



9. TEST RESULTS LIST

Summary of Measurement Results (5.8G)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Body (10mm Separation)	Face Upward	16	0.013	1.019	0.013
	Edge A		0.096		0.098
	Edge B		0.034		0.035
	Edge C		0.066		0.067

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 10g Peak	Scaling Factor	Scaled SAR (W/Kg), 10g
Body (0mm Separation)	Hand	16	Face Upward	0.010	0.010
			Edge A	0.031	0.032
			Edge B	0.017	0.017
			Edge C	0.024	0.024

Note:

- When the 1-g SAR for the mid-band channel or the channel with the highest output power satisfy the following conditions, testing of the other channels in the band is not required. (Per KDB 447498 D01 General RF Exposure Guidance v05r02)
 - ≤ 0.8 W/kg and transmission band ≤ 100 MHz
 - ≤ 0.6 W/kg and, 100 MHz < transmission bandwidth ≤ 200 MHz
 - ≤ 0.4 W/kg and transmission band > 200 MHz
- IEEE Std 1528-2013 requires the middle channel to be tested first. This generally applies to wireless devices that are designed to operate in technologies with tight tolerances for maximum output power variations across channels in the band. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.



3. Per KDB 447498, when the SAR procedures require multiple channels to be tested and the 1-g SAR for the highest output channel is less than 0.8 W/kg and peak SAR is less than 1.6W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

4. Scaling Factor calculation

Band	Tune-up power tolerance(dBm)	SAR test channel Power (dBm)	Scaling Factor
5.8G	PCL = 5, PWR =17.5+-0.5	17.918	1.019



ANNEX A GRAPH TEST RESULTS

BAND	<u>PARAMETERS</u>
<u>5.8G</u>	<p><u>Measurement 1:</u> Flat Plane with Body device position on Middle Channel in GFSK mode</p> <p><u>Measurement 2:</u> Flat Plane with Body device position on Middle Channel in GFSK mode</p> <p><u>Measurement 3:</u> Flat Plane with Body device position on Middle Channel in GFSK mode</p> <p><u>Measurement 4:</u> Flat Plane with Body device position on Middle Channel in GFSK mode</p> <p><u>Measurement 5:</u> Flat Plane with Body device position on Middle Channel in GFSK mode</p> <p><u>Measurement 6:</u> Flat Plane with Body device position on Middle Channel in GFSK mode</p> <p><u>Measurement 7:</u> Flat Plane with Body device position on Middle Channel in GFSK mode</p> <p><u>Measurement 8:</u> Flat Plane with Body device position on Middle Channel in GFSK mode</p>



MEASUREMENT 1

Type: Phone measurement (Complete)
 Area scan resolution: dx=8mm,dy=8mm
 Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm
 Date of measurement: 2014.10.10
 Measurement duration: 9 minutes 28 seconds

A. Experimental conditions.

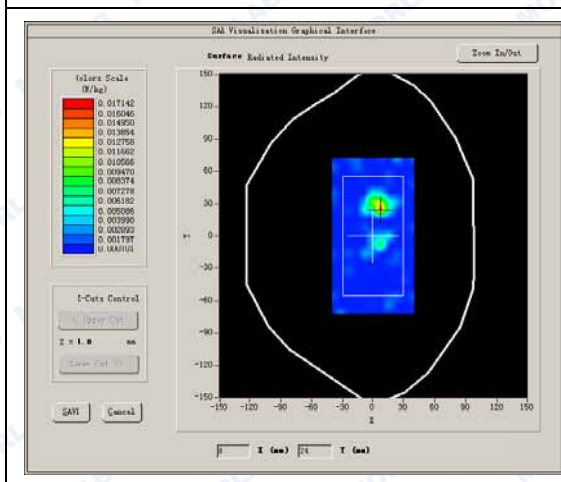
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	5.8G
Channels	High
Signal	GFSK

B. SAR Measurement Results

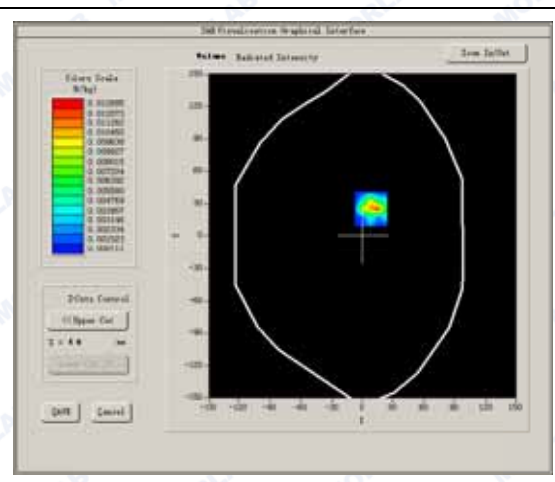
High Band SAR

Frequency (MHz)	5844.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power drift (%)	-0.680000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



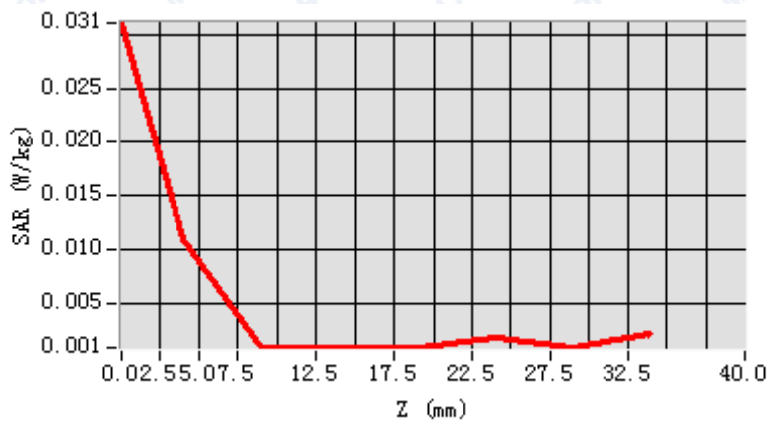


Maximum location: X=8.00, Y=25.00

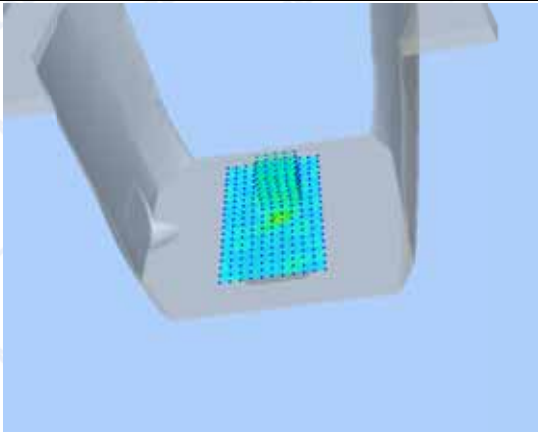
SAR Peak: 0.04 W/kg

SAR 10g (W/Kg)	0.004151
SAR 1g (W/Kg)	0.013426

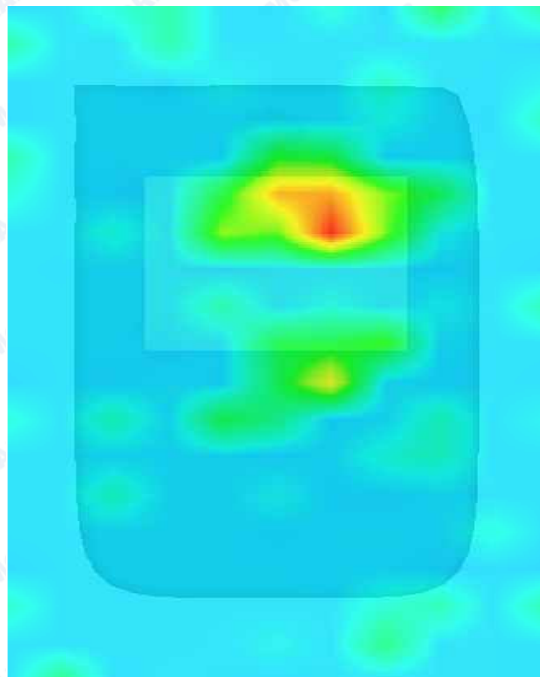
Z axis scan



3D screen shot



Hot spot position





MEASUREMENT 2

Type: Phone measurement (Complete)
 Area scan resolution: dx=8mm,dy=8mm
 Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm
 Date of measurement: 2014.10.10
 Measurement duration: 9 minutes 39 seconds

A. Experimental conditions.

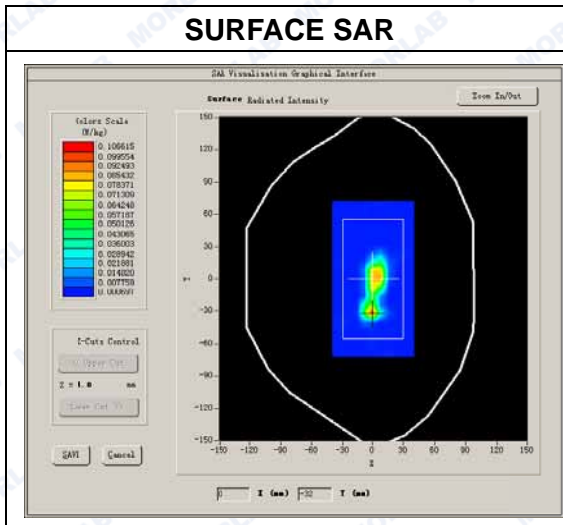
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	5.8G
Channels	High
Signal	GFSK

B. SAR Measurement Results

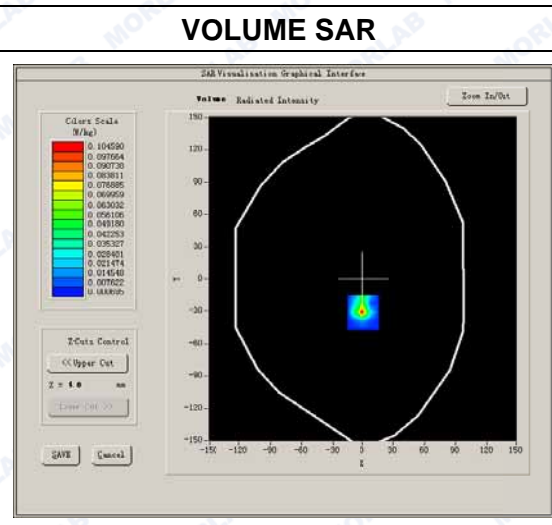
High Band SAR

Frequency (MHz)	5844.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power drift (%)	-2.970000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



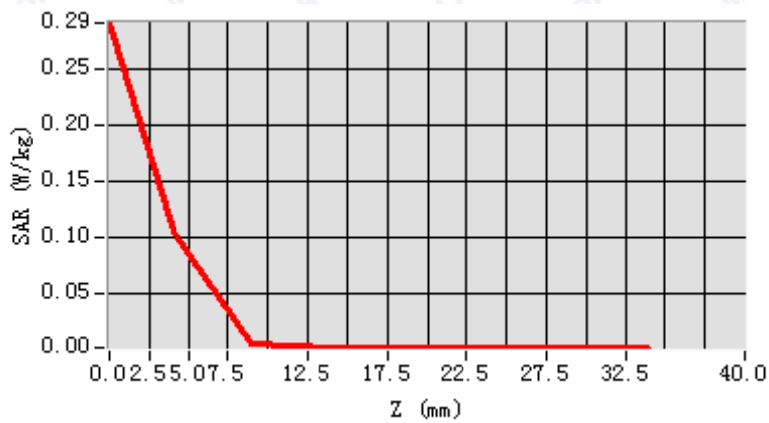


Maximum location: X=0.00, Y=-31.00

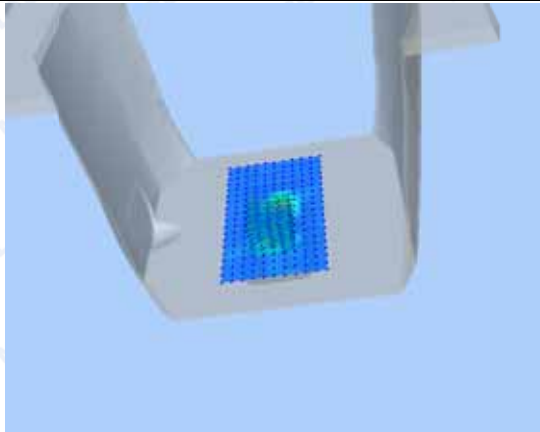
SAR Peak: 0.31 W/kg

SAR 10g (W/Kg)	0.022522
SAR 1g (W/Kg)	0.095819

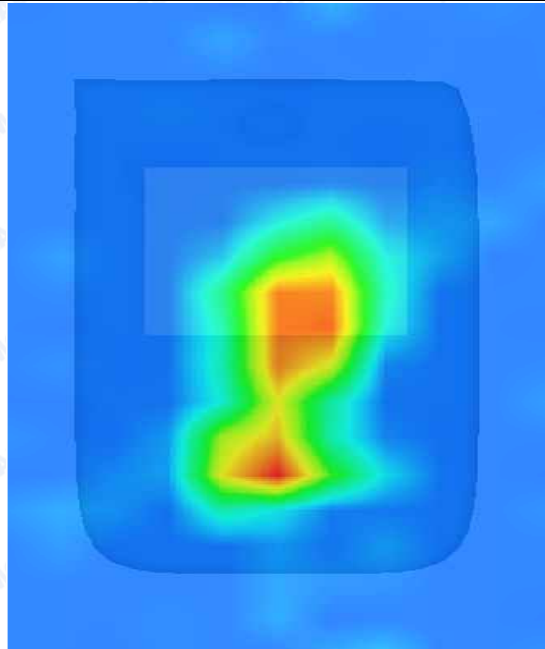
Z axis scan



3D screen shot



Hot spot position



**MEASUREMENT 3**

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.10.10

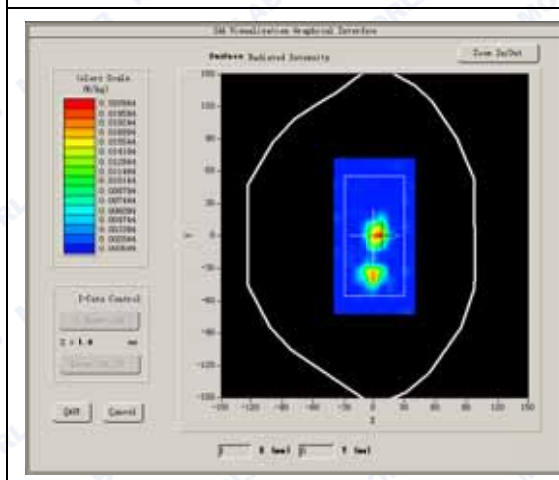
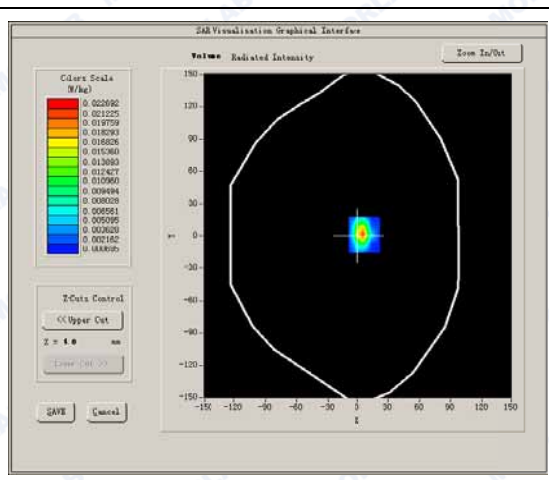
Measurement duration: 9 minutes 25 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	5.8G
Channels	High
Signal	GFSK

B. SAR Measurement Results**High Band SAR**

Frequency (MHz)	5844.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power drift (%)	-3.440000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

SURFACE SAR**VOLUME SAR**

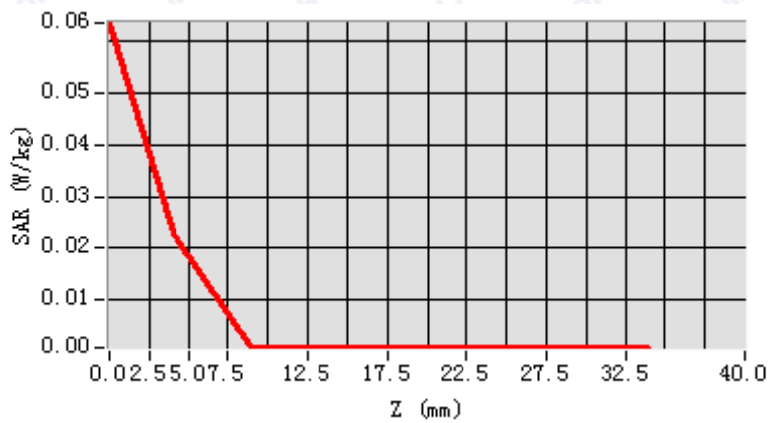


Maximum location: X=6.00, Y=1.00

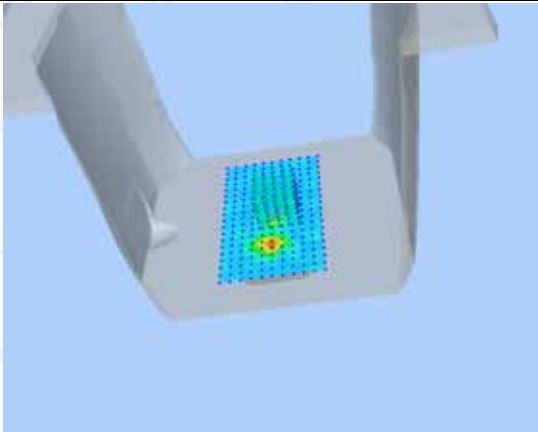
SAR Peak: 0.07 W/kg

SAR 10g (W/Kg)	0.006666
SAR 1g (W/Kg)	0.034095

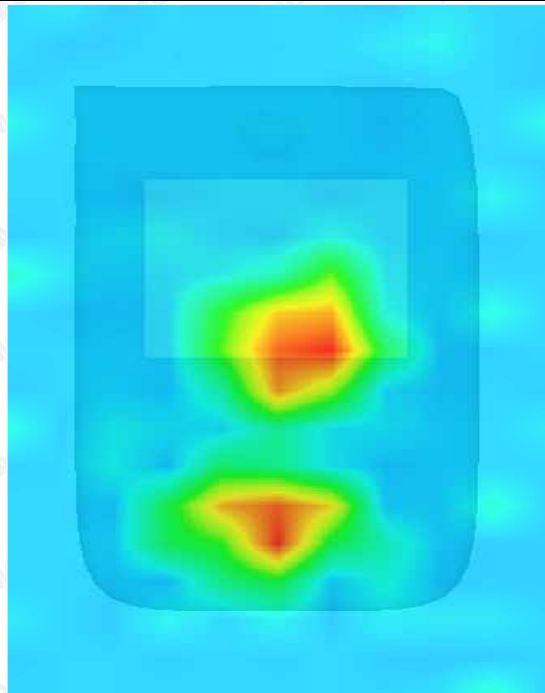
Z axis scan



3D screen shot



Hot spot position





MEASUREMENT 4

Type: Phone measurement (Complete)
 Area scan resolution: dx=8mm,dy=8mm
 Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm
 Date of measurement: 2014.10.10
 Measurement duration: 9 minutes 44 seconds

A. Experimental conditions.

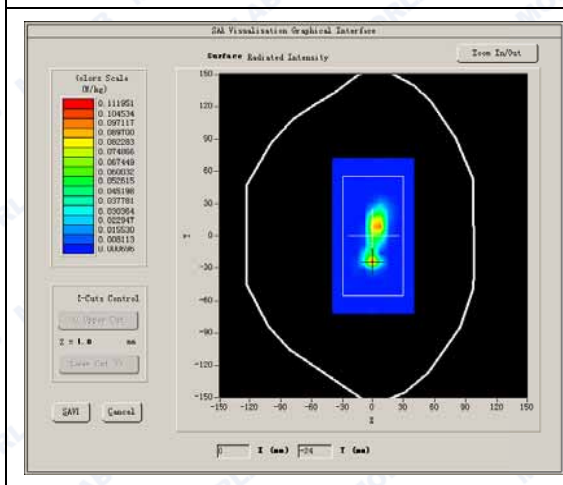
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	5.8G
Channels	High
Signal	GFSK

B. SAR Measurement Results

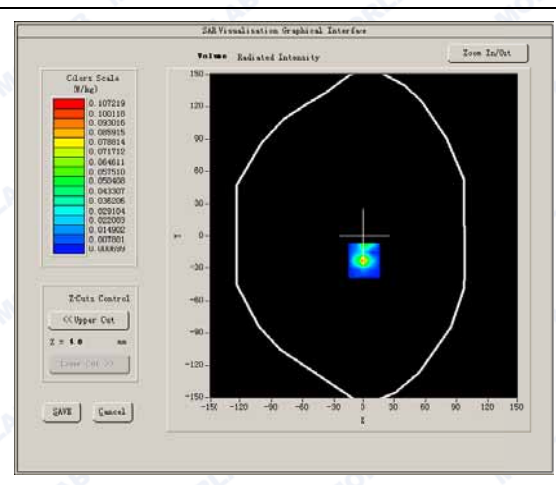
High Band SAR

Frequency (MHz)	5844.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power drift (%)	-1.090000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



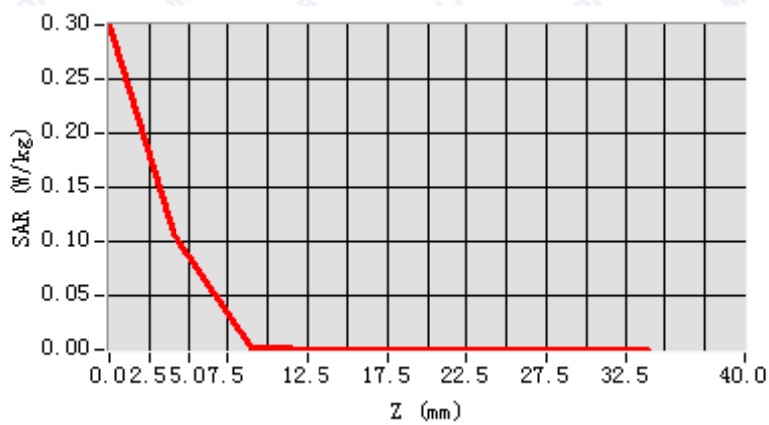


Maximum location: X=0.00, Y=-23.00

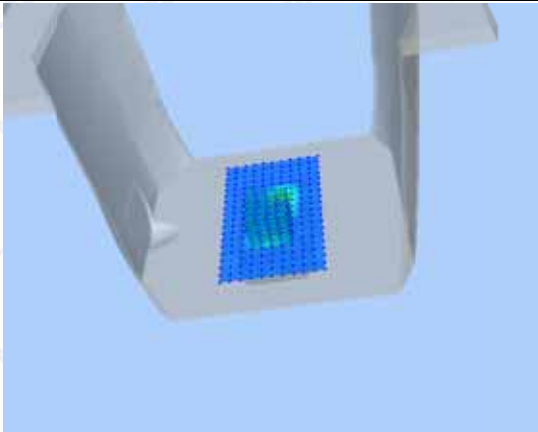
SAR Peak: 0.28 W/kg

SAR 10g (W/Kg)	0.018262
SAR 1g (W/Kg)	0.066076

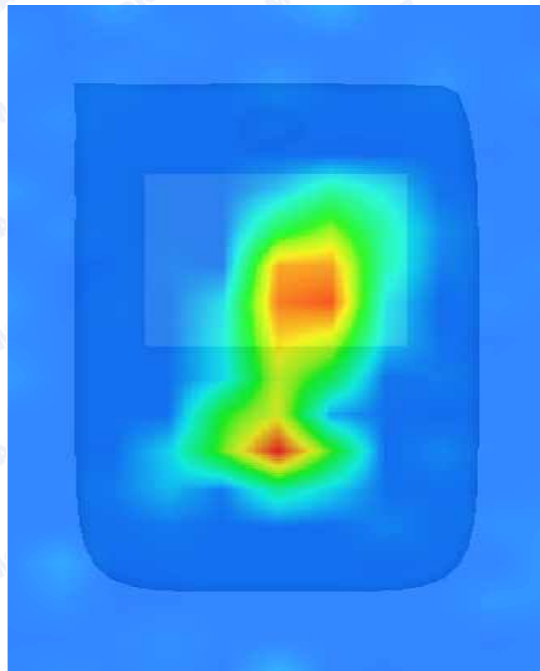
Z axis scan



3D screen shot



Hot spot position





MEASUREMENT 5

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.10.10

Measurement duration: 9 minutes 24 seconds

A. Experimental conditions.

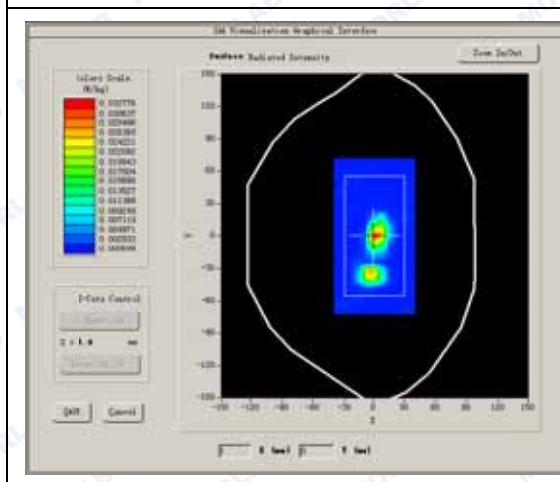
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	5.8G
Channels	High
Signal	GFSK

B. SAR Measurement Results

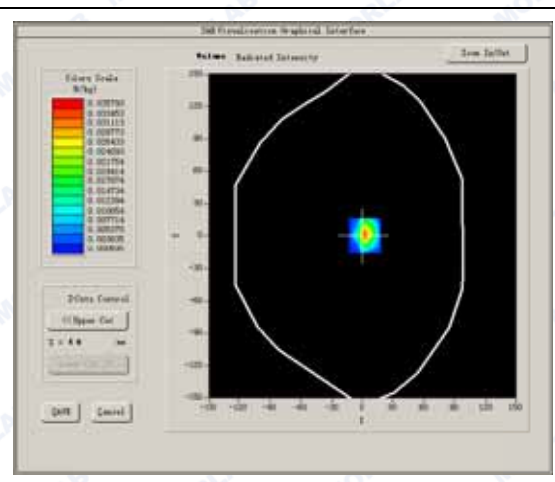
High Band SAR

Frequency (MHz)	5844.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power drift (%)	1.760000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



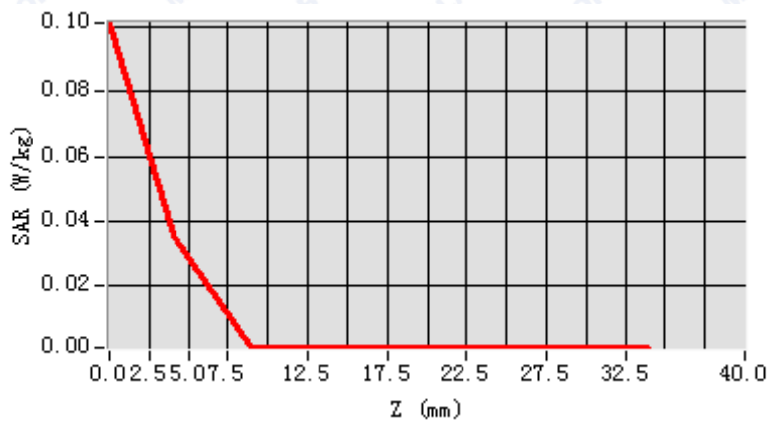


Maximum location: X=2.00, Y=0.00

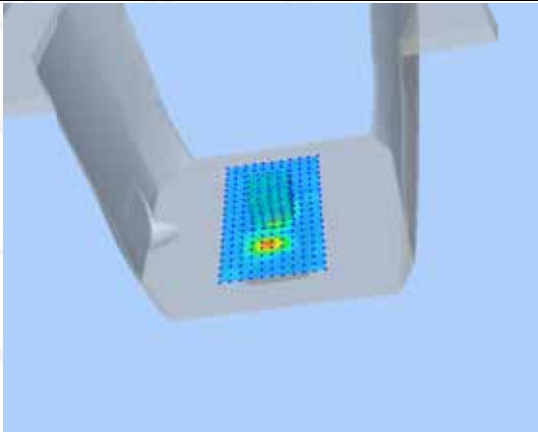
SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.010397
SAR 1g (W/Kg)	0.039507

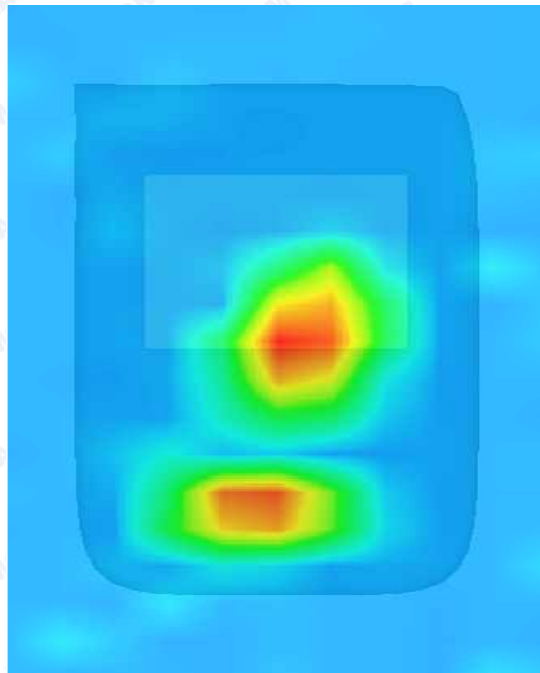
Z axis scan



3D screen shot



Hot spot position





MEASUREMENT 6

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.10.10

Measurement duration: 9 minutes 25 seconds

A. Experimental conditions.

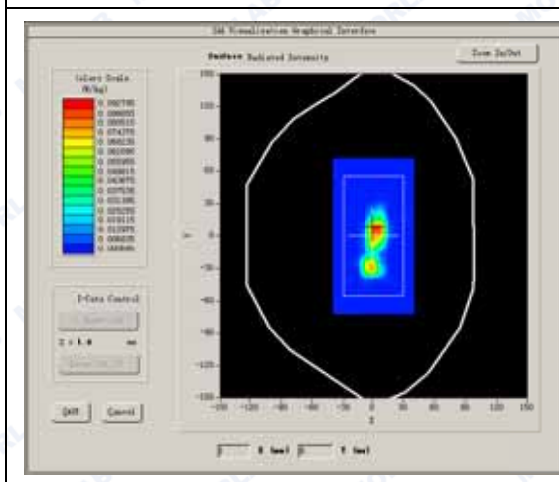
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	5.8G
Channels	High
Signal	GFSK

B. SAR Measurement Results

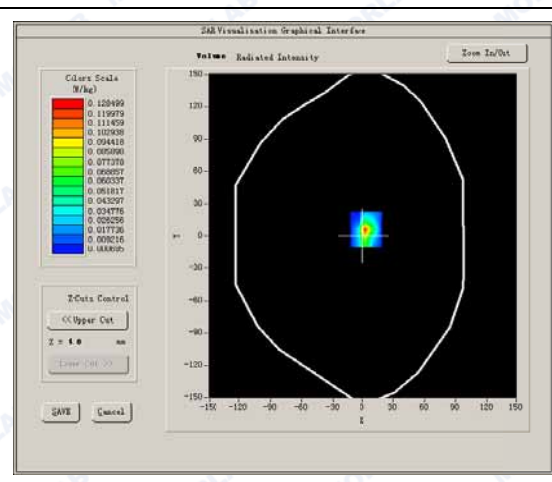
High Band SAR

Frequency (MHz)	5844.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power drift (%)	-2.080000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



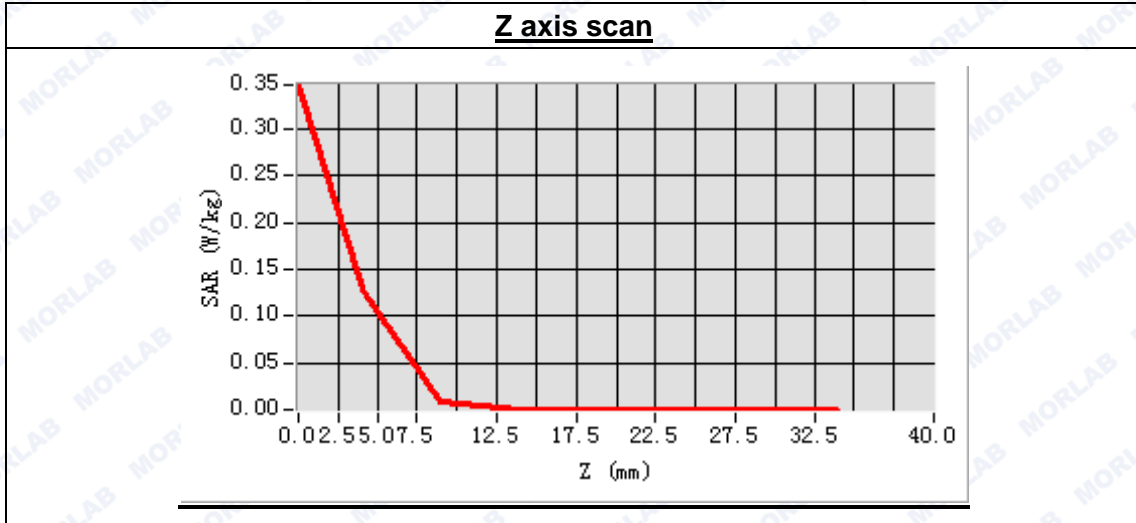


Maximum location: X=3.00, Y=6.00

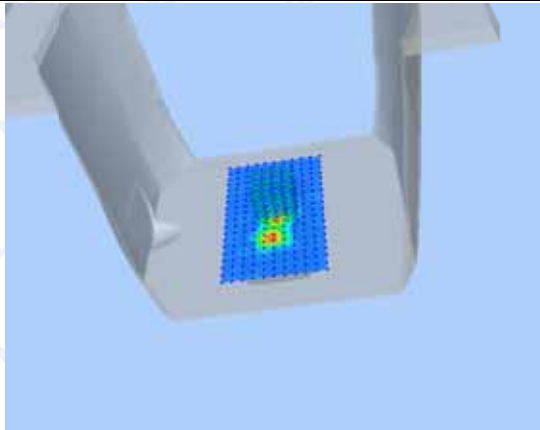
SAR Peak: 0.36 W/kg

SAR 10g (W/Kg)	0.030790
SAR 1g (W/Kg)	0.124685

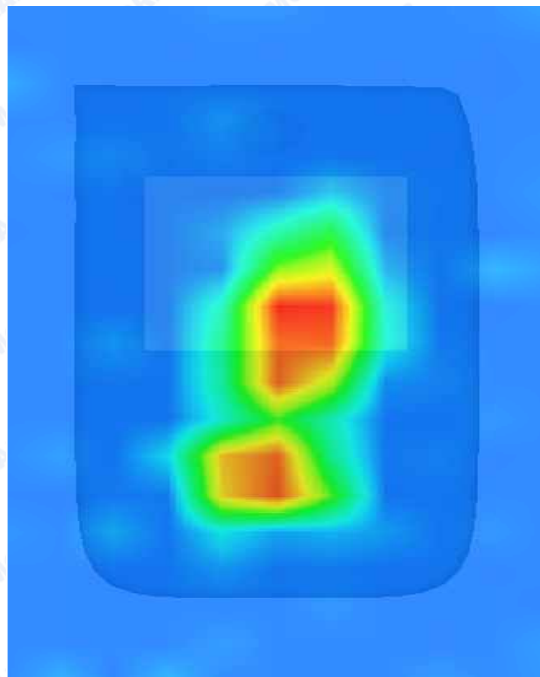
Z axis scan



3D screen shot



Hot spot position





MEASUREMENT 7

Type: Phone measurement (Complete)
 Area scan resolution: dx=8mm,dy=8mm
 Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm
 Date of measurement: 2014.10.10
 Measurement duration: 9 minutes 31 seconds

A. Experimental conditions.

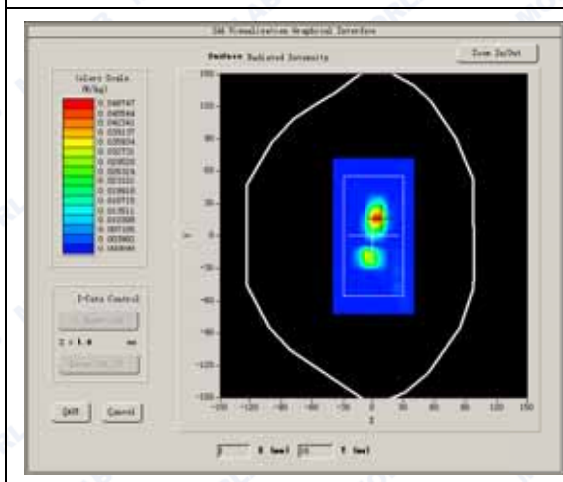
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	5.8G
Channels	High
Signal	GFSK

B. SAR Measurement Results

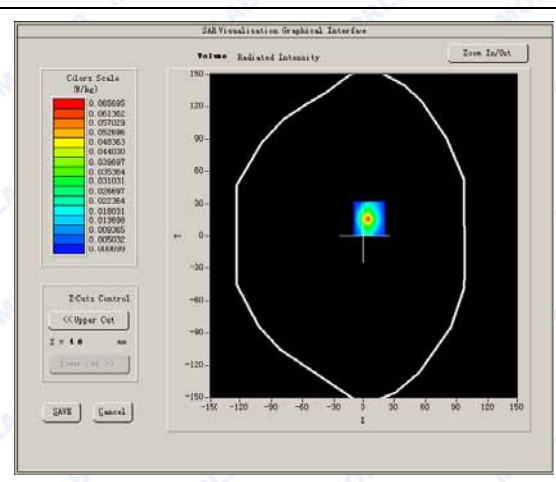
High Band SAR

Frequency (MHz)	5844.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power drift (%)	-3.420000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



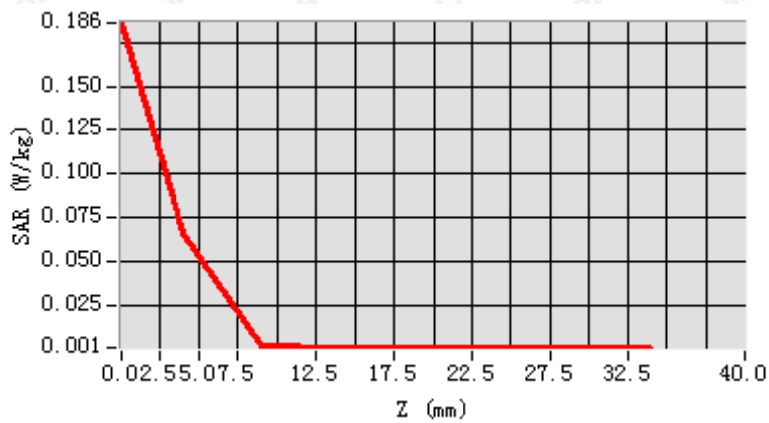


Maximum location: X=5.00, Y=16.00

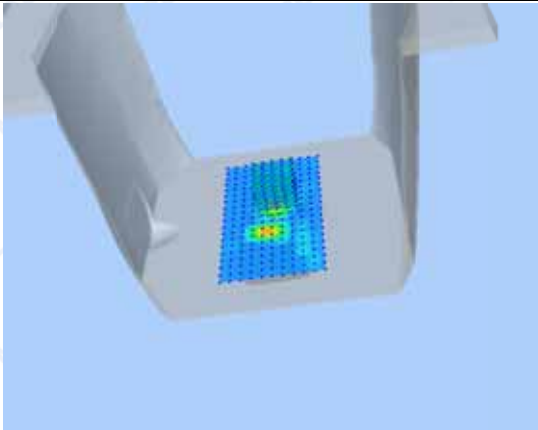
SAR Peak: 0.19 W/kg

SAR 10g (W/Kg)	0.017102
SAR 1g (W/Kg)	0.067081

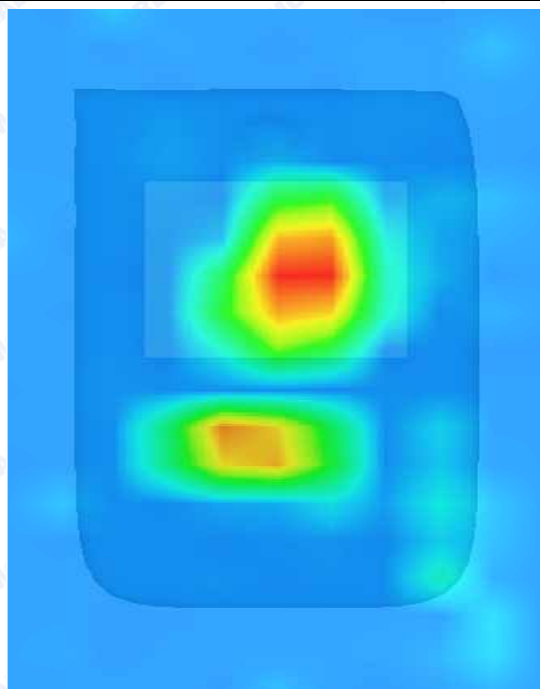
Z axis scan



3D screen shot



Hot spot position





MEASUREMENT 8

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.10.10

Measurement duration: 9 minutes 28 seconds

A. Experimental conditions.

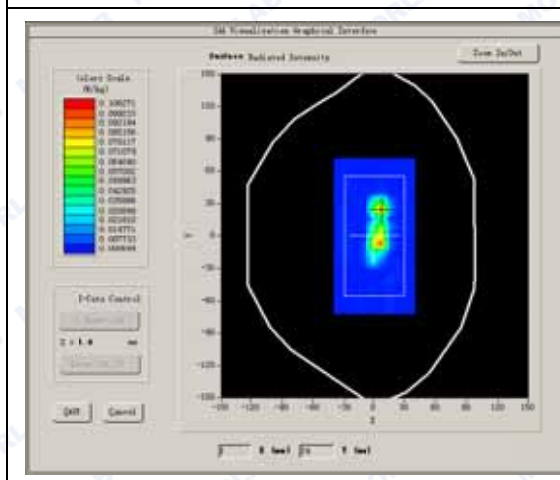
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	5.8G
Channels	High
Signal	GFSK

B. SAR Measurement Results

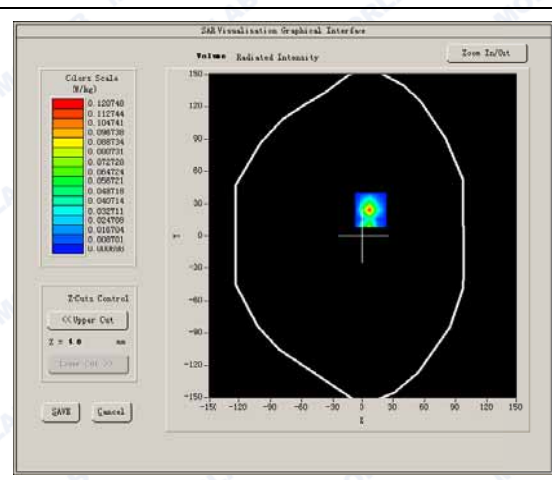
High Band SAR

Frequency (MHz)	5844.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power drift (%)	-1.700000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



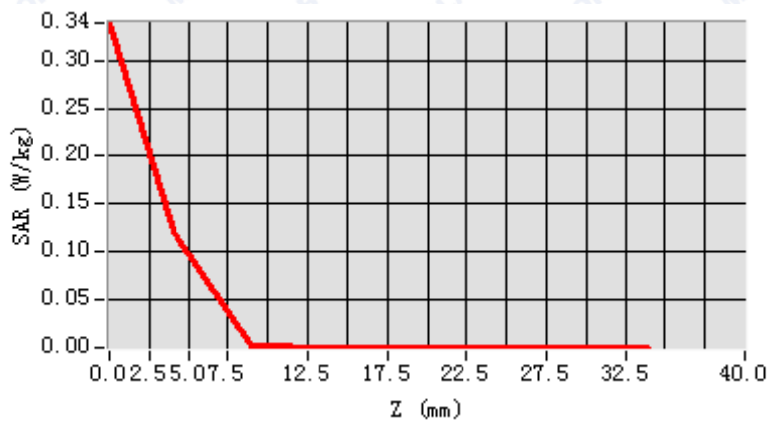


Maximum location: X=7.00, Y=24.00

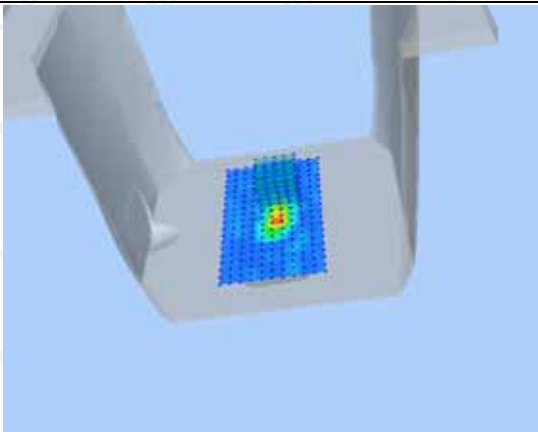
SAR Peak: 0.35 W/kg

SAR 10g (W/Kg)	0.024022
SAR 1g (W/Kg)	0.113891

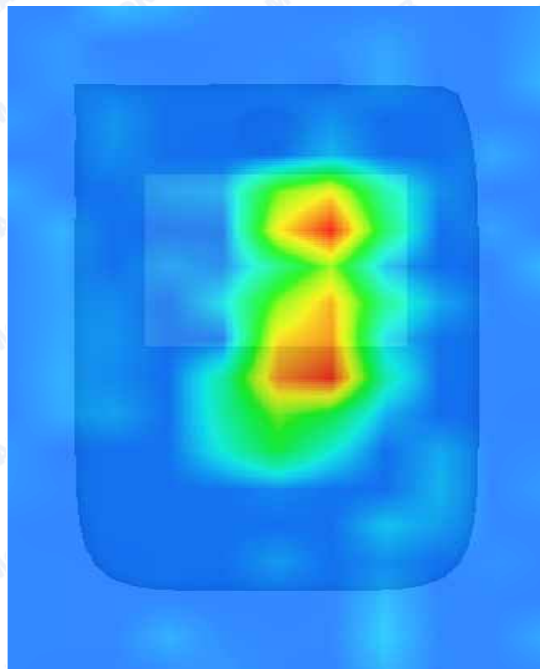
Z axis scan



3D screen shot



Hot spot position





System Performance Check Data(Body)

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.10.10

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	5800MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	5800.000000
Relative permittivity (real part)	48.132865
Conductivity (S/m)	6.068271
Power Drift (%)	-0.850000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	26.47
Crest factor:	1:1

