FCC SAR TEST REPORT

Application No.:	HEWM2202000026RG
Applicant:	Honor Device Co., Ltd.
Manufacturer:	Honor Device Co., Ltd.
Product Name:	Smart Phone
Model No.(EUT):	CMA-LX1
Trade Mark:	HONOR
FCC ID:	2AYGCCMA-LX1
Standards:	FCC 47CFR §2.1093
Date of Receipt:	2022-03-03
Date of Test:	2022-03-06 to 2022-03-10
Date of Issue:	2022-03-14
Test conclusion:	**PASS ***

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

Authorized Signature:

Panta Sun

Panta Sun

Wireless Laboratory Manager

REVISION HISTORY

Report Number	Revision	Description	Issue Date
HEWM2202000026RG07	01	Original	2022-03-14

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TEST SUMMARY

Frequency Band	Maximum Reported SAR(W/kg)			
	Head	Body-worn	Hotspot	Product specific 10g SAR
GSM850	0.67	0.35	0.58	/
GSM1900	0.94	0.55	**1.08**	1.68
WCDMA Band II	**1.08**	**0.58**	0.87	/
WCDMA Band V	1.06	0.37	0.66	/
LTE Band 5	0.72	0.23	0.40	/
LTE Band 7	1.08	0.42	1.03	**2.26**
WI-FI (2.4GHz)	0.30	0.27	0.40	/
WI-FI (5GHz)	0.56	0.39	0.72	1.18
BT	0.23	<0.10	0.19	/
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	1.55	0.95	1.55	2.50
SPLSR	N/A	N/A	N/A	N/A
SPLSR Limited	0.04			0.1

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

Reviewed by

Well Wei

Well Wei

Prepared by

Nature Shen

Nature Shen

CONTENTS

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:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test Engineer:	Nature Shen, KING-P li

1.3 Test Facility

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

• **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

1.4 General Description of EUT

Device Type :	portable device		
Exposure Category:	uncontrolled environment / general population		
Product Name:	Smart Phone		
Model No.(EUT):	CMA-LX1		
FCC ID:	2AYGCCMA-LX1		
Trade Mark:	HONOR		
Product Phase:	Identical Prototype		
IMEI:	860481060001501 860481060001386		
Hardware Version:	HL2CMAM		
Software Version:	4.2.0.32(C900E32R1P1)		
Antenna Type:	Internal Antenna		
Device Operating Configurations :			
Modulation Mode:	**GSM:** GMSK, 8PSK; **WCDMA:** QPSK; **LTE:** QPSK,16QAM, **WIFI:** DSSS, OFDM, OFDMA; **BT:** GFSK, π/4DQPSK,8DPSK		
Device Class:	B		
GPRS Multi-slots Class:	12	EGPRS Multi-slots Class:	12
HSDPA UE Category:	14	HSUPA UE Category	6
DC-HSDPA UE Category:	24		
Power Class	4,tested with power level 5(GSM850)		
	1,tested with power level 0(GSM1900)		
	3, tested with power control “all 1”(WCDMA Band)		
	3, tested with power control Max Power(LTE Band)		
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 V	824~849	869~894
	LTE Band 5	824~849	869-894
	LTE Band 7	2500~2570	2620~2690
	Bluetooth	2400~2483.5	2400~2483.5
	Wi-Fi 2.4G	2402~2462	2402~2462
	Wi-Fi 5G	5150~5250	5150~5250
		5250~5350	5250~5350
		5470~5725	5470~5725
		5725~5850	5725~5850
RF Cable:	☒ Provided by the aplicant ☐ Provided by the laboratory		
Battery1 Information:	Model:	HB496590EFW-F	
	Normal Voltage:	+3.87V	
	Rated capacity:	4900mAh	
	Manufacturer:	Honor Device Co., Ltd.(Factory: NVT)	

Battery2 Information:	Model:	HB496590EFW
	Normal Voltage:	+3.87V
	Rated capacity:	4900mAh
	Manufacturer:	Honor Device Co., Ltd.(Factory: NVT)
Battery3 Information:	Model:	HB496590EFW
	Normal Voltage:	+3.87V
	Rated capacity:	4900mAh
	Manufacturer:	Honor Device Co., Ltd.(Factory: Desay)
Battery4 Information:	Model:	HB496590EFW-F
	Normal Voltage:	+3.87V
	Rated capacity:	4900mAh
	Manufacturer:	Honor Device Co., Ltd.(Factory: Desay)
Battery5 Information:	Model:	HB496590EFW-F
	Normal Voltage:	+3.87V
	Rated capacity:	4900mAh
	Manufacturer:	Honor Device Co., Ltd.(Factory: SUCD)
Battery6 Information:	Model:	HB496590EFW
	Normal Voltage:	+3.87V
	Rated capacity:	4900mAh
	Manufacturer:	Honor Device Co., Ltd.(Factory: SUCD)
Earphone1 Information:	Model:	MEND1532B528A11
	Manufacturer:	Jiangxi Lianchuang Hongsheng Electronic Co., LTD.
Earphone2 Information:	Model:	EPAB542-2WH05-DH
	Manufacturer:	FOXCONN INTERCONNECT TECHNOLOGY LIMITED
Earphone3 Information:	Model:	1293-3283-3.5mm-339
	Manufacturer:	BOLUO COUNTY QUANCHENG ELECTRONIC CO., LTD.

Remark:
According to the difference statement between CMA-LX1 and CMA-LX3, for CMA-LX1 test at the worst case on the original report SUHR/2022/1001007.

1.4.1 DUT ,Antenna Locations (Back View)

The DUT Antenna Locations (Back View) can be refer to Appendix E.

Note:
1) The test device is a smart phone. The overall diagonal dimension of this device is 177 mm. Per KDB 648474 D04, because the diagonal distance of this device is ≥160mm, so it is a phablet.
2) DIV Antenna does not support transmitter function.

According to the distance between LTE/WCDMA/GSM&WIFI&BT 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	Hotspot/Product specific 10g SAR	Yes	Yes	Yes	No	No	Yes
Ant 1	Hotspot/Product specific 10g SAR	Yes	Yes	No	Yes	No	Yes
Ant 3	Hotspot/Product specific 10g SAR	Yes	Yes	No	Yes	Yes	No
Ant 9	Hotspot/Product specific 10g SAR	Yes	Yes	No	Yes	No	No
Ant 11	Hotspot/Product specific 10g SAR	Yes	Yes	No	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) A fixed level power reduction is applied for some frequency bands when handset operate "held to the ear" condition, the power reduction triggered by audio receiver detection. The audio receiver detection is used to determine head or body scenario.

3) 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.

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

The detailed power reduction information can be referred to RF conducted power.

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 D04	Interim General RF Exposure Guidance v01
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

3 SAR Measurements System Configuration

3.1 The SAR Measurement System

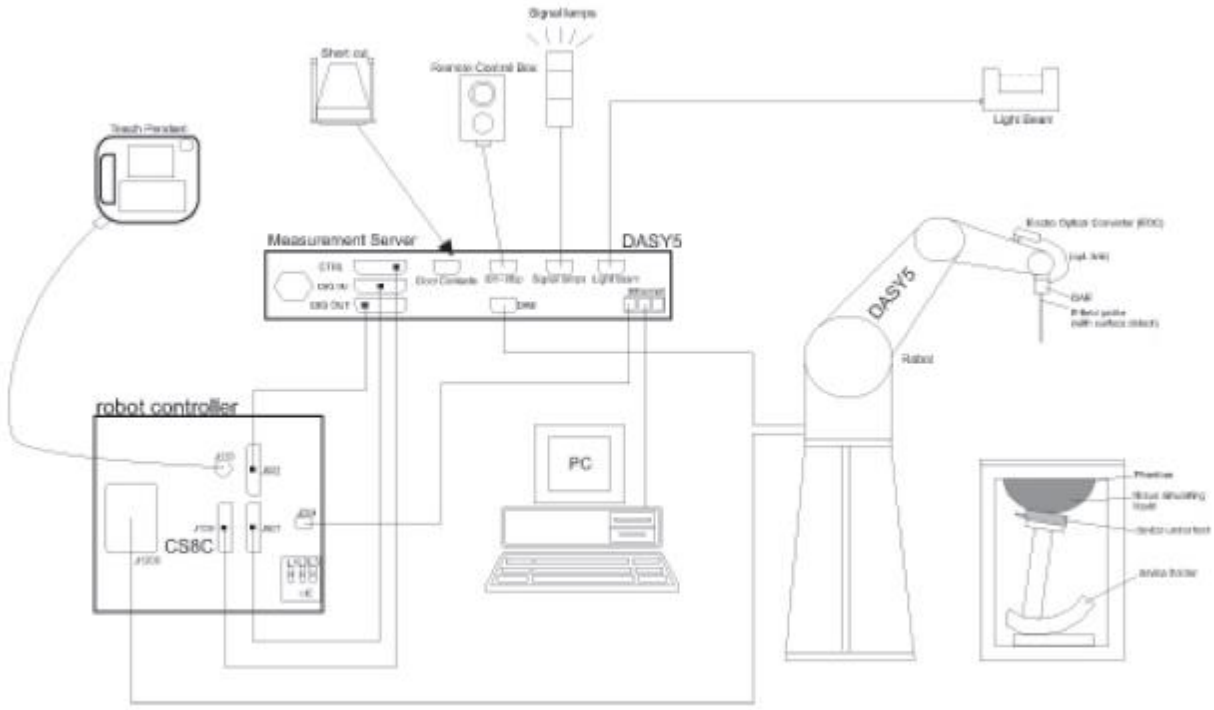
This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY5 professional system). A E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|2)/ ρ where σ and ρ are the conductivity and mass density of the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

- 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

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

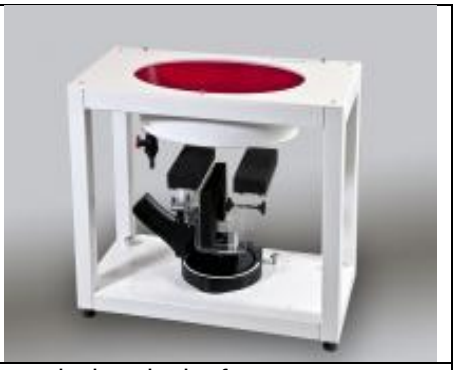
3.4 SAM Twin Phantom

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.

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.

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 %

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:

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

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.

$$P_{pwe} = {E_{tot}}^2{}_2 / 3770 \text{ or } \quad P_{pwe} = {H_{tot}}^2 \cdot 37.7$$

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

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.

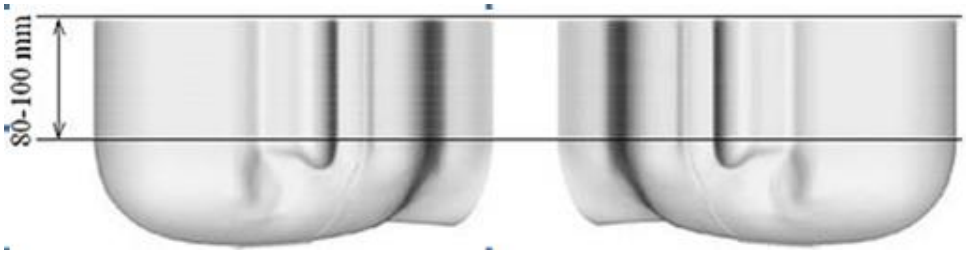
5 Description of Test Position

5.1 Head Exposure Condition

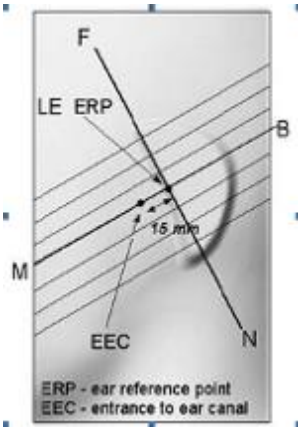
5.1.1 SAM Phantom Shape

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.

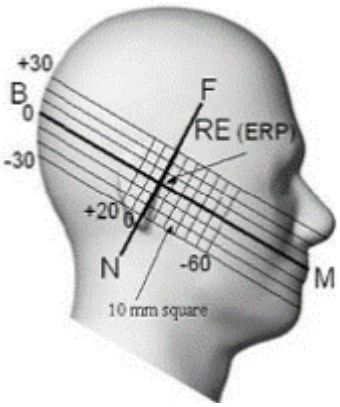
Note: The centre strip including the nose region has a different thickness tolerance.



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

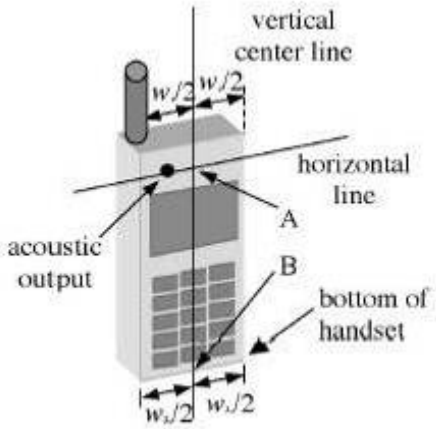


F-5. Close-up side view of phantom, showing the ear region, N-F and B-M lines, and seven cross-sectional plane locations

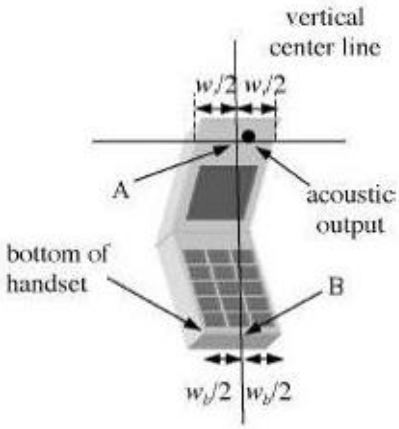


F-6. Side view of the phantom showing relevant markings and seven cross-sectional plane locations

5.1.2 EUT constructions



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



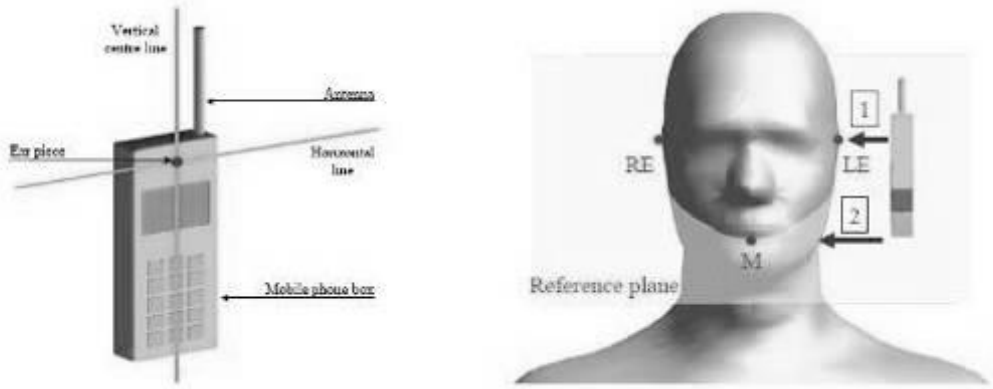
F-8. Handset vertical and horizontal reference lines-“clam-shell case”

5.1.3 Definition of the “cheek” position

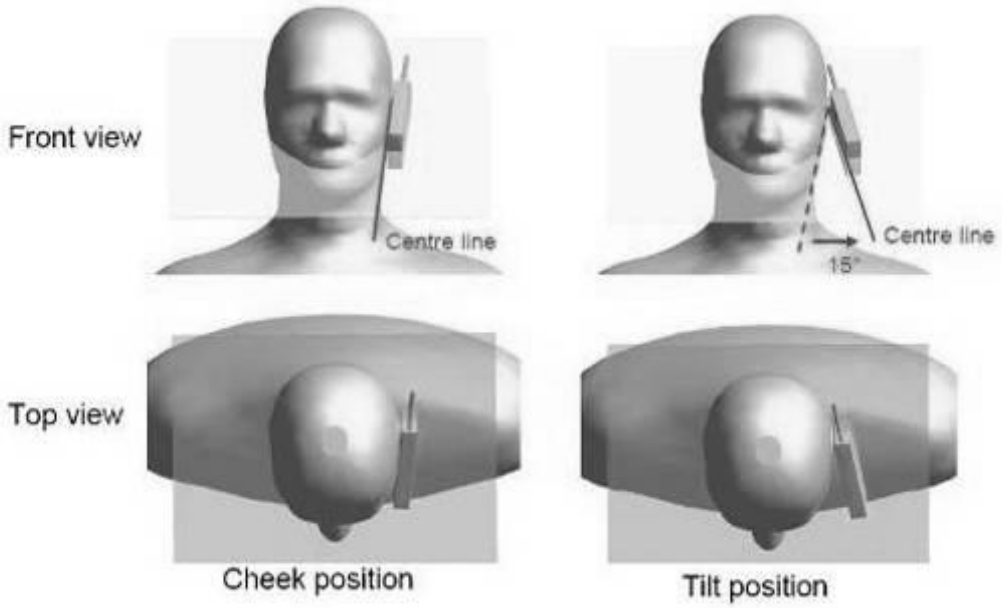
a) Position the device with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagittal plane of the phantom ("initial position"). While maintaining the device in this plane, align the vertical centre line with the 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.

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

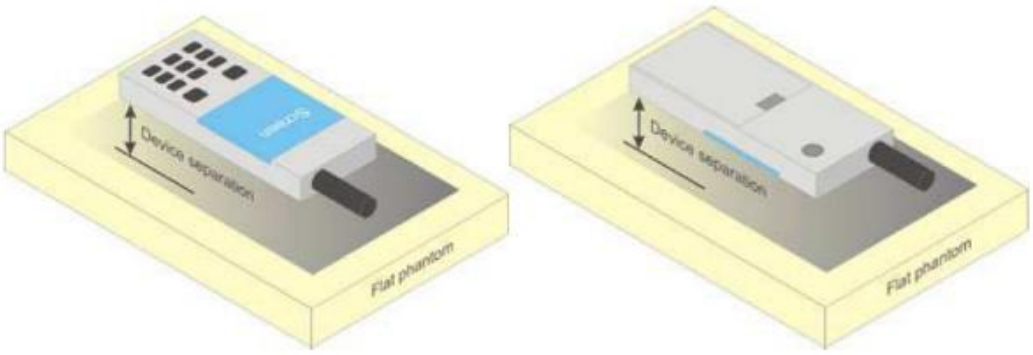
5.2.1 Body-worn accessory exposure conditions

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**

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

Due to the SAR result, only the following frequency bands need to test with 0mm for the Product Specific 10-g SAR, the others are not required.

GSM1900 (Ant3)

Test position	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm)										
Front side	GPRS 4TS	661/1880	1:2.075	0.253	0.01	20.18	22.90	1.871	0.473	Yes
Back side	GPRS 4TS	661/1880	1:2.075	0.560	0.17	20.18	22.90	1.871	1.048	Yes
Left side	GPRS 4TS	661/1880	1:2.075	0.209	0.11	20.18	22.90	1.871	0.391	Yes
Top side	GPRS 4TS	661/1880	1:2.075	0.654	0.13	20.18	22.90	1.871	1.223	No

LTE B7 (Ant3)

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 1-g (W/kg)	Product Specific 10-g SAR SAR Exclusio
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.176	0.06	18.73	20.50	1.503	0.265	Yes
Back side	20	QPSK 1_0	21100/2535	1:1	0.629	0.05	18.73	20.50	1.503	0.945	Yes
Left side	20	QPSK 1_0	21100/2535	1:1	0.263	0.01	18.73	20.50	1.503	0.395	Yes
Right side	20	QPSK 1_0	21100/2535	1:1	0.011	0.15	18.73	20.50	1.503	0.016	Yes
Top side	20	QPSK 1_0	21100/2535	1:1	0.753	0.03	18.73	20.50	1.503	1.132	Yes
Top side	20	QPSK 1_0	20850/2510	1:1	0.747	0.06	18.67	20.50	1.524	1.138	Yes
Top side	20	QPSK 1_0	21350/2560	1:1	0.839	0.03	18.65	20.50	1.531	1.285	No
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.176	0.02	18.35	20.50	1.641	0.289	Yes
Back side	20	QPSK 50_0	21100/2535	1:1	0.622	0.07	18.35	20.50	1.641	1.020	Yes
Left side	20	QPSK 50_0	21100/2535	1:1	0.278	0.06	18.35	20.50	1.641	0.456	Yes
Right side	20	QPSK 50_0	21100/2535	1:1	0.011	0.02	18.35	20.50	1.641	0.017	Yes
Top side	20	QPSK 50_0	21100/2535	1:1	0.784	0.01	18.35	20.50	1.641	1.286	No
Top side	20	QPSK 50_0	20850/2510	1:1	0.785	0.02	18.09	20.50	1.742	1.367	No
Top side	20	QPSK 50_0	21350/2560	1:1	0.852	0.04	18.27	20.50	1.671	**1.424**	No
Top side-Repeat	20	QPSK 50_0	21350/2560	1:1	0.848	0.09	18.27	20.50	1.671	1.417	No
Top side with Battery 2#	20	QPSK 50_0	21350/2560	1:1	0.843	0.02	18.27	20.50	1.671	1.409	No
Top side with Battery 3#	20	QPSK 50_0	21350/2560	1:1	0.839	0.05	18.27	20.50	1.671	1.402	No
Top side with Battery 4#	20	QPSK 50_0	21350/2560	1:1	0.830	0.11	18.27	20.50	1.671	1.387	No
Top side with Battery 5#	20	QPSK 50_0	21350/2560	1:1	0.821	0.18	18.27	20.50	1.671	1.372	No
Top side with Battery 6#	20	QPSK 50_0	21350/2560	1:1	0.847	0.20	18.27	20.50	1.671	1.415	No
Hotspot Test data(Separate 10mm 100%RB)											
Top side	20	QPSK 50_0	21100/2535	1:1	0.841	0.01	18.30	20.50	1.660	1.396	No

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

6.1.2 Measurement for Tissue Simulate Liquid

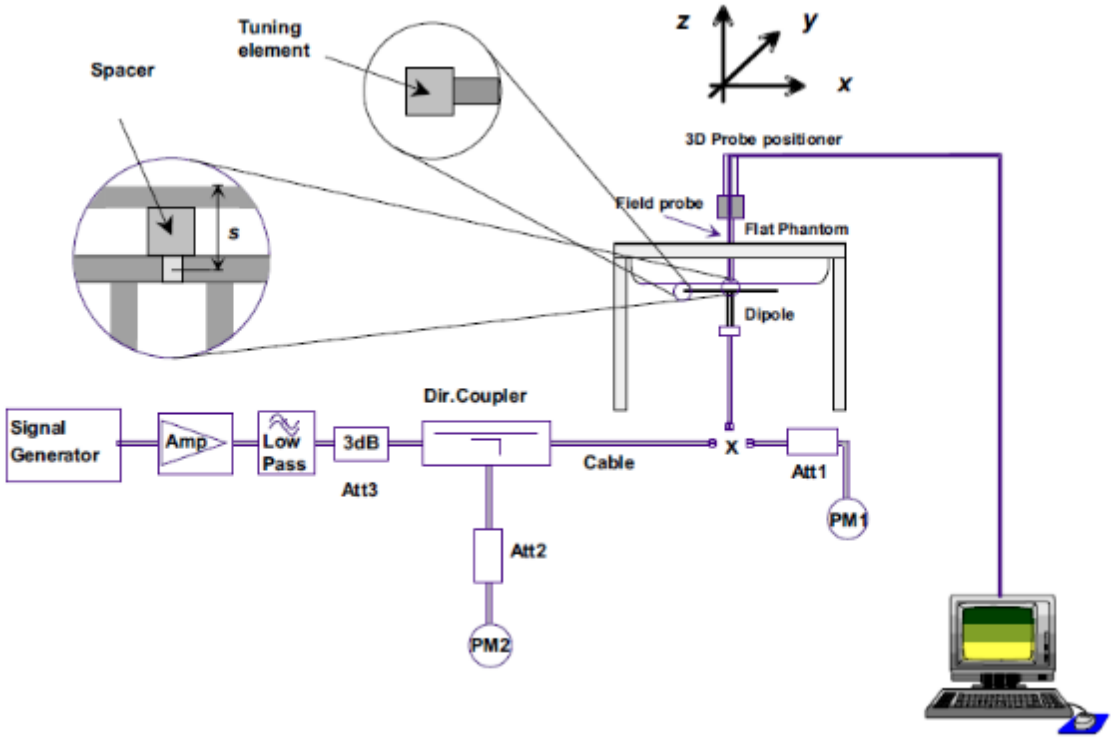
The Conductivity (σ) and Permittivity (ρ) are listed in bellow table. For the SAR measurement given in this report. The temperature variation of the Tissue Simulate Liquids was 22±2°C.

Tissue Type	Measured Frequency (MHz)	Target Tissue (±5%)		Measured Tissue		Liquid Temp.(℃)	Measured Date
		ε_r	σ(S/m)	ε_r	σ(S/m)		
835 Head	835	41.5 (39.43~43.58)	0.90 (0.86~0.95)	41.623	0.894	22.1	2022/3/6
1900 Head	1900	40.0 (38.00~42.00)	1.40 (1.33~1.47)	40.057	1.400	22.3	2022/3/7
2450 Head	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	38.445	1.789	21.9	2022/3/7
2600 Head	2600	39.0 (37.05~40.95)	1.96 (1.86~2.06)	38.364	1.969	21.5	2022/3/7
2600 Head	2600	39.0 (37.05~40.95)	1.96 (1.86~2.06)	39.389	1.990	21.5	2022/3/10
5250Head	5250	35.9 (34.11~37.70)	4.66 (4.47~4.95)	35.520	4.710	22.3	2022/3/7
5600 Head	5600	35.5 (33.73~37.30)	5.07 (4.82~5.32)	34.849	5.182	22.4	2022/3/7
5750 Head	5750	35.4 (33.63~37.17)	5.22 (4.96~5.48)	34.477	5.366	22.3	2022/3/7

Table 4： Measurement result of Tissue electric parameters

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

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)		
D835V2	Head	2.32	1.54	9.28	6.16	9.52 (8.57~10.47)	6.17 (5.55~6.79)	22.1	2022/3/6
D1900V2	Head	9.28	4.85	37.12	19.40	39.7 (35.73~43.67)	20.3 (18.27~22.33)	22.3	2022/3/7
D2450V2	Head	12.00	5.52	48.00	22.08	52.2 (46.98~57.42)	24.5 (22.05~26.95)	21.9	2022/3/7
D2600V2	Head	14.50	6.60	58.00	26.40	57.1 (51.12~62.48)	25.4 (22.41~27.39)	21.5	2022/3/7
D2600V2	Head	12.80	5.71	51.20	22.84	57.1 (51.12~62.48)	25.4 (22.41~27.39)	21.5	2022/3/10
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(5.25 GHz)	7.24	2.07	72.40	20.70	78 (70.2~85.8)	21.8 (19.62~23.98)	22.3	2022/3/7
	Head(5.6 GHz)	8.60	2.45	86.00	24.50	79.9 (71.91~87.89)	22.5 (20.25~24.75)	22.4	2022/3/7
	Head(5.75 GHz)	8.07	2.29	80.70	22.90	76.4 (68.76~84.04)	21.2 (19.08~23.32)	22.3	2022/3/7

Table 5： SAR System Check Result

6.2.3 Detailed System Check Results

Please see the Appendix A

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 33 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 33 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.

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

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_{ec} (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

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

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone 215000 t (86–512) 62992980 www.sgsgroup.com.cn
中国·苏州·中国（江苏）自由贸易试验区苏州片区苏州工业园区润胜路1号的6号厂房南部 邮编：215000 t (86–512) 62992980 sgs.china@sgs.com

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.

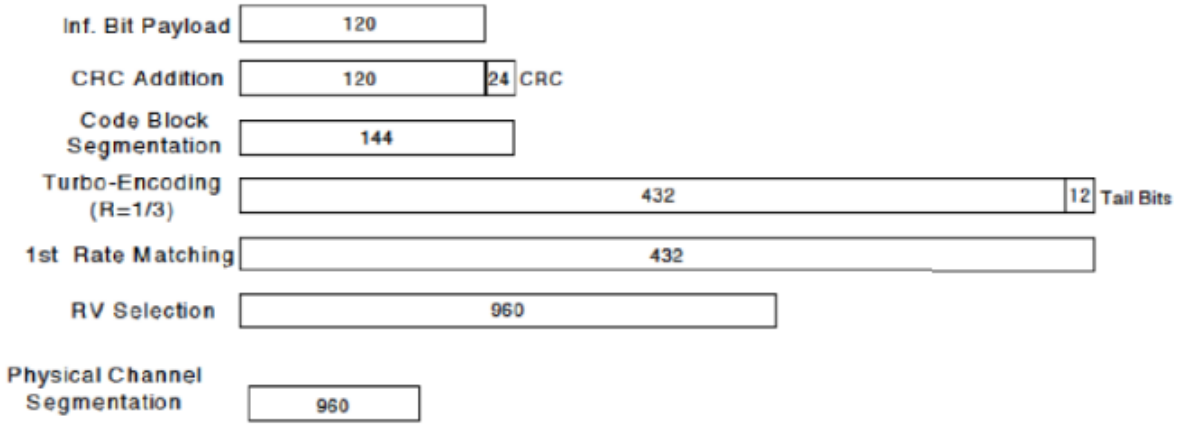


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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 $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

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

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

Note:

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

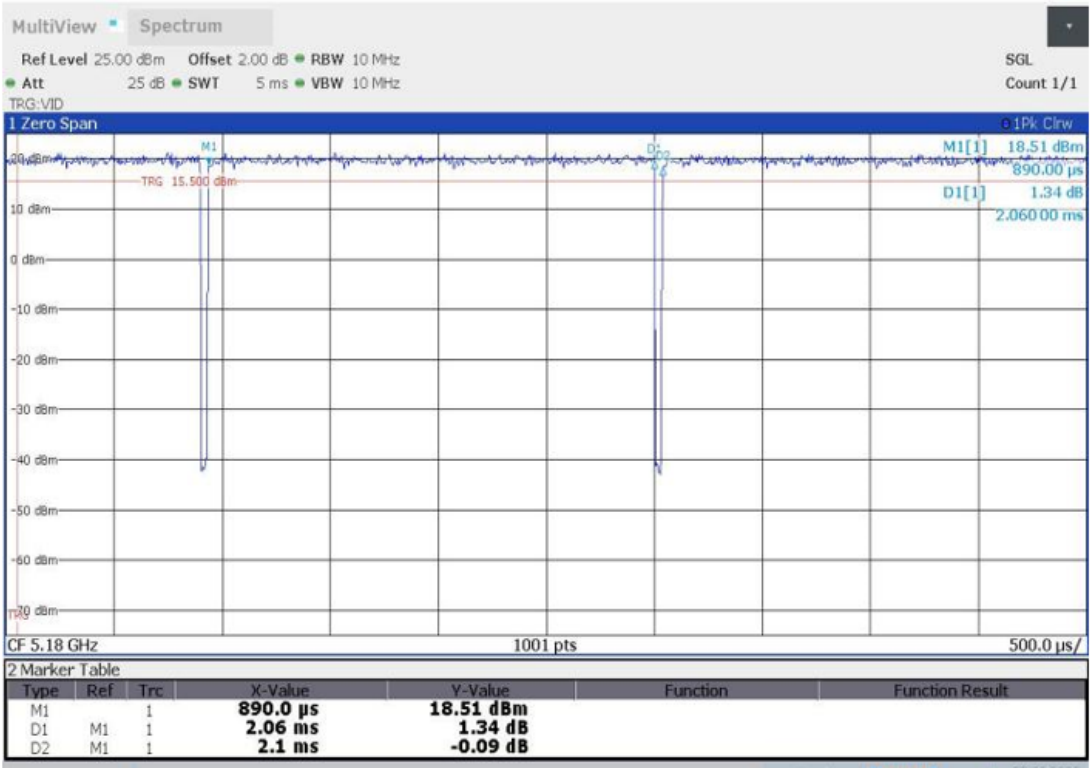
7.2.3 WiFi Test Configuration

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.

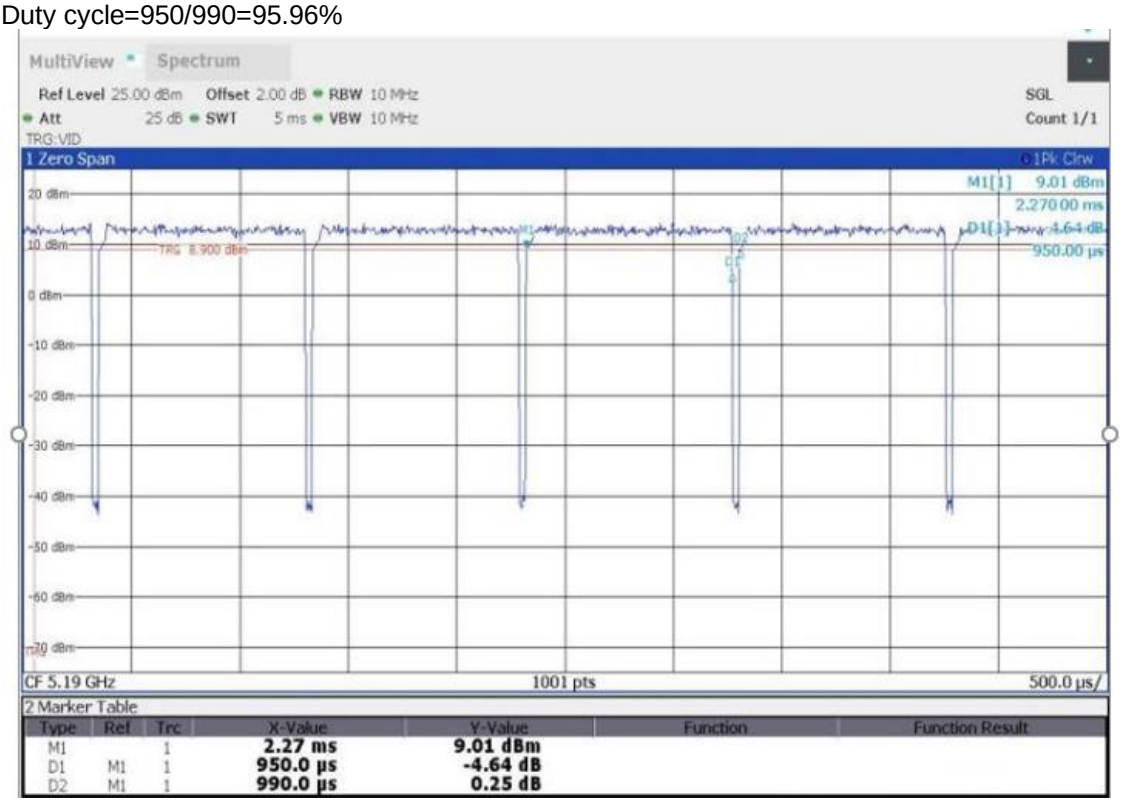
7.2.3.1 Duty cycle

Wi-Fi 2.4GHz 802.11b:
Duty cycle=12.45/12.61=98.73%

Wi-Fi 5GHz 802.11a:
Duty cycle=2.06/2.10=98.10%



Wi-Fi 5GHz 802.11n-HT40:
Duty cycle=950/990=95.96%



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.

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”

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.

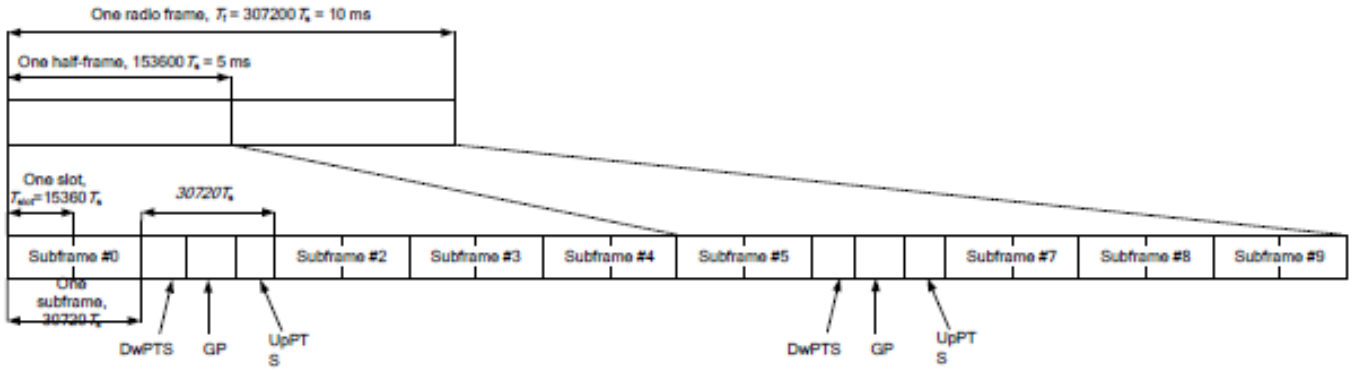
7.2.4 LTE Test Configuration

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 MT8820C 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.

TDD LTE test consideration

For Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.
SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.
LTE TDD Band support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

Frame structure type 2:



Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

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

Uplink-downlink configurations.

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

Calculated Duty Cycle=[Extended cyclic prefix in uplink x (Ts) x # of S + # of U]/10ms

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

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						MPR (dB)
	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	0
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	1
16QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	1
16QAM	> 5	> 4	> 8	> 12	> 16	> 18	2
64QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	2
64QAM	> 5	> 4	> 8	> 12	> 16	> 18	3
256QAM	≥1						5

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.

8 Test Result

8.1 Measurement of RF conducted Power

8.1.1 Conducted Power of GSM

Ant0 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	32.57	32.58	32.45	33.80	-9.19	23.38	23.39	23.26	24.61
GPRS (GMSK)	1 TX Slot	32.61	32.45	32.21	33.80	-9.19	23.42	23.26	23.02	24.61
	2 TX Slots	29.31	29.15	29.01	30.80	-6.18	23.13	22.97	23.13	24.62
	3 TX Slots	26.97	26.93	26.92	29.00	-4.42	22.55	22.51	22.55	24.58
	4 TX Slots	25.51	25.74	25.57	27.80	-3.17	22.34	22.57	22.40	24.63
EDGE (GMSK)	1 TX Slot	32.58	32.46	32.18	33.80	-9.19	23.39	23.27	22.99	24.61
	2 TX Slots	29.28	29.14	29.05	30.80	-6.18	23.10	22.96	23.10	24.62
	3 TX Slots	26.88	26.89	26.81	29.00	-4.42	22.46	22.47	22.46	24.58
	4 TX Slots	25.46	25.67	25.51	27.80	-3.17	22.29	22.50	22.34	24.63
EGPRS(8PSK)	1 TX Slot	26.15	26.48	26.65	28.80	-9.19	16.96	17.29	17.46	19.61
	2 TX Slots	24.01	24.06	24.26	25.80	-6.18	17.83	17.88	18.08	19.62
	3 TX Slots	21.94	22.19	22.69	24.00	-4.42	17.52	17.77	18.27	19.58
	4 TX Slots	20.34	20.65	21.03	22.80	-3.17	17.17	17.48	17.86	19.63
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	32.75	32.80	32.51	33.80	-9.19	23.56	23.61	23.32	24.61
GPRS (GMSK)	1 TX Slot	32.77	32.84	32.75	33.80	-9.19	23.58	23.65	23.56	24.61
	2 TX Slots	29.75	29.94	29.65	30.80	-6.18	23.57	23.76	23.57	24.62
	3 TX Slots	27.49	27.77	27.52	29.00	-4.42	23.07	23.35	23.07	24.58
	4 TX Slots	26.06	26.33	26.11	27.80	-3.17	22.89	23.16	22.94	24.63
EDGE (GMSK)	1 TX Slot	32.74	32.81	32.71	33.80	-9.19	23.55	23.62	23.52	24.61
	2 TX Slots	29.77	29.88	29.59	30.80	-6.18	23.59	23.70	23.59	24.62
	3 TX Slots	27.35	27.67	27.49	29.00	-4.42	22.93	23.25	22.93	24.58
	4 TX Slots	26.01	26.22	26.05	27.80	-3.17	22.84	23.05	22.88	24.63
EGPRS(8PSK)	1 TX Slot	26.90	26.91	26.99	28.80	-9.19	17.71	17.72	17.80	19.61
	2 TX Slots	24.24	24.35	24.29	25.80	-6.18	18.06	18.17	18.11	19.62
	3 TX Slots	22.19	22.38	22.19	24.00	-4.42	17.77	17.96	17.77	19.58
	4 TX Slots	21.19	21.45	21.31	22.80	-3.17	18.02	18.28	18.14	19.63
Ant1 GSM 1900										
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	29.46	30.07	29.56	30.80	-9.19	20.27	20.88	20.37	21.61
GPRS (GMSK)	1 TX Slot	29.43	30.04	29.51	30.80	-9.19	20.24	20.85	20.32	21.61
	2 TX Slots	26.42	27.03	26.56	27.80	-6.18	20.24	20.85	20.24	21.62
	3 TX Slots	24.47	25.08	24.60	26.00	-4.42	20.05	20.66	20.05	21.58
	4 TX Slots	23.18	23.79	23.15	24.80	-3.17	20.01	20.62	19.98	21.63
EDGE (GMSK)	1 TX Slot	29.47	30.08	29.50	30.80	-9.19	20.28	20.89	20.31	21.61
	2 TX Slots	26.60	27.21	26.62	27.80	-6.18	20.42	21.03	20.42	21.62
	3 TX Slots	24.41	25.02	24.65	26.00	-4.42	19.99	20.60	19.99	21.58
	4 TX Slots	23.04	23.65	23.11	24.80	-3.17	19.87	20.48	19.94	21.63
EGPRS(8PSK)	1 TX Slot	25.21	25.82	25.22	27.80	-9.19	16.02	16.63	16.03	18.61
	2 TX Slots	23.48	24.09	23.56	24.80	-6.18	17.30	17.91	17.38	18.62
	3 TX Slots	21.52	22.13	21.51	23.00	-4.42	17.10	17.71	17.09	18.58
	4 TX Slots	20.30	20.91	20.18	21.80	-3.17	17.13	17.74	17.01	18.63

Ant3 GSM 1900 Receiver off/Hotspot Off										
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	28.36	28.61	28.46	28.90	-9.19	19.17	19.42	19.27	19.71
GPRS (GMSK)	1 TX Slot	28.66	28.73	28.38	28.90	-9.19	19.47	16.15	19.19	19.71
	2 TX Slots	25.34	25.62	25.36	25.90	-6.18	19.16	19.44	19.18	19.72
	3 TX Slots	23.12	23.61	23.42	24.10	-4.42	18.70	19.19	18.70	19.68
	4 TX Slots	21.95	22.15	22.04	22.90	-3.17	18.78	18.98	18.87	19.73
EDGE (GMSK)	1 TX Slot	28.73	28.82	28.49	28.90	-9.19	19.54	16.33	19.30	19.71
	2 TX Slots	25.52	25.71	25.47	25.90	-6.18	19.34	19.53	19.29	19.72
	3 TX Slots	23.24	23.71	23.54	24.10	-4.42	18.82	19.29	18.82	19.68
	4 TX Slots	22.09	22.27	22.16	22.90	-3.17	18.92	19.10	18.99	19.73
EGPRS(8PSK)	1 TX Slot	25.39	25.68	25.48	25.90	-9.19	16.20	16.49	16.29	16.71
	2 TX Slots	22.53	22.72	22.47	22.90	-6.18	16.35	16.54	16.29	16.72
	3 TX Slots	20.86	20.91	20.82	21.10	-4.42	16.44	16.49	16.40	16.68
	4 TX Slots	19.65	19.69	19.68	19.90	-3.17	16.48	16.52	16.51	16.73
Ant3 GSM 1900 Receiver on/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	26.33	26.58	26.13	26.80	-9.19	17.14	17.39	16.94	17.61
GPRS (GMSK)	1 TX Slot	26.38	26.77	26.43	26.80	-9.19	17.19	17.58	17.24	17.61
	2 TX Slots	23.18	23.61	23.21	23.80	-6.18	17.00	17.43	17.00	17.62
	3 TX Slots	21.23	21.66	21.44	22.00	-4.42	16.81	17.24	16.81	17.58
	4 TX Slots	19.80	20.18	19.91	20.80	-3.17	16.63	17.01	16.74	17.63
EDGE (GMSK)	1 TX Slot	26.49	26.88	26.54	26.80	-9.19	17.30	17.69	17.35	17.61
	2 TX Slots	23.24	23.67	23.27	23.80	-6.18	17.06	17.49	17.06	17.62
	3 TX Slots	21.29	21.72	21.50	22.00	-4.42	16.87	17.30	16.87	17.58
	4 TX Slots	19.85	20.23	19.96	20.80	-3.17	16.68	17.06	16.79	17.63
EGPRS(8PSK)	1 TX Slot	23.59	23.68	23.56	23.80	-9.19	14.40	14.49	14.37	14.61
	2 TX Slots	20.99	20.86	20.78	20.80	-6.18	14.81	14.68	14.60	14.62
	3 TX Slots	18.94	19.02	18.87	19.00	-4.42	14.52	14.60	14.45	14.58
	4 TX Slots	17.29	17.63	17.65	17.80	-3.17	14.12	14.46	14.48	14.63

Note:

1）. For GSM 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

8.1.2 Conducted Power of WCDMA

Ant1 WCDMA Band II Receiver on/Hotspot off					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	22.75	23.45	22.84	24.40
	12.2kbps AMR	22.71	23.39	22.75	24.40
HSDPA	Subtest 1	21.73	22.38	21.90	23.40
	Subtest 2	21.65	22.43	21.66	23.40
	Subtest 3	21.34	22.01	21.24	22.90
	Subtest 4	21.19	21.90	21.15	22.90
DC-HSDPA	Subtest 1	21.76	22.42	21.92	23.40
	Subtest 2	21.71	22.47	21.79	23.40
	Subtest 3	21.16	21.94	21.31	22.90
	Subtest 4	21.28	21.96	21.20	22.90
HSUPA	Subtest 1	21.70	22.48	21.83	23.40
	Subtest 2	19.84	20.48	19.88	21.40
	Subtest 3	20.72	21.36	20.75	22.40
	Subtest 4	19.76	20.40	19.82	21.40
	Subtest 5	21.75	22.49	21.69	23.40
Ant1 WCDMA Band II Receiver off/Hotspot on					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	21.93	22.37	22.14	23.40
	12.2kbps AMR	21.84	22.31	22.10	23.40
HSDPA	Subtest 1	20.95	21.38	21.21	22.40
	Subtest 2	20.81	21.31	21.15	22.40
	Subtest 3	20.45	20.84	20.55	21.90
	Subtest 4	20.31	20.86	20.54	21.90
DC-HSDPA	Subtest 1	20.98	21.45	21.22	22.40
	Subtest 2	20.80	21.30	21.15	22.40
	Subtest 3	20.37	20.85	20.69	21.90
	Subtest 4	20.30	20.84	20.59	21.90
HSUPA	Subtest 1	20.77	21.21	21.04	22.40
	Subtest 2	18.97	19.42	19.09	20.40
	Subtest 3	19.98	20.41	20.21	21.40
	Subtest 4	18.90	19.27	19.17	20.40
	Subtest 5	20.88	21.36	21.05	22.40

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Ant3 WCDMA Band II Receiver off/Hotspot off					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	19.24	19.61	19.34	20.00
	12.2kbps AMR	19.15	19.57	19.22	20.00
HSDPA	Subtest 1	18.31	18.56	18.26	19.00
	Subtest 2	18.11	18.61	18.32	19.00
	Subtest 3	17.67	18.21	17.87	18.50
	Subtest 4	17.73	18.09	17.80	18.50
DC-HSDPA	Subtest 1	18.29	18.53	18.29	19.00
	Subtest 2	18.05	18.49	18.17	19.00
	Subtest 3	17.84	18.13	17.81	18.50
	Subtest 4	17.75	17.97	17.73	18.50
HSUPA	Subtest 1	18.11	18.47	18.32	19.00
	Subtest 2	16.30	16.69	16.37	17.00
	Subtest 3	17.31	17.55	17.35	18.00
	Subtest 4	16.23	16.51	16.31	17.00
	Subtest 5	18.09	18.48	18.25	19.00
Ant3 WCDMA Band II Receiver on/Hotspot on					
Average Conducted Power(dBm)					
Channel		9262	9400	9538	Tune up
WCDMA	12.2kbps RMC	15.99	16.33	16.05	17.20
	12.2kbps AMR	15.56	15.87	15.22	17.20
HSDPA	Subtest 1	15.51	15.76	15.46	16.20
	Subtest 2	15.31	15.81	15.52	16.20
	Subtest 3	14.87	15.41	15.07	15.70
	Subtest 4	14.93	15.29	15.00	15.70
DC-HSDPA	Subtest 1	15.49	15.73	15.49	16.20
	Subtest 2	15.25	15.69	15.37	16.20
	Subtest 3	15.04	15.33	15.01	15.70
	Subtest 4	14.95	15.17	14.93	15.70
HSUPA	Subtest 1	15.31	15.67	15.52	16.20
	Subtest 2	13.50	13.89	13.57	14.20
	Subtest 3	14.51	14.75	14.55	15.20
	Subtest 4	13.43	13.71	13.51	14.20
	Subtest 5	15.29	15.68	15.45	16.20

Ant0 WCDMA Band V					
Average Conducted Power(dBm)					
Channel		4132	4182	4233	Tune up
WCDMA	12.2kbps RMC	23.95	23.98	23.91	25.00
	12.2kbps AMR	23.89	23.91	23.84	25.00
DC-HSDPA	Subtest 1	22.96	23.01	22.98	24.00
	Subtest 2	22.95	22.89	22.93	24.00
	Subtest 3	22.49	22.41	22.47	23.50
	Subtest 4	22.33	22.37	22.34	23.50
HSDPA	Subtest 1	23.05	22.90	22.99	24.00
	Subtest 2	22.79	22.98	22.86	24.00
	Subtest 3	22.55	22.44	22.49	23.50
	Subtest 4	22.32	22.48	22.30	23.50
HSUPA	Subtest 1	22.97	22.96	22.92	24.00
	Subtest 2	20.86	20.95	20.87	22.00
	Subtest 3	21.86	22.07	21.93	23.00
	Subtest 4	20.96	21.07	20.95	22.00
	Subtest 5	22.95	23.01	22.87	24.00

Ant3 WCDMA Band V					
Average Conducted Power(dBm)					
Channel		4132	4182	4233	Tune up
WCDMA	12.2kbps RMC	23.88	23.95	23.85	25.00
	12.2kbps AMR	23.79	23.88	23.84	25.00
HSDPA	Subtest 1	22.97	23.00	22.80	24.00
	Subtest 2	22.75	22.89	22.85	24.00
	Subtest 3	22.31	22.43	22.27	23.50
	Subtest 4	22.39	22.34	22.26	23.50
DC-HSDPA	Subtest 1	22.93	23.03	22.81	24.00
	Subtest 2	22.80	22.90	22.89	24.00
	Subtest 3	22.44	22.39	22.34	23.50
	Subtest 4	22.35	22.41	22.30	23.50
HSUPA	Subtest 1	22.78	22.93	22.80	24.00
	Subtest 2	20.94	20.89	20.94	22.00
	Subtest 3	21.94	21.93	21.91	23.00
	Subtest 4	20.78	20.95	20.75	22.00
	Subtest 5	22.80	22.91	22.77	24.00

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.

8.1.3 Conducted Power of LTE

Ant0 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	23.64	23.74	23.93	25.00
		1	2	23.85	24.23	24.21	25.00
		1	5	23.66	24.02	23.35	25.00
		3	0	22.85	22.79	23.02	24.00
		3	2	22.86	22.81	22.58	24.00
		3	3	22.75	22.61	22.62	24.00
		6	0	22.72	22.82	22.83	24.00
	16QAM	1	0	22.35	22.26	22.03	24.00
		1	2	23.05	22.75	22.58	24.00
		1	5	22.88	22.65	22.28	24.00
		3	0	22.07	21.89	21.92	23.00
		3	2	21.86	22.08	22.04	23.00
		3	3	21.69	21.66	21.86	23.00
		6	0	22.05	21.88	21.80	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 20415	Channel 20525	Channel 20635	Tune up
3MHz	QPSK	1	0	23.70	23.91	23.85	25.00
		1	7	24.09	24.04	24.16	25.00
		1	14	23.46	23.71	23.40	25.00
		8	0	22.54	22.98	22.86	24.00
		8	4	22.67	22.69	22.55	24.00
		8	7	22.75	22.70	22.50	24.00
		15	0	22.99	22.76	22.92	24.00
	16QAM	1	0	22.32	22.44	22.19	24.00
		1	7	23.01	22.86	22.48	24.00
		1	14	22.63	22.75	22.28	24.00
		8	0	21.93	22.08	21.94	23.00
		8	4	21.92	22.19	22.17	23.00
		8	7	21.88	21.68	21.81	23.00
		15	0	22.00	21.89	22.06	23.00

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20425	20525	20625	
5MHz	QPSK	1	0	23.61	23.75	23.32	25.00
		1	13	23.99	23.95	23.89	25.00
		1	24	23.29	23.56	23.63	25.00
		12	0	22.87	22.72	22.59	24.00
		12	6	22.81	22.77	22.68	24.00
		12	13	22.66	22.69	22.60	24.00
		25	0	22.67	22.73	22.61	24.00
	16QAM	1	0	22.25	22.64	22.01	24.00
		1	13	22.29	23.03	22.62	24.00
		1	24	22.19	22.66	22.54	24.00
		12	0	21.75	22.22	21.52	23.00
		12	6	21.65	21.91	21.73	23.00
		12	13	21.78	21.85	21.66	23.00
		25	0	21.87	21.77	21.63	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20450	20525	20600	
10MHz	QPSK	1	0	24.21	24.29	24.19	25.00
		1	25	24.00	24.18	24.11	25.00
		1	49	23.83	24.05	24.06	25.00
		25	0	22.87	22.99	22.85	24.00
		25	13	22.73	22.89	22.58	24.00
		25	25	22.83	22.82	22.71	24.00
		50	0	22.75	22.97	22.82	24.00
	16QAM	1	0	22.71	22.98	22.47	24.00
		1	25	23.21	22.70	22.71	24.00
		1	49	22.70	23.23	22.51	24.00
		25	0	22.05	22.09	21.82	23.00
		25	13	21.73	22.23	21.94	23.00
		25	25	21.91	21.91	21.63	23.00
		50	0	21.76	21.95	21.95	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	23.78	23.90	24.13	25.00
		1	2	24.03	24.35	24.41	25.00
		1	5	23.85	24.12	23.51	25.00
		3	0	22.99	22.90	23.14	24.00
		3	2	22.98	22.97	22.73	24.00
		3	3	22.89	22.81	22.77	24.00
		6	0	22.87	22.95	22.99	24.00
	16QAM	1	0	22.50	22.58	22.69	24.00
		1	2	23.19	22.93	22.77	24.00
		1	5	22.98	22.82	22.78	24.00
		3	0	22.17	22.04	22.02	23.00
		3	2	21.98	22.22	22.20	23.00
		3	3	21.81	21.80	21.97	23.00
		6	0	22.16	22.05	21.91	23.00
Bandwidth	Modulation	RB size	RB offset	Channel 20415	Channel 20525	Channel 20635	Tune up
3MHz	QPSK	1	0	23.88	24.05	24.05	25.00
		1	7	24.19	24.17	24.31	25.00
		1	14	23.58	23.89	23.50	25.00
		8	0	22.70	23.14	23.04	24.00
		8	4	22.79	22.86	22.65	24.00
		8	7	22.88	22.88	22.69	24.00
		15	0	23.09	22.96	23.03	24.00
	16QAM	1	0	22.54	22.59	22.88	24.00
		1	7	23.12	22.97	22.66	24.00
		1	14	22.77	22.85	22.65	24.00
		8	0	22.03	22.21	22.14	23.00
		8	4	22.07	22.32	22.32	23.00
		8	7	21.98	21.86	21.91	23.00
		15	0	22.18	22.08	22.20	23.00

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20425	20525	20625	
5MHz	QPSK	1	0	23.89	23.88	23.99	25.00
		1	13	24.13	24.19	24.34	25.00
		1	24	23.74	23.98	23.49	25.00
		12	0	22.81	22.94	23.05	24.00
		12	6	22.70	22.90	22.71	24.00
		12	13	22.96	22.95	22.66	24.00
		25	0	22.89	22.87	22.88	24.00
	16QAM	1	0	22.66	22.59	22.89	24.00
		1	13	23.16	22.97	22.61	24.00
		1	24	22.89	22.86	22.50	24.00
		12	0	22.23	21.99	22.11	23.00
		12	6	22.02	22.33	22.10	23.00
		12	13	21.81	21.79	22.10	23.00
		25	0	22.16	21.96	21.98	23.00
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20450	20525	20600	
10MHz	QPSK	1	0	23.95	24.23	24.12	25.00
		1	25	23.70	23.90	23.98	25.00
		1	49	23.84	23.97	23.68	25.00
		25	0	22.93	23.00	22.79	24.00
		25	13	22.87	22.87	22.91	24.00
		25	25	22.95	22.99	22.82	24.00
		50	0	23.00	22.97	22.81	24.00
	16QAM	1	0	22.56	22.59	22.68	24.00
		1	25	23.24	22.75	22.73	24.00
		1	49	23.01	22.80	22.77	24.00
		25	0	22.17	22.11	22.09	23.00
		25	13	22.10	22.29	22.24	23.00
		25	25	21.93	21.85	21.96	23.00
		50	0	22.11	22.16	22.08	23.00

Ant1 LTE Band 7 Receiver off				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 20775	Channel 21100	Channel 21425	Tune up
5MHz	QPSK	1	0	21.42	21.65	21.53	22.40
		1	13	21.39	21.81	21.71	22.40
		1	24	21.32	21.87	21.62	22.40
		12	0	21.66	21.73	21.72	22.40
		12	6	21.71	21.83	21.69	22.40
		12	13	21.64	21.77	21.71	22.40
		25	0	21.57	21.76	21.66	22.40
	16QAM	1	0	22.01	21.59	21.95	22.40
		1	13	22.36	21.65	21.88	22.40
		1	24	22.02	21.14	21.47	22.40
		12	0	21.42	21.76	21.75	22.40
		12	6	21.34	21.69	21.67	22.40
		12	13	21.33	21.74	21.77	22.40
		25	0	21.49	21.69	21.86	22.40
Bandwidth	Modulation	RB size	RB offset	Channel 20800	Channel 21100	Channel 21400	Tune up
10MHz	QPSK	1	0	22.11	22.19	22.02	22.40
		1	25	21.96	21.91	21.86	22.40
		1	49	21.89	21.96	21.89	22.40
		25	0	21.64	21.77	21.62	22.40
		25	13	21.86	21.93	21.77	22.40
		25	25	21.77	21.81	21.71	22.40
		50	0	21.72	21.83	21.79	22.40
	16QAM	1	0	22.03	22.34	21.97	22.40
		1	25	21.92	22.11	21.93	22.40
		1	49	21.97	22.09	22.01	22.40
		25	0	21.65	21.77	21.55	22.40
		25	13	21.71	21.95	21.73	22.40
		25	25	21.67	21.67	21.39	22.40
		50	0	21.73	21.86	21.9	22.40

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	21.89	21.94	21.71	22.40
		1	38	21.63	21.77	21.58	22.40
		1	74	21.55	21.63	21.47	22.40
		36	0	21.42	21.67	21.61	22.40
		36	18	21.69	21.78	21.70	22.40
		36	39	21.63	21.72	21.71	22.40
		75	0	21.51	21.77	21.83	22.40
	16QAM	1	0	22.22	22.38	22.02	22.40
		1	38	22.17	22.31	21.92	22.40
		1	74	22.29	22.29	21.96	22.40
		36	0	21.62	21.66	21.49	22.40
		36	18	21.52	21.80	21.53	22.40
		36	39	21.65	21.63	21.53	22.40
		75	0	21.79	21.87	21.69	22.40
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	22.12	22.38	22.25	22.40
		1	50	22.06	22.22	21.58	22.40
		1	99	22.01	21.92	21.85	22.40
		50	0	22.09	22.16	21.99	22.40
		50	25	21.64	22.11	21.73	22.40
		50	50	21.62	22.15	21.82	22.40
		100	0	21.51	22.07	21.78	22.40
	16QAM	1	0	21.90	22.01	22.08	22.40
		1	50	22.02	21.74	21.98	22.40
		1	99	21.82	21.66	22.10	22.40
		50	0	21.59	21.82	21.62	22.40
		50	25	21.71	21.88	21.72	22.40
		50	50	21.64	21.91	21.62	22.40
		100	0	21.56	21.92	21.89	22.40

Ant1 LTE Band 7 Receiver on				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 20775	Channel 21100	Channel 21425	Tune up
5MHz	QPSK	1	0	23.69	24.12	23.85	24.50
		1	13	23.79	24.04	24.08	24.50
		1	24	23.81	23.72	23.98	24.50
		12	0	22.64	23.07	23.01	23.50
		12	6	22.70	23.14	23.15	23.50
		12	13	22.79	23.02	23.24	23.50
		25	0	22.87	23.03	22.75	23.50
	16QAM	1	0	22.08	23.50	22.72	23.50
		1	13	22.53	23.41	23.17	23.50
		1	24	22.13	23.21	23.09	23.50
		12	0	21.65	21.87	21.90	22.50
		12	6	21.57	21.95	21.91	22.50
		12	13	21.52	21.89	21.95	22.50
		25	0	21.49	21.75	21.72	22.50
Bandwidth	Modulation	RB size	RB offset	Channel 20800	Channel 21100	Channel 21400	Tune up
10MHz	QPSK	1	0	23.93	23.98	23.92	24.50
		1	25	24.02	24.30	24.11	24.50
		1	49	23.92	23.81	23.91	24.50
		25	0	22.76	23.10	22.84	23.50
		25	13	22.81	23.17	23.15	23.50
		25	25	22.89	23.04	23.22	23.50
		50	0	23.04	23.14	22.96	23.50
	16QAM	1	0	23.13	23.26	23.17	23.50
		1	25	23.36	23.38	23.08	23.50
		1	49	23.22	22.07	23.18	23.50
		25	0	21.90	22.25	22.09	22.50
		25	13	21.65	22.11	22.40	22.50
		25	25	21.61	21.88	21.95	22.50
		50	0	21.53	21.89	21.72	22.50

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	23.87	23.89	23.77	24.50
		1	38	23.81	24.07	23.92	24.50
		1	74	23.89	24.03	24.20	24.50
		36	0	22.70	23.13	23.03	23.50
		36	18	22.68	23.03	22.95	23.50
		36	39	22.95	23.12	23.21	23.50
		75	0	22.95	23.17	22.99	23.50
	16QAM	1	0	23.21	23.21	23.08	23.50
		1	38	23.17	23.14	23.01	23.50
		1	74	23.22	22.47	22.98	23.50
		36	0	21.80	22.14	22.07	22.50
		36	18	21.59	21.95	22.01	22.50
		36	39	21.70	21.95	22.08	22.50
		75	0	21.87	22.03	22.14	22.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	23.95	24.35	24.24	24.50
		1	50	23.92	24.26	23.89	24.50
		1	99	23.81	24.19	24.28	24.50
		50	0	22.87	23.22	23.11	23.50
		50	25	22.81	23.12	23.02	23.50
		50	50	22.99	23.15	23.12	23.50
		100	0	23.14	23.23	23.06	23.50
	16QAM	1	0	23.17	23.29	22.82	23.50
		1	50	23.29	23.39	23.02	23.50
		1	99	22.91	22.76	23.32	23.50
		50	0	21.95	22.17	22.01	22.50
		50	25	21.87	22.03	22.08	22.50
		50	50	21.98	21.99	22.10	22.50
		100	0	21.79	21.93	22.05	22.50

Ant3 LTE Band 7 Receiver off/Hotspot Off				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 20775	Channel 21100	Channel 21425	Tune up
5MHz	QPSK	1	0	19.75	20.02	19.72	20.50
		1	13	19.86	20.11	19.32	20.50
		1	24	19.42	19.73	19.83	20.50
		12	0	19.18	19.46	19.12	20.50
		12	6	19.18	19.49	19.00	20.50
		12	13	19.14	19.40	19.05	20.50
		25	0	19.15	19.49	18.50	20.50
	16QAM	1	0	18.59	18.87	18.70	20.50
		1	13	18.86	19.13	18.76	20.50
		1	24	18.90	19.23	19.08	20.50
		12	0	19.12	19.47	18.99	20.50
		12	6	19.10	19.44	19.04	20.50
		12	13	19.12	19.45	18.98	20.50
		25	0	19.10	19.39	19.47	20.50
Bandwidth	Modulation	RB size	RB offset	Channel 20800	Channel 21100	Channel 21400	Tune up
10MHz	QPSK	1	0	19.77	19.95	19.36	20.50
		1	25	19.93	20.13	19.57	20.50
		1	49	19.93	20.06	19.46	20.50
		25	0	19.64	19.82	19.27	20.50
		25	13	19.77	19.9	19.36	20.50
		25	25	19.78	19.91	19.33	20.50
		50	0	19.75	19.98	19.44	20.50
	16QAM	1	0	19.37	19.53	19.49	20.50
		1	25	19.73	19.91	19.28	20.50
		1	49	19.61	19.80	19.19	20.50
		25	0	19.81	19.97	19.35	20.50
		25	13	19.70	19.86	19.24	20.50
		25	25	19.64	19.79	19.18	20.50
		50	0	19.65	19.85	19.26	20.50

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	19.71	20.01	19.66	20.50
		1	38	19.60	19.86	19.48	20.50
		1	74	19.73	20.04	19.64	20.50
		36	0	19.57	19.84	19.47	20.50
		36	18	19.60	19.87	19.56	20.50
		36	39	19.51	19.85	19.46	20.50
		75	0	19.67	19.92	19.57	20.50
	16QAM	1	0	19.42	19.76	19.45	20.50
		1	38	19.31	19.61	19.22	20.50
		1	74	19.27	19.53	19.17	20.50
		36	0	19.31	19.57	19.23	20.50
		36	18	19.35	19.61	19.22	20.50
		36	39	19.35	19.65	19.31	20.50
		75	0	19.49	19.81	19.45	20.50
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	20.20	20.23	19.99	20.50
		1	50	19.93	19.92	19.70	20.50
		1	99	19.82	19.83	19.61	20.50
		50	0	19.76	19.81	19.54	20.50
		50	25	19.74	19.69	19.52	20.50
		50	50	19.72	19.66	19.42	20.50
		100	0	19.74	19.75	19.55	20.50
	16QAM	1	0	19.26	19.27	19.06	20.50
		1	50	19.84	19.84	19.64	20.50
		1	99	19.78	19.74	19.54	20.50
		50	0	19.83	19.81	19.61	20.50
		50	25	19.83	19.80	19.63	20.50
		50	50	19.59	19.57	19.39	20.50
		100	0	19.59	19.56	19.36	20.50

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Ant3 LTE Band 7 Receiver on/Hotspot On				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel 20775	Channel 21100	Channel 21425	Tune up
5MHz	QPSK	1	0	18.13	18.19	18.21	19.10
		1	13	18.37	18.44	18.47	19.10
		1	24	18.10	18.19	18.20	19.10
		12	0	18.21	18.25	18.31	19.10
		12	6	18.21	18.28	18.33	19.10
		12	13	18.20	18.29	18.32	19.10
		25	0	18.11	18.15	18.16	19.10
	16QAM	1	0	18.00	18.01	18.10	19.10
		1	13	17.87	17.89	17.95	19.10
		1	24	18.13	18.21	18.24	19.10
		12	0	18.11	18.13	18.16	19.10
		12	6	18.18	18.26	18.34	19.10
		12	13	18.24	18.25	18.29	19.10
		25	0	18.24	18.25	18.30	19.10
Bandwidth	Modulation	RB size	RB offset	Channel 20800	Channel 21100	Channel 21400	Tune up
10MHz	QPSK	1	0	18.12	18.44	18.38	19.10
		1	25	18.01	18.37	18.33	19.10
		1	49	18.02	18.29	18.24	19.10
		25	0	17.95	18.25	18.15	19.10
		25	13	17.94	18.23	18.16	19.10
		25	25	17.88	18.25	18.16	19.10
		50	0	17.96	18.31	18.27	19.10
	16QAM	1	0	18.09	18.43	18.38	19.10
		1	25	17.95	18.30	18.28	19.10
		1	49	17.77	18.13	18.04	19.10
		25	0	17.94	18.25	18.19	19.10
		25	13	17.92	18.27	18.18	19.10
		25	25	17.87	18.16	18.13	19.10
		50	0	17.98	18.28	18.26	19.10

Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20825	21100	21375	
15MHz	QPSK	1	0	18.21	18.42	18.22	19.10
		1	38	18.38	18.54	18.36	19.10
		1	74	18.10	18.36	18.20	19.10
		36	0	18.08	18.24	18.01	19.10
		36	18	18.01	18.27	18.06	19.10
		36	39	18.07	18.26	18.08	19.10
		75	0	18.07	18.31	18.07	19.10
	16QAM	1	0	17.68	17.94	17.73	19.10
		1	38	17.81	17.99	17.79	19.10
		1	74	18.07	18.32	18.12	19.10
		36	0	17.98	18.16	17.94	19.10
		36	18	18.00	18.21	18.02	19.10
		36	39	17.94	18.19	18.03	19.10
		75	0	17.86	18.07	17.92	19.10
Bandwidth	Modulation	RB size	RB offset	Channel	Channel	Channel	Tune up
				20850	21100	21350	
20MHz	QPSK	1	0	18.67	18.73	18.65	19.10
		1	50	18.17	18.39	18.35	19.10
		1	99	18.23	18.44	18.43	19.10
		50	0	18.09	18.35	18.27	19.10
		50	25	18.04	18.26	18.20	19.10
		50	50	18.10	18.27	18.25	19.10
		100	0	18.05	18.30	18.26	19.10
	16QAM	1	0	18.06	18.23	18.14	19.10
		1	50	18.17	18.36	18.28	19.10
		1	99	18.11	18.28	18.23	19.10
		50	0	17.84	18.07	17.99	19.10
		50	25	17.96	18.16	18.08	19.10
		50	50	17.95	18.12	18.10	19.10
		100	0	17.92	18.15	18.13	19.10

8.1.4 Conducted Power of WIFI and BT

WIFI 2.4GHz Receiver Off					
Mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11b	1	2412	1	18.50	19.50
	6	2437		18.35	19.50
	11	2462		18.23	19.50
802.11g	1	2412	6	17.47	19.00
	6	2437		18.48	20.00
	11	2462		15.42	17.00
802.11n HT20	1	2412	6.5	15.34	17.00
	6	2437		18.48	20.00
	11	2462		12.28	14.00
802.11n HT40	3	2422	13.5	12.03	14.00
	6	2437		14.43	16.00
	9	2452		11.20	13.00
WIFI 2.4GHz Receiver On					
Mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11b	1	2412	1	15.12	16.00
	6	2437		14.94	16.00
	11	2462		14.88	16.00
802.11g	1	2412	6	14.51	16.00
	6	2437		14.50	16.00
	11	2462		14.44	16.00
802.11n HT20	1	2412	6.5	14.34	16.00
	6	2437		14.62	16.00
	11	2462		12.28	14.00
802.11n HT40	3	2422	13.5	12.03	14.00
	6	2437		14.43	16.00
	9	2452		11.20	13.00

WIFI 5GHz Receiver Off						
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11a	U-NII-1	36	5180	6	15.56	16.00
		40	5200		18.52	19.00
		44	5220		18.54	19.00
		48	5240		18.61	19.00
	U-NII-2A	52	5260		18.55	19.00
		56	5280		18.52	19.00
		60	5300		18.48	19.00
		64	5320		13.58	14.00
	U-NII-2C	100	5500		13.62	14.00
		116	5580		18.59	19.00
		124	5620		18.55	19.00
		132	5660		18.52	19.00
		140	5700		16.48	17.00
		144	5720		18.49	19.00
	U-NII-3	149	5745		18.78	19.00
		157	5785		18.92	19.00
		165	5825		18.69	19.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11n-HT20	U-NII-1	36	5180	MCS0	15.51	17.00
		40	5200		17.53	19.00
		44	5220		17.69	19.00
		48	5240		17.72	19.00
	U-NII-2A	52	5260		17.48	19.00
		56	5280		17.52	19.00
		60	5300		17.49	19.00
		64	5320		12.49	14.00
	U-NII-2C	100	5500		12.71	14.00
		116	5580		17.48	19.00
		124	5620		17.48	19.00
		132	5660		17.48	19.00
		140	5700		13.61	15.00
		144	5720		17.52	19.00
	U-NII-3	149	5745		17.48	19.00
		157	5785		17.59	19.00
		165	5825		17.52	19.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11n-HT40	U-NII-1	38	5190	MCS0	10.48	12.00
		46	5230		16.71	18.00
	U-NII-2A	54	5270		16.70	18.00
		62	5310		9.70	11.00
	U-NII-2C	102	5510		11.25	12.50
		110	5550		16.63	18.00
		126	5630		16.58	18.00

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		134	5670		16.60	18.00
		142	5710		16.66	18.00
	U-NII-3	151	5755		16.59	18.00
		159	5795		16.61	18.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac-20	U-NII-1	36	5180	MCS0	15.53	17.00
		40	5200		17.54	19.00
		44	5220		17.71	19.00
		48	5240		17.75	19.00
	U-NII-2A	52	5260		17.50	19.00
		56	5280		17.54	19.00
		60	5300		17.52	19.00
		64	5320		12.53	14.00
	U-NII-2C	100	5500		12.74	14.00
		116	5580		17.51	19.00
		124	5620		17.48	19.00
		132	5660		17.32	19.00
		140	5700		13.64	15.00
		144	5720		17.55	19.00
	U-NII-3	149	5745		17.51	19.00
		157	5785		17.59	19.00
		165	5825		17.55	19.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac-40	U-NII-1	38	5190	MCS0	10.52	12.00
		46	5230		16.73	18.00
	U-NII-2A	54	5270		16.68	18.00
		62	5310		9.72	11.00
	U-NII-2C	102	5510		11.27	12.50
		110	5550		16.67	18.00
		126	5630		16.38	18.00
		134	5670		16.59	18.00
		142	5710		16.63	18.00
	U-NII-3	151	5755		16.61	18.00
		159	5795		16.67	18.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac 80M	U-NII-1	42	5210	MCS0	9.39	11.00
	U-NII-2A	58	5290		8.71	10.00
	U-NII-2C	106	5530		8.73	10.00
		122	5610		15.95	17.50
		138	5690		16.01	17.50
	U-NII-3	155	5775		16.21	17.50

WIFI 5GHz Receiver On						
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11a	U-NII-1	36	5180	6	13.59	15.00
		40	5200		14.09	15.00
		44	5220		14.01	15.00
		48	5240		14.16	15.00
	U-NII-2A	52	5260		14.11	15.00
		56	5280		14.02	15.00
		60	5300		14.02	15.00
		64	5320		13.61	14.00
	U-NII-2C	100	5500		13.64	14.00
		116	5580		14.09	15.00
		124	5620		14.02	15.00
		132	5660		14.01	15.00
		140	5700		13.98	15.00
		144	5720		13.99	15.00
	U-NII-3	149	5745		14.08	15.00
		157	5785		14.12	15.00
		165	5825		14.09	15.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11n-HT20	U-NII-1	36	5180	MCS0	13.49	15.00
		40	5200		13.46	15.00
		44	5220		13.66	15.00
		48	5240		13.70	15.00
	U-NII-2A	52	5260		13.52	15.00
		56	5280		13.52	15.00
		60	5300		13.47	15.00
		64	5320		12.47	14.00
	U-NII-2C	100	5500		12.73	14.00
		116	5580		13.48	15.00
		124	5620		13.44	15.00
		132	5660		13.56	15.00
		140	5700		13.62	15.00
		144	5720		13.54	15.00
	U-NII-3	149	5745		13.48	15.00
		157	5785		13.56	15.00
		165	5825		13.50	15.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11n-HT40	U-NII-1	38	5190	MCS0	10.52	12.00
		46	5230		13.67	15.00
	U-NII-2A	54	5270		13.68	15.00
		62	5310		9.72	11.00
	U-NII-2C	102	5510		11.27	12.50
		110	5550		13.71	15.00
		126	5630		13.55	15.00
		134	5670		13.65	15.00

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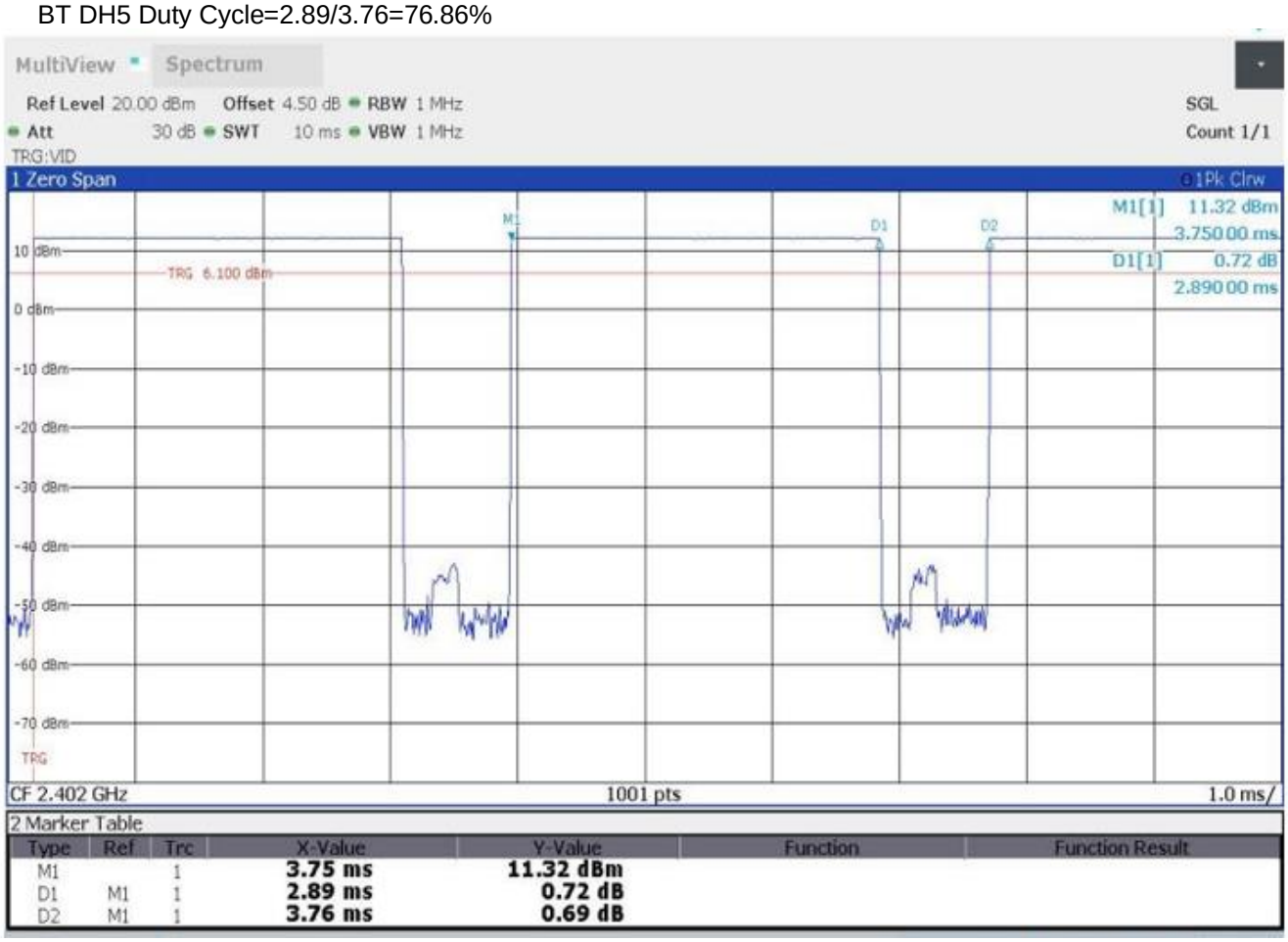
		142	5710		13.68	15.00
	U-NII-3	151	5755		13.65	15.00
		159	5795		13.64	15.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac-20	U-NII-1	36	5180	MCS0	13.52	15.00
		40	5200		13.56	15.00
		44	5220		13.69	15.00
		48	5240		13.77	15.00
	U-NII-2A	52	5260		13.51	15.00
		56	5280		13.52	15.00
		60	5300		13.56	15.00
		64	5320		12.57	14.00
	U-NII-2C	100	5500		12.79	14.00
		116	5580		13.52	15.00
		124	5620		13.51	15.00
		132	5660		13.34	15.00
		140	5700		13.62	15.00
		144	5720		13.49	15.00
	U-NII-3	149	5745		13.57	15.00
		157	5785		13.61	15.00
		165	5825		13.57	15.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac-40	U-NII-1	38	5190	MCS0	10.54	12.00
		46	5230		13.77	15.00
	U-NII-2A	54	5270		13.67	15.00
		62	5310		9.69	11.00
	U-NII-2C	102	5510		11.31	12.50
		110	5550		13.64	15.00
		126	5630		13.41	15.00
		134	5670		13.56	15.00
		142	5710		13.66	15.00
	U-NII-3	151	5755		16.57	15.00
		159	5795		13.69	15.00
5GHz	mode	Channel	Frequency(MHz)	Data Rate(Mbps)	Average Power (dBm)	Tune up
802.11ac 80M	U-NII-1	42	5210	MCS0	9.41	11.00
	U-NII-2A	58	5290		8.74	10.00
	U-NII-2C	106	5530		8.75	10.00
		122	5610		13.47	15.00
		138	5690		13.54	15.00
	U-NII-3	155	5775		13.69	15.00

BT		Average Conducted Power(dBm)			Tune up
Band	Channel	0	39	78	
BT	GFSK	13.01	13.45	13.28	15.00
	π/4DQPSK	9.37	10.10	10.00	12.50
	8DPSK	9.35	10.02	9.98	12.50
Band	Channel	0	19	39	Tune up
BLE	GFSK	6.21	7.37	8.34	11.50

Note:
1）. The conducted power of BT is measured with RMS detector.
BT DH5 Duty Cycle=2.89/3.76=76.86%



8.2 Measurement of SAR Data

Note:

1) The maximum Scaled SAR value is marked in bold. Graph results refer to Appendix B.

2) Per KDB447498, 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.
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

WiFi 2.4G:

1) When the highest reported SAR for the initial test configuration 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 test for the other 802.11 modes are not required.

WiFi 5G:

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. As 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.
2) For Wi-Fi 5G, U-NII-2A (5250-5350 MHz) and U-NII-2C (5470-5725 MHz) bands does not support hotspot function.
3) When the highest reported SAR for the initial test configuration 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 test for the other 802.11 modes are not required.

8.2.1 SAR Result of GSM850

Ant 0 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data										
Left cheek	GSM	190/836.6	1:8.3	0.155	0.07	32.58	33.80	1.324	0.205	21.9
Left tilted	GSM	190/836.6	1:8.3	0.085	0.05	32.58	33.80	1.324	0.112	21.9
Right cheek	GSM	190/836.6	1:8.3	0.192	0.01	32.58	33.80	1.324	**0.254**	21.9
Right tilted	GSM	190/836.6	1:8.3	0.088	0.02	32.58	33.80	1.324	0.116	21.9
Body worn Test data(Separate 15mm)										
Front side	GSM	190/836.6	1:8.3	0.226	0.10	32.58	33.80	1.324	0.299	21.9
Back side	GSM	190/836.6	1:8.3	0.266	0.14	32.58	33.80	1.324	**0.352**	21.9
Back side with Battery 2#	GSM	190/836.6	1:8.3	0.257	0.04	32.58	33.80	1.324	0.340	21.9
Back side with Battery 3#	GSM	190/836.6	1:8.3	0.251	0.01	32.58	33.80	1.324	0.332	21.9
Back side with Battery 4#	GSM	190/836.6	1:8.3	0.254	0.09	32.58	33.80	1.324	0.336	21.9
Back side with Battery 5#	GSM	190/836.6	1:8.3	0.263	0.05	32.58	33.80	1.324	0.348	21.9
Back side with Battery 6#	GSM	190/836.6	1:8.3	0.260	0.19	32.58	33.80	1.324	0.344	21.9
Hotspot Test data(Separate 10mm)										
Front side	GPRS 4TS	190/836.6	1:2.075	0.275	0.18	25.74	27.80	1.607	0.442	21.9
Back side	GPRS 4TS	190/836.6	1:2.075	0.360	0.06	25.74	27.80	1.607	**0.578**	21.9
Left side	GPRS 4TS	190/836.6	1:2.075	0.137	0.01	25.74	27.80	1.607	0.220	21.9
Bottom side	GPRS 4TS	190/836.6	1:2.075	0.005	-0.01	25.74	27.80	1.607	0.008	21.9
Back side with Battery 2#	GPRS 4TS	190/836.6	1:2.075	0.358	0.16	25.74	27.80	1.607	0.575	21.9
Back side with Battery 3#	GPRS 4TS	190/836.6	1:2.075	0.338	0.19	25.74	27.80	1.607	0.543	21.9
Back side with Battery 4#	GPRS 4TS	190/836.6	1:2.075	0.342	0.08	25.74	27.80	1.607	0.550	21.9
Back side with Battery 5#	GPRS 4TS	190/836.6	1:2.075	0.354	0.11	25.74	27.80	1.607	0.569	21.9
Back side with Battery 6#	GPRS 4TS	190/836.6	1:2.075	0.346	0.15	25.74	27.80	1.607	0.556	21.9
Ant 3 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data										
Left cheek	GSM	190/836.6	1:8.3	0.431	0.03	32.80	33.80	1.259	0.543	21.9
Left tilted	GSM	190/836.6	1:8.3	0.185	0.12	32.80	33.80	1.259	0.233	21.9
Right cheek	GSM	190/836.6	1:8.3	0.529	0.18	32.80	33.80	1.259	**0.666**	21.9
Right tilted	GSM	190/836.6	1:8.3	0.347	0.06	32.80	33.80	1.259	0.437	21.9
Right cheek with Battery 2#	GSM	190/836.6	1:8.3	0.493	0.12	32.80	33.80	1.259	0.621	21.9
Right cheek with Battery 3#	GSM	190/836.6	1:8.3	0.499	0.09	32.80	33.80	1.259	0.628	21.9
Right cheek with Battery 4#	GSM	190/836.6	1:8.3	0.511	0.18	32.80	33.80	1.259	0.643	21.9
Right cheek with Battery 5#	GSM	190/836.6	1:8.3	0.487	0.17	32.80	33.80	1.259	0.613	21.9
Right cheek with Battery 6#	GSM	190/836.6	1:8.3	0.523	0.03	32.80	33.80	1.259	0.658	21.9
Body worn Test data(Separate 15mm)										
Front side	GSM	190/836.6	1:8.3	0.103	0.15	32.80	33.80	1.259	0.130	21.9
Back side	GSM	190/836.6	1:8.3	0.182	-0.01	32.80	33.80	1.259	**0.229**	21.9
Hotspot Test data(Separate 10mm)										
Front side	GPRS 4TS	190/836.6	1:2.075	0.131	0.07	26.33	27.80	1.403	0.184	21.9
Back side	GPRS 4TS	190/836.6	1:2.075	0.232	0.03	26.33	27.80	1.403	**0.325**	21.9
Right Side	GPRS 4TS	190/836.6	1:2.075	0.183	0.01	26.33	27.80	1.403	0.257	21.9
Top side	GPRS 4TS	190/836.6	1:2.075	0.071	0.02	26.33	27.80	1.403	0.100	21.9

Table 11： SAR of GSM850 for Head and Body(original report SUHR/2022/1001007).

Ant 0 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Right cheek	GSM	190/836.6	1:8.3	0.188	0.02	32.58	33.80	1.324	**0.249**	22.1
Body worn Test data(Separate 15mm)										
Back side	GSM	190/836.6	1:8.3	0.224	0.09	32.58	33.80	1.324	**0.297**	22.1
Hotspot Test data(Separate 10mm)										
Back side	GPRS 4TS	190/836.6	1:2.075	0.335	-0.04	25.74	27.80	1.607	**0.538**	22.1
Ant 3 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Right cheek	GSM	190/836.6	1:8.3	0.399	0.07	32.80	33.80	1.259	**0.502**	22.1
Body worn Test data(Separate 15mm)										
Back side	GSM	190/836.6	1:8.3	0.205	-0.01	32.80	33.80	1.259	**0.258**	22.1
Hotspot Test data(Separate 10mm)										
Back side	GPRS 4TS	190/836.6	1:2.075	0.272	0.04	26.33	27.80	1.403	**0.382**	22.1

Table 12： SAR of GSM850 for Head and Body(CMA-LX1).

8.2.2 SAR Result of GSM1900

Ant 1 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data										
Left cheek	GSM	661/1880	1:8.3	0.100	0.09	30.07	30.80	1.183	**0.118**	22.1
Left tilted	GSM	661/1880	1:8.3	0.036	0.03	30.07	30.80	1.183	0.042	22.1
Right cheek	GSM	661/1880	1:8.3	0.067	0.07	30.07	30.80	1.183	0.080	22.1
Right tilted	GSM	661/1880	1:8.3	0.030	0.01	30.07	30.80	1.183	0.036	22.1
Body worn Test data(Separate 15mm)										
Front side	GSM	661/1880	1:8.3	0.196	0.11	30.07	30.80	1.183	0.232	22.1
Back side	GSM	661/1880	1:8.3	0.467	0.05	30.07	30.80	1.183	**0.552**	22.1
Back side with Battery 2#	GSM	661/1880	1:8.3	0.460	-0.02	30.07	30.80	1.183	0.544	22.1
Back side with Battery 3#	GSM	661/1880	1:8.3	0.443	-0.09	30.07	30.80	1.183	0.524	22.1
Back side with Battery 4#	GSM	661/1880	1:8.3	0.436	0.19	30.07	30.80	1.183	0.516	22.1
Back side with Battery 5#	GSM	661/1880	1:8.3	0.453	0.05	30.07	30.80	1.183	0.536	22.1
Back side with Battery 6#	GSM	661/1880	1:8.3	0.460	0.18	30.07	30.80	1.183	0.544	22.1
Hotspot Test data(Separate 10mm)										
Front side	GPRS 4TS	661/1880	1:2.075	0.333	0.19	23.79	24.80	1.262	0.420	22.1
Back side	GPRS 4TS	661/1880	1:2.075	0.662	0.02	23.79	24.80	1.262	0.835	22.1
Back side	GPRS 4TS	512/1850.2	1:2.075	0.578	0.17	23.18	24.80	1.452	0.839	22.1
Back side	GPRS 4TS	810/1909.8	1:2.075	0.739	0.17	23.15	24.80	1.462	**1.081**	22.1
Right side	GPRS 4TS	661/1880	1:2.075	0.097	0.09	23.79	24.80	1.262	0.122	22.1
Bottom side	GPRS 4TS	661/1880	1:2.075	0.514	0.07	23.79	24.80	1.262	0.649	22.1
Back side with Battery 2#	GPRS 4TS	810/1909.8	1:2.075	0.713	0.12	23.15	24.80	1.462	1.043	22.1
Back side with Battery 3#	GPRS 4TS	810/1909.8	1:2.075	0.682	0.12	23.15	24.80	1.462	0.997	22.1
Back side with Battery 4#	GPRS 4TS	810/1909.8	1:2.075	0.687	-0.09	23.15	24.80	1.462	1.005	22.1
Back side with Battery 5#	GPRS 4TS	810/1909.8	1:2.075	0.697	0.08	23.15	24.80	1.462	1.019	22.1
Back side with Battery 6#	GPRS 4TS	810/1909.8	1:2.075	0.724	0.05	23.15	24.80	1.462	1.059	22.1
Ant 3 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data										
Left cheek	GSM	661/1880	1:8.3	0.710	0.06	26.58	26.80	1.052	0.747	22.1
Left tilted	GSM	661/1880	1:8.3	0.720	0.08	26.58	26.80	1.052	0.757	22.1
Right cheek	GSM	661/1880	1:8.3	0.757	0.01	26.58	26.80	1.052	0.796	22.1
Right tilted	GSM	661/1880	1:8.3	0.775	-0.07	26.58	26.80	1.052	0.815	22.1
Right tilted	GSM	512/1850.2	1:8.3	0.576	0.03	26.33	26.80	1.114	0.642	22.1
Right tilted	GSM	810/1909.8	1:8.3	0.844	-0.01	26.33	26.80	1.114	**0.940**	22.1
Right tilted repeat	GSM	810/1909.8	1:8.3	0.821	0.05	26.33	26.80	1.114	0.915	22.1
Right cheek with Battery 2#	GSM	810/1909.8	1:8.3	0.785	0.01	26.33	26.80	1.114	0.875	22.1
Right cheek with Battery 3#	GSM	810/1909.8	1:8.3	0.827	0.03	26.33	26.80	1.114	0.922	22.1
Right cheek with Battery 4#	GSM	810/1909.8	1:8.3	0.797	-0.04	26.33	26.80	1.114	0.888	22.1
Right cheek with Battery 5#	GSM	810/1909.8	1:8.3	0.767	0.19	26.33	26.80	1.114	0.855	22.1
Right cheek with Battery 6#	GSM	810/1909.8	1:8.3	0.832	0.11	26.33	26.80	1.114	0.927	22.1
Body worn Test data(Separate 15mm)										
Front side	GSM	661/1880	1:8.3	0.180	0.01	26.58	26.80	1.052	0.189	22.1
Back side	GSM	661/1880	1:8.3	0.340	0.02	26.58	26.80	1.052	**0.358**	22.1
Hotspot Test data(Separate 10mm)										
Front side	GPRS 4TS	661/1880	1:2.075	0.253	0.01	20.18	20.80	1.153	0.292	22.1
Back side	GPRS 4TS	661/1880	1:2.075	0.560	0.17	20.18	20.80	1.153	0.646	22.1
Left side	GPRS 4TS	661/1880	1:2.075	0.209	0.11	20.18	20.80	1.153	0.241	22.1
Top side	GPRS 4TS	661/1880	1:2.075	0.654	0.13	20.18	20.80	1.153	**0.754**	22.1

Test position	BW.	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(℃)
Product specific 10g SAR Test data(Separate 0mm)										
Top side	GSM	661/1880	1:8.3	1.570	0.06	26.58	26.80	1.052	**1.652**	22.1

Table 13： SAR of GSM1900 for Head and Body(original report SUHR/2022/1001007).

Ant 1 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Left cheek	GSM	661/1880	1:8.3	0.029	0.04	30.07	30.80	1.183	**0.035**	22.3
Body worn Test data(Separate 15mm)										
Back side	GSM	661/1880	1:8.3	0.188	0.04	30.07	30.80	1.183	**0.222**	22.3
Hotspot Test data(Separate 10mm)										
Back side	GPRS 4TS	810/1909.8	1:2.075	0.288	-0.09	23.15	24.80	1.462	**0.421**	22.3
Ant 3 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Right tilted	GSM	810/1909.8	1:8.3	0.716	0.07	26.33	26.80	1.114	**0.798**	22.3
Body worn Test data(Separate 15mm)										
Back side	GSM	661/1880	1:8.3	0.263	0.13	26.58	26.80	1.052	**0.277**	22.3
Hotspot Test data(Separate 10mm)										
Top side	GPRS 4TS	661/1880	1:2.075	0.372	0.12	20.18	20.80	1.153	**0.429**	22.3
Test position	**BW.**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 10-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit(dBm)**	**Scaled factor**	**Scaled SAR 10-g (W/kg)**	**Liquid Temp.(℃)**
Product specific 10g SAR Test data(Separate 0mm)										
Top side	GSM	661/1880	1:8.3	1.600	0.05	26.58	26.80	1.052	**1.683**	22.3

Table 14： SAR of GSM1900 for Head and Body(CMA-LX1).

Test Position	Channel/ Frequency	Measured SAR (1g)	1st Repeated	Ratio	2nd Repeated	3rd Repeated
	(MHz)		SAR (1g)		SAR (1g)	SAR (1g)
Right tilted	810/1909.8	0.844	0.821	1.028	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

8.2.3 SAR Result of WCDMA Band II

Ant 1 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data										
Left cheek	RMC	9400/1880	1:1	0.077	0.08	23.45	24.40	1.245	0.096	22.1
Left tilted	RMC	9400/1880	1:1	0.057	0.07	23.45	24.40	1.245	0.071	22.1
Right cheek	RMC	9400/1880	1:1	0.081	0.01	23.45	24.40	1.245	**0.100**	22.1
Right tilted	RMC	9400/1880	1:1	0.052	0.19	23.45	24.40	1.245	0.064	22.1
Body worn Test data(Separate 15mm)										
Front side	RMC	9400/1880	1:1	0.136	0.07	22.37	23.40	1.268	0.172	22.1
Back side	RMC	9400/1880	1:1	0.332	0.14	22.37	23.40	1.268	**0.421**	22.1
Hotspot Test data(Separate 10mm)										
Front side	RMC	9400/1880	1:1	0.224	0.02	22.37	23.40	1.268	0.284	22.1
Back side	RMC	9400/1880	1:1	0.686	0.03	22.37	23.40	1.268	**0.870**	22.1
Back side	RMC	9262/1852.4	1:1	0.523	0.02	21.93	23.40	1.403	0.734	22.1
Back side	RMC	9538/1907.6	1:1	0.577	0.07	22.14	23.40	1.337	0.771	22.1
Right side	RMC	9400/1880	1:1	0.170	0.07	22.37	23.40	1.268	0.216	22.1
Bottom side	RMC	9400/1880	1:1	0.583	0.03	22.37	23.40	1.268	0.739	22.1
Back side with Battery 2#	RMC	9400/1880	1:1	0.661	0.06	22.37	23.40	1.268	0.838	22.1
Back side with Battery 3#	RMC	9400/1880	1:1	0.681	0.03	22.37	23.40	1.268	0.863	22.1
Back side with Battery 4#	RMC	9400/1880	1:1	0.651	0.05	22.37	23.40	1.268	0.825	22.1
Back side with Battery 5#	RMC	9400/1880	1:1	0.636	0.09	22.37	23.40	1.268	0.806	22.1
Back side with Battery 6#	RMC	9400/1880	1:1	0.646	0.11	22.37	23.40	1.268	0.819	22.1
Ant 3 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data										
Left cheek	RMC	9400/1880	1:1	0.590	0.09	16.33	17.20	1.222	0.721	22.1
Left tilted	RMC	9400/1880	1:1	0.724	0.07	16.33	17.20	1.222	0.885	22.1
Left tilted	RMC	9262/1852.4	1:1	0.543	0.03	15.99	17.20	1.321	0.717	22.1
Left tilted	RMC	9538/1907.6	1:1	0.685	0.05	16.05	17.20	1.303	0.893	22.1
Right cheek	RMC	9400/1880	1:1	0.693	0.03	16.33	17.20	1.222	0.847	22.1
Right cheek	RMC	9262/1852.4	1:1	0.561	0.01	15.99	17.20	1.321	0.741	22.1
Right cheek	RMC	9538/1907.6	1:1	0.635	0.06	16.05	17.20	1.303	0.828	22.1
Right tilted	RMC	9400/1880	1:1	0.885	0.01	16.33	17.20	1.222	**1.081**	22.1
Right tilted -Repeat	RMC	9400/1880	1:1	0.862	-0.13	16.33	17.20	1.222	1.053	22.1
Right tilted	RMC	9262/1852.4	1:1	0.605	0.05	15.99	17.20	1.321	0.799	22.1
Right tilted	RMC	9538/1907.6	1:1	0.782	0.02	16.05	17.20	1.303	1.019	22.1
Right tilted with Battery 2#	RMC	9400/1880	1:1	0.821	0.06	16.33	17.20	1.222	1.003	22.1
Right tilted with Battery 3#	RMC	9400/1880	1:1	0.833	0.19	16.33	17.20	1.222	1.018	22.1
Right tilted with Battery 4#	RMC	9400/1880	1:1	0.846	0.08	16.33	17.20	1.222	1.034	22.1
Right tilted with Battery 5#	RMC	9400/1880	1:1	0.859	0.06	16.33	17.20	1.222	1.050	22.1
Right tilted with Battery 6#	RMC	9400/1880	1:1	0.840	0.05	16.33	17.20	1.222	1.026	22.1
Body worn Test data(Separate 15mm)										
Front side	RMC	9400/1880	1:1	0.260	0.04	19.61	20.00	1.094	0.284	22.1
Back side	RMC	9400/1880	1:1	0.530	0.15	19.61	20.00	1.094	**0.580**	22.1
Back side with Battery 2#	RMC	9400/1880	1:1	0.523	0.01	19.61	20.00	1.094	0.572	22.1
Back side with Battery 3#	RMC	9400/1880	1:1	0.515	0.08	19.61	20.00	1.094	0.563	22.1
Back side with Battery 4#	RMC	9400/1880	1:1	0.507	0.09	19.61	20.00	1.094	0.555	22.1
Back side with Battery 5#	RMC	9400/1880	1:1	0.503	0.07	19.61	20.00	1.094	0.550	22.1
Back side with Battery 6#	RMC	9400/1880	1:1	0.499	0.02	19.61	20.00	1.094	0.546	22.1
Hotspot Test data(Separate 10mm)										
Front side	RMC	9400/1880	1:1	0.205	0.05	16.33	17.20	1.222	0.250	22.1
Back side	RMC	9400/1880	1:1	0.441	0.01	16.33	17.20	1.222	0.539	22.1
Left side	RMC	9400/1880	1:1	0.068	0.02	16.33	17.20	1.222	0.083	22.1
Top side	RMC	9400/1880	1:1	0.465	0.04	16.33	17.20	1.222	**0.568**	22.1

Table 15： SAR of WCDMA Band II for Head and Body(original report SUHR/2022/1001007).

Ant 1 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Right cheek	RMC	9400/1880	1:1	0.079	0.03	23.45	24.40	1.245	**0.098**	22.3
Body worn Test data(Separate 15mm)										
Back side	RMC	9400/1880	1:1	0.296	-0.03	22.37	23.40	1.268	**0.375**	22.3
Hotspot Test data(Separate 10mm)										
Back side	RMC	9400/1880	1:1	0.529	-0.03	22.37	23.40	1.268	**0.671**	22.3
Ant 3 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Right tilted	RMC	9400/1880	1:1	0.585	-0.17	16.33	17.20	1.222	**0.715**	22.3
Body worn Test data(Separate 15mm)										
Back side	RMC	9400/1880	1:1	0.483	-0.03	19.61	20.00	1.094	**0.528**	22.3
Hotspot Test data(Separate 10mm)										
Top side	RMC	9400/1880	1:1	0.387	0.12	16.33	17.20	1.222	**0.473**	22.3

Table 16： SAR of WCDMA Band II for Head and Body(CMA-LX1).

Test Position	**Channel/ Frequency**	**Measured SAR (1g)**	**1st Repeated**	**Ratio**	**2nd Repeated**	**3rd Repeated**
	(MHz)		**SAR (1g)**		**SAR (1g)**	**SAR (1g)**
Right tilted	9400/1880	0.885	0.862	1.027	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

8.2.4 SAR Result of WCDMA Band V

Ant 0 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data										
Left cheek	RMC	4182/836.4	1:1	0.170	0.02	23.98	25.00	1.265	0.215	21.9
Left tilted	RMC	4182/836.4	1:1	0.071	-0.01	23.98	25.00	1.265	0.090	21.9
Right cheek	RMC	4182/836.4	1:1	0.191	-0.17	23.98	25.00	1.265	**0.242**	21.9
Right tilted	RMC	4182/836.4	1:1	0.093	0.10	23.98	25.00	1.265	0.117	21.9
Body worn Test data(Separate 15mm)										
Front side	RMC	4182/836.4	1:1	0.235	-0.04	23.98	25.00	1.265	0.297	21.9
Back side	RMC	4182/836.4	1:1	0.291	0.07	23.98	25.00	1.265	**0.368**	21.9
Back side with Battery 2#	RMC	4182/836.4	1:1	0.287	0.16	23.98	25.00	1.265	0.363	21.9
Back side with Battery 3#	RMC	4182/836.4	1:1	0.286	0.01	23.98	25.00	1.265	0.362	21.9
Back side with Battery 4#	RMC	4182/836.4	1:1	0.290	0.05	23.98	25.00	1.265	0.367	21.9
Back side with Battery 5#	RMC	4182/836.4	1:1	0.283	0.13	23.98	25.00	1.265	0.358	21.9
Back side with Battery 6#	RMC	4182/836.4	1:1	0.280	0.19	23.98	25.00	1.265	0.354	21.9
Hotspot Test data(Separate 10mm)										
Front side	RMC	4182/836.4	1:1	0.330	-0.04	23.98	25.00	1.265	0.417	21.9
Back side	RMC	4182/836.4	1:1	0.518	-0.17	23.98	25.00	1.265	**0.655**	21.9
Left side	RMC	4182/836.4	1:1	0.331	0.09	23.98	25.00	1.265	0.419	21.9
Bottom side	RMC	4182/836.4	1:1	0.013	0.07	23.98	25.00	1.265	0.016	21.9
Back side with Battery 2#	RMC	4182/836.4	1:1	0.513	0.09	23.98	25.00	1.265	0.649	21.9
Back side with Battery 3#	RMC	4182/836.4	1:1	0.511	0.05	23.98	25.00	1.265	0.646	21.9
Back side with Battery 4#	RMC	4182/836.4	1:1	0.504	0.02	23.98	25.00	1.265	0.637	21.9
Back side with Battery 5#	RMC	4182/836.4	1:1	0.509	0.05	23.98	25.00	1.265	0.644	21.9
Back side with Battery 6#	RMC	4182/836.4	1:1	0.502	0.19	23.98	25.00	1.265	0.635	21.9
Ant 3 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data										
Left cheek	RMC	4182/836.4	1:1	0.382	0.01	23.95	25.00	1.274	0.486	21.9
Left tilted	RMC	4182/836.4	1:1	0.268	0.05	23.95	25.00	1.274	0.341	21.9
Right cheek	RMC	4182/836.4	1:1	0.724	0.05	23.95	25.00	1.274	0.922	21.9
Right cheek	RMC	4132/826.4	1:1	0.557	-0.03	23.88	25.00	1.294	0.721	21.9
Right cheek	RMC	4233/846.6	1:1	0.811	0.06	23.85	25.00	1.303	**1.057**	21.9
Right cheek-Repeat	RMC	4233/846.6	1:1	0.775	0.14	23.85	25.00	1.303	1.010	21.9
Right tilted	RMC	4182/836.4	1:1	0.376	0.10	23.95	25.00	1.274	0.479	21.9
Right cheek with Battery 2#	RMC	4233/846.6	1:1	0.739	0.05	23.85	25.00	1.303	0.963	21.9
Right cheek with Battery 3#	RMC	4233/846.6	1:1	0.757	0.18	23.85	25.00	1.303	0.986	21.9
Right cheek with Battery 4#	RMC	4233/846.6	1:1	0.739	0.05	23.85	25.00	1.303	0.963	21.9
Right cheek with Battery 5#	RMC	4233/846.6	1:1	0.775	0.06	23.85	25.00	1.303	1.010	21.9
Right cheek with Battery 6#	RMC	4233/846.6	1:1	0.784	0.02	23.85	25.00	1.303	1.022	21.9
Body worn Test data(Separate 15mm)										
Front side	RMC	4182/836.4	1:1	0.148	0.02	23.95	25.00	1.274	0.188	21.9
Back side	RMC	4182/836.4	1:1	0.243	-0.01	23.95	25.00	1.274	**0.309**	21.9
Hotspot Test data(Separate 10mm)										
Front side	RMC	4182/836.4	1:1	0.268	0.06	23.95	25.00	1.274	0.341	21.9
Back side	RMC	4182/836.4	1:1	0.452	-0.03	23.95	25.00	1.274	**0.576**	21.9
Left side	RMC	4182/836.4	1:1	0.334	0.09	23.95	25.00	1.274	0.425	21.9
Top side	RMC	4182/836.4	1:1	0.002	0.10	23.95	25.00	1.274	0.003	21.9

Table 17： SAR of WCDMA Band V for Head and Body(original report SUHR/2022/1001007).

Ant 0 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Right cheek	RMC	4182/836.4	1:1	0.152	-0.03	23.98	25.00	1.265	**0.192**	22.1
Body worn Test data(Separate 15mm)										
Back side	RMC	4182/836.4	1:1	0.198	0.04	23.98	25.00	1.265	**0.250**	22.1
Hotspot Test data(Separate 10mm)										
Back side	RMC	4182/836.4	1:1	0.358	-0.18	23.98	25.00	1.265	**0.453**	22.1
Ant 3 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data										
Right cheek	RMC	4233/846.6	1:1	0.652	0.08	23.85	25.00	1.303	**0.850**	22.1
Body worn Test data(Separate 15mm)										
Back side	RMC	4182/836.4	1:1	0.135	-0.04	23.95	25.00	1.274	**0.172**	22.1
Hotspot Test data(Separate 10mm)										
Back side	RMC	4182/836.4	1:1	0.338	0.05	23.95	25.00	1.274	**0.430**	22.1

Table 18： SAR of WCDMA Band V for Head and Body(CMA-LX1).

8.2.1 SAR Result of LTE Band 5

Ant 0 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB)											
Left cheek	10	QPSK 1_0	20525/836.5	1:1	0.115	0.01	24.29	25.00	1.178	0.135	22.0
Left tilted	10	QPSK 1_0	20525/836.5	1:1	0.054	0.05	24.29	25.00	1.178	0.063	22.0
Right cheek	10	QPSK 1_0	20525/836.5	1:1	0.181	0.05	24.29	25.00	1.178	**0.213**	22.0
Right tilted	10	QPSK 1_0	20525/836.5	1:1	0.081	0.16	24.29	25.00	1.178	0.095	22.0
Head Test Data(50%RB)											
Left cheek	10	QPSK 25_0	20525/836.5	1:1	0.107	0.03	22.99	24.00	1.262	0.135	22.0
Left tilted	10	QPSK 25_0	20525/836.5	1:1	0.071	0.09	22.99	24.00	1.262	0.090	22.0
Right cheek	10	QPSK 25_0	20525/836.5	1:1	0.137	0.08	22.99	24.00	1.262	0.173	22.0
Right tilted	10	QPSK 25_0	20525/836.5	1:1	0.064	0.09	22.99	24.00	1.262	0.081	22.0
Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1_0	20525/836.5	1:1	0.139	-0.06	24.29	25.00	1.178	0.164	22.0
Back side	10	QPSK 1_0	20525/836.5	1:1	0.167	-0.05	24.29	25.00	1.178	0.197	22.0
Body worn Test data(Separate 15mm 50%RB)											
Front side	10	QPSK 25_0	20525/836.5	1:1	0.138	0.02	22.99	24.00	1.262	0.174	22.0
Back side	10	QPSK 25_0	20525/836.5	1:1	0.173	-0.04	22.99	24.00	1.262	**0.218**	22.0
Back side with Battery 2#	10	QPSK 25_0	20525/836.5	1:1	0.165	0.16	22.99	24.00	1.262	0.208	22.0
Back side with Battery 3#	10	QPSK 25_0	20525/836.5	1:1	0.168	0.08	22.99	24.00	1.262	0.212	22.0
Back side with Battery 4#	10	QPSK 25_0	20525/836.5	1:1	0.170	0.03	22.99	24.00	1.262	0.215	22.0
Back side with Battery 5#	10	QPSK 25_0	20525/836.5	1:1	0.167	0.15	22.99	24.00	1.262	0.211	22.0
Back side with Battery 6#	10	QPSK 25_0	20525/836.5	1:1	0.166	0.07	22.99	24.00	1.262	0.209	22.0
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1_0	20525/836.5	1:1	0.240	0.05	24.29	25.00	1.178	0.283	22.0
Back side	10	QPSK 1_0	20525/836.5	1:1	0.290	-0.04	24.29	25.00	1.178	0.342	22.0
Left side	10	QPSK 1_0	20525/836.5	1:1	0.097	0.08	24.29	25.00	1.178	0.114	22.0
Bottom side	10	QPSK 1_0	20525/836.5	1:1	0.121	-0.02	24.29	25.00	1.178	0.142	22.0
Hotspot Test data(Separate 10mm 50%RB)											
Front side	10	QPSK 25_0	20525/836.5	1:1	0.242	0.12	22.99	24.00	1.262	0.305	22.0
Back side	10	QPSK 25_0	20525/836.5	1:1	0.298	-0.03	22.99	24.00	1.262	**0.376**	22.0
Left side	10	QPSK 25_0	20525/836.5	1:1	0.106	0.08	22.99	24.00	1.262	0.134	22.0
Bottom side	10	QPSK 25_0	20525/836.5	1:1	0.131	0.05	22.99	24.00	1.262	0.165	22.0
Back side with Battery 2#	10	QPSK 25_0	20525/836.5	1:1	0.285	0.12	22.99	24.00	1.262	0.360	22.0
Back side with Battery 3#	10	QPSK 25_0	20525/836.5	1:1	0.290	0.15	22.99	24.00	1.262	0.366	22.0
Back side with Battery 4#	10	QPSK 25_0	20525/836.5	1:1	0.293	0.19	22.99	24.00	1.262	0.370	22.0
Back side with Battery 5#	10	QPSK 25_0	20525/836.5	1:1	0.291	0.02	22.99	24.00	1.262	0.367	22.0
Back side with Battery 6#	10	QPSK 25_0	20525/836.5	1:1	0.283	0.15	22.99	24.00	1.262	0.357	22.0
Ant 3 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 1-g (W/kg)	Liquid Temp.(℃)
Head Test Data(1RB)											
Left cheek	10	QPSK 1_0	20525/836.5	1:1	0.227	0.07	24.23	25.00	1.194	0.271	22.0
Left tilted	10	QPSK 1_0	20525/836.5	1:1	0.149	0.07	24.23	25.00	1.194	0.178	22.0
Right cheek	10	QPSK 1_0	20525/836.5	1:1	0.450	0.02	24.23	25.00	1.194	0.537	22.0
Right tilted	10	QPSK 1_0	20525/836.5	1:1	0.263	0.13	24.23	25.00	1.194	0.314	22.0
Head Test Data(50%RB)											
Left cheek	10	QPSK 25_0	20525/836.5	1:1	0.242	-0.02	23.00	24.00	1.259	0.305	22.0
Left tilted	10	QPSK 25_0	20525/836.5	1:1	0.164	0.07	23.00	24.00	1.259	0.206	22.0
Right cheek	10	QPSK 25_0	20525/836.5	1:1	0.571	0.13	23.00	24.00	1.259	**0.719**	22.0
Right tilted	10	QPSK 25_0	20525/836.5	1:1	0.286	0.11	23.00	24.00	1.259	0.360	22.0
Right cheek with Battery 2#	10	QPSK 25_0	20525/836.5	1:1	0.53	0.18	23.00	24.00	1.259	0.667	22.0
Right cheek with Battery 3#	10	QPSK 25_0	20525/836.5	1:1	0.540	0.11	23.00	24.00	1.259	0.680	22.0
Right cheek with Battery 4#	10	QPSK 25_0	20525/836.5	1:1	0.546	0.19	23.00	24.00	1.259	0.687	22.0
Right cheek with Battery 5#	10	QPSK 25_0	20525/836.5	1:1	0.559	0.07	23.00	24.00	1.259	0.704	22.0
Right cheek with Battery 6#	10	QPSK 25_0	20525/836.5	1:1	0.562	0.16	23.00	24.00	1.259	0.708	22.0

Body worn Test data(Separate 15mm 1RB)											
Front side	10	QPSK 1_0	20525/836.5	1:1	0.079	0.19	24.23	25.00	1.194	0.094	22.0
Back side	10	QPSK 1_0	20525/836.5	1:1	0.160	0.02	24.23	25.00	1.194	0.191	22.0
Body worn Test data(Separate 15mm 50%RB)											
Front side	10	QPSK 25_0	20525/836.5	1:1	0.083	0.16	23.00	24.00	1.259	0.105	22.0
Back side	10	QPSK 25_0	20525/836.5	1:1	0.170	0.07	23.00	24.00	1.259	**0.214**	22.0
Hotspot Test data(Separate 10mm 1RB)											
Front side	10	QPSK 1_0	20525/836.5	1:1	0.133	0.16	24.23	25.00	1.194	0.159	22.0
Back side	10	QPSK 1_0	20525/836.5	1:1	0.268	0.04	24.23	25.00	1.194	0.320	22.0
Left side	10	QPSK 1_0	20525/836.5	1:1	0.238	0.10	24.23	25.00	1.194	0.284	22.0
Top side	10	QPSK 1_0	20525/836.5	1:1	0.111	0.11	24.23	25.00	1.194	0.133	22.0
Hotspot Test data(Separate 10mm 50%RB)											
Front side	10	QPSK 25_0	20525/836.5	1:1	0.147	0.02	23.00	24.00	1.259	0.185	22.0
Back side	10	QPSK 25_0	20525/836.5	1:1	0.293	0.07	23.00	24.00	1.259	**0.369**	22.0
Left side	10	QPSK 25_0	20525/836.5	1:1	0.238	0.04	23.00	24.00	1.259	0.300	22.0
Top side	10	QPSK 25_0	20525/836.5	1:1	0.103	0.13	23.00	24.00	1.259	0.130	22.0

Table 19：SAR of LTE Band 5 for Head and Body(original report SUHR/2022/1001007).

Ant 0 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(1RB)											
Right cheek	10	QPSK 1_0	20525/836.5	1:1	0.113	-0.05	24.29	25.00	1.178	**0.133**	22.1
Body worn Test data(Separate 15mm 50%RB)											
Back side	10	QPSK 25_0	20525/836.5	1:1	0.179	-0.04	22.99	24.00	1.262	**0.226**	22.1
Hotspot Test data(Separate 10mm 50%RB)											
Back side	10	QPSK 25_0	20525/836.5	1:1	0.319	-0.09	22.99	24.00	1.262	**0.403**	22.1
Ant 3 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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test Data(50%RB)											
Right cheek	10	QPSK 25_0	20525/836.5	1:1	0.397	0.09	23.00	24.00	1.259	**0.500**	22.1
Body worn Test data(Separate 15mm 50%RB)											
Back side	10	QPSK 25_0	20525/836.5	1:1	0.136	-0.08	23.00	24.00	1.259	**0.171**	22.1
Hotspot Test data(Separate 10mm 50%RB)											
Back side	10	QPSK 25_0	20525/836.5	1:1	0.282	-0.03	23.00	24.00	1.259	**0.355**	22.1

Table 20：SAR of LTE Band 5 for Head and Body(CMA-LX1).

8.2.2 SAR Result of LTE Band 7

Ant 1 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 1-g (W/kg)	Liquid Temp. (℃)
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.098	0.07	24.35	24.50	1.035	0.101	22.5
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.111	0.02	24.35	24.50	1.035	0.115	22.5
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.195	0.05	24.35	24.50	1.035	**0.202**	22.5
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.081	0.09	24.35	24.50	1.035	0.084	22.5
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.092	0.01	23.22	23.50	1.067	0.098	22.5
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.105	0.03	23.22	23.50	1.067	0.112	22.5
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.187	0.09	23.22	23.50	1.067	0.199	22.5
Right tilted	20	QPSK 50_0	21100/2535	1:1	0.077	0.01	23.22	23.50	1.067	0.082	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.108	0.09	22.38	22.40	1.005	0.108	22.5
Back side	20	QPSK 1_0	21100/2535	1:1	0.312	0.08	22.38	22.40	1.005	0.313	22.5
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.107	0.11	22.16	22.40	1.057	0.113	22.5
Back side	20	QPSK 50_0	21100/2535	1:1	0.321	0.08	22.16	22.40	1.057	**0.339**	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.213	0.06	22.38	22.40	1.005	0.214	22.5
Back side	20	QPSK 1_0	21100/2535	1:1	0.692	0.09	22.38	22.40	1.005	0.695	22.5
Left side	20	QPSK 1_0	21100/2535	1:1	0.041	0.06	22.38	22.40	1.005	0.041	22.5
Right side	20	QPSK 1_0	21100/2535	1:1	0.419	0.02	22.38	22.40	1.005	0.421	22.5
Bottom side	20	QPSK 1_0	21100/2535	1:1	0.570	0.03	22.38	22.40	1.005	0.573	22.5
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.212	0.03	22.16	22.40	1.057	0.224	22.5
Back side	20	QPSK 50_0	21100/2535	1:1	0.690	0.02	22.16	22.40	1.057	**0.729**	22.5
Left side	20	QPSK 50_0	21100/2535	1:1	0.038	0.06	22.16	22.40	1.057	0.040	22.5
Right side	20	QPSK 50_0	21100/2535	1:1	0.404	0.08	22.16	22.40	1.057	0.427	22.5
Bottom side	20	QPSK 50_0	21100/2535	1:1	0.585	0.11	22.16	22.40	1.057	0.618	22.5
Ant 3 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 1-g (W/kg)	Liquid Temp. (℃)
Head Test Data(1RB)											
Left cheek	20	QPSK 1_0	21100/2535	1:1	0.803	0.02	18.73	19.10	1.089	0.874	22.5
Left cheek	20	QPSK 1_0	20850/2510	1:1	0.787	0.09	18.67	19.10	1.104	0.869	22.5
Left cheek	20	QPSK 1_0	21350/2560	1:1	0.762	0.06	18.65	19.10	1.109	0.845	22.5
Left tilted	20	QPSK 1_0	21100/2535	1:1	0.792	0.09	18.73	19.10	1.089	0.862	22.5
Left tilted	20	QPSK 1_0	20850/2510	1:1	0.764	0.04	18.67	19.10	1.104	0.844	22.5
Left tilted	20	QPSK 1_0	21350/2560	1:1	0.824	0.11	18.65	19.10	1.109	0.914	22.5
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.761	0.02	18.73	19.10	1.089	0.829	22.5
Right cheek	20	QPSK 1_0	20850/2510	1:1	0.720	-0.04	18.67	19.10	1.104	0.795	22.5
Right cheek	20	QPSK 1_0	21350/2560	1:1	0.687	0.03	18.65	19.10	1.109	0.762	22.5
Right tilted	20	QPSK 1_0	21100/2535	1:1	0.878	0.04	18.73	19.10	1.089	0.956	22.5
Right tilted	20	QPSK 1_0	20850/2510	1:1	0.830	0.13	18.67	19.10	1.104	0.916	22.5
Right tilted	20	QPSK 1_0	21350/2560	1:1	0.835	-0.05	18.65	19.10	1.109	0.926	22.5
Head Test Data(50%RB)											
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.766	0.03	18.35	19.10	1.189	0.910	22.5
Left cheek	20	QPSK 1_0	20850/2510	1:1	0.760	0.12	18.09	19.10	1.262	0.959	22.5
Left cheek	20	QPSK 50_0	21350/2560	1:1	0.776	-0.07	18.27	19.10	1.211	0.939	22.5
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.810	0.06	18.35	19.10	1.189	0.963	22.5
Left tilted	20	QPSK 50_0	20850/2510	1:1	0.791	0.07	18.09	19.10	1.262	0.998	22.5
Left tilted	20	QPSK 50_0	21350/2560	1:1	0.812	0.09	18.27	19.10	1.211	0.983	22.5
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.745	-0.08	18.35	19.10	1.189	0.885	22.5
Right cheek	20	QPSK 50_0	20850/2510	1:1	0.751	0.01	18.09	19.10	1.262	0.948	22.5
Right cheek	20	QPSK 50_0	21350/2560	1:1	0.753	-0.03	18.27	19.10	1.211	0.912	22.5

Right tilted	20	QPSK 50_0	21100/2535	1:1	0.879	0.05	18.35	19.10	1.189	1.045	22.5
Right tilted	20	QPSK 50_0	20850/2510	1:1	0.821	0.12	18.09	19.10	1.262	1.036	22.5
Right tilted	20	QPSK 50_0	21350/2560	1:1	0.847	0.09	18.27	19.10	1.211	1.025	22.5
Right tilted with Battery 2#	20	QPSK 50_0	21100/2535	1:1	0.860	0.01	18.35	19.10	1.189	1.022	22.5
Right tilted with Battery 3#	20	QPSK 50_0	21100/2535	1:1	0.842	0.03	18.35	19.10	1.189	1.001	22.5
Right tilted with Battery 4#	20	QPSK 50_0	21100/2535	1:1	0.865	0.17	18.35	19.10	1.189	1.028	22.5
Right tilted with Battery 5#	20	QPSK 50_0	21100/2535	1:1	0.832	0.03	18.35	19.10	1.189	0.989	22.5
Right tilted with Battery 6#	20	QPSK 50_0	21100/2535	1:1	0.851	-0.09	18.35	19.10	1.189	1.011	22.5
Head Test Data(100%RB)											
Left cheek	20	QPSK 50_0	21100/2535	1:1	0.817	0.11	18.30	19.10	1.202	0.982	22.5
Left tilted	20	QPSK 50_0	21100/2535	1:1	0.824	0.04	18.30	19.10	1.202	0.991	22.5
Right cheek	20	QPSK 50_0	21100/2535	1:1	0.758	0.08	18.30	19.10	1.202	0.911	22.5
Right tilted	20	QPSK 50_0	21100/2535	1:1	0.894	0.05	18.30	19.10	1.202	**1.075**	22.5
Right tilted -Repeat	20	QPSK 50_0	21100/2535	1:1	0.891	0.01	18.30	19.10	1.202	1.071	22.5
Body worn Test data(Separate 15mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.219	0.07	20.23	20.50	1.064	0.233	22.5
Back side	20	QPSK 1_0	21100/2535	1:1	0.354	-0.04	20.23	20.50	1.064	0.377	22.5
Body worn Test data(Separate 15mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.219	0.11	19.81	20.50	1.172	0.257	22.5
Back side	20	QPSK 50_0	21100/2535	1:1	0.362	-0.04	19.81	20.50	1.172	**0.424**	22.5
Back side with Battery 2#	20	QPSK 50_0	21100/2535	1:1	0.355	0.09	19.81	20.50	1.172	0.416	22.5
Back side with Battery 3#	20	QPSK 50_0	21100/2535	1:1	0.345	0.18	19.81	20.50	1.172	0.404	22.5
Back side with Battery 4#	20	QPSK 50_0	21100/2535	1:1	0.343	-0.01	19.81	20.50	1.172	0.402	22.5
Back side with Battery 5#	20	QPSK 50_0	21100/2535	1:1	0.341	0.00	19.81	20.50	1.172	0.400	22.5
Back side with Battery 6#	20	QPSK 50_0	21100/2535	1:1	0.359	0.15	19.81	20.50	1.172	0.421	22.5
Hotspot Test data(Separate 10mm 1RB)											
Front side	20	QPSK 1_0	21100/2535	1:1	0.176	0.06	18.73	19.10	1.089	0.192	22.5
Back side	20	QPSK 1_0	21100/2535	1:1	0.629	0.05	18.73	19.10	1.089	0.685	22.5
Left side	20	QPSK 1_0	21100/2535	1:1	0.263	0.01	18.73	19.10	1.089	0.286	22.5
Right side	20	QPSK 1_0	21100/2535	1:1	0.011	0.15	18.73	19.10	1.089	0.012	22.5
Top side	20	QPSK 1_0	21100/2535	1:1	0.753	0.03	18.73	19.10	1.089	0.820	22.5
Top side	20	QPSK 1_0	20850/2510	1:1	0.747	0.06	18.67	19.10	1.104	0.825	22.5
Top side	20	QPSK 1_0	21350/2560	1:1	0.839	0.03	18.65	19.10	1.109	0.931	22.5
Hotspot Test data(Separate 10mm 50%RB)											
Front side	20	QPSK 50_0	21100/2535	1:1	0.176	0.02	18.35	19.10	1.189	0.209	22.5
Back side	20	QPSK 50_0	21100/2535	1:1	0.622	0.07	18.35	19.10	1.189	0.739	22.5
Left side	20	QPSK 50_0	21100/2535	1:1	0.278	0.06	18.35	19.10	1.189	0.330	22.5
Right side	20	QPSK 50_0	21100/2535	1:1	0.011	0.02	18.35	19.10	1.189	0.012	22.5
Top side	20	QPSK 50_0	21100/2535	1:1	0.784	0.01	18.35	19.10	1.189	0.932	22.5
Top side	20	QPSK 50_0	20850/2510	1:1	0.785	0.02	18.09	19.10	1.262	0.991	22.5
Top side	20	QPSK 50_0	21350/2560	1:1	0.852	0.04	18.27	19.10	1.211	**1.031**	22.5
Top side-Repeat	20	QPSK 50_0	21350/2560	1:1	0.848	0.09	18.27	19.10	1.211	1.027	22.5
Top side with Battery 2#	20	QPSK 50_0	21350/2560	1:1	0.843	0.02	18.27	19.10	1.211	1.021	22.5
Top side with Battery 3#	20	QPSK 50_0	21350/2560	1:1	0.839	0.05	18.27	19.10	1.211	1.016	22.5
Top side with Battery 4#	20	QPSK 50_0	21350/2560	1:1	0.830	0.11	18.27	19.10	1.211	1.005	22.5
Top side with Battery 5#	20	QPSK 50_0	21350/2560	1:1	0.821	0.18	18.27	19.10	1.211	0.994	22.5
Top side with Battery 6#	20	QPSK 50_0	21350/2560	1:1	0.847	0.20	18.27	19.10	1.211	1.025	22.5
Hotspot Test data(Separate 10mm 100%RB)											
Top side	20	QPSK 50_0	21100/2535	1:1	0.841	0.01	18.30	19.10	1.202	1.011	22.5
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 10-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit (dBm)**	**Scaled factor**	**SAR (W/kg) 10-g**	**Liquid Temp. (℃)**
Product specific 10g SAR Test data(Separate 0mm 1RB)											
Top side	20	QPSK 1_0	21100/2535	1:1	1.860	0.05	20.23	20.50	1.064	1.979	22.5
Product specific 10g SAR Test data(Separate 0mm 50RB)											
Top side	20	QPSK 50_0	21100/2535	1:1	1.930	0.03	19.81	20.50	1.172	**2.262**	22.5
Top side	20	QPSK 50_0	20850/2510	1:1	1.440	0.07	19.76	20.50	1.186	1.708	22.5
Top side	20	QPSK 50_0	21350/2560	1:1	1.530	0.09	19.54	20.50	1.247	1.908	22.5
Product specific 10g SAR Test data(Separate 0mm 100RB)											
Top side	20	QPSK 100_0	21100/2535	1:1	1.470	0.02	19.75	20.50	1.189	1.747	22.5

Table 21：SAR of LTE Band 7 for Head and Body(original report SUHR/2022/1001007).

Ant 1 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 1-g (W/kg)**	**Liquid Temp. (℃)**
Head Test Data(1RB)											
Right cheek	20	QPSK 1_0	21100/2535	1:1	0.300	0.03	24.35	24.50	1.035	**0.311**	21.5
Body worn Test data(Separate 15mm 50%RB)											
Back side	20	QPSK 50_0	21100/2535	1:1	0.268	0.07	22.16	22.40	1.057	**0.283**	21.5
Hotspot Test data(Separate 10mm 50%RB)											
Back side	20	QPSK 50_0	21100/2535	1:1	0.595	0.02	22.16	22.40	1.057	**0.629**	21.5
Ant 3 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 1-g (W/kg)**	**Liquid Temp. (℃)**
Head Test Data(100%RB)											
Right tilted	20	QPSK 100_0	21100/2535	1:1	0.621	0.11	18.30	19.10	1.202	**0.747**	21.5
Body worn Test data(Separate 15mm 50%RB)											
Back side	20	QPSK 50_0	21100/2535	1:1	0.169	0.02	19.81	20.50	1.172	**0.198**	21.5
Hotspot Test data(Separate 10mm 50%RB)											
Top side	20	QPSK 50_0	21350/2560	1:1	0.350	0.02	18.27	19.10	1.211	**0.424**	21.5
Test position	**BW.**	**Test mode**	**Test ch./Freq.**	**Duty Cycle**	**SAR (W/kg) 10-g**	**Power drift (dB)**	**Conducted Power(dBm)**	**Tune up Limit (dBm)**	**Scaled factor**	**SAR (W/kg) 10-g**	**Liquid Temp. (℃)**
Product specific 10g SAR Test data(Separate 0mm 50RB)											
Top side	20	QPSK 50_0	21100/2535	1:1	1.160	0.02	19.81	20.50	1.172	**1.360**	21.5

Table 22：SAR of LTE Band 7 for Head and Body(CMA-LX1).

Test Position	**Channel/ Frequency (MHz)**	**Measured SAR (1g)**	**1st Repeated SAR (1g)**	**Ratio**	**2nd Repeated SAR (1g)**	**3rd Repeated SAR (1g)**
Right tilted	21100/2535	0.894	0.891	1.003	N/A	N/A
Top side	21350/2560	0.852	0.848	1.005	N/A	N/A
Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.						
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).						
3) A third repeated measurement was preformed only if the original, first or second repeated measurement was ⩾ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.						
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg						

8.2.3 SAR Result of WIFI 2.4G

Ant9 Test Record chain0											
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 1-g (W/kg)	Liquid Temp.(℃)
Head Test data											
Left cheek	802.11b	1/2412	98.73%	1.013	0.161	-0.11	15.12	16.00	1.225	**0.197**	22.2
Left tilted	802.11b	1/2412	98.73%	1.013	0.070	0.07	15.12	16.00	1.225	0.085	22.2
Right cheek	802.11b	1/2412	98.73%	1.013	0.052	0.06	15.12	16.00	1.225	0.064	22.2
Right tilted	802.11b	1/2412	98.73%	1.013	0.040	0.02	15.12	16.00	1.225	0.049	22.2
Left cheek with Battery 2#	802.11b	1/2412	98.73%	1.013	0.152	0.19	15.12	16.00	1.225	0.189	22.2
Left cheek with Battery 3#	802.11b	1/2412	98.73%	1.013	0.148	0.03	15.12	16.00	1.225	0.184	22.2
Left cheek with Battery 4#	802.11b	1/2412	98.73%	1.013	0.158	0.08	15.12	16.00	1.225	0.196	22.2
Left cheek with Battery 5#	802.11b	1/2412	98.73%	1.013	0.154	-0.05	15.12	16.00	1.225	0.191	22.2
Left cheek with Battery 6#	802.11b	1/2412	98.73%	1.013	0.152	0.09	15.12	16.00	1.225	0.189	22.2
Body worn Test data(Separate 15mm)											
Front side	802.11b	1/2412	98.73%	1.013	0.143	-0.05	18.50	19.50	1.259	0.180	22.2
Back side	802.11b	1/2412	98.73%	1.013	0.217	0.07	18.50	19.50	1.259	**0.273**	22.2
Back side with Battery 2#	802.11b	1/2412	98.73%	1.013	0.174	0.12	18.50	19.50	1.259	0.222	22.2
Back side with Battery 3#	802.11b	1/2412	98.73%	1.013	0.171	0.02	18.50	19.50	1.259	0.218	22.2
Back side with Battery 4#	802.11b	1/2412	98.73%	1.013	0.166	0.05	18.50	19.50	1.259	0.212	22.2
Back side with Battery 5#	802.11b	1/2412	98.73%	1.013	0.170	-0.07	18.50	19.50	1.259	0.217	22.2
Back side with Battery 6#	802.11b	1/2412	98.73%	1.013	0.162	0.08	18.50	19.50	1.259	0.207	22.2
Hotspot Test data (Separate 10mm)											
Front side	802.11b	1/2412	98.73%	1.013	0.268	0.04	18.50	19.50	1.259	0.337	22.2
Back side	802.11b	1/2412	98.73%	1.013	0.287	0.11	18.50	19.50	1.259	0.361	22.2
Right side	802.11b	1/2412	98.73%	1.013	0.321	0.01	18.50	19.50	1.259	**0.404**	22.2
Right side with Battery 2#	802.11b	1/2412	98.73%	1.013	0.316	0.06	18.50	19.50	1.259	0.398	22.2
Right side with Battery 3#	802.11b	1/2412	98.73%	1.013	0.310	-0.13	18.50	19.50	1.259	0.395	22.2
Right side with Battery 4#	802.11b	1/2412	98.73%	1.013	0.312	0.01	18.50	19.50	1.259	0.398	22.2
Right side with Battery 5#	802.11b	1/2412	98.73%	1.013	0.301	-0.02	18.50	19.50	1.259	0.384	22.2
Right side with Battery 6#	802.11b	1/2412	98.73%	1.013	0.307	0.09	18.50	19.50	1.259	0.391	22.2

Table 23：SAR of WIFI 2.4G for Head and Body(original report SUHR/2022/1001007).

Ant9 Test Record chain0											
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 1-g (W/kg)	Liquid Temp.(℃)
Head Test data											
Left cheek	802.11b	1/2412	98.73%	1.013	0.241	0.04	15.12	16.00	1.225	**0.299**	21.9
Body worn Test data(Separate 15mm)											
Back side	802.11b	1/2412	98.73%	1.013	0.159	0.11	18.50	19.50	1.259	**0.203**	21.9
Hotspot Test data (Separate 10mm)											
Right side	802.11b	1/2412	98.73%	1.013	0.259	-0.12	18.50	19.50	1.259	**0.330**	21.9

Table 24：SAR of WIFI 2.4G for Head and Body(CMA-LX1).

Note:

1) As the adjusted SAR is ≤ 1.2 W/kg for other 802.11 modes, SAR test for the other 802.11 modes are not required.

Mode	Tune-up (dBm)	Tune-up (mw)	Hightest Reported SAR1-g(W/kg)	Adjusted SAR1-g(W/kg)	SAR test
Head					
802.11b	16.00	39.81	0.299	/	
802.11g	16.00	39.81	/	0.299	No
802.1n 20M	16.00	39.81	/	0.299	No
802.1n 40M	16.00	39.81	/	0.299	No
Body worn Test data(Separate 15mm)					
802.11b	19.50	89.13	0.273	/	
802.11g	20.00	100.00	/	0.306	No
802.1n 20M	20.00	100.00	/	0.306	No
802.1n 40M	16.00	39.81	/	0.122	No
Hotspot Test data (Separate 10mm)					
802.11b	19.50	89.13	0.404	/	
802.11g	20.00	100.00	/	0.453	No
802.1n 20M	20.00	100.00	/	0.453	No
802.1n 40M	16.00	39.81	/	0.180	No

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8.2.1 SAR Result of WIFI 5G

Ant11 Test Record chain0											
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 1-g (W/kg)	Liquid Temp.(℃)
Head Test data of U-NII-2A											
Left cheek	802.11n-HT40	54/5270	95.96%	1.042	0.210	0.07	13.68	15.00	1.355	**0.297**	22.2
Left tilted	802.11n-HT40	54/5270	95.96%	1.042	0.195	0.05	13.68	15.00	1.355	0.275	22.2
Right cheek	802.11n-HT40	54/5270	95.96%	1.042	0.092	0.05	13.68	15.00	1.355	0.130	22.2
Right tilted	802.11n-HT40	54/5270	95.96%	1.042	0.087	0.03	13.68	15.00	1.355	0.123	22.2
Head Test data of U-NII-2C											
Left cheek	802.11n-HT40	110/5550	95.96%	1.042	0.256	-0.06	13.71	15.00	1.346	**0.359**	22.4
Left tilted	802.11n-HT40	110/5550	95.96%	1.042	0.253	-0.05	13.71	15.00	1.346	0.355	22.4
Right cheek	802.11n-HT40	110/5550	95.96%	1.042	0.133	0.03	13.71	15.00	1.346	0.187	22.4
Right tilted	802.11n-HT40	110/5550	95.96%	1.042	0.082	-0.07	13.71	15.00	1.346	0.115	22.4
Head Test data of U-NII-3											
Left cheek	802.11n-HT40	151/5755	95.96%	1.042	0.383	-0.04	13.65	15.00	1.365	**0.545**	22.3
Left tilted	802.11n-HT40	151/5755	95.96%	1.042	0.246	0.02	13.65	15.00	1.365	0.350	22.3
Right cheek	802.11n-HT40	151/5755	95.96%	1.042	0.108	0.11	13.65	15.00	1.365	0.154	22.3
Right tilted	802.11n-HT40	151/5755	95.96%	1.042	0.208	-0.08	13.65	15.00	1.365	0.296	22.3
Left cheek with Battery 2#	802.11n-HT40	151/5755	95.96%	1.042	0.379	0.05	13.65	15.00	1.365	0.539	22.3
Left cheek with Battery 3#	802.11n-HT40	151/5755	95.96%	1.042	0.367	0.09	13.65	15.00	1.365	0.522	22.3
Left cheek with Battery 4#	802.11n-HT40	151/5755	95.96%	1.042	0.359	0.02	13.65	15.00	1.365	0.511	22.3
Left cheek with Battery 5#	802.11n-HT40	151/5755	95.96%	1.042	0.366	-0.01	13.65	15.00	1.365	0.520	22.3
Left cheek with Battery 6#	802.11n-HT40	151/5755	95.96%	1.042	0.357	0.06	13.65	15.00	1.365	0.508	22.3
Body worn Test data of U-NII-2A (Separate 15mm)											
Front side	802.11a	52/5260	98.10%	1.019	0.110	0.05	18.55	19.00	1.109	0.124	22.2
Back side	802.11a	52/5260	98.10%	1.019	0.239	-0.01	18.55	19.00	1.109	**0.270**	22.2
Body worn Test data of U-NII-2C(Separate 15mm)											
Front side	802.11a	116/5580	98.10%	1.019	0.135	-0.11	18.59	19.00	1.099	0.151	22.4
Back side	802.11a	116/5580	98.10%	1.019	0.270	-0.03	18.59	19.00	1.099	**0.302**	22.4
Body worn Test data of U-NII-3(Separate 15mm)											
Front side	802.11a	157/5785	98.10%	1.019	0.094	0.05	18.92	19.00	1.019	0.098	22.3
Back side	802.11a	157/5785	98.10%	1.019	0.327	0.19	18.92	19.00	1.019	**0.340**	22.3
Back side with Battery 2#	802.11a	157/5785	98.10%	1.019	0.325	0.02	18.92	19.00	1.019	0.337	22.3
Back side with Battery 3#	802.11a	157/5785	98.10%	1.019	0.318	-0.06	18.92	19.00	1.019	0.330	22.3
Back side with Battery 4#	802.11a	157/5785	98.10%	1.019	0.326	0.05	18.92	19.00	1.019	0.338	22.3
Back side with Battery 5#	802.11a	157/5785	98.10%	1.019	0.309	0.07	18.92	19.00	1.019	0.321	22.3
Back side with Battery 6#	802.11a	157/5785	98.10%	1.019	0.318	-0.14	18.92	19.00	1.019	0.330	22.3
Hotspot Test data of U-NII-1(Separate 10mm)											
Front side	802.11a	48/5240	98.10%	1.019	0.212	0.03	18.61	19.00	1.094	0.236	22.2
Back side	802.11a	48/5240	98.10%	1.019	0.379	0.09	18.61	19.00	1.094	**0.423**	22.2
Right side	802.11a	48/5240	98.10%	1.019	0.268	-0.01	18.61	19.00	1.094	0.299	22.2
Top side	802.11a	48/5240	98.10%	1.019	0.170	0.02	18.61	19.00	1.094	0.190	22.2

Hotspot Test data of U-NII-3 (Separate 10mm)											
Front side	802.11a	157/5785	98.10%	1.019	0.119	0.03	18.92	19.00	1.019	0.124	22.3
Back side	802.11a	157/5785	98.10%	1.019	0.453	0.04	18.92	19.00	1.019	0.470	22.3
Right side	802.11a	157/5785	98.10%	1.019	0.696	-0.03	18.92	19.00	1.019	**0.723**	22.3
Top side	802.11a	157/5785	98.10%	1.019	0.281	0.03	18.92	19.00	1.019	0.292	22.3
Right side with Battery 2#	802.11a	157/5785	98.10%	1.019	0.585	0.08	18.92	19.00	1.019	0.607	22.3
Right side with Battery 3#	802.11a	157/5785	98.10%	1.019	0.573	-0.04	18.92	19.00	1.019	0.595	22.3
Right side with Battery 4#	802.11a	157/5785	98.10%	1.019	0.562	0.02	18.92	19.00	1.019	0.584	22.3
Right side with Battery 5#	802.11a	157/5785	98.10%	1.019	0.597	0.09	18.92	19.00	1.019	0.620	22.3
Right side with Battery 6#	802.11a	157/5785	98.10%	1.019	0.544	0.01	18.92	19.00	1.019	0.565	22.3
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 10-g (W/kg)**	**Liquid Temp.(℃)**
Product specific 10g SAR Test data of U-NII-2A(Separate 0mm)											
Front side	802.11a	52/5260	98.10%	1.019	0.233	-0.09	18.55	19.00	1.109	0.263	22.2
Back side	802.11a	52/5260	98.10%	1.019	0.570	-0.06	18.55	19.00	1.109	**0.644**	22.2
Right side	802.11a	52/5260	98.10%	1.019	0.468	-0.09	18.55	19.00	1.109	0.529	22.2
Top side	802.11a	52/5260	98.10%	1.019	0.211	0.06	18.55	19.00	1.109	0.239	22.2
Product specific 10g SAR Test data of U-NII-2C(Separate 0mm)											
Front side	802.11a	116/5580	98.10%	1.019	0.324	-0.01	18.59	19.00	1.099	0.363	22.4
Back side	802.11a	116/5580	98.10%	1.019	0.730	0.02	18.59	19.00	1.099	0.818	22.4
Right side	802.11a	116/5580	98.10%	1.019	1.050	-0.08	18.59	19.00	1.099	**1.176**	22.4
Top side	802.11a	116/5580	98.10%	1.019	0.213	0.12	18.59	19.00	1.099	0.239	22.4
Right side with Battery 2#	802.11a	116/5580	98.10%	1.019	0.950	0.02	18.59	19.00	1.099	1.064	22.4
Right side with Battery 3#	802.11a	116/5580	98.10%	1.019	0.912	0.03	18.59	19.00	1.099	1.022	22.4
Right side with Battery 4#	802.11a	116/5580	98.10%	1.019	0.930	-0.05	18.59	19.00	1.099	1.042	22.4
Right side with Battery 5#	802.11a	116/5580	98.10%	1.019	0.917	0.08	18.59	19.00	1.099	1.028	22.4
Right side with Battery 6#	802.11a	116/5580	98.10%	1.019	0.901	0.07	18.59	19.00	1.099	1.009	22.4

Table 25：SAR of WIFI 5G for Head and Body(original report SUHR/2022/1001007).

Ant11 Test Record chain0											
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 1-g (W/kg)**	**Liquid Temp.(℃)**
Head Test data of U-NII-2A											
Left cheek	802.11n-HT40	54/5270	95.96%	1.042	0.190	0.14	13.68	15.00	1.355	**0.268**	22.3
Head Test data of U-NII-2C											
Left cheek	802.11n-HT40	110/5550	95.96%	1.042	0.269	-0.03	13.71	15.00	1.346	**0.377**	22.4
Head Test data of U-NII-3											
Left cheek	802.11n-HT40	151/5755	95.96%	1.042	0.396	0.08	13.65	15.00	1.365	**0.563**	22.3
Body worn Test data of U-NII-2A (Separate 15mm)											
Back side	802.11a	52/5260	98.10%	1.019	0.244	-0.02	18.55	19.00	1.109	**0.276**	22.3
Body worn Test data of U-NII-2C(Separate 15mm)											
Back side	802.11a	116/5580	98.10%	1.019	0.335	-0.04	18.59	19.00	1.099	**0.375**	22.4
Body worn Test data of U-NII-3(Separate 15mm)											
Back side	802.11a	157/5785	98.10%	1.019	0.379	-0.17	18.92	19.00	1.019	**0.394**	22.3
Hotspot Test data of U-NII-1(Separate 10mm)											
Back side	802.11a	48/5240	98.10%	1.019	0.373	0.03	18.61	19.00	1.094	**0.416**	22.3
Hotspot Test data of U-NII-3 (Separate 10mm)											
Right side	802.11a	157/5785	98.10%	1.019	0.383	-0.12	18.92	19.00	1.019	**0.398**	22.3
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 10-g (W/kg)**	**Liquid Temp.(℃)**
Product specific 10g SAR Test data of U-NII-2A(Separate 0mm)											
Back side	802.11a	52/5260	98.10%	1.019	0.563	0.03	18.55	19.00	1.109	**0.637**	22.3
Product specific 10g SAR Test data of U-NII-2C(Separate 0mm)											
Right side	802.11a	116/5580	98.10%	1.019	0.972	-0.12	18.59	19.00	1.099	**1.089**	22.4

Table 26：SAR of WIFI 5G for Head and Body(CMA-LX1).

Note:

1) As the highest reported SAR is smaller than 1.2 W/kg, and the tune-up of the other 802.11 modes are not higher than SAR test select, therefore the adjusted SAR is ≤ 1.2 W/kg for other 802.11 modes, SAR test for the other 802.11 modes are not required. For Product specific 10gSAR the highest reported SAR is smaller than 3.0 W/kg, SAR test for the other 802.11 modes are also not required.

8.2.2 SAR Result of BT

Ant9 Test Record											
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 1-g (W/kg)	Liquid Temp.(℃)
Head Test data											
Left cheek	DH5	39/2441	76.86%	1.301	0.090	-0.04	13.45	15.00	1.429	**0.168**	22.2
Left tilted	DH5	39/2441	76.86%	1.301	0.043	0.07	13.45	15.00	1.429	0.081	22.2
Right cheek	DH5	39/2441	76.86%	1.301	0.085	0.02	13.45	15.00	1.429	0.159	22.2
Right tilted	DH5	39/2441	76.86%	1.301	0.019	0.04	13.45	15.00	1.429	0.035	22.2
Left cheek with Battery 2#	DH5	39/2441	76.86%	1.301	0.087	0.06	13.45	15.00	1.429	0.162	22.2
Left cheek with Battery 3#	DH5	39/2441	76.86%	1.301	0.086	0.04	13.45	15.00	1.429	0.159	22.2
Left cheek with Battery 4#	DH5	39/2441	76.86%	1.301	0.083	0.08	13.45	15.00	1.429	0.154	22.2
Left cheek with Battery 5#	DH5	39/2441	76.86%	1.301	0.084	-0.05	13.45	15.00	1.429	0.157	22.2
Left cheek with Battery 6#	DH5	39/2441	76.86%	1.301	0.086	0.10	13.45	15.00	1.429	0.160	22.2
Body worn Test data(Separate 15mm)											
Front side	DH5	39/2441	76.86%	1.301	0.031	0.03	13.45	15.00	1.429	0.058	22.2
Back side	DH5	39/2441	76.86%	1.301	0.049	0.02	13.45	15.00	1.429	**0.092**	22.2
Back side with Battery 2#	DH5	39/2441	76.86%	1.301	0.048	0.09	13.45	15.00	1.429	0.090	22.2
Back side with Battery 3#	DH5	39/2441	76.86%	1.301	0.048	-0.05	13.45	15.00	1.429	0.089	22.2
Back side with Battery 4#	DH5	39/2441	76.86%	1.301	0.047	-0.12	13.45	15.00	1.429	0.087	22.2
Back side with Battery 5#	DH5	39/2441	76.86%	1.301	0.046	0.03	13.45	15.00	1.429	0.085	22.2
Back side with Battery 6#	DH5	39/2441	76.86%	1.301	0.045	0.07	13.45	15.00	1.429	0.083	22.2
Hotspot Test data (Separate 10mm)											
Front side	DH5	39/2441	76.86%	1.301	0.066	0.07	13.45	15.00	1.429	0.122	22.2
Back side	DH5	39/2441	76.86%	1.301	0.101	-0.14	13.45	15.00	1.429	**0.188**	22.2
Right side	DH5	39/2441	76.86%	1.301	0.087	0.03	13.45	15.00	1.429	0.162	22.2
Back side with Battery 2#	DH5	39/2441	76.86%	1.301	0.099	-0.08	13.45	15.00	1.429	0.183	22.2
Back side with Battery 3#	DH5	39/2441	76.86%	1.301	0.096	0.09	13.45	15.00	1.429	0.178	22.2
Back side with Battery 4#	DH5	39/2441	76.86%	1.301	0.094	0.02	13.45	15.00	1.429	0.175	22.2
Back side with Battery 5#	DH5	39/2441	76.86%	1.301	0.096	-0.04	13.45	15.00	1.429	0.178	22.2
Back side with Battery 6#	DH5	39/2441	76.86%	1.301	0.091	0.05	13.45	15.00	1.429	0.169	22.2

Table 27：SAR of BT for Head and Body(original report SUHR/2022/1001007).

Ant9 Test Record											
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 1-g (W/kg)	Liquid Temp.(℃)
Head Test data											
Left cheek	DH5	39/2441	76.86%	1.301	0.124	-0.08	13.45	15.00	1.429	**0.231**	21.9
Body worn Test data(Separate 15mm)											
Back side	DH5	39/2441	76.86%	1.301	0.039	-0.05	13.45	15.00	1.429	**0.072**	21.9
Hotspot Test data (Separate 10mm)											
Back side	DH5	39/2441	76.86%	1.301	0.086	-0.07	13.45	15.00	1.429	**0.160**	21.9

Table 28：SAR of BT for Head and Body(CMA-LX1).

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.
2) The device does not support DTM.

8.3.2 Simultaneous Transmission SAR Summation Scenario

Simultaneous Transmission SAR Summation Scenario for WLAN Head:

Test position		SARmax (W/kg)				Summed SAR		
		Main Ant	WiFi 2.4G Ant6(chain0)	WiFi 5G Ant6(chain0)	BT			
		1	2	3	4	1+2	1+3	1+4
GSM850 Ant0	Left cheek	0.205	0.299	0.563	0.231	0.504	0.768	0.436
	Left tilted	0.112	0.085	0.355	0.081	0.197	0.467	0.193
	Right cheek	0.254	0.064	0.187	0.159	0.318	0.441	0.413
	Right tilted	0.116	0.049	0.296	0.035	0.165	0.412	0.151
GSM1900 Ant1	Left cheek	0.118	0.299	0.563	0.231	0.417	0.681	0.349
	Left tilted	0.042	0.085	0.355	0.081	0.127	0.397	0.123
	Right cheek	0.080	0.064	0.187	0.159	0.144	0.267	0.239
	Right tilted	0.036	0.049	0.296	0.035	0.085	0.332	0.071
WCDMA II Ant1	Left cheek	0.096	0.299	0.563	0.231	0.395	0.659	0.327
	Left tilted	0.071	0.085	0.355	0.081	0.156	0.426	0.152
	Right cheek	0.100	0.064	0.187	0.159	0.164	0.287	0.259
	Right tilted	0.064	0.049	0.296	0.035	0.113	0.360	0.099
WCDMA V Ant0	Left cheek	0.215	0.299	0.563	0.231	0.514	0.778	0.446
	Left tilted	0.090	0.085	0.355	0.081	0.175	0.445	0.171
	Right cheek	0.242	0.064	0.187	0.159	0.306	0.429	0.401
	Right tilted	0.117	0.049	0.296	0.035	0.166	0.413	0.152
LTE Band5 Ant0	Left cheek	0.135	0.299	0.563	0.231	0.434	0.698	0.366
	Left tilted	0.090	0.085	0.355	0.081	0.175	0.445	0.171
	Right cheek	0.213	0.064	0.187	0.159	0.277	0.400	0.372
	Right tilted	0.095	0.049	0.296	0.035	0.144	0.391	0.130
LTE Band7 Ant1	Left cheek	0.101	0.299	0.563	0.231	0.400	0.664	0.332
	Left tilted	0.115	0.085	0.355	0.081	0.200	0.470	0.196
	Right cheek	0.311	0.064	0.187	0.159	0.375	0.498	0.470
	Right tilted	0.084	0.049	0.296	0.035	0.133	0.380	0.119

Test position		SARmax (W/kg)				Summed SAR		
		UP Ant	WiFi 2.4G Ant6(chain0)	WiFi 5G Ant6(chain0)	BT			
		1	2	3	4	1+2	1+3	1+4
GSM850 Ant3	Left cheek	0.543	0.299	0.563	0.231	0.842	1.106	0.774
	Left tilted	0.233	0.085	0.355	0.081	0.318	0.588	0.314
	Right cheek	0.666	0.064	0.187	0.159	0.730	0.853	0.825
	Right tilted	0.437	0.049	0.296	0.035	0.486	0.733	0.472
GSM1900 Ant3	Left cheek	0.747	0.299	0.563	0.231	1.046	1.310	0.978
	Left tilted	0.757	0.085	0.355	0.081	0.842	1.112	0.838
	Right cheek	0.927	0.064	0.187	0.159	0.991	1.114	1.086
	Right tilted	0.940	0.049	0.296	0.035	0.989	1.236	0.975
WCDMA II Ant3	Left cheek	0.721	0.299	0.563	0.231	1.020	1.284	0.952
	Left tilted	0.893	0.085	0.355	0.081	0.978	1.248	0.974
	Right cheek	0.847	0.064	0.187	0.159	0.911	1.034	1.006
	Right tilted	1.081	0.049	0.296	0.035	1.130	1.377	1.116
WCDMA V Ant3	Left cheek	0.486	0.299	0.563	0.231	0.785	1.049	0.717
	Left tilted	0.341	0.085	0.355	0.081	0.426	0.696	0.422
	Right cheek	1.057	0.064	0.187	0.159	1.121	1.244	1.216
	Right tilted	0.479	0.049	0.296	0.035	0.528	0.775	0.514
LTE Band5 Ant3	Left cheek	0.305	0.299	0.563	0.231	0.604	0.868	0.536
	Left tilted	0.206	0.085	0.355	0.081	0.291	0.561	0.287
	Right cheek	0.719	0.064	0.187	0.159	0.783	0.906	0.878
	Right tilted	0.360	0.049	0.296	0.035	0.409	0.656	0.395
LTE Band7 Ant3	Left cheek	0.982	0.299	0.563	0.231	1.281	1.545	1.213
	Left tilted	0.998	0.085	0.355	0.081	1.083	1.353	1.079
	Right cheek	0.948	0.064	0.187	0.159	1.012	1.135	1.107
	Right tilted	1.075	0.049	0.296	0.035	1.124	1.371	1.110

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Simultaneous Transmission SAR Summation Scenario for WLAN Body worn:

Test position		SARmax (W/kg)				Summed SAR		
		Main Ant	WiFi 2.4G Ant6(chain0)	WiFi 5G Ant6(chain0)	BT			
		1	2	3	4	1+2	1+3	1+4
GSM850 Ant0	Front side	0.299	0.180	0.151	0.058	0.479	0.450	0.357
	Back side	0.352	0.273	0.394	0.092	0.625	0.746	0.444
GSM1900 Ant1	Front side	0.232	0.180	0.151	0.058	0.412	0.383	0.290
	Back side	0.552	0.273	0.394	0.092	0.825	0.946	0.644
WCDMA II Ant1	Front side	0.172	0.180	0.151	0.058	0.352	0.323	0.230
	Back side	0.421	0.273	0.394	0.092	0.694	0.815	0.513
WCDMA V Ant0	Front side	0.297	0.180	0.151	0.058	0.477	0.448	0.355
	Back side	0.368	0.273	0.394	0.092	0.641	0.762	0.460
LTE Band5 Ant0	Front side	0.174	0.180	0.151	0.058	0.354	0.325	0.232
	Back side	0.226	0.273	0.394	0.092	0.499	0.620	0.318
LTE Band7 Ant1	Front side	0.113	0.180	0.151	0.058	0.293	0.264	0.171
	Back side	0.339	0.273	0.394	0.092	0.612	0.733	0.431

Test position		SARmax (W/kg)				Summed SAR		
		UP Ant	WiFi 2.4G Ant6(chain0)	WiFi 5G Ant6(chain0)	BT			
		1	2	3	4	1+2	1+3	1+4
GSM850 Ant3	Front side	0.130	0.180	0.151	0.058	0.310	0.281	0.188
	Back side	0.229	0.273	0.340	0.092	0.502	0.569	0.321
GSM1900 Ant3	Front side	0.189	0.180	0.151	0.058	0.369	0.340	0.247
	Back side	0.358	0.273	0.340	0.092	0.631	0.698	0.450
WCDMA II Ant3	Front side	0.284	0.180	0.151	0.058	0.464	0.435	0.342
	Back side	0.580	0.273	0.340	0.092	0.853	0.920	0.672
WCDMA V Ant3	Front side	0.188	0.180	0.151	0.058	0.368	0.339	0.246
	Back side	0.309	0.273	0.340	0.092	0.582	0.649	0.401
LTE Band5 Ant3	Front side	0.105	0.180	0.151	0.058	0.285	0.256	0.163
	Back side	0.214	0.273	0.340	0.092	0.487	0.554	0.306
LTE Band7 Ant3	Front side	0.257	0.180	0.151	0.058	0.437	0.408	0.315
	Back side	0.424	0.273	0.340	0.092	0.697	0.764	0.516

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Simultaneous Transmission SAR Summation Scenario for WLAN Hotspot:

Test position		SARmax (W/kg)				Summed SAR		
		Main Ant	WiFi 2.4G Ant6(chain0)	WiFi 5G Ant6(chain0)	BT			
		1	2	3	4	1+2	1+3	1+4
GSM850 Ant0	Front side	0.442	0.337	0.236	0.122	0.779	0.678	0.564
	Back side	0.578	0.361	0.470	0.188	0.939	1.048	0.766
	Left side	0.220				0.220	0.220	0.220
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side			0.292			0.292	
	Bottom side	0.008				0.008	0.008	0.008
GSM1900 Ant1	Front side	0.420	0.337	0.236	0.122	0.757	0.656	0.542
	Back side	1.081	0.361	0.470	0.188	1.442	1.551	1.269
	Left side							
	Right side	0.122	0.404	0.723	0.162	0.526	0.845	0.284
	Top side			0.292			0.292	
	Bottom side	0.649				0.649	0.649	0.649
WCDMA II Ant1	Front side	0.284	0.337	0.236	0.122	0.621	0.520	0.406
	Back side	0.870	0.361	0.470	0.188	1.231	1.340	1.058
	Left side							
	Right side	0.216	0.404	0.723	0.162	0.620	0.939	0.378
	Top side			0.292			0.292	
	Bottom side	0.739				0.739	0.739	0.739
WCDMA V Ant0	Front side	0.417	0.337	0.236	0.122	0.754	0.653	0.539
	Back side	0.655	0.361	0.470	0.188	1.016	1.125	0.843
	Left side	0.419				0.419	0.419	0.419
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side			0.292			0.292	
	Bottom side	0.016				0.016	0.016	0.016
LTE Band5 Ant0	Front side	0.305	0.337	0.236	0.122	0.642	0.541	0.427
	Back side	0.403	0.361	0.470	0.188	0.764	0.873	0.591
	Left side	0.134				0.134	0.134	0.134
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side			0.292			0.292	
	Bottom side	0.165				0.165	0.165	0.165
LTE Band7 Ant1	Front side	0.224	0.337	0.236	0.122	0.561	0.460	0.346
	Back side	0.729	0.361	0.470	0.188	1.090	1.199	0.917
	Left side	0.041				0.041	0.041	0.041
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side			0.292			0.292	
	Bottom side	0.618				0.618	0.618	0.618

Test position		SARmax (W/kg)				Summed SAR		
		UP Ant	WiFi 2.4G Ant6(chain0)	WiFi 5G Ant6(chain0)	BT			
		1	2	3	4	1+2	1+3	1+4
GSM850 Ant3	Front side	0.184	0.337	0.236	0.122	0.521	0.420	0.306
	Back side	0.382	0.361	0.470	0.188	0.743	0.852	0.570
	Left side							
	Right side	0.257	0.404	0.723	0.162	0.661	0.980	0.419
	Top side	0.100		0.292		0.100	0.392	0.100
	Bottom side							
GSM1900 Ant3	Front side	0.292	0.337	0.236	0.122	0.629	0.528	0.414
	Back side	0.646	0.361	0.470	0.188	1.007	1.116	0.834
	Left side	0.241				0.241	0.241	0.241
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side	0.754		0.292		0.754	1.046	0.754
	Bottom side							
WCDMA II Ant3	Front side	0.250	0.337	0.236	0.122	0.587	0.486	0.372
	Back side	0.539	0.361	0.470	0.188	0.900	1.009	0.727
	Left side	0.083				0.083	0.083	0.083
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side	0.568		0.292		0.568	0.860	0.568
	Bottom side							
WCDMA V Ant3	Front side	0.341	0.337	0.236	0.122	0.678	0.577	0.463
	Back side	0.576	0.361	0.470	0.188	0.937	1.046	0.764
	Left side	0.425				0.425	0.425	0.425
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side	0.003		0.292		0.003	0.295	0.003
	Bottom side							
LTE Band5 Ant3	Front side	0.185	0.337	0.236	0.122	0.522	0.421	0.307
	Back side	0.369	0.361	0.470	0.188	0.730	0.839	0.557
	Left side	0.300				0.300	0.300	0.300
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side	0.133		0.292		0.133	0.425	0.133
	Bottom side							
LTE Band7 Ant3	Front side	0.209	0.337	0.236	0.122	0.546	0.445	0.331
	Back side	0.739	0.361	0.470	0.188	1.100	1.209	0.927
	Left side	0.330				0.330	0.330	0.330
	Right side		0.404	0.723	0.162	0.404	0.723	0.162
	Top side	1.031		0.292		1.031	1.323	1.031
	Bottom side							

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Simultaneous Transmission SAR Summation Scenario for WLAN Product specific 10g SAR:

Test position		SARmax (W/kg)				Summed SAR		
		WWAN	WiFi 2.4G Ant6(chain0)	WiFi 5G Ant6(chain0)	BT			
		1	2	3	4	1+2	1+3	1+4
GSM1900 Ant3	Front side			0.363			0.363	
	Back side			0.818			0.818	
	Left side							
	Right side			1.176			1.176	
	Top side	1.683		0.239		1.683	1.922	1.683
	Bottom side							
LTE Band 7 Ant3	Front side			0.363			0.363	
	Back side			0.818			0.818	
	Left side							
	Right side			1.176			1.176	
	Top side	2.262		0.239		2.262	2.501	2.262
	Bottom side							

9 Equipment list

Test Platform	SPEAG DASY Professional
Description	SAR Test System
Software Reference	DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Hardware Reference

	Equipment	Manufacturer	Model	Serial Number	Calibration Date	Due date of calibration
☒	Twin Phantom	SPEAG	SAM2	1563	NCR	NCR
☒	Twin Phantom	SPEAG	SAM3	1770	NCR	NCR
☒	Twin Phantom	SPEAG	SAM5	1481	NCR	NCR
☒	Twin Phantom	SPEAG	SAM6	1824	NCR	NCR
☒	DAE	SPEAG	DAE4	1327	2021-11-05	2022-11-04
☒	DAE	SPEAG	DAE4	1324	2021-06-22	2022-06-21
☒	DAE	SPEAG	DAE4	1374	2021-11-05	2022-11-04
☒	DAE	SPEAG	DAE4	1428	2021-04-09	2022-04-08
☒	E-Field Probe	SPEAG	EX3DV4	3962	2021-04-26	2022-04-25
☒	E-Field Probe	SPEAG	EX3DV4	7620	2021-08-24	2022-08-23
☒	E-Field Probe	SPEAG	EX3DV4	3982	2021-12-29	2022-12-28
☒	E-Field Probe	SPEAG	EX3DV4	3789	2021-08-12	2022-08-11
☒	Validation Kits	SPEAG	D835V2	4d256	2020-04-15	2023-04-14
☒	Validation Kits	SPEAG	D1900V2	5d114	2020-08-27	2023-08-26
☒	Validation Kits	SPEAG	D2450V2	1038	2020-04-08	2023-04-07
☒	Validation Kits	SPEAG	D2600V2	1180	2021-05-12	2024-05-11
☒	Validation Kits	SPEAG	D5GHzV2	1313	2021-01-25	2024-01-24
☒	Dielectric parameter probes	SPEAG	DAKS-3.5	0005	2021-07-15	2022-07-14
☒	Vector Network Analyzer and Vector Reflectometer	SPEAG	DAKS_VNA R140	0140913	2021-07-22	2022-07-21
☒	Universal Radio Communication Tester	R&S	CMW500	169633	2022-02-14	2023-02-13
☒	Radio Communication Analyzer	Anritsu	MT8820C	6201010267	2021-04-01	2022-03-31
☒	RF Bi-Directional Coupler	Agilent	86205-60001	MY31400031	NCR	NCR
☒	Signal Generator	R&S	SMB100A	182393	2022-02-15	2023-02-14

☒	Preamplifier	Qiji	YX28980933	202104001	NCR	NCR
☒	Power Meter	Aglient	E4419B	6843318103	2021-06-08	2022-06-07
☒	Power Sensor	Aglient	E9301A	MY41496508	2021-09-09	2022-09-08
☒	Power Sensor	Aglient	E9301H	MY41495605	2021-06-08	2022-06-07
☒	Attenuator	SHX	TS2-3dB	30704	NCR	NCR
☒	Coaxial low pass filter	Mini-Circuits	VLF-2500(+)	NA	NCR	NCR
☒	Coaxial low pass filter	Microlab Fxr	LA-F13	NA	NCR	NCR
☒	DC POWER SUPPLY	SAKO	SK1730SL5A	NA	NCR	NCR
☒	Speed reading thermometer	LKM	DTM3000	SUW201-30-01	2021-10-09	2022-10-08
☒	Humidity and Temperature Indicator	MingGao	MingGao	NA	2021-06-16	2022-06-15

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: DUT Antenna Locations

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