

**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 0mm</b>	<b>2018-10-27</b>
<b>2</b>	<b>GSM1900/GPRS4Tx</b>	<b>Body Face High 0mm</b>	<b>2018-10-28</b>
<b>3</b>	<b>WCDMA850</b>	<b>Body Back, Middle 0mm</b>	<b>2018-10-27</b>
<b>4</b>	<b>WCDMA1900</b>	<b>Body Back, Middle 0mm</b>	<b>2018-10-28</b>
<b>5</b>	<b>LTE Band2</b>	<b>Body Face, Middle 0mm</b>	<b>2018-10-28</b>
<b>6</b>	<b>LTE Band4</b>	<b>Body Face, Middle 0mm</b>	<b>2018-10-28</b>
<b>7</b>	<b>LTE Band5</b>	<b>Body Back, Middle 0mm</b>	<b>2018-10-27</b>
<b>8</b>	<b>LTE Band7</b>	<b>Body Back, Middle 0mm</b>	<b>2018-10-30</b>
<b>9</b>	<b>LTE Band26</b>	<b>Body Back, Middle 0mm</b>	<b>2018-10-27</b>
<b>10</b>	<b>LTE Band41</b>	<b>Body Back, Middle 0mm</b>	<b>2018-10-30</b>
<b>11</b>	<b>WIFI 802 11b</b>	<b>Body Face Middle 0mm</b>	<b>2018-10-30</b>
<b>12</b>	<b>WIFI 802 11a</b>	<b>Body Face, Middle 0mm</b>	<b>2018-10-31</b>
<b>13</b>	<b>CDMA BC0</b>	<b>Body Back, Middle 0mm</b>	<b>2018-10-27</b>

**Plot 1: GPRS850, Back, Middle,0mm**

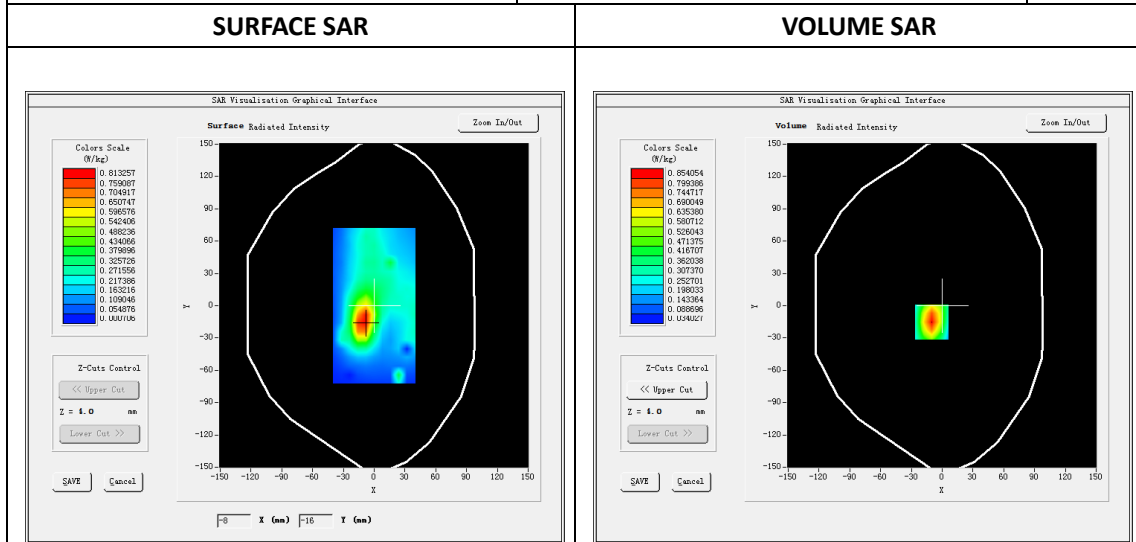
Type: Phone measurement  
 Date of measurement: 10/27/2018  
 Measurement duration: 22 minutes 22 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Back
Band	GSPRS850_4Tx
Channels	190
Signal	GPRS(Duty cycle: 1:2.08)

**B. SAR Measurement Results**

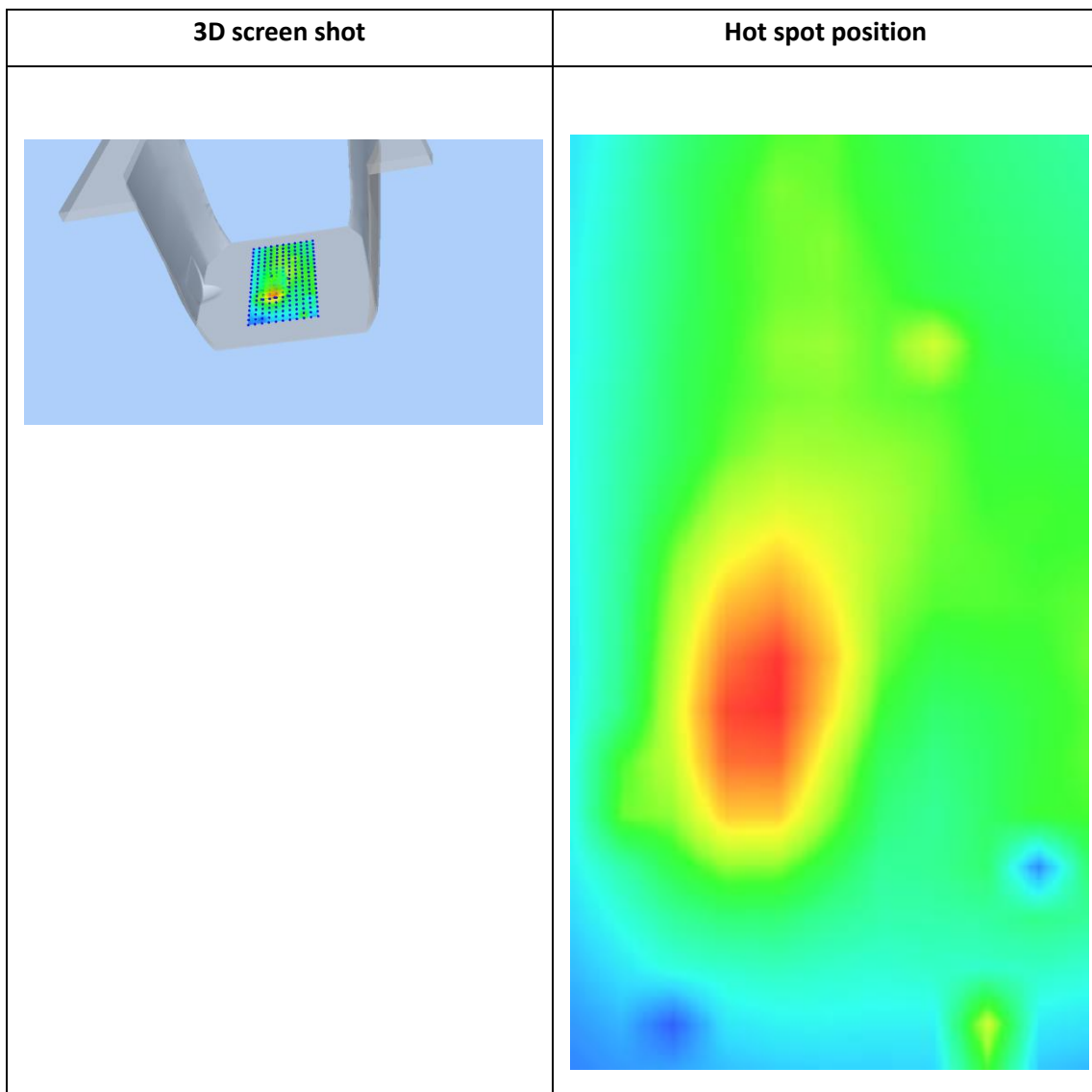
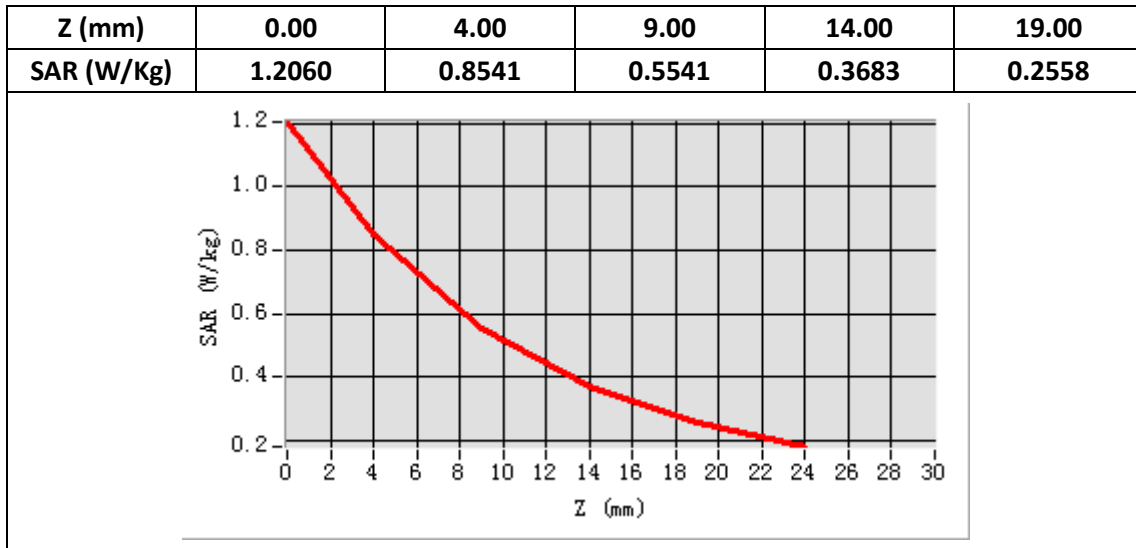
E-Field Probe	SATIMO SN_43/15_EP276
Frequency (MHz)	836.6
Relative permittivity (real part)	55.02
Relative permittivity (imaginary part)	20.91
Conductivity (S/m)	0.97
Variation (%)	-0.75
ConvF:	5.18



**Maximum location: X=-10.00, Y=-15.00**

**SAR Peak: 1.21 W/kg**

SAR 10g (W/Kg)	0.438102
SAR 1g (W/Kg)	0.750816



**Plot 2: GPRS1900, Face High,0mm**

Type: Phone measurement

Date of measurement: 10/28/2018

Measurement duration: 22 minutes 22 seconds

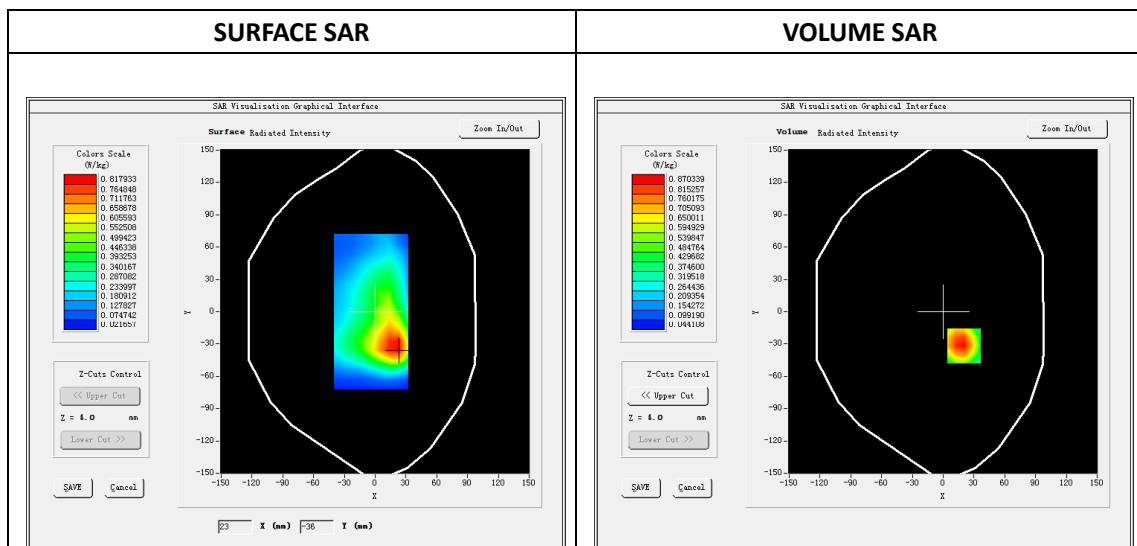
Mobile Phone IMEI number: --

**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>	Face
<b>Band</b>	GPRS1900_4Tx
<b>Channels</b>	810
<b>Signal</b>	GPRS (Duty cycle: 1:2.08)

**B. SAR Measurement Results**

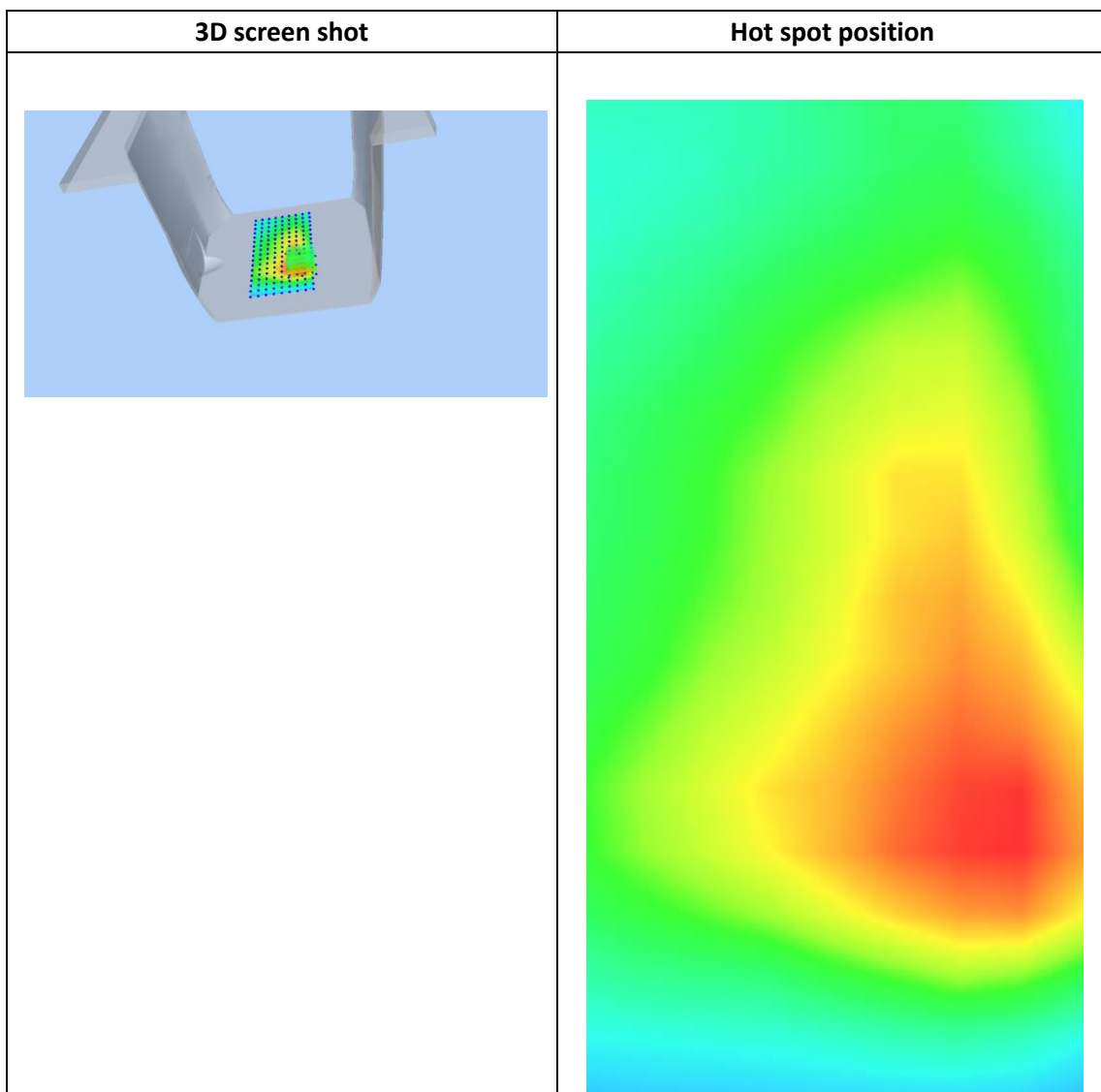
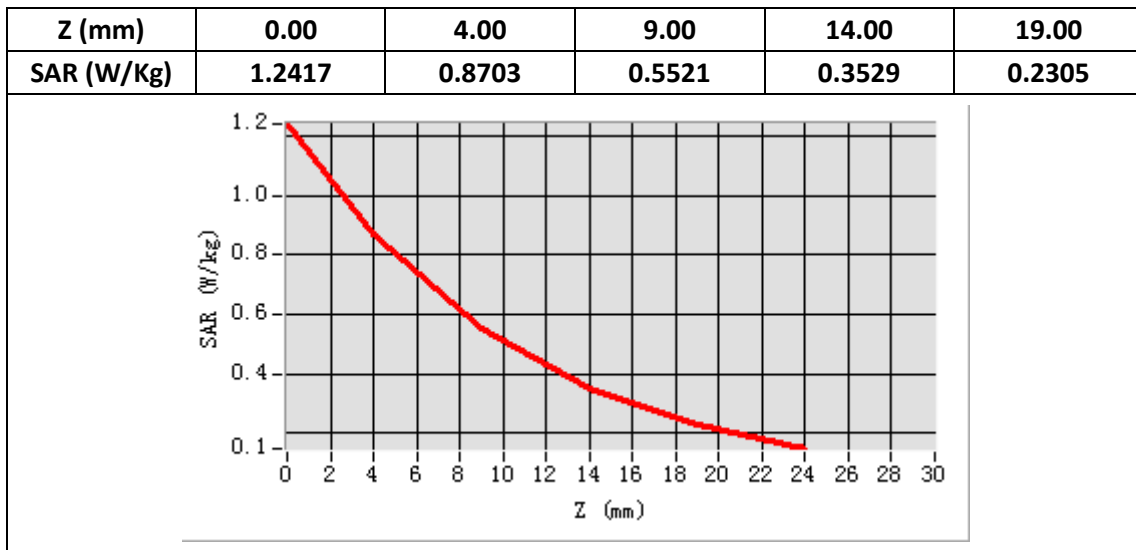
<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	1909.8
<b>Relative permittivity (real part)</b>	53.23
<b>Relative permittivity (imaginary part)</b>	14.25
<b>Conductivity (S/m)</b>	1.51
<b>Variation (%)</b>	-1.12
<b>ConvF:</b>	4.83



Maximum location: X=20.00, Y=-32.00

SAR Peak: 1.26 W/kg

SAR 10g (W/Kg)	0.414426
SAR 1g (W/Kg)	0.704371



### Plot 3: WCDMA850, BACK, Middle,0mm

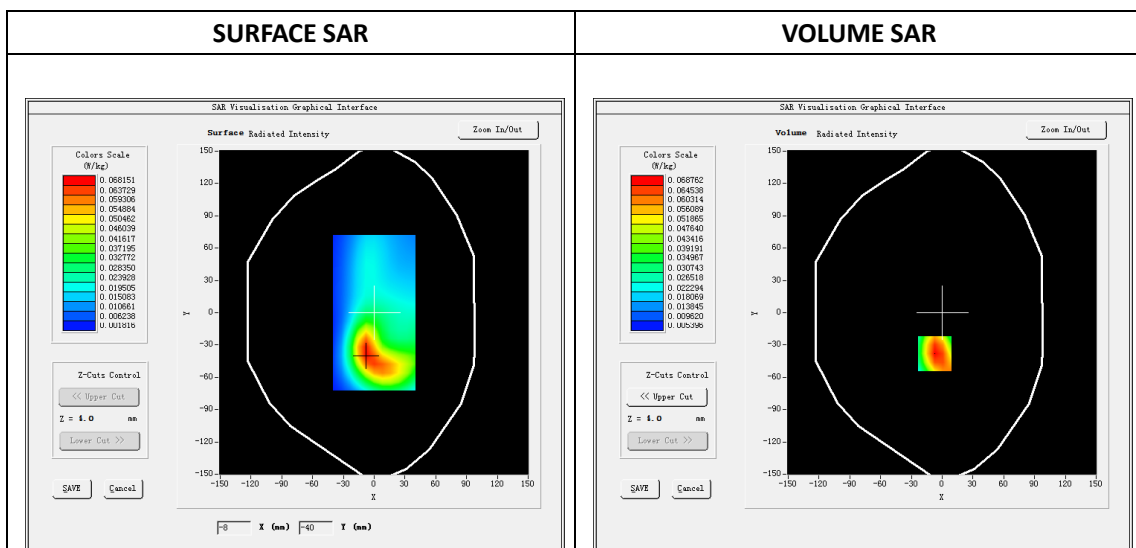
Type: Phone measurement  
 Date of measurement: 10/27/2018  
 Measurement duration: 22 minutes 12 seconds  
 Mobile Phone IMEI number: --

**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>	Band5_WCDMA850
<b>Channels</b>	4183
<b>Signal</b>	WCDMA (Duty cycle: 1:1)

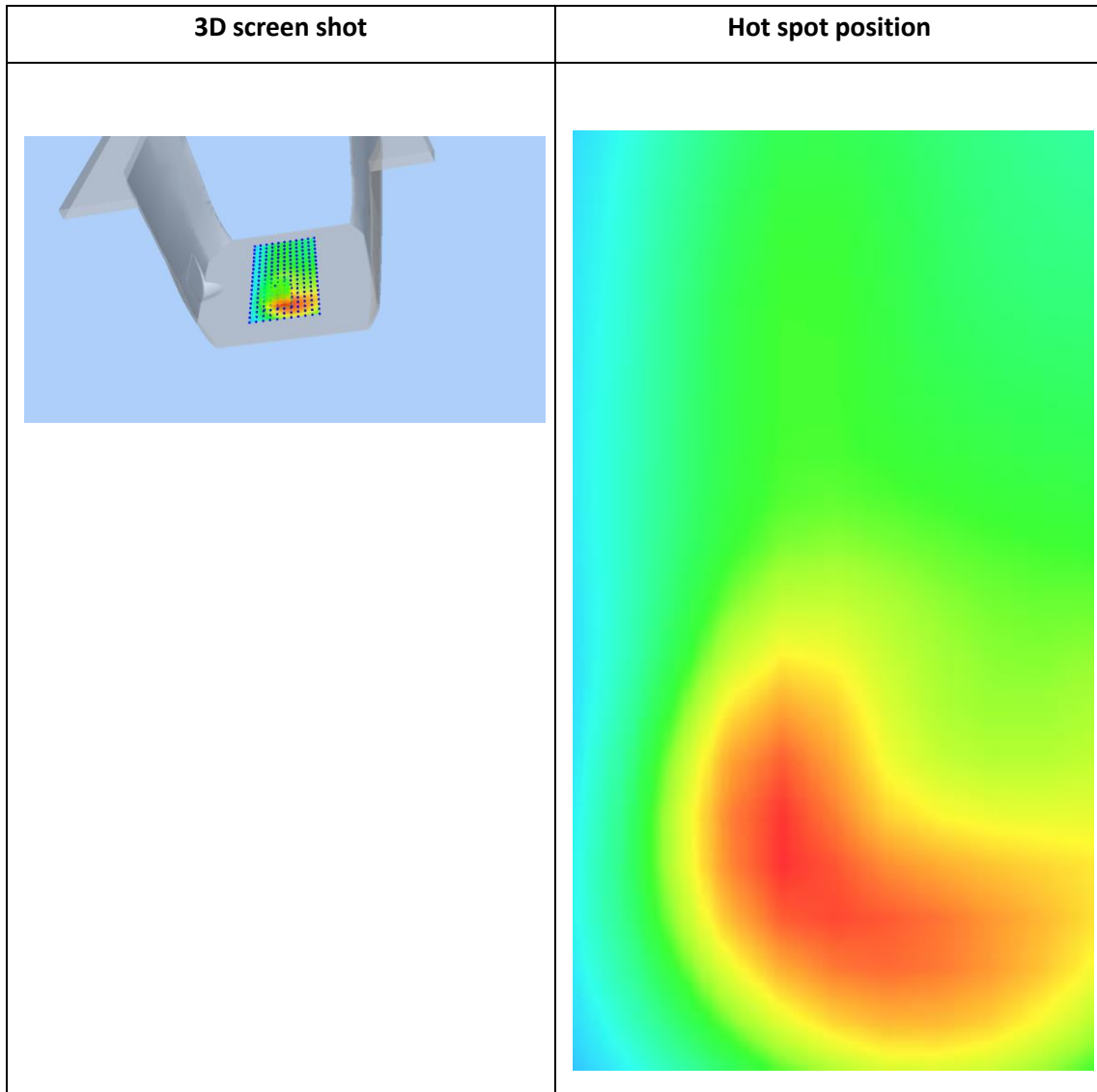
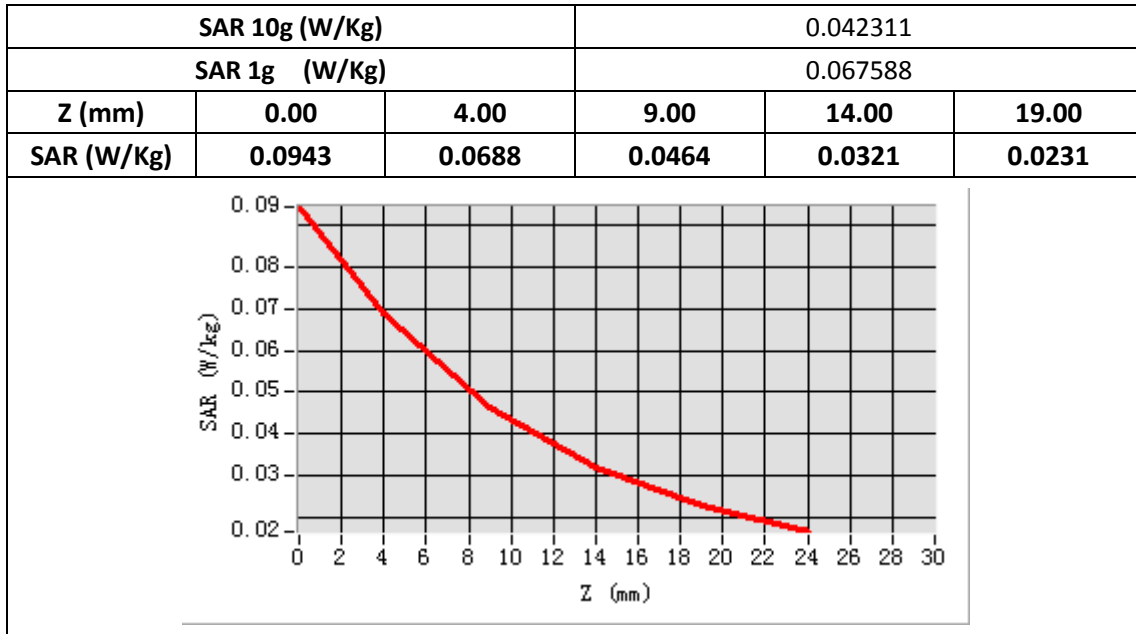
**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	836.6
<b>Relative permittivity (real part)</b>	55.02
<b>Relative permittivity (imaginary part)</b>	20.91
<b>Conductivity (S/m)</b>	0.97
<b>Variation (%)</b>	-1.18
<b>ConvF:</b>	5.18



**Maximum location: X=-7.00, Y=-38.00**

**SAR Peak: 0.10 W/kg**



### Plot 4: WCDMA1900,Back, Middle,0mm

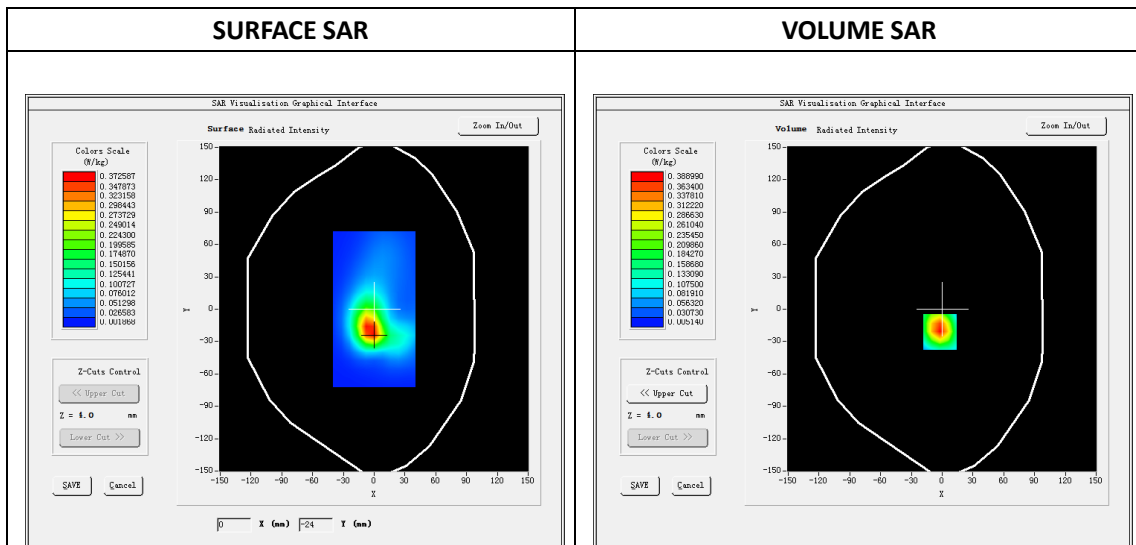
Type: Phone measurement  
 Date of measurement: 10/28/2018  
 Measurement duration: 22 minutes 36 seconds  
 Mobile Phone IMEI number: --

**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>	-1.73
<b>ConvF:</b>	4.83



**Maximum location: X=-2.00, Y=-21.00**

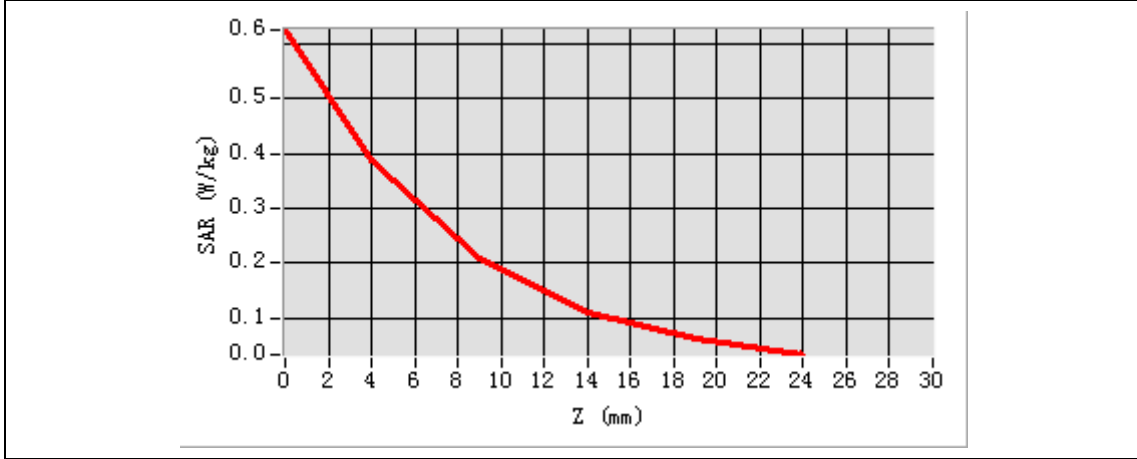
**SAR Peak: 0.64W/kg**

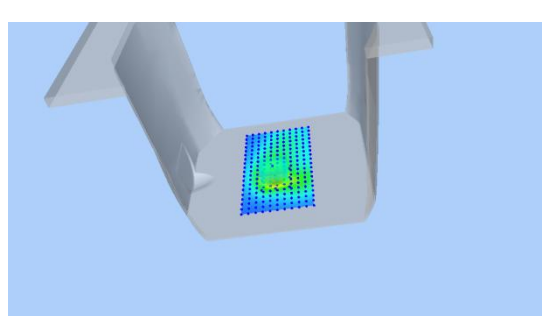
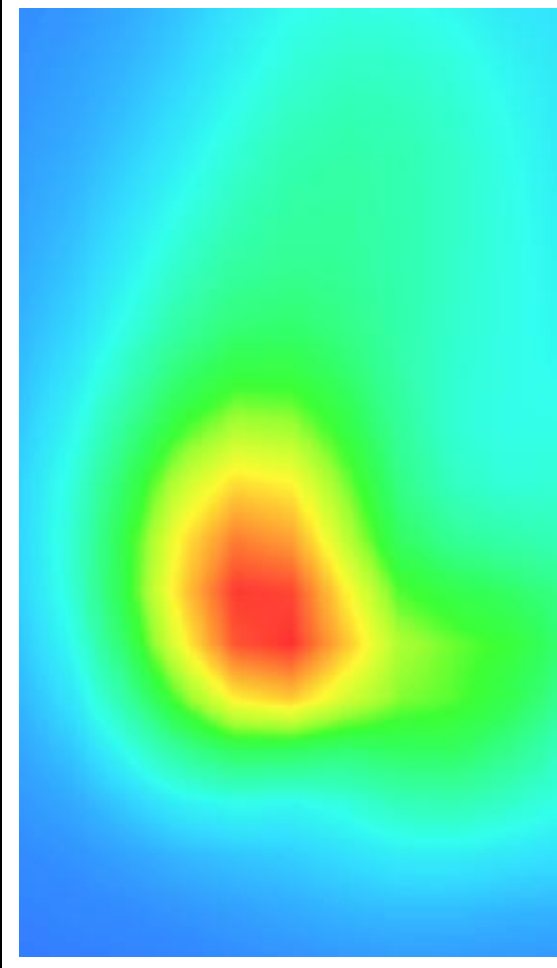
<b>SAR 10g (W/Kg)</b>	0.180796
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<b>SAR 1g (W/Kg)</b>	0.363756
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Z (mm)	0.00	4.00	9.00	14.00	19.00
<b>SAR (W/Kg)</b>	<b>0.6261</b>	<b>0.3890</b>	<b>0.2072</b>	<b>0.1100</b>	<b>0.0610</b>



3D screen shot	Hot spot position
	

## Plot 5: LTE Band2, 20MHz,Face , Middle,0mm

Type: Phone measurement

Date of measurement: 10/28/2018

Measurement duration: 22 minutes 41 seconds

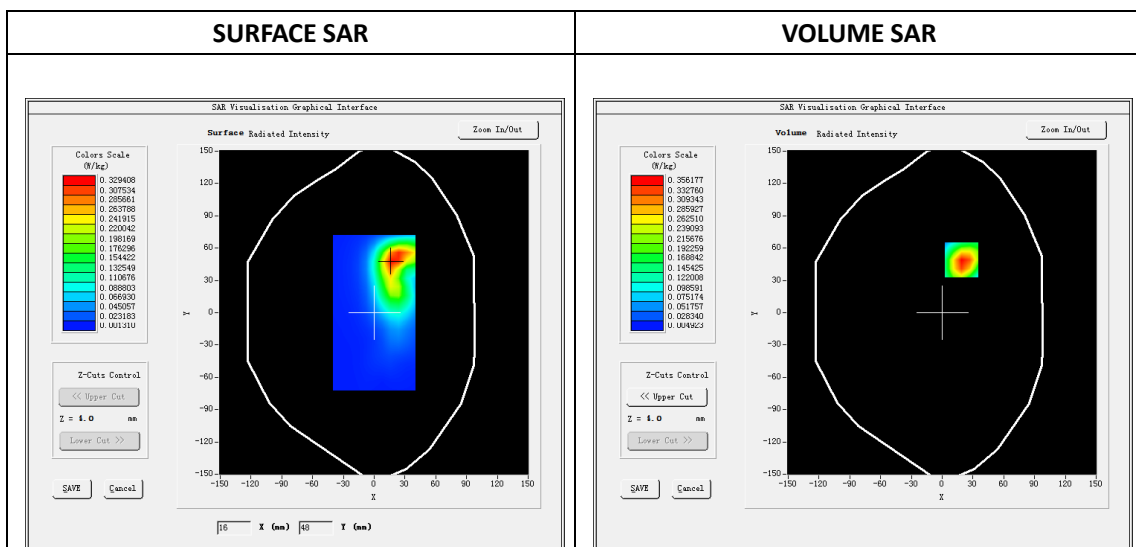
Mobile Phone IMEI number: --

**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>	Face
<b>Band</b>	LTE Band 2
<b>Channels</b>	18900
<b>Signal</b>	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

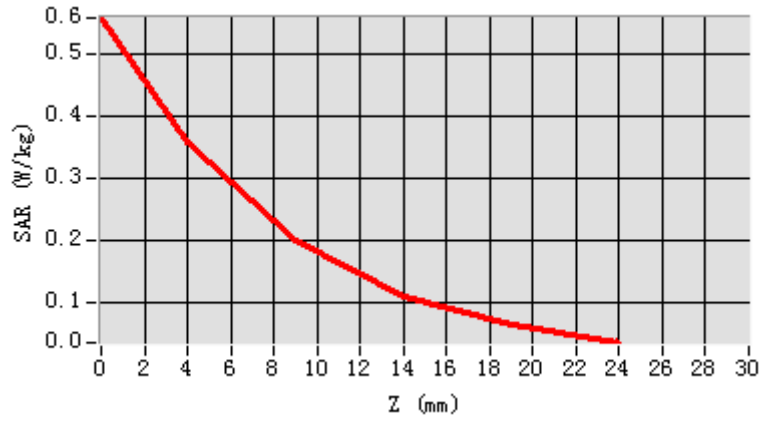
<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	1880
<b>Relative permittivity (real part)</b>	53.23
<b>Relative permittivity (imaginary part)</b>	14.25
<b>Conductivity (S/m)</b>	1.51
<b>Variation (%)</b>	-1.59
<b>ConvF:</b>	4.83

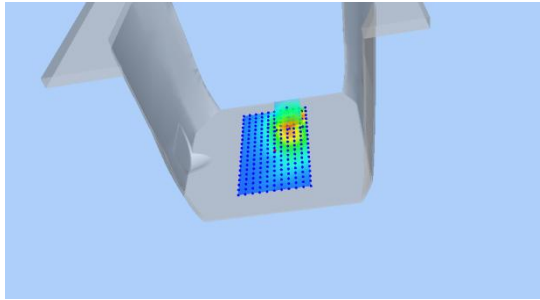
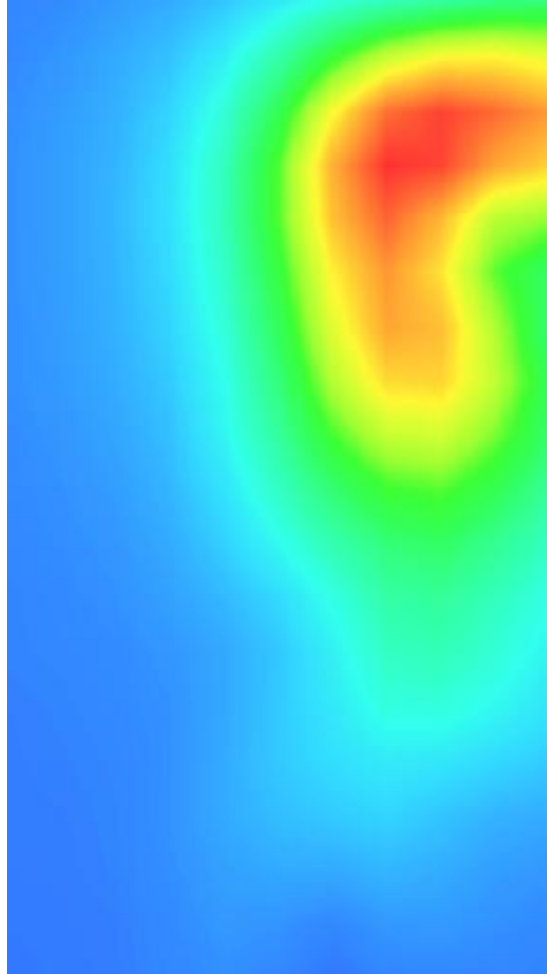


**Maximum location: X=19.00, Y=49.00**

**SAR Peak: 0.57 W/kg**

<b>SAR 10g (W/Kg)</b>			0.175296		
<b>SAR 1g (W/Kg)</b>			0.336939		
<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>0.5565</b>	<b>0.3562</b>	<b>0.1983</b>	<b>0.1103</b>	<b>0.0635</b>



3D screen shot	Hot spot position
	

**Plot 6: LTE Band4, 20MHz, Face Middle,0mm**

Type: Phone measurement

Date of measurement: 10/28/2018

Measurement duration: 22 minutes 13 seconds

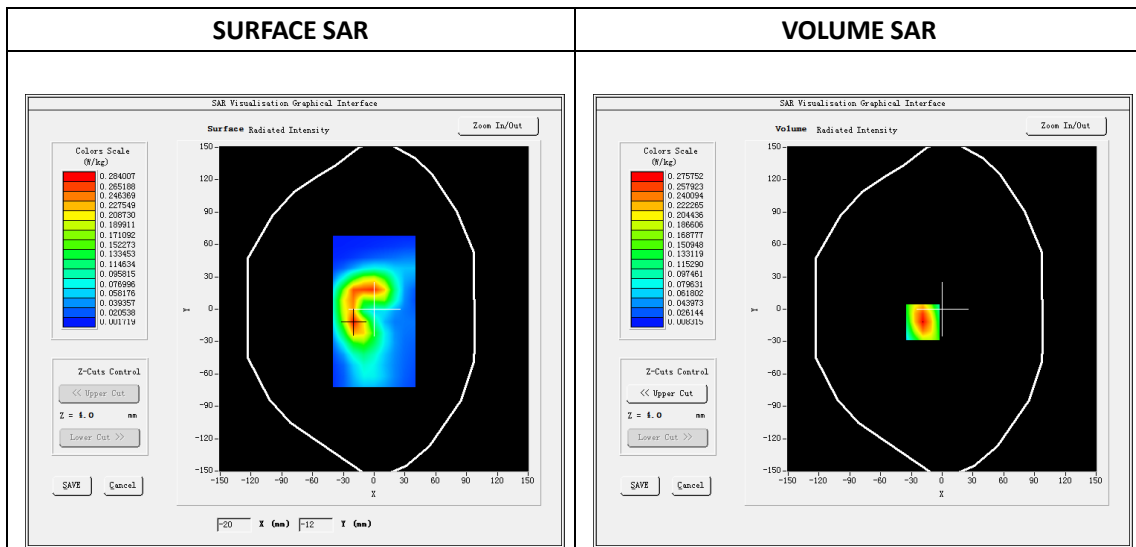
Mobile Phone IMEI number: --

**A. Experimental conditions.**

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

**B. SAR Measurement Results**

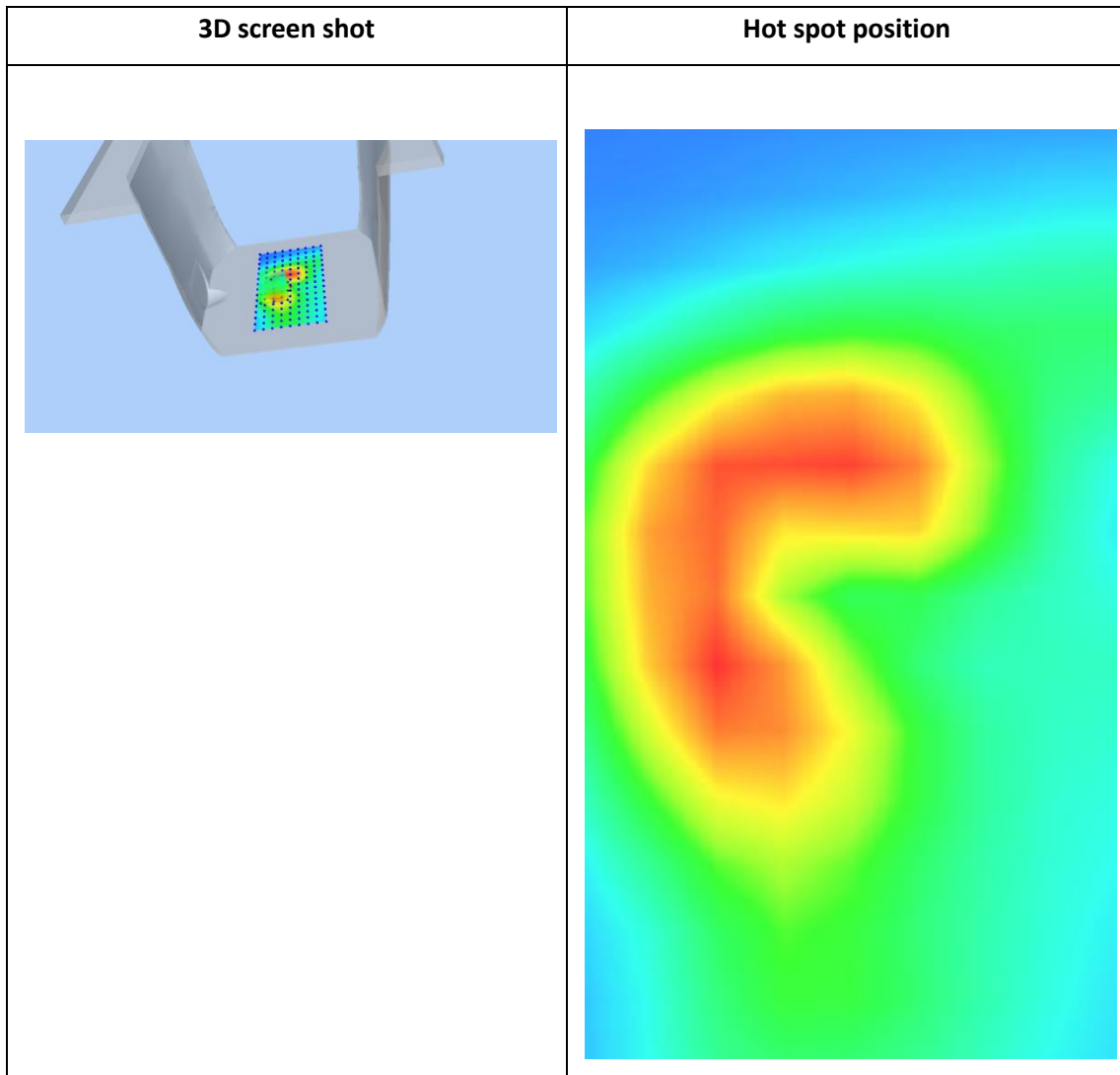
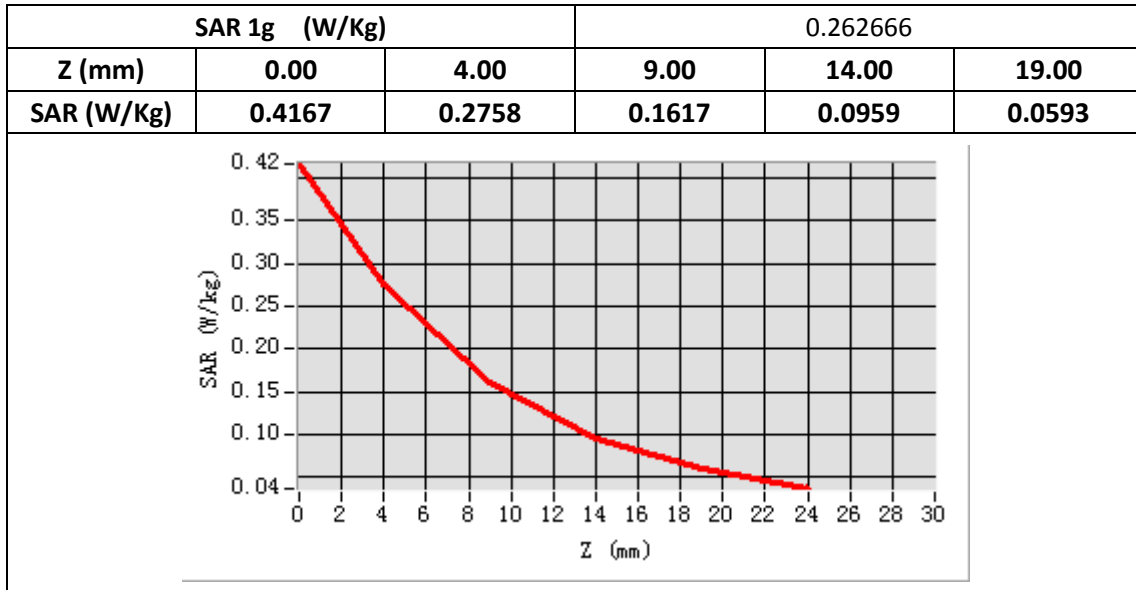
E-Field Probe	SATIMO SN_43/15_EP276
Frequency (MHz)	1732.5
Relative permittivity (real part)	53.23
Relative permittivity (imaginary part)	14.25
Conductivity (S/m)	1.51
Variation (%)	-0.20
ConvF:	4.43



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

SAR Peak: 0.42 W/kg

SAR 10g (W/Kg)	0.144874
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## Plot 7: LTE Band5, 10MHz, Back, Middle,0mm

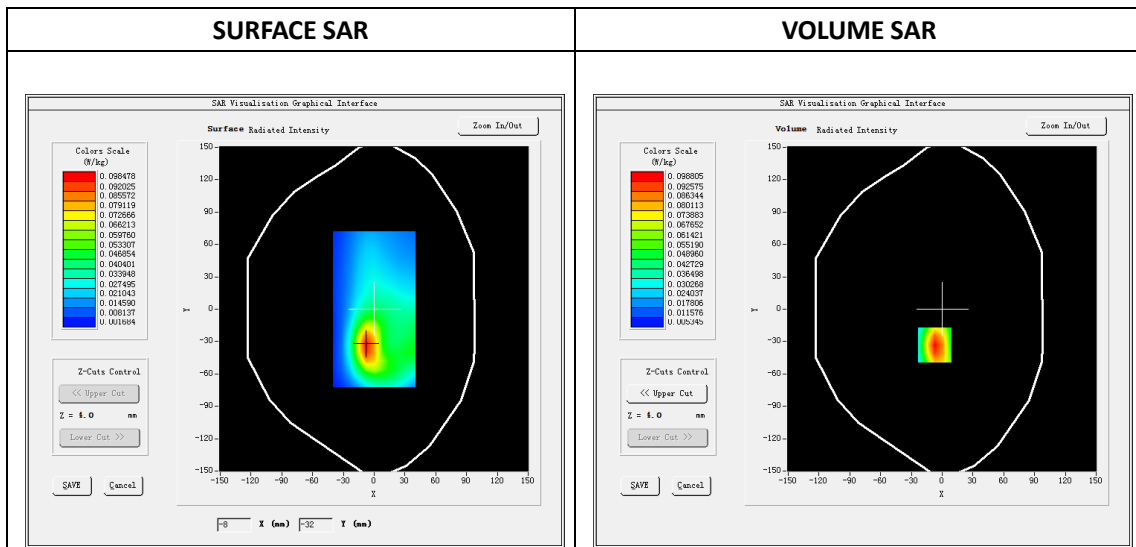
Type: Phone measurement  
 Date of measurement: 10/27/2018  
 Measurement duration: 22 minutes 15 seconds  
 Mobile Phone IMEI number: --

**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>	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>	55.02
<b>Relative permittivity (imaginary part)</b>	20.91
<b>Conductivity (S/m)</b>	0.97
<b>Variation (%)</b>	-1.47
<b>ConvF:</b>	5.18



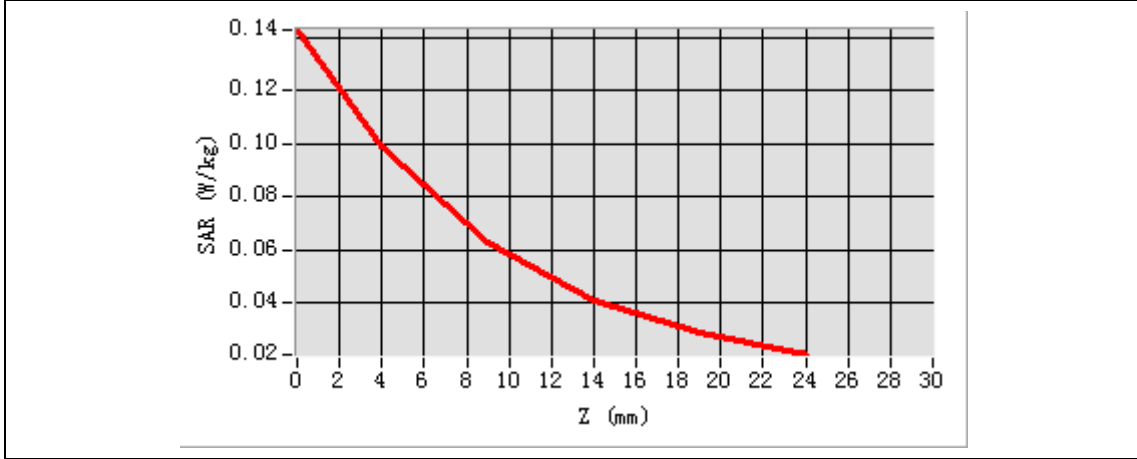
**Maximum location: X=-7.00, Y=-33.00**

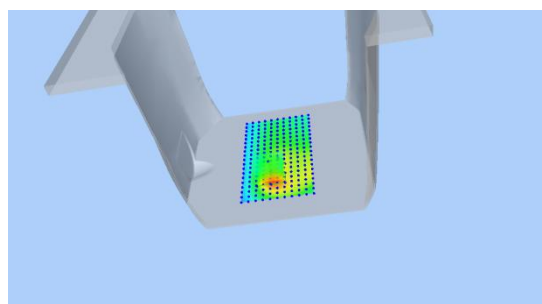
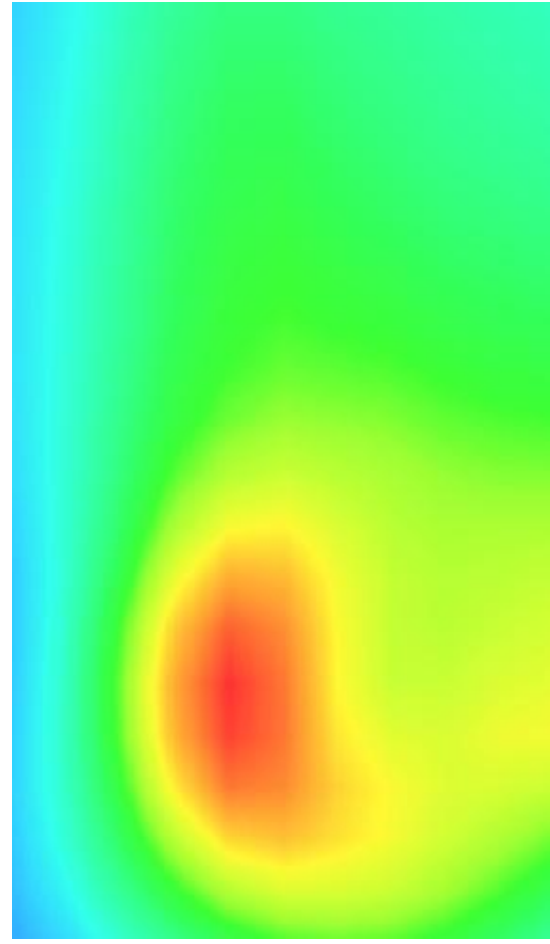
**SAR Peak: 0.14 W/kg**

<b>SAR 10g (W/Kg)</b>	0.055818
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<b>SAR 1g (W/Kg)</b>	0.094351
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<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>0.1427</b>	<b>0.0988</b>	<b>0.0625</b>	<b>0.0410</b>	<b>0.0286</b>



3D screen shot	Hot spot position
	

**Plot 8: LTE Band7, 20MHz, BACK, Middle,0mm**

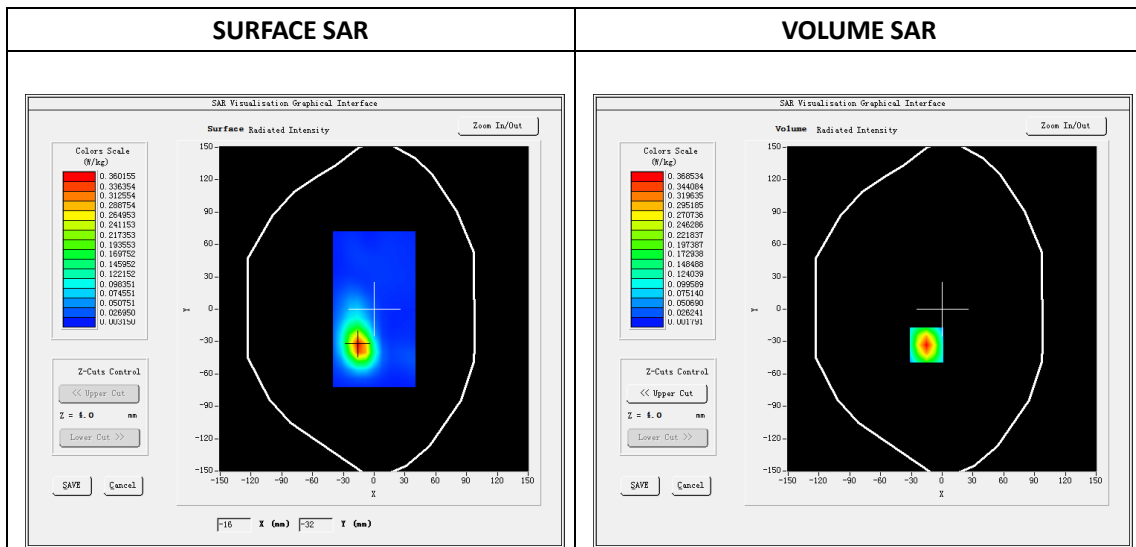
Type: Phone measurement  
 Date of measurement: 10/30/2018  
 Measurement duration: 22 minutes 16 seconds  
 Mobile Phone IMEI number: --

**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>	52.45
<b>Relative permittivity (imaginary part)</b>	14.23
<b>Conductivity (S/m)</b>	2.11
<b>Variation (%)</b>	1.27
<b>ConvF:</b>	5.73

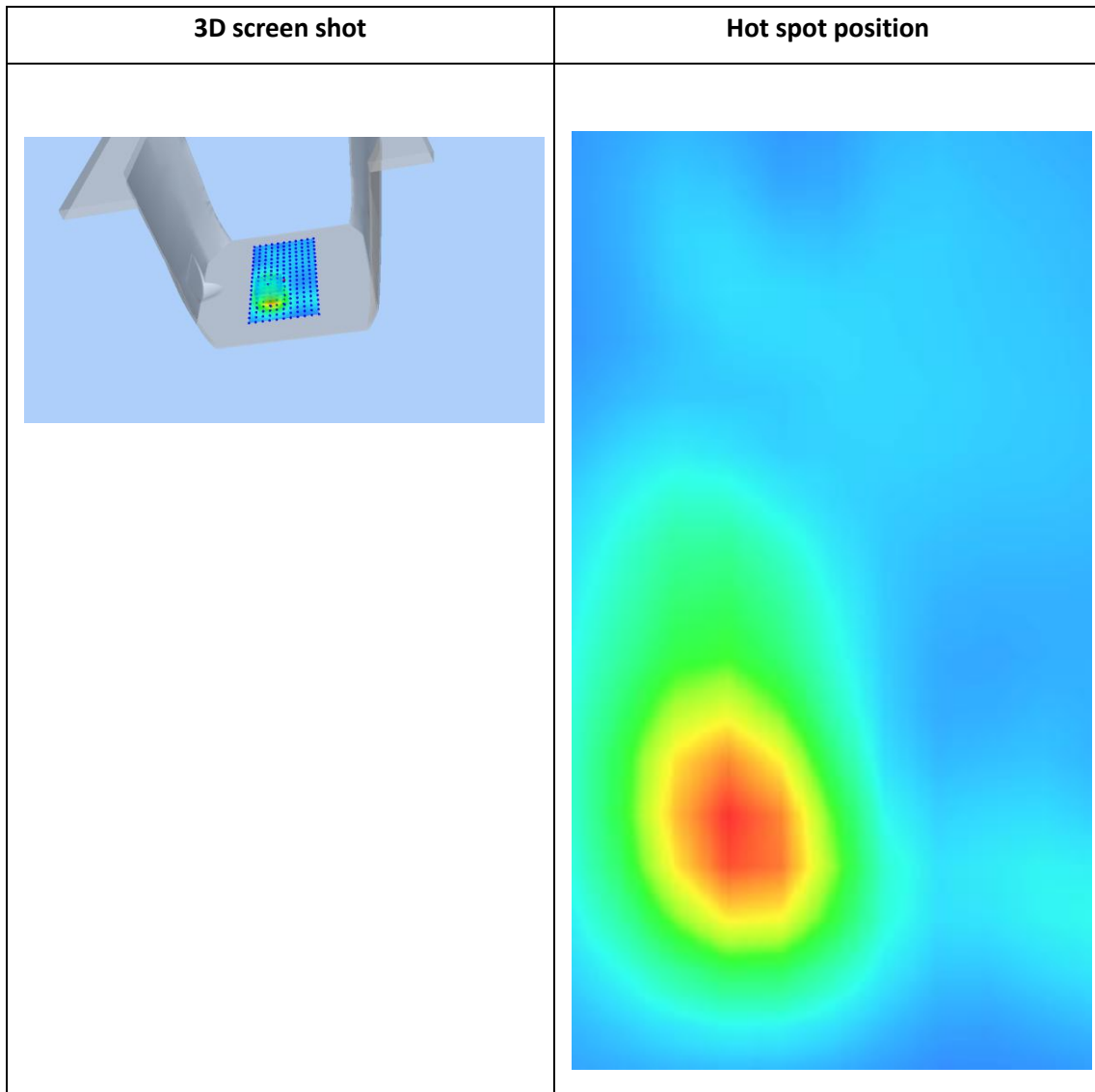
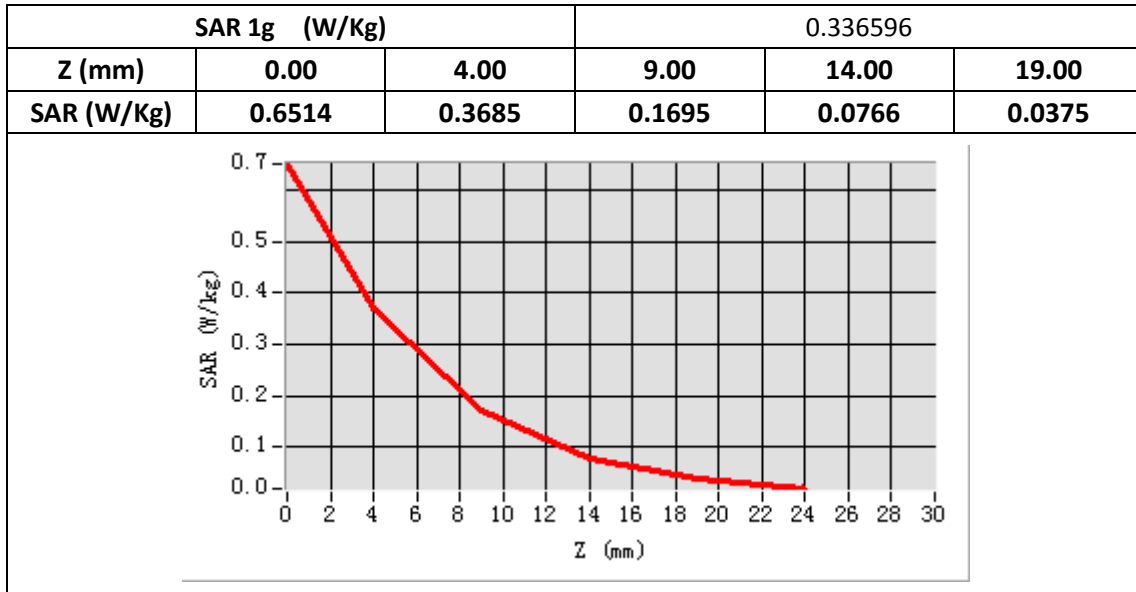


**Maximum location: X=-15.00, Y=-33.00**

**SAR Peak: 0.65 W/kg**

<b>SAR 10g (W/Kg)</b>	0.152216
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**Plot 9: LTE Band26, 15MHz,Back, Middle,0mm**

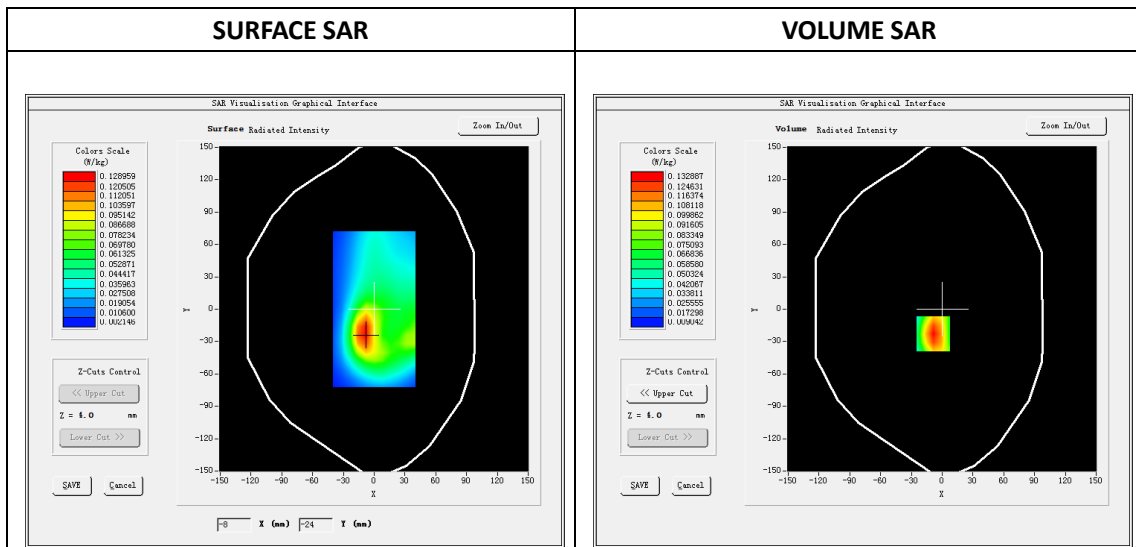
Type: Phone measurement  
 Date of measurement: 10/27/2018  
 Measurement duration: 22 minutes 21 seconds  
 Mobile Phone IMEI number: --

**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 26
<b>Channels</b>	26865
<b>Signal</b>	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

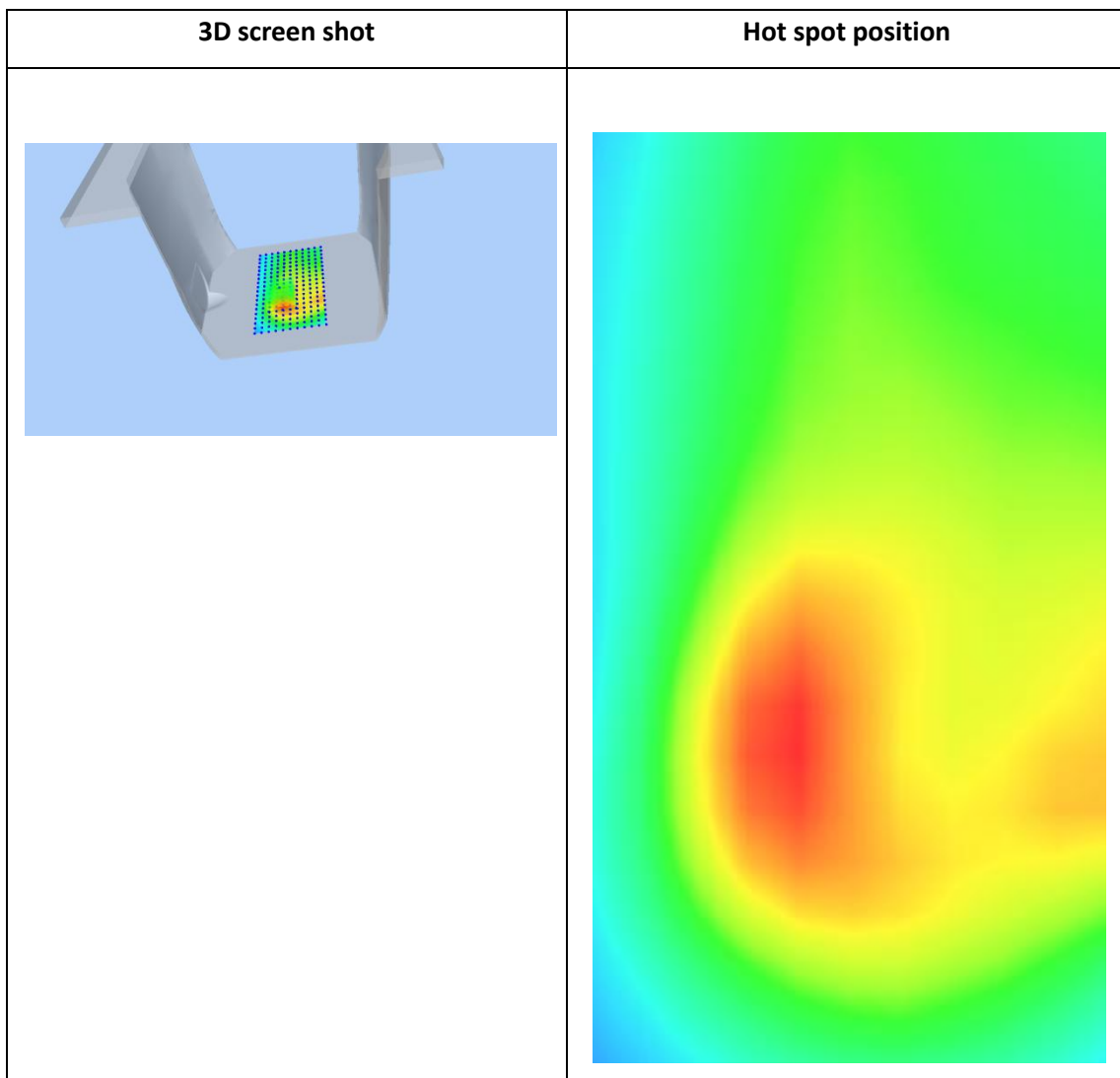
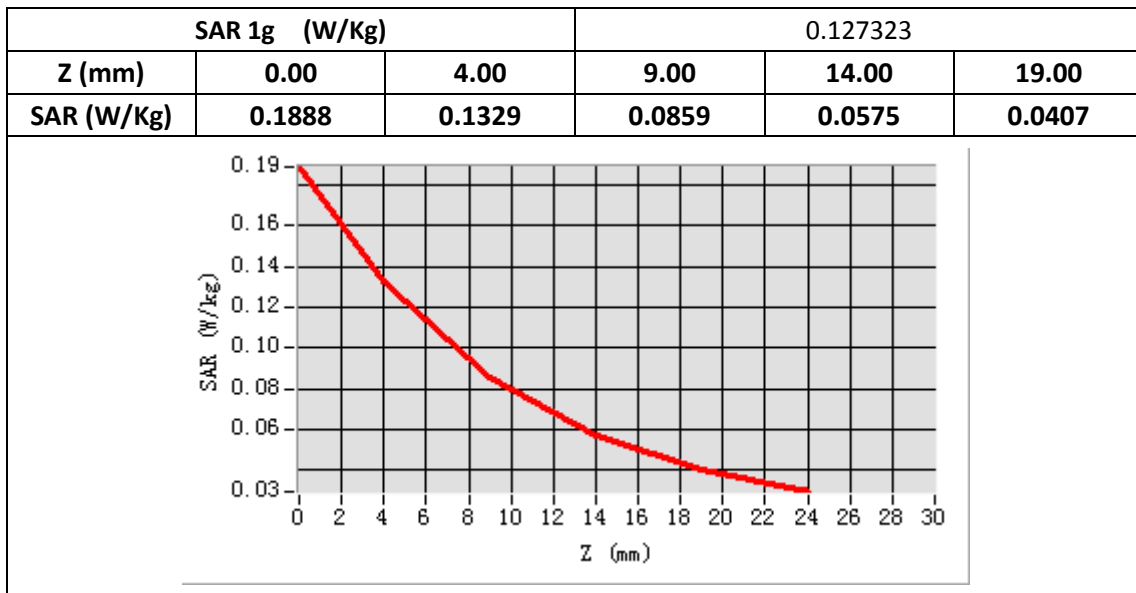
<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	831.5
<b>Relative permittivity (real part)</b>	55.02
<b>Relative permittivity (imaginary part)</b>	20.91
<b>Conductivity (S/m)</b>	0.97
<b>Variation (%)</b>	0.24
<b>ConvF:</b>	4.61



**Maximum location: X=-9.00, Y=-23.00**

**SAR Peak: 0.19 W/kg**

<b>SAR 10g (W/Kg)</b>	0.077133
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**Plot 10: LTE Band41, 20MHz, Back, Middle,0mm**

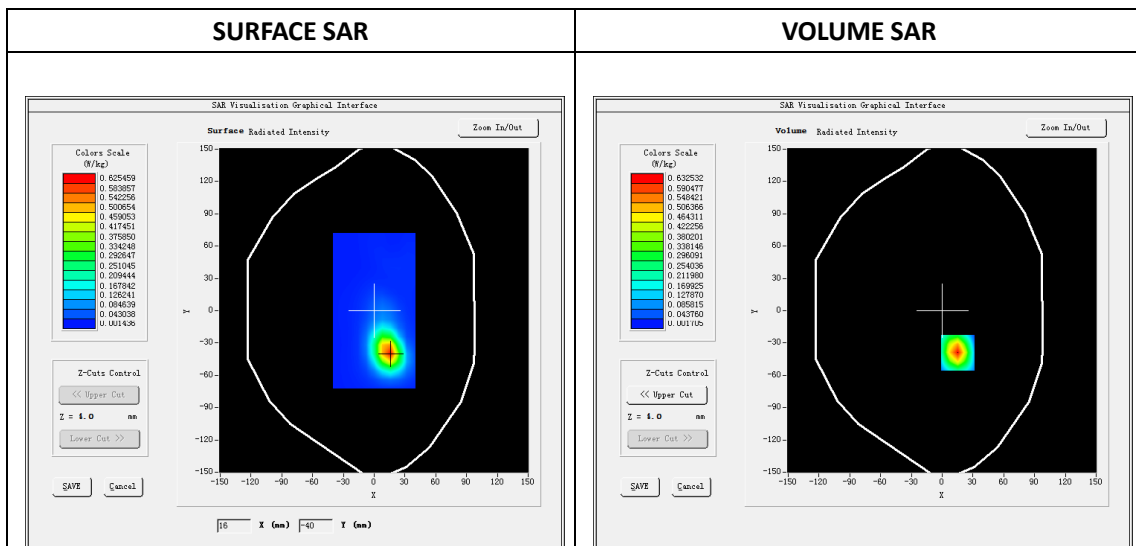
Type: Phone measurement  
 Date of measurement: 10/30/2018  
 Measurement duration: 22 minutes 22 seconds  
 Mobile Phone IMEI number: --

**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 41
Channels	40620
Signal	LTE (Duty cycle: 1:1)

**B. SAR Measurement Results**

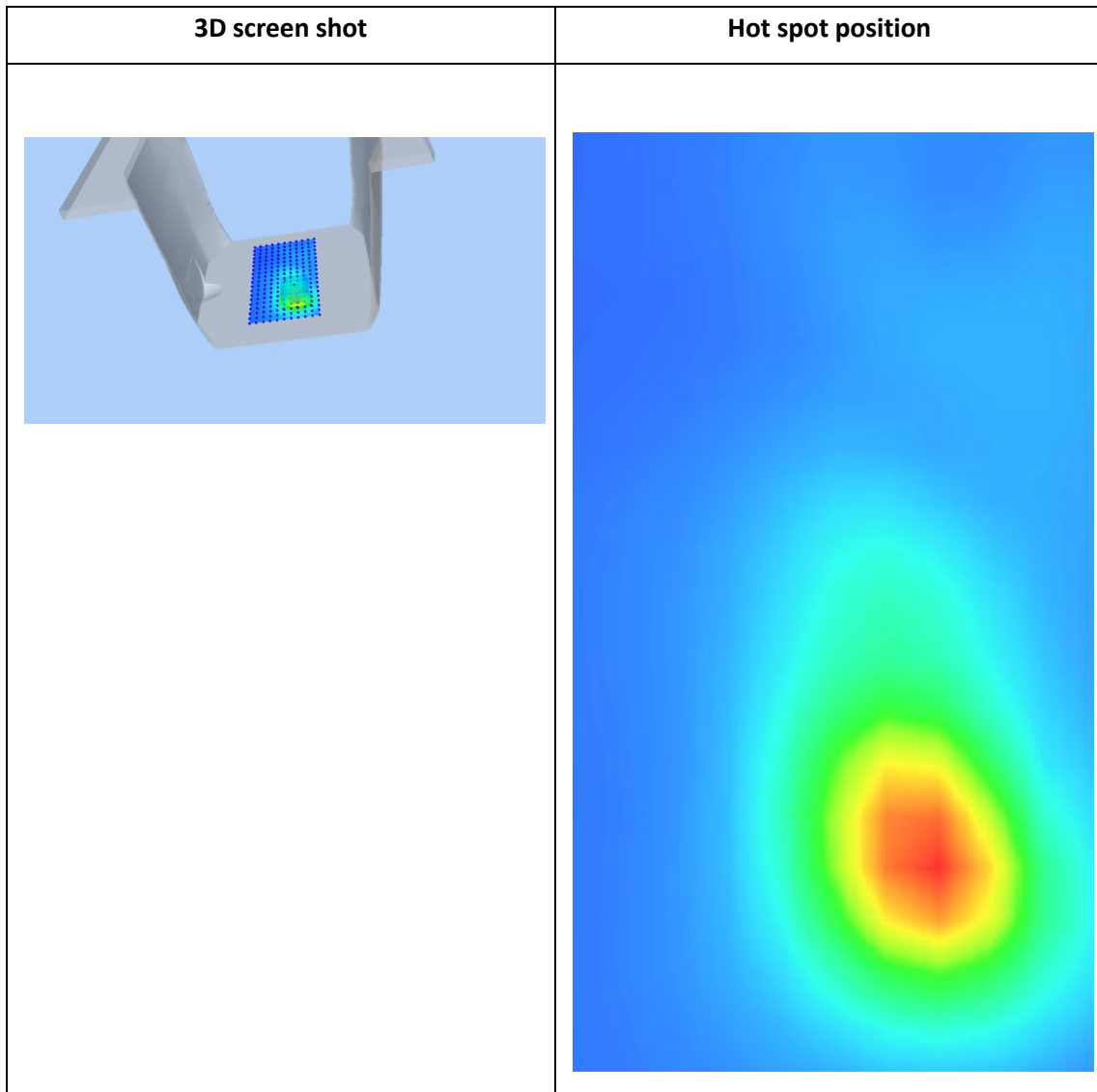
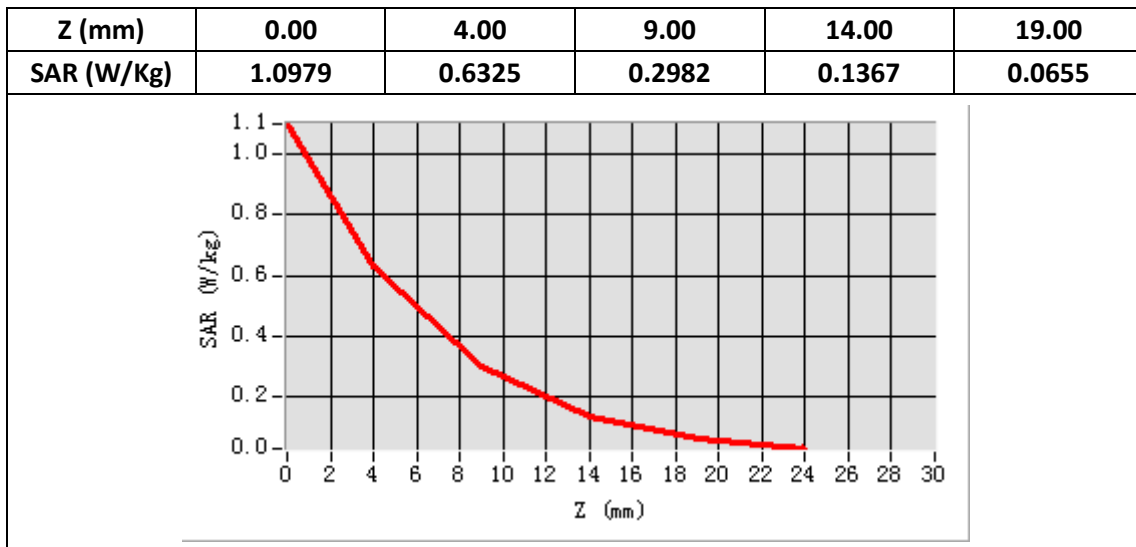
E-Field Probe	SATIMO SN_43/15_EP276
Frequency (MHz)	2593
Relative permittivity (real part)	52.45
Relative permittivity (imaginary part)	14.23
Conductivity (S/m)	2.11
Variation (%)	1.17
ConvF:	4.61



**Maximum location: X=15.00, Y=-39.00**

**SAR Peak: 1.10W/kg**

<b>SAR 10g (W/Kg)</b>	0.254161
<b>SAR 1g (W/Kg)</b>	0.575794



**Plot 11: WIFI 802.11b, Face ,Middle ,0mm**

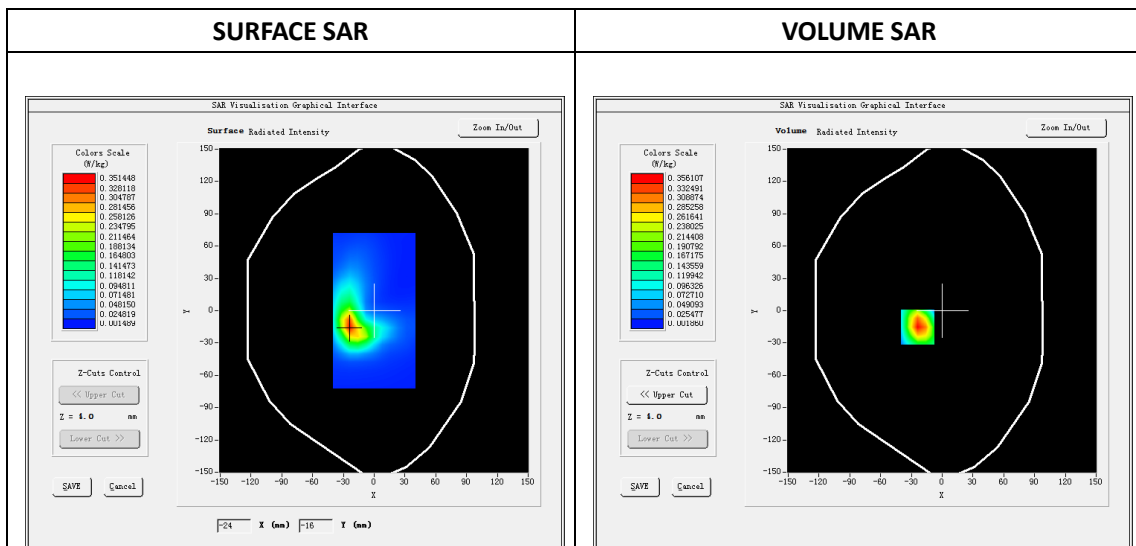
Type: Phone measurement  
 Date of measurement: 10/30/2018  
 Measurement duration: 22 minutes 23 seconds  
 Mobile Phone IMEI number: --

**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>	WIFI
<b>Channels</b>	6
<b>Signal</b>	OFDM (Duty cycle: 1:1)

**B. SAR Measurement Results**

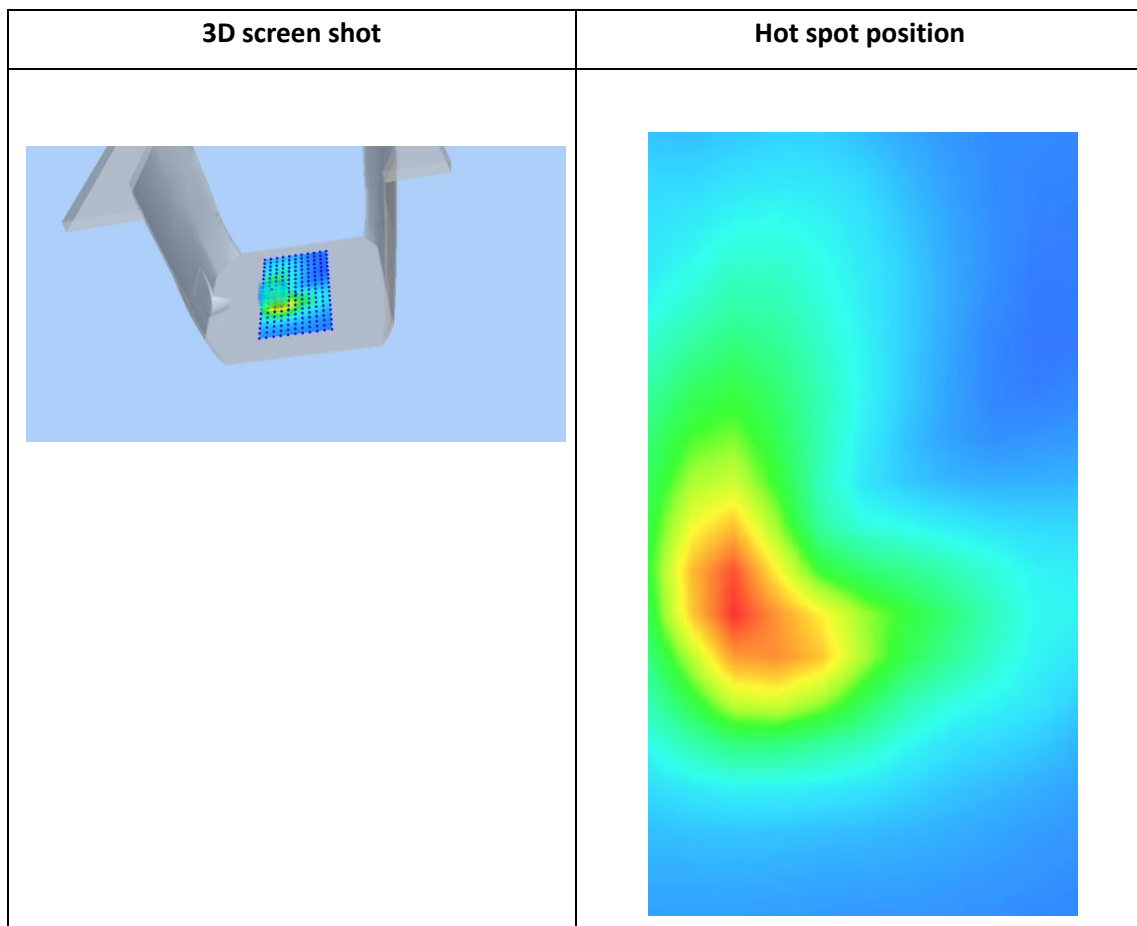
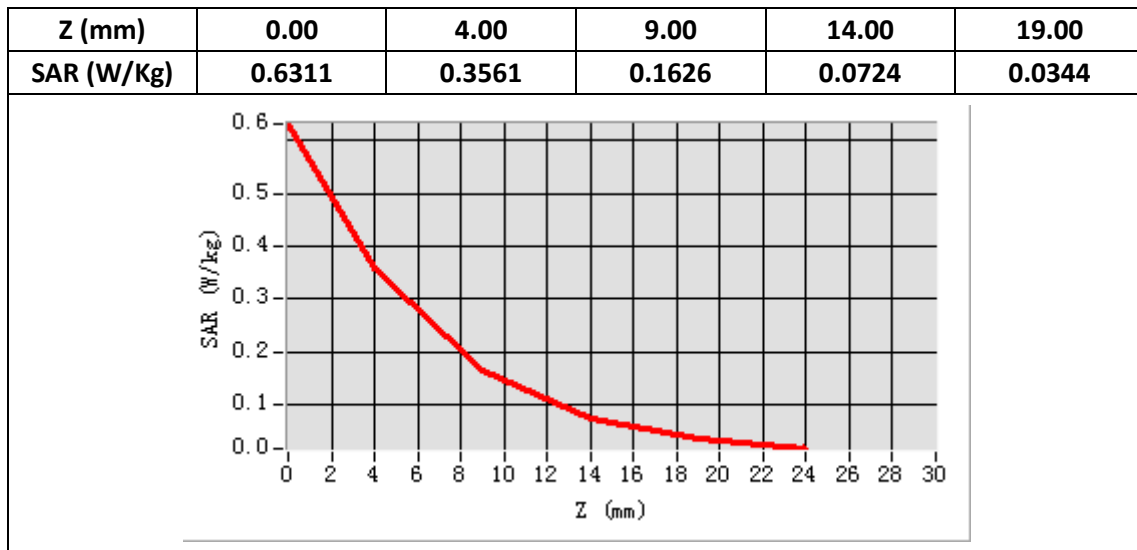
<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	2437
<b>Relative permittivity (real part)</b>	52.45
<b>Relative permittivity (imaginary part)</b>	14.23
<b>Conductivity (S/m)</b>	2.11
<b>Variation (%)</b>	0.25
<b>ConvF:</b>	4.61



**Maximum location: X=-24.00, Y=-15.00**

**SAR Peak: 0.64 W/kg**

<b>SAR 10g (W/Kg)</b>	0.158931
<b>SAR 1g (W/Kg)</b>	0.355630



**Plot 12: WIFI 802.11a , Face, Middle 0mm**

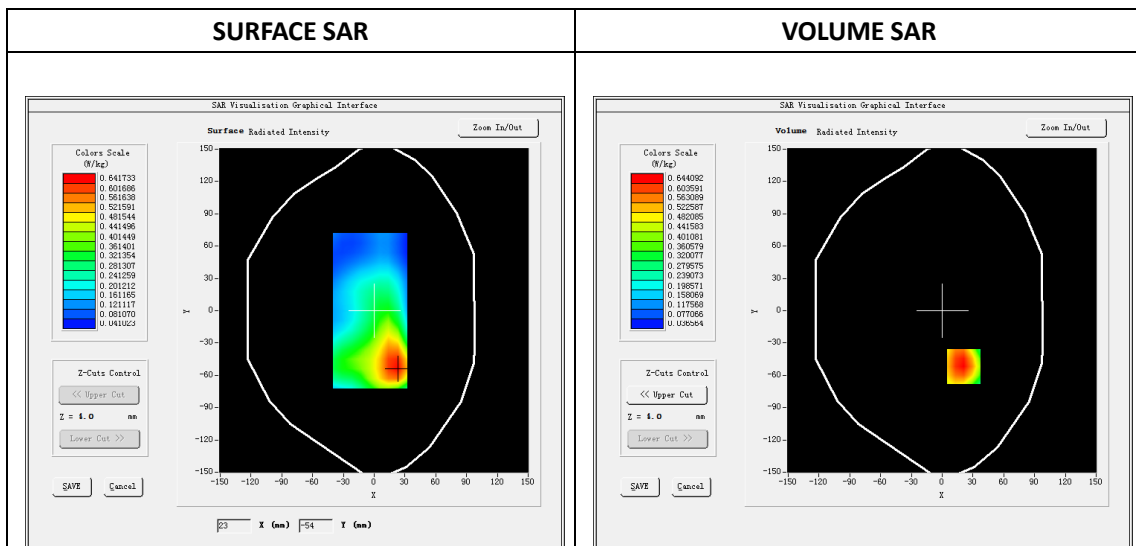
Type: Phone measurement  
 Date of measurement: 10/31/2018  
 Measurement duration: 22 minutes 23 seconds  
 Mobile Phone IMEI number: --

**A. Experimental conditions.**

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Face
Band	802 11a
Channels	36
Signal	OFDM (Duty cycle: 1:1)

**B. SAR Measurement Results**

E-Field Probe	SATIMO SN_27/15_EP261
Frequency (MHz)	5180
Relative permittivity (real part)	49.45
Relative permittivity (imaginary part)	18.03
Conductivity (S/m)	5.21
Variation (%)	0.05
ConvF:	4.61

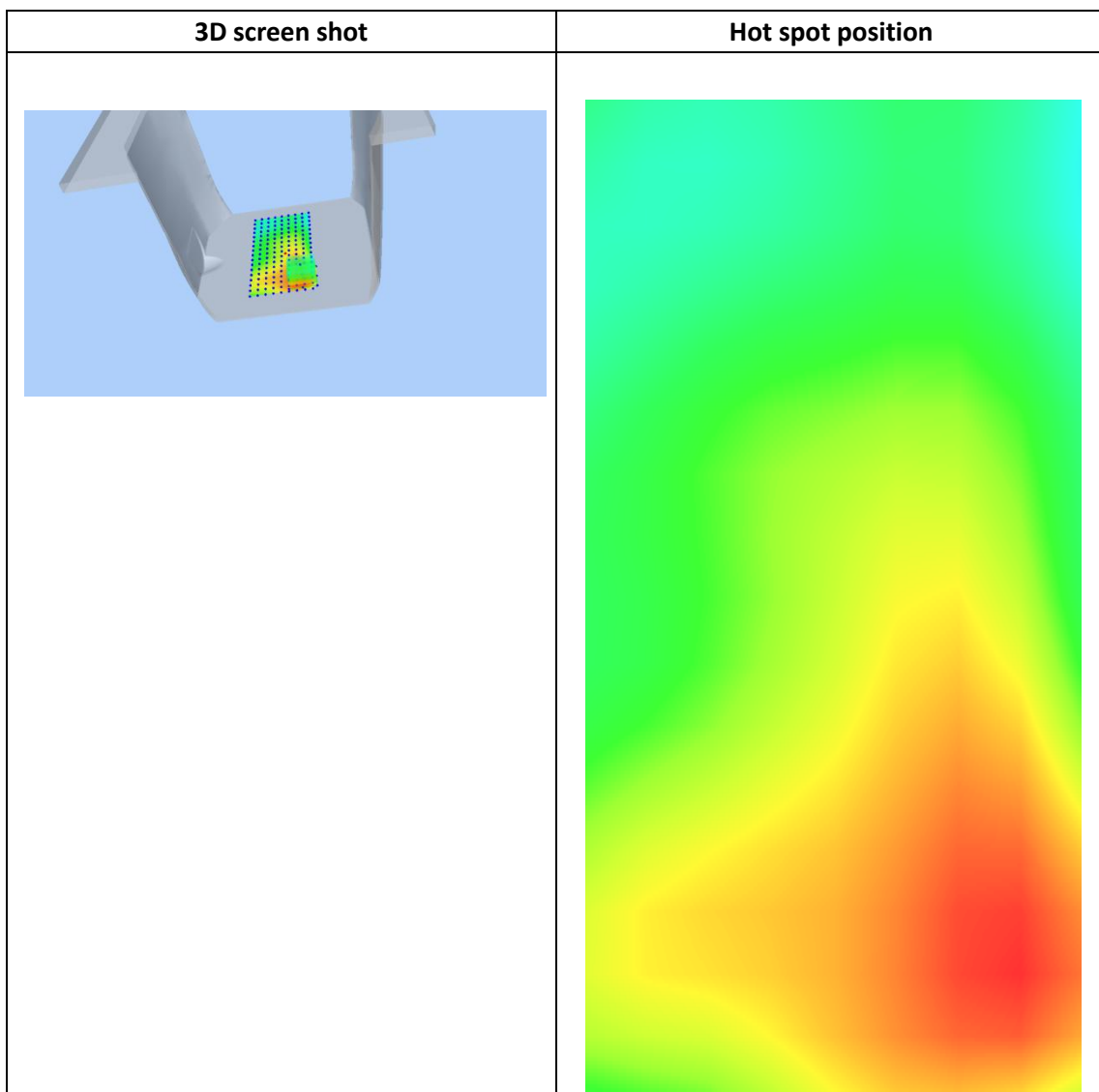
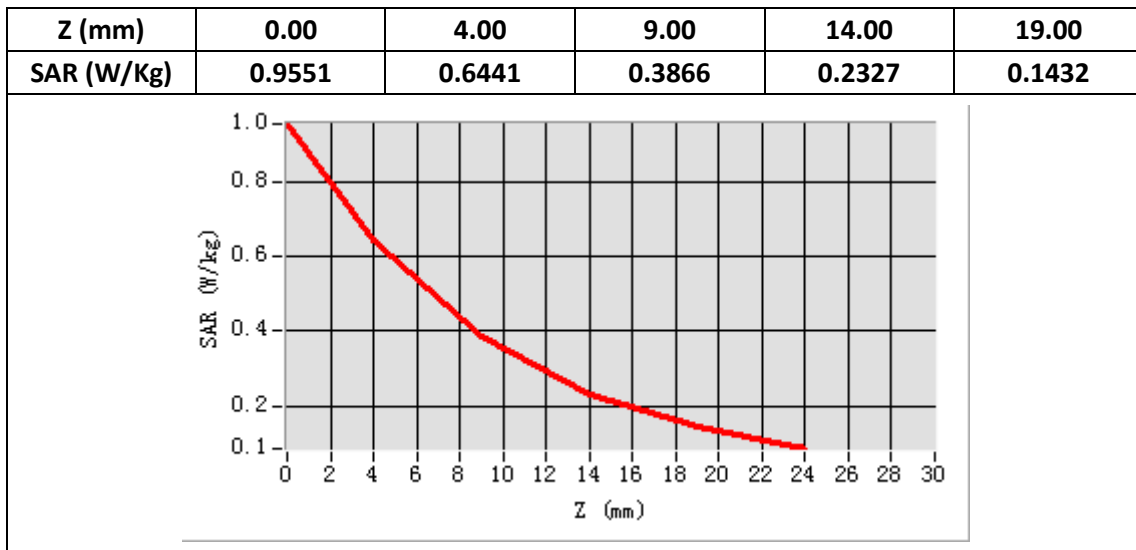


Maximum location: X=21.00, Y=-52.00

SAR Peak: 0.96 W/kg

SAR 10g (W/Kg)	0.293144
SAR 1g (W/Kg)	0.630844





**Plot 13: CDMA BC0, Back, Middle 0mm**

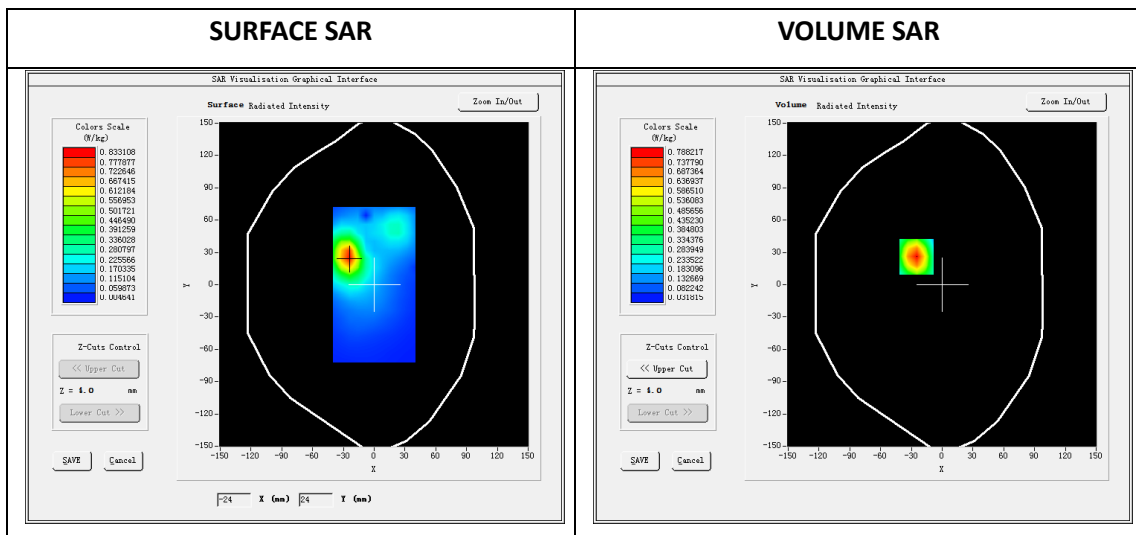
Type: Phone measurement  
 Date of measurement: 10/27/2018  
 Measurement duration: 22minutes 35 seconds  
 Mobile Phone IMEI number: --

**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>	CDMA BC0
<b>Channels</b>	384
<b>Signal</b>	CDMA (Duty cycle: 1:1)

**B. SAR Measurement Results**

<b>E-Field Probe</b>	SATIMO SN_43/15_EP276
<b>Frequency (MHz)</b>	836.52
<b>Relative permittivity (real part)</b>	55.02
<b>Relative permittivity (imaginary part)</b>	20.91
<b>Conductivity (S/m)</b>	0.97
<b>Variation (%)</b>	1.59
<b>ConvF:</b>	5.18

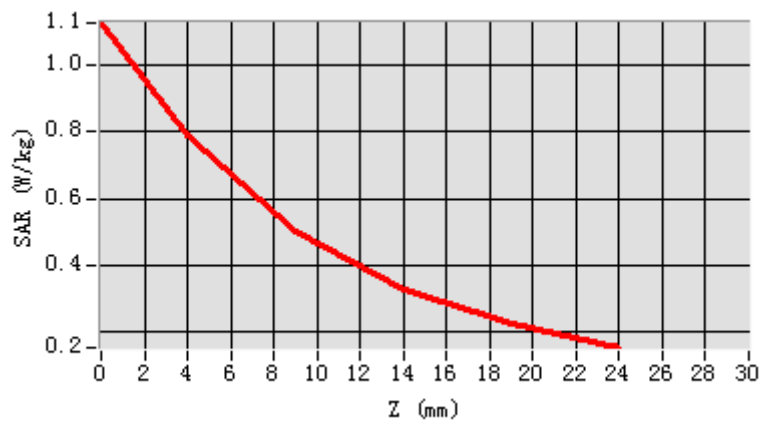


Maximum location: X=-25.00, Y=26.00

SAR Peak: 1.13W/kg

<b>SAR 10g (W/Kg)</b>	0.424135
<b>SAR 1g (W/Kg)</b>	0.685135

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	1.1275	0.7882	0.5018	0.3267	0.2221



3D screen shot	Hot spot position
