



Annex A System check

Project Name : X521

**Report Number:
WSCT-R&E16053699A-SAR**

I. RESULTS

<u>TYPE</u>	<u>BAND</u>	<u>PARAMETERS</u>
Validation	CW835	<u>Measurement 1:</u> Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW835	<u>Measurement 2:</u> Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1800	<u>Measurement 3:</u> Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1800	<u>Measurement 4:</u> Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1900	<u>Measurement 5:</u> Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1900	<u>Measurement 6:</u> Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW2450	<u>Measurement 7:</u> Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW2450	<u>Measurement 8:</u> Validation Plane with Dipole device position on Middle Channel in CW mode

MEASUREMENT 1

Type: Validation measurement (Complete)

Date of measurement: 17/6/2016

Measurement duration: 11 minutes 42 seconds

A. Experimental conditions.

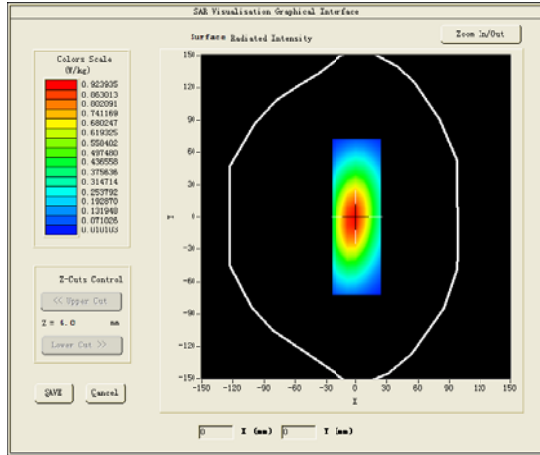
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

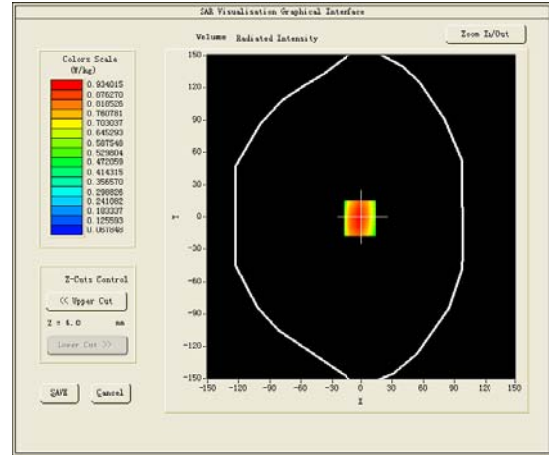
Middle Band SAR (Channel -1):

Frequency (MHz)	835.000000
Relative permittivity (real part)	55.219501
Relative permittivity (imaginary part)	20.868099
Conductivity (S/m)	0.968048
Variation (%)	-0.110000

SURFACE SAR



VOLUME SAR

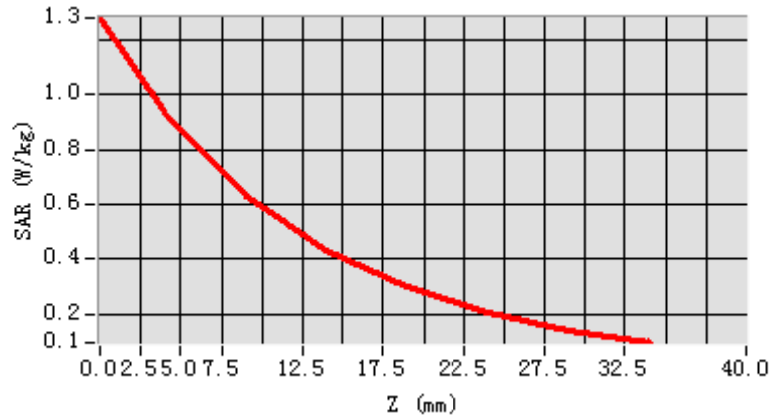


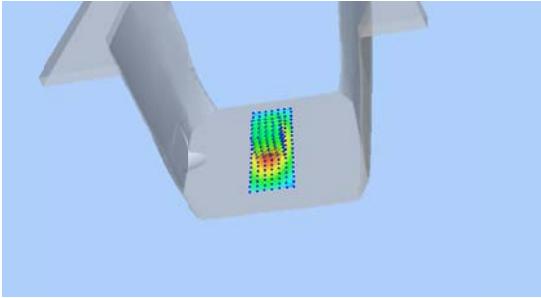
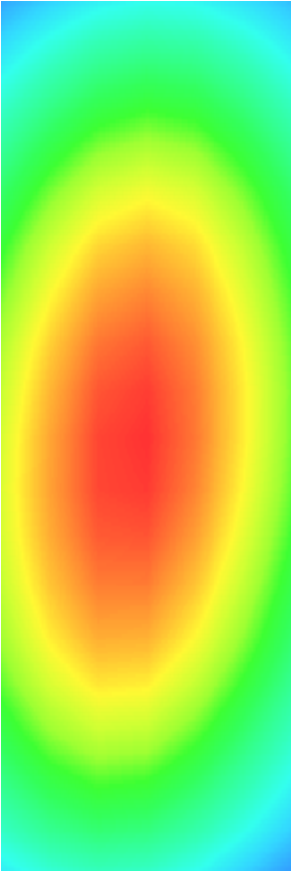
Maximum location: X=-2.00, Y=-1.00

SAR Peak: 1.37 W/kg

SAR 10g (W/Kg)	0.622746
SAR 1g (W/Kg)	0.960713

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.2796	0.9340	0.6314	0.4339	0.2996	0.2062	0.1409



3D screen shot	Hot spot position
	

MEASUREMENT 2

Type: Validation measurement (Complete)

Date of measurement: 17/6/2016

Measurement duration: 11 minutes 43 seconds

A. Experimental conditions.

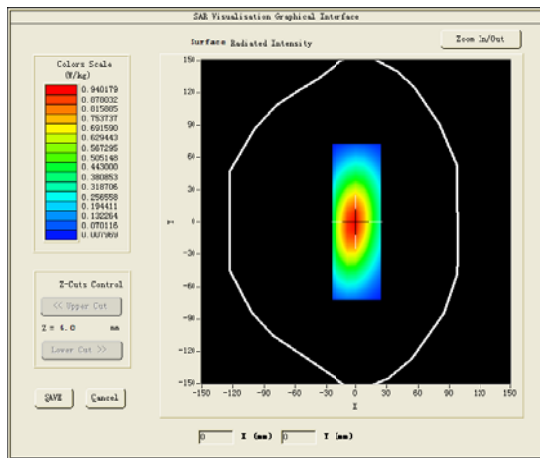
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

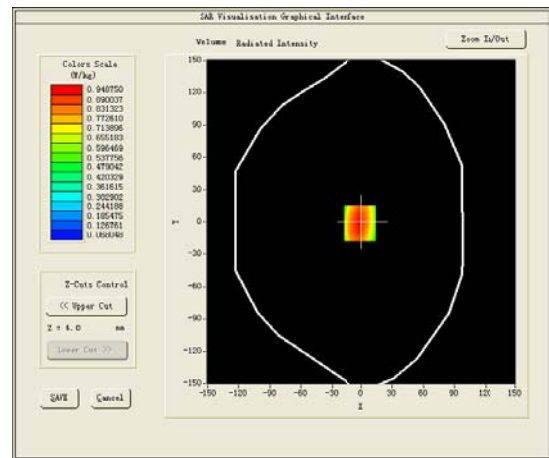
Middle Band SAR (Channel -1):

Frequency (MHz)	835.000000
Relative permittivity (real part)	41.450901
Relative permittivity (imaginary part)	19.477900
Conductivity (S/m)	0.903558
Variation (%)	0.250000

SURFACE SAR



VOLUME SAR

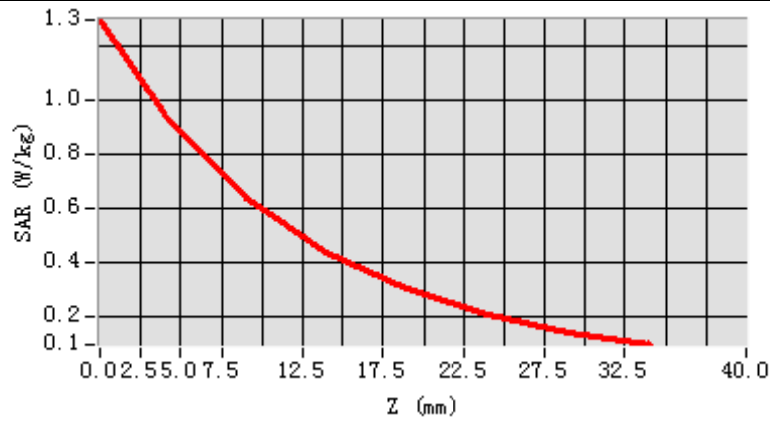


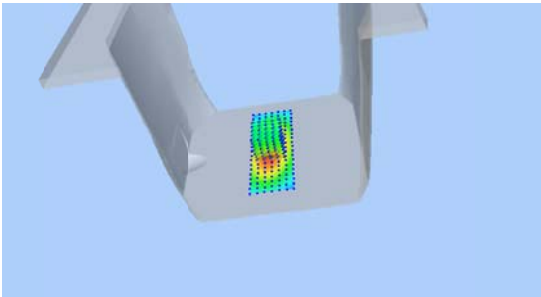
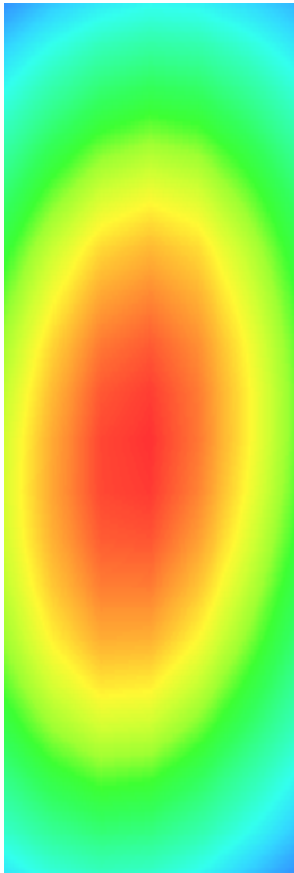
Maximum location: X=-2.00, Y=-1.00

SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.591216
SAR 1g (W/Kg)	0.913485

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.3002	0.9487	0.6411	0.4403	0.3039	0.2089	0.1425



3D screen shot	Hot spot position
	

MEASUREMENT 3

Type: Validation measurement (Complete)

Date of measurement: 18/6/2016

Measurement duration: 16 minutes 33 seconds

A. Experimental conditions.

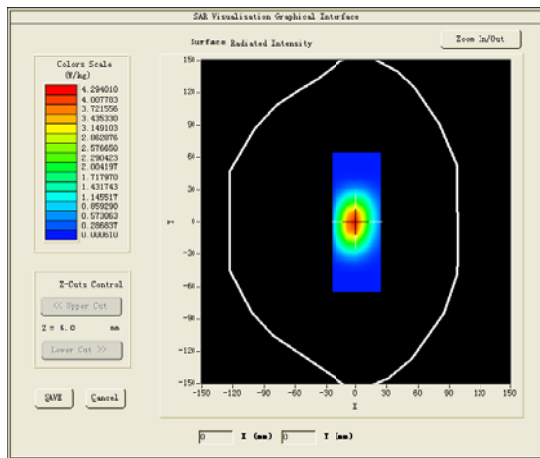
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>7x7x7, dx=5mm dy=5mm</u> <u>dz=5mm, Complete/ndx=8mm</u> <u>dy=8mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

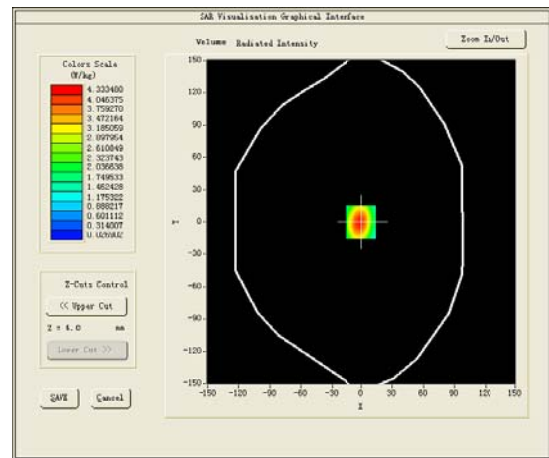
Middle Band SAR (Channel -1):

Frequency (MHz)	1800.000000
Relative permittivity (real part)	53.339298
Relative permittivity (imaginary part)	14.951700
Conductivity (S/m)	1.495170
Variation (%)	-0.620000

SURFACE SAR



VOLUME SAR

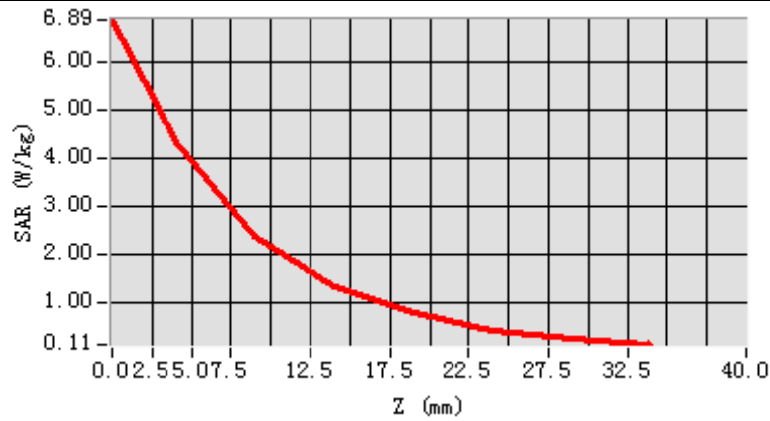


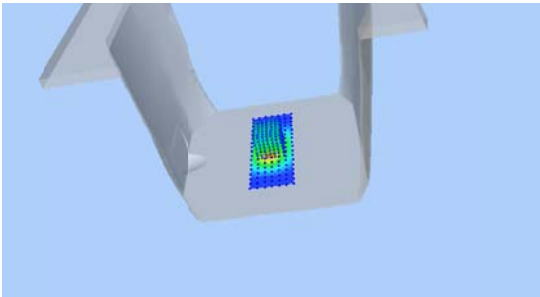
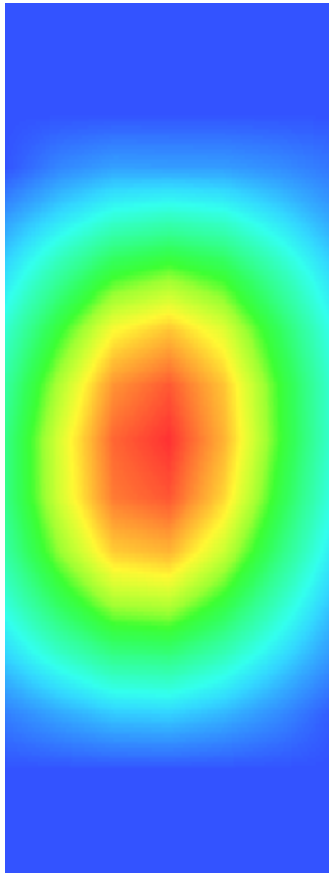
Maximum location: X = -1.00, Y = 0.00

SAR Peak: 7.06 W/kg

SAR 10g (W/Kg)	2.204405
SAR 1g (W/Kg)	4.178476

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.8861	4.3335	2.3668	1.3410	0.7563	0.4187	0.2225



3D screen shot	Hot spot position
	

MEASUREMENT 4

Type: Validation measurement (Complete)

Date of measurement: 18/6/2016

Measurement duration: 16 minutes 35 seconds

A. Experimental conditions.

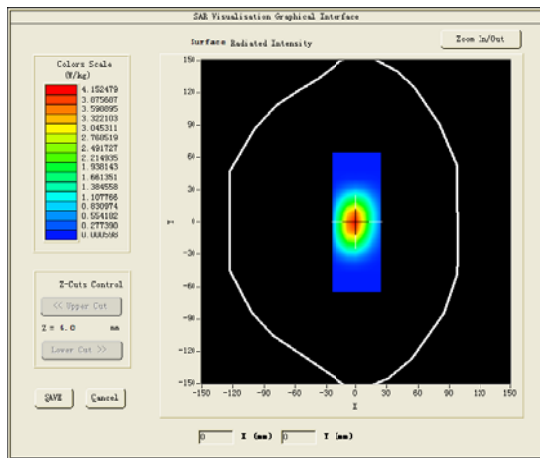
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>7x7x7, dx=5mm dy=5mm</u> <u>dz=5mm, Complete/ndx=8mm</u> <u>dy=8mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

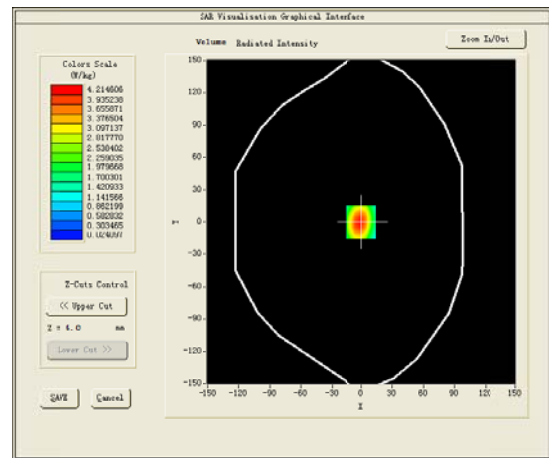
Middle Band SAR (Channel -1):

Frequency (MHz)	1800.000000
Relative permittivity (real part)	40.076401
Relative permittivity (imaginary part)	14.472200
Conductivity (S/m)	1.447220
Variation (%)	0.520000

SURFACE SAR



VOLUME SAR

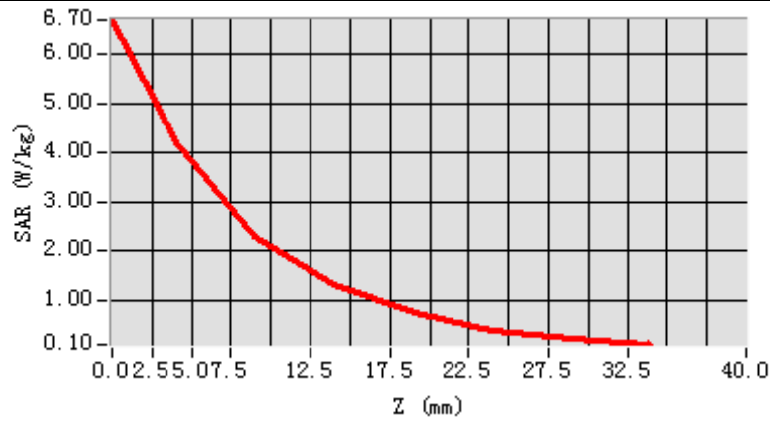


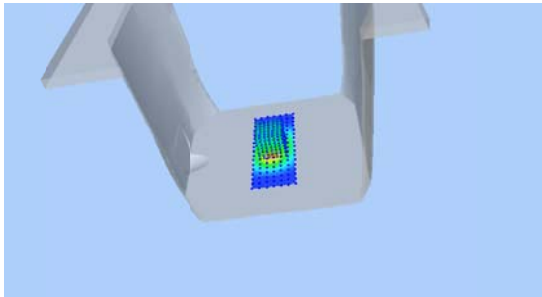
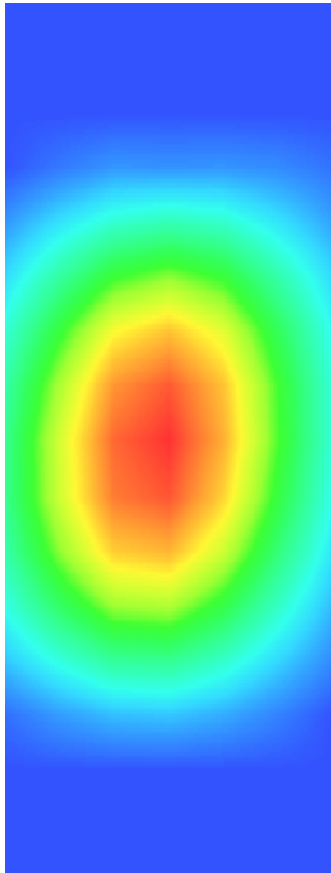
Maximum location: X = -1.00, Y = 0.00

SAR Peak: 6.64 W/kg

SAR 10g (W/Kg)	2.098511
SAR 1g (W/Kg)	4.010130

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.6957	4.2146	2.3034	1.3039	0.7366	0.4045	0.2138



3D screen shot	Hot spot position
	

MEASUREMENT 5

BODY

Type: Validation measurement (Complete)

Date of measurement: 22/6/2016

Measurement duration: 11 minutes 8 seconds

A. Experimental conditions.

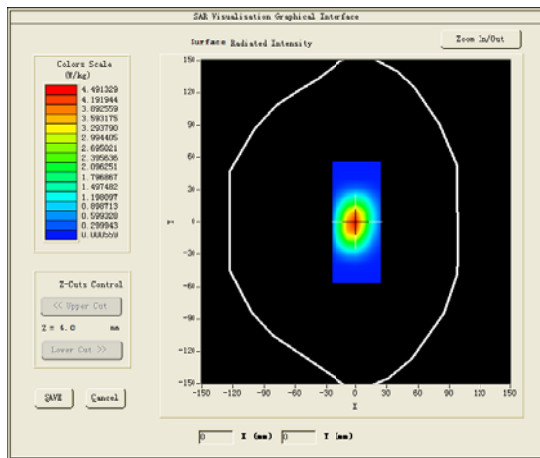
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

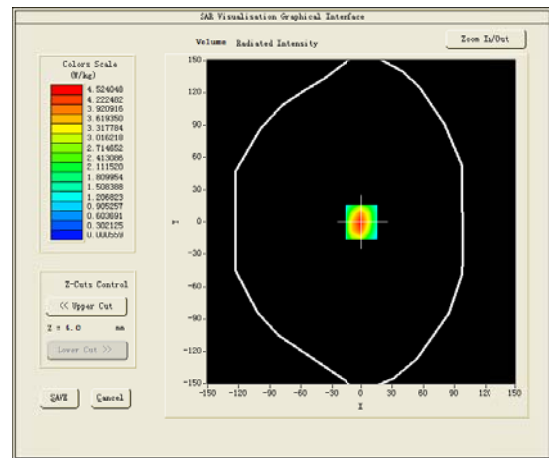
Middle Band SAR (Channel -1):

Frequency (MHz)	1900.000000
Relative permittivity (real part)	53.147202
Relative permittivity (imaginary part)	14.472600
Conductivity (S/m)	1.527663
Variation (%)	-0.160000

SURFACE SAR



VOLUME SAR

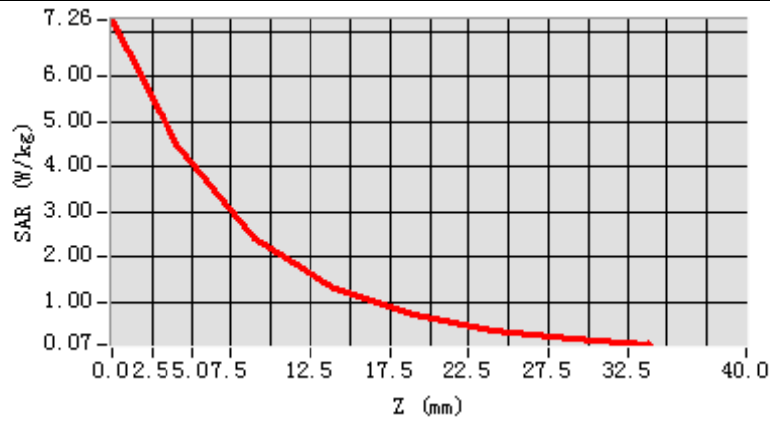


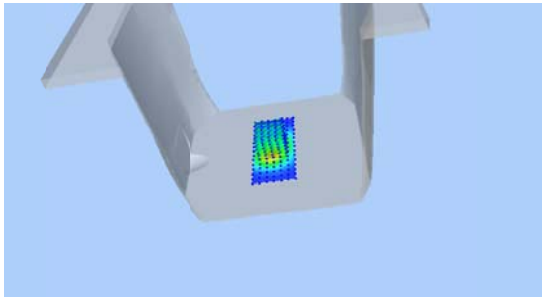
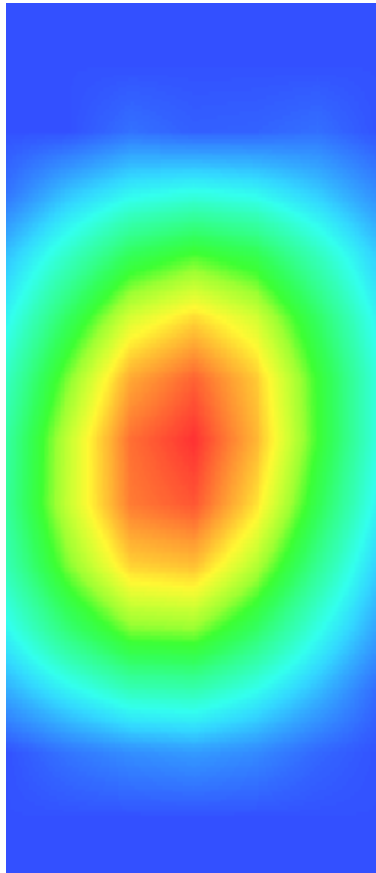
Maximum location: X= -1.00, Y=0.00

SAR Peak: 7.23 W/kg

SAR 10g (W/Kg)	2.144791
SAR 1g (W/Kg)	4.278533

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	7.2625	4.5240	2.4193	1.3215	0.7144	0.3718	0.1784



3D screen shot	Hot spot position
	

MEASUREMENT 6

HEAD

Type: Validation measurement (Complete)

Date of measurement: 22/6/2016

Measurement duration: 13 minutes 45 seconds

A. Experimental conditions.

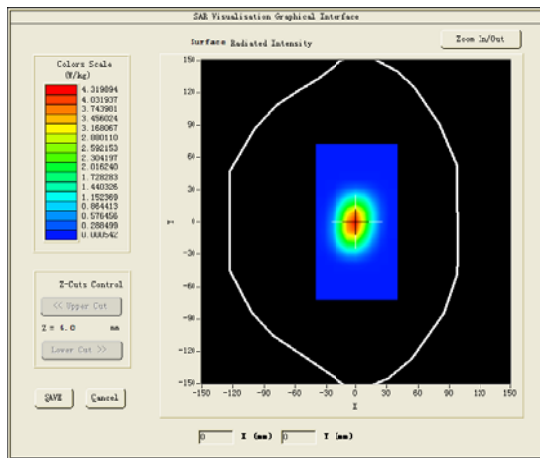
<u>Area Scan</u>	<u>surf_sam_plan.txt, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm</u> <u>dz=5mm,Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

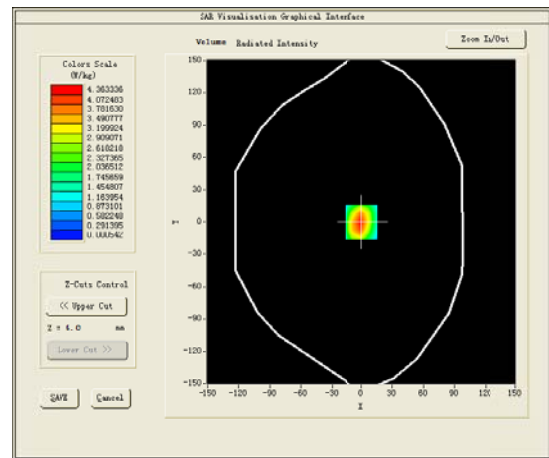
Middle Band SAR (Channel -1):

Frequency (MHz)	1900.000000
Relative permittivity (real part)	53.157902
Relative permittivity (imaginary part)	14.322700
Conductivity (S/m)	1.511841
Variation (%)	0.330000

SURFACE SAR



VOLUME SAR

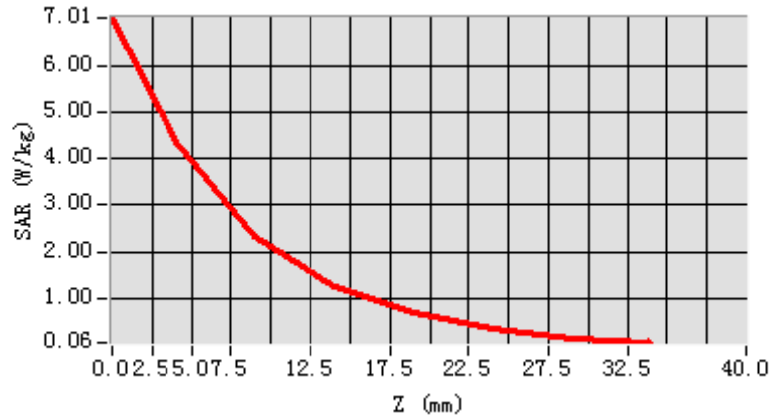


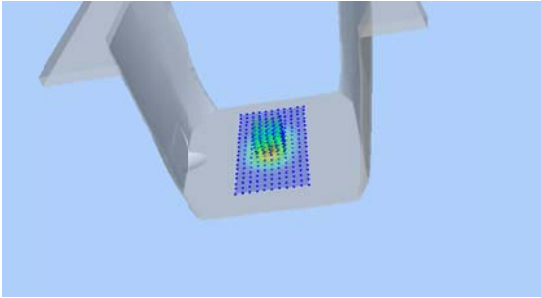
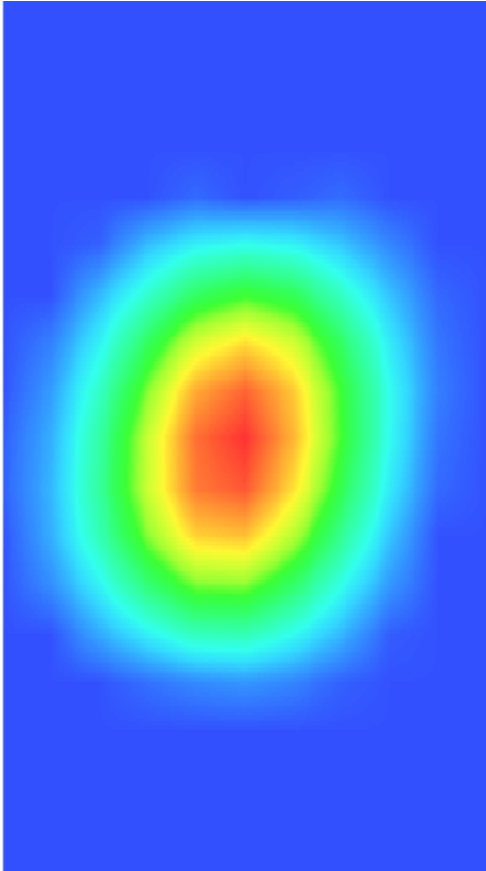
Maximum location: X = -1.00, Y = 0.00

SAR Peak: 6.98 W/kg

SAR 10g (W/Kg)	2.062172
SAR 1g (W/Kg)	4.114412

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	7.0084	4.3633	2.3305	1.2711	0.6827	0.3505	0.1629



3D screen shot	Hot spot position
	

MEASUREMENT 7

Type: Validation measurement (Complete)

Date of measurement: 20/6/2016

Measurement duration: 11 minutes 20 seconds

A. Experimental conditions.

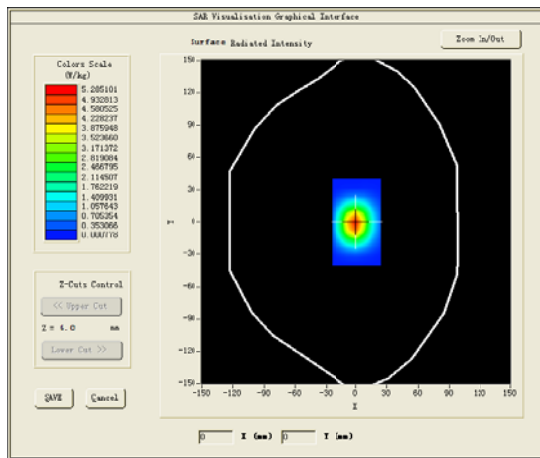
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2450</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

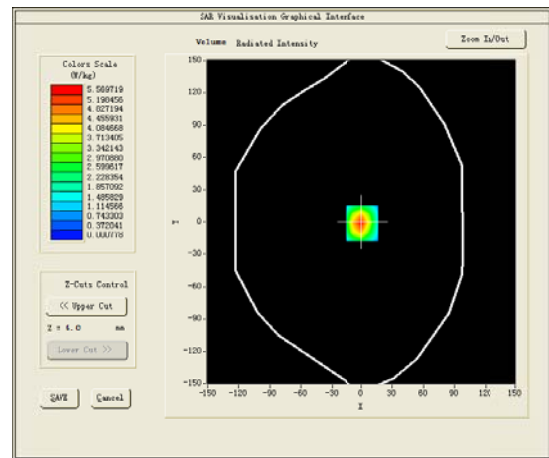
Middle Band SAR (Channel -1):

Frequency (MHz)	2450.000000
Relative permittivity (real part)	52.742599
Relative permittivity (imaginary part)	14.317500
Conductivity (S/m)	1.948771
Variation (%)	2.020000

SURFACE SAR



VOLUME SAR

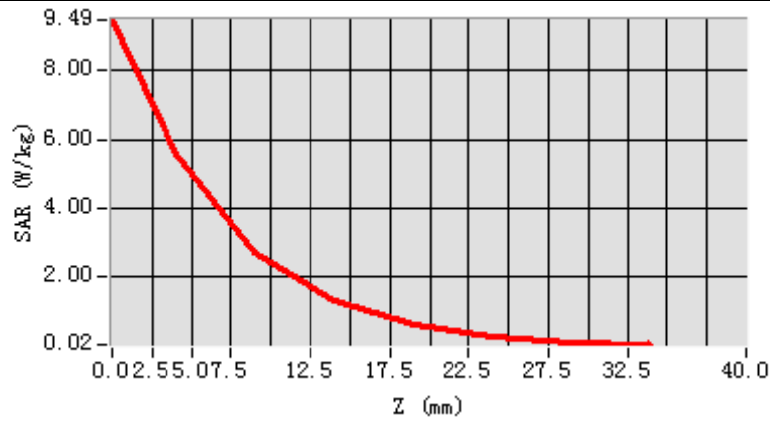


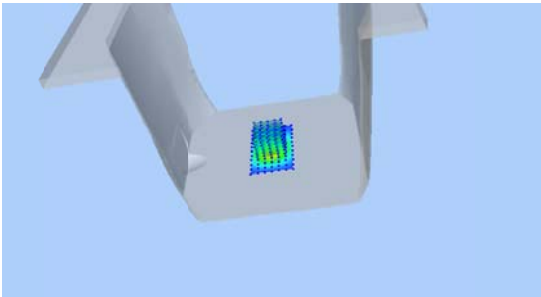
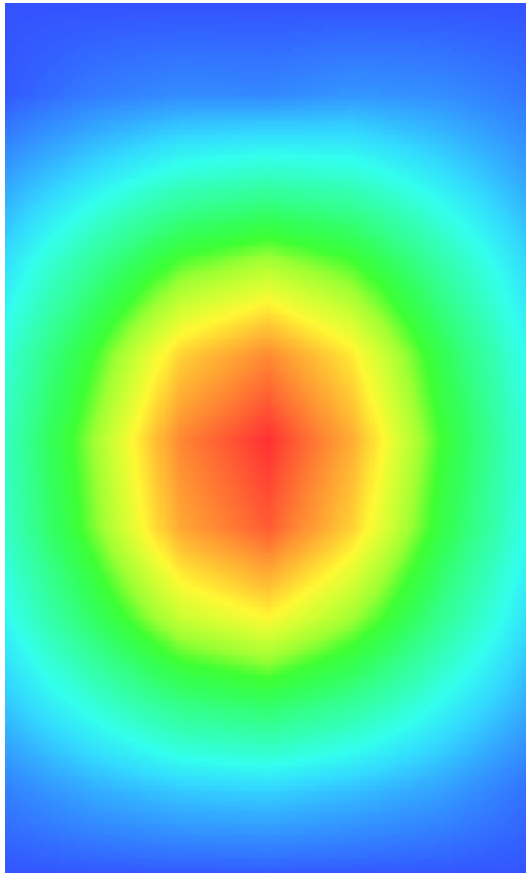
Maximum location: X=0.00, Y=-1.00

SAR Peak: 10.20 W/kg

SAR 10g (W/Kg)	2.576202
SAR 1g (W/Kg)	5.643891

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.4884	5.5697	2.6880	1.3102	0.6207	0.2724	0.0955



3D screen shot	Hot spot position
	

MEASUREMENT 8

Type: Validation measurement (Complete)

Date of measurement: 20/6/2016

Measurement duration: 10 minutes 39 seconds

A. Experimental conditions.

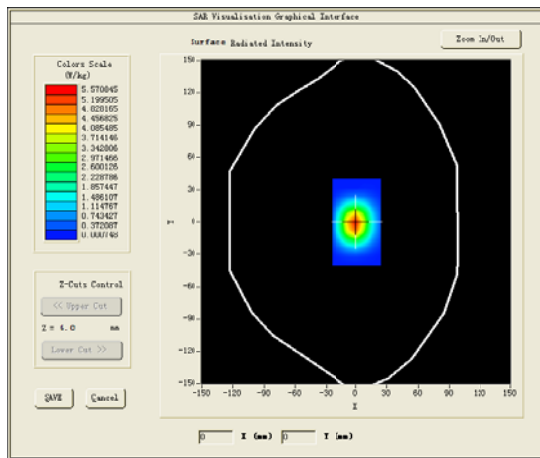
<u>Area Scan</u>	<u>dx=8mm dy=8mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm</u> <u>dz=5mm, Complete</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2450</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>

B. SAR Measurement Results

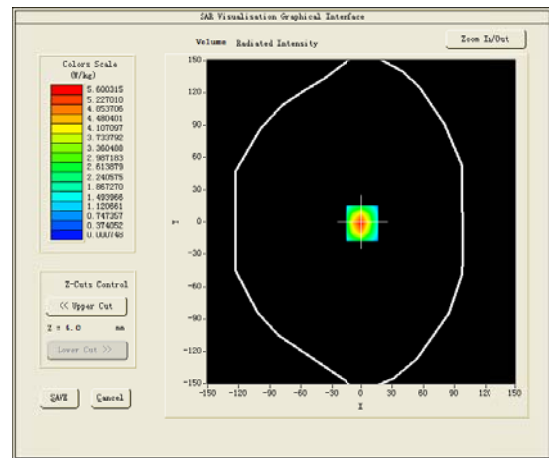
Middle Band SAR (Channel -1):

Frequency (MHz)	2450.000000
Relative permittivity (real part)	39.285599
Relative permittivity (imaginary part)	13.216000
Conductivity (S/m)	1.798844
Variation (%)	0.310000

SURFACE SAR



VOLUME SAR

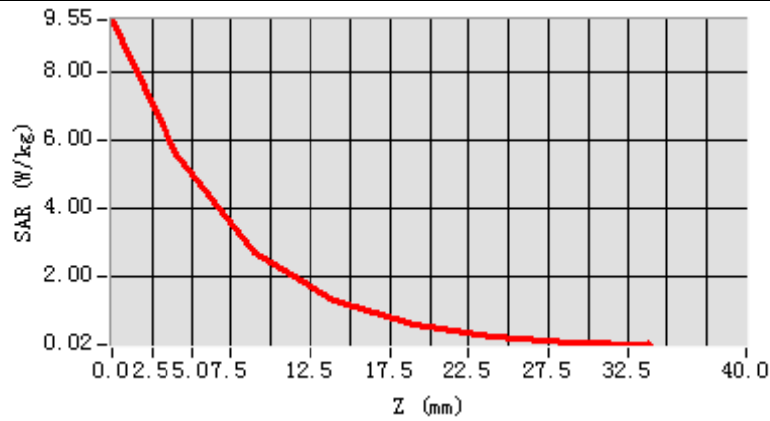


Maximum location: X=0.00, Y=-1.00

SAR Peak: 9.48 W/kg

SAR 10g (W/Kg)	2.379353
SAR 1g (W/Kg)	5.241689

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.5519	5.6003	2.6971	1.3148	0.6202	0.2707	0.0931



3D screen shot	Hot spot position
