FCC SAR REPORT

Applicant:	Sun Cupid Technology (HK) Ltd.
Address of Applicant:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.

Equipment Under Test (EUT)

Product Name:	LTE Smart phone
Model No.:	N6001L, A23,NUU A23
Trade mark	NUU
FCC ID:	2ADINN6001L
Applicable standards:	FCC 47 CFR Part 2.1093
Date of Test:	12 Feb., 2023 ~ 23 Feb., 2023
Test Result:	Maximum Reported 1-g SAR (W/kg) Head: 1.174 Body: 1.326 Hotspot: 1.326

Authorized Signature:

Bruce Zhang
Laboratory Manager

2 Version

Version No.	Date	Description
00	*04 May., 2023*	*Original*

Tested by: Zora. Huang ***Date:*** *04 May., 2023*

Test Engineer

Reviewed by: Janet. Wei ***Date:*** *04 May., 2023*

Project Engineer

3 Contents

4 SAR Results Summary

The maximum results of Specific Absorption Rate (SAR) found during test as below:
<Highest Reported standalone SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported 1-g SAR (W/kg)
Head	GSM 850	0.064	PCE	1.174
	GSM 1900	0.296		
	WCDMA Band II	0.488		
	WCDMA Band IV	0.698		
	WCDMA Band V	0.064		
	LTE Band 7	0.592		
	LTE Band 12	0.170		
	LTE Band 13	0.142		
	LTE Band 25&Band 2	0.498		
	LTE Band 26&Band 5	0.055		
	LTE Band 41	0.748		
	LTE Band 66&Band 4	0.558		
	LTE Band 71	0.117		
	WLAN 2.4 GHz	0.556	DTS	
	Bluetooth	0.086	DSS	
	WLAN 5.2 GHz	0.507	NII	
	WLAN 5.8 GHz	1.174		
Body (10 mm Gap)	GSM 850	0.193	PCE	1.326
	GSM 1900	1.326		
	WCDMA Band II	1.137		
	WCDMA Band IV	1.211		
	WCDMA Band V	0.119		
	LTE Band 7	0.870		
	LTE Band 12	0.573		
	LTE Band 13	0.277		
	LTE Band 25&Band 2	1.050		
	LTE Band 26&Band 5	0.096		
	LTE Band 41	0.798		
	LTE Band 66&Band 4	1.190		
	LTE Band 71	0.262		
	WLAN 2.4GHz	0.182	DTS	
	Bluetooth	0.040	DSS	
	WLAN 5.2 GHz	0.100	NII	
	WLAN 5.8 GHz	0.127		
Hotspot (10 mm Gap)	GSM 850	0.193	PCE	1.326
	GSM 1900	1.326		
	WCDMA Band II	1.137		
	WCDMA Band IV	1.211		
	WCDMA Band V	0.119		
	LTE Band 7	0.870		
	LTE Band 12	0.573		
	LTE Band 13	0.277		
	LTE Band 25&Band 2	1.050		

	LTE Band 26&Band 5	0.096		
	LTE Band 41	0.798		
	LTE Band 66&Band 4	1.190		
	LTE Band 71	0.262		
	WLAN 2.4 GHz	0.182	DTS	
	Bluetooth	0.040	DSS	
	WLAN 5.2 GHz	0.100	NII	
	WLAN 5.8 GHz	0.127		

Highest Reported Product Specific 10g SAR Summary>

Exposure Position	Frequency Band	Reported 10-g SAR (W/kg)	Equipment Class	Highest Reported 10-g SAR (W/kg)
Extremity (0 mm Gap)	GSM 1900	1.475	PCE	1.475

< Highest Reported simultaneous SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported Simultaneous Transmission 1-g SAR (W/kg)
Right Tilted	WWAN	0.417	PCE	1.591
	WLAN 5.8 GHz	1.174	NII	

Note:

1. The highest simultaneous transmission is scalar summation of Reported standalone SAR per FCC KDB 690783 D01 v01r03, and scalar SAR summation of all possible simultaneous transmission scenarios are < 1.6W/kg.
2. This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013.
3. For FDD-LTE Band 2 is full covered by FDD-LTE Band 25, so only FDD-LTE Band 25 was tested.
4. For FDD-LTE Band 4 is full covered by FDD-LTE Band 66, so only FDD-LTE Band 66 was tested.
5. For FDD-LTE Band 5 is full covered by FDD-LTE Band 26, so only FDD-LTE Band 25 was tested.

5 General Information

5.1 Client Information

Applicant:	Sun Cupid Technology (HK) Ltd.
Address of Applicant:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.
Manufacturer:	Suncupid (ShenZhen) Electronic Ltd
Address of Manufacturer:	Baolong Industrial City, Longgang District, Shenzhen Hi-Tech Road, Building 1, A 7, China.

5.2 General Description of EUT

Product Name:	LTE Smart phone			
Model No.:	N6001L,A23,NUU A23			
Category of device	Portable device			
Operation Frequency:	GSM :	GSM850: 824.2~848.8 MHz	PCS 1900: 1850.2~1909.8 MHz	
	WCDMA :	Band II: 1852.4~1907.6 MHz	Band V: 826.4~846.6 MHz	
		Band IV: 1712.4~1752.6 MHz		
	LTE :	Band 2 :1850MHz~1910MHz	Band 4 :1710MHz~1755MHz	
		Band 5 :824MHz~849MHz	Band 7: 2500MHz~2570MHz	
		Band 12: 699MHz~716MHz	Band 13: 777MHz~787MHz	
		Band 25 : 1850MHz-1915MHz	Band 26 :814MHz~849MHz	
		Band 41: 2496MHz~2690MHz	Band 66 :1710MHz~1780MHz	
		Band 71: 663MHz~698MHz		
	Wi-Fi:	2412MHz~2462MHz	5150MHz-5250MHz	
		5725MHz-5850MHz		
	Bluetooth: 2402 MHz ~ 2480 MHz			
Modulation technology:	GSM:	☒Voice(GMSK)	☒GPRS(GMSK)	☒EGPRS(GMSK, 8PSK)
	WCDMA:	☒RMC(QPSK)	☒HSUPA(QPSK)	☒HSDPA(QPSK,16QAM)
	LTE:	☒QPSK	☒16QAM	☒64QAM
	Wi-Fi:	☒802.11b(DSSS)	☒802.11a/g/n/ac (OFDM)	
	Bluetooth:	☒BDR(GFSK)	☒EDR(π/4-DQPSK, 8DPSK)	☒LE(GFSK)
Antenna Type:	Internal Antenna			
Antenna Gain:	GSM 850: -1.67dBi; PCS 1900: 1.02dBi WCDMA Band II: 1.02dBi; WCDMA Band V: -1.67dBi WCDMA Band IV: 1.59dBi LTE Band 2: 1.02dBi; LTE Band 4: 1.59dBi LTE Band 5: -1.50dBi; LTE Band 7: 2.46dBi LTE Band 12: -1.91dBi; LTE Band 13: -1.53dBi LTE Band 25: 1.02dBi; LTE Band 26: -1.50dBi LTE Band 41: 2.48dBi; LTE Band 66: 1.59dBi LTE Band 71: -2.10dBi Bluetooth: 2.64 dBi; 2.4G Wi-Fi: 2.51dBi; 5G Wi-Fi Band 1: -2.78dBi; 5G Wi-Fi Band 4: 4.14dBi			
(E)GPRS Class:	(E)GPRS Class: 12			
Dimensions (L*W*H):	159 mm (L)× 76 mm (W)× 10 mm (H)			

Accessories information:	Model: HJ-0501000E1-US Input: AC100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 1000mA	Battery: Rechargeable Li-ion Battery DC3.80V, 2950mAh
		Headset: Support headset (shipped without)
Remark:	Model No.: N6001L,A23,NUU A23 were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name.	

5.3 Maximum RF Output Power

Mode	Average Power (dBm)	
	GSM 850	PCS 1900
GSM (Voice)	33.42	30.67
GPRS (1 TX Slot)	33.41	30.65
GPRS (2 TX Slots)	32.17	29.32
GPRS (3 TX Slots)	30.01	27.48
GPRS (4 TX Slots)	28.89	26.44
EGPRS (1 TX Slot)	26.32	26.28
EGPRS (2 TX Slots)	25.26	25.26
EGPRS (3 TX Slots)	23.30	23.21
EGPRS (4 TX Slots)	22.12	22.08

Mode	Average Power (dBm)		
	WCDMA Band II	WCDMA Band IV	WCDMA Band V
AMR 12.2 kbps	22.78	23.05	22.54
RMC 12.2 kbps	22.77	23.08	22.98
HSDPA Sub-test 1	21.82	22.19	22.08
HSDPA Sub-test 2	21.28	21.70	21.53
HSDPA Sub-test 3	21.34	21.68	21.53
HSDPA Sub-test 4	21.32	21.69	21.54
HSUPA Sub-test 1	19.85	20.37	20.07
HSUPA Sub-test 2	20.31	20.81	20.51
HSUPA Sub-test 3	20.86	21.32	21.04
HSUPA Sub-test 4	19.85	20.34	20.08
HSUPA Sub-test 5	21.84	22.35	22.06

Mode	Average Power (dBm)							
	LTE Band 7	LTE Band 12	LTE Band 13	LTE Band 25	LTE Band 26	LTE Band 41	LTE Band 66	LTE Band 71
BW/1.4 MHz	/	22.96	/	21.96	23.14	/	23.27	/
BW/3.0 MHz	/	22.40	/	21.75	22.34	/	23.20	/
BW/5.0 MHz	22.66	22.95	22.51	21.80	22.96	24.25	23.25	23.30
BW/10 MHz	22.54	22.43	22.55	22.61	23.03	24.97	23.26	23.28
BW/15 MHz	22.57	/	/	22.53	22.89	24.89	23.21	23.11
BW/20 MHz	22.71	/	/	22.67	/	25.04	23.36	23.02

WLAN 2.4 GHz Band Average Power (dBm)				
Mode/Band	b	g	n (HT-20)	n (HT-40)
WLAN 2.4GHz	17.39	12.22	12.74	12.93

WLAN 5.2 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.2GHz	13.01	11.53	11.38	11.30	12.03	11.23

WLAN 5.8 GHz Band Average Power (dBm)						
Mode/Band	a	ac 20	ac 40	ac 80	n 20	n 40
WLAN 5.8GHz	13.69	12.58	11.76	11.57	12.58	11.95

Bluetooth Average Power (dBm)							
Mode/Band	1 Mbps (GFSK)	2 Mbps (π/4DQPSK)	3 Mbps (8DPSK)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=2
Bluetooth	9.89	9.07	9.17	-2.46	-2.87	-2.80	-2.92

5.4 Environment of Test Site

Temperature:	18°C ~25 °C
Humidity:	35%~75% RH
Atmospheric Pressure:	1010 mbar

5.5 Test Sample Plan

Sample Number	Used for Test Items
1#	SAR
***Remark**: JianYan Testing Group Shenzhen Co., Ltd. is only responsible for the test project data of the above samples, and will keep the above samples for a month.*	

5.6 Test Location

JianYan Testing Group Shenzhen Co., Ltd.
No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community,Xinqiao Street, Bao'an District, Shenzhen, Guangdong,People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://jyt.lets.com

6 Introduction

6.1 Introduction

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

6.2 SAR Definition

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

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

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = C\left(\frac{\delta T}{\delta t}\right)$$

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

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

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength. However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7 RF Exposure Limits

7.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

7.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

7.3 RF Exposure Limits

SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (W/kg) or (mW/g)
SPATIAL PEAK SAR Brain	1.6	8.0
SPATIAL AVERAGE SAR Whole Body	0.08	0.4
SPATIAL PEAK SAR Hands, Feet, Ankles, Wrists	4.0	20

Note:

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

8 SAR Measurement System

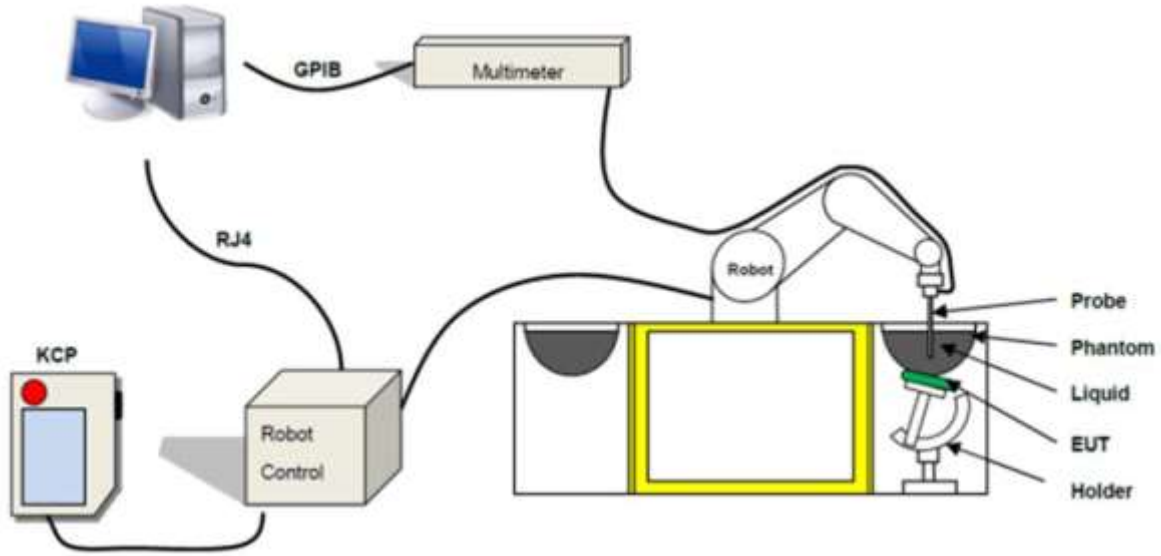


Fig. 8.1 MVG COMOSAR System Configurations

These measurements were performed with the automated near-field scanning system COMOSAR from MVG. The system is based on a high precision robot (working range: 850 mm), which positions the probes with a positional repeatability of better than ± 0.02 mm. Special E- and H-field probes have been developed for measurements close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines to the data acquisition unit.

The SAR measurements were conducted with dosimetric probe (manufactured by MVG), designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe has been calibrated according to the procedure described in SAR standard with accuracy of better than ±10%.The spherical isotropy was evaluated with the procedure described in SAR standard and found to be better than ±0.25 dB. The phantom used was the SAM Phantom as described in FCC supplement C, IEEE P1528.

The MVG COMOSAR system for performance compliance tests is illustrated above graphically. This system consists of the following items:

- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by MVG). 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. This probe has a built in optical surface detection system to prevent from collision with phantom.

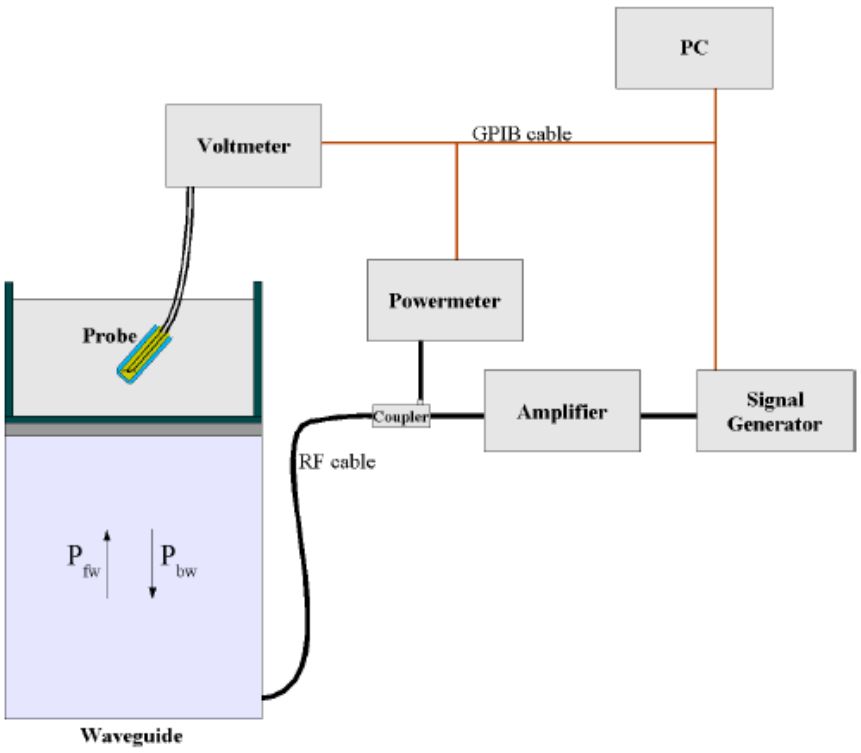
➢ **E-Field Probe Specification**

Device Type	COMOSAR DOSIMETRIC E FIELD PROBE
Model	SSE2
Frequency Range	150 MHz to 6 GHz
Dynamic Range	0.01W/kg to 100W/kg
Probe linearity	<0.25dB
Dimensions	Overall length: 330 mm Tip diameter: 2.5 mm Distance between dipoles / probe extremity: 1 mm

Fig. 8.2 Photo of E-Field Probe

➢ **E-Field Probe Calibration**

Probe calibration is realized, in compliance with EN/IEC 62209-1/-2 and IEEE 1528 std, with CALISAR, MVG proprietary calibration system. The calibration is performed with the technique using reference waveguide.



$$SAR = \frac{4(P_{fw} - P_{bw})}{ab\sigma}\cos^2\left(\pi\frac{y}{a}\right)c^{(2\pi/\sigma)}$$

Where :

Pfw	=	Forward Power
Pbw	=	Backward Power
a and b	=	Waveguide Dimensions
ı	=	Skin Depth

Keithley configuration

Rate=Medium; Filter=ON; RDGS=10; FILTER TYPE=MOVING AVERAGE; RANGE AUTO

After each calibration, a SAR measurement performed on a validation dipole and compared with a NPL calibrated probe, to verify it.

The Calibration factors, CF(N), for the 3 sensors corresponding to dipole 1, dipole 2 and dipole 3 are:

CF(N)=SAR(N)/Vlin(N) (N=1,2,3)

The linearized output voltage Vlin(N) is obtained from the displayed output voltage V(N) using

Vlin(N)=V(N)*(1+V(N)/DCP(N)) N=1,2,3

Where the DCP is the dipole compression point in mV

8.2 Robot

The COMOSAR system uses the high precision robots from KUKA. For the 6-axis controller system, the robot controller version (KUKA-KRC2sr) from KUKA is used. The KUKA robot series have many features that are important for our application:

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

Fig. 8.4 Photo of Robot

8.3 Phantom

<SAM Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume **Dimensions**	Approx. 27 liters Length: 1000mm; Width: 500mm; Height: 200mm
Material	Fiberglass based
Relative permittivity	3-4
Loss tangent	0.02
Measurement Areas	Left Head, Right Head, Flat phantom

Fig. 8.7 Photo of SAM Phantom

The phantom developed by MVG is produced in accordance with the specified in the standards. It has been designed to fit the COMOSAR phantom tables and is delivered with a plastic cover to prevent liquid evaporation.

8.4 Device Holder

The positioning system is made of an extremely stable material, which ensures easy handling and reproducible positioning. It also allows correct positioning of the dipoles referenced by the IEEE, ANSI and IEC.

<Device Holder for SAM Phantom>

Model	Handset Positioning System
Material properties	The positioning system is made of PETP. This material offers a low permittivity of 3.2 and low loss, with a loss tangent of 0.005 to minimize the influence of the DUT on measurement results.
Mechanical properties	The positioning system developed by MVG allows a positioning resolution better than 1 mm. The system is fixed on a bottom rail “x axis” so that the positioning system can be quickly moved from the right to the left part of the phantom. In addition, it can be moved on a perpendicular “y axis” and the height can be adapted. The system is also composed of three rotation points for accurate positioning of the device’s acoustical output.
Accuracy and precision	A curved rail on the top part allows the fast switch from the cheek to the tilt position. The required 15° angle for the tilt position can be easily checked thanks to a printed scale on the curved rail with a tolerance of ± 1°

Fig. 8.9 Photo of Device Holder

8.5 Test Equipment List

Manufacturer	Equipment Description	Model	Management Number	Cal. Information	
				Last Cal.	Due Date
MVG	COMOSAR DOSIMETRIC E FIELD PROBE	SSE2	WXJ076	06.30.2022	06.29.2023
MVG	COMOSAR 750 MHz REFERENCE DIPOLE	SID750	WXJ076-4	01.14.2021	01.13.2024
MVG	COMOSAR 835 MHz REFERENCE DIPOLE	SID835	WXJ076-5	01.14.2021	01.13.2024
MVG	COMOSAR 1750 MHz REFERENCE DIPOLE	SID1750	WXJ076-8	01.14.2021	01.13.2024
MVG	COMOSAR 1900 MHz REFERENCE DIPOLE	SID1900	WXJ076-9	01.14.2021	01.13.2024
MVG	COMOSAR 2450 MHz REFERENCE DIPOLE	SID2450	WXJ076-12	01.14.2021	01.13.2024
MVG	COMOSAR 2600 MHz REFERENCE DIPOLE	SID2600	WXJ076-13	01.14.2021	01.13.2024
MVG	COMOSAR 5200-5800 MHz REFERENCE DIPOLE	SID5000	WXJ076-21	01.14.2021	01.13.2024
KEITHLEY	DIGIT MULTIMETER	DMM6500	WXJ076-1	10.17.2022	10.16.2025
MVG	MVG Measurement Software	OpenSAR	Version: V5_01_09	N.C.R	N.C.R
MVG	COMOSAR IEEE SAM PHANTOM	N/A	WXG009-2	N.C.R	N.C.R
MVG	COMOSAR IEEE SAM PHANTOM	N/A	WXG009-3	N.C.R	N.C.R
MVG	MOBILE PHONE POSITIONNING SYSTEM	N/A	WXG009-4	N.C.R	N.C.R
KUKA	Robot	KR 6 R900 sixx	WXG009-1	N.C.R	N.C.R
Rohde & Schwarz	Broadband radio communication tester	CMW500	WXJ081	06.29.2022	06.28.2023
Anritsu	Universal Radio Communication Analyzer	MT8820C	WXJ008-5	01.10.2023	01.09.2025
R&S	Universal Radio Communication Tester	CMU200	WXJ008-2	03.30.2022	03.29.2024
KEYSIGHT	Network Analyzer	E5071C	WXJ091	03.30.2022	03.29.2023
KEYSIGHT	EPM Series Power Meter	N1914A	WXJ075	06.29.2022	06.28.2023
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-1	06.29.2022	06.28.2023
KEYSIGHT	E-Series Power Sensor	E9300H	WXJ075-2	06.29.2022	06.28.2023
KEYSIGHT	Signal Generator	N5173B	WXJ006-3	06.29.2022	06.28.2023
Huber Suhner	RF Cable	SUCOFLEX	WXG008-13	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	WXG008-14	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	WXG008-15	See Note 3	
Weinschel	Attenuator	23-3-34	WXG008-16	See Note 3	
Anritsu	Directional Coupler	MP654A	WXG008-17	See Note 3	
MVG	LIMESAR DIELECTRIC PROBE	SCLMP	WXG009-5	See Note 4	
TXC	Broadband Amplifier	BBA018000	WXG008-11	See Note 5	

Note:

1. The calibration certificate of MVG can be referred to appendix C of this report.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The Insertion Loss calibration of Dual Directional Coupler and Attenuator were characterized via the network analyzer and compensated during system check.
4. The dielectric probe kit was calibrated via the network analyzer, with the specified procedure (calibrated in pure water) and calibration kit (standard) short circuit, before the dielectric measurement. The specific procedure and calibration kit are provided by MVG.
5. In system check we need to monitor the level on the spectrum analyzer, and adjust the power amplifier level to have precise power level to the dipole; the measured SAR will be normalized to 1 W input power according to the ratio of 1 W to the input power to the dipole. For system check, the calibration of the power amplifier is deemed not critically required for correct measurement; the spectrum analyzer is critical and we do have calibration for it
6. Attenuator insertion loss is calibrated by the network Analyzer, which the calibration is valid, before system check.

7. N.C.R means No Calibration Requirement.

9 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 9.1, for body SAR testing, the liquid height from the center of the flat phantom to liquid top surface is larger than 15 cm, which is shown in Fig. 9.2.

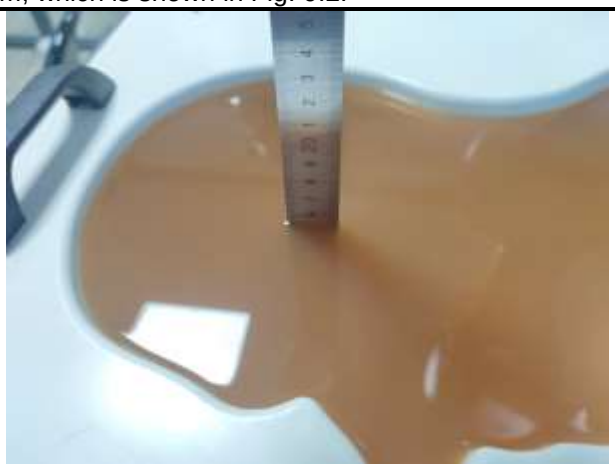


Fig. 9.1 Photo of Liquid Height for Head SAR (depth>15cm)

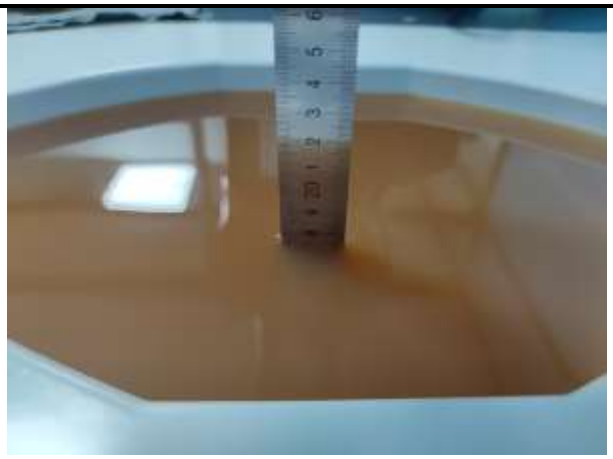


Fig. 9.2 Photo of Liquid Height for Body SAR (depth>15cm)

The relative permittivity and conductivity of the tissue material should be within ±5% of the values given in the table below recommended by the FCC OET 65 supplement C and RSS 102 Issue 5.

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

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

The dielectric parameters of liquids were verified prior to the SAR evaluation using a MVG Liquid measurement Kit and an Agilent Network Analyser.
The following table shows the measuring results for simulating liquid.

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (εr)	Conductivity Target(σ)	Permittivity Target(εr)	Delta (σ)%	Delta (εr)%	Limit (%)	Date (mm/dd/yy)
750	22.6	0.91	42.65	0.89	41.90	2.25	1.79	±5	02.12.2023
835	22.6	0.92	42.33	0.90	41.50	2.22	2.00	±5	02.12.2023
1750	22.3	1.38	41.12	1.37	40.10	0.73	2.54	±5	02.16.2023
1900	22.3	1.39	39.00	1.40	40.00	-0.71	-2.50	±5	02.16.2023
2450	22.7	1.77	38.60	1.80	39.20	-1.67	-1.53	±5	02.18.2023
2600	22.7	1.95	38.53	1.96	39.00	-0.51	-1.21	±5	02.18.2023
5200	22.4	4.72	37.19	4.66	36.00	1.29	3.31	±5	02.23.2023
5800	22.4	5.36	35.98	5.27	35.30	1.71	1.93	±5	02.23.2023

10 SAR System Verification

Each ComoSAR system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the OpenSAR software, enable the user to conduct the system performance check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

- **Purpose of System Performance check**

  The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

- **System Setup**

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:

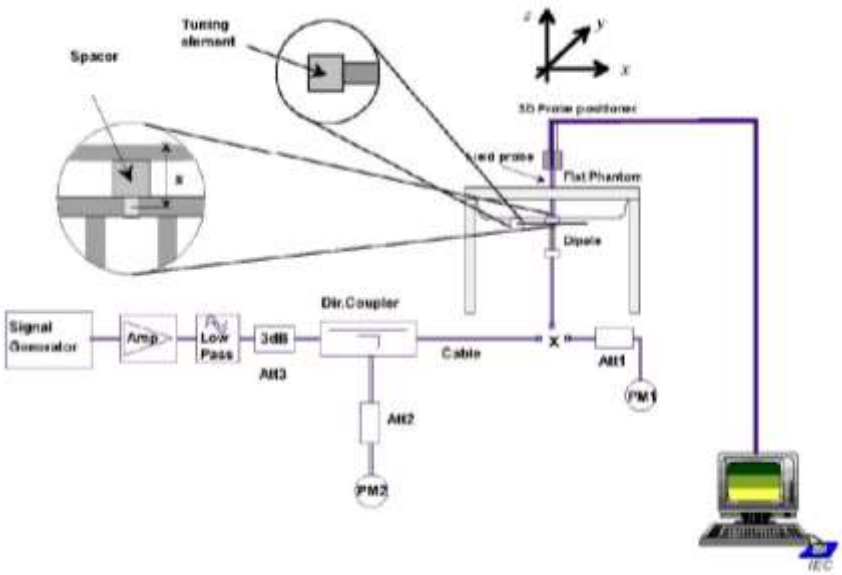


Fig.10.1 System Verification Setup Diagram

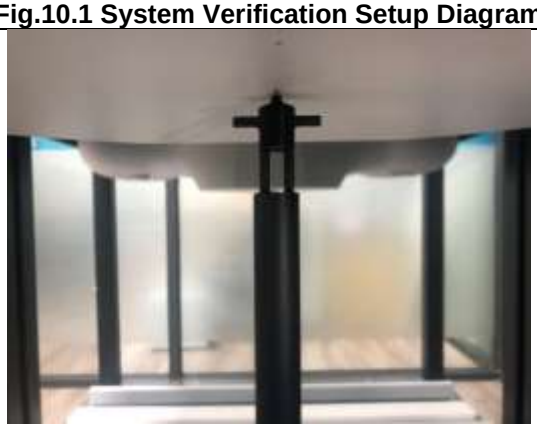


Fig.10.2 Photo of Dipole setup

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➢ **System Verification Results**

Comparing to the original SAR value provided by MVG, the verification data should be within its specification of 10%. The table as below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix C of this report.

Date (mm/dd/yy)	Frequency (MHz)	Power fed onto dipole (mW)	Measured 1g SAR (W/kg)	Normalized to 1W 1g SAR (W/kg)	1W Target 1g SAR (W/kg)	Deviation (%)
02.12.2023	750	100	0.869	8.69	8.57	1.40
02.12.2023	835	100	0.966	9.66	9.57	0.94
02.16.2023	1750	100	3.730	37.30	36.5	2.19
02.16.2023	1900	100	3.943	39.43	39.6	-0.43
02.18.2023	2450	100	5.228	52.28	52.92	-1.21
02.18.2023	2600	100	5.493	54.93	55.47	-0.97
02.23.2023	5200	40	3.156	78.90	76.67	2.91
02.23.2023	5800	40	3.225	80.63	78.36	2.89

Date (mm/dd/yy)	Frequency (MHz)	Power fed onto dipole (mW)	Measured 10g SAR (W/kg)	Normalized to 1W 10g SAR (W/kg)	1W Target 10g SAR (W/kg)	Deviation (%)
02.16.2023	1900	100	2.015	20.15	20.33	-0.89

11 EUT Testing Position

This EUT was tested in ten different positions. They are right cheek/right tilted/left cheek/left tilted for head, Front/Back/Left/Right/Top/Bottom of the EUT with phantom 10 mm gap, as illustrated below, please refer to Appendix B for the test setup photos.

11.1 Handset Reference Points

- The vertical centreline passes through two points on the front side of the handset – the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.
- The horizontal line is perpendicular to the vertical centreline and passes the center of the acoustic output. The horizontal line is also tangential to the handset at point A.
- 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 centreline is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.

Fig.11.1 Illustration for Front, Back and Side of SAM Phantom

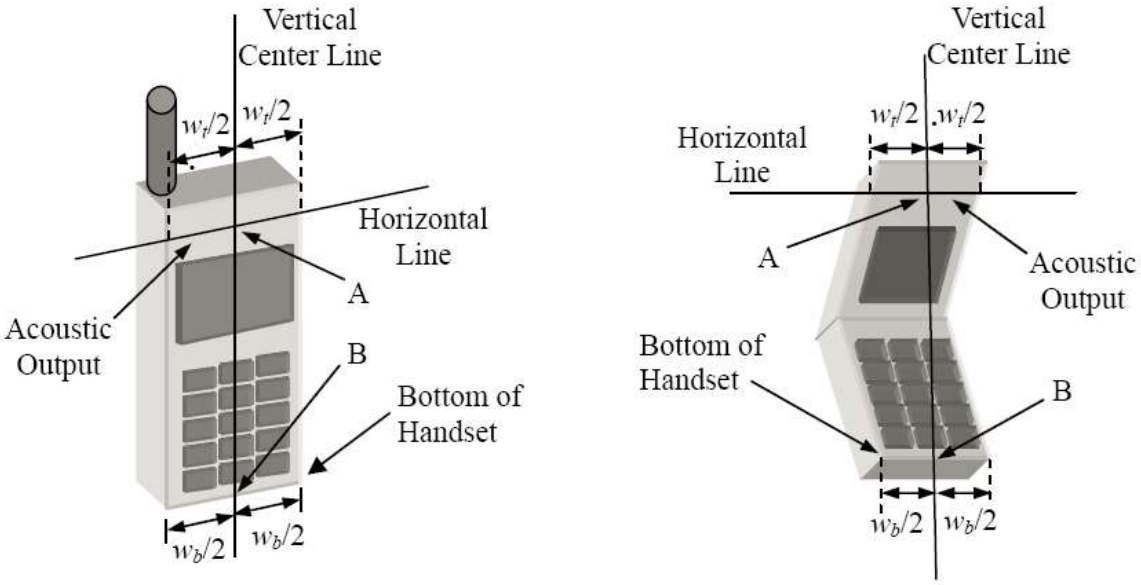


Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

11.2 Positioning for Cheek / Touch

- To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece 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 three 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.
- To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the 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 (see below figure)

Fig. 11.3 Illustration for Cheek Position

11.3 Positioning for Ear / 15º Tilt

- To position the device in the “cheek” position described above.
- While maintaining the device 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 contact with the ear is lost (see figure below).

Fig.11.4 Illustration for Tilted Position

11.4 SAR Evaluations near the Mouth/Jaw Regions of the SAM Phantom

Antennas located near the bottom of a phone may require SAR measurements around the mouth and jaw regions of the SAM head phantom. This typically applies to clam-shell style phones that are generally longer in the unfolded normal use positions or to certain older style long rectangular phones.

Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document FCC KDB Publication 648474 D04v01r03. The SAR required in these regions of SAM should be measured using a flat phantom. The phone should be positioned with a separation distance of 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell. While maintaining this distance at the ERP location, the low (bottom) edge of the phone should be lowered from the phantom to establish the same separation distance between the peak SAR locations identified by the truncated partial SAR distribution measured with the SAM phantom. The distance from the peak SAR location to the phone is determined by the straight line passing perpendicularly through the phantom surface. When it is not feasible to maintain 4 mm separation at the ERP while also establishing the required separation at the peak SAR location, the top edge of the phone will be allowed to touch the phantom with a separation < 4 mm at the ERP. The phone should not be tilted to the left or right while placed in this inclined position to the flat phantom.

11.5 Body Worn Accessory Configurations

- To position the device parallel to the phantom surface with either keypad up or down.
- To adjust the device parallel to the flat phantom.
- To adjust the distance between the device surface and the flat phantom to 10 mm or holster surface and the flat phantom to 0 mm.

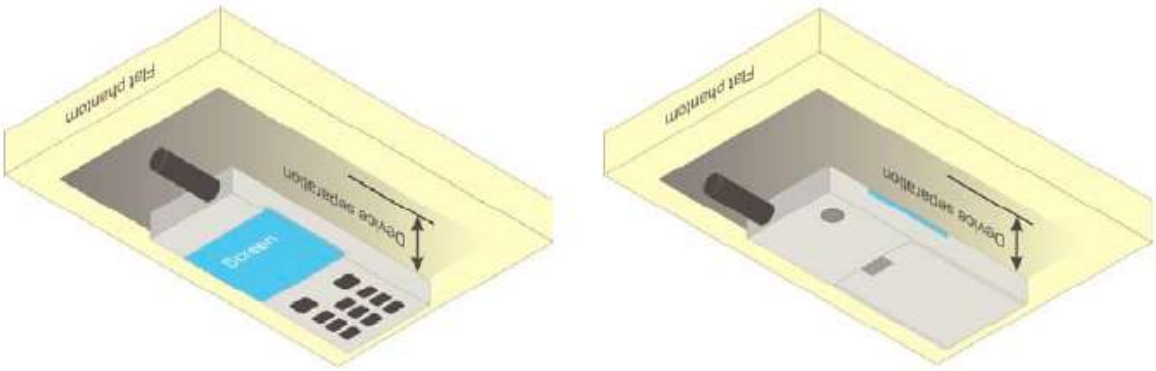


Fig.11.5 Illustration for Body Worn Position

11.6 Wireless Router (Hotspot) Configurations

Some battery-operated handsets have the capability to transmit and receive internet connectivity through simultaneous transmission of WIFI in conjunction with a separate licensed transmitter. The FCC has provided guidance in KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥
9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. Therefore, SAR must be evaluated for each frequency transmission and mode separately and summed with the WIFI transmitter according to KDB 648474 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

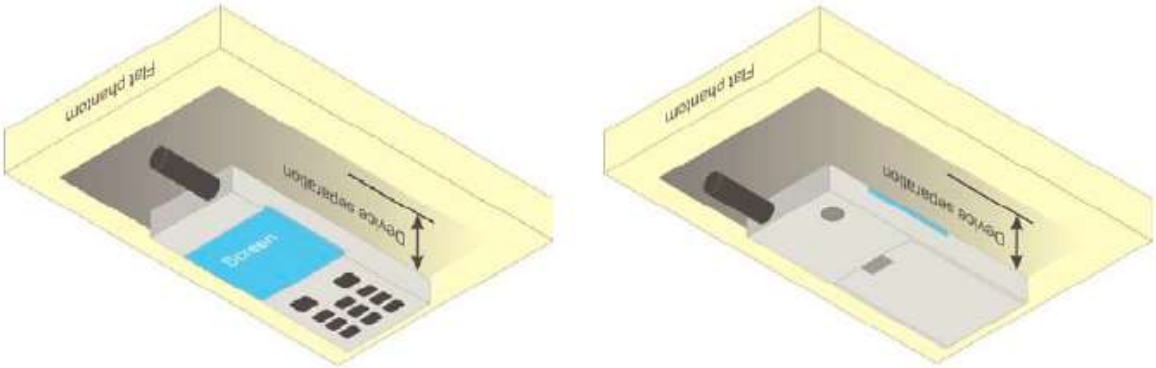


Fig.11.6 Illustration for Hotspot Position

12 Measurement Procedures

The measurement procedures are as below:

<Conducted power measurement>
- For WWAN power measurement, use base station simulator to configure EUT WWAN transition in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- Read the WWAN RF power level from the base station simulator.
- For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band.
- Connect EUT RF port through RF cable to the power meter or spectrum analyzer, and measure WLAN/BT output power.

<Conducted power measurement>
- Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- Place the EUT in positions as Appendix B demonstrates.
- Set scan area, grid size and other setting on the OpenSAR software.
- Measure SAR results for the highest power channel on each testing position.
- Find out the largest SAR result on these testing positions of each band.
- Measure SAR results for other channels in worst SAR testing position if the Reported SAR or highest power channel is larger than 0.8 W/kg.

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- Power reference measurement
- Area scan
- Zoom scan
- Power drift measurement

12.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The OpenSAR software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a “cube” measurement. The measured volume must include the 1g and 10 g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine. The system always gives the maximum values for 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:
- Extraction of the measured data (grid and values) from the Zoom Scan.
- Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters).
- Generation of a high-resolution mesh within the measured volume.
- Interpolation of all measured values form the measurement grid to the high-resolution grid
- Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- Calculation of the averaged SAR within masses of 1g and 10g.

12.2 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 determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

12.3 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

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

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.

12.4 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software can combine and subsequently superpose these measurement data to calculating the multiband SAR.

12.5 SAR Averaged Methods

In COMOSAR system, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1g and 10g cubes, the extrapolation distance should not be larger than 5 mm.

12.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In OpenSAR measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. If the power drifts more than 5%, the SAR will be retested.

13 Conducted RF Output Power

13.1 GSM Conducted Power

Band: GSM 850	Burst Average Power (dBm)			Frame-Average Power(dBm)		
Channel	128	190	251	128	190	251
Frequency (MHz)	824.2	836.6	848.8	824.2	836.6	848.8
GSM (GMSK, Voice)	32.82	**33.42**	33.27	23.79	24.39	24.24
GPRS (GMSK, 1 TX slot)	32.80	33.41	33.26	23.77	24.38	24.23
GPRS (GMSK, 2 TX slots)	31.60	**32.17**	32.09	25.58	**26.15**	26.07
GPRS (GMSK, 3 TX slots)	29.46	30.01	29.92	25.20	25.75	25.66
GPRS (GMSK, 4 TX slots)	28.36	28.89	28.80	25.35	25.88	25.79
EGPRS (8PSK, 1 TX slot)	25.86	26.32	26.32	16.83	17.29	17.29
EGPRS (8PSK, 2 TX slots)	24.85	25.26	25.21	18.83	19.24	19.19
EGPRS (8PSK, 3 TX slots)	22.81	23.30	23.25	18.55	19.04	18.99
EGPRS (8PSK, 4 TX slots)	21.69	22.12	22.04	18.68	19.11	19.03

Remark:

1. The frame-averaged power is linearly reported the maximum burst averaged power over 8 time slots. The calculated method are shown as below:
   The duty cycle "x" of different time slots as below:
   1 TX slot is 1/8, 2 TX slots is 2/8, 3 TX slots is 3/8 and 4 TX slots is 4/8
   Based on the calculation formula:
   Frame-averaged power = Burst averaged power + 10 1og (x)
   So,
   Frame-averaged power (1 TX slot) = Burst averaged power (1 TX slot)– 9.03
   Frame-averaged power (2 TX slots) = Burst averaged power (2 TX slots)– 6.02
   Frame-averaged power (3 TX slots) = Burst averaged power (3 TX slots)– 4.26
   Frame-averaged power (4 TX slots) = Burst averaged power (4 TX slots) – 3.01
2. CS1 coding scheme was used in GPRS conducted power measurements and SAR testing, MCS5 coding scheme was used in EGPRS conducted power measurements and SAR testing (if necessary).

Note:

1. For Head SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in GSM 850 Voice mode.
2. For Body worn SAR testing, GSM Voice, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 2 TX slots mode due to the highest frame-averaged power..
3. For Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 2 TX slots mode due to the highest frame-averaged power.
4. For GPRS multi time slots SAR measurement, when the measured maximum output power levels are within 0.25 dB of each other, test the configuration with the most number of time slots.
5. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.
6. The EUT do not support DTM and VoIP function.

Band: PCS 1900	Burst Average Power (dBm)			Frame-Average Power(dBm)		
Channel	512	661	810	512	661	810
Frequency (MHz)	1850.2	1880.0	1909.8	1850.2	1880.0	1909.8
GSM (GMSK, Voice)	**30.67**	30.14	29.40	21.64	21.11	20.37
GPRS (GMSK, 1 TX slot)	30.65	30.10	29.35	21.62	21.07	20.32
GPRS (GMSK, 2 TX slots)	29.27	29.32	28.64	23.25	23.30	22.62
GPRS (GMSK, 3 TX slots)	27.38	27.48	26.93	23.12	23.22	22.67
GPRS (GMSK, 4 TX slots)	26.32	**26.44**	25.92	23.31	**23.43**	22.91
EGPRS (8PSK, 1 TX slot)	26.28	26.04	25.38	17.25	17.01	16.35
EGPRS (8PSK, 2 TX slots)	25.26	25.12	24.26	19.24	19.10	18.24
EGPRS (8PSK, 3 TX slots)	23.21	23.02	22.25	18.95	18.76	17.99
EGPRS (8PSK, 4 TX slots)	22.08	21.88	21.05	19.07	18.87	18.04

Remark:

3. The frame-averaged power is linearly reported the maximum burst averaged power over 8 time slots. The calculated method are shown as below:
   The duty cycle "x" of different time slots as below:
   1 TX slot is 1/8, 2 TX slots is 2/8, 3 TX slots is 3/8 and 4 TX slots is 4/8
   Based on the calculation formula:
   Frame-averaged power = Burst averaged power + 10 1og (x)
   So,
   Frame-averaged power (1 TX slot) = Burst averaged power (1 TX slot)– 9.03
   Frame-averaged power (2 TX slots) = Burst averaged power (2 TX slots)– 6.02
   Frame-averaged power (3 TX slots) = Burst averaged power (3 TX slots)– 4.26
   Frame-averaged power (4 TX slots) = Burst averaged power (4 TX slots) – 3.01
4. CS1 coding scheme was used in GPRS conducted power measurements and SAR testing, MCS5 coding scheme was used in EGPRS conducted power measurements and SAR testing (if necessary).

Note:

7. For Head SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in GSM 1900 Voice mode.
8. For Body worn SAR testing, GSM Voice, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power..
9. For Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power.
10. For GPRS multi time slots SAR measurement, when the measured maximum output power levels are within 0.25 dB of each other, test the configuration with the most number of time slots.
11. Per KDB447498 D04v01, the maximum output power channel is used for SAR testing and for further SAR test reduction.
12. The EUT do not support DTM and VoIP function.

13.2 WCDMA Conducted Power

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

HSDPA Setup Configuration:

a. The EUT was connected to Base Station Rohde & Schwarz CMU200 referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors (β_c and β_d) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

Table 1

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

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15.
Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

HSDPA Sub-test setup configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Rohde & Schwarz CMU200 referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors (β_c and β_d) 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
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table 2

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

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

HSUPA Sub-test setup configuration

WCDMA Conducted Power:

WCDMA Average power (dBm)			
Band	WCDMA Band V		
Channel	4132	4183	4233
Frequency (MHz)	826.4	836.6	846.6
AMR 12.2 kbps	22.54	22.46	22.27
RMC 12.2 kbps	22.90	**22.98**	22.79
HSDPA Sub-test 1	21.84	22.08	22.04
HSDPA Sub-test 2	21.32	21.53	21.49
HSDPA Sub-test 3	21.37	21.53	21.49
HSDPA Sub-test 4	21.32	21.54	21.51
HSUPA Sub-test 1	19.90	20.07	20.02
HSUPA Sub-test 2	20.33	20.51	20.49
HSUPA Sub-test 3	20.84	21.04	20.92
HSUPA Sub-test 4	19.87	20.08	20.05
HSUPA Sub-test 5	21.90	22.06	21.97

WCDMA Average power (dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
AMR 12.2 kbps	22.86	23.05	22.84
RMC 12.2 kbps	22.92	**23.08**	22.86
HSDPA Sub-test 1	22.02	22.19	21.99
HSDPA Sub-test 2	21.52	21.70	21.54
HSDPA Sub-test 3	21.55	21.68	21.56
HSDPA Sub-test 4	21.52	21.69	21.51
HSUPA Sub-test 1	20.27	20.37	20.30
HSUPA Sub-test 2	20.75	20.81	20.78
HSUPA Sub-test 3	21.22	21.32	21.32
HSUPA Sub-test 4	20.23	20.34	20.25
HSUPA Sub-test 5	22.15	22.35	22.26

WCDMA Average power (dBm)			
Band	WCDMA Band II		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880.0	1907.6
AMR 12.2 kbps	22.78	22.51	22.17
RMC 12.2 kbps	**22.77**	22.55	22.14
HSDPA Sub-test 1	21.82	21.57	21.16
HSDPA Sub-test 2	21.28	21.09	20.69
HSDPA Sub-test 3	21.34	21.06	20.68
HSDPA Sub-test 4	21.32	21.08	20.72
HSUPA Sub-test 1	19.85	19.56	19.24
HSUPA Sub-test 2	20.31	20.07	19.71
HSUPA Sub-test 3	20.86	20.56	20.22
HSUPA Sub-test 4	19.85	19.60	19.22
HSUPA Sub-test 5	21.84	21.57	21.21

Note:

1. Applying the subtest setup in Table C.11.1.3 of 3GPP TS 34.121-1
2. Per KDB 941225 D01, RMC 12.2kbps mode is used to evaluate SAR due the highest output power. If AMR 12.2 kbps power is < 0.25dB higher than RMC 12.2kbps, SAR tests with AMR 12.2 kbps can be excluded.
3. AMR, HSDPA RF power will not be larger than RMC 12.2kbps, detailed information is included in Tune-up Procure exhibit.

13.3 LTE Conducted Power

13.3.1 Largest channel bandwidth standalone SAR test requirements

QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel.8 When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

QPSK with 50% RB allocation

The procedures required for 1 RB allocation in section 4.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.9

QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in sections 4.2.1 and 4.2.2 are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in sections 4.2.1, 5.2.2 and 4.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

13.3.2 Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 4.2 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg. The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth. For example, 50 RB in 10 MHz channel bandwidth does not apply to 5 MHz channel bandwidth; therefore, this cannot be tested in the smaller channel bandwidth. However, 50% RB allocation in 10 MHz channel bandwidth is equivalent to 100% RB allocation in 5 MHz channel bandwidth; therefore, these are the equivalent configurations to be compared to determine the specific channel and configuration in the smaller channel bandwidth that need SAR testing.

13.3.3 TDD LTE configuration setup for SAR measurement

According to KDB 941225 D05v02r03 and April 2013 TCB workshop slides, SAR must be tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- see 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “special subframe S” contains both uplink and downlink transmissions and must be taken into consideration to determine the transmission duty factor
  - according to the worst case uplink and downlink cyclic prefix requirements for UpPTS to determine the highest SAR test duty factor

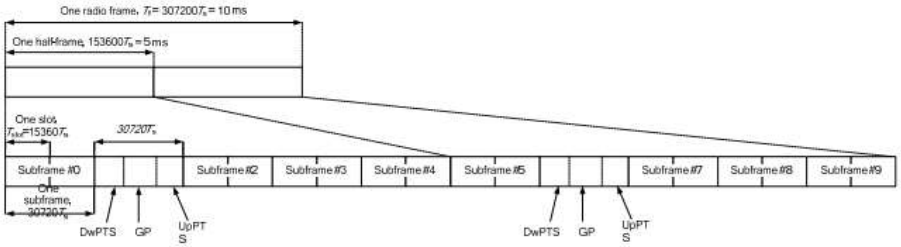


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

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

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

Per 3GPP 36.211 section 4.2, each radio frame of length T_f=37200·Ts = 10 ms consists of two half-frames of length 153600·Ts = 5ms each. Each half-frame consists of five subframes of length 30720 ·Ts = 1ms. So, the uplink duty factor in special subframe as below:

Special Subframe configuration	Normal cyclic prefix in downlink		Extended cyclic prefix in downlink	
	Duty factor of Uplink		Duty factor of Uplink	
	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	7.14%	8.33%	7.14%	8.33%
1	7.14%	8.33%	7.14%	8.33%
2	7.14%	8.33%	7.14%	8.33%
3	7.14%	8.33%	7.14%	8.33%
4	7.14%	8.33%	14.27%	16.67%
5	14.27%	16.67%	14.27%	16.67%
6	14.27%	16.67%	14.27%	16.67%
7	14.27%	16.67%	14.27%	16.67%
8	14.27%	16.67%	/	/
9	14.27%	16.67%	/	/

Table 4.2-2: Uplink-downlink configurations

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

According to above table:

1. The highest duty factor is configuration 0;
2. The duty factor of uplink in one half-frame with normal cyclic prefix is: (3ms + 0.143ms)/5ms=62.86%;
3. The duty factor of uplink in one half-frame with extended cyclic prefix is: (3ms + 0.167ms)/5ms=63.34%;
4. For purpose to get the worst case SAR test duty factor, the duty factor of normal cyclic prefix in uplink scaled-up to the extended cyclic prefix in uplink, the scaling factor is 63.34%/62.86%=1.008, and the scaling factor will be taken into the final measured SAR.

LTE Band 7 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20775	21100	21425
					2502.5MHz	2535MHz	2567.5MHz
Band 7	5	QPSK	1	0	22.40	22.34	22.50
			1	12	22.56	22.45	22.66
			1	24	22.46	22.30	22.57
			12	0	21.44	21.33	21.56
			12	6	21.43	21.35	21.56
			12	11	21.39	21.39	21.53
			25	0	21.51	21.36	21.52
		16QAM	1	0	21.36	21.50	21.42
			1	12	21.52	21.62	21.64
			1	24	21.43	21.44	21.49
			12	0	20.41	20.36	20.56
			12	6	20.35	20.35	20.55
			12	11	20.32	20.37	20.49
			25	0	20.43	20.35	20.59
		64QAM	1	0	21.26	22.16	22.36
			1	12	21.41	22.27	22.50
			1	24	21.34	22.17	22.44
			12	0	20.41	20.71	21.22
			12	6	20.36	20.70	21.25
			12	11	20.35	20.72	21.22
			25	0	20.43	20.72	21.29

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20800	21100	21400
					2505MHz	2535MHz	2565MHz
Band 7	10	QPSK	1	0	22.45	22.43	22.44
			1	24	22.52	22.40	22.31
			1	49	22.47	22.37	22.54
			25	0	21.47	21.45	21.65
			25	12	21.46	21.50	21.66
			25	24	21.48	21.50	21.64
			50	0	21.52	21.45	21.60
		16QAM	1	0	21.55	21.56	21.34
			1	24	21.74	21.62	21.60
			1	49	21.58	21.49	21.48
			25	0	20.41	20.44	20.66
			25	12	20.42	20.45	20.64
			25	24	20.38	20.49	20.68
			50	0	20.49	20.42	20.54
		64QAM	1	0	21.34	21.75	22.23
			1	24	21.58	21.81	22.38
			1	49	21.44	21.78	22.46
			25	0	20.42	20.77	21.09
			25	12	20.38	20.78	21.13
			25	24	20.41	20.76	21.13
			50	0	20.46	20.75	21.18

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20825	21100	21375
					2507.5MHz	2535MHz	2562.5MHz
Band 7	15	QPSK	1	0	22.35	22.37	22.36
			1	37	22.50	22.34	22.57
			1	74	22.34	22.31	22.50
			36	0	21.45	21.48	21.67
			36	16	21.44	21.53	21.66
			36	35	21.48	21.53	21.69
			75	0	21.58	21.51	21.70
		16QAM	1	0	21.48	21.64	21.27
			1	37	21.61	21.62	21.45
			1	74	21.50	21.52	21.42
			36	0	20.38	20.53	20.51
			36	16	20.38	20.50	20.52
			36	35	20.38	20.50	20.53
			75	0	20.51	20.47	20.61
		64QAM	1	0	21.29	21.79	22.06
			1	37	21.47	21.82	22.33
			1	74	21.47	21.82	22.38
			36	0	20.46	20.66	20.97
			36	16	20.44	20.67	20.99
			36	35	20.47	20.66	20.99
			75	0	20.56	20.75	21.18

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20850	21100	21350
					2510MHz	2535MHz	2560MHz
Band 7	20	QPSK	1	0	22.28	22.29	22.04
			1	49	22.71	22.57	22.47
			1	99	22.37	22.22	22.21
			50	0	21.27	21.43	21.48
			50	24	21.28	21.47	21.45
			50	49	21.29	21.48	21.49
			100	0	21.45	21.40	21.46
		16QAM	1	0	21.24	21.39	21.13
			1	49	21.70	21.66	21.58
			1	99	21.38	21.29	21.30
			50	0	20.23	20.42	20.52
			50	24	20.23	20.48	20.48
			50	49	20.23	20.41	20.50
			100	0	20.36	20.38	20.43
		64QAM	1	0	21.53	21.76	21.48
			1	49	22.08	22.05	22.04
			1	99	21.79	21.88	21.95
			50	0	20.33	20.73	20.92
			50	24	20.36	20.70	20.94
			50	49	20.28	20.73	20.93
			100	0	20.52	20.82	20.95

LTE Band 12 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23017	23095	23175
					699.7MHz	707.5MHz	715.3MHz
Band 12	1.4	QPSK	1	0	22.83	22.82	22.63
			1	12	22.93	22.96	22.77
			1	24	22.80	22.78	22.65
			12	0	22.84	22.83	22.68
			12	6	22.85	22.85	22.70
			12	11	22.85	22.86	22.67
			25	0	21.83	21.82	21.65
		16QAM	1	0	21.91	21.92	21.45
			1	12	22.17	21.95	21.57
			1	24	21.91	21.90	21.49
			12	0	21.72	21.74	21.47
			12	6	21.69	21.77	21.46
			12	11	21.69	21.76	21.51
			25	0	20.83	20.68	20.62
		64QAM	1	0	20.19	20.61	20.00
			1	12	20.49	20.81	20.14
			1	24	20.26	20.62	20.07
			12	0	20.15	20.28	19.99
			12	6	20.14	20.29	19.97
			12	11	20.17	20.28	19.96
			25	0	19.16	19.13	18.98

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
Band 12	3	QPSK	1	0	22.39	22.38	22.10
			1	24	22.30	22.40	22.11
			1	49	22.35	22.30	22.14
			25	0	21.29	21.21	21.14
			25	12	21.32	21.21	21.14
			25	24	21.25	21.27	21.12
			50	0	21.30	21.21	21.05
		16QAM	1	0	21.47	21.25	21.29
			1	24	21.47	21.21	21.20
			1	49	21.41	21.16	21.24
			25	0	20.32	20.24	20.16
			25	12	20.33	20.27	20.18
			25	24	20.28	20.26	20.13
			50	0	20.20	20.18	20.11
		64QAM	1	0	20.16	20.28	20.37
			1	24	20.18	20.26	20.31
			1	49	20.26	20.23	20.33
			25	0	19.30	19.30	19.17
			25	12	19.33	19.28	19.16
			25	24	19.23	19.34	19.12
			50	0	19.36	19.20	19.05

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
Band 12	5	QPSK	1	0	22.80	22.82	22.72
			1	37	22.95	22.84	22.80
			1	74	22.85	22.79	22.67
			36	0	21.90	21.77	21.66
			36	16	21.92	21.75	21.71
			36	35	21.95	21.76	21.69
			75	0	21.90	21.87	21.68
		16QAM	1	0	21.82	22.00	21.66
			1	37	21.92	22.09	21.78
			1	74	21.84	21.92	21.72
			36	0	20.87	20.76	20.72
			36	16	20.92	20.76	20.66
			36	35	20.92	20.77	20.66
			75	0	20.92	20.79	20.68
		64QAM	1	0	20.11	20.72	20.35
			1	37	20.20	20.82	20.45
			1	74	20.15	20.68	20.37
			36	0	19.44	19.21	19.24
			36	16	19.42	19.20	19.22
			36	35	19.40	19.24	19.21
			75	0	19.33	19.27	19.15

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23060	23095	23130
					704MHz	707.5MHz	711MHz
Band 12	10	QPSK	1	0	22.24	22.34	22.28
			1	49	22.43	22.41	22.34
			1	99	22.23	22.19	22.24
			50	0	21.47	21.25	21.09
			50	24	21.45	21.22	21.13
			50	49	21.47	21.21	21.03
			100	0	21.48	21.29	21.04
		16QAM	1	0	21.42	21.44	21.10
			1	49	21.66	21.58	21.21
			1	99	21.42	21.33	21.13
			50	0	20.48	20.27	20.06
			50	24	20.48	20.27	20.09
			50	49	20.46	20.24	20.05
			100	0	20.43	20.37	20.09
		64QAM	1	0	20.19	20.24	20.50
			1	49	20.37	20.38	20.58
			1	99	20.18	20.10	20.43
			50	0	19.47	19.24	19.10
			50	24	19.50	19.22	19.06
			50	49	19.50	19.23	19.13
			100	0	19.45	19.33	19.06

LTE Band 13 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23205	23230	23255
					779.5MHz	782MHz	784.5MHz
Band 13	5	QPSK	1	0	21.44	22.43	22.43
			1	12	22.51	22.51	22.46
			1	24	22.43	22.37	22.31
			12	0	21.47	21.51	21.42
			12	6	21.49	21.48	21.41
			12	11	21.50	21.43	21.45
			25	0	21.46	21.50	21.47
		16QAM	1	0	21.59	21.44	21.60
			1	12	21.67	21.55	21.65
			1	24	21.60	21.42	21.47
			12	0	20.50	20.52	20.50
			12	6	20.49	20.51	20.48
			12	11	20.50	20.46	20.47
			25	0	20.46	20.52	20.45
		64QAM	1	0	20.18	19.55	20.13
			1	12	20.22	19.66	20.32
			1	24	20.13	19.56	20.21
			12	0	18.59	18.70	18.77
			12	6	18.59	18.74	18.72
			12	11	18.61	18.67	18.72
			25	0	18.60	18.69	18.68

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
						23230	
						782MHz	
Band 13	10	QPSK	1	0		22.55	
			1	24		22.51	
			1	49		22.35	
			25	0		21.59	
			25	12		21.58	
			25	24		21.64	
			50	0		21.55	
		16QAM	1	0		21.67	
			1	24		21.73	
			1	49		21.52	
			25	0		20.62	
			25	12		20.59	
			25	24		20.60	
			50	0		20.52	
		64QAM	1	0		19.65	
			1	24		19.68	
			1	49		19.73	
			25	0		18.70	
			25	12		18.68	
			25	24		18.71	
			50	0		18.63	

LTE Band 25 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26047	26365	26683
					1850.70MHz	1882.5MHz	1914.3MHz
Band 25	1.4	QPSK	1	0	21.78	21.48	20.97
			1	2	21.96	21.61	21.15
			1	5	21.72	21.45	20.97
			3	0	21.89	21.57	20.89
			3	1	21.90	21.61	20.92
			3	3	21.88	21.65	20.93
			6	0	20.84	20.56	20.08
		16QAM	1	0	20.86	20.55	19.74
			1	2	21.02	20.78	19.94
			1	5	20.86	20.61	19.75
			3	0	20.78	20.50	19.66
			3	1	20.77	20.52	19.69
			3	3	20.76	20.55	19.64
			6	0	19.88	19.45	18.96
		64QAM	1	0	20.98	20.41	19.98
			1	2	21.06	20.55	20.09
			1	5	20.90	20.35	19.97
			3	0	20.70	20.33	19.92
			3	1	20.71	20.30	19.92
			3	3	20.72	20.29	19.96
			6	0	19.54	19.28	18.76

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26055	26365	26675
					1851.50MHz	1882.5MHz	1913.5MHz
Band 25	3	QPSK	1	0	21.68	21.44	21.00
			1	8	21.75	21.54	21.05
			1	14	21.68	21.50	21.00
			8	0	20.81	20.54	20.13
			8	4	20.80	20.51	20.10
			8	7	20.78	20.51	20.08
			15	0	20.77	20.53	19.97
		16QAM	1	0	20.94	20.69	19.90
			1	8	20.89	20.66	19.86
			1	14	20.85	20.63	19.80
			8	0	19.86	19.60	19.02
			8	4	19.86	19.54	19.05
			8	7	19.77	19.56	18.92
			15	0	19.73	19.43	18.89
		64QAM	1	0	20.51	20.40	20.07
			1	8	20.53	20.46	20.00
			1	14	20.51	20.36	20.02
			8	0	19.65	19.44	18.88
			8	4	19.65	19.49	18.90
			8	7	19.60	19.42	18.79
			15	0	19.70	19.42	18.78

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26065	26365	26665
					1852.5MHz	1882.5MHz	1912.5MHz
Band 25	5	QPSK	1	0	21.68	21.45	21.05
			1	12	21.80	21.59	21.13
			1	24	21.64	21.51	21.02
			12	0	20.72	20.48	19.97
			12	6	20.70	20.51	19.97
			12	13	20.72	20.58	19.81
			25	0	20.74	20.60	19.89
		16QAM	1	0	20.68	20.63	20.06
			1	12	20.83	20.81	20.01
			1	24	20.64	20.68	19.83
			12	0	19.70	19.56	18.98
			12	6	19.65	19.55	18.98
			12	13	19.72	19.66	18.84
			25	0	19.81	19.59	18.92
		64QAM	1	0	20.45	20.90	20.07
			1	12	20.56	21.02	20.07
			1	24	20.40	20.89	19.97
			12	0	19.61	19.42	19.01
			12	6	19.65	19.44	19.02
			12	13	19.60	19.49	18.70
			25	0	19.67	19.45	18.86

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26090	26365	26640
					1855.00MHz	1882.5MHz	1910.0MHz
Band 25	10	QPSK	1	0	22.54	22.33	22.01
			1	24	22.61	22.48	21.98
			1	49	22.48	22.27	21.79
			25	0	21.58	21.43	20.85
			25	12	21.58	21.44	20.82
			25	25	21.53	21.46	20.57
			50	0	21.56	21.38	20.74
		16QAM	1	0	21.70	21.52	20.89
			1	24	21.81	21.61	20.92
			1	49	21.61	21.47	20.60
			25	0	20.57	20.46	19.89
			25	12	20.57	20.50	19.87
			25	25	20.54	20.51	19.66
			50	0	20.52	20.51	19.73
		64QAM	1	0	20.51	20.52	20.22
			1	24	20.63	20.59	20.28
			1	49	20.57	20.32	19.94
			25	0	19.67	19.47	18.91
			25	12	19.63	19.45	18.90
			25	25	19.65	19.53	18.64
			50	0	19.68	19.49	18.80

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26115	26365	26615
					1857.50MHz	1882.5MHz	1907.5MHz
Band 25	15	QPSK	1	0	22.48	22.33	21.94
			1	38	22.53	22.30	22.03
			1	74	22.37	22.13	21.70
			38	0	21.57	21.46	20.97
			38	18	21.61	21.49	20.94
			38	37	21.59	21.41	20.93
			75	0	21.55	21.42	20.97
		16QAM	1	0	21.71	21.63	20.84
			1	38	21.67	21.73	20.87
			1	74	21.53	21.58	20.55
			38	0	21.57	21.42	20.98
			38	18	21.61	21.45	20.97
			38	37	21.60	21.42	20.98
			75	0	20.50	20.40	19.93
		64QAM	1	0	20.45	20.65	20.24
			1	38	20.48	20.69	20.26
			1	74	20.36	20.45	19.87
			38	0	21.62	21.44	20.95
			38	18	21.58	21.45	20.93
			38	37	21.61	21.39	20.98
			75	0	19.55	19.43	18.97

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26140	26365	26590
					1860.00MHz	1882.50MHz	1905.00MHz
Band 25	20	QPSK	1	0	22.36	22.29	21.81
			1	49	22.67	22.53	21.96
			1	99	22.30	22.02	21.51
			50	0	21.51	21.37	21.20
			50	25	21.50	21.40	21.23
			50	50	21.44	21.44	21.00
			100	0	21.43	21.44	21.09
		16QAM	1	0	21.41	21.36	20.87
			1	49	21.62	21.71	21.16
			1	99	21.32	21.17	20.55
			50	0	20.53	20.45	20.28
			50	25	20.48	20.44	20.29
			50	50	20.41	20.50	20.02
			100	0	20.45	20.48	20.11
		64QAM	1	0	20.77	20.49	19.80
			1	49	20.91	20.79	20.08
			1	99	20.63	20.30	19.46
			50	0	19.63	19.54	19.32
			50	25	19.58	19.54	19.35
			50	50	19.55	19.60	19.10
			100	0	19.60	19.59	19.14

LTE Band 26 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26697	26865	27033
					814.7MHz	831.5MHz	848.3MHz
Band 26	1.4	QPSK	1	0	22.01	22.51	21.83
			1	2	22.22	22.57	23.14
			1	5	22.12	22.22	22.17
			3	0	22.29	22.35	22.55
			3	1	22.28	22.34	22.22
			3	3	22.28	22.33	22.59
			6	0	21.15	21.62	22.02
		16QAM	1	0	21.38	21.71	21.57
			1	2	21.49	21.96	22.04
			1	5	21.39	21.75	21.87
			3	0	21.22	21.59	21.85
			3	1	21.23	21.61	21.82
			3	3	21.19	21.65	21.78
			6	0	20.33	20.57	21.05
		64QAM	1	0	20.69	20.61	21.26
			1	2	20.87	20.85	21.48
			1	5	20.72	20.72	21.30
			3	0	20.43	20.57	21.23
			3	1	20.43	20.56	21.21
			3	3	20.41	20.64	21.36
			6	0	19.18	19.61	20.07

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26705	26865	27025
					815.5MHz	831.5MHz	847.5MHz
Band 26	3	QPSK	1	0	22.11	22.24	21.68
			1	8	22.21	22.34	21.93
			1	14	22.24	22.04	22.05
			8	0	21.12	21.62	21.53
			8	4	21.09	21.62	21.59
			8	7	21.20	21.63	22.14
			15	0	21.15	21.65	21.93
		16QAM	1	0	21.42	21.75	21.53
			1	8	21.34	21.85	21.76
			1	14	21.37	21.86	21.69
			8	0	20.29	20.62	21.03
			8	4	20.32	20.64	21.08
			8	7	20.35	20.73	21.14
			15	0	20.27	20.68	20.96
		64QAM	1	0	20.29	20.67	21.13
			1	8	20.26	20.76	21.31
			1	14	20.27	20.85	21.47
			8	0	19.24	19.73	20.05
			8	4	19.20	19.72	20.07
			8	7	19.31	19.83	20.11
			15	0	19.35	19.76	20.05

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26715	26865	27015
					816.5MHz	831.5MHz	846.5MHz
Band 26	5	QPSK	1	0	22.08	22.51	22.96
			1	12	22.27	22.30	21.76
			1	24	22.27	22.64	22.51
			12	0	21.07	21.72	22.31
			12	6	21.04	21.75	22.29
			12	13	21.34	21.71	22.03
			25	0	21.24	21.75	22.20
		16QAM	1	0	21.21	21.69	21.86
			1	12	21.37	21.93	21.59
			1	24	21.20	21.92	21.96
			12	0	20.10	20.72	21.23
			12	6	20.10	20.76	21.22
			12	13	20.35	20.84	20.99
			25	0	20.28	20.81	21.12
		64QAM	1	0	20.12	21.05	21.11
			1	12	20.23	21.38	21.29
			1	24	20.14	21.43	21.42
			12	0	19.14	19.87	20.36
			12	6	19.21	19.83	20.36
			12	13	19.42	19.89	20.02
			25	0	19.32	19.87	20.22

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26750	26865	26990
					820MHz	831.5MHz	844MHz
Band 26	10	QPSK	1	0	22.13	22.42	22.69
			1	24	22.27	22.38	23.00
			1	49	22.43	22.76	23.03
			25	0	20.97	21.83	21.51
			25	12	20.96	21.86	21.46
			25	25	21.08	21.99	21.46
			50	0	20.98	21.94	21.44
		16QAM	1	0	21.38	21.54	21.66
			1	24	21.48	21.91	21.89
			1	49	21.53	22.14	21.89
			25	0	19.97	20.89	20.53
			25	12	19.97	20.92	20.52
			25	25	20.11	21.13	20.48
			50	0	20.03	21.00	20.43
		64QAM	1	0	20.27	20.38	21.14
			1	24	20.34	20.88	21.19
			1	49	20.42	21.06	21.37
			25	0	18.97	19.96	19.54
			25	12	18.97	19.95	19.51
			25	25	19.26	20.15	19.38
			50	0	19.09	19.99	19.45

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26775	26865	26965
					822.5MHz	831.5MHz	841.5MHz
Band 26	15	QPSK	1	0	22.11	22.21	22.42
			1	38	22.43	22.35	22.89
			1	74	22.52	22.80	22.56
			38	0	21.27	21.97	21.70
			38	18	21.30	21.99	21.71
			38	37	21.27	21.93	21.68
			75	0	21.26	21.94	21.66
		16QAM	1	0	21.36	21.52	21.35
			1	38	21.59	21.92	21.86
			1	74	21.82	22.08	21.87
			38	0	21.33	21.96	21.69
			38	18	21.27	21.99	21.67
			38	37	21.31	21.97	21.67
			75	0	20.26	20.99	20.67
		64QAM	1	0	20.22	20.55	20.76
			1	38	20.43	21.00	21.33
			1	74	20.73	21.11	21.26
			38	0	21.28	22.00	21.75
			38	18	21.32	22.00	21.69
			38	37	21.30	22.01	21.75
			75	0	19.33	20.04	19.75

LTE Band 41 part:

LTE Band	Band-width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39675	40148	40620	41093	41565
					2498.5MHz	2545.5MHz	2593.0MHz	2640.3MHz	2687.5MHz
Band 41	5	QPSK	1	0	23.12	23.54	24.06	23.71	23.96
			1	12	23.34	23.70	24.25	23.88	24.05
			1	24	23.27	23.57	24.12	23.75	23.86
			12	0	22.16	22.57	23.06	22.73	22.97
			12	6	22.16	22.58	23.09	22.75	22.99
			12	11	22.16	22.58	23.04	22.73	23.00
			25	0	22.29	22.60	23.12	22.77	22.90
		16QAM	1	0	22.41	22.77	23.24	22.93	23.13
			1	12	22.57	22.90	23.42	23.07	23.22
			1	24	22.52	22.78	23.34	22.97	23.04
			12	0	21.05	21.51	21.99	21.67	21.97
			12	6	21.08	21.55	21.96	21.68	22.01
			12	11	21.06	21.52	21.96	21.67	21.98
			25	0	21.18	21.54	22.04	21.71	21.90
		64QAM	1	0	21.61	22.04	22.37	22.15	22.46
			1	12	21.79	22.14	22.55	22.28	22.49
			1	24	21.79	22.07	22.45	22.20	22.35
			12	0	20.26	20.69	21.15	20.84	21.11
			12	6	20.24	20.70	21.15	20.85	21.16
			12	11	20.23	20.68	21.17	20.84	21.13
			25	0	20.24	20.63	21.20	20.82	21.02

LTE Band	Band-width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39700	40160	40620	41080	41540
					2501.0MHz	2547.0MHz	2593.0MHz	2639.0MHz	2685.0MHz
Band 41	10	QPSK	1	0	23.81	24.29	24.59	24.39	24.77
			1	24	24.19	24.57	24.97	24.70	24.95
			1	49	24.12	24.37	24.73	24.49	24.62
			25	0	22.84	23.20	23.64	23.35	23.56
			25	12	22.82	23.20	23.63	23.34	23.58
			25	24	22.82	23.21	23.65	23.36	23.60
			50	0	22.95	23.23	23.63	23.36	23.50
		16QAM	1	0	23.00	23.20	23.74	23.38	23.39
			1	24	23.41	23.48	24.02	23.66	23.55
			1	49	23.36	23.29	23.88	23.49	23.22
			25	0	21.80	22.18	22.67	22.34	22.55
			25	12	21.81	22.18	22.65	22.34	22.55
			25	24	21.83	22.19	22.64	22.34	22.54
			50	0	21.87	22.17	22.58	22.30	22.46
		64QAM	1	0	22.09	22.32	22.94	22.52	22.54
			1	24	22.46	22.57	23.24	22.79	22.68
			1	49	22.41	22.40	23.10	22.63	22.38
			25	0	20.71	21.13	21.66	21.31	21.55
			25	12	20.73	21.14	21.66	21.31	21.55
			25	24	20.70	21.14	21.66	21.31	21.58
			50	0	20.88	21.21	21.69	21.37	21.54

LTE Band	Band-width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39725	40173	40620	41068	41515
					2503.5MHz	2548.5MHz	2593.0MHz	2637.8MHz	2682.5MHz
Band 41	15	QPSK	1	0	23.57	24.21	24.46	24.29	24.84
			1	37	24.01	24.45	24.83	24.58	24.89
			1	74	24.12	24.38	24.75	24.50	24.63
			36	0	22.84	23.35	23.77	23.49	23.86
			36	16	22.85	23.34	23.81	23.50	23.83
			36	35	22.87	23.34	23.78	23.49	23.81
			75	0	23.07	23.39	23.85	23.54	23.70
		16QAM	1	0	22.83	23.18	23.66	23.34	23.53
			1	37	23.25	23.38	23.93	23.56	23.51
			1	74	23.31	23.29	23.86	23.48	23.27
			36	0	21.77	22.20	22.65	22.35	22.63
			36	16	21.73	22.18	22.68	22.35	22.63
			36	35	21.76	22.19	22.67	22.35	22.62
			75	0	21.98	22.29	22.77	22.45	22.60
		64QAM	1	0	21.98	22.39	22.74	22.51	22.80
			1	37	22.38	22.57	23.04	22.73	22.76
			1	74	22.44	22.51	23.00	22.67	22.58
			36	0	20.79	21.27	21.61	21.38	21.75
			36	16	20.79	21.26	21.60	21.37	21.73
			36	35	20.79	21.27	21.60	21.38	21.75
			75	0	21.05	21.35	21.71	21.47	21.65

LTE Band	Band-width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39750	40185	40620	41055	41490
					2506.0MHz	2549.5MHz	2593.0MHz	2636.5MHz	2680.0MHz
Band 41	20	QPSK	1	0	23.48	23.98	24.28	24.08	24.48
			1	49	24.27	24.60	25.04	24.74	24.92
			1	99	24.17	24.27	24.66	24.40	24.37
			50	0	22.69	23.17	23.52	23.28	23.64
			50	24	22.69	23.14	23.54	23.27	23.59
			50	49	22.70	23.16	23.55	23.29	23.62
			100	0	23.02	23.28	23.68	23.41	23.54
		16QAM	1	0	22.56	22.77	23.28	22.94	22.98
			1	49	23.31	23.33	23.90	23.52	23.35
			1	99	23.18	23.00	23.67	23.22	22.81
			50	0	21.61	22.12	22.53	22.25	22.62
			50	24	21.62	22.11	22.47	22.23	22.60
			50	49	21.62	22.11	22.50	22.24	22.60
			100	0	22.01	22.25	22.64	22.38	22.48
		64QAM	1	0	21.60	22.05	22.25	22.11	22.49
			1	49	22.35	22.61	22.93	22.71	22.86
			1	99	22.19	22.26	22.68	22.40	22.32
			50	0	20.61	21.19	21.49	21.29	21.76
			50	24	20.66	21.22	21.48	21.30	21.77
			50	49	20.64	21.21	21.47	21.29	21.77
			100	0	21.02	21.32	21.62	21.42	21.61

Note:

1. Per KDB 447498 D04v01 section 3.1.6, the required test channels number is 5 for LTE Band 41.

LTE Band 66 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					131979	132322	132665
					1710.70MHz	1745.00MHz	1779.3MHz
Band 66	1.4	QPSK	1	0	22.63	23.16	22.93
			1	2	22.74	23.27	23.17
			1	5	22.65	23.17	22.95
			3	0	22.69	23.14	22.93
			3	1	22.69	23.15	22.90
			3	2	22.66	23.18	22.90
			6	0	21.72	22.27	22.11
		16QAM	1	0	21.62	22.14	21.78
			1	2	21.80	22.29	21.95
			1	5	21.62	22.12	21.79
			3	0	21.54	22.04	21.70
			3	1	21.53	22.05	21.69
			3	2	21.55	22.04	21.68
			6	0	20.74	21.01	20.95
		64QAM	1	0	21.12	21.71	21.16
			1	2	21.30	21.61	21.28
			1	5	21.11	21.32	21.11
			3	0	21.05	21.29	20.98
			3	1	21.07	21.29	20.98
			3	2	21.05	21.29	20.97
			6	0	20.00	20.10	19.84

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					131987	132322	132657
					1711.50MHz	1745.00MHz	1778.50MHz
Band 66	3	QPSK	1	0	22.56	23.08	22.99
			1	7	22.58	23.20	22.97
			1	14	22.58	23.14	22.96
			8	0	21.65	22.14	22.03
			8	4	21.65	22.14	22.05
			8	7	21.68	22.18	22.03
			15	0	21.60	22.16	21.92
		16QAM	1	0	21.75	22.15	21.84
			1	7	21.70	22.13	21.81
			1	14	21.73	22.14	21.78
			8	0	20.68	21.11	20.92
			8	4	20.70	21.09	20.91
			8	7	20.68	21.09	20.91
			15	0	20.64	21.02	20.75
		64QAM	1	0	20.62	21.12	21.12
			1	7	20.60	21.17	21.07
			1	14	20.62	21.06	21.14
			8	0	19.69	20.20	19.95
			8	4	19.73	20.19	19.94
			8	7	19.74	20.24	19.93
			15	0	19.75	20.12	19.85

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					131997	132322	132647
					1712.50MHz	1745.00MHz	1777.50MHz
Band 66	5	QPSK	1	0	22.55	23.03	22.99
			1	12	22.73	23.25	23.14
			1	24	22.60	23.10	22.97
			12	0	21.54	22.04	21.94
			12	6	21.59	22.09	21.89
			12	11	21.59	22.04	21.92
			25	0	21.57	22.08	21.90
		16QAM	1	0	21.49	22.13	21.86
			1	12	21.64	22.28	21.95
			1	24	21.54	22.17	21.80
			12	0	20.54	21.03	20.90
			12	6	20.61	21.02	20.85
			12	11	20.55	21.05	20.87
			25	0	20.58	21.08	20.91
		64QAM	1	0	20.56	21.54	21.13
			1	12	20.70	21.69	21.22
			1	24	20.61	21.55	21.11
			12	0	19.73	20.17	20.04
			12	6	19.67	20.15	20.06
			12	11	19.69	20.21	20.04
			25	0	19.70	20.17	20.04

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					132022	132322	132622
					1715.00MHz	1745.00MHz	1775.00MHz
Band 66	10	QPSK	1	0	22.53	23.05	23.11
			1	24	22.73	23.26	23.18
			1	49	22.68	23.15	23.00
			25	0	21.55	22.09	22.12
			25	12	21.58	22.08	22.10
			25	24	21.61	22.10	22.10
			50	0	21.63	22.04	22.02
		16QAM	1	0	21.68	22.09	21.90
			1	24	21.83	22.26	22.00
			1	49	21.77	22.15	21.76
			25	0	20.58	21.12	21.06
			25	12	20.58	21.10	21.02
			25	24	20.57	21.08	21.08
			50	0	20.62	21.07	20.96
		64QAM	1	0	20.55	21.07	21.17
			1	24	20.78	21.15	21.26
			1	49	20.67	21.10	21.13
			25	0	19.64	20.17	20.11
			25	12	19.68	20.19	20.15
			25	24	19.67	20.18	20.12
			50	0	19.69	20.14	20.08

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					132047	132322	132597
					1717.50MHz	1745.00MHz	1772.50MHz
Band 66	15	QPSK	1	0	22.45	22.95	23.03
			1	37	22.66	23.21	23.05
			1	74	22.62	23.09	22.83
			36	0	21.69	22.23	22.29
			36	16	21.68	22.27	22.27
			36	35	21.71	22.21	22.26
			75	0	21.74	22.24	22.20
		16QAM	1	0	21.60	22.12	21.79
			1	37	21.75	22.31	21.89
			1	74	21.83	22.18	21.68
			36	0	20.63	21.18	21.05
			36	16	20.62	21.14	21.05
			36	35	20.59	21.15	21.08
			75	0	20.68	21.14	21.05
		64QAM	1	0	20.52	21.12	21.16
			1	37	20.70	21.36	21.24
			1	74	20.71	21.15	21.05
			36	0	19.72	20.23	20.16
			36	16	19.71	20.23	20.15
			36	35	19.72	20.23	20.15
			75	0	19.78	20.22	20.11

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					132072	132322	132572
					1720.00MHz	1745.00MHz	1770.00MHz
Band 66	20	QPSK	1	0	22.39	22.82	22.76
			1	49	22.88	23.36	23.15
			1	99	22.69	23.02	22.66
			50	0	21.61	22.09	22.01
			50	24	21.61	22.09	22.06
			50	49	21.61	22.07	22.05
			100	0	21.70	22.01	22.01
		16QAM	1	0	21.35	21.86	21.68
			1	49	21.82	22.31	22.05
			1	99	21.66	21.95	21.61
			50	0	20.63	21.07	21.03
			50	24	20.60	21.12	21.01
			50	49	20.63	21.11	21.08
			100	0	20.66	21.00	20.93
		64QAM	1	0	20.75	21.01	20.68
			1	49	21.23	21.41	20.99
			1	99	21.21	21.17	20.62
			50	0	19.79	20.27	20.18
			50	24	19.73	20.23	20.17
			50	49	19.75	20.26	20.17
			100	0	19.79	20.19	20.06

LTE Band 71 part：

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					133147	133297	133447
					665.5MHz	680.5MHz	695.5MHz
Band 71	5	QPSK	1	0	23.26	22.85	23.30
			1	12	22.99	22.96	22.80
			1	24	22.94	22.80	22.72
			12	0	21.36	21.83	21.57
			12	6	21.53	21.90	21.58
			12	11	21.38	22.00	21.60
			25	0	21.38	22.01	21.64
		16QAM	1	0	22.43	21.53	21.95
			1	12	22.20	21.94	21.72
			1	24	21.79	21.83	21.69
			12	0	20.41	20.89	20.57
			12	6	20.52	20.98	20.54
			12	11	20.52	20.94	20.55
			25	0	20.32	21.04	20.70
		64QAM	1	0	21.15	19.53	20.60
			1	12	21.09	20.84	20.65
			1	24	21.13	20.90	20.58
			12	0	19.43	19.55	19.53
			12	6	19.41	19.55	19.60
			12	11	19.36	19.53	19.57
			25	0	19.37	19.52	19.63

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					133172	133297	133422
					668MHz	680.5MHz	693MHz
Band 71	10	QPSK	1	0	23.26	22.58	22.85
			1	24	23.28	22.71	22.93
			1	49	22.70	22.67	22.75
			25	0	21.84	21.32	21.72
			25	12	21.82	21.32	21.68
			25	24	21.79	21.26	21.68
			50	0	21.78	21.30	21.78
		16QAM	1	0	22.35	21.41	21.89
			1	24	22.16	21.61	22.02
			1	49	21.94	21.60	21.85
			25	0	20.82	20.32	20.69
			25	12	20.85	20.38	20.68
			25	24	20.86	20.32	20.66
			50	0	20.79	20.32	20.81
		64QAM	1	0	20.62	19.27	20.64
			1	24	20.79	20.93	20.80
			1	49	20.70	20.92	20.60
			25	0	19.83	19.30	19.57
			25	12	19.79	19.28	19.58
			25	24	19.79	19.34	19.59
			50	0	19.77	19.29	19.71

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					133197	133297	133397
					670.5MHz	680.5MHz	690.5MHz
Band 71	15	QPSK	1	0	23.11	22.70	22.54
			1	37	22.56	22.56	22.87
			1	74	22.48	22.77	22.66
			36	0	21.89	21.25	21.77
			36	16	21.91	21.29	21.80
			36	35	21.90	21.24	21.75
			75	0	21.77	21.34	21.86
		16QAM	1	0	22.19	21.49	21.61
			1	37	21.96	21.46	22.01
			1	74	21.75	21.56	21.78
			36	0	20.90	20.22	20.76
			36	16	20.89	20.16	20.76
			36	35	20.95	20.19	20.79
			75	0	20.90	20.34	20.87
		64QAM	1	0	20.77	19.31	20.44
			1	37	21.01	20.80	20.69
			1	74	20.79	20.92	20.58
			36	0	19.82	19.19	19.77
			36	16	19.88	19.20	19.78
			36	35	19.87	19.20	19.80
			75	0	19.92	19.31	19.85

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					133222	133322	133372
					673MHz	683MHz	688MHz
Band 71	20	QPSK	1	0	22.38	22.32	22.30
			1	49	22.78	22.63	23.02
			1	99	22.42	22.62	22.65
			50	0	22.05	21.19	22.05
			50	24	22.03	21.20	22.08
			50	49	22.02	21.19	22.06
			100	0	21.94	21.37	22.11
		16QAM	1	0	21.52	21.29	21.29
			1	49	22.07	21.74	21.98
			1	99	21.59	21.59	21.58
			50	0	21.10	20.28	21.15
			50	24	21.09	20.29	21.12
			50	49	21.06	20.25	21.11
			100	0	20.97	20.40	21.17
		64QAM	1	0	20.58	19.40	20.54
			1	49	21.14	20.61	21.19
			1	99	20.69	20.53	20.85
			50	0	20.08	19.22	20.08
			50	24	20.07	19.18	20.06
			50	49	20.09	19.20	20.07
			100	0	19.96	19.39	20.11

13.4 WLAN 2.4 GHz Band Conducted Power

Average Power (dBm)				
Channel	Frequency (MHz)	802.11 b	802.11 g	802.11n (HT20)
CH 01	2412	16.69	11.40	10.26
CH 06	2437	17.14	11.24	12.02
CH 11	2462	**17.39**	12.22	12.74

Average Power (dBm)		
Channel	Frequency (MHz)	802.11n (HT40)
CH 03	2422	12.47
CH 06	2437	12.44
CH 09	2452	12.93

Note:

1. SAR test of WLAN 2.4GHz is performed.
2. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
3. Per KDB 248227 D01v02r02, In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. SAR is not required for the following 2.4 GHz OFDM conditions:
   1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
   2) When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
4. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
5. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.5 WLAN 5.2GHz Band Conducted Power

Average Power (dBm)				
Channel	Frequency (MHz)	802.11 a	802.11 ac20	802.11 n20
CH 36	5180	**13.01**	11.53	12.03
CH 40	5200	12.75	11.48	11.93
CH 48	5240	12.85	11.38	11.81

Average Power (dBm)			
Channel	Frequency (MHz)	802.11 ac40	802.11 n40
CH 38	5190	11.38	11.23
CH 46	5230	11.04	11.03

Average Power (dBm)		
Channel	Frequency (MHz)	802.11 ac80
CH 42	5210	11.30

Note:

6. SAR test of WLAN 5.2GHz is performed.
7. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
8. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
9. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.6 WLAN 5.8GHz Band Conducted Power

Average Power (dBm)				
Channel	Frequency (MHz)	802.11 a	802.11 ac20	802.11 n20
CH 149	5745	13.05	11.82	11.82
CH 157	5785	13.24	11.91	11.89
CH 165	5825	**13.69**	12.58	12.58

Average Power (dBm)			
Channel	Frequency (MHz)	802.11 ac40	802.11 n40
CH 151	5755	11.76	11.75
CH 159	5795	11.59	11.95

Average Power (dBm)		
Channel	Frequency (MHz)	802.11 ac80
CH 155	5775	11.57

Note:

10. SAR test of WLAN 5.8GHz is performed.
11. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
12. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
13. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

13.7 Bluetooth Conducted Power

Average Power (dBm)				
Channel	Frequency (MHz)	GFSK	π/4-DQPSK	8DPSK
CH 00	2402	**9.61**	8.82	8.88
CH 39	2441	8.47	7.62	7.73
CH 78	2480	9.89	9.07	9.17

Average Power (dBm)					
Channel	Frequency (MHz)	BLE PHY 1M	BLE PHY 2M	BLE Coded PHY S=2	BLE Coded PHY S=8
CH 00	2402	-2.81	-3.66	-3.59	-3.80
CH 20	2442	-2.49	-3.11	-3.03	-3.15
CH 39	2480	-2.46	-2.87	-2.80	-2.92

Note:

1. SAR test of Bluetooth is performed and the mode with highest average power is selected for SAR testing.
2. Per KDB 447498 D04v01 section 2.1.2: 1-mW Test Exemption, SAR test for BLE is not required.
3. The output power of all data rate were pre-scan, just the worst case of all mode were shown in report.
4. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 100%, so the duty cycle factor is 1.

14 Exposure Positions Consideration

14.1 EUT Antenna Locations

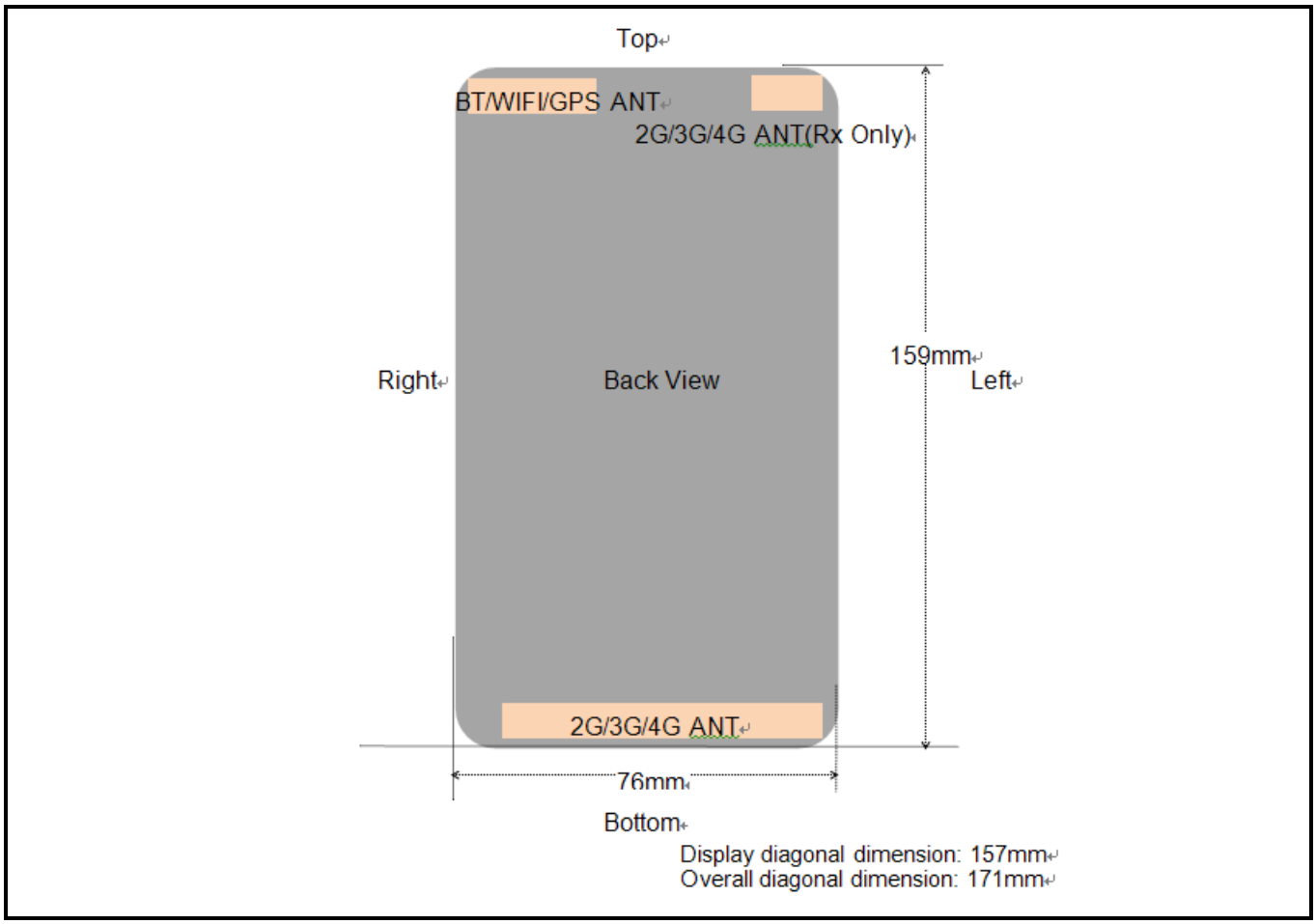


Fig.14.1 EUT Antenna Locations

Note: This antenna diagram is only used as a reference for the distance from the antenna to each edge. For the specific shape of the antenna, please refer to the physical photo.

14.2 Test Positions Consideration

Distance of Antennas to EUT edge/surface Test distance: 10mm						
Antennas	**Back**	**Front**	**Top Side**	**Bottom Side**	**Right Side**	**Left Side**
2G/3G/4G	<25mm	<25mm	144mm	<25mm	<25mm	<25mm
WLAN & Bluetooth	<25mm	<25mm	<25mm	147mm	<25mm	53mm

Test Positions Test distance: 10mm						
Antennas	**Back**	**Front**	**Top Side**	**Bottom Side**	**Right Side**	**Left Side**
2G/3G/4G	Yes	Yes	No	Yes	Yes	Yes
WLAN & Bluetooth	Yes	Yes	Yes	No	Yes	No

Note:

1. Head/Body-worn/Hotspot mode SAR assessments are required.
2. Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 9cm * 5cm, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
3. Per KDB 447498 D04v01, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user, which is 0 mm for head SAR, 10 mm for hotspot SAR, and 10 mm for body-worn SAR.
4. Per KDB 648474 D04 v01r03, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg

15 SAR Test Results Summary

15.1 Standalone Head SAR Data

➢ GSM Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
1	GSM850/Voice	Right Cheek	190	836.6	33.42	-0.70	33.5	**0.063**	1.019	0.064
	GSM850/Voice	Right Tilted	190	836.6	33.42	1.96	33.5	0.038	1.019	0.039
	GSM850/Voice	Left Cheek	190	836.6	33.42	0.62	33.5	0.049	1.019	0.050
	GSM850/Voice	Left Tilted	190	836.6	33.42	0.33	33.5	0.027	1.019	0.028
	PCS1900/Voice	Right Cheek	512	1850.2	30.67	-0.37	31.0	0.143	1.079	0.154
	PCS1900/Voice	Right Tilted	512	1850.2	30.67	0.06	31.0	0.086	1.079	0.093
2	PCS1900/Voice	Left Cheek	512	1850.2	30.67	-0.59	31.0	**0.274**	1.079	0.296
	PCS1900/Voice	Left Tilted	512	1850.2	30.67	1.19	31.0	0.148	1.079	0.160
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	Right Cheek	9262	1852.4	22.77	1.24	23.0	0.282	1.054	0.297
	Band II/RMC	Right Tilted	9262	1852.4	22.77	1.21	23.0	0.152	1.054	0.160
3	Band II/RMC	Left Cheek	9262	1852.4	22.77	-0.47	23.0	**0.463**	1.054	0.488
	Band II/RMC	Left Tilted	9262	1852.4	22.77	0.77	23.0	0.260	1.054	0.274
	Band IV/RMC	Right Cheek	1413	1732.5	23.08	1.93	23.5	0.374	1.102	0.412
	Band IV/RMC	Right Tilted	1413	1732.5	23.08	0.83	23.5	0.192	1.102	0.212
4	Band IV/RMC	Left Cheek	1413	1732.5	23.08	-4.06	23.5	**0.633**	1.102	0.698
	Band IV/RMC	Left Tilted	1413	1732.5	23.08	0.13	23.5	0.348	1.102	0.383
5	Band V/RMC	Right Cheek	4183	836.6	22.98	0.68	23.0	**0.064**	1.005	0.064
	Band V/RMC	Right Tilted	4183	836.6	22.98	0.76	23.0	0.040	1.005	0.040
	Band V/RMC	Left Cheek	4183	836.6	22.98	-2.16	23.0	0.054	1.005	0.054
	Band V/RMC	Left Tilted	4183	836.6	22.98	1.89	23.0	0.034	1.005	0.034
A ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#49	Right Cheek	20850	2510	22.71	0.89	23.0	0.300	1.069	0.321
	Band7/1RB#49	Right Tilted	20850	2510	22.71	0.27	23.0	0.168	1.069	0.180
6	Band7/1RB#49	Left Cheek	20850	2510	22.71	-4.64	23.0	**0.554**	1.069	0.592
	Band7/1RB#49	Left Tilted	20850	2510	22.71	1.39	23.0	0.276	1.069	0.295
	Band7/50%RB#49	Right Cheek	21350	2560	21.49	-1.03	22.0	0.282	1.125	0.317
	Band7/50%RB#49	Right Tilted	21350	2560	21.49	1.65	22.0	0.156	1.125	0.176
	Band7/50%RB#49	Left Cheek	21350	2560	21.49	0.60	22.0	0.522	1.125	0.587
	Band7/50%RB#49	Left Tilted	21350	2560	21.49	1.42	22.0	0.260	1.125	0.293
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 12(10MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#49	Right Cheek	23060	704	22.43	1.96	23.0	0.140	1.14	0.160
	Band12/1RB#49	Right Tilted	23060	704	22.43	-0.85	23.0	0.086	1.14	0.098
7	Band12/1RB#49	Left Cheek	23060	704	22.43	-2.60	23.0	**0.149**	1.14	0.170
	Band12/1RB#49	Left Tilted	23060	704	22.43	0.38	23.0	0.088	1.14	0.100
	Band12/50%RB#0	Right Cheek	23060	704	21.47	1.53	21.5	0.132	1.007	0.133
	Band12/50%RB#0	Right Tilted	23060	704	21.47	0.23	21.5	0.078	1.007	0.079
	Band12/50%RB#0	Left Cheek	23060	704	21.47	1.37	21.5	0.142	1.007	0.143
	Band12/50%RB#0	Left Tilted	23060	704	21.47	0.42	21.5	0.082	1.007	0.083
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 13(10MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band13/1RB#0	Right Cheek	23230	782	22.55	0.83	23.0	0.114	1.109	0.126
	Band13/1RB#0	Right Tilted	23230	782	22.55	1.03	23.0	0.063	1.109	0.070
8	Band13/1RB#0	Left Cheek	23230	782	22.55	-4.55	23.0	**0.128**	1.109	0.142
	Band13/1RB#0	Left Tilted	23230	782	22.55	1.43	23.0	0.072	1.109	0.080
	Band13/50%RB#24	Right Cheek	23230	782	21.64	0.06	22.0	0.106	1.086	0.115
	Band13/50%RB#24	Right Tilted	23230	782	21.64	0.38	22.0	0.058	1.086	0.063
	Band13/50%RB#24	Left Cheek	23230	782	21.64	-0.06	22.0	0.122	1.086	0.132
	Band13/50%RB#24	Left Tilted	23230	782	21.64	-1.17	22.0	0.066	1.086	0.072
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 25(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band25/1RB#49	Right Cheek	26140	1860	22.67	2.62	23.0	0.288	1.079	0.311
	Band25/1RB#49	Right Tilted	26140	1860	22.67	1.41	23.0	0.172	1.079	0.186
9	Band25/1RB#49	Left Cheek	26140	1860	22.67	-0.07	23.0	**0.462**	1.079	0.498
	Band25/1RB#49	Left Tilted	26140	1860	22.67	1.66	23.0	0.263	1.079	0.284
	Band25/50%RB#0	Right Cheek	26140	1860	21.51	0.06	22.0	0.276	1.119	0.309
	Band25/50%RB#0	Right Tilted	26140	1860	21.51	1.23	22.0	0.163	1.119	0.182
	Band25/50%RB#0	Left Cheek	26140	1860	21.51	0.98	22.0	0.434	1.119	0.486
	Band25/50%RB#0	Left Tilted	26140	1860	21.51	0.65	22.0	0.248	1.119	0.278
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 26(15MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26/1RB#38	Right Cheek	26965	841.5	22.89	-0.42	23.5	0.044	1.151	0.051
	Band26/1RB#38	Right Tilted	26965	841.5	22.89	1.79	23.5	0.026	1.151	0.030
10	Band26/1RB#38	Left Cheek	26965	841.5	22.89	0.29	23.5	**0.048**	1.151	0.055
	Band26/1RB#38	Left Tilted	26965	841.5	22.89	0.27	23.5	0.030	1.151	0.035
	Band26/50%RB#18	Right Cheek	26865	831.5	21.99	1.97	22.5	0.039	1.125	0.044
	Band26/50%RB#18	Right Tilted	26865	831.5	21.99	1.40	22.5	0.024	1.125	0.027
	Band26/50%RB#18	Left Cheek	26865	831.5	21.99	3.62	22.5	0.042	1.125	0.047
	Band26/50%RB#18	Left Tilted	26865	831.5	21.99	-1.91	22.5	0.027	1.125	0.030
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE Band41(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49	Right Cheek	40620	2593	25.04	1.64	25.5	0.386	1.112	1.008	0.433
	Band41/1RB#49	Right Tilted	40620	2593	25.04	-1.59	25.5	0.214	1.112	1.008	0.240
11	Band41/1RB#49	Left Cheek	40620	2593	25.04	-0.20	25.5	**0.667**	1.112	1.008	0.748
	Band41/1RB#49	Left Tilted	40620	2593	25.04	1.95	25.5	0.372	1.112	1.008	0.417
	Band41/50%RB#0	Right Cheek	41490	2680	23.64	1.75	24.0	0.346	1.086	1.008	0.379
	Band41/50%RB#0	Right Tilted	41490	2680	23.64	0.55	24.0	0.201	1.086	1.008	0.220
	Band41/50%RB#0	Left Cheek	41490	2680	23.64	0.63	24.0	0.638	1.086	1.008	0.698
	Band41/50%RB#0	Left Tilted	41490	2680	23.64	1.06	24.0	0.356	1.086	1.008	0.390
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ FDD-LTE Band 66(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band66/1RB#49	Right Cheek	132322	1745	23.36	1.48	23.5	0.287	1.033	0.296
	Band66/1RB#49	Right Tilted	132322	1745	23.36	0.58	23.5	0.158	1.033	0.163
12	Band66/1RB#49	Left Cheek	132322	1745	23.36	-3.99	23.5	**0.540**	1.033	0.558
	Band66/1RB#49	Left Tilted	132322	1745	23.36	-1.73	23.5	0.282	1.033	0.291
	Band66/50%RB#0	Right Cheek	132322	1745	22.09	0.54	22.5	0.262	1.099	0.288
	Band66/50%RB#0	Right Tilted	132322	1745	22.09	-1.72	22.5	0.142	1.099	0.156
	Band66/50%RB#0	Left Cheek	132322	1745	22.09	1.63	22.5	0.502	1.099	0.552
	Band66/50%RB#0	Left Tilted	132322	1745	22.09	0.68	22.5	0.259	1.099	0.285
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 71(20MHz) QPSK Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
13	Band71/1RB#49	Right Cheek	133372	688	23.02	-2.71	23.5	**0.105**	1.117	0.117
	Band71/1RB#49	Right Tilted	133372	688	23.02	-1.71	23.5	0.062	1.117	0.069
	Band71/1RB#49	Left Cheek	133372	688	23.02	0.93	23.5	0.102	1.117	0.114
	Band71/1RB#49	Left Tilted	133372	688	23.02	0.07	23.5	0.060	1.117	0.067
	Band71/50%RB#24	Right Cheek	133372	688	22.08	-0.94	22.5	0.094	1.102	0.104
	Band71/50%RB#24	Right Tilted	133372	688	22.08	1.49	22.5	0.057	1.102	0.063
	Band71/50%RB#24	Left Cheek	133372	688	22.08	0.21	22.5	0.092	1.102	0.101
	Band71/50%RB#24	Left Tilted	133372	688	22.08	-0.24	22.5	0.054	1.102	0.060
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	Right Cheek	11	2462	17.39	0.86	17.5	0.286	1.026	1.000	0.293
	2.4GHz/802.11b	Right Tilted	11	2462	17.39	1.61	17.5	0.223	1.026	1.000	0.229
14	2.4GHz/802.11b	Left Cheek	11	2462	17.39	1.10	17.5	**0.542**	1.026	1.000	0.556
	2.4GHz/802.11b	Left Tilted	11	2462	17.39	1.33	17.5	0.421	1.026	1.000	0.432
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.2 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.2GHz/802.11a	Right Cheek	36	5180	13.01	1.88	13.5	0.226	1.119	1.000	0.253
	5.2GHz/802.11a	Right Tilted	36	5180	13.01	-0.36	13.5	0.248	1.119	1.000	0.278
	5.2GHz/802.11a	Left Cheek	36	5180	13.01	1.23	13.5	0.432	1.119	1.000	0.483
15	5.2GHz/802.11a	Left Tilted	36	5180	13.01	2.81	13.5	**0.453**	1.119	1.000	0.507
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	Right Cheek	165	5825	13.69	0.47	14.0	0.392	1.074	1.000	0.421
	5.8GHz/802.11a	Right Tilted	165	5825	13.69	1.99	14.0	0.486	1.074	1.000	0.522
	5.8GHz/802.11a	Left Cheek	165	5825	13.69	-1.15	14.0	0.628	1.074	1.000	0.674
	5.8GHz/802.11a	Left Tilted	165	5825	13.69	-0.07	14.0	0.794	1.074	1.000	0.853
16	5.8GHz/802.11a	Left Tilted	149	5745	13.05	3.53	14.0	**0.943**	1.245	1.000	1.174
	5.8GHz/802.11a	Left Tilted	157	5825	13.24	0.04	14.0	0.865	1.191	1.000	1.030
	5.8GHz/802.11a	**Left Tilted**	**149**	**5745**	**13.05**	**0.26**	**14.0**	**0.932**	**1.245**	**1.000**	**1.160**
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BT/GFSK	Right Cheek	78	2480	9.89	1.61	10.0	0.056	1.026	1.000	0.057
	BT/GFSK	Right Tilted	78	2480	9.89	-1.71	10.0	0.037	1.026	1.000	0.038
17	BT/GFSK	Left Cheek	78	2480	9.89	0.08	10.0	**0.084**	1.026	1.000	0.086
	BT/GFSK	Left Tilted	78	2480	9.89	1.75	10.0	0.058	1.026	1.000	0.060
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Per KDB 447498 D04v01, for each exposure position, if the highest output power channel Reported SAR ≤ 0.8W/kg, other channels SAR testing is not necessary.
2. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg.
3. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
4. Per KDB 248227 D01v02r02, for 802.11b DSSS , when the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required in that exposure configuration.
5. Per KDB 248227 D01v02r02, OFDM SAR 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 ≤ 1.2 W/kg. Cuz the maximum output power specified for OFDM and DSSS are 19.95mW(13.0dBm) and 56.23mW(17.5dBm), the scaled SAR would

be 0.556×(19.95/56.23)=0.197W/Kg<1.2 W/kg, therefore, SAR is not required for OFDM.

6. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.

15.2 Standalone Body SAR

➢ GSM Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GPRS850/2 slots	Front	190	836.6	32.17	0.08	32.5	0.106	1.079	0.114
18	GPRS850/2 slots	Back	190	836.6	32.17	0.07	32.5	**0.179**	1.079	0.193
	GPRS1900/3 slots	Front	661	1880	27.48	1.47	27.5	0.623	1.005	0.626
	GPRS1900/3 slots	Back	661	1880	27.48	-1.27	27.5	1.156	1.005	1.162
19	GPRS1900/3 slots	Back	512	1850.2	27.38	-0.65	27.5	**1.290**	1.028	1.326
	GPRS1900/3 slots	Back	810	1909.8	26.93	0.14	27.5	0.835	1.140	0.952
	GPRS1900/3 slots	**Back**	**512**	**1850.2**	**27.38**	**-1.05**	**27.5**	**1.270**	**1.028**	**1.306**
	GPRS1900/3 slots with headset	Back	512	1850.2	27.38	1.17	27.5	1.260	1.028	1.295
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	Front	9262	1852.4	22.77	-1.87	23.0	0.524	1.054	0.552
	Band II/RMC	Back	9262	1852.4	22.77	-1.38	23.0	1.000	1.054	1.054
20	Band II/RMC	Back	9400	1880	22.55	4.95	23.0	**1.025**	1.109	1.137
	Band II/RMC	Back	9538	1907.6	22.14	-1.64	23.0	0.882	1.219	1.075
	Band II/RMC	**Back**	**9400**	**1880**	**22.55**	**0.68**	**23.0**	**1.012**	**1.109**	**1.122**
	Band IV/RMC	Front	1413	1732.5	23.08	1.69	23.5	0.582	1.102	0.641
	Band IV/RMC	Back	1413	1732.5	23.08	-4.07	23.5	1.028	1.102	1.133
	Band IV/RMC	Back	1312	1712.4	22.92	-1.50	23.5	0.977	1.143	1.117
21	Band IV/RMC	Back	1513	1752.6	22.86	-1.46	23.5	**1.045**	1.159	1.211
	Band IV/RMC	**Back**	**1513**	**1752.6**	**22.86**	**1.39**	**23.5**	**1.033**	**1.159**	**1.197**
	Band V/RMC	Front	4183	836.6	22.98	0.26	23.5	0.068	1.127	0.077
22	Band V/RMC	Back	4183	836.6	22.98	3.88	23.5	**0.106**	1.127	0.119
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#49	Front	20850	2510	22.71	-0.95	23.0	0.528	1.069	0.564
	Band7/1RB#49	Back	20850	2510	22.71	-1.82	23.0	0.754	1.069	0.806
	Band7/50%RB#49	Front	21350	2560	21.49	1.86	22.0	0.466	1.125	0.524
	Band7/50%RB#49	Back	21350	2560	21.49	0.21	22.0	0.706	1.125	0.794
	Band7/100%RB#0	Back	21350	2560	21.46	0.81	22.0	0.642	1.132	0.727
23	Band7/1RB#49	Back	21100	2535	22.57	-1.09	23.0	**0.788**	1.104	0.870
	Band7/1RB#49	Back	21350	2560	22.47	0.38	23.0	0.732	1.130	0.827
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 12(10MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#49	Front	23060	704	22.43	-1.33	23.0	0.282	1.140	0.321
24	Band12/1RB#49	Back	23060	704	22.43	-0.18	23.0	**0.503**	1.140	0.573
	Band12/50%RB#0	Front	23060	704	21.47	-0.41	21.5	0.226	1.007	0.228
	Band12/50%RB#0	Back	23060	704	21.47	0.93	21.5	0.433	1.007	0.436
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak					**1.6 W/kg (mW/g) Averaged over 1g**					

Uncontrolled Exposure/General Population	

➢ FDD-LTE Band 13(10MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band13/1RB#0	Front	23230	782	22.55	0.98	23.0	0.128	1.109	0.142
25	Band13/1RB#0	Back	23230	782	22.55	0.00	23.0	**0.250**	1.109	0.277
	Band13/50%RB#24	Front	23230	782	21.64	0.44	22.0	0.108	1.086	0.117
	Band13/50%RB#24	Back	23230	782	21.64	1.63	22.0	0.226	1.086	0.245
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 25(20MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band25/1RB#49	Front	26140	1860	22.67	-0.69	23.0	0.418	1.079	0.451
26	Band25/1RB#49	Back	26140	1860	22.67	0.19	23.0	**0.973**	1.079	1.050
	Band25/50%RB#0	Front	26140	1860	21.51	-1.27	22.0	0.328	1.119	0.367
	Band25/50%RB#0	Back	26140	1860	21.51	1.78	22.0	0.842	1.119	0.942
	Band25/100%RB#0	Back	26365	1882.5	21.44	0.74	22.0	0.690	1.138	0.785
	Band25/1RB#49	Back	26365	1882.5	22.53	-0.23	23.0	0.941	1.114	1.048
	Band25/1RB#49	Back	26590	1905	21.96	3.14	23.0	0.813	1.271	1.033
	Band25/50%RB#49	Back	26365	1882.5	21.44	0.37	22.0	0.782	1.138	0.890
	Band25/50%RB#24	Back	26590	1905	21.23	0.09	22.0	0.754	1.194	0.900
	Band25/1RB#49	**Back**	**26140**	**1860**	**22.67**	**-0.53**	**23.0**	**0.962**	**1.079**	**1.038**
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 26(15MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26/1RB#38	Front	26965	841.5	22.89	-0.23	23.5	0.052	1.151	0.060
27	Band26/1RB#38	Back	26965	841.5	22.89	2.81	23.5	**0.083**	1.151	0.096
	Band26/50%RB#18	Front	26865	831.5	21.99	1.77	22.5	0.043	1.125	0.048
	Band26/50%RB#18	Back	26865	831.5	21.99	-0.82	22.5	0.074	1.125	0.083
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE Band 41(20MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49	Front	40620	2593	25.04	0.79	25.5	0.386	1.112	1.008	0.433
28	Band41/1RB#49	Back	40620	2593	25.04	0.44	25.5	**0.712**	1.112	1.008	0.798
	Band41/50%RB#0	Front	41490	2680	23.64	-1.89	24.0	0.342	1.086	1.008	0.374
	Band41/50%RB#0	Back	41490	2680	23.64	0.78	24.0	0.668	1.086	1.008	0.731
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ FDD-LTE Band 66(20MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band66/1RB#49	Front	132322	1745	23.36	1.85	23.5	0.522	1.033	0.539
	Band66/1RB#49	Back	132322	1745	23.36	0.17	23.5	1.016	1.033	1.050
	Band66/50%RB#0	Front	132322	1745	22.09	1.86	22.5	0.462	1.099	0.508
	Band66/50%RB#0	Back	132322	1745	22.09	0.18	22.5	0.852	1.099	0.936
	Band66/100%RB#0	Back	132322	1745	22.01	1.62	22.5	0.704	1.119	0.788
	Band66/1RB#49	Back	132072	1720	22.88	1.17	23.5	0.912	1.153	1.052
29	Band66/1RB#49	Back	132572	1770	23.15	0.57	23.5	**1.098**	1.084	1.190
	Band66/50%RB#0	Back	132072	1720	21.61	1.62	22.5	0.784	1.227	0.962
	Band66/50%RB#24	Back	132572	1770	22.06	1.25	22.5	0.904	1.107	1.001
	Band66/1RB#49	**Back**	**132572**	**1770**	**23.15**	**1.54**	**23.5**	**1.091**	**1.084**	**1.183**
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 71(20MHz) QPSK Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band71/1RB#49	Front	133372	688	23.02	-1.86	23.5	0.076	1.117	0.085
30	Band71/1RB#49	Back	133372	688	23.02	0.54	23.5	**0.235**	1.117	0.262
	Band71/50%RB#24	Front	133372	688	22.08	-1.07	22.5	0.058	1.102	0.064
	Band71/50%RB#24	Back	133372	688	22.08	1.21	22.5	0.206	1.102	0.227
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4GHz Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	Front	11	2462	17.39	-0.34	17.5	0.152	1.026	1.000	0.156
31	2.4GHz/802.11b	Back	11	2462	17.39	-0.51	17.5	**0.177**	1.026	1.000	0.182
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.2GHz Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.2GHz/802.11a	Front	36	5180	13.01	-0.96	13.5	0.071	1.119	1.000	0.079
32	5.2GHz/802.11a	Back	36	5180	13.01	0.51	13.5	**0.089**	1.119	1.000	0.100
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.8GHz Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	Front	165	5825	13.69	0.97	14.0	0.084	1.074	1.000	0.090
33	5.8GHz/802.11a	Back	165	5825	13.69	0.84	14.0	**0.118**	1.074	1.000	0.127
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power	Power Drift	Tune-Up Limit	Meas. SAR_{1g}	Scaling Factor	D.C Factor	Reported SAR_{1g}

					(dBm)	(dB)	(dBm)	(W/kg)			(W/kg)
	BT/GFSK	Front	78	2480	9.89	1.04	10.0	0.028	1.026	1.000	0.029
34	BT/GFSK	Back	78	2480	9.89	0.52	10.0	**0.039**	1.026	1.000	0.040
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Body-worn SAR testing was performed at 10mm separation, and this distance is determined by the handset manufacturer that there will be body-worn accessories that users may acquire at the time of equipment certification, to enable users to purchase aftermarket body-worn accessories with the required minimum separation.
2. Per KDB 941225 D06v02r01, when the same wireless modes and device transmission configurations are required for testing body-worn accessories and hotspot mode, it is not necessary to test body-worn accessory SAR for the same device orientation if the test separation distance for hotspot mode is more conservative than that used for body-worn accessories.
3. Per KDB 648474 D04v01r03, when the Reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
4. The WLAN SAR perform the front and back position, due considered the simultaneous SAR for body-worn.
5. Per KDB 447498 D04v01, for each exposure position, if the highest output channel Reported SAR ≤0.8W/kg, other channels SAR testing is not necessary.
6. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥0.8W/kg.
7. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
8. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
9. Highlight part of test data means repeated test.

15.3 Body SAR in Hotspot Mode

➢ GSM Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GPRS850/2 slots	Front	190	836.6	32.17	0.08	32.5	0.106	1.079	0.114
18	GPRS850/2 slots	Back	190	836.6	32.17	0.07	32.5	**0.179**	1.079	0.193
	GPRS850/2 slots	Left	190	836.6	32.17	1.15	32.5	0.072	1.079	0.078
	GPRS850/2 slots	Right	190	836.6	32.17	1.82	32.5	0.044	1.079	0.047
	GPRS850/2 slots	Bottom	190	836.6	32.17	-1.92	32.5	0.082	1.079	0.088
	GPRS1900/3 slots	Front	661	1880	27.48	1.47	27.5	0.623	1.005	0.626
	GPRS1900/3 slots	Back	661	1880	27.48	-1.27	27.5	1.156	1.005	1.162
	GPRS1900/3 slots	Left	661	1880	27.48	0.56	27.5	0.528	1.005	0.531
	GPRS1900/3 slots	Right	661	1880	27.48	0.26	27.5	0.136	1.005	0.137
	GPRS1900/3 slots	Bottom	661	1880	27.48	1.83	27.5	0.496	1.005	0.498
19	GPRS1900/3 slots	Back	512	1850.2	27.38	-0.65	27.5	**1.290**	1.028	1.326
	GPRS1900/3 slots	Back	810	1909.8	26.93	0.14	27.5	0.835	1.140	0.952
	GPRS1900/3 slots	**Back**	**512**	**1850.2**	**27.38**	**-1.05**	**27.5**	**1.270**	**1.028**	**1.306**
	GPRS1900/3 slots with headset	Back	512	1850.2	27.38	1.17	27.5	1.260	1.028	1.295
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band II/RMC	Front	9262	1852.4	22.77	-1.87	23.0	0.524	1.054	0.552
	Band II/RMC	Back	9262	1852.4	22.77	-1.38	23.0	1.000	1.054	1.054
	Band II/RMC	Left	9262	1852.4	22.77	0.52	23.0	0.481	1.054	0.507
	Band II/RMC	Right	9262	1852.4	22.77	0.23	23.0	0.123	1.054	0.130
	Band II/RMC	Bottom	9262	1852.4	22.77	-1.89	23.0	0.384	1.054	0.405
20	Band II/RMC	Back	9400	1880	22.55	4.95	23.0	**1.025**	1.109	1.137
	Band II/RMC	Back	9538	1907.6	22.14	-1.64	23.0	0.882	1.219	1.075
	Band II/RMC	**Back**	**9400**	**1880**	**22.55**	**0.68**	**23.0**	**1.012**	**1.109**	**1.122**
	Band IV/RMC	Front	1413	1732.5	23.08	1.69	23.5	0.582	1.102	0.641
	Band IV/RMC	Back	1413	1732.5	23.08	-4.07	23.5	1.028	1.102	1.133
	Band IV/RMC	Left	1413	1732.5	23.08	0.74	23.5	0.549	1.102	0.605
	Band IV/RMC	Right	1413	1732.5	23.08	-1.28	23.5	0.145	1.102	0.160
	Band IV/RMC	Bottom	1413	1732.5	23.08	1.21	23.5	0.622	1.102	0.685
	Band IV/RMC	Back	1312	1712.4	22.92	-1.50	23.5	0.977	1.143	1.117
21	Band IV/RMC	Back	1513	1752.6	22.86	-1.46	23.5	**1.045**	1.159	1.211
	Band IV/RMC	**Back**	**1513**	**1752.6**	**22.86**	**1.39**	**23.5**	**1.033**	**1.159**	**1.197**
	Band V/RMC	Front	4183	836.6	22.98	0.26	23.5	0.068	1.127	0.077
22	Band V/RMC	Back	4183	836.6	22.98	3.88	23.5	**0.106**	1.127	0.119
	Band V/RMC	Left	4183	836.6	22.98	-1.83	23.5	0.066	1.127	0.074
	Band V/RMC	Right	4183	836.6	22.98	1.53	23.5	0.038	1.127	0.043
	Band V/RMC	Bottom	4183	836.6	22.98	0.28	23.5	0.052	1.127	0.059
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 7(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band7/1RB#49	Front	20850	2510	22.71	-0.95	23.0	0.528	1.069	0.564
	Band7/1RB#49	Back	20850	2510	22.71	-1.82	23.0	0.754	1.069	0.806
	Band7/1RB#49	Left	20850	2510	22.71	-3.77	23.0	0.559	1.069	0.598
	Band7/1RB#49	Right	20850	2510	22.71	0.16	23.0	0.021	1.069	0.022
	Band7/1RB#49	Bottom	20850	2510	22.71	-0.23	23.0	0.359	1.069	0.384
	Band7/50%RB#49	Front	21350	2560	21.49	1.86	22.0	0.466	1.125	0.524
	Band7/50%RB#49	Back	21350	2560	21.49	0.21	22.0	0.706	1.125	0.794
	Band7/50%RB#49	Left	21350	2560	21.49	-0.92	22.0	0.491	1.125	0.552
	Band7/50%RB#49	Right	21350	2560	21.49	0.38	22.0	0.016	1.125	0.018
	Band7/50%RB#49	Bottom	21350	2560	21.49	0.05	22.0	0.303	1.125	0.341
	Band7/100%RB#0	Back	21350	2560	21.46	0.81	22.0	0.642	1.132	0.727
23	Band7/1RB#49	Back	21100	2535	22.57	-1.09	23.0	**0.788**	1.104	0.870
	Band7/1RB#49	Back	21350	2560	22.47	0.38	23.0	0.732	1.130	0.827
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 12(10MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12/1RB#49	Front	23060	704	22.43	-1.33	23.0	0.282	1.140	0.321
24	Band12/1RB#49	Back	23060	704	22.43	-0.18	23.0	**0.503**	1.140	0.573
	Band12/1RB#49	Left	23060	704	22.43	0.31	23.0	0.256	1.140	0.292
	Band12/1RB#49	Right	23060	704	22.43	1.49	23.0	0.082	1.140	0.093
	Band12/1RB#49	Bottom	23060	704	22.43	-0.61	23.0	0.322	1.140	0.367
	Band12/50%RB#0	Front	23060	704	21.47	-0.41	21.5	0.226	1.007	0.228
	Band12/50%RB#0	Back	23060	704	21.47	0.93	21.5	0.433	1.007	0.436
	Band12/50%RB#0	Left	23060	704	21.47	1.96	21.5	0.176	1.007	0.177
	Band12/50%RB#0	Right	23060	704	21.47	-0.17	21.5	0.063	1.007	0.063
	Band12/50%RB#0	Bottom	23060	704	21.47	1.73	21.5	0.259	1.007	0.261
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 13(10MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band13/1RB#0	Front	23230	782	22.55	0.98	23.0	0.128	1.109	0.142
25	Band13/1RB#0	Back	23230	782	22.55	0.00	23.0	**0.250**	1.109	0.277
	Band13/1RB#0	Left	23230	782	22.55	1.36	23.0	0.148	1.109	0.164
	Band13/1RB#0	Right	23230	782	22.55	0.77	23.0	0.082	1.109	0.091
	Band13/1RB#0	Bottom	23230	782	22.55	-0.68	23.0	0.136	1.109	0.151
	Band13/50%RB#24	Front	23230	782	21.64	0.44	22.0	0.108	1.086	0.117
	Band13/50%RB#24	Back	23230	782	21.64	1.63	22.0	0.226	1.086	0.245
	Band13/50%RB#24	Left	23230	782	21.64	-1.28	22.0	0.126	1.086	0.137
	Band13/50%RB#24	Right	23230	782	21.64	0.04	22.0	0.056	1.086	0.061
	Band13/50%RB#24	Bottom	23230	782	21.64	0.41	22.0	0.113	1.086	0.123
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 25(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band25/1RB#49	Front	26140	1860	22.67	-0.69	23.0	0.418	1.079	0.451
26	Band25/1RB#49	Back	26140	1860	22.67	0.19	23.0	**0.973**	1.079	1.050
	Band25/1RB#49	Left	26140	1860	22.67	0.95	23.0	0.276	1.079	0.298
	Band25/1RB#49	Right	26140	1860	22.67	0.99	23.0	0.146	1.079	0.158
	Band25/1RB#49	Bottom	26140	1860	22.67	0.84	23.0	0.737	1.079	0.795
	Band25/50%RB#0	Front	26140	1860	21.51	-1.27	22.0	0.328	1.119	0.367
	Band25/50%RB#0	Back	26140	1860	21.51	1.78	22.0	0.842	1.119	0.942
	Band25/50%RB#0	Left	26140	1860	21.51	-0.92	22.0	0.220	1.119	0.246
	Band25/50%RB#0	Right	26140	1860	21.51	0.52	22.0	0.098	1.119	0.110
	Band25/50%RB#0	Bottom	26140	1860	21.51	1.04	22.0	0.648	1.119	0.725
	Band25/100%RB#0	Back	26365	1882.5	21.44	0.74	22.0	0.690	1.138	0.785
	Band25/1RB#49	Back	26365	1882.5	22.53	-0.23	23.0	0.941	1.114	1.048
	Band25/1RB#49	Back	26590	1905	21.96	3.14	23.0	0.813	1.271	1.033
	Band25/50%RB#49	Back	26365	1882.5	21.44	0.37	22.0	0.782	1.138	0.890
	Band25/50%RB#24	Back	26590	1905	21.23	0.09	22.0	0.754	1.194	0.900
	Band25/1RB#49	**Back**	**26140**	**1860**	**22.67**	**-0.53**	**23.0**	**0.962**	**1.079**	**1.038**
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 26(15MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26/1RB#38	Front	26965	841.5	22.89	-0.23	23.5	0.052	1.151	0.060
27	Band26/1RB#38	Back	26965	841.5	22.89	2.81	23.5	**0.083**	1.151	0.096
	Band26/1RB#38	Left	26965	841.5	22.89	-0.88	23.5	0.057	1.151	0.066
	Band26/1RB#38	Right	26965	841.5	22.89	-0.54	23.5	0.025	1.151	0.029
	Band26/1RB#38	Bottom	26965	841.5	22.89	0.55	23.5	0.041	1.151	0.047
	Band26/50%RB#18	Front	26865	831.5	21.99	1.77	22.5	0.043	1.125	0.048
	Band26/50%RB#18	Back	26865	831.5	21.99	-0.82	22.5	0.074	1.125	0.083
	Band26/50%RB#18	Left	26865	831.5	21.99	0.68	22.5	0.048	1.125	0.054
	Band26/50%RB#18	Right	26865	831.5	21.99	1.57	22.5	0.021	1.125	0.024
	Band26/50%RB#18	Bottom	26865	831.5	21.99	0.71	22.5	0.033	1.125	0.037
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE Band 41(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41/1RB#49	Front	40620	2593	25.04	0.79	25.5	0.386	1.112	1.008	0.433
28	Band41/1RB#49	Back	40620	2593	25.04	0.44	25.5	**0.712**	1.112	1.008	0.798
	Band41/1RB#49	Left	40620	2593	25.04	-1.46	25.5	0.373	1.112	1.008	0.418
	Band41/1RB#49	Right	40620	2593	25.04	0.61	25.5	0.122	1.112	1.008	0.137
	Band41/1RB#49	Bottom	40620	2593	25.04	0.17	25.5	0.293	1.112	1.008	0.328
	Band41/50%RB#0	Front	41490	2680	23.64	-1.89	24.0	0.342	1.086	1.008	0.374
	Band41/50%RB#0	Back	41490	2680	23.64	0.78	24.0	0.668	1.086	1.008	0.731
	Band41/50%RB#0	Left	41490	2680	23.64	1.41	24.0	0.346	1.086	1.008	0.379
	Band41/50%RB#0	Right	41490	2680	23.64	0.66	24.0	0.103	1.086	1.008	0.113
	Band41/50%RB#0	Bottom	41490	2680	23.64	-0.09	24.0	0.270	1.086	1.008	0.296
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ FDD-LTE Band 66(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band66/1RB#49	Front	132322	1745	23.36	1.85	23.5	0.522	1.033	0.539
	Band66/1RB#49	Back	132322	1745	23.36	0.17	23.5	1.016	1.033	1.050
	Band66/1RB#49	Left	132322	1745	23.36	0.95	23.5	0.426	1.033	0.440
	Band66/1RB#49	Right	132322	1745	23.36	0.62	23.5	0.163	1.033	0.168
	Band66/1RB#49	Bottom	132322	1745	23.36	-0.82	23.5	0.745	1.033	0.770
	Band66/50%RB#0	Front	132322	1745	22.09	1.86	22.5	0.462	1.099	0.508
	Band66/50%RB#0	Back	132322	1745	22.09	0.18	22.5	0.852	1.099	0.936
	Band66/50%RB#0	Left	132322	1745	22.09	-1.58	22.5	0.384	1.099	0.422
	Band66/50%RB#0	Right	132322	1745	22.09	-0.11	22.5	0.123	1.099	0.135
	Band66/50%RB#0	Bottom	132322	1745	22.09	0.36	22.5	0.657	1.099	0.722
	Band66/100%RB#0	Back	132322	1745	22.01	1.62	22.5	0.704	1.119	0.788
	Band66/1RB#49	Back	132072	1720	22.88	1.17	23.5	0.912	1.153	1.052
29	Band66/1RB#49	Back	132572	1770	23.15	0.57	23.5	**1.098**	1.084	1.190
	Band66/50%RB#0	Back	132072	1720	21.61	1.62	22.5	0.784	1.227	0.962
	Band66/50%RB#24	Back	132572	1770	22.06	1.25	22.5	0.904	1.107	1.001
	Band66/1RB#49	**Back**	**132572**	**1770**	**23.15**	**1.54**	**23.5**	**1.091**	**1.084**	**1.183**
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ FDD-LTE Band 71(20MHz) QPSK Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band71/1RB#49	Front	133372	688	23.02	-1.86	23.5	0.076	1.117	0.085
30	Band71/1RB#49	Back	133372	688	23.02	0.54	23.5	**0.235**	1.117	0.262
	Band71/1RB#49	Left	133372	688	23.02	-0.67	23.5	0.108	1.117	0.121
	Band71/1RB#49	Right	133372	688	23.02	0.61	23.5	0.068	1.117	0.076
	Band71/1RB#49	Bottom	133372	688	23.02	1.17	23.5	0.057	1.117	0.064
	Band71/50%RB#24	Front	133372	688	22.08	-1.07	22.5	0.058	1.102	0.064
	Band71/50%RB#24	Back	133372	688	22.08	1.21	22.5	0.206	1.102	0.227
	Band71/50%RB#24	Left	133372	688	22.08	2.42	22.5	0.092	1.102	0.101
	Band71/50%RB#24	Right	133372	688	22.08	1.89	22.5	0.052	1.102	0.057
	Band71/50%RB#24	Bottom	133372	688	22.08	0.15	22.5	0.047	1.102	0.052
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WLAN 2.4GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	Front	11	2462	17.39	-0.34	17.5	0.152	1.026	1.000	0.156
31	2.4GHz/802.11b	Back	11	2462	17.39	-0.51	17.5	**0.177**	1.026	1.000	0.182
	2.4GHz/802.11b	Right	11	2462	17.39	0.09	17.5	0.108	1.026	1.000	0.111
	2.4GHz/802.11b	Top	11	2462	17.39	1.37	17.5	0.096	1.026	1.000	0.098
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 5.2GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.2GHz/802.11a	Front	36	5180	13.01	-0.96	13.5	0.071	1.119	1.000	0.079
32	5.2GHz/802.11a	Back	36	5180	13.01	0.51	13.5	**0.089**	1.119	1.000	0.100
	5.2GHz/802.11a	Right	36	5180	13.01	1.91	13.5	0.048	1.119	1.000	0.054
	5.2GHz/802.11a	Top	36	5180	13.01	-1.38	13.5	0.040	1.119	1.000	0.045
ANSI / IEEE C95.1 – SAFETY LIMIT					**1.6 W/kg (mW/g)**						

Spatial Peak Uncontrolled Exposure/General Population	Averaged over 1g

➢ WLAN 5.8GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	5.8GHz/802.11a	Front	165	5825	13.69	0.97	14.0	0.084	1.074	1.000	0.090
33	5.8GHz/802.11a	Back	165	5825	13.69	0.84	14.0	**0.118**	1.074	1.000	0.127
	5.8GHz/802.11a	Right	165	5825	13.69	-0.42	14.0	0.066	1.074	1.000	0.071
	5.8GHz/802.11a	Top	165	5825	13.69	-1.56	14.0	0.053	1.074	1.000	0.057
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ Bluetooth Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	BT/GFSK	Front	78	2480	9.89	1.04	10.0	0.028	1.026	1.000	0.029
34	BT/GFSK	Back	78	2480	9.89	0.52	10.0	**0.039**	1.026	1.000	0.040
	BT/GFSK	Right	78	2480	9.89	-0.73	10.0	0.022	1.026	1.000	0.023
	BT/GFSK	Top	78	2480	9.89	-1.50	10.0	0.020	1.026	1.000	0.021
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Per KDB 447498 D04v01, for each exposure position, if the highest output channel Reported SAR ≤0.8W/kg, other channels SAR testing is not necessary.
2. Additional WLAN SAR testing was performed for simultaneous transmission analysis.
3. For Hotspot SAR testing, per KDB 941225 D06v02r01, for EUT dimension ≥ 9cm*5cm, the test distance is 10mm. SAR must be measured for all surfaces and sides with a transmitting antenna located within 2.5cm from that surface or edge.
4. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA output power is < 0.25dB higher than RMC 12.2kbps, or Reported SAR with RMC 12.2kbps setting is ≤ 1.2W/kg, HSDPA SAR evaluation can be excluded.
5. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥0.8W/kg.
6. Per KDB 648474 D04v01r03, when the Reported SAR for a body-worn accessory measured without a headset connected to the handset is > 1.2 W/kg, SAR testing with a headset connected to the handset is required.
7. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel.
8. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
9. Highlight part of test data means repeated test.

15.4 Product specific 10g SAR

➢ GSM SAR extremity SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Variation (%)	Tune-Up Limit (dBm)	Meas. SAR_{10g} (W/kg)	Scaling Factor	Reported SAR_{10g} (W/kg)
35	GPRS1900/3 slots	Back	512	1850.2	27.38	-1.77	27.5	1.435	1.028	1.475
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**4.0 W/kg (mW/g) Averaged over 10g**					

Note:

1. For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension> 16.0 cm. Per KDB648474 D04v01r03, When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR> 1.2W/kg.

15.5 Repeated SAR measurement

Band/ Mode	Test Position	CH.	Freq. (MHz)	Measured SAR (W/kg)				
				Original	1st Repeated		2nd Repeated	
					Value	Ratio	Value	Ratio
5.8GHz/802.11a	Left Tilted	149	5745	0.943	0.932	1.01	/	/
GPRS1900/3 slots	Back	512	1850.2	1.290	1.270	1.02	/	/
Band II/RMC	Back	9262	1852.4	1.025	1.012	1.01	/	/
Band IV/RMC	Back	1513	1752.6	1.045	1.033	1.01	/	/
Band25/1RB#49	Back	26140	1860	0.973	0.962	1.01	/	/
Band66/1RB#49	Back	132572	1770	1.098	1.091	1.01	/	/
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				**1.6 W/kg (mW/g) Averaged over 1g**				

Note:

2. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8 W/kg
3. Per KDB 865664 D01v01r04, if the ratio of *original* and *repeated* is ≤ 1.2 and the measured SAR <1.45 W/kg, only one repeated measurement is required.

15.6 DUT holder perturbation uncertainty evaluation

1. According to TCB workshop, Oct 2016:
   When the highest reported SAR of an antenna is > 1.2 W/kg, holder perturbation verification is required for each antenna, using the highest SAR configuration among all applicable frequency bands.
2. When the highest reported SAR of an antenna is > 1.2 W/kg, holder perturbation verification is required for each antenna, using the highest SAR configuration among all applicable frequency bands.
3. According to IEEE 1528-2013 section E.4.1, When it is unknown if a device holder perturbs the fields of a test device, the SAR uncertainty shall be assessed with a flat phantom (see Clause 5) by comparing the SAR with and without the device holder according to the following tests:

a) With device holder: 1 g or 10 g peak spatial-average SAR is measured with the handset fixed in the holder in a manner similar to the way it was held when tested for the head SAR position. The handset horizontal and vertical centerlines (see Clause 6) are aligned parallel to the bottom of the flat phantom and the device is in direct contact with the phantom. The test shall be performed with the antenna position and device operational configuration corresponding to that where the highest head SAR was previously measured for each frequency band.

b) Without device holder: 1 g or 10 g peak spatial-average SAR is measured with the handset placed on a low-loss foam block or support in the position identical to that tested with the device holder. The relative permittivity and loss tangent of the foam material shall be less than 1.2 and 10–5, respectively.

Test result:

Plot	Band/ Mode	Test Position	CH.	Freq. (MHz)	Test configuration	Measured SAR (W/kg) Averaged over 1g
35	GPRS1900/3 slots	Back	512	1850.2	With device holder	2.79
36	GPRS1900/3 slots	Back	512	1850.2	Without device holder	2.67

The following equation is used to computed the SAR tolerance,

$$SAR_{\text{tolerance}}[\%] = 100 \times \left(\frac{SAR_{\text{w/ holder}} - SAR_{\text{w/o holder}}}{SAR_{\text{w/o holder}}} \right)$$

Therefore, the $SAR_{\text{tolerance}}$=100× [(2.79-2.67)/ 2.67] = 4.49%.

15.7 Multi-Band Simultaneous Transmission Considerations

➢ **Simultaneous Transmission Capabilities**

According to FCC KDB Publication 447498 D04v01, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown in below Figure and are color-coded to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

Fig.15.1 Simultaneous Transmission Paths

➢ **Multi-Band simultaneous Transmission Consideration**

	Position	Applicable Combination
Simultaneous Transmission Consideration	Head	WWAN (Voice) + WLAN 2.4 GHz/5.2GHz/5.8GHz
		WWAN (Voice) + Bluetooth
	Body	WWAN (Voice) + WLAN 2.4 GHz/5.2GHz/5.8GHz
		WWAN (Voice) + Bluetooth
	Hotspot	WWAN (Data) + WLAN 2.4 GHz/5.2GHz/5.8GHz
		WWAN (Data) + Bluetooth

Note:

1. WLAN 2.4GHz Band, WLAN 5.2GHz Band, WLAN 5.8GHz Band and Bluetooth share the same antenna, and cannot transmit simultaneously.
2. GSM/WCDMA/LTE shares the same antenna, and cannot transmit simultaneously.
3. The Report SAR summation is calculated based on the same configuration and test position.
4. Per KDB 447498 D04v01, simultaneous transmission SAR is compliant if,
   i. Scalar SAR summation < 1.6 W/kg.
   ii. SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (*min. separation distance, mm*), and the peak separation distance is determined from the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary
   iii. Simultaneously transmission SAR measurement, and the Reported multi-band SAR < 1.6 W/kg

15.8 SAR Simultaneous Transmission Analysis

➢ **Simultaneous Transmission**

➢

Position		Standalone SAR(W/kg)				Σ SAR$_{1g}$ (W/kg)		
		1	2	3	4	1+2	1+3	1+4
		WWAN	2.4G WLAN	5G WLAN	BT			
Head	Right Cheek	0.433	0.293	0.421	0.057	0.726	0.854	0.490
	Right Tilted	0.240	0.229	0.522	0.038	0.469	0.762	0.278
	Left Cheek	0.748	0.556	0.674	0.086	1.304	1.422	0.834
	Left Tilted	0.417	0.432	1.174	0.060	0.849	**1.591**	0.477
Body-worn	Front	0.641	0.156	0.090	0.029	0.797	0.731	0.670
	Back	1.326	0.182	0.127	0.040	1.508	1.453	1.366
Hotspot	Front	0.641	0.156	0.090	0.029	0.797	0.731	0.670
	Back	1.326	0.182	0.127	0.040	1.508	1.453	1.366
	Left	0.605	/	/	/	0.605	0.605	0.605
	Right	0.168	0.111	0.071	0.023	0.279	0.239	0.191
	Top	/	0.098	0.057	0.021	0.098	0.057	0.021
	Bottom	0.795	/	/	/	0.795	0.795	0.795

➢ **Simultaneous Transmission Conclusion**

The above numerical summed SAR results for all the case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D04v01.

15.9 Measurement Uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

16 Reference

[1]. FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2]. ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3]. IEEE Std. 1528-2013, “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, September2013

[4]. OpenSAR V5 Software User Manual

[5]. FCC KDB 248227 D01 v02r02, “SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS”, October 2015

[6]. FCC KDB 447498 D04 v01, “RF EXPOSURE PROCEDURES AND EQUIPMENT AUTHORIZATION POLICIES FOR MOBILE AND PORTABLE DEVICES”, November 2021

[7]. FCC KDB 648474 D04 v01r03, “SAR EVALUATION CONSIDERATIONS FOR WIRELESS HANDSETS”, October 2015

[8]. FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, October 2015

[9]. FCC KDB 941225 D05 v02r05, “SAR EVALUATION CONSIDERATIONS FOR LTE DEVICES”, Dec 2015

[10]. FCC KDB 941225 D06 v02r01, " SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES", October 2015

[11]. FCC KDB 865664 D01 v01r04, “SAR MEASUREMENT REQUIREMENTS FOR 100 MHz TO 6 GHz”, August 2015

Appendix A: Plots of SAR System Check

System check at 750 MHz

Date of measurement: 12/2/2023

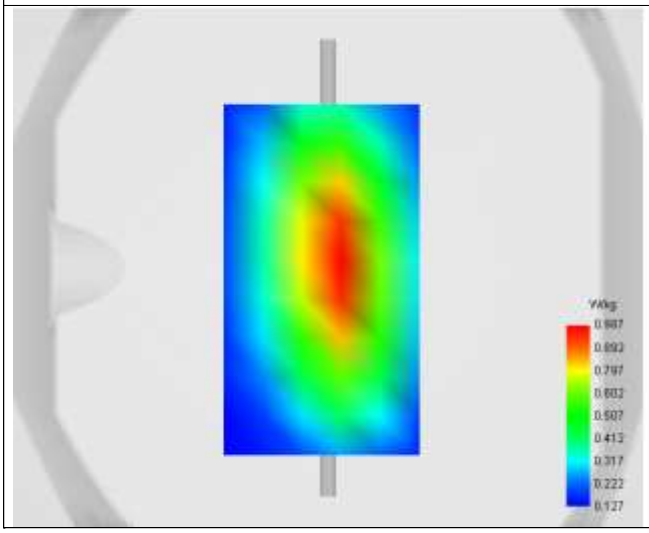
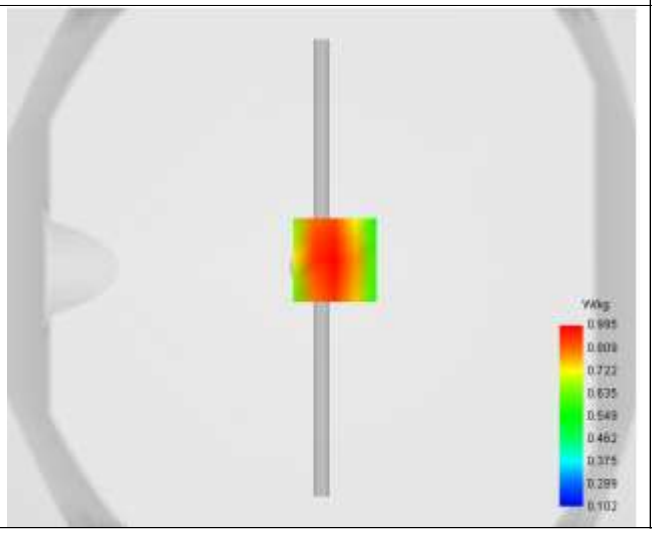
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW750
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	750.000000
Relative permitivity (real part)	42.650000
Conductivity (S/m)	0.910000

C. SAR Surface and Volume

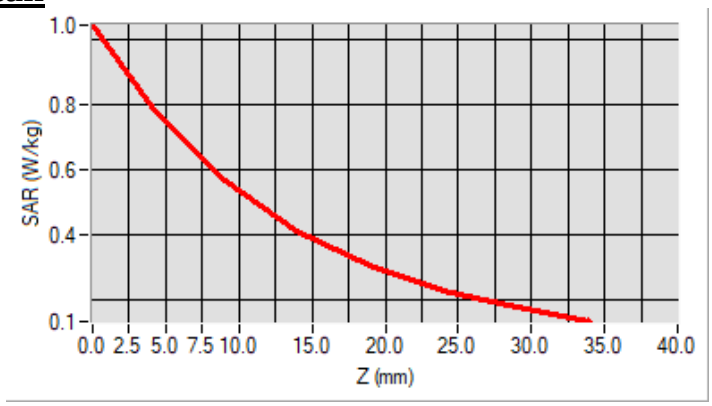
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=3.00 ; SAR Peak: 1.05 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.562182
SAR 1g (W/Kg)	0.869320
Variation (%)	-2.320000

E. Z Axis Scan



System check at 835 MHz

Date of measurement: 12/2/2023

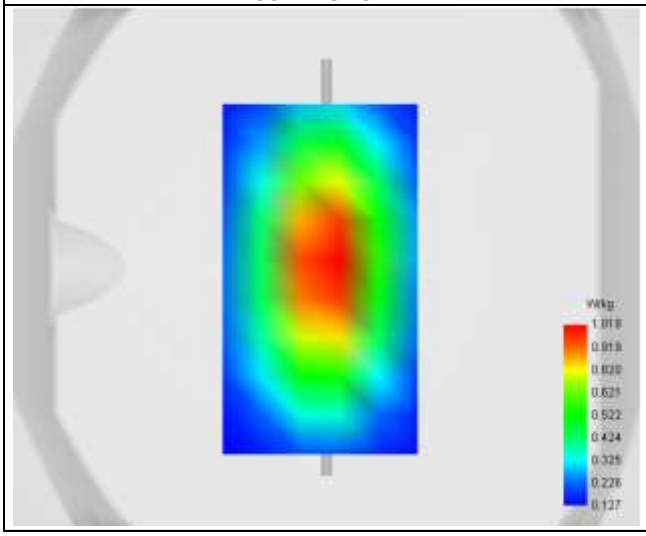
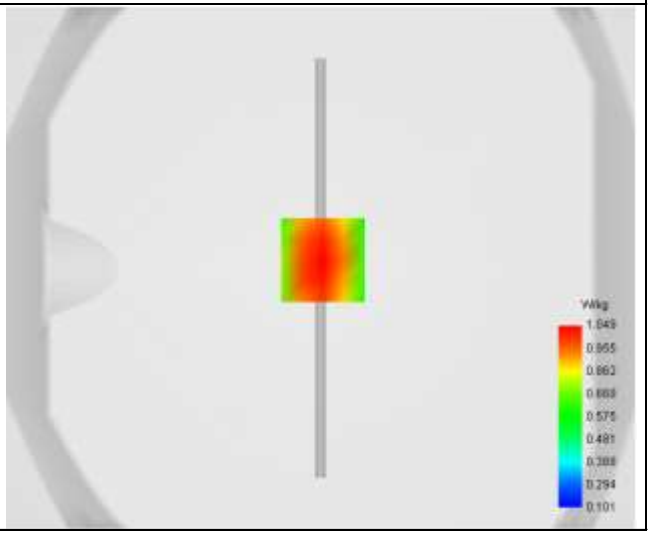
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.73
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW835
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	835.000000
Relative permitivity (real part)	41.500000
Conductivity (S/m)	0.899944

C. SAR Surface and Volume

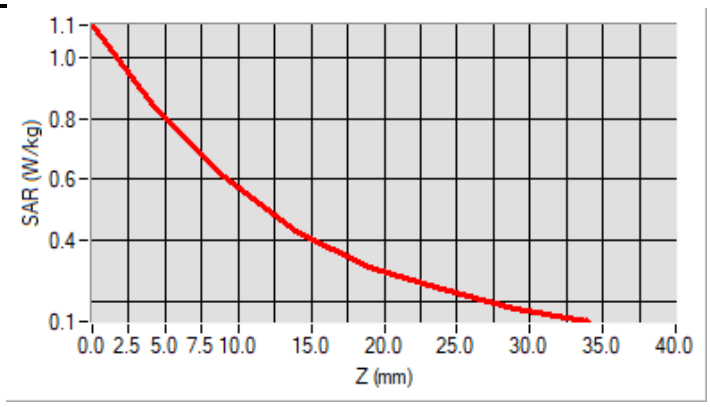
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=3.00 ; SAR Peak: 1.11 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.586205
SAR 1g (W/Kg)	0.911594
Variation (%)	0.020000

E. Z Axis Scan



System check at 1750 MHz

Date of measurement: 16/2/2023

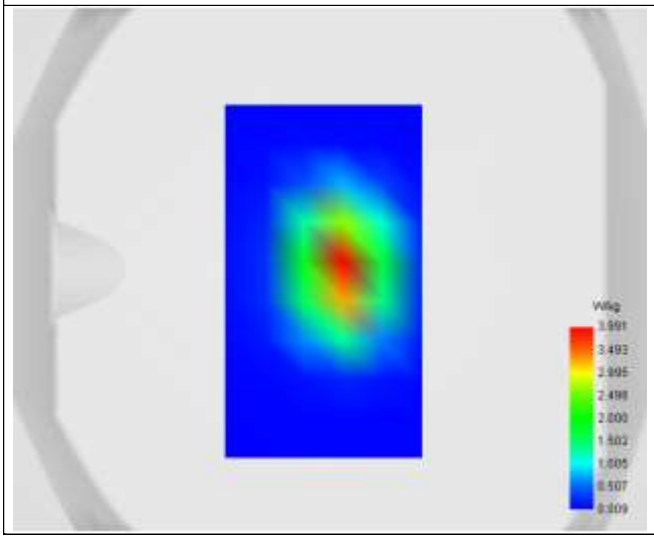
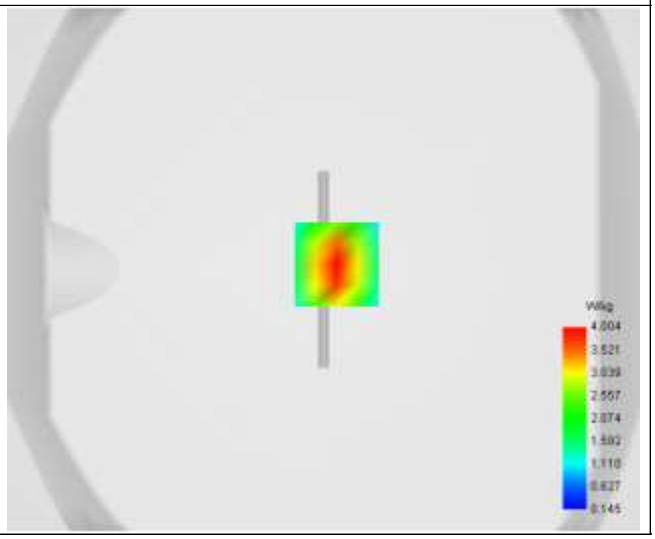
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.05
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW1750
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1750.000000
Relative permitivity (real part)	41.122564
Conductivity (S/m)	1.382631

C. SAR Surface and Volume

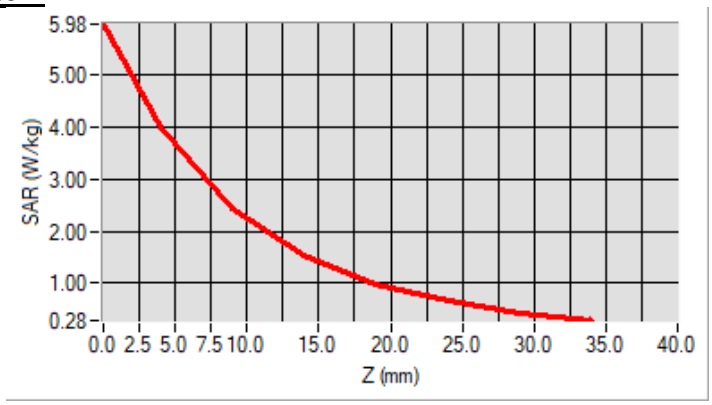
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=2.00 ; SAR Peak: 5.94 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	1.932154
SAR 1g (W/Kg)	3.730374
Variation (%)	0.830000

E. Z Axis Scan



System check at 1900 MHz

Date of measurement: 16/2/2023

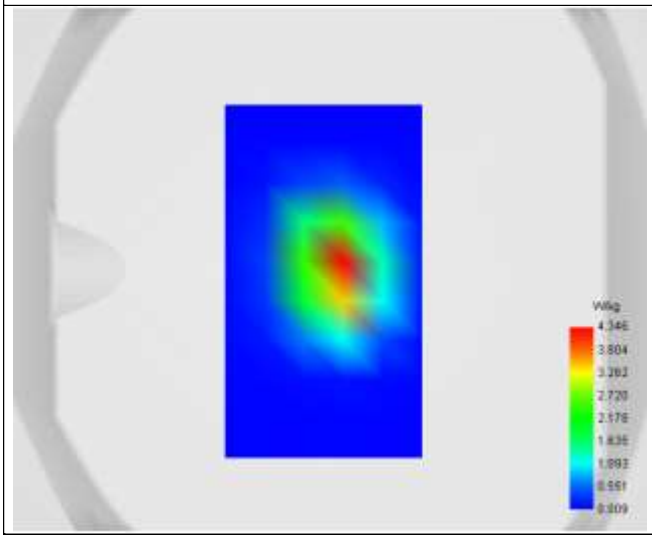
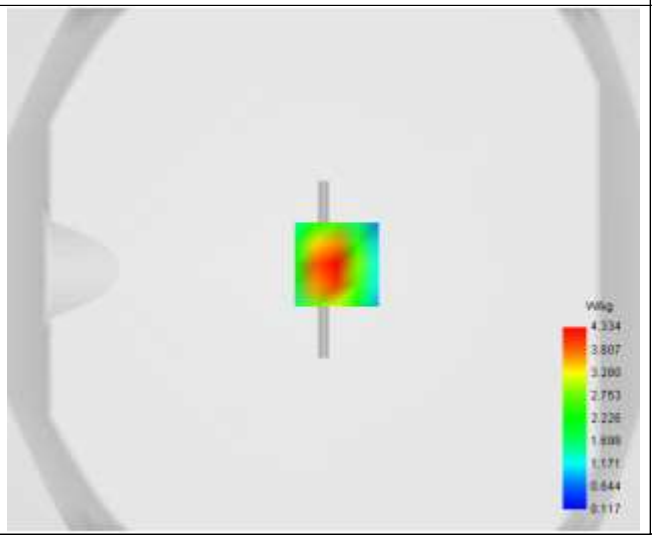
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW1900
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1900.000000
Relative permitivity (real part)	39.000000
Conductivity (S/m)	1.390231

C. SAR Surface and Volume

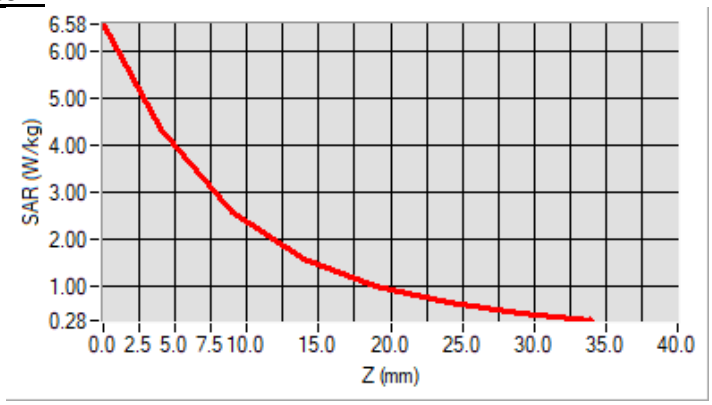
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=2.00 ; SAR Peak: 6.71 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	2.015404
SAR 1g (W/Kg)	3.943427
Variation (%)	-1.190000

E. Z Axis Scan



System check at 2450 MHz

Date of measurement: 18/2/2023

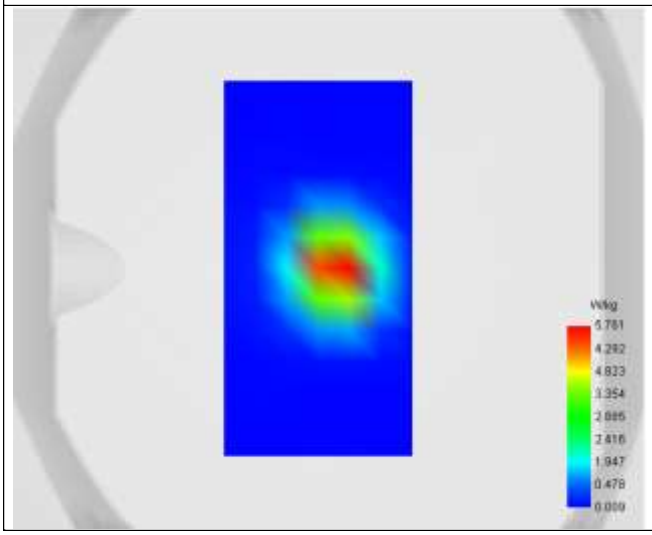
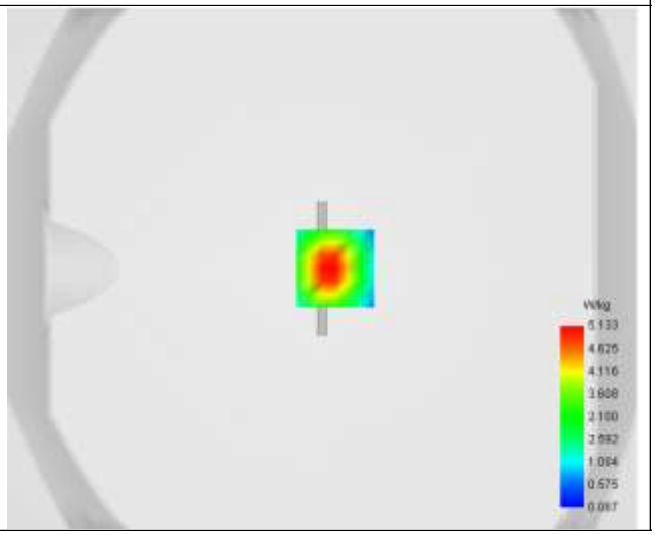
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.46
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW2450
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2450.000000
Relative permitivity (real part)	38.600000
Conductivity (S/m)	1.770312

C. SAR Surface and Volume

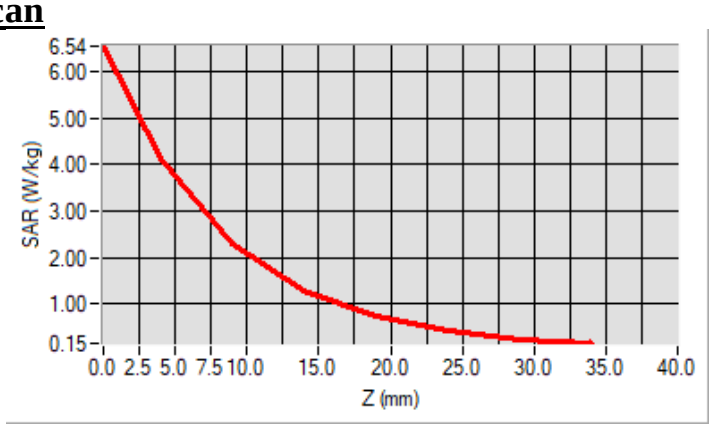
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=0.00 ; SAR Peak: 6.58 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	2.332001
SAR 1g (W/Kg)	5.228311
Variation (%)	3.960000

E. Z Axis Scan



System check at 2600 MHz

Date of measurement: 18/2/2023

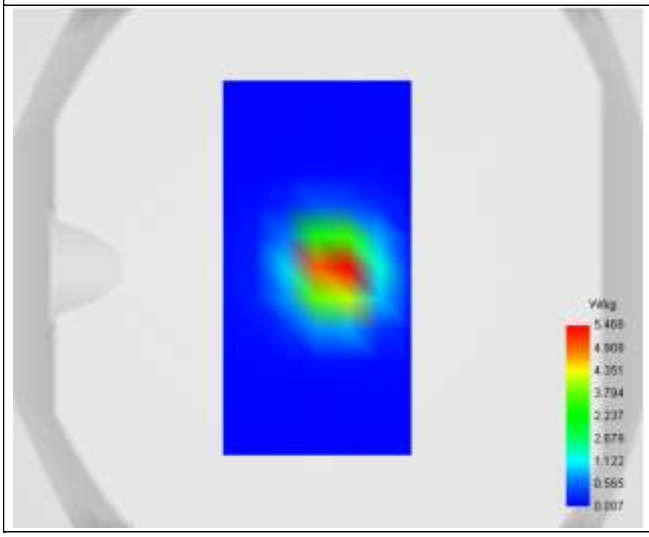
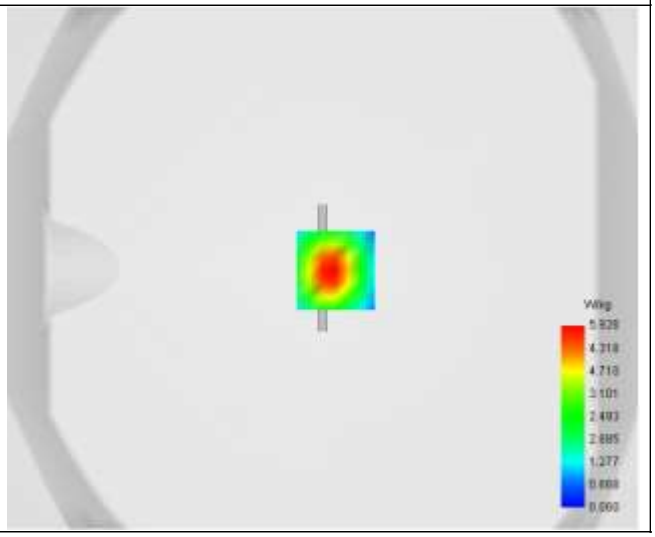
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.27
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	CW2600
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2600.000000
Relative permitivity (real part)	38.530000
Conductivity (S/m)	1.950111

C. SAR Surface and Volume

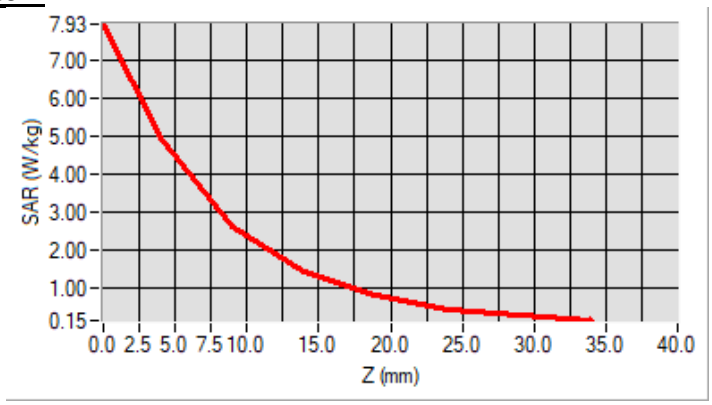
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=-1.00 ; SAR Peak: 7.99 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	2.392231
SAR 1g (W/Kg)	5.493121
Variation (%)	-3.130000

E. Z Axis Scan



System check at 5200 MHz

Date of measurement: 23/2/2023

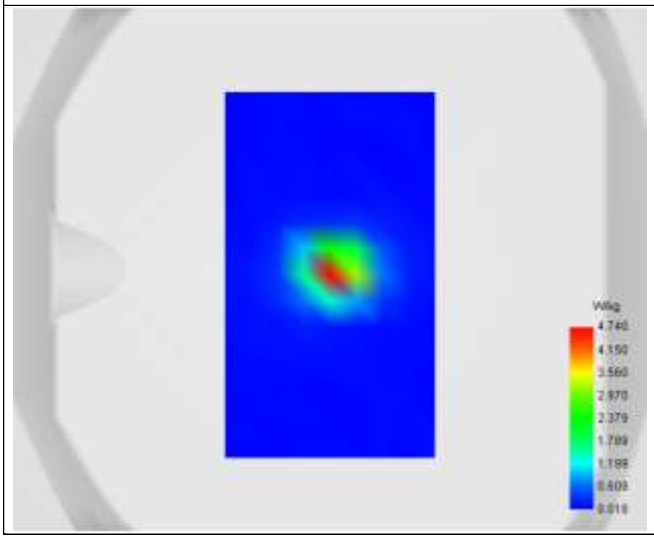
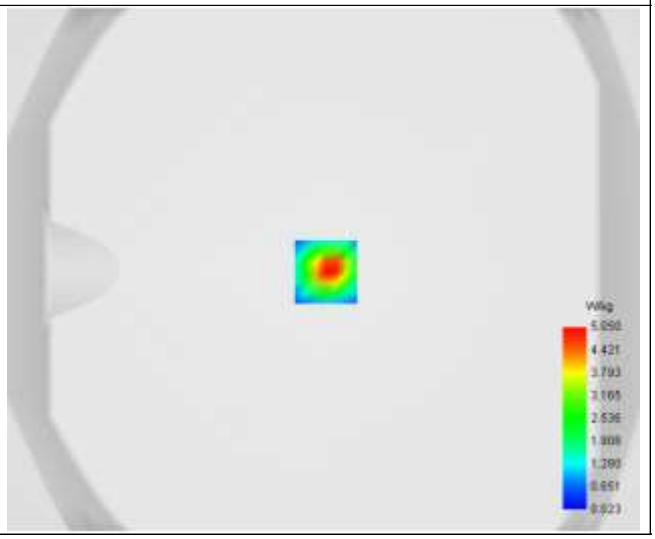
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.71
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5200
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	5200.000000
Relative permitivity (real part)	37.190000
Conductivity (S/m)	4.722415

C. SAR Surface and Volume

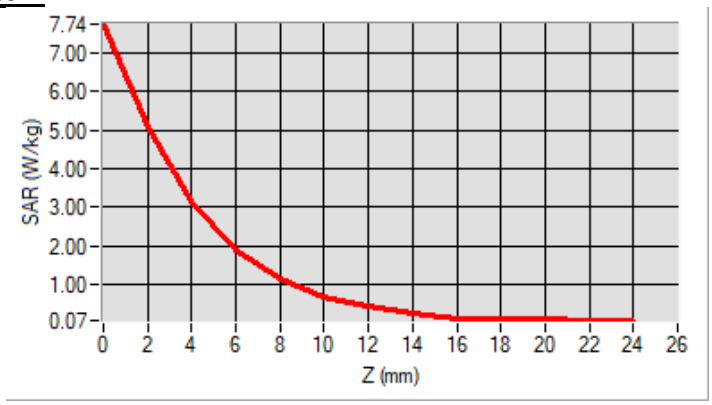
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-1.00 ; SAR Peak: 8.13 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.943121
SAR 1g (W/Kg)	3.156245
Variation (%)	0.160000

E. Z Axis Scan



System check at 5800 MHz

Date of measurement: 23/2/2023

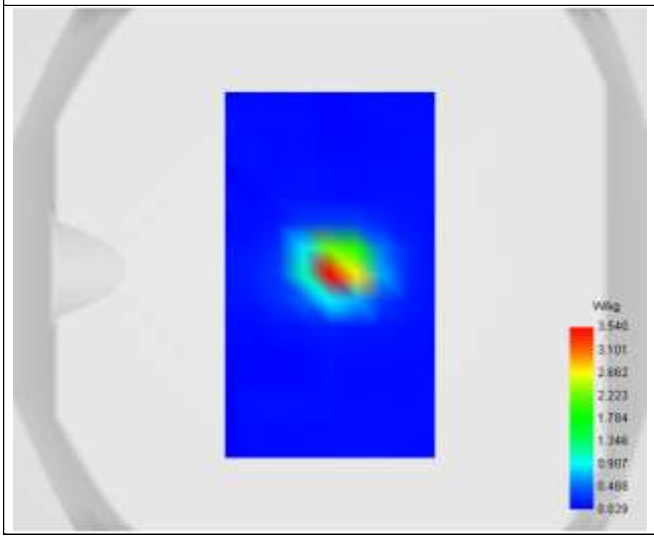
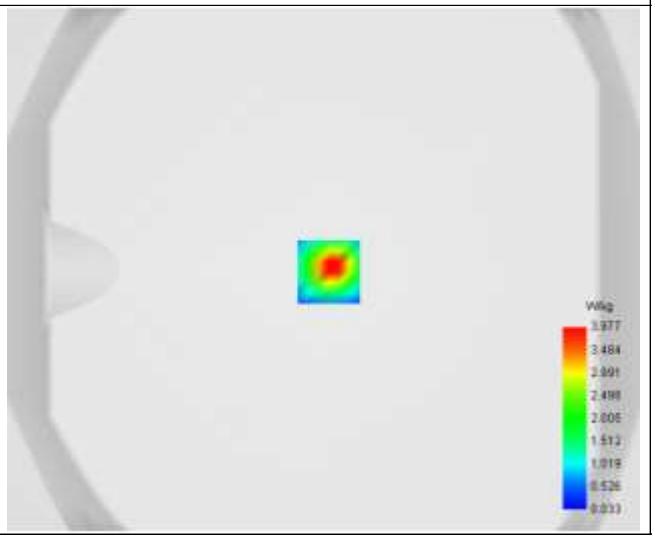
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.94
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	5800.000000
Relative permitivity (real part)	35.981324
Conductivity (S/m)	5.361125

C. SAR Surface and Volume

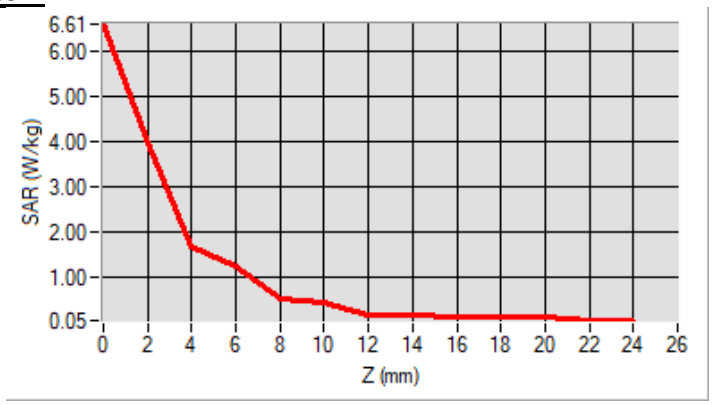
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=-1.00 ; SAR Peak: 7.02 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.951221
SAR 1g (W/Kg)	3.225105
Variation (%)	0.610000

E. Z Axis Scan



Appendix B: Plots of SAR Test Data

SAR Measurement at GSM850 (Cheek, Right)

Date of measurement: 12/2/2023

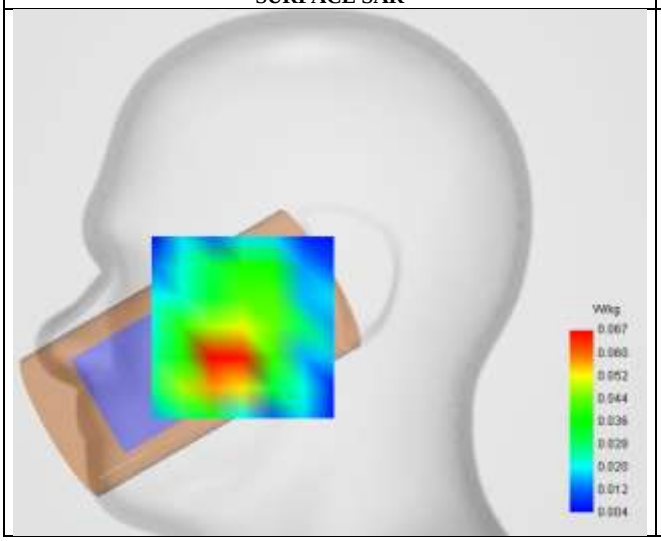
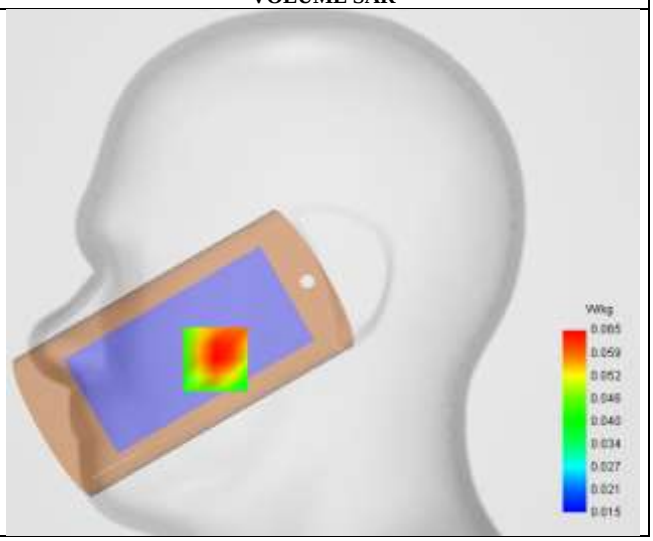
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.73
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. Permitivity

Frequency (MHz)	836.599976
Relative permitivity (real part)	42.338622
Conductivity (S/m)	0.923115

C. SAR Surface and Volume

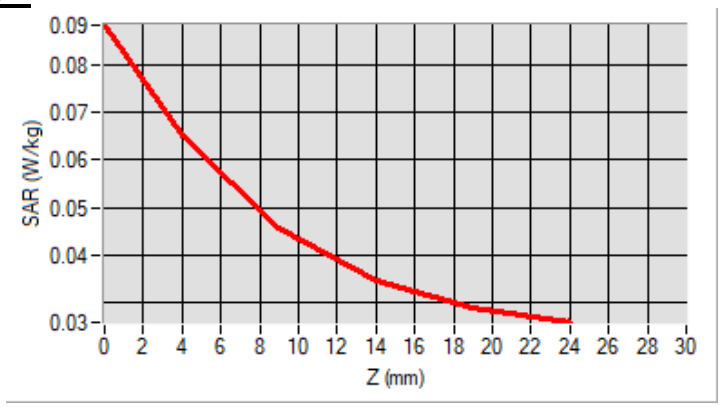
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-53.00, Y=-43.00 ; SAR Peak: 0.09 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.046770
SAR 1g (W/Kg)	0.062836
Variation (%)	-0.700000

E. Z Axis Scan



SAR Measurement at GSM1900 (Cheek, Left)

Date of measurement: 16/2/2023

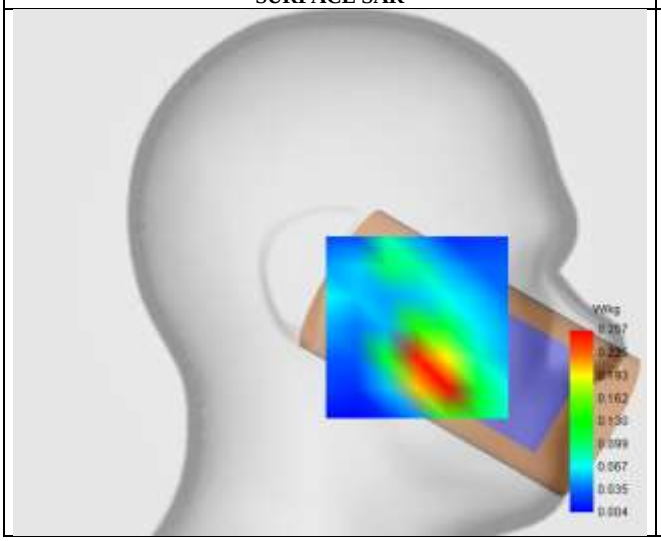
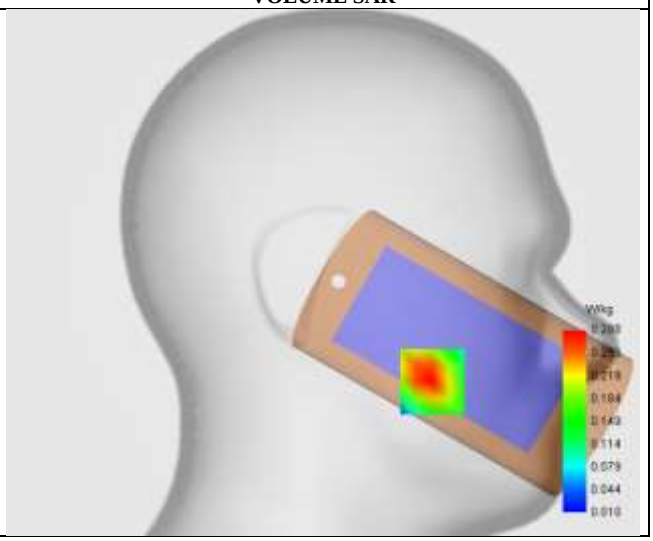
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 8.0)

B. Permitivity

Frequency (MHz)	1850.199951
Relative permitivity (real part)	38.880000
Conductivity (S/m)	1.386230

C. SAR Surface and Volume

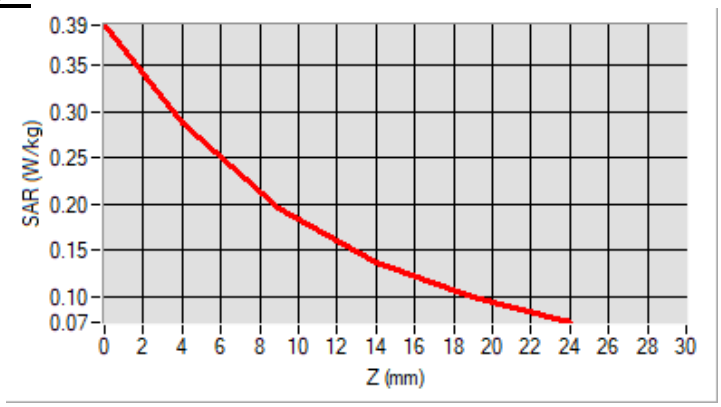
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-54.00, Y=-54.00 ; SAR Peak: 0.40 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.169461
SAR 1g (W/Kg)	0.273862
Variation (%)	-0.590000

E. Z Axis Scan



SAR Measurement at Band2_WCDMA1900 (Cheek, Left)

Date of measurement: 16/2/2023

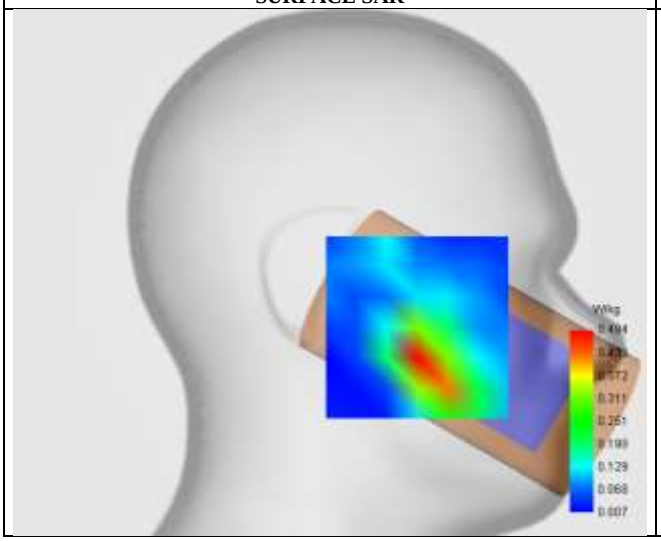
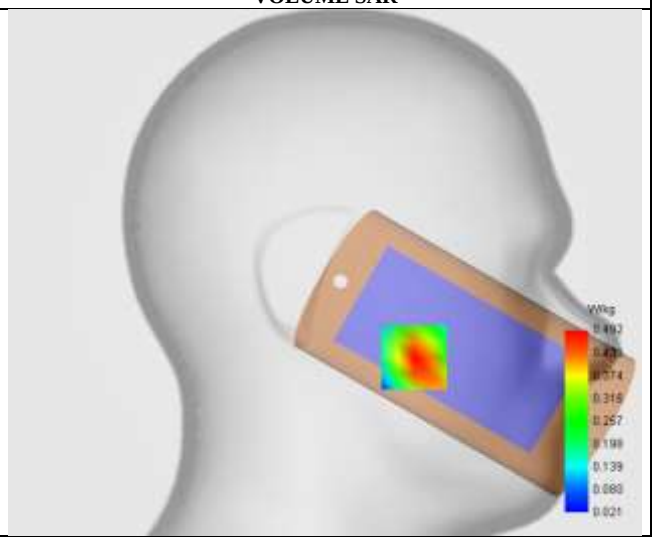
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	Band2_WCDMA1900
Channels	Low
Signal	WCDMA (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1852.400000
Relative permitivity (real part)	38.230000
Conductivity (S/m)	1.391234

C. SAR Surface and Volume

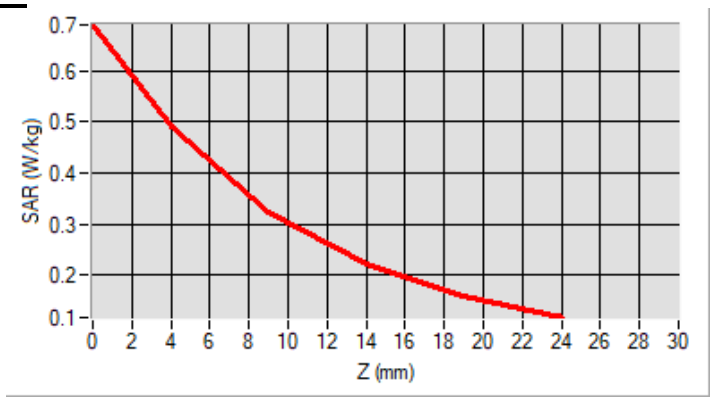
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-44.00, Y=-42.00 ; SAR Peak: 0.70 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.278537
SAR 1g (W/Kg)	0.462799
Variation (%)	-0.470000

E. Z Axis Scan



SAR Measurement at CUSTOM (WCDMA_1700) (Cheek, Left)

Date of measurement: 16/2/2023

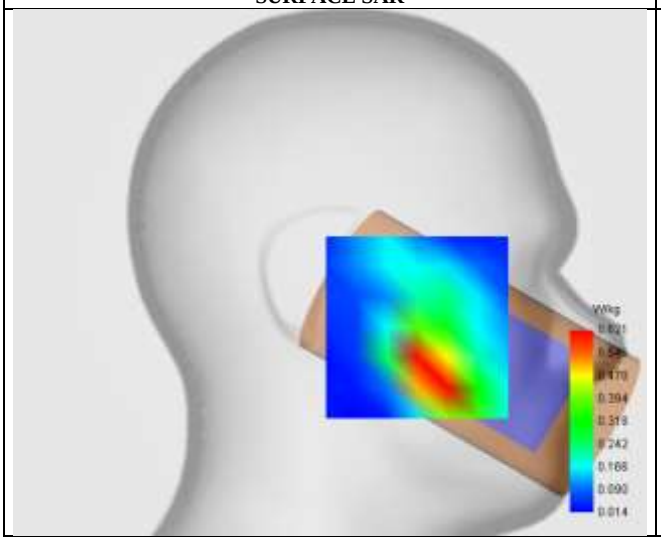
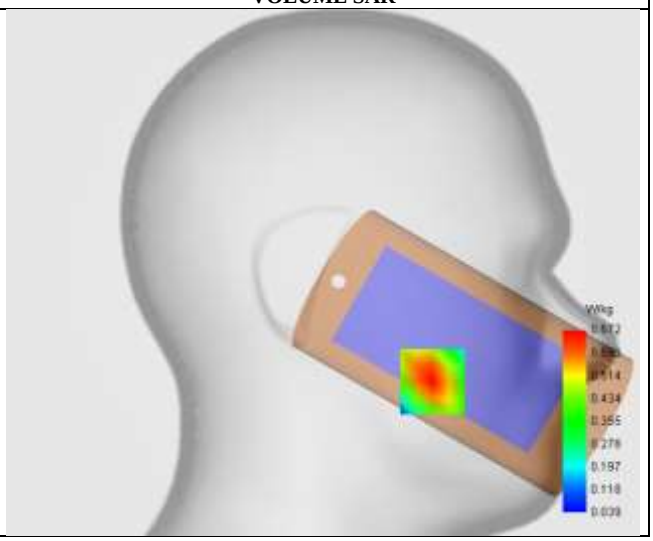
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.05
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	Band4_WCDMA1700
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1732.599976
Relative permitivity (real part)	40.115218
Conductivity (S/m)	1.360756

C. SAR Surface and Volume

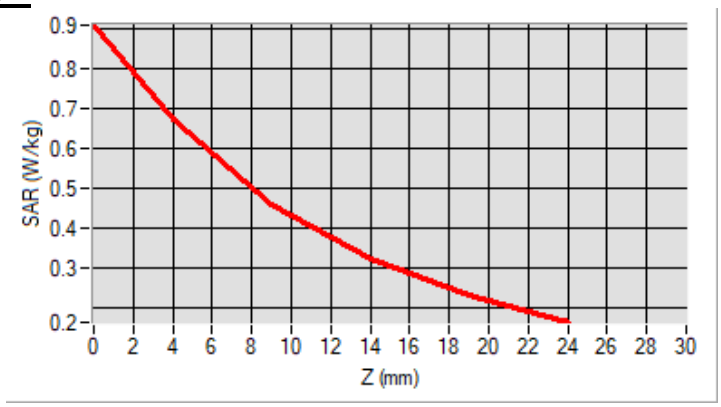
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-54.00, Y=-54.00 ; SAR Peak: 0.91 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.397179
SAR 1g (W/Kg)	0.632798
Variation (%)	-4.060000

E. Z Axis Scan



SAR Measurement at Band5_WCDMA850 (Cheek, Right)

Date of measurement: 12/2/2023

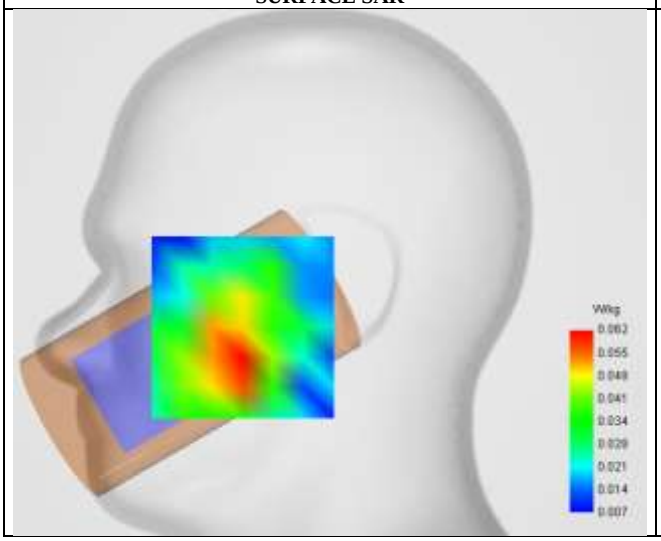
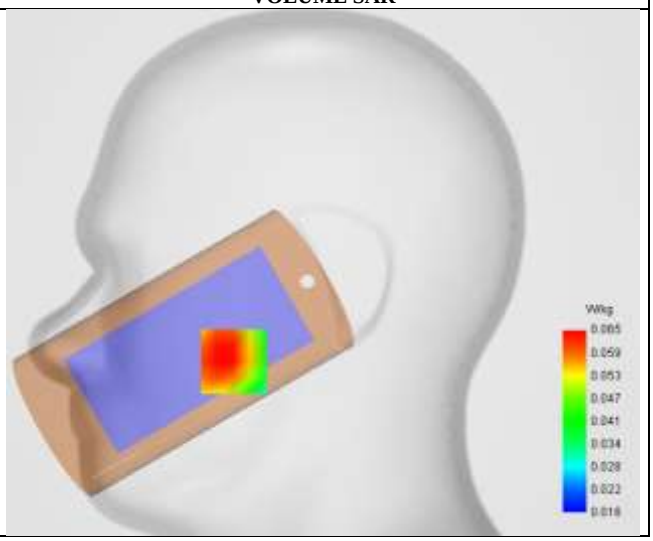
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.73
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	Band5_WCDMA850
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	836.599976
Relative permitivity (real part)	42.560000
Conductivity (S/m)	0.916239

C. SAR Surface and Volume

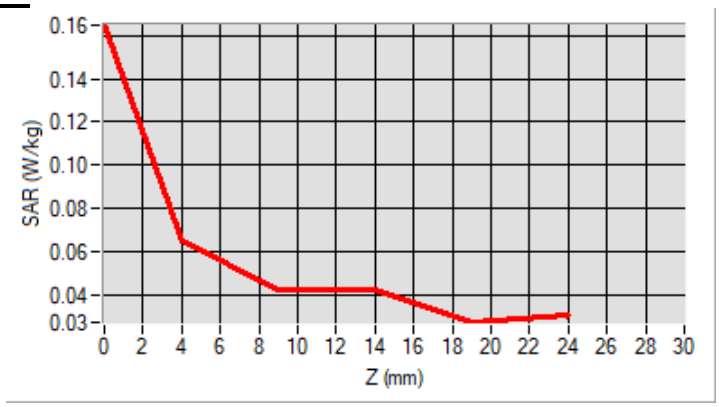
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-44.00, Y=-44.00 ; SAR Peak: 0.08 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.048095
SAR 1g (W/Kg)	0.063801
Variation (%)	0.680000

E. Z Axis Scan



SAR Measurement at LTE band 7 (Cheek, Left)

Date of measurement: 18/2/2023

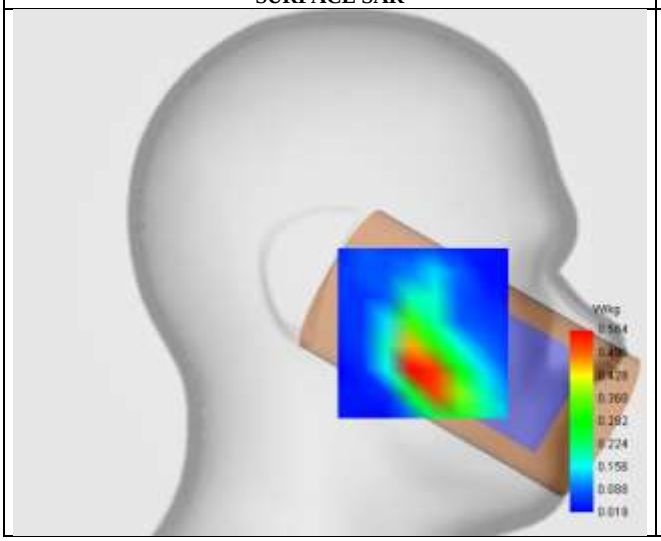
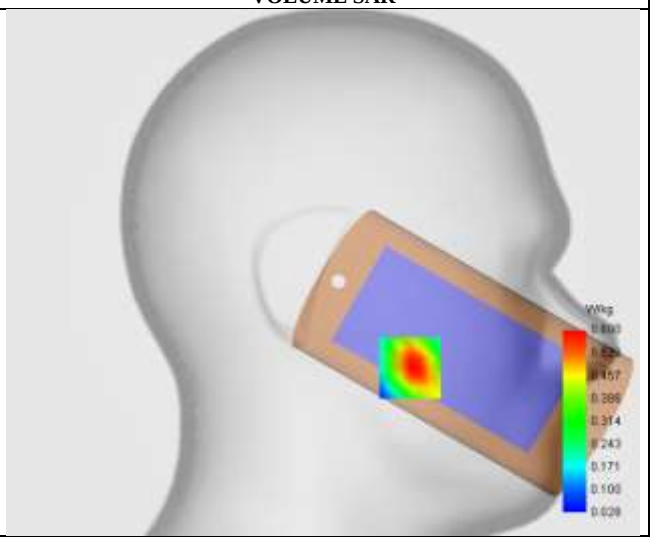
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.27
Area Scan	dx=12mm dy=12mm
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 7
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2535.000000
Relative permitivity (real part)	39.086666
Conductivity (S/m)	1.889749

C. SAR Surface and Volume

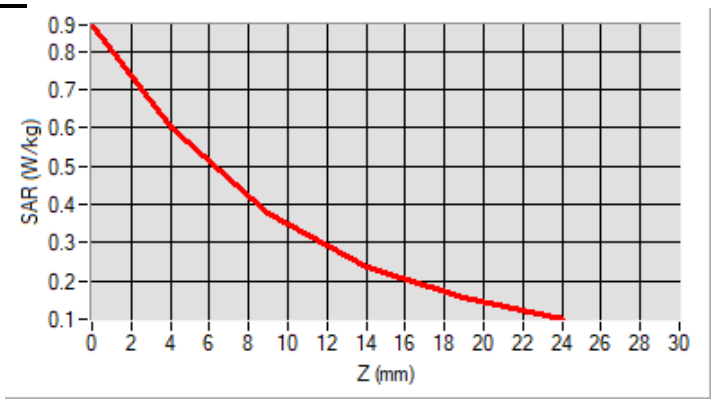
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-43.00, Y=-47.00 ; SAR Peak: 0.88 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.310748
SAR 1g (W/Kg)	0.553726
Variation (%)	-4.640000

E. Z Axis Scan



SAR Measurement at LTE band 12 (Cheek, Left)

Date of measurement: 12/2/2023

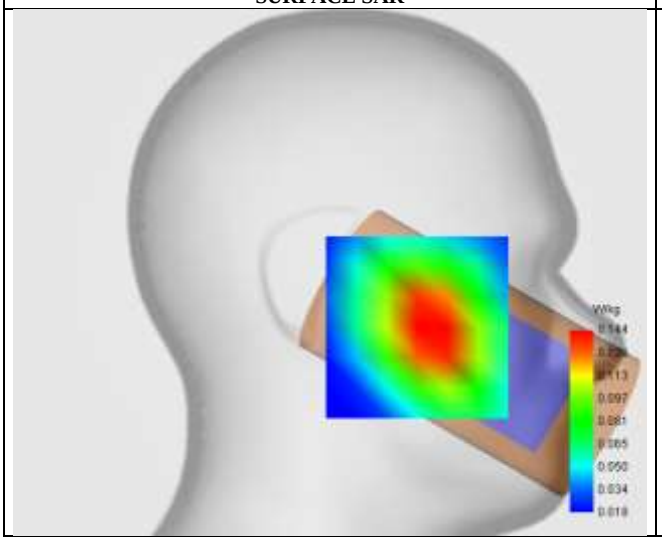
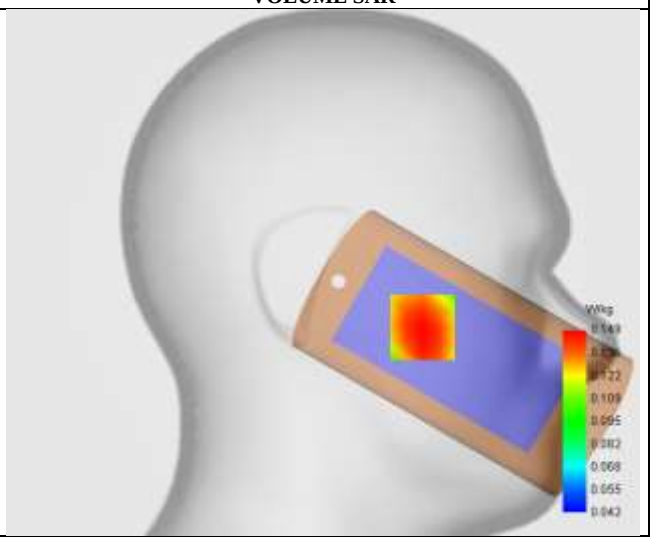
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 12
Channels	Low
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	704.000000
Relative permitivity (real part)	42.126267
Conductivity (S/m)	0.914304

C. SAR Surface and Volume

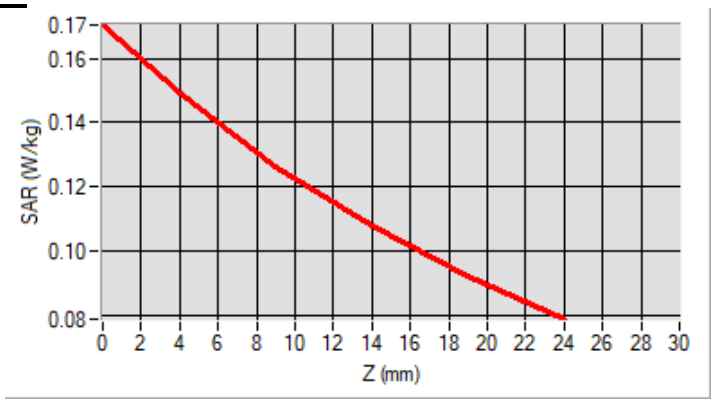
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-49.00, Y=-27.00 ; SAR Peak: 0.17 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.118769
SAR 1g (W/Kg)	0.148564
Variation (%)	-2.600000

E. Z Axis Scan



SAR Measurement at LTE band 13 (Cheek, Left)

Date of measurement: 12/2/2023

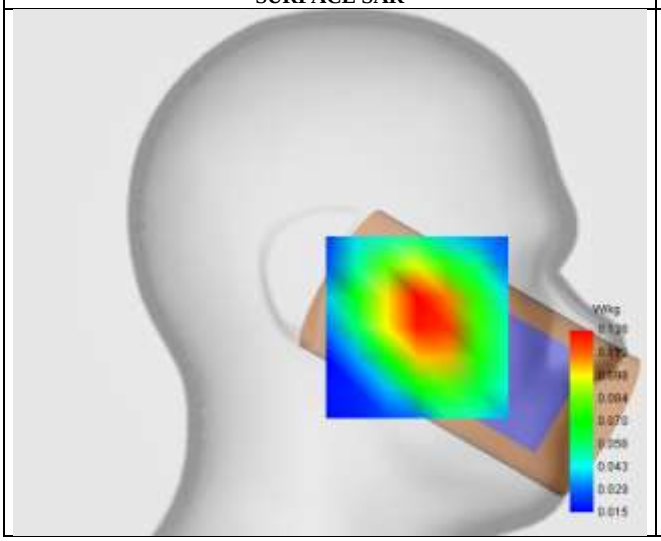
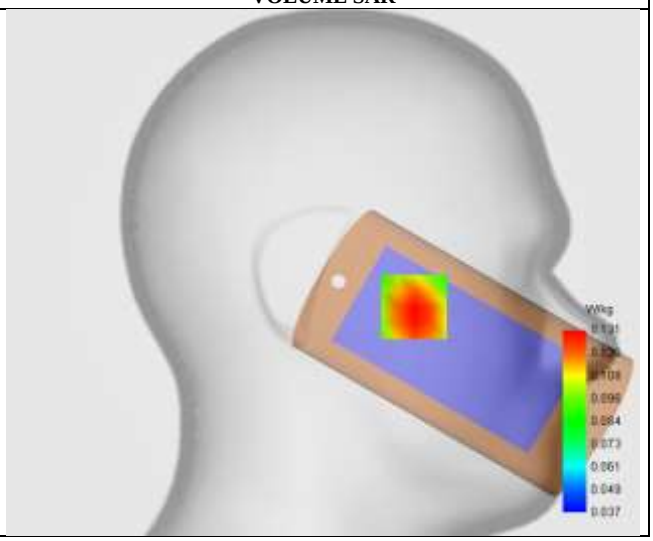
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 13
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	782.000000
Relative permitivity (real part)	42.132514
Conductivity (S/m)	0.916332

C. SAR Surface and Volume

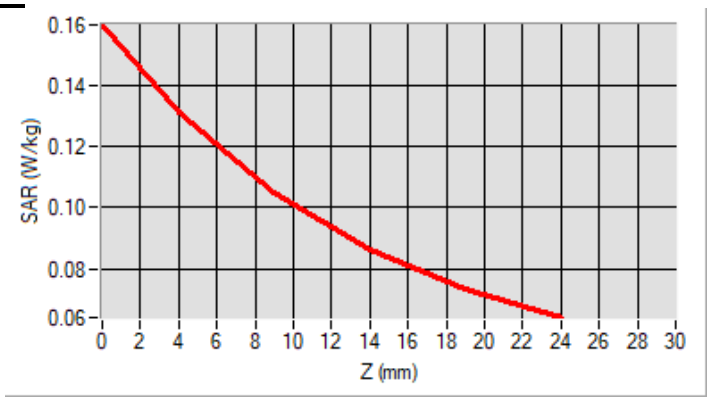
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-45.00, Y=-17.00 ; SAR Peak: 0.16 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.098664
SAR 1g (W/Kg)	0.127552
Variation (%)	-4.550000

E. Z Axis Scan



SAR Measurement at LTE band 25 (Cheek, Left)

Date of measurement: 16/2/2023

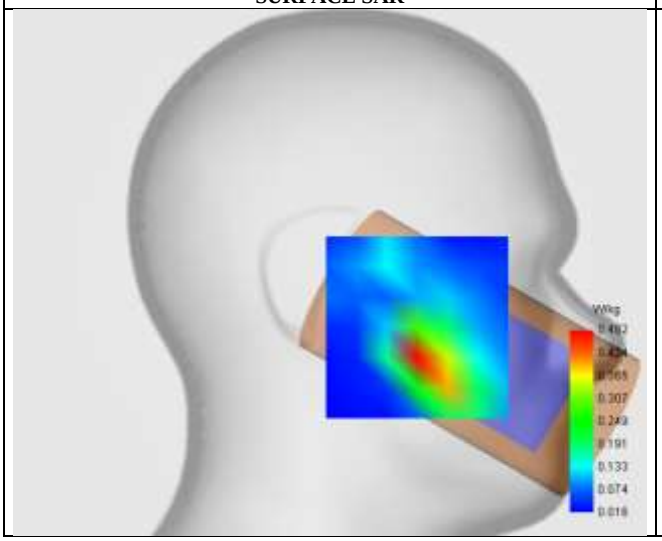
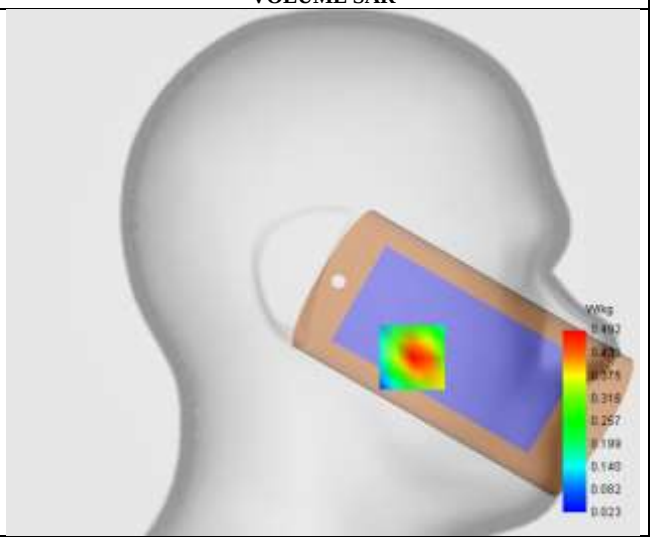
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 25
Channels	Low
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1860.000000
Relative permitivity (real part)	38.690000
Conductivity (S/m)	1.390282

C. SAR Surface and Volume

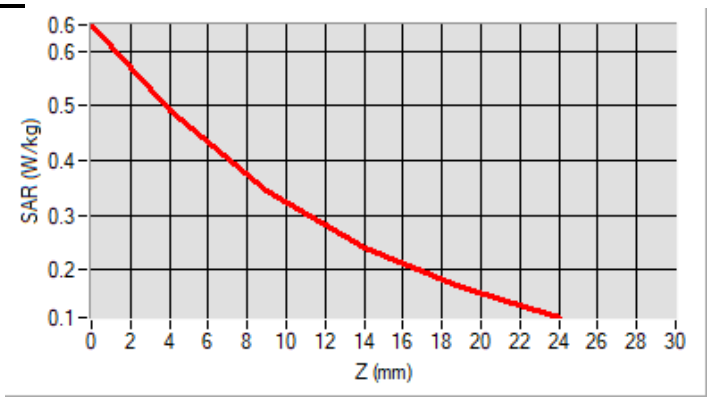
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-44.00, Y=-42.00 ; SAR Peak: 0.66 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.278998
SAR 1g (W/Kg)	0.461795
Variation (%)	-0.070000

E. Z Axis Scan



SAR Measurement at CUSTOM (LTE_Band_26) (Cheek, Left)

Date of measurement: 12/2/2023

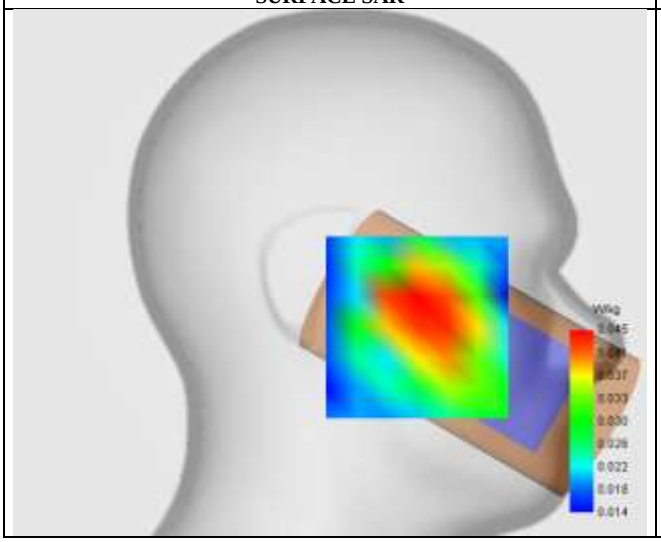
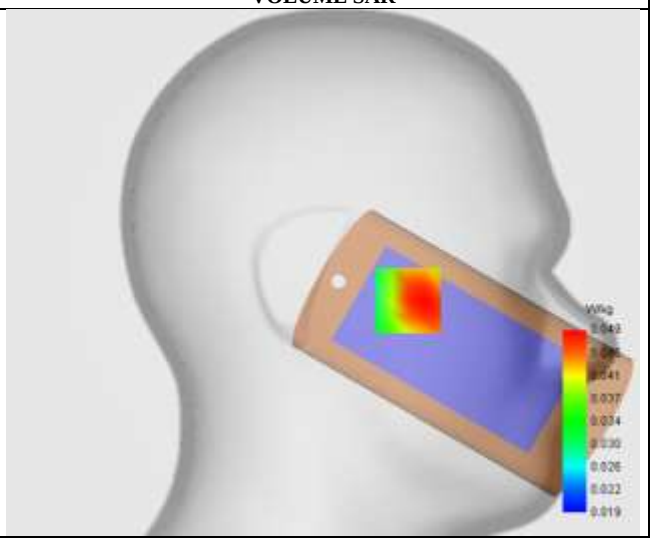
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 26
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	841.500000
Relative permitivity (real part)	42.516262
Conductivity (S/m)	0.923200

C. SAR Surface and Volume

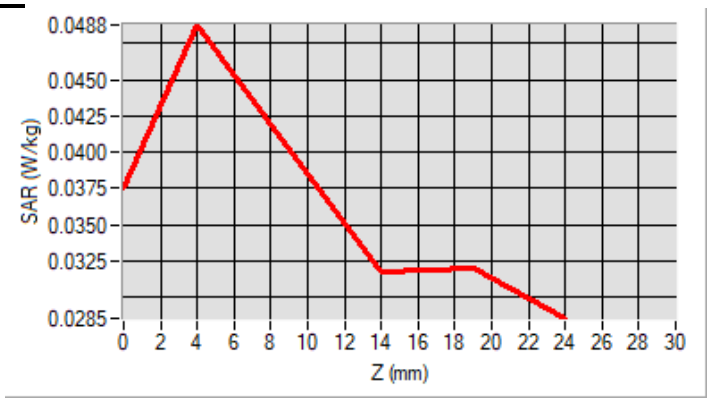
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-42.00, Y=-14.00 ; SAR Peak: 0.06 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.039136
SAR 1g (W/Kg)	0.048489
Variation (%)	0.290000

E. Z Axis Scan



SAR Measurement at LTE band 41 (Cheek, Left)

Date of measurement: 18/2/2023

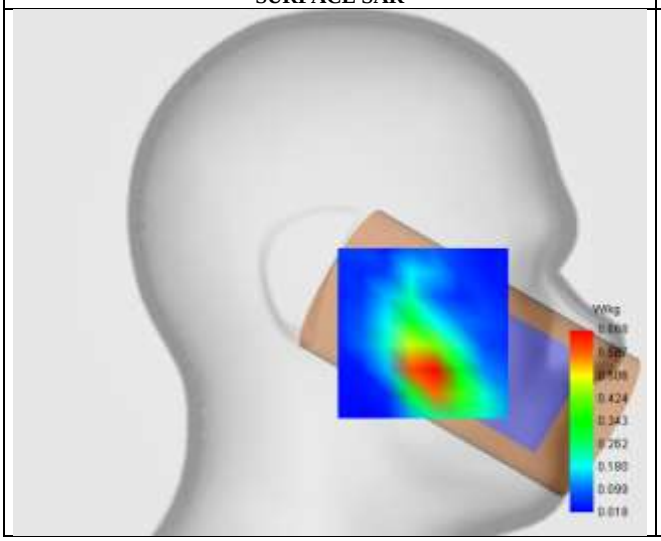
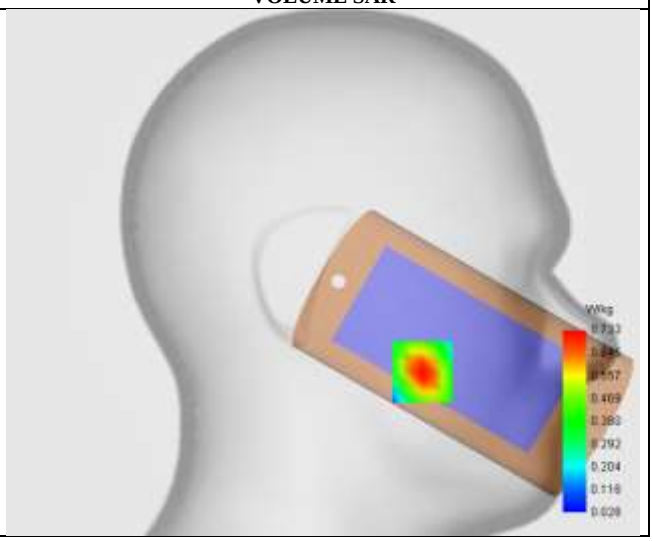
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.27
Area Scan	dx=12mm dy=12mm
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 41
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2593.000000
Relative permitivity (real part)	38.006268
Conductivity (S/m)	1.954320

C. SAR Surface and Volume

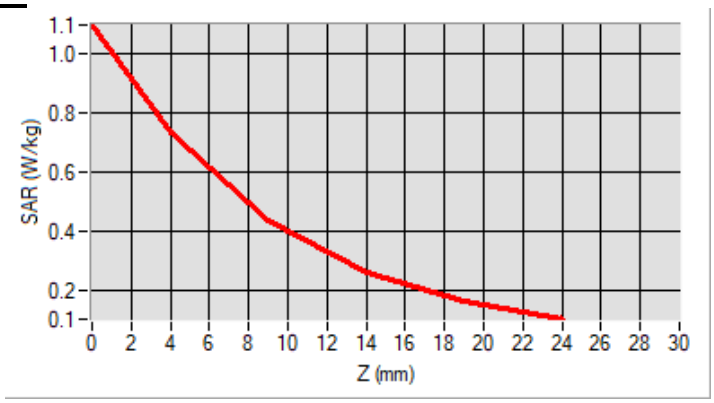
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-49.00, Y=-49.00 ; SAR Peak: 1.10 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.363875
SAR 1g (W/Kg)	0.667435
Variation (%)	-0.200000

E. Z Axis Scan



SAR Measurement at CUSTOM (LTE_Band_66) (Cheek, Left)

Date of measurement: 16/2/2023

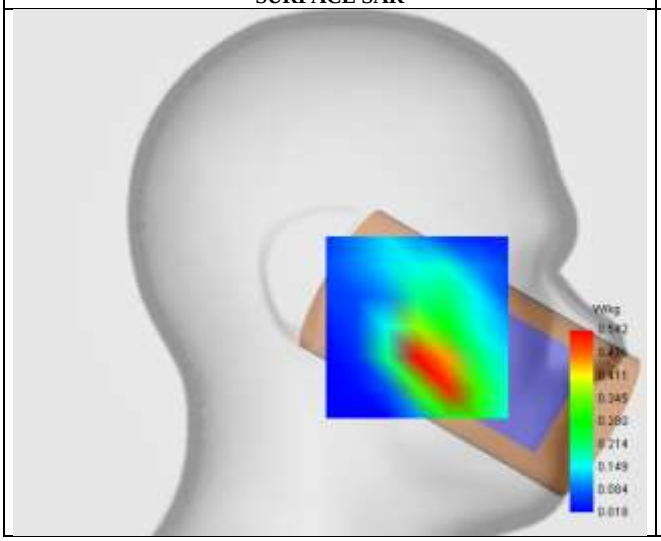
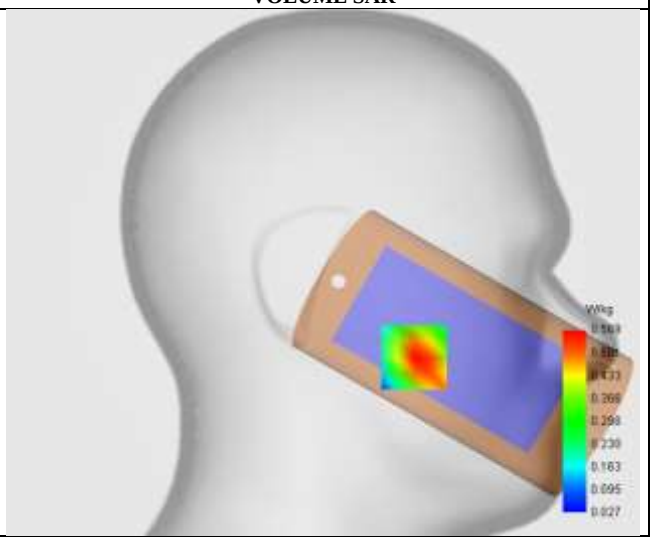
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.05
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	LTE band 66
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1745.000000
Relative permitivity (real part)	41.004542
Conductivity (S/m)	1.377224

C. SAR Surface and Volume

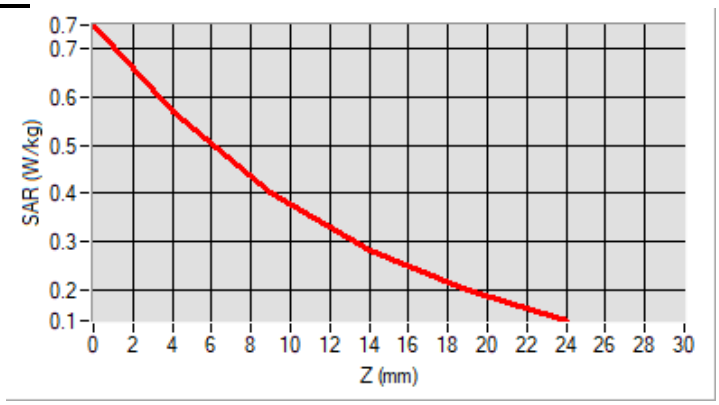
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-45.00, Y=-42.00 ; SAR Peak: 0.76 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.338872
SAR 1g (W/Kg)	0.539722
Variation (%)	-3.990000

E. Z Axis Scan



SAR Measurement at CUSTOM (LTE_Band_71) (Cheek, Right)

Date of measurement: 12/2/2023

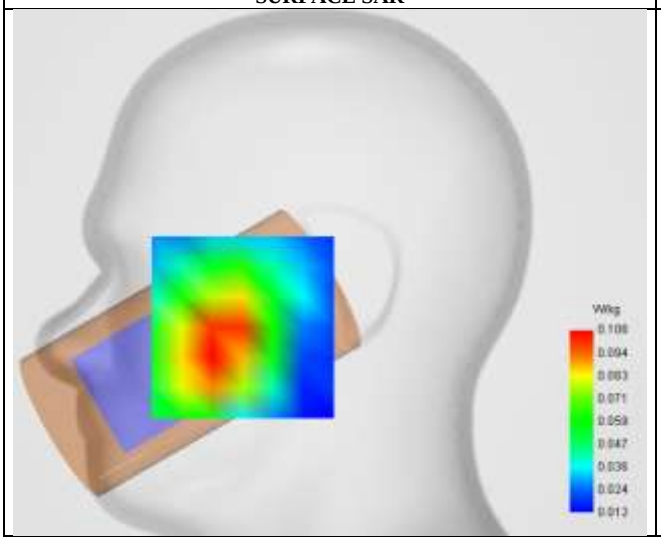
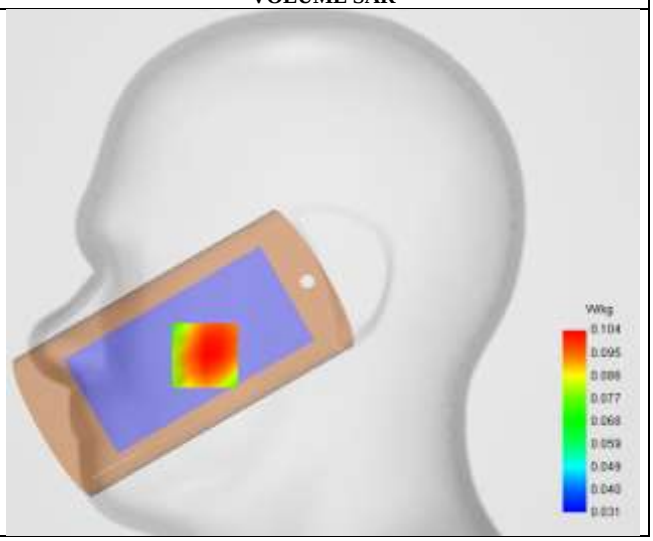
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	dx=15mm dy=15mm
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	LTE band 71
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	688.000000
Relative permitivity (real part)	42.355332
Conductivity (S/m)	0.910215

C. SAR Surface and Volume

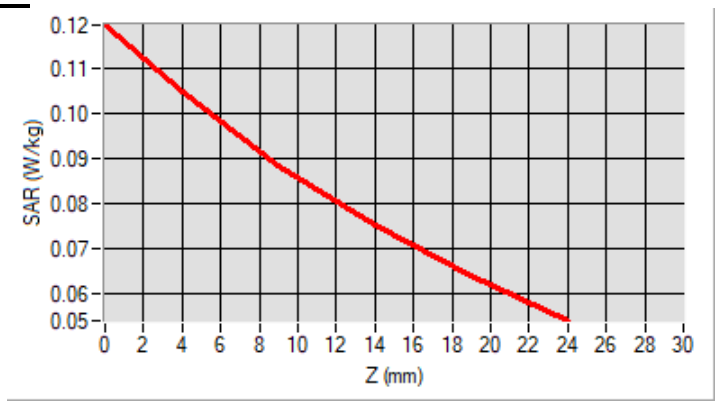
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-58.00, Y=-41.00 ; SAR Peak: 0.12 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.084281
SAR 1g (W/Kg)	0.105432
Variation (%)	-2.710000

E. Z Axis Scan



SAR Measurement at IEEE 802.11b ISM (Cheek, Left)

Date of measurement: 18/2/2023

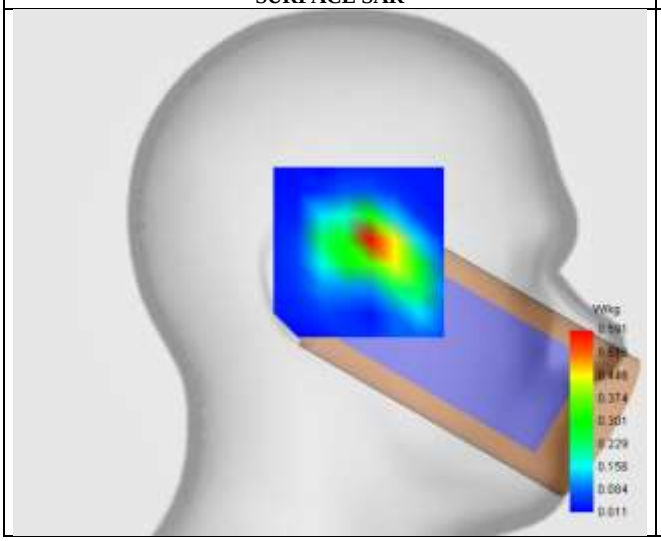
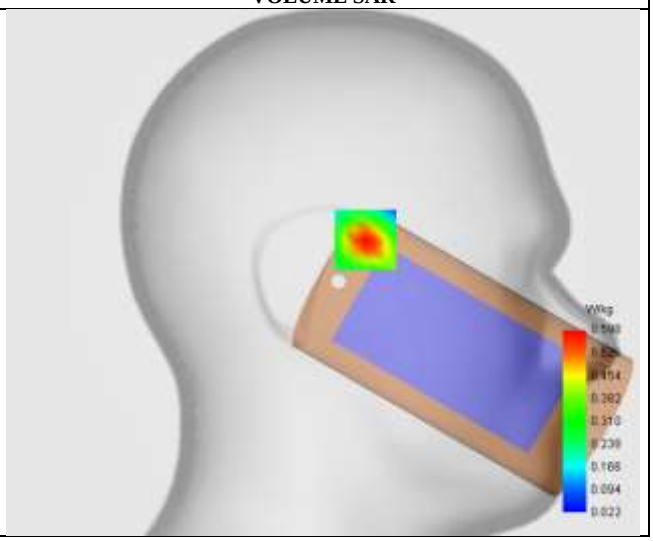
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.46
Area Scan	dx=12mm dy=12mm
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	IEEE 802.11b ISM
Channels	High
Signal	IEEE802.b (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2462.000000
Relative permitivity (real part)	38.853998
Conductivity (S/m)	1.762032

C. SAR Surface and Volume

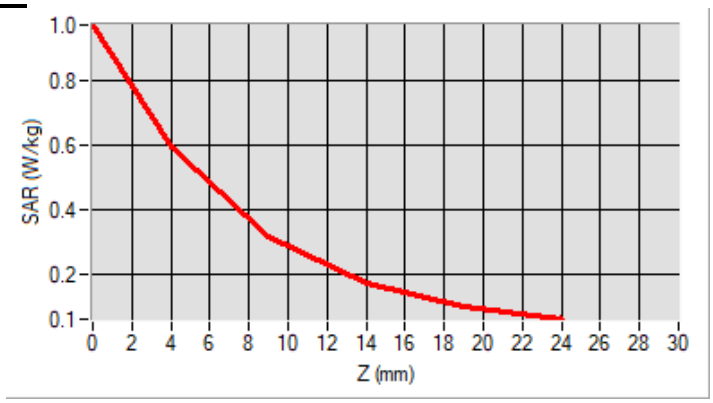
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-21.00, Y=16.00 ; SAR Peak: 0.97 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.281081
SAR 1g (W/Kg)	0.541995
Variation (%)	1.100000

E. Z Axis Scan



SAR Measurement at CUSTOM (5.2GHz_802.11a) (Tilt, Left)

Date of measurement: 23/2/2023

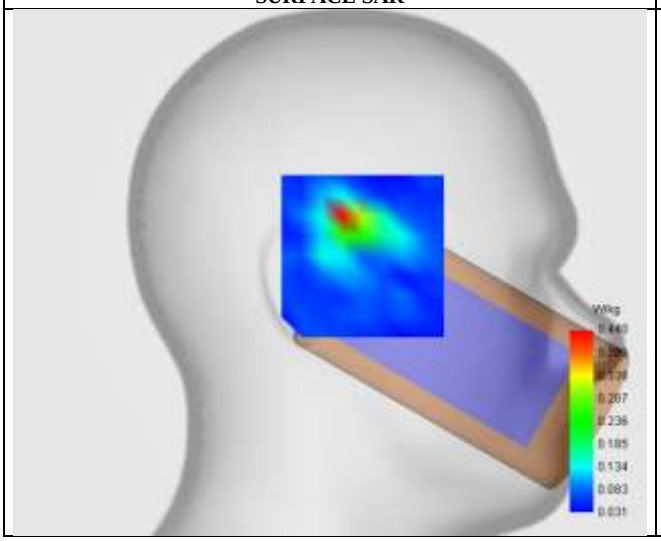
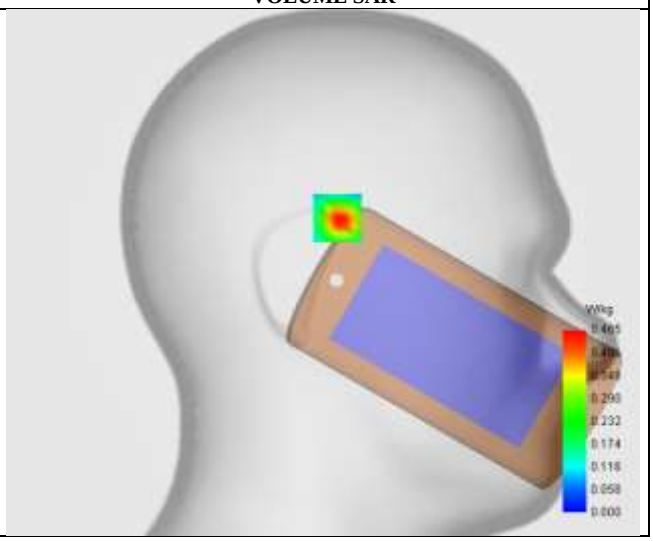
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.71
Area Scan	dx=10mm dy=10mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Left head
Device Position	Tilt
Band	IEEE 802.11a
Channels	Low
Signal	IEEE802.a (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	5180.000000
Relative permitivity (real part)	37.090200
Conductivity (S/m)	4.724090

C. SAR Surface and Volume

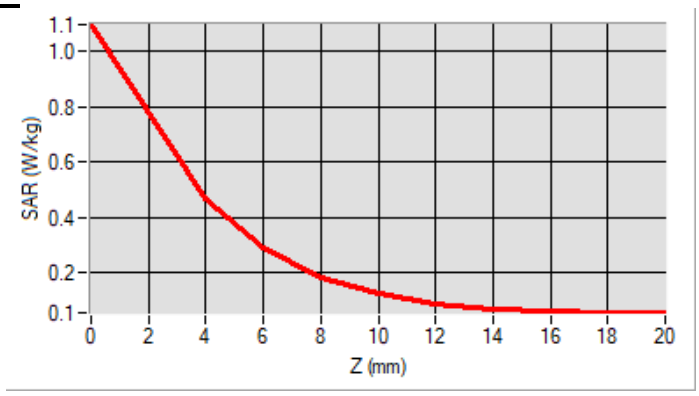
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-7.00, Y=27.00 ; SAR Peak: 1.12 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.187526
SAR 1g (W/Kg)	0.452815
Variation (%)	2.810000

E. Z Axis Scan



SAR Measurement at CUSTOM (5.8GHz_802.11a) (Tilt, Left)

Date of measurement: 23/2/2023

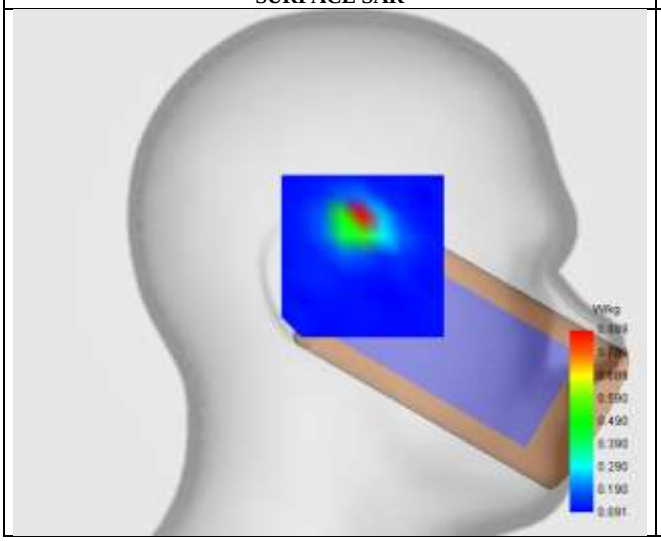
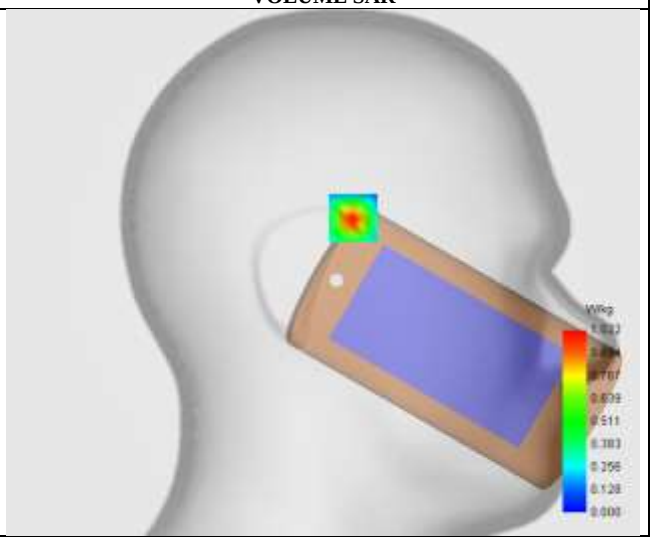
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.94
Area Scan	dx=10mm dy=10mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Left head
Device Position	Tilt
Band	IEEE 802.11a
Channels	Low
Signal	IEEE802.a (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	5745.000000
Relative permitivity (real part)	35.355000
Conductivity (S/m)	5.366300

C. SAR Surface and Volume

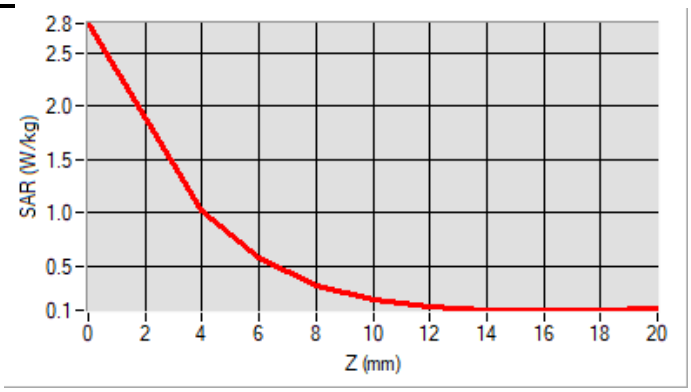
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-15.00, Y=27.00 ; SAR Peak: 2.77 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.337279
SAR 1g (W/Kg)	0.943290
Variation (%)	3.530000

E. Z Axis Scan



SAR Measurement at Bluetooth (Cheek, Left)

Date of measurement: 18/2/2023

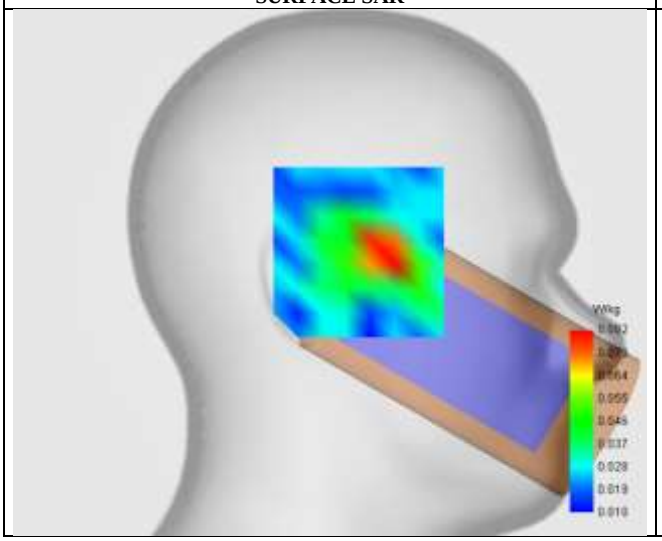
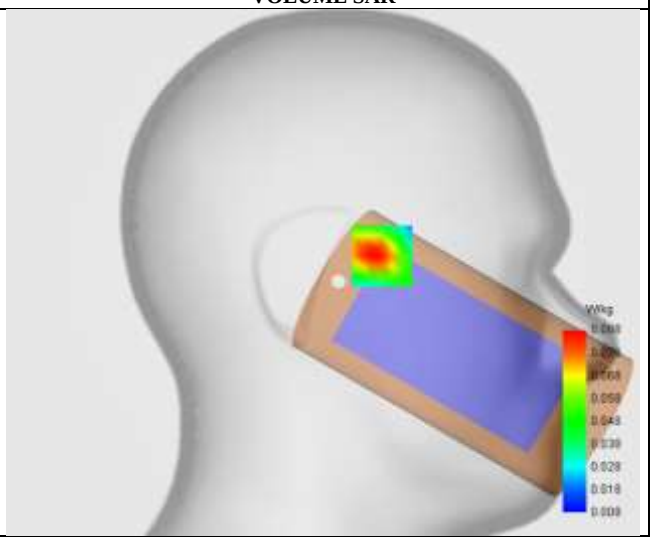
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.46
Area Scan	dx=12mm dy=12mm
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Left head
Device Position	Cheek
Band	Bluetooth
Channels	High
Signal	Bluetooth (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2480.000000
Relative permitivity (real part)	39.130000
Conductivity (S/m)	1.781063

C. SAR Surface and Volume

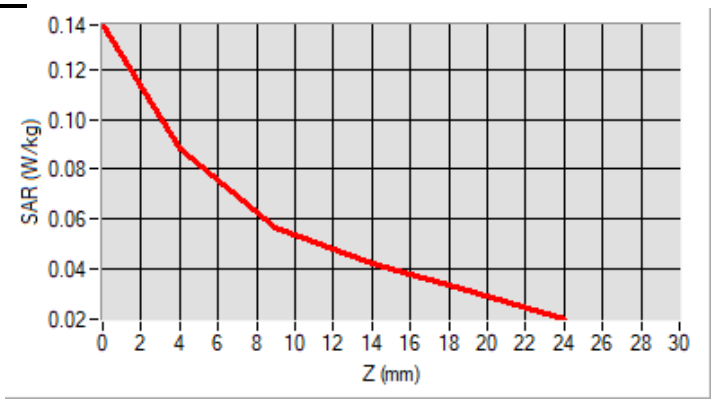
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-29.00, Y=8.00 ; SAR Peak: 0.13 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.052511
SAR 1g (W/Kg)	0.083879
Variation (%)	0.080000

E. Z Axis Scan



SAR Measurement at CUSTOM (GPRS8504Txslots) (Body, Validation Plane)

Date of measurement: 12/2/2023

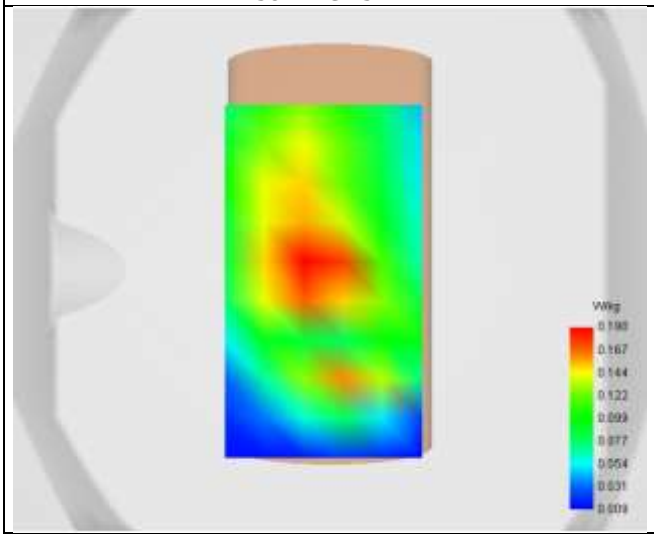
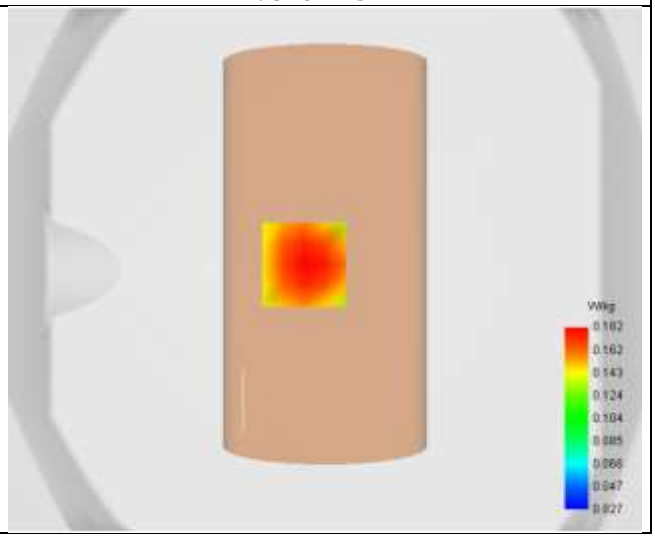
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	TDMA (Crest factor: 2.0)

B. Permitivity

Frequency (MHz)	836.599976
Relative permitivity (real part)	42.338622
Conductivity (S/m)	0.923115

C. SAR Surface and Volume

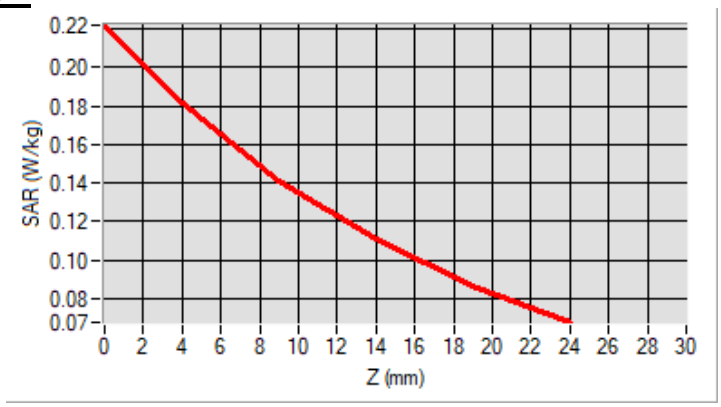
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=2.00 ; SAR Peak: 0.23 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.132709
SAR 1g (W/Kg)	0.179286
Variation (%)	0.070000

E. Z Axis Scan



SAR Measurement at CUSTOM (GPRS19003Txslots) (Body, Validation Plane)

Date of measurement: 16/2/2023

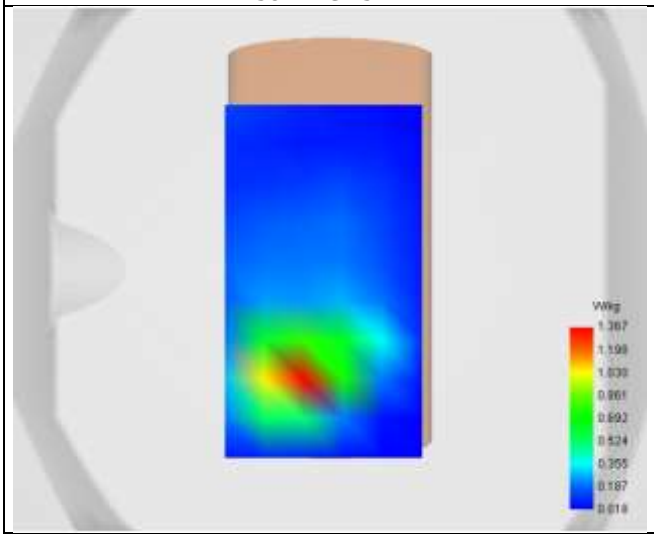
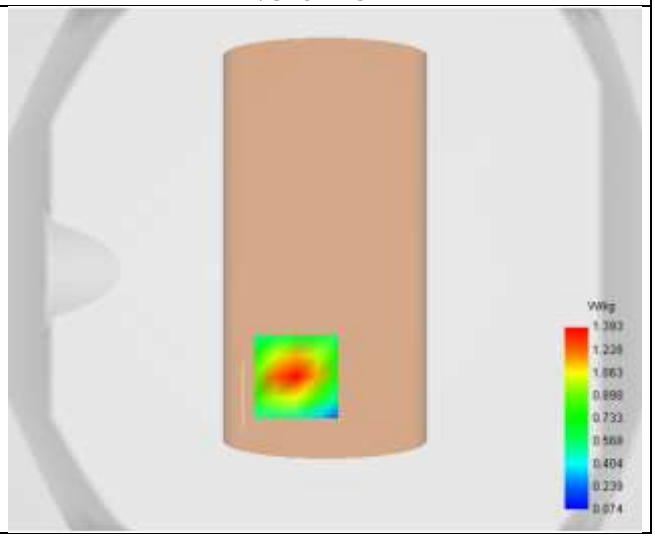
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 2.7)

B. Permitivity

Frequency (MHz)	1850.199951
Relative permitivity (real part)	38.880000
Conductivity (S/m)	1.386230

C. SAR Surface and Volume

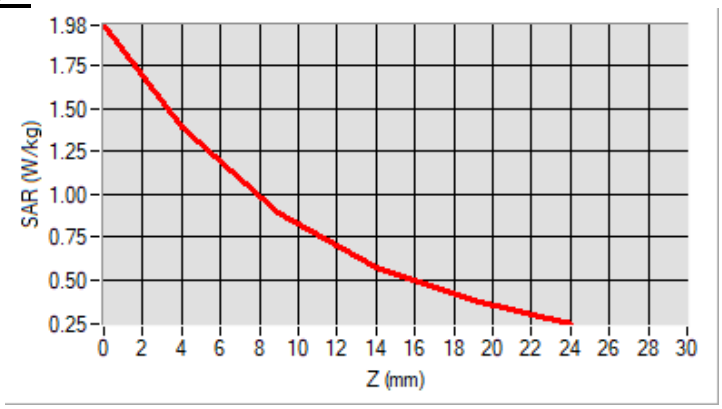
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=-41.00 ; SAR Peak: 1.99 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.739231
SAR 1g (W/Kg)	1.290490
Variation (%)	-0.650000

E. Z Axis Scan



SAR Measurement at Band2_WCDMA1900 (Body, Validation Plane)

Date of measurement: 16/2/2023

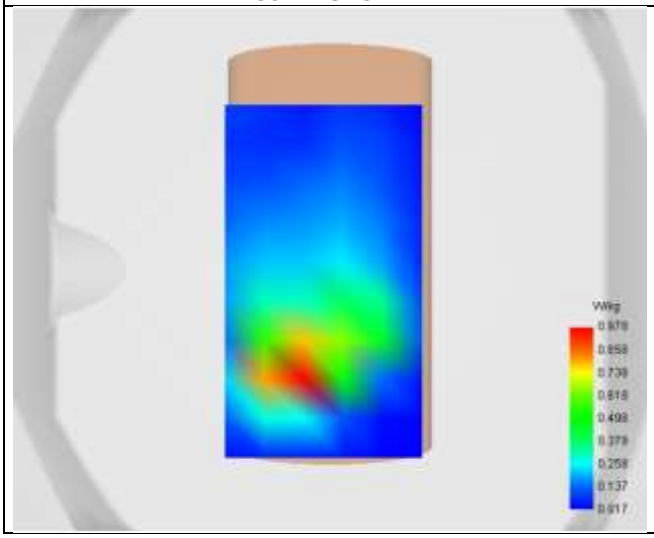
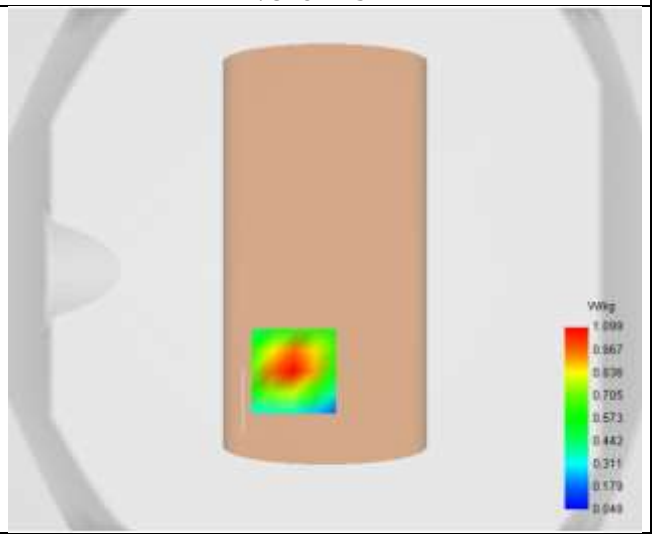
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Band2_WCDMA1900
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1880.000000
Relative permitivity (real part)	38.860000
Conductivity (S/m)	1.391264

C. SAR Surface and Volume

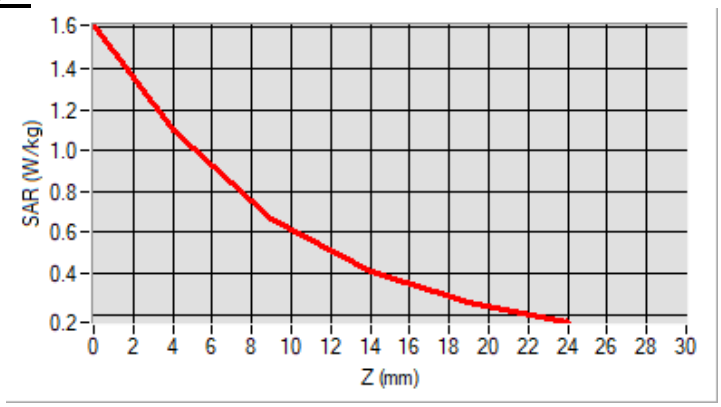
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-12.00, Y=-39.00 ; SAR Peak: 1.63 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.571415
SAR 1g (W/Kg)	1.025491
Variation (%)	4.950000

E. Z Axis Scan



SAR Measurement at CUSTOM (WCDMA_1700) (Body, Validation Plane)

Date of measurement: 16/2/2023

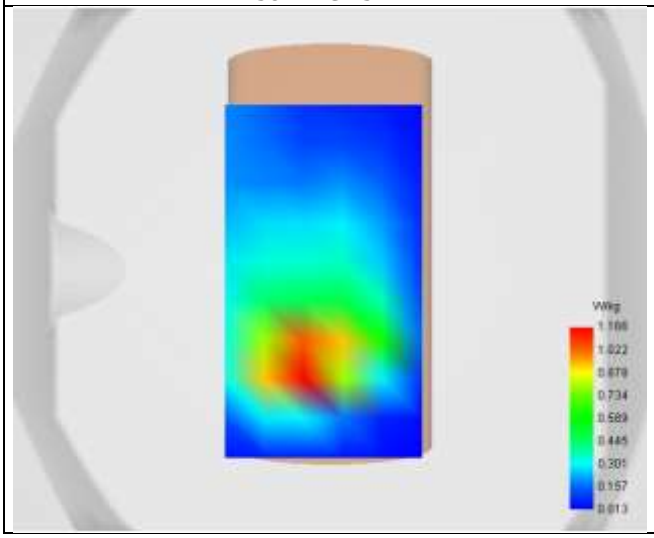
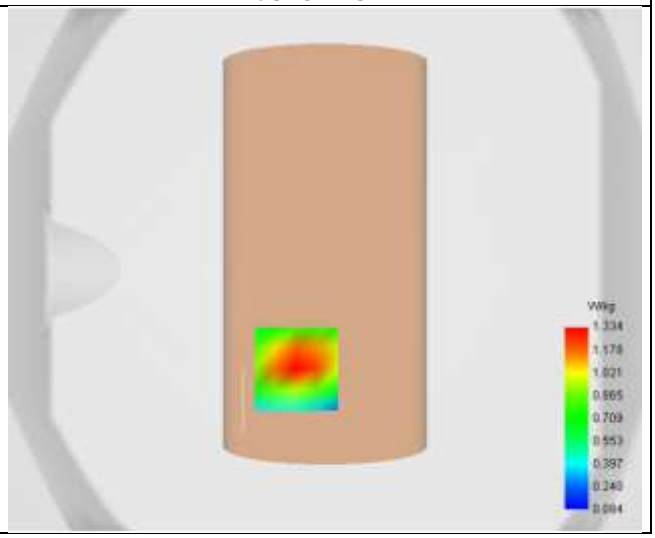
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.05
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Band4_WCDMA1700
Channels	High
Signal	WCDMA (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1752.599976
Relative permitivity (real part)	41.247399
Conductivity (S/m)	1.371441

C. SAR Surface and Volume

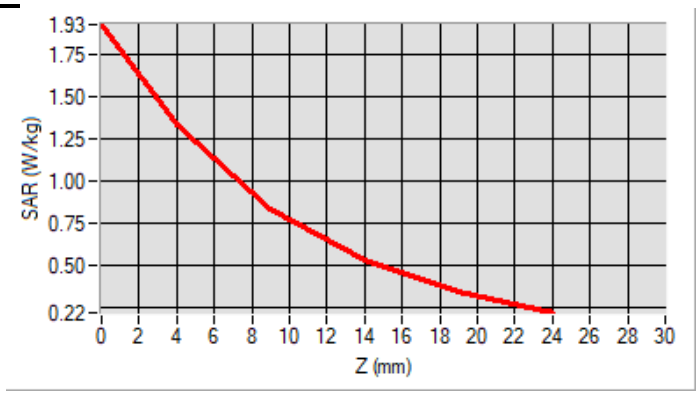
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=-38.00 ; SAR Peak: 1.63 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.608105
SAR 1g (W/Kg)	1.044561
Variation (%)	-1.460000

E. Z Axis Scan



SAR Measurement at Band5_WCDMA850 (Body, Validation Plane)

Date of measurement: 12/2/2023

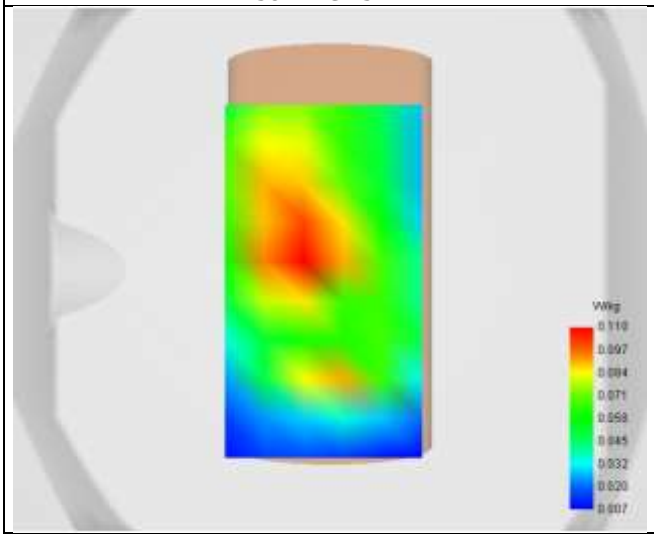
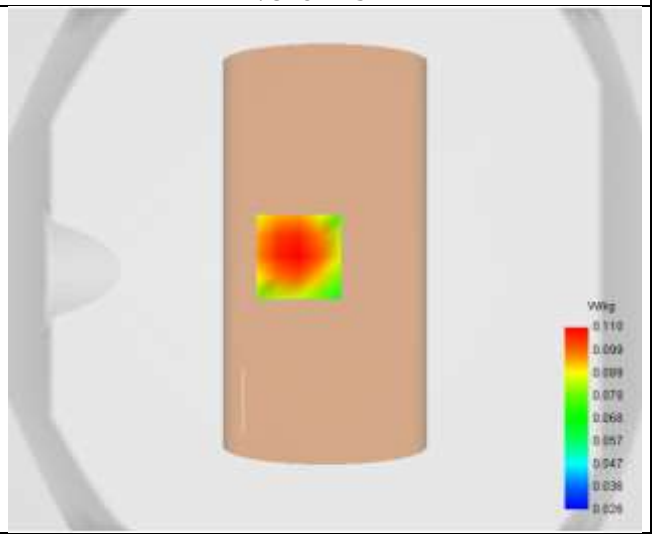
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.73
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Band5_WCDMA850
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	836.599976
Relative permitivity (real part)	42.560000
Conductivity (S/m)	0.916239

C. SAR Surface and Volume

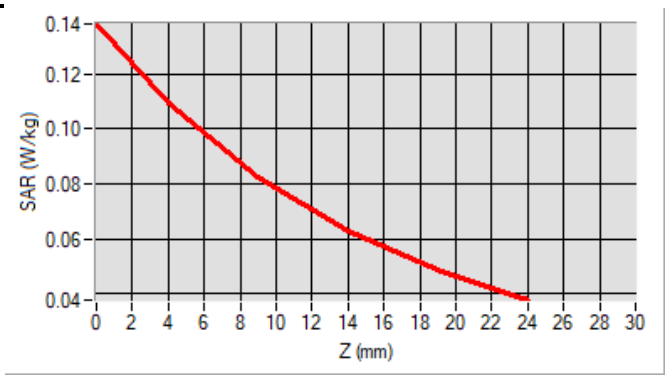
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-10.00, Y=5.00 ; SAR Peak: 0.14 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.077165
SAR 1g (W/Kg)	0.105916
Variation (%)	3.880000

E. Z Axis Scan



SAR Measurement at LTE band 7 (Body, Validation Plane)

Date of measurement: 18/2/2023

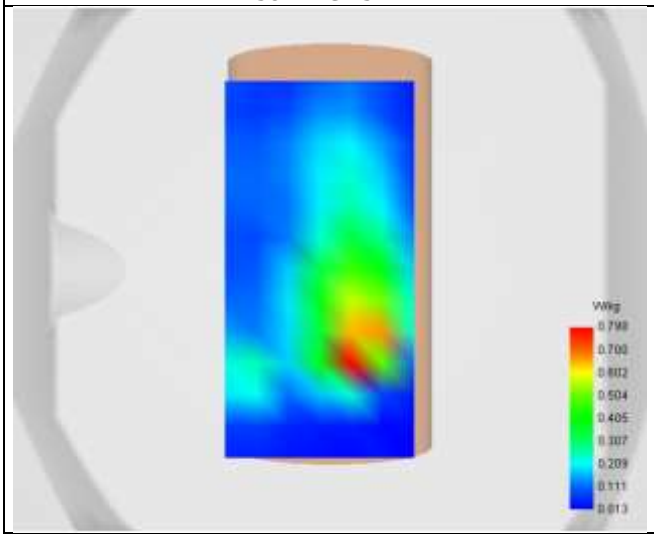
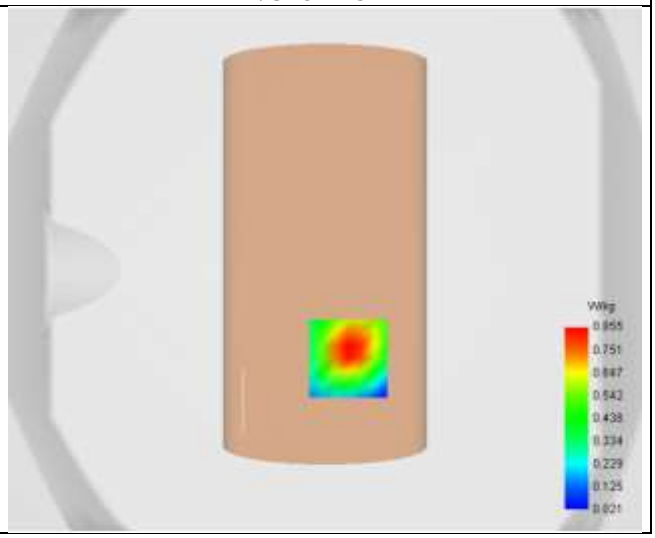
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.27
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 7
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2535.000000
Relative permitivity (real part)	39.086666
Conductivity (S/m)	1.889749

C. SAR Surface and Volume

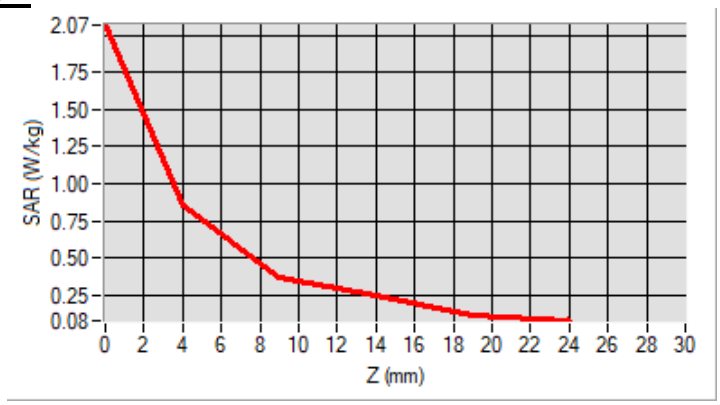
SURFACE SAR	VOLUME SAR
	

Maximum location: X=9.00, Y=-34.00 ; SAR Peak: 1.39 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.395775
SAR 1g (W/Kg)	0.787851
Variation (%)	-1.090000

E. Z Axis Scan



SAR Measurement at LTE band 12 (Body, Validation Plane)

Date of measurement: 12/2/2023

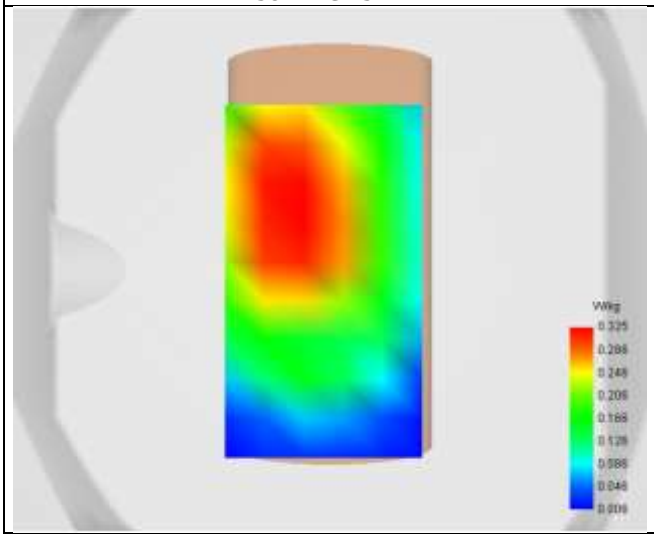
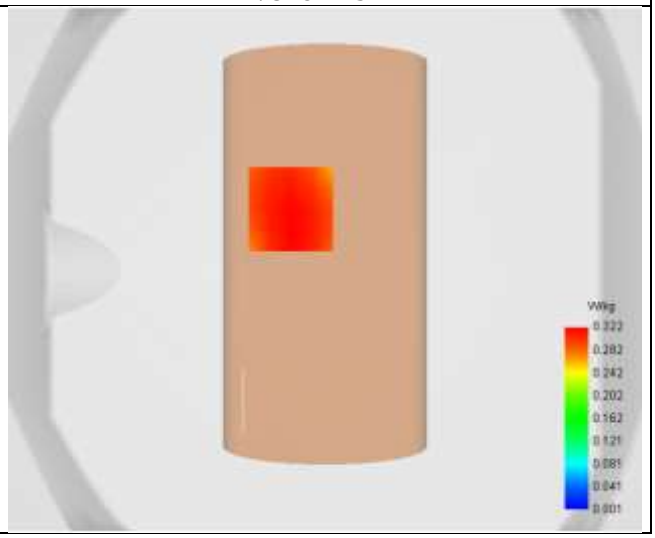
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 12
Channels	Low
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	704.000000
Relative permitivity (real part)	42.126267
Conductivity (S/m)	0.914304

C. SAR Surface and Volume

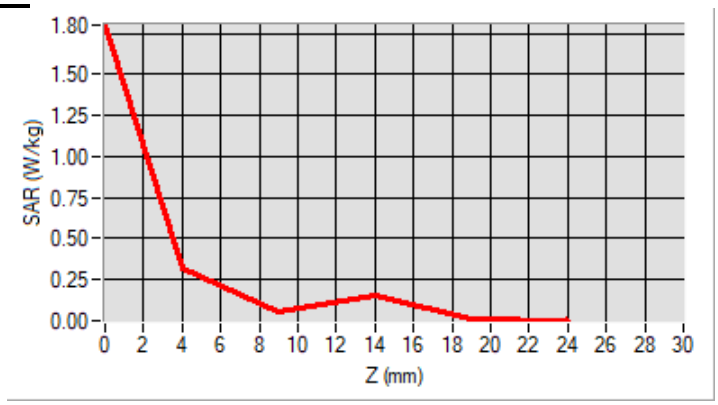
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-13.00, Y=23.00 ; SAR Peak: 1.41 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.235392
SAR 1g (W/Kg)	0.503183
Variation (%)	-0.180000

E. Z Axis Scan



SAR Measurement at LTE band 13 (Body, Validation Plane)

Date of measurement: 12/2/2023

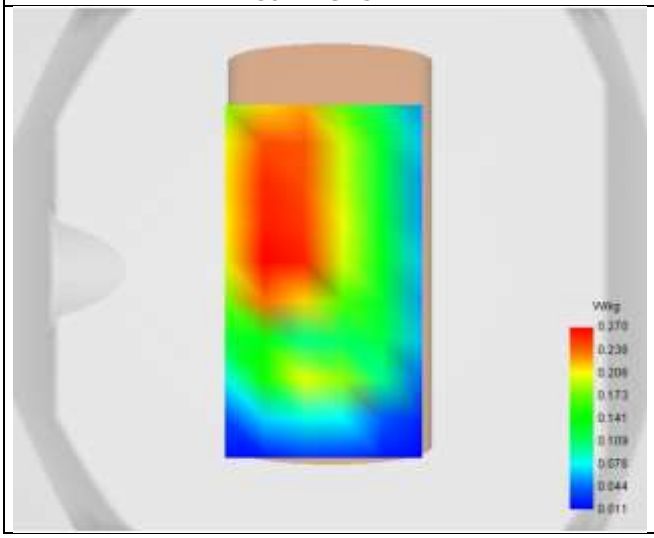
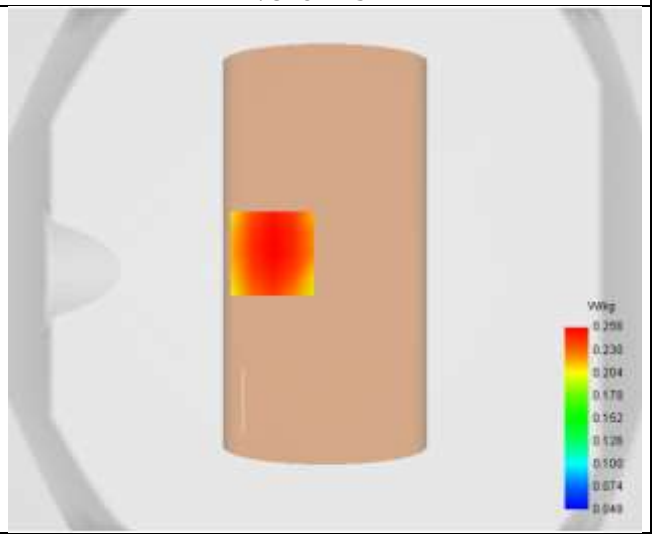
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 13
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	782.000000
Relative permitivity (real part)	42.132514
Conductivity (S/m)	0.916332

C. SAR Surface and Volume

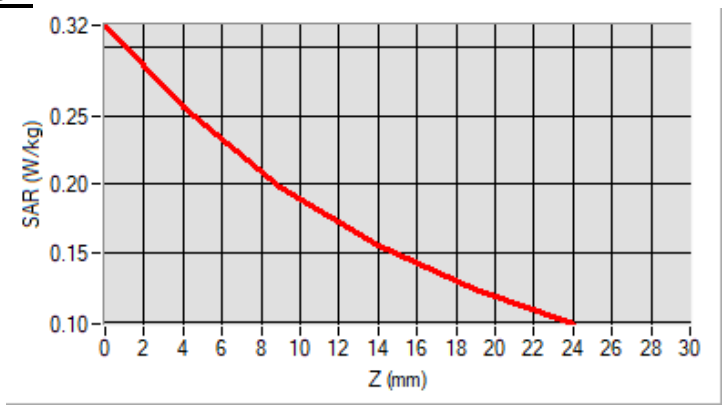
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-20.00, Y=6.00 ; SAR Peak: 0.33 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.187350
SAR 1g (W/Kg)	0.249784
Variation (%)	0.000000

E. Z Axis Scan



SAR Measurement at LTE band 25 (Body, Validation Plane)

Date of measurement: 16/2/2023

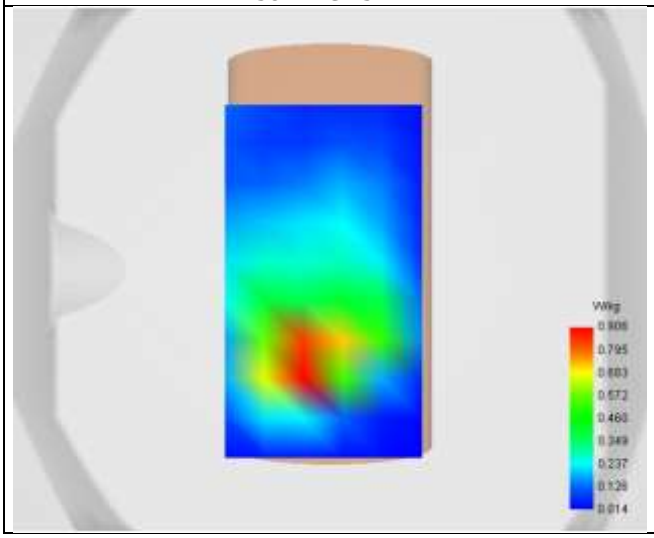
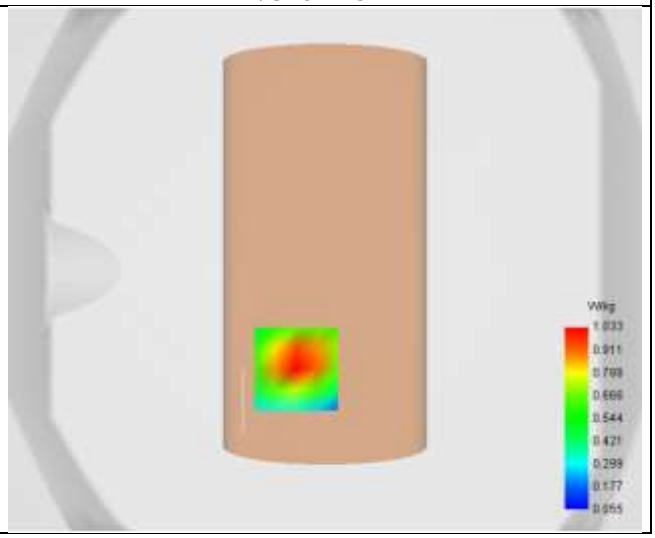
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 25
Channels	Low
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1860.000000
Relative permitivity (real part)	38.690000
Conductivity (S/m)	1.390282

C. SAR Surface and Volume

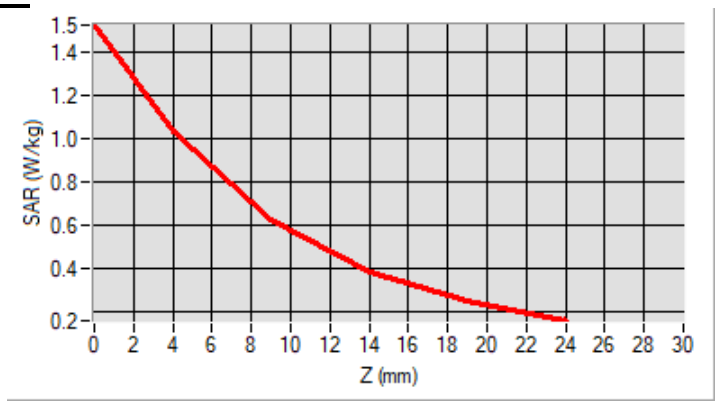
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=-38.00 ; SAR Peak: 1.55 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.549158
SAR 1g (W/Kg)	0.973125
Variation (%)	0.190000

E. Z Axis Scan



SAR Measurement at CUSTOM (LTE_Band_26) (Body, Validation Plane)

Date of measurement: 12/2/2023

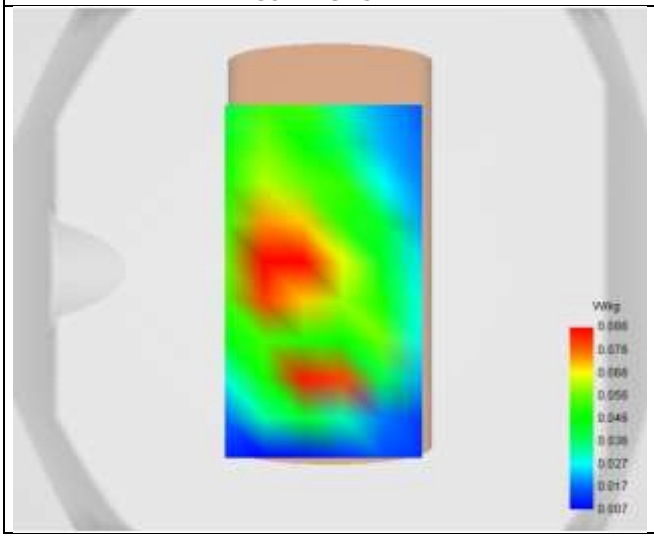
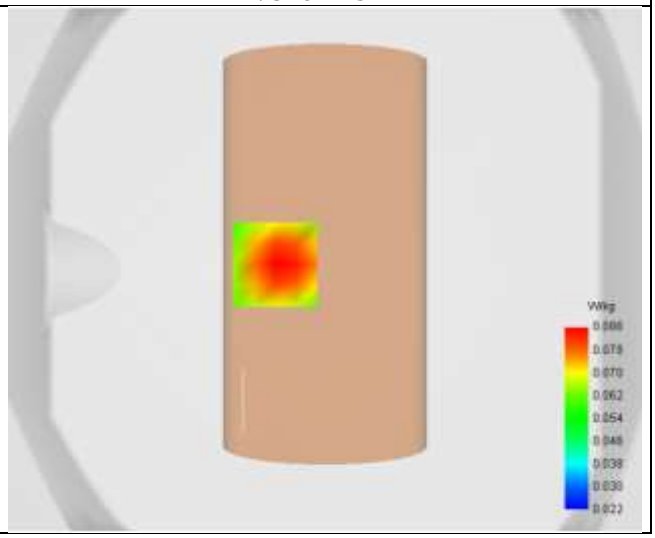
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 26
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	841.500000
Relative permitivity (real part)	42.516262
Conductivity (S/m)	0.923200

C. SAR Surface and Volume

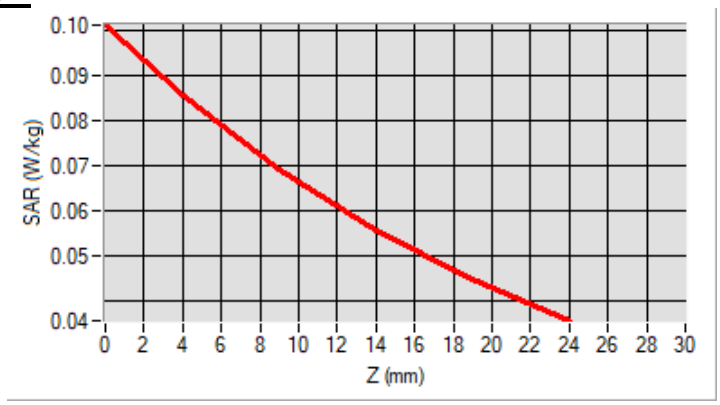
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-19.00, Y=2.00 ; SAR Peak: 0.10 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.063240
SAR 1g (W/Kg)	0.082987
Variation (%)	2.810000

E. Z Axis Scan



SAR Measurement at LTE band 41 (Body, Validation Plane)

Date of measurement: 18/2/2023

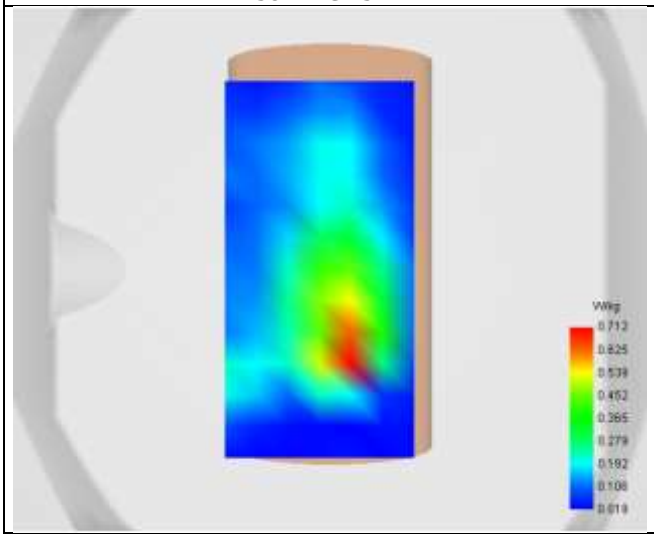
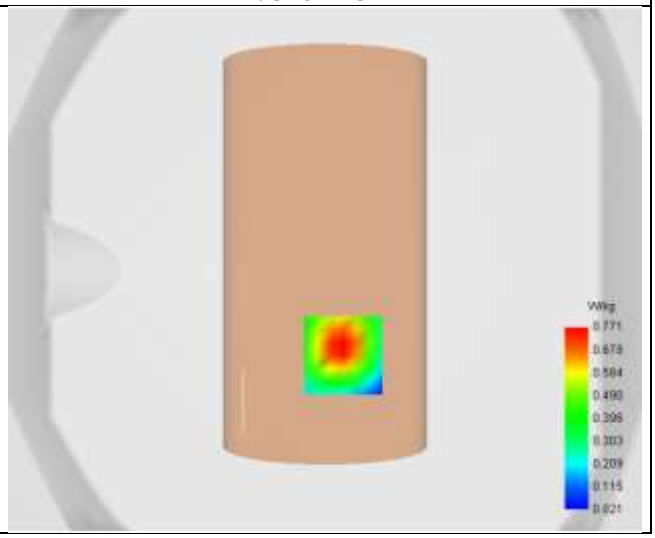
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.27
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 41
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2593.000000
Relative permitivity (real part)	38.006268
Conductivity (S/m)	1.954320

C. SAR Surface and Volume

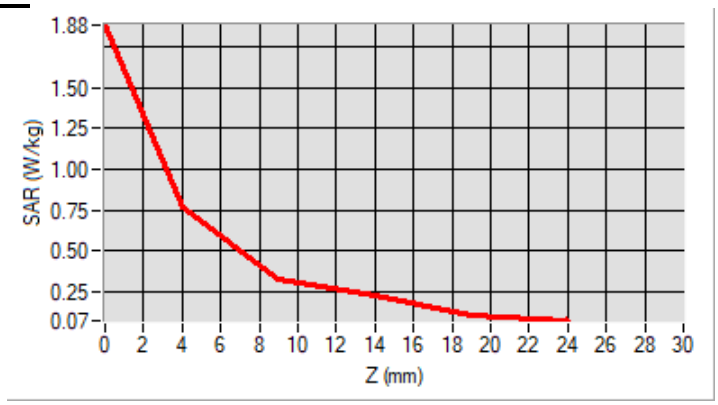
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=-33.00 ; SAR Peak: 1.26 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.361409
SAR 1g (W/Kg)	0.711771
Variation (%)	0.440000

E. Z Axis Scan



SAR Measurement at CUSTOM (LTE_Band66) (Body, Validation Plane)

Date of measurement: 16/2/2023

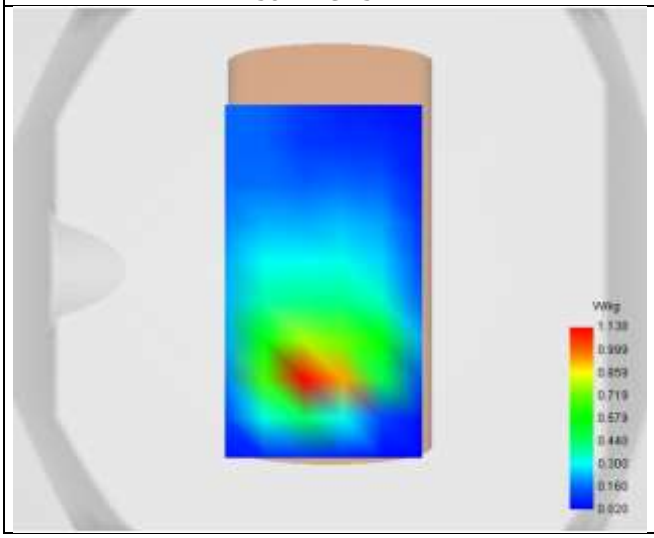
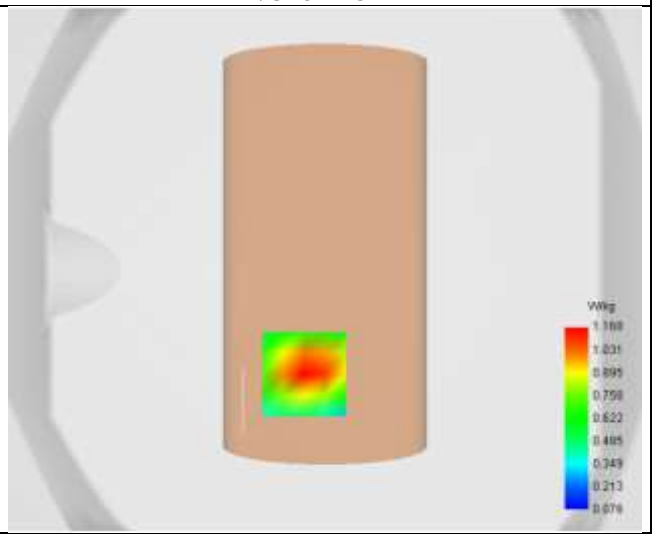
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.05
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 66
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	1770.000000
Relative permitivity (real part)	40.060001
Conductivity (S/m)	1.381977

C. SAR Surface and Volume

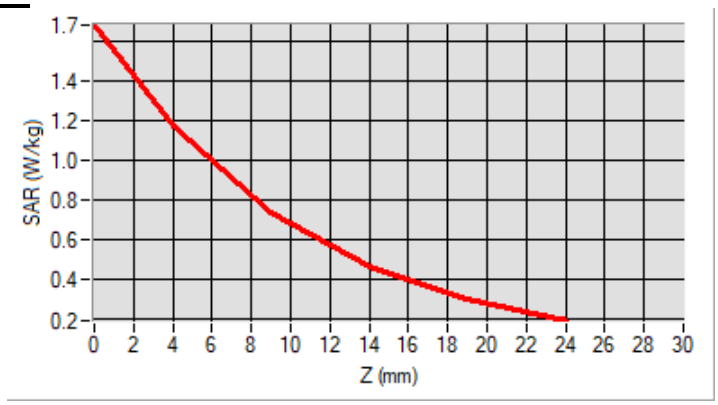
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=-40.00 ; SAR Peak: 1.70 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.639079
SAR 1g (W/Kg)	1.097634
Variation (%)	0.570000

E. Z Axis Scan



SAR Measurement at CUSTOM (LTE_Band_71) (Body, Validation Plane)

Date of measurement: 12/2/2023

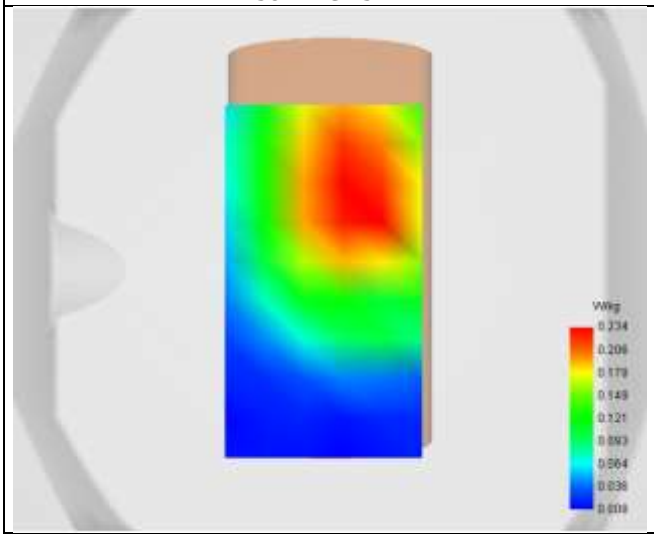
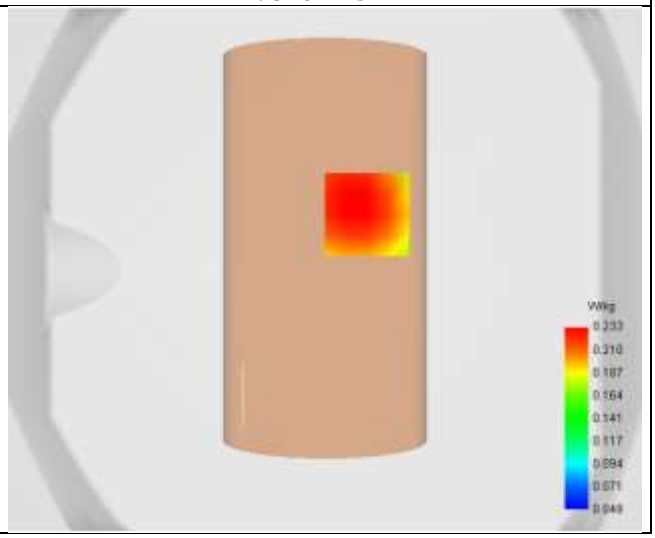
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.70
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	LTE band 71
Channels	High
Signal	LTE (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	688.000000
Relative permitivity (real part)	42.355332
Conductivity (S/m)	0.910215

C. SAR Surface and Volume

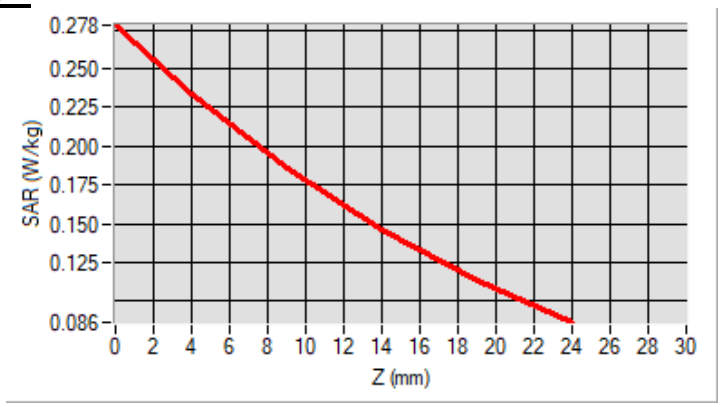
SURFACE SAR	VOLUME SAR
	

Maximum location: X=16.00, Y=21.00 ; SAR Peak: 0.28 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.179025
SAR 1g (W/Kg)	0.235297
Variation (%)	0.540000

E. Z Axis Scan



SAR Measurement at IEEE 802.11b ISM (Body, Validation Plane)

Date of measurement: 18/2/2023

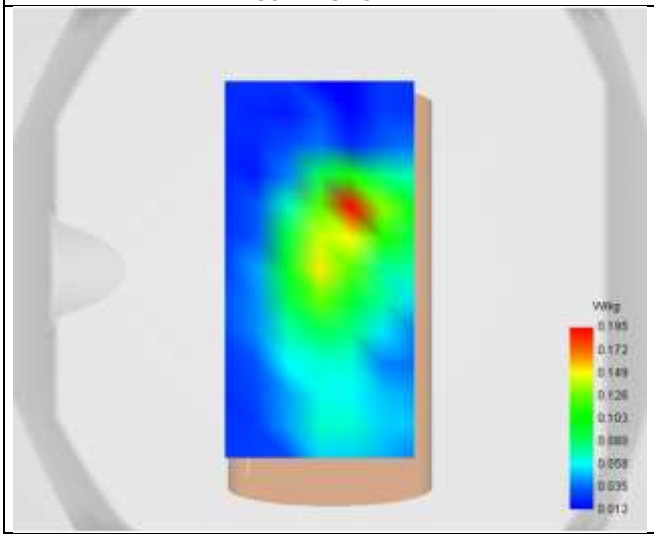
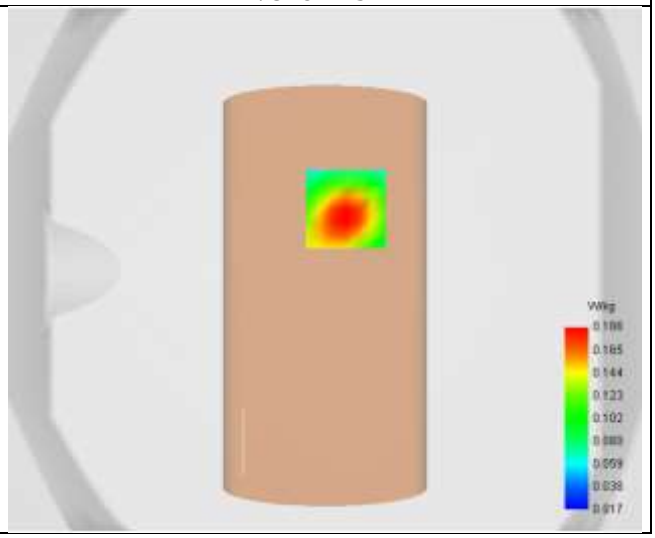
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.46
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11b ISM
Channels	High
Signal	IEEE802.b (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2462.000000
Relative permitivity (real part)	38.853998
Conductivity (S/m)	1.762032

C. SAR Surface and Volume

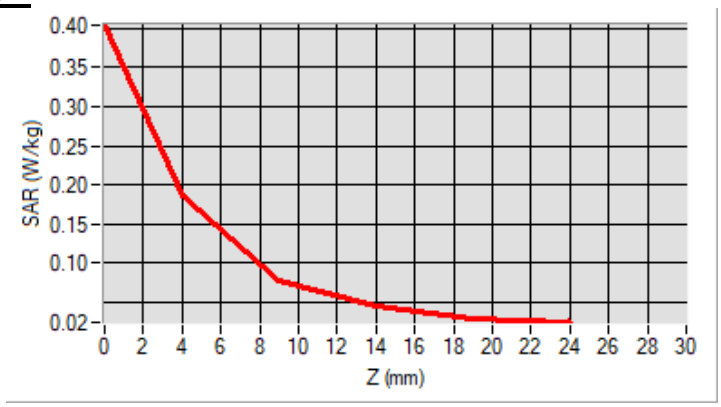
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=23.00 ; SAR Peak: 0.34 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.094946
SAR 1g (W/Kg)	0.176995
Variation (%)	-0.510000

E. Z Axis Scan



SAR Measurement at CUSTOM (5.2GHz_802.11a) (Body, Validation Plane)

Date of measurement: 23/2/2023

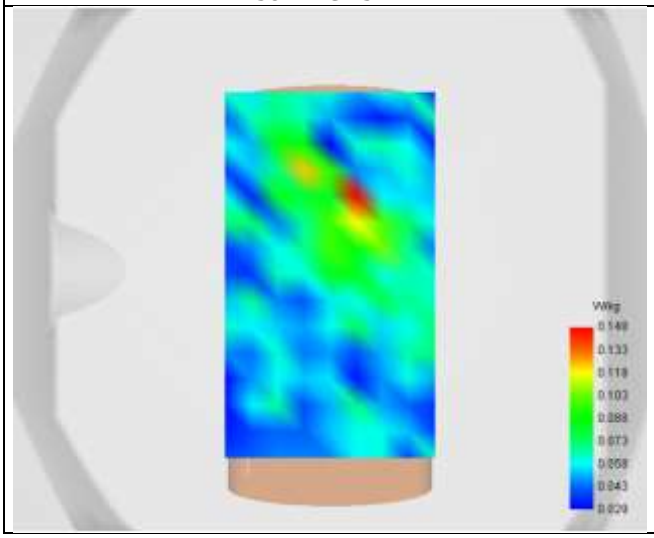
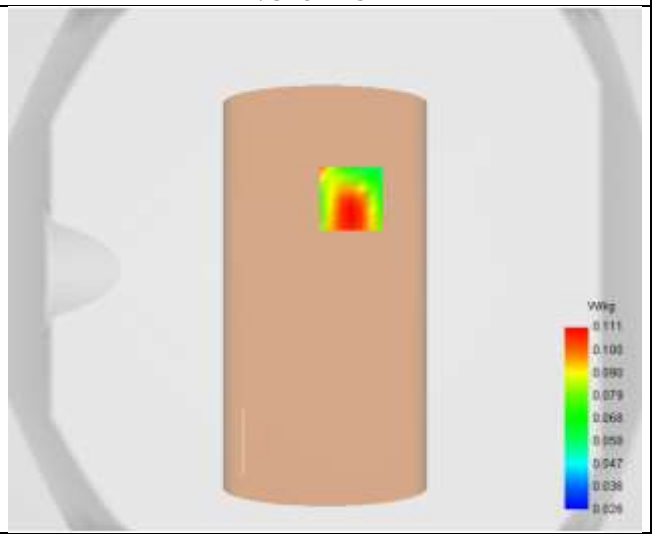
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.71
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11a
Channels	Low
Signal	IEEE802.a (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	5180.000000
Relative permitivity (real part)	37.090200
Conductivity (S/m)	4.724090

C. SAR Surface and Volume

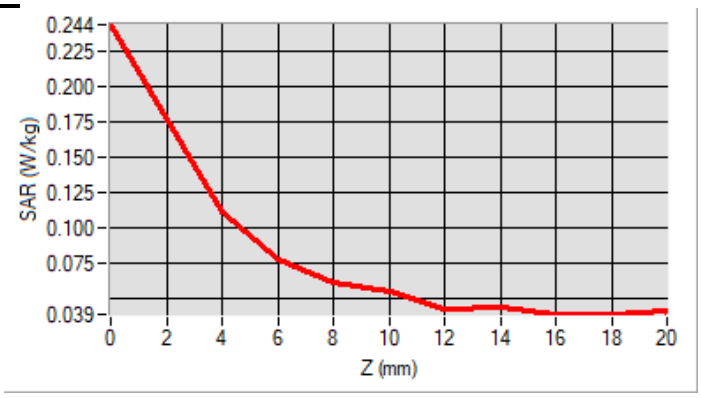
SURFACE SAR	VOLUME SAR
	

Maximum location: X=10.00, Y=27.00 ; SAR Peak: 0.16 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.063877
SAR 1g (W/Kg)	0.088754
Variation (%)	0.510000

E. Z Axis Scan



SAR Measurement at CUSTOM (5.8GHz_802.11a) (Body, Validation Plane)

Date of measurement: 23/2/2023

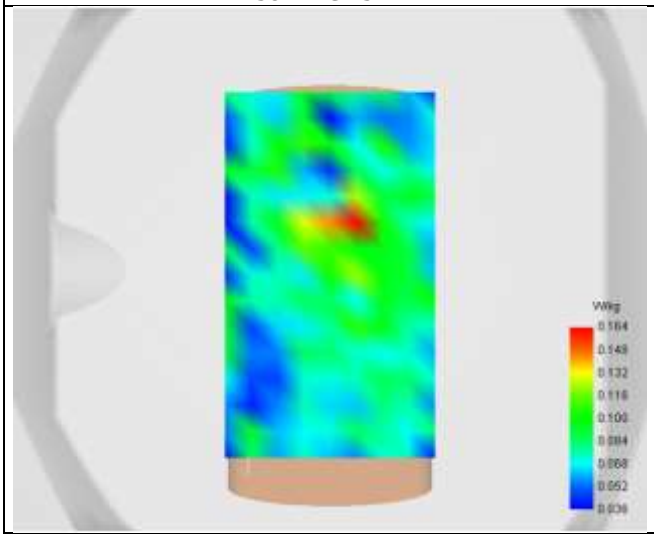
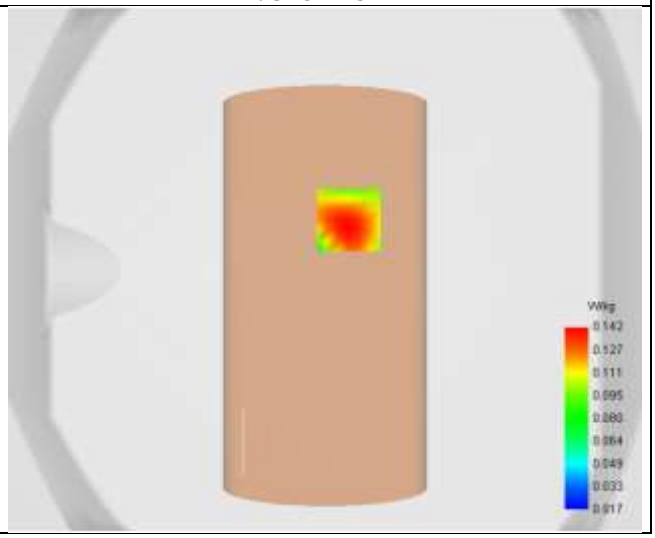
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	1.94
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11a
Channels	High
Signal	IEEE802.a (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	5825.000000
Relative permitivity (real part)	35.996027
Conductivity (S/m)	5.367214

C. SAR Surface and Volume

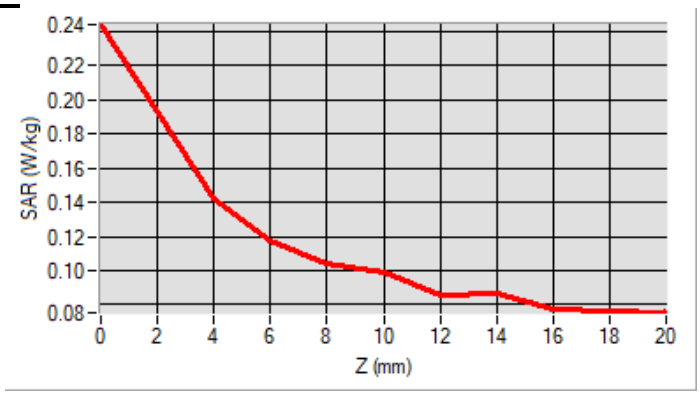
SURFACE SAR	VOLUME SAR
	

Maximum location: X=9.00, Y=19.00 ; SAR Peak: 0.17 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.086871
SAR 1g (W/Kg)	0.118309
Variation (%)	0.840000

E. Z Axis Scan



SAR Measurement at Bluetooth (Body, Validation Plane)

Date of measurement: 18/2/2023

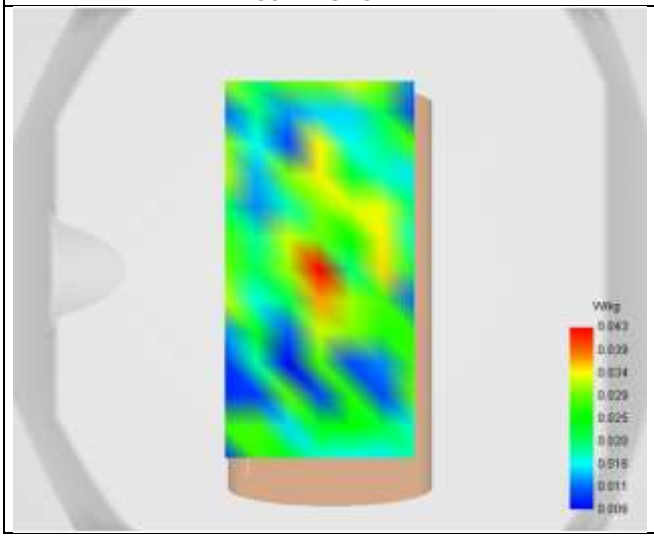
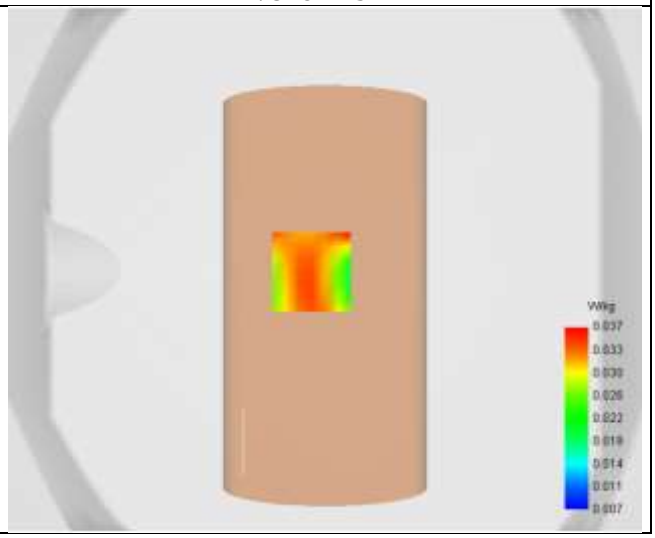
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.46
Area Scan	surf_sam_plan.txt
Zoom Scan	7x7x7,dx=5mm dy=5mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	Bluetooth
Channels	High
Signal	Bluetooth (Crest factor: 1.0)

B. Permitivity

Frequency (MHz)	2480.000000
Relative permitivity (real part)	39.130000
Conductivity (S/m)	1.781063

C. SAR Surface and Volume

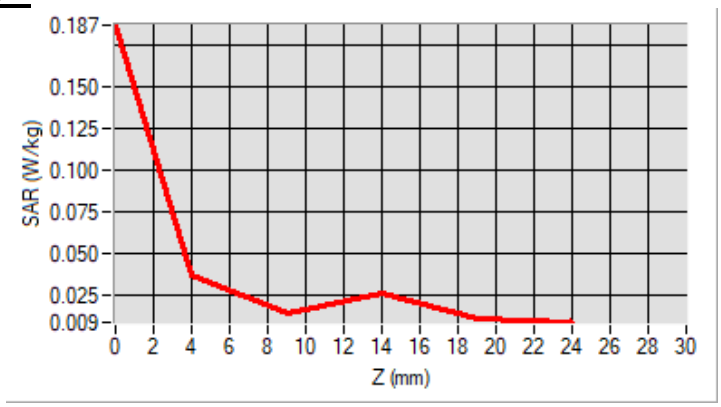
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-5.00, Y=-1.00 ; SAR Peak: 0.07 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.025696
SAR 1g (W/Kg)	0.039126
Variation (%)	0.520000

E. Z Axis Scan



SAR Measurement at CUSTOM (GPRS19003Txslots) (Body, Validation Plane)

Date of measurement: 16/2/2023

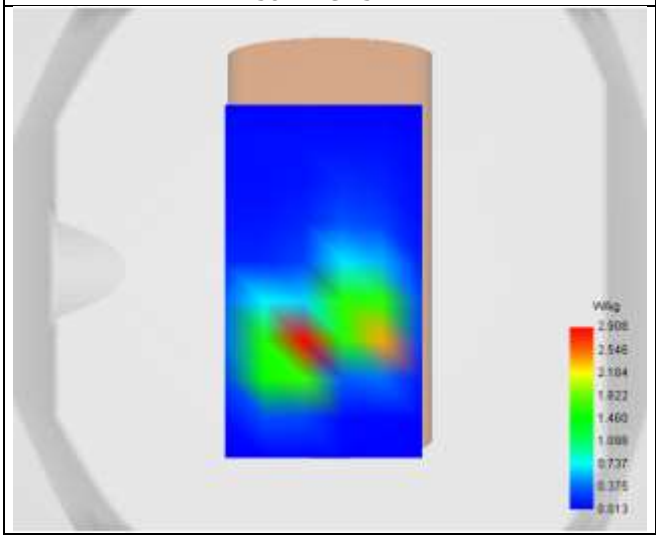
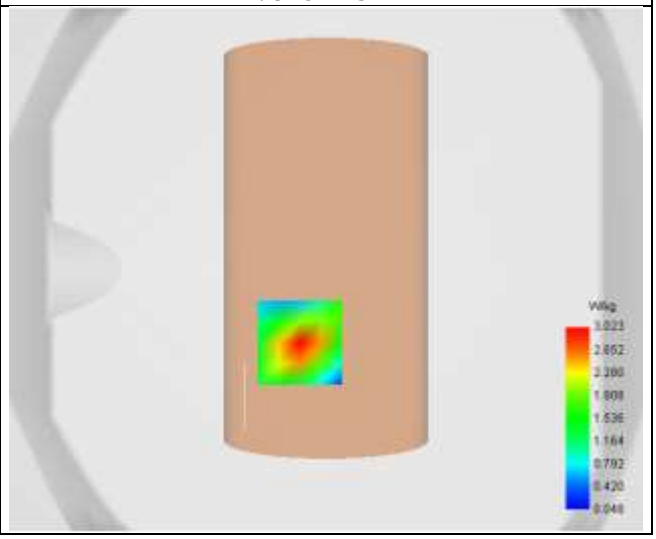
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 2.7)

B. Permitivity

Frequency (MHz)	1850.199951
Relative permitivity (real part)	38.880000
Conductivity (S/m)	1.386230

C. SAR Surface and Volume

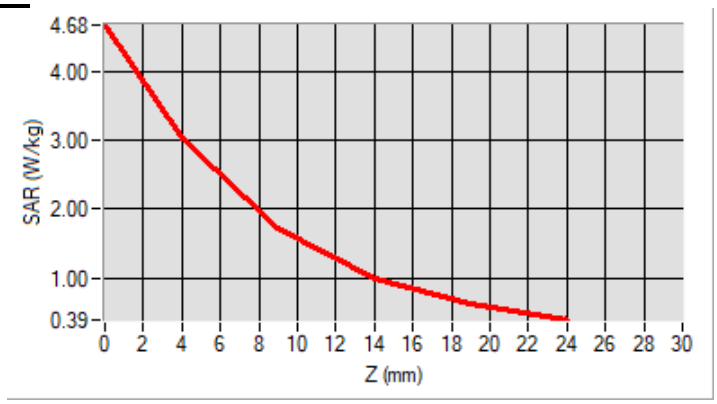
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-10.00, Y=-28.00 ; SAR Peak: 4.75 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	1.434743
SAR 1g (W/Kg)	2.789732
Variation (%)	-1.770000

E. Z Axis Scan



SAR Measurement at CUSTOM (GPRS19003Txslots) (Body, Validation Plane)

Date of measurement: 16/2/2023

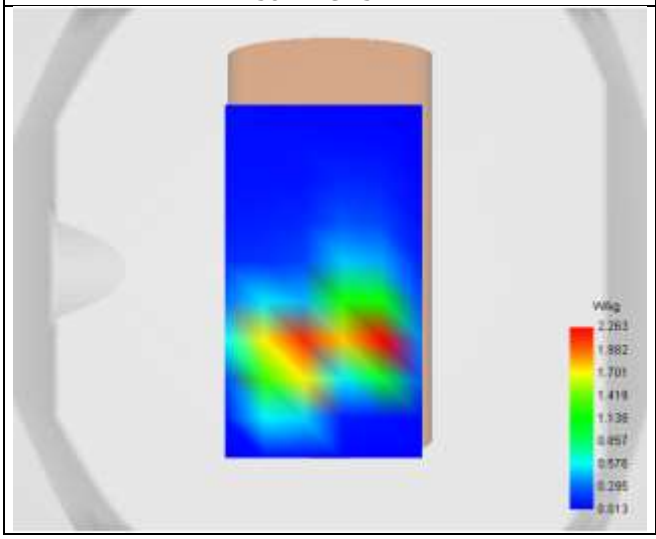
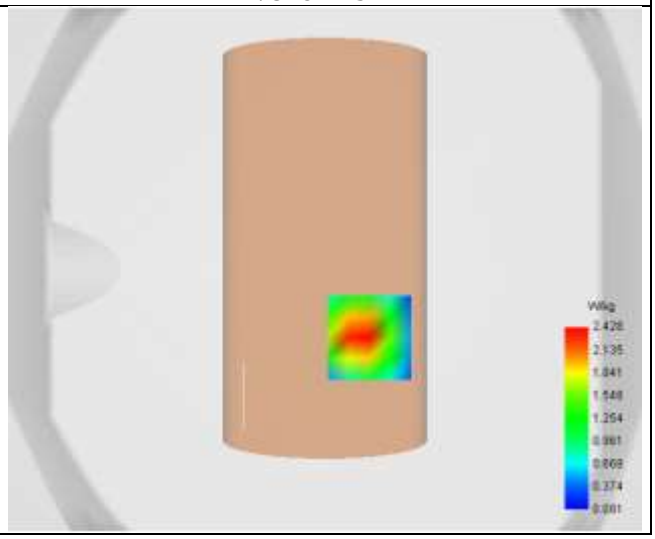
A. Experimental conditions.

Probe	SN 18/21 EPGO354
ConvF	2.00
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 2.7)

B. Permitivity

Frequency (MHz)	1850.199951
Relative permitivity (real part)	38.880000
Conductivity (S/m)	1.386230

C. SAR Surface and Volume

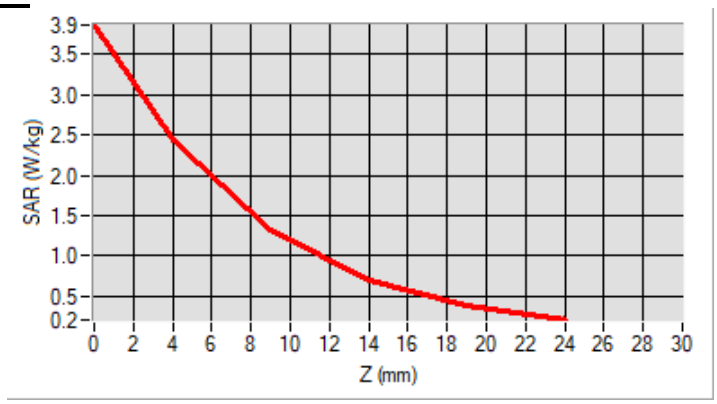
SURFACE SAR	VOLUME SAR
	

Maximum location: X=17.00, Y=-26.00 ; SAR Peak: 4.00 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	1.186950
SAR 1g (W/Kg)	2.674113
Variation (%)	-4.250000

E. Z Axis Scan



------End of Report----