

## Appendix B: SAR Measurement results Plots

### Antenna1

Plot	Frequency/Mode	Testing Position and Channel	Test Date
1	GSM850/GPRS4Tx	Edge C, Middle ,10mm	2019/04/16
2	GSM1900/GPRS4Tx	Edge C, Middle ,10mm	2019/04/18
3	WCDMA850	Edge C, Middle ,10mm	2019/04/16
4	WCDMA1900	Edge C, Middle ,10mm	2019/04/18
5	LTE Band2	Edge C, Middle ,10mm	2019/04/18
6	LTE Band4	Body Back, Middle ,10mm	2019/04/17
7	LTE Band5	Edge C, Middle,10mm	2019/04/16
8	LTE Band7	Body Back, Middle ,10mm	2019/04/20
9	WIFI 2.4G 802.11b	Body Back, Middle ,10mm	2019/04/19
10	BT 3.0 8-DPSK	Edge B, Middle ,10mm	2019/04/19

### Plot 1: GPRS850, Edge C, Middle,10mm

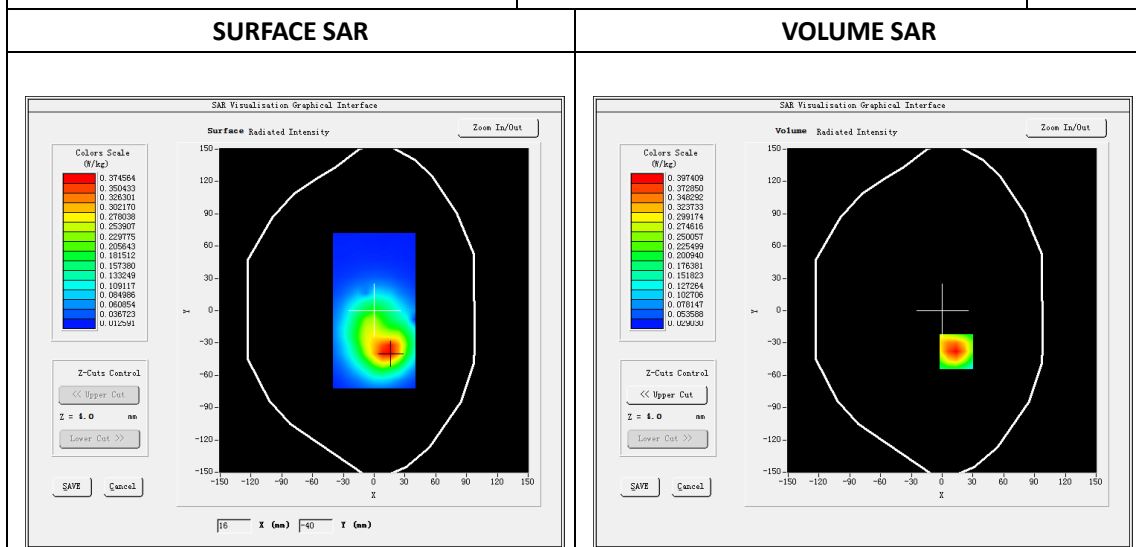
Type: Phone measurement  
 Date of measurement: 04/16/2019  
 Measurement duration: 22 minutes 13 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

<b>Area Scan</b>	dx=8mm dy=8mm
<b>ZoomScan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Back
<b>Band</b>	GSPRS850_4Tx
<b>Channels</b>	190
<b>Signal</b>	GPRS(Duty cycle: 1:2)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	836.6
<b>Relative permittivity (real part)</b>	55.24
<b>Relative permittivity (imaginary part)</b>	20.96
<b>Conductivity (S/m)</b>	0.99
<b>Variation (%)</b>	-1.70
<b>ConvF:</b>	1.99

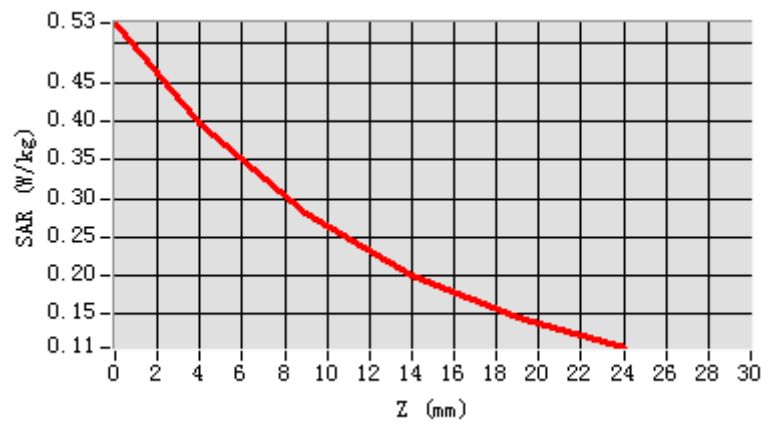


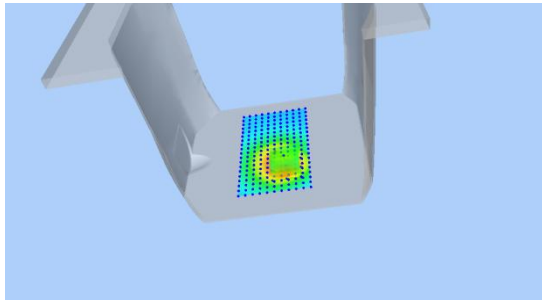
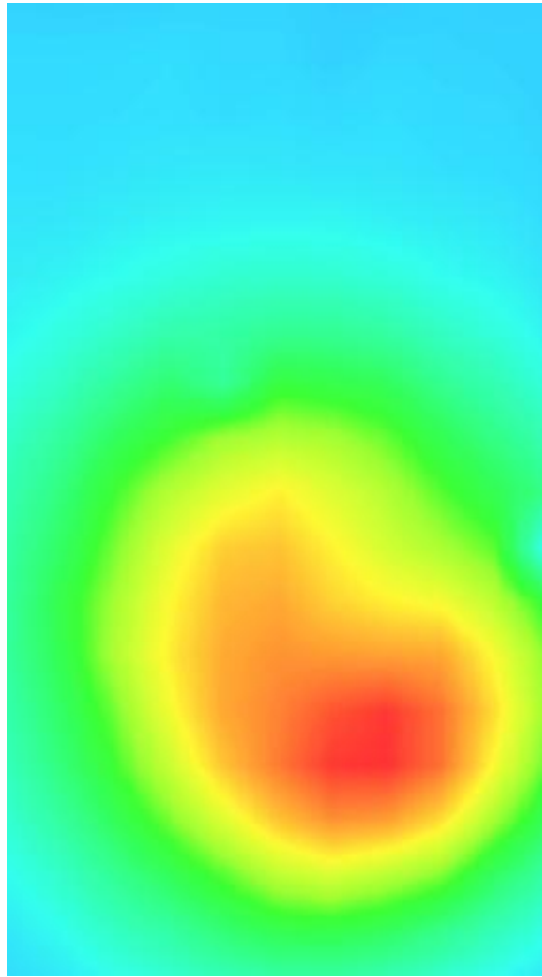
**Maximum location: X=14.00, Y=-38.00**

**SAR Peak: 0.53 W/kg**

<b>SAR 10g (W/Kg)</b>	0.243337
<b>SAR 1g (W/Kg)</b>	0.381525

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.5271	0.3974	0.2795	0.1999	0.1464



3D screen shot	Hot spot position
 <p>A 3D perspective view of a grey, U-shaped device. A small rectangular area on the inner surface of the device is highlighted with a color-coded grid, representing a hot spot. The colors range from blue (low SAR) to red (high SAR).</p>	 <p>A 2D heatmap visualization of the hot spot. The color scale transitions from cyan (low SAR) to red (high SAR). The highest SAR region (red) is concentrated in the center of the device's opening, matching the hot spot location in the 3D view.</p>

**Plot2: GPRS1900, Edge C , Middle ,10mm**

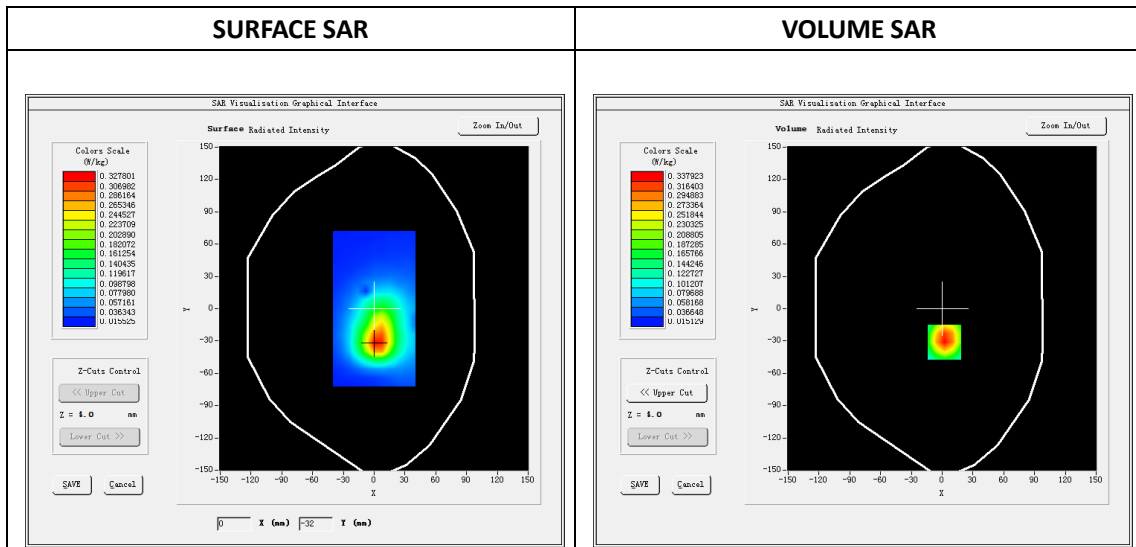
Type: Phone measurement  
 Date of measurement: 04/18/2019  
 Measurement duration: 22 minutes 19 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Edge C
<b>Band</b>	GPRS1900_4Tx
<b>Channels</b>	661
<b>Signal</b>	GPRS(Duty cycle: 1:2)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	1880
<b>Relative permittivity (real part)</b>	53.40
<b>Relative permittivity (imaginary part)</b>	14.49
<b>Conductivity (S/m)</b>	1.53
<b>Variation (%)</b>	1.91
<b>ConvF:</b>	2.39

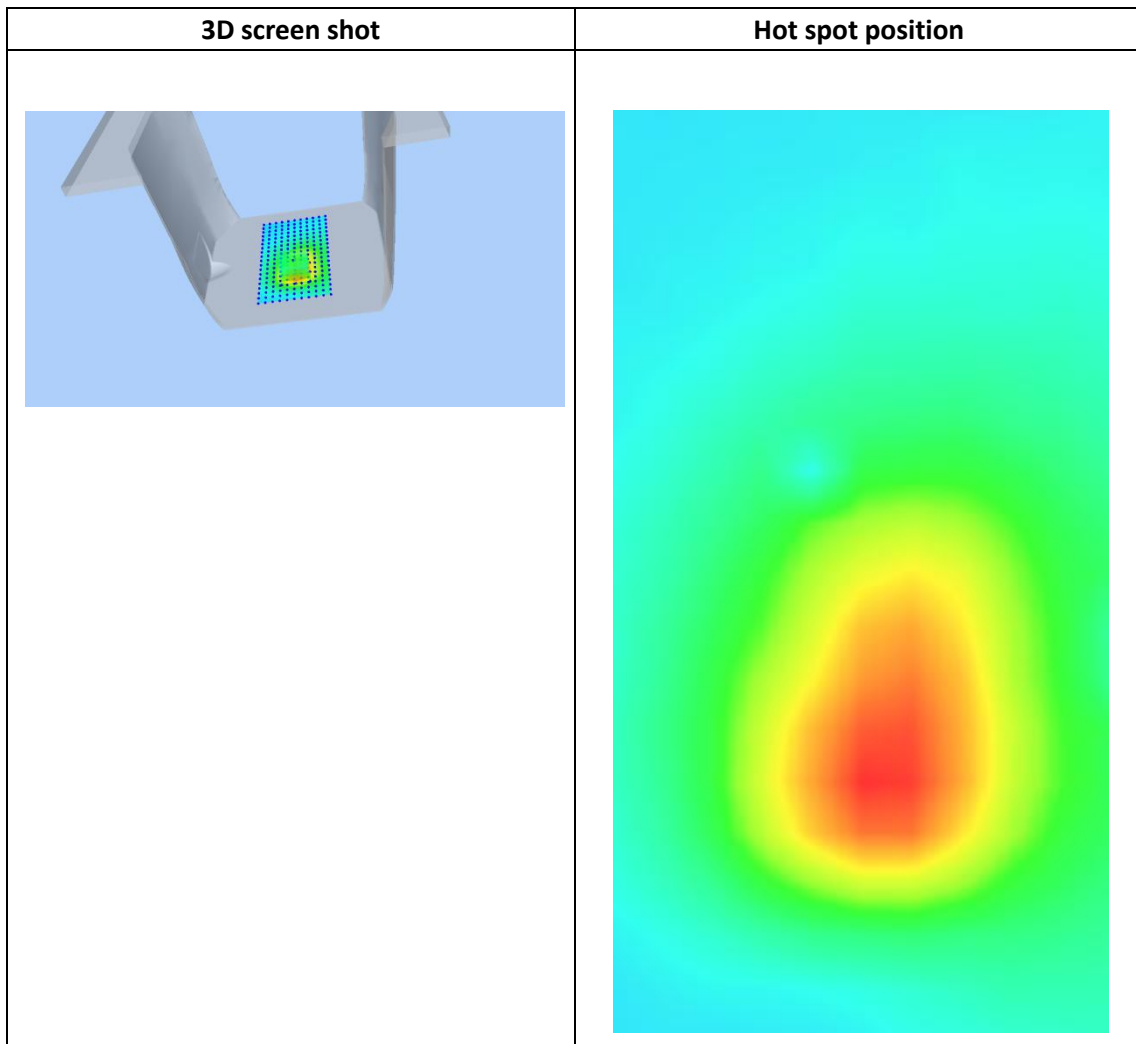
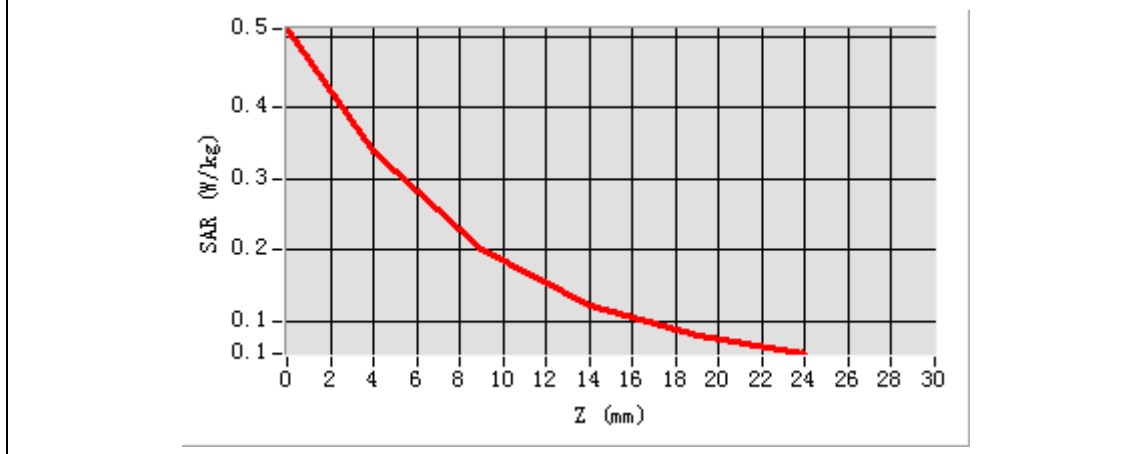


Maximum location: X=2.00, Y=-31.00

SAR Peak: 0.52 W/kg

SAR 10g (W/Kg)	0.181186
SAR 1g (W/Kg)	0.318788

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.5101	0.3379	0.2003	0.1226	0.0805



### Plot 3: WCDMA850, Edge C, Middle,10mm

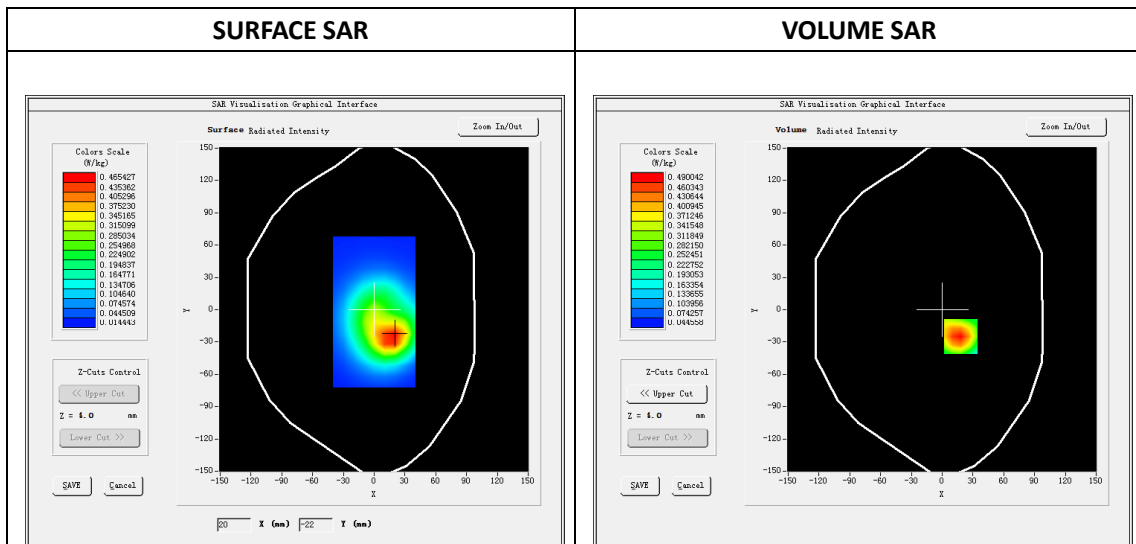
Type: Phone measurement  
 Date of measurement: 04/16/2019  
 Measurement duration: 22 minutes 11 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back
Band	Band5_WCDMA850
Channels	4183
Signal	WCDMA (Duty cycle: 1:1)

**B. SAR Measurement Results**

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	836.6
Relative permittivity (real part)	55.24
Relative permittivity (imaginary part)	20.96
Conductivity (S/m)	0.99
Variation (%)	-1.32
ConvF:	1.99

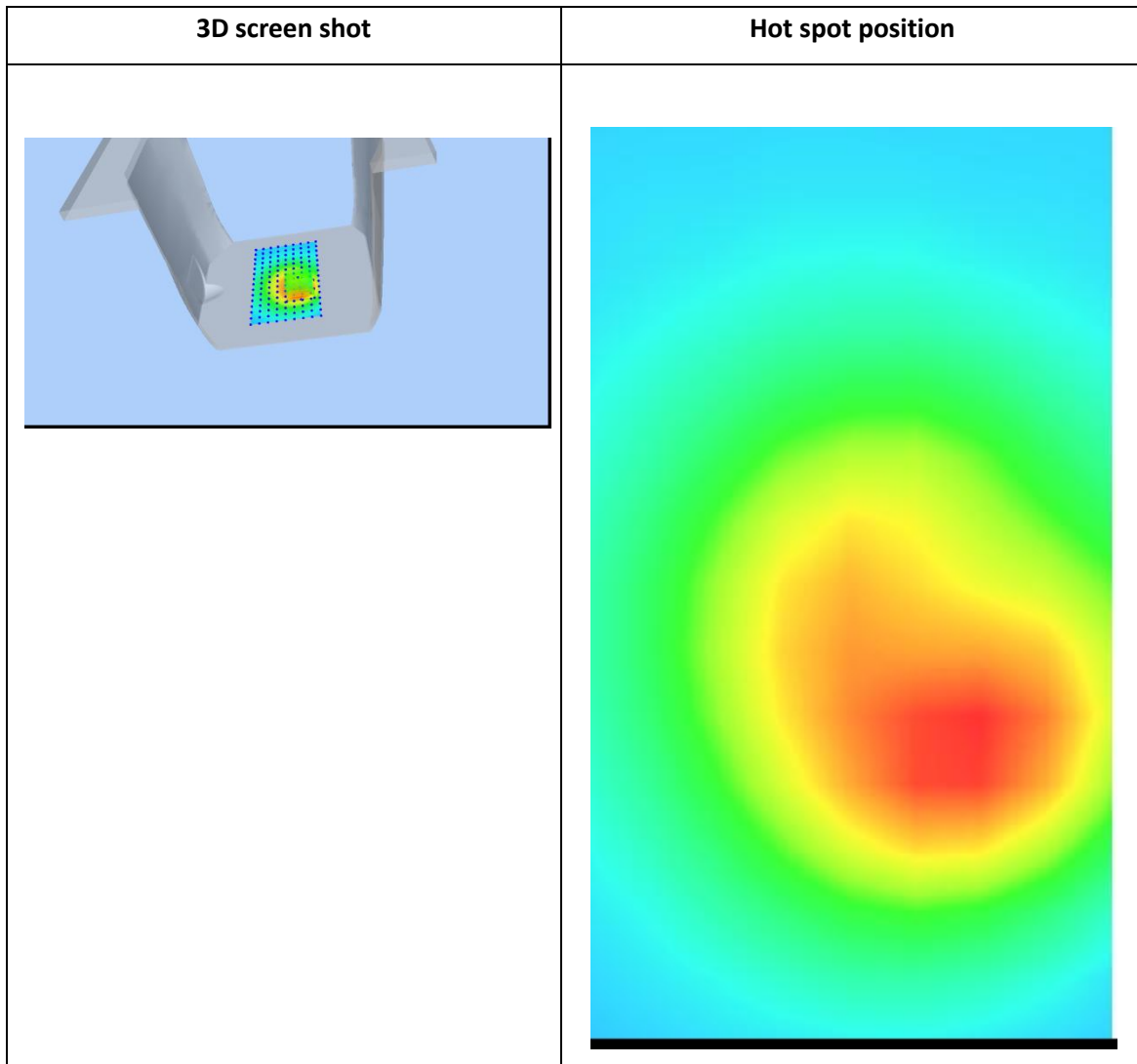
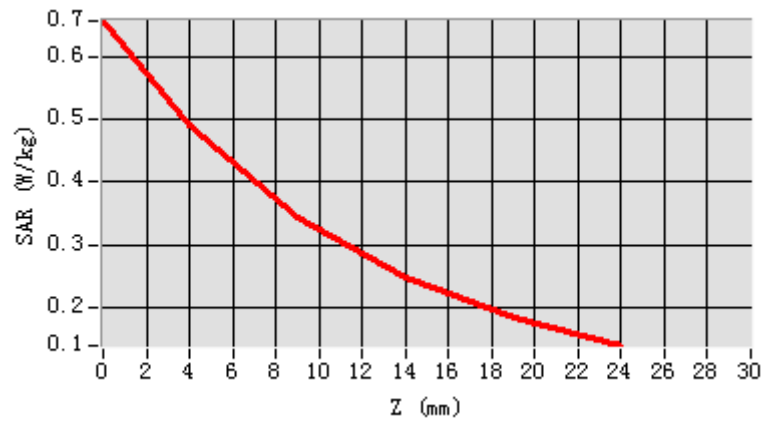


**Maximum location: X=18.00, Y=-25.00**

**SAR Peak: 0.66W/kg**

SAR 10g (W/Kg)	0.305156
SAR 1g (W/Kg)	0.471805

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6564	0.4900	0.3423	0.2459	0.1838



## Plot 4: WCDMA1900 Edge C, Middle,10mm

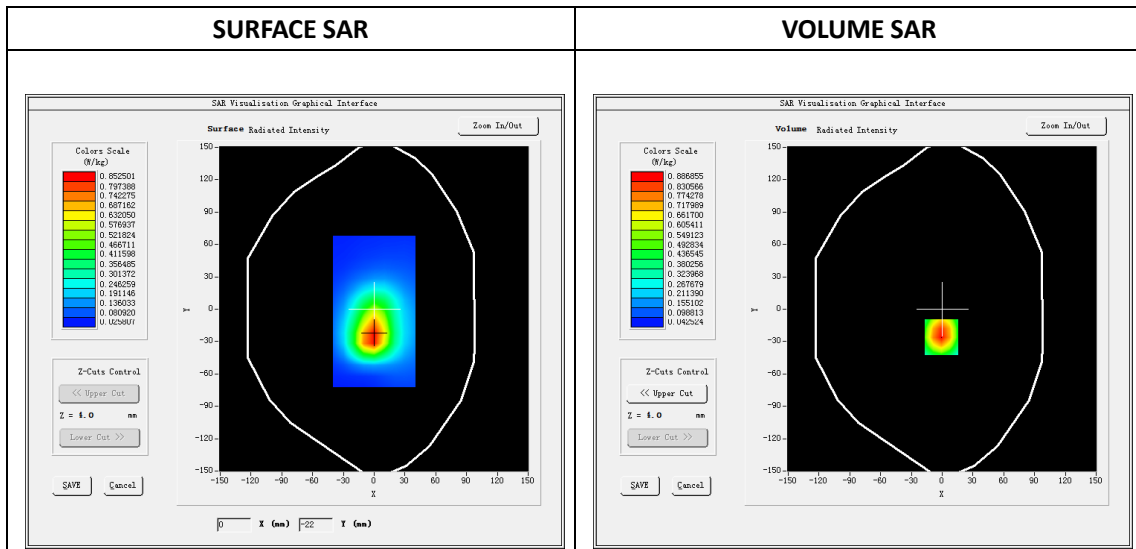
Type: Phone measurement  
 Date of measurement: 04/18/2019  
 Measurement duration: 22 minutes 47 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge C
Band	Band2_WCDMA1900
Channels	9400
Signal	WCDMA (Duty cycle: 1:1)

**B. SAR Measurement Results**

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	1880
Relative permittivity (real part)	53.40
Relative permittivity (imaginary part)	14.49
Conductivity (S/m)	1.53
Variation (%)	-1.82
ConvF:	2.39

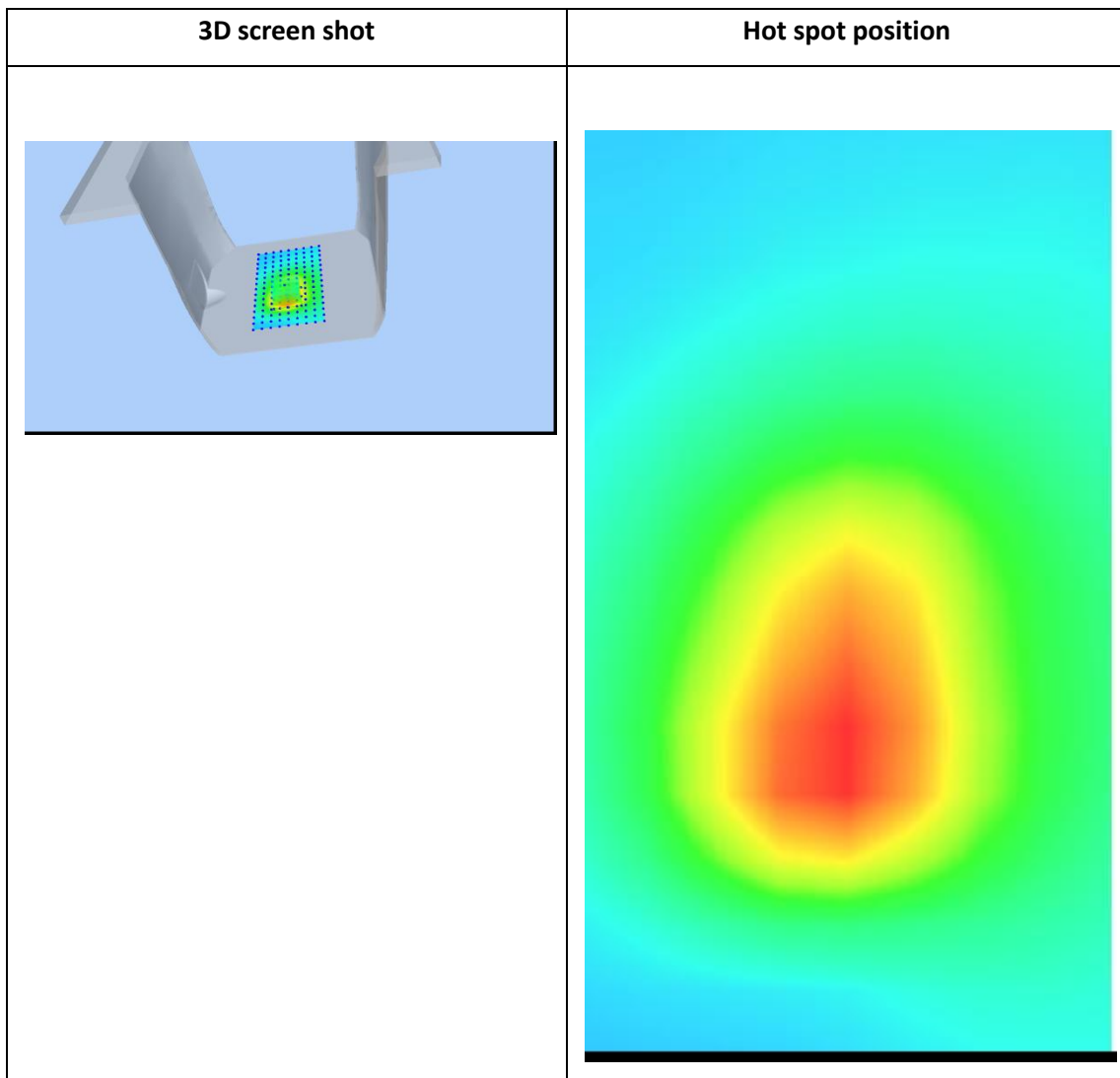
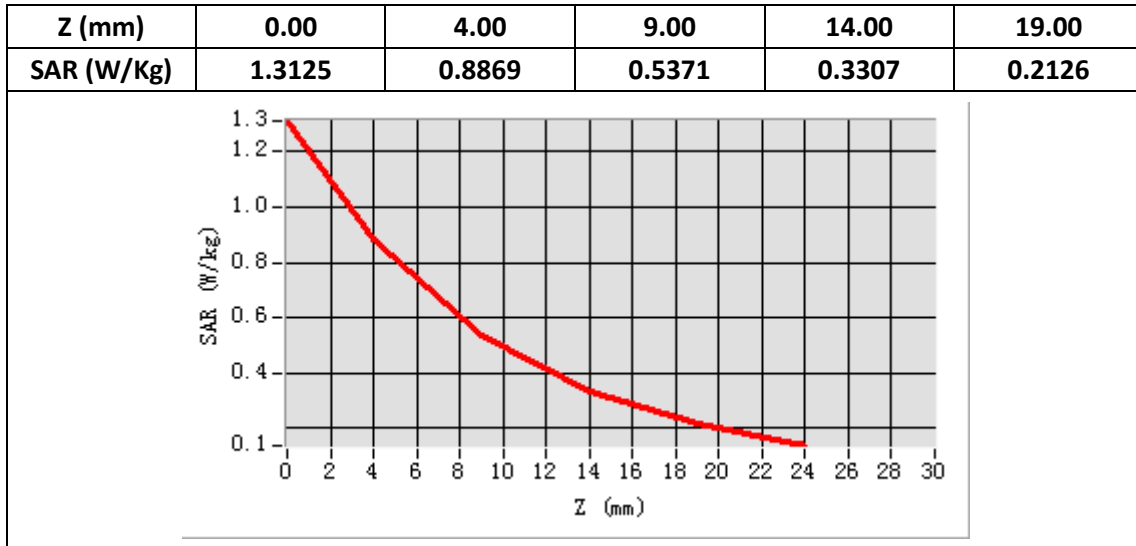


**Maximum location: X=-1.00, Y=-26.00**

**SAR Peak: 1.33W/kg**

SAR 10g (W/Kg)	0.480406
SAR 1g (W/Kg)	0.836848





## Plot 5: LTE Band2, 20MHz, Edge C Middle,10mm

Type: Phone measurement

Date of measurement: 04/18/2019

Measurement duration: 22 minutes 29 seconds

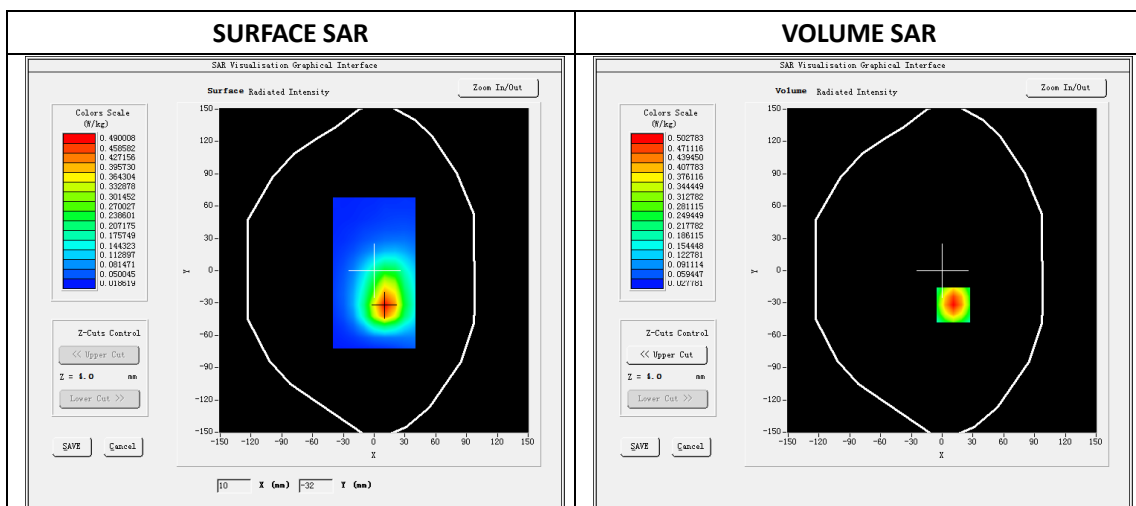
Mobile Phone IMEI number: --

**A. Experimental conditions.**

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge C
Band	LTE Band 2
Channels	18900
Signal	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	1880
Relative permittivity (real part)	53.40
Relative permittivity (imaginary part)	14.49
Conductivity (S/m)	1.53
Variation (%)	-1.46
ConvF:	2.39

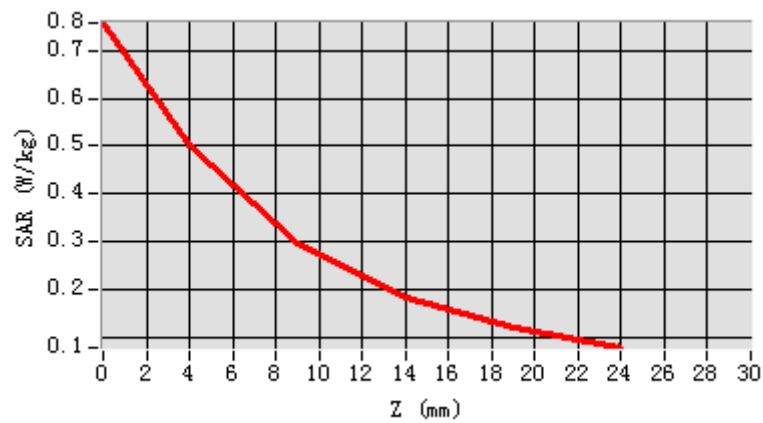


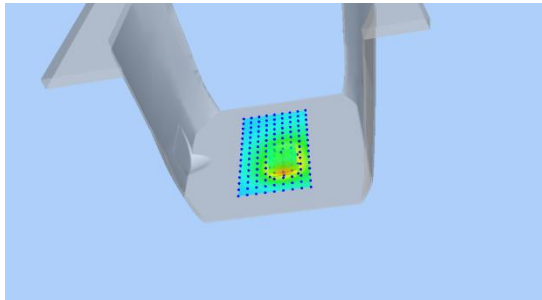
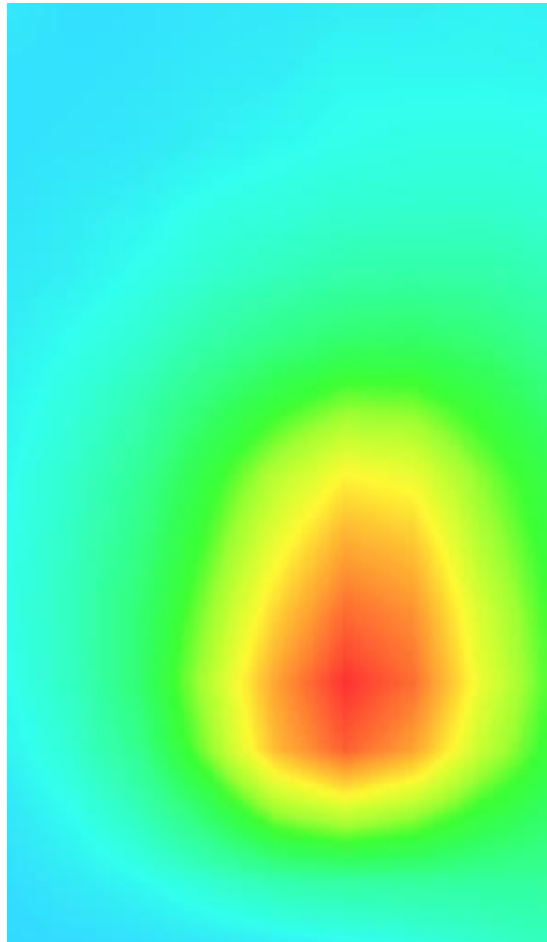
Maximum location: X=11.00, Y=-32.00

SAR Peak: 0.76 W/kg

SAR 10g (W/Kg)	0.270061
SAR 1g (W/Kg)	0.473160

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7574	0.5028	0.2985	0.1823	0.1188



3D screen shot	Hot spot position
	

**Plot 6: LTE Band4, 20MHz, Back, Middle,10mm**

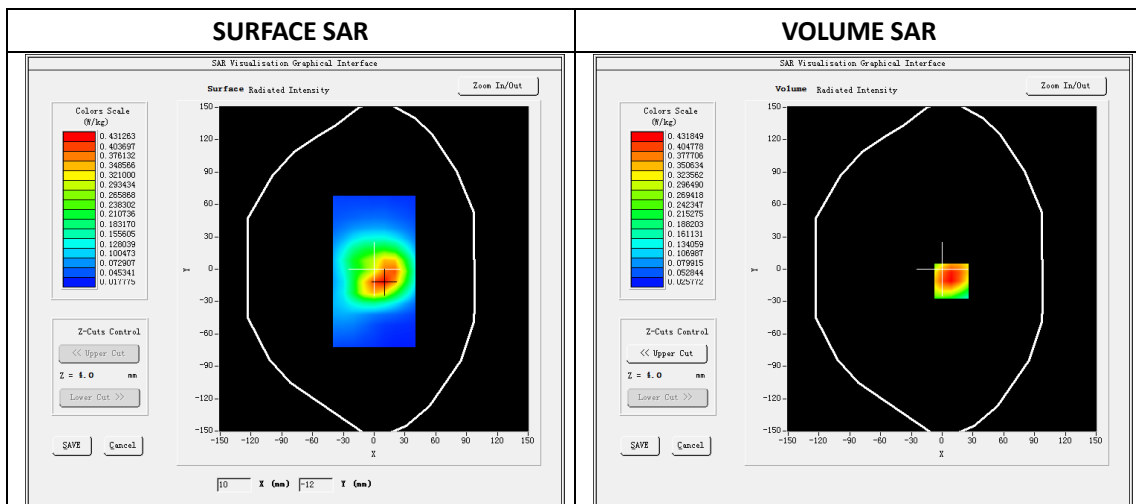
Type: Phone measurement  
 Date of measurement: 04/17/2019  
 Measurement duration: 22 minutes 41 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

<b>Area Scan</b>	dx=8mm dy=8mm
<b>ZoomScan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Back
<b>Band</b>	LTE Band 4
<b>Channels</b>	20175
<b>Signal</b>	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	1732.5
<b>Relative permittivity (real part)</b>	53.39
<b>Relative permittivity (imaginary part)</b>	15.20
<b>Conductivity (S/m)</b>	1.52
<b>Variation (%)</b>	-1.29
<b>ConvF:</b>	2.22

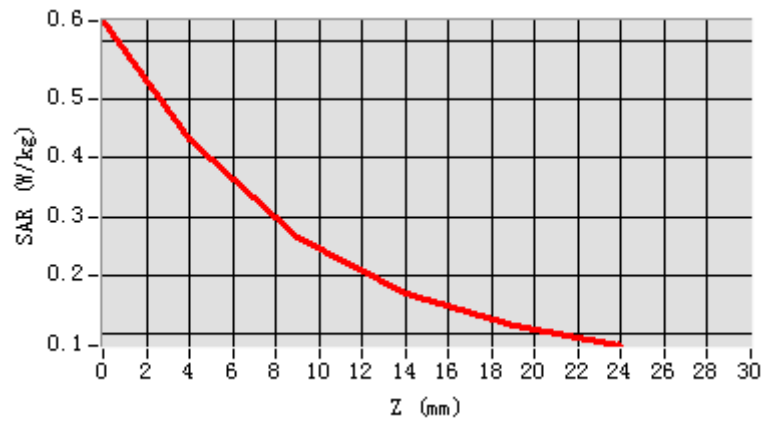


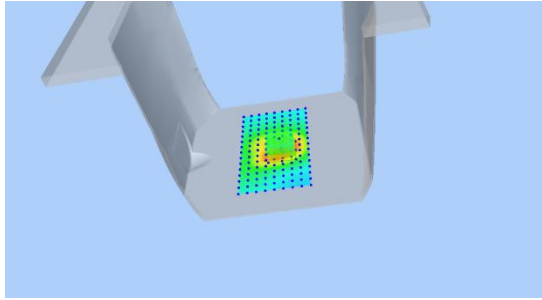
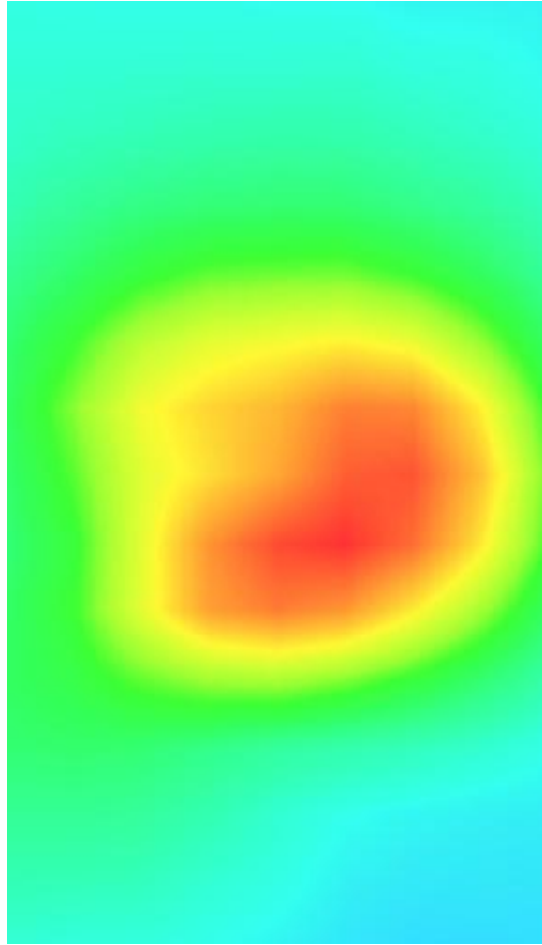
**Maximum location: X=9.00, Y=-11.00**

**SAR Peak: 0.64 W/kg**

<b>SAR 10g (W/Kg)</b>	0.253099
<b>SAR 1g (W/Kg)</b>	0.415369

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6349	0.4318	0.2658	0.1689	0.1142



3D screen shot	Hot spot position
	

**Plot 7: LTE Band5, 10MHz, Edge C, Middle,10mm**

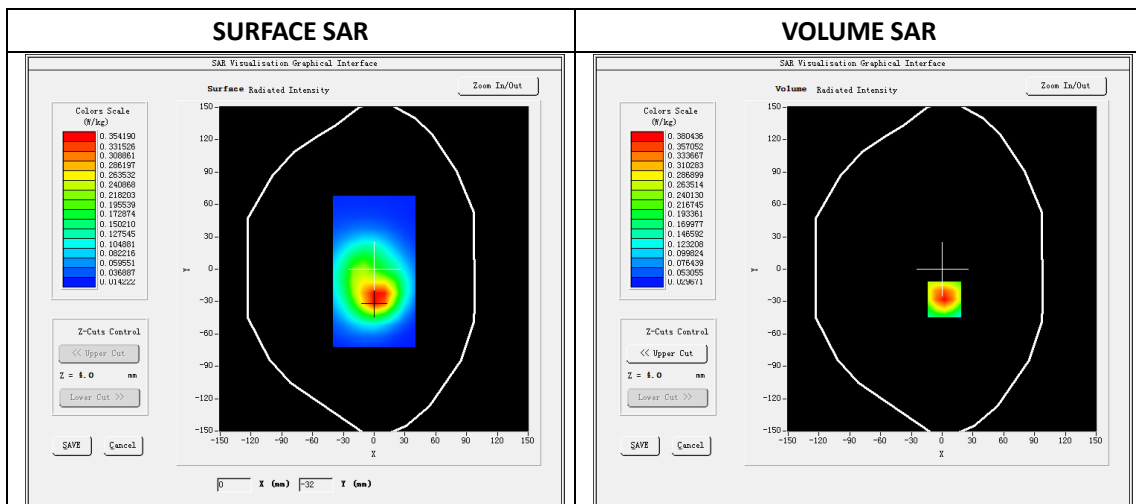
Type: Phone measurement  
 Date of measurement: 04/16/2019  
 Measurement duration: 22 minutes 38 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

<b>Area Scan</b>	dx=8mm dy=8mm
<b>ZoomScan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Back
<b>Band</b>	LTE Band 5
<b>Channels</b>	20525
<b>Signal</b>	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	836.5
<b>Relative permittivity (real part)</b>	55.24
<b>Relative permittivity (imaginary part)</b>	20.96
<b>Conductivity (S/m)</b>	0.99
<b>Variation (%)</b>	-2.77
<b>ConvF:</b>	1.99

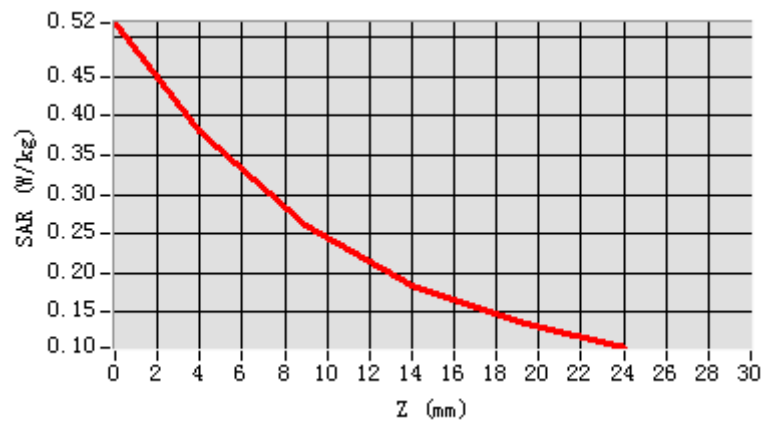


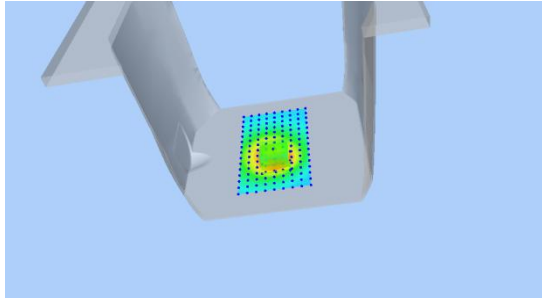
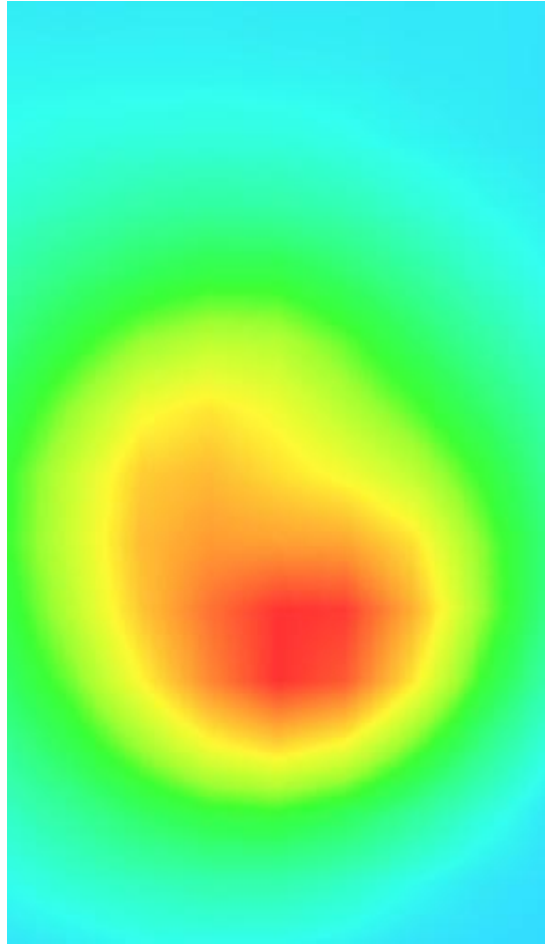
**Maximum location: X=2.00, Y=-28.00**

**SAR Peak: 0.52 W/kg**

<b>SAR 10g (W/Kg)</b>	0.232070
<b>SAR 1g (W/Kg)</b>	0.365498

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.5191	0.3804	0.2600	0.1840	0.1370



3D screen shot	Hot spot position
	

**Plot 8: LTE Band7, 20MHz, Back, Middle,10mm**

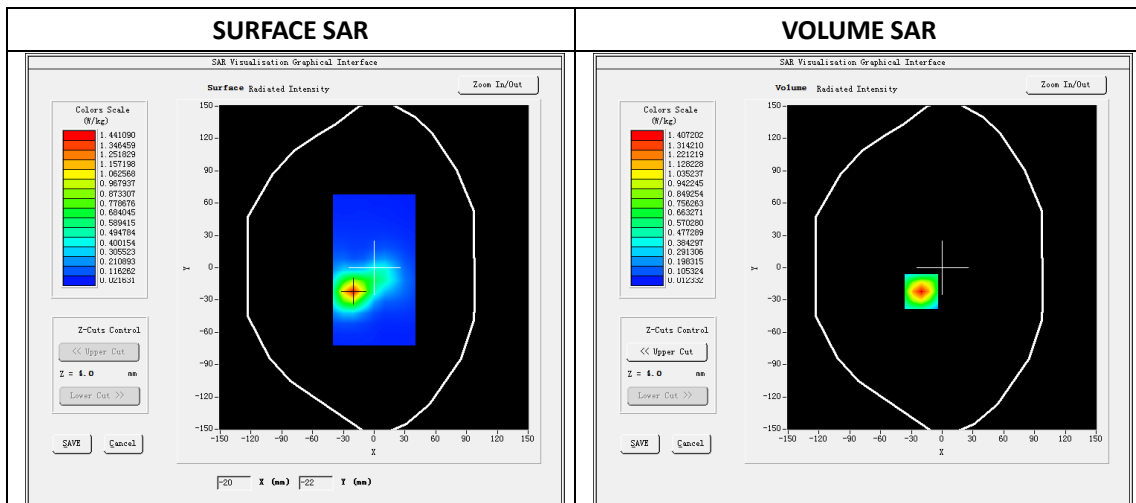
Type: Phone measurement  
 Date of measurement: 04/20/2019  
 Measurement duration: 22 minutes 21 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

<b>Area Scan</b>	dx=8mm dy=8mm
<b>ZoomScan</b>	7x7x8,dx=5mm dy=5mm dz=4mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Back
<b>Band</b>	LTE Band 7
<b>Channels</b>	21100
<b>Signal</b>	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	2535
<b>Relative permittivity (real part)</b>	52.35
<b>Relative permittivity (imaginary part)</b>	14.68
<b>Conductivity (S/m)</b>	2.12
<b>Variation (%)</b>	-2.98
<b>ConvF:</b>	2.43



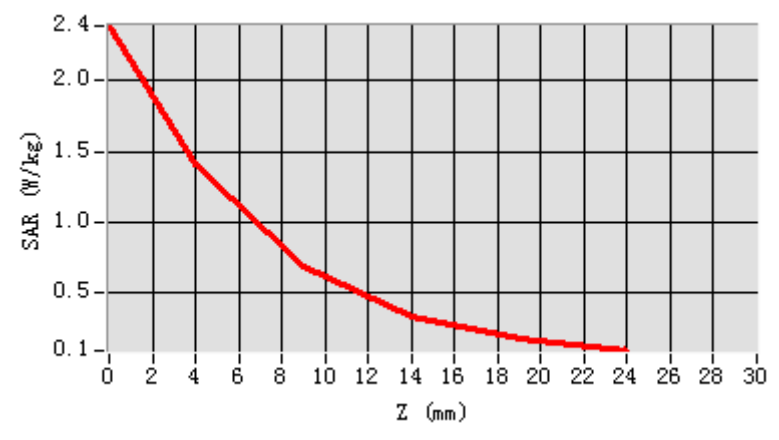
**Maximum location: X=-20.00 Y=-22.00**

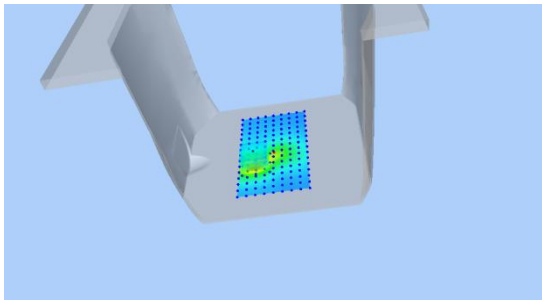
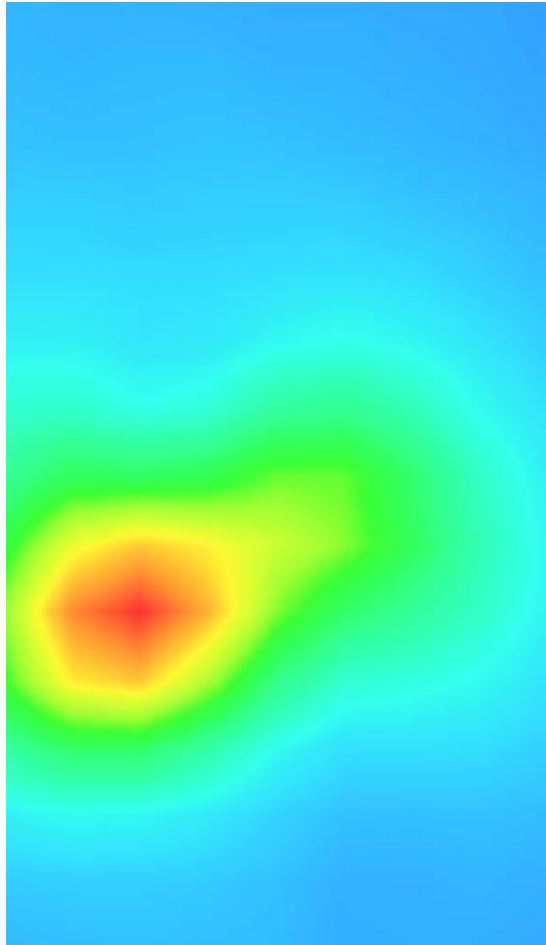
**SAR Peak: 2.38 W/kg**

<b>SAR 10g (W/Kg)</b>	0.610165
<b>SAR 1g (W/Kg)</b>	1.288656



<b>Z (mm)</b>	<b>0.00</b>	<b>4.00</b>	<b>9.00</b>	<b>14.00</b>	<b>19.00</b>
<b>SAR (W/Kg)</b>	<b>2.3875</b>	<b>1.4072</b>	<b>0.6930</b>	<b>0.3407</b>	<b>0.1806</b>



3D screen shot	Hot spot position
	

## Plot 9: Wi-Fi 802.11b, Back , Middle, 10mm

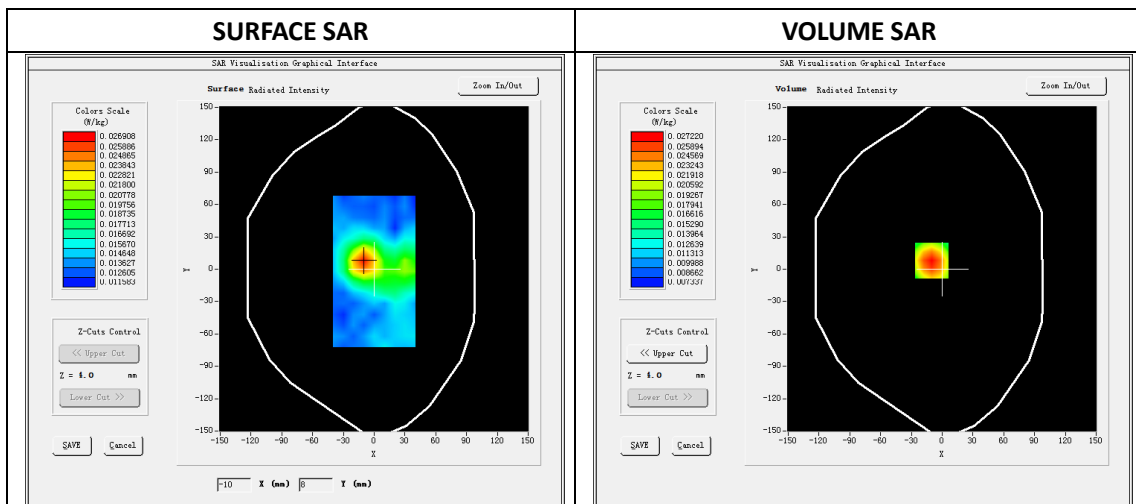
Type: Phone measurement  
 Date of measurement: 04/19/2019  
 Measurement duration: 22 minutes 52 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

<b>Area Scan</b>	dx=8mm dy=8mm
<b>ZoomScan</b>	7x7x8,dx=5mm dy=5mm dz=4mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Back
<b>Band</b>	WIFI
<b>Channels</b>	6
<b>Signal</b>	DSSS (Duty cycle: 1:1)

**B. SAR Measurement Results**

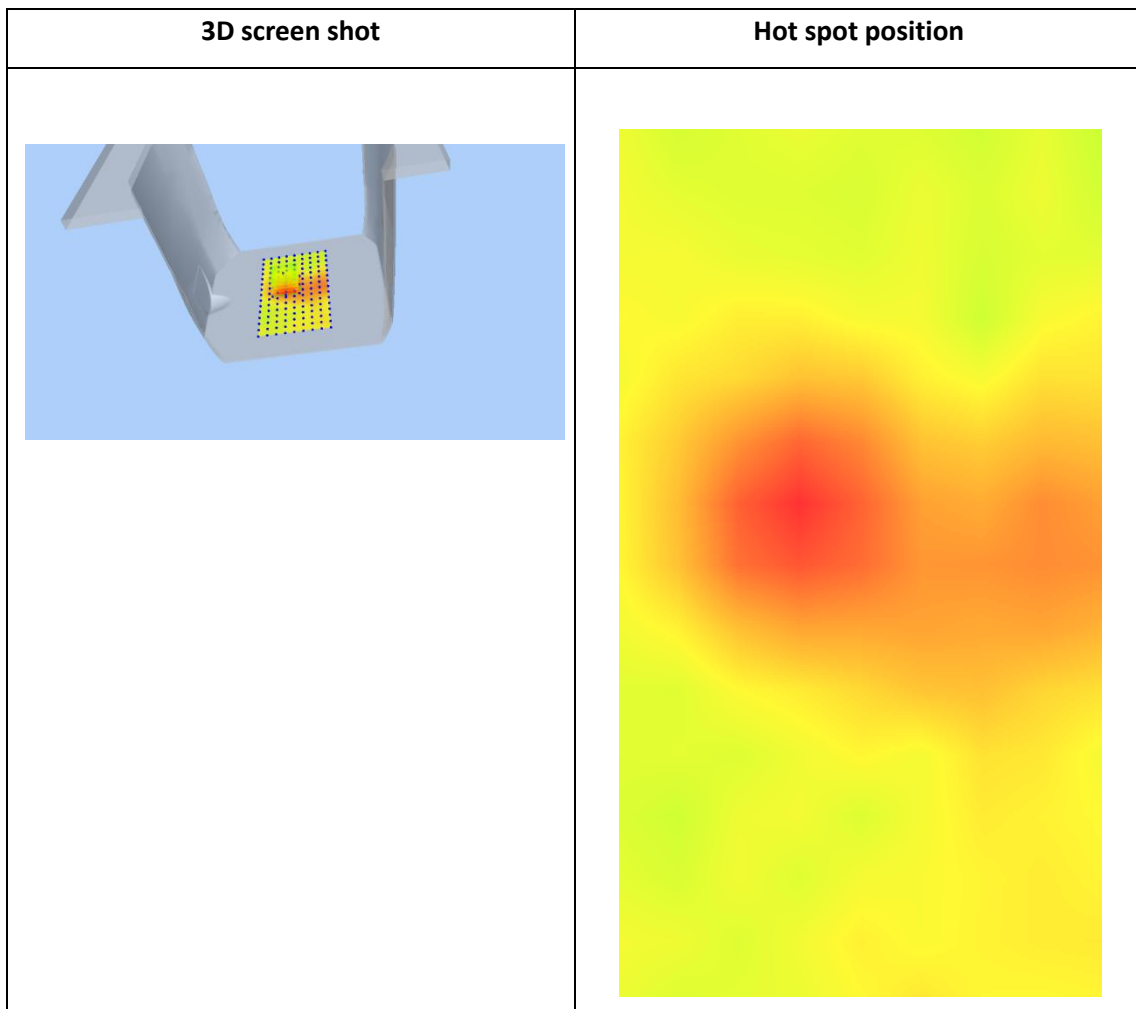
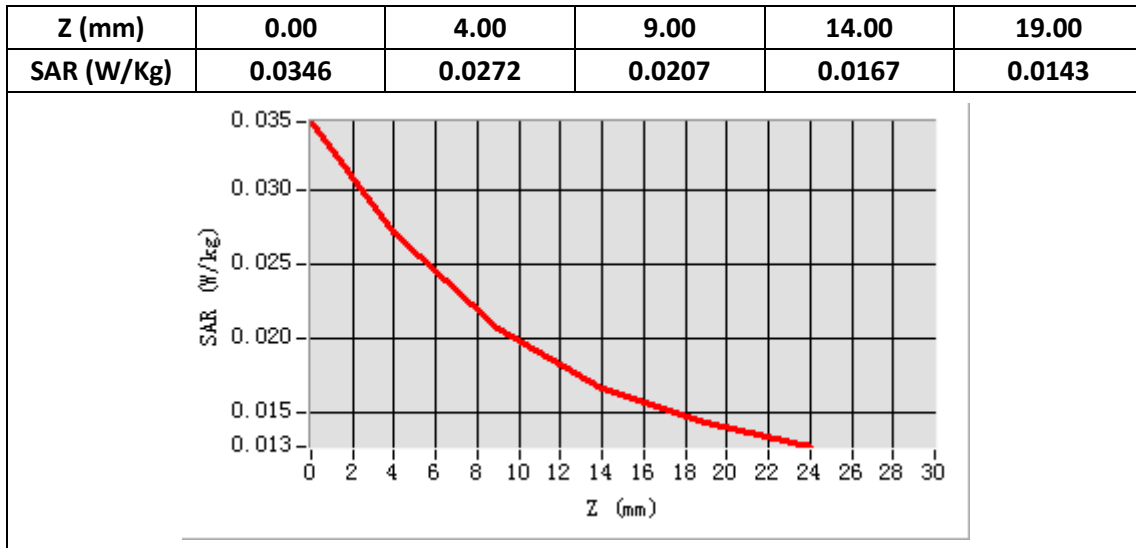
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	2437
<b>Relative permittivity (real part)</b>	52.65
<b>Relative permittivity (imaginary part)</b>	14.18
<b>Conductivity (S/m)</b>	1.93
<b>Variation (%)</b>	-2.10
<b>ConvF:</b>	2.46



**Maximum location: X=-10.00 Y=8.00**

**SAR Peak: 0.03 W/kg**

<b>SAR 10g (W/Kg)</b>	0.019471
<b>SAR 1g (W/Kg)</b>	0.026185



## Plot 10: BT3.0 8-DPSK, Edge B ,Middle, 10mm

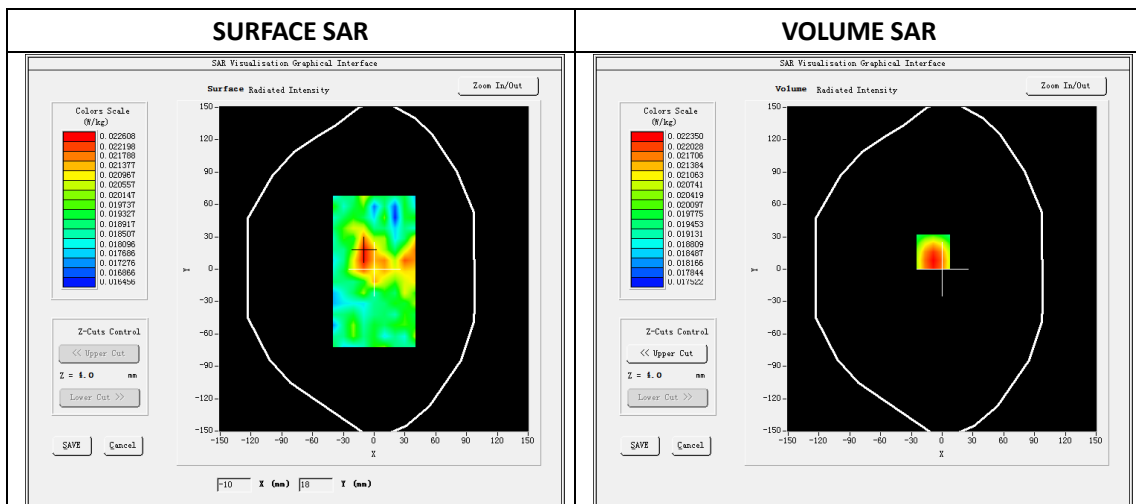
Type: Phone measurement  
 Date of measurement: 04/19/2019  
 Measurement duration: 22 minutes 01 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x8,dx=5mm dy=5mm dz=4mm
Phantom	Validation plane
Device Position	Edge B
Band	BT3.0
Channels	39
Signal	8-DPSK (Duty cycle: 1:1)

**B. SAR Measurement Results**

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	2441
Relative permittivity (real part)	52.35
Relative permittivity (imaginary part)	14.68
Conductivity (S/m)	2.12
Variation (%)	-3.70
ConvF:	2.43



Maximum location: X=-9.00 Y=16.00

SAR Peak: 0.02 W/kg

SAR 10g (W/Kg)	0.020959
SAR 1g (W/Kg)	0.023218

