S T S L A B

FCC SAR TEST REPORT

Report No.: STS1903051H01

Issued for

Justice Tech Solutions, LLC

13530 Fifth Street, Chino, CA 91710 United States

Product Name:	Securebook 5.0
Brand Name:	Justice Tech Solutions
Model Name:	JTS-SB50W
Series Model:	JTS-SB50W-A, JTS-SB50W-B, JTS-SB50W-C, JTS-SB50W-D, JTS-SB50W-E, JTS-SB50W-F
FCC ID:	2AS4KJTS-SB50W
Test Standard:	ANSI/IEEE Std. C95.1
	FCC 47 CFR Part 2 (2.1093)
	IEEE 1528: 2013
Max. Report SAR (1g):	Body: 0.282 W/kg

Shenzhen STS Test Services Co., Ltd.
1/F., Building B, Zhuoke Science Park, No.190,Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong,China
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com

Test Report Certification

Applicant's name ....:	Justice Tech Solutions, LLC
Address ....:	13530 Fifth Street, Chino, CA 91710 United States
Manufacture's Name ....:	Justice Tech Solutions, LLC
Address ....:	13530 Fifth Street, Chino, CA 91710 United States

Product description

Product name ....:	Securebook 5.0
Brand name ....:	Justice Tech Solutions
Model name ....:	JTS-SB50W
Series Model..........................:	JTS-SB50W-A, JTS-SB50W-B, JTS-SB50W-C, JTS-SB50W-D, JTS-SB50W-E, JTS-SB50W-F
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 ....:	22 Mar. 2019~27 Mar. 2019
Date of Issue..:	28 Mar. 2019
Test Result...:	**Pass**

Testing Engineer : Aaron Bu

(Aaron Bu)

Technical Manager : Jason Lu

(Jason Lu)

Authorized Signatory : Vita Li

(Vita Li)

Table of Contents

1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road, Fuyong Street, Bao'an District, Shenzhen, Guangdong, China
Tel: + 86-755 3688 6288 Fax:+ 86-755 3688 6277 Http://www.stsapp.com E-mail: sts@stsapp.com

1.General Information

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

1.1 EUT Description

Product Name	Securebook 5.0		
Brand Name	Justice Tech Solutions		
Model Name.	JTS-SB50W		
Series Model	JTS-SB50W-A, JTS-SB50W-B, JTS-SB50W-C, JTS-SB50W-D, JTS-SB50W-E, JTS-SB50W-F		
FCC ID	2AS4KJTS-SB50W		
Model Difference	Just different in CPU and memory capacity JTS-SB50W-A：DDR 4GB change to 8GB； JTS-SB50W-B：CPU N3450 change to N3350； JTS-SB50W-C：CPU N3450 change to J3455 JTS-SB50W-D：SSD 120GB changed to SSD 128GB JTS-SB50W-E：SSD 120GB changed to SSD 240GB JTS-SB50W-F：SSD 120GB changed to SSD 480GB		
Battery	Rated Voltage: 7.6V Charge Limit: 8.7V; Capacity: 7000mAh		
Device Category	Portable		
Product stage	Production unit		
RF Exposure Environment	General Population / Uncontrolled		
Hardware Version	N/A		
Software Version	N/A		
Frequency Range	WLAN 802.11b/g/n(HT20):2412~2462MHz WLAN 802.11n(HT40):2422~2452MHz		
	IEEE 802.11a/ n(HT20)/ac(VHT20): 5.180GHz-5.240GHz IEEE 802.11n(HT40)/ac(VHT40): 5.190GHz-5.230GHz IEEE 802.11ac(VHT80): 5.210GHz		
	IEEE 802.11a/ n(HT20)/ac(VHT20): 5.260GHz-5.320GHz IEEE 802.11 n(HT40)/ac(VHT40): 5.270GHz-5.310GHz IEEE 802.11ac(VHT80): 5.290GHz		
	IEEE 802.11a/ n(HT20)/ac(VHT20): 5.500GHz-5.700GHz IEEE 802.11 n(HT40)/ac(VHT40): 5.510GHz-5.670GHz IEEE 802.11ac(VHT80): 5.530GHz-5.610GHz		
Max. Reported SAR(1g): (Limit:1.6W/kg)	Band	Mode	Body SAR (W/kg)
	DTS	2.4G WLAN ANT A	0.039
	DTS	2.4G WLAN ANT B	0.282
	NII	5.2G WLAN ANT A	0.086
	NII	5.2G WLAN ANT B	0.121
	NII	5.3G WLAN ANT A	0.133
	NII	5.3G WLAN ANT B	0.265
	NII	5.6G WLAN ANT A	0.112
	NII	5.6G WLAN ANT B	0.182
FCC Equipment Class	Digital Transmission System (DTS) Unlicensed National Information Infrastructure TX(NII)		

Operating Mode:	WLAN: 802.11 a/ac/b/g/n(HT20) /ac/n(HT40) /ac(HT80)
Antenna Specification:	WLAN: PIFA Antenna
Hotspot Mode:	Not Support
DTM Mode:	Not Support
Note: 1. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power	

1.2 Test Environment

Ambient conditions in the SAR laboratory:

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

1.3 Test Factory

Shenzhen STS Test Services Co., Ltd.
Add. : 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong, China
FCC Registration No.: 625569;
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	Securebook 5.0 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 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
8	FCC KDB 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices
9	FCC KDB 616217 D04	SAR Evaluation Considerations for Laptop, Securebook 5.0, Netbook and Tablet Computers

(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

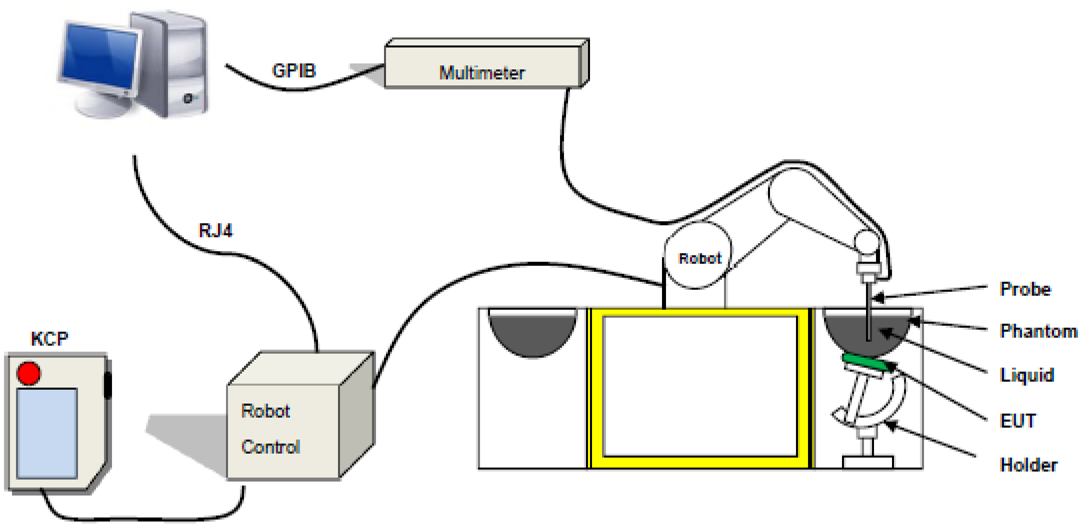
$$SAR = \frac{\sigma E^2}{\rho}$$

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 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 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

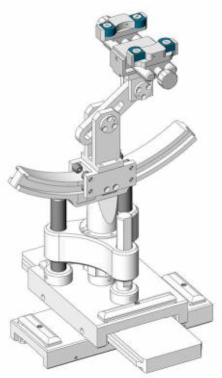
3.2.2 Phantom

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.

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	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

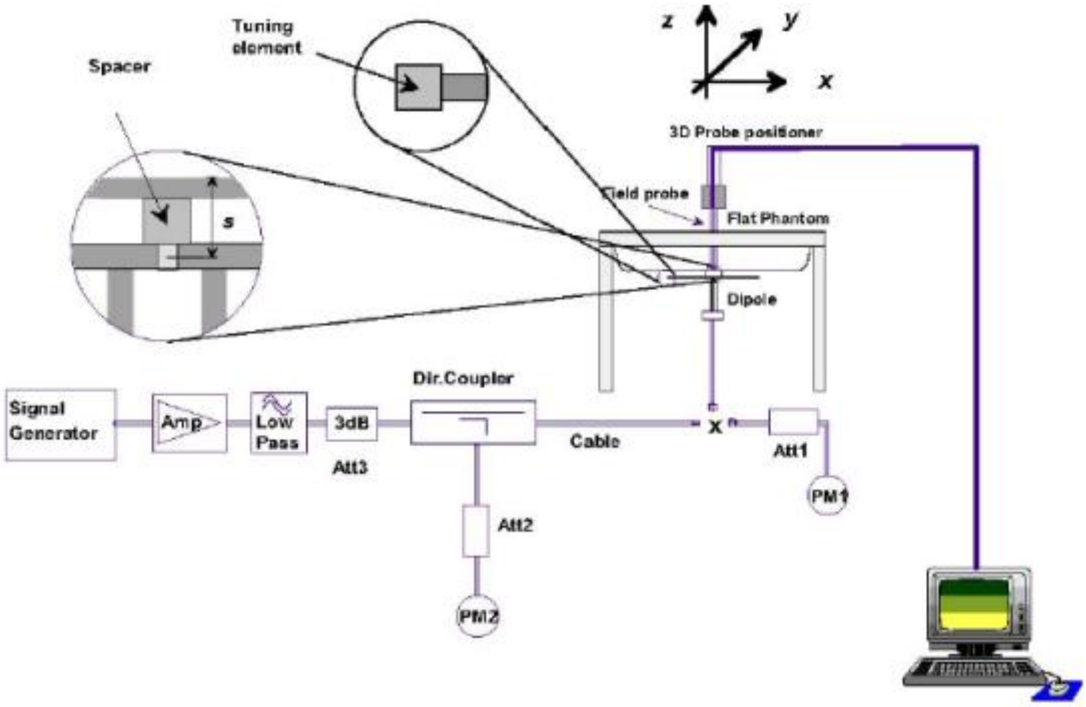
Date	Ambient condition		Body Simulating Liquid		Parameters	Target	Measured	Deviation [%]	Limited [%]
	Temp. [°C]	Humidity [%]	Frequency	Temp. [°C]					
2019-03-22	22.0	50	2450 MHz	21.6	Permittivity:	52.7	51.29	-2.68	±5
					Conductivity	1.95	1.97	1.03	±5
2019-03-25	22.1	53	5200 MHz	21.8	Permittivity:	49.0	48.73	-0.55	±5
					Conductivity	5.30	5.32	0.38	±5
2019-03-26	22.2	51	5300 MHz	21.9	Permittivity:	48.70	48.95	0.51	±5
					Conductivity	5.53	5.56	0.54	±5
2019-03-27	22.5	54	5600 MHz	22.2	Permittivity:	48.5	49.11	1.26	±5
					Conductivity	5.77	5.64	-2.25	±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
2450 Body	100	5.319	53.19	52.4	1.51	2019-03-22
5200 Body	100	15.835	158.35	159	-0.41	2019-03-25
5300 Body	100	16.702	167.02	166.4	0.37	2019-03-26
5600 Body	100	17.439	174.39	173.8	0.34	2019-03-27

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.

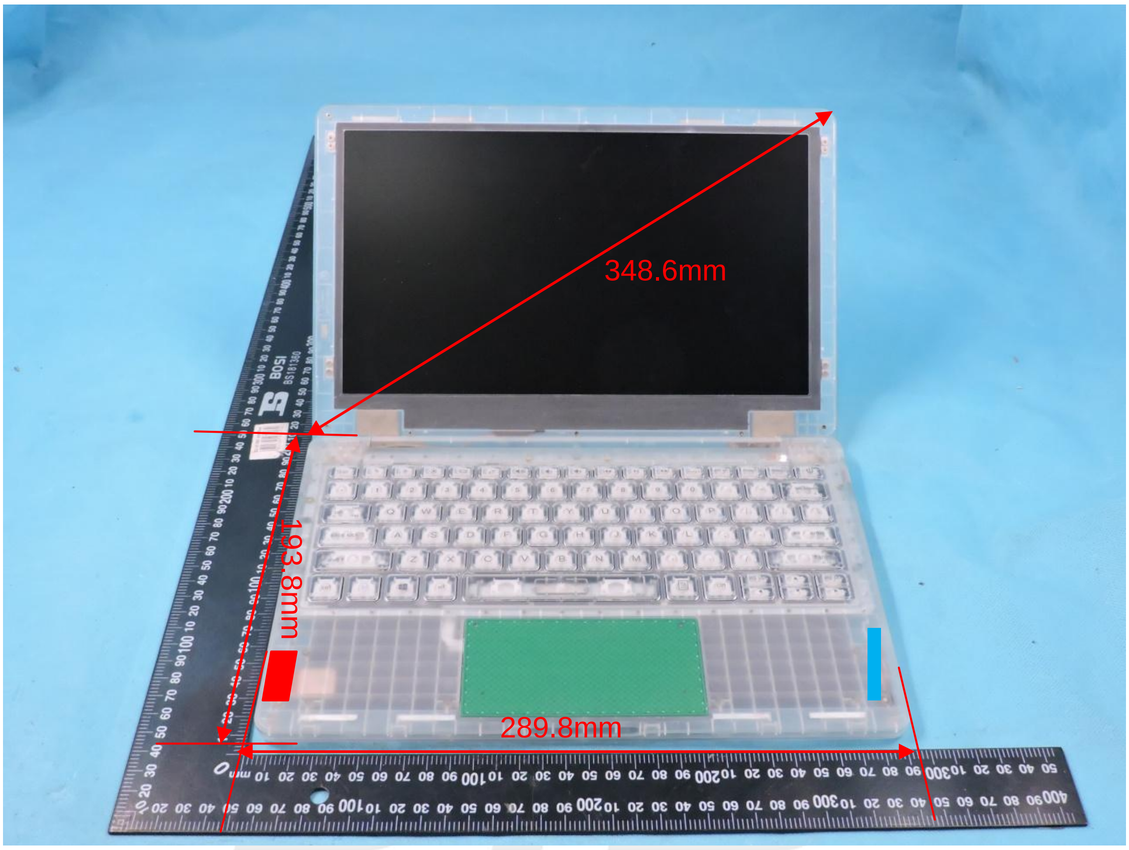
Area Scan& Zoom Scan:

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 Securebook 5.0, support WLAN mode.



WLAN Antenna A

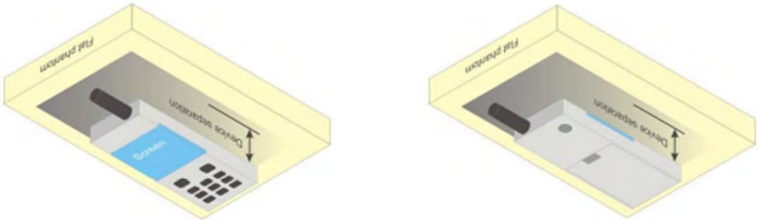
WLAN Antenna B

8. EUT Test Position

This EUT was tested in Rear Face.

Body-worn Position Conditions:

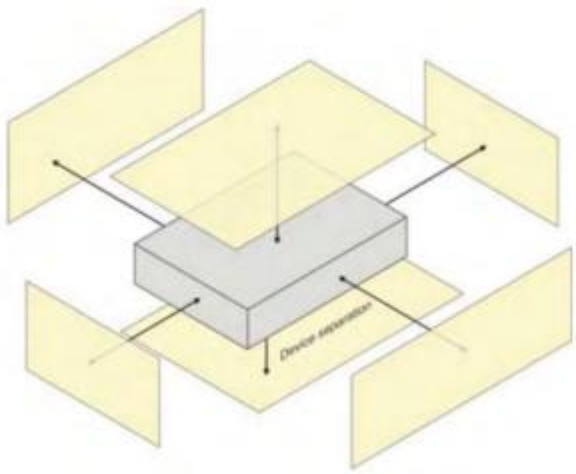
Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same 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.



8.1 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

WLAN (2.4Gband)

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	
			Antenna A	Antenna B
802.11b	1	2412	12.79	13.82
	6	2437	13.28	13.81
	11	2462	13.62	14.72
802.11g	1	2412	11.29	11.72
	6	2437	13.60	14.24
	11	2462	9.65	10.13
802.11n(HT 20)	1	2412	11.36	12.02
	6	2437	13.91	13.66
	11	2462	9.47	10.66
802.11n(HT 40)	3	2412	10.18	11.05
	6	2437	13.70	13.61
	9	2462	9.59	9.48

WLAN (5.2Gband)

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	
			Antenna A	Antenna B
802.11a	36	5180	10.58	12.16
	40	5200	10.93	12.61
	48	5240	10.80	12.48
802.11 n-HT20	36	5180	9.91	11.02
	40	5200	11.37	12.46
	48	5240	11.26	12.38
802.11 n-HT40	38	5190	7.31	9.74
	46	5230	11.43	13.82
802.11ac(HT20)	36	5180	9.93	11.54
	40	5200	11.42	12.93
	48	5240	11.38	12.83
802.11ac(HT40)	38	5190	8.16	10.63
	46	5230	11.32	13.80
802.11ac(HT80)	42	5210	9.65	10.97

WLAN (5.3Gband)

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	
			Antenna A	Antenna B
802.11a	52	5260	11.40	12.93
	60	5300	12.09	12.83
	64	5320	11.97	12.31
802.11 n-HT20	52	5260	8.56	9.86
	60	5300	9.03	10.25
	64	5320	9.15	9.71
802.11 n-HT40	54	5270	13.13	13.77
	62	5310	10.48	11.06
802.11ac(HT20)	52	5260	11.33	12.39
	60	5300	11.75	12.32
	64	5320	11.73	12.75
802.11ac(HT40)	54	5270	13.38	13.74
	62	5310	10.58	10.96
802.11ac(HT80)	58	5290	10.43	11.49

WLAN (5.6Gband)

Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	
			Antenna A	Antenna B
802.11a	100	5500	9.61	10.67
	116	5580	11.47	12.51
	140	5700	9.12	10.21
802.11 n-HT20	100	5500	9.48	10.56
	116	5580	10.58	11.73
	140	5700	9.47	10.13
802.11 n-HT40	102	5510	8.23	10.31
	110	5550	9.87	11.96
	134	5670	10.92	12.74
802.11ac(HT20)	100	5500	9.45	10.24
	116	5580	10.63	11.70
	140	5700	9.69	10.93
802.11ac(HT40)	102	5510	8.02	10.73
	110	5550	9.38	11.93
	134	5670	10.89	13.47
802.11ac(HT80)	106	5530	8.70	9.84
	122	5610	11.42	12.29

10.1 Tune-up Power

Mode		WLAN(AVG) ANT A	WLAN(AVG) ANT B
IEEE 802.11b		13±1dBm	14±1dBm
IEEE 802.11g	Low	11±1dBm	11±1dBm
	Middle	13±1dBm	14±1dBm
	High	9±1dBm	10±1dBm
IEEE 802.11n20	Low	11±1dBm	12±1dBm
	Middle	13±1dBm	13±1dBm
	High	9±1dBm	10±1dBm
IEEE 802.11n40(HT40)	Low	10±1dBm	11±1dBm
	Middle	13±1dBm	13±1dBm
	High	9±1dBm	9±1dBm

	Mode	WLAN(AVG)		
		Antenna A		Antenna B
5200 MHz	802.11a	10±1dBm		12±1dBm
	802.11 n-HT20	10.4±1dBm		12±1dBm
	802.11 n-HT40	Channel38	7±1dBm	9±1dBm
		Channel46	11±1dBm	13±1dBm
	802.11ac-HT20	10.5±1dBm		12±1dBm
	802.11ac-HT40	Channel38	8±1dBm	10±1dBm
		Channel46	11±1dBm	13±1dBm
	802.11ac-HT80	9±1dBm		10±1dBm

	Mode	WLAN(AVG)		
		Antenna A		Antenna B
5300 MHz	802.11a	12±1dBm		12±1dBm
	802.11 n-HT20	9±1dBm		10±1dBm
	802.11 n-HT40	Channel54	13±1dBm	13±1dBm
		Channel62	10±1dBm	11±1dBm
	802.11ac-HT20	11±1dBm		12±1dBm
	802.11ac-HT40	Channel54	13±1dBm	13±1dBm
		Channel62	10±1dBm	10±1dBm
	802.11ac-HT80	10±1dBm		11±1dBm

<table>
<tr><td rowspan="18">5600 MHz</td><td rowspan="2">Mode</td><td colspan="3">WLAN(AVG)</td></tr>
<tr><td colspan="2">Antenna A</td><td>Antenna B</td></tr>
<tr><td rowspan="3">802.11a</td><td>Channel100</td><td>9±1dBm</td><td>10±1dBm</td></tr>
<tr><td>Channel116</td><td>11±1dBm</td><td>12±1dBm</td></tr>
<tr><td>Channel140</td><td>9±1dBm</td><td>10±1dBm</td></tr>
<tr><td>802.11 n-HT20</td><td colspan="2">10±1dBm</td><td>11±1dBm</td></tr>
<tr><td rowspan="3">802.11 n-HT40</td><td>Channel102</td><td>8±1dBm</td><td>10±1dBm</td></tr>
<tr><td>Channel110</td><td>9±1dBm</td><td>11±1dBm</td></tr>
<tr><td>Channel134</td><td>10±1dBm</td><td>12±1dBm</td></tr>
<tr><td>802.11ac-HT20</td><td colspan="2">10±1dBm</td><td>11±1dBm</td></tr>
<tr><td rowspan="3">802.11ac-HT40</td><td>Channel102</td><td>8±1dBm</td><td>10±1dBm</td></tr>
<tr><td>Channel110</td><td>9±1dBm</td><td>11±1dBm</td></tr>
<tr><td>Channel134</td><td>10±1dBm</td><td>13±1dBm</td></tr>
<tr><td rowspan="2">802.11ac-HT80</td><td>Channel110</td><td>8±1dBm</td><td>9±1dBm</td></tr>
<tr><td>Channel134</td><td>11±1dBm</td><td>12±1dBm</td></tr>
</table>

10.2 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 **2.4 GHz WLAN ANT A Body** (rounded to the nearest mW) and the antenna to user separation distance,
2.4 GHz WLAN ANT A SAR was required; [(25.119/5)* √2.462] = **7.88** > 3.0.

Based on the maximum conducted power of **2.4 GHz WLAN Body ANT B Body** (rounded to the nearest mW) and the antenna to user separation distance,
2.4 GHz WLAN ANT B SAR was required; [(31.623/5)* √2.462] = **9.92** > 3.0.

Based on the maximum conducted power of **5.2 GHz WLAN ANT A Body** (rounded to the nearest mW) and the antenna to user separation distance,
5.2 GHz WLAN ANT A SAR was required; [15.849/5)* √5200] = **7.23** > 3.0.

Based on the maximum conducted power of **5.2 GHz WLAN ANT B Body** (rounded to the nearest mW) and the antenna to user separation distance,

5.2 GHz WLAN ANT B SAR was required; [25.119/5)* √5200] = **11.46** > 3.0.

Based on the maximum conducted power of **5.3 GHz WLAN ANT A Body** (rounded to the nearest mW) and the antenna to user separation distance,

5.3 GHz WLAN ANT A SAR was required; [(25.119/5)* √5300] = **11.57** > 3.0

Based on the maximum conducted power of **5.3 GHz WLAN ANT B Body** (rounded to the nearest mW) and the antenna to user separation distance,

5.3 GHz WLAN ANT B SAR was required; [(25.119/5)* √5300] = **11.57** > 3.0

Based on the maximum conducted power of **5.6 GHz WLAN ANT A Body** (rounded to the nearest mW) and the antenna to user separation distance,

5.6 GHz WLAN ANT A SAR was required; [(15.849/5)* √5600] = **7.50** > 3.0

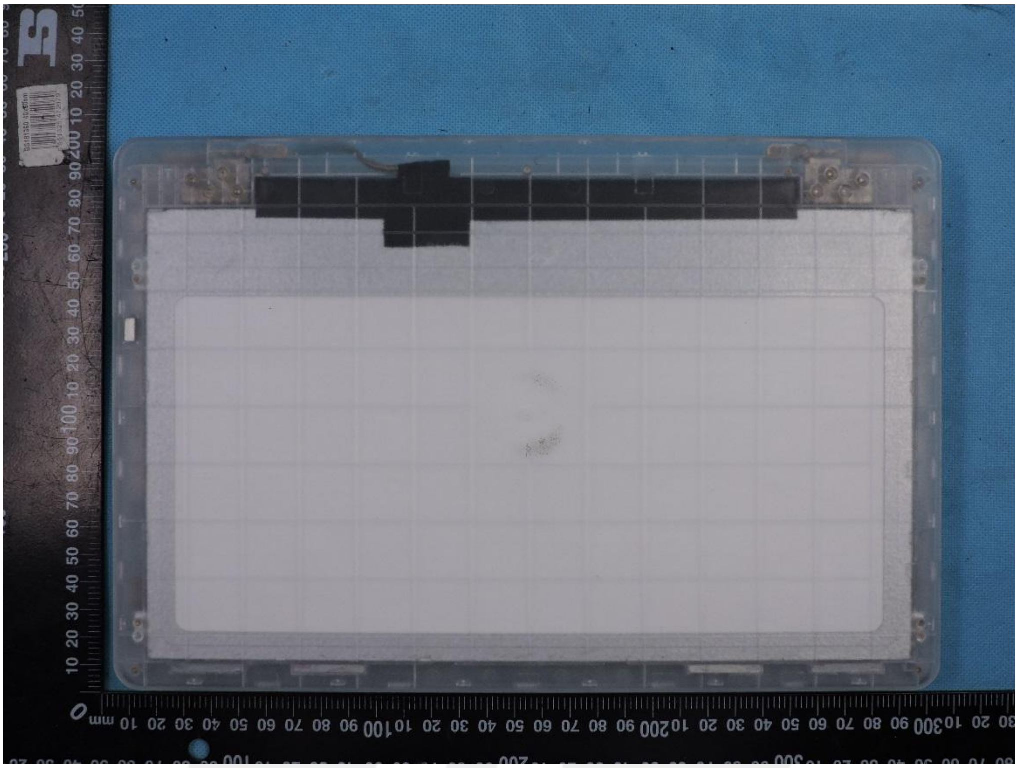
Based on the maximum conducted power of **5.6 GHz WLAN ANT B Body** (rounded to the nearest mW) and the antenna to user separation distance,

5.6 GHz WLAN ANT B SAR was required; [(25.119/5)* √5600] = **11.89** > 3.0

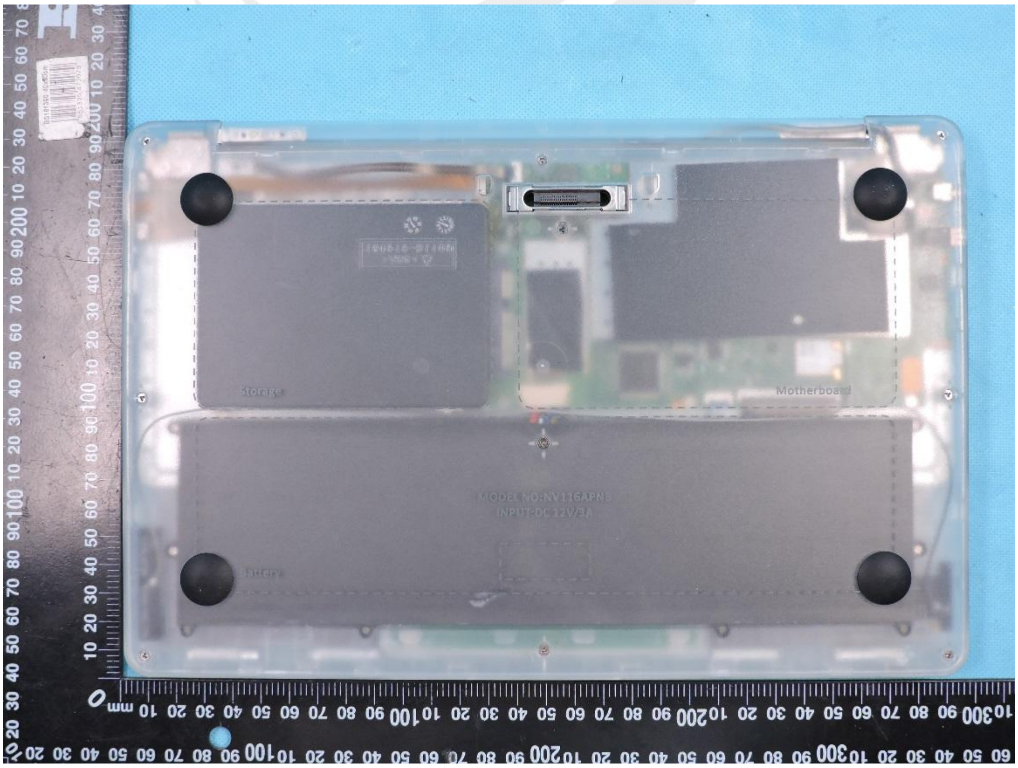
11. EUT And Test Setup Photo

11.1 EUT Photo

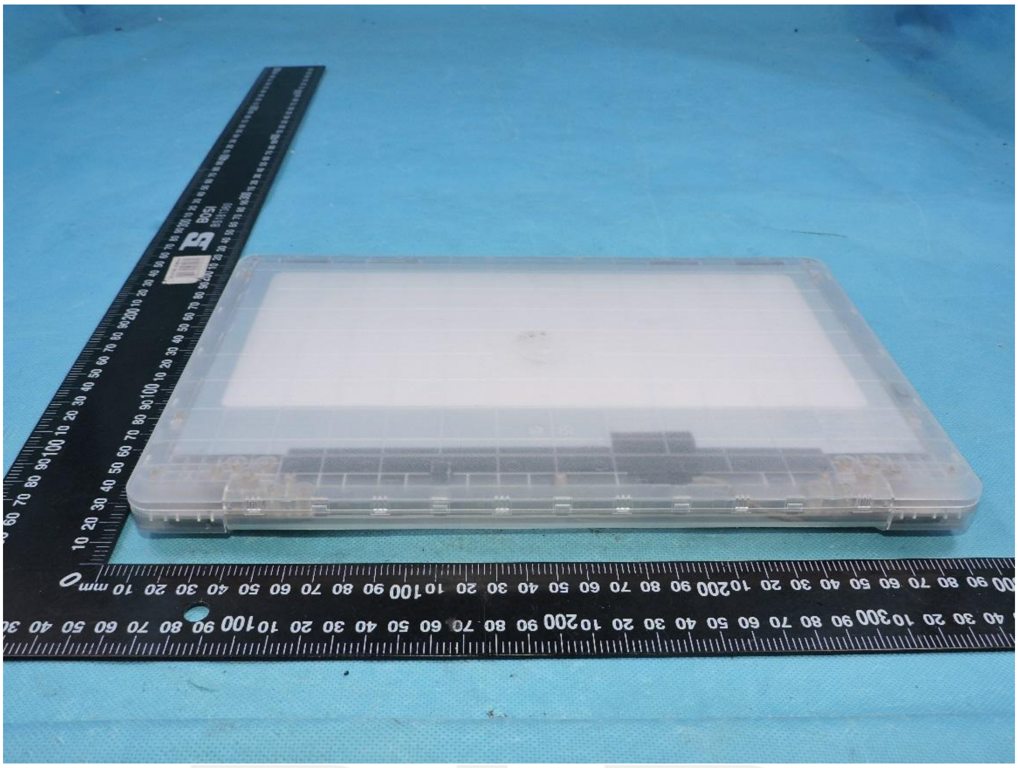
Front side



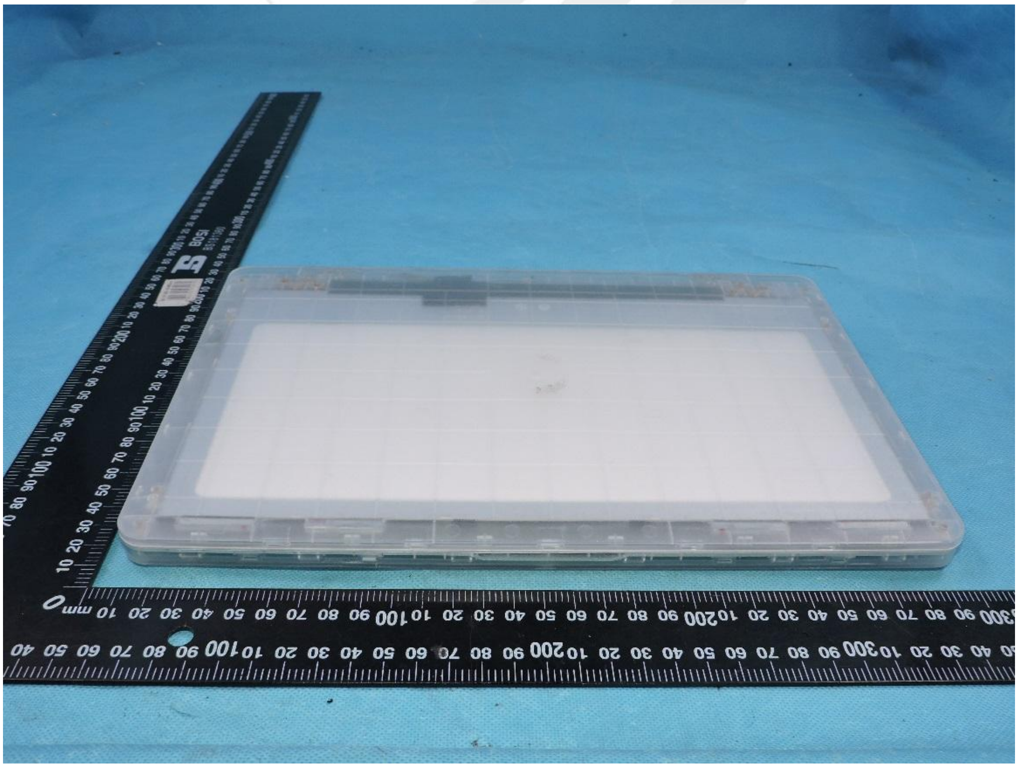
Back side



Top side

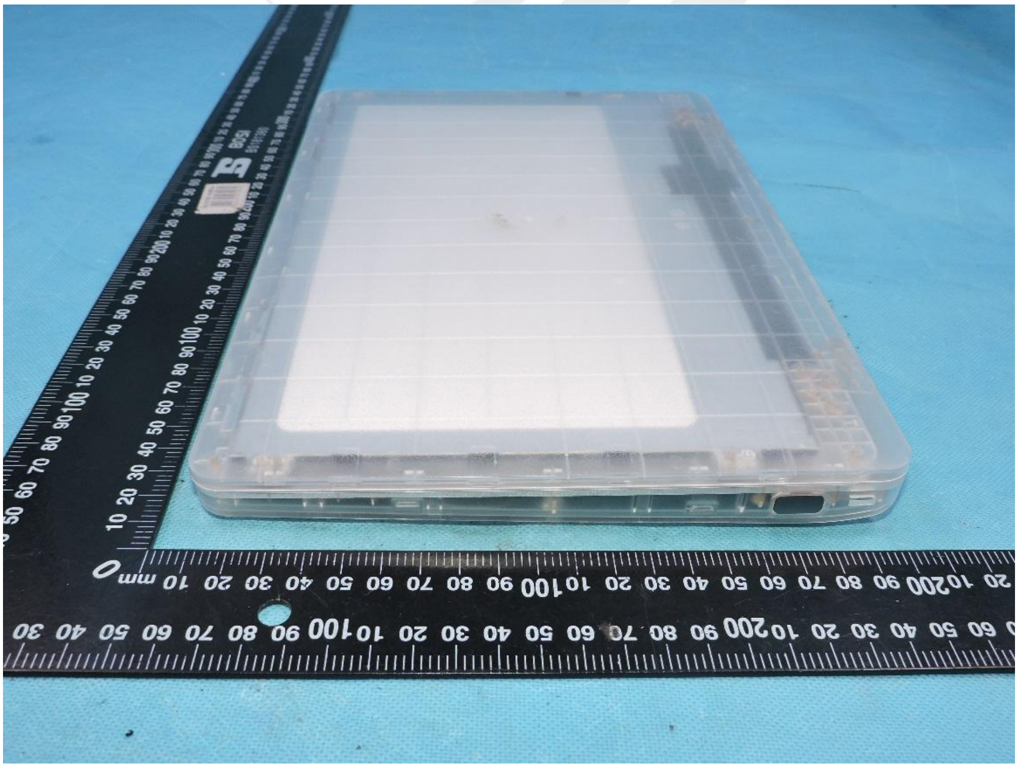


Bottom side



Left side

Right side

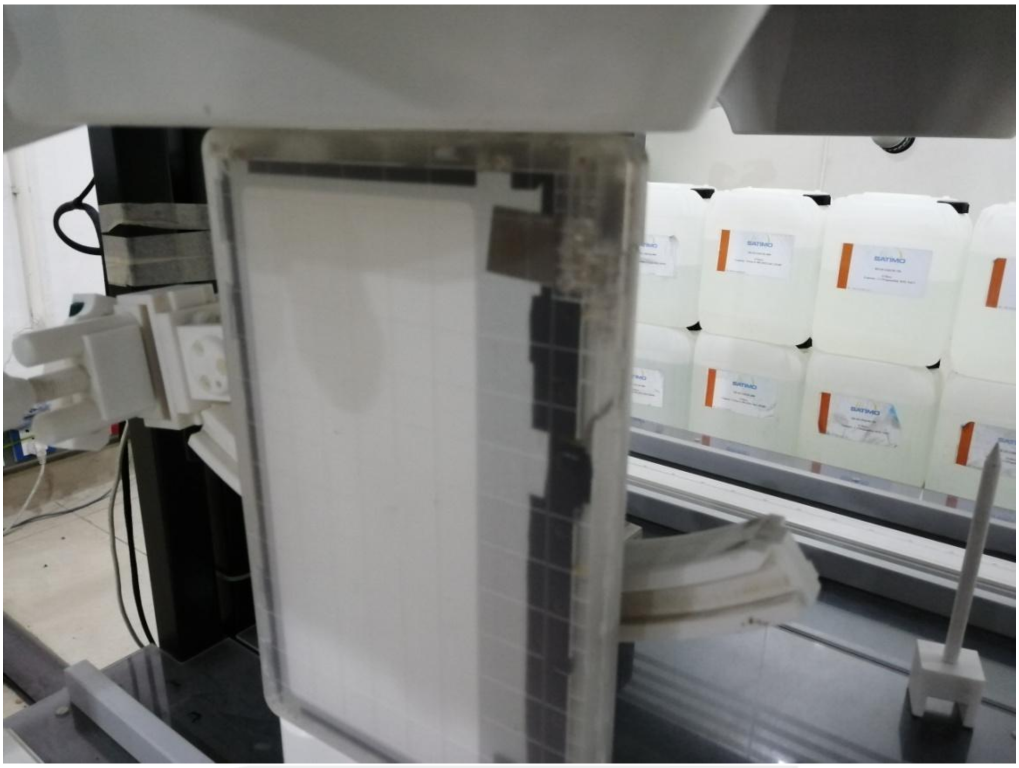


11.2 Setup Photo

Back side with ANT A (separation distance is 0mm)

Back side with ANT B (separation distance is 0mm)

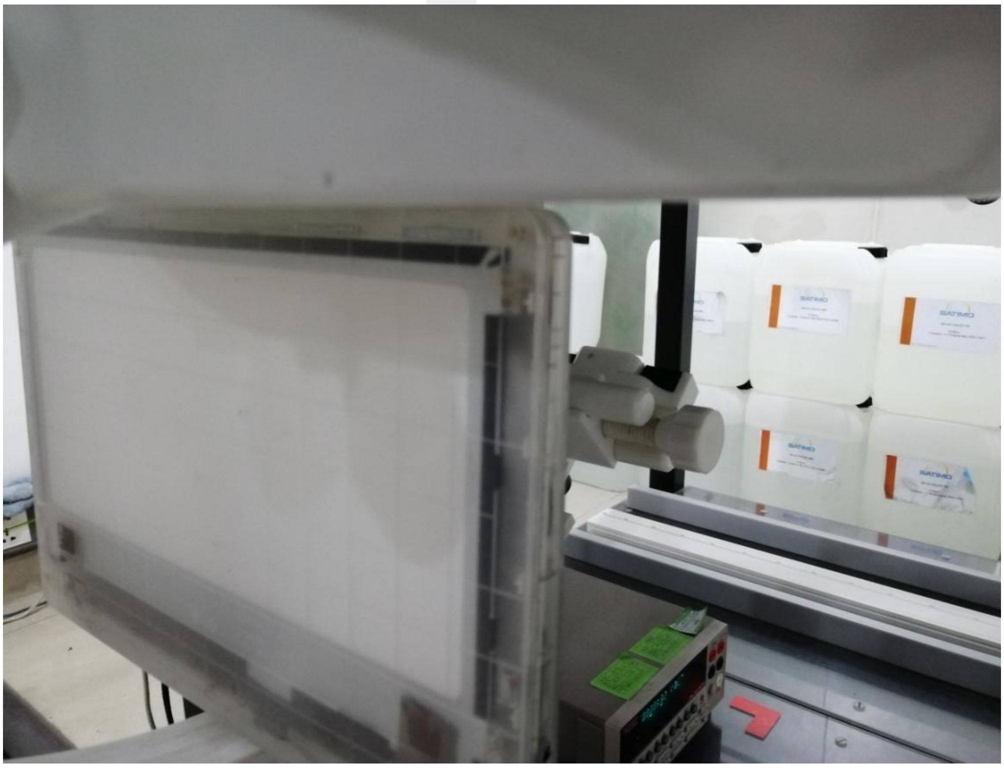
Body Left side(separation distance is 0mm)



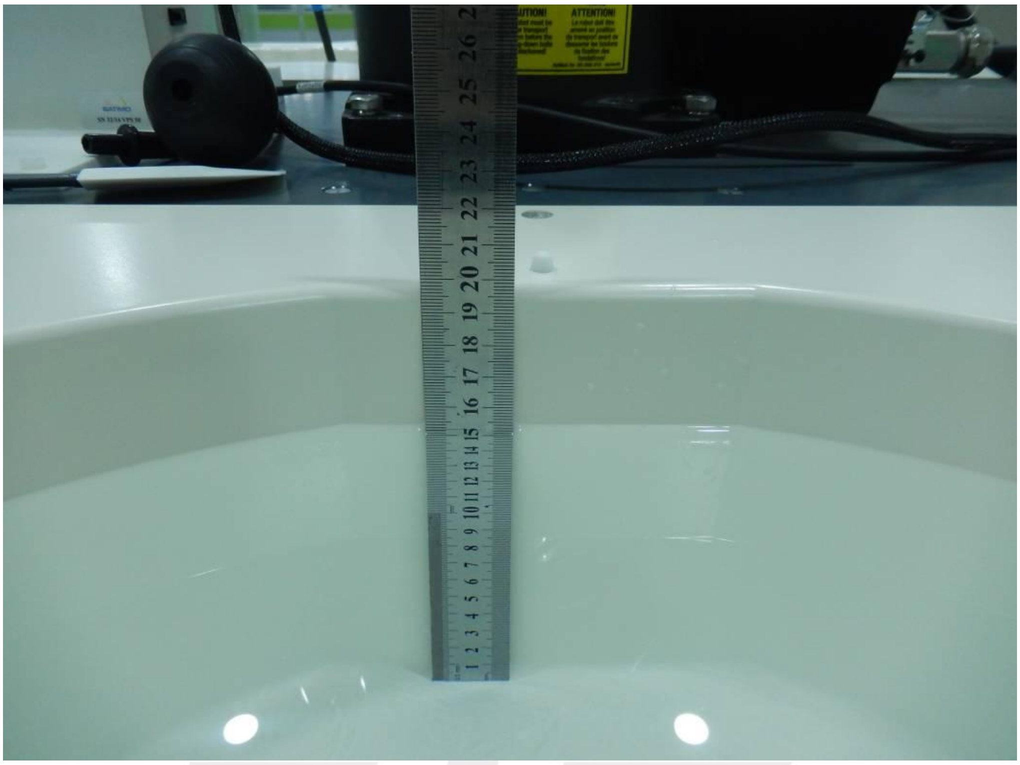
Body Right side(separation distance is 0mm)

Body Bottom side with ANT A (separation distance is 0mm)

Body Bottom side with ANT B (separation distance is 0mm)



Liquid depth (15 cm)



12. SAR Result Summary

12.1 Body-worn and Hotspot SAR

Band	Mode	Antenna	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.
2.4G WLAN	802.11n (HT 20)	A	Back side	6	0.038	-3.18	14	13.91	100	**0.039**	1
			Right side	6	0.030	-3.75	14	13.91	100	0.031	/
			Bottom side	6	0.012	1.94	14	13.91	100	0.012	/
	802.11b	B	Back side	6	0.264	-1.13	15	14.72	100	**0.282**	2
			Left side	6	0.187	-0.53	15	14.72	100	0.199	/
			Bottom side	6	0.105	0.82	15	14.72	100	0.112	/

Band	Mode	Antenna	Test Position	Ch.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR (W/Kg)	Meas. No.
5.2G WLAN	802.11n (HT40)	A	Back side	46	0.075	3.27	12	11.43	**0.086**	3
			Right side	46	0.058	-0.77	12	11.43	0.066	/
			Bottom side	46	0.029	-1.72	12	11.43	0.033	/
		B	Back side	46	0.116	2.88	14	13.82	**0.121**	4
			Left side	46	0.083	-1.02	14	13.82	0.087	/
			Bottom side	46	0.045	-2.28	14	13.82	0.047	/

Band	Mode	Antenna	Test Position	Ch.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR (W/Kg)	Meas. No.
5.3G WLAN	802.11ac (HT40)	A	Back side	54	0.115	2.25	14	13.38	**0.133**	5
			Right side	54	0.078	2.63	14	13.38	0.090	/
			Bottom side	54	0.065	-2.05	14	13.38	0.075	/
	802.11n (HT40)	B	Back side	54	0.251	-1.08	14	13.77	**0.265**	6
			Left side	54	0.184	-3.40	14	13.77	0.194	/
			Bottom side	54	0.097	-1.98	14	13.77	0.102	/

Band	Mode	Antenna	Test Position	Ch.	Result 1g (W/Kg)	Power Drift(%)	Max.Turn-up Power(dBm)	Meas.Output Power(dBm)	Scaled SAR (W/Kg)	Meas. No.
5.6G WLAN	802.11a	A	Back side	116	0.099	0.78	12	11.47	0.112	7
			Right side	116	0.067	-1.28	12	11.47	0.076	//
			Bottom side	116	0.028	2.44	12	11.47	0.032	/
	802.11ac (HT40)	B	Back side	134	0.161	-0.87	14	13.47	0.182	8
			Left side	134	0.102	-2.17	14	13.47	0.115	/
			Bottom sid	134	0.044	2.43	14	13.47	0.050	/

Note:

1. The test separation of all above table is 0mm.
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. 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.

13. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
2450MHzDipole	MVG	SID2450	SN 30/14 DIP2G450-335	2017.08.15	2020.08.14
Waveguide	MVG	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	N/A	N/A
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	2019.03.02	2020.03.01
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
hygrothermograph	MiEO	HH660	N/A	2018.10.11	2019.10.10
Thermograph	Elitech	RC-4	S/N EF7176501537	2018.10.15	2019.10.14

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

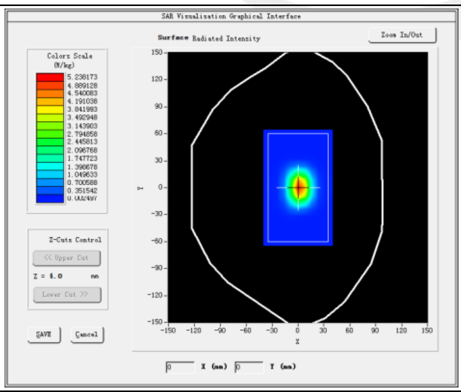
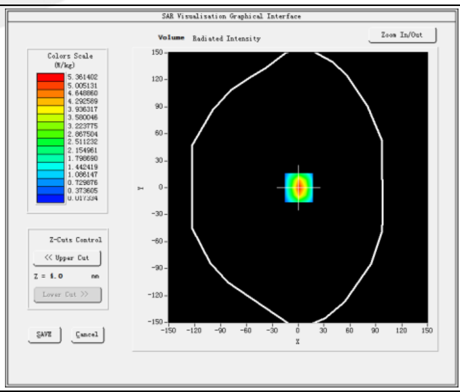
Appendix A. System Validation Plots

System Performance Check Data (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: 2019-03-22

Experimental conditions.

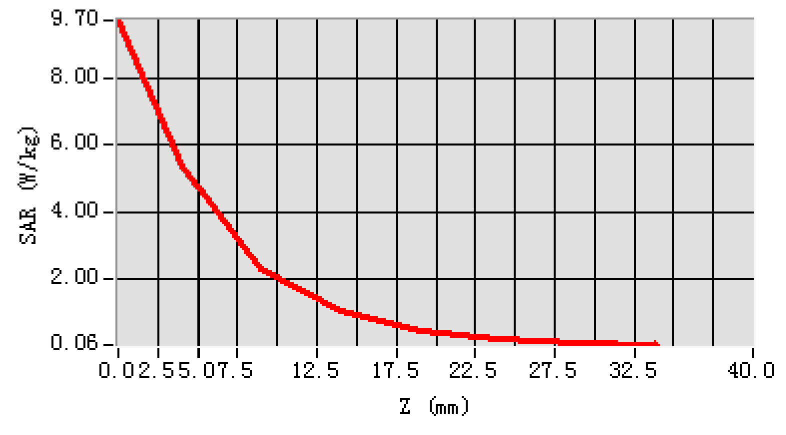
Device Position	Validation plane
Band	2450 MHz
Channels	-
Signal	CW
Frequency (MHz)	2450
Relative permittivity	51.29
Conductivity (S/m)	1.97
Power drift (%)	-0.30
Probe	SN 45/15 EPGO281
ConvF	2.28
Crest factor:	1:1

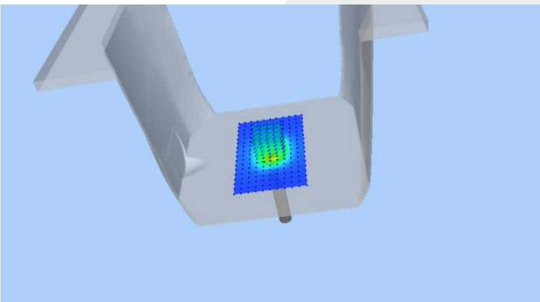
SURFACE SAR	VOLUME SAR
	

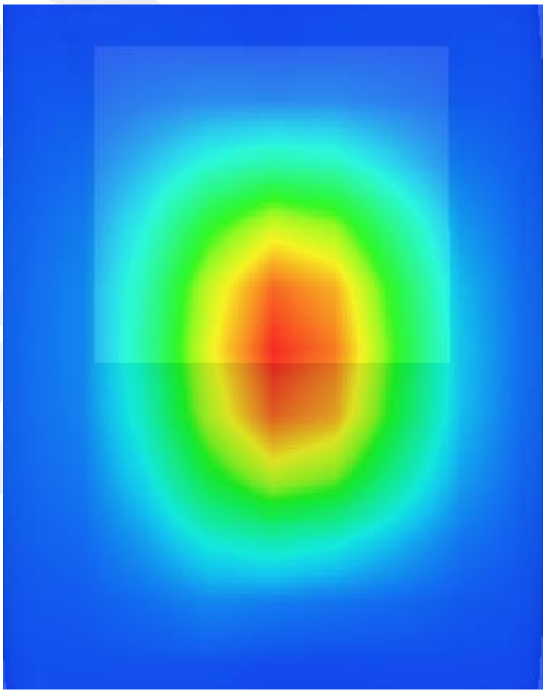
Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	2.413281
SAR 1g (W/Kg)	5.318574

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)



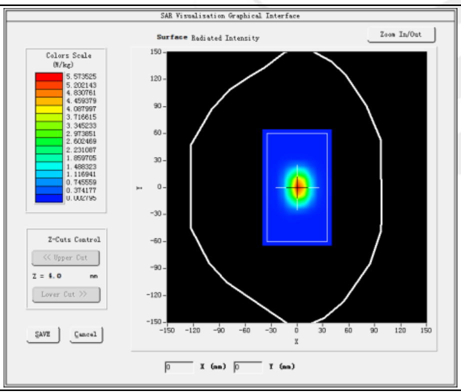
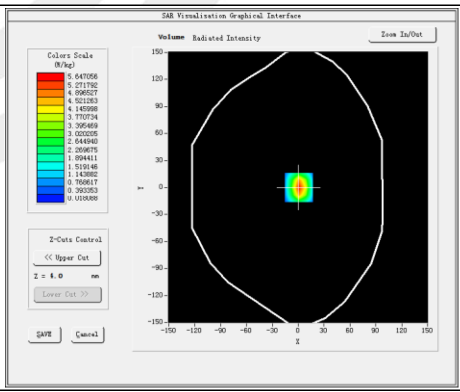


System Performance Check Data(5200MHz Body)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2019-03-25

Experimental conditions.

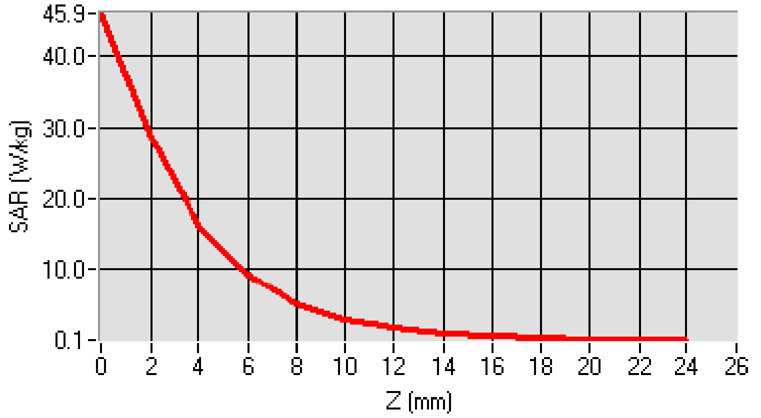
Device Position	Validation plane
Band	5200 MHz
Channels	-
Signal	CW
Frequency (MHz)	5200
Relative permittivity	48.73
Conductivity (S/m)	5.32
Power drift (%)	2.52
Probe	SN 45/15 EPGO281
ConvF	2.52
Crest factor:	1:1

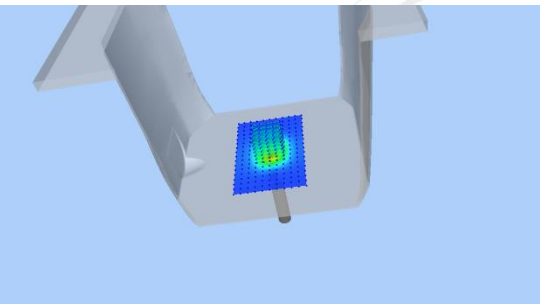
SURFACE SAR	VOLUME SAR
	

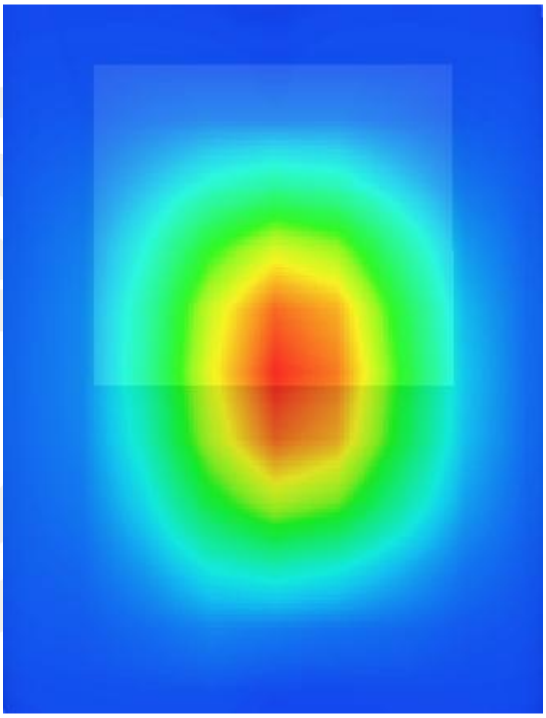
Maximum location: X=7.00, Y=2.00

SAR 10g (W/Kg)	5.843129
SAR 1g (W/Kg)	15.835236

Z Axis Scan





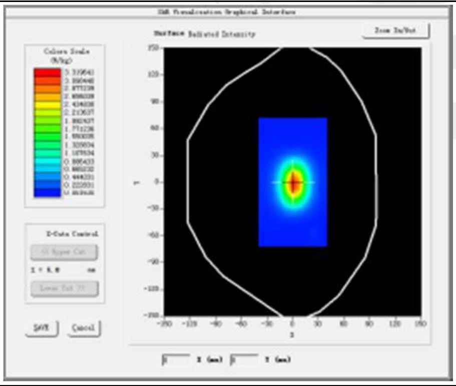
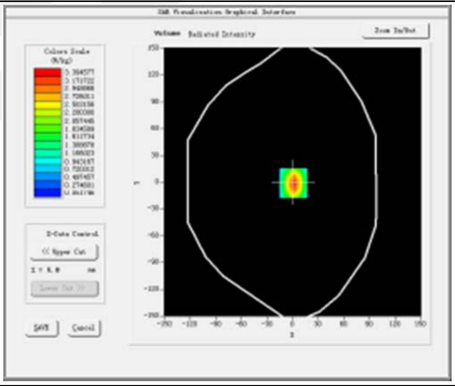


System Performance Check Data(5300MHz Body)

Type: Dipole measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2019-03-26

Experimental conditions.

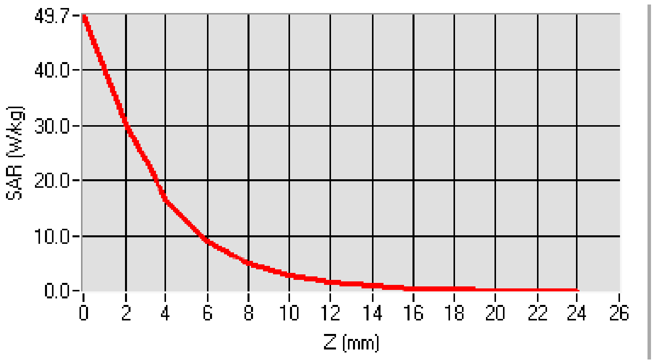
Device Position	Validation plane
Band	5300 MHz
Channels	-
Signal	CW
Frequency (MHz)	5300
Relative permittivity	48.95
Conductivity (S/m)	5.56
Power drift (%)	-1.77
Probe	SN 45/15 EPGO281
ConvF	2.79
Crest factor:	1:1

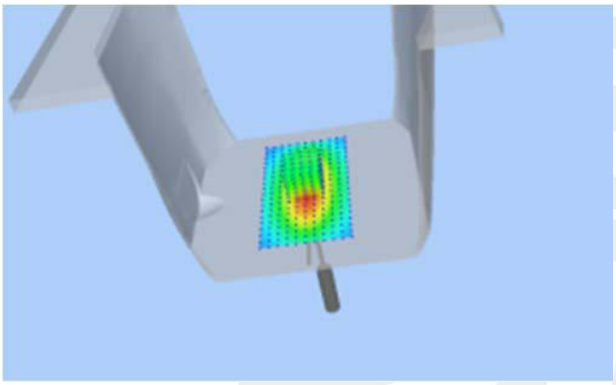
SURFACE SAR	VOLUME SAR
	

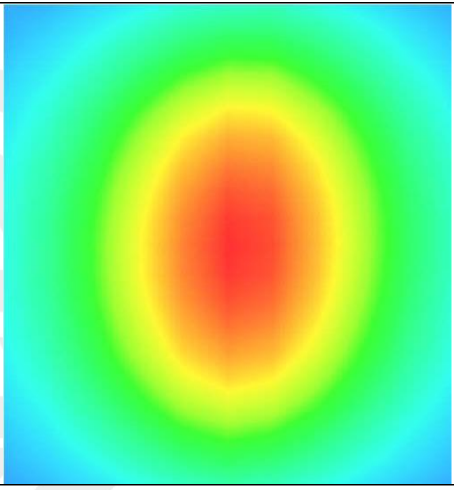
Maximum location: X=7.00, Y=2.00

SAR 10g (W/Kg)	5.975164
SAR 1g (W/Kg)	16.702467

Z Axis Scan





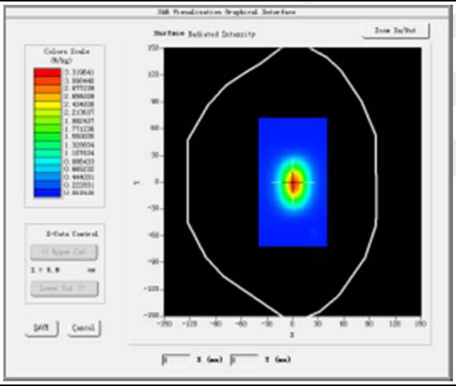
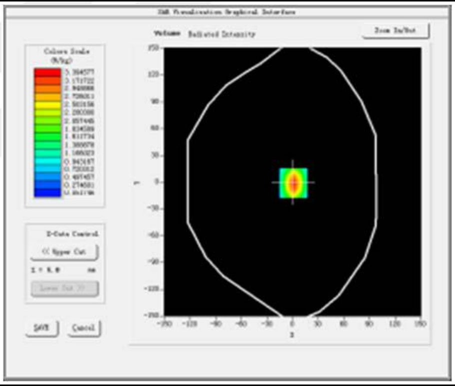


System Performance Check Data(5600MHz Body)

Type: Dipole measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm
Date of measurement: 2019-03-27

Experimental conditions.

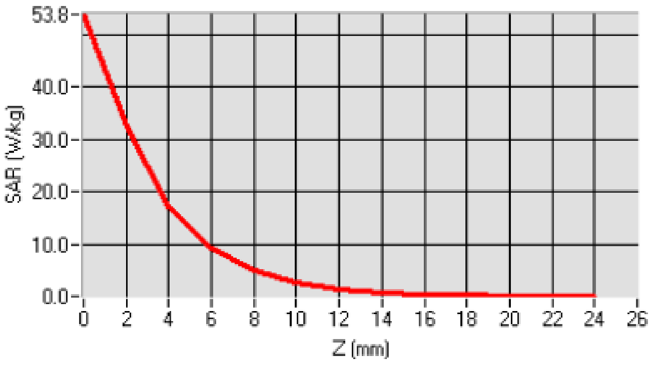
Device Position	Validation plane
Band	5600 MHz
Channels	-
Signal	CW
Frequency (MHz)	5600
Relative permittivity	49.11
Conductivity (S/m)	5.64
Power drift (%)	1.86
Probe	SN 45/15 EPGO281
ConvF	2.83
Crest factor:	1:1

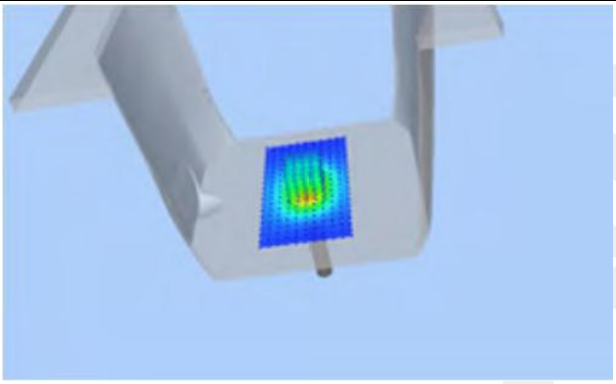
SURFACE SAR	VOLUME SAR
	

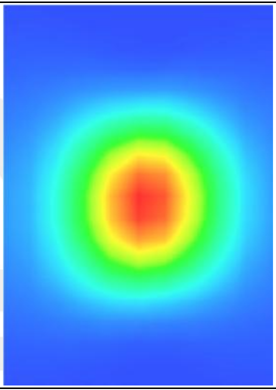
Maximum location: X=7.00, Y=2.00

SAR 10g (W/Kg)	6.103871
SAR 1g (W/Kg)	17.438523

Z Axis Scan







Appendix B. SAR Test Plots

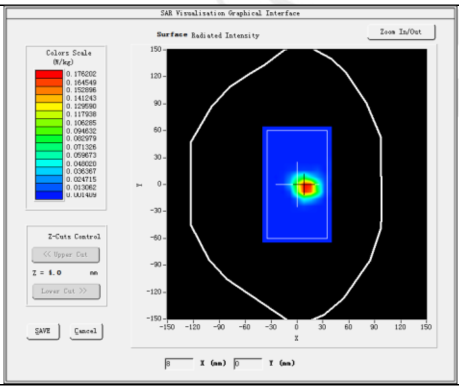
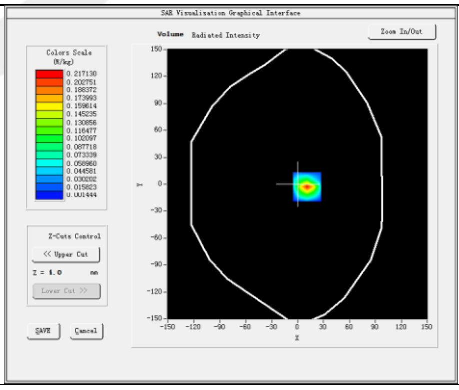
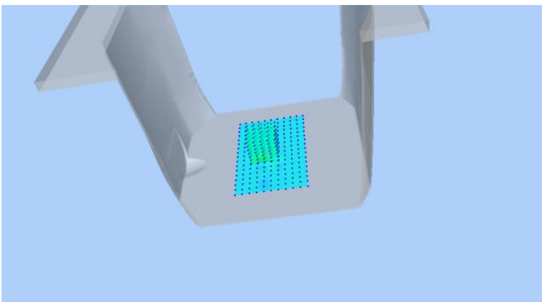
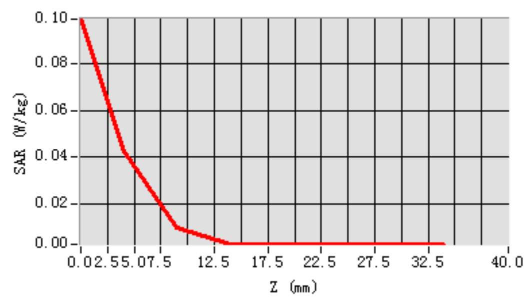
Plot 1: DUT: Securebook 5.0; EUT Model: JTS-SB50W

Test Date	2019-03-22
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	Back side
Antenna	A
Band	IEEE 802.11n ISM
Channels	Middle
Signal	IEEE802.n (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	52.70
Conductivity (S/m)	1.95
Variation (%)	-3.18

Maximum location: X=-7.00, Y=1.00

SAR Peak: 0.10 W/kg

SAR 10g (W/Kg)	0.010664
SAR 1g (W/Kg)	0.037791

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

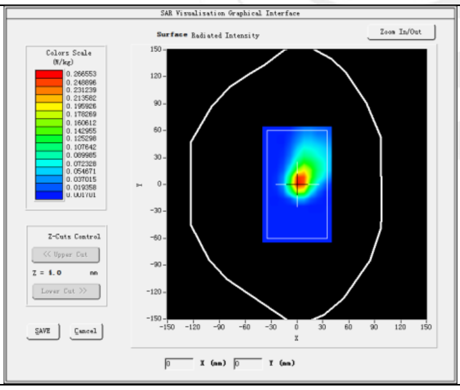
Plot 2: DUT: Securebook 5.0; EUT Model: JTS-SB50W

Test Date	2019-03-22
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	Back side
Antenna	B
Band	IEEE 802.11b ISM
Channels	Middle
Signal	IEEE802.b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	52.70
Conductivity (S/m)	1.95
Variation (%)	-1.13

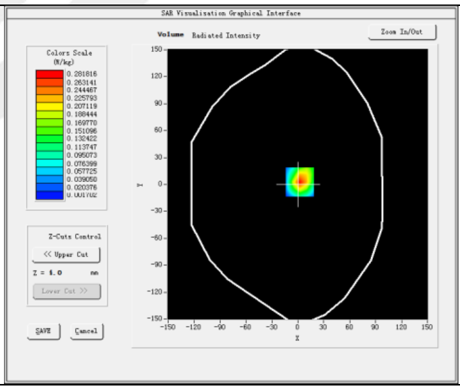
Maximum location: X=2.00, Y=3.00
SAR Peak: 0.51 W/kg

SAR 10g (W/Kg)	0.112176
SAR 1g (W/Kg)	0.263694

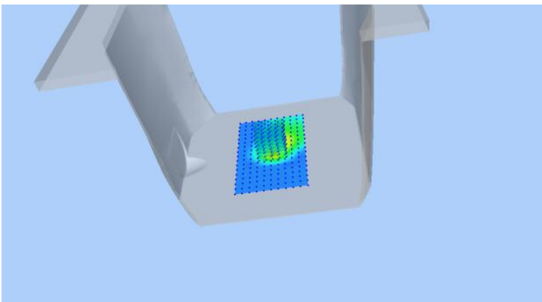
SURFACE SAR



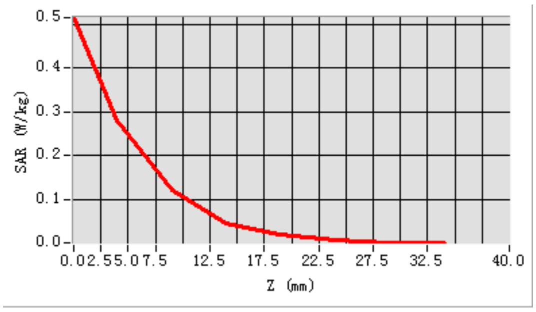
VOLUME SAR



3D



Z Axis Scan



Plot 3: DUT: Securebook 5.0; EUT Model: JTS-SB50W

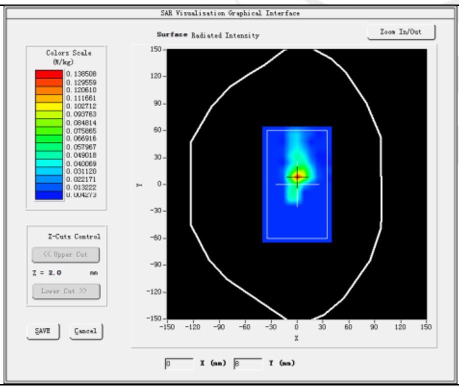
Test Date	2019-03-25
Probe	SN 45/15 EPGO281
ConvF	2.52
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back side
Antenna	A
Band	IEEE 802.11n ISM
Channels	Middle
Signal	IEEE802.n (Crest factor: 1.0)
Frequency (MHz)	5230
Relative permittivity (real part)	49.0
Conductivity (S/m)	5.30
Variation (%)	3.27

Maximum location: X=1.00, Y=8.00

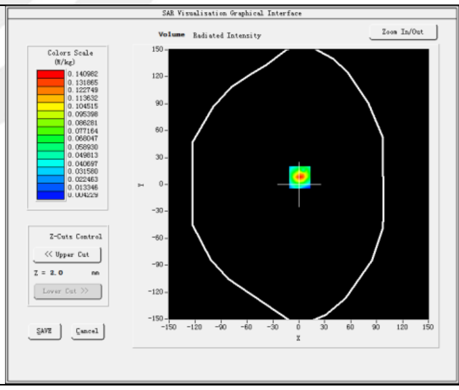
SAR Peak: 0.29 W/kg

SAR 10g (W/Kg)	0.027083
SAR 1g (W/Kg)	0.074655

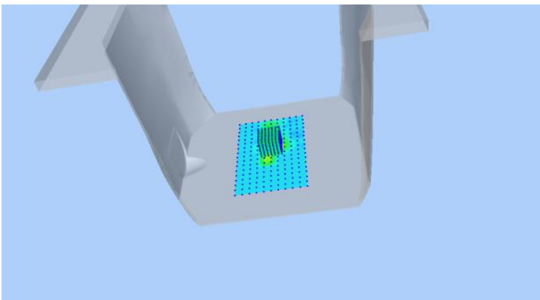
SURFACE SAR



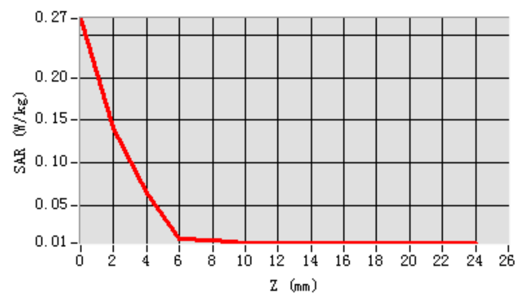
VOLUME SAR



3D



Z Axis Scan



Plot 4: DUT: Securebook 5.0; EUT Model: JTS-SB50W

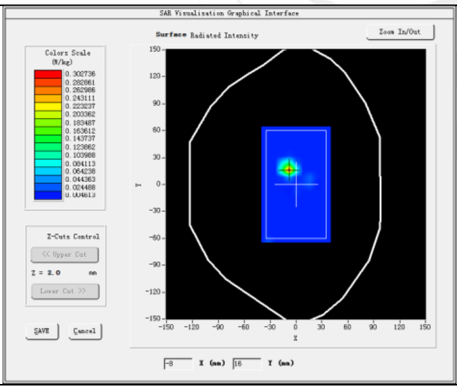
Test Date	2019-03-25
Probe	SN 45/15 EPGO281
ConvF	2.52
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back side
Antenna	B
Band	IEEE 802.11n ISM
Channels	Middle
Signal	IEEE802.n (Crest factor: 1.0)
Frequency (MHz)	5230
Relative permittivity (real part)	49.0
Conductivity (S/m)	5.30
Variation (%)	2.88

Maximum location: X=-8.00, Y=16.00

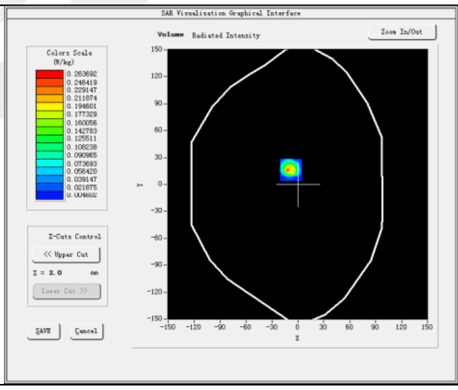
SAR Peak: 0.55 W/kg

SAR 10g (W/Kg)	0.032991
SAR 1g (W/Kg)	0.115591

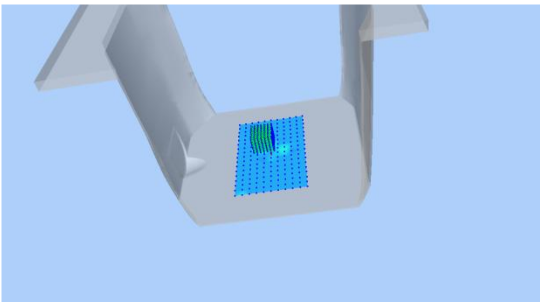
SURFACE SAR



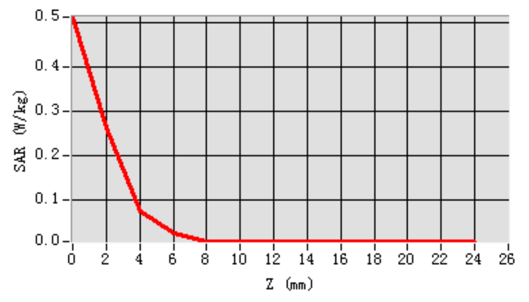
VOLUME SAR



3D



Z Axis Scan



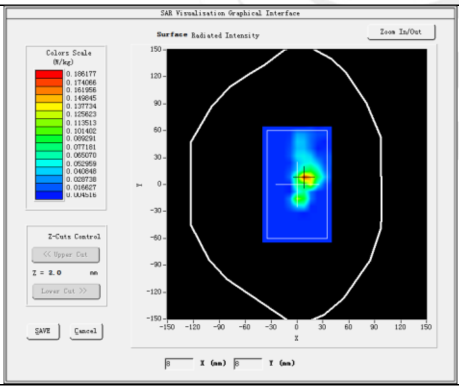
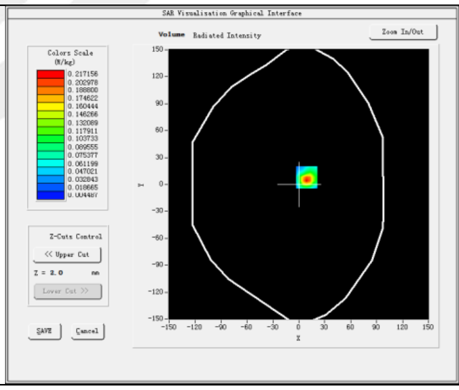
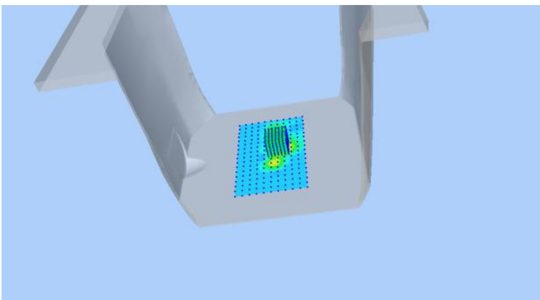
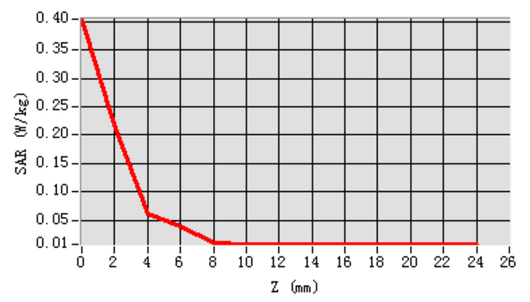
Plot 5: DUT: Securebook 5.0; EUT Model: JTS-SB50W

Test Date	2019-03-26
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	Back side
Antenna	A
Band	IEEE 802.11ac ISM
Channels	Middle
Signal	IEEE802.ac (Crest factor: 1.0)
Frequency (MHz)	5270
Relative permittivity (real part)	48.70
Conductivity (S/m)	5.53
Variation (%)	2.25

Maximum location: X=9.00, Y=8.00

SAR Peak: 0.42 W/kg

SAR 10g (W/Kg)	0.038270
SAR 1g (W/Kg)	0.114894

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

Plot 6: DUT: Securebook 5.0; EUT Model: JTS-SB50W

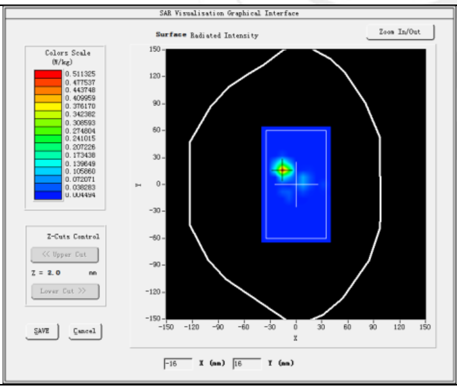
Test Date	2019-03-26
Probe	SN 45/15 EPGO281
ConvF	2.79
Area Scan	dx=8mm dy=8mm, h= 5.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm, Complete/ndx=8mm dy=8mm, h= 5.00 mm
Phantom	Validation plane
Device Position	Back side
Antenna	B
Band	IEEE 802.11n ISM
Channels	Middle
Signal	IEEE802.n (Crest factor: 1.0)
Frequency (MHz)	5270
Relative permittivity (real part)	48.70
Conductivity (S/m)	5.53
Variation (%)	-1.08

Maximum location: X=-11.00, Y=16.00

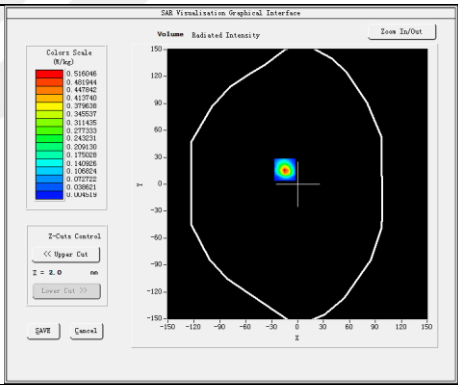
SAR Peak: 1.06 W/kg

SAR 10g (W/Kg)	0.059657
SAR 1g (W/Kg)	0.250703

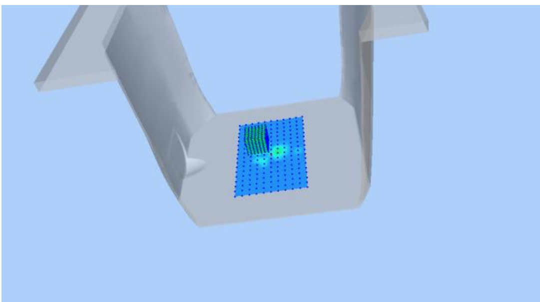
SURFACE SAR



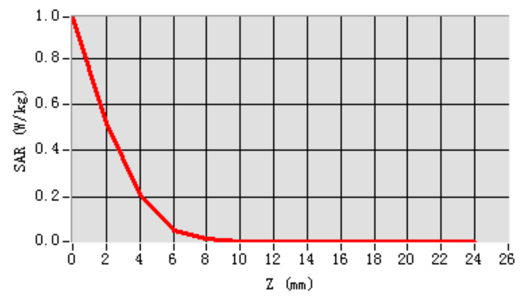
VOLUME SAR



3D



Z Axis Scan



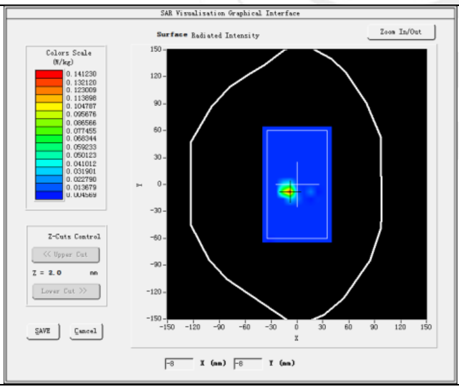
Plot 7: DUT: Securebook 5.0; EUT Model: JTS-SB50W

Test Date	2019-03-27
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	Back side
Antenna	A
Band	IEEE 802.11a ISM
Channels	Middle
Signal	IEEE802.a (Crest factor: 1.0)
Frequency (MHz)	5580
Relative permittivity (real part)	48.5
Conductivity (S/m)	5.77
Variation (%)	0.78

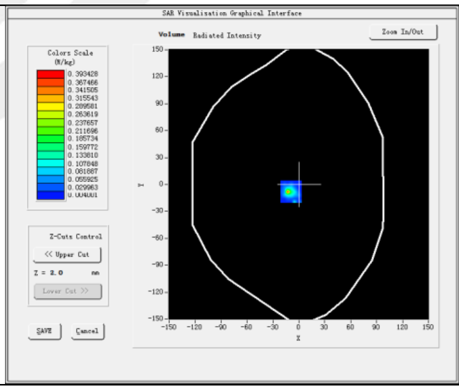
Maximum location: X=-9.00, Y=-8.00
SAR Peak: 0.88 W/kg

SAR 10g (W/Kg)	0.022267
SAR 1g (W/Kg)	0.098962

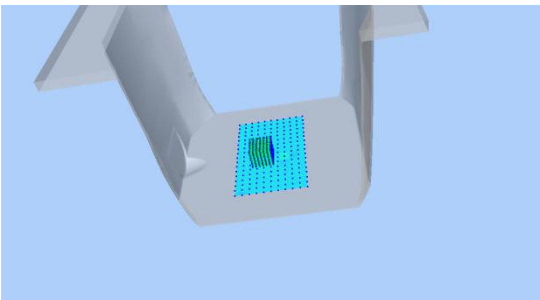
SURFACE SAR



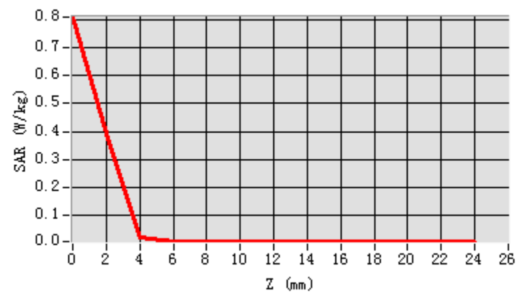
VOLUME SAR



3D



Z Axis Scan



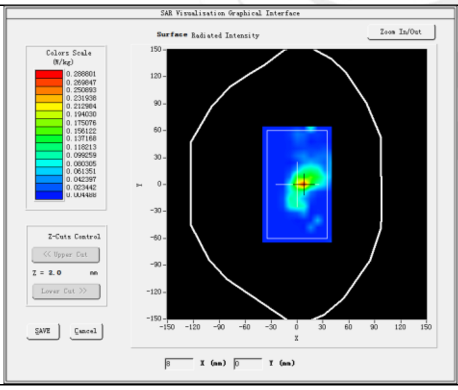
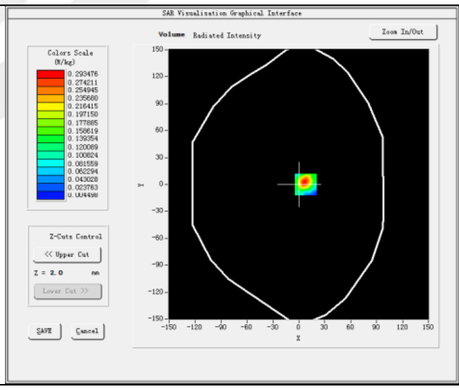
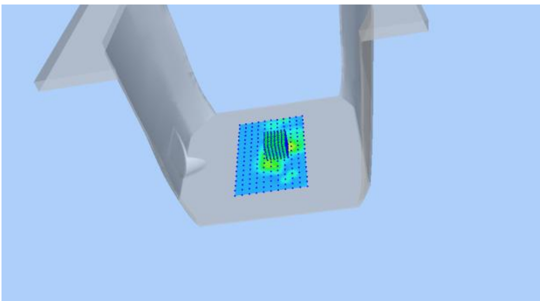
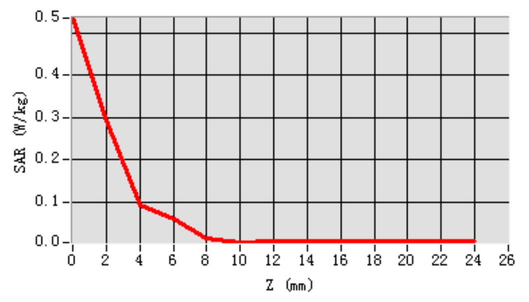
Plot 8: DUT: Securebook 5.0; EUT Model: JTS-SB50W

Test Date	2019-03-27
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	Back side
Antenna	B
Band	IEEE 802.11ac ISM
Channels	Middle
Signal	IEEE802.ac (Crest factor: 1.0)
Frequency (MHz)	5670
Relative permittivity (real part)	48.5
Conductivity (S/m)	5.77
Variation (%)	-0.87

Maximum location: X=8.00, Y=0.00

SAR Peak: 0.60 W/kg

SAR 10g (W/Kg)	0.055863
SAR 1g (W/Kg)	0.161373

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

Appendix C. Probe Calibration And Dipole Calibration Report

Refer the appendix Calibration Report.

※※※※※END OF THE REPORT※※※※※