SAR Test Report

Report No.: AGC02931240301FH01

FCC ID	:	2BLTR-AND1
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	4G LTE IP Radio
BRAND NAME	:	TYTECH
MODEL NAME	:	IP-66
APPLICANT	:	Quanzhou RadioBoss Technology Co., Ltd
DATE OF ISSUE	:	Feb. 10, 2025
STANDARD(S)	:	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2005
REPORT VERSION	:	V1.0

Attestation of Global Compliance(Shenzhen) Co., Ltd.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Feb. 10, 2025	Valid	Initial Release

Test Report

Applicant Name	Quanzhou RadioBoss Technology Co., Ltd
Applicant Address	No.8, Chuangzao Road, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian
Manufacturer Name	Quanzhou RadioBoss Technology Co., Ltd
Manufacturer Address	No.8, Chuangzao Road, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian
Factory Name	Quanzhou RadioBoss Technology Co., Ltd
Factory Address	No.8, Chuangzao Road, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian
Product Designation	4G LTE IP Radio
Brand Name	TYTECH
Model Name	IP-66
Series Model(s)	N/A
Difference Description	N/A
EUT Voltage	DC 3.7V by battery
Applicable Standard	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2005
Date of receipt of test item	Mar. 04, 2024
Test Date	Mar. 09, 2024 to Mar. 20, 2024
Report Template	AGCRT-US-4G/SAR (2021-04-20)

Note: The results of testing in this report apply to the product/system which was tested only.

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1. SUMMARY OF MAXIMUM SAR VALUE

The maximum results of Specific Absorption Rate (SAR) found during testing for EUT are as follows:

Frequency Band	Highest Reported 1g-SAR(W/kg)		SAR Test Limit (W/kg)
	Face Up (with 25mm separation)	Back Touch with all accessories	
GSM 850	0.457	0.640	1.6
PCS 1900	0.250	0.188	
UMTS Band II	0.218	0.161	
UMTS Band IV	0.168	0.317	
UMTS Band V	0.132	0.187	
LTE Band 2	0.266	0.213	
LTE Band 4	0.263	0.493	
LTE Band 5	0.151	0.156	
LTE Band 7	0.215	0.835	
LTE Band 12	0.089	0.122	
LTE Band 13	0.117	0.258	
LTE Band 17	0.076	0.116	
LTE Band 38	0.071	0.316	
LTE Band 40-Lower Side	0.034	0.138	
LTE Band 40- Upper Side	0.046	0.138	
LTE Band 66	0.226	0.180	
LTE Band 71	0.080	0.116	
WIFI 2.4G	0.019	0.016	
5.2GHz (U-NII-1)	0.134	0.089	
5.3GHz (U-NII-2A)	0.160	0.093	
5.8GHz (U-NII-3)	0.081	0.104	
Simultaneous Reported SAR	0.928		
SAR Test Result	PASS		

This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/kg) specified in IEEE Std. 1528:2013; FCC 47CFR § 2.1093; IEEE/ANSI C95.1:2005 and the following specific FCC Test Procedures:

- KDB 447498 D01 General RF Exposure Guidance v06
- KDB 648474 D04 Handset SAR v01r03
- KDB 865664 D01 SAR Measurement 100MHz to 6GHz v01r04
- KDB 941225 D01 3G SAR Procedures v03r01
- KDB 248227 D01 802 11 Wi-Fi SAR v02r02
- KDB 941225 D05 SAR for LTE Devices v02r05

2. GENERAL INFORMATION

2.1. EUT Description

General Information	
Product Designation	4G LTE IP Radio
Test Model	IP-66
Sample ID	240301618
Hardware Version	V2.0
Software Version	PU562WAE3C_KT5508_starlight_istar two_V01_20180813
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	WLAN/BT: PIFA Antenna GSM/WCDMA/LTE: Detachable Antenna
GPRS& EGPRS	
Support Band	☒GSM 850 ☒PCS 1900 ☐GSM 900 ☐DCS 1800
GPRS & EGPRS Type	Class B
GPRS & EGPRS Class	Class 12(1Tx+4Rx, 2Tx+3Rx, 3Tx+2Rx, 4Tx+1Rx)
TX Frequency Range	GSM 850 : 820-850MHz; PCS 1900: 1850-1910MHz;
RX Frequency Range	GSM 850 : 869~894MHz; PCS 1900: 1930~1990MHz
Release Version	R99
Type of modulation	GMSK for GPRS; GMSK & 8-PSK for EGPRS
Antenna Gain	GSM850:3.7dBi; PCS1900: 1.71dBi
Max. Average Power	GSM850: 32.44dBm; PCS1900: 28.45dBm
WCDMA	
Support Band	☒UMTS FDD Band II ☒UMTS FDD Band V ☒UMTS FDD Band IV ☐UMTS FDD Band I ☐UMTS FDD Band III ☐UMTS FDD Band VIII
HS Type	HSPA(HSUPA/HSDPA)
TX Frequency Range	FDD Band II: 1850-1910MHz; FDD Band V: 824-849MHz FDD Band IV: 1710-1770MHz
RX Frequency Range	FDD Band II: 1930-1990MHz; FDD Band V: 869-894MHz FDD Band IV: 2110-2170MHz
Release Version	Release 6 and later
Type of modulation	HSDPA:QPSK/16QAM; HSUPA:BPSK; WCDMA:QPSK
Antenna Gain	WCDMA1900:1.71dBi; WCDMA1700:1.68dBi; WCDMA850: 3.7dBi
Max. Average Power	Band II: 24.73dBm; Band IV: 21.42dBm; Band V: 22.13dBm
Bluetooth	
Bluetooth Version	V4.2
Operation Frequency	2402~2480MHz
Type of modulation	☒GFSK ☒Π/4-DQPSK ☒8-DPSK
Peak Power	6.196dBm
Antenna Gain	-0.9dBi
2.4GHz WIFI	
WIFI Specification	☐802.11a ☒802.11b ☒802.11g ☒802.11n(20) ☒802.11n(40)
Operation Frequency	2412~2462MHz
Avg. Burst Power	11b:15.18dBm,11g:13.32dBm,11n(20):13.33dBm,11n(40):12.87dBm
Antenna Gain	-0.9dBi

EUT Description(Continue)

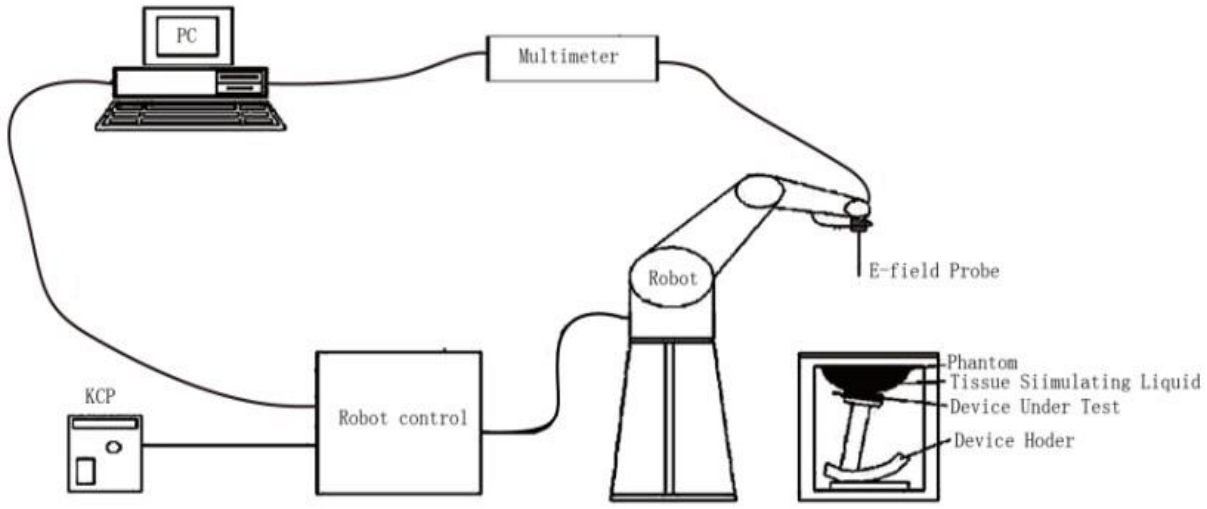
LTE	
Support Band	☒FDD Band 2 ☒FDD Band 4 ☒FDD Band 5 ☒FDD Band 7 ☒FDD Band 12 ☒FDD Band 13 ☐FDD Band 14 ☒FDD Band 17 ☐FDD Band 25 ☐FDD Band 26 ☒TDD Band 38 ☒TDD Band 40 ☐TDD Band 41 ☒FDD Band 66 ☒FDD Band 71
TX Frequency Range	Band 2:1850-1910MHz; Band 4:1710-1755MHz;Band 5:824-849MHz; Band 7:2500-2570MHz; Band 12:699-716MHz; Band 13: 777-787MHz; Band 17: 704-716MHz; Band 38: 2570-2620 MHz; Band 40:2305-2320&2345-2360MHz; Band 66:1700-1780MHz; Band 71:663-698MHz
RX Frequency Range	Band 2:1930-1990MHz; Band 4:2110-2155MHz; Band 5:869-894MHz; Band 7:2620-2690MHz; Band 12: 729-746 MHz; Band 13: 746-756MHz; Band 17: 734-746 MHz; Band 38: 2570-2620 MHz; Band 40:2305-2320&2345-2360MHz; Band 66:2110-2200MHz; Band 71:617-652MHz
Type of modulation	QPSK, 16QAM
Antenna Gain	Band 2:1.71dBi; Band 4:1.68dBi; Band 5:3.7dBi; Band 7:1.95dBi; Band 12:1.31dBi; Band 13:1.31dBi; Band 17:1.31dBi; Band 38:2.26dBi; Band 40:1.95dBi; Band 66:1.68dBi; Band 71:1.31dBi
Max. Average Power	Band 2: 22.62dBm; Band 4: 22.63dBm; Band 5: 23.03dBm; Band 7: 22.53 dBm; Band 12: 22.83 dBm; Band 13: 23.24 dBm; Band 17: 22.54 dBm; Band 38: 22.76 dBm; LTE-Band 40(Lower Side): 22.57 dBm; LTE-Band 40 (Upper Side): 21.55 dBm; Band 66: 22.76dBm; Band 71: 26.49 dBm;
5 GHz WIFI	
WIFI Specification	☒802.11a ☒802.11n20 ☒802.11n40 ☐802.11ac20 ☐802.11ac40 ☐802.11ac80
Operation Frequency	U-NII-1: 5180MHz~5240MHz; U-NII-2A: 5260MHz~5320MHz; U-NII-3: 5745MHz~5825MHz
Max. conducted Power	U-NII-1: 12.10dBm; U-NII-2A: 11.93dBm; U-NII-3: 10.83dBm
Antenna Gain	-0.9dBi
Accessories	
Battery	Brand name: N/A Model No. : BATT-78 Voltage and Capacitance: 3.7 V & 6000mAh
Earphone	Brand name: N/A Model No. : N/A

Note:1.CMU200 can measure the average power and Peak power at the same time
2.The sample used for testing is end product.
3. The test sample has no any deviation to the test method of standard mentioned in page 1.

Product	Type
	☒ Production unit ☐ Identical Prototype

3. SAR MEASUREMENT SYSTEM

3.1. The SATIMO system used for performing compliance tests consists of following items



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

- The PC. It controls most of the bench devices and stores measurement data.A computer running WinXP and the Opensar software.
- The E-Field probe. The probe is a 3-axis system made of 3 distinct dipoles. Each dipole returns a voltage in function of the ambient electric field.
- The Keithley multimeter measures each probe dipole voltages.
- The SAM phantom simulates a human head. The measurement of the electric field is made inside the phantom.
- The liquids simulate the dielectric properties of the human head tissues.
- The network emulator controls the mobile phone under test.
- The validation dipoles are used to measure a reference SAR. They are used to periodically check the bench to make sure that there is no drift of the system characteristics over time.

·The phantom, the device holder and other accessories according to the targeted measurement.

3.2. COMOSAR E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SATIMO. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. SATIMO conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528 and relevant KDB files.) The calibration data are in Appendix D.

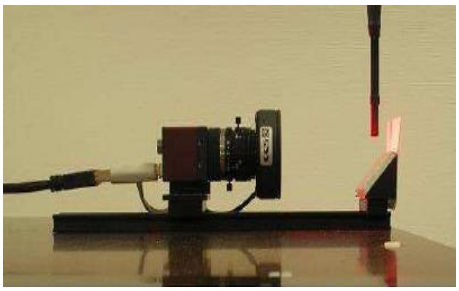
Isotropic E-Field Probe Specification

Model	SSE2	
Manufacture	MVG	
Identification No.	2023-EPGO-414	
Frequency	0.15GHz-7.5GHz Linearity:±0.09dB(0.15GHz-7.5GHz)	
Dynamic Range	0.01W/kg-100W/kg Linearity:±0.09dB	
Dimensions	Overall length:330mm Length of individual dipoles:24.5mm Maximum external diameter:8mm Probe Tip external diameter:2.55mm Distance between dipoles/ probe extremity:12.7mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precisin of better 30%.	

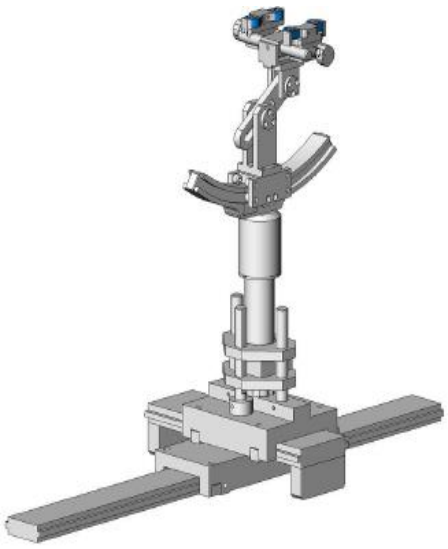
3.3. Robot

The COMOSAR system uses the KUKA robot from SATIMO SA (France).For the 6-axis controller COMOSAR system, the KUKA robot controller version from SATIMO is used. The XL robot series have many features that are important for our application: □ High precision (repeatability 0.02 mm) □ High reliability (industrial design) □ Jerk-free straight movements □ Low ELF interference (the closed metallic construction shields against motor control fields) □ 6-axis controller	

3.4. Video Positioning System

The video positioning system is used in OpenSAR to check the probe. Which is composed of a camera, LED, mirror and mechanical parts.The camera is piloted by the main computer with firewire link. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip. The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.	

3.5. Device Holder

The COMOSAR 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 center for both scales is the ear reference point (EPR). Thus the device needs no repositioning when changing the angles. The COMOSAR device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity εr =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.	

3.6. SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas: □ Left head □ Right head □ Flat phantom	

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

4. SAR MEASUREMENT PROCEDURE

4.1. Specific Absorption Rate (SAR)

SAR is related to the rate at which energy is absorbed per unit mass in 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 occupational/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 given mass density (ρ). The equation description is as below:

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

SAR is expressed in units of Watts per kilogram (W/kg)
SAR can be obtained using either of the following equations:

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

$$SAR = c_h \frac{dT}{dt}\Big|_{t=0}$$

Where

SAR	is the specific absorption rate in watts per kilogram;
E	is the r.m.s. value of the electric field strength in the tissue in volts per meter;
σ	is the conductivity of the tissue in siemens per metre;
ρ	is the density of the tissue in kilograms per cubic metre;
c_h	is the heat capacity of the tissue in joules per kilogram and Kelvin;
$\frac{dT}{dt} \mid t = 0$	is the initial time derivative of temperature in the tissue in kelvins per second

4.2. SAR Measurement Procedure

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurement are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface is 2.7mm This distance cannot be smaller than the distance os sensor calibration points to probe tip as `defined in the probe properties,

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in SATIMO software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in db) is specified in the standards for compliance testing. For example, a 2db range is required in IEEE Standard 1528 standards, whereby 3db is a requirement when compliance is assessed in accordance with the ARIB standard (Japan) If one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximum are detected, the number of Zoom Scan has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100MHz to 6GHz

	≤ 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.	

Step 3: Zoom Scan

Zoom Scan are used to assess the peak spatial SAR value within a cubic average volume containing 1g abd 10g of simulated tissue. The Zoom Scan measures points(refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1g and 10g and displays these values next to the job's label.

Zoom Scan Parameters extracted from KDB865664 d01 SAR Measurement 100MHz to 6GHz

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
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

Step 4: Power Drift Measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the same settings. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

4.3. RF Exposure Conditions

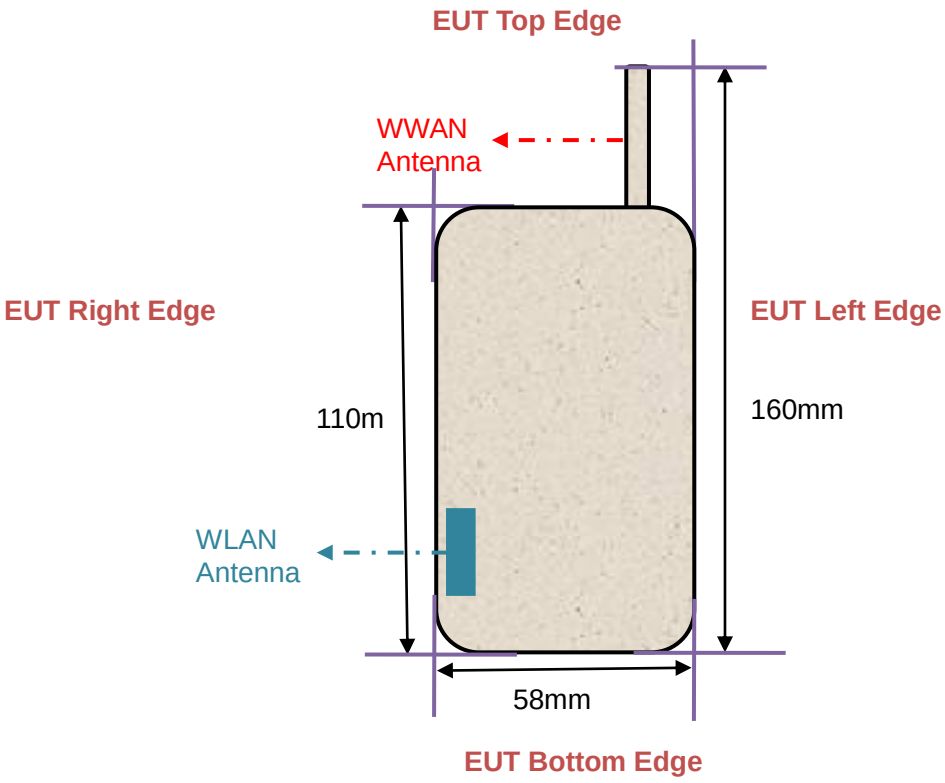
Test Configuration and setting:

The EUT is a model of GSM Portable Mobile Station (MS). It supports GSM/GPRS/EGPRS, WCDMA/HSPA, LTE, BT, WIFI mode.

For WWAN SAR testing, the device was controlled by using a base station emulator. Communication between the device and the emulator were established by air link. The distance between the EUT and the antenna is larger than 50cm, and the output power radiated from the emulator antenna is at least 30db smaller than the output power of EUT.

For WLAN testing, the EUT is configured with the WLAN continuous TX tool through engineering command.

Antenna Location: (the back view)



5. TISSUE SIMULATING LIQUID

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15cm. For head SAR testing the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15cm For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15cm.The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5% are listed in 5.2

5.1. The composition of the tissue simulating liquid

Ingredient (% Weight) / **Frequency** (MHz)	**Water**	**Nacl**	**Polysorbate 20**	**DGBE**	**1,2-Propanediol**	**Triton X-100**	**Diethylen glycol monohex ylether**
750 Head	35	2	0.0	0.0	63	0.0	0.0
835 Head	50.36	1.25	48.39	0.0	0.0	0.0	0.0
1750 Head	52.64	0.36	0.0	47	0.0	0.0	0.0
1900 Head	54.9	0.18	0.0	44.92	0.0	0.0	0.0
2300 Head	62.82	0.51	0.0	36.67	0.0	0.0	0.0
2450 Head	71.88	0.16	0.0	7.99	0.0	19.97	0.0
2600 Head	55.242	0.306	0	44.452	0	0	0.0
5000 Head	65.52	0.0	0.0	0.0	0.0	17.24	17.24

5.2. Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE 1528 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 variations in a human head. Other head and body tissue parameters that have not been specified in IEEE 1528 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 IEEE 1528.

Target Frequency (MHz)	head		body	
	εr	σ (S/m)	εr	σ (S/m)
300	45.3	0.87	45.3	0.87
450	43.5	0.87	43.5	0.87
750	**41.9**	**0.89**	**41.9**	**0.89**
835	**41.5**	**0.90**	**41.5**	**0.90**
900	41.5	0.97	41.5	0.97
915	41.5	1.01	41.5	1.01
1450	40.5	1.20	40.5	1.20
1610	40.3	1.29	40.3	1.29
1750	**40.1**	**1.37**	**40.1**	**1.37**
1800 – 2000	**40.0**	**1.40**	**40.0**	**1.40**
2300	**39.5**	**1.67**	**39.5**	**1.67**
2450	**39.2**	**1.80**	**39.2**	**1.80**
2600	**39.0**	**1.96**	**39.0**	**1.96**
3000	38.5	2.40	38.5	2.40
5200	**36.0**	**4.66**	**36.0**	**4.66**
5300	**35.9**	**4.76**	**35.9**	**4.76**
5600	35.5	5.07	35.5	5.07
5800	**35.3**	**5.27**	**35.3**	**5.27**

(εr = relative permittivity, σ = conductivity and ρ = 1000 kg/m3

5.3. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using SATIMO Dielectric Probe Kit and R&S Network Analyzer ZVL6.

Tissue Stimulant Measurement for 750MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 41.9 (39.805-43.995)	δ[s/m] 0.89(0.8455-0.9345)		
Head	683	43.82	0.87	20.2	Mar. 14, 2024
	707.5	43.67	0.88		
	710	43.26	0.90		
	750	43.12	0.92		
	782	42.63	0.93		

Tissue Stimulant Measurement for 835MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 41.5 (39.425-43.575)	δ[s/m] 0.90(0.855-0.945)		
Head	835	40.49	0.91	20.8	Mar. 13, 2024
	836.4	40.13	0.92		
	836.5	40.13	0.92		
	836.6	40.13	0.92		

Tissue Stimulant Measurement for 1750MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 40.1 (38.095-42.105)	δ[s/m]1.37(1.3015-1.439)		
Head	1732.4	41.63	1.37	21.1	Mar. 16, 2024
	1732.5	41.63	1.37		
	1750	41.07	1.39		
	1755	40.69	1.40		

Tissue Stimulant Measurement for 1900MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr40.00(38.00-42.00)	δ[s/m]1.40(1.33-1.47)		
Head	1880	40.26	1.41	20.7	Mar. 17, 2024
	1900	39.51	1.43		

Tissue Stimulant Measurement for 2300MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 39.5 (37.525-41.475)	δ[s/m]1.67 (1.5865-1.7535)		
Head	2300	38.61	1.65	20.5	Mar. 15, 2024
	2310	38.10	1.68		
	2355	37.96	1.70		

Tissue Stimulant Measurement for 2450MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr39.2(37.24-41.16)	δ[s/m]1.80(1.71-1.89)		
	2450	38.13	1.79	21.6	Mar. 10, 2024
	2462	37.92	1.81		

Tissue Stimulant Measurement for 2600MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr39(37.05.1-40.95)	δ[s/m]1.96(1.862-2.058)		
	2535	40.13	1.93	20.9	Mar. 09, 2024
	2595	39.63	1.95		
	2600	38.17	1.97		

Tissue Stimulant Measurement for 5200MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 36.0(34.105-37.695)	δ[s/m] 4.66(4.427-4.893)		
	5200	35.68	4.62	21.1	Mar. 18, 2024
	5240	35.43	4.65		

Tissue Stimulant Measurement for 5300MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 35.9(34.105-37.695)	δ[s/m] 4.76(4.522-4.998)		
	5260	36.83	4.69	20.9	Mar. 19, 2024
	5300	35.93	4.71		

Tissue Stimulant Measurement for 5800MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 35.3 (33.535-37.065)	δ[s/m] 5.27 (5.0065-5.5335)		
	5755	35.61	5.16	20.5	Mar. 20, 2024
	5800	34.72	5.19		

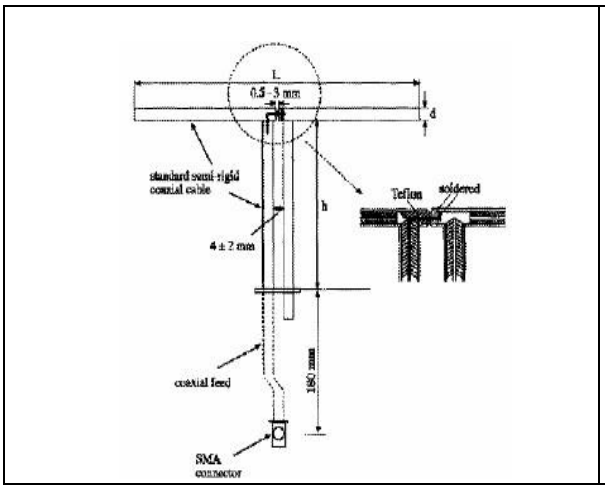
6. SAR SYSTEM CHECK PROCEDURE

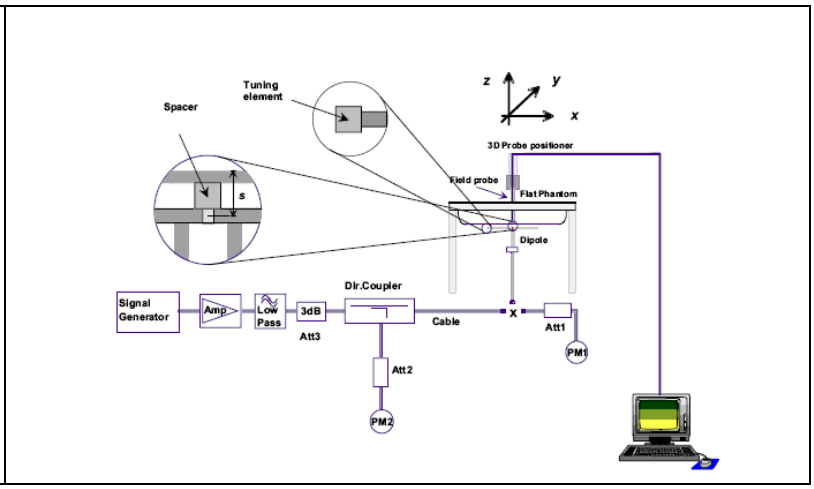
6.1. SAR System Check Procedures

SAR system check is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are remeasured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

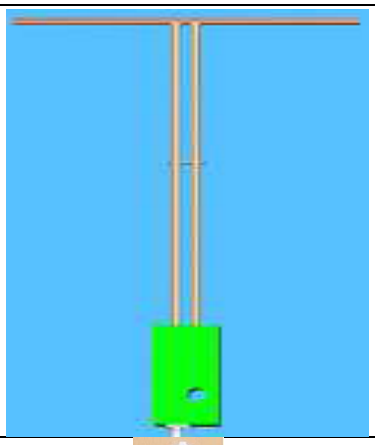
Each SATIMO system is equipped with one or more system check kits. These units, together with the predefined measurement procedures within the SATIMO software, enable the user to conduct the system check and system validation. System kit includes a dipole, and dipole device holder.

The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system check setup is shown as below.





6.2. SAR System Check
6.2.1. Dipoles

	The dipoles are based on the IEEE-1528 standard, and are complied with mechanical and electrical specifications in line with the requirements of IEEE. the table below provides details for the mechanical and electrical Specifications for the dipoles.
	The dipole is based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of IEEE. The table below provides details for the mechanical and electrical specifications for the wave guide.

Frequency	L (mm)	h (mm)	d (mm)
750MHz	176	100	6.35
835MHz	161.0	89.8	3.6
1800MHz	71.6	41.7	3.6
1900MHz	68	39.5	3.6
2300MHz	55.5	32.6	3.6
2450MHz	51.5	30.4	3.6
2600MHz	48.5	28.8	3.6
5000MHz	20.6	40.3	3.6

6.2.2. System Check Result

System Performance Check at 750MHz&835MHz &1800MHz &1900MHz &2300MHz &2450MHz&2600MHz & 5200-5800MHz for Head								
Validation Kit: SN 22/16 DIP 0G750-417& SN 15/16 DIP 0G835-399& SN 46/11 DIP 1G800-186& SN 29/15 DIP 1G900-389& SN 22/16 DIP 2G300-412& SN 29/15 DIP 2G450-393& SN 22/16 DIP 2G600-407& SN 17/22 DIP 5G000-671								
Frequency [MHz]	Target Value(W/kg)		Reference Result (± 10%)		Tested Value(W/kg)		Tissue Temp. [°C]	Test time
	1g	10g	1g	10g	1g	10g		
750	8.33	5.44	7.497-9.163	4.896-5.984	8.98	5.68	20.2	Mar. 14, 2024
835	9.67	6.14	8.703-10.637	5.526-6.754	9.45	6.17	20.8	Mar. 13, 2024
1800	37.76	19.60	33.984-41.536	17.640-21.560	40.89	21.05	21.1	Mar. 16, 2024
1900	41.26	20.86	37.134-45.386	18.774-22.946	39.67	20.07	20.7	Mar. 17, 2024
2300	50.12	23.16	45.108-55.132	20.844-25.476	50.48	23.35	20.5	Mar. 15, 2024
2450	54.32	24.25	48.888-59.752	21.825-26.675	49.70	23.50	21.6	Mar. 10, 2024
2600	54.94	23.77	49.446-60.434	21.393-26.147	52.89	24.15	20.9	Mar. 09, 2024
5200	73.43	21.83	66.087-80.773	19.647-24.013	74.52	21.36	21.1	Mar. 18, 2024
5200	73.43	21.83	66.087-80.773	19.647-24.013	80.42	22.73	20.9	Mar. 19, 2024
5800	75.69	22.44	68.121-83.259	20.196-24.684	76.79	22.31	20.5	Mar. 20, 2024

Note:
(1) We use a CW signal of 18dBm and 10dBm for system check, and then all SAR value are normalized to 1W forward power. The result must be within ±10% of target value.

7. EUT TEST POSITION

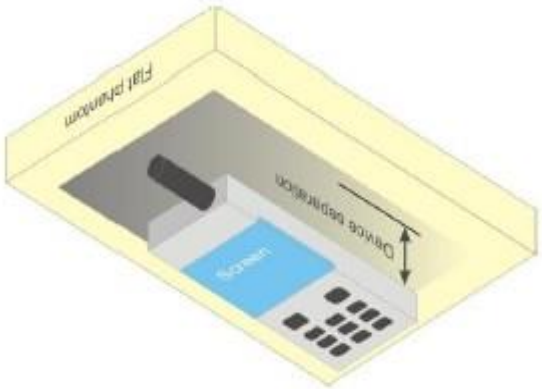
This EUT was tested in **Front Face and Rear Face.**

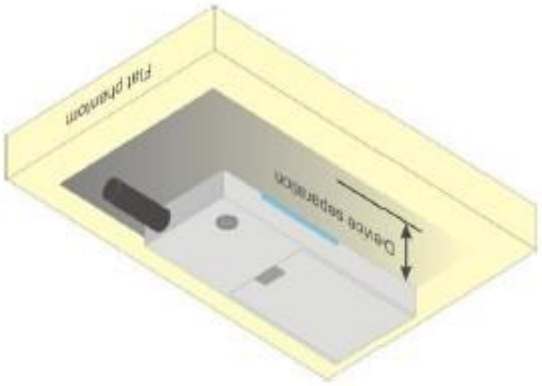
7.1. Body Worn Position

(1) To position the EUT parallel to the phantom surface.

(2) To adjust the EUT parallel to the flat phantom.

(3) To adjust the distance between the EUT surface and the flat phantom to **25mm** while used in front of face, and body back touch with all accessories.





8. SAR EXPOSURE LIMITS

Limits for General Population/Uncontrolled Exposure (W/kg)

Type Exposure	Uncontrolled Environment Limit (W/kg)
Spatial Peak SAR (1g cube tissue for brain or body)	1.60
Spatial Average SAR (Whole body)	0.08
Spatial Peak SAR (Limbs)	4.0

9. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA

10. TEST EQUIPMENT LIST

Equipment description	Manufacturer/ Model	Identification No.	Software version	Current calibration date	Next calibration date
SAR Probe	MVG	2023-EPGO-414	N/A	May 31, 2023	May 30, 2024
Phantom	SATIMO	SN_4511_SAM90	N/A	Validated. No cal required.	Validated. No cal required.
Liquid	SATIMO	N/A	N/A	Validated. No cal required.	Validated. No cal required.
Comm Tester	Agilent-8960	GB46310822	A.13.07	Jun. 03, 2023	Jun. 02, 2024
Comm Tester	R&S- CMW500	121209	V3.7.40	Jun. 01, 2023	May 31, 2024
Multimeter	Keithley 2000	1350784	N/A	Jun. 01, 2023	May 31, 2024
SAR Software	SATIMO-OpenSAR	N/A	OpenSAR V4_02_32	N/A	N/A
Dipole	SATIMO SID750	SN 22/16 DIP 0G750-417	N/A-	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID835	SN 15/16 DIP 0G835-399	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID1800	SN 46/11 DIP 1G800-186	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID1900	SN 29/15 DIP 1G900-389	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID2300	SN 22/16 DIP 2G300-412	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID2450	SN 29/15 DIP 2G450-393	N/A	Apr. 28,2022	Apr. 27,2025
Dipole	SATIMO SID2600	SN 22/16 DIP 2G600-407	N/A	Apr. 28,2022	Apr. 27, 2025
Dipole	SID5000	SN 17/22 DIP 5G000-671	N/A	Apr. 28,2022	Apr. 27, 2025
Signal Generator	Agilent-E4438C	US41461365	V5.03	Jun. 01, 2023	May 31, 2024
EXA Signal Analyzer	Agilent / N9010A	MY53470504	N/A	Jun. 01, 2023	May 31, 2024
Network Analyzer	Rhode & Schwarz ZVL6	SN101443	3.2	Sep. 21, 2023	Sep. 20, 2024
Attenuator	Warison /WATT-6SR1211	S/N:WRJ34AYM2F1	N/A	June 07,2023	June 06,2024
Attenuator	Mini-circuits / VAT-10+	31405	N/A	June 07,2023	June 06,2024
Amplifier	AS0104-55_55	1004793	N/A	N/A	N/A
Directional Couple	Werlatone/ C5571-10	SN99463	N/A	Feb. 01, 2024	Jan. 31, 2026
Directional Couple	Werlatone/ C6026-10	SN99482	N/A	Feb. 01, 2024	Jan. 31, 2026
Power Sensor	NRP-Z21	104604	N/A	Sep. 05,2023	Sep. 04,2024
Power Sensor	NRP-Z23	100323	N/A	Jun. 06, 2023	Jun. 05, 2024
Power Viewer	R&S	V2.3.1.0	N/A	N/A	N/A
Calibration standard parts for network sub - port	R&S/ ZV-Z132	N/A	V2.3.1.0	Nov. 11, 2023	Nov. 10, 2024

Note: Per KDB 865664 Dipole SAR Validation, AGC Lab has adopted 3 years calibration intervals. On annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:
1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss is within 20% of calibrated measurement;
4. Impedance is within 5Ω of calibrated measurement.

11. MEASUREMENT UNCERTAINTY

SATIMO Uncertainty- 2023-EPGO-414 Measurement uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System									
Probe calibration	E.2.1	7.000	N	1	1	1	7.000	7.000	∞
Axial Isotropy	E.2.2	1.695	R	1.732	0.707	0.707	0.692	0.692	∞
Hemispherical Isotropy	E.2.2	1.695	R	1.732	0.707	0.707	0.692	0.692	∞
Boundary effect	E.2.3	1.000	R	1.732	1	1	0.577	0.577	∞
Linearity	E.2.4	2.250	R	1.732	1	1	1.299	1.299	∞
System detection limits	E.2.4	1.000	R	1.732	1	1	0.577	0.577	∞
Modulation response	E2.5	3.000	R	1.732	1	1	1.732	1.732	∞
Readout Electronics	E.2.6	0.021	N	1	1	1	0.021	0.021	∞
Response Time	E.2.7	0.000	R	1.732	1	1	0.000	0.000	∞
Integration Time	E.2.8	1.400	R	1.732	1	1	0.808	0.808	∞
RF ambient conditions-Noise	E.6.1	3.000	R	1.732	1	1	1.732	1.732	∞
RF ambient conditions-reflections	E.6.1	3.000	R	1.732	1	1	1.732	1.732	∞
Probe positioner mechanical tolerance	E.6.2	1.400	R	1.732	1	1	0.808	0.808	∞
Probe positioning with respect to phantom shell	E.6.3	1.400	R	1.732	1	1	0.808	0.808	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.300	R	1.732	1	1	1.328	1.328	∞
Test sample Related									
Test sample positioning	E.4.2	2.6	N	1	1	1	2.60	2.60	∞
Device holder uncertainty	E.4.1	3	N	1	1	1	3.00	3.00	∞
Output power variation—SAR drift measurement	E.2.9	5	R	1.732	1	1	2.89	2.89	∞
SAR scaling	E.6.5	5	R	1.732	1	1	2.89	2.89	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	1.732	1	1	2.309	2.309	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.900	1.596	∞
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.120	2.840	M
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.150	1.300	M
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	1.732	0.78	0.71	1.126	1.025	∞
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	1.732	0.23	0.26	0.332	0.375	∞
Combined Standard Uncertainty			RSS				10.616	10.432	
Expanded Uncertainty (95% Confidence interval)			K=2				21.232	20.865	

SATIMO Uncertainty- 2023-EPGO-414 System Validation uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System									
Probe calibration	E.2.1	7.000	N	1	1	1	7.000	7.000	∞
Axial Isotropy	E.2.2	1.695	R	1.732	1.000	1.000	0.979	0.979	∞
Hemispherical Isotropy	E.2.2	1.695	R	1.732	0.000	0.000	0.000	0.000	∞
Boundary effect	E.2.3	1.000	R	1.732	1.000	1.000	0.577	0.577	∞
Linearity	E.2.4	2.250	R	1.732	1.000	1.000	1.299	1.299	∞
System detection limits	E.2.4	1.000	R	1.732	1.000	1.000	0.577	0.577	∞
Modulation response	E2.5	3.000	R	1.732	0.000	0.000	0.000	0.000	∞
Readout Electronics	E.2.6	0.021	N	1.000	1.000	1.000	0.021	0.021	∞
Response Time	E.2.7	0.000	R	1.732	0.000	0.000	0.000	0.000	∞
Integration Time	E.2.8	1.400	R	1.732	0.000	0.000	0.000	0.000	∞
RF ambient conditions-Noise	E.6.1	3.000	R	1.732	1.000	1.000	1.732	1.732	∞
RF ambient conditions-reflections	E.6.1	3.000	R	1.732	1.000	1.000	1.732	1.732	∞
Probe positioner mechanical tolerance	E.6.2	1.400	R	1.732	1.000	1.000	0.808	0.808	∞
Probe positioning with respect to phantom shell	E.6.3	1.400	R	1.732	1.000	1.000	0.808	0.808	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.300	R	1.732	1.000	1.000	1.328	1.328	∞
System validation source									
Deviation of experimental dipole from numerical dipole	E.6.4	5	N	1	1	1	5	5	∞
Input power and SAR drift measurement	8,6.6.4	5	R	1.732	1	1	2.887	2.887	∞
Dipole axis to liquid distance	8,E.6.6	2	R	1.732	1	1	1.155	1.155	∞
Phantom and set-up									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	1.732	1	1	2.309	2.309	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.9	1.596	∞
Liquid conductivity（temperature uncertainty）	E.3.3	4	N	1	0.78	0.71	3.12	2.84	∞
Liquid conductivity（measured）	E.3.3	5	N	1	0.23	0.26	1.15	1.3	M
Liquid permittivity（temperature uncertainty）	E.3.4	2.5	R	1.732	0.78	0.71	1.126	1.025	∞
Liquid permittivity（measured）	E.3.4	2.5	R	1.732	0.23	0.26	0.332	0.375	M
Combined Standard Uncertainty			RSS				10.572	10.387	
Expanded Uncertainty (95% Confidence interval)			K=2				21.143	20.775	

SATIMO Uncertainty- 2023-EPGO-414 System Check uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System									
Probe calibration drift	E.2.1.3	0.5	N	1	1	1	0.5	0.5	∞
Axial Isotropy	E.2.2	1.695	R	$\sqrt{3}$	0	0	0	0	∞
Hemispherical Isotropy	E.2.2	1.695	R	$\sqrt{3}$	0	0	0	0	∞
Boundary effect	E.2.3	1.000	R	$\sqrt{3}$	0	0	0	0	∞
Linearity	E.2.4	2.250	R	$\sqrt{3}$	0	0	0	0	∞
System detection limits	E.2.4	1	R	$\sqrt{3}$	0	0	0	0	∞
Modulation response	E2.5	3	R	$\sqrt{3}$	0	0	0	0	∞
Readout Electronics	E.2.6	0.021	N	$\sqrt{3}$	0	0	0	0	∞
Response Time	E.2.7	0	R	$\sqrt{3}$	0	0	0	0	∞
Integration Time	E.2.8	1.4	R	$\sqrt{3}$	0	0	0	0	∞
RF ambient conditions-Noise	E.6.1	3	R	$\sqrt{3}$	0	0	0	0	∞
RF ambient conditions-reflections	E.6.1	3	R	$\sqrt{3}$	0	0	0	0	∞
Probe positioner mechanical tolerance	E.6.2	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Probe positioning with respect to phantom shell	E.6.3	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.3	R	$\sqrt{3}$	0	0	0	0.00	∞
System check source (dipole)									
Deviation of experimental dipoles	E.6.4	2	N	1	1	1	2	2	∞
Input power and SAR drift measurement	8,6.6.4	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole axis to liquid distance	8,E.6.6	2	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1.000	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	N	1.000	0.78	0.71	3.12	2.84	∞
Liquid permittivity measurement	E.3.3	5	N	1.000	0.23	0.26	1.15	1.30	M
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	M
Combined Standard Uncertainty			RSS				5.562	5.203	
Expanded Uncertainty (95% Confidence interval)			K=2				11.124	10.406	

12. CONDUCTED POWER MEASUREMENT

GSM BAND

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1>				
GPRS 850 （1 Slot）	824.2	**32.44**	-9	23.44
	836.6	32.42	-9	23.42
	848.8	32.27	-9	23.27
GPRS 850 （2 Slot）	824.2	30.59	-6	**24.59**
	836.6	30.51	-6	24.51
	848.8	30.42	-6	24.42
GPRS 850 （3 Slot）	824.2	28.64	-4.26	24.38
	836.6	28.60	-4.26	24.34
	848.8	28.53	-4.26	24.27
GPRS 850 （4 Slot）	824.2	26.34	-3	23.34
	836.6	26.43	-3	23.43
	848.8	26.39	-3	23.39
EGPRS 850 （1 Slot）	824.2	24.30	-9	15.30
	836.6	24.15	-9	15.15
	848.8	24.24	-9	15.24
EGPRS 850 （2 Slot）	824.2	24.15	-6	18.15
	836.6	24.06	-6	18.06
	848.8	24.13	-6	18.13
EGPRS 850 （3 Slot）	824.2	22.57	-4.26	18.31
	836.6	22.52	-4.26	18.26
	848.8	22.55	-4.26	18.29
EGPRS 850 （4 Slot）	824.2	21.41	-3	18.41
	836.6	21.33	-3	18.33
	848.8	21.40	-3	18.40

GSM BAND CONTINUE

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1>				
GPRS1900 （1 Slot）	1850.2	28.30	-9	19.30
	1880	28.27	-9	19.27
	1909.8	**28.45**	-9	19.45
GPRS1900 （2 Slot）	1850.2	26.08	-6	20.08
	1880	25.78	-6	19.78
	1909.8	26.00	-6	20.00
GPRS1900 （3 Slot）	1850.2	24.45	-4.26	**20.19**
	1880	24.14	-4.26	19.88
	1909.8	24.36	-4.26	20.10
GPRS1900 （4 Slot）	1850.2	22.31	-3	19.31
	1880	22.01	-3	19.01
	1909.8	22.19	-3	19.19
EGPRS1900 （1 Slot）	1850.2	26.73	-9	17.73
	1880	26.49	-9	17.49
	1909.8	26.28	-9	17.28
EGPRS1900 （2 Slot）	1850.2	24.24	-6	18.24
	1880	24.14	-6	18.14
	1909.8	23.86	-6	17.86
EGPRS1900 （3 Slot）	1850.2	22.42	-4.26	18.16
	1880	22.34	-4.26	18.08
	1909.8	22.09	-4.26	17.83
EGPRS1900 （4 Slot）	1850.2	20.92	-3	17.92
	1880	20.77	-3	17.77
	1909.8	20.57	-3	17.57

Note 1:
The Frame Power (Source-based time-averaged Power) is scaled the maximum burst average power based on time slots. The calculated methods are show as following:
Frame Power = Max burst power (1 Up Slot) – 9 dB
Frame Power = Max burst power (2 Up Slot) – 6 dB
Frame Power = Max burst power (3 Up Slot) – 4.26 dB
Frame Power = Max burst power (4 Up Slot) – 3 dB

UMTS BAND
HSDPA Setup Configuration:

·The EUT was connected to Base Station Agilent-8960 referred to the Setup Configuration.

·The RF path losses were compensated into the measurements.

·A call was established between EUT and Based Station with following setting:

(1) Set Gain Factors(βc and βd) parameters set according to each

(2) Set RMC 12.2Kbps+HSDPA mode.

(3) Set Cell Power=-86dBm

(4) Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)

(5) Select HSDPA Uplink Parameters

(6) Set Delta ACK, Delta NACK and Delta CQI=8

(7) Set Ack - Nack Repetition Factor to 3

(8) Set CQI Feedback Cycle (k) to 4ms

(9) Set CQI Repetition Factor to 2

(10) Power Ctrl Mode=All Up bits

·The transmitted maximum output power was recorded.

Table C.10.2.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	βc (Note5)	βd	βd (SF)	βc/βd	βHS (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15(Note 4)	15/15(Note 4)	64	12/15(Note 4)	24/15	1.0	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: ΔACK, ΔNACK and ΔCQI = 30/15 with β_{hs} = 30/15 * β_c .
Note 2: 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 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, ΔACK and ΔNACK = 30/15 with β_{hs} = 30/15 * β_c , and ΔCQI = 24/15 with β_{hs} = 24/15 * β_c .
Note 3: CM = 1 for βc/βd =12/15, hs/ 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 4: For subtest 2 the c/ 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 c = 11/15 and d = 15/15.

HSUPA Setup Configuration:

· The EUT was connected to Base Station Agilent-8960 referred to the Setup Configuration.

· The RF path losses were compensated into the measurements.

· A call was established between EUT and Base Station with following setting * :

(1) Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK

(2) Set the Gain Factors (βc and βd) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121

(3) Set Cell Power = -86 dBm

(4) Set Channel Type = 12.2k + HSPA

(5) Set UE Target Power

(6) Power Ctrl Mode= Alternating bits

(7) Set and observe the E-TFCI

(8) Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI

· The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	βc	βd	βd (SF)	βc/βd	βHS (Note 1)	βec	βed (Note 4) (Note 5)	βed (SF)	βed (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	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	βed1: 47/15 βed2: 47/15	4 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	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, ΔACK, ΔNACK and ΔCQI = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, ΔACK, ΔNACK and ΔCQI = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for βc/βd =12/15, hs/ 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 c/ 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 c = 10/15 and d = 15/15.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: βed cannot be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

UMTS BAND II

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 1900 RMC	1852.4	20.82
	1880	21.84
	1907.6	**24.73**
HSDPA Subtest 1	1852.4	19.78
	1880	20.78
	1907.6	23.65
HSDPA Subtest 2	1852.4	20.33
	1880	20.33
	1907.6	23.16
HSDPA Subtest 3	1852.4	20.38
	1880	20.31
	1907.6	23.21
HSDPA Subtest 4	1852.4	20.33
	1880	20.38
	1907.6	23.20
HSUPA Subtest 1	1852.4	17.83
	1880	17.90
	1907.6	18.22
HSUPA Subtest 2	1852.4	18.35
	1880	18.42
	1907.6	18.74
HSUPA Subtest 3	1852.4	18.85
	1880	18.96
	1907.6	19.26
HSUPA Subtest 4	1852.4	17.90
	1880	17.97
	1907.6	18.30
HSUPA Subtest 5	1852.4	19.85
	1880	19.88
	1907.6	20.21

UMTS BAND IV

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 1700 RMC	1712.4	21.35
	1732.4	21.38
	1752.6	**21.42**
HSDPA Subtest 1	1712.4	20.43
	1732.4	20.45
	1752.6	20.52
HSDPA Subtest 2	1712.4	19.90
	1732.4	19.96
	1752.6	20.07
HSDPA Subtest 3	1712.4	19.87
	1732.4	19.94
	1752.6	20.08
HSDPA Subtest 4	1712.4	19.88
	1732.4	19.91
	1752.6	20.04
HSUPA Subtest 1	1712.4	18.39
	1732.4	18.42
	1752.6	18.57
HSUPA Subtest 2	1712.4	18.89
	1732.4	18.92
	1752.6	19.08
HSUPA Subtest 3	1712.4	19.40
	1732.4	19.42
	1752.6	19.58
HSUPA Subtest 4	1712.4	18.42
	1732.4	18.44
	1752.6	18.60
HSUPA Subtest 5	1712.4	20.42
	1732.4	20.45
	1752.6	20.52

UMTS BAND V

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 850 RMC	826.4	**22.13**
	836.4	22.06
	846.6	22.10
HSDPA Subtest 1	826.4	21.11
	836.4	21.10
	846.6	21.15
HSDPA Subtest 2	826.4	20.70
	836.4	20.62
	846.6	20.70
HSDPA Subtest 3	826.4	20.71
	836.4	20.68
	846.6	20.72
HSDPA Subtest 4	826.4	20.72
	836.4	20.61
	846.6	20.68
HSUPA Subtest 1	826.4	19.23
	836.4	19.18
	846.6	19.21
HSUPA Subtest 2	826.4	19.68
	836.4	19.66
	846.6	19.72
HSUPA Subtest 3	826.4	20.22
	836.4	20.14
	846.6	20.23
HSUPA Subtest 4	826.4	19.23
	836.4	19.17
	846.6	19.25
HSUPA Subtest 5	826.4	21.20
	836.4	21.13
	846.6	21.20

According to 3GPP 25.101 sub-clause 6.2.2 , the maximum output power is allowed to be reduced by following the table.

Table 6.1aA: UE maximum output power with HS-DPCCH and E-DCH

UE Transmit Channel Configuration	CM(db)	MPR(db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	0≤ CM≤3.5	MAX(CM-1,0)
Note: CM=1 for β_c/β_d=12/15, β_{hs}/β_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.		

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present the beta gains on those channels are reduced firsts to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done .However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a compensation for the power back-off by increasing the gain of TX_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.

LTE Band

LTE (TDD) Considerations

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 38, 40 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

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

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

Table 4.2-2: Uplink-downlink configurations

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

Calculated Duty Cycle

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	5ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5ms	D	S	U	U	U	D	S	U	U	D	53.33

Note： Calculated Duty Cycle = Extended cyclic prefix in uplink x (Ts) x # of S + # of U
Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = 5120 x [1/(15000 x 2048)] x 2 + 6 ms = 63.33%
where
Ts = 1/(15000 x 2048) seconds

LTE Band

Conducted Power of LTE Band 2(dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					18607	**18900**	**19193**
1.4MHz	QPSK	1	0	0	22.13	22.06	22.38
			3	0	22.31	22.27	**22.62**
			5	0	22.11	22.10	22.40
		3	0	0	22.18	22.23	22.43
			2	0	22.20	22.16	22.44
			3	0	22.15	22.14	22.48
		6	0	1	21.18	21.19	21.45
	16QAM	1	0	1	21.14	21.13	21.43
			3	1	21.35	21.39	21.66
			5	1	21.13	21.13	21.41
		3	0	1	21.07	21.06	21.32
			2	1	21.08	21.06	21.29
			3	1	21.02	21.03	21.28
		6	0	2	20.14	20.15	20.42
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					18615	**18900**	**19185**
3MHz	QPSK	1	0	0	22.05	22.01	22.25
			7	0	22.03	22.06	22.28
			14	0	22.03	22.04	22.33
		8	0	1	21.04	21.08	21.36
			4	1	21.00	21.05	21.33
			7	1	21.04	21.03	21.33
		15	0	1	20.97	20.99	21.28
	16QAM	1	0	1	21.18	21.16	21.43
			7	1	21.11	21.16	21.40
			14	1	21.12	21.14	21.40
		8	0	2	20.02	20.02	20.31
			4	2	20.01	20.04	20.29
			7	2	20.00	20.03	20.27
		15	0	2	19.96	19.98	20.25

Conducted Power of LTE Band 2(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 18625	Channel 18900	Channel 19175
5MHz	QPSK	1	0	0	22.03	22.00	22.24
			13	0	22.12	22.13	22.38
			24	0	21.97	22.00	22.25
		12	0	1	20.96	21.05	21.25
			6	1	20.97	21.06	21.26
			13	1	20.98	21.00	21.22
		25	0	1	21.02	21.09	21.28
	16QAM	1	0	1	20.97	20.97	21.17
			13	1	21.03	21.08	21.33
			24	1	20.87	20.96	21.23
		12	0	2	19.93	19.96	20.21
			6	2	19.93	20.00	20.22
			13	2	19.90	19.91	20.17
		25	0	2	19.95	19.97	20.22
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 18650	Channel 18900	Channel 19150
10MHz	QPSK	1	0	0	22.02	21.96	22.23
			25	0	22.09	22.17	22.34
			49	0	21.97	21.98	22.24
		25	0	1	21.00	21.08	21.28
			13	1	21.03	21.03	21.26
			25	1	21.06	20.97	21.22
		50	0	1	21.02	21.02	21.25
	16QAM	1	0	1	21.11	21.07	21.38
			25	1	21.09	21.22	21.40
			49	1	21.04	21.09	21.35
		25	0	2	19.89	20.00	20.20
			13	2	19.88	19.98	20.19
			25	2	19.98	19.89	20.15
		50	0	2	19.91	19.98	20.17

Conducted Power of LTE Band 2(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					18675	18900	19125
15MHz	QPSK	1	0	0	21.99	21.92	22.18
			38	0	22.08	22.03	22.33
			74	0	21.92	21.97	22.20
		36	0	1	21.10	21.13	21.33
			18	1	21.12	21.10	21.32
			39	1	21.14	21.13	21.33
		75	0	1	21.13	21.14	21.33
	16QAM	1	0	1	21.09	21.08	21.27
			38	1	21.13	21.17	21.45
			74	1	21.03	21.11	21.35
		36	0	2	21.13	21.12	21.32
			18	2	21.13	21.10	21.33
			39	2	21.13	21.13	21.31
		75	0	2	20.00	20.03	20.23
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					18700	18900	19100
20MHz	QPSK	1	0	0	21.92	21.87	21.98
			50	0	22.20	22.24	22.50
			99	0	21.91	21.92	22.12
		50	0	1	20.86	21.18	21.17
			25	1	20.85	21.19	21.14
			50	1	21.11	20.98	21.23
		100	0	1	21.01	21.11	21.23
	16QAM	1	0	1	20.81	20.83	20.96
			50	1	21.15	21.17	21.46
			99	1	20.85	20.86	21.12
		50	0	2	19.75	20.14	20.04
			25	2	19.80	20.14	20.02
			50	2	20.05	19.92	20.15
		100	0	2	19.91	20.06	20.12

Conducted Power of LTE Band 4(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					19957	20175	20393
1.4MHz	QPSK	1	0	0	22.29	22.08	22.40
			3	0	22.39	22.20	22.17
			5	0	22.27	22.12	21.93
		3	0	0	22.06	22.17	21.69
			2	0	22.06	22.15	21.67
			3	0	22.05	22.12	21.71
		6	0	1	21.15	21.13	20.84
	16QAM	1	0	1	20.96	21.13	21.15
			3	1	21.16	21.41	21.06
			5	1	21.05	21.17	20.63
		3	0	1	20.92	21.02	20.53
			2	1	20.86	21.04	20.49
			3	1	20.63	21.07	20.50
		6	0	2	20.08	19.99	19.71
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					19965	20175	20385
3MHz	QPSK	1	0	0	21.72	22.22	22.25
			7	0	21.65	22.20	22.01
			14	0	21.67	22.18	21.70
		8	0	1	20.67	21.19	20.87
			4	1	20.66	21.21	20.88
			7	1	20.68	21.21	20.90
		15	0	1	20.61	21.16	20.79
	16QAM	1	0	1	20.75	21.31	21.32
			7	1	20.65	21.26	20.81
			14	1	20.66	21.26	20.82
		8	0	2	19.63	20.13	19.75
			4	2	19.63	20.15	19.78
			7	2	19.61	20.16	19.73
		15	0	2	19.61	20.03	19.71

Conducted Power of LTE Band 4(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 19975	Channel 20175	Channel 20375
5MHz	QPSK	1	0	0	21.71	22.18	22.42
			13	0	21.75	22.26	21.99
			24	0	21.60	22.17	21.80
		12	0	1	20.60	21.19	20.79
			6	1	20.61	21.17	20.77
			13	1	20.69	21.15	20.72
		25	0	1	20.67	21.14	20.74
	16QAM	1	0	1	20.48	21.31	21.01
			13	1	20.60	21.42	20.69
			24	1	20.52	21.29	20.62
		12	0	2	19.58	20.21	19.71
			6	2	19.59	20.22	19.74
			13	2	19.60	20.10	19.65
		25	0	2	19.60	20.07	19.70
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20000	Channel 20175	Channel 20350
10MHz	QPSK	1	0	0	21.73	22.24	22.34
			25	0	21.80	22.37	21.98
			49	0	21.62	22.15	21.71
		25	0	1	20.66	21.32	20.90
			13	1	20.64	21.31	20.87
			25	1	20.87	21.19	20.78
		50	0	1	20.87	21.19	20.78
	16QAM	1	0	1	20.75	21.19	21.18
			25	1	20.87	21.42	20.94
			49	1	20.76	21.24	20.82
		25	0	2	19.57	20.27	19.84
			13	2	19.57	20.30	19.85
			25	2	19.78	20.12	19.65
		50	0	2	19.70	20.16	19.71

Conducted Power of LTE Band 4(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20025	Channel 20175	Channel 20325
15MHz	QPSK	1	0	0	22.26	22.26	22.31
			38	0	22.33	22.32	22.33
			74	0	22.23	21.87	22.41
		36	0	1	21.42	21.37	21.53
			18	1	21.44	21.33	21.43
			39	1	21.40	20.96	21.49
		75	0	1	21.36	21.05	21.46
	16QAM	1	0	1	**22.63**	21.49	21.35
			38	1	21.52	21.27	21.37
			74	1	21.42	21.19	21.52
		36	0	2	21.41	21.31	21.33
			18	2	21.38	21.18	21.34
			39	2	21.39	21.12	21.46
		75	0	2	20.26	20.10	20.30
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20050	Channel 20175	Channel 20300
20MHz	QPSK	1	0	0	21.62	21.60	21.67
			50	0	21.88	21.91	22.10
			99	0	21.64	21.69	21.84
		50	0	1	20.89	20.73	20.87
			25	1	20.86	20.76	20.87
			50	1	20.84	20.89	21.00
		100	0	1	20.88	20.76	20.85
	16QAM	1	0	1	20.61	20.71	20.66
			50	1	20.96	21.06	21.10
			99	1	20.63	20.77	20.77
		50	0	2	19.86	19.70	19.76
			25	2	19.90	19.72	19.79
			50	2	19.78	19.87	19.92
		100	0	2	19.78	19.73	19.86

Conducted Power of LTE Band 5(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					20407	20525	20643
1.4MHz	QPSK	1	0	0	22.78	22.83	22.76
			3	0	22.84	22.96	22.90
			5	0	22.78	22.77	22.79
		3	0	0	22.82	22.83	22.86
			2	0	22.83	22.86	22.84
			3	0	22.82	22.89	22.84
		6	0	1	21.82	21.83	21.84
	16QAM	1	0	1	21.81	21.90	21.63
			3	1	21.97	22.02	21.77
			5	1	21.84	21.91	21.61
		3	0	1	21.70	21.74	21.69
			2	1	21.68	21.72	21.68
			3	1	21.69	21.75	21.66
		6	0	2	20.80	20.70	20.79
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					20415	20525	20635
3MHz	QPSK	1	0	0	22.73	22.75	22.86
			7	0	22.71	22.79	22.83
			14	0	22.73	22.81	22.86
		8	0	1	21.74	21.76	21.81
			4	1	21.74	21.77	21.81
			7	1	21.72	21.75	21.81
		15	0	1	21.69	21.74	21.82
	16QAM	1	0	1	21.90	21.98	21.67
			7	1	21.84	21.87	21.66
			14	1	21.87	21.84	21.65
		8	0	2	20.76	20.74	20.75
			4	2	20.79	20.73	20.77
			7	2	20.74	20.67	20.79
		15	0	2	20.71	20.66	20.63

Conducted Power of LTE Band 5(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20425	Channel 20525	Channel 20625
5MHz	QPSK	1	0	0	22.77	22.83	22.86
			13	0	22.87	22.89	22.91
			24	0	22.81	22.79	22.84
		12	0	1	21.73	21.82	21.80
			6	1	21.70	21.76	21.75
			13	1	21.76	21.70	21.72
		25	0	1	21.80	21.80	21.78
	16QAM	1	0	1	21.73	21.95	21.79
			13	1	21.80	22.01	21.82
			24	1	21.81	21.88	21.80
		12	0	2	20.71	20.78	20.79
			6	2	20.68	20.77	20.77
			13	2	20.79	20.80	20.70
		25	0	2	20.74	20.76	20.77
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20450	Channel 20525	Channel 20600
10MHz	QPSK	1	0	0	22.74	22.79	22.79
			25	0	22.91	22.95	**23.03**
			49	0	22.79	22.81	22.86
		25	0	1	21.81	21.78	21.90
			13	1	21.81	21.87	21.88
			25	1	21.91	21.84	21.85
		50	0	1	21.84	21.82	21.85
	16QAM	1	0	1	21.89	21.93	21.65
			25	1	22.05	22.12	21.86
			49	1	21.90	21.96	21.73
		25	0	2	20.78	20.82	20.86
			13	2	20.74	20.80	20.86
			25	2	20.85	20.82	20.87
		50	0	2	20.79	20.82	20.79

Conducted Power of LTE Band 7 (dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					20775	21100	21425
5MHz	QPSK	1	0	0	22.16	22.26	21.94
			12	0	22.33	22.36	22.04
			24	0	22.25	22.24	21.87
		12	0	1	21.17	21.27	20.89
			6	1	21.18	21.23	20.91
			13	1	21.23	21.23	20.87
		25	0	1	21.22	21.26	20.92
	16QAM	1	0	1	21.07	21.23	20.86
			12	1	21.19	21.25	20.93
			24	1	21.19	21.20	20.87
		12	0	2	20.18	20.26	19.83
			6	2	20.14	20.25	19.85
			13	2	20.17	20.27	19.88
		25	0	2	20.14	20.24	19.88
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					20800	21100	21400
10MHz	QPSK	1	0	0	22.20	22.28	22.08
			24	0	22.29	22.40	21.98
			49	0	22.22	22.30	21.93
		25	0	1	21.27	21.36	21.05
			12	1	21.24	21.32	21.07
			25	1	21.27	21.32	21.11
		50	0	1	21.26	21.31	21.07
	16QAM	1	0	1	21.27	21.42	21.17
			24	1	21.52	21.57	21.32
			49	1	21.30	21.37	21.03
		25	0	2	20.22	20.32	20.03
			12	2	20.21	20.24	20.01
			25	2	20.23	20.29	20.07
		50	0	2	20.21	20.23	20.03

Conducted Power of LTE Band 7 (dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					20825	**21100**	**21375**
15MHz	QPSK	1	0	0	22.12	22.23	22.07
			37	0	22.25	22.28	22.04
			74	0	22.15	22.16	21.81
		37	0	1	21.35	21.37	21.20
			16	1	21.39	21.37	21.18
			35	1	21.37	21.37	21.18
		75	0	1	21.37	21.34	21.16
	16QAM	1	0	1	21.22	21.33	21.22
			37	1	21.37	21.41	21.18
			74	1	21.27	21.28	20.98
		37	0	2	21.39	21.37	21.20
			16	2	21.38	21.38	21.15
			35	2	21.37	21.34	21.15
		75	0	2	20.24	20.23	20.07
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					20850	**21100**	**21350**
20MHz	QPSK	1	0	0	22.06	22.18	22.02
			49	0	22.40	**22.53**	22.25
			99	0	22.05	22.19	21.85
		50	0	1	21.15	21.21	21.11
			25	1	21.20	21.25	21.08
			49	1	21.20	21.24	21.13
		100	0	1	21.24	21.20	21.11
	16QAM	1	0	1	20.98	21.09	21.01
			49	1	21.39	21.49	21.18
			99	1	20.95	21.10	20.77
		50	0	2	20.15	20.19	20.05
			25	2	20.18	20.19	20.02
			49	2	20.19	20.18	20.13
		100	0	2	20.12	20.15	20.06

Conducted Power of LTE Band 12(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					23017	23095	23173
1.4MHz	QPSK	1	0	0	22.60	22.58	22.54
			3	0	22.81	22.81	22.64
			5	0	22.64	22.56	22.51
		3	0	0	22.64	22.56	22.62
			2	0	22.69	22.59	22.62
			3	0	22.75	22.62	22.62
		6	0	1	21.70	21.70	21.70
	16QAM	1	0	1	21.81	21.78	21.67
			3	1	22.01	21.92	21.85
			5	1	21.81	21.73	21.66
		3	0	1	21.67	21.61	21.58
			2	1	21.66	21.60	21.58
			3	1	21.61	21.65	21.50
		6	0	2	20.75	20.58	20.69
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					23025	23095	23165
3MHz	QPSK	1	0	0	22.72	22.68	22.67
			7	0	22.73	22.68	22.57
			14	0	22.71	22.66	22.62
		8	0	1	21.82	21.70	21.66
			4	1	21.81	21.68	21.67
			7	1	21.83	21.71	21.71
		15	0	1	21.76	21.65	21.63
	16QAM	1	0	1	21.96	21.92	21.83
			7	1	21.95	21.89	21.82
			14	1	21.89	21.81	21.78
		8	0	2	20.76	20.69	20.72
			4	2	20.82	20.71	20.69
			7	2	20.81	20.67	20.69
		15	0	2	20.77	20.57	20.65

Conducted Power of LTE Band 12(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 23035	Channel 23095	Channel 23155
5MHz	QPSK	1	0	0	22.73	22.73	22.65
			13	0	22.81	22.73	22.69
			24	0	22.74	22.61	22.62
		12	0	1	21.83	21.78	21.73
			6	1	21.80	21.76	21.71
			13	1	21.82	21.65	21.73
		25	0	1	21.87	21.71	21.81
	16QAM	1	0	1	21.83	21.97	21.69
			13	1	21.82	22.02	21.75
			24	1	21.79	21.88	21.67
		12	0	2	20.83	20.76	20.77
			6	2	20.78	20.75	20.72
			13	2	20.78	20.73	20.72
		25	0	2	20.80	20.68	20.74
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 23060	Channel 23095	Channel 23130
10MHz	QPSK	1	0	0	22.72	22.74	22.70
			25	0	22.80	**22.83**	22.74
			49	0	22.63	22.68	22.64
		25	0	1	21.82	21.79	21.91
			13	1	21.82	21.79	21.91
			25	1	21.86	21.69	21.81
		50	0	1	21.84	21.68	21.89
	16QAM	1	0	1	21.98	21.97	21.96
			25	1	22.11	21.97	22.04
			49	1	21.89	21.89	21.83
		25	0	2	20.79	20.79	20.88
			13	2	20.83	20.76	20.82
			25	2	20.81	20.65	20.79
		50	0	2	20.75	20.66	20.81

Conducted Power of LTE Band 13(dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					23205	**23230**	**23255**
5MHz	QPSK	1	0	0	22.97	23.10	23.10
			13	0	23.22	23.24	23.24
			24	0	23.10	23.07	23.14
		12	0	1	22.04	22.15	22.00
			6	1	22.03	22.15	22.04
			13	1	22.04	22.14	22.14
		25	0	1	22.09	22.20	22.10
	16QAM	1	0	1	21.98	22.27	22.05
			13	1	22.21	22.37	22.24
			24	1	22.09	22.28	22.07
		12	0	2	21.14	21.22	21.05
			6	2	21.15	21.20	21.09
			13	2	21.16	21.19	21.14
		25	0	2	21.15	21.25	21.13
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**		
					23230		
10MHz	QPSK	1	0	0	22.99		
			25	0	**23.24**		
			49	0	23.07		
		25	0	1	22.19		
			13	1	22.23		
			25	1	22.31		
		50	0	1	22.27		
	16QAM	1	0	1	22.15		
			25	1	22.43		
			49	1	22.21		
		25	0	2	21.22		
			13	2	21.24		
			25	2	21.25		
		50	0	2	21.23		

Conducted Power of LTE Band 17(dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					23755	**23790**	**23825**
5MHz	QPSK	1	0	0	22.41	22.42	22.38
			13	0	22.49	22.50	22.48
			24	0	22.41	22.40	22.28
		12	0	1	21.40	21.44	21.47
			6	1	21.41	21.54	21.42
			13	1	21.49	21.34	21.44
		25	0	1	21.47	21.50	21.49
	16QAM	1	0	1	21.55	21.44	21.68
			13	1	21.58	21.53	21.73
			24	1	21.47	21.46	21.55
		12	0	2	20.43	20.43	20.51
			6	2	20.41	20.47	20.51
			13	2	20.49	20.39	20.50
		25	0	2	20.46	20.50	20.50
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					23780	**23790**	**23800**
10MHz	QPSK	1	0	0	22.44	22.43	22.42
			25	0	22.41	22.51	**22.54**
			49	0	22.28	22.41	22.33
		25	0	1	21.50	21.56	21.62
			13	1	21.51	21.58	21.65
			25	1	21.41	21.46	21.57
		50	0	1	21.45	21.56	21.55
	16QAM	1	0	1	21.66	21.65	21.72
			25	1	21.72	21.77	21.71
			49	1	21.57	21.60	21.48
		25	0	2	20.51	20.59	20.64
			13	2	20.49	20.55	20.65
			25	2	20.36	20.47	20.57
		50	0	2	20.37	20.48	20.59

Conducted Power of LTE Band 38 (dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					37775	**38000**	**38225**
5MHz	QPSK	1	0	0	22.02	22.43	22.49
			12	0	22.12	22.27	22.65
			24	0	22.02	22.31	22.58
		12	0	1	20.98	21.44	21.50
			6	1	21.31	21.45	21.60
			13	1	21.50	21.42	21.63
		25	0	1	21.51	21.45	21.58
	16QAM	1	0	1	21.25	21.54	21.83
			12	1	21.34	21.82	21.95
			24	1	21.24	21.65	21.90
		12	0	2	20.15	20.45	20.54
			6	2	20.25	20.43	20.59
			13	2	20.42	20.44	20.53
		25	0	2	20.34	20.50	20.64
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					37800	**38000**	**38200**
10MHz	QPSK	1	0	0	22.55	22.51	22.52
			24	0	22.70	22.67	**22.76**
			49	0	22.49	22.50	22.66
		25	0	1	21.53	21.57	21.61
			12	1	21.54	21.53	21.61
			25	1	21.49	21.53	21.68
		50	0	1	21.50	21.55	21.71
	16QAM	1	0	1	21.75	21.81	21.82
			24	1	21.89	21.99	22.11
			49	1	21.65	21.83	22.00
		25	0	2	20.51	20.61	20.69
			12	2	20.52	20.63	20.69
			25	2	20.51	20.62	20.77
		50	0	2	20.42	20.53	20.72

Conducted Power of LTE Band 38 (dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					37825	**38000**	**38175**
15MHz	QPSK	1	0	0	22.45	22.37	22.30
			38	0	22.48	22.46	22.51
			74	0	22.31	22.34	22.51
		37	0	1	21.55	21.55	21.58
			18	1	21.55	21.54	21.55
			37	1	21.55	21.52	21.57
		75	0	1	21.54	21.50	21.57
	16QAM	1	0	1	21.63	21.68	21.67
			38	1	21.67	21.80	21.84
			74	1	21.48	21.66	21.83
		37	0	2	21.55	21.52	21.57
			18	2	21.55	21.52	21.55
			37	2	21.55	21.49	21.54
		75	0	2	20.48	20.46	20.56
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					37850	**38000**	**38150**
20MHz	QPSK	1	0	0	22.33	22.23	22.23
			49	0	22.58	22.55	22.75
			99	0	22.17	22.23	22.46
		50	0	1	21.44	21.41	21.47
			25	1	21.44	21.46	21.49
			49	1	21.35	21.43	21.65
		100	0	1	21.39	21.49	21.57
	16QAM	1	0	1	21.37	21.37	20.84
			49	1	21.66	21.73	21.34
			99	1	21.23	21.43	21.11
		50	0	2	20.37	20.43	20.47
			25	2	20.41	20.43	20.50
			49	2	20.33	20.44	20.63
		100	0	2	20.37	20.46	20.50

Avg. Output Power of LTE Band 40(dBm) -Lower Side						
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Channel**	**Channel**	**Channel**
				38725	**38750**	**38775**
5MHz	QPSK	1	0	22.25	22.17	22.35
			12	22.39	22.37	**22.57**
			24	22.34	22.30	22.48
		12	0	21.24	21.33	21.42
			6	21.27	21.32	21.44
			13	21.32	21.36	21.42
		25	0	21.33	21.35	21.39
	16QAM	1	0	21.56	21.56	21.47
			12	21.70	21.65	21.62
			24	21.74	21.67	21.53
		12	0	20.26	20.39	20.36
			6	20.27	20.36	20.39
			13	20.31	20.43	20.38
		25	0	20.36	20.37	20.41
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Channel**		
				38750		
10MHz	QPSK	1	0	22.24		
			24	22.53		
			49	22.43		
		25	0	21.29		
			12	21.30		
			25	21.43		
		50	0	21.35		
	16QAM	1	0	21.45		
			24	21.73		
			49	21.62		
		25	0	20.34		
			12	20.35		
			25	20.46		
		50	0	20.31		

Avg. Output Power of LTE Band 40(dBm) -Upper Side						
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Channel**	**Channel**	**Channel**
				39175	**39200**	**39225**
5MHz	QPSK	1	0	21.27	21.22	21.34
			12	21.37	21.35	21.44
			24	21.33	21.19	21.40
		12	0	20.25	20.32	20.37
			6	20.27	20.29	20.34
			13	20.32	20.35	20.44
		25	0	20.33	20.33	20.40
	16QAM	1	0	20.59	20.49	20.39
			12	20.69	20.63	20.52
			24	20.53	20.49	20.36
		12	0	19.27	19.35	19.31
			6	19.24	19.34	19.34
			13	19.31	19.36	19.37
		25	0	19.35	19.32	19.37
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Channel**		
				39200		
10MHz	QPSK	1	0	21.31		
			24	**21.55**		
			49	21.35		
		25	0	20.38		
			12	20.41		
			25	20.36		
		50	0	20.43		
	16QAM	1	0	20.50		
			24	20.73		
			49	20.54		
		25	0	19.45		
			12	19.44		
			25	19.47		
		50	0	19.41		

Conducted Power of LTE Band 66(dBm)							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					131979	**132422**	**132665**
1.4MHz	QPSK	1	0	0	22.44	22.59	22.61
			2	0	22.70	22.57	**22.76**
			5	0	22.38	22.57	22.59
		3	0	0	22.36	22.59	22.58
			1	0	22.33	22.60	22.60
			3	0	22.39	22.61	22.61
		6	0	1	21.39	21.61	21.69
	16QAM	1	0	1	21.29	21.52	21.66
			2	1	21.47	21.69	21.84
			5	1	21.28	21.52	21.64
		3	0	1	21.24	21.46	21.46
			1	1	21.23	21.47	21.47
			3	1	21.11	21.45	21.43
		6	0	2	20.35	20.59	20.65
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					131987	**132422**	**132657**
3MHz	QPSK	1	0	0	21.77	21.97	22.14
			8	0	21.86	22.00	22.14
			14	0	21.84	22.03	22.13
		8	0	1	20.86	21.10	21.11
			4	1	20.83	21.06	21.11
			7	1	20.84	21.07	21.12
		15	0	1	20.75	21.02	21.07
	16QAM	1	0	1	20.93	21.16	21.24
			8	1	20.84	21.12	21.20
			14	1	20.90	21.08	21.17
		8	0	2	19.83	20.07	20.05
			4	2	19.83	20.09	20.06
			7	2	19.77	20.01	20.06
		15	0	2	19.79	20.00	19.99

Conducted Power of LTE Band 66(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 131997	Channel 132422	Channel 132647
5MHz	QPSK	1	0	0	21.78	21.97	22.04
			12	0	21.96	22.09	22.19
			24	0	21.79	22.00	22.02
		12	0	1	20.78	21.03	21.06
			6	1	20.79	21.09	20.95
			13	1	20.84	20.95	21.11
		25	0	1	20.82	21.07	21.06
	16QAM	1	0	1	20.70	20.95	20.96
			12	1	20.85	21.01	21.12
			24	1	20.75	20.86	20.96
		12	0	2	19.78	20.06	19.89
			6	2	19.80	20.06	19.92
			13	2	19.89	19.94	20.04
		25	0	2	19.80	20.04	19.96
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 132022	Channel 132422	Channel 132622
10MHz	QPSK	1	0	0	21.79	22.01	22.12
			24	0	21.97	22.12	22.18
			49	0	21.95	22.10	22.11
		25	0	1	20.86	21.19	21.08
			12	1	20.83	21.23	21.06
			25	1	21.06	21.00	21.29
		50	0	1	20.99	21.11	21.19
	16QAM	1	0	1	20.91	21.12	21.24
			24	1	21.01	21.24	21.23
			49	1	21.09	21.11	21.17
		25	0	2	19.82	20.13	19.98
			12	2	19.80	20.16	19.97
			25	2	20.01	19.94	20.16
		50	0	2	19.93	20.00	20.06

Conducted Power of LTE Band 66(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 132047	Channel 132422	Channel 132597
15MHz	QPSK	1	0	0	21.73	21.90	22.02
			38	0	21.89	22.02	22.08
			74	0	21.86	21.98	22.02
		38	0	1	20.98	21.20	21.25
			18	1	20.97	21.19	21.24
			37	1	20.98	21.19	21.21
		75	0	1	20.98	21.18	21.19
	16QAM	1	0	1	20.84	21.09	21.06
			38	1	21.01	21.11	21.21
			74	1	21.00	21.00	21.07
		38	0	2	20.97	21.18	21.23
			18	2	20.96	21.19	21.23
			37	2	20.98	21.20	21.22
		75	0	2	19.86	20.02	20.11
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 132072	Channel 132422	Channel 132572
20MHz	QPSK	1	0	0	21.62	21.89	22.03
			49	0	22.09	22.22	22.35
			99	0	21.78	21.96	21.95
		50	0	1	20.63	21.34	21.05
			25	1	20.68	21.35	21.04
			50	1	21.17	20.91	21.39
		100	0	1	20.92	21.15	21.23
	16QAM	1	0	1	20.59	20.86	20.91
			49	1	20.99	21.19	21.36
			99	1	20.76	20.83	21.08
		50	0	2	19.60	20.36	19.98
			25	2	19.57	20.32	20.01
			50	2	20.07	19.83	20.32
		100	0	2	19.86	20.11	20.17

Conducted Power of LTE Band 71(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 133147	Channel 133297	Channel 133447
5MHz	QPSK	1	0	0	23.24	22.99	22.75
			12	0	23.37	23.23	22.81
			24	0	22.95	23.06	22.64
		12	0	1	22.20	22.13	21.73
			6	1	22.20	22.10	21.72
			13	1	22.21	22.05	21.71
		25	0	1	22.22	22.13	21.76
	16QAM	1	0	1	22.33	22.21	21.83
			12	1	22.21	22.23	21.87
			24	1	22.19	22.09	21.67
		12	0	2	21.11	21.05	20.69
			6	2	21.14	21.11	20.67
			13	2	21.15	21.03	20.64
		25	0	2	21.18	21.09	20.70
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 133172	Channel 133297	Channel 133422
10MHz	QPSK	1	0	0	23.32	23.12	22.79
			24	0	23.41	23.11	22.90
			49	0	23.38	22.97	22.67
		25	0	1	22.39	22.12	21.94
			12	1	22.33	22.12	21.90
			25	1	22.35	22.01	21.84
		50	0	1	22.36	21.98	21.83
	16QAM	1	0	1	22.54	22.32	22.03
			24	1	22.69	22.41	22.12
			49	1	22.46	22.17	21.85
		25	0	2	21.33	21.11	20.82
			12	2	21.33	21.08	20.85
			25	2	21.26	20.93	20.72
		50	0	2	21.25	20.99	20.70

Conducted Power of LTE Band 71(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 133197	Channel 133297	Channel 133397
15MHz	QPSK	1	0	0	23.32	23.10	22.79
			38	0	**26.49**	23.05	22.80
			74	0	23.06	22.86	22.53
		38	0	1	22.46	22.47	21.95
			18	1	22.63	22.36	21.94
			37	1	22.21	22.18	21.75
		75	0	1	22.28	21.99	21.86
	16QAM	1	0	1	22.44	22.50	21.93
			38	1	22.60	22.35	21.97
			74	1	22.27	22.22	21.79
		38	0	2	22.44	22.47	21.93
			18	2	22.63	22.34	21.95
			37	2	22.24	22.19	21.82
		75	0	2	21.23	21.00	20.82
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 133222	Channel 133322	Channel 133372
20MHz	QPSK	1	0	0	22.96	22.98	22.74
			49	0	23.32	22.97	23.00
			99	0	22.64	22.72	22.46
		50	0	1	22.33	21.91	22.01
			25	1	22.38	21.92	22.03
			50	1	22.13	21.82	21.89
		100	0	1	22.24	21.88	21.96
	16QAM	1	0	1	22.09	21.98	21.96
			49	1	22.37	22.05	22.25
			99	1	21.77	21.69	21.70
		50	0	2	21.33	20.85	20.99
			25	2	21.31	20.86	21.04
			50	2	21.14	20.79	20.79
		100	0	2	21.14	20.82	20.82

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.
UE Power Class: 3 (23 +/- 2dBm). 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 6.2.3.3-1 of the 3GPP TS36.101.

Table 6.2.3.3-1 Maximum Power Reduction (MPR) for Power class3

Modulation	Maximum Power Reduction (MPR) for Power[RB]						MPR(dB)
	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz	
QPSK	＞5	＞4	＞8	＞12	＞16	＞18	≤1
16QAM	≤5	≤4	≤8	≤12	≤16	≤18	≤1
16QAM	＞5	＞4	＞8	＞12	＞16	＞18	≤2

The allowed A-MPR values specified below in Table 6.2.4.3-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of “NS_01”.3

Table 6.2.4.3-1: Additional Maximum Power Reduction (A-MPR) / Spectrum Emission requirements

Network Signaling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.2-1	1.4,3,5,10,15,20	Table 5.4.2-1	N/A
NS_03	6.6.2.2.3.1	2,4,10, 23, 25,35,36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.3.2	41	5	>6	≤1
			10, 15, 20	Table 6.2.4.3-4	
NS_05	6.6.3.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.4.2-1	N/A
NS_07	6.6.2.2.3.3 6.6.3.3.3.2	13	10	Table 6.2.4.3-2	Table 6.2.4.3-2
NS_08	6.6.3.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4.3-3	Table 6.2.4.3-3
NS_11	6.6.2.2.1 6.6.3.3.13	231	1.4, 3, 5, 10,15,20	Table 6.2.4.3-5	Table 6.2.4.3-5
NS_12	6.6.3.3.5	26	1.4, 3, 5	Table 6.2.4.3-6	Table 6.2.4.3-6
NS_13	6.6.3.3.6	26	5	Table 6.2.4.3-7	Table 6.2.4.3-7
NS_14	6.6.3.3.7	26	10, 15	Table 6.2.4.3-8	Table 6.2.4.3-8
NS_15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4.3-9 Table 6.2.4.3-10	Table 6.2.4.3-9, Table 6.2.4.3-10
NS_16	6.6.3.3.9	27	3, 5, 10	Table 6.2.4.3-11, Table 6.2.4.3-12, Table 6.2.4.3-13	
NS_17	6.6.3.3.10 6.6.3.3.11	28 28	5, 10	Table 5.4.2-1	N/A
			5	≥ 2	≤ 1
NS_18			10, 15, 20	≥ 1	≤ 4
NS_19			10, 15, 20	Table 6.2.4.3-15	Table 6.2.4.3-15
NS_20			5, 10, 15, 20	Table 6.2.4.3-14	Table 6.2.4.3-14
…					
NS_20	-	-	-	-	-

WIFI

Mode	Data Rate (Mbps)	Channel	Frequency(MHz)	Avg. Burst Power(dBm)
802.11b	1	01	2412	14.34
		06	2437	14.75
		11	2462	**15.18**
802.11g	6	01	2412	12.85
		06	2437	13.05
		11	2462	13.32
802.11n(20)	6.5	01	2412	12.78
		06	2437	13.20
		11	2462	13.33
802.11n(40)	13.5	03	2422	12.48
		06	2437	12.87
		09	2452	12.82

Bluetooth_V4.2(BR/EDR)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
GFSK	0	2402	4.407
	39	2441	**6.196**
	78	2480	5.701
π /4-DQPSK	0	2402	4.085
	39	2441	5.721
	78	2480	4.771
8-DPSK	0	2402	4.282
	39	2441	5.935
	78	2480	4.381

Bluetooth_V4.2(BLE)

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
GFSK	0	2402	3.893
	19	2440	**6.177**
	39	2480	5.079

5GHz WIFI

Mode	channel	Frequency	Power(dBm)							
			Data Rate(bps)							
			6M	9M	12M	18M	24M	36M	48M	54M
802.11a	36	5180	11.76	11.72	11.60	11.59	11.50	11.37	11.18	11.11
	40	5200	11.25	11.18	11.12	10.96	10.84	10.70	10.58	10.53
	48	5240	**12.10**	11.96	11.88	11.73	11.63	11.45	11.29	11.23
	52	5260	**11.93**	11.93	11.88	11.79	11.69	11.55	11.41	11.32
	60	5300	11.21	11.17	10.98	10.93	10.74	10.71	10.59	10.50
	64	5320	11.35	11.22	11.10	10.97	10.83	10.70	10.65	10.50
	149	5745	10.39	10.21	10.18	10.06	9.96	9.84	9.79	9.72
	157	5785	10.39	10.34	10.24	10.06	9.96	9.92	9.73	9.66
	165	5825	10.55	10.39	10.32	10.20	10.17	9.98	9.93	9.84
			MCS0	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**
802.11n (20)	36	5180	11.94	11.81	11.76	11.66	11.65	11.54	11.36	11.19
	40	5200	11.36	11.16	11.03	10.88	10.82	10.66	10.62	10.50
	48	5240	12.05	11.97	11.91	11.78	11.62	11.50	11.48	11.37
	52	5260	11.83	11.70	11.58	11.50	11.43	11.32	11.30	11.16
	60	5300	11.33	11.20	11.15	11.01	11.00	10.96	10.79	10.64
	64	5320	11.85	11.76	11.69	11.56	11.48	11.47	11.29	11.11
	149	5745	10.42	10.33	10.19	10.10	10.08	9.89	9.85	9.78
	157	5785	10.35	10.32	10.15	10.10	10.05	9.96	9.86	9.83
	165	5825	10.51	10.32	10.18	10.02	9.83	9.75	9.66	9.48
			MCS0	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**
802.11n (40)	38	5190	11.38	11.32	11.32	11.30	11.23	11.11	10.97	10.81
	46	5230	12.12	12.08	12.02	11.86	11.69	11.62	11.56	11.37
	54	5270	11.78	11.66	11.65	11.64	11.46	11.37	11.28	11.16
	62	5310	11.66	11.62	11.49	11.42	11.38	11.36	11.32	11.16
	151	5755	**10.83**	10.81	10.65	10.58	10.38	10.31	10.29	10.13
	159	5795	10.61	10.60	10.47	10.42	10.27	10.26	10.23	10.12

13. TEST RESULTS

13.1. SAR Test Results Summary

13.1.1. Test position and configuration

Face up SAR was performed with the device configured in the positions according to IEEE 1528-2013, Body-worn SAR was performed with the device 0cm from the phantom.

13.1.2. Operation Mode

1. Per KDB 447498 D01 v06 ,for each exposure position, if the highest 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional.
2. Per KDB 865664 D01 v01r04,for each frequency band, if the measured SAR is ≥0.8W/kg, testing for repeated SAR measurement is required , that the highest measured SAR is only to be tested. When the SAR results are near the limit, the following procedures are required for each device to verify these types of SAR measurement related variation concerns by repeating the highest measured SAR configuration in each frequency band.
   (1) When the original highest measured SAR is ≥0.8W/kg, repeat that measurement once.
   (2) 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.
   (3) Perform a third repeated measurement only if the original, first and second repeated measurement is ≥1.5 W/kg and ratio of largest to smallest SAR for the original, first and second measurement is ≥ 1.20.
3. Body-worn exposure conditions are intended to voice call operations, therefore GSM voice call mode is selected to be test.
4. Per KDB 648474 D04 v01r03,when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤1.2W/kg, SAR testing with a headset connected is not required.
5. Per KDB 248227 D01v02r02,for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤1.2W/kg.
6. Per KDB 248227 D01 v02r02 Chapter 5.3.4, 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, the procedures in 5.3.2 are applied to determine the test configuration. 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 D01 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.

7. Maximum Scaling SAR in order to calculate the Maximum SAR values to test under the standard Peak Power, Calculation method is as follows:
   Maximum Scaling SAR =tested SAR (Max.) ×[maximum turn-up power (mw)/ maximum measurement output power(mw)]
8. Proximity sensor, just for avoiding the wrong operation in the phone screen when call, and has no influence on output power or SAR result
9. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1RB allocation using the RB offset and required test channel combination with highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
10. Per KDB 941125 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
11. Per KDB 941125 D05v02r05. 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 1RB allocation and the highest reported SAR is >1.45 W/kg, the remaining required test channels must also be tested.
12. Per KDB 941125 D05v02r05. 16QAM output power for each RB allocation configuration is not 1/2 dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤1.45W/kg, Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
13. Per KDB 941125 D05v02r05. Smaller bandwidth output power for each RB allocation configuration is >not 1/2 dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤1.45W/kg. Per KDB 941125 D05v02r05, smaller bandwidth SAR testing is not required.

13.1.3. Test Result

SAR MEASUREMENT										
Depth of Liquid (cm):>15				Relative Humidity (%): 58.4						
Product: 4G LTE IP Radio										
Test Mode: GSM850 with GMSK modulation										
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
SIM 1 Card										
Face Up	GPRS-2 slot	190	836.6	-0.14	**0.408**	31.00	30.51	1.119	**0.457**	1.6
Back Touch +Belt Clip + headset	GPRS-2 slot	190	836.6	0.02	**0.572**	31.00	30.51	1.119	**0.640**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT										
Depth of Liquid (cm):>15				Relative Humidity (%): 58.2						
Product: 4G LTE IP Radio										
Test Mode: PCS1900 with GMSK modulation										
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
SIM 1 Card										
Face Up	GPRS-3 slot	661	1880	-0.10	**0.230**	24.50	24.14	1.086	**0.250**	1.6
Back Touch +Belt Clip + headset	GPRS-3 slot	661	1880.0	0.23	**0.173**	24.50	24.14	1.086	**0.188**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT										
Depth of Liquid (cm):>15				Relative Humidity (%): 58.2						
Product: 4G LTE IP Radio										
Test Mode: WCDMA Band II with QPSK modulation										
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Face Up	RMC 12.2kbps	9400	1880	-0.15	**0.210**	22.00	21.84	1.038	**0.218**	1.6
Back Touch +Belt Clip + headset	RMC 12.2kbps	9400	1880	0.09	**0.155**	22.00	21.84	1.038	**0.161**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT										
Depth of Liquid (cm):>15				Relative Humidity (%): 56.4						
Product: 4G LTE IP Radio										
Test Mode: WCDMA Band IV with QPSK modulation										
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Face Up	RMC 12.2kbps	8662	1732.4	-0.15	**0.163**	21.50	21.38	1.028	**0.168**	1.6
Back Touch +Belt Clip + headset	RMC 12.2kbps	8662	1732.4	0.30	**0.308**	21.50	21.38	1.028	**0.317**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT										
Depth of Liquid (cm):>15				Relative Humidity (%): 58.4						
Product: 4G LTE IP Radio										
Test Mode: WCDMA Band V with QPSK modulation										
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Face Up	RMC 12.2kbps	4183	836.4	-0.19	**0.119**	22.50	22.06	1.107	**0.132**	1.6
Back Touch +Belt Clip + headset	RMC 12.2kbps	4183	836.4	0.21	**0.169**	22.50	22.06	1.107	**0.187**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 58.2										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 2													
BM MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune up Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
20	QPSK	Face Up	1	0	18900	1880	0.26	**0.220**	22.70	21.87	1.211	**0.266**	1.6
		Back Touch +Belt Clip + headset	1	0	18900	1880	-0.30	**0.176**	22.70	21.87	1.211	**0.213**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 56.4										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 4													
BM MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
20	QPSK	Face Up	1	0	20175	1732.5	0.04	**0.204**	22.70	21.60	1.288	**0.263**	1.6
		Back Touch +Belt Clip + headset	1	0	20175	1732.5	-0.16	**0.383**	22.70	21.60	1.288	**0.493**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 58.4										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 5													
BM MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
10	QPSK	Face Up	1	0	20525	836.5	0.13	**0.141**	23.10	22.79	1.074	**0.151**	1.6
		Back Touch +Belt Clip + headset	1	0	20525	836.5	-0.21	**0.145**	23.10	22.79	1.074	**0.156**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 54.2										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 7													
BM MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
20	QPSK	Face Up	1	0	21100	2535	0.05	**0.195**	22.60	22.18	1.102	**0.215**	1.6
		Back Touch +Belt Clip + headset	1	0	21100	2535	-0.07	**0.758**	22.60	22.18	1.102	**0.835**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 60.2										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 12													
BM MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
10	QPSK	Face Up	1	0	23095	707.5	0.12	**0.084**	23.00	22.74	1.062	**0.089**	1.6
		Back Touch +Belt Clip + headset	1	0	23095	707.5	-0.15	**0.115**	23.00	22.74	1.062	**0.122**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 60.2										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 13													
BM MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
10	QPSK	Face Up	1	0	23230	782	0.23	**0.109**	23.30	22.99	1.074	**0.117**	1.6
		Back Touch +Belt Clip + headset	1	0	23230	782	-0.18	**0.240**	23.30	22.99	1.074	**0.258**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 60.2										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 17													
BM MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
10	QPSK	Face Up	1	0	23790	710	0.19	**0.073**	22.60	22.43	1.040	**0.076**	1.6
		Back Touch +Belt Clip + headset	1	0	23790	710	-0.22	**0.112**	22.60	22.43	1.040	**0.116**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 54.2										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 38													
BW MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
20	QPSK	Face Up	1	0	38000	2595	0.21	**0.062**	22.80	22.23	1.140	**0.071**	1.6
		Back Touch +Belt Clip + headset	1	0	38000	2595	-0.11	**0.277**	22.80	22.23	1.140	**0.316**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15			Relative Humidity (%): 57.3										
Product: 4G LTE IP Radio													
Test Mode: LTE Band 40-Lower Side													
BW MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
10	QPSK	Face Up	1	0	38750	2310	-0.13	**0.031**	22.60	22.24	1.086	**0.034**	1.6
		Back Touch +Belt Clip + headset	1	0	38750	2310	-0.23	**0.127**	22.60	22.24	1.086	**0.138**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15					Relative Humidity (%): 57.3								
Product: 4G LTE IP Radio													
Test Mode: LTE Band 40- Upper Side													
BW MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
10	QPSK	Face Up	1	0	39200	2355	0.06	**0.043**	21.60	21.31	1.069	**0.046**	1.6
		Back Touch +Belt Clip + headset	1	0	39200	2355	-0.07	**0.129**	21.60	21.31	1.069	**0.138**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15					Relative Humidity (%): 56.4								
Product: LTE smartphone													
Test Mode: LTE Band 66													
BW MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/Kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
20	QPSK	Face Up	1	0	132422	1755	-0.09	**0.183**	22.80	21.89	1.233	**0.226**	1.6
		Back Touch +Belt Clip + headset	1	0	132422	1755	0.18	**0.146**	22.80	21.89	1.233	**0.180**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT													
Depth of Liquid (cm):>15					Relative Humidity (%): 60.2								
Product: LTE smartphone													
Test Mode: LTE Band 71													
BW MHz	MOD	Position	Test Mode		Ch.	Freq. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tuneup Power (dBm)	Meas. output Power(dBm)	Tune-up Scaling factor	Scaled SAR (W/Kg)	Limit (W/kg)
			UL RB Allocation	UL RB START									
20	QPSK	Face Up	1	0	133322	683	-0.12	**0.071**	23.50	22.98	1.127	**0.080**	1.6
		Back Touch +Belt Clip + headset	1	0	133322	683	0.36	**0.103**	23.50	22.98	1.127	**0.116**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT										
Depth of Liquid (cm):>15				Relative Humidity (%): 56.7						
Product: 4G LTE IP Radio										
Test Mode:802.11b										
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Face Up	DTS	11	2462	-0.07	**0.019**	15.20	15.18	1.005	**0.019**	1.6
Back Touch +Belt Clip + headset	DTS	11	2462	0.19	**0.016**	15.20	15.18	1.005	**0.016**	1.6

Note:
· According to KDB248227, SAR is not required for 802.11n HT20/HT40 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11a/b channels.
· All of above “DTS” means data transmitters.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.6					
Product: 4G LTE IP Radio									
Test Mode: 5.2GHz WIFI-802.11a									
Position	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Face Up	48	5240	0.05	**0.131**	12.20	12.10	1.023	**0.134**	1.6
Back Touch +Belt Clip + headset	48	5240	0.10	**0.087**	12.20	12.10	1.023	**0.089**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 61.4					
Product: 4G LTE IP Radio									
Test Mode: 5.3GHz WIFI-802.11a									
Position	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Face Up	52	5260	-0.21	**0.157**	12.00	11.93	1.016	**0.160**	1.6
Back Touch +Belt Clip + headset	52	5260	0.29	**0.092**	12.00	11.93	1.016	**0.093**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 52.1					
Product: 4G LTE IP Radio									
Test Mode: 5.8GHz WIFI-802.11n40									
Position	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Tune-up Power (dBm)**	**Meas. output Power(dBm)**	**Tune-up Scaling factor**	**Scaled SAR (W/kg)**	**Limit (W/kg)**
Face Up	157	5775	-0.27	**0.100**	11.00	10.83	1.040	**0.104**	1.6
Back Touch +Belt Clip + headset	157	5775	0.03	**0.078**	11.00	10.83	1.040	**0.081**	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

Simultaneous Multi-band Transmission Evaluation:

Application Simultaneous Transmission information:

NO	Simultaneous state	Portable Handset	
		Face up	Back Touch with all accessories
1	GSM (Data) + Bluetooth(data)	Yes	Yes
2	WCDMA+ WLAN 2.4GHz/ 5GHz (data)	Yes	Yes
3	WCDMA+ Bluetooth(data)	Yes	Yes
4	LTE + WLAN 2.4GHz/ 5GHz (data)	Yes	Yes
5	LTE + Bluetooth(data)	Yes	Yes

NOTE:

1. WIFI and BT share the same antenna, and cannot transmit simultaneously.
2. Simultaneous with every transmitter must be the same test position.
3. KDB 447498 D01, BT SAR is excluded as below table.
4. KDB 447498 D01, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user; which is 0mm for body back with all accessories SAR and 2.5cm for face up SAR.
5. According to KDB 447498 D01 4.3.1, Standalone SAR test exclusion is as follow:
   For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
   [(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] • [√f(GHz)] ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR[30], where
   - f(GHz) is the RF channel transmit frequency in GHz
   - Power and distance are rounded to the nearest mW and mm before calculation[31]
   - The result is rounded to one decimal place for comparison
   - The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

   The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.
6. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
7. According to KDB 447498 D01 4.3.2, simultaneous transmission SAR test exclusion is as follow:
   (1) Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna.
   (2) Any transmitters and antennas should be considered when calculating simultaneous mode.
   (3) For mobile phone and PC, it's the sum of all transmitters and antennas at the same mode with same position in each applicable exposure condition
   (4)When the standalone SAR test exclusion of section 4.3.2 is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to det
   (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;
   where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

8. When the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio. The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion. The ratio is determined by (SAR1 + SAR2)1.5/Ri, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

Estimated SAR		Max Power including Tune-up Tolerance		Separation Distance (mm)	Estimated SAR (W/kg)
		dBm	mW		
BT	Face up	6.50	4.467	0	0.186
	Back Touch with all accessories	6.50	4.467	25	0.037

Sum of the SAR for GSM 850 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		GSM 850	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Face Up	0.457		0.186	0.643	No
		0.457	0.019		0.476	No
	Back Touch +Belt Clip + headset	0.640		0.037	0.677	No
		0.640	0.016		0.656	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		GSM 850	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Face Up	0.457		0.160	0.617	No
		0.457	0.134		0.591	No
	Back Touch +Belt Clip + headset	0.640		0.093	0.733	No
		0.640	0.089		0.729	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		GSM 850	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Face Up	0.457	0.104		0.561	No
	Back Touch +Belt Clip + headset	0.640	0.081		0.721	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.

·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for GSM 1900 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		GSM 1900	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Face Up	0.250		0.186	0.436	No
		0.250	0.019		0.269	No
	Back Touch +Belt Clip + headset	0.188		0.037	0.225	No
		0.188	0.016		0.204	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		GSM 1900	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Face Up	0.250		0.160	0.410	No
		0.250	0.134		0.384	No
	Back Touch +Belt Clip + headset	0.188		0.093	0.281	No
		0.188	0.089		0.277	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		GSM 1900	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Face Up	0.250	0.104		0.354	No
	Back Touch +Belt Clip + headset	0.188	0.081		0.269	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for WCDMA Band II &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band II	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.218	0.019		0.237	No
	Front	0.161	0.016		0.177	No
	Rear	0.218		0.186	0.404	No
	Front	0.161		0.037	0.198	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band II	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.218	0.134		0.352	No
	Front	0.161	0.089		0.250	No
	Rear	0.218		0.160	0.378	No
	Front	0.161		0.093	0.254	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band II	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.218	0.104		0.322	No
	Front	0.161	0.081		0.242	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for WCDMA Band IV &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band IV	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.168	0.019		0.187	No
	Front	0.317	0.016		0.333	No
	Rear	0.168		0.186	0.354	No
	Front	0.317		0.037	0.354	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band IV	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.168	0.134		0.302	No
	Front	0.317	0.089		0.406	No
	Rear	0.168		0.160	0.328	No
	Front	0.317		0.093	0.410	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band IV	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.168	0.104		0.272	No
	Front	0.317	0.081		0.398	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for WCDMA Band V &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band V	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.132	0.019		0.151	No
	Front	0.187	0.016		0.203	No
	Rear	0.132		0.186	0.318	No
	Front	0.187		0.037	0.224	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band V	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.132	0.134		0.266	No
	Front	0.187	0.089		0.276	No
	Rear	0.132		0.160	0.292	No
	Front	0.187		0.093	0.280	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		WCDMA Band V	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.132	0.104		0.236	No
	Front	0.187	0.081		0.268	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 2 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 2	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.266	0.019		0.285	No
	Front	0.213	0.016		0.229	No
	Rear	0.266		0.186	0.452	No
	Front	0.213		0.037	0.250	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 2	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.266	0.134		0.400	No
	Front	0.213	0.089		0.302	No
	Rear	0.266		0.160	0.426	No
	Front	0.213		0.093	0.306	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 2	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.266	0.104		0.370	No
	Front	0.213	0.081		0.294	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 4 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 4	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.263	0.019		0.282	No
	Front	0.493	0.016		0.509	No
	Rear	0.263		0.186	0.449	No
	Front	0.493		0.037	0.530	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 4	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.263	0.134		0.397	No
	Front	0.493	0.089		0.582	No
	Rear	0.263		0.160	0.423	No
	Front	0.493		0.093	0.586	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 4	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.263	0.104		0.367	No
	Front	0.493	0.081		0.574	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 5 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 5	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.151	0.019		0.170	No
	Front	0.156	0.016		0.172	No
	Rear	0.151		0.186	0.337	No
	Front	0.156		0.037	0.193	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 5	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.151	0.134		0.285	No
	Front	0.156	0.089		0.245	No
	Rear	0.151		0.160	0.311	No
	Front	0.156		0.093	0.249	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 5	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.151	0.104		0.255	No
	Front	0.156	0.081		0.237	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 7 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 7	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.215	0.019		0.234	No
	Front	0.835	0.016		0.851	No
	Rear	0.215		0.186	0.401	No
	Front	0.835		0.037	0.872	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 7	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.215	0.134		0.349	No
	Front	0.835	0.089		0.924	No
	Rear	0.215		0.160	0.375	No
	Front	0.835		0.093	**0.928**	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 7	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.215	0.104		0.319	No
	Front	0.835	0.081		0.916	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 12 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 12	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.089	0.019		0.108	No
	Front	0.122	0.016		0.138	No
	Rear	0.089		0.186	0.275	No
	Front	0.122		0.037	0.159	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 12	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.089	0.134		0.223	No
	Front	0.122	0.089		0.211	No
	Rear	0.089		0.160	0.249	No
	Front	0.122		0.093	0.215	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 12	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.089	0.104		0.193	No
	Front	0.122	0.081		0.203	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 13 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 13	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.117	0.019		0.136	No
	Front	0.258	0.016		0.274	No
	Rear	0.117		0.186	0.303	No
	Front	0.258		0.037	0.295	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 13	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.117	0.134		0.251	No
	Front	0.258	0.089		0.347	No
	Rear	0.117		0.160	0.277	No
	Front	0.258		0.093	0.351	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 13	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.117	0.104		0.221	No
	Front	0.258	0.081		0.339	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 17 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 17	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.076	0.019		0.095	No
	Front	0.116	0.016		0.132	No
	Rear	0.076		0.186	0.262	No
	Front	0.116		0.037	0.153	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 17	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.076	0.134		0.210	No
	Front	0.116	0.089		0.205	No
	Rear	0.076		0.160	0.236	No
	Front	0.116		0.093	0.209	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 17	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.076	0.104		0.180	No
	Front	0.116	0.081		0.197	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 38 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 38	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.071	0.019		0.090	No
	Front	0.316	0.016		0.332	No
	Rear	0.071		0.186	0.257	No
	Front	0.316		0.037	0.353	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 38	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.071	0.134		0.205	No
	Front	0.316	0.089		0.405	No
	Rear	0.071		0.160	0.231	No
	Front	0.316		0.093	0.409	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 38	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.071	0.104		0.175	No
	Front	0.316	0.081		0.397	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 40-Lower Side &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 40-Lower Side	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.034	0.019		0.053	No
	Front	0.138	0.016		0.154	No
	Rear	0.034		0.186	0.220	No
	Front	0.138		0.037	0.175	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 40-Lower Side	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.034	0.134		0.168	No
	Front	0.138	0.089		0.227	No
	Rear	0.034		0.160	0.194	No
	Front	0.138		0.093	0.231	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 40-Lower Side	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.034	0.104		0.138	No
	Front	0.138	0.081		0.219	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 40-Upper Side &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 40-Upper Side	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.046	0.019		0.065	No
	Front	0.138	0.016		0.154	No
	Rear	0.046		0.186	0.232	No
	Front	0.138		0.037	0.175	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 40-Upper Side	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.046	0.134		0.180	No
	Front	0.138	0.089		0.227	No
	Rear	0.046		0.160	0.206	No
	Front	0.138		0.093	0.231	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 40-Upper Side	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.046	0.104		0.150	No
	Front	0.138	0.081		0.219	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 66 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 66	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.226	0.019		0.245	No
	Front	0.180	0.016		0.196	No
	Rear	0.226		0.186	0.412	No
	Front	0.180		0.037	0.217	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 66	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.226	0.134		0.360	No
	Front	0.180	0.089		0.269	No
	Rear	0.226		0.160	0.386	No
	Front	0.180		0.093	0.273	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 66	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.226	0.104		0.330	No
	Front	0.180	0.081		0.261	No

Note:

·According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 71 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 71	2.4GHz WI-Fi Band	Bluetooth		
Face Up &Body-worn (Data)	Rear	0.080	0.019		0.099	No
	Front	0.116	0.016		0.132	No
	Rear	0.080		0.186	0.266	No
	Front	0.116		0.037	0.153	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 71	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Face Up &Body-worn (Data)	Rear	0.080	0.134		0.214	No
	Front	0.116	0.089		0.205	No
	Rear	0.080		0.160	0.240	No
	Front	0.116		0.093	0.209	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 71	5.8GHz WI-Fi Band			
Face Up &Body-worn (Data)	Rear	0.080	0.104		0.184	No
	Front	0.116	0.081		0.197	No

·**Note:**

According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/kg, SPLSR assessment is not required.

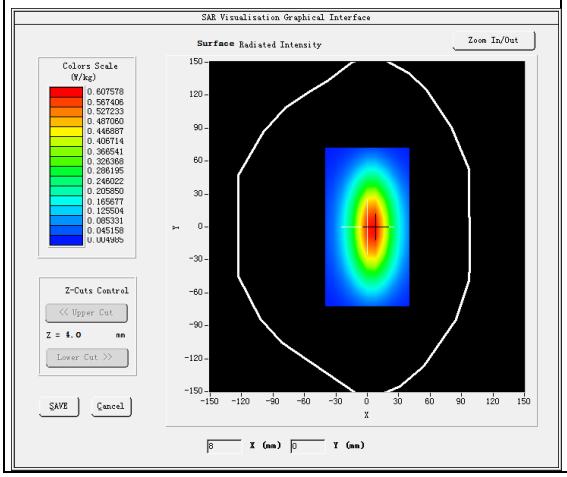
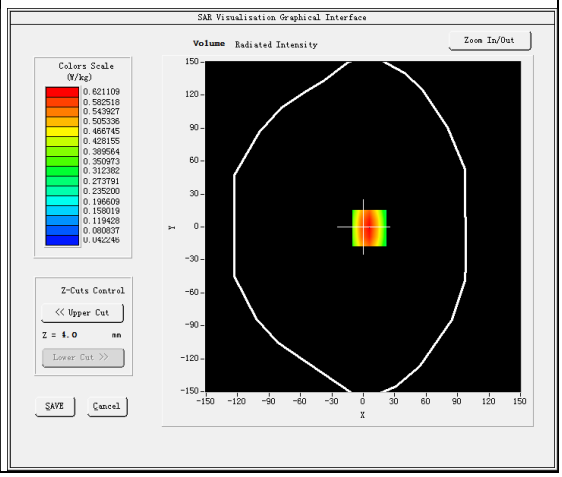
·SPLSR mean is “The SAR to Peak Location Separation Ratio “

APPENDIX A. SAR SYSTEM CHECK DATA

Test Laboratory: AGC Lab **Date: Mar. 14, 2024**
System Check Head 750 MHz
DUT: Dipole 750 MHz Type: SID 750
Communication System CW; Communication System Band: D750 (750.0 MHz); Duty Cycle: 1:1; Conv.F=1.95
Frequency: 750 MHz; Medium parameters used: f = 750 MHz; σ=0.92 mho/m; εr =43.12; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):20.6, Liquid temperature (℃): 20.2

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

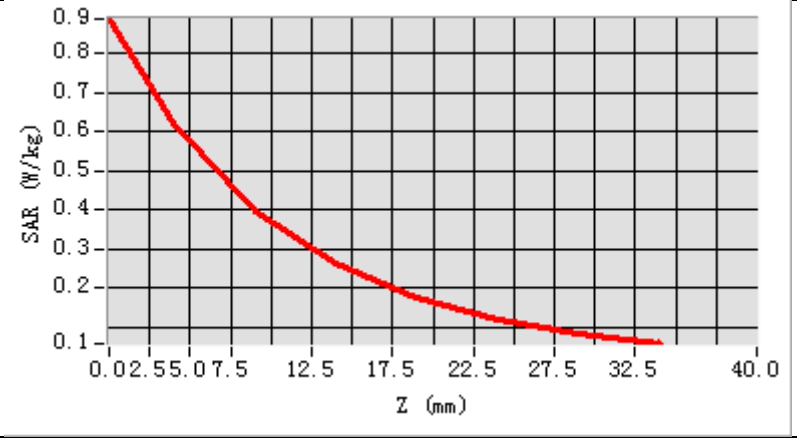
Configuration/System Check 750MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 750MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

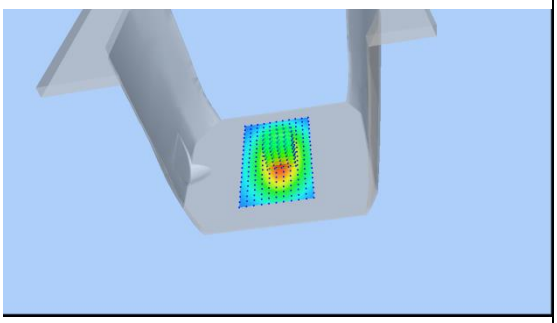
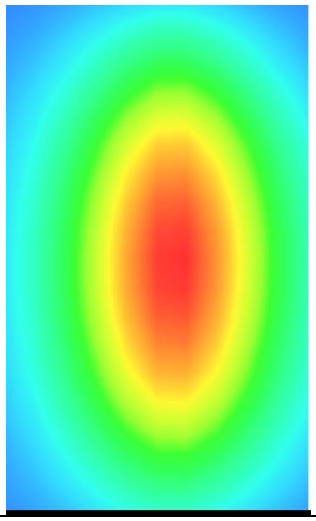
SURFACE SAR	VOLUME SAR
	

Maximum location: X=6.00, Y=-1.00
SAR Peak: 0.89 W/kg

SAR 10g (W/Kg)	0.358154
SAR 1g (W/Kg)	0.566803

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8868	0.6224	0.3973	0.2628	0.1763	0.1212	0.0821



3D screen shot	Hot spot position
	

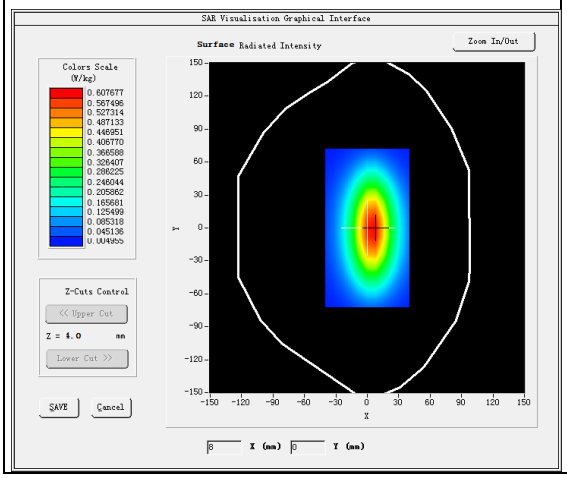
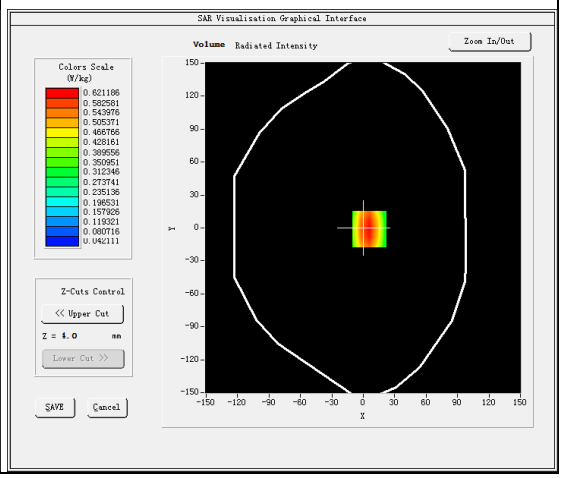
Test Laboratory: AGC Lab **Date: Mar. 13, 2024**
System Check Head 835 MHz
DUT: Dipole 835 MHz Type: SID 835
Communication System CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1; Conv.F=2.02
Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ=0.91 mho/m; εr =40.49; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (℃):21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

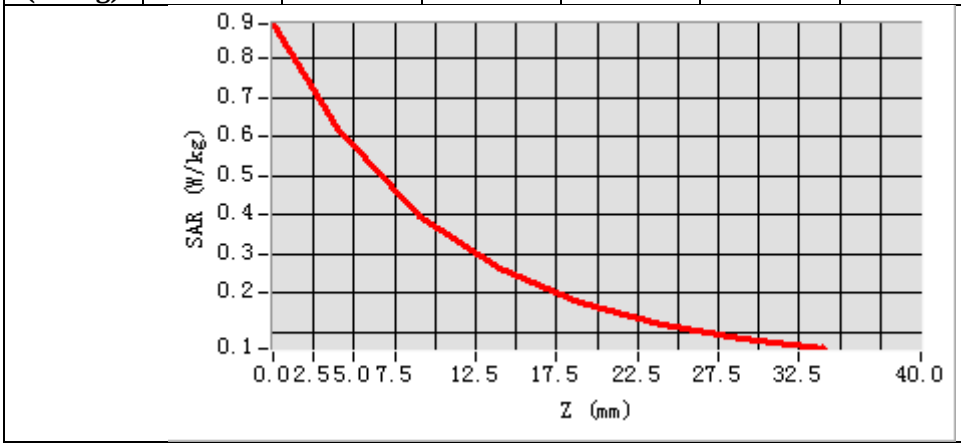
Configuration/System Check 835MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 835MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

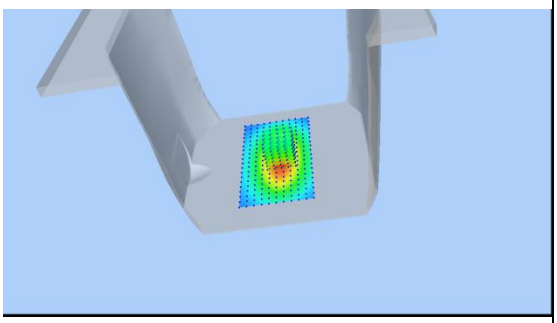
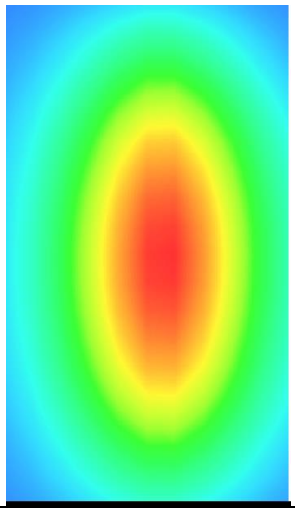
SURFACE SAR	VOLUME SAR
	

Maximum location: X=6.00, Y=-1.00
SAR Peak: 0.89 W/kg

SAR 10g (W/Kg)	0.389577
SAR 1g (W/Kg)	0.596385

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8857	0.6203	0.3974	0.2625	0.1764	0.1206	0.0829



3D screen shot	Hot spot position
	

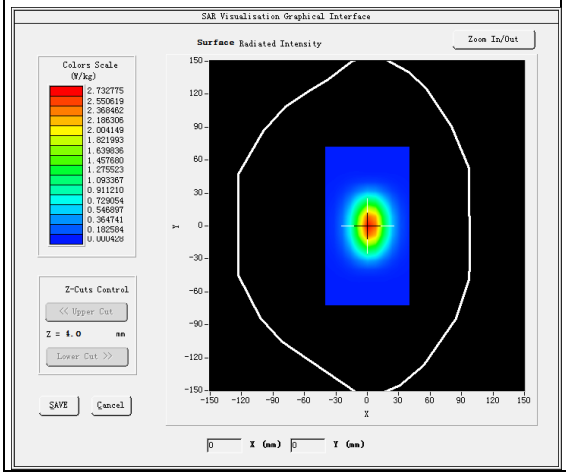
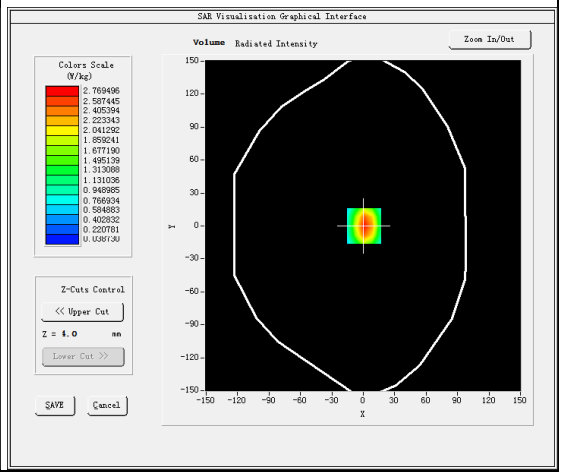
Test Laboratory: AGC Lab **Date: Mar. 16, 2024**
System Check Head 1750MHz
DUT: Dipole 1800 MHz; Type: SID 1800
Communication System: CW; Communication System Band: D1700 (1750.0 MHz); Duty Cycle:1:1; Conv.F=2.17
Frequency: 1750 MHz; Medium parameters used: f = 1750MHz; σ=1.39 mho/m; εr =41.07; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.1

SATIMO Configuration:
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

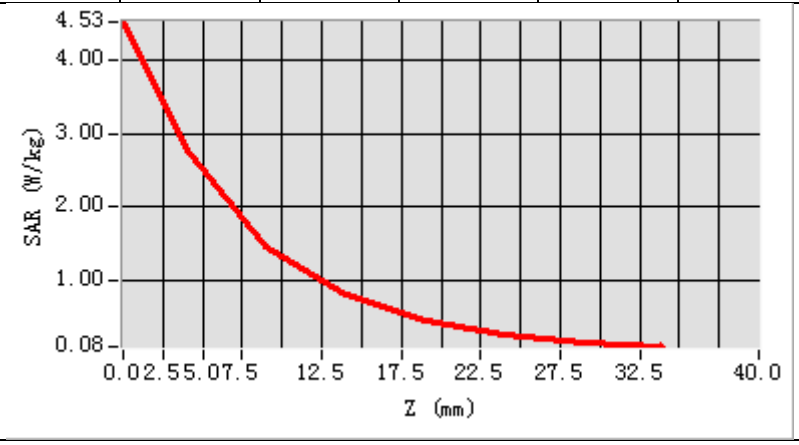
Configuration/System Check 1750MHz Head/Area Scan: Measurement grid: dx=8mm,dy=8mm
Configuration/System Check 1750MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

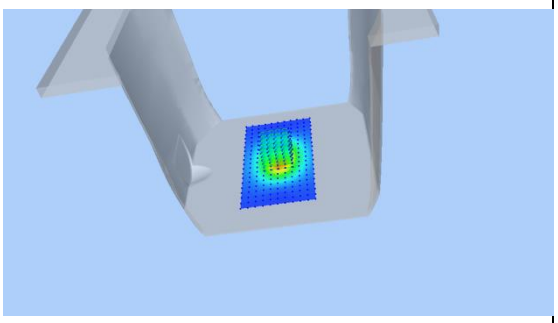
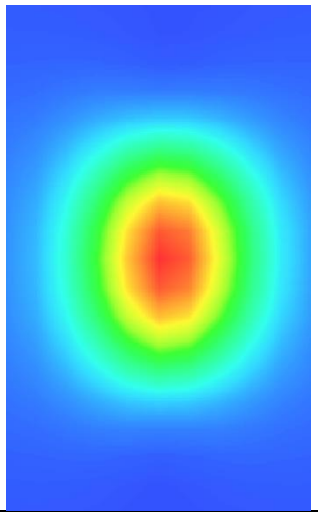
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=0.00
SAR Peak: 4.52 W/kg

SAR 10g (W/Kg)	1.327856
SAR 1g (W/Kg)	2.580127

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	4.5314	2.7683	1.4474	0.7936	0.4437	0.2474	0.1425



3D screen shot	Hot spot position
	

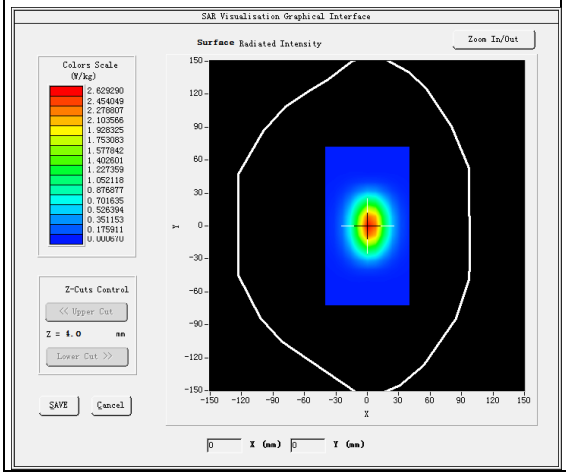
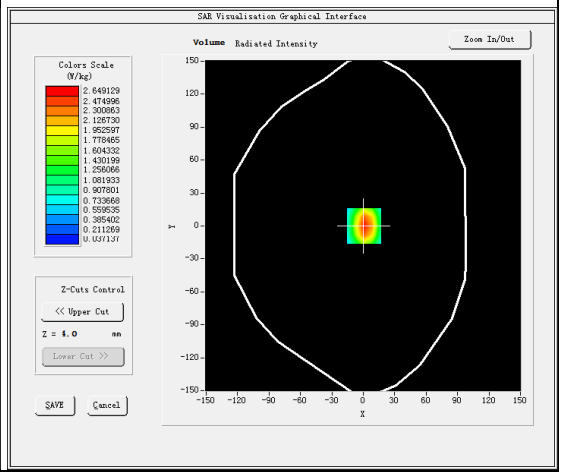
Test Laboratory: AGC Lab **Date: Mar. 17, 2024**
System Check Head 1900MHz
DUT: Dipole 1900 MHz; Type: SID 1900
Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1; Conv.F=2.15
Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ=1.43 mho/m; εr =39.51; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (℃):21.2, Liquid temperature (℃): 20.7

SATIMO Configuration:
Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

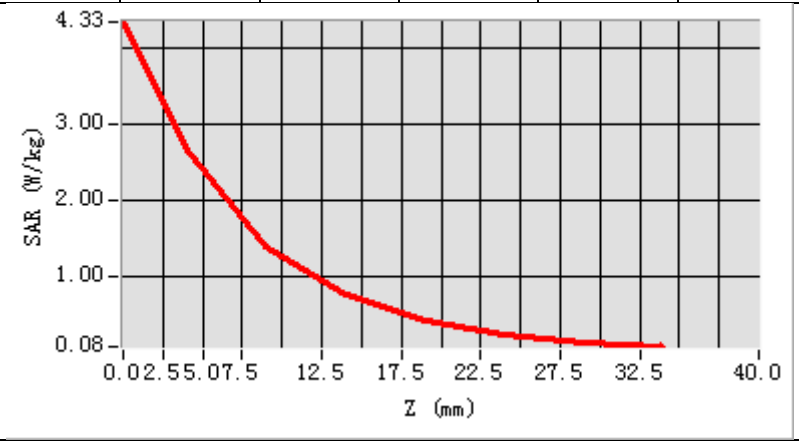
Configuration/System Check 1900MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 1900MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

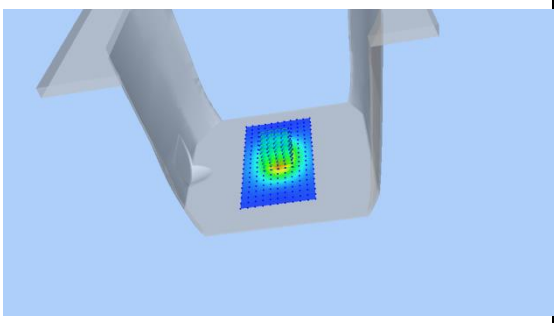
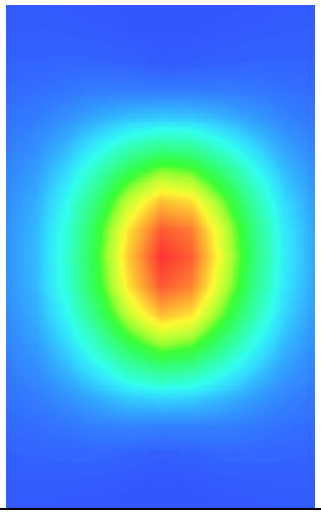
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=0.00
SAR Peak: 4.33 W/kg

SAR 10g (W/Kg)	1.266586
SAR 1g (W/Kg)	2.502751

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	4.3323	2.6447	1.3816	0.7582	0.4205	0.2343	0.1365



3D screen shot	Hot spot position
	

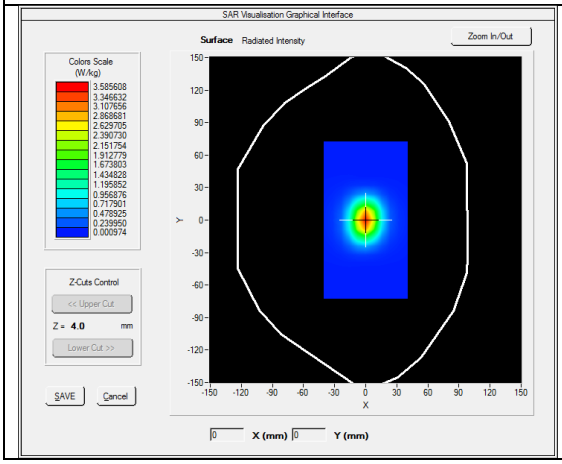
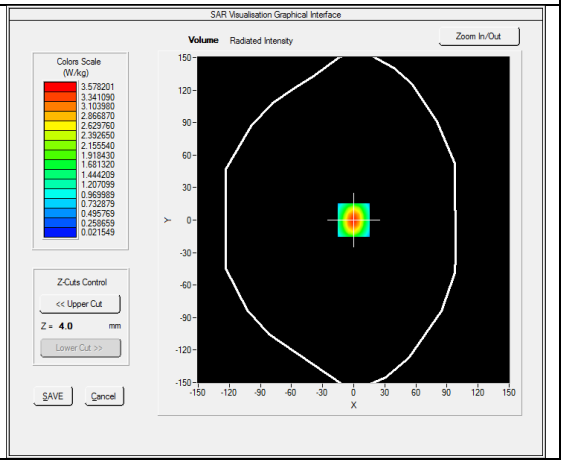
Test Laboratory: AGC Lab **Date: Mar. 15, 2024**
System Check Head 2300 MHz
DUT: Dipole 2300 MHz Type: SID 2300
Communication System CW; Communication System Band: D2300 (2300.0 MHz); Duty Cycle: 1:1; Conv.F=2.33
Frequency: 2300 MHz; Medium parameters used: f = 2300 MHz; σ=1.65 mho/m; εr =38.61; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (℃): 20.9, Liquid temperature (℃): 20.5

SATIMO Configuration

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

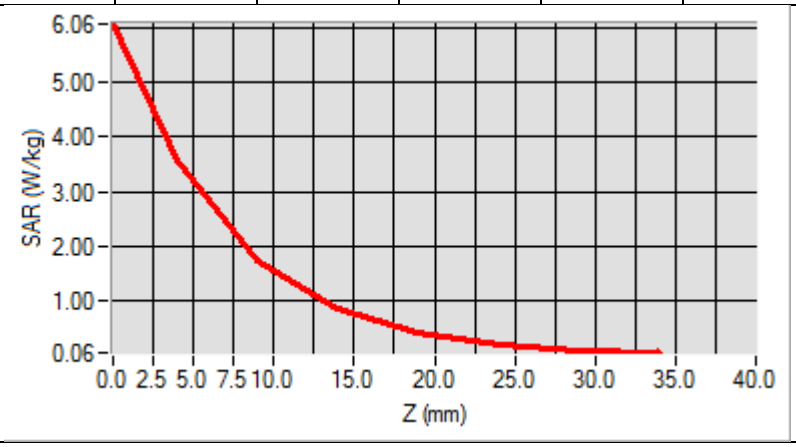
Configuration/System Check 2300MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 2300MHz Head/Zoom Scan: Measurement grid: dx=5mm,dy=5mm, dz=5mm

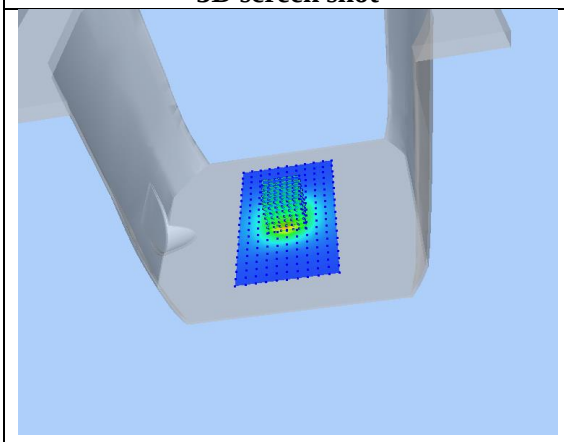
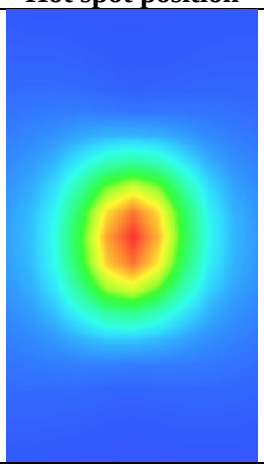
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 5.61W/kg

SAR 10g (W/Kg)	1.473174
SAR 1g (W/Kg)	3.185085

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.0642	3.5764	1.7469	0.8671	0.4380	0.2212	0.1123



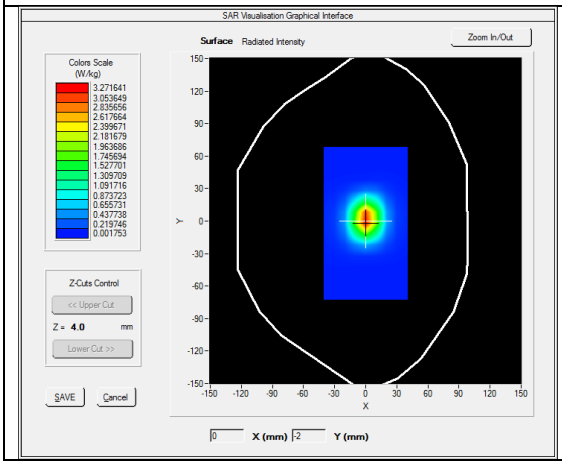
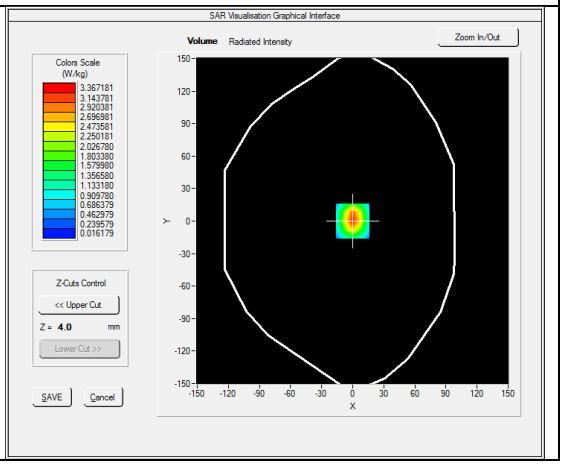
3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 10, 2024**
System Check Head 2450 MHz
DUT: Dipole 2450 MHz Type: SID 2450
Communication System CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:1; Conv.F=2.29
Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz; σ=1.79 mho/m; εr =38.13; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (℃):21.9, Liquid temperature (℃): 21.6

SATIMO Configuration
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

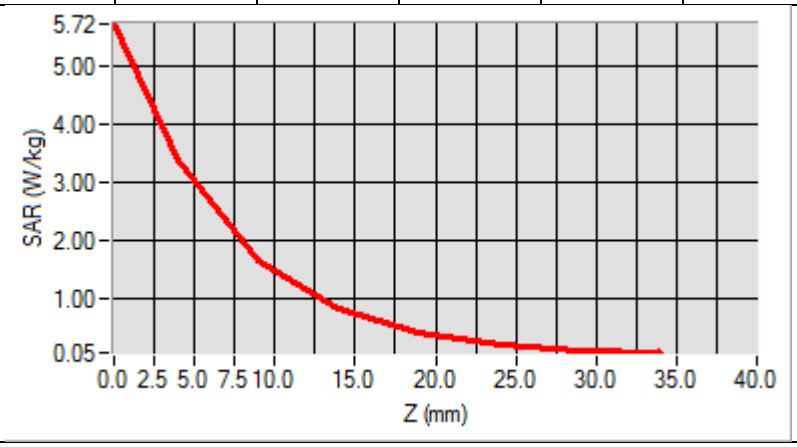
Configuration/System Check 2450MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 2450MHz Head/Zoom Scan: Measurement grid: dx=5mm,dy=5mm, dz=5mm

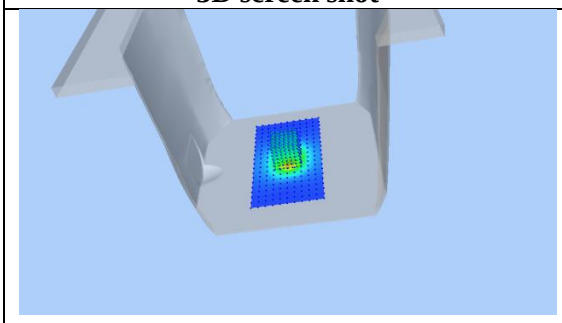
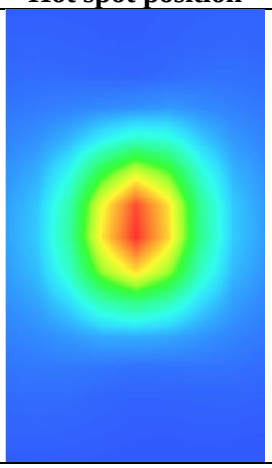
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 5.96 W/kg

SAR 10g (W/Kg)	1.482697
SAR 1g (W/Kg)	3.136035

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	5.7157	3.3689	1.6967	0.8075	0.3984	0.1962	0.0976

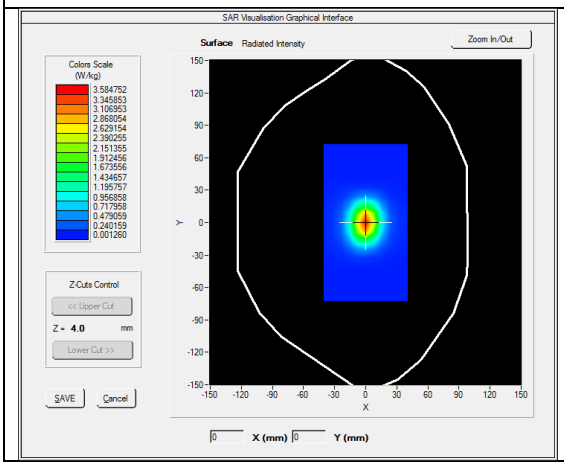
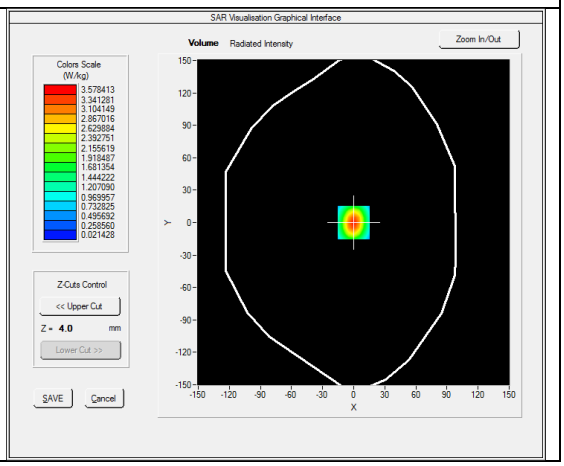


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 09, 2024**
System Check Head 2600MHz
DUT: Dipole 2600 MHz; Type: SID 2600
Communication System: CW; Communication System Band: D2600 (2600.0 MHz); Duty Cycle: 1:1; Conv.F=2.13
Frequency:2600 MHz; Medium parameters used: f = 2600 MHz; σ=1.97 mho/m; εr =38.17; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.9

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

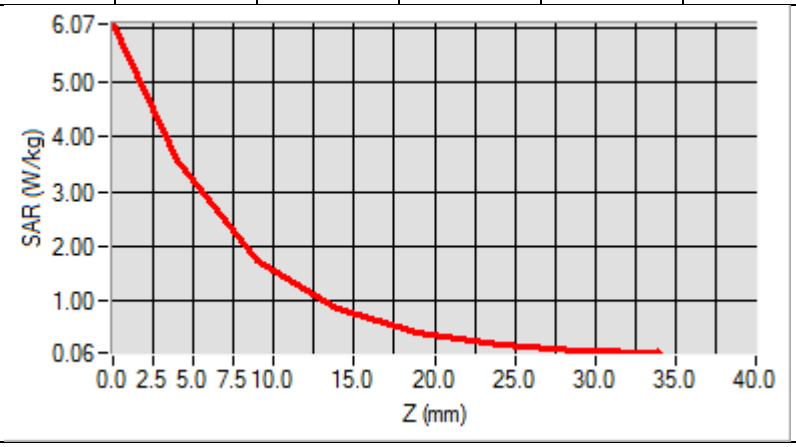
Configuration/System Check 2600 Head/Area Scan: Measurement grid: dx=8mm,dy=8mm
Configuration/System Check 2600 Head/Zoom Scan: Measurement grid: dx=5mm,dy=5mm, dz=5mm

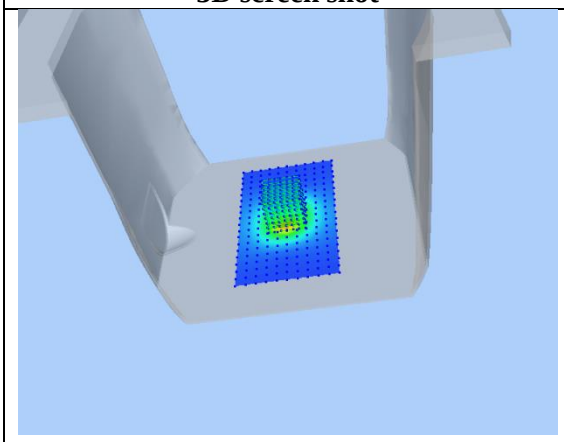
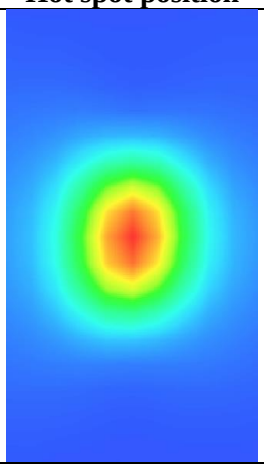
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 5.98 W/kg

SAR 10g (W/Kg)	1.523714
SAR 1g (W/Kg)	3.337390

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.0683	3.5710	1.7394	0.8569	0.4293	0.2217	0.1101



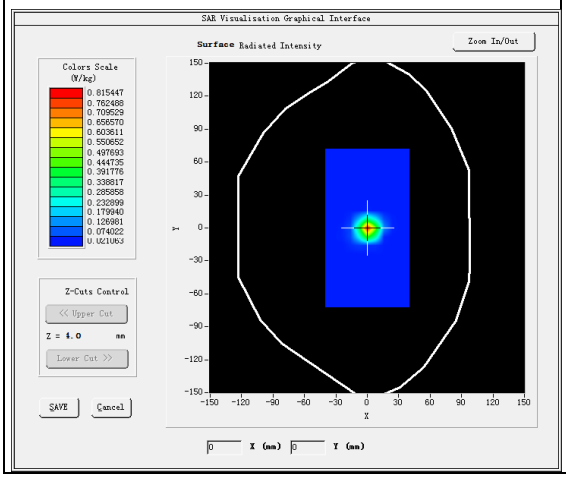
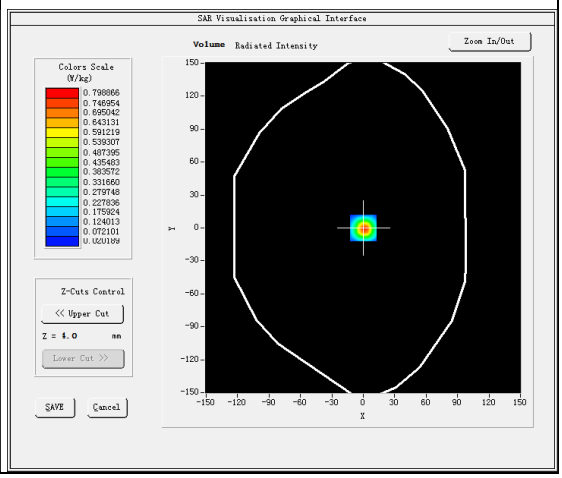
3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 18, 2024**
System Check 5200 MHz
DUT: Dipole 5000MHz Type: SID5500
Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.35
Frequency: 5200 MHz; Medium parameters used: f = 5200 MHz; σ =4.62 mho/m; εr =35.68; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section; Input Power=10dBm

Ambient temperature (℃): 21.4, Liquid temperature (℃): 21.1

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

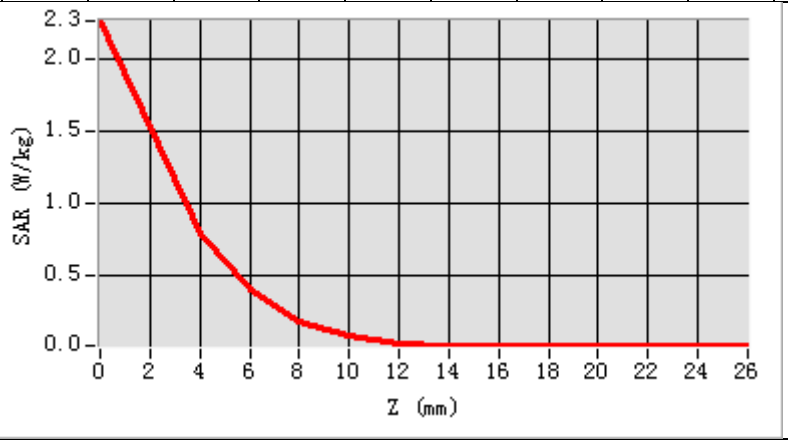
Configuration/System Check 5200 MHz Body/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 5200 MHz Body/Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm

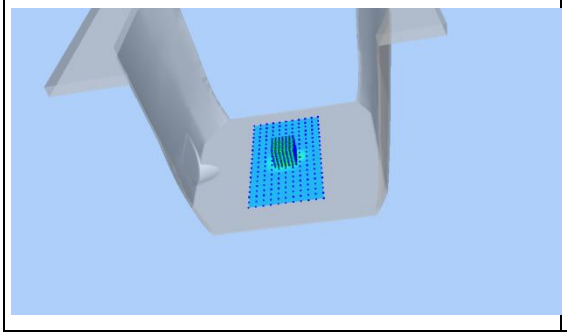
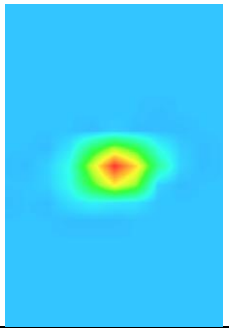
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 2.25 W/kg

SAR 10g (W/Kg)	0.213648
SAR 1g (W/Kg)	0.745182

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
SAR (W/Kg)	2.2600	0.7989	0.4029	0.1819	0.0841	0.0360	0.0274	0.0212	0.0234	0.0234	0.0234	0.0234



3D screen shot	Hot spot position
	

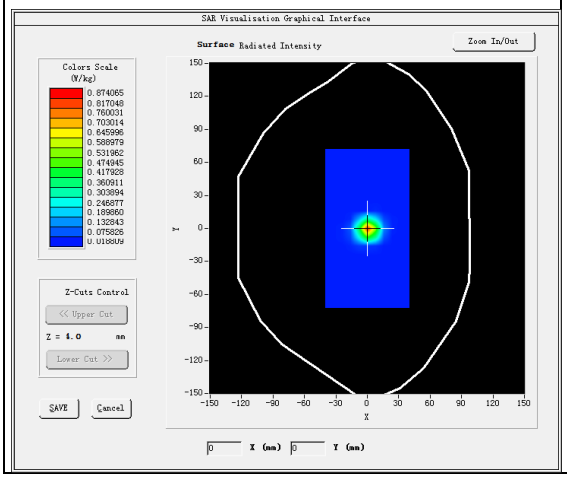
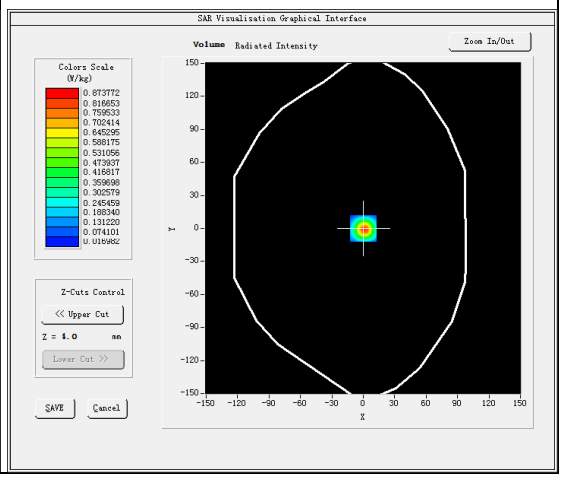
Test Laboratory: AGC Lab **Date: Mar. 19, 2024**
System Check Head 5300 MHz
DUT: Dipole 5000MHz Type: SID5000
Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.35
Frequency: 5300 MHz; Medium parameters used: f = 5300 MHz; σ =4.71 mho/m; εr =35.93; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section; Input Power=10dBm

Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.9

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

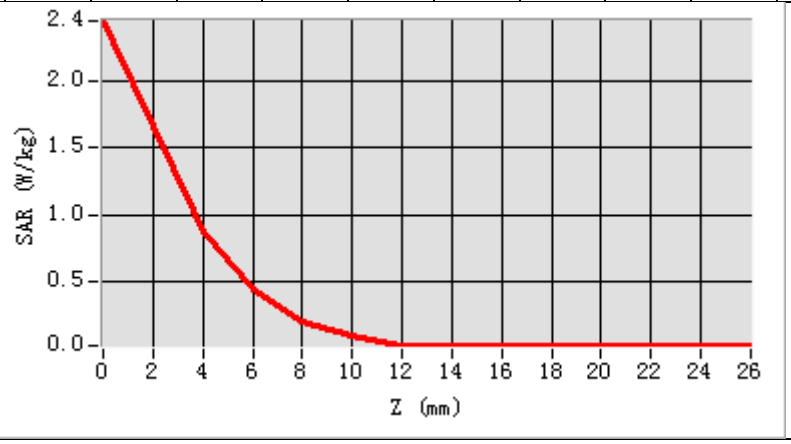
Configuration/System Check 5300 MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 5300 MHz Head/Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm

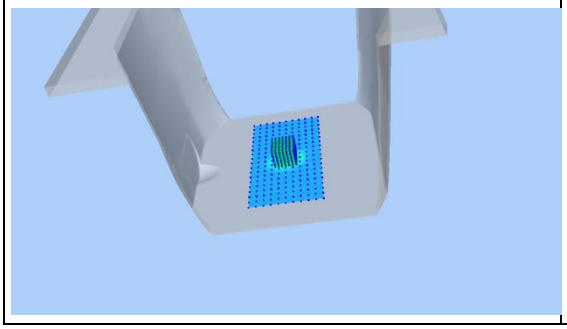
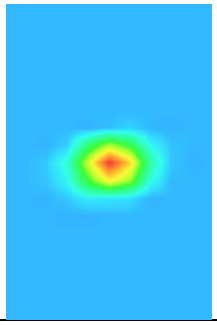
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 2.42 W/kg

SAR 10g (W/Kg)	0.227294
SAR 1g (W/Kg)	0.804173

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
SAR (W/Kg)	2.4451	0.8738	0.4398	0.2058	0.0935	0.0273	0.0210	0.0210	0.0210	0.0210	0.0210	0.0210



3D screen shot	Hot spot position
	

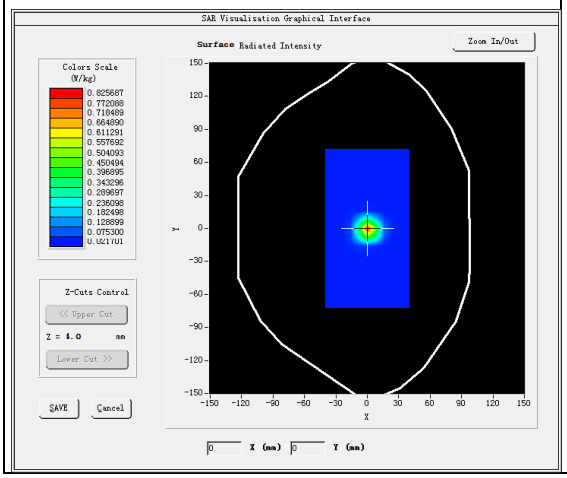
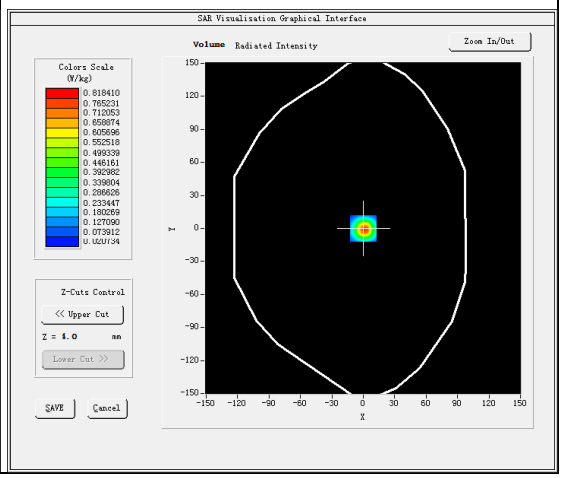
Test Laboratory: AGC Lab **Date: Mar. 20, 2024**
System Check Head 5800 MHz
DUT: Dipole 5000MHz Type: SID5800
Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.41
Frequency: 5800 MHz; Medium parameters used: f = 5800 MHz; σ =5.19 mho/m; εr =34.72; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section; Input Power=10dBm

Ambient temperature (℃): 20.8, Liquid temperature (℃): 20.5

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

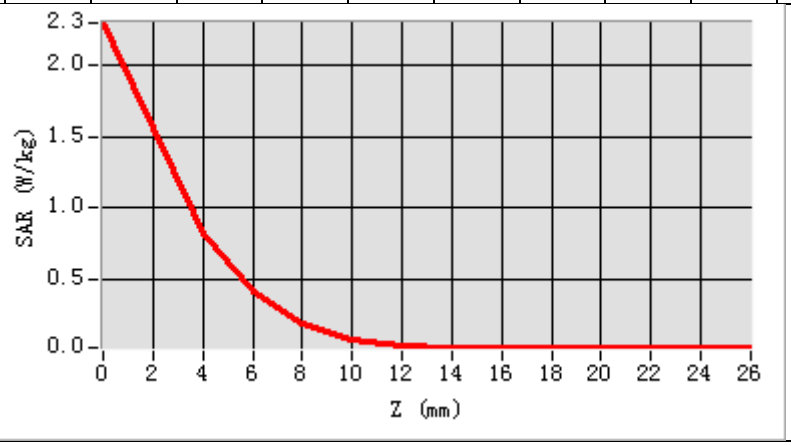
Configuration/System Check 5800 MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 5800 MHz Head/Zoom Scan: Measurement grid: dx=4mm,dy=4mm, dz=2mm

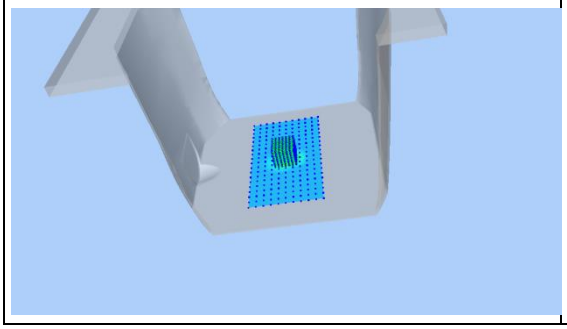
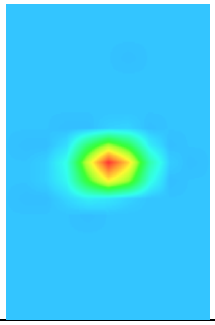
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 2.29 W/kg

SAR 10g (W/Kg)	0.223097
SAR 1g (W/Kg)	0.767935

Z (mm)	0.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
SAR (W/Kg)	2.2973	0.8184	0.4113	0.1940	0.0828	0.0400	0.0220	0.0218	0.0239	0.0239	0.0239	0.0239



3D screen shot	Hot spot position
	

APPENDIX B. SAR MEASUREMENT DATA

Test Laboratory: AGC Lab **Date: Mar. 13, 2024**
GPRS 850 Mid- Face Up 2.5cm(2up)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: GPRS-2 Slot; Communication System Band: GSM 850; Duty Cycle: 1:4.2; Conv.F=2.02; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.92 mho/m; εr = 40.13; ρ= 1000 kg/m^3 ; Phantom section: Flat Section

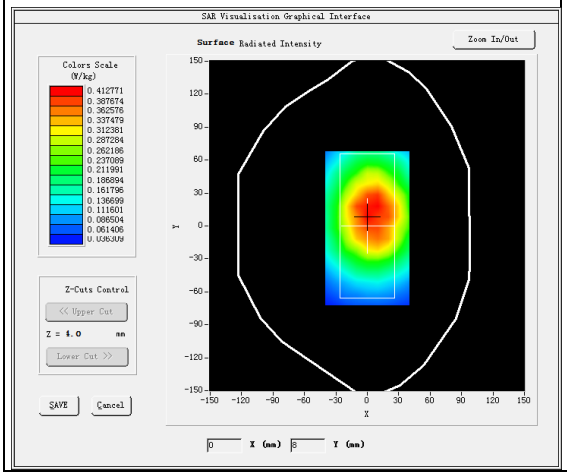
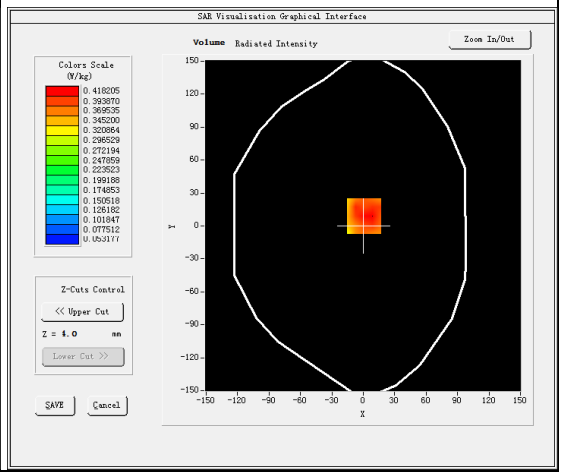
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/GPRS 850 Mid-Face Up/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GPRS 850 Mid-Face Up/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

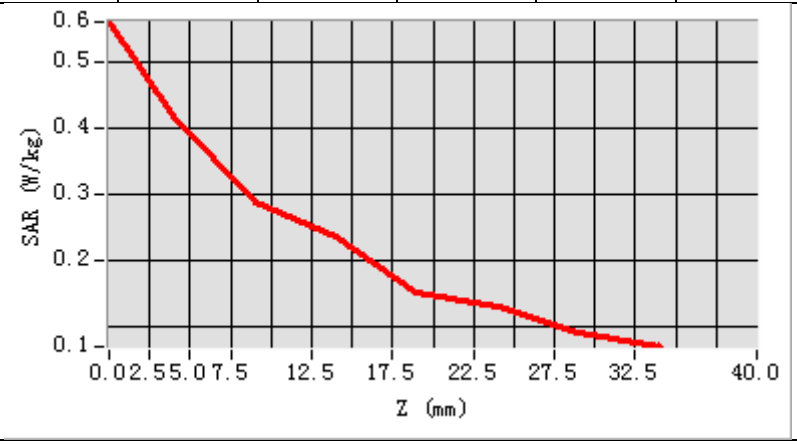
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Face Up
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 4.0)

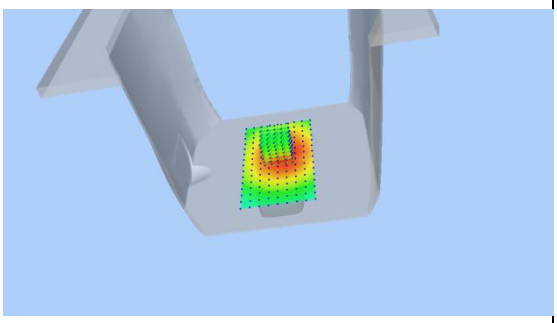
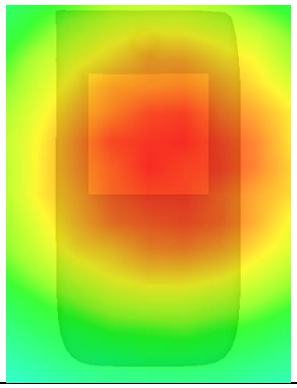
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=9.00
SAR Peak: 0.56 W/kg

SAR 10g (W/Kg)	0.288381
SAR 1g (W/Kg)	0.407599

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.5591	0.4182	0.2879	0.2355	0.1519	0.1295	0.0929



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 13, 2024**
GPRS 850 Mid- Body-Back with all accessories (2up)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: GPRS-2 Slot; Communication System Band: GSM 850; Duty Cycle: 1:4.2; Conv.F=2.02; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.92 mho/m; εr = 40.13; ρ= 1000 kg/m^3 ; Phantom section: Flat Section

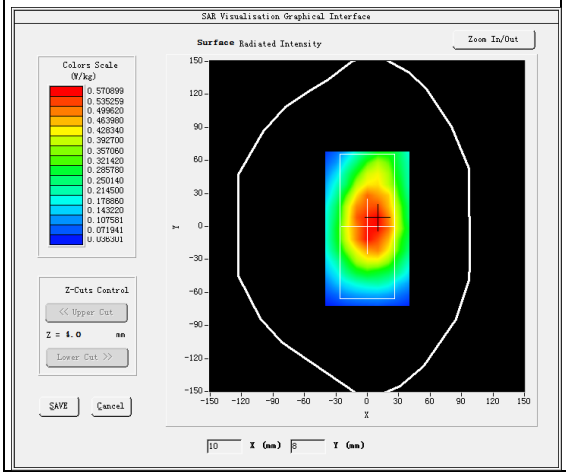
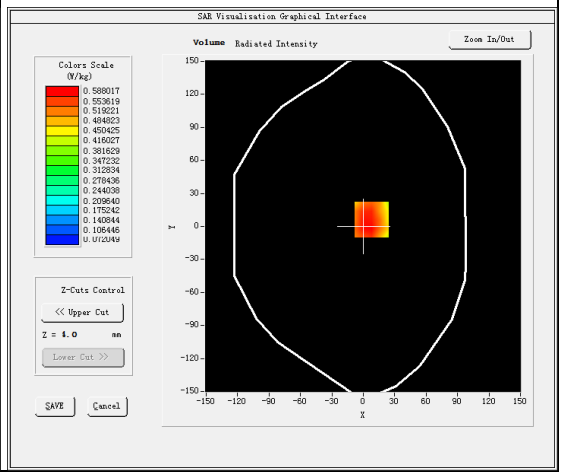
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/GPRS 850 Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GPRS 850 Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

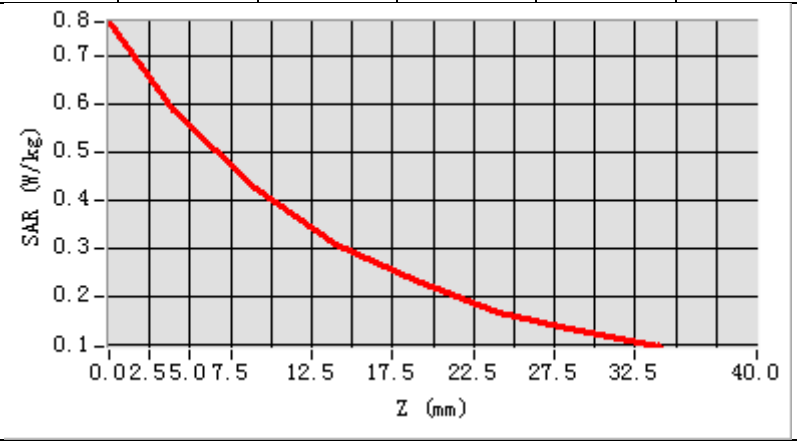
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 4.0)

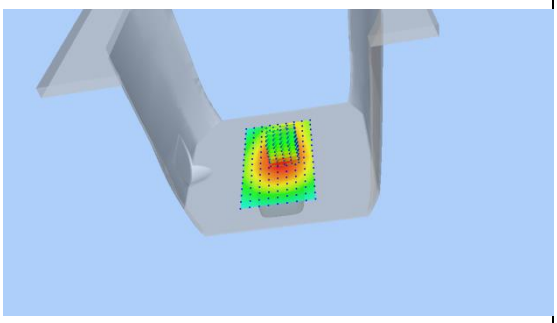
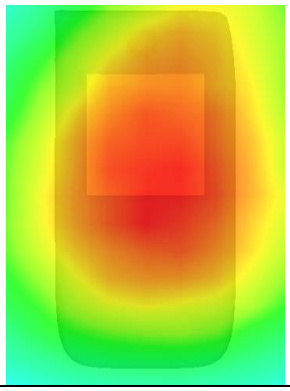
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=6.00
SAR Peak: 0.78 W/kg

SAR 10g (W/Kg)	0.401709
SAR 1g (W/Kg)	0.571869

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7684	0.5880	0.4256	0.3096	0.2351	0.1682	0.1301



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 17, 2024**
GPRS 1900 Mid-Face Up 2.5cm (3up)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: GPRS-3Slot; Communication System Band: PCS 1900; Duty Cycle: 1:2.7; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.41 mho/m; εr =40.26; ρ= 1000 kg/m^3 ; Phantom section: Flat Section

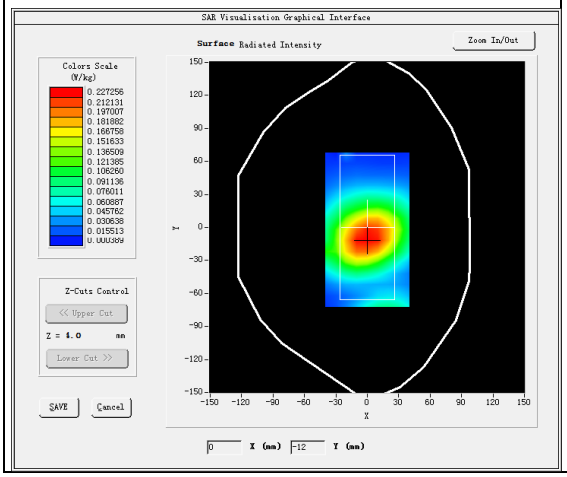
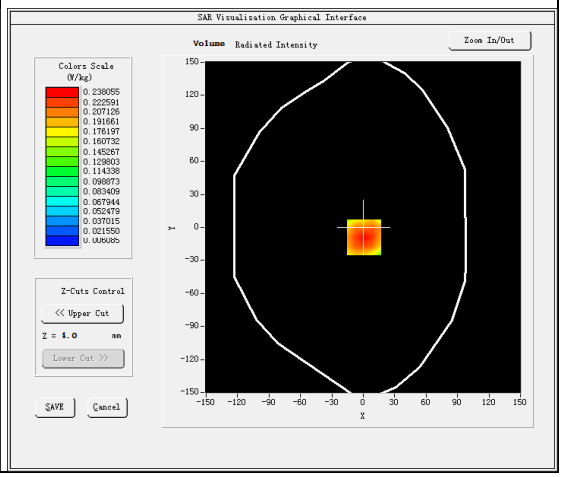
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.7

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/GPRS1900 Mid-Face Up/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GPRS1900 Mid-Face Up/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

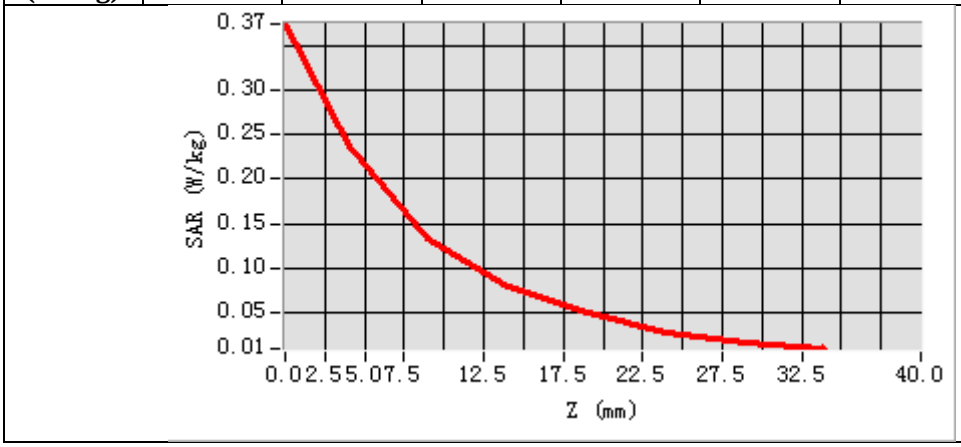
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Face Up
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 2.7)

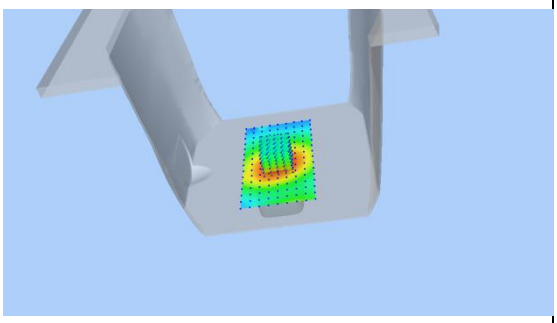
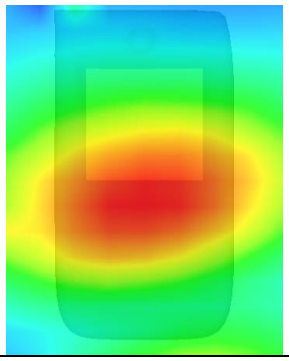
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-9.00
SAR Peak: 0.37 W/kg

SAR 10g (W/Kg)	0.132749
SAR 1g (W/Kg)	0.229557

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3746	0.2381	0.1339	0.0794	0.0489	0.0281	0.0168



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 17, 2024**
GPRS 1900 Mid-Body-Back with all accessories (3up)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: GPRS-3Slot; Communication System Band: PCS 1900; Duty Cycle: 1:2.7; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.41 mho/m; εr =40.26; ρ= 1000 kg/m^3 ; Phantom section: Flat Section

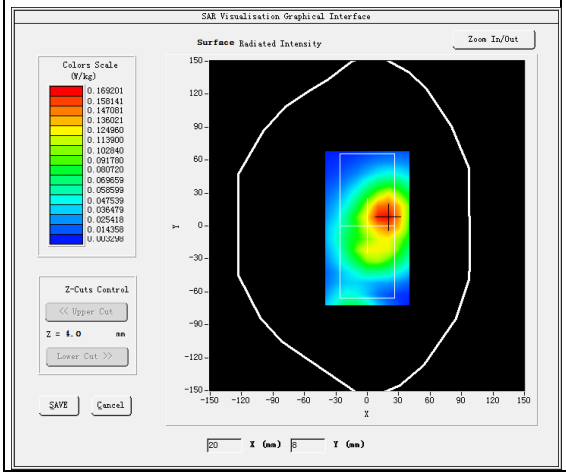
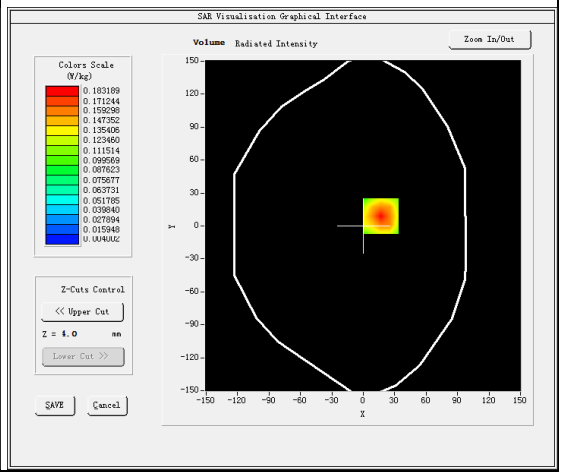
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.7

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/GPRS1900 Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GPRS1900 Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

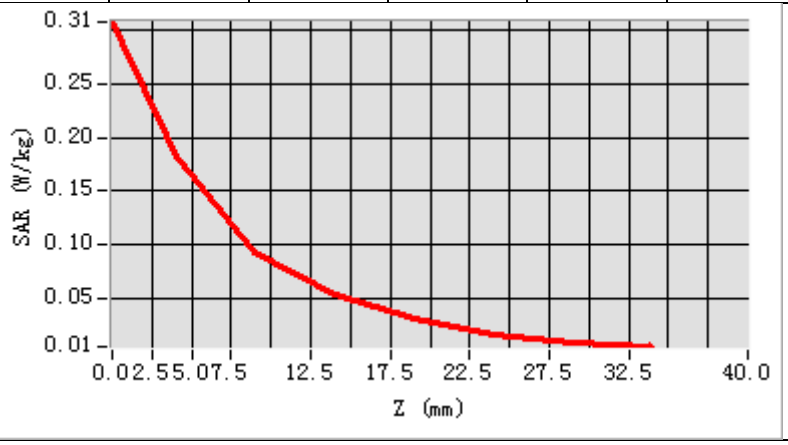
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 2.7)

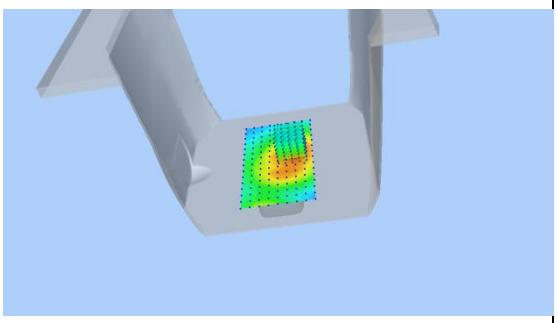
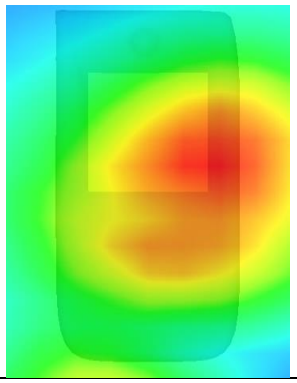
SURFACE SAR	VOLUME SAR
	

Maximum location: X=17.00, Y=9.00
SAR Peak: 0.30 W/kg

SAR 10g (W/Kg)	0.094013
SAR 1g (W/Kg)	0.173460

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3069	0.1832	0.0937	0.0540	0.0310	0.0161	0.0091



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 17, 2024**
WCDMA Band II Mid-Face Up 2.5cm (RMC 12.2kbps)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ=1.41 mho/m; ε_r =40.26; ρ= 1000 kg/m^3 ; Phantom section: Flat Section

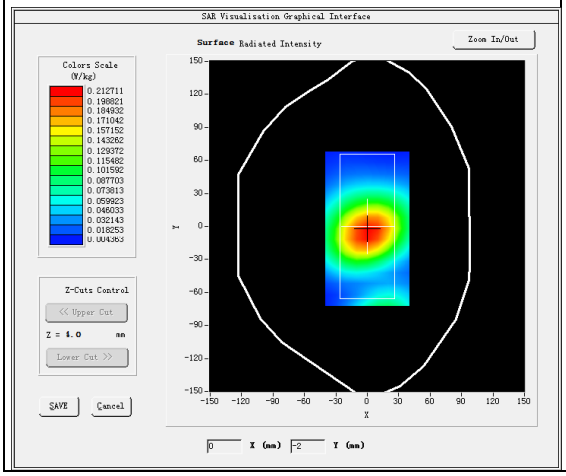
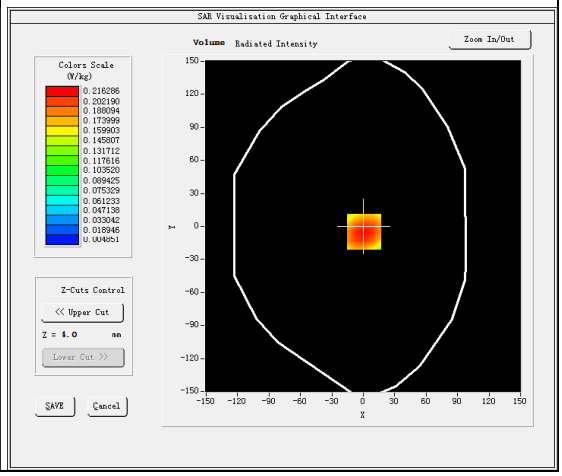
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.7

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ WCDMA band II Mid-Face Up/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA band II Mid-Face Up/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

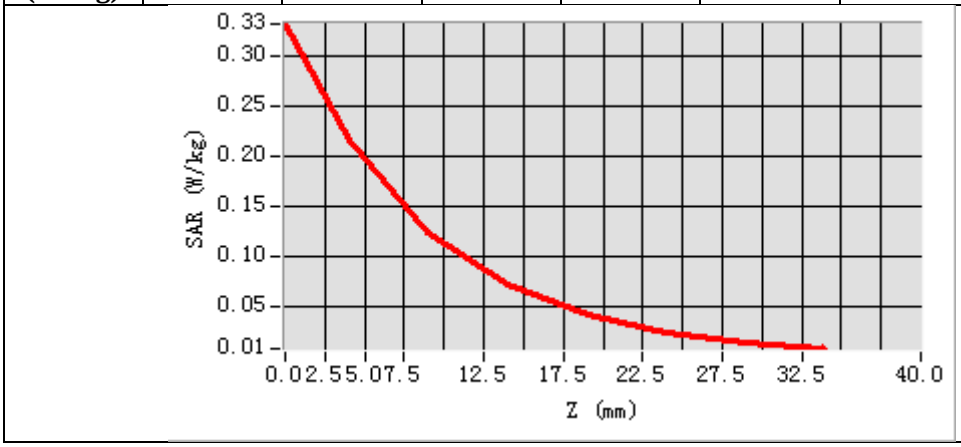
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Face Up
Band	WCDMA band II
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

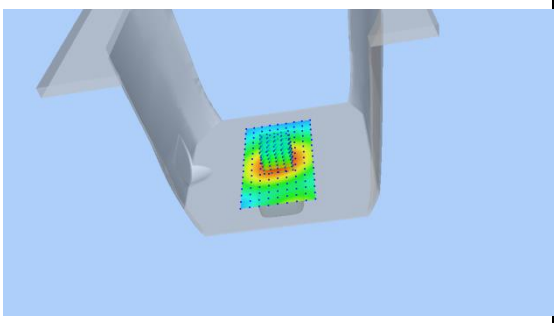
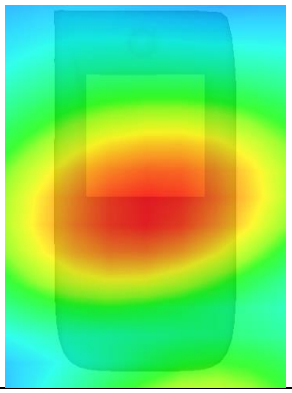
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-5.00
SAR Peak: 0.33 W/kg

SAR 10g (W/Kg)	0.122652
SAR 1g (W/Kg)	0.209585

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3312	0.2163	0.1244	0.0727	0.0428	0.0251	0.0149



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 17, 2024**
WCDMA Band II Mid- Body-Back with all accessories (RMC 12.2kbps)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.15; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ=1.41 mho/m; εr =40.26; ρ= 1000 kg/m³ ; Phantom section: Flat Section

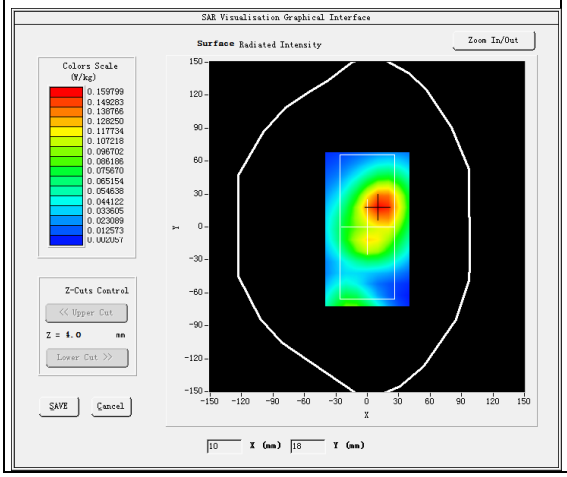
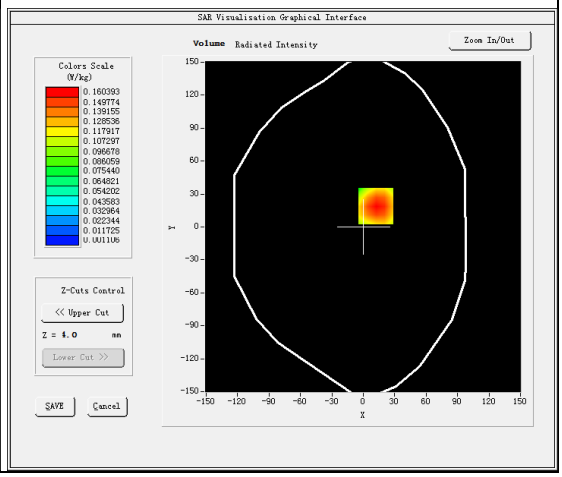
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.7

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ WCDMA band II Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA band II Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

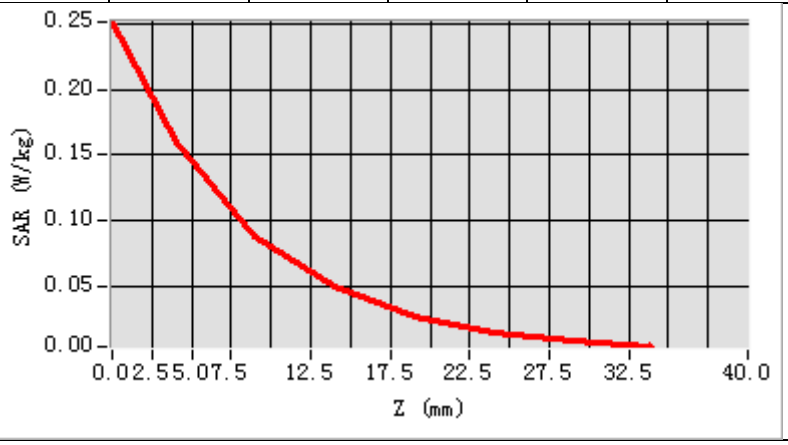
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	WCDMA band II
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

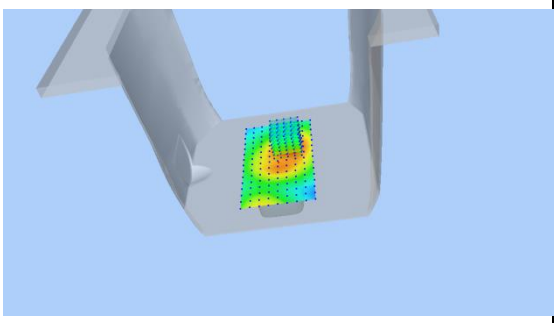
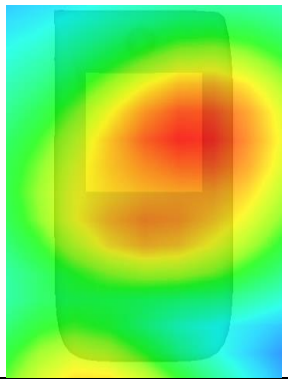
SURFACE SAR	VOLUME SAR
	

Maximum location: X=12.00, Y=19.00
SAR Peak: 0.25 W/kg

SAR 10g (W/Kg)	0.087057
SAR 1g (W/Kg)	0.154685

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.2510	0.1604	0.0889	0.0495	0.0277	0.0153	0.0085



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 16, 2024**
WCDMA Band IV Mid- Face Up 2.5cm (RMC)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: UMTS; Communication System Band: BAND IV UTRA/FDD; Duty Cycle:1: 1; Conv.F=2.17; Frequency:1732.4 MHz; Medium parameters used: f = 1750 MHz; σ=1.37 mho/m; εr =41.63; ρ= 1000 kg/m³; Phantom section: Flat Section

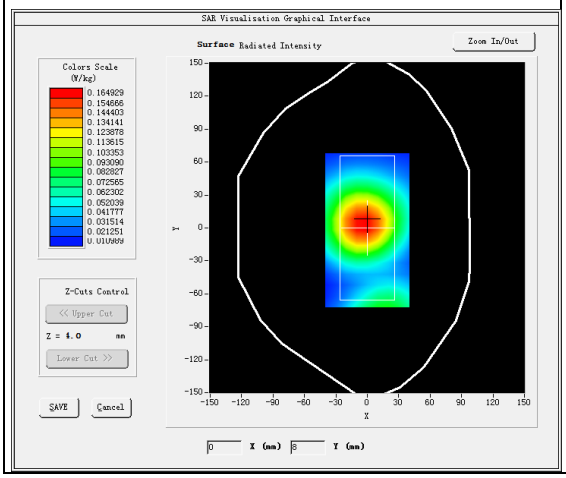
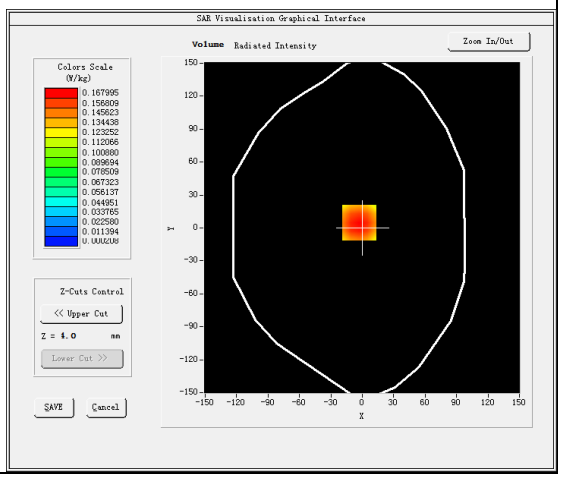
Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.1

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ WCDMA Band IV Mid- Face Up /Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band IV Mid- Face Up /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

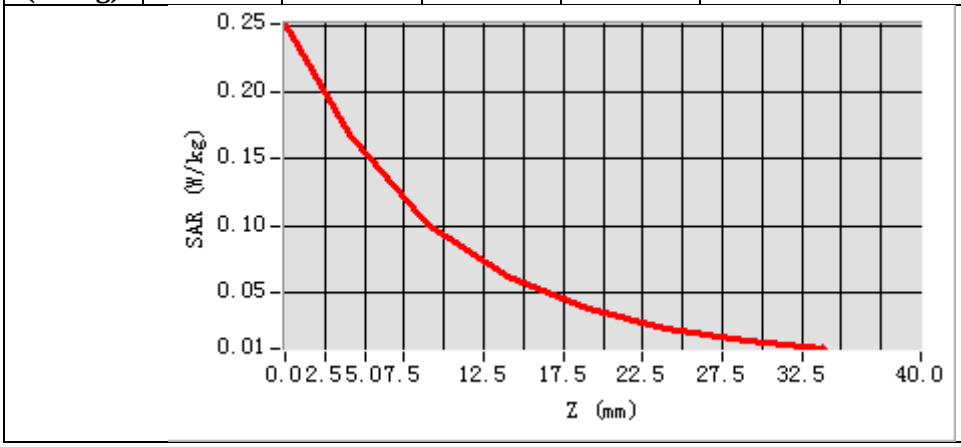
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Face Up
Band	WCDMA Band IV
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

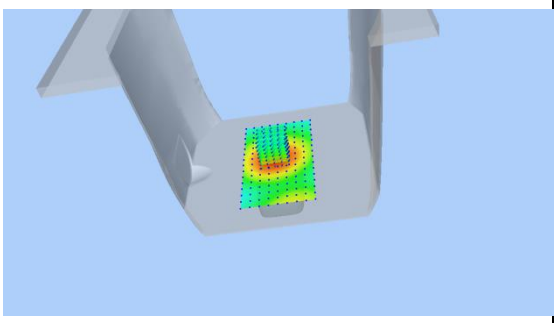
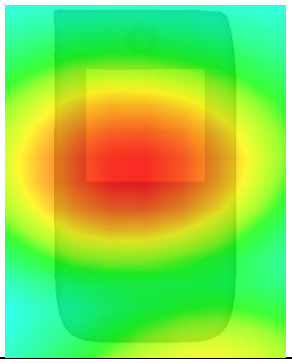
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-3.00, Y=5.00
SAR Peak: 0.25 W/kg

SAR 10g (W/Kg)	0.097900
SAR 1g (W/Kg)	0.163207

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.2511	0.1680	0.1005	0.0614	0.0378	0.0228	0.0138



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 16, 2024**
WCDMA Band IV Mid- Body-Back with all accessories (RMC)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: UMTS; Communication System Band: BAND IV UTRA/FDD; Duty Cycle:1: 1; Conv.F=2.17; Frequency:1732.4 MHz; Medium parameters used: f = 1750 MHz; σ=1.37 mho/m; εr =41.63; ρ= 1000 kg/m³; Phantom section: Flat Section

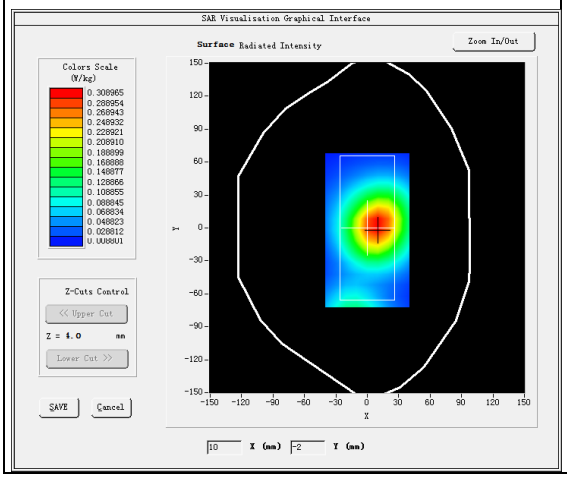
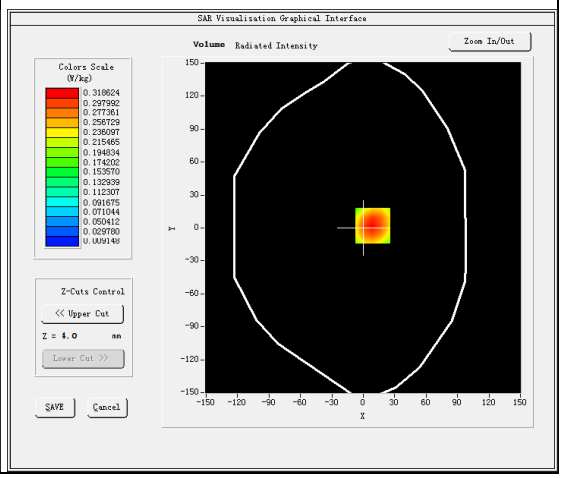
Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.1

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ WCDMA Band IV Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band IV Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

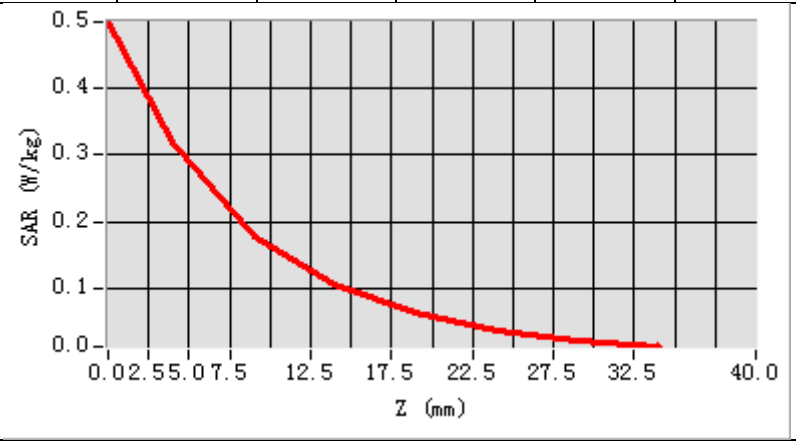
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	WCDMA Band IV
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

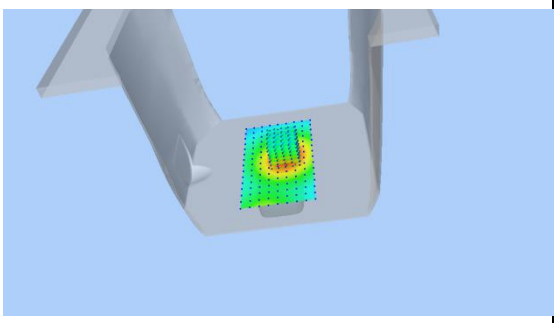
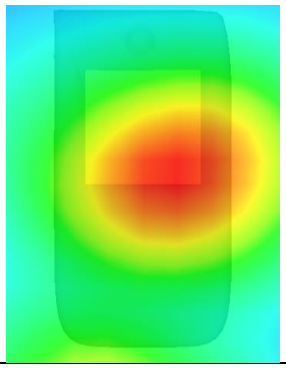
SURFACE SAR	VOLUME SAR
	

Maximum location: X=9.00, Y=2.00
SAR Peak: 0.50 W/kg

SAR 10g (W/Kg)	0.176879
SAR 1g (W/Kg)	0.308447

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.4991	0.3186	0.1791	0.1076	0.0640	0.0383	0.0230



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 13, 2024**

WCDMA Band Ⅴ Mid- Face Up 2.5cm (RMC)

DUT: 4G LTE IP Radio; Type: IP-66

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=2.02; Frequency: 836.4 MHz; Medium parameters used: f = 835MHz; σ= 0.92 mho/m; εr = 40.13; ρ= 1000 kg/m³ ; Phantom section: Flat Section

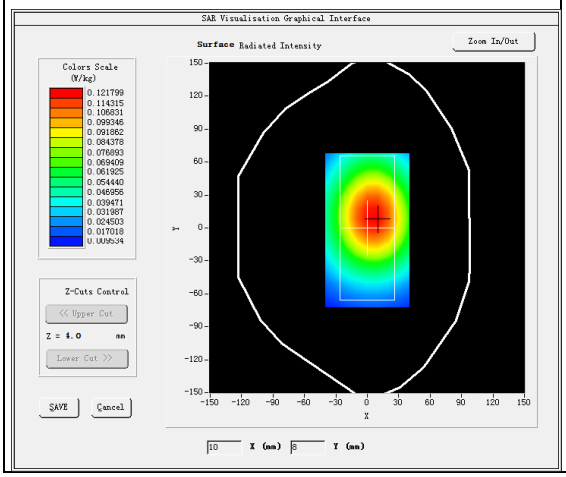
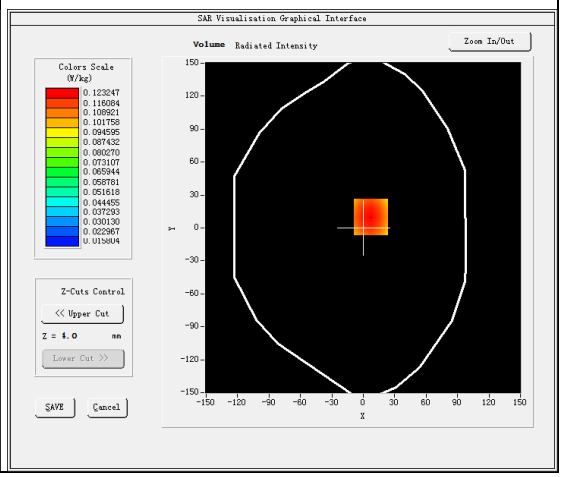
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ WCDMA Band V Mid- Face Up/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band V Mid- Face Up/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

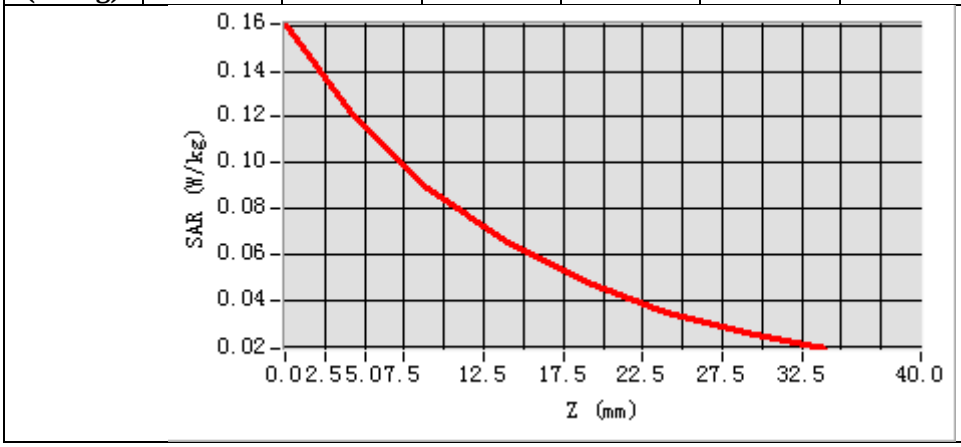
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Face Up
Band	WCDMA Band V
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

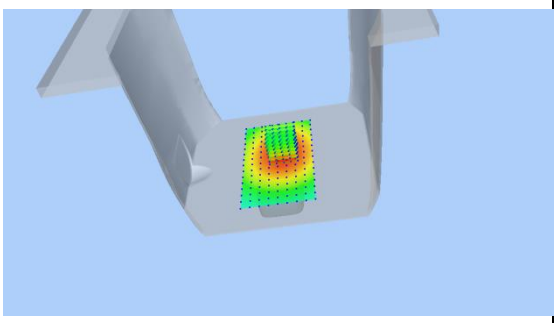
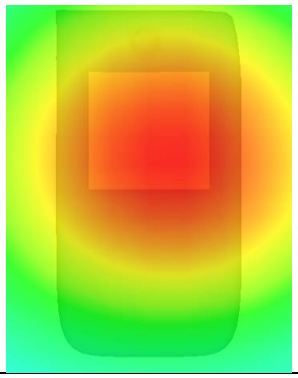
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=10.00
SAR Peak: 0.16 W/kg

SAR 10g (W/Kg)	0.084232
SAR 1g (W/Kg)	0.119491

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.1606	0.1232	0.0891	0.0650	0.0479	0.0350	0.0257



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Mar. 13, 2024**

WCDMA Band Ⅴ Mid- Body-Back with all accessories (RMC)

DUT: 4G LTE IP Radio; Type: IP-66

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=2.02; Frequency: 836.4 MHz; Medium parameters used: f = 835MHz; σ= 0.92 mho/m; εr = 40.13; ρ= 1000 kg/m³ ; Phantom section: Flat Section

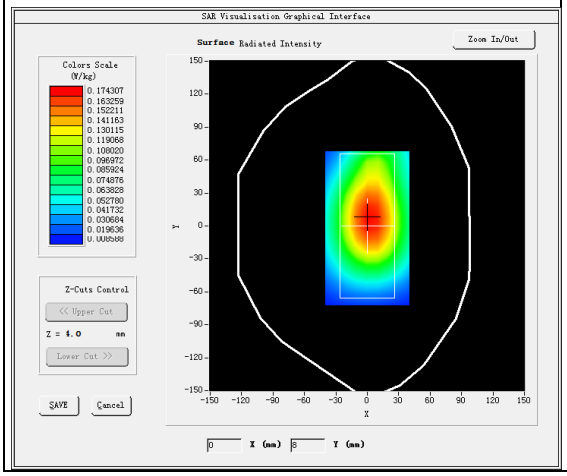
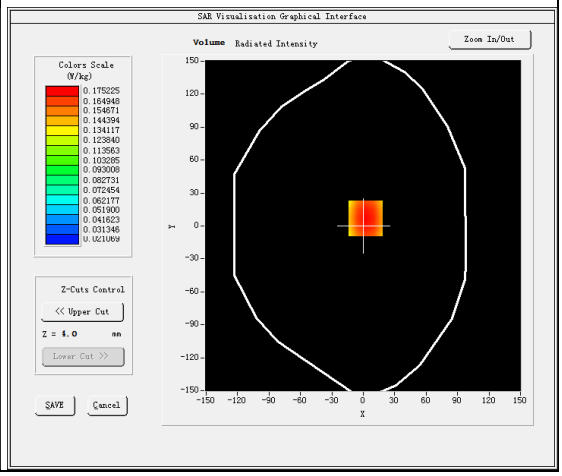
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:

- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ WCDMA Band V Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band V Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	WCDMA Band V
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

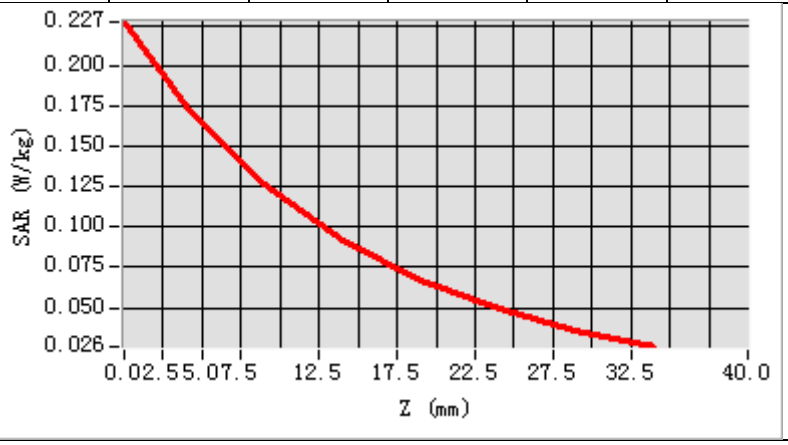
SURFACE SAR	VOLUME SAR
	

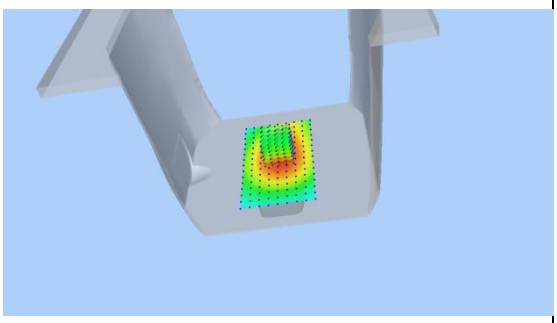
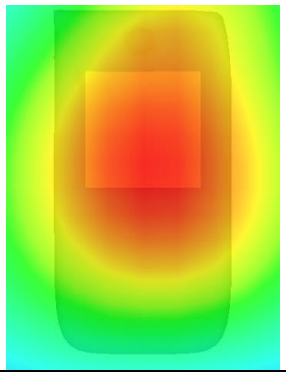
Maximum location: X=2.00, Y=7.00

SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	0.118818
SAR 1g (W/Kg)	0.169280

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.2272	0.1752	0.1265	0.0922	0.0671	0.0492	0.0359



3D screen shot	Hot spot position
	

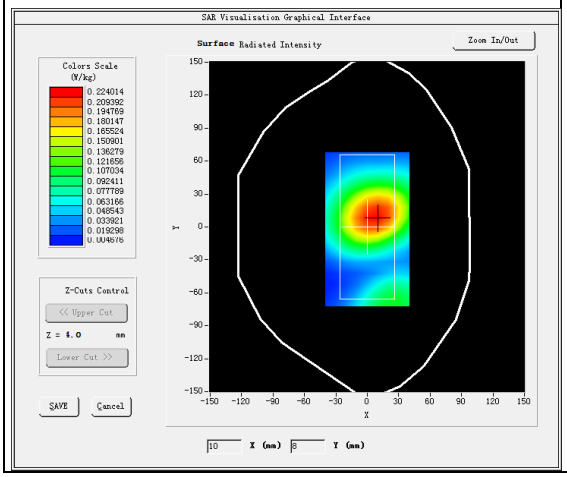
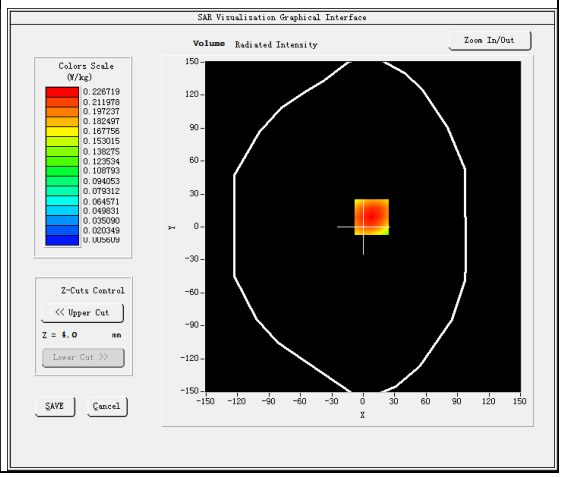
Test Laboratory: AGC Lab **Date: Mar. 17, 2024**
LTE Band 2 Mid-Face Up 2.5cm (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 2; Duty Cycle:1:1; Conv.F=2.15; Frequency:1880MHz; Medium parameters used: f = 1900 MHz; σ= 1.41 mho/m; εr =40.26; ρ= 1000 kg/m^3 ; Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.7

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 2 Mid-Face Up 2.5cm/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 2 Mid-Face Up 2.5cm/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

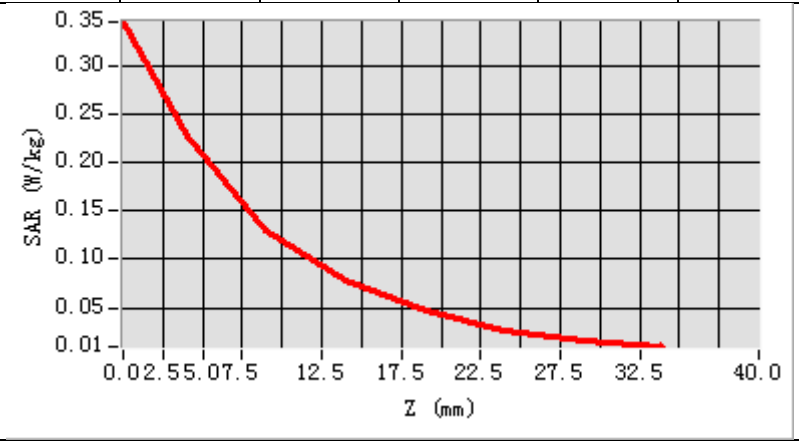
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Face Up 2.5cm
Band	LTE Band 2
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

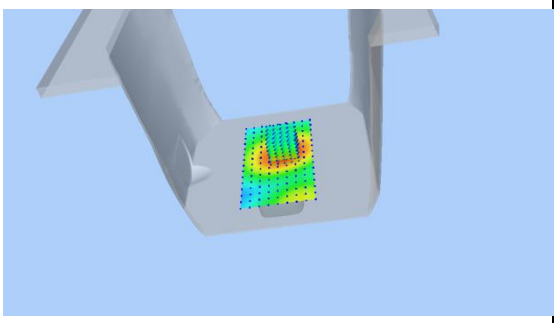
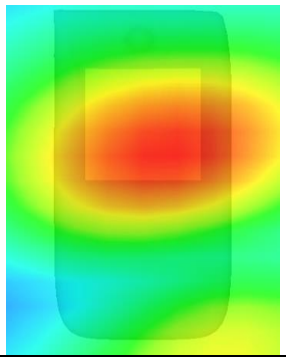
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=9.00
SAR Peak: 0.34 W/kg

SAR 10g (W/Kg)	0.129687
SAR 1g (W/Kg)	0.219734

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3461	0.2267	0.1310	0.0776	0.0460	0.0265	0.0160



3D screen shot	Hot spot position
	

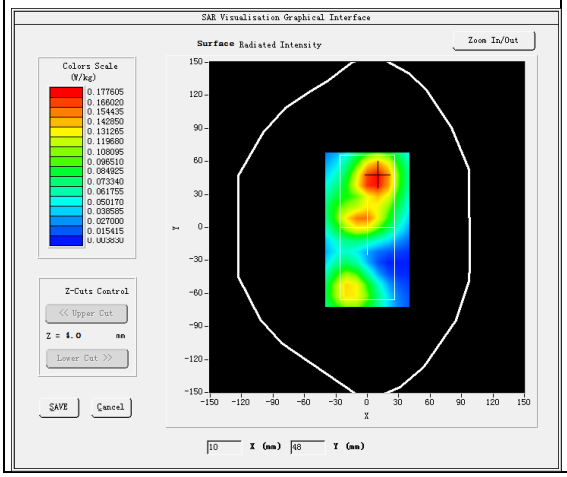
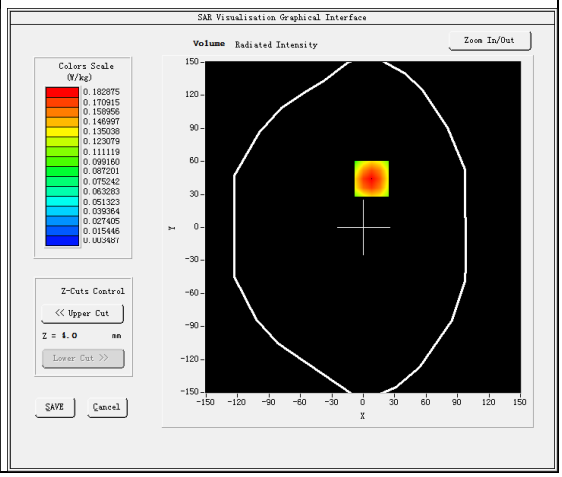
Test Laboratory: AGC Lab **Date: Mar. 17, 2024**
LTE Band 2 Mid-Body-Back with all accessories (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 2; Duty Cycle:1:1; Conv.F=2.15; Frequency:1880MHz; Medium parameters used: f = 1900 MHz; σ= 1.41 mho/m; εr =40.26; ρ= 1000 kg/m^3 ; Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.7

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 2 Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 2 Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

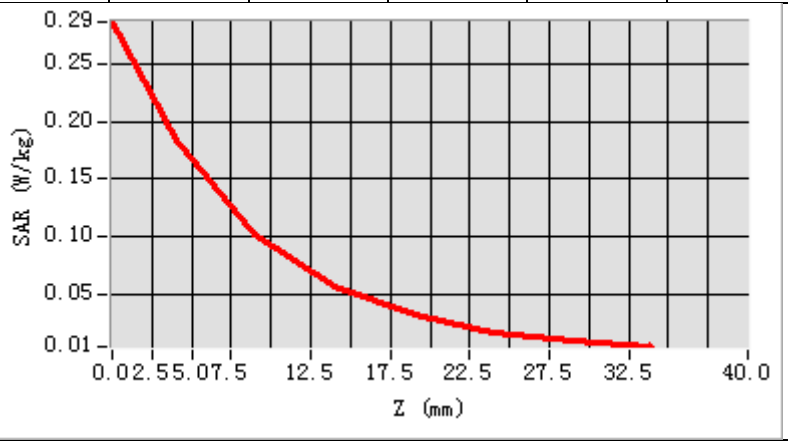
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	LTE Band 2
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

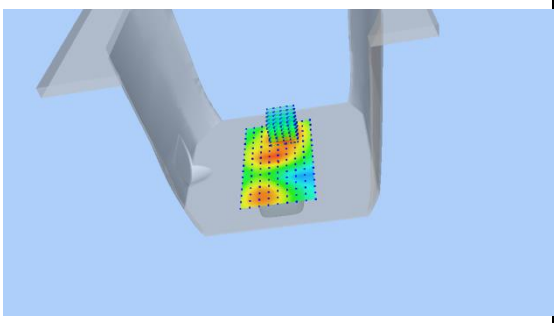
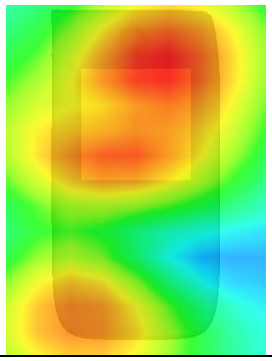
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=44.00
SAR Peak: 0.29 W/kg

SAR 10g (W/Kg)	0.098863
SAR 1g (W/Kg)	0.176497

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.2858	0.1829	0.1016	0.0577	0.0325	0.0182	0.0103



3D screen shot	Hot spot position
	

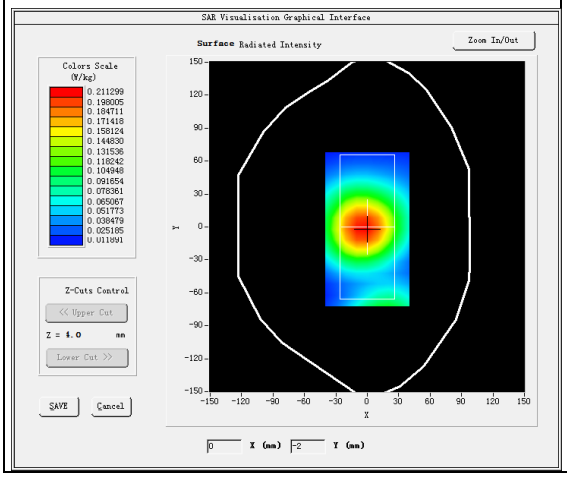
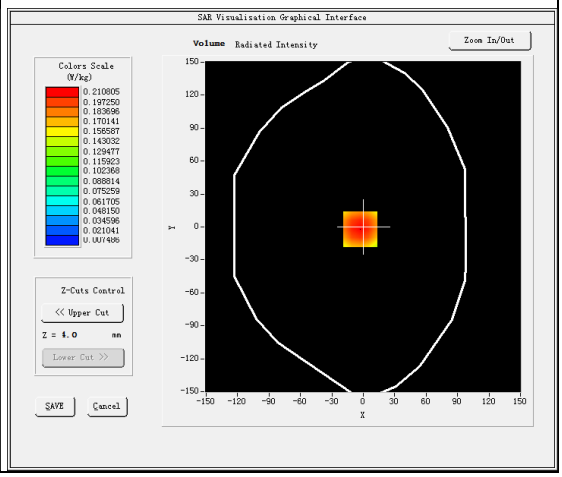
Test Laboratory: AGC Lab **Date: Mar. 16, 2024**
LTE Band 4 Mid-Face Up 2.5cm (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 4; Duty Cycle:1:1; Conv.F=2.17; Frequency:1732.5 MHz; Medium parameters used: f = 1750 MHz; σ= 1.37 mho/m; εr =41.63; ρ= 1000 kg/m^3 ; Phantom section: Flat Section
Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.1

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 4 Mid-Face Up 2.5cm/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 4 Mid-Face Up 2.5cm/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

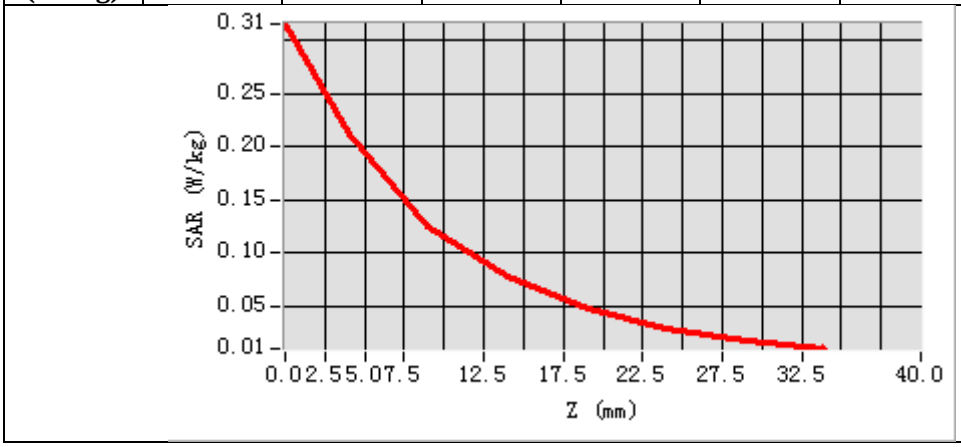
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Face Up 2.5cm
Band	LTE Band 4
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

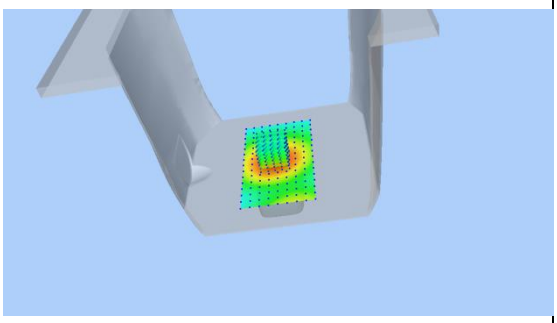
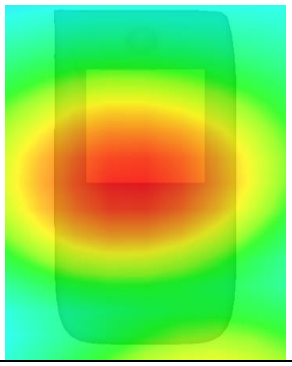
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-3.00, Y=-2.00
SAR Peak: 0.31 W/kg

SAR 10g (W/Kg)	0.123935
SAR 1g (W/Kg)	0.203905

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3148	0.2108	0.1260	0.0780	0.0475	0.0292	0.0180



3D screen shot	Hot spot position
	

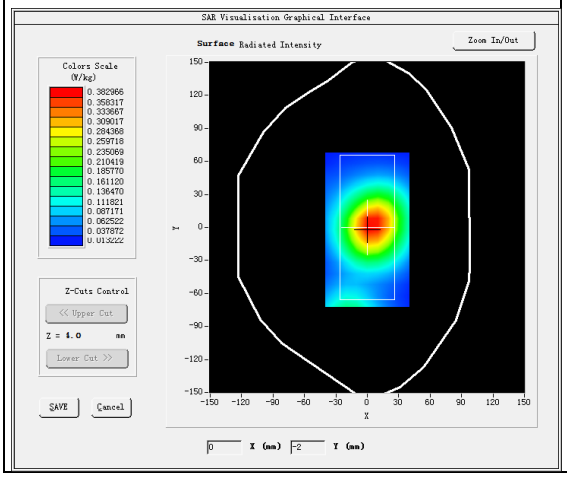
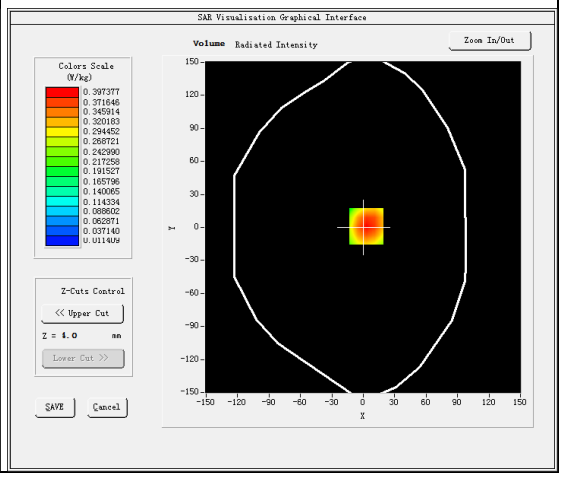
Test Laboratory: AGC Lab **Date: Mar. 16, 2024**
LTE Band 4 Mid-Body-Back with all accessories (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 4; Duty Cycle:1:1; Conv.F=2.17; Frequency:1732.5 MHz; Medium parameters used: f = 1750 MHz; σ= 1.37 mho/m; εr =41.63; ρ= 1000 kg/m^3 ; Phantom section: Flat Section
Ambient temperature (℃): 21.7, Liquid temperature (℃): 21.1

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 4 Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 4 Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

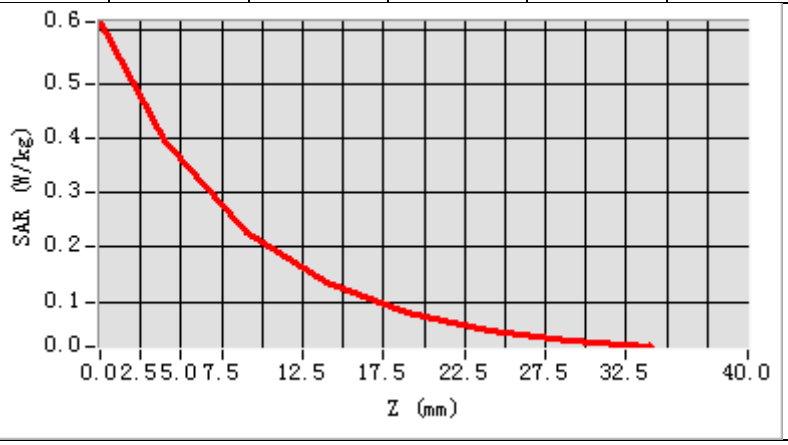
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	LTE Band 4
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

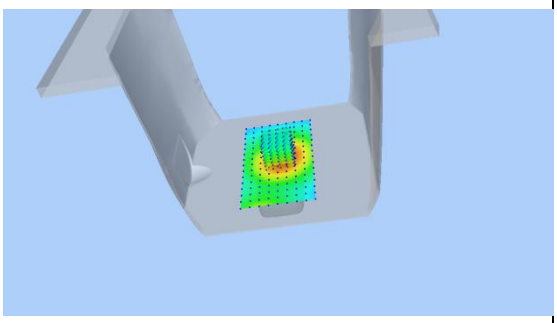
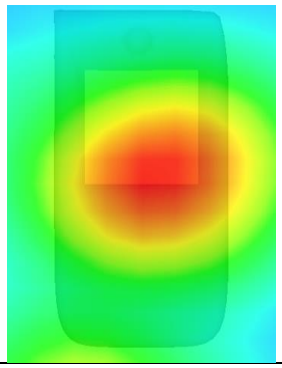
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=1.00
SAR Peak: 0.61 W/kg

SAR 10g (W/Kg)	0.221559
SAR 1g (W/Kg)	0.383484

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6156	0.3974	0.2268	0.1353	0.0809	0.0482	0.0284



3D screen shot	Hot spot position
	

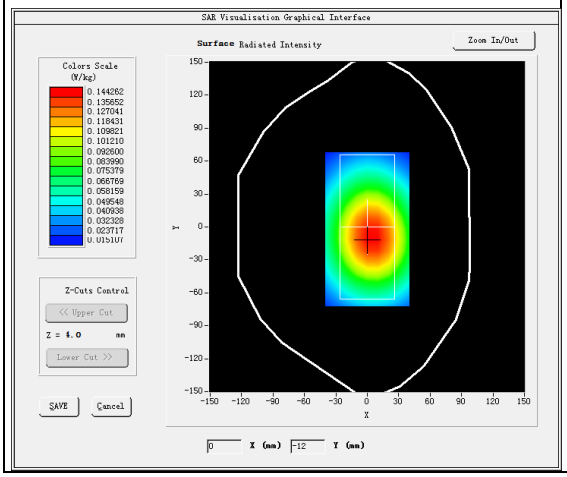
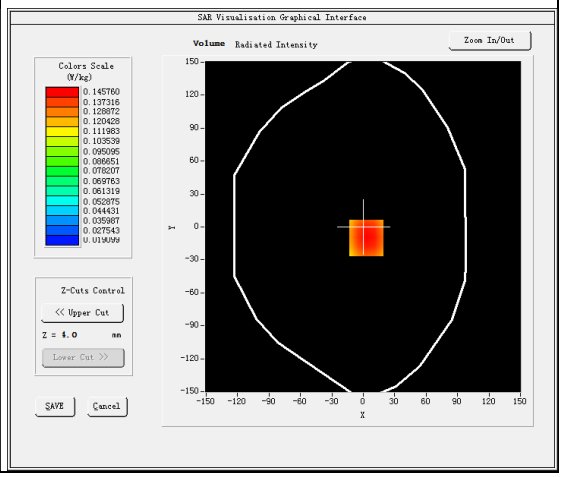
Test Laboratory: AGC Lab **Date: Mar. 13, 2024**
LTE Band 5 Mid-Face Up 2.5cm (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 5; Duty Cycle:1:1; Conv.F=2.02
Frequency:836.5 MHz; Medium parameters used: f = 835 MHz; σ=0.92mho/m; εr =40.13; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 5 Mid-Face Up 2.5cm/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 5 Mid-Face Up 2.5cm/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

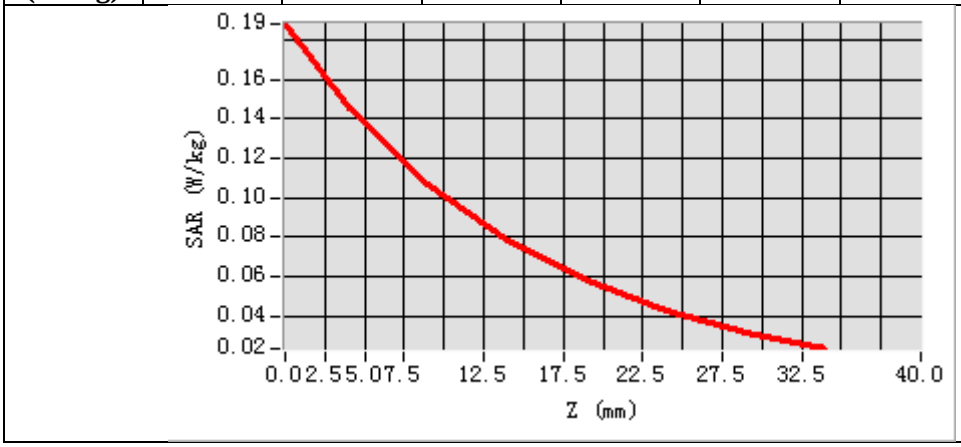
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Face Up 2.5cm
Band	LTE Band 5
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

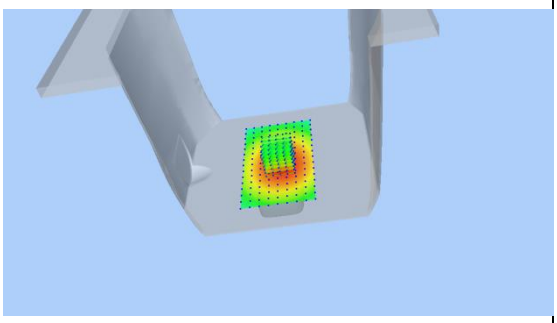
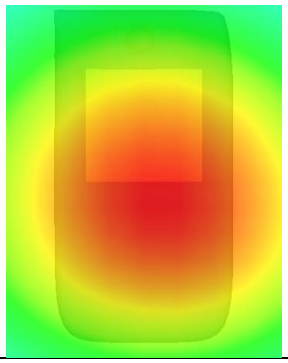
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=-10.00
SAR Peak: 0.19 W/kg

SAR 10g (W/Kg)	0.100373
SAR 1g (W/Kg)	0.141199

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.1880	0.1458	0.1064	0.0777	0.0574	0.0424	0.0313



3D screen shot	Hot spot position
	

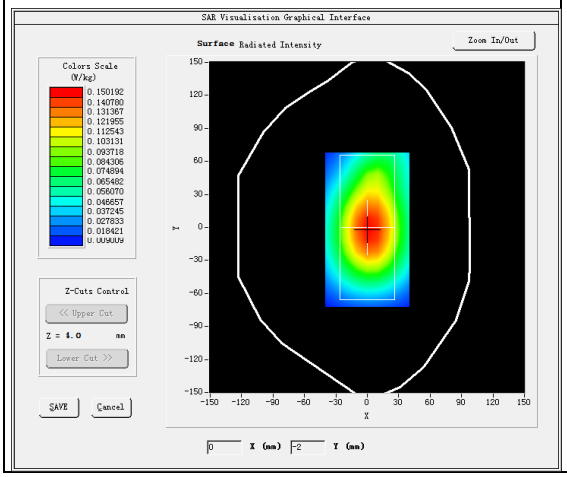
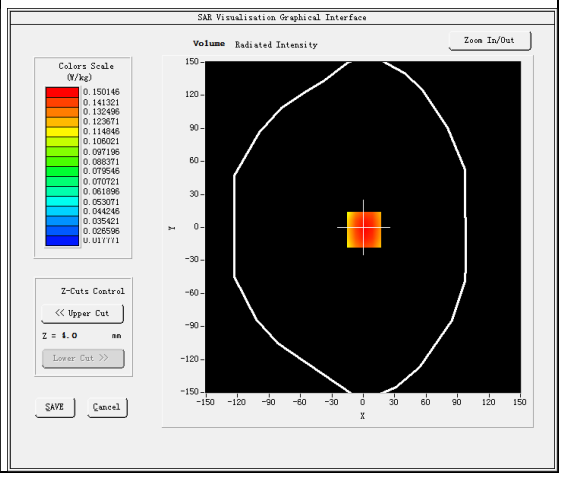
Test Laboratory: AGC Lab **Date: Mar. 13, 2024**
LTE Band 5 Mid-Body-Back with all accessories (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 5; Duty Cycle:1:1; Conv.F=2.02
Frequency:836.5 MHz; Medium parameters used: f = 835 MHz; σ=0.92mho/m; εr =40.13; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 5 Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 5 Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

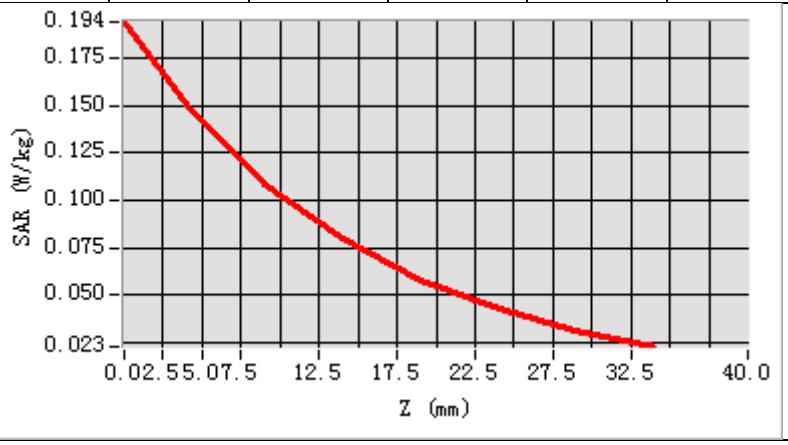
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	LTE Band 5
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

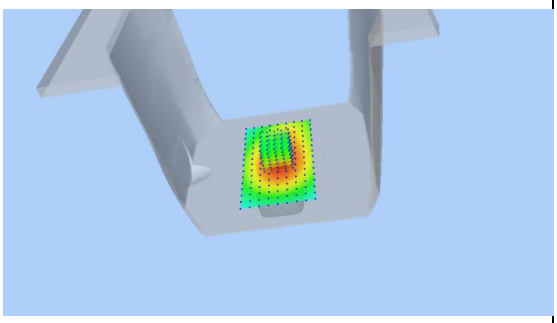
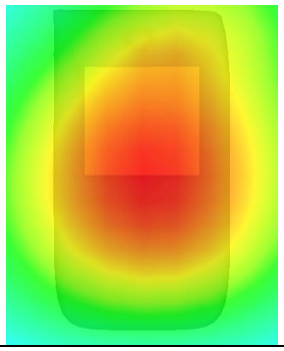
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-2.00
SAR Peak: 0.19 W/kg

SAR 10g (W/Kg)	0.102150
SAR 1g (W/Kg)	0.145144

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.1940	0.1501	0.1089	0.0798	0.0579	0.0424	0.0309



3D screen shot	Hot spot position
	

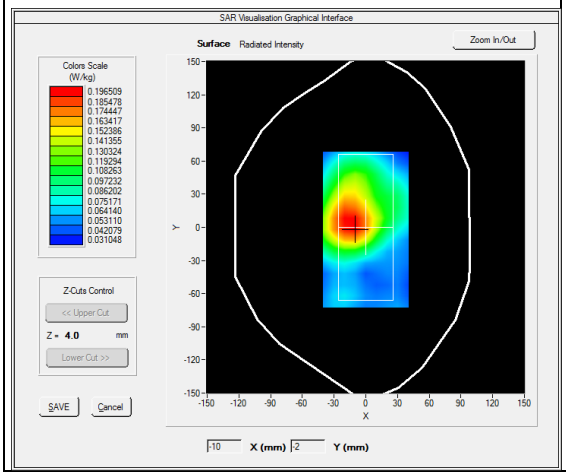
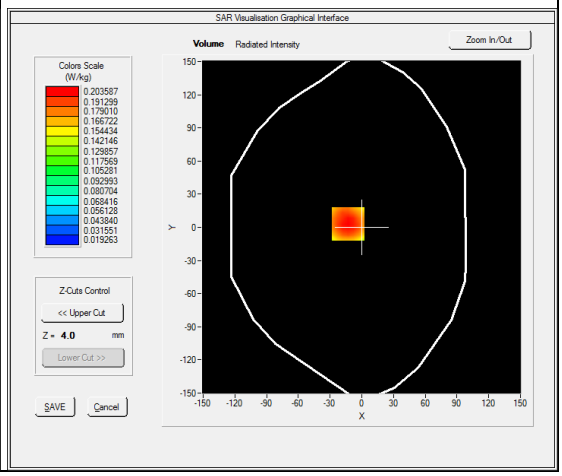
Test Laboratory: AGC Lab **Date: Mar. 09, 2024**
LTE Band 7 Mid-Face Up 2.5cm (1RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 7; Duty Cycle:1:1; Conv.F=2.13
Frequency: 2535MHz; Medium parameters used: f =2600 MHz; σ=1.93 mho/m; ε_r =40.13; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.9

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE BAND 7 Mid-Face Up 2.5cm /Area Scan: Measurement grid: dx=10mm, y=10mm
Configuration/ LTE BAND 7 Mid-Face Up 2.5cm /Zoom Scan: Measurement grid: dx=5mm, dy=5mm, dz=5mm

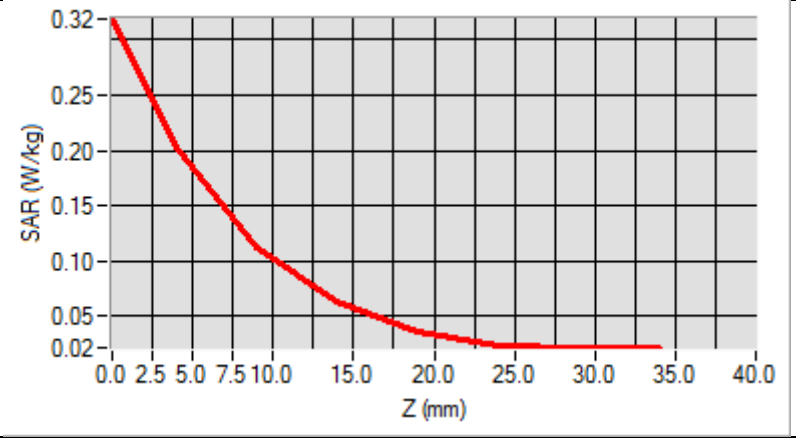
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Face Up 2.5cm
Band	LTE BAND 7
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

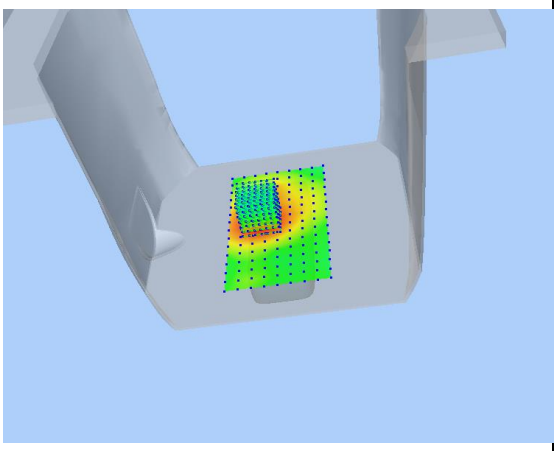
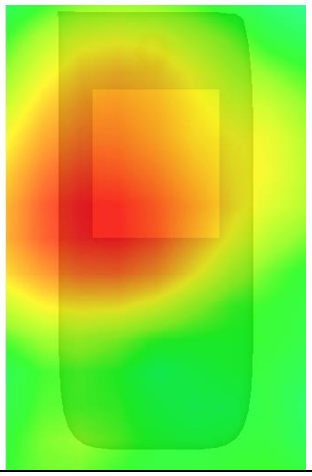
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-13.00, Y=3.00
SAR Peak: 0.32 W/kg

SAR 10g (W/Kg)	0.113325
SAR 1g (W/Kg)	0.195297

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3185	0.2036	0.1116	0.0633	0.0368	0.0239	0.0218



3D screen shot	Hot spot position
	

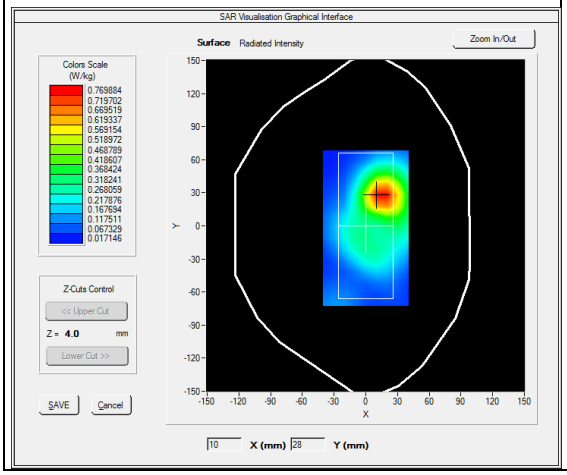
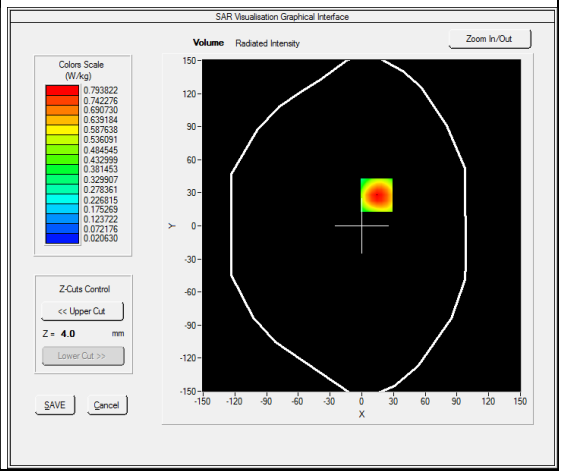
Test Laboratory: AGC Lab **Date: Mar. 09, 2024**
LTE Band 7 Mid-Body-Back with all accessories (1RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 7; Duty Cycle:1:1; Conv.F=2.13
Frequency: 2535MHz; Medium parameters used: f =2600 MHz; σ=1.93 mho/m; ε_r =40.13; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.9

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE BAND 7 Mid-Body-Back with all accessories /Area Scan: Measurement grid: dx=10mm, y=10mm
Configuration/ LTE BAND 7 Mid-Body-Back with all accessories /Zoom Scan: Measurement grid: dx=5mm, dy=5mm, dz=5mm

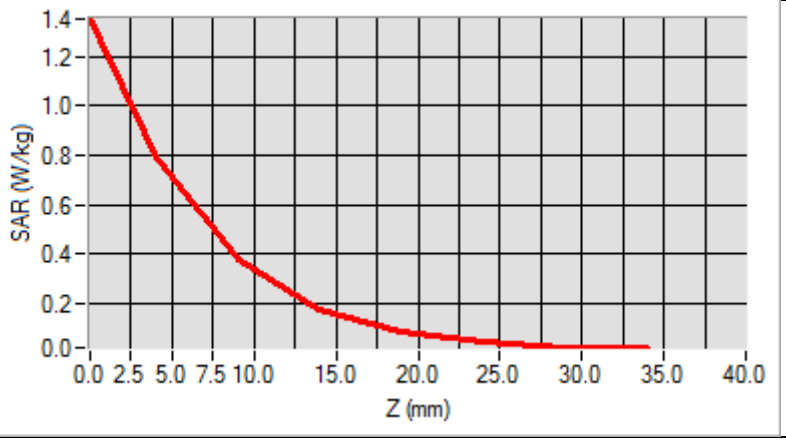
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	LTE BAND 7
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

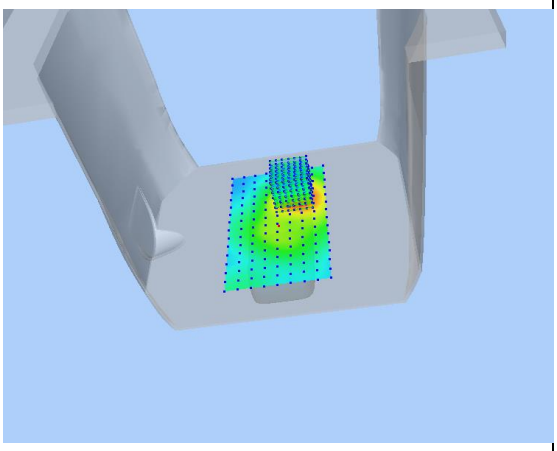
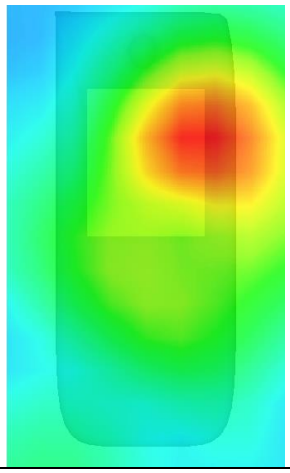
SURFACE SAR	VOLUME SAR
	

Maximum location: X=14.00, Y=28.00
SAR Peak: 1.34 W/kg

SAR 10g (W/Kg)	0.383488
SAR 1g (W/Kg)	0.757984

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.3505	0.7938	0.3814	0.1754	0.0832	0.0413	0.0241



3D screen shot	Hot spot position
	

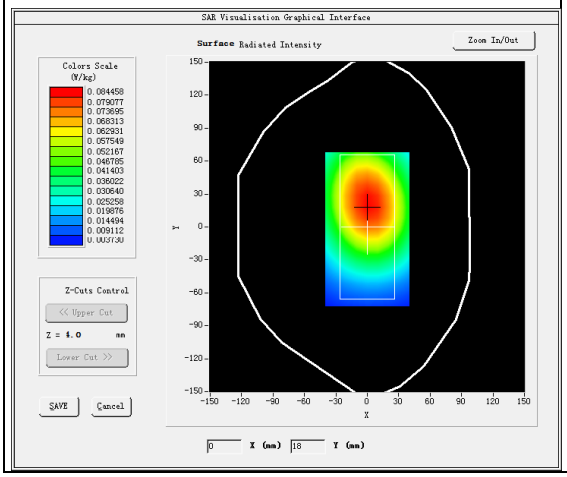
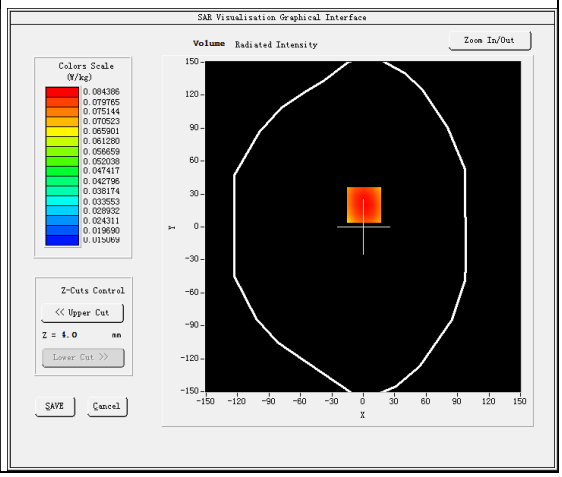
Test Laboratory: AGC Lab **Date: Mar. 14, 2024**
LTE Band 12 Mid-Face Up 2.5cm (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 12; Duty Cycle:1:1; Conv.F=1.95;
Frequency: 707.5 MHz; Medium parameters used: f = 750 MHz; σ=0.88 mho/m; εr =43.67; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃): 20.6, Liquid temperature (℃): 20.2

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 12 Mid-Face Up 2.5cm/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 12 Mid-Face Up 2.5cm/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

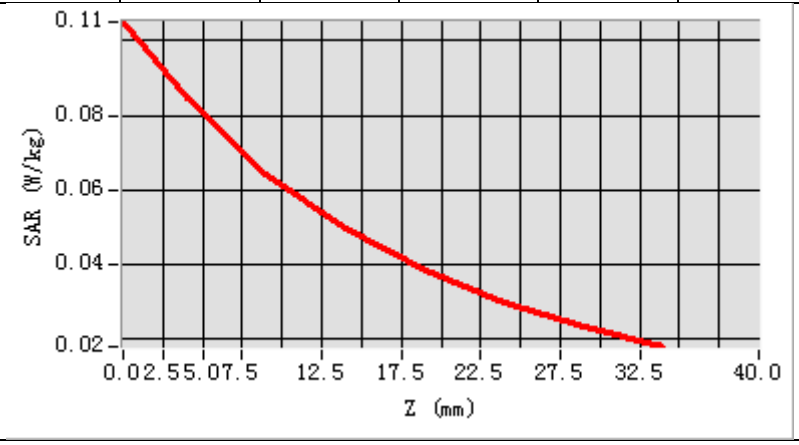
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Face Up 2.5cm
Band	LTE Band 12
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

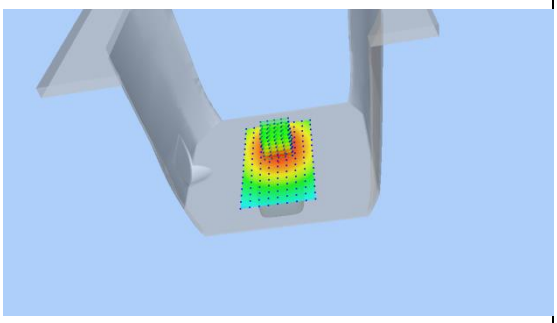
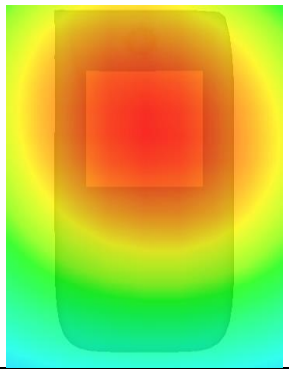
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=20.00
SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.061835
SAR 1g (W/Kg)	0.083548

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.1050	0.0844	0.0645	0.0498	0.0387	0.0298	0.0234



3D screen shot	Hot spot position
	

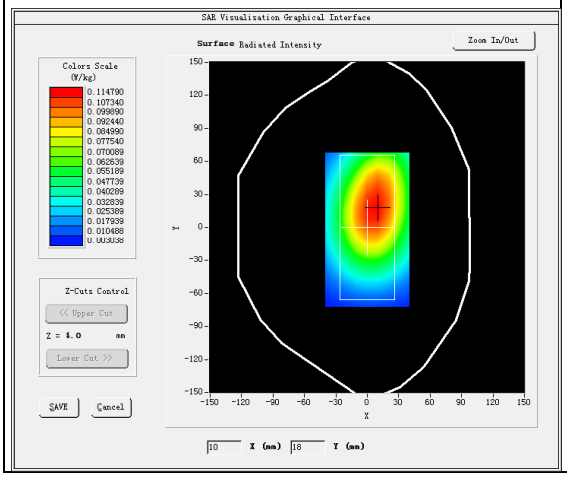
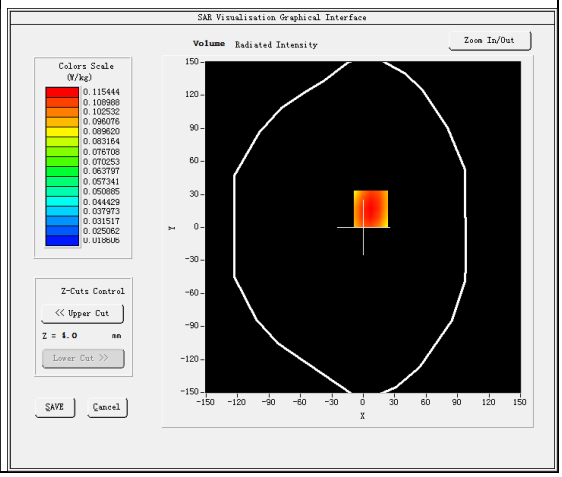
Test Laboratory: AGC Lab **Date: Mar. 14, 2024**
LTE Band 12 Mid-Body-Back with all accessories (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 12; Duty Cycle:1:1; Conv.F=1.95;
Frequency: 707.5 MHz; Medium parameters used: f = 750 MHz; σ=0.88 mho/m; εr =43.67; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃): 20.6, Liquid temperature (℃): 20.2

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 12 Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 12 Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

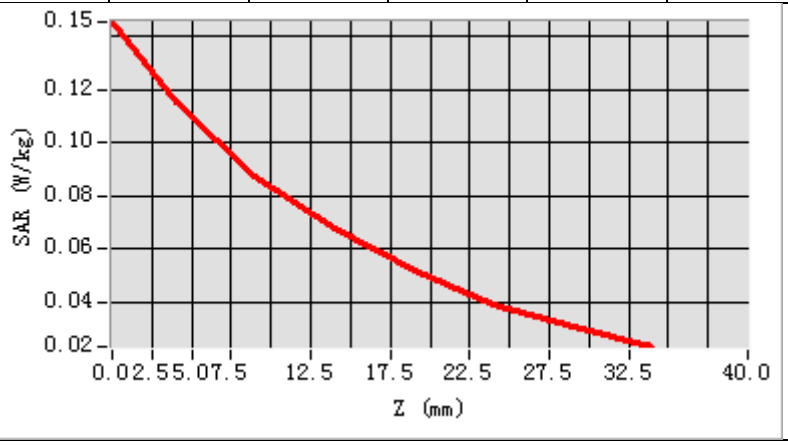
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	LTE Band 12
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

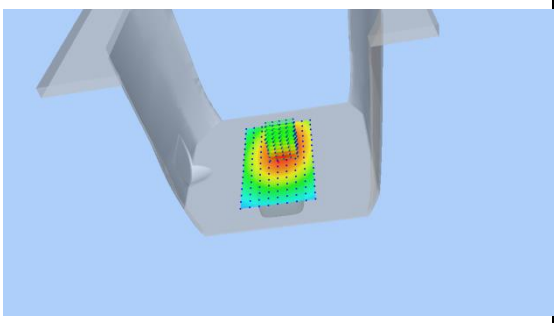
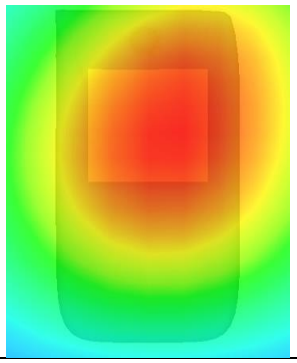
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=17.00
SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.083744
SAR 1g (W/Kg)	0.114553

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.1453	0.1154	0.0874	0.0678	0.0522	0.0396	0.0307



3D screen shot	Hot spot position
	

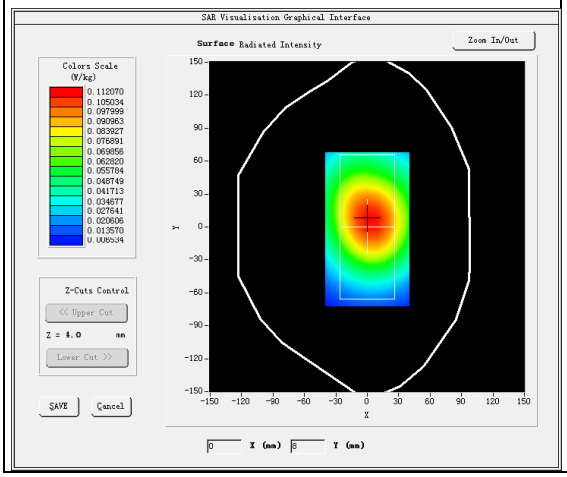
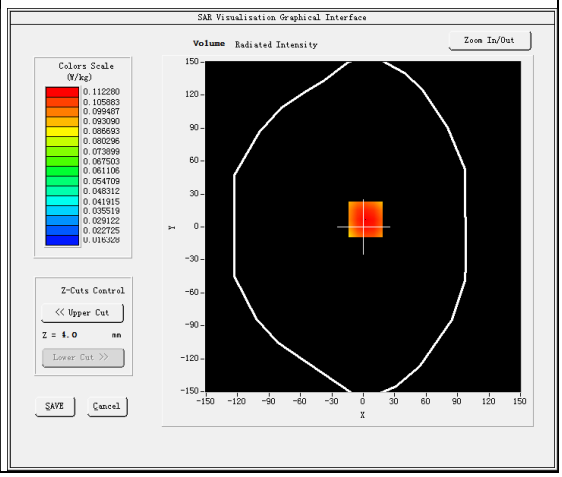
Test Laboratory: AGC Lab **Date: Mar. 14, 2024**
LTE Band 13 Mid-Face Up 2.5cm (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 13; Duty Cycle:1:1; Conv.F=1.95;
Frequency: 782 MHz; Medium parameters used: f = 750 MHz; σ=0.93 mho/m; εr =42.63; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃): 20.6, Liquid temperature (℃): 20.2

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 13 Mid-Face Up 2.5cm/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 13 Mid-Face Up 2.5cm/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Face Up 2.5cm
Band	LTE Band 13
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

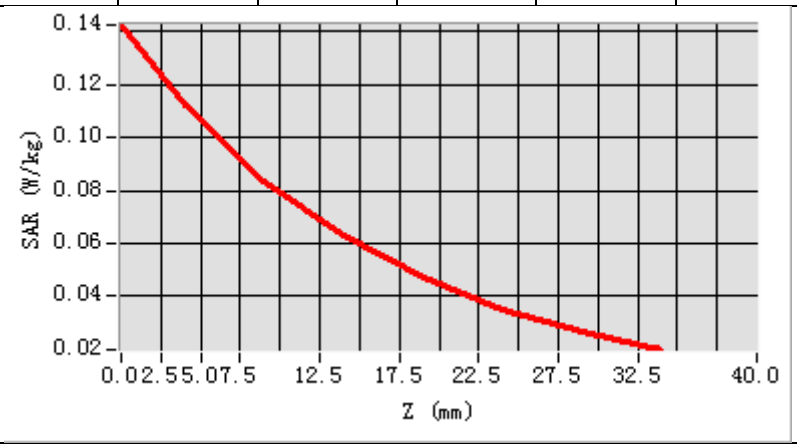
SURFACE SAR	VOLUME SAR
	

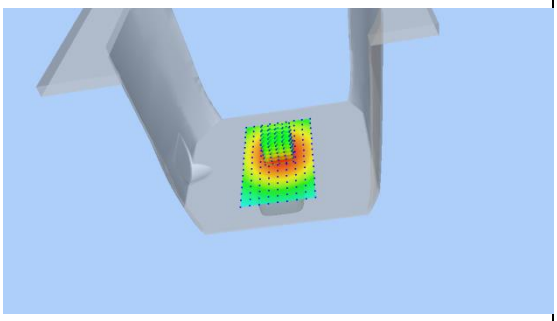
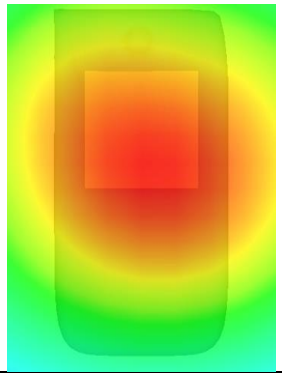
Maximum location: X=2.00, Y=7.00
SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.078799
SAR 1g (W/Kg)	0.108956

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**

SAR (W/Kg)	0.1425	0.1123	0.0835	0.0626	0.0471	0.0350	0.0264



3D screen shot	Hot spot position
	

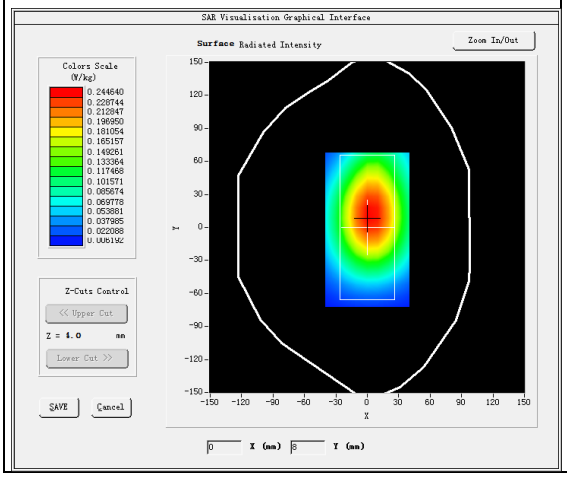
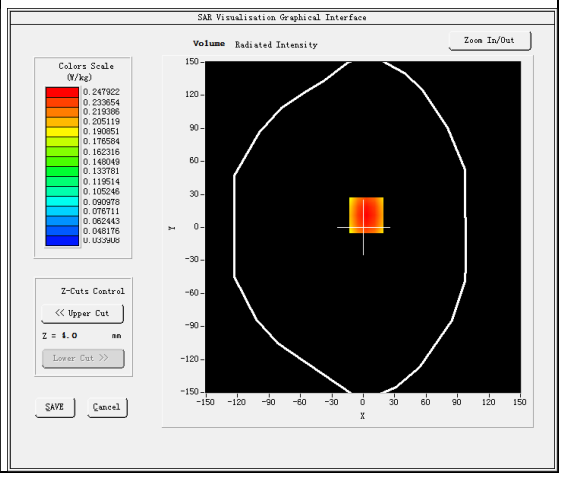
Test Laboratory: AGC Lab **Date: Mar. 14, 2024**
LTE Band 13 Mid-Body-Back with all accessories (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 13; Duty Cycle:1:1; Conv.F=1.95;
Frequency: 782 MHz; Medium parameters used: f = 750 MHz; σ=0.93 mho/m; εr =42.63; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 20.6, Liquid temperature (℃): 20.2

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 13 Mid-Body-Back with all accessories/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 13 Mid-Body-Back with all accessories/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

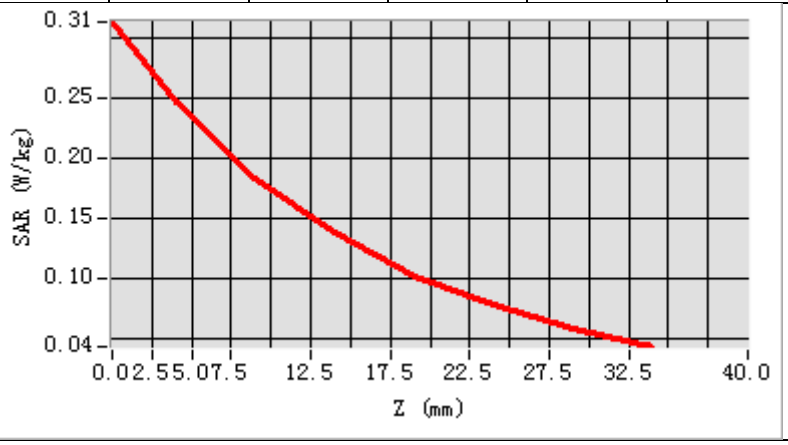
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body-Back with all accessories
Band	LTE Band 13
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

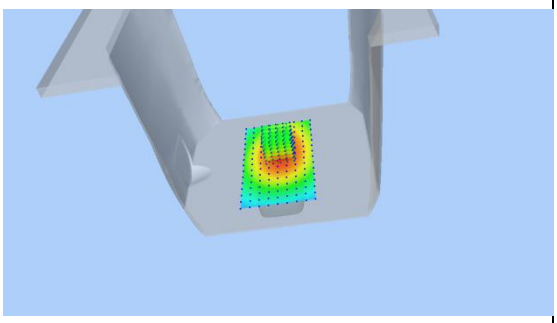
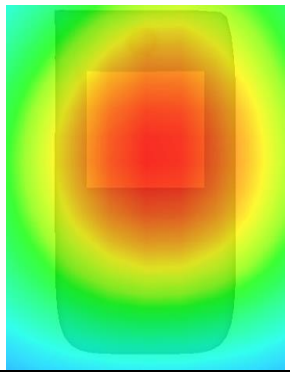
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=11.00
SAR Peak: 0.31 W/kg

SAR 10g (W/Kg)	0.172176
SAR 1g (W/Kg)	0.239550

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3140	0.2479	0.1842	0.1380	0.1028	0.0779	0.0584



3D screen shot	Hot spot position
	

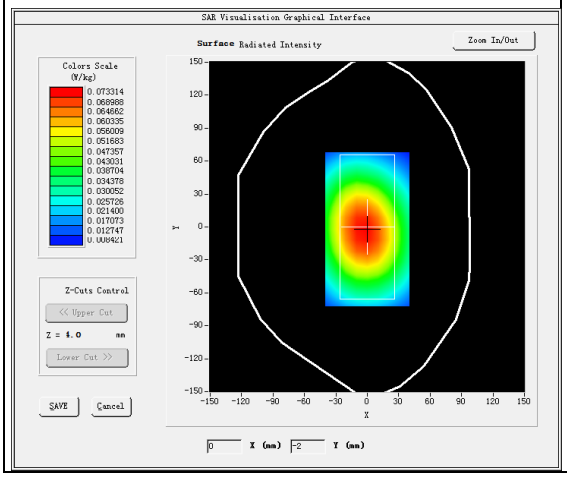
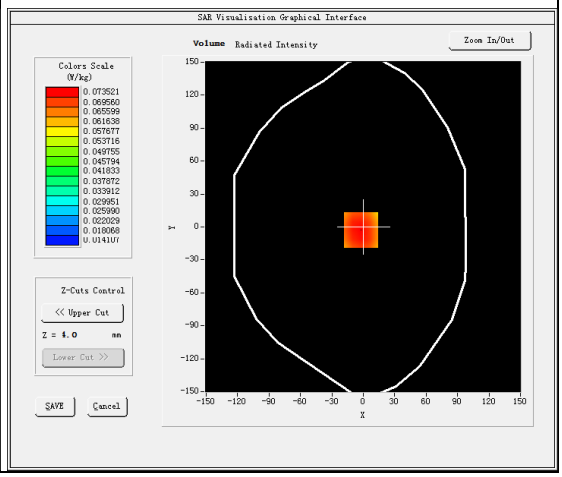
Test Laboratory: AGC Lab **Date: Mar. 14, 2024**
LTE Band 17 Mid-Face Up 2.5cm (1 RB#0)
DUT: 4G LTE IP Radio; Type: IP-66

Communication System: LTE; Communication System Band: LTE Band 17; Duty Cycle:1:1; Conv.F=1.95;
Frequency: 710 MHz; Medium parameters used: f = 750 MHz; σ=0.90 mho/m; εr =43.26; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 20.6, Liquid temperature (℃): 20.2

SATIMO Configuration:
- Probe: SSE2; Calibrated: May 31, 2023; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/ LTE Band 17 Mid-Face Up 2.5cm/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 17 Mid-Face Up 2.5cm/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Face Up 2.5cm
Band	LTE Band 17
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

SURFACE SAR	VOLUME SAR
	

Maximum location: X=-2.00, Y=-3.00
SAR Peak: 0.09 W/kg

SAR 10g (W/Kg)	0.054617
SAR 1g (W/Kg)	0.072961