

**Appendix B: SAR Measurement results Plots**

<b>Plot</b>	<b>Frequency/Mode</b>	<b>Testing Position and Channel</b>	<b>Test Date</b>
<b>1</b>	<b>GSM850/GPRS4Tx</b>	<b>Body Back, Middle 5mm</b>	<b>2018-05-08</b>
<b>2</b>	<b>GSM1900/GPRS4Tx</b>	<b>Body Back, Middle 5mm</b>	<b>2018-05-10</b>
<b>3</b>	<b>WCDMA850</b>	<b>Body Back, Middle 5mm</b>	<b>2018-05-08</b>
<b>4</b>	<b>WCDMA1900</b>	<b>Body Face, Middle 5mm</b>	<b>2018-05-10</b>
<b>5</b>	<b>LTE Band2</b>	<b>Body Back, Middle 5mm</b>	<b>2018-05-10</b>
<b>6</b>	<b>LTE Band4</b>	<b>Body Face, Middle 5mm</b>	<b>2018-05-09</b>
<b>7</b>	<b>LTE Band5</b>	<b>Body Back, Middle 5mm</b>	<b>2018-05-08</b>
<b>8</b>	<b>LTE Band7</b>	<b>Body Back, Middle 5mm</b>	<b>2018-05-11</b>
<b>9</b>	<b>WIFI</b>	<b>Body Back, Middle 5mm</b>	<b>2018-05-11</b>

**Plot 1: GPRS850, Back, Middle,5mm**

Type: Phone measurement

Date of measurement: 05/08/2018

Measurement duration: 22 minutes 22 seconds

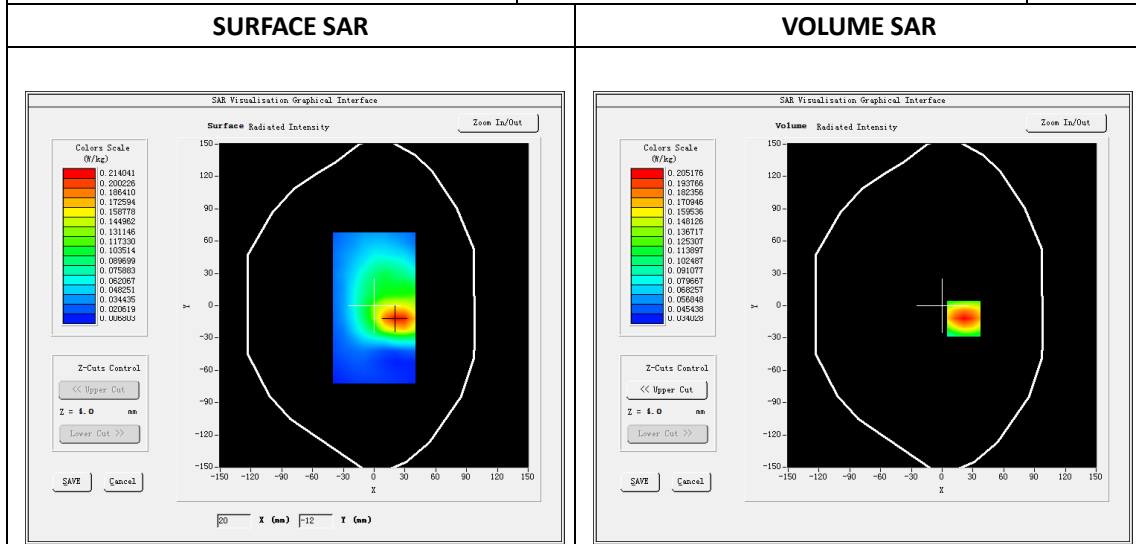
Mobile Phone IMEI number: --

**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: 1:2.08)

**B. SAR Measurement Results**

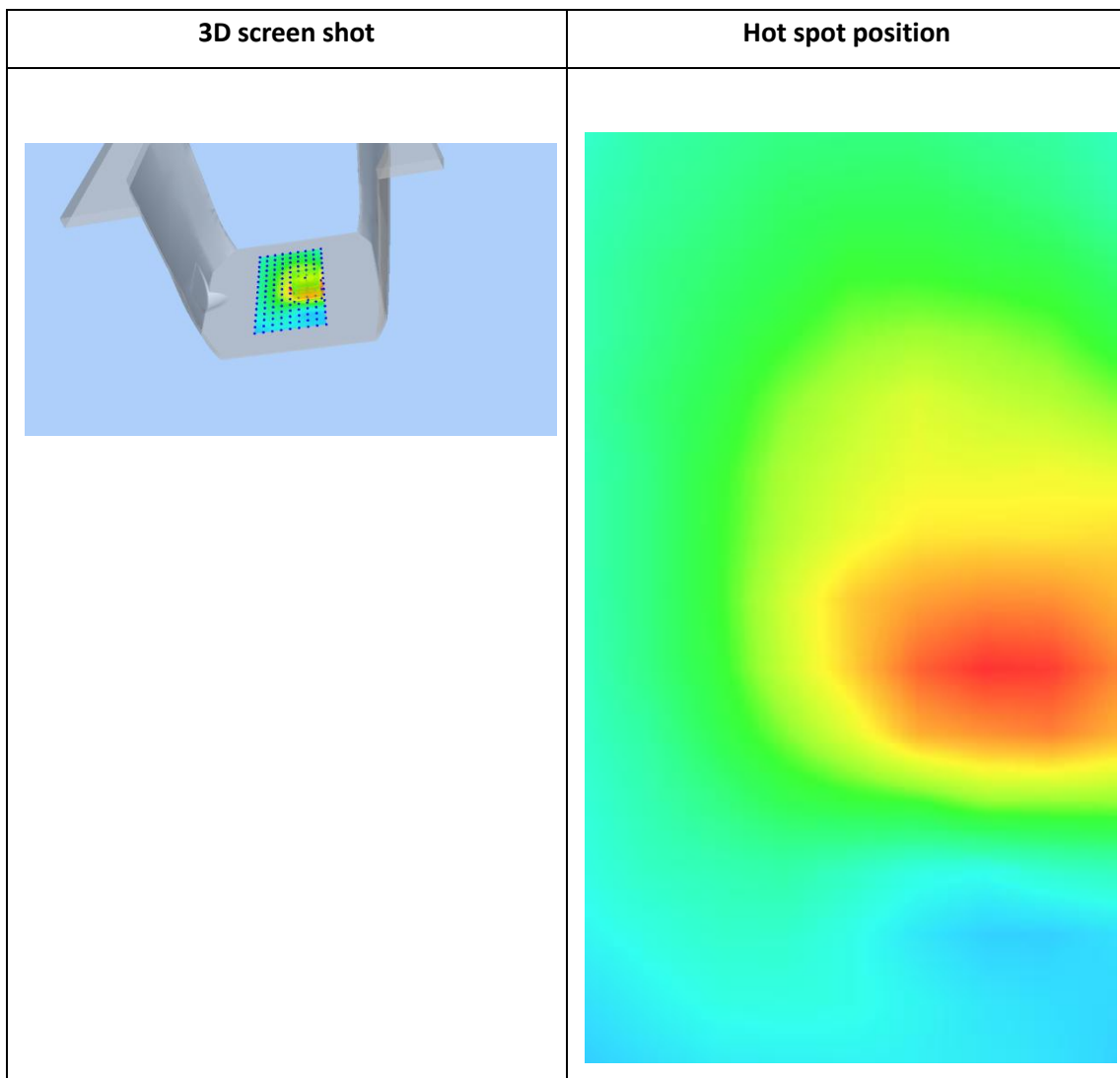
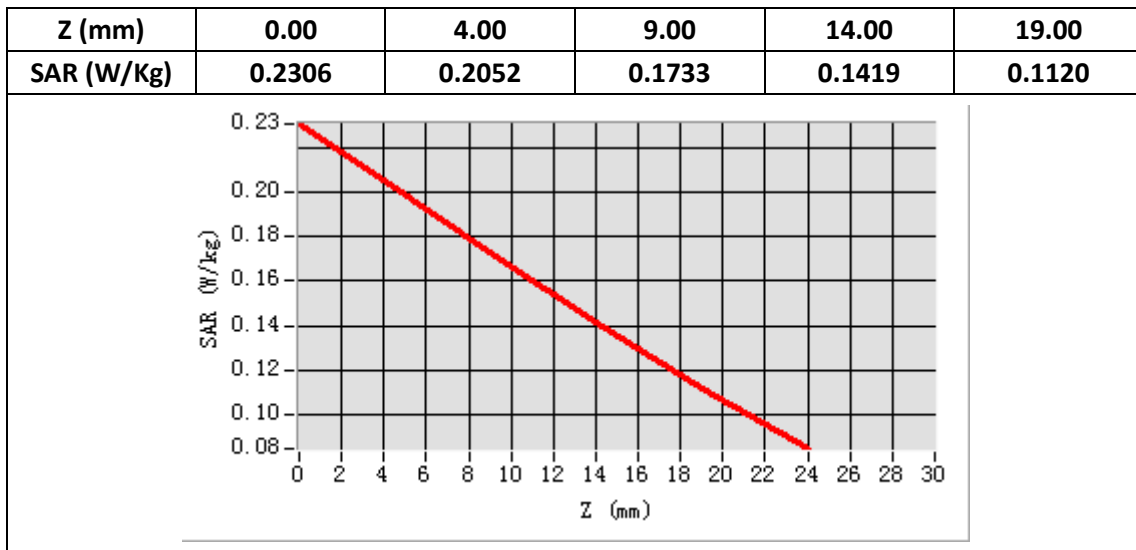
<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	836.6
<b>Relative permittivity (real part)</b>	55.22
<b>Relative permittivity (imaginary part)</b>	21.12
<b>Conductivity (S/m)</b>	0.98
<b>Variation (%)</b>	-1.93
<b>ConvF:</b>	5.18



Maximum location: X=21.00, Y=-12.00

SAR Peak: 0.23 W/kg

<b>SAR 10g (W/Kg)</b>	0.145590
<b>SAR 1g (W/Kg)</b>	0.197206



**Plot 2: GPRS1900, Back Middle,5mm**

Type: Phone measurement

Date of measurement: 05/10/2018

Measurement duration: 22 minutes 22 seconds

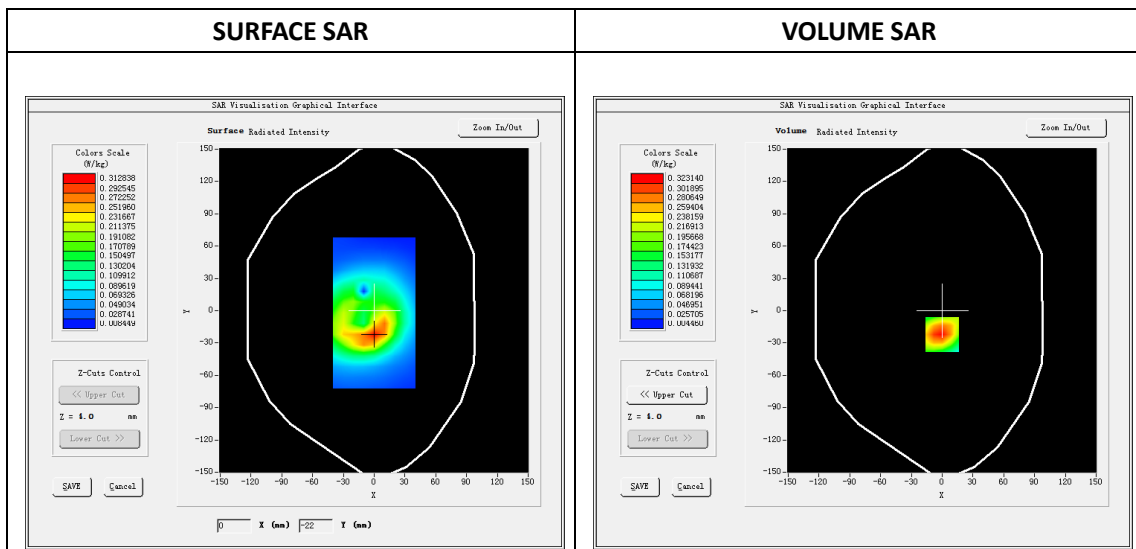
Mobile Phone IMEI number: --

**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>	GPRS1900_4Tx
<b>Channels</b>	661
<b>Signal</b>	GPRS (Duty cycle: 1:2.08)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	1880.0
<b>Relative permittivity (real part)</b>	53.33
<b>Relative permittivity (imaginary part)</b>	14.49
<b>Conductivity (S/m)</b>	1.53
<b>Variation (%)</b>	0.48
<b>ConvF:</b>	4.83

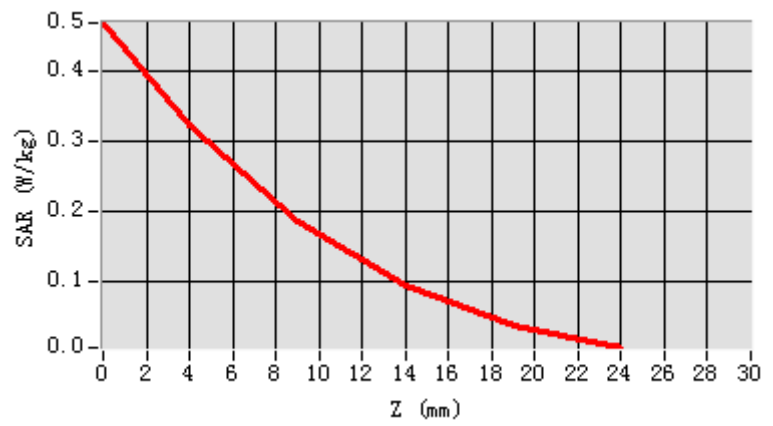


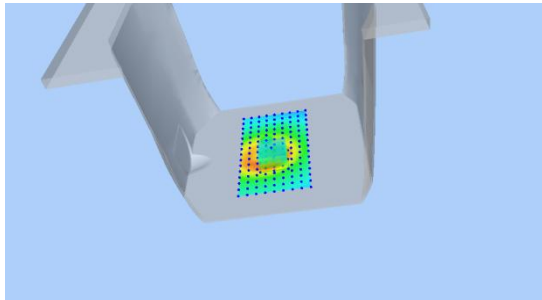
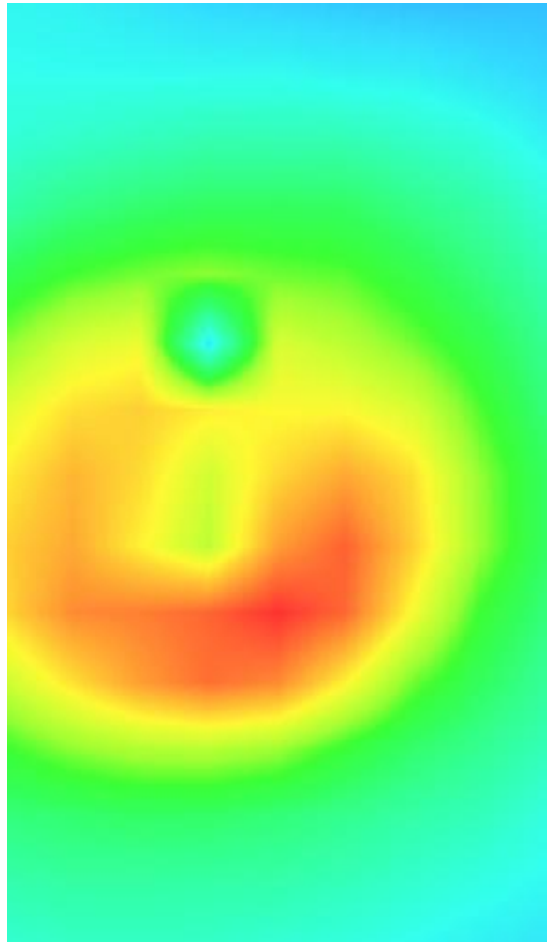
Maximum location: X=0.00, Y=-22.00

SAR Peak:0.48 W/kg

SAR 10g (W/Kg)	0.271751
SAR 1g (W/Kg)	0.524500

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.4692	0.3231	0.1876	0.0950	0.0371



3D screen shot	Hot spot position
	

### Plot 3: WCDMA850, BACK, Middle,5mm

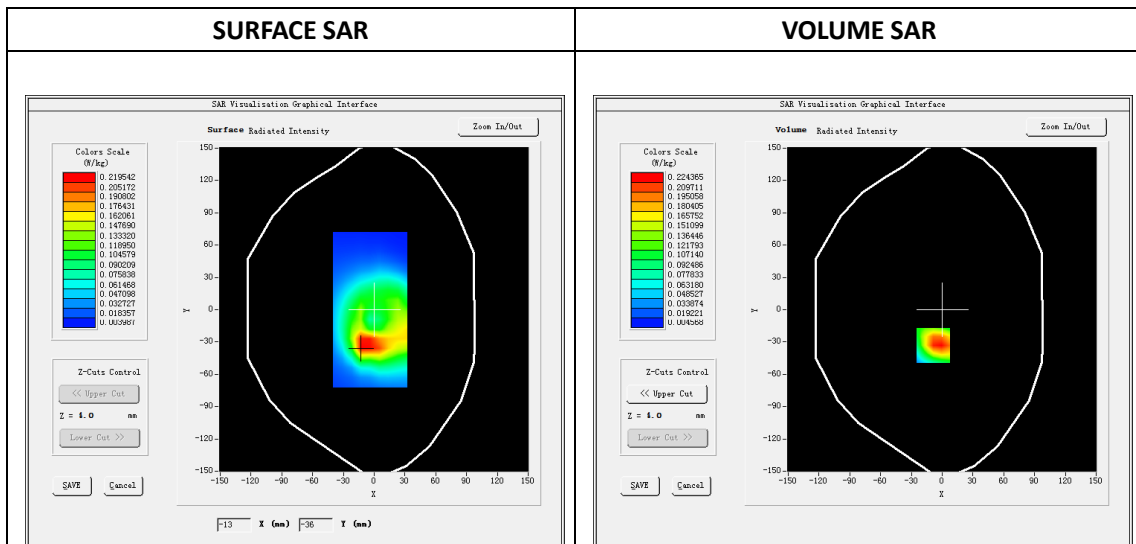
Type: Phone measurement  
 Date of measurement: 05/08/2018  
 Measurement duration: 22 minutes 12 seconds  
 Mobile Phone IMEI number: --

**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_43/15_EP276
Frequency (MHz)	836.6
Relative permittivity (real part)	55.22
Relative permittivity (imaginary part)	21.12
Conductivity (S/m)	0.98
Variation (%)	-1.54
ConvF:	5.18

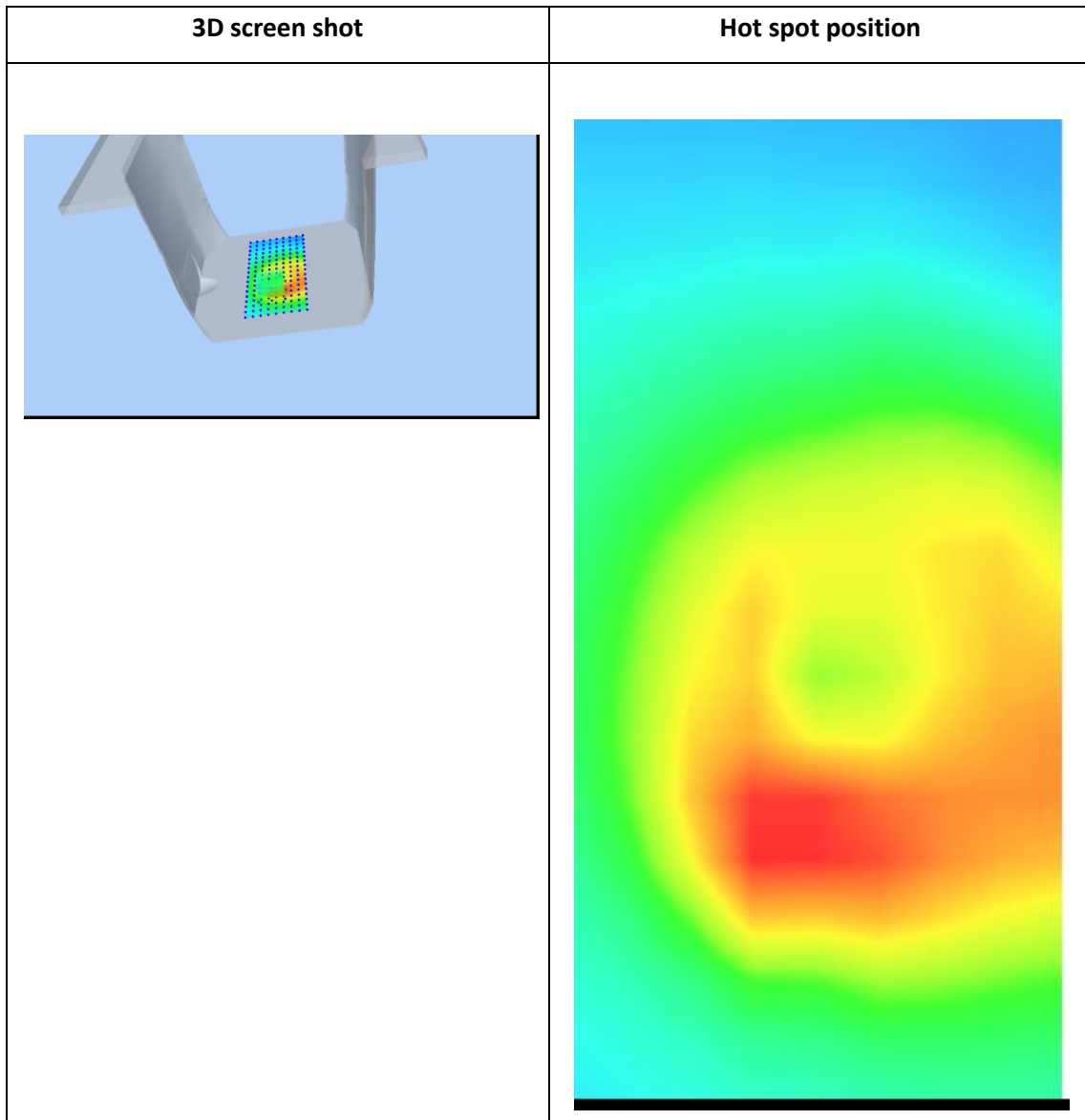
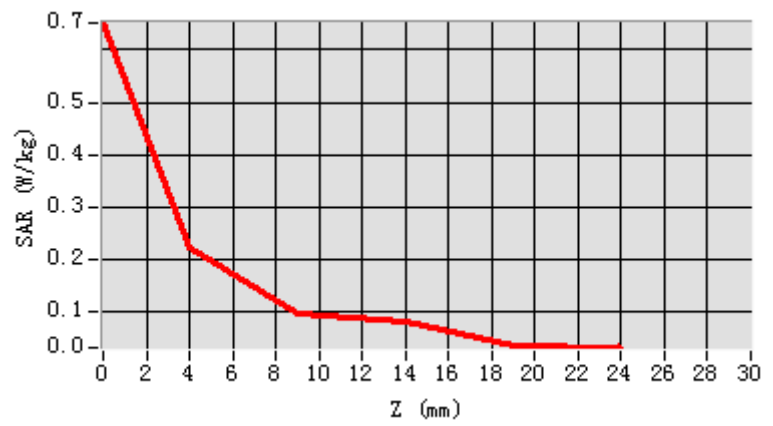


**Maximum location: X=-6.90, Y=-33.00**

**SAR Peak: 0.34 W/kg**

SAR 10g (W/Kg)	0.120647
SAR 1g (W/Kg)	0.213799

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6516	0.2244	0.0950	0.0816	0.0362



**Plot 4: WCDMA1900,Face, Middle,5mm**

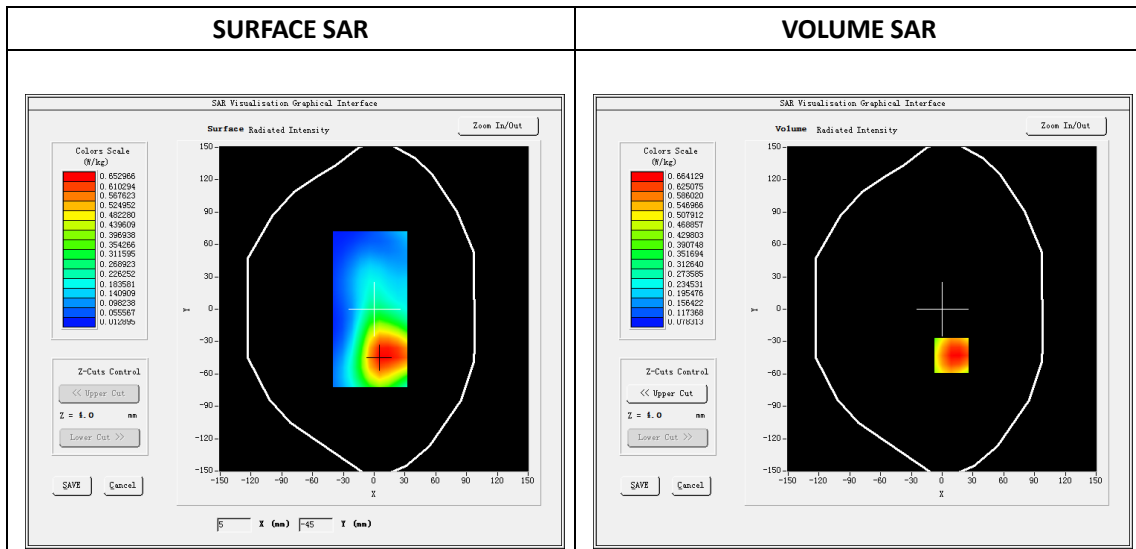
Type: Phone measurement  
 Date of measurement: 05/10/2018  
 Measurement duration: 22 minutes 16 seconds  
 Mobile Phone IMEI number: --

**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>	Face
<b>Band</b>	Band2_WCDMA1900
<b>Channels</b>	9400
<b>Signal</b>	WCDMA (Duty cycle: 1:1)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	1880
<b>Relative permittivity (real part)</b>	53.33
<b>Relative permittivity (imaginary part)</b>	14.49
<b>Conductivity (S/m)</b>	1.53
<b>Variation (%)</b>	-0.23
<b>ConvF:</b>	4.83



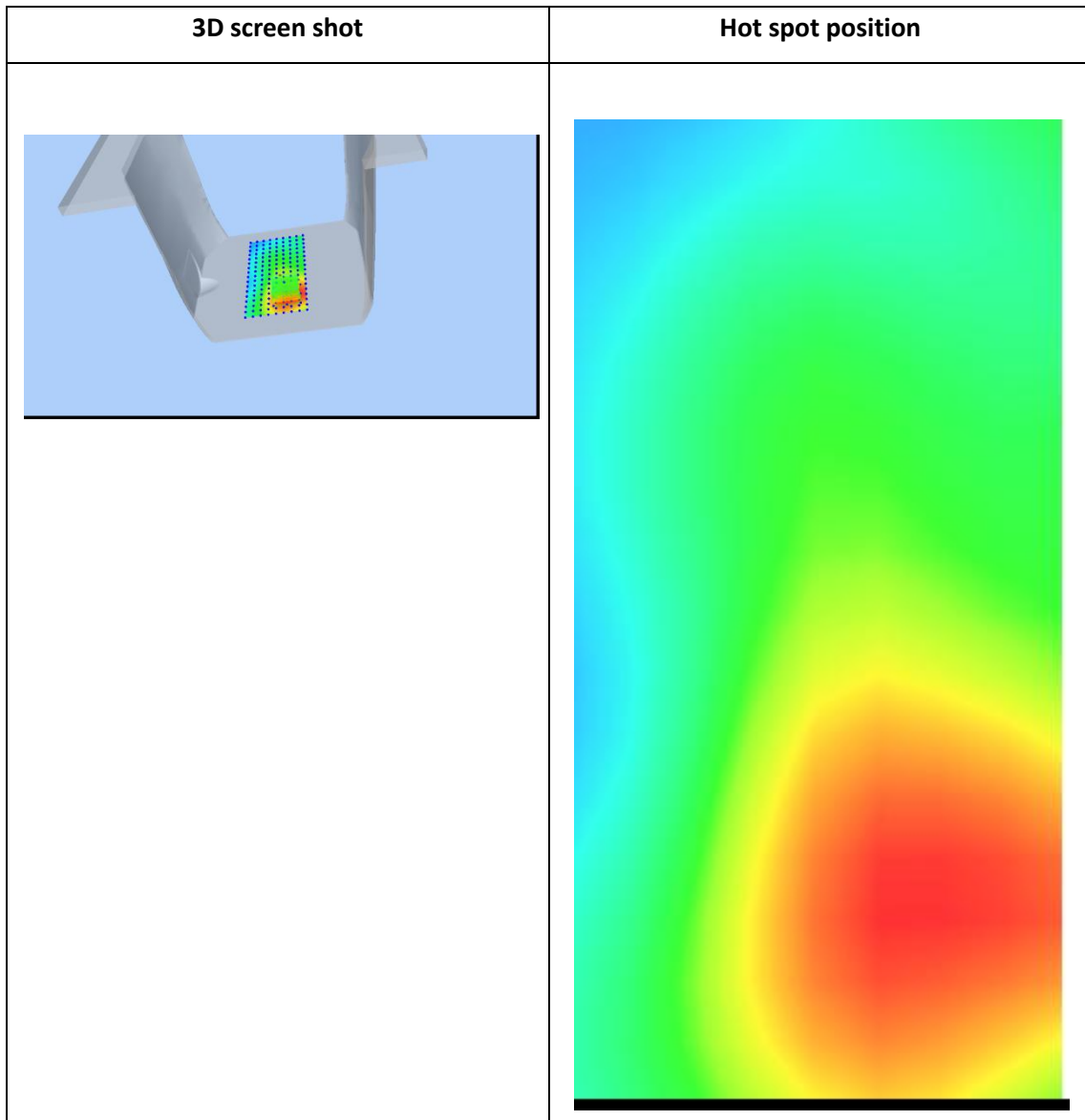
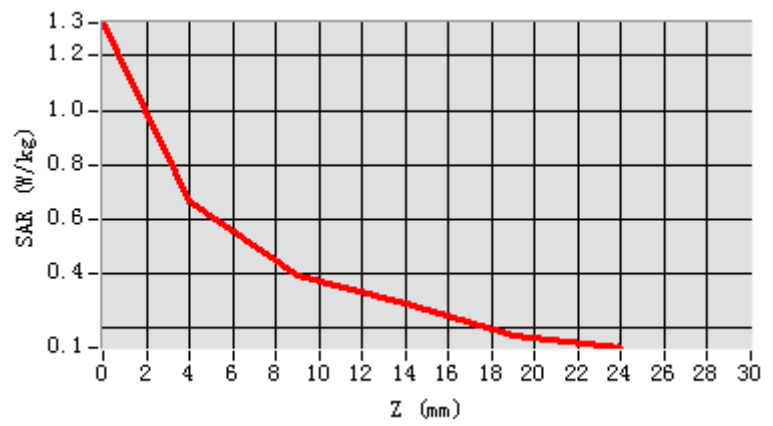
**Maximum location: X=9.00, Y=-43.00**

**SAR Peak: 0.93W/kg**

<b>SAR 10g (W/Kg)</b>	0.413957
<b>SAR 1g (W/Kg)</b>	0.639140



Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	1.3205	0.6641	0.3902	0.2913	0.1736



## Plot 5: LTE Band2, 20MHz,Back , Middle,5mm

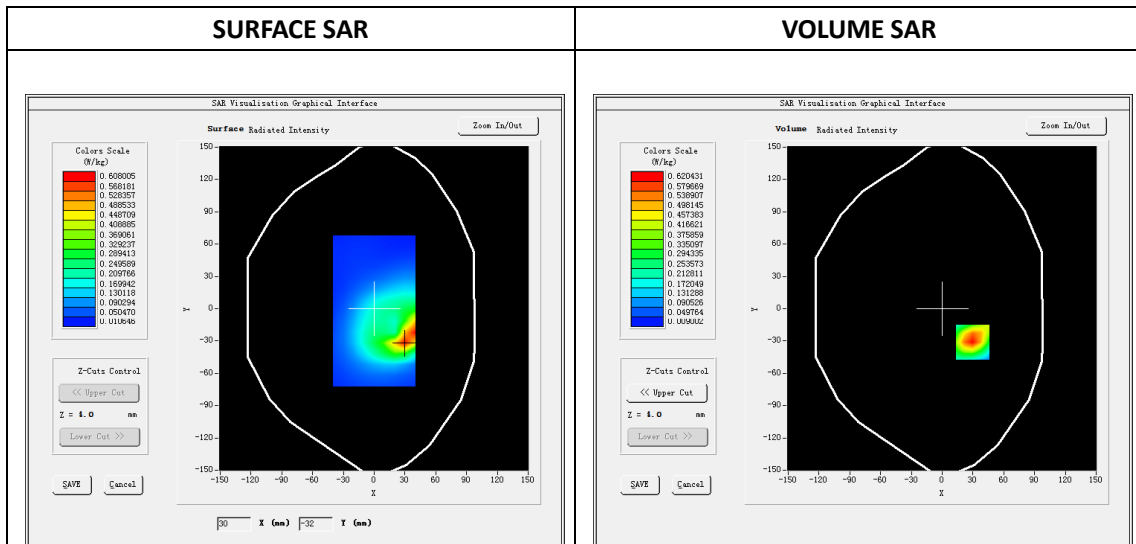
Type: Phone measurement  
 Date of measurement: 05/10/2018  
 Measurement duration: 22 minutes 23 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

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

**B. SAR Measurement Results**

E-Field Probe	SATIMO SN_43/15_EP276
Frequency (MHz)	1880
Relative permittivity (real part)	53.33
Relative permittivity (imaginary part)	14.49
Conductivity (S/m)	1.53
Variation (%)	-1.43
ConvF:	4.83

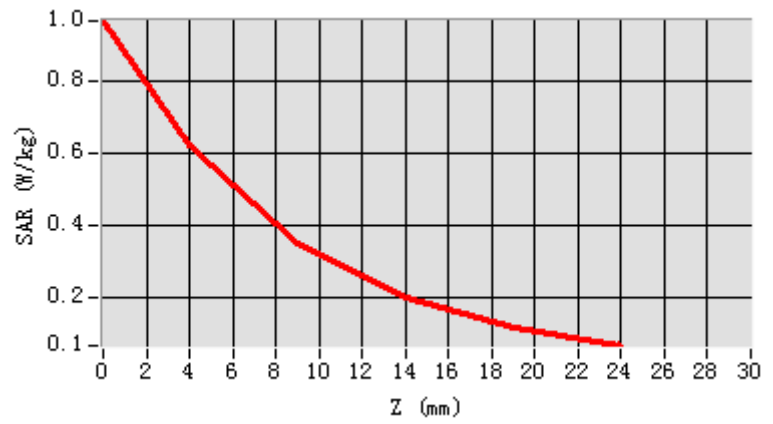


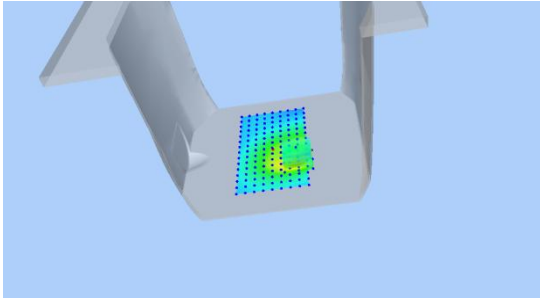
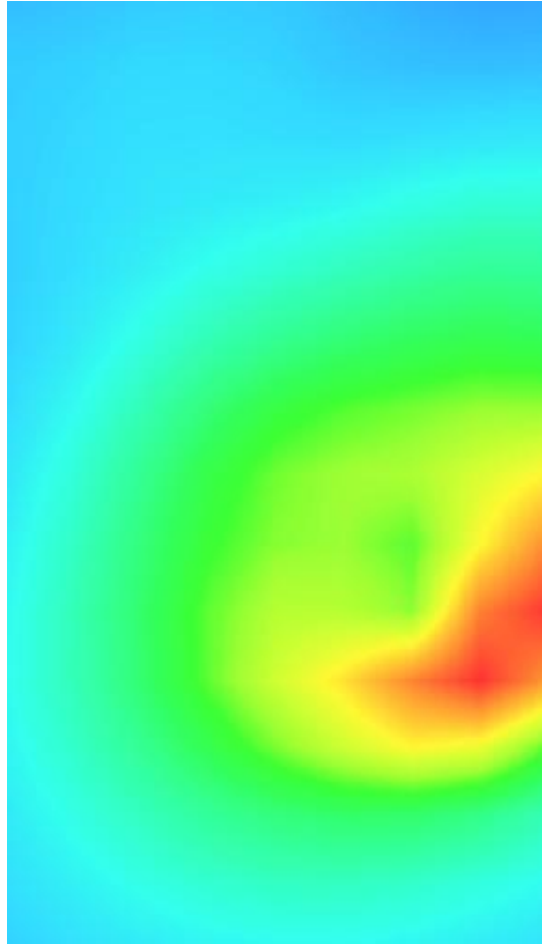
**Maximum location: X=30.00, Y=-31.00**

**SAR Peak: 0.98 W/kg**

<b>SAR 10g (W/Kg)</b>	0.304011
<b>SAR 1g (W/Kg)</b>	0.580290

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.9627	0.6204	0.3500	0.1990	0.1183



3D screen shot	Hot spot position
	

**Plot 6: LTE Band4, 20MHz, Face Middle,5mm**

Type: Phone measurement

Date of measurement: 05/09/2018

Measurement duration: 22 minutes 39 seconds

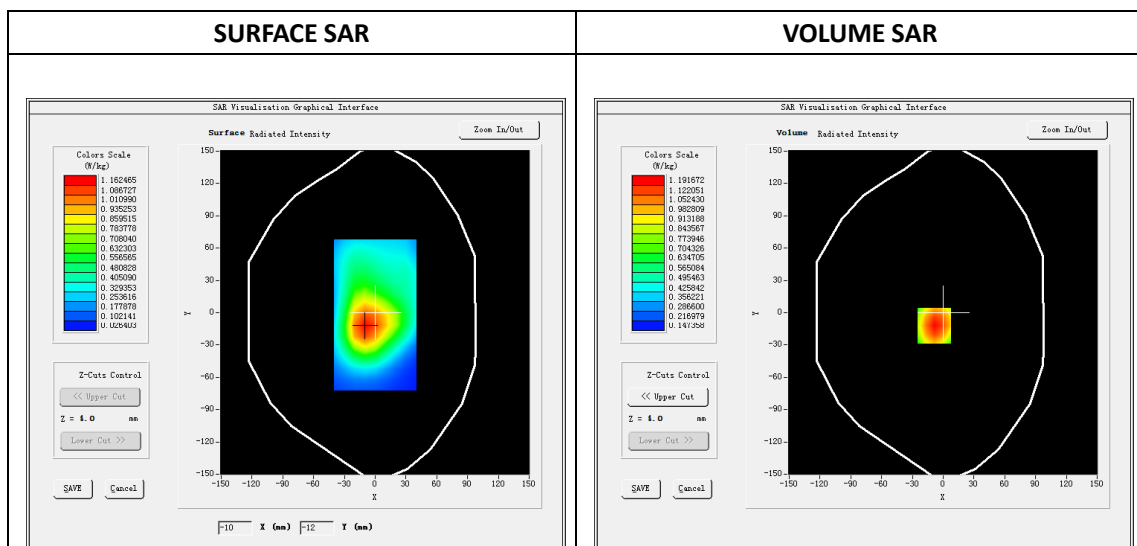
Mobile Phone IMEI number: --

**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 4
Channels	20175
Signal	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

E-Field Probe	SATIMO SN_43/15_EP276
Frequency (MHz)	1732.5
Relative permittivity (real part)	53.31
Relative permittivity (imaginary part)	15.10
Conductivity (S/m)	1.51
Variation (%)	0.90
ConvF:	4.43

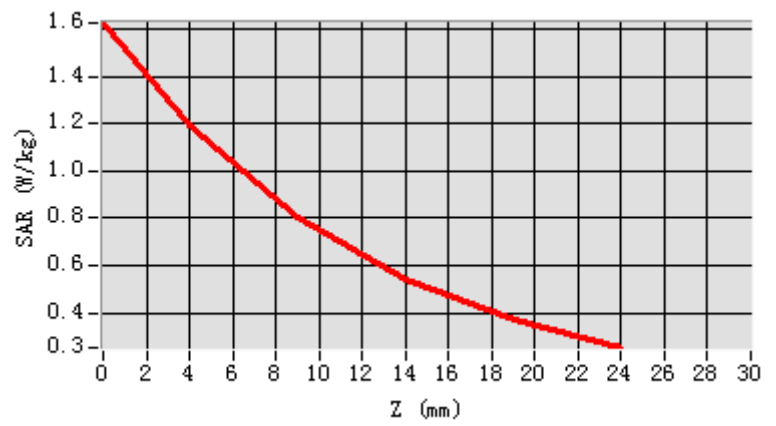


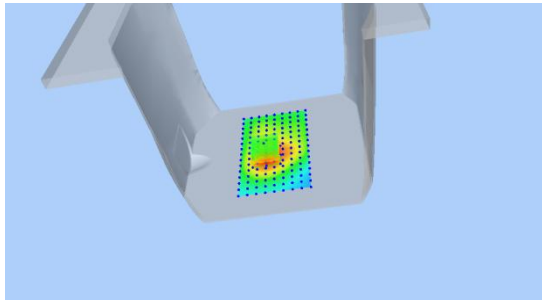
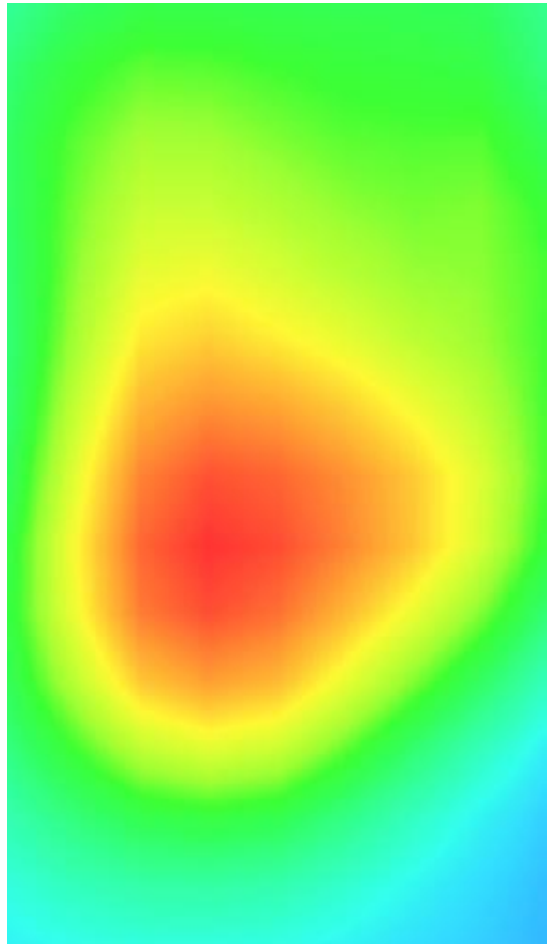
Maximum location: X=-9.00, Y=-12.00

SAR Peak: 1.63 W/kg

SAR 10g (W/Kg)	0.739908
SAR 1g (W/Kg)	1.144660

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	1.6286	1.1917	0.8014	0.5429	0.3733



3D screen shot	Hot spot position
	

### Plot 7: LTE Band5, 10MHz, Back, Middle,5mm

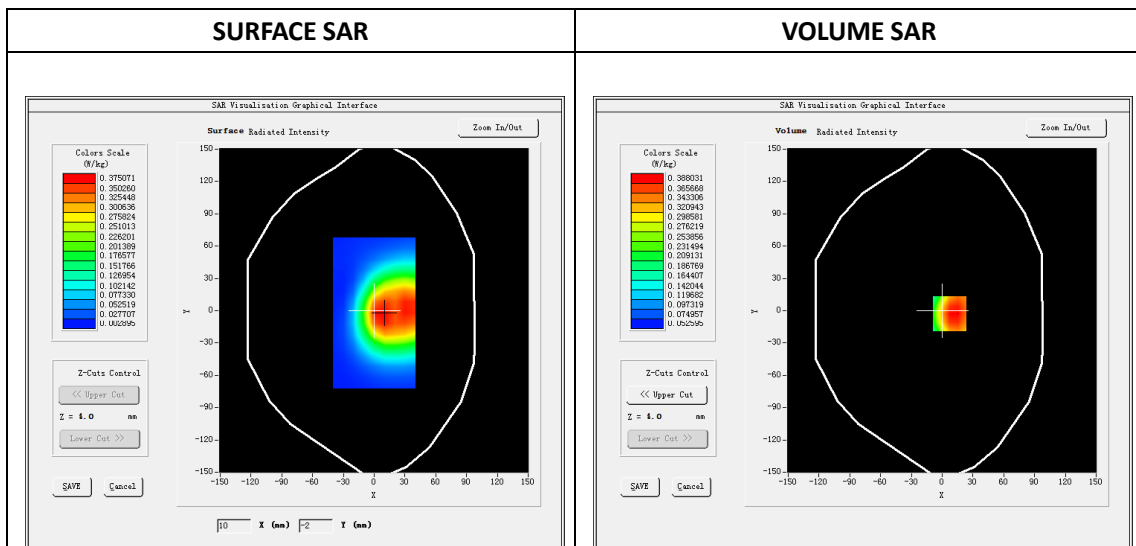
Type: Phone measurement  
 Date of measurement: 05/08/2018  
 Measurement duration: 22 minutes 13 seconds  
 Mobile Phone IMEI number: --

**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>	LTE Band 5
<b>Channels</b>	20525
<b>Signal</b>	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

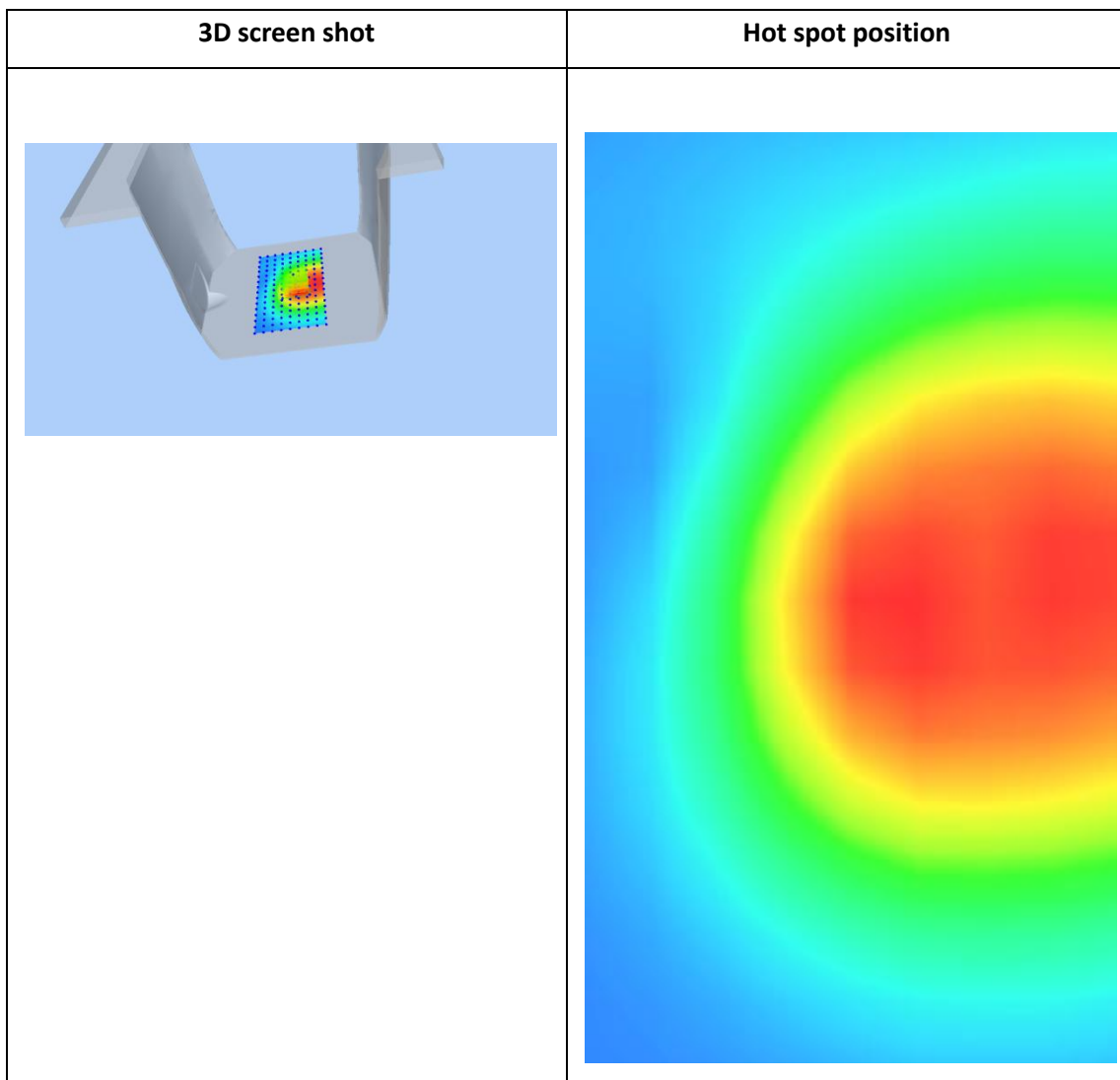
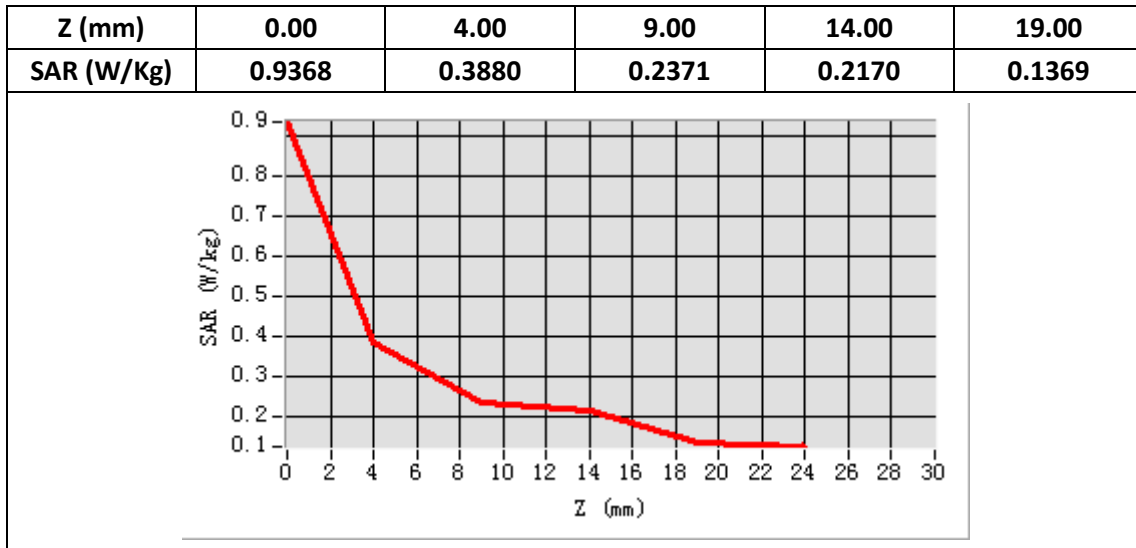
<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	836.5
<b>Relative permittivity (real part)</b>	55.22
<b>Relative permittivity (imaginary part)</b>	21.12
<b>Conductivity (S/m)</b>	0.98
<b>Variation (%)</b>	1.18
<b>ConvF:</b>	5.18



**Maximum location: X=7.00, Y=-3.00**

**SAR Peak: 0.51 W/kg**

<b>SAR 10g (W/Kg)</b>	0.269707
<b>SAR 1g (W/Kg)</b>	0.380962



### Plot 8: LTE Band7, 20MHz, BACK, Middle,5mm

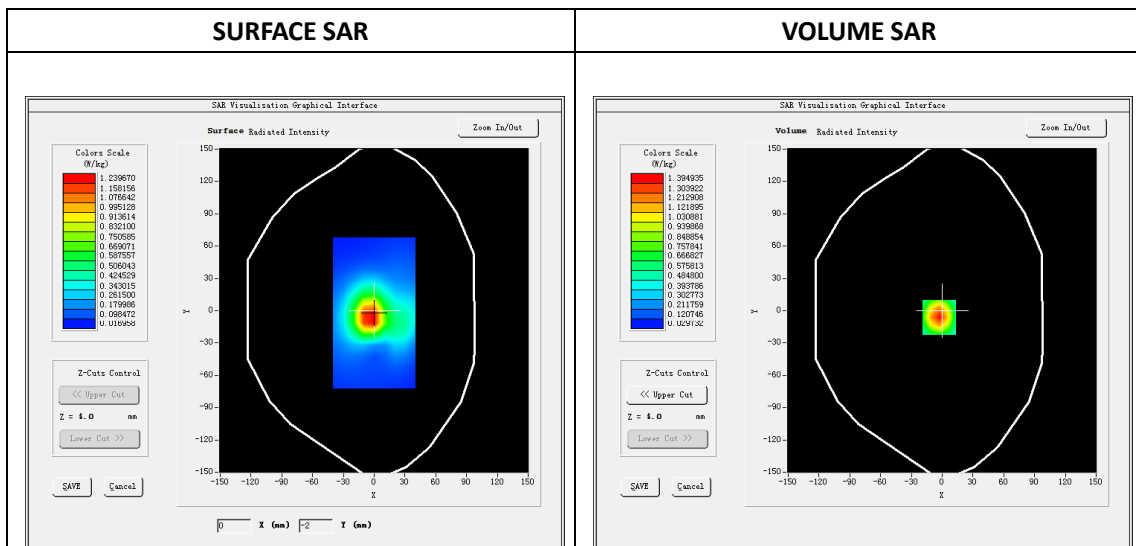
Type: Phone measurement  
 Date of measurement: 05/11/2018  
 Measurement duration: 22 minutes 16 seconds  
 Mobile Phone IMEI number: --

**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 7
<b>Channels</b>	21100
<b>Signal</b>	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	2535
<b>Relative permittivity (real part)</b>	52.53.
<b>Relative permittivity (imaginary part)</b>	14.81
<b>Conductivity (S/m)</b>	2.14
<b>Variation (%)</b>	-0.23
<b>ConvF:</b>	5.73



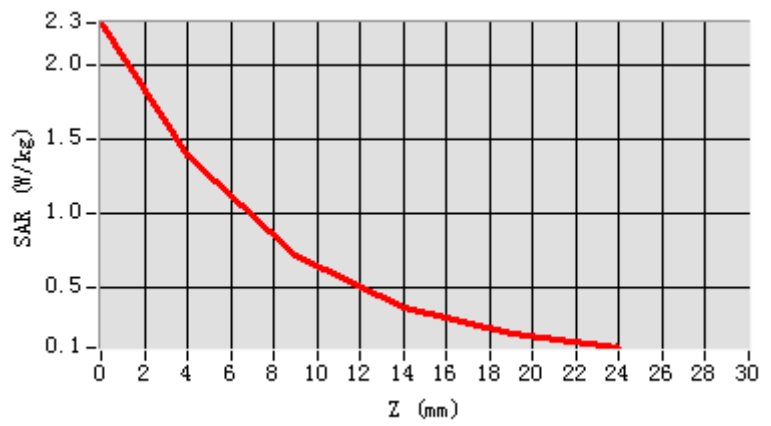
**Maximum location: X=-3.00, Y=-6.00**

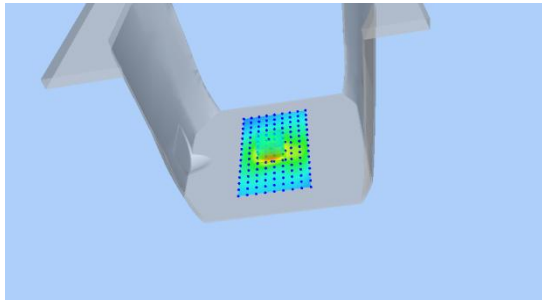
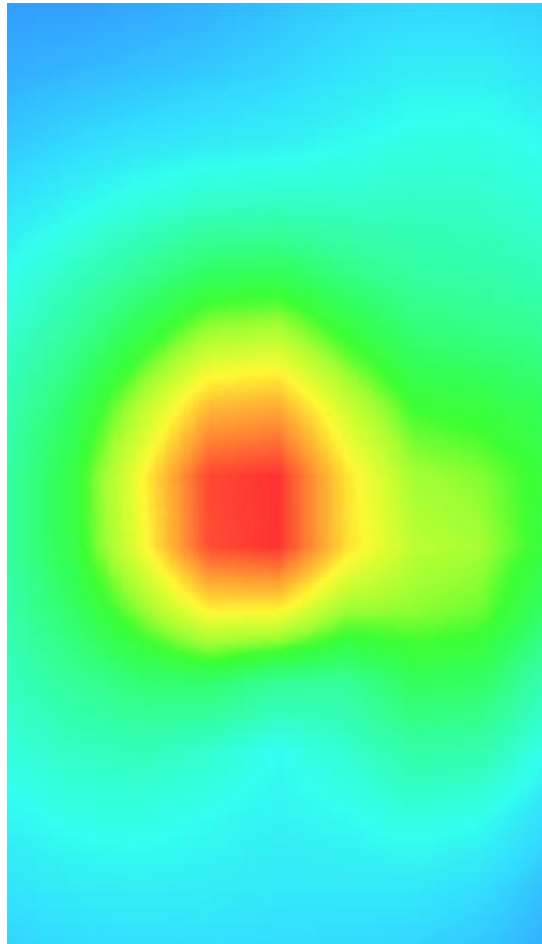
**SAR Peak: 2.29 W/kg**

<b>SAR 10g (W/Kg)</b>	0.550278
<b>SAR 1g (W/Kg)</b>	1.097012



Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	2.2874	1.3949	0.7206	0.3682	0.1953



3D screen shot	Hot spot position
	

## Plot 9: Wi-Fi 802.11b, Back ,High,5mm

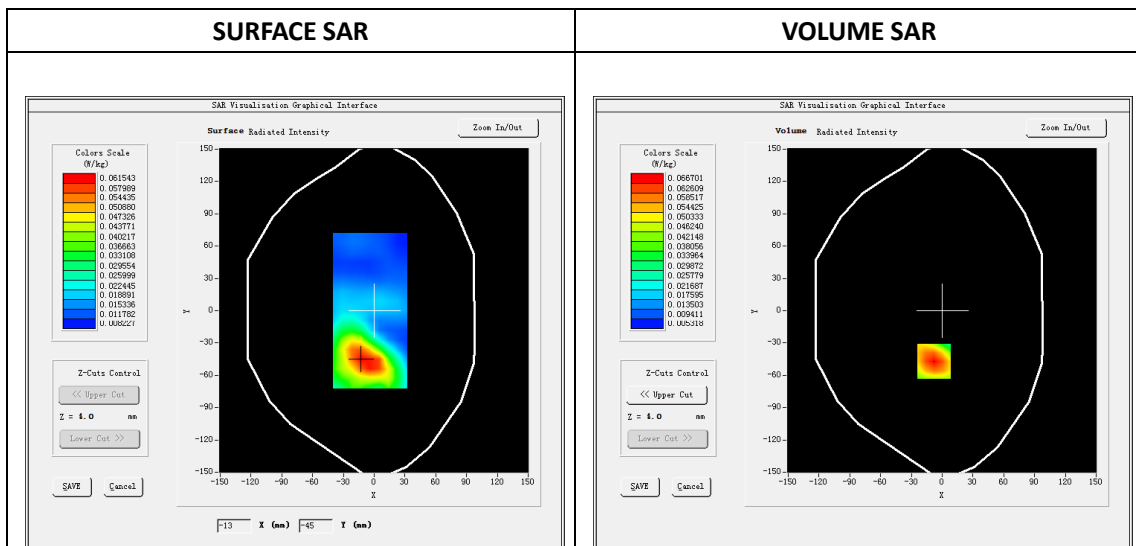
Type: Phone measurement  
 Date of measurement: 05/11/2018  
 Measurement duration: 22 minutes 15 seconds  
 Mobile Phone IMEI number: --

**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>	WIFI
<b>Channels</b>	11
<b>Signal</b>	OFDM (Duty cycle: 1:1)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	2462
<b>Relative permittivity (real part)</b>	52.71
<b>Relative permittivity (imaginary part)</b>	14.32
<b>Conductivity (S/m)</b>	1.95
<b>Variation (%)</b>	0.61
<b>ConvF:</b>	4.61



**Maximum location: X=-8.00, Y=-47.00**

**SAR Peak: 0.10 W/kg**

<b>SAR 10g (W/Kg)</b>	0.040111
<b>SAR 1g (W/Kg)</b>	0.071424

