SAR Test Report

Report No.: AGC14246250702FH01

FCC ID	:	2BO97ENVNOTE20
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Smartphone
BRAND NAME	:	ENV
MODEL NAME	:	ENV NOTE 20
APPLICANT	:	NOVISOLUTIONS CIA LTDA
DATE OF ISSUE	:	Aug. 14, 2025
STANDARD(S)	:	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2019
REPORT VERSION	:	V1.0

*A*ttestation of Global Compliance(Shenzhen) Co., Ltd.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Aug. 14, 2025	Valid	Initial Release

Test Report

Applicant Name	NOVISOLUTIONS CIA LTDA
Applicant Address	Ponceano N73 y Mariano Paredes ,QUITO, ECUADOR
Manufacturer Name	Shenzhen Ebot digital electronics co. LTD
Manufacturer Address	701, Building A, Huizhi R&D Center, Longteng Community, Xixiang Street, Bao'an District, Shenzhen
Factory Name	Shenzhen Ebot digital electronics co. LTD
Factory Address	701, Building A, Huizhi R&D Center, Longteng Community, Xixiang Street, Bao'an District, Shenzhen
Product Designation	Smartphone
Brand Name	ENV
Model Name	ENV NOTE 20
Series Model	N/A
Different Description	N/A
EUT Voltage	DC 3.84V by battery
Applicable Standard	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2019
Date of receipt of test item	Jul. 24, 2025
Test Date	Aug. 02, 2025 to Aug. 08, 2025
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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TABLE OF CONTENTS

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)
	Head	Body-worn(with 5mm separation)	Hotspot(with 5mm separation)	
GSM 850	0.270	0.516	0.516	1.6
PCS 1900	0.021	0.676	0.676	
UMTS Band II	0.052	1.170	1.170	
UMTS Band V	0.296	0.299	0.299	
LTE Band 2	0.065	1.012	1.012	
LTE Band 4	0.016	0.619	0.619	
WIFI 2.4G	0.550	0.207	0.207	
5.2GHz (U-NII-1)	0.638	0.577	0.577	
5.3GHz (U-NII-2A)	0.587	0.539	0.539	
5.8GHz (U-NII-3)	0.609	0.185	0.185	
Simultaneous Reported SAR	1.476			
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 941225 D06 Hotspot Mode v02r01
- 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	Smartphone
Test Model	ENV NOTE 20
Hardware Version	H691_MB_v1
Software Version	N/A
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	Internal
GSM and 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 GSM/GPRS; GMSK & 8-PSK for EGPRS
Antenna Gain	GSM850: -4.4dBi; PCS1900: -0.7dBi
Max. Average Power	GSM850: 33.33dBm; PCS1900: 28.27dBm
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
RX Frequency Range	FDD Band II: 1930-1990MHz; FDD Band V: 869-894MHz
Release Version	Release 6 and later
Type of modulation	HSDPA:QPSK/16QAM; HSUPA:BPSK; WCDMA:QPSK
Antenna Gain	Band II: -0.7dBi; Band V: -4.4dBi
Max. Average Power	Band II: 24.71dBm; Band V: 24.10dBm
Bluetooth	
Bluetooth Version	V5.2
Operation Frequency	2402~2480MHz
Type of modulation	☒ GFSK ☒ Π/4-DQPSK ☒ 8-DPSK
Peak Power	1.99dBm
Antenna Gain	0.8dBi
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: 15.78dBm,11g:15.15dBm,11n(20):14.81dBm,11n(40):15.18dBm
Antenna Gain	0.8dBi

EUT Description(Continue)

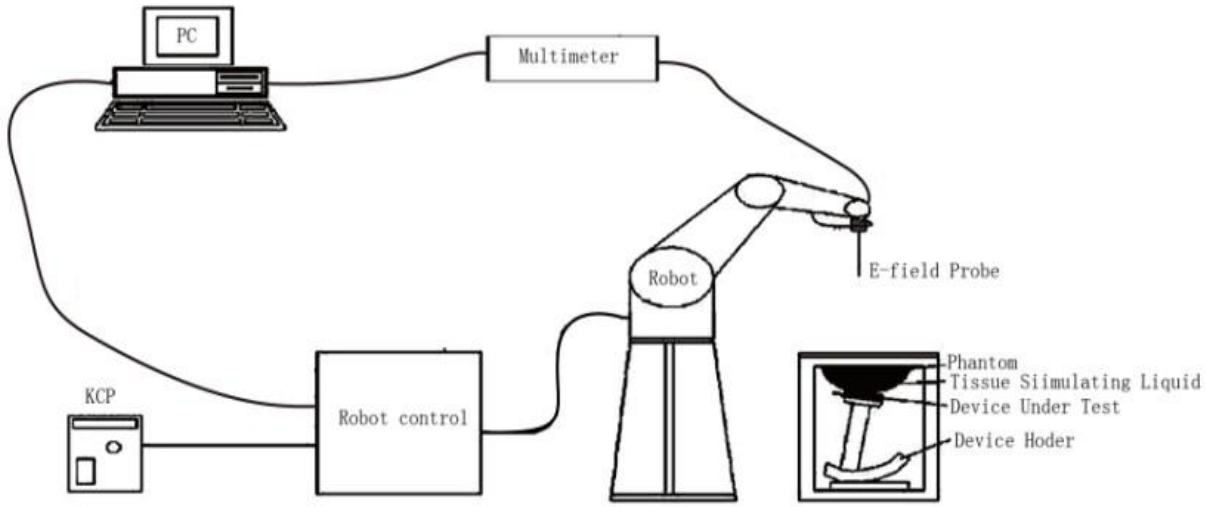
LTE	
Support Band	☒FDD Band 2 ☒FDD Band 4 (U.S. Bands) ☒FDD Band 28 (Non-U.S. Bands)
TX Frequency Range	Band 2:1850-1910MHz; Band 4:1710-1755MHz;
RX Frequency Range	Band 2:1930-1990MHz; Band 4:2110-2155MHz;
Type of modulation	QPSK, 16QAM
Antenna Gain	Band 2: -0.7dBi; Band 4: -0.8dBi;
Max. Average Power	Band 2: 23.49dBm; Band 4: 22.92dBm;
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: 10.51dBm; U-NII-2A: 12.87dBm; U-NII-3:14.51dBm
Antenna Gain	U-NII-1: -1.3dBi; U-NII-2A: -0.82dBi; U-NII-3:-2.1dBi
Accessories	
Battery	Brand name: N/A Model No. : BA511H Voltage and Capacitance: 3.84 V & 5070mAh
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.

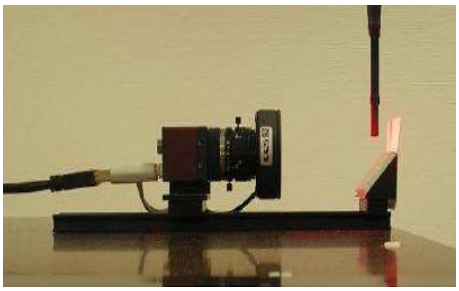
Isotropic E-Field Probe Specification

Model	SSE2	
Manufacture	MVG	
Identification No.	2023-EPGO-414	
Frequency	0.15GHz-7.5GHz Linearity:±0.10dB(0.15GHz-7.5GHz)	
Dynamic Range	0.01W/kg-100W/kg Linearity:±0.10dB	
Dimensions	Overall length:330mm Length of individual dipoles:2mm Maximum external diameter:8mm Probe Tip external diameter:2.5mm Distance between dipoles/ probe extremity:1mm	
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%.	

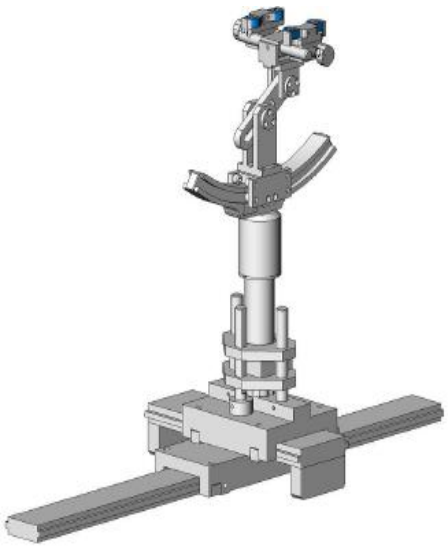
3.3. Robot

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.

ELLI39 Phantom

The Flat phantom is a fiberglass shellphantom with 2mm+/- 0.2 mm shell thickness. It has only one measurement area for Flat phantom	

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:

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

$$SAR = c_h \left.\frac{dT}{dt}\right|_{t=0}$$

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

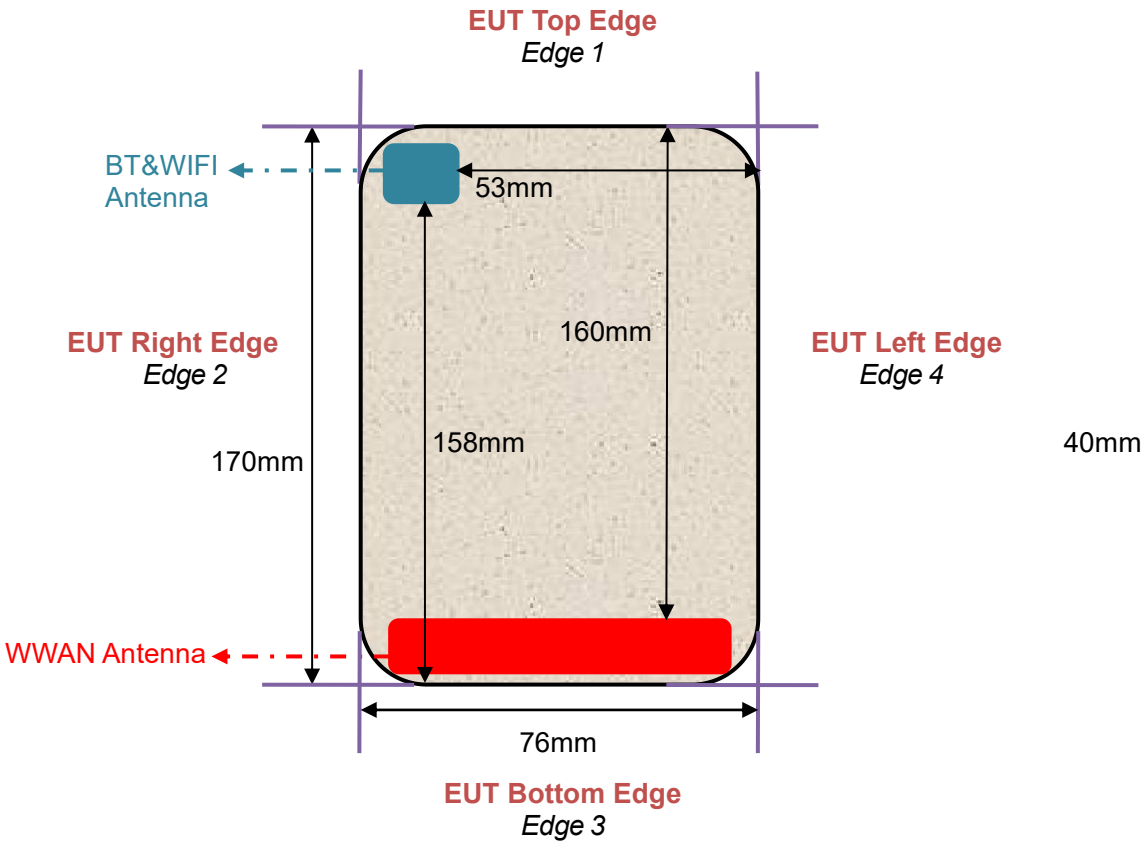
Test Configuration and setting:

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



For WWAN mode:

Test Configurations	Antenna to edges/surface	SAR required	Note
Head			
Left Touch		Yes	--
Left Tilt		Yes	--
Right Touch		Yes	--
Right Tilt		Yes	--
Body			
Back	<25mm	Yes	--
Front	<25mm	Yes	--
Hotspot			
Back	<25mm	Yes	--
Front	<25mm	Yes	--
Edge 1 (Top)	160mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR
Edge 2 (Right)	2mm	Yes	--
Edge 3 (Bottom)	2mm	Yes	--
Edge 4 (Left)	3mm	Yes	--

For WLAN mode:

Test Configurations	Antenna to edges/surface	SAR required	Note
Head			
Left Touch		Yes	--
Left Tilt		Yes	--
Right Touch		Yes	--
Right Tilt		Yes	--
Body			
Back	<25mm	Yes	--
Front	<25mm	Yes	--
Hotspot			
Back	<25mm	Yes	--
Front	<25mm	Yes	--
Edge 1 (Top)	2mm	Yes	--
Edge 2 (Right)	2mm	Yes	--
Edge 3 (Bottom)	158mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR
Edge 4 (Left)	53mm	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225 D06 Hotspot SAR

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**
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
2450 Head	71.88	0.16	0.0	7.99	0.0	19.97	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 835MHz							
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Ambient Temp [℃]	Relative Humidity (%)	Tissue Temp [°C]	Test time
		εr 41.5 (39.425-43.575)	δ[s/m] 0.90 (0.855-0.945)				
	835	41.31	0.91	21.3	56.8	20.8	Aug. 02, 2025
	836.4	40.97	0.92				
	836.6	40.97	0.92				

Tissue Stimulant Measurement for 1750MHz							
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Ambient Temp [℃]	Relative Humidity (%)	Tissue Temp [°C]	Test time
		εr 40.1 (38.095-42.105)	δ[s/m]1.37 (1.302-1.439)				
	1732.5	40.01	1.32	20.9	60.2	20.7	Aug. 04, 2025
	1750	39.71	1.34				

Tissue Stimulant Measurement for 1900MHz							
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Ambient Temp [℃]	Relative Humidity (%)	Tissue Temp [°C]	Test time
		εr40.00 (38.00-42.00)	δ[s/m]1.40 (1.33-1.47)				
	1852.4	40.69	1.36	21.4	58.9	20.9	Aug. 03, 2025
	1860	40.13	1.38				
	1880	39.96	1.40				
	1900	39.48	1.42				
	1907.6	38.79	1.44				

Tissue Stimulant Measurement for 2450MHz							
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Ambient Temp [℃]	Relative Humidity (%)	Tissue Temp [°C]	Test time
		εr39.2 (37.24-41.16)	δ[s/m]1.80 (1.71-1.89)				
	2437	40.66	1.81	21.2	53.4	20.9	Aug. 05, 2025
	2450	40.13	1.83				

Tissue Stimulant Measurement for 5200MHz							
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Ambient Temp [℃]	Relative Humidity (%)	Tissue Temp [°C]	Test time
		εr 36.0 (34.105-37.695)	δ[s/m]4.66 (4.427-4.893)				
	5200	35.92	4.58	21.4	56.5	21.1	Aug. 06, 2025

Tissue Stimulant Measurement for 5300MHz							
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Ambient Temp [℃]	Relative Humidity (%)	Tissue Temp [°C]	Test time
		εr35.9 (34.105-37.695)	δ[s/m]4.76 (4.522-4.998)				
	5300	36.52	4.61	21.2	59.3	20.8	Aug. 07, 2025

Tissue Stimulant Measurement for 5800MHz							
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Ambient Temp [℃]	Relative Humidity (%)	Tissue Temp [°C]	Test time
		εr 35.3 (33.535-37.065)	δ[s/m] 5.27 (5.0065-5.5335)				
	5785	36.72	5.17	21.6	52.1	21.3	Aug. 08, 2025
	5800	36.37	5.19				

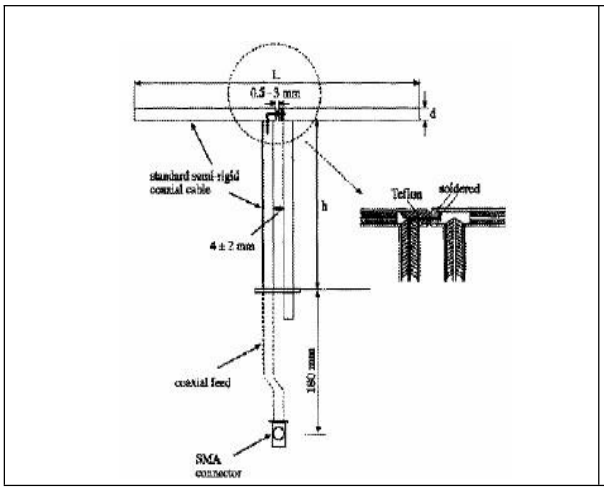
6. SAR SYSTEM CHECK PROCEDURE

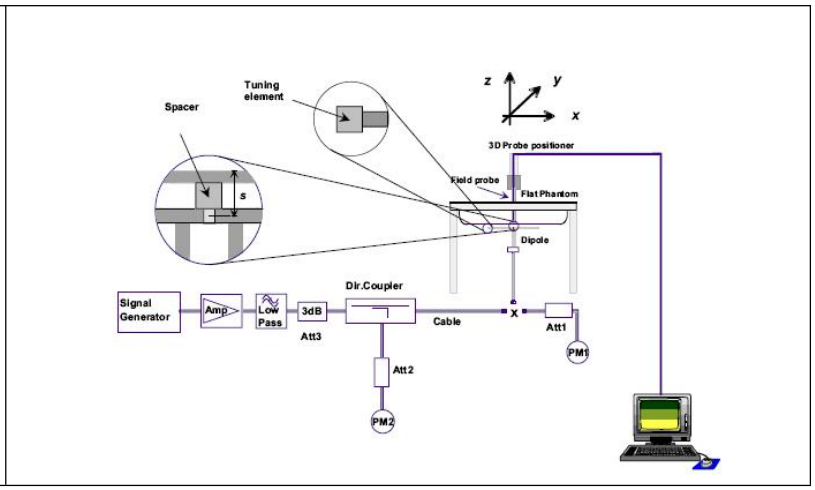
6.1. SAR System Check Procedures

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.

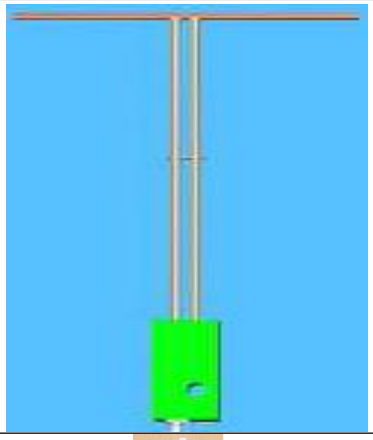
The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system check setup is shown as below.





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)
835MHz	161.0	89.8	3.6
1800MHz	71.6	41.7	3.6
1900MHz	68	39.5	3.6
2450MHz	51.5	30.4	3.6
5000MHz	20.6	40.3	3.6

6.2.2. System Check Result

System Performance Check at 835MHz &1800MHz &1900MHz &2450MHz& 5200-5800MHz for Head							
Validation Kit: SN 1516 DIP 0G835-399& SN 4611 DIP 1G800-186& SN 2915 DIP 1G900-389& SN 2915 DIP 2G450-393& SN 1722 DIP 5G000-671							
Frequency [MHz]	Target Value(W/kg)		Reference Result (± 10%)		Tested Value(W/kg)		Test time
	1g	10g	1g	10g	1g	10g	
835	9.67	6.29	8.70-10.64	5.66-6.92	9.43	5.99	Aug. 02, 2025
1800	36.11	19.04	32.50-39.72	17.14-20.94	38.26	20.47	Aug. 04, 2025
1900	39.83	20.59	35.85-43.81	18.53-22.65	42.34	20.18	Aug. 03, 2025
2450	53.5	25.0	48.15-58.85	22.50-27.50	52.95	23.84	Aug. 05, 2025
5200	77.74	22.60	69.97-85.51	20.34-24.86	73.82	21.49	Aug. 06, 2025
5200	77.74	22.60	69.97-85.51	20.34-24.86	82.62	23.50	Aug. 07, 2025
5800	75.01	21.84	67.51-82.51	19.66-24.02	80.17	22.83	Aug. 08, 2025

Note:
(1) We use a CW signal of 18dBm/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

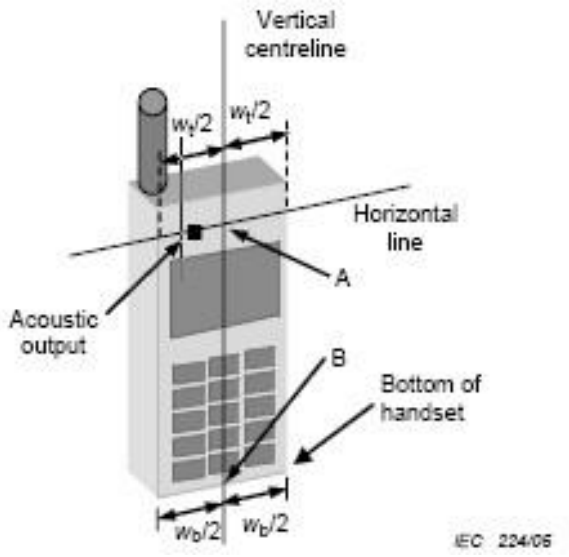
This EUT was tested in **Right Cheek, Right Tilted, Left Cheek, Left Tilted, Body back, Body front and 4 edges.**

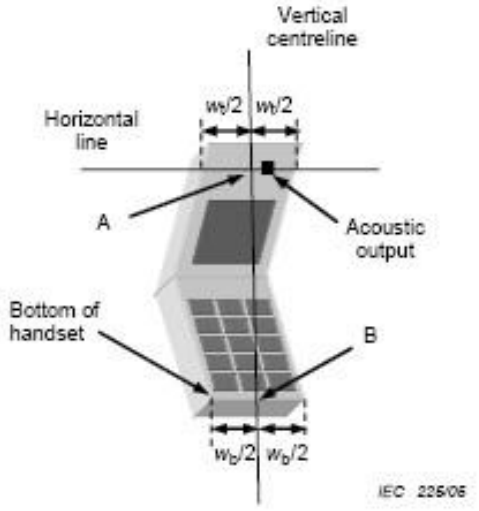
7.1. Define Two Imaginary Lines on the Handset

(1)The vertical centerline passes through two points on the front side of the handset the midpoint of the width wt of the handset at the level of the acoustic output, and the midpoint of the width wb of the handset.

(2)The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.

(3)The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.





7.2. Cheek Position

(1) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center picec in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.

(2) To move the device towards the phantom with the ear piece aligned with the the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost

7.3. Tilt Position

(1) To position the device in the “cheek” position described above.

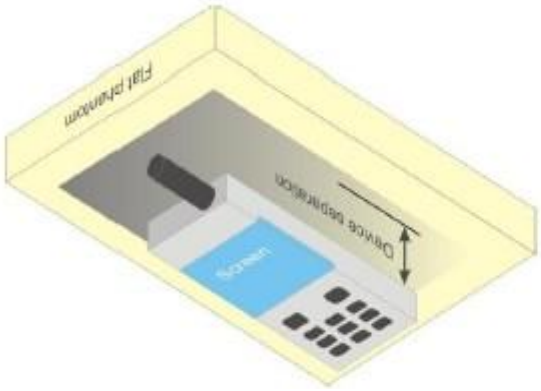
(2) While maintaining the device in the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until with the ear is lost.

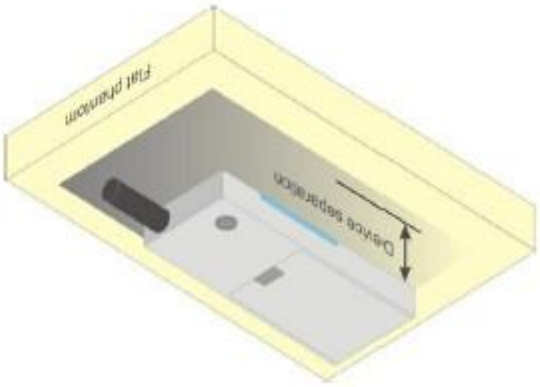
7.4. Body Worn Position

(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 **5mm.**





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

No.	Equipment description	Manufacturer/ Model	Identification No.	Software version	Current calibration date	Next calibration date
AGC-HE-A103	SAR Probe	MVG	2023-EPGO-414	N/A	2025-05-06	2026-05-05
AGC-HE-E016	Phantom	SATIMO	SN_4511_SAM90	N/A	Validated. No cal required.	Validated. No cal required.
AGC-HE-A071	Phantom	SATIMO	SN_2316_ELLI39	N/A	Validated. No cal required.	Validated. No cal required.
AGC-ER-E020	WIRELESS COMMUNICATION TEST SET	Agilent-8960	GB46200384	N/A	2025-05-21	2026-05-20
AGC-ER-E032	Wireless communication instrument	R&S- CMW500	121209	N/A	2025-05-16	2026-05-15
AGC-HE-E005	Multimeter	Keithley 2000	1350784	N/A	2025-05-16	2026-05-15
AGC-HE-S001	SAR Software	SATIMO-OpenSAR	N/A	OpenSAR V4_02_32	N/A	N/A
AGC-HE-A056	Dipole	SATIMO SID835	SN 1516 DIP 0G835-399	N/A	2025-05-15	2028-05-14
AGC-HE-A016	Dipole	SATIMO SID1800	SN 4611 DIP 1G800-186	N/A	2025-05-12	2028-05-11
AGC-HE-A059	Dipole	SATIMO SID1900	SN 2915 DIP 1G900-389	N/A	2025-05-15	2028-05-14
AGC-HE-A061	Dipole	SATIMO SID2450	SN 2915 DIP 2G450-393	N/A	2025-05-16	2028-05-15
AGC-HE-A101	Dipole	SID5000	SN 1722 DIP 5G000-671	N/A	2025-05-16	2028-05-15
AGC-HE-E021	Signal Generator	Agilent-E4438C	US41461365	V5.03	2025-05-21	2026-05-20
AGC-EM-E061	EXA Signal Analyzer	Agilent / N9010A	MY53470504	N/A	2025-05-08	2026-05-07
AGC-HE-E004	Network Analyzer	Rhode & Schwarz ZVL6	101443	3.2	2025-07-18	2026-07-17
AGC-ER-A001	Attenuator	SMA-JK	N/A	N/A	2023-09-21	2025-09-20
AGC-EM-E019	Amplifier	AS0104-55_55	1004793	N/A	N/A	N/A
AGC-EM-E040	Directional Couple	Werlatone/ C5571-10	SN99463	N/A	2024-02-01	2026-01-31
AGC-EM-E041	Directional Couple	Werlatone/ C6026-10	SN99482	N/A	2024-02-01	2026-01-31
AGC-BQ-E016	Power Sensor	NRP-Z21	104604	N/A	2025-05-16	2026-05-15
AGC-HE-E023	Power Sensor	NRP-Z23	100323	N/A	2025-01-14	2026.01-13
AGC-HE-S004	Power Viewer	R&S	V2.3.1.0	N/A	N/A	N/A
AGC-HE-A001	Calibration standard parts for network sub - port	R&S/ ZV-Z132	100707	V2.3.1.0	2024-11-08	2025-11-07
AGC-HE-A002	Thermometer	DigiMate/TP677	3811930452	N/A	2025-05-24	2027-05-23

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	0.105	R	1.732	0.707	0.707	0.043	0.043	∞
Hemispherical Isotropy	E.2.2	0.105	R	1.732	0.707	0.707	0.043	0.043	∞
Boundary effect	E.2.3	1.000	R	1.732	1	1	0.577	0.577	∞
Linearity	E.2.4	1.105	R	1.732	1	1	0.638	0.638	∞
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				10.533	10.348	
Expanded Uncertainty (95% Confidence interval)			K=2				21.065	20.695	

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	0.105	R	1.732	1.000	1.000	0.061	0.061	∞
Hemispherical Isotropy	E.2.2	0.105	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	1.105	R	1.732	1.000	1.000	0.638	0.638	∞
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				10.466	10.279	
Expanded Uncertainty (95% Confidence interval)			K=2				20.931	20.559	

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	0.500	N	1	1	1	0.5	0.5	∞
Axial Isotropy	E.2.2	0.105	R	1.732	0	0	0	0	∞
Hemispherical Isotropy	E.2.2	0.105	R	1.732	0	0	0	0	∞
Boundary effect	E.2.3	1.000	R	1.732	0	0	0	0	∞
Linearity	E.2.4	1.105	R	1.732	0	0	0	0	∞
System detection limits	E.2.4	1	R	1.732	0	0	0	0	∞
Modulation response	E2.5	3	R	1.732	0	0	0	0	∞
Readout Electronics	E.2.6	0.021	N	1	0	0	0	0	∞
Response Time	E.2.7	0	R	1.732	0	0	0	0	∞
Integration Time	E.2.8	1.4	R	1.732	0	0	0	0	∞
RF ambient conditions-Noise	E.6.1	3	R	1.732	0	0	0	0	∞
RF ambient conditions-reflections	E.6.1	3	R	1.732	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>				
GSM 850	824.2	33.31	-9	24.31
	836.6	33.10	-9	24.10
	848.8	33.13	-9	24.13
GPRS 850 （1 Slot）	824.2	**33.33**	-9	24.33
	836.6	33.12	-9	24.12
	848.8	33.16	-9	24.16
GPRS 850 （2 Slot）	824.2	32.99	-6	26.99
	836.6	32.79	-6	26.79
	848.8	32.80	-6	26.80
GPRS 850 （3 Slot）	824.2	31.77	-4.26	27.51
	836.6	31.59	-4.26	27.33
	848.8	31.51	-4.26	27.25
GPRS 850 （4 Slot）	824.2	30.77	-3	**27.77**
	836.6	30.57	-3	27.57
	848.8	30.42	-3	27.42
EGPRS 850 （1 Slot）	824.2	28.82	-9	19.82
	836.6	28.90	-9	19.90
	848.8	28.23	-9	19.23
EGPRS 850 （2 Slot）	824.2	28.40	-6	22.40
	836.6	27.99	-6	21.99
	848.8	27.42	-6	21.42
EGPRS 850 （3 Slot）	824.2	25.97	-4.26	21.71
	836.6	25.55	-4.26	21.29
	848.8	25.89	-4.26	21.63
EGPRS 850 （4 Slot）	824.2	24.73	-3	21.73
	836.6	24.74	-3	21.74
	848.8	24.50	-3	21.50

GSM BAND CONTINUE

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1>				
PCS1900	1850.2	28.08	-9	19.08
	1880	28.07	-9	19.07
	1909.8	28.27	-9	19.27
GPRS1900 （1 Slot）	1850.2	28.10	-9	19.10
	1880	28.09	-9	19.09
	1909.8	**28.27**	-9	19.27
GPRS1900 （2 Slot）	1850.2	27.92	-6	21.92
	1880	27.91	-6	21.91
	1909.8	28.14	-6	22.14
GPRS1900 （3 Slot）	1850.2	26.82	-4.26	22.56
	1880	26.81	-4.26	22.55
	1909.8	27.08	-4.26	22.82
GPRS1900 （4 Slot）	1850.2	25.79	-3	22.79
	1880	25.77	-3	22.77
	1909.8	26.01	-3	**23.01**
EGPRS1900 （1 Slot）	1850.2	25.99	-9	16.99
	1880	25.94	-9	16.94
	1909.8	25.87	-9	16.87
EGPRS1900 （2 Slot）	1850.2	25.65	-6	19.65
	1880	24.74	-6	18.74
	1909.8	25.32	-6	19.32
EGPRS1900 （3 Slot）	1850.2	23.75	-4.26	19.49
	1880	23.36	-4.26	19.10
	1909.8	23.56	-4.26	19.30
EGPRS1900 （4 Slot）	1850.2	22.65	-3	19.65
	1880	22.37	-3	19.37
	1909.8	22.17	-3	19.17

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
Note 2:
SAR is not required for GPRS (1 Slot) Mode because its output power is less than of Voice Mode

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 β c/ β d =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	24.69
	1880	24.18
	1907.6	24.27
HSDPA Subtest 1	1852.4	24.70
	1880	24.22
	1907.6	24.15
HSDPA Subtest 2	1852.4	24.69
	1880	24.26
	1907.6	24.17
HSDPA Subtest 3	1852.4	24.68
	1880	24.25
	1907.6	24.15
HSDPA Subtest 4	1852.4	**24.71**
	1880	24.20
	1907.6	24.08
HSUPA Subtest 1	1852.4	24.58
	1880	24.03
	1907.6	24.02
HSUPA Subtest 2	1852.4	24.59
	1880	23.99
	1907.6	24.03
HSUPA Subtest 3	1852.4	24.45
	1880	24.03
	1907.6	24.00
HSUPA Subtest 4	1852.4	24.47
	1880	24.01
	1907.6	23.98
HSUPA Subtest 5	1852.4	24.62
	1880	24.14
	1907.6	23.99

UMTS BAND V

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 850 RMC	826.4	23.34
	836.4	23.87
	846.6	**24.10**
HSDPA Subtest 1	826.4	22.34
	836.4	22.89
	846.6	23.10
HSDPA Subtest 2	826.4	21.62
	836.4	22.36
	846.6	22.71
HSDPA Subtest 3	826.4	20.57
	836.4	21.05
	846.6	21.81
HSDPA Subtest 4	826.4	20.75
	836.4	21.33
	846.6	21.75
HSUPA Subtest 1	826.4	21.14
	836.4	22.63
	846.6	22.96
HSUPA Subtest 2	826.4	22.10
	836.4	22.66
	846.6	23.00
HSUPA Subtest 3	826.4	20.69
	836.4	21.62
	846.6	21.69
HSUPA Subtest 4	826.4	22.30
	836.4	22.76
	846.6	23.13
HSUPA Subtest 5	826.4	20.58
	836.4	22.07
	846.6	22.35

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

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	23.29	22.33	22.27
			3	0	**23.49**	22.78	22.43
			5	0	23.31	22.49	22.26
		3	0	0	23.27	22.47	22.38
			2	0	23.30	22.43	22.33
			3	0	23.31	22.46	22.35
		6	0	1	22.30	21.47	21.30
	16QAM	1	0	1	22.34	21.61	21.17
			3	1	22.44	21.74	21.36
			5	1	22.32	21.64	21.18
		3	0	1	22.41	21.75	21.56
			2	1	22.43	21.72	21.54
			3	1	22.37	21.77	21.59
		6	0	2	21.48	20.58	20.54
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					18615	**18900**	**19185**
3MHz	QPSK	1	0	0	23.32	22.48	22.34
			7	0	23.35	22.78	22.69
			14	0	22.88	22.59	22.32
		8	0	1	21.87	21.48	21.36
			4	1	21.92	21.57	21.46
			7	1	21.91	21.52	21.40
		15	0	1	21.86	21.50	21.38
	16QAM	1	0	1	22.03	21.41	21.88
			7	1	22.25	21.85	22.14
			14	1	22.03	21.43	21.85
		8	0	2	20.90	20.49	20.47
			4	2	20.88	20.54	20.52
			7	2	20.91	20.55	20.44
		15	0	2	20.82	20.60	20.42

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	22.66	22.26	22.19
			13	0	23.09	22.74	22.59
			24	0	22.67	22.34	22.10
		12	0	1	21.81	21.44	21.32
			6	1	21.89	21.49	21.39
			13	1	21.81	21.47	21.30
		25	0	1	21.85	21.45	21.32
	16QAM	1	0	1	22.22	21.68	21.65
			13	1	22.68	22.08	22.02
			24	1	22.25	21.74	21.57
		12	0	2	20.83	20.39	20.39
			6	2	20.90	20.47	20.44
			13	2	20.81	20.41	20.32
		25	0	2	20.81	20.49	20.31
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 18650	Channel 18900	Channel 19150
10MHz	QPSK	1	0	0	22.71	22.34	22.40
			25	0	22.92	22.60	22.49
			49	0	22.60	22.55	22.21
		25	0	1	21.93	21.45	21.53
			13	1	21.89	21.51	21.46
			25	1	21.79	21.48	21.40
		50	0	1	21.90	21.51	21.46
	16QAM	1	0	1	21.90	21.24	21.91
			25	1	22.12	21.52	21.96
			49	1	21.84	21.39	21.75
		25	0	2	20.96	20.48	20.61
			13	2	20.89	20.53	20.54
			25	2	20.83	20.54	20.48
		50	0	2	20.96	20.51	20.52

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	22.63	22.16	22.31
			38	0	22.91	22.63	22.74
			74	0	22.31	22.37	22.07
		36	0	1	21.89	21.39	21.53
			18	1	21.82	21.51	21.52
			39	1	21.64	21.49	21.36
		75	0	1	21.81	21.40	21.48
	16QAM	1	0	1	21.77	21.32	21.84
			38	1	22.07	21.85	22.12
			74	1	21.59	21.51	21.63
		36	0	2	20.88	20.33	20.58
			18	2	20.84	20.42	20.53
			39	2	20.67	20.43	20.39
		75	0	2	20.76	20.44	20.48
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					18700	18900	19100
20MHz	QPSK	1	0	0	22.51	22.00	22.20
			50	0	22.80	22.52	22.59
			99	0	22.13	22.25	21.99
		50	0	1	21.84	21.34	21.63
			25	1	21.67	21.46	21.55
			50	1	21.56	21.35	21.43
		100	0	1	21.73	21.38	21.54
	16QAM	1	0	1	21.71	21.34	21.63
			50	1	22.04	21.88	22.00
			99	1	21.47	21.60	21.42
		50	0	2	20.88	20.43	20.72
			25	2	20.70	20.56	20.66
			50	2	20.57	20.45	20.46
		100	0	2	20.77	20.45	20.57

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	22.31	22.54	22.30
			3	0	22.36	22.70	22.51
			5	0	22.15	22.56	22.37
		3	0	0	22.29	22.61	22.36
			2	0	22.26	22.59	22.33
			3	0	22.24	22.59	22.38
		6	0	1	21.22	21.59	21.31
	16QAM	1	0	1	21.42	21.37	21.54
			3	1	21.52	21.58	21.67
			5	1	21.41	21.40	21.55
		3	0	1	21.51	21.78	21.61
			2	1	21.56	21.80	21.62
			3	1	21.56	21.80	21.64
		6	0	2	20.38	20.78	20.51
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					19965	20175	20385
3MHz	QPSK	1	0	0	22.28	22.62	22.40
			7	0	22.55	22.91	22.76
			14	0	22.24	22.60	22.45
		8	0	1	21.28	21.64	21.40
			4	1	21.33	21.68	21.45
			7	1	21.32	21.67	21.40
		15	0	1	21.31	21.64	21.43
	16QAM	1	0	1	21.77	21.87	21.33
			7	1	22.10	22.10	21.65
			14	1	21.74	21.82	21.32
		8	0	2	20.32	20.69	20.43
			4	2	20.37	20.70	20.41
			7	2	20.35	20.66	20.44
		15	0	2	20.34	20.61	20.48

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	22.03	22.42	22.16
			13	0	22.29	**22.92**	22.55
			24	0	22.07	22.35	22.19
		12	0	1	21.18	21.52	21.31
			6	1	21.27	21.61	21.37
			13	1	21.23	21.53	21.32
		25	0	1	21.25	21.59	21.37
	16QAM	1	0	1	21.47	22.01	21.58
			13	1	21.83	22.47	22.03
			24	1	21.52	21.97	21.63
		12	0	2	20.23	20.57	20.29
			6	2	20.29	20.63	20.35
			13	2	20.31	20.54	20.28
		25	0	2	20.19	20.53	20.37
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 20000	Channel 20175	Channel 20350
10MHz	QPSK	1	0	0	22.17	22.45	22.19
			25	0	22.48	22.63	22.37
			49	0	22.40	22.36	22.26
		25	0	1	21.22	21.60	21.40
			13	1	21.34	21.64	21.35
			25	1	21.45	21.60	21.33
		50	0	1	21.34	21.60	21.38
	16QAM	1	0	1	21.07	21.94	21.46
			25	1	21.32	22.10	21.73
			49	1	21.25	21.86	21.51
		25	0	2	20.24	20.61	20.43
			13	2	20.34	20.70	20.43
			25	2	20.48	20.64	20.34
		50	0	2	20.31	20.63	20.45

Conducted Power of LTE Band 4(dBm)							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					20025	20175	20325
15MHz	QPSK	1	0	0	21.94	22.27	22.22
			38	0	22.50	22.79	22.48
			74	0	22.27	22.21	22.10
		36	0	1	21.20	21.59	21.40
			18	1	21.40	21.62	21.37
			39	1	21.50	21.51	21.27
		75	0	1	21.40	21.58	21.32
	16QAM	1	0	1	21.45	21.53	21.30
			38	1	22.00	22.05	21.68
			74	1	21.77	21.49	21.27
		36	0	2	20.21	20.58	20.33
			18	2	20.39	20.66	20.35
			39	2	20.51	20.57	20.25
		75	0	2	20.36	20.54	20.37
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel	Channel	Channel
					20050	20175	20300
20MHz	QPSK	1	0	0	21.91	22.10	22.08
			50	0	22.54	22.65	22.39
			99	0	22.35	22.08	21.97
		50	0	1	21.14	21.49	21.46
			25	1	21.42	21.58	21.40
			50	1	21.60	21.47	21.22
		100	0	1	21.42	21.49	21.36
	16QAM	1	0	1	21.20	21.45	21.50
			50	1	21.77	21.95	21.82
			99	1	21.61	21.44	21.42
		50	0	2	20.15	20.55	20.54
			25	2	20.46	20.65	20.46
			50	2	20.58	20.54	20.28
		100	0	2	20.44	20.52	20.38

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	15.50
		06	2437	**15.78**
		11	2462	15.78
802.11g	6	01	2412	15.15
		06	2437	15.08
		11	2462	14.75
802.11n(20)	6.5	01	2412	14.78
		06	2437	14.81
		11	2462	14.61
802.11n(40)	13.5	03	2422	15.17
		06	2437	15.09
		09	2452	15.18

Bluetooth_BR/EDR

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
GFSK	0	2402	-0.29
	39	2441	**1.99**
	78	2480	1.61
π /4-DQPSK	0	2402	-1.02
	39	2441	1.30
	78	2480	1.01
8-DPSK	0	2402	-1.04
	39	2441	1.24
	78	2480	1.08

Bluetooth_BLE

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
GFSK_1M	0	2402	-7.24
	19	2440	-4.73
	39	2480	-5.29
GFSK_2M	0	2402	-7.21
	19	2440	**-4.71**
	39	2480	-5.24

5GHz WIFI

Mode	channel	Frequency	Avg. Burst Power (dBm)							
			Data Rate(bps)							
			6M	9M	12M	18M	24M	36M	48M	54M
802.11a	36	5180	10.38	10.38	10.24	10.21	10.04	10.00	9.98	9.80
	40	5200	10.39	10.21	10.09	9.96	9.91	9.71	9.52	9.48
	48	5240	**10.51**	10.47	10.33	10.23	10.17	10.16	10.07	9.93
	52	5260	12.51	12.33	12.22	12.15	12.00	11.84	11.75	11.55
	60	5300	12.57	12.38	12.25	12.12	11.97	11.88	11.78	11.61
	64	5320	**12.87**	12.77	12.70	12.53	12.52	12.37	12.19	12.03
	149	5745	14.08	14.06	14.04	13.93	13.77	13.57	13.48	13.44
	157	5785	14.37	14.34	14.25	14.14	14.09	13.99	13.82	13.76
	165	5825	**14.51**	14.39	14.26	14.23	14.18	14.03	13.98	13.83
			MCS0	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**
802.11n (20)	36	5180	9.15	9.07	8.88	8.73	8.67	8.48	8.34	8.32
	40	5200	9.24	9.10	8.95	8.83	8.76	8.59	8.59	8.39
	48	5240	9.34	9.17	9.07	8.88	8.70	8.63	8.55	8.51
	52	5260	11.32	11.31	11.21	11.03	10.89	10.87	10.84	10.74
	60	5300	11.45	11.40	11.25	11.17	11.15	11.11	10.96	10.92
	64	5320	11.68	11.62	11.43	11.27	11.20	11.14	10.96	10.84
	149	5745	13.04	12.91	12.80	12.79	12.70	12.62	12.57	12.48
	157	5785	13.33	13.24	13.06	12.94	12.91	12.85	12.84	12.71
	165	5825	13.43	13.27	13.09	13.07	12.91	12.90	12.71	12.62
			MCS0	**MCS1**	**MCS2**	**MCS3**	**MCS4**	**MCS5**	**MCS6**	**MCS7**
802.11n (40)	38	5190	10.21	10.12	10.04	9.89	9.86	9.69	9.68	9.65
	46	5230	8.25	8.06	8.05	7.92	7.89	7.85	7.74	7.56
	54	5270	9.72	9.68	9.59	9.47	9.43	9.37	9.35	9.25
	62	5310	10.00	9.98	9.83	9.79	9.68	9.67	9.60	9.48
	151	5755	11.71	11.51	11.42	11.38	11.38	11.24	11.11	11.04
	159	5795	11.92	11.83	11.78	11.67	11.53	11.33	11.25	11.12

Mode	channel	Frequency	Avg. Burst Power (dBm)							
			Data Rate(bps)							
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11ac (20)	36	5180	9.23	9.16	9.00	8.83	8.83	8.65	8.45	8.37
	40	5200	8.79	8.78	8.68	8.49	8.34	8.32	8.23	8.04
	48	5240	9.38	9.30	9.27	9.24	9.04	8.90	8.86	8.79
	52	5260	11.80	11.69	11.55	11.49	11.48	11.45	11.35	11.32
	60	5300	11.88	11.81	11.71	11.66	11.65	11.45	11.34	11.22
	64	5320	12.02	12.02	12.02	11.98	11.93	11.92	11.80	11.78
	149	5745	13.58	13.57	13.46	13.40	13.34	13.28	13.18	13.04
	157	5785	13.82	13.72	13.68	13.57	13.43	13.31	13.28	13.26
	165	5825	13.79	13.64	13.60	13.58	13.45	13.40	13.30	13.14
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11ac (40)	38	5190	8.72	8.60	8.55	8.48	8.38	8.29	8.12	8.02
	46	5230	8.64	8.44	8.39	8.28	8.14	8.05	7.92	7.80
	54	5270	9.82	9.73	9.55	9.49	9.42	9.31	9.22	9.07
	62	5310	9.47	9.40	9.23	9.11	9.07	9.03	8.95	8.94
	151	5755	11.82	11.75	11.62	11.61	11.52	11.46	11.38	11.30
	159	5795	11.95	11.91	11.79	11.70	11.65	11.52	11.41	11.23
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11ac (80)	42	5210	9.25	9.19	9.03	8.97	8.95	8.94	8.85	8.77
	58	5290	10.10	9.91	9.72	9.65	9.58	9.49	9.34	9.16
	155	5775	12.06	11.98	11.87	11.85	11.77	11.64	11.62	11.53

13. TEST RESULTS

13.1. SAR Test Results Summary

13.1.1. Test position and configuration

Head SAR was performed with the device configured in the positions according to IEEE 1528-2013, Body-worn and 4 Edges SAR was performed with the device 5mm 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. Per KDB 941225 D06 V02r01, When the same wireless mode transmission configurations for voice and data are required for SAR measurements, the more conservative configuration with a smaller separation distance should be tested for the overlapping SAR configurations.
8. 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)]
9. Proximity sensor, just for avoiding the wrong operation in the phone screen when call, and has no influence on output power or SAR result
10. 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.
11. Per KDB 941125 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
12. 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.
13. 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.
14. 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										
Product: Smartphone										
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										
Left Cheek	voice	190	836.6	-0.82	0.229	33.50	33.10	1.096	0.251	1.6
Left Tilt	voice	190	836.6	-0.61	0.134	33.50	33.10	1.096	0.147	1.6
Right Cheek	voice	190	836.6	0.83	**0.246**	33.50	33.10	1.096	**0.270**	1.6
Right Tilt	voice	190	836.6	-0.90	0.149	33.50	33.10	1.096	0.163	1.6
Body back	voice	190	836.6	-0.04	**0.245**	33.50	33.10	1.096	**0.269**	1.6
Body front	voice	190	836.6	0.18	0.202	33.50	33.10	1.096	0.221	1.6
Body back	GPRS-4 slot	190	836.6	-0.66	**0.489**	31.00	30.77	1.054	**0.516**	1.6
Body front	GPRS-4 slot	190	836.6	-0.93	0.292	31.00	30.57	1.104	0.322	1.6
Edge 2(Right)	GPRS-4 slot	190	836.6	-0.43	0.169	31.00	30.57	1.104	0.187	1.6
Edge 3(Bottom)	GPRS-4 slot	190	836.6	0.38	0.103	31.00	30.57	1.104	0.114	1.6
Edge 4(Left)	GPRS-4 slot	190	836.6	-1.02	0.108	31.00	30.57	1.104	0.119	1.6

SAR MEASUREMENT										
Depth of Liquid (cm):>15										
Product: Smartphone										
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										
Left Cheek	voice	661	1880.0	-0.78	0.016	28.50	28.07	1.104	0.018	1.6
Left Tilt	voice	661	1880.0	-0.70	0.010	28.50	28.07	1.104	0.011	1.6
Right Cheek	voice	661	1880.0	0.66	**0.019**	28.50	28.07	1.104	**0.021**	1.6
Right Tilt	voice	661	1880.0	-0.88	0.002	28.50	28.07	1.104	0.002	1.6
Body back	voice	661	1880.0	-1.05	**0.336**	28.50	28.07	1.104	**0.371**	1.6
Body front	voice	661	1880.0	0.16	0.114	28.50	28.07	1.104	0.126	1.6
Body back	GPRS-4 slot	661	1880	-0.78	0.536	26.50	25.77	1.183	0.634	1.6
Body front	GPRS-4 slot	661	1880.0	0.70	0.186	26.50	25.77	1.183	0.220	1.6
Edge 2(Right)	GPRS-4 slot	661	1880.0	-0.66	0.063	26.50	25.77	1.183	0.075	1.6
Edge 3(Bottom)	GPRS-4 slot	661	1880.0	-0.88	**0.571**	26.50	25.77	1.183	**0.676**	1.6
Edge 4(Left)	GPRS-4 slot	661	1880.0	1.05	0.019	26.50	25.77	1.183	0.022	1.6

SAR MEASUREMENT										
Depth of Liquid (cm):>15										
Product: Smartphone										
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)**
Left Cheek	RMC 12.2kbps	9400	1880	-0.81	0.032	25.00	24.18	1.208	0.039	1.6
Left Tilt	RMC 12.2kbps	9400	1880	0.78	0.026	25.00	24.18	1.208	0.031	1.6
Right Cheek	RMC 12.2kbps	9400	1880	-0.80	**0.043**	25.00	24.18	1.208	**0.052**	1.6
Right Tilt	RMC 12.2kbps	9400	1880	0.71	0.006	25.00	24.18	1.208	0.007	1.6
Body back	RMC 12.2kbps	9262	1852.4	0.71	0.743	25.00	24.69	1.074	0.798	1.6
Body back	RMC 12.2kbps	9400	1880	1.01	0.744	25.00	24.18	1.208	0.899	1.6
Body back	RMC 12.2kbps	9538	1907.6	0.24	0.741	25.00	24.27	1.183	0.877	1.6
Body front	RMC 12.2kbps	9400	1880	-0.34	0.242	25.00	24.18	1.208	0.292	1.6
Edge 2(Right)	RMC 12.2kbps	9400	1880	-0.36	0.104	25.00	24.18	1.208	0.126	1.6
Edge 3(Bottom)	RMC 12.2kbps	9262	1852.4	-0.79	0.957	25.00	24.69	1.074	1.028	1.6
Edge 3(Bottom)	RMC 12.2kbps	9400	1880	0.39	0.869	25.00	24.18	1.208	1.050	1.6
Edge 3(Bottom)	RMC 12.2kbps	9538	1907.6	-0.09	**0.989**	25.00	24.27	1.183	**1.170**	1.6
Edge 4(Left)	RMC 12.2kbps	9400	1880	0.14	0.032	25.00	24.18	1.208	0.039	1.6

SAR MEASUREMENT										
Depth of Liquid (cm):>15										
Product: Smartphone										
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)**
Left Cheek	RMC 12.2kbps	4183	836.4	-0.91	0.087	24.50	23.87	1.156	0.101	1.6
Left Tilt	RMC 12.2kbps	4183	836.4	0.87	0.052	24.50	23.87	1.156	0.060	1.6
Right Cheek	RMC 12.2kbps	4183	836.4	-0.82	**0.256**	24.50	23.87	1.156	**0.296**	1.6
Right Tilt	RMC 12.2kbps	4183	836.4	-0.82	0.141	24.50	23.87	1.156	0.163	1.6
Body back	RMC 12.2kbps	4183	836.4	1.01	**0.259**	24.50	23.87	1.156	**0.299**	1.6
Body front	RMC 12.2kbps	4183	836.4	0.50	0.168	24.50	23.87	1.156	0.194	1.6
Edge 2(Right)	RMC 12.2kbps	4183	836.4	0.22	0.222	24.50	23.87	1.156	0.257	1.6
Edge 3(Bottom)	RMC 12.2kbps	4183	836.4	-1.09	0.133	24.50	23.87	1.156	0.154	1.6
Edge 4(Left)	RMC 12.2kbps	4183	836.4	0.33	0.138	24.50	23.87	1.156	0.160	1.6

SAR MEASUREMENT													
Depth of Liquid (cm):>15													
Product: Smartphone													
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**	Left Cheek	1	0	18900	1880	-0.64	0.038	23.50	22.34	1.306	0.050	1.6
		Left Tilt	1	0	18900	1880	-0.75	0.038	23.50	22.34	1.306	0.050	1.6
		Right Cheek	1	0	18900	1880	0.77	**0.050**	23.50	22.34	1.306	**0.065**	1.6
		Right Tilt	1	0	18900	1880	-0.93	0.013	23.50	22.34	1.306	0.017	1.6
		Body back	1	0	18900	1880	-0.99	0.610	23.50	22.34	1.306	0.797	1.6
		Body front	1	0	18900	1880	0.32	0.223	23.50	22.34	1.306	0.291	1.6
		Edge 2(Right)	1	0	18900	1880	-0.27	0.086	23.50	22.34	1.306	0.112	1.6
		Edge 3(Bottom)	1	0	18700	1860	0.30	0.771	23.50	22.71	1.199	0.925	1.6
		Edge 3(Bottom)	1	0	18900	1880	-0.99	**0.775**	23.50	22.34	1.306	**1.012**	1.6
		Edge 3(Bottom)	1	0	19100	1900	-0.21	0.770	23.50	22.40	1.288	0.992	1.6
		Edge 4(Left)	1	0	18900	1880	0.11	0.035	23.50	22.34	1.306	0.046	1.6

SAR MEASUREMENT													
Depth of Liquid (cm):>15													
Product: Smartphone													
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	Left Cheek	1	0	20175	1732.5	-0.97	0.006	23.00	22.10	1.230	0.007	1.6
		Left Tilt	1	0	20175	1732.5	-0.23	0.003	23.00	22.10	1.230	0.004	1.6
		Right Cheek	1	0	20175	1732.5	0.45	**0.013**	23.00	22.10	1.230	**0.016**	1.6
		Right Tilt	1	0	20175	1732.5	-0.41	0.002	23.00	22.10	1.230	0.002	1.6
		Body back	1	0	20175	1732.5	-1.12	0.397	23.00	22.10	1.230	0.488	1.6
		Body front	1	0	20175	1732.5	-0.18	0.157	23.00	22.10	1.230	0.193	1.6
		Edge 2(Right)	1	0	20175	1732.5	0.25	0.032	23.00	22.10	1.230	0.039	1.6
		Edge 3(Bottom)	1	0	20175	1732.5	-0.40	**0.503**	23.00	22.10	1.230	**0.619**	1.6
		Edge 4(Left)	1	0	20175	1732.5	-0.25	0.007	23.00	22.10	1.230	0.009	1.6

SAR MEASUREMENT										
Depth of Liquid (cm):>15										
Product: Smartphone										
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)**
Left Cheek	DTS	6	2437	-0.70	0.502	16.00	15.78	1.052	0.528	1.6
Left Tilt	DTS	6	2437	-0.77	**0.523**	16.00	15.78	1.052	**0.550**	1.6
Right Cheek	DTS	6	2437	0.87	0.273	16.00	15.78	1.052	0.287	1.6
Right Tilt	DTS	6	2437	-0.32	0.316	16.00	15.78	1.052	0.332	1.6
Body back	DTS	6	2437	0.21	0.197	16.00	15.78	1.052	0.207	1.6
Body front	DTS	6	2437	-0.23	**0.197**	16.00	15.78	1.052	**0.207**	1.6
Edge 1 (Top)	DTS	6	2437	-0.78	0.109	16.00	15.78	1.052	0.115	1.6
Edge 2(Right)	DTS	6	2437	0.41	0.112	16.00	15.78	1.052	0.118	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.
·The test separation for body back, body front and 4 Edges is 5mm of all above table.

SAR MEASUREMENT									
Depth of Liquid (cm):>15									
Product: Smartphone									
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)**
Left Cheek	40	5200	-0.65	0.330	11.00	10.39	1.151	0.380	1.6
Left Tilt	40	5200	-0.74	**0.554**	11.00	10.39	1.151	**0.638**	1.6
Right Cheek	40	5200	-0.72	0.162	11.00	10.39	1.151	0.186	1.6
Right Tilt	40	5200	-0.91	0.171	11.00	10.39	1.151	0.197	1.6
Body back	40	5200	1.11	**0.501**	11.00	10.39	1.151	**0.577**	1.6
Body front	40	5200	-0.04	0.134	11.00	10.39	1.151	0.154	1.6
Edge 1 (Top)	40	5200	-0.28	0.499	11.00	10.39	1.151	0.574	1.6
Edge 2(Right)	40	5200	0.39	0.270	11.00	10.39	1.151	0.311	1.6

SAR MEASUREMENT									
Depth of Liquid (cm):>15									
Product: Smartphone									
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)**
Left Cheek	60	5300	-1.05	0.359	13.00	12.57	1.104	0.396	1.6
Left Tilt	60	5300	-0.21	**0.532**	13.00	12.57	1.104	**0.587**	1.6
Right Cheek	60	5300	0.41	0.278	13.00	12.57	1.104	0.307	1.6
Right Tilt	60	5300	-0.36	0.366	13.00	12.57	1.104	0.404	1.6
Body back	60	5300	-0.85	**0.488**	13.00	12.57	1.104	**0.539**	1.6
Body front	60	5300	-0.30	0.117	13.00	12.57	1.104	0.129	1.6
Edge 1 (Top)	60	5300	-0.31	0.454	13.00	12.57	1.104	0.501	1.6
Edge 2 (Right)	60	5300	-0.08	0.304	13.00	12.57	1.104	0.336	1.6

SAR MEASUREMENT									
Depth of Liquid (cm):>15									
Product: Smartphone									
Test Mode: 5.8GHz 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)**
Left Cheek	157	5785	-0.74	0.487	15.00	14.37	1.156	0.563	1.6
Left Tilt	157	5785	-0.91	**0.527**	15.00	14.37	1.156	**0.609**	1.6
Right Cheek	157	5785	0.72	0.225	15.00	14.37	1.156	0.260	1.6
Right Tilt	157	5785	-0.89	0.213	15.00	14.37	1.156	0.246	1.6
Body back	157	5785	-0.17	0.123	15.00	14.37	1.156	0.142	1.6
Body front	157	5785	0.25	0.084	15.00	14.37	1.156	0.097	1.6
Edge 1 (Top)	157	5785	-0.43	**0.160**	15.00	14.37	1.156	**0.185**	1.6
Edge 2 (Right)	157	5785	-0.97	0.108	15.00	14.37	1.156	0.125	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.
·The test separation for body back, body front and 4 Edges is 5mm of all above table

Repeated SAR											
Product: Smartphone											
Test Mode: WCDMA Band II & LTE Band 2											
Position	**Mode**		**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**Once SAR (1g) (W/kg)**	**Power Drift (<±5%)**	**Twice SAR (1g) (W/kg)**	**Power Drift (<±5%)**	**Third SAR (1g) (W/kg)**	**Limit W/kg**
Edge 3(Bottom)	RMC 12.2kbps		9538	1907.6	0.16	0.979	--	--	--	--	1.6
Position	**Mode**		**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**Once SAR (1g) (W/kg)**	**Power Drift (<±5%)**	**Twice SAR (1g) (W/kg)**	**Power Drift (<±5%)**	**Third SAR (1g) (W/kg)**	**Limit W/kg**
	UL RB Allocation	**UL RB START**									
Edge 3(Bottom)	1	0	18900	1880	0.13	0.772	--	--	--	--	1.6

The second repeated SAR judge reference									
Product: Smartphone									
Band	**Position**	**Mode**		**Ch.**	**Fr. (MHz)**	**Orignal SAR (1g) (W/kg)**	**First SAR (1g) (W/kg)**	**Ratio**	**Limit**
WCDMA Band II	Edge 3(Bottom)	RMC 12.2kbps		9538	1907.6	0.989	0.979	1.010	<1.2
Band	**Position**	**Mode**		**Ch.**	**Fr. (MHz)**	**Orignal SAR (1g) (W/kg)**	**First SAR (1g) (W/kg)**	**Ratio**	**Limit**
		UL RB Allocation	**UL RB START**						
LTE Band 2	Edge 3(Bottom)	1	0	18900	1880	0.775	0.772	1.004	<1.2

Simultaneous Multi-band Transmission Evaluation:

Application Simultaneous Transmission information:

NO	Simultaneous state	Portable Handset		
		Head	Body-worn	Hotspot
1	GSM(voice)+ WLAN 2.4GHz/ 5GHz (data)	Yes	Yes	-
2	GSM(voice)+ Bluetooth(data)	Yes	Yes	-
3	GSM (Data) + WLAN 2.4GHz/ 5GHz (data)	-	Yes	Yes
4	GSM (Data) + Bluetooth(data)	-	Yes	Yes
5	WCDMA+ WLAN 2.4GHz/ 5GHz (data)	Yes	Yes	Yes
6	WCDMA+ Bluetooth(data)	Yes	Yes	Yes
7	LTE + WLAN 2.4GHz/ 5GHz (data)	Yes	Yes	Yes
8	LTE + Bluetooth(data)	Yes	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 head SAR and 5mm for body-worn 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	Head	2	1.585	0	0.066
	Body	2	1.585	5	0.066

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	WI-Fi DTS Band	Bluetooth		
Head (voice)	Left Touch	0.251	0.528		0.779	No
	Left Tilt	0.147	0.550		0.697	No
	Right Touch	0.270	0.287		0.557	No
	Right Tilt	0.163	0.332		0.495	No
Head (voice)	Left Touch	0.251		0.066	0.317	No
	Left Tilt	0.147		0.066	0.213	No
	Right Touch	0.270		0.066	0.336	No
	Right Tilt	0.163		0.066	0.229	No
Body-worn (voice)	Rear	0.269	0.207		0.476	No
		0.269		0.066	0.302	No
	Front	0.221	0.207		0.428	No
		0.221		0.066	0.287	No
Body-worn (Data)	Rear	0.269		0.066	0.335	No
		0.269	0.207		0.476	No
	Front	0.221		0.066	0.287	No
		0.221	0.207		0.428	No
Body-worn (Hotspot)	Edge 2	0.187	0.118		0.305	No
	Edge 2	0.187		0.066	0.253	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		
Head (voice)	Left Touch	0.251	0.380		0.631	No
	Left Tilt	0.147	0.638		0.785	No
	Right Touch	0.270	0.186		0.456	No
	Right Tilt	0.163	0.197		0.360	No
Head (voice)	Left Touch	0.251		0.396	0.647	No
	Left Tilt	0.147		0.587	0.734	No
	Right Touch	0.270		0.307	0.577	No
	Right Tilt	0.163		0.404	0.567	No
Body-worn (voice)	Rear	0.269	0.577		0.846	No
		0.269		0.539	0.808	No
	Front	0.221	0.154		0.375	No
		0.221		0.129	0.350	No
Body-worn (Data)	Rear	0.516		0.539	1.055	No
		0.516	0.577		1.093	No
	Front	0.322		0.129	0.451	No
		0.322	0.154		0.476	No
Body-worn (Hotspot)	Edge 2	0.187	0.311		0.498	No
	Edge 2	0.187		0.336	0.523	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		GSM 850	5.8GHz WI-Fi Band			
Head (voice)	Left Touch	0.251	0.563		0.814	No
	Left Tilt	0.147	0.609		0.756	No
	Right Touch	0.270	0.260		0.530	No
	Right Tilt	0.163	0.246		0.409	No
Body-worn (voice)	Rear	0.269	0.142		0.411	No
	Front	0.221	0.097		0.318	No
Body-worn (Data)	Rear	0.516	0.142		0.658	No
	Front	0.322	0.097		0.419	No
Body-worn (Hotspot)	Edge 2	0.187	0.125		0.312	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 PCS 1900 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		PCS 1900	WI-Fi DTS Band	Bluetooth		
Head (voice)	Left Touch	0.018	0.528		0.546	No
	Left Tilt	0.011	0.550		0.561	No
	Right Touch	0.021	0.287		0.308	No
	Right Tilt	0.002	0.332		0.334	No
Head (voice)	Left Touch	0.018		0.066	0.084	No
	Left Tilt	0.011		0.066	0.077	No
	Right Touch	0.021		0.066	0.087	No
	Right Tilt	0.002		0.066	0.068	No
Body-worn (voice)	Rear	0.371	0.207		0.578	No
		0.371		0.066	0.437	No
	Front	0.126	0.207		0.333	No
		0.126		0.066	0.192	No
Body-worn (Data)	Rear	0.634		0.066	0.700	No
		0.634	0.207		0.841	No
	Front	0.220		0.066	0.286	No
		0.220	0.207		0.427	No
Body-worn (Hotspot)	Edge 2	0.075	0.118		0.193	No
	Edge 2	0.075		0.066	0.141	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		PCS 1900	5.2GHz WI-Fi Band	5.3GHz WI-Fi Band		
Head (voice)	Left Touch	0.018	0.380		0.398	No
	Left Tilt	0.011	0.638		0.649	No
	Right Touch	0.021	0.186		0.207	No
	Right Tilt	0.002	0.197		0.199	No
Head (voice)	Left Touch	0.018		0.396	0.414	No
	Left Tilt	0.011		0.587	0.598	No
	Right Touch	0.021		0.307	0.328	No
	Right Tilt	0.002		0.404	0.406	No
Body-worn (voice)	Rear	0.371	0.577		0.948	No
		0.371		0.539	0.910	No
	Front	0.126	0.154		0.280	No
		0.126		0.129	0.255	No
Body-worn (Data)	Rear	0.634		0.539	1.173	No
		0.634	0.577		1.211	No
	Front	0.220		0.129	0.349	No
		0.220	0.154		0.374	No
Body-worn (Hotspot)	Edge 2	0.075	0.311		0.386	No
	Edge 2	0.075		0.336	0.411	No
RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		PCS 1900	5.8GHz WI-Fi Band			
Head (voice)	Left Touch	0.018	0.563		0.581	No
	Left Tilt	0.011	0.609		0.620	No
	Right Touch	0.021	0.260		0.281	No
	Right Tilt	0.002	0.246		0.248	No
Body-worn (voice)	Rear	0.371	0.142		0.513	No
	Front	0.126	0.097		0.223	No
Body-worn (Data)	Rear	0.634	0.142		0.776	No
	Front	0.220	0.097		0.317	No
Body-worn (Hotspot)	Edge 2	0.075	0.125		0.200	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	Wi-Fi DTS Band	Bluetooth		
Head	Left Touch	0.039	0.528		0.567	No
	Left Tilt	0.031	0.550		0.581	No
	Right Touch	0.052	0.287		0.339	No
	Right Tilt	0.007	0.332		0.339	No
Head	Left Touch	0.039		0.066	0.105	No
	Left Tilt	0.031		0.066	0.097	No
	Right Touch	0.052		0.066	0.118	No
	Right Tilt	0.007		0.066	0.073	No
Body-worn	Rear	0.899	0.207		1.106	No
	Front	0.292	0.207		0.499	No
	Edge 2	0.126	0.118		0.244	No
	Rear	0.899		0.066	0.965	No
	Front	0.292		0.066	0.358	No
	Edge 2	0.126		0.066	0.192	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		
Head	Left Touch	0.039	0.380		0.419	No
	Left Tilt	0.031	0.638		0.669	No
	Right Touch	0.052	0.186		0.238	No
	Right Tilt	0.007	0.197		0.204	No
Head	Left Touch	0.039		0.396	0.435	No
	Left Tilt	0.031		0.587	0.618	No
	Right Touch	0.052		0.307	0.359	No
	Right Tilt	0.007		0.404	0.411	No
Body-worn	Rear	0.899	0.577		**1.476**	No
	Front	0.292	0.154		0.446	No
	Edge 2	0.126	0.311		0.437	No
	Rear	0.899		0.539	1.438	No
	Front	0.292		0.129	0.421	No
	Edge 2	0.126		0.336	0.462	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			
Head	Left Touch	0.039	0.563		0.602	No
	Left Tilt	0.031	0.609		0.640	No
	Right Touch	0.052	0.260		0.312	No
	Right Tilt	0.007	0.246		0.253	No
Body-worn	Rear	0.899	0.142		1.041	No
	Front	0.292	0.097		0.389	No
	Edge 2	0.126	0.125		0.251	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	Wi-Fi DTS Band	Bluetooth		
Head	Left Touch	0.101	0.528		0.629	No
	Left Tilt	0.060	0.550		0.610	No
	Right Touch	0.296	0.287		0.583	No
	Right Tilt	0.163	0.332		0.495	No
Head	Left Touch	0.101		0.066	0.167	No
	Left Tilt	0.060		0.066	0.126	No
	Right Touch	0.296		0.066	0.362	No
	Right Tilt	0.163		0.066	0.229	No
Body-worn	Rear	0.299	0.207		0.506	No
	Front	0.194	0.207		0.401	No
	Edge 2	0.257	0.118		0.375	No
	Rear	0.299		0.066	0.365	No
	Front	0.194		0.066	0.260	No
	Edge 2	0.257		0.066	0.323	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		
Head	Left Touch	0.101	0.380		0.481	No
	Left Tilt	0.060	0.638		0.698	No
	Right Touch	0.296	0.186		0.482	No
	Right Tilt	0.163	0.197		0.360	No
Head	Left Touch	0.101		0.396	0.497	No
	Left Tilt	0.060		0.587	0.647	No
	Right Touch	0.296		0.307	0.603	No
	Right Tilt	0.163		0.404	0.567	No
Body-worn	Rear	0.299	0.577		0.876	No
	Front	0.194	0.154		0.348	No
	Edge 2	0.257	0.311		0.568	No
	Rear	0.299		0.539	0.838	No
	Front	0.194		0.129	0.323	No
	Edge 2	0.257		0.336	0.593	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			
Head	Left Touch	0.101	0.563		0.664	No
	Left Tilt	0.060	0.609		0.669	No
	Right Touch	0.296	0.260		0.556	No
	Right Tilt	0.163	0.246		0.409	No
Body-worn	Rear	0.299	0.142		0.441	No
	Front	0.194	0.097		0.291	No
	Edge 2	0.257	0.125		0.382	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	Wi-Fi DTS Band	Bluetooth		
Head	Left Touch	0.050	0.528		0.578	No
	Left Tilt	0.050	0.550		0.600	No
	Right Touch	0.065	0.287		0.352	No
	Right Tilt	0.017	0.332		0.349	No
Head	Left Touch	0.050		0.066	0.116	No
	Left Tilt	0.050		0.066	0.116	No
	Right Touch	0.065		0.066	0.131	No
	Right Tilt	0.017		0.066	0.083	No
Body-worn	Rear	0.797	0.207		1.004	No
	Front	0.291	0.207		0.498	No
	Edge 2	0.112	0.118		0.230	No
	Rear	0.797		0.066	0.863	No
	Front	0.291		0.066	0.357	No
	Edge 2	0.112		0.066	0.178	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		
Head	Left Touch	0.050	0.380		0.430	No
	Left Tilt	0.050	0.638		0.688	No
	Right Touch	0.065	0.186		0.251	No
	Right Tilt	0.017	0.197		0.214	No
Head	Left Touch	0.050		0.396	0.446	No
	Left Tilt	0.050		0.587	0.637	No
	Right Touch	0.065		0.307	0.372	No
	Right Tilt	0.017		0.404	0.421	No
Body-worn	Rear	0.797	0.577		1.374	No
	Front	0.291	0.154		0.445	No
	Edge 2	0.112	0.311		0.423	No
	Rear	0.797		0.539	1.336	No
	Front	0.291		0.129	0.420	No
	Edge 2	0.112		0.336	0.448	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			
Head	Left Touch	0.050	0.563		0.613	No
	Left Tilt	0.050	0.609		0.659	No
	Right Touch	0.065	0.260		0.325	No
	Right Tilt	0.017	0.246		0.263	No
Body-worn	Rear	0.797	0.142		0.939	No
	Front	0.291	0.097		0.388	No
	Edge 2	0.112	0.125		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 4 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/kg)	SPLSR (Yes/No)
		LTE Band 4	Wi-Fi DTS Band	Bluetooth		
Head	Left Touch	0.007	0.528		0.535	No
	Left Tilt	0.004	0.550		0.554	No
	Right Touch	0.016	0.287		0.303	No
	Right Tilt	0.002	0.332		0.334	No
Head	Left Touch	0.007		0.066	0.073	No
	Left Tilt	0.004		0.066	0.070	No
	Right Touch	0.016		0.066	0.082	No
	Right Tilt	0.002		0.066	0.068	No
Body-worn	Rear	0.488	0.207		0.695	No
	Front	0.193	0.207		0.400	No
	Edge 2	0.039	0.118		0.157	No
	Rear	0.488		0.066	0.554	No
	Front	0.193		0.066	0.259	No
	Edge 2	0.039		0.066	0.105	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		
Head	Left Touch	0.007	0.380		0.387	No
	Left Tilt	0.004	0.638		0.642	No
	Right Touch	0.016	0.186		0.202	No
	Right Tilt	0.002	0.197		0.199	No
Head	Left Touch	0.007		0.396	0.403	No
	Left Tilt	0.004		0.587	0.591	No
	Right Touch	0.016		0.307	0.323	No
	Right Tilt	0.002		0.404	0.406	No
Body-worn	Rear	0.488	0.577		1.065	No
	Front	0.193	0.154		0.347	No
	Edge 2	0.039	0.311		0.350	No
	Rear	0.488		0.539	1.027	No
	Front	0.193		0.129	0.322	No
	Edge 2	0.039		0.336	0.375	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			
Head	Left Touch	0.007	0.563		0.570	No
	Left Tilt	0.004	0.609		0.613	No
	Right Touch	0.016	0.260		0.276	No
	Right Tilt	0.002	0.246		0.248	No
Body-worn	Rear	0.488	0.142		0.630	No
	Front	0.193	0.097		0.290	No
	Edge 2	0.039	0.125		0.164	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: Aug. 02, 2025**

System Check Head 835 MHz

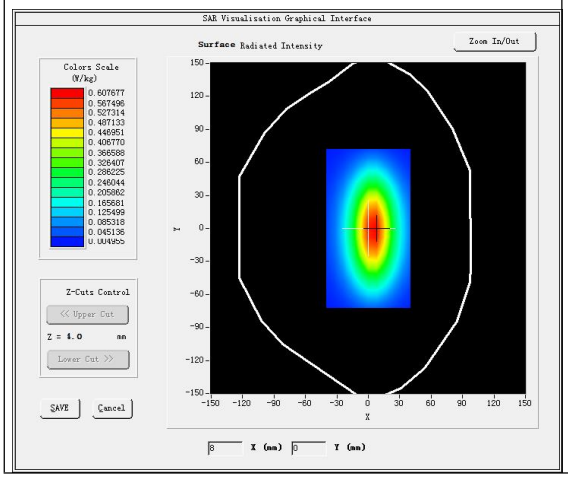
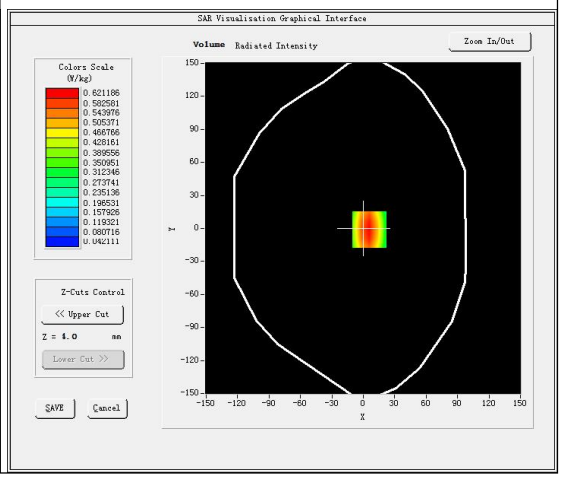
DUT: Dipole 835 MHz Type: SID 835

Communication System CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1; Conv.F=2.23
Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ=0.91 mho/m; εr =41.31; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm

SATIMO Configuration:

- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

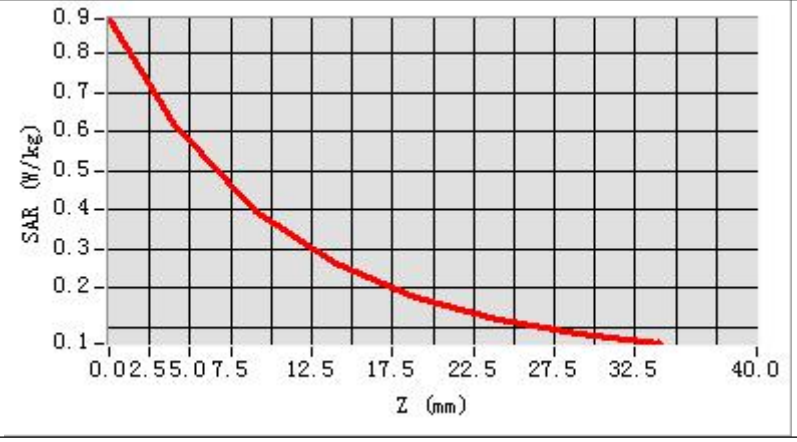
Configuration/System Check 835MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 835MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

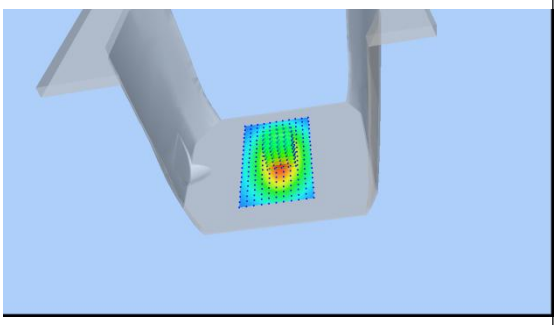
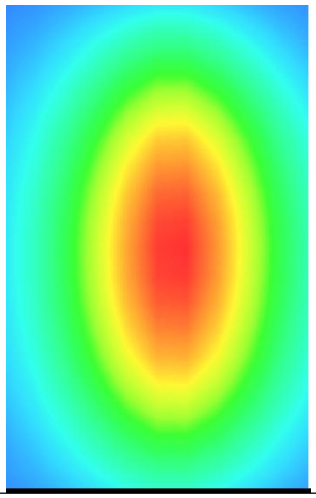
SURFACE SAR	VOLUME SAR
	

Maximum location: X=6.00, Y=-1.00
SAR Peak: 0.88 W/kg

SAR 10g (W/Kg)	0.377892
SAR 1g (W/Kg)	0.595046

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8885	0.6201	0.3971	0.2627	0.1766	0.1209	0.0823

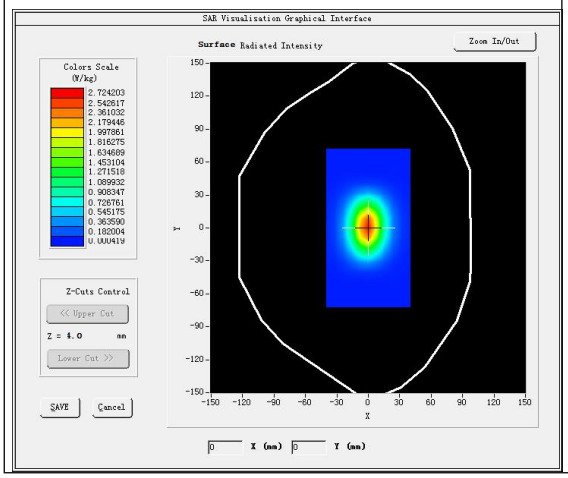
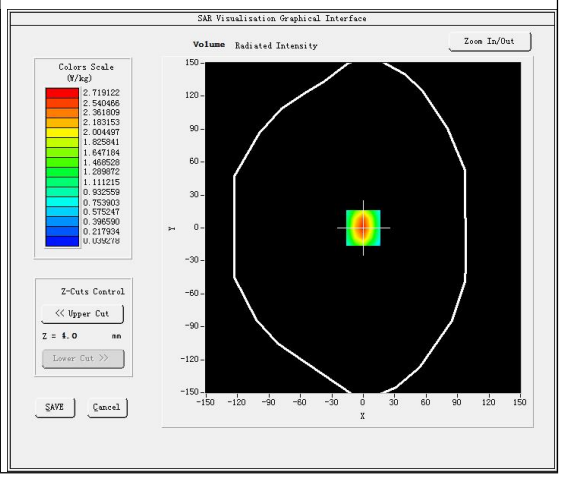


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Aug. 04, 2025**
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=2.33
Frequency: 1750 MHz; Medium parameters used: f = 1750MHz; σ=1.34 mho/m; εr =39.71; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

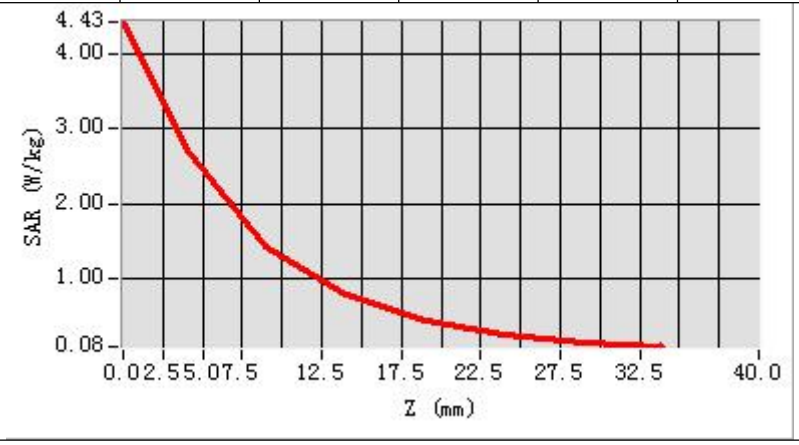
Configuration/System Check 1750MHz **Head/Area Scan:** Measurement grid: dx=8mm,dy=8mm
Configuration/System Check 1750MHz **Head/Zoom Scan:** Measurement grid: dx=8mm,dy=8mm, dz=5mm

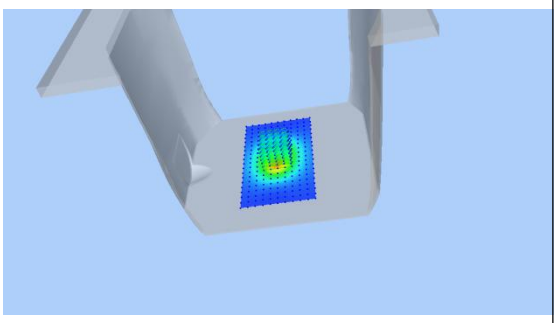
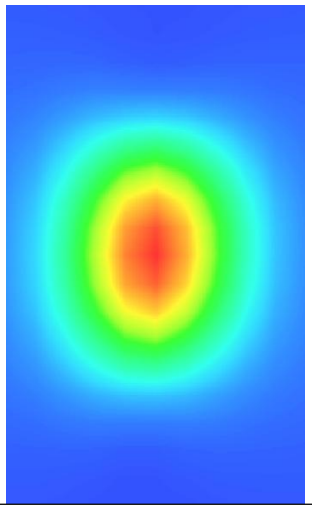
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 4.41 W/kg

SAR 10g (W/Kg)	1.291432
SAR 1g (W/Kg)	2.413877

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	4.4324	2.7137	1.4316	0.7845	0.4463	0.2574	0.1452

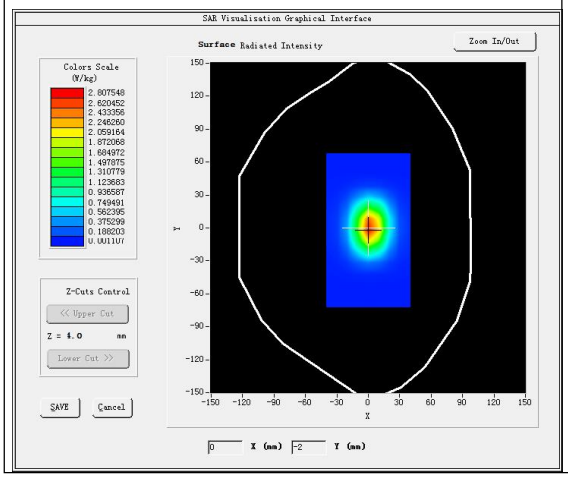
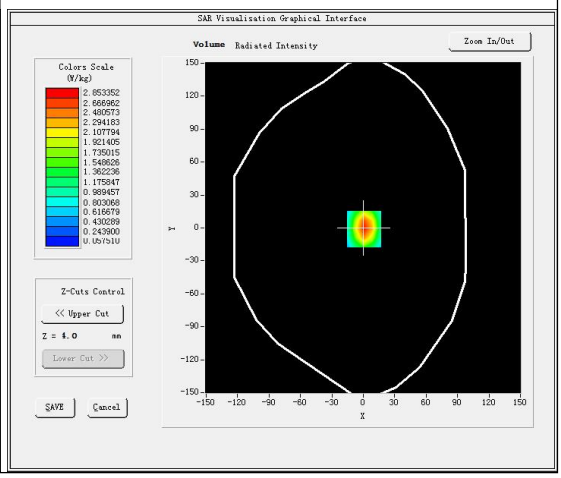


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Aug. 03, 2025**
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=2.25
Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ=1.42 mho/m; εr =39.48; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

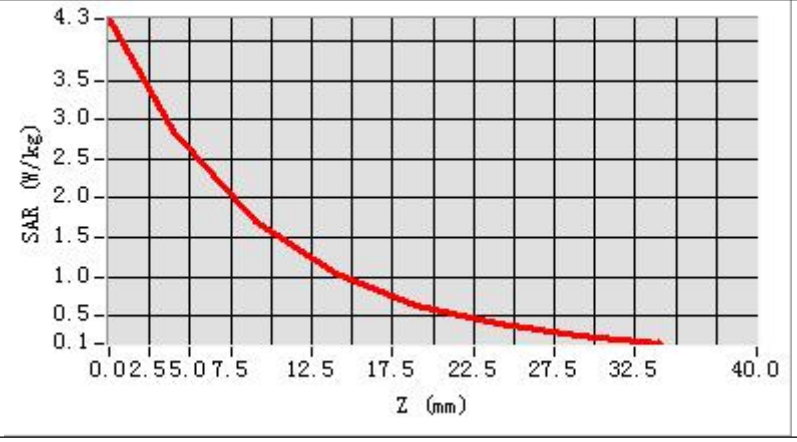
Configuration/System Check 1900MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 1900MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

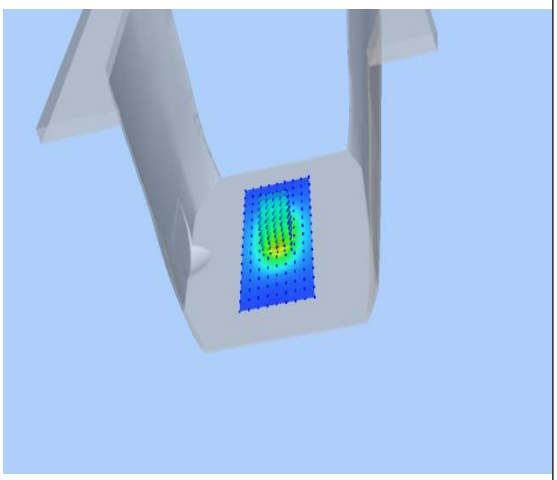
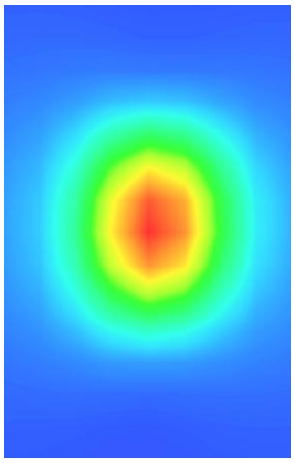
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-1.00
SAR Peak: 4.29 W/kg

SAR 10g (W/Kg)	1.273548
SAR 1g (W/Kg)	2.671652

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	4.2828	2.8571	1.6964	1.0473	0.6342	0.3908	0.2469



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Aug. 05, 2025**

System Check Head 2450 MHz

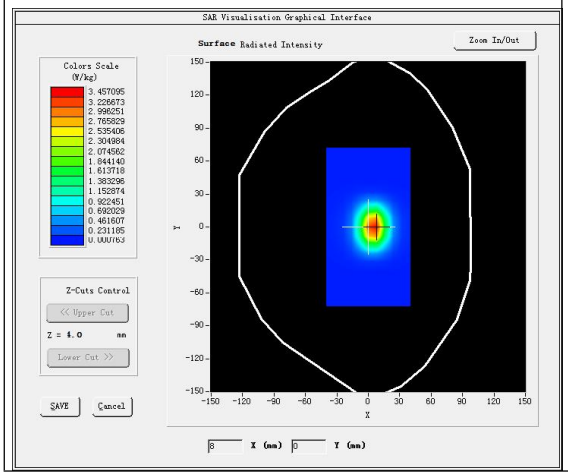
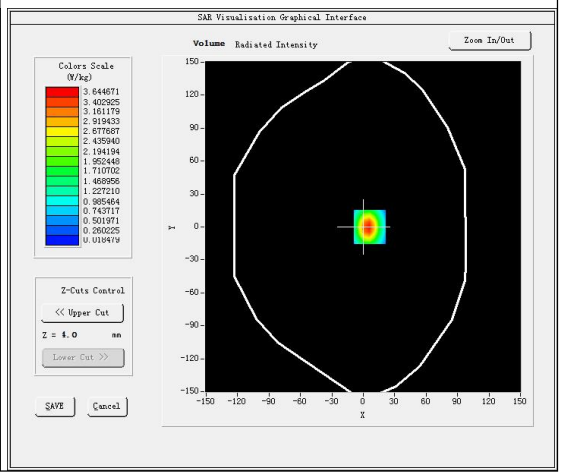
DUT: Dipole 2450 MHz Type: SID 2450

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=1.83 mho/m; εr =40.13; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm

SATIMO Configuration

- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

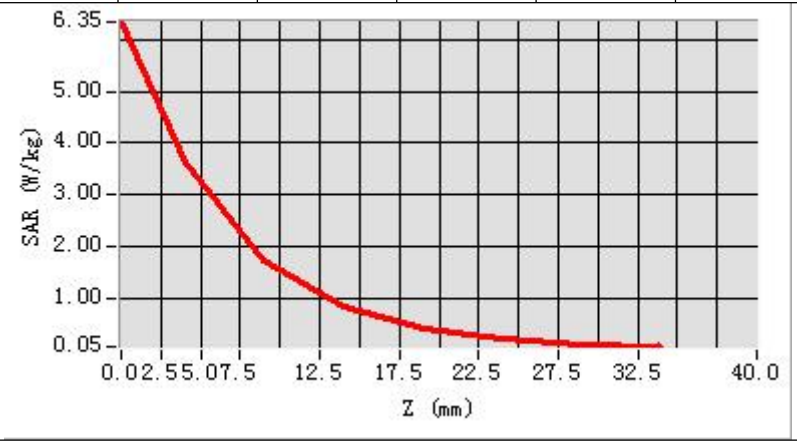
Configuration/System Check 2450MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 2450MHz Head/Zoom Scan: Measurement grid: dx=5mm,dy=5mm, dz=5mm

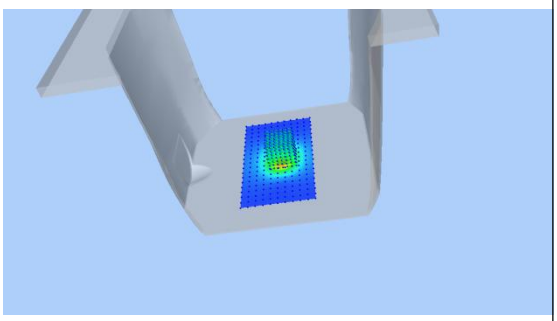
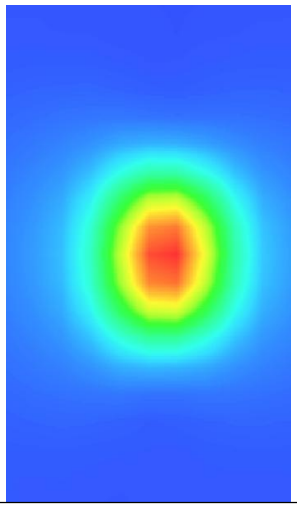
SURFACE SAR	VOLUME SAR
	

Maximum location: X=6.00, Y=0.00
SAR Peak: 6.30 W/kg

SAR 10g (W/Kg)	1.504142
SAR 1g (W/Kg)	3.340860

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.3452	3.6447	1.7032	0.8328	0.4084	0.2039	0.1020



3D screen shot	Hot spot position
	

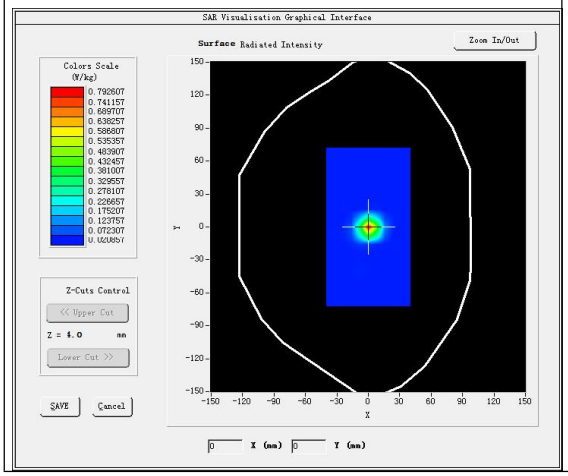
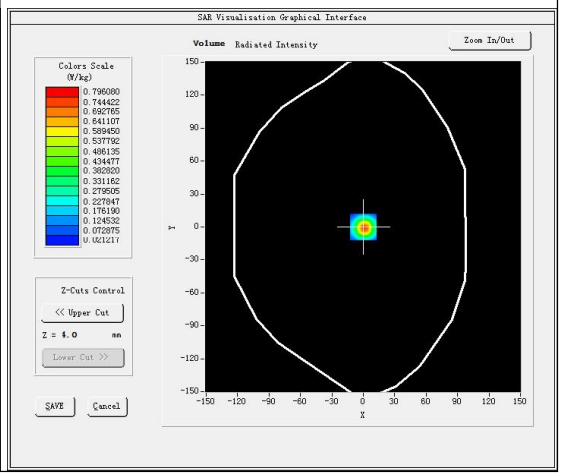
Test Laboratory: AGC Lab **Date: Aug. 06, 2025**

System Check 5200 MHz
DUT: Dipole 5000MHz Type: SID5000
Communication System: CW; Communication System Band: D5000 (5000.0 MHz); Duty Cycle: 1:1; Conv.F=1.54
Frequency: 5200 MHz; Medium parameters used: f = 5250 MHz; σ =4.58 mho/m; εr =35.92; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=10dBm

SATIMO Configuration:

- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

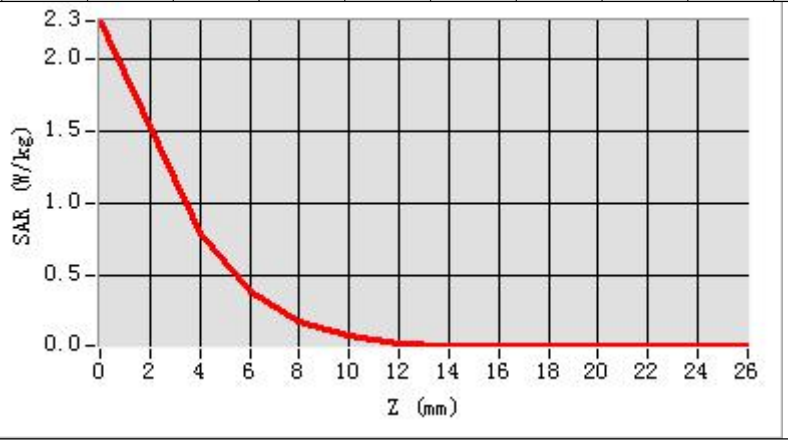
Configuration/System Check 5200 MHz **Body/Area Scan:** Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 5200 MHz **Body/Zoom Scan:** Measurement grid: dx=4mm,dy=4mm, dz=2mm

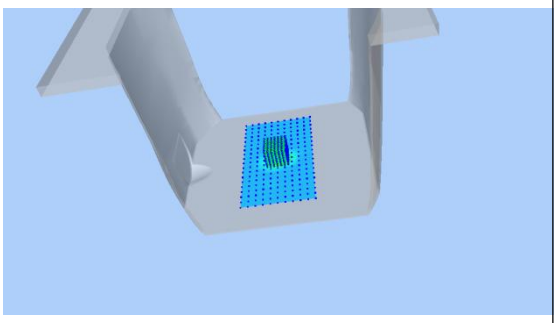
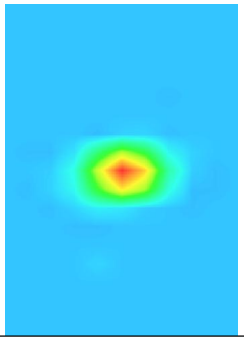
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 2.23 W/kg

SAR 10g (W/Kg)	0.214934
SAR 1g (W/Kg)	0.738241

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)	2.2593	0.7982	0.3997	0.1813	0.0837	0.0361	0.0271	0.0213	0.0234	0.0234	0.0234	0.0234



3D screen shot	Hot spot position
	

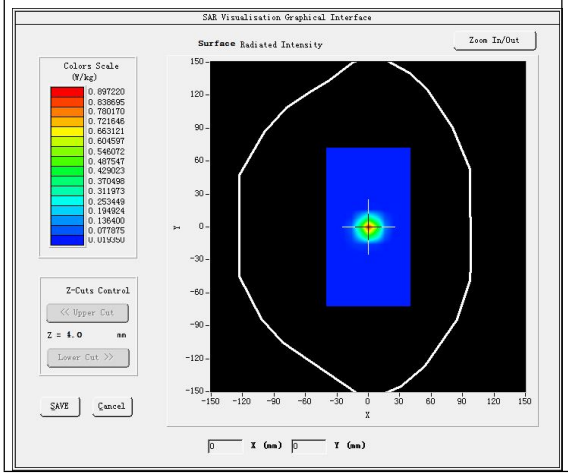
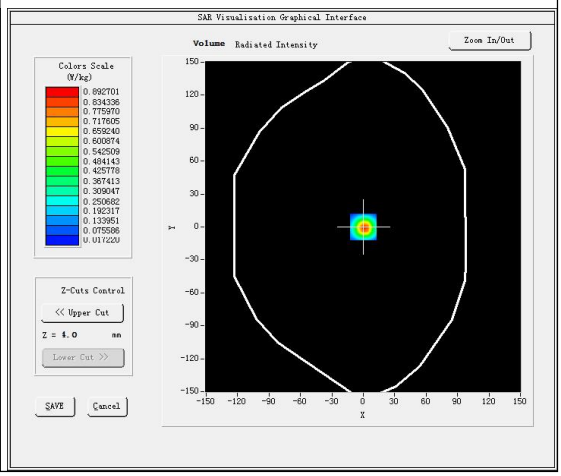
Test Laboratory: AGC Lab **Date: Aug. 07, 2025**

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=1.54
Frequency: 5300 MHz; Medium parameters used: f = 5250 MHz; σ =4.61 mho/m; εr =36.52; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section; Input Power=10dBm

SATIMO Configuration:

- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

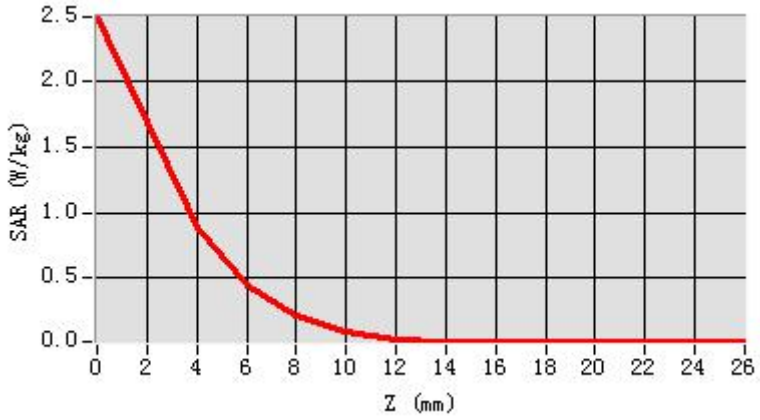
Configuration/System Check 5300 MHz **Head/Area Scan:** Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 5300 MHz **Head/Zoom Scan:** Measurement grid: dx=4mm,dy=4mm, dz=2mm

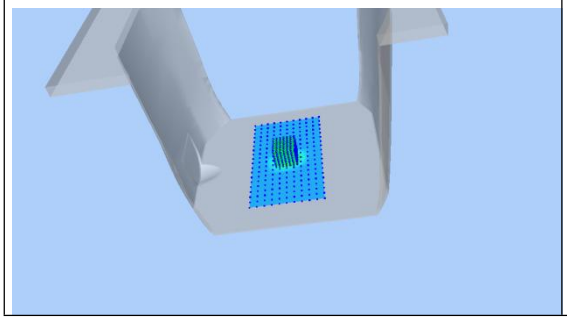
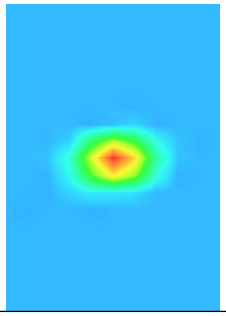
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 2.47 W/kg

SAR 10g (W/Kg)	0.235021
SAR 1g (W/Kg)	0.826175

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)	2.4893	0.8941	0.4499	0.2161	0.0954	0.0376	0.0253	0.0197	0.0217	0.0215	0.0215	0.0215



3D screen shot	Hot spot position
	

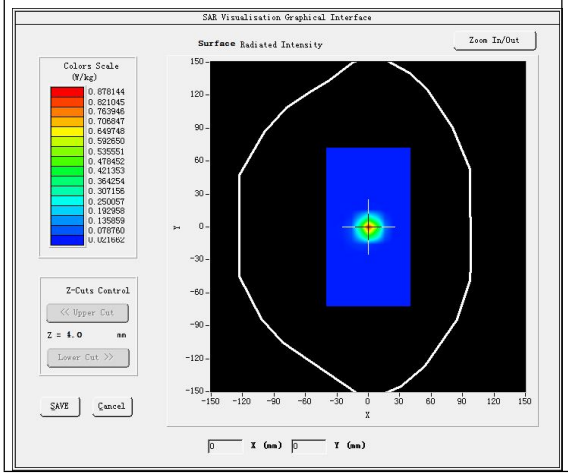
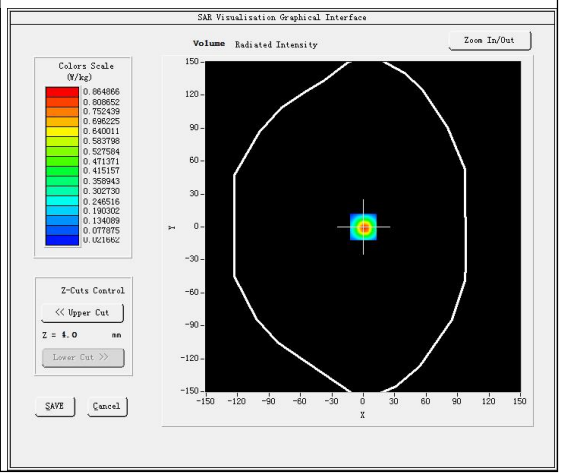
Test Laboratory: AGC Lab **Date: Aug. 08, 2025**

System Check Head 5800 MHz
DUT: Dipole 5000MHz Type: SID5000
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 = 5750 MHz; σ =5.19 mho/m; εr =36.37; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=10dBm

SATIMO Configuration:

- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

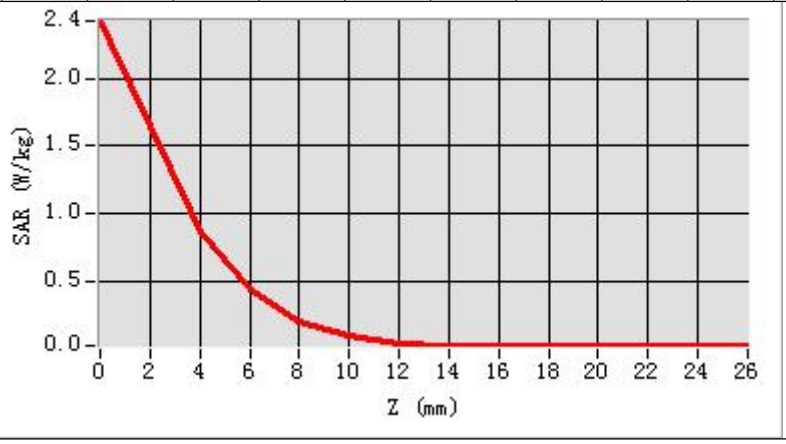
Configuration/System Check 5800 MHz **Head/Area Scan:** Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 5800 MHz **Head/Zoom Scan:** Measurement grid: dx=4mm,dy=4mm, dz=2mm

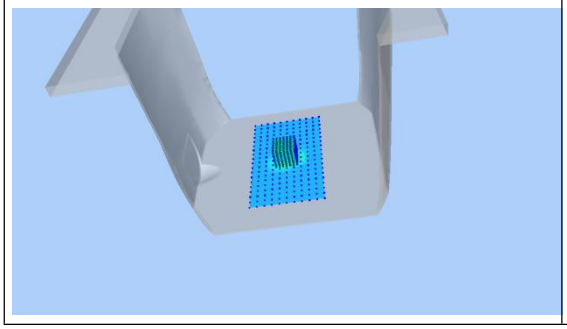
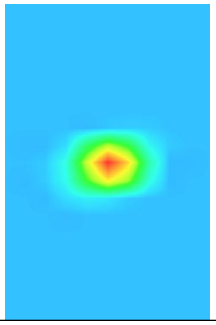
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 2.41 W/kg

SAR 10g (W/Kg)	0.228345
SAR 1g (W/Kg)	0.801739

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)	2.4267	0.8638	0.4324	0.2043	0.0922	0.0394	0.0271	0.0235	0.0239	0.0218	0.0239	0.0239



3D screen shot	Hot spot position
	

APPENDIX B. SAR MEASUREMENT DATA

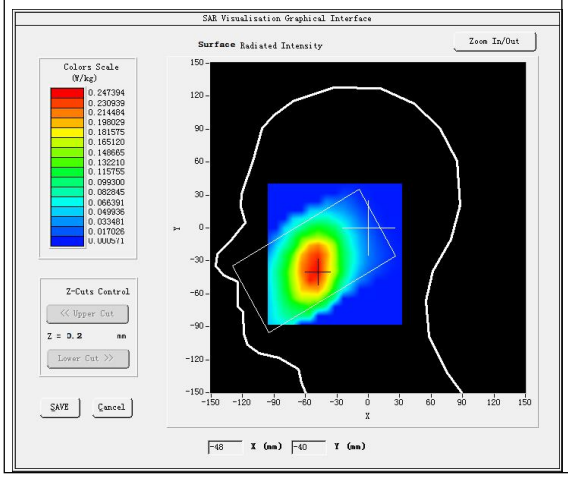
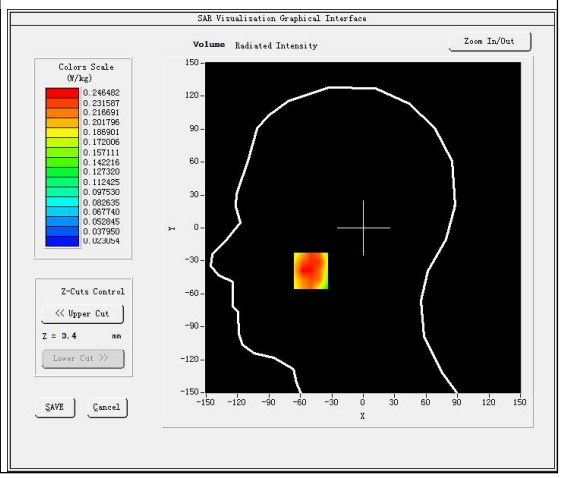
Test Laboratory: AGC Lab **Date: Aug. 02, 2025**
GSM 850 Mid- Touch-Right <SIM 1>
DUT: Smartphone; Type: ENV NOTE 20

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=2.23; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.92 mho/m; εr = 40.97; ρ= 1000 kg/m³ ; Phantom section: Right Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/GSM 850 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GSM 850 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

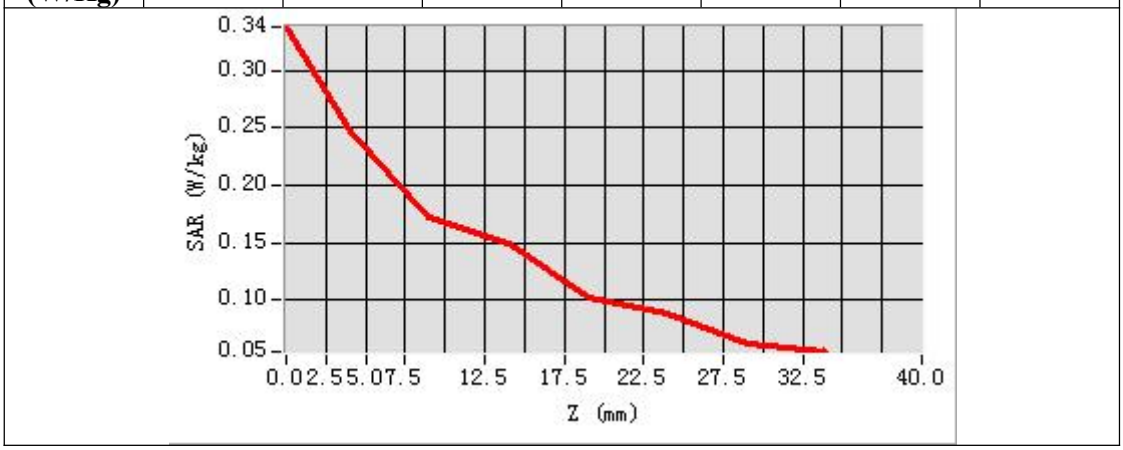
SURFACE SAR	VOLUME SAR
	

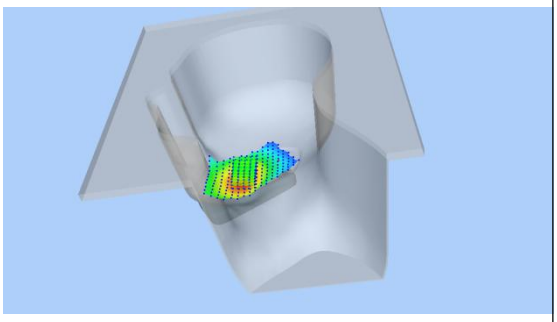
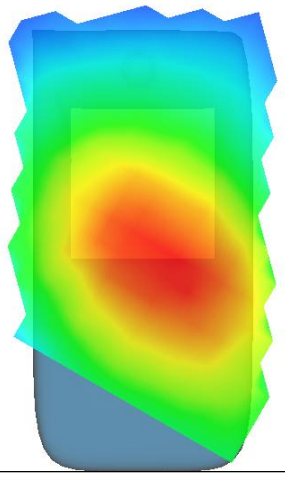
Maximum location: X=-50.00, Y=-39.00
SAR Peak: 0.35 W/kg

SAR 10g (W/Kg)	0.175565
SAR 1g (W/Kg)	0.246237

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.3382	0.2465	0.1727	0.1495	0.1020	0.0874	0.0620

(W/Kg)							



3D screen shot	Hot spot position
	

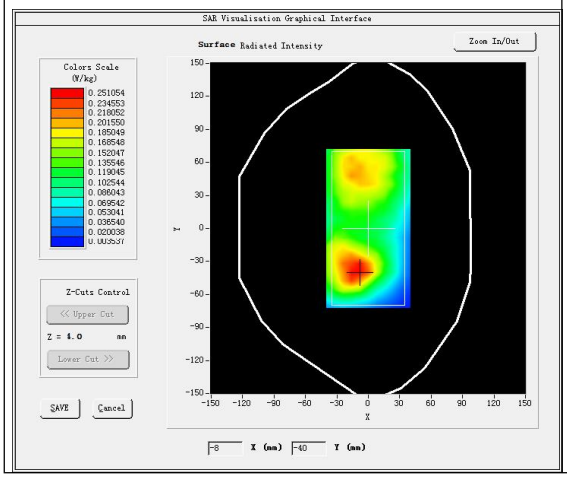
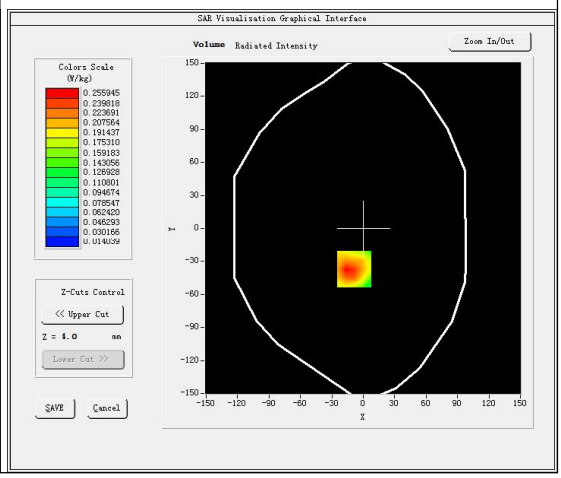
Test Laboratory: AGC Lab **Date: Aug. 02, 2025**
GSM 850 Mid- Body- Back (MS)<SIM 1>
DUT: Smartphone; Type: ENV NOTE 20

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=2.23; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.92 mho/m; εr = 40.97; ρ= 1000 kg/m^3 ; Phantom section: Flat Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

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

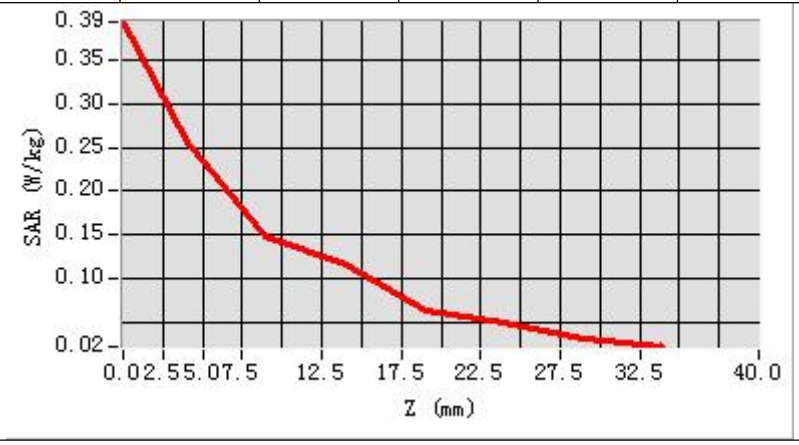
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

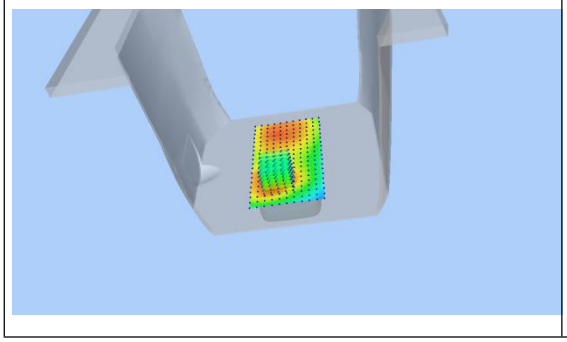
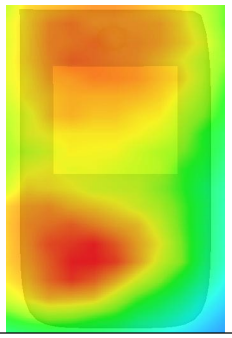
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-9.00, Y=-37.00
SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.151572
SAR 1g (W/Kg)	0.245165

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3929	0.2559	0.1484	0.1151	0.0646	0.0489	0.0310



3D screen shot	Hot spot position
	

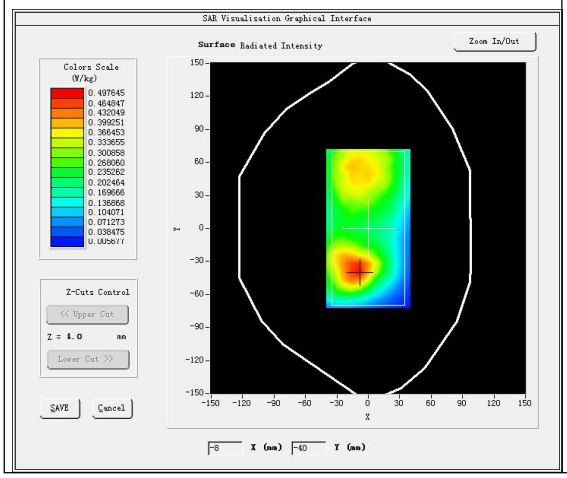
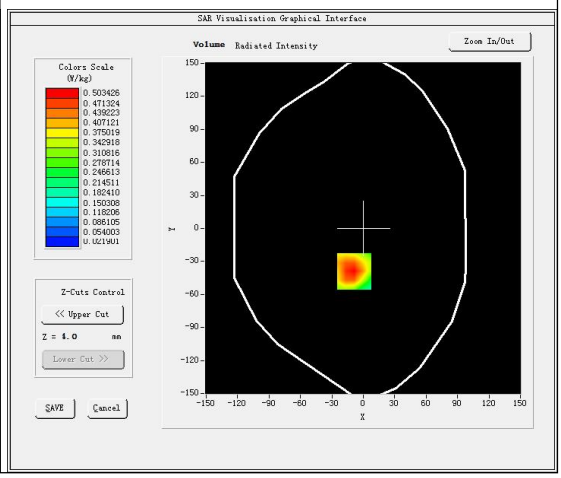
Test Laboratory: AGC Lab **Date: Aug. 02, 2025**
GPRS 850 Mid- Body- Back (4up)
DUT: Smartphone; Type: ENV NOTE 20

Communication System: GPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.1; Conv.F=2.23; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.92 mho/m; εr = 40.97; ρ= 1000 kg/m^3 ; Phantom section: Flat Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; 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/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GPRS 850 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

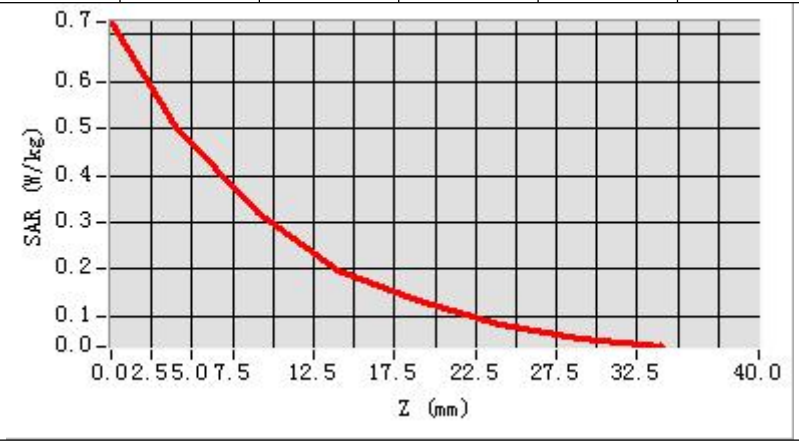
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 2.0)

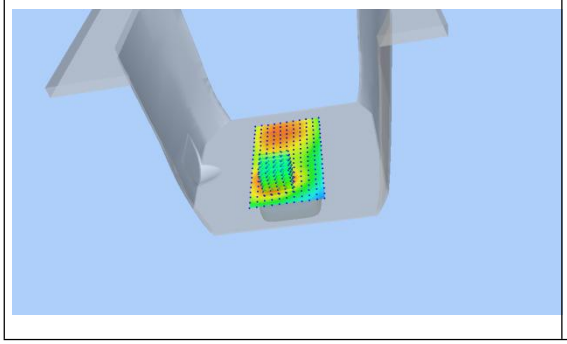
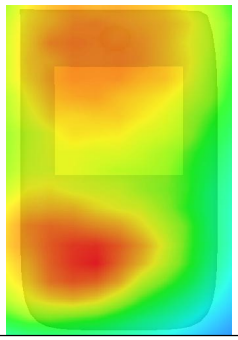
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-9.00, Y=-39.00
SAR Peak: 0.77 W/kg

SAR 10g (W/Kg)	0.292273
SAR 1g (W/Kg)	0.488822

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7267	0.5034	0.3199	0.1980	0.1317	0.0840	0.0514



3D screen shot	Hot spot position
	

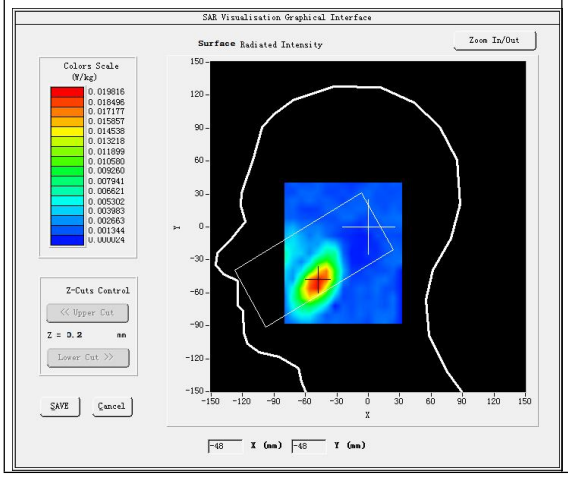
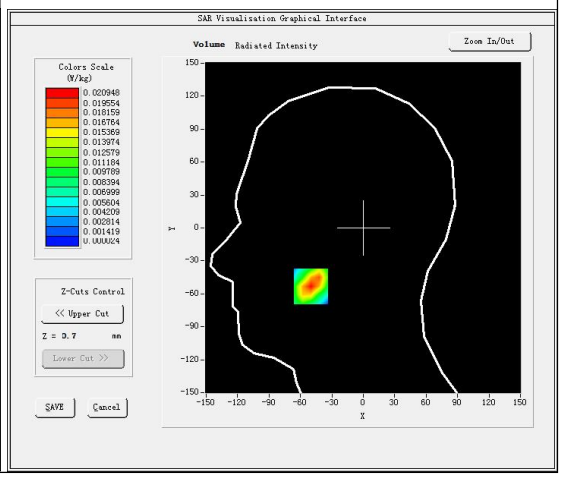
Test Laboratory: AGC Lab **Date: Aug. 03, 2025**
PCS 1900 Mid-Touch-Right <SIM 1>
DUT: Smartphone; Type: ENV NOTE 20

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=2.25; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.40 mho/m; εr =39.96; ρ= 1000 kg/m³ ; Phantom section: Right Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/PCS1900 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/PCS1900 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

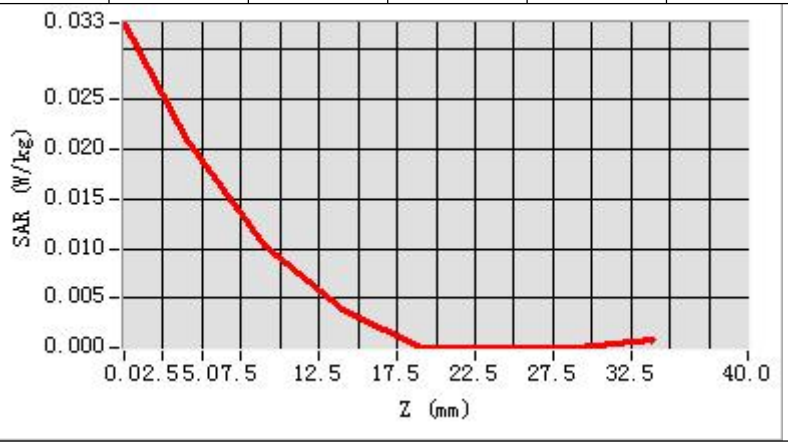
SURFACE SAR	VOLUME SAR
	

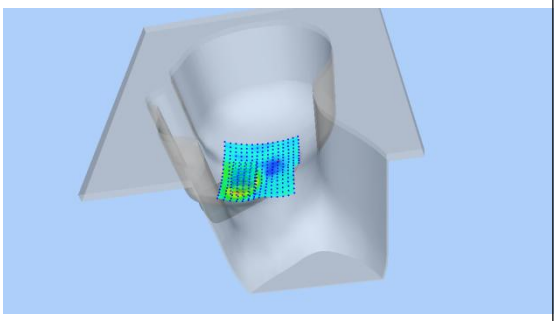
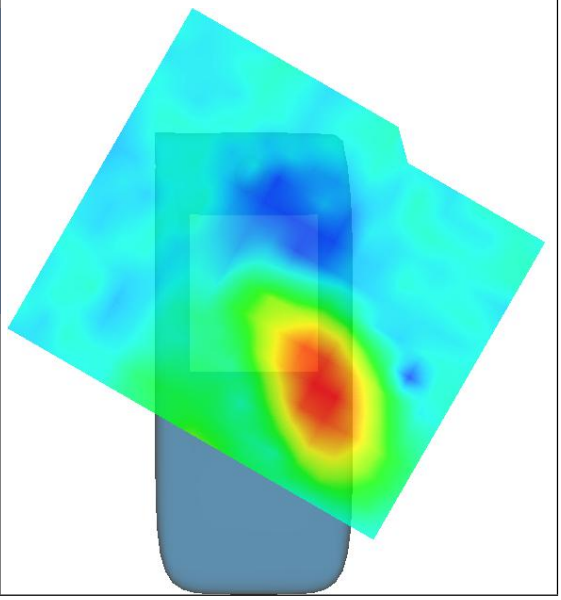
Maximum location: X=-50.00, Y=-53.00
SAR Peak: 0.03 W/kg

SAR 10g (W/Kg)	0.008334
SAR 1g (W/Kg)	0.018878

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00

SAR (W/Kg)	0.0327	0.0209	0.0102	0.0039	0.0001	0.0000	0.0001



3D screen shot	Hot spot position
	

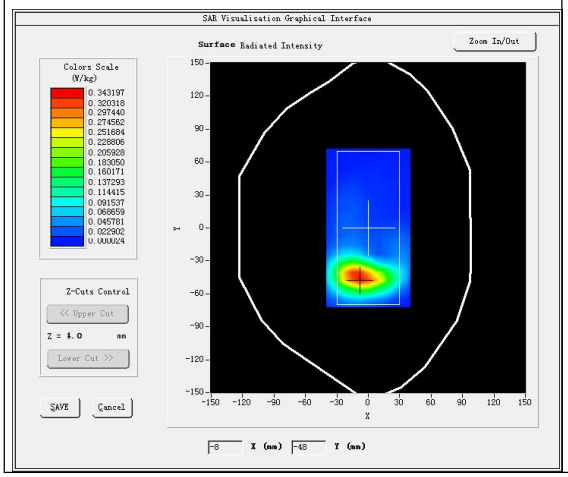
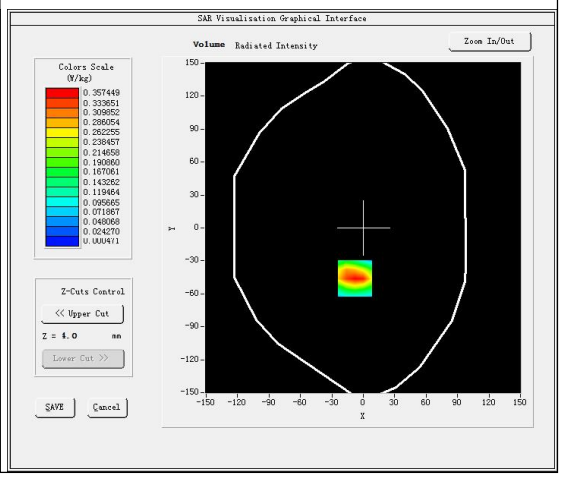
Test Laboratory: AGC Lab **Date: Aug. 03, 2025**
PCS 1900 Mid-Body-Back (MS)<SIM 1>
DUT: Smartphone; Type: ENV NOTE 20

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=2.25; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.40 mho/m; εr =39.96; ρ= 1000 kg/m³ ; Phantom section: Flat Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/PCS1900 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/PCS1900 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

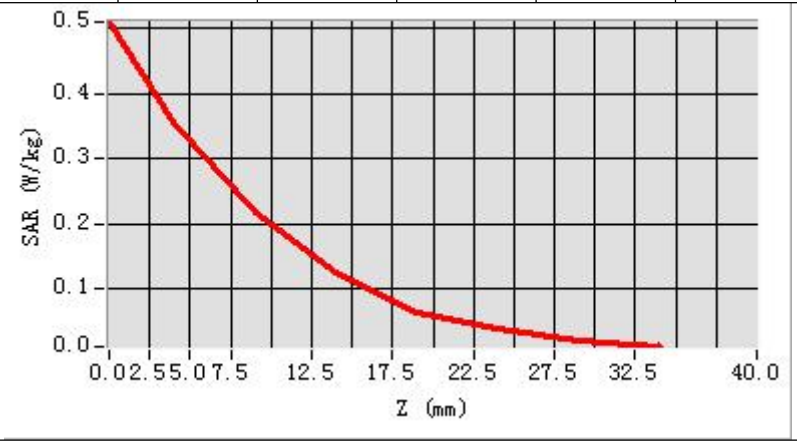
Area Scan	surf_sam_plan.txt, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

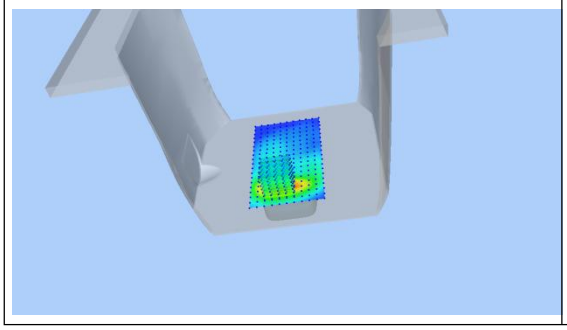
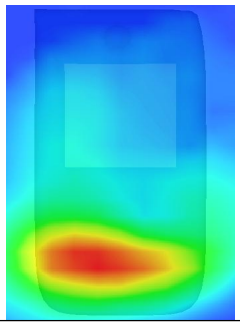
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=-46.00
SAR Peak: 0.60 W/kg

SAR 10g (W/Kg)	0.170803
SAR 1g (W/Kg)	0.335833

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.5099	0.3574	0.2165	0.1249	0.0637	0.0384	0.0201



3D screen shot	Hot spot position
	

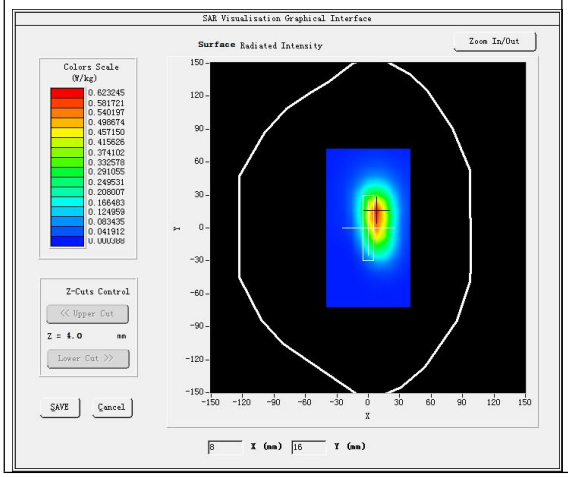
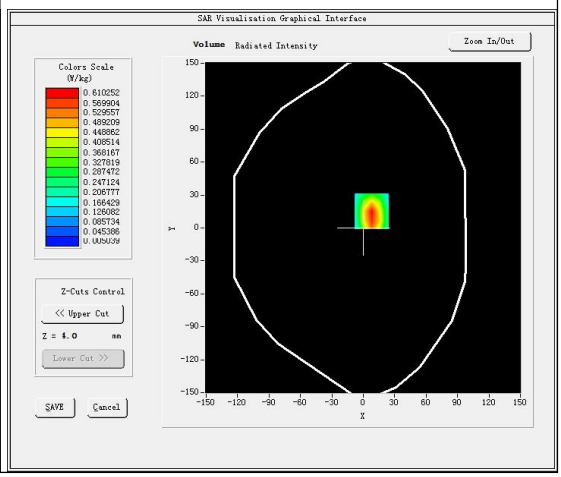
Test Laboratory: AGC Lab **Date: Aug. 03, 2025**
GPRS 1900 Mid-Edge 3(4up)
DUT: Smartphone; Type: ENV NOTE 20

Communication System: GPRS-4Slot; Communication System Band: PCS 1900; Duty Cycle: 1:2.1; Conv.F=2.25; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.40 mho/m; εr =39.96; ρ= 1000 kg/m^3 ; Phantom section: Flat Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_32

Configuration/GPRS1900 Mid-Edge 3/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GPRS1900 Mid-Edge 3/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

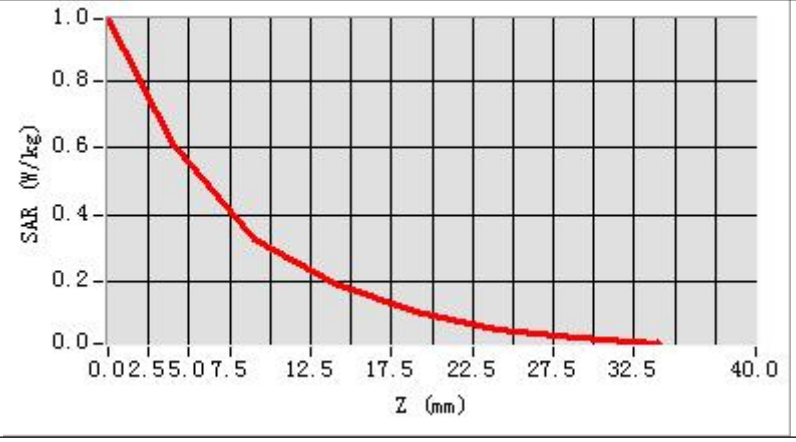
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Edge 3
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 2.0)

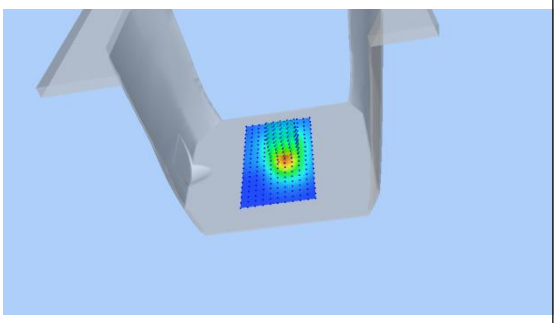
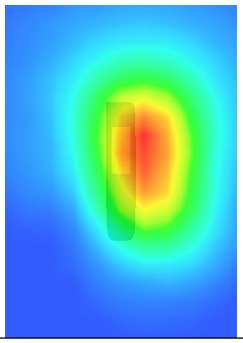
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=15.00
SAR Peak: 0.97 W/kg

SAR 10g (W/Kg)	0.295599
SAR 1g (W/Kg)	0.570848

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.9830	0.6103	0.3288	0.1959	0.1117	0.0584	0.0327



3D screen shot	Hot spot position
	

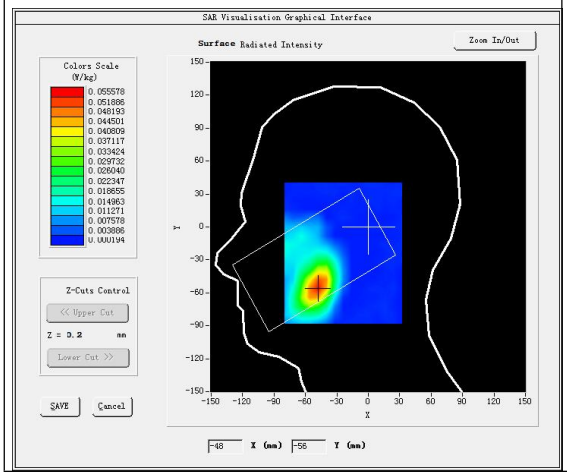
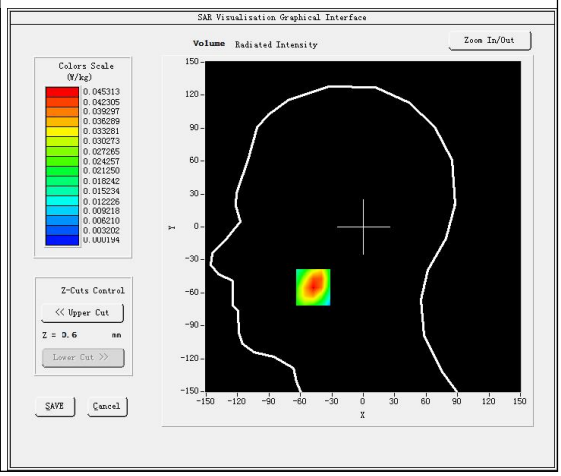
Test Laboratory: AGC Lab **Date: Aug. 03, 2025**
WCDMA Band II Mid-Touch-Right (RMC)
DUT: Smartphone; Type: ENV NOTE 20

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.25; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.40 mho/m; εr =39.96; ρ= 1000 kg/m^3 ; Phantom section: Right Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; 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-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/WCDMA band II Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	WCDMA band II
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

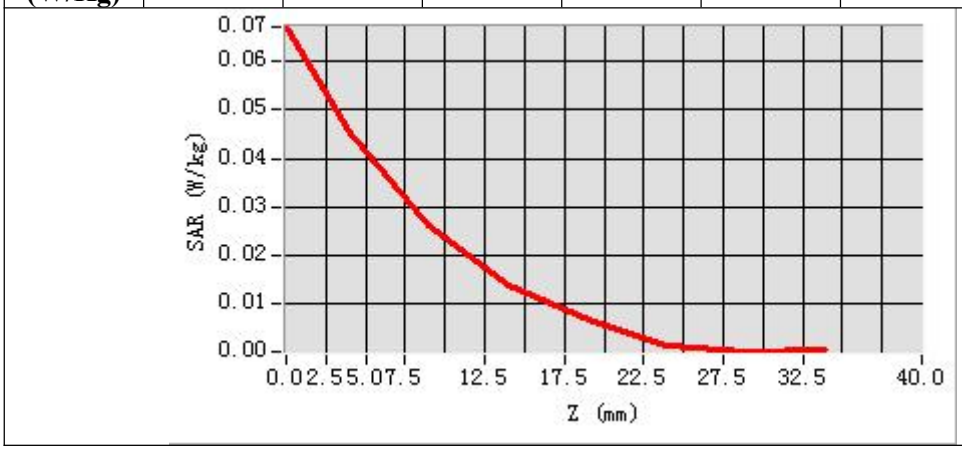
SURFACE SAR	VOLUME SAR
	

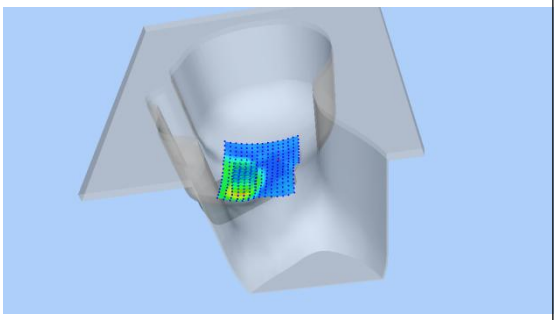
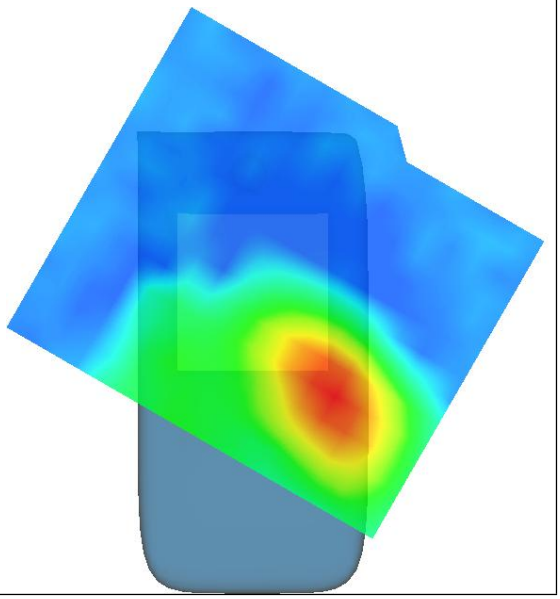
Maximum location: X=-48.00, Y=-55.00
SAR Peak: 0.07 W/kg

SAR 10g (W/Kg)	0.021602
SAR 1g (W/Kg)	0.042966

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR	**0.0671**	**0.0453**	**0.0264**	**0.0138**	**0.0068**	**0.0014**	**0.0002**

(W/Kg)							



3D screen shot	Hot spot position
	

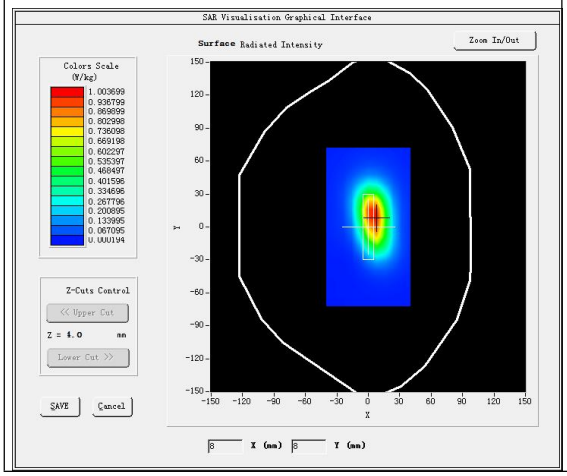
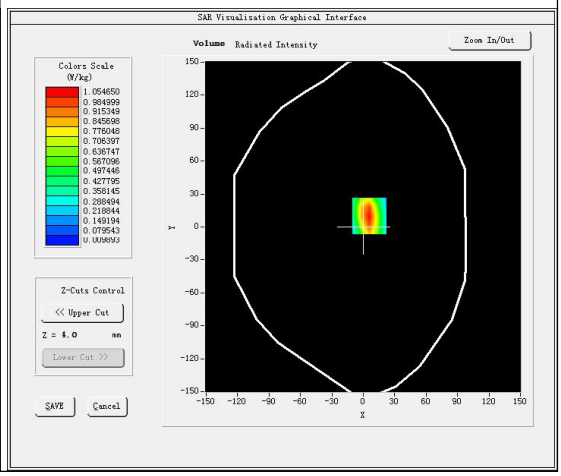
Test Laboratory: AGC Lab **Date: Aug. 03, 2025**
WCDMA Band II High-Edge 3(RMC)
DUT: Smartphone; Type: ENV NOTE 20

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Conv.F=2.25
Frequency: 1907.6 MHz; Medium parameters used: f = 1900 MHz; σ=1.44 mho/m; εr =38.79; ρ= 1000 kg/m³ ;
Phantom section: Flat Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; 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 High -Edge 3/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA band II High -Edge 3/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

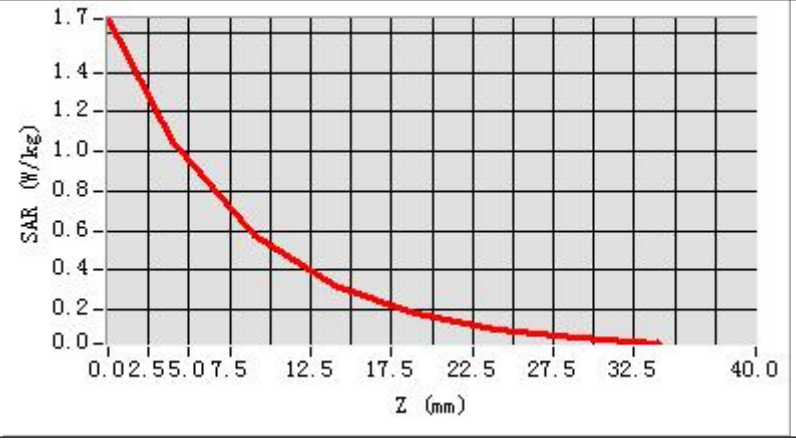
Area Scan	surf_sam_plan.txt, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Edge 3
Band	WCDMA band II
Channels	High
Signal	CDMA (Crest factor: 1.0)

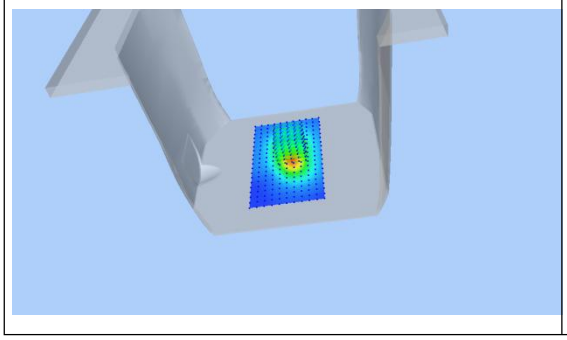
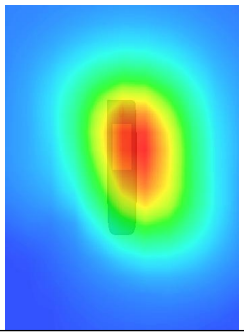
SURFACE SAR	VOLUME SAR
	

Maximum location: X=6.00, Y=10.00
SAR Peak: 1.68 W/kg

SAR 10g (W/Kg)	0.502032
SAR 1g (W/Kg)	0.989458

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.6704	1.0547	0.5780	0.3290	0.1855	0.1051	0.0579



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Aug. 02, 2025**

WCDMA Band Ⅴ Mid-Touch-Right (RMC)

DUT: Smartphone; Type: ENV NOTE 20

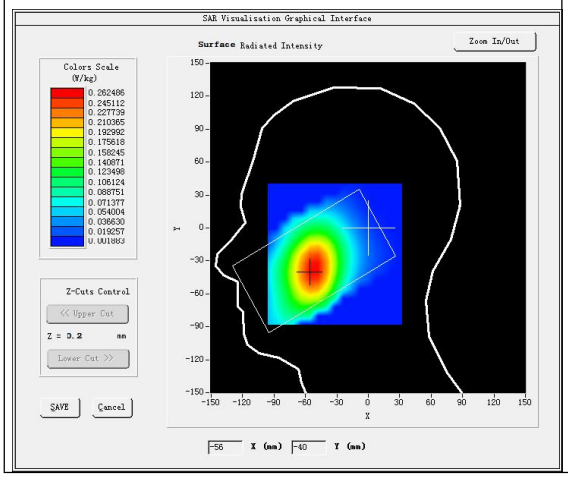
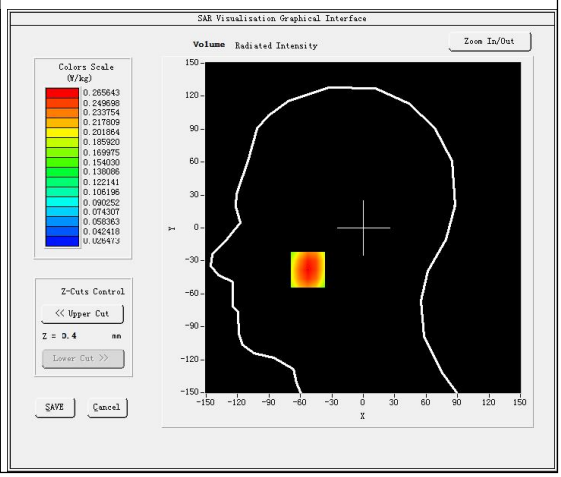
Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; Duty Cycle:1: 1; Conv.F=2.23; Frequency: 836.4 MHz; Medium parameters used: f = 835MHz; σ=0.92 mho/m; εr =40.97; ρ= 1000 kg/m³ ; Phantom section: Right Section

SATIMO Configuration:

- Probe: SSE2; Calibrated: 2025-05-06; 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-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band V Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	WCDMA Band V
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

SURFACE SAR	VOLUME SAR
	

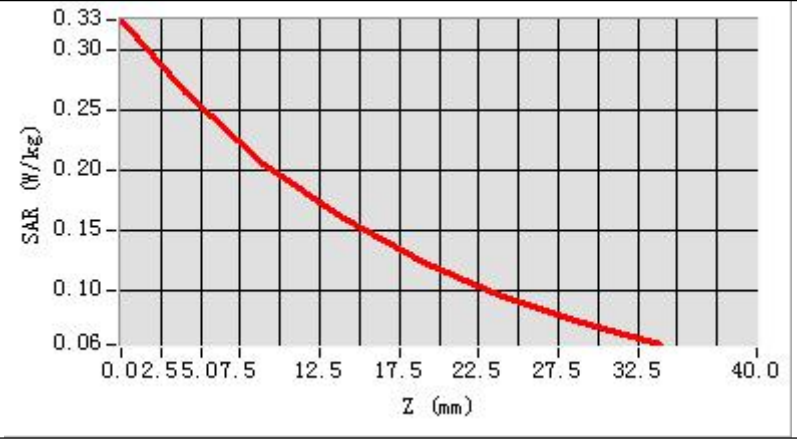
Maximum location: X=-53.00, Y=-38.00

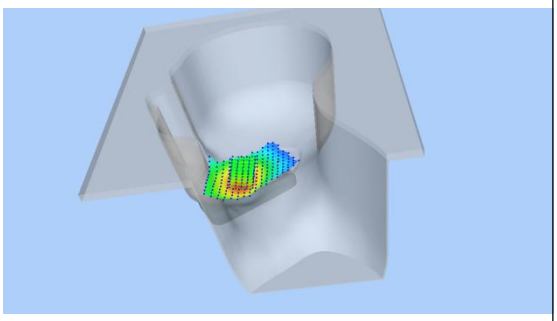
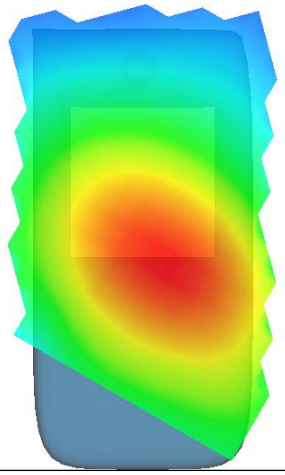
SAR Peak: 0.33 W/kg

SAR 10g (W/Kg)	0.185896
SAR 1g (W/Kg)	0.256229

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

SAR (W/Kg)	0.3254	0.2656	0.2051	0.1594	0.1228	0.0953	0.0736



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: Aug. 02, 2025**

WCDMA Band Ⅴ Mid-Body-Towards Grounds (RMC)

DUT: Smartphone; Type: ENV NOTE 20

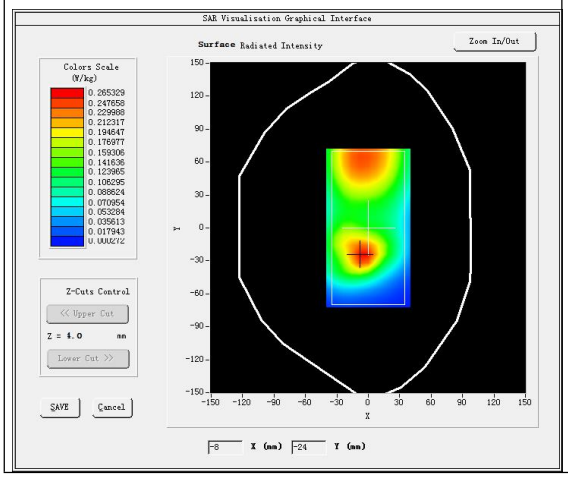
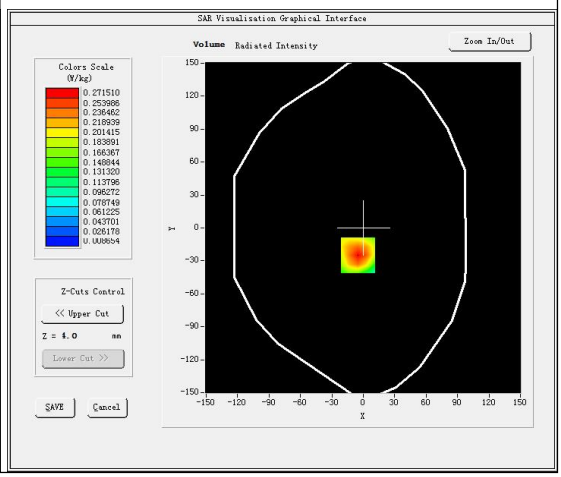
Communication System: UMTS; Communication System Band: BAND V UTRA/FDD; Duty Cycle:1: 1; Conv.F=2.23; Frequency: 836.4 MHz; Medium parameters used: f = 835MHz; σ= 0.92 mho/m; εr = 40.97; ρ= 1000 kg/m³ ; Phantom section: Flat Section

SATIMO Configuration:

- Probe: SSE2; Calibrated: 2025-05-06; 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/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band V Mid-Body-Back/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
Band	WCDMA Band V
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

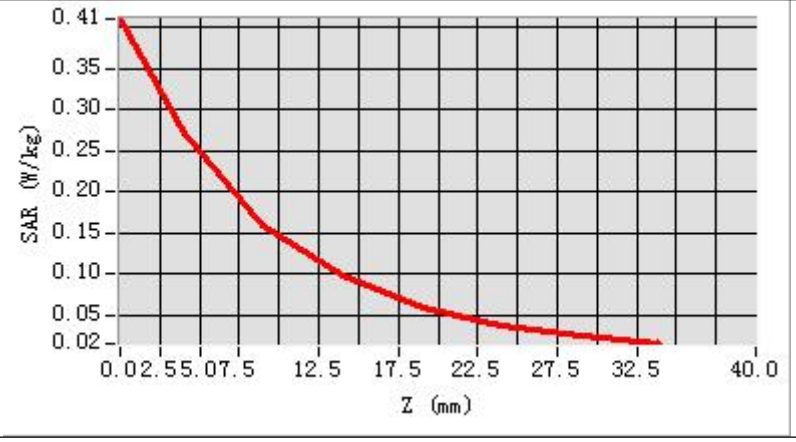
SURFACE SAR	VOLUME SAR
	

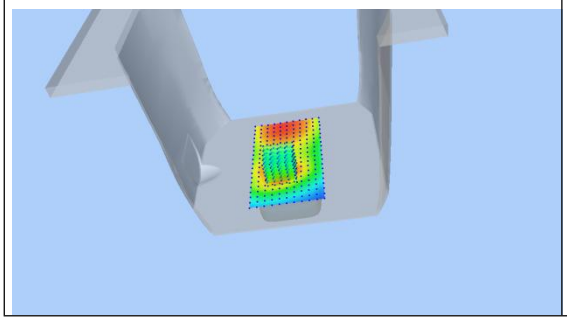
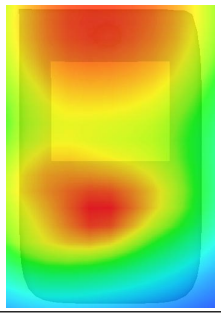
Maximum location: X=-5.00, Y=-25.00

SAR Peak: 0.41 W/kg

SAR 10g (W/Kg)	0.151262
SAR 1g (W/Kg)	0.259063

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.4108	0.2715	0.1603	0.0976	0.0608	0.0386	0.0247



3D screen shot	Hot spot position
	

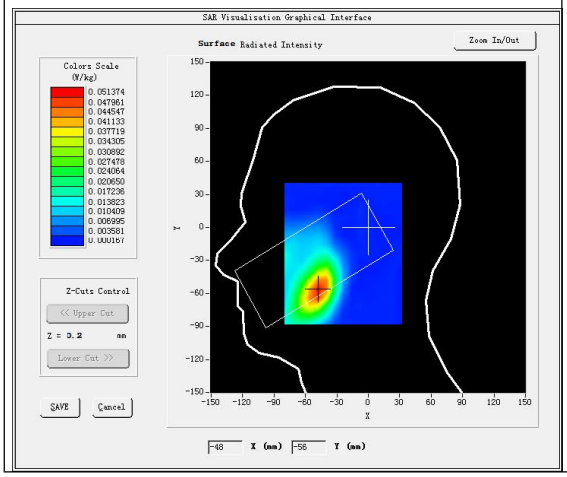
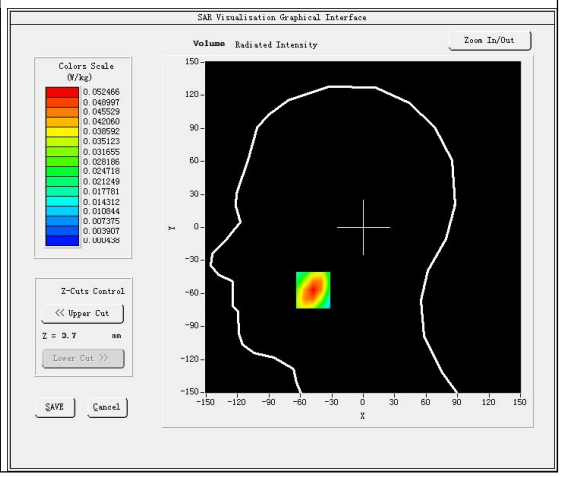
Test Laboratory: AGC Lab **Date: Aug. 03, 2025**
LTE Band 2 Mid-Touch-Right (1 RB#0)
DUT: Smartphone; Type: ENV NOTE 20

Communication System: LTE; Communication System Band: LTE Band 2; Duty Cycle:1:1; Conv.F=2.25; Frequency:1880MHz; Medium parameters used: f =1900 MHz; σ= 1.40 mho/m; εr =39.96; ρ= 1000 kg/m³ ; Phantom section: Right Section

SATIMO Configuration:
- Probe: SSE2; Calibrated: 2025-05-06; 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- Touch-Right /Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band 2 Mid- Touch-Right /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	dx=8mm dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE Band 2
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

SURFACE SAR	VOLUME SAR
	

Maximum location: X=-48.00, Y=-57.00
SAR Peak: 0.08 W/kg

SAR 10g (W/Kg)	0.027862
SAR 1g (W/Kg)	0.049622

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0761	0.0525	0.0324	0.0204	0.0124	0.0077	0.0046