



SAR TEST REPORT

Report No.: 20240417G06548X-W8
Product Name: SOLIS GO
Model Name: SGO24
Trade Name: 
Brand Name: SIMO
FCC ID: 2A9UP-SOL24PB
Applicant: SIMO Holdings Inc.
Address: PO.Box PO.Box 309, Ugland House, GrandCayman, KY1-1104, Cayman Islands
Test Date: 2024/04/30~2024/05/14
Issued by: CCIC Southern Testing Co., Ltd.
Lab Location: Electronic Testing Building, No. 43 Shahe Road Xili Street, Nanshan District, Shenzhen, Guangdong 518055, China
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Test Report

Applicant: SIMO Holdings Inc.

Applicant Address: PO.Box PO.Box 309, Ugland House, GrandCayman, KY1-1104,
Cayman Islands

Manufacturer: SIMO Holdings Inc.

Manufacturer Address: PO.Box PO.Box 309, Ugland House, GrandCayman, KY1-1104,
Cayman Islands

Test Standards: **47CFR §2.1093-** Radiofrequency Radiation Exposure Evaluation:
Portable Devices;
ANSI C95.1-1992: Safety Levels with Respect to Human Exposure to
Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.(IEEE Std
C95.1-1991)
IEEE 1528-2013: IEEE Recommended Practice for Determining the
Peak Spatial-Average Specific Absorption Rate (SAR) in the Human
Head from Wireless Communications Devices: Measurement
Techniques

Test Result: Pass

Tested by: Carl Wei 2024-05-26
Carl Wei, Test Engineer

Reviewed by: Sun Jiaohui 2024-05-26
Sun Jiaohui, Senior Engineer

Approved by: Chris You 2024-05-26
Chris You, Manager



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1. Administrative Data

1.1 Testing Laboratory

Test Site:	CCIC Southern Testing Co., Ltd.
Address:	Electronic Testing Building, No.43, Shahe Road, Xili Street, Nanshan District, Shenzhen, Guangdong, China
A2LA Lab Code:	CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025:2017. The accreditation certificate number is 5721.01
FCC Registration:	CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until June.30, 2025.
ISED Registration:	CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until June.30, 2025.
Test Environment Condition:	Temperature (°C): 18 °C ~25 °C Relative Humidity (%): 35%~75% RH Atmospheric Pressure (kPa): 86KPa-106KPa

2. Equipment Under Test (EUT)

Identification of the Equipment under Test

Device type :	portable device	
Exposure category:	uncontrolled environment / general population	
Product Name:	SOLIS GO	
Brand Name:	SIMO	
Model Name:	SGO24	
Operating Band(s):	WCDMA 850/1700/1900,LTE Band 2,4,5,7,12,17,25,26,41, CA: B7C/B41C, WIFI2.4G, WIFI5G, Bluetooth	
Test Band(s):	WCDMA 850/1700/1900,LTE Band 2,4,5,7,12,17,25,26,41, CA: B7C/B41C, WIFI2.4G, WIFI5G, Bluetooth	
Test modulation:	WCDMA(QPSK),LTE(QPSK/16QAM/64QAM), WI-FI 2.4G(DSSS, OFDM), WI-FI 5G(OFDM), Bluetooth(GFSK/ π /4-DQPSK/8-DPSK)	
IMEI:	863063050696495/863063050697493/868443020001028	
Tested frequency range(s)	transmitter frequency range	receiver frequency range
WCDMA Band 850:	824-849 MHz	869-894 MHz
WCDMA Band 1700:	1710-1755 MHz	2110-2155 MHz
WCDMA Band 1900:	1850-1910 MHz	1930-1990 MHz
LTE Band 2:	1850-1910 MHz	1930-1990 MHz
LTE Band 4:	1710-1755 MHz	2110-2155 MHz
LTE Band 5:	824-849 MHz	869-894 MHz
LTE Band 7:	2500-2570 MHz	2620-2690 MHz
LTE Band 12:	698-716 MHz	728-746 MHz
LTE Band 17:	704-716 MHz	734-746 MHz
LTE Band 25:	1850-1915 MHz	1930-1995 MHz
LTE Band 26:	814-849 MHz	859-894 MHz
LTE Band 41:	2555-2655 MHz	
Wi-Fi:	2412-2462 MHz	
	5150-5250 MHz	
	5725-5850 MHz	
Bluetooth:	2402-2480 MHz	
Antenna type :	Internal antenna	
Hotspot :	WLAN support Hotspot mode	
Battery options :	Model No.: 906090P Nominal Capacity: 8000mAh Rated Voltage: 3.8 V Charge Limit: 4.35 V Manufacturer: Dongguan juxin electronic technology co.,LTD	
MAX. SAR Value:	Body-worn: 1.064 W/Kg(Limit:1.6W/Kg, 10mm distance) Hotspot: 1.064 W/Kg(Limit:1.6W/Kg, 10mm distance)	

Note:

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



3. SAR Summary

Highest Standalone SAR Summary

Exposure Position	Frequency Band	Scaled 1g-SAR(W/kg)	Highest Scaled 1g-SAR(W/kg)
Body-worn (10mm Gap)	WCDMA Band 850	0.242	1.064
	WCDMA Band 1700	1.037	
	WCDMA Band 1900	0.704	
	LTE Band 2	0.698	
	LTE Band 4	1.064	
	LTE Band 5	0.112	
	LTE Band 7	1.026	
	LTE Band 12	0.094	
	LTE Band 17	0.047	
	LTE Band 25	0.826	
	LTE Band 26	0.357	
	LTE Band 41	0.946	
	WIFI 2.4G	0.197	
	WIFI U-NII 1	0.280	
	WIFI U-NII 3	0.231	
	Bluetooth	0.023	

Exposure Position	Frequency Band	Scaled 1g-SAR(W/kg)	Highest Scaled 1g-SAR(W/kg)
Hotspot (10mm Gap)	WCDMA Band 850	0.242	1.064
	WCDMA Band 1700	1.037	
	WCDMA Band 1900	0.704	
	LTE Band 2	0.698	
	LTE Band 4	1.064	
	LTE Band 5	0.112	
	LTE Band 7	1.026	
	LTE Band 12	0.094	
	LTE Band 17	0.047	
	LTE Band 25	0.826	
	LTE Band 26	0.357	
	LTE Band 41	0.946	
	WIFI 2.4G	0.197	
	WIFI U-NII 1	0.280	
	WIFI U-NII 3	0.231	



Highest Simultaneous SAR Summary

Exposure Position	Frequency Band	Highest Simultaneous 1g-SAR(W/kg)
Back(10mmGap)	WWAN(LTE Band 7 ANT 2)&WIFI	1.306

Note:
1. The SAR limit (Head & Body: SAR1g 1.6 W/kg for general population uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992.

4. Specific Absorption Rate (SAR)

4.1 Introduction

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

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

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

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

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

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

where C is the specific heat capacity, δT is the temperature rise and δt the exposure duration, or related to the electrical field in the tissue by

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

where σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the rms electrical field strength.

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



4.2 Applicable Standards and Limits

4.2.1 Applicable Standards

47CFR §2.1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
ANSI C95.1–1992	Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.(IEEE Std C95.1-1991)
IEEE 1528–2013	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
KDB 248227 D01	v02r02 802.11 Wi-Fi SAR
KDB 447498 D01	v06 General RF Exposure Guidance
KDB 616217 D04	v01r02 SAR for laptop and tablets
KDB 648474 D04	v01r03 Handset SAR
KDB 865664 D01	v01r04 SAR Measurement 100MHz to 6GHz
KDB 865664 D02	v01r02 SAR Exposure Reporting
KDB 941225 D01	v03r01 3G SAR Procedures
KDB 941225 D05	v02r05 SAR for LTE Devices
KDB 941225 D05A	v01r02 LTE Rel.10 KDB Inquiry Sheet
KDB 941225 D06	v02r01 Hotspot Mode

4.2.2 RF exposure Limits

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

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

Notes:

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

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

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

4.3 Phantoms

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

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



SAM Twin Phantom

4.4 Device Holder

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

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



Device holder

4.5 Probe Specification

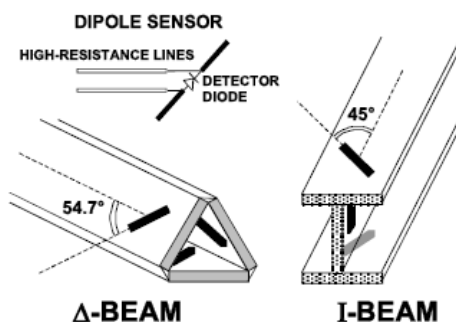


Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	700 MHz to 3 GHz; Linearity: ± 0.5 dB (700 MHz to 3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

Isotropic E-Field Probe

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

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





5. Tissue check and recommend Dielectric Parameters

5.1 Tissue Dielectric Parameters for Head and Body Phantoms

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

Table 1: Recommended Dielectric Performance of Tissue

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

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

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

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



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

Table 2 Recommended Tissue Dielectric Parameters

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



5.2 Simulate liquid

Liquid check results:

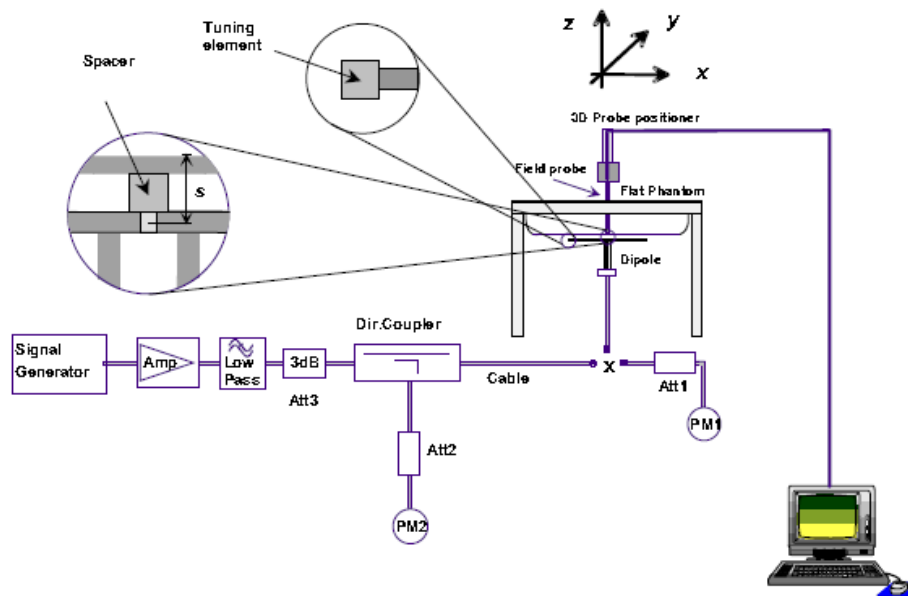
Table 3: Dielectric Performance of Tissue Simulating Liquid

/	Frequency	Permittivity ϵ	Conductivity σ (S/m)	Liquid Temp. (°C)	Test Date
Target value	750MHz	41.9 ±5% (39.805~43.995)	0.89 ±5% (0.8455~0.9345)	21.9	2024/05/06
Validation value		42.73	0.91		
Target value	835MHz	41.5 ±5% (39.425~43.575)	0.90 ±5% (0.855~0.945)	22.2	2024/05/09
Validation value		41.24	0.92		
Target value	1800MHz	40.0 ±5% (38.0~42.0)	1.40 ±5% (1.33~1.47)	21.2	2024/04/30
Validation value		40.83	1.38		
Target value	1900MHz	40.0 ±5% (38.0~42.0)	1.40 ±5% (1.33~1.47)	21.7	2024/05/07
Validation value		39.80	1.42		
Target value	2450MHz	39.2 ±5% (37.24~41.16)	1.80 ±5% (1.71~1.89)	21.8	2024/05/12
Validation value		39.65	1.84		
Target value	2600MHz	39.0 ±5% (37.05~40.95)	1.96 ±5% (1.862~2.058)	21.9	2024/05/14
Validation value		39.26	1.98		
Target value	5200MHz	36.0 ±5% (34.20~37.80)	4.66 ±5% (4.427~4.893)	21.2	2024/05/10
Validation value		35.26	4.51		
Target value	5800MHz	35.3 ±5% (33.535~37.065)	5.27 ±5% (5.0065~5.5335)	21.5	2024/05/11
Validation value		34.14	5.25		

SAR System validation

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

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



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

- Note 1: In this method, the directional coupler is used for monitoring rather than setting the exact feed power level. If, however, the directional coupler is used for power measurement, you should check the frequency range and power rating of the coupler and measure the coupling factor (referred to output) at the test frequency using a VNA.
- Note 2: Remember that the use of a 3dB attenuator (as shown in Figure 8.1 of P1528) means that you need an RF amplifier of 2 times greater power for the same feed power. The other issue is the cable length. You might get up to 1dB of loss per meter of cable, so the cable length after the coupler needs to be quite short.
- Note 3: For the validation testing done using CW signals, most power meters are suitable. However, if you are measuring the output of a modulated signal from either a signal generator or a handset, you must ensure that the power meter correctly reads the modulated signals.

The measured 1-gram averaged SAR values of the device against the phantom are provided in Tables 5 and Table 6. The body phantom were full of the body tissue simulating liquid. The EUT was supplied with full-charged battery for each measurement.

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



Table 4: system validation (1g)
System Check Results

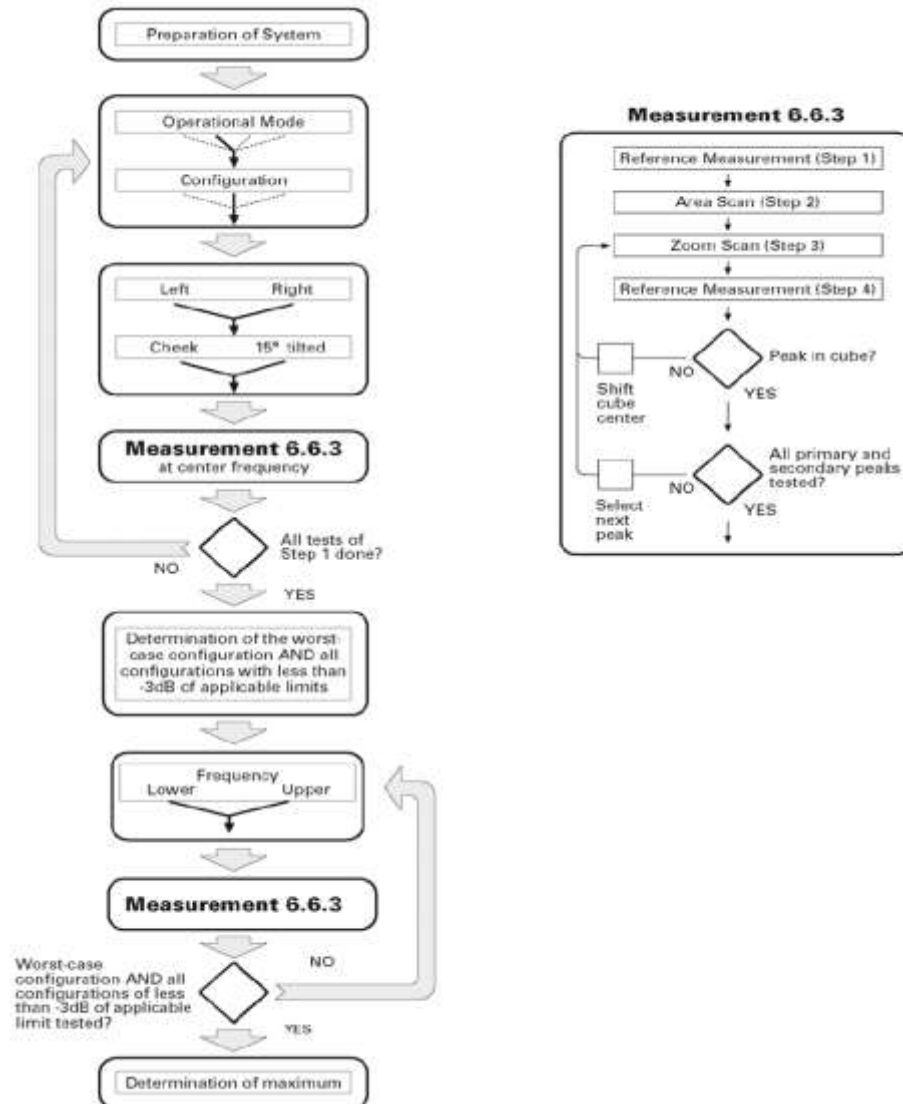
Frequency	Duty cycle	Target value (1-g) (W/Kg)	10mW Test value (1-g) (W/Kg)	Test SAR Normalized to 1W(w/Kg)	Test Date
750MHz	1:1	8.65 W/kg $\pm$ 10% (7.785~9.515)	0.0940	9.40	2024/05/06
835MHz	1:1	9.93 W/kg $\pm$ 10% (8.937~10.923)	0.1007	10.07	2024/05/09
1800MHz	1:1	37.81 W/kg $\pm$ 10% (34.029~41.591)	0.3725	37.25	2024/04/30
1900MHz	1:1	41.50 W/kg $\pm$ 10% (37.350~45.650)	0.3951	39.51	2024/05/07
2450MHz	1:1	51.74 W/kg $\pm$ 10% (46.566~56.914)	0.5368	53.68	2024/05/12
2600MHz	1:1	57.13 W/kg $\pm$ 10% (51.417~62.843)	0.5553	55.53	2024/05/14
5200MHz	1:1	152.95 W/kg $\pm$ 10% (137.655~168.245)	1.5426	154.26	2024/05/10
5800MHz	1:1	174.67 W/kg $\pm$ 10% (157.203~192.137)	1.7196	171.96	2024/05/11

Note:

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

6. SAR measurement procedure

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



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

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

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



7. Conducted RF Output Power

7.1 WCDMA Conducted output Power

WCDMA850 (Band V) ANT 2		Averaged output Power (dBm)		
		4132CH	4183CH	4233CH
		826.4	836.6	846..6
WCDMA	12.2kbps RMC	23.05	23.06	23.14
HSDPA	Subtest 1	22.11	22.10	22.22
	Subtest 2	21.62	21.54	21.71
	Subtest 3	21.62	21.54	17.71
	Subtest 4	21.61	21.60	21.63
HSUPA	Subtest 1	20.10	20.07	20.17
	Subtest 2	20.12	20.11	20.20
	Subtest 3	21.13	21.12	20.17
	Subtest 4	19.65	19.62	19.69
	Subtest 5	21.11	21.10	21.19
WCDMA1700 (Band IV) ANT 2		Averaged output Power (dBm)		
		1312CH	1413CH	1513CH
		1712.4	1732.6	1752.6
WCDMA	12.2kbps RMC	23.73	23.79	23.88
HSDPA	Subtest 1	22.59	22.78	22.96
	Subtest 2	22.00	22.30	22.39
	Subtest 3	22.12	22.23	22.48
	Subtest 4	22.04	22.30	22.47
HSUPA	Subtest 1	20.56	20.78	20.94
	Subtest 2	20.55	20.80	20.90
	Subtest 3	21.55	21.79	21.89
	Subtest 4	20.10	20.31	20.39
	Subtest 5	21.66	21.90	21.92
WCDMA1900 (Band II) ANT 2		Averaged output Power (dBm)		
		9262CH	9400CH	9538cH
		1852.4	1880.0	1907.6
WCDMA	12.2kbps RMC	23.61	23.71	23.48
HSDPA	Subtest 1	22.68	22.80	22.66
	Subtest 2	22.18	22.26	22.14
	Subtest 3	22.20	22.33	22.19
	Subtest 4	22.19	22.23	22.06
HSUPA	Subtest 1	20.67	20.76	20.64
	Subtest 2	20.60	20.71	20.54
	Subtest 3	21.65	21.67	21.51
	Subtest 4	20.15	20.28	20.14
	Subtest 5	21.70	21.75	21.61



Note:

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

7.2 LTE Conducted peak output Power

LTE Test Configurations

The CMW500 Wide Band Radio Communication Tester was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR test were performed with the same number of RB and RB offsets transmitting on all frames.

1) Spectrum Plots for RB configurations

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

2) MPR

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

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

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

Modulation	Channel bandwidth / Transmission bandwidth configuration [RB]						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

3) A-MPR LTE procedures for SAR testing

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

4) LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test requirements i) QPSK with 1 RB allocation

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



1. LTE Band 2 Conducted Power Test Verdict:

LTE FDD Band 2 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				18607/1850.7	18900/1880.0	19193/1909.3	
1.4MHz	QPSK	1	0	22.95	22.91	22.84	22.5±1.0
		1	3	23.08	23.14	23.01	
		1	5	22.93	22.94	22.83	
		3	0	22.09	22.06	21.93	21.5±1.0
		3	2	22.06	22.06	22.02	
		3	3	22.12	22.07	21.95	
		6	0	22.07	22.04	21.96	21.5±1.0
	16QAM	1	0	21.94	21.89	21.83	21.5±1.0
		1	3	22.12	22.12	22.03	
		1	5	21.90	22.01	21.74	
		3	0	21.08	21.04	21.11	20.5±1.0
		3	2	21.16	21.13	21.06	
		3	3	21.12	21.14	21.10	
		6	0	21.05	21.08	20.93	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				18615/1851.5	18900/1880.0	19185/1908.5	
3MHz	QPSK	1	0	22.96	22.80	22.92	22.5±1.0
		1	7	22.94	22.98	22.87	
		1	14	22.87	22.80	22.83	
		8	0	21.97	21.93	21.88	21.5±1.0
		8	4	22.00	21.90	21.86	
		8	7	21.93	21.87	21.83	
		15	0	21.91	21.91	21.86	21.5±1.0
	16QAM	1	0	21.87	22.03	21.95	21.5±1.0
		1	7	21.97	22.00	21.86	
		1	14	21.85	21.92	21.79	
		8	0	21.03	20.93	20.93	20.5±1.0
		8	4	21.04	20.95	20.95	
		8	7	21.01	20.88	20.90	
		15	0	20.94	20.91	20.90	20.5±1.0



LTE FDD Band 2 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				18625/1852.5	18900/1880.0	19175/1907.5	
5MHz	QPSK	1	0	22.84	22.81	22.72	22.5±1.0
		1	13	22.97	22.96	22.89	
		1	24	22.78	22.78	22.73	
		12	0	21.92	21.88	21.81	21.5±1.0
		12	6	21.94	21.93	21.85	
		12	13	21.92	21.89	21.84	
		25	0	21.90	21.85	21.80	21.5±1.0
	16QAM	1	0	22.08	21.94	22.01	21.5±1.0
		1	13	22.14	22.09	21.85	
		1	24	22.04	21.79	21.97	
		12	0	20.92	20.92	20.83	20.5±1.0
		12	6	20.95	20.95	20.87	
		12	13	20.94	21.00	20.82	
		25	0	20.93	20.98	20.90	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				18650/1855.0	18900/1880.0	19150/1905.0	
10MHz	QPSK	1	0	22.93	22.83	22.89	22.5±1.0
		1	25	23.04	22.96	23.06	
		1	49	22.87	22.83	22.87	
		25	0	22.05	21.89	21.92	21.5±1.0
		25	13	22.00	21.89	21.95	
		25	25	22.02	21.92	21.86	
		50	0	21.98	21.96	21.91	21.5±1.0
	16QAM	1	0	22.06	21.98	22.07	21.5±1.0
		1	25	22.15	22.04	22.13	
		1	49	22.03	21.86	22.02	
		25	0	21.05	20.95	21.06	20.5±1.0
		25	13	21.05	20.95	21.06	
		25	25	21.08	20.96	20.95	
		50	0	21.04	20.99	20.94	20.5±1.0



LTE FDD Band 2 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				18675/1857.5	18900/1880.0	19125/1902.5	
15MHz	QPSK	1	0	22.90	22.93	22.88	22.5±1.0
		1	38	22.94	23.03	22.90	
		1	74	22.79	22.84	22.81	
		36	0	21.96	22.06	22.04	21.5±1.0
		36	18	22.01	22.08	22.02	
		36	39	22.03	21.94	21.89	
		75	0	21.95	22.04	21.92	21.5±1.0
	16QAM	1	0	22.08	21.95	22.01	21.5±1.0
		1	38	22.14	22.07	22.01	
		1	74	22.05	21.91	21.95	
		36	0	21.08	21.05	21.04	20.5±1.0
		36	18	20.97	20.93	21.03	
		36	39	21.09	21.08	20.88	
		75	0	20.97	21.02	20.91	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				18700/1860.0	18900/1880.0	19100/1900.0	
20MHz	QPSK	1	0	23.08	22.93	22.98	22.5±1.0
		1	50	23.16	23.01	23.13	
		1	99	22.91	22.94	22.86	
		50	0	21.94	22.01	21.95	21.5±1.0
		50	25	21.94	22.03	21.93	
		50	50	21.90	22.09	21.79	
		100	0	21.95	22.05	21.88	21.5±1.0
	16QAM	1	0	21.93	22.02	21.98	21.5±1.0
		1	50	22.06	22.11	22.13	
		1	99	22.09	22.01	22.02	
		50	0	21.00	21.01	20.98	20.5±1.0
		50	25	21.03	21.05	20.98	
		50	50	20.96	21.08	20.82	
		100	0	20.99	21.01	20.90	20.5±1.0



2. LTE Band 4 Conducted Power Test Verdict:

LTE FDD Band 4 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	22.78	22.80	22.77	22.5±1.0
		1	3	22.88	22.83	22.85	
		1	5	22.75	22.72	22.67	
		3	0	21.85	21.79	21.79	21.5±1.0
		3	2	21.86	21.79	21.80	
		3	3	21.81	21.82	21.79	
		6	0	21.73	21.72	21.74	21.0±1.0
	16QAM	1	0	21.76	21.71	21.74	21.5±1.0
		1	3	21.90	21.81	21.96	
		1	5	21.71	21.64	21.75	
		3	0	21.03	20.79	20.73	20.5±1.0
		3	2	20.83	20.84	20.76	
		3	3	21.05	20.91	20.81	
		6	0	20.87	20.75	20.74	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	22.60	22.69	22.49	22.5±1.0
		1	7	22.67	22.81	22.52	
		1	14	22.59	22.69	22.52	
		8	0	21.59	21.71	21.55	21.0±1.0
		8	4	21.61	21.74	21.63	
		8	7	21.58	21.70	21.41	
		15	0	21.57	21.67	21.40	21.0±1.0
	16QAM	1	0	21.55	21.69	21.65	21.5±1.0
		1	7	21.67	21.58	21.44	
		1	14	21.52	21.61	21.52	
		8	0	20.68	20.70	20.65	20.5±1.0
		8	4	20.67	20.70	20.61	
		8	7	20.61	20.67	20.54	
		15	0	20.67	20.68	20.48	20.5±1.0



LTE FDD Band 4 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	22.67	22.69	22.68	22.0±1.0
		1	13	22.73	22.68	22.73	
		1	24	22.53	22.60	22.59	
		12	0	21.69	21.62	21.66	21.0±1.0
		12	6	21.69	21.68	21.64	
		12	13	21.63	21.66	21.69	
		25	0	21.62	21.68	21.70	21.0±1.0
	16QAM	1	0	21.52	21.64	21.64	21.5±1.0
		1	13	21.57	21.79	21.62	
		1	24	21.69	21.74	21.58	
		12	0	20.67	20.71	20.68	20.0±1.0
		12	6	20.67	20.65	20.67	
		12	13	20.64	20.70	20.68	
		25	0	20.72	20.69	20.71	20.0±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20000/1715.0	20175/1732.5	20350/1750.0	
10MHz	QPSK	1	0	22.73	22.77	22.74	22.5±1.0
		1	25	22.79	22.79	22.80	
		1	49	22.71	22.70	22.73	
		25	0	21.67	21.79	21.72	21.5±1.0
		25	13	21.74	21.80	21.74	
		25	25	21.65	21.72	21.75	
		50	0	21.66	21.73	21.75	21.5±1.0
	16QAM	1	0	21.79	21.57	21.72	21.5±1.0
		1	25	21.75	21.85	21.92	
		1	49	21.64	21.67	21.66	
		25	0	20.77	20.82	20.80	20.5±1.0
		25	13	20.76	20.83	20.82	
		25	25	20.70	20.81	20.87	
		50	0	20.68	20.75	20.76	20.5±1.0



LTE FDD Band 4 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	22.73	22.69	22.74	22.5±1.0
		1	38	22.76	22.78	22.80	
		1	74	22.66	22.67	22.69	
		36	0	21.72	21.76	21.83	21.5±1.0
		36	18	21.70	21.68	21.82	
		36	39	21.65	21.69	21.73	
		75	0	21.77	21.65	21.80	21.5±1.0
	16QAM	1	0	21.79	21.92	21.78	21.5±1.0
		1	38	21.77	21.80	21.89	
		1	74	21.64	21.64	21.71	
		36	0	20.84	20.69	20.77	20.5±1.0
		36	18	20.82	20.75	20.82	
		36	39	20.77	20.69	20.81	
		75	0	20.75	20.63	20.80	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20050/1720.0	20175/1732.5	20300/1745.0	
20MHz	QPSK	1	0	22.87	22.94	22.72	22.5±1.0
		1	50	22.86	22.87	22.65	
		1	99	22.82	22.66	22.67	
		50	0	21.67	21.69	21.73	21.5±1.0
		50	25	21.67	21.71	21.61	
		50	50	21.59	21.77	21.73	
		100	0	21.60	21.72	21.65	21.0±1.0
	16QAM	1	0	21.93	21.78	21.79	21.5±1.0
		1	50	22.09	21.81	21.88	
		1	99	21.80	21.76	21.83	
		50	0	20.66	20.77	20.78	20.5±1.0
		50	25	20.68	20.88	20.84	
		50	50	20.58	20.80	20.85	
		100	0	20.67	20.74	20.77	20.5±1.0



3. LTE Band 5 Conducted Power Test Verdict:

LTE FDD Band 5 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	23.13	23.12	23.13	22.5±1.0
		1	3	23.22	23.06	23.14	
		1	5	23.06	23.10	23.02	
		3	0	22.15	22.19	22.30	22.0±1.0
		3	2	22.21	22.27	22.29	
		3	3	22.11	21.17	22.23	
		6	0	22.17	22.15	22.18	21.5±1.0
	16QAM	1	0	22.16	22.15	22.06	21.5±1.0
		1	3	22.17	22.11	22.16	
		1	5	22.09	22.21	22.11	
		3	0	21.17	21.07	21.11	20.5±1.0
		3	2	21.20	21.13	21.15	
		3	3	21.11	21.05	21.09	
		6	0	21.13	21.09	21.08	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	22.98	22.98	23.09	22.5±1.0
		1	7	22.94	23.15	23.10	
		1	14	22.90	23.00	23.16	
		8	0	22.02	22.12	22.11	21.5±1.0
		8	4	21.96	22.04	22.04	
		8	7	21.89	22.07	22.14	
		15	0	21.86	22.02	22.13	21.5±1.0
	16QAM	1	0	22.16	22.06	22.14	21.5±1.0
		1	7	22.15	22.15	22.05	
		1	14	22.09	22.01	22.08	
		8	0	21.04	21.09	21.11	20.5±1.0
		8	4	21.13	21.11	21.10	
		8	7	20.92	21.05	21.06	
		15	0	20.97	21.06	21.09	20.5±1.0



LTE FDD Band 5 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	23.09	23.05	23.02	22.5±1.0
		1	13	23.20	23.12	23.10	
		1	24	23.05	22.99	23.05	
		12	0	22.06	22.06	22.07	21.5±1.0
		12	6	22.06	22.10	22.10	
		12	13	22.06	22.09	22.03	
		25	0	22.02	22.04	22.04	21.5±1.0
	16QAM	1	0	22.12	22.03	21.99	21.5±1.0
		1	13	22.20	22.13	22.13	
		1	24	22.09	22.01	22.00	
		12	0	21.12	21.05	21.15	20.5±1.0
		12	6	21.09	21.17	21.11	
		12	13	21.15	21.04	21.02	
		25	0	21.03	21.10	21.12	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20450/829.0	20525/836.5	20600/844.0	
10MHz	QPSK	1	0	23.19	23.09	23.06	22.5±1.0
		1	25	23.13	23.15	23.11	
		1	49	23.06	23.08	23.12	
		25	0	22.04	22.10	22.13	21.5±1.0
		25	13	22.05	22.07	22.14	
		25	25	22.08	22.13	22.05	
		50	0	22.06	22.08	22.01	21.5±1.0
	16QAM	1	0	22.08	22.12	22.08	21.5±1.0
		1	25	22.15	22.20	22.14	
		1	49	22.13	22.15	22.05	
		25	0	21.09	21.17	21.16	20.5±1.0
		25	13	21.07	21.15	21.15	
		25	25	21.12	21.17	21.06	
		50	0	21.05	21.12	21.06	20.5±1.0



4. LTE Band 7 Conducted Power Test Verdict:

LTE FDD Band 7 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20775/2502.5	21100/2535.0	21425/2567.5	
5MHz	QPSK	1	0	19.51	19.46	19.66	19.0±1.0
		1	13	19.64	19.58	19.73	
		1	24	19.42	19.50	19.60	
		12	0	18.44	18.59	18.68	18.0±1.0
		12	6	18.52	18.60	18.68	
		12	13	18.47	18.55	18.67	
		25	0	18.44	18.54	18.69	18.0±1.0
	16QAM	1	0	18.55	18.75	18.54	18.5±1.0
		1	13	18.65	18.86	18.67	
		1	24	18.54	18.77	18.50	
		12	0	17.54	17.56	17.71	17.0±1.0
		12	6	17.56	17.62	17.75	
		12	13	17.45	17.60	17.73	
		25	0	17.32	17.62	17.67	17.0±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20800/2505.0	21100/2535.0	21400/2565.0	
10MHz	QPSK	1	0	19.49	19.46	19.64	19.0±1.0
		1	25	19.61	19.69	19.73	
		1	49	19.45	19.57	19.63	
		25	0	18.56	18.61	18.73	18.0±1.0
		25	13	18.44	18.57	18.71	
		25	25	18.47	18.59	18.70	
		50	0	18.37	18.58	18.66	18.0±1.0
	16QAM	1	0	18.58	18.55	18.64	18.5±1.0
		1	25	18.62	18.69	18.78	
		1	49	18.39	18.66	18.71	
		25	0	17.63	17.73	17.81	17.5±1.0
		25	13	17.61	17.74	17.79	
		25	25	17.64	17.75	17.87	
		50	0	17.59	17.68	17.83	17.5±1.0



LTE FDD Band 7 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20825/2507.5	21100/2535.0	21375/2562.5	
15MHz	QPSK	1	0	19.68	19.43	19.65	19.0±1.0
		1	38	19.54	19.55	19.71	
		1	74	19.51	19.45	19.55	
		36	0	18.51	18.62	18.52	18.0±1.0
		36	18	18.61	18.64	18.70	
		36	39	18.62	18.58	18.74	
		75	0	18.46	18.53	18.67	18.0±1.0
	16QAM	1	0	18.47	18.53	18.62	18.0±1.0
		1	38	18.51	18.64	18.70	
		1	74	18.46	18.55	18.46	
		36	0	17.65	17.52	17.54	17.0±1.0
		36	18	17.58	17.51	17.62	
		36	39	17.49	17.56	17.65	
		75	0	17.35	17.45	17.73	17.0±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				20850/2510.0	21100/2535.0	21350/2560.0	
20MHz	QPSK	1	0	19.66	19.65	19.55	19.0±1.0
		1	50	19.52	19.71	19.73	
		1	99	19.69	19.50	19.56	
		50	0	18.43	18.55	18.66	18.0±1.0
		50	25	18.41	18.55	18.64	
		50	50	18.36	18.51	18.69	
		100	0	18.38	18.56	18.62	18.0±1.0
	16QAM	1	0	18.54	18.59	18.60	18.5±1.0
		1	50	18.69	18.66	18.79	
		1	99	18.62	18.75	18.57	
		50	0	17.51	17.57	17.65	17.5±1.0
		50	25	17.46	17.60	17.67	
		50	50	17.49	17.57	17.78	
		100	0	17.41	17.66	17.58	17.0±1.0



5. LTE Band 12 Conducted Power Test Verdict:

LTE FDD Band 12 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				23017/699.7	23095/707.5	23173/715.3	
1.4MHz	QPSK	1	0	22.98	22.75	22.94	22.5±1.0
		1	3	23.07	22.82	22.98	
		1	5	23.02	22.72	22.88	
		3	0	22.06	21.90	22.00	21.5±1.0
		3	2	22.04	21.89	22.01	
		3	3	22.07	21.91	22.03	
		6	0	22.02	21.85	21.96	21.5±1.0
	16QAM	1	0	22.01	21.94	22.06	21.5±1.0
		1	3	22.13	22.03	22.11	
		1	5	22.05	21.96	22.03	
		3	0	21.11	21.05	21.18	20.5±1.0
		3	2	21.07	21.02	21.19	
		3	3	21.12	21.06	21.12	
		6	0	20.93	21.02	21.04	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				23025/700.5	23095/707.5	23165/714.5	
3MHz	QPSK	1	0	22.99	23.01	23.07	22.5±1.0
		1	7	22.97	23.16	23.16	
		1	14	22.91	23.02	23.13	
		8	0	22.03	22.09	22.14	21.5±1.0
		8	4	22.05	22.09	22.11	
		8	7	22.00	22.15	22.09	
		15	0	21.99	22.14	22.13	21.5±1.0
	16QAM	1	0	22.17	22.05	22.09	21.5±1.0
		1	7	22.18	22.06	21.95	
		1	14	22.20	22.97	22.02	
		8	0	20.98	21.01	21.06	20.5±1.0
		8	4	21.03	21.08	21.05	
		8	7	21.06	20.97	20.97	
		15	0	20.93	20.95	21.08	20.5±1.0



LTE FDD Band 12 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				23035/701.5	23095/707.5	23155/713.5	
5MHz	QPSK	1	0	22.90	22.92	22.91	22.5±1.0
		1	13	23.00	23.07	23.06	
		1	24	22.96	22.96	22.93	
		12	0	22.01	22.07	22.11	21.5±1.0
		12	6	21.95	22.07	22.11	
		12	13	22.03	22.12	21.98	
		25	0	21.99	22.12	22.02	21.5±1.0
	16QAM	1	0	21.98	22.20	22.11	21.5±1.0
		1	13	22.16	22.09	22.15	
		1	24	22.08	22.14	22.13	
		12	0	21.09	20.97	21.11	20.5±1.0
		12	6	21.07	21.06	21.06	
		12	13	21.13	21.02	20.97	
		25	0	21.04	21.06	21.04	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				23060/704.0	23095/707.5	23130/711.0	
10MHz	QPSK	1	0	22.94	22.97	23.19	22.5±1.0
		1	25	23.05	23.11	23.17	
		1	49	22.84	22.92	23.21	
		25	0	22.08	22.11	22.15	21.5±1.0
		25	13	22.03	22.04	22.16	
		25	25	22.02	22.13	22.14	
		50	0	22.05	22.11	22.13	21.5±1.0
	16QAM	1	0	21.94	22.05	22.04	21.5±1.0
		1	25	22.20	22.14	22.12	
		1	49	22.03	22.07	22.05	
		25	0	21.04	21.11	21.17	20.5±1.0
		25	13	21.12	21.05	21.05	
		25	25	21.09	21.08	21.06	
		50	0	21.11	21.04	21.08	20.5±1.0



6. LTE Band 17 Conducted Power Test Verdict:

LTE FDD Band 17 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				23755/706.5	23790/710.0	23825/713.5	
5MHz	QPSK	1	0	22.89	22.88	22.89	22.5±1.0
		1	13	23.01	22.98	23.04	
		1	24	22.85	22.89	22.92	
		12	0	22.04	21.93	22.06	21.5±1.0
		12	6	22.01	21.98	22.01	
		12	13	22.07	22.04	21.98	
		25	0	22.02	21.97	21.97	21.5±1.0
	16QAM	1	0	22.00	22.10	22.09	21.5±1.0
		1	13	22.13	22.24	22.24	
		1	24	22.02	22.10	22.15	
		12	0	20.99	20.96	21.10	20.5±1.0
		12	6	21.02	21.02	21.11	
		12	13	21.09	21.06	20.98	
		25	0	21.14	21.05	21.00	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				23780/709.0	23790/710.0	23800/711.0	
10MHz	QPSK	1	0	22.92	22.95	22.88	22.5±1.0
		1	25	23.05	22.84	23.01	
		1	49	22.84	22.97	22.92	
		25	0	21.90	21.83	21.82	21.5±1.0
		25	13	21.89	21.88	21.84	
		25	25	21.98	21.84	21.77	
		50	0	21.92	21.81	21.84	21.5±1.0
	16QAM	1	0	22.11	22.09	22.10	21.5±1.0
		1	25	22.16	22.13	22.11	
		1	49	22.05	22.06	22.07	
		25	0	21.11	21.05	21.07	20.5±1.0
		25	13	21.12	21.08	21.06	
		25	25	21.18	21.05	20.99	
		50	0	21.12	20.99	20.99	20.5±1.0



7. LTE Band 25 Conducted Power Test Verdict:

LTE FDD Band 25 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26047/1850.7	26365/1882.5	26683/1914.3	
1.4MHz	QPSK	1	0	22.96	22.89	22.85	22.5±1.0
		1	3	23.11	23.15	23.06	
		1	5	22.97	22.92	22.88	
		3	0	22.02	21.99	21.95	21.5±1.0
		3	2	21.99	21.98	21.98	
		3	3	22.06	22.01	21.87	
		6	0	22.01	21.95	21.86	21.5±1.0
	16QAM	1	0	21.98	21.96	21.95	21.5±1.0
		1	3	22.11	22.09	22.09	
		1	5	22.00	21.99	21.97	
		3	0	21.09	21.04	21.05	20.5±1.0
		3	2	21.04	21.05	21.03	
		3	3	21.02	21.02	21.06	
		6	0	21.05	21.03	20.98	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26055/1851.5	26365/1882.5	26675/1913.5	
3MHz	QPSK	1	0	22.87	22.81	22.90	22.5±1.0
		1	7	22.95	22.93	22.85	
		1	14	22.83	22.82	22.87	
		8	0	21.87	21.90	21.92	21.5±1.0
		8	4	21.82	21.94	21.90	
		8	7	21.74	21.91	21.87	
		15	0	21.78	21.94	21.88	21.5±1.0
	16QAM	1	0	21.89	21.90	22.03	21.5±1.0
		1	7	21.95	22.01	21.99	
		1	14	21.84	21.90	21.94	
		8	0	21.96	20.99	21.08	20.5±1.0
		8	4	21.91	21.02	21.03	
		8	7	21.89	21.93	21.05	
		15	0	20.88	21.01	20.95	20.5±1.0



LTE FDD Band 25 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26065/1852.5	26365/1882.5	26665/1912.5	
5MHz	QPSK	1	0	22.87	22.81	22.89	22.5±1.0
		1	13	22.99	22.93	23.02	
		1	24	22.84	22.84	23.89	
		12	0	21.96	21.91	21.80	21.5±1.0
		12	6	22.02	21.91	21.81	
		12	13	21.96	21.90	21.81	
		25	0	21.95	21.88	21.75	21.5±1.0
	16QAM	1	0	21.93	21.85	21.89	21.5±1.0
		1	13	22.01	22.03	21.98	
		1	24	21.96	21.86	21.85	
		12	0	20.97	20.93	20.84	20.5±1.0
		12	6	21.00	20.95	20.85	
		12	13	20.95	20.90	20.80	
		25	0	21.04	20.97	20.89	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26090/1855.0	26365/1882.5	26640/1910.0	
10MHz	QPSK	1	0	22.95	22.86	22.89	22.5±1.0
		1	25	23.06	23.04	22.91	
		1	49	22.93	22.86	22.82	
		25	0	22.05	21.99	21.91	21.5±1.0
		25	13	22.03	21.97	21.93	
		25	25	22.00	21.91	21.84	
		50	0	22.00	21.95	21.88	21.5±1.0
	16QAM	1	0	21.98	21.92	21.89	21.5±1.0
		1	25	22.16	22.09	22.01	
		1	49	21.99	21.93	21.78	
		25	0	21.16	21.11	21.00	20.5±1.0
		25	13	21.13	21.12	21.03	
		25	25	21.11	21.04	20.93	
		50	0	21.05	21.02	20.92	20.5±1.0



LTE FDD Band 25 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26115/1857.5	26365/1882.5	26615/1907.5	
15MHz	QPSK	1	0	22.92	22.90	22.79	22.5±1.0
		1	38	22.97	22.97	22.94	
		1	74	22.81	22.88	22.87	
		36	0	21.79	21.84	21.97	21.5±1.0
		36	18	21.77	21.83	21.99	
		36	39	21.82	21.86	21.88	
		75	0	21.74	21.86	21.84	21.5±1.0
	16QAM	1	0	22.04	22.05	22.03	21.5±1.0
		1	38	22.11	21.97	22.08	
		1	74	21.98	22.04	21.94	
		36	0	21.04	20.98	21.05	20.5±1.0
		36	18	21.09	21.01	21.02	
		36	39	20.99	20.97	20.97	
		75	0	21.06	21.89	21.00	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26140/1860.0	26365/1882.5	26590/1905.0	
20MHz	QPSK	1	0	22.94	23.05	22.98	22.5±1.0
		1	50	23.01	23.07	23.11	
		1	99	22.88	22.96	22.72	
		50	0	22.02	22.03	21.89	21.5±1.0
		50	25	21.99	21.97	21.86	
		50	50	21.86	21.87	21.72	
		100	0	21.97	21.94	21.84	21.5±1.0
	16QAM	1	0	22.12	22.01	22.08	21.5±1.0
		1	50	22.03	22.12	22.13	
		1	99	22.05	22.03	22.04	
		50	0	20.99	21.01	21.03	20.5±1.0
		50	25	21.03	21.10	20.88	
		50	50	20.96	20.92	20.96	
		100	0	21.02	20.99	20.85	20.5±1.0



9. LTE Band 26 Conducted Power Test Verdict:

LTE FDD Band 26 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26697/814.7	26915/831.5	27033/848.3	
1.4MHz	QPSK	1	0	23.08	23.02	23.06	22.5±1.0
		1	3	23.14	23.08	23.13	
		1	5	23.05	23.03	23.16	
		3	0	22.16	22.01	22.16	21.5±1.0
		3	2	22.14	21.99	22.15	
		3	3	22.12	22.05	22.12	
		6	0	22.15	22.02	22.08	21.5±1.0
	16QAM	1	0	22.11	22.05	22.08	21.5±1.0
		1	3	22.13	22.14	22.15	
		1	5	22.04	22.07	22.04	
		3	0	21.11	21.03	21.09	20.5±1.0
		3	2	21.12	21.07	21.16	
		3	3	21.07	21.15	21.24	
		6	0	21.13	21.08	21.15	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26705/815.5	26865/831.5	27025/847.5	
3MHz	QPSK	1	0	23.05	23.12	23.01	22.5±1.0
		1	7	23.09	23.07	23.08	
		1	14	23.12	23.14	22.94	
		8	0	22.11	22.06	22.08	21.5±1.0
		8	4	22.08	22.08	22.09	
		8	7	22.05	22.07	22.04	
		15	0	22.06	22.02	21.96	21.5±1.0
	16QAM	1	0	22.06	22.19	22.02	21.5±1.0
		1	7	22.07	22.12	22.09	
		1	14	22.13	22.16	21.98	
		8	0	21.09	21.15	21.05	20.5±1.0
		8	4	21.12	21.06	21.07	
		8	7	21.04	21.10	21.09	
		15	0	21.03	21.02	20.96	20.5±1.0



LTE FDD Band 26 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26715/816.5	26865/831.5	27015/846.5	
5MHz	QPSK	1	0	23.03	23.05	23.03	22.5±1.0
		1	13	23.12	23.14	23.07	
		1	24	23.03	23.08	23.05	
		12	0	22.11	22.02	22.13	21.5±1.0
		12	6	22.10	22.05	22.12	
		12	13	22.11	22.08	22.00	
		25	0	22.10	22.02	22.06	21.5±1.0
	16QAM	1	0	22.15	22.17	22.16	21.5±1.0
		1	13	22.09	22.27	22.18	
		1	24	22.07	22.22	22.09	
		12	0	21.12	20.95	21.19	20.5±1.0
		12	6	21.08	21.04	21.16	
		12	13	21.09	21.13	21.06	
		25	0	21.06	21.04	21.09	20.5±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26750/820.0	26865/831.5	26990/844.0	
10MHz	QPSK	1	0	23.12	23.04	23.14	22.5±1.0
		1	25	23.16	23.02	23.17	
		1	49	23.17	22.95	23.09	
		25	0	22.12	22.00	22.11	21.5±1.0
		25	13	22.15	22.06	22.13	
		25	25	22.09	22.09	22.02	
		50	0	22.13	22.11	22.04	21.5±1.0
	16QAM	1	0	22.15	22.17	22.17	21.5±1.0
		1	25	22.16	22.16	22.11	
		1	49	22.07	22.13	22.09	
		25	0	21.08	21.06	21.17	20.5±1.0
		25	13	21.09	21.10	21.18	
		25	25	21.16	21.12	21.02	
		50	0	21.11	21.04	21.09	20.5±1.0



LTE FDD Band 26 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				26775/822.5	26865/831.5	26965/841.5	
15MHz	QPSK	1	0	23.15	23.13	23.06	22.5±1.0
		1	38	23.21	23.12	23.07	
		1	74	23.08	23.04	22.99	
		36	0	22.02	22.09	22.06	21.5±1.0
		36	18	22.02	22.11	22.09	
		36	39	22.08	22.10	22.01	
		75	0	22.02	22.03	22.07	21.5±1.0
	16QAM	1	0	22.17	22.11	22.12	21.5±1.0
		1	38	22.27	22.13	22.17	
		1	74	22.22	22.16	22.06	
		36	0	20.95	21.12	21.13	20.5±1.0
		36	18	21.04	21.11	21.11	
		36	39	21.13	21.16	21.07	
		75	0	21.04	21.06	21.09	20.5±1.0



9. LTE Band 41 Conducted Power Test Verdict:

LTE TDD Band 41 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				40265/2557.5	40740/2605.0	41215/2652.5	
5MHz	QPSK	1	0	23.30	23.35	23.28	23.0±1.0
		1	13	23.37	23.42	23.27	
		1	24	23.31	23.35	23.31	
		12	0	22.24	22.26	22.32	22.0±1.0
		12	6	22.35	22.35	22.33	
		12	13	22.19	22.24	22.21	
		25	0	22.23	22.25	22.29	22.0±1.0
	16QAM	1	0	22.26	22.31	22.27	22.0±1.0
		1	13	22.40	22.39	22.42	
		1	24	22.24	22.30	22.24	
		12	0	21.35	21.39	21.36	21.0±1.0
		12	6	21.33	21.41	21.37	
		12	13	21.31	21.40	21.37	
		25	0	21.33	21.34	21.30	21.0±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				40290/2560.0	40740/2605.0	41190/2650.0	
10MHz	QPSK	1	0	23.26	23.32	23.29	23.0±1.0
		1	25	23.46	23.52	23.48	
		1	49	23.25	23.30	23.28	
		25	0	22.28	22.31	22.25	22.0±1.0
		25	13	22.30	22.21	22.25	
		25	25	22.23	22.30	22.22	
		50	0	22.21	22.23	22.13	22.0±1.0
	16QAM	1	0	22.29	22.33	22.25	22.0±1.0
		1	25	22.38	22.46	22.31	
		1	49	22.26	22.29	22.18	
		25	0	21.26	21.29	21.23	21.0±1.0
		25	13	21.25	21.28	21.23	
		25	25	21.19	21.30	21.22	
		50	0	21.21	21.26	21.15	21.0±1.0



LTE TDD Band 41 ANT 2				Conducted Power(dBm)			
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				40315/2562.5	40740/2605.0	41165/2647.5	
15MHz	QPSK	1	0	23.27	23.31	23.29	23.0±1.0
		1	38	23.33	23.43	23.39	
		1	74	23.23	23.27	23.27	
		36	0	22.33	22.29	22.28	22.0±1.0
		36	18	22.31	22.28	22.27	
		36	39	22.29	22.28	22.20	
		75	0	22.21	22.23	22.21	22.0±1.0
	16QAM	1	0	22.32	22.22	22.26	22.0±1.0
		1	38	22.38	22.33	22.33	
		1	74	22.30	22.24	22.18	
		36	0	21.33	21.29	21.28	21.0±1.0
		36	18	21.32	21.26	21.28	
		36	39	21.29	21.17	21.19	
		75	0	21.21	21.22	21.20	21.0±1.0
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency			Tune up
				40340/2565.0	40740/2605.0	41140/2645.0	
20MHz	QPSK	1	0	23.34	23.31	23.35	23.0±1.0
		1	50	23.43	23.55	23.47	
		1	99	23.23	23.35	23.30	
		50	0	22.27	22.36	22.33	22.0±1.0
		50	25	22.29	22.34	22.30	
		50	50	22.26	22.32	22.23	
		100	0	22.22	22.27	22.28	22.0±1.0
	16QAM	1	0	22.29	22.41	22.31	22.0±1.0
		1	50	22.48	22.75	22.41	
		1	99	22.41	22.36	22.29	
		50	0	21.43	21.49	21.46	21.0±1.0
		50	25	21.42	21.50	21.42	
		50	50	21.37	21.48	21.40	
		100	0	21.32	21.35	21.33	21.0±1.0



7.3 LTE CA Power

LTE Band 7C ANT 1 - 10MHz+20MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
10MHz / 20MHz	2505.5	2519.9	1	49	1	0	18.96	18.03
			50	0	100	0	16.86	15.91
	2525.6	2540.0	1	49	1	0	18.87	17.89
			50	0	100	0	16.95	15.92
	2545.6	2560.0	1	49	1	0	19.23	17.97
			50	0	100	0	17.22	16.22
LTE Band 7C ANT 1 - 15MHz+10MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
15MHz / 10MHz	2507.5	2519.5	1	74	1	0	18.96	18.05
			75	0	50	0	17.02	15.98
	2530.1	2542.1	1	74	1	0	19.46	18.49
			75	0	50	0	18.13	17.07
	2552.7	2564.7	1	74	1	0	19.40	18.34
			75	0	50	0	18.29	17.12
LTE Band 7C ANT 1 - 15MHz+15MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
15MHz / 15MHz	2507.5	2522.5	1	74	1	0	18.91	18.10
			75	0	75	0	17.26	16.12
	2527.5	2542.5	1	74	1	0	19.10	18.12
			75	0	75	0	17.12	16.07
	2547.5	2562.5	1	74	1	0	19.35	18.30
			75	0	75	0	17.36	16.34
LTE Band 7C ANT 1 - 15MHz+20MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
15MHz / 20MHz	2507.8	2524.9	1	74	1	0	18.98	18.38
			75	0	100	0	17.00	15.96
	2525.3	2542.4	1	74	1	0	18.99	17.96
			75	0	100	0	17.06	16.02
	2542.9	2560.0	1	74	1	0	19.31	18.43



			75	0	100	0	17.35	16.30
LTE Band 7C ANT 1 - 20MHz+10MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
20MHz / 10MHz	2510.0	2524.4	1	99	1	0	18.97	18.40
			100	0	50	0	17.04	16.00
	2530.1	2544.5	1	99	1	0	19.24	18.30
			100	0	50	0	17.08	16.10
	2550.1	2564.5	1	99	1	0	19.42	18.43
			100	0	50	0	17.40	16.36
LTE Band 7C ANT 1 - 20MHz+15MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
20MHz / 15MHz	2510.0	2527.1	1	99	1	0	18.95	18.09
			100	0	75	0	17.01	15.99
	2527.6	2544.7	1	99	1	0	19.18	18.26
			100	0	75	0	17.06	16.06
	2545.1	2562.2	1	99	1	0	19.37	18.42
			100	0	75	0	17.39	16.33
LTE Band 7C ANT 1 - 20MHz+20MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
20MHz / 20MHz	2510.0	2529.8	1	99	1	0	18.97	18.10
			1	0	1	99	10.40	9.58
			100	0	100	0	16.96	15.95
	2525.1	2544.9	1	99	1	0	19.08	18.14
			1	0	1	99	10.41	10.37
			100	0	100	0	17.02	16.01
	2540.2	2560.0	1	99	1	0	19.36	18.47
			1	0	1	99	11.97	10.33
			100	0	100	0	17.25	16.24



LTE Band 41C ANT 1 - 10MHz+20MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
10MHz / 20MHz	2560.5	2574.9	1	49	1	0	22.86	22.05
			50	0	100	0	20.97	19.96
	2595.6	2610.0	1	49	1	0	23.03	21.94
			50	0	100	0	20.98	19.99
	2630.6	2645.0	1	49	1	0	23.28	21.93
			50	0	100	0	21.24	20.23
LTE Band 41C ANT 1 - 15MHz+10MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
15MHz / 10MHz	2562.5	2574.5	1	74	1	0	23.17	22.25
			75	0	50	0	21.01	19.97
	2600.1	2612.1	1	74	1	0	23.08	21.99
			75	0	50	0	21.06	20.00
	2637.7	2649.7	1	74	1	0	23.35	22.17
			75	0	50	0	21.31	20.20
LTE Band 41C ANT 1 - 15MHz+15MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
15MHz / 15MHz	2562.5	2577.5	1	74	1	0	23.07	22.00
			75	0	75	0	21.09	20.01
	2597.5	2612.5	1	74	1	0	23.17	21.92
			75	0	75	0	21.09	20.06
	2632.5	2647.5	1	74	1	0	23.23	22.24
			75	0	75	0	21.35	20.30
LTE Band 41C ANT 1 - 15MHz+20MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
15MHz / 20MHz	2562.8	2579.9	1	74	1	0	23.08	22.23
			75	0	100	0	20.97	19.96
	2595.4	2612.5	1	74	1	0	23.05	21.95
			75	0	100	0	21.01	20.03
	2627.9	2645.0	1	74	1	0	23.25	22.16



			75	0	100	0	21.27	20.27
LTE Band 41C ANT 1 - 20MHz+10MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
20MHz / 10MHz	2565.0	2579.4	1	99	1	0	22.96	21.55
			100	0	50	0	21.03	20.03
	2600.1	2614.5	1	99	1	0	23.35	22.36
			100	0	50	0	21.14	20.16
	2635.1	2649.5	1	99	1	0	23.37	22.30
			100	0	50	0	21.29	20.31
LTE Band 41C ANT 1 - 20MHz+15MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
20MHz / 15MHz	2565.0	2582.1	1	99	1	0	22.93	21.99
			100	0	75	0	20.94	19.94
	2597.6	2614.7	1	99	1	0	23.07	21.66
			100	0	75	0	21.03	20.00
	2630.1	2647.2	1	99	1	0	23.26	22.22
			100	0	75	0	21.18	20.18
LTE Band 41C ANT 1 - 20MHz+20MHz Bandwidth								
Bandwidth	CC1	CC2	CC1 RB	CC1 RB	CC2 RB	CC2 RB	Conducted Average (dBm)	
	Frequency (MHz)	Frequency (MHz)	Size	Offset	Size	Offset	QPSK	16QAM
20MHz / 20MHz	2565.0	2584.8	1	99	1	0	22.96	22.09
			1	0	1	99	14.58	13.41
			100	0	100	0	21.16	20.19
	2595.1	2614.9	1	99	1	0	23.04	22.02
			1	0	1	99	16.34	14.43
			100	0	100	0	21.20	20.22
	2625.2	2645.0	1	99	1	0	23.18	22.17
			1	0	1	99	16.37	14.62
			100	0	100	0	21.41	20.43



7.4 WIFI Conducted Power

Wi-Fi 2.4G Output power

2.4G WI-FI Channel/Freq.(MHz)	Output Power (dBm)		
	802.11b	802.11g	802.11n(HT20)
1/2412.0	16.38	13.88	13.78
6/2437.0	14.95	12.50	12.76
11/2462.0	15.14	13.50	12.92

2.4G WI-FI Channel/Freq.(MHz)	Output Power (dBm)	
	802.11n(HT40)	
3/2422.0	13.45	
6/2437.0	12.62	
9/2452.0	12.32	

Wi-Fi U-NII-1 Output power

Channel/Freq.(MHz)	Output Power (dBm)		
	802.11 a	802.11 n20	802.11 ac20
36/5180.0	9.52	8.76	9.10
44/5220.0	9.62	9.11	9.17
48/5240.0	9.25	9.26	9.23

Channel/Freq.(MHz)	Output Power (dBm)	
	802.11 n40	802.11 ac40
38/5190.0	8.99	9.14
46/5230.0	9.27	9.24

Channel/Freq.(MHz)	Output Power (dBm)	
	802.11 ac80	
42/5210.0	8.85	



Wi-Fi U-NII-3 Output power

Channel/Freq.(MHz)	Output Power (dBm)		
	802.11 a	802.11 n20	802.11 ac20
149/5745.0	6.18	5.81	6.21
157/5785.0	6.85	6.23	6.87
165/5825.0	7.82	6.96	7.80

Channel/Freq.(MHz)	Output Power (dBm)	
	802.11 n40	802.11 ac40
151/5755.0	5.73	6.20
159/5795.0	6.98	6.90

Channel/Freq.(MHz)	Output Power (dBm)	
	802.11 ac80	
155/5775.0	6.30	

7.5 Bluetooth Output Power

Channel	Frequency (MHz)	BT Output Power(dBm)		
		GFSK	$\pi/4$ -DQPSK	8-DPSK
CH 0	2402	6.72	6.78	6.92
CH 39	2441	6.81	6.56	6.20
CH 78	2480	8.68	7.46	7.43

Channel	Frequency (MHz)	BLE Output Power(dBm)	
		1M(GFSK)	2M(GFSK)
CH 0	2402	-5.90	-5.88
CH 19	2440	-5.42	-5.40
CH 39	2480	-4.09	-4.12

8. Antenna Location:



Antenna	Test Band
ANT 2	WCDMA 850/1700/1900, LTE Band 2/4/5/7/12/17/25/41
ANT 3	2.4GWIFI, 5GWIFI, BT



Antenna-to-User (Edge Side) distance (mm):

Antenna	Front	Back	Left	Right	Top	Bottom
ANT 2	<25	<25	<25	<25	<25	>25
ANT 3	<25	<25	<25	>25	<25	>25

Note:

1. Overall (Length x Width x High): 150 mm x 67 mm x17.5 mm
2. Overall Diagonal: 160 mm

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

Antenna	Front	Back	Left	Right	Top	Bottom
ANT 2	Yes	Yes	Yes	Yes	Yes	No
ANT 3	Yes	Yes	Yes	No	Yes	No

Note:

1. According to KDB 941225 D06 v02r01, when antenna-to-edge>2.5cm, SAR is not required.
2. The other Frequencies were measured at the worst position



9. Scaling Factor calculation

Operation Mode	Channel /Frequency	Output Power(dBm)	Tune up Power in tolerance (dBm)	Max. Tune up(dBm)	Scaling Factor
WCDMA850 ANT 2	4132/826.4	23.05	22.5 ± 1.0	23.50	1.109
	4183/836.6	23.06	22.5 ± 1.0	23.50	1.107
	4233/846.6	23.14	22.5 ± 1.0	23.50	1.086
WCDMA1700 ANT 2	1312/1712.4	23.73	23.0 ± 1.0	24.00	1.064
	1413/1732.6	23.79	23.5 ± 1.0	24.50	1.178
	1513/1752.6	23.88	23.5 ± 1.0	24.50	1.153
WCDMA1900 ANT 2	9262/1852.4	23.61	23.0 ± 1.0	24.00	1.094
	9400/1880.0	23.71	23.0 ± 1.0	24.00	1.069
	9538/1907.6	23.48	23.0 ± 1.0	24.00	1.127
LTE B2 20MHz 1RB#0 ANT 2	18700/1860.0	23.08	22.5 ± 1.0	23.50	1.102
	18900/1880.0	22.93	22.5 ± 1.0	23.50	1.140
	19100/1900.0	22.98	22.5 ± 1.0	23.50	1.127
LTE B2 20MHz 50%RB#0 ANT 2	18700/1860.0	21.94	21.5 ± 1.0	22.50	1.138
	18900/1880.0	22.01	21.5 ± 1.0	22.50	1.119
	19100/1900.0	21.95	21.5 ± 1.0	22.50	1.135
LTE B4 20MHz 1RB#0 ANT 2	20050/1720.0	22.87	22.5 ± 1.0	23.50	1.156
	20175/1732.5	22.94	22.5 ± 1.0	23.50	1.138
	20300/1745.0	22.72	22.0 ± 1.0	23.00	1.067
LTE B4 20MHz 50%RB#0 ANT 2	20050/1720.0	21.67	21.0 ± 1.0	22.00	1.079
	20175/1732.5	21.69	21.0 ± 1.0	22.00	1.074
	20300/1745.0	21.73	21.0 ± 1.0	22.00	1.064
LTE B4 20MHz 100%RB#0 ANT 2	20050/1720.0	21.60	21.0 ± 1.0	22.00	1.096
	20175/1732.5	21.72	21.0 ± 1.0	22.00	1.067
	20300/1745.0	21.65	21.0 ± 1.0	22.00	1.084
LTE B5 10MHz 1RB#0 ANT 2	20450/829.0	23.19	22.5 ± 1.0	23.50	1.074
	20525/836.5	23.09	22.5 ± 1.0	23.50	1.099
	20600/844.0	23.06	22.5 ± 1.0	23.50	1.107
LTE B5 10MHz 50%RB#0 ANT 2	20450/829.0	22.04	21.5 ± 1.0	22.50	1.112
	20525/836.5	22.10	21.5 ± 1.0	22.50	1.096
	20600/844.0	22.13	21.5 ± 1.0	22.50	1.089
LTE B7 20MHz 1RB#0 ANT 2	20850/2510.0	19.66	19.0 ± 1.0	20.00	1.081
	21100/2535.0	19.65	19.0 ± 1.0	20.00	1.084
	21350/2560.0	19.55	19.0 ± 1.0	20.00	1.109



LTE B7 20MHz 50%RB#0 ANT 2	20850/2510.0	18.43	18.0 ± 1.0	19.00	1.140
	21100/2535.0	18.55	18.0 ± 1.0	19.00	1.109
	21350/2560.0	18.66	18.0 ± 1.0	19.00	1.081
LTE B7 20MHz 100%RB#0 ANT 2	20850/2510.0	18.38	18.0 ± 1.0	19.00	1.153
	21100/2535.0	18.56	18.0 ± 1.0	19.00	1.107
	21350/2560.0	18.62	18.0 ± 1.0	19.00	1.091
LTE B12 10MHz 1RB#0 ANT 2	23060/704.0	22.94	22.5 ± 1.0	23.50	1.138
	23095/707.5	22.97	22.5 ± 1.0	23.50	1.130
	23130/711.0	23.19	22.5 ± 1.0	23.50	1.074
LTE B12 10MHz 50%RB#0 ANT 2	23060/704.0	22.08	21.5 ± 1.0	22.50	1.102
	23095/707.5	22.11	21.5 ± 1.0	22.50	1.094
	23130/711.0	22.15	21.5 ± 1.0	22.50	1.084
LTE B17 10MHz 1RB#0 ANT 2	23780/709.0	22.92	22.5 ± 1.0	23.50	1.143
	23790/710.0	22.95	22.5 ± 1.0	23.50	1.135
	23800/711.0	22.88	22.5 ± 1.0	23.50	1.153
LTE B17 10MHz 50%RB#0 ANT 2	23780/709.0	21.92	21.5 ± 1.0	22.50	1.143
	23790/710.0	21.81	21.5 ± 1.0	22.50	1.172
	23800/711.0	21.84	21.5 ± 1.0	22.50	1.164
LTE B25 20MHz 1RB#0 ANT 2	26140/1860.0	22.94	22.5 ± 1.0	23.50	1.138
	26365/1882.5	23.05	22.5 ± 1.0	23.50	1.109
	26590/1905.0	22.98	22.5 ± 1.0	23.50	1.127
LTE B25 20MHz 50%RB#0 ANT 2	26140/1860.0	22.02	21.5 ± 1.0	22.50	1.117
	26365/1882.5	22.03	21.5 ± 1.0	22.50	1.114
	26590/1905.0	21.89	21.5 ± 1.0	22.50	1.151
LTE B25 20MHz 100%RB#0 ANT 2	26140/1860.0	21.97	21.5 ± 1.0	22.50	1.130
	26365/1882.5	21.94	21.5 ± 1.0	22.50	1.138
	26590/1905.0	21.84	21.5 ± 1.0	22.50	1.164
LTE B26 15MHz 1RB#0 ANT 2	26765/821.5	23.15	22.5 ± 1.0	23.50	1.084
	26865/831.5	23.13	22.5 ± 1.0	23.50	1.089
	26965/841.5	23.06	22.5 ± 1.0	23.50	1.107
LTE B26 15MHz 50%RB#0 ANT 2	26765/821.5	22.02	21.5 ± 1.0	22.50	1.117
	26865/831.5	22.09	21.5 ± 1.0	22.50	1.099
	26965/841.5	22.06	21.5 ± 1.0	22.50	1.107
LTE B41 20MHz 1RB#0 ANT 2	40340/2565.0	23.34	23.0 ± 1.0	24.00	1.164
	40740/2605.0	23.31	23.0 ± 1.0	24.00	1.172
	41140/2645.0	23.35	23.0 ± 1.0	24.00	1.161



LTE B41 20MHz 50%RB#0 ANT 2	40340/2565.0	22.27	22.0 ± 1.0	23.00	1.183
	40740/2605.0	22.36	22.0 ± 1.0	23.00	1.159
	41140/2645.0	22.33	22.0 ± 1.0	23.00	1.167
LTE B41 20MHz 100%RB#0 ANT 2	40340/2565.0	22.22	22.0 ± 1.0	23.00	1.197
	40740/2605.0	22.27	22.0 ± 1.0	23.00	1.183
	41140/2645.0	22.28	22.0 ± 1.0	23.00	1.180
WIFI 2.4G 802.11b ANT 3	1/2412.0	16.38	16.0 ± 1.0	17.00	1.153
	6/2437.0	14.95	14.5 ± 1.0	15.50	1.135
	11/2462.0	15.14	14.5 ± 1.0	15.50	1.086
WIFI U-NII 1 802.11a ANT 3	36/5180.0	9.52	9.0 ± 1.0	10.00	1.117
	44/5220.0	9.62	9.0 ± 1.0	10.00	1.091
	48/5240.0	9.25	9.0 ± 1.0	10.00	1.189
WIFI U-NII 3 802.11a ANT 3	149/5745.0	6.18	5.5 ± 1.0	6.50	1.076
	157/5785.0	6.85	6.5 ± 1.0	7.50	1.161
	165/5825.0	7.82	7.5 ± 1.0	8.50	1.169
Bluetooth DH5 ANT 3	0/2402.0	6.72	6.0 ± 1.0	7.00	1.067
	39/2441.0	6.81	6.5 ± 1.0	7.50	1.172
	78/2480.0	8.68	8.0 ± 1.0	9.00	1.076

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



10. Test Results

Results overview of WCDMA850

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
Front Upward	4183/836.6	RMC	0.018	0.25	1.107	0.020	1.6	/
Back Upward	4183/836.6	RMC	0.227	-0.88	1.107	0.251	1.6	1
Left	4183/836.6	RMC	0.019	2.82	1.107	0.021	1.6	/
Right	4183/836.6	RMC	0.017	0.66	1.107	0.019	1.6	/
Top	4183/836.6	RMC	0.013	1.51	1.107	0.014	1.6	/

Results overview of WCDMA1700

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
Front Upward	1413/1732.6	RMC	0.880	-1.86	1.178	1.037	1.6	2
Front Upward Repeat	1413/1732.6	RMC	0.865	0.27	1.178	1.019	1.6	/
Back Upward	1413/1732.6	RMC	0.363	0.51	1.178	0.428	1.6	/
Left	1413/1732.6	RMC	0.453	-0.28	1.178	0.534	1.6	/
Right	1413/1732.6	RMC	0.128	2.03	1.178	0.151	1.6	/
Top	1413/1732.6	RMC	0.388	-1.00	1.178	0.457	1.6	/
Front Upward	1413/1732.6	RMC	0.826	1.19	1.064	0.879	1.6	/
Front Upward	1312/1712.4	RMC	0.839	0.61	1.153	0.967	1.6	/

**Results overview of WCDMA1900**

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
Front Upward	9400/1880.0	RMC	0.598	-1.05	1.069	0.639	1.6	/
Back Upward	9400/1880.0	RMC	0.659	-2.10	1.069	0.704	1.6	3
Left	9400/1880.0	RMC	0.041	1.24	1.069	0.044	1.6	/
Right	9400/1880.0	RMC	0.032	0.98	1.069	0.034	1.6	/
Top	9400/1880.0	RMC	0.283	2.77	1.069	0.303	1.6	/

Results overview of FDD LTE Band 2, QPSK, 20MHz Bandwidth

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	18900/1880.0	QPSK	0.612	-0.72	1.140	0.698	1.6	4
Back Upward	18900/1880.0	QPSK	0.531	-1.50	1.140	0.605	1.6	/
Left	18900/1880.0	QPSK	0.104	2.49	1.140	0.119	1.6	/
Right	18900/1880.0	QPSK	0.013	1.21	1.140	0.015	1.6	/
Top	18900/1880.0	QPSK	0.039	2.31	1.140	0.044	1.6	/
50%RB#0								
Front Upward	18900/1880.0	QPSK	0.486	0.94	1.119	0.544	1.6	/
Back Upward	18900/1880.0	QPSK	0.398	0.17	1.119	0.445	1.6	/
Left	18900/1880.0	QPSK	0.078	1.34	1.119	0.087	1.6	/
Right	18900/1880.0	QPSK	0.011	-2.02	1.119	0.012	1.6	/
Top	18900/1880.0	QPSK	0.030	1.11	1.119	0.034	1.6	/

**Results overview of FDD LTE Band 4, QPSK, 20MHz Bandwidth**

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	20175/1732.5	QPSK	0.926	0.18	1.138	1.054	1.6	/
Back Upward	20175/1732.5	QPSK	0.245	-2.45	1.138	0.279	1.6	/
Left	20175/1732.5	QPSK	0.335	0.51	1.138	0.381	1.6	/
Right	20175/1732.5	QPSK	0.021	0.17	1.138	0.024	1.6	/
Top	20175/1732.5	QPSK	0.099	-2.04	1.138	0.113	1.6	/
Front Upward	20050/1720.0	QPSK	0.920	0.30	1.156	1.064	1.6	/
Front Upward	20300/1745.0	QPSK	0.942	1.84	1.067	1.005	1.6	5
Front Upward Repeat	20300/1745.0	QPSK	0.918	-0.32	1.067	0.980	1.6	/
50%RB#0								
Front Upward	20175/1732.5	QPSK	0.758	-2.49	1.074	0.814	1.6	/
Back Upward	20175/1732.5	QPSK	0.188	-1.12	1.074	0.202	1.6	/
Left	20175/1732.5	QPSK	0.254	0.94	1.074	0.273	1.6	/
Right	20175/1732.5	QPSK	0.017	-0.58	1.074	0.018	1.6	/
Top	20175/1732.5	QPSK	0.085	-1.26	1.074	0.091	1.6	/
Front Upward	20050/1720.0	QPSK	0.791	0.99	1.079	0.853	1.6	/
Front Upward	20300/1745.0	QPSK	0.694	-1.04	1.064	0.738	1.6	/
100%RB#0								
Front Upward	20175/1732.5	QPSK	0.709	0.38	1.067	0.757	1.6	/
Back Upward	20175/1732.5	QPSK	0.172	-1.71	1.067	0.184	1.6	/
Left	20175/1732.5	QPSK	0.229	1.26	1.067	0.244	1.6	/
Right	20175/1732.5	QPSK	0.016	-0.34	1.067	0.017	1.6	/
Top	20175/1732.5	QPSK	0.080	0.50	1.067	0.085	1.6	/
Front Upward	20050/1720.0	QPSK	0.691	-2.14	1.096	0.757	1.6	/
Front Upward	20300/1745.0	QPSK	0.664	0.92	1.084	0.720	1.6	/

**Results overview of FDD LTE Band 5, QPSK, 10MHz Bandwidth**

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	20525/836.5	QPSK	0.102	-0.27	1.099	0.112	1.6	6
Back Upward	20525/836.5	QPSK	0.042	2.18	1.099	0.046	1.6	/
Left	20525/836.5	QPSK	0.013	-1.05	1.099	0.014	1.6	/
Right	20525/836.5	QPSK	0.022	0.84	1.099	0.024	1.6	/
Top	20525/836.5	QPSK	0.016	-1.72	1.099	0.018	1.6	/
50%RB#0								
Front Upward	20525/836.5	QPSK	0.078	0.14	1.096	0.085	1.6	/
Back Upward	20525/836.5	QPSK	0.031	-2.47	1.096	0.034	1.6	/
Left	20525/836.5	QPSK	0.012	0.52	1.096	0.013	1.6	/
Right	20525/836.5	QPSK	0.015	-1.39	1.096	0.016	1.6	/
Top	20525/836.5	QPSK	0.014	-0.68	1.096	0.015	1.6	/

**Results overview of FDD LTE Band 7, QPSK, 20MHz Bandwidth**

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	21100/2535.0	QPSK	0.316	0.75	1.084	0.343	1.6	/
Back Upward	21100/2535.0	QPSK	0.880	-2.68	1.084	0.954	1.6	/
Left	21100/2535.0	QPSK	0.022	-1.51	1.084	0.024	1.6	/
Right	21100/2535.0	QPSK	0.332	-3.23	1.084	0.360	1.6	/
Top	21100/2535.0	QPSK	0.632	-1.90	1.084	0.685	1.6	/
Back Upward	20850/2510.0	QPSK	0.905	-1.76	1.081	0.978	1.6	/
Back Upward Repeat	20850/2510.0	QPSK	0.949	0.10	1.081	1.026	1.6	7
Back Upward	21350/2560.0	QPSK	0.807	0.54	1.109	0.895	1.6	/
CA_7C 1RB#99+1RB#0								
Back Upward CA_7C	21001/2525.1	QPSK	0.712	-0.15	1.102	0.785	1.6	/
	21199/2544.9	QPSK						
50%RB#0								
Front Upward	21100/2535.0	QPSK	0.262	0.95	1.109	0.291	1.6	/
Back Upward	21100/2535.0	QPSK	0.796	-0.39	1.109	0.883	1.6	/
Left	21100/2535.0	QPSK	0.017	1.15	1.109	0.019	1.6	/
Right	21100/2535.0	QPSK	0.271	-0.48	1.109	0.301	1.6	/
Top	21100/2535.0	QPSK	0.540	2.26	1.109	0.599	1.6	/
Back Upward	20850/2510.0	QPSK	0.758	1.67	1.140	0.864	1.6	/
Back Upward	21350/2560.0	QPSK	0.709	-2.32	1.081	0.766	1.6	/
100%RB#0								
Front Upward	21100/2535.0	QPSK	0.229	0.15	1.107	0.254	1.6	/
Back Upward	21100/2535.0	QPSK	0.747	-0.39	1.107	0.827	1.6	/
Left	21100/2535.0	QPSK	0.016	2.31	1.107	0.018	1.6	/
Right	21100/2535.0	QPSK	0.252	0.86	1.107	0.279	1.6	/
Top	21100/2535.0	QPSK	0.516	-1.79	1.107	0.571	1.6	/
Back Upward	20850/2510.0	QPSK	0.702	0.42	1.153	0.809	1.6	/
Back Upward	21350/2560.0	QPSK	0.726	1.13	1.091	0.792	1.6	/

**Results overview of FDD LTE Band 12, QPSK, 10MHz Bandwidth**

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	23095/707.5	QPSK	0.049	-0.56	1.130	0.055	1.6	/
Back Upward	23095/707.5	QPSK	0.083	0.27	1.130	0.094	1.6	8
Left	23095/707.5	QPSK	0.017	1.41	1.130	0.019	1.6	/
Right	23095/707.5	QPSK	0.022	0.98	1.130	0.025	1.6	/
Top	23095/707.5	QPSK	0.014	1.71	1.130	0.016	1.6	/
50%RB#0								
Front Upward	23095/707.5	QPSK	0.037	2.01	1.094	0.040	1.6	/
Back Upward	23095/707.5	QPSK	0.064	-1.82	1.094	0.070	1.6	/
Left	23095/707.5	QPSK	0.013	-2.33	1.094	0.014	1.6	/
Right	23095/707.5	QPSK	0.017	-0.69	1.094	0.019	1.6	/
Top	23095/707.5	QPSK	0.011	0.40	1.094	0.012	1.6	/

Results overview of FDD LTE Band 17, QPSK, 10MHz Bandwidth

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	23790/710.0	QPSK	0.041	-1.25	1.135	0.047	1.6	9
Back Upward	23790/710.0	QPSK	0.031	0.39	1.135	0.035	1.6	/
Left	23790/710.0	QPSK	0.017	0.18	1.135	0.019	1.6	/
Right	23790/710.0	QPSK	0.014	-0.71	1.135	0.016	1.6	/
Top	23790/710.0	QPSK	0.011	-1.04	1.135	0.012	1.6	/
50%RB#0								
Front Upward	23790/710.0	QPSK	0.031	-0.64	1.172	0.036	1.6	/
Back Upward	23790/710.0	QPSK	0.024	-2.40	1.172	0.028	1.6	/
Left	23790/710.0	QPSK	0.013	-1.32	1.172	0.015	1.6	/
Right	23790/710.0	QPSK	0.011	-0.62	1.172	0.013	1.6	/
Top	23790/710.0	QPSK	0.008	1.00	1.172	0.009	1.6	/

**Results overview of FDD LTE Band 25, QPSK, 20MHz Bandwidth**

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	26365/1882.5	QPSK	0.705	1.17	1.172	0.826	1.6	10
Back Upward	26365/1882.5	QPSK	0.076	3.89	1.172	0.089	1.6	/
Left	26365/1882.5	QPSK	0.525	0.51	1.172	0.615	1.6	/
Right	26365/1882.5	QPSK	0.025	-1.92	1.172	0.029	1.6	/
Top	26365/1882.5	QPSK	0.044	1.46	1.172	0.052	1.6	/
Front Upward	26140/1860.0	QPSK	0.653	-3.92	1.143	0.746	1.6	/
Front Upward	26590/1905.0	QPSK	0.697	-3.49	1.164	0.811	1.6	/
50%RB#0								
Front Upward	26365/1882.5	QPSK	0.586	-0.86	1.114	0.653	1.6	/
Back Upward	26365/1882.5	QPSK	0.057	0.61	1.114	0.063	1.6	/
Left	26365/1882.5	QPSK	0.422	-0.29	1.114	0.470	1.6	/
Right	26365/1882.5	QPSK	0.021	0.28	1.114	0.023	1.6	/
Top	26365/1882.5	QPSK	0.038	-1.05	1.114	0.042	1.6	/
100%RB#0								
Front Upward	26365/1882.5	QPSK	0.563	0.14	1.138	0.641	1.6	/
Back Upward	26365/1882.5	QPSK	0.051	-1.49	1.138	0.058	1.6	/
Left	26365/1882.5	QPSK	0.405	-2.02	1.138	0.461	1.6	/
Right	26365/1882.5	QPSK	0.020	0.96	1.138	0.023	1.6	/
Top	26365/1882.5	QPSK	0.035	1.17	1.138	0.040	1.6	/

**Results overview of FDD LTE Band 26, QPSK, 15MHz Bandwidth**

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	26865/831.5	QPSK	0.106	-1.63	1.089	0.115	1.6	/
Back Upward	26865/831.5	QPSK	0.328	0.48	1.089	0.357	1.6	11
Left	26865/831.5	QPSK	0.049	2.14	1.089	0.053	1.6	/
Right	26865/831.5	QPSK	0.178	0.72	1.089	0.194	1.6	/
Top	26865/831.5	QPSK	0.151	0.33	1.089	0.164	1.6	/
50%RB#0								
Front Upward	26865/831.5	QPSK	0.081	-0.54	1.099	0.089	1.6	/
Back Upward	26865/831.5	QPSK	0.249	-0.66	1.099	0.274	1.6	/
Left	26865/831.5	QPSK	0.037	1.02	1.099	0.041	1.6	/
Right	26865/831.5	QPSK	0.137	-1.97	1.099	0.151	1.6	/
Top	26865/831.5	QPSK	0.114	2.33	1.099	0.125	1.6	/

**Results overview of TDD LTE Band 41, QPSK, 20MHz Bandwidth**

ANT 2

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
1RB#0								
Front Upward	40740/2605.0	QPSK	0.277	0.33	1.172	0.325	1.6	/
Back Upward	40740/2605.0	QPSK	0.807	-2.01	1.172	0.946	1.6	12
Back Upward Repeat	40740/2605.0	QPSK	0.789	0.62	1.172	0.925	1.6	/
Left	40740/2605.0	QPSK	0.126	1.72	1.172	0.148	1.6	/
Right	40740/2605.0	QPSK	0.454	-1.65	1.172	0.532	1.6	/
Top	40740/2605.0	QPSK	0.386	-0.57	1.17	0.452	1.6	/
Back Upward	40340/2565.0	QPSK	0.783	1.00	1.164	0.911	1.6	/
Back Upward	411400/2645.0	QPSK	0.724	-1.62	1.161	0.841	1.6	/
CA_41C 1RB#99+1RB#0								
Back Upward CA_41C	40641/2595.1	QPSK	0.630	0.51	1.112	0.701	1.6	/
	40839/2614.9	QPSK						
50%RB#0								
Front Upward	40740/2605.0	QPSK	0.211	2.52	1.159	0.245	1.6	/
Back Upward	40740/2605.0	QPSK	0.648	0.14	1.159	0.751	1.6	/
Left	40740/2605.0	QPSK	0.096	0.36	1.159	0.111	1.6	/
Right	40740/2605.0	QPSK	0.344	1.77	1.159	0.399	1.6	/
Top	40740/2605.0	QPSK	0.292	-2.53	1.159	0.338	1.6	/
100%RB#0								
Front Upward	40740/2605.0	QPSK	0.203	0.93	1.183	0.240	1.6	/
Back Upward	40740/2605.0	QPSK	0.621	-1.66	1.183	0.735	1.6	/
Left	40740/2605.0	QPSK	0.087	-0.31	1.183	0.103	1.6	/
Right	40740/2605.0	QPSK	0.319	-0.80	1.183	0.377	1.6	/
Top	40740/2605.0	QPSK	0.245	2.05	1.183	0.290	1.6	/

**Results overview of WIFI2.4G 802.11b**

ANT 3

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
Front Upward	6/2437.0	802.11b	0.106	-2.03	1.135	0.120	1.6	/
Back Upward	6/2437.0	802.11b	0.174	1.95	1.135	0.197	1.6	13
Left	6/2437.0	802.11b	0.152	0.27	1.135	0.173	1.6	/
Top	6/2437.0	802.11b	0.034	0.88	1.135	0.039	1.6	/

Results overview of WIFI U-NII 1 802.11a

ANT 3

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
Front Upward	44/5220.0	802.11a	0.116	0.81	1.091	0.127	1.6	/
Back Upward	44/5220.0	802.11a	0.257	1.72	1.091	0.280	1.6	14
Left	44/5220.0	802.11a	0.201	-2.25	1.091	0.219	1.6	/
Top	44/5220.0	802.11a	0.089	0.37	1.091	0.097	1.6	/

Results overview of WIFI U-NII 3 802.11a

ANT 3

Body-worn & Hotspot(10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
Front Upward	157/5785.0	802.11a	0.112	0.23	1.161	0.130	1.6	/
Back Upward	157/5785.0	802.11a	0.199	0.89	1.161	0.231	1.6	15
Left	157/5785.0	802.11a	0.172	-2.46	1.161	0.200	1.6	/
Top	157/5785.0	802.11a	0.072	1.52	1.161	0.084	1.6	/

**Results overview of Bluetooth**

ANT 3

Body-worn (10mm)	Channel /Frequency	Mode	SAR Value (W/kg)1-g	Power drift(%)	Scaled Factor	Scaled SAR (W/Kg)1-g	Limit (W/kg)	SAR Plot.
Front Upward	39/2441.0	DH5	0.012	-1.81	1.172	0.014	1.6	/
Back Upward	39/2441.0	DH5	0.020	0.59	1.172	0.023	1.6	16

Note:

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

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

- ≤ 0.8 W/kg, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg, when the transmission band is ≥ 200 MHz



11. Simultaneous Transmissions Analysis

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

Simultaneous SAR

No.	Transmitter Combinations	Head	Body	Hotspot
1	WWAN + WLAN 2.4GHz	Support	Support	Support
2	WWAN + WLAN 5GHz	Support	Support	Support
3	WWAN+ Bluetooth	Support	Support	No

Note:

1. EUT will choose each GSM, WCDMA, LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
2. The reported SAR summation is calculated based on the same configuration and test position.



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

Test Position		Front	Back	Left	Right	Top	Bottom
Body-worn MAX 1-g SAR(W/Kg) 10mm distance	WCDMA 850 ANT 2	0.020	0.251	/	/	/	/
	WCDMA 1700 ANT 2	1.037	0.428	/	/	/	/
	WCDMA 1900 ANT 2	0.639	0.704	/	/	/	/
	LTE Band 2 ANT 2	0.698	0.605	/	/	/	/
	LTE Band 4 ANT 2	1.064	0.279	/	/	/	/
	LTE Band 5 ANT 2	0.112	0.046	/	/	/	/
	LTE Band 7 ANT 2	0.343	1.026	/	/	/	/
	LTE Band 12 ANT 2	0.055	0.094	/	/	/	/
	LTE Band 17 ANT 2	0.047	0.035	/	/	/	/
	LTE Band 25 ANT 2	0.826	0.089	/	/	/	/
	LTE Band 26 ANT 2	0.115	0.357	/	/	/	/
	LTE Band 41 ANT 2	0.325	0.946	/	/	/	/
	WIFI 2.4G ANT 2	0.120	0.197	/	/	/	/
	WIFI 5G U-NII 1 ANT 3	0.127	0.280	/	/	/	/
	WIFI 5G U-NII 3 ANT 3	0.130	0.231	/	/	/	/
	Bluetooth ANT 3	0.014	0.023	/	/	/	/
WWAN MAX SAR		1.064	1.026	/	/	/	/
WIFI/BT MAX SAR		0.130	0.280	/	/	/	/
Max Simultaneous $\sum$ 1-g SAR(W/Kg) (WIFI/BT MAX SAR +WWAN ANT MAX SAR)		1.194	1.306	/	/	/	/



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

Test Position		Front	Back	Left	Right	Top	Bottom
Hotspot MAX 1-g SAR(W/Kg) 10mm distance	WCDMA 850 ANT 2	0.020	0.251	0.021	0.019	0.014	/
	WCDMA 1700 ANT 2	1.037	0.428	0.534	0.151	0.457	/
	WCDMA 1900 ANT 2	0.639	0.704	0.044	0.034	0.303	/
	LTE Band 2 ANT 2	0.698	0.605	0.119	0.015	0.044	/
	LTE Band 4 ANT 2	1.064	0.279	0.381	0.024	0.113	/
	LTE Band 5 ANT 2	0.112	0.046	0.014	0.024	0.018	/
	LTE Band 7 ANT 2	0.343	1.026	0.024	0.360	0.685	/
	LTE Band 12 ANT 2	0.055	0.094	0.019	0.025	0.016	/
	LTE Band 17 ANT 2	0.047	0.035	0.019	0.016	0.012	/
	LTE Band 25 ANT 2	0.826	0.089	0.615	0.029	0.052	/
	LTE Band 26 ANT 2	0.115	0.357	0.053	0.194	0.164	/
	LTE Band 41 ANT 2	0.325	0.946	0.148	0.532	0.452	/
	WIFI 2.4G ANT 2	0.120	0.197	0.173	/	0.039	/
	WIFI 5G U-NII 1 ANT 3	0.127	0.280	0.219	/	0.097	/
	WIFI 5G U-NII 3 ANT 3	0.130	0.231	0.200	/	0.084	/
WWAN MAX SAR		1.064	1.026	0.615	0.532	0.685	/
WIFI/BT MAX SAR		0.130	0.280	0.219	/	0.097	/
Max Simultaneous $\sum$ 1-g SAR(W/Kg) (WIFI/BT MAX SAR +WWAN ANT MAX SAR)		1.194	1.306	0.834	0.532	0.782	/

SAR to Peak Location Separation Ratio (SPLSR)

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



12.Measurement Uncertainty

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



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



13. System Check Uncertainty

No.	Uncertainty Component	Type	Uncertainty Value (%)	Probability Distribution	k	ci	Standard Uncertainty (%) $u_i(\%)$	Degree of freedom ν_{eff} or ν_i
	Measurement System							
1	- Probe Calibration	B	5.8	N	1	1	5.8	∞
2	- Axial isotropy	B	3.5	R	$\sqrt{3}$	0.5	1.43	∞
3	- Hemispherical Isotropy	B	5.9	R	$\sqrt{3}$	0.5	2.41	∞
4	- Boundary Effect	B	1	R	$\sqrt{3}$	1	0.58	∞
5	- Linearity	B	4.7	R	$\sqrt{3}$	1	2.71	∞
6	- System Detection Limits	B	1	R	$\sqrt{3}$	1	0.58	∞
7	Modulation response	B	0	N	1	1	0.00	
8	- Readout Electronics	B	0.5	N	1	1	0.50	∞
9	- Response Time	B	0.00	R	$\sqrt{3}$	1	0.00	∞
10	- Integration Time	B	1.4	R	$\sqrt{3}$	1	0.81	∞
11	- RF Ambient Conditions	B	3.0	R	$\sqrt{3}$	1	1.73	∞
12	- Probe Position Mechanical tolerance	B	1.4	R	$\sqrt{3}$	1	0.81	∞
13	- Probe Position with respect to Phantom Shell	B	1.4	R	$\sqrt{3}$	1	0.81	∞
14	- Extrapolation, Interpolation and Integration Algorithms for Max. SAR evaluation	B	2.3	R	$\sqrt{3}$	1	1.33	∞
	Uncertainties of the DUT							



15	Deviation of experimental source from numerical source	A	4	N	1	1	4.00	5
16	Input Power and SAR drift measurement	A	5	R	$\sqrt{3}$	1	2.89	5
17	Dipole Axis to Liquid Distance	B	2	R	$\sqrt{3}$	1	1.2	∞
Phantom and Tissue Parameters								
18	- Phantom Uncertainty(shape and thickness tolerances)	B	4	R	$\sqrt{3}$	1	2.31	∞
19	Uncertainty in SAR correction for deviation(in permittivity and conductivity)	B	2	N	1	1	2.00	
20	- Liquid Conductivity Target – tolerance	B	2.5	R	$\sqrt{3}$	0.6	1.95	∞
21	- Liquid Conductivity – measurement Uncertainty)	B	4	N	$\sqrt{3}$	1	0.92	9
22	- Liquid Permittivity Target tolerance	B	2.5	R	$\sqrt{3}$	0.6	1.95	∞
23	- Liquid Permittivity – measurement uncertainty	B	5	N	$\sqrt{3}$	1	1.15	∞
Combined Standard Uncertainty				RSS			10.15	
Expanded uncertainty (Confidence interval of 95 %)				K=2			20.29	



14. Equipment List

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

	EQUIPMENT	Model	Serial number	Calibration Date	Due Date
☒	SAR Probe	SSE2	3223-EPGO-422	2023/08/28	2024/08/27
☒	SAR Probe	SSE2	SN 41/18 EPGO330	2024/01/24	2025/01/23
☒	Dipole	SID750	SN 23/15 DIP0G750-378	2023/05/24	2026/05/23
☒	Dipole	SID835	SN 09/13 DIP0G835-217	2023/05/24	2026/05/23
☒	Dipole	SID1800	SN 09/13 DIP1G800-216	2023/05/24	2026/05/23
☒	Dipole	SID1900	SN 09/13 DIP1G900-218	2023/05/24	2026/05/23
☒	Dipole	SID2300	SN 20/20 DIP2G300-525	2023/05/24	2026/05/23
☒	Dipole	SID2450	SN 09/13 DIP2G450-220	2023/05/24	2026/05/23
☒	Dipole	SID2600	SN 32/14 DIP2G600-338	2023/05/24	2026/05/23
☒	Dipole	SWG5500	SN15/15 WGA39	2023/05/25	2026/05/24
☒	Multimeter	Keithley-2000	4014020	2024/01/18	2025/01/17
☒	System Simulator(R&S)	CMW500	130805	2023/07/13	2024/07/12
☒	KEYSIGHT	E7515A	MY56040357	2024/01/18	2025/01/17
☒	Vector Network Analyzer(R&S)	ZVB8	100343	2024/01/18	2025/01/17
☒	PC 3.5 Fixed Match Calibration Kit	ZV-Z32	100571	2024/01/18	2025/01/17
☒	Dielectric Probe Kit	SCLMP	SN 09/13 OCPG51	2024/01/18	2025/01/17
☒	Signal Generator	SMU100A	177649	2024/01/18	2025/01/17
☒	Amplifier	Nucletudes	143060	2024/01/18	2025/01/17
☒	Directional Coupler	DC6180A	305827	2023/06/15	2024/06/14
☒	Power Meter	NRP2	103434	2024/01/18	2025/01/17



ANNEX A: Appendix A: SAR System performance Check Plots

(Please See Appendix A)

ANNEX B: Appendix B: SAR Measurement results Plots

(Please See Appendix B)

ANNEX C: Appendix C: Calibration reports

(Please See Appendix C)

ANNEX D: Appendix D: SAR Test Setup

(Please See Appendix D)

—End of the Report—