	6/0	22.00	21.51	21.55	21.50		15/0	22.00	21.47	21.49	21.47
16QAM	1/0	22.00	20.48	20.66	20.83	16QAM	1/0	22.00	20.39	20.91	20.57
	1/2	22.00	20.55	20.76	20.95		1/7	22.00	20.55	21.06	20.68
	1/5	22.00	20.47	20.64	20.83		1/14	22.00	20.40	20.89	20.49
	3/0	22.00	21.61	21.61	21.77		8/0	21.00	20.55	20.61	20.51
	3/1	22.00	21.67	21.65	21.79		8/3	21.00	20.57	20.66	20.56
	3/3	22.00	21.63	21.62	21.78		8/7	21.00	20.55	20.59	20.52
	6/0	21.00	20.66	20.70	20.43		15/0	21.00	20.47	20.56	20.49
64QAM	1/0	21.00	19.62	19.90	19.63	64QAM	1/0	21.00	19.76	19.65	19.77
	1/2	21.00	19.71	20.07	19.83		1/7	21.00	19.90	19.80	19.91
	1/5	21.00	19.65	19.91	19.64		1/14	21.00	19.79	19.68	19.66
	3/0	21.00	20.42	20.87	20.67		8/0	20.00	19.51	19.54	19.53
	3/1	21.00	20.47	20.93	20.73		8/3	20.00	19.56	19.62	19.54
	3/3	21.00	20.43	20.86	20.69		8/7	20.00	19.52	19.56	19.49
	6/0	20.00	19.61	19.54	19.87		15/0	20.00	19.46	19.53	19.58

LTE B4/BW=5M		Average Conducted Power(dBm)				LTE B4/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			19975/ 1712.5	20175/ 1732.5	20375/ 1752.5				20000/ 1715	20175/ 1732.5	20350/ 1750
QPSK	1/0	23.00	21.44	21.44	21.46	QPSK	1/0	23.00	21.41	21.53	21.43
	1/12	23.00	21.59	21.55	21.54		1/24	23.00	21.60	21.71	21.57
	1/24	23.00	21.47	21.45	21.40		1/49	23.00	21.42	21.56	21.42
	12/0	22.00	21.44	21.51	21.46		25/0	22.00	21.50	21.54	21.50
	12/6	22.00	21.49	21.56	21.53		25/12	22.00	21.51	21.58	21.49
	12/13	22.00	21.53	21.63	21.51		25/25	22.00	21.51	21.66	21.47
	25/0	22.00	21.47	21.52	21.48		50/0	22.00	21.54	21.59	21.48
16QAM	1/0	22.00	20.56	20.93	20.50	16QAM	1/0	22.00	20.41	20.90	20.52
	1/12	22.00	20.67	21.06	20.63		1/24	22.00	20.62	21.07	20.66
	1/24	22.00	20.57	20.96	20.54		1/49	22.00	20.45	20.91	20.44
	12/0	21.00	20.49	20.63	20.55		25/0	21.00	20.52	20.60	20.61
	12/6	21.00	20.53	20.70	20.59		25/12	21.00	20.54	20.62	20.63
	12/13	21.00	20.56	20.74	20.57		25/25	21.00	20.57	20.69	20.58
	25/0	21.00	20.46	20.61	20.46		50/0	21.00	20.52	20.64	20.55
64QAM	1/0	21.00	19.33	19.79	19.72	64QAM	1/0	21.00	19.78	19.69	19.72
	1/12	21.00	19.47	19.88	19.80		1/24	21.00	19.92	19.80	19.87
	1/24	21.00	19.40	19.78	19.72		1/49	21.00	19.83	19.68	19.64
	12/0	20.00	19.49	19.43	19.65		25/0	20.00	19.52	19.57	19.64
	12/6	20.00	19.53	19.49	19.66		25/12	20.00	19.57	19.62	19.68
	12/13	20.00	19.53	19.52	19.63		25/25	20.00	19.55	19.64	19.64
	25/0	20.00	19.45	19.48	19.59		50/0	20.00	19.55	19.57	19.58

LTE B4/BW=15M		Average Conducted Power(dBm)				LTE B4/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20025/ 1717.5	20175/ 1732.5	20325/ 1747.5				20050/ 1720	20175/ 1732.5	20300/ 1745
QPSK	1/0	23.00	21.35	21.48	21.40	QPSK	1/0	23.00	21.20	21.30	21.24
	1/37	23.00	21.42	21.57	21.50		1/50	23.00	**21.74**	**21.62**	**21.64**
	1/74	23.00	21.33	21.44	21.38		1/99	23.00	21.20	21.22	21.13
	36/0	22.00	21.51	21.44	21.49		50/0	22.00	21.51	21.53	21.47
	36/19	22.00	21.50	21.55	21.51		50/25	22.00	21.54	21.56	21.49
	36/39	22.00	21.48	21.60	21.50		50/50	22.00	**21.56**	**21.63**	**21.53**
	75/0	22.00	21.53	21.56	21.50		100/0	22.00	21.52	**21.56**	21.48
16QAM	1/0	22.00	20.31	20.81	20.94	16QAM	1/0	22.00	20.71	20.78	20.77
	1/37	22.00	20.42	20.90	20.96		1/50	22.00	21.19	20.59	21.06
	1/74	22.00	20.36	20.74	20.83		1/99	22.00	20.74	20.70	20.59
	36/0	21.00	20.48	20.74	20.49		50/0	21.00	20.55	20.56	20.54
	36/19	21.00	20.50	20.59	20.49		50/25	21.00	20.59	20.56	20.55
	36/39	21.00	20.52	20.63	20.45		50/50	21.00	20.59	20.66	20.56
	75/0	21.00	20.52	20.57	20.49		100/0	21.00	20.56	20.56	20.54
64QAM	1/0	21.00	19.68	19.66	20.09	64QAM	1/0	21.00	19.58	19.93	19.76
	1/37	21.00	19.78	19.70	20.16		1/50	21.00	20.01	19.62	20.04
	1/74	21.00	19.60	19.53	19.99		1/99	21.00	19.61	19.83	19.63
	36/0	20.00	19.53	19.53	19.51		50/0	20.00	19.58	19.58	19.66
	36/19	20.00	19.55	19.61	19.56		50/25	20.00	19.62	19.57	19.68
	36/39	20.00	19.40	19.63	19.51		50/50	20.00	19.62	19.62	19.66
	75/0	20.00	19.50	19.59	19.56		100/0	20.00	19.59	19.54	19.61

Note:
1) The tested channels are marks in bold.
2) The receiver on/off power of LTE B4 main antenna is the same.

3. Conducted power measurement results of LTE B5

1) Main antenna

LTE B5/BW=1.4M		Average Conducted Power(dBm)				LTE B5/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20407/ 824.7	20525/ 836.5	20643/ 848.3				20415/ 825.5	20525/ 836.5	20635/ 847.5
QPSK	1/0	23.00	21.78	21.81	21.79	QPSK	1/0	23.00	21.84	21.90	21.88
	1/2	23.00	21.86	21.89	21.92		1/7	23.00	21.96	22.04	21.98
	1/5	23.00	21.76	21.78	21.80		1/14	23.00	21.87	21.94	21.85
	3/0	23.00	22.87	22.89	22.88		8/0	22.00	21.85	21.83	21.86
	3/1	23.00	22.88	22.91	**22.94**		8/3	22.00	21.91	21.87	21.91
	3/3	23.00	22.83	22.90	22.88		8/7	22.00	21.85	21.84	21.82
	6/0	22.00	21.82	21.78	21.83		15/0	22.00	21.87	21.87	21.87
16QAM	1/0	22.00	20.91	21.04	21.18	16QAM	1/0	22.00	20.88	21.28	20.96
	1/2	22.00	20.96	21.10	21.29		1/7	22.00	20.98	21.47	21.08
	1/5	22.00	20.85	21.02	21.20		1/14	22.00	20.85	21.38	20.95
	3/0	22.00	21.83	21.99	21.87		8/0	21.00	20.99	20.99	20.91
	3/1	22.00	21.85	21.83	21.90		8/3	21.00	20.90	20.94	20.98
	3/3	22.00	21.80	21.74	21.88		8/7	21.00	20.96	20.90	20.90
	6/0	21.00	20.84	20.85	20.80		15/0	21.00	20.90	20.94	20.84
64QAM	1/0	21.00	19.99	20.09	20.24	64QAM	1/0	21.00	20.25	20.03	20.12
	1/2	21.00	20.13	20.15	20.41		1/7	21.00	20.36	20.25	20.25
	1/5	21.00	19.93	20.11	20.30		1/14	21.00	20.22	20.18	20.09
	3/0	21.00	20.99	20.87	20.97		8/0	20.00	19.91	19.96	19.89
	3/1	21.00	21.00	20.92	20.96		8/3	20.00	19.92	19.94	19.93
	3/3	21.00	20.96	20.90	20.99		8/7	20.00	19.94	19.91	19.86
	6/0	20.00	19.97	19.82	19.92		15/0	20.00	19.88	19.96	19.92

LTE B5/BW=5M		Average Conducted Power(dBm)				LTE B5/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20425/ 826.5	20525/ 836.5	20625/ 846.5				20450/ 829	20525/ 836.5	20600/ 844
QPSK	1/0	23.00	21.89	21.81	21.90	QPSK	1/0	23.00	21.86	21.95	21.90
	1/12	23.00	22.00	21.91	21.98		1/24	23.00	22.12	**22.15**	22.13
	1/24	23.00	21.86	21.81	21.83		1/49	23.00	21.85	21.96	21.83
	12/0	22.00	21.83	21.93	21.94		25/0	22.00	21.89	21.87	21.91
	12/6	22.00	21.91	21.96	21.96		25/12	22.00	21.95	21.78	**21.98**
	12/13	22.00	21.93	21.97	21.90		25/25	22.00	21.86	21.85	21.89
	25/0	22.00	21.88	21.98	21.88		50/0	22.00	21.90	21.90	21.91
16QAM	1/0	22.00	21.06	21.34	21.01	16QAM	1/0	22.00	20.89	21.28	20.98
	1/12	22.00	21.16	21.47	21.06		1/24	22.00	21.00	21.47	21.09
	1/24	22.00	20.98	21.39	20.97		1/49	22.00	20.82	21.35	20.91
	12/0	21.00	20.87	20.87	20.93		25/0	21.00	20.86	20.93	20.98
	12/6	21.00	20.96	20.90	20.99		25/12	21.00	20.90	20.85	20.85
	12/13	21.00	20.96	20.94	20.93		25/25	21.00	20.83	20.89	20.97
	25/0	21.00	20.86	20.83	20.82		50/0	21.00	20.83	20.91	20.91
64QAM	1/0	21.00	19.83	20.19	20.14	64QAM	1/0	21.00	20.24	20.10	20.17
	1/12	21.00	19.92	20.34	20.18		1/24	21.00	20.35	20.28	20.29
	1/24	21.00	19.76	20.24	20.10		1/49	21.00	20.21	20.14	20.12
	12/0	20.00	19.88	19.92	19.96		25/0	20.00	19.92	19.99	19.98
	12/6	20.00	19.94	19.94	19.82		25/12	20.00	19.94	19.91	19.88
	12/13	20.00	19.93	19.97	19.94		25/25	20.00	19.84	19.97	19.97
	25/0	20.00	19.85	19.96	19.89		50/0	20.00	19.87	19.95	19.90

2) Second antenna

LTE B5/BW=1.4M		Average Conducted Power(dBm)				LTE B5/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20407/ 824.7	20525/ 836.5	20643/ 848.3				20415/ 825.5	20525/ 836.5	20635/ 847.5
QPSK	1/0	23.00	21.84	21.87	21.86	QPSK	1/0	23.00	21.93	21.96	21.96
	1/2	23.00	21.97	21.98	22.03		1/7	23.00	22.05	22.11	21.97
	1/5	23.00	21.83	21.86	21.91		1/14	23.00	21.95	21.96	21.93
	3/0	23.00	22.94	22.98	22.95		8/0	22.50	21.93	21.90	21.91
	3/1	23.00	22.97	**22.99**	22.92		8/3	22.50	21.95	21.95	21.95
	3/3	23.00	22.99	22.90	22.98		8/7	22.50	21.91	21.86	21.87
	6/0	22.50	21.89	21.90	21.93		15/0	22.50	21.93	21.93	21.92
16QAM	1/0	22.50	21.25	20.97	21.00	16QAM	1/0	22.50	20.96	21.37	20.99
	1/2	22.50	21.36	21.05	21.15		1/7	22.50	21.03	21.50	21.12
	1/5	22.50	21.23	21.00	21.05		1/14	22.50	20.88	21.36	21.01
	3/0	22.50	22.19	22.13	21.98		8/0	22.00	21.03	21.06	20.95
	3/1	22.50	22.16	22.19	22.04		8/3	22.00	21.06	21.08	21.01
	3/3	22.50	22.13	22.17	22.01		8/7	22.00	21.03	21.01	20.93
	6/0	22.00	20.82	21.13	21.13		15/0	22.00	20.94	20.99	20.88
64QAM	1/0	22.00	20.33	20.06	20.08	64QAM	1/0	22.00	20.28	20.10	20.15
	1/2	22.00	20.47	20.19	20.17		1/7	22.00	20.39	20.26	20.31
	1/5	22.00	20.29	20.05	20.12		1/14	22.00	20.25	20.15	20.14
	3/0	22.00	21.23	21.10	20.84		8/0	21.50	20.00	20.01	19.91
	3/1	22.00	21.22	21.11	20.92		8/3	21.50	20.04	20.04	19.95
	3/3	22.00	21.17	21.09	20.97		8/7	21.50	20.00	20.02	19.90
	6/0	21.50	19.93	20.25	20.07		15/0	21.50	19.92	19.97	19.95

LTE B5/BW=5M		Average Conducted Power(dBm)				LTE B5/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20425/ 826.5	20525/ 836.5	20625/ 846.5				20450/ 829	20525/ 836.5	20600/ 844
QPSK	1/0	23.00	22.00	21.88	21.91	QPSK	1/0	23.00	21.99	22.02	21.93
	1/12	23.00	22.07	21.93	21.97		1/24	23.00	**22.13**	22.10	22.04
	1/24	23.00	21.98	21.87	21.94		1/49	23.00	21.92	21.96	21.94
	12/0	22.50	21.90	22.04	21.96		25/0	22.50	21.99	**22.09**	21.91
	12/6	22.50	21.98	21.99	22.02		25/12	22.50	21.98	22.03	22.05
	12/13	22.50	21.94	22.00	21.92		25/25	22.50	21.93	22.09	21.91
	25/0	22.50	21.91	22.00	21.93		50/0	22.50	21.96	22.09	21.92
16QAM	1/0	22.50	21.13	21.41	21.01	16QAM	1/0	22.50	20.92	21.33	20.95
	1/12	22.50	21.18	21.51	21.07		1/24	22.50	21.10	21.50	21.06
	1/24	22.50	21.09	21.38	21.02		1/49	22.50	20.92	21.29	20.92
	12/0	22.00	20.95	21.10	20.97		25/0	22.00	20.99	21.18	20.93
	12/6	22.00	21.01	21.14	21.01		25/12	22.00	20.97	21.07	21.04
	12/13	22.00	20.96	21.14	20.97		25/25	22.00	20.91	21.17	20.91
	25/0	22.00	20.89	21.09	20.85		50/0	22.00	20.93	21.12	20.91
64QAM	1/0	22.00	20.06	20.23	20.16	64QAM	1/0	22.00	20.11	20.19	20.27
	1/12	22.00	20.10	20.37	20.21		1/24	22.00	20.26	20.33	20.42
	1/24	22.00	20.05	20.21	20.17		1/49	22.00	20.10	20.14	20.24
	12/0	21.50	19.90	19.90	19.99		25/0	21.50	20.01	20.16	19.94
	12/6	21.50	19.95	19.94	20.03		25/12	21.50	20.00	20.09	20.07
	12/13	21.50	19.91	19.94	19.96		25/25	21.50	19.91	20.15	19.93
	25/0	21.50	19.83	19.94	19.90		50/0	21.50	19.93	20.07	19.91

Note:
1) The tested channels are marks in bold.
2) The receiver on/off power of LTE B5 main antenna and second antenna are the same.

4. Conducted power measurement results of LTE B7

1) Main antenna_Receiver on

LTE B7/BW=5M		Average Conducted Power(dBm)				LTE B7/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20775/ 2502.5	21100/ 2535	21425/ 2567.5				20800/ 2505	21100/ 2535	21400/ 2565
QPSK	1/0	23.50	22.91	23.04	22.99	QPSK	1/0	23.50	22.96	23.09	23.03
	1/12	23.50	22.99	23.09	23.04		1/24	23.50	23.09	23.23	23.19
	1/24	23.50	22.91	23.02	22.97		1/49	23.50	22.96	23.05	23.00
	12/0	22.50	21.92	21.97	22.03		25/0	22.50	21.99	22.03	22.08
	12/6	22.50	22.00	22.03	22.05		25/12	22.50	22.01	22.05	22.10
	12/13	22.50	21.96	21.99	22.05		25/25	22.50	22.05	22.07	22.07
	25/0	22.50	21.93	21.99	21.99		50/0	22.50	22.01	22.05	22.05
16QAM	1/0	22.50	22.00	22.16	22.48	16QAM	1/0	22.50	21.91	22.40	22.10
	1/12	22.50	22.02	22.18	22.49		1/24	22.50	22.03	22.42	22.21
	1/24	22.50	21.98	22.12	22.40		1/49	22.50	21.89	22.35	22.00
	12/0	21.50	20.96	21.06	21.09		25/0	21.50	20.98	21.09	21.22
	12/6	21.50	21.02	21.10	21.14		25/12	21.50	21.01	21.11	21.18
	12/13	21.50	21.02	21.08	21.16		25/25	21.50	21.07	21.10	21.15
	25/0	21.50	20.92	21.04	21.06		50/0	21.50	21.00	21.12	21.12
64QAM	1/0	21.50	21.20	21.12	20.91	64QAM	1/0	21.50	21.24	21.13	21.22
	1/12	21.50	21.27	21.19	20.91		1/24	21.50	21.36	21.22	21.34
	1/24	21.50	21.18	21.13	20.86		1/49	21.50	21.20	21.11	21.14
	12/0	20.50	19.80	19.99	19.96		25/0	20.50	19.99	20.07	20.11
	12/6	20.50	19.88	20.04	20.00		25/12	20.50	20.01	20.09	20.11
	12/13	20.50	19.91	20.03	20.01		25/25	20.50	20.05	20.12	20.10
	25/0	20.50	19.88	19.97	19.94		50/0	20.50	20.01	20.09	20.03

LTE B7/BW=15M		Average Conducted Power(dBm)				LTE B7/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20825/ 2507.5	21100/ 2535	21375/ 2562.5				20850/ 2510	21100/ 2535	21350/ 2560
QPSK	1/0	23.50	22.92	22.99	23.02	QPSK	1/0	23.50	22.81	22.83	22.81
	1/37	23.50	22.98	23.05	23.12		1/50	23.50	23.28	**23.29**	23.21
	1/74	23.50	22.85	22.90	22.95		1/99	23.50	22.78	22.79	22.77
	36/0	22.50	22.02	22.05	22.09		50/0	22.50	21.93	22.02	**22.12**
	36/19	22.50	22.04	22.09	22.12		50/25	22.50	22.04	22.06	22.09
	36/39	22.50	22.03	22.07	22.09		50/50	22.50	21.98	22.02	22.10
	75/0	22.50	22.03	22.06	22.14		100/0	22.50	21.95	22.03	22.08
16QAM	1/0	22.50	21.86	22.30	22.39	16QAM	1/0	22.50	22.26	22.27	22.26
	1/37	22.50	21.93	22.34	22.45		1/50	22.50	22.48	22.42	22.48
	1/74	22.50	21.77	22.20	22.34		1/99	22.50	22.25	22.25	22.25
	36/0	21.50	20.96	21.07	21.11		50/0	21.50	20.98	21.06	21.11
	36/19	21.50	20.99	21.10	21.09		50/25	21.50	21.03	21.08	21.11
	36/39	21.50	20.98	21.09	21.05		50/50	21.50	21.01	21.07	21.12
	75/0	21.50	20.95	21.08	21.11		100/0	21.50	21.01	21.03	21.14
64QAM	1/0	21.50	21.16	21.07	21.50	64QAM	1/0	21.50	21.06	21.36	20.94
	1/37	21.50	21.21	21.10	21.45		1/50	21.50	21.40	21.43	21.36
	1/74	21.50	21.08	20.97	21.42		1/99	21.50	21.03	21.34	20.93
	36/0	20.50	20.00	20.11	20.09		50/0	20.50	19.96	20.02	20.07
	36/19	20.50	20.03	20.10	20.08		50/25	20.50	20.04	20.04	20.05
	36/39	20.50	20.05	20.09	20.08		50/50	20.50	20.00	20.04	20.03
	75/0	20.50	20.00	20.06	20.15		100/0	20.50	19.96	19.99	20.05

2) Main antenna_Receiver off

LTE B7/BW=5M		Average Conducted Power(dBm)				LTE B7/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20775/ 2502.5	21100/ 2535	21425/ 2567.5				20800/ 2505	21100/ 2535	21400/ 2565
QPSK	1/0	21.50	20.78	20.77	20.89	QPSK	1/0	21.50	20.83	20.84	20.87
	1/12	21.50	20.93	20.81	21.08		1/24	21.50	20.99	21.04	21.04
	1/24	21.50	20.69	20.78	20.93		1/49	21.50	20.85	20.85	20.88
	12/0	21.50	20.83	20.84	20.92		25/0	21.50	20.81	20.80	20.90
	12/6	21.50	20.94	20.90	20.97		25/12	21.50	20.82	20.93	20.92
	12/13	21.50	20.89	20.83	20.98		25/25	21.50	20.84	20.87	20.99
	25/0	21.50	20.84	20.81	20.92		50/0	21.50	20.83	20.87	20.93
16QAM	1/0	21.50	20.85	20.93	21.13	16QAM	1/0	21.50	20.78	21.00	20.90
	1/12	21.50	21.02	21.05	21.19		1/24	21.50	20.93	21.11	21.13
	1/24	21.50	20.84	20.92	21.15		1/49	21.50	20.76	20.95	20.90
	12/0	21.50	20.87	20.86	20.83		25/0	21.50	20.83	20.87	21.04
	12/6	21.50	20.93	20.96	20.92		25/12	21.50	20.91	20.90	21.09
	12/13	21.50	20.94	20.95	20.93		25/25	21.50	20.95	20.93	21.10
	25/0	21.50	20.80	20.86	20.82		50/0	21.50	20.87	20.92	21.00
64QAM	1/0	21.50	20.99	20.65	20.94	64QAM	1/0	21.50	21.11	20.91	20.99
	1/12	21.50	21.16	20.77	21.09		1/24	21.50	21.08	20.89	21.02
	1/24	21.50	20.98	20.66	20.94		1/49	21.50	21.07	20.93	21.05
	12/0	21.50	19.84	19.81	19.82		25/0	21.50	19.85	19.88	19.95
	12/6	21.50	19.94	19.89	19.88		25/12	21.50	19.87	19.90	19.96
	12/13	21.50	19.93	19.88	19.87		25/25	21.50	19.88	19.90	20.01
	25/0	21.50	19.84	19.78	19.85		50/0	21.50	19.84	19.89	19.91

LTE B7/BW=15M		Average Conducted Power(dBm)				LTE B7/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20825/ 2507.5	21100/ 2535	21375/ 2562.5				20850/ 2510	21100/ 2535	21350/ 2560
QPSK	1/0	21.50	20.76	20.80	20.86	QPSK	1/0	21.50	20.81	20.80	20.82
	1/37	21.50	20.86	20.93	20.95		1/50	21.50	**21.13**	**21.29**	**21.21**
	1/74	21.50	20.67	20.83	20.89		1/99	21.50	20.78	20.77	20.87
	36/0	21.50	20.89	20.90	21.00		50/0	21.50	20.93	20.97	**21.16**
	36/19	21.50	20.97	20.95	20.99		50/25	21.50	**20.99**	**21.03**	21.08
	36/39	21.50	20.92	20.92	21.04		50/50	21.50	20.95	21.01	21.12
	75/0	21.50	20.91	20.93	21.01		100/0	21.50	20.96	21.02	**21.14**
16QAM	1/0	21.50	20.75	20.93	21.03	16QAM	1/0	21.50	21.09	21.09	21.01
	1/37	21.50	20.81	21.01	21.21		1/50	21.50	21.07	21.06	21.06
	1/74	21.50	20.65	20.86	21.03		1/99	21.50	21.05	21.04	21.08
	36/0	21.50	20.83	20.88	20.93		50/0	21.50	20.81	20.81	20.89
	36/19	21.50	20.91	20.93	20.91		50/25	21.50	20.88	20.92	20.95
	36/39	21.50	20.84	20.95	20.97		50/50	21.50	20.81	20.89	20.96
	75/0	21.50	20.88	20.92	20.94		100/0	21.50	20.84	20.88	20.97
64QAM	1/0	21.50	21.08	20.88	21.12	64QAM	1/0	21.50	20.90	21.17	20.87
	1/37	21.50	21.14	20.95	21.28		1/50	21.50	21.07	21.13	21.03
	1/74	21.50	20.96	20.83	21.16		1/99	21.50	20.92	21.11	20.96
	36/0	21.50	19.88	19.89	19.95		50/0	21.50	19.80	19.79	19.93
	36/19	21.50	19.93	19.94	19.93		50/25	21.50	19.89	19.86	19.94
	36/39	21.50	19.86	20.03	19.96		50/50	21.50	19.77	19.90	19.96
	75/0	21.50	19.89	19.90	20.00		100/0	21.50	19.78	19.82	19.94

3) Second antenna_Receiver on

LTE B7/BW=5M		Average Conducted Power(dBm)				LTE B7/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20775/ 2502.5	21100/ 2535	21425/ 2567.5				20800/ 2505	21100/ 2535	21400/ 2565
QPSK	1/0	15.00	14.20	14.22	14.29	QPSK	1/0	15.00	14.15	14.26	14.31
	1/12	15.00	14.37	14.39	14.49		1/24	15.00	14.25	14.42	14.52
	1/24	15.00	14.21	14.21	14.36		1/49	15.00	14.18	14.25	14.39
	12/0	15.00	14.27	14.27	14.42		25/0	15.00	14.17	14.23	14.35
	12/6	15.00	14.31	14.31	14.49		25/12	15.00	14.24	14.31	14.40
	12/13	15.00	14.34	14.30	14.48		25/25	15.00	14.31	14.25	14.40
	25/0	15.00	14.27	14.28	14.43		50/0	15.00	14.24	14.26	14.39
16QAM	1/0	15.00	14.26	14.32	14.48	16QAM	1/0	15.00	14.17	14.57	14.32
	1/12	15.00	14.43	14.46	14.69		1/24	15.00	14.32	14.72	14.57
	1/24	15.00	14.29	14.30	14.54		1/49	15.00	14.15	14.56	14.42
	12/0	15.00	14.29	14.30	14.54		25/0	15.00	14.20	14.25	14.46
	12/6	15.00	14.35	14.35	14.60		25/12	15.00	14.30	14.28	14.48
	12/13	15.00	14.35	14.34	14.57		25/25	15.00	14.31	14.27	14.50
	25/0	15.00	14.23	14.27	14.48		50/0	15.00	14.23	14.26	14.41
64QAM	1/0	15.00	14.45	14.38	14.21	64QAM	1/0	15.00	14.46	14.30	14.47
	1/12	15.00	14.61	14.52	14.39		1/24	15.00	14.58	14.43	14.60
	1/24	15.00	14.43	14.37	14.26		1/49	15.00	14.47	14.31	14.54
	12/0	15.00	14.18	14.30	14.41		25/0	15.00	14.20	14.27	14.44
	12/6	15.00	14.24	14.33	14.47		25/12	15.00	14.28	14.30	14.46
	12/13	15.00	14.25	14.30	14.46		25/25	15.00	14.30	14.31	14.47
	25/0	15.00	14.22	14.27	14.36		50/0	15.00	14.22	14.25	14.38

LTE B7/BW=15M		Average Conducted Power(dBm)				LTE B7/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20825/ 2507.5	21100/ 2535	21375/ 2562.5				20850/ 2510	21100/ 2535	21350/ 2560
QPSK	1/0	15.00	14.11	14.21	14.28	QPSK	1/0	15.00	14.18	14.19	14.25
	1/37	15.00	14.18	14.29	14.41		1/50	15.00	14.62	14.56	**14.73**
	1/74	15.00	14.08	14.20	14.34		1/99	15.00	14.12	14.17	14.33
	36/0	15.00	14.16	14.25	14.41		50/0	15.00	14.35	14.48	**14.60**
	36/19	15.00	14.27	14.27	14.40		50/25	15.00	14.40	14.45	14.56
	36/39	15.00	14.27	14.28	14.45		50/50	15.00	14.40	14.51	14.53
	75/0	15.00	14.24	14.23	14.41		100/0	15.00	14.39	14.50	14.57
16QAM	1/0	15.00	14.10	14.52	14.44	16QAM	1/0	15.00	14.47	14.47	14.52
	1/37	15.00	14.19	14.62	14.61		1/50	15.00	14.56	14.59	14.68
	1/74	15.00	14.04	14.49	14.57		1/99	15.00	14.41	14.47	14.67
	36/0	15.00	14.16	14.29	14.32		50/0	15.00	14.17	14.30	14.41
	36/19	15.00	14.24	14.28	14.33		50/25	15.00	14.25	14.29	14.35
	36/39	15.00	14.21	14.29	14.36		50/50	15.00	14.21	14.31	14.38
	75/0	15.00	14.21	14.27	14.37		100/0	15.00	14.23	14.31	14.43
64QAM	1/0	15.00	14.47	14.26	14.46	64QAM	1/0	15.00	14.28	14.56	14.17
	1/37	15.00	14.54	14.37	14.60		1/50	15.00	14.55	14.68	14.51
	1/74	15.00	14.39	14.23	14.58		1/99	15.00	14.21	14.56	14.34
	36/0	15.00	14.19	14.29	14.34		50/0	15.00	14.16	14.27	14.38
	36/19	15.00	14.29	14.32	14.35		50/25	15.00	14.27	14.28	14.32
	36/39	15.00	14.22	14.29	14.35		50/50	15.00	14.22	14.29	14.34
	75/0	15.00	14.22	14.25	14.40		100/0	15.00	14.19	14.28	14.36

4) Second antenna_Receiver off

LTE B7/BW=5M		Average Conducted Power(dBm)				LTE B7/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20775/ 2502.5	21100/ 2535	21425/ 2567.5				20800/ 2505	21100/ 2535	21400/ 2565
QPSK	1/0	17.50	16.71	16.67	16.84	QPSK	1/0	17.50	16.71	16.75	16.78
	1/12	17.50	16.87	16.84	17.02		1/24	17.50	16.90	16.91	17.00
	1/24	17.50	16.74	16.69	16.89		1/49	17.50	16.73	16.74	16.86
	12/0	17.50	16.78	16.78	16.89		25/0	17.50	16.72	16.71	16.86
	12/6	17.50	16.89	16.78	16.94		25/12	17.50	16.82	16.74	16.90
	12/13	17.50	16.87	16.77	16.98		25/25	17.50	16.82	16.76	16.90
	25/0	17.50	16.80	16.74	16.93		50/0	17.50	16.80	16.75	16.89
16QAM	1/0	17.50	16.80	16.84	17.18	16QAM	1/0	17.50	16.74	17.08	16.82
	1/12	17.50	16.96	17.02	17.22		1/24	17.50	16.89	17.23	16.99
	1/24	17.50	16.85	16.86	17.24		1/49	17.50	16.76	17.08	16.90
	12/0	17.50	16.88	16.83	17.04		25/0	17.50	16.76	16.76	16.98
	12/6	17.50	16.92	16.88	17.10		25/12	17.50	16.87	16.80	16.99
	12/13	17.50	16.91	16.85	17.08		25/25	17.50	16.89	16.79	17.01
	25/0	17.50	16.79	16.77	17.00		50/0	17.50	16.80	16.76	16.94
64QAM	1/0	17.50	16.93	16.58	17.11	64QAM	1/0	17.50	17.10	16.81	17.00
	1/12	17.50	17.09	16.78	17.21		1/24	17.50	17.22	17.03	17.11
	1/24	17.50	16.96	16.63	17.13		1/49	17.50	17.07	16.91	17.09
	12/0	17.50	16.86	16.80	16.84		25/0	17.50	16.78	16.80	16.95
	12/6	17.50	16.94	16.83	16.93		25/12	17.50	16.89	16.85	17.00
	12/13	17.50	16.93	16.80	16.94		25/25	17.50	16.92	16.85	17.00
	25/0	17.50	16.83	16.72	16.93		50/0	17.50	16.84	16.81	16.89

LTE B7/BW=15M		Average Conducted Power(dBm)				LTE B7/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			20825/ 2507.5	21100/ 2535	21375/ 2562.5				20850/ 2510	21100/ 2535	21350/ 2560
QPSK	1/0	17.50	16.67	16.69	16.79	QPSK	1/0	17.50	16.73	16.69	16.71
	1/37	17.50	16.75	16.78	16.90		1/50	17.50	**17.27**	17.06	17.12
	1/74	17.50	16.59	16.67	16.83		1/99	17.50	16.70	16.66	16.86
	36/0	17.50	16.76	16.75	16.89		50/0	17.50	16.70	16.76	16.88
	36/19	17.50	16.82	16.76	16.91		50/25	17.50	16.79	16.73	16.86
	36/39	17.50	16.77	16.77	16.92		50/50	17.50	16.74	16.80	**16.93**
	75/0	17.50	16.75	16.73	16.87		100/0	17.50	16.73	16.79	16.91
16QAM	1/0	17.50	16.67	17.06	17.20	16QAM	1/0	17.50	17.08	16.99	16.91
	1/37	17.50	16.79	17.14	17.22		1/50	17.50	17.24	17.20	17.14
	1/74	17.50	16.56	17.03	17.23		1/99	17.50	17.00	16.98	17.10
	36/0	17.50	16.75	16.78	16.84		50/0	17.50	16.78	16.81	16.87
	36/19	17.50	16.80	16.82	16.87		50/25	17.50	16.87	16.82	16.83
	36/39	17.50	16.75	16.81	16.87		50/50	17.50	16.79	16.84	16.83
	75/0	17.50	16.79	16.78	16.87		100/0	17.50	16.81	16.84	16.91
64QAM	1/0	17.50	17.02	16.82	17.11	64QAM	1/0	17.50	16.89	17.10	16.82
	1/37	17.50	17.11	16.92	17.21		1/50	17.50	17.02	17.19	17.08
	1/74	17.50	16.90	16.79	17.18		1/99	17.50	16.82	17.09	17.01
	36/0	17.50	16.78	16.79	16.86		50/0	17.50	16.79	16.80	16.96
	36/19	17.50	16.83	16.83	16.87		50/25	17.50	16.88	16.81	16.90
	36/39	17.50	16.81	16.84	16.91		50/50	17.50	16.82	16.85	16.97
	75/0	17.50	16.79	16.79	16.88		100/0	17.50	16.80	16.79	16.93

Note: The tested channels are marks in bold.

5. Conducted power measurement results of LTE B38

1) Main antenna

LTE B38/BW=5M		Average Conducted Power(dBm)				LTE B38/BW=10M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			37775/ 2572.5	38000/ 2595	38225/ 2617.5				37800/ 2575	38000/ 2595	38200/ 2615
QPSK	1/0	23.00	22.03	21.92	22.00	QPSK	1/0	23.00	22.09	22.16	22.05
	1/12	23.00	22.12	22.05	22.18		1/24	23.00	22.29	22.42	22.34
	1/24	23.00	21.95	21.94	22.04		1/49	23.00	21.99	22.16	22.09
	12/0	22.50	22.10	21.98	22.08		25/0	22.50	22.12	22.06	22.16
	12/6	22.50	22.13	22.04	22.15		25/12	22.50	22.10	22.09	22.15
	12/13	22.50	22.12	22.08	22.14		25/25	22.50	22.09	22.08	22.12
	25/0	22.50	22.10	22.06	22.10		50/0	22.50	22.08	22.10	22.11
16QAM	1/0	22.50	21.41	21.15	21.26	16QAM	1/0	22.50	21.42	21.48	21.49
	1/12	22.50	21.51	21.29	21.41		1/24	22.50	21.62	21.76	21.77
	1/24	22.50	21.32	21.18	21.29		1/49	22.50	21.34	21.48	21.52
	12/0	22.00	21.18	21.05	21.06		25/0	22.00	21.18	21.10	21.21
	12/6	22.00	21.23	21.10	21.12		25/12	22.00	21.15	21.13	21.19
	12/13	22.00	21.24	21.15	21.15		25/25	22.00	21.14	21.14	21.18
	25/0	22.00	21.12	21.08	21.16		50/0	22.00	21.13	21.16	21.22
64QAM	1/0	22.00	20.33	20.02	20.54	64QAM	1/0	22.00	20.27	20.55	20.30
	1/12	22.00	20.43	20.14	20.64		1/24	22.00	20.48	20.83	20.58
	1/24	22.00	20.26	20.03	20.55		1/49	22.00	20.18	20.56	20.29
	12/0	21.50	20.08	20.00	20.18		25/0	21.50	20.23	20.05	20.09
	12/6	21.50	20.10	20.06	20.25		25/12	21.50	20.17	20.10	20.08
	12/13	21.50	20.12	20.11	20.24		25/25	21.50	20.17	20.11	20.09
	25/0	21.50	20.05	20.15	20.08		50/0	21.50	20.15	20.10	20.15

LTE B38/BW=15M		Average Conducted Power(dBm)				LTE B38/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			37825/ 2577.5	38000/ 2595	38175/ 2612.5				37850/ 2580	38000/ 2595	38150/ 2610
QPSK	1/0	23.00	22.00	21.94	22.13	QPSK	1/0	23.00	21.87	21.88	21.88
	1/37	23.00	22.00	22.01	22.23		1/50	23.00	22.35	22.39	**22.46**
	1/74	23.00	21.83	21.84	22.09		1/99	23.00	21.74	21.85	21.93
	36/0	22.50	22.03	22.01	22.09		50/0	22.50	22.04	22.03	22.07
	36/19	22.50	22.06	22.02	22.15		50/25	22.50	22.10	22.12	**22.16**
	36/39	22.50	22.04	22.06	22.12		50/50	22.50	22.05	22.11	22.09
	75/0	22.50	22.06	22.07	22.13		100/0	22.50	22.07	22.06	22.08
16QAM	1/0	22.50	21.33	21.44	21.33	16QAM	1/0	22.50	21.17	21.05	21.24
	1/37	22.50	21.32	21.50	21.43		1/50	22.50	21.67	21.51	21.75
	1/74	22.50	21.17	21.36	21.27		1/99	22.50	21.05	21.02	21.28
	36/0	22.00	21.05	20.99	21.10		50/0	22.00	21.06	21.07	21.15
	36/19	22.00	21.04	21.02	21.15		50/25	22.00	21.14	21.15	21.23
	36/39	22.00	21.04	21.05	21.12		50/50	22.00	21.08	21.13	21.15
	75/0	22.00	21.06	21.08	21.12		100/0	22.00	21.09	21.11	21.09
64QAM	1/0	22.00	20.18	20.48	20.10	64QAM	1/0	22.00	20.42	20.20	20.36
	1/37	22.00	20.16	20.55	20.20		1/50	22.00	20.91	20.40	20.86
	1/74	22.00	20.02	20.41	20.08		1/99	22.00	20.31	20.22	20.41
	36/0	21.50	20.11	20.05	20.04		50/0	21.50	20.13	20.07	20.16
	36/19	21.50	20.14	20.08	20.07		50/25	21.50	20.20	20.17	20.19
	36/39	21.50	20.11	20.13	20.05		50/50	21.50	20.16	20.17	20.18
	75/0	21.50	20.06	20.07	20.13		100/0	21.50	20.15	20.13	20.13

2) Second antenna_Receiver on

LTE B38/BW=5M		Average Conducted Power(dBm)				LTE B38/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			37775/ 2572.5	38000/ 2595	38225/ 2617.5				37800/ 2575	38000/ 2595	38200/ 2615
QPSK	1/0	19.50	18.43	18.42	18.57	QPSK	1/0	19.50	18.43	18.64	18.60
	1/12	19.50	18.54	18.50	18.70		1/24	19.50	18.77	18.90	18.92
	1/24	19.50	18.43	18.40	18.60		1/49	19.50	18.48	18.64	18.62
	12/0	19.50	18.55	18.52	18.66		25/0	19.50	18.60	18.60	18.69
	12/6	19.50	18.59	18.57	18.73		25/12	19.50	18.60	18.61	18.74
	12/13	19.50	18.59	18.58	18.73		25/25	19.50	18.60	18.61	18.71
	25/0	19.50	18.55	18.56	18.69		50/0	19.50	18.59	18.61	18.73
16QAM	1/0	19.50	18.88	18.74	18.89	16QAM	1/0	19.50	18.85	19.06	19.10
	1/12	19.50	19.03	18.86	19.04		1/24	19.50	19.05	19.10	19.13
	1/24	19.50	18.89	18.75	18.93		1/49	19.50	18.99	19.05	19.11
	12/0	19.50	18.66	18.60	18.68		25/0	19.50	18.65	18.64	18.79
	12/6	19.50	18.73	18.65	18.74		25/12	19.50	18.65	18.65	18.83
	12/13	19.50	18.71	18.67	18.75		25/25	19.50	18.64	18.65	18.82
	25/0	19.50	18.63	18.61	18.77		50/0	19.50	18.61	18.66	18.82
64QAM	1/0	19.50	19.04	18.84	18.72	64QAM	1/0	19.50	18.39	19.09	18.93
	1/12	19.50	19.14	18.95	18.88		1/24	19.50	18.71	19.12	19.08
	1/24	19.50	19.04	18.82	18.77		1/49	19.50	18.44	19.11	18.99
	12/0	19.50	18.67	18.54	18.71		25/0	19.50	18.67	18.60	18.69
	12/6	19.50	18.73	18.59	18.78		25/12	19.50	18.67	18.62	18.71
	12/13	19.50	18.71	18.57	18.75		25/25	19.50	18.67	18.61	18.71
	25/0	19.50	18.58	18.56	18.81		50/0	19.50	18.60	18.62	18.75

LTE B38/BW=15M		Average Conducted Power(dBm)				LTE B38/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			37825/ 2577.5	38000/ 2595	38175/ 2612.5				37850/ 2580	38000/ 2595	38150/ 2610
QPSK	1/0	19.50	18.39	18.57	18.57	QPSK	1/0	19.50	18.48	18.54	18.62
	1/37	19.50	18.49	18.68	18.69		1/50	19.50	19.01	19.02	**19.15**
	1/74	19.50	18.36	18.56	18.55		1/99	19.50	18.49	18.57	18.66
	36/0	19.50	18.55	18.54	18.65		50/0	19.50	18.59	18.59	18.67
	36/19	19.50	18.57	18.56	18.68		50/25	19.50	18.63	18.61	**18.72**
	36/39	19.50	18.56	18.54	18.64		50/50	19.50	18.59	18.63	18.71
	75/0	19.50	18.55	18.53	18.66		100/0	19.50	18.61	18.62	18.70
16QAM	1/0	19.50	18.79	19.00	19.01	16QAM	1/0	19.50	18.65	18.60	18.75
	1/37	19.50	18.91	19.12	19.07		1/50	19.50	18.97	18.89	19.07
	1/74	19.50	18.72	19.06	19.02		1/99	19.50	18.67	18.65	18.82
	36/0	19.50	18.56	18.54	18.70		50/0	19.50	18.62	18.64	18.71
	36/19	19.50	18.61	18.57	18.73		50/25	19.50	18.67	18.67	18.76
	36/39	19.50	18.60	18.56	18.73		50/50	19.50	18.63	18.70	18.76
	75/0	19.50	18.62	18.60	18.70		100/0	19.50	18.64	18.67	18.77
64QAM	1/0	19.50	18.34	19.09	18.83	64QAM	1/0	19.50	18.88	18.51	18.85
	1/37	19.50	18.43	19.07	18.87		1/50	19.50	19.11	18.99	19.08
	1/74	19.50	18.33	19.09	18.51		1/99	19.50	18.92	18.55	18.91
	36/0	19.50	18.61	18.62	18.62		50/0	19.50	18.64	18.69	18.77
	36/19	19.50	18.67	18.66	18.67		50/25	19.50	18.68	18.70	18.82
	36/39	19.50	18.64	18.65	18.65		50/50	19.50	18.66	18.71	18.80
	75/0	19.50	18.59	18.60	18.72		100/0	19.50	18.64	18.68	18.82

3) Second antenna_Receiver off

LTE B38/BW=5M		Average Conducted Power(dBm)				LTE B38/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			37775/ 2572.5	38000/ 2595	38225/ 2617.5				37800/ 2575	38000/ 2595	38200/ 2615
QPSK	1/0	23.00	22.14	22.15	22.30	QPSK	1/0	23.00	22.17	22.39	22.33
	1/12	23.00	22.22	22.25	22.41		1/24	23.00	22.47	22.57	22.59
	1/24	23.00	22.13	22.15	22.32		1/49	23.00	22.18	22.37	22.35
	12/0	22.50	22.23	22.23	22.35		25/0	22.50	22.30	22.32	22.41
	12/6	22.50	22.28	22.26	22.41		25/12	22.50	22.24	22.32	22.41
	12/13	22.50	22.26	22.28	22.41		25/25	22.50	22.28	22.32	22.41
	25/0	22.50	22.17	22.26	22.40		50/0	22.50	22.28	22.32	22.41
16QAM	1/0	22.50	21.50	21.40	21.56	16QAM	1/0	22.50	21.47	21.72	21.75
	1/12	22.50	21.61	21.51	21.69		1/24	22.50	21.77	22.00	22.03
	1/24	22.50	21.53	21.40	21.56		1/49	22.50	21.51	21.70	21.74
	12/0	22.00	21.33	21.32	21.38		25/0	22.00	21.35	21.38	21.49
	12/6	22.00	21.35	21.35	21.41		25/12	22.00	21.38	21.36	21.48
	12/13	22.00	21.38	21.37	21.44		25/25	22.00	21.34	21.37	21.49
	25/0	22.00	21.21	21.32	21.45		50/0	22.00	21.32	21.40	21.52
64QAM	1/0	22.00	20.71	20.49	20.38	64QAM	1/0	22.00	20.08	20.81	20.61
	1/12	22.00	20.79	20.61	20.50		1/24	22.00	20.36	21.10	20.89
	1/24	22.00	20.72	20.49	20.37		1/49	22.00	20.10	20.80	20.61
	12/0	21.50	20.37	20.22	20.39		25/0	21.50	20.41	20.32	20.40
	12/6	21.50	20.41	20.25	20.41		25/12	21.50	20.37	20.32	20.39
	12/13	21.50	20.41	20.29	20.42		25/25	21.50	20.39	20.33	20.39
	25/0	21.50	20.27	20.22	20.45		50/0	21.50	20.34	20.36	20.46

LTE B38/BW=15M		Average Conducted Power(dBm)				LTE B38/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			37825/ 2577.5	38000/ 2595	38175/ 2612.5				37850/ 2580	38000/ 2595	38150/ 2610
QPSK	1/0	23.00	22.11	22.31	22.31	QPSK	1/0	23.00	22.00	22.11	22.15
	1/37	23.00	22.20	22.38	22.41		1/50	23.00	**22.51**	**22.55**	**22.65**
	1/74	23.00	22.09	22.27	22.27		1/99	23.00	21.98	22.08	22.16
	36/0	22.50	22.24	22.25	22.33		50/0	22.50	22.25	22.28	22.34
	36/19	22.50	22.23	22.25	22.38		50/25	22.50	**22.30**	**22.32**	**22.39**
	36/39	22.50	22.28	22.25	22.34		50/50	22.50	22.23	22.29	22.36
	75/0	22.50	22.29	22.27	22.35		100/0	22.50	22.27	22.28	**22.33**
16QAM	1/0	22.50	21.42	21.64	21.58	16QAM	1/0	22.50	21.28	21.25	21.27
	1/37	22.50	21.51	21.74	21.69		1/50	22.50	21.80	21.69	21.78
	1/74	22.50	21.40	21.63	21.52		1/99	22.50	21.27	21.24	21.30
	36/0	22.00	21.21	21.22	21.37		50/0	22.00	21.26	21.32	21.39
	36/19	22.00	21.20	21.22	21.39		50/25	22.00	21.35	21.36	21.45
	36/39	22.00	21.25	21.22	21.38		50/50	22.00	21.26	21.34	21.39
	75/0	22.00	21.26	21.27	21.38		100/0	22.00	21.29	21.33	21.39
64QAM	1/0	22.00	20.09	20.76	20.37	64QAM	1/0	22.00	20.43	20.60	20.21
	1/37	22.00	20.11	20.82	20.48		1/50	22.00	20.96	21.09	20.73
	1/74	22.00	20.19	20.72	20.37		1/99	22.00	20.44	20.61	20.24
	36/0	21.50	20.33	20.31	20.30		50/0	21.50	20.37	20.35	20.39
	36/19	21.50	20.35	20.31	20.32		50/25	21.50	20.40	20.39	20.45
	36/39	21.50	20.34	20.33	20.34		50/50	21.50	20.37	20.39	20.45
	75/0	21.50	20.28	20.29	20.39		100/0	21.50	20.10	20.04	20.13

Note:
1) The tested channels are marks in bold.
2) The receiver on/off power of LTE B38 main antenna is the same.

6. Conducted power measurement results of LTE B41

1) Main antenna

LTE B41/BW=5M		Average Conducted Power(dBm)					LTE B41/BW=10M		Average Conducted Power(dBm)				
Modula-tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)				Modula-tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)			
			40065/ 2537.5	40440/ 2575	40840/ 2615	41215/ 2652.5				40090/ 2540	40440/ 2575	40840/ 2615	41190/ 2650
QPSK	1/0	23.50	22.40	22.22	22.17	22.64	QPSK	1/0	23.50	22.47	22.53	22.64	22.72
	1/12	23.50	22.48	22.56	22.58	22.77		1/24	23.50	22.82	22.55	22.65	22.90
	1/24	23.50	22.41	22.19	22.19	22.64		1/49	23.50	22.50	22.63	22.79	22.67
	12/0	23.00	22.42	22.28	22.23	22.72		25/0	23.00	22.44	22.62	22.65	22.73
	12/6	23.00	22.39	22.32	22.29	22.67		25/12	23.00	22.45	22.65	22.63	22.72
	12/13	23.00	22.43	22.25	22.25	22.67		25/25	23.00	22.53	22.64	22.60	22.69
	25/0	23.00	22.44	22.28	22.26	22.67		50/0	23.00	22.42	22.62	22.66	22.71
16QAM	1/0	23.00	21.39	21.44	21.27	21.69	16QAM	1/0	23.00	21.30	21.49	21.22	21.56
	1/12	23.00	21.50	21.78	21.64	21.82		1/24	23.00	21.60	21.53	21.24	21.86
	1/24	23.00	21.39	21.42	21.29	21.70		1/49	23.00	21.27	21.59	21.35	21.54
	12/0	22.50	21.41	21.22	21.20	21.71		25/0	22.50	21.46	21.27	21.25	21.70
	12/6	22.50	21.37	21.27	21.23	21.59		25/12	22.50	21.47	21.28	21.26	21.67
	12/13	22.50	21.38	21.19	21.21	21.64		25/25	22.50	21.49	21.31	21.30	21.69
	25/0	22.50	21.32	21.25	21.22	21.58		50/0	22.50	21.44	21.30	21.30	21.70
64QAM	1/0	22.50	20.16	20.56	20.39	20.47	64QAM	1/0	22.50	20.39	20.12	20.68	20.77
	1/12	22.50	20.28	20.88	20.77	20.62		1/24	22.50	20.64	20.11	20.69	20.86
	1/24	22.50	20.15	20.50	20.42	20.48		1/49	22.50	20.32	20.19	20.80	20.78
	12/0	21.50	20.12	20.25	20.26	20.33		25/0	21.50	20.08	20.19	20.23	20.36
	12/6	21.50	20.11	20.30	20.30	20.20		25/12	21.50	20.12	20.22	20.25	20.22
	12/13	21.50	20.18	20.22	20.25	20.28		25/25	21.50	20.16	20.25	20.27	20.27
	25/0	21.50	20.16	20.21	20.32	20.12		50/0	21.50	20.14	20.30	20.35	20.28

LTE B41/BW=15M		Average Conducted Power(dBm)					LTE B41/BW=20M		Average Conducted Power(dBm)				
Modula -tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)				Modula -tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)			
			40115/ 2542.5	40440/ 2575	40840/ 2615	41165/ 2647.5				40140/ 2545	40440/ 2575	40840/ 2615	41140/ 2645
QPSK	1/0	23.50	22.31	22.15	22.29	22.51	QPSK	1/0	23.50	22.49	22.33	22.34	22.43
	1/37	23.50	22.44	22.22	22.33	22.67		1/50	23.50	**23.00**	**22.60**	**22.64**	**22.91**
	1/74	23.50	22.31	22.24	22.37	22.50		1/99	23.50	22.40	22.57	22.58	22.41
	36/0	23.00	22.47	22.28	22.28	22.71		50/0	23.00	22.59	22.47	22.47	22.60
	36/19	23.00	22.45	22.30	22.33	22.72		50/25	23.00	22.57	22.54	22.55	22.64
	36/39	23.00	22.55	22.32	22.31	22.69		50/50	23.00	**22.68**	22.57	22.58	22.66
	75/0	23.00	22.51	22.25	22.26	22.72		100/0	23.00	**22.70**	22.48	22.51	22.66
16QAM	1/0	23.00	21.39	21.22	21.64	21.65	16QAM	1/0	23.00	21.31	20.97	21.30	21.23
	1/37	23.00	21.51	21.30	21.67	21.79		1/50	23.00	21.84	21.15	21.96	21.74
	1/74	23.00	21.41	21.34	21.72	21.63		1/99	23.00	21.24	21.25	21.51	21.18
	36/0	22.50	21.45	21.22	21.20	21.72		50/0	22.50	21.51	21.12	21.12	21.69
	36/19	22.50	21.42	21.22	21.22	21.70		50/25	22.50	21.51	21.20	21.17	21.68
	36/39	22.50	21.54	21.23	21.27	21.72		50/50	22.50	21.64	21.25	21.24	21.65
	75/0	22.50	21.44	21.17	21.27	21.70		100/0	22.50	21.64	21.19	21.19	21.60
64QAM	1/0	22.50	20.41	20.05	20.64	20.26	64QAM	1/0	22.50	20.46	20.08	20.42	20.40
	1/37	22.50	20.36	20.09	20.65	20.39		1/50	22.50	20.89	20.23	20.58	20.91
	1/74	22.50	20.15	20.12	20.72	20.28		1/99	22.50	20.38	20.29	20.65	20.42
	36/0	21.50	20.22	20.15	20.18	20.24		50/0	21.50	20.13	20.11	20.10	20.33
	36/19	21.50	20.25	20.19	20.23	20.22		50/25	21.50	20.20	20.21	20.15	20.33
	36/39	21.50	20.23	20.21	20.25	20.21		50/50	21.50	20.24	20.23	20.19	20.24
	75/0	21.50	20.17	20.25	20.33	20.25		100/0	21.50	20.15	20.22	20.21	20.24

2) Second antenna_Receiver on

LTE B41/BW=5M		Average Conducted Power(dBm)					LTE B41/BW=10M		Average Conducted Power(dBm)				
Modula-tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)				Modula-tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)			
			40065/ 2537.5	40440/ 2575	40840/ 2615	41215/ 2652.5				40090/ 2540	40440/ 2575	40840/ 2615	41190/ 2650
QPSK	1/0	19.00	17.92	18.03	18.10	18.22	QPSK	1/0	19.00	18.07	18.06	18.18	18.30
	1/12	19.00	18.31	18.37	18.48	18.61		1/24	19.00	18.18	18.19	18.31	18.42
	1/24	19.00	17.91	18.09	18.11	18.26		1/49	19.00	18.06	18.10	18.17	18.28
	12/0	19.00	18.02	18.14	18.19	18.35		25/0	19.00	17.95	18.16	18.20	18.35
	12/6	19.00	18.05	18.18	18.22	18.39		25/12	19.00	18.05	18.19	18.26	18.38
	12/13	19.00	18.04	18.08	18.17	18.33		25/25	19.00	18.08	18.14	18.23	18.34
	25/0	19.00	18.06	18.14	18.19	18.36		50/0	19.00	18.02	18.15	18.24	18.36
16QAM	1/0	19.00	18.29	18.35	18.37	18.63	16QAM	1/0	19.00	18.48	18.35	18.53	18.65
	1/12	19.00	18.66	18.68	18.75	18.69		1/24	19.00	18.62	18.51	18.64	18.67
	1/24	19.00	18.28	18.33	18.39	18.65		1/49	19.00	18.49	18.42	18.52	18.63
	12/0	19.00	18.07	18.16	18.23	18.41		25/0	19.00	17.99	18.21	18.25	18.41
	12/6	19.00	18.12	18.18	18.27	18.43		25/12	19.00	18.09	18.25	18.31	18.44
	12/13	19.00	18.09	18.11	18.21	18.37		25/25	19.00	18.12	18.22	18.28	18.39
	25/0	19.00	18.10	18.20	18.25	18.39		50/0	19.00	18.08	18.19	18.27	18.38
64QAM	1/0	19.00	18.18	18.42	18.36	18.52	64QAM	1/0	19.00	18.44	18.35	18.52	18.63
	1/12	19.00	18.57	18.68	18.74	18.71		1/24	19.00	18.57	18.50	18.61	18.75
	1/24	19.00	18.21	18.45	18.37	18.55		1/49	19.00	18.45	18.42	18.49	18.62
	12/0	19.00	18.02	18.15	18.20	18.38		25/0	19.00	17.97	18.15	18.24	18.40
	12/6	19.00	18.08	18.21	18.23	18.40		25/12	19.00	18.06	18.21	18.29	18.39
	12/13	19.00	18.05	18.12	18.18	18.35		25/25	19.00	18.09	18.16	18.26	18.35
	25/0	19.00	18.09	18.13	18.24	18.41		50/0	19.00	18.04	18.15	18.24	18.36

LTE B41/BW=15M		Average Conducted Power(dBm)					LTE B41/BW=20M		Average Conducted Power(dBm)				
Modula-tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)				Modula-tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)			
			40115/ 2542.5	40440/ 2575	40840/ 2615	41165/ 2647.5				40140/ 2545	40440/ 2575	40840/ 2615	41140/ 2645
QPSK	1/0	19.00	18.01	18.02	18.12	18.20	QPSK	1/0	19.00	18.04	18.02	18.14	18.31
	1/37	19.00	18.33	18.44	18.45	18.56		1/50	19.00	18.48	18.51	18.64	**18.77**
	1/74	19.00	17.94	17.88	18.09	18.21		1/99	19.00	18.01	18.07	18.26	18.33
	36/0	19.00	18.00	18.17	18.22	18.37		50/0	19.00	17.98	18.14	18.26	18.40
	36/19	19.00	18.07	18.21	18.28	18.35		50/25	19.00	18.11	18.17	18.29	**18.42**
	36/39	19.00	18.05	18.16	18.25	18.32		50/50	19.00	18.09	18.14	18.28	18.33
	75/0	19.00	18.03	18.14	18.24	18.33		100/0	19.00	18.05	18.13	18.26	18.36
16QAM	1/0	19.00	18.44	18.28	18.48	18.56	16QAM	1/0	19.00	18.17	18.14	18.40	18.45
	1/37	19.00	18.76	18.65	18.59	18.72		1/50	19.00	18.43	18.44	18.63	18.69
	1/74	19.00	18.39	18.29	18.46	18.55		1/99	19.00	18.14	18.19	18.43	18.46
	36/0	19.00	17.98	18.17	18.25	18.38		50/0	19.00	18.02	18.17	18.29	18.44
	36/19	19.00	18.05	18.23	18.28	18.37		50/25	19.00	18.13	18.21	18.32	18.43
	36/39	19.00	18.03	18.17	18.24	18.35		50/50	19.00	18.11	18.18	18.32	18.38
	75/0	19.00	18.04	18.15	18.27	18.37		100/0	19.00	18.09	18.16	18.31	18.39
64QAM	1/0	19.00	18.40	18.19	18.34	18.17	64QAM	1/0	19.00	17.99	18.23	18.23	18.53
	1/37	19.00	18.72	18.54	18.66	18.53		1/50	19.00	18.31	18.64	18.58	18.68
	1/74	19.00	18.34	18.17	18.29	18.15		1/99	19.00	17.97	18.29	18.25	18.55
	36/0	19.00	18.02	18.14	18.24	18.37		50/0	19.00	18.04	18.13	18.31	18.41
	36/19	19.00	18.10	18.19	18.25	18.38		50/25	19.00	18.15	18.18	18.35	18.39
	36/39	19.00	18.08	18.15	18.22	18.34		50/50	19.00	18.12	18.15	18.34	18.36
	75/0	19.00	18.06	18.17	18.26	18.34		100/0	19.00	18.09	18.14	18.30	18.39

3) Second antenna_Receiver off

LTE B41/BW=5M		Average Conducted Power(dBm)					LTE B41/BW=10M		Average Conducted Power(dBm)				
Modula -tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)				Modula -tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)			
			40065/ 2537.5	40440/ 2575	40840/ 2615	41215/ 2652.5				40090/ 2540	40440/ 2575	40840/ 2615	41190/ 2650
QPSK	1/0	22.50	21.13	21.19	21.19	21.42	QPSK	1/0	22.50	21.23	21.15	21.30	21.42
	1/12	22.50	21.48	21.53	21.55	21.79		1/24	22.50	21.24	21.19	21.33	21.45
	1/24	22.50	21.11	21.19	21.19	21.43		1/49	22.50	21.34	21.30	21.42	21.53
	12/0	22.50	22.16	22.29	22.29	22.41		25/0	22.50	22.16	22.27	22.37	22.30
	12/6	22.50	22.23	22.33	22.33	22.34		25/12	22.50	22.17	22.29	22.35	22.34
	12/13	22.50	22.22	22.27	22.30	22.42		25/25	22.50	22.19	22.31	22.37	22.33
	25/0	22.50	22.19	22.28	22.29	22.40		50/0	22.50	22.15	22.30	22.36	22.35
16QAM	1/0	22.50	21.22	21.46	21.46	21.70	16QAM	1/0	22.50	20.81	21.42	21.62	21.46
	1/12	22.50	21.58	21.79	21.73	22.03		1/24	22.50	21.25	21.49	21.63	21.48
	1/24	22.50	21.25	21.45	21.38	21.72		1/49	22.50	21.35	21.57	21.68	21.60
	12/0	22.50	21.10	21.22	21.28	21.46		25/0	22.50	22.18	22.31	22.44	22.31
	12/6	22.50	21.17	21.27	21.32	21.52		25/12	22.50	22.19	22.34	22.43	22.30
	12/13	22.50	21.16	21.20	21.27	21.46		25/25	22.50	22.20	22.38	22.43	22.33
	25/0	22.50	21.14	21.29	21.27	21.51		50/0	22.50	21.12	21.32	21.41	21.54
64QAM	1/0	22.50	20.52	20.54	20.43	20.79	64QAM	1/0	22.50	20.06	20.48	20.59	20.90
	1/12	22.50	20.86	20.88	20.76	21.14		1/24	22.50	19.77	20.50	20.61	20.95
	1/24	22.50	20.51	20.56	20.45	20.82		1/49	22.50	20.18	20.58	20.68	21.03
	12/0	22.50	20.15	20.27	20.28	20.52		25/0	22.50	21.12	21.25	21.35	21.51
	12/6	22.50	20.29	20.29	20.29	20.54		25/12	22.50	21.13	21.29	21.37	21.54
	12/13	22.50	20.19	20.28	20.31	20.47		25/25	22.50	21.14	21.33	21.38	21.53
	25/0	22.50	20.13	20.21	20.30	20.45		50/0	22.50	20.15	20.30	20.39	20.55

LTE B41/BW=15M		Average Conducted Power(dBm)					LTE B41/BW=20M		Average Conducted Power(dBm)				
Modula-tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)				Modula-tion	RB Size/ Offset	Max. Tune up	Channel/Frequency(MHz)			
			40115/ 2542.5	40440/ 2575	40840/ 2615	41165/ 2647.5				40140/ 2545	40440/ 2575	40840/ 2615	41140/ 2645
QPSK	1/0	22.50	21.19	21.10	21.33	21.34	QPSK	1/0	22.50	20.94	20.96	21.18	21.24
	1/37	22.50	21.24	21.17	21.36	21.40		1/50	22.50	21.08	21.13	21.33	21.38
	1/74	22.50	21.25	21.25	21.41	21.46		1/99	22.50	**21.46**	**21.51**	**21.68**	**21.78**
	36/0	22.50	22.16	22.20	22.32	22.32		50/0	22.50	22.06	22.08	22.24	22.31
	36/19	22.50	22.19	22.24	22.35	22.31		50/25	22.50	22.12	22.13	22.29	22.35
	36/39	22.50	22.21	22.28	22.40	22.43		50/50	22.50	**22.35**	**22.39**	**22.34**	**22.44**
	75/0	22.50	22.14	22.24	22.36	22.40		100/0	22.50	22.05	22.17	22.29	**22.42**
16QAM	1/0	22.50	21.13	21.41	21.52	21.45	16QAM	1/0	22.50	20.95	21.22	21.30	21.54
	1/37	22.50	21.15	21.49	21.58	21.55		1/50	22.50	21.14	21.39	21.44	21.68
	1/74	22.50	21.17	21.52	21.62	21.56		1/99	22.50	21.17	21.51	21.54	21.75
	36/0	22.50	22.15	22.22	22.39	22.43		50/0	22.50	22.08	22.09	22.19	22.37
	36/19	22.50	22.16	22.24	22.40	22.35		50/25	22.50	22.12	22.12	22.24	22.40
	36/39	22.50	22.21	22.27	22.43	22.31		50/50	22.50	22.17	22.22	22.30	22.37
	75/0	22.50	21.13	21.22	21.35	21.40		100/0	22.50	21.08	21.15	21.25	21.35
64QAM	1/0	22.50	20.58	20.01	20.42	20.30	64QAM	1/0	22.50	20.05	20.32	20.31	20.39
	1/37	22.50	20.48	20.11	20.45	20.32		1/50	22.50	20.17	20.51	20.44	20.56
	1/74	22.50	20.63	20.13	20.49	20.39		1/99	22.50	20.22	20.58	20.52	20.63
	36/0	22.50	21.13	21.14	21.31	21.40		50/0	22.50	21.08	21.05	21.15	21.31
	36/19	22.50	21.12	21.17	21.32	21.45		50/25	22.50	21.11	21.12	21.21	21.35
	36/39	22.50	21.13	21.22	21.35	21.44		50/50	22.50	21.13	21.17	21.25	21.37
	75/0	22.50	20.15	20.28	20.34	20.53		100/0	22.50	20.05	20.11	20.31	20.46

Note:
1) The tested channels are marks in bold.
2) The receiver on/off power of LTE B41 main antenna is the same.

7. Conducted power measurement results of LTE B66

1) Main antenna

LTE B66/BW=1.4M		Average Conducted Power(dBm)				LTE B66/BW=3M		Average Conducted Power(dBm)			
Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula-tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			131979/ 1710.7	132322/ 1745	132665/ 1779.3				131987/ 1711.5	132322/ 1745	132657/ 1778.5
QPSK	1/0	23.00	21.65	21.62	21.50	QPSK	1/0	23.00	21.65	21.71	21.62
	1/2	23.00	21.79	21.74	21.67		1/7	23.00	21.80	21.84	21.75
	1/5	23.00	21.62	21.56	21.54		1/14	23.00	21.65	21.73	21.59
	3/0	23.00	22.73	22.66	22.69		8/0	22.00	21.67	21.63	21.64
	3/1	23.00	**22.77**	22.73	22.73		8/3	22.00	21.70	21.68	21.67
	3/3	23.00	22.72	22.69	22.75		8/7	22.00	21.63	21.63	21.63
	6/0	22.00	21.71	21.68	21.61		15/0	22.00	21.67	21.63	21.66
16QAM	1/0	22.00	20.72	20.75	21.03	16QAM	1/0	22.00	20.66	21.04	20.78
	1/2	22.00	20.79	20.87	21.11		1/7	22.00	20.78	21.19	20.89
	1/5	22.00	20.71	20.74	21.03		1/14	22.00	20.62	21.05	20.70
	3/0	22.00	21.87	21.71	21.92		8/0	21.00	20.83	20.76	20.74
	3/1	22.00	21.94	21.75	21.97		8/3	21.00	20.85	20.80	20.80
	3/3	22.00	21.92	21.71	21.92		8/7	21.00	20.77	20.72	20.72
	6/0	21.00	20.87	20.81	20.58		15/0	21.00	20.70	20.68	20.67
64QAM	1/0	21.00	19.82	19.75	20.12	64QAM	1/0	21.00	20.03	19.80	19.97
	1/2	21.00	19.94	19.86	20.27		1/7	21.00	20.19	19.92	20.08
	1/5	21.00	19.75	19.76	20.10		1/14	21.00	20.01	19.81	19.90
	3/0	21.00	20.79	20.55	20.90		8/0	20.00	19.81	19.68	19.70
	3/1	21.00	20.86	20.62	20.92		8/3	20.00	19.83	19.74	19.74
	3/3	21.00	20.85	20.62	20.90		8/7	20.00	19.75	19.70	19.64
	6/0	20.00	19.83	19.73	19.70		15/0	20.00	19.69	19.65	19.81

LTE B66/BW=5M		Average Conducted Power(dBm)				LTE B66/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			131997/ 1712.5	132322/ 1745	132647/ 1777.5				132022/ 1715	132322/ 1745	132622/ 1775
QPSK	1/0	23.00	21.68	21.58	21.64	QPSK	1/0	23.00	21.60	21.63	21.57
	1/12	23.00	21.74	21.69	21.70		1/24	23.00	21.75	21.83	21.74
	1/24	23.00	21.64	21.57	21.61		1/49	23.00	21.57	21.59	21.50
	12/0	22.00	21.69	21.63	21.71		25/0	22.00	21.68	21.64	21.73
	12/6	22.00	21.70	21.69	21.75		25/12	22.00	21.68	21.69	21.70
	12/13	22.00	21.68	21.70	21.70		25/25	22.00	21.65	21.70	21.63
	25/0	22.00	21.68	21.66	21.68		50/0	22.00	21.67	21.67	21.72
16QAM	1/0	22.00	20.83	21.09	20.71	16QAM	1/0	22.00	20.61	20.98	20.68
	1/12	22.00	20.85	21.19	20.84		1/24	22.00	20.77	21.18	20.84
	1/24	22.00	20.79	21.07	20.72		1/49	22.00	20.60	20.93	20.63
	12/0	21.00	20.71	20.73	20.83		25/0	21.00	20.75	20.68	20.87
	12/6	21.00	20.77	20.84	20.82		25/12	21.00	20.73	20.73	20.85
	12/13	21.00	20.79	20.82	20.78		25/25	21.00	20.71	20.73	20.80
	25/0	21.00	20.71	20.72	20.70		50/0	21.00	20.67	20.70	20.81
64QAM	1/0	21.00	19.60	19.93	19.94	64QAM	1/0	21.00	20.01	19.78	19.82
	1/12	21.00	19.70	19.99	20.00		1/24	21.00	20.16	19.96	20.04
	1/24	21.00	19.58	19.86	19.84		1/49	21.00	19.93	19.75	19.82
	12/0	20.00	19.69	19.53	19.82		25/0	20.00	19.75	19.66	19.87
	12/6	20.00	19.77	19.66	19.88		25/12	20.00	19.80	19.76	19.86
	12/13	20.00	19.77	19.63	19.85		25/25	20.00	19.74	19.71	19.85
	25/0	20.00	19.69	19.60	19.83		50/0	20.00	19.72	19.70	19.75

LTE B66/BW=15M		Average Conducted Power(dBm)				LTE B66/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			132047/ 1717.5	132322/ 1745	132597/ 1772.5				132072/ 1720	132322/ 1745	132572/ 1770
QPSK	1/0	23.00	21.54	21.59	21.56	QPSK	1/0	23.00	21.65	21.57	21.50
	1/37	23.00	21.63	21.69	21.65		1/50	23.00	**22.01**	21.97	21.89
	1/74	23.00	21.47	21.54	21.51		1/99	23.00	21.57	21.51	21.48
	36/0	22.00	21.66	21.61	21.65		50/0	22.00	21.68	21.64	21.68
	36/19	22.00	21.65	21.65	21.71		50/25	22.00	21.66	21.69	**21.70**
	36/39	22.00	21.66	21.67	21.63		50/50	22.00	21.65	21.65	21.60
	75/0	22.00	21.65	21.65	21.69		100/0	22.00	21.62	21.68	21.66
16QAM	1/0	22.00	20.59	20.96	21.09	16QAM	1/0	22.00	20.95	20.87	20.87
	1/37	22.00	20.68	21.02	21.22		1/50	22.00	21.36	21.18	21.28
	1/74	22.00	20.55	20.80	21.02		1/99	22.00	20.90	20.68	20.86
	36/0	21.00	20.65	20.68	20.66		50/0	21.00	20.73	20.58	20.79
	36/19	21.00	20.63	20.70	20.69		50/25	21.00	20.72	20.64	20.79
	36/39	21.00	20.66	20.70	20.65		50/50	21.00	20.69	20.61	20.67
	75/0	21.00	20.67	20.69	20.70		100/0	21.00	20.67	20.63	20.72
64QAM	1/0	21.00	19.93	19.74	20.25	64QAM	1/0	21.00	20.10	19.67	19.76
	1/37	21.00	20.03	19.78	20.36		1/50	21.00	20.48	19.98	20.16
	1/74	21.00	19.87	19.64	20.21		1/99	21.00	20.07	19.52	19.80
	36/0	20.00	19.69	19.71	19.69		50/0	20.00	19.72	19.65	19.84
	36/19	20.00	19.70	19.72	19.69		50/25	20.00	19.72	19.68	19.83
	36/39	20.00	19.71	19.71	19.67		50/50	20.00	19.72	19.67	19.75
	75/0	20.00	19.67	19.68	19.73		100/0	20.00	19.69	19.64	19.74

2) Second antenna_Receiver on

LTE B66/BW=1.4M		Average Conducted Power(dBm)				LTE B66/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			131979/ 1710.7	132322/ 1745	132665/ 1779.3				131987/ 1711.5	132322/ 1745	132657/ 1778.5
QPSK	1/0	17.00	16.04	16.07	15.93	QPSK	1/0	17.00	15.97	16.06	15.98
	1/2	17.00	16.17	16.17	16.09		1/7	17.00	16.15	16.22	16.12
	1/5	17.00	16.01	16.05	15.96		1/14	17.00	16.02	16.03	15.94
	3/0	17.00	16.07	16.08	16.03		8/0	17.00	16.02	16.02	16.01
	3/1	17.00	16.11	16.13	16.07		8/3	17.00	16.04	16.05	16.02
	3/3	17.00	16.07	16.06	16.08		8/7	17.00	15.99	15.98	16.00
	6/0	17.00	16.11	16.09	16.09		15/0	17.00	15.99	15.99	15.99
16QAM	1/0	17.00	16.07	16.10	16.36	16QAM	1/0	17.00	16.00	16.39	16.08
	1/2	17.00	16.16	16.20	16.48		1/7	17.00	16.12	16.46	16.22
	1/5	17.00	16.08	16.10	16.39		1/14	17.00	15.96	16.38	16.03
	3/0	17.00	16.22	16.11	16.26		8/0	17.00	16.15	16.13	16.08
	3/1	17.00	16.30	16.13	16.29		8/3	17.00	16.17	16.16	16.12
	3/3	17.00	16.26	16.09	16.27		8/7	17.00	16.14	16.12	16.07
	6/0	17.00	16.25	16.21	16.00		15/0	17.00	16.02	16.04	15.98
64QAM	1/0	17.00	16.43	16.10	16.11	64QAM	1/0	17.00	16.33	16.14	16.22
	1/2	17.00	16.40	16.27	16.26		1/7	17.00	16.49	16.31	16.35
	1/5	17.00	16.45	16.08	16.18		1/14	17.00	16.34	16.16	16.14
	3/0	17.00	16.37	16.18	16.01		8/0	17.00	16.10	16.05	15.97
	3/1	17.00	16.40	16.21	16.04		8/3	17.00	16.15	16.11	16.01
	3/3	17.00	16.37	16.18	16.01		8/7	17.00	16.10	16.07	15.96
	6/0	17.00	16.08	16.36	16.12		15/0	17.00	16.00	16.04	16.02

LTE B66/BW=5M		Average Conducted Power(dBm)				LTE B66/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			131997/ 1712.5	132322/ 1745	132647/ 1777.5				132022/ 1715	132322/ 1745	132622/ 1775
QPSK	1/0	17.00	16.02	15.94	15.95	QPSK	1/0	17.00	16.01	16.06	15.97
	1/12	17.00	16.13	16.09	16.07		1/24	17.00	16.16	16.20	16.13
	1/24	17.00	16.02	15.93	15.93		1/49	17.00	16.01	16.05	15.97
	12/0	17.00	16.00	15.98	15.99		25/0	17.00	16.04	15.98	16.02
	12/6	17.00	16.07	16.05	16.02		25/12	17.00	16.05	16.04	16.02
	12/13	17.00	16.04	16.04	15.98		25/25	17.00	15.99	16.02	15.94
	25/0	17.00	16.00	16.00	15.96		50/0	17.00	16.02	16.02	15.97
16QAM	1/0	17.00	16.16	16.42	16.04	16QAM	1/0	17.00	16.02	16.38	16.02
	1/12	17.00	16.32	16.47	16.18		1/24	17.00	16.14	16.45	16.18
	1/24	17.00	16.17	16.41	16.05		1/49	17.00	16.06	16.38	16.00
	12/0	17.00	16.10	16.10	16.02		25/0	17.00	16.07	16.03	16.11
	12/6	17.00	16.18	16.19	16.08		25/12	17.00	16.11	16.09	16.13
	12/13	17.00	16.14	16.17	16.04		25/25	17.00	16.00	16.06	16.02
	25/0	17.00	16.03	16.07	15.93		50/0	17.00	16.02	16.05	16.02
64QAM	1/0	17.00	15.92	16.25	16.18	64QAM	1/0	17.00	16.34	16.15	16.17
	1/12	17.00	16.07	16.37	16.31		1/24	17.00	16.50	16.29	16.33
	1/24	17.00	15.93	16.23	16.12		1/49	17.00	16.36	16.14	16.16
	12/0	17.00	16.08	15.88	16.05		25/0	17.00	16.10	16.07	16.09
	12/6	17.00	16.13	15.99	16.12		25/12	17.00	16.13	16.11	16.09
	12/13	17.00	16.09	15.97	16.05		25/25	17.00	16.06	16.10	16.02
	25/0	17.00	16.02	15.96	16.02		50/0	17.00	16.07	16.05	16.00

LTE B66/BW=15M		Average Conducted Power(dBm)				LTE B66/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			132047/ 1717.5	132322/ 1745	132597/ 1772.5				132072/ 1720	132322/ 1745	132572/ 1770
QPSK	1/0	17.00	15.93	16.05	15.99	QPSK	1/0	17.00	16.06	16.00	15.94
	1/37	17.00	16.09	16.11	16.08		1/50	17.00	**16.52**	**16.30**	**16.36**
	1/74	17.00	15.90	15.97	15.93		1/99	17.00	16.02	15.97	15.94
	36/0	17.00	16.03	15.97	16.10		50/0	17.00	16.06	16.00	16.07
	36/19	17.00	16.07	16.10	16.10		50/25	17.00	16.07	16.06	16.04
	36/39	17.00	16.07	16.08	16.01		50/50	17.00	**16.10**	**16.06**	**16.09**
	75/0	17.00	16.02	16.04	16.03		100/0	17.00	**16.05**	16.03	16.02
16QAM	1/0	17.00	15.94	16.38	16.45	16QAM	1/0	17.00	16.37	16.30	16.31
	1/37	17.00	16.11	16.46	16.35		1/50	17.00	16.39	16.13	16.31
	1/74	17.00	15.96	16.32	16.41		1/99	17.00	16.33	16.27	16.28
	36/0	17.00	16.05	16.32	16.04		50/0	17.00	16.14	16.00	16.11
	36/19	17.00	16.05	16.13	16.05		50/25	17.00	16.13	16.08	16.08
	36/39	17.00	16.05	16.11	15.95		50/50	17.00	16.13	16.12	15.99
	75/0	17.00	16.02	16.09	16.02		100/0	17.00	16.13	16.06	16.06
64QAM	1/0	17.00	16.28	16.13	16.37	64QAM	1/0	17.00	16.46	16.03	16.08
	1/37	17.00	16.43	16.18	16.46		1/50	17.00	16.41	16.12	16.48
	1/74	17.00	16.28	16.06	16.32		1/99	17.00	16.46	15.97	16.09
	36/0	17.00	16.11	16.06	16.09		50/0	17.00	16.12	16.01	16.10
	36/19	17.00	16.12	16.15	16.07		50/25	17.00	16.09	16.09	16.10
	36/39	17.00	16.07	16.12	15.99		50/50	17.00	16.12	16.09	16.02
	75/0	17.00	16.08	16.08	16.05		100/0	17.00	16.07	16.05	16.05

3) Second antenna_Receiver off

LTE B66/BW=1.4M		Average Conducted Power(dBm)				LTE B66/BW=3M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			131979/ 1710.7	132322/ 1745	132665/ 1779.3				131987/ 1711.5	132322/ 1745	132657/ 1778.5
QPSK	1/0	23.00	21.51	21.45	21.50	QPSK	1/0	23.00	21.44	21.54	21.44
	1/2	23.00	21.62	21.59	21.62		1/7	23.00	21.63	21.71	21.56
	1/5	23.00	21.50	21.44	21.45		1/14	23.00	21.48	21.58	21.43
	3/0	23.00	22.64	22.59	22.57		8/0	22.00	21.49	21.51	21.49
	3/1	23.00	22.65	**22.65**	22.61		8/3	22.00	21.52	21.55	21.53
	3/3	23.00	22.57	22.63	22.58		8/7	22.00	21.47	21.50	21.50
	6/0	22.00	21.56	21.59	21.53		15/0	22.00	21.49	21.49	21.51
16QAM	1/0	22.00	20.52	20.59	20.85	16QAM	1/0	22.00	20.46	20.86	20.57
	1/2	22.00	20.62	20.71	20.95		1/7	22.00	20.59	21.01	20.68
	1/5	22.00	20.52	20.59	20.84		1/14	22.00	20.45	20.85	20.50
	3/0	22.00	21.68	21.60	21.77		8/0	21.00	20.61	20.58	20.55
	3/1	22.00	21.74	21.64	21.78		8/3	21.00	20.65	20.61	20.60
	3/3	22.00	21.70	21.59	21.78		8/7	21.00	20.60	20.57	20.54
	6/0	21.00	20.73	20.68	20.41		15/0	21.00	20.53	20.49	20.50
64QAM	1/0	21.00	19.71	19.89	19.67	64QAM	1/0	21.00	19.82	19.66	19.79
	1/2	21.00	19.78	20.08	19.82		1/7	21.00	19.98	19.83	19.91
	1/5	21.00	19.68	19.91	19.67		1/14	21.00	19.83	19.67	19.72
	3/0	21.00	20.48	20.83	20.70		8/0	20.00	19.61	19.57	19.55
	3/1	21.00	20.53	20.88	20.77		8/3	20.00	19.63	19.62	19.56
	3/3	21.00	20.51	20.75	20.72		8/7	20.00	19.58	19.57	19.51
	6/0	20.00	19.66	19.57	19.87		15/0	20.00	19.50	19.53	19.62

LTE B66/BW=5M		Average Conducted Power(dBm)				LTE B66/BW=10M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			131997/ 1712.5	132322/ 1745	132647/ 1777.5				132022/ 1715	132322/ 1745	132622/ 1775
QPSK	1/0	23.00	21.48	21.41	21.47	QPSK	1/0	23.00	21.49	21.58	21.45
	1/12	23.00	21.59	21.53	21.58		1/24	23.00	21.60	21.69	21.55
	1/24	23.00	21.46	21.44	21.43		1/49	23.00	21.44	21.59	21.45
	12/0	22.00	21.48	21.48	21.56		25/0	22.00	21.56	21.50	21.58
	12/6	22.00	21.52	21.55	21.56		25/12	22.00	21.55	21.52	21.51
	12/13	22.00	21.52	21.54	21.52		25/25	22.00	21.56	21.52	21.44
	25/0	22.00	21.52	21.48	21.54		50/0	22.00	21.55	21.52	21.48
16QAM	1/0	22.00	20.63	20.94	20.58	16QAM	1/0	22.00	20.46	20.88	20.55
	1/12	22.00	20.74	21.02	20.68		1/24	22.00	20.61	21.00	20.63
	1/24	22.00	20.63	20.89	20.55		1/49	22.00	20.46	20.82	20.51
	12/0	21.00	20.57	20.55	20.73		25/0	21.00	20.59	20.50	20.71
	12/6	21.00	20.61	20.63	20.62		25/12	21.00	20.56	20.56	20.65
	12/13	21.00	20.59	20.62	20.59		25/25	21.00	20.59	20.52	20.63
	25/0	21.00	20.53	20.51	20.57		50/0	21.00	20.59	20.51	20.61
64QAM	1/0	21.00	19.41	19.80	19.75	64QAM	1/0	21.00	19.84	19.69	19.73
	1/12	21.00	19.52	19.88	19.84		1/24	21.00	19.94	19.80	19.90
	1/24	21.00	19.37	19.76	19.72		1/49	21.00	19.84	19.64	19.73
	12/0	20.00	19.59	19.45	19.65		25/0	20.00	19.64	19.58	19.73
	12/6	20.00	19.59	19.51	19.69		25/12	20.00	19.60	19.62	19.71
	12/13	20.00	19.58	19.49	19.65		25/25	20.00	19.61	19.60	19.65
	25/0	20.00	19.52	19.46	19.61		50/0	20.00	19.58	19.58	19.62

LTE B66/BW=15M		Average Conducted Power(dBm)				LTE B66/BW=20M		Average Conducted Power(dBm)			
Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)			Modula -tion	RB Size/ Offset	Max. Tune-up	Channel/Frequency(MHz)		
			132047/ 1717.5	132322/ 1745	132597/ 1772.5				132072/ 1720	132322/ 1745	132572/ 1770
QPSK	1/0	23.00	21.44	21.50	21.51	QPSK	1/0	23.00	21.31	21.30	21.24
	1/37	23.00	21.53	21.60	21.52		1/50	23.00	**21.80**	**21.69**	**21.59**
	1/74	23.00	21.39	21.44	21.40		1/99	23.00	21.28	21.27	21.18
	36/0	22.00	21.57	21.44	21.59		50/0	22.00	**21.60**	**21.58**	**21.61**
	36/19	22.00	21.57	21.62	21.60		50/25	22.00	21.55	21.55	21.57
	36/39	22.00	21.57	21.60	21.52		50/50	22.00	21.59	21.50	21.51
	75/0	22.00	21.58	21.56	21.58		100/0	22.00	**21.60**	21.48	21.55
16QAM	1/0	22.00	20.43	20.86	20.96	16QAM	1/0	22.00	20.82	20.85	20.74
	1/37	22.00	20.58	20.91	21.04		1/50	22.00	21.27	20.66	21.04
	1/74	22.00	20.42	20.73	20.86		1/99	22.00	20.80	20.69	20.70
	36/0	21.00	20.53	20.73	20.56		50/0	21.00	20.63	20.53	20.63
	36/19	21.00	20.55	20.59	20.58		50/25	21.00	20.61	20.55	20.58
	36/39	21.00	20.57	20.59	20.52		50/50	21.00	20.66	20.53	20.55
	75/0	21.00	20.56	20.54	20.54		100/0	21.00	20.63	20.50	20.61
64QAM	1/0	21.00	19.78	19.66	20.15	64QAM	1/0	21.00	19.67	20.01	19.69
	1/37	21.00	19.94	19.73	20.26		1/50	21.00	20.08	19.71	20.08
	1/74	21.00	19.77	19.54	20.18		1/99	21.00	19.67	19.87	19.65
	36/0	20.00	19.62	19.54	19.64		50/0	20.00	19.68	19.54	19.75
	36/19	20.00	19.60	19.66	19.65		50/25	20.00	19.65	19.62	19.69
	36/39	20.00	19.65	19.61	19.55		50/50	20.00	19.71	19.59	19.64
	75/0	20.00	19.59	19.59	19.65		100/0	20.00	19.65	19.54	19.66

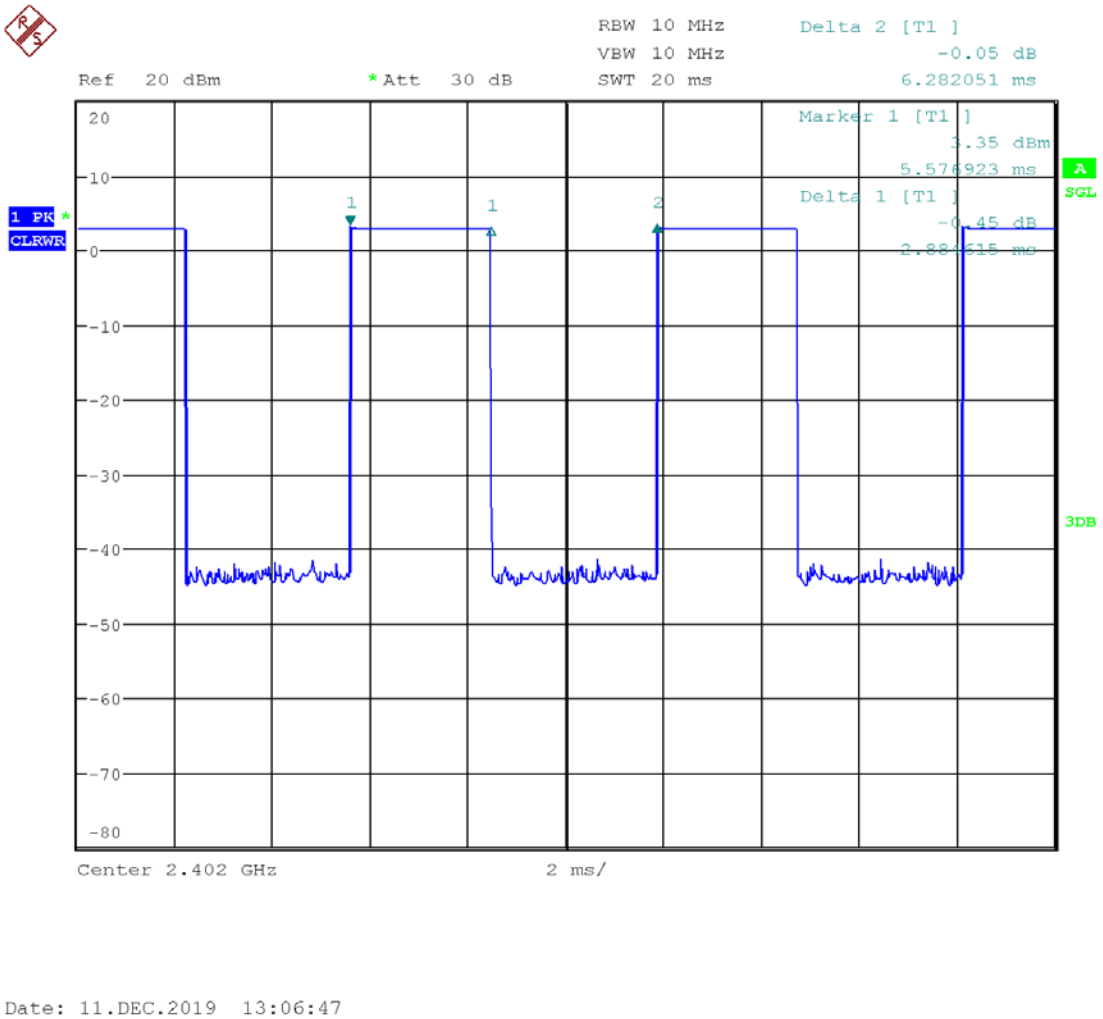
Note:
1) The tested channels are marks in bold.
2) The receiver on/off power of LTE B66 main antenna is the same.

7.1.4 CONDUCTED POWER MEASUREMENTS OF BT

For BT SAR testing, BT engineering testing software installed on the EUT can provide continuous transmitting RF signal with maximum output power, and the CBT control the EUT operating with hoping off and data rate set for 2DH5. The SAR measurement takes full account of the BT duty cycle and is reflected in the report, and the duty factor of the device is as follow:

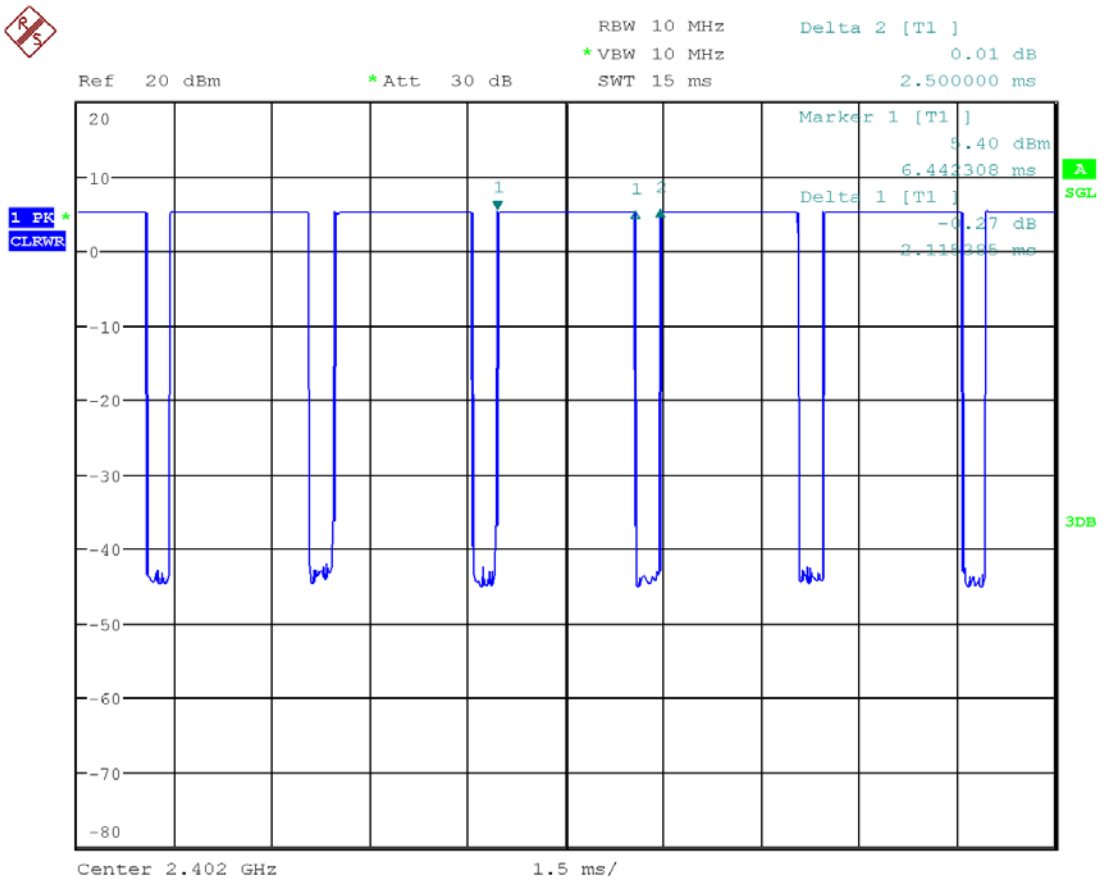
BT	Average Conducted Power(dBm)			
	Max. Tune up	CH0 2402MHz	CH39 2441MHz	CH78 2480MHz
DH5	11.00	10.04	**10.74**	9.12
2DH5	11.00	9.56	9.87	9.11
3DH5	11.00	9.42	9.53	9.11

MODE	ON Time (ms)	Total Time (ms)	Duty cycle
BT	2.88	6.28	46%



BT	Average Conducted Power(dBm)			
	Max. Tune up	CH0 2402MHz	CH19 2441MHz	CH39 2480MHz
BLE(1M)	8.50	5.30	6.67	5.64
BLE(2M)	6.50	3.66	5.02	3.98

MODE	ON Time (ms)	Total Time (ms)	Duty cycle
BLE	2.11	2.50	84%



Note:
1) The conducted power of BT is measured with RMS detector.
2) The tested channels are marks in bold.

7.1.5 CONDUCTED POWER MEASUREMENTS OF WIFI

1. Conducted power measurement results of WiFi 2.4G

Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Max. Tune up	Average Power(dBm)
802.11b	1	2412	1	17.50	15.76
	6	2437		17.50	**17.13**
	11	2462		17.50	16.93
802.11g	1	2412	6	13.00	11.31
	2	2417		18.00	17.56
	6	2437		18.00	17.87
	10	2457		18.00	17.72
	11	2462		13.00	12.71
802.11n HT20	1	2412	6.5	13.00	11.15
	2	2417		18.00	17.50
	6	2437		18.00	17.84
	10	2457		18.00	17.66
	11	2462		13.00	12.71

Note:

1) The Average conducted power of WiFi 2.4G is measured with RMS detector.

2) Per KDB248227 D01, for WiFi 2.4GHz, the highest measured maximum output power Channel for DSSS modes (802.11b) was selected for SAR measurement. SAR for OFDM modes (2.4GHz 802.11g/n) was not required When the highest reported SAR for DSSS is adjusted by the ratio of OFDM modes (802.11g/n) to DSSS modes (802.11b) specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

3) The tested channels are marks in bold.

2. Conducted power measurement results of WiFi 5.2G

1) Full Power (WiFi only)

Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Max. Tune up	Average Power(dBm)
5.2G	802.11a	36	5180	6	14.50	13.89
		40	5200		15.50	15.45
		44	5220		15.50	15.38
		48	5240		15.50	15.34
	802.11n HT20	36	5180	MCS0	14.50	13.66
		40	5200		15.50	15.30
		44	5220		15.50	15.28
		48	5240		15.50	15.18
	802.11n HT40	38	5190	MCS0	12.50	**12.02**
		46	5230		15.50	**15.16**
	802.11ac VHT20	36	5180	MCS0	14.50	13.76
		40	5200		15.50	15.22
		44	5220		15.50	15.13
		48	5240		15.50	15.24
	802.11ac VHT40	38	5190	MCS0	12.50	12.18
		46	5230		15.50	15.20
	802.11ac VHT80	42	5210	MCS0	11.00	10.81

2) WiFi Antenna simultaneous with 2G&3G&4G

Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Max. Tune up	Average Power(dBm)
5.2G	802.11a	36	5180	6	14.00	13.89
		40	5200		14.00	13.36
		44	5220		14.00	13.27
		48	5240		14.00	13.12
	802.11n HT20	36	5180	MCS0	14.00	13.66
		40	5200		14.00	13.27
		44	5220		14.00	13.22
		48	5240		14.00	13.16
	802.11n HT40	38	5190	MCS0	12.50	12.02
		46	5230		14.00	**13.35**
	802.11ac VHT20	36	5180	MCS0	14.00	13.76
		40	5200		14.00	13.24
		44	5220		14.00	13.17
		48	5240		14.00	13.12
	802.11ac VHT40	38	5190	MCS0	12.50	12.18
		46	5230		14.00	13.27
	802.11ac VHT80	42	5210	MCS0	11.00	10.81

Note: The Average conducted power of WiFi 5.2G is measured with RMS detector.

3. Conducted power measurement results of WiFi 5.3G

Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Max. Tune up	Average Power(dBm)
5.3G	802.11a	52	5260	6	15.50	15.44
		56	5280		15.50	15.23
		60	5300		15.50	15.32
		64	5320		14.50	13.85
	802.11n HT20	52	5260	MCS0	15.50	15.16
		56	5280		15.50	15.09
		60	5300		15.50	15.28
		64	5320		14.50	13.62
	802.11n HT40	54	5270	MCS0	15.50	**15.07**
		62	5310		12.50	12.12
	802.11ac VHT20	52	5260	MCS0	15.50	15.35
		56	5280		15.50	15.30
		60	5300		15.50	15.31
		64	5320		15.50	13.80
	802.11ac VHT40	54	5270	MCS0	15.50	15.07
		62	5310		12.50	12.14
	802.11ac VHT80	58	5290	MCS0	11.00	10.71

Note:
1) The Average conducted power of WiFi 5.3G is measured with RMS detector.
2) The tested channels are marks in bold.

4. Conducted power measurement results of WiFi 5.6G

Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Max. Tune up	Average Power(dBm)
5.6G	802.11a	100	5500	6	14.50	14.16
		104	5520		16.00	15.41
		108	5540		16.00	15.34
		112	5560		16.00	**15.62**
		116	5580		16.00	**15.65**
		132	5660		16.00	15.40
		136	5680		16.00	15.42
		140	5700		14.50	14.06
	802.11n HT20	100	5500	MCS0	14.50	13.92
		104	5520		16.00	15.33
		108	5540		16.00	15.39
		112	5560		16.00	15.45
		116	5580		16.00	15.52
		132	5660		16.00	15.21
		136	5680		16.00	15.23
		140	5700		14.50	13.94
	802.11n HT40	102	5510	MCS0	12.50	12.31
		110	5550		15.50	15.42
		118	5590		15.50	15.41
		126	5630		15.50	15.45
		134	5670		12.50	12.25
	802.11ac VHT20	100	5500	MCS0	14.50	14.06
		104	5520		16.00	15.12
		108	5540		16.00	15.20
		112	5560		16.00	15.45
		116	5580		16.00	15.57
		132	5660		16.00	15.25
		136	5680		16.00	15.28
		140	5700		14.50	13.84
	802.11ac VHT40	102	5510	MCS0	12.50	12.33
		110	5550		15.50	15.37
		118	5590		15.50	15.32
		126	5630		15.50	15.48
		134	5670		12.50	12.17
	802.11ac VHT80	106	5530	MCS0	11.50	11.07
		122	5610		15.50	15.14

Note:
1) The Average conducted power of WiFi 5.6G is measured with RMS detector.
2) The tested channels are marks in bold.

5. Conducted power measurement results of WiFi 5.8G

1) Full Power (WiFi only)

Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Max. Tune up	Average Power(dBm)
5.8G	802.11a	149	5745	6	16.00	15.88
		153	5765		16.00	15.24
		157	5785		16.00	15.92
		161	5805		16.00	15.28
		165	5825		14.50	14.29
	802.11n HT20	149	5745	MCS0	16.00	15.68
		153	5765		16.00	15.30
		157	5785		16.00	15.06
		161	5805		16.00	15.34
		165	5825		14.50	14.18
	802.11n HT40	151	5755	MCS0	16.00	**15.54**
		159	5795		16.00	**15.56**
	802.11ac VHT20	149	5745	MCS0	16.00	15.71
		153	5765		16.00	15.28
		157	5785		16.00	15.74
		161	5805		16.00	15.15
		165	5825		14.50	14.15
	802.11ac VHT40	151	5755	MCS0	16.00	15.54
		159	5795		16.00	15.55
	802.11ac VHT80	155	5775	MCS0	15.50	15.27

2) WiFi Antenna simultaneous with 2G&3G&4G

Band	Mode	Channel	Frequency (MHz)	Data Rate (Mbps)	Max. Tune up	Average Power(dBm)
5.8G	802.11a	149	5745	6	14.00	13.74
		153	5765		14.00	13.72
		157	5785		14.00	13.65
		161	5805		14.00	13.87
		165	5825		14.00	13.84
	802.11n HT20	149	5745	MCS0	14.00	13.68
		153	5765		14.00	13.51
		157	5785		14.00	13.49
		161	5805		14.00	13.66
		165	5825		14.00	13.73
	802.11n HT40	151	5755	MCS0	14.00	13.65
		159	5795		14.00	**13.69**
	802.11ac VHT20	149	5745	MCS0	14.00	13.76
		153	5765		14.00	13.72
		157	5785		14.00	13.68
		161	5805		14.00	13.63
		165	5825		14.00	13.59
	802.11ac VHT40	151	5755	MCS0	14.00	13.62
		159	5795		14.00	13.64
	802.11ac VHT80	155	5775	MCS0	13.50	13.13

Note:
1) The Average conducted power of WiFi 5.8G is measured with RMS detector.
2) The tested channels are marks in bold.

7.2 SAR TEST RESULTS

General Notes:

1) Per KDB447498 D01, all measurement SAR results are scaled to the maximum tune-up tolerance limit to demonstrate compliant.
2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is: ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.
3) Per KDB865664 D01,for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8W/kg; if the deviation among the repeated measurement is ≤ 20%,and the measured SAR < 1.45W/kg, only one repeated measurement is required.
4) Per KDB941225 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 KDB648474 D04, SAR is evaluated without a headset connected to the device. When the standalone reported body-worn SAR is ≤1.2 W/kg, no additional SAR evaluations using a headset are required.
6) Per KDB865664 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 W/kg, or > 7.0 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.

GSM Notes:

1) Per KDB648474 D04, body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2) 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.

UMTS Notes:

Per KDB941225 D01, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ 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.

LTE notes:

1) The LTE test configurations are determined according to KDB941225 D05 SAR for LTE Devices. The general test procedures used for SAR testing can be found in Section 7.1.3.
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)

WLAN Notes:

1. For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 for 2.4GHz WIFI single transmission chain operations, the highest measured maximum output power Channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4GHz 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 7.1.5 for more information.

3. Justification for test configurations for WLAN per KDB Publication 248227 for 5GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed power. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2W/kg. See Section 7.1.5 for more information.

7.2.1 SAR MEASUREMENT RESULT OF HEAD

1. Head SAR test results of GSM

Test No.	Band	Mode	Channel	Test Position	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T01	GSM 850	GSM	190	Right Cheek	Main	1	33	32.95	0.01	**0.210**	**0.162**	**0.212**
T02	GSM 850	GSM	190	Right Tilted	Main	1	33	32.95	0.09	0.112	0.091	0.113
T03	GSM 850	GSM	190	Left Cheek	Main	1	33	32.95	0	0.179	0.141	0.181
T04	GSM 850	GSM	190	Left Tilted	Main	1	33	32.95	-0.07	0.108	0.088	0.109
T05	GSM 850	GSM	190	Right Cheek	Main	2	33	32.95	0.01	0.193	0.148	0.195
T06	GSM 850	GSM	190	Right Cheek	Main	3	33	32.95	-0.08	0.207	0.153	0.209
T08	GSM 850	GSM	190	Right Cheek	Second	1	31.5	31.38	0.07	**0.768**	**0.469**	**0.790**
T09	GSM 850	GSM	190	Right Tilted	Second	1	31.5	31.38	-0.01	0.681	0.393	0.700
T10	GSM 850	GSM	190	Left Cheek	Second	1	31.5	31.38	0.02	0.621	0.402	0.638
T11	GSM 850	GSM	190	Left Tilted	Second	1	31.5	31.38	0.05	0.549	0.315	0.564
T14	GSM 850	GSM	190	Right Cheek	Second	2	31.5	31.38	-0.12	0.749	0.461	0.770
T15	GSM 850	GSM	190	Right Cheek	Second	3	31.5	31.38	0.08	0.742	0.449	0.763
T17	GSM 1900	GSM	661	Right Cheek	Main	1	30.5	29.88	0.08	**0.057**	**0.033**	**0.066**
T18	GSM 1900	GSM	661	Right Tilted	Main	1	30.5	29.88	0.01	0.048	0.025	0.055
T19	GSM 1900	GSM	661	Left Cheek	Main	1	30.5	29.88	-0.06	0.052	0.030	0.060
T20	GSM 1900	GSM	661	Left Tilted	Main	1	30.5	29.88	-0.15	0.050	0.029	0.058
T21	GSM 1900	GSM	661	Right Cheek	Main	2	30.5	29.88	0.02	0.056	0.033	0.065
T22	GSM 1900	GSM	661	Right Cheek	Main	3	30.5	29.88	-0.07	0.056	0.032	0.064
T24	GSM 1900	GSM	661	Right Cheek	Second	1	26	25.68	0.02	0.588	0.292	0.633
T25	GSM 1900	GSM	661	Right Tilted	Second	1	26	25.68	-0.11	**0.729**	**0.320**	**0.785**
T26	GSM 1900	GSM	661	Left Cheek	Second	1	26	25.68	-0.01	0.395	0.204	0.425
T27	GSM 1900	GSM	661	Left Tilted	Second	1	26	25.68	0.03	0.428	0.238	0.461
T30	GSM 1900	GSM	661	Right Tilted	Second	2	26	25.68	-0.01	0.705	0.304	0.759
T31	GSM 1900	GSM	661	Right Tilted	Second	3	26	25.68	0.05	0.711	0.309	0.765

Note: The value with boldface is the maximum SAR Value of each test band.

2. Head SAR test results of UMTS

Test No.	Band	Mode	Channel	Test Position	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T33	UMTS B2	RMC12.2K	9400	Right Cheek	Main	1	23.5	23.14	0.06	**0.145**	**0.086**	**0.158**
T34	UMTS B2	RMC12.2K	9400	Right Tilted	Main	1	23.5	23.14	0.02	0.119	0.066	0.129
T35	UMTS B2	RMC12.2K	9400	Left Cheek	Main	1	23.5	23.14	-0.07	0.118	0.074	0.128
T36	UMTS B2	RMC12.2K	9400	Left Tilted	Main	1	23.5	23.14	0.12	0.124	0.075	0.135
T37	UMTS B2	RMC12.2K	9400	Right Cheek	Main	2	23.5	23.14	0.08	0.134	0.078	0.146
T38	UMTS B2	RMC12.2K	9400	Right Cheek	Main	3	23.5	23.14	0	0.139	0.082	0.151
T40	UMTS B2	RMC12.2K	9400	Right Cheek	Second	1	18	17.76	-0.05	0.607	0.278	0.641
T41	UMTS B2	RMC12.2K	9400	Right Tilted	Second	1	18	17.76	0.04	**0.711**	**0.313**	**0.751**
T42	UMTS B2	RMC12.2K	9400	Left Cheek	Second	1	18	17.76	0.01	0.361	0.184	0.382
T43	UMTS B2	RMC12.2K	9400	Left Tilted	Second	1	18	17.76	0.06	0.518	0.246	0.547
T46	UMTS B2	RMC12.2K	9400	Right Tilted	Second	2	18	17.76	0.19	0.689	0.298	0.728
T47	UMTS B2	RMC12.2K	9400	Right Tilted	Second	3	18	17.76	-0.08	0.697	0.307	0.737
T49	UMTS B4	RMC12.2K	1413	Right Cheek	Main	1	23.5	23.06	0.08	0.046	0.027	0.050
T50	UMTS B4	RMC12.2K	1413	Right Tilted	Main	1	23.5	23.06	-0.09	0.048	0.028	0.053
T51	UMTS B4	RMC12.2K	1413	Left Cheek	Main	1	23.5	23.06	0.08	0.034	0.020	0.037
T52	UMTS B4	RMC12.2K	1413	Left Tilted	Main	1	23.5	23.06	0.01	0.043	0.026	0.047
T53	UMTS B4	RMC12.2K	1413	Right Tilted	Main	2	23.5	23.06	0.05	**0.049**	**0.029**	**0.055**
T54	UMTS B4	RMC12.2K	1413	Right Tilted	Main	3	23.5	23.06	-0.07	0.042	0.026	0.047
T56	UMTS B4	RMC12.2K	1413	Right Cheek	Second	1	17	16.52	-0.05	0.722	0.333	0.806
T57	UMTS B4	RMC12.2K	1413	Right Tilted	Second	1	17	16.52	0.04	**0.776**	**0.359**	**0.867**
T58	UMTS B4	RMC12.2K	1413	Left Cheek	Second	1	17	16.52	0.01	0.436	0.239	0.487
T59	UMTS B4	RMC12.2K	1413	Left Tilted	Second	1	17	16.52	-0.08	0.545	0.301	0.609
T60	UMTS B4	RMC12.2K	1312	Right Cheek	Second	1	17	16.55	-0.11	0.715	0.328	0.793
T61	UMTS B4	RMC12.2K	1312	Right Tilted	Second	1	17	16.55	0.03	0.738	0.345	0.819
T62	UMTS B4	RMC12.2K	1513	Right Cheek	Second	1	17	16.49	0.09	0.705	0.322	0.793
T63	UMTS B4	RMC12.2K	1513	Right Tilted	Second	1	17	16.49	0.02	0.730	0.340	0.821
T64	UMTS B4	RMC12.2K	1413	Right Tilted	Second	2	17	16.52	0.15	0.759	0.338	0.848
T65	UMTS B4	RMC12.2K	1413	Right Tilted	Second	3	17	16.52	-0.04	0.766	0.348	0.856
T67	UMTS B5	RMC12.2K	4182	Right Cheek	Main	1	23.5	22.93	0.02	**0.188**	**0.145**	**0.214**
T68	UMTS B5	RMC12.2K	4182	Right Tilted	Main	1	23.5	22.93	0.01	0.099	0.080	0.113
T69	UMTS B5	RMC12.2K	4182	Left Cheek	Main	1	23.5	22.93	-0.05	0.145	0.114	0.165
T70	UMTS B5	RMC12.2K	4182	Left Tilted	Main	1	23.5	22.93	0.08	0.101	0.080	0.115
T71	UMTS B5	RMC12.2K	4182	Right Cheek	Main	2	23.5	22.93	0.12	0.172	0.139	0.196
T72	UMTS B5	RMC12.2K	4182	Right Cheek	Main	3	23.5	22.93	0.09	0.180	0.141	0.205
T74	UMTS B5	RMC12.2K	4182	Right Cheek	Second	1	23.5	23.01	0.01	0.757	0.463	0.847
T75	UMTS B5	RMC12.2K	4182	Right Tilted	Second	1	23.5	23.01	0.09	0.631	0.378	0.706
T76	UMTS B5	RMC12.2K	4182	Left Cheek	Second	1	23.5	23.01	0.06	0.583	0.390	0.653
T77	UMTS B5	RMC12.2K	4182	Left Tilted	Second	1	23.5	23.01	-0.02	0.545	0.338	0.610
T78	UMTS B5	RMC12.2K	4132	Right Cheek	Second	1	23.5	22.94	-0.02	0.602	0.371	0.685
T79	UMTS B5	RMC12.2K	4233	Right Cheek	Second	1	23.5	23.03	0.11	0.846	0.519	0.943
T80	UMTS B5	RMC12.2K	4233	Right Cheek	Second	2	23.5	23.03	0.05	**0.853**	**0.524**	**0.950**
T81	UMTS B5	RMC12.2K	4233	Right Cheek	Second	3	23.5	23.03	-0.03	0.833	0.511	0.928
T82	UMTS B5	RMC12.2K	4233	Right Cheek (Repeated)	Second	2	23.5	23.03	0.08	0.838	0.510	0.934

Note: The value with boldface is the maximum SAR Value of each test band.

3. Head SAR test results of LTE

Test No.	Band	Mode	Channel	RB	offset	Test Position	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T83	LTE B2	QPSK20M	18900	1	50	Right Cheek	Main	1	23.5	22.21	0.03	0.106	0.062	0.143
T84	LTE B2	QPSK20M	18900	1	50	Right Tilted	Main	1	23.5	22.21	-0.05	0.073	0.041	0.098
T85	LTE B2	QPSK20M	18900	1	50	Left Cheek	Main	1	23.5	22.21	-0.08	0.079	0.049	0.106
T86	LTE B2	QPSK20M	18900	1	50	Left Tilted	Main	1	23.5	22.21	-0.16	0.064	0.040	0.086
T87	LTE B2	QPSK20M	19100	50	0	Right Cheek	Main	1	22.5	22.15	0.08	0.106	0.062	0.115
T88	LTE B2	QPSK20M	19100	50	0	Right Tilted	Main	1	22.5	22.15	0.11	0.075	0.043	0.081
T89	LTE B2	QPSK20M	19100	50	0	Left Cheek	Main	1	22.5	22.15	0.02	0.073	0.046	0.079
T90	LTE B2	QPSK20M	19100	50	0	Left Tilted	Main	1	22.5	22.15	0.03	0.058	0.037	0.063
T91	LTE B2	QPSK1.4M	19193	3	1	Right Cheek	Main	1	23.5	23.08	0.09	0.142	0.093	0.156
T92	LTE B2	QPSK1.4M	19193	3	1	Right Cheek	Main	2	23.5	23.08	-0.08	0.138	0.091	0.152
T93	LTE B2	QPSK1.4M	19193	3	1	Right Cheek	Main	3	23.5	23.08	0.04	**0.155**	**0.094**	**0.171**
T94	LTE B2	QPSK20M	19100	1	50	Right Cheek	Second	1	18	17.79	0.01	0.545	0.267	0.572
T95	LTE B2	QPSK20M	19100	1	50	Right Tilted	Second	1	18	17.79	-0.02	0.683	0.303	0.717
T96	LTE B2	QPSK20M	19100	1	50	Left Cheek	Second	1	18	17.79	0.04	0.309	0.173	0.324
T97	LTE B2	QPSK20M	19100	1	50	Left Tilted	Second	1	18	17.79	0.09	0.415	0.221	0.436
T98	LTE B2	QPSK20M	19100	50	0	Right Cheek	Second	1	18	17.55	-0.01	0.577	0.286	0.640
T99	LTE B2	QPSK20M	19100	50	0	Right Tilted	Second	1	18	17.55	-0.08	**0.705**	**0.321**	**0.782**
T100	LTE B2	QPSK20M	19100	50	0	Left Cheek	Second	1	18	17.55	-0.03	0.364	0.195	0.404
T101	LTE B2	QPSK20M	19100	50	0	Left Tilted	Second	1	18	17.55	0.07	0.451	0.240	0.500
T107	LTE B2	QPSK20M	19100	50	0	Right Tilted	Second	2	18	17.55	-0.05	0.682	0.307	0.756
T108	LTE B2	QPSK20M	19100	50	0	Right Tilted	Second	3	18	17.55	-0.18	0.690	0.318	0.765
T110	LTE B4	QPSK20M	20050	1	50	Right Cheek	Main	1	23	22.04	0.01	0.032	0.016	0.039
T111	LTE B4	QPSK20M	20050	1	50	Right Tilted	Main	1	23	22.04	0.05	0.032	0.017	0.040
T112	LTE B4	QPSK20M	20050	1	50	Left Cheek	Main	1	23	22.04	0.09	0.022	0.013	0.027
T113	LTE B4	QPSK20M	20050	1	50	Left Tilted	Main	1	23	22.04	0.13	0.030	0.018	0.037
T114	LTE B4	QPSK20M	20175	50	50	Right Cheek	Main	1	22	21.9	0.05	0.041	0.025	0.042
T115	LTE B4	QPSK20M	20175	50	50	Right Tilted	Main	1	22	21.9	0.15	**0.048**	**0.029**	**0.050**
T116	LTE B4	QPSK20M	20175	50	50	Left Cheek	Main	1	22	21.9	0.04	0.027	0.016	0.028
T117	LTE B4	QPSK20M	20175	50	50	Left Tilted	Main	1	22	21.9	0.07	0.035	0.021	0.035
T118	LTE B4	QPSK1.4M	20175	3	1	Right Tilted	Main	1	23	22.87	0.1	0.044	0.024	0.045
T119	LTE B4	QPSK20M	20175	50	50	Right Tilted	Main	2	22	21.9	0.02	0.042	0.026	0.043
T120	LTE B4	QPSK20M	20175	50	50	Right Tilted	Main	3	22	21.9	-0.08	0.045	0.027	0.046
T122	LTE B4	QPSK20M	20050	1	50	Right Cheek	Second	1	16.5	16.38	0.05	0.630	0.306	0.648
T123	LTE B4	QPSK20M	20050	1	50	Right Tilted	Second	1	16.5	16.38	0.04	0.729	0.339	0.749
T124	LTE B4	QPSK20M	20050	1	50	Left Cheek	Second	1	16.5	16.38	-0.01	0.395	0.226	0.406
T125	LTE B4	QPSK20M	20050	1	50	Left Tilted	Second	1	16.5	16.38	-0.06	0.537	0.288	0.552
T126	LTE B4	QPSK20M	20175	50	50	Right Cheek	Second	1	16.5	16.12	0.08	0.645	0.315	0.704
T127	LTE B4	QPSK20M	20175	50	50	Right Tilted	Second	1	16.5	16.12	0.07	0.740	0.340	0.808
T128	LTE B4	QPSK20M	20175	50	50	Left Cheek	Second	1	16.5	16.12	0.04	0.411	0.230	0.449
T129	LTE B4	QPSK20M	20175	50	50	Left Tilted	Second	1	16.5	16.12	0.01	0.540	0.290	0.589
T132	LTE B4	QPSK20M	20050	50	50	Right Tilted	Second	1	16.5	16.1	0.09	0.712	0.332	0.781
T133	LTE B4	QPSK20M	20300	50	50	Right Tilted	Second	1	16.5	16.03	-0.05	0.722	0.334	0.805
T134	LTE B4	QPSK20M	20175	100	0	Right Tilted	Second	1	16.5	16.06	0.11	0.726	0.327	0.803
T135	LTE B4	QPSK20M	20175	50	50	Right Tilted	Second	2	16.5	16.12	0.02	**0.745**	**0.345**	**0.813**
T136	LTE B4	QPSK20M	20175	50	50	Right Tilted	Second	3	16.5	16.12	-0.03	0.738	0.341	0.805

Test No.	Band	Mode	Channel	RB	offset	Test Position	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T138	LTE B5	QPSK10M	20525	1	24	Right Cheek	Main	1	23	22.15	-0.02	**0.152**	**0.118**	**0.185**
T139	LTE B5	QPSK10M	20525	1	24	Right Tilted	Main	1	23	22.15	0.01	0.090	0.073	0.109
T140	LTE B5	QPSK10M	20525	1	24	Left Cheek	Main	1	23	22.15	0.05	0.119	0.087	0.145
T141	LTE B5	QPSK10M	20525	1	24	Left Tilted	Main	1	23	22.15	-0.02	0.087	0.067	0.106
T142	LTE B5	QPSK10M	20600	25	12	Right Cheek	Main	1	22	21.98	0	0.146	0.113	0.147
T143	LTE B5	QPSK10M	20600	25	12	Right Tilted	Main	1	22	21.98	0.09	0.089	0.072	0.089
T144	LTE B5	QPSK10M	20600	25	12	Left Cheek	Main	1	22	21.98	-0.06	0.134	0.104	0.135
T145	LTE B5	QPSK10M	20600	25	12	Left Tilted	Main	1	22	21.98	0.02	0.081	0.064	0.081
T146	LTE B5	QPSK1.4M	20643	3	1	Right Cheek	Main	1	23	22.94	0.17	0.181	0.150	0.184
T147	LTE B5	QPSK10M	20525	1	24	Right Cheek	Main	2	23	22.15	0.03	0.147	0.110	0.179
T148	LTE B5	QPSK10M	20525	1	24	Right Cheek	Main	3	23	22.15	0.01	0.139	0.102	0.169
T150	LTE B5	QPSK10M	20450	1	24	Right Cheek	Second	1	23	22.13	-0.03	0.549	0.335	0.671
T151	LTE B5	QPSK10M	20450	1	24	Right Tilted	Second	1	23	22.13	0.09	0.534	0.305	0.652
T152	LTE B5	QPSK10M	20450	1	24	Left Cheek	Second	1	23	22.13	0.05	0.441	0.267	0.539
T153	LTE B5	QPSK10M	20450	1	24	Left Tilted	Second	1	23	22.13	-0.04	0.446	0.255	0.545
T154	LTE B5	QPSK10M	20525	25	0	Right Cheek	Second	1	22.5	22.09	-0.02	**0.650**	**0.393**	**0.714**
T155	LTE B5	QPSK10M	20525	25	0	Right Tilted	Second	1	22.5	22.09	0.11	0.602	0.344	0.662
T156	LTE B5	QPSK10M	20525	25	0	Left Cheek	Second	1	22.5	22.09	-0.03	0.518	0.312	0.569
T157	LTE B5	QPSK10M	20525	25	0	Left Tilted	Second	1	22.5	22.09	0.07	0.527	0.301	0.579
T158	LTE B5	QPSK1.4M	20525	3	1	Right Cheek	Second	1	23	22.99	0.07	0.633	0.403	0.634
T159	LTE B5	QPSK10M	20525	25	0	Right Cheek	Second	2	22.5	22.09	0.06	0.636	0.384	0.699
T160	LTE B5	QPSK10M	20525	25	0	Right Cheek	Second	3	22.5	22.09	0.02	0.620	0.370	0.681
T162	LTE B7	QPSK20M	21100	1	50	Right Cheek	Main	1	23.5	23.29	0.01	0.071	0.039	0.075
T163	LTE B7	QPSK20M	21100	1	50	Right Tilted	Main	1	23.5	23.29	-0.05	0.057	0.032	0.060
T164	LTE B7	QPSK20M	21100	1	50	Left Cheek	Main	1	23.5	23.29	0.02	0.068	0.039	0.071
T165	LTE B7	QPSK20M	21100	1	50	Left Tilted	Main	1	23.5	23.29	0.03	**0.095**	**0.049**	**0.100**
T166	LTE B7	QPSK20M	21350	50	0	Right Cheek	Main	1	22.5	22.12	-0.01	0.049	0.026	0.054
T167	LTE B7	QPSK20M	21350	50	0	Right Tilted	Main	1	22.5	22.12	-0.03	0.036	0.020	0.039
T168	LTE B7	QPSK20M	21350	50	0	Left Cheek	Main	1	22.5	22.12	0.15	0.041	0.024	0.045
T169	LTE B7	QPSK20M	21350	50	0	Left Tilted	Main	1	22.5	22.12	0	0.058	0.032	0.063
T170	LTE B7	QPSK20M	21100	1	50	Left Tilted	Main	2	23.5	23.29	-0.09	0.088	0.048	0.092
T171	LTE B7	QPSK20M	21100	1	50	Left Tilted	Main	3	23.5	23.29	-0.07	0.092	0.050	0.097
T173	LTE B7	QPSK20M	21350	1	50	Right Cheek	Second	1	15	14.73	-0.01	0.441	0.204	0.469
T174	LTE B7	QPSK20M	21350	1	50	Right Tilted	Second	1	15	14.73	0.01	0.531	0.221	0.565
T175	LTE B7	QPSK20M	21350	1	50	Left Cheek	Second	1	15	14.73	0.05	0.146	0.072	0.155
T176	LTE B7	QPSK20M	21350	1	50	Left Tilted	Second	1	15	14.73	0.12	0.220	0.101	0.234
T177	LTE B7	QPSK20M	21350	50	0	Right Cheek	Second	1	15	14.6	-0.08	0.463	0.211	0.508
T178	LTE B7	QPSK20M	21350	50	0	Right Tilted	Second	1	15	14.6	0.04	**0.552**	**0.227**	**0.605**
T179	LTE B7	QPSK20M	21350	50	0	Left Cheek	Second	1	15	14.6	-0.03	0.163	0.081	0.179
T180	LTE B7	QPSK20M	21350	50	0	Left Tilted	Second	1	15	14.6	0.04	0.239	0.112	0.262
T186	LTE B7	QPSK20M	21350	50	0	Right Tilted	Second	2	15	14.6	-0.05	0.538	0.218	0.590
T187	LTE B7	QPSK20M	21350	50	0	Right Tilted	Second	3	15	14.6	-0.09	0.541	0.224	0.593

Test No.	Band	Mode	Channel	RB	offset	Test Position	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T189	LTE B38	QPSK20M	38150	1	50	Right Cheek	Main	1	23	22.46	0.06	0.013	0.005	0.015
T190	LTE B38	QPSK20M	38150	1	50	Right Tilted	Main	1	23	22.46	0.06	0.010	0.004	0.011
T191	LTE B38	QPSK20M	38150	1	50	Left Cheek	Main	1	23	22.46	0	0.013	0.006	0.015
T192	LTE B38	QPSK20M	38150	1	50	Left Tilted	Main	1	23	22.46	0.08	**0.017**	**0.008**	**0.019**
T193	LTE B38	QPSK20M	38150	50	25	Right Cheek	Main	1	22.5	22.16	0	0.013	0.005	0.014
T194	LTE B38	QPSK20M	38150	50	25	Right Tilted	Main	1	22.5	22.16	0	0.003	0.001	0.003
T195	LTE B38	QPSK20M	38150	50	25	Left Cheek	Main	1	22.5	22.16	0	0.014	0.007	0.015
T196	LTE B38	QPSK20M	38150	50	25	Left Tilted	Main	1	22.5	22.16	0.08	0.016	0.007	0.017
T197	LTE B38	QPSK20M	38150	1	50	Left Tilted	Main	2	23	22.46	0.01	0.013	0.008	0.015
T198	LTE B38	QPSK20M	38150	1	50	Left Tilted	Main	3	23	22.46	-0.05	0.015	0.008	0.017
T200	LTE B38	QPSK20M	38150	1	50	Right Cheek	Second	1	19.5	19.15	0.05	0.507	0.258	0.550
T201	LTE B38	QPSK20M	38150	1	50	Right Tilted	Second	1	19.5	19.15	0.01	0.627	0.269	0.680
T202	LTE B38	QPSK20M	38150	1	50	Left Cheek	Second	1	19.5	19.15	-0.04	0.166	0.090	0.180
T203	LTE B38	QPSK20M	38150	1	50	Left Tilted	Second	1	19.5	19.15	-0.03	0.232	0.106	0.251
T204	LTE B38	QPSK20M	38150	50	25	Right Cheek	Second	1	19.5	18.72	0.02	0.493	0.251	0.590
T205	LTE B38	QPSK20M	38150	50	25	Right Tilted	Second	1	19.5	18.72	0.05	0.608	0.252	0.728
T206	LTE B38	QPSK20M	38150	50	25	Left Cheek	Second	1	19.5	18.72	-0.06	0.181	0.094	0.217
T207	LTE B38	QPSK20M	38150	50	25	Left Tilted	Second	1	19.5	18.72	-0.08	0.241	0.109	0.288
T213	LTE B38	QPSK20M	38150	50	25	Right Tilted	Second	2	19.5	18.72	0.05	0.616	0.259	0.737
T214	LTE B38	QPSK20M	38150	50	25	Right Tilted	Second	3	19.5	18.72	0.01	**0.620**	**0.265**	**0.742**
T216	LTE B41	QPSK20M	40140	1	50	Right Cheek	Main	1	23.5	23	0.06	0.023	0.010	0.025
T217	LTE B41	QPSK20M	40140	1	50	Right Tilted	Main	1	23.5	23	0.08	0.021	0.010	0.024
T218	LTE B41	QPSK20M	40140	1	50	Left Cheek	Main	1	23.5	23	0.05	0.026	0.014	0.029
T219	LTE B41	QPSK20M	40140	1	50	Left Tilted	Main	1	23.5	23	0.08	**0.038**	**0.019**	**0.042**
T220	LTE B41	QPSK20M	40140	50	50	Right Cheek	Main	1	23	22.68	0	0.023	0.010	0.025
T221	LTE B41	QPSK20M	40140	50	50	Right Tilted	Main	1	23	22.68	0.04	0.023	0.010	0.024
T222	LTE B41	QPSK20M	40140	50	50	Left Cheek	Main	1	23	22.68	0.03	0.022	0.012	0.023
T223	LTE B41	QPSK20M	40140	50	50	Left Tilted	Main	1	23	22.68	0.05	0.033	0.017	0.035
T224	LTE B41	QPSK20M	40140	1	50	Left Tilted	Main	2	23.5	23	0.11	0.035	0.017	0.039
T225	LTE B41	QPSK20M	40140	1	50	Left Tilted	Main	3	23.5	23	0.02	0.033	0.016	0.036
T227	LTE B41	QPSK20M	41140	1	50	Right Cheek	Second	1	19	18.77	0.09	0.454	0.212	0.479
T228	LTE B41	QPSK20M	41140	1	50	Right Tilted	Second	1	19	18.77	0.03	0.511	0.217	0.539
T229	LTE B41	QPSK20M	41140	1	50	Left Cheek	Second	1	19	18.77	-0.05	0.173	0.084	0.182
T230	LTE B41	QPSK20M	41140	1	50	Left Tilted	Second	1	19	18.77	-0.06	0.202	0.098	0.213
T231	LTE B41	QPSK20M	41140	50	25	Right Cheek	Second	1	19	18.42	0.15	0.429	0.201	0.490
T232	LTE B41	QPSK20M	41140	50	25	Right Tilted	Second	1	19	18.42	0.06	**0.480**	**0.206**	**0.549**
T233	LTE B41	QPSK20M	41140	50	25	Left Cheek	Second	1	19	18.42	0.02	0.168	0.082	0.192
T234	LTE B41	QPSK20M	41140	50	25	Left Tilted	Second	1	19	18.42	0.01	0.199	0.093	0.227
T248	LTE B41	QPSK20M	41140	50	25	Right Tilted	Second	2	19	18.42	-0.03	0.461	0.192	0.527
T249	LTE B41	QPSK20M	41140	50	25	Right Tilted	Second	3	19	18.42	-0.09	0.475	0.203	0.543

Test No.	Band	Mode	Channel	RB	offset	Test Position	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T251	LTE B66	QPSK20M	132072	1	50	Right Cheek	Main	1	23	22.01	0.02	0.029	0.018	0.036
T252	LTE B66	QPSK20M	132072	1	50	Right Tilted	Main	1	23	22.01	0.04	0.033	0.020	0.042
T253	LTE B66	QPSK20M	132072	1	50	Left Cheek	Main	1	23	22.01	0.06	0.023	0.014	0.029
T254	LTE B66	QPSK20M	132072	1	50	Left Tilted	Main	1	23	22.01	0.02	0.030	0.018	0.038
T255	LTE B66	QPSK20M	132572	50	25	Right Cheek	Main	1	22	21.7	0.04	0.053	0.033	0.057
T256	LTE B66	QPSK20M	132572	50	25	Right Tilted	Main	1	22	21.7	-0.18	**0.056**	**0.033**	**0.060**
T257	LTE B66	QPSK20M	132572	50	25	Left Cheek	Main	1	22	21.7	0.03	0.036	0.022	0.039
T258	LTE B66	QPSK20M	132572	50	25	Left Tilted	Main	1	22	21.7	0.01	0.046	0.026	0.049
T259	LTE B66	QPSK1.4M	131979	3	1	Right Tilted	Main	1	23	22.77	-0.05	0.055	0.032	0.058
T260	LTE B66	QPSK20M	132572	50	25	Right Tilted	Main	2	22	21.7	0.12	0.052	0.030	0.056
T261	LTE B66	QPSK20M	132572	50	25	Right Tilted	Main	3	22	21.7	0.19	0.050	0.029	0.053
T263	LTE B66	QPSK20M	132072	1	50	Right Cheek	Second	1	17	16.52	-0.03	0.620	0.311	0.692
T264	LTE B66	QPSK20M	132072	1	50	Right Tilted	Second	1	17	16.52	0.02	0.720	0.334	0.804
T265	LTE B66	QPSK20M	132072	1	50	Left Cheek	Second	1	17	16.52	0.08	0.383	0.227	0.428
T266	LTE B66	QPSK20M	132072	1	50	Left Tilted	Second	1	17	16.52	0.01	0.480	0.276	0.536
T267	LTE B66	QPSK20M	132072	50	50	Right Cheek	Second	1	17	16.1	-0.03	0.584	0.295	0.718
T268	LTE B66	QPSK20M	132072	50	50	Right Tilted	Second	1	17	16.1	0.02	0.690	0.319	0.849
T269	LTE B66	QPSK20M	132072	50	50	Left Cheek	Second	1	17	16.1	-0.06	0.360	0.213	0.443
T270	LTE B66	QPSK20M	132072	50	50	Left Tilted	Second	1	17	16.1	-0.08	0.454	0.260	0.559
T271	LTE B66	QPSK20M	132322	1	50	Right Tilted	Second	1	17	16.3	0.02	0.714	0.330	0.839
T272	LTE B66	QPSK20M	132572	1	50	Right Tilted	Second	1	17	16.36	0.12	0.623	0.308	0.722
T273	LTE B66	QPSK20M	132322	50	50	Right Tilted	Second	1	17	16.06	0	0.716	0.330	0.889
T274	LTE B66	QPSK20M	132572	50	50	Right Tilted	Second	1	17	16.09	0.06	0.591	0.292	0.729
T275	LTE B66	QPSK20M	132072	100	0	Right Tilted	Second	1	17	16.05	0.09	**0.724**	**0.335**	**0.901**
T276	LTE B66	QPSK20M	132072	100	0	Right Tilted	Second	2	17	16.05	0.01	0.720	0.333	0.896
T277	LTE B66	QPSK20M	132072	100	0	Right Tilted	Second	3	17	16.05	0.08	0.703	0.327	0.875

Note: The value with boldface is the maximum SAR Value of each test band.

4. Head SAR test results of 2.4G WIFI

Test No.	Band	Channel	Test Position	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T278	802.11b	6	Right Cheek	1	1	17.5	17.13	-0.07	0.266	0.143	0.290
T279	802.11b	6	Right Tilted	1	1	17.5	17.13	-0.03	0.226	0.112	0.246
T280	802.11b	6	Left Cheek	1	1	17.5	17.13	0.12	**0.543**	**0.249**	**0.591**
T281	802.11b	6	Left Tilted	1	1	17.5	17.13	0.01	0.287	0.130	0.313
T282	802.11b	6	Left Cheek	2	1	17.5	17.13	-0.01	0.529	0.227	0.576
T283	802.11b	6	Left Cheek	3	1	17.5	17.13	0.19	0.538	0.236	0.586

Note:
1) The value with boldface is the maximum SAR Value of each test band.
2) Adj SAR = 1g Reported SAR x (802.11g/n P_{max} / 802.11b P_{max}) = 0.591 x (63.10 / 56.23) = 0.663 < 1.2, so 2.4G WIFI 802.11g/n SAR test is not required.

5. Head SAR test results of BT

Test No.	Band	Channel	Test Position	Battery	Data Rate	Duty Cycle	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T285	BT DH5	39	Right Cheek	1	1	46%	11	10.74	0.05	0.033	0.018	0.076
T286	BT DH5	39	Right Tilted	1	1	46%	11	10.74	0.08	0.037	0.018	0.084
T287	BT DH5	39	Left Cheek	1	1	46%	11	10.74	0.18	**0.075**	**0.034**	**0.173**
T288	BT DH5	39	Left Tilted	1	1	46%	11	10.74	0.07	0.039	0.021	0.091
T289	BT DH5	39	Left Cheek	2	1	46%	11	10.74	-0.02	0.072	0.031	0.166
T290	BT DH5	39	Left Cheek	3	1	46%	11	10.74	-0.13	0.069	0.032	0.159

Note: The value with boldface is the maximum SAR Value of each test band.

6. Head SAR test results of 5G WIFI (WiFi only)

Test No.	Band	Channel	Test Position	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T292	802.11n40	54	Right Cheek	1	MCS0	15.5	15.07	0.05	0.202	0.085	0.223
T293	802.11n40	54	Right Tilted	1	MCS0	15.5	15.07	-0.09	0.180	0.074	0.199
T294	802.11n40	54	Left Cheek	1	MCS0	15.5	15.07	0.06	**0.697**	**0.216**	**0.770**
T295	802.11n40	54	Left Tilted	1	MCS0	15.5	15.07	0.01	0.358	0.152	0.395
T296	802.11n40	54	Left Cheek	2	MCS0	15.5	15.07	-0.03	0.676	0.207	0.746
T297	802.11n40	54	Left Cheek	3	MCS0	15.5	15.07	-0.07	0.683	0.211	0.754
T299	802.11a	116	Right Cheek	1	6	16	15.65	0.03	0.185	0.073	0.201
T300	802.11a	116	Right Tilted	1	6	16	15.65	0.01	0.193	0.076	0.209
T301	802.11a	116	Left Cheek	1	6	16	15.65	0.09	0.616	0.228	0.668
T302	802.11a	116	Left Tilted	1	6	16	15.65	-0.07	0.360	0.153	0.390
T303	802.11a	112	Left Cheek	1	6	16	15.62	-0.03	0.743	0.251	0.811
T304	802.11a	112	Left Cheek	2	6	16	15.62	-0.19	0.746	0.255	0.814
T305	802.11a	112	Left Cheek	3	6	16	15.62	0.05	**0.750**	**0.258**	**0.819**
T307	802.11n40	159	Right Cheek	1	MCS0	16	15.56	0.05	0.301	0.113	0.333
T308	802.11n40	159	Right Tilted	1	MCS0	16	15.56	-0.06	0.304	0.115	0.336
T309	802.11n40	159	Left Cheek	1	MCS0	16	15.56	0.03	**0.612**	**0.222**	**0.677**
T310	802.11n40	159	Left Tilted	1	MCS0	16	15.56	0.04	0.480	0.181	0.531
T311	802.11n40	151	Left Cheek	1	MCS0	16	15.54	0.13	0.569	0.207	0.633
T312	802.11n40	159	Left Cheek	2	MCS0	16	15.56	-0.09	0.586	0.219	0.648
T313	802.11n40	159	Left Cheek	3	MCS0	16	15.56	-0.01	0.597	0.221	0.661

Note: The value with boldface is the maximum SAR Value of each test band.

7. Head SAR test results of 5G WIFI (WiFi+2G&3G&4G)

Test No.	Band	Channel	Test Position	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T850	802.11n40	159	Right Cheek	1	MCS0	14	13.69	0.03	0.102	0.032	0.110
T851	802.11n40	159	Right Tilted	1	MCS0	14	13.69	0.11	0.113	0.039	0.121
T852	802.11n40	159	Left Cheek	1	MCS0	14	13.69	0.07	**0.290**	**0.107**	**0.311**
T853	802.11n40	159	Left Tilted	1	MCS0	14	13.69	-0.05	0.222	0.092	0.238
T854	802.11n40	159	Left Cheek	2	MCS0	14	13.69	0.06	0.271	0.110	0.291
T855	802.11n40	159	Left Cheek	3	MCS0	14	13.69	0.02	0.265	0.104	0.285

Note: The value with boldface is the maximum SAR Value of each test band.

7.2.2 SAR MEASUREMENT RESULT OF BODY-WORN

1. Body-worn SAR test results of GSM

Test No.	Band	Mode	Channel	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T314	GSM 850	GSM	190	Front Face	1.5	Main	1	33	32.95	0.06	0.155	0.121	0.157
T315	GSM 850	GSM	190	Rear Face	1.5	Main	1	33	32.95	-0.04	**0.200**	**0.153**	**0.202**
T316	GSM 850	GSM	190	Rear Face	1.5	Main	2	33	32.95	0.12	0.184	0.146	0.186
T317	GSM 850	GSM	190	Rear Face	1.5	Main	3	33	32.95	-0.02	0.195	0.149	0.197
T327	GSM 850	GSM	190	Front Face	1.5	Second	1	32.5	32.42	-0.02	0.088	0.058	0.089
T328	GSM 850	GSM	190	Rear Face	1.5	Second	1	32.5	32.42	0.01	**0.126**	**0.085**	**0.128**
T329	GSM 850	GSM	190	Rear Face	1.5	Second	2	32.5	32.42	0	0.118	0.084	0.120
T330	GSM 850	GSM	190	Rear Face	1.5	Second	3	32.5	32.42	0.08	0.112	0.084	0.114
T339	GSM 1900	GSM	661	Front Face	1.5	Main	1	30.5	29.88	0.09	0.096	0.059	0.111
T340	GSM 1900	GSM	661	Rear Face	1.5	Main	1	30.5	29.88	0.02	**0.214**	**0.126**	**0.247**
T341	GSM 1900	GSM	661	Rear Face	1.5	Main	2	30.5	29.88	-0.05	0.209	0.121	0.241
T342	GSM 1900	GSM	661	Rear Face	1.5	Main	3	30.5	29.88	0.1	0.202	0.115	0.233
T352	GSM 1900	GSM	661	Front Face	1.5	Second	1	29.5	29.35	0.01	0.200	0.115	0.207
T353	GSM 1900	GSM	661	Rear Face	1.5	Second	1	29.5	29.35	0.09	**0.262**	**0.151**	**0.271**
T354	GSM 1900	GSM	661	Rear Face	1.5	Second	2	29.5	29.35	-0.05	0.254	0.143	0.263
T355	GSM 1900	GSM	661	Rear Face	1.5	Second	3	29.5	29.35	0	0.249	0.146	0.258

Note: The value with boldface is the maximum SAR Value of each test band.

2. Body-worn SAR test results of UMTS

Test No.	Band	Mode	Channel	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T366	UMTS B2	RMC12.2K	9400	Front Face	1.5	Main	1	20.5	20.28	0.01	0.101	0.063	0.106
T367	UMTS B2	RMC12.2K	9400	Rear Face	1.5	Main	1	20.5	20.28	0.05	**0.236**	**0.138**	**0.248**
T368	UMTS B2	RMC12.2K	9400	Rear Face	1.5	Main	2	20.5	20.28	-0.03	0.219	0.115	0.230
T369	UMTS B2	RMC12.2K	9400	Rear Face	1.5	Main	3	20.5	20.28	0.09	0.223	0.124	0.235
T383	UMTS B2	RMC12.2K	9400	Front Face	1.5	Second	1	21.5	21.28	-0.02	0.189	0.102	0.199
T384	UMTS B2	RMC12.2K	9400	Rear Face	1.5	Second	1	21.5	21.28	0.05	0.232	0.128	0.244
T385	UMTS B2	RMC12.2K	9400	Rear Face	1.5	Second	2	21.5	21.28	-0.03	0.226	0.117	0.238
T386	UMTS B2	RMC12.2K	9400	Rear Face	1.5	Second	3	21.5	21.28	0.12	**0.243**	**0.135**	**0.256**
T397	UMTS B4	RMC12.2K	1413	Front Face	1.5	Main	1	23.5	23.06	0.08	0.119	0.078	0.132
T398	UMTS B4	RMC12.2K	1413	Rear Face	1.5	Main	1	23.5	23.06	0.03	**0.320**	**0.195**	**0.354**
T399	UMTS B4	RMC12.2K	1413	Rear Face	1.5	Main	2	23.5	23.06	-0.05	0.307	0.182	0.340
T400	UMTS B4	RMC12.2K	1413	Rear Face	1.5	Main	3	23.5	23.06	0	0.315	0.189	0.349
T412	UMTS B4	RMC12.2K	1413	Front Face	1.5	Second	1	21	20.57	0.05	0.223	0.127	0.246
T413	UMTS B4	RMC12.2K	1413	Rear Face	1.5	Second	1	21	20.57	0.09	**0.259**	**0.152**	**0.286**
T414	UMTS B4	RMC12.2K	1413	Rear Face	1.5	Second	2	21	20.57	0.01	0.234	0.137	0.258
T415	UMTS B4	RMC12.2K	1413	Rear Face	1.5	Second	3	21	20.57	-0.03	0.246	0.145	0.272
T426	UMTS B5	RMC12.2K	4182	Front Face	1.5	Main	1	23.5	22.93	0.02	0.159	0.122	0.181
T427	UMTS B5	RMC12.2K	4182	Rear Face	1.5	Main	1	23.5	22.93	0.01	**0.196**	**0.150**	**0.223**
T428	UMTS B5	RMC12.2K	4182	Rear Face	1.5	Main	2	23.5	22.93	0.05	0.191	0.146	0.218
T429	UMTS B5	RMC12.2K	4182	Rear Face	1.5	Main	3	23.5	22.93	-0.03	0.184	0.139	0.210
T439	UMTS B5	RMC12.2K	4182	Front Face	1.5	Second	1	23.5	23.01	0.02	0.074	0.056	0.083
T440	UMTS B5	RMC12.2K	4182	Rear Face	1.5	Second	1	23.5	23.01	0.03	0.101	0.074	0.113
T441	UMTS B5	RMC12.2K	4182	Rear Face	1.5	Second	2	23.5	23.01	-0.04	**0.104**	**0.075**	**0.116**
T442	UMTS B5	RMC12.2K	4182	Rear Face	1.5	Second	3	23.5	23.01	-0.07	0.099	0.074	0.111

Note: The value with boldface is the maximum SAR Value of each test band.

3. Body-worn SAR test results of LTE

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T450	LTE B2	QPSK20M	18900	1	50	Front Face	1.5	Main	1	21.5	20.7	-0.1	0.126	0.077	0.151
T451	LTE B2	QPSK20M	18900	1	50	Rear Face	1.5	Main	1	21.5	20.7	-0.03	0.292	0.170	0.351
T452	LTE B2	QPSK20M	19100	50	0	Front Face	1.5	Main	1	21.5	21.43	0.08	0.165	0.101	0.168
T453	LTE B2	QPSK20M	19100	50	0	Rear Face	1.5	Main	1	21.5	21.43	0.07	**0.360**	**0.211**	**0.366**
T454	LTE B2	QPSK20M	19100	50	0	Rear Face	1.5	Main	2	21.5	21.43	-0.02	0.342	0.201	0.348
T455	LTE B2	QPSK20M	19100	50	0	Rear Face	1.5	Main	3	21.5	21.43	0.13	0.349	0.205	0.355
T475	LTE B2	QPSK20M	18700	1	50	Front Face	1.5	Second	1	23	21.93	0.05	0.235	0.134	0.301
T476	LTE B2	QPSK20M	18700	1	50	Rear Face	1.5	Second	1	23	21.93	0.07	**0.313**	**0.180**	**0.400**
T477	LTE B2	QPSK20M	19100	50	0	Front Face	1.5	Second	1	22	21.9	-0.02	0.231	0.131	0.236
T478	LTE B2	QPSK20M	19100	50	0	Rear Face	1.5	Second	1	22	21.9	-0.06	0.304	0.173	0.311
T479	LTE B2	QPSK1.4M	18607	3	3	Rear Face	1.5	Second	1	23	22.84	0.07	0.380	0.220	0.394
T480	LTE B2	QPSK20M	18700	1	50	Rear Face	1.5	Second	2	23	21.93	-0.08	0.296	0.168	0.379
T481	LTE B2	QPSK20M	18700	1	50	Rear Face	1.5	Second	3	23	21.93	0.03	0.305	0.176	0.390
T500	LTE B4	QPSK20M	20050	1	50	Front Face	1.5	Main	1	23	22.04	-0.01	0.078	0.050	0.098
T501	LTE B4	QPSK20M	20050	1	50	Rear Face	1.5	Main	1	23	22.04	0.15	0.230	0.137	0.287
T502	LTE B4	QPSK20M	20175	50	50	Front Face	1.5	Main	1	22	21.9	-0.08	0.094	0.061	0.096
T503	LTE B4	QPSK20M	20175	50	50	Rear Face	1.5	Main	1	22	21.9	0.12	0.259	0.155	0.265
T504	LTE B4	QPSK1.4M	20175	3	1	Rear Face	1.5	Main	1	23	22.87	0.07	**0.331**	**0.199**	**0.341**
T505	LTE B4	QPSK1.4M	20175	3	1	Rear Face	1.5	Main	2	23	22.87	0.02	0.313	0.189	0.323
T506	LTE B4	QPSK1.4M	20175	3	1	Rear Face	1.5	Main	3	23	22.87	0.15	0.320	0.192	0.330
T522	LTE B4	QPSK20M	20050	1	50	Front Face	1.5	Second	1	23	21.74	-0.06	0.314	0.193	0.420
T523	LTE B4	QPSK20M	20050	1	50	Rear Face	1.5	Second	1	23	21.74	0.07	0.367	0.215	0.491
T524	LTE B4	QPSK20M	20175	50	50	Front Face	1.5	Second	1	22	21.63	0.01	0.327	0.184	0.356
T525	LTE B4	QPSK20M	20175	50	50	Rear Face	1.5	Second	1	22	21.63	0.03	0.360	0.209	0.392
T526	LTE B4	QPSK1.4M	20175	3	1	Rear Face	1.5	Second	1	23	22.65	0.02	**0.468**	**0.274**	**0.507**
T527	LTE B4	QPSK1.4M	20175	3	1	Rear Face	1.5	Second	2	23	22.65	0.07	0.433	0.249	0.469
T528	LTE B4	QPSK1.4M	20175	3	1	Rear Face	1.5	Second	3	23	22.65	0.13	0.456	0.260	0.494
T547	LTE B5	QPSK10M	20525	1	24	Front Face	1.5	Main	1	23	22.15	-0.01	0.122	0.095	0.148
T548	LTE B5	QPSK10M	20525	1	24	Rear Face	1.5	Main	1	23	22.15	0.04	**0.154**	**0.118**	**0.187**
T549	LTE B5	QPSK10M	20600	25	12	Front Face	1.5	Main	1	22	21.98	0.07	0.125	0.095	0.126
T550	LTE B5	QPSK10M	20600	25	12	Rear Face	1.5	Main	1	22	21.98	0.02	0.146	0.113	0.147
T551	LTE B5	QPSK1.4M	20643	3	1	Rear Face	1.5	Main	1	23	22.94	-0.05	0.174	0.133	0.176
T552	LTE B5	QPSK10M	20525	1	24	Rear Face	1.5	Main	2	23	22.15	0.07	0.142	0.110	0.173
T553	LTE B5	QPSK10M	20525	1	24	Rear Face	1.5	Main	3	23	22.15	0.03	0.135	0.106	0.164
T569	LTE B5	QPSK10M	20450	1	24	Front Face	1.5	Second	1	23	22.13	-0.01	0.060	0.041	0.073
T570	LTE B5	QPSK10M	20450	1	24	Rear Face	1.5	Second	1	23	22.13	0.06	0.081	0.060	0.099
T571	LTE B5	QPSK10M	20525	25	0	Front Face	1.5	Second	1	22.5	22.09	0.04	0.066	0.051	0.073
T572	LTE B5	QPSK10M	20525	25	0	Rear Face	1.5	Second	1	22.5	22.09	0.02	**0.098**	**0.070**	**0.107**
T573	LTE B5	QPSK1.4M	20525	3	1	Rear Face	1.5	Second	1	23	22.99	-0.06	0.105	0.081	0.105
T574	LTE B5	QPSK10M	20525	25	0	Rear Face	1.5	Second	2	22.5	22.09	0.02	0.092	0.066	0.101
T575	LTE B5	QPSK10M	20525	25	0	Rear Face	1.5	Second	3	22.5	22.09	0.05	0.087	0.061	0.096
T589	LTE B7	QPKS20M	21100	1	50	Front Face	1.5	Main	1	21.5	21.29	0.01	0.154	0.075	0.162
T590	LTE B7	QPKS20M	21100	1	50	Rear Face	1.5	Main	1	21.5	21.29	-0.05	0.249	0.111	0.261
T591	LTE B7	QPKS20M	21350	50	0	Front Face	1.5	Main	1	21.5	21.16	0	0.137	0.066	0.148
T592	LTE B7	QPKS20M	21350	50	0	Rear Face	1.5	Main	1	21.5	21.16	0.03	0.282	0.123	0.305
T593	LTE B7	QPKS20M	21350	50	0	Rear Face	1.5	Main	2	21.5	21.16	0.01	0.275	0.112	0.297
T594	LTE B7	QPKS20M	21350	50	0	Rear Face	1.5	Main	3	21.5	21.16	0.08	**0.291**	**0.129**	**0.315**

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T618	LTE B7	QPKS20M	20850	1	50	Front Face	1.5	Second	1	17.5	17.27	0.05	0.136	0.070	0.143
T619	LTE B7	QPKS20M	20850	1	50	Rear Face	1.5	Second	1	17.5	17.27	0.01	**0.349**	**0.164**	**0.368**
T620	LTE B7	QPKS20M	21350	50	50	Front Face	1.5	Second	1	17.5	16.93	-0.01	0.130	0.068	0.148
T621	LTE B7	QPKS20M	21350	50	50	Rear Face	1.5	Second	1	17.5	16.93	-0.06	0.267	0.123	0.304
T622	LTE B7	QPKS20M	20850	1	50	Rear Face	1.5	Second	2	17.5	17.27	-0.08	0.334	0.151	0.352
T623	LTE B7	QPKS20M	20850	1	50	Rear Face	1.5	Second	3	17.5	17.27	0.19	0.347	0.161	0.366
T641	LTE B38	QPSK20M	38150	1	50	Front Face	1.5	Main	1	23	22.46	0.02	0.092	0.043	0.104
T642	LTE B38	QPSK20M	38150	1	50	Rear Face	1.5	Main	1	23	22.46	0.09	**0.243**	**0.107**	**0.275**
T643	LTE B38	QPSK20M	38150	50	25	Front Face	1.5	Main	1	22.5	22.16	0.01	0.098	0.048	0.106
T644	LTE B38	QPSK20M	38150	50	25	Rear Face	1.5	Main	1	22.5	22.16	0.07	0.224	0.096	0.242
T645	LTE B38	QPSK20M	38150	1	50	Rear Face	1.5	Main	2	23	22.46	-0.05	0.236	0.102	0.267
T646	LTE B38	QPSK20M	38150	1	50	Rear Face	1.5	Main	3	23	22.46	-0.13	0.221	0.098	0.250
T661	LTE B38	QPSK20M	38150	1	50	Front Face	1.5	Second	1	23	22.65	-0.02	0.193	0.101	0.209
T662	LTE B38	QPSK20M	38150	1	50	Rear Face	1.5	Second	1	23	22.65	-0.04	0.387	0.189	0.419
T663	LTE B38	QPSK20M	38150	50	25	Front Face	1.5	Second	1	22.5	22.39	0.05	0.194	0.107	0.199
T664	LTE B38	QPSK20M	38150	50	25	Rear Face	1.5	Second	1	22.5	22.39	0.07	0.400	0.191	0.410
T665	LTE B38	QPSK20M	38150	1	50	Rear Face	1.5	Second	2	23	22.65	0.1	**0.405**	**0.194**	**0.439**
T666	LTE B38	QPSK20M	38150	1	50	Rear Face	1.5	Second	3	23	22.65	-0.01	0.381	0.183	0.413
T684	LTE B41	QPSK20M	40140	1	50	Front Face	1.5	Main	1	23.5	23	0.01	0.084	0.040	0.095
T685	LTE B41	QPSK20M	40140	1	50	Rear Face	1.5	Main	1	23.5	23	-0.05	0.197	0.090	0.221
T686	LTE B41	QPSK20M	40140	50	50	Front Face	1.5	Main	1	23	22.68	-0.12	0.078	0.040	0.083
T687	LTE B41	QPSK20M	40140	50	50	Rear Face	1.5	Main	1	23	22.68	0.03	0.192	0.086	0.207
T688	LTE B41	QPSK20M	40140	50	50	Rear Face	1.5	Main	2	23.5	23	0.06	0.185	0.083	0.208
T689	LTE B41	QPSK20M	40140	50	50	Rear Face	1.5	Main	3	23.5	23	0.01	**0.208**	**0.093**	**0.233**
T708	LTE B41	QPSK20M	41140	1	99	Front Face	1.5	Second	1	22.5	21.78	-0.06	0.181	0.100	0.214
T709	LTE B41	QPSK20M	41140	1	99	Rear Face	1.5	Second	1	22.5	21.78	0.08	0.249	0.119	0.294
T710	LTE B41	QPSK20M	41140	50	50	Front Face	1.5	Second	1	22.5	22.44	0.01	0.184	0.103	0.187
T711	LTE B41	QPSK20M	41140	50	50	Rear Face	1.5	Second	1	22.5	22.44	0.02	**0.349**	**0.165**	**0.354**
T712	LTE B41	QPSK20M	41140	50	50	Rear Face	1.5	Second	2	22.5	22.44	0.11	0.326	0.146	0.331
T713	LTE B41	QPSK20M	41140	50	50	Rear Face	1.5	Second	3	22.5	22.44	-0.19	0.334	0.159	0.339
T740	LTE B66	QPSK20M	132072	1	50	Front Face	1.5	Main	1	23	22.01	0.01	0.080	0.051	0.100
T741	LTE B66	QPSK20M	132072	1	50	Rear Face	1.5	Main	1	23	22.01	0.05	0.232	0.136	0.291
T742	LTE B66	QPSK20M	132572	50	25	Front Face	1.5	Main	1	22	21.7	-0.09	0.105	0.069	0.113
T743	LTE B66	QPSK20M	132572	50	25	Rear Face	1.5	Main	1	22	21.7	0.06	**0.294**	**0.176**	**0.315**
T744	LTE B66	QPSK1.4M	131979	3	1	Rear Face	1.5	Main	1	23	22.77	0.03	0.261	0.158	0.275
T745	LTE B66	QPSK20M	132572	50	25	Rear Face	1.5	Main	2	22	21.7	-0.02	0.286	0.169	0.306
T746	LTE B66	QPSK20M	132572	50	25	Rear Face	1.5	Main	3	22	21.7	0.1	0.290	0.172	0.311
T762	LTE B66	QPSK20M	132072	1	50	Front Face	1.5	Second	1	23	21.8	-0.05	0.308	0.185	0.406
T763	LTE B66	QPSK20M	132072	1	50	Rear Face	1.5	Second	1	23	21.8	0.03	**0.344**	**0.202**	**0.453**
T764	LTE B66	QPSK20M	132572	50	0	Front Face	1.5	Second	1	22	21.61	-0.02	0.308	0.173	0.337
T765	LTE B66	QPSK20M	132572	50	0	Rear Face	1.5	Second	1	22	21.61	0.09	0.339	0.197	0.371
T766	LTE B66	QPSK1.4M	132322	3	1	Rear Face	1.5	Second	1	23	22.65	0.03	0.415	0.257	0.450
T767	LTE B66	QPSK20M	132072	1	50	Rear Face	1.5	Second	2	23	21.8	0.06	0.320	0.189	0.422
T768	LTE B66	QPSK20M	132072	1	50	Rear Face	1.5	Second	3	23	21.8	0.14	0.336	0.198	0.443

Note: The value with boldface is the maximum SAR Value of each test band.

4. Body-worn SAR test results of 2.4G WIFI

Test No.	Band	Channel	Test Position	Separation Distance (cm)	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T786	802.11b	6	Front Face	1.5	1	1	17.5	17.13	0.06	0.058	0.032	0.063
T787	802.11b	6	Rear Face	1.5	1	1	17.5	17.13	0.02	**0.067**	**0.036**	**0.073**
T788	802.11b	6	Rear Face	1.5	2	1	17.5	17.13	-0.03	0.065	0.036	0.071
T789	802.11b	6	Rear Face	1.5	3	1	17.5	17.13	0.08	0.067	0.036	0.073

Note:
1) The value with boldface is the maximum SAR Value of each test band.
2) Adj SAR = 1g Reported SAR x (802.11g/n P_{max} / 802.11b P_{max}) = 0.073 x (63.10 / 56.23) = 0.082 < 1.2, so 2.4G WIFI 802.11g/n SAR test is not required.

5. Body-worn SAR test results of 5G WIFI (WiFi only)

Test No.	Band	Channel	Test Position	Separation Distance (cm)	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T811	802.11n40	54	Front Face	1.5	1	MCS0	15.5	15.07	0	0.030	0.008	0.033
T812	802.11n40	54	Rear Face	1.5	1	MCS0	15.5	15.07	0.04	**0.466**	**0.173**	**0.515**
T813	802.11n40	54	Rear Face	1.5	2	MCS0	15.5	15.07	0.01	0.462	0.175	0.510
T814	802.11n40	54	Rear Face	1.5	3	MCS0	15.5	15.07	-0.03	0.448	0.162	0.495
T823	802.11a	116	Front Face	1.5	1	6	16	15.65	0.06	0.095	0.037	0.103
T824	802.11a	116	Rear Face	1.5	1	6	16	15.65	0.09	0.510	0.193	0.553
T825	802.11a	112	Rear Face	1.5	1	6	16	15.62	-0.03	**0.546**	**0.219**	**0.596**
T826	802.11a	112	Rear Face	1.5	2	6	16	15.62	-0.19	0.524	0.197	0.572
T827	802.11a	112	Rear Face	1.5	3	6	16	15.62	0.05	0.537	0.207	0.586
T837	802.11n40	159	Front Face	1.5	1	MCS0	16	15.56	0	0.083	0.035	0.092
T838	802.11n40	159	Rear Face	1.5	1	MCS0	16	15.56	-0.06	**0.628**	**0.228**	**0.695**
T839	802.11n40	151	Rear Face	1.5	1	MCS0	16	15.54	0.11	0.456	0.197	0.507
T840	802.11n40	159	Rear Face	1.5	2	MCS0	16	15.56	0.01	0.457	0.209	0.506
T841	802.11n40	159	Rear Face	1.5	3	MCS0	16	15.56	0.03	0.442	0.214	0.489

Note: The value with boldface is the maximum SAR Value of each test band.

6. Body-worn SAR test results of 5G WIFI (WiFi+2G&3G&4G)

Test No.	Band	Channel	Test Position	Separation Distance (cm)	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T865	802.11n40	159	Front Face	1.5	1	MCS0	14	13.69	0.03	0.056	0.021	0.060
T866	802.11n40	159	Rear Face	1.5	1	MCS0	14	13.69	0.04	**0.274**	**0.102**	**0.294**
T867	802.11n40	159	Rear Face	1.5	2	MCS0	14	13.69	0.08	0.253	0.093	0.272
T868	802.11n40	159	Rear Face	1.5	3	MCS0	14	13.69	-0.05	0.258	0.097	0.277

Note: The value with boldface is the maximum SAR Value of each test band.

7.2.3 SAR MEASUREMENT RESULT OF HOTSPOT

1. Hotspot SAR test results of GSM

Test No.	Band	Mode	Channel	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T319	GSM 850	GPRS4TX	190	Front Face	1	Main	1	28.5	28.11	-0.01	0.208	0.127	0.228
T320	GSM 850	GPRS4TX	190	Rear Face	1	Main	1	28.5	28.11	0.09	0.328	0.187	0.359
T321	GSM 850	GPRS4TX	190	Left Side	1	Main	1	28.5	28.11	0.02	0.142	0.092	0.155
T322	GSM 850	GPRS4TX	190	Right Side	1	Main	1	28.5	28.11	0.07	0.279	0.178	0.305
T323	GSM 850	GPRS4TX	190	Bottom Side	1	Main	1	28.5	28.11	-0.02	0.245	0.129	0.268
T324	GSM 850	GPRS4TX	190	Rear Face	1	Main	2	28.5	28.11	-0.08	0.337	0.195	0.369
T325	GSM 850	GPRS4TX	190	Rear Face	1	Main	3	28.5	28.11	0.05	**0.342**	**0.203**	**0.374**
T332	GSM 850	GPRS4TX	190	Front Face	1	Second	1	28	27.68	0.01	0.294	0.186	0.316
T333	GSM 850	GPRS4TX	190	Rear Face	1	Second	1	28	27.68	0.05	0.436	0.268	0.469
T334	GSM 850	GPRS4TX	190	Left Side	1	Second	1	28	27.68	0.09	0.146	0.081	0.157
T335	GSM 850	GPRS4TX	190	Top Side	1	Second	1	28	27.68	-0.13	0.339	0.187	0.365
T336	GSM 850	GPRS4TX	190	Rear Face	1	Second	2	28	27.68	-0.03	**0.458**	**0.286**	**0.493**
T337	GSM 850	GPRS4TX	190	Rear Face	1	Second	3	28	27.68	-0.08	0.442	0.273	0.476
T344	GSM 1900	GPRS4TX	661	Front Face	1	Main	1	25.5	24.76	-0.05	0.148	0.093	0.175
T345	GSM 1900	GPRS4TX	661	Rear Face	1	Main	1	25.5	24.76	-0.04	0.406	0.223	0.481
T346	GSM 1900	GPRS4TX	661	Left Side	1	Main	1	25.5	24.76	0.01	0.096	0.057	0.113
T347	GSM 1900	GPRS4TX	661	Right Side	1	Main	1	25.5	24.76	0.16	0.051	0.030	0.060
T348	GSM 1900	GPRS4TX	661	Bottom Side	1	Main	1	25.5	24.76	0.02	**0.460**	**0.256**	**0.545**
T349	GSM 1900	GPRS4TX	661	Bottom Side	1	Main	2	25.5	24.76	0.1	0.435	0.221	0.516
T350	GSM 1900	GPRS4TX	661	Bottom Side	1	Main	3	25.5	24.76	-0.08	0.449	0.245	0.532
T357	GSM 1900	GPRS4TX	661	Front Face	1	Second	1	25	24.52	0.01	0.435	0.232	0.486
T358	GSM 1900	GPRS4TX	661	Rear Face	1	Second	1	25	24.52	-0.05	0.563	0.309	0.629
T359	GSM 1900	GPRS4TX	661	Left Side	1	Second	1	25	24.52	-0.17	0.187	0.100	0.209
T360	GSM 1900	GPRS4TX	661	Top Side	1	Second	1	25	24.52	0	0.811	0.391	0.906
T361	GSM 1900	GPRS4TX	512	Top Side	1	Second	1	25	24.53	0.09	0.834	0.401	0.929
T362	GSM 1900	GPRS4TX	810	Top Side	1	Second	1	25	24.66	0.09	0.789	0.360	0.853
T363	GSM 1900	GPRS4TX	512	Top Side	1	Second	2	25	24.53	0.1	0.823	0.391	0.917
T364	GSM 1900	GPRS4TX	512	Top Side	1	Second	3	25	24.53	-0.02	**0.839**	**0.405**	**0.935**
T365	GSM 1900	GPRS4TX	512	Top Side (Repeated)	1	Second	3	25	24.53	0.03	0.822	0.399	0.916

Note: The value with boldface is the maximum SAR Value of each test band.

2. Hotspot SAR test results of UMTS

Test No.	Band	Mode	Channel	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T371	UMTS B2	RMC12.2K	9400	Front Face	1	Main	1	20.5	20.28	-0.05	0.348	0.209	0.366
T372	UMTS B2	RMC12.2K	9400	Rear Face	1	Main	1	20.5	20.28	0.03	0.831	0.477	0.874
T373	UMTS B2	RMC12.2K	9400	Left Side	1	Main	1	20.5	20.28	0.08	0.183	0.100	0.193
T374	UMTS B2	RMC12.2K	9400	Right Side	1	Main	1	20.5	20.28	0	0.055	0.032	0.057
T375	UMTS B2	RMC12.2K	9400	Bottom Side	1	Main	1	20.5	20.28	0.06	**1.070**	**0.578**	**1.126**
T376	UMTS B2	RMC12.2K	9262	Rear Face	1	Main	1	20.5	20.22	0.05	0.856	0.461	0.913
T377	UMTS B2	RMC12.2K	9538	Rear Face	1	Main	1	20.5	20.33	-0.09	0.879	0.492	0.914
T378	UMTS B2	RMC12.2K	9262	Bottom Side	1	Main	1	20.5	20.22	0.16	1.020	0.550	1.088
T379	UMTS B2	RMC12.2K	9538	Bottom Side	1	Main	1	20.5	20.33	0.03	1.010	0.547	1.050
T380	UMTS B2	RMC12.2K	9400	Bottom Side	1	Main	2	20.5	20.28	0.05	1.040	0.559	1.094
T381	UMTS B2	RMC12.2K	9400	Bottom Side	1	Main	3	20.5	20.28	-0.15	1.060	0.572	1.115
T382	UMTS B2	RMC12.2K	9400	Bottom Side (Repeated)	1	Main	1	20.5	20.28	0.03	1.020	0.558	1.073
T388	UMTS B2	RMC12.2K	9400	Front Face	1	Second	1	21.5	21.28	0.01	0.307	0.163	0.323
T389	UMTS B2	RMC12.2K	9400	Rear Face	1	Second	1	21.5	21.28	0.08	0.393	0.211	0.413
T390	UMTS B2	RMC12.2K	9400	Left Side	1	Second	1	21.5	21.28	-0.01	0.124	0.066	0.130
T391	UMTS B2	RMC12.2K	9400	Top Side	1	Second	1	21.5	21.28	0.09	**0.626**	**0.309**	**0.659**
T394	UMTS B2	RMC12.2K	9400	Top Side	1	Second	2	21.5	21.28	0.1	0.608	0.289	0.640
T395	UMTS B2	RMC12.2K	9400	Top Side	1	Second	3	21.5	21.28	-0.08	0.614	0.296	0.646
T402	UMTS B4	RMC12.2K	1413	Front Face	1	Main	1	23.5	23.06	0.01	0.209	0.132	0.231
T403	UMTS B4	RMC12.2K	1413	Rear Face	1	Main	1	23.5	23.06	0.12	0.725	0.407	0.802
T404	UMTS B4	RMC12.2K	1413	Left Side	1	Main	1	23.5	23.06	-0.05	0.093	0.056	0.103
T405	UMTS B4	RMC12.2K	1413	Right Side	1	Main	1	23.5	23.06	0.06	0.056	0.034	0.061
T406	UMTS B4	RMC12.2K	1413	Bottom Side	1	Main	1	23.5	23.06	-0.05	0.660	0.373	0.730
T407	UMTS B4	RMC12.2K	1312	Rear Face	1	Main	1	23.5	23.07	0.01	0.584	0.329	0.645
T408	UMTS B4	RMC12.2K	1513	Rear Face	1	Main	1	23.5	23.02	0.04	**0.791**	**0.447**	**0.883**
T409	UMTS B4	RMC12.2K	1513	Rear Face	1	Main	2	23.5	23.02	0.11	0.772	0.436	0.862
T410	UMTS B4	RMC12.2K	1513	Rear Face	1	Main	3	23.5	23.02	0.17	0.786	0.441	0.878
T417	UMTS B4	RMC12.2K	1413	Front Face	1	Second	1	21	20.57	-0.09	0.398	0.221	0.439
T418	UMTS B4	RMC12.2K	1413	Rear Face	1	Second	1	21	20.57	-0.05	0.426	0.249	0.470
T419	UMTS B4	RMC12.2K	1413	Left Side	1	Second	1	21	20.57	0.01	0.134	0.072	0.148
T420	UMTS B4	RMC12.2K	1413	Top Side	1	Second	1	21	20.57	0.03	**0.557**	**0.282**	**0.615**
T423	UMTS B4	RMC12.2K	1413	Top Side	1	Second	2	21	20.57	0.15	0.538	0.269	0.594
T424	UMTS B4	RMC12.2K	1413	Top Side	1	Second	3	21	20.57	-0.05	0.542	0.274	0.598
T431	UMTS B5	RMC12.2K	4182	Front Face	1	Main	1	23.5	22.93	-0.01	0.161	0.102	0.184
T432	UMTS B5	RMC12.2K	4182	Rear Face	1	Main	1	23.5	22.93	0.05	**0.275**	**0.163**	**0.314**
T433	UMTS B5	RMC12.2K	4182	Left Side	1	Main	1	23.5	22.93	0.07	0.108	0.071	0.123
T434	UMTS B5	RMC12.2K	4182	Right Side	1	Main	1	23.5	22.93	-0.02	0.213	0.139	0.243
T435	UMTS B5	RMC12.2K	4182	Bottom Side	1	Main	1	23.5	22.93	0.1	0.184	0.099	0.210
T436	UMTS B5	RMC12.2K	4182	Rear Face	1	Main	2	23.5	22.93	0.02	0.267	0.156	0.304
T437	UMTS B5	RMC12.2K	4182	Rear Face	1	Main	3	23.5	22.93	0.12	0.271	0.162	0.309
T444	UMTS B5	RMC12.2K	4182	Front Face	1	Second	1	23.5	23.01	0.02	0.136	0.082	0.152
T445	UMTS B5	RMC12.2K	4182	Rear Face	1	Second	1	23.5	23.01	0.01	0.182	0.115	0.204
T446	UMTS B5	RMC12.2K	4182	Left Side	1	Second	1	23.5	23.01	0.01	0.098	0.060	0.110
T447	UMTS B5	RMC12.2K	4182	Top Side	1	Second	1	23.5	23.01	-0.08	0.166	0.091	0.186
T448	UMTS B5	RMC12.2K	4182	Rear Face	1	Second	2	23.5	23.01	0.01	0.186	0.117	0.208
T449	UMTS B5	RMC12.2K	4182	Rear Face	1	Second	3	23.5	23.01	-0.19	**0.195**	**0.123**	**0.218**

Note: The value with boldface is the maximum SAR Value of each test band.

3. Hotspot SAR test results of LTE

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T457	LTE B2	QPSK20M	18900	1	50	Front Face	1	Main	1	21.5	20.7	0.05	0.224	0.144	0.269
T458	LTE B2	QPSK20M	18900	1	50	Rear Face	1	Main	1	21.5	20.7	0.09	0.613	0.348	0.737
T459	LTE B2	QPSK20M	18900	1	50	Left Side	1	Main	1	21.5	20.7	-0.01	0.141	0.079	0.170
T460	LTE B2	QPSK20M	18900	1	50	Right Side	1	Main	1	21.5	20.7	0.02	0.062	0.039	0.075
T461	LTE B2	QPSK20M	18900	1	50	Bottom Side	1	Main	1	21.5	20.7	0.03	0.855	0.463	1.028
T462	LTE B2	QPSK20M	19100	50	0	Front Face	1	Main	1	21.5	21.43	-0.05	0.287	0.187	0.292
T463	LTE B2	QPSK20M	19100	50	0	Rear Face	1	Main	1	21.5	21.43	-0.07	0.747	0.427	0.759
T464	LTE B2	QPSK20M	19100	50	0	Left Side	1	Main	1	21.5	21.43	0.01	0.191	0.108	0.194
T465	LTE B2	QPSK20M	19100	50	0	Right Side	1	Main	1	21.5	21.43	0.06	0.083	0.052	0.084
T466	LTE B2	QPSK20M	19100	50	0	Bottom Side	1	Main	1	21.5	21.43	-0.04	0.865	0.474	0.879
T467	LTE B2	QPSK20M	18700	1	50	Bottom Side	1	Main	1	21.5	20.53	0.1	0.708	0.390	0.885
T468	LTE B2	QPSK20M	19100	1	50	Bottom Side	1	Main	1	21.5	20.44	0.03	0.718	0.398	0.916
T469	LTE B2	QPSK20M	18700	50	0	Bottom Side	1	Main	1	21.5	21.42	-0.02	0.914	0.504	0.931
T470	LTE B2	QPSK20M	18900	50	0	Bottom Side	1	Main	1	21.5	21.29	0	0.851	0.470	0.893
T471	LTE B2	QPSK20M	19100	100	0	Bottom Side	1	Main	1	21.5	21.42	-0.01	0.828	0.457	0.843
T472	LTE B2	QPSK20M	18900	1	50	Bottom Side	1	Main	2	21.5	20.7	-0.05	0.846	0.455	1.017
T473	LTE B2	QPSK20M	18900	1	50	Bottom Side	1	Main	3	21.5	20.7	0.01	**0.862**	**0.474**	**1.036**
T474	LTE B2	QPSK20M	18900	1	50	Bottom Side (Repeated)	1	Main	3	21.5	20.7	0.05	0.846	0.462	1.017
T483	LTE B2	QPSK20M	18700	1	50	Front Face	1	Second	1	23	21.93	0.02	0.373	0.205	0.477
T484	LTE B2	QPSK20M	18700	1	50	Rear Face	1	Second	1	23	21.93	0.05	0.484	0.266	0.619
T485	LTE B2	QPSK20M	18700	1	50	Left Side	1	Second	1	23	21.93	0.09	0.137	0.072	0.175
T486	LTE B2	QPSK20M	18700	1	50	Top Side	1	Second	1	23	21.93	0	0.724	0.364	0.926
T487	LTE B2	QPSK20M	19100	50	0	Front Face	1	Second	1	22	21.9	-0.1	0.358	0.195	0.366
T488	LTE B2	QPSK20M	19100	50	0	Rear Face	1	Second	1	22	21.9	0.05	0.472	0.255	0.483
T489	LTE B2	QPSK20M	19100	50	0	Left Side	1	Second	1	22	21.9	0.03	0.147	0.077	0.150
T490	LTE B2	QPSK20M	19100	50	0	Top Side	1	Second	1	22	21.9	-0.05	0.757	0.376	0.775
T491	LTE B2	QPSK20M	18900	1	50	Top Side	1	Second	1	23	21.79	-0.08	**0.708**	**0.354**	**0.935**
T492	LTE B2	QPSK20M	19100	1	50	Top Side	1	Second	1	23	21.88	-0.02	0.715	0.357	0.925
T495	LTE B2	QPSK20M	19100	100	0	Top Side	1	Second	1	22	21.89	0.01	0.705	0.347	0.723
T496	LTE B2	QPSK1.4M	18607	3	3	Top Side	1	Second	1	23	22.84	0.07	0.789	0.407	0.819
T497	LTE B2	QPSK20M	18900	1	50	Top Side	1	Second	2	23	21.79	0.08	0.673	0.334	0.889
T498	LTE B2	QPSK20M	18900	1	50	Top Side	1	Second	3	23	21.79	0.19	0.686	0.347	0.906

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T508	LTE B4	QPSK20M	20050	1	50	Front Face	1	Main	1	23	22.04	-0.01	0.125	0.079	0.156
T509	LTE B4	QPSK20M	20050	1	50	Rear Face	1	Main	1	23	22.04	0.02	0.428	0.243	0.533
T510	LTE B4	QPSK20M	20050	1	50	Left Side	1	Main	1	23	22.04	0	0.052	0.032	0.065
T511	LTE B4	QPSK20M	20050	1	50	Right Side	1	Main	1	23	22.04	-0.05	0.033	0.018	0.041
T512	LTE B4	QPSK20M	20050	1	50	Bottom Side	1	Main	1	23	22.04	0.12	0.428	0.248	0.534
T513	LTE B4	QPSK20M	20175	50	50	Front Face	1	Main	1	22	21.9	-0.09	0.151	0.095	0.155
T514	LTE B4	QPSK20M	20175	50	50	Rear Face	1	Main	1	22	21.9	0.17	0.510	0.287	0.522
T515	LTE B4	QPSK20M	20175	50	50	Left Side	1	Main	1	22	21.9	-0.1	0.064	0.038	0.065
T516	LTE B4	QPSK20M	20175	50	50	Right Side	1	Main	1	22	21.9	-0.02	0.038	0.023	0.039
T517	LTE B4	QPSK20M	20175	50	50	Bottom Side	1	Main	1	22	21.9	0	0.532	0.299	0.544
T518	LTE B4	QPSK1.4M	20175	3	1	Bottom Side	1	Main	1	23	22.87	0.05	**0.587**	**0.331**	**0.605**
T519	LTE B4	QPSK1.4M	20175	3	1	Bottom Side	1	Main	2	23	22.87	0.09	0.562	0.317	0.579
T520	LTE B4	QPSK1.4M	20175	3	1	Bottom Side	1	Main	3	23	22.87	-0.02	0.550	0.302	0.567
T530	LTE B4	QPSK20M	20050	1	50	Front Face	1	Second	1	23	21.74	0.01	0.544	0.303	0.727
T531	LTE B4	QPSK20M	20050	1	50	Rear Face	1	Second	1	23	21.74	-0.05	0.590	0.344	0.789
T532	LTE B4	QPSK20M	20050	1	50	Left Side	1	Second	1	23	21.74	0.03	0.210	0.118	0.281
T533	LTE B4	QPSK20M	20050	1	50	Top Side	1	Second	1	23	21.74	-0.13	0.682	0.376	0.912
T534	LTE B4	QPSK20M	20175	50	50	Front Face	1	Second	1	22	21.63	-0.1	0.565	0.314	0.615
T535	LTE B4	QPSK20M	20175	50	50	Rear Face	1	Second	1	22	21.63	-0.03	0.612	0.358	0.666
T536	LTE B4	QPSK20M	20175	50	50	Left Side	1	Second	1	22	21.63	0.1	0.208	0.115	0.226
T537	LTE B4	QPSK20M	20175	50	50	Top Side	1	Second	1	22	21.63	-0.05	0.762	0.403	0.830
T538	LTE B4	QPSK20M	20175	1	50	Top Side	1	Second	1	23	21.62	0.03	0.789	0.397	1.084
T539	LTE B4	QPSK20M	20300	1	50	Top Side	1	Second	1	23	21.64	0	**0.794**	**0.399**	**1.086**
T540	LTE B4	QPSK20M	20050	50	50	Top Side	1	Second	1	22	21.56	0.19	0.766	0.390	0.848
T541	LTE B4	QPSK20M	20300	50	50	Top Side	1	Second	1	22	21.53	-0.03	0.790	0.409	0.880
T542	LTE B4	QPSK20M	20175	100	0	Top Side	1	Second	1	22	21.56	-0.03	0.802	0.401	0.888
T543	LTE B4	QPSK1.4M	20175	3	1	Top Side	1	Second	1	23	22.65	0.02	0.830	0.468	0.900
T544	LTE B4	QPSK20M	20300	1	50	Top Side	1	Second	2	23	21.64	0.09	0.777	0.380	1.063
T545	LTE B4	QPSK20M	20300	1	50	Top Side	1	Second	3	23	21.64	0.04	0.759	0.371	1.038

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T555	LTE B5	QPSK10M	20525	1	24	Front Face	1	Main	1	23	22.15	-0.03	0.129	0.083	0.157
T556	LTE B5	QPSK10M	20525	1	24	Rear Face	1	Main	1	23	22.15	0.02	**0.234**	**0.138**	**0.285**
T557	LTE B5	QPSK10M	20525	1	24	Left Side	1	Main	1	23	22.15	0.04	0.106	0.069	0.129
T558	LTE B5	QPSK10M	20525	1	24	Right Side	1	Main	1	23	22.15	-0.06	0.164	0.107	0.199
T559	LTE B5	QPSK10M	20525	1	24	Bottom Side	1	Main	1	23	22.15	0.09	0.172	0.090	0.209
T560	LTE B5	QPSK10M	20525	25	0	Front Face	1	Main	1	22	21.98	0.1	0.127	0.082	0.128
T561	LTE B5	QPSK10M	20525	25	0	Rear Face	1	Main	1	22	21.98	0.03	0.231	0.137	0.232
T562	LTE B5	QPSK10M	20525	25	0	Left Side	1	Main	1	22	21.98	-0.02	0.106	0.069	0.106
T563	LTE B5	QPSK10M	20525	25	0	Right Side	1	Main	1	22	21.98	0.05	0.163	0.107	0.164
T564	LTE B5	QPSK10M	20525	25	0	Bottom Side	1	Main	1	22	21.98	-0.01	0.162	0.087	0.163
T565	LTE B5	QPSK1.4M	20643	3	1	Rear Face	1	Main	1	23	22.94	0	0.262	0.156	0.266
T566	LTE B5	QPSK10M	20525	1	24	Rear Face	1	Main	2	23	22.15	-0.09	0.229	0.131	0.279
T567	LTE B5	QPSK10M	20525	1	24	Rear Face	1	Main	3	23	22.15	0.03	0.214	0.126	0.260
T577	LTE B5	QPSK10M	20450	1	24	Front Face	1	Second	1	23	22.13	-0.02	0.098	0.061	0.120
T578	LTE B5	QPSK10M	20450	1	24	Rear Face	1	Second	1	23	22.13	0.07	0.149	0.095	0.182
T579	LTE B5	QPSK10M	20450	1	24	Left Side	1	Second	1	23	22.13	0.01	0.059	0.030	0.072
T580	LTE B5	QPSK10M	20450	1	24	Top Side	1	Second	1	23	22.13	-0.12	0.096	0.055	0.117
T581	LTE B5	QPSK10M	20525	25	0	Front Face	1	Second	1	22.5	22.09	-0.01	0.117	0.072	0.129
T582	LTE B5	QPSK10M	20525	25	0	Rear Face	1	Second	1	22.5	22.09	0.03	0.173	0.111	0.190
T583	LTE B5	QPSK10M	20525	25	0	Left Side	1	Second	1	22.5	22.09	0.1	0.061	0.037	0.067
T584	LTE B5	QPSK10M	20525	25	0	Top Side	1	Second	1	22.5	22.09	0.09	0.116	0.068	0.127
T585	LTE B5	QPSK1.4M	20525	3	1	Rear Face	1	Second	1	23	22.99	0.02	**0.209**	**0.132**	**0.209**
T586	LTE B5	QPSK1.4M	20525	3	1	Rear Face	1	Second	2	23	22.99	0.03	0.197	0.122	0.197
T587	LTE B5	QPSK1.4M	20525	3	1	Rear Face	1	Second	3	23	22.99	0.07	0.202	0.129	0.202

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T595	LTE B7	QPSK20M	21100	1	50	Front Face	1	Main	1	21.5	21.29	-0.05	0.322	0.148	0.338
T596	LTE B7	QPSK20M	21100	1	50	Rear Face	1	Main	1	21.5	21.29	0.01	0.870	0.377	0.913
T597	LTE B7	QPSK20M	21100	1	50	Left Side	1	Main	1	21.5	21.29	0.09	0.129	0.069	0.135
T598	LTE B7	QPSK20M	21100	1	50	Right Side	1	Main	1	21.5	21.29	0.11	0.113	0.059	0.119
T599	LTE B7	QPSK20M	21100	1	50	Bottom Side	1	Main	1	21.5	21.29	0.06	**1.010**	**0.412**	**1.060**
T600	LTE B7	QPSK20M	21350	50	0	Front Face	1	Main	1	21.5	21.16	-0.08	0.373	0.169	0.403
T601	LTE B7	QPSK20M	21350	50	0	Rear Face	1	Main	1	21.5	21.16	-0.03	0.834	0.398	0.902
T602	LTE B7	QPSK20M	21350	50	0	Left Side	1	Main	1	21.5	21.16	-0.08	0.111	0.059	0.120
T603	LTE B7	QPSK20M	21350	50	0	Right Side	1	Main	1	21.5	21.16	0.19	0.120	0.065	0.130
T604	LTE B7	QPSK20M	21350	50	0	Bottom Side	1	Main	1	21.5	21.16	0.03	0.908	0.367	0.982
T605	LTE B7	QPSK20M	20850	1	50	Rear Face	1	Main	1	21.5	21.13	0.02	0.708	0.322	0.771
T606	LTE B7	QPSK20M	21350	1	50	Rear Face	1	Main	1	21.5	21.21	0.05	0.857	0.404	0.916
T607	LTE B7	QPSK20M	20850	1	50	Bottom Side	1	Main	1	21.5	21.13	-0.01	0.838	0.391	0.913
T608	LTE B7	QPSK20M	21350	1	50	Bottom Side	1	Main	1	21.5	21.21	0.11	0.834	0.402	0.892
T609	LTE B7	QPSK20M	20850	50	25	Rear Face	1	Main	1	21.5	20.99	-0.03	0.691	0.316	0.777
T610	LTE B7	QPSK20M	21100	50	25	Rear Face	1	Main	1	21.5	21.03	0	0.814	0.368	0.907
T611	LTE B7	QPSK20M	20850	50	25	Bottom Side	1	Main	1	21.5	20.99	-0.19	0.863	0.338	0.971
T612	LTE B7	QPSK20M	21100	50	25	Bottom Side	1	Main	1	21.5	21.03	0.02	0.886	0.356	0.987
T613	LTE B7	QPSK20M	21350	100	0	Bottom Side	1	Main	1	21.5	21.14	-0.15	0.920	0.401	1.000
T614	LTE B7	QPSK20M	21350	100	0	Rear Face	1	Main	1	21.5	21.14	0.03	0.792	0.376	0.860
T615	LTE B7	QPSK20M	21100	1	50	Bottom Side	1	Main	2	21.5	21.29	0.03	0.986	0.406	1.035
T616	LTE B7	QPSK20M	21100	1	50	Bottom Side	1	Main	3	21.5	21.29	0.08	0.993	0.410	1.042
T617	LTE B7	QPSK20M	21100	1	50	Bottom Side (Repeated)	1	Main	1	21.5	21.29	0.03	0.990	0.401	1.039
T625	LTE B7	QPSK20M	20850	1	50	Front Face	1	Second	1	17.5	17.27	0.02	0.255	0.121	0.269
T626	LTE B7	QPSK20M	20850	1	50	Rear Face	1	Second	1	17.5	17.27	0.08	0.651	0.279	0.686
T627	LTE B7	QPSK20M	20850	1	50	Left Side	1	Second	1	17.5	17.27	-0.05	0.276	0.136	0.291
T628	LTE B7	QPSK20M	20850	1	50	Top Side	1	Second	1	17.5	17.27	-0.01	**0.712**	**0.299**	**0.751**
T629	LTE B7	QPSK20M	21350	50	50	Front Face	1	Second	1	17.5	16.93	0.04	0.205	0.105	0.234
T630	LTE B7	QPSK20M	21350	50	50	Rear Face	1	Second	1	17.5	16.93	0	0.498	0.212	0.568
T631	LTE B7	QPSK20M	21350	50	50	Left Side	1	Second	1	17.5	16.93	0.08	0.308	0.147	0.351
T632	LTE B7	QPSK20M	21350	50	50	Top Side	1	Second	1	17.5	16.93	0.1	0.538	0.210	0.613
T638	LTE B7	QPSK20M	20850	1	50	Top Side	1	Second	2	17.5	17.27	0.15	0.682	0.275	0.719
T639	LTE B7	QPSK20M	20850	1	50	Top Side	1	Second	3	17.5	17.27	-0.02	0.679	0.269	0.716

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T648	LTE B38	QPSK20M	38150	1	50	Front Face	1	Main	1	23	22.46	0.01	0.215	0.093	0.243
T649	LTE B38	QPSK20M	38150	1	50	Rear Face	1	Main	1	23	22.46	0.08	0.590	0.226	0.668
T650	LTE B38	QPSK20M	38150	1	50	Left Side	1	Main	1	23	22.46	-0.05	0.065	0.023	0.074
T651	LTE B38	QPSK20M	38150	1	50	Right Side	1	Main	1	23	22.46	-0.03	0.076	0.037	0.086
T652	LTE B38	QPSK20M	38150	1	50	Bottom Side	1	Main	1	23	22.46	-0.03	**0.684**	**0.276**	**0.775**
T653	LTE B38	QPSK20M	38150	50	25	Front Face	1	Main	1	22.5	22.16	0.12	0.208	0.090	0.225
T654	LTE B38	QPSK20M	38150	50	25	Rear Face	1	Main	1	22.5	22.16	0.02	0.675	0.245	0.730
T655	LTE B38	QPSK20M	38150	50	25	Left Side	1	Main	1	22.5	22.16	-0.07	0.046	0.017	0.050
T656	LTE B38	QPSK20M	38150	50	25	Right Side	1	Main	1	22.5	22.16	0.1	0.065	0.033	0.070
T657	LTE B38	QPSK20M	38150	50	25	Bottom Side	1	Main	1	22.5	22.16	0.03	0.664	0.268	0.718
T658	LTE B38	QPSK20M	38150	1	50	Bottom Side	1	Main	2	23	22.46	0	0.661	0.257	0.749
T659	LTE B38	QPSK20M	38150	1	50	Bottom Side	1	Main	3	23	22.46	0.08	0.673	0.264	0.762
T668	LTE B38	QPSK20M	38150	1	50	Front Face	1	Second	1	23	22.65	-0.07	0.348	0.186	0.377
T669	LTE B38	QPSK20M	38150	1	50	Rear Face	1	Second	1	23	22.65	0.05	0.894	0.382	0.969
T670	LTE B38	QPSK20M	38150	1	50	Left Side	1	Second	1	23	22.65	0.04	0.573	0.281	0.621
T671	LTE B38	QPSK20M	38150	1	50	Top Side	1	Second	1	23	22.65	-0.02	0.726	0.300	0.787
T672	LTE B38	QPSK20M	38150	50	25	Front Face	1	Second	1	22.5	22.39	0	0.354	0.188	0.363
T673	LTE B38	QPSK20M	38150	50	25	Rear Face	1	Second	1	22.5	22.39	0.13	0.880	0.376	0.903
T674	LTE B38	QPSK20M	38150	50	25	Left Side	1	Second	1	22.5	22.39	0.05	0.555	0.272	0.569
T675	LTE B38	QPSK20M	38150	50	25	Top Side	1	Second	1	22.5	22.39	0.02	0.764	0.317	0.784
T676	LTE B38	QPSK20M	37850	1	50	Rear Face	1	Second	1	23	22.51	0.01	**0.973**	**0.424**	**1.089**
T677	LTE B38	QPSK20M	38000	1	50	Rear Face	1	Second	1	23	22.55	0.03	0.911	0.397	1.010
T678	LTE B38	QPSK20M	37850	50	25	Rear Face	1	Second	1	22.5	22.3	-0.06	0.951	0.415	0.996
T679	LTE B38	QPSK20M	38000	50	25	Rear Face	1	Second	1	22.5	22.32	-0.08	0.895	0.391	0.933
T680	LTE B38	QPSK20M	38150	100	0	Rear Face	1	Second	1	22.5	22.33	0.05	0.773	0.359	0.804
T681	LTE B38	QPSK20M	37850	1	50	Rear Face	1	Second	2	23	22.51	0.02	0.966	0.426	1.081
T682	LTE B38	QPSK20M	37850	1	50	Rear Face	1	Second	3	23	22.51	-0.06	0.956	0.418	1.070
T683	LTE B38	QPSK20M	37850	1	50	Rear Face (Repeated)	1	Second	1	23	22.51	0.03	0.961	0.417	1.076

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T691	LTE B41	QPSK20M	40140	1	50	Front Face	1	Main	1	23.5	23	0.05	0.196	0.087	0.220
T692	LTE B41	QPSK20M	40140	1	50	Rear Face	1	Main	1	23.5	23	0.01	0.493	0.197	0.553
T693	LTE B41	QPSK20M	40140	1	50	Left Side	1	Main	1	23.5	23	-0.08	0.113	0.055	0.127
T694	LTE B41	QPSK20M	40140	1	50	Right Side	1	Main	1	23.5	23	-0.19	0.077	0.038	0.087
T695	LTE B41	QPSK20M	40140	1	50	Bottom Side	1	Main	1	23.5	23	-0.02	0.555	0.228	0.623
T696	LTE B41	QPSK20M	40140	50	50	Front Face	1	Main	1	23	22.68	0	0.194	0.085	0.209
T697	LTE B41	QPSK20M	40140	50	50	Rear Face	1	Main	1	23	22.68	0.09	0.502	0.198	0.540
T698	LTE B41	QPSK20M	40140	50	50	Left Side	1	Main	1	23	22.68	0.02	0.110	0.055	0.118
T699	LTE B41	QPSK20M	40140	50	50	Right Side	1	Main	1	23	22.68	0.06	0.077	0.039	0.083
T700	LTE B41	QPSK20M	40140	50	50	Bottom Side	1	Main	1	23	22.68	0.06	0.530	0.217	0.571
T701	LTE B41	QPSK20M	40440	1	50	Bottom Side	1	Main	1	23.5	22.6	0.14	0.680	0.274	0.837
T702	LTE B41	QPSK20M	40840	1	50	Bottom Side	1	Main	1	23.5	22.64	0.11	**0.709**	**0.284**	**0.864**
T703	LTE B41	QPSK20M	41140	1	50	Bottom Side	1	Main	1	23.5	22.91	-0.01	0.635	0.253	0.727
T704	LTE B41	QPSK20M	40140	100	0	Bottom Side	1	Main	1	23	22.7	-0.03	0.541	0.213	0.580
T705	LTE B41	QPSK20M	40840	1	50	Bottom Side	1	Main	2	23.5	22.64	0.05	0.686	0.265	0.836
T706	LTE B41	QPSK20M	40840	1	50	Bottom Side	1	Main	3	23.5	22.64	0.13	0.699	0.278	0.852
T715	LTE B41	QPSK20M	41140	1	99	Front Face	1	Second	1	22.5	21.78	0.05	0.246	0.135	0.290
T716	LTE B41	QPSK20M	41140	1	99	Rear Face	1	Second	1	22.5	21.78	0	0.562	0.259	0.663
T717	LTE B41	QPSK20M	41140	1	99	Left Side	1	Second	1	22.5	21.78	-0.09	0.339	0.173	0.400
T718	LTE B41	QPSK20M	41140	1	99	Top Side	1	Second	1	22.5	21.78	0	0.501	0.209	0.591
T719	LTE B41	QPSK20M	41140	50	50	Front Face	1	Second	1	22.5	22.44	0.01	0.263	0.144	0.267
T720	LTE B41	QPSK20M	41140	50	50	Rear Face	1	Second	1	22.5	22.44	0.08	0.775	0.337	0.786
T721	LTE B41	QPSK20M	41140	50	50	Left Side	1	Second	1	22.5	22.44	0.04	0.372	0.188	0.377
T722	LTE B41	QPSK20M	41140	50	50	Top Side	1	Second	1	22.5	22.44	-0.05	0.549	0.224	0.557
T723	LTE B41	QPSK20M	40140	1	99	Rear Face	1	Second	1	22.5	21.46	0.03	0.792	0.366	1.006
T724	LTE B41	QPSK20M	40440	1	99	Rear Face	1	Second	1	22.5	21.51	0.06	0.564	0.252	0.708
T725	LTE B41	QPSK20M	40840	1	99	Rear Face	1	Second	1	22.5	21.68	-0.01	0.495	0.211	0.598
T729	LTE B41	QPSK20M	40140	50	50	Rear Face	1	Second	1	22.5	22.35	0.07	**1.050**	**0.506**	**1.087**
T730	LTE B41	QPSK20M	40440	50	50	Rear Face	1	Second	1	22.5	22.39	0.1	0.989	0.439	1.014
T731	LTE B41	QPSK20M	40840	50	50	Rear Face	1	Second	1	22.5	22.34	0.09	0.640	0.304	0.664
T735	LTE B41	QPSK20M	41140	100	0	Rear Face	1	Second	1	22.5	22.42	-0.05	0.694	0.304	0.707
T737	LTE B41	QPSK20M	40140	50	50	Rear Face	1	Second	2	22.5	22.35	0.16	0.997	0.466	1.032
T738	LTE B41	QPSK20M	40140	50	50	Rear Face	1	Second	3	22.5	22.35	-0.01	1.020	0.498	1.056
T739	LTE B41	QPSK20M	40140	50	50	Rear Face (Repeated)	1	Second	1	22.5	22.35	0.04	1.030	0.499	1.066

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T748	LTE B66	QPSK20M	132072	1	50	Front Face	1	Main	1	23	22.01	0.01	0.143	0.090	0.180
T749	LTE B66	QPSK20M	132072	1	50	Rear Face	1	Main	1	23	22.01	-0.01	0.508	0.281	0.638
T750	LTE B66	QPSK20M	132072	1	50	Left Side	1	Main	1	23	22.01	0.05	0.063	0.038	0.080
T751	LTE B66	QPSK20M	132072	1	50	Right Side	1	Main	1	23	22.01	-0.1	0.033	0.016	0.041
T752	LTE B66	QPSK20M	132072	1	50	Bottom Side	1	Main	1	23	22.01	0.06	0.464	0.260	0.583
T753	LTE B66	QPSK20M	132572	50	25	Front Face	1	Main	1	22	21.7	0.01	0.191	0.122	0.205
T754	LTE B66	QPSK20M	132572	50	25	Rear Face	1	Main	1	22	21.7	0	0.638	0.359	0.684
T755	LTE B66	QPSK20M	132572	50	25	Left Side	1	Main	1	22	21.7	-0.09	0.095	0.059	0.102
T756	LTE B66	QPSK20M	132572	50	25	Right Side	1	Main	1	22	21.7	0.12	0.055	0.036	0.059
T757	LTE B66	QPSK20M	132572	50	25	Bottom Side	1	Main	1	22	21.7	0.04	**0.652**	**0.363**	**0.699**
T758	LTE B66	QPSK1.4M	131979	3	1	Bottom Side	1	Main	1	23	22.77	-0.1	0.625	0.343	0.659
T759	LTE B66	QPSK20M	132572	50	25	Bottom Side	1	Main	2	22	21.7	0.11	0.643	0.356	0.689
T760	LTE B66	QPSK20M	132572	50	25	Bottom Side	1	Main	3	22	21.7	0.03	0.649	0.361	0.695
T770	LTE B66	QPSK20M	132072	1	50	Front Face	1	Second	1	23	21.8	0.02	0.541	0.310	0.713
T771	LTE B66	QPSK20M	132072	1	50	Rear Face	1	Second	1	23	21.8	0.01	0.569	0.336	0.750
T772	LTE B66	QPSK20M	132072	1	50	Left Side	1	Second	1	23	21.8	0.09	0.214	0.117	0.282
T773	LTE B66	QPSK20M	132072	1	50	Top Side	1	Second	1	23	21.8	0.07	0.713	0.367	0.940
T774	LTE B66	QPSK20M	132572	50	0	Front Face	1	Second	1	22	21.61	-0.05	0.539	0.292	0.590
T775	LTE B66	QPSK20M	132572	50	0	Rear Face	1	Second	1	22	21.61	-0.01	0.583	0.338	0.638
T776	LTE B66	QPSK20M	132572	50	0	Left Side	1	Second	1	22	21.61	0.12	0.203	0.110	0.222
T777	LTE B66	QPSK20M	132572	50	0	Top Side	1	Second	1	22	21.61	0.15	0.755	0.393	0.826
T778	LTE B66	QPSK20M	132322	1	50	Top Side	1	Second	1	23	21.69	0	0.745	0.386	1.007
T779	LTE B66	QPSK20M	132572	1	50	Top Side	1	Second	1	23	21.59	0	**0.759**	**0.394**	**1.050**
T780	LTE B66	QPSK20M	132072	50	0	Top Side	1	Second	1	22	21.6	-0.01	0.702	0.359	0.770
T781	LTE B66	QPSK20M	132322	50	0	Top Side	1	Second	1	22	21.58	-0.03	0.720	0.371	0.793
T782	LTE B66	QPSK20M	132072	100	0	Top Side	1	Second	1	22	21.6	0.11	0.698	0.358	0.765
T783	LTE B66	QPSK1.4M	132322	3	1	Top Side	1	Second	1	23	22.65	0.01	0.966	0.484	1.047
T784	LTE B66	QPSK20M	132572	1	50	Top Side	1	Second	2	23	21.59	0.05	0.744	0.381	1.029
T785	LTE B66	QPSK20M	132572	1	50	Top Side	1	Second	3	23	21.59	0.08	0.752	0.390	1.040

Note: The value with boldface is the maximum SAR Value of each test band.

4. Hotspot SAR test results of 2.4G WIFI

Test No.	Band	Channel	Test Position	Separation Distance (cm)	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T791	802.11b	6	Front Face	1	1	1	17.5	17.13	0.06	0.107	0.052	0.117
T792	802.11b	6	Rear Face	1	1	1	17.5	17.13	0.05	**0.132**	**0.062**	**0.144**
T793	802.11b	6	Right Side	1	1	1	17.5	17.13	0.01	0.101	0.048	0.110
T794	802.11b	6	Top Side	1	1	1	17.5	17.13	-0.08	0.091	0.050	0.099
T795	802.11b	6	Rear Face	1	2	1	17.5	17.13	0	0.129	0.061	0.140
T796	802.11b	6	Rear Face	1	3	1	17.5	17.13	0.01	0.130	0.062	0.142

Note:
1) The value with boldface is the maximum SAR Value of each test band.
2) Adj SAR = 1g Reported SAR x (802.11g/n Pmax / 802.11b Pmax) = 0.144 x (63.10 / 56.23) = 0.162 < 1.2, so 2.4G WIFI 802.11g/n SAR test is not required.

5. Hotspot SAR test results of 5G WIFI (WiFi only)

Test No.	Band	Channel	Test Position	Separation Distance (cm)	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T803	802.11n40	46	Front Face	1	1	MCS0	15.5	15.16	0.06	0.191	0.070	0.207
T804	802.11n40	46	Rear Face	1	1	MCS0	15.5	15.16	-0.01	0.525	0.243	0.568
T805	802.11n40	46	Right Side	1	1	MCS0	15.5	15.16	0.08	**0.940**	**0.309**	**1.017**
T806	802.11n40	46	Top Side	1	1	MCS0	15.5	15.16	0.05	0.211	0.093	0.228
T807	802.11n40	38	Right Side	1	1	MCS0	12.5	12.02	0.14	0.520	0.166	0.581
T808	802.11n40	46	Right Side	1	2	MCS0	15.5	15.16	-0.03	0.934	0.301	1.010
T809	802.11n40	46	Right Side	1	3	MCS0	15.5	15.16	0.08	0.929	0.294	1.005
T810	802.11n40	46	Right Side (Repeated)	1	1	MCS0	15.5	15.16	0.03	0.923	0.297	0.998
T843	802.11n40	159	Front Face	1	1	MCS0	16	15.56	0.04	0.149	0.061	0.165
T844	802.11n40	159	Rear Face	1	1	MCS0	16	15.56	0.04	**0.708**	**0.246**	**0.783**
T845	802.11n40	159	Right Side	1	1	MCS0	16	15.56	0.06	0.633	0.209	0.700
T846	802.11n40	159	Top Side	1	1	MCS0	16	15.56	0.04	0.221	0.095	0.245
T847	802.11n40	151	Right Side	1	1	MCS0	16	15.54	-0.03	0.608	0.226	0.676
T848	802.11n40	159	Right Side	1	2	MCS0	16	15.56	-0.01	0.619	0.233	0.685
T849	802.11n40	159	Right Side	1	3	MCS0	16	15.56	-0.08	0.592	0.241	0.655

Note: The value with boldface is the maximum SAR Value of each test band.

6. Hotspot SAR test results of 5G WIFI (WiFi+2G&3G&4G)

Test No.	Band	Channel	Test Position	Separation Distance (cm)	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR
T860	802.11n40	46	Front Face	1	1	MCS0	14	13.35	0.02	0.133	0.051	0.154
T861	802.11n40	46	Rear Face	1	1	MCS0	14	13.35	0.09	0.348	0.122	0.404
T862	802.11n40	46	Right Side	1	1	MCS0	14	13.35	-0.19	**0.480**	**0.155**	**0.557**
T863	802.11n40	46	Top Side	1	1	MCS0	14	13.35	0.11	0.157	0.058	0.182
T864	802.11n40	46	Right Side	1	2	MCS0	14	13.35	0.06	0.453	0.132	0.526
T865	802.11n40	46	Right Side	1	3	MCS0	14	13.35	0.01	0.468	0.148	0.544
T870	802.11n40	159	Front Face	1	1	MCS0	14	13.69	0.03	0.114	0.048	0.122
T871	802.11n40	159	Rear Face	1	1	MCS0	14	13.69	-0.01	**0.370**	**0.141**	**0.397**
T872	802.11n40	159	Right Side	1	1	MCS0	14	13.69	0.01	0.356	0.131	0.382
T873	802.11n40	159	Top Side	1	1	MCS0	14	13.69	0.08	0.166	0.073	0.178
T874	802.11n40	159	Rear Face	1	2	MCS0	14	13.69	0.04	0.356	0.121	0.382
T875	802.11n40	159	Rear Face	1	3	MCS0	14	13.69	0.09	0.334	0.106	0.359

Note: The value with boldface is the maximum SAR Value of each test band.

Note: Per KDB248227 D01, 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.

7.2.4 SAR MEASUREMENT RESULT OF PRODUCT SPECIFIC 10-G SAR

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 No.	Band	Mode	Channel	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T319	GSM 850	GPRS4TX	190	Front Face	1	Main	1	28.5	28.11	-0.01	0.208	0.127	0.228	YES
T320	GSM 850	GPRS4TX	190	Rear Face	1	Main	1	28.5	28.11	0.09	0.328	0.187	0.359	YES
T321	GSM 850	GPRS4TX	190	Left Side	1	Main	1	28.5	28.11	0.02	0.142	0.092	0.155	YES
T322	GSM 850	GPRS4TX	190	Right Side	1	Main	1	28.5	28.11	0.07	0.279	0.178	0.305	YES
T323	GSM 850	GPRS4TX	190	Bottom Side	1	Main	1	28.5	28.11	-0.02	0.245	0.129	0.268	YES
T324	GSM 850	GPRS4TX	190	Rear Face	1	Main	2	28.5	28.11	-0.08	0.337	0.195	0.369	YES
T325	GSM 850	GPRS4TX	190	Rear Face	1	Main	3	28.5	28.11	0.05	**0.342**	**0.203**	**0.374**	YES
T332	GSM 850	GPRS4TX	190	Front Face	1	Second	1	28	27.68	0.01	0.294	0.186	0.316	YES
T333	GSM 850	GPRS4TX	190	Rear Face	1	Second	1	28	27.68	0.05	0.436	0.268	0.469	YES
T334	GSM 850	GPRS4TX	190	Left Side	1	Second	1	28	27.68	0.09	0.146	0.081	0.157	YES
T335	GSM 850	GPRS4TX	190	Top Side	1	Second	1	28	27.68	-0.13	0.339	0.187	0.365	YES
T336	GSM 850	GPRS4TX	190	Rear Face	1	Second	2	28	27.68	-0.03	**0.458**	**0.286**	**0.493**	YES
T337	GSM 850	GPRS4TX	190	Rear Face	1	Second	3	28	27.68	-0.08	0.442	0.273	0.476	YES
T344	GSM 1900	GPRS4TX	661	Front Face	1	Main	1	25.5	24.76	-0.05	0.148	0.093	0.175	YES
T345	GSM 1900	GPRS4TX	661	Rear Face	1	Main	1	25.5	24.76	-0.04	0.406	0.223	0.481	YES
T346	GSM 1900	GPRS4TX	661	Left Side	1	Main	1	25.5	24.76	0.01	0.096	0.057	0.113	YES
T347	GSM 1900	GPRS4TX	661	Right Side	1	Main	1	25.5	24.76	0.16	0.051	0.030	0.060	YES
T348	GSM 1900	GPRS4TX	661	Bottom Side	1	Main	1	25.5	24.76	0.02	**0.460**	**0.256**	**0.545**	YES
T349	GSM 1900	GPRS4TX	661	Bottom Side	1	Main	2	25.5	24.76	0.1	0.435	0.221	0.516	YES
T350	GSM 1900	GPRS4TX	661	Bottom Side	1	Main	3	25.5	24.76	-0.08	0.449	0.245	0.532	YES
T357	GSM 1900	GPRS4TX	661	Front Face	1	Second	1	25	24.52	0.01	0.435	0.232	0.486	YES
T358	GSM 1900	GPRS4TX	661	Rear Face	1	Second	1	25	24.52	-0.05	0.563	0.309	0.629	YES
T359	GSM 1900	GPRS4TX	661	Left Side	1	Second	1	25	24.52	-0.17	0.187	0.100	0.209	YES
T360	GSM 1900	GPRS4TX	661	Top Side	1	Second	1	25	24.52	0	0.811	0.391	0.906	YES
T361	GSM 1900	GPRS4TX	512	Top Side	1	Second	1	25	24.53	0.09	0.834	0.401	0.929	YES
T362	GSM 1900	GPRS4TX	810	Top Side	1	Second	1	25	24.66	0.09	0.789	0.360	0.853	YES
T363	GSM 1900	GPRS4TX	512	Top Side	1	Second	2	25	24.53	0.1	0.823	0.391	0.917	YES
T364	GSM 1900	GPRS4TX	512	Top Side	1	Second	3	25	24.53	-0.02	**0.839**	**0.405**	**0.935**	YES
T365	GSM 1900	GPRS4TX	512	Top Side (Repeated)	1	Second	3	25	24.53	0.03	0.822	0.399	0.916	YES

Test No.	Band	Mode	Channel	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T371	UMTS B2	RMC12.2K	9400	Front Face	1	Main	1	20.5	20.28	-0.05	0.348	0.209	0.366	YES
T372	UMTS B2	RMC12.2K	9400	Rear Face	1	Main	1	20.5	20.28	0.03	0.831	0.477	0.874	YES
T373	UMTS B2	RMC12.2K	9400	Left Side	1	Main	1	20.5	20.28	0.08	0.183	0.100	0.193	YES
T374	UMTS B2	RMC12.2K	9400	Right Side	1	Main	1	20.5	20.28	0	0.055	0.032	0.057	YES
T375	UMTS B2	RMC12.2K	9400	Bottom Side	1	Main	1	20.5	20.28	0.06	**1.070**	**0.578**	**1.126**	YES
T376	UMTS B2	RMC12.2K	9262	Rear Face	1	Main	1	20.5	20.22	0.05	0.856	0.461	0.913	YES
T377	UMTS B2	RMC12.2K	9538	Rear Face	1	Main	1	20.5	20.33	-0.09	0.879	0.492	0.914	YES
T378	UMTS B2	RMC12.2K	9262	Bottom Side	1	Main	1	20.5	20.22	0.16	1.020	0.550	1.088	YES
T379	UMTS B2	RMC12.2K	9538	Bottom Side	1	Main	1	20.5	20.33	0.03	1.010	0.547	1.050	YES
T380	UMTS B2	RMC12.2K	9400	Bottom Side	1	Main	2	20.5	20.28	0.05	1.040	0.559	1.094	YES
T381	UMTS B2	RMC12.2K	9400	Bottom Side	1	Main	3	20.5	20.28	-0.15	1.060	0.572	1.115	YES
T382	UMTS B2	RMC12.2K	9400	Bottom Side (Repeated)	1	Main	1	20.5	20.28	0.03	1.020	0.558	1.073	YES
T388	UMTS B2	RMC12.2K	9400	Front Face	1	Second	1	21.5	21.28	0.01	0.307	0.163	0.323	YES
T389	UMTS B2	RMC12.2K	9400	Rear Face	1	Second	1	21.5	21.28	0.08	0.393	0.211	0.413	YES
T390	UMTS B2	RMC12.2K	9400	Left Side	1	Second	1	21.5	21.28	-0.01	0.124	0.066	0.130	YES
T391	UMTS B2	RMC12.2K	9400	Top Side	1	Second	1	21.5	21.28	0.09	**0.626**	**0.309**	**0.659**	YES
T394	UMTS B2	RMC12.2K	9400	Top Side	1	Second	2	21.5	21.28	0.1	0.608	0.289	0.640	YES
T395	UMTS B2	RMC12.2K	9400	Top Side	1	Second	3	21.5	21.28	-0.08	0.614	0.296	0.646	YES
T402	UMTS B4	RMC12.2K	1413	Front Face	1	Main	1	23.5	23.06	0.01	0.209	0.132	0.231	YES
T403	UMTS B4	RMC12.2K	1413	Rear Face	1	Main	1	23.5	23.06	0.12	0.720	0.407	0.797	YES
T404	UMTS B4	RMC12.2K	1413	Left Side	1	Main	1	23.5	23.06	-0.05	0.093	0.056	0.103	YES
T405	UMTS B4	RMC12.2K	1413	Right Side	1	Main	1	23.5	23.06	0.06	0.056	0.034	0.061	YES
T406	UMTS B4	RMC12.2K	1413	Bottom Side	1	Main	1	23.5	23.06	-0.05	0.660	0.373	0.730	YES
T407	UMTS B4	RMC12.2K	1312	Rear Face	1	Main	1	23.5	23.07	0.01	0.584	0.329	0.645	YES
T408	UMTS B4	RMC12.2K	1513	Rear Face	1	Main	1	23.5	23.02	0.04	**0.791**	**0.447**	**0.883**	YES
T409	UMTS B4	RMC12.2K	1513	Rear Face	1	Main	2	23.5	23.02	0.11	0.772	0.436	0.862	YES
T410	UMTS B4	RMC12.2K	1513	Rear Face	1	Main	3	23.5	23.02	0.17	0.786	0.441	0.878	YES
T417	UMTS B4	RMC12.2K	1413	Front Face	1	Second	1	21	20.57	-0.09	0.398	0.221	0.439	YES
T418	UMTS B4	RMC12.2K	1413	Rear Face	1	Second	1	21	20.57	-0.05	0.426	0.249	0.470	YES
T419	UMTS B4	RMC12.2K	1413	Left Side	1	Second	1	21	20.57	0.01	0.134	0.072	0.148	YES
T420	UMTS B4	RMC12.2K	1413	Top Side	1	Second	1	21	20.57	0.03	**0.557**	**0.282**	**0.615**	YES
T423	UMTS B4	RMC12.2K	1413	Top Side	1	Second	2	21	20.57	0.15	0.538	0.269	0.594	YES
T424	UMTS B4	RMC12.2K	1413	Top Side	1	Second	3	21	20.57	-0.05	0.542	0.274	0.598	YES
T431	UMTS B5	RMC12.2K	4182	Front Face	1	Main	1	23.5	22.93	-0.01	0.161	0.102	0.184	YES
T432	UMTS B5	RMC12.2K	4182	Rear Face	1	Main	1	23.5	22.93	0.05	**0.275**	**0.163**	**0.314**	YES
T433	UMTS B5	RMC12.2K	4182	Left Side	1	Main	1	23.5	22.93	0.07	0.108	0.071	0.123	YES
T434	UMTS B5	RMC12.2K	4182	Right Side	1	Main	1	23.5	22.93	-0.02	0.213	0.139	0.243	YES
T435	UMTS B5	RMC12.2K	4182	Bottom Side	1	Main	1	23.5	22.93	0.1	0.184	0.099	0.210	YES
T436	UMTS B5	RMC12.2K	4182	Rear Face	1	Main	2	23.5	22.93	0.02	0.267	0.156	0.304	YES
T437	UMTS B5	RMC12.2K	4182	Rear Face	1	Main	3	23.5	22.93	0.12	0.271	0.162	0.309	YES
T444	UMTS B5	RMC12.2K	4182	Front Face	1	Second	1	23.5	23.01	0.02	0.136	0.082	0.152	YES
T445	UMTS B5	RMC12.2K	4182	Rear Face	1	Second	1	23.5	23.01	0.01	0.182	0.115	0.204	YES
T446	UMTS B5	RMC12.2K	4182	Left Side	1	Second	1	23.5	23.01	0.01	0.098	0.060	0.110	YES
T447	UMTS B5	RMC12.2K	4182	Top Side	1	Second	1	23.5	23.01	-0.08	0.166	0.091	0.186	YES
T448	UMTS B5	RMC12.2K	4182	Rear Face	1	Second	2	23.5	23.01	0.01	0.186	0.117	0.208	YES
T449	UMTS B5	RMC12.2K	4182	Rear Face	1	Second	3	23.5	23.01	-0.19	**0.195**	**0.123**	**0.218**	YES

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T457	LTE B2	QPSK20M	18900	1	50	Front Face	1	Main	1	21.5	20.7	0.05	0.224	0.144	0.269	YES
T458	LTE B2	QPSK20M	18900	1	50	Rear Face	1	Main	1	21.5	20.7	0.09	0.613	0.348	0.737	YES
T459	LTE B2	QPSK20M	18900	1	50	Left Side	1	Main	1	21.5	20.7	-0.01	0.141	0.079	0.170	YES
T460	LTE B2	QPSK20M	18900	1	50	Right Side	1	Main	1	21.5	20.7	0.02	0.062	0.039	0.075	YES
T461	LTE B2	QPSK20M	18900	1	50	Bottom Side	1	Main	1	21.5	20.7	0.03	0.855	0.463	1.028	YES
T462	LTE B2	QPSK20M	19100	50	0	Front Face	1	Main	1	21.5	21.43	-0.05	0.287	0.187	0.292	YES
T463	LTE B2	QPSK20M	19100	50	0	Rear Face	1	Main	1	21.5	21.43	-0.07	0.747	0.427	0.759	YES
T464	LTE B2	QPSK20M	19100	50	0	Left Side	1	Main	1	21.5	21.43	0.01	0.191	0.108	0.194	YES
T465	LTE B2	QPSK20M	19100	50	0	Right Side	1	Main	1	21.5	21.43	0.06	0.083	0.052	0.084	YES
T466	LTE B2	QPSK20M	19100	50	0	Bottom Side	1	Main	1	21.5	21.43	-0.04	0.865	0.474	0.879	YES
T467	LTE B2	QPSK20M	18700	1	50	Bottom Side	1	Main	1	21.5	20.53	0.1	0.708	0.390	0.885	YES
T468	LTE B2	QPSK20M	19100	1	50	Bottom Side	1	Main	1	21.5	20.44	0.03	0.718	0.398	0.916	YES
T469	LTE B2	QPSK20M	18700	50	0	Bottom Side	1	Main	1	21.5	21.42	-0.02	0.914	0.504	0.931	YES
T470	LTE B2	QPSK20M	18900	50	0	Bottom Side	1	Main	1	21.5	21.29	0	0.851	0.470	0.893	YES
T471	LTE B2	QPSK20M	19100	100	0	Bottom Side	1	Main	1	21.5	21.42	-0.01	0.828	0.457	0.843	YES
T472	LTE B2	QPSK20M	18900	1	50	Bottom Side	1	Main	2	21.5	20.7	-0.05	0.846	0.455	1.017	YES
T473	LTE B2	QPSK20M	18900	1	50	Bottom Side	1	Main	3	21.5	20.7	0.01	**0.862**	**0.474**	**1.036**	YES
T474	LTE B2	QPSK20M	18900	1	50	Bottom Side (Repeated)	1	Main	3	21.5	20.7	0.05	0.846	0.462	1.017	YES
T483	LTE B2	QPSK20M	18700	1	50	Front Face	1	Second	1	23	21.93	0.02	0.373	0.205	0.477	YES
T484	LTE B2	QPSK20M	18700	1	50	Rear Face	1	Second	1	23	21.93	0.05	0.484	0.266	0.619	YES
T485	LTE B2	QPSK20M	18700	1	50	Left Side	1	Second	1	23	21.93	0.09	0.137	0.072	0.175	YES
T486	LTE B2	QPSK20M	18700	1	50	Top Side	1	Second	1	23	21.93	0	0.724	0.364	0.926	YES
T487	LTE B2	QPSK20M	19100	50	0	Front Face	1	Second	1	22	21.9	-0.1	0.358	0.195	0.366	YES
T488	LTE B2	QPSK20M	19100	50	0	Rear Face	1	Second	1	22	21.9	0.05	0.472	0.255	0.483	YES
T489	LTE B2	QPSK20M	19100	50	0	Left Side	1	Second	1	22	21.9	0.03	0.147	0.077	0.150	YES
T490	LTE B2	QPSK20M	19100	50	0	Top Side	1	Second	1	22	21.9	-0.05	0.757	0.376	0.775	YES
T491	LTE B2	QPSK20M	18900	1	50	Top Side	1	Second	1	23	21.79	-0.08	**0.708**	**0.354**	**0.935**	YES
T492	LTE B2	QPSK20M	19100	1	50	Top Side	1	Second	1	23	21.88	-0.02	0.715	0.357	0.925	YES
T495	LTE B2	QPSK20M	19100	100	0	Top Side	1	Second	1	22	21.89	0.01	0.705	0.347	0.723	YES
T496	LTE B2	QPSK1.4M	18607	3	3	Top Side	1	Second	1	23	22.84	0.07	0.789	0.407	0.819	YES
T497	LTE B2	QPSK20M	18900	1	50	Top Side	1	Second	2	23	21.79	0.08	0.673	0.334	0.889	YES
T498	LTE B2	QPSK20M	18900	1	50	Top Side	1	Second	3	23	21.79	0.19	0.686	0.347	0.906	YES

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T508	LTE B4	QPSK20M	20050	1	50	Front Face	1	Main	1	23	22.04	-0.01	0.125	0.079	0.156	YES
T509	LTE B4	QPSK20M	20050	1	50	Rear Face	1	Main	1	23	22.04	0.02	0.428	0.243	0.533	YES
T510	LTE B4	QPSK20M	20050	1	50	Left Side	1	Main	1	23	22.04	0	0.052	0.032	0.065	YES
T511	LTE B4	QPSK20M	20050	1	50	Right Side	1	Main	1	23	22.04	-0.05	0.033	0.018	0.041	YES
T512	LTE B4	QPSK20M	20050	1	50	Bottom Side	1	Main	1	23	22.04	0.12	0.428	0.248	0.534	YES
T513	LTE B4	QPSK20M	20175	50	50	Front Face	1	Main	1	22	21.9	-0.09	0.151	0.095	0.155	YES
T514	LTE B4	QPSK20M	20175	50	50	Rear Face	1	Main	1	22	21.9	0.17	0.510	0.287	0.522	YES
T515	LTE B4	QPSK20M	20175	50	50	Left Side	1	Main	1	22	21.9	-0.1	0.064	0.038	0.065	YES
T516	LTE B4	QPSK20M	20175	50	50	Right Side	1	Main	1	22	21.9	-0.02	0.038	0.023	0.039	YES
T517	LTE B4	QPSK20M	20175	50	50	Bottom Side	1	Main	1	22	21.9	0	0.532	0.299	0.544	YES
T518	LTE B4	QPSK1.4M	20175	3	1	Bottom Side	1	Main	1	23	22.87	0.05	**0.587**	**0.331**	**0.605**	YES
T519	LTE B4	QPSK1.4M	20175	3	1	Bottom Side	1	Main	2	23	22.87	0.09	0.562	0.317	0.579	YES
T520	LTE B4	QPSK1.4M	20175	3	1	Bottom Side	1	Main	3	23	22.87	-0.02	0.550	0.302	0.567	YES
T530	LTE B4	QPSK20M	20050	1	50	Front Face	1	Second	1	23	21.74	0.01	0.544	0.303	0.727	YES
T531	LTE B4	QPSK20M	20050	1	50	Rear Face	1	Second	1	23	21.74	-0.05	0.590	0.344	0.789	YES
T532	LTE B4	QPSK20M	20050	1	50	Left Side	1	Second	1	23	21.74	0.03	0.210	0.118	0.281	YES
T533	LTE B4	QPSK20M	20050	1	50	Top Side	1	Second	1	23	21.74	-0.13	0.682	0.376	0.912	YES
T534	LTE B4	QPSK20M	20175	50	50	Front Face	1	Second	1	22	21.63	-0.1	0.565	0.314	0.615	YES
T535	LTE B4	QPSK20M	20175	50	50	Rear Face	1	Second	1	22	21.63	-0.03	0.612	0.358	0.666	YES
T536	LTE B4	QPSK20M	20175	50	50	Left Side	1	Second	1	22	21.63	0.1	0.208	0.115	0.226	YES
T537	LTE B4	QPSK20M	20175	50	50	Top Side	1	Second	1	22	21.63	-0.05	0.762	0.403	0.830	YES
T538	LTE B4	QPSK20M	20175	1	50	Top Side	1	Second	1	23	21.62	0.03	0.789	0.397	1.084	YES
T539	LTE B4	QPSK20M	20300	1	50	Top Side	1	Second	1	23	21.64	0	**0.794**	**0.399**	**1.086**	YES
T540	LTE B4	QPSK20M	20050	50	50	Top Side	1	Second	1	22	21.56	0.19	0.766	0.390	0.848	YES
T541	LTE B4	QPSK20M	20300	50	50	Top Side	1	Second	1	22	21.53	-0.03	0.790	0.409	0.880	YES
T542	LTE B4	QPSK20M	20175	100	0	Top Side	1	Second	1	22	21.56	-0.03	0.802	0.401	0.888	YES
T543	LTE B4	QPSK1.4M	20175	3	1	Top Side	1	Second	1	23	22.65	0.02	0.830	0.468	0.900	YES
T544	LTE B4	QPSK20M	20300	1	50	Top Side	1	Second	2	23	21.64	0.09	0.777	0.380	1.063	YES
T545	LTE B4	QPSK20M	20300	1	50	Top Side	1	Second	3	23	21.64	0.04	0.759	0.371	1.038	YES

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T555	LTE B5	QPSK10M	20525	1	24	Front Face	1	Main	1	23	22.15	-0.03	0.129	0.083	0.157	YES
T556	LTE B5	QPSK10M	20525	1	24	Rear Face	1	Main	1	23	22.15	0.02	**0.234**	**0.138**	**0.285**	YES
T557	LTE B5	QPSK10M	20525	1	24	Left Side	1	Main	1	23	22.15	0.04	0.106	0.069	0.129	YES
T558	LTE B5	QPSK10M	20525	1	24	Right Side	1	Main	1	23	22.15	-0.06	0.164	0.107	0.199	YES
T559	LTE B5	QPSK10M	20525	1	24	Bottom Side	1	Main	1	23	22.15	0.09	0.172	0.090	0.209	YES
T560	LTE B5	QPSK10M	20525	25	0	Front Face	1	Main	1	22	21.98	0.1	0.127	0.082	0.128	YES
T561	LTE B5	QPSK10M	20525	25	0	Rear Face	1	Main	1	22	21.98	0.03	0.231	0.137	0.232	YES
T562	LTE B5	QPSK10M	20525	25	0	Left Side	1	Main	1	22	21.98	-0.02	0.106	0.069	0.106	YES
T563	LTE B5	QPSK10M	20525	25	0	Right Side	1	Main	1	22	21.98	0.05	0.163	0.107	0.164	YES
T564	LTE B5	QPSK10M	20525	25	0	Bottom Side	1	Main	1	22	21.98	-0.01	0.162	0.087	0.163	YES
T565	LTE B5	QPSK1.4M	20643	3	1	Rear Face	1	Main	1	23	22.94	0	0.262	0.156	0.266	YES
T566	LTE B5	QPSK10M	20525	1	24	Rear Face	1	Main	2	23	22.15	-0.09	0.229	0.131	0.279	YES
T567	LTE B5	QPSK10M	20525	1	24	Rear Face	1	Main	3	23	22.15	0.03	0.214	0.126	0.260	YES
T577	LTE B5	QPSK10M	20450	1	24	Front Face	1	Second	1	23	22.13	-0.02	0.098	0.061	0.120	YES
T578	LTE B5	QPSK10M	20450	1	24	Rear Face	1	Second	1	23	22.13	0.07	0.149	0.095	0.182	YES
T579	LTE B5	QPSK10M	20450	1	24	Left Side	1	Second	1	23	22.13	0.01	0.059	0.030	0.072	YES
T580	LTE B5	QPSK10M	20450	1	24	Top Side	1	Second	1	23	22.13	-0.12	0.096	0.055	0.117	YES
T581	LTE B5	QPSK10M	20525	25	0	Front Face	1	Second	1	22.5	22.09	-0.01	0.117	0.072	0.129	YES
T582	LTE B5	QPSK10M	20525	25	0	Rear Face	1	Second	1	22.5	22.09	0.03	0.173	0.111	0.190	YES
T583	LTE B5	QPSK10M	20525	25	0	Left Side	1	Second	1	22.5	22.09	0.1	0.061	0.037	0.067	YES
T584	LTE B5	QPSK10M	20525	25	0	Top Side	1	Second	1	22.5	22.09	0.09	0.116	0.068	0.127	YES
T585	LTE B5	QPSK1.4M	20525	3	1	Rear Face	1	Second	1	23	22.99	0.02	**0.209**	**0.132**	**0.209**	YES
T586	LTE B5	QPSK1.4M	20525	3	1	Rear Face	1	Second	2	23	22.99	0.03	0.197	0.122	0.197	YES
T587	LTE B5	QPSK1.4M	20525	3	1	Rear Face	1	Second	3	23	22.99	0.07	0.202	0.129	0.202	YES

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T595	LTE B7	QPSK20M	21100	1	50	Front Face	1	Main	1	21.5	21.29	-0.05	0.322	0.148	0.338	YES
T596	LTE B7	QPSK20M	21100	1	50	Rear Face	1	Main	1	21.5	21.29	0.01	0.870	0.377	0.913	YES
T597	LTE B7	QPSK20M	21100	1	50	Left Side	1	Main	1	21.5	21.29	0.09	0.129	0.069	0.135	YES
T598	LTE B7	QPSK20M	21100	1	50	Right Side	1	Main	1	21.5	21.29	0.11	0.113	0.059	0.119	YES
T599	LTE B7	QPSK20M	21100	1	50	Bottom Side	1	Main	1	21.5	21.29	0.06	**1.010**	**0.412**	**1.060**	YES
T600	LTE B7	QPSK20M	21350	50	0	Front Face	1	Main	1	21.5	21.16	-0.08	0.373	0.169	0.403	YES
T601	LTE B7	QPSK20M	21350	50	0	Rear Face	1	Main	1	21.5	21.16	-0.03	0.834	0.398	0.902	YES
T602	LTE B7	QPSK20M	21350	50	0	Left Side	1	Main	1	21.5	21.16	-0.08	0.111	0.059	0.120	YES
T603	LTE B7	QPSK20M	21350	50	0	Right Side	1	Main	1	21.5	21.16	0.19	0.120	0.065	0.130	YES
T604	LTE B7	QPSK20M	21350	50	0	Bottom Side	1	Main	1	21.5	21.16	0.03	0.908	0.367	0.982	YES
T605	LTE B7	QPSK20M	20850	1	50	Rear Face	1	Main	1	21.5	21.13	0.02	0.708	0.322	0.771	YES
T606	LTE B7	QPSK20M	21350	1	50	Rear Face	1	Main	1	21.5	21.21	0.05	0.857	0.404	0.916	YES
T607	LTE B7	QPSK20M	20850	1	50	Bottom Side	1	Main	1	21.5	21.13	-0.01	0.838	0.391	0.913	YES
T608	LTE B7	QPSK20M	21350	1	50	Bottom Side	1	Main	1	21.5	21.21	0.11	0.834	0.402	0.892	YES
T609	LTE B7	QPSK20M	20850	50	25	Rear Face	1	Main	1	21.5	20.99	-0.03	0.691	0.316	0.777	YES
T610	LTE B7	QPSK20M	21100	50	25	Rear Face	1	Main	1	21.5	21.03	0	0.814	0.368	0.907	YES
T611	LTE B7	QPSK20M	20850	50	25	Bottom Side	1	Main	1	21.5	20.99	-0.19	0.863	0.338	0.971	YES
T612	LTE B7	QPSK20M	21100	50	25	Bottom Side	1	Main	1	21.5	21.03	0.02	0.886	0.356	0.987	YES
T613	LTE B7	QPSK20M	21350	100	0	Bottom Side	1	Main	1	21.5	21.14	-0.15	0.920	0.401	1.000	YES
T614	LTE B7	QPSK20M	21350	100	0	Rear Face	1	Main	1	21.5	21.14	0.03	0.792	0.376	0.860	YES
T615	LTE B7	QPSK20M	21100	1	50	Bottom Side	1	Main	2	21.5	21.29	0.03	0.986	0.406	1.035	YES
T616	LTE B7	QPSK20M	21100	1	50	Bottom Side	1	Main	3	21.5	21.29	0.08	0.993	0.410	1.042	YES
T617	LTE B7	QPSK20M	21100	1	50	Bottom Side (Repeated)	1	Main	1	21.5	21.29	0.03	0.990	0.401	1.039	YES
T625	LTE B7	QPSK20M	20850	1	50	Front Face	1	Second	1	17.5	17.27	0.02	0.255	0.121	0.269	YES
T626	LTE B7	QPSK20M	20850	1	50	Rear Face	1	Second	1	17.5	17.27	0.08	0.651	0.279	0.686	YES
T627	LTE B7	QPSK20M	20850	1	50	Left Side	1	Second	1	17.5	17.27	-0.05	0.276	0.136	0.291	YES
T628	LTE B7	QPSK20M	20850	1	50	Top Side	1	Second	1	17.5	17.27	-0.01	**0.712**	**0.299**	**0.751**	YES
T629	LTE B7	QPSK20M	21350	50	50	Front Face	1	Second	1	17.5	16.93	0.04	0.205	0.105	0.234	YES
T630	LTE B7	QPSK20M	21350	50	50	Rear Face	1	Second	1	17.5	16.93	0	0.498	0.212	0.568	YES
T631	LTE B7	QPSK20M	21350	50	50	Left Side	1	Second	1	17.5	16.93	0.08	0.308	0.147	0.351	YES
T632	LTE B7	QPSK20M	21350	50	50	Top Side	1	Second	1	17.5	16.93	0.1	0.538	0.210	0.613	YES
T638	LTE B7	QPSK20M	20850	1	50	Top Side	1	Second	2	17.5	17.27	0.15	0.682	0.275	0.719	YES
T639	LTE B7	QPSK20M	20850	1	50	Top Side	1	Second	3	17.5	17.27	-0.02	0.679	0.269	0.716	YES

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T648	LTE B38	QPSK20M	38150	1	50	Front Face	1	Main	1	23	22.46	0.01	0.215	0.093	0.243	YES
T649	LTE B38	QPSK20M	38150	1	50	Rear Face	1	Main	1	23	22.46	0.08	0.590	0.226	0.668	YES
T650	LTE B38	QPSK20M	38150	1	50	Left Side	1	Main	1	23	22.46	-0.05	0.065	0.023	0.074	YES
T651	LTE B38	QPSK20M	38150	1	50	Right Side	1	Main	1	23	22.46	-0.03	0.076	0.037	0.086	YES
T652	LTE B38	QPSK20M	38150	1	50	Bottom Side	1	Main	1	23	22.46	-0.03	**0.684**	**0.276**	**0.775**	YES
T653	LTE B38	QPSK20M	38150	50	25	Front Face	1	Main	1	22.5	22.16	0.12	0.208	0.090	0.225	YES
T654	LTE B38	QPSK20M	38150	50	25	Rear Face	1	Main	1	22.5	22.16	0.02	0.675	0.245	0.730	YES
T655	LTE B38	QPSK20M	38150	50	25	Left Side	1	Main	1	22.5	22.16	-0.07	0.046	0.017	0.050	YES
T656	LTE B38	QPSK20M	38150	50	25	Right Side	1	Main	1	22.5	22.16	0.1	0.065	0.033	0.070	YES
T657	LTE B38	QPSK20M	38150	50	25	Bottom Side	1	Main	1	22.5	22.16	0.03	0.664	0.268	0.718	YES
T658	LTE B38	QPSK20M	38150	1	50	Bottom Side	1	Main	2	23	22.46	0	0.661	0.257	0.749	YES
T659	LTE B38	QPSK20M	38150	1	50	Bottom Side	1	Main	3	23	22.46	0.08	0.673	0.264	0.762	YES
T668	LTE B38	QPSK20M	38150	1	50	Front Face	1	Second	1	23	22.65	-0.07	0.348	0.186	0.377	YES
T669	LTE B38	QPSK20M	38150	1	50	Rear Face	1	Second	1	23	22.65	0.05	0.894	0.382	0.969	YES
T670	LTE B38	QPSK20M	38150	1	50	Left Side	1	Second	1	23	22.65	0.04	0.573	0.281	0.621	YES
T671	LTE B38	QPSK20M	38150	1	50	Top Side	1	Second	1	23	22.65	-0.02	0.726	0.300	0.787	YES
T672	LTE B38	QPSK20M	38150	50	25	Front Face	1	Second	1	22.5	22.39	0	0.354	0.188	0.363	YES
T673	LTE B38	QPSK20M	38150	50	25	Rear Face	1	Second	1	22.5	22.39	0.13	0.880	0.376	0.903	YES
T674	LTE B38	QPSK20M	38150	50	25	Left Side	1	Second	1	22.5	22.39	0.05	0.555	0.272	0.569	YES
T675	LTE B38	QPSK20M	38150	50	25	Top Side	1	Second	1	22.5	22.39	0.02	0.764	0.317	0.784	YES
T676	LTE B38	QPSK20M	37850	1	50	Rear Face	1	Second	1	23	22.51	0.01	**0.973**	**0.424**	**1.089**	YES
T677	LTE B38	QPSK20M	38000	1	50	Rear Face	1	Second	1	23	22.55	0.03	0.911	0.397	1.010	YES
T678	LTE B38	QPSK20M	37850	50	25	Rear Face	1	Second	1	22.5	22.3	-0.06	0.951	0.415	0.996	YES
T679	LTE B38	QPSK20M	38000	50	25	Rear Face	1	Second	1	22.5	22.32	-0.08	0.895	0.391	0.933	YES
T680	LTE B38	QPSK20M	38150	100	0	Rear Face	1	Second	1	22.5	22.33	0.05	0.773	0.359	0.804	YES
T681	LTE B38	QPSK20M	37850	1	50	Rear Face	1	Second	2	23	22.51	0.02	0.966	0.426	1.081	YES
T682	LTE B38	QPSK20M	37850	1	50	Rear Face	1	Second	3	23	22.51	-0.06	0.956	0.418	1.070	YES
T683	LTE B38	QPSK20M	37850	1	50	Rear Face (Repeated)	1	Second	1	23	22.51	0.03	0.961	0.417	1.076	YES

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T691	LTE B41	QPSK20M	40140	1	50	Front Face	1	Main	1	23.5	23	0.05	0.196	0.087	0.220	YES
T692	LTE B41	QPSK20M	40140	1	50	Rear Face	1	Main	1	23.5	23	0.01	0.493	0.197	0.553	YES
T693	LTE B41	QPSK20M	40140	1	50	Left Side	1	Main	1	23.5	23	-0.08	0.113	0.055	0.127	YES
T694	LTE B41	QPSK20M	40140	1	50	Right Side	1	Main	1	23.5	23	-0.19	0.077	0.038	0.087	YES
T695	LTE B41	QPSK20M	40140	1	50	Bottom Side	1	Main	1	23.5	23	-0.02	0.555	0.228	0.623	YES
T696	LTE B41	QPSK20M	40140	50	50	Front Face	1	Main	1	23	22.68	0	0.194	0.085	0.209	YES
T697	LTE B41	QPSK20M	40140	50	50	Rear Face	1	Main	1	23	22.68	0.09	0.502	0.198	0.540	YES
T698	LTE B41	QPSK20M	40140	50	50	Left Side	1	Main	1	23	22.68	0.02	0.110	0.055	0.118	YES
T699	LTE B41	QPSK20M	40140	50	50	Right Side	1	Main	1	23	22.68	0.06	0.077	0.039	0.083	YES
T700	LTE B41	QPSK20M	40140	50	50	Bottom Side	1	Main	1	23	22.68	0.06	0.530	0.217	0.571	YES
T701	LTE B41	QPSK20M	40440	1	50	Bottom Side	1	Main	1	23.5	22.6	0.14	0.680	0.274	0.837	YES
T702	LTE B41	QPSK20M	40840	1	50	Bottom Side	1	Main	1	23.5	22.64	0.11	**0.709**	**0.284**	**0.864**	YES
T703	LTE B41	QPSK20M	41140	1	50	Bottom Side	1	Main	1	23.5	22.91	-0.01	0.635	0.253	0.727	YES
T704	LTE B41	QPSK20M	40140	100	0	Bottom Side	1	Main	1	23	22.7	-0.03	0.541	0.213	0.580	YES
T705	LTE B41	QPSK20M	40840	1	50	Bottom Side	1	Main	2	23.5	22.64	0.05	0.686	0.265	0.836	YES
T706	LTE B41	QPSK20M	40840	1	50	Bottom Side	1	Main	3	23.5	22.64	0.13	0.699	0.278	0.852	YES
T715	LTE B41	QPSK20M	41140	1	99	Front Face	1	Second	1	22.5	21.78	0.05	0.246	0.135	0.290	YES
T716	LTE B41	QPSK20M	41140	1	99	Rear Face	1	Second	1	22.5	21.78	0	0.562	0.259	0.663	YES
T717	LTE B41	QPSK20M	41140	1	99	Left Side	1	Second	1	22.5	21.78	-0.09	0.339	0.173	0.400	YES
T718	LTE B41	QPSK20M	41140	1	99	Top Side	1	Second	1	22.5	21.78	0	0.501	0.209	0.591	YES
T719	LTE B41	QPSK20M	41140	50	50	Front Face	1	Second	1	22.5	22.44	0.01	0.263	0.144	0.267	YES
T720	LTE B41	QPSK20M	41140	50	50	Rear Face	1	Second	1	22.5	22.44	0.08	0.775	0.337	0.786	YES
T721	LTE B41	QPSK20M	41140	50	50	Left Side	1	Second	1	22.5	22.44	0.04	0.372	0.188	0.377	YES
T722	LTE B41	QPSK20M	41140	50	50	Top Side	1	Second	1	22.5	22.44	-0.05	0.549	0.224	0.557	YES
T723	LTE B41	QPSK20M	40140	1	99	Rear Face	1	Second	1	22.5	21.46	0.03	0.792	0.366	1.006	YES
T724	LTE B41	QPSK20M	40440	1	99	Rear Face	1	Second	1	22.5	21.51	0.06	0.564	0.252	0.708	YES
T725	LTE B41	QPSK20M	40840	1	99	Rear Face	1	Second	1	22.5	21.68	-0.01	0.495	0.211	0.598	YES
T729	LTE B41	QPSK20M	40140	50	50	Rear Face	1	Second	1	22.5	22.35	0.07	**1.050**	**0.506**	**1.087**	YES
T730	LTE B41	QPSK20M	40440	50	50	Rear Face	1	Second	1	22.5	22.39	0.1	0.989	0.439	1.014	YES
T731	LTE B41	QPSK20M	40840	50	50	Rear Face	1	Second	1	22.5	22.34	0.09	0.640	0.304	0.664	YES
T735	LTE B41	QPSK20M	41140	100	0	Rear Face	1	Second	1	22.5	22.42	-0.05	0.694	0.304	0.707	YES
T737	LTE B41	QPSK20M	40140	50	50	Rear Face	1	Second	2	22.5	22.35	0.16	0.997	0.466	1.032	YES
T738	LTE B41	QPSK20M	40140	50	50	Rear Face	1	Second	3	22.5	22.35	-0.01	1.020	0.498	1.056	YES
T739	LTE B41	QPSK20M	40140	50	50	Rear Face (Repeated)	1	Second	1	22.5	22.35	0.04	1.030	0.499	1.066	YES

Test No.	Band	Mode	Channel	RB	offset	Test Position	Separation Distance (cm)	Ant	Battery	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Reported 1g SAR	product specific 10-g SAR Exclusion
T748	LTE B66	QPSK20M	132072	1	50	Front Face	1	Main	1	23	22.01	0.01	0.143	0.090	0.180	YES
T749	LTE B66	QPSK20M	132072	1	50	Rear Face	1	Main	1	23	22.01	-0.01	0.508	0.281	0.638	YES
T750	LTE B66	QPSK20M	132072	1	50	Left Side	1	Main	1	23	22.01	0.05	0.063	0.038	0.080	YES
T751	LTE B66	QPSK20M	132072	1	50	Right Side	1	Main	1	23	22.01	-0.1	0.033	0.016	0.041	YES
T752	LTE B66	QPSK20M	132072	1	50	Bottom Side	1	Main	1	23	22.01	0.06	0.464	0.260	0.583	YES
T753	LTE B66	QPSK20M	132572	50	25	Front Face	1	Main	1	22	21.7	0.01	0.191	0.122	0.205	YES
T754	LTE B66	QPSK20M	132572	50	25	Rear Face	1	Main	1	22	21.7	0	0.638	0.359	0.684	YES
T755	LTE B66	QPSK20M	132572	50	25	Left Side	1	Main	1	22	21.7	-0.09	0.095	0.059	0.102	YES
T756	LTE B66	QPSK20M	132572	50	25	Right Side	1	Main	1	22	21.7	0.12	0.055	0.036	0.059	YES
T757	LTE B66	QPSK20M	132572	50	25	Bottom Side	1	Main	1	22	21.7	0.04	**0.652**	**0.363**	**0.699**	YES
T758	LTE B66	QPSK1.4M	131979	3	1	Bottom Side	1	Main	1	23	22.77	-0.1	0.625	0.343	0.659	YES
T759	LTE B66	QPSK20M	132572	50	25	Bottom Side	1	Main	2	22	21.7	0.11	0.643	0.356	0.689	YES
T760	LTE B66	QPSK20M	132572	50	25	Bottom Side	1	Main	3	22	21.7	0.03	0.649	0.361	0.695	YES
T770	LTE B66	QPSK20M	132072	1	50	Front Face	1	Second	1	23	21.8	0.02	0.541	0.310	0.713	YES
T771	LTE B66	QPSK20M	132072	1	50	Rear Face	1	Second	1	23	21.8	0.01	0.569	0.336	0.750	YES
T772	LTE B66	QPSK20M	132072	1	50	Left Side	1	Second	1	23	21.8	0.09	0.214	0.117	0.282	YES
T773	LTE B66	QPSK20M	132072	1	50	Top Side	1	Second	1	23	21.8	0.07	0.713	0.367	0.940	YES
T774	LTE B66	QPSK20M	132572	50	0	Front Face	1	Second	1	22	21.61	-0.05	0.539	0.292	0.590	YES
T775	LTE B66	QPSK20M	132572	50	0	Rear Face	1	Second	1	22	21.61	-0.01	0.583	0.338	0.638	YES
T776	LTE B66	QPSK20M	132572	50	0	Left Side	1	Second	1	22	21.61	0.12	0.203	0.110	0.222	YES
T777	LTE B66	QPSK20M	132572	50	0	Top Side	1	Second	1	22	21.61	0.15	0.755	0.393	0.826	YES
T778	LTE B66	QPSK20M	132322	1	50	Top Side	1	Second	1	23	21.69	0	0.745	0.386	1.007	YES
T779	LTE B66	QPSK20M	132572	1	50	Top Side	1	Second	1	23	21.59	0	**0.759**	**0.394**	**1.050**	YES
T780	LTE B66	QPSK20M	132072	50	0	Top Side	1	Second	1	22	21.6	-0.01	0.702	0.359	0.770	YES
T781	LTE B66	QPSK20M	132322	50	0	Top Side	1	Second	1	22	21.58	-0.03	0.720	0.371	0.793	YES
T782	LTE B66	QPSK20M	132072	100	0	Top Side	1	Second	1	22	21.6	0.11	0.698	0.358	0.765	YES
T783	LTE B66	QPSK1.4M	132322	3	1	Top Side	1	Second	1	23	22.65	0.01	0.966	0.484	1.047	YES
T784	LTE B66	QPSK20M	132572	1	50	Top Side	1	Second	2	23	21.59	0.05	0.744	0.381	1.029	YES
T785	LTE B66	QPSK20M	132572	1	50	Top Side	1	Second	3	23	21.59	0.08	0.752	0.390	1.040	YES

Test No.	Band	Channel	Test Position	Separation Distance (cm)	Battery	Data Rate	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	product specific 10-g SAR Exclusion
T791	802.11b	6	Front Face	1	1	1	17.5	17.13	0.06	0.107	0.052	YES
T792	802.11b	6	Rear Face	1	1	1	17.5	17.13	0.05	**0.132**	**0.062**	YES
T793	802.11b	6	Right Side	1	1	1	17.5	17.13	0.01	0.101	0.048	YES
T794	802.11b	6	Top Side	1	1	1	17.5	17.13	-0.08	0.091	0.050	YES
T795	802.11b	6	Rear Face	1	2	1	17.5	17.13	0	0.129	0.061	YES
T796	802.11b	6	Rear Face	1	3	1	17.5	17.13	0.01	0.130	0.062	YES
T803	802.11n40	46	Front Face	1	1	MCS0	15.5	15.16	0.06	0.191	0.070	YES
T804	802.11n40	46	Rear Face	1	1	MCS0	15.5	15.16	-0.01	0.525	0.243	YES
T805	802.11n40	46	Right Side	1	1	MCS0	15.5	15.16	0.08	**0.940**	**0.309**	YES
T806	802.11n40	46	Top Side	1	1	MCS0	15.5	15.16	0.05	0.211	0.093	YES
T807	802.11n40	38	Right Side	1	1	MCS0	12.5	12.02	0.14	0.520	0.166	YES
T808	802.11n40	46	Right Side	1	2	MCS0	15.5	15.16	-0.03	0.934	0.301	YES
T809	802.11n40	46	Right Side	1	3	MCS0	15.5	15.16	0.08	0.929	0.294	YES
T810	802.11n40	46	Right Side (Repeated)	1	1	MCS0	15.5	15.16	0.03	0.923	0.297	YES
T860	802.11n40	46	Front Face	1	1	MCS0	14	13.35	0.02	0.133	0.051	YES
T861	802.11n40	46	Rear Face	1	1	MCS0	14	13.35	0.09	0.348	0.122	YES
T862	802.11n40	46	Right Side	1	1	MCS0	14	13.35	-0.19	**0.480**	**0.155**	YES
T863	802.11n40	46	Top Side	1	1	MCS0	14	13.35	0.11	0.157	0.058	YES
T864	802.11n40	46	Right Side	1	2	MCS0	14	13.35	0.06	0.453	0.132	YES
T865	802.11n40	46	Right Side	1	3	MCS0	14	13.35	0.01	0.468	0.148	YES
T811	802.11n40	54	Front Face	1.5	1	MCS0	15.5	15.07	0	0.030	0.008	YES
T812	802.11n40	54	Rear Face	1.5	1	MCS0	15.5	15.07	0.04	**0.466**	**0.173**	YES
T813	802.11n40	54	Rear Face	1.5	2	MCS0	15.5	15.07	0.01	0.462	0.175	YES
T814	802.11n40	54	Rear Face	1.5	3	MCS0	15.5	15.07	-0.03	0.448	0.162	YES
T843	802.11n40	159	Front Face	1	1	MCS0	16	15.56	0.04	0.149	0.061	YES
T844	802.11n40	159	Rear Face	1	1	MCS0	16	15.56	0.04	**0.708**	**0.246**	YES
T845	802.11n40	159	Right Side	1	1	MCS0	16	15.56	0.06	0.633	0.209	YES
T846	802.11n40	159	Top Side	1	1	MCS0	16	15.56	0.04	0.221	0.095	YES
T847	802.11n40	151	Right Side	1	1	MCS0	16	15.54	-0.03	0.608	0.226	YES
T848	802.11n40	159	Right Side	1	2	MCS0	16	15.56	-0.01	0.619	0.233	YES
T849	802.11n40	159	Right Side	1	3	MCS0	16	15.56	-0.08	0.592	0.241	YES
T870	802.11n40	159	Front Face	1	1	MCS0	14	13.69	0.03	0.114	0.048	YES
T871	802.11n40	159	Rear Face	1	1	MCS0	14	13.69	-0.01	**0.370**	**0.141**	YES
T872	802.11n40	159	Right Side	1	1	MCS0	14	13.69	0.01	0.356	0.131	YES
T873	802.11n40	159	Top Side	1	1	MCS0	14	13.69	0.08	0.166	0.073	YES
T874	802.11n40	159	Rear Face	1	2	MCS0	14	13.69	0.04	0.356	0.121	YES
T875	802.11n40	159	Rear Face	1	3	MCS0	14	13.69	0.09	0.334	0.106	YES

Product specific 10-g SAR test results of WIFI

Test No.	Band	Channel	Test Position	Separation Distance (cm)	Battery	Data Rate	Duty Cycle	Maximum Tune-up (dBm)	Conducted Power (dBm)	Power Drift (dB)	SAR 1g (W/kg)	SAR 10g (W/kg)	Specifit Reported SAR 10g
T816	802.11n40	54	Front Face	0	1	MCS0	-	15.5	15.07	0.07	1.238	0.469	0.518
T817	802.11n40	54	Rear Face	0	1	MCS0	-	15.5	15.07	0.08	2.980	0.955	1.054
T818	802.11n40	54	Right Side	0	1	MCS0	-	15.5	15.07	0.1	**6.970**	**1.630**	**1.800**
T819	802.11n40	54	Top Side	0	1	MCS0	-	15.5	15.07	-0.03	0.520	0.221	0.244
T820	802.11n40	54	Right Side	0	2	MCS0	-	15.5	15.07	0.05	6.750	1.490	1.645
T821	802.11n40	54	Right Side	0	3	MCS0	-	15.5	15.07	-0.16	6.820	1.530	1.689
T829	802.11a	116	Front Face	0	1	6	-	16	15.65	0	1.120	0.392	0.425
T830	802.11a	116	Rear Face	0	1	6	-	16	15.65	0.03	2.740	0.806	0.874
T831	802.11a	116	Right Side	0	1	6	-	16	15.65	0.01	**7.550**	**1.370**	**1.485**
T832	802.11a	116	Top Side	0	1	6	-	16	15.65	0.11	0.937	0.317	0.344
T833	802.11a	112	Right Side	0	1	6	-	16	15.62	0.05	7.250	1.090	1.190
T834	802.11a	116	Right Side	0	2	6	-	16	15.65	-0.02	7.370	1.190	1.290
T835	802.11a	116	Right Side	0	3	6	-	16	15.65	0.07	7.430	1.260	1.366

Note: The value with boldface is the maximum SAR Value of each test band.

7.3 MULTIPLE TRANSMITTER EVALUATION

The following tables list information which is relevant for the decision if a simultaneous transmit evaluation is necessary according to FCC KDB 447498D01 General RF Exposure Guidance v06.

The location of the antenna inside EUT, please refer to Appendix E.

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:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)][√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for product specific 10-g SAR, where:

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

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

Standalone SAR test exclusion for BT

Mode	Position	P_{max} (dBm)*	P_{max} (mW)	Distance (mm)	f (GHz)	Calculation Result	SAR Exclusion threshold	SAR test exclusion
BT	Body-worn	11	12.59	15	2.48	1.32	3.0	Yes
BT	product specific 10-g SAR	11	12.59	5	2.48	3.97	7.5	Yes

Note: * - 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:

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

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

According to KDB 447498 D01, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standslone SAR was estimated according to following formula to result in substantially conservative SAR values of ≤ 0.4W/kg to determine simultaneous transmission SAR test exclusion.

$$\text{Estimated SAR} = \frac{\text{Max. Tune up Power}_{(mW)}}{\text{Min. Test Separation Distance}_{(mm)}} \times \frac{\sqrt{f_{(GHz)}}}{7.5}$$

Estimated SAR calculation

Mode	Position		P_{max} (dBm)*	P_{max} (mW)	Distance (mm)	f (GHz)	X	Estimated SAR (W/kg)*
BT	Body-worn		11	12.59	15	2.48	7.5	0.176
BT	product specific 10-g SAR	Front Face/ Rear Face/ Right Side/ Top Side	11	12.59	5	2.48	18.75	0.211
		Left Side/ Bottom Side	11	12.59	>50mm	2.48	18.75	0.400

Note: * - maximum possible output power declared by manufacturer

7.3.2 SIMULTANEOUS TRANSMISSION CONDITIONS

Per FCC KDB 447498 D01, SAR compliance for simultaneous transmission must be considered when the maximum duration of overlapping transmissions, including network hand-offs, is greater than 30 seconds. This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis.

The Simultaneous Transmission Possibilities of this device are as below:

NO.	Simultaneous Tx Combination	Head	Body-worn	Hotspot (10mm)	Product specific 10-g (0mm)
1	GSM/UMTS/LTE(Main Ant) + 2.4G WIFI	Yes	Yes	Yes	Yes
2	GSM/UMTS/LTE(Main Ant) + 5G WIFI	Yes	Yes	Yes	Yes
3	GSM/UMTS/LTE(Main Ant) + BT	Yes	Yes	No	Yes
4	GSM/UMTS/LTE(Second Ant) + 2.4G WIFI	Yes	Yes	Yes	Yes
5	GSM/UMTS/LTE(Second Ant) + 5G WIFI	Yes	Yes	Yes	Yes
6	GSM/UMTS/LTE(Second Ant) + BT	Yes	Yes	No	Yes

Note:
1) 2G&3G&4G share the same Tx antenna and can't transmit simultaneously.
2) WiFi and Bluetooth share the same Tx antenna and can't transmit simultaneously.
3) Main Ant and Second Ant can't transmit simultaneously.

7.3.3 SAR SUMMATION SCENARIO

1. About BT/WIFI and GSM/UMTS/LTE main antenna

Position	Head				Body-worn		Hotspot					
	Right Cheek	Right Tilted	Left Cheek	Left Tilted	Front Face (1.5cm)	Rear Face (1.5cm)	Front Face (1cm)	Rear Face (1cm)	Left Side (1cm)	Right Side (1cm)	Top Side (1cm)	Bottom Side (1cm)
GSM 850	0.212	0.113	0.181	0.109	0.157	0.202	0.228	0.374	0.155	0.305	/	0.268
GSM 1900	0.066	0.055	0.060	0.058	0.111	0.247	0.175	0.481	0.113	0.060	/	0.545
UMTS B2	0.158	0.129	0.128	0.135	0.106	0.248	0.366	0.914	0.193	0.057	/	1.126
UMTS B4	0.050	0.055	0.037	0.047	0.132	0.354	0.231	0.883	0.103	0.061	/	0.730
UMTS B5	0.214	0.113	0.165	0.115	0.181	0.223	0.184	0.314	0.123	0.243	/	0.210
LTE B2	0.171	0.098	0.106	0.086	0.168	0.366	0.292	0.759	0.194	0.084	/	1.036
LTE B4	0.042	0.050	0.028	0.037	0.098	0.341	0.156	0.533	0.065	0.041	/	0.605
LTE B5	0.185	0.109	0.145	0.106	0.148	0.187	0.157	0.285	0.129	0.199	/	0.209
LTE B7	0.075	0.060	0.071	0.100	0.162	0.315	0.403	0.916	0.135	0.130	/	1.060
LTE B38	0.015	0.011	0.015	0.019	0.106	0.275	0.243	0.730	0.074	0.086	/	0.775
LTE B41	0.025	0.024	0.029	0.042	0.095	0.233	0.220	0.553	0.127	0.087	/	0.864
LTE B66	0.057	0.060	0.039	0.049	0.113	0.315	0.205	0.684	0.102	0.059	/	0.699
2.4G WLAN	0.290	0.246	0.591	0.313	0.063	0.073	0.117	0.144	/	0.110	0.099	/
5.2G WLAN	/	/	/	/	/	/	0.154	0.404	/	0.557	0.182	/
5.3G WLAN	0.223	0.199	0.770	0.395	0.033	0.515	/	/	/	/	/	/
5.6G WLAN	0.201	0.209	0.819	0.390	0.103	0.596	/	/	/	/	/	/
5.8G WLAN	0.110	0.121	0.311	0.238	0.060	0.294	0.122	0.397	/	0.382	0.178	/
Bluetooth	0.076	0.084	0.173	0.091	0.176	0.176	/	/	/	/	/	/
Max. SAR Summation	**0.504**	**0.375**	**1.000**	**0.530**	**0.357**	**0.962**	**0.557**	**1.320**	**0.194**	**0.862**	**0.182**	**1.126**
Hot Spot Separation	-	-	-	-	-	-	-	-	-	-	-	-

Note: MAX. $\sum SAR_{1g}$ =1.320W/Kg <1.6W/Kg, so the SAR to peak location separation ratio should not be considered.

2. About BT/WIFI and GSM/UMTS/LTE second antenna

Position	Head				Body-worn		Hotspot					
	Right Cheek	Right Tilted	Left Cheek	Left Tilted	Front Face (1.5cm)	Rear Face (1.5cm)	Front Face (1cm)	Rear Face (1cm)	Left Side (1cm)	Right Side (1cm)	Top Side (1cm)	Bottom Side (1cm)
GSM 850	0.790	0.700	0.638	0.564	0.089	0.128	0.316	0.493	0.157	/	0.365	/
GSM 1900	0.633	0.785	0.425	0.461	0.207	0.271	0.486	0.629	0.209	/	0.935	/
UMTS B2	0.641	0.751	0.382	0.547	0.199	0.256	0.323	0.413	0.130	/	0.659	/
UMTS B4	0.806	0.867	0.487	0.609	0.246	0.286	0.439	0.470	0.148	/	0.615	/
UMTS B5	0.950	0.706	0.653	0.610	0.083	0.116	0.152	0.218	0.110	/	0.186	/
LTE B2	0.640	0.782	0.404	0.500	0.301	0.400	0.477	0.619	0.175	/	0.935	/
LTE B4	0.704	0.813	0.449	0.589	0.420	0.507	0.727	0.789	0.281	/	1.086	/
LTE B5	0.714	0.662	0.569	0.579	0.073	0.107	0.129	0.209	0.072	/	0.127	/
LTE B7	0.508	0.605	0.179	0.262	0.148	0.368	0.269	0.686	0.351	/	0.751	/
LTE B38	0.590	0.742	0.217	0.288	0.209	0.439	0.377	1.089	0.621	/	0.787	/
LTE B41	0.490	0.549	0.192	0.227	0.214	0.354	0.290	1.087	0.400	/	0.591	/
LTE B66	0.718	0.901	0.443	0.559	0.406	0.453	0.713	0.750	0.282	/	1.050	/
2.4G WLAN	0.290	0.246	0.591	0.313	0.063	0.073	0.117	0.144	/	0.110	0.099	/
5.2G WLAN	/	/	/	/	/	/	0.154	0.404	/	0.557	0.182	/
5.3G WLAN	0.223	0.199	0.770	0.395	0.033	0.515	/	/	/	/	/	/
5.6G WLAN	0.201	0.209	0.819	0.390	0.103	0.596	/	/	/	/	/	/
5.8G WLAN	0.110	0.121	0.311	0.238	0.060	0.294	0.122	0.397	/	0.382	0.178	/
Bluetooth	0.076	0.084	0.173	0.091	0.176	0.176	/	/	/	/	/	/
Max. SAR Summation	**1.240**	**1.147**	**1.472**	**1.005**	**0.596**	**1.103**	**0.881**	**1.493**	**0.621**	**0.557**	**1.268**	/
Hot Spot Separation	-	-	-	-	-	-	-	-	-	-	-	-

Note: MAX. $\sum SAR_{1g}$ =1.493W/Kg <1.6W/Kg, so the SAR to peak location separation ratio should not be considered.

3. About product specific 10g SAR

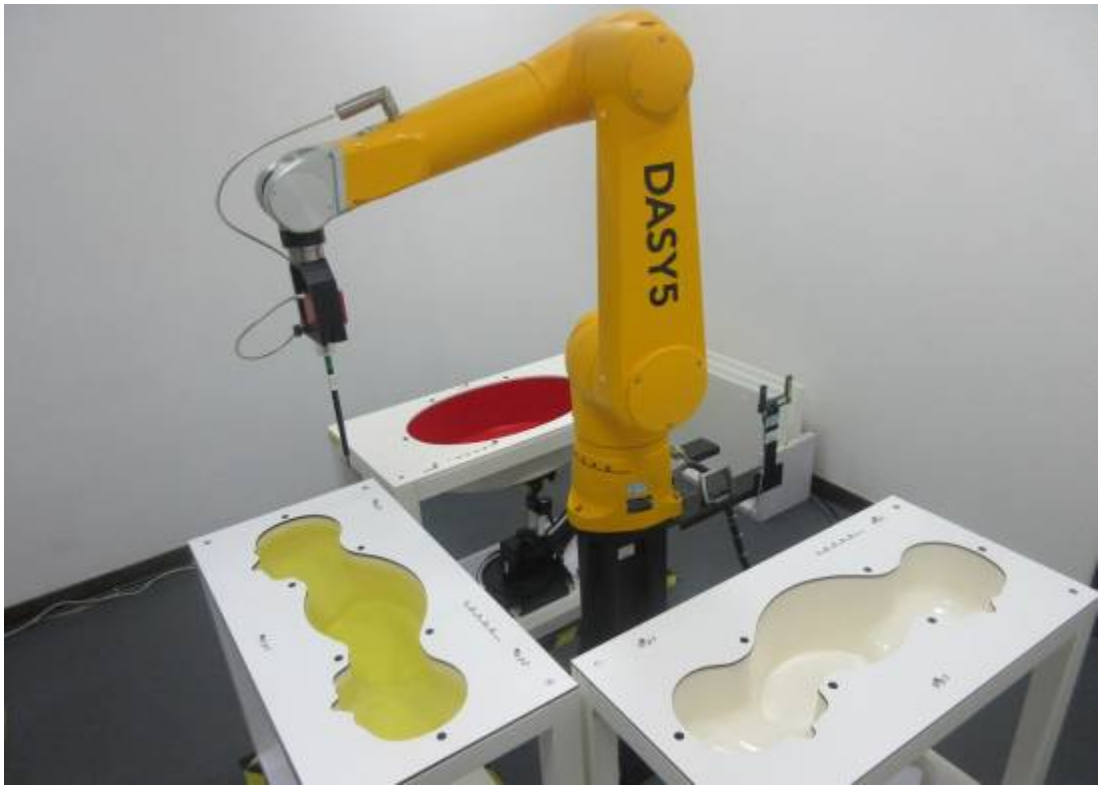
Position	Specific 10g SAR					
	Front Face (0cm)	Rear Face (0cm)	Left Side (0cm)	Right Side (0cm)	Top Side (0cm)	Bottom Side (0cm)
GSM 850	/	/	/	/	/	/
GSM 1900	/	/	/	/	/	/
UMTS B2	/	/	/	/	/	/
UMTS B4	/	/	/	/	/	/
UMTS B5	/	/	/	/	/	/
LTE B2	/	/	/	/	/	/
LTE B4	/	/	/	/	/	/
LTE B5	/	/	/	/	/	/
LTE B7	/	/	/	/	/	/
LTE B38	/	/	/	/	/	/
LTE B41	/	/	/	/	/	/
LTE B66	/	/	/	/	/	/
2.4G WLAN	/	/	/	/	/	/
5.2G WLAN	/	/	/	/	/	/
5.3G WLAN	0.518	1.054	/	1.800	0.244	/
5.6G WLAN	0.425	0.874	/	1.485	0.344	/
5.8G WLAN	/	/	/	/	/	/
Bluetooth	0.211	0.211	0.400	0.211	0.211	0.400
Max. SAR Summation	**0.518**	**1.054**	**0.400**	**1.800**	**0.344**	**0.400**
Hot Spot Separation	-	-	-	-	-	-

Note: The Simultaneous SAR of product Specific 10-g SAR is 1.800W/Kg which less than 4.0W/Kg, so the Simultaneous SAR is not required to calculate.

APPENDIX

1. TEST LAYOUT

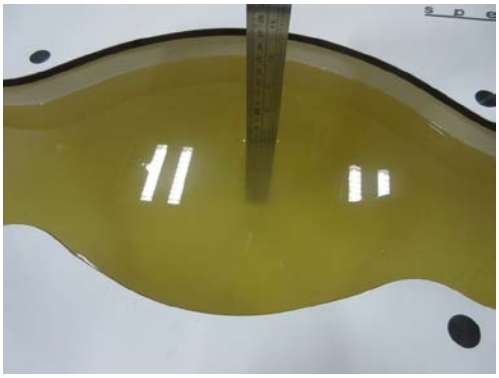
Specific Absorption Rate Test Layout



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

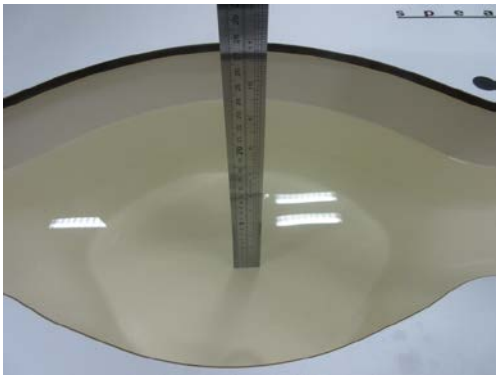
HSL835MHz-900MHz_Head_15.7cm

HSL835MHz-900MHz_Body_16.4cm

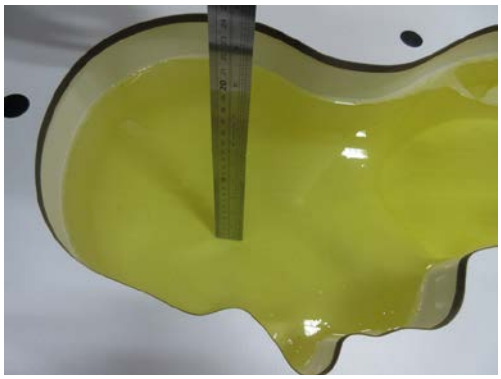


HSL1750MHz_Head_15.1cm

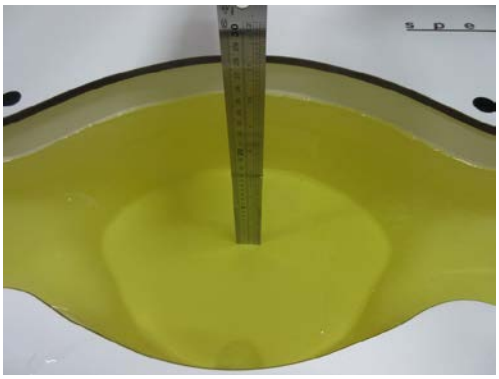
HSL1750MHz_Body_15.5cm



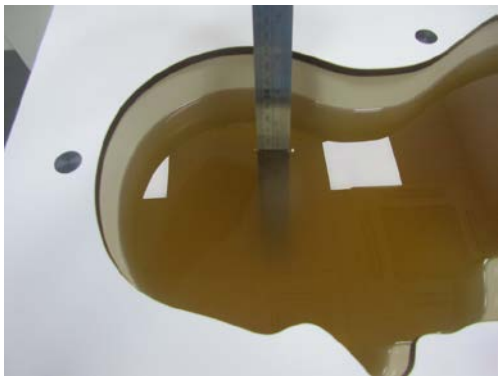
HSL1900MHz-2600MHz_Head_15.9cm



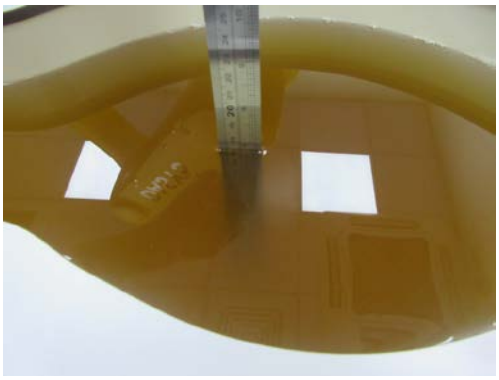
HSL1900MHz-2600MHz_Body_15.2cm



HSL5GHz_Head_15.5cm



HSL5GHz_Body_17.5cm



Appendix A. SAR Plots of System Verification

(Pls See BTL-FCC SAR-1-1911C066_Appendix A.)

Appendix B. SAR Plots of SAR Measurement

(Pls See BTL-FCC SAR-1-1911C066_Appendix B.)

Appendix C. Calibration Certificate

(Pls See BTL-FCC SAR-1-1911C066_Appendix C.)

Appendix D. Photographs of the Test Set-Up

(Pls See BTL-FCC SAR-1-1911C066_Appendix D.)

Appendix E. Antenna location

(Pls See BTL-FCC SAR-1-1911C066_Appendix E.)

End of Test Report