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# **Annex B: Measurement Results**

**Project Name: X556** 

**Report Number:** 

FCC16083919A



Type: Phone measurement (Complete)

Date of measurement: 23/8/2016

Measurement duration: 9 minutes 59 seconds

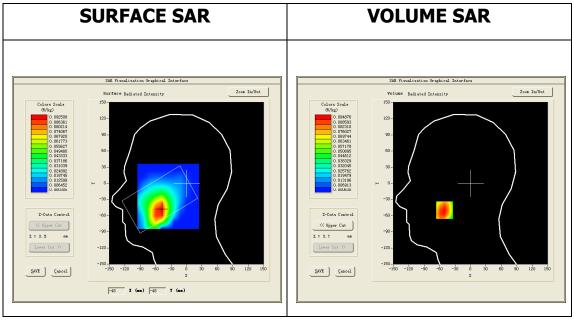
# A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Left head</u>	
<u>Device Position</u>	<u>Cheek</u>	
<u>Band</u>	CUSTOM (GPRS850 4Tx)	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	Duty Cycle: 2.00 (Crest factor: 2.0)	
Conversion factor	<u>4.93</u>	

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

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	40.527519
Relative permittivity (imaginary part)	19.956440
Conductivity (S/m)	0.927531
Variation (%)	0.000000



Maximum location: X=-51.00, Y=-50.00

SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	0.088066
SAR 1g (W/Kg)	0.124877



# Towards-ground-middle

Type: Phone measurement (Complete)

Date of measurement: 23/8/2016

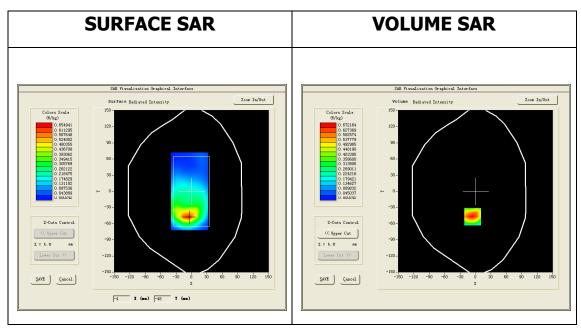
Measurement duration: 9 minutes 36 seconds

#### 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>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	CUSTOM (GPRS850 4Tx)	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	Duty Cycle: 2.00 (Crest factor: 2.0)	
Conversion factor	<u>5.07</u>	

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

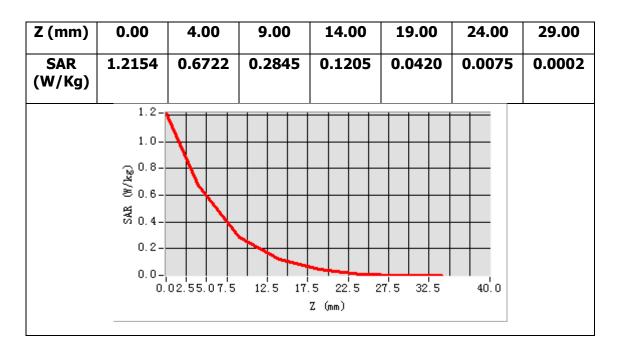
Frequency (MHz)	836.599976
Relative permittivity (real part)	53.395020
Relative permittivity (imaginary part)	21.690760
Conductivity (S/m)	1.008138
Variation (%)	2.300000

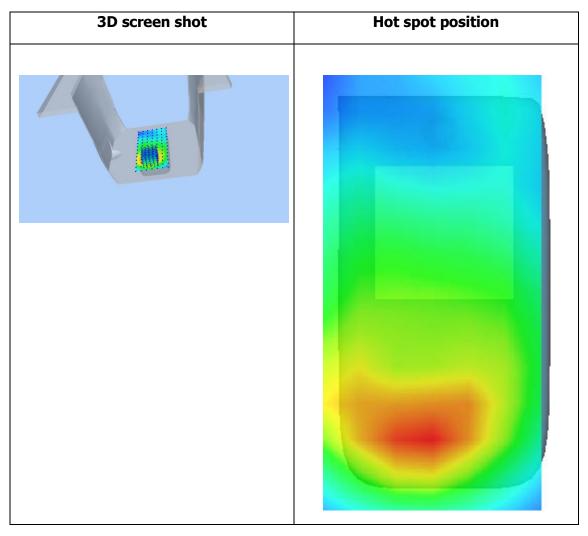


Maximum location: X=-6.00, Y=-47.00

SAR Peak: 1.21 W/kg

SAR 10g (W/Kg)	0.301262
SAR 1g (W/Kg)	0.563167







### Rear-side-middle

Type: Phone measurement (Complete)

Date of measurement: 23/8/2016

Measurement duration: 9 minutes 22 seconds

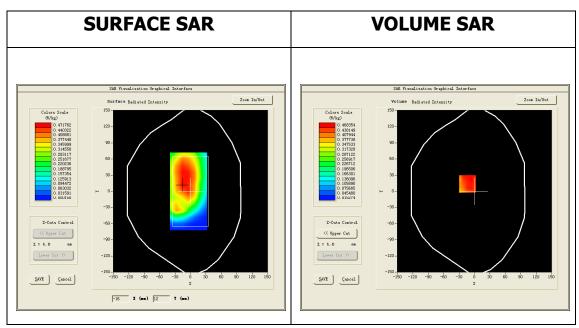
### A. Experimental conditions.

<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>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	CUSTOM (GPRS850 4Tx)	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	Duty Cycle: 2.00 (Crest factor: 2.0)	
Conversion factor	5.07	

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

Frequency (MHz)	836.599976
Relative permittivity (real part)	53.395020
Relative permittivity (imaginary part)	21.690760
Conductivity (S/m)	1.008138
Variation (%)	3.120000

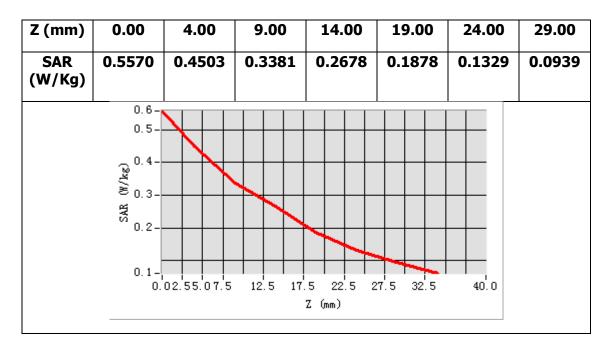
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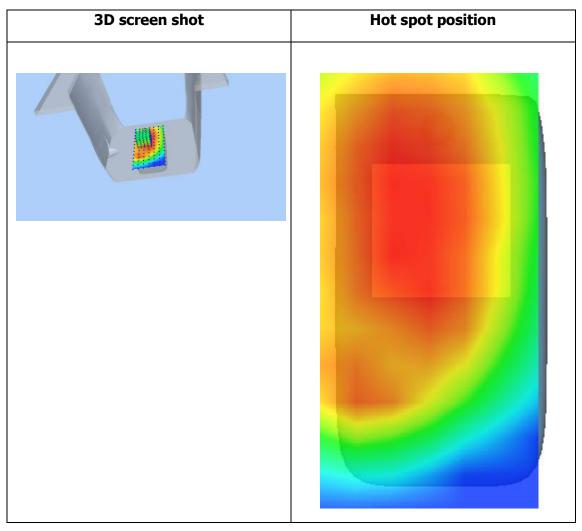


**Maximum location: X=-14.00, Y=14.00** 

SAR Peak: 0.60 W/kg

SAR 10g (W/Kg)	0.341860
SAR 1g (W/Kg)	0.469918







Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

Measurement duration: 10 minutes 16 seconds

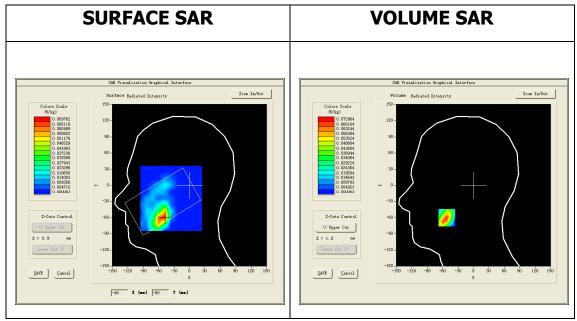
# A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Right head</u>	
<u>Device Position</u>	<u>Cheek</u>	
<u>Band</u>	CUSTOM (GPRS1900 4Tx)	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	Duty Cycle: 2.00 (Crest factor: 2.0)	
Conversion factor	<u>4.63</u>	

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

Middle Band SAR (Channel 661):

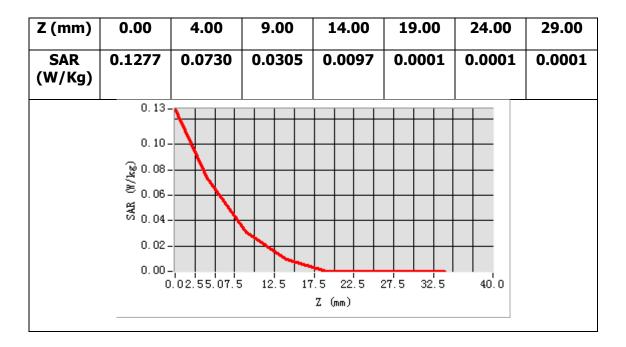
Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.054401
Relative permittivity (imaginary part)	13.497900
Conductivity (S/m)	1.409781
Variation (%)	0.000000

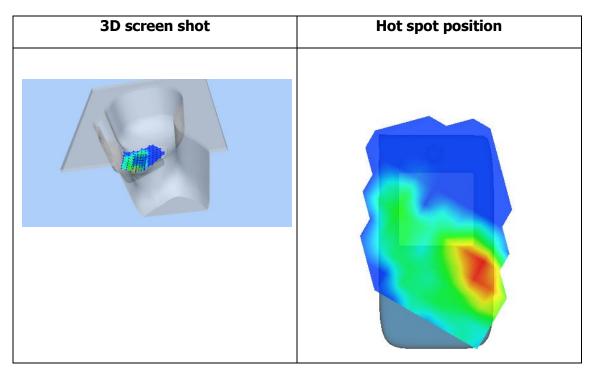


**Maximum location: X=-52.00, Y=-60.00** 

SAR Peak: 0.13 W/kg

SAR 10g (W/Kg)	0.027136
SAR 1g (W/Kg)	0.067711







# Towards-ground-middle

Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

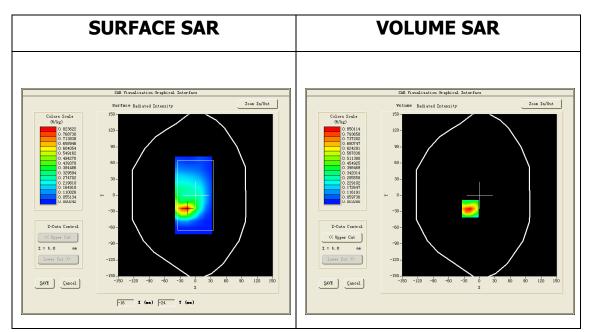
Measurement duration: 8 minutes 3 seconds

### 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>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	CUSTOM (GPRS1900 4Tx)	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	Duty Cycle: 2.00 (Crest factor: 2.0)	
Conversion factor	4.78	

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

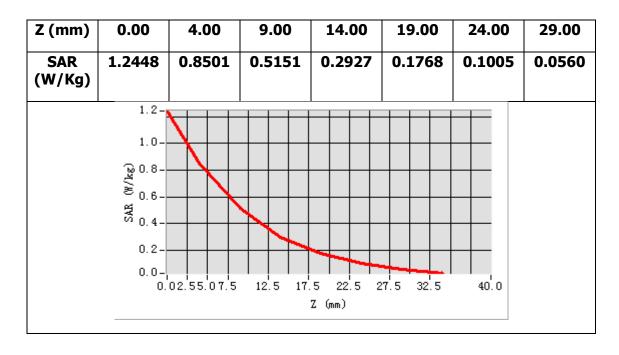
Frequency (MHz)	1880.000000
Relative permittivity (real part)	52.254400
Relative permittivity (imaginary part)	14.597950
Conductivity (S/m)	1.525980
Variation (%)	4.820000

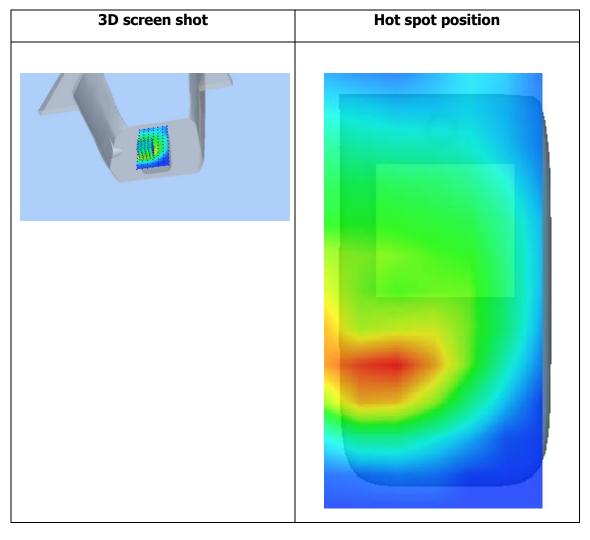


**Maximum location: X=-18.00, Y=-25.00** 

SAR Peak: 1.35 W/kg

SAR 10g (W/Kg)	0.431069
SAR 1g (W/Kg)	0.530071







# Bottom-edge-middle

Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

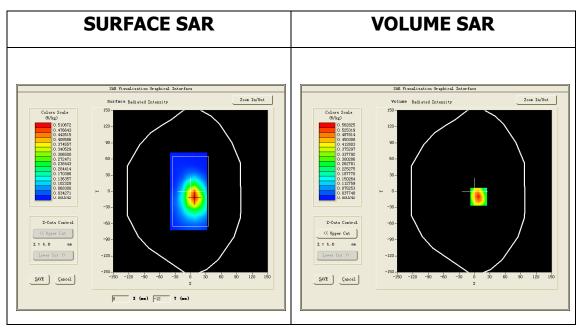
Measurement duration: 12 minutes 5 seconds

#### 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>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	CUSTOM (GPRS1900 4Tx)	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	Duty Cycle: 2.00 (Crest factor: 2.0)	
Conversion factor	<u>4.78</u>	

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

Frequency (MHz)	1880.000000	
Relative permittivity (real part)	52.254400	
Relative permittivity (imaginary part)	14.597950	
Conductivity (S/m)	1.525980	
Variation (%)	-0.200000	

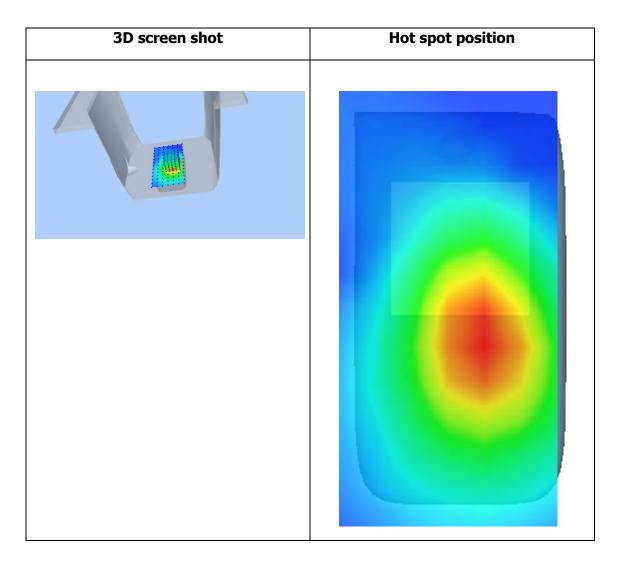


Maximum location: X=8.00, Y=-10.00

SAR Peak: 0.85 W/kg

SAR 10g (W/Kg)	0.100348
SAR 1g (W/Kg)	0.205505

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.8526	0.5628	0.3258	0.2055	0.1129	0.0602	0.0308
	0.9- 0.7- 0.6- 0.5- 0.4- 0.3- 0.2- 0.1- 0.0-	02.55.07.5	12.5 17	.5 22.5 2 Z (mm)	27.5 32.5	40.0	





Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

Measurement duration: 10 minutes 47 seconds

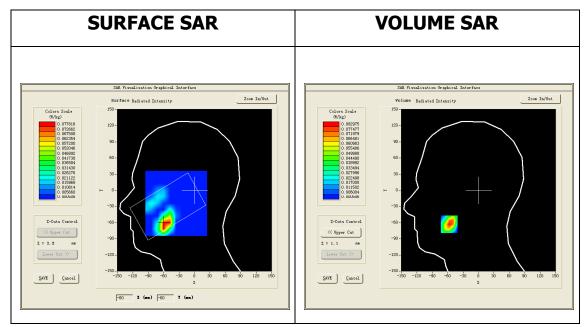
### A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Left head</u>	
<u>Device Position</u>	<u>Cheek</u>	
<u>Band</u>	Band2 WCDMA1900	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	WCDMA (Crest factor: 1.0)	
Conversion factor	<u>4.63</u>	

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

Middle Band SAR (Channel 9400):

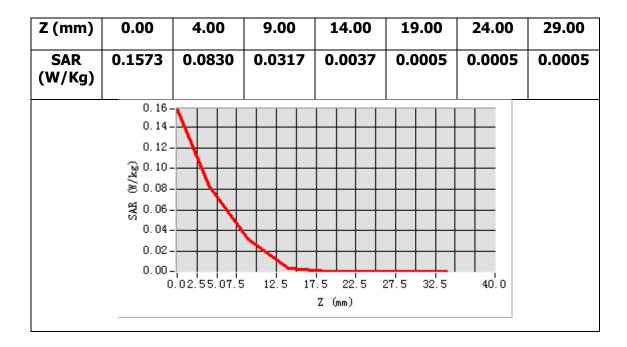
Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.054401
Relative permittivity (imaginary part)	13.497900
Conductivity (S/m)	1.409781
Variation (%)	0.000000

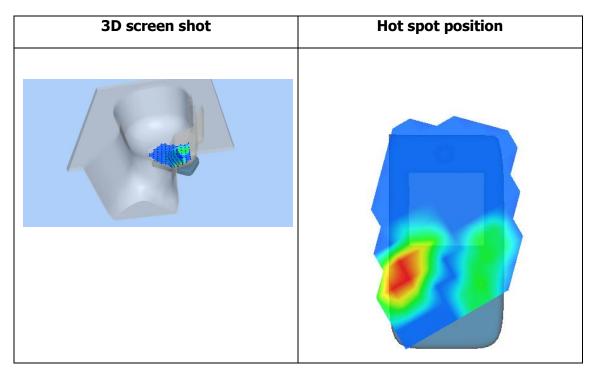


**Maximum location: X=-57.00, Y=-63.00** 

SAR Peak: 0.19 W/kg

SAR 10g (W/Kg)	0.029534
SAR 1g (W/Kg)	0.083211







Rear-Side -middle

Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

Measurement duration: 10 minutes 57 seconds

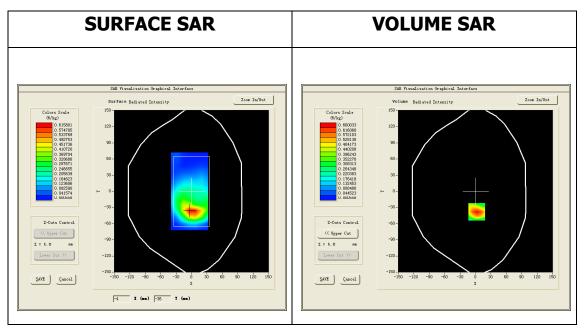
### A. Experimental conditions.

<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>	
<u>Device Position</u>	Body	
<u>Band</u>	Band2 WCDMA1900	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	WCDMA (Crest factor: 1.0)	
Conversion factor	4.78	

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

### Middle Band SAR (Channel 9400):

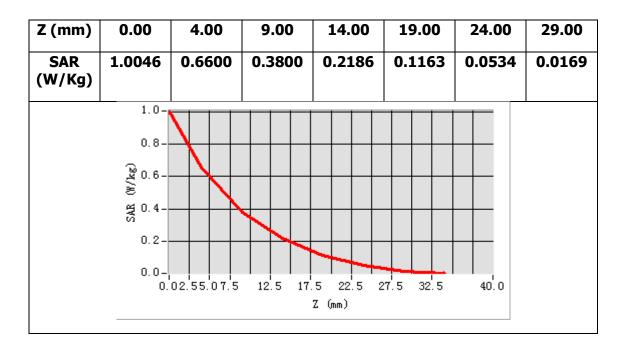
Frequency (MHz)	1880.000000
Relative permittivity (real part)	52.254398
Relative permittivity (imaginary part)	14.597900
Conductivity (S/m)	1.524670
Variation (%)	2.140000

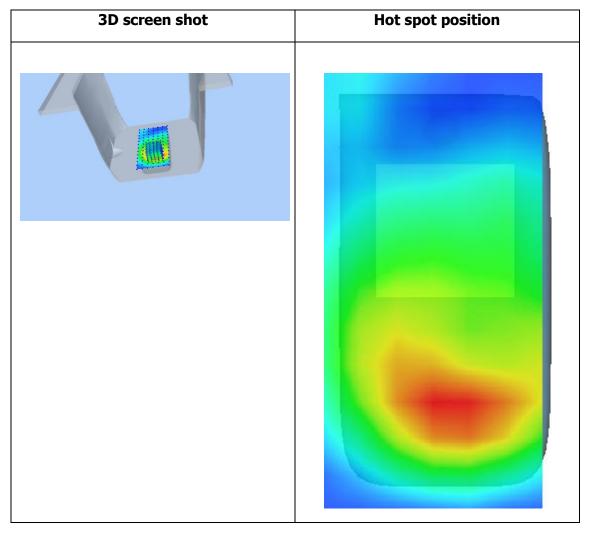


Maximum location: X=2.00, Y=-38.00

SAR Peak: 1.00 W/kg

SAR 10g (W/Kg)	0.263830
SAR 1g (W/Kg)	0.458014







# Towards-ground-middle

Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

Measurement duration: 7 minutes 44 seconds

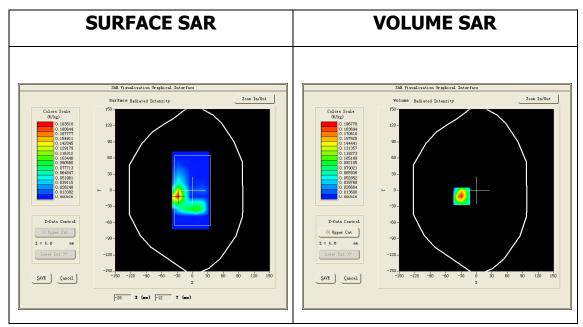
### A. Experimental conditions.

<u>Area Scan</u>	dx=15mm dy=15mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	Band2 WCDMA1900
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	WCDMA (Crest factor: 1.0)
Conversion factor	<u>4.78</u>

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

### Middle Band SAR (Channel 9400):

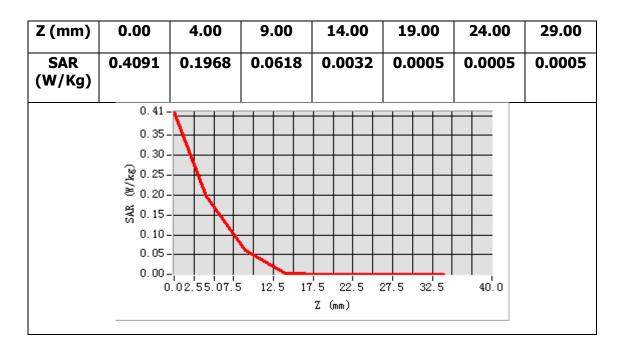
Frequency (MHz)	1880.000000
Relative permittivity (real part)	52.254398
Relative permittivity (imaginary part)	14.597900
Conductivity (S/m)	1.524670
Variation (%)	-1.480000

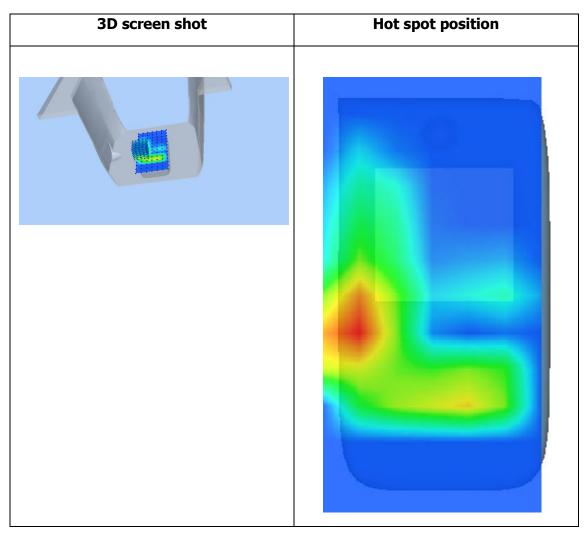


**Maximum location: X=-29.00, Y=-11.00** 

SAR Peak: 0.45 W/kg

SAR 10g (W/Kg)	0.353066
SAR 1g (W/Kg)	0.460383







Type: Phone measurement (Complete)

Date of measurement: 27/8/2016

Measurement duration: 10 minutes 11 seconds

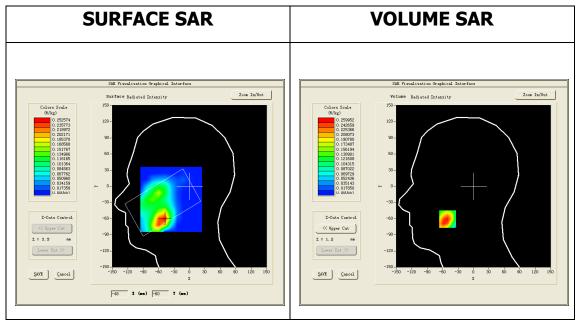
# A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Left head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	Band4 WCDMA1700
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	WCDMA (Crest factor: 1.0)
Conversion factor	<u>4.01</u>

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

Middle Band SAR (Channel 1413):

Frequency (MHz)	1732.500000
Relative permittivity (real part)	39.690201
Relative permittivity (imaginary part)	14.005500
Conductivity (S/m)	1.347640
Variation (%)	0.000000

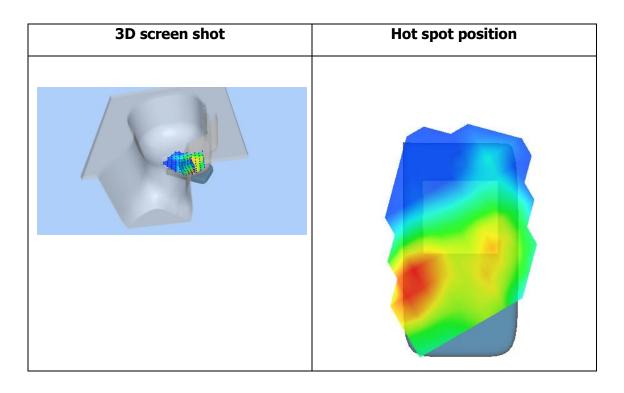


**Maximum location: X=-51.00, Y=-61.00** 

SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.138029
SAR 1g (W/Kg)	0.250865

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3748	0.2600	0.1583	0.0966	0.0522	0.0232	0.0096
	0.37 -				·		
	0.30-	$\perp$					
	(20.25 - 2√ 2€ 0.20 -	+					
		++					
	뙻 0.15-		$\mathcal{H}$				
	0. 10 - 0. 05 -						
	0.00-						
		.'02.'55.'07.'5	12.5 17		27.5 32.5	40.0	
	Z (mm)						





# Towards-ground-middle

Type: Phone measurement (Complete)

Date of measurement: 27/8/2016

Measurement duration: 9 minutes 52 seconds

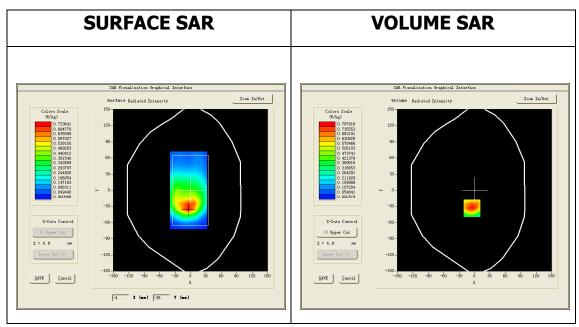
### A. Experimental conditions.

<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>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	Band4 WCDMA1700
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	WCDMA (Crest factor: 1.0)
Conversion factor	4.16

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

#### Middle Band SAR (Channel 1413):

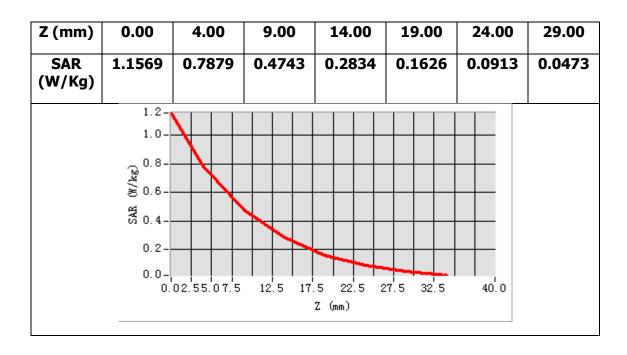
Frequency (MHz)	1732.500000
Relative permittivity (real part)	53.297798
Relative permittivity (imaginary part)	14.675700
Conductivity (S/m)	1.412128
Variation (%)	4.200000

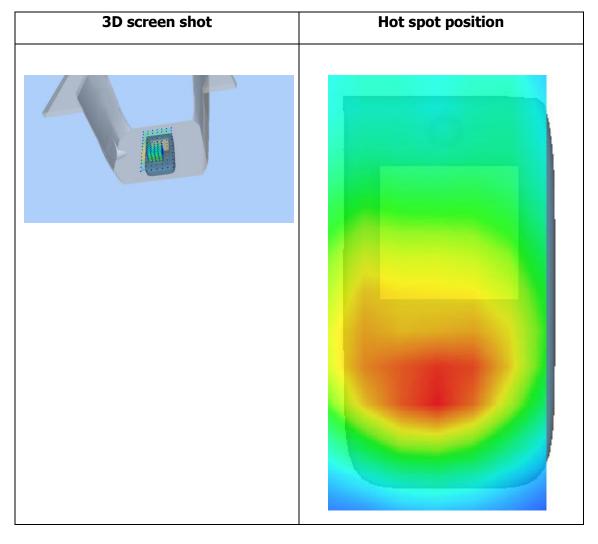


Maximum location: X=-5.00, Y=-33.00

SAR Peak: 1.21 W/kg

SAR 10g (W/Kg)	0.448047
SAR 1g (W/Kg)	0.583961







# Front-Side-middle

Type: Phone measurement (Complete)

Date of measurement: 27/8/2016

Measurement duration: 10 minutes 26 seconds

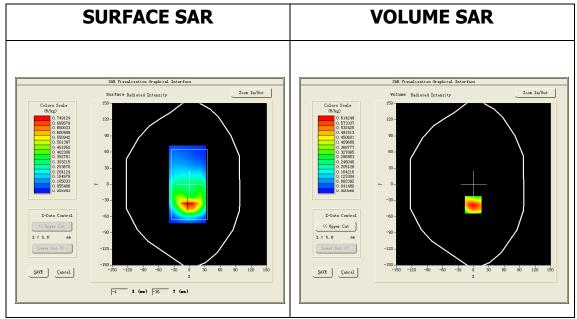
### A. Experimental conditions.

<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>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	Band4 WCDMA1700
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	WCDMA (Crest factor: 1.0)
Conversion factor	<u>4.16</u>

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

### Middle Band SAR (Channel 1413):

Frequency (MHz)	1732.500000
Relative permittivity (real part)	53.297798
Relative permittivity (imaginary part)	14.675700
Conductivity (S/m)	1.412128
Variation (%)	0.960000

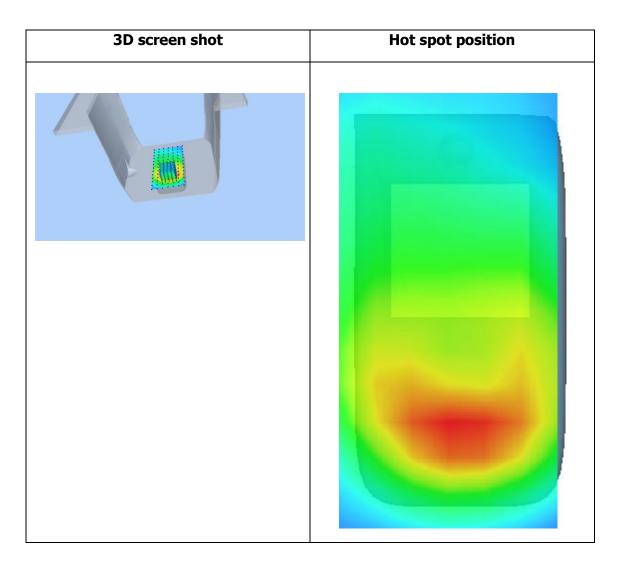


**Maximum location: X=-1.00, Y=-38.00** 

SAR Peak: 0.97 W/kg

SAR 10g (W/Kg)	0.182477
SAR 1g (W/Kg)	0.353112

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.9276	0.6142	0.3589	0.2123	0.1211	0.0637	0.0296
	0.9- 0.8- 0.6- 0.4- 0.2- 0.0-	02.55.07.5	12.5 17.	.5 22.5 2 Z (mm)	27.5 32.5	40.0	





Type: Phone measurement (Complete)

Date of measurement: 23/8/2016

Measurement duration: 10 minutes 22 seconds

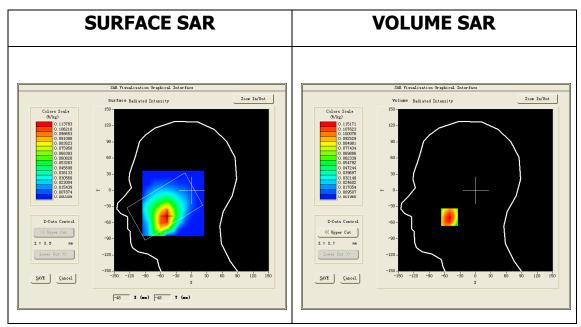
#### A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Left head</u>	
<u>Device Position</u>	<u>Cheek</u>	
<u>Band</u>	Band5 WCDMA850	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	WCDMA (Crest factor: 1.0)	
Conversion factor	<u>4.93</u>	

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

Middle Band SAR (Channel 4182):

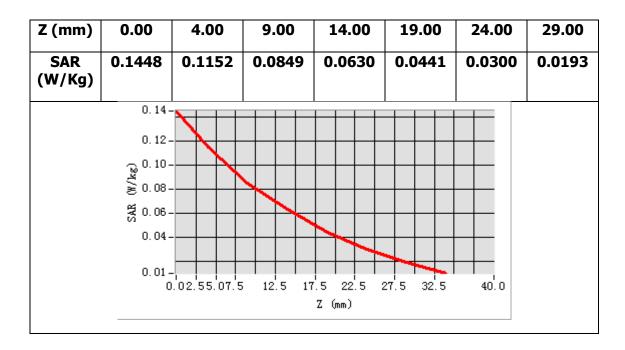
Frequency (MHz)	836.400024
Relative permittivity (real part)	40.538380
Relative permittivity (imaginary part)	19.960159
Conductivity (S/m)	0.927482
Variation (%)	1.450000

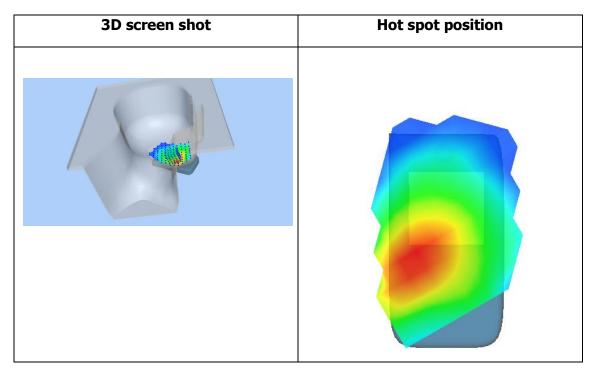


**Maximum location: X=-51.00, Y=-50.00** 

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.076328
SAR 1g (W/Kg)	0.113516







# Towards-ground-middle

Type: Phone measurement (Complete)

Date of measurement: 23/8/2016

Measurement duration: 12 minutes 12 seconds

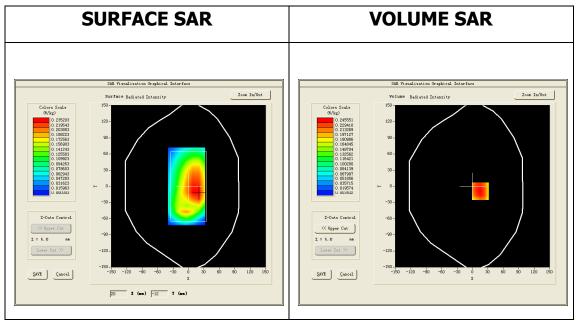
#### A. Experimental conditions.

<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>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	Band5 WCDMA850	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	WCDMA (Crest factor: 1.0)	
Conversion factor	<u>5.07</u>	

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

#### Middle Band SAR (Channel 4182):

Frequency (MHz)	836.400024
Relative permittivity (real part)	53.394279
Relative permittivity (imaginary part)	21.684340
Conductivity (S/m)	1.007599
Variation (%)	-1.250000

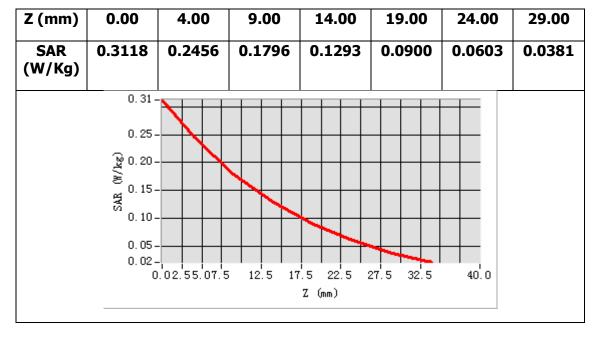


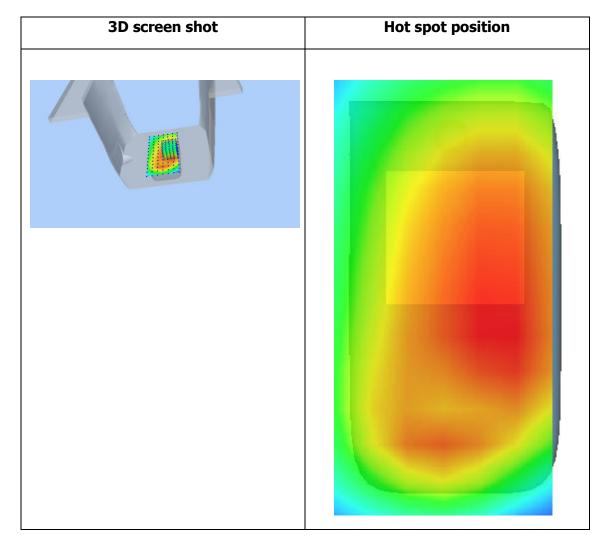
Maximum location: X=15.00, Y=-9.00

SAR Peak: 0.35 W/kg

SAR 10g (W/Kg)	0.184233
SAR 1g (W/Kg)	0.266974









## Rear-Side-middle

Type: Phone measurement (Complete)

Date of measurement: 23/8/2016

Measurement duration: 8 minutes 57 seconds

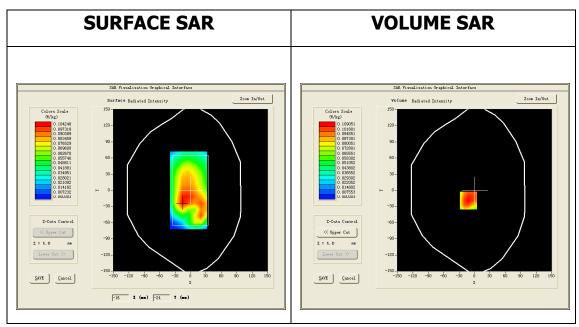
#### A. Experimental conditions.

<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>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	Band5 WCDMA850	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	WCDMA (Crest factor: 1.0)	
Conversion factor	5.07	

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

#### Middle Band SAR (Channel 4182):

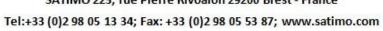
Frequency (MHz)	836.400024
Relative permittivity (real part)	53.394279
Relative permittivity (imaginary part)	21.684340
Conductivity (S/m)	1.007599
Variation (%)	1.090000

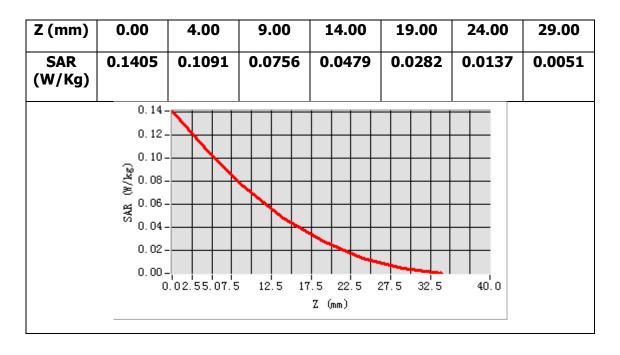


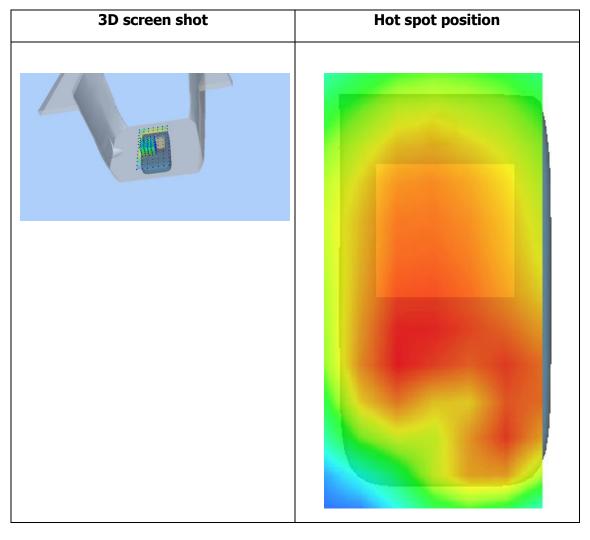
**Maximum location: X=-12.00, Y=-19.00** 

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.330133
SAR 1g (W/Kg)	0.458336









#### 20M-1RB#50

Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

Measurement duration: 10 minutes 7 seconds

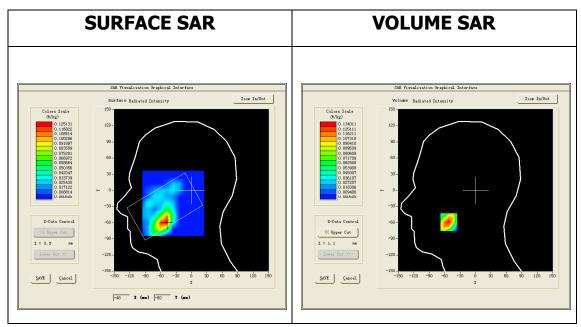
#### A. Experimental conditions.

<u>Area Scan</u>	dx=15mm dy=15mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	Right head	
<u>Device Position</u>	<u>Cheek</u>	
<u>Band</u>	LTE band 2	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	4.63	

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

Middle Band SAR (Channel 19100):

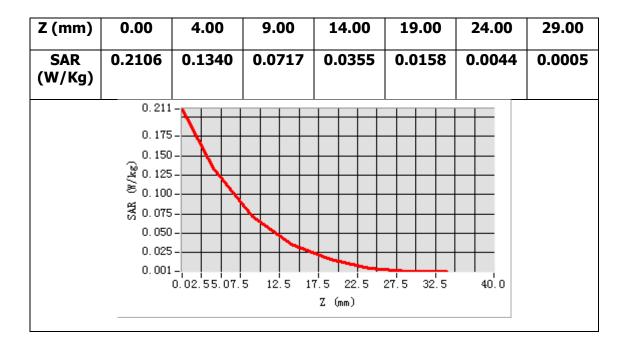
Frequency (MHz)	1900.000000
Relative permittivity (real part)	40.054401
Relative permittivity (imaginary part)	13.497900
Conductivity (S/m)	1.409406
Variation (%)	0.000000

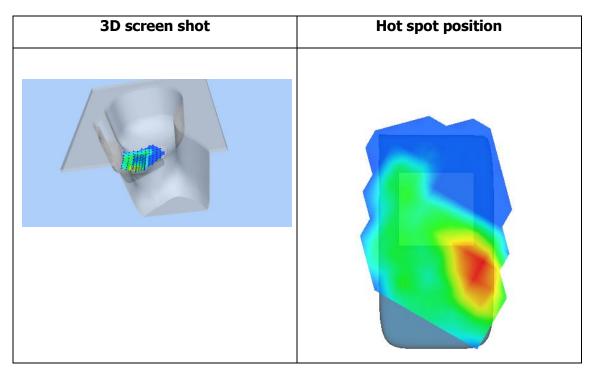


**Maximum location: X=-52.00, Y=-59.00** 

SAR Peak: 0.21 W/kg

SAR 10g (W/Kg)	0.061456
SAR 1g (W/Kg)	0.126550







Right-side-20M-1RB#50-middle

Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

Measurement duration: 7 minutes 52 seconds

#### A. Experimental conditions.

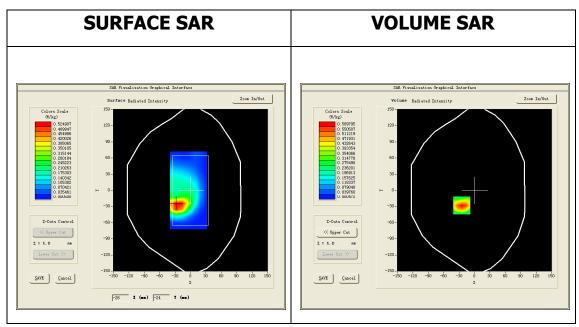
<u>Area Scan</u>	dx=15mm dy=15mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Validation plane</u>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	LTE band 2	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	<u>4.78</u>	

## **B. SAR Measurement Results**

Middle Band SAR (Channel 19100):

Frequency (MHz)	1900.000000
Relative permittivity (real part)	52.254398
Relative permittivity (imaginary part)	14.597900
Conductivity (S/m)	1.524264
Variation (%)	2.640000

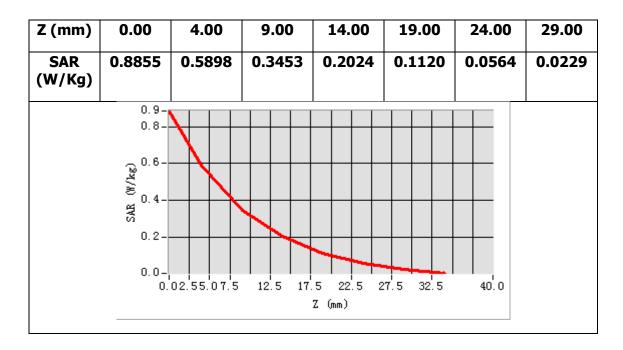
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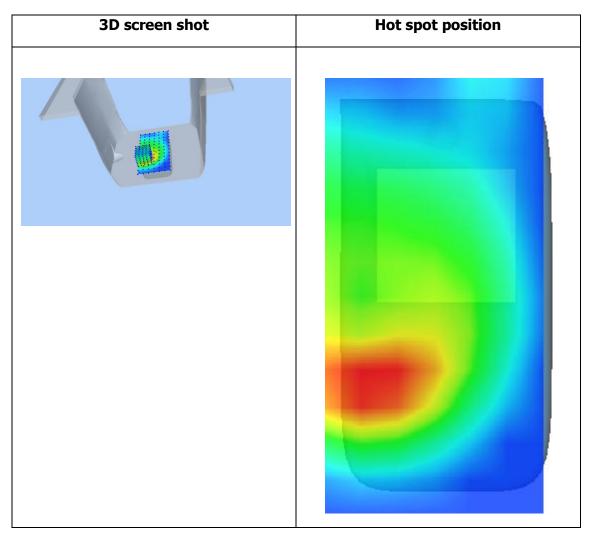


**Maximum location: X=-25.00, Y=-28.00** 

SAR Peak: 0.00 W/kg

SAR 10g (W/Kg)	0.355068
SAR 1g (W/Kg)	0.502158







## Towards-phantom-20M-50RB#50-middle

Type: Phone measurement (Complete)

Date of measurement: 24/8/2016

Measurement duration: 7 minutes 50 seconds

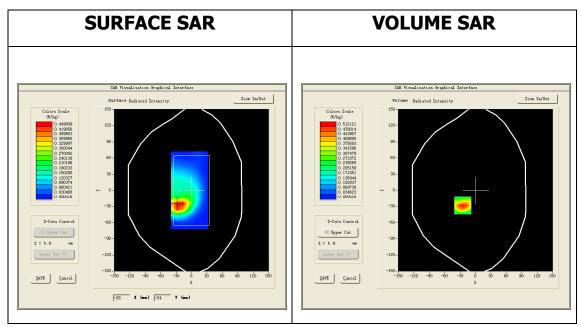
## A. Experimental conditions.

<u>Area Scan</u>	dx=15mm dy=15mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Validation plane</u>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	LTE band 2	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	4.78	

## **B. SAR Measurement Results**

#### Middle Band SAR (Channel 19100):

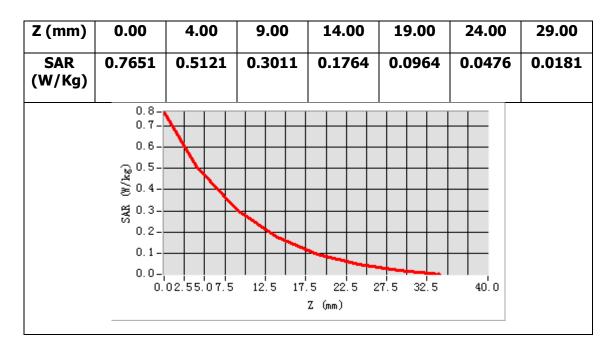
Frequency (MHz)	1900.000000
Relative permittivity (real part)	52.254398
Relative permittivity (imaginary part)	14.597900
Conductivity (S/m)	1.524264
Variation (%)	-1.360000

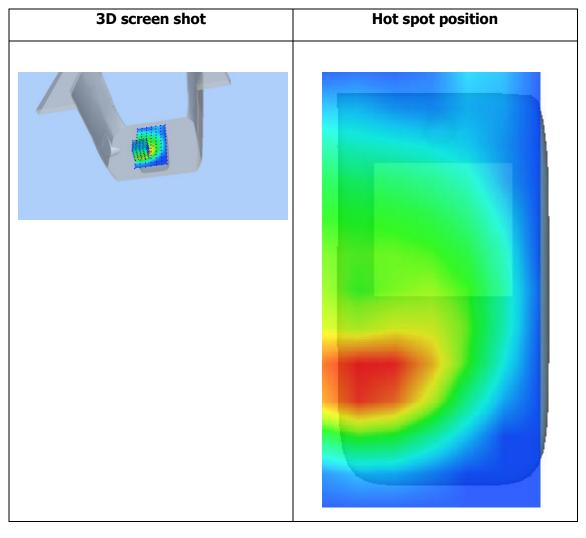


**Maximum location: X=-25.00, Y=-28.00** 

SAR Peak: 0.83 W/kg

SAR 10g (W/Kg)	0.320803
SAR 1g (W/Kg)	0.500467







#### 20M-1RB#99

Type: Phone measurement (Complete)

Date of measurement: 27/8/2016

Measurement duration: 10 minutes 44 seconds

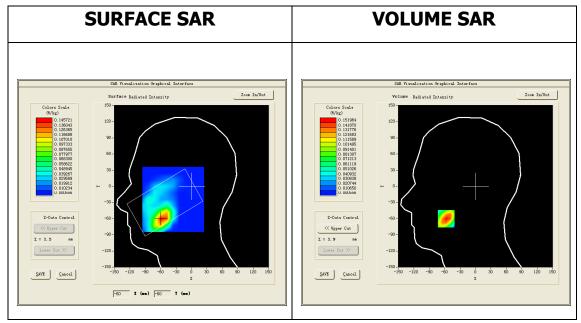
#### A. Experimental conditions.

<u>Area Scan</u>	dx=15mm dy=15mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	Right head	
<u>Device Position</u>	<u>Cheek</u>	
<u>Band</u>	LTE band 4	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	4.01	

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

Middle Band SAR (Channel 20175):

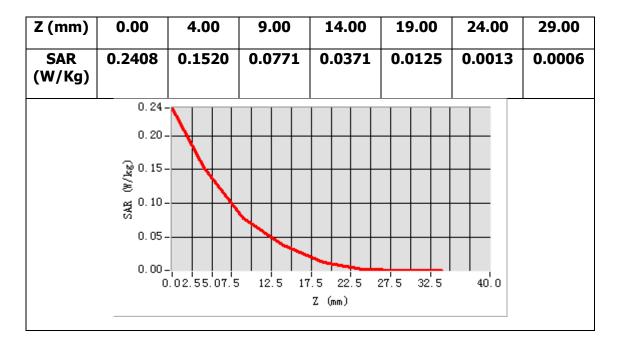
Frequency (MHz)	1732.500000
Relative permittivity (real part)	39.739349
Relative permittivity (imaginary part)	13.991050
Conductivity (S/m)	1.346639
Variation (%)	-1.450000

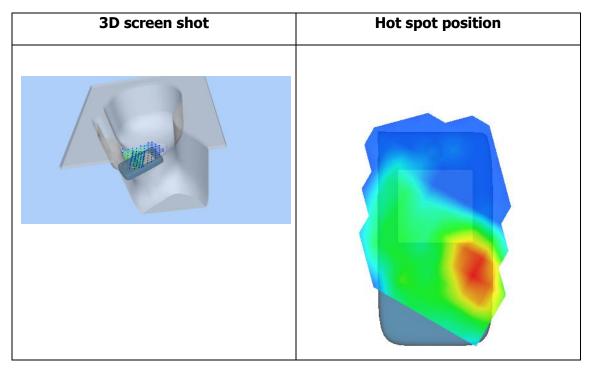


**Maximum location: X=-57.00, Y=-60.00** 

SAR Peak: 0.25 W/kg

SAR 10g (W/Kg)	0.067671
SAR 1g (W/Kg)	0.123075







Front-side-20M-1RB#99-middle

Type: Phone measurement (Complete)

Date of measurement: 27/8/2016

Measurement duration: 8 minutes 39 seconds

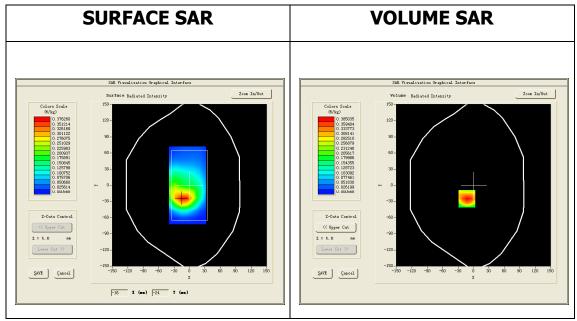
#### A. Experimental conditions.

<u>Area Scan</u>	dx=15mm dy=15mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Validation plane</u>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	LTE band 4	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	<u>4.16</u>	

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

Middle Band SAR (Channel 20175):

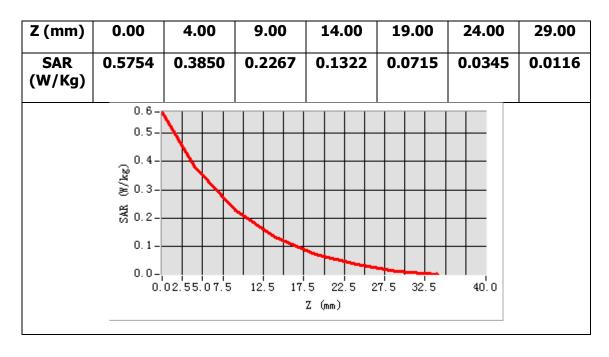
Frequency (MHz)	1732.500000
Relative permittivity (real part)	53.306702
Relative permittivity (imaginary part)	14.680750
Conductivity (S/m)	1.413022
Variation (%)	2.530000

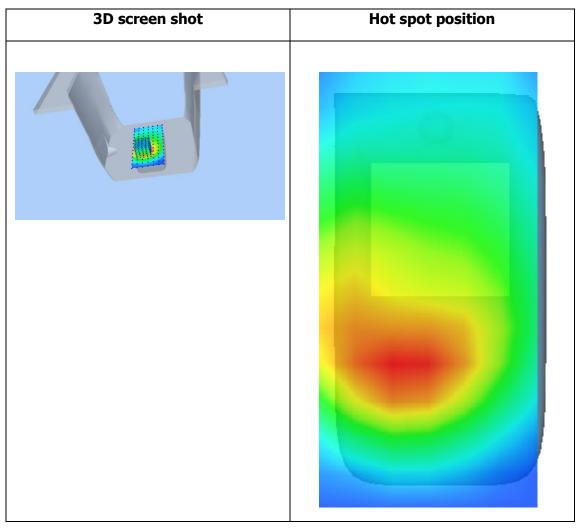


**Maximum location: X=-13.00, Y=-25.00** 

SAR Peak: 0.60 W/kg

SAR 10g (W/Kg)	0.373295
SAR 1g (W/Kg)	0.433142







## Towards-phantom-20M-1RB#99-middle

Type: Phone measurement (Complete)

Date of measurement: 27/8/2016

Measurement duration: 11 minutes 39 seconds

## A. Experimental conditions.

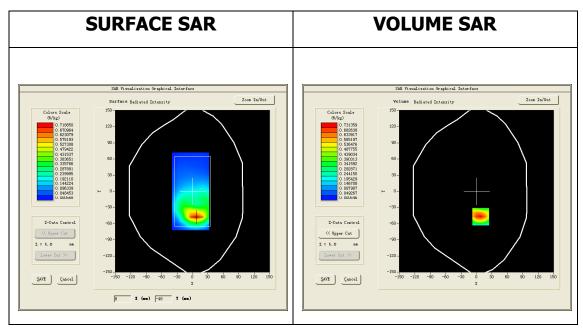
<u>Area Scan</u>	dx=15mm dy=15mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Validation plane</u>	
<u>Device Position</u>	Body	
<u>Band</u>	LTE band 4	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	4.16	

## **B. SAR Measurement Results**

Middle Band SAR (Channel 20175):

Frequency (MHz)	1732.500000
Relative permittivity (real part)	53.306702
Relative permittivity (imaginary part)	14.680750
Conductivity (S/m)	1.413022
Variation (%)	3.690000

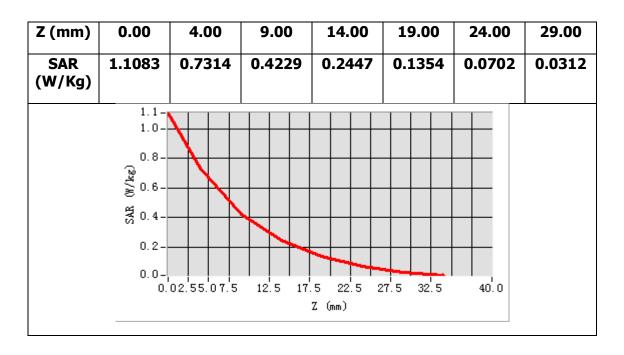
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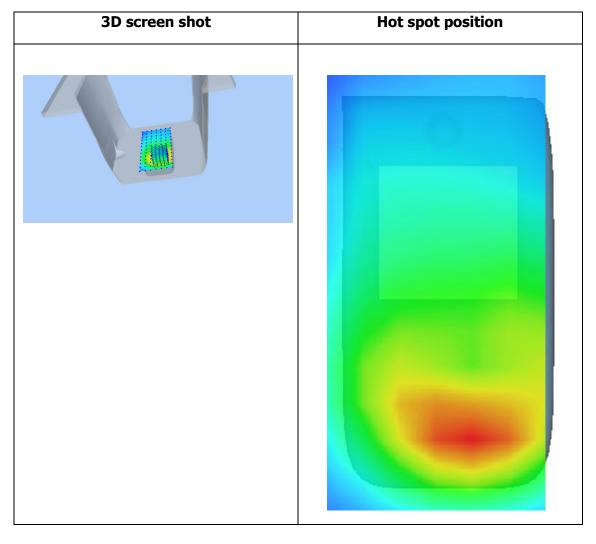


Maximum location: X=8.00, Y=-47.00

SAR Peak: 1.17 W/kg

SAR 10g (W/Kg)	0.390072
SAR 1g (W/Kg)	0.526289







## 20M-50RB#50

Type: Phone measurement (Complete)

Date of measurement: 29/8/2016

Measurement duration: 13 minutes 51 seconds

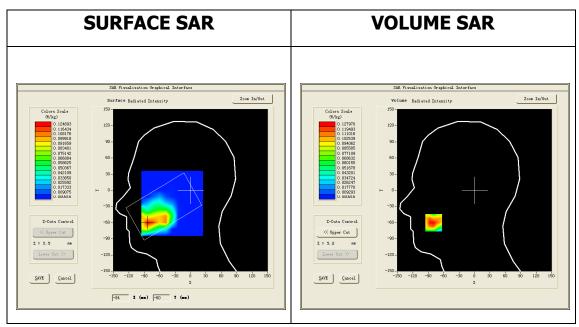
#### A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	Right head	
<u>Device Position</u>	<u>Cheek</u>	
<u>Band</u>	LTE band 7	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	3.92	

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

Middle Band SAR (Channel 21100):

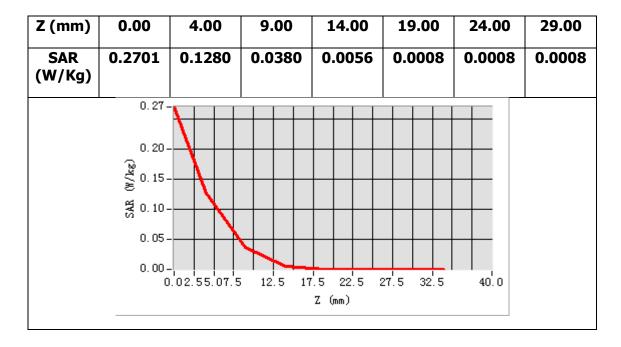
Frequency (MHz)	2535.000000
Relative permittivity (real part)	39.062801
Relative permittivity (imaginary part)	13.774200
Conductivity (S/m)	1.939867
Variation (%)	0.000000

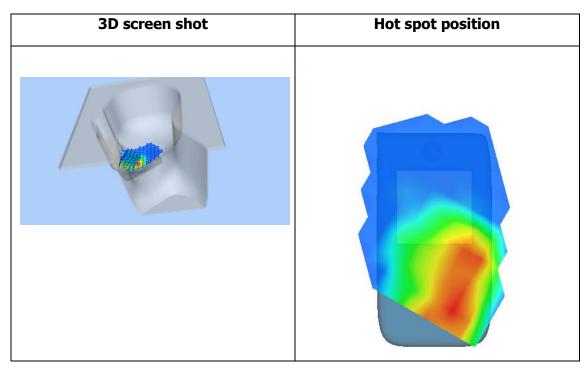


**Maximum location: X=-80.00, Y=-60.00** 

SAR Peak: 0.28 W/kg

SAR 10g (W/Kg)	0.047408
SAR 1g (W/Kg)	0.114969







# Right-side-20M-50RB#50-middle

Type: Phone measurement (Complete)

Date of measurement: 29/8/2016

Measurement duration: 8 minutes 17 seconds

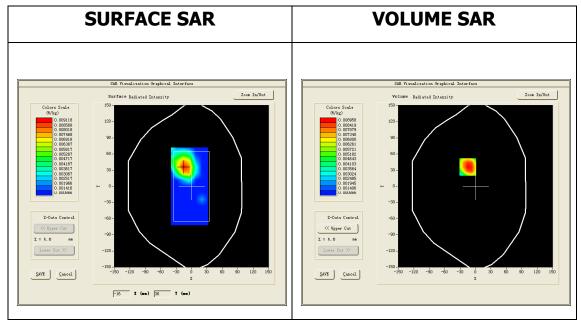
## A. Experimental conditions.

<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>	
<u>Device Position</u>	Body	
<u>Band</u>	LTE band 7	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	4.07	

## **B. SAR Measurement Results**

Middle Band SAR (Channel 21100):

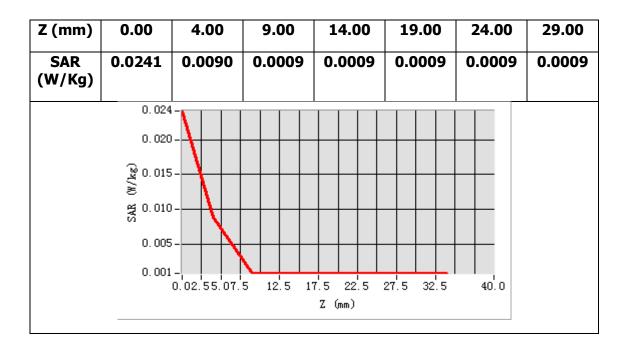
Frequency (MHz)	2535.000000
Relative permittivity (real part)	52.643902
Relative permittivity (imaginary part)	14.644800
Conductivity (S/m)	2.062476
Variation (%)	2.880000

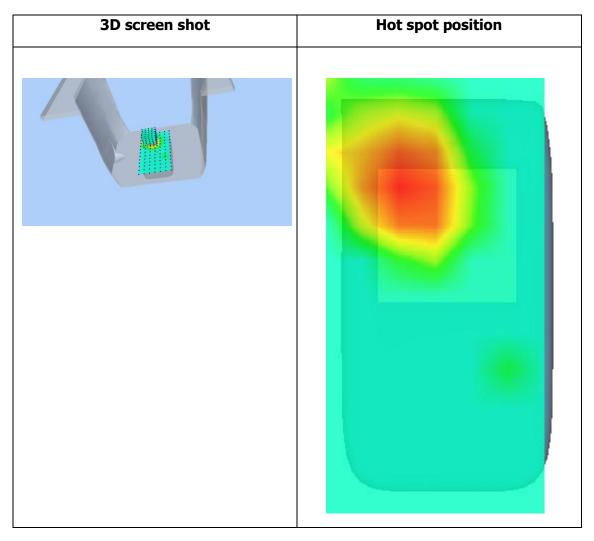


**Maximum location: X=-15.00, Y=36.00** 

SAR Peak: 0.03 W/kg

SAR 10g (W/Kg)	0.242342
SAR 1g (W/Kg)	0.434657







## Towards-phantom-20M-1RB#99-middle

Type: Phone measurement (Complete)

Date of measurement: 29/8/2016

Measurement duration: 9 minutes 42 seconds

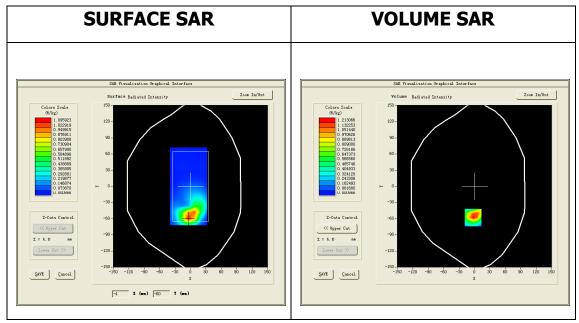
## A. Experimental conditions.

<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>	
<u>Device Position</u>	Body	
<u>Band</u>	LTE band 7	
<u>Channels</u>	<u>Middle</u>	
<u>Signal</u>	LTE (Crest factor: 1.0)	
Conversion factor	4.07	

## **B. SAR Measurement Results**

#### Middle Band SAR (Channel 21100):

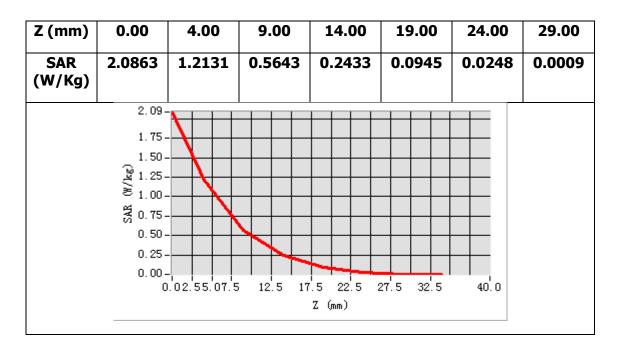
Frequency (MHz)	2535.000000
Relative permittivity (real part)	52.643902
Relative permittivity (imaginary part)	14.644800
Conductivity (S/m)	2.062476
Variation (%)	2.940000

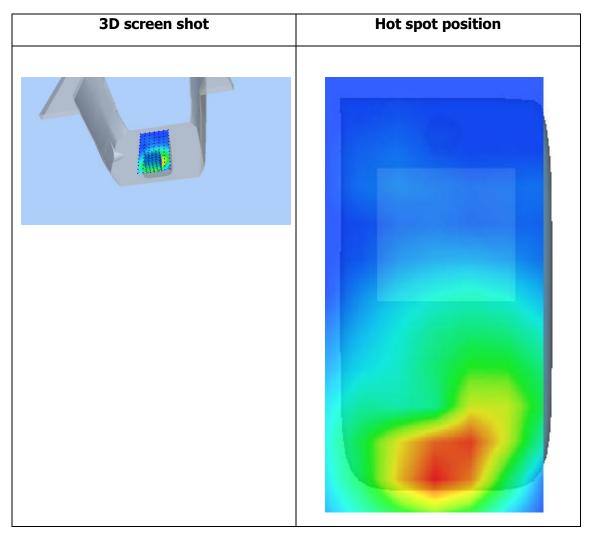


Maximum location: X=-3.00, Y=-58.00

SAR Peak: 2.42 W/kg

SAR 10g (W/Kg)	0.345053
SAR 1g (W/Kg)	0.602611







Type: Phone measurement (Complete)

Date of measurement: 22/8/2016

Measurement duration: 8 minutes 44 seconds

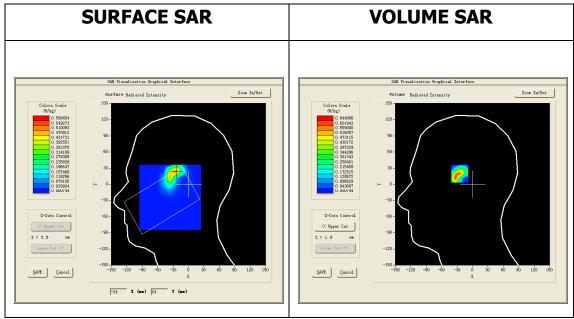
# A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Right head</u>
<u>Device Position</u>	<u>Cheek</u>
<u>Band</u>	<u>IEEE 802.11b ISM</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	IEEE802.b (Crest factor: 1.0)
Conversion factor	4.00

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

### Middle Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.279701
Relative permittivity (imaginary part)	13.189900
Conductivity (S/m)	1.789430
Variation (%)	-1.570000

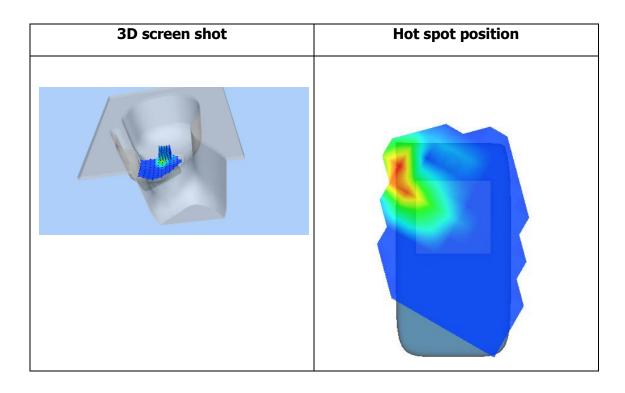


**Maximum location: X=-25.00, Y=24.00** 

SAR Peak: 1.33 W/kg

SAR 10g (W/Kg)	0.202228
SAR 1g (W/Kg)	0.601664

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.3011	0.6143	0.1752	0.0437	0.0007	0.0007	0.0007
	1.3- 1.0 (%) 0.8 (%) 0.6 0.4 0.2					40.0	
	U.	02.55.07.5	12.5 17.	5 22.5 2 Z (mm)	27.5 32.5	40.0	





## Front-side-middle

Type: Phone measurement (Complete)

Date of measurement: 22/8/2016

Measurement duration: 8 minutes 11 seconds

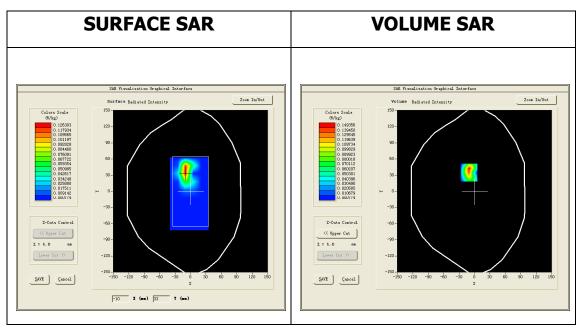
## A. Experimental conditions.

<u>Area Scan</u>	dx=12mm dy=12mme
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11b ISM</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	IEEE802.b (Crest factor: 1.0)
Conversion factor	4.11

## **B. SAR Measurement Results**

## Middle Band SAR (Channel 6):

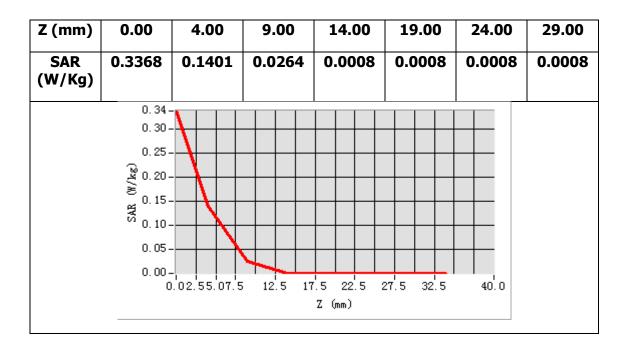
Frequency (MHz)	2437.000000
Relative permittivity (real part)	52.915798
Relative permittivity (imaginary part)	14.315100
Conductivity (S/m)	1.942082
Variation (%)	0.000000

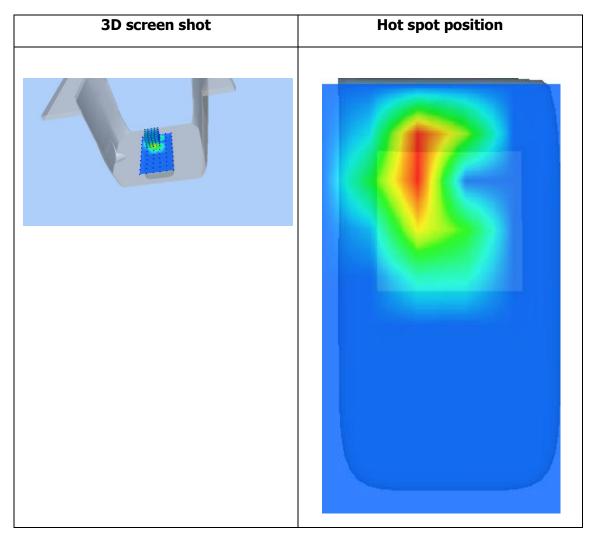


**Maximum location: X=-11.00, Y=35.00** 

SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.015484
SAR 1g (W/Kg)	0.068280







# Towards-phantom-middle

Type: Phone measurement (Complete)

Date of measurement: 22/8/2016

Measurement duration: 8 minutes 28 seconds

## A. Experimental conditions.

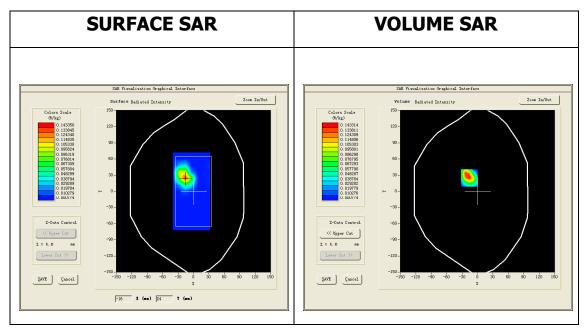
<u>Area Scan</u>	dx=12mm dy=12mme
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11b ISM</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	IEEE802.b (Crest factor: 1.0)
Conversion factor	4.11

## **B. SAR Measurement Results**

### Middle Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	52.915798
Relative permittivity (imaginary part)	14.315100
Conductivity (S/m)	1.942082
Variation (%)	0.000000

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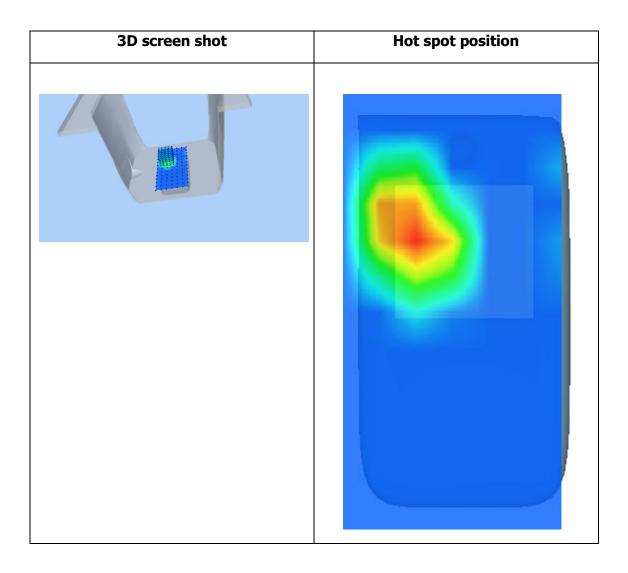


**Maximum location: X=-16.00, Y=25.00** 

SAR Peak: 0.34 W/kg

SAR 10g (W/Kg)	0.057470
SAR 1g (W/Kg)	0.096659

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.2765	0.1433	0.0508	0.0153	0.0008	0.0008	0.0008
	0. 28- 0. 25- 0. 20- 0. 15- 0. 10- 0. 05- 0. 00-		12.5 17		27.5 32.5	40.0	
				Z (mm)			





Type: Phone measurement (Complete)

Date of measurement: 30/8/2016

Measurement duration: 9 minutes 22 seconds

# A. Experimental conditions.

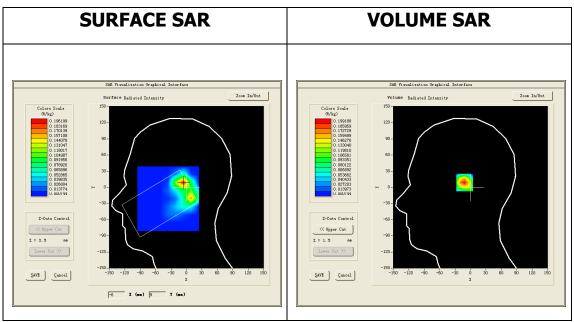
<u>Area Scan</u>	dx=10mm dy=10mm
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
<u>Phantom</u>	<u>Left head</u>
<b>Device Position</b>	<u>Cheek</u>
<u>Band</u>	<u>IEEE 802.11a U-NII-2A</u>
<u>Channels</u>	<u>High</u>
<u>Signal</u>	Duty Cycle: 1.0

# **B. SAR Measurement Results**

## High Band SAR (Channel 64):

Frequency (MHz)	5320.000000
Relative permittivity (real part)	35.139701
Relative permittivity (imaginary part)	16.548572
Conductivity (S/m)	4.895210
Variation (%)	-0.600000

#### SATIMO 225, rue Pierre Rivoalon 29200 Brest - France Tel:+33 (0)2 98 05 13 34; Fax: +33 (0)2 98 05 53 87; www.satimo.com

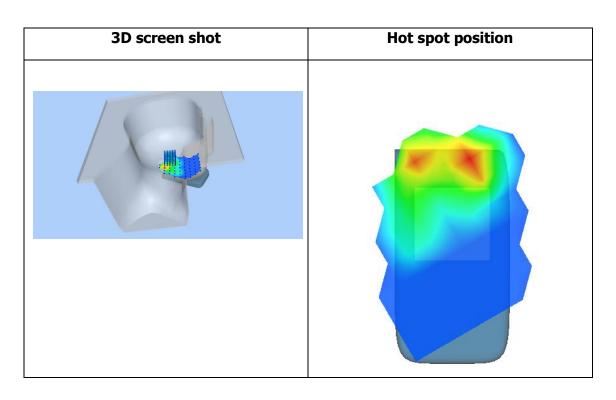


Maximum location: X=-7.00, Y=9.00

SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.037369
SAR 1g (W/Kg)	0.108057

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3963	0.1992	0.0686	0.0083	0.0007	0.0007	0.0007
	0. 40 - 0. 35 - 0. 30 - 9 0. 25 - 8 0. 20 - 27 0. 15 - 0. 05 - 0. 00 - 0		12.5 17	.5 22.5 Z (mm)	27.5 32.5	40.0	
				Z (MM)			





Type: Phone measurement (Complete)

Date of measurement: 30/8/2016

Measurement duration: 10 minutes 3 seconds

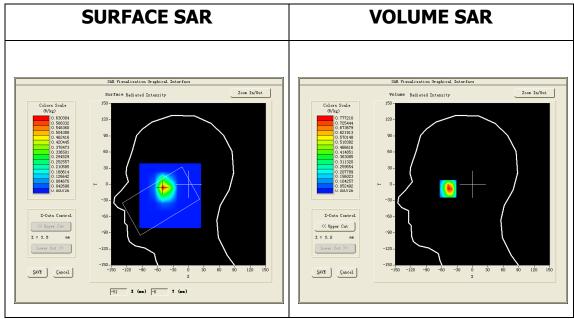
# A. Experimental conditions.

<u>Area Scan</u>	dx=10mm dy=10mm	
<u>ZoomScan</u>	5x5x7,dx=8mm dy=8mm dz=5mm,Complete	
<u>Phantom</u>	<u>Left head</u>	
<u>Device Position</u>	<u>Cheek</u>	
<u>Band</u>	<u>IEEE 802.11a U-NII-3</u>	
<u>Channels</u>	<u>High</u>	
<u>Signal</u>	Duty Cycle: 1.0	

## **B. SAR Measurement Results**

High Band SAR (Channel 165):

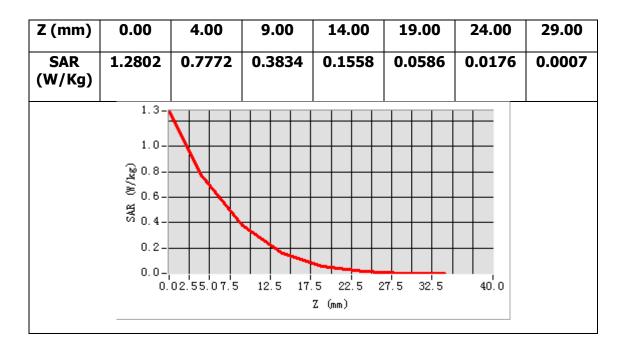
Frequency (MHz)	5825.000000
Relative permittivity (real part)	35.375521
Relative permittivity (imaginary part)	16.245435
Conductivity (S/m)	5.261300
Variation (%)	0.900000

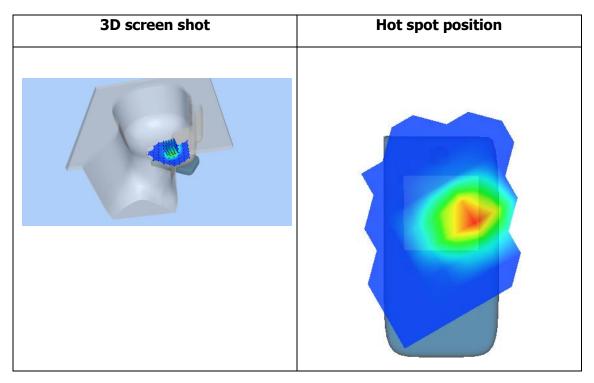


Maximum location: X=-48.00, Y=-6.00

SAR Peak: 1.59 W/kg

SAR 10g (W/Kg)	0.084353
SAR 1g (W/Kg)	0.177002







## Towards-Phantom-low

Type: Phone measurement (Complete)

Date of measurement: 30/8/2016

Measurement duration: 11 minutes 43 seconds

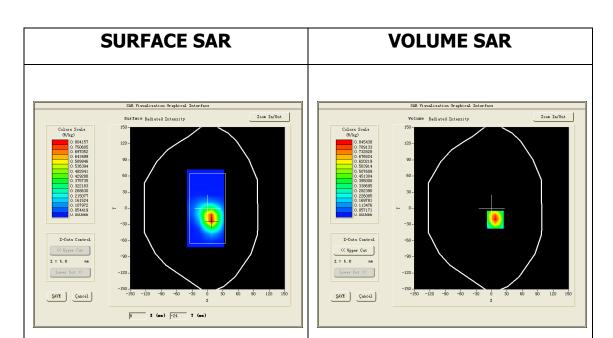
## A. Experimental conditions.

<u>Area Scan</u>	dx=10mm dy=10mm	
<u>ZoomScan</u>	8x8x7,dx=4mm dy=4mm dz=2mm,Complete	
<u>Phantom</u>	<u>Validation plane</u>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	<u>IEEE 802.11a U-NII-1</u>	
<u>Channels</u>	Low	
<u>Signal</u>	Duty Cycle: 1.0	

## **B. SAR Measurement Results**

Low Band SAR (Channel 36):

Frequency (MHz)	5180.000000
Relative permittivity (real part)	49.379736
Relative permittivity (imaginary part)	17.911400
Conductivity (S/m)	5.158907
Variation (%)	0.850000

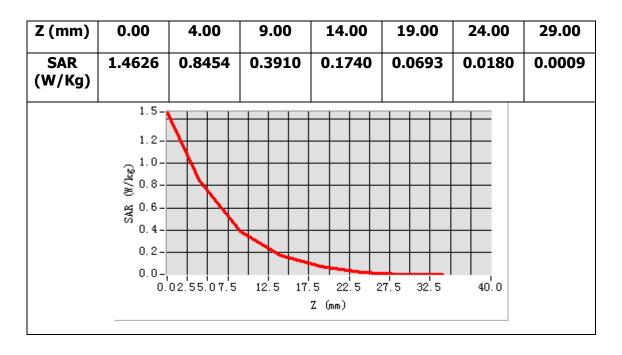


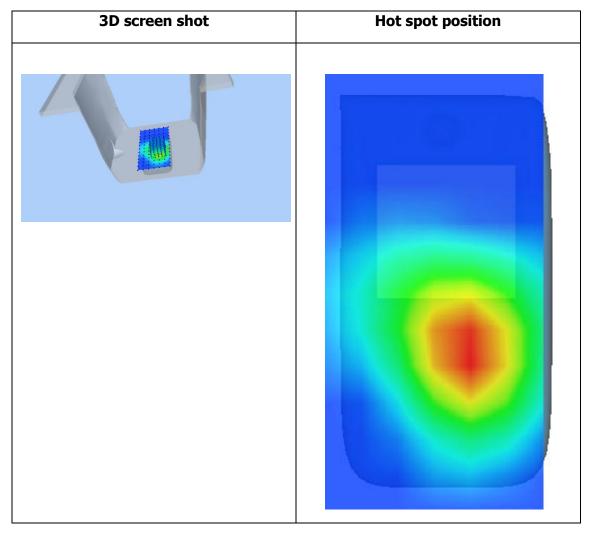
Maximum location: X=7.00, Y=-21.00

SAR Peak: 1.56 W/kg

SAR 10g (W/Kg)	0.044124
SAR 1g (W/Kg)	0.094262









Towards-Ground-high

ype: Phone measurement (Complete)

Date of measurement: 30/8/2016

Measurement duration: 9 minutes 55 seconds

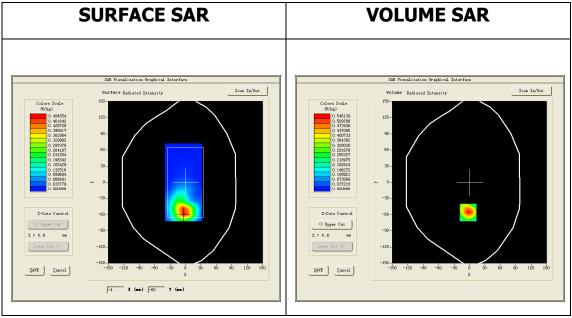
# A. Experimental conditions.

<u>Area Scan</u>	dx=10mm dy=10mm	
<u>ZoomScan</u>	8x8x7,dx=4mm dy=4mm dz=2mm,Complete	
<u>Phantom</u>	<u>Validation plane</u>	
<u>Device Position</u>	<u>Body</u>	
<u>Band</u>	<u>IEEE 802.11a U-NII-3</u>	
<u>Channels</u>	<u>High</u>	
<u>Signal</u>	Duty Cycle: 1.0	

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

High Band SAR (Channel 165):

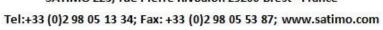
Frequency (MHz)	5825.000000
Relative permittivity (real part)	48.235748
Relative permittivity (imaginary part)	19.060800
Conductivity (S/m)	6.173560
Variation (%)	2.500000

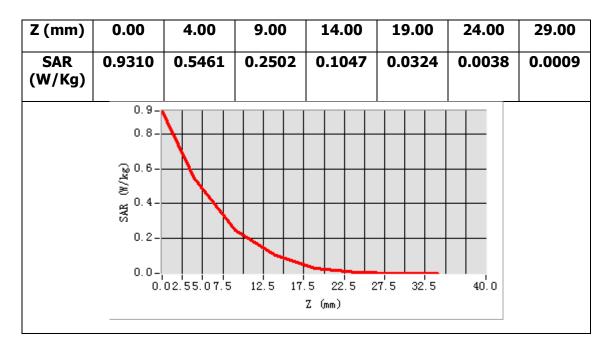


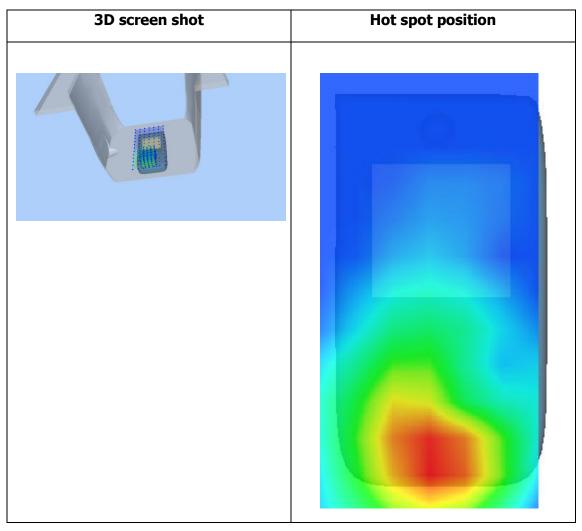
Maximum location: X=-3.00, Y=-56.00

SAR Peak: 1.00 W/kg

SAR 10g (W/Kg)	0.042350
SAR 1g (W/Kg)	0.081282









Top-Side-high

Type: Phone measurement (Complete)

Date of measurement: 30/8/2016

Measurement duration: 9 minutes 42 seconds

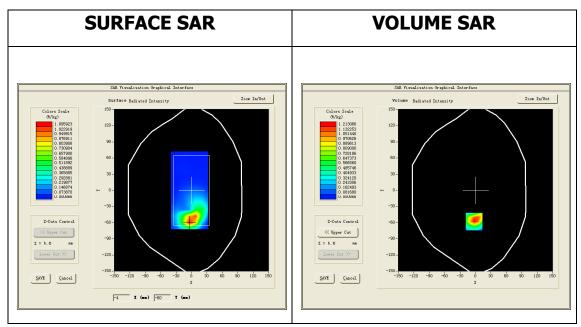
# A. Experimental conditions.

<u>Area Scan</u>	dx=10mm dy=10mm
<u>ZoomScan</u>	8x8x7,dx=4mm dy=4mm dz=2mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11a U-NII-3</u>
<u>Channels</u>	<u>High</u>
<u>Signal</u>	Duty Cycle: 1.0

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

### High Band SAR (Channel 64):

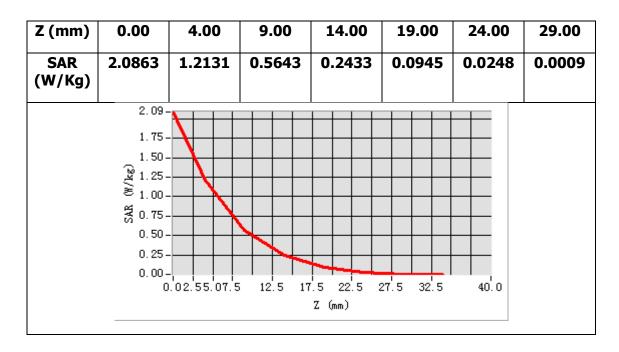
Frequency (MHz)	5320.000000
Relative permittivity (real part)	47.981902
Relative permittivity (imaginary part)	18.107654
Conductivity (S/m)	5.392476
Variation (%)	0.580000

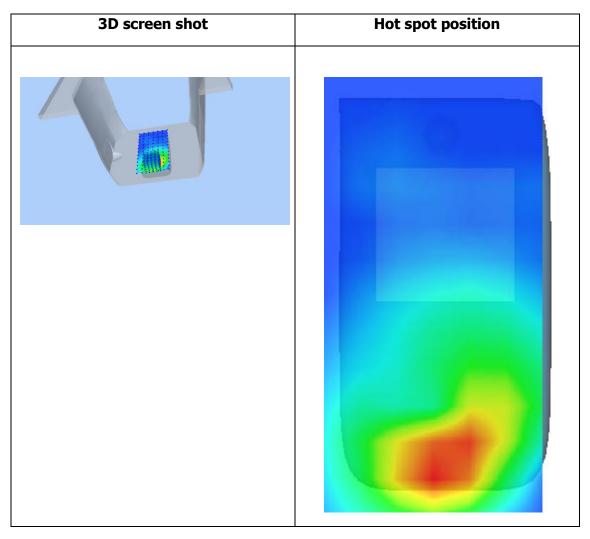


Maximum location: X=-3.00, Y=-58.00

SAR Peak: 2.42 W/kg

SAR 10g (W/Kg)	0.247053
SAR 1g (W/Kg)	0.291311







Top-Side-high

Type: Phone measurement (Complete)

Date of measurement: 30/8/2016

Measurement duration: 11 minutes 52 seconds

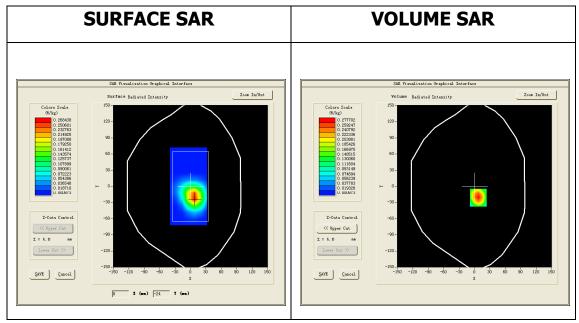
# A. Experimental conditions.

<u>Area Scan</u>	dx=10mm dy=10mm
<u>ZoomScan</u>	8x8x7,dx=4mm dy=4mm dz=2mm,Complete
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>IEEE 802.11a U-NII-3</u>
<u>Channels</u>	<u>High</u>
<u>Signal</u>	Duty Cycle: 1.0

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

Higher Band SAR (Channel 165):

Frequency (MHz)	5825.000000
Relative permittivity (real part)	48.139400
Relative permittivity (imaginary part)	19.154900
Conductivity (S/m)	6.205808
Variation (%)	0.600000



Maximum location: X=7.00, Y=-21.00

SAR Peak: 0.51 W/kg

SAR 10g (W/Kg)	0.277351
SAR 1g (W/Kg)	0.331495

