



# **Annex A: System Check**

**Project Name: W5** 

**Report Number:** 

FCC16083896A-6

### I. RESULTS

<u>TYPE</u>	BAND	<u>PARAMETERS</u>
Validation	CW835	Measurement 1: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW835	Measurement 2: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1800	Measurement 3: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1800	Measurement 4: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1900	Measurement 5: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW1900	Measurement 6: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW2450	Measurement 7: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW2450	Measurement 8: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW2600	Measurement 9: Validation Plane with Dipole device position on Middle Channel in CW mode
Validation	CW2600	Measurement 10: Validation Plane with Dipole device position on Middle Channel in CW mode



### **HEAD**

Type: Validation measurement (Complete)

Date of measurement: 19/8/2016

Measurement duration: 11 minutes 48 seconds

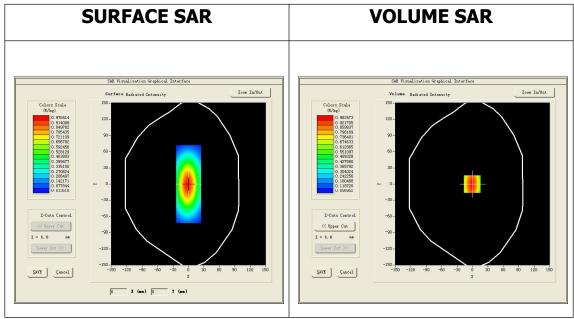
## A. Experimental conditions.

Area Scan	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

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

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.526699
Relative permittivity (imaginary part)	19.965200
Conductivity (S/m)	0.926163
Variation (%)	0.920000

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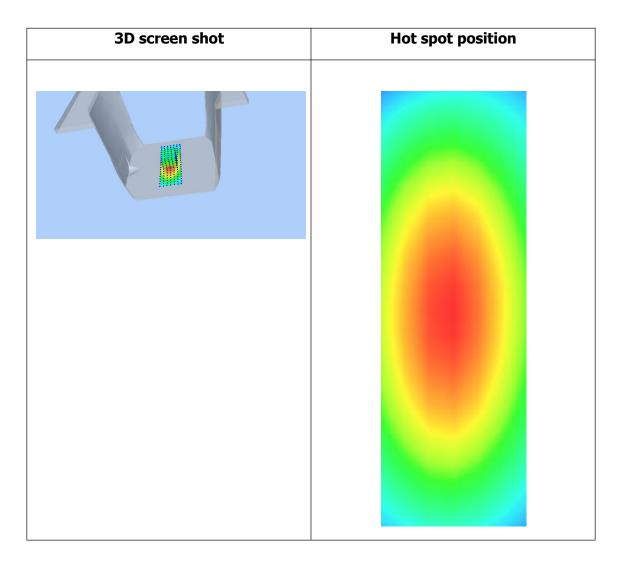


Maximum location: X=-1.00, Y=0.00

SAR Peak: 1.37 W/kg

SAR 10g (W/Kg)	6.10478	
SAR 1g (W/Kg)	9.69519	

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.3713	0.9835	0.6484	0.4339	0.2906	0.1933	0.1261
	1. 4 - 1. 2 - 1. 0						
	0.4 0.2 0.1-	02.55.07.5		.5 22.5 2 Z (mm)	27.5 32.5	40.0	





## **BODY**

Type: Validation measurement (Complete)

Date of measurement: 19/8/2016

Measurement duration: 11 minutes 47 seconds

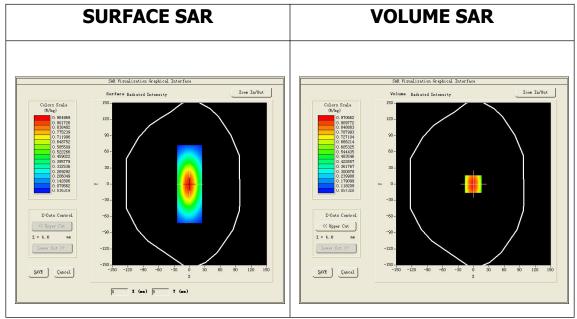
### A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW835</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

## **B. SAR Measurement Results**

Frequency (MHz)	835.000000
Relative permittivity (real part)	53.439098
Relative permittivity (imaginary part)	21.715401
Conductivity (S/m)	1.007353
Variation (%)	0.760000

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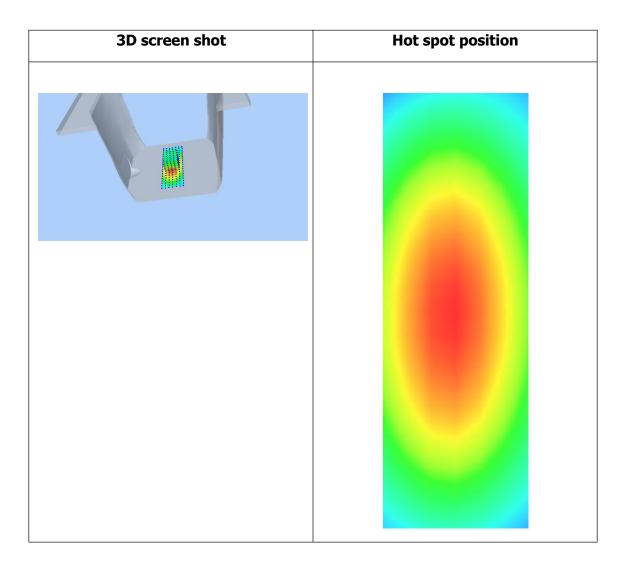


Maximum location: X=-1.00, Y=0.00

SAR Peak: 1.47 W/kg

SAR 10g (W/Kg)	6.61623
SAR 1g (W/Kg)	10.49474

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.3515	0.9707	0.6410	0.4295	0.2884	0.1920	0.1262
	1.4- 1.2- 1.0- 2W (%//kg) 8WS - 0.6- 0.4-						
	0.1- 0.	02.55.07.5		.5 22.5 2 Z (mm)	27.5 32.5	40.0	





## **BODY**

Type: Validation measurement (Complete)

Date of measurement: 27/8/2016

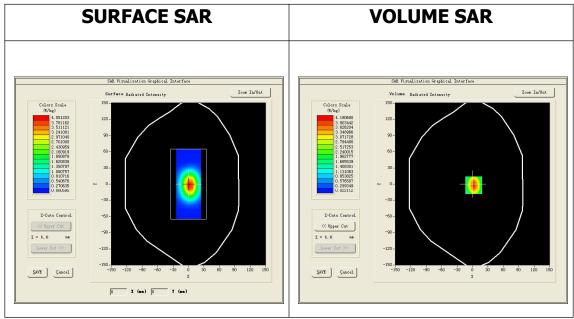
Measurement duration: 11 minutes 59 seconds

### A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

## **B. SAR Measurement Results**

Frequency (MHz)	1800.000000
Relative permittivity (real part)	53.054001
Relative permittivity (imaginary part)	14.715600
Conductivity (S/m)	1.471560
Variation (%)	0.070000

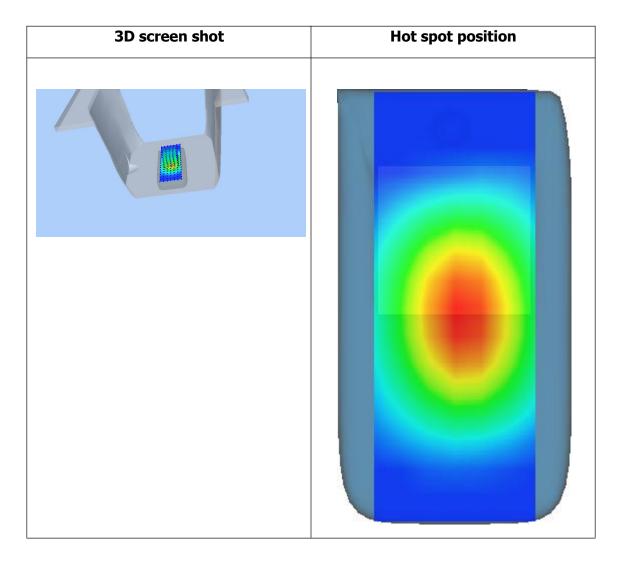


Maximum location: X=2.00, Y=-2.00

SAR Peak: 6.88 W/kg

SAR 10g (W/Kg)	21.32362	
SAR 1g (W/Kg)	41.04705	

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.6543	4.1807	2.2751	1.2686	0.7073	0.3838	0.1975
	6.65						
	6.00-	1				100	
	5,00-						
	æ 4.00-						
	.00 -4.00 3.00 -						
	중 2.00-						
	1.00-						
	0.10-			1			
		0.02.55.07.5	12.5 17	.5 22.5	27.5 32.5	40.0	
				Z (mm)			





## **HEAD**

Type: Validation measurement (Complete)

Date of measurement: 27/8/2016

Measurement duration: 12 minutes 2 seconds

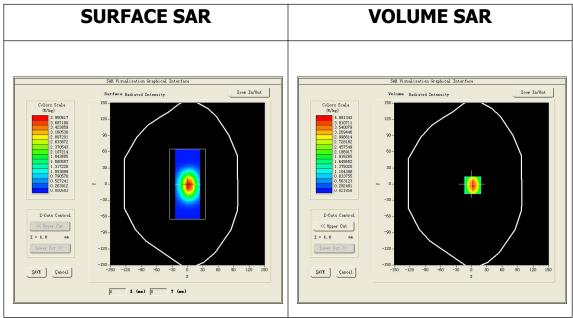
### A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW1800</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

## **B. SAR Measurement Results**

Frequency (MHz)	1800.000000
Relative permittivity (real part)	39.970501
Relative permittivity (imaginary part)	14.110600
Conductivity (S/m)	1.411060
Variation (%)	0.430000

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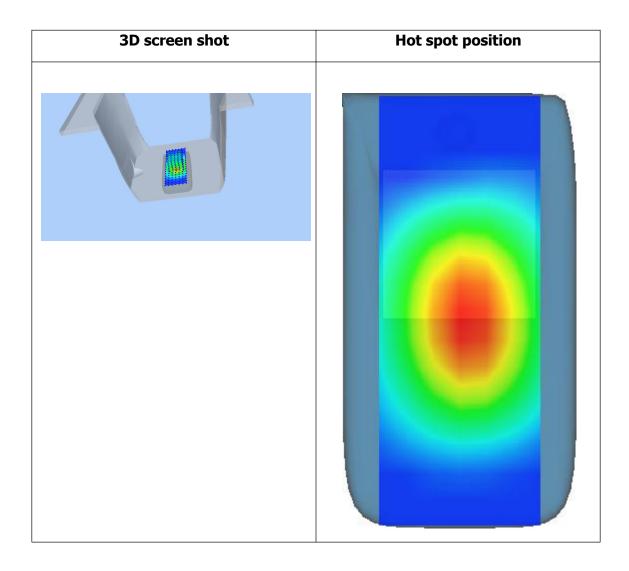


Maximum location: X=2.00, Y=-2.00

SAR Peak: 6.44 W/kg

SAR 10g (W/Kg)	20.07012
SAR 1g (W/Kg)	38.65479

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.4983	4.0813	2.2222	1.2407	0.6952	0.3777	0.1952
	6.50-						
	5.00-						
	3 <u>45</u> 0						
	.00 4.00 3.00 -	-					
	र्छ 2.00-						
	1.00-		+				
	0. 10 - 0			.5 22.5	27.5 32.5	40.0	
	~			Z (mm)			





## **BODY**

Type: Validation measurement (Complete)

Date of measurement: 24/8/2016

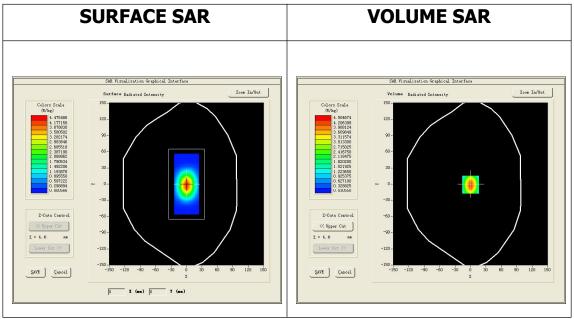
Measurement duration: 11 minutes 20 seconds

### A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

## **B. SAR Measurement Results**

1900.000000
52.238701
14.662300
1.547687
-0.120000

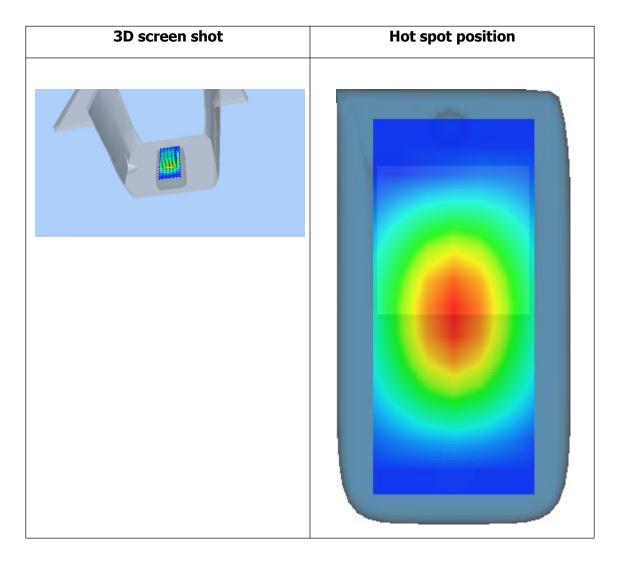


Maximum location: X=0.00, Y=-1.00

SAR Peak: 7.00 W/kg

SAR 10g (W/Kg)	22.16406
SAR 1g (W/Kg)	42.98718

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	7.0414	4.5047	2.5140	1.4403	0.8196	0.4627	0.2535
	7.04						
	6.00						
	5.00						
	(29 4.00 8)						
	공 왕 3.00-						
	2.00						
	1.00					- 45	
	0.13					1	
	C	0.02.55.07.5	12.5 17	.5 22.5 : Z (mm)	27.5 32.5	40.0	
				o componential • concerc • F   a 5			





## **HEAD**

Type: Validation measurement (Complete)

Date of measurement: 24/8/2016

Measurement duration: 11 minutes 21 seconds

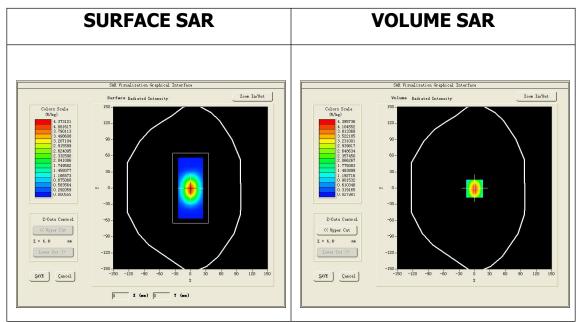
### **A. Experimental conditions.**

<u>Area Scan</u>	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

## **B. SAR Measurement Results**

Frequency (MHz)	1900.000000
Relative permittivity (real part)	52.238701
Relative permittivity (imaginary part)	14.662300
Conductivity (S/m)	1.547687
Variation (%)	-0.060000

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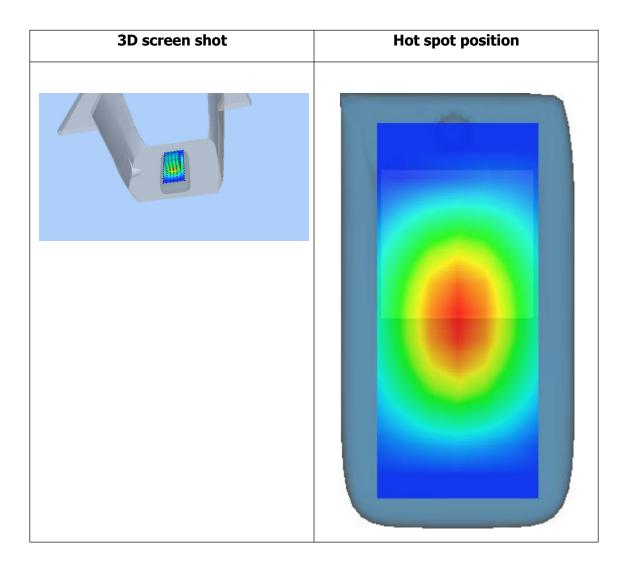


Maximum location: X=0.00, Y=-1.00

SAR Peak: 6.84 W/kg

SAR 10g (W/Kg)	21.46633
SAR 1g (W/Kg)	41.50148

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.8761	4.3957	2.4510	1.4045	0.7983	0.4499	0.2451
	6.88- 6.00-						
	5.00-						
	(29 4.00- 8	$\rightarrow$					
	¥ 3.00-						
	2.00 - 1.00 -						
	0.12-					10,0	
		.02.55.07.5	12.5 17	.5 22.5 ; Z (mm)	27.5 32.5	40.0	





## **BODY**

Type: Validation measurement (Complete)

Date of measurement: 20/8/2016

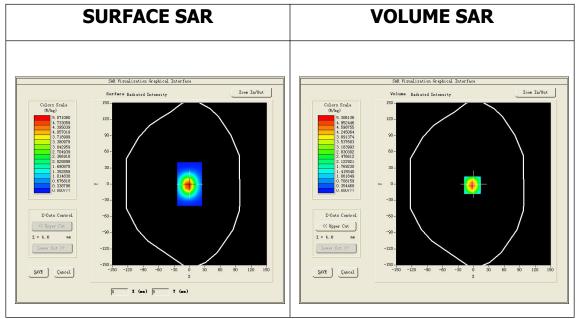
Measurement duration: 10 minutes 15 seconds

### A. Experimental conditions.

Area Scan	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW2450</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

## **B. SAR Measurement Results**

2450.000000
54.220600
14.968800
2.037420
0.050000

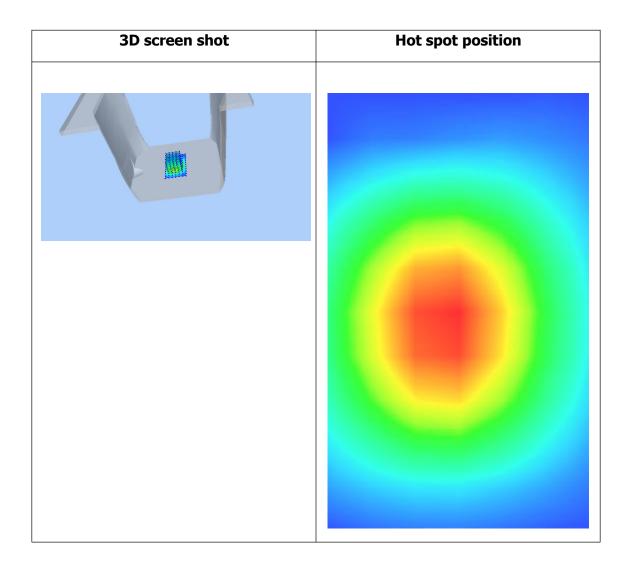


Maximum location: X=-2.00, Y=-2.00

SAR Peak: 10.27 W/kg

SAR 10g (W/Kg)	25.83320
SAR 1g (W/Kg)	57.34640

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.1411	5.3061	2.4999	1.1841	0.5409	0.2294	0.0858
	9. 14 - 8. 00 -						<u>I</u>
	SAR (#/kg) -00.9					1	
	9 4.00-					-	
	2.00-	10					
	0.02		10.5	<del></del>	7 5 20 5	10,0	
		0.02.55.07.5	12.5 17	7.5 22.5 : Z (mm)	27.5 32.5	40.0	





## **HEAD**

Type: Validation measurement (Complete)

Date of measurement: 20/8/2016

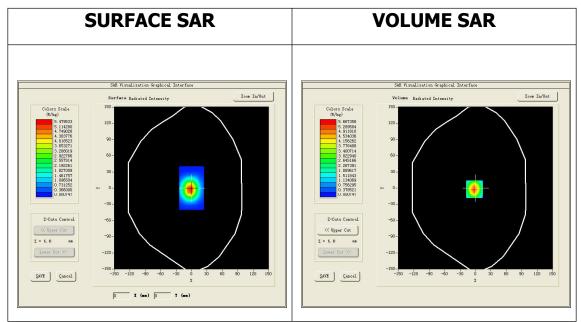
Measurement duration: 10 minutes 16 seconds

### A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW2450</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

## **B. SAR Measurement Results**

Frequency (MHz)	2450.000000
Relative permittivity (real part)	39.274300
Relative permittivity (imaginary part)	13.209200
Conductivity (S/m)	1.797919
Variation (%)	-0.070000

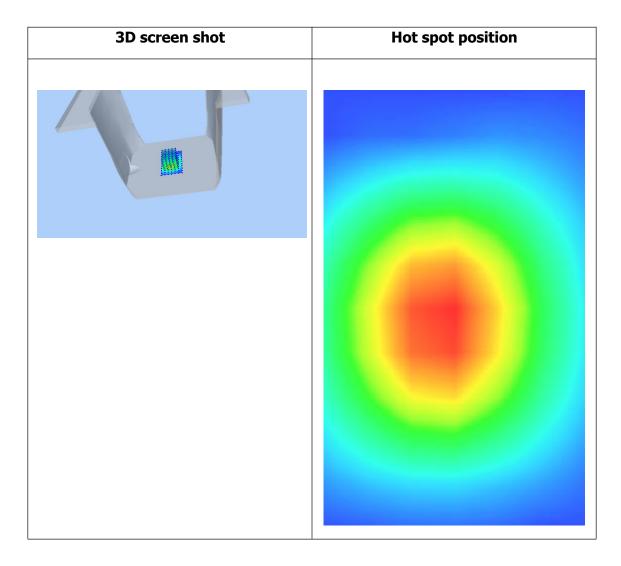


Maximum location: X=-2.00, Y=-2.00

SAR Peak: 9.73 W/kg

SAR 10g (W/Kg)	23.89643
SAR 1g (W/Kg)	53.19294

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.8410	5.6674	2.6392	1.2582	0.5748	0.2432	0.0901
	9.84- 8.00-						
	% (% /kg) 34 4.00- 2.00-						
	0.02-		12.5 17	7.5 22.5 2 Z (nm)	27.5 32.5	40.0	





## **BODY**

Type: Validation measurement (Complete)

Date of measurement: 29/8/2016

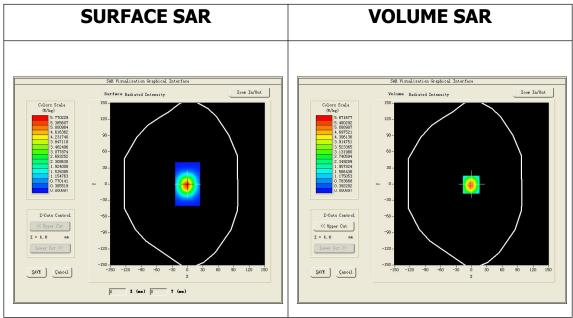
Measurement duration: 10 minutes 30 seconds

### A. Experimental conditions.

Area Scan	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<b>Device Position</b>	<u>Dipole</u>
<u>Band</u>	<u>CW2600</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	CW (Crest factor: 1.0)

## **B. SAR Measurement Results**

2600.000000
52.593700
15.205400
2.196336
-0.080000

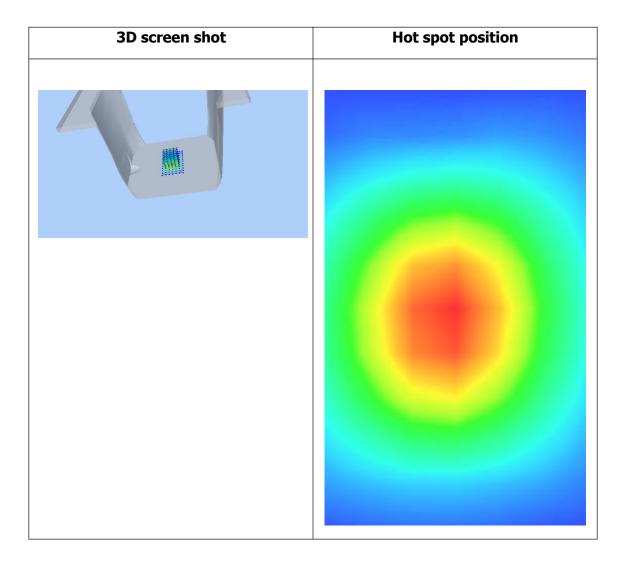


Maximum location: X=-1.00, Y=-1.00

SAR Peak: 11.30 W/kg

SAR 10g (W/Kg)	26.74928
SAR 1g (W/Kg)	60.96026

Z (mm) SAR (W/Kg)	0.00 10.410 7	9.00     14.00       2.6201     1.1660	14.00	19.00 0.4942	24.00 0.1858	29.00 0.0567
			1.1660			
	10.41 8.00 8.00 6.00 4.00 2.00 0.01	5 12.5 1	7.5 22.5 Z (mm)	27.5 32.5	40.0	





## **HEAD**

Type: Validation measurement (Complete)

Date of measurement: 29/8/2016

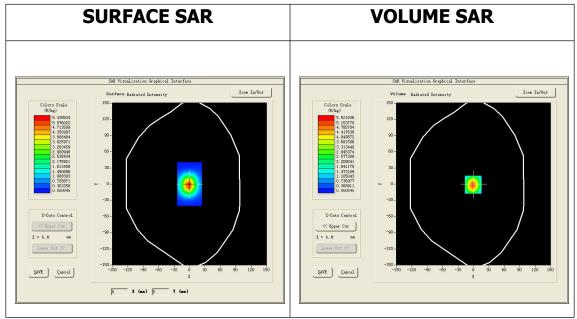
Measurement duration: 10 minutes 28 seconds

### A. Experimental conditions.

Area Scan	dx=12mm dy=12mm  5x5x7,dx=8mm dy=8mm dz=5mm,Complete  Validation plane			
<u>ZoomScan</u>				
<u>Phantom</u>				
<b>Device Position</b>	<u>Dipole</u>			
<u>Band</u>	<u>CW2600</u>			
<u>Channels</u>	<u>Middle</u>			
<u>Signal</u>	CW (Crest factor: 1.0)			

## **B. SAR Measurement Results**

Frequency (MHz)	2600.000000
Relative permittivity (real part)	39.051800
Relative permittivity (imaginary part)	13.905600
Conductivity (S/m)	2.008587
Variation (%)	-0.120000



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

SAR Peak: 9.72 W/kg

SAR 10g (W/Kg)	23.06832
SAR 1g (W/Kg)	52.61117

Z (mm) SAR (W/Kg)	0.00 9.7899		9.00 2.4644	14.00	19.00 0.4671	24.00 0.1769	29.00 0.0546
	8.00-	<del>\</del>					
	(%) 6.00 - (%)/⊮						
	≩ ≪ 4.00.						
	왕 4.00-						
	2,00-						
	0.01		12.5 17	7.5 22.5	27.5 32.5	40.0	
	ř			Z (mm)		2,74,750,0	

