FCC SAR TEST REPORT

Report No: STS1703189H01

Issued for

ITALCOM GROUP

1728Coral Way, Coral Gables, Miami, Florida, United States 33145(Zip code : 518048)

Product Name:	KIN Tablet
Brand Name:	NYX mobile
Model Name:	KIN
Series Model:	N/A
FCC ID:	YPVITALCOMKIN
Test Standard:	ANSI/IEEE Std. C95.1
	FCC 47 CFR Part 2 (2.1093)
	IEEE 1528: 2013
Max. Report SAR (1g):	Head:0.343 W/kg
	Body:0.634 W/kg

BZT Testing Technology Co., Ltd

Add. : Buliding 17, Xinghua Road Xingwei industrial Park Fuyong, Baoan District, Shenzhen, Guangdong, China

TEL: +86-755 3307 1680 FAX: +86-755 27341758 E-mail:bruce@bzt.cn

Test Report Certification

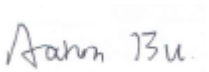
Applicant's name	:	ITALCOM GROUP
Address	:	1728Coral Way, Coral Gables, Miami, Florida, United States 33145(Zip code : 518048)
Manufacture's Name	:	Vitsmo&Nyx. Co., LTD
Address	:	7th FL, ChengHa Building, 174 Donggyo-ro, Mapo-gu, Seoul, Korea

Product description

Product name	:	KIN Tablet
Trademark	:	NYX mobile
Model and/or type reference	:	KIN
Series Model	:	N/A
Standards	:	ANSI/IEEE Std. C95.1-1992 FCC 47 CFR Part 2 (2.1093) IEEE 1528: 2013

The device was tested by Shenzhen BZT 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	:	16 May. 2017~17 May. 2017
Date of Issue	:	18 May. 2017
Test Result	:	**Pass**

Testing Engineer **:** 

(Aaron Bu)

Technical Manager **:** 

(John Zou)

Authorized Signatory **:** 

(Vita Li)

Table of Contents

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	KIN Tablet			
Brand Name	NYX mobile			
Model No.	KIN			
Series Model	N/A			
FCC ID	YPVITALCOMKIN			
Model Difference	N/A			
Adapter	Input: AC100-240V,350mA, 50/60 Hz Output: DC 5V,2000mA			
Battery	Rated Voltage: 3.7V; Charge Limit: 4.2V; Capacity: 4000mAh			
Device Category	Portable			
Product stage	Production unit			
RF Exposure Environment	General Population / Uncontrolled			
IMEI	354000080000559			
Hardware Version	NYX_KIN_001			
Software Version	KIN_AMXNYX_V001R			
Frequency Range	GSM 850:824.2~848.8MHz PCS1900:1850.2~1909.8MHz WCDMA Band II:1852.4~1907.6MHz WCDMA Band V:826.4~846.6MHz		LTE Band 4:1710.7~1754.3MHz WLAN802.11b/g/n(HT20):2412~2462MHz WLAN 802.11n(HT40):2422~2452MHz Bluetooth:2402~ 2480MHz	
Max. Reported SAR(1g): (Limit:1.6W/kg)	Band	Mode	Head (W/kg)	Body Worn and Hotspot(W/kg)
	PCE	GSM 850	0.078	0.475
	PCE	GSM 1900	0.088	0.594
	PCE	WCDMA Band II	0.028	0.429
	PCE	WCDMA Band V	0.135	0.229
	PCE	LTE Band 4	0.029	0.193
	DTS	WIFI	0.343	0.042
	DSS	Bluetooth[Note]	0.084	0.634
1-g Sum SAR			0.478	1.228
FCC Equipment Class	Licensed Portable Transmitter Held to Ear (PCE) Part 15 Spread Spectrum Transmitter (DSS) Digital Transmission System (DTS)			
Operating Mode:	GSM: GSM Voice; GPRS; EGPRS Class 12; WCDMA:RMC,HSDPA,HSUPA Release 8; LTE:QPSK,16QAM; WLAN: 802.11 b/g/n(HT20) /n(HT40); Bluetooth: 3.0+EDR (GFSK +π/4DQPSK+8DPSK) ; Bluetooth: V4.0			
Antenna Specification:	GSM,WCDMA,LTE: PIFA Antenna BT,WIFI: PIFA Antenna			
SIM Card	Support single SIM card			
Hotspot Mode:	Support			
DTM Mode:	Not Support			
Note: 1. 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	Actual
Temperature (℃)	18-25	22~23
Humidity (%RH)	30-70	55~65

1.3 Test Factory

BZT Testing Technology Co., Ltd
Add. : Buliding 17, Xinghua Road Xingwei industrial Park Fuyong, Baoan District, Shenzhen, Guangdong, China

FCC Registration No.: 701733

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	Mobile 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 941225 D01 v03r01	SAR Measurement Procedures for 3G Devices
8	FCC KDB 941225 D05 v02r05	SAR for LTE Devices
9	FCC KDB 941225 D06 v02r01	Hotspot Mode SAR
10	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
11	FCC KDB 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices

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

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

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

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

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

Population/Uncontrolled Environments:
are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

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

NOTE

GENERAL POPULATION/UNCONTROLLED EXPOSURE

PARTIAL BODY LIMIT

1.6 W/kg

3. SAR Measurement System

3.1 Definition Of Specific Absorption Rate (SAR)

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

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

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

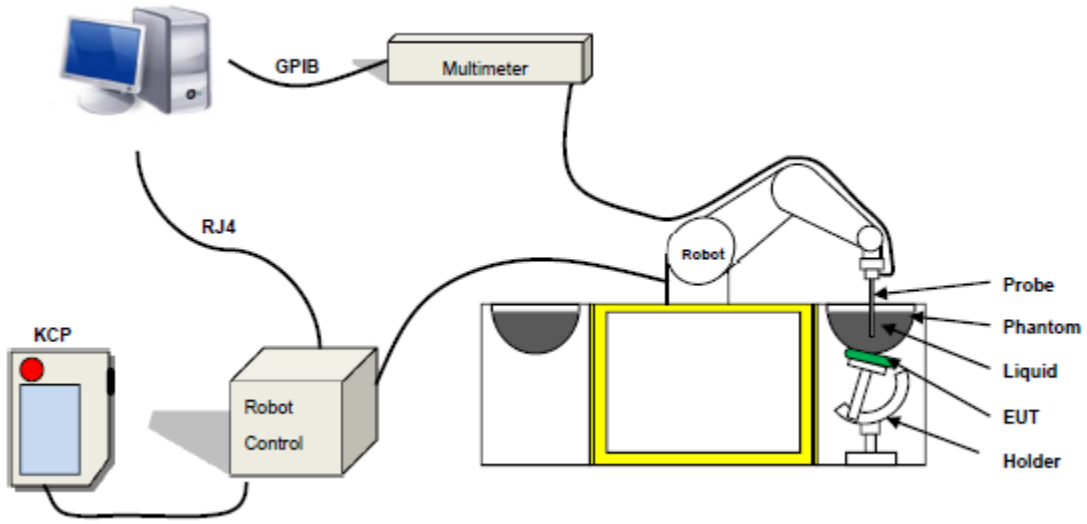
SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

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

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

SATIMO 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 OpenSAR 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 14/16 EP309 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter: 5 mm
- Length of Individual Dipoles: 4.5 mm
- Maximum external diameter: 8 mm
- Distance between dipole/probe extremity: 8 mm (repeatability better than +/- 2.7mm)
- Probe linearity: 0±2.27%(±0.10dB)
- Axial Isotropy: < 0.10 dB
- Spherical Isotropy: < 0.10 dB
- Calibration range: 400 MHz to 3 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

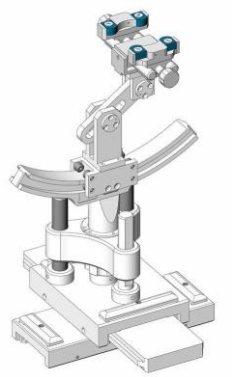
3.2.2 Phantom

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.

SN 32/14 SAM115

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. 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.

Frequency (MHz)	Bactericide	DGBE	HEC	NaCl	Sucrose	1,2-Propanediol	X100	Water	Conductivity	Permittivity
	%	%	%	%	%	%	%	%	σ	εr
750	/	/	/	0.79	/	64.81	/	34.40	0.97	41.8
835	/	/	/	0.79	/	64.81	/	34.40	0.97	41.8
900	/	/	/	0.79	/	64.81	/	34.40	0.97	41.8
1800	/	13.84	/	0.35	/	/	30.45	55.36	1.38	41.0
1900	/	13.84	/	0.35	/	/	30.45	55.36	1.38	41.0
2000	/	7.99	/	0.16	/	/	19.97	71.88	1.55	41.1
2450	/	7.99	/	0.16	/	/	19.97	71.88	1.88	40.3
2600	/	7.99	/	0.16	/	/	19.97	71.88	1.88	40.3

Tissue dielectric parameters for head and body phantoms				
Frequency	ε_r		σ S/m	
	Head	Body	Head	Body
300	45.3	58.2	0.87	0.92
450	43.5	58.7	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]					
2017-05-16	22.7	54	835 MHz	22.3	Permitivity:	41.5	42.12	1.49	±5
					Conductivity:	0.9	0.88	-2.22	±5
2017-05-16	22.7	54	1800 MHz	22.3	Permitivity:	40	39.82	-0.45	±5
					Conductivity:	1.40	1.44	2.86	±5
2017-05-17	23.5	57	1900 MHz	23.2	Permitivity:	40	38.95	-2.62	±5
					Conductivity:	1.4	1.39	-0.71	±5
2017-05-17	23.5	57	2450 MHz	23.2	Permitivity:	39.2	39.61	1.05	±5
					Conductivity:	1.8	1.81	0.56	±5

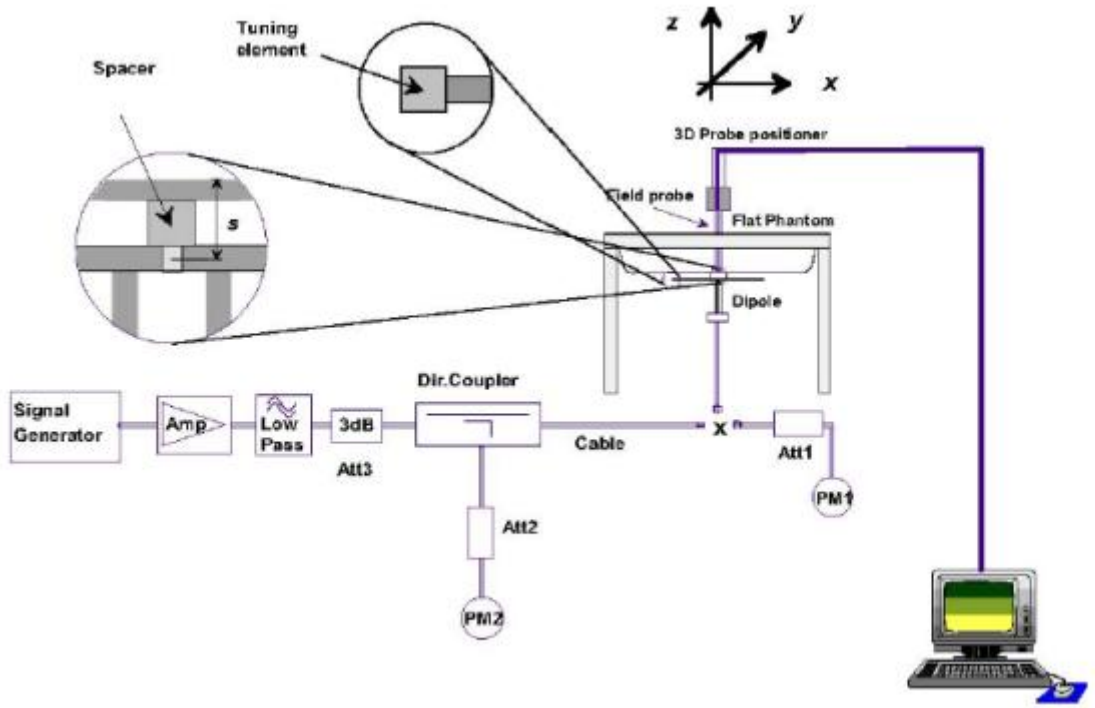
Date	Ambient condition		Body Simulating Liquid		Parameters	Target	Measured	Deviation [%]	Limited [%]
	Temp. [°C]	Humidity [%]	Frequency	Temp. [°C]					
2017-05-16	22.7	54	835 MHz	22.3	Permitivity:	55.2	54.87	-0.60	±5
					Conductivity:	0.97	0.99	2.06	±5
2017-05-16	22.7	54	1800 MHz	22.3	Permitivity:	53.3	53.62	0.60	±5
					Conductivity:	1.52	1.54	1.32	±5
2017-05-17	23.5	57	1900 MHz	23.2	Permitivity:	53.3	53.97	1.26	±5
					Conductivity:	1.52	1.51	-0.66	±5
2017-05-17	23.5	57	2450 MHz	23.2	Permitivity:	52.7	52.88	0.34	±5
					Conductivity:	1.95	1.96	0.51	±5

5. SAR System Validation

5.1 Validation System

Each SATIMO system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the SATIMO 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 SATIMO, the validation data should be within its specification of 10 %.

Freq.(MHz)	Power(mW)	Tested Value (W/Kg)	Normalized SAR (W/kg/W)	Target (W/Kg/W)	Tolerance(%)	Date
835 Head	100	0.961	9.61	9.56	0.52	2017-05-16
835 Body	100	0.963	9.63	9.56	0.73	2017-05-16
1800 Head	100	3.789	37.89	38.4	-1.33	2017-05-16
1800 Body	100	3.842	38.42	38.4	0.05	2017-05-16
1900 Head	100	3.951	39.51	39.7	-0.48	2017-05-17
1900 Body	100	4.012	40.12	39.7	1.06	2017-05-17
2450 Head	100	5.315	53.15	52.4	1.43	2017-05-17
2450 Body	100	5.263	52.63	52.4	0.44	2017-05-17

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

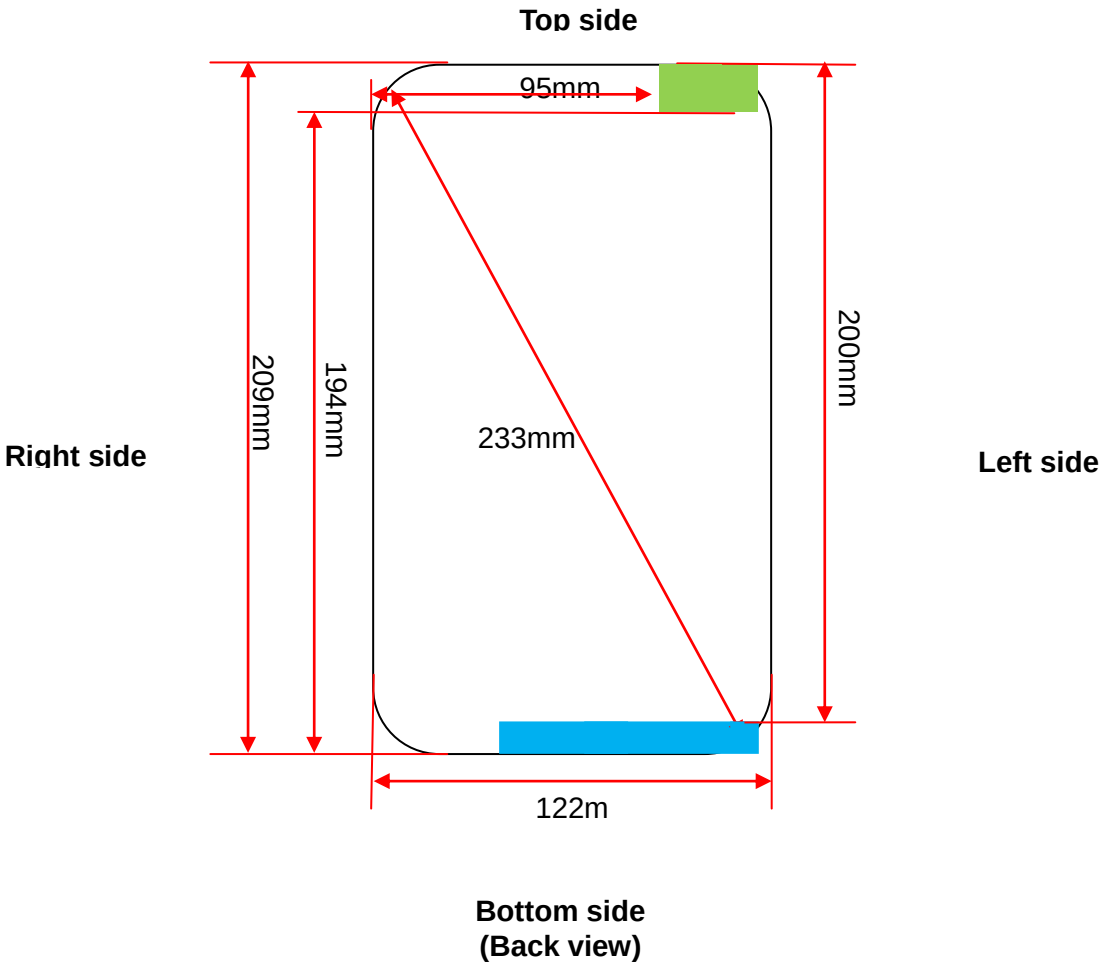
- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible 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 D01 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 KIN Tablet, support GSM/WCDMA/LTE mode.



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	45mm	200mm	＜5mm
	Yes	Yes	No	No	Yes
WIFI/BT	＜5mm	95mm	＜5mm	＜5mm	194mm
	Yes	No	Yes	Yes	No

Note：

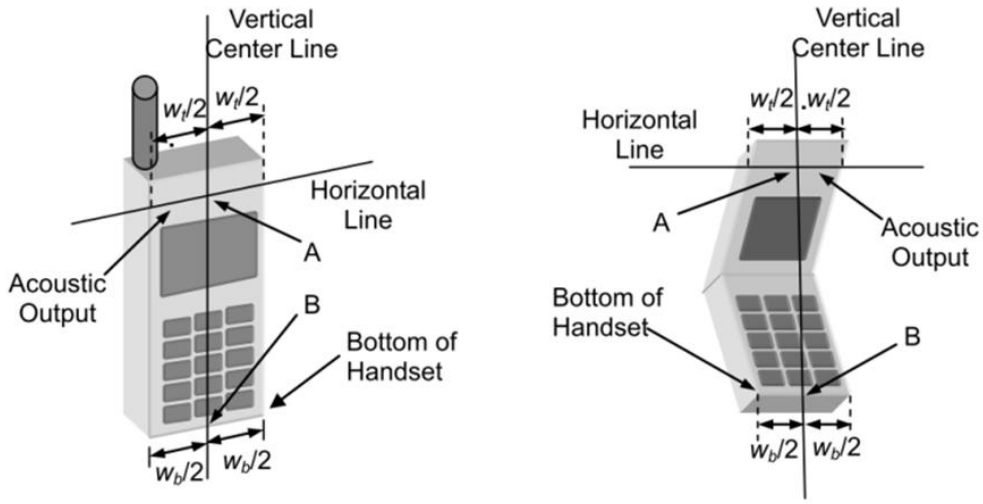
1. maximum power is the source-based time-average power and represents the maximum RF output power among production units.
2. per KDB 447498 D01, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. 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 futher 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

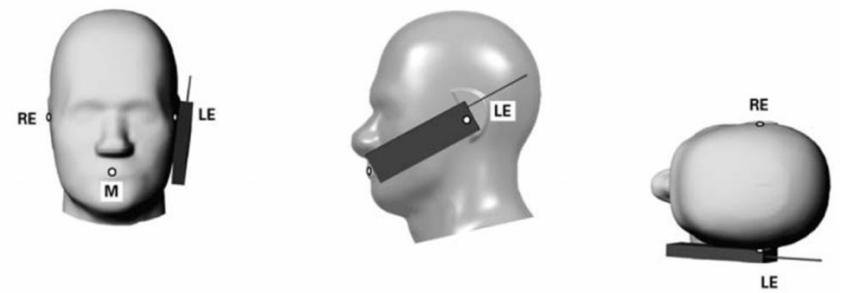
This EUT was tested in Right Cheek, Right Titled, Left Cheek, Left Titled, Front Face and Rear Face.

8.1 Define Two Imaginary Lines On The Handset

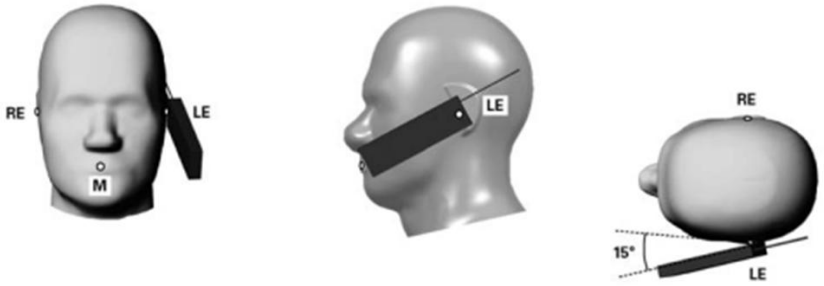
(1)The vertical centerline passes through two points on the front side of the handset the midpoint of the width wt of the handset at the level of the acoustic output, and the midpoint of the width wb of the handset.
(2)The horizontal line is perpendicular to the vertical centerline and passes through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



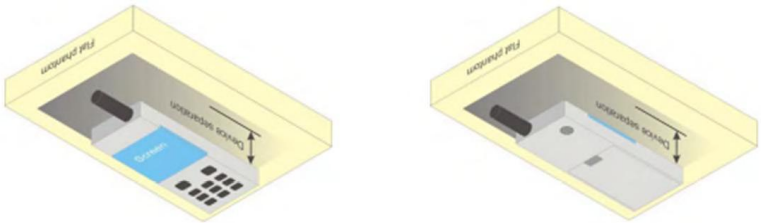
Cheek Position
1)To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
2)To move the device towards the phantom with the ear piece aligned with the the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost



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

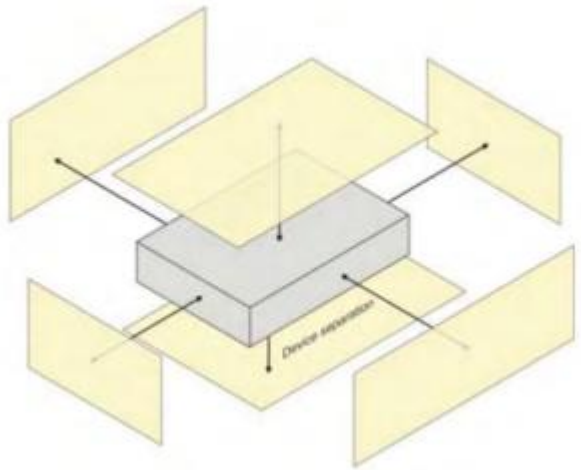


Body-worn Position Conditions:
Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset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



8.2 Hotspot mode exposure position condition

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing function, the relevant hand and body exposure condition are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surface and edges with a transmitting antenna located within 25 mm form that surface or edge. When form factor of a handset is smaller than 9cm x 5cm, a test separation distance of 5mm (instead of 10mm)is required for testing hotspot mode. When the separate distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration(surface).



9. Uncertainty

9.1 Measurement Uncertainty

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

NO	Source	Tol(%)	Prob. Dist.	Div. k	ci (1g)	ci (10g)	1gUi	10gUi	Veff
Measurement System									
1	Probe calibration	5.8	N	1	1	1	5.8	5.8	∞
2	Axial isotropy	3.5	R	√3	$(1\text{-cp})^{1/2}$	$(1\text{-cp})^{1/2}$	1.43	1.43	∞
3	Hemispherical isotropy	5.9	R	√3	$\sqrt{C_p}$	$\sqrt{C_p}$	2.41	2.41	∞
4	Boundary effect	1.0	R	√3	1	1	0.58	0.58	∞
5	Linearity	4.7	R	√3	1	1	2.71	2.71	∞
6	System Detection limits	1.0	R	√3	1	1	0.58	0.58	∞
7	Readout electronics	0.5	N	1	1	1	0.50	0.50	∞
8	Response time	0	R	√3	1	1	0	0	∞
9	Integration time	1.4	R	√3	1	1	0.81	0.81	∞
10	Ambient noise	3.0	R	√3	1	1	1.73	1.73	∞
11	Ambient reflections	3.0	R	√3	1	1	1.73	1.73	∞
12	Probe positioner mech. restrictions	1.4	R	√3	1	1	0.81	0.81	∞
13	Probe positioning with respect to phantom shell	1.4	R	√3	1	1	0.81	0.81	∞
14	Max.SAR evaluation	1.0	R	√3	1	1	0.6	0.6	∞
Test sample related									

15	Device positioning	2.6	N	1	1	1	2.6	2.6	11
16	Device holder	3	N	1	1	1	3.0	3.0	7
17	Drift of output power	5.0	R	√3	1	1	2.89	2.89	∞
Phantom and set-up									
18	Phantom uncertainty	4.0	R	√3	1	1	2.31	2.31	∞
19	Liquid conductivity (target)	2.5	N	1	0.78	0.71	1.95	1.78	5
20	Liquid conductivity (meas)	4	N	1	0.23	0.26	0.92	1.04	5
21	Liquid Permittivity (target)	2.5	N	1	0.78	0.71	1.95	1.78	∞
22	Liquid Permittivity (meas)	5.0	N	1	0.23	0.26	1.15	1.30	∞
Combined standard			RSS	$U_C = \sqrt{\sum_{i=1}^{n} C_i^2 U_i^2}$			10.63%	10.54%	
Expanded uncertainty (P=95%)		$U = k\, U_C$,k=2					21.26%	21.08%	

9.2 System validation Uncertainty

NO	Source	Tol(%)	Prob. Dist.	Div. k	ci (1g)	ci (10g)	1gUi	10gUi	Veff
Measurement System									
1	Probe calibration	5.8	N	1	1	1	5.8	5.8	∞
2	Axial isotropy	3.5	R	√3	$(1\text{-cp})^{1/2}$	$(1\text{-cp})^{1/2}$	1.43	1.43	∞
3	Hemispherical isotropy	5.9	R	√3	$\sqrt{C_p}$	$\sqrt{C_p}$	2.41	2.41	∞
4	Boundary effect	1.0	R	√3	1	1	0.58	0.58	∞
5	Linearity	4.7	R	√3	1	1	2.71	2.71	∞
6	System Detection limits	1.0	R	√3	1	1	0.58	0.58	∞
7	Modulation response	0	N	1	1	1	0	0	∞
8	Readout electronics	0.5	N	1	1	1	0.50	0.50	∞
9	Response time	0	R	√3	1	1	0	0	∞
10	Integration time	1.4	R	√3	1	1	0.81	0.81	∞
11	Ambient noise	3.0	R	√3	1	1	1.73	1.73	∞
12	Ambient reflections	3.0	R	√3	1	1	1.73	1.73	∞
13	Probe positioner mech. restrictions	1.4	R	√3	1	1	0.81	0.81	∞
14	Probe positioning with respect to phantom shell	1.4	R	√3	1	1	0.81	0.81	∞
15	Max.SAR evaluation	1.0	R	√3	1	1	0.6	0.6	∞
Dipole									
16	Deviation of experimental source from	4	N	1	1	1	4.00	4.00	∞

17	Input power and SAR drit measurement	5	R	√3	1	1	2.89	2.89	∞
18	Dipole Axis to liquid Distance	2	R	√3	1	1			∞
Phantom and set-up									
19	Phantom uncertainty	4.0	R	√3	1	1	2.31	2.31	∞
20	Uncertainty in SAR correction for deviation(in	2.0	N	1	1	0.84	2	1.68	∞
21	Liquid conductivity (target)	2	N	1	1	0.84	2.00	1.68	∞
22	Liquid conductivity (temperature uncertainty)	2.5	N	1	0.78	0.71	1.95	1.78	5
23	Liquid conductivity (meas)	4	N	1	0.23	0.26	0.92	1.04	5
24	Liquid Permittivity (target)	2.5	N	1	0.78	0.71	1.95	1.78	∞
25	Liquid Permittivity (temperature uncertainty)	2.5	N	1	0.78	0.71	1.95	1.78	5
26	Liquid Permittivity (meas)	5.0	N	1	0.23	0.26	1.15	1.30	∞
Combined standard			RSS	$U_C = \sqrt{\sum_{i=1}^{n} C_i^2 U_i^2}$			10.15%	10.05%	
Expanded uncertainty (P=95%)		$U = k\ U_C$,k=2					20.29%	20.10%	

10. Conducted Power Measurement

10.1 Test Result

Burst Average Power (dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM(GMSK, 1-Slot)	31.84	31.86	31.89	28.70	28.43	28.15
GPRS (GMSK, 1-Slot)	31.65	31.69	31.72	28.58	28.29	28.06
GPRS (GMSK, 2-Slot)	31.16	31.24	31.28	28.14	27.86	27.66
GPRS (GMSK, 3-Slot)	29.70	29.80	29.80	26.74	26.42	26.25
GPRS (GMSK, 4-Slot)	29.22	29.34	29.36	26.26	25.99	25.82
EGPRS(8PSK, 1-Slot)	31.62	31.63	31.67	28.47	28.32	28.05
EGPRS(8PSK, 2-Slot)	31.15	31.22	31.19	27.97	27.86	27.56
EGPRS(8PSK, 3-Slot)	29.75	29.76	29.70	26.48	26.44	26.11
EGPRS(8PSK, 4-Slot)	29.33	29.30	29.23	26.00	26.03	25.67

Remark: GPRS, CS4 coding scheme. EGPRS, MCS9 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
GSM(GMSK, 1-Slot)	22.81	22.83	22.86	19.67	19.40	19.12
GPRS (GMSK, 1-Slot)	22.62	22.66	22.69	19.55	19.26	19.03
GPRS (GMSK, 2-Slot)	25.14	25.22	25.26	22.12	21.84	21.64
GPRS (GMSK, 3-Slot)	25.44	25.54	25.54	22.48	22.16	21.99
GPRS (GMSK, 4-Slot)	26.21	26.33	26.35	23.25	22.98	22.81
EGPRS(8PSK, 1-Slot)	22.59	22.60	22.64	19.44	19.29	19.02
EGPRS(8PSK, 2-Slot)	25.13	25.20	25.17	21.95	21.84	21.54
EGPRS(8PSK, 3-Slot)	25.49	25.50	25.44	22.22	22.18	21.85
EGPRS(8PSK, 4-Slot)	26.32	26.29	26.22	22.99	23.02	22.66

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	23.43	23.61	23.45	22.43	22.48	22.20
RMC 12.2Kbps	23.45	23.63	23.49	22.45	22.51	22.21
HSDPA Subtest-1	23.14	23.26	23.21	22.16	22.18	21.98
HSDPA Subtest-2	22.73	22.82	22.81	21.76	21.75	21.53
HSDPA Subtest-3	22.38	22.39	22.43	21.42	21.28	21.14
HSDPA Subtest-4	22.07	22.01	22.04	21.02	20.94	20.81
HSUPA Subtest-1	23.08	23.22	22.78	22.13	22.15	21.53
HSUPA Subtest-2	22.11	22.26	21.79	21.29	21.21	20.59
HSUPA Subtest-3	22.10	21.81	21.37	21.13	20.74	20.25
HSUPA Subtest-4	21.65	21.46	21.07	20.74	20.39	19.89
HSUPA Subtest-5	20.18	20.03	19.62	19.30	18.96	18.44

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.

WIFI

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)
802.11b	1	2412	14.96
	6	2437	15.79
	11	2462	15.09
802.11g	1	2412	13.79
	6	2437	13.91
	11	2462	13.55
802.11n(HT 20)	1	2412	12.61
	6	2437	12.75
	11	2462	12.43
802.11n(HT 40)	3	2422	12.34
	6	2437	12.25
	9	2452	12.01

Bluetooth

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)
GFSK(1Mbps)	0	2402	2.61
	39	2441	2.62
	78	2480	2.64
π/4-DQPSK(2Mbps)	0	2402	0.23
	39	2441	0.24
	78	2480	0.25
8DPSK(3Mbps)	0	2402	0.16
	39	2441	0.19
	78	2480	0.22

BT 4.0

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)
GFSK(1Mbps)	0	2402	-5.43
	19	2440	-4.91
	39	2480	-5.69

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 4

BW(MHz)	Modulation	RB Size	RB Offset	Power Low CH./Freq.	Power Middle CH./Freq.	Power High CH./Freq.
Channel				20050	20175	20300
Frequency(MHz)				1720	1732.5	1745
20	QPSK	1	0	24.01	23.97	23.92
20	QPSK	1	49	23.8	23.77	23.65
20	QPSK	1	99	23.51	23.51	23.35
20	QPSK	50	0	23.25	23.26	23.07
20	QPSK	50	24	22.96	23.05	22.78
20	QPSK	50	49	22.75	22.84	22.53
20	QPSK	100	0	22.51	22.6	22.3
20	16QAM	1	0	23.72	23.75	23.63
20	16QAM	1	49	23.47	23.52	23.38
20	16QAM	1	99	23.23	23.3	23.17
20	16QAM	50	0	22.95	23.07	22.9
20	16QAM	50	24	22.66	22.79	22.67
20	16QAM	50	49	22.36	22.51	22.46
20	16QAM	100	0	22.06	22.3	22.2
Channel				20025	20175	20325
Frequency(MHz)				1717.5	1732.5	1747.5
15	QPSK	1	0	24.02	23.98	23.95
15	QPSK	1	37	23.78	23.76	23.74
15	QPSK	1	74	23.5	23.52	23.47
15	QPSK	36	0	23.29	23.27	23.17
15	QPSK	36	18	23.05	23.04	22.94
15	QPSK	36	39	22.83	22.84	22.68
15	QPSK	75	0	22.6	22.54	22.43
15	16QAM	1	0	23.81	23.71	23.71
15	16QAM	1	38	23.56	23.46	23.49
15	16QAM	1	75	23.3	23.23	23.28
15	16QAM	36	0	23.07	23	23.06
15	16QAM	36	18	22.86	22.7	22.85
15	16QAM	36	39	22.63	22.45	22.59
15	16QAM	75	0	22.39	22.23	22.35
Channel				20000	20175	20350
Frequency(MHz)				1715	1732.5	1750
10	QPSK	1	0	24.08	24.06	24.03
10	QPSK	1	24	23.81	23.8	23.76
10	QPSK	1	49	23.56	23.53	23.49
10	QPSK	25	0	23.28	23.29	23.24
10	QPSK	25	12	23	23.09	23.04
10	QPSK	25	24	22.72	22.79	22.81
10	QPSK	50	0	22.43	22.49	22.59
10	16QAM	1	0	23.84	23.78	23.75
10	16QAM	1	24	23.62	23.51	23.49
10	16QAM	1	49	23.42	23.22	23.22
10	16QAM	25	0	23.17	23	22.97
10	16QAM	25	12	22.89	22.77	22.72
10	16QAM	25	24	22.65	22.5	22.46
10	16QAM	50	0	22.45	22.23	22.16

Channel				19975	20175	20375
Frequency(MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	24.09	24.07	24.05
5	QPSK	1	12	23.82	23.79	23.76
5	QPSK	1	24	23.6	23.56	23.47
5	QPSK	12	0	23.36	23.28	23.25
5	QPSK	12	6	23.11	22.98	23.01
5	QPSK	12	11	22.83	22.73	22.76
5	QPSK	25	0	22.59	22.43	22.54
5	16QAM	1	0	23.83	23.86	23.85
5	16QAM	1	12	23.63	23.57	23.61
5	16QAM	1	24	23.4	23.34	23.38
5	16QAM	12	0	23.11	23.06	23.12
5	16QAM	12	6	22.88	22.79	22.92
5	16QAM	12	11	22.61	22.5	22.66
5	16QAM	25	0	22.36	22.28	22.43
Channel				19965	20175	20385
Frequency(MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	24.12	24.09	24.07
3	QPSK	1	7	23.82	23.86	23.8
3	QPSK	1	14	23.57	23.64	23.6
3	QPSK	8	0	23.31	23.38	23.39
3	QPSK	8	4	23.07	23.1	23.09
3	QPSK	8	7	22.81	22.87	22.79
3	QPSK	15	0	22.59	22.65	22.53
3	16QAM	1	0	23.83	23.82	23.86
3	16QAM	1	7	23.55	23.6	23.63
3	16QAM	1	14	23.29	23.35	23.35
3	16QAM	8	0	23.01	23.1	23.11
3	16QAM	8	4	22.75	22.8	22.86
3	16QAM	8	7	22.53	22.56	22.58
3	16QAM	15	0	22.24	22.33	22.34
Channel				19957	20175	20393
Frequency(MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	24.14	24.12	24.09
1.4	QPSK	1	2	23.91	23.82	23.8
1.4	QPSK	1	5	23.63	23.6	23.56
1.4	QPSK	3	0	23.37	23.37	23.33
1.4	QPSK	3	1	23.12	23.16	23.1
1.4	QPSK	3	2	22.88	22.95	22.87
1.4	QPSK	6	0	22.62	22.71	22.61
1.4	16QAM	1	0	23.9	23.87	23.81
1.4	16QAM	1	2	23.62	23.65	23.55
1.4	16QAM	1	5	23.42	23.38	23.29
1.4	16QAM	3	0	23.21	23.08	23.04
1.4	16QAM	3	1	22.95	22.83	22.76
1.4	16QAM	3	2	22.68	22.53	22.47
1.4	16QAM	6	0	22.39	22.33	22.19

10.2 Tune-up Power

Mode	GSM850(AVG)	GSM1900(AVG)
GSM/PCS	31±1dBm	28±1dBm
GPRS (1 Slot)	31±1dBm	28±1dBm
GPRS (2 Slot)	31±1dBm	28±1dBm
GPRS (3 Slot)	29±1dBm	26±1dBm
GPRS (4 Slot)	29±1dBm	26±1dBm
EDGE (1 Slot)	31±1dBm	28±1dBm
EDGE (2 Slot)	31±1dBm	27±1dBm
EDGE (3 Slot)	29±1dBm	26±1dBm
EDGE (4 Slot)	29±1dBm	26±1dBm

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

Mode	WIFI(AVG)
IEEE 802.11b	15±1dBm
IEEE 802.11g	13±1dBm
IEEE 802.11n(HT 20)	12±1dBm
IEEE 802.11n(HT 40)	12±1dBm

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

Mode	BT 4.0(AVG)
GFSK	-5±1dBm

LTE

BW[MHz]	RB Size	Mode	Band 4
1.4	1	QPSK	24±1dBm
1.4	3		23±1dBm
1.4	6		22±1dBm
1.4	1	16- QAM	23±1dBm
1.4	3		23±1dBm
1.4	6		22±1dBm
3	1	QPSK	24±1dBm
3	8		23±1dBm
3	15		22±1dBm
3	1	16- QAM	23±1dBm
3	8		23±1dBm
3	15		22±1dBm
5	1	QPSK	24±1dBm
5	12		23±1dBm
5	25		22±1dBm
5	1	16- QAM	23±1dBm
5	12		23±1dBm
5	25		22±1dBm
10	1	QPSK	24±1dBm
10	25		23±1dBm
10	50		22±1dBm
10	1	16- QAM	23±1dBm
10	25		23±1dBm
10	50		22±1dBm
15	1	QPSK	24±1dBm
15	36		23±1dBm
15	75		22±1dBm
15	1	16- QAM	23±1dBm
15	36		23±1dBm
15	75		22±1dBm
20	1	QPSK	24±1dBm
20	50		23±1dBm
20	100		22±1dBm
20	1	16- QAM	23±1dBm
20	50		23±1dBm
20	100		22±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 Head** (rounded to the nearest mW) and the antenna to user separation distance,

Bluetooth Head SAR was not required; [(1.995/5)* √2.480 = **0.63** < 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; [(1.995/10)* √2.480] = **0.31** < 3.0.

Based on the maximum conducted power of **2.4 GHz WIFI Head** (rounded to the nearest mW) and the antenna to user separation distance,

2.4 GHz WIFI SAR was required; [(39.811/5)* √2.462] = **12.49** > 3.0.

Based on the maximum conducted power of **2.4 GHz WIFI Body** (rounded to the nearest mW) and the antenna to user separation distance,

2.4 GHz WIFI SAR was required; [(39.811/10)* √2.462] = **6.25** > 3.0.

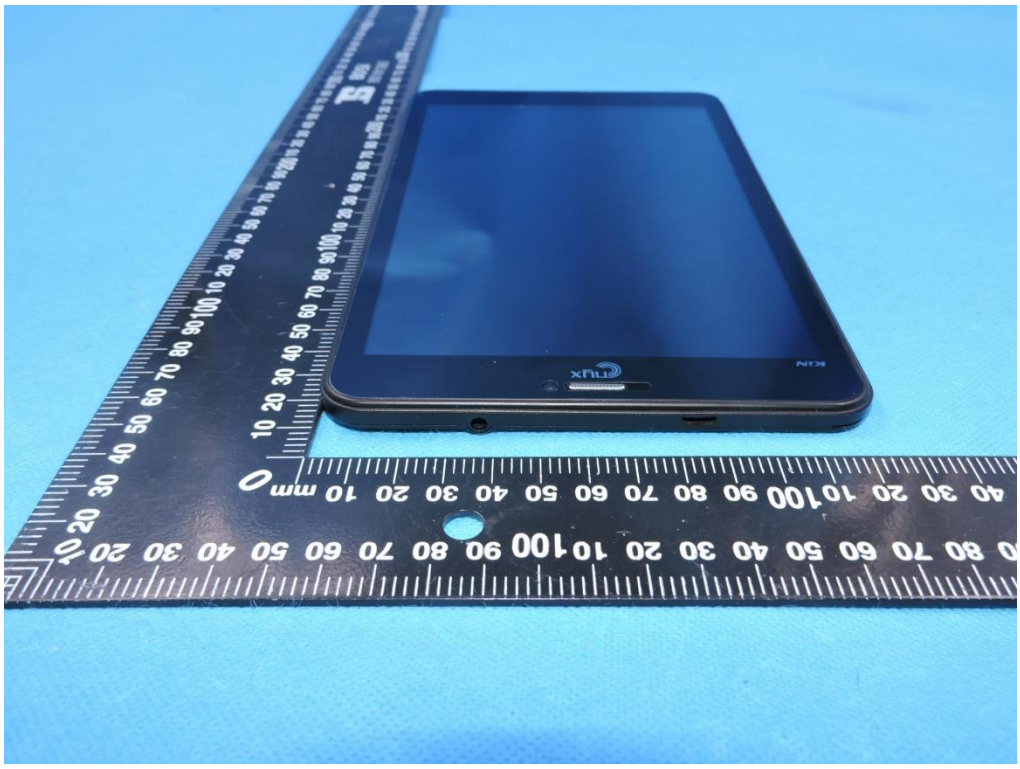
11. EUT And Test Setup Photo

11.1 EUT Photo

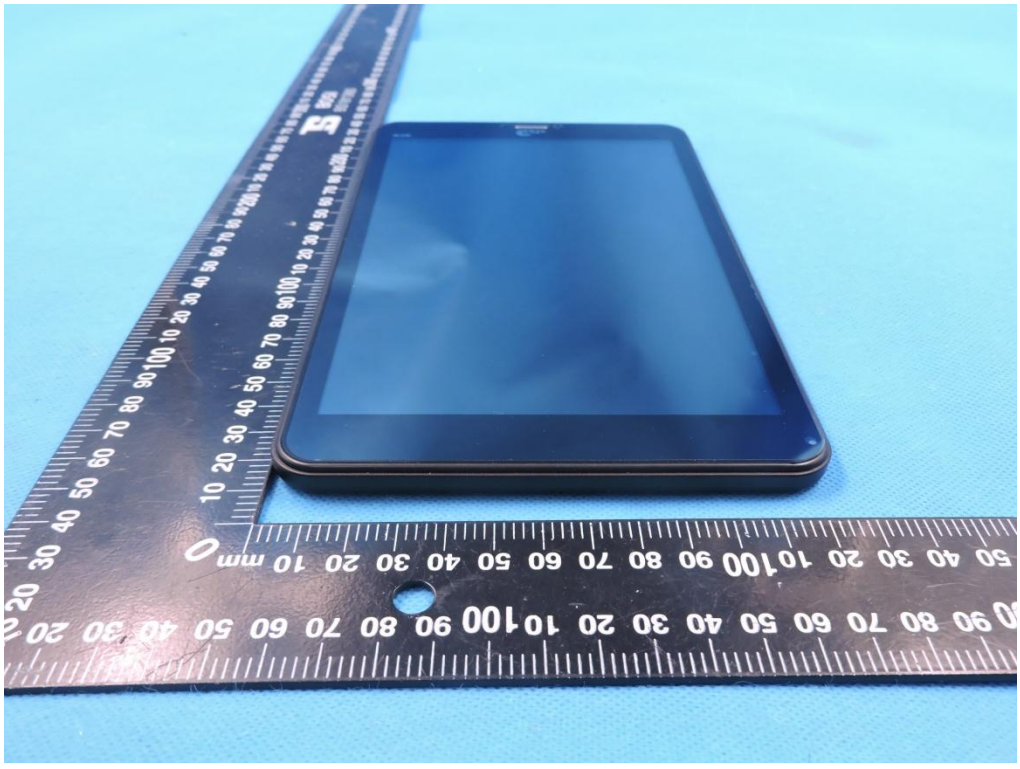
Front side

Back side

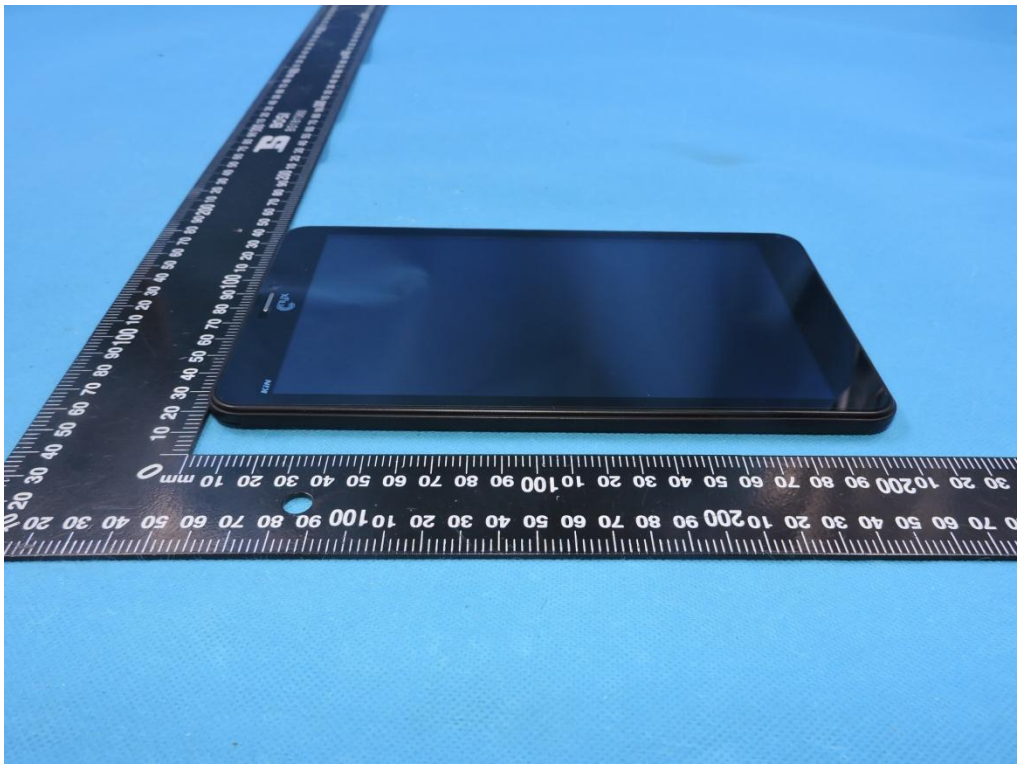
Top side



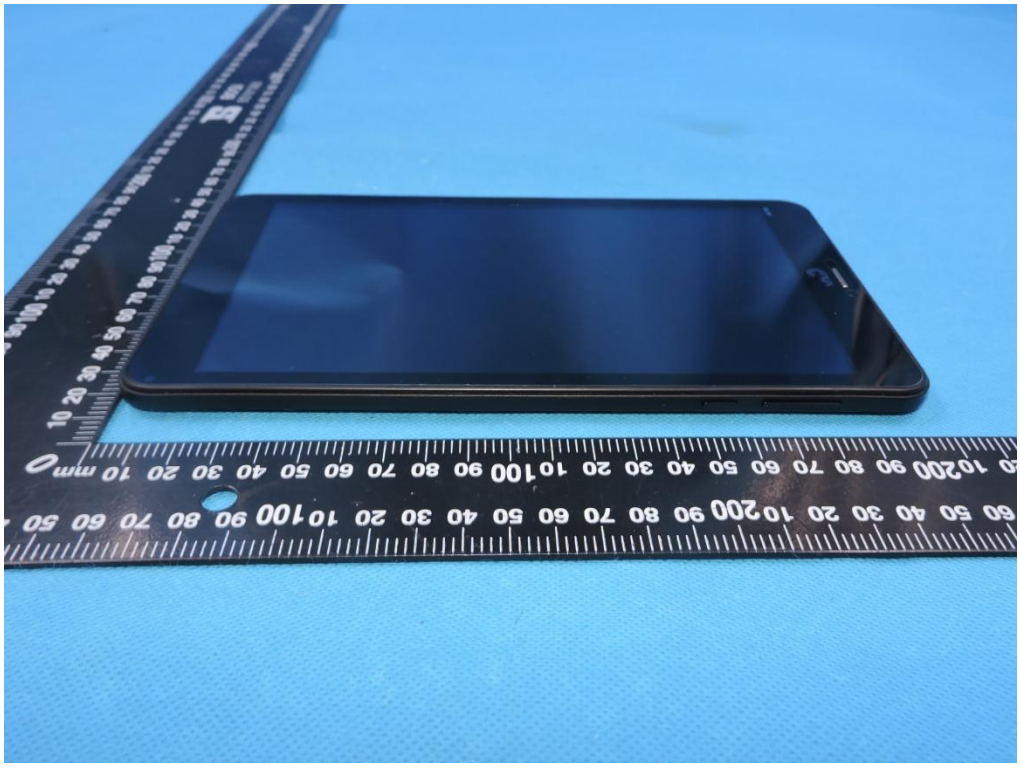
Bottom side



Left side

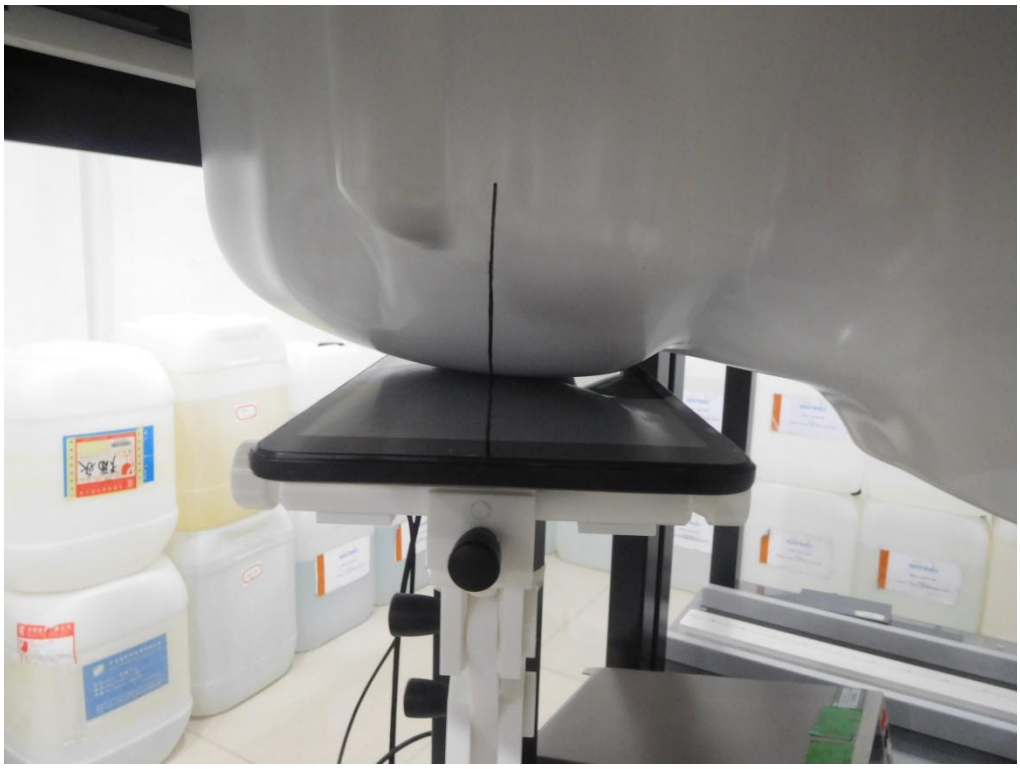


Right side

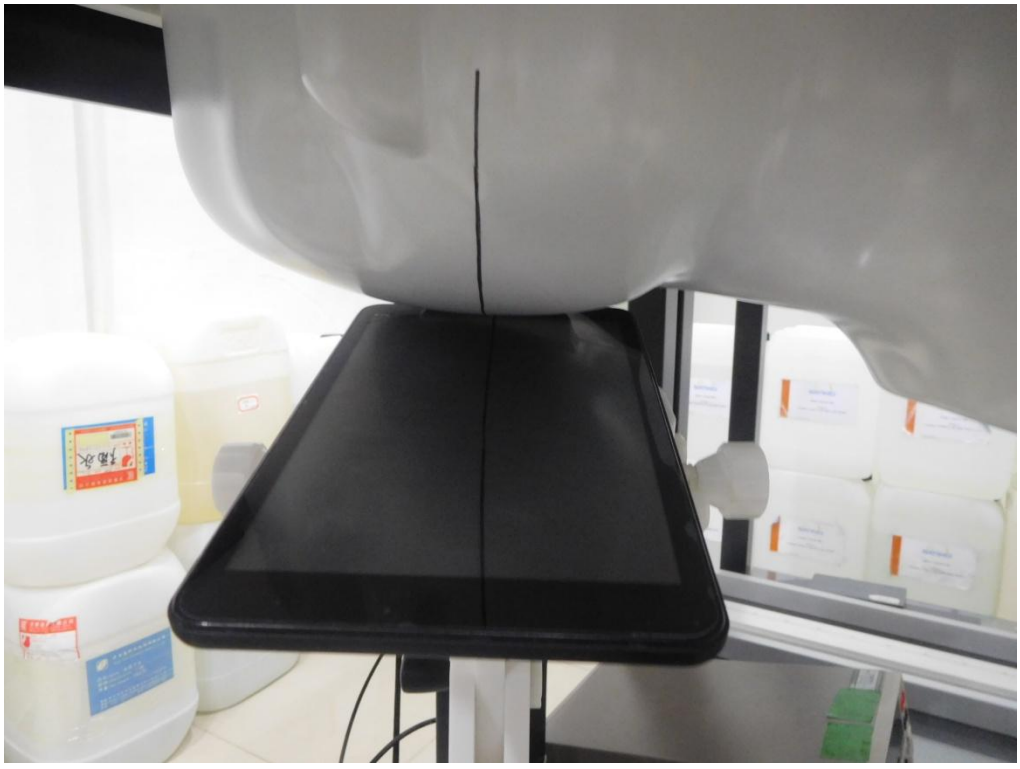


11.2 Setup Photo

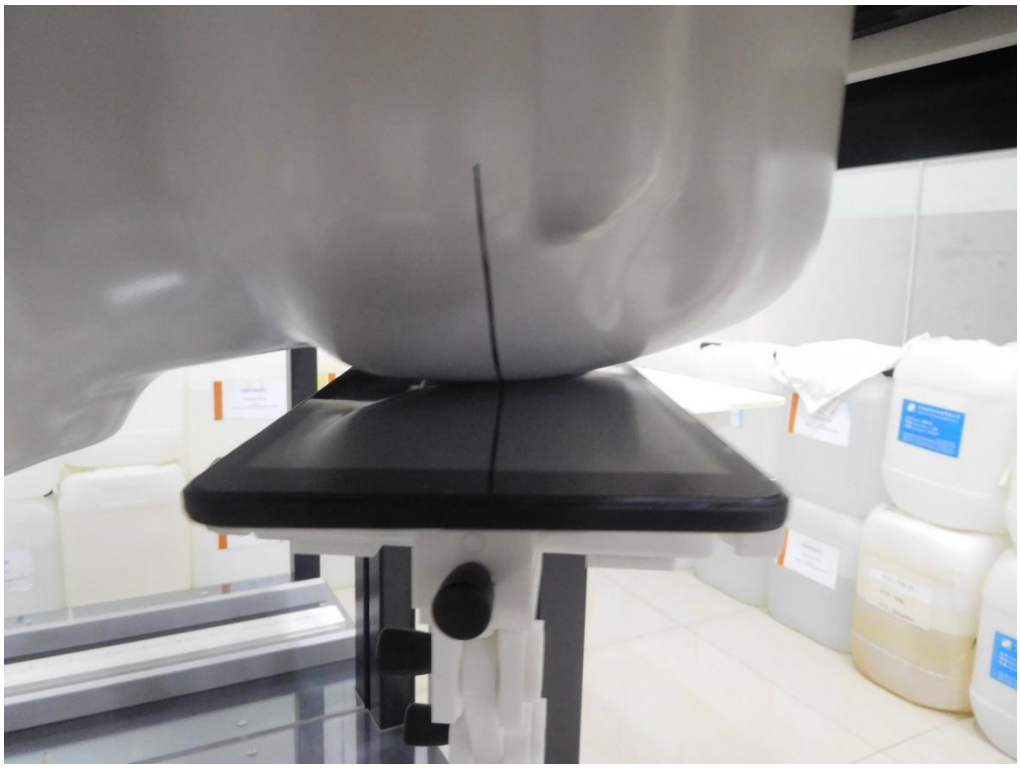
Right Touch



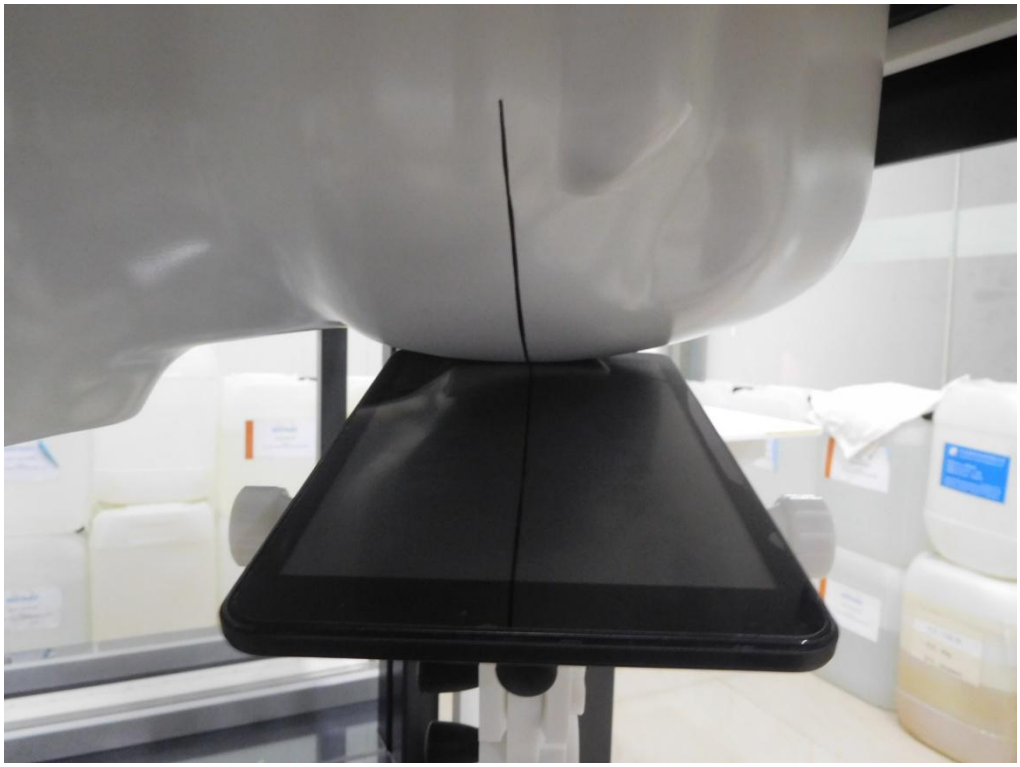
Right Tilt



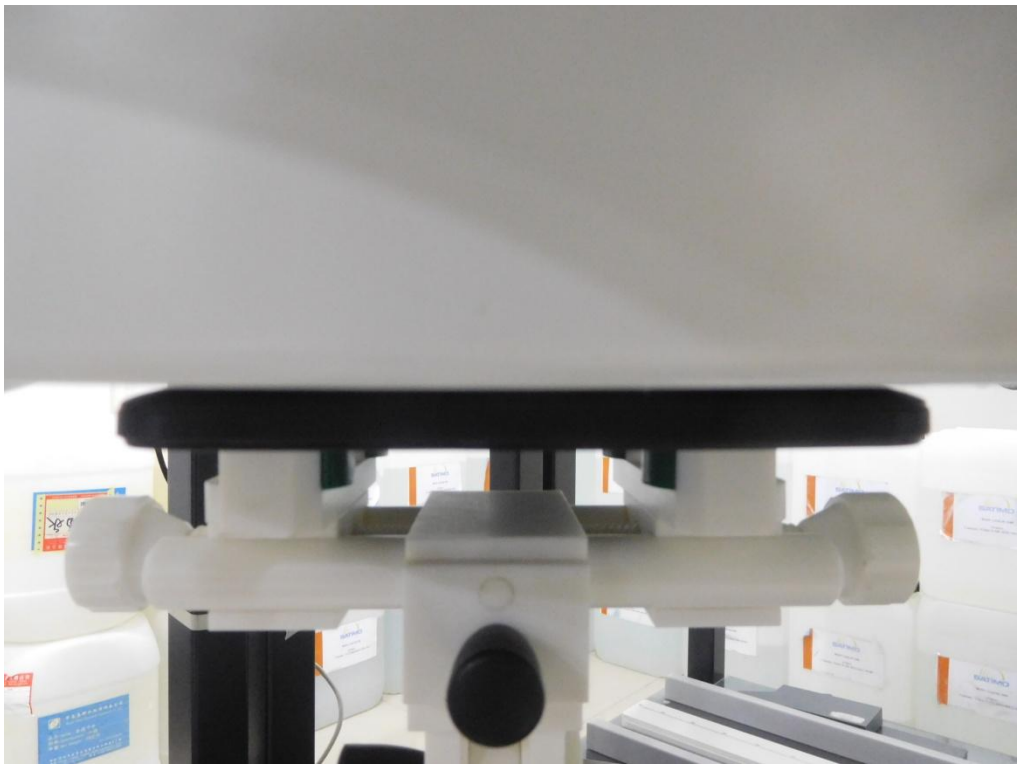
Left Touch



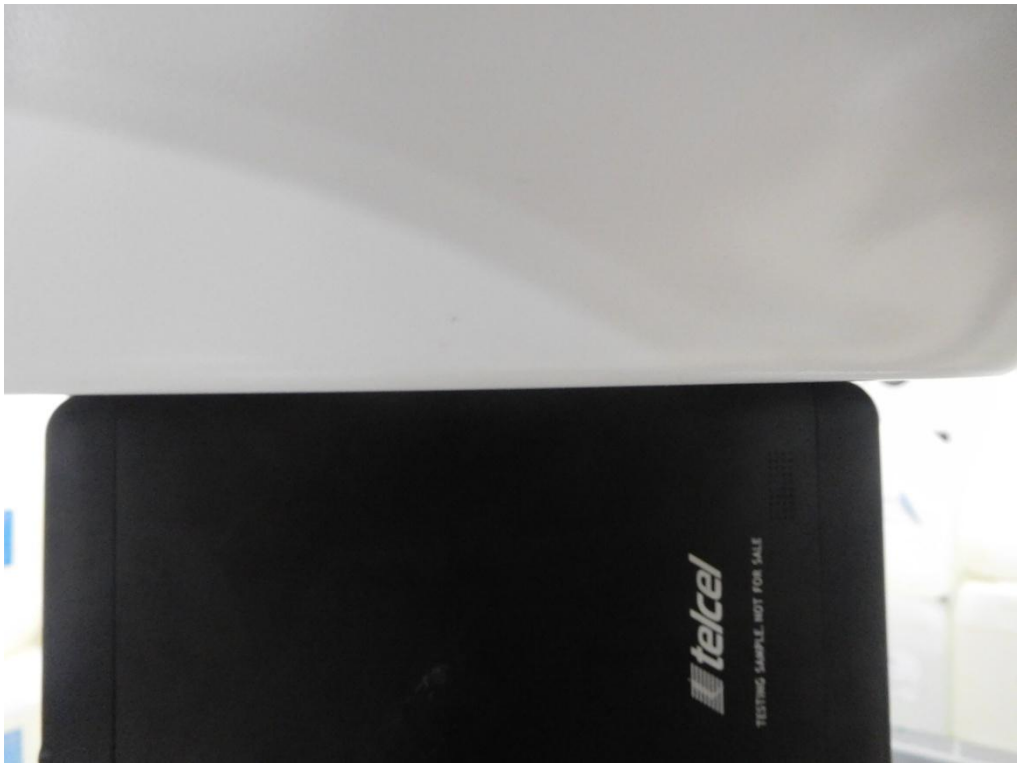
Left Tilt



Body Back side(separation distance is 0mm)

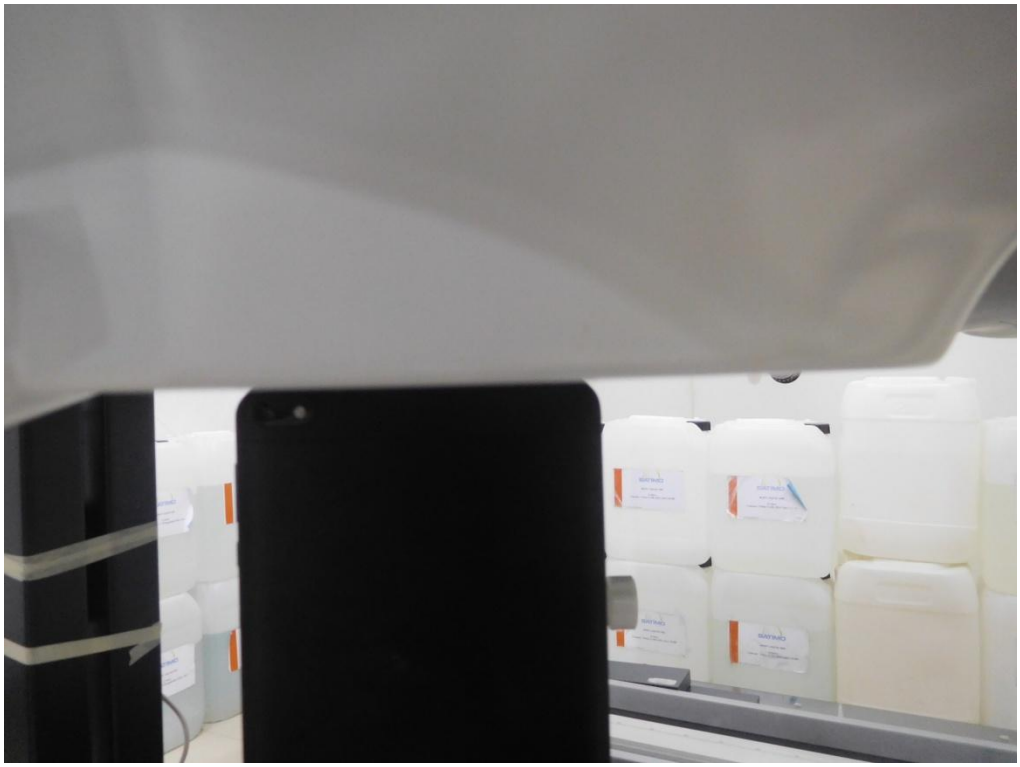


Body left side(separation distance is 0mm)



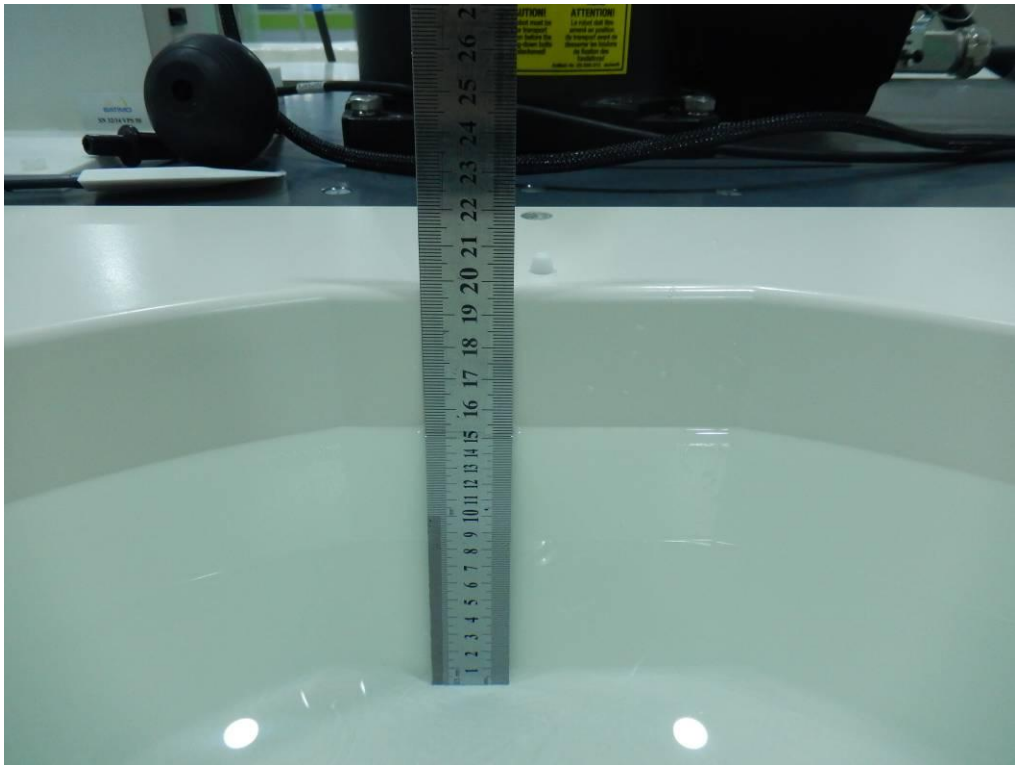
Body right side(separation distance is 0mm)

Body top side(separation distance is 0mm)



Body Bottom side(separation distance is 0mm)

Liquid depth (15 cm)



12. SAR Result Summary

12.1 Head 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	Voice	Right Cheek	251	0.076	-1.60	32	31.89	**0.078**	1
		Right Tilt	251	0.039	0.05	32	31.89	0.040	/
		Left Cheek	251	0.073	-0.24	32	31.89	0.075	/
		Left Tilt	251	0.036	-1.80	32	31.89	0.037	/
GSM1900	Voice	Right Cheek	512	0.082	1.02	29	28.70	**0.088**	3
		Right Tilt	512	0.043	-3.43	29	28.70	0.046	/
		Left Cheek	512	0.079	-1.98	29	28.70	0.085	/
		Left Tilt	512	0.041	-1.27	29	28.70	0.044	/
WCDMA II	RMC	Right Cheek	9400	0.025	0.97	23	22.51	**0.028**	5
		Right Tilt	9400	0.014	-0.01	23	22.51	0.016	/
		Left Cheek	9400	0.022	2.92	23	22.51	0.025	/
		Left Tilt	9400	0.012	-1.71	23	22.51	0.013	/
WCDMA V	RMC	Right Cheek	4183	0.124	0.65	24	23.63	**0.135**	7
		Right Tilt	4183	0.067	-1.19	24	23.63	0.073	/
		Left Cheek	4183	0.118	-2.72	24	23.63	0.128	/
		Left Tilt	4183	0.062	-2.86	24	23.63	0.068	/

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.
WIFI	802.11b	Right Cheek	6	0.327	-0.47	16	15.79	100%	**0.343**	9
		Right Tilt	6	0.168	-3.35	16	15.79	100%	0.176	/
		Left Cheek	6	0.302	-2.41	16	15.79	100%	0.317	/
		Left Tilt	6	0.153	-2.70	16	15.79	100%	0.161	/

Note:

1.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 **0.222** W/Kg for Head)

2. Per KDB865664 D01, Repeated measurement is not required when the original highest measured SAR is <0.80 W/kg

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 4	20M	QPSK	1	0	Right Cheek	20050	0.023	3.35	25	24.01	**0.029**	11
			50	0	Right Cheek	20175	0.021	1.10	24	23.26	0.025	/
			1	0	Right Tilt	20050	0.016	3.41	25	24.01	0.020	/
			50	0	Right Tilt	20175	0.014	-2.95	24	23.26	0.017	/
			1	0	Left Cheek	20050	0.020	-2.90	25	24.01	0.025	/
			50	0	Left Cheek	20175	0.019	1.95	24	23.26	0.023	/
			1	0	Left Tilt	20050	0.012	-1.94	25	24.01	0.015	/
			50	0	Left Tilt	20175	0.010	0.68	24	23.26	0.012	/

12.2 Body-worn and Hotspot 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 Data-4 Slot	Back side	251	0.410	0.96	30	29.36	**0.475**	2
		Right side	251	0.121	-2.48	30	29.36	0.140	/
		Bottom side	251	0.256	3.65	30	29.36	0.297	/
GSM1900	GPRS Data-4 Slot	Back side	512	0.501	-1.30	27	26.26	**0.594**	4
		Right side	512	0.134	-3.36	27	26.26	0.159	/
		Bottom side	512	0.323	3.56	27	26.26	0.383	/
WCDMA II	RMC	Back side	9400	0.383	-0.51	23	22.51	**0.429**	6
		Right side	9400	0.074	-2.98	23	22.51	0.083	/
		Bottom side	9400	0.289	3.08	23	22.51	0.324	/
WCDMA V	RMC	Back side	4183	0.210	-0.72	24	23.63	**0.229**	8
		Right side	4183	0.057	-0.38	24	23.63	0.062	/
		Bottom side	4183	0.113	-3.01	24	23.63	0.123	/

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.
WIFI	802.11b	Back side	6	0.604	-1.57	16	15.79	100	**0.634**	10
		Left side	6	0.104	-3.16	16	15.79	100	0.109	/
		Top side	6	0.470	2.06	16	15.79	100	0.493	/

Note:

1. The test separation of all above table is 0mm.
2. 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 **0.411** W/Kg for Body)
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.

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 4	20M	QPSK	1	0	Back Side	20050	0.154	2.44	25	24.01	**0.193**	12
			50	0	Back Side	20175	0.151	3.36	24	23.26	0.179	/
			1	0	Right Side	20050	0.078	-3.66	25	24.01	0.098	/
			50	0	Right Side	20175	0.073	-2.77	24	23.26	0.087	/
			1	0	Bottom Side	20050	0.117	-0.74	25	24.01	0.147	/
			50	0	Bottom Side	20175	0.114	-1.39	24	23.26	0.135	/

Simultaneous Multi-band Transmission Evaluation:

Application Simultaneous Transmission information:

Position	Simultaneous state
Head	1. GSM + WIFI
	2. GSM + Bluetooth
	3. WCDMA + WIFI
	4. WCDMA + Bluetooth
	5. LTE + WIFI
	6. LTE + Bluetooth
Body	1. GSM + WIFI
	2. GSM + Bluetooth
	3. WCDMA + WIFI
	4. WCDMA + Bluetooth
	5. LTE + WIFI
	6. LTE + Bluetooth

NOTE:

1. Bluetooth and WIFI 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:
   a) (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	Head	3	1.995	5	2.480	0.084
	Body			10	2.480	0.042

Simultaneous Mode	Position	Mode	Max. 1-g SAR (W/kg)	1-g Sum SAR (W/kg)
GSM + WIFI	Head	GSM Voice	0.088	0.431
		WIFI	0.343	
	Body	GSM Data	0.594	**1.228**
		WIFI	0.634	
GSM + Bluetooth	Head	GSM Voice	0.088	0.172
		Bluetooth	0.084	
	Body	GSM Data	0.594	0.636
		Bluetooth	0.042	
WCDMA + WIFI	Head	WCDMA RMC	0.135	**0.478**
		WIFI	0.343	
	Body	WCDMA RMC	0.429	1.063
		WIFI	0.634	
WCDMA + Bluetooth	Head	WCDMA RMC	0.135	0.219
		Bluetooth	0.084	
	Body	WCDMA RMC	0.429	0.471
		Bluetooth	0.042	
LTE + WIFI	Head	LTE RMC	0.029	0.372
		WIFI	0.343	
	Body	LTE RMC	0.193	0.827
		WIFI	0.634	
LTE + Bluetooth	Head	LTE RMC	0.029	0.113
		Bluetooth	0.084	
	Body	LTE RMC	0.193	0.235
		Bluetooth	0.042	

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

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

13. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
750MHz Dipole	SATIMO	SID750	SN 30/14 DIP0G750-331	2014.09.01	2017.08.31
835MHz Dipole	SATIMO	SID835	SN 30/14 DIP0G835-332	2014.09.01	2017.08.31
1800MHz Dipole	SATIMO	SID1800	SN 30/14 DIP1G800-329	2014.09.01	2017.08.31
1900MHz Dipole	SATIMO	SID1900	SN 30/14 DIP1G900-333	2014.09.01	2017.08.31
2450MHzDipole	SATIMO	SID2450	SN 30/14 DIP2G450-335	2014.09.01	2017.08.31
Antenna	SATIMO	ANTA3	SN 07/13 ZNTA52	2014.09.01	2017.08.31
Waveguide	SATIMO	SWG5500	SN 13/14 WGA32	2014.09.01	2017.08.31
E-Field Probe	MVG	SSE5	SN 14/16 EP309	2016.12.05	2017.12.04
Phantom1	SATIMO	SAM	SN 32/14 SAM115	N/A	N/A
Phantom2	SATIMO	SAM	SN 32/14 SAM116	N/A	N/A
SAR TEST BENCH	SATIMO	MOBILE PHONE POSITIONNING SYSTEM	SN 32/14 MSH97	N/A	N/A
SAR TEST BENCH	SATIMO	LAPTOP POSITIONNING SYSTEM	SN 32/14 LSH29	N/A	N/A
Dielectric Probe Kit	SATIMO	SCLMP	SN 32/14 OCPG52	2016.08.30	2017.08.29
Multi Meter	Keithley	Multi Meter 2000	4050073	2016.10.23	2017.10.22
Signal Generator	Agilent	N5182A	MY50140530	2016.10.23	2017.10.22
Power Meter	R&S	NRP	100510	2016.10.23	2017.10.22
Power Meter	HP	EPM-442A	GB37170267	2016.10.23	2017.10.22
Power Sensor	R&S	NRP-Z11	101919	2016.10.23	2017.10.22
Power Sensor	HP	8481A	2702A65976	2016.10.23	2017.10.22
Power Sensor	R&S	NRP-Z21	103971	2016.10.23	2017.10.22
Network Analyzer	Agilent	8753ES	US38432810	2017.03.16	2018.03.15
Attenuator 1	PE	PE7005-10	N/A	2016.10.23	2017.10.22
Attenuator 2	PE	PE7005-3	N/A	2016.10.23	2017.10.22
Attenuator 3	Woken	WK0602-XX	N/A	2016.10.23	2017.10.22
Dual Directional Coupler	Agilent	778D	50422	2016.10.23	2017.10.22

Appendix A. System Validation Plots

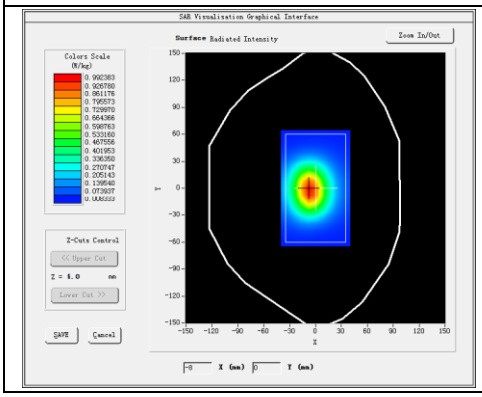
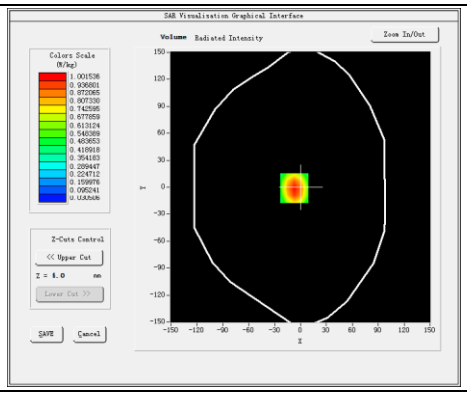
System Performance Check Data (835MHz Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2017-05-16
Measurement duration: 13 minutes 27 seconds

Experimental conditions

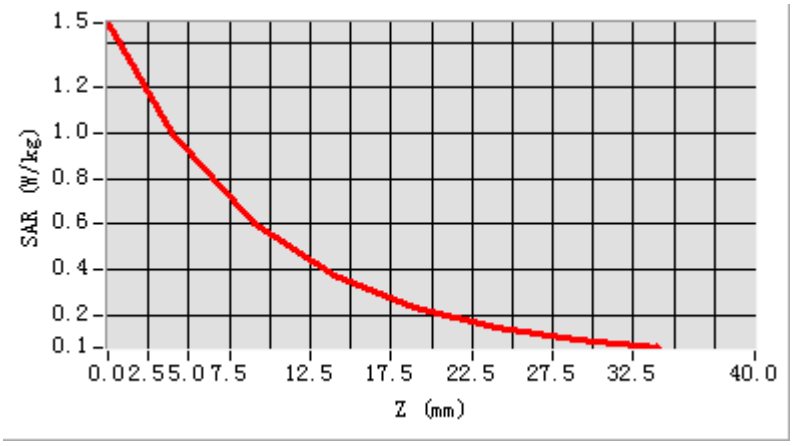
Phantom	Validation plane
Device Position	-
Band	835MHz
Channels	-
Signal	CW
Frequency (MHz)	835MHz
Relative permittivity	42.12
Conductivity (S/m)	0.88
Power drift (%)	0.07
Probe	SN 14/16 EP309
ConvF:	5.74
Crest factor:	1:1

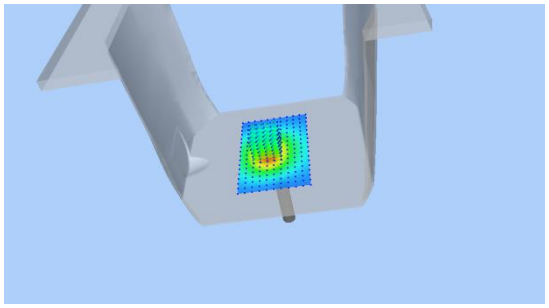
SURFACE SAR	VOLUME SAR
	

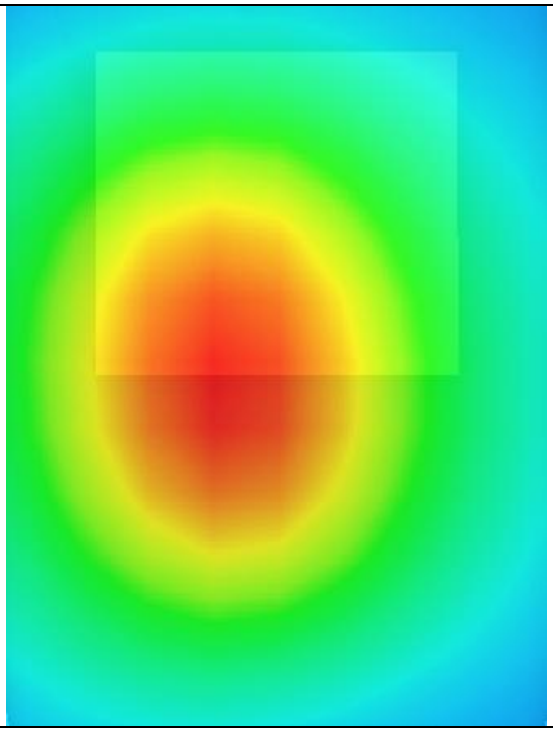
Maximum location: X=-7.00, Y=-1.00

SAR 10g (W/Kg)	0.583214
SAR 1g (W/Kg)	0.961086

Z Axis Scan


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



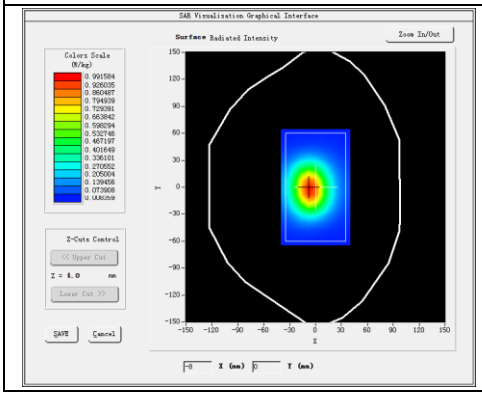
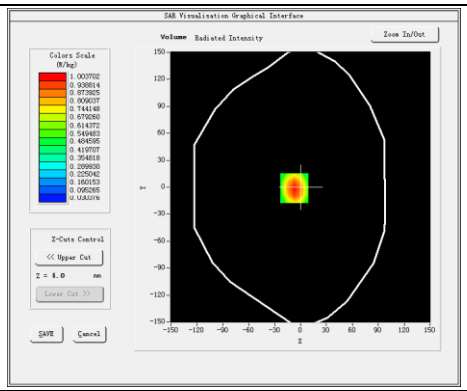


System Performance Check Data (835MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2017-05-16
Measurement duration: 14 minutes 13 seconds

Experimental conditions.

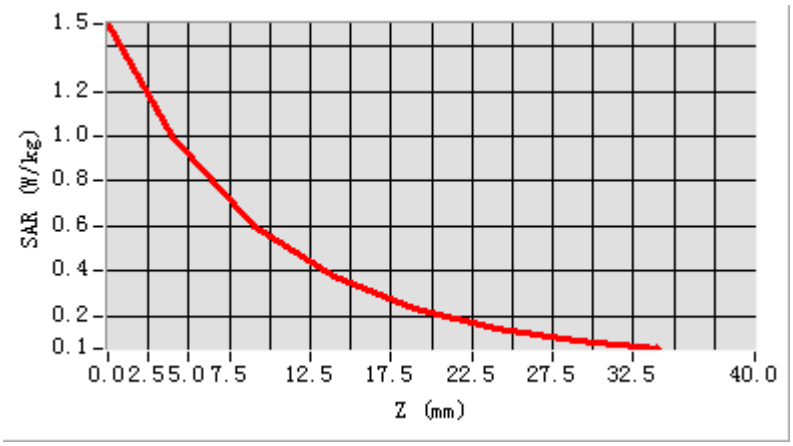
Probe	
Phantom	Validation plane
Device Position	-
Band	835MHz
Channels	-
Signal	CW
Frequency (MHz)	835MHz
Relative permittivity	54.87
Conductivity (S/m)	0.99
Power drift (%)	-0.37
Probe	SN 14/16 EP309
ConvF:	5.90
Crest factor:	1:1

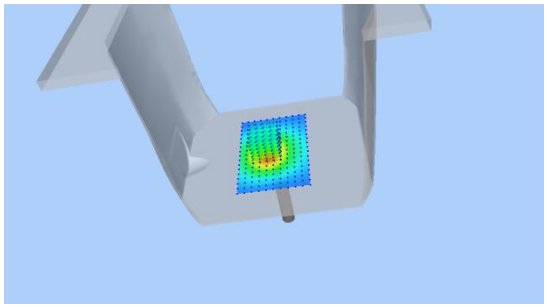
SURFACE SAR	VOLUME SAR
	

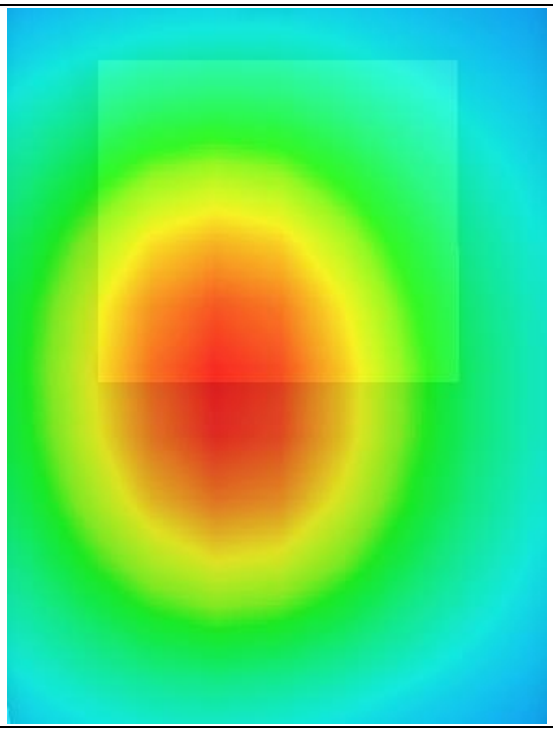
Maximum location: X=-7.00, Y=-1.00

SAR 10g (W/Kg)	0.596154
SAR 1g (W/Kg)	0.962811

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)



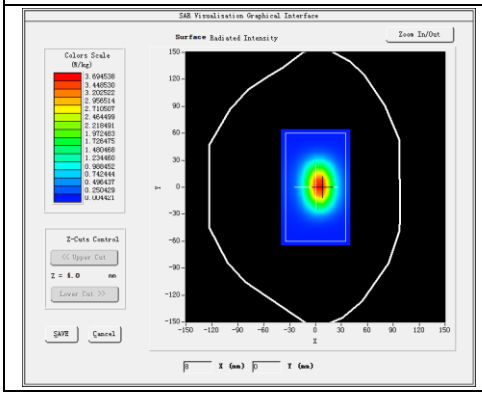
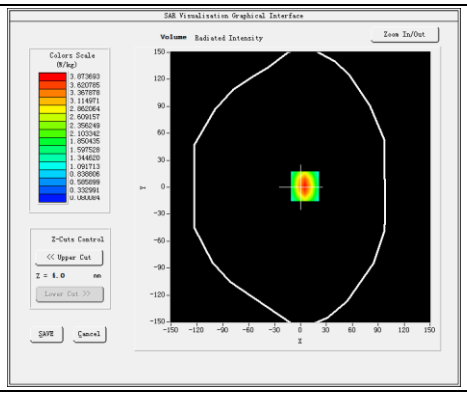


System Performance Check Data(1800MHz Head)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2017-05-16

Experimental conditions.

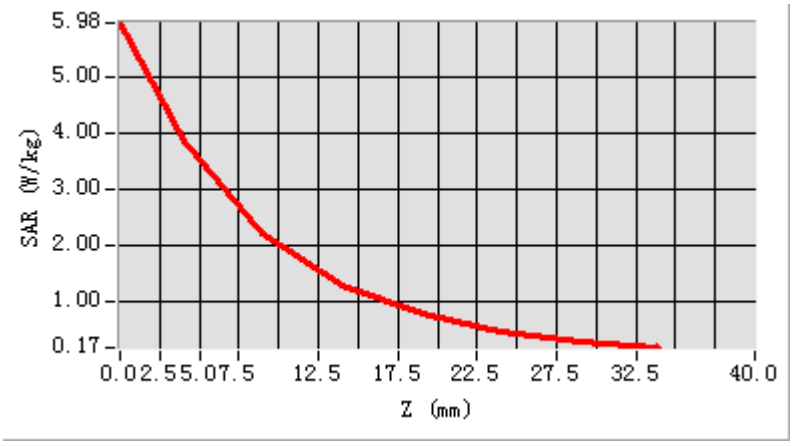
Phantom	Validation plane
Device Position	-
Band	1800MHz
Channels	-
Signal	CW
Frequency (MHz)	1800MHz
Relative permittivity	39.82
Conductivity (S/m)	1.44
Power drift (%)	0.23
Probe	SN 14/16 EP309
ConvF	4.69
Crest factor:	1:1

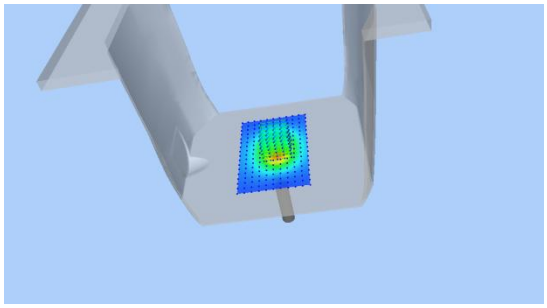
SURFACE SAR	VOLUME SAR
	

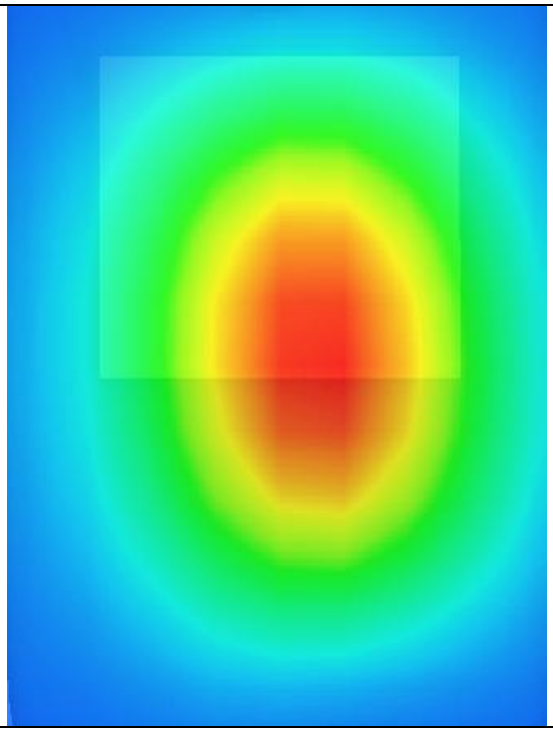
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.991358
SAR 1g (W/Kg)	3.788529

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)



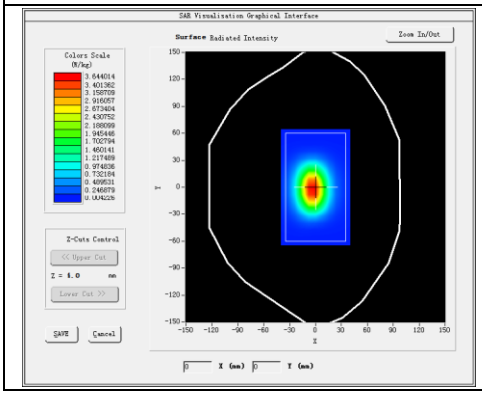
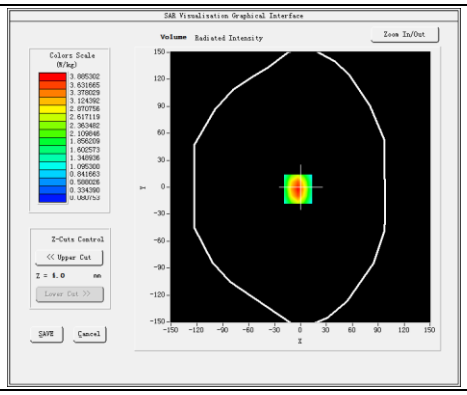


System Performance Check Data(1800MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2017-05-16

Experimental conditions.

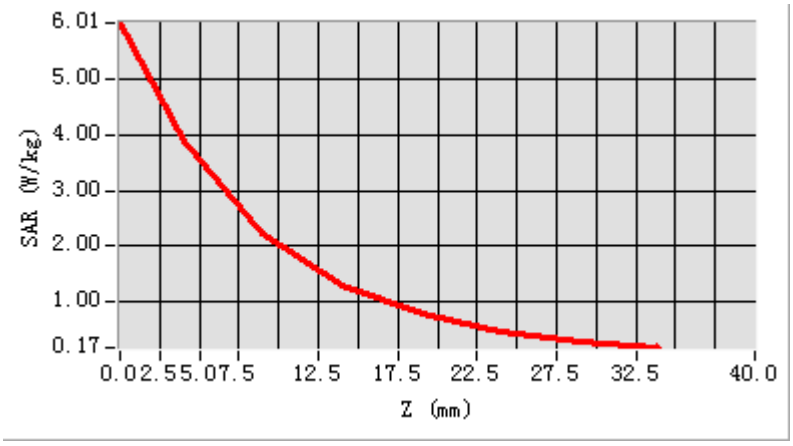
Phantom	Validation plane
Device Position	-
Band	1800MHz
Channels	-
Signal	CW
Frequency (MHz)	1800MHz
Relative permittivity	53.62
Conductivity (S/m)	1.54
Power drift (%)	-0.28
Probe	SN 14/16 EP309
ConvF	4.78
Crest factor:	1:1

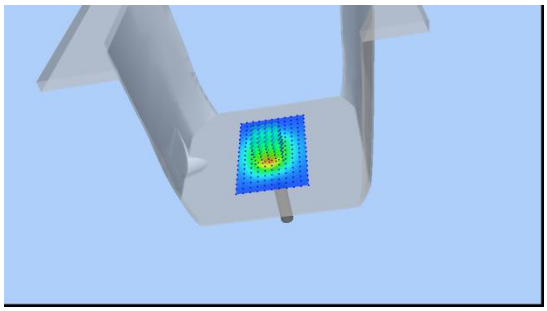
SURFACE SAR	VOLUME SAR
	

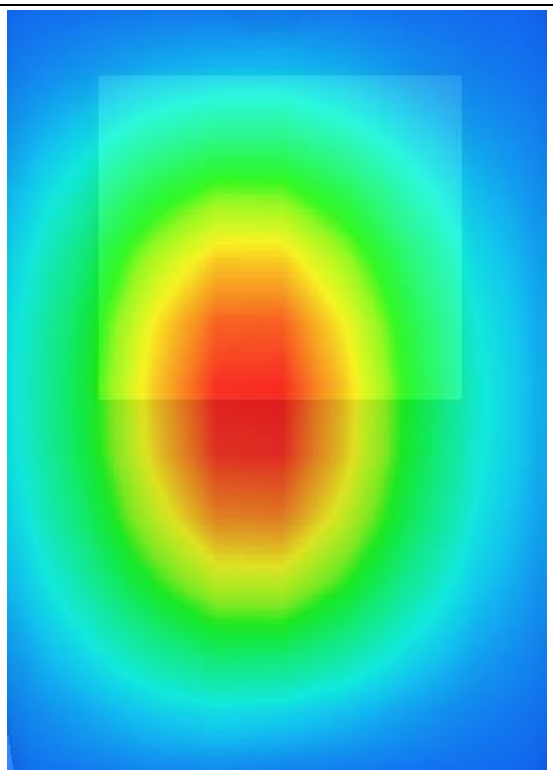
Maximum location: X=-3.00, Y=-2.00

SAR 10g (W/Kg)	2.016448
SAR 1g (W/Kg)	3.842058

Z Axis Scan


6.01
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)



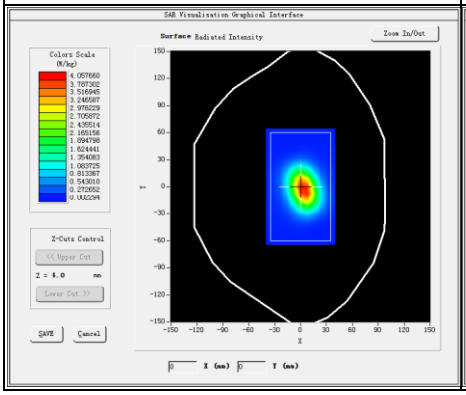
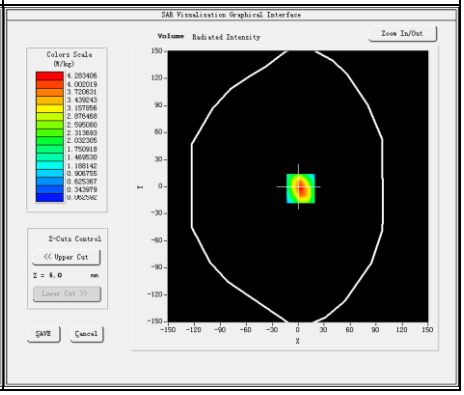


System Performance Check Data (1900MHz Head)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2017-05-17
Measurement duration: 14 minutes 12 seconds

Experimental conditions.

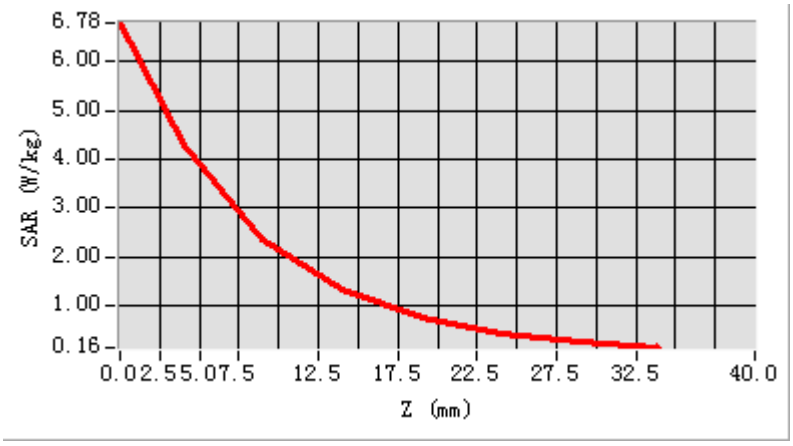
Phantom	Validation plane
Device Position	-
Band	1900MHz
Channels	-
Signal	CW
Frequency (MHz)	1900MHz
Relative permittivity	38.95
Conductivity (S/m)	1.39
Power drift (%)	0.46
Probe	SN 14/16 EP309
ConvF:	5.46
Crest factor:	1:1

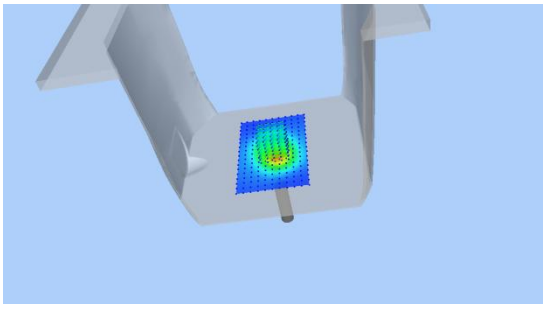
SURFACE SAR	VOLUME SAR
	

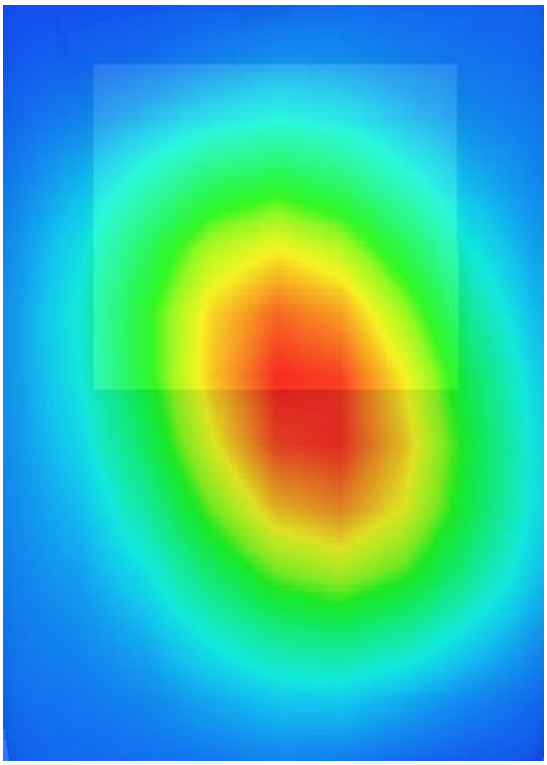
Maximum location: X=3.00, Y=-2.00

SAR 10g (W/Kg)	2.084576
SAR 1g (W/Kg)	3.951355

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)



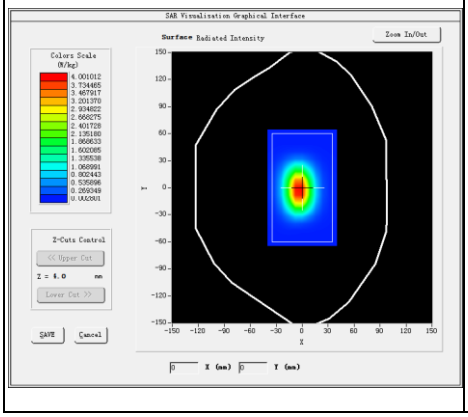
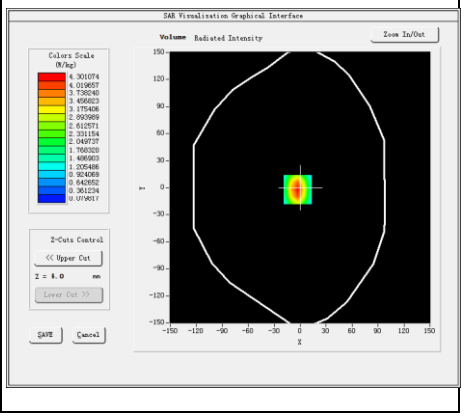


System Performance Check Data (1900MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2017-05-17
Measurement duration: 14 minutes 46 seconds

Experimental conditions.

Device Position	-
Band	1900MHz
Channels	-
Signal	CW
Frequency (MHz)	1900
Relative permittivity	53.97
Conductivity (S/m)	1.51
Power drift (%)	-0.31
Probe	SN 14/16 EP309
ConvF:	5.67
Crest factor:	1:1

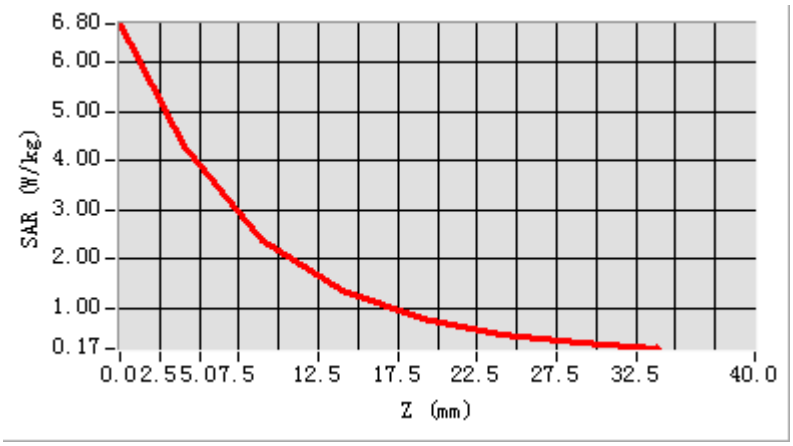
SURFACE SAR	VOLUME SAR
	

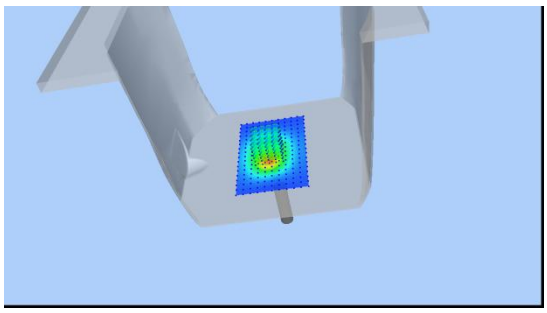
Maximum location: X=-3.00, Y=-2.00

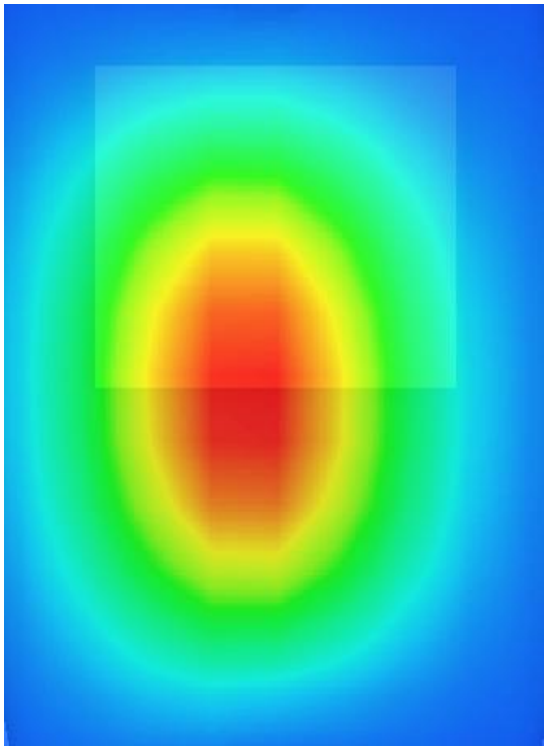
SAR Peak: 5.27 W/kg

SAR 10g (W/Kg)	2.125481
SAR 1g (W/Kg)	4.011768

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)



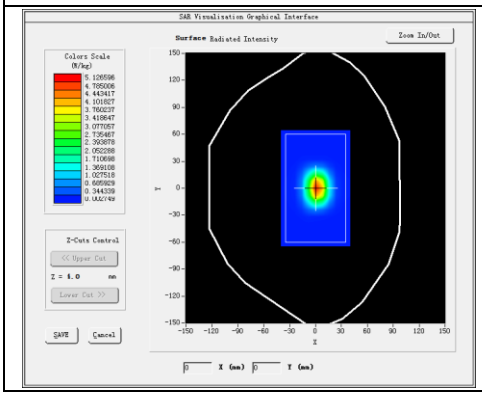
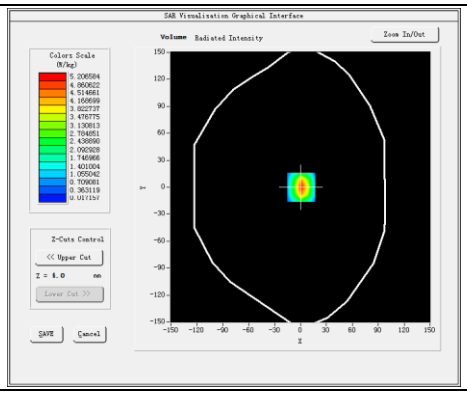


System Performance Check Data (2450MHz Head)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2017-05-17
Measurement duration: 13 minutes 51seconds

Experimental conditions.

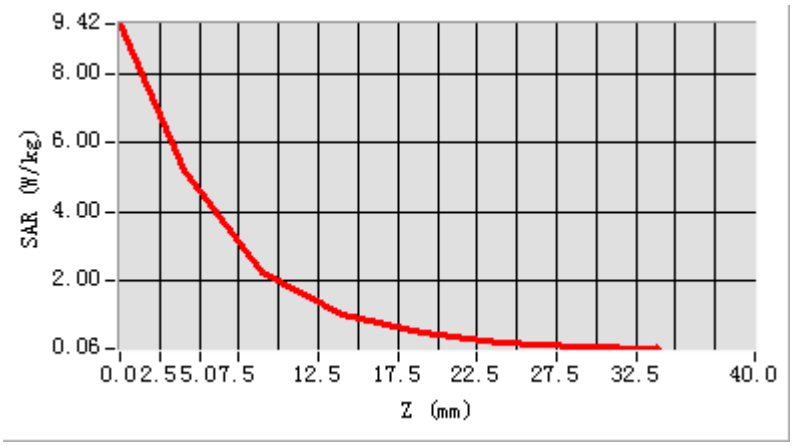
Device Position	Validation plane
Band	2450 MHz
Channels	-
Signal	CW
Frequency (MHz)	2450
Relative permittivity	39.61
Conductivity (S/m)	1.81
Power drift (%)	-0.38
Probe	SN 14/16 EP309
ConvF	5.09
Crest factor:	1:1

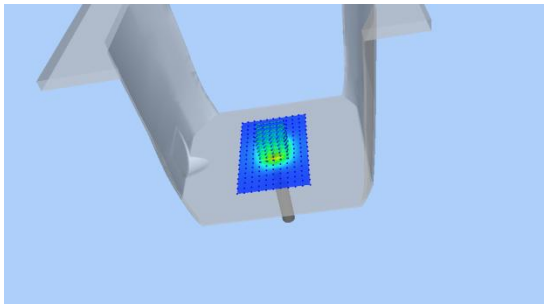
SURFACE SAR	VOLUME SAR
	

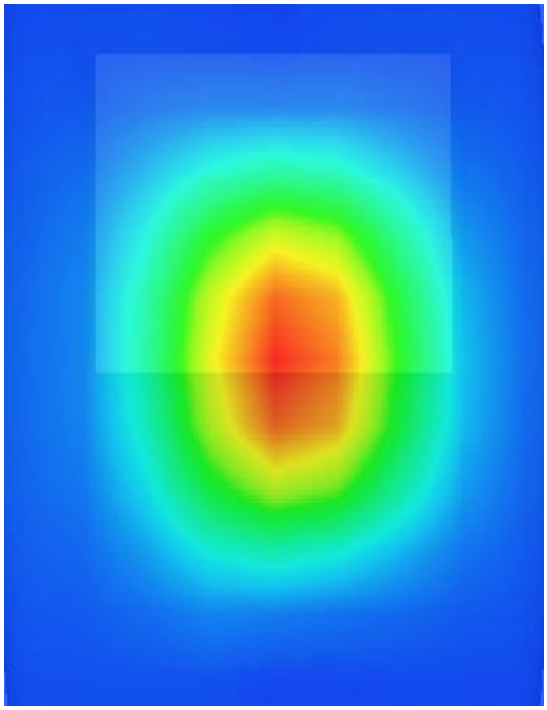
Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	2.413871
SAR 1g (W/Kg)	5.314945

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)



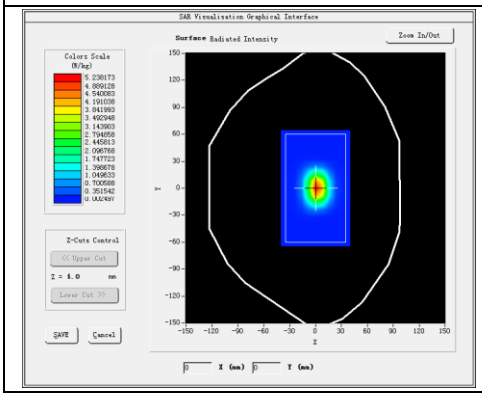
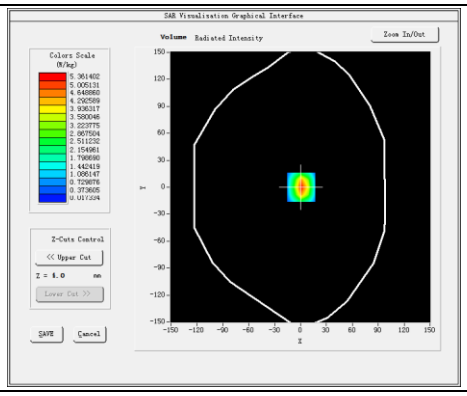


System Performance Check Data (2450MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 2017-05-17
Measurement duration: 14 minutes 23 seconds

Experimental conditions.

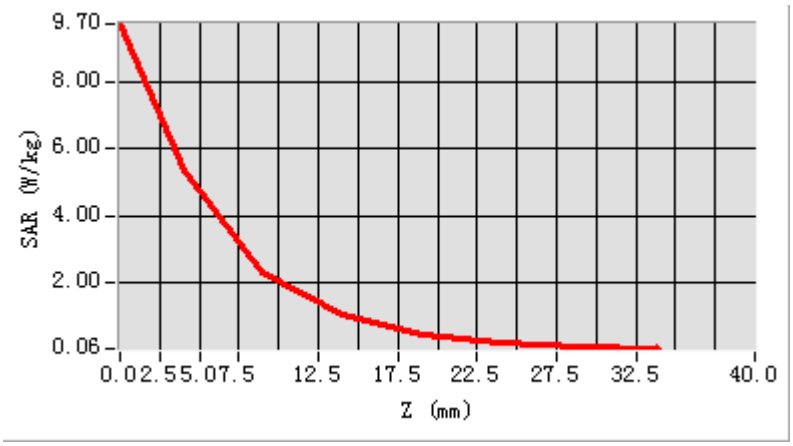
Device Position	Validation plane
Band	2450 MHz
Channels	-
Signal	CW
Frequency (MHz)	2450
Relative permittivity	52.88
Conductivity (S/m)	1.96
Power drift (%)	-0.30
Probe	SN 14/16 EP309
ConvF	5.24
Crest factor:	1:1

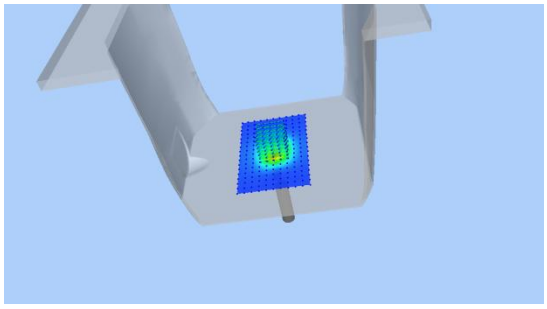
SURFACE SAR	VOLUME SAR
	

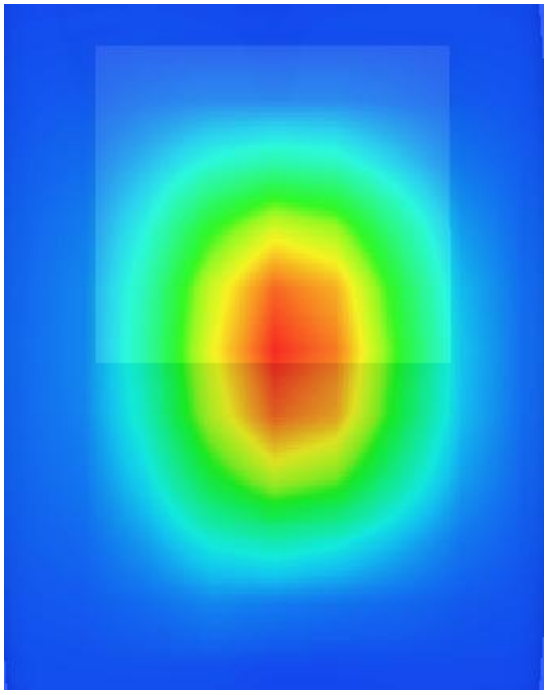
Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	2.456572
SAR 1g (W/Kg)	5.263093

Z Axis Scan


9.70
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)





Appendix B. SAR Test Plots

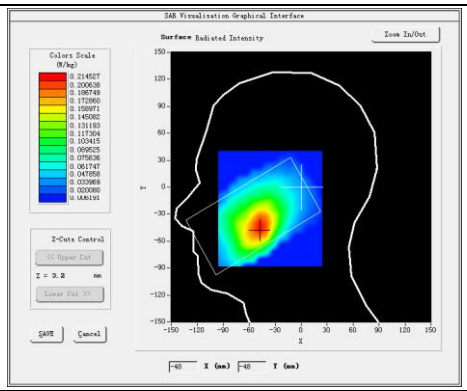
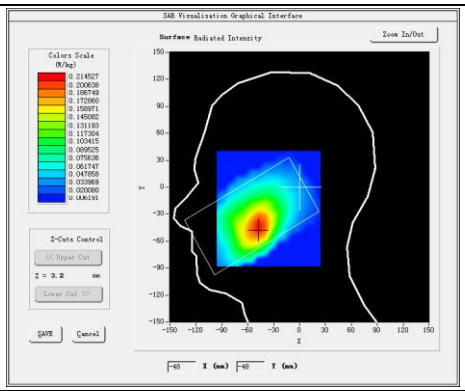
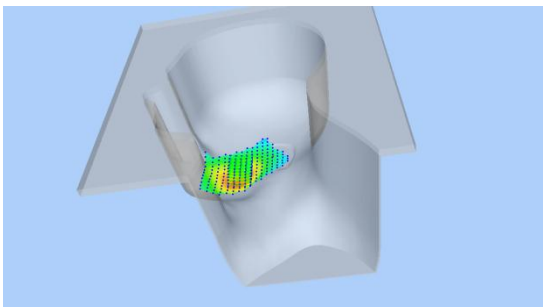
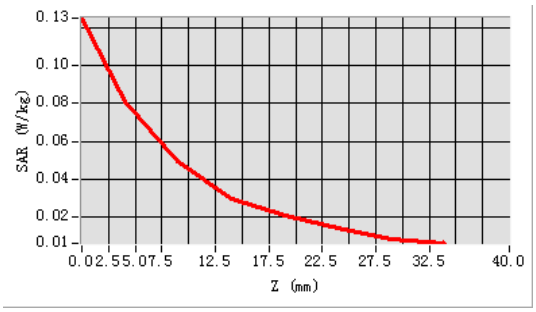
Plot 1: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-16
Probe	SN 14/16 EP309
ConvF	5.74
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	Right head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	TDMA (Crest factor: 8.32)
Frequency (MHz)	848.8
Relative permittivity (real part)	41.5
Conductivity (S/m)	0.90
Variation (%)	-1.60

Maximum location: X=-48.00, Y=-45.00

SAR Peak: 0.13 W/kg

SAR 10g (W/Kg)	0.045876
SAR 1g (W/Kg)	0.076245

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

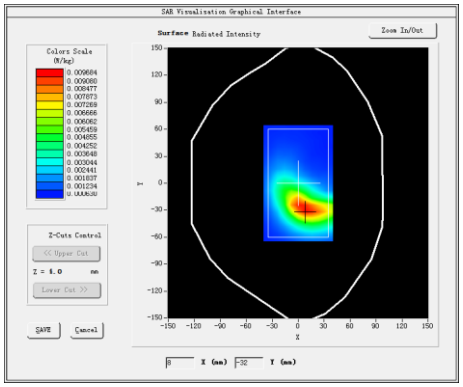
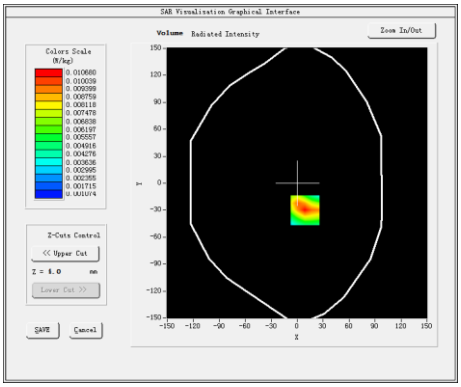
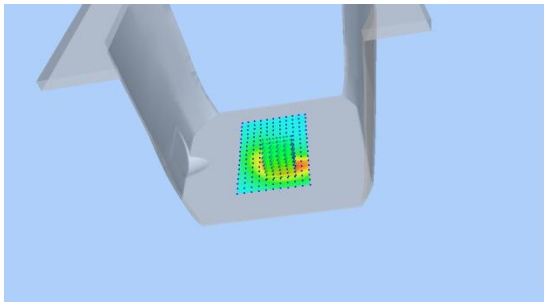
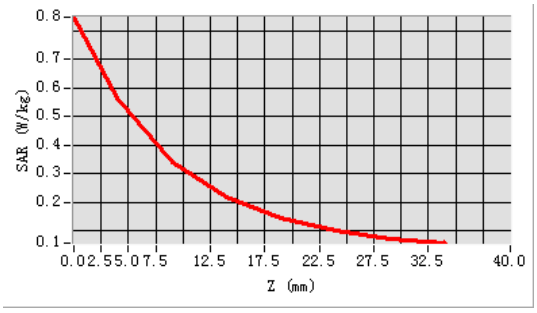
Plot 2: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-16
Probe	SN 14/16 EP309
ConvF	5.90
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	GPRS 850
Channels	High
Signal	Duty Cycle: 2.00 (Crest factor: 2.0)
Frequency (MHz)	848.8
Relative permittivity (real part)	55.20
Conductivity (S/m)	0.97
Variation (%)	0.96

Maximum location: X=9.00, Y=-30.00

SAR Peak: 0.82 W/kg

SAR 10g (W/Kg)	0.205904
SAR 1g (W/Kg)	0.410068

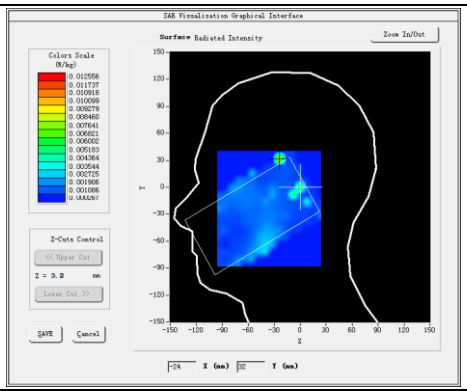
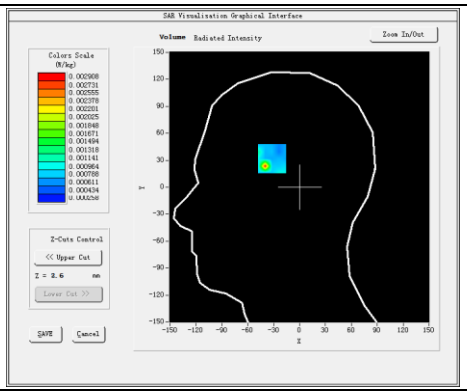
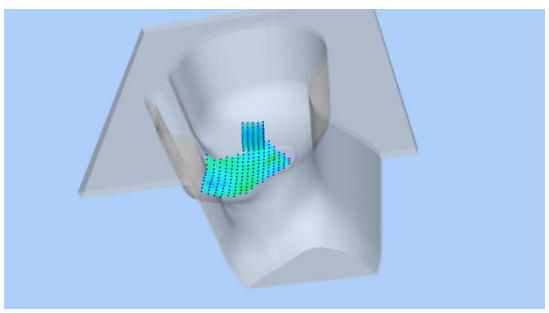
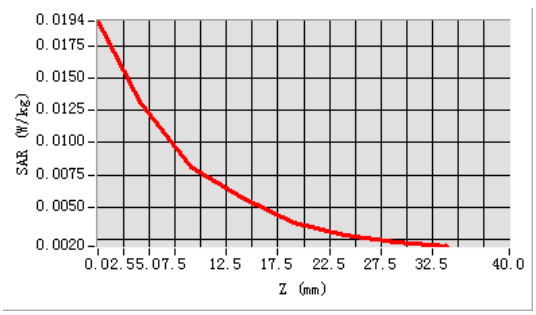
SURFACE SAR	VOLUME SAR
	
3D screen shot	**Z Axis Scan**
	

Plot 3: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-17
Probe	SN 14/16 EP309
ConvF	5.46
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	Right head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA (Crest factor: 4.0)
Frequency (MHz)	1850.2
Relative permittivity (real part)	40.00
Conductivity (S/m)	1.40
Variation (%)	1.02

Maximum location: X=-32.00, Y=-40.00
SAR Peak: 0.02 W/kg

SAR 10g (W/Kg)	0.041895
SAR 1g (W/Kg)	0.082253

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

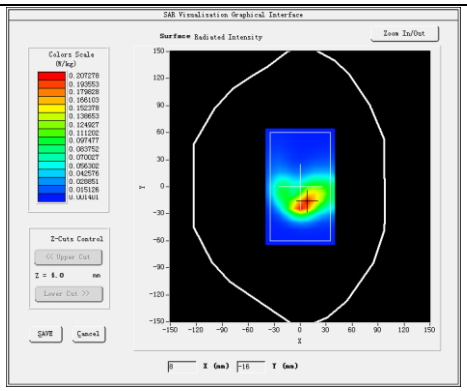
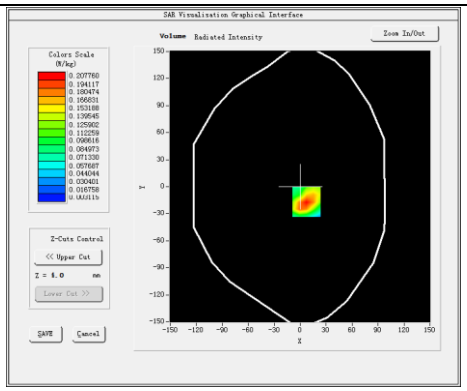
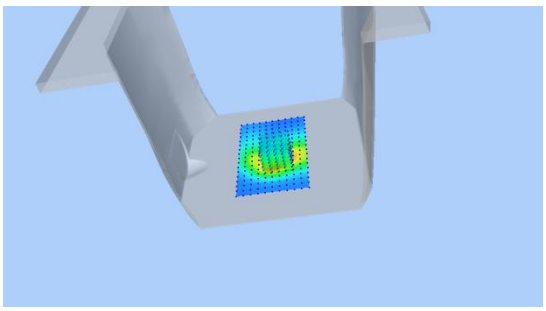
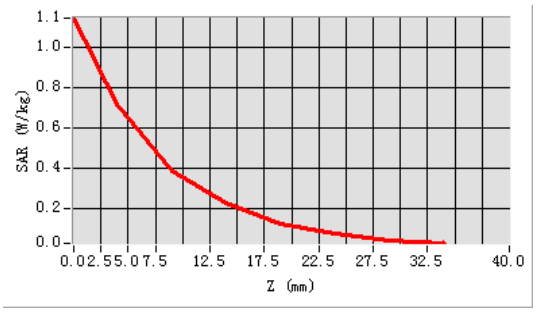
Plot 4: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-17
Probe	SN 14/16 EP309
ConvF	5.67
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 Bottom side
Band	GPRS 1900
Channels	Low
Signal	Duty Cycle: 1:2.00 (Crest factor: 2.0)
Frequency (MHz)	1850.2
Relative permittivity (real part)	53.30
Conductivity (S/m)	1.52
Variation (%)	-1.30

Maximum location: X=7.00, Y=-17.00

SAR Peak: 1.07 W/kg

SAR 10g (W/Kg)	0.294378
SAR 1g (W/Kg)	0.500932

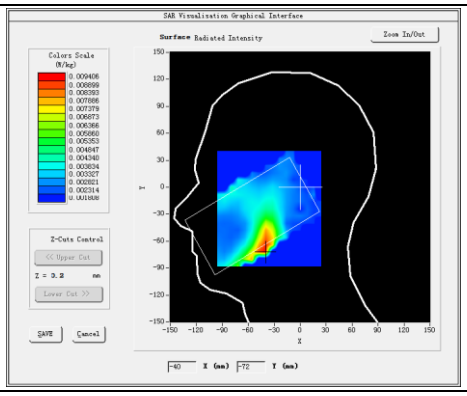
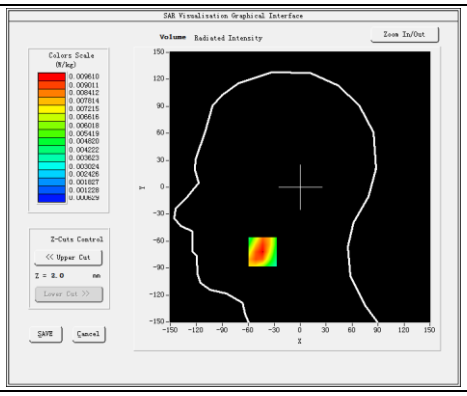
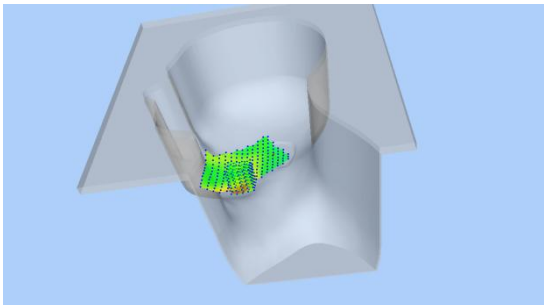
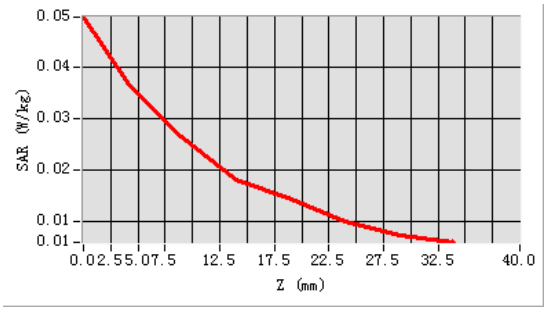
SURFACE SAR	VOLUME SAR
	
3D screen shot	**Z Axis Scan**
	

Plot 5: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-17
Probe	SN 14/16 EP309
ConvF	5.46
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	Right head
Device Position	Cheek
Band	WCDMA II
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1880.0
Relative permittivity (real part)	40.00
Conductivity (S/m)	1.40
Variation (%)	0.97

Maximum location: X=-55.00, Y=-50.00
SAR Peak: 0.05 W/kg

SAR 10g (W/Kg)	0.014623
SAR 1g (W/Kg)	0.025356

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

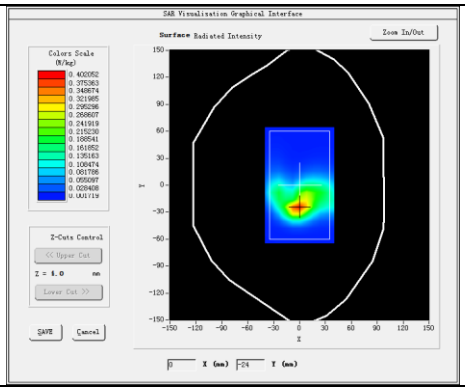
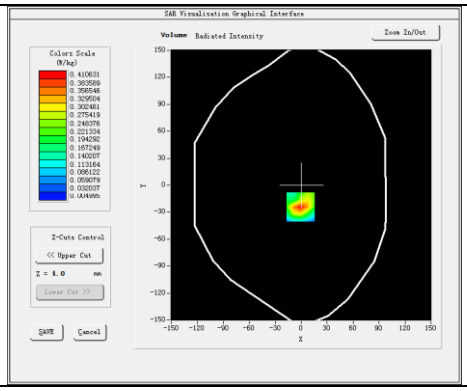
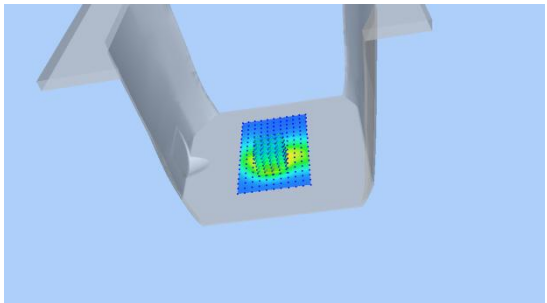
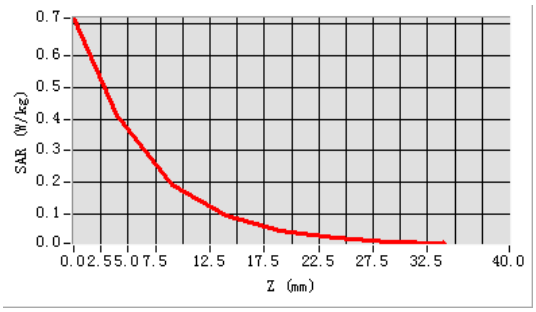
Plot 6: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-17
Probe	SN 14/16 EP309
ConvF	5.67
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 bottom side
Band	WCDMA II
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	1880.0
Relative permittivity (real part)	53.21
Conductivity (S/m)	1.50
Variation (%)	-0.51

Maximum location: X=-1.00, Y=-24.00

SAR Peak: 0.71 W/kg

SAR 10g (W/Kg)	0.172278
SAR 1g (W/Kg)	0.382791

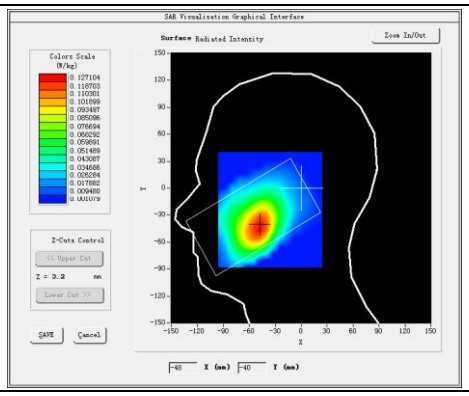
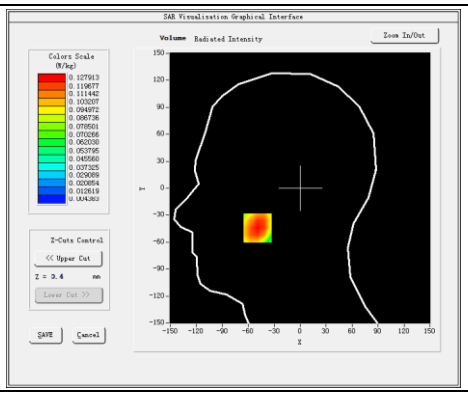
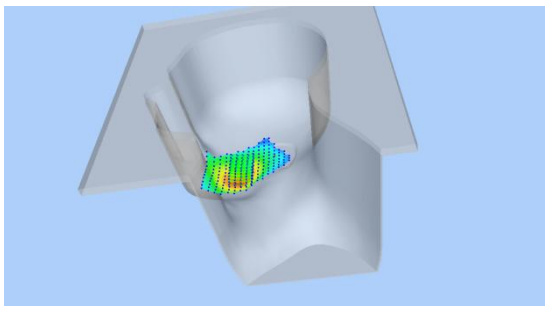
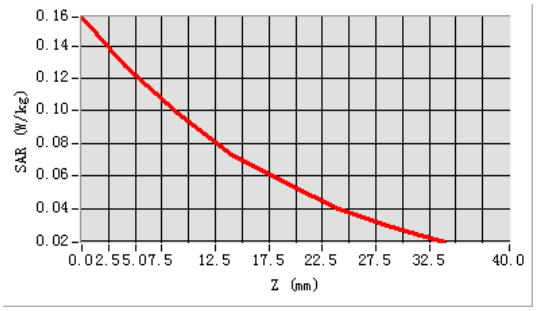
SURFACE SAR	VOLUME SAR
	
3D screen shot	**Z Axis Scan**
	

Plot 7: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-16
Probe	SN 14/16 EP309
ConvF	5.74
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	Right head
Device Position	Cheek
Band	WCDMA V
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	836.6
Relative permittivity (real part)	42.27
Conductivity (S/m)	0.91
Variation (%)	0.65

Maximum location: X=-49.00, Y=-44.00
SAR Peak: 0.16 W/kg

SAR 10g (W/Kg)	0.087044
SAR 1g (W/Kg)	0.124083

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

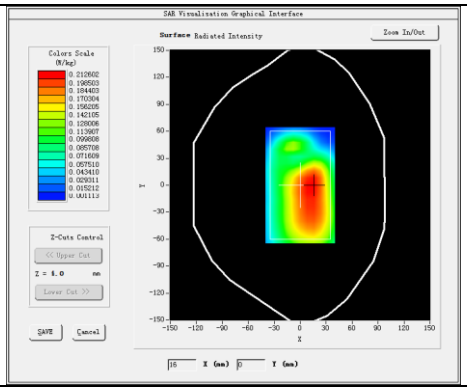
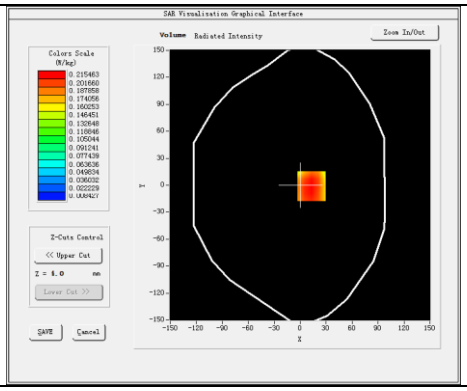
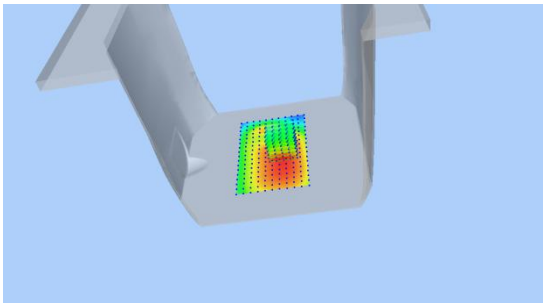
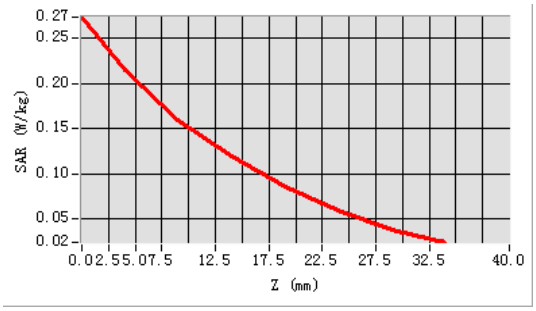
Plot 8: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-16
Probe	SN 14/16 EP309
ConvF	5.90
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	WCDMA V
Channels	Middle
Signal	WCDMA (Crest factor: 1.0)
Frequency (MHz)	836.6
Relative permittivity (real part)	55.5
Conductivity (S/m)	0.96
Variation (%)	-0.72

Maximum location: X=13.00, Y=-1.00

SAR Peak: 0.28 W/kg

SAR 10g (W/Kg)	0.148112
SAR 1g (W/Kg)	0.209655

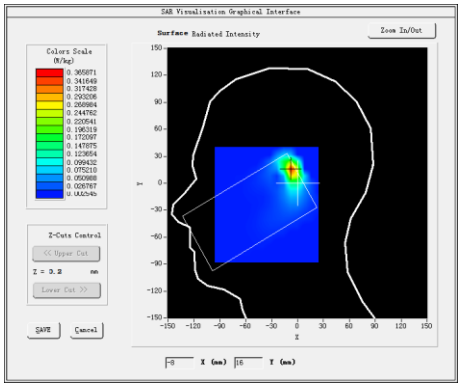
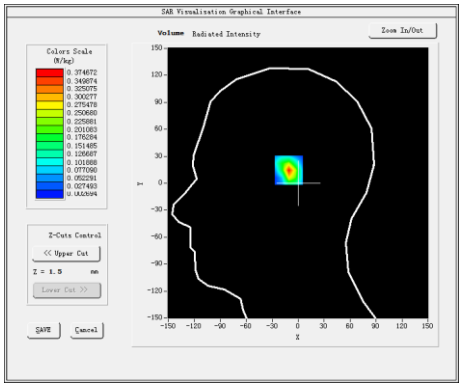
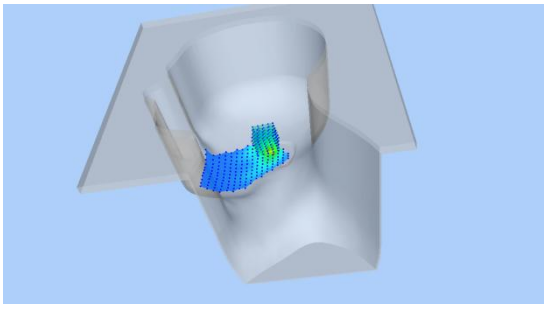
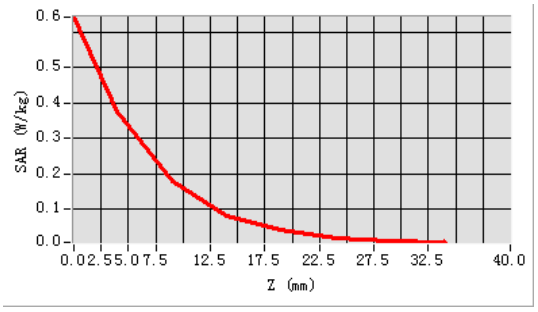
SURFACE SAR	VOLUME SAR
	
3D screen shot	**Z Axis Scan**
	

Plot 9: DUT:KIN Tablet; EUT Model: KIN

Test Date	2017-05-17
Probe	SN 14/16 EP309
ConvF	5.09
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	Right head
Device Position	Cheek
Band	IEEE 802.11b ISM
Channels	Middle
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2437
Relative permittivity (real part)	39.23
Conductivity (S/m)	1.79
Variation (%)	-0.47

Maximum location: X=-7.00, Y=15.00
SAR Peak: 0.64 W/kg

SAR 10g (W/Kg)	0.133199
SAR 1g (W/Kg)	0.326605

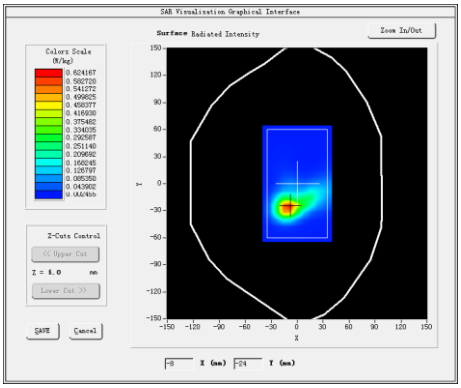
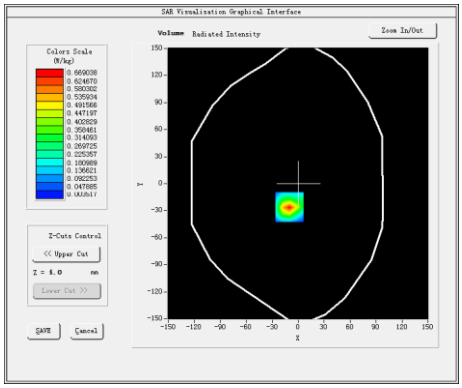
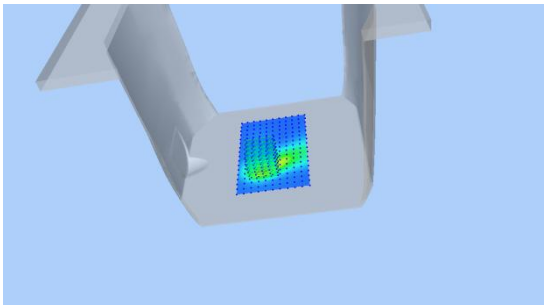
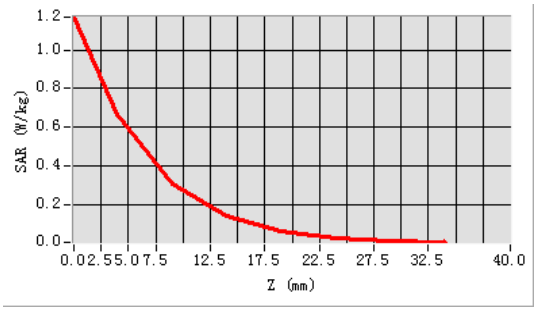
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 10: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-17
Probe	SN 14/16 EP309
ConvF	5.24
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	IEEE 802.11b ISM
Channels	Middle
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2412
Relative permittivity (real part)	52.40
Conductivity (S/m)	1.94
Variation (%)	-1.57

Maximum location: X=-10.00, Y=-26.00
SAR Peak: 1.16 W/kg

SAR 10g (W/Kg)	0.248662
SAR 1g (W/Kg)	0.604085

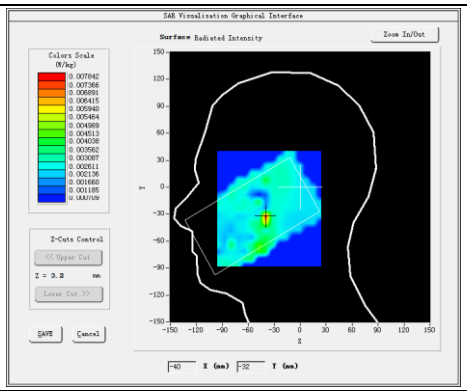
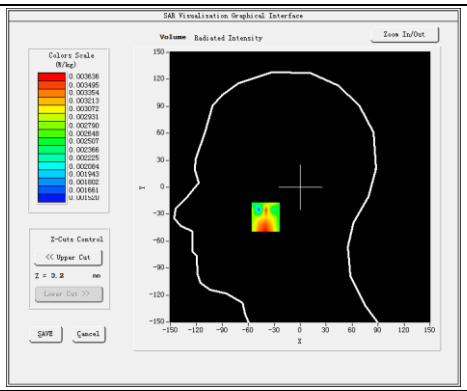
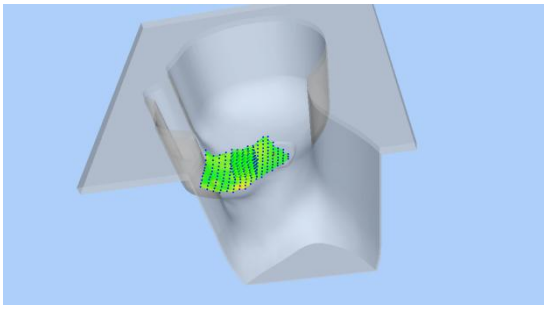
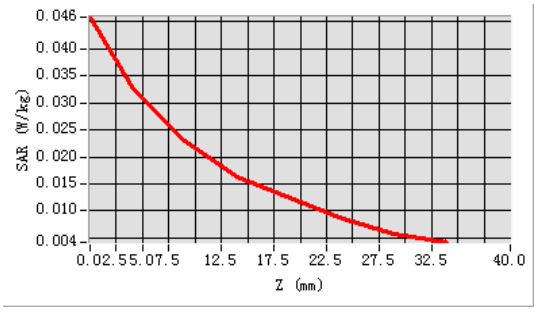
SURFACE SAR	VOLUME SAR
	
3D	**Z Axis Scan**
	

Plot 11: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-16
Probe	SN 14/16 EP309
ConvF	4.69
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	Right head
Device Position	Cheek
Band	LTE Band 4 (RB 1)
Channels	Low
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1720.0
Relative permittivity (real part)	40.2
Conductivity (S/m)	1.31
Variation (%)	3.35

Maximum location: X=-40.00, Y=-33.00
SAR Peak: 0.04 W/kg

SAR 10g (W/Kg)	0.011547
SAR 1g (W/Kg)	0.023387

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

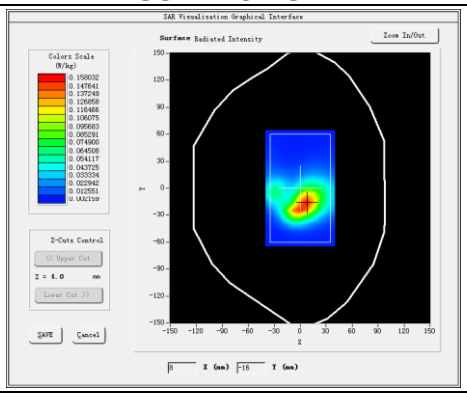
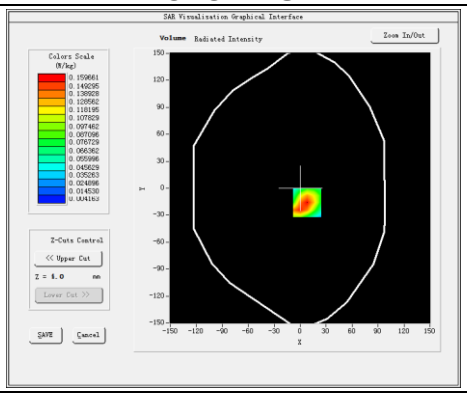
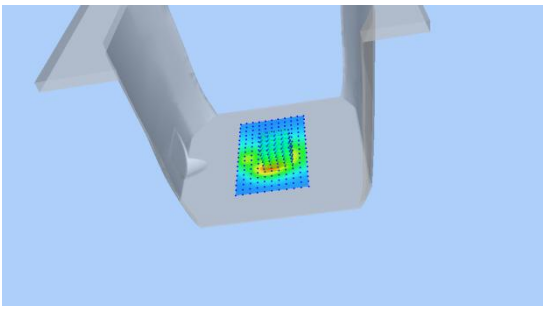
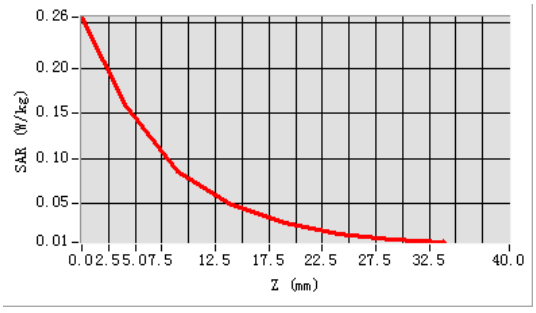
Plot 12: DUT: KIN Tablet; EUT Model: KIN

Test Date	2017-05-16
Probe	SN 14/16 EP309
ConvF	4.78
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	Body back
Band	LTE Band 4 (RB 1)
Channels	Low
Signal	LTE (Crest factor: 1.0)
Frequency (MHz)	1720.0
Relative permittivity (real part)	52.6
Conductivity (S/m)	1.38
Variation (%)	2.44

Maximum location: X=8.00, Y=-16.00

SAR Peak: 0.27 W/kg

SAR 10g (W/Kg)	0.078940
SAR 1g (W/Kg)	0.153558

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※※※※※