



# FCC SAR TEST REPORT

**Report No.:** SET2019-03635

**Product:** LTE Digital Mobile Phone

**Brand Name:** nubia

**Model No.:** NX629J

**FCC ID:** 2AHJO-NX629J

**Applicant:** Nubia Technology Co., Ltd.

**Address:** 10/F, Tower A, Hans Innovation Mansion, North Ring Rd., No.9018, High-Tech Park, Nanshan District, Shenzhen, China.

**Issued by:** CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd.

**Lab Location:** Building 28/29, East of Shigu Xili Industrial Zone, Nanshan District Shenzhen, Guangdong 518055, China

**Tel:** 86 755 26627338      **Fax:** 86 755 26627238

**Mail:** manager@ccic-set.com      **Website:** <http://www.ccic-set.com>

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**Applicant Address**.....: 10/F, Tower A, Hans Innovation Mansion, North Ring Rd.,No.9018, High-Tech Park, Nanshan District, Shenzhen, China.

**Manufacturer**.....: Nubia Technology Co., Ltd.

**Manufacturer Address**.....: 10/F, Tower A, Hans Innovation Mansion, North Ring Rd.,No.9018, High-Tech Park, Nanshan District, Shenzhen, China.

**Test Standards**.....: **47CFR § 2.1093-** Radiofrequency Radiation Exposure Evaluation: Portable Devices;  
**ANSI 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 1528–2013:** IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques

**Test Result**.....: Pass

**Test Date**.....: 2019.03.15-2019.03.26

**Tested by** .....: Mei Chun 2019-04-16  
Mei Chun, Test Engineer

**Reviewed by**.....: Chris You 2019-04-16  
Chris You, Senior Engineer

**Approved by**.....: Shuangwen Zhang 2019-04-16  
Shuangwen Zhang, Manager



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# 1. Administrative Data

## 1.1 Testing Laboratory

**Test Site:** CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd

**Address:** Electronic Testing Building, No. 43 Shahe Road, Xili Jiedao, Nanshan District, Shenzhen, Guangdong, China

**CNAS Lab Code:** CCIC-SET is a third party testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

**NVLAP Lab Code:** CCIC-SET is a third party testing organization accredited by NVLAP according to ISO/IEC 17025. The accreditation certificate number is 201008-0.

**FCC Registration:** CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN5031, valid time is until December 31, 2019.

**ISED Registration:** CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until Aug. 03, 2019.

**Test Environment** Temperature ( °C): 21 °C

**Condition:** Relative Humidity (%): 60%

Atmospheric Pressure (kPa): 86KPa-106KPa



## 2. Equipment Under Test (EUT)

### Identification of the Equipment under Test

<b>Device Type:</b>	Portable
<b>Exposure Category:</b>	Population/Uncontrolled
<b>Sample Name:</b>	LTE Digital Mobile Phone
<b>Brand Name:</b>	nubia
<b>Model Name:</b>	NX629J
<b>Support Band</b>	GSM850MHz/1900MHz, WCDMA 850MHz /1900MHz /1700;CDMA BC0/BC1, LTE Band 2/4/5/7/12/17/25/26/30/41/66, WIFI2.4G&5G
<b>Test Band</b>	GSM850MHz/1900MHz, WCDMA 850MHz /1900MHz /1700;CDMA BC0/BC1, LTE Band 2/4/5/7/12/17/25/26/30/41/66, WIFI2.4G&5G
<b>IMEI No.</b>	866280040011240/866280040011257
<b>WIFI Mode</b>	2*2 MIMO for 2.4/5GHz WLAN
<b>Multi Class</b>	GPRS: Class 12; EGPRS: Class 12
<b>General description:</b>	
<b>Development Stage</b>	Identical Prototype
<b>Accessories</b>	Power Supply
<b>Hotspot</b>	2.4GHz WLAN support Hotspot mode
<b>Antenna type</b>	Internal Antenna
<b>Operation mode</b>	GSM /WCDMA / LTE /WIFI
<b>Modulation mode</b>	GSM(GMSK),UMTS(QPSK),LTE(QPSK,16QAM,64QAM), WIFI(OFDM/DSSS) ,BT( GFSK/π /4-DQPSK/8-DPSK)
<b>DTM mode</b>	Not support
<b>Hardware Version</b>	NX629J_V1AMB
<b>Software Version</b>	NX629J_ENCommon_V1.06
<b>Max. SAR Value</b>	Head: 1.045 W/Kg Body: 0.755 W/Kg(Limit:1.6W/Kg, 10mm distance)

### NOTE:

- a. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



**EUT testing configuration**

Tested Band	Transmitter Frequency Range	Receiver Frequency Range
GSM850:	824-849 MHz	869-894 MHz
GSM1900:	1850-1910 MHz	1930-1990 MHz
UMTS Band II:	1850-1910 MHz	1930-1990 MHz
UMTS Band IV:	1710-1755 MHz	2110-2155 MHz
UMTS Band V:	824-849 MHz	869-894 MHz
CDMA BC0	815-850 MHz	860-895 MHz
CDMA BC1	1850-1910 MHz	1930-1990 MHz
LTE Band2:	1850-1910 MHz	1930-1990 MHz
LTE Band4:	1710-1755 MHz	2110-2155 MHz
LTE Band5:	824-849 MHz	869-894 MHz
LTE Band7:	2500-2570 MHz	2620-2690 MHz
LTE Band12:	698-716 MHz	728-746 MHz
LTE Band17:	704-716 MHz	734-746 MHz
LTE Band25:	1850-1915 MHz	1930-1995 MHz
LTE Band26:	814-849 MHz	859-894 MHz
LTE Band30:	2305-2315 MHz	2350-2360 MHz
LTE Band41:	2496-2690 MHz	
LTE Band66:	1710-1780 MHz	2110-2200 MHz
WIFI:	2412-2462 MHz	
	5150-5250 MHz	
	5250-5350 MHz	
	5470-5725 MHz	
	5745-5825 MHz	
Bluetooth:	2402-2480 MHz	
Test channels(low-mid-high):	128-190-251(GSM850)	
	512-661-810(GSM1900)	
	9262-9400-9538(UMTS Band II)	
	1312-1412-1513(UMTS Band IV)	
	4132-4183-4233(UMTS Band V)	
	1013-384-777(CDMA BC0)	
	25-600-1175( CDMA BC1)	
	18700-18900-19100( LTE Band 2 Bandwidth 20M)	
	20050-20175-20300( LTE Band 4 Bandwidth 20M)	
	20450-20525-20600( LTE Band 5 Bandwidth 10M)	
	20850-21100-21350( LTE Band 7 Bandwidth 20M)	
	23060-23095-23130( LTE Band 12 Bandwidth 10M)	
	23780-23790-23800( LTE Band 17 Bandwidth 10M)	
	23060-23095-23130( LTE Band 25 Bandwidth 20M)	
	23780-23790-23800( LTE Band 26 Bandwidth 15M)	
	27110-27110-27110( LTE Band 30 Bandwidth 20M)	
	23780-23790-23800( LTE Band 41 Bandwidth 20M)	
	27310-27460-27560( LTE Band 66 Bandwidth 20M)	
1-6-11(WIFI 2.4G 802.11b)		
5190-5270-5590-5795 (WIFI 5G)		
0-39-78(BT )		



### 3. SAR Summary

#### Highest Standalone SAR Summary

Exposure Position	Frequency Band	Scaled 1g-SAR(W/kg)	Highest Scaled 1g-SAR(W/kg)
Head	GSM850	1.045	<b>1.045</b>
	GSM1900	0.709	
	WCDMA Band V	0.957	
	WCDMA Band II	0.613	
	WCDMA Band IV	0.143	
	CDMA BC0	0.937	
	CDMA BC1	0.765	
	LTE Band 2	0.578	
	LTE Band 4	0.600	
	LTE Band 5	0.729	
	LTE Band 7	0.166	
	LTE Band 12	0.076	
	LTE Band 17	0.065	
	LTE Band 25	0.591	
	LTE Band 26	0.788	
	LTE Band 30	0.323	
	LTE Band 41	0.193	
	LTE Band 66	0.290	
	WIFI 2.4G	0.421	
	WIFI 5G	0.414	
BT	0.127		



Exposure Position	Frequency Band	Scaled 1g-SAR(W/kg)	Highest Scaled 1g-SAR(W/kg)
Body-worn (10mm Gap)	GSM850	0.755	<b>0.755</b>
	GSM1900	0.750	
	WCDMA Band V	0.518	
	WCDMA Band II	0.445	
	WCDMA Band IV	0.201	
	CDMA BC0	0.571	
	CDMA BC1	0.463	
	LTE Band 2	0.243	
	LTE Band 4	0.257	
	LTE Band 5	0.282	
	LTE Band 7	0.138	
	LTE Band 12	0.029	
	LTE Band 17	0.030	
	LTE Band 25	0.244	
	LTE Band 26	0.305	
	LTE Band 30	0.446	
	LTE Band 41	0.187	
	LTE Band 66	0.263	
	WIFI 2.4G	0.063	
	WIFI 5G	0.186	
BT	0.151		





Exposure Position	Frequency Band	Scaled 1g-SAR(W/kg)	Highest Scaled 1g-SAR(W/kg)
Hotspot (10mm Gap)	GSM850	0.755	<b>0.755</b>
	GSM1900	0.750	
	WCDMA Band V	0.518	
	WCDMA Band II	0.445	
	WCDMA Band IV	0.201	
	CDMA BC0	0.571	
	CDMA BC1	0.463	
	LTE Band 2	0.243	
	LTE Band 4	0.257	
	LTE Band 5	0.282	
	LTE Band 7	0.138	
	LTE Band 12	0.029	
	LTE Band 17	0.030	
	LTE Band 25	0.244	
	LTE Band 26	0.305	
	LTE Band 30	0.446	
	LTE Band 41	0.187	
	LTE Band 66	0.263	
WIFI 2.4G	0.063		

**Highest Simultaneous SAR Summary**

Exposure Position	Frequency Band	Highest Scaled 1g-SAR(W/kg)
Head	WWAN(GSM850)&WIFI 5G	1.459
Hotspot (10mmGap)	WWAN(GSM850)&WIFI 2.4G	0.818

## 4. Specific Absorption Rate (SAR)

### 4.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy ( $dW$ ) absorbed by (dissipated in) an incremental mass ( $dm$ ) contained in a volume element ( $dv$ ) of a given density ( $\rho$ ). The equation description is as below:

$$\text{SAR} = \frac{d}{dt} \left( \frac{dW}{dm} \right) = \frac{d}{dt} \left( \frac{dW}{\rho dv} \right)$$

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

$$\text{SAR} = C \frac{\delta T}{\delta t}$$

where  $C$  is the specific heat capacity,  $\delta T$  is the temperature rise and  $\delta t$  the exposure duration, or related to the electrical field in the tissue by

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

where  $\sigma$  is the conductivity of the tissue,  $\rho$  is the mass density of the tissue and  $E$  is the rms electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.



## 4.2 Applicable Standards and Limits

### 4.2.1 Applicable Standards

47CFR § 2.1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
ANSI 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 1528-2013	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
KDB 248227 D01	v02r02 802.11 Wi-Fi SAR
KDB 447498 D01	v06 General RF Exposure Guidance
KDB 648474 D04	v01r03 Handset SAR
KDB 865664 D01	v01r04 SAR Measurement 100MHz to 6GHz
KDB 865664 D02	v01r02 SAR Exposure Reporting
KDB 941225 D01	v03r01 3G SAR Procedures
KDB 941225 D05	v02r05 SAR for LTE Devices
KDB 941225 D05A	v01r02 LTE Rel.10 KDB Inquiry Sheet
KDB 941225 D06	v02r01 Hotspot Mode

### 4.2.2 RF exposure Limits

Human Exposure	Uncontrolled Environment General Population
<b>Spatial Peak SAR*</b> (Brain/Body)	<b>1.60 mW/g</b>
<b>Spatial Average SAR**</b> (Whole Body)	0.08 mW/g
<b>Spatial Peak SAR***</b> (Limbs)	4.00 mW/g

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

Notes:

\* The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time

\*\* The Spatial Average value of the SAR averaged over the whole body.

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

### 4.3 Phantoms

The phantom used for all tests i.e. for both system checks and device testing, was the twin-headed "SAM Phantom", manufactured by SATIMO. The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region, where shell thickness increases to 6mm).

System checking was performed using the flat section, whilst Head SAR tests used the left and right head profile sections. Body SAR testing also used the flat section between the head profiles.

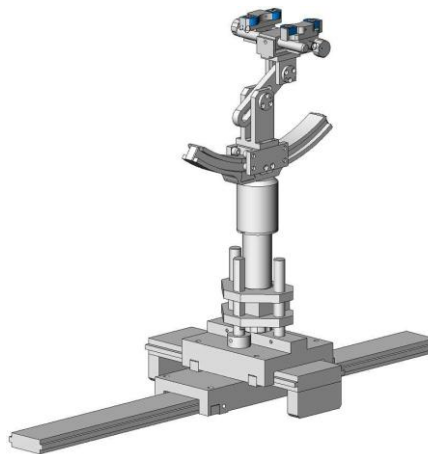


SAM Twin Phantom

### 4.4 Device Holder

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

The device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.



Device holder

## 4.5 Probe Specification

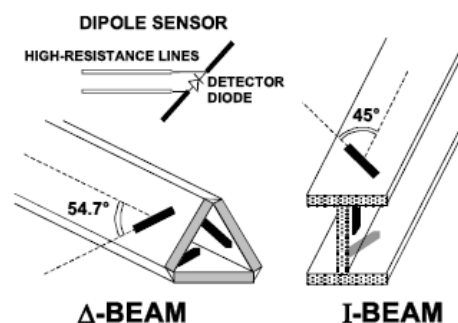


Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	700 MHz to 3 GHz; Linearity: $\pm 0.5$ dB (700 MHz to 3 GHz)
Directivity	$\pm 0.25$ dB in HSL (rotation around probe axis) $\pm 0.5$ dB in tissue material (rotation normal to probe axis)
Dynamic Range	1.5 $\mu$ W/g to 100 mW/g; Linearity: $\pm 0.5$ dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 5 mm Distance from probe tip to dipole centers: <2.7 mm
Application	General dosimetry up to 3 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones
Compatibility	COMOSAR

### Isotropic E-Field Probe

The isotropic E-Field probe has been fully calibrated and assessed for isotropicity, and boundary effect within a controlled environment. Depending on the frequency for which the probe is calibrated the method utilized for calibration will change.

The E-Field probe utilizes a triangular sensor arrangement as detailed in the diagram below:



## 5. Tissue check and recommend Dielectric Parameters

### 5.1 Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness Power drifts in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Table 1: Recommended Dielectric Performance of Tissue

Ingredients (% by weight )	Frequency (MHz)											
	450		835		915		1900		2450		2600	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.46	52.4	41.05	56.0	54.9	40.4	62.7	73.2	55.24	64.49
Salt (Nacl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04	0.5	0.024
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0	0.0	0.0
Triton x-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0	44.45	32.25
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7	0.0	26.7
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.2	52.5	39.0	52.5
Conductivity (s/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.80	1.78	1.96	2.16

MSL/HSL750 (Body and Head liquid for 650 – 850 MHz)

Item	Head Tissue Simulation Liquid HSL750 Muscle(body)Tissue Simulation Liquid MSL750			
H2O	Water, 35 – 58%			
Sucrose	Sugar, white, refined, 40-60%			
NaCl	Sodium Chloride, 0-6%			
Hydroxyethyl-cellulose	Medium Viscosity (CAS# 9004-62-0), <0.3%			
Preventol-D7	Preservative: aqueous preparation, (CAS# 55965-84-9), containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone, 0.1-0.7%			
Frequency (MHz)	Head $\epsilon_r$	Head $\sigma$ (S/m)	Body $\epsilon_r$	Body $\sigma$ (S/m)
750	41.9	0.89	55.2	0.97

Note: The liquid of 700MHz&2600MHz typical liquid composition is provided by SATIMO.

Frequency:5200/5400/5600/5800MHz	
Ingredients	(% by weight)
Water	78
Mineral oil	11
Emulsifiers	9
Additives and Salt	2

Table 2 Recommended Tissue Dielectric Parameters

Frequency (MHz)	Head Tissue		Body Tissue	
	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800-2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

## 5.2 Simulate liquid

Liquid check results:

Table 3: Dielectric Performance of Head Tissue Simulating Liquid

Temperature: 23.2°C; Humidity: 64%;			
/	Frequency	Permittivity $\epsilon$	Conductivity $\sigma$ (S/m)
Target value	750MHz	41.9±5%	0.89±5%
Validation value (2019-03-15)	750MHz	41.95	0.92
Target value	850MHz	41.5±5%	0.90±5%
Validation value (2019-03-16)	850MHz	41.32	0.87
Target value	1800MHz	40.5±5%	1.40±5%
Validation value (2019-03-17)	1800MHz	40.34	1.31
Target value	1900MHz	40.5±5%	1.40±5%
Validation value (2019-03-18)	1900MHz	40.6	1.39
Target value	2450MHz	39.2±5%	1.80±5%
Validation value (2019-03-19)	2450MHz	39.26	1.81
Target value	2600MHz	39.0±5%	1.96±5%
Validation value (2019-03-19)	2600MHz	39.11	1.97
Target value	750MHz	41.9±5%	0.89±5%
Validation value (2019-03-21)	750MHz	41.86	0.93
Target value	850MHz	41.5±5%	0.90±5%
Validation value (2019-03-22)	850MHz	41.61	0.94
Target value	1800MHz	40.5±5%	1.40±5%
Validation value (2019-03-23)	1800MHz	40.58	1.43
Target value	1900MHz	40.5±5%	1.40±5%
Validation value (2019-03-24)	1900MHz	40.58	1.42
Target value	5200MHz	36.0±5%	4.66±5%
Validation value (2019-03-25)	5200MHz	36.12	4.62
Target value	5400MHz	35.8±5%	4.86±5%
Validation value (2019-03-25)	5400MHz	35.71	4.81
Target value	5600MHz	35.5±5%	5.07±5%
Validation value (2019-03-26)	5600MHz	35.36	5.02
Target value	5800MHz	35.3±5%	5.27±5%
Validation value (2019-03-26)	5800MHz	35.23	5.19



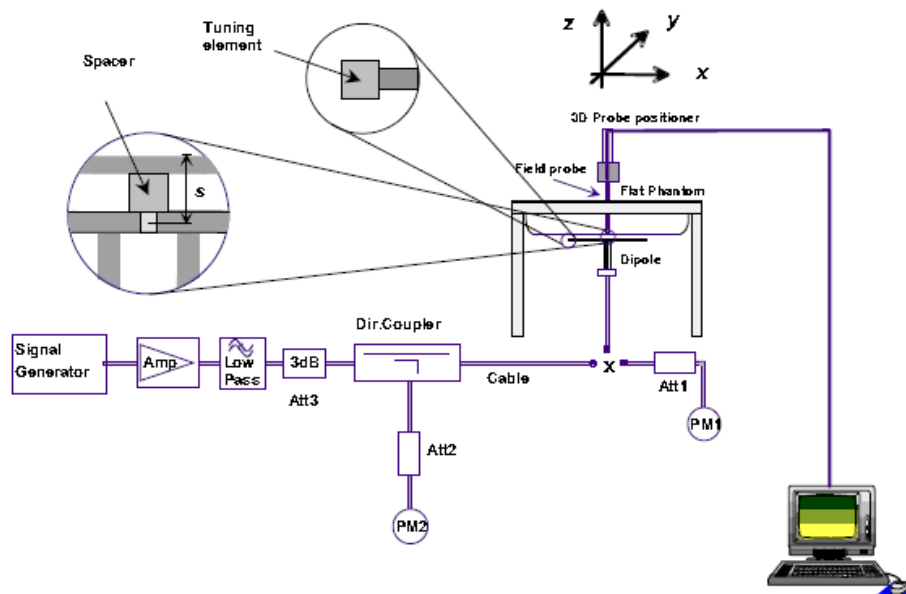
## Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 23.2°C; Humidity: 64%;			
/	Frequency	Permittivity $\epsilon$	Conductivity $\sigma$ (S/m)
Target value	750MHz	55.5±5%	0.96±5%
Validation value (2019-03-15)	750MHz	55.53	0.95
Target value	850MHz	55.2±5%	0.97±5%
Validation value (2019-03-16)	850MHz	55.23	0.98
Target value	1800MHz	53.3±5%	1.52±5%
Validation value (2019-03-17)	1800MHz	53.39	1.52
Target value	1900MHz	53.3±5%	1.52±5%
Validation value (2019-03-18)	1900MHz	53.42	1.51
Target value	2450MHz	52.7±5%	1.95±5%
Validation value (2019-03-19)	2450MHz	52.61	1.93
Target value	2600MHz	52.5±5%	2.16±5%
Validation value (2019-03-19)	2600MHz	52.28	2.11
Target value	750MHz	55.5±5%	0.96±5%
Validation value (2019-03-21)	750MHz	52.71	0.99
Target value	850MHz	55.2±5%	0.97±5%
Validation value (2019-03-22)	850MHz	55.33	0.98
Target value	1800MHz	53.3±5%	1.52±5%
Validation value (2019-03-23)	1800MHz	53.31	1.52
Target value	1900MHz	53.3±5%	1.52±5%
Validation value (2019-03-24)	1900MHz	53.48	1.53
Target value	5200MHz	49.0±5%	5.30±5%
Validation value (2019-03-25)	5200MHz	49.12	5.31
Target value	5400MHz	48.7±5%	5.53±5%
Validation value (2019-03-25)	5400MHz	49.11	5.58
Target value	5600MHz	48.5±5%	5.77±5%
Validation value (2019-03-26)	5600MHz	48.91	5.88
Target value	5800MHz	48.2±5%	6.00±5%
Validation value (2019-03-26)	5800MHz	48.27	6.01

## SAR System validation

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

The following procedure, recommended for performing validation tests using box phantoms is based on the procedures described in the IEEE standard P1528. Setup according to the setup diagram below:



With the SG and Amp and with directional coupler in place, set up the source signal at the relevant frequency and use a power meter to measure the power at the end of the SMA cable that you intend to connect to the balanced dipole. Adjust the SG to make this, say, 0.01W (10 dBm). If this level is too high to read directly with the power meter sensor, insert a calibrated attenuator (e.g. 10 or 20 dB) and make a suitable correction to the power meter reading.

Note 1: In this method, the directional coupler is used for monitoring rather than setting the exact feed power level. If, however, the directional coupler is used for power measurement, you should check the frequency range and power rating of the coupler and measure the coupling factor (referred to output) at the test frequency using a VNA.

Note 2: Remember that the use of a 3dB attenuator (as shown in Figure 8.1 of P1528) means that you need an RF amplifier of 2 times greater power for the same feed power. The other issue is the cable length. You might get up to 1dB of loss per meter of cable, so the cable length after the coupler needs to be quite short.

Note 3: For the validation testing done using CW signals, most power meters are suitable. However, if you are measuring the output of a modulated signal from either a signal generator or a handset, you must ensure that the power meter correctly reads the modulated signals.

The measured 1-gram averaged SAR values of the device against the phantom are provided in Tables 5 and Table 6. The humidity and ambient temperature of test facility

were 64% and 23.2°C respectively. The body phantom were full of the body tissue simulating liquid. The EUT was supplied with full-charged battery for each measurement.

The distance between the back of the EUT and the bottom of the flat phantom is 10 mm (taking into account of the IEEE 1528 and the place of the antenna).

Table 4: Head SAR system validation (1g)

Frequency	Duty cycle	Target value (W/kg)	Test value (W/kg)	
			10 mW	1W
750MHz(2019-03-15)	1:1	8.62 ± 10%	0.0878	8.78
835MHz(2019-03-16)	1:1	9.61 ± 10%	0.0962	9.62
1800MHz(2019-03-17)	1:1	37.35 ± 10%	0.3719	37.19
1900MHz(2019-03-18)	1:1	39.35 ± 10%	0.3942	39.42
2450MHz(2019-03-19)	1:1	52.67 ± 10%	0.5234	52.34
2600MHz(2019-03-19)	1:1	55.47 ± 10%	0.5527	55.27
750MHz(2019-03-21)	1:1	8.62 ± 10%	0.0857	8.57
835MHz(2019-03-22)	1:1	9.61 ± 10%	0.0987	9.87
1800MHz(2019-03-23)	1:1	37.35 ± 10%	0.3741	37.41
1900MHz(2019-03-24)	1:1	39.35 ± 10%	0.3967	39.67
5200MHz(2019-03-25)	1:1	164.10 ± 10%	1.5935	159.35
5400MHz(2019-03-25)	1:1	171.25 ± 10%	1.6471	164.71
5600MHz(2019-03-26)	1:1	178.98 ± 10%	1.7787	177.87
5800MHz(2019-03-26)	1:1	185.54 ± 10%	1.8097	180.97

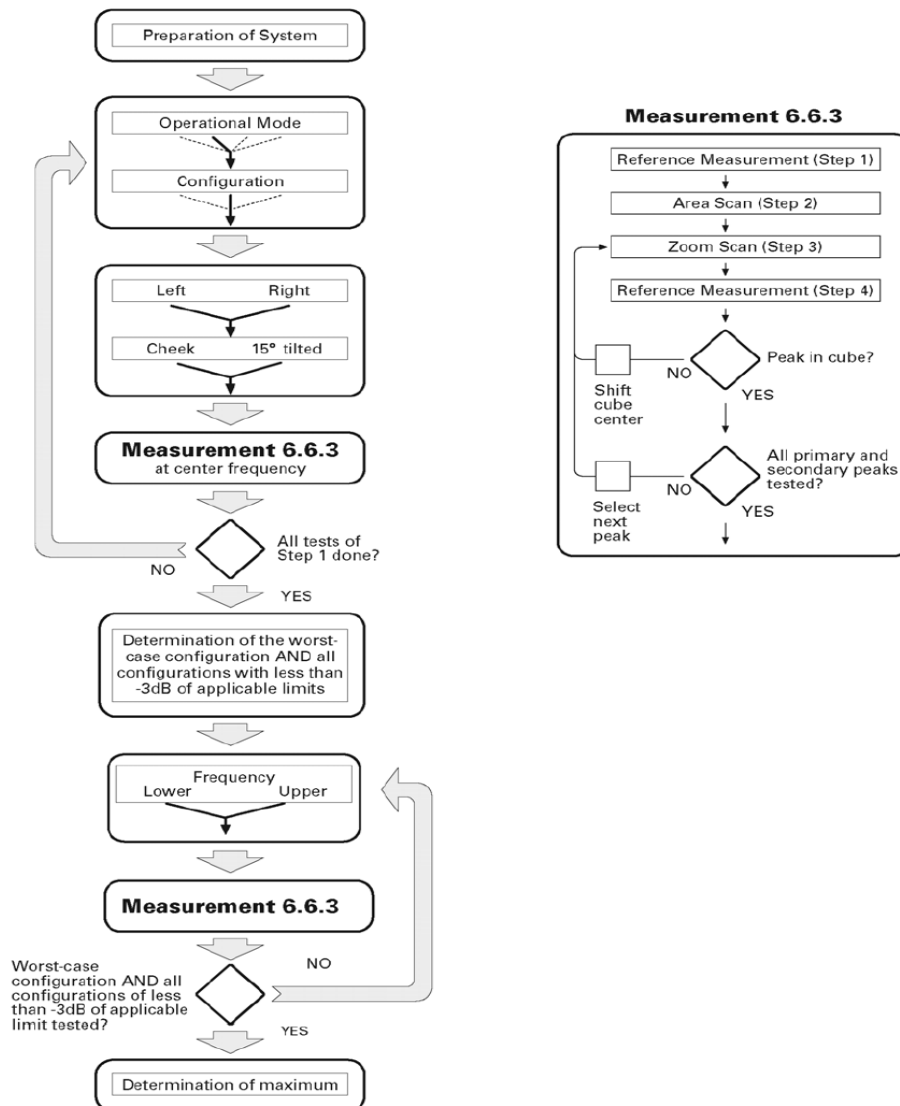
Table 5: Body SAR system validation (1g)

Frequency	Duty cycle	Target value (W/kg)	Test value (W/kg)	
			10 mW	1W
750MHz(2019-03-15)	1:1	8.68 ± 10%	0.0854	8.54
835MHz(2019-03-16)	1:1	9.88 ± 10%	0.0954	9.54
1800MHz(2019-03-17)	1:1	37.68 ± 10%	0.3776	37.76
1900MHz(2019-03-18)	1:1	38.84 ± 10%	0.3869	38.69
2450MHz(2019-03-19)	1:1	51.42 ± 10%	0.5137	51.37
2600MHz(2019-03-19)	1:1	53.45 ± 10%	0.5346	53.46
750MHz(2019-03-21)	1:1	8.68 ± 10%	0.0866	8.66
835MHz(2019-03-22)	1:1	9.88 ± 10%	0.0975	9.75
1800MHz(2019-03-23)	1:1	37.68 ± 10%	0.3776	37.76
1900MHz(2019-03-24)	1:1	38.84 ± 10%	0.3828	38.28
5200MHz(2019-03-25)	1:1	155.78 ± 10%	1.5379	153.79
5400MHz(2019-03-25)	1:1	160.24 ± 10%	1.5663	156.63
5600MHz(2019-03-26)	1:1	167.61 ± 10%	1.7370	173.70
5800MHz(2019-03-26)	1:1	170.49 ± 10%	1.7104	171.04

\* Note: Target value was referring to the measured value in the calibration certificate of reference dipole.  
 Note: All SAR values are normalized to 1W forward power.

## 6. SAR measurement procedure

The SAR test against the head phantom was carried out as follow:



Establish a call with the maximum output power with a base station simulator, the connection between the EUT and the base station simulator is established via air interface.

After an area scan has been done at a fixed distance of 2mm from the surface of the phantom on the source side, a 3D scan is set up around the location of the maximum spot SAR. First, a point within the scan area is visited by the probe and a SAR reading taken at the start of testing. At the end of testing, the probe is returned to the same point and a second reading is taken. Comparison between these start and end readings enables the power drift during measurement to be assessed.

Above is the scanning procedure flow chart and table from the IEEE p1528 standard. This is the procedure for which all compliant testing should be carried out to ensure that all variations of the device position and transmission behavior are tested.

## 7. Conducted RF Output Power

### 7.1 Upper Antenna

#### GSM Conducted Power

GSM850		Burst-Averaged output Power (dBm)			Division Factors	Frame-Averaged output Power (dBm)		
		128CH	190CH	251CH		28CH	190CH	251CH
GSM (CS)		29.25	29.22	29.18	-9.19	20.06	20.03	19.99
GPRS (GMSK)	1 Tx Slot	29.10	29.25	29.17	-9.19	19.91	20.06	19.98
	2 Tx Slots	27.98	28.00	27.97	-6.13	21.85	21.87	21.84
	3 Tx Slots	26.11	26.27	26.19	-4.42	21.69	21.85	21.77
	4 Tx Slots	24.96	25.06	25.01	-3.18	21.78	21.88	21.83
EDGE (8PSK)	1 Tx Slot	26.85	26.51	25.94	-9.19	17.66	17.32	16.75
	2 Tx Slots	24.04	24.07	23.87	-6.13	17.91	17.94	17.74
	3 Tx Slots	22.56	22.50	22.61	-4.42	18.14	18.08	18.19
	4 Tx Slots	21.82	21.93	21.87	-3.18	18.64	18.75	18.69
GSM1900		Burst-Averaged output Power (dBm)			Division Factors	Frame-Averaged output Power (dBm)		
		512CH	661CH	810CH		512CH	661CH	810CH
GSM (CS)		26.85	26.74	26.53	-9.19	17.66	17.55	17.34
GPRS (GMSK)	1 Tx Slot	26.54	26.41	26.03	-9.19	17.35	17.22	17.84
	2 Tx Slots	25.83	25.85	25.74	-6.13	19.70	19.72	19.61
	3 Tx Slots	24.47	24.40	24.50	-4.42	20.05	19.98	20.08
	4 Tx Slots	23.37	23.24	24.31	-3.18	20.19	20.06	21.13
EDGE (8PSK)	1 Tx Slot	25.61	24.99	24.53	-9.19	16.42	15.80	15.34
	2 Tx Slots	22.84	22.86	22.69	-6.13	16.71	16.73	16.56
	3 Tx Slots	21.36	21.25	21.36	-4.42	16.94	16.83	16.94
	4 Tx Slots	20.50	20.56	20.55	-3.18	17.32	17.38	17.37

**Note:** Per KDB 447498 D01 v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.

For hotspot SAR, EUT was performed at GPRS Class 12 multi-slots(4Tx) mode

For Head and Body-worn SAR testing, EUT was set in GSM Voice mode for both GSM850 and GSM1900

#### Timeslot consignations

No. Of Slots	Slot 1	Slot 2	Slot 3	Slot 4
Slot Consignation	1Up4Down	2UpDown	3UpDown	4Up1Down
Duty Cycle	1:8	1:4	1:2.67	1:2
Crest Factor	-9.03dB	-6.02dB	-4.26dB	-3.01dB



## CDMA Conducted output Power

Conducted Power (Unit:dBm)			
Band	CDMA BC0		
Channel	1013	384	777
Frequency(MHz)	824.7	836.52	848.31
RC1 + SO55	23.81	23.85	23.82
RC3 + SO55	23.77	23.83	23.80
RC3 + SO32(+ F-SCH)	23.80	23.82	23.78
RC3 + SO32(+SCH)	23.80	23.81	23.77
1xEVDO Rev A RETAP	22.54	22.56	22.52
Band	CDMA BC1		
Channel	25	600	1175
Frequency(MHz)	1851.25	1880.00	1908.75
RC1 + SO55	22.87	22.88	22.83
RC3 + SO55	22.83	22.85	22.79
RC3 + SO32(+ F-SCH)	22.73	22.77	22.71
RC3 + SO32(+SCH)	22.45	22.47	22.46
1xEVDO Rev A RETAP	21.63	21.68	21.62



WCDMA Conducted output Power

Item	band	WCDMA 850			WCDMA 1900			WCDMA1700		
	Frequency	4132	4183	4233	9262	9400	9538	1313	1413	1513
	Subtest	dBm			dBm			dBm		
WCDMA	RMC 12.2Kbps	19.65	19.53	19.63	18.65	18.26	18.55	19.67	19.55	19.77
HSDPA	1	19.26	19.54	19.36	18.24	17.85	18.14	19.24	18.82	19.22
	2	19.12	19.25	19.17	17.85	17.46	17.75	18.85	18.43	18.83
	3	19.16	19.24	19.16	17.64	17.25	17.54	18.64	18.22	18.62
	4	19.18	19.21	19.17	17.42	18.22	17.48	18.38	18.14	18.17
HSUPA	1	19.13	19.39	19.10	18.74	18.54	18.42	19.44	19.18	19.45
	2	19.04	19.19	19.14	18.35	18.15	18.03	19.25	19.17	19.36
	3	19.06	19.22	19.16	18.07	17.87	17.75	19.14	19.18	19.12
	4	19.07	19.13	19.13	17.88	17.68	17.56	18.94	18.83	18.70
	5	19.07	19.05	19.12	17.65	17.26	17.55	18.27	18.35	18.32

**Note:**

1. WCDMA SAR was tested under PMC 12.2kbps with HSPA Inactive per KDB Publication 941225 D01v03r01.HSPA SAR was not requires since the average output power of the HSPA subtests was not more than 0.25dB higher than the RMC level and SAR was less than 1.2W/kg.
2. It is expected by the manufacturer that MPR for some HSPA subtests may be up to 2dB more than specified by 3GPP, but also as low as 0dB according to the chipset implementation in this model



LTE Conducted peak output Power

### LTE Test Configurations

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 frames.

#### 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 configuration [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 LTE procedures for SAR testing

A-MPR(Additional MPR) has been disabled for all SAR tests by using Network Signaling Value of "NS\_01" on the base station simulator.

#### 4)LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test

requirements i) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is  $\leq 0.8W/kg$ , testing of the remaining RB offset configurations and required test channels is not required for 1RB 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.



1. LTE Band 2 Conducted Power Test Verdict:

LTE FDD Band 2				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				18607/1850.7	18900/1880	19193/1909.3
1.4MHz	QPSK	1	0	17.56	17.61	17.42
		1	3	17.43	17.51	17.3
		1	5	17.45	17.5	17.29
		3	0	16.73	16.79	16.57
		3	2	16.74	16.78	16.54
		3	3	16.75	16.8	16.55
		6	0	16.61	16.67	16.44
	16QAM	1	0	16.43	16.46	16.31
		1	3	16.28	16.35	16.18
		1	5	16.41	16.43	16.3
		3	0	15.5	15.54	15.49
		3	2	15.58	15.64	15.52
		3	3	15.6	15.65	15.46
		6	0	15.48	15.55	15.31
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				18615/1851.5	18900/1880	19185/1908.5
3MHz	QPSK	1	0	17.78	17.95	17.85
		1	7	17.65	17.85	17.73
		1	14	17.67	17.84	17.72
		8	0	16.95	17.13	17
		8	4	16.96	17.12	16.97
		8	7	16.97	17.14	16.98
		15	0	16.83	17.01	16.87
	16QAM	1	0	16.65	16.8	16.74
		1	7	16.5	16.69	16.61
		1	14	16.63	16.77	16.73
		8	0	15.72	15.88	15.92
		8	4	15.8	15.98	15.95
		8	7	15.82	15.99	15.89
		15	0	15.7	15.89	15.74



LTE FDD Band 2				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				18625/1852.5	18900/1880	19175/1907.5
5MHz	QPSK	1	0	17.89	18.01	17.79
		1	13	17.76	17.91	17.67
		1	24	17.78	17.9	17.66
		12	0	17.06	17.19	16.94
		12	6	17.07	17.18	16.91
		12	13	17.08	17.2	16.92
		25	0	16.94	17.07	16.81
	16QAM	1	0	16.76	16.86	16.68
		1	13	16.61	16.75	16.55
		1	24	16.74	16.83	16.67
		12	0	15.83	15.94	15.86
		12	6	15.91	16.04	15.89
		12	13	15.93	16.05	15.83
		25	0	15.81	15.95	15.68
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				18650/1855	18900/1880	19150/1905
10MHz	QPSK	1	0	18.23	18.05	18.11
		1	25	18.1	17.95	17.99
		1	49	18.12	17.94	17.98
		25	0	17.4	17.23	17.26
		25	13	17.41	17.22	17.23
		25	25	17.42	17.24	17.24
		50	0	17.28	17.11	17.13
	16QAM	1	0	17.1	16.9	17
		1	25	16.95	16.79	16.87
		1	49	17.08	16.87	16.99
		25	0	16.17	15.98	16.18
		25	13	16.25	16.08	16.21
		25	25	16.27	16.09	16.15
		50	0	16.15	15.99	16



LTE FDD Band 2				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				18675/1857.5	18900/1880	19125/1902.5
15MHz	QPSK	1	0	17.35	17.26	17.15
		1	38	17.22	17.16	17.03
		1	74	17.24	17.15	17.02
		36	0	16.52	16.44	16.3
		36	18	16.53	16.43	16.27
		36	39	16.54	16.45	16.28
		75	0	16.4	16.32	16.17
	16QAM	1	0	16.22	16.11	16.04
		1	38	16.07	16	15.91
		1	74	16.2	16.08	16.03
		36	0	15.29	15.19	15.22
		36	18	15.37	15.29	15.25
		36	39	15.39	15.3	15.19
		75	0	15.27	15.2	15.04
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				18700/1860	18900/1880	19100/1900
20MHz	QPSK	1	0	18.42	18.50	18.25
		1	50	18.23	18.35	18.15
		1	99	18.25	18.34	18.14
		50	0	17.73	17.68	17.72
		50	25	17.64	17.56	17.66
		50	50	17.59	17.78	17.51
		100	0	17.41	17.66	17.38
	16QAM	1	0	17.23	17.3	17.16
		1	50	17.08	17.19	17.03
		1	99	17.21	17.27	17.15
		50	0	16.3	16.38	16.34
		50	25	16.38	16.48	16.37
		50	50	16.4	16.49	16.31
		100	0	16.28	16.39	16.16



2. LTE Band 4 Conducted Power Test Verdict:

LTE FDD Band 4				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				19957/1710.7	20175/1732.5	20393/1754.3
1.4MHz	QPSK	1	0	17.02	17.25	17.16
		1	3	16.89	17.15	17.04
		1	5	16.91	17.14	17.03
		3	0	16.19	16.43	16.31
		3	2	16.2	16.42	16.28
		3	3	16.21	16.44	16.29
		6	0	16.07	16.31	16.18
	16QAM	1	0	15.89	16.1	16.05
		1	3	15.74	15.99	15.92
		1	5	15.87	16.07	16.04
		3	0	14.96	15.18	15.23
		3	2	15.04	15.28	15.26
		3	3	15.06	15.29	15.2
		6	0	14.94	15.19	15.05
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				19965/1711.5	20175/1732.5	20385/1753.5
3MHz	QPSK	1	0	17.12	17.43	17.36
		1	7	16.99	17.33	17.24
		1	14	17.01	17.32	17.23
		8	0	16.29	16.61	16.51
		8	4	16.3	16.6	16.48
		8	7	16.31	16.62	16.49
		15	0	16.17	16.49	16.38
	16QAM	1	0	15.99	16.28	16.25
		1	7	15.84	16.17	16.12
		1	14	15.97	16.25	16.24
		8	0	15.06	15.36	15.43
		8	4	15.14	15.46	15.46
		8	7	15.16	15.47	15.4
		15	0	15.04	15.37	15.25



LTE FDD Band 4				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				19975/1712.5	20175/1732.5	20375/1752.5
5MHz	QPSK	1	0	17.55	17.34	17.46
		1	13	17.42	17.24	17.34
		1	24	17.44	17.23	17.33
		12	0	16.72	16.52	16.61
		12	6	16.73	16.51	16.58
		12	13	16.74	16.53	16.59
	16QAM	25	0	16.6	16.4	16.48
		1	0	16.42	16.19	16.35
		1	13	16.27	16.08	16.22
		1	24	16.4	16.16	16.34
		12	0	15.49	15.27	15.53
		12	6	15.57	15.37	15.56
		12	13	15.59	15.38	15.5
		25	0	15.47	15.28	15.35
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20000/1715	20175/1732.5	20350/1750
10MHz	QPSK	1	0	17.89	17.72	17.85
		1	25	17.76	17.62	17.73
		1	49	17.78	17.61	17.72
		25	0	17.06	16.9	17
		25	13	17.07	16.89	16.97
		25	25	17.08	16.91	16.98
		50	0	16.94	16.78	16.87
	16QAM	1	0	16.76	16.57	16.74
		1	25	16.61	16.46	16.61
		1	49	16.74	16.54	16.73
		25	0	15.83	15.65	15.92
		25	13	15.91	15.75	15.95
		25	25	15.93	15.76	15.89
		50	0	15.81	15.66	15.74



LTE FDD Band 4				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20025/1717.5	20175/1732.5	20325/1747.5
15MHz	QPSK	1	0	17.78	17.85	17.65
		1	38	17.65	17.75	17.53
		1	74	17.67	17.74	17.52
		36	0	16.95	17.03	16.8
		36	18	16.96	17.02	16.77
		36	39	16.97	17.04	16.78
		75	0	16.83	16.91	16.67
	16QAM	1	0	16.65	16.7	16.54
		1	38	16.5	16.59	16.41
		1	74	16.63	16.67	16.53
		36	0	15.72	15.78	15.72
		36	18	15.8	15.88	15.75
		36	39	15.82	15.89	15.69
		75	0	15.7	15.79	15.54
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20050/1720	20175/1732.5	20300/1745
20MHz	QPSK	1	0	18.15	18.27	18.10
		1	50	18.13	18.68	18.44
		1	99	18.15	18.67	18.43
		50	0	17.21	17.16	17.26
		50	25	17.27	17.24	17.31
		50	50	17.33	17.28	17.34
		100	0	17.04	17.1	17.12
	16QAM	1	0	17.13	17.63	17.45
		1	50	16.98	17.52	17.32
		1	99	17.11	17.6	17.44
		50	0	16.2	16.71	16.63
		50	25	16.28	16.81	16.66
		50	50	16.3	16.82	16.6
		100	0	16.18	16.72	16.45



3. LTE Band 5 Conducted Power Test Verdict:

LTE FDD Band 5				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20407/824.7	20525/836.5	20643/848.3
1.4MHz	QPSK	1	0	17.56	17.81	17.65
		1	3	17.43	17.7	17.54
		1	5	17.41	17.66	17.51
		3	0	16.75	16.95	16.79
		3	2	16.71	16.98	16.83
		3	3	16.72	16.97	16.78
		6	0	16.57	16.78	16.68
	16QAM	1	0	16.43	16.69	16.5
		1	3	16.32	16.54	16.39
		1	5	16.41	16.65	16.48
		3	0	15.52	15.77	15.67
		3	2	15.55	15.86	15.73
		3	3	15.61	15.88	15.64
		6	0	15.47	15.7	15.43
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20415/825.5	20525/836.5	20635/847.5
3MHz	QPSK	1	0	17.76	17.96	18.01
		1	7	17.61	17.82	17.87
		1	14	17.65	17.83	17.86
		8	0	16.94	17.11	17.18
		8	4	16.95	17.14	17.2
		8	7	16.96	17.12	17.13
		15	0	16.78	16.99	17.02
	16QAM	1	0	16.64	16.83	16.84
		1	7	16.49	16.68	16.69
		1	14	16.61	16.77	16.81
		8	0	15.72	15.89	16.03
		8	4	15.78	16.01	16.12
		8	7	15.83	15.99	16.01
		15	0	15.68	15.83	15.77





LTE FDD Band 5				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20425/826.5	20525/836.5	20625/846.5
5MHz	QPSK	1	0	18.23	18.17	18.02
		1	13	18.08	18.02	17.91
		1	24	18.1	18.05	17.87
		12	0	17.41	17.34	17.21
		12	6	17.42	17.33	17.18
		12	13	17.4	17.3	17.17
		25	0	17.26	17.18	17.23
	16QAM	1	0	17.09	17.05	16.86
		1	13	16.96	16.91	16.72
		1	24	17.04	17.03	16.79
		12	0	16.15	16.13	16.01
		12	6	16.28	16.19	16.14
		12	13	16.27	16.22	16
		25	0	16.12	16.11	15.76
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20450/829	20525/836.5	20600/844
10MHz	QPSK	1	0	18.65	18.78	18.55
		1	25	18.39	18.6	18.28
		1	49	18.41	18.6	18.32
		25	0	17.46	17.53	17.55
		25	13	17.18	17.32	17.25
		25	25	17.03	17.13	16.91
		50	0	17.39	17.27	17.35
	16QAM	1	0	17.44	17.57	17.28
		1	25	17.33	17.46	17.17
		1	49	17.39	17.49	17.25
		25	0	16.53	16.63	16.44
		25	13	16.58	16.68	16.52
		25	25	16.59	16.71	16.4
		50	0	16.46	16.54	16.18



4. LTE Band 7 Conducted Power Test Verdict:

LTE FDD Band 7				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20775/2502.5	21100/2535	21425/2567.5
5MHz	QPSK	1	0	18.02	17.56	17.69
		1	13	17.91	17.41	17.54
		1	24	17.89	17.43	17.58
		12	0	17.14	16.71	16.86
		12	6	17.17	16.75	16.83
		12	13	17.19	16.73	16.84
		25	0	17.03	16.53	16.75
	16QAM	1	0	16.91	16.44	16.53
		1	13	16.79	16.31	16.42
		1	24	16.86	16.39	16.52
		12	0	16	15.46	15.68
		12	6	16.03	15.6	15.77
		12	13	16.05	15.55	15.7
		25	0	15.94	15.4	15.58
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20800/2505	21100/2535	21400/2565
10MHz	QPSK	1	0	18.1	17.76	18.01
		1	25	17.99	17.61	17.86
		1	49	17.97	17.63	17.9
		25	0	17.22	16.91	17.18
		25	13	17.25	16.95	17.15
		25	25	17.27	16.93	17.16
		50	0	17.11	16.73	17.07
	16QAM	1	0	16.99	16.64	16.85
		1	25	16.87	16.51	16.74
		1	49	16.94	16.59	16.84
		25	0	16.08	15.66	16
		25	13	16.11	15.8	16.09
		25	25	16.13	15.75	16.02
		50	0	16.02	15.6	15.9



LTE FDD Band 7				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20825/2507.5	21100/2535	21375/2562.5
15MHz	QPSK	1	0	18.23	18.02	18.17
		1	38	18.12	17.87	18.02
		1	74	18.1	17.89	18.06
		36	0	17.35	17.17	17.34
		36	18	17.38	17.21	17.31
		36	39	17.4	17.19	17.32
		75	0	17.24	16.99	17.23
	16QAM	1	0	17.12	16.9	17.01
		1	38	17	16.77	16.9
		1	74	17.07	16.85	17
		36	0	16.21	15.92	16.16
		36	18	16.24	16.06	16.25
		36	39	16.26	16.01	16.18
		75	0	16.15	15.86	16.06
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				20850/2510	21100/2535	21350/2560
20MHz	QPSK	1	0	18.62	18.57	18.43
		1	50	18.51	18.42	18.28
		1	99	18.49	18.44	18.32
		50	0	17.65	17.45	17.6
		50	25	17.77	17.96	17.72
		50	50	17.69	17.74	17.58
		100	0	17.63	17.88	17.49
	16QAM	1	0	17.51	17.45	17.27
		1	50	17.39	17.32	17.16
		1	99	17.46	17.4	17.26
		50	0	16.6	16.47	16.42
		50	25	16.63	16.61	16.51
		50	50	16.65	16.56	16.44
		100	0	16.54	16.41	16.32



5. LTE Band 12 Conducted Power Test Verdict:

LTE FDD Band 12				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				23017/699.7	23095/707.5	23173/715.3
1.4MHz	QPSK	1	0	17.35	17.52	17.66
		1	3	17.23	17.4	17.54
		1	5	17.24	17.41	17.53
		3	0	16.5	16.7	16.84
		3	2	16.53	16.67	16.82
		3	3	16.47	16.71	16.83
		6	0	16.37	16.57	16.69
	16QAM	1	0	16.22	16.37	16.54
		1	3	16.11	16.26	16.41
		1	5	16.2	16.34	16.49
		3	0	15.27	15.42	15.7
		3	2	15.39	15.55	15.81
		3	3	15.38	15.52	15.73
		6	0	15.2	15.39	15.51
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				23025/700.5	23095/707.5	23165/714.5
3MHz	QPSK	1	0	17.45	17.64	17.75
		1	7	17.33	17.52	17.63
		1	14	17.34	17.53	17.62
		8	0	16.6	16.82	16.93
		8	4	16.63	16.79	16.91
		8	7	16.57	16.83	16.92
		15	0	16.47	16.69	16.78
	16QAM	1	0	16.32	16.49	16.63
		1	7	16.21	16.38	16.5
		1	14	16.3	16.46	16.58
		8	0	15.37	15.54	15.79
		8	4	15.49	15.67	15.9
		8	7	15.48	15.64	15.82
		15	0	15.3	15.51	15.6



LTE FDD Band 12				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				23035/701.5	23095/707.5	23155/713.5
5MHz	QPSK	1	0	17.89	17.96	17.91
		1	13	17.77	17.84	17.79
		1	24	17.78	17.85	17.78
		12	0	17.04	17.14	17.09
		12	6	17.07	17.11	17.07
		12	13	17.01	17.15	17.08
		25	0	16.91	17.01	16.94
	16QAM	1	0	16.76	16.81	16.79
		1	13	16.65	16.7	16.66
		1	24	16.74	16.78	16.74
		12	0	15.81	15.86	15.95
		12	6	15.93	15.99	16.06
		12	13	15.92	15.96	15.98
		25	0	15.74	15.83	15.76
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				23060/704	23095/707.5	23130/711
10MHz	QPSK	1	0	18.10	18.15	18.05
		1	25	17.93	18	17.89
		1	49	17.94	18.01	17.88
		25	0	17.2	17.05	17.23
		25	13	17.1	16.81	17.15
		25	25	17.16	17.27	17.24
		50	0	17.07	16.92	17.11
	16QAM	1	0	16.92	16.97	16.89
		1	25	16.81	16.86	16.76
		1	49	16.9	16.94	16.84
		25	0	15.97	16.02	16.05
		25	13	16.09	16.15	16.16
		25	25	16.08	16.12	16.08
		50	0	15.9	15.99	15.86



6. LTE Band 17 Conducted Power Test Verdict:

LTE FDD Band 17				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				23755/706.5	23790/710	23825/713.5
5MHz	QPSK	1	0	18.02	18.13	17.88
		1	13	17.91	18	17.74
		1	24	17.87	18.01	17.73
		12	0	17.37	17.47	17.05
		12	6	17.14	17.28	17
		12	13	17.18	17.31	17.07
		25	0	17.2	17.34	16.88
	16QAM	1	0	16.9	17	16.74
		1	13	16.79	16.85	16.59
		1	24	16.89	16.97	16.71
		12	0	15.99	16.05	15.89
		12	6	16.02	16.18	15.96
		12	13	16.04	16.16	15.85
		25	0	15.9	16.04	15.73
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				23780/709	23790/710	23800/711
10MHz	QPSK	1	0	18.08	18.21	18.02
		1	25	18	18.15	17.83
		1	49	17.98	18.02	17.81
		25	0	17.24	17.32	17.27
		25	13	16.97	16.95	17.15
		25	25	16.72	16.72	17.24
		50	0	16.19	16.64	17.29
	16QAM	1	0	16.99	17	16.85
		1	25	16.85	16.89	16.69
		1	49	16.97	16.98	16.8
		25	0	16.05	16.05	16
		25	13	16.16	15.97	16.11
		25	25	16.17	16.07	16.03
		50	0	16.06	15.17	15.8



7. LTE Band 25 Conducted Power Test Verdict:

LTE FDD Band 25				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26047/1850.7	26365/1882.5	26683/1914.3
1.4MHz	QPSK	1	0	17.68	17.84	17.93
		1	3	17.53	17.71	17.78
		1	5	17.5	17.69	17.74
		3	0	16.85	17	17.08
		3	2	16.8	17.01	17.04
		3	3	16.79	17.02	17.05
		6	0	16.74	16.85	16.94
	16QAM	1	0	16.56	16.67	16.8
		1	3	16.41	16.54	16.67
		1	5	16.51	16.62	16.72
		3	0	15.6	15.74	15.99
		3	2	15.71	15.63	16.04
		3	3	15.69	15.69	15.95
		6	0	15.56	14.82	15.71
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26055/1851.5	26365/1882.5	26675/1913.5
3MHz	QPSK	1	0	17.78	18.02	18.09
		1	7	17.63	17.89	17.94
		1	14	17.6	17.87	17.9
		8	0	16.95	17.18	17.24
		8	4	16.9	17.19	17.2
		8	7	16.89	17.2	17.21
		15	0	16.84	17.03	17.1
	16QAM	1	0	16.66	16.85	16.96
		1	7	16.51	16.72	16.83
		1	14	16.61	16.8	16.88
		8	0	15.7	15.92	16.15
		8	4	15.81	15.81	16.2
		8	7	15.79	15.87	16.11
		15	0	15.66	15	15.87



LTE FDD Band 25				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26065/1852.5	26365/1882.5	26665/1912.5
5MHz	QPSK	1	0	18.02	18.11	18.16
		1	13	17.87	17.99	18.05
		1	24	17.83	17.96	18.04
		12	0	17.17	17.25	17.33
		12	6	17.11	17.24	17.21
		12	13	17.09	17.25	17.21
		25	0	17.04	17.07	17.2
	16QAM	1	0	16.87	16.97	17.02
		1	13	16.69	16.86	16.87
		1	24	16.83	16.92	16.94
		12	0	15.91	16.04	16.19
		12	6	16.02	15.98	16.31
		12	13	16.04	15.99	16.17
		25	0	15.9	15.19	15.88
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26090/1855	26365/1882.5	26640/1910
10MHz	QPSK	1	0	18.12	18.25	18.26
		1	25	18	18.1	18.13
		1	49	17.98	18.12	18.11
		25	0	17.31	17.4	17.42
		25	13	17.27	17.44	17.35
		25	25	17.26	17.41	17.34
		50	0	17.19	17.28	17.3
	16QAM	1	0	16.99	17.1	17.15
		1	25	16.85	16.99	16.99
		1	49	16.97	17.08	17.1
		25	0	16.05	16.15	16.3
		25	13	16.16	16.07	16.41
		25	25	16.17	16.17	16.33
		50	0	16.06	15.27	16.1





LTE FDD Band 25				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26115/1857.5	26365/1882.5	26615/1907.5
15MHz	QPSK	1	0	18.27	18.32	18.33
		1	38	18.12	18.2	18.22
		1	74	18.08	18.17	18.21
		36	0	17.42	17.46	17.5
		36	18	17.36	17.45	17.38
		36	39	17.34	17.46	17.38
		75	0	17.29	17.28	17.37
	16QAM	1	0	17.12	17.18	17.19
		1	38	16.94	17.07	17.04
		1	74	17.08	17.13	17.11
		36	0	16.16	16.25	16.36
		36	18	16.27	16.19	16.48
		36	39	16.29	16.2	16.34
		75	0	16.15	15.4	16.05
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26140/1860	26365/1882.5	26590/1905
20MHz	QPSK	1	0	18.42	18.59	18.43
		1	50	18.2	18.27	18.26
		1	99	18.16	18.24	18.25
		50	0	17.57	17.73	17.60
		50	25	17.44	17.52	17.42
		50	50	17.42	17.23	17.35
		100	0	17.37	17.31	17.41
	16QAM	1	0	16.2	17.25	17.23
		1	50	16.02	17.14	17.08
		1	99	16.16	17.2	17.15
		50	0	15.24	16.32	16.4
		50	25	15.35	16.26	16.52
		50	50	15.37	16.27	16.38
		100	0	15.23	15.47	16.09



8. LTE Band 26 Conducted Power Test Verdict

LTE FDD Band 26				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26697/814.7	26865/831.5	27033/848.3
1.4MHz	QPSK	1	0	17.75	17.89	17.79
		1	3	17.6	17.76	17.64
		1	5	17.57	17.74	17.6
		3	0	16.92	17.05	16.94
		3	2	16.87	17.06	16.9
		3	3	16.86	17.07	16.91
		6	0	16.81	16.9	16.8
	16QAM	1	0	16.63	16.72	16.66
		1	3	16.48	16.59	16.53
		1	5	16.58	16.67	16.58
		3	0	15.67	15.79	15.85
		3	2	15.78	15.68	15.9
		3	3	15.76	15.74	15.81
		6	0	15.63	14.87	15.57
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26705/815.5	26865/831.5	27025/847.5
3MHz	QPSK	1	0	18	18.12	18.05
		1	7	17.85	18	17.94
		1	14	17.81	17.97	17.93
		8	0	17.15	17.26	17.22
		8	4	17.09	17.25	17.1
		8	7	17.07	17.26	17.1
		15	0	17.02	17.08	17.09
	16QAM	1	0	16.85	16.98	16.91
		1	7	16.67	16.87	16.76
		1	14	16.81	16.93	16.83
		8	0	15.89	16.05	16.08
		8	4	16	15.99	16.2
		8	7	16.02	16	16.06
		15	0	15.88	15.2	15.77



LTE FDD Band 26				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26715/816.5	26865/831.5	27015/846.5
5MHz	QPSK	1	0	18.13	18.25	18.24
		1	13	17.98	18.13	18.13
		1	24	17.94	18.1	18.12
		12	0	17.28	17.39	17.41
		12	6	17.22	17.38	17.29
		12	13	17.2	17.39	17.29
		25	0	17.15	17.21	17.28
	16QAM	1	0	16.98	17.11	17.1
		1	13	16.8	17	16.95
		1	24	16.94	17.06	17.02
		12	0	16.02	16.18	16.27
		12	6	16.13	16.12	16.39
		12	13	16.15	16.13	16.25
		25	0	16.01	15.33	15.96
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26740/819	26865/831.5	26990/844
10MHz	QPSK	1	0	18.25	18.34	18.35
		1	25	18.1	18.22	18.24
		1	49	18.06	18.19	18.23
		25	0	17.4	17.48	17.52
		25	13	17.34	17.47	17.4
		25	25	17.32	17.48	17.4
		50	0	17.27	17.3	17.39
	16QAM	1	0	17.1	17.2	17.21
		1	25	16.92	17.09	17.06
		1	49	17.06	17.15	17.13
		25	0	16.14	16.27	16.38
		25	13	16.25	16.21	16.5
		25	25	16.27	16.22	16.36
		50	0	16.13	15.42	16.07



LTE FDD Band 26				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				26765/821.5	26865/831.52	26965/841.5
15MHz	QPSK	1	0	18.42	18.63	18.46
		1	38	18.2	18.3	18.29
		1	74	18.16	18.27	18.28
		36	0	17.57	17.79	17.63
		36	18	17.44	17.55	17.45
		36	39	17.42	17.56	17.45
		75	0	17.37	17.38	17.44
	16QAM	1	0	17.2	17.28	17.26
		1	38	17.02	17.17	17.11
		1	74	17.16	17.23	17.18
		36	0	16.24	16.35	16.43
		36	18	16.35	16.29	16.55
		36	39	16.37	16.3	16.41
		75	0	16.23	15.5	16.12



9. LTE Band 30 Conducted Power Test Verdict

LTE FDD Band 30				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				27685/2307.5	27710/2310	27735/2312.5
5MHz	QPSK	1	0	17.56	17.63	17.52
		1	13	17.44	17.51	17.4
		1	24	17.45	17.52	17.39
		12	0	16.71	16.81	16.7
		12	6	16.74	16.78	16.68
		12	13	16.68	16.82	16.69
		25	0	16.58	16.68	16.55
	16QAM	1	0	16.43	16.48	16.4
		1	13	16.32	16.37	16.27
		1	24	16.41	16.45	16.35
		12	0	15.48	15.53	15.56
		12	6	15.6	15.66	15.67
		12	13	15.59	15.63	15.59
		25	0	15.41	15.5	15.37
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				27710/2310	27710/2310	27710/2310
10MHz	QPSK	1	0	17.69	17.69	17.69
		1	25	17.57	17.57	17.57
		1	49	17.58	17.58	17.58
		25	0	16.27	16.27	16.27
		25	13	16.16	16.16	16.16
		25	25	16.04	16.04	16.04
		50	0	16.14	16.14	16.14
	16QAM	1	0	16.54	16.54	16.54
		1	25	16.43	16.43	16.43
		1	49	16.51	16.51	16.51
		25	0	15.59	15.59	15.59
		25	13	15.72	15.72	15.72
		25	25	15.69	15.69	15.69
		50	0	15.56	15.56	15.56



10. LTE Band 41 Conducted Power Test Verdict

LTE TDD Band 41				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				39675/2498.5	40620/2593	41565/2687.5
5MHz	QPSK	1	0	18.02	18.09	17.85
		1	13	17.87	17.97	17.74
		1	24	17.83	17.94	17.73
		12	0	17.17	17.23	17.02
		12	6	17.11	17.22	16.9
		12	13	17.09	17.23	16.9
		25	0	17.04	17.05	16.89
	16QAM	1	0	16.87	16.95	16.71
		1	13	16.69	16.84	16.56
		1	24	16.83	16.9	16.63
		12	0	15.91	16.02	15.88
		12	6	16.02	15.96	16
		12	13	16.04	15.97	15.86
		25	0	15.9	15.17	15.57
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				39700/2501	40620/2593	41540/2685
10MHz	QPSK	1	0	18.08	18.13	17.96
		1	25	17.93	18.01	17.85
		1	49	17.89	17.98	17.84
		25	0	17.23	17.27	17.13
		25	13	17.17	17.26	17.01
		25	25	17.15	17.27	17.01
		50	0	17.1	17.09	17
	16QAM	1	0	16.93	16.99	16.82
		1	25	16.75	16.88	16.67
		1	49	16.89	16.94	16.74
		25	0	15.97	16.06	15.99
		25	13	16.08	16	16.11
		25	25	16.1	16.01	15.97
		50	0	15.96	15.21	15.68



LTE TDD Band 41				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				39725/2503.5	40620/2593	41515/2682.5
15MHz	QPSK	1	0	18.12	18.17	18.02
		1	38	17.97	18.05	17.91
		1	74	17.93	18.02	17.9
		36	0	17.27	17.31	17.19
		36	18	17.21	17.3	17.07
		36	39	17.19	17.31	17.07
		75	0	17.14	17.13	17.06
	16QAM	1	0	16.97	17.03	16.88
		1	38	16.79	16.92	16.73
		1	74	16.93	16.98	16.8
		36	0	16.01	16.1	16.05
		36	18	16.12	16.04	16.17
		36	39	16.14	16.05	16.03
		75	0	16	15.25	15.74
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				39750/2506	40620/2593	41490/2680
20MHz	QPSK	1	0	18.18	18.25	18.16
		1	50	18	18.09	17.95
		1	99	17.96	18.06	17.94
		50	0	17.33	17.39	17.33
		50	25	17.24	17.34	17.11
		50	50	17.22	17.35	17.11
		100	0	17.17	17.17	17.1
	16QAM	1	0	17	17.07	16.92
		1	50	16.82	16.96	16.77
		1	99	16.96	17.02	16.84
		50	0	16.04	16.14	16.09
		50	25	16.15	16.08	16.21
		50	50	16.17	16.09	16.07
		100	0	16.03	15.29	15.78



11. LTE Band 66 Conducted Power Test Verdict

LTE FDD Band 66				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				131979/1710.7	132322/1745	132665/1779.3
1.4MHz	QPSK	1	0	17.75	17.67	17.45
		1	3	17.62	17.57	17.33
		1	5	17.64	17.56	17.32
		3	0	16.92	16.85	16.6
		3	2	16.93	16.84	16.57
		3	3	16.94	16.86	16.58
		6	0	16.8	16.73	16.47
	16QAM	1	0	16.62	16.52	16.34
		1	3	16.47	16.41	16.21
		1	5	16.6	16.49	16.33
		3	0	15.69	15.6	15.52
		3	2	15.77	15.7	15.55
		3	3	15.79	15.71	15.49
		6	0	15.67	15.61	15.34
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				131987/1711.5	12322/1745	132657/1778.5
3MHz	QPSK	1	0	17.79	17.85	17.66
		1	7	17.66	17.75	17.54
		1	14	17.68	17.74	17.53
		8	0	16.96	17.03	16.81
		8	4	16.97	17.02	16.78
		8	7	16.98	17.04	16.79
		15	0	16.84	16.91	16.68
	16QAM	1	0	16.66	16.7	16.55
		1	7	16.51	16.59	16.42
		1	14	16.64	16.67	16.54
		8	0	15.73	15.78	15.73
		8	4	15.81	15.88	15.76
		8	7	15.83	15.89	15.7
		15	0	15.71	15.79	15.55





LTE FDD Band 66				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				131997/1712.5	132322/1745	132647/1777.5
5MHz	QPSK	1	0	18.02	18.16	18.07
		1	13	17.89	18.06	17.95
		1	24	17.91	18.05	17.94
		12	0	17.19	17.34	17.22
		12	6	17.2	17.33	17.19
		12	13	17.21	17.35	17.2
		25	0	17.07	17.22	17.09
	16QAM	1	0	16.89	17.01	16.96
		1	13	16.74	16.9	16.83
		1	24	16.87	16.98	16.95
		12	0	15.96	16.09	16.14
		12	6	16.04	16.19	16.17
		12	13	16.06	16.2	16.11
		25	0	15.94	16.1	15.96
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				132022/1715	132322/1745	132622/1775
10MHz	QPSK	1	0	18.15	18.24	18.13
		1	25	18.02	18.14	18.01
		1	49	18.04	18.13	18
		25	0	17.32	17.42	17.28
		25	13	17.33	17.41	17.25
		25	25	17.34	17.43	17.26
		50	0	17.2	17.3	17.15
	16QAM	1	0	17.02	17.09	17.02
		1	25	16.87	16.98	16.89
		1	49	17	17.06	17.01
		25	0	16.09	16.17	16.2
		25	13	16.17	16.27	16.23
		25	25	16.19	16.28	16.17
		50	0	16.07	16.18	16.02



LTE FDD Band 66				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				132047/1717.5	132322/1745	132597/1772.5
15MHz	QPSK	1	0	18.21	18.28	18.21
		1	38	18.08	18.18	18.09
		1	74	18.1	18.17	18.08
		36	0	17.38	17.46	17.36
		36	18	17.39	17.45	17.33
		36	39	17.4	17.47	17.34
		75	0	17.26	17.34	17.23
	16QAM	1	0	17.08	17.13	17.1
		1	38	16.93	17.02	16.97
		1	74	17.06	17.1	17.09
		36	0	16.15	16.21	16.28
		36	18	16.23	16.31	16.31
		36	39	16.25	16.32	16.25
		75	0	16.13	16.22	16.1
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency		
				132072/1720	132322/1745	132572/1770
20MHz	QPSK	1	0	18.31	18.42	18.27
		1	50	18.12	18.25	18.12
		1	99	18.14	18.24	18.11
		50	0	17.48	17.60	17.42
		50	25	17.43	17.52	17.36
		50	50	17.44	17.54	17.37
		100	0	17.3	17.41	17.26
	16QAM	1	0	17.12	17.2	17.13
		1	50	16.97	17.09	17
		1	99	17.1	17.17	17.12
		50	0	16.19	16.28	16.31
		50	25	16.27	16.38	16.34
		50	50	16.29	16.39	16.28
		100	0	16.17	16.29	16.13



## 7.2 Primary Antenna

### GSM Conducted Power

GSM850		Burst-Averaged output Power (dBm)			Division Factors	Frame-Averaged output Power (dBm)		
		128CH	190CH	251CH		28CH	190CH	251CH
GSM (CS)		31.21	31.18	31.15	-9.19	22.02	21.99	21.96
GPRS (GMSK)	1 Tx Slot	31.05	31.21	31.13	-9.19	21.86	22.02	21.94
	2 Tx Slots	28.17	28.20	28.09	-6.13	22.04	22.07	21.96
	3 Tx Slots	26.76	26.72	26.84	-4.42	22.34	22.30	22.42
	4 Tx Slots	25.91	26.03	25.96	-3.18	22.73	22.85	22.78
EDGE (8PSK)	1 Tx Slot	26.81	26.46	25.89	-9.19	17.62	17.27	16.70
	2 Tx Slots	24.00	24.03	23.83	-6.13	17.87	17.90	17.70
	3 Tx Slots	22.52	22.46	22.57	-4.42	18.10	18.04	18.15
	4 Tx Slots	21.78	21.89	21.83	-3.18	18.60	18.71	18.65
GSM1900		Burst-Averaged output Power (dBm)			Division Factors	Frame-Averaged output Power (dBm)		
		512CH	661CH	810CH		512CH	661CH	810CH
GSM (CS)		28.81	28.69	25.46	-9.19	19.62	19.50	16.27
GPRS (GMSK)	1 Tx Slot	28.48	28.36	27.89	-9.19	19.29	15.17	18.70
	2 Tx Slots	25.77	25.79	25.68	-6.13	19.64	19.66	19.55
	3 Tx Slots	24.41	24.34	24.44	-4.42	19.99	19.92	20.02
	4 Tx Slots	23.31	23.18	23.11	-3.18	20.13	20.00	21.13
EDGE (8PSK)	1 Tx Slot	25.55	24.93	24.47	-9.19	16.36	15.74	15.28
	2 Tx Slots	22.78	22.80	22.63	-6.13	16.65	16.67	16.50
	3 Tx Slots	21.30	21.19	21.30	-4.42	16.88	16.77	16.88
	4 Tx Slots	20.44	20.50	20.49	-3.18	17.26	17.32	17.31

**Note:** Per KDB 447498 D01 v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.

For hotspot SAR, EUT was performed at GPRS Class 12 multi-slots(4Tx) mode

For Head and Body-worn SAR testing, EUT was set in GSM Voice mode for both GSM850 and GSM1900

### Timeslot consignations

No. Of Slots	Slot 1	Slot 2	Slot 3	Slot 4
Slot Consignation	1Up4Down	2UpDown	3UpDown	4Up1Down
Duty Cycle	1:8	1:4	1:2.67	1:2
Crest Factor	-9.03dB	-6.02dB	-4.26dB	-3.01dB



## CDMA Conducted output Power

Conducted Power (Unit:dBm)			
Band	CDMA BC0		
Channel	1013	384	777
Frequency(MHz)	824.7	836.52	848.31
RC1 + SO55	23.75	<b>23.78</b>	23.76
RC3 + SO55	23.68	23.74	23.71
RC3 + SO32(+ F-SCH)	23.66	23.69	23.57
RC3 + SO32(+SCH)	23.67	23.68	23.61
1xEVDO Rev A RETAP	22.46	22.42	22.36
Band	CDMA BC1		
Channel	25	600	1175
Frequency(MHz)	1851.25	1880.00	1908.75
RC1 + SO55	22.81	22.82	22.78
RC3 + SO55	22.78	22.81	22.75
RC3 + SO32(+ F-SCH)	22.67	22.69	22.62
RC3 + SO32(+SCH)	22.41	22.43	22.42
1xEVDO Rev A RETAP	21.58	21.64	21.56



WCDMA Conducted output Power

Item	band	WCDMA 850			WCDMA 1900			WCDMA1700		
	Frequency	4132	4183	4233	9262	9400	9538	1313	1413	1513
	Subtest	dBm			dBm			dBm		
WCDMA	RMC 12.2Kbps	21.61	21.23	21.52	21.63	21.01	21.73	21.51	21.18	21.56
HSDPA	1	21.23	21.61	23.46	21.21	20.81	21.02	21.23	21.17	21.31
	2	21.08	21.33	23.2	21.09	20.56	20.8	21.11	20.92	21.09
	3	21.01	21.30	23.24	20.98	20.48	20.81	21.00	20.84	21.10
	4	21.06	21.23	23.33	21.06	20.5	20.89	21.08	20.86	21.18
HSUPA	1	21.11	20.58	21.51	21.68	21.46	21.39	21.08	20.9	21.19
	2	21.00	20.35	21.39	21.56	21.22	21.23	20.96	20.66	21.03
	3	20.93	20.45	21.38	21.53	21.3	21.34	20.93	20.74	21.14
	4	20.99	20.36	21.23	21.55	21.22	21.16	20.95	20.66	20.96
	5	20.88	20.40	21.36	21.44	21.33	21.28	20.84	20.77	21.08

**Note:**

3. WCDMA SAR was tested under PMC 12.2kbps with HSPA Inactive per KDB Publication 941225 D01v03r01.HSPA SAR was not requires since the average output power of the HSPA subtests was not more than 0.25dB higher than the RMC level and SAR was less than 1.2W/kg.
4. It is expected by the manufacturer that MPR for some HSPA subtests may be up to 2dB more than specified by 3GPP, but also as low as 0dB according to the chipset implementation in this model

## LTE Conducted peak output Power

### LTE Test Configurations

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 frames.

#### 3) 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.

#### 4) 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 configuration [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 LTE procedures for SAR testing

A-MPR(Additional MPR) has been disabled for all SAR tests by using Network Signaling Value of "NS\_01" on the base station simulator.

#### 4)LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test

requirements i) QPSK with 1 RB allocation

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



1. LTE Band 2 Conducted Power Test Verdict:

LTE FDD Band 2				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18607	18900	19193
1.4MHz	QPSK	1	0	22.68	22.81	22.75
		1	3	22.55	22.71	22.63
		1	5	22.57	22.7	22.62
		3	0	21.85	21.99	21.9
		3	2	21.86	21.98	21.87
		3	3	21.87	22	21.88
		6	0	21.73	21.87	21.77
	16QAM	1	0	21.55	21.66	21.64
		1	3	21.4	21.55	21.51
		1	5	21.53	21.63	21.63
		3	0	20.62	20.74	20.82
		3	2	20.7	20.84	20.85
		3	3	20.72	20.85	20.79
		6	0	20.6	20.75	20.64
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18615	18900	19185
3MHz	QPSK	1	0	22.74	22.91	22.78
		1	7	22.61	22.81	22.66
		1	14	22.63	22.8	22.65
		8	0	21.91	22.09	21.93
		8	4	21.92	22.08	21.9
		8	7	21.93	22.1	21.91
		15	0	21.79	21.97	21.8
	16QAM	1	0	21.61	21.76	21.67
		1	7	21.46	21.65	21.54
		1	14	21.59	21.73	21.66
		8	0	20.68	20.84	20.85
		8	4	20.76	20.94	20.88
		8	7	20.78	20.95	20.82
		15	0	20.66	20.85	20.67



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18625	18900	19175
5MHz	QPSK	1	0	22.93	22.95	22.92
		1	13	22.8	22.85	22.8
		1	24	22.82	22.84	22.79
		12	0	22.1	22.13	22.07
		12	6	22.11	22.12	22.04
		12	13	22.12	22.14	22.05
		25	0	21.98	22.01	21.94
	16QAM	1	0	21.8	21.8	21.81
		1	13	21.65	21.69	21.68
		1	24	21.78	21.77	21.8
		12	0	20.87	20.88	20.99
		12	6	20.95	20.98	21.02
		12	13	20.97	20.99	20.96
		25	0	20.85	20.89	20.81
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18650	18900	19150
10MHz	QPSK	1	0	23.05	23.11	23.02
		1	25	22.92	23.01	22.9
		1	49	22.94	23	22.89
		25	0	22.22	22.29	22.17
		25	13	22.23	22.28	22.14
		25	25	22.24	22.3	22.15
		50	0	22.1	22.17	22.04
	16QAM	1	0	21.92	21.96	21.91
		1	25	21.77	21.85	21.78
		1	49	21.9	21.93	21.9
		25	0	20.99	21.04	21.09
		25	13	21.07	21.14	21.12
		25	25	21.09	21.15	21.06
		50	0	20.97	21.05	20.91





Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18675	18900	19125
15MHz	QPSK	1	0	23.13	23.28	23.16
		1	38	23	23.18	23.04
		1	74	23.02	23.17	23.03
		36	0	22.3	22.46	22.31
		36	18	22.31	22.45	22.28
		36	39	22.32	22.47	22.29
		75	0	22.18	22.34	22.18
	16QAM	1	0	22	22.13	22.05
		1	38	21.85	22.02	21.92
		1	74	21.98	22.1	22.04
		36	0	21.07	21.21	21.23
		36	18	21.15	21.31	21.26
		36	39	21.17	21.32	21.2
		75	0	21.05	21.22	21.05
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				18700	18900	19100
20MHz	QPSK	1	0	23.36	23.42	23.12
		1	50	23.23	23.32	23
		1	99	23.25	23.31	22.99
		50	0	22.53	22.6	22.27
		50	25	22.54	22.59	22.24
		50	50	22.55	22.61	22.25
		100	0	22.41	22.48	22.14
	16QAM	1	0	22.23	22.27	22.01
		1	50	22.08	22.16	21.88
		1	99	22.21	22.24	22
		50	0	21.3	21.35	21.19
		50	25	21.38	21.45	21.22
		50	50	21.4	21.46	21.16
		100	0	21.28	21.36	21.01

## 2. LTE Band 4 Conducted Power Test Verdict:

LTE FDD Band 4				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				19957	20175	20393
1.4MHz	QPSK	1	0	22.55	22.63	22.46
		1	3	22.42	22.53	22.34
		1	5	22.44	22.52	22.33
		3	0	21.72	21.81	21.61
		3	2	21.73	21.8	21.58
		3	3	21.74	21.82	21.59
		6	0	21.6	21.69	21.48
	16QAM	1	0	21.42	21.48	21.35
		1	3	21.27	21.37	21.22
		1	5	21.4	21.45	21.34
		3	0	20.49	20.56	20.53
		3	2	20.57	20.66	20.56
		3	3	20.59	20.67	20.5
		6	0	20.47	20.57	20.35
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				19965	20175	20385
3MHz	QPSK	1	0	22.65	22.76	22.65
		1	7	22.52	22.66	22.53
		1	14	22.54	22.65	22.52
		8	0	21.82	21.94	21.8
		8	4	21.83	21.93	21.77
		8	7	21.84	21.95	21.78
		15	0	21.7	21.82	21.67
	16QAM	1	0	21.52	21.61	21.54
		1	7	21.37	21.5	21.41
		1	14	21.5	21.58	21.53
		8	0	20.59	20.69	20.72
		8	4	20.67	20.79	20.75
		8	7	20.69	20.8	20.69
		15	0	20.57	20.7	20.54



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				19975	20175	20375
5MHz	QPSK	1	0	22.75	22.78	22.71
		1	13	22.62	22.68	22.59
		1	24	22.64	22.67	22.58
		12	0	21.92	21.96	21.86
		12	6	21.93	21.95	21.83
		12	13	21.94	21.97	21.84
		25	0	21.8	21.84	21.73
	16QAM	1	0	21.62	21.63	21.6
		1	13	21.47	21.52	21.47
		1	24	21.6	21.6	21.59
		12	0	20.69	20.71	20.78
		12	6	20.77	20.81	20.81
		12	13	20.79	20.82	20.75
		25	0	20.67	20.72	20.6
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20000	20175	20350
10MHz	QPSK	1	0	22.85	22.91	22.81
		1	25	22.72	22.81	22.69
		1	49	22.74	22.8	22.68
		25	0	22.02	22.09	21.96
		25	13	22.03	22.08	21.93
		25	25	22.04	22.1	21.94
		50	0	21.9	21.97	21.83
	16QAM	1	0	21.72	21.76	21.7
		1	25	21.57	21.65	21.57
		1	49	21.7	21.73	21.69
		25	0	20.79	20.84	20.88
		25	13	20.87	20.94	20.91
		25	25	20.89	20.95	20.85
		50	0	20.77	20.85	20.7



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20025	20175	20325
15MHz	QPSK	1	0	23.05	23.12	23.05
		1	38	22.92	23.02	22.93
		1	74	22.94	23.01	22.92
		36	0	22.22	22.3	22.2
		36	18	22.23	22.29	22.17
		36	39	22.24	22.31	22.18
		75	0	22.1	22.18	22.07
	16QAM	1	0	21.92	21.97	21.94
		1	38	21.77	21.86	21.81
		1	74	21.9	21.94	21.93
		36	0	20.99	21.05	21.12
		36	18	21.07	21.15	21.15
		36	39	21.09	21.16	21.09
		75	0	20.97	21.06	20.94
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20050	20175	20300
20MHz	QPSK	1	0	23.12	23.24	23.08
		1	50	22.99	23.14	22.96
		1	99	23.01	23.13	22.95
		50	0	21.33	21.28	21.34
		50	25	21.25	21.18	21.11
		50	50	21.21	21.03	21.08
		100	0	21.21	21.16	21.21
	16QAM	1	0	21.99	22.09	21.97
		1	50	21.84	21.98	21.84
		1	99	21.97	22.06	21.96
		50	0	21.06	21.17	21.15
		50	25	21.14	21.27	21.18
		50	50	21.16	21.28	21.12
		100	0	21.04	21.18	20.97



3. LTE Band 5 Conducted Power Test Verdict:

LTE FDD Band 5				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20407	20525	20643
1.4MHz	QPSK	1	0	23.12	23.28	23.01
		1	3	22.99	23.17	22.9
		1	5	22.97	23.13	22.87
		3	0	22.31	22.42	22.15
		3	2	22.27	22.45	22.19
		3	3	22.28	22.44	22.14
		6	0	22.13	22.25	22.04
	16QAM	1	0	21.99	22.16	21.86
		1	3	21.88	22.01	21.75
		1	5	21.97	22.12	21.84
		3	0	21.08	21.24	21.03
		3	2	21.11	21.33	21.09
		3	3	21.17	21.35	21
		6	0	21.03	21.17	20.79
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20415	20525	20635
3MHz	QPSK	1	0	23.15	23.22	23.13
		1	7	23	23.08	22.99
		1	14	23.04	23.09	22.98
		8	0	22.33	22.37	22.3
		8	4	22.34	22.4	22.32
		8	7	22.35	22.38	22.25
		15	0	22.17	22.25	22.14
	16QAM	1	0	22.03	22.09	21.96
		1	7	21.88	21.94	21.81
		1	14	22	22.03	21.93
		8	0	21.11	21.15	21.15
		8	4	21.17	21.27	21.24
		8	7	21.22	21.25	21.13
		15	0	21.07	21.09	20.89



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20425	20525	20625
5MHz	QPSK	1	0	23.28	23.46	23.43
		1	13	23.13	23.31	23.32
		1	24	23.15	23.34	23.28
		12	0	22.46	22.63	22.62
		12	6	22.47	22.62	22.59
		12	13	22.45	22.59	22.58
		25	0	22.31	22.47	22.433
	16QAM	1	0	22.14	22.34	22.27
		1	13	22.01	22.2	22.13
		1	24	22.09	22.32	22.2
		12	0	21.2	21.42	21.42
		12	6	21.33	21.48	21.55
		12	13	21.32	21.51	21.41
		25	0	21.17	21.4	21.17
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20450	20525	20600
10MHz	QPSK	1	0	23.56	23.71	23.51
		1	25	23.38	23.59	23.36
		1	49	23.4	23.59	23.4
		25	0	21.46	21.53	21.55
		25	13	21.08	21.33	21.43
		25	25	21.25	21.14	21.15
		50	0	21.33	21.4	21.37
	16QAM	1	0	22.43	22.56	22.36
		1	25	22.32	22.45	22.25
		1	49	22.38	22.48	22.33
		25	0	21.52	21.62	21.52
		25	13	21.57	21.67	21.6
		25	25	21.58	21.7	21.48
		50	0	21.45	21.53	21.26



4. LTE Band 7 Conducted Power Test Verdict:

LTE FDD Band 7				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20775	21100	21425
5MHz	QPSK	1	0	23.12	23.18	23.05
		1	13	23.01	23.03	22.9
		1	24	22.99	23.05	22.94
		12	0	22.24	22.33	22.22
		12	6	22.27	22.37	22.19
		12	13	22.29	22.35	22.2
		25	0	22.13	22.15	22.11
	16QAM	1	0	22.01	22.06	21.89
		1	13	21.89	21.93	21.78
		1	24	21.96	22.01	21.88
		12	0	21.1	21.08	21.04
		12	6	21.13	21.22	21.13
		12	13	21.15	21.17	21.06
		25	0	21.04	21.02	20.94
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20800	21100	21400
10MHz	QPSK	1	0	23.18	23.31	23.05
		1	25	23.07	23.16	22.9
		1	49	23.05	23.18	22.94
		25	0	22.3	22.46	22.22
		25	13	22.33	22.5	22.19
		25	25	22.35	22.48	22.2
		50	0	22.19	22.28	22.11
	16QAM	1	0	22.07	22.19	21.89
		1	25	21.95	22.06	21.78
		1	49	22.02	22.14	21.88
		25	0	21.16	21.21	21.04
		25	13	21.19	21.35	21.13
		25	25	21.21	21.3	21.06
		50	0	21.1	21.15	20.94



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20825	21100	21375
15MHz	QPSK	1	0	23.45	23.51	23.36
		1	38	23.34	23.36	23.21
		1	74	23.32	23.38	23.25
		36	0	22.57	22.66	22.53
		36	18	22.6	22.7	22.5
		36	39	22.62	22.68	22.51
		75	0	22.46	22.48	22.42
	16QAM	1	0	22.34	22.39	22.2
		1	38	22.22	22.26	22.09
		1	74	22.29	22.34	22.19
		36	0	21.43	21.41	21.35
		36	18	21.46	21.55	21.44
		36	39	21.48	21.5	21.37
		75	0	21.37	21.35	21.25
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				20850	21100	21350
20MHz	QPSK	1	0	23.61	23.64	23.52
		1	50	23.5	23.49	23.37
		1	99	23.48	23.51	23.41
		50	0	22.73	22.79	22.69
		50	25	22.76	22.83	22.66
		50	50	22.78	22.81	22.67
		100	0	22.62	22.61	22.58
	16QAM	1	0	22.5	22.52	22.36
		1	50	22.38	22.39	22.25
		1	99	22.45	22.47	22.35
		50	0	21.59	21.54	21.51
		50	25	21.62	21.68	21.6
		50	50	21.64	21.63	21.53
		100	0	21.53	21.48	21.41



## 5. LTE Band 12 Conducted Power Test Verdict:

LTE FDD Band 12				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23017	23095	23173
1.4MHz	QPSK	1	0	22.13	22.35	22.08
		1	3	22.01	22.23	21.96
		1	5	22.02	22.24	21.95
		3	0	21.28	21.53	21.26
		3	2	21.31	21.5	21.24
		3	3	21.25	21.54	21.25
		6	0	21.15	21.4	21.11
	16QAM	1	0	21	21.2	20.96
		1	3	20.89	21.09	20.83
		1	5	20.98	21.17	20.91
		3	0	20.05	20.25	20.12
		3	2	20.17	20.38	20.23
		3	3	20.16	20.35	20.15
		6	0	19.98	20.22	19.93
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23025	23095	23165
3MHz	QPSK	1	0	22.56	22.71	22.34
		1	7	22.44	22.59	22.22
		1	14	22.45	22.6	22.21
		8	0	21.71	21.89	21.52
		8	4	21.74	21.86	21.5
		8	7	21.68	21.9	21.51
		15	0	21.58	21.76	21.37
	16QAM	1	0	21.43	21.56	21.22
		1	7	21.32	21.45	21.09
		1	14	21.41	21.53	21.17
		8	0	20.48	20.61	20.38
		8	4	20.6	20.74	20.49
		8	7	20.59	20.71	20.41
		15	0	20.41	20.58	20.19



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23035	23095	23155
5MHz	QPSK	1	0	22.83	22.76	22.71
		1	13	22.71	22.64	22.59
		1	24	22.72	22.65	22.58
		12	0	21.98	21.94	21.89
		12	6	22.01	21.91	21.87
		12	13	21.95	21.95	21.88
		25	0	21.85	21.81	21.74
	16QAM	1	0	21.7	21.61	21.59
		1	13	21.59	21.5	21.46
		1	24	21.68	21.58	21.54
		12	0	20.75	20.66	20.75
		12	6	20.87	20.79	20.86
		12	13	20.86	20.76	20.78
		25	0	20.68	20.63	20.56
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23060	23095	23130
10MHz	QPSK	1	0	23.05	23.12	23.01
		1	25	22.93	23	22.89
		1	49	22.94	23.01	22.88
		25	0	21.16	21.27	21.24
		25	13	21.05	21.08	21.12
		25	25	21.01	21	21.09
		50	0	21.03	21.14	21.09
	16QAM	1	0	21.92	21.97	21.89
		1	25	21.81	21.86	21.76
		1	49	21.9	21.94	21.84
		25	0	20.97	21.02	21.05
		25	13	21.09	21.15	21.16
		25	25	21.08	21.12	21.08
		50	0	20.9	20.99	20.86



6. LTE Band 17 Conducted Power Test Verdict:

LTE FDD Band 17				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23755	23790	23825
5MHz	QPSK	1	0	22.84	22.96	22.75
		1	13	22.69	22.83	22.6
		1	24	22.66	22.81	22.56
		12	0	22.01	22.12	21.9
		12	6	21.96	22.13	21.86
		12	13	21.95	22.14	21.87
		25	0	21.9	21.97	21.76
	16QAM	1	0	21.72	21.79	21.62
		1	13	21.57	21.66	21.49
		1	24	21.67	21.74	21.54
		12	0	20.76	20.86	20.81
		12	6	20.87	20.75	20.86
		12	13	20.85	20.81	20.77
		25	0	20.72	19.94	20.53
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				23780	23790	23800
10MHz	QPSK	1	0	23.02	23.15	22.96
		1	25	22.9	23	22.83
		1	49	22.88	23.02	22.81
		25	0	21.24	21.32	21.27
		25	13	21.15	21.25	21.18
		25	25	21.05	21.11	21.02
		50	0	21.12	21.2	21.15
	16QAM	1	0	21.89	22	21.85
		1	25	21.75	21.89	21.69
		1	49	21.87	21.98	21.8
		25	0	20.95	21.05	21
		25	13	21.06	20.97	21.11
		25	25	21.07	21.07	21.03
		50	0	20.96	20.17	20.8



7. LTE Band 25 Conducted Power Test Verdict:

LTE FDD Band 25				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26047	26365	26683
1.4MHz	QPSK	1	0	22.63	22.51	22.63
		1	3	22.48	22.38	22.48
		1	5	22.45	22.36	22.44
		3	0	21.8	21.67	21.78
		3	2	21.75	21.68	21.74
		3	3	21.74	21.69	21.75
		6	0	21.69	21.52	21.64
	16QAM	1	0	21.51	21.34	21.5
		1	3	21.36	21.21	21.37
		1	5	21.46	21.29	21.42
		3	0	20.55	20.41	20.69
		3	2	20.66	20.3	20.74
		3	3	20.64	20.36	20.65
		6	0	20.51	19.49	20.41
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26055	26365	26675
3MHz	QPSK	1	0	22.63	22.74	22.78
		1	7	22.48	22.61	22.63
		1	14	22.45	22.59	22.59
		8	0	21.8	21.9	21.93
		8	4	21.75	21.91	21.89
		8	7	21.74	21.92	21.9
		15	0	21.69	21.75	21.79
	16QAM	1	0	21.51	21.57	21.65
		1	7	21.36	21.44	21.52
		1	14	21.46	21.52	21.57
		8	0	20.55	20.64	20.84
		8	4	20.66	20.53	20.89
		8	7	20.64	20.59	20.8
		15	0	20.51	19.72	20.56



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26065	26365	26665
5MHz	QPSK	1	0	22.83	22.88	22.94
		1	13	22.68	22.76	22.83
		1	24	22.64	22.73	22.82
		12	0	21.98	22.02	22.11
		12	6	21.92	22.01	21.99
		12	13	21.9	22.02	21.99
		25	0	21.85	21.84	21.98
	16QAM	1	0	21.68	21.74	21.8
		1	13	21.5	21.63	21.65
		1	24	21.64	21.69	21.72
		12	0	20.72	20.81	20.97
		12	6	20.83	20.75	21.09
		12	13	20.85	20.76	20.95
		25	0	20.71	19.96	20.66
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26090	26365	26640
10MHz	QPSK	1	0	23.12	23.08	23.05
		1	25	23	22.93	22.92
		1	49	22.98	22.95	22.9
		25	0	22.31	22.23	22.21
		25	13	22.27	22.27	22.14
		25	25	22.26	22.24	22.13
		50	0	22.19	22.11	22.09
	16QAM	1	0	21.99	21.93	21.94
		1	25	21.85	21.82	21.78
		1	49	21.97	21.91	21.89
		25	0	21.05	20.98	21.09
		25	13	21.16	20.9	21.2
		25	25	21.17	21	21.12
		50	0	21.06	20.1	20.89



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26115	26365	26615
15MHz	QPSK	1	0	23.12	23.14	23.28
		1	38	22.97	23.02	23.17
		1	74	22.93	22.99	23.16
		36	0	22.27	22.28	22.45
		36	18	22.21	22.27	22.33
		36	39	22.19	22.28	22.33
		75	0	22.14	22.1	22.32
	16QAM	1	0	21.97	22	22.14
		1	38	21.79	21.89	21.99
		1	74	21.93	21.95	22.06
		36	0	21.01	21.07	21.31
		36	18	21.12	21.01	21.43
		36	39	21.14	21.02	21.29
		75	0	21	20.22	21
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26140	26365	26590
20MHz	QPSK	1	0	23.35	23.54	23.41
		1	50	23.2	23.42	23.3
		1	99	23.16	23.39	23.29
		50	0	22.5	22.68	22.58
		50	25	22.44	22.67	22.46
		50	50	22.42	22.68	22.46
		100	0	22.37	22.5	22.45
	16QAM	1	0	22.2	22.4	22.27
		1	50	22.02	22.29	22.12
		1	99	22.16	22.35	22.19
		50	0	21.24	21.47	21.44
		50	25	21.35	21.41	21.56
		50	50	21.37	21.42	21.42
		100	0	21.23	20.62	21.13



8. LTE Band 26 Conducted Power Test Verdict

LTE FDD Band 26				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26697	26865	27033
1.4MHz	QPSK	1	0	22.58	22.71	22.72
		1	3	22.43	22.58	22.57
		1	5	22.4	22.56	22.53
		3	0	21.75	21.87	21.87
		3	2	21.7	21.88	21.83
		3	3	21.69	21.89	21.84
		6	0	21.64	21.72	21.73
	16QAM	1	0	21.46	21.54	21.59
		1	3	21.31	21.41	21.46
		1	5	21.41	21.49	21.51
		3	0	20.5	20.61	20.78
		3	2	20.61	20.5	20.83
		3	3	20.59	20.56	20.74
		6	0	20.46	19.69	20.5
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26705	26865	27025
3MHz	QPSK	1	0	22.76	22.83	22.88
		1	7	22.61	22.71	22.77
		1	14	22.57	22.68	22.76
		8	0	21.91	21.97	22.05
		8	4	21.85	21.96	21.93
		8	7	21.83	21.97	21.93
		15	0	21.78	21.79	21.92
	16QAM	1	0	21.61	21.69	21.74
		1	7	21.43	21.58	21.59
		1	14	21.57	21.64	21.66
		8	0	20.65	20.76	20.91
		8	4	20.76	20.7	21.03
		8	7	20.78	20.71	20.89
		15	0	20.64	19.91	20.6



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26715	26865	27015
5MHz	QPSK	1	0	23.05	23.04	23.13
		1	13	22.9	22.92	23.02
		1	24	22.86	22.89	23.01
		12	0	22.2	22.18	22.3
		12	6	22.14	22.17	22.18
		12	13	22.12	22.18	22.18
		25	0	22.07	22	22.17
	16QAM	1	0	21.9	21.9	21.99
		1	13	21.72	21.79	21.84
		1	24	21.86	21.85	21.91
		12	0	20.94	20.97	21.16
		12	6	21.05	20.91	21.28
		12	13	21.07	20.92	21.14
		25	0	20.93	20.12	20.85
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26740	26865	26990
10MHz	QPSK	1	0	23.21	23.15	23.25
		1	25	23.06	23.03	23.14
		1	49	23.02	23	23.13
		25	0	22.36	22.29	22.42
		25	13	22.3	22.28	22.3
		25	25	22.28	22.29	22.3
		50	0	22.23	22.11	22.29
	16QAM	1	0	22.06	22.01	22.11
		1	25	21.88	21.9	21.96
		1	49	22.02	21.96	22.03
		25	0	21.1	21.08	21.28
		25	13	21.21	21.02	21.4
		25	25	21.23	21.03	21.26
		50	0	21.09	20.23	20.97





Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				26765	26865	26965
15MHz	QPSK	1	0	23.35	23.56	23.4
		1	38	23.2	23.44	23.29
		1	74	23.16	23.41	23.28
		36	0	22.5	22.7	22.57
		36	18	22.44	22.69	22.45
		36	39	22.42	22.7	22.45
		75	0	22.37	22.52	22.44
	16QAM	1	0	22.2	22.42	22.26
		1	38	22.02	22.31	22.11
		1	74	22.16	22.37	22.18
		36	0	21.24	21.49	21.43
		36	18	21.35	21.43	21.55
		36	39	21.37	21.44	21.41
		75	0	21.23	20.64	21.12



9. LTE Band 30 Conducted Power Test Verdict

LTE FDD Band 30				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				27685	27710	27735
5MHz	QPSK	1	0	22.12	22.31	22.39
		1	13	22	22.19	22.27
		1	24	22.01	22.2	22.26
		12	0	21.27	21.49	21.57
		12	6	21.3	21.46	21.55
		12	13	21.24	21.5	21.56
		25	0	21.14	21.36	21.42
	16QAM	1	0	20.99	21.16	21.27
		1	13	20.88	21.05	21.14
		1	24	20.97	21.13	21.22
		12	0	20.04	20.21	20.43
		12	6	20.16	20.34	20.54
		12	13	20.15	20.31	20.46
		25	0	19.97	20.18	20.24
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				27710	27710	27710
10MHz	QPSK	1	0	22.68	22.68	22.68
		1	25	22.56	22.56	22.56
		1	49	22.57	22.57	22.57
		25	0	21.27	21.27	21.27
		25	13	21.08	21.08	21.08
		25	25	21	21	21
		50	0	21.14	21.14	21.14
	16QAM	1	0	21.53	21.53	21.53
		1	25	21.42	21.42	21.42
		1	49	21.5	21.5	21.5
		25	0	20.58	20.58	20.58
		25	13	20.71	20.71	20.71
		25	25	20.68	20.68	20.68
		50	0	20.55	20.55	20.55

## 10. LTE Band 41 Conducted Power Test Verdict

LTE TDD Band 41				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				39675	40620	41565
5MHz	QPSK	1	0	22.38	22.46	22.32
		1	13	22.23	22.34	22.21
		1	24	22.19	22.31	22.2
		12	0	21.53	21.6	21.49
		12	6	21.47	21.59	21.37
		12	13	21.45	21.6	21.37
		25	0	21.4	21.42	21.36
	16QAM	1	0	21.23	21.32	21.18
		1	13	21.05	21.21	21.03
		1	24	21.19	21.27	21.1
		12	0	20.27	20.39	20.35
		12	6	20.38	20.33	20.47
		12	13	20.4	20.34	20.33
		25	0	20.26	19.54	20.04
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				39700	40620	41540
10MHz	QPSK	1	0	22.58	22.73	22.56
		1	25	22.43	22.61	22.45
		1	49	22.39	22.58	22.44
		25	0	21.73	21.87	21.73
		25	13	21.67	21.86	21.61
		25	25	21.65	21.87	21.61
		50	0	21.6	21.69	21.6
	16QAM	1	0	21.43	21.59	21.42
		1	25	21.25	21.48	21.27
		1	49	21.39	21.54	21.34
		25	0	20.47	20.66	20.59
		25	13	20.58	20.6	20.71
		25	25	20.6	20.61	20.57
		50	0	20.46	19.81	20.28



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				39725	40620	41515
15MHz	QPSK	1	0	22.85	22.93	22.84
		1	38	22.7	22.81	22.73
		1	74	22.66	22.78	22.72
		36	0	22	22.07	22.01
		36	18	21.94	22.06	21.89
		36	39	21.92	22.07	21.89
		75	0	21.87	21.89	21.88
	16QAM	1	0	21.7	21.79	21.7
		1	38	21.52	21.68	21.55
		1	74	21.66	21.74	21.62
		36	0	20.74	20.86	20.87
		36	18	20.85	20.8	20.99
		36	39	20.87	20.81	20.85
		75	0	20.73	20.01	20.56
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				39750	40620	41490
20MHz	QPSK	1	0	23.13	23.21	23.12
		1	50	22.98	23.09	23.01
		1	99	22.94	23.06	23
		50	0	22.28	22.35	22.29
		50	25	22.22	22.34	22.17
		50	50	22.2	22.35	22.17
		100	0	22.15	22.17	22.16
	16QAM	1	0	21.98	22.07	21.98
		1	50	21.8	21.96	21.83
		1	99	21.94	22.02	21.9
		50	0	21.02	21.14	21.15
		50	25	21.13	21.08	21.27
		50	50	21.15	21.09	21.13
		100	0	21.01	20.29	20.84



11. LTE Band 66 Conducted Power Test Verdict

LTE FDD Band 66				Conducted Power(dBm)		
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				131979	132322	132665
1.4MHz	QPSK	1	0	22.51	22.65	22.33
		1	3	22.38	22.55	22.21
		1	5	22.4	22.54	22.2
		3	0	21.68	21.83	21.48
		3	2	21.69	21.82	21.45
		3	3	21.7	21.84	21.46
		6	0	21.56	21.71	21.35
	16QAM	1	0	21.38	21.5	21.22
		1	3	21.23	21.39	21.09
		1	5	21.36	21.47	21.21
		3	0	20.45	20.58	20.4
		3	2	20.53	20.68	20.43
		3	3	20.55	20.69	20.37
		6	0	20.43	20.59	20.22
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				131987	12322	132657
3MHz	QPSK	1	0	22.61	22.72	22.4
		1	7	22.48	22.62	22.28
		1	14	22.5	22.61	22.27
		8	0	21.78	21.9	21.55
		8	4	21.79	21.89	21.52
		8	7	21.8	21.91	21.53
		15	0	21.66	21.78	21.42
	16QAM	1	0	21.48	21.57	21.29
		1	7	21.33	21.46	21.16
		1	14	21.46	21.54	21.28
		8	0	20.55	20.65	20.47
		8	4	20.63	20.75	20.5
		8	7	20.65	20.76	20.44
		15	0	20.53	20.66	20.29



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				131997	132322	132647
5MHz	QPSK	1	0	22.73	22.81	22.64
		1	13	22.6	22.71	22.52
		1	24	22.62	22.7	22.51
		12	0	21.9	21.99	21.79
		12	6	21.91	21.98	21.76
		12	13	21.92	22	21.77
		25	0	21.78	21.87	21.66
	16QAM	1	0	21.6	21.66	21.53
		1	13	21.45	21.55	21.4
		1	24	21.58	21.63	21.52
		12	0	20.67	20.74	20.71
		12	6	20.75	20.84	20.74
		12	13	20.77	20.85	20.68
		25	0	20.65	20.75	20.53
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				132022	132322	132622
10MHz	QPSK	1	0	22.95	23.02	22.84
		1	25	22.82	22.92	22.72
		1	49	22.84	22.91	22.71
		25	0	22.12	22.2	21.99
		25	13	22.13	22.19	21.96
		25	25	22.14	22.21	21.97
		50	0	22	22.08	21.86
	16QAM	1	0	21.82	21.87	21.73
		1	25	21.67	21.76	21.6
		1	49	21.8	21.84	21.72
		25	0	20.89	20.95	20.91
		25	13	20.97	21.05	20.94
		25	25	20.99	21.06	20.88
		50	0	20.87	20.96	20.73



Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				132047	132322	132597
15MHz	QPSK	1	0	23.16	23.27	23.1
		1	38	23.03	23.17	22.98
		1	74	23.05	23.16	22.97
		36	0	22.33	22.45	22.25
		36	18	22.34	22.44	22.22
		36	39	22.35	22.46	22.23
		75	0	22.21	22.33	22.12
	16QAM	1	0	22.03	22.12	21.99
		1	38	21.88	22.01	21.86
		1	74	22.01	22.09	21.98
		36	0	21.1	21.2	21.17
		36	18	21.18	21.3	21.2
		36	39	21.2	21.31	21.14
		75	0	21.08	21.21	20.99
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel
				132072	132322	132572
20MHz	QPSK	1	0	23.25	23.37	23.22
		1	50	23.12	23.27	23.1
		1	99	23.14	23.26	23.09
		50	0	22.42	22.55	22.37
		50	25	22.43	22.54	22.34
		50	50	22.44	22.56	22.35
		100	0	22.3	22.43	22.24
	16QAM	1	0	22.12	22.22	22.11
		1	50	21.97	22.11	21.98
		1	99	22.1	22.19	22.1
		50	0	21.19	21.3	21.29
		50	25	21.27	21.4	21.32
		50	50	21.29	21.41	21.26
		100	0	21.17	21.31	21.11

## WIFI Conducted Power

### WLAN 2.4GHz Band Conducted Power

#### 802.11b Test mode conducted output power

Channel	Frequency (MHz)	Output Power(dBm)	
		Ant. 0	Ant. 1
1	2412	15.14	14.68
6	2437	15.09	14.69
11	2462	15.18	14.85

#### 802.11g Test mode conducted output power

Channel	Frequency (MHz)	Output Power(dBm)	
		Ant. 0	Ant. 1
1	2412	14.68	14.28
6	2437	14.27	14.16
11	2462	14.61	14.42

#### 802.11n-20MHz Test mode conducted output power

Channel	Frequency (MHz)	Output Power(dBm)		
		Ant. 0	Ant. 1	Ant. 0+1
1	2412	14.63	13.97	17.32
6	2437	14.37	13.92	17.16
11	2462	14.61	14.04	17.34

#### 802.11n-40MHz Test mode conducted output power

Channel	Frequency (MHz)	Output Power(dBm)		
		Ant. 0	Ant. 1	Ant. 0+1
3	2422	14.39	14.38	17.40
6	2437	14.74	14.28	17.53
9	2452	14.70	14.19	17.46



**Conducted Power Test results of band U-NII-1 (5150 ~ 5250 MHz)**

Frequency (MHz)	802.11a mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	
5180	14.81	7.26	
5220	14.26	7.51	
5240	14.11	7.19	
Test Frequency (MHz)	802.11n-HT20 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5180	14.77	7.18	15.47
5220	14.47	7.54	15.27
5240	14.21	6.94	14.96
Test Frequency (MHz)	802.11n-HT40 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5190	16.23	5.97	16.62
5230	15.53	5.49	15.94
Test Frequency (MHz)	802.11ac-VHT20 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5180	15.01	6.95	15.64
5220	14.37	4.96	14.84
5240	14.28	7.04	15.03
Test Frequency (MHz)	802.11ac-VHT40 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5190	16.38	7.86	16.95
5230	15.75	4.79	16.08
Test Frequency (MHz)	802.11ac-VHT80 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5210	15.22	3.13	15.48

**Conducted Power Test results of band U-NII-2A (5250 ~ 5350 MHz)**

Frequency (MHz)	802.11a mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	
5260	14.62	7.36	
5300	14.35	6.90	
5320	14.05	6.75	
Test Frequency (MHz)	802.11n-HT20 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5260	14.34	6.54	15.01
5300	14.22	6.76	14.94
5320	13.84	6.40	14.56
Test Frequency (MHz)	802.11n-HT40 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5270	15.17	5.59	15.62
5310	14.89	5.29	15.34
Test Frequency (MHz)	802.11ac-VHT20 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5260	14.39	6.19	15.00
5300	14.32	6.36	14.96
5320	14.13	6.48	14.82
Test Frequency (MHz)	802.11ac-VHT40 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5270	15.13	5.34	15.56
5310	14.86	5.17	15.30
Test Frequency (MHz)	802.11ac-VHT80 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5290	14.64	4.86	15.07



**Conducted Power Test results of band U-NII-2C (5470 ~ 5725 MHz)**

Frequency (MHz)	802.11a mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	
5500	14.18	6.03	
5580	13.85	6.53	
5700	11.88	6.23	
Test Frequency (MHz)	802.11n-HT20 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5500	14.19	6.01	14.80
5580	13.80	6.50	14.54
5700	13.81	6.30	14.52
Test Frequency (MHz)	802.11n-HT40 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5510	15.68	6.21	16.14
5590	16.44	6.21	16.83
Test Frequency (MHz)	802.11ac-VHT20 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5500	13.96	6.10	14.62
5580	13.65	6.46	14.41
5700	14.90	6.37	15.47
Test Frequency (MHz)	802.11ac-VHT40 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5510	15.72	2.29	15.91
5590	16.47	3.39	16.68
Test Frequency (MHz)	802.11ac-VHT80 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5530	15.64	6.28	16.12



**Conducted Power Test results of band U-NII-3 (5725 ~ 5850 MHz)**

Frequency (MHz)	802.11a mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	
5745	14.80	6.18	
5785	14.78	7.59	
5825	15.60	8.17	
Test Frequency (MHz)	802.11n-HT20 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5745	14.56	5.98	15.12
5785	14.64	7.44	15.40
5825	15.47	7.69	16.14
Test Frequency (MHz)	802.11n-HT40 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5755	15.03	7.60	15.75
5795	16.18	8.90	16.92
Test Frequency (MHz)	802.11ac-VHT20 mode Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5745	13.54	5.63	14.19
5785	14.51	7.13	15.24
5825	15.47	7.48	16.11
Test Frequency (MHz)	Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5755	15.16	7.63	15.87
5795	16.16	8.84	16.90
Test Frequency (MHz)	Conducted Output Power (dBm)		
	Antenna 0	Antenna 1	Total
5775	14.16	7.14	14.95

**Note:**

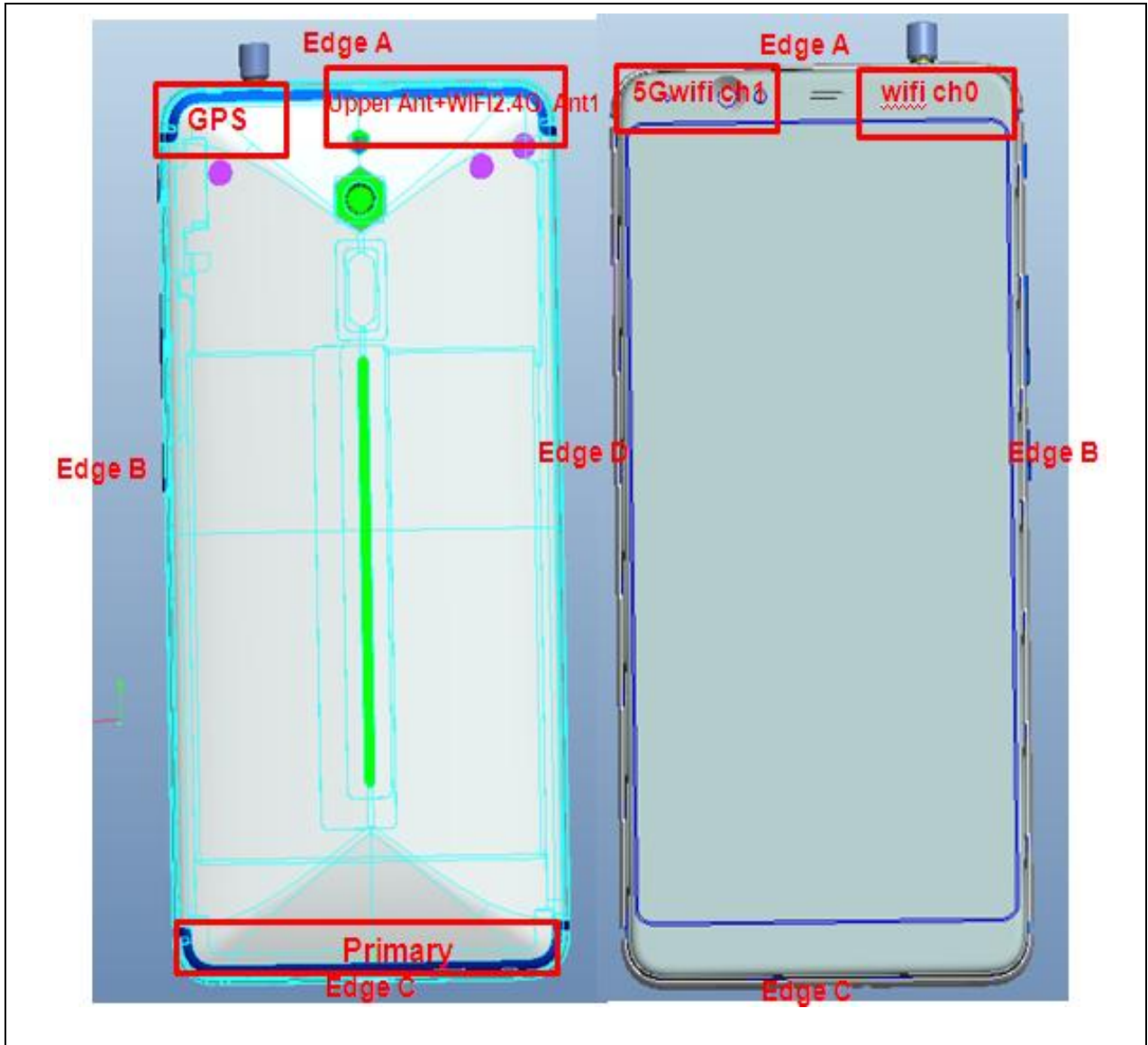
1. Per KDB248227 D01 v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion
2. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4dB higher than those measured at lowest data rate
3. Per KDB248227 D01 v02r02, 802.11g /11n-HT20/11n-HT40 is not required. . 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  $\leq 1.2W/Kg$ . Thus the SAR can be excluded.

### 7.5 Bluetooth Output Power

Channel	Frequency (MHz)	BT3.0 Output Power(dBm) Average		
		GFSK	$\pi$ /4-DQPSK	8-DPSK
CH 0	2402	13.87	13.61	13.60
CH 39	2441	13.95	13.54	13.64
CH 78	2480	14.04	13.87	13.82
Channel	Frequency (MHz)	BT4.0 Output Power(dBm)Peak		
		GFSK		
CH 0	2402	11.252		
CH 20	2442	11.467		
CH 39	2480	11.944		

## 8. SAR test Exclusion and estimate SAR calculation:

Antenna Location:



The Body SAR measurement positions of each band are as below:

Antenna	Front	Back	Edge A	Edge B	Edge C	Edge D
WWAN Antenna Body-worn	Yes	Yes	No	No	No	No
WWAN Upper Antenna hotspot	Yes	Yes	Yes	Yes	No	Yes
WWAN Primary Antenna hotspot	Yes	Yes	No	Yes	Yes	Yes
WIFI Antenna Body-worn	Yes	Yes	No	No	No	No
WIFI Antenna hotspot	Yes	Yes	Yes	Yes	No	Yes

Note: According to KDB 941225 D06 v02r01, when antenna-to-edge>2.5cm, SAR is not required.



## 9. Scaling Factor calculation

Upper Antenna

Operation Mode	Channel	Output Power(dBm)	Tune up Power in tolerance(dBm)	Scaling Factor
GSM850	128	29.25	29.3 ± 1.0	1.012
	190	29.22	29.3 ± 1.0	1.019
	251	29.18	29.3 ± 1.0	1.028
GPRS850(GPRS) 4Tx	128	24.96	24.1 ± 1.0	1.033
	190	24.06	24.1 ± 1.0	1.009
	251	24.01	24.1 ± 1.0	1.021
GSM1900	512	26.85	26.0 ± 1.0	1.035
	661	26.74	26.0 ± 1.0	1.062
	810	26.75	26.0 ± 1.0	1.059
GPRS1900(GPRS) 4Tx	512	23.37	22.5 ± 1.0	1.030
	661	23.24	22.5 ± 1.0	1.062
	810	23.31	22.5 ± 1.0	1.045
WCDMA850	4132	19.65	18.7 ± 1.0	1.012
	4183	19.53	18.7 ± 1.0	1.040
	4233	19.63	18.7 ± 1.0	1.016
WCDMA1900	9262	18.65	17.7 ± 1.0	1.012
	9400	18.26	17.7 ± 1.0	1.107
	9538	18.55	17.7 ± 1.0	1.035
WCDMA1700	1313	19.67	18.8 ± 1.0	1.030
	1413	19.55	18.8 ± 1.0	1.059
	1513	19.77	18.8 ± 1.0	1.007
CDMA BC0 1XRTT(RC1 SO55)	1013	23.81	23.0 ± 1.0	1.045
	384	23.85	23.0 ± 1.0	1.035
	777	23.82	23.0 ± 1.0	1.042
CDMA BC0 1XRTT(RC3 SO32)	1013	23.80	23.0 ± 1.0	1.047
	384	23.82	23.0 ± 1.0	1.042
	777	23.78	23.0 ± 1.0	1.052
CDMA BC0 (1xEVDO (Rel.A))	1013	22.54	22.0 ± 1.0	1.112
	384	22.56	22.0 ± 1.0	1.107
	777	22.52	22.0 ± 1.0	1.117
CDMA BC1 1XRTT(RC1 SO55)	25	22.87	22.0 ± 1.0	1.030
	600	22.88	22.0 ± 1.0	1.028
	1175	22.83	22.0 ± 1.0	1.040
CDMA BC1 1XRTT(RC3 SO32)	25	22.73	22.0 ± 1.0	1.064
	600	22.77	22.0 ± 1.0	1.054
	1175	22.71	22.0 ± 1.0	1.069
CDMA BC1	25	21.63	21.0 ± 1.0	1.089



(1xEVDO (Rel.A))	600	21.68	21.0 ± 1.0	1.076
	1175	21.62	21.0 ± 1.0	1.091
LTE B2 20MHz 1RB#0	18700	18.42	17.6 ± 1.0	1.042
	18900	18.50	17.6 ± 1.0	1.023
	19100	18.25	17.6 ± 1.0	1.084
LTE B2 20MHz 50RB#50	18700	17.59	17.0 ± 1.0	1.099
	18900	17.78	17.0 ± 1.0	1.052
	19100	17.51	17.0 ± 1.0	1.119
LTE B4 20MHz 1RB#0	20050	18.15	17.5 ± 1.0	1.084
	20175	18.27	17.5 ± 1.0	1.054
	20300	18.10	17.5 ± 1.0	1.096
LTE B4 20MHz 50RB#50	20050	17.33	16.5 ± 1.0	1.040
	20175	17.28	16.5 ± 1.0	1.052
	20300	17.34	16.5 ± 1.0	1.038
LTE B5 10MHz 1RB#0	20450	18.65	17.8 ± 1.0	1.035
	20525	18.78	17.8 ± 1.0	1.005
	20600	18.55	17.8 ± 1.0	1.059
LTE B5 10MHz 25RB#0	20450	17.46	16.8 ± 1.0	1.081
	20525	17.53	16.8 ± 1.0	1.064
	20600	17.55	16.8 ± 1.0	1.059
LTE B7 20MHz 1RB#0	20850	18.65	18.0 ± 1.0	1.084
	21100	18.71	18.0 ± 1.0	1.069
	21350	18.55	18.0 ± 1.0	1.109
LTE B7 20MHz 50RB#25	20850	17.77	17.0 ± 1.0	1.054
	21100	17.96	17.0 ± 1.0	1.009
	21350	17.72	17.0 ± 1.0	1.067
LTE B12 10MHz 1RB#0	23060	18.10	17.3 ± 1.0	1.072
	23095	18.15	17.3 ± 1.0	1.059
	23130	18.05	17.3 ± 1.0	1.084
LTE B12 10MHz 25RB#25	23060	17.16	16.4 ± 1.0	1.057
	23095	17.27	16.4 ± 1.0	1.030
	23130	17.24	16.4 ± 1.0	1.038
LTE B17 10MHz 1RB#0	23780	18.08	17.5 ± 1.0	1.102
	23790	18.21	17.5 ± 1.0	1.069
	23800	18.02	17.5 ± 1.0	1.117
LTE B17 10MHz 25RB#0	23780	17.24	16.5 ± 1.0	1.062
	23790	17.32	16.5 ± 1.0	1.042
	23800	17.27	16.5 ± 1.0	1.054
LTE B25 20MHz 1RB#0	26140	18.42	17.7 ± 1.0	1.067
	26365	18.59	17.7 ± 1.0	1.026
	26590	18.43	17.7 ± 1.0	1.064





LTE B25 20MHz 50RB#0	26140	17.57	17.0 ± 1.0	1.104
	26365	17.73	17.0 ± 1.0	1.064
	26590	17.60	17.0 ± 1.0	1.096
LTE B26 15MHz 1RB#0	26765	18.42	18.0 ± 1.0	1.143
	26865	18.63	18.0 ± 1.0	1.089
	26965	18.46	18.0 ± 1.0	1.132
LTE B26 15MHz 36RB#0	26765	17.57	17.0 ± 1.0	1.104
	26865	17.79	17.0 ± 1.0	1.050
	26965	17.63	17.0 ± 1.0	1.089
LTE B30 10MHz 1RB#0	27110	17.73	17.0 ± 1.0	1.064
	27110	17.73	17.0 ± 1.0	1.064
	27110	17.73	17.0 ± 1.0	1.064
LTE B30 10MHz 25RB#0	27110	16.27	15.5 ± 1.0	1.054
	27110	16.27	15.5 ± 1.0	1.054
	27110	16.27	15.5 ± 1.0	1.054
LTE B41 20MHz 1RB#0	39750	18.18	17.5 ± 1.0	1.076
	40620	18.25	17.5 ± 1.0	1.059
	41490	18.16	17.5 ± 1.0	1.081
LTE B41 20MHz 50RB#0	39750	17.33	16.5 ± 1.0	1.040
	40620	17.39	16.5 ± 1.0	1.026
	4190	17.33	16.5 ± 1.0	1.040
LTE B66 20MHz 1RB#0	132072	18.31	17.5 ± 1.0	1.045
	132322	18.42	17.5 ± 1.0	1.019
	132572	18.27	17.5 ± 1.0	1.054
LTE B66 20MHz 50RB#0	132072	17.48	17.0 ± 1.0	1.127
	132322	17.60	17.0 ± 1.0	1.096
	132572	17.42	17.0 ± 1.0	1.143



Primary Antenna

Operation Mode	Channel	Output Power(dBm)	Tune up Power in tolerance(dBm)	Scaling Factor
GSM850	128	31.21	30.3 ± 1.0	1.021
	190	31.18	30.3 ± 1.0	1.028
	251	31.15	30.3 ± 1.0	1.035
GPRS850(GPRS) 4Tx	128	25.91	25.1 ± 1.0	1.045
	190	26.03	25.1 ± 1.0	1.016
	251	25.96	25.1 ± 1.0	1.033
GSM1900	512	28.81	28.0 ± 1.0	1.045
	661	28.69	28.0 ± 1.0	1.074
	810	28.46	28.0 ± 1.0	1.132
GPRS1900(GPRS) 4Tx	512	23.31	23.5 ± 1.0	1.045
	661	23.18	23.5 ± 1.0	1.076
	810	23.11	23.5 ± 1.0	1.096
WCDMA850	4132	21.61	20.7 ± 1.0	1.021
	4183	21.23	20.7 ± 1.0	1.114
	4233	21.52	20.7 ± 1.0	1.042
WCDMA1900	9262	21.63	20.7 ± 1.0	1.016
	9400	21.01	20.7 ± 1.0	1.172
	9538	21.73	20.7 ± 1.0	0.993
WCDMA1700	1313	21.51	20.8 ± 1.0	1.069
	1413	21.18	20.8 ± 1.0	1.153
	1513	21.56	20.8 ± 1.0	1.057
CDMA BC0 1XRTT(RC1 SO55)	1013	23.75	23.0 ± 1.0	1.059
	384	23.78	23.0 ± 1.0	1.052
	777	23.76	23.0 ± 1.0	1.057
CDMA BC0 1XRTT(RC3 SO32)	1013	23.66	23.0 ± 1.0	1.081
	384	23.69	23.0 ± 1.0	1.074
	777	23.57	23.0 ± 1.0	1.104
CDMA BC0 (1xEVDO (Rel.A))	1013	22.46	22.0 ± 1.0	1.132
	384	22.42	22.0 ± 1.0	1.143
	777	22.36	22.0 ± 1.0	1.159
CDMA BC1 1XRTT(RC1 SO55)	25	22.81	22.0 ± 1.0	1.045
	600	22.82	22.0 ± 1.0	1.042
	1175	22.78	22.0 ± 1.0	1.052
CDMA BC1 1XRTT(RC3 SO32)	25	22.67	22.0 ± 1.0	1.079
	600	22.69	22.0 ± 1.0	1.074
	1175	22.62	22.0 ± 1.0	1.091
CDMA BC1 (1xEVDO (Rel.A))	25	21.58	21.0 ± 1.0	1.102
	600	21.64	21.0 ± 1.0	1.086
	1175	21.56	21.0 ± 1.0	1.107



LTE B2 20MHz 1RB#0	18700	23.36	22.6 ± 1.0	1.057
	18900	23.42	22.6 ± 1.0	1.042
	19100	23.12	22.6 ± 1.0	1.117
LTE B2 20MHz 50RB#50	18700	22.55	22.0 ± 1.0	1.109
	18900	22.61	22.0 ± 1.0	1.094
	19100	22.25	22.0 ± 1.0	1.189
LTE B4 20MHz 1RB#0	20050	23.12	22.5 ± 1.0	1.091
	20175	23.24	22.5 ± 1.0	1.062
	20300	23.08	22.5 ± 1.0	1.102
LTE B4 20MHz 50RB#50	20050	21.33	20.5 ± 1.0	1.040
	20175	21.28	20.5 ± 1.0	1.052
	20300	21.34	20.5 ± 1.0	1.038
LTE B5 10MHz 1RB#0	20450	23.56	22.8 ± 1.0	1.057
	20525	23.71	22.8 ± 1.0	1.021
	20600	23.51	22.8 ± 1.0	1.069
LTE B5 10MHz 25RB#0	20450	21.46	20.8 ± 1.0	1.081
	20525	21.53	20.8 ± 1.0	1.064
	20600	21.55	20.8 ± 1.0	1.059
LTE B7 20MHz 1RB#0	20850	23.61	23.0 ± 1.0	1.094
	21100	23.64	23.0 ± 1.0	1.086
	21350	23.52	23.0 ± 1.0	1.117
LTE B7 20MHz 50RB#25	20850	22.76	22.0 ± 1.0	1.057
	21100	22.83	22.0 ± 1.0	1.040
	21350	22.66	22.0 ± 1.0	1.081
LTE B12 10MHz 1RB#0	23060	23.05	22.3 ± 1.0	1.059
	23095	23.12	22.3 ± 1.0	1.042
	23130	23.01	22.3 ± 1.0	1.069
LTE B12 10MHz 25RB#25	23060	21.16	20.4 ± 1.0	1.057
	23095	21.27	20.4 ± 1.0	1.030
	23130	21.24	20.4 ± 1.0	1.038
LTE B17 10MHz 1RB#0	23780	23.02	22.5 ± 1.0	1.117
	23790	23.15	22.5 ± 1.0	1.084
	23800	22.96	22.5 ± 1.0	1.132
LTE B17 10MHz 25RB#0	23780	21.24	20.5 ± 1.0	1.062
	23790	21.32	20.5 ± 1.0	1.042
	23800	21.27	20.5 ± 1.0	1.054
LTE B25 20MHz 1RB#0	26140	23.35	22.7 ± 1.0	1.084
	26365	23.54	22.7 ± 1.0	1.038
	26590	23.41	22.7 ± 1.0	1.069
LTE B25 20MHz 50RB#0	26140	22.50	22.0 ± 1.0	1.122
	26365	22.68	22.0 ± 1.0	1.076
	26590	22.58	22.0 ± 1.0	1.102



LTE B26 15MHz 1RB#0	26765	23.35	23.0 ± 1.0	1.161
	26865	23.56	23.0 ± 1.0	1.107
	26965	23.40	23.0 ± 1.0	1.148
LTE B26 15MHz 36RB#0	26765	22.50	22.0 ± 1.0	1.122
	26865	22.70	22.0 ± 1.0	1.072
	26965	22.57	22.0 ± 1.0	1.104
LTE B30 10MHz 1RB#0	27110	22.68	22.0 ± 1.0	1.076
	27110	22.68	22.0 ± 1.0	1.076
	27110	22.68	22.0 ± 1.0	1.076
LTE B30 10MHz 25RB#0	27110	21.27	20.5 ± 1.0	1.054
	27110	21.27	20.5 ± 1.0	1.054
	27110	21.27	20.5 ± 1.0	1.054
LTE B41 20MHz 1RB#0	39750	23.13	22.5 ± 1.0	1.089
	40620	23.21	22.5 ± 1.0	1.069
	41490	23.12	22.5 ± 1.0	1.091
LTE B41 20MHz 50RB#0	39750	22.28	21.5 ± 1.0	1.052
	40620	22.35	21.5 ± 1.0	1.035
	4190	22.29	21.5 ± 1.0	1.050
LTE B66 20MHz 1RB#0	132072	23.25	22.5 ± 1.0	1.059
	132322	23.37	22.5 ± 1.0	1.030
	132572	23.22	22.5 ± 1.0	1.067
LTE B66 20MHz 50RB#50	132072	22.44	22.0 ± 1.0	1.138
	132322	22.56	22.0 ± 1.0	1.107
	132572	22.35	22.0 ± 1.0	1.161



802.11AC VHT40-A0	5190	16.38	$15.5 \pm 1.0$	1.028
802.11AC -VHT40-A0+1	5190	16.95	$16.0 \pm 1.0$	1.012
802.11AC n-HT40-A0	5270	15.17	$14.5 \pm 1.0$	1.079
802.11AC n-HT40-A0+1	5270	15.62	$15.0 \pm 1.0$	1.091
802.11AC -VHT40-A0	5590	16.47	$15.5 \pm 1.0$	1.007
802.11AC n-HT40-A0+1	5590	16.83	$16.0 \pm 1.0$	1.040
802.11AC n-HT40-A0	5795	16.18	$15.5 \pm 1.0$	1.076
802.11AC n-HT40-A0+1	5795	16.92	$16.0 \pm 1.0$	1.019
BT	CH78	14.04	$13.5 \pm 1.0$	1.112

Note: for LTE power tolerance, only QPSK modulation mode was provide here.

## 10. Test Results

### 10.1 Upper Antenna

Table 1: SAR Values of GSM 850MHz Band

Temperature: 23.0~23.5°C, humidity: 62~64%.										
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.		
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)			
Head	Left	Cheek	190/836.6	0.514	1.019	0.524	2.22	--		
		Tilt	190/836.6	0.366	1.019	0.373	3.55	--		
	Right	Cheek	128/824.2	0.924	1.012	0.935	0.43	--		
			190/836.6	<b>1.026</b>	1.019	<b>1.045</b>	<b>-0.91</b>	<b>1</b>		
			251/848.8	0.964	1.028	0.991	1.66	--		
			128/824.2 Repeated	0.874	1.012	0.884	-2.67	--		
			190/836.6 Repeated	0.955	1.019	0.973	-1.25	--		
			251/848.8 Repeated	0.923	1.028	0.949	1.14	--		
		Tilt	128/824.2	0.825	1.012	0.835	0.14	--		
			190/836.6	0.874	1.019	0.891	3.45	--		
			251/848.8	0.811	1.028	0.834	1.78	--		
			128/824.2 Repeated	0.812	1.012	0.822	3.11	--		
			190/836.6 Repeated	0.843	1.019	0.859	-0.01	--		
			251/848.8 Repeated	0.785	1.028	0.807	1.22	--		
		Body-worn (10mm Separation)	GPRS (4Tx)	Face Upward	190/836.6	0.512	1.009	0.517	3.01	--
				Back Upward	190/836.6	<b>0.748</b>	1.009	<b>0.755</b>	<b>-2.85</b>	<b>2</b>
	Hotspot (10mm Separation)	GPRS (4Tx)	Face Upward	190/836.6	0.512	1.009	0.517	3.01	--	
			Back Upward	190/836.6	<b>0.748</b>	1.009	<b>0.755</b>	<b>-2.85</b>	<b>2</b>	
Edge B			190/836.6	0.245	1.009	0.247	1.17	--		
Edge A			190/836.6	0.447	1.009	0.451	-3.66	--		
Edge D			190/836.6	0.199	1.009	0.201	-4.01	--		



Table 2: SAR Values of GSM1900 MHz Band

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	661/1880	0.438	1.062	0.465	-0.66	--
		Tilt	661/1880	0.385	1.062	0.409	0.67	--
	Right	Cheek	661/1880	<b>0.668</b>	1.062	<b>0.709</b>	<b>-1.59</b>	<b>3</b>
		Tilt	661/1880	0.544	1.062	0.578	-2.45	--
Body-worn (10mm Separation)	GPRS (4Tx)	Face Upward	661/1880	0.341	1.062	0.362	-1.12	--
		Back Upward	661/1880	<b>0.706</b>	1.062	<b>0.750</b>	<b>-3.59</b>	<b>4</b>
Hotspot (10mm Separation)	GPRS (4Tx)	Face Upward	661/1880	0.341	1.062	0.362	-1.12	--
		Back Upward	661/1880	<b>0.706</b>	1.062	<b>0.750</b>	<b>-3.59</b>	--
		Edge B	661/1880	0.188	1.062	0.200	-3.55	--
		Edge A	661/1880	0.354	1.062	0.376	0.57	--
		Edge D	661/1880	0.105	1.062	0.112	-2.45	--

Table 3: SAR Values of WCDMA850

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	4183/836.6	0.642	1.040	0.668	-2.47	--
		Tilt	4183/836.6	0.511	1.040	0.531	-1.14	--
	Right	Cheek	4132/826.4	0.899	1.012	0.910	-4.26	--
			4183/836.6	<b>0.920</b>	1.040	<b>0.957</b>	<b>-2.88</b>	<b>5</b>
			4233/846.6	0.901	1.016	0.915	-2.36	--
			4132/826.4 Repeated	0.874	1.012	0.884	-3.03	--
			4183/836.6 Repeated	0.895	1.040	0.931	-1.24	--
			4233/846.6 Repeated	0.886	1.016	0.900	1.45	--
			Tilt	4183/836.6	0.689	1.040	0.717	-0.25
	Body-worn (10mm Separation)	Face Upward	4183/836.6	0.288	1.040	0.300	1.25	--
Back Upward		4183/836.6	<b>0.498</b>	1.040	<b>0.518</b>	<b>-2.49</b>	<b>6</b>	
Hotspot (10mm Separation)	Face Upward	4183/836.6	0.288	1.040	0.300	1.25	--	
	Back Upward	4183/836.6	<b>0.498</b>	1.040	<b>0.518</b>	<b>-2.49</b>	<b>6</b>	
	Edge B	4183/836.6	0.246	1.040	0.256	3.16	--	
	Edge A	4183/836.6	0.367	1.040	0.382	4.18	--	
	Edge D	4183/836.6	0.210	1.040	0.218	4.55	--	

Table 4: SAR Values of WCDMA1900

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	9400/1880	0.425	1.107	0.470	1.47	--
		Tilt	9400/1880	0.388	1.107	0.430	2.80	--
	Right	Cheek	9400/1880	<b>0.615</b>	1.107	<b>0.681</b>	<b>-2.88</b>	<b>7</b>
		Tilt	9400/1880	0.554	1.107	0.613	-0.32	--
Body-worn (10mm Separation)		Face Upward	9400/1880	0.319	1.107	0.353	0.91	--
		Back Upward	9400/1880	<b>0.402</b>	1.107	<b>0.445</b>	<b>-1.83</b>	<b>8</b>
Hotspot (10mm Separation)		Face Upward	9400/1880	0.319	1.107	0.353	0.91	--
		Back Upward	9400/1880	<b>0.402</b>	1.107	<b>0.445</b>	<b>-1.83</b>	<b>8</b>
		Edge B	9400/1880	0.101	1.107	0.112	2.70	--
		Edge A	9400/1880	0.222	1.107	0.246	-3.42	--
		Edge D	9400/1880	0.085	1.107	0.094	0.99	--

Table 5: SAR Values of WCDMA1700

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	1413/1732.6	0.068	1.059	0.072	-2.98	--
		Tilt	1413/1732.6	0.052	1.059	0.055	1.61	--
	Right	Cheek	1413/1732.6	<b>0.135</b>	1.059	<b>0.143</b>	-2.98	<b>9</b>
		Tilt	1413/1732.6	0.111	1.059	0.118	-0.18	--
Body-worn (10mm Separation)		Face Upward	1413/1732.6	0.081	1.059	0.086	1.05	--
		Back Upward	1413/1732.6	<b>0.190</b>	1.059	<b>0.201</b>	<b>-0.96</b>	<b>10</b>
Hotspot (10mm Separation)		Face Upward	1413/1732.6	0.081	1.059	0.086	1.05	--
		Back Upward	1413/1732.6	<b>0.190</b>	1.059	<b>0.201</b>	<b>-0.96</b>	<b>10</b>
		Edge B	1413/1732.6	0.055	1.059	0.058	-3.28	--
		Edge A	1413/1732.6	0.101	1.059	0.107	2.84	--
		Edge D	1413/1732.6	0.044	1.059	0.047	-1.33	--





Table 6: SAR Values of CDMA BC0

Temperature: 23.0~23.5°C, humidity: 62~64%.

Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
Head 1XRTT(RC3 SO55)	Left	Cheek	384/836.5	0.579	1.035	0.599	1.58	--
		Tilt	384/836.5	0.422	1.035	0.437	0.30	--
	Right	Cheek	1013/824.7	0.871	1.045	0.910	0.45	---
			384/836.5	<b>0.905</b>	1.035	<b>0.937</b>	<b>-0.08</b>	<b>11</b>
			777/848.3	0.859	1.042	0.895	0.99	--
			1013/824.7 Repeated	0.844	1.045	0.882	4.12	--
			384/836.5 Repeated	0.867	1.035	0.897	2.81	--
			777/848.3 Repeated	0.851	1.042	0.887	1.96	--
	Tilt	384/836.5	0.712	1.035	0.737	1.53	--	
1XRTT(RC3 SO32)	Face Upward		384/836.5	0.179	1.042	0.187	0.61	--
	Back Upward		384/836.5	<b>0.383</b>	1.042	<b>0.399</b>	<b>-3.46</b>	<b>12</b>
	Edge B		384/836.5	0.125	1.042	0.130	0.66	--
	Edge A		384/836.5	0.189	1.042	0.197	0.95	--
	Edge D		384/836.5	0.096	1.042	0.100	1.75	--
1Xevdo(Rel. 0)	Face Upward		384/836.5	0.124	1.107	0.137	1.84	--
	Back Upward		384/836.5	0.344	1.107	0.381	0.59	--
	Edge B		384/836.5	0.105	1.107	0.116	-0.66	--
	Edge A		384/836.5	0.165	1.107	0.183	-0.17	--
	Edge D		384/836.5	0.074	1.107	0.082	0.88	--



Table 7: SAR Values of CDMA BC1

Temperature: 23.0~23.5°C, humidity: 62~64%.

Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
Head 1XRTT(RC3 SO55)	Left	Cheek	600/1880	0.521	1.028	0.536	-0.74	--
		Tilt	600/1880	0.346	1.028	0.356	2.20	--
	Right	Cheek	600/1880	<b>0.744</b>	1.028	<b>0.765</b>	<b>-1.57</b>	<b>13</b>
		Tilt	600/1880	0.688	1.028	0.707	-1.87	--
1XRTT(RC3 SO32)	Face Upward		600/1880	0.251	1.054	0.265	1.68	--
	Back Upward		600/1880	<b>0.342</b>	1.054	<b>0.360</b>	<b>-3.17</b>	<b>14</b>
	Edge B		600/1880	0.188	1.054	0.198	-1.33	--
	Edge A		600/1880	0.203	1.054	0.214	0.49	--
	Edge D		600/1880	0.147	1.054	0.155	0.36	--
1Xevdo(Rel. 0)	Face Upward		600/1880	0.223	1.076	0.240	-0.79	--
	Back Upward		600/1880	0.318	1.076	0.342	0.56	--
	Edge B		600/1880	0.154	1.076	0.166	-1.71	--
	Edge A		600/1880	0.173	1.076	0.186	-1.70	--
	Edge D		600/1880	0.112	1.076	0.121	-0.48	--



Table 8: SAR Values of LTE Band 2,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	18900/1880	0.371	1.023	0.380	2.35	--
		Tilt	18900/1880	0.355	1.023	0.363	3.68	--
	Right	Cheek	18900/1880	<b>0.565</b>	1.023	<b>0.578</b>	<b>-3.32</b>	<b>15</b>
		Tilt	18900/1880	0.423	1.023	0.433	0.56	--
Body-worn (10mm Separation)	Face Upward		18900/1880	0.188	1.023	0.192	1.78	--
	Back Upward		18900/1880	<b>0.238</b>	1.023	<b>0.243</b>	<b>-3.81</b>	<b>16</b>
Hotspot (10mm Separation)	Face Upward		18900/1880	0.188	1.023	0.192	1.78	--
	Back Upward		18900/1880	<b>0.238</b>	1.023	<b>0.243</b>	<b>-3.81</b>	<b>16</b>
	Edge B		18900/1880	0.134	1.023	0.137	-2.54	--
	Edge A		18900/1880	0.199	1.023	0.204	3.55	--
	Edge D		18900/1880	0.102	1.023	0.104	4.12	--
50%RB #0								
Head	Left	Cheek	18900/1880	0.331	1.052	0.348	1.25	--
		Tilt	18900/1880	0.301	1.052	0.317	3.55	--
	Right	Cheek	18900/1880	0.523	1.052	0.550	2.17	--
		Tilt	18900/1880	0.367	1.052	0.386	-2.52	--
Body-worn (10mm Separation)	Face Upward		18900/1880	0.152	1.052	0.160	-3.33	--
	Back Upward		18900/1880	0.199	1.052	0.209	1.24	--
Hotspot (10mm Separation)	Face Upward		18900/1880	0.152	1.052	0.160	-3.33	--
	Back Upward		18900/1880	0.199	1.052	0.209	1.24	--
	Edge B		18900/1880	0.102	1.052	0.107	2.88	--
	Edge A		18900/1880	0.156	1.052	0.164	4.65	--
	Edge D		18900/1880	0.066	1.052	0.069	3.99	--



Table 9: SAR Values of LTE Band 4, 20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg), 1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	20175/1732.5	0.415	1.054	0.437	3.15	--
		Tilt	20175/1732.5	0.388	1.054	0.409	4.48	--
	Right	Cheek	20175/1732.5	<b>0.569</b>	1.054	<b>0.600</b>	<b>-1.74</b>	<b>17</b>
		Tilt	20175/1732.5	0.522	1.054	0.550	3.15	--
Body-worn (10mm Separation)	Face Upward		20175/1732.5	0.187	1.054	0.197	2.85	--
	Back Upward		20175/1732.5	<b>0.244</b>	1.054	<b>0.257</b>	<b>-4.10</b>	<b>18</b>
Hotspot (10mm Separation)	Face Upward		20175/1732.5	0.187	1.054	0.197	2.85	--
	Back Upward		20175/1732.5	<b>0.244</b>	1.054	<b>0.257</b>	<b>-4.10</b>	<b>18</b>
	Edge B		20175/1732.5	0.065	1.054	0.069	-2.04	--
	Edge A		20175/1732.5	0.122	1.054	0.129	4.08	--
	Edge D		20175/1732.5	0.089	1.054	0.094	2.85	--
50%RB #0								
Head	Left	Cheek	20175/1732.5	0.351	1.052	0.369	4.52	--
		Tilt	20175/1732.5	0.302	1.052	0.318	5.85	--
	Right	Cheek	20175/1732.5	0.496	1.052	0.522	2.73	--
		Tilt	20175/1732.5	0.442	1.052	0.465	3.96	--
Body-worn (10mm Separation)	Face Upward		20175/1732.5	0.128	1.052	0.135	1.78	--
	Back Upward		20175/1732.5	0.196	1.052	0.206	3.11	--
Hotspot (10mm Separation)	Face Upward		20175/1732.5	0.128	1.052	0.135	1.78	--
	Back Upward		20175/1732.5	0.196	1.052	0.206	3.11	--
	Edge B		20175/1732.5	0.042	1.052	0.044	-2.11	--
	Edge A		20175/1732.5	0.096	1.052	0.101	3.01	--
	Edge D		20175/1732.5	0.055	1.052	0.058	1.78	--



Table 10: SAR Values of LTE Band 5,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg), 1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	20525/836.5	0.612	1.005	0.615	2.13	--
		Tilt	20525/836.5	0.574	1.005	0.577	3.46	--
	Right	Cheek	20525/836.5	<b>0.725</b>	1.005	<b>0.729</b>	<b>-1.70</b>	<b>19</b>
		Tilt	20525/836.5	0.695	1.005	0.698	1.57	--
Body-worn (10mm Separation)	Face Upward		20525/836.5	0.245	1.005	0.246	-1.36	--
	Back Upward		20525/836.5	<b>0.281</b>	1.005	<b>0.282</b>	<b>-3.51</b>	<b>20</b>
Hotspot (10mm Separation)	Face Upward		20525/836.5	0.245	1.005	0.246	-1.36	--
	Back Upward		20525/836.5	<b>0.281</b>	1.005	<b>0.282</b>	<b>-3.51</b>	<b>20</b>
	Edge B		20525/836.5	0.105	1.005	0.106	-4.25	--
	Edge A		20525/836.5	0.217	1.005	0.218	-0.13	--
	Edge D		20525/836.5	0.166	1.005	0.167	-1.36	--
50%RB #0								
Head	Left	Cheek	20525/836.5	0.549	1.064	0.584	-1.78	--
		Tilt	20525/836.5	0.505	1.064	0.537	-0.45	--
	Right	Cheek	20525/836.5	0.641	1.064	0.682	-3.57	--
		Tilt	20525/836.5	0.598	1.064	0.636	-2.34	--
Body-worn (10mm Separation)	Face Upward		20525/836.5	0.201	1.064	0.214	-3.42	--
	Back Upward		20525/836.5	0.233	1.064	0.248		--
Hotspot (10mm Separation)	Face Upward		20525/836.5	0.201	1.064	0.214	-3.42	--
	Back Upward		20525/836.5	0.233	1.064	0.248		--
	Edge B		20525/836.5	0.085	1.064	0.090	-1.31	--
	Edge A		20525/836.5	0.176	1.064	0.187	-2.19	--
	Edge D		20525/836.5	0.133	1.064	0.142	-3.42	--



Table 11: SAR Values of LTE Band 7,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	21100/2535	<b>0.155</b>	1.069	<b>0.166</b>	<b>0.07</b>	<b>21</b>
		Tilt	21100/2535	0.049	1.069	0.052	-3.16	--
	Right	Cheek	21100/2535	0.060	1.069	0.064	-3.01	--
		Tilt	21100/2535	0.022	1.069	0.024	-1.46	--
Body-worn (10mm Separation)	Face Upward		21100/2535	0.107	1.069	0.114	-2.47	--
	Back Upward		21100/2535	<b>0.260</b>	1.069	<b>0.278</b>	<b>-1.86</b>	<b>22</b>
Hotspot (10mm Separation)	Face Upward		21100/2535	0.107	1.069	0.114	-2.47	--
	Back Upward		21100/2535	<b>0.260</b>	1.069	<b>0.278</b>	<b>-1.86</b>	<b>22</b>
	Edge B		21100/2535	0.032	1.069	0.034	-1.93	--
	Edge A		21100/2535	0.012	1.069	0.013	-1.7	--
	Edge D		21100/2535	0.016	1.069	0.017	-2.85	--
50%RB #0								
Head	Left	Cheek	21100/2535	0.123	1.009	0.124	-4.84	--
		Tilt	21100/2535	0.036	1.009	0.036	-2.51	--
	Right	Cheek	21100/2535	0.028	1.009	0.028	-1.62	--
		Tilt	21100/2535	0.012	1.009	0.012	-2.87	--
Body-worn (10mm Separation)	Face Upward		21100/2535	0.075	1.009	0.076	3.36	--
	Back Upward		21100/2535	0.233	1.009	0.235	2.08	--
Hotspot (10mm Separation)	Face Upward		21100/2535	0.075	1.009	0.076	3.36	--
	Back Upward		21100/2535	0.233	1.009	0.235	2.08	--
	Edge B		21100/2535	0.028	1.009	0.028	2.77	--
	Edge A		21100/2535	0.008	1.009	0.008	5.78	--
	Edge D		21100/2535	0.012	1.009	0.012	4.59	--



Table 12: SAR Values of LTE Band 12,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	23095/707.5	0.042	1.059	0.044	1.57	--
		Tilt	23095/707.5	0.035	1.059	0.037	2.9	--
	Right	Cheek	23095/707.5	<b>0.072</b>	1.059	<b>0.076</b>	<b>-2.95</b>	<b>23</b>
		Tilt	23095/707.5	0.059	1.059	0.062	1.01	--
Body-worn (10mm Separation)	Face Upward		23095/707.5	0.021	1.059	0.022	1.27	--
	Back Upward		23095/707.5	<b>0.027</b>	1.059	<b>0.029</b>	<b>1.13</b>	<b>24</b>
Hotspot (10mm Separation)	Face Upward		23095/707.5	0.021	1.059	0.022	1.27	--
	Back Upward		23095/707.5	<b>0.027</b>	1.059	<b>0.029</b>	<b>1.13</b>	<b>24</b>
	Edge B		23095/707.5	0.012	1.059	0.013	-3.62	--
	Edge A		23095/707.5	0.018	1.059	0.019	2.5	--
	Edge D		23095/707.5	0.008	1.059	0.008	1.27	--
50%RB #0								
Head	Left	Cheek	23095/707.5	0.031	1.030	0.032	1.95	--
		Tilt	23095/707.5	0.024	1.030	0.025	3.28	--
	Right	Cheek	23095/707.5	0.062	1.030	0.064	0.16	--
		Tilt	23095/707.5	0.051	1.030	0.053	1.39	--
Body-worn (10mm Separation)	Face Upward		23095/707.5	0.018	1.030	0.019	3.17	--
	Back Upward		23095/707.5	0.023	1.030	0.024	4.5	--
Hotspot (10mm Separation)	Face Upward		23095/707.5	0.018	1.030	0.019	3.17	--
	Back Upward		23095/707.5	0.023	1.030	0.024	4.5	--
	Edge B		23095/707.5	0.008	1.030	0.008	-1.72	--
	Edge A		23095/707.5	0.013	1.030	0.013	4.4	--
	Edge D		23095/707.5	0.005	1.030	0.005	3.17	--



Table 13: SAR Values of LTE Band 17,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	23790/710	<b>0.035</b>	1.069	<b>0.037</b>	<b>-2.87</b>	<b>25</b>
		Tilt	23790/710	0.031	1.069	0.033	2.88	--
	Right	Cheek	23790/710	0.061	1.069	0.065	2.76	--
		Tilt	23790/710	0.045	1.069	0.048	3.99	--
Body-worn (10mm Separation)	Face Upward		23790/710	0.019	1.069	0.020	4.96	--
	Back Upward		23790/710	<b>0.028</b>	1.069	<b>0.030</b>	<b>-1.74</b>	<b>26</b>
Hotspot (10mm Separation)	Face Upward		23790/710	0.019	1.069	0.020	4.96	--
	Back Upward		23790/710	<b>0.028</b>	1.069	<b>0.030</b>	<b>-1.74</b>	<b>26</b>
	Edge B		23790/710	0.012	1.069	0.013	0.07	--
	Edge A		23790/710	0.017	1.069	0.018	3.19	--
	Edge D		23790/710	0.007	1.069	0.007	4.96	--
50%RB #0								
Head	Left	Cheek	23790/710	0.028	1.042	0.029	2.66	--
		Tilt	23790/710	0.023	1.042	0.024	3.99	--
	Right	Cheek	23790/710	0.055	1.042	0.057	0.87	--
		Tilt	23790/710	0.041	1.042	0.043	2.1	--
Body-worn (10mm Separation)	Face Upward		23790/710	0.013	1.042	0.014	2.71	--
	Back Upward		23790/710	0.022	1.042	0.023	4.04	--
Hotspot (10mm Separation)	Face Upward		23790/710	0.013	1.042	0.014	2.71	--
	Back Upward		23790/710	0.022	1.042	0.023	4.04	--
	Edge B		23790/710	0.008	1.042	0.008	-2.18	--
	Edge A		23790/710	0.013	1.042	0.014	3.94	--
	Edge D		23790/710	0.003	1.042	0.003	2.71	--





Table 14: SAR Values of LTE Band 25,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg), 1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	26365/1882.5	0.488	1.026	0.501	1.25	--
		Tilt	26365/1882.5	0.423	1.026	0.434	-0.03	--
	Right	Cheek	26365/1882.5	<b>0.576</b>	1.026	<b>0.591</b>	<b>-2.55</b>	<b>27</b>
		Tilt	26365/1882.5	0.511	1.026	0.524	1.67	--
Body-worn (10mm Separation)	Face Upward		26365/1882.5	0.201	1.026	0.206	0.66	--
	Back Upward		26365/1882.5	<b>0.238</b>	1.026	<b>0.244</b>	<b>-2.35</b>	<b>28</b>
Hotspot (10mm Separation)	Face Upward		26365/1882.5	0.201	1.026	0.206	0.66	--
	Back Upward		26365/1882.5	<b>0.238</b>	1.026	<b>0.244</b>	<b>-2.35</b>	<b>28</b>
	Edge B		26365/1882.5	0.142	1.026	0.146	1.2	--
	Edge A		26365/1882.5	0.196	1.026	0.201	1.43	--
	Edge D		26365/1882.5	0.125	1.026	0.128	0.66	--
50%RB #0								
Head	Left	Cheek	26365/1882.5	0.454	1.064	0.483	1.66	--
		Tilt	26365/1882.5	0.371	1.064	0.395	0.38	--
	Right	Cheek	26365/1882.5	0.532	1.064	0.566	0.53	--
		Tilt	26365/1882.5	0.423	1.064	0.450	2.08	--
Body-worn (10mm Separation)	Face Upward		26365/1882.5	0.158	1.064	0.168	1.07	--
	Back Upward		26365/1882.5	0.181	1.064	0.193	4.08	--
Hotspot (10mm Separation)	Face Upward		26365/1882.5	0.158	1.064	0.168	1.07	--
	Back Upward		26365/1882.5	0.181	1.064	0.193	4.08	--
	Edge B		26365/1882.5	0.043	1.064	0.046	1.61	--
	Edge A		26365/1882.5	0.13	1.064	0.138	1.84	--
	Edge D		26365/1882.5	0.052	1.064	0.055	0.69	--



Table 15: SAR Values of LTE Band 26,15MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	26865/831.5	0.257	1.089	0.280	2.31	--
		Tilt	26865/831.5	0.243	1.089	0.265	1.03	--
	Right	Cheek	26865/831.5	<b>0.724</b>	1.089	<b>0.788</b>	<b>-1.79</b>	<b>29</b>
		Tilt	26865/831.5	0.614	1.089	0.669	2.73	--
Body-worn (10mm Separation)	Face Upward		26865/831.5	0.185	1.089	0.201	1.72	--
	Back Upward		26865/831.5	<b>0.280</b>	1.089	<b>0.305</b>	<b>-3.77</b>	<b>30</b>
Hotspot (10mm Separation)	Face Upward		26865/831.5	0.185	1.089	0.201	1.72	--
	Back Upward		26865/831.5	<b>0.280</b>	1.089	<b>0.305</b>	<b>-3.77</b>	<b>30</b>
	Edge B		26865/831.5	0.103	1.089	0.112	2.26	--
	Edge A		26865/831.5	0.233	1.089	0.254	2.49	--
	Edge D		26865/831.5	0.145	1.089	0.158	1.34	--
50%RB #0								
Head	Left	Cheek	26865/831.5	0.223	1.050	0.234	0.79	--
		Tilt	26865/831.5	0.191	1.050	0.201	-0.49	--
	Right	Cheek	26865/831.5	0.68	1.050	0.714	-0.34	--
		Tilt	26865/831.5	0.526	1.050	0.552	1.21	--
Body-worn (10mm Separation)	Face Upward		26865/831.5	0.142	1.050	0.149	0.2	--
	Back Upward		26865/831.5	0.223	1.050	0.234	3.21	--
Hotspot (10mm Separation)	Face Upward		26865/831.5	0.142	1.050	0.149	0.2	--
	Back Upward		26865/831.5	0.223	1.050	0.234	3.21	--
	Edge B		26865/831.5	0.004	1.050	0.004	0.74	--
	Edge A		26865/831.5	0.167	1.050	0.175	0.97	--
	Edge D		26865/831.5	0.072	1.050	0.076	-0.18	--



Table 16: SAR Values of LTE Band 30,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	27710/2310	0.196	1.064	0.209	2.48	--
		Tilt	27710/2310	0.134	1.064	0.143	1.20	--
	Right	Cheek	27710/2310	<b>0.304</b>	1.064	<b>0.323</b>	<b>-2.26</b>	<b>31</b>
		Tilt	27710/2310	0.257	1.064	0.273	2.90	--
Body-worn (10mm Separation)	Face Upward		27710/2310	0.248	1.064	0.264	1.89	--
	Back Upward		27710/2310	<b>0.419</b>	1.064	<b>0.446</b>	<b>-1.01</b>	<b>32</b>
Hotspot (10mm Separation)	Face Upward		27710/2310	0.248	1.064	0.264	4.91	--
	Back Upward		27710/2310	<b>0.419</b>	1.064	<b>0.446</b>	<b>-1.01</b>	<b>32</b>
	Edge B		27710/2310	0.185	1.064	0.197	3.71	--
	Edge C		27710/2310	0.266	1.064	0.283	2.86	--
	Edge D		27710/2310	0.112	1.064	0.119	1.51	--
50%RB #0								
Head	Left	Cheek	27710/2310	0.174	1.054	0.183	-0.48	--
		Tilt	27710/2310	0.103	1.054	0.109	1.85	--
	Right	Cheek	27710/2310	0.256	1.054	0.270	2.74	--
		Tilt	27710/2310	0.201	1.054	0.212	1.49	--
Body-worn (10mm Separation)	Face Upward		27710/2310	0.366	1.054	0.386	0.24	--
	Back Upward		27710/2310	0.189	1.054	0.199	3.36	--
Hotspot (10mm Separation)	Face Upward		27710/2310	0.366	1.054	0.386	0.24	--
	Back Upward		27710/2310	0.189	1.054	0.199	3.36	--
	Edge B		27710/2310	0.145	1.054	0.153	1.85	--
	Edge A		27710/2310	0.196	1.054	0.207	-1.58	--
	Edge D		27710/2310	0.103	1.054	0.109	-2.66	--



Table 17: SAR Values of LTE Band 41,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	39150/2350	0.132	1.059	0.140	2.86	--
		Tilt	39150/2350	0.101	1.059	0.107	1.58	--
	Right	Cheek	39150/2350	<b>0.182</b>	1.059	<b>0.193</b>	<b>-2.59</b>	<b>33</b>
		Tilt	39150/2350	0.152	1.059	0.161	3.28	--
Body-worn (10mm Separation)	Face Upward		39150/2350	0.153	1.059	0.162	2.27	--
	Back Upward		39150/2350	<b>0.177</b>	1.059	<b>0.187</b>	<b>-2.80</b>	<b>34</b>
Hotspot (10mm Separation)	Face Upward		39150/2350	0.153	1.059	0.162	2.27	--
	Back Upward		39150/2350	<b>0.177</b>	1.059	<b>0.187</b>	<b>-2.80</b>	<b>34</b>
	Edge B		39150/2350	0.128	1.059	0.136	2.81	--
	Edge A		39150/2350	0.088	1.059	0.093	3.04	--
	Edge D		39150/2350	0.103	1.059	0.109	1.89	--
50%RB #0								
Head	Left	Cheek	39150/2350	0.098	1.026	0.135	-0.1	--
		Tilt	39150/2350	0.049	1.026	0.104	2.23	--
	Right	Cheek	39150/2350	0.138	1.026	0.187	3.12	--
		Tilt	39150/2350	0.064	1.026	0.156	1.87	--
Body-worn (10mm Separation)	Face Upward		39150/2350	0.11	1.026	0.157	-3.25	--
	Back Upward		39150/2350	0.12	1.026	0.182	-4.53	--
Hotspot (10mm Separation)	Face Upward		39150/2350	0.11	1.026	0.157	-4.38	--
	Back Upward		39150/2350	0.12	1.026	0.182	-2.83	--
	Edge B		39150/2350	0.029	1.026	0.131	-3.84	--
	Edge A		39150/2350	0.022	1.026	0.090	-0.83	--
	Edge D		39150/2350	0.03	1.026	0.106	-2.02	--



Table 18: SAR Values of LTE Band 66,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg), 1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	132197/1732.5	0.189	1.019	0.193	-2.36	--
		Tilt	132197/1732.5	0.166	1.019	0.169	-3.64	--
	Right	Cheek	132197/1732.5	<b>0.285</b>	1.019	<b>0.290</b>	<b>-2.70</b>	<b>35</b>
		Tilt	132197/1732.5	0.246	1.019	0.251	-1.94	--
Body-worn (10mm Separation)	Face Upward		132197/1732.5	0.213	1.019	0.217	-2.95	--
	Back Upward		132197/1732.5	<b>0.258</b>	1.019	<b>0.263</b>	<b>-4.71</b>	<b>36</b>
Hotspot (10mm Separation)	Face Upward		132197/1732.5	0.213	1.019	0.217	-2.95	--
	Back Upward		132197/1732.5	<b>0.258</b>	1.019	<b>0.263</b>	<b>-4.71</b>	<b>36</b>
	Edge B		132197/1732.5	0.089	1.019	0.091	-2.41	--
	Edge A		132197/1732.5	0.111	1.019	0.113	-2.18	--
	Edge D		132197/1732.5	0.075	1.019	0.076	-3.33	--
50%RB #0								
Head	Left	Cheek	132197/1732.5	0.155	1.096	0.170	-2.99	--
		Tilt	132197/1732.5	0.114	1.096	0.125	-2.1	--
	Right	Cheek	132197/1732.5	0.241	1.096	0.264	-3.35	--
		Tilt	132197/1732.5	0.158	1.096	0.173	-4.6	--
Body-worn (10mm Separation)	Face Upward		132197/1732.5	0.17	1.096	0.186	1.56	--
	Back Upward		132197/1732.5	0.201	1.096	0.220	0.28	--
Hotspot (10mm Separation)	Face Upward		132197/1732.5	0.17	1.096	0.186	1.56	--
	Back Upward		132197/1732.5	0.201	1.096	0.220	0.28	--
	Edge B		132197/1732.5	0.023	1.096	0.025	0.97	--
	Edge A		132197/1732.5	0.045	1.096	0.049	3.98	--
	Edge D		132197/1732.5	0.018	1.096	0.020	2.79	--

## 10.2 Primary Antenna

Table 19: SAR Values of GSM 850MHz Band

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	190/836.6	0.123	1.028	0.126	1.3	--
		Tilt	190/836.6	0.054	1.028	0.056	0.02	--
	Right	Cheek	190/836.6	<b>0.182</b>	1.028	<b>0.187</b>	<b>2.00</b>	<b>37</b>
		Tilt	190/836.6	0.077	1.028	0.079	1.72	--
Body-worn (10mm Separation)	GPRS (4Tx)	Face Upward	190/836.6	0.335	1.016	0.340	0.71	--
		Back Upward	190/836.6	<b>0.406</b>	1.016	<b>0.412</b>	<b>2.61</b>	<b>38</b>
Hotspot (10mm Separation)	GPRS (4Tx)	Face Upward	190/836.6	0.335	1.016	0.340	0.71	--
		Back Upward	190/836.6	<b>0.406</b>	1.016	<b>0.412</b>	<b>2.61</b>	<b>38</b>
		Edge B	190/836.6	0.180	1.016	0.183	1.25	--
		Edge C	190/836.6	0.221	1.016	0.225	1.48	--
		Edge D	190/836.6	0.035	1.016	0.036	0.33	--

Table 20: SAR Values of GSM1900 MHz Band

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	661/1880	0.013	1.074	0.014	0.67	--
		Tilt	661/1880	0.009	1.074	0.010	1.56	--
	Right	Cheek	661/1880	<b>0.018</b>	1.074	<b>0.019</b>	<b>-1.84</b>	<b>39</b>
		Tilt	661/1880	0.011	1.074	0.012	-0.94	--
Body-worn (10mm Separation)	GPRS (4Tx)	Face Upward	661/1880	0.069	1.076	0.074	1.09	--
		Back Upward	661/1880	<b>0.073</b>	1.076	<b>0.079</b>	<b>-2.82</b>	<b>40</b>
Hotspot (10mm Separation)	GPRS (4Tx)	Face Upward	661/1880	0.069	1.076	0.074	1.09	--
		Back Upward	661/1880	<b>0.073</b>	1.076	<b>0.079</b>	<b>-2.82</b>	<b>40</b>
		Edge B	661/1880	0.007	1.076	0.008	0.5	--
		Edge C	661/1880	0.019	1.076	0.020	3.51	--
		Edge D	661/1880	0.041	1.076	0.044	2.32	--

Table 21: SAR Values of WCDMA850

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	4183/836.6	<b>0.144</b>	1.114	<b>0.160</b>	<b>-1.58</b>	<b>41</b>
		Tilt	4183/836.6	0.129	1.114	0.144	1.35	--
	Right	Cheek	4183/836.6	0.121	1.114	0.135	0.1	--
		Tilt	4183/836.6	0.082	1.114	0.091	-1.15	--
Body-worn (10mm Separation)		Face Upward	4183/836.6	0.178	1.114	0.198	-0.79	--
		Back Upward	4183/836.6	<b>0.319</b>	1.114	<b>0.355</b>	<b>-1.42</b>	<b>42</b>
Hotspot (10mm Separation)		Face Upward	4183/836.6	0.178	1.114	0.198	-0.79	--
		Back Upward	4183/836.6	<b>0.319</b>	1.114	<b>0.355</b>	<b>-1.42</b>	<b>42</b>
		Edge B	4183/836.6	0.189	1.114	0.211	-1.38	--
		Edge C	4183/836.6	0.268	1.114	0.299	1.63	--
		Edge D	4183/836.6	0.034	1.114	0.038	0.44	--

Table 22: SAR Values of WCDMA1900

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	9400/1880	0.015	1.172	0.018	-1.42	--
		Tilt	9400/1880	0.008	1.172	0.009	-0.53	--
	Right	Cheek	9400/1880	<b>0.019</b>	1.172	<b>0.022</b>	<b>-3.06</b>	<b>43</b>
		Tilt	9400/1880	0.017	1.172	0.020	-3.03	--
Body-worn (10mm Separation)		Face Upward	9400/1880	0.056	1.172	0.066	2.87	--
		Back Upward	9400/1880	<b>0.074</b>	1.172	<b>0.087</b>	<b>-0.66</b>	<b>44</b>
Hotspot (10mm Separation)		Face Upward	9400/1880	0.056	1.172	0.066	2.87	--
		Back Upward	9400/1880	<b>0.074</b>	1.172	<b>0.087</b>	<b>-0.66</b>	<b>44</b>
		Edge B	9400/1880	0.010	1.172	0.012	3.56	--
		Edge C	9400/1880	0.013	1.172	0.015	6.57	--
		Edge D	9400/1880	0.037	1.172	0.043	5.38	--



Table 23: SAR Values of WCDMA1700

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	1413/1732.6	<b>0.016</b>	1.153	<b>0.018</b>	<b>-1.80</b>	<b>45</b>
		Tilt	1413/1732.6	0.011	1.153	0.013	-2.68	--
	Right	Cheek	1413/1732.6	0.013	1.153	0.015	-1.73	--
		Tilt	1413/1732.6	0.009	1.153	0.010	-2.22	--
Body-worn (10mm Separation)		Face Upward	1413/1732.6	0.011	1.153	0.013	-3.86	--
		Back Upward	1413/1732.6	<b>0.054</b>	1.153	<b>0.062</b>	<b>-1.91</b>	<b>46</b>
Hotspot (10mm Separation)		Face Upward	1413/1732.6	0.011	1.153	0.013	-3.86	--
		Back Upward	1413/1732.6	<b>0.054</b>	1.153	<b>0.062</b>	<b>-1.91</b>	<b>46</b>
		Edge B	1413/1732.6	0.011	1.153	0.013	-2.42	--
		Edge C	1413/1732.6	0.009	1.153	0.010	-3.11	--
		Edge D	1413/1732.6	0.009	1.153	0.010	-2.33	--

Table 24: SAR Values of CDMA BC0

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head 1XRTT(RC3 SO55)	Left	Cheek	384/836.5	0.251	1.052	0.264	3.17	--
		Tilt	384/836.5	0.186	1.052	0.196	1.89	--
	Right	Cheek	384/836.5	<b>0.467</b>	1.052	<b>0.491</b>	<b>0.19</b>	<b>47</b>
		Tilt	384/836.5	0.396	1.052	0.417	2.04	--
1XRTT(RC3 SO32)		Face Upward	384/836.5	0.315	1.074	0.338	3.59	--
		Back Upward	384/836.5	<b>0.532</b>	1.074	<b>0.571</b>	<b>-3.50</b>	<b>48</b>
		Edge B	384/836.5	0.217	1.074	0.233	1.25	--
		Edge C	384/836.5	0.355	1.074	0.381	-0.25	--
		Edge D	384/836.5	0.156	1.074	0.168	0.21	--
1Xevdo(Rel. 0)		Face Upward	384/836.5	0.246	1.143	0.281	-2.54	--
		Back Upward	384/836.5	0.447	1.143	0.511	2.18	--
		Edge B	384/836.5	0.153	1.143	0.175	0.93	--
		Edge C	384/836.5	0.271	1.143	0.310	-3.33	--
		Edge D	384/836.5	0.132	1.143	0.151	-4.28	--





Table 25: SAR Values of CDMA BC1

Temperature: 23.0~23.5°C, humidity: 62~64%.

Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
Head 1XRTT(RC3 SO55)	Left	Cheek	600/1880	0.352	1.042	0.367	-0.74	--
		Tilt	600/1880	0.311	1.042	0.324	2.20	--
	Right	Cheek	600/1880	<b>0.442</b>	1.042	<b>0.461</b>	<b>-2.78</b>	<b>49</b>
		Tilt	600/1880	0.418	1.042	0.436	-1.87	--
1XRTT(RC3 SO32)	Face Upward		600/1880	0.245	1.074	0.263	1.68	--
	Back Upward		600/1880	<b>0.431</b>	1.074	<b>0.463</b>	<b>-2.20</b>	<b>50</b>
	Edge B		600/1880	0.188	1.074	0.202	-1.33	--
	Edge C		600/1880	0.276	1.074	0.296	0.49	--
	Edge D		600/1880	0.145	1.074	0.156	0.36	--
1Xevdo(Rel. 0)	Face Upward		600/1880	0.208	1.086	0.226	-0.79	--
	Back Upward		600/1880	0.367	1.086	0.399	0.56	--
	Edge B		600/1880	0.154	1.086	0.167	-1.71	--
	Edge C		600/1880	0.233	1.086	0.253	-1.70	--
	Edge D		600/1880	0.101	1.086	0.110	-0.48	--



Table 26: SAR Values of LTE Band 2,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	18900/1880	0.102	1.042	0.106	3.25	--
		Tilt	18900/1880	0.096	1.042	0.100	4.14	--
	Right	Cheek	18900/1880	<b>0.123</b>	1.042	<b>0.128</b>	<b>-1.64</b>	<b>51</b>
		Tilt	18900/1880	0.109	1.042	0.114	1.64	--
Body-worn (10mm Separation)	Face Upward		18900/1880	0.115	1.042	0.120	0.45	--
	Back Upward		18900/1880	<b>0.121</b>	1.042	<b>0.126</b>	0.91	<b>52</b>
Hotspot (10mm Separation)	Face Upward		18900/1880	0.115	1.042	0.120	0.45	--
	Back Upward		18900/1880	<b>0.121</b>	1.042	<b>0.126</b>	0.91	<b>52</b>
	Edge B		18900/1880	0.055	1.042	0.057	1.6	--
	Edge C		18900/1880	0.077	1.042	0.080	4.61	--
	Edge D		18900/1880	0.061	1.042	0.064	3.42	--
50%RB #0								
Head	Left	Cheek	18900/1880	0.086	1.094	0.094	2.57	--
		Tilt	18900/1880	0.081	1.094	0.089	2.14	--
	Right	Cheek	18900/1880	0.113	1.094	0.124	2.37	--
		Tilt	18900/1880	0.106	1.094	0.116	1.22	--
Body-worn (10mm Separation)	Face Upward		18900/1880	0.096	1.094	0.105	-0.77	--
	Back Upward		18900/1880	0.102	1.094	0.112	1.56	--
Hotspot (10mm Separation)	Face Upward		18900/1880	0.096	1.094	0.105	-0.77	--
	Back Upward		18900/1880	0.102	1.094	0.112	1.56	--
	Edge B		18900/1880	0.023	1.094	0.025	-0.05	--
	Edge C		18900/1880	0.047	1.094	0.051	-0.28	--
	Edge D		18900/1880	0.033	1.094	0.036	0.33	--



Table 27: SAR Values of LTE Band 4, 20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg), 1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	20175/1732.5	<b>0.111</b>	1.062	<b>0.118</b>	<b>-3.14</b>	<b>53</b>
		Tilt	20175/1732.5	0.102	1.062	0.108	0.23	--
	Right	Cheek	20175/1732.5	0.078	1.062	0.083	3.79	--
		Tilt	20175/1732.5	0.072	1.062	0.076	1.93	--
Body-worn (10mm Separation)	Face Upward		20175/1732.5	0.085	1.062	0.090	2.74	--
	Back Upward		20175/1732.5	<b>0.121</b>	1.062	<b>0.129</b>	<b>2.80</b>	<b>54</b>
Hotspot (10mm Separation)	Face Upward		20175/1732.5	0.085	1.062	0.090	2.74	--
	Back Upward		20175/1732.5	<b>0.121</b>	1.062	<b>0.129</b>	<b>2.80</b>	<b>54</b>
	Edge B		20175/1732.5	0.046	1.062	0.049	1.46	--
	Edge C		20175/1732.5	0.077	1.062	0.082	1.69	--
	Edge D		20175/1732.5	0.052	1.062	0.055	0.54	--
50%RB #0								
Head	Left	Cheek	20175/1732.5	0.105	1.052	0.110	-1.45	--
		Tilt	20175/1732.5	0.096	1.052	0.101	0.88	--
	Right	Cheek	20175/1732.5	0.072	1.052	0.076	1.77	--
		Tilt	20175/1732.5	0.065	1.052	0.068	0.52	--
Body-worn (10mm Separation)	Face Upward		20175/1732.5	0.077	1.052	0.081	1.28	--
	Back Upward		20175/1732.5	0.106	1.052	0.112	0	--
Hotspot (10mm Separation)	Face Upward		20175/1732.5	0.077	1.052	0.081	1.28	--
	Back Upward		20175/1732.5	0.106	1.052	0.112	0	--
	Edge B		20175/1732.5	0.041	1.052	0.043	0.69	--
	Edge C		20175/1732.5	0.072	1.052	0.076	3.7	--
	Edge D		20175/1732.5	0.033	1.052	0.035	2.51	--



Table 28: SAR Values of LTE Band 5,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg), 1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	20525/836.5	0.110	1.021	0.112	2.36	--
		Tilt	20525/836.5	0.098	1.021	0.100	1.08	--
	Right	Cheek	20525/836.5	<b>0.121</b>	1.021	<b>0.124</b>	<b>-2.08</b>	<b>55</b>
		Tilt	20525/836.5	0.071	1.021	0.072	2.78	--
Body-worn (10mm Separation)	Face Upward		20525/836.5	0.087	1.021	0.089	1.77	--
	Back Upward		20525/836.5	<b>0.163</b>	1.021	<b>0.166</b>	<b>-2.77</b>	<b>56</b>
Hotspot (10mm Separation)	Face Upward		20525/836.5	0.087	1.021	0.089	1.77	--
	Back Upward		20525/836.5	<b>0.163</b>	1.021	<b>0.166</b>	<b>-2.77</b>	<b>56</b>
	Edge B		20525/836.5	0.008	1.021	0.008	2.31	--
	Edge C		20525/836.5	0.133	1.021	0.136	2.54	--
	Edge D		20525/836.5	0.034	1.021	0.035	1.39	--
50%RB #0								
Head	Left	Cheek	20525/836.5	0.065	1.064	0.069	-0.6	--
		Tilt	20525/836.5	0.051	1.064	0.054	1.73	--
	Right	Cheek	20525/836.5	0.102	1.064	0.109	2.62	--
		Tilt	20525/836.5	0.085	1.064	0.090	1.37	--
Body-worn (10mm Separation)	Face Upward		20525/836.5	0.061	1.064	0.065	-2.36	--
	Back Upward		20525/836.5	0.132	1.064	0.140	-3.64	--
Hotspot (10mm Separation)	Face Upward		20525/836.5	0.061	1.064	0.065	-2.36	--
	Back Upward		20525/836.5	0.132	1.064	0.140	-3.64	--
	Edge B		20525/836.5	0.05	1.064	0.053	-2.95	--
	Edge C		20525/836.5	0.102	1.064	0.109	0.06	--
	Edge D		20525/836.5	0.013	1.064	0.014	-1.13	--



Table 29: SAR Values of LTE Band 7,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
<b>1RB #0</b>								
Head	Left	Cheek	21100/2535	<b>0.019</b>	1.086	<b>0.021</b>	<b>-2.80</b>	<b>57</b>
		Tilt	21100/2535	0.012	1.086	0.013	1.08	--
	Right	Cheek	21100/2535	0.014	1.086	0.015	-0.25	--
		Tilt	21100/2535	0.009	1.086	0.010	-0.81	--
Body-worn (10mm Separation)	Face Upward		21100/2535	0.056	1.086	0.061	-2.33	--
	Back Upward		21100/2535	<b>0.127</b>	1.086	<b>0.138</b>	<b>-3.91</b>	<b>58</b>
Hotspot (10mm Separation)	Face Upward		21100/2535	0.056	1.086	0.061	-2.33	--
	Back Upward		21100/2535	<b>0.127</b>	1.086	<b>0.138</b>	<b>-3.91</b>	<b>58</b>
	Edge B		21100/2535	0.017	1.086	0.018	-2.22	--
	Edge C		21100/2535	0.081	1.086	0.088	-1.1	--
	Edge D		21100/2535	0.029	1.086	0.031	-2.33	--
<b>50%RB #0</b>								
Head	Left	Cheek	21100/2535	0.015	1.040	0.016	-1.25	--
		Tilt	21100/2535	0.008	1.040	0.008	0.08	--
	Right	Cheek	21100/2535	0.011	1.040	0.011	-3.04	--
		Tilt	21100/2535	0.007	1.040	0.007	-1.81	--
Body-worn (10mm Separation)	Face Upward		21100/2535	0.045	1.040	0.047	-1.33	--
	Back Upward		21100/2535	0.101	1.040	0.105	0	--
Hotspot (10mm Separation)	Face Upward		21100/2535	0.045	1.040	0.047	1.33	--
	Back Upward		21100/2535	0.101	1.040	0.105	0	--
	Edge B		21100/2535	0.013	1.040	0.014	-6.22	--
	Edge C		21100/2535	0.066	1.040	0.069	-0.1	--
	Edge D		21100/2535	0.015	1.040	0.016	-1.33	--



Table 30: SAR Values of LTE Band 12,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	23095/707.5	<b>0.021</b>	1.042	<b>0.022</b>	<b>0.63</b>	<b>59</b>
		Tilt	23095/707.5	0.014	1.042	0.015	3.62	--
	Right	Cheek	23095/707.5	0.010	1.042	0.010	2.37	--
		Tilt	23095/707.5	0.010	1.042	0.010	1.12	--
Body-worn (10mm Separation)	Face Upward		23095/707.5	0.008	1.042	0.008	-1.27	--
	Back Upward		23095/707.5	<b>0.011</b>	1.042	<b>0.011</b>	<b>-1.03</b>	<b>60</b>
Hotspot (10mm Separation)	Face Upward		23095/707.5	0.008	1.042	0.008	-1.27	--
	Back Upward		23095/707.5	<b>0.011</b>	1.042	<b>0.011</b>	<b>-1.03</b>	<b>60</b>
	Edge B		23095/707.5	0.007	1.042	0.007	-1.86	--
	Edge C		23095/707.5	0.009	1.042	0.009	1.15	--
	Edge D		23095/707.5	0.006	1.042	0.006	-0.04	--
50%RB #0								
Head	Left	Cheek	23095/707.5	0.015	1.030	0.015	-0.89	--
		Tilt	23095/707.5	0.009	1.030	0.009	-1.32	--
	Right	Cheek	23095/707.5	0.008	1.030	0.008	-1.09	--
		Tilt	23095/707.5	0.008	1.030	0.008	-2.24	--
Body-worn (10mm Separation)	Face Upward		23095/707.5	0.005	1.030	0.005	-4.23	--
	Back Upward		23095/707.5	0.009	1.030	0.009	-1.9	--
Hotspot (10mm Separation)	Face Upward		23095/707.5	0.005	1.030	0.005	-4.23	--
	Back Upward		23095/707.5	0.009	1.030	0.009	-1.9	--
	Edge B		23095/707.5	0.006	1.030	0.006	-3.51	--
	Edge C		23095/707.5	0.008	1.030	0.008	1.58	--
	Edge D		23095/707.5	0.005	1.030	0.005	3.17	--



Table 31: SAR Values of LTE Band 17,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	23790/710	0.015	1.084	0.016	-1.9	--
		Tilt	23790/710	0.012	1.084	0.013	-1.01	--
	Right	Cheek	23790/710	<b>0.049</b>	1.084	<b>0.053</b>	<b>-3.58</b>	<b>61</b>
		Tilt	23790/710	0.045	1.084	0.049	-3.51	--
Body-worn (10mm Separation)	Face Upward		23790/710	0.007	1.084	0.008	4.25	--
	Back Upward		23790/710	<b>0.019</b>	1.084	<b>0.021</b>	<b>-1.37</b>	<b>62</b>
Hotspot (10mm Separation)	Face Upward		23790/710	0.007	1.084	0.008	4.25	--
	Back Upward		23790/710	<b>0.019</b>	1.084	<b>0.021</b>	<b>-1.37</b>	<b>62</b>
	Edge B		23790/710	0.013	1.084	0.014	3.66	--
	Edge C		23790/710	0.016	1.084	0.017	6.67	--
	Edge D		23790/710	0.007	1.084	0.008	5.48	--
50%RB #0								
Head	Left	Cheek	23790/710	0.011	1.042	0.011	4.63	--
		Tilt	23790/710	0.008	1.042	0.008	4.2	--
	Right	Cheek	23790/710	0.036	1.042	0.038	4.43	--
		Tilt	23790/710	0.032	1.042	0.033	3.28	--
Body-worn (10mm Separation)	Face Upward		23790/710	0.005	1.042	0.005	1.29	--
	Back Upward		23790/710	0.015	1.042	0.016	3.62	--
Hotspot (10mm Separation)	Face Upward		23790/710	0.005	1.042	0.005	1.29	--
	Back Upward		23790/710	0.015	1.042	0.016	3.62	--
	Edge B		23790/710	0.009	1.042	0.009	2.01	--
	Edge C		23790/710	0.012	1.042	0.013	-3.95	--
	Edge D		23790/710	0.007	1.042	0.007	4.88	--



Table 32: SAR Values of LTE Band 25,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg), 1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	26365/1882.5	0.012	1.038	0.012	0.98	--
		Tilt	26365/1882.5	0.009	1.038	0.009	-0.3	--
	Right	Cheek	26365/1882.5	<b>0.013</b>	1.038	<b>0.013</b>	<b>1.72</b>	<b>63</b>
		Tilt	26365/1882.5	0.011	1.038	0.011	1.4	--
Body-worn (10mm Separation)	Face Upward		26365/1882.5	0.025	1.038	0.026	0.39	--
	Back Upward		26365/1882.5	<b>0.030</b>	1.038	<b>0.031</b>	<b>-2.97</b>	<b>64</b>
Hotspot (10mm Separation)	Face Upward		26365/1882.5	0.025	1.038	0.026	0.39	--
	Back Upward		26365/1882.5	<b>0.030</b>	1.038	<b>0.031</b>	<b>-2.97</b>	<b>64</b>
	Edge B		26365/1882.5	0.010	1.038	0.010	0.93	--
	Edge C		26365/1882.5	0.009	1.038	0.009	1.16	--
	Edge D		26365/1882.5	0.016	1.038	0.017	0.01	--
50%RB #0								
Head	Left	Cheek	26365/1882.5	0.009	1.076	0.010	-1.98	--
		Tilt	26365/1882.5	0.007	1.076	0.008	0.35	--
	Right	Cheek	26365/1882.5	0.011	1.076	0.012	1.24	--
		Tilt	26365/1882.5	0.009	1.076	0.010	-0.01	--
Body-worn (10mm Separation)	Face Upward		26365/1882.5	0.021	1.076	0.023	-1.28	--
	Back Upward		26365/1882.5	0.026	1.076	0.028	-2.56	--
Hotspot (10mm Separation)	Face Upward		26365/1882.5	0.021	1.076	0.023	-1.28	--
	Back Upward		26365/1882.5	0.026	1.076	0.028	-2.56	--
	Edge B		26365/1882.5	0.008	1.076	0.009	-1.87	--
	Edge C		26365/1882.5	0.006	1.076	0.006	1.14	--
	Edge D		26365/1882.5	0.013	1.076	0.014	-0.05	--





Table 33: SAR Values of LTE Band 26,15MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	26865/831.5	<b>0.077</b>	1.107	<b>0.085</b>	<b>-2.06</b>	<b>65</b>
		Tilt	26865/831.5	0.069	1.107	0.076	-2.7	--
	Right	Cheek	26865/831.5	0.062	1.107	0.069	-2.55	--
		Tilt	26865/831.5	0.045	1.107	0.050	-1	--
Body-worn (10mm Separation)	Face Upward		26865/831.5	0.097	1.107	0.107	-2.01	--
	Back Upward		26865/831.5	<b>0.148</b>	1.107	<b>0.164</b>	<b>-3.96</b>	<b>66</b>
Hotspot (10mm Separation)	Face Upward		26865/831.5	0.097	1.107	0.107	-2.01	--
	Back Upward		26865/831.5	<b>0.148</b>	1.107	<b>0.164</b>	<b>-3.96</b>	<b>66</b>
	Edge B		26865/831.5	0.087	1.107	0.096	-1.47	--
	Edge C		26865/831.5	0.025	1.107	0.028	-1.24	--
	Edge D		26865/831.5	0.047	1.107	0.052	-2.39	--
50%RB #0								
Head	Left	Cheek	26865/831.5	0.052	1.072	0.056	-4.38	--
		Tilt	26865/831.5	0.046	1.072	0.049	-2.05	--
	Right	Cheek	26865/831.5	0.042	1.072	0.045	-1.16	--
		Tilt	26865/831.5	0.038	1.072	0.041	-2.41	--
Body-worn (10mm Separation)	Face Upward		26865/831.5	0.086	1.072	0.092	0.24	--
	Back Upward		26865/831.5	0.092	1.072	0.099	-1.04	--
Hotspot (10mm Separation)	Face Upward		26865/831.5	0.086	1.072	0.092	0.24	--
	Back Upward		26865/831.5	0.092	1.072	0.099	-1.04	--
	Edge B		26865/831.5	0.077	1.072	0.083	-0.35	--
	Edge C		26865/831.5	0.013	1.072	0.014	2.66	--
	Edge D		26865/831.5	0.033	1.072	0.035	1.47	--



Table 34: SAR Values of LTE Band 30,10MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	27710/2310	0.112	1.076	0.121	-0.67	--
		Tilt	27710/2310	0.096	1.076	0.103	-1.95	--
	Right	Cheek	27710/2310	<b>0.142</b>	1.076	<b>0.153</b>	<b>-3.09</b>	<b>67</b>
		Tilt	27710/2310	0.113	1.076	0.122	-0.25	--
Body-worn (10mm Separation)	Face Upward		27710/2310	0.105	1.076	0.113	-1.26	--
	Back Upward		27710/2310	<b>0.128</b>	1.076	<b>0.138</b>	<b>1.42</b>	<b>68</b>
Hotspot (10mm Separation)	Face Upward		27710/2310	0.105	1.076	0.113	-1.26	--
	Back Upward		27710/2310	<b>0.128</b>	1.076	<b>0.138</b>	<b>1.42</b>	<b>68</b>
	Edge B		27710/2310	0.075	1.076	0.081	-0.29	--
	Edge C		27710/2310	0.096	1.076	0.103	0.75	--
	Edge D		27710/2310	0.056	1.076	0.060	0.44	--
50%RB #0								
Head	Left	Cheek	27710/2310	0.105	1.054	0.111	-1.30	--
		Tilt	27710/2310	0.075	1.054	0.079	-0.41	--
	Right	Cheek	27710/2310	0.123	1.054	0.130	-1.66	--
		Tilt	27710/2310	0.097	1.054	0.102	-2.91	--
Body-worn (10mm Separation)	Face Upward		27710/2310	0.085	1.054	0.090	3.56	--
	Back Upward		27710/2310	0.108	1.054	0.114	2.78	--
Hotspot (10mm Separation)	Face Upward		27710/2310	0.085	1.054	0.090	3.56	--
	Back Upward		27710/2310	0.108	1.054	0.114	2.78	--
	Edge B		27710/2310	0.069	1.054	0.073	-2.66	--
	Edge C		27710/2310	0.081	1.054	0.085	3.84	--
	Edge D		27710/2310	0.044	1.054	0.046	-1.11	--



Table 35: SAR Values of LTE Band 41,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	39150/2350	<b>0.056</b>	1.069	<b>0.060</b>	<b>-2.23</b>	<b>69</b>
		Tilt	39150/2350	0.042	1.069	0.045	1.5	--
	Right	Cheek	39150/2350	0.040	1.069	0.043	1.65	--
		Tilt	39150/2350	0.019	1.069	0.020	3.2	--
Body-worn (10mm Separation)	Face Upward		39150/2350	0.057	1.069	0.061	2.19	--
	Back Upward		39150/2350	<b>0.089</b>	1.069	<b>0.095</b>	<b>-1.26</b>	<b>70</b>
Hotspot (10mm Separation)	Face Upward		39150/2350	0.057	1.069	0.061	2.19	--
	Back Upward		39150/2350	<b>0.089</b>	1.069	<b>0.095</b>	<b>-1.26</b>	<b>70</b>
	Edge B		39150/2350	0.017	1.069	0.018	2.73	--
	Edge C		39150/2350	0.054	1.069	0.058	2.96	--
	Edge D		39150/2350	0.019	1.069	0.020	1.81	--
50%RB #0								
Head	Left	Cheek	39150/2350	0.042	1.035	0.043	-0.18	--
		Tilt	39150/2350	0.035	1.035	0.036	2.15	--
	Right	Cheek	39150/2350	0.020	1.035	0.021	3.04	--
		Tilt	39150/2350	0.013	1.035	0.013	1.79	--
Body-worn (10mm Separation)	Face Upward		39150/2350	0.042	1.035	0.043	2.37	--
	Back Upward		39150/2350	0.078	1.035	0.081	1.09	--
Hotspot (10mm Separation)	Face Upward		39150/2350	0.042	1.035	0.043	2.37	--
	Back Upward		39150/2350	0.078	1.035	0.081	1.09	--
	Edge B		39150/2350	0.013	1.035	0.013	1.78	--
	Edge C		39150/2350	0.042	1.035	0.043	4.79	--
	Edge D		39150/2350	0.016	1.035	0.017	3.6	--



Table 36: SAR Values of LTE Band 66,20MHz, QPSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions		Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.	
			SAR (W/Kg), 1g	Scaled Factor	Scaled SAR (W/Kg), 1g	Power drift (%)		
1RB #0								
Head	Left	Cheek	132197/1732.5	0.056	1.030	0.058	2.29	--
		Tilt	132197/1732.5	0.045	1.030	0.046	1.01	--
	Right	Cheek	132197/1732.5	<b>0.107</b>	1.030	<b>0.110</b>	<b>-3.31</b>	<b>71</b>
		Tilt	132197/1732.5	0.085	1.030	0.088	2.71	--
Body-worn (10mm Separation)	Face Upward		132197/1732.5	0.142	1.030	0.146	1.7	--
	Back Upward		132197/1732.5	<b>0.164</b>	1.030	<b>0.169</b>	<b>-2.01</b>	<b>72</b>
Hotspot (10mm Separation)	Face Upward		132197/1732.5	0.142	1.030	0.146	1.7	--
	Back Upward		132197/1732.5	<b>0.164</b>	1.030	<b>0.169</b>	<b>-2.01</b>	<b>72</b>
	Edge B		132197/1732.5	0.037	1.030	0.038	2.24	--
	Edge C		132197/1732.5	0.066	1.030	0.068	2.47	--
	Edge D		132197/1732.5	0.013	1.030	0.013	1.32	--
50%RB #0								
Head	Left	Cheek	132197/1732.5	0.051	1.107	0.056	-0.67	--
		Tilt	132197/1732.5	0.038	1.107	0.042	1.66	--
	Right	Cheek	132197/1732.5	0.079	1.107	0.087	2.55	--
		Tilt	132197/1732.5	0.074	1.107	0.082	1.3	--
Body-worn (10mm Separation)	Face Upward		132197/1732.5	0.112	1.107	0.124	0.59	--
	Back Upward		132197/1732.5	0.131	1.107	0.145	-0.69	--
Hotspot (10mm Separation)	Face Upward		132197/1732.5	0.112	1.107	0.124	0.59	--
	Back Upward		132197/1732.5	0.131	1.107	0.145	-0.69	--
	Edge B		132197/1732.5	0.025	1.107	0.028	1.82	--
	Edge C		132197/1732.5	0.051	1.107	0.056	0.97	--
	Edge D		132197/1732.5	0.006	1.107	0.007	0.54	--



Table 37: SAR Values of Wi-Fi 802.11b-A0

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	6/2437	0.159	1.099	0.175	0.34	--
		Tilt	6/2437	0.134	1.099	0.147	-0.94	--
	Right	Cheek	6/2437	0.221	1.099	0.243	0.71	--
		Tilt	6/2437	0.161	1.099	0.177	0.76	--
Hotspot (10mm Separation)	Face Upward		6/2437	0.036	1.099	0.040	-0.66	--
	Back Upward		6/2437	0.041	1.099	0.045	2.76	--
	Edge A		6/2437	0.025	1.099	0.027	1.57	--
	Edge B		6/2437	0.012	1.099	0.013	0.72	--
	Edge D		6/2437	0.010	1.099	0.011	-1.03	--

Table 38: SAR Values of Wi-Fi 802.11b-A1

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	6/2437	0.102	1.183	0.121	0.52	--
		Tilt	6/2437	0.086	1.183	0.102	-0.63	--
	Right	Cheek	6/2437	0.177	1.183	0.209	-2.62	--
		Tilt	6/2437	0.152	1.183	0.180	-0.29	--
Hotspot (10mm Separation)	Face Upward		6/2437	0.024	1.183	0.028	-0.89	--
	Back Upward		6/2437	0.038	1.183	0.045	0.6	--
	Edge A		6/2437	0.031	1.183	0.037	-0.65	--
	Edge B		6/2437	0.012	1.183	0.014	-1.9	--
	Edge D		6/2437	0.020	1.183	0.024	0.02	--



Table 39: SAR Values of Wi-Fi 802.11n-40-A0+1

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	6/2437	<b>0.414</b>	1.016	0.421	<b>1.88</b>	<b>73</b>
		Tilt	6/2437	0.328	1.016	0.333	0.5	--
	Right	Cheek	6/2437	0.295	1.016	0.300	0.65	--
		Tilt	6/2437	0.245	1.016	0.249	2.2	--
Hotspot (10mm Separation)	Face Upward		6/2437	0.034	1.016	0.035	1.19	--
	Back Upward		6/2437	<b>0.062</b>	1.016	0.063	<b>-2.02</b>	<b>74</b>
	Edge A		6/2437	0.021	1.016	0.021	3.01	--
	Edge B		6/2437	0.033	1.016	0.034	2.16	--
	Edge D		6/2437	0.014	1.016	0.014	-2.13	--

Table 40: SAR Values of Wi-Fi 802.11ac-VHT40-A0

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	38/5190	0.245	1.028	0.252	1.73	--
		Tilt	38/5190	0.211	1.028	0.217	1.96	--
	Right	Cheek	38/5190	0.327	1.028	0.336	0.81	--
		Tilt	38/5190	0.311	1.028	0.320	-1.18	--
Hotspot (10mm Separation)	Face Upward		38/5190	0.152	1.028	0.156	1.15	--
	Back Upward		38/5190	<b>0.181</b>	1.028	0.186	<b>0.61</b>	<b>75</b>
	Edge A		38/5190	0.027	1.028	0.028	0.79	--
	Edge B		38/5190	0.053	1.028	0.054	-0.46	--
	Edge D		38/5190	0.019	1.028	0.019	3.24	--



Table 41: SAR Values of Wi-Fi 802.11 ac-VHT40-A0+1

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	38/5190	0.174	1.012	0.176	0.54	--
		Tilt	38/5190	0.133	1.012	0.135	-0.74	--
	Right	Cheek	38/5190	0.238	1.012	0.241	-0.59	--
		Tilt	38/5190	0.203	1.012	0.205	0.96	--
Hotspot (10mm Separation)	Face Upward		38/5190	0.105	1.012	0.106	-0.05	--
	Back Upward		38/5190	0.141	1.012	0.143	2.96	--
	Edge A		38/5190	0.086	1.012	0.087	1.77	--
	Edge B		38/5190	0.061	1.012	0.062	0.92	--
	Edge D		38/5190	0.053	1.012	0.054	-0.21	--

Table 42: SAR Values of Wi-Fi 802.11 n-HT40-A0

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	54/5270	0.285	1.079	0.308	0.49	--
		Tilt	54/5270	0.233	1.079	0.251	0.72	--
	Right	Cheek	54/5270	<b>0.384</b>	1.079	<b>0.414</b>	<b>4.48</b>	<b>76</b>
		Tilt	54/5270	0.314	1.079	0.339	-2.42	--
Hotspot (10mm Separation)	Face Upward		54/5270	0.112	1.079	0.121	-0.09	--
	Back Upward		54/5270	0.176	1.079	0.190	0.8	--
	Edge A		54/5270	0.086	1.079	0.093	-0.45	--
	Edge B		54/5270	0.036	1.079	0.039	-1.7	--
	Edge D		54/5270	0.021	1.079	0.023	2.27	--



Table 43: SAR Values of Wi-Fi 802.11 n-HT40-A0+1

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	54/5270	0.177	1.091	0.193	0.76	--
		Tilt	54/5270	0.138	1.091	0.151	-0.52	--
	Right	Cheek	54/5270	0.254	1.091	0.277	-0.37	--
		Tilt	54/5270	0.201	1.091	0.219	1.18	--
Hotspot (10mm Separation)	Face Upward		54/5270	0.125	1.091	0.136	0.17	--
	Back Upward		54/5270	0.150	1.091	0.164	3.18	--
	Edge A		54/5270	0.085	1.091	0.093	1.99	--
	Edge B		54/5270	0.066	1.091	0.072	1.14	--
	Edge D		54/5270	0.046	1.091	0.050	0.57	--

Table 44: SAR Values of Wi-Fi 802.11ac-VHT40-A0

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	118/5590	0.274	1.007	0.276	0.71	--
		Tilt	118/5590	0.253	1.007	0.255	0.94	--
	Right	Cheek	118/5590	0.357	1.007	0.359	-0.21	--
		Tilt	118/5590	0.296	1.007	0.298	-2.2	--
Hotspot (10mm Separation)	Face Upward		118/5590	0.102	1.007	0.103	0.13	--
	Back Upward		118/5590	0.148	1.007	0.149	1.02	--
	Edge A		118/5590	0.085	1.007	0.086	-0.23	--
	Edge B		118/5590	0.067	1.007	0.067	-1.48	--
	Edge D		118/5590	0.044	1.007	0.044	0.47	--





Table 45: SAR Values of Wi-Fi 802.11n-HT40-A0+1

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	118/5590	0.085	1.040	0.088	-0.81	--
		Tilt	118/5590	0.081	1.040	0.084	-2.09	--
	Right	Cheek	118/5590	0.133	1.040	0.138	-1.94	--
		Tilt	118/5590	0.105	1.040	0.109	-0.39	--
Hotspot (10mm Separation)	Face Upward		118/5590	0.066	1.040	0.069	-1.4	--
	Back Upward		118/5590	0.074	1.040	0.077	1.61	--
	Edge A		118/5590	0.023	1.040	0.024	0.42	--
	Edge B		118/5590	0.046	1.040	0.048	-0.43	--
	Edge D		118/5590	0.033	1.040	0.034	1.11	--

Table 46: SAR Values of Wi-Fi 802.11n-HT40-A0

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	159/5795	0.163	1.076	0.175	-0.86	--
		Tilt	159/5795	0.128	1.076	0.138	-0.63	--
	Right	Cheek	159/5795	0.203	1.076	0.218	-1.78	--
		Tilt	159/5795	0.188	1.076	0.202	-3.77	--
Hotspot (10mm Separation)	Face Upward		159/5795	0.085	1.076	0.091	-1.44	--
	Back Upward		159/5795	0.109	1.076	0.117	-0.55	--
	Edge A		159/5795	0.036	1.076	0.039	-1.8	--
	Edge B		159/5795	0.052	1.076	0.056	-3.05	--
	Edge D		159/5795	0.023	1.076	0.025	1.44	--

Table 47: SAR Values of Wi-Fi 802.11n-HT40-A0+1

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	159/5795	0.108	1.019	0.110	-0.78	--
		Tilt	159/5795	0.085	1.019	0.087	-2.06	--
	Right	Cheek	159/5795	0.155	1.019	0.158	-1.91	--
		Tilt	159/5795	0.133	1.019	0.136	-0.36	--
Hotspot (10mm Separation)	Face Upward		159/5795	0.024	1.019	0.024	-1.37	--
	Back Upward		159/5795	0.043	1.019	0.044	1.64	--
	Edge A		159/5795	0.013	1.019	0.013	0.45	--
	Edge B		159/5795	0.008	1.019	0.008	-0.4	--
	Edge D		159/5795	0.007	1.019	0.007	4.33	--

Table 48: SAR Values of BT 3.0 GFSK

Temperature: 23.0~23.5°C, humidity: 62~64%.								
Test Positions			Channel /Frequency (MHz)	SAR(W/Kg), 1.6 (1g average)				Plot No.
				SAR (W/Kg),1g	Scaled Factor	Scaled SAR (W/Kg),1g	Power drift (%)	
Head	Left	Cheek	2480/78	0.085	1.112	0.095	-1.36	--
		Tilt	2480/78	0.074	1.112	0.082	-1.85	--
	Right	Cheek	2480/78	<b>0.114</b>	1.112	<b>0.127</b>	-2.95	<b>77</b>
		Tilt	2480/78	0.102	1.112	0.113	0.36	--
Hotspot (10mm Separation)	Face Upward		2480/78	0.075	1.112	0.083	0.56	--
	Back Upward		2480/78	<b>0.136</b>	1.112	<b>0.151</b>	4.71	<b>78</b>
	Edge A		2480/78	0.076	1.112	0.085	-1.64	--
	Edge B		2480/78	0.055	1.112	0.061	1.3	--
	Edge D		2480/78	0.038	1.112	0.042	-1.00	--

## Note:

Per KDB941225 D06 v02r01, When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested. As the manufacture requirement the separation distance use 5mm for Hotspot mode.

Per KDB Publication 941225 D01v03r01. RMC 12.2kbps was as primary mode SAR, when the primary mode SAR less than 1.2W/kg, secondary SAR (HSPA) was not requires.

When the 1-g SAR for the mid-band channel or the channel with the highest output power satisfy the following conditions, testing of the other channels in the band is not required. (Per KDB 447498 D01 General RF Exposure Guidance v06)

- $\leq 0.8$  W/kg, when the transmission band is  $\leq 100$  MHz
- $\leq 0.6$  W/kg, when the transmission band is between 100 MHz and 200 MHz
- $\leq 0.4$  W/kg, when the transmission band is  $\geq 200$  MHz



## 11. Simultaneous Transmissions Analysis

Localized Specific Absorption Rate (SAR) of this portable wireless device has been measured in all cases requested by the relevant standards cited in Clause 6 of this report. Maximum localized SAR is **below** exposure limits specified in the relevant standards.

### Simultaneous SAR

No.	Transmitter Combinations	Scenario Supported or not	Supported for Mobile Hotspot or not
1	GSM + BT	Yes	No
2	GSM + WIFI 2.4G	Yes	Yes
3	WCDMA +BT	Yes	No
4	WCDMA +WIFI2.4G	Yes	Yes
5	LTE+BT	Yes	No
6	LTE+WIFI2.4G	Yes	Yes
7	WIFI+BT	No	No
8	CDMA+BT	Yes	No
9	CDMA+ WIFI2.4G	Yes	Yes



Upper Antenna

Simultaneous Tx Combination of GSM/WCDMA/CDMA/LTE and BT/WIFI (Head)

Test Position	Left Cheek	Left Tilt	Right Cheek	Right Tilt
GSM850	0.524	0.373	<b>1.045</b>	0.891
GSM1900	0.465	0.409	0.709	0.578
WCDMA 850	<b>0.668</b>	0.531	0.910	<b>0.957</b>
WCDMA 1900	0.470	0.430	0.681	0.613
WCDMA 1700	0.072	0.055	0.143	0.118
CDMA BC0	0.599	0.437	0.937	0.737
CDMA BC1	0.536	0.356	0.765	0.707
LTE Band2	0.380	0.363	0.578	0.433
LTE Band4	0.437	0.409	0.600	0.550
LTE Band5	0.615	<b>0.577</b>	0.729	0.698
LTE Band7	0.166	0.052	0.064	0.024
LTE Band12	0.044	0.037	0.076	0.062
LTE Band17	0.037	0.033	0.065	0.048
LTE Band25	0.501	0.434	0.591	0.524
LTE Band26	0.280	0.265	0.788	0.669
LTE Band30	0.209	0.143	0.323	0.273
LTE Band41	0.140	0.107	0.193	0.161
LTE Band66	0.193	0.169	0.290	0.251
WIFI 2.4G	0.421	0.333	0.300	0.249
WIFI 5G	0.308	0.251	0.414	0.339
BT	0.127	0.127	0.127	0.127
WIFI Simultaneous $\Sigma$ 1-g SAR(W/Kg)	1.089	0.910	1.459	1.296
BT Simultaneous $\Sigma$ 1-g SAR(W/Kg)	0.795	0.704	1.172	1.084



Simultaneous Tx Combination of GSM/WCDMA/CDMA/LTE and BT/WIFI (Body).

	Test Position	Face	Back	Edge A	Edge B	Edge C	Edge D
Body-worn 10mm separation MAX 1-g SAR(W/Kg)	GSM850	<b>0.517</b>	<b>0.755</b>	/	/	/	/
	GSM1900	0.362	0.750	/	/	/	/
	WCDMA 850	0.300	0.518	/	/	/	/
	WCDMA 1900	0.353	0.445	/	/	/	/
	WCDMA 1700	0.086	0.201	/	/	/	/
	CDMA0	0.187	0.399	/	/	/	/
	CDMA1	0.265	0.360	/	/	/	/
	LTE Band2	0.192	0.243	/	/	/	/
	LTE Band4	0.197	0.257	/	/	/	/
	LTE Band5	0.246	0.282	/	/	/	/
	LTE Band7	0.114	0.278	/	/	/	/
	LTE Band12	0.022	0.029	/	/	/	/
	LTE Band17	0.020	0.030	/	/	/	/
	LTE Band25	0.206	0.244	/	/	/	/
	LTE Band26	0.201	0.305	/	/	/	/
	LTE Band30	0.264	0.446	/	/	/	/
	LTE Band41	0.162	0.187	/	/	/	/
	LTE Band66	0.217	0.263	/	/	/	/
	WIFI 2.4G	0.035	0.063	/	/	/	/
	WIFI 5G	0.156	0.186	/	/	/	/
BT	0.151	0.151	/	/	/	/	
WIFI Simultaneous $\Sigma$ 1-g SAR(W/Kg)	0.673	0.941	/	/	/	/	
BT Simultaneous $\Sigma$ 1-g SAR(W/Kg)	0.668	0.906	/	/	/	/	



Simultaneous Tx Combination of GSM/WCDMA/CDMA/LTE and WIFI (Body).

Test Position		Face	Back	Edge A	Edge B	Edge C	Edge D
Hotspot 10mm separation MAX 1-g SAR(W/Kg)	GSM850	<b>0.517</b>	<b>0.755</b>	<b>0.451</b>	0.247	/	0.201
	GSM1900	0.362	0.750	0.376	0.200	/	0.112
	WCDMA 850	0.300	0.518	0.382	<b>0.256</b>	/	<b>0.218</b>
	WCDMA 1900	0.353	0.445	0.246	0.112	/	0.094
	WCDMA 1700	0.086	0.201	0.107	0.058	/	0.047
	CDMA0	0.187	0.399	0.197	0.130.	/	0.100
	CDMA1	0.265	0.360	0.214	0.198	/	0.155
	LTE Band2	0.192	0.243	0.204	0.137	/	0.104
	LTE Band4	0.197	0.257	0.129	0.069	/	0.094
	LTE Band5	0.246	0.282	0.218	0.106	/	0.167
	LTE Band7	0.114	0.278	0.013	0.034	/	0.017
	LTE Band12	0.022	0.029	0.019	0.013	/	0.008
	LTE Band17	0.020	0.030	0.018	0.013	/	0.007
	LTE Band25	0.206	0.244	0.201	0.146	/	0.128
	LTE Band26	0.201	0.305	0.254	0.112	/	0.158
	LTE Band30	0.264	0.446	0.283	0.197	/	0.119
	LTE Band41	0.162	0.187	0.093	0.163	/	0.109
	LTE Band66	0.217	0.263	0.113	0.091	/	0.076
	WIFI 2.4G	0.035	0.063	0.021	0.034	/	/
	BT	0.151	0.151	0.151	0.151	/	/
WIFI Simultaneous $\Sigma$ 1-g SAR(W/Kg)		0.552	0.818	0.472	0.290	/	0.218
BT Simultaneous $\Sigma$ 1-g SAR(W/Kg)		0.668	0.906	/	0.407	/	0.218



Primary Antenna

Simultaneous Tx Combination of GSM/WCDMA/CDMA/LTE and BT/WIFI (Head)

Test Position		Left Cheek	Left Tilt	Right Cheek	Right Tilt
Head MAX 1-g SAR(W/Kg)	GSM850	0.126	0.056	0.187	0.079
	GSM1900	0.014	0.010	0.019	0.012
	WCDMA 850	0.160	0.144	0.135	0.091
	WCDMA 1900	0.018	0.009	0.022	0.020
	WCDMA 1700	0.018	0.013	0.015	0.010
	CDMA0	0.264	0.196	<b>0.491</b>	0.417
	CDMA1	<b>0.367</b>	<b>0.324</b>	0.461	<b>0.436</b>
	LTE Band2	0.106	0.100	0.128	0.114
	LTE Band4	0.118	0.108	0.083	0.076
	LTE Band5	0.112	0.100	0.124	0.072
	LTE Band7	0.021	0.013	0.015	0.010
	LTE Band12	0.022	0.015	0.010	0.010
	LTE Band17	0.016	0.013	0.053	0.049
	LTE Band25	0.012	0.009	0.013	0.011
	LTE Band26	0.085	0.076	0.069	0.050
	LTE Band30	0.121	0.103	0.153	0.122
	LTE Band41	0.060	0.045	0.043	0.020
	LTE Band66	0.058	0.046	0.110	0.088
	WIFI 2.4G	0.421	0.333	0.300	0.249
	WIFI 5G	0.308	0.251	0.414	0.339
BT	0.127	0.127	0.127	0.127	
WIFI Simultaneous $\Sigma$ 1-g SAR(W/Kg)		0.788	0.657	0.905	0.775
BT Simultaneous $\Sigma$ 1-g SAR(W/Kg)		0.494	0.451	0.618	0.563



Simultaneous Tx Combination of GSM/WCDMA/CDMA/LTE and BT/WIFI (Body).

Test Position		Face	Back	Edge A	Edge B	Edge C	Edge D
Body-worn 10mm separation MAX 1-g SAR(W/Kg)	GSM850	<b>0.340</b>	0.412	/	/	/	/
	GSM1900	0.074	0.079	/	/	/	/
	WCDMA 850	0.198	0.355	/	/	/	/
	WCDMA 1900	0.066	0.087	/	/	/	/
	WCDMA 1700	0.013	0.062	/	/	/	/
	CDMA0	0.338	<b>0.571</b>	/	/	/	/
	CDMA1	0.263	0.463	/	/	/	/
	LTE Band2	0.120	0.126	/	/	/	/
	LTE Band4	0.090	0.129	/	/	/	/
	LTE Band5	0.089	0.166	/	/	/	/
	LTE Band7	0.061	0.138	/	/	/	/
	LTE Band12	0.008	0.011	/	/	/	/
	LTE Band17	0.008	0.021	/	/	/	/
	LTE Band25	0.026	0.031	/	/	/	/
	LTE Band26	0.107	0.164	/	/	/	/
	LTE Band30	0.113	0.138	/	/	/	/
	LTE Band41	0.061	0.095	/	/	/	/
	LTE Band66	0.146	0.169	/	/	/	/
	WIFI 2.4G	0.035	0.063	/	/	/	/
	WIFI 5G	0.156	0.186	/	/	/	/
BT	0.151	0.151	/	/	/	/	
WIFI Simultaneous $\Sigma$ 1-g SAR(W/Kg)		0.496	0.757	/	/	/	/
BT Simultaneous $\Sigma$ 1-g SAR(W/Kg)		0.491	0.722	/	/	/	/





Simultaneous Tx Combination of GSM/WCDMA/CDMA/LTE and WIFI (Body).

Test Position		Face	Back	Edge A	Edge B	Edge C	Edge D
Hotspot 10mm separation MAX 1-g SAR(W/Kg)	GSM850	<b>0.340</b>	0.412	/	0.183	0.225	0.036
	GSM1900	0.074	0.079	/	0.008	0.020	0.044
	WCDMA 850	0.198	0.355	/	0.211	0.299	0.038
	WCDMA 1900	0.066	0.087	/	0.012	0.015	0.043
	WCDMA 1700	0.013	0.062	/	0.013	0.010	0.010
	CDMA0	0.338	<b>0.571</b>	/	<b>0.233</b>	<b>0.381</b>	<b>0.168</b>
	CDMA1	0.263	0.463	/	0.202	0.296	0.156
	LTE Band2	0.120	0.126	/	0.057	0.080	0.064
	LTE Band4	0.090	0.129	/	0.049	0.082	0.055
	LTE Band5	0.089	0.166	/	0.008	0.136	0.035
	LTE Band7	0.061	0.138	/	0.018	0.088	0.031
	LTE Band12	0.008	0.011	/	0.007	0.009	0.006
	LTE Band17	0.008	0.021	/	0.014	0.017	0.008
	LTE Band25	0.026	0.031	/	0.010	0.009	0.017
	LTE Band26	0.107	0.164	/	0.096	0.028	0.052
	LTE Band30	0.113	0.138	/	0.081	0.103	0.060
	LTE Band41	0.061	0.095	/	0.018	0.058	0.020
	LTE Band66	0.146	0.169	/	0.038	0.068	0.013
	WIFI 2.4G	0.035	0.063	0.021	0.034	/	/
	BT	0.151	0.151	0.151	0.151	/	/
WIFI Simultaneous $\Sigma$ 1-g SAR(W/Kg)		0.496	0.757	0.021	0.264	/	/
BT Simultaneous $\Sigma$ 1-g SAR(W/Kg)		0.491	0.722	0.151	0.384	/	/

The estimated SAR value with \* Signal

**SAR to Peak Location Separation Ratio (SPLSR)**

As the Sum of the SAR is not greater than 1.6 W/kg SPLSR assessment is not required

## 12. Measurement Uncertainty

No.	Uncertainty Component	Type	Uncertainty Value (%)	Probability Distribution	k	ci	Standard Uncertainty (%) $u_i(\%)$	Degree of freedom $\nu_{eff}$ or $\nu_i$
<b>Measurement System</b>								
1	– Probe Calibration	B	5.8	N	1	1	5.8	$\infty$
2	– Axial isotropy	B	3.5	R	$\sqrt{3}$	0.5	1.43	$\infty$
3	– Hemispherical Isotropy	B	5.9	R	$\sqrt{3}$	0.5	2.41	$\infty$
4	– Boundary Effect	B	1	R	$\sqrt{3}$	1	0.58	$\infty$
5	– Linearity	B	4.7	R	$\sqrt{3}$	1	2.71	$\infty$
6	– System Detection Limits	B	1.0	R	$\sqrt{3}$	1	0.58	$\infty$
7	Modulation response	B	3	N	1	1	3.00	
8	– Readout Electronics	B	0.5	N	1	1	0.50	$\infty$
9	– Response Time	B	1.4	R	$\sqrt{3}$	1	0.81	$\infty$
10	– Integration Time	B	3.0	R	$\sqrt{3}$	1	1.73	$\infty$
11	– RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	$\infty$
12	– Probe Position Mechanical tolerance	B	1.4	R	$\sqrt{3}$	1	0.81	$\infty$
13	– Probe Position with respect to Phantom Shell	B	1.4	R	$\sqrt{3}$	1	0.81	$\infty$
14	– Extrapolation, Interpolation and Integration Algorithms for Max. SAR evaluation	B	2.3	R	$\sqrt{3}$	1	1.33	$\infty$



Uncertainties of the DUT								
15	- Position of the DUT	A	2.6	N	$\sqrt{3}$	1	2.6	5
16	- Holder of the DUT	A	3	N	$\sqrt{3}$	1	3.0	5
17	- Output Power Variation -SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.89	$\infty$
Phantom and Tissue Parameters								
18	- Phantom Uncertainty(shape and thickness tolerances)	B	4	R	$\sqrt{3}$	1	2.31	$\infty$
19	Uncertainty in SAR correction for deviation(in permittivity and conductivity)	B	2	N	1	1	2.00	
20	- Liquid Conductivity Target -tolerance	B	2.5	R	$\sqrt{3}$	0.6	1.95	$\infty$
21	- Liquid Conductivity -measurement Uncertainty)	B	4	N	$\sqrt{3}$	1	0.92	9
22	- Liquid Permittivity Target tolerance	B	2.5	R	$\sqrt{3}$	0.6	1.95	$\infty$
23	- Liquid Permittivity -measurement uncertainty	B	5	N	$\sqrt{3}$	1	1.15	$\infty$
<b>Combined Standard Uncertainty</b>				RSS			10.63	
<b>Expanded uncertainty</b> (Confidence interval of 95 %)				K=2			21.26	

**System Check Uncertainty**

No.	Uncertainty Component	Type	Uncertainty Value (%)	Probability Distribution	k	ci	Standard Uncertainty (%) $u_i(\%)$	Degree of freedom $V_{eff}$ or $v_i$
Measurement System								
1	- Probe Calibration	B	5.8	N	1	1	5.8	$\infty$



2	- Axial isotropy	B	3.5	R	$\sqrt{3}$	0.5	1.43	$\infty$
3	- Hemispherical Isotropy	B	5.9	R	$\sqrt{3}$	0.5	2.41	$\infty$
4	- Boundary Effect	B	1	R	$\sqrt{3}$	1	0.58	$\infty$
5	- Linearity	B	4.7	R	$\sqrt{3}$	1	2.71	$\infty$
6	- System Detection Limits	B	1	R	$\sqrt{3}$	1	0.58	$\infty$
7	Modulation response	B	0	N	1	1	0.00	
8	- Readout Electronics	B	0.5	N	1	1	0.50	$\infty$
9	- Response Time	B	0.00	R	$\sqrt{3}$	1	0.00	$\infty$
10	- Integration Time	B	1.4	R	$\sqrt{3}$	1	0.81	$\infty$
11	- RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	$\infty$
12	- Probe Position Mechanical tolerance	B	1.4	R	$\sqrt{3}$	1	0.81	$\infty$
13	- Probe Position with respect to Phantom Shell	B	1.4	R	$\sqrt{3}$	1	0.81	$\infty$
14	- Extrapolation, Interpolation and Integration Algorithms for Max. SAR evaluation	B	2.3	R	$\sqrt{3}$	1	1.33	$\infty$
Uncertainties of the DUT								
15	Deviation of experimental source from numerical source	A	4	N	1	1	4.00	5
16	Input Power and SAR drift measurement	A	5	R	$\sqrt{3}$	1	2.89	5
17	Dipole Axis to Liquid Distance	B	2	R	$\sqrt{3}$	1	1.2	$\infty$



Phantom and Tissue Parameters								
18	– Phantom Uncertainty(shape and thickness tolerances)	B	4	R	$\sqrt{3}$	1	2.31	$\infty$
19	Uncertainty in SAR correction for deviation(in permittivity and conductivity)	B	2	N	1	1	2.00	
20	– Liquid Conductivity Target –tolerance	B	2.5	R	$\sqrt{3}$	0.6	1.95	$\infty$
21	– Liquid Conductivity –measurement Uncertainty)	B	4	N	$\sqrt{3}$	1	0.92	9
22	– Liquid Permittivity Target tolerance	B	2.5	R	$\sqrt{3}$	0.6	1.95	$\infty$
23	– Liquid Permittivity –measurement uncertainty	B	5	N	$\sqrt{3}$	1	1.15	$\infty$
<b>Combined Standard Uncertainty</b>				RSS			10.15	
<b>Expanded uncertainty</b> (Confidence interval of 95 %)				K=2			20.29	



### 13. Equipment List

This table is a complete overview of the SAR measurement equipment. Devices used during the test described are marked .

	EQUIPMENT	Model	Serial number	Calibration Date	Due Date
<input checked="" type="checkbox"/>	SAR Probe	SSE2	SN27/15 EPGO261	2019/03/04	2020/03/03
<input checked="" type="checkbox"/>	Dipole	SID750	SN 23/15 DIP0G750-378	2017/11/27	2019/11/26
<input checked="" type="checkbox"/>	Dipole	SID835	SN 09/13 DIP0G835-217	2017/11/27	2019/11/26
<input checked="" type="checkbox"/>	Dipole	SID1800	SN 09/13 DIP1G800-216	2017/11/27	2019/11/26
<input checked="" type="checkbox"/>	Dipole	SID1900	SN 09/13 DIP1G900-218	2017/11/27	2019/11/26
<input checked="" type="checkbox"/>	Dipole	SID2450	SN_09/13_DIP2G450-220	2017/11/27	2019/11/26
<input checked="" type="checkbox"/>	Dipole	SID2600	SN 32/14_DIP2G600-338	2017/11/27	2019/11/26
<input checked="" type="checkbox"/>	Dipole	SWG5500	SN15/15 WGA39	2017/11/27	2019/11/26
<input checked="" type="checkbox"/>	Multimeter	Keithley-2000	4085310	2018/09/06	2019/09/05
<input checked="" type="checkbox"/>	System Simulator(Agilent 8960)	E5515C	GB 47200710	2017/11/08	2019/11/07
<input checked="" type="checkbox"/>	System Simulator(R&S)	CMW500	130805	2017/08/29	2019/08/28
<input checked="" type="checkbox"/>	KEYSIGHT	E7515A	MY56040357	2018/04/18	2019/04/18
<input checked="" type="checkbox"/>	Vector Network Analyzer(R&S)	ZVB8	A0802530	2018/05/09	2019/05/09
<input checked="" type="checkbox"/>	PC 3.5 Fixed Match Calibration Kit	ZV-Z32	100571	2017/11/29	2019/11/28
<input checked="" type="checkbox"/>	Dielectric Probe Kit	SCLMP	SN 09/13 OCPG51	2017/11/27	2019/11/26
<input checked="" type="checkbox"/>	Signal Generator	SMU200A	A140801889	2018/05/09	2019/05/09
<input checked="" type="checkbox"/>	Amplifier	Nucletudes	143060	2018/03/27	2019/03/28
<input checked="" type="checkbox"/>	Directional Coupler	DC6180A	305827	2018/03/27	2019/03/28
<input checked="" type="checkbox"/>	Power Meter	NRP2	A140401673	2018/03/27	2019/03/28
<input checked="" type="checkbox"/>	Power Sensor	NPR-Z11	1138.3004.02-114072-nq	2018/03/27	2019/03/28
<input checked="" type="checkbox"/>	Power Meter	NRVS	A0802531	2018/03/27	2019/03/28
<input checked="" type="checkbox"/>	Power Sensor	NRV-Z4	100069	2018/03/27	2019/03/28



## ANNEX A: Appendix A: SAR System performance Check Plots

(Please See Appendix A)

## ANNEX B: Appendix B: SAR Measurement results Plots

(Please See Appendix B)

## ANNEX C: Appendix C: Calibration reports

(Please See Appendix C)

## ANNEX D: Appendix D: SAR Test Setup

(Please See Appendix D)

—End of the Report—