

Appendix B: SAR Measurement results Plots

Plot	Frequency/Mode	Testing Position and Channel	Test Date
1	WCDMA1900	Edge A, Low ,10mm	2019/12/18
2	WCDMA1700	Edge A, High ,10mm	2019/12/17
3	WCDMA850	Edge A, Low ,10mm	2019/12/16
4	LTE Band2	Edge A, Middle ,10mm	2019/12/18
5	LTE Band4	Edge A, High ,10mm	2019/12/17
6	LTE Band5	Edge A, Middle ,10mm	2019/12/16
7	LTE Band7	Edge A, Middle ,10mm	2019/12/20
8	LTE Band12	Edge A, High ,10mm	2019/12/15
9	LTE Band13	Edge A, Middle ,10mm	2019/12/15
10	LTE Band17	Edge A, Middle ,10mm	2019/12/15
11	WIFI 2.4G 802.11b	Edge D, Middle ,10mm	2019/12/19
12	WIFI 5G 802.11a	Body Back, Middle ,10mm	2019/12/21
13	RFID	Body Back, Low ,10mm	2019/12/16

Plot 1: WCDMA1900, Edge A, Low,10mm

Type: Phone measurement

Date of measurement: 12/18/2019

Measurement duration: 22 minutes 05 seconds

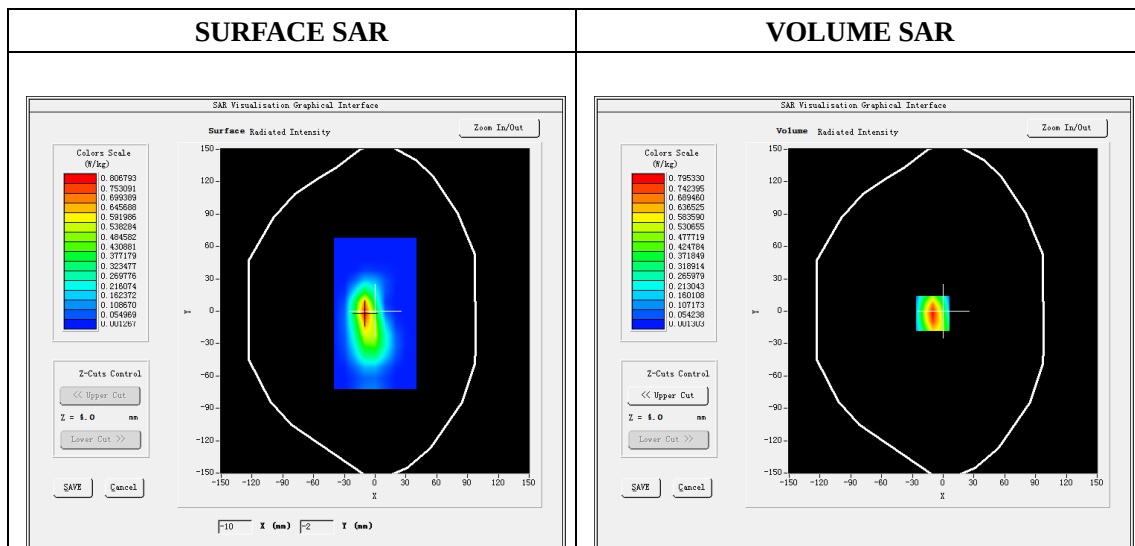
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge A
Band	Band2_WCDMA1900
Channels	9262
Signal	WCDMA (Duty cycle: 1:1)

B. SAR Measurement Results

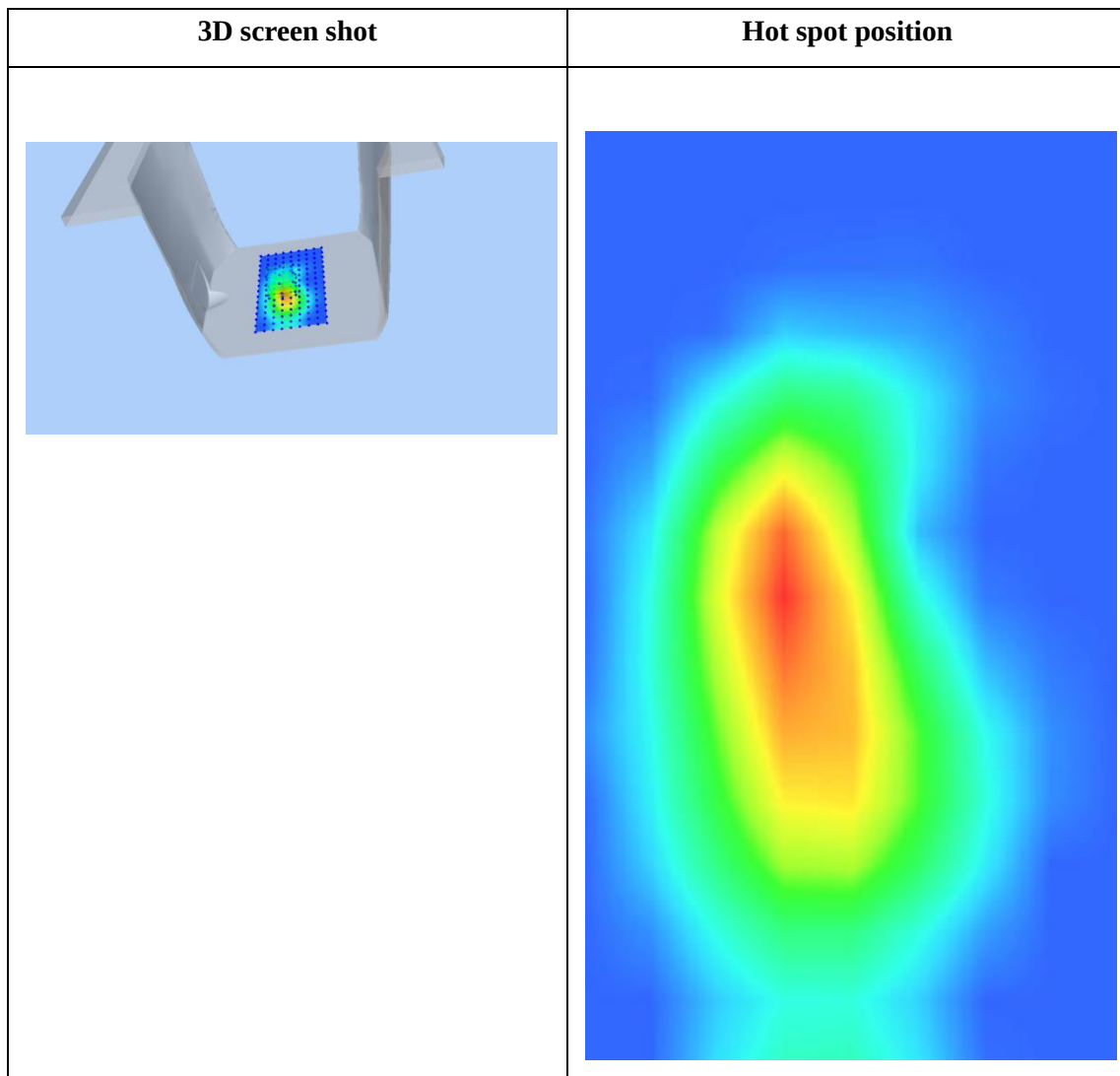
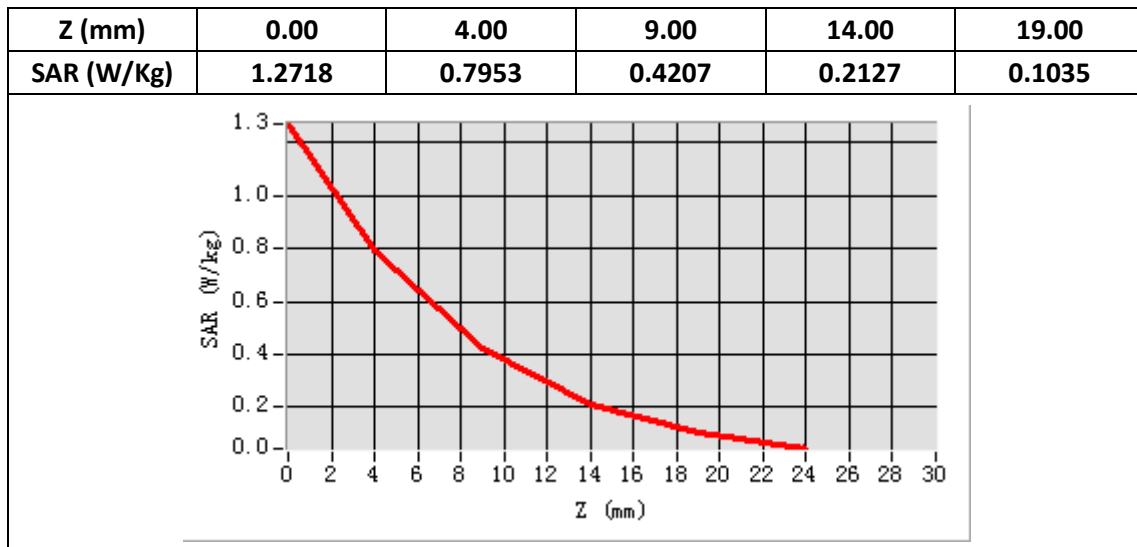
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	1852.4
Relative permittivity (real part)	53.32
Relative permittivity (imaginary)	14.49
Conductivity (S/m)	1.53
Variation (%)	0.05
ConvF:	2.39



Maximum location: X=-10.00, Y=-2.00

SAR Peak: 1.27W/kg

SAR 10g (W/Kg)	0.356568
SAR 1g (W/Kg)	0.727218



Plot 2: WCDMA1700, Edge A, High,10mm

Type: Phone measurement

Date of measurement: 12/17/2019

Measurement duration: 22 minutes 08 seconds

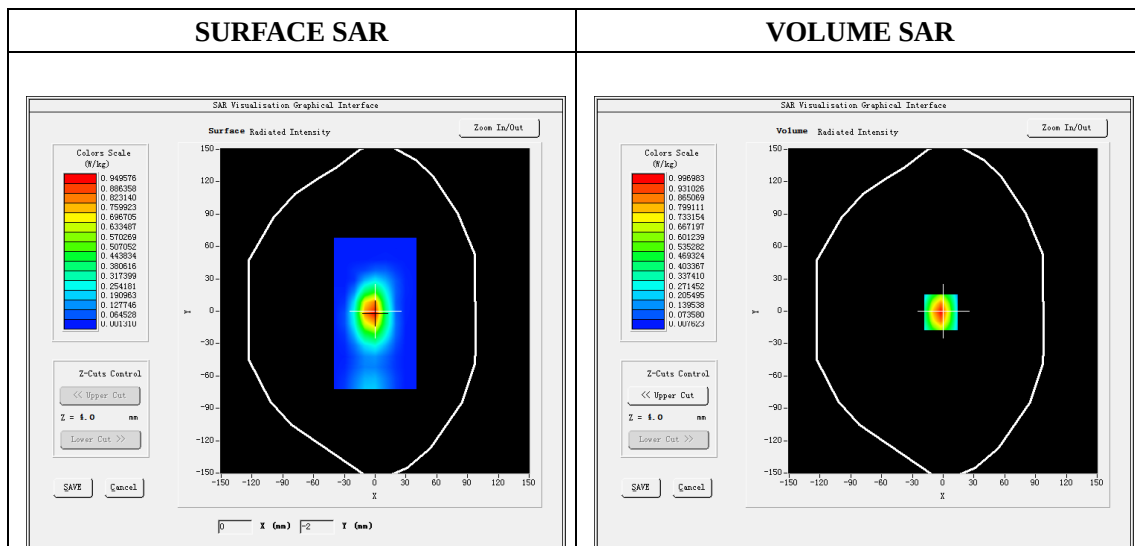
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge A
Band	Band2_WCDMA1700
Channels	1513
Signal	WCDMA (Duty cycle: 1:1)

B. SAR Measurement Results

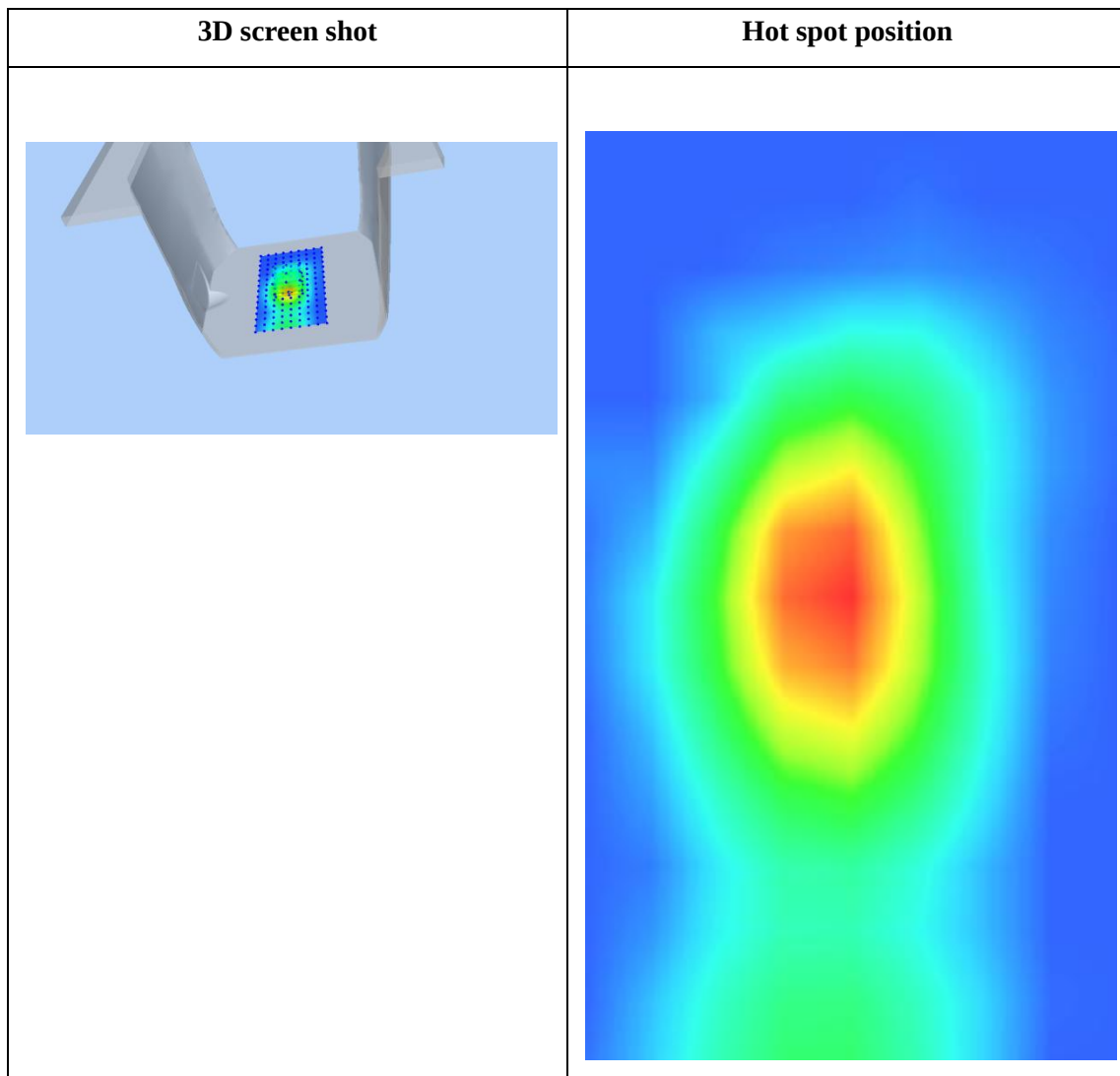
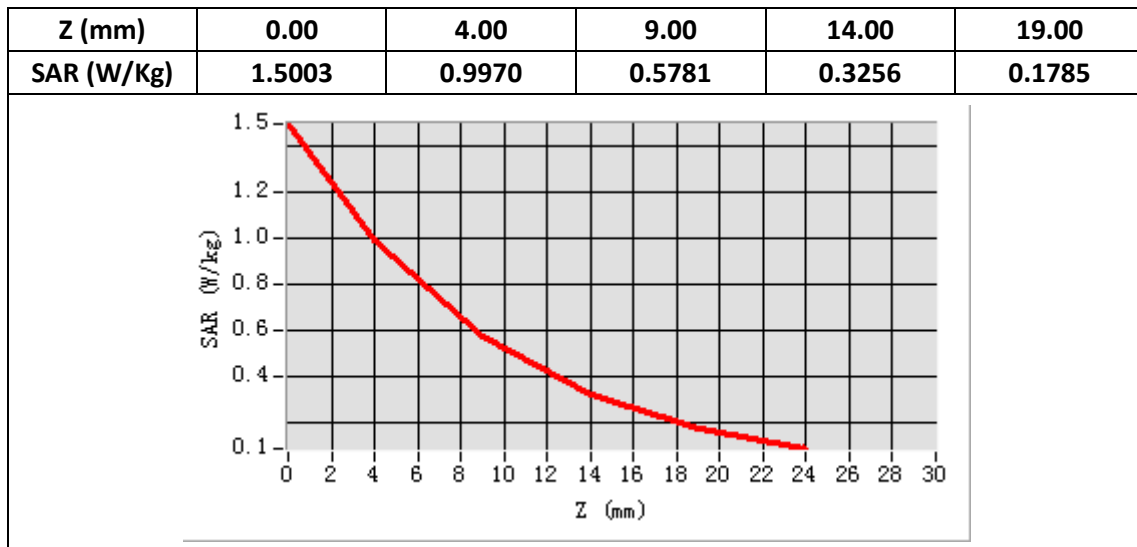
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	1752.6
Relative permittivity (real part)	53.40
Relative permittivity (imaginary)	15.10
Conductivity (S/m)	1.51
Variation (%)	-4.09
ConvF:	2.22



Maximum location: X=-2.00, Y=-1.00

SAR Peak: 1.50W/kg

SAR 10g (W/Kg)	0.472695
SAR 1g (W/Kg)	0.915222



Plot 3: WCDMA850, Edge A, Low,10mm

Type: Phone measurement

Date of measurement: 12/16/2019

Measurement duration: 22 minutes 09 seconds

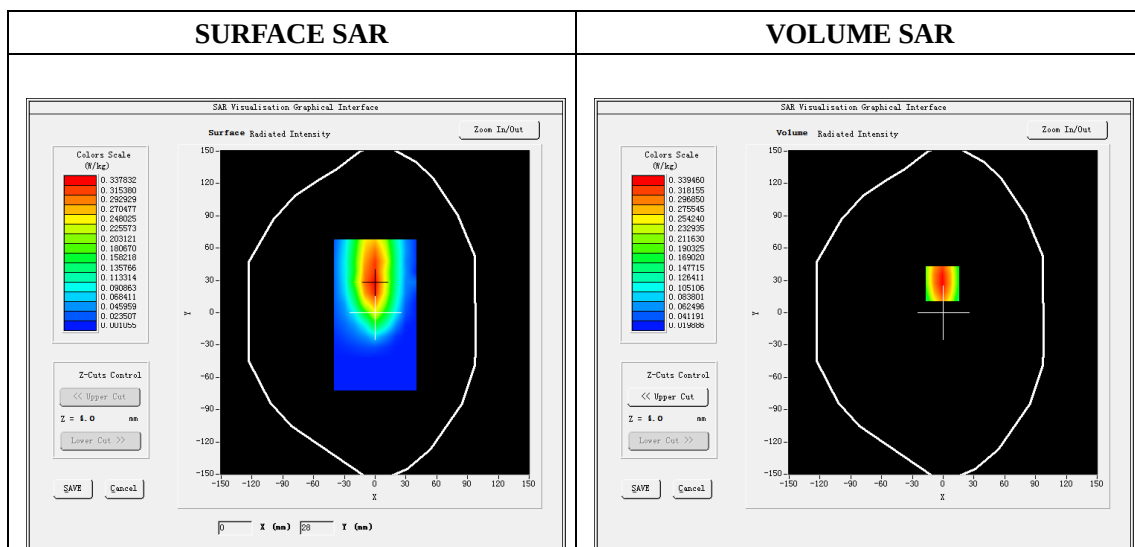
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge A
Band	Band5_WCDMA850
Channels	4132
Signal	WCDMA (Duty cycle: 1:1)

B. SAR Measurement Results

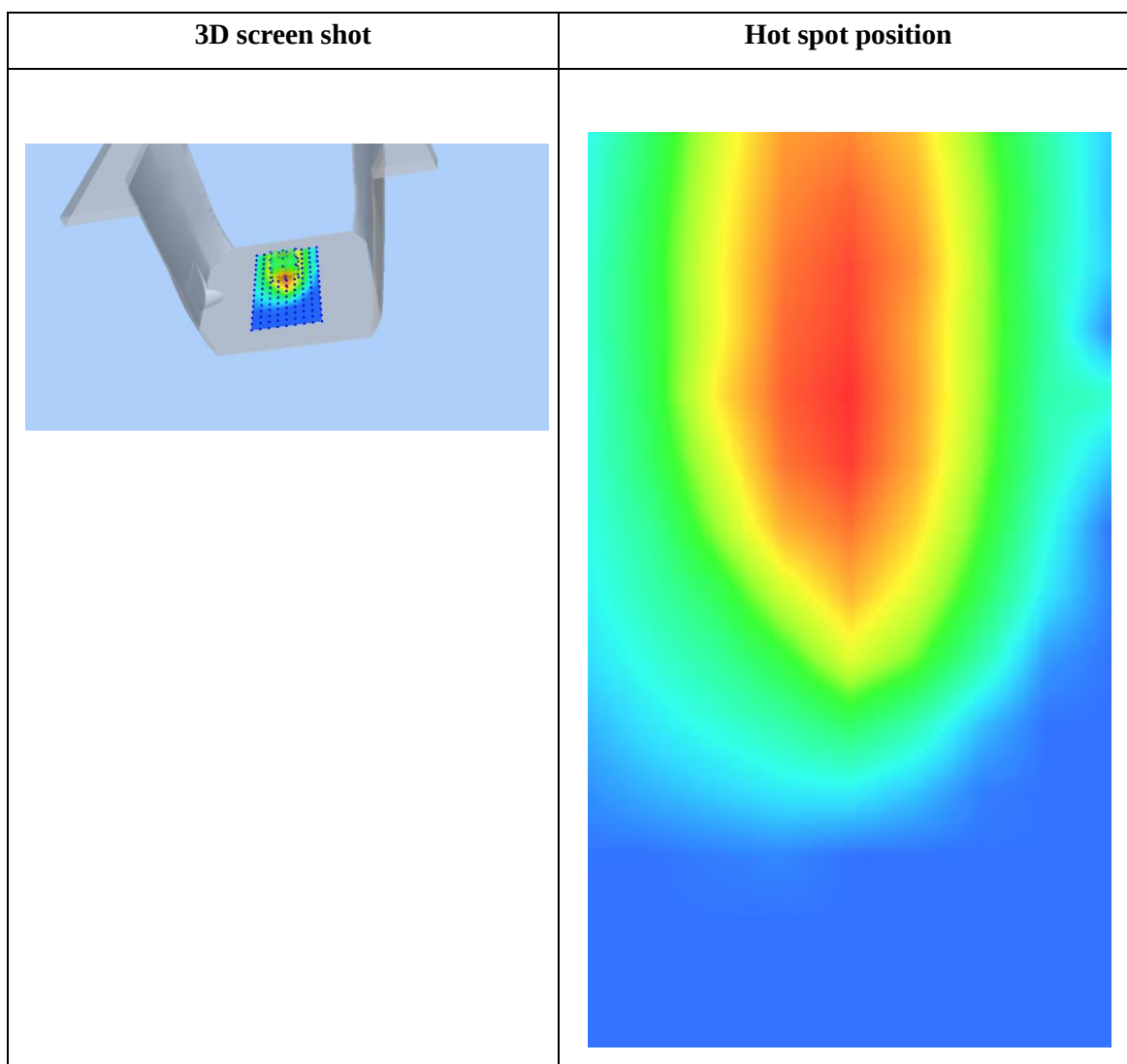
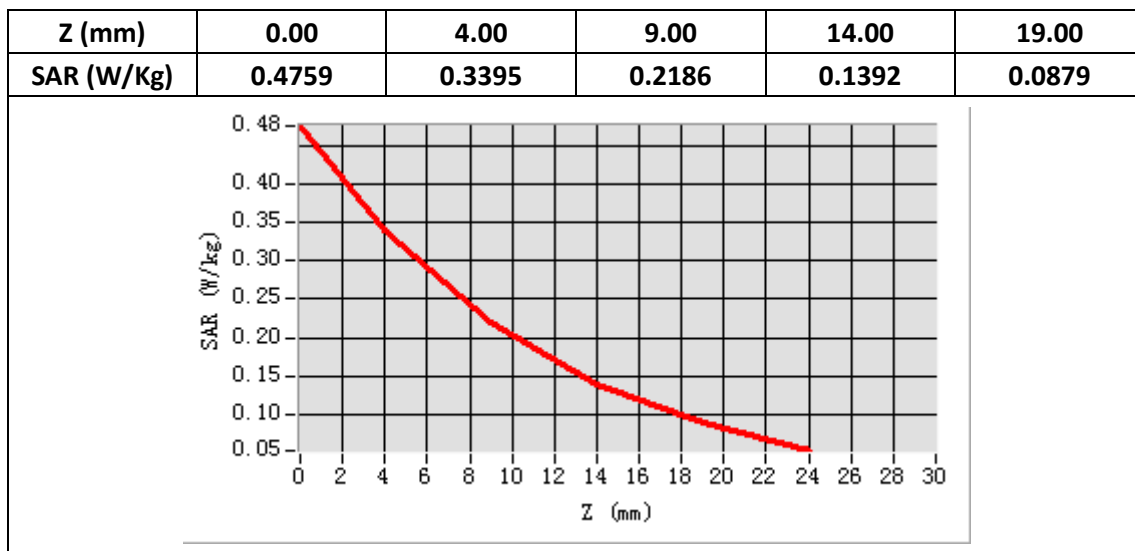
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	826.4
Relative permittivity (real part)	55.28
Relative permittivity (imaginary)	21.13
Conductivity (S/m)	0.98
Variation (%)	-2.27
ConvF:	1.99



Maximum location: X=-1.00, Y=27.00

SAR Peak: 0.48W/kg

SAR 10g (W/Kg)	0.201412
SAR 1g (W/Kg)	0.327371



Plot 4: LTE Band2, 20MHz, Edge A, Middle,10mm

Type: Phone measurement

Date of measurement: 12/18/2019

Measurement duration: 22 minutes 06 seconds

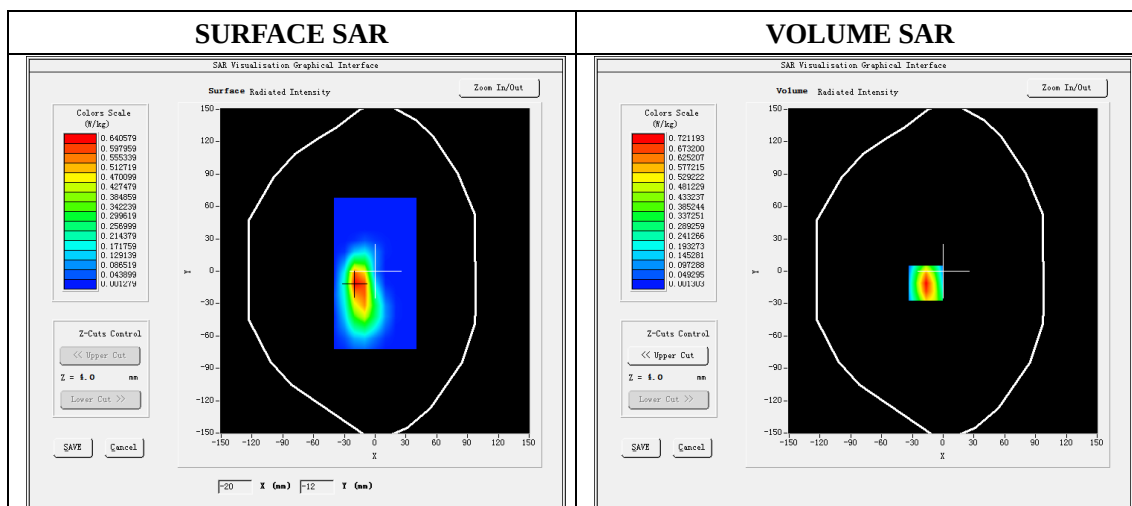
Mobile Phone IMEI number: --

A. Experimental conditions.

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

B. SAR Measurement Results

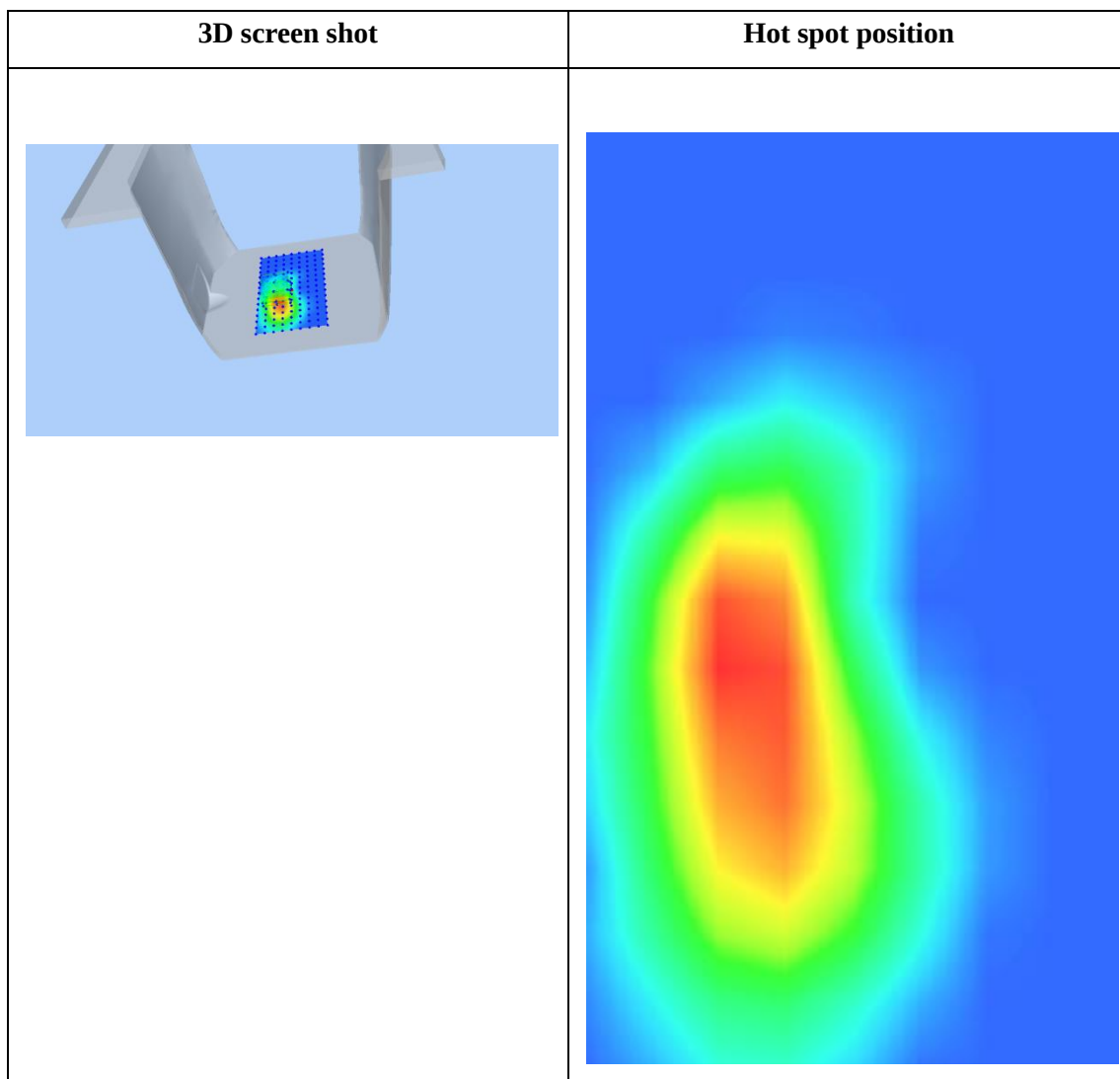
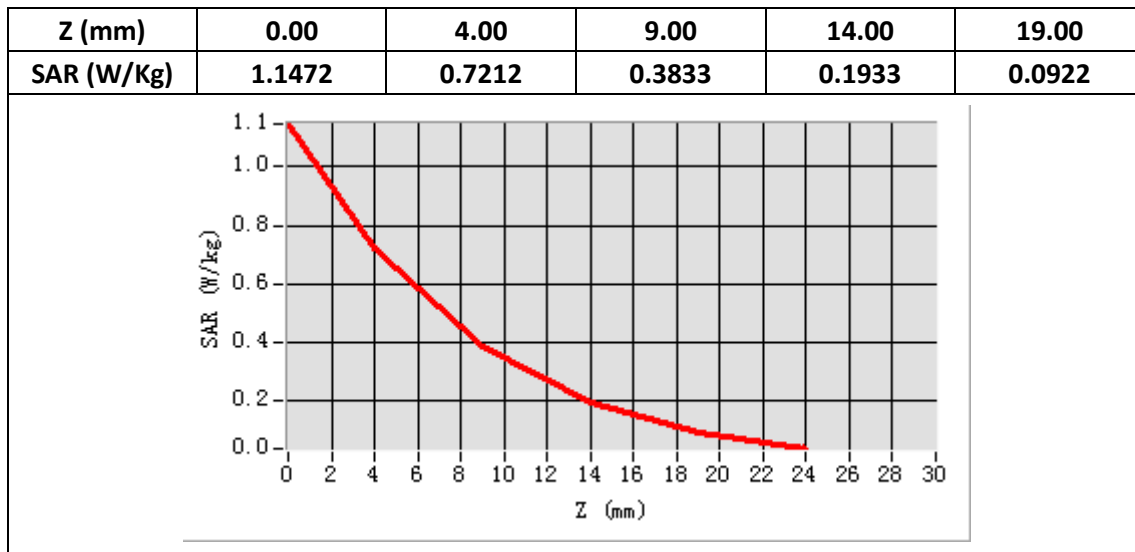
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	1880
Relative permittivity (real part)	53.32
Relative permittivity (imaginary)	14.49
Conductivity (S/m)	1.53
Variation (%)	-2.07
ConvF:	2.39



Maximum location: X=-17.00, Y=-11.00

SAR Peak: 1.15W/kg

SAR 10g (W/Kg)	0.323158
SAR 1g (W/Kg)	0.659134



Plot 5: LTE Band4, 20MHz, Edge A, High,10mm

Type: Phone measurement

Date of measurement: 12/17/2019

Measurement duration: 22 minutes 04 seconds

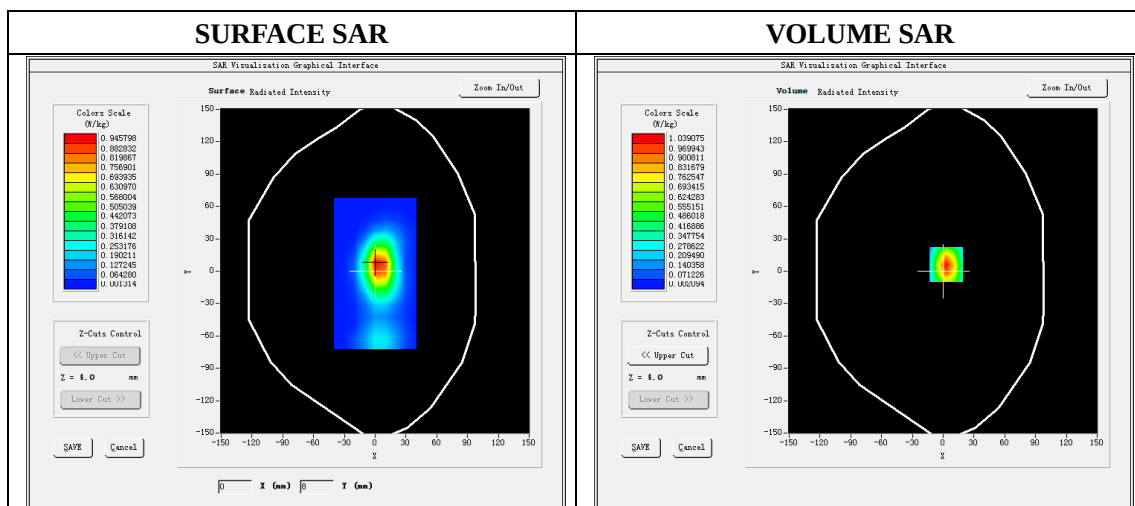
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge A
Band	LTE Band 4
Channels	20300
Signal	LTE (Duty cycle: 1:1)

B. SAR Measurement Results

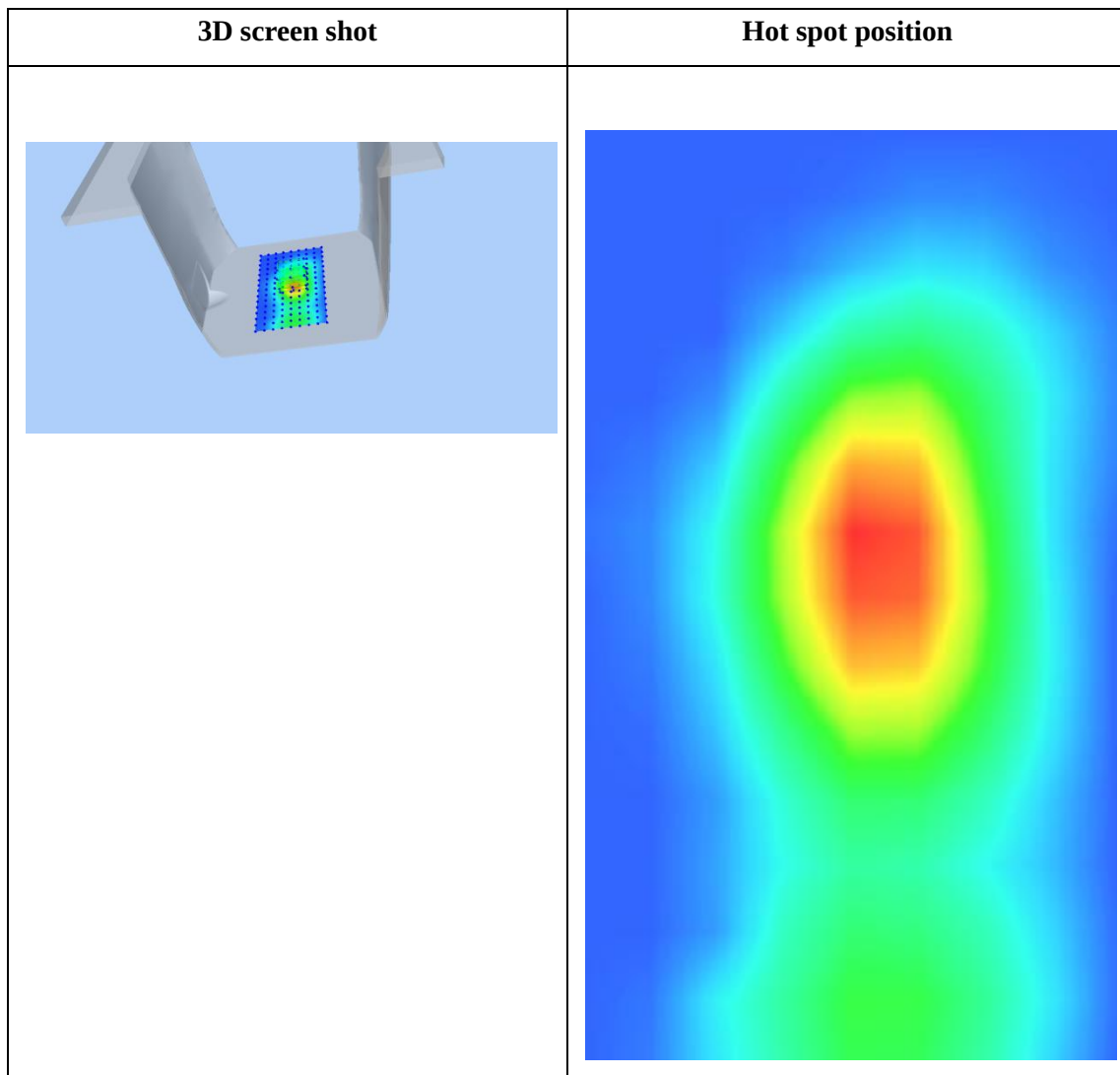
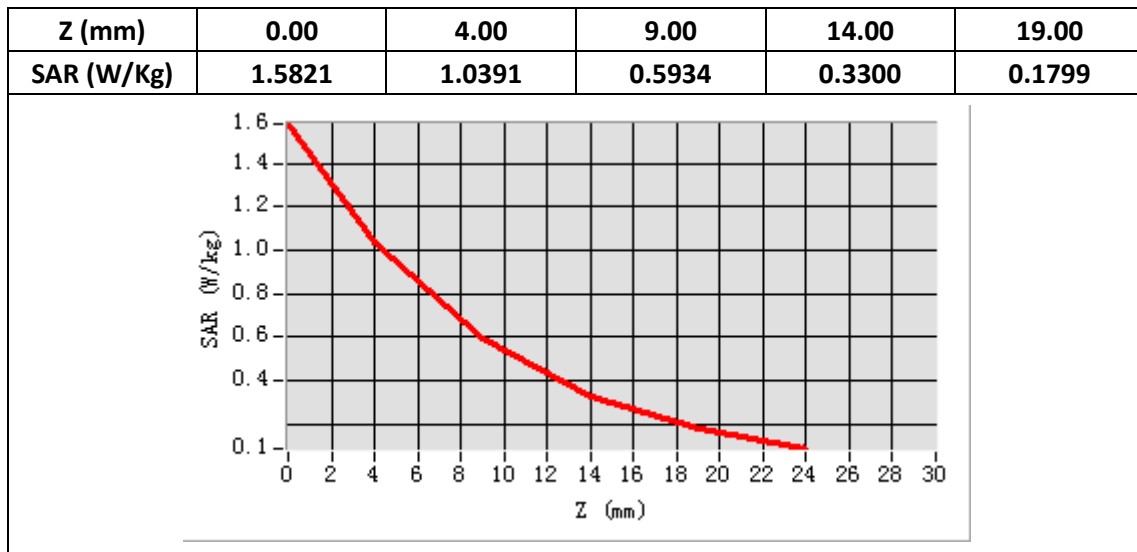
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	1745
Relative permittivity (real part)	53.40
Relative permittivity (imaginary)	15.10
Conductivity (S/m)	1.51
Variation (%)	-0.65
ConvF:	2.22



Maximum location: X=3.00, Y=6.00

SAR Peak: 1.59W/kg

SAR 10g (W/Kg)	0.487999
SAR 1g (W/Kg)	0.950421



Plot 6: LTE Band5, 10MHz, Edge A, Middle,10mm

Type: Phone measurement

Date of measurement: 12/16/2019

Measurement duration: 22 minutes 07 seconds

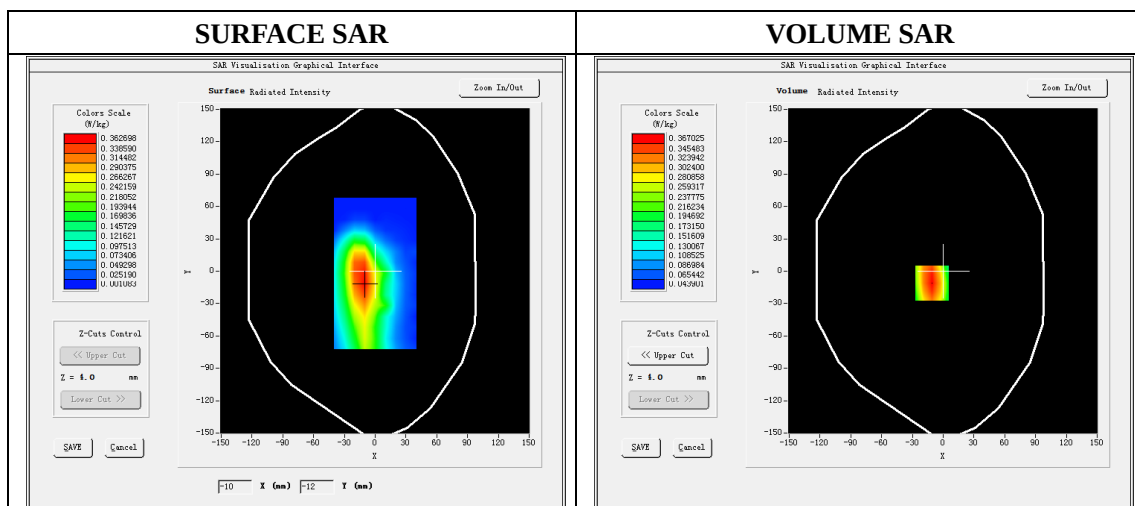
Mobile Phone IMEI number: --

A. Experimental conditions.

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

B. SAR Measurement Results

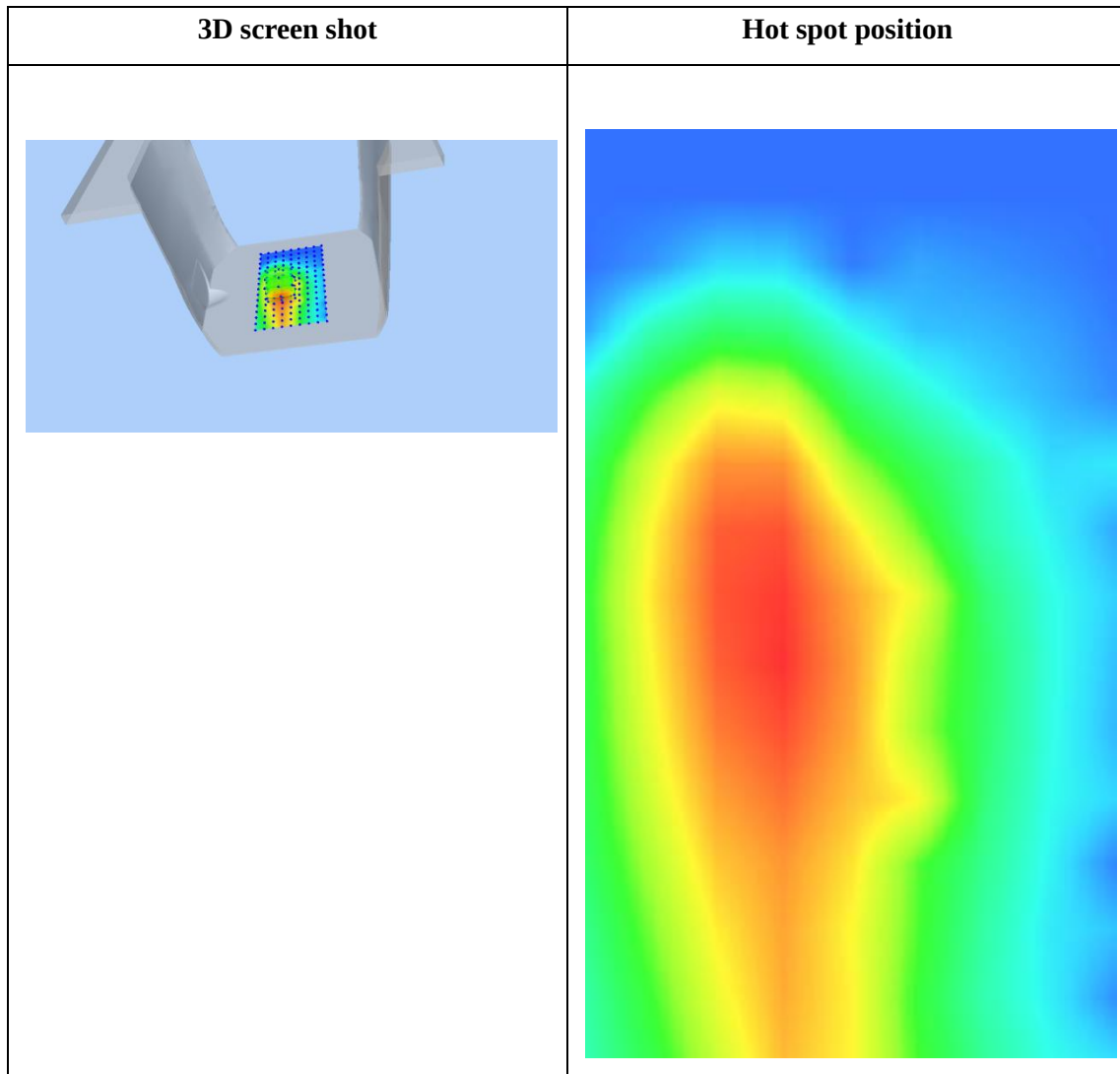
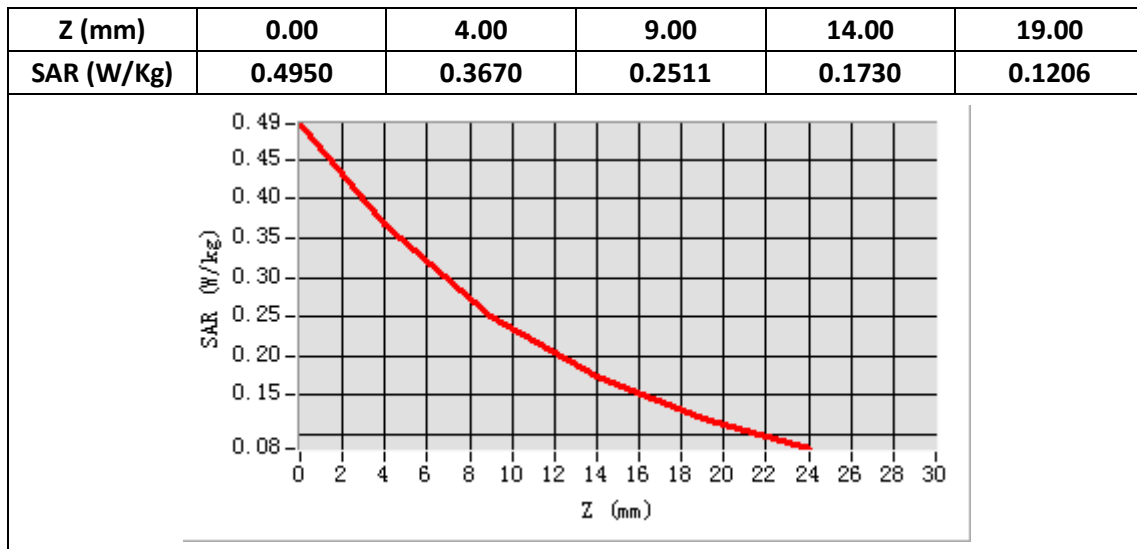
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	836.5
Relative permittivity (real part)	55.28
Relative permittivity (imaginary)	21.13
Conductivity (S/m)	0.98
Variation (%)	-0.50
ConvF:	1.99



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

SAR Peak: 0.51W/kg

SAR 10g (W/Kg)	0.231541
SAR 1g (W/Kg)	0.356397



Plot 7: LTE Band7, 20MHz, Edge A, Middle,10mm

Type: Phone measurement

Date of measurement: 12/20/2019

Measurement duration: 22 minutes 13 seconds

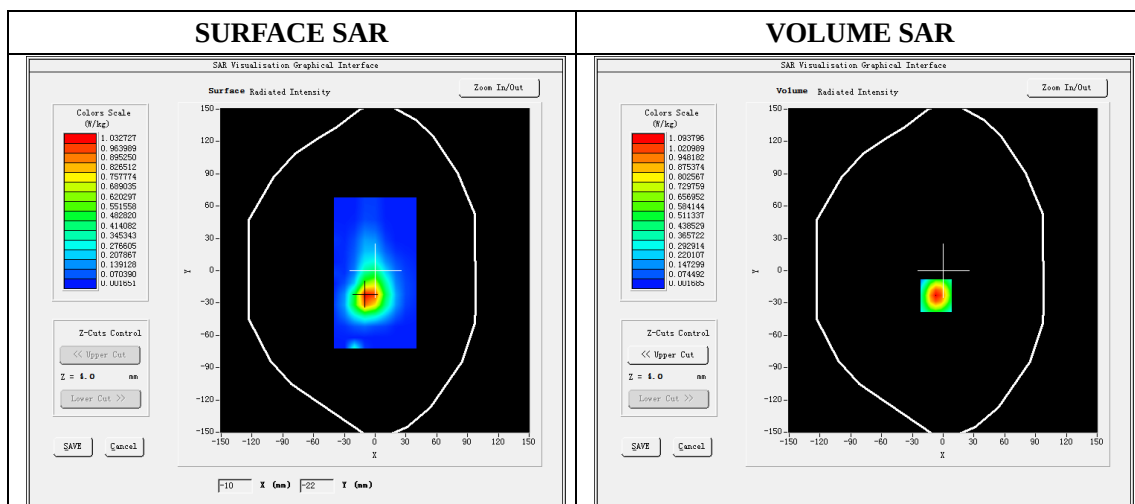
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=5mm,dy=5mm
ZoomScan	7x7x8,dx=5mm dy=5mm dz=4mm
Phantom	Validation plane
Device Position	Edge A
Band	LTE Band 7
Channels	21100
Signal	LTE (Duty cycle: 1:1)

B. SAR Measurement Results

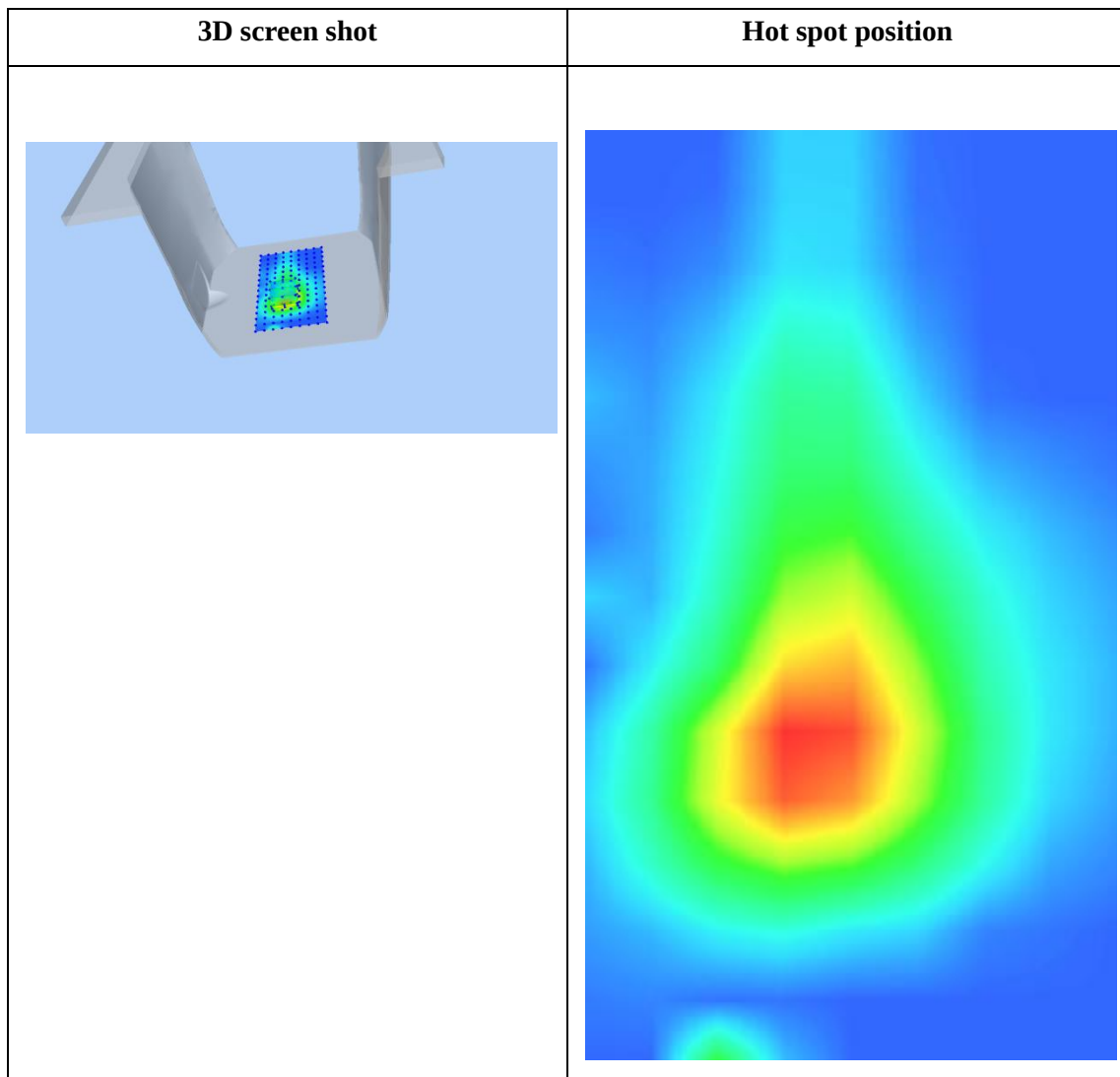
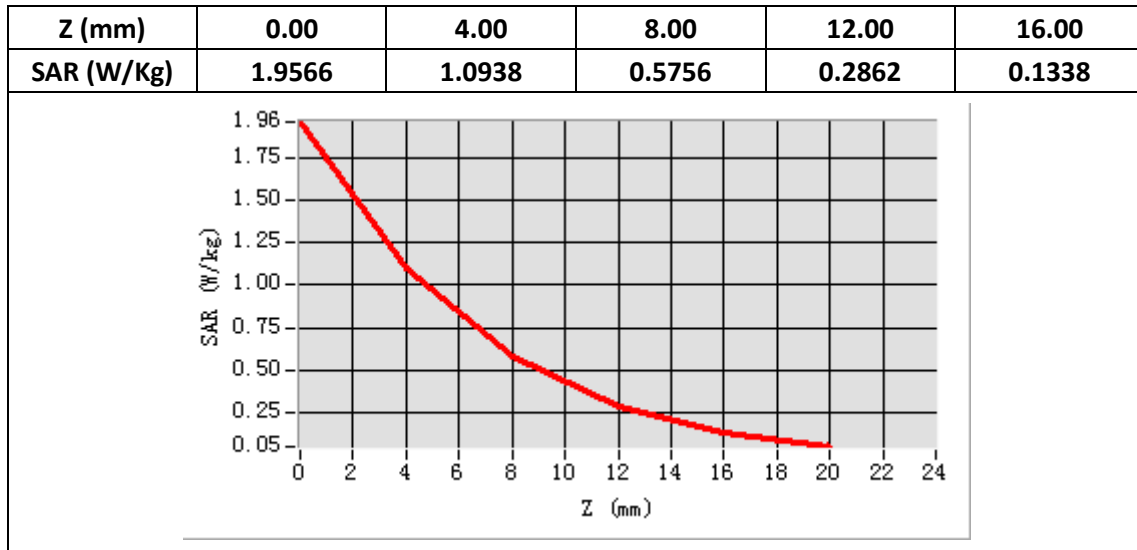
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	2535
Relative permittivity (real part)	52.54
Relative permittivity (imaginary)	14.88
Conductivity (S/m)	2.15
Variation (%)	-4.71
ConvF:	2.43



Maximum location: X=-7.00 Y=-23.00

SAR Peak: 1.96 W/Kg

SAR 10g (W/Kg)	0.444757
SAR 1g (W/Kg)	0.993783



Plot 8: LTE Band12, 10MHz, Edge A, High,10mm

Type: Phone measurement

Date of measurement: 12/15/2019

Measurement duration: 22 minutes 15 seconds

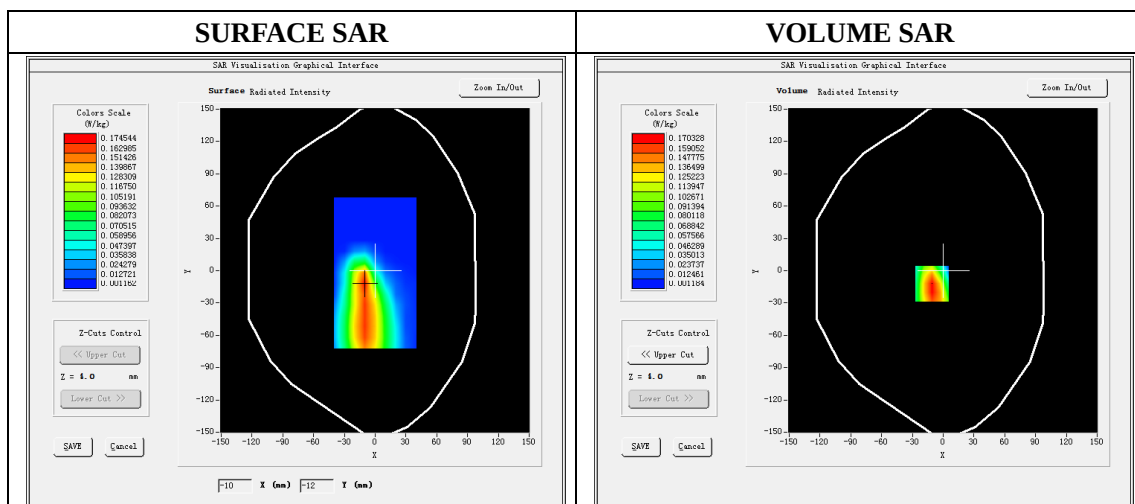
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge A
Band	LTE Band 12
Channels	23130
Signal	LTE (Duty cycle: 1:1)

B. SAR Measurement Results

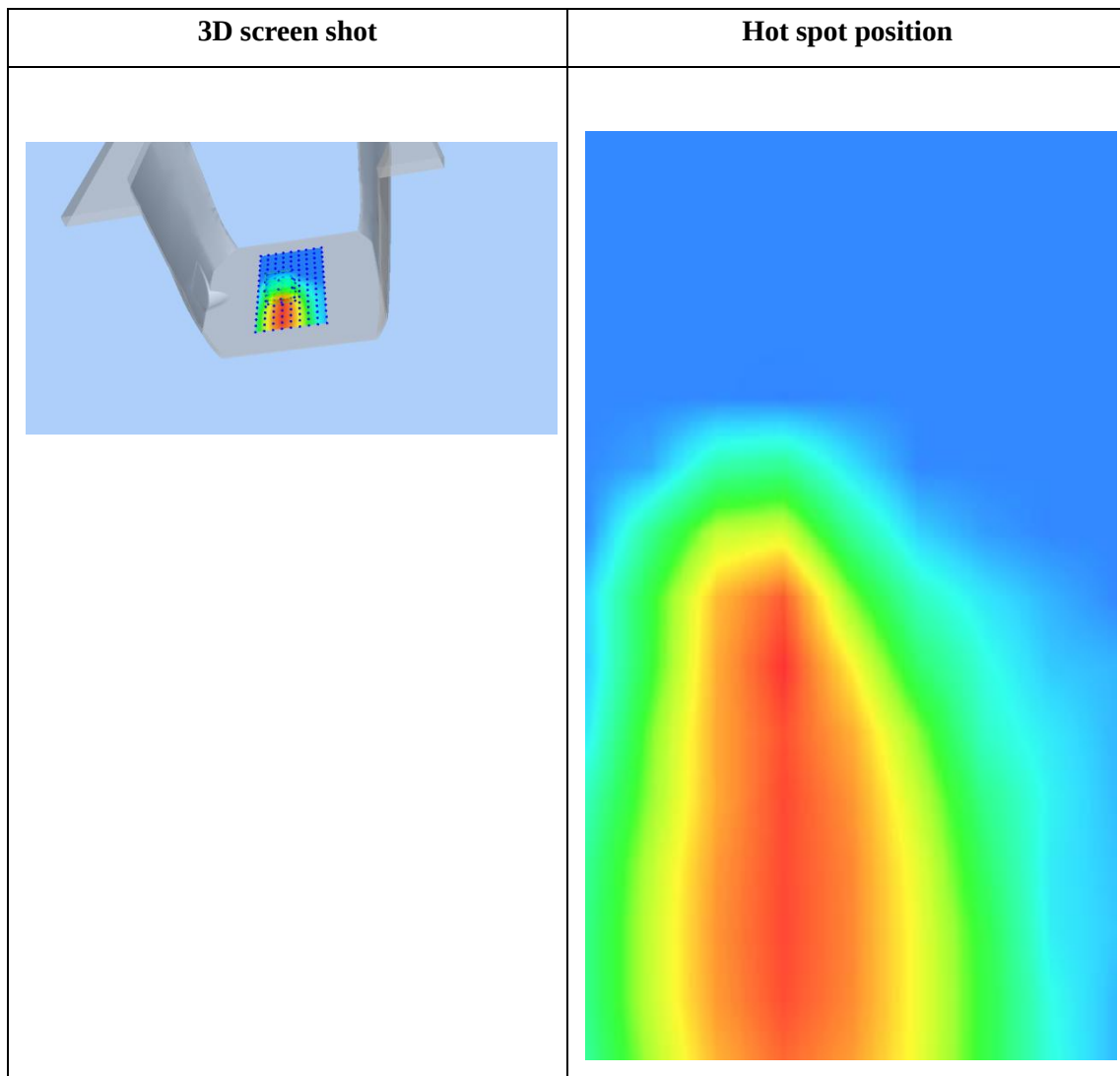
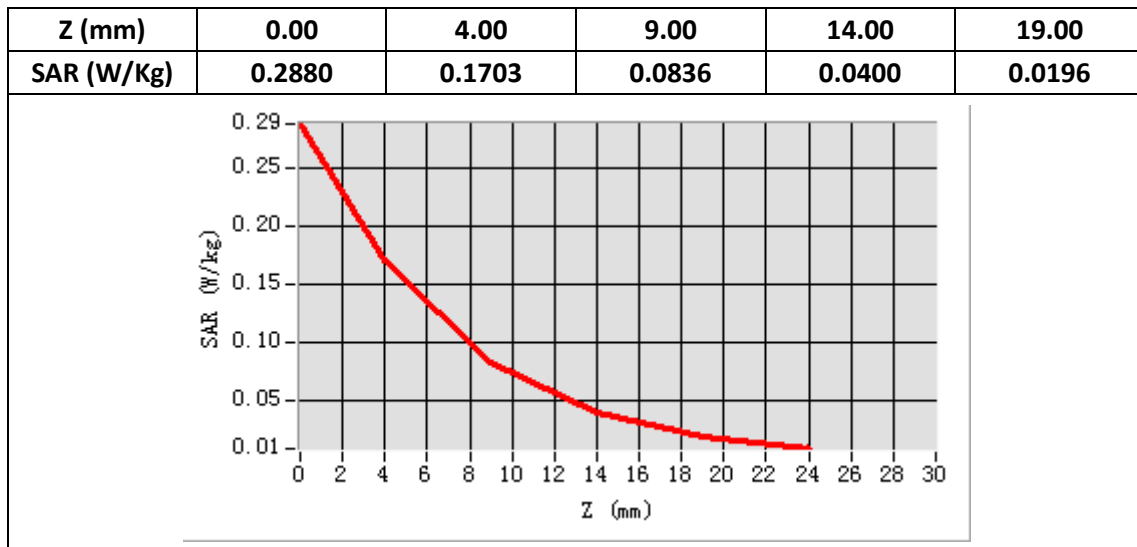
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	711
Relative permittivity (real part)	55.63
Relative permittivity (imaginary)	23.28
Conductivity (S/m)	0.97
Variation (%)	-2.48
ConvF:	1.93



Maximum location: X=-11.00, Y=-12.00

SAR Peak: 0.29W/kg

SAR 10g (W/Kg)	0.086569
SAR 1g (W/Kg)	0.166827



Plot 9: LTE Band13, 10MHz, Edge A, Middle,10mm

Type: Phone measurement

Date of measurement: 12/15/2019

Measurement duration: 22 minutes 11 seconds

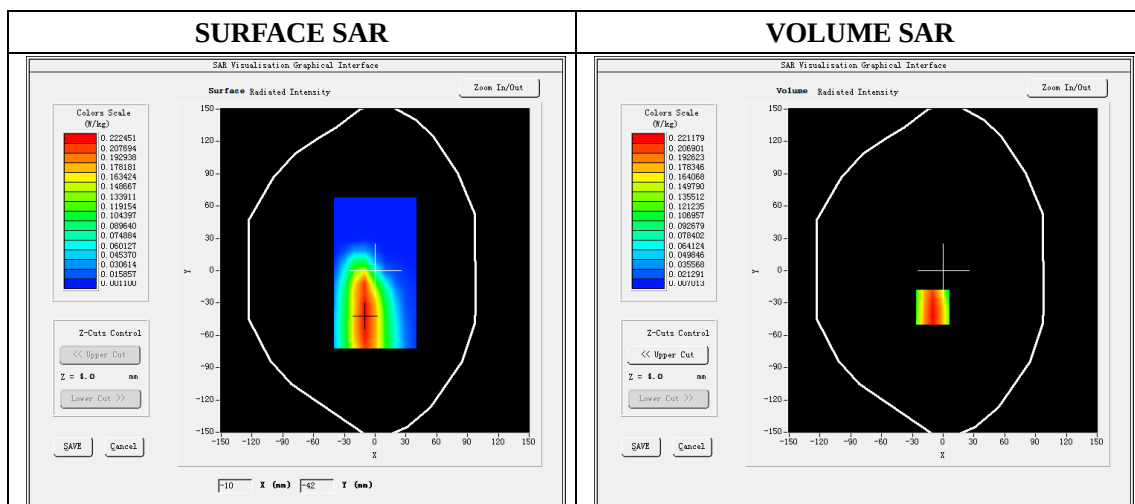
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge A
Band	LTE Band 13
Channels	23230
Signal	LTE (Duty cycle: 1:1)

B. SAR Measurement Results

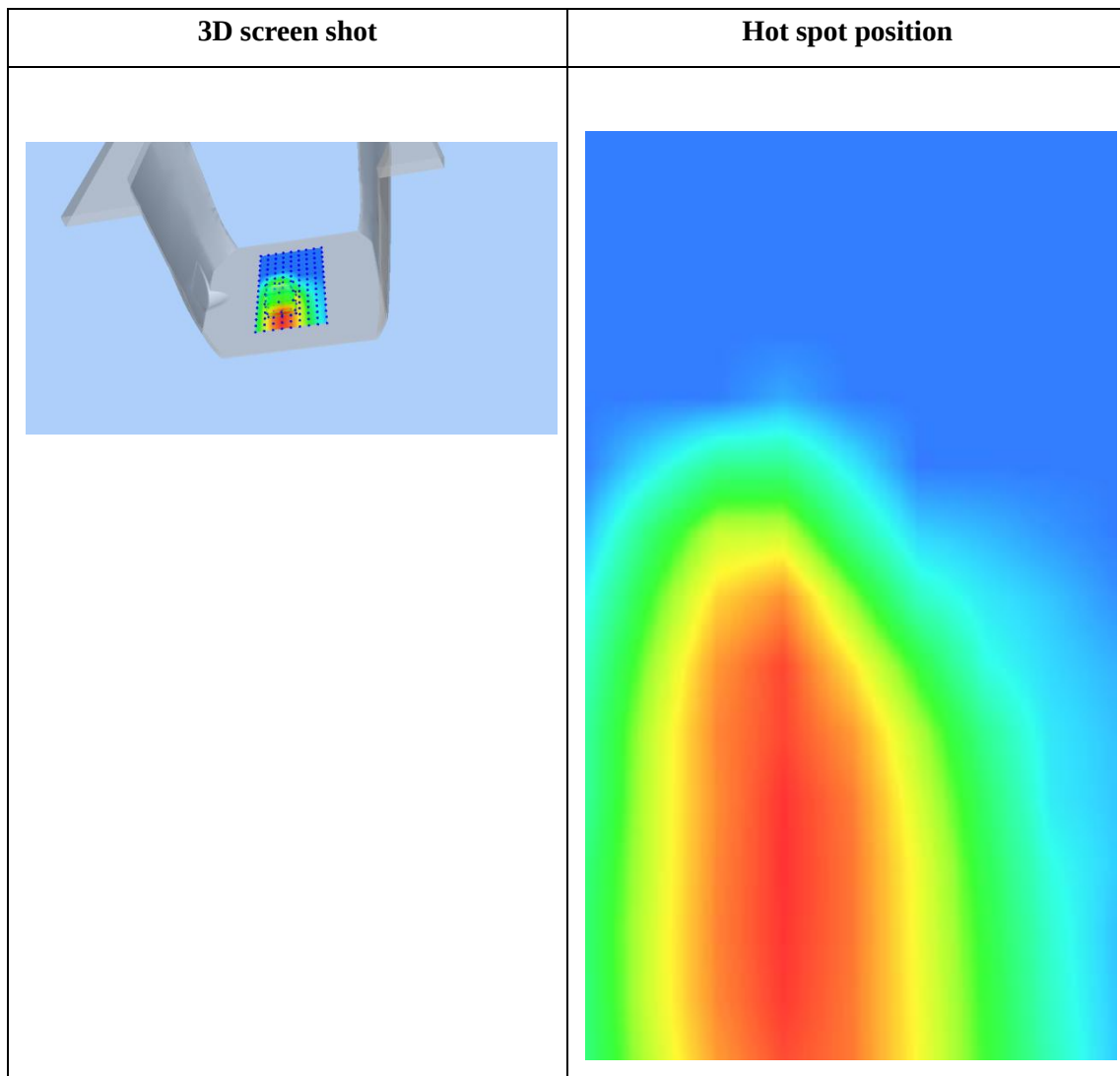
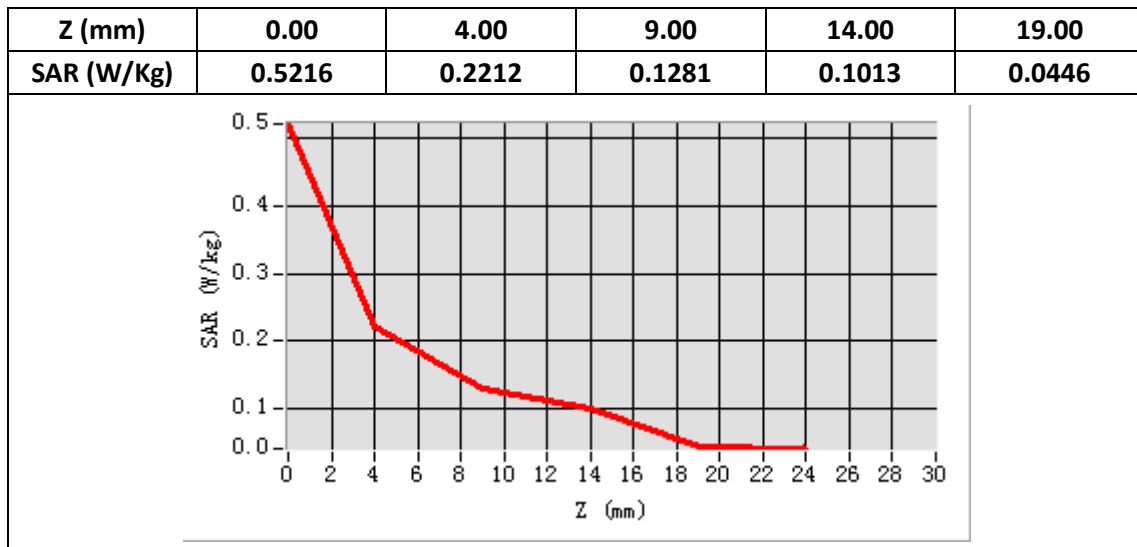
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	782
Relative permittivity (real part)	55.63
Relative permittivity (imaginary)	23.28
Conductivity (S/m)	0.97
Variation (%)	-2.60
ConvF:	1.93



Maximum location: X=-10.00, Y=-34.00

SAR Peak: 0.35W/kg

SAR 10g (W/Kg)	0.137274
SAR 1g (W/Kg)	0.221048



Plot 10: LTE Band17, 10MHz, Edge A, Middle,10mm

Type: Phone measurement

Date of measurement: 12/15/2019

Measurement duration: 22 minutes 14 seconds

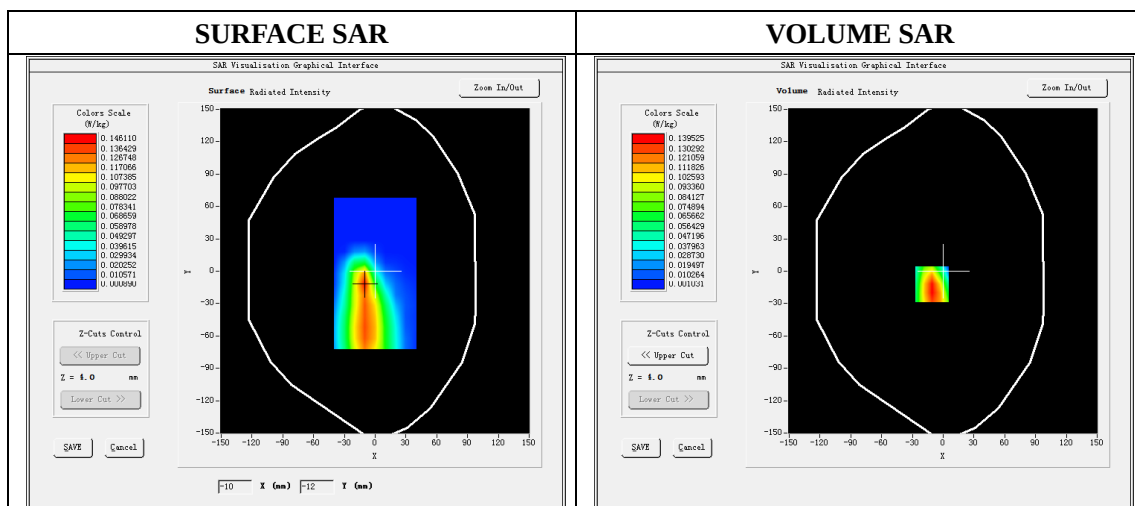
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Edge A
Band	LTE Band 17
Channels	23790
Signal	LTE (Duty cycle: 1:1)

B. SAR Measurement Results

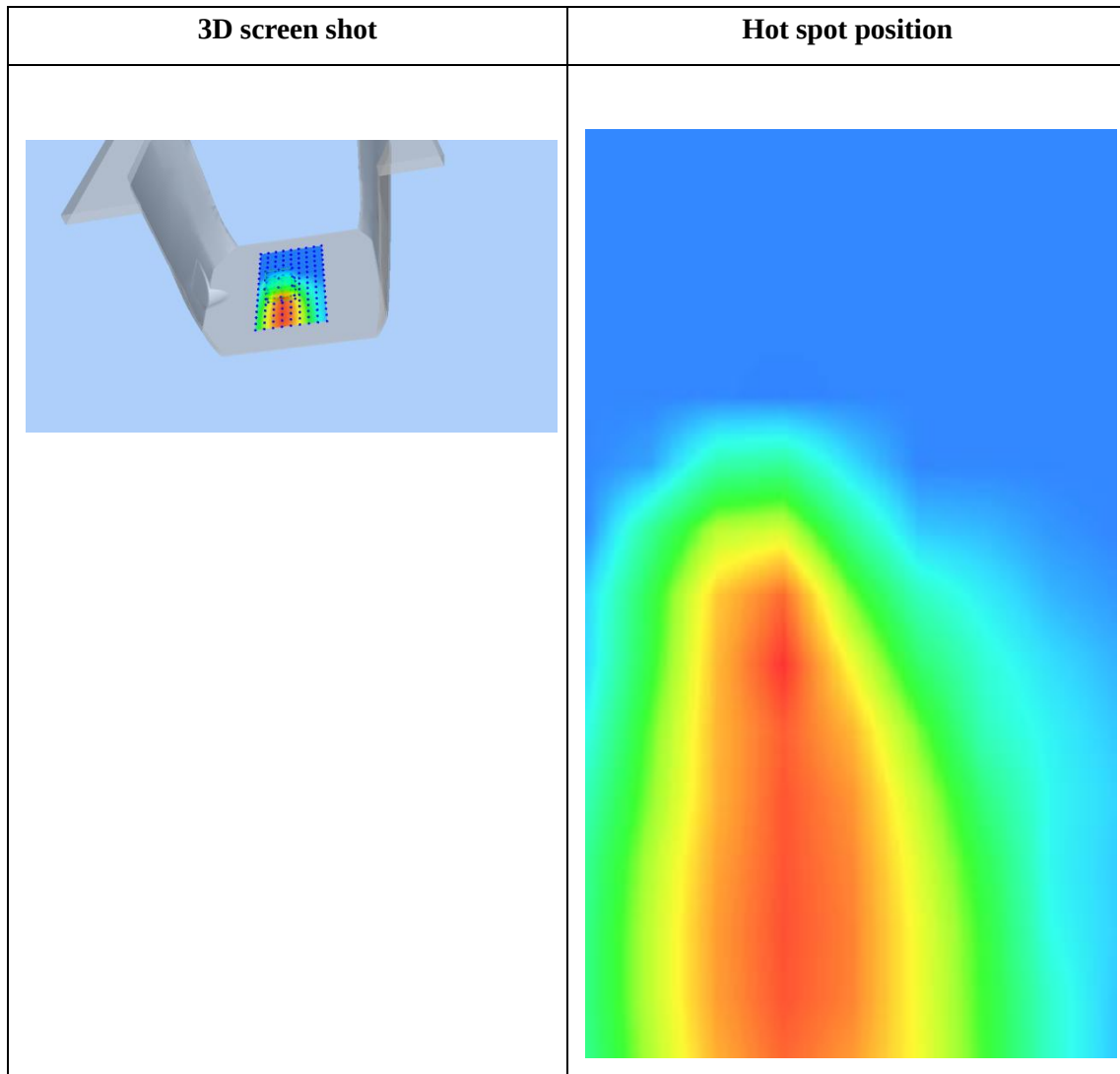
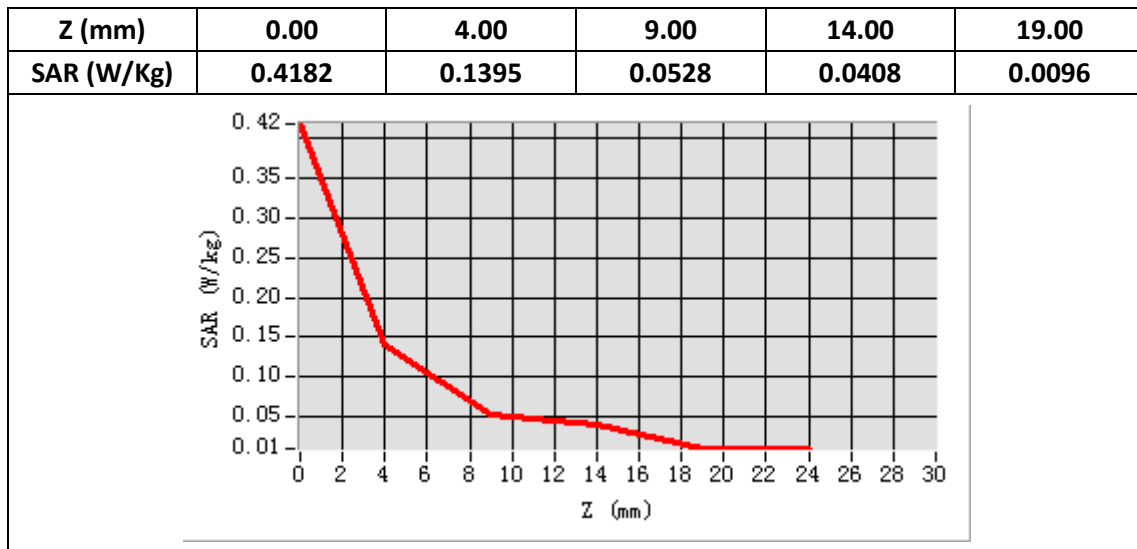
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	710
Relative permittivity (real part)	55.63
Relative permittivity (imaginary)	23.28
Conductivity (S/m)	0.97
Variation (%)	-1.65
ConvF:	1.93



Maximum location: X=-11.00, Y=-12.00

SAR Peak: 0.23W/kg

SAR 10g (W/Kg)	0.069827
SAR 1g (W/Kg)	0.133277



Plot 11: Wi-Fi 802.11b, Edge D ,Middle, 10mm

Type: Phone measurement

Date of measurement: 12/19/2019

Measurement duration: 22 minutes 17 seconds

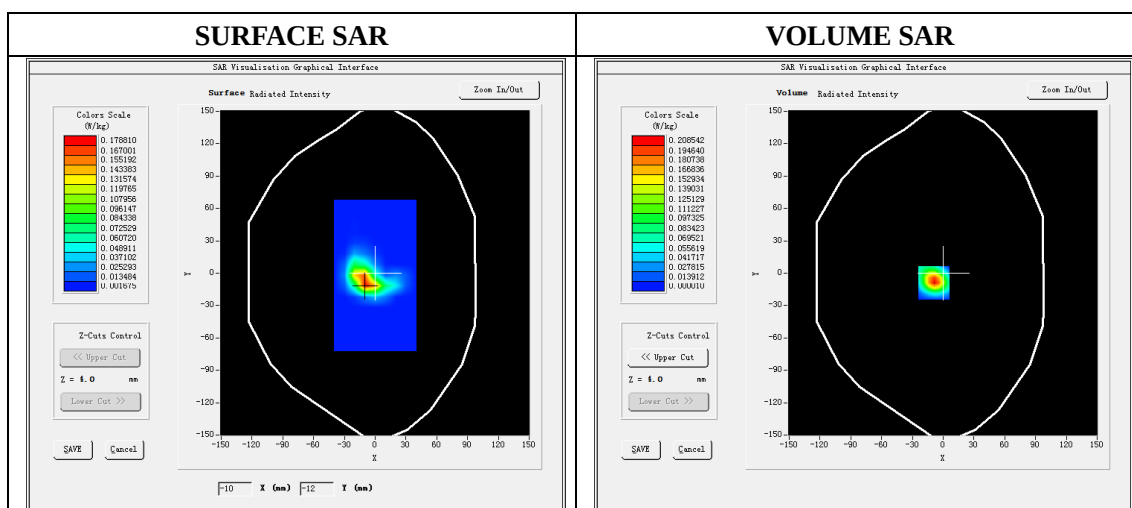
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=5mm,dy=5mm
ZoomScan	7x7x8,dx=5mm dy=5mm dz=4mm
Phantom	Validation plane
Device Position	Edge D
Band	WIFI
Channels	6
Signal	DSSS (Duty cycle: 1:1)

B. SAR Measurement Results

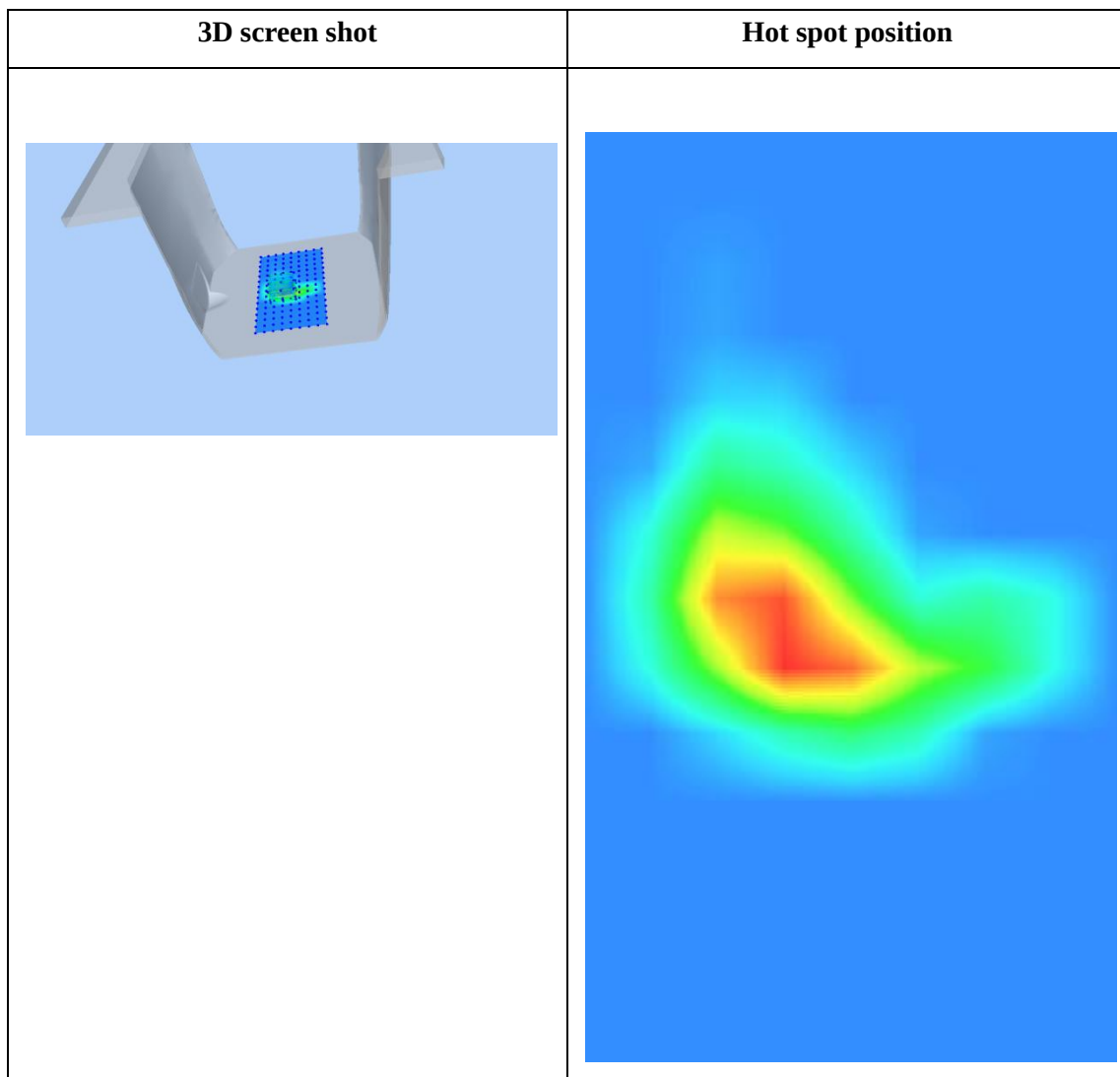
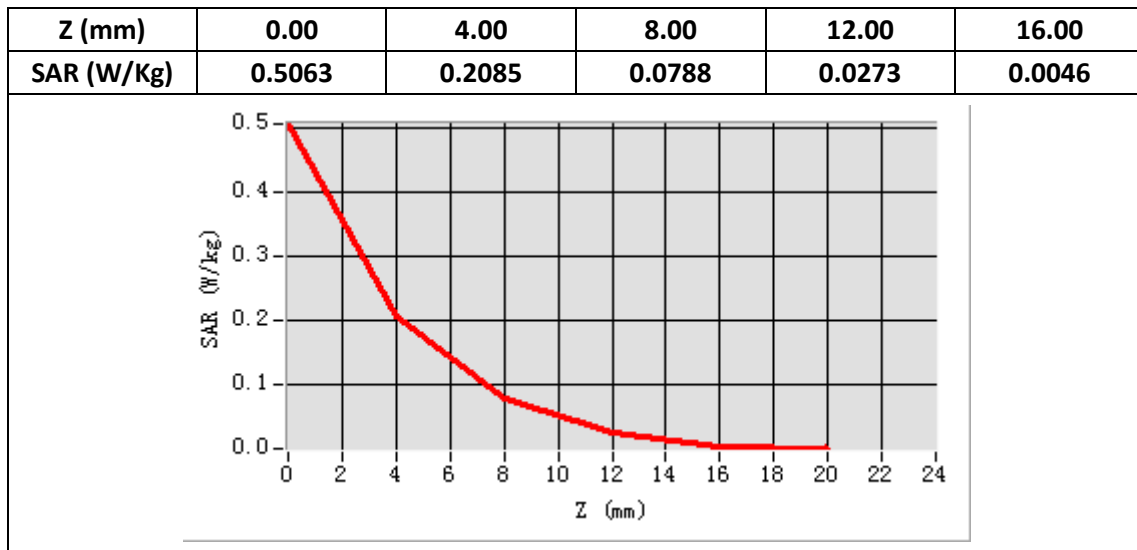
E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	2437
Relative permittivity (real part)	52.76
Relative permittivity (imaginary)	14.40
Conductivity (S/m)	1.96
Variation (%)	-0.81
ConvF:	2.46



Maximum location: X=-9.00 Y=-9.00

SAR Peak: 0.49W/kg

SAR 10g (W/Kg)	0.070167
SAR 1g (W/Kg)	0.196348



Plot 12: WIFI 5G 802.11a(20MHz), Back , Middle,10mm

Type: Phone measurement

Date of measurement: 12/21/2019

Measurement duration: 22 minutes 19 seconds

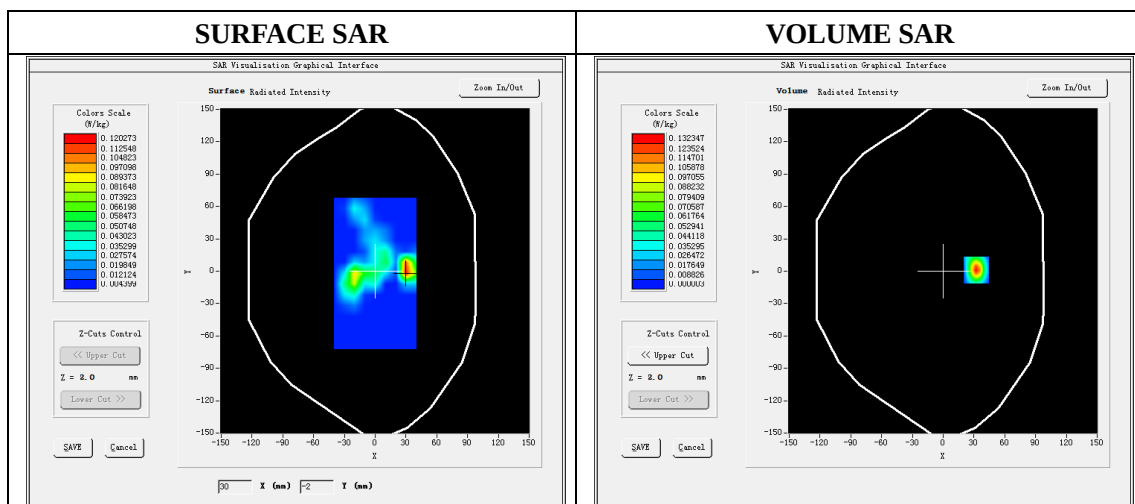
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=4mm,dy=4mm
ZoomScan	7x7x12,dx=4m, dy=4mm, dz=2mm
Phantom	Validation plane
Device Position	Back
Band	WIFI 5G
Channels	44
Signal	OFDM (Duty cycle: 1:1)

B. SAR Measurement Results

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	5220
Relative permittivity (real part)	49.12
Relative permittivity (imaginary)	18.35
Conductivity (S/m)	5.30
Variation (%)	-1.10
ConvF:	2.21

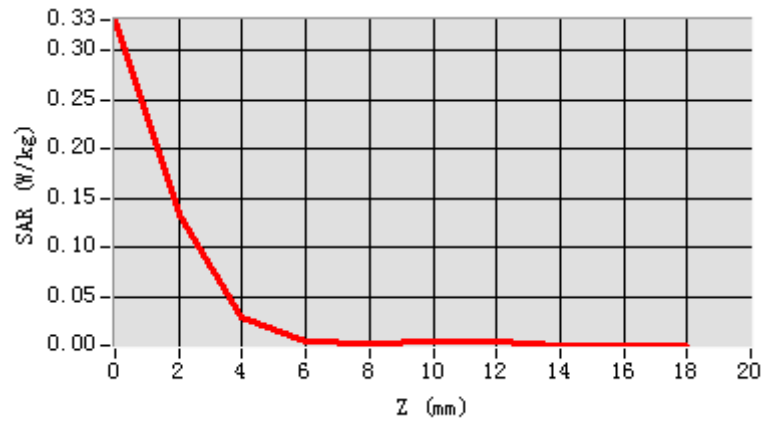


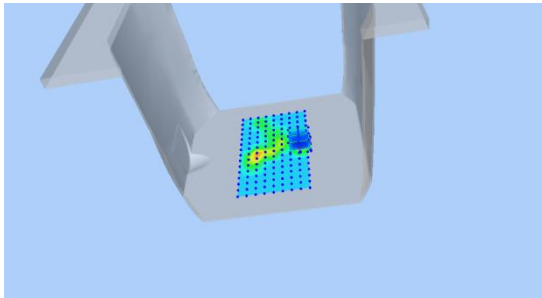
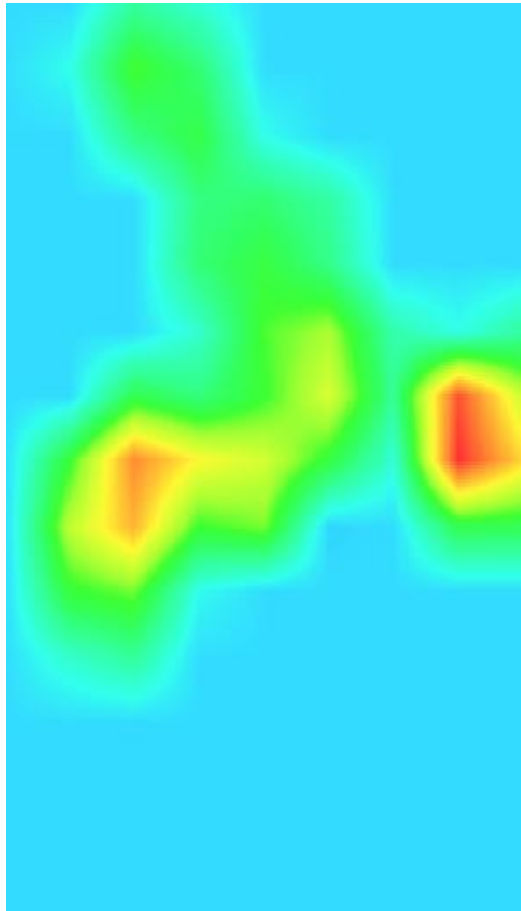
Maximum location: X=32.00 Y=1.00

SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.010773
SAR 1g (W/Kg)	0.076190

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	0.3313	0.1323	0.0286	0.0033	0.0025	0.0039	0.0050	0.0000	0.0000



3D screen shot	Hot spot position
	

Plot 13: RFID, Back, Low,10mm

Type: Phone measurement

Date of measurement: 12/16/2019

Measurement duration: 22 minutes 20 seconds

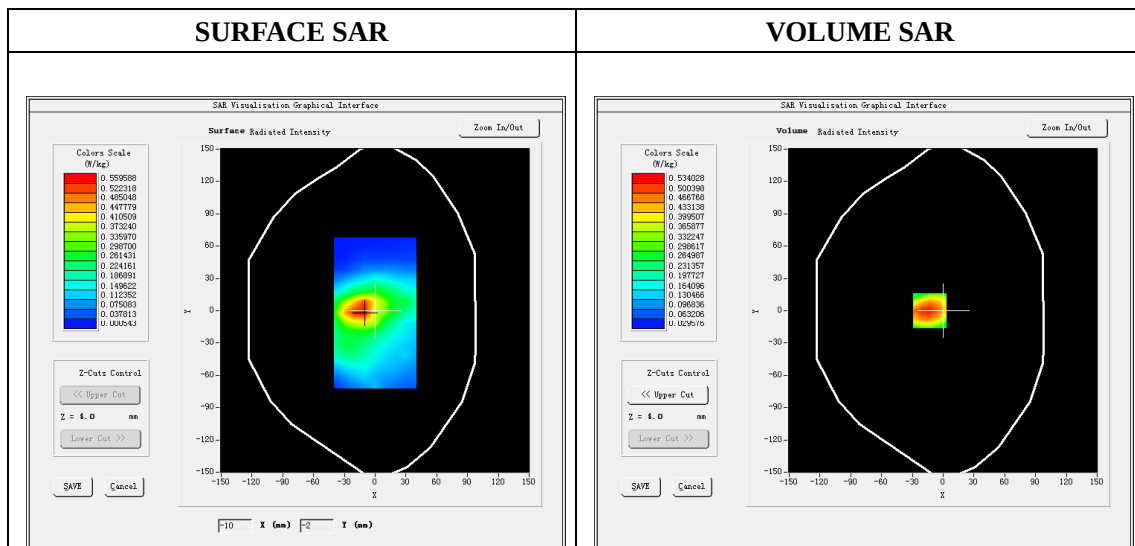
Mobile Phone IMEI number: --

A. Experimental conditions.

Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	RFID
Channels	1
Signal	UHF

B. SAR Measurement Results

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	902.75
Relative permittivity (real part)	55.28
Relative permittivity (imaginary part)	21.13
Conductivity (S/m)	0.98
Variation (%)	-1.56
ConvF:	1.99



Maximum location: X=-13.00, Y=0.00

SAR Peak: 0.76 W/kg

SAR 10g (W/Kg)	0.311202
SAR 1g (W/Kg)	0.514264

