FCC SAR TEST REPORT

Application No.:	KSEM2108001481CR
Applicant:	Honor Device Co., Ltd.
Manufacturer:	Honor Device Co., Ltd.
Product Name:	Smart Phone
Model No.(EUT):	NTN-LX3
Trade Mark:	HONOR
FCC ID:	2AYGCNTN-LX3
Standards:	FCC 47CFR §2.1093
Date of Receipt:	2021-08-26
Date of Test:	2021-08-26 to 2021-09-01
Date of Issue:	2021-09-02
Test conclusion:	**PASS ***

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Eric Lin

Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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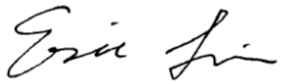
REVISION HISTORY

Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2021-09-02	/

Authorized for issue by:				
				
		Richard.Kong/ Project Engineer		
				
		Eric.Lin/Reviewer		

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TEST SUMMARY

Frequency Band	Maximum Reported SAR(W/kg)			
	Head	Body-worn	Hotspot	Product specific 10g SAR
GSM850	0.14	0.21	0.18	/
GSM1900	0.79	0.18	0.32	/
WCDMA Band II	0.61	**0.40**	0.44	/
WCDMA Band IV	0.70	0.31	0.38	/
WCDMA Band V	0.23	0.26	0.46	/
LTE Band 2	0.76	0.35	0.41	/
LTE Band 4	0.63	0.27	0.35	/
LTE Band 5	0.14	0.21	0.33	/
LTE Band 7	**0.98**	0.31	**0.65**	/
LTE Band 12	0.10	0.19	0.25	/
LTE Band 17	0.12	0.21	0.30	/
LTE Band 26	0.14	0.25	0.39	/
LTE Band 66	0.45	0.20	0.33	/
WI-FI (2.4GHz)	0.12	<0.10	0.35	/
WI-FI (5GHz)	0.17	0.34	0.47	**1.23**
BT	0.13	<0.10	<0.10	/
SAR Limited(W/kg)	1.6			4.0
Maximum Simultaneous Transmission SAR (W/kg)				
Scenario	Head	Body-worn	Hotspot	Product specific 10g SAR
Sum SAR	1.05	0.75	0.76	1.23
SPLSR	N/A	N/A	N/A	N/A
SPLSR Limited	0.04			0.1

Note:
The Simultaneous transmission SAR is the same test position of the WWAN antenna + WiFi/BT antenna.

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1 General Information

1.1 Details of Client

Applicant:	Honor Device Co., Ltd.
Address:	Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, Guangdong 518040, People's Republic of China
Manufacturer:	Honor Device Co., Ltd.
Address:	Suite 3401, Unit A, Building 6, Shum Yip Sky Park, No. 8089, Hongli West Road, Xiangmihu Street, Futian District, Shenzhen, Guangdong 518040, People's Republic of China

1.2 Test Location

Company: Compliance Certification Services (Kunshan) Inc.

Address: No.10 Weiye Rd., Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China

Post code: 215300

Telephone: 86-512-57355888

Fax: 86-512-57370818

1.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L4354)**

  CNAS has accredited Compliance Certification Services (Kunshan) Inc. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 2541.01)**

  Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

- **FCC –Designation Number: CN1172**

  Compliance Certification Services Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

- **ISED (CAB identifier: CN0072)**

  Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory
  CAB Identifier: CN0072.

- **VCCI (Member No.: 1938)**

  The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: : R-20134, R-11600,C-11707, T-11499, G-10216 respectively.

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1.4 General Description of EUT

Device Type :	portable device		
Exposure Category:	uncontrolled environment / general population		
Product Name:	Smart Phone		
Model No.(EUT):	NTN-LX3		
FCC ID:	2AYGCNTN-LX3		
Trade Mark:	HONOR		
Product Phase:	Identical Prototype		
SN:	ACSPUT1203000179/ACSPUT1203000171/ACSPUT1203000230		
Hardware Version:	HL1NTNM		
Software Version:	11.0.2.88(C900E85R1P3)		
Antenna Type:	Inner Antenna		
Device Operating Configurations :			
Modulation Mode:	**GSM:** GMSK, 8PSK **WCDMA:** QPSK, 16QAM(HSPA+); **LTE:** QPSK,16QAM **WIFI:** DSSS, OFDM; **BT:** GFSK, π/4DQPSK,8DPSK		
Device Class:	B		
HSDPA UE Category:	14	HSUPA UE Category	7
DC-HSDPA UE Category:	24		
Power Class	4,tested with power level 5(GSM850)		
	1,tested with power level 0(GSM1900)		
	3, tested with power control “all 1”(All UMTS Bands)		
	3, tested with power control Max Power(All LTE Bands)		
Frequency Bands:	Band	Tx (MHz)	Rx (MHz)
	GSM850	824~849	869~894
	GSM1900	1850~1910	1930~1990
	WCDMA Band II	1850~1910	1930~1990
	WCDMA Band IV	1710~1755	2110~2155
	WCDMA Band V	824~849	869~894
	LTE Band 2	1850 ~1910	1930 ~1990
	LTE Band 4	1710~1755	2110~2155
	LTE Band 5	824~849	869-894
	LTE Band 7	2500~2570	2620~2690
	LTE Band 12	699~716	729~746
	LTE Band 17	704~716	734~746
	LTE Band 26	814~849	859~894
	LTE Band 66	1710~1780	2110~2200
	Bluetooth	2400~2483.5	2400~2483.5
	Wi-Fi 2.4G	2402~2472	2402~2472
	Wi-Fi 5G	5150~5250	5150~5250
		5250~5350	5250~5350
		5470~5725	5470~5725
		5725~5850	5725~5850

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Battery1 Information:	Model:	HB466589EFW
	Normal Voltage:	+3.87V
	Rated capacity:	4200mAh
	Manufacturer:	Sunwoda
Battery2 Information:	Model:	HB466589EFW
	Normal Voltage:	+3.87V
	Rated capacity:	4200mAh
	Manufacturer:	SCUD
Headset1 Information:	Model:	1293-3283-3.5mm-339
	Manufacturer:	Boluo County Quancheng Electronic Co., Ltd.
Headset2 Information:	Model:	EPAB542-2WH05-DH
	Manufacturer:	FOXCONN INTERCONNECT TECHNOLOGY LIMITED.
Headset3 Information:	Model:	MEND1532B528A11
	Manufacturer:	Jiangxi Lianchuang Hongsheng Electronic Co. ,LTD

Remark:
According to the declaration letter from manufacturer, in this report, for the all bands are test at the worst case on the original report (report No.: HR/2021/1001407).

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1.4.1 EUT Antenna Locations(Back View)

Please see the Appendix E.

Note:

1) The test device is a smart phone. The overall diagonal dimension of this device is 168.98mm. Per KDB 648474 D04, because the diagonal distance of this device is ≥160mm, so it is a phablet.

According to the distance between the antennas and the sides of the EUT we can draw the conclusion that:

EUT Sides for SAR Testing							
Mode	Exposure Condition	Front	Back	Left	Right	Top	Bottom
Ant 0/1	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	Yes	No	Yes
Ant 2/3/4	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	Yes	Yes	No
WIFI / BT Ant 6	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	Yes	Yes	No

Table 1： EUT Sides for SAR Testing

Note:

1) When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.

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1.4.2 Power reduction specification

This device uses a single fixed level of power reduction through static table look-up for SAR compliance and it is triggered by a single event or operation:

1) A fixed level power reduction is applied for some frequency bands when hotspot mode becomes active. When the hotspot is disabled, the power value will be recovered.

2) This device uses the receiver to indicate whether the user is making a voice call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. A fixed level power reduction is applied for some frequency bands when the audio receiver is on.

3) A fixed level power reduction is applied for some frequency bands when simultaneously transmitting with the other antennas in certain simultaneous transmission conditions. The standalone SAR compliance still uses the standalone SAR results tested at the maximum output power level without any power reduction

4) This device uses the mobile country code (MCC) detection mechanism to indicate whether the users in CE countries and FCC countries in set the relevant power level for some bands. The selection between different power levels is based on the country code detection mechanism.

The following tables summarize the key power reduction information.

Ant0 Max Power Level(dBm)							
Power Reduction Scenario	**GSM1900**	**WCDMA Band II**	**WCDMA Band IV**	**LTE B2**	**LTE B4**	**LTE B7**	**LTE B66**
Hotspot on	26.5	21.8	21.3	21.5	21.3	20.3	20.8
Receiver off	30.5	24.8	24.3	24.5	24.3	22.8	22.8
Receiver on	30.5	24.8	24.3	24.5	24.3	23.2	23.3
Receiver off+WIFI/BT	30.5	24.8	24.3	24.5	24.3	22.8	21.8

Ant1 Max Power Level(dBm)	
Power Reduction Scenario	**GSM850**
Hotspot on	30.3
Receiver off	33.3
Receiver on	33.3
Receiver off+WIFI/BT	33.3

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Ant2 Max Power Level(dBm)						
Power Reduction Scenario	**GSM1900**	**WCDMA Band II**	**WCDMA Band IV**	**LTE B2**	**LTE B4**	**LTE B66**
Hotspot on	29.5	19.8	19.3	19.5	19.3	18.3
Receiver off	30.5	21.3	20.8	21.0	20.8	19.8
Receiver on	30.5	20.3	21.3	20.5	21.3	20.3
Receiver off+WIFI/BT	30.5	19.8	19.3	19.5	19.3	18.3

Ant4 Max Power Level(dBm)	
Power Reduction Scenario	**LTE B7**
Hotspot on	19.5
Receiver off	21.0
Receiver on	21.0
Receiver off+WIFI/BT	19.5

Ant6 Max Power Level(dBm)		
Band/ Power Reduction Scenario	Receiver off	Receiver on
Wi-Fi 2.4G 802.11b	18.5	12.0
Wi-Fi 2.4G 802.11g	19.0	12.0
Wi-Fi 2.4G 802.11n 20M	18.5	12.0
Wi-Fi 2.4G 802.11n 40M	15.0	12.0

5) For FCC SAR test should be evaluated at the power level of FCC mobile country code for each exposure conditions.

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1.5 Test Specification

Identity	Document Title
FCC 47CFR §2.1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
ANSI/IEEE C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.
IEEE 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
KDB 941225 D01	3G SAR Measurement Procedures v03r01
KDB 941225 D05	SAR for LTE Devices v02r05
KDB 941225 D05A	LTE Rel.10 KDB Inquiry Sheet v01r02
KDB 941225 D06	Hotspot Mode SAR v02r01
KDB 248227 D01	SAR Guidance for IEEE 802 11 Wi-Fi SAR v02r02
KDB 648474 D04	Handset SAR v01r03
KDB 447498 D01	General RF Exposure Guidance v06
KDB 865664 D01	SAR Measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02	RF Exposure Reporting v01r02
KDB 690783 D01	SAR Listings on Grants v01r03
KDB 616217 D04	SAR for laptop and tablets v01r02

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1.6 RF exposure limits

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

Notes:

* The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time

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

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

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

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

2 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

Table 2： The Ambient Conditions

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3 SAR Measurements System Configuration

3.1 The SAR Measurement System

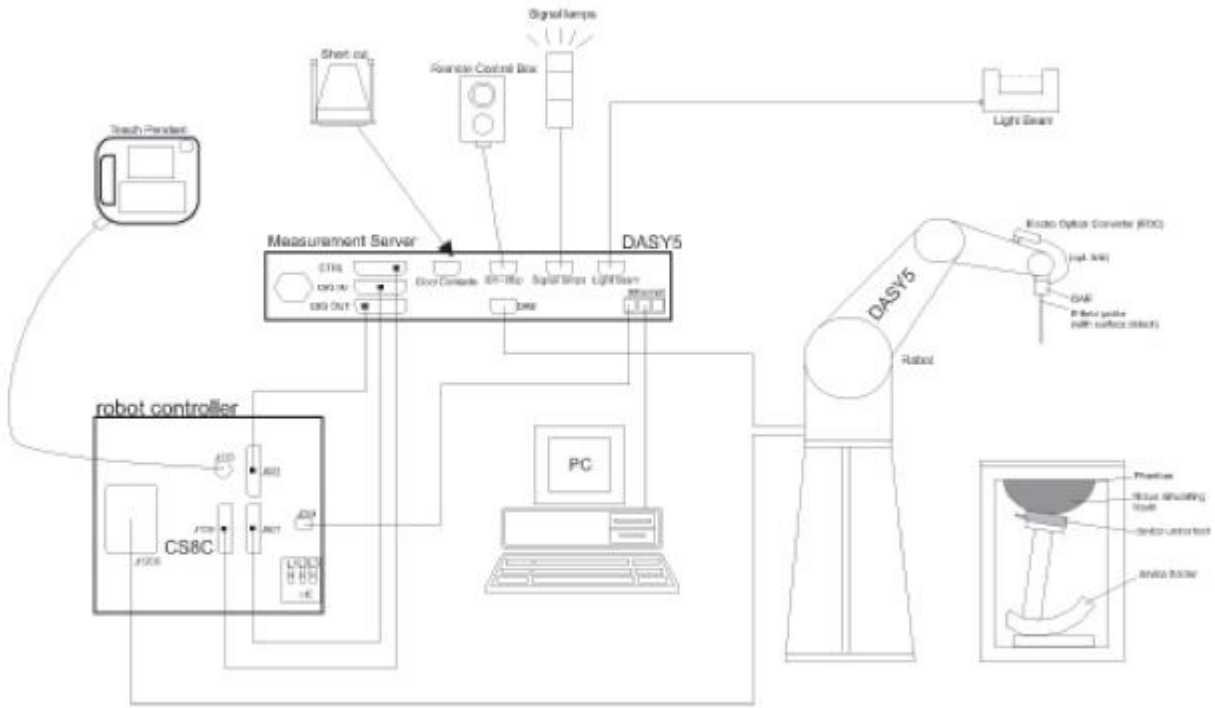
This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY5 professional system). A E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|2)/ ρ where σ and ρ are the conductivity and mass density of the tissue-Simulate.

The DASY5 system for performing compliance tests consists of the following items:
A standard high precision 6-axis robot (Stabile RX family) with controller, teach pendant and software .An arm extension for accommodation the data acquisition electronics (DAE).

A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.



F-1. SAR Measurement System Configuration

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- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows 7.
- DASY5 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing left-hand, right-hand and Body Worn usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- Validation dipole kits allowing to validating the proper functioning of the system.

3.2 Isotropic E-field Probe EX3DV4

	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

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3.3 Data Acquisition Electronics (DAE)

Model	DAE
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY4/5 embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV,400mV)
Input Offset Voltage	< 5µV (with auto zero)
Input Bias Current	< 50 f A
Dimensions	60 x 60 x 68 mm

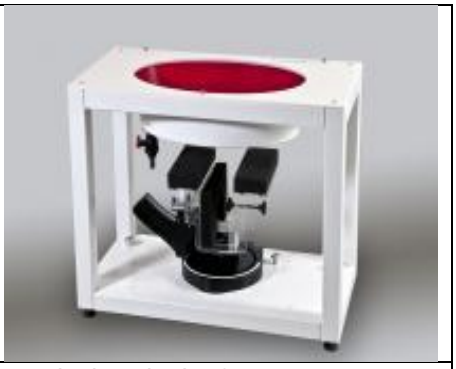
3.4 SAM Twin Phantom

Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)
Dimensions (incl. Wooden Support)	Length: 1000 mm Width: 500 mm Height: adjustable feet
Filling Volume	approx. 25 liters
Wooden Support	SPEAG standard phantom table

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.

Twin SAM V5.0 has the same shell geometry and is manufactured from the same material as Twin SAM V4.0, but has reinforced top structure.

3.5 ELI Phantom

Material	Vinylester, glass fiber reinforced (VE-GF)	
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)	
Shell Thickness	2.0 ± 0.2 mm (bottom plate)	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	
Filling Volume	approx. 30 liters	
Wooden Support	SPEAG standard phantom table	

Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.

ELI V5.0 has the same shell geometry and is manufactured from the same material as ELI4, but has reinforced top structure.

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3.6 Device Holder for Transmitters

F-2. **Device Holder for Transmitters**

- The DASY device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation centres for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.
- The DASY device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity ε=3 and loss tangent δ=0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

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3.7 Measurement procedure

3.7.1 Scanning procedure

Step 1: Power reference measurement

The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure.

Step 2: *Area scan*

The SAR distribution at the exposed side of the head was measured at a distance of 4mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15mm*15mm or 12mm*12mm or 10mm*10mm.Based on the area scan data, the area of the maximum absorption was determined by spline interpolation.

Step 3: *Zoom scan*

Around this point, a volume of 32mm*32mm*30mm (f≤2GHz), 30mm*30mm*30mm (f for 2-3GHz) and 24mm*24mm*22mm (f for 5-6GHz) was assessed by measuring 5x5x7 points (f≤2GHz), 7x7x7 points (f for 2-3GHz) and 7x7x12 points (f for 5-6GHz). On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

The data at the surface was extrapolated, since the centre of the dipoles is 2.0mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2mm. (This can be variable. Refer to the probe specification).The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-Spline interpolation algorithm. The volume was integrated with the trapezoidal algorithm. One thousand points were interpolated to calculate the average. All neighbouring volumes were evaluated until no neighboring volume with a higher average value was found.

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std. 1528-2013.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Step 4: Power reference measurement (drift)

The Power Drift Measurement job measures the field at the same location as the most recent power reference measurement job within the same procedure, and with the same settings. The indicated drift is mainly the variation of the DUT's output power and should vary max. ± 5 %

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3.7.2 Data Storage

The DASY software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DAE4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated. The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [m W/g], [m W/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

3.7.3 Data Evaluation by SEMCAD

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

Probe parameters:	- Sensitivity	Normi, ai0, ai1, ai2
	- Conversion factor	ConvFi
	- Diode compression point	Dcpi
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	ε
	- Density	ρ

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

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

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

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

With Vi = compensated signal of channel i (i = x, y, z)
Ui = input signal of channel i (i = x, y, z)
cf = crest factor of exciting field (DASY parameter)
dcp i = diode compression point (DASY parameter)

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

E-field probes:

$$E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$$

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H-field probes:

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

With Vi = compensated signal of channel i (i = x, y, z)
Normi = sensor sensitivity of channel I (i = x, y, z)
[mV/(V/m)2] for E-field Probes
ConvF = sensitivity enhancement in solution
aij = sensor sensitivity factors for H-field probes
f = carrier frequency [GHz]
Ei = electric field strength of channel i in V/m
Hi = magnetic field strength of channel i in A/m

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

$$E_{tot} = (E_x^2 + E_Y^2 + E_z^2)^{1/2}$$

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

$$SAR = (Etot^2 \cdot \sigma) / (\varepsilon \cdot 1000)$$

with SAR = local specific absorption rate in mW/g
Etot = total field strength in V/m
σ= conductivity in [mho/m] or [Siemens/m]
ε= equivalent tissue density in g/cm3

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

$$P_{pwe} = Etot^2{}_2 / 3770 \text{ or } \quad P_{pwe} = Htot^2 \cdot 37.7$$

with Ppwe = equivalent power density of a plane wave in mW/cm2
Etot = total electric field strength in V/m
Htot = total magnetic field strength in A/m

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4 SAR measurement variability and uncertainty

4.1 SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz v01r04, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

2) When the original highest measured SAR is ⩾ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ⩾ 1.45 W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ⩾1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

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

4.2 SAR measurement uncertainty

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

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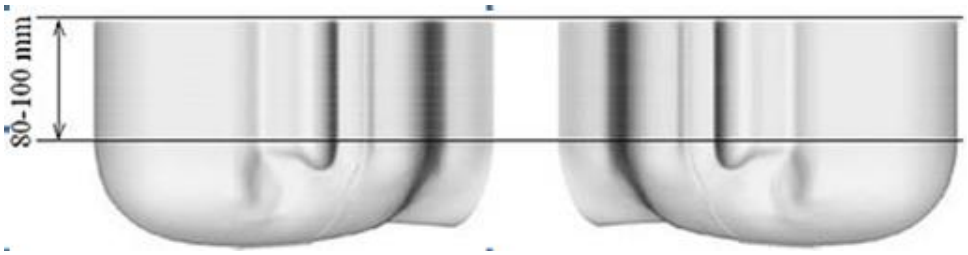
5 Description of Test Position

5.1 Head Exposure Condition

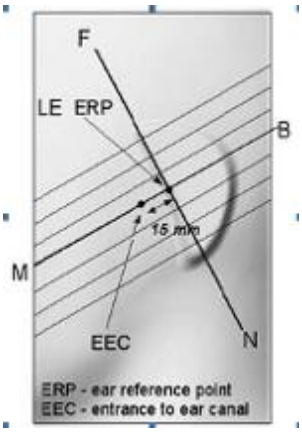
5.1.1 SAM Phantom Shape

F-3. Front, back, and side views of SAM (model for the phantom shell). Full-head model is for illustration purposes only-procedures in this recommended practice are intended primarily for the phantom setup.

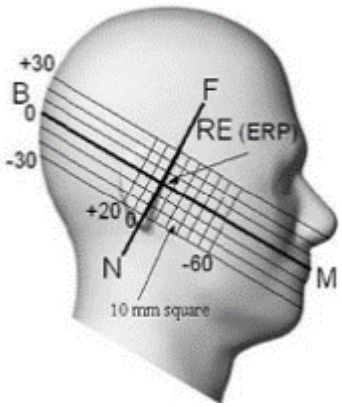
Note: The centre strip including the nose region has a different thickness tolerance.



F-4. Sagittally bisected phantom with extended perimeter (shown placed on its side as used for SAR measurements)



F-5. Close-up side view of phantom, showing the ear region, N-F and B-M lines, and seven cross-sectional plane locations



F-6. Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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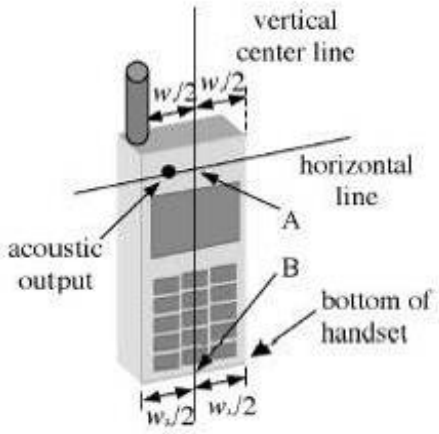
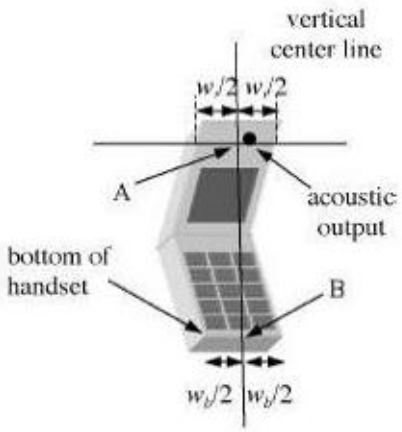
5.1.2 EUT constructions



F-7. Handset vertical and horizontal reference lines-“fixed case”



F-8. Handset vertical and horizontal reference lines-“clam-shell case”

5.1.3 Definition of the “cheek” position

a) Position the device with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagittal plane of the phantom ("initial position"). While maintaining the device in this plane, align the vertical centre line with the reference plane containing the three ear and mouth reference points (M, RE and LE) and align the centre of the ear piece with the line RE-LE.
b) Translate the mobile phone box towards the phantom with the ear piece aligned with the line LE-RE until telephone touches the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the box until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.

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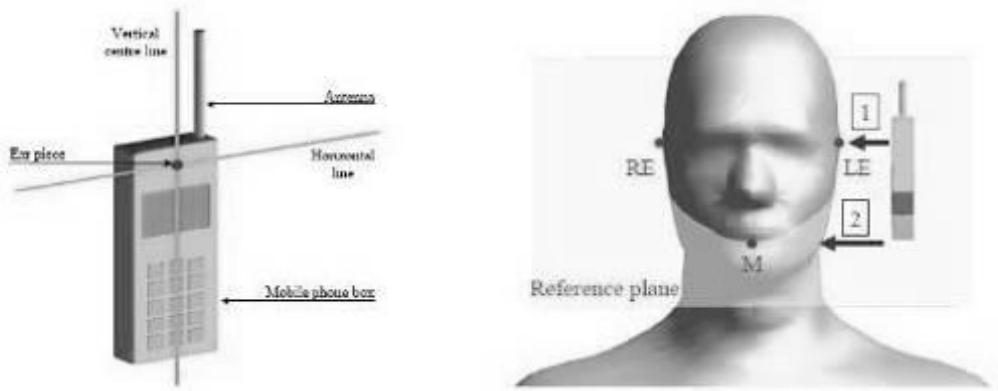
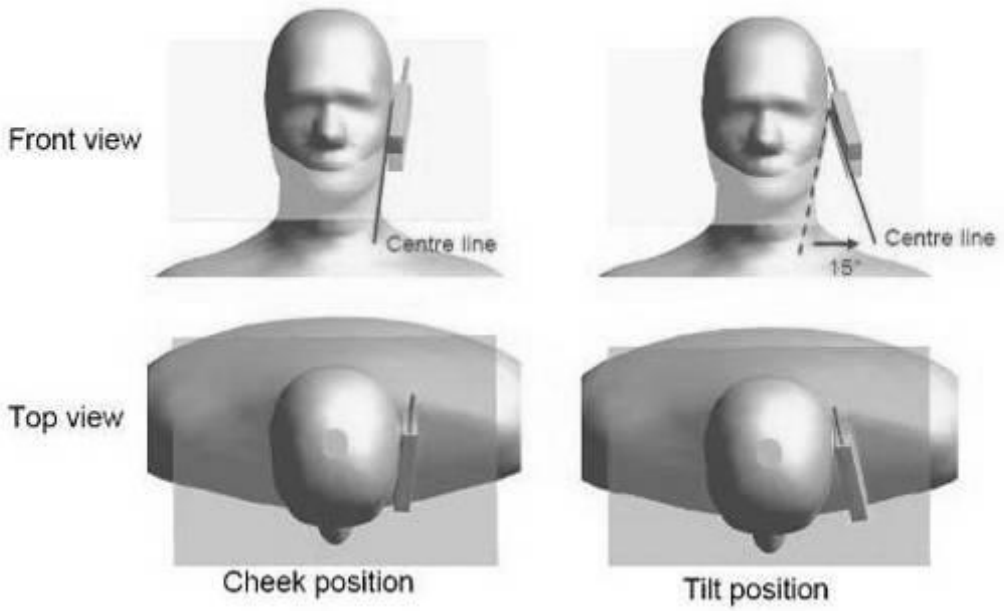
5.1.4 Definition of the “tilted” position

a) Position the device in the “cheek” position described above;
b) While maintaining the device in the reference plane described above and pivoting against the ear, move it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.



F-9. **Definition of the reference lines and points, on the phone and on the phantom and initial position**



F-10. **“Cheek” and “tilt” positions of the mobile phone on the left side**

5.2 Body Exposure Condition

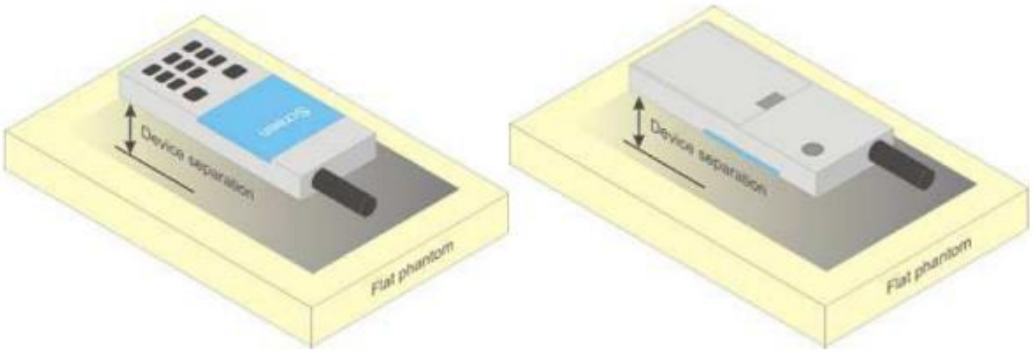
5.2.1 Body-worn accessory exposure conditions

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations.

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration. Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.



F-11. **Test positions for body-worn devices**

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5.2.2 Wireless Router exposure conditions

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. For devices with form factors smaller than 9 cm x 5 cm, a test separation distance of 5 mm is required.

5.3 Extremity exposure conditions

Per FCC KDB 648474D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the device is marketed as “Phablet”.
The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for Product Specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

According to the 1.4.2 section Power reduction specification above, below table bands have hotspot fouction. Due to the SAR result scaled to the maximum output power, there is no band needs to be test with 0mm for the Product Specific 10-g SAR.

GSM850

Ant1 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusion
Hotspot Test data(Separate 10mm)										
Front side	GPRS 2TS	190/836.6	1:2.075	0.101	0.03	26.84	30.70	2.432	0.246	Yes
Back side	GPRS 2TS	190/836.6	1:2.075	0.149	-0.01	26.84	30.70	2.432	0.362	Yes
Left side	GPRS 2TS	190/836.6	1:2.075	0.003	0.14	26.84	30.70	2.432	0.007	Yes
Right side	GPRS 2TS	190/836.6	1:2.075	0.001	0.13	26.84	30.70	2.432	0.002	Yes
Bottom side	GPRS 2TS	190/836.6	1:2.075	0.070	0.10	26.84	30.70	2.432	0.170	Yes
Hotspot Test data at the worst case with battery 2										
Back side	GPRS 2TS	190/836.6	1:2.075	0.141	0.03	26.84	30.70	2.432	0.343	Yes

GSM1900

Ant0 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusion
Hotspot Test data(Separate 10mm)										
Front side	GPRS 3TS	661/1880	1:2.075	0.044	-0.11	21.16	26.00	3.048	0.133	Yes
Back side	GPRS 3TS	661/1880	1:2.075	0.072	-0.06	21.16	26.00	3.048	0.219	Yes
Left side	GPRS 3TS	661/1880	1:2.075	0.023	0.00	21.16	26.00	3.048	0.069	Yes
Right side	GPRS 3TS	661/1880	1:2.075	0.020	-0.11	21.16	26.00	3.048	0.061	Yes
Bottom side	GPRS 3TS	661/1880	1:2.075	0.090	0.09	21.16	26.00	3.048	0.273	Yes
Hotspot Test data at the worst case with battery 2										
Bottom side	GPRS 3TS	661/1880	1:2.075	0.085	-0.07	21.16	26.00	3.048	0.258	Yes

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Ant2 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusion
Hotspot Test data(Separate 10mm)										
Front side	GPRS 1TS	661/1880	1:8.3	0.062	0.03	29.22	31.50	1.690	0.105	Yes
Back side	GPRS 1TS	661/1880	1:8.3	0.162	0.14	29.22	31.50	1.690	0.274	Yes
Left side	GPRS 1TS	661/1880	1:8.3	0.014	0.16	29.22	31.50	1.690	0.024	Yes
Right side	GPRS 1TS	661/1880	1:8.3	0.012	0.05	29.22	31.50	1.690	0.020	Yes
Top side	GPRS 1TS	661/1880	1:8.3	0.237	0.04	29.22	31.50	1.690	0.401	Yes
Hotspot Test data at the worst case with battery 2										
Top side	GPRS 1TS	661/1880	1:8.3	0.187	0.03	29.22	31.50	1.690	0.316	Yes

WCDMA Band II

Ant0 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusion
Ant0 Test Record										
Hotspot Test data(Separate 10mm)										
Front side	RMC	9400/1880	1:1	0.157	-0.04	20.66	24.80	2.594	0.407	Yes
Back side	RMC	9400/1880	1:1	0.212	-0.02	20.66	24.80	2.594	0.550	Yes
Left side	RMC	9400/1880	1:1	0.095	-0.02	20.66	24.80	2.594	0.246	Yes
Right side	RMC	9400/1880	1:1	0.069	0.13	20.66	24.80	2.594	0.179	Yes
Bottom side	RMC	9400/1880	1:1	0.340	-0.06	20.66	24.80	2.594	0.882	Yes
Hotspot Test data at the worst case with battery 2										
Bottom side	RMC	9400/1880	1:1	0.312	0.08	20.66	24.80	2.594	0.809	Yes
Ant2 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusion
Hotspot Test data(Separate 10mm)										
Front side	RMC	9400/1880	1:1	0.082	0.04	18.19	21.30	2.046	0.167	Yes
Back side	RMC	9400/1880	1:1	0.218	0.01	18.19	21.30	2.046	0.446	Yes
Left side	RMC	9400/1880	1:1	0.022	0.07	18.19	21.30	2.046	0.045	Yes
Right side	RMC	9400/1880	1:1	0.022	-0.12	18.19	21.30	2.046	0.044	Yes
Top side	RMC	9400/1880	1:1	0.301	0.13	18.19	21.30	2.046	0.616	Yes
Hotspot Test data at the worst case with battery 2										
Top side	RMC	9400/1880	1:1	0.249	-0.10	18.19	21.30	2.046	0.510	Yes

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WCDMA Band IV

Ant0 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm)										
Front side	RMC	1412/1732.4	1:1	0.136	-0.10	20.88	24.30	2.198	0.299	Yes
Back side	RMC	1412/1732.4	1:1	0.174	-0.01	20.88	24.30	2.198	0.382	Yes
Left side	RMC	1412/1732.4	1:1	0.089	-0.01	20.88	24.30	2.198	0.196	Yes
Right side	RMC	1412/1732.4	1:1	0.069	0.07	20.88	24.30	2.198	0.152	Yes
Bottom side	RMC	1412/1732.4	1:1	0.303	-0.08	20.88	24.30	2.198	0.666	Yes
Hotspot Test data at the worst case with battery 2										
Bottom side	RMC	1412/1732.4	1:1	0.348	-0.03	20.88	24.30	2.198	0.765	Yes
Ant2 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm)										
Front side	RMC	1412/1732.4	1:1	0.056	0.05	17.83	20.80	1.982	0.111	Yes
Back side	RMC	1412/1732.4	1:1	0.142	0.03	17.83	20.80	1.982	0.281	Yes
Left side	RMC	1412/1732.4	1:1	0.020	0.05	17.83	20.80	1.982	0.039	Yes
Right side	RMC	1412/1732.4	1:1	0.012	0.03	17.83	20.80	1.982	0.023	Yes
Top side	RMC	1412/1732.4	1:1	0.194	0.09	17.83	20.80	1.982	0.384	Yes
Hotspot Test data at the worst case with battery 2										
Top side	RMC	1412/1732.4	1:1	0.174	0.04	17.83	20.80	1.982	0.345	Yes

LTE Band 2

Ant0 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_0	18900/1880	1:1	0.161	-0.02	21.26	24.50	2.109	0.339	Yes
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.228	-0.06	21.26	24.50	2.109	0.481	Yes
Left side	20	QPSK 1RB_0	18900/1880	1:1	0.078	-0.02	21.26	24.50	2.109	0.165	Yes
Right side	20	QPSK 1RB_0	18900/1880	1:1	0.067	0.02	21.26	24.50	2.109	0.140	Yes
Bottom side	20	QPSK 1RB_0	18900/1880	1:1	0.358	0.10	21.26	24.50	2.109	**0.755**	Yes
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_0	18900/1880	1:1	0.156	-0.06	21.10	23.50	1.738	0.271	Yes
Back side	20	QPSK 50RB_0	18900/1880	1:1	0.220	-0.06	21.10	23.50	1.738	0.382	Yes
Left side	20	QPSK 50RB_0	18900/1880	1:1	0.076	0.10	21.10	23.50	1.738	0.131	Yes
Right side	20	QPSK 50RB_0	18900/1880	1:1	0.065	0.01	21.10	23.50	1.738	0.114	Yes
Bottom side	20	QPSK 50RB_0	18900/1880	1:1	0.371	0.04	21.10	23.50	1.738	0.645	Yes
Hotspot Test data at the worst case with battery 2											
Bottom side	20	QPSK 50RB_0	18900/1880	1:1	0.361	0.11	21.10	24.50	2.188	0.790	Yes
Ant2 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_0	18900/1880	1:1	0.086	0.00	18.52	21.00	1.770	0.153	Yes
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.223	0.15	18.52	21.00	1.770	0.395	Yes
Left side	20	QPSK 1RB_0	18900/1880	1:1	0.025	-0.02	18.52	21.00	1.770	0.044	Yes
Right side	20	QPSK 1RB_0	18900/1880	1:1	0.034	0.03	18.52	21.00	1.770	0.061	Yes
Top side	20	QPSK 1RB_0	18900/1880	1:1	0.316	0.02	18.52	21.00	1.770	0.559	Yes
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_0	18900/1880	1:1	0.085	0.01	18.58	21.00	1.746	0.148	Yes
Back side	20	QPSK 50RB_0	18900/1880	1:1	0.219	-0.04	18.58	21.00	1.746	0.382	Yes
Left side	20	QPSK 50RB_0	18900/1880	1:1	0.024	-0.06	18.58	21.00	1.746	0.042	Yes
Right side	20	QPSK 50RB_0	18900/1880	1:1	0.036	-0.01	18.58	21.00	1.746	0.063	Yes
Top side	20	QPSK 50RB_0	18900/1880	1:1	0.311	0.09	18.58	21.00	1.746	0.543	Yes
Hotspot Test data at the worst case with battery 2											

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Top side	20	QPSK 1RB_0	18900/1880	1:1	0.312	0.02	18.52	21.00	1.770	0.552	Yes

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Ant0 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_0	20175/1732.5	1:1	0.143	0.13	20.88	24.30	2.198	0.314	Yes
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.197	-0.01	20.88	24.30	2.198	0.433	Yes
Left side	20	QPSK 1RB_0	20175/1732.5	1:1	0.066	0.10	20.88	24.30	2.198	0.145	Yes
Right side	20	QPSK 1RB_0	20175/1732.5	1:1	0.047	0.19	20.88	24.30	2.198	0.102	Yes
Bottom side	20	QPSK 1RB_0	20175/1732.5	1:1	0.266	0.06	20.88	24.30	2.198	0.585	Yes
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_0	20175/1732.5	1:1	0.146	-0.01	20.96	23.30	1.714	0.250	Yes
Back side	20	QPSK 50RB_0	20175/1732.5	1:1	0.179	0.17	20.96	23.30	1.714	0.307	Yes
Left side	20	QPSK 50RB_0	20175/1732.5	1:1	0.068	0.20	20.96	23.30	1.714	0.116	Yes
Right side	20	QPSK 50RB_0	20175/1732.5	1:1	0.048	0.03	20.96	23.30	1.714	0.082	Yes
Bottom side	20	QPSK 50RB_0	20175/1732.5	1:1	0.320	0.17	20.96	23.30	1.714	0.548	Yes
Hotspot Test data at the worst case with battery 2											
Bottom side	20	QPSK 50RB_0	20175/1732.5	1:1	0.285	0.03	20.96	23.30	1.714	0.488	Yes
Ant2 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_0	20175/1732.5	1:1	0.050	0.10	18.17	20.80	1.832	0.091	Yes
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.125	0.01	18.17	20.80	1.832	0.229	Yes
Left side	20	QPSK 1RB_0	20175/1732.5	1:1	0.019	-0.02	18.17	20.80	1.832	0.035	Yes
Right side	20	QPSK 1RB_0	20175/1732.5	1:1	0.025	0.14	18.17	20.80	1.832	0.046	Yes
Top side	20	QPSK 1RB_0	20175/1732.5	1:1	0.207	0.02	18.17	20.80	1.832	0.379	Yes
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_0	20175/1732.5	1:1	0.049	0.03	18.12	20.80	1.854	0.090	Yes
Back side	20	QPSK 50RB_0	20175/1732.5	1:1	0.123	0.09	18.12	20.80	1.854	0.228	Yes
Left side	20	QPSK 50RB_0	20175/1732.5	1:1	0.018	-0.08	18.12	20.80	1.854	0.033	Yes
Right side	20	QPSK 50RB_0	20175/1732.5	1:1	0.023	-0.08	18.12	20.80	1.854	0.042	Yes
Top side	20	QPSK 50RB_0	20175/1732.5	1:1	0.205	0.13	18.12	20.80	1.854	0.380	Yes
Hotspot Test data at the worst case with battery 2											
Top side	20	QPSK 1RB_0	20175/1732.5	1:1	0.184	0.04	18.17	20.80	1.832	0.337	Yes

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Ant0 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_99	20850/2510	1:1	0.128	0.19	19.37	22.80	2.203	0.282	Yes
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.170	-0.10	19.37	22.80	2.203	0.374	Yes
Left side	20	QPSK 1RB_99	20850/2510	1:1	0.075	-0.19	19.37	22.80	2.203	0.165	Yes
Right side	20	QPSK 1RB_99	20850/2510	1:1	0.041	-0.13	19.37	22.80	2.203	0.090	Yes
Bottom side	20	QPSK 1RB_99	20850/2510	1:1	0.274	-0.09	19.37	22.80	2.203	0.604	Yes
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_50	20850/2510	1:1	0.136	0.04	19.16	22.30	2.061	0.280	Yes
Back side	20	QPSK 50RB_50	20850/2510	1:1	0.179	0.00	19.16	22.30	2.061	0.369	Yes
Left side	20	QPSK 50RB_50	20850/2510	1:1	0.082	0.00	19.16	22.30	2.061	0.169	Yes
Right side	20	QPSK 50RB_50	20850/2510	1:1	0.047	-0.17	19.16	22.30	2.061	0.097	Yes
Bottom side	20	QPSK 50RB_50	20850/2510	1:1	0.499	0.06	19.16	22.30	2.061	1.028	Yes
Hotspot Test data at the worst case with battery 2											
Bottom side	20	QPSK 50RB_50	20850/2510	1:1	0.390	-0.07	19.16	22.30	2.061	0.804	Yes
Ant4 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm 1RB)											

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Front side	20	QPSK 1RB_99	20850/2510	1:1	0.101	-0.12	18.47	21.00	1.791	0.181	Yes
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.192	-0.07	18.47	21.00	1.791	0.344	Yes
Left side	20	QPSK 1RB_99	20850/2510	1:1	0.212	-0.06	18.47	21.00	1.791	0.380	Yes
Right side	20	QPSK 1RB_99	20850/2510	1:1	0.002	0.16	18.47	21.00	1.791	0.004	Yes
Top side	20	QPSK 1RB_99	20850/2510	1:1	0.029	0.07	18.47	21.00	1.791	0.052	Yes
Hotspot Test data at the worst case with battery 2											
Front side	20	QPSK 50RB_50	20850/2510	1:1	0.112	0.13	18.34	21.00	1.845	0.207	Yes
Back side	20	QPSK 50RB_50	20850/2510	1:1	0.212	0.16	18.34	21.00	1.845	0.391	Yes
Left side	20	QPSK 50RB_50	20850/2510	1:1	0.374	0.05	18.34	21.00	1.845	0.690	Yes
Right side	20	QPSK 50RB_50	20850/2510	1:1	0.003	0.11	18.34	21.00	1.845	0.006	Yes
Top side	20	QPSK 50RB_50	20850/2510	1:1	0.050	-0.18	18.34	21.00	1.845	0.092	Yes
Body worn Test data at the worst case with battery 2											
Left side	20	QPSK 50RB_50	20850/2510	1:1	0.274	-0.07	18.34	21.00	1.845	0.506	Yes

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Ant0 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Product Specific 10-g SAR SAR Exclusio**
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_50	132322/1745	1:1	0.158	-0.08	20.28	22.80	1.786	0.282	Yes
Back side	20	QPSK 1RB_50	132322/1745	1:1	0.195	0.03	20.28	22.80	1.786	0.348	Yes
Left side	20	QPSK 1RB_50	132322/1745	1:1	0.072	0.01	20.28	22.80	1.786	0.128	Yes
Right side	20	QPSK 1RB_50	132322/1745	1:1	0.053	0.19	20.28	22.80	1.786	0.094	Yes
Bottom side	20	QPSK 1RB_50	132322/1745	1:1	0.292	0.03	20.28	22.80	1.786	0.522	Yes
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_25	132322/1745	1:1	0.155	0.04	20.25	22.30	1.603	0.249	Yes
Back side	20	QPSK 50RB_25	132322/1745	1:1	0.192	0.03	20.25	22.30	1.603	0.308	Yes
Left side	20	QPSK 50RB_25	132322/1745	1:1	0.069	0.09	20.25	22.30	1.603	0.111	Yes
Right side	20	QPSK 50RB_25	132322/1745	1:1	0.051	0.12	20.25	22.30	1.603	0.081	Yes
Bottom side	20	QPSK 50RB_25	132322/1745	1:1	0.265	0.20	20.25	22.30	1.603	0.425	Yes
Hotspot Test data at the worst case with battery 2											
Bottom side	20	QPSK 1RB_50	132322/1745	1:1	0.266	0.06	20.28	22.80	1.786	0.475	Yes
Ant2 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Product Specific 10-g SAR SAR Exclusio**
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_50	132322/1745	1:1	0.039	0.02	17.59	19.80	1.663	0.065	Yes
Back side	20	QPSK 1RB_50	132322/1745	1:1	0.099	0.14	17.59	19.80	1.663	0.165	Yes
Left side	20	QPSK 1RB_50	132322/1745	1:1	0.014	-0.01	17.59	19.80	1.663	0.024	Yes
Right side	20	QPSK 1RB_50	132322/1745	1:1	0.021	0.03	17.59	19.80	1.663	0.035	Yes
Top side	20	QPSK 1RB_50	132322/1745	1:1	0.167	0.15	17.59	19.80	1.663	0.278	Yes
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_25	132322/1745	1:1	0.039	0.16	17.55	19.80	1.679	0.065	Yes
Back side	20	QPSK 50RB_25	132322/1745	1:1	0.100	-0.01	17.55	19.80	1.679	0.168	Yes
Left side	20	QPSK 50RB_25	132322/1745	1:1	0.015	-0.17	17.55	19.80	1.679	0.026	Yes
Right side	20	QPSK 50RB_25	132322/1745	1:1	0.022	0.14	17.55	19.80	1.679	0.037	Yes
Top side	20	QPSK 50RB_25	132322/1745	1:1	0.168	0.16	17.55	19.80	1.679	0.282	Yes
Hotspot Test data at the worst case with battery 2											
Top side	20	QPSK 50RB_25	132322/1745	1:1	0.162	0.08	17.55	19.80	1.679	0.272	Yes

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6 SAR System Verification Procedure

6.1 Tissue Simulate Liquid

6.1.1 Recipes for Tissue Simulate Liquid

The bellowing tables give the recipes for tissue simulating liquids to be used in different frequency bands：

Ingredients (% by weight)	Frequency (MHz)				
	450	700-900	1750-2000	2300-2500	2500-2700
Water	38.56	40.30	55.24	55.00	54.92
Salt (NaCl)	3.95	1.38	0.31	0.2	0.23
Sucrose	56.32	57.90	0	0	0
HEC	0.98	0.24	0	0	0
Bactericide	0.19	0.18	0	0	0
Tween	0	0	44.45	44.80	44.85
Salt: 99⁺% Pure Sodium Chloride Water: De-ionized, 16 MΩ⁺ resistivity Tween: Polyoxyethylene (20) sorbitan monolaurate			Sucrose: 98⁺% Pure Sucrose HEC: Hydroxyethyl Cellulose		
HSL5GHz is composed of the following ingredients： Water：50-65% Mineral oil：10-30% Emulsifiers：8-25% Sodium salt：0-1.5%					

Table 3： Recipe of Tissue Simulate Liquid

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6.1.2 Measurement for Tissue Simulate Liquid

The dielectric properties for this Tissue Simulate Liquids were measured by using the Agilent Model 85070E Dielectric Probe in conjunction with Agilent E5071C Network Analyzer (300 KHz-8500 MHz). The Conductivity (σ) and Permittivity (ρ) are listed in bellow table. For the SAR measurement given in this report. The temperature variation of the Tissue Simulate Liquids was 22±2°C.

Tissue Type	Measured Frequency (MHz)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Liquid Temp. (℃)	Date
750 Head	750	0.879	42.786	0.89	41.90	-1.24	2.11	±5	22	2021/08/31
835 Head	835	0.909	40.668	0.90	41.50	1.00	-2.00	±5	21.9	2021/08/27
1800 Head	1800	1.384	40.258	1.40	40.00	-1.14	0.65	±5	22.2	2021/08/28
1900 Head	1900	1.372	40.640	1.40	40.00	-2.00	1.60	±5	21.8	2021/08/30
2450 Head	2450	1.782	39.422	1.80	39.20	-1.00	0.57	±5	22	2021/08/26
2600 Head	2600	1.953	38.932	1.96	39.00	-0.36	-0.17	±5	21.9	2021/08/26
5250 Head	5250	4.721	36.578	4.71	35.95	0.23	1.75	±5	22	2021/09/01
5600 Head	5600	5.107	35.626	5.07	35.50	0.73	0.35	±5	22	2021/09/01
5750 Head	5750	5.279	35.262	5.22	35.35	1.13	-0.25	±5	22	2021/09/01

Table 4： Measurement result of Tissue electric parameters

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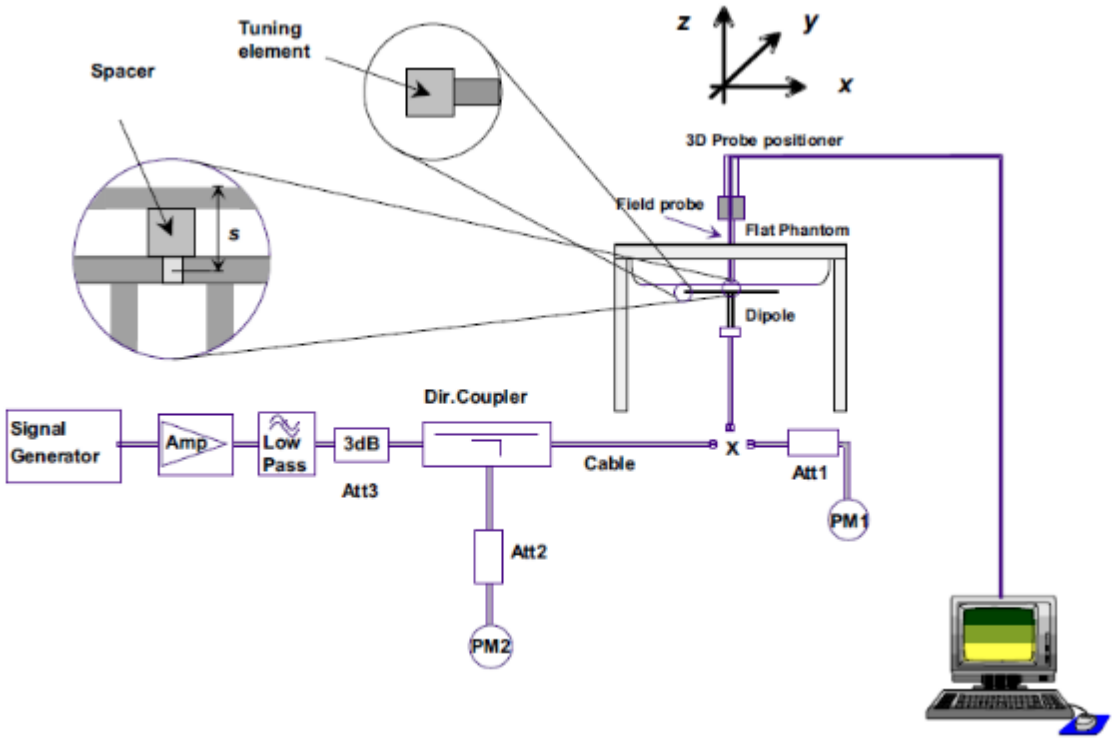
6.2 SAR System Check

The microwave circuit arrangement for system Check is sketched in F-12. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR values. The tests were conducted on the same days as the measurement of the EUT. The obtained results from the system accuracy verification are displayed in the following table (A power level of 250mW (below 3GHz) or 100mW (3-6GHz) was input to the dipole antenna). During the tests, the ambient temperature of the laboratory was in the range 22±2°C, the relative humidity was in the range 60% and the liquid depth above the ear reference points was above 15±0.5 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.



F-12. the microwave circuit arrangement used for SAR system check

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6.2.1 Justification for Extended SAR Dipole Calibrations

1) Referring to KDB865664 D01 requirements for dipole calibration, instead of the typical annual calibration recommended by measurement standards, longer calibration intervals of up to three years may be considered when it is demonstrated that the SAR target, impedance and return loss of a dipole have remain stable according to the following requirements. Each measured dipole is expected to evaluate with the following criteria at least on annual interval in Appendix C.
a) There is no physical damage on the dipole;
b) System check with specific dipole is within 10% of calibrated value;
c) Return-loss is within 10% of calibrated measurement;
d) Impedance is within 5Ω from the previous measurement.

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

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6.2.2 Summary System Check Result(s)

Validation Kit		Measured SAR 250mW	Measured SAR 250mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W) (±10%)	Target SAR (normalized to 1W)(±10%)	Liquid Temp. (℃)	Measured Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)		
D750V3	Head	2.09	1.37	8.36	5.48	8.23 (7.41~9.05)	5.41 (4.87~5.95)	22	2021/08/31
D835V2	Head	2.38	1.57	9.52	6.28	9.41 (8.47~10.35)	6.25 (5.63~6.88)	21.9	2021/08/27
D1800V2	Head	9.5	4.91	38	19.64	38.4 (34.56~42.24)	20.2 (18.18~22.22)	22.2	2021/08/28
D1900V2	Head	9.9	5.11	39.6	20.44	39.7 (35.73~43.67)	20.5 (18.45~22.55)	21.8	2021/08/30
D2450V2	Head	13.2	5.92	52.8	23.68	53 (47.70~58.30)	24.6 (22.14~27.60)	22	2021/08/26
D2600V2	Head	13.9	6.07	55.6	24.28	56.2 (50.58~61.82)	25 (22.50~27.50)	21.9	2021/08/26
Validation Kit		Measured SAR 100mW	Measured SAR 100mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W) (±10%)	Target SAR (normalized to 1W)(±10%)	Liquid Temp. (℃)	Measured Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)		
D5GHzV2	Head (5.25GHz)	8.02	2.3	80.2	23	77.7 (69.93~85.47)	22.4 (20.16~24.64)	22	2021/09/01
	Head (5.6GHz)	8.23	2.37	82.3	23.7	81.2 (73.08~89.32)	23.5 (21.15~25.85)	22	2021/09/01
	Head (5.75GHz)	8.05	2.33	80.5	23.3	78.9 (71.01~86.79)	22.7 (20.43~24.97)	22	2021/09/01

Table 5： SAR System Check Result

6.2.3 Detailed System Check Results

Please see the Appendix A

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6.3 System Validation

Per FCC KDB 865664 D02, SAR system verification is required to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles are used with the required tissue-equivalent media for system validation, according to the procedures outlined in FCC KDB 865664 D01 and IEEE 1528-2013.Since SAR probe calibrations are frequency dependent, each probe calibration point must be validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.
a tabulated summary of the system validation status, measurement frequencies, SAR probes, calibrated signal type(s) and tissue dielectric parameters has been included.

Table of SAR System validation summary:

Frequency (MHz)	Date	Probe SN	Probe Type	Probe CAL Point		PERM (εr)	COND (σ)	CW Validation			MOD.Validation		
								Sensitivity	Probe Linarity	Probe Isotropy	Modulation	Duty. Factore	PAR
750	2021/7/14	3798	EX3DV4	750	Head	41.66	0.89	PASS	PASS	PASS	N/A	N/A	N/A
835	2021/7/14	3798	EX3DV4	835	Head	42.11	0.91	PASS	PASS	PASS	GMSK	PASS	N/A
1800	2021/7/14	3798	EX3DV4	1750	Head	40.20	1.39	PASS	PASS	PASS	N/A	N/A	N/A
1900	2021/7/14	3798	EX3DV4	1900	Head	40.58	1.37	PASS	PASS	PASS	GMSK	PASS	N/A
2450	2021/7/14	3798	EX3DV4	2450	Head	40.16	1.83	PASS	PASS	PASS	OFDM	PASS	N/A
2600	2021/7/14	3798	EX3DV4	2600	Head	38.59	1.98	PASS	PASS	PASS	TDD	PASS	N/A
5250	2021/7/14	3798	EX3DV4	5250	Head	36.01	4.72	PASS	PASS	PASS	OFDM	PASS	N/A
5600	2021/7/14	3798	EX3DV4	5600	Head	35.06	5.11	PASS	PASS	PASS	OFDM	PASS	N/A
5750	2021/7/14	3798	EX3DV4	5750	Head	34.70	5.28	PASS	PASS	PASS	OFDM	PASS	N/A

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664D01 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5dB), such as OFDM according to KDB 865664.

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7 Test Configuration

7.1 3G SAR Test Reduction Procedure

According to KDB 941225D01, in the following procedures, the mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

7.2 Operation Configurations

7.2.1 GSM Test Configuration

SAR tests for GSM 850 and GSM 1900, a communication link is set up with a base station by air link. Using CMW500 the power lever is set to “5”and “0” in SAR of GSM 850 and GSM 1900. The tests in the band of GSM 850 and GSM 1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 12 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

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

The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode

7.2.2 WCDMA Test Configuration

1）. Output Power Verification

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

2）. Head SAR

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

3）. Body SAR

SAR for body configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreaing code or DPDCHn, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the handset, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC.

4）. HSDPA / HSUPA / DC-HSDPA

According to KDB 941225 D01v03, RMC 12.2kbps setting is used to evaluate SAR. If the maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

a) HSDPA

HSDPA is configured according to the applicable UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms and a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors(βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) are set according to values indicated in the following table The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	βc	Bd	βd(SF)	βc/βd	βhs	CM(dB)	MPR (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0	0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note1: △ACK, △NACK and △CQI= 8 Ahs = βhs/βc=30/15 βhs=30/15*βc
Note2:For the HS-DPCCH power mask requirement test in clause 5.2C,5.7A,and the Error Vector Magnitude(EVM) with HS-DPCCH test in clause 5.13.1.A,and HSDPA EVM with phase discontinuity in clause 5.13.1AA, △ACK and △NACK= 8 (Ahs=30/15) with βhs=30/15*βc,and △CQI=
7 (Ahs=24/15) with βhs=24/15*βc.
Note3: CM=1 forβc/βd =12/15, βhs/βc=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

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

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

Table 6： settings of required H-Set 1 QPSK acc. to 3GPP 34.121

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

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Table 7： HSDPA UE category

b) HSUPA

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

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

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

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

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

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

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

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

Table 8： Subtests for UMTS Release 6 HSUPA

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UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCH TTI(ms)	Minimum Speading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592
4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	10	2SF2&2SF4	11484	5.76
	4	4	2		20000	2.00
7 (No DPDCH)	4	8	2	2SF2&2SF4	22996	?
	4	4	10		20000	?
NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4.UE categories 1 to 6 support QPSK only. UE category 7 supports QPSK and 16QAM.(TS25.306-7.3.0).						

Table 9： HSUPA UE category

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c) DC-HSDPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a Second serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.
The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0.
A summary of these settings are illustrated below:
Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0

Table E.5.0: Levels for HSDPA connection setup

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

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

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

Table 10：settings of required H-Set 12 QPSK acc. to 3GPP 34.121

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

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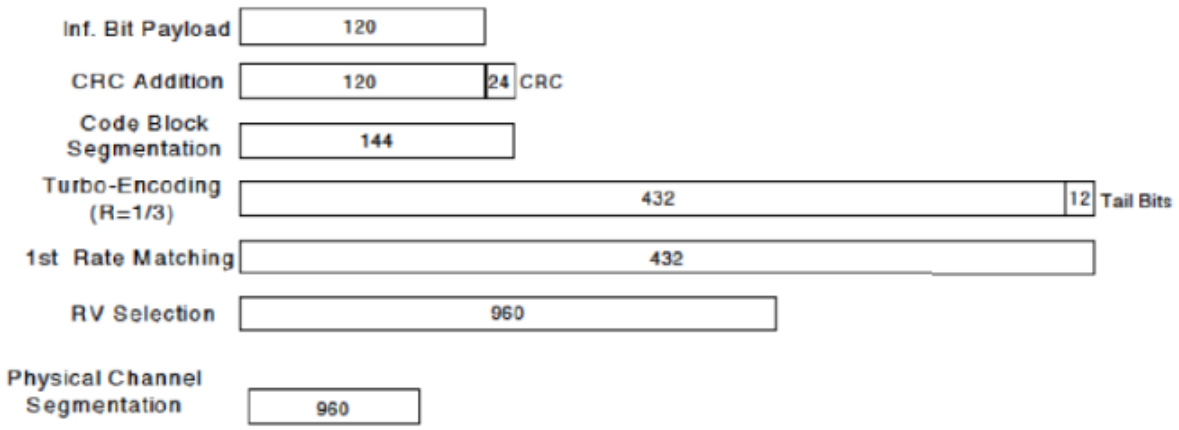

Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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

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

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

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

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

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

Note:

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

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d) HSPA+

Per KDB941225D01, SAR is required for Rel. 7 HSPA+ when SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (uplink) HSPA+ with 12.2 kbps RMC as the primary mode. Power is measured for HSPA+ that supports uplink 16 QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

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

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

Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.

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

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

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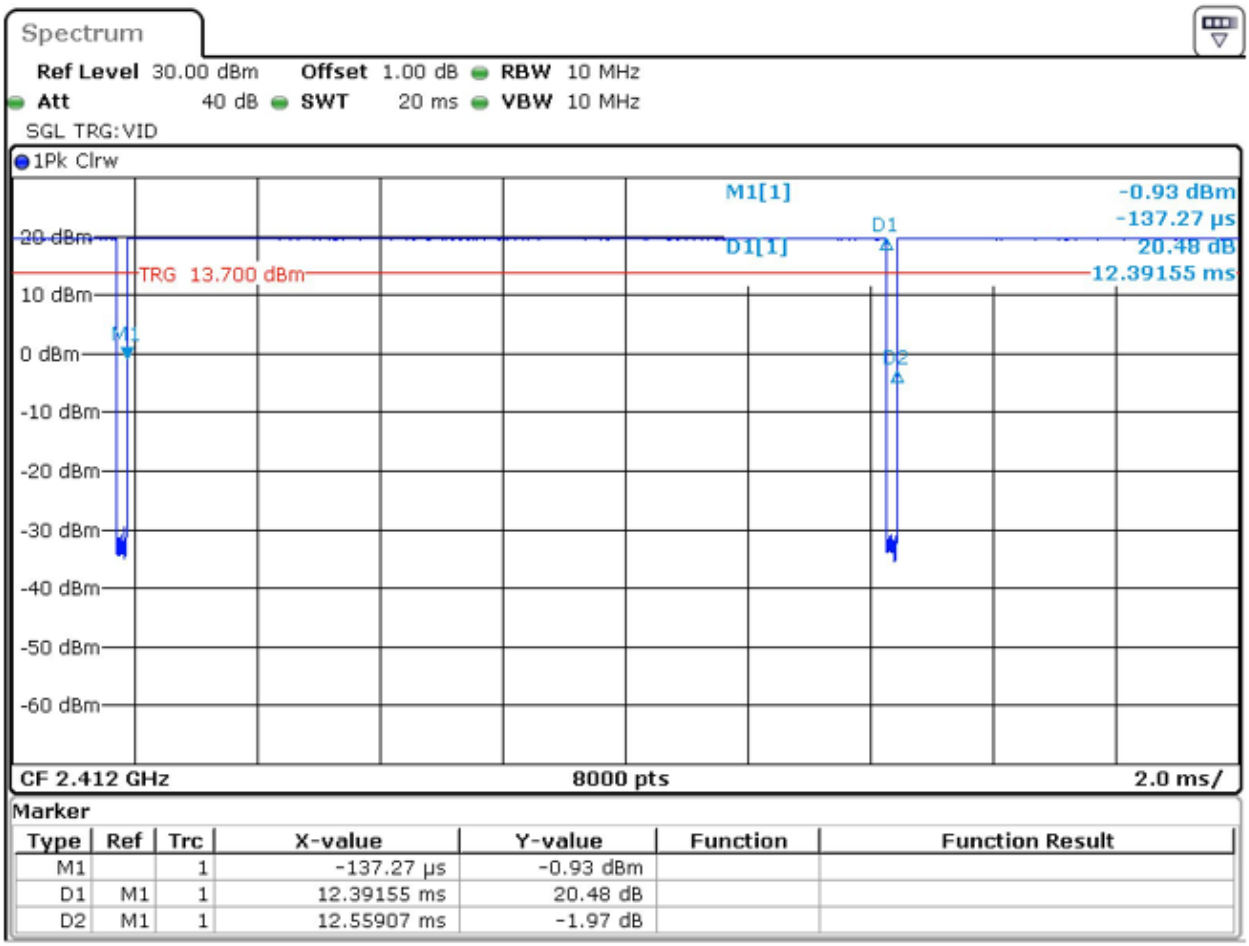
7.2.3 WiFi Test Configuration

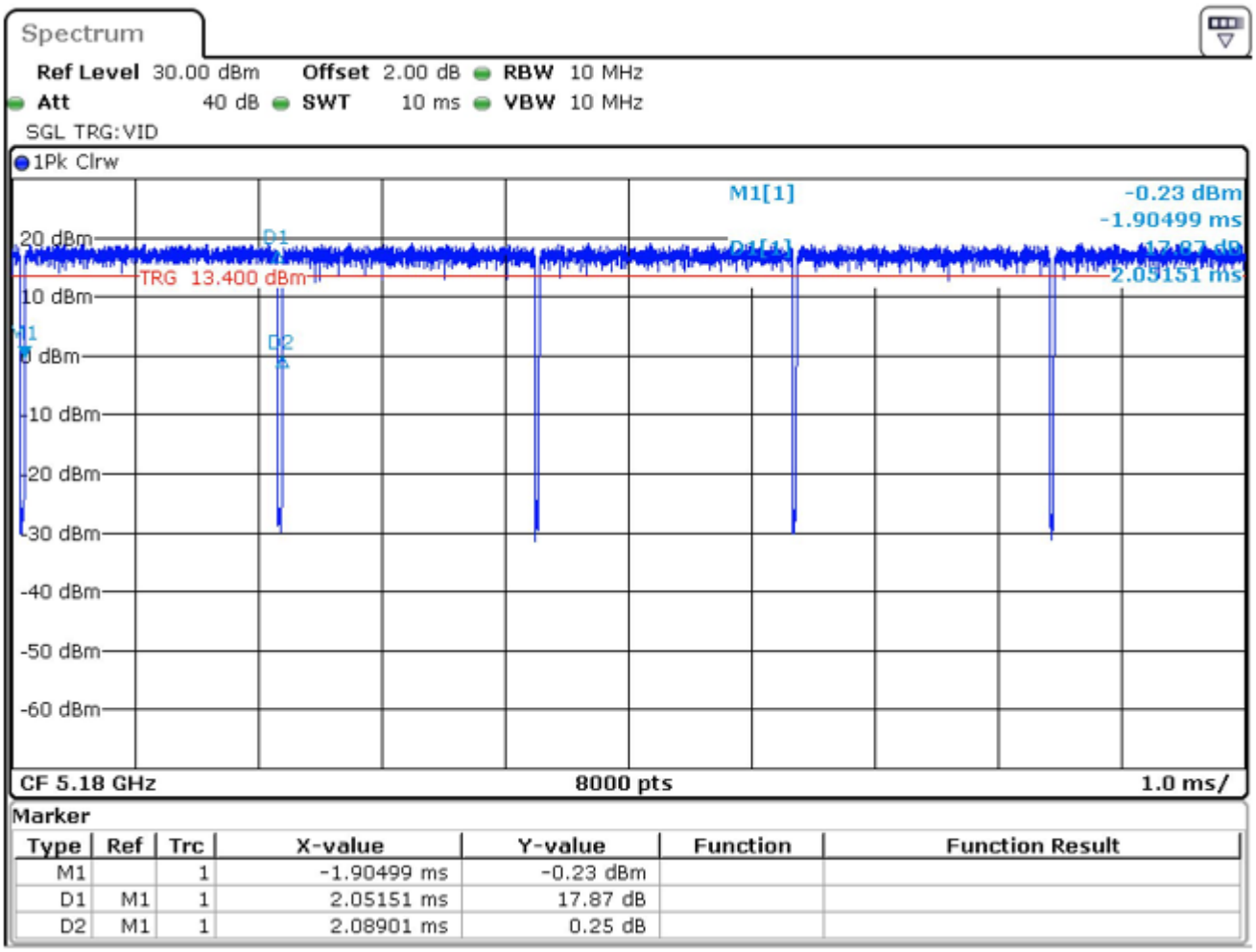
A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

7.2.3.1 Duty cycle

1) Wi-Fi 2.4GHz 802.11b:
Duty cycle=12.39/12.56=98.65%



2) Wi-Fi 5GHz 802.11a:
Duty cycle=2.05/2.09=98.09%



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	-1.90499 ms	-0.23 dBm		
D1	M1	1	2.05151 ms	17.87 dB		
D2	M1	1	2.08901 ms	0.25 dB		

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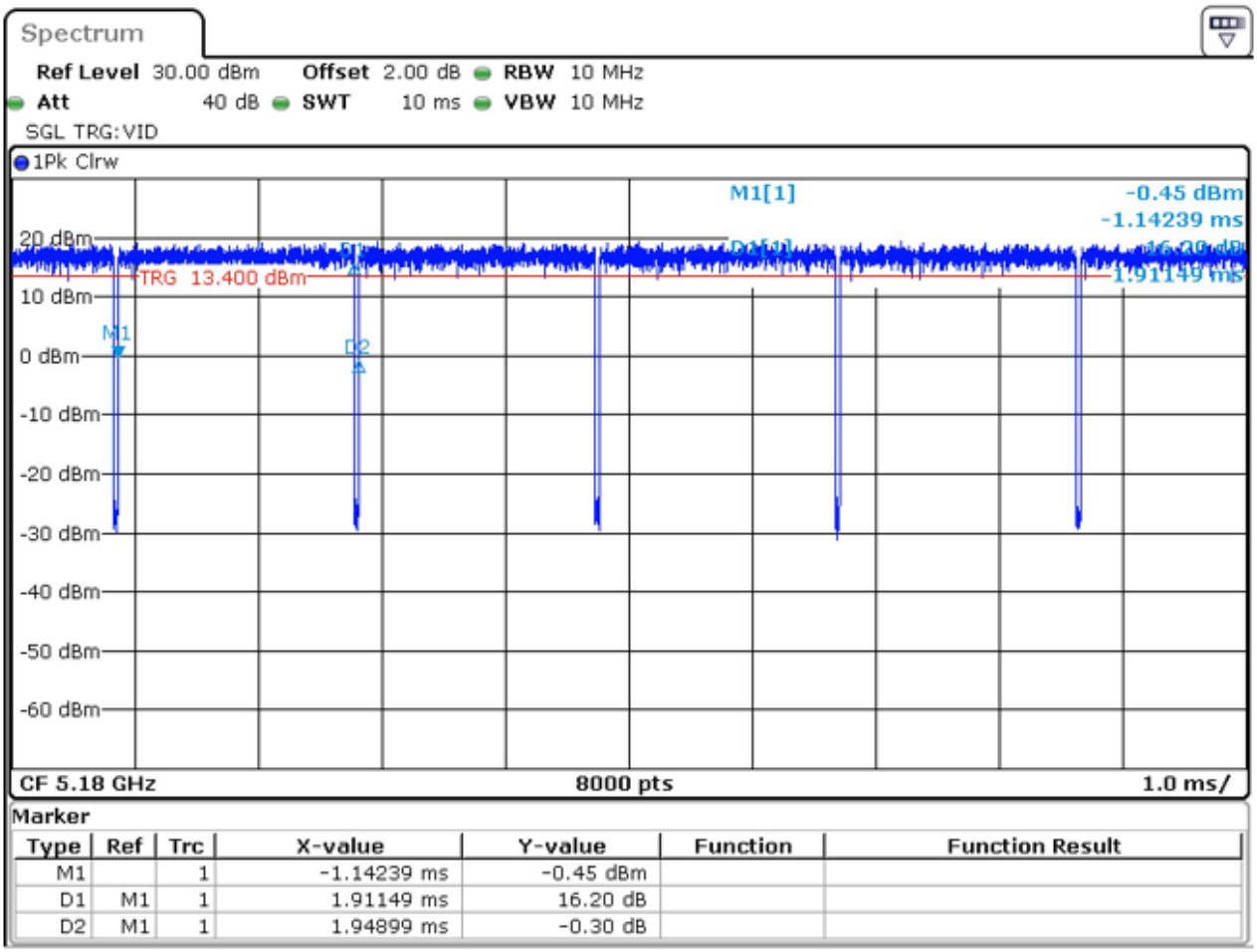
3) Wi-Fi 5GHz 802.11n 20M:
Duty cycle=1.91/1.95=97.95%



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	-1.14239 ms	-0.45 dBm		
D1	M1	1	1.91149 ms	16.20 dB		
D2	M1	1	1.94899 ms	-0.30 dB		

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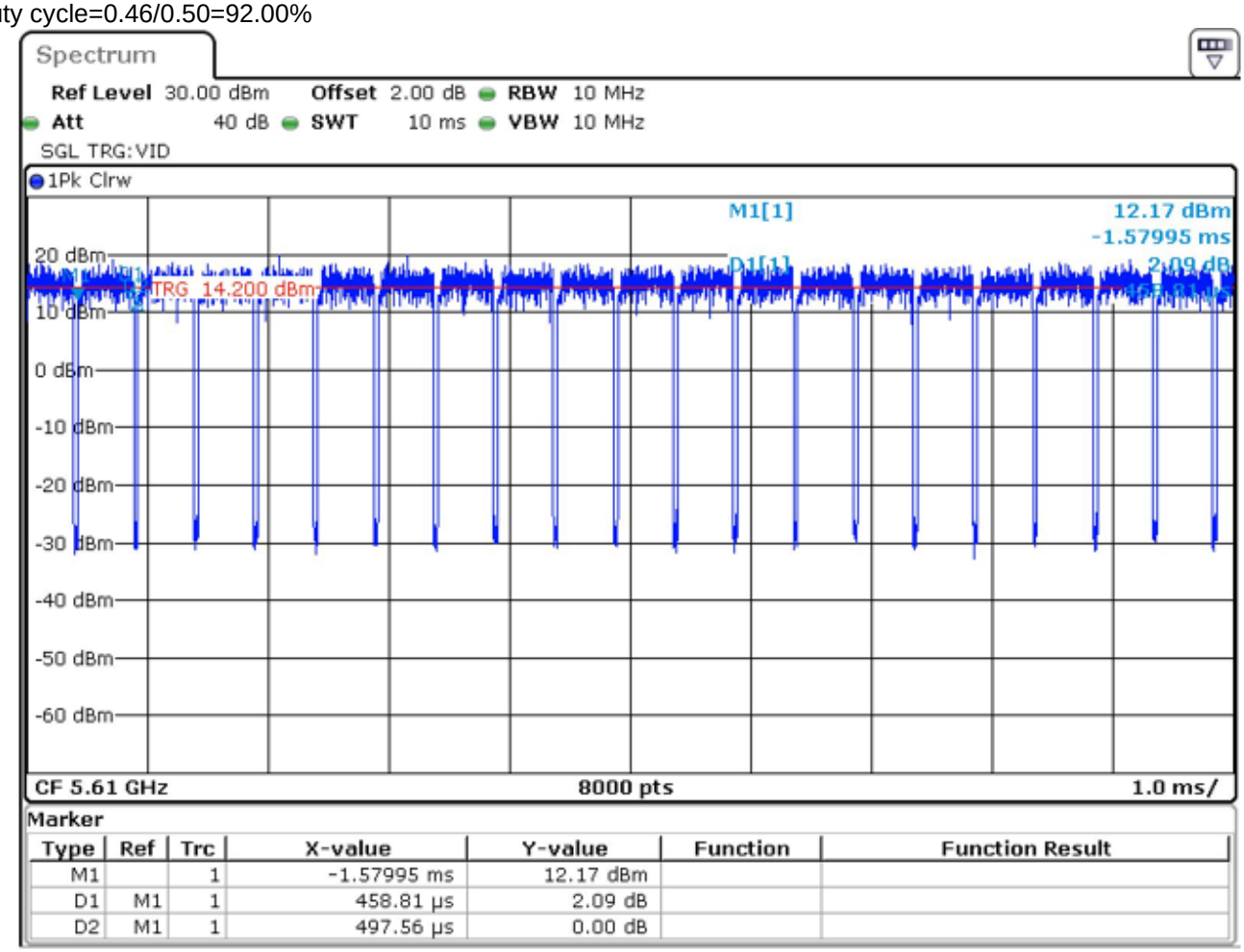
4) Wi-Fi 5GHz 802.11ac 80M:
Duty cycle=0.46/0.50=92.00%



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	-1.57995 ms	12.17 dBm		
D1	M1	1	458.81 µs	2.09 dB		
D2	M1	1	497.56 µs	0.00 dB		

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7.2.3.2 Initial Test Position SAR Test Reduction Procedure

DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures. The initial test position procedure is described in the following:

1）. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band. SAR is also not required for that exposure configuration in the subsequent test configuration(s).
2）. When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest extrapolated or estimated 1-g SAR conditions determined by area scans or next closest/smallest test separation distance and maximum RF coupling test positions based on manufacturer justification, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions (left, right, touch, tilt or subsequent surfaces and edges) are tested.
3）. For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested. a) Additional power measurements may be required for this step, which should be limited to those necessary for identifying the subsequent highest output power channels.

7.2.3.3 Initial Test Configuration Procedures

An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. For configurations with the same specified or measured maximum output power, additional transmission mode and test channel selection procedures are required. SAR test reduction for subsequent highest output test channels is determined according to *reported* SAR of the initial test configuration.
For next to the ear, hotspot mode and UMC mini-tablet exposure configurations where multiple test positions are required, the initial test position procedure is applied to minimize the number of test positions required for SAR measurement using the initial test configuration transmission mode. For fixed exposure conditions that do not have multiple SAR test positions, SAR is measured in the transmission mode determined by the initial test configuration.
When the *reported* SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for subsequent next highest measured output power channel(s) in the initial test configuration until *reported* SAR is ≤ 1.2 W/kg or all required channels are tested.

7.2.3.4 Subsequent Test Configuration Procedures

SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. The initial test position procedure is applied to next to the ear, UMPC mini-tablet and hotspot mode configurations. When the same maximum output power is specified for multiple transmission modes, additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. The subsequent test configuration and SAR measurement procedures are described in the following.

1）. When SAR test exclusion provisions of KDB Publication 447498 are applicable and SAR measurement is not required for the initial test configuration, SAR is also not required for the next highest maximum output power transmission mode subsequent test configuration(s) in that frequency band or aggregated band and exposure configuration.

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2）. When the highest *reported* SAR for the initial test configuration (when applicable, include subsequent highest output channels), according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

3）. The number of channels in the initial test configuration and subsequent test configuration can be different due to differences in channel bandwidth. When SAR measurement is required for a subsequent test configuration and the channel bandwidth is smaller than that in the initial test configuration, all channels in the subsequent test configuration that overlap with the larger bandwidth channel tested in the initial test configuration should be used to determine the highest maximum output power channel. This step requires additional power measurement to identify the highest maximum output power channel in the subsequent test configuration to determine SAR test reduction.

a) SAR should first be measured for the channel with highest measured output power in the subsequent test configuration.

b) SAR for subsequent highest measured maximum output power channels in the subsequent test configuration is required only when the *reported* SAR of the preceding higher maximum output power channel(s) in the subsequent test configuration is > 1.2 W/kg or until all required channels are tested. i) For channels with the same measured maximum output power, SAR should be measured using the channel closest to the center frequency of the larger channel bandwidth channel in the initial test configuration.

4）. SAR measurements for the remaining highest specified maximum output power OFDM transmission mode configurations that have not been tested in the initial test configuration (highest maximum output) or subsequent test configuration(s) (subsequent next highest maximum output power) is determined by recursively applying the subsequent test configuration procedures in this section to the remaining configurations according to the following:

a) replace “subsequent test configuration” with “next subsequent test configuration” (i.e., subsequent next highest specified maximum output power configuration)

b) replace “initial test configuration” with “all tested higher output power configurations”

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7.2.3.5 2.4 GHz WiFi SAR Procedures

Separate SAR procedures are applied to DSSS and OFDM configurations in the 2.4 GHz band to simplify DSSS test requirements. For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions. When SAR measurement is required for an OFDM configuration, the initial test configuration, subsequent test configuration and initial test position procedures are applied. The SAR test exclusion requirements for 802.11g/n OFDM configurations are described in following.

- **802.11b DSSS SAR Test Requirements**

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

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

2）. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

- **2.4 GHz 802.11g/n OFDM SAR Test Exclusion Requirements**

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

1）. When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.

2）. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

- **SAR Test Requirements for OFDM configurations**

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

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7.2.3.6 5 GHz WiFi SAR Procedures

- **U-NII-1 and U-NII-2A Bands**
  For devices that operate in only one of the U-NII-1 and U-NII-2A bands, the normally required SAR procedures for OFDM configurations are applied. For devices that operate in both U-NII bands using the same transmitter and antenna(s), SAR test reduction is determined according to the following：

1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, both bands are tested independently for SAR.
2) When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, both bands are tested independently for SAR.
3) The two U-NII bands may be aggregated to support a 160 MHz channel on channel number 50. Without additional testing, the maximum output power for this is limited to the lower of the maximum output power certified for the two bands. When SAR measurement is required for at least one of the bands and the highest reported SAR adjusted by the ratio of specified maximum output power of aggregated to standalone band is > 1.2 W/kg, SAR is required for the 160 MHz channel. This procedure does not apply to an aggregated band with maximum output higher than the standalone band(s); the aggregated band must be tested independently for SAR. SAR is not required when the 160 MHz channel is operating at a reduced maximum power and also qualifies for SAR test exclusion.

- **U-NII-2C and U-NII-3 Bands**
  The frequency range covered by these bands is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. when Terminal Doppler Weather Radar (TDWR) restriction applies, all channels that operate at 5.60 – 5.65 GHz must be included to apply the SAR test reduction and measurement procedures.

  When the same transmitter and antenna(s) are used for U-NII-2C band and U-NII-3 band or 5.8 GHz band of §15.247, the bands may be aggregated to enable additional channels with 20, 40 or 80 MHz bandwidth to span across the band gap, as illustrated in Appendix B. The maximum output power for the additional band gap channels is limited to the lower of those certified for the bands. Unless band gap channels are permanently disabled, they must be considered for SAR testing. The frequency range covered by these bands is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. To maintain SAR measurement accuracy and to facilitate test reduction, the channels in U-NII-2C band above 5.65 GHz may be grouped with the 5.8 GHz channels in U-NII-3 or §15.247 band to enable two SAR probe calibration frequency points to cover the bands, including the band gap channels. When band gap channels are supported and the bands are not aggregated for SAR testing, band gap channels must be considered independently in each band according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

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- **OFDM Transmission Mode SAR Test Configuration and Channel Selection Requirements**

The initial test configuration for 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance, in each standalone and aggregated frequency band. SAR for the initial test configuration is measured using the highest maximum output power channel determined by the default power measurement procedures. When multiple configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined according to the following steps applied sequentially.

1) The largest channel bandwidth configuration is selected among the multiple configurations with the same specified maximum output power.
2) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
3) If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.
4) When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n. After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following. These channel selection procedures apply to both the initial test configuration and subsequent test configuration(s), with respect to the default power measurement procedures or additional power measurements required for further SAR test reduction. The same procedures also apply to subsequent highest output power channel(s) selection.
    a) The channel closest to mid-band frequency is selected for SAR measurement.
    b) For channels with equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement.

- **SAR Test Requirements for OFDM configurations**

When SAR measurement is required for 802.11 a/n/ac OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. When the same transmitter and antenna(s) are used for U-NII-1 and U-NII-2A bands, additional SAR test reduction applies. When band gap channels between U-NII-2C band and 5.8 GHz U-NII-3 or §15.247 band are supported, the highest maximum output power transmission mode configuration and maximum output power channel across the bands must be used to determine SAR test reduction, according to the initial test configuration and subsequent test configuration requirements. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

7.2.4 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The Anritsu MT8821C was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

A) Spectrum Plots for RB Configurations

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

B) MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

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

C) A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

D) Largest channel bandwidth standalone SAR test requirements

1) QPSK with 1 RB allocation

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

2) QPSK with 50% RB allocation

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

3) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

E) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

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8 Test Result

8.1 Measurement of RF conducted Power

8.1.1 Conducted Power of GSM

ANT1

GSM850 receiver off/receiver on										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		128	190	251			128	190	251	
GSM(GMSK)	GSM	32.12	32.21	32.43	33.30	-9.19	22.93	23.02	23.24	24.11
GPRS/EGPRS (GMSK)	1 TX Slot	32.20	32.29	32.54	33.30	-9.19	23.01	23.10	23.35	24.11
	2 TX Slots	29.47	29.60	29.77	30.70	-6.18	23.29	23.42	23.59	24.52
	3 TX Slots	27.40	27.46	27.58	28.50	-4.42	22.98	23.04	23.16	24.08
	4 TX Slots	25.78	26.07	26.15	27.00	-3.17	22.61	22.90	22.98	23.83
EGPRS(8PSK)	1 TX Slot	27.27	27.47	27.57	28.50	-9.19	18.08	18.28	18.38	19.31
	2 TX Slots	24.42	24.58	24.68	25.50	-6.18	18.24	18.40	18.50	19.32
	3 TX Slots	22.46	22.62	22.56	23.70	-4.42	18.04	18.20	18.14	19.28
	4 TX Slots	20.84	21.10	21.17	22.30	-3.17	17.67	17.93	18.00	19.13
GSM 850 hotspot on										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		128	190	251			128	190	251	
GSM(GMSK)	GSM	29.87	30.02	30.05	30.30	-9.19	20.68	20.83	20.86	21.11
GPRS/EGPRS (GMSK)	1 TX Slot	29.95	30.09	30.12	30.30	-9.19	20.76	20.9	20.93	21.11
	2 TX Slots	26.57	26.84	27.00	27.70	-6.18	20.39	20.66	20.82	21.52
	3 TX Slots	24.57	24.68	24.81	25.50	-4.42	20.15	20.26	20.39	21.08
	4 TX Slots	23.01	23.09	23.22	24.00	-3.17	19.84	19.92	20.05	20.83
EGPRS(8PSK)	1 TX Slot	24.24	24.36	24.46	25.50	-9.19	15.05	15.17	15.27	16.31
	2 TX Slots	21.00	21.17	21.25	22.50	-6.18	14.82	14.99	15.07	16.32
	3 TX Slots	20.32	20.40	20.53	20.70	-4.42	15.9	15.98	16.11	16.28
	4 TX Slots	18.75	19.13	19.30	19.30	-3.17	15.58	15.96	16.13	16.13

ANT3

GSM 850										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		128	190	251			128	190	251	
GSM(GMSK)	GSM	32.18	32.30	32.52	33.2	-9.19	22.99	23.11	23.33	24.01
GPRS/EGPRS (GMSK)	1 TX Slot	32.21	32.35	32.55	33.2	-9.19	23.02	23.16	23.36	24.01
	2 TX Slots	29.25	29.45	29.67	30.5	-6.18	23.07	23.27	23.49	24.32
	3 TX Slots	27.13	27.26	27.43	28.5	-4.42	22.71	22.84	23.01	24.08
	4 TX Slots	25.54	25.84	26.00	26.8	-3.17	22.37	22.67	22.83	23.63
EGPRS(8PSK)	1 TX Slot	27.05	27.28	27.34	28.2	-9.19	17.86	18.09	18.15	19.01
	2 TX Slots	24.05	24.32	24.48	25.3	-6.18	17.87	18.14	18.30	19.12
	3 TX Slots	22.07	22.21	22.27	23.2	-4.42	17.65	17.79	17.85	18.78
	4 TX Slots	20.42	20.61	20.82	21.6	-3.17	17.25	17.44	17.65	18.43

ANT0

GSM 1900 receiver off/receiver on										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		512	661	810			512	661	810	
GSM(GMSK)	GSM	29.89	29.83	29.75	30.5	-9.19	20.7	20.64	20.56	21.31
GPRS/EGPRS (GMSK)	1 TX Slot	29.85	29.71	29.61	30.5	-9.19	20.66	20.52	20.42	21.31
	2 TX Slots	26.76	26.52	26.46	27.5	-6.18	20.58	20.34	20.28	21.32
	3 TX Slots	24.92	24.69	24.55	26.0	-4.42	20.5	20.27	20.13	21.58
	4 TX Slots	23.67	23.35	23.06	24.5	-3.17	20.5	20.18	19.89	21.33
EGPRS(8PSK)	1 TX Slot	26.09	25.82	25.64	27.3	-9.19	16.9	16.63	16.45	18.11

	2 TX Slots	24.03	23.65	23.25	24.5	-6.18	17.85	17.47	17.07	18.32
	3 TX Slots	21.72	21.42	21.15	22.5	-4.42	17.3	17	16.73	18.08
	4 TX Slots	20.74	20.51	20.12	21.5	-3.17	17.57	17.34	16.95	18.33

GSM 1900 hotspot on										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		512	661	810			512	661	810	
GSM(GMSK)	GSM	26.12	26.47	26.28	26.50	-9.19	16.93	17.28	17.09	17.31
GPRS/EGPRS (GMSK)	1 TX Slot	26.42	26.42	26.27	26.50	-9.19	17.23	17.23	17.08	17.31
	2 TX Slots	23.38	22.95	22.88	23.50	-6.18	17.20	16.77	16.70	17.32
	3 TX Slots	21.43	21.16	20.83	22.00	-4.42	17.01	16.74	16.41	17.58
	4 TX Slots	20.50	20.34	20.00	20.50	-3.17	17.33	17.17	16.83	17.33
EGPRS(8PSK)	1 TX Slot	23.87	23.07	23.17	24.30	-9.19	14.68	13.88	13.98	15.11
	2 TX Slots	20.76	20.51	20.26	21.50	-6.18	14.58	14.33	14.08	15.32
	3 TX Slots	18.64	18.46	18.25	19.50	-4.42	14.22	14.04	13.83	15.08
	4 TX Slots	17.13	16.68	16.55	18.00	-3.17	13.96	13.51	13.38	14.83

ANT2

GSM 1900 receiver off/receiver on										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		512	661	810			512	661	810	
GSM(GMSK)	GSM	29.40	29.36	29.26	30.50	-9.19	20.21	20.17	20.07	21.31
GPRS/EGPRS (GMSK)	1 TX Slot	29.30	29.22	29.20	30.50	-9.19	20.11	20.03	20.01	21.31
	2 TX Slots	26.15	25.75	25.70	27.00	-6.18	19.97	19.57	19.52	20.82
	3 TX Slots	24.03	23.81	23.61	25.00	-4.42	19.61	19.39	19.19	20.58
	4 TX Slots	22.77	22.52	22.38	23.50	-3.17	19.60	19.35	19.21	20.33
EGPRS(8PSK)	1 TX Slot	25.60	25.10	25.11	26.60	-9.19	16.41	15.91	15.92	17.41
	2 TX Slots	23.38	22.94	22.74	24.20	-6.18	17.20	16.76	16.56	18.02
	3 TX Slots	20.95	20.62	20.42	21.70	-4.42	16.53	16.20	16.00	17.28
	4 TX Slots	19.41	19.33	19.34	20.50	-3.17	16.24	16.16	16.17	17.33

GSM 1900 Hotspot										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		512	661	810			512	661	810	
GSM(GMSK)	GSM	28.86	28.59	28.28	29.50	-9.19	19.67	19.40	19.09	20.31
GPRS/EGPRS (GMSK)	1 TX Slot	28.87	28.65	28.28	29.50	-9.19	19.68	19.46	19.09	20.31
	2 TX Slots	25.56	25.21	25.05	26.00	-6.18	19.38	19.03	18.87	19.82
	3 TX Slots	23.51	22.94	22.83	24.00	-4.42	19.09	18.52	18.41	19.58
	4 TX Slots	22.13	21.64	21.52	22.50	-3.17	18.96	18.47	18.35	19.33
EGPRS(8PSK)	1 TX Slot	25.78	25.31	25.10	26.10	-9.19	16.59	16.12	15.91	16.91
	2 TX Slots	22.45	22.01	21.75	23.20	-6.18	16.27	15.83	15.57	17.02
	3 TX Slots	20.67	20.22	19.98	21.20	-4.42	16.25	15.80	15.56	16.78
	4 TX Slots	19.23	18.91	18.69	20.00	-3.17	16.06	15.74	15.52	16.83

Note:

1）. CMW500 measures GSM peak and average output power for active timeslots. For SAR the time-based average power is relevant. The difference in between depends on the duty cycle of the TDMA signal:

No. of timeslots	1	2	3	4
Duty Cycle	1:8.3	1:4.15	1:2.77	1:2.075
Time based avg. power compared to slotted avg. power	-9.19	-6.18	-4.42	-3.17

2）. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:
Frame-averaged power = 10 x log (Burst-averaged power mW x Slot used / 8

3）. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used

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8.1.2 Conducted Power of WCDMA

ANT1

WCDMA Band V					
Average Conducted Power(dBm)					
Channel		4132	4182	4233	Tune up
WCDMA	12.2kbps RMC	23.20	23.41	23.56	25.00
	12.2kbps AMR	23.22	23.40	23.59	25.00
HSDPA	Subtest 1	22.00	22.29	22.39	23.50
	Subtest 2	22.03	22.29	22.39	23.50
	Subtest 3	21.51	21.78	21.86	23.00
	Subtest 4	21.46	21.79	21.86	23.00
HSUPA	Subtest 1	21.98	22.26	22.37	23.50
	Subtest 2	19.99	20.24	20.34	21.80
	Subtest 3	20.97	21.26	21.32	22.80
	Subtest 4	19.99	20.29	20.32	21.50
	Subtest 5	22.00	22.30	22.30	23.50
DC-HSDPA	Subtest 1	22.03	22.25	22.36	23.50
	Subtest 2	22.06	22.29	22.35	23.50
	Subtest 3	21.49	21.75	21.83	23.00
	Subtest 4	21.48	21.77	21.85	23.00
HSPA+	16QAM	21.05	21.09	21.12	22.50

ANT3

WCDMA Band V					
Average Conducted Power(dBm)					
Channel		4132	4182	4233	Tune up
WCDMA	12.2kbps RMC	23.11	23.31	23.25	25.00
	12.2kbps AMR	23.11	23.32	23.23	25.00
HSDPA	Subtest 1	21.67	21.94	21.89	23.50
	Subtest 2	21.77	21.91	21.91	23.50
	Subtest 3	21.27	21.46	21.41	23.00
	Subtest 4	21.25	21.47	21.52	23.00
HSUPA	Subtest 1	21.66	21.93	21.65	23.50
	Subtest 2	19.93	19.94	19.96	21.80
	Subtest 3	20.95	20.93	21.01	22.80
	Subtest 4	19.62	19.93	20.03	21.50
	Subtest 5	21.70	21.90	22.10	23.50

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DC-HSDPA	Subtest 1	21.69	21.96	21.92	23.50
	Subtest 2	21.82	21.93	21.91	23.50
	Subtest 3	21.26	21.44	21.48	23.00
	Subtest 4	21.29	21.49	21.55	23.00
HSPA+	16QAM	20.95	21.10	20.92	22.50

ANT0

WCDMA Band II receiver off/receiver on					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	23.17	23.41	23.42	24.80
	12.2kbps AMR	23.18	23.40	23.41	24.80
HSDPA	Subtest 1	22.28	22.30	22.04	23.50
	Subtest 2	22.32	22.26	22.01	23.50
	Subtest 3	21.77	21.76	21.54	23.00
	Subtest 4	21.78	21.75	21.54	23.00
HSUPA	Subtest 1	21.75	21.66	21.64	21.80
	Subtest 2	20.23	20.24	20.13	21.80
	Subtest 3	21.23	21.29	21.09	22.80
	Subtest 4	20.27	20.26	20.14	21.30
	Subtest 5	22.30	22.20	22.10	22.80
DC-HSDPA	Subtest 1	22.25	22.32	22.02	23.50
	Subtest 2	22.30	22.24	22.01	23.50
	Subtest 3	21.75	21.77	21.61	23.00
	Subtest 4	21.74	21.75	21.60	23.00
HSPA+	16QAM	20.56	20.61	20.67	21.80
WCDMA Band II hotspot on					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	20.71	20.66	20.41	21.80
	12.2kbps AMR	20.69	20.65	20.38	21.80
HSDPA	Subtest 1	19.14	19.16	18.90	20.50
	Subtest 2	19.21	19.15	18.90	20.50
	Subtest 3	18.66	18.65	18.43	20.00
	Subtest 4	18.65	18.62	18.41	20.00
HSUPA	Subtest 1	18.56	18.47	18.45	18.80
	Subtest 2	17.10	17.11	17.00	18.80
	Subtest 3	18.12	18.18	17.98	19.80
	Subtest 4	17.04	17.03	16.91	18.30

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	Subtest 5	19.00	18.90	18.80	19.80
DC-HSDPA	Subtest 1	19.11	19.18	18.88	20.50
	Subtest 2	19.01	18.95	18.72	20.50
	Subtest 3	18.61	18.63	18.47	20.00
	Subtest 4	18.49	18.50	18.35	20.00
HSPA+	16QAM	17.36	17.41	17.47	18.80

WCDMA Band IV receiver off/receiver on

Average Conducted Power(dBm)

Channel		1312	1412	1513	Tune up
WCDMA	12.2kbps RMC	23.11	23.07	23.00	24.30
	12.2kbps AMR	23.10	23.06	22.99	24.30
HSDPA	Subtest 1	22.55	22.57	22.31	24.00
	Subtest 2	22.65	22.59	22.34	24.00
	Subtest 3	22.10	22.09	21.87	23.50
	Subtest 4	22.09	22.06	21.85	23.50
HSUPA	Subtest 1	22.11	22.02	22.00	22.30
	Subtest 2	20.54	20.55	20.44	22.30
	Subtest 3	21.58	21.64	21.44	23.30
	Subtest 4	20.59	20.58	20.46	21.80
	Subtest 5	22.59	22.49	22.39	23.30
DC-HSDPA	Subtest 1	22.55	22.62	22.32	24.00
	Subtest 2	22.60	22.54	22.31	24.00
	Subtest 3	22.04	22.06	21.90	23.50
	Subtest 4	22.03	22.04	21.89	23.50
HSPA+	16QAM	20.91	20.96	21.02	22.30

WCDMA Band IV hotspot on

Average Conducted Power(dBm)

Channel		1312	1412	1513	Tune up
WCDMA	12.2kbps RMC	20.98	20.88	21.12	21.30
	12.2kbps AMR	20.97	20.87	21.11	21.30
HSDPA	Subtest 1	19.77	19.79	19.53	21.00
	Subtest 2	19.74	19.68	19.43	21.00
	Subtest 3	19.39	19.38	19.16	20.50
	Subtest 4	19.39	19.36	19.15	20.50
HSUPA	Subtest 1	19.15	19.06	19.04	19.30
	Subtest 2	17.83	17.84	17.73	19.30
	Subtest 3	18.64	18.70	18.50	20.30
	Subtest 4	17.66	17.65	17.53	18.80
	Subtest 5	19.65	19.55	19.45	20.30
DC-HSDPA	Subtest 1	19.67	19.74	19.44	21.00
	Subtest 2	19.86	19.80	19.57	21.00

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	Subtest 3	19.01	19.03	18.87	20.50
	Subtest 4	19.28	19.29	19.14	20.50
HSPA+	16QAM	18.16	18.21	18.27	19.30

ANT2

WCDMA Band II receiver off					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	19.69	19.67	19.66	21.30
	12.2kbps AMR	19.69	19.68	19.67	21.30
HSDPA	Subtest 1	18.68	18.70	18.44	20.00
	Subtest 2	18.70	18.64	18.39	20.00
	Subtest 3	18.41	18.40	18.18	19.50
	Subtest 4	18.46	18.43	18.22	19.50
HSUPA	Subtest 1	18.06	17.97	17.95	18.30
	Subtest 2	16.88	16.89	16.78	18.30
	Subtest 3	17.75	17.81	17.61	19.30
	Subtest 4	16.58	16.57	16.45	17.80
	Subtest 5	18.62	18.52	18.42	19.30
DC-HSDPA	Subtest 1	18.67	18.74	18.44	20.00
	Subtest 2	18.94	18.88	18.65	20.00
	Subtest 3	18.12	18.14	17.98	19.50
	Subtest 4	18.31	18.32	18.17	19.50
HSPA+	16QAM	17.12	17.17	17.23	18.30

WCDMA Band II hotspot/receiver off +WIFI/BT					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	18.30	18.19	18.09	19.80
	12.2kbps AMR	18.29	18.21	18.07	19.80
HSDPA	Subtest 1	17.33	17.35	17.09	18.50
	Subtest 2	17.43	17.37	17.12	18.50
	Subtest 3	16.99	16.98	16.76	18.00
	Subtest 4	16.94	16.91	16.70	18.00
HSUPA	Subtest 1	16.19	16.29	16.37	16.80
	Subtest 2	15.31	15.32	15.21	16.80
	Subtest 3	16.29	16.35	16.15	17.80
	Subtest 4	15.37	15.36	15.24	16.30
	Subtest 5	17.21	17.11	17.01	17.80
DC-HSDPA	Subtest 1	17.20	17.27	16.97	18.50
	Subtest 2	17.45	17.39	17.16	18.50
	Subtest 3	16.65	16.67	16.51	18.00

	Subtest 4	16.99	17.00	16.85	18.00
HSPA+	16QAM	15.8	15.85	15.91	16.80

WCDMA Band II receiver on					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	18.69	18.69	18.47	20.30
	12.2kbps AMR	18.65	18.69	18.45	20.30
HSDPA	Subtest 1	17.78	17.80	17.54	19.00
	Subtest 2	17.70	17.64	17.39	19.00
	Subtest 3	17.38	17.37	17.15	18.50
	Subtest 4	17.39	17.36	17.15	18.50
HSUPA	Subtest 1	17.20	17.11	17.09	17.30
	Subtest 2	15.81	15.82	15.71	17.30
	Subtest 3	16.59	16.65	16.45	18.30
	Subtest 4	15.65	15.64	15.52	16.80
	Subtest 5	17.56	17.46	17.36	18.30
DC-HSDPA	Subtest 1	17.70	17.77	17.47	19.00
	Subtest 2	17.90	17.84	17.61	19.00
	Subtest 3	17.02	17.04	16.88	18.50
	Subtest 4	17.21	17.22	17.07	18.50
HSPA+	16QAM	16.08	16.13	16.19	17.30
WCDMA Band IV receiver off					
Average Conducted Power(dBm)					
Channel		1312	1412	1513	Tune up
WCDMA	12.2kbps RMC	19.32	19.40	19.82	20.80
	12.2kbps AMR	19.32	19.39	19.78	20.80
HSDPA	Subtest 1	19.21	19.23	18.97	20.50
	Subtest 2	19.16	19.10	18.85	20.50
	Subtest 3	18.81	18.80	18.58	20.00
	Subtest 4	18.85	18.82	18.61	20.00
HSUPA	Subtest 1	18.56	18.47	18.45	18.80
	Subtest 2	17.21	17.22	17.11	18.80
	Subtest 3	18.04	18.10	17.90	19.80
	Subtest 4	17.04	17.03	16.91	18.30
	Subtest 5	19.07	18.97	18.87	19.80
DC-HSDPA	Subtest 1	19.10	19.17	18.87	20.50
	Subtest 2	19.26	19.20	18.97	20.50
	Subtest 3	18.48	18.50	18.34	20.00
	Subtest 4	18.75	18.76	18.61	20.00
HSPA+	16QAM	17.63	17.68	17.74	18.80

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WCDMA Band IV hotspot on/receiver off +WIFI/BT					
Average Conducted Power(dBm)					
Channel		1312	1412	1513	Tune up
WCDMA	12.2kbps RMC	18.01	17.83	18.37	19.30
	12.2kbps AMR	18.00	17.81	18.36	19.30
HSDPA	Subtest 1	17.79	17.81	17.55	19.00
	Subtest 2	17.67	17.61	17.36	19.00
	Subtest 3	17.44	17.43	17.21	18.50
	Subtest 4	17.33	17.30	17.09	18.50
HSUPA	Subtest 1	17.17	17.08	17.06	17.30
	Subtest 2	15.73	15.74	15.63	17.30
	Subtest 3	16.69	16.75	16.55	18.30
	Subtest 4	15.61	15.60	15.48	16.80
	Subtest 5	17.65	17.55	17.45	18.30
DC-HSDPA	Subtest 1	17.62	17.69	17.39	19.00
	Subtest 2	17.86	17.80	17.57	19.00
	Subtest 3	17.03	17.05	16.89	18.50
	Subtest 4	17.20	17.21	17.06	18.50
HSPA+	16QAM	16.06	16.11	16.17	17.30
WCDMA Band IV receiver on					
Average Conducted Power(dBm)					
Channel		1312	1412	1513	Tune up
WCDMA	12.2kbps RMC	19.80	19.82	20.05	21.30
	12.2kbps AMR	19.79	19.81	20.04	21.30
HSDPA	Subtest 1	19.68	19.70	19.44	21.00
	Subtest 2	19.69	19.63	19.38	21.00
	Subtest 3	19.30	19.29	19.07	20.50
	Subtest 4	19.33	19.30	19.09	20.50
HSUPA	Subtest 1	19.06	18.97	18.95	19.30
	Subtest 2	17.77	17.78	17.67	19.30
	Subtest 3	18.59	18.65	18.45	20.30
	Subtest 4	17.58	17.57	17.45	18.80
	Subtest 5	19.55	19.45	19.35	20.30
DC-HSDPA	Subtest 1	19.60	19.67	19.37	21.00
	Subtest 2	19.78	19.72	19.49	21.00
	Subtest 3	18.95	18.97	18.81	20.50
	Subtest 4	19.20	19.21	19.06	20.50
HSPA+	16QAM	18.11	18.16	18.22	19.30

Note:
1) when the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

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8.1.3 Conducted Power of LTE

ANT1

LTE Band 5				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 20407	Channel 20525	Channel 20643	Tune up
1.4MHz	QPSK	1	0	24.10	23.90	23.16	25.00
		1	2	24.04	23.71	23.06	25.00
		1	5	23.96	23.48	23.41	25.00
		3	0	23.92	23.63	23.16	25.00
		3	2	23.99	23.92	23.20	25.00
		3	3	23.90	23.83	23.40	25.00
		6	0	22.96	22.71	22.27	24.00
	16QAM	1	0	23.39	23.05	22.49	24.00
		1	2	23.68	22.83	22.95	24.00
		1	5	22.98	23.28	22.93	24.00
		3	0	23.10	22.71	22.17	24.00
		3	2	23.23	22.72	22.43	24.00
		3	3	22.87	22.85	22.48	24.00
		6	0	22.08	21.89	21.30	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 20415	Channel 20525	Channel 20635	Tune up
3MHz	QPSK	1	0	24.17	23.83	23.66	25.00
		1	7	24.00	23.76	23.21	25.00
		1	14	23.81	23.56	23.01	25.00
		8	0	22.97	22.62	22.19	24.00
		8	4	23.00	22.69	22.22	24.00
		8	7	23.04	22.48	22.33	24.00
		15	0	22.91	22.56	22.16	24.00
	16QAM	1	0	22.86	23.09	22.18	24.00
		1	7	23.45	23.03	22.39	24.00
		1	14	22.95	22.49	22.46	24.00
		8	0	21.96	21.59	21.04	23.00
		8	4	21.91	21.71	21.06	23.00
		8	7	22.01	21.64	21.13	23.00
		15	0	21.97	21.58	21.15	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 20425	Channel 20525	Channel 20625	Tune up
5MHz	QPSK	1	0	24.28	23.87	23.85	25.00
		1	13	23.90	23.77	23.24	25.00
		1	24	23.78	23.57	23.03	25.00

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		12	0	22.93	22.72	22.12	24.00
		12	6	22.82	22.79	22.07	24.00
		12	13	22.95	22.66	22.16	24.00
		25	0	22.85	22.69	22.07	24.00
	16QAM	1	0	23.45	22.66	22.34	24.00
		1	13	23.50	22.92	22.68	24.00
		1	24	22.99	22.68	22.55	24.00
		12	0	21.95	21.75	21.18	23.00
		12	6	21.88	21.71	21.13	23.00
		12	13	21.93	21.50	21.03	23.00
		25	0	21.96	21.61	21.07	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20450	20525	20600	
10MHz	QPSK	1	0	24.27	23.86	23.87	25.00
		1	25	23.22	23.25	22.81	25.00
		1	49	23.80	23.87	23.49	25.00
		25	0	22.32	22.31	21.82	24.00
		25	13	22.40	22.38	21.87	24.00
		25	25	22.61	22.60	22.06	24.00
		50	0	22.52	22.44	22.02	24.00
	16QAM	1	0	23.19	23.01	21.96	24.00
		1	25	22.76	22.38	21.81	24.00
		1	49	23.04	23.23	22.65	24.00
		25	0	21.43	21.14	20.88	23.00
		25	13	21.41	21.23	20.95	23.00
		25	25	21.51	21.51	20.93	23.00
		50	0	21.60	21.32	20.98	23.00

LTE FDD Band 12				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23017	23095	23173	
1.4MHz	QPSK	1	0	23.10	23.75	23.69	25.00
		1	2	23.11	23.98	23.89	25.00
		1	5	23.09	23.62	23.88	25.00
		3	0	23.38	23.77	23.84	25.00
		3	2	23.06	23.70	24.00	25.00
		3	3	23.03	23.77	23.99	25.00
		6	0	22.13	22.69	22.72	24.00
	16QAM	1	0	22.36	23.07	23.23	24.00
		1	2	22.52	23.37	23.14	24.00

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		1	5	22.64	23.41	22.95	24.00
		3	0	22.07	22.78	22.69	24.00
		3	2	22.09	22.64	22.92	24.00
		3	3	22.07	22.69	22.75	24.00
		6	0	21.39	21.65	22.13	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23025	23095	23165	
3MHz	QPSK	1	0	23.66	23.73	23.77	25.00
		1	7	23.30	23.76	23.81	25.00
		1	14	23.12	23.63	23.76	25.00
		8	0	22.34	22.53	22.68	24.00
		8	4	22.42	22.71	22.84	24.00
		8	7	22.27	22.70	22.87	24.00
		15	0	22.34	22.55	22.73	24.00
	16QAM	1	0	22.61	23.04	22.88	24.00
		1	7	22.79	22.98	23.44	24.00
		1	14	22.48	22.56	23.15	24.00
		8	0	21.33	21.61	21.80	23.00
		8	4	21.34	21.59	21.84	23.00
		8	7	21.30	21.63	21.66	23.00
		15	0	21.36	21.64	21.88	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23035	23095	23155	
5MHz	QPSK	1	0	23.72	23.63	23.89	25.00
		1	13	23.71	23.95	23.77	25.00
		1	24	23.42	23.74	23.84	25.00
		12	0	22.34	22.70	22.85	24.00
		12	6	22.39	22.73	22.80	24.00
		12	13	22.58	22.76	22.78	24.00
		25	0	22.49	22.77	22.66	24.00
	16QAM	1	0	22.66	22.83	22.75	24.00
		1	13	22.87	22.94	23.29	24.00
		1	24	22.95	22.85	23.05	24.00
		12	0	21.38	21.64	21.71	23.00
		12	6	21.44	21.57	21.77	23.00
		12	13	21.55	21.64	21.88	23.00
		25	0	21.52	21.66	21.69	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23060	23095	23130	
10MHz	QPSK	1	0	23.57	23.78	23.76	25.00
		1	25	23.33	23.81	23.87	25.00
		1	49	23.85	24.15	24.13	25.00

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		25	0	22.54	22.75	22.71	24.00
		25	13	22.61	22.83	22.81	24.00
		25	25	22.73	22.77	22.74	24.00
		50	0	22.59	22.73	22.60	24.00
	16QAM	1	0	22.82	22.72	22.77	24.00
		1	25	22.86	22.59	22.95	24.00
		1	49	23.24	22.85	22.93	24.00
		25	0	21.52	21.56	21.57	23.00
		25	13	21.58	21.74	21.71	23.00
		25	25	21.64	21.75	21.71	23.00
		50	0	21.62	21.61	21.75	23.00

LTE FDD Band 17				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23755	23790	23825	
5MHz	QPSK	1	0	23.65	23.58	23.78	25.00
		1	13	23.60	23.70	23.84	25.00
		1	24	23.74	23.74	23.67	25.00
		12	0	22.73	22.63	22.74	24.00
		12	6	22.70	22.76	22.84	24.00
		12	13	22.76	22.76	22.84	24.00
		25	0	22.74	22.75	22.79	24.00
	16QAM	1	0	23.07	23.16	22.87	24.00
		1	13	22.56	23.07	23.08	24.00
		1	24	22.75	23.08	22.72	24.00
		12	0	21.69	21.58	21.62	23.00
		12	6	21.68	21.64	21.81	23.00
		12	13	21.67	21.68	21.70	23.00
		25	0	21.67	21.58	21.77	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23780	23790	23800	
10MHz	QPSK	1	0	23.85	23.76	23.80	25.00
		1	25	23.73	23.87	23.74	25.00
		1	49	23.06	23.13	23.04	25.00
		25	0	22.73	22.78	22.75	24.00
		25	13	22.75	22.80	22.84	24.00
		25	25	22.85	22.84	22.97	24.00
		50	0	22.79	22.81	22.94	24.00
	16QAM	1	0	22.82	22.88	22.79	24.00
		1	25	22.59	23.03	22.76	24.00

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		1	49	23.33	23.05	23.24	24.00
		25	0	21.60	21.76	21.59	23.00
		25	13	21.68	21.74	21.62	23.00
		25	25	21.69	21.77	21.93	23.00
		50	0	21.64	21.78	21.78	23.00

LTE Band 26				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26697	26865	27033	
1.4MHz	QPSK	1	0	23.52	23.53	23.47	25.00
		1	2	23.77	23.93	23.77	25.00
		1	5	23.22	23.90	23.63	25.00
		3	0	23.85	24.21	23.62	25.00
		3	2	23.26	24.05	23.62	25.00
		3	3	23.19	23.99	23.69	25.00
		6	0	22.79	22.48	22.46	24.00
	16QAM	1	0	23.37	23.18	22.77	24.00
		1	2	23.62	23.22	22.89	24.00
		1	5	23.25	23.17	23.04	24.00
		3	0	22.80	22.73	22.32	24.00
		3	2	22.90	22.64	22.29	24.00
		3	3	22.74	22.61	22.39	24.00
		6	0	21.75	21.74	21.66	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26705	26865	27025	
3MHz	QPSK	1	0	23.62	23.61	23.43	25.00
		1	7	23.76	23.44	23.51	25.00
		1	14	23.9	23.97	23.57	25.00
		8	0	22.67	22.71	22.29	24.00
		8	4	22.76	22.71	22.43	24.00
		8	7	22.82	22.77	22.58	24.00
		15	0	22.71	22.78	22.35	24.00
	16QAM	1	0	22.84	22.75	22.48	24.00
		1	7	22.99	23.13	22.77	24.00
		1	14	22.75	23.09	22.71	24.00
		8	0	21.72	21.74	21.22	23.00
		8	4	21.79	21.82	21.27	23.00
		8	7	21.79	21.85	21.38	23.00
		15	0	21.85	21.78	21.32	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up

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				26715	26865	27015	
5MHz	QPSK	1	0	23.73	23.78	23.48	25.00
		1	13	23.82	23.15	23.62	25.00
		1	24	23.57	23.11	23.54	25.00
		12	0	22.74	22.85	22.23	24.00
		12	6	22.78	22.77	22.29	24.00
		12	13	22.80	22.80	22.39	24.00
		25	0	22.73	22.70	22.28	24.00
	16QAM	1	0	23.03	22.70	22.67	24.00
		1	13	22.70	23.18	22.78	24.00
		1	24	23.07	22.83	22.45	24.00
		12	0	21.76	21.79	21.22	23.00
		12	6	21.72	21.92	21.21	23.00
		12	13	21.81	21.82	21.38	23.00
		25	0	21.81	21.73	21.30	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26750	26865	26990	
10MHz	QPSK	1	0	23.87	23.10	23.37	25.00
		1	25	23.79	23.00	23.45	25.00
		1	49	23.66	23.03	23.56	25.00
		25	0	22.82	22.97	22.42	24.00
		25	13	22.85	22.84	22.28	24.00
		25	25	22.68	22.78	22.24	24.00
		50	0	22.78	22.84	22.42	24.00
	16QAM	1	0	22.87	22.73	22.43	24.00
		1	25	23.03	23.20	22.61	24.00
		1	49	22.83	22.65	22.12	24.00
		25	0	21.80	21.92	21.39	23.00
		25	13	21.71	21.81	21.19	23.00
		25	25	21.65	21.75	21.18	23.00
		50	0	21.74	21.90	21.48	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26750	26865	26990	
15MHz	QPSK	1	0	23.65	23.58	23.50	25.00
		1	38	23.79	23.66	23.58	25.00
		1	74	23.93	23.94	23.64	25.00
		36	0	22.70	22.68	22.36	24.00
		36	18	22.79	22.68	22.50	24.00
		36	39	22.85	22.74	22.65	24.00
		75	0	22.74	22.75	22.42	24.00
	16QAM	1	0	22.82	22.72	22.55	24.00
		1	38	22.97	23.10	22.84	24.00

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		1	74	22.73	23.06	22.78	24.00
		36	0	21.70	21.71	21.24	23.00
		36	18	21.77	21.79	21.29	23.00
		36	39	21.77	21.82	21.40	23.00
		75	0	21.84	21.75	21.34	23.00

ANT3

LTE Band 5				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 20407	Channel 20525	Channel 20643	Tune up
1.4MHz	QPSK	1	0	24.03	23.54	23.45	24.80
		1	2	23.63	23.45	22.99	24.80
		1	5	23.61	23.38	22.83	24.80
		3	0	22.70	22.45	22.25	23.80
		3	2	22.58	22.49	22.26	23.80
		3	3	22.69	22.50	22.29	23.80
		6	0	22.65	22.46	21.82	23.80
	16QAM	1	0	22.85	22.75	22.55	23.80
		1	2	22.75	22.69	22.10	23.80
		1	5	22.73	22.34	22.63	23.80
		3	0	21.82	21.51	21.21	22.80
		3	2	21.72	21.58	21.24	22.80
		3	3	21.65	21.49	21.23	22.80
		6	0	21.59	21.38	20.83	22.80
Bandwidth	Modulation	RB size	RB offset	Channel 20415	Channel 20525	Channel 20635	Tune up
3MHz	QPSK	1	0	23.82	23.30	23.72	24.80
		1	7	23.79	23.35	22.89	24.80
		1	14	23.61	23.35	23.08	24.80
		8	0	22.61	22.17	21.89	23.80
		8	4	22.60	22.35	21.83	23.80
		8	7	22.97	22.20	21.90	23.80
		15	0	22.67	22.20	21.95	23.80
	16QAM	1	0	23.06	22.85	21.82	23.80
		1	7	22.95	22.75	22.23	23.80
		1	14	23.04	22.76	22.15	23.80
		8	0	21.69	21.34	20.89	22.80
		8	4	21.61	21.31	20.92	22.80
		8	7	21.57	21.40	20.99	22.80

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		15	0	21.55	21.18	20.86	22.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20425	20525	20625	
5MHz	QPSK	1	0	24.03	23.54	23.45	24.80
		1	13	23.63	23.45	22.99	24.80
		1	24	23.61	23.38	22.87	24.80
		12	0	22.70	22.45	21.85	23.80
		12	6	22.58	22.49	21.86	23.80
		12	13	22.69	22.50	21.89	23.80
		25	0	22.65	22.46	21.82	23.80
	16QAM	1	0	22.85	22.75	22.55	23.80
		1	13	23.09	22.69	22.10	23.80
		1	24	22.73	22.34	22.63	23.80
		12	0	21.82	21.51	22.00	22.80
		12	6	21.72	21.58	20.84	22.80
		12	13	21.65	21.49	20.93	22.80
		25	0	21.59	21.38	21.00	22.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20450	20525	20600	
10MHz	QPSK	1	0	24.13	23.60	23.42	24.80
		1	25	23.00	23.21	22.83	24.80
		1	49	23.82	23.82	23.51	24.80
		25	0	22.27	22.10	21.92	23.80
		25	13	22.40	22.21	22.03	23.80
		25	25	22.56	22.49	22.33	23.80
		50	0	22.42	22.43	22.21	23.80
	16QAM	1	0	22.75	22.84	22.66	23.80
		1	25	22.90	22.10	22.03	23.80
		1	49	22.83	23.23	23.02	23.80
		25	0	21.42	21.15	21.04	22.80
		25	13	21.47	21.15	21.16	22.80
		25	25	21.55	21.42	21.00	22.80
		50	0	21.44	21.41	21.11	22.80

LTE FDD Band 12				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23017	23095	23173	
1.4MHz	QPSK	1	0	23.23	23.03	23.47	24.90
		1	2	23.39	23.16	23.62	24.90
		1	5	23.22	23.19	23.34	24.90

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		3	0	22.87	22.84	23.15	24.90
		3	2	22.92	22.87	23.00	24.90
		3	3	22.83	22.84	22.90	24.90
		6	0	22.17	22.19	22.02	23.90
	16QAM	1	0	22.26	22.29	22.42	23.90
		1	2	22.17	22.37	22.71	23.90
		1	5	22.34	22.23	22.43	23.90
		3	0	21.74	21.90	22.29	23.90
		3	2	21.79	21.96	22.23	23.90
		3	3	21.71	22.02	22.10	23.90
		6	0	21.28	21.02	21.56	22.90
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23025	23095	23165	
3MHz	QPSK	1	0	23.04	23.52	23.45	24.90
		1	7	23.40	23.51	23.45	24.90
		1	14	23.12	23.47	23.54	24.90
		8	0	22.07	22.34	22.50	23.90
		8	4	22.01	22.37	22.54	23.90
		8	7	22.14	22.35	22.53	23.90
		15	0	22.05	22.43	22.55	23.90
	16QAM	1	0	22.50	23.00	22.49	23.90
		1	7	22.06	23.00	22.93	23.90
		1	14	22.28	22.74	22.65	23.90
		8	0	21.13	21.48	21.49	22.90
		8	4	21.20	21.42	21.50	22.90
		8	7	21.07	21.41	21.66	22.90
		15	0	21.01	21.33	21.52	22.90
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23035	23095	23155	
5MHz	QPSK	1	0	23.31	23.41	23.23	24.90
		1	13	23.30	23.56	23.84	24.90
		1	24	23.07	23.54	23.58	24.90
		12	0	22.56	22.46	22.49	23.90
		12	6	22.13	22.52	22.50	23.90
		12	13	22.32	22.43	22.51	23.90
		25	0	22.27	22.50	22.54	23.90
	16QAM	1	0	22.66	22.43	22.73	23.90
		1	13	22.58	22.66	23.23	23.90
		1	24	22.66	22.38	23.27	23.90
		12	0	21.13	21.43	21.58	22.90
		12	6	21.16	21.35	21.54	22.90
		12	13	21.31	21.36	21.49	22.90

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		25	0	21.34	21.41	21.49	22.90
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23060	23095	23130	
10MHz	QPSK	1	0	23.12	23.64	23.56	24.90
		1	25	23.46	23.56	23.87	24.90
		1	49	23.66	23.77	24.21	24.90
		25	0	22.44	22.59	22.57	23.90
		25	13	22.47	22.69	22.82	23.90
		25	25	22.58	22.69	22.74	23.90
		50	0	22.47	22.59	22.75	23.90
	16QAM	1	0	22.39	22.77	23.11	23.90
		1	25	22.90	22.52	22.95	23.90
		1	49	23.15	22.78	22.95	23.90
		25	0	21.45	21.55	21.62	22.90
		25	13	21.47	21.75	21.62	22.90
		25	25	21.65	21.67	21.67	22.90
		50	0	21.53	21.57	21.69	22.90

LTE FDD Band 17				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23755	23790	23825	
5MHz	QPSK	1	0	23.20	23.30	23.52	24.90
		1	13	23.42	23.42	23.39	24.90
		1	24	23.30	23.42	23.45	24.90
		12	0	22.38	22.51	22.52	23.90
		12	6	22.47	22.51	22.64	23.90
		12	13	22.48	22.65	22.66	23.90
		25	0	22.51	22.54	22.57	23.90
	16QAM	1	0	22.83	22.44	22.94	23.90
		1	13	22.72	22.82	22.83	23.90
		1	24	22.88	22.33	22.95	23.90
		12	0	21.37	21.27	21.45	22.90
		12	6	21.42	21.44	21.58	22.90
		12	13	21.35	21.49	21.45	22.90
		25	0	21.34	21.41	21.54	22.90
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				23780	23790	23800	
10MHz	QPSK	1	0	23.39	23.33	23.46	24.90
		1	25	23.48	23.58	23.62	24.90
		1	49	23.05	23.03	23.00	24.90

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		25	0	22.67	22.66	22.65	23.90
		25	13	22.66	22.66	22.68	23.90
		25	25	22.72	22.76	22.87	23.90
		50	0	22.68	22.72	22.78	23.90
	16QAM	1	0	22.65	22.76	22.43	23.90
		1	25	22.85	22.86	23.03	23.90
		1	49	23.11	23.00	23.05	23.90
		25	0	21.66	21.62	21.57	22.90
		25	13	21.65	21.70	21.75	22.90
		25	25	21.81	21.73	21.74	22.90
		50	0	21.76	21.78	21.96	22.90

LTE Band 26				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26697	26865	27033	
1.4MHz	QPSK	1	0	23.35	23.07	23.34	24.80
		1	2	23.56	23.39	23.20	24.80
		1	5	23.50	23.29	23.40	24.80
		3	0	22.65	22.74	22.58	24.80
		3	2	22.64	22.78	22.52	24.80
		3	3	22.98	22.72	22.59	24.80
		6	0	22.45	22.20	22.10	23.80
	16QAM	1	0	22.86	22.80	22.50	23.80
		1	2	23.06	22.51	22.32	23.80
		1	5	22.87	22.25	22.28	23.80
		3	0	22.56	22.46	22.07	23.80
		3	2	22.56	22.39	21.98	23.80
		3	3	22.46	22.40	21.70	23.80
		6	0	21.84	21.23	21.20	22.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26705	26865	27025	
3MHz	QPSK	1	0	23.40	23.23	23.45	24.80
		1	13	23.46	23.35	23.55	24.80
		1	24	23.41	23.37	23.65	24.80
		12	0	22.58	22.53	22.54	23.80
		12	6	22.49	22.54	22.59	23.80
		12	13	22.54	22.60	22.62	23.80
		25	0	22.42	22.50	22.52	23.80

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	16QAM	1	0	22.59	22.83	22.79	23.80
		1	13	22.37	22.53	23.16	23.80
		1	24	22.60	22.46	22.39	23.80
		12	0	21.47	21.74	21.51	22.80
		12	6	21.61	21.34	21.54	22.80
		12	13	21.48	21.67	21.59	22.80
		25	0	21.55	21.55	21.58	22.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26715	26865	27015	
5MHz	QPSK	1	0	23.40	23.37	23.16	24.80
		1	13	23.63	23.40	23.47	24.80
		1	24	23.37	23.46	23.12	24.80
		12	0	22.46	22.66	22.11	23.80
		12	6	22.42	22.37	22.36	23.80
		12	13	22.53	22.33	22.37	23.80
		25	0	22.45	22.63	22.40	23.80
	16QAM	1	0	22.71	22.69	22.28	23.80
		1	13	22.55	22.72	23.09	23.80
		1	24	22.80	22.54	22.37	23.80
		12	0	21.62	21.52	21.09	22.80
		12	6	21.47	21.32	21.33	22.80
		12	13	21.50	21.70	21.43	22.80
		25	0	21.36	21.36	21.38	22.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26750	26865	26990	
10MHz	QPSK	1	0	23.82	23.53	23.14	24.80
		1	25	23.53	23.50	23.05	24.80
		1	49	23.48	23.44	23.19	24.80
		25	0	22.56	22.59	22.03	23.80
		25	13	22.54	22.75	22.45	23.80
		25	25	22.42	22.30	22.04	23.80
		50	0	22.51	22.55	22.13	23.80
	16QAM	1	0	22.79	22.51	22.61	23.80
		1	25	22.73	22.72	22.36	23.80
		1	49	22.97	22.70	22.40	23.80
		25	0	21.63	21.58	21.01	22.80
		25	13	21.44	21.61	21.06	22.80
		25	25	21.37	21.72	21.60	22.80
		50	0	21.47	21.52	21.16	22.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				26750	26865	26990	
15MHz	QPSK	1	0	23.48	23.62	23.17	24.80

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		1	38	23.32	23.53	23.32	24.80
		1	74	23.08	23.38	23.16	24.80
		36	0	22.64	22.62	22.33	23.80
		36	18	22.64	22.74	22.14	23.80
		36	39	22.45	22.63	22.09	23.80
		75	0	22.58	22.66	22.30	23.80
	16QAM	1	0	23.04	22.79	22.18	23.80
		1	38	22.81	22.72	22.20	23.80
		1	74	23.12	23.05	22.21	23.80
		36	0	21.60	21.58	21.22	22.80
		36	18	21.60	21.41	21.06	22.80
		36	39	21.43	21.57	21.50	22.80
		75	0	21.65	21.48	21.18	22.80

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LTE Band 2 receiver off/receiver on				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18607	18900	19193	
1.4MHz	QPSK	1	0	23.19	23.03	23.12	24.50
		1	2	23.19	23.28	23.26	24.50
		1	5	22.93	23.02	23.11	24.50
		3	0	23.29	23.16	22.33	24.50
		3	2	23.33	23.16	22.36	24.50
		3	3	23.38	23.44	22.38	24.50
		6	0	22.15	22.15	22.20	23.50
	16QAM	1	0	22.05	22.68	22.45	23.50
		1	2	22.76	22.30	22.65	23.50
		1	5	22.68	22.70	22.46	23.50
		3	0	22.13	22.17	21.38	23.50
		3	2	22.16	22.15	21.35	23.50
		3	3	22.24	22.08	21.34	23.50
		6	0	21.13	21.38	21.35	22.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18615	18900	19185	
3MHz	QPSK	1	0	23.46	23.12	23.07	24.50
		1	7	23.34	23.27	22.59	24.50
		1	14	23.06	23.12	22.31	24.50
		8	0	22.14	22.18	22.17	23.50
		8	4	22.16	22.24	22.20	23.50
		8	7	22.17	22.23	22.26	23.50
		15	0	22.13	22.18	22.23	23.50

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	16QAM	1	0	22.25	22.58	22.08	23.50
		1	7	22.62	22.79	21.79	23.50
		1	14	22.62	22.60	21.33	23.50
		8	0	21.19	21.15	21.13	22.50
		8	4	21.27	21.06	21.20	22.50
		8	7	21.24	21.21	21.07	22.50
		15	0	21.15	21.15	21.23	22.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18625	18900	19175	
5MHz	QPSK	1	0	23.63	23.23	23.39	24.50
		1	13	23.44	23.21	22.96	24.50
		1	24	23.23	23.30	22.33	24.50
		12	0	22.17	22.26	22.19	23.50
		12	6	22.25	22.22	22.18	23.50
		12	13	22.00	22.20	22.11	23.50
		25	0	22.15	22.22	22.28	23.50
	16QAM	1	0	22.81	22.47	22.30	23.50
		1	13	22.59	22.27	22.04	23.50
		1	24	22.11	22.17	21.38	23.50
		12	0	21.19	21.31	21.28	22.50
		12	6	21.20	21.14	21.19	22.50
		12	13	21.14	21.15	21.23	22.50
		25	0	21.27	21.28	21.13	22.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18650	18900	19150	
10MHz	QPSK	1	0	23.70	23.55	23.21	24.50
		1	25	23.47	23.32	23.22	24.50
		1	49	23.48	23.69	22.33	24.50
		25	0	22.34	22.26	22.18	23.50
		25	13	22.30	22.18	22.24	23.50
		25	25	22.23	22.36	22.32	23.50
		50	0	22.32	22.25	22.21	23.50
	16QAM	1	0	22.47	22.61	22.45	23.50
		1	25	22.64	22.69	22.29	23.50
		1	49	21.82	22.43	21.55	23.50
		25	0	21.28	21.28	21.27	22.50
		25	13	21.19	21.21	21.35	22.50
		25	25	21.37	21.41	21.33	22.50
		50	0	21.41	21.26	21.24	22.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18675	18900	19125	
15MHz	QPSK	1	0	23.00	22.94	22.94	24.50

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		1	38	23.00	23.23	23.11	24.50
		1	74	22.87	23.31	22.37	24.50
		36	0	21.84	21.98	22.01	23.50
		36	18	22.09	22.30	22.01	23.50
		36	39	22.08	22.24	22.27	23.50
		75	0	22.02	22.10	22.08	23.50
	16QAM	1	0	22.06	22.17	21.88	23.50
		1	38	22.16	22.67	22.24	23.50
		1	74	21.35	22.60	21.37	23.50
		36	0	20.92	20.95	20.90	22.50
		36	18	21.12	21.28	21.18	22.50
		36	39	21.06	21.22	21.17	22.50
		75	0	21.08	21.21	21.08	22.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18700	18900	19100	
20MHz	QPSK	1	0	23.42	23.43	23.36	24.50
		1	50	23.38	23.40	22.98	24.50
		1	99	22.76	22.67	22.38	24.50
		50	0	22.44	22.45	22.39	23.50
		50	25	22.33	22.34	22.30	23.50
		50	50	22.13	22.19	22.13	23.50
		100	0	22.45	22.33	22.46	23.50
	16QAM	1	0	22.81	22.68	22.66	23.50
		1	50	22.15	22.45	22.29	23.50
		1	99	21.84	22.20	21.81	23.50
		50	0	21.46	21.45	21.29	22.50
		50	25	21.43	21.23	21.32	22.50
		50	50	21.24	21.25	21.10	22.50
		100	0	21.32	21.29	21.19	22.50

LTE Band 2 hotspot on				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18607	18900	19193	
1.4MHz	QPSK	1	0	21.45	21.16	20.91	21.50
		1	2	20.85	20.81	20.81	21.50
		1	5	21.00	20.76	20.73	21.50
		3	0	21.42	20.87	20.94	21.50
		3	2	21.02	20.74	20.62	21.50
		3	3	21.33	21.19	21.13	21.50
		6	0	20.93	21.06	20.85	21.50

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	16QAM	1	0	21.28	20.93	21.00	21.50
		1	2	21.43	21.44	21.28	21.50
		1	5	21.10	21.16	21.24	21.50
		3	0	21.02	20.75	20.93	21.50
		3	2	21.36	21.04	20.72	21.50
		3	3	20.96	20.86	20.89	21.50
		6	0	21.07	21.06	20.91	21.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18615	18900	19185	
3MHz	QPSK	1	0	21.24	20.91	21.13	21.50
		1	7	20.81	20.59	20.87	21.50
		1	14	21.23	21.46	21.03	21.50
		8	0	21.12	21.01	20.97	21.50
		8	4	21.05	20.96	20.79	21.50
		8	7	21.34	21.07	20.75	21.50
		15	0	21.24	20.98	20.80	21.50
	16QAM	1	0	21.15	21.13	21.44	21.50
		1	7	21.32	21.41	21.39	21.50
		1	14	21.00	21.40	21.49	21.50
		8	0	21.12	21.04	20.90	21.50
		8	4	20.98	20.85	20.89	21.50
		8	7	21.04	20.82	20.99	21.50
		15	0	21.08	21.02	21.07	21.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18625	18900	19175	
5MHz	QPSK	1	0	21.32	21.12	21.05	21.50
		1	13	21.05	20.88	20.72	21.50
		1	24	21.06	20.80	20.96	21.50
		12	0	21.36	20.81	21.00	21.50
		12	6	21.02	20.88	20.71	21.50
		12	13	21.32	20.88	21.11	21.50
		25	0	20.93	20.75	20.89	21.50
	16QAM	1	0	21.18	21.12	21.46	21.50
		1	13	21.47	21.44	21.36	21.50
		1	24	21.25	21.37	21.36	21.50
		12	0	21.01	20.88	20.67	21.50
		12	6	21.08	20.93	20.67	21.50
		12	13	20.83	20.82	20.74	21.50
		25	0	21.16	21.05	20.93	21.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18650	18900	19150	
10MHz	QPSK	1	0	21.48	21.05	20.98	21.50

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		1	25	20.99	20.72	20.72	21.50
		1	49	21.20	20.94	20.92	21.50
		25	0	21.23	20.93	20.84	21.50
		25	13	21.07	20.89	20.82	21.50
		25	25	21.17	21.01	20.95	21.50
		50	0	21.11	20.86	20.94	21.50
	16QAM	1	0	21.34	21.10	21.46	21.50
		1	25	21.41	21.43	21.43	21.50
		1	49	21.09	21.46	21.30	21.50
		25	0	21.18	20.94	20.83	21.50
		25	13	21.17	20.85	20.81	21.50
		25	25	21.02	21.02	20.83	21.50
		50	0	21.05	21.06	20.99	21.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18675	18900	19125	
15MHz	QPSK	1	0	20.76	20.39	20.37	21.50
		1	38	20.91	21.30	20.78	21.50
		1	74	20.44	21.06	20.65	21.50
		36	0	20.75	20.57	20.51	21.50
		36	18	20.91	20.79	20.68	21.50
		36	39	21.06	20.96	20.81	21.50
		75	0	20.92	20.76	20.74	21.50
	16QAM	1	0	21.11	20.80	21.02	21.50
		1	38	21.28	21.09	20.78	21.50
		1	74	20.24	20.87	20.70	21.50
		36	0	20.69	20.60	20.44	21.50
		36	18	20.96	21.02	20.70	21.50
		36	39	21.10	20.98	20.77	21.50
		75	0	20.95	20.86	20.80	21.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18700	18900	19100	
20MHz	QPSK	1	0	21.13	21.26	20.98	21.50
		1	50	21.02	20.91	20.71	21.50
		1	99	20.52	20.32	20.31	21.50
		50	0	21.05	21.10	20.94	21.50
		50	25	21.09	21.00	20.89	21.50
		50	50	20.87	20.77	20.69	21.50
		100	0	21.07	20.95	20.95	21.50
	16QAM	1	0	21.14	21.23	20.96	21.50
		1	50	21.15	21.16	20.83	21.50
		1	99	20.44	21.08	20.69	21.50
		50	0	21.18	21.07	20.82	21.50

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		50	25	21.13	20.94	20.90	21.50
		50	50	20.98	20.87	20.66	21.50
		100	0	21.12	21.01	20.81	21.50

LTE Band 4 receiver off/receiver on				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19957	20175	20393	
1.4MHz	QPSK	1	0	22.88	22.95	23.37	24.30
		1	2	22.43	23.35	23.44	24.30
		1	5	22.25	22.87	23.21	24.30
		3	0	22.32	22.94	23.12	24.30
		3	2	22.36	23.06	23.44	24.30
		3	3	22.27	22.99	23.55	24.30
		6	0	21.09	21.56	22.16	23.30
	16QAM	1	0	21.54	21.91	22.54	23.30
		1	2	21.69	22.67	22.44	23.30
		1	5	21.16	22.39	22.21	23.30
		3	0	21.32	21.79	22.16	23.30
		3	2	21.24	21.72	22.30	23.30
		3	3	21.18	21.69	21.96	23.30
		6	0	20.44	20.63	21.37	22.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19965	20175	20385	
3MHz	QPSK	1	0	22.83	22.95	23.08	24.30
		1	7	22.64	23.00	23.60	24.30
		1	14	22.48	23.12	23.25	24.30
		8	0	21.46	21.96	22.28	23.30
		8	4	21.45	22.07	22.19	23.30
		8	7	21.42	21.94	22.24	23.30
		15	0	21.37	21.85	22.19	23.30
	16QAM	1	0	21.39	21.88	22.30	23.30
		1	7	21.79	22.21	22.47	23.30
		1	14	21.44	21.94	22.53	23.30
		8	0	20.75	20.89	21.17	22.30
		8	4	20.83	20.92	21.26	22.30
		8	7	20.89	20.90	21.21	22.30
		15	0	20.88	20.94	21.50	22.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19975	20175	20375	
5MHz	QPSK	1	0	23.18	23.05	23.78	24.30

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		1	13	22.95	23.65	23.79	24.30
		1	24	22.82	23.39	23.63	24.30
		12	0	21.87	22.39	22.77	23.30
		12	6	21.82	22.35	22.70	23.30
		12	13	21.84	22.46	22.65	23.30
		25	0	21.85	22.39	22.68	23.30
	16QAM	1	0	22.22	22.47	22.86	23.30
		1	13	22.06	22.60	22.89	23.30
		1	24	22.08	22.49	23.18	23.30
		12	0	20.92	21.49	21.66	22.30
		12	6	20.80	21.37	21.62	22.30
		12	13	21.02	21.39	21.77	22.30
		25	0	20.95	21.38	21.71	22.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20000	20175	20350	
10MHz	QPSK	1	0	22.96	22.83	23.56	24.30
		1	25	22.68	23.38	23.52	24.30
		1	49	22.54	23.11	23.35	24.30
		25	0	21.35	21.87	22.25	23.30
		25	13	21.43	21.96	22.31	23.30
		25	25	21.99	21.91	22.10	23.30
		50	0	21.41	21.95	22.24	23.30
	16QAM	1	0	21.77	22.02	22.41	23.30
		1	25	21.52	22.06	22.35	23.30
		1	49	21.59	22.00	22.69	23.30
		25	0	20.47	21.04	21.21	22.30
		25	13	20.41	20.98	21.23	22.30
		25	25	20.52	20.89	21.27	22.30
		50	0	20.39	20.82	21.15	22.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20025	20175	20325	
15MHz	QPSK	1	0	22.49	22.56	22.75	24.30
		1	38	22.55	22.96	23.22	24.30
		1	74	22.80	23.25	23.39	24.30
		36	0	21.26	21.71	21.93	23.30
		36	18	21.19	21.79	21.96	23.30
		36	39	21.50	22.03	22.24	23.30
		75	0	21.27	21.69	21.98	23.30
	16QAM	1	0	21.10	21.44	21.63	23.30
		1	38	21.37	21.84	22.17	23.30
		1	74	21.03	22.01	21.83	23.30
		36	0	20.33	20.52	20.83	22.30

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		36	18	20.27	20.69	21.10	22.30
		36	39	20.41	20.92	21.19	22.30
		75	0	20.36	20.61	21.01	22.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20050	20175	20300	
20MHz	QPSK	1	0	22.95	23.03	22.96	24.30
		1	50	22.64	22.84	23.02	24.30
		1	99	22.70	22.89	23.01	24.30
		50	0	21.49	21.98	21.83	23.30
		50	25	21.54	21.96	21.93	23.30
		50	50	21.41	21.85	21.85	23.30
		100	0	21.64	21.82	22.13	23.30
	16QAM	1	0	22.06	21.93	22.17	23.30
		1	50	21.38	21.49	22.17	23.30
		1	99	21.42	21.67	21.86	23.30
		50	0	20.42	20.74	21.06	22.30
		50	25	20.32	20.84	21.05	22.30
		50	50	20.34	20.76	21.07	22.30
		100	0	20.53	20.82	21.13	22.30

LTE Band 4 hotspot on				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19957	20175	20393	
1.4MHz	QPSK	1	0	20.36	20.86	20.61	21.30
		1	2	20.14	21.07	20.74	21.30
		1	5	20.07	20.92	20.69	21.30
		3	0	20.11	21.03	20.74	21.30
		3	2	20.15	20.98	20.75	21.30
		3	3	20.10	20.96	20.71	21.30
		6	0	20.04	20.93	20.72	21.30
	16QAM	1	0	20.43	20.49	20.74	21.30
		1	2	20.50	20.49	20.83	21.30
		1	5	20.45	20.39	20.72	21.30
		3	0	20.06	20.28	20.40	21.30
		3	2	20.12	20.18	20.43	21.30
		3	3	20.05	20.18	20.43	21.30
		6	0	20.22	20.23	20.57	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19965	20175	20385	
3MHz	QPSK	1	0	20.27	20.92	20.50	21.30
		1	7	20.12	20.96	20.69	21.30

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		1	14	20.11	20.95	20.57	21.30
		8	0	20.13	21.05	20.74	21.30
		8	4	20.15	21.03	20.81	21.30
		8	7	20.14	21.06	20.78	21.30
		15	0	20.11	20.94	20.80	21.30
	16QAM	1	0	20.50	20.61	20.78	21.30
		1	7	20.49	20.62	20.79	21.30
		1	14	20.44	20.51	20.64	21.30
		8	0	20.19	20.25	20.50	21.30
		8	4	20.20	20.26	20.54	21.30
		8	7	20.15	20.27	20.48	21.30
		15	0	20.17	20.19	20.51	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19975	20175	20375	
5MHz	QPSK	1	0	20.61	20.42	20.19	21.30
		1	13	20.08	20.44	20.33	21.30
		1	24	20.12	20.46	20.27	21.30
		12	0	20.16	20.55	20.37	21.30
		12	6	20.14	20.46	20.25	21.30
		12	13	20.14	20.44	20.31	21.30
		25	0	20.17	20.48	20.34	21.30
	16QAM	1	0	20.48	20.43	20.33	21.30
		1	13	20.40	20.37	20.60	21.30
		1	24	20.41	20.42	20.60	21.30
		12	0	20.27	20.33	20.38	21.30
		12	6	20.25	20.48	20.26	21.30
		12	13	20.28	20.44	20.35	21.30
		25	0	20.27	20.47	20.32	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20000	20175	20350	
10MHz	QPSK	1	0	20.51	21.12	20.67	21.30
		1	25	20.33	21.05	20.43	21.30
		1	49	20.44	20.26	20.44	21.30
		25	0	20.17	21.09	20.40	21.30
		25	13	20.37	21.10	20.47	21.30
		25	25	20.39	21.11	20.34	21.30
		50	0	20.37	21.11	20.36	21.30
	16QAM	1	0	20.56	20.36	20.64	21.30
		1	25	20.58	20.25	20.65	21.30
		1	49	20.79	20.45	20.78	21.30
		25	0	20.29	21.11	20.44	21.30
		25	13	20.44	21.09	20.48	21.30

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		25	25	20.40	21.09	20.35	21.30
		50	0	20.34	21.09	20.45	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20025	20175	20325	
15MHz	QPSK	1	0	19.94	20.35	20.61	21.30
		1	38	20.37	21.11	20.27	21.30
		1	74	20.45	21.18	20.27	21.30
		36	0	20.01	20.76	21.06	21.30
		36	18	20.26	21.03	20.28	21.30
		36	39	20.32	21.12	20.35	21.30
		75	0	20.16	20.90	21.12	21.30
	16QAM	1	0	20.04	20.79	21.14	21.30
		1	38	20.69	20.35	20.57	21.30
		1	74	20.70	20.38	20.56	21.30
		36	0	19.98	20.67	21.09	21.30
		36	18	20.19	21.02	20.26	21.30
		36	39	20.30	21.07	20.36	21.30
		75	0	20.16	20.85	21.13	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20050	20175	20300	
20MHz	QPSK	1	0	20.37	20.88	20.81	21.30
		1	50	20.35	20.84	20.86	21.30
		1	99	20.18	20.63	20.75	21.30
		50	0	20.43	20.96	20.25	21.30
		50	25	20.38	20.88	20.22	21.30
		50	50	20.35	20.92	20.89	21.30
		100	0	20.35	20.95	20.84	21.30
	16QAM	1	0	20.55	20.16	20.46	21.30
		1	50	20.78	20.28	20.42	21.30
		1	99	20.51	20.87	20.12	21.30
		50	0	20.41	20.93	20.30	21.30
		50	25	20.38	20.85	20.31	21.30
		50	50	20.41	20.89	20.91	21.30
		100	0	20.35	20.95	20.88	21.30

LTE Band 7 receive on				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20775	21100	21425	
5MHz	QPSK	1	0	22.56	22.38	21.73	23.20
		1	13	22.54	22.26	21.82	23.20
		1	24	22.60	22.22	21.66	23.20

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		12	0	21.62	21.29	21.12	22.20
		12	6	21.63	21.25	21.16	22.20
		12	13	21.54	21.25	21.12	22.20
		25	0	21.64	21.27	21.17	22.20
	16QAM	1	0	21.57	21.59	21.02	22.20
		1	13	21.76	21.52	21.26	22.20
		1	24	21.73	21.42	20.75	22.20
		12	0	20.77	20.31	20.19	21.20
		12	6	20.73	20.30	20.18	21.20
		12	13	20.60	20.26	20.02	21.20
		25	0	20.71	20.30	20.15	21.20
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20800	21100	21400	
10MHz	QPSK	1	0	22.73	22.10	21.69	23.20
		1	25	22.47	22.30	21.71	23.20
		1	49	22.51	22.18	21.56	23.20
		25	0	21.56	21.33	21.21	22.20
		25	13	21.64	21.28	21.22	22.20
		25	25	21.66	21.27	21.23	22.20
		50	0	21.54	21.26	21.13	22.20
	16QAM	1	0	22.20	21.37	20.95	22.20
		1	25	22.06	21.71	21.14	22.20
		1	49	21.74	21.63	20.48	22.20
		25	0	20.59	20.30	20.23	21.20
		25	13	20.65	20.32	20.17	21.20
		25	25	20.57	20.28	20.18	21.20
		50	0	20.66	20.35	20.16	21.20
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	21.92	21.80	21.62	23.20
		1	38	22.27	22.23	21.73	23.20
		1	74	21.97	21.92	21.77	23.20
		36	0	21.41	21.31	21.19	22.20
		36	18	21.52	21.31	21.32	22.20
		36	39	21.60	21.36	21.29	22.20
		75	0	21.53	21.36	21.29	22.20
	16QAM	1	0	21.31	21.10	20.93	22.20
		1	38	21.23	21.75	20.93	22.20
		1	74	21.69	20.92	21.21	22.20
		36	0	20.44	20.28	20.08	21.20
		36	18	20.58	20.29	20.20	21.20
		36	39	20.53	20.34	20.27	21.20

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		75	0	20.59	20.33	20.25	21.20

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	22.12	21.84	21.79	23.20
		1	50	22.39	22.17	21.68	23.20
		1	99	22.10	22.29	21.48	23.20
		50	0	21.15	21.13	21.08	22.20
		50	25	21.28	21.24	21.23	22.20
		50	50	21.36	21.28	21.28	22.20
		100	0	21.56	21.20	21.24	22.20
	16QAM	1	0	21.40	21.02	21.02	22.20
		1	50	21.54	21.61	20.86	22.20
		1	99	21.70	21.65	20.68	22.20
		50	0	20.24	20.09	19.95	21.20
		50	25	20.26	20.25	20.10	21.20
		50	50	20.42	20.32	20.23	21.20
		100	0	20.48	20.26	20.18	21.20

LTE Band 7 receiver off				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20775	21100	21425	
5MHz	QPSK	1	0	21.78	21.60	21.61	22.80
		1	13	21.85	21.57	21.43	22.80
		1	24	21.69	21.35	21.36	22.80
		12	0	21.26	21.04	20.84	22.30
		12	6	21.38	20.93	20.79	22.30
		12	13	21.29	21.07	20.87	22.30
		25	0	21.37	20.98	20.78	22.30
	16QAM	1	0	21.73	21.43	21.00	22.30
		1	13	21.46	21.39	21.24	22.30
		1	24	21.65	21.52	21.19	22.30
		12	0	20.43	19.98	19.82	21.30
		12	6	20.39	20.04	19.85	21.30
		12	13	20.30	19.98	19.74	21.30
		25	0	20.30	19.95	19.78	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20800	21100	21400	
10MHz	QPSK	1	0	22.09	21.68	21.62	22.80
		1	25	22.02	21.41	21.36	22.80
		1	49	22.00	21.71	21.60	22.80
		25	0	21.29	21.07	20.91	22.30

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		25	13	21.38	21.05	20.93	22.30
		25	25	21.45	20.93	20.89	22.30
		50	0	21.30	21.02	20.80	22.30
	16QAM	1	0	22.05	21.30	21.46	22.30
		1	25	21.64	21.12	21.31	22.30
		1	49	21.62	21.70	21.51	22.30
		25	0	20.24	20.02	19.86	21.30
		25	13	20.30	20.01	19.91	21.30
		25	25	20.40	20.04	19.90	21.30
		50	0	20.34	20.03	19.83	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	21.29	21.05	20.96	22.80
		1	38	21.63	21.42	21.30	22.80
		1	74	21.36	21.17	21.08	22.80
		36	0	21.30	21.04	20.93	22.30
		36	18	21.30	21.04	21.05	22.30
		36	39	21.33	21.11	21.01	22.30
		75	0	21.30	21.06	21.03	22.30
	16QAM	1	0	21.22	20.94	20.36	22.30
		1	38	21.34	21.35	20.86	22.30
		1	74	20.99	21.12	20.64	22.30
		36	0	20.19	19.99	19.92	21.30
		36	18	20.24	19.97	20.02	21.30
		36	39	20.34	20.17	20.03	21.30
		75	0	20.29	20.06	19.99	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	21.42	21.29	21.25	22.80
		1	50	21.43	21.49	21.27	22.80
		1	99	21.94	21.83	21.90	22.80
		50	0	20.98	20.87	20.85	22.30
		50	25	21.05	21.03	20.93	22.30
		50	50	21.23	21.01	21.02	22.30
		100	0	21.32	21.04	21.03	22.30
	16QAM	1	0	21.15	20.99	20.68	22.30
		1	50	20.92	21.01	20.90	22.30
		1	99	21.19	21.75	21.64	22.30
		50	0	20.04	19.86	19.92	21.30
		50	25	20.10	19.99	19.89	21.30
		50	50	20.06	20.19	19.98	21.30
		100	0	20.16	19.97	19.91	21.30

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LTE Band 7 hotspot				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20775	21100	21425	
5MHz	QPSK	1	0	19.26	19.17	18.94	20.30
		1	13	19.05	18.99	18.78	20.30
		1	24	19.21	18.94	18.86	20.30
		12	0	19.26	19.05	18.78	20.30
		12	6	19.26	18.98	18.80	20.30
		12	13	19.15	19.07	18.86	20.30
		25	0	19.39	19.03	18.85	20.30
	16QAM	1	0	19.33	19.17	19.29	20.30
		1	13	19.23	19.17	19.38	20.30
		1	24	19.21	19.01	19.35	20.30
		12	0	19.36	19.08	18.97	20.30
		12	6	19.37	19.03	18.84	20.30
		12	13	19.25	19.07	18.90	20.30
		25	0	19.38	19.13	18.97	20.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20800	21100	21400	
10MHz	QPSK	1	0	19.47	19.19	19.21	20.30
		1	25	19.28	18.94	18.88	20.30
		1	49	19.39	19.24	19.06	20.30
		25	0	19.37	19.07	18.90	20.30
		25	13	19.36	19.09	18.87	20.30
		25	25	19.32	18.95	18.90	20.30
		50	0	19.25	19.09	18.88	20.30
	16QAM	1	0	19.37	19.25	19.45	20.30
		1	25	19.40	19.10	18.83	20.30
		1	49	19.46	19.40	19.32	20.30
		25	0	19.44	19.09	18.90	20.30
		25	13	19.39	19.00	18.84	20.30
		25	25	19.44	18.96	18.87	20.30
		50	0	19.26	19.05	18.86	20.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	18.77	18.60	18.55	20.30
		1	38	19.16	19.07	18.80	20.30
		1	74	18.82	18.57	18.72	20.30
		36	0	19.19	19.01	18.93	20.30
		36	18	19.23	19.02	19.05	20.30

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		36	39	19.34	19.13	19.04	20.30
		75	0	19.27	19.08	19.01	20.30
	16QAM	1	0	18.79	19.19	18.85	20.30
		1	38	19.28	19.13	19.26	20.30
		1	74	18.88	18.83	19.15	20.30
		36	0	19.10	19.06	18.92	20.30
		36	18	19.33	19.03	18.97	20.30
		36	39	19.33	19.19	19.14	20.30
		75	0	19.33	19.11	19.13	20.30

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	18.75	18.76	18.58	20.30
		1	50	19.06	19.08	18.68	20.30
		1	99	19.37	19.33	19.32	20.30
		50	0	18.96	18.98	18.86	20.30
		50	25	19.03	19.00	18.94	20.30
		50	50	19.16	19.11	19.02	20.30
		100	0	19.22	19.06	18.85	20.30
	16QAM	1	0	19.13	19.03	18.98	20.30
		1	50	19.34	19.32	19.22	20.30
		1	99	19.31	19.28	19.25	20.30
		50	0	18.99	18.95	18.84	20.30
		50	25	19.00	19.05	18.84	20.30
		50	50	19.16	19.10	19.05	20.30
		100	0	19.16	19.09	18.91	20.30

LTE Band 66 Receiver on				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131979	132322	132665	
1.4MHz	QPSK	1	0	22.56	22.51	22.56	23.30
		1	2	22.12	22.28	22.18	23.30
		1	5	22.13	22.14	22.21	23.30
		3	0	22.41	22.30	22.47	23.30
		3	1	22.14	22.30	22.23	23.30
		3	3	22.00	22.17	22.04	23.30
		6	0	21.36	21.30	21.07	22.30
	16QAM	1	0	21.48	21.24	21.49	22.30
		1	2	21.38	21.28	21.40	22.30
		1	5	21.56	21.08	21.59	22.30
		3	0	21.14	20.08	21.31	22.30
		3	1	21.33	20.15	21.15	22.30

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		3	3	21.17	20.07	21.31	22.30
		6	0	20.42	20.38	20.58	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131987	132322	132657	
3MHz	QPSK	1	0	22.55	22.44	22.53	23.30
		1	7	22.33	22.41	22.30	23.30
		1	14	21.98	22.15	22.00	23.30
		8	0	21.36	21.21	21.10	22.30
		8	4	21.30	21.16	21.05	22.30
		8	7	21.33	21.15	21.04	22.30
		15	0	21.19	21.17	21.06	22.30
	16QAM	1	0	21.37	21.18	21.07	22.30
		1	7	21.28	21.14	21.13	22.30
		1	14	21.36	20.85	20.82	22.30
		8	0	20.25	19.92	20.19	21.30
		8	4	20.21	20.00	20.04	21.30
		8	7	20.15	19.93	20.21	21.30
		15	0	20.16	20.17	19.93	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131997	132322	132647	
5MHz	QPSK	1	0	22.45	22.48	22.36	23.30
		1	13	22.05	22.24	22.15	23.30
		1	24	22.16	22.17	21.98	23.30
		12	0	21.40	21.23	21.31	22.30
		12	6	21.42	21.26	21.26	22.30
		12	13	21.22	21.02	20.93	22.30
		25	0	21.41	21.32	21.07	22.30
	16QAM	1	0	21.52	21.26	21.48	22.30
		1	13	21.32	21.20	21.29	22.30
		1	24	21.46	20.97	21.45	22.30
		12	0	20.20	20.02	20.24	21.30
		12	6	20.19	20.00	19.99	21.30
		12	13	20.00	19.89	20.12	21.30
		25	0	20.25	20.32	20.03	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132022	132322	132622	
10MHz	QPSK	1	0	22.49	22.28	22.37	23.30
		1	25	22.36	22.41	22.28	23.30
		1	49	22.22	22.22	22.14	23.30
		25	0	21.36	21.18	21.05	22.30
		25	13	21.39	21.22	21.09	22.30
		25	25	21.32	21.11	20.98	22.30

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		50	0	21.27	21.22	21.09	22.30
	16QAM	1	0	21.40	21.19	21.05	22.30
		1	25	21.22	21.06	21.02	22.30
		1	49	21.35	20.83	20.77	22.30
		25	0	20.28	19.88	20.14	21.30
		25	13	20.17	19.95	19.98	21.30
		25	25	20.08	19.85	20.12	21.30
		50	0	20.09	20.12	19.87	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132047	132322	132597	
15MHz	QPSK	1	0	22.49	22.35	22.58	23.30
		1	38	22.15	22.34	22.12	23.30
		1	74	22.07	22.06	22.18	23.30
		36	0	21.38	21.20	21.14	22.30
		36	18	21.34	21.17	21.11	22.30
		36	39	21.25	21.04	20.98	22.30
		75	0	21.36	21.26	21.20	22.30
	16QAM	1	0	21.49	21.22	21.16	22.30
		1	38	21.31	21.19	21.13	22.30
		1	74	21.38	20.89	20.83	22.30
		36	0	20.12	19.99	20.23	21.30
		36	18	20.17	19.98	19.99	21.30
		36	39	20.03	19.92	20.17	21.30
		75	0	20.24	20.23	19.96	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132072	132322	132572	
20MHz	QPSK	1	0	22.55	22.52	22.51	23.30
		1	50	22.35	22.56	22.24	23.30
		1	99	22.11	22.13	22.13	23.30
		50	0	21.23	21.37	21.25	22.30
		50	25	21.32	21.38	21.30	22.30
		50	50	21.26	21.17	21.04	22.30
		100	0	21.39	21.22	21.07	22.30
	16QAM	1	0	21.59	21.72	21.57	22.30
		1	50	21.46	21.70	21.45	22.30
		1	99	21.53	21.42	21.55	22.30
		50	0	19.96	20.14	20.04	21.30
		50	25	20.08	20.21	20.11	21.30
		50	50	20.06	20.09	20.14	21.30
		100	0	19.97	20.36	20.06	21.30

LTE Band 66 receiver off	Conducted Power(dBm)

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Bandwidth	Modulation	RB size	RB offset	Channel 131979	Channel 132322	Channel 132665	Tune up
1.4MHz	QPSK	1	0	22.03	21.89	21.61	22.80
		1	2	21.76	21.68	21.67	22.80
		1	5	21.58	21.53	21.53	22.80
		3	0	21.87	21.77	21.63	22.80
		3	1	21.89	21.61	21.68	22.80
		3	3	21.61	21.47	21.64	22.80
		6	0	21.32	21.26	21.03	22.30
	16QAM	1	0	21.48	21.24	21.49	22.30
		1	2	21.49	21.39	21.51	22.30
		1	5	21.42	20.94	21.45	22.30
		3	0	21.04	20.16	21.21	22.30
		3	1	21.30	20.12	21.12	22.30
		3	3	21.12	20.02	21.26	22.30
		6	0	20.41	20.37	20.57	21.30
Bandwidth	Modulation	RB size	RB offset	Channel 131987	Channel 132322	Channel 132657	Tune up
3MHz	QPSK	1	0	21.92	21.81	21.62	22.80
		1	7	21.8	21.66	21.75	22.80
		1	14	21.57	21.57	21.58	22.80
		8	0	21.37	21.22	21.11	22.30
		8	4	21.40	21.26	21.15	22.30
		8	7	21.18	21.00	20.89	22.30
		15	0	21.24	21.22	21.11	22.30
	16QAM	1	0	21.37	21.18	21.07	22.30
		1	7	21.27	21.13	21.12	22.30
		1	14	21.38	20.87	20.84	22.30
		8	0	20.24	19.91	20.18	21.30
		8	4	20.27	20.06	20.10	21.30
		8	7	20.15	19.93	20.21	21.30
		15	0	20.28	20.29	20.05	21.30
Bandwidth	Modulation	RB size	RB offset	Channel 131997	Channel 132322	Channel 132647	Tune up
5MHz	QPSK	1	0	21.79	21.71	21.81	22.80
		1	13	21.63	21.79	21.89	22.80
		1	24	21.62	21.69	21.52	22.80
		12	0	21.49	21.32	21.40	22.30
		12	6	21.47	21.31	21.31	22.30
		12	13	21.29	21.09	21.00	22.30

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		25	0	21.30	21.21	20.96	22.30
	16QAM	1	0	21.46	21.20	21.42	22.30
		1	13	21.32	21.20	21.29	22.30
		1	24	21.46	20.97	21.45	22.30
		12	0	20.06	19.88	20.10	21.30
		12	6	20.16	19.97	19.96	21.30
		12	13	20.03	19.92	20.15	21.30
		25	0	20.23	20.30	20.01	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132022	132322	132622	
10MHz	QPSK	1	0	21.93	21.78	21.73	22.80
		1	25	21.62	21.67	21.7	22.80
		1	49	21.51	21.49	21.5	22.80
		25	0	21.39	21.21	21.08	22.30
		25	13	21.25	21.08	20.95	22.30
		25	25	21.26	21.05	20.92	22.30
		50	0	21.25	21.20	21.07	22.30
	16QAM	1	0	21.37	21.16	21.02	22.30
		1	25	21.25	21.09	21.05	22.30
		1	49	21.44	20.92	20.86	22.30
		25	0	20.16	19.76	20.02	21.30
		25	13	20.16	19.94	19.97	21.30
		25	25	20.05	19.82	20.09	21.30
		50	0	20.12	20.15	19.90	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132047	132322	132597	
15MHz	QPSK	1	0	22.14	22	22.23	22.80
		1	38	21.77	21.96	21.74	22.80
		1	74	21.75	21.74	21.86	22.80
		36	0	21.31	21.13	21.07	22.30
		36	18	21.25	21.08	21.02	22.30
		36	39	21.16	20.95	20.89	22.30
		75	0	21.29	21.19	21.13	22.30
	16QAM	1	0	21.44	21.17	21.11	22.30
		1	38	21.22	21.10	21.04	22.30
		1	74	21.33	20.84	20.78	22.30
		36	0	20.03	19.90	20.14	21.30
		36	18	20.09	19.90	19.91	21.30
		36	39	19.98	19.87	20.12	21.30
		75	0	20.16	20.15	19.88	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132072	132322	132572	

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20MHz	QPSK	1	0	21.81	21.73	21.68	22.80
		1	50	21.70	21.82	21.79	22.80
		1	99	21.63	21.57	21.53	22.80
		50	0	21.13	21.27	21.15	22.30
		50	25	21.25	21.36	21.35	22.30
		50	50	21.20	21.11	20.98	22.30
		100	0	21.41	21.24	21.09	22.30
	16QAM	1	0	21.54	21.67	21.52	22.30
		1	50	21.37	21.61	21.36	22.30
		1	99	21.55	21.44	21.57	22.30
		50	0	20.07	20.25	20.15	21.30
		50	25	20.06	20.19	20.09	21.30
		50	50	19.95	19.98	20.03	21.30
		100	0	19.95	20.34	20.04	21.30

LTE Band 66 Hotspot				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131979	132322	132665	
1.4MHz	QPSK	1	0	20.26	20.33	20.19	20.80
		1	2	20.18	20.27	20.23	20.80
		1	5	19.98	20.07	20.14	20.80
		3	0	20.35	20.40	20.45	20.80
		3	1	20.29	20.22	20.18	20.80
		3	3	20.36	20.25	20.35	20.80
		6	0	20.40	20.37	20.41	20.80
	16QAM	1	0	20.01	20.20	19.93	20.80
		1	2	20.31	19.96	20.23	20.80
		1	5	20.45	20.10	20.11	20.80
		3	0	20.31	20.25	20.28	20.80
		3	1	20.30	20.56	20.44	20.80
		3	3	20.28	20.34	20.39	20.80
		6	0	20.39	20.13	19.96	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131987	132322	132657	
3MHz	QPSK	1	0	20.20	20.19	20.29	20.80
		1	7	20.18	20.19	20.23	20.80
		1	14	20.01	20.18	20.21	20.80
		8	0	20.33	20.27	20.43	20.80
		8	4	20.12	20.27	20.11	20.80
		8	7	20.43	20.13	20.32	20.80
		15	0	20.31	20.21	20.32	20.80

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	16QAM	1	0	20.03	20.02	19.81	20.80
		1	7	20.33	20.09	20.34	20.80
		1	14	20.41	20.10	19.96	20.80
		8	0	20.28	20.34	20.23	20.80
		8	4	20.28	20.23	20.27	20.80
		8	7	20.13	20.34	20.35	20.80
		15	0	20.45	20.22	20.08	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131997	132322	132647	
5MHz	QPSK	1	0	20.08	20.24	20.15	20.80
		1	13	19.98	20.06	20.03	20.80
		1	24	19.93	20.04	20.20	20.80
		12	0	20.41	20.50	20.45	20.80
		12	6	20.21	20.05	19.94	20.80
		12	13	20.46	20.33	20.47	20.80
		25	0	20.26	20.22	20.44	20.80
	16QAM	1	0	19.98	20.01	19.82	20.80
		1	13	20.35	20.20	20.38	20.80
		1	24	20.24	20.17	19.92	20.80
		12	0	20.14	20.31	20.18	20.80
		12	6	20.41	20.30	20.47	20.80
		12	13	20.28	20.44	20.50	20.80
		25	0	20.37	20.24	20.08	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132022	132322	132622	
10MHz	QPSK	1	0	20.20	20.13	20.21	20.80
		1	25	20.10	20.07	20.27	20.80
		1	49	19.93	20.22	20.29	20.80
		25	0	20.43	20.37	20.52	20.80
		25	13	20.28	20.16	20.07	20.80
		25	25	20.44	20.18	20.49	20.80
		50	0	20.38	20.24	20.27	20.80
	16QAM	1	0	20.11	20.11	19.80	20.80
		1	25	20.33	20.13	20.36	20.80
		1	49	20.35	20.20	20.08	20.80
		25	0	20.09	20.25	20.18	20.80
		25	13	20.55	20.36	20.51	20.80
		25	25	20.25	20.30	20.36	20.80
		50	0	20.49	20.31	20.12	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132047	132322	132597	
15MHz	QPSK	1	0	20.20	20.07	20.22	20.80

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		1	38	20.06	20.10	20.13	20.80
		1	74	19.98	19.93	20.21	20.80
		36	0	20.28	20.51	20.39	20.80
		36	18	20.16	20.13	20.18	20.80
		36	39	20.37	20.29	20.40	20.80
		75	0	20.24	20.35	20.24	20.80
	16QAM	1	0	20.09	19.95	19.79	20.80
		1	38	20.14	20.15	20.35	20.80
		1	74	20.18	20.14	19.92	20.80
		36	0	20.25	20.30	20.26	20.80
		36	18	20.46	20.25	20.30	20.80
		36	39	20.36	20.27	20.41	20.80
		75	0	20.44	20.35	20.11	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132072	132322	132572	
20MHz	QPSK	1	0	20.26	20.21	20.27	20.80
		1	50	20.08	20.28	20.2	20.80
		1	99	19.91	20.00	20.17	20.80
		50	0	20.18	20.14	20.18	20.80
		50	25	20.14	20.25	20.05	20.80
		50	50	20.24	20.21	20.21	20.80
		100	0	20.24	20.19	20.27	20.80
	16QAM	1	0	19.99	20.02	19.82	20.80
		1	50	20.35	20.19	20.39	20.80
		1	99	20.33	20.13	19.99	20.80
		50	0	20.25	20.29	20.35	20.80
		50	25	20.47	20.42	20.39	20.80
		50	50	20.23	20.32	20.42	20.80
		100	0	20.41	20.25	20.07	20.80

LTE Band 66 receiver off + WIFI/BT				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131979	132322	132665	
1.4MHz	QPSK	1	0	21.17	21.19	21.08	21.80
		1	2	20.81	21.00	20.90	21.80
		1	5	20.91	21.00	21.12	21.80
		3	0	21.11	21.11	21.08	21.80
		3	1	21.06	21.01	20.92	21.80
		3	3	20.80	20.89	20.84	21.80
		6	0	20.86	21.13	21.01	21.80

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	16QAM	1	0	21.20	21.16	21.05	21.80
		1	2	21.03	21.12	21.03	21.80
		1	5	20.81	20.73	20.80	21.80
		3	0	20.90	20.84	20.76	21.80
		3	1	20.85	20.38	20.17	21.80
		3	3	20.34	20.62	20.61	21.80
		6	0	20.68	20.64	20.84	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131987	132322	132657	
3MHz	QPSK	1	0	21.23	21.21	21.18	21.80
		1	7	20.83	20.86	20.84	21.80
		1	14	20.97	20.96	20.95	21.80
		8	0	21.07	21.18	21.2	21.80
		8	4	21.04	21.02	20.94	21.80
		8	7	20.83	20.86	20.91	21.80
		15	0	20.99	20.92	20.98	21.80
	16QAM	1	0	21.15	21.03	21.17	21.80
		1	7	21.18	20.84	21.1	21.80
		1	14	20.87	20.8	20.68	21.80
		8	0	20.58	20.25	20.52	21.30
		8	4	20.41	20.20	20.24	21.30
		8	7	20.36	20.14	20.42	21.30
		15	0	20.45	20.46	20.22	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131997	132322	132647	
5MHz	QPSK	1	0	21.16	21.15	21.09	21.80
		1	13	20.8	21.03	20.87	21.80
		1	24	20.87	20.98	20.95	21.80
		12	0	21.24	21.35	21.25	21.80
		12	6	21.01	21.19	21.08	21.80
		12	13	20.91	20.93	21.02	21.80
		25	0	20.98	21	21.03	21.80
	16QAM	1	0	21.29	21.26	21.2	21.80
		1	13	21.07	21.25	21.12	21.80
		1	24	20.81	20.89	20.75	21.80
		12	0	20.40	20.22	20.44	21.30
		12	6	20.57	20.38	20.37	21.30
		12	13	20.33	20.22	20.45	21.30
		25	0	20.43	20.50	20.21	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132022	132322	132622	
10MHz	QPSK	1	0	21.1	21.35	21.31	21.80

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		1	25	20.95	21.12	20.93	21.80
		1	49	20.97	20.97	20.94	21.80
		25	0	21.17	21.22	21.22	21.80
		25	13	21.16	21.22	21.04	21.80
		25	25	20.82	20.77	20.94	21.80
		50	0	20.85	20.96	21.02	21.80
	16QAM	1	0	21.14	21.14	21.09	21.80
		1	25	21.14	21.18	21.23	21.80
		1	49	20.73	20.73	20.78	21.80
		25	0	20.44	20.04	20.30	21.30
		25	13	20.42	20.20	20.23	21.30
		25	25	20.33	20.10	20.37	21.30
		50	0	20.35	20.38	20.13	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132047	132322	132597	
15MHz	QPSK	1	0	21.31	21.25	21.24	21.80
		1	38	21.08	21.2	21.02	21.80
		1	74	20.94	20.96	21.13	21.80
		36	0	21.07	21.23	21.18	21.80
		36	18	21.16	21.18	21.02	21.80
		36	39	20.75	21.02	20.96	21.80
		75	0	20.95	21.02	21.17	21.80
	16QAM	1	0	21.11	21.1	21.12	21.80
		1	38	21.08	21.1	21.03	21.80
		1	74	20.82	20.91	20.8	21.80
		36	0	20.31	20.18	20.42	21.30
		36	18	20.57	20.38	20.39	21.30
		36	39	20.40	20.29	20.54	21.30
		75	0	20.56	20.55	20.28	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132072	132322	132572	
20MHz	QPSK	1	0	21.08	21.15	21.13	21.80
		1	50	20.96	21.05	21.04	21.80
		1	99	20.87	20.89	20.96	21.80
		50	0	21.14	21.20	21.21	21.80
		50	25	21.12	21.14	21.05	21.80
		50	50	20.7	20.80	20.83	21.80
		100	0	20.88	20.96	21.03	21.80
	16QAM	1	0	21.23	21.23	21.15	21.80
		1	50	21.03	21.05	21.07	21.80
		1	99	20.84	20.86	20.83	21.80
		50	0	20.32	20.50	20.40	21.30

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		50	25	20.25	20.38	20.28	21.30
		50	50	20.36	20.39	20.44	21.30
		100	0	20.27	20.66	20.36	21.30

ANT2

LTE Band 2 receiver on				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 18607	Channel 18900	Channel 19193	Tune up
1.4MHz	QPSK	1	0	19.32	19.08	19.16	20.50
		1	2	19.06	19.04	18.90	20.50
		1	5	19.01	19.17	19.14	20.50
		3	0	19.15	19.19	19.14	20.50
		3	2	19.18	19.15	19.21	20.50
		3	3	19.03	18.98	19.08	20.50
		6	0	19.20	19.07	19.17	20.50
	16QAM	1	0	19.64	19.34	19.39	20.50
		1	2	19.09	19.67	19.56	20.50
		1	5	19.52	19.23	19.14	20.50
		3	0	19.14	19.13	19.06	20.50
		3	2	19.23	19.09	19.25	20.50
		3	3	19.02	19.09	18.98	20.50
		6	0	19.17	19.08	18.97	20.50
Bandwidth	Modulation	RB size	RB offset	Channel 18615	Channel 18900	Channel 19185	Tune up
3MHz	QPSK	1	0	19.28	19.01	19.18	20.50
		1	7	19.04	18.94	18.98	20.50
		1	14	19.00	19.00	19.13	20.50
		8	0	19.26	19.02	19.16	20.50
		8	4	19.01	19.07	19.18	20.50
		8	7	19.02	18.99	19.07	20.50
		15	0	19.12	18.91	19.15	20.50
	16QAM	1	0	19.63	19.48	19.31	20.50
		1	7	19.12	19.77	19.49	20.50
		1	14	19.42	19.38	19.14	20.50
		8	0	19.19	19.23	19.18	20.50
		8	4	19.11	19.07	19.12	20.50
		8	7	18.98	19.01	19.17	20.50
		15	0	19.02	19.09	19.04	20.50

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Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18625	18900	19175	
5MHz	QPSK	1	0	19.33	19.07	19.08	20.50
		1	13	19.03	18.99	18.89	20.50
		1	24	19.03	19.07	19.04	20.50
		12	0	19.16	19.10	19.12	20.50
		12	6	19.09	19.11	19.13	20.50
		12	13	19.01	18.98	19.03	20.50
		25	0	19.14	18.99	19.13	20.50
	16QAM	1	0	19.66	19.39	19.39	20.50
		1	13	19.18	19.70	19.53	20.50
		1	24	19.43	19.32	19.17	20.50
		12	0	19.23	19.14	19.08	20.50
		12	6	19.17	19.02	19.16	20.50
		12	13	19.00	19.02	19.08	20.50
		25	0	19.08	19.08	19.04	20.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18650	18900	19150	
10MHz	QPSK	1	0	19.53	19.24	19.05	20.50
		1	25	19.11	18.96	19.13	20.50
		1	49	19.25	19.15	19.01	20.50
		25	0	19.30	19.11	19.14	20.50
		25	13	19.07	19.08	19.05	20.50
		25	25	19.20	19.08	19.24	20.50
		50	0	19.25	19.06	19.20	20.50
	16QAM	1	0	19.80	19.47	19.53	20.50
		1	25	18.93	19.74	19.59	20.50
		1	49	19.18	19.87	18.89	20.50
		25	0	19.19	19.20	19.06	20.50
		25	13	19.14	19.00	19.01	20.50
		25	25	19.08	19.08	19.08	20.50
		50	0	19.09	19.12	19.04	20.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18675	18900	19125	
15MHz	QPSK	1	0	18.87	19.45	18.99	20.50
		1	38	19.22	19.25	18.93	20.50
		1	74	19.20	19.08	19.00	20.50
		36	0	18.81	18.99	18.91	20.50
		36	18	19.09	19.06	18.88	20.50
		36	39	19.01	18.94	19.07	20.50
		75	0	18.99	18.97	18.93	20.50
	16QAM	1	0	19.44	18.87	18.86	20.50

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		1	38	19.34	19.05	19.19	20.50
		1	74	18.98	18.89	18.87	20.50
		36	0	18.81	18.80	18.88	20.50
		36	18	18.90	19.06	18.84	20.50
		36	39	19.05	19.04	18.91	20.50
		75	0	18.97	19.03	18.99	20.50
Bandwidth	Modulation	RB size	RB offset	Channel 18700	Channel 18900	Channel 19100	Tune up
20MHz	QPSK	1	0	19.25	19.26	19.24	20.50
		1	50	19.16	19.05	18.93	20.50
		1	99	18.88	18.90	19.00	20.50
		50	0	19.22	19.30	19.02	20.50
		50	25	19.29	19.15	19.13	20.50
		50	50	19.07	19.02	19.11	20.50
		100	0	19.34	19.18	19.33	20.50
	16QAM	1	0	19.12	19.56	19.41	20.50
		1	50	19.46	19.17	19.19	20.50
		1	99	18.91	19.40	19.44	20.50
		50	0	19.37	19.07	19.13	20.50
		50	25	19.30	19.17	19.14	20.50
		50	50	19.06	18.87	19.21	20.50
		100	0	19.33	19.08	18.95	20.50

LTE Band 2 receiver off				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel 18607	Channel 18900	Channel 19193	Tune up
1.4MHz	QPSK	1	0	19.79	19.53	19.49	21.00
		1	2	19.79	19.61	19.54	21.00
		1	5	19.70	19.52	19.47	21.00
		3	0	19.72	19.54	19.50	21.00
		3	2	19.74	19.63	19.54	21.00
		3	3	19.71	19.53	19.50	21.00
		6	0	19.64	19.52	19.47	21.00
	16QAM	1	0	20.01	19.83	19.86	21.00
		1	2	20.04	19.92	19.88	21.00
		1	5	19.97	19.80	19.88	21.00
		3	0	19.74	19.62	19.57	21.00
		3	2	19.75	19.67	19.55	21.00
		3	3	19.66	19.58	19.50	21.00

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		6	0	19.70	19.59	19.61	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18615	18900	19185	
3MHz	QPSK	1	0	19.80	19.56	19.54	21.00
		1	7	19.72	19.59	19.62	21.00
		1	14	19.63	19.61	19.51	21.00
		8	0	19.70	19.60	19.55	21.00
		8	4	19.71	19.59	19.57	21.00
		8	7	19.68	19.55	19.52	21.00
		15	0	19.70	19.59	19.55	21.00
	16QAM	1	0	20.12	19.92	19.87	21.00
		1	7	20.03	19.98	20.01	21.00
		1	14	19.96	19.92	19.86	21.00
		8	0	19.74	19.66	19.59	21.00
		8	4	19.74	19.65	19.62	21.00
		8	7	19.72	19.61	19.56	21.00
		15	0	19.70	19.59	19.55	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18625	18900	19175	
5MHz	QPSK	1	0	19.80	19.69	19.67	21.00
		1	13	19.70	19.55	19.54	21.00
		1	24	19.60	19.57	19.54	21.00
		12	0	19.71	19.62	19.59	21.00
		12	6	19.67	19.57	19.60	21.00
		12	13	19.59	19.55	19.56	21.00
		25	0	19.69	19.60	19.63	21.00
	16QAM	1	0	20.07	19.99	20.07	21.00
		1	13	20.00	19.88	19.88	21.00
		1	24	19.96	19.93	19.86	21.00
		12	0	19.73	19.66	19.63	21.00
		12	6	19.68	19.59	19.66	21.00
		12	13	19.61	19.56	19.59	21.00
		25	0	19.67	19.58	19.63	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18650	18900	19150	
10MHz	QPSK	1	0	20.02	19.72	19.67	21.00
		1	25	19.69	19.61	19.56	21.00
		1	49	19.76	19.71	19.66	21.00
		25	0	19.86	19.65	19.63	21.00
		25	13	19.76	19.66	19.66	21.00
		25	25	19.81	19.71	19.65	21.00
		50	0	19.82	19.62	19.69	21.00

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	16QAM	1	0	20.23	20.07	19.98	21.00
		1	25	20.04	19.96	19.92	21.00
		1	49	20.07	20.05	19.89	21.00
		25	0	19.87	19.66	19.62	21.00
		25	13	19.75	19.65	19.63	21.00
		25	25	19.79	19.68	19.62	21.00
		50	0	19.83	19.64	19.69	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18675	18900	19125	
15MHz	QPSK	1	0	19.45	19.68	19.67	21.00
		1	38	19.79	19.72	19.65	21.00
		1	74	19.74	19.77	19.71	21.00
		36	0	19.51	19.39	19.31	21.00
		36	18	19.72	19.66	19.57	21.00
		36	39	19.67	19.64	19.66	21.00
		75	0	19.64	19.57	19.57	21.00
	16QAM	1	0	19.78	19.58	19.49	21.00
		1	38	20.13	20.08	19.98	21.00
		1	74	20.03	20.11	19.96	21.00
		36	0	19.54	19.36	19.37	21.00
		36	18	19.80	19.68	19.36	21.00
		36	39	19.67	19.67	19.62	21.00
		75	0	19.68	19.58	19.63	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18700	18900	19100	
20MHz	QPSK	1	0	20.01	20.02	19.85	21.00
		1	50	19.84	19.62	19.53	21.00
		1	99	19.34	19.44	19.33	21.00
		50	0	20.03	20.04	19.72	21.00
		50	25	19.92	19.76	19.71	21.00
		50	50	19.66	19.64	19.65	21.00
		100	0	19.92	19.79	19.78	21.00
	16QAM	1	0	20.55	20.40	20.20	21.00
		1	50	20.26	20.08	20.02	21.00
		1	99	19.69	19.63	19.58	21.00
		50	0	20.05	19.78	19.72	21.00
		50	25	19.93	19.78	19.73	21.00
		50	50	19.65	19.63	19.70	21.00
		100	0	19.90	19.77	19.71	21.00

LTE Band 2 hotspot/receiver off +WIFI/BT	Conducted Power(dBm)

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Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18607	18900	19193	
1.4MHz	QPSK	1	0	18.64	18.40	18.23	19.50
		1	2	18.29	18.10	17.97	19.50
		1	5	18.88	18.87	18.82	19.50
		3	0	18.51	18.26	18.17	19.50
		3	2	18.35	18.20	18.15	19.50
		3	3	18.13	18.09	18.11	19.50
		6	0	18.34	18.23	18.22	19.50
	16QAM	1	0	18.63	18.86	18.65	19.50
		1	2	18.73	18.61	18.49	19.50
		1	5	18.16	18.15	18.14	19.50
		3	0	18.50	18.13	18.17	19.50
		3	2	18.35	18.13	18.15	19.50
		3	3	18.13	18.07	18.08	19.50
		6	0	18.32	18.18	18.13	19.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18615	18900	19185	
3MHz	QPSK	1	0	18.26	18.05	18.02	19.50
		1	7	18.58	18.53	18.39	19.50
		1	14	18.41	18.59	18.57	19.50
		8	0	18.24	18.17	18.09	19.50
		8	4	18.46	18.46	18.31	19.50
		8	7	18.46	18.44	18.42	19.50
		15	0	18.39	18.32	18.34	19.50
	16QAM	1	0	18.31	18.18	18.10	19.50
		1	7	18.44	18.56	18.55	19.50
		1	14	18.53	18.43	18.56	19.50
		8	0	17.94	17.86	17.89	19.50
		8	4	18.14	18.13	18.02	19.50
		8	7	18.17	18.12	18.05	19.50
		15	0	18.10	18.07	18.11	19.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18625	18900	19175	
5MHz	QPSK	1	0	18.60	18.50	18.50	19.50
		1	13	18.49	18.38	18.34	19.50
		1	24	18.56	18.50	18.49	19.50
		12	0	18.66	18.47	18.44	19.50
		12	6	18.55	18.45	18.44	19.50
		12	13	18.59	18.53	18.48	19.50

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		25	0	18.63	18.42	18.48	19.50
	16QAM	1	0	18.54	18.59	18.54	19.50
		1	13	18.62	18.53	18.50	19.50
		1	24	18.63	18.61	18.47	19.50
		12	0	18.34	18.17	18.10	19.50
		12	6	18.25	18.14	18.13	19.50
		12	13	18.29	18.20	18.13	19.50
		25	0	18.30	18.13	18.12	19.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18650	18900	19150	
10MHz	QPSK	1	0	18.67	18.53	18.50	19.50
		1	25	18.48	18.37	18.42	19.50
		1	49	18.47	18.46	18.36	19.50
		25	0	18.57	18.48	18.42	19.50
		25	13	18.55	18.45	18.44	19.50
		25	25	18.44	18.40	18.39	19.50
		50	0	18.55	18.44	18.48	19.50
	16QAM	1	0	18.65	18.59	18.52	19.50
		1	25	18.59	18.51	18.45	19.50
		1	49	18.50	18.52	18.40	19.50
		25	0	18.31	18.22	18.11	19.50
		25	13	18.24	18.20	18.15	19.50
		25	25	18.17	18.12	18.10	19.50
		50	0	18.21	18.14	18.14	19.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18675	18900	19125	
15MHz	QPSK	1	0	18.64	18.48	18.36	19.50
		1	38	18.64	18.61	18.46	19.50
		1	74	18.53	18.46	18.35	19.50
		36	0	18.54	18.43	18.38	19.50
		36	18	18.53	18.46	18.43	19.50
		36	39	18.51	18.39	18.37	19.50
		75	0	18.51	18.43	18.43	19.50
	16QAM	1	0	18.53	18.51	18.42	19.50
		1	38	18.63	18.47	18.47	19.50
		1	74	18.44	18.51	18.37	19.50
		36	0	18.28	18.19	18.15	19.50
		36	18	18.27	18.19	18.16	19.50
		36	39	18.23	18.15	18.11	19.50
		75	0	18.22	18.11	18.11	19.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				18700	18900	19100	

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20MHz	QPSK	1	0	18.40	18.52	18.39	19.50
		1	50	18.50	18.49	18.51	19.50
		1	99	18.45	18.38	18.34	19.50
		50	0	18.53	18.58	18.37	19.50
		50	25	18.45	18.55	18.47	19.50
		50	50	18.50	18.40	18.38	19.50
		100	0	18.47	18.39	18.36	19.50
	16QAM	1	0	18.49	18.38	18.31	19.50
		1	50	18.51	18.46	18.40	19.50
		1	99	18.47	18.42	18.36	19.50
		50	0	18.33	18.21	18.16	19.50
		50	25	18.35	18.27	18.20	19.50
		50	50	18.30	18.14	18.10	19.50
		100	0	18.22	18.13	18.11	19.50

LTE Band 4 receiver on				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19957	20175	20393	
1.4MHz	QPSK	1	0	19.61	20.10	20.33	21.30
		1	2	19.21	20.00	20.27	21.30
		1	5	19.20	19.75	20.15	21.30
		3	0	19.53	19.81	20.28	21.30
		3	2	19.34	19.73	20.40	21.30
		3	3	19.27	19.78	20.17	21.30
		6	0	19.20	19.79	20.15	21.30
	16QAM	1	0	19.85	19.95	20.23	21.30
		1	2	19.87	20.04	20.75	21.30
		1	5	19.47	20.75	20.86	21.30
		3	0	19.25	19.80	20.26	21.30
		3	2	19.27	19.97	20.31	21.30
		3	3	19.25	19.78	20.28	21.30
		6	0	19.42	19.93	20.33	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19965	20175	20385	
3MHz	QPSK	1	0	19.62	19.80	20.18	21.30
		1	7	19.44	19.86	20.38	21.30
		1	14	19.18	19.77	20.16	21.30
		8	0	19.30	19.79	20.27	21.30
		8	4	19.28	19.92	20.29	21.30
		8	7	19.30	19.92	20.26	21.30

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		15	0	19.36	19.78	20.23	21.30
	16QAM	1	0	19.60	20.08	20.82	21.30
		1	7	19.52	20.18	20.49	21.30
		1	14	20.10	20.04	20.46	21.30
		8	0	19.39	20.07	20.38	21.30
		8	4	19.24	19.87	20.28	21.30
		8	7	19.29	19.87	20.18	21.30
		15	0	19.31	19.93	20.40	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19975	20175	20375	
5MHz	QPSK	1	0	19.78	19.89	20.14	21.30
		1	13	19.42	19.86	20.39	21.30
		1	24	19.25	19.84	20.22	21.30
		12	0	19.34	19.97	20.21	21.30
		12	6	19.25	19.99	20.38	21.30
		12	13	19.23	19.88	20.31	21.30
		25	0	19.38	19.96	20.33	21.30
	16QAM	1	0	19.49	20.67	20.46	21.30
		1	13	19.68	19.90	20.52	21.30
		1	24	19.73	19.96	20.72	21.30
		12	0	19.36	19.83	20.22	21.30
		12	6	19.29	19.90	20.33	21.30
		12	13	19.24	19.92	20.26	21.30
		25	0	19.39	19.75	20.33	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20000	20175	20350	
10MHz	QPSK	1	0	19.87	19.87	20.37	21.30
		1	25	19.41	19.89	20.54	21.30
		1	49	19.57	20.05	20.55	21.30
		25	0	19.48	19.81	20.34	21.30
		25	13	19.40	19.93	20.40	21.30
		25	25	19.31	19.87	20.29	21.30
		50	0	19.57	19.87	20.31	21.30
	16QAM	1	0	20.07	20.62	20.60	21.30
		1	25	19.39	20.41	20.93	21.30
		1	49	20.19	20.41	20.66	21.30
		25	0	19.36	20.07	20.26	21.30
		25	13	19.25	19.68	20.47	21.30
		25	25	19.34	19.92	20.45	21.30
		50	0	19.47	20.05	20.45	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20025	20175	20325	

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15MHz	QPSK	1	0	19.20	19.26	19.95	21.30
		1	38	19.27	19.98	20.08	21.30
		1	74	19.28	20.03	20.08	21.30
		36	0	19.21	19.66	19.83	21.30
		36	18	19.29	19.79	20.09	21.30
		36	39	19.33	19.79	20.13	21.30
		75	0	19.21	19.70	19.95	21.30
	16QAM	1	0	19.17	20.06	20.04	21.30
		1	38	19.36	19.84	20.76	21.30
		1	74	19.44	20.19	19.92	21.30
		36	0	19.22	19.74	19.82	21.30
		36	18	19.21	19.87	20.11	21.30
		36	39	19.32	19.81	20.10	21.30
		75	0	19.28	19.74	19.98	21.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20050	20175	20300	
20MHz	QPSK	1	0	19.95	20.03	19.89	21.30
		1	50	19.24	19.77	20.02	21.30
		1	99	19.23	19.69	19.94	21.30
		50	0	19.52	20.15	20.11	21.30
		50	25	19.34	19.81	20.11	21.30
		50	50	19.22	19.85	20.09	21.30
		100	0	19.44	19.83	20.16	21.30
	16QAM	1	0	19.71	20.05	20.22	21.30
		1	50	19.79	19.98	20.34	21.30
		1	99	19.60	20.10	20.32	21.30
		50	0	19.44	20.09	20.26	21.30
		50	25	19.33	19.82	20.18	21.30
		50	50	19.24	19.75	20.14	21.30
		100	0	19.35	19.80	20.14	21.30

LTE Band 4 receiver off				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19957	20175	20393	
1.4MHz	QPSK	1	0	19.90	19.43	19.86	20.80
		1	2	20.15	19.49	19.90	20.80
		1	5	19.66	19.47	19.95	20.80
		3	0	19.76	19.54	19.94	20.80
		3	2	19.73	19.55	19.98	20.80
		3	3	19.70	19.45	19.92	20.80

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		6	0	19.77	19.40	19.92	20.80
	16QAM	1	0	20.02	19.84	19.54	20.80
		1	2	20.12	19.85	19.76	20.80
		1	5	20.13	19.85	19.85	20.80
		3	0	19.77	19.55	19.95	20.80
		3	2	19.75	19.52	19.98	20.80
		3	3	19.70	19.43	19.88	20.80
		6	0	19.84	19.55	20.05	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19965	20175	20385	
3MHz	QPSK	1	0	19.75	19.44	19.92	20.80
		1	7	20.03	19.48	20.01	20.80
		1	14	19.41	19.44	19.92	20.80
		8	0	19.37	19.52	19.91	20.80
		8	4	19.54	19.51	19.99	20.80
		8	7	19.48	19.45	19.96	20.80
		15	0	19.43	19.41	19.94	20.80
	16QAM	1	0	19.79	19.92	19.88	20.80
		1	7	19.84	19.92	19.78	20.80
		1	14	19.75	19.74	19.84	20.80
		8	0	19.49	19.63	20.01	20.80
		8	4	19.51	19.52	19.80	20.80
		8	7	19.50	19.51	19.95	20.80
		15	0	19.46	19.45	19.79	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19975	20175	20375	
5MHz	QPSK	1	0	19.75	19.47	19.97	20.80
		1	13	19.60	19.45	19.96	20.80
		1	24	19.50	19.53	19.95	20.80
		12	0	19.59	19.55	20.04	20.80
		12	6	19.54	19.44	20.00	20.80
		12	13	19.54	19.45	19.95	20.80
		25	0	19.59	19.50	20.01	20.80
	16QAM	1	0	19.95	19.92	19.79	20.80
		1	13	19.82	19.77	19.84	20.80
		1	24	19.86	19.87	19.71	20.80
		12	0	19.62	19.60	19.68	20.80
		12	6	19.53	19.45	19.55	20.80
		12	13	19.62	19.53	20.01	20.80
		25	0	19.54	19.50	19.98	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20000	20175	20350	

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10MHz	QPSK	1	0	19.76	19.69	19.97	20.80
		1	25	19.83	19.48	20.06	20.80
		1	49	19.26	19.73	20.26	20.80
		25	0	19.53	19.60	20.06	20.80
		25	13	19.53	19.55	20.13	20.80
		25	25	19.49	19.55	20.12	20.80
		50	0	19.48	19.53	20.03	20.80
	16QAM	1	0	19.91	19.87	20.21	20.80
		1	25	19.76	19.81	19.73	20.80
		1	49	19.97	20.02	19.89	20.80
		25	0	19.56	19.61	20.02	20.80
		25	13	19.51	19.55	20.10	20.80
		25	25	19.45	19.51	20.12	20.80
		50	0	19.49	19.54	20.06	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20025	20175	20325	
15MHz	QPSK	1	0	19.81	19.30	19.29	20.80
		1	38	19.64	19.41	19.83	20.80
		1	74	19.78	19.71	20.07	20.80
		36	0	19.47	19.26	19.50	20.80
		36	18	19.59	19.48	19.80	20.80
		36	39	19.72	19.57	19.92	20.80
		75	0	19.52	19.35	19.69	20.80
	16QAM	1	0	19.70	19.37	19.62	20.80
		1	38	19.91	19.76	19.77	20.80
		1	74	19.77	19.97	19.80	20.80
		36	0	19.40	19.21	19.46	20.80
		36	18	19.58	19.44	19.77	20.80
		36	39	19.68	19.52	19.86	20.80
		75	0	19.56	19.37	19.76	20.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20050	20175	20300	
20MHz	QPSK	1	0	19.56	19.57	19.45	20.80
		1	50	19.44	19.29	19.40	20.80
		1	99	19.50	19.38	19.40	20.80
		50	0	19.75	19.90	19.86	20.80
		50	25	19.61	19.46	19.62	20.80
		50	50	19.54	19.49	19.82	20.80
		100	0	19.68	19.47	19.84	20.80
	16QAM	1	0	19.58	19.82	19.80	20.80
		1	50	19.35	19.73	19.44	20.80
		1	99	19.37	19.74	19.83	20.80

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		50	0	19.24	19.57	19.78	20.80
		50	25	19.52	19.46	19.82	20.80
		50	50	19.48	19.52	19.87	20.80
		100	0	19.57	19.47	19.84	20.80

LTE Band 4 hotspot on/receiver off +WIFI/BT				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19957	20175	20393	
1.4MHz	QPSK	1	0	17.81	17.98	18.25	19.30
		1	2	17.91	17.85	18.32	19.30
		1	5	17.97	17.81	18.17	19.30
		3	0	18.20	18.12	18.29	19.30
		3	2	18.07	17.96	18.27	19.30
		3	3	18.03	18.00	18.28	19.30
		6	0	18.48	17.97	18.31	19.30
	16QAM	1	0	18.21	18.47	18.30	19.30
		1	2	17.81	18.28	18.22	19.30
		1	5	17.86	18.26	18.15	19.30
		3	0	17.71	18.08	18.35	19.30
		3	2	17.89	17.95	18.27	19.30
		3	3	17.79	17.94	18.29	19.30
		6	0	17.96	17.96	18.26	19.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19965	20175	20385	
3MHz	QPSK	1	0	17.92	17.96	17.73	19.30
		1	7	18.16	17.95	18.38	19.30
		1	14	18.23	18.20	18.58	19.30
		8	0	17.97	17.79	18.03	19.30
		8	4	18.09	17.98	18.24	19.30
		8	7	18.23	18.07	18.41	19.30
		15	0	18.04	17.84	18.18	19.30
	16QAM	1	0	18.30	18.04	18.19	19.30
		1	7	18.55	18.36	18.37	19.30
		1	14	18.59	18.55	18.56	19.30
		8	0	17.92	17.73	17.98	19.30
		8	4	18.13	18.01	18.29	19.30
		8	7	18.17	18.04	18.35	19.30
		15	0	18.10	17.90	18.27	19.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				19975	20175	20375	

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5MHz	QPSK	1	0	17.89	18.05	18.51	19.30
		1	13	18.20	17.91	18.58	19.30
		1	24	18.35	18.28	18.70	19.30
		12	0	18.21	18.08	18.47	19.30
		12	6	18.24	18.04	18.59	19.30
		12	13	18.20	18.08	18.61	19.30
		25	0	18.19	18.08	18.51	19.30
	16QAM	1	0	18.53	18.30	18.43	19.30
		1	13	18.27	18.08	18.63	19.30
		1	24	18.45	18.56	18.33	19.30
		12	0	18.23	18.08	18.19	19.30
		12	6	18.26	18.05	18.30	19.30
		12	13	18.15	18.04	18.27	19.30
		25	0	18.19	18.09	18.25	19.30

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20000	20175	20350	
10MHz	QPSK	1	0	17.82	18.00	18.34	19.30
		1	25	18.14	17.88	18.26	19.30
		1	49	18.04	18.07	18.43	19.30
		25	0	18.11	18.07	18.51	19.30
		25	13	18.06	18.02	18.50	19.30
		25	25	18.17	18.07	18.50	19.30
		50	0	18.12	18.05	18.50	19.30
	16QAM	1	0	17.99	18.55	18.44	19.30
		1	25	18.01	18.31	18.31	19.30
		1	49	18.08	18.47	18.29	19.30
		25	0	18.01	18.19	18.11	19.30
		25	13	17.93	18.06	18.03	19.30
		25	25	17.97	18.11	18.02	19.30
		50	0	17.92	18.07	18.01	19.30

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20025	20175	20325	
15MHz	QPSK	1	0	17.97	17.96	18.54	19.30
		1	38	17.91	17.95	18.39	19.30
		1	74	18.00	18.06	18.36	19.30
		36	0	18.00	18.12	18.37	19.30
		36	18	18.06	18.06	18.47	19.30
		36	39	18.03	17.97	18.34	19.30
		75	0	17.98	17.97	18.38	19.30
	16QAM	1	0	17.86	18.44	18.43	19.30
		1	38	17.84	18.44	18.30	19.30
		1	74	17.77	18.39	18.34	19.30

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		36	0	17.96	18.17	18.43	19.30
		36	18	17.96	18.09	18.48	19.30
		36	39	17.99	18.08	18.53	19.30
		75	0	17.97	18.08	18.43	19.30
Bandwidth	Modulation	RB size	RB offset	Channel 20050	Channel 20175	Channel 20300	Tune up
20MHz	QPSK	1	0	18.15	18.17	18.09	19.30
		1	50	18.12	18.10	18.14	19.30
		1	99	17.93	18.01	18.14	19.30
		50	0	18.01	18.12	18.09	19.30
		50	25	17.96	18.05	18.06	19.30
		50	50	17.96	18.00	18.10	19.30
		100	0	17.97	17.98	18.32	19.30
	16QAM	1	0	17.81	18.38	18.37	19.30
		1	50	17.82	18.41	18.21	19.30
		1	99	17.76	18.28	18.28	19.30
		50	0	17.89	18.14	18.40	19.30
		50	25	17.81	18.12	18.45	19.30
		50	50	17.78	18.07	18.43	19.30
		100	0	17.87	18.06	18.40	19.30

LTE Band 66 receiver on				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel 131979	Channel 132322	Channel 132665	Tune up
1.4MHz	QPSK	1	0	19.49	19.64	19.32	20.30
		1	2	19.42	19.58	19.46	20.30
		1	5	19.36	19.4	19.35	20.30
		3	0	19.34	19.27	19.35	20.30
		3	1	19.49	19.47	19.43	20.30
		3	3	19.3	19.54	19.57	20.30
		6	0	19.39	19.39	19.31	20.30
	16QAM	1	0	19.28	19.29	19.46	20.30
		1	2	19.31	19.34	19.33	20.30
		1	5	19.27	19.23	19.19	20.30
		3	0	19.56	19.66	19.39	20.30
		3	1	19.49	19.38	19.39	20.30
		3	3	19.39	19.49	19.5	20.30
		6	0	19.43	19.45	19.37	20.30
Bandwidth	Modulation	RB size	RB offset	Channel 131987	Channel 132322	Channel 132657	Tune up
3MHz	QPSK	1	0	19.28	19.27	19.42	20.30

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		1	7	19.47	19.45	19.44	20.30
		1	14	19.52	19.48	19.56	20.30
		8	0	19.69	19.39	19.32	20.30
		8	4	19.39	19.49	19.54	20.30
		8	7	19.35	19.61	19.41	20.30
		15	0	19.53	19.22	19.28	20.30
	16QAM	1	0	19.52	19.47	19.52	20.30
		1	7	19.56	19.33	19.44	20.30
		1	14	19.51	19.3	19.45	20.30
		8	0	19.37	19.47	19.16	20.30
		8	4	19.24	19.33	19.29	20.30
		8	7	19.56	19.55	19.61	20.30
		15	0	19.42	19.39	19.34	20.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131997	132322	132647	
5MHz	QPSK	1	0	19.3	19.4	19.38	20.30
		1	13	19.47	19.56	19.5	20.30
		1	24	19.49	19.36	19.46	20.30
		12	0	19.43	19.56	19.36	20.30
		12	6	19.28	19.3	19.45	20.30
		12	13	19.44	19.38	19.39	20.30
		25	0	19.54	19.45	19.54	20.30
	16QAM	1	0	19.35	19.29	19.49	20.30
		1	13	19.17	19.18	19.27	20.30
		1	24	19.37	19.28	19.28	20.30
		12	0	19.28	19.49	19.18	20.30
		12	6	19.44	19.3	19.21	20.30
		12	13	19.68	19.6	19.68	20.30
		25	0	19.36	19.29	19.34	20.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132022	132322	132622	
10MHz	QPSK	1	0	19.31	19.28	19.48	20.30
		1	25	19.19	19.45	19.48	20.30
		1	49	19.32	19.4	19.33	20.30
		25	0	19.63	19.26	19.29	20.30
		25	13	19.31	19.41	19.41	20.30
		25	25	19.37	19.5	19.54	20.30
		50	0	19.26	19.2	19.31	20.30
	16QAM	1	0	19.46	19.39	19.57	20.30
		1	25	19.43	19.33	19.4	20.30
		1	49	19.3	19.28	19.32	20.30
		25	0	19.37	19.44	19.35	20.30

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		25	13	19.44	19.43	19.37	20.30
		25	25	19.47	19.48	19.46	20.30
		50	0	19.49	19.26	19.23	20.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132047	132322	132597	
15MHz	QPSK	1	0	19.29	19.27	19.29	20.30
		1	38	19.2	19.38	19.39	20.30
		1	74	19.31	19.38	19.38	20.30
		36	0	19.68	19.35	19.47	20.30
		36	18	19.34	19.3	19.47	20.30
		36	39	19.51	19.63	19.55	20.30
		75	0	19.27	19.26	19.26	20.30
	16QAM	1	0	19.2	19.25	19.33	20.30
		1	38	19.5	19.34	19.43	20.30
		1	74	19.39	19.33	19.29	20.30
		36	0	19.39	19.49	19.25	20.30
		36	18	19.51	19.31	19.27	20.30
		36	39	19.36	19.41	19.53	20.30
		75	0	19.55	19.39	19.28	20.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132072	132322	132572	
20MHz	QPSK	1	0	19.23	19.21	19.33	20.30
		1	50	19.32	19.42	19.41	20.30
		1	99	19.21	19.35	19.30	20.30
		50	0	19.40	19.20	19.28	20.30
		50	25	19.32	19.51	19.50	20.30
		50	50	19.26	19.45	19.42	20.30
		100	0	19.40	19.29	19.21	20.30
	16QAM	1	0	19.33	19.39	19.41	20.30
		1	50	19.30	19.25	19.33	20.30
		1	99	19.18	19.24	19.24	20.30
		50	0	19.33	19.50	19.29	20.30
		50	25	19.41	19.27	19.33	20.30
		50	50	19.55	19.50	19.54	20.30
		100	0	19.28	19.26	19.17	20.30

LTE Band 66 receiver off				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131979	132322	132665	
1.4MHz	QPSK	1	0	19.02	18.94	18.83	19.80

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		1	2	18.96	18.81	18.68	19.80
		1	5	19.53	18.88	19.10	19.80
		3	0	18.55	18.91	18.82	19.80
		3	1	18.91	18.69	18.89	19.80
		3	3	18.58	18.54	18.88	19.80
		6	0	18.91	18.87	18.86	19.80
	16QAM	1	0	18.79	18.87	18.91	19.80
		1	2	19.25	19.40	19.29	19.80
		1	5	18.49	18.54	18.54	19.80
		3	0	19.14	19.21	19.38	19.80
		3	1	18.73	18.79	18.84	19.80
		3	3	19.09	18.88	18.85	19.80
		6	0	19.05	18.96	19.12	19.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131987	132322	132657	
3MHz	QPSK	1	0	18.86	18.86	18.87	19.80
		1	7	18.92	18.82	18.99	19.80
		1	14	18.93	18.86	19.31	19.80
		8	0	18.68	18.67	18.53	19.80
		8	4	19.05	18.93	19.05	19.80
		8	7	18.69	18.59	18.42	19.80
		15	0	18.73	18.92	18.89	19.80
	16QAM	1	0	19.02	18.90	18.84	19.80
		1	7	19.12	19.32	19.22	19.80
		1	14	18.56	18.49	18.57	19.80
		8	0	19.19	19.05	19.06	19.80
		8	4	18.88	18.71	18.82	19.80
		8	7	18.91	18.98	18.87	19.80
		15	0	19.08	19.13	19.05	19.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131997	132322	132647	
5MHz	QPSK	1	0	18.71	18.85	18.91	19.80
		1	13	19.28	18.88	18.88	19.80
		1	24	18.96	19.25	19.03	19.80
		12	0	19.02	18.54	18.61	19.80
		12	6	19.02	19.36	19.00	19.80
		12	13	18.77	18.74	18.57	19.80
		25	0	18.98	18.78	18.63	19.80
	16QAM	1	0	19.18	19.16	19.21	19.80
		1	13	19.42	19.16	19.10	19.80
		1	24	18.68	18.70	18.50	19.80
		12	0	18.80	19.34	19.43	19.80

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		12	6	18.55	18.93	18.98	19.80
		12	13	19.17	18.88	19.08	19.80
		25	0	19.11	19.07	19.18	19.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132022	132322	132622	
10MHz	QPSK	1	0	18.92	18.84	18.92	19.80
		1	25	19.02	19.32	19.02	19.80
		1	49	19.10	18.92	19.10	19.80
		25	0	18.58	18.94	18.58	19.80
		25	13	19.10	18.77	19.10	19.80
		25	25	18.86	18.67	18.86	19.80
		50	0	18.65	18.98	18.65	19.80
	16QAM	1	0	19.04	19.09	19.04	19.80
		1	25	19.18	19.10	19.18	19.80
		1	49	18.63	19.08	18.63	19.80
		25	0	19.09	18.62	19.09	19.80
		25	13	18.78	18.50	18.78	19.80
		25	25	18.82	19.07	18.82	19.80
		50	0	19.08	18.76	19.08	19.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132047	132322	132597	
15MHz	QPSK	1	0	19.00	18.84	19.07	19.80
		1	38	19.23	19.11	18.80	19.80
		1	74	19.12	19.00	19.42	19.80
		36	0	18.73	18.78	18.71	19.80
		36	18	19.07	18.63	19.52	19.80
		36	39	19.07	18.73	18.60	19.80
		75	0	18.71	18.76	18.83	19.80
	16QAM	1	0	19.05	18.95	19.00	19.80
		1	38	19.53	18.82	19.27	19.80
		1	74	18.46	19.18	18.58	19.80
		36	0	18.85	18.80	19.41	19.80
		36	18	18.97	18.68	18.84	19.80
		36	39	19.24	18.69	18.95	19.80
		75	0	19.42	18.52	18.77	19.80
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132072	132322	132572	
20MHz	QPSK	1	0	18.95	18.92	18.78	19.80
		1	50	19.09	19.10	19.04	19.80
		1	99	19.06	18.98	19.04	19.80
		50	0	18.80	18.73	18.77	19.80
		50	25	18.76	18.95	18.94	19.80

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		50	50	18.51	18.83	18.68	19.80
		100	0	18.89	18.93	18.76	19.80
	16QAM	1	0	19.00	18.85	19.02	19.80
		1	50	19.14	19.05	19.13	19.80
		1	99	18.61	18.96	18.79	19.80
		50	0	18.88	18.73	18.84	19.80
		50	25	18.72	18.73	18.63	19.80
		50	50	18.83	18.91	19.02	19.80
		100	0	19.13	18.90	19.08	19.80

LTE Band 66 hotspot on/receiver off +WIFI/BT				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131979	132322	132665	
1.4MHz	QPSK	1	0	18.06	17.95	17.76	18.30
		1	2	17.34	17.32	17.29	18.30
		1	5	17.42	17.32	17.33	18.30
		3	0	17.78	17.24	17.67	18.30
		3	1	17.29	17.18	17.41	18.30
		3	3	17.52	17.37	17.46	18.30
		6	0	17.50	17.38	17.63	18.30
	16QAM	1	0	17.33	17.23	17.56	18.30
		1	2	17.34	17.55	17.30	18.30
		1	5	16.99	17.28	17.14	18.30
		3	0	17.40	17.17	17.58	18.30
		3	1	17.18	17.13	17.12	18.30
		3	3	17.76	17.27	17.75	18.30
		6	0	17.76	17.42	17.51	18.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131987	132322	132657	
3MHz	QPSK	1	0	17.89	17.96	17.81	18.30
		1	7	17.68	17.76	17.55	18.30
		1	14	17.65	17.91	17.60	18.30
		8	0	17.76	17.92	17.59	18.30
		8	4	17.77	17.51	17.63	18.30
		8	7	17.58	17.62	17.75	18.30
		15	0	17.91	18.00	17.71	18.30
	16QAM	1	0	17.61	17.77	17.81	18.30
		1	7	17.77	17.76	17.81	18.30
		1	14	17.73	17.75	17.81	18.30
		8	0	17.84	17.67	17.61	18.30
		8	4	17.72	17.68	17.69	18.30

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		8	7	17.67	17.80	17.51	18.30
		15	0	17.84	17.68	17.79	18.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				131997	132322	132647	
5MHz	QPSK	1	0	17.87	17.79	17.99	18.30
		1	13	17.31	17.46	17.31	18.30
		1	24	17.21	17.24	17.49	18.30
		12	0	17.47	17.45	17.36	18.30
		12	6	17.25	17.17	17.47	18.30
		12	13	17.75	17.70	17.43	18.30
		25	0	17.60	17.44	17.44	18.30
	16QAM	1	0	17.39	17.56	17.34	18.30
		1	13	17.55	17.28	17.27	18.30
		1	24	17.21	17.32	17.28	18.30
		12	0	17.42	17.58	17.24	18.30
		12	6	17.37	17.27	17.23	18.30
		12	13	17.84	17.73	17.22	18.30
		25	0	17.77	17.57	17.58	18.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132022	132322	132622	
10MHz	QPSK	1	0	17.61	17.79	17.90	18.30
		1	25	17.75	17.39	17.33	18.30
		1	49	17.68	17.50	17.35	18.30
		25	0	17.78	17.39	17.73	18.30
		25	13	17.16	17.40	17.30	18.30
		25	25	17.21	17.42	17.55	18.30
		50	0	17.53	17.22	17.42	18.30
	16QAM	1	0	17.49	17.40	17.48	18.30
		1	25	17.47	17.52	17.45	18.30
		1	49	17.15	17.10	17.02	18.30
		25	0	17.14	17.29	17.41	18.30
		25	13	17.15	17.36	17.23	18.30
		25	25	17.57	17.31	17.60	18.30
		50	0	17.37	17.53	17.65	18.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132047	132322	132597	
15MHz	QPSK	1	0	17.81	17.66	17.63	18.30
		1	38	17.31	17.44	17.65	18.30
		1	74	17.57	17.57	17.39	18.30
		36	0	17.46	17.45	17.63	18.30
		36	18	17.34	17.37	17.01	18.30
		36	39	17.55	17.44	17.29	18.30

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		75	0	17.54	17.28	17.47	18.30
	16QAM	1	0	17.53	17.30	17.41	18.30
		1	38	17.57	17.71	17.43	18.30
		1	74	17.11	17.11	17.23	18.30
		36	0	17.39	17.14	17.54	18.30
		36	18	17.25	17.51	17.40	18.30
		36	39	17.74	17.63	17.53	18.30
		75	0	17.40	17.63	17.26	18.30
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				132072	132322	132572	
20MHz	QPSK	1	0	17.56	17.59	17.57	18.30
		1	50	17.53	17.59	17.43	18.30
		1	99	17.47	17.49	17.34	18.30
		50	0	17.41	17.52	17.47	18.30
		50	25	17.20	17.55	17.28	18.30
		50	50	17.35	17.42	17.55	18.30
		100	0	17.48	17.43	17.63	18.30
	16QAM	1	0	17.42	17.31	17.39	18.30
		1	50	17.36	17.47	17.40	18.30
		1	99	17.04	17.21	17.13	18.30
		50	0	17.38	17.27	17.39	18.30
		50	25	17.16	17.33	17.20	18.30
		50	50	17.62	17.48	17.77	18.30
		100	0	17.41	17.47	17.59	18.30

ANT4

LTE Band 7 receiver off/receiver on				**Conducted Power(dBm)**			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20775	21100	21425	
5MHz	QPSK	1	0	19.97	19.65	19.57	21.00
		1	13	19.83	19.55	19.43	21.00
		1	24	19.76	19.50	19.42	21.00
		12	0	19.82	19.50	19.36	21.00
		12	6	19.77	19.46	19.25	21.00
		12	13	19.74	19.60	19.40	21.00
		25	0	19.74	19.44	19.42	21.00
	16QAM	1	0	20.39	19.69	19.55	21.00
		1	13	20.27	19.63	19.29	21.00
		1	24	19.66	19.77	19.84	21.00
		12	0	19.75	19.52	19.46	21.00

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		12	6	19.89	19.54	19.44	21.00
		12	13	19.77	19.45	19.29	21.00
		25	0	19.80	19.48	19.38	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20800	21100	21400	
10MHz	QPSK	1	0	20.21	19.68	19.71	21.00
		1	25	19.81	19.45	19.30	21.00
		1	49	19.77	19.66	19.30	21.00
		25	0	19.72	19.55	19.39	21.00
		25	13	19.73	19.50	19.36	21.00
		25	25	19.77	19.50	19.45	21.00
		50	0	19.76	19.54	19.47	21.00
	16QAM	1	0	20.21	20.15	19.44	21.00
		1	25	20.08	19.64	19.84	21.00
		1	49	20.12	19.85	20.06	21.00
		25	0	19.76	19.57	19.42	21.00
		25	13	19.74	19.60	19.47	21.00
		25	25	19.64	19.49	19.39	21.00
		50	0	19.66	19.54	19.37	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	19.40	19.51	19.50	21.00
		1	38	19.62	19.50	19.35	21.00
		1	74	19.54	19.38	19.46	21.00
		36	0	19.67	19.49	19.31	21.00
		36	18	19.82	19.63	19.41	21.00
		36	39	19.88	19.78	19.56	21.00
		75	0	20.00	19.69	19.49	21.00
	16QAM	1	0	19.39	19.66	19.68	21.00
		1	38	19.80	19.50	19.78	21.00
		1	74	19.89	19.79	19.41	21.00
		36	0	19.79	19.50	19.30	21.00
		36	18	19.84	19.71	19.50	21.00
		36	39	19.85	19.77	19.52	21.00
		75	0	19.87	19.60	19.47	21.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	19.76	19.33	19.48	21.00
		1	50	19.66	19.60	19.43	21.00
		1	99	19.78	19.75	19.68	21.00
		50	0	19.77	19.77	19.63	21.00
		50	25	19.71	19.76	19.60	21.00

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		50	50	19.81	19.78	19.67	21.00
		100	0	19.95	19.76	19.58	21.00
	16QAM	1	0	20.17	19.61	19.49	21.00
		1	50	19.66	20.05	19.47	21.00
		1	99	20.15	20.28	20.19	21.00
		50	0	19.59	19.38	19.37	21.00
		50	25	19.69	19.51	19.37	21.00
		50	50	19.70	19.61	19.52	21.00
		100	0	19.88	19.67	19.43	21.00

LTE Band 7 hotspot on/receiver off +WIFI/BT				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20775	21100	21425	
5MHz	QPSK	1	0	18.40	18.10	18.09	19.50
		1	13	18.07	17.91	17.89	19.50
		1	24	18.15	17.85	17.83	19.50
		12	0	18.25	18.03	17.88	19.50
		12	6	18.28	18.07	17.82	19.50
		12	13	18.32	18.08	17.87	19.50
		25	0	18.44	18.08	18.01	19.50
	16QAM	1	0	18.54	18.48	18.20	19.50
		1	13	18.38	18.21	17.89	19.50
		1	24	18.50	18.07	18.17	19.50
		12	0	18.45	18.11	17.95	19.50
		12	6	18.41	18.08	17.95	19.50
		12	13	18.40	18.12	17.97	19.50
		25	0	18.39	18.03	18.03	19.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20800	21100	21400	
10MHz	QPSK	1	0	18.32	18.18	**18.18**	19.50
		1	25	18.15	18.04	17.98	19.50
		1	49	18.34	18.20	18.07	19.50
		25	0	18.28	18.14	18.01	19.50
		25	13	18.35	18.20	18.10	19.50
		25	25	18.29	17.91	17.81	19.50
		50	0	18.35	18.17	17.95	19.50
	16QAM	1	0	18.61	18.39	18.15	19.50
		1	25	18.69	18.58	18.48	19.50
		1	49	18.86	18.48	18.84	19.50
		25	0	18.30	18.19	17.97	19.50
		25	13	18.41	18.07	18.11	19.50

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		25	25	18.37	17.95	17.95	19.50
		50	0	18.26	17.91	17.81	19.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	17.81	17.77	**17.83**	19.50
		1	38	18.39	17.86	17.89	19.50
		1	74	17.89	17.83	17.82	19.50
		36	0	18.31	18.04	17.98	19.50
		36	18	18.26	18.05	18.08	19.50
		36	39	18.34	18.17	18.05	19.50
		75	0	18.33	18.07	17.98	19.50
	16QAM	1	0	18.21	17.93	18.11	19.50
		1	38	18.67	18.01	18.43	19.50
		1	74	18.20	17.99	18.41	19.50
		36	0	18.25	17.97	17.95	19.50
		36	18	18.10	18.03	17.94	19.50
		36	39	18.40	18.12	18.10	19.50
		75	0	18.28	18.17	18.05	19.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	18.05	17.86	17.89	19.50
		1	50	18.16	18.02	17.94	19.50
		1	99	18.47	18.46	18.42	19.50
		50	0	17.95	17.82	17.78	19.50
		50	25	18.04	17.91	17.87	19.50
		50	50	18.34	18.22	18.11	19.50
		100	0	18.36	18.06	18.21	19.50
	16QAM	1	0	18.08	18.50	18.19	19.50
		1	50	18.14	18.88	18.79	19.50
		1	99	18.95	18.91	18.53	19.50
		50	0	18.03	18.02	17.93	19.50
		50	25	18.05	18.08	18.05	19.50
		50	50	18.11	18.02	18.01	19.50
		100	0	18.16	17.96	17.85	19.50

8.1.4 Conducted Power of WIFI

WiFi 2.4G Receiver off						
Mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11b	1	2412	1	17.59	18.50	Yes

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	6	2437		17.55	18.50	Yes
	11	2462		17.89	18.50	Yes
802.11g	1	2412	6	14.85	15.00	No
	2	2417		16.01	17.00	No
	3	2422		17.92	19.00	No
	6	2437		17.85	19.00	No
	9	2452		17.73	19.00	No
	10	2457		15.89	17.00	No
	11	2462		14.85	15.00	No
802.11n HT20	1	2412	6.5	14.65	15.00	No
	2	2417		15.83	17.00	No
	3	2422		17.54	18.50	No
	6	2437		17.68	18.50	No
	9	2452		17.49	18.50	No
	10	2457		15.92	17.00	No
	11	2462		14.65	15.00	No
802.11n HT40	3	2422	13.5	10.45	11.50	No
	4	2427		10.33	11.50	No
	5	2432		12.49	13.50	No
	6	2437		14.05	15.00	No
	7	2442		12.31	13.50	No
	8	2447		11.59	13.00	No
	9	2452		11.18	12.50	No

WiFi 2.4G Receiver on						
Mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11b	1	2412	1	11.45	12.00	Yes
	6	2437		11.32	12.00	Yes
	11	2462		11.64	12.00	Yes
802.11g	1	2412	6	11.77	12.00	No
	6	2437		11.65	12.00	No
	11	2462		11.83	12.00	No
802.11n HT20	1	2412	6.5	11.58	12.00	No
	6	2437		11.47	12.00	No
	11	2462		11.63	12.00	No
802.11n HT40	3	2422	13.5	10.45	11.50	No
	4	2427		10.38	11.50	No
	5	2432		11.53	12.00	No
	6	2437		11.69	12.00	No

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	9	2452		11.18	12.00	No

WiFi 5G Receiver off							
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11a	U-NII-1	36	5180	6	13.95	15.00	No
		40	5200		18.68	19.00	Yes
		44	5220		18.51	19.00	No
		48	5240		18.35	19.00	No
	U-NII-2A	52	5260		18.42	19.00	Yes
		56	5280		18.37	19.00	No
		60	5300		18.33	19.00	No
		64	5320		15.35	16.00	No
	U-NII-2C	100	5500		16.97	18.00	No
		104	5520		17.89	19.00	Yes
		108	5540		17.85	19.00	No
		112	5560		17.68	19.00	No
		116	5580		17.15	18.50	No
		120	5600		17.63	19.00	No
		124	5620		17.71	19.00	No
		128	5640		17.73	19.00	No
		132	5660		17.68	19.00	No
		136	5680		17.66	19.00	No
		140	5700		17.55	15.00	No
	U-NII-3	149	5745		17.65	19.00	No
		153	5765		17.67	19.00	No
		157	5785		17.69	19.00	Yes
		161	5805		17.54	19.00	No
		165	5825		17.61	19.00	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11n-HT20	U-NII-1	36	5180	MCS0	14.75	15.00	No
		40	5200		17.52	18.50	No
		44	5220		17.35	18.50	No
		48	5240		17.30	18.50	No
	U-NII-2A	52	5260		17.34	18.50	No
		56	5280		17.28	18.50	No
		60	5300		17.25	18.50	No
		64	5320		15.22	16.00	No
	U-NII-2C	100	5500		17.29	18.00	No
		104	5520		17.74	18.50	No
		108	5540		17.69	18.50	No
		112	5560		17.53	18.50	No

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		116	5580		16.51	17.50	No
		120	5600		17.48	18.50	No
		124	5620		17.54	18.50	No
		128	5640		17.56	18.50	No
		132	5660		17.55	18.50	No
		136	5680		17.50	18.50	No
		140	5700		14.78	15.00	No
	U-NII-3	149	5745		17.46	18.50	No
		153	5765		17.51	18.50	No
		157	5785		17.54	18.50	No
		161	5805		17.38	18.50	No
		165	5825		17.45	18.50	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11n-HT40	U-NII-1	38	5190	MCS0	8.54	9.00	No
		46	5230		17.45	18.00	No
	U-NII-2A	54	5270		17.44	18.00	No
		62	5310		8.10	9.50	No
	U-NII-2C	102	5510		9.73	10.00	No
		110	5550		16.82	17.00	No
		118	5590		17.61	18.00	No
		126	5630		17.68	18.00	No
		134	5670		16.75	17.00	No
		142	5710		17.61	18.00	No
	U-NII-3	151	5755		17.71	18.00	No
		159	5795		17.58	18.00	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11ac-20M	U-NII-1	36	5180	MCS0	14.79	15.00	No
		40	5200		17.41	18.50	No
		44	5220		17.23	18.50	No
		48	5240		17.24	18.50	No
	U-NII-2A	52	5260		17.27	18.50	No
		56	5280		17.28	18.50	No
		60	5300		17.39	18.50	No
		64	5320		15.35	16.00	No
	U-NII-2C	100	5500		17.28	18.00	No
		104	5520		17.60	18.50	No
		108	5540		17.69	18.50	No
		112	5560		17.55	18.50	No
		116	5580		16.37	17.50	No
		120	5600		17.35	18.50	No
		124	5620		17.46	18.50	No

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		128	5640		17.42	18.50	No
		132	5660		17.49	18.50	No
		136	5680		17.56	18.50	No
		140	5700		14.65	15.00	No
	U-NII-3	149	5745		17.32	18.50	No
		153	5765		17.57	18.50	No
		157	5785		17.49	18.50	No
		161	5805		17.45	18.50	No
		165	5825		17.32	18.50	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11ac-40M	U-NII-1	38	5190	MCS0	8.47	9.00	No
		46	5230		17.38	18.00	No
	U-NII-2A	54	5270		17.50	18.00	No
		62	5310		8.09	9.50	No
	U-NII-2C	102	5510		9.79	10.00	No
		110	5550		16.81	17.00	No
		118	5590		17.56	18.00	No
		126	5630		17.58	18.00	No
		134	5670		16.75	17.00	No
		142	5710		17.53	18.00	No
	U-NII-3	151	5755		17.72	18.00	No
		159	5795		17.57	18.00	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11ac 80M	U-NII-1	42	5210	MCS0	7.16	8.00	No
	U-NII-2A	58	5290		7.97	8.50	No
	U-NII-2C	106	5530		8.37	9.00	No
		122	5610		16.54	17.00	No
		138	5690		16.44	17.00	No
	U-NII-3	155	5775		16.59	17.00	No

WiFi 5G Receiver off							
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11a	U-NII-1	36	5180	6	11.45	12.00	No
		40	5200		11.25	12.00	No
		44	5220		11.12	12.00	No
		48	5240		11.08	12.00	No
	U-NII-2A	52	5260		11.17	12.00	No
		56	5280		11.12	12.00	No
		60	5300		11.07	12.00	No

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		64	5320		10.85	12.00	No
	U-NII-2C	100	5500		11.65	12.00	No
		104	5520		11.53	12.00	No
		108	5540		11.52	12.00	No
		112	5560		11.34	12.00	No
		116	5580		11.50	12.00	No
		120	5600		11.35	12.00	No
		124	5620		11.42	12.00	No
		128	5640		11.41	12.00	No
		132	5660		11.35	12.00	No
		136	5680		11.33	12.00	No
		140	5700		11.35	12.00	No
	U-NII-3	149	5745		11.38	12.00	No
		153	5765		11.45	12.00	No
		157	5785		11.44	12.00	No
		161	5805		11.32	12.00	No
		165	5825		11.35	12.00	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11n-HT20	U-NII-1	36	5180	MCS0	11.25	12.00	No
		40	5200		11.08	12.00	No
		44	5220		10.89	12.00	No
		48	5240		10.88	12.00	No
	U-NII-2A	52	5260		10.98	12.00	No
		56	5280		10.92	12.00	No
		60	5300		10.87	12.00	No
		64	5320		10.71	12.00	No
	U-NII-2C	100	5500		11.41	12.00	No
		104	5520		11.35	12.00	No
		108	5540		11.32	12.00	No
		112	5560		11.15	12.00	No
		116	5580		11.35	12.00	No
		120	5600		11.15	12.00	No
		124	5620		11.25	12.00	No
		128	5640		11.22	12.00	No
		132	5660		11.15	12.00	No
		136	5680		11.11	12.00	No
		140	5700		11.16	12.00	No
	U-NII-3	149	5745		11.21	12.00	No
		153	5765		11.23	12.00	No
		157	5785		11.23	12.00	No
		161	5805		11.14	12.00	No

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		165	5825		11.15	12.00	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11n-HT40	U-NII-1	38	5190	MCS0	8.56	9.00	No
		46	5230		11.12	12.00	No
	U-NII-2A	54	5270		11.14	12.00	Yes
		62	5310		8.06	9.50	No
	U-NII-2C	102	5510		11.75	12.00	No
		110	5550		11.52	12.00	No
		118	5590		11.45	12.00	No
		126	5630		11.45	12.00	No
		134	5670		11.38	12.00	No
		142	5710		11.40	12.00	No
	U-NII-3	151	5755		11.52	12.00	No
		159	5795		11.38	12.00	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11ac-20M	U-NII-1	36	5180	MCS0	11.30	12.00	No
		40	5200		10.98	12.00	No
		44	5220		10.81	12.00	No
		48	5240		10.85	12.00	No
	U-NII-2A	52	5260		10.92	12.00	No
		56	5280		10.86	12.00	No
		60	5300		10.79	12.00	No
		64	5320		10.62	12.00	No
	U-NII-2C	100	5500		11.42	12.00	No
		104	5520		11.28	12.00	No
		108	5540		11.33	12.00	No
		112	5560		11.18	12.00	No
		116	5580		11.33	12.00	No
		120	5600		11.24	12.00	No
		124	5620		11.20	12.00	No
		128	5640		11.14	12.00	No
		132	5660		11.25	12.00	No
		136	5680		11.09	12.00	No
		140	5700		11.21	12.00	No
	U-NII-3	149	5745		11.24	12.00	No
		153	5765		11.23	12.00	No
		157	5785		11.19	12.00	No
		161	5805		11.06	12.00	No
		165	5825		11.25	12.00	No

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5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11ac-40M	U-NII-1	38	5190	MCS0	8.47	9.00	No
		46	5230		11.22	12.00	No
	U-NII-2A	54	5270		11.09	12.00	No
		62	5310		8.11	9.50	No
	U-NII-2C	102	5510		11.84	12.00	No
		110	5550		11.57	12.00	No
		118	5590		11.55	12.00	No
		126	5630		11.49	12.00	No
		134	5670		11.33	12.00	No
		142	5710		11.30	12.00	No
	U-NII-3	151	5755		11.52	12.00	No
		159	5795		11.34	12.00	No
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up	SAR Test
802.11ac 80M	U-NII-1	42	5210	MCS0	7.24	8.00	No
	U-NII-2A	58	5290		8.02	8.50	No
	U-NII-2C	106	5530		8.42	9.00	No
		122	5610		11.34	12.00	Yes
		138	5690		11.05	12.00	No
	U-NII-3	155	5775		11.28	12.00	Yes

Note:
a) Power must be measured at each transmit antenna port according to the DSSS and OFDM transmission configurations in each standalone and aggregated frequency band.
b) Power measurement is required for the transmission mode configuration with the highest maximum output power specified for production units.
1) When the same highest maximum output power specification applies to multiple transmission modes, the largest channel bandwidth configuration with the lowest order modulation and lowest data rate is measured.
2) When the same highest maximum output power is specified for multiple largest channel bandwidth configurations with the same lowest order modulation or lowest order modulation and lowest data rate, power measurement is required for all equivalent 802.11 configurations with the same maximum output power.
c) For each transmission mode configuration, power must be measured for the highest and lowest channels; and at the mid-band channel(s) when there are at least 3 channels. For configurations with multiple mid-band channels, due to an even number of channels, both channels should be measured.

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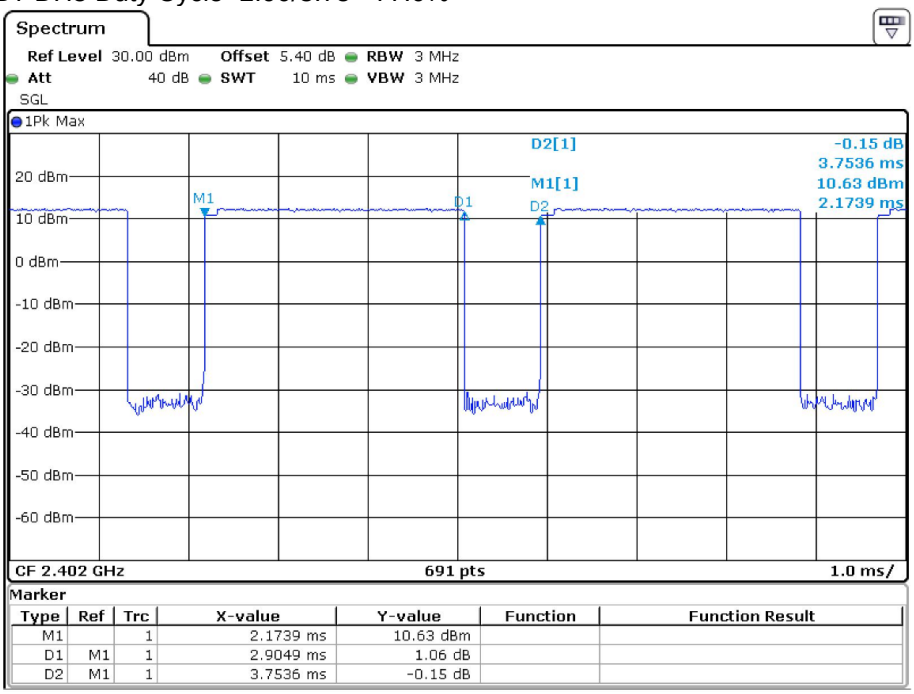
8.1.5 Conducted Power of BT

BT DH5 Duty Cycle=2.90/3.75 =77.0%



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

BT			Tune up
Band	Channel	Average Conducted Power(dBm)	
GFSK	0	11.83	12.0
	1	11.77	12.0
	38	13.01	13.3
	39	13.08	13.3
	40	12.96	13.3
	77	12.14	12.5
	78	12.22	12.5
π/4DQPSK	0	8.71	11.5
	39	10.42	11.5
	78	9.95	11.5
8DPSK	0	8.70	11.5
	39	10.42	11.5
	78	9.90	11.5
BLE 1M	0	5.04	9.5
	19	7.07	9.5
	39	6.74	9.5

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8.2 Measurement of SAR Data

Note:

1) The maximum measured SAR value and Scaled SAR value is marked in bold. Graph results refer to Appendix B.
2) Per KDB447498 D01, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8W/kg for 1-g or 2.0W/kg for 10-g respectively, when the transmission band is ≤ 100MHz.
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.

8.2.1 SAR Result of GSM850

Ant1 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	GSM	190/836.6	1:8.3	0.104	0.03	32.21	33.30	1.285	**0.134**	22.1
Left tilted	GSM	190/836.6	1:8.3	0.043	0.16	32.21	33.30	1.285	0.055	22.1
Right cheek	GSM	190/836.6	1:8.3	0.091	0.03	32.21	33.30	1.285	0.117	22.1
Right tilted	GSM	190/836.6	1:8.3	0.049	0.02	32.21	33.30	1.285	0.063	22.1
Head Test data at the worst case with battery 2										
Left cheek	GSM	190/836.6	1:8.3	0.095	0.01	32.21	33.30	1.285	0.122	22.1
Body worn Test data(Separate 15mm)										
Front side	GSM	190/836.6	1:8.3	0.127	0.00	32.21	33.30	1.285	0.163	22.1
Back side	GSM	190/836.6	1:8.3	0.161	-0.03	32.21	33.30	1.285	**0.207**	22.1
Body worn Test data at the worst case with battery 2										
Back side	GSM	190/836.6	1:8.3	0.152	0.02	32.21	33.30	1.285	0.195	22.1
Hotspot Test data(Separate 10mm)										
Front side	GPRS 2TS	190/836.6	1:2.075	0.101	0.03	26.84	27.70	1.219	0.123	22.1
Back side	GPRS 2TS	190/836.6	1:2.075	0.149	-0.01	26.84	27.70	1.219	**0.182**	22.1
Left side	GPRS 2TS	190/836.6	1:2.075	0.003	0.14	26.84	27.70	1.219	0.004	22.1
Right side	GPRS 2TS	190/836.6	1:2.075	0.001	0.13	26.84	27.70	1.219	0.001	22.1
Bottom side	GPRS 2TS	190/836.6	1:2.075	0.070	0.10	26.84	27.70	1.219	0.085	22.1
Hotspot Test data at the worst case with battery 2										
Back side	GPRS 2TS	190/836.6	1:2.075	0.141	0.03	26.84	27.70	1.219	0.172	22.1
Ant3 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	GSM	190/836.6	1:8.3	0.058	0.16	32.30	33.20	1.230	0.071	22.1
Left tilted	GSM	190/836.6	1:8.3	0.046	-0.01	32.30	33.20	1.230	0.057	22.1
Right cheek	GSM	190/836.6	1:8.3	0.111	-0.18	32.30	33.20	1.230	**0.137**	22.1
Right tilted	GSM	190/836.6	1:8.3	0.081	-0.12	32.30	33.20	1.230	0.100	22.1
Head Test data at the worst case with battery 2										
Right cheek	GSM	190/836.6	1:8.3	0.110	0.04	32.30	33.20	1.230	0.135	22.1
Body worn Test data(Separate 15mm)										
Front side	GSM	190/836.6	1:8.3	0.011	-0.15	32.30	33.20	1.230	0.014	22.1
Back side	GSM	190/836.6	1:8.3	0.031	-0.06	32.30	33.20	1.230	**0.038**	22.1
Body worn Test data at the worst case with battery 2										
Back side	GSM	190/836.6	1:8.3	0.027	0.01	32.30	33.20	1.230	0.033	22.1
Hotspot Test data(Separate 10mm)										
Front side	GPRS 2TS	190/836.6	1:2.075	0.032	-0.12	29.45	30.50	1.274	0.041	22.1
Back side	GPRS 2TS	190/836.6	1:2.075	0.068	0.05	29.45	30.50	1.274	**0.087**	22.1
Left side	GPRS 2TS	190/836.6	1:2.075	0.047	-0.13	29.45	30.50	1.274	0.060	22.1
Right side	GPRS 2TS	190/836.6	1:2.075	0.001	-0.11	29.45	30.50	1.274	0.001	22.1
Top side	GPRS 2TS	190/836.6	1:2.075	0.045	0.09	29.45	30.50	1.274	0.057	22.1
Hotspot Test data at the worst case with battery 2										
Back side	GPRS 2TS	190/836.6	1:2.075	0.059	0.13	29.45	30.50	1.274	0.075	22.1

Table 1： SAR of GSM850 for Head and Body(original report HR/2021/1001407).

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Ant1 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Left cheek	GSM	190/836.6	1:8.3	0.092	0.02	32.21	33.30	1.285	**0.119**	22.0
Body worn Test data at the worst case (Separate 15mm)										
Back side	GSM	190/836.6	1:8.3	0.142	0.01	32.21	33.30	1.285	**0.182**	22.0
Hotspot Test data at the worst case (Separate 10mm)										
Back side	GPRS 2TS	190/836.6	1:2.075	0.132	-0.06	26.84	27.70	1.219	**0.161**	22.0
Ant3 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Right cheek	GSM	190/836.6	1:8.3	0.094	0.12	32.30	33.20	1.230	**0.115**	22.0
Body worn Test data at the worst case (Separate 15mm)										
Back side	GSM	190/836.6	1:8.3	0.017	-0.01	32.30	33.20	1.230	**0.021**	22.0
Hotspot Test data at the worst case (Separate 10mm)										
Back side	GPRS 2TS	190/836.6	1:2.075	0.052	-0.06	29.45	30.50	1.274	**0.066**	22.0

Table 2： SAR of GSM850 for Head and Body(Variant).

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8.2.2 SAR Result of GSM1900

Ant0 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data										
Left cheek	GSM	661/1880	1:8.3	0.059	0.08	29.83	30.50	1.167	**0.069**	22.3
Left tilted	GSM	661/1880	1:8.3	0.020	0.08	29.83	30.50	1.167	0.023	22.3
Right cheek	GSM	661/1880	1:8.3	0.043	0.09	29.83	30.50	1.167	0.050	22.3
Right tilted	GSM	661/1880	1:8.3	0.028	-0.15	29.83	30.50	1.167	0.033	22.3
Head Test data at the worst case with battery 2										
Left cheek	GSM	661/1880	1:8.3	0.046	0.06	29.83	30.50	1.167	0.054	22.3
Body worn Test data(Separate 15mm)										
Front side	GSM	661/1880	1:8.3	0.072	-0.09	29.83	30.50	1.167	0.084	22.3
Back side	GSM	661/1880	1:8.3	0.124	0.12	29.83	30.50	1.167	0.145	22.3
Body worn Test data at the worst case with battery 2										
Back side	GSM	661/1880	1:8.3	0.135	-0.14	29.83	30.50	1.167	**0.158**	22.3
Hotspot Test data(Separate 10mm)										
Front side	GPRS 3TS	661/1880	1:2.075	0.044	-0.11	21.16	22.00	1.213	0.053	22.3
Back side	GPRS 3TS	661/1880	1:2.075	0.072	-0.06	21.16	22.00	1.213	0.087	22.3
Left side	GPRS 3TS	661/1880	1:2.075	0.023	0.00	21.16	22.00	1.213	0.028	22.3
Right side	GPRS 3TS	661/1880	1:2.075	0.020	-0.11	21.16	22.00	1.213	0.024	22.3
Bottom side	GPRS 3TS	661/1880	1:2.075	0.090	0.09	21.16	22.00	1.213	**0.109**	22.3
Hotspot Test data at the worst case with battery 2										
Bottom side	GPRS 3TS	661/1880	1:2.075	0.085	-0.07	21.16	22.00	1.213	0.103	22.3
Ant2 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data										
Left cheek	GSM	661/1880	1:8.3	0.388	-0.03	29.36	30.50	1.300	0.504	22.3
Left tilted	GSM	661/1880	1:8.3	0.607	0.09	29.36	30.50	1.300	**0.789**	22.3
Right cheek	GSM	661/1880	1:8.3	0.312	-0.02	29.36	30.50	1.300	0.406	22.3
Right tilted	GSM	661/1880	1:8.3	0.471	-0.13	29.36	30.50	1.300	0.612	22.3
Head Test data at the worst case with battery 2										
Left tilted	GSM	661/1880	1:8.3	0.561	0.27	29.36	30.50	1.300	0.729	22.2
Body worn Test data(Separate 15mm)										
Front side	GSM	661/1880	1:8.3	0.045	0.05	29.36	30.50	1.300	0.059	22.3
Back side	GSM	661/1880	1:8.3	0.128	0.18	29.36	30.50	1.300	0.166	22.3
Body worn Test data at the worst case with battery 2										
Back side	GSM	661/1880	1:8.3	0.139	0.04	29.36	30.50	1.300	**0.181**	22.2
Hotspot Test data(Separate 10mm)										
Front side	GPRS 1TS	661/1880	1:8.3	0.062	0.03	29.22	30.50	1.343	0.083	22.3
Back side	GPRS 1TS	661/1880	1:8.3	0.162	0.14	29.22	30.50	1.343	0.218	22.3
Left side	GPRS 1TS	661/1880	1:8.3	0.014	0.16	29.22	30.50	1.343	0.019	22.3
Right side	GPRS 1TS	661/1880	1:8.3	0.012	0.05	29.22	30.50	1.343	0.016	22.3
Top side	GPRS 1TS	661/1880	1:8.3	0.237	0.04	29.22	30.50	1.343	**0.318**	22.3
Hotspot Test data at the worst case with battery 2										
Top side	GPRS 1TS	661/1880	1:8.3	0.187	0.03	29.22	30.50	1.343	0.251	22.2

Table 3： SAR of GSM1900 for Head and Body(original report HR/2021/1001407).

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Ant0 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Left cheek	GSM	661/1880	1:8.3	0.041	0.06	29.83	30.50	1.167	**0.048**	22.0
Body worn Test data at the worst case (Separate 15mm)										
Back side	GSM	661/1880	1:8.3	0.120	0.03	29.83	30.50	1.167	**0.140**	22.0
Hotspot Test data at the worst case (Separate 10mm)										
Bottom side	GPRS 3TS	661/1880	1:2.075	0.072	-0.02	21.16	22.00	1.213	**0.087**	22.0
Ant2 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Left tilted	GSM	661/1880	1:8.3	0.589	-0.09	29.36	30.50	1.300	**0.766**	22.0
Body worn Test data at the worst case (Separate 15mm)										
Back side	GSM	661/1880	1:8.3	0.128	0.16	29.36	30.50	1.300	**0.166**	22.0
Hotspot Test data at the worst case (Separate 10mm)										
Top side	GPRS 1TS	661/1880	1:8.3	0.218	0.14	29.22	30.50	1.343	**0.292**	22.0

Table 4： SAR of GSM1900 for Head and Body(Variant).

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8.2.3 SAR Result of WCDMA Band II

Ant0 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data										
Left cheek	RMC	9400/1880	1:1	0.140	0.09	23.41	24.80	1.377	**0.193**	22.3
Left tilted	RMC	9400/1880	1:1	0.053	0.15	23.41	24.80	1.377	0.073	22.3
Right cheek	RMC	9400/1880	1:1	0.109	0.12	23.41	24.80	1.377	0.150	22.3
Right tilted	RMC	9400/1880	1:1	0.067	0.00	23.41	24.80	1.377	0.093	22.3
Head Test data at the worst case with battery 2										
Left cheek	RMC	9400/1880	1:1	0.126	0.07	23.41	24.80	1.377	0.174	22.3
Body worn Test data(Separate 15mm)										
Front side	RMC	9400/1880	1:1	0.170	-0.20	23.41	24.80	1.377	0.234	22.3
Back side	RMC	9400/1880	1:1	0.254	-0.07	23.41	24.80	1.377	0.350	22.3
Body worn Test data at the worst case with battery 2										
Back side	RMC	9400/1880	1:1	0.293	-0.07	23.41	24.80	1.377	**0.404**	22.3
Hotspot Test data(Separate 10mm)										
Front side	RMC	9400/1880	1:1	0.157	-0.04	20.66	21.80	1.300	0.204	22.3
Back side	RMC	9400/1880	1:1	0.212	-0.02	20.66	21.80	1.300	0.276	22.3
Left side	RMC	9400/1880	1:1	0.095	-0.02	20.66	21.80	1.300	0.124	22.3
Right side	RMC	9400/1880	1:1	0.069	0.13	20.66	21.80	1.300	0.090	22.3
Bottom side	RMC	9400/1880	1:1	0.340	-0.06	20.66	21.80	1.300	**0.442**	22.3
Hotspot Test data at the worst case with battery 2										
Bottom side	RMC	9400/1880	1:1	0.312	0.08	20.66	21.80	1.300	0.406	22.2
Ant2 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data										
Left cheek	RMC	9400/1880	1:1	0.370	-0.06	18.69	20.30	1.449	0.536	22.3
Left tilted	RMC	9400/1880	1:1	0.420	-0.08	18.69	20.30	1.449	**0.608**	22.3
Right cheek	RMC	9400/1880	1:1	0.292	-0.06	18.69	20.30	1.449	0.423	22.3
Right tilted	RMC	9400/1880	1:1	0.381	-0.09	18.69	20.30	1.449	0.552	22.3
Head Test data at the worst case with battery 2										
Left tilted	RMC	9400/1880	1:1	0.413	0.03	18.69	20.30	1.449	0.598	22.2
Body worn Test data(Separate 15mm)										
Front side	RMC	9400/1880	1:1	0.055	0.02	19.67	21.30	1.455	0.080	22.3
Back side	RMC	9400/1880	1:1	0.138	0.05	19.67	21.30	1.455	**0.201**	22.3
Body worn Test data at the worst case with battery 2										
Back side	RMC	9400/1880	1:1	0.127	0.17	19.67	21.30	1.455	0.185	22.3
Hotspot Test data(Separate 10mm)										
Front side	RMC	9400/1880	1:1	0.082	0.04	18.19	19.80	1.449	0.118	22.3
Back side	RMC	9400/1880	1:1	0.218	0.01	18.19	19.80	1.449	0.316	22.3
Left side	RMC	9400/1880	1:1	0.022	0.07	18.19	19.80	1.449	0.032	22.3
Right side	RMC	9400/1880	1:1	0.022	-0.12	18.19	19.80	1.449	0.031	22.3
Top side	RMC	9400/1880	1:1	0.301	0.13	18.19	19.80	1.449	**0.436**	22.3
Hotspot Test data at the worst case with battery 2										
Top side	RMC	9400/1880	1:1	0.249	-0.10	18.19	19.80	1.449	0.361	22.2

Table 5： SAR of WCDMA Band II for Head and Body(original report HR/2021/1001407).

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Ant0 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Left cheek	RMC	9400/1880	1:1	0.126	0.10	23.41	24.80	1.377	**0.173**	22.0
Body worn Test data at the worst case (Separate 15mm)										
Back side	RMC	9400/1880	1:1	0.276	0.05	23.41	24.80	1.377	**0.380**	22.0
Hotspot Test data at the worst case (Separate 10mm)										
Bottom side	RMC	9400/1880	1:1	0.322	-0.08	20.66	21.80	1.300	**0.418**	22.0
Ant2 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Left tilted	RMC	9400/1880	1:1	0.407	0.13	18.69	20.30	1.449	**0.590**	22.0
Body worn Test data at the worst case (Separate 15mm)										
Back side	RMC	9400/1880	1:1	0.126	-0.09	19.67	21.30	1.455	**0.183**	22.0
Hotspot Test data at the worst case (Separate 10mm)										
Top side	RMC	9400/1880	1:1	0.282	0.01	18.19	19.80	1.449	**0.409**	22.0

Table 6： SAR of WCDMA Band II for Head and Body(Variant).

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8.2.4 SAR Result of WCDMA Band IV

Ant0 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	RMC	1412/1732.4	1:1	0.103	0.00	23.07	24.30	1.327	**0.137**	22.2
Left tilted	RMC	1412/1732.4	1:1	0.065	0.05	23.07	24.30	1.327	0.086	22.2
Right cheek	RMC	1412/1732.4	1:1	0.096	0.17	23.07	24.30	1.327	0.127	22.2
Right tilted	RMC	1412/1732.4	1:1	0.053	-0.15	23.07	24.30	1.327	0.070	22.2
Head Test data at the worst case with battery 2										
Left cheek	RMC	1412/1732.4	1:1	0.093	0.03	23.07	24.30	1.327	0.123	22.2
Body worn Test data(Separate 15mm)										
Front side	RMC	1412/1732.4	1:1	0.141	-0.09	23.07	24.30	1.327	0.187	22.2
Back side	RMC	1412/1732.4	1:1	0.235	0.05	23.07	24.30	1.327	**0.312**	22.2
Body worn Test data at the worst case with battery 2										
Back side	RMC	1412/1732.4	1:1	0.215	-0.07	23.07	24.30	1.327	0.285	22.2
Hotspot Test data(Separate 10mm)										
Front side	RMC	1412/1732.4	1:1	0.136	-0.10	20.88	21.30	1.102	0.150	22.2
Back side	RMC	1412/1732.4	1:1	0.174	-0.01	20.88	21.30	1.102	0.192	22.2
Left side	RMC	1412/1732.4	1:1	0.089	-0.01	20.88	21.30	1.102	0.098	22.2
Right side	RMC	1412/1732.4	1:1	0.069	0.07	20.88	21.30	1.102	0.076	22.2
Bottom side	RMC	1412/1732.4	1:1	0.303	-0.08	20.88	21.30	1.102	0.334	22.2
Hotspot Test data at the worst case with battery 2										
Bottom side	RMC	1412/1732.4	1:1	0.348	-0.03	20.88	21.30	1.102	**0.383**	22.2
Ant2 Test Record										
Test position	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp
Head Test data										
Left cheek	RMC	1412/1732.4	1:1	0.375	-0.17	19.82	21.30	1.406	0.527	22.2
Left tilted	RMC	1412/1732.4	1:1	0.437	-0.16	19.82	21.30	1.406	0.614	22.2
Right cheek	RMC	1412/1732.4	1:1	0.284	0.03	19.82	21.30	1.406	0.399	22.2
Right tilted	RMC	1412/1732.4	1:1	0.412	-0.09	19.82	21.30	1.406	0.579	22.2
Head Test data at the worst case with battery 2										
Left tilted	RMC	1412/1732.4	1:1	0.494	-0.11	19.82	21.30	1.406	**0.695**	22.2
Body worn Test data(Separate 15mm)										
Front side	RMC	1412/1732.4	1:1	0.041	0.03	19.40	20.80	1.380	0.056	22.2
Back side	RMC	1412/1732.4	1:1	0.110	0.17	19.40	20.80	1.380	**0.152**	22.2
Body worn Test data at the worst case with battery 2										
Back side	RMC	1412/1732.4	1:1	0.108	0.07	19.40	20.80	1.380	0.149	22.2
Hotspot Test data(Separate 10mm)										
Front side	RMC	1412/1732.4	1:1	0.056	0.05	17.83	19.30	1.403	0.079	22.2
Back side	RMC	1412/1732.4	1:1	0.142	0.03	17.83	19.30	1.403	0.199	22.2
Left side	RMC	1412/1732.4	1:1	0.020	0.05	17.83	19.30	1.403	0.027	22.2
Right side	RMC	1412/1732.4	1:1	0.012	0.03	17.83	19.30	1.403	0.016	22.2
Top side	RMC	1412/1732.4	1:1	0.194	0.09	17.83	19.30	1.403	**0.272**	22.2
Hotspot Test data at the worst case with battery 2										
Top side	RMC	1412/1732.4	1:1	0.174	0.04	17.83	19.30	1.403	0.244	22.2

Table 7： SAR of WCDMA Band IV for Head and Body(original report HR/2021/1001407).

Ant0 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Left cheek	RMC	1412/1732.4	1:1	0.088	0.07	23.07	24.30	1.327	**0.116**	21.9
Body worn Test data at the worst case (Separate 15mm)										
Back side	RMC	1412/1732.4	1:1	0.220	-0.04	23.07	24.30	1.327	**0.291**	21.9
Hotspot Test data at the worst case (Separate 10mm)										
Bottom side	RMC	1412/1732.4	1:1	0.329	0.11	20.88	21.30	1.102	**0.362**	21.9
Ant2 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Left tilted	RMC	1412/1732.4	1:1	0.474	0.01	19.82	21.30	1.406	**0.667**	21.9
Body worn Test data at the worst case (Separate 15mm)										
Back side	RMC	1412/1732.4	1:1	0.094	-0.02	19.40	20.80	1.380	**0.130**	21.9
Hotspot Test data at the worst case (Separate 10mm)										
Top side	RMC	1412/1732.4	1:1	0.175	-0.04	17.83	19.30	1.403	**0.246**	21.9

Table 8： SAR of WCDMA Band IV for Head and Body(Variant).

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8.2.5 SAR Result of WCDMA Band V

Ant1 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data										
Left cheek	RMC	4182/836.4	1:1	0.121	0.06	23.41	25.00	1.442	**0.174**	22.1
Left tilted	RMC	4182/836.4	1:1	0.051	0.14	23.41	25.00	1.442	0.074	22.1
Right cheek	RMC	4182/836.4	1:1	0.116	-0.02	23.41	25.00	1.442	0.167	22.1
Right tilted	RMC	4182/836.4	1:1	0.061	0.05	23.41	25.00	1.442	0.088	22.1
Head Test data at the worst case with battery 2										
Left cheek	RMC	4182/836.4	1:1	0.115	0.16	23.41	25.00	1.442	0.166	22.2
Body worn Test data(Separate 15mm)										
Front side	RMC	4182/836.4	1:1	0.145	-0.06	23.41	25.00	1.442	0.209	22.1
Back side	RMC	4182/836.4	1:1	0.179	-0.05	23.41	25.00	1.442	**0.258**	22.1
Body worn Test data at the worst case with battery 2										
Back side	RMC	4182/836.4	1:1	0.121	0.04	23.41	25.00	1.442	0.174	22.2
Hotspot Test data(Separate 10mm)										
Front side	RMC	4182/836.4	1:1	0.242	-0.13	23.41	25.00	1.442	0.349	22.1
Back side	RMC	4182/836.4	1:1	0.318	-0.05	23.41	25.00	1.442	**0.459**	22.1
Left side	RMC	4182/836.4	1:1	0.119	0.00	23.41	25.00	1.442	0.172	22.1
Right side	RMC	4182/836.4	1:1	0.100	-0.12	23.41	25.00	1.442	0.144	22.1
Bottom side	RMC	4182/836.4	1:1	0.186	-0.08	23.41	25.00	1.442	0.268	22.1
Hotspot Test data at the worst case with battery 2										
Back side	RMC	4182/836.4	1:1	0.271	0.05	23.41	25.00	1.442	0.391	22.2
Ant3 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data										
Left cheek	RMC	4182/836.4	1:1	0.093	-0.02	23.31	25.00	1.476	0.137	22.1
Left tilted	RMC	4182/836.4	1:1	0.085	-0.13	23.31	25.00	1.476	0.125	22.1
Right cheek	RMC	4182/836.4	1:1	0.156	-0.02	23.31	25.00	1.476	**0.230**	22.1
Right tilted	RMC	4182/836.4	1:1	0.135	0.16	23.31	25.00	1.476	0.199	22.1
Head Test data at the worst case with battery 2										
Right cheek	RMC	4182/836.4	1:1	0.154	0.02	23.31	25.00	1.476	0.227	22.1
Body worn Test data(Separate 15mm)										
Front side	RMC	4182/836.4	1:1	0.024	-0.18	23.31	25.00	1.476	0.035	22.1
Back side	RMC	4182/836.4	1:1	0.045	-0.06	23.31	25.00	1.476	**0.067**	22.1
Body worn Test data at the worst case with battery 2										
Back side	RMC	4182/836.4	1:1	0.037	-0.12	23.31	25.00	1.476	0.055	22.1
Hotspot Test data(Separate 10mm)										
Front side	RMC	4182/836.4	1:1	0.051	-0.06	23.31	25.00	1.476	0.075	22.1
Back side	RMC	4182/836.4	1:1	0.090	-0.11	23.31	25.00	1.476	**0.133**	22.1
Left side	RMC	4182/836.4	1:1	0.066	-0.07	23.31	25.00	1.476	0.097	22.1
Right side	RMC	4182/836.4	1:1	0.003	0.10	23.31	25.00	1.476	0.004	22.1
Top side	RMC	4182/836.4	1:1	0.061	-0.10	23.31	25.00	1.476	0.090	22.1
Hotspot Test data at the worst case with battery 2										
Back side	RMC	4182/836.4	1:1	0.086	-0.13	23.31	25.00	1.476	0.128	22.1

Table 9： SAR of WCDMA Band V for Head and Body(original report HR/2021/1001407).

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Ant1 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Left cheek	RMC	4182/836.4	1:1	0.109	0.06	23.41	25.00	1.442	**0.157**	22.0
Body worn Test data at the worst case (Separate 15mm)										
Back side	RMC	4182/836.4	1:1	0.164	0.07	23.41	25.00	1.442	**0.237**	22.0
Hotspot Test data at the worst case (Separate 10mm)										
Back side	RMC	4182/836.4	1:1	0.301	-0.10	23.41	25.00	1.442	**0.434**	22.0
Ant3 Test Record										
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp**
Head Test data at the worst case										
Right cheek	RMC	4182/836.4	1:1	0.138	0.16	23.31	25.00	1.476	**0.203**	22.0
Body worn Test data at the worst case (Separate 15mm)										
Back side	RMC	4182/836.4	1:1	0.028	0.03	23.31	25.00	1.476	**0.041**	22.0
Hotspot Test data at the worst case (Separate 10mm)										
Back side	RMC	4182/836.4	1:1	0.079	0.01	23.31	25.00	1.476	**0.117**	22.0

Table 10： SAR of WCDMA Band V for Head and Body(Variant).

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8.2.6 SAR Result of LTE Band 2

Ant0 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_0	18900/1880	1:1	0.073	0.11	23.43	24.50	1.279	0.093	22.3
Left tilted	20	QPSK 1RB_0	18900/1880	1:1	0.055	-0.16	23.43	24.50	1.279	0.070	22.3
Right cheek	20	QPSK 1RB_0	18900/1880	1:1	0.080	0.19	23.43	24.50	1.279	**0.103**	22.3
Right tilted	20	QPSK 1RB_0	18900/1880	1:1	0.061	-0.02	23.43	24.50	1.279	0.078	22.3
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_0	18900/1880	1:1	0.068	-0.16	22.45	23.50	1.274	0.087	22.3
Left tilted	20	QPSK 50RB_0	18900/1880	1:1	0.042	-0.09	22.45	23.50	1.274	0.053	22.3
Right cheek	20	QPSK 50RB_0	18900/1880	1:1	0.081	0.09	22.45	23.50	1.274	0.103	22.3
Right tilted	20	QPSK 50RB_0	18900/1880	1:1	0.053	0.10	22.45	23.50	1.274	0.067	22.3
Head Test data at the worst case with battery 2											
Right cheek	20	QPSK 1RB_0	18900/1880	1:1	0.074	0.02	23.43	24.50	1.279	0.095	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1RB_0	18900/1880	1:1	0.141	0.05	23.43	24.50	1.279	0.180	22.3
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.274	-0.12	23.43	24.50	1.279	**0.351**	22.3
Body worn Test data (Separate 15mm 50%RB)											
Front side	20	QPSK 50RB_0	18900/1880	1:1	0.137	0.08	22.45	23.50	1.274	0.174	22.3
Back side	20	QPSK 50RB_0	18900/1880	1:1	0.222	-0.07	22.45	23.50	1.274	0.283	22.3
Body worn Test data at the worst case with battery 2											
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.265	-0.14	23.43	24.50	1.279	0.339	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_0	18900/1880	1:1	0.161	-0.02	21.26	21.50	1.057	0.170	22.3
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.228	-0.06	21.26	21.50	1.057	0.241	22.3
Left side	20	QPSK 1RB_0	18900/1880	1:1	0.078	-0.02	21.26	21.50	1.057	0.083	22.3
Right side	20	QPSK 1RB_0	18900/1880	1:1	0.067	0.02	21.26	21.50	1.057	0.070	22.3
Bottom side	20	QPSK 1RB_0	18900/1880	1:1	0.358	0.10	21.26	21.50	1.057	0.378	22.3
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_0	18900/1880	1:1	0.156	-0.06	21.10	21.50	1.096	0.171	22.3
Back side	20	QPSK 50RB_0	18900/1880	1:1	0.220	-0.06	21.10	21.50	1.096	0.241	22.3
Left side	20	QPSK 50RB_0	18900/1880	1:1	0.076	0.10	21.10	21.50	1.096	0.083	22.3
Right side	20	QPSK 50RB_0	18900/1880	1:1	0.065	0.01	21.10	21.50	1.096	0.072	22.3
Bottom side	20	QPSK 50RB_0	18900/1880	1:1	0.371	0.04	21.10	21.50	1.096	**0.407**	22.3
Hotspot Test data at the worst case with battery 2											
Bottom side	20	QPSK 50RB_0	18900/1880	1:1	0.361	0.11	21.10	21.50	1.096	0.396	22.3
Ant2 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_0	18900/1880	1:1	0.379	0.19	19.26	20.50	1.330	0.504	22.3
Left tilted	20	QPSK 1RB_0	18900/1880	1:1	0.473	-0.12	19.26	20.50	1.330	0.629	22.3
Right cheek	20	QPSK 1RB_0	18900/1880	1:1	0.277	-0.10	19.26	20.50	1.330	0.369	22.3
Right tilted	20	QPSK 1RB_0	18900/1880	1:1	0.455	0.08	19.26	20.50	1.330	0.605	22.3
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_0	18900/1880	1:1	0.380	0.02	19.30	20.50	1.318	0.501	22.3
Left tilted	20	QPSK 50RB_0	18900/1880	1:1	0.576	-0.07	19.30	20.50	1.318	**0.759**	22.3
Right cheek	20	QPSK 50RB_0	18900/1880	1:1	0.281	-0.15	19.30	20.50	1.318	0.370	22.3
Right tilted	20	QPSK 50RB_0	18900/1880	1:1	0.441	0.17	19.30	20.50	1.318	0.581	22.3
Head Test data at the worst case with battery 2											
Left tilted	20	QPSK 50RB_0	18900/1880	1:1	0.561	-0.01	19.30	20.50	1.318	0.740	22.3
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1RB_0	18900/1880	1:1	0.076	0.01	20.02	21.00	1.253	0.095	22.3
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.169	0.05	20.02	21.00	1.253	**0.212**	22.3
Body worn Test data (Separate 15mm 50%RB)											
Front side	20	QPSK 50RB_0	18900/1880	1:1	0.075	-0.02	20.04	21.00	1.247	0.093	22.3
Back side	20	QPSK 50RB_0	18900/1880	1:1	0.167	-0.13	20.04	21.00	1.247	0.208	22.3
Body worn Test data at the worst case with battery 2											
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.162	-0.03	20.02	21.00	1.253	0.203	22.3
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_0	18900/1880	1:1	0.086	0.00	18.52	19.50	1.253	0.108	22.3
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.223	0.15	18.52	19.50	1.253	0.279	22.3
Left side	20	QPSK 1RB_0	18900/1880	1:1	0.025	-0.02	18.52	19.50	1.253	0.031	22.3
Right side	20	QPSK 1RB_0	18900/1880	1:1	0.034	0.03	18.52	19.50	1.253	0.043	22.3

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Top side	20	QPSK 1RB_0	18900/1880	1:1	0.316	0.02	18.52	19.50	1.253	**0.396**	22.3
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_0	18900/1880	1:1	0.085	0.01	18.58	19.50	1.236	0.105	22.3
Back side	20	QPSK 50RB_0	18900/1880	1:1	0.219	-0.04	18.58	19.50	1.236	0.271	22.3
Left side	20	QPSK 50RB_0	18900/1880	1:1	0.024	-0.06	18.58	19.50	1.236	0.030	22.3
Right side	20	QPSK 50RB_0	18900/1880	1:1	0.036	-0.01	18.58	19.50	1.236	0.044	22.3
Top side	20	QPSK 50RB_0	18900/1880	1:1	0.311	0.09	18.58	19.50	1.236	0.384	22.3
Hotspot Test data at the worst case with battery 2											
Top side	20	QPSK 1RB_0	18900/1880	1:1	0.312	0.02	18.52	19.50	1.253	0.391	22.3

Table 11：SAR of LTE Band 2 for Head and Body(original report HR/2021/1001407).

Ant0 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Right cheek	20	QPSK 1RB_0	18900/1880	1:1	0.060	0.02	23.43	24.50	1.279	**0.077**	22.1
Body worn Test data at the worst case (Separate 15mm)											
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.258	0.11	23.43	24.50	1.279	**0.330**	22.1
Hotspot Test data at the worst case (Separate 10mm)											
Bottom side	20	QPSK 50RB_0	18900/1880	1:1	0.360	-0.08	21.10	21.50	1.096	**0.394**	22.1
Ant2 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Left tilted	20	QPSK 50RB_0	18900/1880	1:1	0.563	-0.04	19.30	20.50	1.318	**0.742**	22.1
Body worn Test data at the worst case (Separate 15mm)											
Back side	20	QPSK 1RB_0	18900/1880	1:1	0.154	0.07	20.02	21.00	1.253	**0.193**	22.1
Hotspot Test data at the worst case (Separate 10mm)											
Top side	20	QPSK 1RB_0	18900/1880	1:1	0.304	0.09	18.52	19.50	1.253	**0.381**	22.1

Table 12：SAR of LTE Band 2 for Head and Body(Variant).

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8.2.7 SAR Result of LTE Band 4

Ant0 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_0	20175/1732.5	1:1	0.073	-0.19	23.03	24.30	1.340	0.098	22.2
Left tilted	20	QPSK 1RB_0	20175/1732.5	1:1	0.064	0.17	23.03	24.30	1.340	0.086	22.2
Right cheek	20	QPSK 1RB_0	20175/1732.5	1:1	0.091	-0.01	23.03	24.30	1.340	**0.121**	22.2
Right tilted	20	QPSK 1RB_0	20175/1732.5	1:1	0.061	-0.16	23.03	24.30	1.340	0.082	22.2
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_0	20175/1732.5	1:1	0.065	-0.15	21.98	23.30	1.355	0.088	22.2
Left tilted	20	QPSK 50RB_0	20175/1732.5	1:1	0.051	0.06	21.98	23.30	1.355	0.103	22.2
Right cheek	20	QPSK 50RB_0	20175/1732.5	1:1	0.076	0.07	21.98	23.30	1.355	0.070	22.2
Right tilted	20	QPSK 50RB_0	20175/1732.5	1:1	0.052	-0.19	21.98	23.30	1.355	0.070	22.2
Head Test data at the worst case with battery 2											
Right cheek	20	QPSK 1RB_0	20175/1732.5	1:1	0.081	-0.15	23.03	24.30	1.340	0.109	22.2
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1RB_0	20175/1732.5	1:1	0.139	0.03	23.03	24.30	1.340	0.186	22.2
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.203	0.00	23.03	24.30	1.340	**0.272**	22.2
Body worn Test data (Separate 15mm 50%RB)											
Front side	20	QPSK 50RB_0	20175/1732.5	1:1	0.135	0.07	21.98	23.30	1.355	0.183	22.2
Back side	20	QPSK 50RB_0	20175/1732.5	1:1	0.167	-0.11	21.98	23.30	1.355	0.226	22.2
Body worn Test data at the worst case with battery 2											
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.182	0.01	23.03	24.30	1.340	0.244	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_0	20175/1732.5	1:1	0.143	0.13	20.88	21.30	1.102	0.158	22.2
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.197	-0.01	20.88	21.30	1.102	0.217	22.2
Left side	20	QPSK 1RB_0	20175/1732.5	1:1	0.066	0.10	20.88	21.30	1.102	0.073	22.2
Right side	20	QPSK 1RB_0	20175/1732.5	1:1	0.047	0.19	20.88	21.30	1.102	0.051	22.2
Bottom side	20	QPSK 1RB_0	20175/1732.5	1:1	0.266	0.06	20.88	21.30	1.102	0.293	22.2
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_0	20175/1732.5	1:1	0.146	-0.01	20.96	21.30	1.081	0.158	22.2
Back side	20	QPSK 50RB_0	20175/1732.5	1:1	0.179	-0.11	20.96	21.30	1.081	0.194	22.2
Left side	20	QPSK 50RB_0	20175/1732.5	1:1	0.068	0.20	20.96	21.30	1.081	0.073	22.2
Right side	20	QPSK 50RB_0	20175/1732.5	1:1	0.048	0.03	20.96	21.30	1.081	0.052	22.2
Bottom side	20	QPSK 50RB_0	20175/1732.5	1:1	0.320	0.17	20.96	21.30	1.081	**0.346**	22.2
Hotspot Test data at the worst case with battery 2											
Bottom side	20	QPSK 50RB_0	20175/1732.5	1:1	0.285	0.03	20.96	21.30	1.081	0.308	22.2
Ant2 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_0	20175/1732.5	1:1	0.356	0.17	20.03	21.30	1.340	0.477	22.2
Left tilted	20	QPSK 1RB_0	20175/1732.5	1:1	0.447	0.13	20.03	21.30	1.340	0.599	22.2
Right cheek	20	QPSK 1RB_0	20175/1732.5	1:1	0.257	-0.10	20.03	21.30	1.340	0.344	22.2
Right tilted	20	QPSK 1RB_0	20175/1732.5	1:1	0.411	0.08	20.03	21.30	1.340	0.551	22.2
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_0	20175/1732.5	1:1	0.354	0.06	20.15	21.30	1.303	0.461	22.2
Left tilted	20	QPSK 50RB_0	20175/1732.5	1:1	0.481	-0.08	20.15	21.30	1.303	**0.627**	22.2
Right cheek	20	QPSK 50RB_0	20175/1732.5	1:1	0.263	-0.13	20.15	21.30	1.303	0.343	22.2
Right tilted	20	QPSK 50RB_0	20175/1732.5	1:1	0.425	-0.02	20.15	21.30	1.303	0.554	22.2
Head Test data at the worst case with battery 2											
Left tilted	20	QPSK 50RB_0	20175/1732.5	1:1	0.449	-0.19	20.15	21.30	1.303	0.585	22.2
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1RB_0	20175/1732.5	1:1	0.038	0.01	19.57	20.80	1.327	0.050	22.2
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.088	0.09	19.57	20.80	1.327	0.117	22.2
Body worn Test data (Separate 15mm 50%RB)											
Front side	20	QPSK 50RB_0	20175/1732.5	1:1	0.039	0.04	19.90	20.80	1.230	0.048	22.2
Back side	20	QPSK 50RB_0	20175/1732.5	1:1	0.088	-0.11	19.90	20.80	1.230	0.108	22.2
Body worn Test data at the worst case with battery 2											
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.088	0.09	19.57	20.80	1.327	**0.117**	22.2
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_0	20175/1732.5	1:1	0.050	0.10	18.17	19.30	1.297	0.064	22.2
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.125	0.01	18.17	19.30	1.297	0.162	22.2
Left side	20	QPSK 1RB_0	20175/1732.5	1:1	0.019	-0.02	18.17	19.30	1.297	0.025	22.2
Right side	20	QPSK 1RB_0	20175/1732.5	1:1	0.025	0.14	18.17	19.30	1.297	0.033	22.2

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Top side	20	QPSK 1RB_0	20175/1732.5	1:1	0.207	0.02	18.17	19.30	1.297	**0.269**	22.2
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_0	20175/1732.5	1:1	0.049	0.03	18.12	19.30	1.312	0.064	22.2
Back side	20	QPSK 50RB_0	20175/1732.5	1:1	0.123	0.09	18.12	19.30	1.312	0.161	22.2
Left side	20	QPSK 50RB_0	20175/1732.5	1:1	0.018	-0.08	18.12	19.30	1.312	0.024	22.2
Right side	20	QPSK 50RB_0	20175/1732.5	1:1	0.023	-0.08	18.12	19.30	1.312	0.030	22.2
Top side	20	QPSK 50RB_0	20175/1732.5	1:1	0.205	0.13	18.12	19.30	1.312	0.269	22.2
Hotspot Test data at the worst case with battery 2											
Top side	20	QPSK 1RB_0	20175/1732.5	1:1	0.184	0.04	18.17	19.30	1.297	0.239	22.2

Table 13：SAR of LTE Band 4 for Head and Body(original report HR/2021/1001407).

Ant0 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Right cheek	20	QPSK 1RB_0	20175/1732.5	1:1	0.077	-0.07	23.03	24.30	1.340	**0.103**	22.3
Body worn Test data at the worst case (Separate 15mm)											
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.190	0.04	23.03	24.30	1.340	**0.255**	22.3
Hotspot Test data at the worst case (Separate 10mm)											
Bottom side	20	QPSK 50RB_0	20175/1732.5	1:1	0.302	0.09	20.96	21.30	1.081	**0.326**	22.3
Ant2 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Left tilted	20	QPSK 50RB_0	20175/1732.5	1:1	0.469	0.14	20.15	21.30	1.303	**0.612**	22.3
Body worn Test data at the worst case (Separate 15mm)											
Back side	20	QPSK 1RB_0	20175/1732.5	1:1	0.076	0.03	19.57	20.80	1.327	**0.101**	22.3
Hotspot Test data at the worst case (Separate 10mm)											
Top side	20	QPSK 1RB_0	20175/1732.5	1:1	0.188	-0.10	18.17	19.30	1.297	**0.244**	22.3

Table 14：SAR of LTE Band 4 for Head and Body(Variant).

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8.2.8 SAR Result of LTE Band 5

Ant1 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	10	QPSK 1RB_0	20450/829	1:1	0.104	0.18	24.27	25.00	1.183	**0.123**	22.1
Left tilted	10	QPSK 1RB_0	20450/829	1:1	0.047	0.01	24.27	25.00	1.183	0.055	22.1
Right cheek	10	QPSK 1RB_0	20450/829	1:1	0.104	-0.19	24.27	25.00	1.183	0.123	22.1
Right tilted	10	QPSK 1RB_0	20450/829	1:1	0.055	0.05	24.27	25.00	1.183	0.065	22.1
Head Test data(50%RB)											
Left cheek	10	QPSK 25RB_25	20450/829	1:1	0.082	0.03	22.61	24.00	1.377	0.112	22.1
Left tilted	10	QPSK 25RB_25	20450/829	1:1	0.038	0.03	22.61	24.00	1.377	0.052	22.1
Right cheek	10	QPSK 25RB_25	20450/829	1:1	0.073	0.08	22.61	24.00	1.377	0.100	22.1
Right tilted	10	QPSK 25RB_25	20450/829	1:1	0.044	0.02	22.61	24.00	1.377	0.061	22.1
Head Test data at the worst case with battery 2											
Left cheek	10	QPSK 1RB_0	20450/829	1:1	0.103	0.08	24.27	25.00	1.183	0.122	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1RB_0	20450/829	1:1	0.123	-0.16	24.27	25.00	1.183	0.146	22.1
Back side	10	QPSK 1RB_0	20450/829	1:1	0.177	-0.09	24.27	25.00	1.183	**0.209**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	10	QPSK 25RB_25	20450/829	1:1	0.085	0.03	22.61	24.00	1.377	0.117	22.1
Back side	10	QPSK 25RB_25	20450/829	1:1	0.115	-0.09	22.61	24.00	1.377	0.158	22.1
Body worn Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_0	20450/829	1:1	0.130	0.06	24.27	25.00	1.183	0.154	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1RB_0	20450/829	1:1	0.167	-0.11	24.27	25.00	1.183	0.198	22.1
Back side	10	QPSK 1RB_0	20450/829	1:1	0.254	0.05	24.27	25.00	1.183	0.300	22.1
Left side	10	QPSK 1RB_0	20450/829	1:1	0.057	-0.01	24.27	25.00	1.183	0.067	22.1
Right side	10	QPSK 1RB_0	20450/829	1:1	0.063	-0.07	24.27	25.00	1.183	0.075	22.1
Bottom side	10	QPSK 1RB_0	20450/829	1:1	0.123	0.05	24.27	25.00	1.183	0.146	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	10	QPSK 25RB_25	20450/829	1:1	0.152	-0.06	22.61	24.00	1.377	0.209	22.1
Back side	10	QPSK 25RB_25	20450/829	1:1	0.237	-0.07	22.61	24.00	1.377	**0.326**	22.1
Left side	10	QPSK 25RB_25	20450/829	1:1	0.054	0.12	22.61	24.00	1.377	0.074	22.1
Right side	10	QPSK 25RB_25	20450/829	1:1	0.057	-0.03	22.61	24.00	1.377	0.079	22.1
Bottom side	10	QPSK 25RB_25	20450/829	1:1	0.119	-0.08	22.61	24.00	1.377	0.164	22.1
Hotspot Test data at the worst case with battery 2											
Back side	10	QPSK 25RB_25	20450/829	1:1	0.227	-0.11	22.61	24.00	1.377	0.313	22.1
Ant3 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	10	QPSK 1RB_0	20450/829	1:1	0.050	-0.05	24.13	24.80	1.167	0.058	22.1
Left tilted	10	QPSK 1RB_0	20450/829	1:1	0.034	0.08	24.13	24.80	1.167	0.040	22.1
Right cheek	10	QPSK 1RB_0	20450/829	1:1	0.110	0.15	24.13	24.80	1.167	0.128	22.1
Right tilted	10	QPSK 1RB_0	20450/829	1:1	0.101	0.15	24.13	24.80	1.167	0.118	22.1
Head Test data(50%RB)											
Left cheek	10	QPSK 25RB_25	20450/829	1:1	0.057	-0.04	22.56	23.80	1.330	0.076	22.1
Left tilted	10	QPSK 25RB_25	20450/829	1:1	0.042	-0.17	22.56	23.80	1.330	0.056	22.1
Right cheek	10	QPSK 25RB_25	20450/829	1:1	0.103	-0.11	22.56	23.80	1.330	**0.137**	22.1
Right tilted	10	QPSK 25RB_25	20450/829	1:1	0.095	0.08	22.56	23.80	1.330	0.126	22.1
Head Test data at the worst case with battery 2											
Right cheek	10	QPSK 25RB_25	20450/829	1:1	0.0955	0.06	22.56	23.80	1.330	0.127	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1RB_0	20450/829	1:1	0.019	-0.08	24.13	24.80	1.167	0.022	22.1
Back side	10	QPSK 1RB_0	20450/829	1:1	0.029	-0.06	24.13	24.80	1.167	**0.034**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	10	QPSK 25RB_25	20450/829	1:1	0.011	-0.18	22.56	23.80	1.330	0.015	22.1
Back side	10	QPSK 25RB_25	20450/829	1:1	0.020	-0.13	22.56	23.80	1.330	0.027	22.1
Body worn Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_0	20450/829	1:1	0.021	-0.06	24.13	24.80	1.167	0.025	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1RB_0	20450/829	1:1	0.031	0.10	24.13	24.80	1.167	0.036	22.1
Back side	10	QPSK 1RB_0	20450/829	1:1	0.082	-0.13	24.13	24.80	1.167	**0.096**	22.1
Left side	10	QPSK 1RB_0	20450/829	1:1	0.055	-0.19	24.13	24.80	1.167	0.064	22.1
Right side	10	QPSK 1RB_0	20450/829	1:1	0.003	-0.05	24.13	24.80	1.167	0.004	22.1

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Top side	10	QPSK 1RB_0	20450/829	1:1	0.038	-0.03	24.13	24.80	1.167	0.045	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	10	QPSK 25RB_25	20450/829	1:1	0.025	0.07	22.56	23.80	1.330	0.033	22.1
Back side	10	QPSK 25RB_25	20450/829	1:1	0.061	-0.03	22.56	23.80	1.330	0.081	22.1
Left side	10	QPSK 25RB_25	20450/829	1:1	0.039	0.19	22.56	23.80	1.330	0.052	22.1
Right side	10	QPSK 25RB_25	20450/829	1:1	0.036	-0.05	22.56	23.80	1.330	0.048	22.1
Top side	10	QPSK 25RB_25	20450/829	1:1	0.001	-0.11	22.56	23.80	1.330	0.001	22.1
Hotspot Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_0	20450/829	1:1	0.081	0.07	24.13	24.80	1.167	0.095	22.1

Table 15：SAR of LTE Band 5 for Head and Body(original report HR/2021/1001407).

Ant1 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Left cheek	10	QPSK 1RB_0	20450/829	1:1	0.090	0.13	24.27	25.00	1.183	**0.106**	21.8
Body worn Test data at the worst case (Separate 15mm)											
Back side	10	QPSK 1RB_0	20450/829	1:1	0.163	-0.07	24.27	25.00	1.183	**0.193**	21.8
Hotspot Test data at the worst case (Separate 10mm)											
Back side	10	QPSK 25RB_25	20450/829	1:1	0.226	-0.12	22.61	24.00	1.377	**0.311**	21.8
Ant3 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Right cheek	10	QPSK 25RB_25	20450/829	1:1	0.084	0.15	22.56	23.80	1.330	**0.112**	21.8
Body worn Test data at the worst case (Separate 15mm)											
Back side	10	QPSK 1RB_0	20450/829	1:1	0.027	0.04	24.13	24.80	1.167	**0.032**	21.8
Hotspot Test data at the worst case (Separate 10mm)											
Back side	10	QPSK 1RB_0	20450/829	1:1	0.071	-0.11	24.13	24.80	1.167	**0.083**	21.8

Table 16：SAR of LTE Band 5 for Head and Body(Variant).

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8.2.9 SAR Result of LTE Band 7

Ant0 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_50	20850/2510	1:1	0.098	0.08	22.39	23.20	1.205	**0.118**	22.1
Left tilted	20	QPSK 1RB_50	20850/2510	1:1	0.094	0.11	22.39	23.20	1.205	0.113	22.1
Right cheek	20	QPSK 1RB_50	20850/2510	1:1	0.086	-0.15	22.39	23.20	1.205	0.104	22.1
Right tilted	20	QPSK 1RB_50	20850/2510	1:1	0.069	-0.03	22.39	23.20	1.205	0.083	22.1
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_50	20850/2510	1:1	0.091	0.15	21.36	22.20	1.213	0.110	22.1
Left tilted	20	QPSK 50RB_50	20850/2510	1:1	0.079	0.03	21.36	22.20	1.213	0.096	22.1
Right cheek	20	QPSK 50RB_50	20850/2510	1:1	0.080	-0.17	21.36	22.20	1.213	0.097	22.1
Right tilted	20	QPSK 50RB_50	20850/2510	1:1	0.059	0.07	21.36	22.20	1.213	0.072	22.1
Head Test data at the worst case with battery 2											
Left cheek	20	QPSK 1RB_50	20850/2510	1:1	0.095	0.05	22.39	23.20	1.205	0.115	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1RB_99	20850/2510	1:1	0.154	-0.11	21.94	22.80	1.219	0.188	22.1
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.255	-0.19	21.94	22.80	1.219	**0.311**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	20	QPSK 50RB_50	20850/2510	1:1	0.109	-0.11	21.23	22.30	1.279	0.139	22.1
Back side	20	QPSK 50RB_50	20850/2510	1:1	0.160	0.07	21.23	22.30	1.279	0.205	22.1
Body worn Test data at the worst case with battery 2											
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.205	0.07	21.94	22.80	1.219	0.250	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_99	20850/2510	1:1	0.128	0.19	19.37	20.30	1.239	0.159	22.1
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.170	-0.10	19.37	20.30	1.239	0.211	22.1
Left side	20	QPSK 1RB_99	20850/2510	1:1	0.075	-0.19	19.37	20.30	1.239	0.093	22.1
Right side	20	QPSK 1RB_99	20850/2510	1:1	0.041	-0.13	19.37	20.30	1.239	0.051	22.1
Bottom side	20	QPSK 1RB_99	20850/2510	1:1	0.274	-0.09	19.37	20.30	1.239	0.339	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_50	20850/2510	1:1	0.136	0.04	19.16	20.30	1.300	0.177	22.1
Back side	20	QPSK 50RB_50	20850/2510	1:1	0.179	0.00	19.16	20.30	1.300	0.233	22.1
Left side	20	QPSK 50RB_50	20850/2510	1:1	0.082	0.00	19.16	20.30	1.300	0.107	22.1
Right side	20	QPSK 50RB_50	20850/2510	1:1	0.047	-0.17	19.16	20.30	1.300	0.061	22.1
Bottom side	20	QPSK 50RB_50	20850/2510	1:1	0.499	0.16	19.16	20.30	1.300	**0.649**	22.1
Hotspot Test data at the worst case with battery 2											
Bottom side	20	QPSK 50RB_50	20850/2510	1:1	0.390	-0.07	19.16	20.30	1.300	0.507	22.1
Ant4 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_99	20850/2510	1:1	0.275	0.04	19.78	21.00	1.324	0.364	22.1
Left tilted	20	QPSK 1RB_99	20850/2510	1:1	0.152	0.01	19.78	21.00	1.324	0.201	22.1
Right cheek	20	QPSK 1RB_99	20850/2510	1:1	0.616	-0.03	19.78	21.00	1.324	0.816	22.1
Right tilted	20	QPSK 1RB_99	20850/2510	1:1	0.235	0.05	19.78	21.00	1.324	0.311	22.1
Right cheek	20	QPSK 1RB_99	21100/2535.5	1:1	0.621	0.07	19.75	21.00	1.334	0.828	22.1
Right cheek	20	QPSK 1RB_99	21350/2560	1:1	0.675	0.03	19.68	21.00	1.355	0.915	22.1
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_50	20850/2510	1:1	0.352	-0.06	19.81	21.00	1.315	0.463	22.1
Left tilted	20	QPSK 50RB_50	20850/2510	1:1	0.149	-0.19	19.81	21.00	1.315	0.196	22.1
Right cheek	20	QPSK 50RB_50	20850/2510	1:1	0.614	-0.04	19.81	21.00	1.315	0.808	22.1
Right tilted	20	QPSK 50RB_50	20850/2510	1:1	0.345	0.09	19.81	21.00	1.315	0.454	22.1
Right cheek	20	QPSK 50RB_50	21100/2535.5	1:1	0.681	0.01	19.78	21.00	1.324	0.902	22.1
Right cheek	20	QPSK 50RB_50	21350/2560	1:1	0.719	0.11	19.67	21.00	1.358	**0.977**	22.1
Head Test data(100%RB)											
Right cheek	20	QPSK 100RB_0	20850/2510	1:1	0.601	0.01	19.95	21.00	1.274	0.765	22.1
Head Test data at the worst case with battery 2											
Right cheek	20	QPSK 50RB_50	21350/2560	1:1	0.700	0.02	19.67	21.00	1.358	0.951	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1RB_99	20850/2510	1:1	0.162	-0.11	19.78	21.00	1.324	0.215	22.1
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.218	0.07	19.78	21.00	1.324	**0.289**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	20	QPSK 50RB_50	20850/2510	1:1	0.150	-0.15	19.81	21.00	1.315	0.197	22.1

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Back side	20	QPSK 50RB_50	20850/2510	1:1	0.195	-0.17	19.81	21.00	1.315	0.256	22.1
Body worn Test data at the worst case with battery 2											
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.173	0.05	19.78	21.00	1.324	0.229	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_99	20850/2510	1:1	0.101	-0.12	18.47	19.50	1.268	0.128	22.1
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.192	-0.07	18.47	19.50	1.268	0.243	22.1
Left side	20	QPSK 1RB_99	20850/2510	1:1	0.212	-0.06	18.47	19.50	1.268	0.269	22.1
Right side	20	QPSK 1RB_99	20850/2510	1:1	0.002	0.16	18.47	19.50	1.268	0.003	22.1
Top side	20	QPSK 1RB_99	20850/2510	1:1	0.029	0.07	18.47	19.50	1.268	0.037	22.1
Hotspot Test data at the worst case with battery 2											
Front side	20	QPSK 50RB_50	20850/2510	1:1	0.112	0.13	18.34	19.50	1.306	0.146	22.1
Back side	20	QPSK 50RB_50	20850/2510	1:1	0.212	0.16	18.34	19.50	1.306	0.277	22.1
Left side	20	QPSK 50RB_50	20850/2510	1:1	0.374	0.05	18.34	19.50	1.306	**0.489**	22.1
Right side	20	QPSK 50RB_50	20850/2510	1:1	0.003	0.11	18.34	19.50	1.306	0.004	22.1
Top side	20	QPSK 50RB_50	20850/2510	1:1	0.050	-0.18	18.34	19.50	1.306	0.065	22.1
Body worn Test data at the worst case with battery 2											
Left side	20	QPSK 50RB_50	20850/2510	1:1	0.274	-0.07	18.34	19.50	1.306	0.358	22.1

Table 17： SAR of LTE Band 7 for Head and Body(original report HR/2021/1001407).

Ant0 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Left cheek	20	QPSK 1RB_50	20850/2510	1:1	0.085	0.16	22.39	23.20	1.205	**0.102**	21.7
Body worn Test data at the worst case (Separate 15mm)											
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.238	0.02	21.94	22.80	1.219	**0.291**	21.7
Hotspot Test data at the worst case (Separate 10mm)											
Bottom side	20	QPSK 50RB_50	20850/2510	1:1	0.485	-0.01	19.16	20.30	1.300	**0.630**	21.7
Ant4 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Right cheek	20	QPSK 50RB_50	21350/2560	1:1	0.703	0.03	19.67	21.00	1.358	**0.955**	21.7
Body worn Test data at the worst case (Separate 15mm)											
Back side	20	QPSK 1RB_99	20850/2510	1:1	0.207	0.03	19.78	21.00	1.324	**0.274**	21.7
Body worn Test data at the worst case (Separate 10mm)											
Left side	20	QPSK 50RB_50	20850/2510	1:1	0.359	0.01	18.34	19.50	1.306	**0.469**	21.7

Table 18： SAR of LTE Band 7 for Head and Body(Variant).

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8.2.10SAR Result of LTE Band 12

Ant1 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	10	QPSK 1RB_49	23095/707.5	1:1	0.067	0.09	24.15	25.00	1.216	**0.081**	22.1
Left tilted	10	QPSK 1RB_49	23095/707.5	1:1	0.031	0.05	24.15	25.00	1.216	0.038	22.1
Right cheek	10	QPSK 1RB_49	23095/707.5	1:1	0.061	0.03	24.15	25.00	1.216	0.074	22.1
Right tilted	10	QPSK 1RB_49	23095/707.5	1:1	0.039	0.03	24.15	25.00	1.216	0.047	22.1
Head Test data(50%RB)											
Left cheek	10	QPSK 25RB_13	23095/707.5	1:1	0.050	0.02	22.83	24.00	1.309	0.065	22.1
Left tilted	10	QPSK 25RB_13	23095/707.5	1:1	0.024	0.07	22.83	24.00	1.309	0.032	22.1
Right cheek	10	QPSK 25RB_13	23095/707.5	1:1	0.043	0.08	22.83	24.00	1.309	0.057	22.1
Right tilted	10	QPSK 25RB_13	23095/707.5	1:1	0.029	0.03	22.83	24.00	1.309	0.038	22.1
Head Test data at the worst case with battery 2											
Left cheek	10	QPSK 1RB_49	23095/707.5	1:1	0.062	0.03	24.15	25.00	1.216	0.075	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1RB_49	23095/707.5	1:1	0.105	-0.10	24.15	25.00	1.216	0.128	22.1
Back side	10	QPSK 1RB_49	23095/707.5	1:1	0.156	0.02	24.15	25.00	1.216	**0.190**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	10	QPSK 25RB_13	23095/707.5	1:1	0.084	-0.01	22.83	24.00	1.309	0.110	22.1
Back side	10	QPSK 25RB_13	23095/707.5	1:1	0.116	-0.10	22.83	24.00	1.309	0.152	22.1
Body worn Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_49	23095/707.5	1:1	0.151	0.02	24.15	25.00	1.216	0.184	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1RB_49	23095/707.5	1:1	0.122	-0.15	24.15	25.00	1.216	0.148	22.1
Back side	10	QPSK 1RB_49	23095/707.5	1:1	0.185	0.08	24.15	25.00	1.216	0.225	22.1
Left side	10	QPSK 1RB_49	23095/707.5	1:1	0.064	-0.08	24.15	25.00	1.216	0.078	22.1
Right side	10	QPSK 1RB_49	23095/707.5	1:1	0.069	-0.10	24.15	25.00	1.216	0.084	22.1
Bottom side	10	QPSK 1RB_49	23095/707.5	1:1	0.078	0.18	24.15	25.00	1.216	0.095	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	10	QPSK 25RB_13	23095/707.5	1:1	0.124	0.18	22.83	24.00	1.309	0.162	22.1
Back side	10	QPSK 25RB_13	23095/707.5	1:1	0.188	-0.06	22.83	24.00	1.309	**0.246**	22.1
Left side	10	QPSK 25RB_13	23095/707.5	1:1	0.064	-0.02	22.83	24.00	1.309	0.084	22.1
Right side	10	QPSK 25RB_13	23095/707.5	1:1	0.072	-0.11	22.83	24.00	1.309	0.094	22.1
Bottom side	10	QPSK 25RB_13	23095/707.5	1:1	0.080	0.16	22.83	24.00	1.309	0.105	22.1
Hotspot Test data at the worst case with battery 2											
Back side	10	QPSK 25RB_13	23095/707.5	1:1	0.182	0.03	22.83	24.00	1.309	0.238	22.1
Ant3 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	10	QPSK 1RB_49	23130/711	1:1	0.041	-0.02	24.21	24.90	1.172	0.048	22.1
Left tilted	10	QPSK 1RB_49	23130/711	1:1	0.034	0.10	24.21	24.90	1.172	0.040	22.1
Right cheek	10	QPSK 1RB_49	23130/711	1:1	0.071	-0.13	24.21	24.90	1.172	0.083	22.1
Right tilted	10	QPSK 1RB_49	23130/711	1:1	0.062	0.04	24.21	24.90	1.172	0.073	22.1
Head Test data(50%RB)											
Left cheek	10	QPSK 25RB_13	23130/711	1:1	0.046	0.09	22.82	23.90	1.282	0.059	22.1
Left tilted	10	QPSK 25RB_13	23130/711	1:1	0.039	-0.15	22.82	23.90	1.282	0.050	22.1
Right cheek	10	QPSK 25RB_13	23130/711	1:1	0.075	0.04	22.82	23.90	1.282	**0.096**	22.1
Right tilted	10	QPSK 25RB_13	23130/711	1:1	0.061	0.18	22.82	23.90	1.282	0.078	22.1
Head Test data at the worst case with battery 2											
Right cheek	10	QPSK 25RB_13	23130/711	1:1	0.071	0.03	22.82	23.90	1.282	0.092	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1RB_49	23130/711	1:1	0.013	-0.09	24.21	24.90	1.172	0.015	22.1
Back side	10	QPSK 1RB_49	23130/711	1:1	0.026	-0.10	24.21	24.90	1.172	0.030	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	10	QPSK 25RB_13	23130/711	1:1	0.018	0.13	22.82	23.90	1.282	0.023	22.1
Back side	10	QPSK 25RB_13	23130/711	1:1	0.028	0.02	22.82	23.90	1.282	**0.036**	22.1
Body worn Test data at the worst case with battery 2											
Back side	10	QPSK 25RB_13	23130/711	1:1	0.021	0.02	22.82	23.90	1.282	0.027	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1RB_49	23130/711	1:1	0.041	-0.08	24.21	24.90	1.172	0.048	22.1
Back side	10	QPSK 1RB_49	23130/711	1:1	0.058	-0.06	24.21	24.90	1.172	**0.068**	22.1
Left side	10	QPSK 1RB_49	23130/711	1:1	0.056	0.11	24.21	24.90	1.172	0.066	22.1
Right side	10	QPSK 1RB_49	23130/711	1:1	0.029	-0.04	24.21	24.90	1.172	0.034	22.1

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Top side	10	QPSK 1RB_49	23130/711	1:1	0.034	-0.03	24.21	24.90	1.172	0.040	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	10	QPSK 25RB_13	23130/711	1:1	0.025	-0.12	22.82	23.90	1.282	0.032	22.1
Back side	10	QPSK 25RB_13	23130/711	1:1	0.048	0.13	22.82	23.90	1.282	0.062	22.1
Left side	10	QPSK 25RB_13	23130/711	1:1	0.048	-0.18	22.82	23.90	1.282	0.062	22.1
Right side	10	QPSK 25RB_13	23130/711	1:1	0.022	0.03	22.82	23.90	1.282	0.028	22.1
Top side	10	QPSK 25RB_13	23130/711	1:1	0.026	0.17	22.82	23.90	1.282	0.034	22.1
Hotspot Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_49	23130/711	1:1	0.047	-0.01	24.21	24.90	1.172	0.055	22.1

Table 19：SAR of LTE Band 12 for Head and Body(original report HR/2021/1001407).

Ant1 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Left cheek	10	QPSK 1RB_49	23095/707.5	1:1	0.051	0.04	24.15	25.00	1.216	**0.062**	21.9
Body worn Test data at the worst case (Separate 15mm)											
Back side	10	QPSK 1RB_49	23095/707.5	1:1	0.146	0.06	24.15	25.00	1.216	**0.177**	21.9
Hotspot Test data at the worst case (Separate 10mm)											
Back side	10	QPSK 25RB_13	23095/707.5	1:1	0.174	0.02	22.83	24.00	1.309	**0.227**	21.9
Ant3 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Right cheek	10	QPSK 25RB_13	23130/711	1:1	0.058	-0.15	22.82	23.90	1.282	**0.075**	21.9
Body worn Test data at the worst case (Separate 15mm)											
Back side	10	QPSK 25RB_13	23130/711	1:1	0.024	0.07	22.82	23.90	1.282	**0.031**	21.9
Hotspot Test data at the worst case (Separate 10mm)											
Back side	10	QPSK 1RB_49	23130/711	1:1	0.046	-0.06	24.21	24.90	1.172	**0.054**	21.9

Table 20：SAR of LTE Band 12 for Head and Body(Variant).

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8.2.11SAR Result of LTE Band 17

Ant1 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	10	QPSK 1RB_25	23790/710	1:1	0.053	0.04	23.87	25.00	1.297	**0.069**	22.1
Left tilted	10	QPSK 1RB_25	23790/710	1:1	0.025	0.07	23.87	25.00	1.297	0.033	22.1
Right cheek	10	QPSK 1RB_25	23790/710	1:1	0.048	0.16	23.87	25.00	1.297	0.063	22.1
Right tilted	10	QPSK 1RB_25	23790/710	1:1	0.030	0.02	23.87	25.00	1.297	0.039	22.1
Head Test data(50%RB)											
Left cheek	10	QPSK 25RB_25	23800/711	1:1	0.049	0.11	22.97	24.00	1.268	0.061	22.1
Left tilted	10	QPSK 25RB_25	23800/711	1:1	0.024	0.09	22.97	24.00	1.268	0.030	22.1
Right cheek	10	QPSK 25RB_25	23800/711	1:1	0.042	0.17	22.97	24.00	1.268	0.053	22.1
Right tilted	10	QPSK 25RB_25	23800/711	1:1	0.028	0.09	22.97	24.00	1.268	0.035	22.1
Head Test data at the worst case with battery 2											
Left cheek	10	QPSK 1RB_25	23790/710	1:1	0.045	0.05	23.87	25.00	1.297	0.058	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1RB_25	23790/710	1:1	0.105	0.13	23.87	25.00	1.297	0.136	22.1
Back side	10	QPSK 1RB_25	23790/710	1:1	0.160	0.01	23.87	25.00	1.297	**0.208**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	10	QPSK 25RB_25	23800/711	1:1	0.075	0.16	22.97	24.00	1.268	0.095	22.1
Back side	10	QPSK 25RB_25	23800/711	1:1	0.112	-0.02	22.97	24.00	1.268	0.142	22.1
Body worn Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_25	23790/710	1:1	0.152	0.01	23.87	25.00	1.297	0.197	22.10
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1RB_25	23790/710	1:1	0.122	-0.05	23.87	25.00	1.297	0.158	22.1
Back side	10	QPSK 1RB_25	23790/710	1:1	0.233	-0.05	23.87	25.00	1.297	**0.302**	22.1
Left side	10	QPSK 1RB_25	23790/710	1:1	0.063	0.02	23.87	25.00	1.297	0.082	22.1
Right side	10	QPSK 1RB_25	23790/710	1:1	0.071	0.19	23.87	25.00	1.297	0.092	22.1
Bottom side	10	QPSK 1RB_25	23790/710	1:1	0.077	-0.04	23.87	25.00	1.297	0.100	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	10	QPSK 25RB_25	23800/711	1:1	0.132	0.15	22.97	24.00	1.268	0.167	22.1
Back side	10	QPSK 25RB_25	23800/711	1:1	0.218	0.07	22.97	24.00	1.268	0.276	22.1
Left side	10	QPSK 25RB_25	23800/711	1:1	0.065	-0.06	22.97	24.00	1.268	0.082	22.1
Right side	10	QPSK 25RB_25	23800/711	1:1	0.073	-0.10	22.97	24.00	1.268	0.093	22.1
Bottom side	10	QPSK 25RB_25	23800/711	1:1	0.080	-0.09	22.97	24.00	1.268	0.101	22.1
Hotspot Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_25	23790/710	1:1	0.222	-0.05	23.87	25.00	1.297	0.288	22.1
Ant3 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	10	QPSK 1RB_25	23800/711	1:1	0.040	-0.10	23.62	24.90	1.343	0.054	22.1
Left tilted	10	QPSK 1RB_25	23800/711	1:1	0.033	0.09	23.62	24.90	1.343	0.044	22.1
Right cheek	10	QPSK 1RB_25	23800/711	1:1	0.087	0.05	23.62	24.90	1.343	0.117	22.1
Right tilted	10	QPSK 1RB_25	23800/711	1:1	0.075	0.17	23.62	24.90	1.343	0.101	22.1
Head Test data(50%RB)											
Left cheek	10	QPSK 25RB_25	23800/711	1:1	0.042	0.14	22.87	23.90	1.268	0.053	22.1
Left tilted	10	QPSK 25RB_25	23800/711	1:1	0.034	0.01	22.87	23.90	1.268	0.043	22.1
Right cheek	10	QPSK 25RB_25	23800/711	1:1	0.096	-0.05	22.87	23.90	1.268	**0.122**	22.1
Right tilted	10	QPSK 25RB_25	23800/711	1:1	0.081	-0.16	22.87	23.90	1.268	0.103	22.1
Head Test data at the worst case with battery 2											
Right cheek	10	QPSK 25RB_25	23800/711	1:1	0.070	0.04	22.87	23.90	1.268	0.089	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1RB_25	23800/711	1:1	0.016	-0.04	23.62	24.90	1.343	0.021	22.1
Back side	10	QPSK 1RB_25	23800/711	1:1	0.028	-0.02	23.62	24.90	1.343	**0.037**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	10	QPSK 25RB_25	23800/711	1:1	0.010	0.12	22.87	23.90	1.268	0.013	22.1
Back side	10	QPSK 25RB_25	23800/711	1:1	0.022	-0.10	22.87	23.90	1.268	0.028	22.1
Body worn Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_25	23800/711	1:1	0.025	-0.02	23.62	24.90	1.343	0.034	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1RB_25	23800/711	1:1	0.035	-0.17	23.62	24.90	1.343	0.047	22.1
Back side	10	QPSK 1RB_25	23800/711	1:1	0.058	-0.10	23.62	24.90	1.343	**0.078**	22.1
Left side	10	QPSK 1RB_25	23800/711	1:1	0.058	0.05	23.62	24.90	1.343	0.078	22.1
Right side	10	QPSK 1RB_25	23800/711	1:1	0.033	-0.02	23.62	24.90	1.343	0.045	22.1

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Top side	10	QPSK 1RB_25	23800/711	1:1	0.031	-0.18	23.62	24.90	1.343	0.042	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	10	QPSK 25RB_25	23800/711	1:1	0.027	0.16	22.87	23.90	1.268	0.034	22.1
Back side	10	QPSK 25RB_25	23800/711	1:1	0.048	0.16	22.87	23.90	1.268	0.061	22.1
Left side	10	QPSK 25RB_25	23800/711	1:1	0.051	0.00	22.87	23.90	1.268	0.065	22.1
Right side	10	QPSK 25RB_25	23800/711	1:1	0.031	0.07	22.87	23.90	1.268	0.039	22.1
Top side	10	QPSK 25RB_25	23800/711	1:1	0.028	0.00	22.87	23.90	1.268	0.035	22.1
Hotspot Test data at the worst case with battery 2											
Back side	10	QPSK 1RB_25	23800/711	1:1	0.051	0.01	23.62	24.90	1.343	0.068	22.1

Table 21： SAR of LTE Band 17 for Head and Body(original report HR/2021/1001407).

Ant1 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Left cheek	10	QPSK 1RB_25	23790/710	1:1	0.039	0.01	23.87	25.00	1.297	**0.051**	21.9
Body worn Test data at the worst case (Separate 15mm)											
Back side	10	QPSK 1RB_25	23790/710	1:1	0.143	0.02	23.87	25.00	1.297	**0.185**	21.9
Hotspot Test data at the worst case (Separate 10mm)											
Back side	10	QPSK 1RB_25	23790/710	1:1	0.219	-0.09	23.87	25.00	1.297	**0.284**	21.9
Ant3 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Right cheek	10	QPSK 25RB_25	23800/711	1:1	0.081	-0.12	22.87	23.90	1.268	**0.102**	21.9
Body worn Test data at the worst case (Separate 15mm)											
Back side	10	QPSK 1RB_25	23800/711	1:1	0.012	0.06	23.62	24.90	1.343	**0.016**	21.9
Hotspot Test data at the worst case (Separate 10mm)											
Back side	10	QPSK 1RB_25	23800/711	1:1	0.041	0.02	23.62	24.90	1.343	**0.055**	21.9

Table 22： SAR of LTE Band 17 for Head and Body(Variant).

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8.2.12 SAR Result of LTE Band 26

Ant1 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	15	QPSK 1RB_74	26865/831.5	1:1	0.085	0.04	23.94	25.00	1.276	**0.108**	22.1
Left tilted	15	QPSK 1RB_74	26865/831.5	1:1	0.039	0.01	23.94	25.00	1.276	0.050	22.1
Right cheek	15	QPSK 1RB_74	26865/831.5	1:1	0.078	0.06	23.94	25.00	1.276	0.099	22.1
Right tilted	15	QPSK 1RB_74	26865/831.5	1:1	0.047	0.03	23.94	25.00	1.276	0.061	22.1
Head Test data(50%RB)											
Left cheek	15	QPSK 36RB_36	26765/821.5	1:1	0.074	0.06	22.85	24.00	1.303	0.096	22.1
Left tilted	15	QPSK 36RB_36	26765/821.5	1:1	0.037	0.04	22.85	24.00	1.303	0.048	22.1
Right cheek	15	QPSK 36RB_36	26765/821.5	1:1	0.075	0.09	22.85	24.00	1.303	0.098	22.1
Right tilted	15	QPSK 36RB_36	26765/821.5	1:1	0.045	0.02	22.85	24.00	1.303	0.059	22.1
Head Test data at the worst case with battery 2											
Left cheek	15	QPSK 1RB_74	26865/831.5	1:1	0.081	0.03	23.94	25.00	1.276	0.103	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	15	QPSK 1RB_74	26865/831.5	1:1	0.128	0.06	23.94	25.00	1.276	0.163	22.1
Back side	15	QPSK 1RB_74	26865/831.5	1:1	0.193	-0.01	23.94	25.00	1.276	**0.246**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	15	QPSK 36RB_36	26765/821.5	1:1	0.112	-0.16	22.85	24.00	1.303	0.146	22.1
Back side	15	QPSK 36RB_36	26765/821.5	1:1	0.124	-0.13	22.85	24.00	1.303	0.162	22.1
Body worn Test data at the worst case with battery 2											
Back side	15	QPSK 1RB_74	26865/831.5	1:1	0.180	-0.01	23.94	25.00	1.276	0.230	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	15	QPSK 1RB_74	26865/831.5	1:1	0.217	-0.03	23.94	25.00	1.276	0.277	22.1
Back side	15	QPSK 1RB_74	26865/831.5	1:1	0.309	0.05	23.94	25.00	1.276	**0.394**	22.1
Left side	15	QPSK 1RB_74	26865/831.5	1:1	0.081	0.06	23.94	25.00	1.276	0.103	22.1
Right side	15	QPSK 1RB_74	26865/831.5	1:1	0.089	-0.09	23.94	25.00	1.276	0.114	22.1
Bottom side	15	QPSK 1RB_74	26865/831.5	1:1	0.168	0.18	23.94	25.00	1.276	0.214	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	15	QPSK 36RB_36	26765/821.5	1:1	0.195	-0.10	22.85	24.00	1.303	0.254	22.1
Back side	15	QPSK 36RB_36	26765/821.5	1:1	0.231	0.07	22.85	24.00	1.303	0.301	22.1
Left side	15	QPSK 36RB_36	26765/821.5	1:1	0.068	-0.18	22.85	24.00	1.303	0.089	22.1
Right side	15	QPSK 36RB_36	26765/821.5	1:1	0.073	-0.10	22.85	24.00	1.303	0.095	22.1
Bottom side	15	QPSK 36RB_36	26765/821.5	1:1	0.138	0.07	22.85	24.00	1.303	0.180	22.1
Hotspot Test data at the worst case with battery 2											
Back side	15	QPSK 1RB_74	26865/831.5	1:1	0.275	0.14	23.94	25.00	1.276	0.351	22.1
Ant3 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	15	QPSK 1RB_0	26865/831.5	1:1	0.069	-0.19	23.62	24.80	1.312	0.091	22.1
Left tilted	15	QPSK 1RB_0	26865/831.5	1:1	0.047	-0.10	23.62	24.80	1.312	0.062	22.1
Right cheek	15	QPSK 1RB_0	26865/831.5	1:1	0.095	-0.05	23.62	24.80	1.312	0.125	22.1
Right tilted	15	QPSK 1RB_0	26865/831.5	1:1	0.075	-0.13	23.62	24.80	1.312	0.098	22.1
Head Test data(50%RB)											
Left cheek	15	QPSK 36RB_18	26865/831.5	1:1	0.073	-0.11	22.74	23.80	1.276	0.093	22.1
Left tilted	15	QPSK 36RB_18	26865/831.5	1:1	0.054	0.17	22.74	23.80	1.276	0.069	22.1
Right cheek	15	QPSK 36RB_18	26865/831.5	1:1	0.107	0.02	22.74	23.80	1.276	**0.137**	22.1
Right tilted	15	QPSK 36RB_18	26865/831.5	1:1	0.085	-0.03	22.74	23.80	1.276	0.108	22.1
Head Test data at the worst case with battery 2											
Right cheek	15	QPSK 36RB_18	26865/831.5	1:1	0.102	0.18	22.74	23.80	1.276	0.130	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	15	QPSK 1RB_0	26865/831.5	1:1	0.013	0.11	23.62	24.80	1.312	0.017	22.1
Back side	15	QPSK 1RB_0	26865/831.5	1:1	0.030	-0.02	23.62	24.80	1.312	**0.039**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	15	QPSK 36RB_18	26865/831.5	1:1	0.009	-0.11	22.74	23.80	1.276	0.011	22.1
Back side	15	QPSK 36RB_18	26865/831.5	1:1	0.016	-0.08	22.74	23.80	1.276	0.020	22.1
Body worn Test data at the worst case with battery 2											
Back side	15	QPSK 1RB_0	26865/831.5	1:1	0.027	0.07	23.62	24.80	1.312	0.035	22.1
Body worn Test data at the worst case with battery 2											
Front side	15	QPSK 1RB_0	26865/831.5	1:1	0.026	-0.13	23.62	24.80	1.312	0.034	22.1
Back side	15	QPSK 1RB_0	26865/831.5	1:1	0.069	-0.02	23.62	24.80	1.312	**0.091**	22.1
Left side	15	QPSK 1RB_0	26865/831.5	1:1	0.051	0.14	23.62	24.80	1.312	0.067	22.1
Right side	15	QPSK 1RB_0	26865/831.5	1:1	0.003	-0.07	23.62	24.80	1.312	0.004	22.1

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Top side	15	QPSK 1RB_0	26865/831.5	1:1	0.038	0.04	23.62	24.80	1.312	0.050	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	15	QPSK 36RB_18	26865/831.5	1:1	0.019	0.06	22.74	23.80	1.276	0.024	22.1
Back side	15	QPSK 36RB_18	26865/831.5	1:1	0.062	-0.03	22.74	23.80	1.276	0.079	22.1
Left side	15	QPSK 36RB_18	26865/831.5	1:1	0.046	0.10	22.74	23.80	1.276	0.059	22.1
Right side	15	QPSK 36RB_18	26865/831.5	1:1	0.001	-0.06	22.74	23.80	1.276	0.001	22.1
Top side	15	QPSK 36RB_18	26865/831.5	1:1	0.034	0.10	22.74	23.80	1.276	0.044	22.1
Hotspot Test data at the worst case with battery 2											
Back side	15	QPSK 1RB_0	26865/831.5	1:1	0.062	0.14	23.62	24.80	1.312	0.081	22.1

Table 23：SAR of LTE Band 26 for Head and Body(original report HR/2021/1001407).

Ant1 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Left cheek	15	QPSK 1RB_74	26865/831.5	1:1	0.069	0.10	23.94	25.00	1.276	**0.088**	21.8
Body worn Test data at the worst case (Separate 15mm)											
Back side	15	QPSK 1RB_74	26865/831.5	1:1	0.176	0.04	23.94	25.00	1.276	**0.224**	21.8
Hotspot Test data at the worst case (Separate 10mm)											
Back side	15	QPSK 1RB_74	26865/831.5	1:1	0.291	0.18	23.94	25.00	1.276	**0.371**	21.8
Ant3 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Right cheek	15	QPSK 36RB_18	26865/831.5	1:1	0.090	0.06	22.74	23.80	1.276	**0.115**	21.8
Body worn Test data at the worst case (Separate 15mm)											
Back side	15	QPSK 1RB_0	26865/831.5	1:1	0.020	0.08	23.62	24.80	1.312	**0.026**	21.8
Hotspot Test data at the worst case (Separate 10mm)											
Back side	15	QPSK 1RB_0	26865/831.5	1:1	0.051	0.01	23.62	24.80	1.312	**0.067**	21.8

Table 24：SAR of LTE Band 26 for Head and Body(Variant).

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8.2.13 SAR Result of LTE Band 66

Ant0 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_50	132322/1745	1:1	0.069	0.08	22.56	23.30	1.186	0.082	22.1
Left tilted	20	QPSK 1RB_50	132322/1745	1:1	0.051	0.04	22.56	23.30	1.186	0.061	22.1
Right cheek	20	QPSK 1RB_50	132322/1745	1:1	0.096	-0.09	22.56	23.30	1.186	**0.114**	22.1
Right tilted	20	QPSK 1RB_50	132322/1745	1:1	0.027	-0.07	22.56	23.30	1.186	0.031	22.1
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_25	132322/1745	1:1	0.060	0.07	21.38	22.30	1.236	0.075	22.1
Left tilted	20	QPSK 50RB_25	132322/1745	1:1	0.043	0.07	21.38	22.30	1.236	0.053	22.1
Right cheek	20	QPSK 50RB_25	132322/1745	1:1	0.081	0.05	21.38	22.30	1.236	0.100	22.1
Right tilted	20	QPSK 50RB_25	132322/1745	1:1	0.025	0.07	21.38	22.30	1.236	0.031	22.1
Head Test data at the worst case with battery 2											
Right cheek	20	QPSK 1RB_50	132322/1745	1:1	0.094	0.06	22.56	23.30	1.186	0.111	22.1
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1RB_50	132322/1745	1:1	0.137	0.07	21.82	22.80	1.253	0.172	22.1
Back side	20	QPSK 1RB_50	132322/1745	1:1	0.161	-0.04	21.82	22.80	1.253	**0.202**	22.1
Body worn Test data (Separate 15mm 50%RB)											
Front side	20	QPSK 50RB_25	132322/1745	1:1	0.119	0.09	21.36	22.30	1.242	0.148	22.1
Back side	20	QPSK 50RB_25	132322/1745	1:1	0.147	0.01	21.36	22.30	1.242	0.183	22.1
Body worn Test data at the worst case with battery 2											
Back side	20	QPSK 1RB_50	132322/1745	1:1	0.153	-0.03	21.82	22.80	1.253	0.192	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_50	132322/1745	1:1	0.158	-0.08	20.28	20.80	1.127	0.178	22.1
Back side	20	QPSK 1RB_50	132322/1745	1:1	0.195	0.03	20.28	20.80	1.127	0.220	22.1
Left side	20	QPSK 1RB_50	132322/1745	1:1	0.072	0.01	20.28	20.80	1.127	0.081	22.1
Right side	20	QPSK 1RB_50	132322/1745	1:1	0.053	0.19	20.28	20.80	1.127	0.059	22.1
Bottom side	20	QPSK 1RB_50	132322/1745	1:1	0.292	0.03	20.28	20.80	1.127	**0.329**	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_25	132322/1745	1:1	0.155	0.04	20.25	20.80	1.135	0.176	22.1
Back side	20	QPSK 50RB_25	132322/1745	1:1	0.192	0.03	20.25	20.80	1.135	0.218	22.1
Left side	20	QPSK 50RB_25	132322/1745	1:1	0.069	0.09	20.25	20.80	1.135	0.078	22.1
Right side	20	QPSK 50RB_25	132322/1745	1:1	0.051	0.12	20.25	20.80	1.135	0.058	22.1
Bottom side	20	QPSK 50RB_25	132322/1745	1:1	0.265	0.20	20.25	20.80	1.135	0.301	22.1
Hotspot Test data at the worst case with battery 2											
Bottom side	20	QPSK 1RB_50	132322/1745	1:1	0.266	0.06	20.28	20.80	1.127	0.300	22.1
Ant2 Test Record											
Test position	BW.	Test mode	Test Ch./Freq.	Duty Cycle	SAR (W/kg)1-g	Power Drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data(1RB)											
Left cheek	20	QPSK 1RB_50	132322/1745	1:1	0.306	-0.04	19.42	20.30	1.225	0.375	22.1
Left tilted	20	QPSK 1RB_50	132322/1745	1:1	0.370	-0.15	19.42	20.30	1.225	0.453	22.1
Right cheek	20	QPSK 1RB_50	132322/1745	1:1	0.224	-0.02	19.42	20.30	1.225	0.274	22.1
Right tilted	20	QPSK 1RB_50	132322/1745	1:1	0.295	-0.07	19.42	20.30	1.225	0.361	22.1
Head Test data(50%RB)											
Left cheek	20	QPSK 50RB_25	132322/1745	1:1	0.312	-0.13	19.51	20.30	1.199	0.374	22.1
Left tilted	20	QPSK 50RB_25	132322/1745	1:1	0.378	0.18	19.51	20.30	1.199	**0.453**	22.1
Right cheek	20	QPSK 50RB_25	132322/1745	1:1	0.224	-0.02	19.51	20.30	1.199	0.269	22.1
Right tilted	20	QPSK 50RB_25	132322/1745	1:1	0.297	-0.05	19.51	20.30	1.199	0.356	22.1
Head Test data at the worst case with battery 2											
Left tilted	20	QPSK 50RB_25	132322/1745	1:1	0.368	0.08	19.51	20.30	1.199	0.441	22.1
Body worn Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_50	132322/1745	1:1	0.032	-0.01	19.10	19.80	1.175	0.038	22.1
Back side	20	QPSK 1RB_50	132322/1745	1:1	0.077	-0.12	19.10	19.80	1.175	0.090	22.1
Body worn Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_25	132322/1745	1:1	0.032	0.16	18.95	19.80	1.216	0.039	22.1
Back side	20	QPSK 50RB_25	132322/1745	1:1	0.077	0.05	18.95	19.80	1.216	**0.094**	22.1
Body worn Test data at the worst case with battery 2											
Back side	20	QPSK 50RB_25	132322/1745	1:1	0.071	0.01	18.95	19.80	1.216	0.086	22.1
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1RB_50	132322/1745	1:1	0.039	0.02	17.59	18.30	1.178	0.046	22.1
Back side	20	QPSK 1RB_50	132322/1745	1:1	0.099	0.14	17.59	18.30	1.178	0.117	22.1
Left side	20	QPSK 1RB_50	132322/1745	1:1	0.014	-0.01	17.59	18.30	1.178	0.017	22.1
Right side	20	QPSK 1RB_50	132322/1745	1:1	0.021	0.03	17.59	18.30	1.178	0.025	22.1

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Top side	20	QPSK 1RB_50	132322/1745	1:1	0.167	0.15	17.59	18.30	1.178	0.197	22.1
Hotspot Test data (Separate 10mm 50%RB)											
Front side	20	QPSK 50RB_25	132322/1745	1:1	0.039	0.16	17.55	18.30	1.189	0.046	22.1
Back side	20	QPSK 50RB_25	132322/1745	1:1	0.100	-0.01	17.55	18.30	1.189	0.119	22.1
Left side	20	QPSK 50RB_25	132322/1745	1:1	0.015	-0.17	17.55	18.30	1.189	0.018	22.1
Right side	20	QPSK 50RB_25	132322/1745	1:1	0.022	0.14	17.55	18.30	1.189	0.026	22.1
Top side	20	QPSK 50RB_25	132322/1745	1:1	0.168	0.16	17.55	18.30	1.189	**0.200**	22.1
Hotspot Test data at the worst case with battery 2											
Top side	20	QPSK 50RB_25	132322/1745	1:1	0.162	0.08	17.55	18.30	1.189	0.193	22.1

Table 25：SAR of LTE Band 66 for Head and Body(original report HR/2021/1001407).

Ant0 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Right cheek	20	QPSK 1RB_50	132322/1745	1:1	0.081	-0.06	22.56	23.30	1.186	**0.096**	22.3
Body worn Test data at the worst case(Separate 15mm)											
Back side	20	QPSK 1RB_50	132322/1745	1:1	0.144	0.12	21.82	22.80	1.253	**0.181**	22.3
Hotspot Test data at the worst case (Separate 10mm)											
Bottom side	20	QPSK 1RB_50	132322/1745	1:1	0.274	0.09	20.28	20.80	1.127	**0.308**	22.3
Ant2 Test Record											
Test position	**BW.**	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**SAR (W/kg)1-g**	**Power Drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Head Test data at the worst case											
Left tilted	20	QPSK 50RB_25	132322/1745	1:1	0.363	0.13	19.51	20.30	1.199	**0.436**	22.3
Body worn Test data at the worst case (Separate 15mm)											
Back side	20	QPSK 50RB_25	132322/1745	1:1	0.062	0.05	18.95	19.80	1.216	**0.076**	22.3
Hotspot Test data at the worst case (Separate 10mm)											
Top side	20	QPSK 50RB_25	132322/1745	1:1	0.156	0.10	17.55	18.30	1.189	**0.186**	22.3

Table 26：SAR of LTE Band 66 for Head and Body(Variant).

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8.2.14SAR Result of WIFI 2.4G

Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)1-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data											
Left cheek	802.11b	11/2462	98.65%	1.014	0.108	0.06	11.64	12.00	1.086	**0.119**	22
Left tilted	802.11b	11/2462	98.65%	1.014	0.023	0.01	11.64	12.00	1.086	0.025	22
Right cheek	802.11b	11/2462	98.65%	1.014	0.020	0.03	11.64	12.00	1.086	0.022	22
Right tilted	802.11b	11/2462	98.65%	1.014	0.008	0.08	11.64	12.00	1.086	0.009	22
Head Test data at the worst case with Battery2#											
Left cheek	802.11b	11/2462	98.65%	1.014	0.100	0.01	11.64	12.00	1.086	0.110	22
Body worn Test data(Separate 15mm)											
Front side	802.11b	11/2462	98.65%	1.014	0.039	-0.17	17.89	18.50	1.151	0.046	22
Back side	802.11b	11/2462	98.65%	1.014	0.084	0.17	17.89	18.50	1.151	**0.098**	22
Body worn Test data at the worst case with Battery2#(Separate 15mm)											
Back side	802.11b	11/2462	98.65%	1.014	0.079	-0.11	17.89	18.50	1.151	0.093	22
Hotspot Test data (Separate 10mm)											
Front side	802.11b	11/2462	98.65%	1.014	0.093	0.09	17.89	18.50	1.151	0.109	22
Back side	802.11b	11/2462	98.65%	1.014	0.209	0.04	17.89	18.50	1.151	0.244	22
Left side	802.11b	11/2462	98.65%	1.014	0.067	0.04	17.89	18.50	1.151	0.078	22
Right side	802.11b	11/2462	98.65%	1.014	0.303	0.02	17.89	18.50	1.151	**0.353**	22
Top side	802.11b	11/2462	98.65%	1.014	0.019	0.12	17.89	18.50	1.151	0.022	22
Hotspot Test data at the worst case with Battery2#(Separate 10mm)											
Right side	802.11b	11/2462	98.65%	1.014	0.293	0.10	17.89	18.50	1.151	0.342	22

Table 27：SAR of WIFI 2.4G for Head and Body(original report HR/2021/1001407).

Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)1-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data at the worst case											
Left cheek	802.11b	11/2462	98.65%	1.014	0.089	0.11	11.64	12.00	1.086	**0.098**	22.2
Body worn Test data at the worst case (Separate 15mm)											
Back side	802.11b	11/2462	98.65%	1.014	0.069	0.05	17.89	18.50	1.151	**0.080**	22.2
Hotspot Test data at the worst case (Separate 10mm)											
Right side	802.11b	11/2462	98.65%	1.014	0.287	-0.07	17.89	18.50	1.151	**0.335**	22.2

Table 28：SAR of WIFI 2.4G for Head and Body(Variant).

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8.2.15 SAR Result of WIFI 5G

Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)1-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data of U-NII-2A											
Left cheek	802.11n 40M	54/5270	97.95%	1.021	0.037	-0.08	11.14	12.00	1.219	0.046	22.2
Left tilted	802.11n 40M	54/5270	97.95%	1.021	0.005	0.04	11.14	12.00	1.219	0.006	22.2
Right cheek	802.11n 40M	54/5270	97.95%	1.021	0.034	0.03	11.14	12.00	1.219	0.042	22.2
Right tilted	802.11n 40M	54/5270	97.95%	1.021	0.002	0.02	11.14	12.00	1.219	0.002	22.2
Head Test data of U-NII-2C											
Left cheek	802.11ac.80M	122/5610	92.00%	1.087	0.133	0.11	11.34	12.00	1.164	**0.168**	22.2
Left tilted	802.11ac.80M	122/5610	92.00%	1.087	0.041	0.05	11.34	12.00	1.164	0.052	22.2
Right cheek	802.11ac.80M	122/5610	92.00%	1.087	0.046	-0.19	11.34	12.00	1.164	0.058	22.2
Right tilted	802.11ac.80M	122/5610	92.00%	1.087	0.011	0.17	11.34	12.00	1.164	0.014	22.2
Head Test data of U-NII-3											
Left cheek	802.11ac.80M	155/5775	92.00%	1.087	0.062	0.03	11.28	12.00	1.180	0.080	22.2
Left tilted	802.11ac.80M	155/5775	92.00%	1.087	0.024	0.03	11.28	12.00	1.180	0.030	22.2
Right cheek	802.11ac.80M	155/5775	92.00%	1.087	0.060	0.09	11.28	12.00	1.180	0.077	22.2
Right tilted	802.11ac.80M	155/5775	92.00%	1.087	0.018	0.18	11.28	12.00	1.180	0.023	22.2
Head Test data at the worst case with Battery2#											
Left cheek	802.11ac.80M	122/5610	92.00%	1.087	0.115	0.11	11.34	12.00	1.164	0.146	22.2
Body worn Test data of U-NII-2A (Separate 15mm)											
Front side	802.11a	52/5260	98.09%	1.019	0.065	-0.15	18.42	19.00	1.143	0.076	22.2
Back side	802.11a	52/5260	98.09%	1.019	0.130	-0.15	18.42	19.00	1.143	0.151	22.2
Body worn Test data of U-NII-2C(Separate 15mm)											
Front side	802.11a	104/5520	98.09%	1.019	0.096	0.14	17.89	19.00	1.291	0.126	22.2
Back side	802.11a	104/5520	98.09%	1.019	0.259	0.10	17.89	19.00	1.291	**0.341**	22.2
Body worn Test data of U-NII-3(Separate 15mm)											
Front side	802.11a	157/5785	98.09%	1.019	0.106	0.01	17.69	19.00	1.352	0.146	22.2
Back side	802.11a	157/5785	98.09%	1.019	0.127	0.14	17.69	19.00	1.352	0.175	22.2
Body worn Test data at the worst case with Battery2#(Separate 15mm)											
Back side	802.11a	104/5520	98.09%	1.019	0.237	0.06	17.89	19.00	1.291	0.312	22.2
Hotspot Test data of U-NII-1(Separate 10mm)											
Front side	802.11a	40/5200	98.09%	1.019	0.067	-0.03	18.68	19.00	1.076	0.074	22.2
Back side	802.11a	40/5200	98.09%	1.019	0.144	0.09	18.68	19.00	1.076	0.158	22.2
Left side	802.11a	40/5200	98.09%	1.019	0.058	0.05	18.68	19.00	1.076	0.064	22.2
Right side	802.11a	40/5200	98.09%	1.019	0.225	-0.10	18.68	19.00	1.076	0.247	22.2
Top side	802.11a	40/5200	98.09%	1.019	0.069	-0.01	18.68	19.00	1.076	0.076	22.2
Hotspot Test data of U-NII-3 (Separate 10mm)											
Front side	802.11a	157/5785	98.09%	1.019	0.115	-0.15	17.69	19.00	1.352	0.159	22.2
Back side	802.11a	157/5785	98.09%	1.019	0.215	0.07	17.69	19.00	1.352	0.296	22.2
Left side	802.11a	157/5785	98.09%	1.019	0.090	-0.12	17.69	19.00	1.352	0.124	22.2
Right side	802.11a	157/5785	98.09%	1.019	0.337	0.01	17.69	19.00	1.352	**0.465**	22.2
Top side	802.11a	157/5785	98.09%	1.019	0.105	0.17	17.69	19.00	1.352	0.145	22.2
Hotspot Test data at the worst case with Battery2#(Separate 10mm)											
Right side	802.11a	157/5785	98.09%	1.019	0.327	0.01	17.69	19.00	1.352	0.451	22.2
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg)10-g**	**Power drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data of U-NII-2A(Separate 0mm)											
Front side	802.11a	52/5260	98.09%	1.019	0.277	-0.15	18.42	19.00	1.143	0.323	22.2
Back side	802.11a	52/5260	98.09%	1.019	0.357	0.16	18.42	19.00	1.143	0.416	22.2
Left side	802.11a	52/5260	98.09%	1.019	0.080	0.06	18.42	19.00	1.143	0.093	22.2
Right side	802.11a	52/5260	98.09%	1.019	0.912	0.02	18.42	19.00	1.143	1.063	22.2
Top side	802.11a	52/5260	98.09%	1.019	0.074	0.10	18.42	19.00	1.143	0.086	22.2
Product specific 10g SAR Test data of U-NII-2C(Separate 0mm)											
Front side	802.11a	104/5520	98.09%	1.019	0.425	0.08	17.89	19.00	1.291	0.559	22.2
Back side	802.11a	104/5520	98.09%	1.019	0.708	0.02	17.89	19.00	1.291	0.932	22.2
Left side	802.11a	104/5520	98.09%	1.019	0.070	0.06	17.89	19.00	1.291	0.092	22.2
Right side	802.11a	104/5520	98.09%	1.019	0.931	-0.01	17.89	19.00	1.291	**1.226**	22.2
Top side	802.11a	104/5520	98.09%	1.019	0.107	0.18	17.89	19.00	1.291	0.141	22.2
Product specific 10g SAR Test data of U-NII-2A at the worst case with Battery2#(Separate 0mm)											
Right side	802.11a	104/5520	98.09%	1.019	0.912	-0.01	17.89	19.00	1.291	1.201	22.2

Table 29: SAR of WIFI 5G for Head, Body and Product specific 10g SAR(original report HR/2021/1001407).

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Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)1-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data at the worst case											
Left cheek	802.11ac.80M	122/5610	92.00%	1.087	0.123	0.01	11.34	12.00	1.164	**0.155**	22.0
Body worn Test data at the worst case (Separate 15mm)											
Back side	802.11a	104/5520	98.09%	1.019	0.248	0.07	17.89	19.00	1.291	**0.326**	22.0
Hotspot Test data at the worst case (Separate 10mm)											
Right side	802.11a	157/5785	98.09%	1.019	0.323	-0.08	17.69	19.00	1.352	**0.445**	22.0
Test position	**Test mode**	**Test Ch./Freq.**	**Duty Cycle**	**Duty Cycle Scaled factor**	**SAR (W/kg)10-g**	**Power drift(dB)**	**Conducted power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR(W/kg)**	**Liquid Temp.**
Product specific 10g SAR Test data at the worst case (Separate 0mm)											
Right side	802.11a	104/5520	98.09%	1.019	0.918	0.02	17.89	19.00	1.291	**1.207**	22.0

Table 30：SAR of WIFI 5G for Head, Body and Product specific 10g SAR(Variant).

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8.2.16 SAR Result of BT

Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)1-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data											
Left cheek	DH5	39/2441	0.77	1.30	0.098	-0.08	13.08	13.30	1.052	**0.133**	22
Left tilted	DH5	39/2441	0.77	1.30	0.025	0.12	13.08	13.30	1.052	0.034	22
Right cheek	DH5	39/2441	0.77	1.30	0.035	0.02	13.08	13.30	1.052	0.048	22
Right tilted	DH5	39/2441	0.77	1.30	0.014	-0.07	13.08	13.30	1.052	0.019	22
Head Test data at the worst case with Battery2#											
Left cheek	DH5	39/2441	0.77	1.30	0.082	-0.08	13.08	13.30	1.052	0.112	22
Body worn Test data(Separate 15mm)											
Front side	DH5	39/2441	0.77	1.30	0.013	0.01	13.08	13.30	1.052	0.018	22
Back side	DH5	39/2441	0.77	1.30	0.021	0.01	13.08	13.30	1.052	**0.028**	22
Body worn Test data at the worst case with Battery2#(Separate 15mm)											
Back side	DH5	39/2441	0.77	1.30	0.017	0.01	13.08	13.30	1.052	0.023	22
Hotspot Test data (Separate 10mm)											
Front side	DH5	39/2441	0.77	1.30	0.018	0.00	13.08	13.30	1.052	0.025	22
Back side	DH5	39/2441	0.77	1.30	0.045	0.09	13.08	13.30	1.052	0.061	22
Left side	DH5	39/2441	0.77	1.30	0.013	0.01	13.08	13.30	1.052	0.018	22
Right side	DH5	39/2441	0.77	1.30	0.063	0.10	13.08	13.30	1.052	**0.085**	22
Top side	DH5	39/2441	0.77	1.30	0.008	-0.08	13.08	13.30	1.052	0.011	22
Hotspot Test data at the worst case with Battery2#(Separate 10mm)											
Right side	DH5	39/2441	0.77	1.30	0.059	0.10	13.08	13.30	1.052	0.081	22

Table 31：SAR of BT for Head and Body(original report HR/2021/1001407).

Test position	Test mode	Test Ch./Freq.	Duty Cycle	Duty Cycle Scaled factor	SAR (W/kg)1-g	Power drift(dB)	Conducted power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR(W/kg)	Liquid Temp.
Head Test data at the worst case											
Left cheek	DH5	39/2441	0.77	1.30	0.079	0.14	13.08	13.30	1.052	**0.108**	22.2
Body worn Test data at the worst case (Separate 15mm)											
Back side	DH5	39/2441	0.77	1.30	0.005	-0.12	13.08	13.30	1.052	**0.007**	22.2
Hotspot Test data at the worst case (Separate 10mm)											
Right side	DH5	39/2441	0.77	1.30	0.043	0.04	13.08	13.30	1.052	**0.059**	22.2

Table 32：SAR of BT for Head and Body(Variant).

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8.3 Multiple Transmitter Evaluation

8.3.1 Simultaneous SAR SAR test evaluation

- **Simultaneous Transmission Possibilities**

NO	Simultaneous TX Combination	Head	Body-worn	Hotspot	Product Specific 10-g (0mm)
1	WWAN+BT	Y	Y	Y	Y
2	WWAN+WIFI 2.4G	Y	Y	Y	Y
3	WWAN+WIFI 5G	Y	Y	Y	Y
4	WWAN+BT+WIFI 5G	N	N	N	N
5	BT+WIFI 5G	N	N	N	N
6	WIFI 2.4G+WIFI 5G	N	N	N	N
7	WIFI 2.4G+BT	N	N	N	N

Note:

1) For Wi-Fi 5G, U-NII-2A (5250-5350 MHz) and U-NII-2C (5470-5725 MHz) band do not support hotspot function.

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8.3.2 Simultaneous Transmission SAR Summation Scenario

Ant Down		1													2	3	4	1+2	1+3	1+4
Test position		Main Antenna SARmax (W/kg)													WiFi/BT Antenna SARmax (W/kg)			Summed 1g SARmax (W/kg)	Summed 1g SARmax (W/kg)	Summed 1g SARmax (W/kg)
		GSM850	GSM1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 17	LTE Band 26	LTE Band 66	WiFi 2.4G	WiFi 5G	BT			
Head	Left Touch	0.134	0.069	0.193	0.137	0.174	0.093	0.098	0.123	0.152	0.091	0.097	0.142	0.082	0.127	0.168	0.158	0.320	0.361	0.351
	Left Tilt	0.055	0.023	0.073	0.086	0.074	0.070	0.103	0.055	0.113	0.038	0.033	0.050	0.061	0.025	0.052	0.034	0.138	0.165	0.147
	Right Touch	0.117	0.050	0.150	0.127	0.167	0.127	0.151	0.123	0.104	0.074	0.063	0.099	0.130	0.022	0.077	0.048	0.189	0.244	0.215
	Right Tilt	0.063	0.033	0.093	0.070	0.088	0.078	0.082	0.065	0.083	0.047	0.039	0.061	0.031	0.009	0.023	0.019	0.102	0.116	0.112
Body 15mm	Front	0.163	0.084	0.234	0.187	0.209	0.180	0.186	0.146	0.188	0.128	0.136	0.163	0.172	0.046	0.146	0.018	0.280	0.380	0.252
	Back	0.207	0.158	0.404	0.329	0.275	0.351	0.348	0.219	0.313	0.202	0.214	0.259	0.318	0.140	0.341	0.028	0.544	0.745	0.432
Hotspot	Front	0.123	0.053	0.204	0.150	0.349	0.171	0.158	0.209	0.177	0.162	0.167	0.277	0.178	0.109	0.159	0.025	0.458	0.508	0.374
	Back	0.182	0.087	0.276	0.192	0.461	0.241	0.217	0.354	0.233	0.268	0.322	0.407	0.220	0.244	0.296	0.061	0.705	**0.757**	0.522
	Left	0.004	0.028	0.124	0.098	0.172	0.083	0.073	0.074	0.107	0.084	0.082	0.103	0.081	0.078	0.124	0.018	0.250	0.296	0.190
	Right	0.001	0.024	0.090	0.076	0.144	0.072	0.052	0.079	0.061	0.094	0.093	0.114	0.059	0.436	0.465	0.122	0.580	0.609	0.266
	Top	/	/	/	/	/	/	/	/	/	/	/	/	/	0.022	0.145	0.011	0.022	0.145	0.011
	Bottom	0.085	0.118	0.489	0.383	0.268	0.407	0.373	0.164	0.649	0.105	0.101	0.214	0.405	/	/	/	0.649	0.649	0.649

Test position		Main Antenna SARmax (W/kg)													WiFi/BT Antenna SARmax (W/kg)			Summed 10g SARmax	Summed 10g SARmax	Summed 10g SARmax
		GSM850	GSM1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 17	LTE Band 26	LTE Band 66	WiFi 2.4G	WiFi 5G	BT			
Product specific 10g SAR	Front	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.559	/	/	0.559	/
	Back	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.932	/	/	0.932	/
	Left	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.093	/	/	0.093	/
	Right	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1.226	/	/	**1.226**	/
	Top	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.141	/	/	0.141	/
	Bottom	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

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Ant Up		1													2	3	4	1+2	1+3	1+4
Test position		Main Antenna SARmax (W/kg)													WiFi/BT Antenna SARmax (W/kg)			Summed 1g SARmax (W/kg)	Summed 1g SARmax (W/kg)	Summed 1g SARmax (W/kg)
		GSM850	GSM1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 17	LTE Band 26	LTE Band 66	WiFi 2.4G	WiFi 5G	BT			
Head	Left Touch	0.071	0.504	0.536	0.527	0.137	0.504	0.477	0.076	0.463	0.059	0.054	0.093	0.375	0.127	0.168	0.158	0.663	0.704	0.694
	Left Tilt	0.057	0.789	0.608	0.796	0.125	0.796	0.758	0.056	0.201	0.050	0.044	0.069	0.608	0.025	0.052	0.034	0.821	0.848	0.830
	Right Touch	0.250	0.406	0.423	0.399	0.246	0.370	0.344	0.178	0.977	0.126	0.123	0.163	0.274	0.022	0.077	0.048	0.999	**1.054**	1.025
	Right Tilt	0.100	0.612	0.552	0.579	0.199	0.605	0.554	0.126	0.454	0.078	0.103	0.108	0.361	0.009	0.023	0.019	0.621	0.635	0.631
Body 15mm	Front	0.014	0.059	0.080	0.056	0.035	0.095	0.050	0.022	0.215	0.023	0.021	0.017	0.039	0.046	0.146	0.018	0.261	0.361	0.233
	Back	0.054	0.242	0.262	0.217	0.067	0.281	0.227	0.041	0.289	0.036	0.041	0.049	0.175	0.140	0.341	0.028	0.429	0.630	0.317
Hotspot	Front	0.041	0.083	0.118	0.079	0.075	0.108	0.064	0.036	0.146	0.048	0.047	0.034	0.046	0.109	0.159	0.025	0.255	0.305	0.171
	Back	0.144	0.218	0.316	0.199	0.133	0.279	0.162	0.096	0.277	0.068	0.078	0.091	0.119	0.244	0.296	0.061	0.560	0.612	0.377
	Left	0.060	0.019	0.032	0.027	0.097	0.031	0.025	0.064	0.489	0.066	0.078	0.067	0.018	0.078	0.124	0.018	0.567	0.613	0.507
	Right	0.001	0.016	0.031	0.016	0.004	0.044	0.033	0.048	0.004	0.034	0.045	0.004	0.026	0.436	0.465	0.122	0.484	0.513	0.170
	Top	0.057	0.470	0.595	0.302	0.090	0.545	0.329	0.045	0.065	0.040	0.042	0.050	0.245	0.022	0.145	0.011	0.617	0.740	0.606
	Bottom	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

Test position		Main Antenna SARmax (W/kg)													WiFi/BT Antenna SARmax (W/kg)			Summed 10g SARmax	Summed 10g SARmax	Summed 10g SARmax
		GSM850	GSM1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 17	LTE Band 26	LTE Band 66	WiFi 2.4G	WiFi 5G	BT			
Product specific 10g SAR	Front	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.559	/	/	0.559	/
	Back	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.932	/	/	0.932	/
	Left	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.093	/	/	0.093	/
	Right	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1.226	/	/	**1.226**	/
	Top	/	/	/	/	/	/	/	/	/	/	/	/	/	/	0.141	/	/	0.141	/
	Bottom	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

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

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9 Equipment list

Test Platform	SPEAG DASY5 Professional
Location	Compliance Certification Services (Kunshan) Inc.
Software Reference	DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Hardware Reference

Equipment		Manufacturer	Model	Serial Number	Calibration Date	Due date of calibration
☒	P C	HP	Core(rm)3.16G	CZCO48171H	N/A	N/A
☒	Signal Generator	Agilent	N5182A	MY50142015	2020/09/25	2021/09/24
☒	S-Parameter Network Analyzer	Agilent	E5071B	MY42301382	2021/02/01	2022/01/31
☒	DAK-3.5 probe	SPEAG	DAK-3.5	1102	N/A	N/A
☒	Power meter	Anritsu	ML2495A	1445010	2021/04/05	2022/04/04
☒	Power sensor	Anritsu	MA2411B	1339220	2021/04/05	2022/04/04
☒	universal Radio communication tester	R&S	CMW500	159275	2020/10/19	2021/10/18
☒	Wireless Communication Test Set	R&S	CMU200	109525	2020/10/19	2021/10/18
☒	DAE	SPEAG	DAE4	1245	2021/05/19	2022/05/18
☒	E-field PROBE	SPEAG	EX3DV4	3798	2021/05/31	2022/05/30
☒	Dipole	SPEAG	D750V3	1188	2019/03/07	2022/03/06
☒	Dipole	SPEAG	D835V2	4d114	2019/06/11	2022/06/10
☒	Dipole	SPEAG	D1800V2	2d170	2019/06/11	2022/06/10
☒	Dipole	SPEAG	D1900V2	5d136	2019/06/11	2022/06/10
☒	Dipole	SPEAG	D2450V2	817	2019/06/10	2022/06/09
☒	Dipole	SPEAG	D2600V2	1158	2019/03/08	2022/03/07
☒	Dipole	SPEAG	D5GHzV2	1095	2019/06/14	2022/06/13
☒	Electro Thermometer	DTM	DTM3000	3030	2020/10/24	2021/10/23
☒	Amplifier	Mini-circuits	ZVE-8G	110405	N/A	N/A
☒	Amplifier	Mini-circuits	ZHL-42	QA1331003	N/A	N/A
☒	3db ATTENUATOR	MINI	MCL BW-S3W5	0533	N/A	N/A
☒	DUMMY PROBE	SPEAG	DP_2	SPDP2001AA	N/A	N/A
☒	Dual Directional Coupler	Woken	20W couple	DOM2BHW1A1	N/A	N/A
☒	SAM PHANTOM (ELI4 v4.0)	SPEAG	QDOVA001BB	1102	N/A	N/A
☒	Twin SAM Phantom	SPEAG	QD000P40CD	1609	N/A	N/A
☒	ROBOT	SPEAG	TX60	F10/5E6AA1/A101	N/A	N/A

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☒	ROBOT KRC	SPEAG	CS8C	F10/5E6AA1/C101	N/A	N/A
☒	LIQUID CALIBRATION KIT	ANTENNESSA	41/05 OCP9	00425167	N/A	N/A

Note: All the equipments are within the valid period when the tests are performed.

10 Calibration certificate

Please see the Appendix C

11 Photographs

Please see the Appendix D

Appendix A: Detailed System Check Results

Appendix B: Detailed Test Results

Appendix C: Calibration certificate

Appendix D: Photographs

Appendix E: EUT Antenna Locations

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