FCC SAR TEST REPORT

Report No: STS2106306H01

Issued for

SOURCENEXT CORPORATION

Shiodome City Center 33F, 1-5-2 Higashi Shinbashi
Minato-ku, Tokyo 105-7133, Japan

Product Name:	POCKETALK W
Brand Name:	POCKETALK
Test Model Name:	W1PGK
Series Model:	W1PGG,W1PGW,W1PWG,W1PWK, W1PWW,W1PGR,W1PGP
FCC ID:	2AOJA-W1P
Test Standard:	ANSI/IEEE Std. C95.1
	FCC 47 CFR Part 2 (2.1093)
	IEEE 1528: 2013
Max. Report SAR (1g):	Body: 0.463 W/kg
	Front to face:0.335 W/kg

Any reproduction of this document must be done in full. No single part of this document may be reproduced without permission from STS, All Test Data Presented in this report is only applicable to presented Test sample.

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
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com

Test Report Certification

Applicant's name ..... :	SOURCENEXT CORPORATION
Address..... :	Shiodome City Center 33F, 1-5-2 Higashi Shinbashi Minato-ku, Tokyo 105-7133, Japan
Manufacture's Name..... :	JENESIS(SHENZHEN)CO.,LTD
Address..... :	No.401-1, Building2, Runheng High-Tech Industrial Park, Liuxian 3rd Road No.1, XingDong, Xinan Avenue, Bao'an District, Shenzhen, China

Product description

Product name..... :	POCKETALK W
Trademark ..... :	POCKETALK
Model and/or type reference :	W1PGK
Series Model..... :	W1PGG,W1PGW,W1PWG,W1PWK,W1PWW,W1PGR,W1PGP
Standards ..... :	ANSI/IEEE Std. C95.1-1992 FCC 47 CFR Part 2 (2.1093) IEEE 1528: 2013

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.....:	05 Mar. 2019 ~ 04 Aug. 2021
Date of Issue .....:	06 Aug. 2021
Test Result.....:	**Pass**

Testing Engineer **:** Luffy He

(Luffy He)

Technical Manager **:** Sean She

(Sean She)

Authorized Signatory **:** Vita Li

(Vita Li)

Table of Contents

Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	15 Aug 2018	STS1806067H03	ALL	Initial Issue
00	06 Mar. 2019	STS1902072H02	ALL	Increase the 5G frequency band
00	26 Jan. 2021	STS2101178H01	ALL	Update Product Name, Series Model, Manufacture Address and Software Version Number.
00	06 Aug. 2021	STS2106306H01	ALL	Add 2G Test.

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

Equipment	POCKETALK W			
Brand Name	POCKETALK			
Test Model No.	W1PGK			
Series Model	W1PGG,W1PGW,W1PWG,W1PWK,W1PWW,W1PGR,W1PGP			
FCC ID	2AOJA-W1P			
Model Difference	The structure of the circuit is the same, only the name of the model is different			
Battery	Rated Voltage: 3.7V; Charge Limit: 4.2V; Capacity: 2200mAh			
Device Category	Portable			
Product stage	Production unit			
RF Exposure Environment	General Population / Uncontrolled			
Hardware Version	PT2_MB_V1.0			
Software Version	3.1.2			
Frequency Range	GSM 850: 824 MHz ~ 849MHz GSM 1900: 1850 MHz ~ 1910MHz WCDMA Band II:1852.4~1907.6MHz WCDMA Band V:826.4~846.6MHz LTE Band 2:1850.7~1909.3MHz WLAN 802.11b/g/n(HT20/40):2412~2462MHz WLAN 802.11a/n(HT20): 5180~5240 MHz; 5260~5320 MHz; 5500~5700 MHz; 5745~582`5 MHz; WLAN 802.11n(HT40): 5150~5250 MHz; 5250~5350 MHz; 5470~5725 MHz; 5725~5875 MHz; Bluetooth:2402~ 2480MHz			
Max. Reported SAR(1g): (Limit:1.6W/kg)	Band	Mode	Body Worn (W/kg)	Front to face (W/kg)
	PCB	GSM 850	0.381	/
	PCB	GSM 1900	0.463	/
	PCB	WCDMA Band II	0.437	0.335
	PCB	WCDMA Band V	0.285	0.140
	PCB	LTE Band 2	0.441	0.260
	DTS	WLAN	0.084	0.067
	NII	5.2G WLAN	0.045	0.021
	NII	5.3G WLAN	0.107	0.244 Note
	NII	5.6G WLAN	0.142	0.251 Note
	NII	5.8G WLAN Note	0.203	0.101
	DTS	Bluetooth Note	0.053	0.026
FCC Equipment Class	Licensed Portable Transmitter (PCB) Digital Transmission System (DTS)			

Operating Mode:	GSM: GMSK for GPRS, GMSK and 8PSK for EDGE; WCDMA:16QAM/64QAM; LTE:QPSK,16QAM, 64QAM; WLAN: 802.11 a/b/g/n(HT20/40); Bluetooth: V4.0 + EDR (GFSK, π/4DQPSK, 8DPSK) ;
SIM Card	Support single card
Antenna Specification:	GSM/WCDMA/LTE: PIFA Antenna BT,WLAN: PIFA Antenna
Hotspot Mode:	Support
DTM Mode:	Not Support
Note: 1. 5.3G front to face SAR, 5.6G front to face SAR, 5.8G SAR and Bluetooth SAR was estimated 2. 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 (℃)	18-25
Humidity (%RH)	30-70

1.3 Test Factory

SHENZHEN STS TEST SERVICES CO.,LTD.

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

FCC 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	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D01 v06	POCKETALK and Portable Device RF Exposure Procedures and Equipment Authorization Policies
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 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices
8	FCC KDB 941225 D01 v03r01	SAR Measurement Procedures for 3G Devices
9	FCC KDB 941225 D05 v02r05	SAR for LTE Devices
10	FCC KDB 941225 D06 v02r01	Hotspot Mode SAR

(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:

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

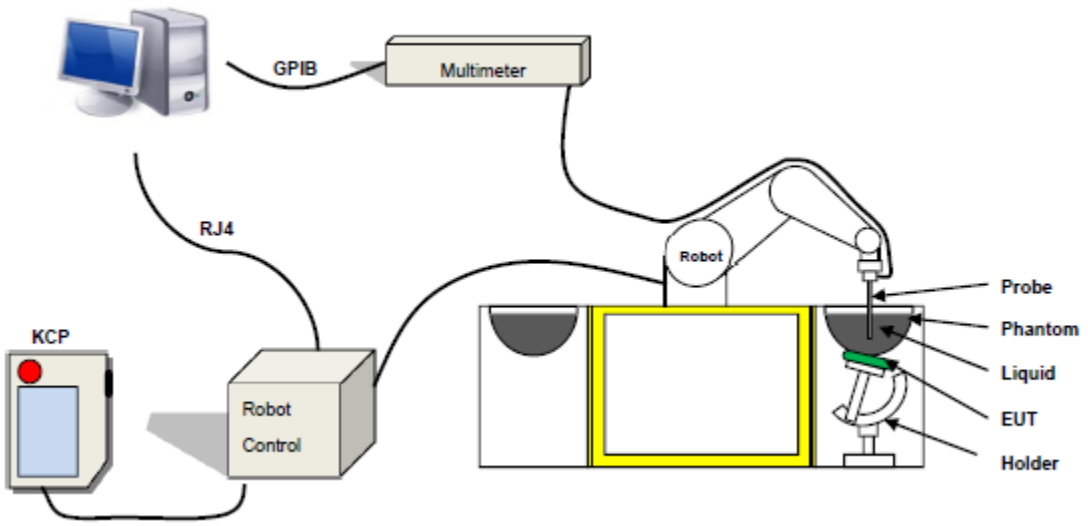
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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 45/15 EPGO281 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter: 2.5 mm
- Length of Individual Dipoles: 2 mm
- Maximum external diameter: 8 mm
- Distance between dipole/probe extremity: 8 mm (repeatability better than +/- 1mm)
- Probe linearity: 0±2.60%(0.11dB)
- Axial Isotropy: ＜0.25 dB
- Spherical Isotropy: ＜0.25 dB
- Calibration range: 450 MHz to 6 GHz for head & body simulating liquid.
- Angle between probe axis (evaluation axis) and surface normal line: less than 30°

Figure-MVG COMOSAR Dosimetric E field Dipole

For the measurements the Specific Dosimetric E-Field Probe SN 07/21 EPGO352 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: 450 MHz to 6 GHz for head & body simulating liquid.
- Angle between probe axis (evaluation axis) and surface normal line: less than 30°

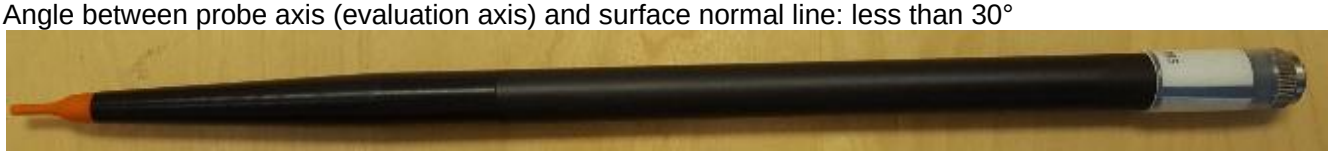


Figure 1-MVG COMOSAR Dosimetric E field Dipole

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.

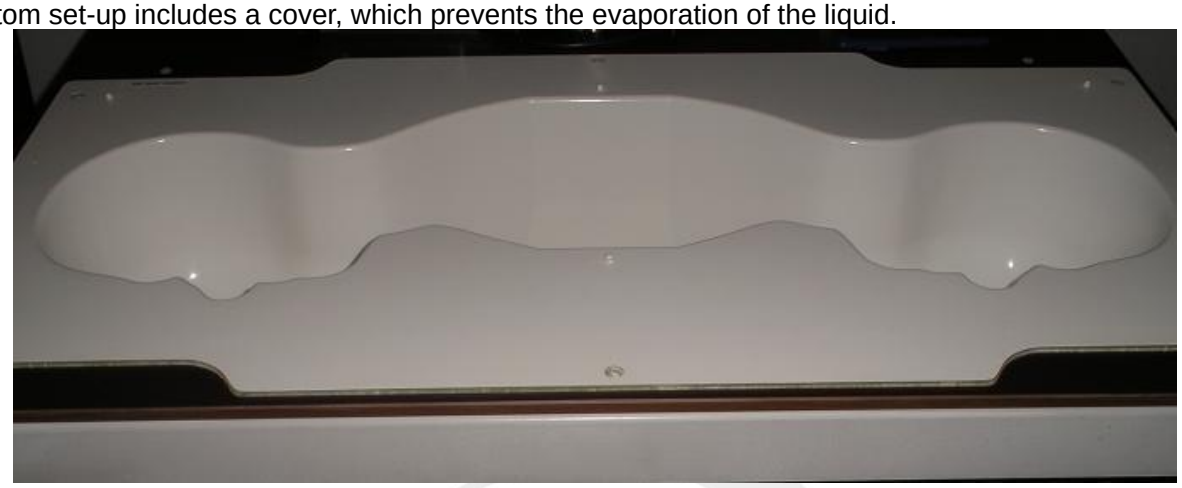
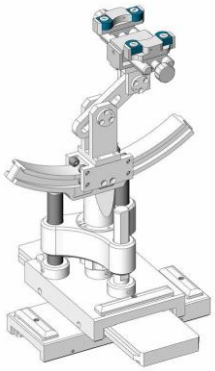


Figure-SN 32/14 SAM115

Figure-SN 32/14 SAM116

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	Permittivity
	%	%	%	%	%	%	%	%	σ	εr
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	Permittivity
	%	%	%	%	%	%	%	%	σ	εr
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	εr		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 condition		Head Simulating Liquid		Parameters	Target	Measured	Deviation [%]	Limited [%]
	Temp. [°C]	Humidity [%]	Frequency	Temp. [°C]					
2018-08-14	22.8	46	835 MHz	22.5	Permittivity:	41.5	40.47	-2.49	±5
					Conductivity:	0.9	0.91	1.22	±5
2018-08-14	22.8	46	1900 MHz	22.5	Permittivity:	40	40.93	2.33	±5
					Conductivity:	1.4	1.38	-1.74	±5
2018-08-15	23.5	56	2450 MHz	23.2	Permittivity:	39.2	39.59	1.01	± 5
					Conductivity	1.8	1.76	-2.00	± 5
2018-08-15	23.5	56	5200 MHz	23.2	Permittivity:	36.0	37.22	3.39	± 5
					Conductivity	4.66	4.51	-3.22	± 5
2021-08-04	23.5	53	824.2 MHz	23.2	Permittivity:	41.55	41.29	-0.63	±5
					Conductivity:	0.9	0.90	0.00	±5
2021-08-04	23.5	53	835 MHz	23.2	Permittivity:	41.5	41.92	1.01	±5
					Conductivity:	0.9	0.89	-1.11	±5
2021-08-04	23.5	53	836.6 MHz	23.2	Permittivity:	41.5	40.99	-1.23	±5
					Conductivity:	0.9	0.88	-2.22	±5
2021-08-04	23.5	53	848.8 MHz	23.2	Permittivity:	41.44	40.14	-3.14	±5
					Conductivity:	0.9	0.91	1.11	±5
2021-08-04	23.5	53	1850.2 MHz	23.2	Permittivity:	40	39.89	-0.27	±5
					Conductivity:	1.4	1.41	0.71	±5
2021-08-04	23.5	53	1880 MHz	23.2	Permittivity:	40	39.50	-1.25	±5
					Conductivity:	1.4	1.38	-1.43	±5
2021-08-04	23.5	53	1900 MHz	23.2	Permittivity:	40	39.39	-1.53	±5
					Conductivity:	1.4	1.39	-0.71	±5
2021-08-04	23.5	53	1909.8 MHz	23.2	Permittivity:	40	39.70	-0.75	±5
					Conductivity:	1.4	1.42	1.43	±5

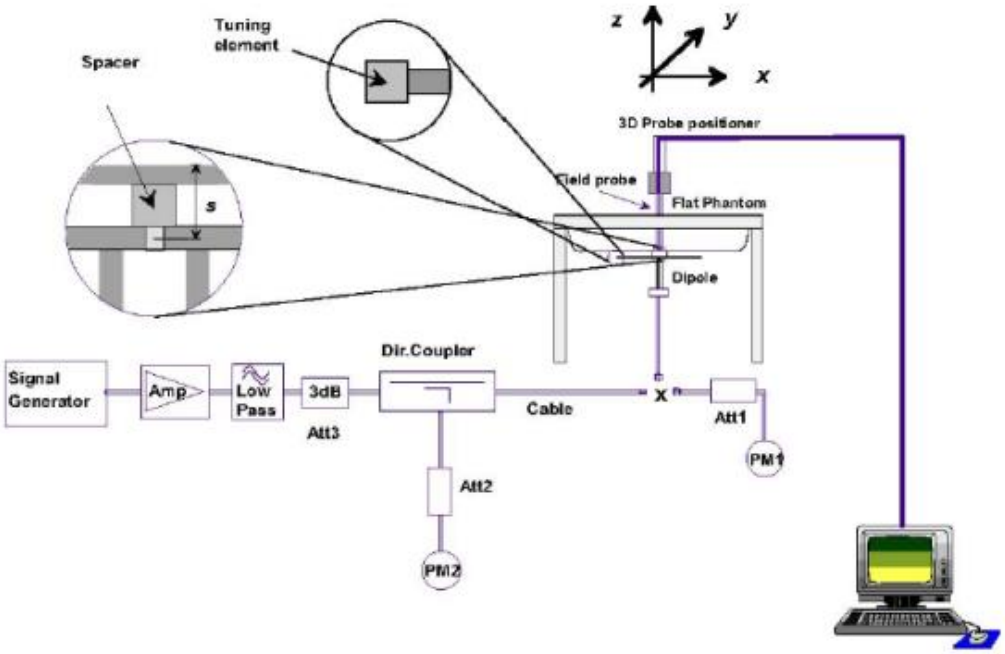
Date	Ambient condition		Body Simulating Liquid		Parameters	Target	Measured	Deviation [%]	Limited [%]
	Temp. [°C]	Humidity [%]	Frequency	Temp. [°C]					
2018-07-17	23.2	53	835 MHz	22.9	Permittivity:	55.2	54.05	-2.08	±5
					Conductivity:	0.97	0.94	-2.93	±5
2018-07-18	22.7	54	1900 MHz	22.4	Permittivity:	53.3	53.28	-0.04	±5
					Conductivity:	1.52	1.49	-1.97	±5
2018-07-18	22.7	54	2450 MHz	22.4	Permittivity:	52.70	54.14	2.73	± 5
					Conductivity	1.95	2.00	2.56	± 5
2018-07-19	23.1	50	5200 MHz	22.8	Permittivity:	49.0	49.66	1.35	± 5
					Conductivity	5.30	5.41	2.08	± 5
2019-03-05	22.6	58	5300 MHz	23.3	Permittivity:	48.70	49.20	1.03	±5
					Conductivity:	5.53	5.39	-2.53	±5
2019-03-05	22.6	58	5600 MHz	23.3	Permittivity:	48.5	50.37	3.86	±5
					Conductivity:	5.77	5.90	2.25	±5
2019-03-05	22.6	58	5800 MHz	23.3	Permittivity:	48.2	47.86	-0.71	±5
					Conductivity:	6.00	6.05	0.83	±5

5. SAR System Validation

5.1 Validation System

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

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



5.2 Validation Result

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

Freq.(MHz)	Power(mW)	Tested Value (W/Kg)	Normalized SAR (W/kg)	Target(W/Kg)	Tolerance(%)	Date
835 Head	100	0.967	9.67	9.56	1.12	2018-08-14
835 Body	100	0.992	9.92	9.56	3.74	2018-07-17
1900 Head	100	4.165	41.65	39.7	4.92	2018-08-14
1900 Body	100	3.930	39.30	39.7	-1.00	2018-07-18
2450 Head	100	5.275	52.75	52.4	0.68	2018-08-15
2450 Body	100	5.302	53.02	52.4	-1.17	2018-07-18
5200 Head	100	15.421	154.21	159	-3.01	2018-08-15
5200 Body	100	15.847	158.47	159	-0.33	2018-07-19
5300 Body	100	16.79	167.9	166.4	0.90	2019-03-05
5600 Body	100	17.23	172.3	173.8	-0.86	2019-03-05
5800 Body	100	18.75	187.5	181.2	3.48	2019-03-05
835 Head	100	0.964	9.64	9.56	0.81	2021-08-04
1900 Head	100	4.088	40.88	39.7	2.98	2021-08-04

Note: The tolerance limit of System validation ±10%.

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 to16 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:

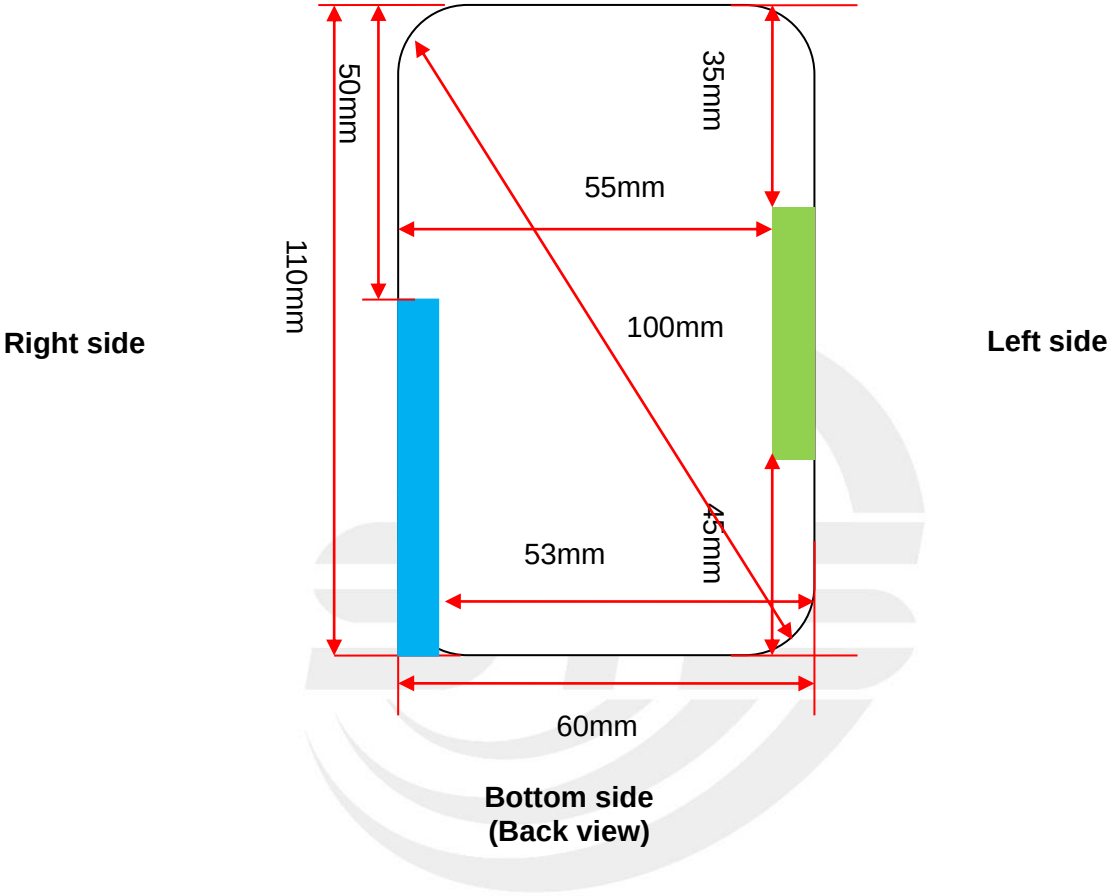
First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan 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 POCKETALK, support GSM/WCDMA/LTE/WLAN mode.

Top side



Right side

Left side

Bottom side
(Back view)

WWAN Antenna

WIFI/BT Antenna

7.1 SAR test exclusion consider table

According with FCC KDB 447498 D01, appendix A, <SAR test exclusion thresholds for 100MHz ~ 6GHz and≤50mm＞table, this device SAR test configurations consider as following:

Band	Test position configurations				
	Back	Right edge	Left edge	Top edge	Bottom edge
WWAN	＜5mm	＜5mm	53mm	50mm	＜5mm
	Yes	Yes	No	No	Yes
WLAN/BT	＜5mm	55mm	＜5mm	35mm	45mm
	Yes	No	Yes	No	No

Note：

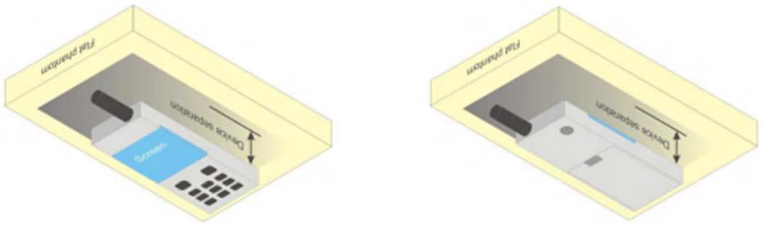
1. maximum power is the source-based time-average power and represents the maximum RF output power among production units.
2. per KDB 447498 D01, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. per KDB 447498 D01, standalone SAR test exclusion threshold is applied; if the distance of the antenna to the user is <5mm, 5mm is user to determine SAR exclusion threshold
4. per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distance ≤50mm are determined by:
   [(max.power of channel, including tune-up tolerance, Mw)/(min. test separation distance, mm)]*[√f(GHZ）)≤3.0 for 1-g SAR and≤7.5 for10-g extremity SAR ,f(GHz) is the RF channel transmit frequency in GHz. Power and distance are rounded to the nearest mW and mm before calculation. The result is rounded to one decimal place for comparison
   For <50mm distance, we just calculate mW of the exclusion threshold value(3.0)to do compare
5. per KDB 447498 D01, at 100 MHz to 6GHz and for test separation distances >50mm, the SAR test exclusion threshold is determined according to the following
   a)[threshold at 50mm in step 1]+(test separation distance -50mm)*(f (MHz)/150)]Mw, at 100 MHz to 1500 MHz
   b) [threshold at 50mm in step1]+(test separation distance -50mm) *10]mW at＞ 1500MHz and≤6GHz
6. Per KDB 447498 D02, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA/ HSUPA/DC-HSDPA output power is<0.25db higher than RMC 12.2Kbps,or reported SAR with RMC 12.2kbps setting is ≤1.2W/Kg, HSDPA/HSUPA/DC-HSDPA SAR evaluation can be excluded.
7. 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.

8. EUT Test Position

This EUT was tested in Front Face and Rear Face.

8.1Body-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 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.



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.

Uncertainty Component	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System								
Probe calibration	5.831	N	1	1	1	5.83	5.83	∞
Axial Isotropy	0.695	R	√3	√0.5	√0.5	0.28	0.28	∞
Hemispherical Isotropy	1.045	R	√3	√0.5	√0.5	0.43	0.43	∞
Boundary effect	1.0	R	√3	1	1	0.58	0.58	∞
Linearity	0.685	R	√3	1	1	0.40	0.40	∞
System detection limits	1.0	R	√3	1	1	0.58	0.58	∞
Modulation response	3.0	R	√3	1	1	1.73	1.73	∞
Readout Electronics	0.021	N	1	1	1	0.021	0.021	∞
Response Time	0	R	√3	1	1	0	0	∞
Integration Time	1.4	R	√3	1	1	0.81	0.81	∞
RF ambient conditions-Noise	3.0	R	√3	1	1	1.73	1.73	∞
RF ambient conditions-reflections	3.0	R	√3	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	1.4	R	√3	1	1	0.81	0.81	∞
Probe positioning with respect to phantom shell	1.4	R	√3	1	1	0.81	0.81	∞
Post-processing	2.3	R	√3	1	1	1.33	1.33	∞
Test sample Related								
Test sample positioning	2.6	N	1	1	1	2.6	2.6	∞
Device holder uncertainty	3	N	1	1	1	3	3	∞
SAR drift measurement	5	R	√3	1	1	2.89	2.89	∞
SAR scaling	5	R	√3	1	1	2.89	2.89	∞
Phantom and tissue parameters								
Phantom uncertainty(shape and thickness uncertainty)	4	R	√3	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity (temperature uncertainty)	2.5	R	√3	0.78	0.71	1.13	1.02	∞
Liquid conductivity (measured)	4	N	1	0.78	0.71	3.12	2.84	M
Liquid permittivity (temperature uncertainty)	2.5	R	√3	0.23	0.26	0.33	0.38	∞
Liquid permittivity (measured)	5	N	1	0.23	0.26	1.15	1.30	M
Combined Standard Uncertainty		RSS				9.79	9.59	
Expanded Uncertainty (95% Confidence interval)		K=2				19.58	19.18	

9.2 System validation Uncertainty

Uncertainty Component	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System								
Probe calibration	5.831	N	1	1	1	5.83	5.83	∞
Axial Isotropy	0.695	R	$\sqrt{3}$	1	1	0.40	0.40	∞
Hemispherical Isotropy	1.045	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Boundary effect	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	0.685	R	$\sqrt{3}$	1	1	0.40	0.40	∞
System detection limits	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response	3.0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Readout Electronics	0.021	N	1	1	1	0.021	0.021	∞
Response Time	0.0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Integration Time	1.4	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-Noise	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient conditions-reflections	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Probe positioning with respect to phantom shell	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	∞
Post-Processing	2.3	R	$\sqrt{3}$	1	1	1.33	1.33	∞
System validation source								
Deviation of experimental dipole from numerical dipole	5.0	N	1	1	1	5.00	5.00	∞
Input power and SAR drift measurement	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Other source contribution Uncertainty	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Phantom and set-up								
Phantom uncertainty (shape and thickness uncertainty)	4.0	R	$\sqrt{3}$	1	1	2.31	2.31	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity (temperature uncertainty)	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid conductivity (measured)	4	N	1	0.78	0.71	3.12	2.84	M
Liquid permittivity (temperature uncertainty)	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	∞
Liquid permittivity (measured)	5	N	1	0.23	0.26	1.15	1.30	M
Combined Standard Uncertainty		RSS				9.718	9.517	
Expanded Uncertainty (95% Confidence interval)		K=2				19.44	19.04	

10. Conducted Power Measurement

10.1 Test Result

WLAN

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)
802.11b	1	2412	13.63
	6	2437	14.02
	11	2462	14.22
802.11g	1	2412	9.66
	6	2437	11.72
	11	2462	10.22
802.11n(HT 20)	1	2412	8.85
	6	2437	11.07
	11	2462	9.05
802.11n(HT 40)	3	2422	8.12
	6	2437	10.22
	9	2452	8.61

5.2G WLAN

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)
802.11a	36	5180	8.92
	40	5200	7.78
	48	5240	7.90
802.11 n-HT20	36	5180	8.85
	40	5200	7.61
	48	5240	7.82
802.11 n-HT40	38	5190	7.11
	46	5230	7.03

WLAN (5.3Gband)

Mode	Channel Number	Frequency (MHz)	Average EIRP Power (dBm)
802.11a	52	5260	8.15
	60	5300	7.41
	64	5320	7.28
802.11 n-HT20	52	5260	8.04
	60	5300	7.33
	64	5320	7.15
802.11 n-HT40	54	5270	6.98
	62	5310	6.84

WLAN (5.6Gband)

Mode	Channel Number	Frequency (MHz)	Average EIRP Power (dBm)
802.11a	100	5500	8.26
	116	5580	7.44
	140	5700	7.18
802.11 n-HT20	100	5500	7.96
	116	5580	7.40
	140	5700	7.09
802.11 n-HT40	102	5510	7.54
	110	5550	7.06
	134	5670	7.02

WLAN (5.8Gband)

Mode	Channel Number	Frequency (MHz)	Average EIRP Power (dBm)
802.11a	149	5745	4.87
	157	5785	4.55
	165	5825	4.77
802.11 n-HT20	149	5745	4.800
	157	5785	4.500
	165	5825	4.670
802.11 n-HT40	151	5755	4.310
	159	5795	4.130

BLE

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)
GFSK(1Mbps)	0	2402	0.21
	39	2441	-0.46
	78	2480	-1.64
π/4-DQPSK(2Mbps)	0	2402	-1.75
	39	2441	-2.25
	78	2480	-3.17
8DPSK(3Mbps)	0	2402	-1.78
	39	2441	-2.35
	78	2480	-3.20

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	1880.0	1909.8
GPRS (GMSK, 1-Slot)	22.42	22.14	21.94	19.74	19.45	19.09
GPRS (GMSK, 2-Slot)	22.00	21.73	21.49	19.33	18.97	18.62
GPRS (GMSK, 3-Slot)	21.50	21.23	21.05	18.92	18.52	18.14
GPRS (GMSK, 4-Slot)	21.04	20.81	20.57	18.51	18.06	17.65
EGPRS(8PSK, 1-Slot)	20.63	22.02	20.94	19.11	19.89	19.60
EGPRS(8PSK, 2-Slot)	19.91	21.26	20.22	18.41	19.19	18.89
EGPRS(8PSK, 3-Slot)	19.15	20.53	19.52	17.61	18.45	18.12
EGPRS(8PSK, 4-Slot)	18.36	19.82	18.81	16.83	17.75	17.34
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						

Fram- 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	1880.0	1909.8
GPRS (GMSK, 1-Slot)	13.39	13.11	12.91	10.71	10.42	10.06
GPRS (GMSK, 2-Slot)	15.98	15.71	15.47	13.31	12.95	12.60
GPRS (GMSK, 3-Slot)	17.24	16.97	16.79	14.66	14.26	13.88
GPRS (GMSK, 4-Slot)	18.03	17.80	17.56	15.50	15.05	14.64
EGPRS(8PSK, 1-Slot)	11.60	12.99	11.91	10.08	10.86	10.57
EGPRS(8PSK, 2-Slot)	13.89	15.24	14.20	12.39	13.17	12.87
EGPRS(8PSK, 3-Slot)	14.89	16.27	15.26	13.35	14.19	13.86
EGPRS(8PSK, 4-Slot)	15.35	16.81	15.80	13.82	14.74	14.33
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 V			WCDMA Band II		
Channel	4132	4183	4233	9262	9400	9538
Frequency (MHz)	826.4	836.6	846.6	1852.4	1880.0	1907.6
AMR 12.2Kbps	23.57	23.74	23.71	20.74	20.70	21.28
RMC 12.2Kbps	23.67	23.80	23.78	20.86	20.82	21.67
HSDPA Subtest-1	22.66	22.83	22.79	19.75	19.73	20.26
HSDPA Subtest-2	22.20	22.43	22.33	19.30	19.24	19.79
HSDPA Subtest-3	21.80	22.00	21.83	18.93	18.75	19.37
HSDPA Subtest-4	21.45	21.67	21.49	18.58	18.41	18.91
HSUPA Subtest-1	22.58	22.67	22.43	19.70	19.65	19.77
HSUPA Subtest-2	21.70	21.74	21.49	18.75	18.66	18.77
HSUPA Subtest-3	21.67	21.27	21.02	18.71	18.24	18.47
HSUPA Subtest-4	21.24	20.78	20.67	18.23	17.80	18.00
HSUPA Subtest-5	19.80	19.35	19.25	16.78	16.35	16.55

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≤ CM≤3.5	MAX(CM-1,0)
Note: CM=1 for βc/βd=12/15, βhs/ βc=24/15.For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.		

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

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

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

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

LTE 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 $\leqslant$ 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 > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is $\leqslant$ 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 > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is $\leqslant$ 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	22.08	22.05	22.19
1.4	1	2		22.07	22.03	22.15
1.4	1	5		21.94	21.91	22.02
1.4	3	0		21.71	21.83	21.88
1.4	3	1		21.78	21.87	21.89
1.4	3	2		21.76	21.85	21.9
1.4	6	0		21.08	21.01	21.11
1.4	1	0	16-QAM	20.66	20.94	20.91
1.4	1	2		20.82	21.03	21.02
1.4	1	5		20.72	20.94	20.89
1.4	3	0		20.62	20.81	20.75
1.4	3	1		20.67	20.78	20.75
1.4	3	2		20.63	20.73	20.76
1.4	6	0		19.88	19.9	19.95
3	1	0	QPSK	22.01	21.94	22.1
3	1	7		22.06	22.04	22.18
3	1	14		21.94	21.96	22.04
3	8	0		20.99	20.96	21.05
3	8	4		21.02	21.02	21.08
3	8	7		20.96	20.99	21.03
3	15	0		20.85	20.89	20.96
3	1	0	16-QAM	20.89	20.97	21
3	1	7		21.01	21.13	21.07
3	1	14		20.89	20.98	20.91
3	8	0		19.91	20.02	20.05
3	8	4		19.94	20.03	20
3	8	7		19.93	19.99	19.96
3	15	0		19.67	19.83	19.89

LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.02	20.31	21.88
5	1	12		22	20.06	21.7
5	1	24		21.62	19.81	21.87
5	12	0		19.91	18.9	19.29
5	12	6		20.72	18.95	19.34
5	12	11		20.55	18.92	19.3
5	25	0		20.77	18.88	19.26
5	1	0	16-QAM	20.38	19.35	19.46
5	1	12		20.24	19	19.73
5	1	24		20.26	20.28	19.47
5	12	0		19.68	19.41	18.21
5	12	6		19.34	19.45	18.27
5	12	11		19.36	18.61	18.28
5	25	0		18.66	17.84	18.31
10	1	0	QPSK	19.93	20.49	20.58
10	1	24		19.99	20.1	20.72
10	1	49		19.78	20.05	20.34
10	25	0		18.97	18.99	19.43
10	25	12		19.01	19	19.44
10	25	24		19.01	19.01	19.44
10	50	0		18.99	19	19.43
10	1	0	16-QAM	19.6	19.71	19.32
10	1	24		19.22	19.2	19.49
10	1	49		18.96	19.22	19.43
10	25	0		18.03	17.97	18.41
10	25	12		18.06	17.99	18.46
10	25	24		18.08	18.03	18.5
10	50	0		17.95	17.94	18.34

LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	22.09	22.07	22.21
15	1	37		21.82	21.81	21.96
15	1	74		21.58	21.53	21.74
15	36	0		21.37	21.25	21.53
15	36	18		21.12	20.98	21.28
15	36	39		20.89	20.73	21.03
15	75	0		20.67	20.48	20.79
15	1	0	16-QAM	21.84	21.8	21.98
15	1	38		21.62	21.51	21.7
15	1	75		21.42	21.3	21.48
15	36	0		21.19	21.05	21.26
15	36	18		20.92	20.82	21.03
15	36	39		20.66	20.6	20.76
15	75	0		20.39	20.37	20.52
20	1	0	QPSK	22.1	22.09	22.24
20	1	49		21.87	21.81	21.95
20	1	99		21.58	21.6	21.72
20	50	0		21.34	21.38	21.45
20	50	24		21.11	21.17	21.17
20	50	49		20.89	20.91	20.91
20	100	0		20.6	20.68	20.65
20	1	0	16-QAM	21.84	21.85	21.95
20	1	49		21.62	21.62	21.71
20	1	99		21.35	21.35	21.44
20	50	0		21.09	21.12	21.17
20	50	24		20.83	20.86	20.97
20	50	49		20.57	20.59	20.71
20	100	0		20.37	20.42	20.44

10.2 Tune-up Power

2.4G WLAN

Mode	WLAN(AVG)	
IEEE 802.11b	14±1dBm	
IEEE 802.11g	Low	9±1dBm
	Middle	11±1dBm
	High	10±1dBm
IEEE 802.11n(HT 20)	Low	8±1dBm
	Middle	11±1dBm
	High	9±1dBm
IEEE 802.11n(HT 40)	Low	8±1dBm
	Middle	10±1dBm
	High	8±1dBm

Mode	5.2G WLAN(AVG)
IEEE 802.11a	8±1dBm
IEEE 802.11n(HT 20)	8±1dBm
IEEE 802.11n(HT 40)	7±1dBm

Mode	5.3G WLAN(AVG)
IEEE 802.11a	8±1dBm
IEEE 802.11n(HT 20)	8±1dBm
IEEE 802.11n(HT 40)	6±1dBm

Mode	5.6G WLAN(AVG)
IEEE 802.11a	8±1dBm
IEEE 802.11n(HT 20)	7±1dBm
IEEE 802.11n(HT 40)	7±1dBm

Mode	5.8G WLAN(AVG)
IEEE 802.11a	4±1dBm
IEEE 802.11n(HT 20)	4±1dBm
IEEE 802.11n(HT 40)	4±1dBm

BT

Mode	BT(AVG)	
GFSK	Low	0±1dBm
	Middle	0±1dBm
	High	-1±1dBm
π/4-DQPSK	Low	-1±1dBm
	Middle	-2±1dBm
	High	-3±1dBm
8DPSK	Low	-1±1dBm
	Middle	-2±1dBm
	High	-3±1dBm

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)	23±1dBm	32±1dBm	31±1dBm	29±1dBm	29±1dBm	29±1dBm
GPRS (GMSK, 2-Slot)	22±1dBm	31±1dBm	31±1dBm	28±1dBm	28±1dBm	28±1dBm
GPRS (GMSK, 3-Slot)	22±1dBm	31±1dBm	28±1dBm	28±1dBm	28±1dBm	28±1dBm
GPRS (GMSK, 4-Slot)	21±1dBm	30±1dBm	30±1dBm	27.5±1dBm	27±1dBm	27±1dBm
EGPRS(8PSK, 1-Slot)	30±1dBm	30±1dBm	30±1dBm	28±1dBm	28±1dBm	28±1dBm
EGPRS(8PSK, 2-Slot)	30±1dBm	29±1dBm	29±1dBm	27±1dBm	27±1dBm	27±1dBm
EGPRS(8PSK, 3-Slot)	29±1dBm	29±1dBm	28±1dBm	27±1dBm	26±1dBm	26±1dBm
EGPRS(8PSK, 4-Slot)	28±1dBm	28±1dBm	28±1dBm	26±1dBm	26±1dBm	25±1dBm

Mode	WCDMA Band V(AVG)	WCDMA Band II(AVG)
AMR	23±1dBm	21±1dBm
RMC	23±1dBm	21±1dBm
HSDPA Subtest-1	22±1dBm	20±1dBm
HSDPA Subtest-2	22±1dBm	19±1dBm
HSDPA Subtest-3	22±1dBm	19±1dBm
HSDPA Subtest-4	21±1dBm	18±1dBm
HSUPA Subtest-1	22±1dBm	19±1dBm
HSUPA Subtest-2	21±1dBm	18±1dBm
HSUPA Subtest-3	21±1dBm	18±1dBm
HSUPA Subtest-4	21±1dBm	18±1dBm
HSUPA Subtest-5	19±1dBm	16±1dBm

LTE

BW[MHz]	RB Size	Mode	Band 2
1.4	1	QPSK	22±1dBm
1.4	3		21±1dBm
1.4	6		21±1dBm
1.4	1	16- QAM	21±1dBm
1.4	3		20±1dBm
1.4	6		19±1dBm
3	1	QPSK	22±1dBm
3	8		21±1dBm
3	15		20±1dBm
3	1	16- QAM	21±1dBm
3	8		20±1dBm
3	15		19±1dBm
5	1	QPSK	21.1±1dBm
5	12		20.8±1dBm
5	25		19.8±1dBm
5	1	16- QAM	20±1dBm
5	12		19±1dBm
5	25		18±1dBm
10	1	QPSK	20±1dBm
10	25		19±1dBm
10	50		19±1dBm
10	1	16- QAM	19±1dBm
10	25		18±1dBm
10	50		18±1dBm
15	1	QPSK	22±1dBm
15	36		21±1dBm
15	75		20±1dBm
15	1	16- QAM	21±1dBm
15	36		21±1dBm
15	75		20±1dBm
20	1	QPSK	22±1dBm
20	50		21±1dBm
20	100		20±1dBm
20	1	16- QAM	21±1dBm
20	50		21±1dBm
20	100		20±1dBm

10.3 SAR Test Exclusions Applied

Per FCC KDB 447498D01, the 1-g SAR and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHZ)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where:

• f(GHZ) is the RF channel transmit frequency in GHz
• Power and distance are rounded to the nearest mW and mm before calculation
• The result is rounded to one decimal place for comparison

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

$$\frac{Max\ Power\ of\ Channel\ (mW)}{Test\ Separation\ Dist\ (mm)} * \sqrt{Frequency(GHz)} \leq 3.0$$

Based on the maximum conducted power of **Bluetooth Body** (rounded to the nearest mW) and the antenna to user separation distance,
Bluetooth Body SAR was not required; [1.259/5)* √2.480] = **0.40** < 3.0.

Based on the maximum conducted power of **Bluetooth Front to face** (rounded to the nearest mW) and the antenna to user separation distance,
Bluetooth Front to face SAR was not required; [(1.259/10)* √2.480] = **0.20** < 3.0.

Based on the maximum conducted power of **2.4 GHz WLAN Body** (rounded to the nearest mW) and the antenna to user separation distance,
2.4 GHz WLAN SAR was required; [(31.623/5)* √2.462] = **9.96** >3.0.

Based on the maximum conducted power of **2.4 GHz WLAN Front to face** (rounded to the nearest mW) and the antenna to user separation distance,
2.4 GHz WLAN Front to face SAR was required; [(31.623/10)* √2.462] = **4.96** ＞ 3.0

Based on the maximum conducted power of **5.2 GHz WLAN Body** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN SAR was required; [7.943/5]* √5.200] = **3.62** > 3.0.

Based on the maximum conducted power of **5.2 GHz WLAN Front to face** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN Front to face SAR was not required; [(7.943/10)* √5.200] = **1.81** < 3.0

Based on the maximum conducted power of **5.3 GHz WLAN Body** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN SAR was required; [7.943/5]* √5.300] = **3.66** > 3.0.

Based on the maximum conducted power of **5.3 GHz WLAN Front to face** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN Front to face SAR was not required; [(7.943/10)* √5.300] = **1.83** < 3.0

Based on the maximum conducted power of **5.6 GHz WLAN Body** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN SAR was required; [7.943/5]* $\sqrt{}$5.600] = **3.76** > 3.0.

Based on the maximum conducted power of **5.6 GHz WLAN Front to face** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN Front to face SAR was not required; [(7.943/10)* $\sqrt{}$5.600] = **1.88** < 3.0

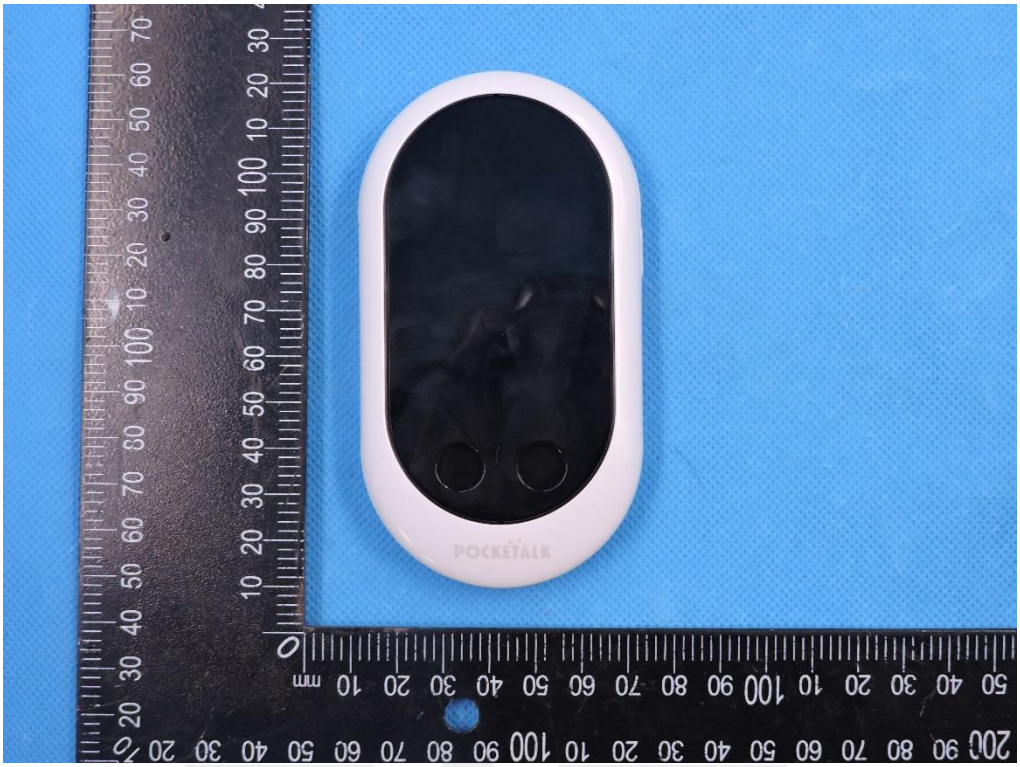
Based on the maximum conducted power of **5.8 GHz WLAN Body** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN SAR was required; [7.943/5]* $\sqrt{}$5.800] = **1.52** < 3.0.

Based on the maximum conducted power of **5.8 GHz WLAN Front to face** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN Front to face SAR was not required; [(7.943/10)* $\sqrt{}$5.800] = **0.76** < 3.0

11. EUT And Test Setup Photo

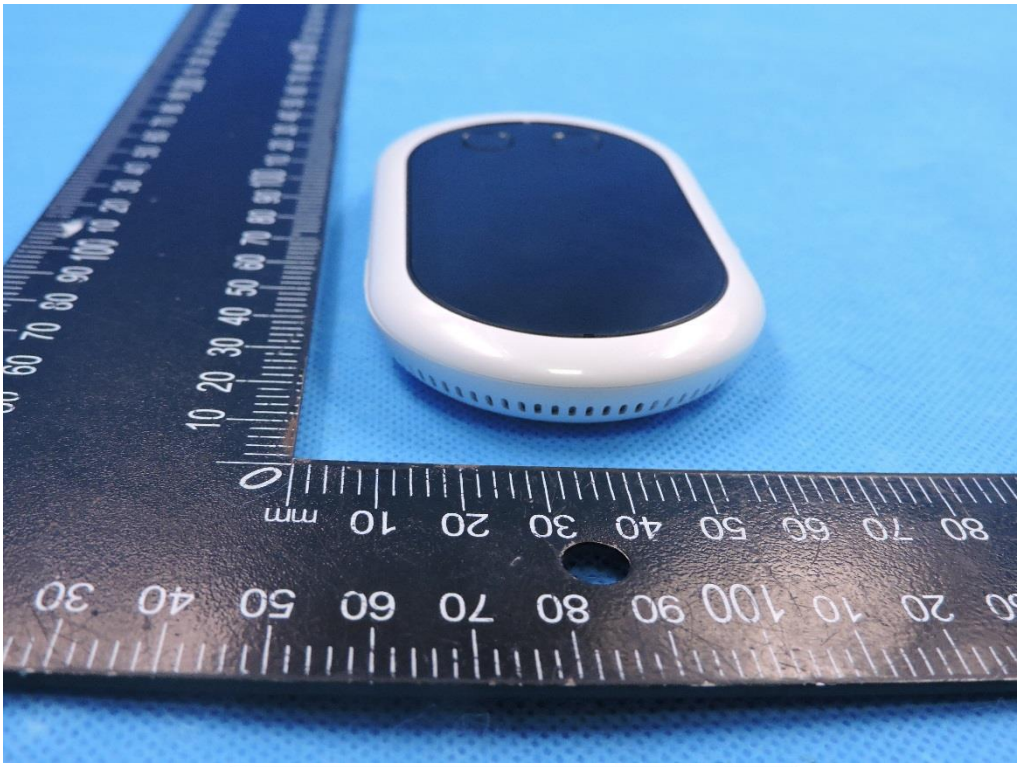
11.1 EUT Photo

Front side

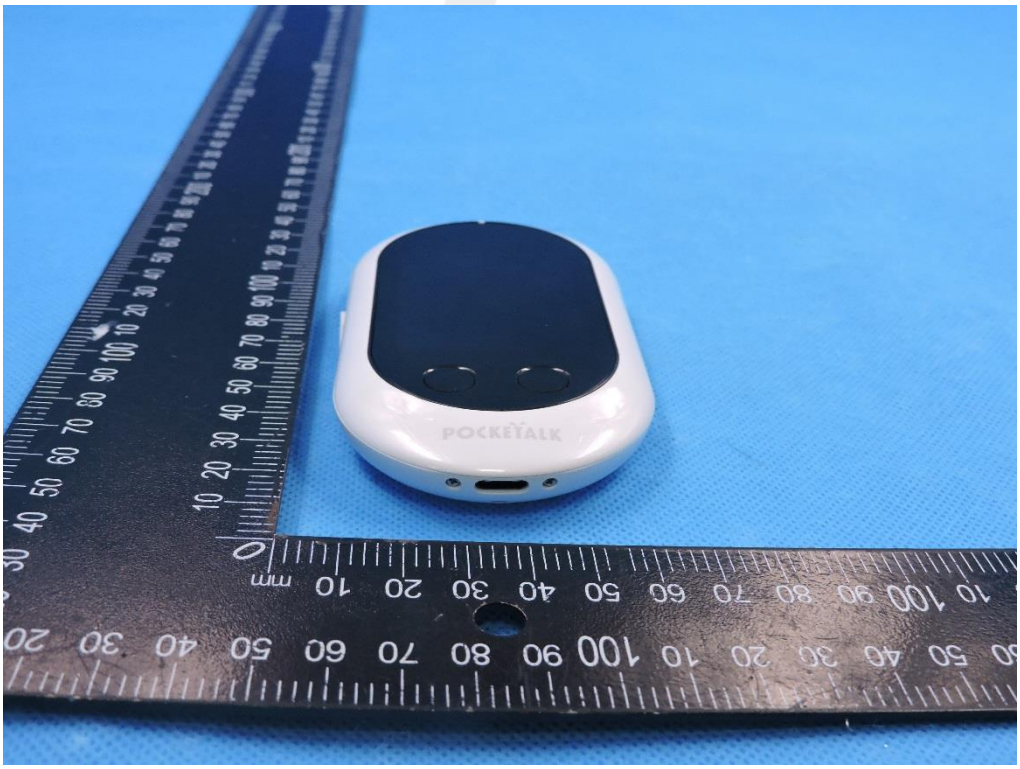


Back side

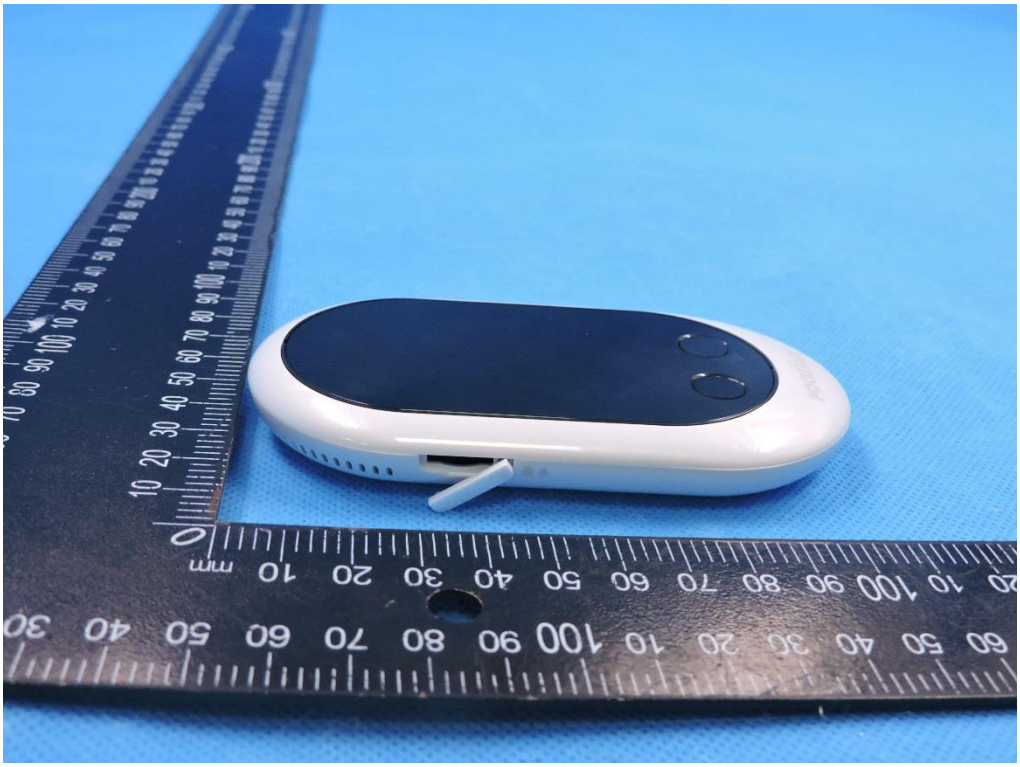
Top side



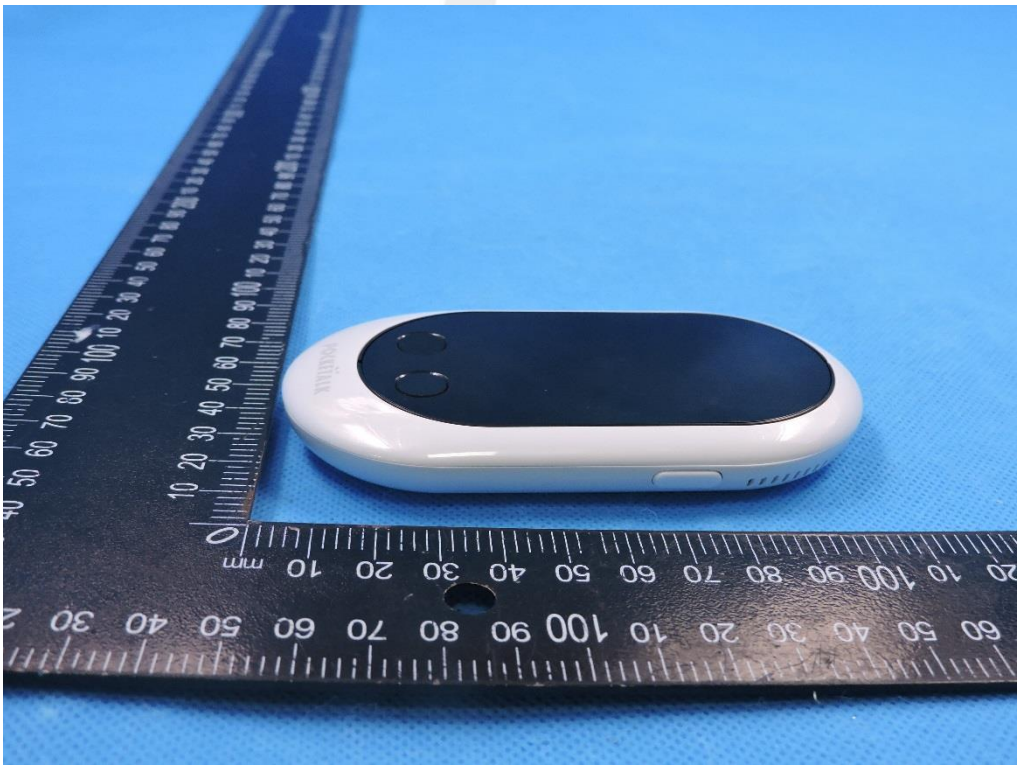
Bottom side



Left side



Right side

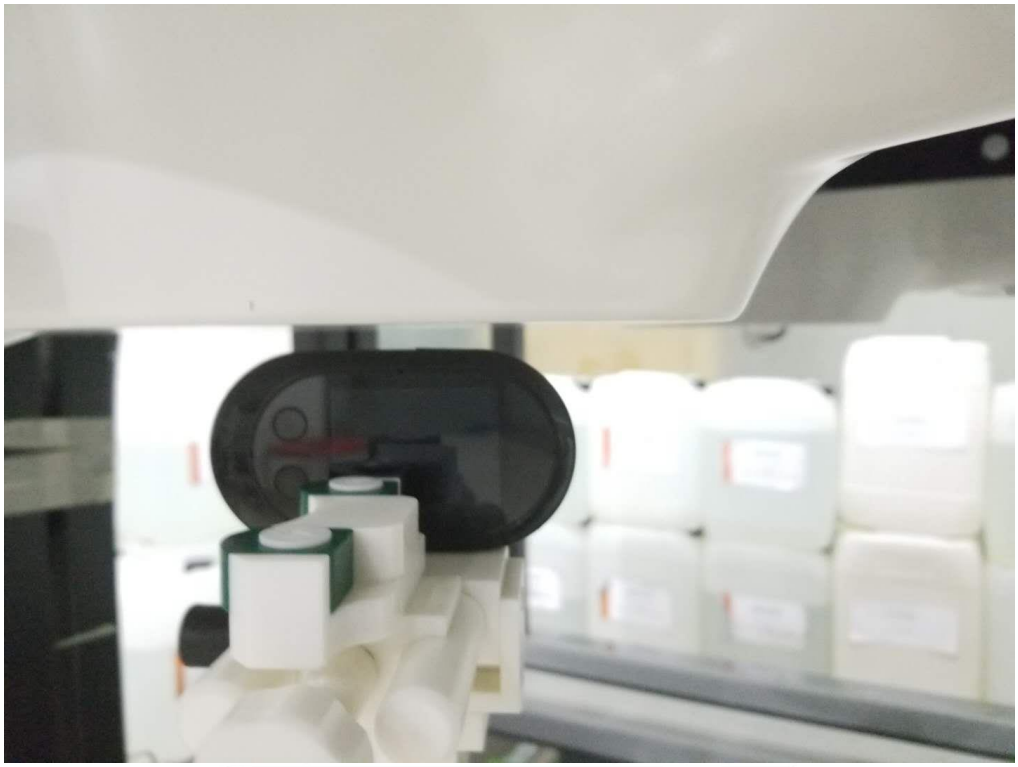


11.2 Setup Photo

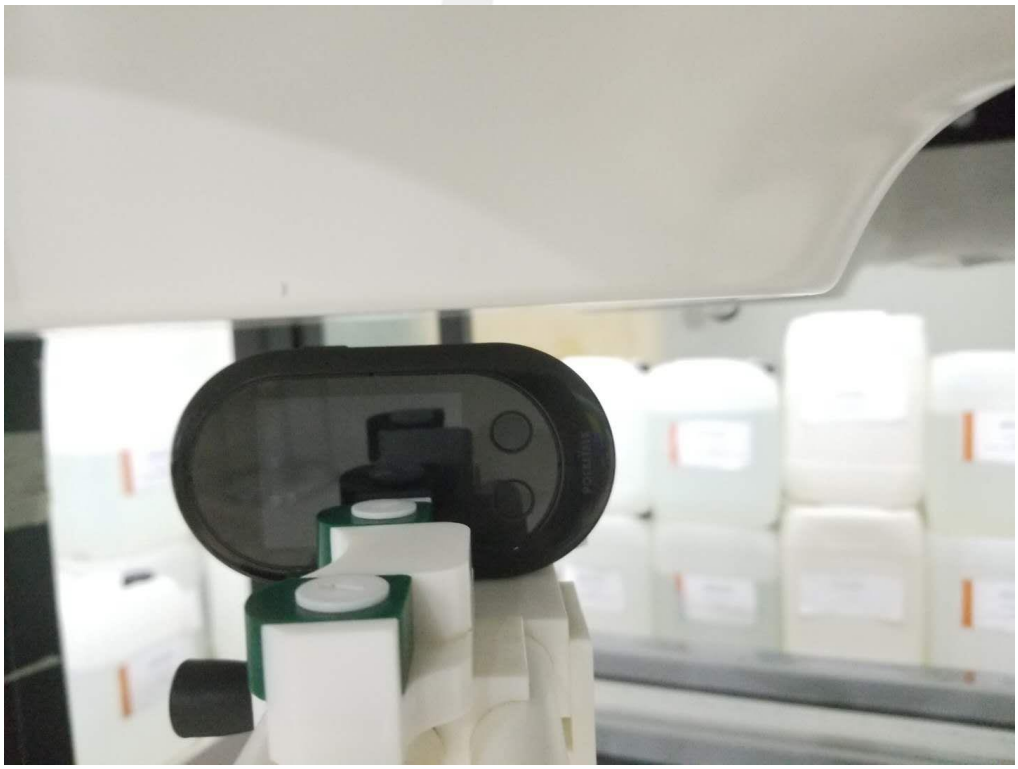
Body Front side(separation distance is 5mm)

Body Back side(separation distance is 5mm)

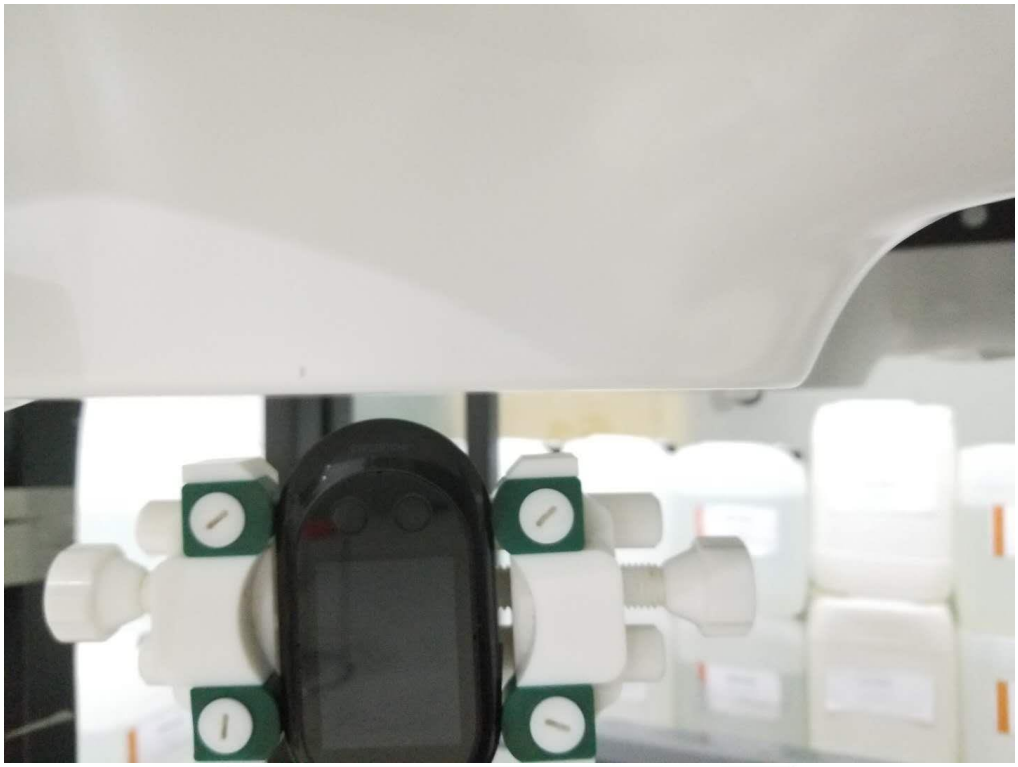
Body left side(separation distance is 5mm)



Body right side(separation distance is 5mm)

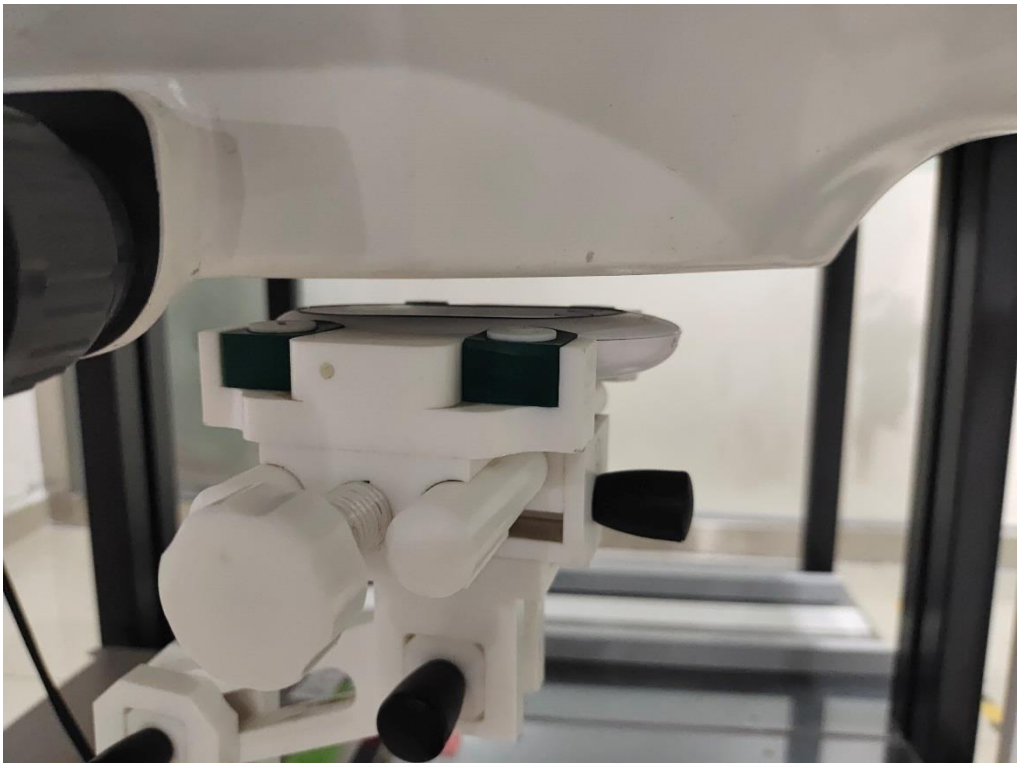


Body Bottom side(separation distance is 5mm)

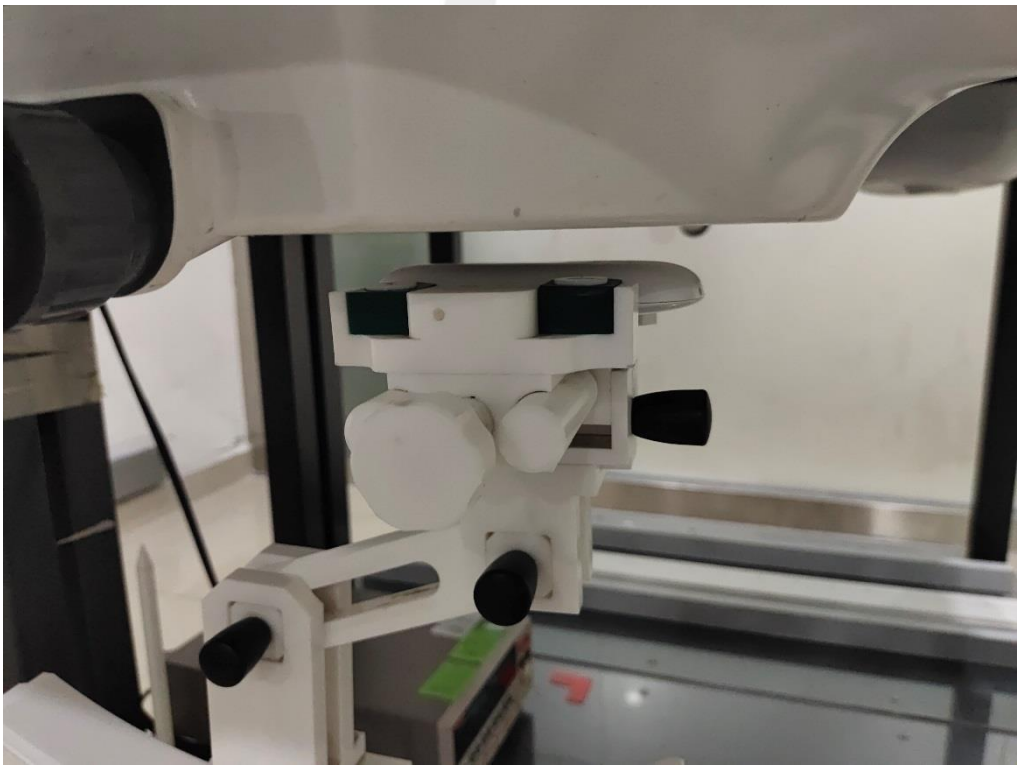


Front to face (separation distance is 10mm)

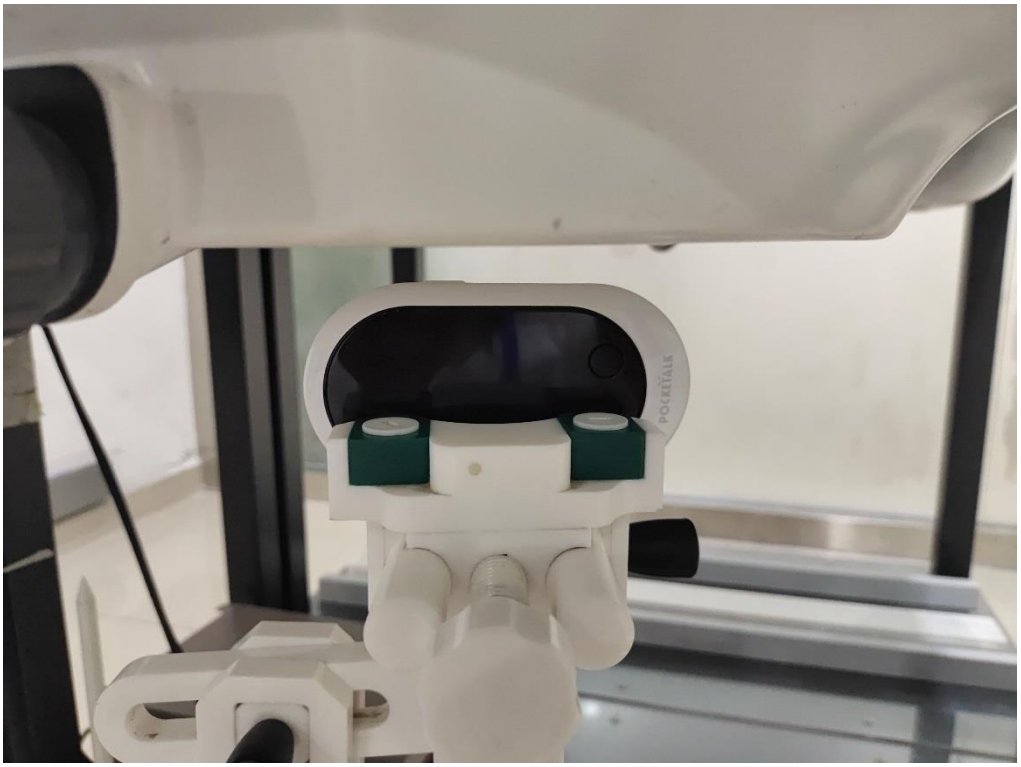
Body Front side(separation distance is 10mm)



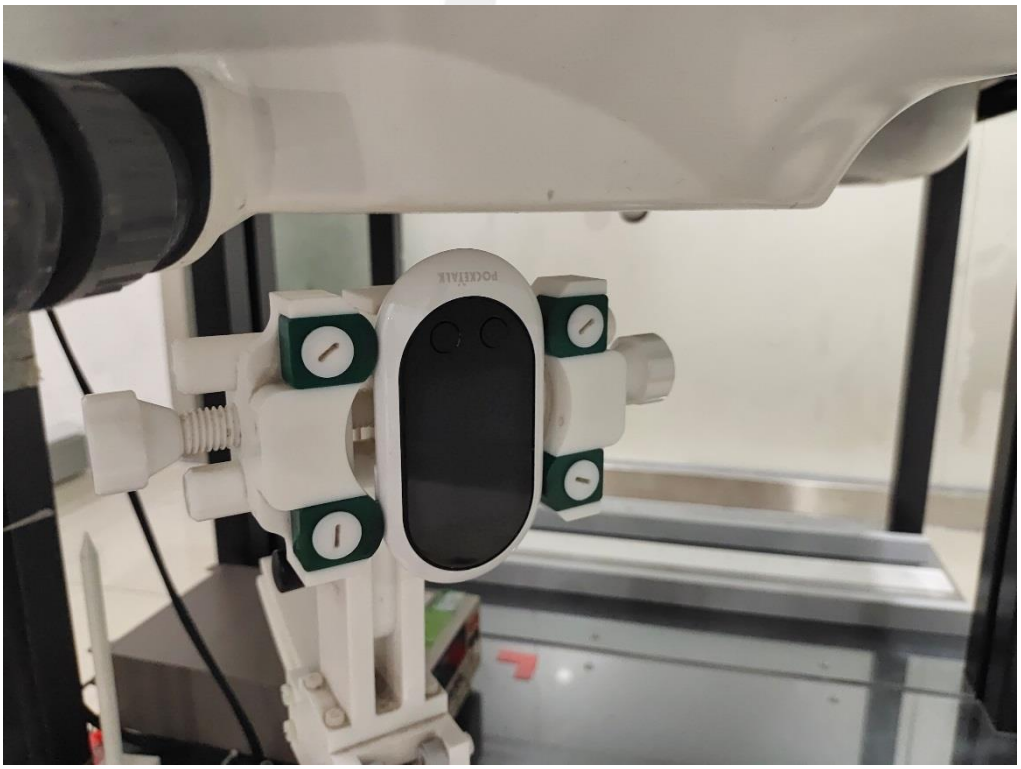
Body Back side(separation distance is 10mm)



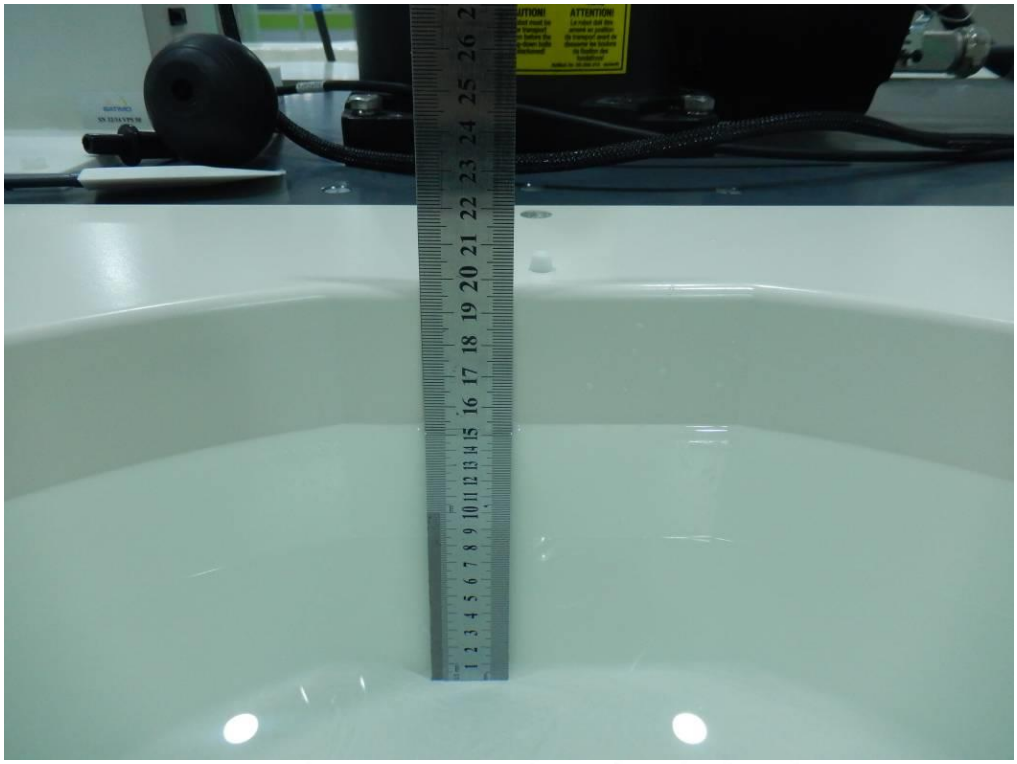
Body right side(separation distance is 10mm)



Body Bottom side(separation distance is 10mm)



Liquid depth (15 cm)



12. SAR Result Summary

12.1 Body-worn SAR

Band	Mode	Test Position	Ch.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR (W/Kg)	Meas. No.
GSM 850	GPRS (GMSK, 4-Slot)	Front side	128	0.153	0.72	21.5	21.04	0.170	/
		Back side	128	0.343	-0.33	21.5	21.04	**0.381**	13
		Right side	128	0.207	1.88	21.5	21.04	0.230	/
		Bottom side	128	0.051	-1.88	21.5	21.04	0.057	/
GSM 1900	GPRS (GMSK, 4-Slot)	Front side	512	0.120	3.06	19	18.51	0.134	/
		Back side	512	0.414	-3.22	19	18.51	**0.463**	14
		Right side	512	0.215	1.44	19	18.51	0.241	/
		Bottom side	512	0.067	0.54	19	18.51	0.075	/
WCDMA II	RMC	Front side	9538	0.231	2.42	22	21.28	0.273	/
		Back side	9538	0.370	2.94	22	21.28	**0.437**	1
		Right side	9538	0.245	-0.78	22	21.28	0.289	/
		Bottom side	9538	0.098	3.67	22	21.28	0.116	/
WCDMA V	RMC	Front side	4183	0.173	3.02	24	23.80	0.181	/
		Back side	4183	0.272	-3.76	24	23.80	**0.285**	2
		Right side	4183	0.178	3.27	24	23.80	0.186	/
		Bottom side	4183	0.054	0.45	24	23.80	0.057	/

Band	Mode	Test Position	Ch.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Duty cycle(%)	Scaled SAR (W/Kg)	Meas. No.
WLAN	802.11b	Front side	11	0.037	-2.45	15	14.22	100	0.044	/
		Back side	11	0.070	3.44	15	14.22	100	**0.084**	3
		Left side	11	0.068	3.72	15	14.22	100	0.081	/
5.2G WLAN	802.11a	Front side	36	0.017	2.08	9	8.92	100	0.017	/
		Back side	36	0.044	1.98	9	8.92	100	**0.045**	4
		Left side	36	0.041	2.66	9	8.92	100	0.042	/
WLAN 5.3 G	802.11n	Front side	52	0.036	2.49	9	8.15	100	0.044	/
		Back side	52	0.088	2.09	9	8.15	100	**0.107**	11
		Left side	52	0.049	-2.58	9	8.15	100	0.060	/
WLAN 5.6 G	802.11a	Front side	100	0.051	1.22	9	8.26	100	0.060	/
		Back side	100	0.120	1.62	9	8.26	100	**0.142**	12
		Left side	100	0.076	-0.44	9	8.26	100	0.090	/

Note:

1. The test separation of WCDMA and WLAN is 5mm, the test separation of GSM is 10mm.
2. Per KDB 447498 D01v05r01, 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 **0.136** 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.

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Ch.	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	0	Front side	19100	0.209	1.47	23	22.21	0.251	/
			50	0	Front side	19100	0.175	-2.61	22	21.98	0.176	/
			1	0	Back Side	19100	0.368	-1.90	23	22.21	**0.441**	5
			50	0	Back Side	19100	0.340	-1.63	22	21.98	0.342	/
			1	0	Right Side	19100	0.178	2.22	23	22.21	0.214	/
			50	0	Right Side	19100	0.152	1.38	22	21.98	0.153	/
			1	0	Bottom Side	19100	0.092	0.56	23	22.21	0.110	/
			50	0	Bottom Side	19100	0.083	-3.42	22	21.98	0.083	/

12.2 Front to face SAR

Band	Mode	Test Position	Ch.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR (W/Kg)	Meas. No.
WCDMA II	RMC	Front to face	9538	0.284	2.11	22	21.28	**0.335**	6
WCDMA V	RMC	Front to face	4183	0.134	-1.53	24	23.80	**0.140**	7

Band	Mode	Test Position	Ch.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Duty cycle(%)	Scaled SAR (W/Kg)	Meas. No.
WLAN	802.11b	Front to face	11	0.056	2.03	15	14.22	100	**0.067**	8
5.2G WLAN	802.11a	Front to face	36	0.021	1.98	9	8.92	100	**0.021**	9

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Ch.	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	0	Front to face	19100	0.217	2.08	23	22.21	**0.260**	10
			50	0	Front to face	19100	0.185	1.95	22	21.98	0.186	/

Note:

1. The test separation of all above table is 10mm.
2. Per KDB 447498 D01v05r01, 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 **0.031** W/Kg for Head)
4. 3. 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.

Simultaneous Multi-band Transmission Evaluation:

Application Simultaneous Transmission information:

Position	Simultaneous state
Body	1. GSM + WLAN
	2. GSM + 5G WLAN
	3. GSM + Bluetooth
	4. WCDMA + WLAN
	5. WCDMA + 5G WLAN
	6. WCDMA + Bluetooth
	7. LTE + WLAN
	8 LTE + 5G WLAN
	9. LTE + Bluetooth
Front to face	1 WCDMA + WLAN
	2 WCDMA + 5G WLAN
	3. WCDMA + Bluetooth
	4. LTE + WLAN
	5 LTE + 5G WLAN
	6. LTE + Bluetooth

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. Based upon KDB 447498 D01, BT SAR is excluded as below table.
4. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
5. For minimum test separation distance≦50mm,Bluetooth standalone SAR is excluded according to [(max. power of channel, including tune-up tolerance, mW)/ (min. test separation distance, mm) ·[√f (GHz) /x] ≦3.0 for 1-g SAR and ≦7.5 for 10-g extremity SAR
6. The reported SAR summation is calculated based on the same configuration and test position.
7. KDB 447498 / 4.3.2 (2) 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:
   5) (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f (GHz) /x] W/kg for test separation distances≤ 50 mm;
   Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.
   b) 0.4W/Kg for 1-g SAR and 1.0W/Kg for 10-g SAR, when the separation distance is >50mm.

Estimated SAR		Maximum Power		Antenna to user(mm)	Frequency(GHz)	Stand alone SAR(1g) [W/kg]
		dBm	mW			
BT	Body	1	1.259	5	2.480	0.053
BT	Front to face	1	1.259	10	2.480	0.026
5.3G	Front to face	9	7.94	10	5.300	0.244
5.6G	Front to face	9	7.94	10	5.600	0.251
5.8G	Body	5	3.16	5	5.800	0.203
	Front to face	5	3.16	10	5.800	0.101

Simultaneous Mode	Position	Mode	Max. 1-g SAR (W/kg)	1-g Sum SAR (W/kg)
GSM + WLAN	Body	GSM	0.463	0.547
		WLAN	0.084	
GSM + 5.2G WLAN	Body	GSM	0.463	0.508
		5.2G WLAN	0.045	
GSM + 5.3G WLAN	Body	GSM	0.463	0.570
		5.3G WLAN	0.107	
GSM + 5.6G WLAN	Body	GSM	0.463	0.605
		5.6G WLAN	0.142	
GSM + 5.8G WLAN	Body	GSM	0.463	0.666
		5.8G WLAN	0.203	
WCDMA + WLAN	Body	WCDMA RMC	0.437	0.521
		WLAN	0.084	
	Front to face	WCDMA RMC	0.335	0.402
		WLAN	0.067	
WCDMA + 5.2G WLAN	Body	WCDMA RMC	0.437	0.482
		5.2G WLAN	0.045	
	Front to face	WCDMA RMC	0.335	0.356
		5.2G WLAN	0.021	
WCDMA + 5.3G WLAN	Body	WCDMA RMC	0.437	0.544
		5.3G WLAN	0.107	
	Front to face	WCDMA RMC	0.335	0.579
		5.4G WLAN	0.244	
WCDMA + 5.6G WLAN	Body	WCDMA RMC	0.437	0.579
		5.6G WLAN	0.142	
	Front to face	WCDMA RMC	0.335	0.586
		5.6G WLAN	0.251	
WCDMA + 5.8G WLAN	Body	WCDMA RMC	0.437	0.640
		5.8G WLAN	0.203	
	Front to face	WCDMA RMC	0.335	0.436
		5.8G WLAN	0.101	
WCDMA + Bluetooth	Body	WCDMA RMC	0.437	0.490
		Bluetooth	0.053	
	Front to face	WCDMA RMC	0.335	0.361
		Bluetooth	0.026	

LTE + WLAN	Body	LTE RMC	0.441	0.525
		WLAN	0.084	
	Front to face	LTE RMC	0.260	0.327
		WLAN	0.067	
LTE + 5.2G WLAN	Body	LTE RMC	0.441	0.486
		5.2G WLAN	0.045	
	Front to face	LTE RMC	0.260	0.281
		5.2G WLAN	0.021	
LTE + 5.3G WLAN	Body	LTE RMC	0.441	0.548
		5.3G WLAN	0.107	
	Front to face	LTE RMC	0.260	0.504
		5.3G WLAN	0.244	
LTE + 5.6G WLAN	Body	LTE RMC	0.441	0.583
		5.6G WLAN	0.142	
	Front to face	LTE RMC	0.260	0.511
		5.6G WLAN	0.251	
LTE + 5.8G WLAN	Body	LTE RMC	0.441	0.644
		5.8G WLAN	0.203	
	Front to face	LTE RMC	0.260	0.361
		5.8G WLAN	0.101	
LTE + Bluetooth	Body	LTE RMC	0.441	0.494
		Bluetooth	0.053	
	Front to face	LTE RMC	0.260	0.286
		Bluetooth	0.026	

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
835MHz Dipole	MVG	SID835	SN 30/14 DIP0G835-332	2017.08.15	2020.08.14
1900MHz Dipole	MVG	SID1900	SN 30/14 DIP1G900-333	2017.08.15	2020.08.14
2450MHzDipole	MVG	SID2450	SN 30/14 DIP2G450-335	2017.08.15	2020.08.14
Waveguide	SATIMO	SWG5500	SN 13/14 WGA32	2017.08.15	2020.08.14
E-Field Probe	MVG	SSE2	SN 45/15 EPGO281	2018.04.10	2019.04.09
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2018.12.13	2019.12.12
Antenna	MVG	ANTA3	SN 07/13 ZNTA52	N/A	N/A
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom2	MVG	SAM	SN 32/14 SAM116	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
Network Analyzer	Agilent	8753ES	US38432810	2018.03.08	2019.03.07
Multi Meter	Keithley	Multi Meter 2000	4050073	2018.10.13	2019.10.12
Signal Generator	Agilent	N5182A	MY50140530	2018.10.16	2019.10.15
Wireless Communication Test Set	Agilent	8960-E5515C	MY48360751	2018.10.16	2019.10.15
Wireless Communication Test Set	R&S	CMW500	117239	2018.10.13	2019.10.12
Power Amplifier	DESAY	ZHL-42W	9638	2018.10.13	2019.10.12
Power Meter	R&S	NRP	100510	2018.10.26	2019.10.25
Power Meter	Agilent	E4418B	GB43312526	2018.10.26	2019.10.25
Power Sensor	R&S	NRP-Z11	101919	2018.10.13	2019.10.12
Power Sensor	Agilent	E9301A	MY41497725	2018.10.13	2019.10.12
9dB Attenuator	Agilent	99899	DC-18GHz	2018.05.09	2019.05.08
11dB Attenuator	Agilent	8494B	DC-18GHz	2018.05.09	2019.05.08
110dB Attenuator	Agilent	8494B	DC-18GHz	2018.05.09	2019.05.08
Directional coupler	Narda	4226-20	3305	2018.10.14	2019.10.13
hygrothermograph	MiEO	HH660	N/A	2018.10.14	2019.10.13
Thermograph	Elitech	RC-4	S/N EF7176501537	2018.10.14	2019.10.13

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
835MHz Dipole	MVG	SID835	SN 30/14 DIP0G835-332	2020.07.14	2023.07.13
1900MHz Dipole	MVG	SID1900	SN 30/14 DIP1G900-333	2020.07.14	2023.07.13
E-Field Probe	MVG	SSE2	SN 07/21 EPGO352	2021.03.01	2022.02.28
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2020.11.24	2021.11.23
Antenna	MVG	ANTA3	SN 07/13 ZNTA52	N/A	N/A
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom2	MVG	SAM	SN 32/14 SAM116	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	2020.10.12	2021.10.11
Multi Meter	Keithley	Multi Meter 2000	4050073	2020.10.10	2021.10.09
Signal Generator	Agilent	N5182A	MY50140530	2020.10.10	2021.10.09
Wireless Communication Test Set	Agilent	8960-E5515C	MY48360751	2020.10.10	2021.10.09
Wireless Communication Test Set	R&S	CMW500	117239	2020.10.10	2021.10.09
Power Amplifier	DESAY	ZHL-42W	9638	2020.10.12	2021.10.11
Power Meter	R&S	NRP	100510	2020.10.10	2021.10.09
Power Meter	Agilent	E4419B	QB43312265	2020.10.10	2021.10.09
Power Sensor	R&S	NRP-Z11	101919	2020.10.10	2021.10.09
Power Sensor	HP	E9300A	US39210170	2020.10.10	2021.10.09
Temperature hygrometer	SuWei	SW-108	N/A	2020.10.12	2021.10.11
Thermograph	Elitech	RC-4	S/N EF7176501537	2020.10.12	2021.10.11

Note:
Per KDB 865664 D01, Dipole SAR Validation Verification, STS LAB has adopted 3 years calibration intervals. On annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:
1. There is no physical damage on the dipole
2. System validation with specific dipole is within 10% of calibrated value Return-loss in within 20% of calibrated measurement

Appendix A. System Validation Plots

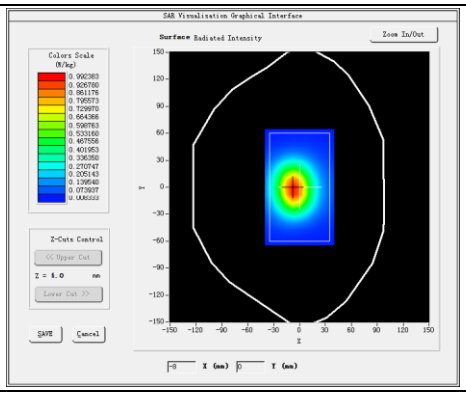
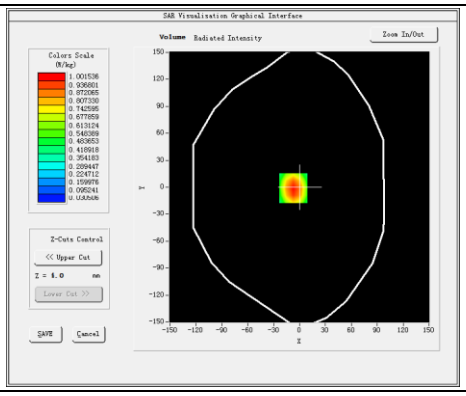
System Performance Check Data (835MHz Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2018-08-14
Measurement duration: 13 minutes 27 seconds

Experimental conditions

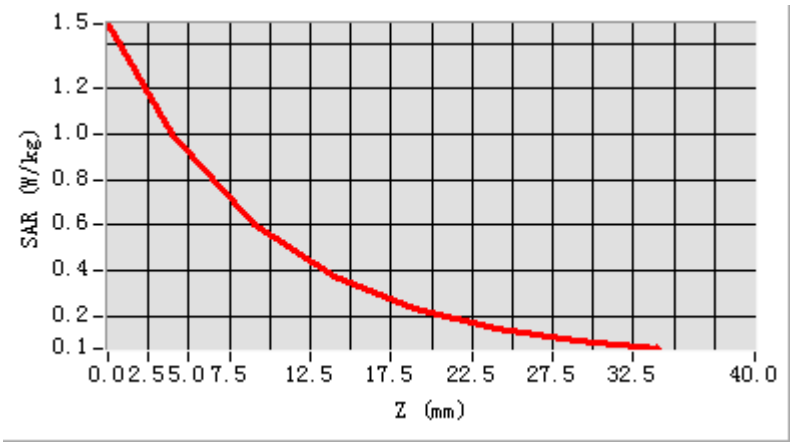
Phantom	Validation plane
Device Position	-
Band	835MHz
Channels	-
Signal	CW
Frequency (MHz)	835MHz
Relative permittivity	40.47
Conductivity (S/m)	0.91
Power drift (%)	0.07
Probe	SN 14/16 EP309
ConvF:	1.78
Crest factor:	1:1

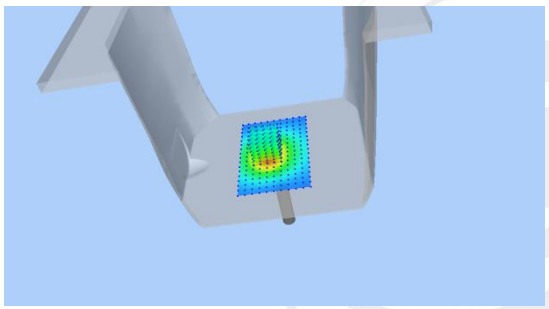
SURFACE SAR	VOLUME SAR
	

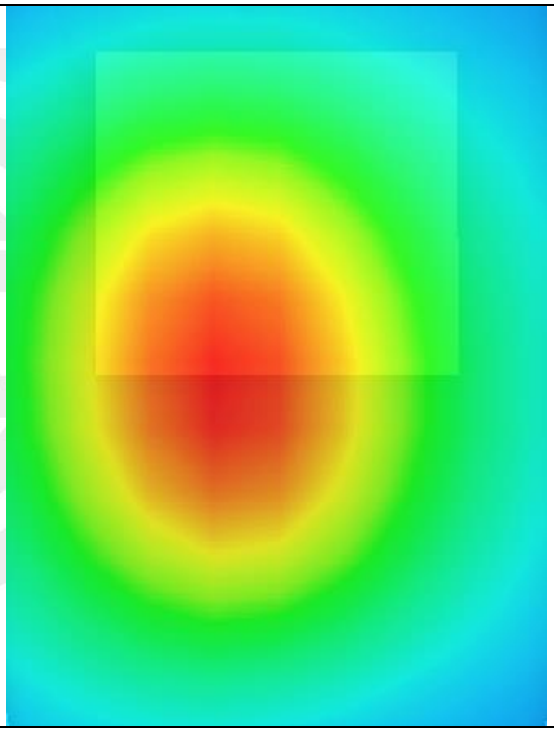
Maximum location: X=-7.00, Y=-1.00

SAR 10g (W/Kg)	0.615203
SAR 1g (W/Kg)	0.967102

Z Axis Scan


1.5
1.2
1.0
0.8
0.6
0.4
0.2
0.1
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)



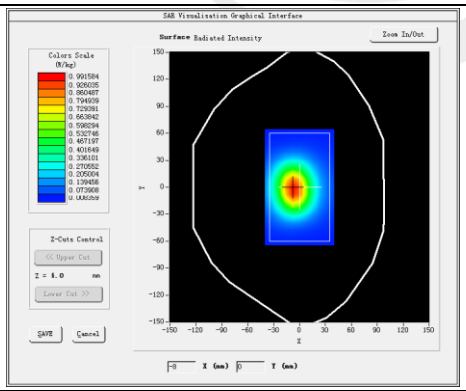
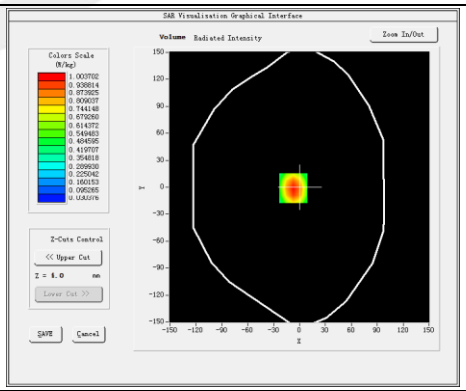


System Performance Check Data (835MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2018-07-17
Measurement duration: 14 minutes 13 seconds

Experimental conditions.

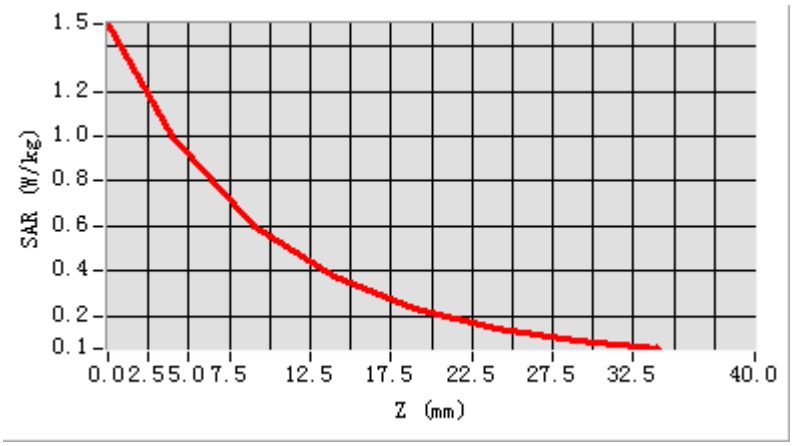
Probe	
Phantom	Validation plane
Device Position	-
Band	835MHz
Channels	-
Signal	CW
Frequency (MHz)	835MHz
Relative permittivity	54.05
Conductivity (S/m)	0.94
Power drift (%)	-0.37
Probe	SN 45/15 EPGO281
ConvF:	1.85
Crest factor:	1:1

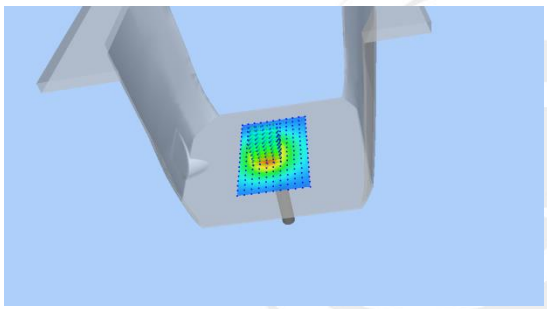
SURFACE SAR	VOLUME SAR
	

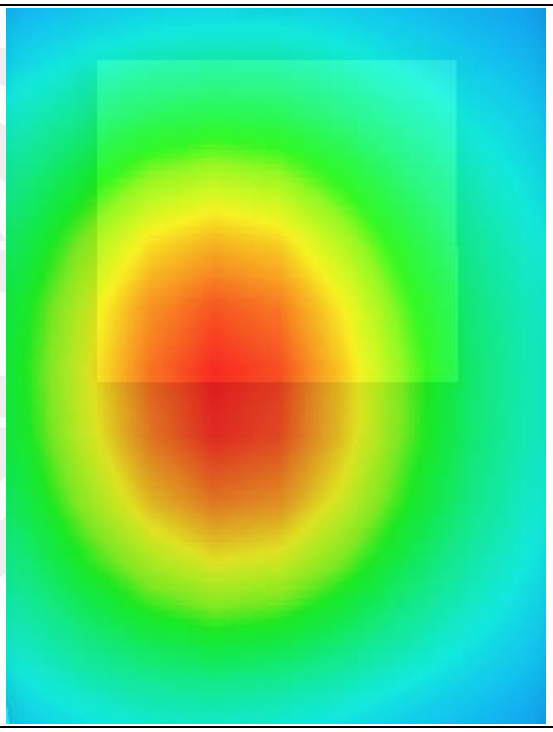
Maximum location: X=-7.00, Y=-1.00

SAR 10g (W/Kg)	0.635871
SAR 1g (W/Kg)	0.992145

Z Axis Scan


1.5
1.2
1.0
0.8
0.6
0.4
0.2
0.1
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)



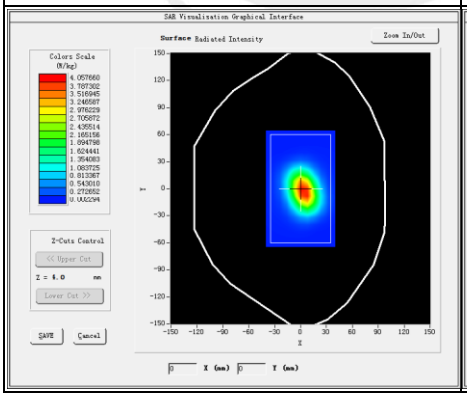
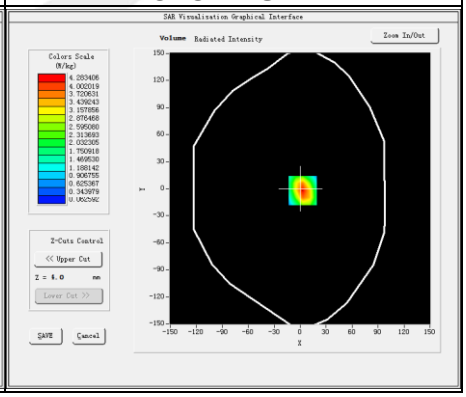


System Performance Check Data (1900MHz Head)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2018-08-14
Measurement duration: 14 minutes 12 seconds

Experimental conditions.

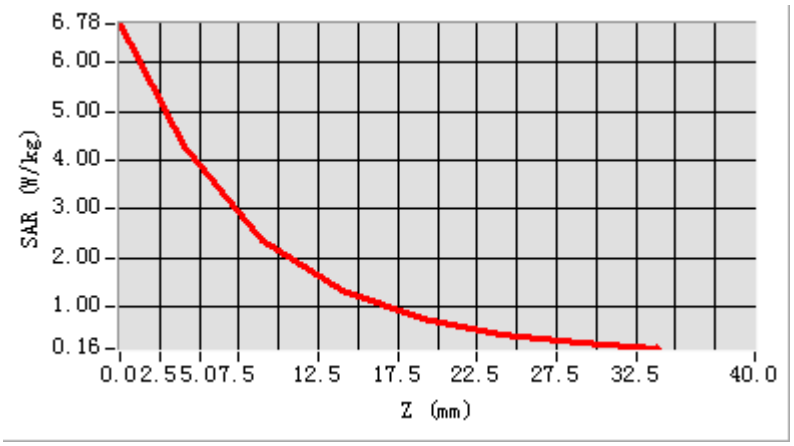
Phantom	Validation plane
Device Position	-
Band	1900MHz
Channels	-
Signal	CW
Frequency (MHz)	1900MHz
Relative permittivity	40.93
Conductivity (S/m)	1.38
Power drift (%)	0.46
Probe	SN 14/16 EP309
ConvF:	2.10
Crest factor:	1:1

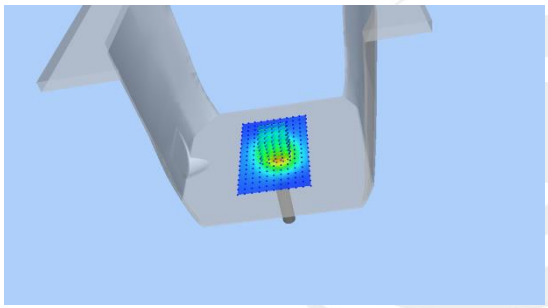
SURFACE SAR	VOLUME SAR
	

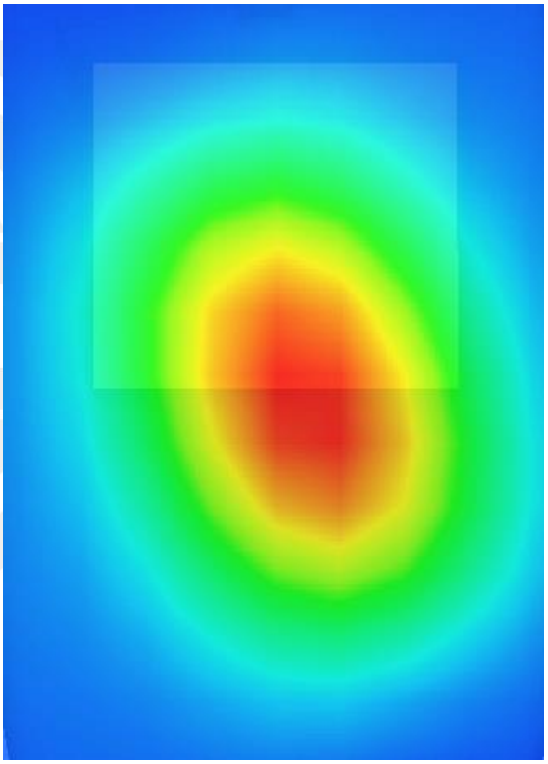
Maximum location: X=3.00, Y=-2.00

SAR 10g (W/Kg)	2.102587
SAR 1g (W/Kg)	4.164821

Z Axis Scan


6.78
6.00
5.00
4.00
3.00
2.00
1.00
0.16
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)



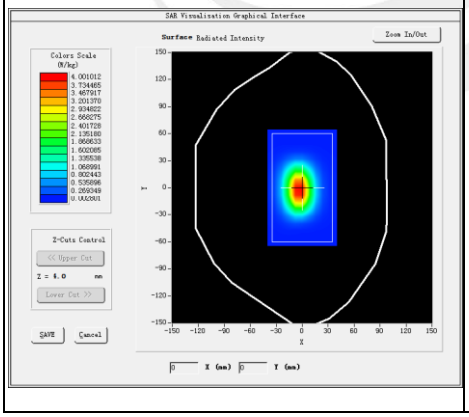
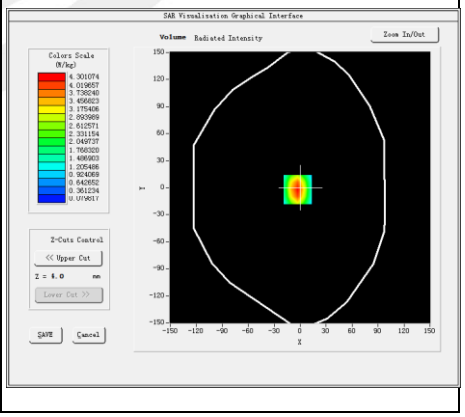


System Performance Check Data (1900MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2018-07-18
Measurement duration: 14 minutes 46 seconds

Experimental conditions.

Device Position	-
Band	1900MHz
Channels	-
Signal	CW
Frequency (MHz)	1900
Relative permittivity	53.28
Conductivity (S/m)	1.49
Power drift (%)	-0.31
Probe	SN 45/15 EPGO281
ConvF:	2.16
Crest factor:	1:1

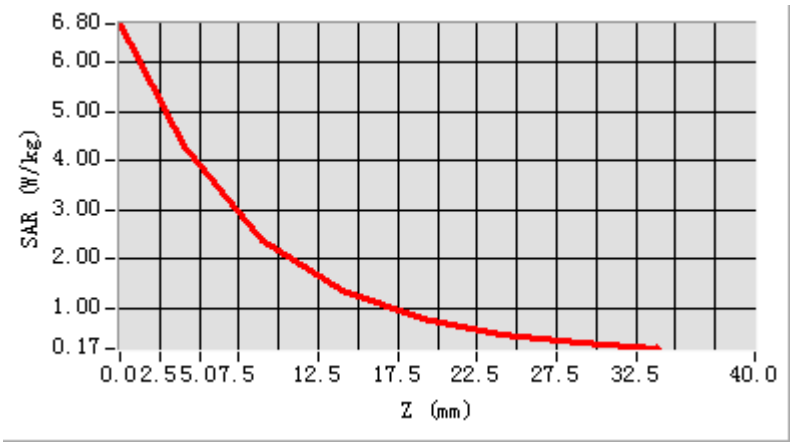
SURFACE SAR	VOLUME SAR
	

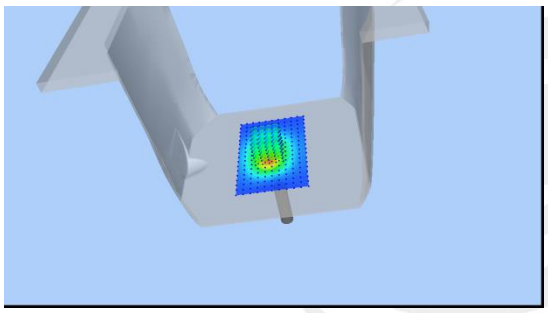
Maximum location: X=-3.00, Y=-2.00

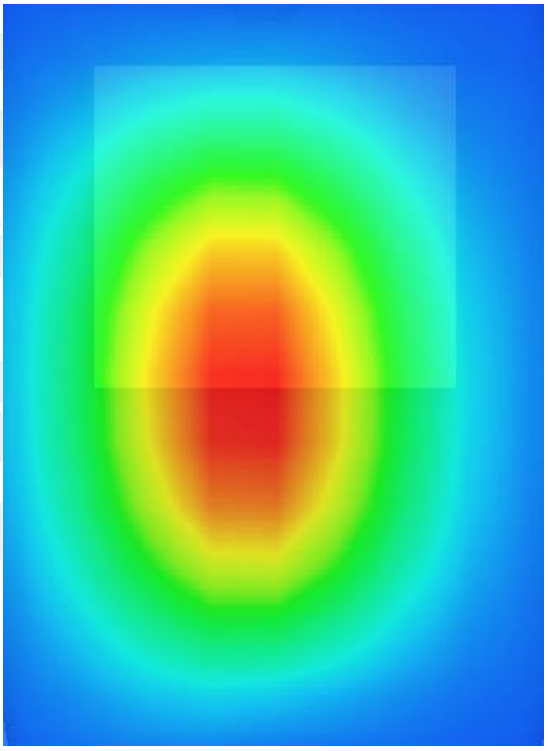
SAR Peak: 5.27 W/kg

SAR 10g (W/Kg)	2.183011
SAR 1g (W/Kg)	3.930247

Z Axis Scan


6.80
6.00
5.00
4.00
3.00
2.00
1.00
0.17
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)



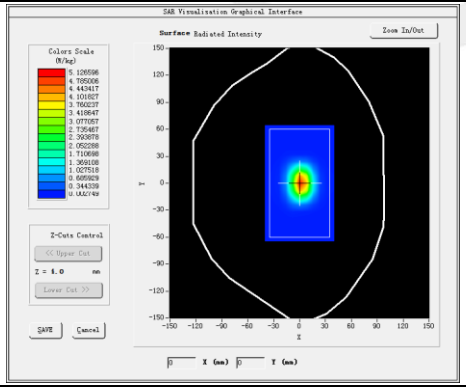
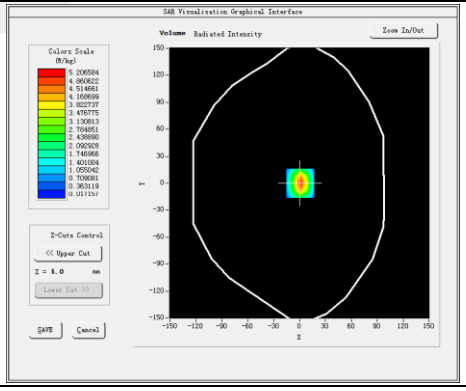


System Performance Check Data (2450MHz Head)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2018-08-15
Measurement duration: 13 minutes 51seconds

Experimental conditions.

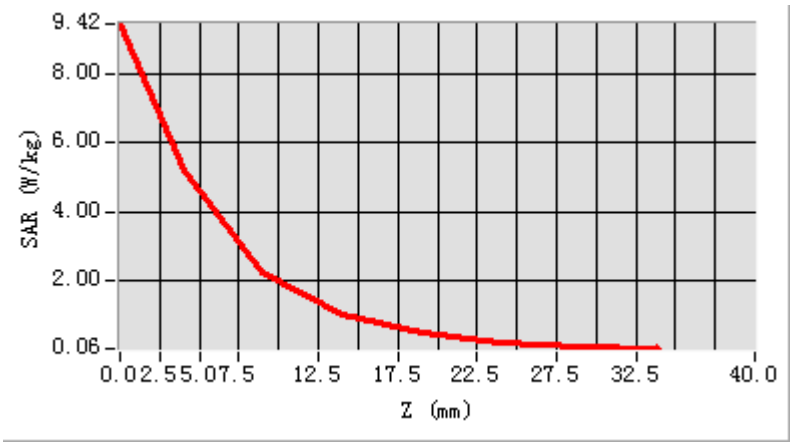
Device Position	Validation plane
Band	2450 MHz
Channels	-
Signal	CW
Frequency (MHz)	2450
Relative permittivity	39.59
Conductivity (S/m)	1.76
Power drift (%)	-0.38
Probe	SN 14/16 EP309
ConvF	2.21
Crest factor:	1:1

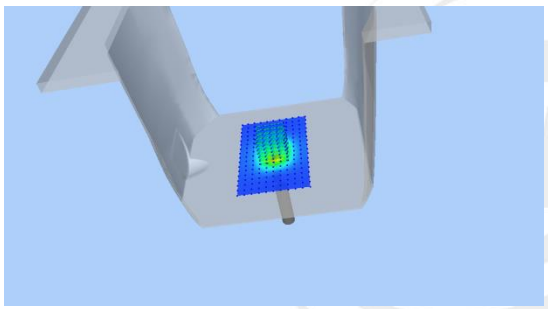
SURFACE SAR	VOLUME SAR
	

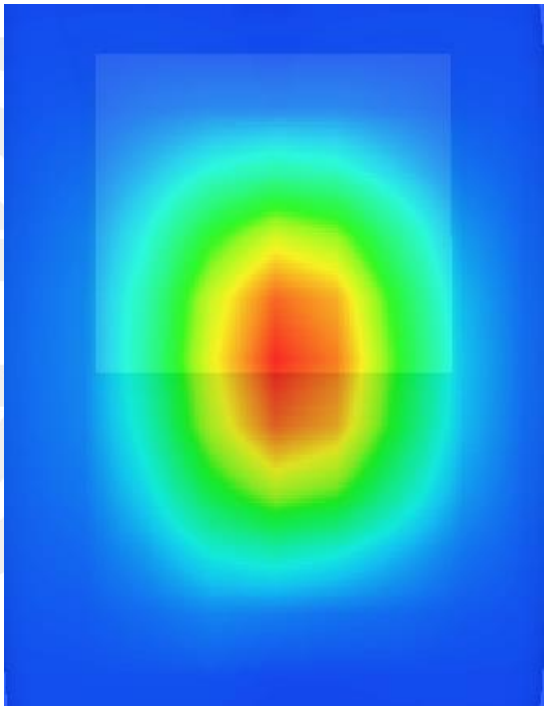
Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	2.450217
SAR 1g (W/Kg)	5.274508

Z Axis Scan


9.42
8.00
6.00
4.00
2.00
0.06
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)



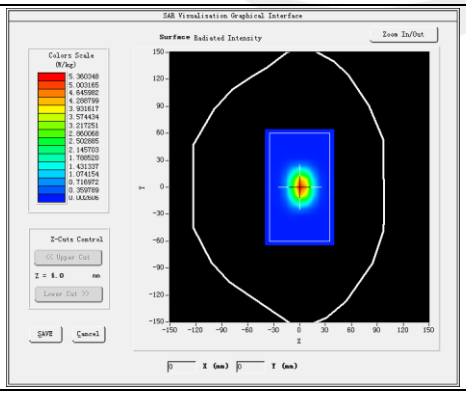
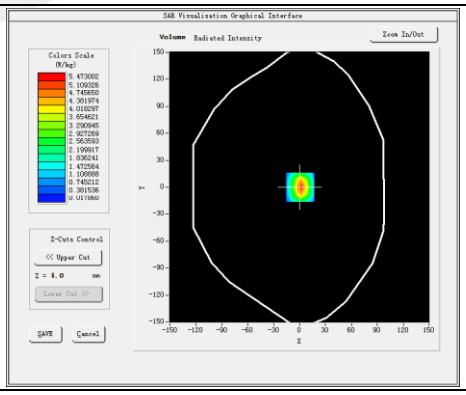


System Performance Check Data (2450MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2018-08-15
Measurement duration: 14 minutes 23 seconds

Experimental conditions.

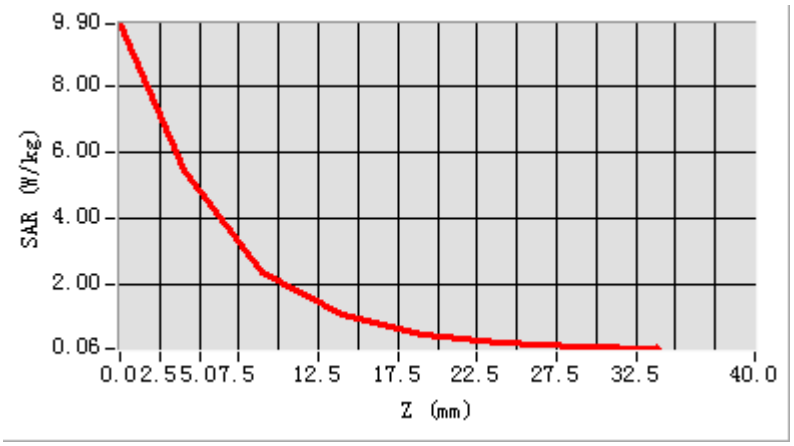
Device Position	Validation plane
Band	2450 MHz
Channels	-
Signal	CW
Frequency (MHz)	2450
Relative permittivity	53.28
Conductivity (S/m)	1.49
Power drift (%)	-0.07
Probe	SN 45/15 EPGO281
ConvF	2.28
Crest factor:	1:1

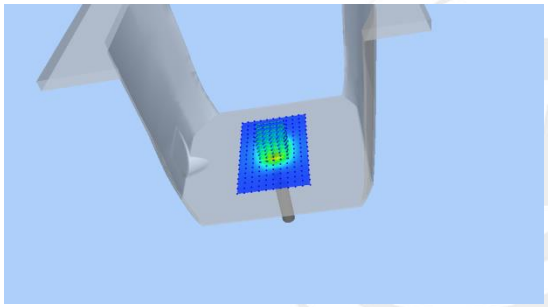
SURFACE SAR	VOLUME SAR
	

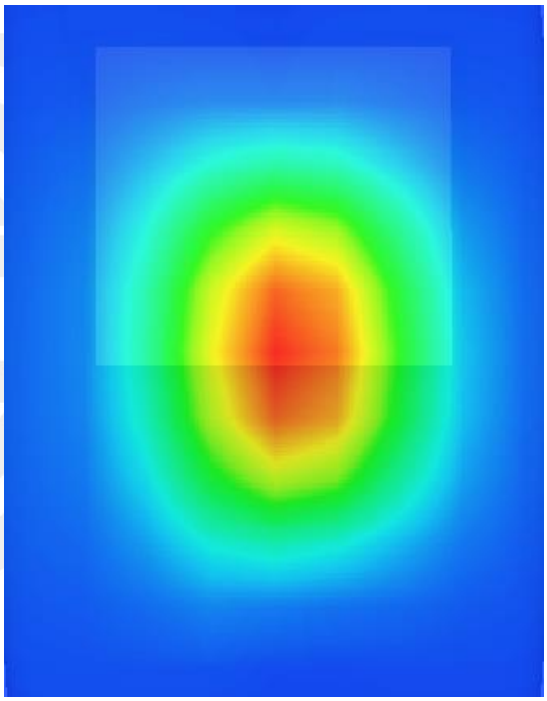
Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	2.452014
SAR 1g (W/Kg)	5.302451

Z Axis Scan


9.90
8.00
6.00
4.00
2.00
0.06
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)



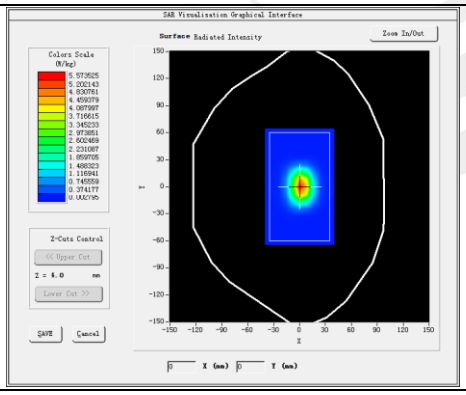
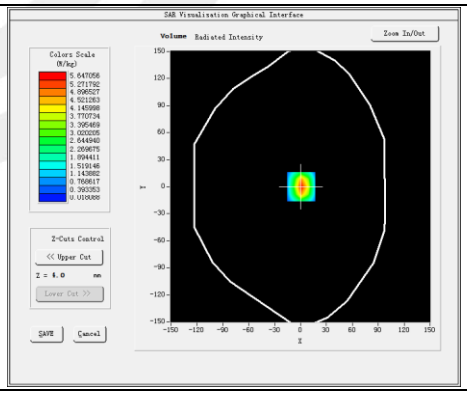


System Performance Check Data(5200MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2018-07-19

Experimental conditions.

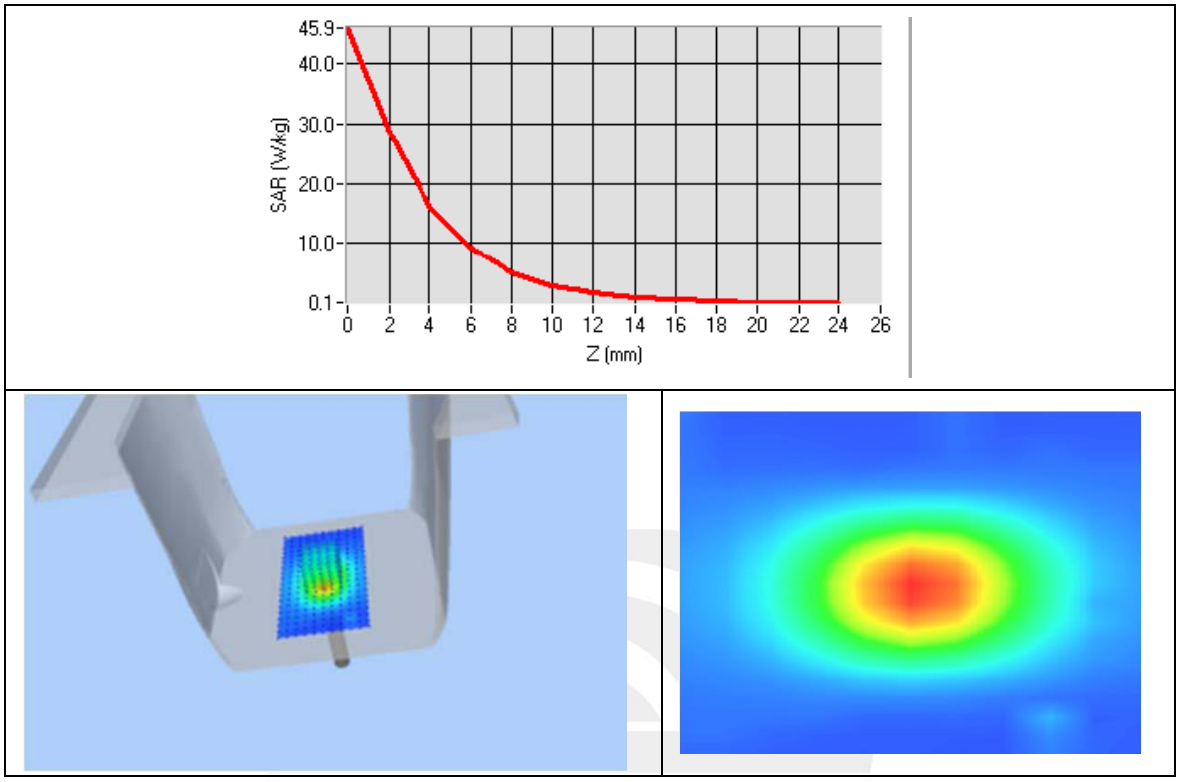
Device Position	Validation plane
Band	5200 MHz
Channels	-
Signal	CW
Frequency (MHz)	5200
Relative permittivity	49.66
Conductivity (S/m)	5.41
Power drift (%)	2.52
Probe	SN 45/15 EPGO281
ConvF	2.52
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=2.00

SAR 10g (W/Kg)	5.762062
SAR 1g (W/Kg)	15.847001

Z Axis Scan

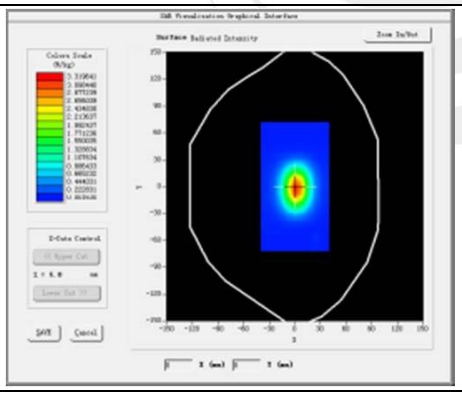
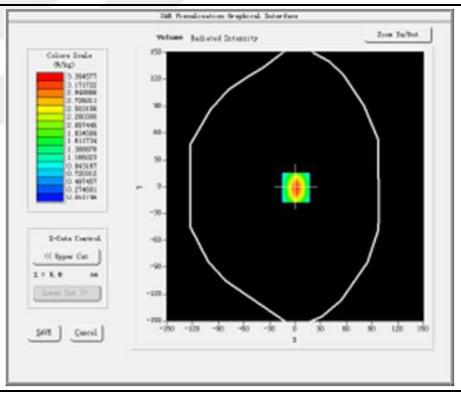


System Performance Check Data(5300MHz Body)

Type: Dipole measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2019-03-05

Experimental conditions.

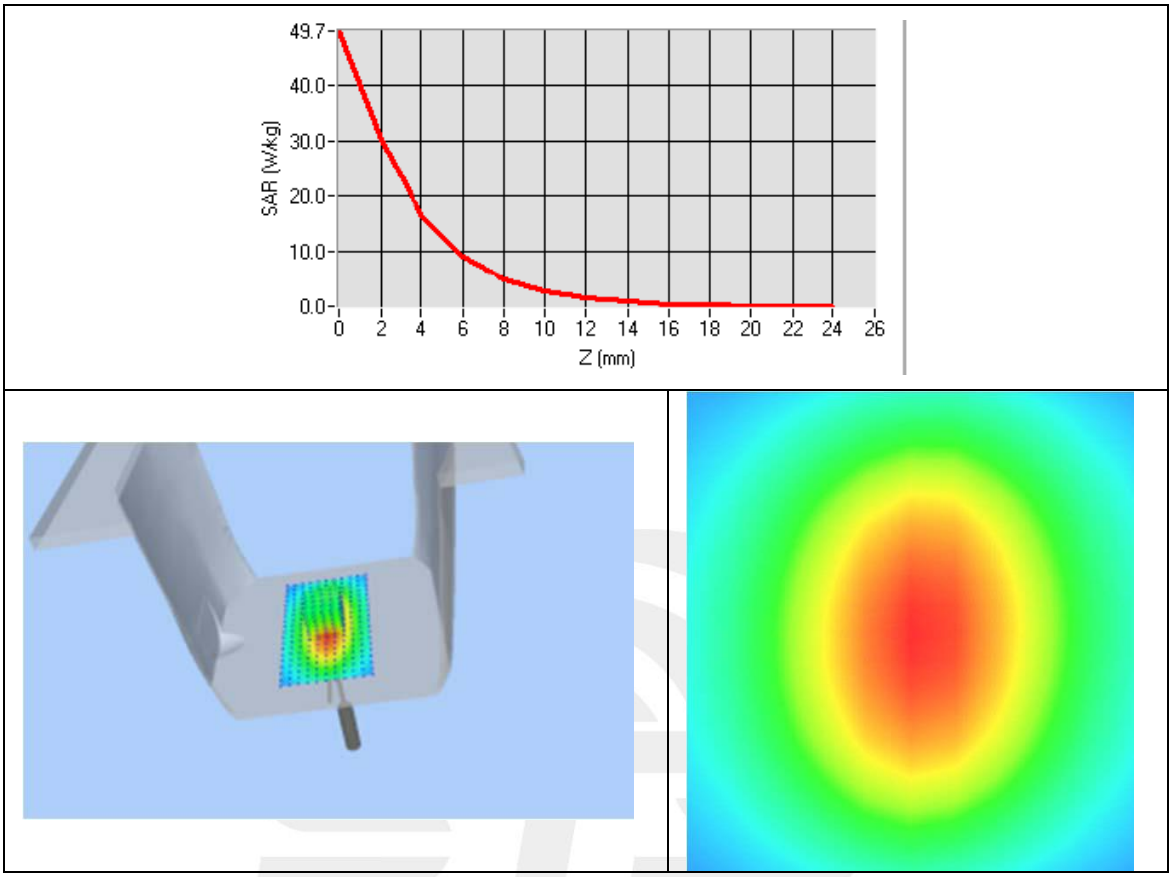
Device Position	Validation plane
Band	5300 MHz
Channels	-
Signal	CW
Frequency (MHz)	5300
Relative permittivity	49.20
Conductivity (S/m)	5.39
Power drift (%)	-1.77
Probe	SN 45/15 EPGO281
ConvF	2.79
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=2.00

SAR 10g (W/Kg)	5.975031
SAR 1g (W/Kg)	16.786210

Z Axis Scan

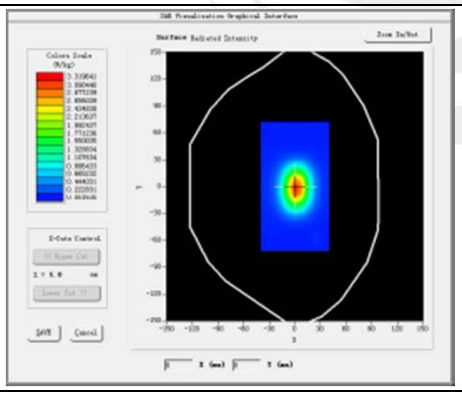
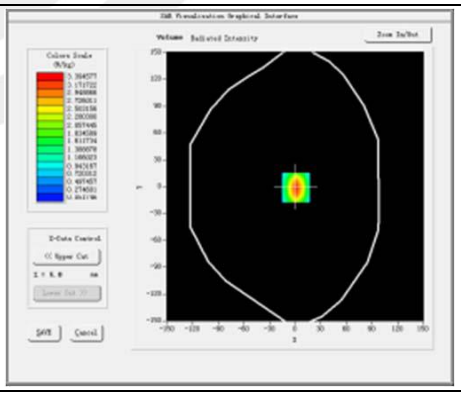


System Performance Check Data(5600MHz Body)

Type: Dipole measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2019-03-05

Experimental conditions.

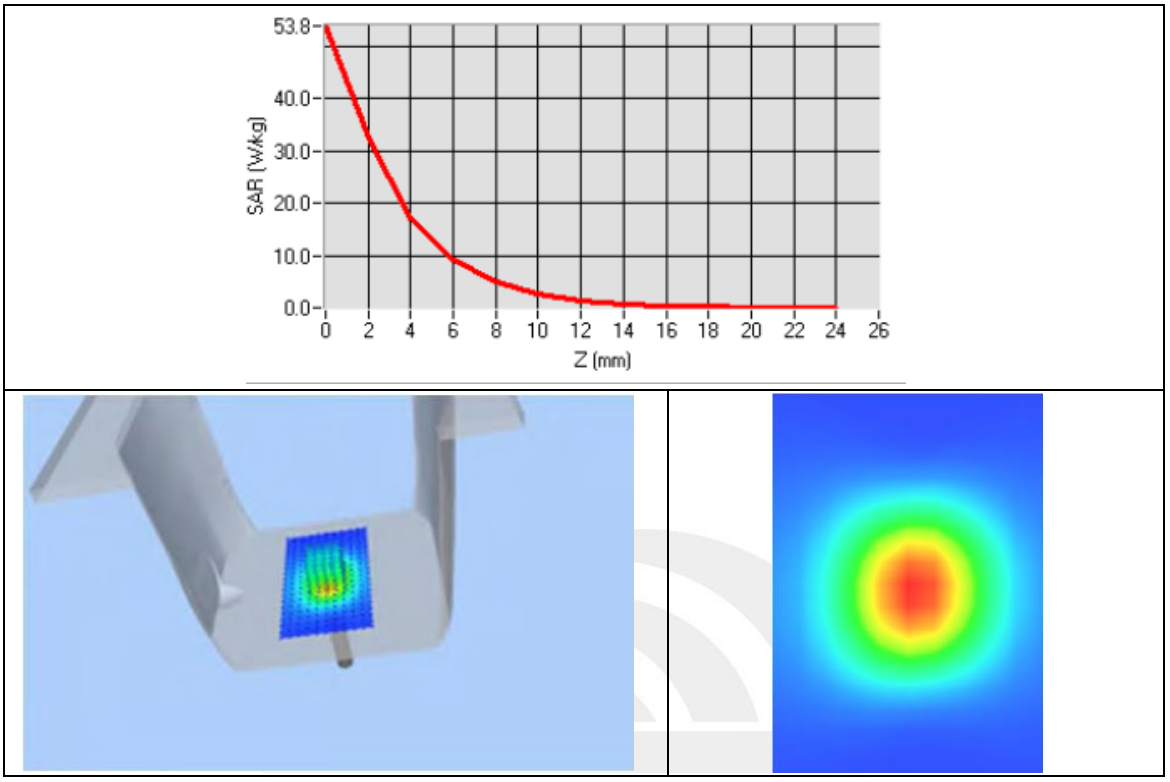
Device Position	Validation plane
Band	5600 MHz
Channels	-
Signal	CW
Frequency (MHz)	5600
Relative permittivity	50.37
Conductivity (S/m)	5.90
Power drift (%)	1.86
Probe	SN 45/15 EPGO281
ConvF	2.83
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=2.00

SAR 10g (W/Kg)	6.140128
SAR 1g (W/Kg)	17.232581

Z Axis Scan



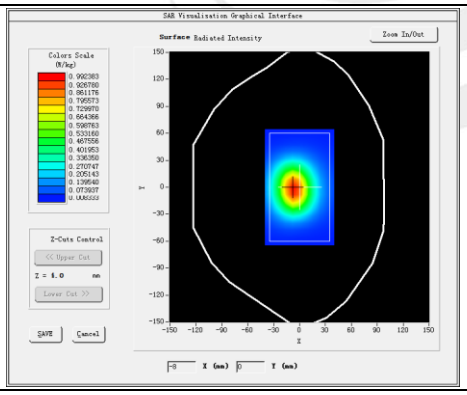
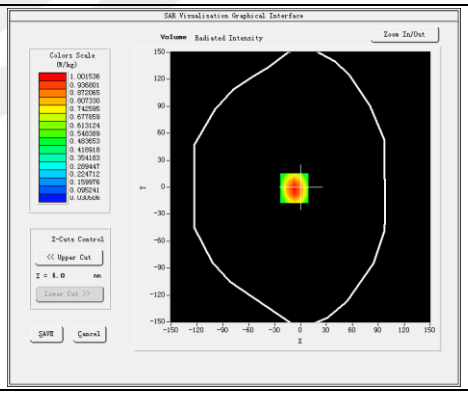
System Performance Check Data (835MHz)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2021-08-04

Experimental conditions

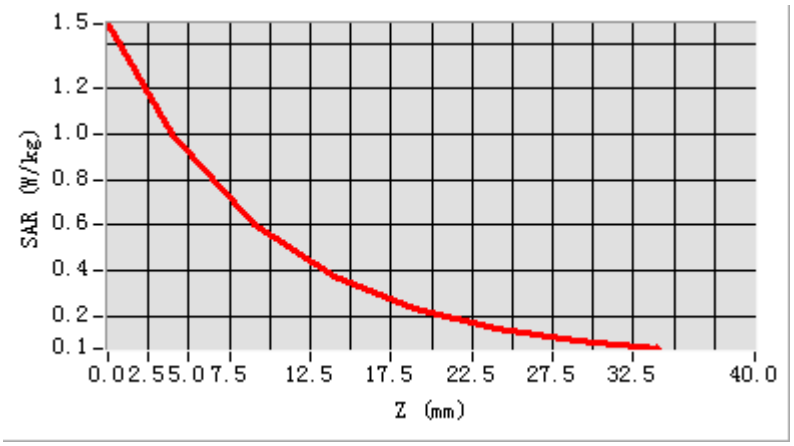
Phantom	Validation plane
Device Position	-
Band	835MHz
Channels	-
Signal	CW
Frequency (MHz)	835MHz
Relative permittivity	41.92
Conductivity (S/m)	0.89
Probe	SN 07/21 EPGO352
ConvF:	1.57
Crest factor:	1:1

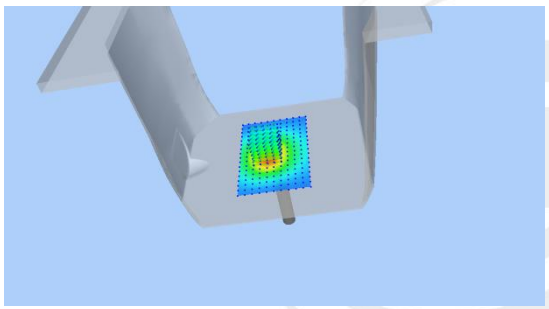
SURFACE SAR	VOLUME SAR
	

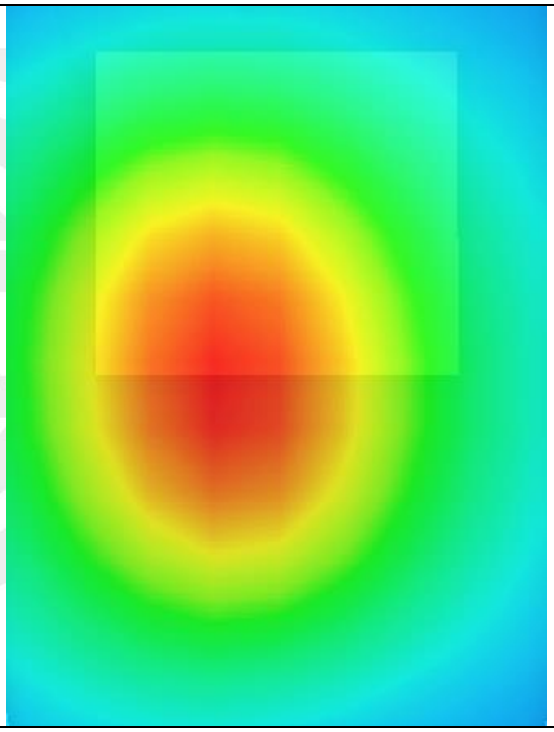
Maximum location: X=-7.00, Y=-1.00

SAR 10g (W/Kg)	0.623751
SAR 1g (W/Kg)	0.964281

Z Axis Scan


1.5
1.2
1.0
0.8
0.6
0.4
0.2
0.1
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)



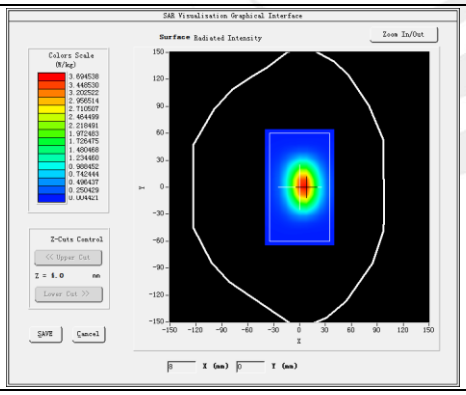
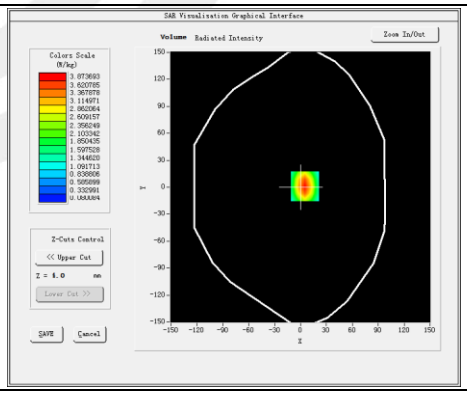


System Performance Check Data(1800MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2021-08-04

Experimental conditions.

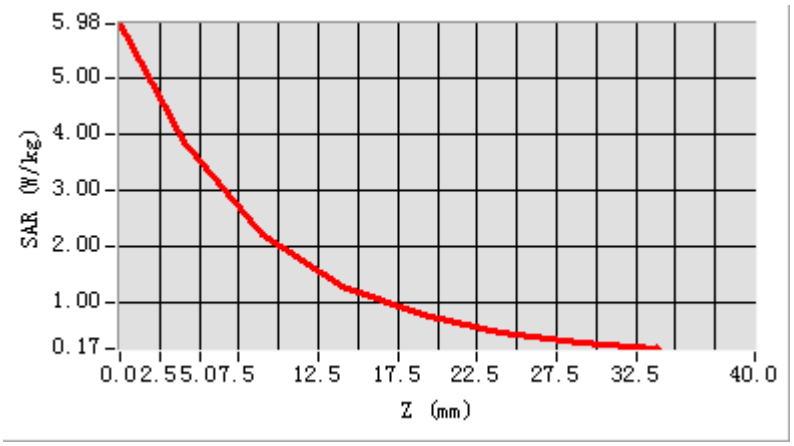
Phantom	Validation plane
Device Position	-
Band	1800MHz
Channels	-
Signal	CW
Frequency (MHz)	1800MHz
Relative permittivity	39.39
Conductivity (S/m)	1.39
Probe	SN 07/21 EPGO352
ConvF	1.60
Crest factor:	1:1

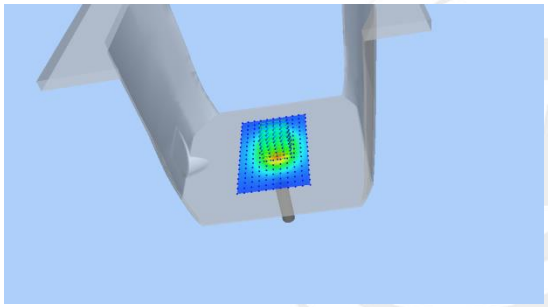
SURFACE SAR	VOLUME SAR
	

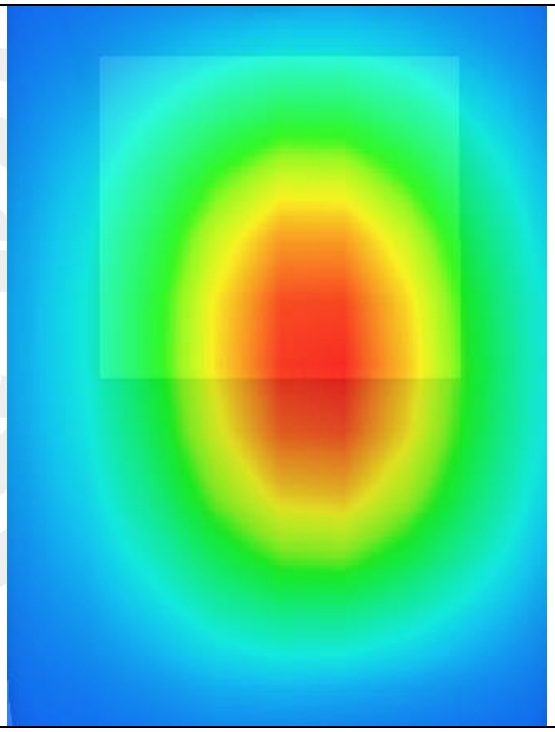
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	2.075120
SAR 1g (W/Kg)	4.088312

Z Axis Scan


5.98
5.00
4.00
3.00
2.00
1.00
0.17
SAR (W/kg)
0.0 2.5 5.0 7.5 12.5 17.5 22.5 27.5 32.5 40.0
Z (mm)





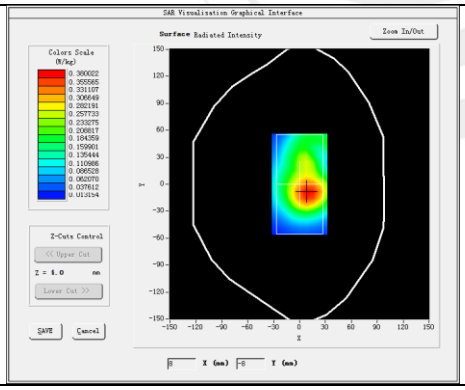
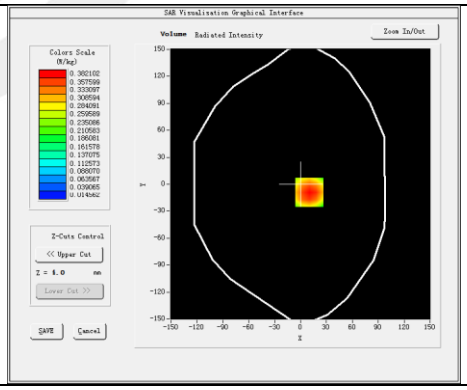
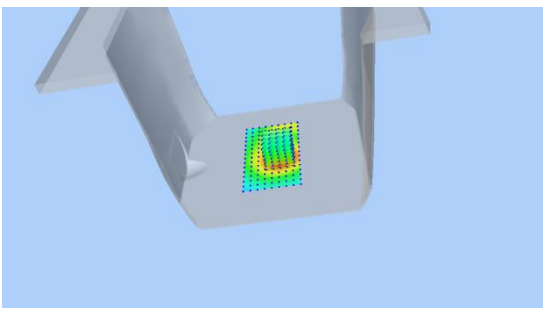
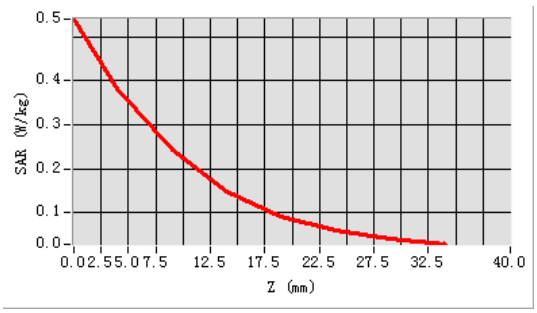
Appendix B. SAR Test Plots

Plot 1: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2018-07-18
Probe	SN 45/15 EPGO281
ConvF	2.16
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Body back side
Band	WCDMA II
Channels	High
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1907.6
Relative permittivity (real part)	53.28
Conductivity (S/m)	1.49
Variation (%)	2.94

Maximum location: X=10.00, Y=-9.00
SAR Peak: 0.54 W/kg

SAR 10g (W/Kg)	0.223191
SAR 1g (W/Kg)	0.369710

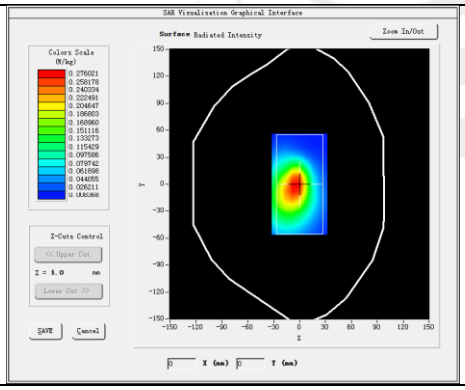
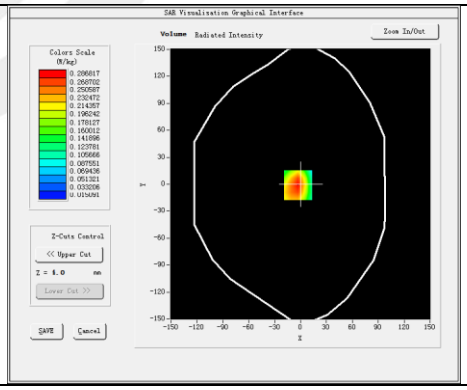
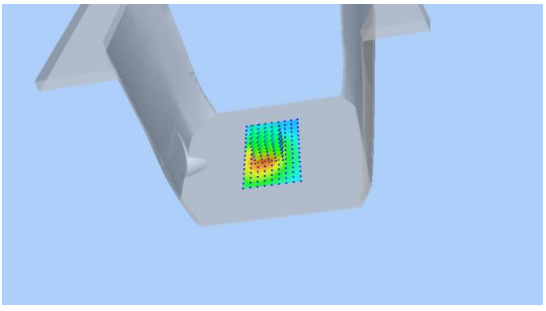
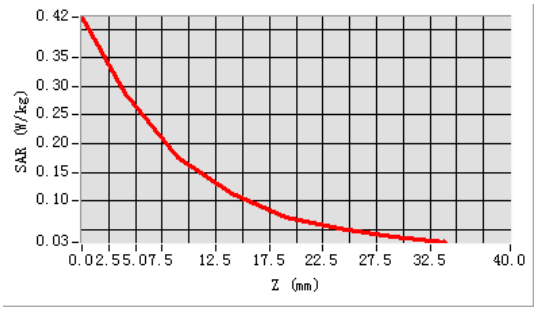
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 2: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2018-07-18
Probe	SN 45/15 EPGO281
ConvF	1.85
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Body back side
Band	WCDMA V
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	836.6
Relative permittivity (real part)	54.05
Conductivity (S/m)	0.94
Variation (%)	-3.76

Maximum location: X=-3.00, Y=-1.00
SAR Peak: 0.42 W/kg

SAR 10g (W/Kg)	0.165820
SAR 1g (W/Kg)	0.271605

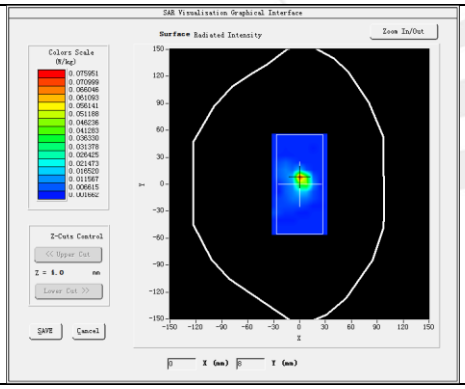
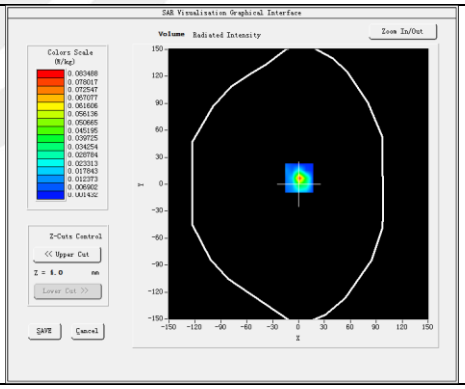
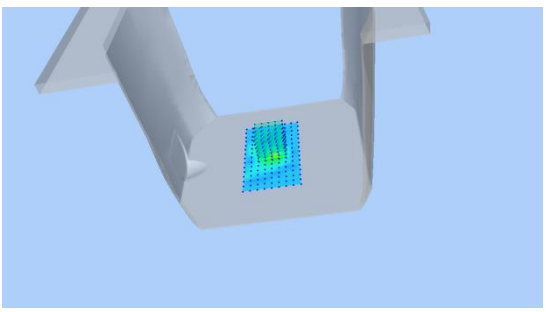
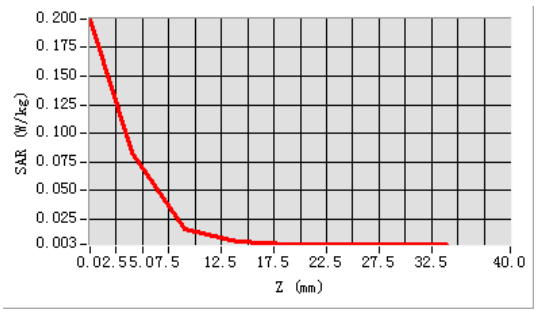
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 3: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2018-07-18
Probe	SN 45/15 EPGO281
ConvF	2.28
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Body back side
Band	IEEE 802.11b ISM
Channels	High
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	54.14
Conductivity (S/m)	2.00
Variation (%)	3.44

Maximum location: X=1.00, Y=7.00
SAR Peak: 0.19 W/kg

SAR 10g (W/Kg)	0.018384
SAR 1g (W/Kg)	0.070234

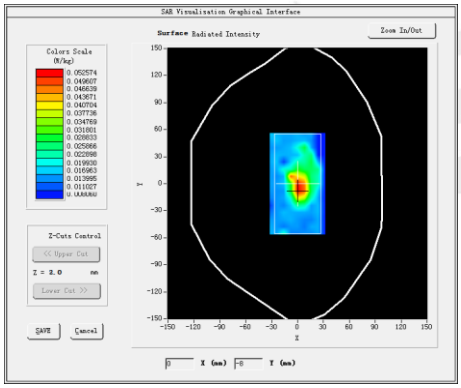
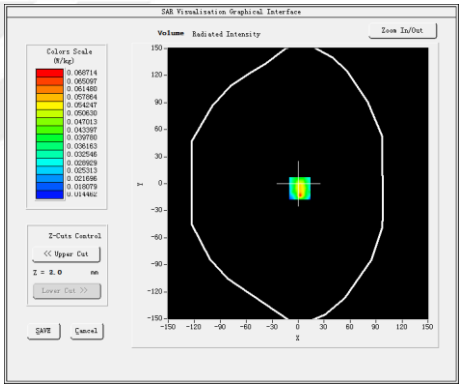
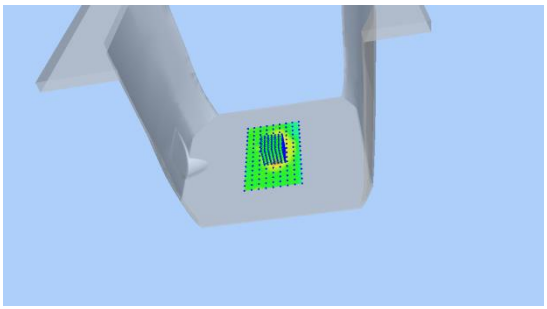
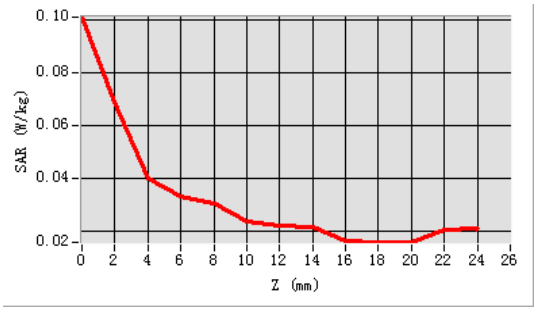
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 4: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2017-07-19
Probe	SN 45/15 EPGO281
ConvF	2.52
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Body back
Band	IEEE 802.11a U-NII
Channels	Low
Signal	IEEE802.a (Crest factor: 1.0)
Frequency (MHz)	5180
Relative permittivity (real part)	49.66
Conductivity (S/m)	5.41
Variation (%)	1.98

Maximum location: X=2.00, Y=-5.00
SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.027296
SAR 1g (W/Kg)	0.043615

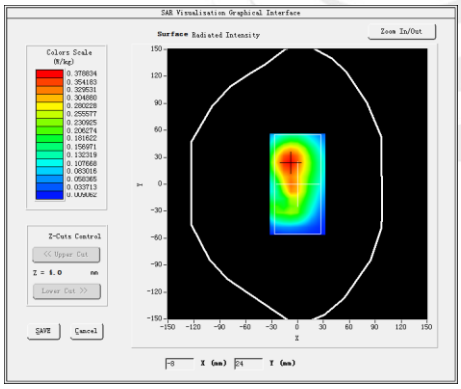
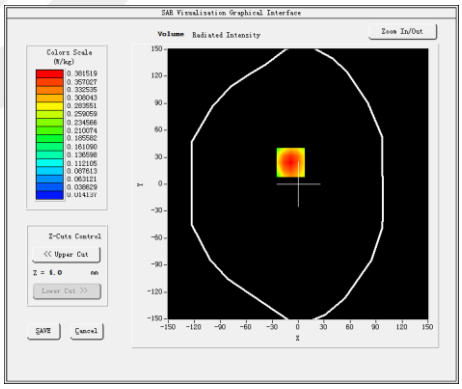
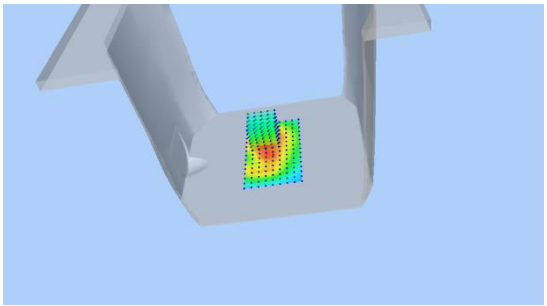
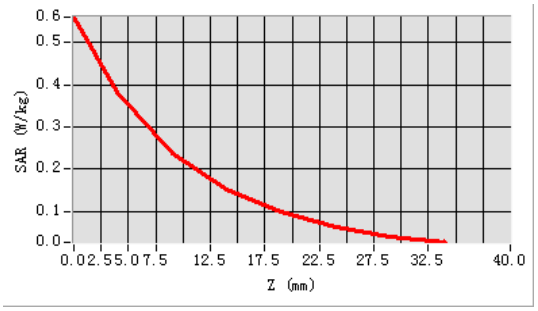
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 5: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2018-07-18
Probe	SN 45/15 EPGO281
ConvF	2.16
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Body back
Band	LTE Band 2(RB 1)
Channels	High
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1900
Relative permittivity (real part)	53.28
Conductivity (S/m)	1.49
Variation (%)	-1.90

Maximum location: X=-9.00, Y=24.00
SAR Peak: 0.56 W/kg

SAR 10g (W/Kg)	0.222531
SAR 1g (W/Kg)	0.367580

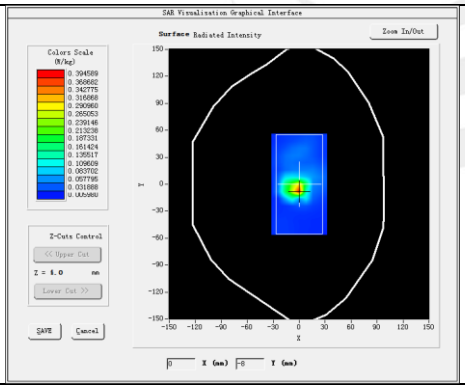
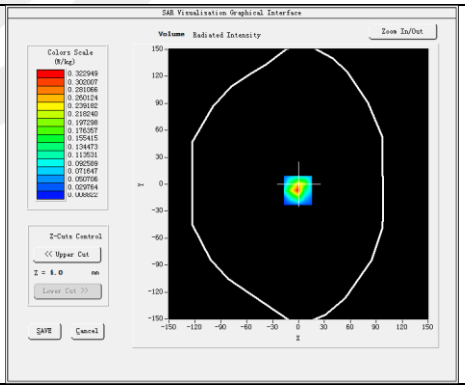
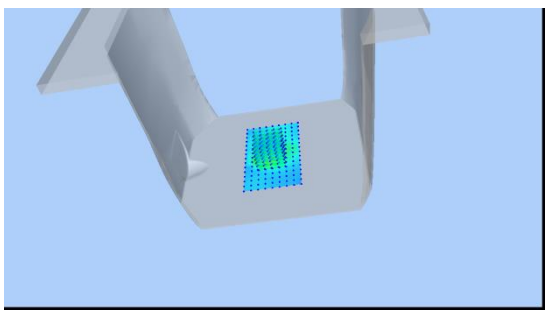
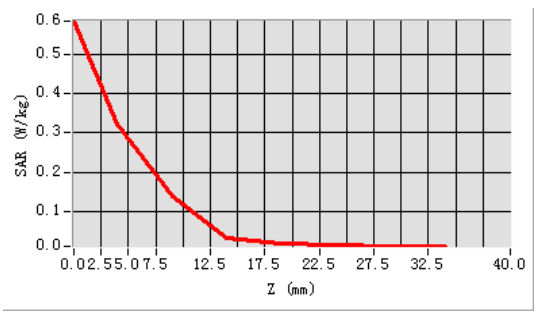
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 6: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2018-08-14
Probe	SN 45/15 EPGO281
ConvF	2.10
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Front to face
Band	WCDMA II
Channels	High
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1907.6
Relative permittivity (real part)	40.93
Conductivity (S/m)	1.38
Variation (%)	2.11

Maximum location: X=-1.00, Y=-7.00
SAR Peak: 0.60 W/kg

SAR 10g (W/Kg)	0.103846
SAR 1g (W/Kg)	0.283890

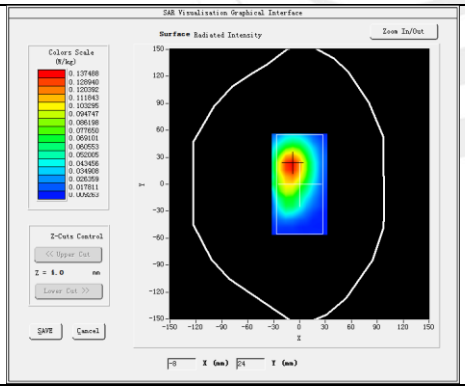
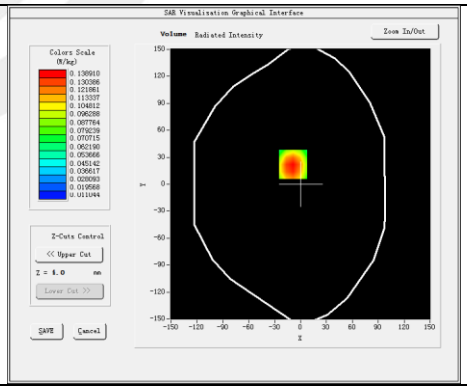
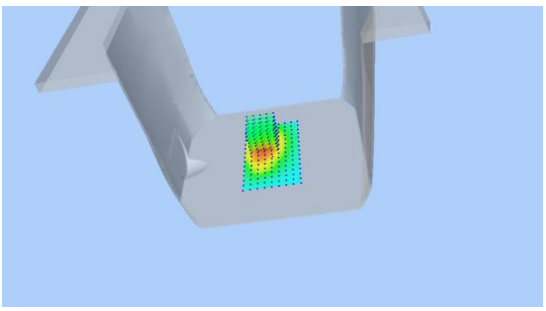
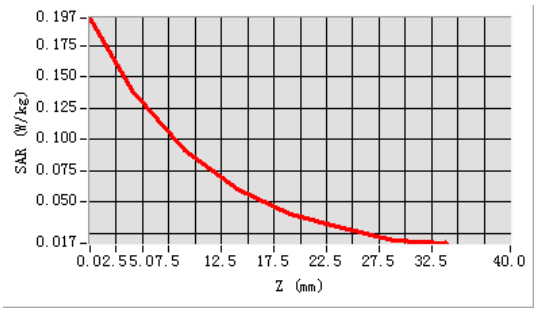
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 7: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2018-8-14
Probe	SN 45/15 EPGO281
ConvF	1.78
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Front to face
Band	WCDMA V
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	836.6
Relative permittivity (real part)	40.37
Conductivity (S/m)	0.91
Variation (%)	-1.53

Maximum location: X=-9.00, Y=22.00
SAR Peak: 0.20 W/kg

SAR 10g (W/Kg)	0.082941
SAR 1g (W/Kg)	0.134094

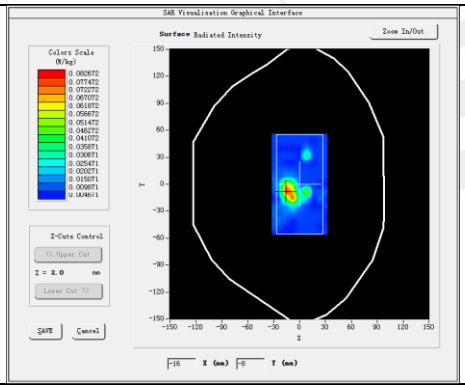
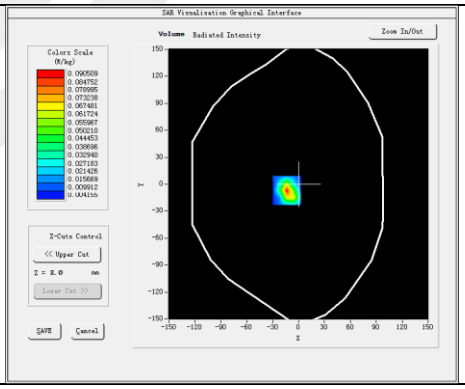
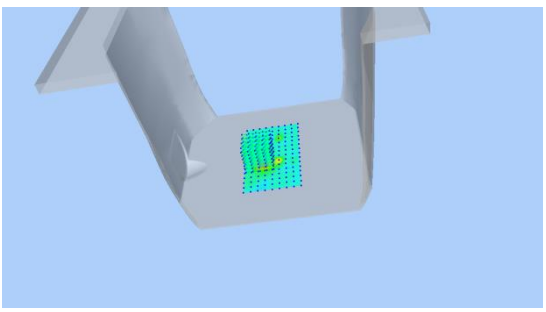
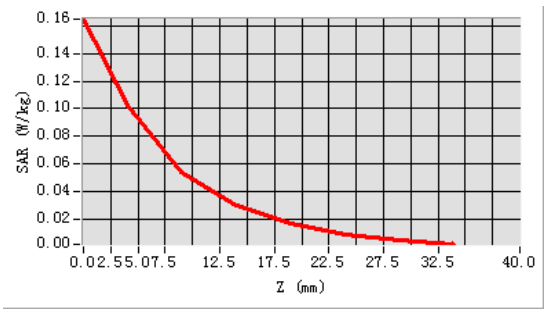
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 8: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2018-08-15
Probe	SN 45/15 EPGO281
ConvF	2.21
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Front to face
Band	IEEE 802.11b ISM
Channels	High
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	39.59
Conductivity (S/m)	1.76
Variation (%)	2.03

Maximum location: X=-14.0, Y=-7.00
SAR Peak: 0.16 W/kg

SAR 10g (W/Kg)	0.019707
SAR 1g (W/Kg)	0.056151

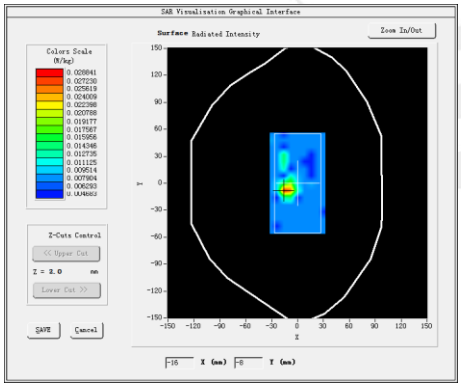
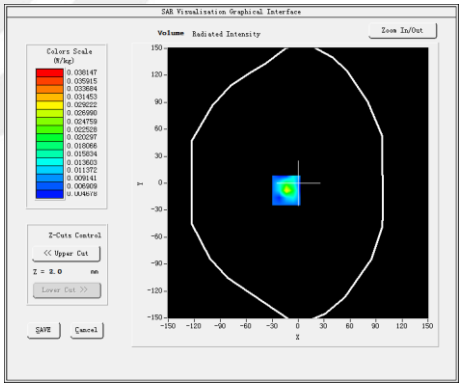
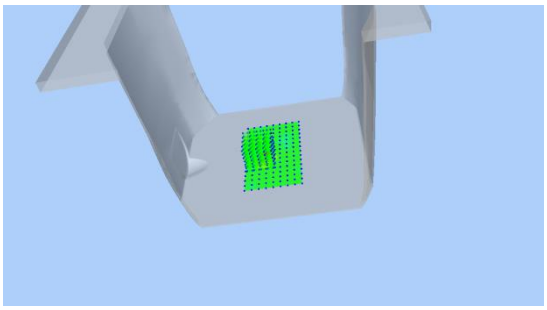
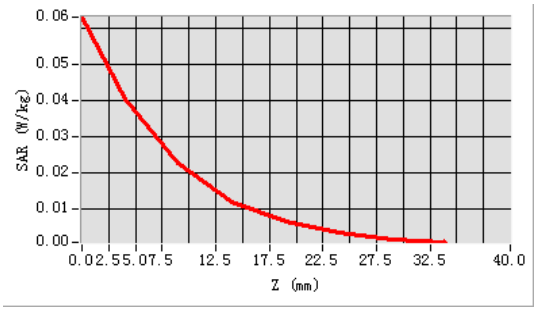
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 9: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2017-08-15
Probe	SN 45/15 EPGO281
ConvF	2.46
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Front to face
Band	IEEE 802.11a U-NII
Channels	Low
Signal	IEEE802.a (Crest factor: 1.0)
Frequency (MHz)	5180
Relative permittivity (real part)	37.22
Conductivity (S/m)	4.51
Variation (%)	1.98

Maximum location: X=-14.00, Y=-8.00
SAR Peak: 0.06 W/kg

SAR 10g (W/Kg)	0.010308
SAR 1g (W/Kg)	0.020718

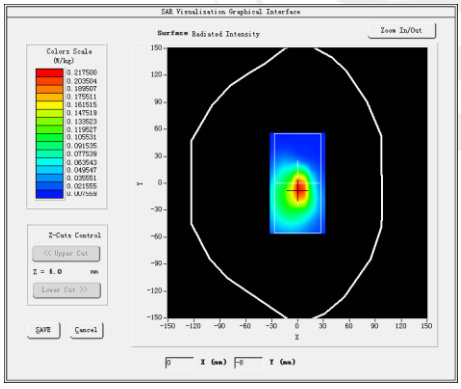
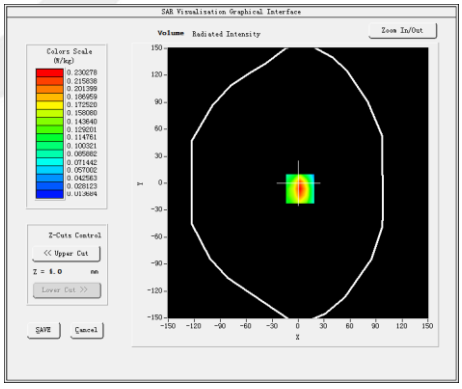
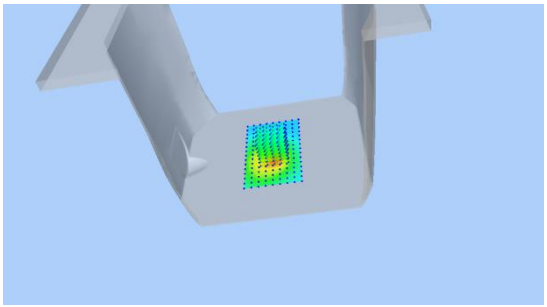
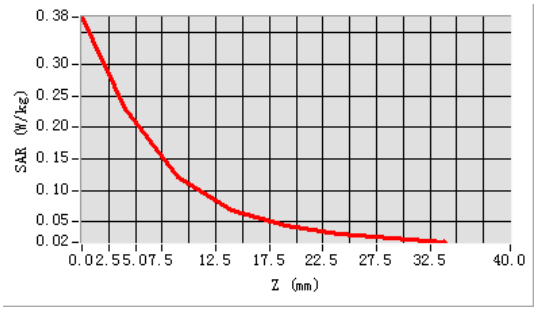
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 10: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2018-08-14
Probe	SN 45/15 EPGO281
ConvF	2.10
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Front to face
Band	LTE Band 2(RB 1)
Channels	High
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1900
Relative permittivity (real part)	40.93
Conductivity (S/m)	1.38
Variation (%)	2.08

Maximum location: X=2.00, Y=-6.00
SAR Peak: 0.38 W/kg

SAR 10g (W/Kg)	0.114825
SAR 1g (W/Kg)	0.217888

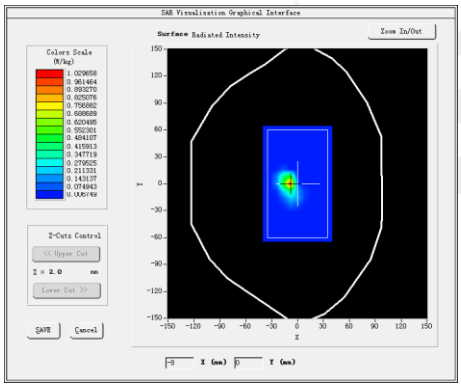
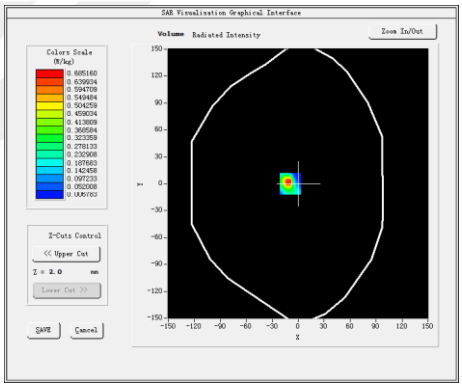
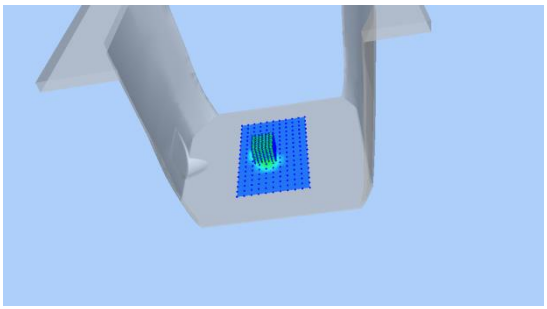
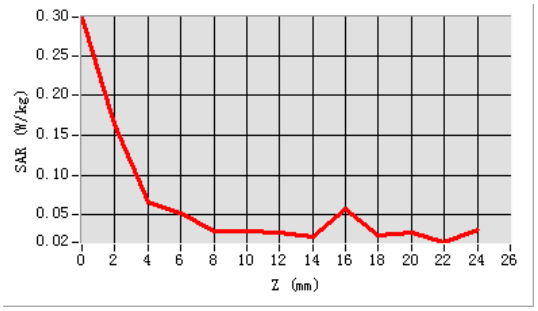
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 11: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2019-03-05
Probe	SN 45/15 EPGO281
ConvF	2.79
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Body back
Band	IEEE 802.11a U-NII
Channels	Low
Signal	IEEE802.a (Crest factor: 1.0)
Frequency (MHz)	5260
Relative permittivity (real part)	50.51
Conductivity (S/m)	5.70
Variation (%)	2.09

Maximum location: X=-9.00, Y=0.00
SAR Peak: 0.30 W/kg

SAR 10g (W/Kg)	0.036172
SAR 1g (W/Kg)	0.087628

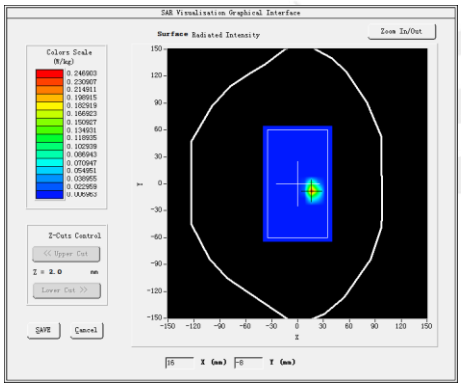
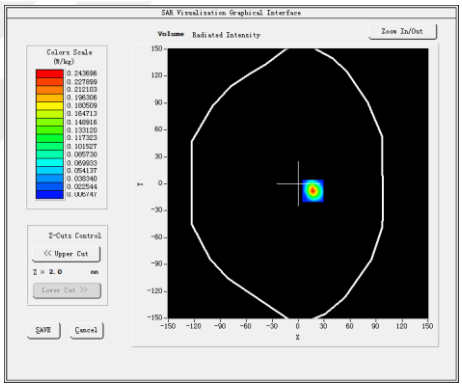
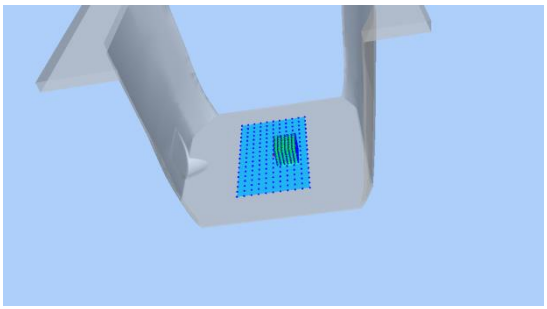
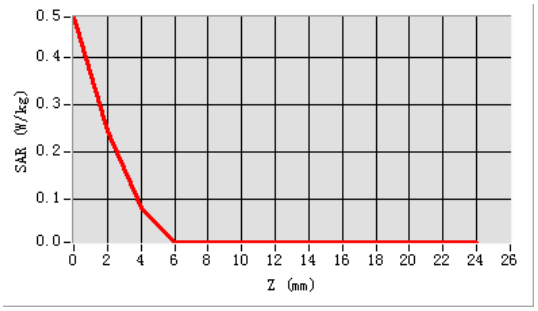
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 12: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2019-03-05
Probe	SN 45/15 EPGO281
ConvF	2.83
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Body back
Band	IEEE 802.11a U-NII
Channels	Low
Signal	IEEE802.a (Crest factor: 1.0)
Frequency (MHz)	5500
Relative permittivity (real part)	49.83
Conductivity (S/m)	5.91
Variation (%)	1.62

Maximum location: X=17.00, Y=-8.00
SAR Peak: 0.53 W/kg

SAR 10g (W/Kg)	0.031855
SAR 1g (W/Kg)	0.120147

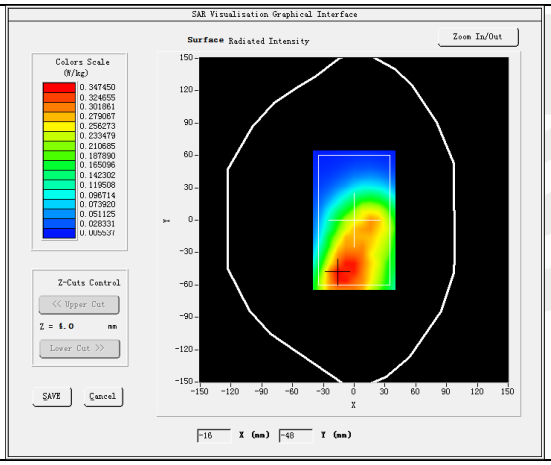
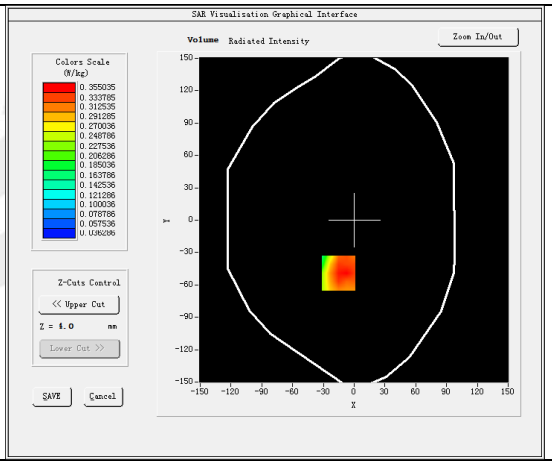
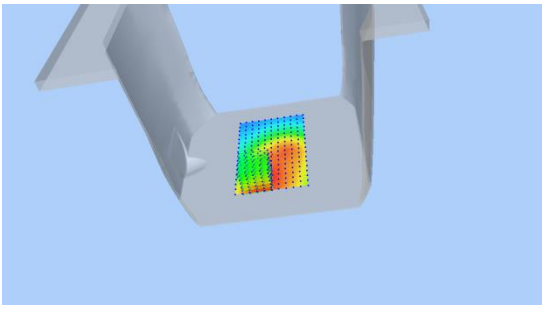
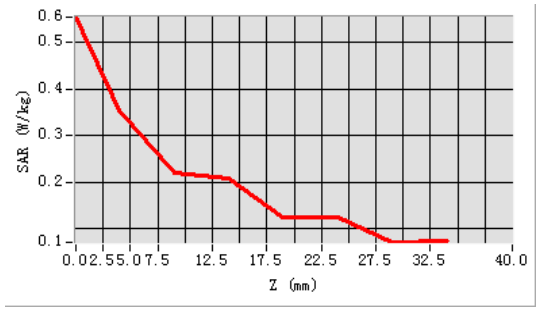
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 13: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2021-08-04
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
Channels	Low
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	824.2
Relative permittivity (real part)	42.40
Conductivity (S/m)	0.89

Maximum location: X=-15.00, Y=-49.00
SAR Peak: 0.45 W/kg

SAR 10g (W/Kg)	0.249558
SAR 1g (W/Kg)	0.342628

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Z Axis Scan**
	

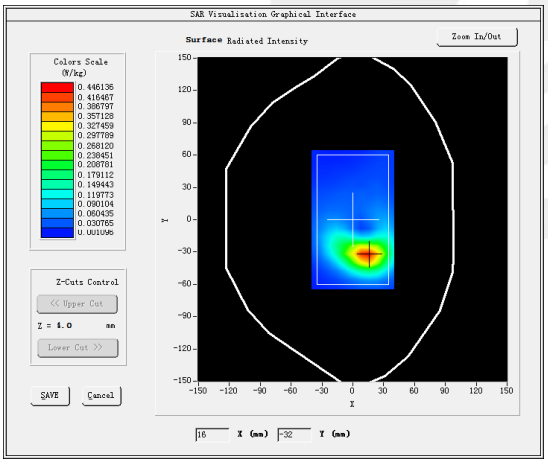
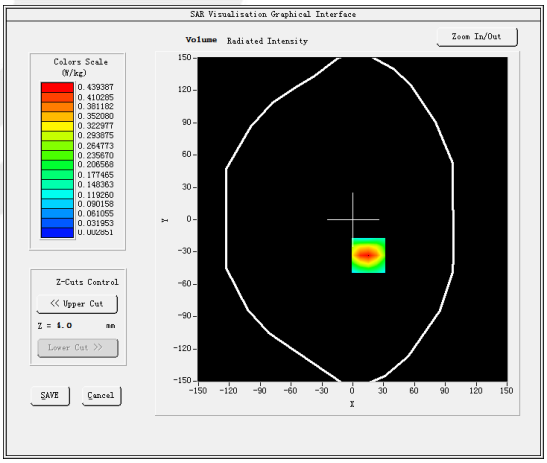
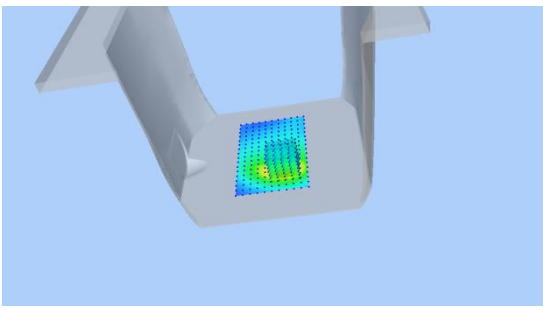
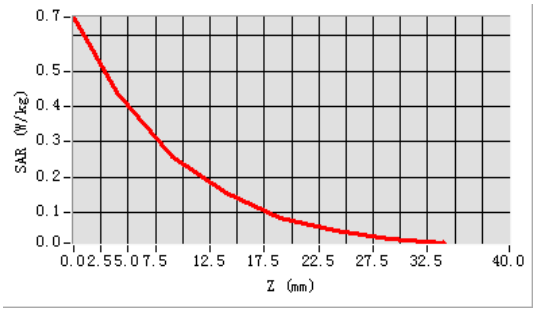
Plot 14: DUT: POCKETALK W; EUT Model: W1PGK

Test Date	2021-08-04
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 1900
Channels	Low
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	1850.2
Relative permittivity (real part)	40.05
Conductivity (S/m)	1.37

Maximum location: X=15.00, Y=-33.00

SAR Peak: 0.68 W/kg

SAR 10g (W/Kg)	0.216429
SAR 1g (W/Kg)	0.413942

SURFACE SAR	VOLUME SAR
	
3D screen shot	**Z Axis Scan**
	

Appendix C. Probe Calibration And Dipole Calibration Report

Refer the appendix Calibration Report.

※※※※※END OF THE REPORT※※※※※