



SAR TEST REPORT

Report No.: STS2304345H01

Issued for

POLARIS MOBILITY SOLUTIONS CO.,LIMITED
FLAT/RM 3B 8/F KAISER CENTRE 18 CENTRE STREET
SAI YING PUN HK

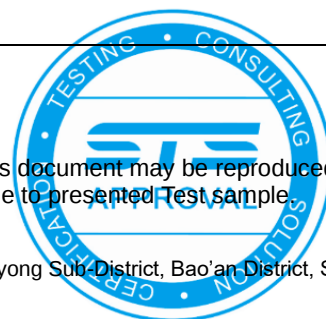
Product Name:	Portable Translator
Brand Name:	GLOBOTOK
Model Name:	G1
Series Model:	N/A
FCC ID:	2BBFP-G1
Test Standard:	ANSI/IEEE Std. C95.1
	FCC 47 CFR Part 2 (2.1093)
	IEC/IEEE 62209-1528
Max. Report SAR (1g):	Body Worn and Hotspot : 1.099 W/kg

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Test Report Certification

Applicant's name: POLARIS MOBILITY SOLUTIONS CO.,LIMITED
Address: FLAT/RM 3B 8/F KAISER CENTRE 18 CENTRE STREET SAI YING PUN HK
Manufacturer's Name.....: POLARIS MOBILITY SOLUTIONS CO.,LIMITED
Address: FLAT/RM 3B 8/F KAISER CENTRE 18 CENTRE STREET SAI YING PUN HK

Product description

Product name: Portable Translator
Brand name: GLOBOTOK
Model name: G1
Series Model.....: N/A

Standards: ANSI/IEEE Std. C95.1-1992
FCC 47 CFR Part 2 (2.1093)
IEC/IEEE 62209-1528

The device was tested by Shenzhen STS Test Services Co., Ltd. in accordance with the measurement methods and procedures specified in KDB 865664 The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Date of Test

Date (s) of performance of tests: 08 May 2023 ~ 18 May 2023
Date of Issue: 24 May 2023
Test Result.....: **Pass**

Testing Engineer :

(Shifan. Long)

Technical Manager :

(Sean She)

Authorized Signatory :

(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	24 May 2023	STS2304345H01	ALL	Initial Issue





1. General Information

Environmental evaluation measurements of specific absorption rate (SAR) distributions in emulated human head and body tissues exposed to radio frequency (RF) radiation from wireless portable devices for compliance with the rules and regulations of the U.S. Federal Communications Commission (FCC).

1.1 EUT Description

Product Name/PMN	Portable Translator		
Brand Name	GLOBOTOK		
Model Name/HVIN	G1		
Series Model	N/A		
Model difference	N/A		
Device Category	Portable		
Product stage	Production unit		
RF Exposure Environment	General Population / Uncontrolled		
Hardware Version	G223_MB_V01		
Software Version/FVIN	G223_SW_V01		
Frequency Range	GSM 850: 824 MHz ~ 849 MHz PCS1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 17: 704 MHz ~ 715 MHz LTE Band 26: 814 MHz ~ 824 MHz / 824 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 40: 2305 MHz ~ 2315 MHz / 2350 MHz ~ 2360 MHz LTE Band 41: 2555 MHz ~ 2655 MHz WLAN802.11b/g/n20: 2412 MHz ~ 2462 MHz WLAN 802.11n40: 2422 MHz ~ 2452 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5150 ~ 5250 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5250 ~ 5350 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5470 ~ 5725 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5725 ~ 5850 MHz Bluetooth: 2402 MHz to 2480 MHz		
Max. Reported SAR(1g): (Limit:1.6W/kg)	Band	Mode	Body Worn and Hotspot(W/kg)
	PCB	GPRS 850	1.069
	PCB	GPRS 1900	0.839
	PCB	WCDMA Band II	1.003
	PCB	WCDMA Band V	0.653
	PCB	LTE Band 2	1.099
	PCB	LTE Band 4	0.876
	PCB	LTE Band 5	0.663
	PCB	LTE Band 7	0.753
	PCB	LTE Band 12	0.497
	PCB	LTE Band 17	0.468



	PCB	LTE Band 26	0.558
	PCB	LTE Band 38	0.343
	PCB	LTE Band 40	0.448
	PCB	LTE Band 41	0.258
	DTS	2.4G WLAN	0.148
	DSS	BT	0.074
	NII	5.2G WLAN	0.481
	NII	5.3G WLAN	0.310
	NII	5.6G WLAN	0.171
	NII	5.8G WLAN	0.177
	1-g Sum SAR		1.580
FCC Equipment Class	Licensed Portable Transmitter (PCB) Part 15 Spread Spectrum Transmitter (DSS) Digital Transmission System (DTS) Unlicensed National Information Infrastructure TX(NII)		
Operating Mode:	GSM: GPRS/EGPRS Class 12 WCDMA: RMC, HSDPA, HSUPA Release 6 LTE: QPSK, 16QAM 2.4G WLAN: 802.11 b/g/n20/n40 5G WLAN: 802.11a(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM Bluetooth: GFSK + $\pi/4$ DQPSK+8DPSK BLE: GFSK		
Antenna Specification:	GSM/WCDMA/LTE: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
SIM Card	SIM 1 is used to tested, ESIM 2 is a built-in card.		
Hotspot Mode	Support		
DTM Mode	Not Support		
Note: 1. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power			



1.2 Test Environment

Ambient conditions in the SAR laboratory:

Items	Required
Temperature (°C)	18-25
Humidity (%RH)	30-70

1.3 Test Factory

ShenZhen STS Test Services Co.,Ltd.

A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration No.: 625569

IC Registration No.: 12108A

A2LA Certificate No.: 4338.01





2. Test Standards and Limits

No.	Identity	Document Title
1	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
3	IEC/IEEE 62209-1528	Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)
4	FCC KDB 447498 D04 v01	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices
5	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
6	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
7	FCC KDB 941225 D01 v03r01	SAR Measurement Procedures for 3G Devices
8	FCC KDB 941225 D05 v02r05	SAR for LTE Devices
9	FCC KDB 941225 D06 v02r01	Hotspot Mode SAR
10	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
11	FCC KDB 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices

(A). Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

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

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

NOTE: Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1 gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

Population/Uncontrolled Environments:

Are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

Occupational/Controlled Environments:

Are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

NOTE

GENERAL POPULATION/UNCONTROLLED EXPOSURE

PARTIAL BODY LIMIT

1.6 W/kg

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

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

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

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

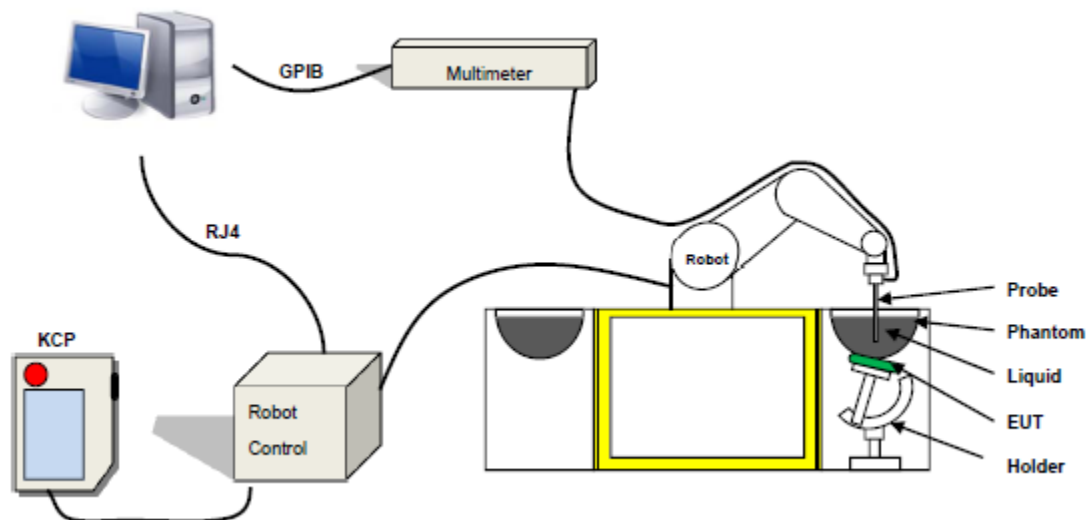
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

Where: σ is the conductivity of the tissue,
 ρ is the mass density of the tissue and E is the RMS electrical field strength.

3.2 SAR System

MVG SAR System Diagram:



COMOSAR is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The COMOSAR 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

The following figure shows the system.



The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The Open SAR software computes the results to give a SAR value in a 1g or 10g mass.

3.2.1 Probe

For the measurements the Specific Dosimetric E-Field Probe SN 07/21 EPG0352 with following specifications is used

- Probe Length: 330 mm
- Length of Individual Dipoles: 2 mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter: 2.5 mm
- Distance between dipole/probe extremity: 1 mm
- Dynamic range: 0.01-100 W/kg
- Probe linearity: 3%
- Axial Isotropy: < 0.10 dB
- Spherical Isotropy: < 0.10 dB
- Calibration range: 150 MHz to 6 GHz for head & body simulating liquid.
- Angle between probe axis (evaluation axis) and surface normal line: less than 30°



Figure 1-MVG COMOSAR Dosimetric E field Dipole

3.2.2 Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

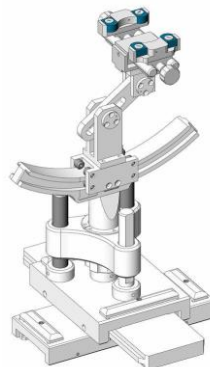


Figure-SN 32/14 SAM115



Figure-SN 21/21 ELLI48

3.2.3 Device Holder



The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of ± 0.5 mm would produce a SAR uncertainty of ± 20 %. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.



4. Tissue Simulating Liquids

4.1 Simulating Liquids Parameter Check

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

Head Tissue

Frequency (MHz)	cellulose %	DGBE %	HEC %	NaCl %	Preventol %	Sugar %	X100 %	Water %	Conductivity σ	Permittivity ϵ_r
750	0.2	/	/	1.4	0.2	57.0	/	41.1	0.89	41.9
835	0.2	/	/	1.4	0.2	57.9	/	40.3	0.90	41.5
900	0.2	/	/	1.4	0.2	57.9	/	40.3	0.97	41.5
1800	/	44.5	/	0.3	/	/	30.45	55.2	1.4	40.0
1900	/	44.5	/	0.3	/	/	30.45	55.2	1.4	40.0
2000	/	44.5	/	0.3	/	/	/	55.2	1.4	40.0
2450	/	44.9	/	0.1	/	/	/	55.0	1.80	39.2
2600	/	45.0	/	0.1	/	/	/	54.9	1.96	39.0

Body Tissue

Frequency (MHz)	cellulose %	DGBE %	HEC %	NaCl %	Preventol %	Sugar %	X100 %	Water %	Conductivity σ	Permittivity ϵ_r
750	0.2	/	/	0.9	0.1	47.2	/	51.7	0.96	55.5
835	0.2	/	/	0.9	0.1	48.2	/	50.8	0.97	55.2
900	0.2	/	/	0.9	0.1	48.2	/	50.8	1.05	55.0
1800	/	29.4	/	0.4	/	/	30.45	70.2	1.52	53.3
1900	/	29.4	/	0.4	/	/	30.45	70.2	1.52	53.3
2000	/	29.4	/	0.4	/	/	/	70.2	1.52	53.3
2450	/	31.3	/	0.1	/	/	/	68.6	1.95	52.7
2600	/	31.7	/	0.1	/	/	/	68.2	2.16	52.3

Tissue dielectric parameters for head and body phantoms				
Frequency	ϵ_r		σ S/m	
	Head	Body	Head	Body
300	45.3	58.2	0.87	0.92
450	43.5	56.7	0.87	0.94
900	41.5	55.0	0.97	1.05
1450	40.5	54.0	1.20	1.30
1800	40.0	53.3	1.40	1.52
2450	39.2	52.7	1.80	1.95
3000	38.5	52.0	2.40	2.73
5800	35.3	48.2	5.27	6.00

**LIQUID MEASUREMENT RESULTS**

Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp. [°C]	Humidity %	Frequency (MHz)	Temp. [°C]					
2023-05-16	22.0	59	704	21.7	Permittivity	42.15	42.51	0.87	±5
					Conductivity	0.89	0.92	3.73	±5
2023-05-16	22.0	59	708	21.7	Permittivity	42.13	42.96	1.98	±5
					Conductivity	0.89	0.91	2.57	±5
2023-05-16	22.1	60	709	21.8	Permittivity	42.12	42.39	0.64	±5
					Conductivity	0.89	0.85	-4.20	±5
2023-05-16	22.1	60	711	21.8	Permittivity	42.11	42.32	0.50	±5
					Conductivity	0.89	0.92	3.67	±5
2023-05-16	22.1	60	750	21.8	Permittivity	41.90	42.76	2.05	±5
					Conductivity	0.89	0.88	-1.12	±5
2023-05-12	23.1	50	824.2	22.8	Permittivity	41.55	41.74	0.46	±5
					Conductivity	0.90	0.94	4.59	±5
2023-05-12	23.1	50	831.5	22.8	Permittivity	41.52	41.19	-0.79	±5
					Conductivity	0.90	0.88	-2.18	±5
2023-05-12	23.2	50	835	22.9	Permittivity	41.50	41.16	-0.82	±5
					Conductivity	0.90	0.91	1.11	±5
2023-05-12	22.1	60	836.6	21.8	Permittivity	41.49	41.31	-0.44	±5
					Conductivity	0.90	0.86	-4.46	±5
2023-05-12	23.2	50	841.5	22.8	Permittivity	41.47	41.88	0.99	±5
					Conductivity	0.90	0.91	1.03	±5
2023-05-12	23.1	50	844	22.8	Permittivity	41.46	41.13	-0.79	±5
					Conductivity	0.90	0.88	-2.34	±5
2023-05-12	23.1	50	846.6	22.9	Permittivity	41.45	42.08	1.53	±5
					Conductivity	0.90	0.89	-1.26	±5
2023-05-12	23.2	50	848.8	22.9	Permittivity	41.44	41.18	-0.62	±5
					Conductivity	0.90	0.92	2.04	±5
2023-05-10	22.9	58	1720	22.6	Permittivity	40.11	40.72	1.51	±5
					Conductivity	1.35	1.34	-1.05	±5
2023-05-10	22.9	58	1732.5	22.6	Permittivity	40.10	40.77	1.68	±5
					Conductivity	1.36	1.38	1.36	±5
2023-05-10	22.9	58	1745	22.6	Permittivity	40.08	40.05	-0.07	±5
					Conductivity	1.37	1.36	-0.63	±5



2023-05-10	22.9	59	1800	22.6	Permittivity	40.00	40.86	2.15	±5
					Conductivity	1.40	1.36	-2.86	±5
2023-05-10	23.3	50	1850.2	23.0	Permittivity	39.93	40.78	2.13	±5
					Conductivity	1.43	1.37	-4.11	±5
2023-05-10	22.9	58	1850.4	22.7	Permittivity	39.93	40.48	1.38	±5
					Conductivity	1.43	1.38	-3.42	±5
2023-05-10	22.9	59	1860	22.5	Permittivity	39.91	39.19	-1.81	±5
					Conductivity	1.43	1.46	1.79	±5
2023-05-10	22.9	59	1880	22.6	Permittivity	39.89	41.02	2.84	±5
					Conductivity	1.45	1.43	-1.09	±5
2023-05-16	22.0	51	1900	21.7	Permittivity	40.00	41.27	3.18	±5
					Conductivity	1.40	1.36	-2.86	±5
2023-05-16	22.0	51	1907.6	21.7	Permittivity	40.00	40.87	2.17	±5
					Conductivity	1.40	1.35	-3.57	±5
2023-05-16	22.0	51	1909.8	21.7	Permittivity	40.00	41.05	2.62	±5
					Conductivity	1.40	1.36	-2.86	±5
2023-05-16	22.1	51	1910	21.8	Permittivity	40.00	40.24	0.60	±5
					Conductivity	1.40	1.38	-1.43	±5
2023-05-12	22.3	47	2437	22.0	Permittivity	39.22	40.08	2.18	±5
					Conductivity	1.79	1.78	-0.47	±5
2023-05-12	22.4	47	2450	22.1	Permittivity	39.20	39.50	0.77	±5
					Conductivity	1.80	1.83	1.67	±5
2023-05-12	22.5	48	2480	22.2	Permittivity	39.15	39.39	0.62	±5
					Conductivity	1.83	1.80	-1.46	±5
2023-05-15	21.9	56	2535	21.6	Permittivity	39.09	40.37	3.28	±5
					Conductivity	1.89	1.86	-1.62	±5
2023-05-15	21.9	56	2560	21.6	Permittivity	39.05	40.50	3.70	±5
					Conductivity	1.92	1.97	2.75	±5
2023-05-15	22.0	57	2565	21.7	Permittivity	39.05	39.93	2.26	±5
					Conductivity	1.92	1.91	-0.66	±5
2023-05-15	22.1	57	2595	21.9	Permittivity	39.01	39.94	2.39	±5
					Conductivity	1.95	1.99	1.81	±5
2023-05-16	20.1	41	2600	19.8	Permittivity	39.00	38.76	-0.62	±5
					Conductivity	1.96	1.89	-3.57	±5
2023-05-16	20.2	41	2610	19.9	Permittivity	38.99	40.25	3.24	±5
					Conductivity	1.97	1.99	0.96	±5



2023-05-16	22.4	47	5180	22.1	Permittivity	36.02	36.50	1.33	±5
					Conductivity	4.64	4.50	-3.00	±5
2023-05-16	22.4	47	5200	22.1	Permittivity	36.00	36.50	1.39	±5
					Conductivity	4.66	4.52	-3.00	±5
2023-05-16	22.4	47	5260	22.1	Permittivity	35.94	36.21	0.75	±5
					Conductivity	4.72	4.67	-1.12	±5
2023-05-17	22.1	59	5300	21.8	Permittivity	35.90	37.02	3.12	±5
					Conductivity	4.76	4.81	1.05	±5
2023-05-17	20.5	50	5500	20.2	Permittivity	35.68	36.39	2.00	±5
					Conductivity	4.96	4.94	-0.45	±5
2023-05-17	20.6	50	5600	20.3	Permittivity	35.55	35.74	0.53	±5
					Conductivity	5.07	5.26	3.85	±5
2023-05-18	23.3	57	5800	23.0	Permittivity	35.30	36.18	2.49	±5
					Conductivity	5.27	5.23	-0.76	±5
2023-05-18	23.4	57	5825	23.1	Permittivity	35.28	36.30	2.91	±5
					Conductivity	5.30	5.34	0.83	±5



5.2 Validation Result

Comparing to the original SAR value provided by MVG, the validation data should be within its specification of 10 %.

Date	Freq.	Power	Tested Value	Normalized SAR	Target SAR	Tolerance	Limit
	(MHz)	(mW)	(W/Kg)	(W/kg)	1g(W/kg)	(%)	(%)
2023-05-16	750	100	0.867	8.67	8.49	2.12	10
2023-05-12	835	100	0.951	9.51	9.63	-1.25	10
2023-05-10	1800	100	3.809	38.09	38.31	-0.57	10
2023-05-16	1900	100	4.083	40.83	39.84	2.48	10
2023-05-12	2450	100	5.254	52.54	54.70	-3.95	10
2023-05-16	2600	100	5.695	56.95	56.19	1.35	10
2023-05-16	5200	100	15.496	154.96	158.49	-2.23	10
2023-05-17	5300	100	16.762	167.62	167.20	0.25	10
2023-05-17	5600	100	17.999	179.99	175.65	2.47	10
2023-05-18	5800	100	18.493	184.93	183.06	1.02	10

Note:

1. The tolerance limit of System validation $\pm 10\%$.
2. The dipole input power (forward power) was 100 mW.
3. The results are normalized to 1 W input power.



6. SAR Evaluation Procedures

The procedure for assessing the average SAR value consists of the following steps:

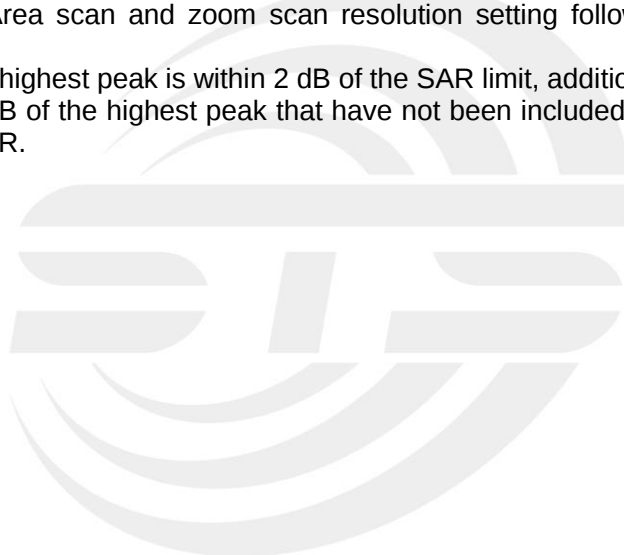
The following steps are used for each test position

- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

Area Scan& Zoom Scan:

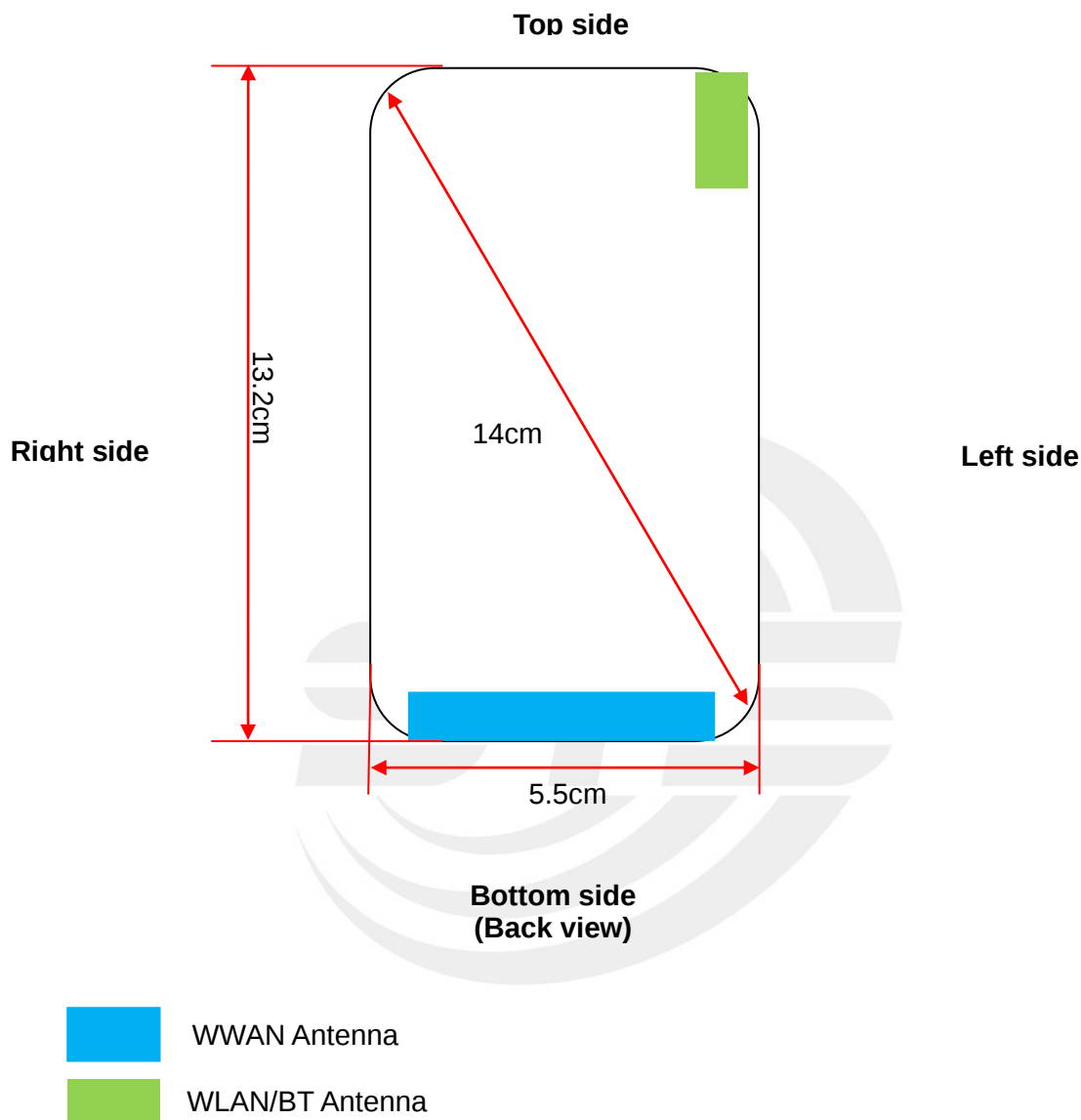
First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR -distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r01 quoted below.

When the 1-g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.



7. EUT Antenna Location Sketch

It is a Portable Translator, support GSM/WCDMA/LTE/WLAN/BT mode.



Antenna Separation Distance(cm)						
ANT	Back Side	Front Side	Left Side	Right Side	Top Side	Bottom Side
WLAN/BT	≤0.5	≤0.5	3.5	≤0.5	1	11.8
WWAN	≤0.5	≤0.5	2.2	3	11.5	1.3

Note 1: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.



7.1 SAR test exclusion consider table

The WWAN/WLAN/BT SAR evaluation of Maximum power (dBm) summing tolerance.

Exposure Position	Wireless Interface	GSM850	PCS1900	WCDMA II	WCDMA V	LTE Band 2
Exposure Position	Calculated Frequency(GHz)	0.8242	1.88	1.8524	0.8466	1.86
	Maximum Turn-up power (dBm)	30	29	23.5	23.5	23
	Maximum rated power(mW)	1000.00	794.33	223.87	223.87	199.53
Back Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	9.42	3.39	3.43	9.07	3.42
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	9.42	3.39	3.43	9.07	3.42
	Testing required?	YES	YES	YES	YES	YES
Left Side	Separation distance (cm)	2.2	2.2	2.2	2.2	2.2
	exclusion threshold(mW)	75.56	52.17	52.54	74.68	52.44
	Testing required?	YES	YES	YES	YES	YES
Right Side	Separation distance (cm)	3	3	3	3	3
	exclusion threshold(mW)	116.85	92.45	93.01	116.12	92.86
	Testing required?	YES	YES	YES	YES	YES
Top Side	Separation distance (cm)	11.5	11.5	11.5	11.5	11.5
	exclusion threshold(mW)	772.45	1102.54	1104.50	785.81	1103.95
	Testing required?	YES	NO	NO	NO	NO
Bottom Side	Separation distance (cm)	1.3	1.3	1.3	1.3	1.3
	exclusion threshold(mW)	36.07	19.77	19.94	35.33	19.89
	Testing required?	YES	YES	YES	YES	YES



Exposure Position	Wireless Interface	LTE Band 4	LTE Band 5	LTE Band 7	LTE Band 12	LTE Band 17
	Calculated Frequency(GHz)	1.7325	0.844	2.535	0.7075	0.709
	Maximum Turn-up power (dBm)	22.5	23.5	22.5	23	23.5
	Maximum rated power(mW)	177.83	223.87	177.83	199.53	223.87
Back Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	3.62	9.11	2.67	11.67	11.63
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	3.62	9.11	2.67	11.67	11.63
	Testing required?	YES	YES	YES	YES	YES
Left Side	Separation distance (cm)	2.2	2.2	2.2	2.2	2.2
	exclusion threshold(mW)	54.25	74.78	45.21	80.79	80.71
	Testing required?	YES	YES	YES	YES	YES
Right Side	Separation distance (cm)	3	3	3	3	3
	exclusion threshold(mW)	95.61	116.20	81.74	121.14	121.08
	Testing required?	YES	YES	YES	YES	YES
Top Side	Separation distance (cm)	11.5	11.5	11.5	11.5	11.5
	exclusion threshold(mW)	1113.41	784.26	1063.64	700.59	701.54
	Testing required?	NO	NO	NO	NO	NO
Bottom Side	Separation distance (cm)	1.3	1.3	1.3	1.3	1.3
	exclusion threshold(mW)	20.75	35.41	16.55	40.64	40.57
	Testing required?	YES	YES	YES	YES	YES



Exposure Position	Wireless Interface	LTE Band 26	LTE Band 38	LTE Band 40	LTE Band 41	BT
	Calculated Frequency(GHz)	0.8315	2.595	2.35	2.593	2.48
	Maximum Turn-up power (dBm)	23	23	20	21.5	9.5
	Maximum rated power(mW)	199.53	199.53	100.00	141.25	8.91
Back Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	9.30	2.62	2.84	2.62	2.72
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	9.30	2.62	2.84	2.62	2.72
	Testing required?	YES	YES	YES	YES	YES
Left Side	Separation distance (cm)	2.2	2.2	2.2	2.2	3.5
	exclusion threshold(mW)	75.27	44.70	46.88	44.72	110.63
	Testing required?	YES	YES	YES	YES	NO
Right Side	Separation distance (cm)	3	3	3	3	0.5
	exclusion threshold(mW)	116.61	176.67	84.33	80.98	2.72
	Testing required?	YES	YES	YES	YES	YES
Top Side	Separation distance (cm)	11.5	11.5	11.5	11.5	1
	exclusion threshold(mW)	5201.66	1060.65	1073.37	1060.75	10.17
	Testing required?	NO	NO	NO	NO	NO
Bottom Side	Separation distance (cm)	1.3	1.3	1.3	1.3	11.8
	exclusion threshold(mW)	35.83	16.33	17.32	16.33	1120.06
	Testing required?	YES	YES	YES	YES	NO



Exposure Position	Wireless Interface	2.4G WLAN	5.2G WLAN	5.3G WLAN	5.6G WLAN	5.8G WLAN
	Calculated Frequency(GHz)	2.437	5.18	5.26	5.5	5.825
	Maximum Turn-up power (dBm)	13	14.5	14	14	12.5
	Maximum rated power(mW)	19.95	28.18	25.12	25.12	17.78
Back Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	2.76	1.51	1.49	1.44	1.37
	Testing required?	YES	YES	YES	YES	YES
Front Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	2.76	1.51	1.49	1.44	1.37
	Testing required?	YES	YES	YES	YES	YES
Left Side	Separation distance (cm)	3.5	3.5	3.5	3.5	3.5
	exclusion threshold(mW)	111.36	83.71	83.23	81.84	80.08
	Testing required?	NO	NO	NO	NO	NO
Right Side	Separation distance (cm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5
	exclusion threshold(mW)	2.76	1.51	1.49	1.44	1.37
	Testing required?	YES	YES	YES	YES	YES
Top Side	Separation distance (cm)	1	1	1	1	1
	exclusion threshold(mW)	10.29	6.30	6.24	6.06	5.84
	Testing required?	YES	YES	YES	YES	YES
Bottom Side	Separation distance (cm)	11.8	11.8	11.8	11.8	11.8
	exclusion threshold(mW)	1122.31	1029.42	1027.61	1022.37	1015.67
	Testing required?	NO	NO	NO	NO	NO

Note:

1. maximum power is the source-based time-average power and represents the maximum RF output power among production units.
2. Per KDB 447498 D04, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. Per KDB 447498 D04, if the maximum time-averaged power available does not exceed 1 mW. This stand-alone SAR exemption test.

4. Per KDB 447498 D04, the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

5. Per KDB 447498 D04, An alternative to the SAR-based exemption is using below table and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in below table to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

RF Source frequency (MHz)	Threshold ERP(watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.



6. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion 8. for each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of each of these configurations is less than 1/4db higher than those measured at the lower data rate than 11b mode, thus the SAR can be excluded.
7. Per KDB 616217 D04, SAR evaluation for the front surface of tablet display screens are generally not necessary.

Per KDB 248227, as maximum rated power for U-NII-2A > U-NII-1, U-NII-2A was chosen for SAR evaluation. Based on the measurements obtained, SAR measurements on U-NII-1 are not required as highest reported SAR from U-NII-2A band is $\leq 1.2\text{W/Kg}$.

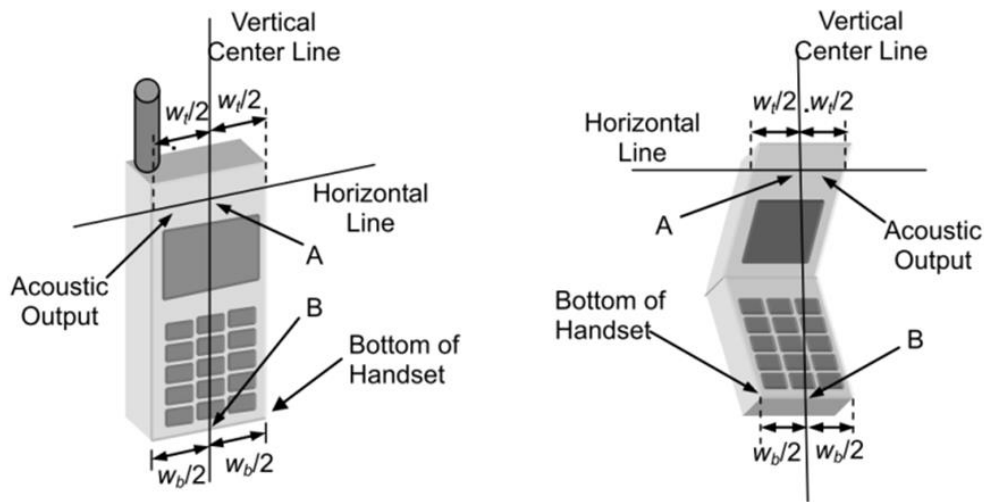


8. EUT Test Position

This EUT was tested in Front Side, Back Side, Left Side, Right Side, Top Side, and Bottom Side.

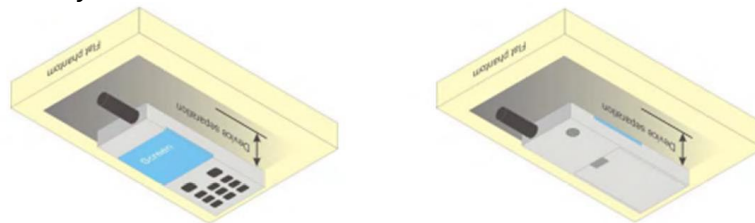
8.1 Define Two Imaginary Lines On The Handset

- (1) The vertical centerline passes through two points on the front side of the handset the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the handset.
- (2) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- (3) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



Body-worn Position Conditions:

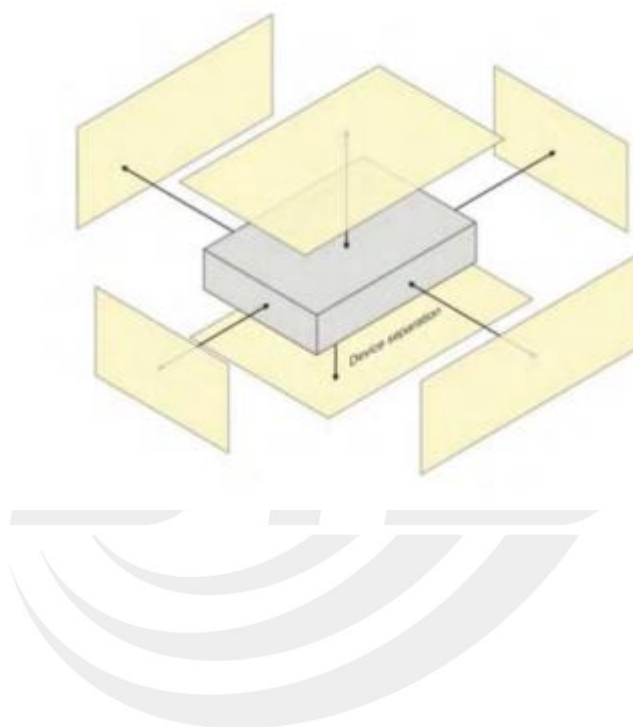
Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative *test separation distance* configuration may be used to support both SAR conditions. When the *reported* SAR for a body-worn accessory, measured without a headset connected to the handset, is $> 1.2 \text{ W/kg}$, the highest *reported* SAR configuration for that wireless mode and frequency band should be repeated for the body-worn accessory with a headset attached to the handset.



8.2 Hotspot mode exposure position condition

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing function, the relevant hand and body exposure condition are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surface and edges with a transmitting antenna located within 25 mm from that surface or edge.

When form factor of a handset is smaller than 9cm x 5cm, a test separation distance of 5mm (instead of 10mm) is required for testing hotspot mode. When the separate distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration(surface).





9. Uncertainty

9.1 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in IEEE 1528: 2013. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Symbol	Uncertainty Component	Prob. Dist.	Unc. $u(x_i)$	Div. q_i	$u(x_i) = a(x_i)/q_i$	C_i	$u(y) = C_i * u(x_i)$	v_i
Measurement system errors								
CF	Probe calibration	N ($k = 2$)	5.72	2	2.86	1	2.86	∞
CF _{drift}	Probe calibration drift	R	0.15	$\sqrt{3}$	0.09	1	0.09	∞
LIN	Probe linearity and detection limit	R	1.27	$\sqrt{3}$	0.73	1	0.73	∞
BBS	Broadband signal	R	0.12	$\sqrt{3}$	0.07	1	0.07	∞
ISO	Probe isotropy	R	0.16	$\sqrt{3}$	0.09	1	0.09	∞
DAE	Other probe and data acquisition errors	N	2.4	1	2.40	1	2.40	∞
AMB	RF ambient and noise	N	3.51	1	3.51	1	3.51	∞
Δ_{xyz}	Probe positioning errors	N	1.2	1	1.20	2/5	1.20	
DAT	Data processing errors	N	2.1	1	2.10	1	2.10	∞
Phantom and device (DUT or validation antenna) errors								
LIQ(σ)	Measurement of phantom conductivity(σ)	N	4.1	1	4.1	C_ϵ, C_σ	4.10	∞
LIQ(T_c)	Temperature effects (medium)	R	2.7	$\sqrt{3}$	1.56	C_ϵ, C_σ	1.56	∞
EPS	Shell permittivity	R	2.1	$\sqrt{3}$	1.21	See 8.4.2.3	0.30	∞
DIS	Distance between the radiating element of the DUT and the phantom medium	N	0.7	1	0.7	2	1.40	∞
D _{xyz}	Repeatability of positioning the DUT or source against the phantom	N	1.2	1	1.2	1	1.20	5
H	Device holder effects	N	3.8	1	3.8	1	3.80	
MOD	Effect of operating mode on probe sensitivity	R	3.42	$\sqrt{3}$	1.97	1	1.97	∞
TAS	Time-average SAR	R	1.8	$\sqrt{3}$	1.04	1	1.04	∞
RF _{drift}	Variation in SAR due to drift in output of DUT	N	4.5	1	4.5	1	4.50	
VAL	Validation antenna uncertainty (validation measurement only)	N	1.4	1	1.4	1	1.40	
P _{in}	Uncertainty in accepted power (validation measurement only)	N	2.4	1	2.4	1	2.40	
Corrections to the SAR result (if applied)								
C(ϵ', σ)	Phantom deviation from target (ϵ', σ)	N	3.7	1	3.7	1	3.70	
C(R)	SAR scaling	R	1.8	$\sqrt{3}$	1.04	1	1.04	
u(Δ SAR)	Combined uncertainty						10.84	
U	Expanded uncertainty and effective degrees of freedom					U =	21.68	



10. Output Power Measurement

10.1 Maximum test Result

Burst Average Power (dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880	1909.8
GPRS (GMSK, 1-Slot)	33.52	33.33	33.29	29.82	29.81	29.71
GPRS (GMSK, 2-Slot)	32.62	32.47	32.40	28.92	28.94	28.89
GPRS (GMSK, 3-Slot)	30.67	30.60	30.53	26.86	26.89	26.83
GPRS (GMSK, 4-Slot)	29.67	29.61	29.51	25.49	25.57	25.48
EGPRS(8PSK, 1-Slot)	27.91	27.98	27.92	25.84	25.87	26.24
EGPRS(8PSK, 2-Slot)	26.61	26.85	26.48	24.89	24.87	25.01
EGPRS(8PSK, 3-Slot)	24.41	24.55	24.29	22.99	23.00	22.98
EGPRS(8PSK, 4-Slot)	23.18	23.31	23.04	21.74	21.72	21.88
Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme. Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link						

Frame- Average Power(dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880	1909.8
GPRS (GMSK, 1-Slot)	24.49	24.30	24.26	20.79	20.78	20.68
GPRS (GMSK, 2-Slot)	26.60	26.45	26.38	22.90	22.92	22.87
GPRS (GMSK, 3-Slot)	26.41	26.34	26.27	22.60	22.63	22.57
GPRS (GMSK, 4-Slot)	26.66	26.60	26.50	22.48	22.56	22.47
EGPRS(8PSK, 1-Slot)	18.88	18.95	18.89	16.81	16.84	17.21
EGPRS(8PSK, 2-Slot)	20.59	20.83	20.46	18.87	18.85	18.99
EGPRS(8PSK, 3-Slot)	20.15	20.29	20.03	18.73	18.74	18.72
EGPRS(8PSK, 4-Slot)	20.17	20.30	20.03	18.73	18.71	18.87
Remark : 1. SAR testing was performed on the maximum frame-averaged power mode. 2. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum Burst - averaged power based on time slots. The calculated method is shown as below: Frame-averaged power = Burst averaged power (1 TX Slot) – 9.03 dB Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB						

WCDMA

Band	WCDMA Band II			WCDMA Band V		
Channel	9262	9400	9538	4132	4183	4233
Frequency (MHz)	1852.4	1880.0	1907.6	826.4	836.6	846.6
RMC 12.2Kbps		22.76	22.73	22.96	23.00	23.08
HSDPA Subtest-1	22.04	21.68	20.29	22.02	21.54	20.18
HSDPA Subtest-2	20.64	21.89	21.40	20.51	22.07	21.74
HSDPA Subtest-3	20.00	20.59	21.95	20.30	20.57	22.16
HSDPA Subtest-4	21.33	20.19	20.30	21.67	20.96	20.67
HSUPA Subtest-1	20.89	21.95	19.89	21.00	21.93	19.97
HSUPA Subtest-2	22.06	20.67	21.60	21.96	20.56	21.86
HSUPA Subtest-3	21.70	20.71	21.90	21.85	20.75	22.02
HSUPA Subtest-4	21.11	21.69	21.82	21.21	21.93	21.99
HSUPA Subtest-5	21.03	21.93	21.21	20.55	22.09	21.34

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

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

UE Transmit Channel Configuration	CM(db)	MPR(db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	$0 \leq CM \leq 3.5$	MAX(CM-1,0)
Note: CM=1 for $\beta_c/\beta_d=12/15$, $\beta_{hs}/\beta_c=24/15$.For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.		

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

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

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

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

**2.4G WLAN**

2.4GWIFI				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11b	1	2412	12.49	17.74
	7	2437	12.87	19.36
	11	2462	12.85	19.28
802.11g	1	2412	6.59	4.56
	7	2437	6.84	4.83
	11	2462	6.77	4.75
802.11 n-HT20	1	2412	6.68	4.66
	7	2437	6.85	4.84
	11	2462	6.78	4.76
802.11 n-HT40	3	2422	5.92	3.91
	6	2437	6.07	4.05
	9	2452	7.05	5.07

BT

BT				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	8.58	7.21
	39	2441	7.45	5.56
	78	2480	9.03	8.00
$\pi/4$ -QPSK(2Mbps)	0	2402	5.47	3.52
	39	2441	4.67	2.93
	78	2480	6.11	4.08
8DPSK(3Mbps)	0	2402	5.67	3.69
	39	2441	4.77	3.00
	78	2480	6.16	4.13

**BLE**

BLE				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	-3.9	0.41
	19	2440	-3.93	0.40
	39	2480	-3.68	0.43
GFSK(2Mbps)	0	2402	-3.72	0.42
	19	2440	-3.95	0.40
	39	2480	-3.64	0.43

5.2G WLAN

5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a	36	5180	13.71	23.50
	40	5200	13.67	23.28
	48	5240	13.33	21.53
802.11 n-HT20	36	5180	14.1	25.70
	40	5200	13.89	24.49
	48	5240	13.03	20.09
802.11 n-HT40	38	5190	13.58	22.80
	46	5230	13.67	23.28
802.11ac-VHT20	36	5180	13.56	22.70
	40	5200	13.51	22.44
	48	5240	13.46	22.18
802.11ac-VHT40	38	5190	13.78	23.88
	46	5230	13.53	22.54
802.11ac-VHT80	42	5210	13.63	23.07

**5.3G WLAN**

5.3G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a	52	5260	13.5	22.39
	60	5300	13.1	20.42
	64	5320	12.96	19.77
802.11 n-HT20	52	5260	13.24	21.09
	60	5300	12.89	19.45
	64	5320	12.66	18.45
802.11 n-HT40	54	5270	12.98	19.86
	62	5310	12.81	19.10
802.11ac-VHT20	52	5260	13.08	20.32
	60	5300	12.65	18.41
	64	5320	12.55	17.99
802.11ac-VHT40	54	5270	13.12	20.51
	62	5310	12.56	18.03
802.11ac-VHT80	58	5290	12.48	17.70

5.6G WLAN

5.6G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a	100	5500	13.73	23.60
	116	5580	12.72	18.71
	140	5700	11.1	12.88
802.11 n-HT20	100	5500	13.6	22.91
	116	5580	12.53	17.91
	140	5700	10.89	12.27
802.11 n-HT40	102	5510	13.02	20.04
	110	5550	12.93	19.63
	134	5670	10.27	10.64
802.11ac-VHT20	100	5500	13.57	22.75
	116	5580	12.66	18.45
	140	5700	10.85	12.16
802.11ac-VHT40	102	5510	13.58	22.80
	110	5550	13.33	21.53
	134	5670	10.12	10.28
802.11ac-VHT80	106	5530	12.98	19.86
	122	5610	11.21	13.21

**5.8G WLAN**

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	Output Power (dBm)	Output Power (mW)
802.11a	149	5745	10.37	10.89
	157	5785	11.3	13.49
	165	5825	12.32	17.06
802.11 n-HT20	149	5745	9.81	9.57
	157	5785	10.48	11.17
	165	5825	12.01	15.89
802.11 n-HT40	151	5755	9.81	9.57
	159	5795	10.9	12.30
802.11ac-VHT20	149	5745	9.84	9.64
	157	5785	10.54	11.32
	165	5825	12.08	16.14
802.11ac-VHT40	151	5755	9.77	9.48
	159	5795	10.69	11.72
802.11ac-VHT80	155	5775	10.15	10.35





LTE Conducted Power

General Note:

1. Anritsu CMW500 base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05, 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 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.
6. Per KDB 941225 D05, 16QAM output power for each RB allocation configuration is $> \text{not } \frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05, Smaller bandwidth output power for each RB allocation configuration is $> \text{not } \frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05, smaller bandwidth SAR testing is not required.





LTE Band 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.70	22.58	22.48
1.4	1	2		22.85	22.74	22.65
1.4	1	5		22.73	22.60	22.44
1.4	3	0		22.74	22.56	22.59
1.4	3	1		22.75	22.56	22.60
1.4	3	3		22.72	22.61	22.55
1.4	6	0		21.73	21.58	21.57
1.4	1	0	16-QAM	21.58	21.71	21.65
1.4	1	2		21.69	21.73	21.73
1.4	1	5		21.54	21.69	21.66
1.4	3	0		21.85	21.75	21.75
1.4	3	1		21.84	21.73	21.78
1.4	3	3		21.87	21.75	21.77
1.4	6	0		20.88	20.73	20.66
3	1	0	QPSK	22.71	22.60	22.63
3	1	7		22.92	22.81	22.83
3	1	14		22.68	22.61	22.39
3	8	0		21.72	21.59	21.59
3	8	3		21.76	21.62	21.59
3	8	7		21.76	21.58	21.59
3	15	0		21.70	21.55	21.51
3	1	0	16-QAM	22.11	21.78	21.45
3	1	7		22.33	22.06	21.64
3	1	14		22.12	21.78	21.21
3	8	0		20.77	20.59	20.47
3	8	3		20.78	20.63	20.52
3	8	7		20.76	20.58	20.43
3	15	0		20.75	20.51	20.52



LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.59	22.52	22.20
5	1	12		22.96	22.83	22.54
5	1	24		22.64	22.47	22.16
5	12	0		21.71	21.56	21.65
5	12	6		21.79	21.67	21.38
5	12	13		21.70	21.53	21.22
5	25	0		21.75	21.57	21.20
5	1	0	16-QAM	22.11	21.84	21.36
5	1	12		22.59	22.18	21.70
5	1	24		22.14	21.81	21.31
5	12	0		20.64	20.53	20.30
5	12	6		20.78	20.59	20.42
5	12	13		20.71	20.46	20.19
5	25	0		20.60	20.57	20.28
10	1	0	QPSK	22.79	22.08	22.13
10	1	24		22.96	22.36	22.39
10	1	49		22.81	22.09	22.05
10	25	0		21.74	21.17	21.26
10	25	12		21.76	21.17	21.40
10	25	25		21.73	21.29	21.16
10	50	0		21.73	21.58	21.14
10	1	0	16-QAM	21.24	21.72	21.36
10	1	24		21.32	21.92	21.40
10	1	49		21.17	21.70	21.23
10	25	0		20.61	20.58	20.35
10	25	12		20.75	20.62	20.42
10	25	25		20.73	20.59	20.21
10	50	0		20.62	20.57	20.51



LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.65	22.09	22.03
15	1	37		23.01	22.48	22.39
15	1	74		22.34	22.02	22.00
15	36	0		21.63	21.39	21.22
15	36	18		21.71	21.40	21.25
15	36	39		21.60	21.20	21.14
15	75	0		21.46	21.18	21.24
15	1	0	16-QAM	21.31	21.16	21.42
15	1	38		21.68	21.54	21.84
15	1	74		21.31	21.19	21.39
15	36	0		20.37	20.41	20.19
15	36	18		20.36	20.44	20.34
15	36	39		20.42	20.39	20.12
15	75	0		20.24	20.46	20.14
20	1	0	QPSK	22.49	21.87	21.95
20	1	50		22.88	22.10	22.33
20	1	99		22.47	21.90	21.85
20	50	0		21.70	21.14	21.19
20	50	25		21.80	21.17	21.19
20	50	50		21.71	21.26	21.00
20	100	0		21.53	21.14	21.11
20	1	0	16-QAM	21.38	21.25	21.15
20	1	50		21.67	21.49	21.50
20	1	99		21.40	21.17	21.14
20	50	0		20.50	20.14	20.20
20	50	25		20.78	20.28	20.17
20	50	50		20.52	20.26	20.00
20	100	0		20.65	20.27	20.10



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.73	22.22	22.26
1.4	1	2		22.94	22.37	22.41
1.4	1	5		22.77	22.17	22.24
1.4	3	0		22.73	22.34	22.32
1.4	3	1		22.77	22.31	22.30
1.4	3	3		22.80	22.31	22.32
1.4	6	0		21.73	21.22	21.28
1.4	1	0	16-QAM	21.63	21.41	21.05
1.4	1	2		21.64	21.53	21.27
1.4	1	5		21.54	21.40	21.07
1.4	3	0		21.52	21.54	21.40
1.4	3	1		21.45	21.53	21.45
1.4	3	3		21.45	21.56	21.44
1.4	6	0		20.47	20.44	20.45
3	1	0	QPSK	22.15	22.24	22.24
3	1	7		22.45	22.55	22.64
3	1	14		22.13	22.22	22.29
3	8	0		21.16	21.20	21.21
3	8	3		21.20	21.24	21.27
3	8	7		21.18	21.22	21.25
3	15	0		21.14	21.17	21.21
3	1	0	16-QAM	21.61	21.43	21.13
3	1	7		21.94	21.72	21.38
3	1	14		21.59	21.39	21.06
3	8	0		20.20	20.25	20.23
3	8	4		20.25	20.28	20.25
3	8	7		20.25	20.23	20.22
3	15	0		20.19	20.19	20.29



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.06	22.16	22.08
5	1	12		22.47	22.54	22.68
5	1	24		22.05	22.04	22.12
5	12	0		21.12	21.18	21.18
5	12	6		21.22	21.28	21.26
5	12	13		21.18	21.18	21.20
5	25	0		21.20	21.23	21.24
5	1	0	16-QAM	21.40	21.72	21.40
5	1	12		21.89	22.09	21.86
5	1	24		21.42	21.61	21.44
5	12	0		20.18	20.19	20.13
5	12	6		20.26	20.30	20.21
5	12	13		20.15	20.20	20.20
5	25	0		20.11	20.16	20.22
10	1	0	QPSK	22.25	22.33	22.19
10	1	24		22.27	22.33	22.25
10	1	49		22.29	22.16	22.27
10	25	0		21.22	21.29	21.20
10	25	12		21.21	21.25	21.20
10	25	25		21.31	21.21	21.22
10	50	0		21.17	21.26	21.22
10	1	0	16-QAM	21.57	21.48	21.03
10	1	24		21.74	21.55	21.11
10	1	49		21.75	21.34	21.10
10	25	0		20.30	20.29	20.22
10	25	12		20.22	20.28	20.21
10	25	25		20.37	20.25	20.22
10	50	0		20.22	20.27	20.17



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.13	22.20	22.01
15	1	37		22.48	22.52	22.40
15	1	74		22.19	22.04	22.06
15	36	0		21.20	21.27	21.16
15	36	19		21.32	21.26	21.23
15	36	39		21.36	21.22	21.24
15	75	0		21.28	21.24	21.20
15	1	0	16-QAM	21.25	21.28	21.46
15	1	38		21.63	21.58	21.70
15	1	75		21.37	21.18	21.50
15	36	0		20.27	20.24	20.14
15	36	19		20.34	20.22	20.24
15	36	39		20.41	20.21	20.24
15	75	0		20.25	20.27	20.17
20	1	0	QPSK	21.89	22.03	21.91
20	1	50		22.39	22.40	22.31
20	1	99		22.04	21.93	22.02
20	50	0		21.21	21.30	21.12
20	50	25		21.30	21.24	21.21
20	50	50		21.32	21.23	21.21
20	100	0		21.25	21.27	21.22
20	1	0	16-QAM	21.20	21.30	21.15
20	1	50		21.73	21.63	21.61
20	1	99		21.37	21.19	21.22
20	50	0		20.29	20.30	20.20
20	50	25		20.37	20.29	20.28
20	50	50		20.42	20.22	20.28
20	100	0		20.31	20.27	20.24



LTE BAND 5

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.30	22.93	22.91
1.4	1	2		23.50	23.11	23.11
1.4	1	5		23.34	22.95	22.92
1.4	3	0		23.33	22.89	23.09
1.4	3	1		23.34	22.92	23.07
1.4	3	2		23.36	22.95	23.03
1.4	6	0		22.34	21.95	22.02
1.4	1	0	16-QAM	22.20	22.02	22.13
1.4	1	2		22.33	22.20	22.28
1.4	1	5		22.16	22.06	22.12
1.4	3	0		22.33	22.11	22.24
1.4	3	1		22.28	22.12	22.30
1.4	3	2		22.10	22.11	22.27
1.4	6	0		21.18	21.10	21.21
3	1	0	QPSK	22.82	22.91	23.05
3	1	7		23.12	23.11	23.44
3	1	14		22.81	22.93	23.15
3	8	0		21.83	21.90	22.03
3	8	4		21.88	21.94	22.08
3	8	7		21.92	21.96	22.05
3	15	0		21.81	21.93	22.04
3	1	0	16-QAM	22.28	22.11	21.91
3	1	7		22.65	22.39	22.18
3	1	14		22.26	22.18	21.94
3	8	0		20.90	20.95	21.04
3	8	4		20.92	20.97	21.06
3	8	7		20.92	20.94	21.00
3	15	0		20.86	20.91	21.08



LTE BAND 5

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.94	22.77	22.93
5	1	12		23.00	23.20	23.33
5	1	24		22.79	22.85	22.91
5	12	0		21.82	21.87	22.07
5	12	6		21.93	22.01	22.11
5	12	11		21.83	21.93	22.00
5	25	0		21.91	22.03	22.07
5	1	0	16-QAM	22.06	22.08	22.44
5	1	12		22.31	22.52	22.85
5	1	24		22.12	22.19	22.47
5	12	0		20.89	20.95	21.02
5	12	6		20.88	20.99	21.07
5	12	11		20.82	20.91	21.00
5	25	0		20.95	20.97	20.97
10	1	0	QPSK	22.76	22.85	22.88
10	1	24		23.01	23.08	23.10
10	1	49		22.90	23.03	22.94
10	25	0		21.88	21.96	22.09
10	25	12		21.82	21.94	22.06
10	25	24		21.89	22.01	22.05
10	50	0		21.91	21.96	22.06
10	1	0	16-QAM	21.92	21.68	22.36
10	1	24		22.15	21.91	22.55
10	1	49		22.04	21.86	22.39
10	25	0		20.91	21.00	21.10
10	25	12		20.90	21.00	21.08
10	25	24		20.92	21.03	21.05
10	50	0		20.97	20.96	21.04



LTE BAND 7

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.94	21.83	21.85
5	1	12		22.30	22.20	22.36
5	1	24		21.97	21.79	21.91
5	12	0		20.97	20.89	21.00
5	12	6		21.01	20.96	21.08
5	12	13		20.99	20.89	21.00
5	25	0		21.00	20.88	21.01
5	1	0	16-QAM	21.47	21.11	21.22
5	1	12		21.90	21.52	21.60
5	1	24		21.48	21.09	21.23
5	12	0		19.98	19.86	20.06
5	12	6		20.06	19.88	20.09
5	12	13		20.02	19.83	20.03
5	25	0		20.06	20.02	20.04
10	1	0	QPSK	22.02	21.88	21.88
10	1	24		22.15	22.03	22.07
10	1	49		21.99	21.83	22.01
10	25	0		20.99	20.94	21.03
10	25	12		20.98	20.90	20.98
10	25	25		21.01	20.93	20.99
10	50	0		20.99	20.92	20.98
10	1	0	16-QAM	20.83	21.31	21.03
10	1	24		21.01	21.43	21.32
10	1	49		20.83	21.26	21.19
10	25	0		19.98	20.01	20.02
10	25	12		19.97	19.91	19.96
10	25	25		20.02	19.98	19.99
10	50	0		20.09	20.00	20.09



LTE BAND 7

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	21.95	21.91	21.80
15	1	37		22.30	22.17	22.12
15	1	74		21.89	21.83	21.90
15	36	0		21.00	20.99	20.98
15	36	19		20.94	20.96	21.01
15	36	39		21.02	20.93	21.06
15	75	0		20.97	20.96	21.02
15	1	0	16-QAM	21.02	21.25	21.01
15	1	38		21.29	21.54	21.32
15	1	75		20.99	21.19	21.14
15	36	0		19.94	19.98	20.03
15	36	19		19.94	19.97	20.02
15	36	39		19.95	19.92	20.05
15	75	0		20.12	20.00	20.07
20	1	0	QPSK	21.70	21.73	21.59
20	1	50		22.07	22.10	22.02
20	1	99		21.66	21.67	21.84
20	50	0		20.86	20.88	20.94
20	50	25		20.95	20.91	20.97
20	50	50		20.96	20.84	20.93
20	100	0		20.86	20.86	20.91
20	1	0	16-QAM	21.07	20.92	20.82
20	1	50		21.38	21.24	21.22
20	1	99		20.95	20.89	21.04
20	50	0		20.00	19.93	20.01
20	50	25		20.03	19.90	19.99
20	50	50		20.02	19.86	19.97
20	100	0		20.02	19.99	19.98



LTE BAND 12

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.64	22.55	22.53
1.4	1	2		22.78	22.71	22.70
1.4	1	5		22.66	22.56	22.57
1.4	3	0		22.57	22.67	22.59
1.4	3	1		22.58	22.67	22.53
1.4	3	2		22.65	22.67	22.56
1.4	6	0		21.63	21.67	21.59
1.4	1	0	16-QAM	21.72	21.80	21.35
1.4	1	2		21.80	21.88	21.50
1.4	1	5		21.74	21.78	21.38
1.4	3	0		21.78	21.87	21.68
1.4	3	1		21.78	21.89	21.66
1.4	3	2		21.78	21.90	21.74
1.4	6	0		20.75	20.78	20.69
3	1	0	QPSK	22.63	22.64	22.56
3	1	7		22.98	22.87	22.86
3	1	14		22.68	22.61	22.56
3	8	0		21.57	21.62	21.56
3	8	4		21.63	21.70	21.53
3	8	7		21.59	21.65	21.54
3	15	0		21.58	21.60	21.50
3	1	0	16-QAM	21.46	22.09	21.77
3	1	7		21.81	22.31	21.94
3	1	14		21.49	22.02	21.74
3	8	0		20.54	20.66	20.56
3	8	4		20.62	20.70	20.55
3	8	7		20.59	20.64	20.51
3	15	0		20.62	20.62	20.42



LTE BAND 12

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.43	22.54	22.49
5	1	12		22.98	23.21	22.86
5	1	24		22.52	22.51	22.49
5	12	0		21.54	21.64	21.62
5	12	6		21.66	21.70	21.61
5	12	11		21.64	21.62	21.44
5	25	0		21.62	21.64	21.52
5	1	0	16-QAM	21.79	22.08	21.78
5	1	12		22.25	22.48	22.13
5	1	24		21.85	22.04	21.75
5	12	0		20.58	20.57	20.51
5	12	6		20.65	20.69	20.53
5	12	11		20.63	20.56	20.35
5	25	0		20.55	20.56	20.51
10	1	0	QPSK	22.56	22.67	22.57
10	1	24		22.77	22.84	22.72
10	1	49		22.64	22.65	22.48
10	25	0		21.68	21.68	21.67
10	25	12		21.66	21.68	21.66
10	25	24		21.70	21.68	21.57
10	50	0		21.69	21.69	21.60
10	1	0	16-QAM	21.71	21.47	21.98
10	1	24		21.91	21.63	22.13
10	1	49		21.79	21.47	21.87
10	25	0		20.67	20.70	20.67
10	25	12		20.68	20.63	20.63
10	25	24		20.68	20.65	20.55
10	50	0		20.69	20.65	20.61



LTE BAND 17

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.04	23.01	22.92
5	1	12		23.45	23.27	23.26
5	1	24		23.05	22.89	22.91
5	12	0		22.13	22.13	22.01
5	12	6		22.15	22.13	22.03
5	12	11		22.10	22.04	21.94
5	25	0		22.13	22.07	22.00
5	1	0	16-QAM	22.31	22.30	22.43
5	1	12		22.69	22.68	22.78
5	1	24		22.34	22.22	22.38
5	12	0		21.00	21.12	20.96
5	12	6		21.08	21.13	21.00
5	12	11		21.01	21.02	20.91
5	25	0		21.14	21.08	20.94
10	1	0	QPSK	23.10	23.05	23.06
10	1	24		23.30	23.10	23.09
10	1	49		23.10	22.97	23.02
10	25	0		22.10	22.12	22.13
10	25	12		22.04	22.09	22.04
10	25	24		22.10	22.01	21.97
10	50	0		22.08	22.08	22.01
10	1	0	16-QAM	21.96	22.45	22.18
10	1	24		22.01	22.49	22.20
10	1	49		21.89	22.33	22.12
10	25	0		21.08	21.14	21.10
10	25	12		21.03	21.08	21.07
10	25	24		21.07	21.05	20.99
10	50	0		21.08	21.11	21.08



LTE BAND 26

LTE Band 26 Part22 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.10	22.49	22.64
1.4	1	2		23.21	22.68	22.84
1.4	1	5		23.04	22.50	22.68
1.4	3	0		23.04	22.63	22.72
1.4	3	1		22.94	22.61	22.72
1.4	3	2		22.71	22.60	22.70
1.4	6	0		21.56	21.53	21.69
1.4	1	0	16-QAM	21.67	21.80	21.54
1.4	1	2		21.81	21.82	21.68
1.4	1	5		21.63	21.75	21.52
1.4	3	0		21.75	21.83	21.88
1.4	3	1		21.72	21.85	21.87
1.4	3	2		21.71	21.87	21.88
1.4	6	0		20.74	20.76	20.89
3	1	0	QPSK	22.96	22.58	22.67
3	1	7		22.93	22.70	23.02
3	1	14		22.53	22.72	22.64
3	8	0		21.46	21.56	21.71
3	8	4		21.50	21.62	21.73
3	8	7		21.55	21.58	21.71
3	15	0		21.51	21.59	21.67
3	1	0	16-QAM	21.72	21.48	22.14
3	1	7		22.00	21.77	22.35
3	1	14		21.72	21.50	22.09
3	8	0		20.52	20.58	20.80
3	8	4		20.59	20.64	20.79
3	8	7		20.56	20.67	20.74
3	15	0		20.49	20.68	20.73



LTE BAND 26

LTE Band 26 Part22 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.41	22.43	22.56
5	1	12		22.89	22.88	23.00
5	1	24		22.45	22.49	22.54
5	12	0		21.55	21.58	21.72
5	12	6		21.56	21.69	21.72
5	12	11		21.51	21.61	21.70
5	25	0		21.55	21.63	21.72
5	1	0	16-QAM	21.99	21.78	21.98
5	1	12		22.51	22.21	22.32
5	1	24		21.99	21.88	21.87
5	12	0		20.58	20.56	20.78
5	12	6		20.62	20.65	20.80
5	12	11		20.55	20.57	20.71
5	25	0		20.56	20.70	20.73
10	1	0	QPSK	22.44	22.47	22.68
10	1	24		22.59	22.70	22.85
10	1	49		22.49	22.66	22.74
10	25	0		21.61	21.66	21.80
10	25	12		21.55	21.66	21.69
10	25	24		21.62	21.65	21.72
10	50	0		21.55	21.70	21.75
10	1	0	16-QAM	21.93	21.63	21.53
10	1	24		22.01	21.87	21.70
10	1	49		22.02	21.84	21.55
10	25	0		20.65	20.70	20.86
10	25	12		20.63	20.70	20.80
10	25	24		20.69	20.72	20.75
10	50	0		20.63	20.75	20.79



LTE BAND 26

LTE Band 26 Part22 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.39	22.42	22.42
15	1	37		22.76	22.88	22.87
15	1	74		22.52	22.65	22.59
15	36	0		21.52	21.62	21.68
15	36	18		21.59	21.68	21.73
15	36	39		21.65	21.66	21.72
15	75	0		21.60	21.66	21.69
15	1	0	16-QAM	21.51	21.52	21.85
15	1	38		21.85	21.99	22.37
15	1	75		21.77	21.69	21.98
15	36	0		20.57	20.57	20.75
15	36	18		20.68	20.66	20.78
15	36	39		20.72	20.70	20.75
15	75	0		20.63	20.74	20.77





LTE BAND 26

LTE Band 26 Part90 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.08	22.59	22.46
1.4	1	2		23.27	22.77	22.61
1.4	1	5		23.10	22.60	22.45
1.4	3	0		23.19	22.57	22.58
1.4	3	1		23.13	22.58	22.57
1.4	3	2		23.09	22.61	22.55
1.4	6	0		22.09	21.56	21.50
1.4	1	0	16-QAM	21.78	21.72	21.70
1.4	1	2		21.71	21.83	21.87
1.4	1	5		21.44	21.73	21.64
1.4	3	0		21.83	21.78	21.82
1.4	3	1		21.86	21.77	21.80
1.4	3	2		21.78	21.76	21.83
1.4	6	0		20.86	20.78	20.72
3	1	0	QPSK	23.00	22.59	22.55
3	1	7		23.03	22.79	22.82
3	1	14		22.70	22.56	22.49
3	8	0		21.61	21.56	21.51
3	8	4		21.66	21.61	21.55
3	8	7		21.63	21.57	21.52
3	15	0		21.58	21.53	21.51
3	1	0	16-QAM	21.60	22.03	21.74
3	1	7		21.83	22.30	22.10
3	1	14		21.54	22.01	21.76
3	8	0		20.62	20.64	20.56
3	8	4		20.67	20.64	20.58
3	8	7		20.65	20.62	20.53
3	15	0		20.70	20.63	20.49



LTE BAND 26

LTE Band 26 Part90 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.71	22.47	22.40
5	1	12		22.88	22.88	22.88
5	1	24		22.50	22.47	22.39
5	12	0		21.59	21.54	21.54
5	12	6		21.67	21.63	21.57
5	12	11		21.59	21.48	21.49
5	25	0		21.62	21.57	21.55
5	1	0	16-QAM	22.10	21.82	21.74
5	1	12		22.43	22.15	22.17
5	1	24		22.07	21.76	21.81
5	12	0		20.56	20.55	20.59
5	12	6		20.70	20.60	20.66
5	12	11		20.62	20.53	20.54
5	25	0		20.62	20.63	20.59
10	1	0	QPSK	N/A	22.57	N/A
10	1	24		N/A	22.66	N/A
10	1	49		N/A	22.56	N/A
10	25	0		N/A	21.57	N/A
10	25	12		N/A	21.57	N/A
10	25	24		N/A	21.61	N/A
10	50	0		N/A	21.57	N/A
10	1	0	16-QAM	N/A	21.76	N/A
10	1	24		N/A	21.84	N/A
10	1	49		N/A	21.68	N/A
10	25	0		N/A	20.65	N/A
10	25	12		N/A	20.63	N/A
10	25	24		N/A	20.58	N/A
10	50	0		N/A	20.69	N/A



LTE BAND 38

LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.25	22.31	22.17
5	1	12		22.66	22.70	22.50
5	1	24		22.28	22.33	22.11
5	12	0		21.36	21.37	21.34
5	12	6		21.48	21.50	21.38
5	12	11		21.40	21.41	21.32
5	25	0		21.36	21.43	21.31
5	1	0	16-QAM	21.82	21.58	21.52
5	1	12		22.20	21.92	21.84
5	1	24		21.84	21.58	21.47
5	12	0		20.34	20.34	20.29
5	12	6		20.44	20.48	20.39
5	12	11		20.38	20.39	20.32
5	25	0		20.34	20.43	20.26
10	1	0	QPSK	22.34	22.40	22.37
10	1	24		22.51	22.62	22.52
10	1	49		22.38	22.40	22.28
10	25	0		21.40	21.45	21.37
10	25	12		21.45	21.42	21.36
10	25	24		21.45	21.48	21.36
10	50	0		21.43	21.43	21.37
10	1	0	16-QAM	21.79	21.51	21.31
10	1	24		21.98	21.77	21.44
10	1	49		21.80	21.48	21.21
10	25	0		20.41	20.45	20.37
10	25	12		20.46	20.44	20.37
10	25	24		20.47	20.49	20.35
10	50	0		20.44	20.46	20.37



LTE BAND 38

LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.27	22.29	22.36
15	1	37		22.58	22.65	22.65
15	1	74		22.27	22.29	22.26
15	36	0		21.47	21.49	21.46
15	36	18		21.45	21.52	21.43
15	36	39		21.48	21.49	21.41
15	75	0		21.46	21.48	21.42
15	1	0	16-QAM	21.72	21.42	21.57
15	1	38		22.07	21.80	21.78
15	1	75		21.78	21.43	21.39
15	36	0		20.48	20.51	20.40
15	36	18		20.46	20.53	20.35
15	36	39		20.47	20.51	20.31
15	75	0		20.43	20.45	20.41
20	1	0	QPSK	22.13	22.16	22.10
20	1	49		22.60	22.67	22.54
20	1	99		22.19	22.16	22.04
20	50	0		21.40	21.39	21.44
20	50	24		21.38	21.43	21.40
20	50	49		21.42	21.43	21.32
20	100	0		21.44	21.39	21.37
20	1	0	16-QAM	21.35	21.36	21.39
20	1	49		21.77	21.79	21.78
20	1	99		21.39	21.35	21.30
20	50	0		20.42	20.46	20.46
20	50	24		20.38	20.49	20.47
20	50	49		20.44	20.48	20.43
20	100	0		20.43	20.43	20.42



LTE BAND 40

LTE Band 40(2305-2315) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	19.41	19.29	19.35
5	1	12		19.57	19.49	19.61
5	1	24		19.22	19.31	19.43
5	12	0		18.35	18.34	18.42
5	12	6		18.43	18.45	18.46
5	12	11		18.36	18.40	18.39
5	25	0		18.38	18.41	18.41
5	1	0	16-QAM	18.61	18.65	18.96
5	1	12		18.86	18.90	19.23
5	1	24		18.65	18.68	19.16
5	12	0		17.32	17.38	17.38
5	12	6		17.37	17.46	17.45
5	12	11		17.31	17.39	17.40
5	25	0		17.37	17.33	17.35
10	1	0	QPSK	/	/	19.42
10	1	24		/	/	19.58
10	1	49		/	/	19.48
10	25	0		/	/	18.44
10	25	12		/	/	18.45
10	25	24		/	/	18.42
10	50	0		/	/	18.44
10	1	0	16-QAM	/	/	18.37
10	1	24		/	/	18.53
10	1	49		/	/	18.40
10	25	0		/	/	17.44
10	25	12		/	/	17.46
10	25	24		/	/	17.45
10	50	0		/	/	17.39



LTE BAND 40

LTE Band 40(2350-2360) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	19.49	19.56	19.63
5	1	12		19.75	19.85	19.89
5	1	24		19.56	19.64	19.67
5	12	0		18.54	18.61	18.62
5	12	6		18.63	18.68	18.75
5	12	11		18.59	18.64	18.66
5	25	0		18.61	18.64	18.67
5	1	0	16-QAM	18.84	19.14	18.89
5	1	12		19.13	19.44	19.14
5	1	24		18.92	19.22	18.94
5	12	0		17.56	17.61	17.58
5	12	6		17.70	17.69	17.69
5	12	11		17.59	17.62	17.61
5	25	0		17.60	17.60	17.70
10	1	0	QPSK	/	/	19.59
10	1	24		/	/	19.84
10	1	49		/	/	19.75
10	25	0		/	/	18.66
10	25	12		/	/	18.69
10	25	24		/	/	18.71
10	50	0		/	/	18.66
10	1	0	16-QAM	/	/	18.55
10	1	24		/	/	18.77
10	1	49		/	/	18.68
10	25	0		/	/	17.66
10	25	12		/	/	17.69
10	25	24		/	/	17.73
10	50	0		/	/	17.67



LTE BAND 41

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	20.98	21.05	20.54
5	1	12		21.31	21.34	20.80
5	1	24		21.06	20.99	20.49
5	12	0		20.07	20.08	19.70
5	12	6		20.24	20.16	19.69
5	12	11		20.02	20.10	19.66
5	25	0		20.09	20.09	19.65
5	1	0	16-QAM	20.53	20.26	19.87
5	1	12		20.87	20.51	20.11
5	1	24		20.62	20.24	19.85
5	12	0		19.04	19.03	18.68
5	12	6		19.22	19.15	18.69
5	12	11		19.06	19.05	18.61
5	25	0		19.01	19.11	18.60
10	1	0	QPSK	21.13	21.17	20.76
10	1	24		21.27	21.33	20.83
10	1	49		21.15	21.15	20.68
10	25	0		20.13	20.16	19.80
10	25	12		20.16	20.18	19.77
10	25	24		20.11	20.14	19.75
10	50	0		20.09	20.12	19.78
10	1	0	16-QAM	20.21	20.09	20.21
10	1	24		20.40	20.22	20.26
10	1	49		20.32	20.05	20.11
10	25	0		19.14	19.17	18.82
10	25	12		19.17	19.17	18.76
10	25	24		19.15	19.12	18.75
10	50	0		19.18	19.13	18.78



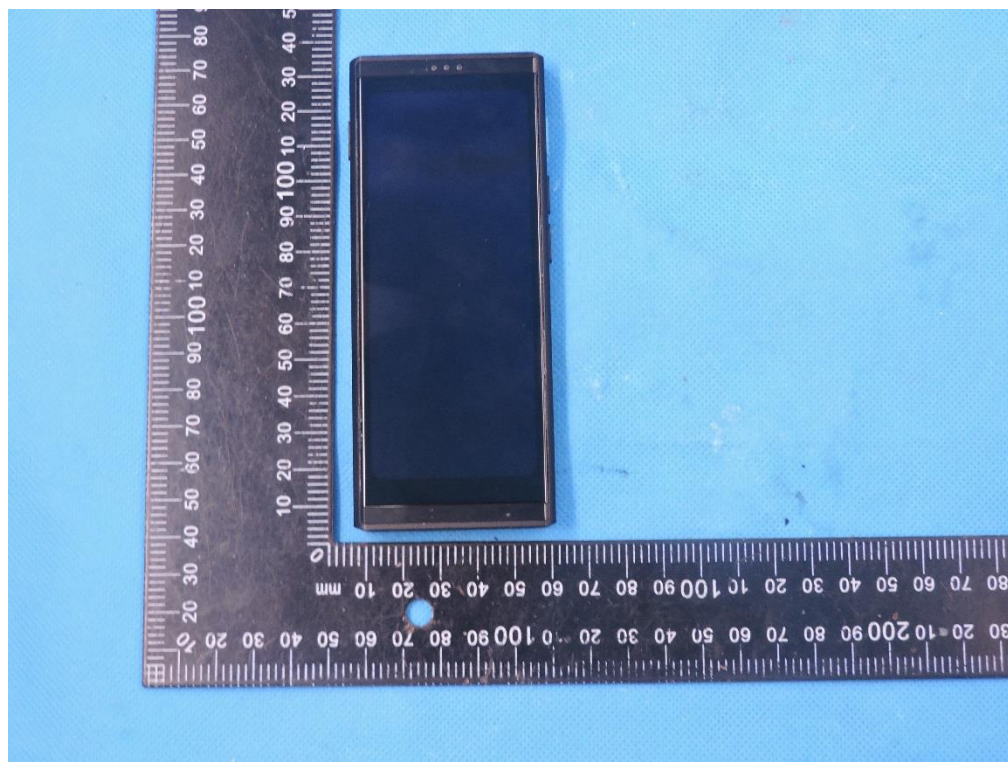
LTE BAND 41

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	21.03	21.17	20.85
15	1	37		21.41	21.44	21.08
15	1	74		21.38	21.10	20.74
15	36	0		20.24	20.30	19.91
15	36	18		20.27	20.31	19.90
15	36	39		20.26	20.25	19.84
15	75	0		20.24	20.22	19.88
15	1	0	16-QAM	20.48	20.23	19.92
15	1	38		20.85	20.51	20.19
15	1	75		20.47	20.13	19.82
15	36	0		19.21	19.28	18.81
15	36	18		19.24	19.27	18.81
15	36	39		19.28	19.23	18.75
15	75	0		19.19	19.18	18.85
20	1	0	QPSK	20.90	21.00	20.66
20	1	49		21.35	21.41	21.03
20	1	99		21.09	20.96	20.56
20	50	0		20.19	20.19	19.87
20	50	24		20.21	20.22	19.82
20	50	49		20.24	20.14	19.76
20	100	0		20.18	20.18	19.83
20	1	0	16-QAM	20.14	20.15	19.78
20	1	49		20.59	20.54	20.12
20	1	99		20.34	20.07	19.68
20	50	0		19.26	19.16	18.90
20	50	24		19.29	19.18	18.87
20	50	49		19.30	19.12	18.78
20	100	0		19.22	19.15	18.85

11. EUT And Test Setup Photo

11.1 EUT Photos

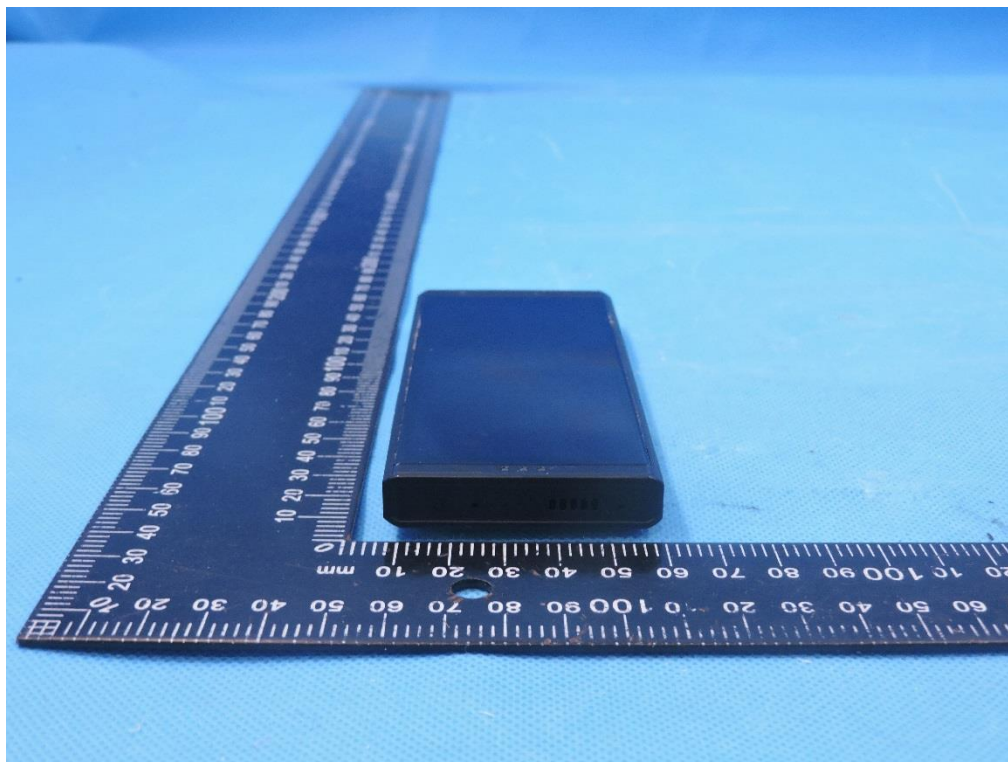
Front side



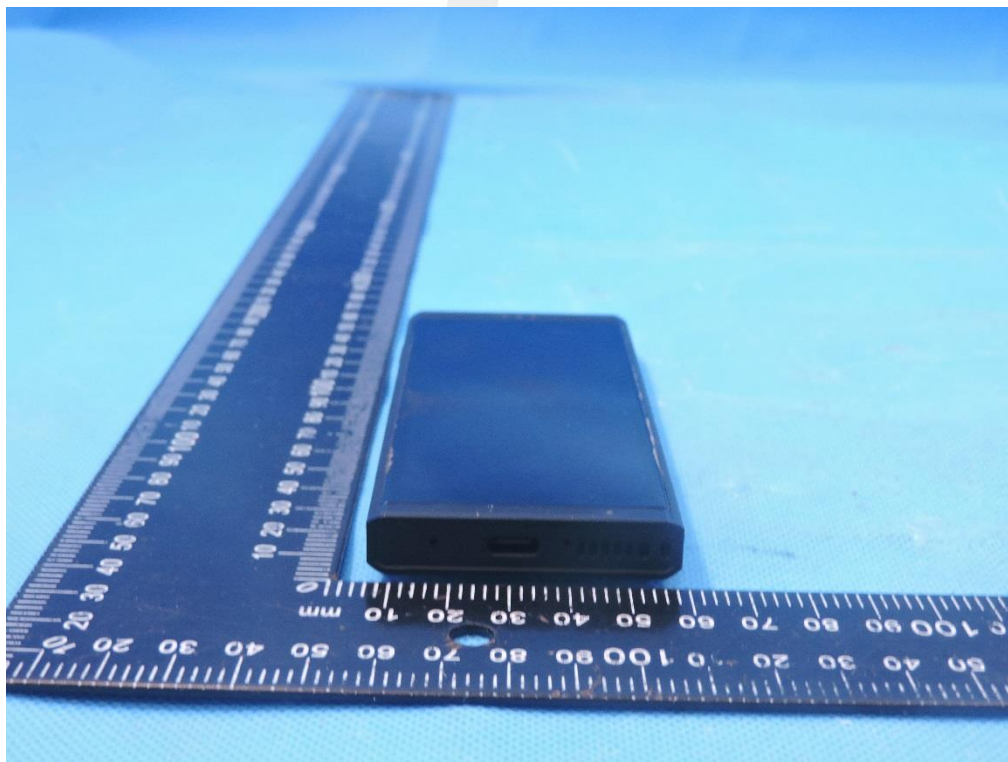
Back side



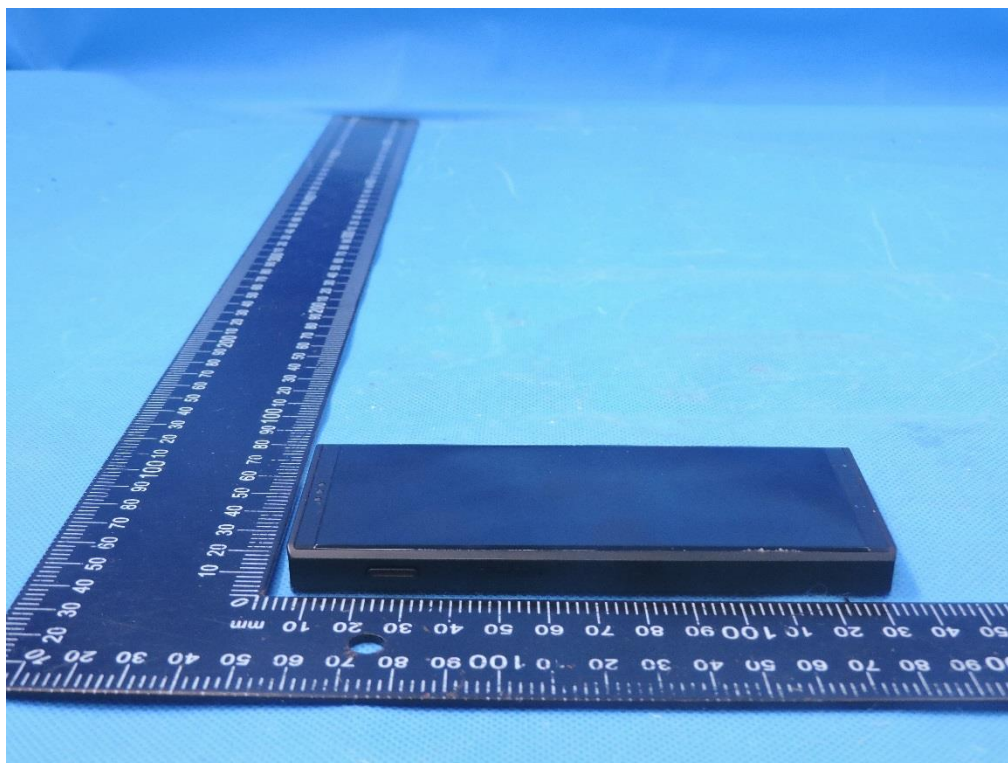
Top side



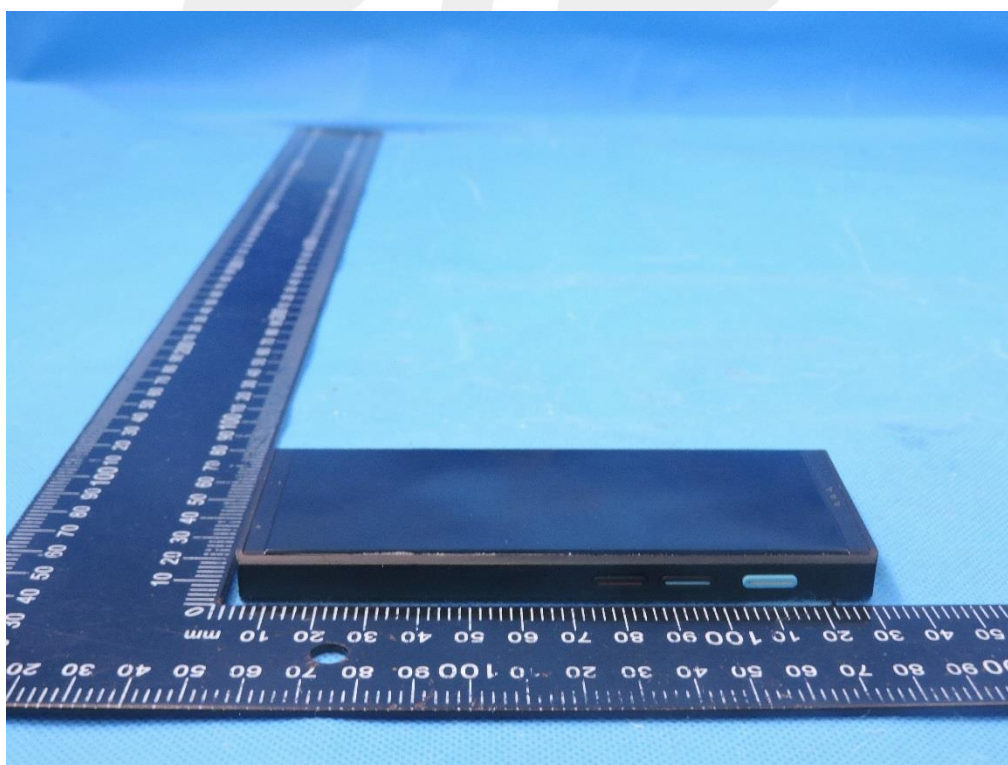
Bottom side



Left side

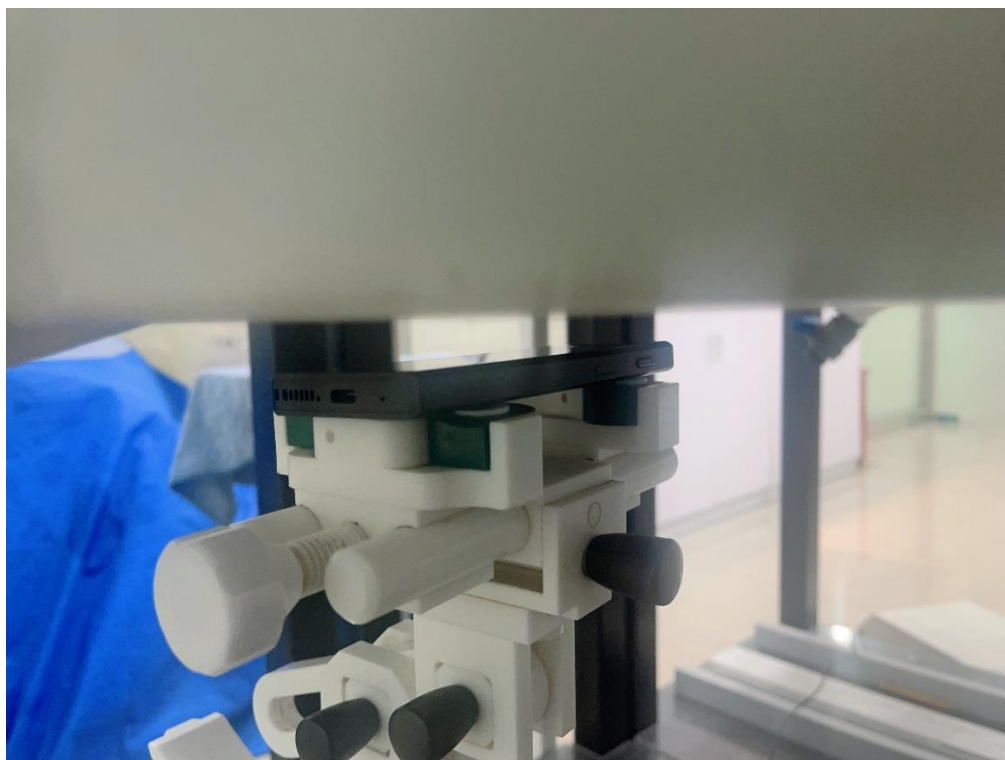


Right side

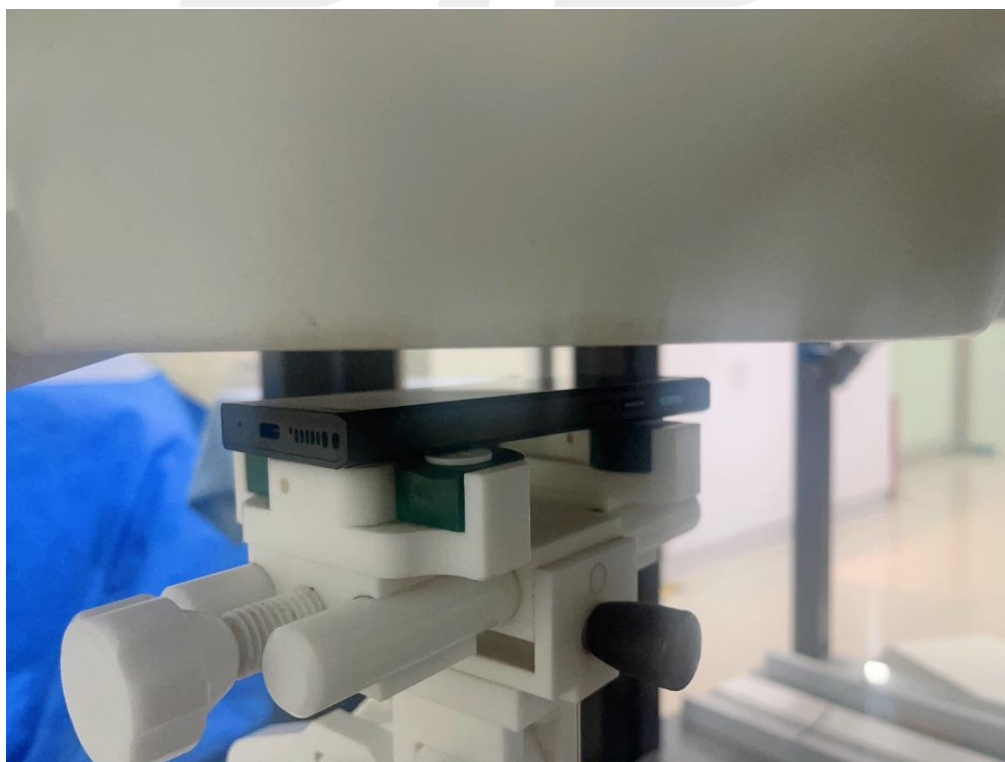


11.2 Setup Photos

Front Side(Test separation is 10mm)



Back Side(Test separation is 10mm)



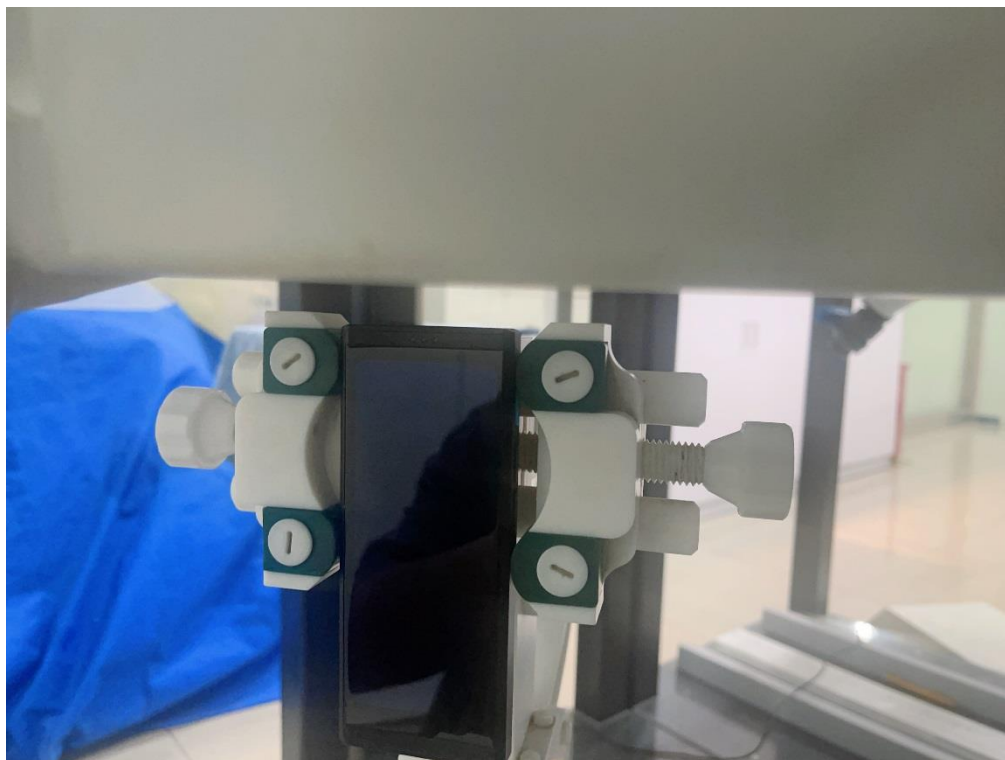
Left Edge(Test separation is 10mm)



Right Edge(Test separation is 10mm)



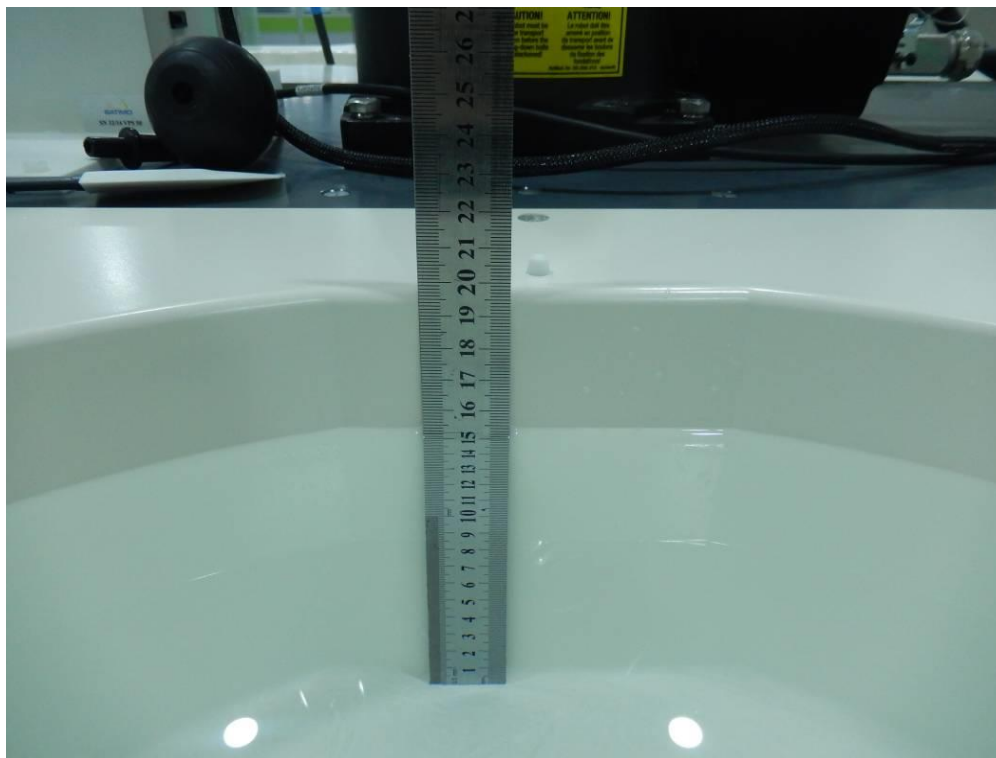
Bottom Edge(Test separation is 10mm)



Top Edge(Test separation is 10mm)



Liquid depth (15 cm)





12. SAR Result Summary

12.1 Body-worn and Hotspot SAR

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR (W/Kg)	Meas.No.
GSM850	GPRS Data-4 Slot	Front Side	824.2	0.947	3.66	30.00	29.67	1.022	/
		Front Side	836.6	0.796	2.81	30.00	29.61	0.871	/
		Front Side	848.8	0.811	-1.90	30.00	29.51	0.908	/
		Back Side	824.2	0.991	1.50	30.00	29.67	1.069	1
		Back Side	836.6	0.765	3.87	30.00	29.61	0.837	/
		Back Side	848.8	0.814	-2.68	30.00	29.51	0.911	/
		Left Side	824.2	0.685	-3.64	30.00	29.67	0.739	/
		Right Side	824.2	0.838	-2.58	30.00	29.67	0.904	/
		Right Side	836.6	0.69	2.78	30.00	29.61	0.755	/
		Right Side	848.8	0.711	-0.57	30.00	29.51	0.796	/
		Bottom Side	824.2	0.185	-0.25	30.00	29.67	0.200	/
GSM1900	GPRS Data-2 Slot	Front Side	1880	0.315	0.41	29.00	28.94	0.319	/
		Back Side	1850.2	0.785	0.28	29.00	28.92	0.800	/
		Back Side	1880	0.827	-3.90	29.00	28.94	0.839	2
		Back Side	1909.8	0.795	-3.12	29.00	28.89	0.815	/
		Left Side	1880	0.236	-3.75	29.00	28.94	0.239	/
		Right Side	1880	0.242	2.14	29.00	28.94	0.245	/
		Bottom Side	1880	0.415	-1.91	29.00	28.94	0.421	/
WCDMA Band II	RMC	Front Side	1850.4	0.356	1.32	23.50	23.05	0.395	/
		Back Side	1850.4	0.904	-0.12	23.50	23.05	1.003	3
		Back Side	1880	0.775	1.40	23.50	22.76	0.919	/
		Back Side	1907.6	0.786	-0.92	23.50	22.73	0.938	/
		Left Side	1850.4	0.323	3.63	23.50	23.05	0.358	/
		Right Side	1850.4	0.24	-1.09	23.50	23.05	0.266	/
		Bottom Side	1850.4	0.502	-3.70	23.50	23.05	0.557	/
WCDMA Band V	RMC	Front Side	846.6	0.444	1.39	23.50	23.08	0.489	/
		Back Side	846.6	0.593	3.81	23.50	23.08	0.653	4
		Left Side	846.6	0.122	-0.03	23.50	23.08	0.134	/
		Right Side	846.6	0.135	-1.68	23.50	23.08	0.149	/
		Bottom Side	846.6	0.108	1.98	23.50	23.08	0.119	/



Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max. Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaled SAR (W/Kg)	Meas.No.
LTE Band 2	20M	QPSK	1	49	Front side	1860	0.396	-2.99	23	22.88	0.407	/
			50	24	Front side	1860	0.234	-1.99	22	21.8	0.245	/
			1	49	Back Side	1860	1.069	2.41	23	22.88	1.099	5
			1	49	Back Side	1880	0.716	-0.49	23	22.1	0.881	/
			1	49	Back Side	1900	0.721	1.83	23	22.33	0.841	/
			50	24	Back Side	1860	0.668	0.67	22	21.8	0.699	/
			100	0	Back Side	1860	0.620	1.46	22	21.83	0.645	/
			1	49	Left Side	1860	0.326	-1.69	23	22.88	0.335	/
			50	24	Left Side	1860	0.224	-3.79	22	21.8	0.235	/
			1	49	Right Side	1860	0.315	-2.22	23	22.88	0.324	/
			50	24	Right Side	1860	0.243	-2.91	22	21.8	0.254	/
			1	49	Bottom Side	1860	0.615	-0.54	23	22.88	0.632	/
			50	24	Bottom Side	1860	0.487	2.73	22	21.8	0.510	/
LTE Band 4	20M	QPSK	1	49	Front side	1732.5	0.408	-1.41	22.5	22.4	0.418	/
			50	49	Front side	1720	0.315	-2.81	21.5	21.32	0.328	/
			1	49	Back Side	1732.5	0.632	-1.67	22.5	22.4	0.647	/
			50	49	Back Side	1720	0.569	1.37	21.5	21.32	0.593	/
			1	49	Left Side	1732.5	0.212	2.19	22.5	22.4	0.217	/
			50	49	Left Side	1720	0.193	3.90	21.5	21.32	0.201	/
			1	49	Right Side	1732.5	0.187	1.56	22.5	22.4	0.191	/
			50	49	Right Side	1720	0.205	0.24	21.5	21.32	0.214	/
			1	49	Bottom Side	1720	0.765	-3.51	22.5	22.39	0.785	/
			1	49	Bottom Side	1732.5	0.856	3.58	22.5	22.4	0.876	6
			1	49	Bottom Side	1745	0.662	-0.34	22.5	22.31	0.692	/
			50	49	Bottom Side	1720	0.614	3.44	21.5	21.32	0.640	/
			100	0	Bottom Side	1732.5	0.630	-2.59	21.5	21.27	0.664	/



LTE Band 5	10M	QPSK	1	24	Front side	844	0.442	-0.53	23.5	23.1	0.485	/
			25	0	Front side	844	0.335	-3.88	22.5	22.09	0.368	/
			1	24	Back Side	844	0.605	2.89	23.5	23.1	0.663	7
			25	0	Back Side	844	0.451	0.46	22.5	22.09	0.496	/
			1	24	Left Side	844	0.231	-0.38	23.5	23.1	0.253	/
			25	0	Left Side	844	0.224	0.03	22.5	22.09	0.246	/
			1	24	Right Side	844	0.220	-2.21	23.5	23.1	0.241	/
			25	0	Right Side	844	0.189	3.65	22.5	22.09	0.208	/
			1	24	Bottom Side	844	0.233	0.98	23.5	23.1	0.255	/
			25	0	Bottom Side	844	0.154	-1.79	22.5	22.09	0.169	/
LTE Band 7	10M	QPSK	1	49	Front side	2535	0.236	-3.11	22.5	22.1	0.259	/
			50	24	Front side	2560	0.201	3.15	21	20.97	0.202	/
			1	49	Back Side	2535	0.687	-0.84	22.5	22.1	0.753	8
			50	24	Back Side	2560	0.594	-0.27	21	20.97	0.598	/
			1	49	Left Side	2535	0.223	-2.85	22.5	22.1	0.245	/
			50	24	Left Side	2560	0.215	0.30	21	20.97	0.216	/
			1	49	Right Side	2535	0.184	-1.66	22.5	22.1	0.202	/
			50	24	Right Side	2560	0.170	3.85	21	20.97	0.171	/
			1	49	Bottom Side	2535	0.422	-3.91	22.5	22.1	0.463	/
			50	24	Bottom Side	2560	0.368	1.85	21	20.97	0.371	/
LTE Band 12	10M	QPSK	1	24	Front side	707.5	0.347	3.51	23	22.84	0.360	/
			25	24	Front side	704	0.305	-2.96	22	21.70	0.327	/
			1	24	Back Side	707.5	0.479	0.68	23	22.84	0.497	9
			25	24	Back Side	704	0.382	-2.48	22	21.70	0.409	/
			1	24	Left Side	707.5	0.125	-3.66	23	22.84	0.130	/
			25	24	Left Side	704	0.120	-2.26	22	21.70	0.129	/
			1	24	Right Side	707.5	0.114	-2.39	23	22.84	0.118	/
			25	24	Right Side	704	0.119	-0.26	22	21.70	0.128	/
			1	24	Bottom Side	707.5	0.072	-0.28	23	22.84	0.075	/
			25	24	Bottom Side	704	0.063	3.65	22	21.70	0.068	/



LTE Band 17	10M	QPSK	1	24	Front side	709	0.321	-1.38	23.5	23.3	0.336	/
			25	24	Front side	711	0.256	-0.48	22.5	22.13	0.279	/
			1	24	Back Side	709	0.447	2.39	23.5	23.3	0.468	10
			25	24	Back Side	711	0.362	2.42	22.5	22.13	0.394	/
			1	24	Left Side	709	0.102	2.86	23.5	23.3	0.107	/
			25	24	Left Side	711	0.098	1.73	22.5	22.13	0.107	/
			1	24	Right Side	709	0.112	-1.09	23.5	23.3	0.117	/
			25	24	Right Side	711	0.115	-2.21	22.5	22.13	0.125	/
			1	24	Bottom Side	709	0.076	-1.69	23.5	23.3	0.080	/
			25	24	Bottom Side	711	0.061	1.37	22.5	22.13	0.066	/
LTE Band 26	15M	QPSK	1	37	Front side	831.5	0.464	1.10	23	22.88	0.477	/
			36	18	Front side	841.5	0.325	-3.50	22	21.73	0.346	/
			1	37	Back Side	831.5	0.543	3.21	23	22.88	0.558	11
			36	18	Back Side	841.5	0.441	2.58	22	21.73	0.469	/
			1	37	Left Side	831.5	0.115	-0.76	23	22.88	0.118	/
			36	18	Left Side	841.5	0.103	-0.20	22	21.73	0.110	/
			1	37	Right Side	831.5	0.121	-3.77	23	22.88	0.124	/
			36	18	Right Side	841.5	0.108	-3.14	22	21.73	0.115	/
			1	37	Bottom Side	831.5	0.086	-0.56	23	22.88	0.088	/
			36	18	Bottom Side	841.5	0.070	-2.49	22	21.73	0.074	/
LTE Band 38	20M	QPSK	1	49	Front side	2595	0.153	-2.30	23	22.67	0.165	/
			50	0	Front side	2610	0.112	0.86	21.5	21.44	0.114	/
			1	49	Back Side	2595	0.317	1.40	23	22.66	0.343	12
			50	0	Back Side	2610	0.228	-2.52	21.5	21.61	0.222	/
			1	49	Left Side	2595	0.094	2.37	23	22.66	0.102	/
			50	0	Left Side	2610	0.083	2.67	21.5	21.61	0.081	/
			1	49	Right Side	2595	0.080	0.40	23	22.66	0.087	/
			50	0	Right Side	2610	0.075	3.30	21.5	21.61	0.073	/
			1	49	Bottom Side	2595	0.062	-3.31	23	22.66	0.067	/
			50	0	Bottom Side	2610	0.055	1.88	21.5	21.61	0.054	/



LTE Band 40	20M	QPSK	1	24	Front side	2390	0.105	-2.55	20	19.84	0.109	/
			50	24	Front side	2390	0.081	-2.96	19	18.71	0.087	/
			1	24	Back Side	2390	0.432	-3.78	20	19.84	0.448	13
			50	24	Back Side	2390	0.331	3.49	19	18.71	0.354	/
			1	24	Left Side	2390	0.123	-0.98	20	19.84	0.128	/
			50	24	Left Side	2390	0.110	1.58	19	18.71	0.118	/
			1	24	Right Side	2390	0.112	1.41	20	19.84	0.116	/
			50	24	Right Side	2390	0.094	3.02	19	18.71	0.100	/
			1	24	Bottom Side	2390	0.228	-2.66	20	19.84	0.237	/
			50	24	Bottom Side	2390	0.184	1.81	19	18.71	0.197	/
LTE Band 41	20M	QPSK	1	49	Front side	2605	0.157	3.50	21.5	21.41	0.160	/
			50	24	Front side	2565	0.112	2.94	20.5	20.24	0.119	/
			1	49	Back Side	2605	0.253	0.52	21.5	21.41	0.258	14
			50	24	Back Side	2565	0.198	-0.50	20.5	20.24	0.210	/
			1	49	Left Side	2605	0.087	2.24	21.5	21.41	0.089	/
			50	24	Left Side	2565	0.074	-3.60	20.5	20.24	0.079	/
			1	49	Right Side	2605	0.088	-3.28	21.5	21.41	0.090	/
			50	24	Right Side	2565	0.072	3.91	20.5	20.24	0.076	/
			1	49	Bottom Side	2605	0.249	-1.89	21.5	21.41	0.254	/
			50	24	Bottom Side	2565	0.214	-2.00	20.5	20.24	0.227	/

Band	Model	Test Position	Freq.	SAR (1g) (W/kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR (W/Kg)	Meas.No.
2.4GHz WLAN	802.11b	Front Side	2437	0.134	1.11	13.00	12.87	0.138	/
		Back Side	2437	0.122	2.29	13.00	12.87	0.126	/
		Left Side	2437	0.056	-1.77	13.00	12.87	0.058	/
		Right Side	2437	0.044	3.67	13.00	12.87	0.045	/
		Top Side	2437	0.144	1.60	13.00	12.87	0.148	15
BT	GFSK	Back Side	2480	0.066	-0.05	9.50	9.03	0.074	16
		Right Side	2480	0.031	-2.61	9.50	9.03	0.035	/
5.2GHz WLAN	802.11 n-HT20	Front Side	5180	0.183	-0.46	14.50	14.10	0.201	/
		Back Side	5180	0.343	-1.10	14.50	14.10	0.376	/
		Left Side	5180	0.095	-1.16	14.50	14.10	0.104	/
		Right Side	5180	0.102	2.23	14.50	14.10	0.112	/
		Top Side	5180	0.439	3.69	14.50	14.10	0.481	17



5.3GHz WLAN	802.11a	Front Side	5260	0.223	-3.17	14.00	13.50	0.250	/
		Back Side	5260	0.276	-2.88	14.00	13.50	0.310	18
		Left Side	5260	0.084	2.40	14.00	13.50	0.094	/
		Right Side	5260	0.090	0.15	14.00	13.50	0.101	/
		Top Side	5260	0.178	0.10	14.00	13.50	0.200	/
5.6GHz WLAN	802.11a	Front Side	5500	0.127	2.30	14.00	13.73	0.135	/
		Back Side	5500	0.161	-3.34	14.00	13.73	0.171	19
		Left Side	5500	0.052	-1.45	14.00	13.73	0.055	/
		Right Side	5500	0.046	1.90	14.00	13.73	0.049	/
		Top Side	5500	0.097	0.04	14.00	13.73	0.103	/
5.8GHz WLAN	802.11a	Front Side	5825	0.110	3.62	12.50	12.32	0.115	/
		Back Side	5825	0.170	3.39	12.50	12.32	0.177	20
		Left Side	5825	0.046	-0.93	12.50	12.32	0.048	/
		Right Side	5825	0.034	3.59	12.50	12.32	0.035	/
		Top Side	5825	0.078	1.79	12.50	12.32	0.081	/

Note:

1. The test separation of all above table is 10mm.
2. Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For WWAN: Scaled SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
3. Per KDB 248227- 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. (The highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power was **0.037** W/Kg for Body)
4. When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.



Repeated SAR

Band	Mode	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR(W/Kg)	Meas. No.
GSM 850	GPRS Data-4 Slot	Front Side	824.2	0.904	-3.08	30	29.67	0.975	-
		Front Side	836.6	0.762	3.75	30	29.61	0.834	-
		Front Side	848.8	0.780	1.14	30	29.51	0.873	-
		Back Side	824.2	0.954	-2.02	30	29.67	1.029	-
		Back Side	836.6	0.742	2.11	30	29.61	0.812	-
		Back Side	848.8	0.790	1.99	30	29.51	0.884	-
		Right Side	824.2	0.796	0.99	30	29.67	0.859	-
		Right Side	836.6	0.657	3.13	30	29.61	0.719	-
		Right Side	848.8	0.689	-3.36	30	29.51	0.771	-
GSM1900	GPRS Data-2Slot	Back Side	1850.2	0.771	-3.90	29.00	28.92	0.785	-
		Back Side	1880	0.799	-3.65	29.00	28.94	0.810	-
		Back Side	1909.8	0.783	-0.41	29.00	28.89	0.803	-
WCDMA Band II	RMC	Back Side	1852.4	0.863	0.47	23.50	23.05	0.957	-
		Back Side	1880	0.752	-1.89	23.50	22.76	0.892	-
		Back Side	1907.6	0.771	-3.00	23.50	22.73	0.921	-

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR(W/Kg)	Meas. No.
LTE Band 2	20M	QPSK	1	49	Back Side	1860	1.018	3.85	23	22.88	1.047	-
			1	49	Back Side	1880	0.704	-2.01	23	22.1	0.866	-
			1	49	Back Side	1900	0.716	2.17	23	22.33	0.835	-
LTE Band 4	20M	QPSK	1	49	Bottom Side	1720	0.786	2.99	22.5	22.39	0.806	-
			1	49	Bottom Side	1732.5	0.818	2.47	22.5	22.4	0.837	-
			1	49	Bottom Side	1745	0.770	-2.35	22.5	22.31	0.804	-



12.2 repeated SAR measurement

Band	Mode	Test Position	Freq.	Original Measured SAR 1g(W/kg)	1 st Repeated SAR 1g	Ratio	Original Measured SAR 1g(W/kg)	2nd Repeated SAR 1g	Ratio
GSM 850	GPRS Data-4 Slot	Front Side	824.2	0.947	0.904	1.048	-	-	-
		Front Side	836.6	0.796	0.762	1.045	-	-	-
		Front Side	848.8	0.811	0.780	1.040	-	-	-
		Back Side	824.2	0.991	0.954	1.039	-	-	-
		Back Side	836.6	0.765	0.742	1.031	-	-	-
		Back Side	848.8	0.814	0.790	1.030	-	-	-
		Right Side	824.2	0.838	0.796	1.053	-	-	-
		Right Side	836.6	0.69	0.657	1.050	-	-	-
		Right Side	848.8	0.711	0.689	1.032	-	-	-
GSM1900	GPRS Data-2Slot	Back Side	1850.2	0.785	0.771	1.018	-	-	-
		Back Side	1880	0.827	0.799	1.035	-	-	-
		Back Side	1909.8	0.795	0.783	1.015	-	-	-
WCDMA Band II	RMC	Back Side	1852.4	0.904	0.863	1.048	-	-	-
		Back Side	1880	0.775	0.752	1.031	-	-	-
		Back Side	1907.6	0.786	0.771	1.019	-	-	-

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Original Measured SAR 1g(W/kg)	1 st Repeated SAR 1g	Ratio	Original Measured	2nd Repeated SAR 1g	Ratio
LTE Band 2	20M	QPSK	1	0	Back Side	1860	1.069	1.018	1.050	-	-	-
			1	0	Back Side	1880	0.716	0.704	1.017	-	-	-
			1	0	Back Side	1900	0.721	0.716	1.007	-	-	-
LTE Band 4	20M	QPSK	1	49	Bottom Side	1720	0.789	0.786	1.004	-	-	-
			1	49	Bottom Side	1732.5	0.856	0.818	1.046	-	-	-
			1	49	Bottom Side	1745	0.775	0.770	1.006	-	-	-

Note:

1. Per KDB 865664 D01,for each frequency band ,repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/Kg}$.
2. Per KDB 865664 D01,if the ratio of largest to smallest SAR for the original and first repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/Kg}$, only one repeated measurement is required.
3. Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is $\geq 1.45\text{W/Kg}$
4. The ratio is the difference in percentage between original and repeated measured SAR.

**Simultaneous Multi-band Transmission Evaluation:**

Application Simultaneous Transmission information:

Position	Simultaneous State
Body Worn and Hotspot	1. GSM + 2.4/5GHz WLAN
	2. GSM + BT
	3. WCDMA + 2.4/5GHz WLAN
	4. WCDMA + BT
	5. LTE + 2.4/5GHz WLAN
	6. LTE + BT

NOTE:

1. Bluetooth and WLAN can't simultaneous transmission at the same time.
2. For simultaneous transmission at head and body exposure position, 2 transmitters simultaneous transmission was the worst state.
3. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
4. KDB 447498 Appendix E, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
 $SAR_{est} = 1.6 \cdot P_{ant} / P_{th} [W/kg]$.
 P_{ant} is maximum time-averaged power or effective radiated power (ERP), whichever is greater, and P_{th} is defined in Formula KDB 447498 (B.2).



Simultaneous Mode	Position	Mode	Max. 1-g SAR	1-g Sum SAR
			(W/kg)	(W/kg)
GSM + 2.4G WLAN	Body Worn and Hotspot	GSM	1.069	1.217
		2.4G WLAN	0.148	
GSM + Bluetooth	Body Worn and Hotspot	GSM	1.069	1.143
		Bluetooth	0.074	
GSM + 5G WLAN	Body Worn and Hotspot	GSM	1.069	1.550
		5G WLAN	0.481	
WCDMA + 2.4G WLAN	Body Worn and Hotspot	WCDMA	1.003	1.151
		2.4G WLAN	0.148	
WCDMA + Bluetooth	Body Worn and Hotspot	WCDMA	1.003	1.077
		Bluetooth	0.074	
WCDMA + 5G WLAN	Body Worn and Hotspot	WCDMA	1.003	1.484
		5G WLAN	0.481	
LTE + 2.4G WLAN	Body Worn and Hotspot	LTE	1.099	1.247
		2.4G WLAN	0.148	
LTE + Bluetooth	Body Worn and Hotspot	LTE	1.099	1.173
		Bluetooth	0.074	
LTE + 5G WLAN	Body Worn and Hotspot	LTE	1.099	1.580
		5G WLAN	0.481	

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna.

When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR-1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR-1g 1.6 W/kg), SAR test exclusion is determined by the SPLSR.



13. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
750MHz Dipole	MVG	SID750	SN 30/14 DIP0G750-331	2020.07.14	2023.07.13
835MHz Dipole	MVG	SID835	SN 30/14 DIP0G835-332	2020.07.14	2023.07.13
1800MHz Dipole	MVG	SID1800	SN 30/14 DIP1G800-329	2020.07.14	2023.07.13
1900MHz Dipole	MVG	SID1900	SN 30/14 DIP1G900-333	2020.07.14	2023.07.13
2450MHz Dipole	MVG	SID2450	SN 30/14 DIP2G450-335	2020.07.14	2023.07.13
2600MHz Dipole	MVG	SID2600	SN 30/14 DIP2G600-336	2020.07.14	2023.07.13
E-Field Probe	MVG	SSE2	SN 07/21 EPOG352	2023.02.24	2024.02.23
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2022.11.15	2023.11.14
Antenna	MVG	ANTA3	SN 07/13 ZNTA52	N/A	N/A
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom3	MVG	SAM	SN 21/21 ELLI48	N/A	N/A
Phone holder	MVG	N/A	SN 32/14 MSH97	N/A	N/A
Laptop holder	MVG	N/A	SN 32/14 LSH29	N/A	N/A
Attenuator	Agilent	99899	DC-18GHz	N/A	N/A
Directional coupler	Narda	4226-20	3305	N/A	N/A
Network Analyzer	Agilent	8753ES	US38432810	2022.09.28	2023.09.27
Multi Meter	Keithley	Multi Meter 2000	4050073	2022.09.29	2023.09.28
Signal Generator	Agilent	N5182A	MY50140530	2022.09.28	2023.09.27
Wireless Communication Test Set	Agilent	8960-E5515C	MY48360751	2022.09.28	2023.09.27
Wireless Communication Test Set	R&S	CMW500	156324	2022.09.29	2023.09.28
Power Amplifier	DESAY	ZHL-42W	9638	2022.10.08	2023.10.07
Power Meter	R&S	NRP	100510	2022.09.28	2023.09.27
Power Sensor	R&S	NRP-Z11	101919	2022.09.28	2023.09.27
Power Sensor	Keysight	U2021XA	MY56280002	2022.09.29	2023.09.28
Temperature hygrometer	SuWei	SW-108	N/A	2022.09.30	2023.09.29
Thermograph	Elitech	RC-4	S/N EF7176501537	2022.09.30	2023.09.29



Appendix A. System Validation Plots

System Performance Check Data (750MHz)

Type: Phone measurement (Complete)

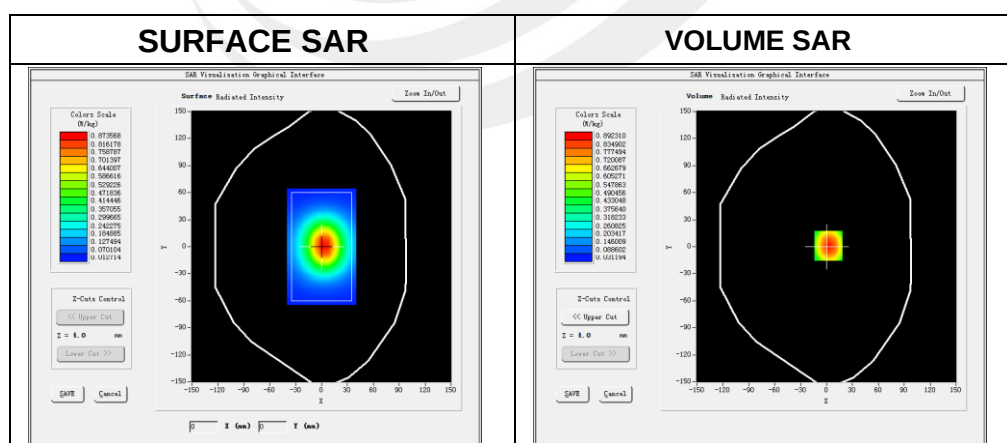
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2023-05-16

Experimental conditions

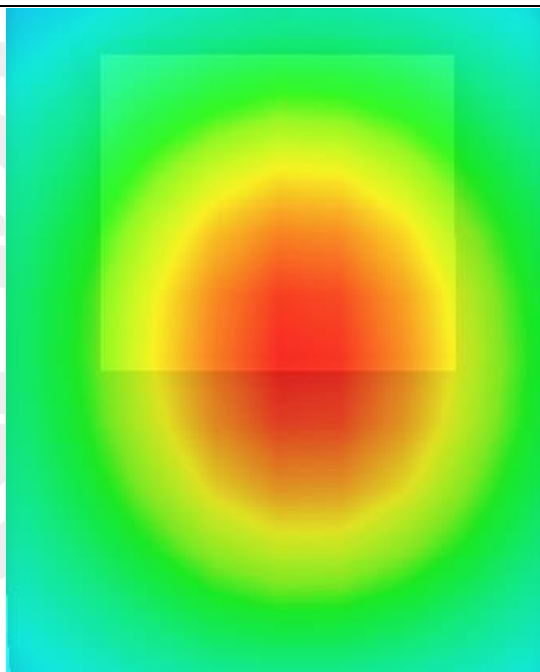
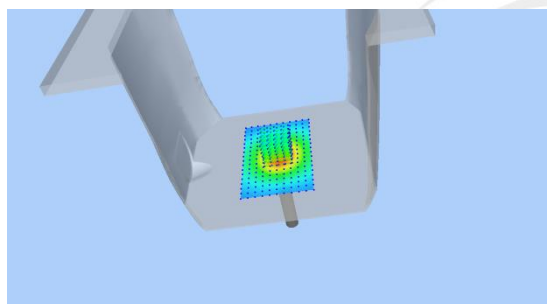
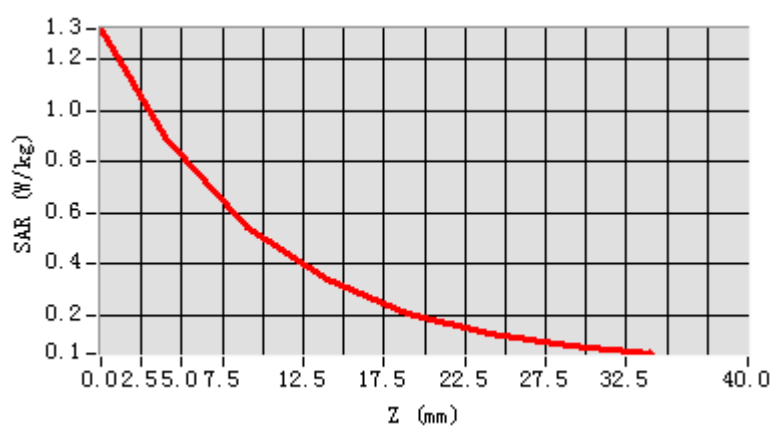
Phantom	Validation plane
Device Position	-
Band	750MHz
Channels	-
Signal	CW
Frequency (MHz)	750MHz
Relative permittivity	42.76
Conductivity (S/m)	0.88
Probe	SN 07/21 EPGO352
ConvF	1.58
Crest factor	1:1



Maximum location: X=2.00, Y=1.00

SAR 10g (W/Kg)	0.572625
SAR 1g (W/Kg)	0.867181

Z Axis Scan



**System Performance Check Data (835MHz)**

Type: Phone measurement (Complete)

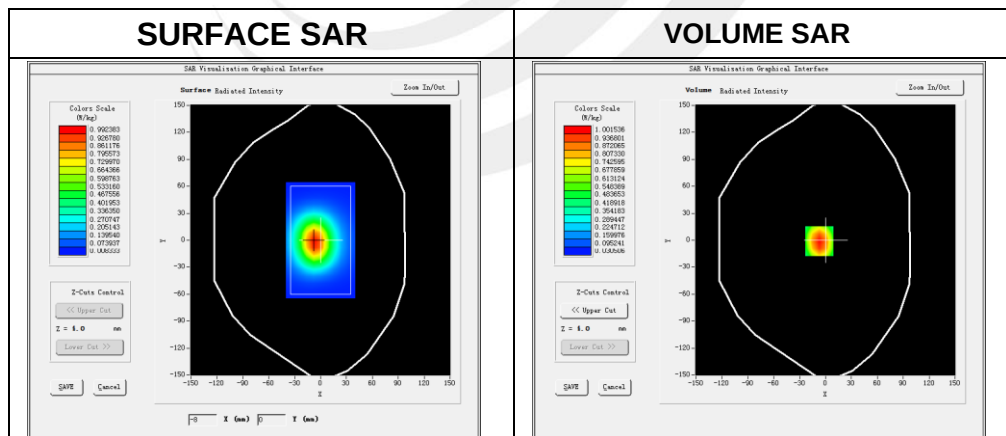
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2023-05-12

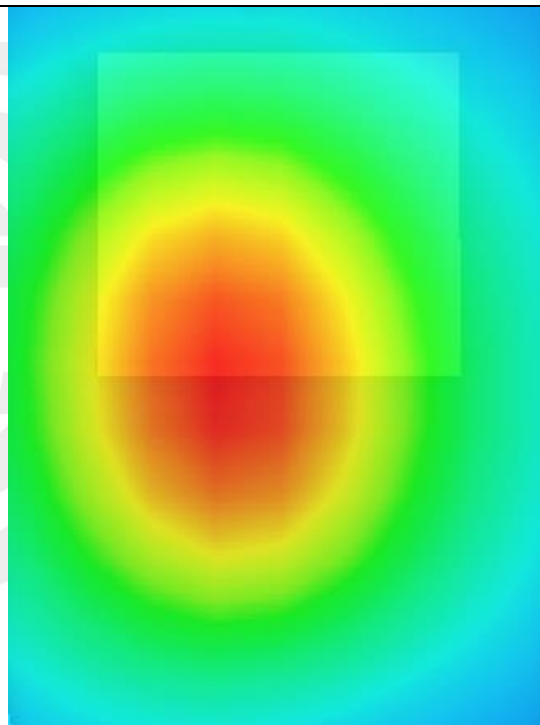
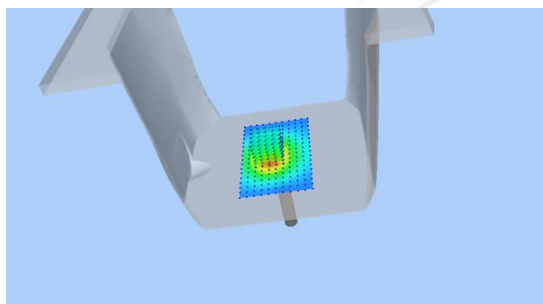
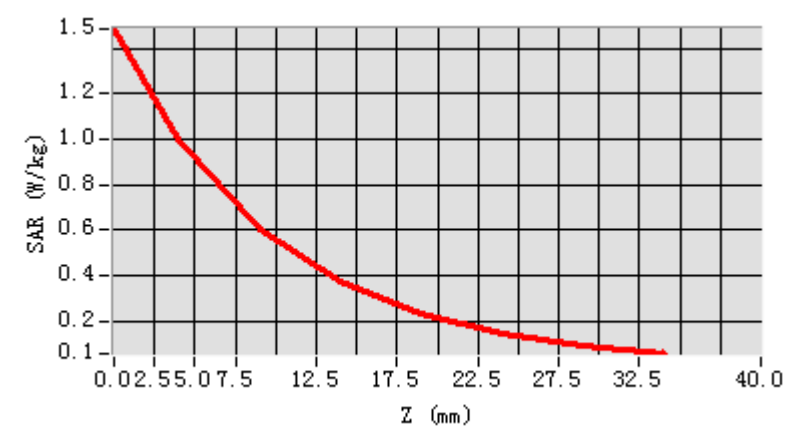
Experimental conditions

Phantom	Validation plane
Device Position	-
Band	835MHz
Channels	-
Signal	CW
Frequency (MHz)	835MHz
Relative permittivity	41.16
Conductivity (S/m)	0.91
Probe	SN 07/21 EPGO352
ConvF:	1.57
Crest factor:	1:1

**Maximum location: X=-7.00, Y=-1.00**

SAR 10g (W/Kg)	0.603898
SAR 1g (W/Kg)	0.951361

Z Axis Scan



**System Performance Check Data(1800MHz)**

Type: Phone measurement (Complete)

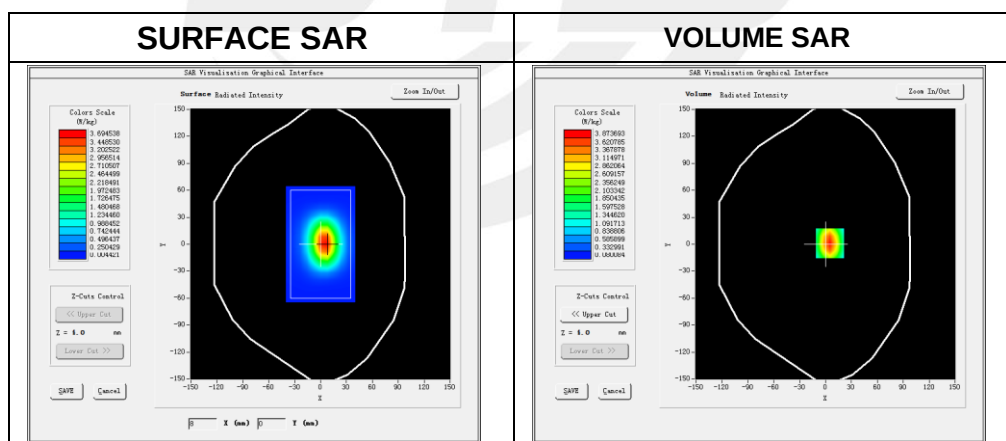
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2023-05-10

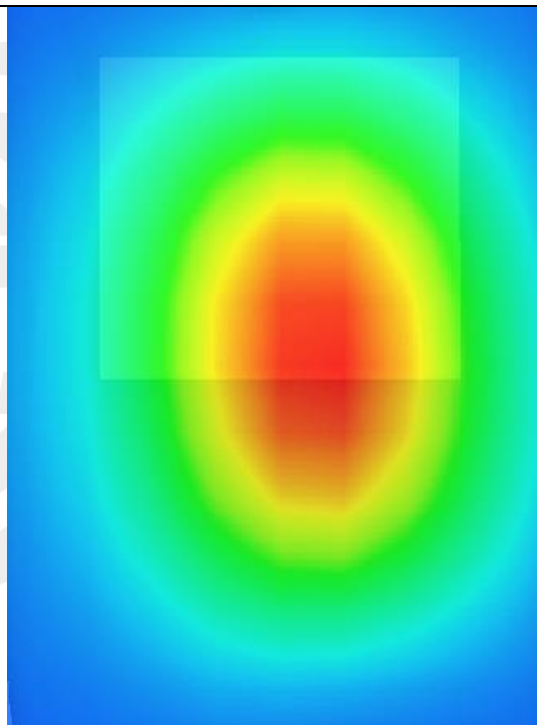
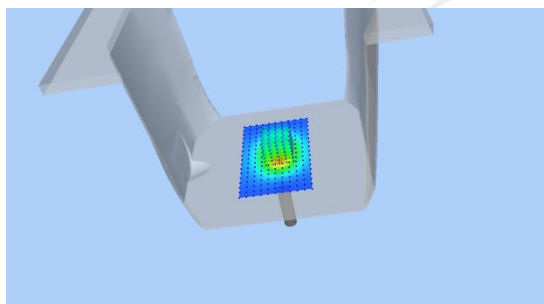
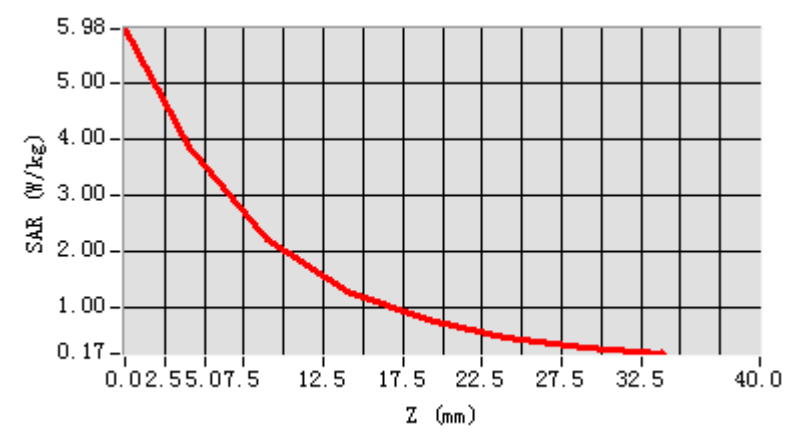
Experimental conditions.

Phantom	Validation plane
Device Position	-
Band	1800MHz
Channels	-
Signal	CW
Frequency (MHz)	1800MHz
Relative permittivity	40.86
Conductivity (S/m)	1.36
Probe	SN 07/21 EPGO352
ConvF	1.60
Crest factor:	1:1

**Maximum location: X=5.00, Y=1.00**

SAR 10g (W/Kg)	2.105394
SAR 1g (W/Kg)	3.809201

Z Axis Scan





System Performance Check Data (1900MHz)

Type: Phone measurement (Complete)

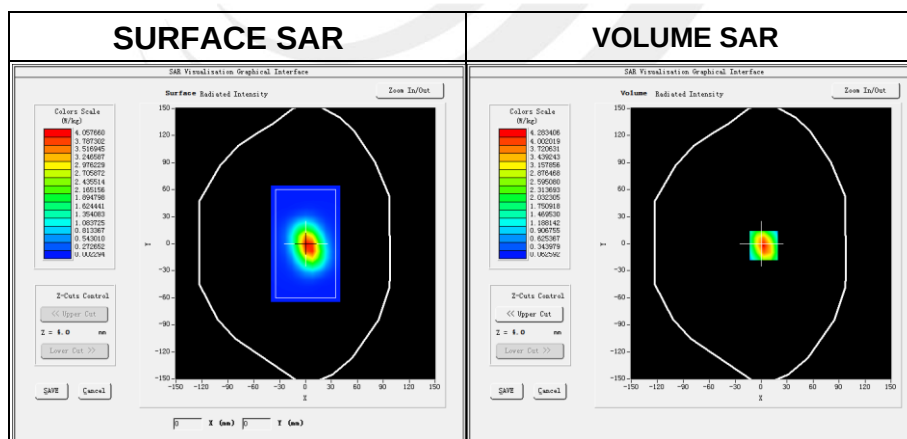
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2023-05-16

Experimental conditions.

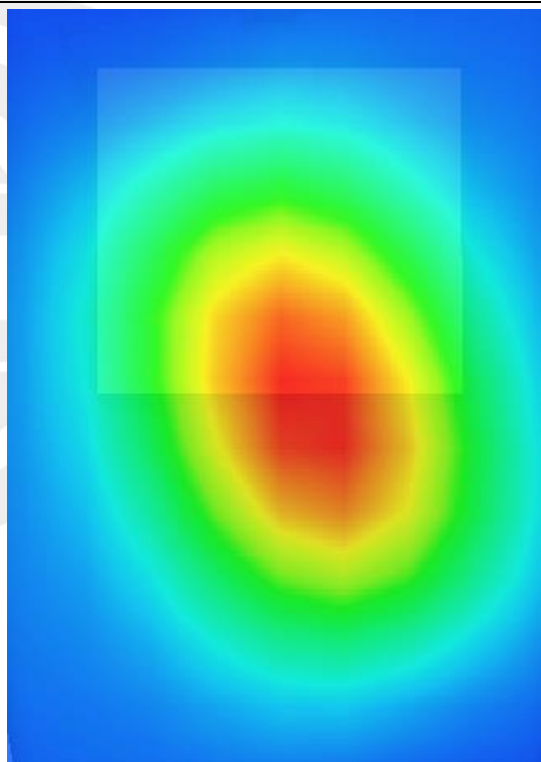
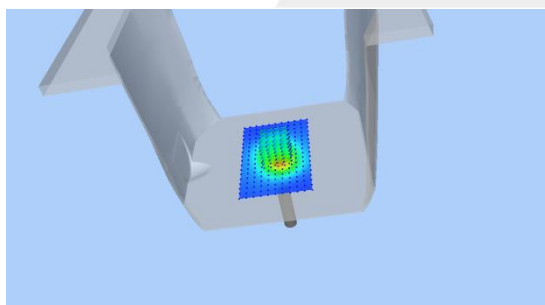
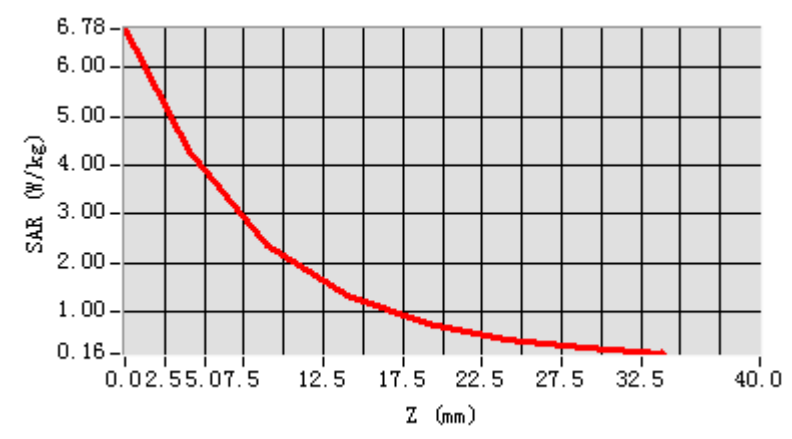
Phantom	Validation plane
Device Position	-
Band	1900MHz
Channels	-
Signal	CW
Frequency (MHz)	1900MHz
Relative permittivity	41.27
Conductivity (S/m)	1.36
Probe	SN 07/21 EPGO352
ConvF:	1.78
Crest factor:	1:1



Maximum location: X=3.00, Y=-2.00

SAR 10g (W/Kg)	1.995377
SAR 1g (W/Kg)	4.083065

Z Axis Scan



**System Performance Check Data (2450MHz)**

Type: Phone measurement (Complete)

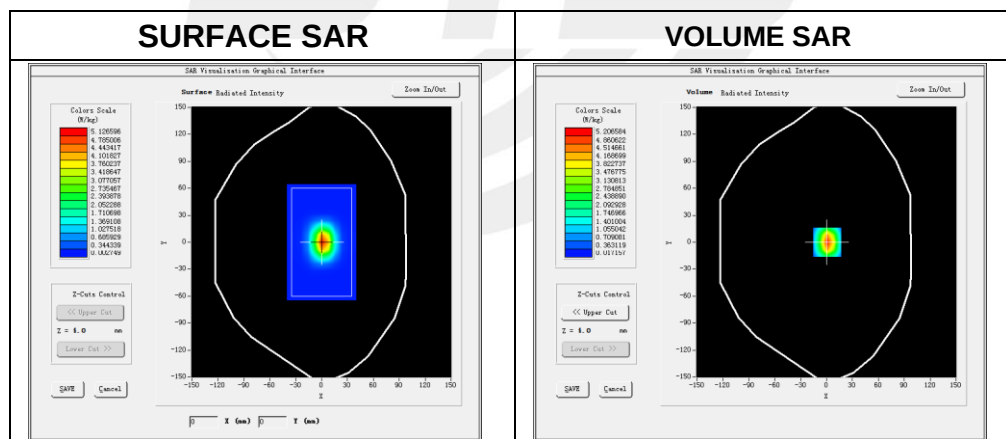
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2023-05-12

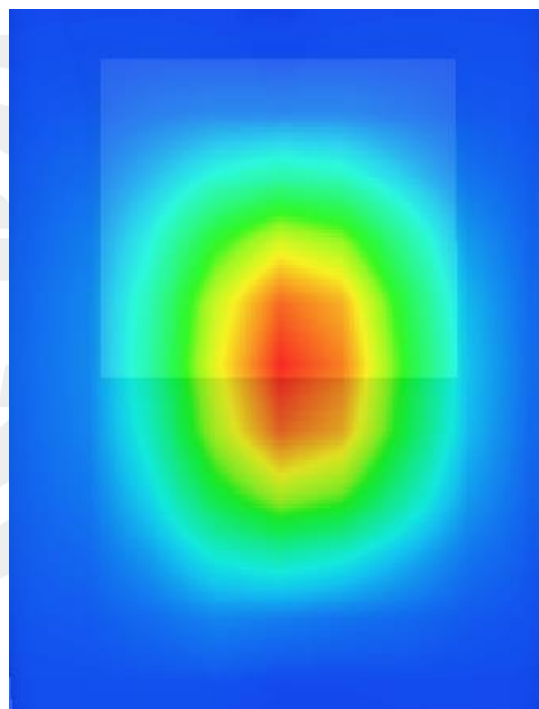
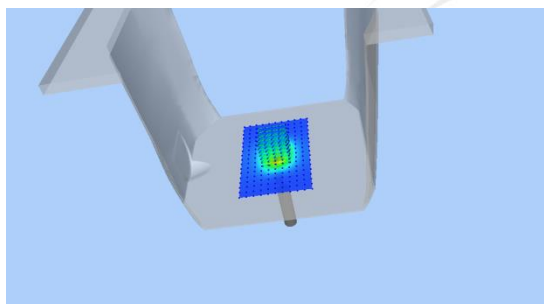
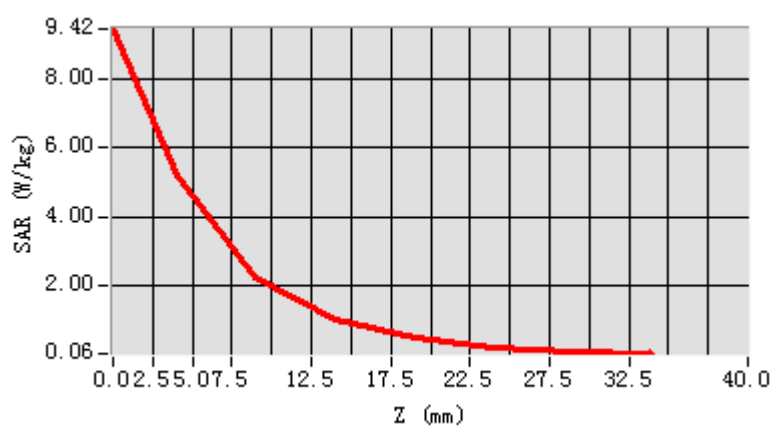
Experimental conditions.

Device Position	Validation plane
Band	2450 MHz
Channels	-
Signal	CW
Frequency (MHz)	2450
Relative permittivity	39.50
Conductivity (S/m)	1.83
Probe	SN 07/21 EPGO352
ConvF	1.75
Crest factor:	1:1

**Maximum location: X=1.00, Y=0.00**

SAR 10g (W/Kg)	2.615310
SAR 1g (W/Kg)	5.253709

Z Axis Scan



**System Performance Check Data(2600MHz)**

Type: Phone measurement (Complete)

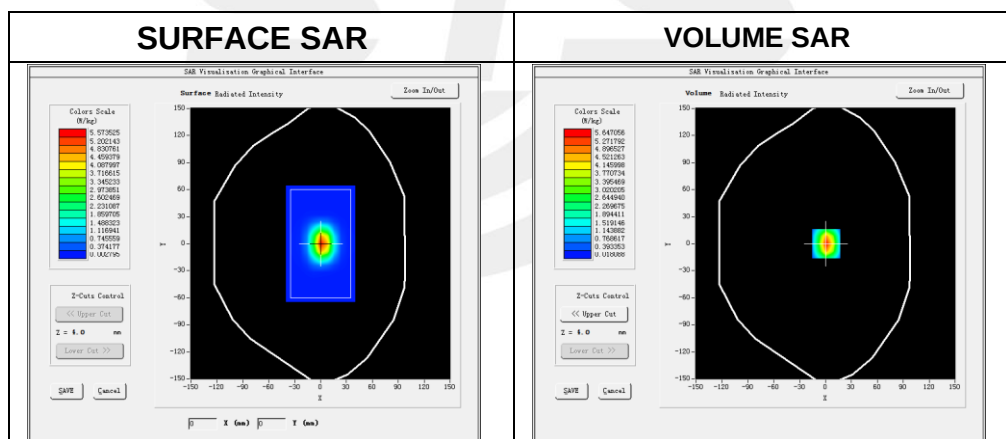
Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2023-05-16

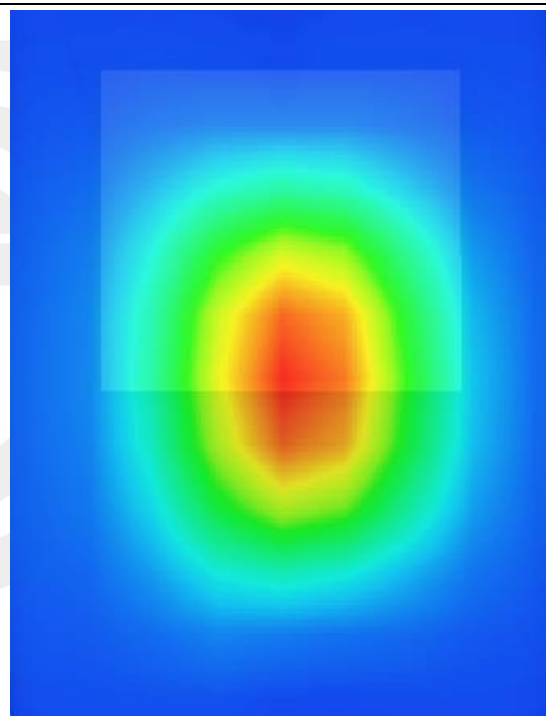
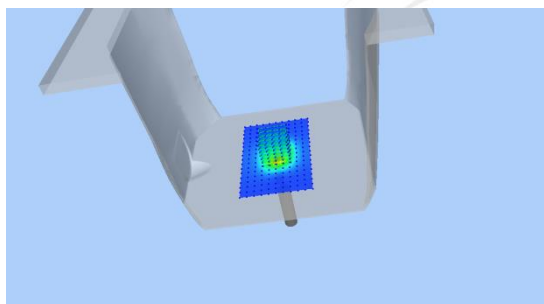
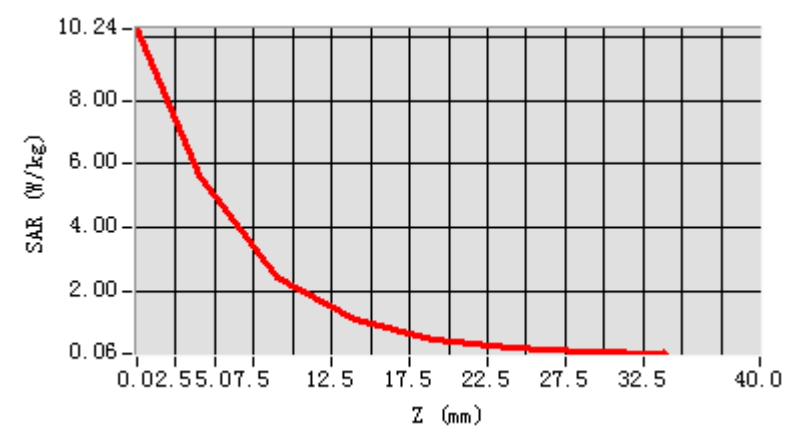
Experimental conditions.

Device Position	Validation plane
Band	2600 MHz
Channels	-
Signal	CW
Frequency (MHz)	2600
Relative permittivity	38.76
Conductivity (S/m)	1.89
Probe	SN 07/21 EPGO352
ConvF	1.63
Crest factor:	1:1

**Maximum location: X=1.00, Y=0.00**

SAR 10g (W/Kg)	2.283812
SAR 1g (W/Kg)	5.695413

Z Axis Scan





System Performance Check Data (5200MHz)

Type: Dipole measurement (Complete)

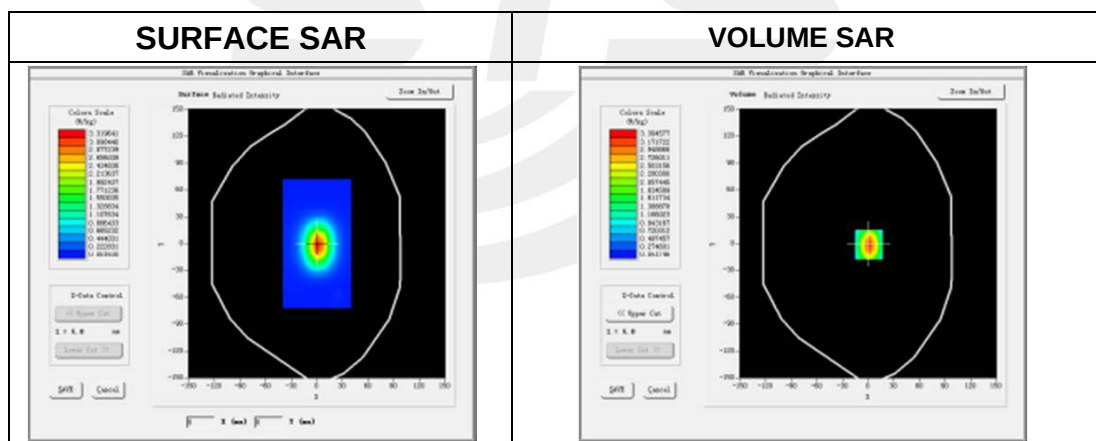
Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2023-05-16

Experimental conditions.

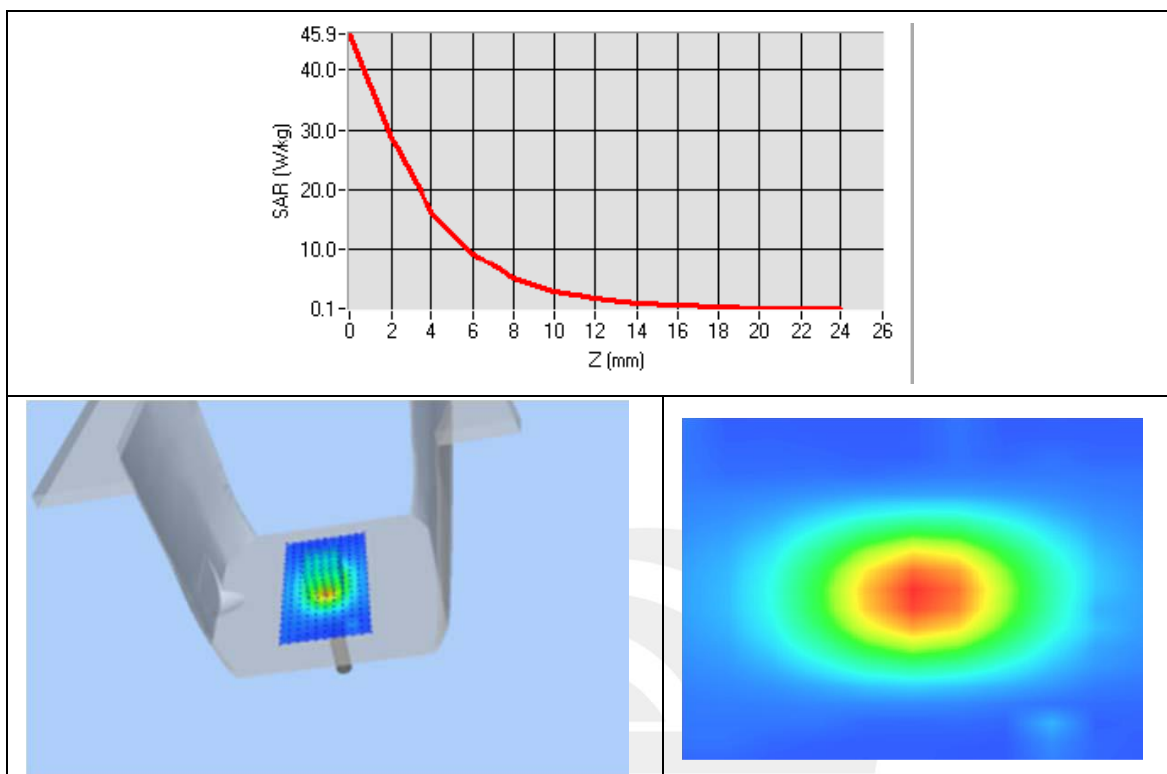
Device Position	Validation plane
Band	5200 MHz
Channels	-
Signal	CW
Frequency (MHz)	5200
Relative permittivity	36.50
Conductivity (S/m)	4.52
Probe	SN 07/21 EPGO352
ConvF	1.47
Crest factor:	1:1



Maximum location: X=7.00, Y=2.00

SAR 10g (W/Kg)	5.798298
SAR 1g (W/Kg)	15.495545

Z Axis Scan





System Performance Check Data (5300MHz)

Type: Dipole measurement (Complete)

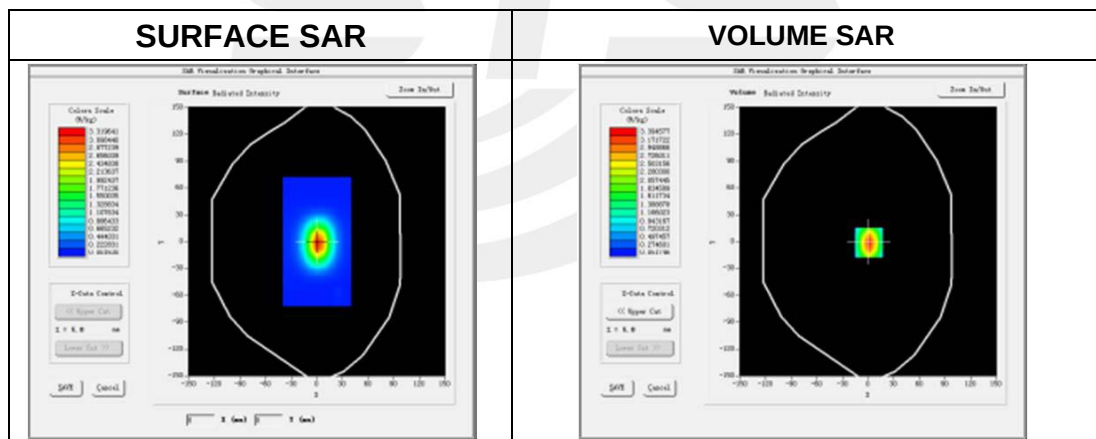
Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2023-05-17

Experimental conditions.

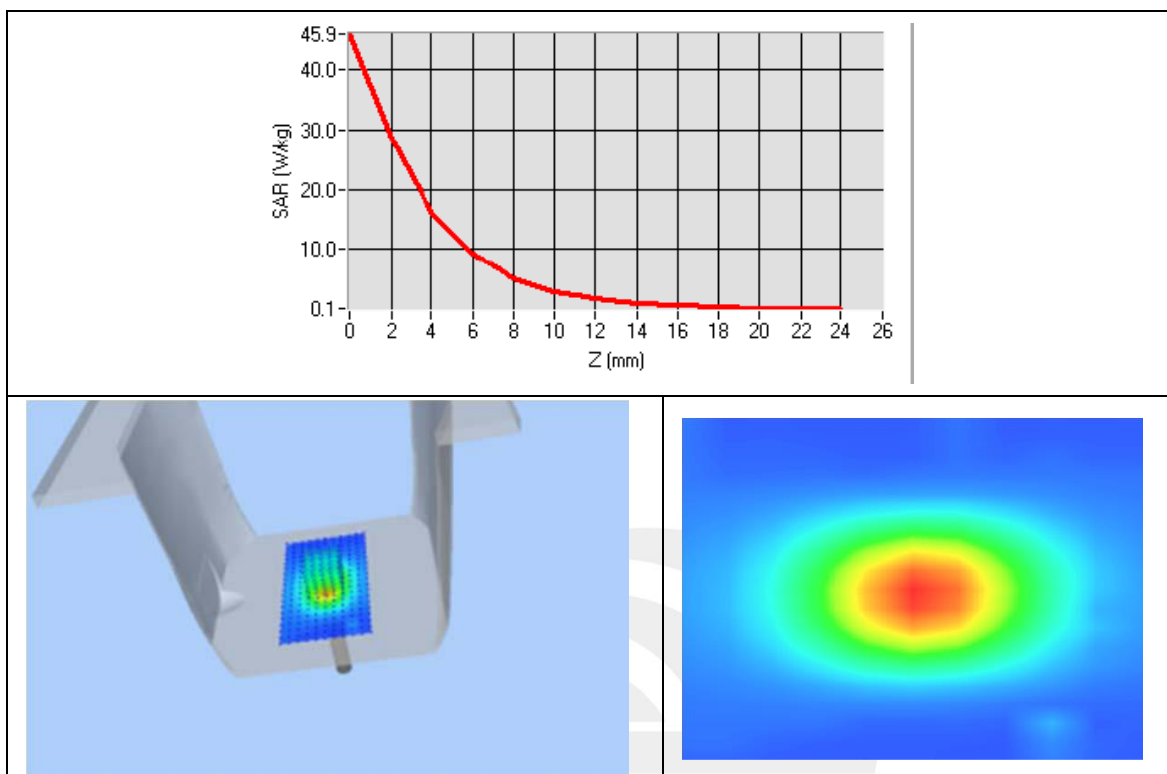
Device Position	Validation plane
Band	5300 MHz
Channels	-
Signal	CW
Frequency (MHz)	5300
Relative permittivity	37.02
Conductivity (S/m)	4.81
Probe	SN 07/21 EPGO352
ConvF	1.65
Crest factor:	1:1



Maximum location: X=7.00, Y=2.00

SAR 10g (W/Kg)	5.437288
SAR 1g (W/Kg)	16.762127

Z Axis Scan



**System Performance Check Data (5600MHz)**

Type: Dipole measurement (Complete)

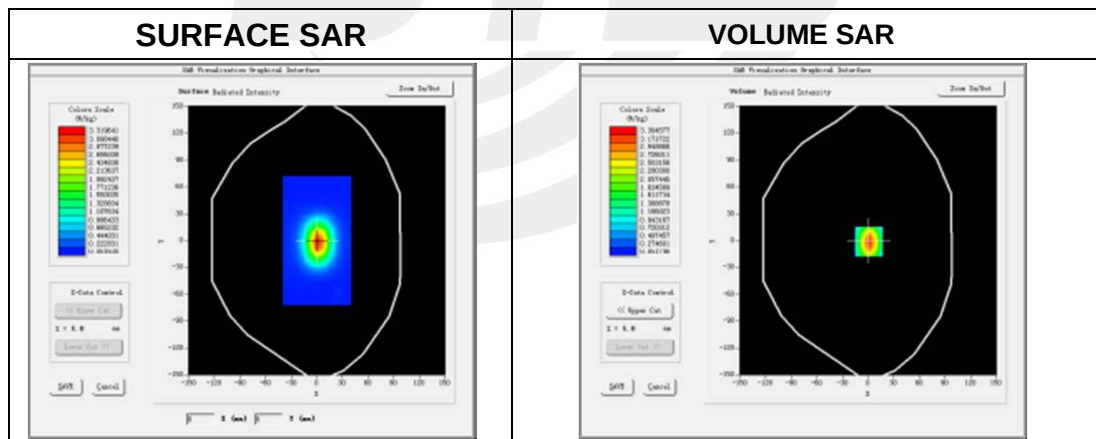
Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2023-05-17

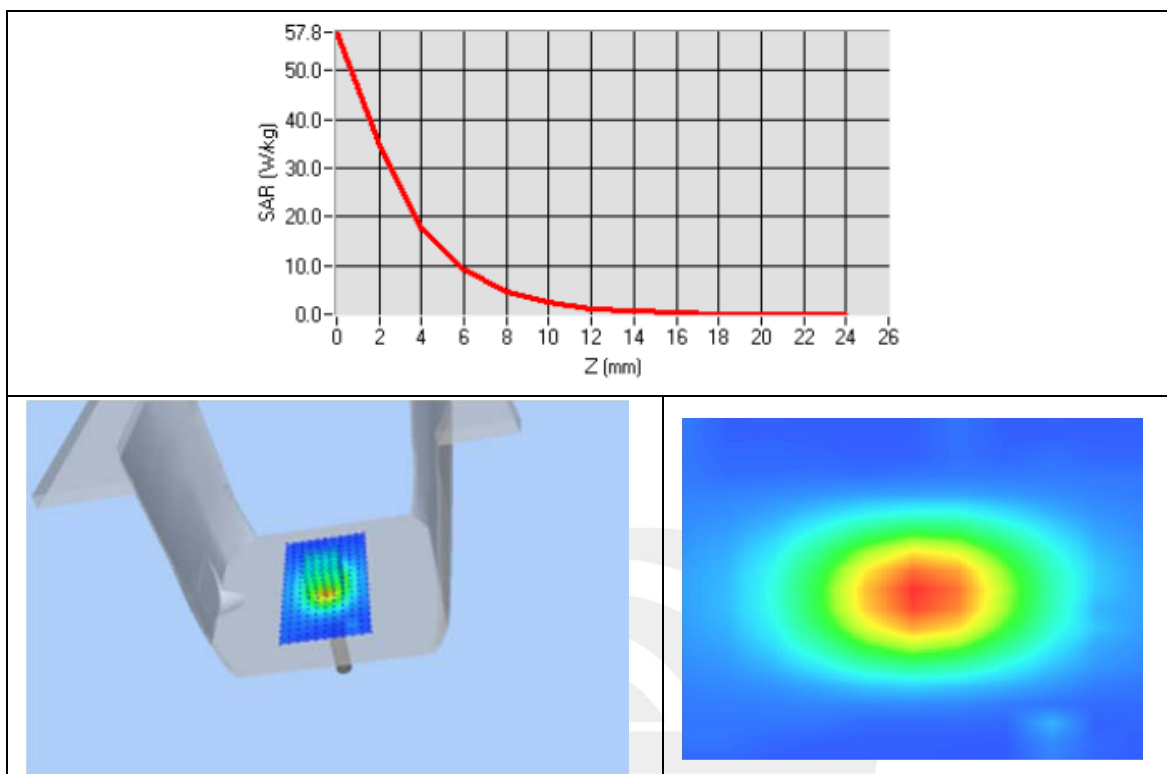
Experimental conditions.

Device Position	Validation plane
Band	5600 MHz
Channels	-
Signal	CW
Frequency (MHz)	5600
Relative permittivity	35.74
Conductivity (S/m)	5.26
Probe	SN 07/21 EPGO352
ConvF	1.74
Crest factor:	1:1

**Maximum location: X=7.00, Y=2.00**

SAR 10g (W/Kg)	5.025109
SAR 1g (W/Kg)	17.998917

Z Axis Scan



**System Performance Check Data (5800MHz)**

Type: Dipole measurement (Complete)

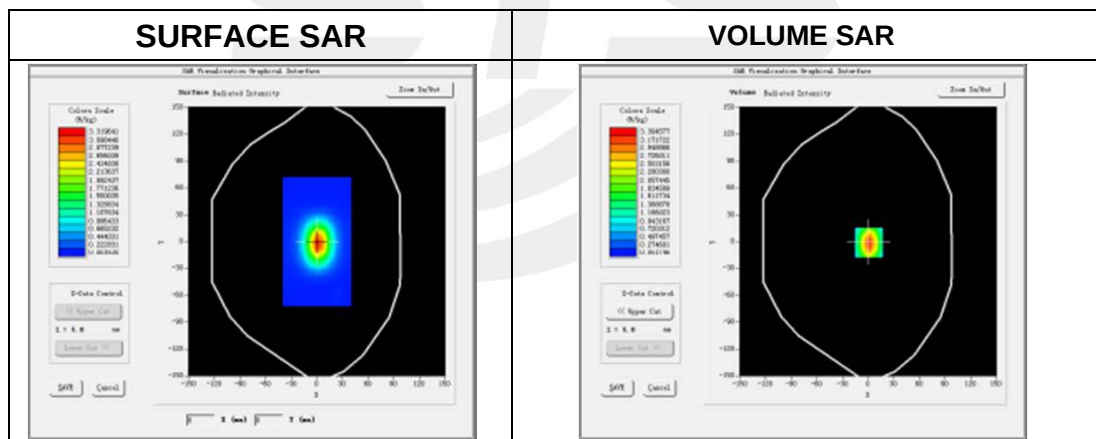
Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2023-05-18

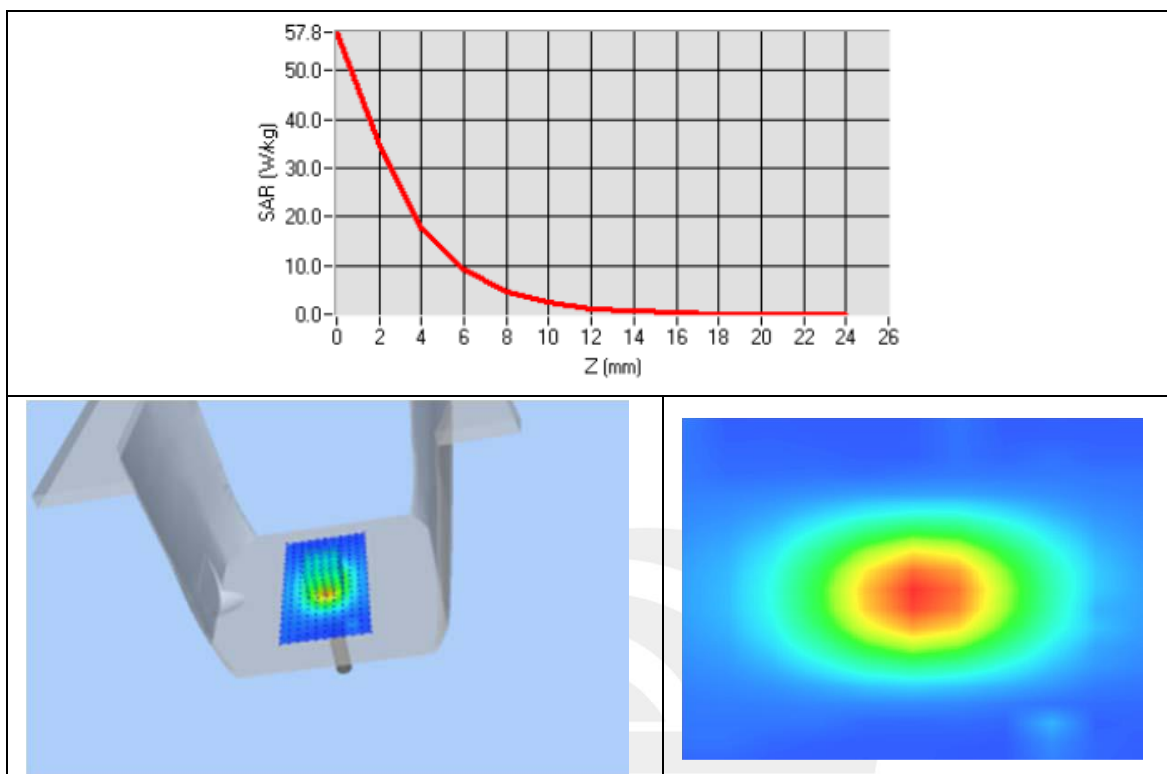
Experimental conditions.

Device Position	Validation plane
Band	5800 MHz
Channels	-
Signal	CW
Frequency (MHz)	5800
Relative permittivity	36.18
Conductivity (S/m)	5.23
Probe	SN 07/21 EPGO352
ConvF	1.64
Crest factor:	1:1

**Maximum location: X=7.00, Y=2.00**

SAR 10g (W/Kg)	6.232341
SAR 1g (W/Kg)	18.493061

Z Axis Scan





Appendix B. SAR Test Plots

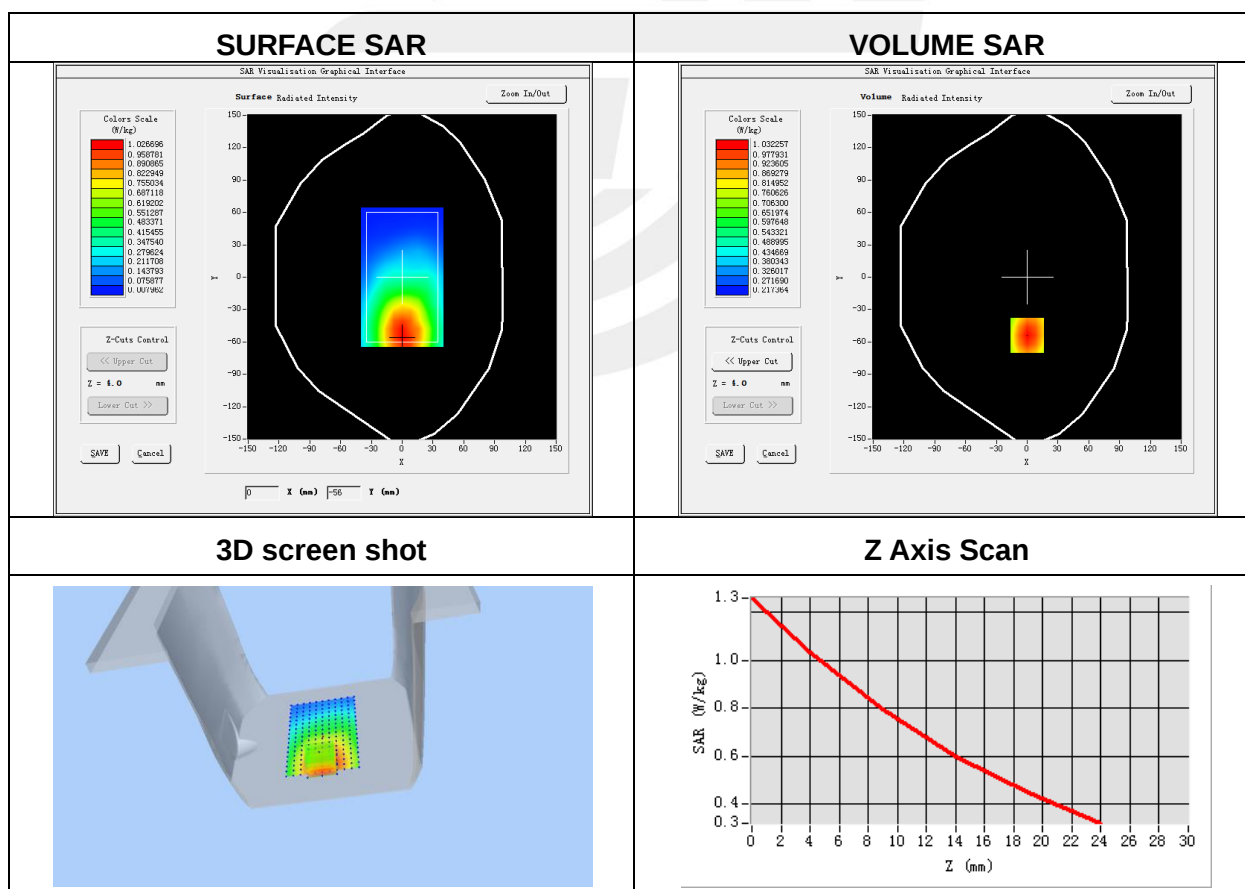
Plot 1: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-09
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	GPRS 850
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	824.2
Relative permittivity (real part)	41.74
Conductivity (S/m)	0.94

Maximum location: X=0.00, Y=-54.00

SAR Peak: 1.26 W/kg

SAR 10g (W/Kg)	0.708806
SAR 1g (W/Kg)	0.990995





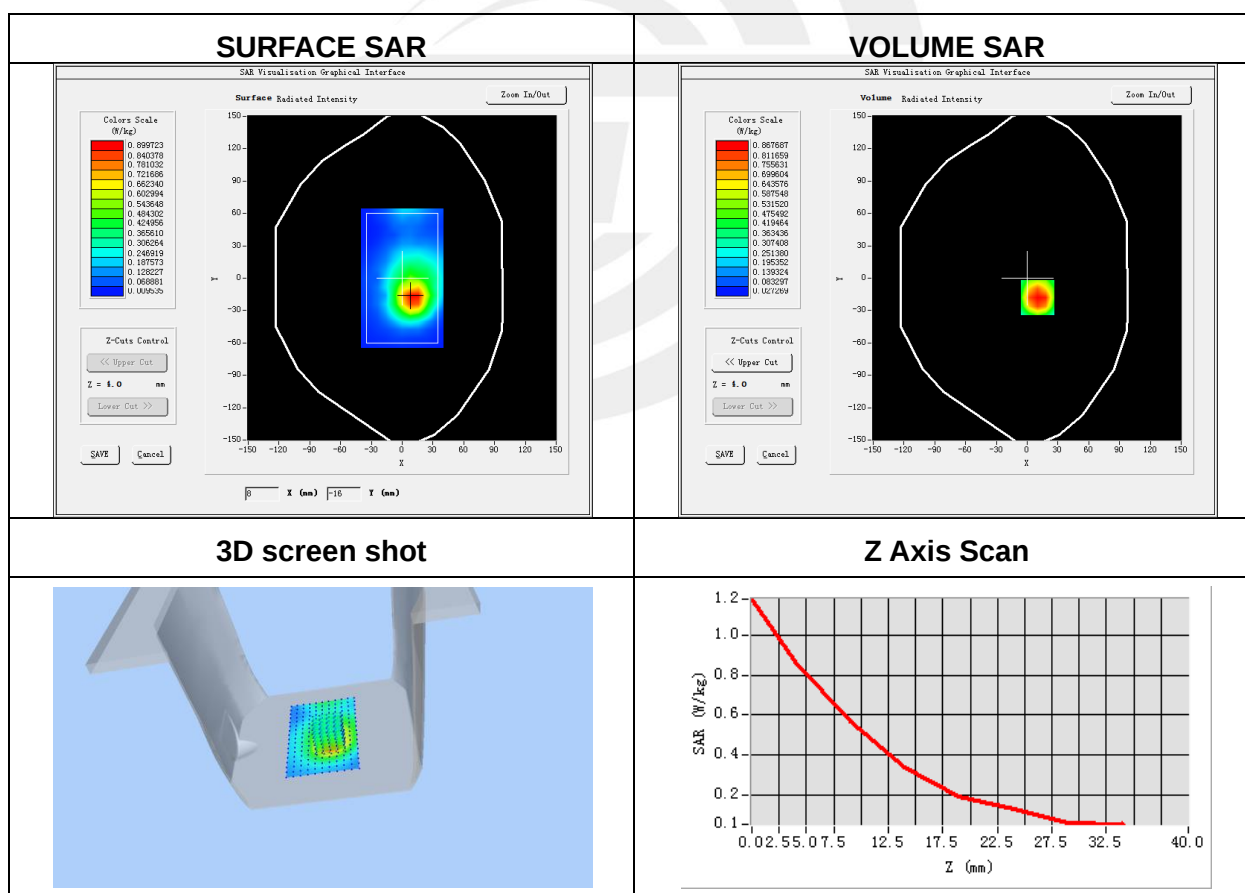
Plot 2: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-11
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Bottom Side
Band	GPRS 1900
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	1880
Relative permittivity (real part)	41.02
Conductivity (S/m)	1.43

Maximum location: X=10.00, Y=-18.00

SAR Peak: 1.34 W/kg

SAR 10g (W/Kg)	0.464494
SAR 1g (W/Kg)	0.826945





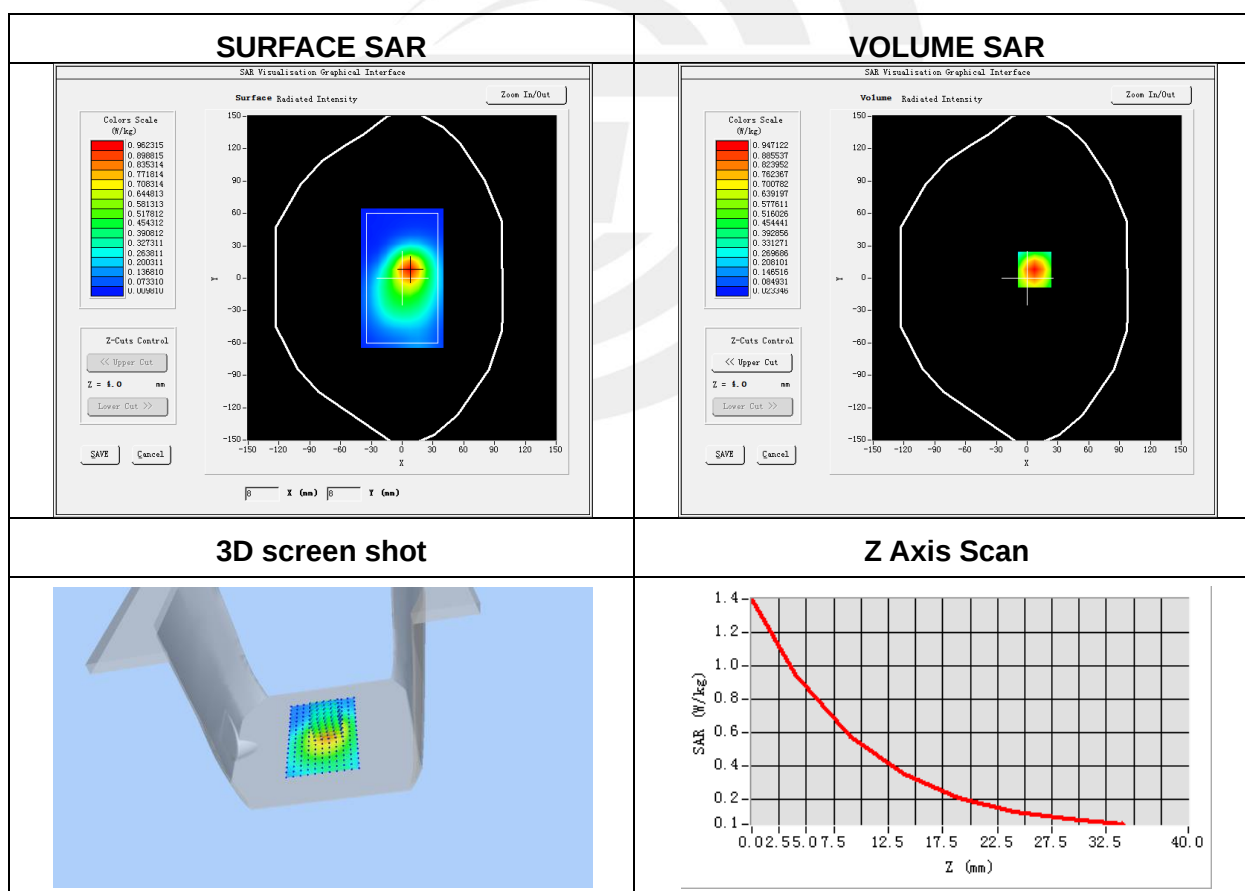
Plot 3: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-11
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Bottom Side
Band	WCDMA II
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1850.4
Relative permittivity (real part)	40.48
Conductivity (S/m)	1.38

Maximum location: X=7.00, Y=8.00

SAR Peak: 1.40 W/kg

SAR 10g (W/Kg)	0.508206
SAR 1g (W/Kg)	0.903853





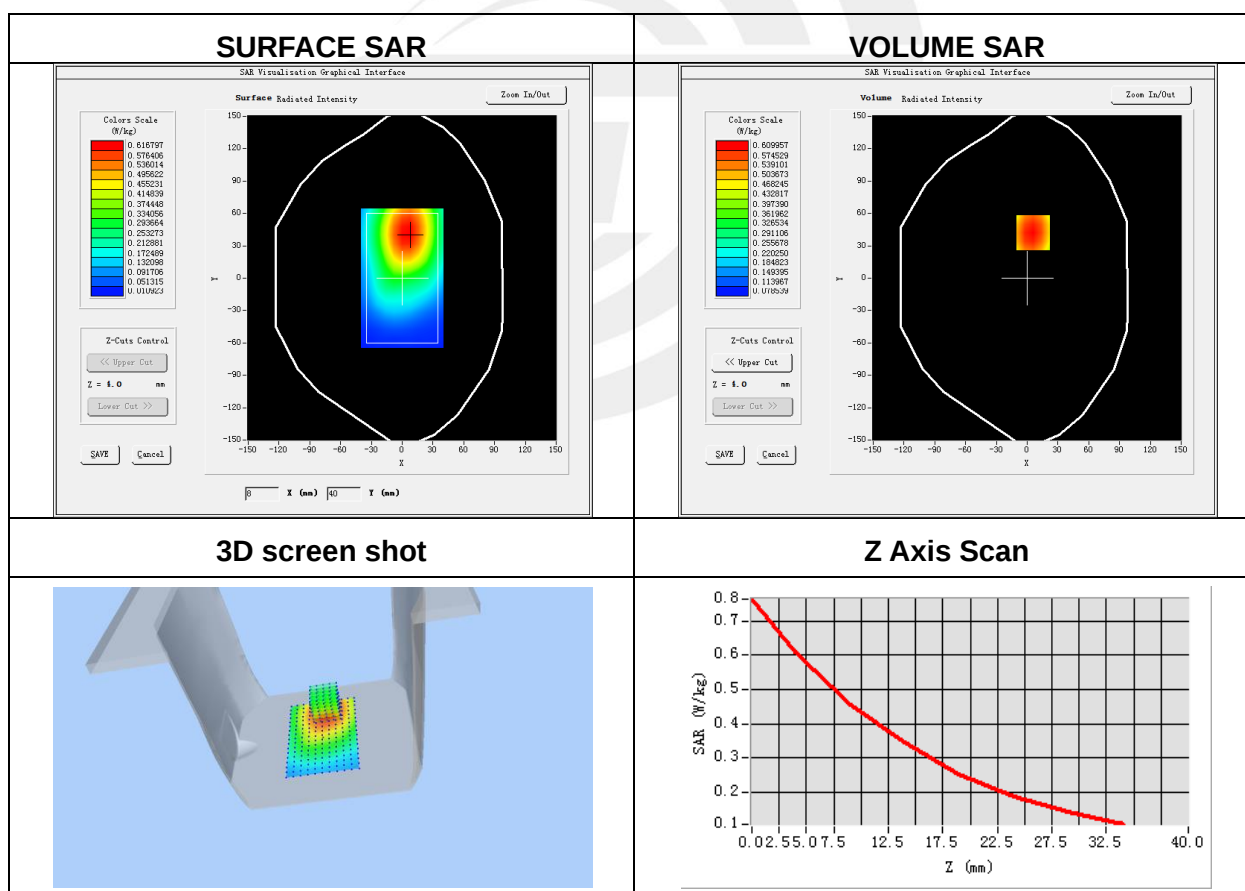
Plot 4: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-09
Probe	SN 07/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	WCDMA V
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	846.6
Relative permittivity (real part)	42.08
Conductivity (S/m)	0.89

Maximum location: X=6.00, Y=42.00

SAR Peak: 0.77 W/kg

SAR 10g (W/Kg)	0.422166
SAR 1g (W/Kg)	0.592509



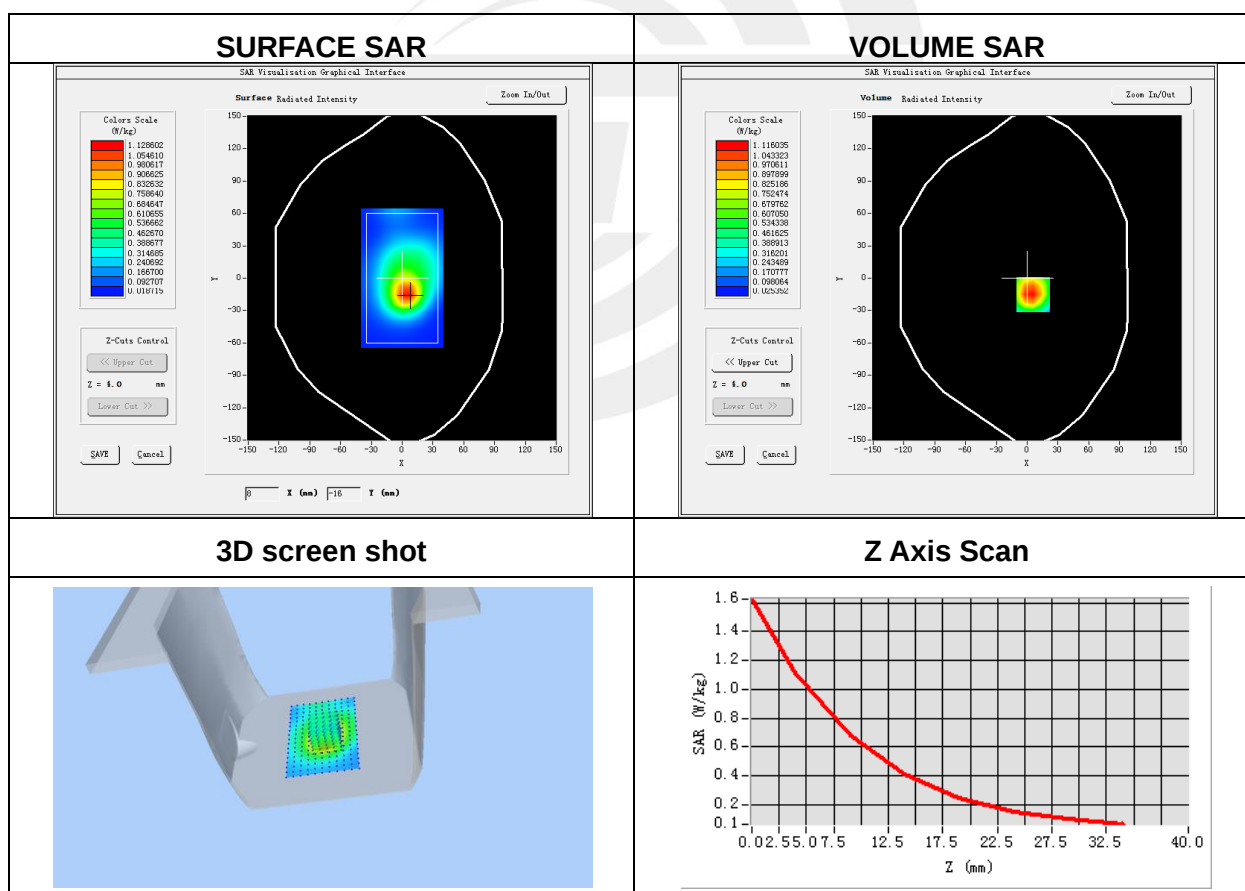

Plot 5: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-11
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Bottom Side
Band	LTE B2
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1860
Relative permittivity (real part)	39.19
Conductivity (S/m)	1.46

Maximum location: X=6.00, Y=-15.00

SAR Peak: 1.65 W/kg

SAR 10g (W/Kg)	0.595637
SAR 1g (W/Kg)	1.069507



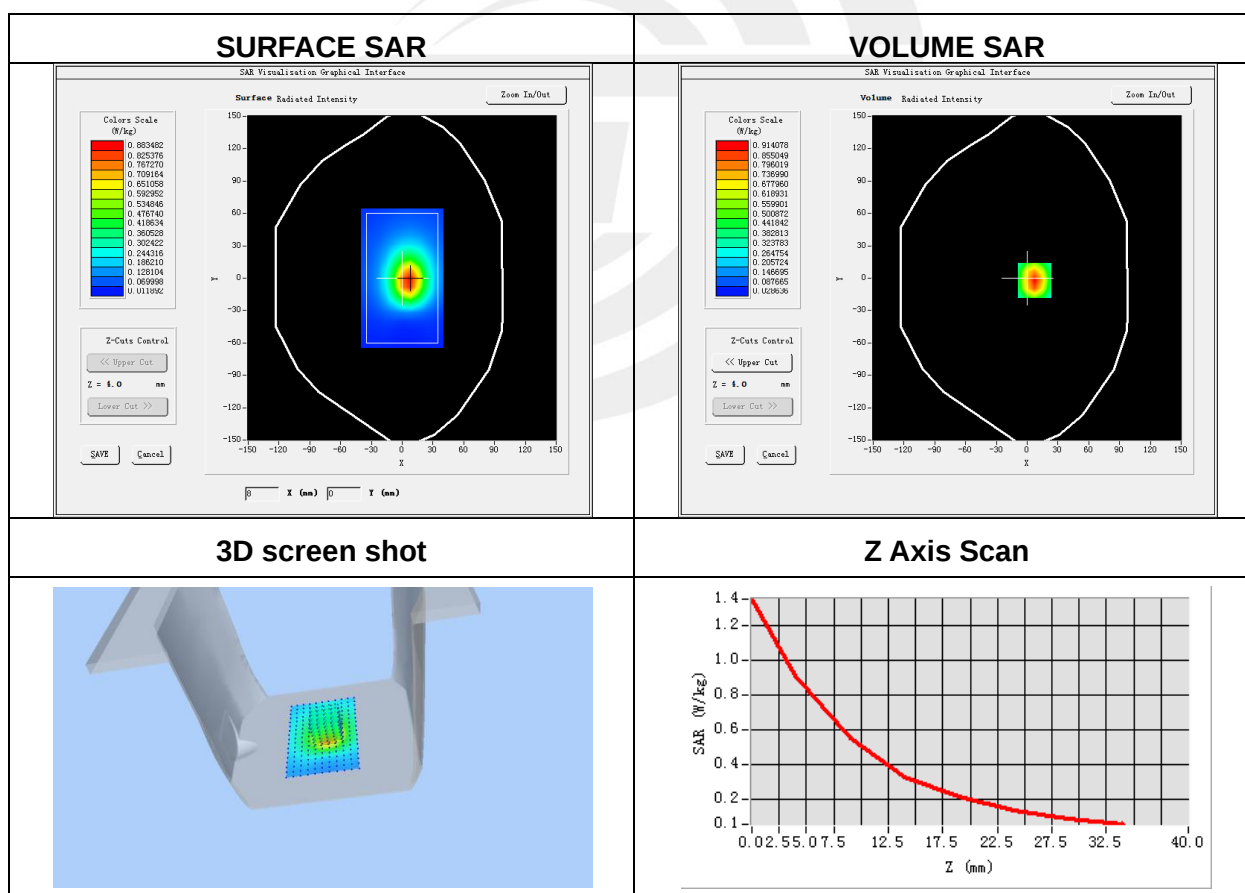

Plot 6: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-10
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Bottom Side
Band	LTE B4
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1732.5
Relative permittivity (real part)	40.77
Conductivity (S/m)	1.38

Maximum location: X=7.00, Y=-2.00

SAR Peak: 1.37 W/kg

SAR 10g (W/Kg)	0.472395
SAR 1g (W/Kg)	0.856262



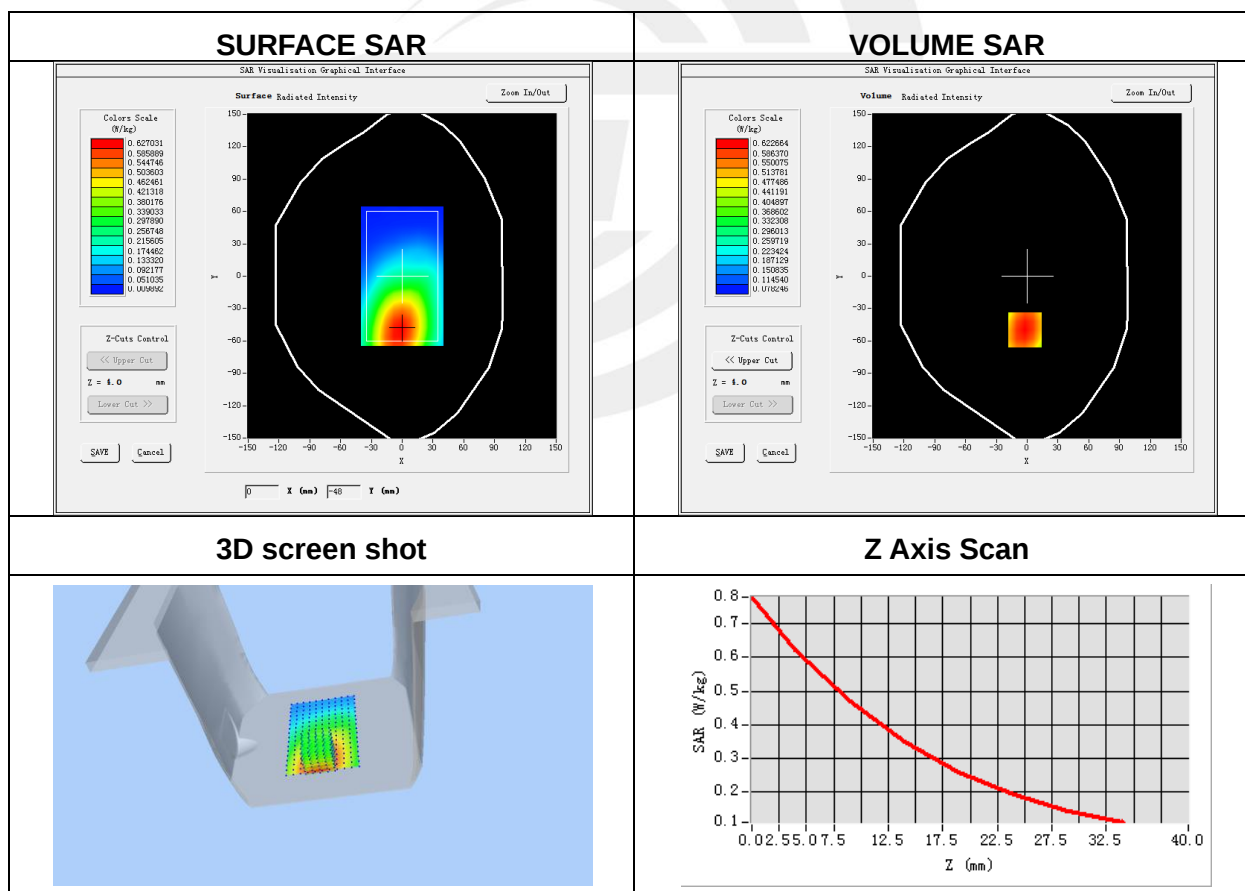
Plot 7: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-09
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE B5
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	844
Relative permittivity (real part)	41.13
Conductivity (S/m)	0.88

Maximum location: X=-2.00, Y=-50.00

SAR Peak: 0.78 W/kg

SAR 10g (W/Kg)	0.433530
SAR 1g (W/Kg)	0.605085



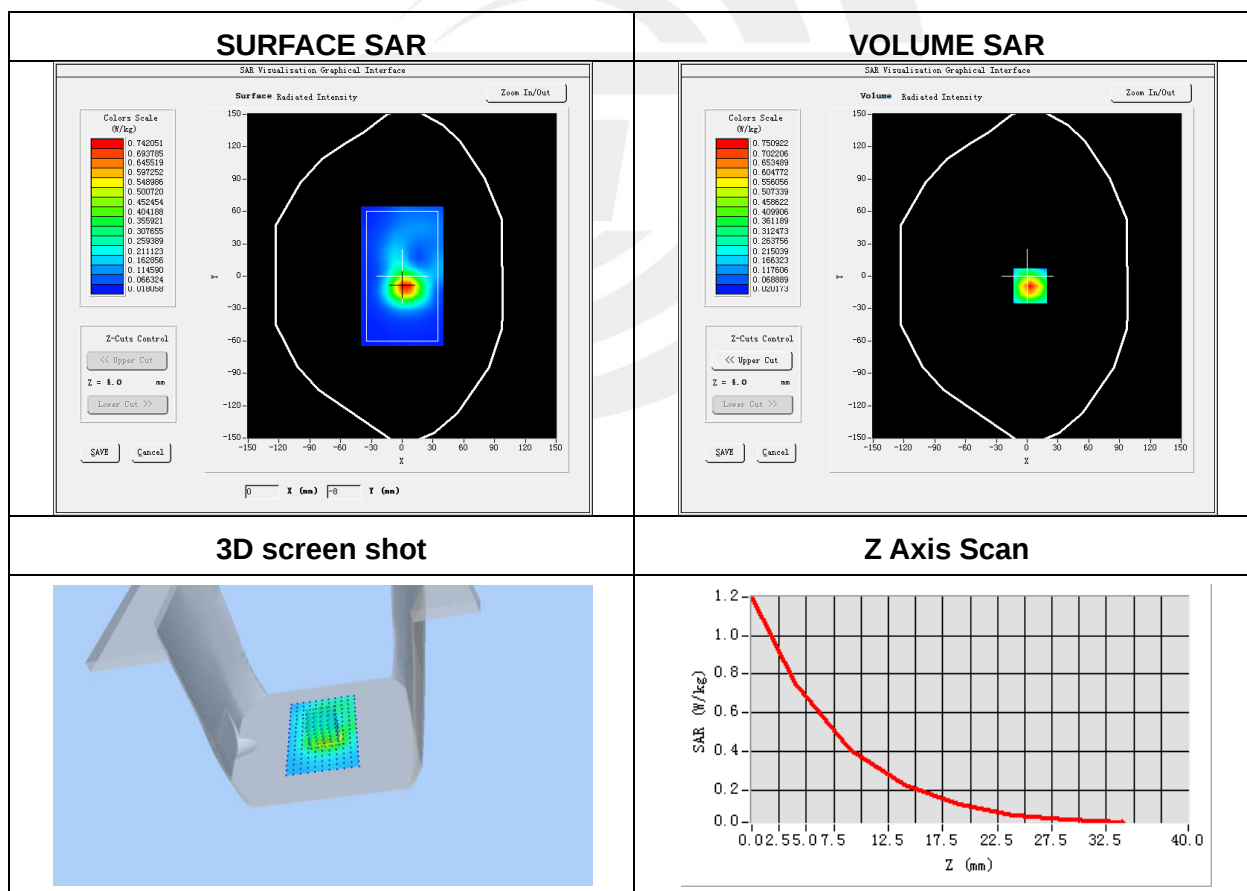
Plot 8: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-16
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE B7
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	2535
Relative permittivity (real part)	40.37
Conductivity (S/m)	1.86

Maximum location: X=3.00, Y=-9.00

SAR Peak: 1.19 W/kg

SAR 10g (W/Kg)	0.328904
SAR 1g (W/Kg)	0.687416





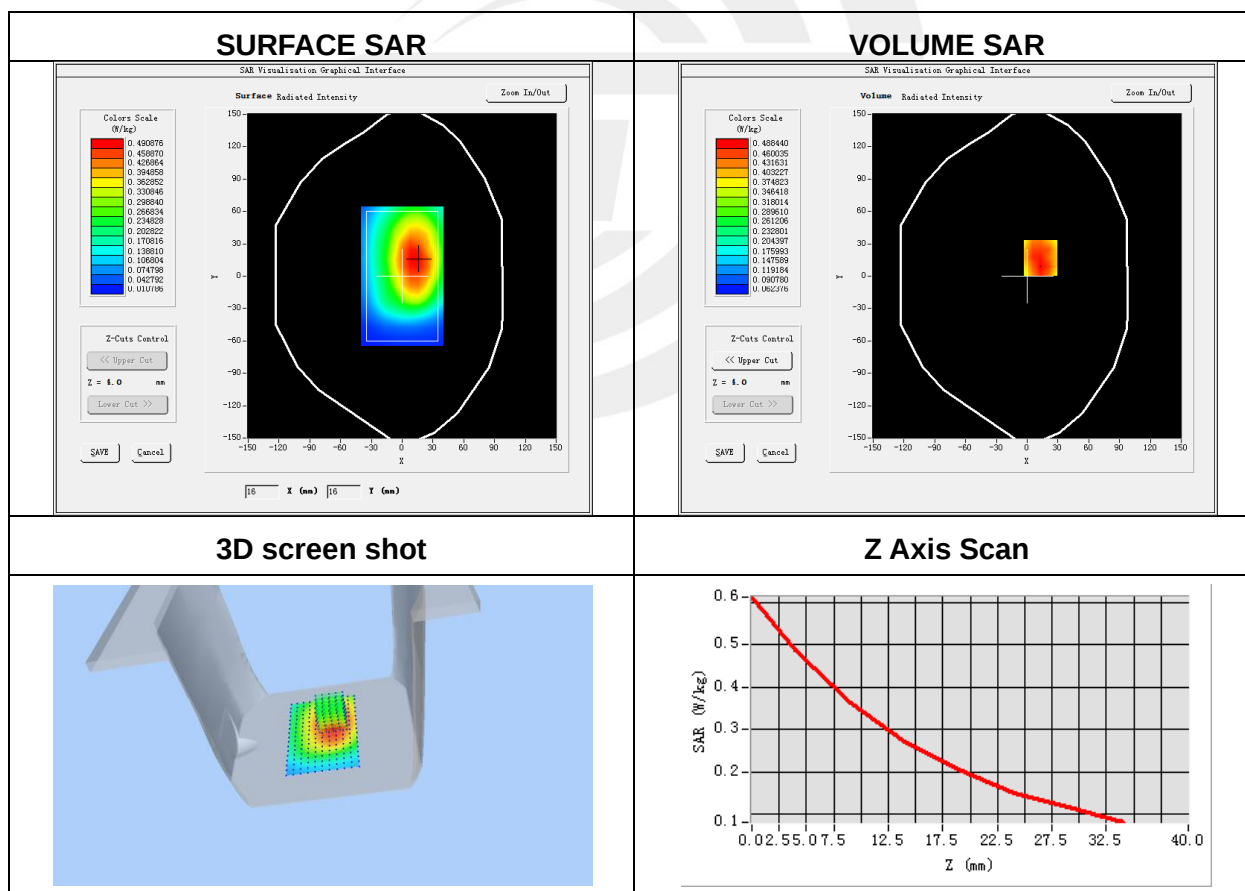
Plot 9: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-08
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE B12
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	707.5
Relative permittivity (real part)	42.96
Conductivity (S/m)	0.91

Maximum location: X=13.00, Y=17.00

SAR Peak: 0.62 W/kg

SAR 10g (W/Kg)	0.342791
SAR 1g (W/Kg)	0.478741





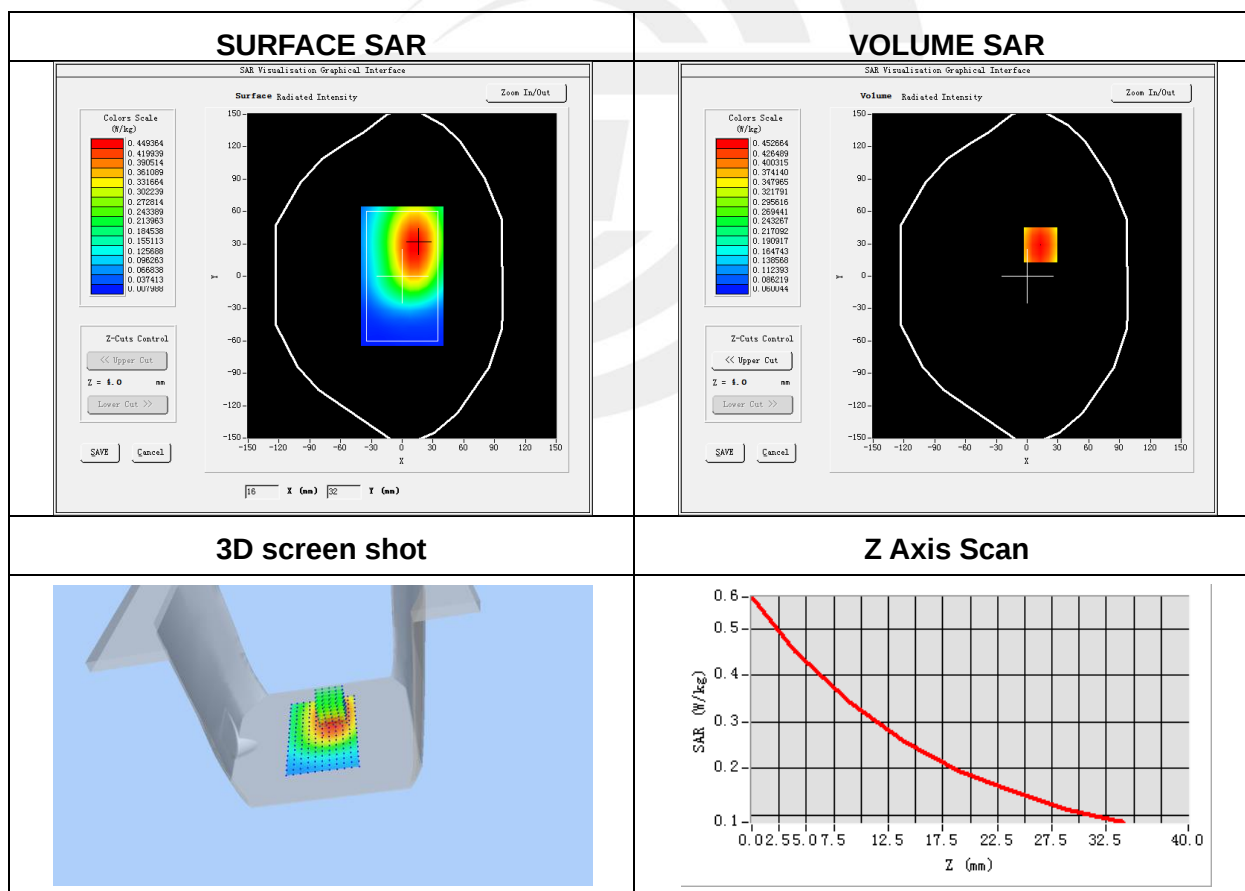
Plot 10: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-08
Probe	SN 07/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE B17
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	709
Relative permittivity (real part)	42.39
Conductivity (S/m)	0.85

Maximum location: X=13.00, Y=29.00

SAR Peak: 0.57 W/kg

SAR 10g (W/Kg)	0.322489
SAR 1g (W/Kg)	0.446974



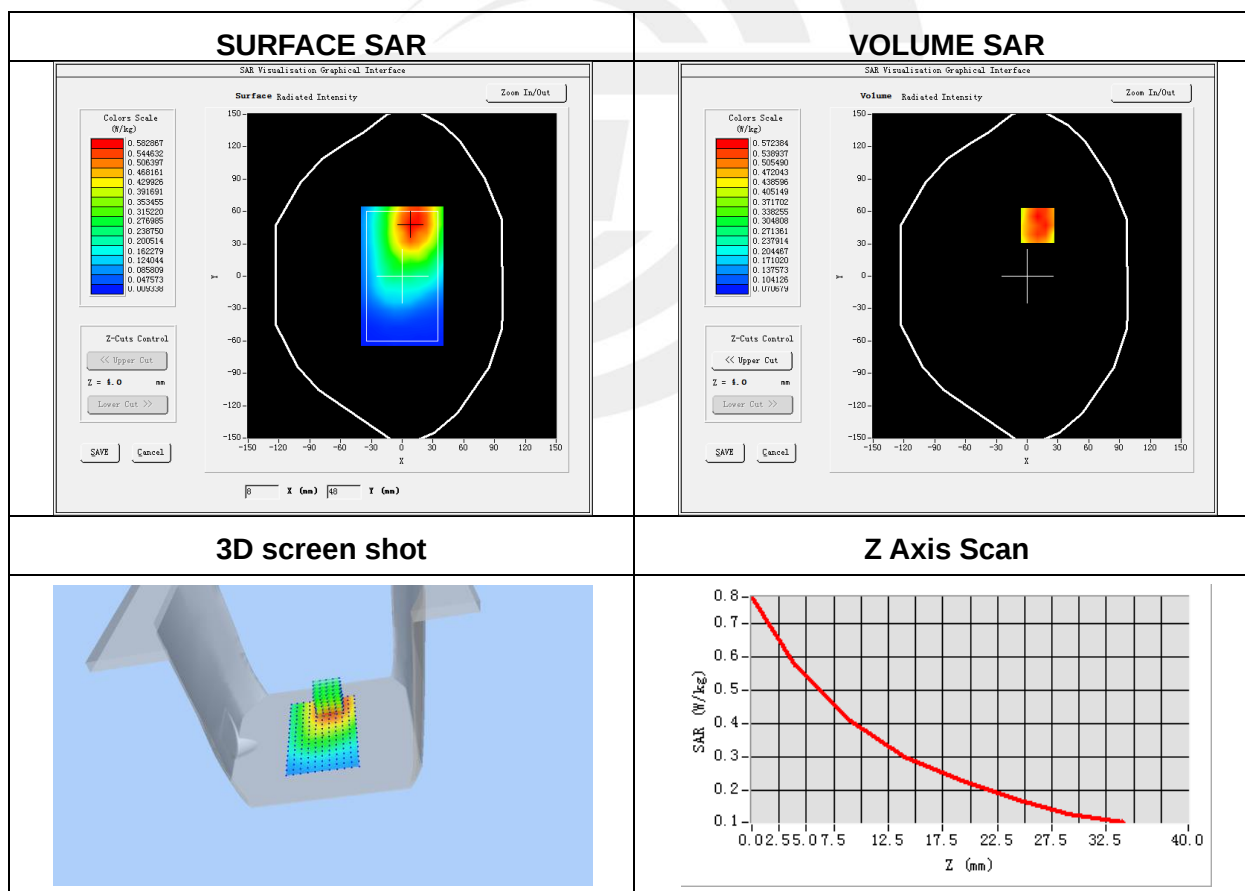
Plot 11: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-09
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE B26
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	831.5
Relative permittivity (real part)	41.19
Conductivity (S/m)	0.88

Maximum location: X=10.00, Y=47.00

SAR Peak: 0.76 W/kg

SAR 10g (W/Kg)	0.386524
SAR 1g (W/Kg)	0.542823



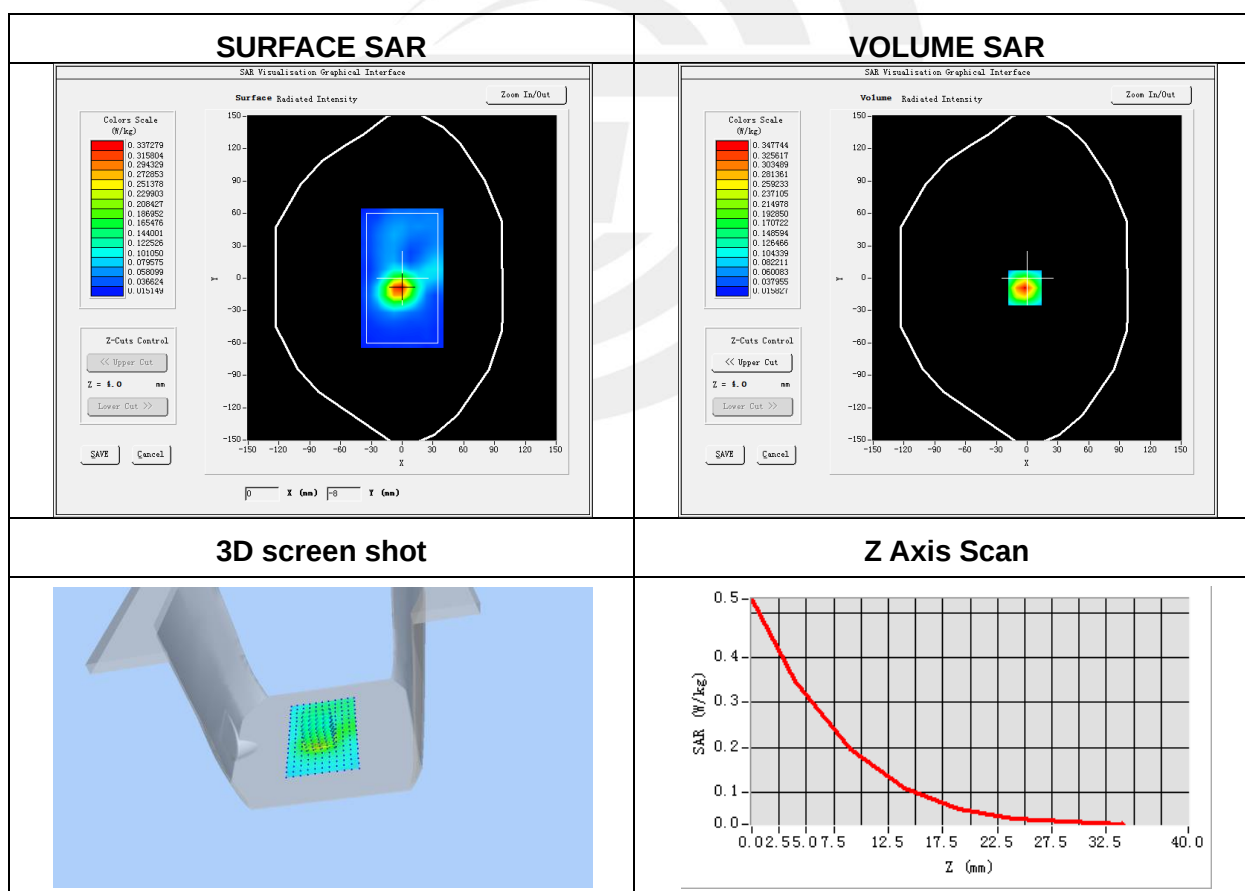
Plot 12: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-16
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Bottom Side
Band	LTE B38
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	2595
Relative permittivity (real part)	39.95
Conductivity (S/m)	1.99

Maximum location: X=-2.00, Y=-9.00

SAR Peak: 0.53 W/kg

SAR 10g (W/Kg)	0.155238
SAR 1g (W/Kg)	0.317432



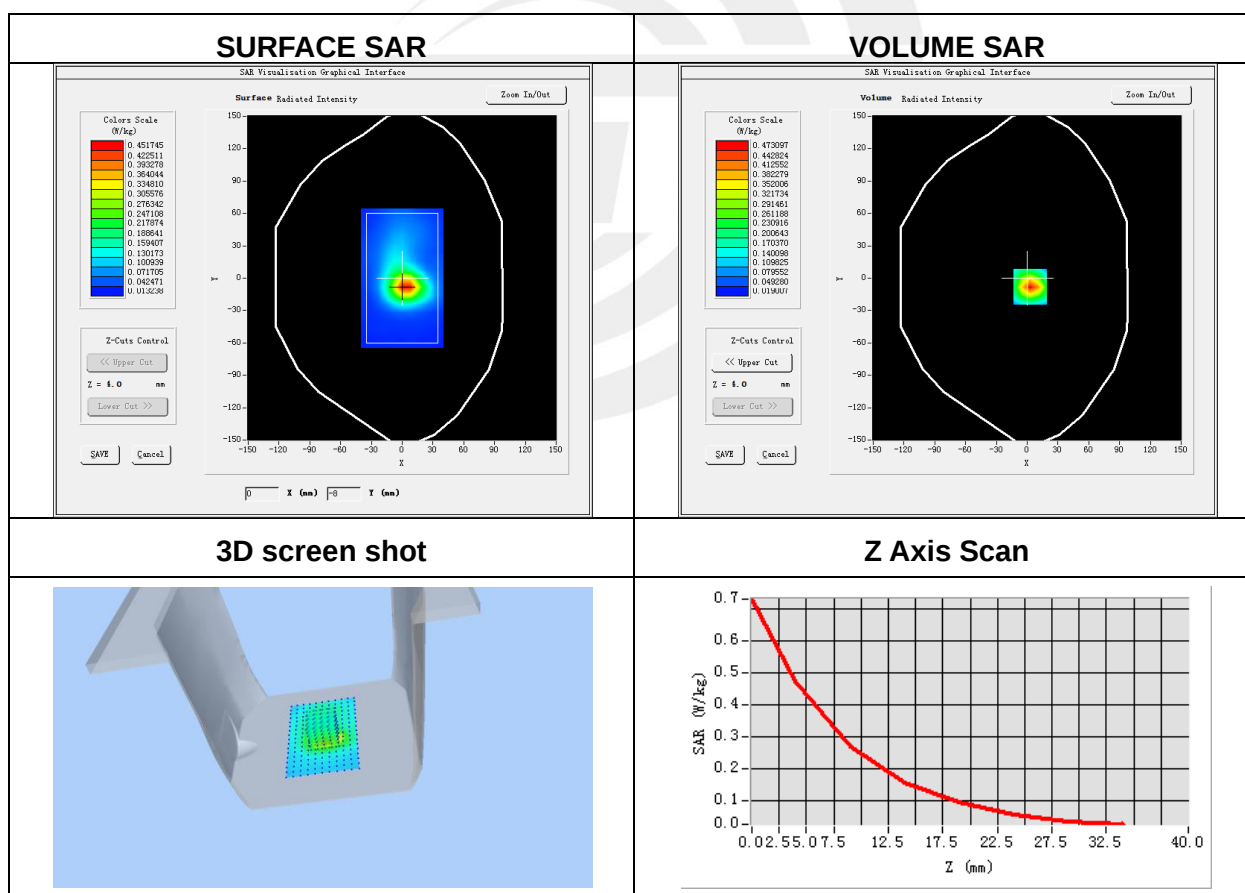
Plot 13: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-12
Probe	SN 07/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	LTE B40
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	2390
Relative permittivity (real part)	40.12
Conductivity (S/m)	1.72

Maximum location: X=3.00, Y=-8.00

SAR Peak: 0.72 W/kg

SAR 10g (W/Kg)	0.216661
SAR 1g (W/Kg)	0.432231



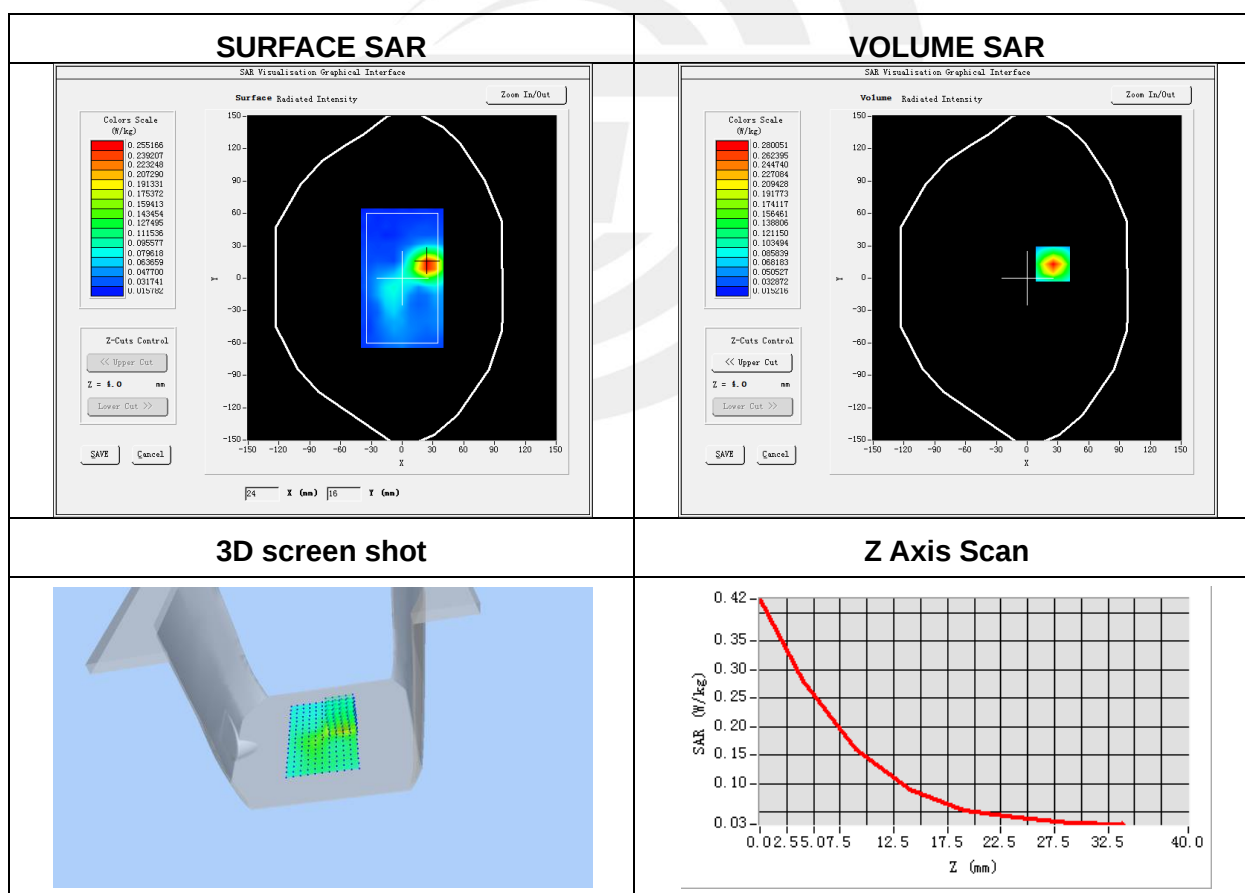
Plot 14: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-16
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Bottom Side
Band	LTE B41
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	2605
Relative permittivity (real part)	40.23
Conductivity (S/m)	1.98

Maximum location: X=25.00, Y=13.00

SAR Peak: 0.42 W/kg

SAR 10g (W/Kg)	0.126699
SAR 1g (W/Kg)	0.252724





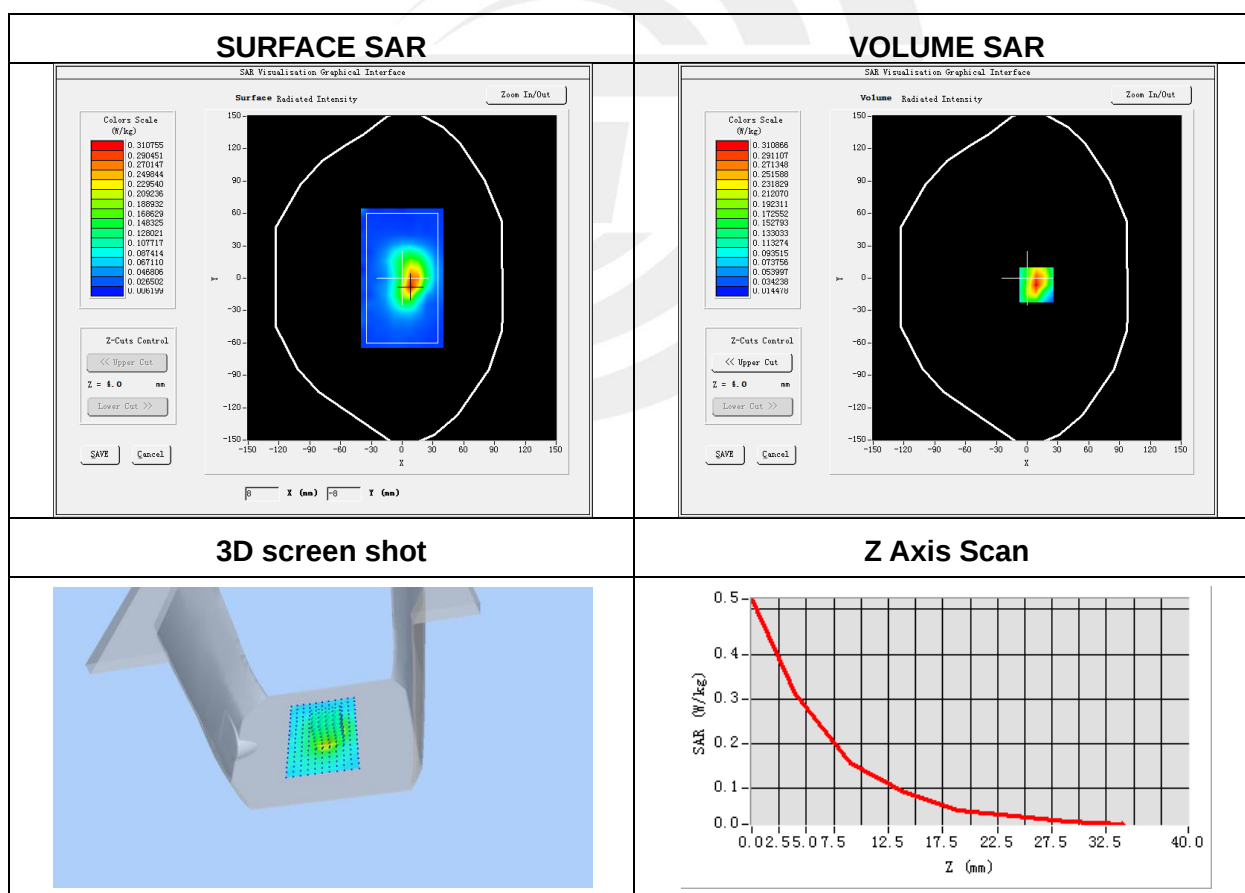
Plot 15: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-12
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Top Side
Band	2.4G WLAN
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2437
Relative permittivity (real part)	40.08
Conductivity (S/m)	1.78

Maximum location: X=9.00, Y=-6.00

SAR Peak: 0.52 W/kg

SAR 10g (W/Kg)	0.125360
SAR 1g (W/Kg)	0.144256



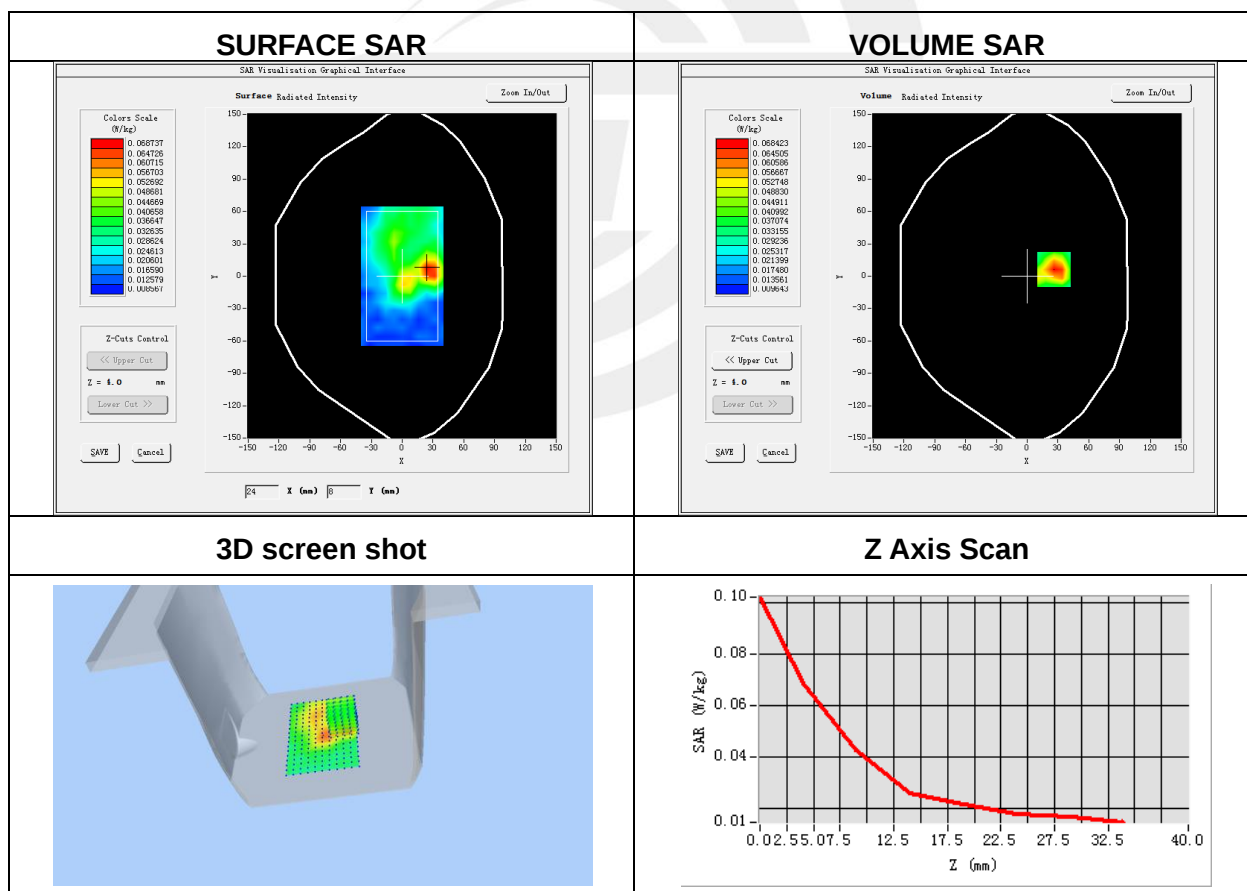

Plot 15: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-12
Probe	SN 07/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	5x5x7, dx=8mm, dy=8mm, dz=5mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	BT
Signal	GFSK (Crest factor: 1.0)
Frequency (MHz)	2480
Relative permittivity (real part)	39.39
Conductivity (S/m)	1.80

Maximum location: X=26.00, Y=6.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.038707
SAR 1g (W/Kg)	0.065638



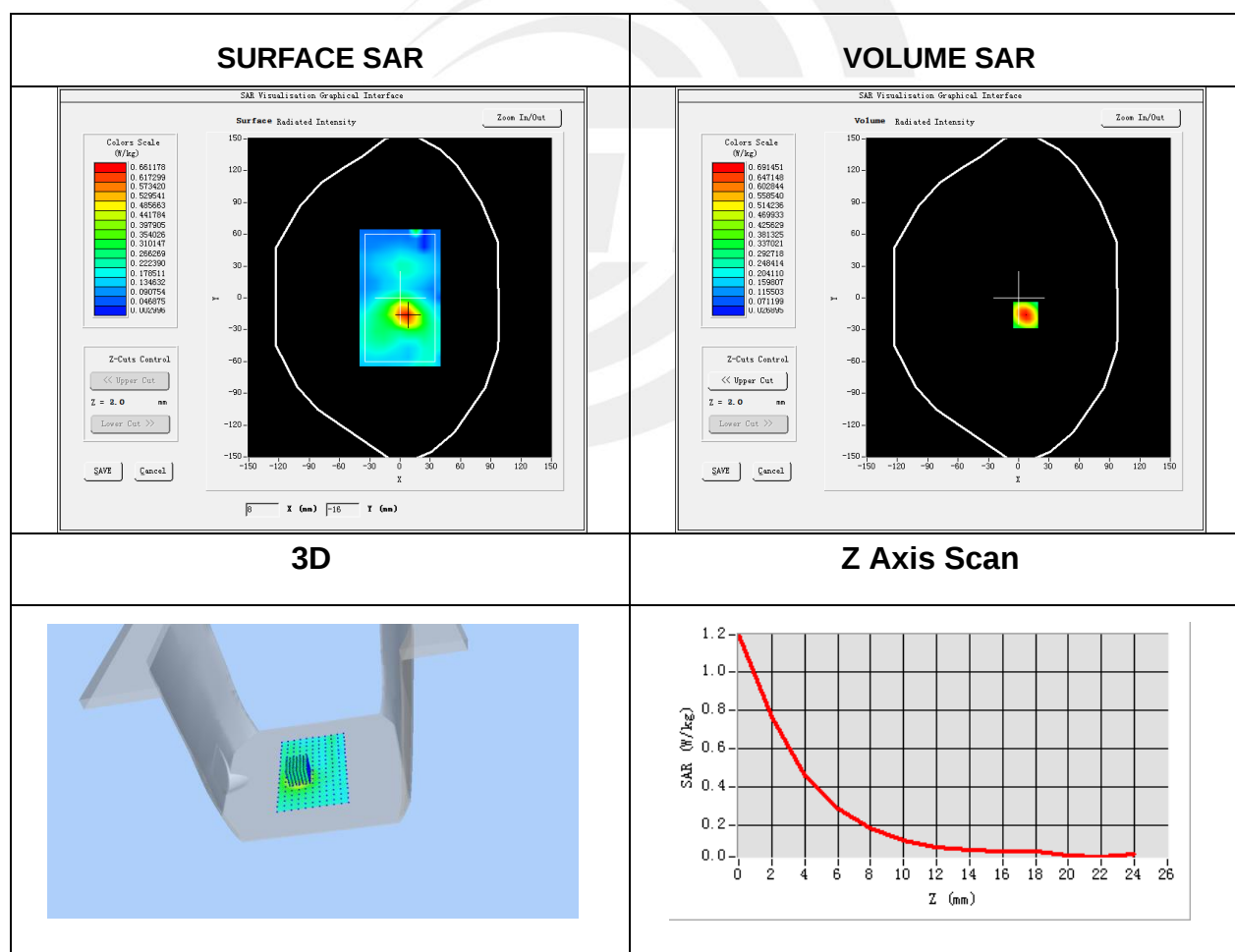
Plot 16: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-16
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Top Side
Band	IEEE 802.11a ISM
Signal	802.11 n-HT20 (Crest factor: 1.0)
Frequency (MHz)	5180
Relative permittivity (real part)	36.50
Conductivity (S/m)	4.50

Maximum location: X=7.00, Y=-16.00

SAR Peak: 1.12 W/kg

SAR 10g (W/Kg)	0.211487
SAR 1g (W/Kg)	0.438629



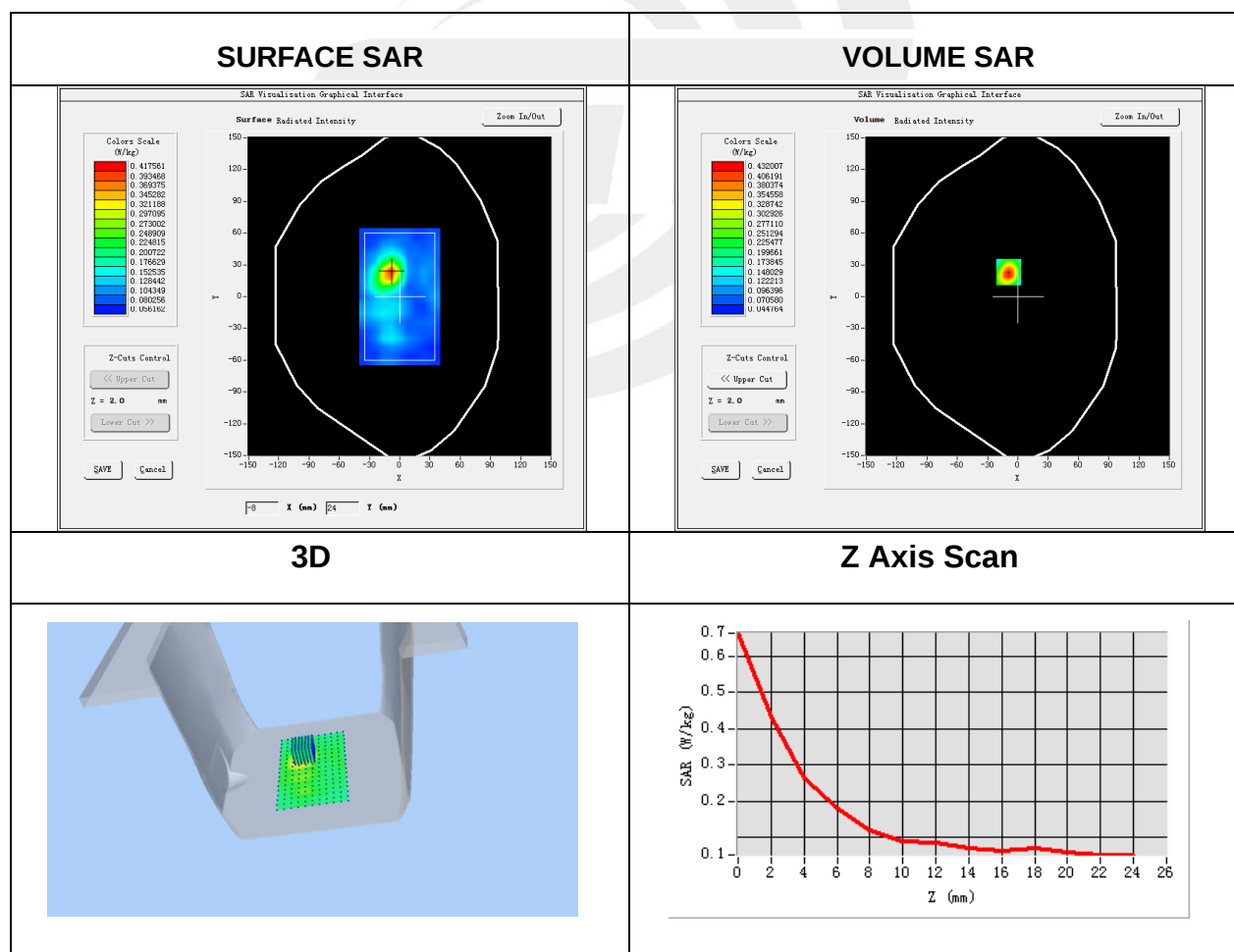
Plot 17: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-17
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	IEEE 802.11a ISM
Signal	IEEE802.a (Crest factor: 1.0)
Frequency (MHz)	5260
Relative permittivity (real part)	36.21
Conductivity (S/m)	4.67

Maximum location: X=-9.00, Y=23.00

SAR Peak: 0.69 W/kg

SAR 10g (W/Kg)	0.138510
SAR 1g (W/Kg)	0.275573



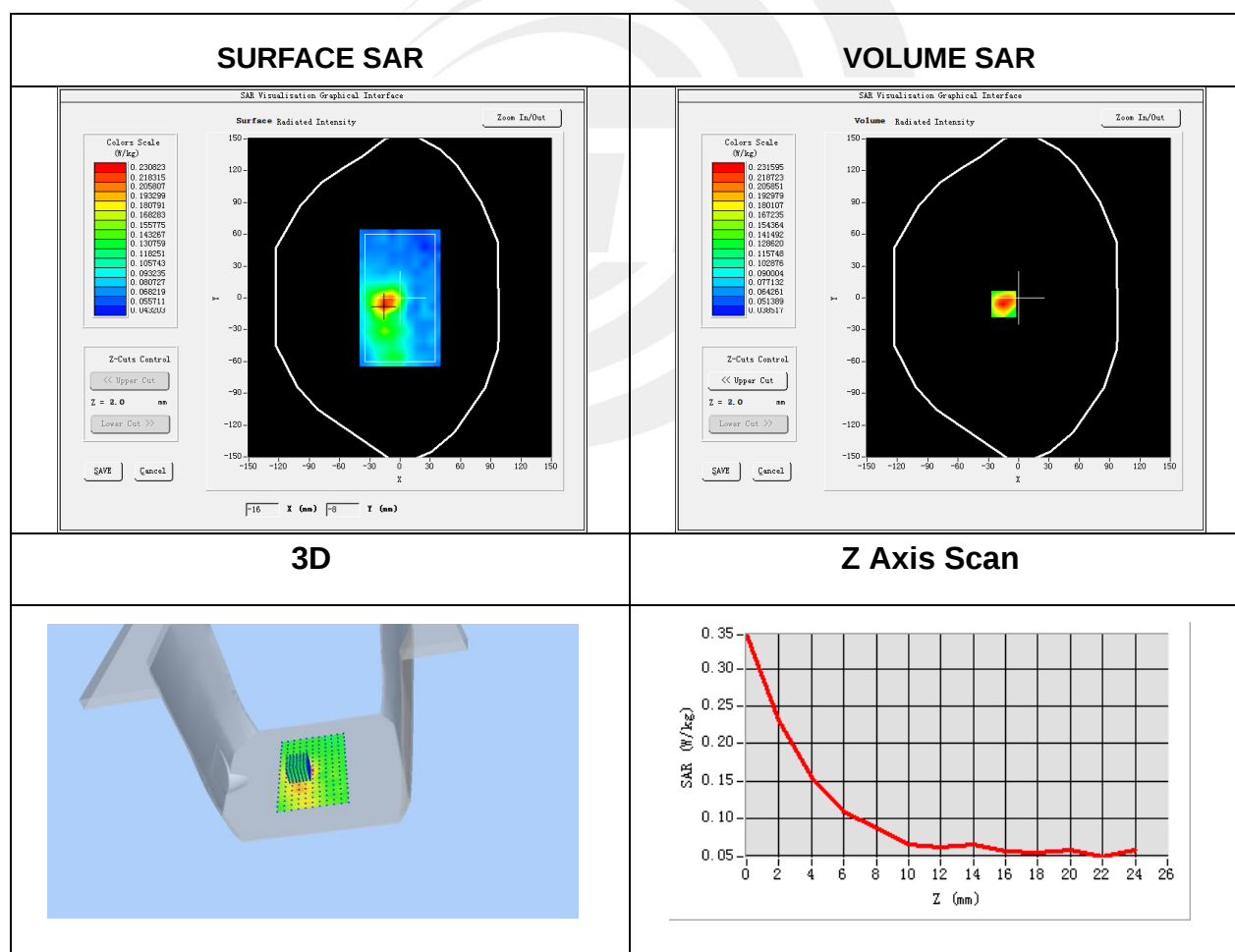
Plot 18: DUT: Portable Translator; EUT Model: G1

Test Date	2023-05-17
Probe	SN 07/21 EPGO352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	IEEE 802.11a ISM
Signal	IEEE802.a (Crest factor: 1.0)
Frequency (MHz)	5500
Relative permittivity (real part)	36.39
Conductivity (S/m)	4.94

Maximum location: X=-15.00, Y=-6.00

SAR Peak: 0.36 W/kg

SAR 10g (W/Kg)	0.097220
SAR 1g (W/Kg)	0.160614





Plot 19: DUT: Portable Translator; EUT Model: G1

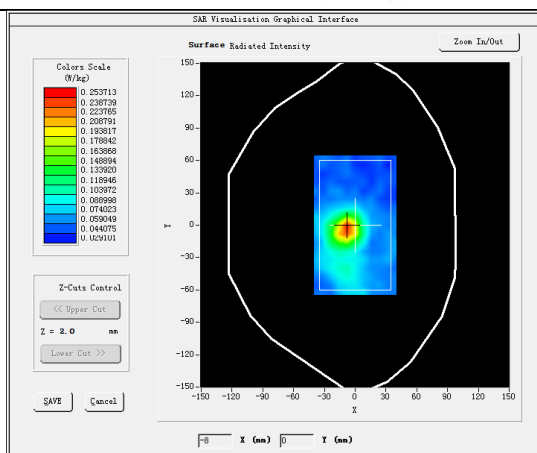
Test Date	2023-05-18
Probe	SN 07/21 EPG0352
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x12, dx=4mm, dy=4mm, dz=2mm, Complete/ndx=8mm, dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back Side
Band	IEEE 802.11a ISM
Signal	IEEE802.a (Crest factor: 1.0)
Frequency (MHz)	5825
Relative permittivity (real part)	36.30
Conductivity (S/m)	5.34

Maximum location: X=-8.00, Y=-2.00

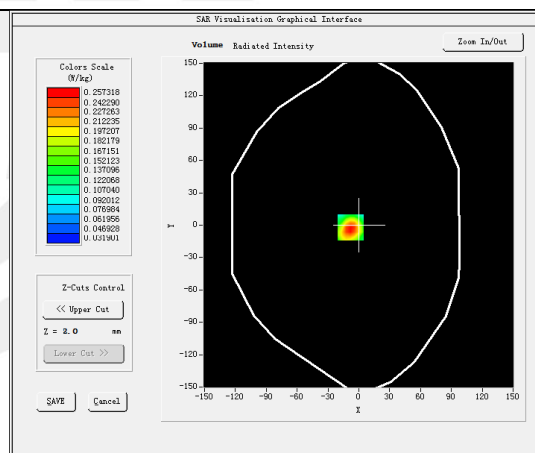
SAR Peak: 0.40 W/kg

SAR 10g (W/Kg)	0.094735
SAR 1g (W/Kg)	0.170045

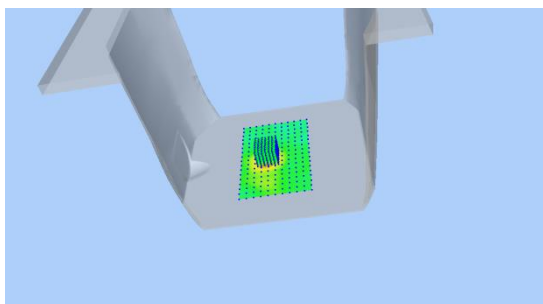
SURFACE SAR



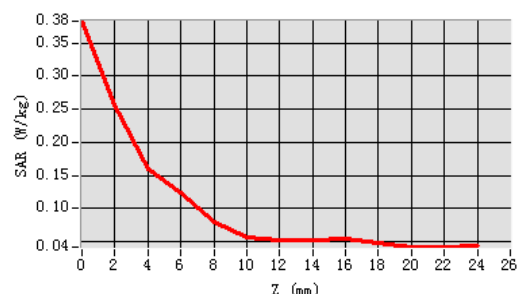
VOLUME SAR



3D



Z Axis Scan





Appendix C. Probe Calibration And Dipole Calibration Report

Refer the appendix Calibration Report.

※※※※END OF THE REPORT※※※※

