



## **Annex A: System Check**

**Tested Model : EMP2920**

**Report Number:  
FCC17050447A-6**

## MEASUREMENT 1

### BODY

Type: Validation measurement (Complete)

Date of measurement: 17/5/2017

Measurement duration: 11 minutes 54 seconds

#### **A. Experimental conditions.**

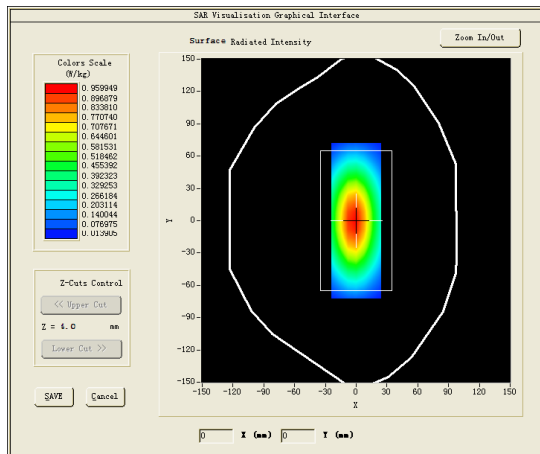
<b><u>Area Scan</u></b>	<u>dx=8mm dy=8mm</u>
<b><u>ZoomScan</u></b>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<b><u>Phantom</u></b>	<u>Validation plane</u>
<b><u>Device Position</u></b>	<u>Dipole</u>
<b><u>Band</u></b>	<u>CW835</u>
<b><u>Channels</u></b>	<u>Middle</u>
<b><u>Signal</u></b>	<u>CW (Crest factor: 1.0)</u>

#### **B. SAR Measurement Results**

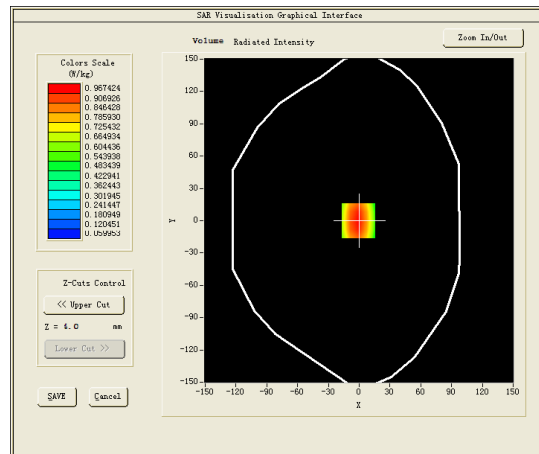
Middle Band SAR (Channel -1):

<b>Frequency (MHz)</b>	835.000000
<b>Relative permittivity (real part)</b>	53.927799
<b>Relative permittivity (imaginary part)</b>	21.281300
<b>Conductivity (S/m)</b>	0.987216
<b>Variation (%)</b>	0.120000

## SURFACE SAR



## VOLUME SAR

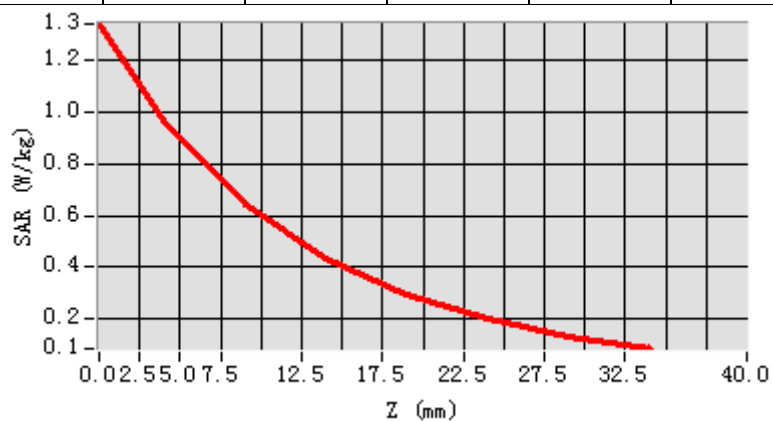


**Maximum location: X=-1.00, Y=0.00**

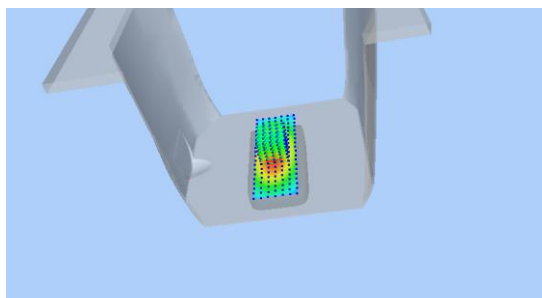
**SAR Peak: 1.44 W/kg**

<b>SAR 10g (W/Kg)</b>	6.44746
<b>SAR 1g (W/Kg)</b>	10.14583

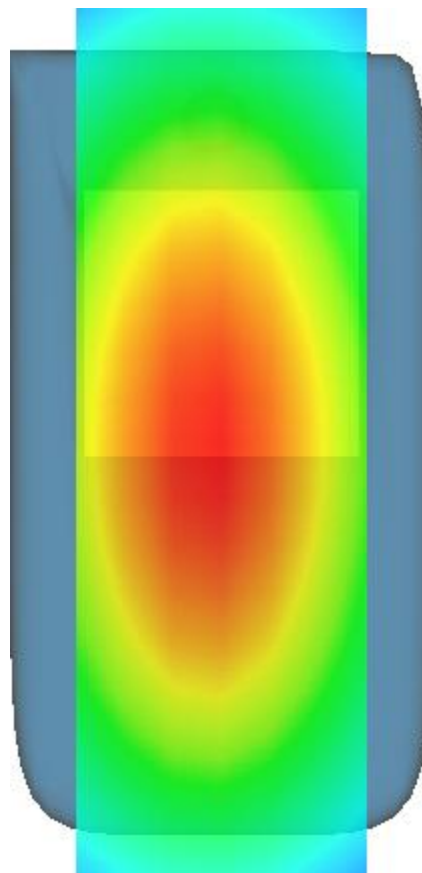
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.3418	0.9674	0.6426	0.4358	0.2947	0.1989	0.1326



**3D screen shot**



**Hot spot position**



## MEASUREMENT 2

### HEAD

Type: Validation measurement (Complete)

Date of measurement: 17/5/2017

Measurement duration: 11 minutes 54 seconds

#### **A. Experimental conditions.**

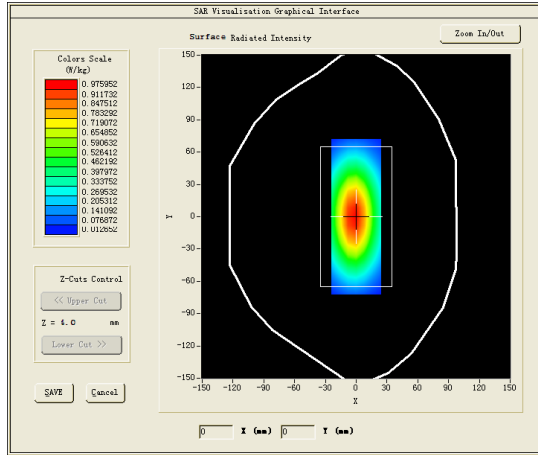
<b><u>Area Scan</u></b>	<u>dx=8mm dy=8mm</u>
<b><u>ZoomScan</u></b>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<b><u>Phantom</u></b>	<u>Validation plane</u>
<b><u>Device Position</u></b>	<u>Dipole</u>
<b><u>Band</u></b>	<u>CW835</u>
<b><u>Channels</u></b>	<u>Middle</u>
<b><u>Signal</u></b>	<u>CW (Crest factor: 1.0)</u>

#### **B. SAR Measurement Results**

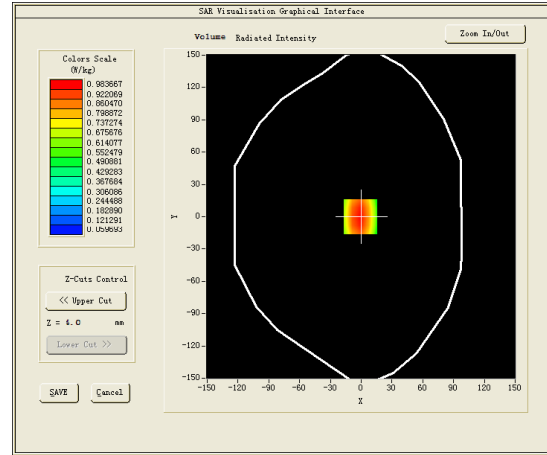
Middle Band SAR (Channel -1):

<b>Frequency (MHz)</b>	835.000000
<b>Relative permittivity (real part)</b>	40.328999
<b>Relative permittivity (imaginary part)</b>	19.880501
<b>Conductivity (S/m)</b>	0.922234
<b>Variation (%)</b>	-0.070000

## SURFACE SAR



## VOLUME SAR

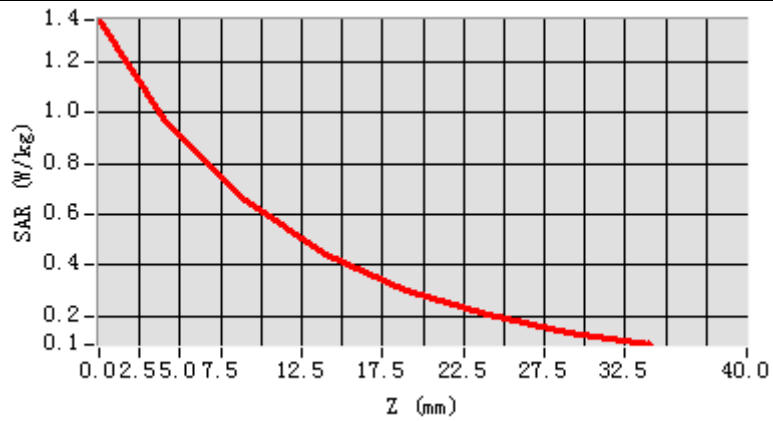


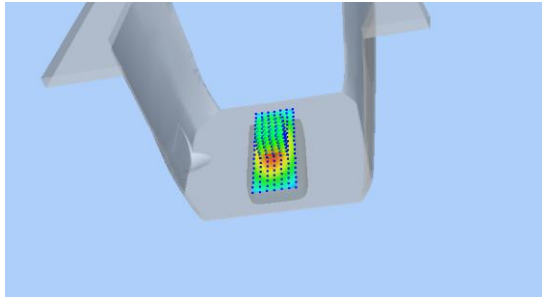
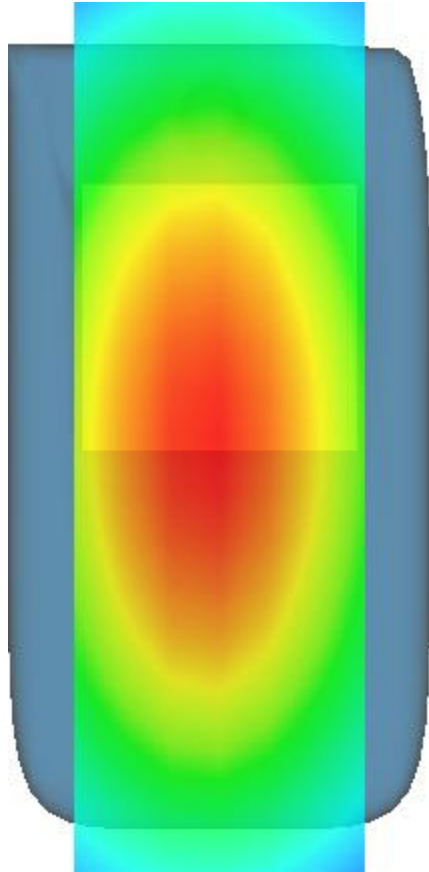
**Maximum location: X=-1.00, Y=0.00**

**SAR Peak: 1.37 W/kg**

<b>SAR 10g (W/Kg)</b>	6.15004
<b>SAR 1g (W/Kg)</b>	9.70049

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.3669	0.9837	0.6529	0.4412	0.2993	0.2017	0.1343



3D screen shot	Hot spot position
	

## MEASUREMENT 3

### BODY

Type: Validation measurement (Complete)

Date of measurement: 24/5/2017

Measurement duration: 10 minutes 57 seconds

#### **A. Experimental conditions.**

<b><u>Area Scan</u></b>	<u>dx=8mm dy=8mm</u>
<b><u>ZoomScan</u></b>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<b><u>Phantom</u></b>	<u>Validation plane</u>
<b><u>Device Position</u></b>	<u>Dipole</u>
<b><u>Band</u></b>	<u>CW1900</u>
<b><u>Channels</u></b>	<u>Middle</u>
<b><u>Signal</u></b>	<u>CW (Crest factor: 1.0)</u>

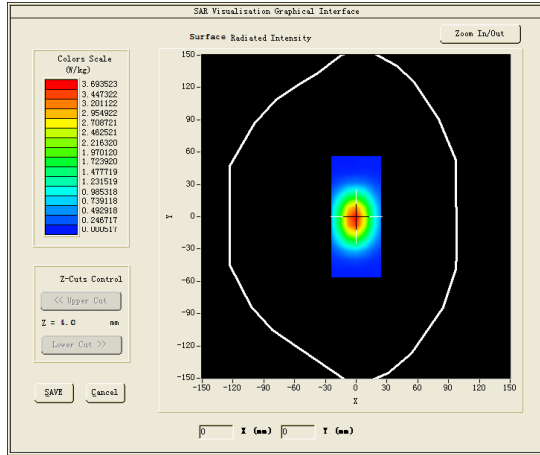
#### **B. SAR Measurement Results**

Middle Band SAR (Channel -1):

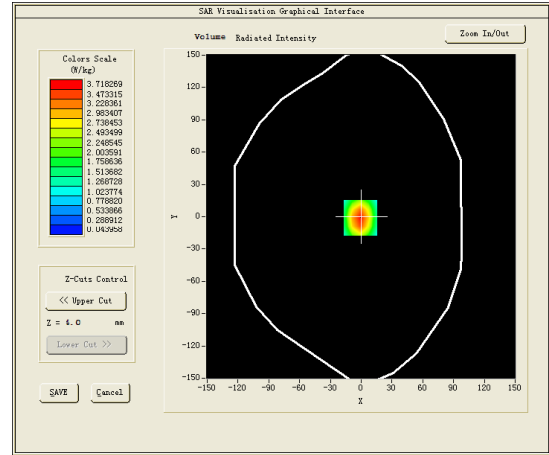
<b>Frequency (MHz)</b>	1900.000000
<b>Relative permittivity (real part)</b>	53.365299
<b>Relative permittivity (imaginary part)</b>	14.757600
<b>Conductivity (S/m)</b>	1.557747
<b>Variation (%)</b>	-0.450000



## SURFACE SAR



## VOLUME SAR

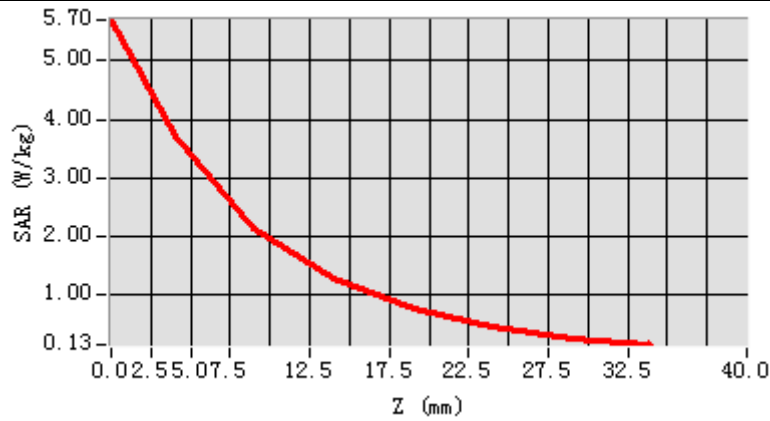


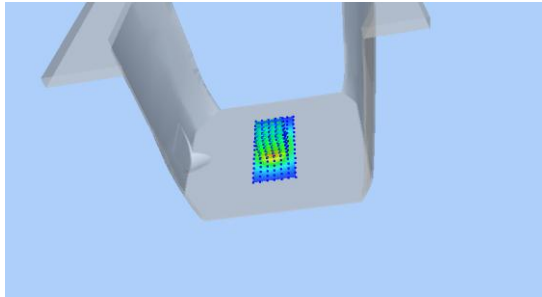
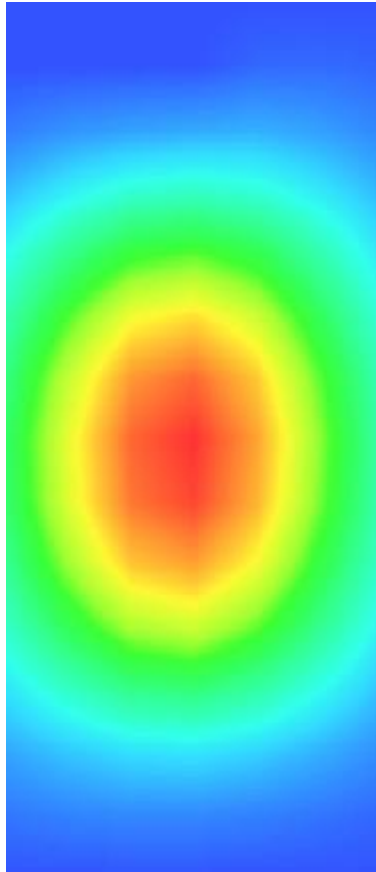
**Maximum location: X=-1.00, Y=-1.00**

**SAR Peak: 6.26 W/kg**

<b>SAR 10g (W/Kg)</b>	20.93533
<b>SAR 1g (W/Kg)</b>	39.32904

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	5.7034	3.7183	2.1347	1.2560	0.7338	0.4260	0.2429



3D screen shot	Hot spot position
	

## MEASUREMENT 4

### HEAD

Type: Validation measurement (Complete)

Date of measurement: 24/5/2017

Measurement duration: 11 minutes 6 seconds

#### **A. Experimental conditions.**

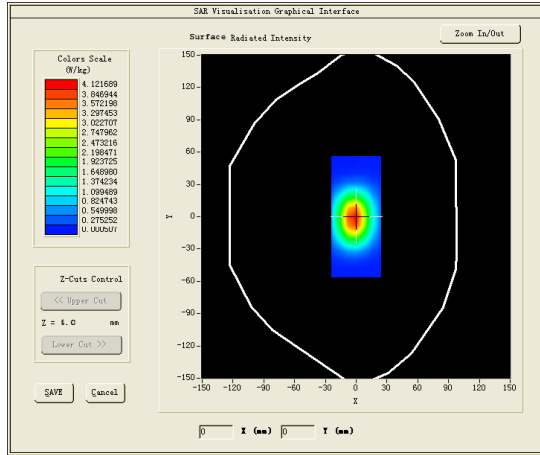
<b><u>Area Scan</u></b>	<u>dx=8mm dy=8mm</u>
<b><u>ZoomScan</u></b>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<b><u>Phantom</u></b>	<u>Validation plane</u>
<b><u>Device Position</u></b>	<u>Dipole</u>
<b><u>Band</u></b>	<u>CW1900</u>
<b><u>Channels</u></b>	<u>Middle</u>
<b><u>Signal</u></b>	<u>CW (Crest factor: 1.0)</u>

#### **B. SAR Measurement Results**

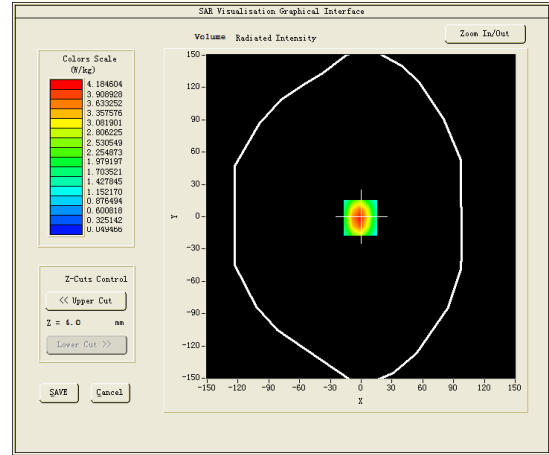
Middle Band SAR (Channel -1):

<b>Frequency (MHz)</b>	1900.000000
<b>Relative permittivity (real part)</b>	39.976398
<b>Relative permittivity (imaginary part)</b>	13.386300
<b>Conductivity (S/m)</b>	1.412998
<b>Variation (%)</b>	-0.040000

## SURFACE SAR



## VOLUME SAR

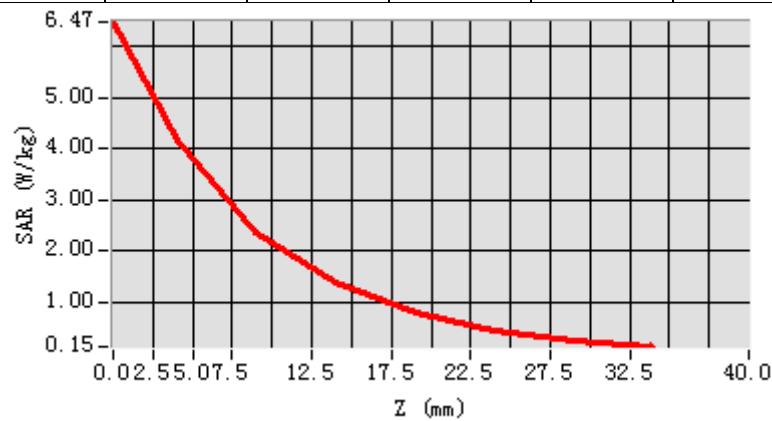


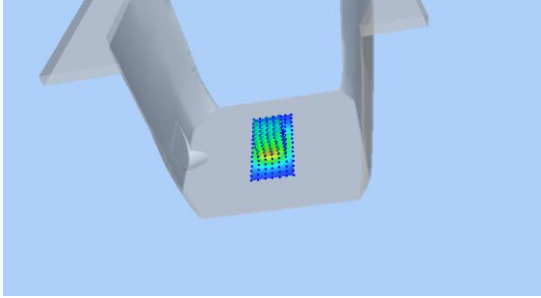
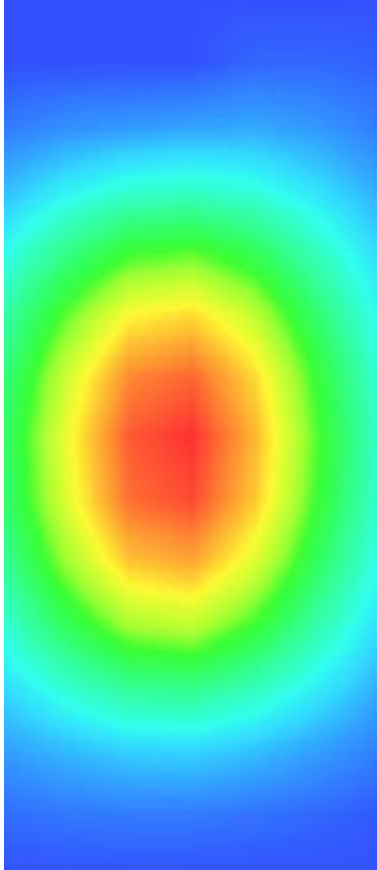
**Maximum location: X=-1.00, Y=-1.00**

**SAR Peak: 6.48 W/kg**

<b>SAR 10g (W/Kg)</b>	21.07104
<b>SAR 1g (W/Kg)</b>	39.97625

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.4693	4.1846	2.3780	1.3892	0.8084	0.4680	0.2662



3D screen shot	Hot spot position
	

## MEASUREMENT 5

### BODY

Type: Validation measurement (Complete)

Date of measurement: 20/5/2017

Measurement duration: 9 minutes 46 seconds

### A. Experimental conditions.

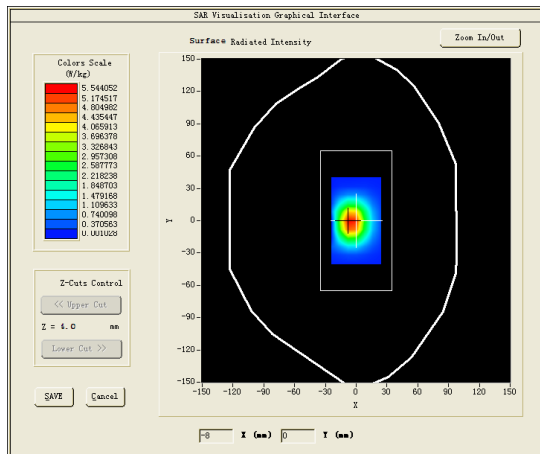
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2450</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

### B. SAR Measurement Results

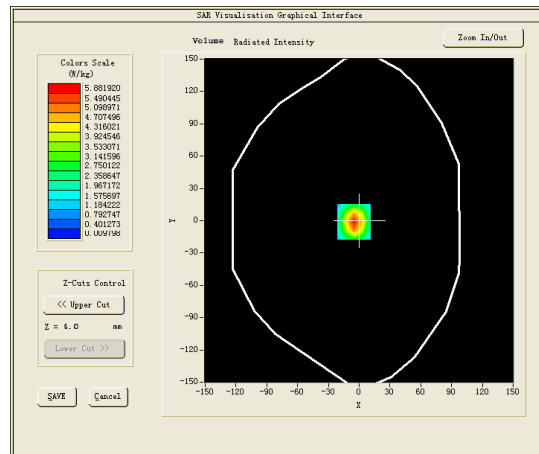
Middle Band SAR (Channel -1):

<b>Frequency (MHz)</b>	2450.000000
<b>Relative permittivity (real part)</b>	52.735699
<b>Relative permittivity (imaginary part)</b>	14.017300
<b>Conductivity (S/m)</b>	1.907910
<b>Variation (%)</b>	0.390000

## SURFACE SAR



## VOLUME SAR

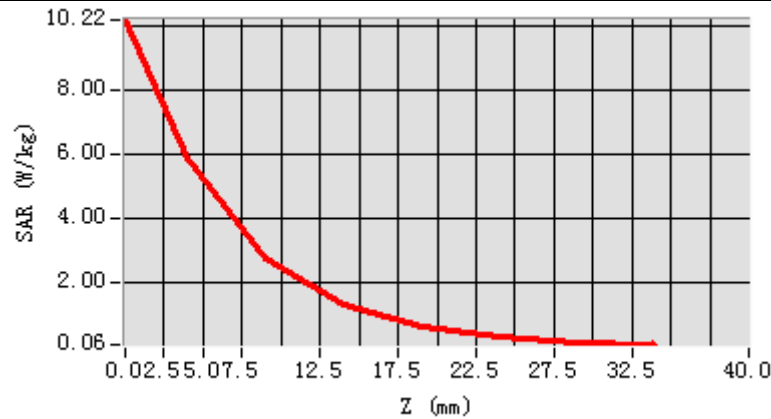


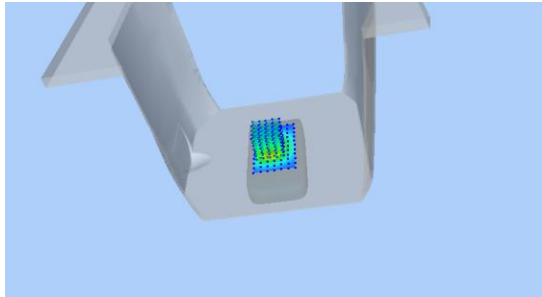
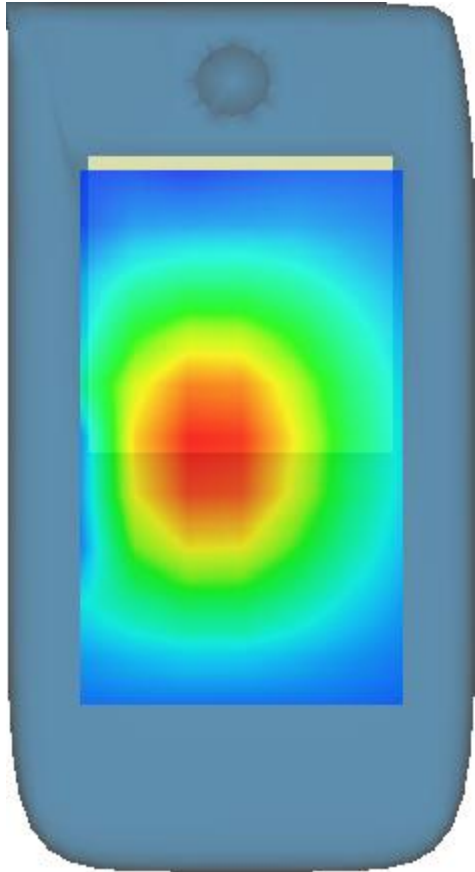
**Maximum location: X=-5.00, Y=-1.00**

**SAR Peak: 10.96 W/kg**

<b>SAR 10g (W/Kg)</b>	23.33453
<b>SAR 1g (W/Kg)</b>	56.33343

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.2188	5.8819	2.7478	1.3151	0.6266	0.2969	0.1341



3D screen shot	Hot spot position
	



## MEASUREMENT 6

### HEAD

Type: Validation measurement (Complete)

Date of measurement: 20/5/2017

Measurement duration: 9 minutes 46 seconds

#### **A. Experimental conditions.**

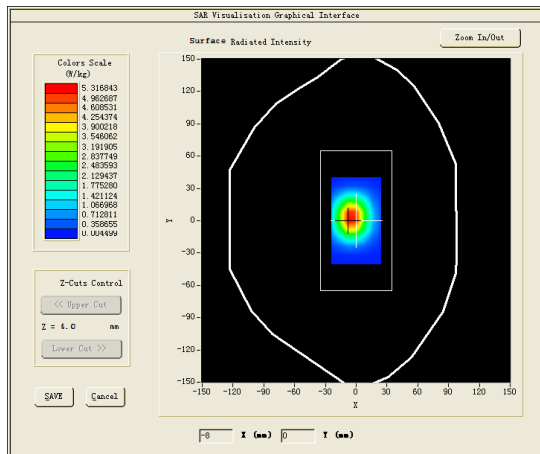
<b><u>Area Scan</u></b>	<u>dx=8mm dy=8mm</u>
<b><u>ZoomScan</u></b>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<b><u>Phantom</u></b>	<u>Validation plane</u>
<b><u>Device Position</u></b>	<u>Dipole</u>
<b><u>Band</u></b>	<u>CW2450</u>
<b><u>Channels</u></b>	<u>Middle</u>
<b><u>Signal</u></b>	<u>CW (Crest factor: 1.0)</u>

#### **B. SAR Measurement Results**

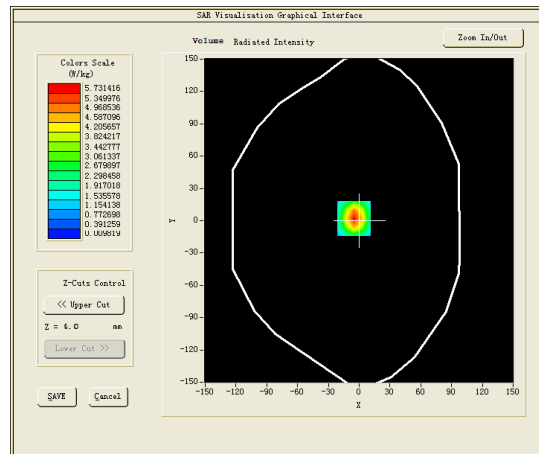
Middle Band SAR (Channel -1):

<b>Frequency (MHz)</b>	2450.000000
<b>Relative permittivity (real part)</b>	39.235699
<b>Relative permittivity (imaginary part)</b>	12.917300
<b>Conductivity (S/m)</b>	1.758188
<b>Variation (%)</b>	2.820000

## SURFACE SAR



## VOLUME SAR

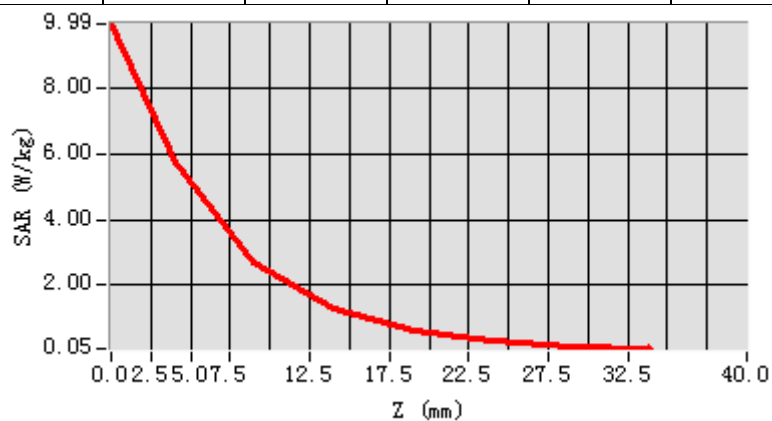


**Maximum location: X=-5.00, Y=2.00**

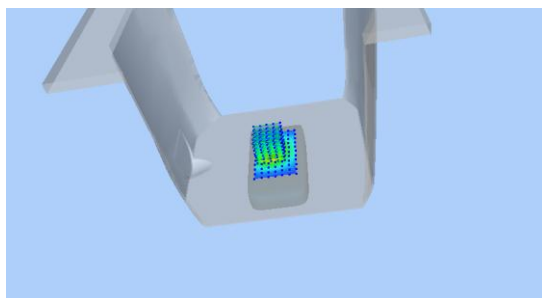
**SAR Peak: 9.92 W/kg**

<b>SAR 10g (W/Kg)</b>	24.52895
<b>SAR 1g (W/Kg)</b>	53.93069

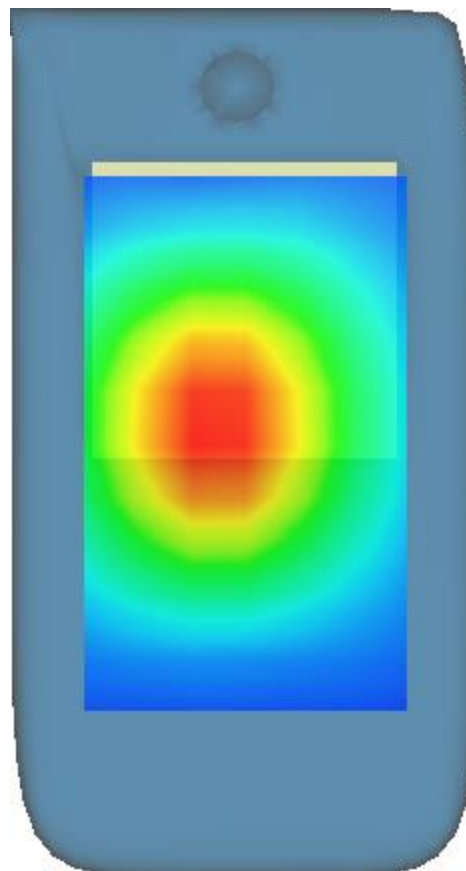
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.9915	5.7314	2.6626	1.2722	0.6047	0.2852	0.1274



**3D screen shot**



**Hot spot position**



## MEASUREMENT 9

### BODY

Type: Validation measurement (Complete)

Date of measurement: 22/5/2017

Measurement duration: 10 minutes 13 seconds

### A. Experimental conditions.

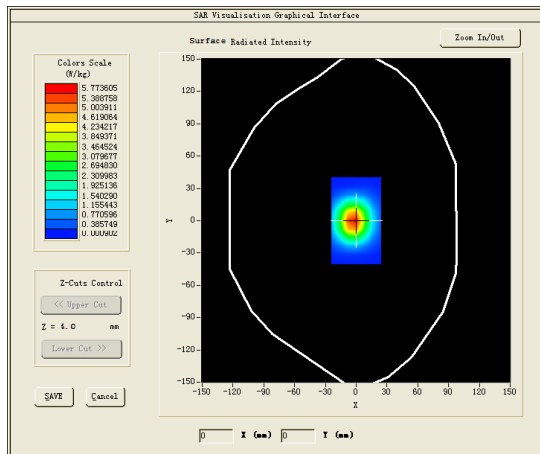
<b><u>Area Scan</u></b>	<u>dx=8mm dy=8mm</u>
<b><u>ZoomScan</u></b>	<u>5x5x7,dx=8mm dy=8mm</u> <u>dz=5mm,Complete</u>
<b><u>Phantom</u></b>	<u>Validation plane</u>
<b><u>Device Position</u></b>	<u>Dipole</u>
<b><u>Band</u></b>	<u>CW2600</u>
<b><u>Channels</u></b>	<u>Middle</u>
<b><u>Signal</u></b>	<u>CW (Crest factor: 1.0)</u>

### B. SAR Measurement Results

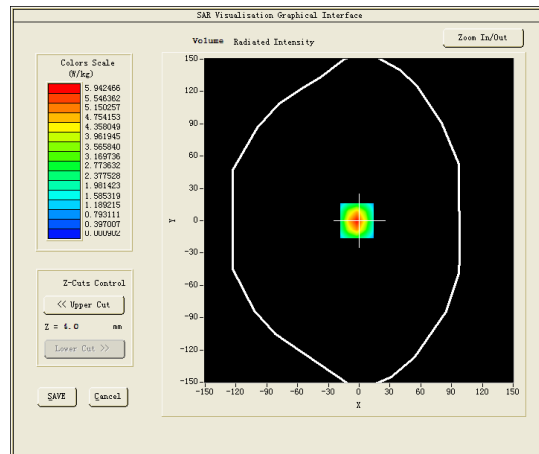
Middle Band SAR (Channel -1):

<b>Frequency (MHz)</b>	2600.000000
<b>Relative permittivity (real part)</b>	52.007900
<b>Relative permittivity (imaginary part)</b>	14.458500
<b>Conductivity (S/m)</b>	2.088450
<b>Variation (%)</b>	-0.220000

## SURFACE SAR



## VOLUME SAR

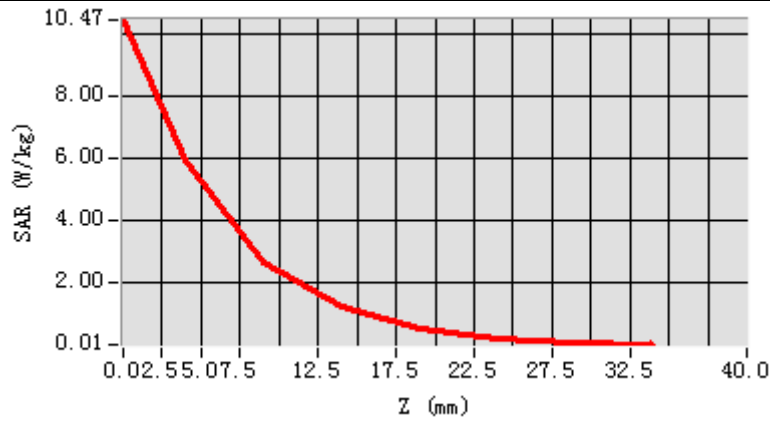


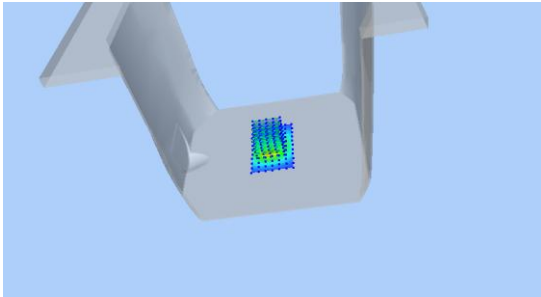
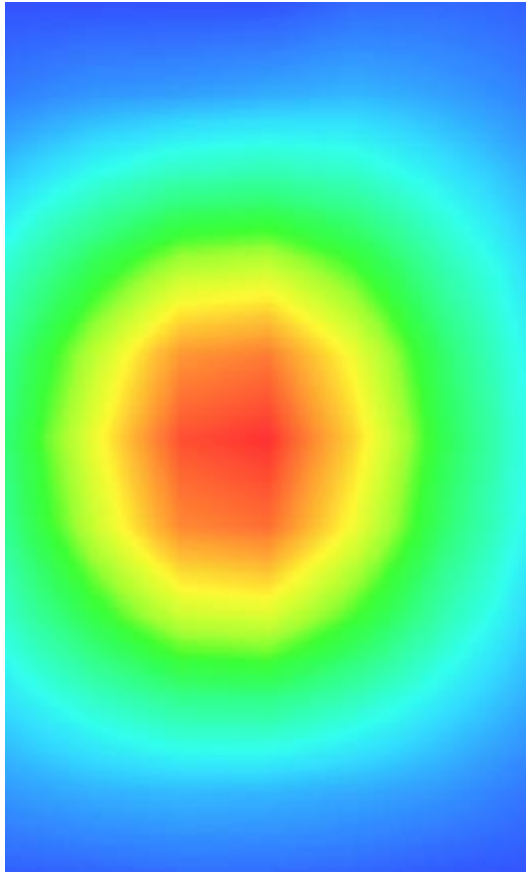
**Maximum location: X=-2.00, Y=0.00**

**SAR Peak: 10.74 W/kg**

<b>SAR 10g (W/Kg)</b>	25.599674
<b>SAR 1g (W/Kg)</b>	57.864350

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	10.4745	5.9425	2.6827	1.2126	0.5266	0.2069	0.0714



3D screen shot	Hot spot position
	

## MEASUREMENT 10

### HEAD

Type: Validation measurement (Complete)

Date of measurement: 22/5/2017

Measurement duration: 10 minutes 12 seconds

#### **A. Experimental conditions.**

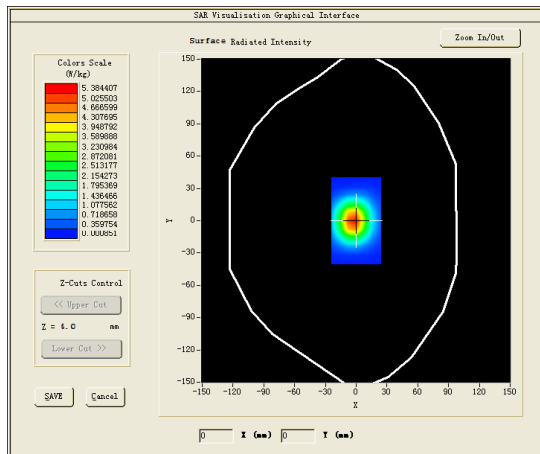
<b><u>Area Scan</u></b>	<u>dx=8mm dy=8mm</u>
<b><u>ZoomScan</u></b>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<b><u>Phantom</u></b>	<u>Validation plane</u>
<b><u>Device Position</u></b>	<u>Dipole</u>
<b><u>Band</u></b>	<u>CW2600</u>
<b><u>Channels</u></b>	<u>Middle</u>
<b><u>Signal</u></b>	<u>CW (Crest factor: 1.0)</u>

#### **B. SAR Measurement Results**

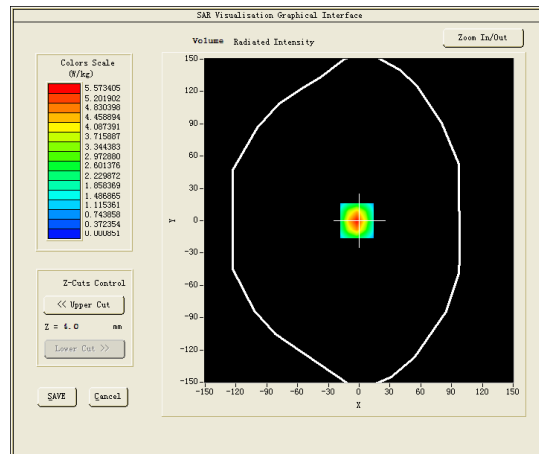
Middle Band SAR (Channel -1):

<b>Frequency (MHz)</b>	2600.000000
<b>Relative permittivity (real part)</b>	38.979599
<b>Relative permittivity (imaginary part)</b>	13.989700
<b>Conductivity (S/m)</b>	2.020734
<b>Variation (%)</b>	0.250000

## SURFACE SAR



## VOLUME SAR



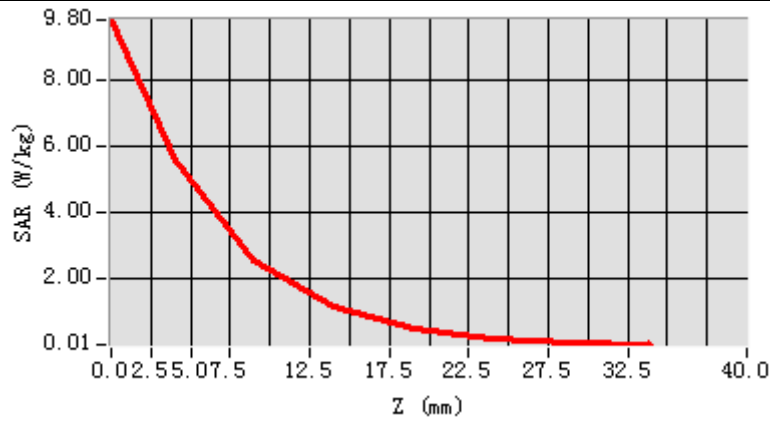
**Maximum location: X=-2.00, Y=0.00**

**SAR Peak: 9.73 W/kg**

<b>SAR 10g (W/Kg)</b>	23.42963
<b>SAR 1g (W/Kg)</b>	53.18259



Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.8044	5.5734	2.5229	1.1430	0.4950	0.1964	0.0689



3D screen shot	Hot spot position
