

**Appendix A: SAR System performance Check Plots**

Measurement	Liquid	Frequency	Test Date
System Check	Head	750	2019-03-06
System Check	Body	750	2019-03-06
System Check	Head	850	2019-03-07
System Check	Body	850	2019-03-07
System Check	Head	1800	2019-03-08
System Check	Body	1800	2019-03-08
System Check	Head	1900	2019-03-11
System Check	Body	1900	2019-03-11
System Check	Head	2450	2019-03-12
System Check	Body	2450	2019-03-12

System Performance Check (Head, 750MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 03/06/2019

Measurement duration: 22 minutes 15 seconds

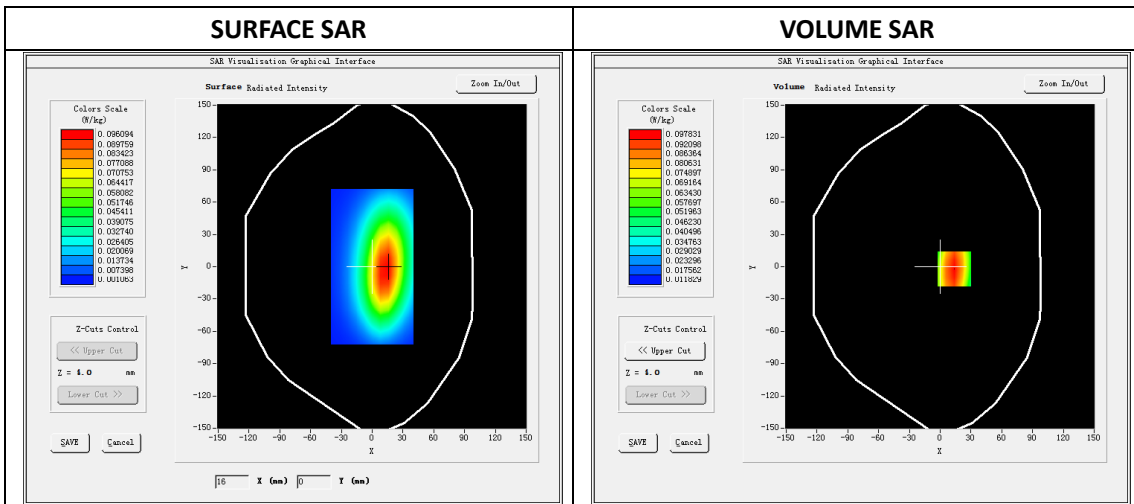
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	750MHz
Channels	
Signal	CW

B. SAR Measurement Results

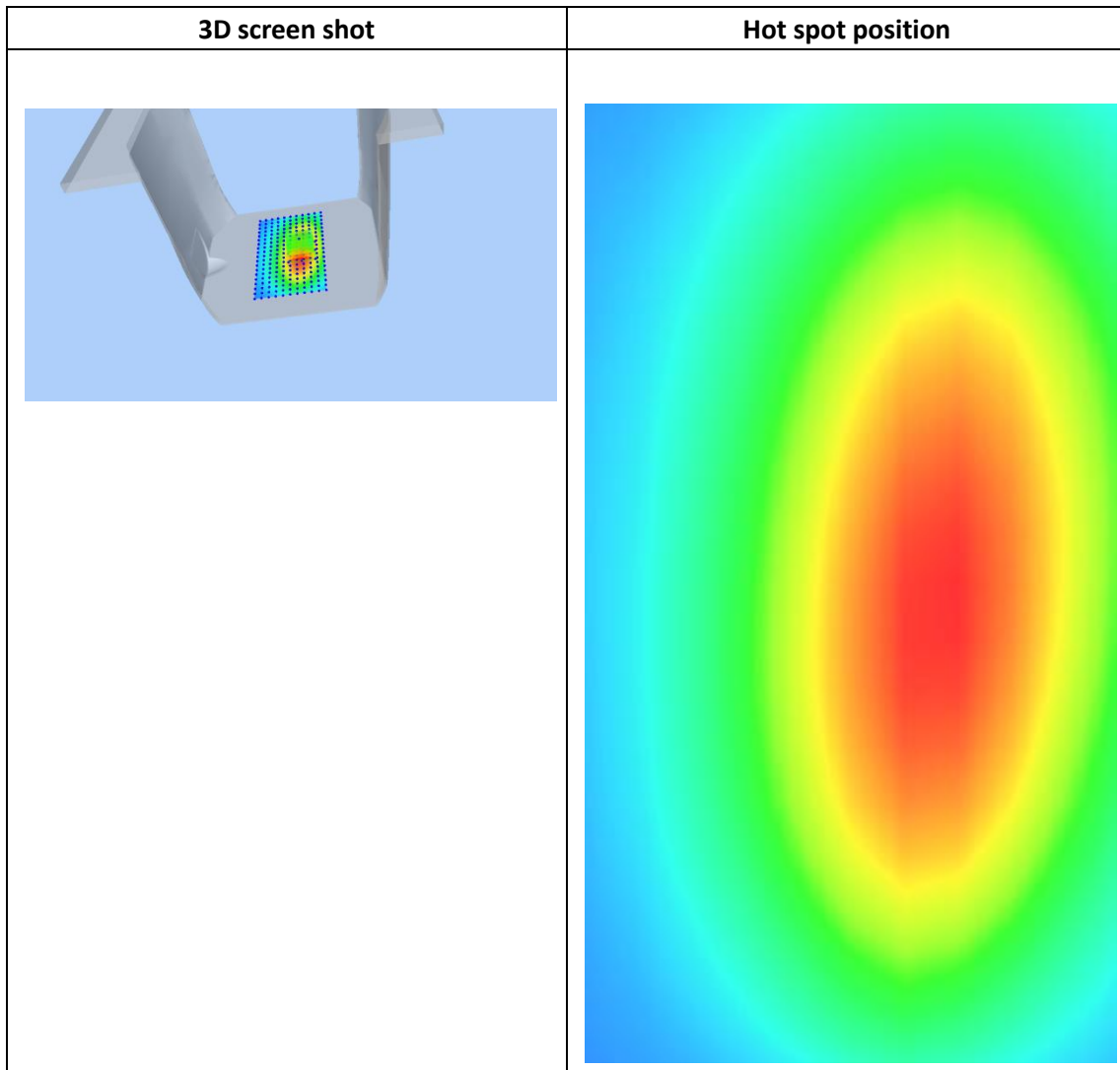
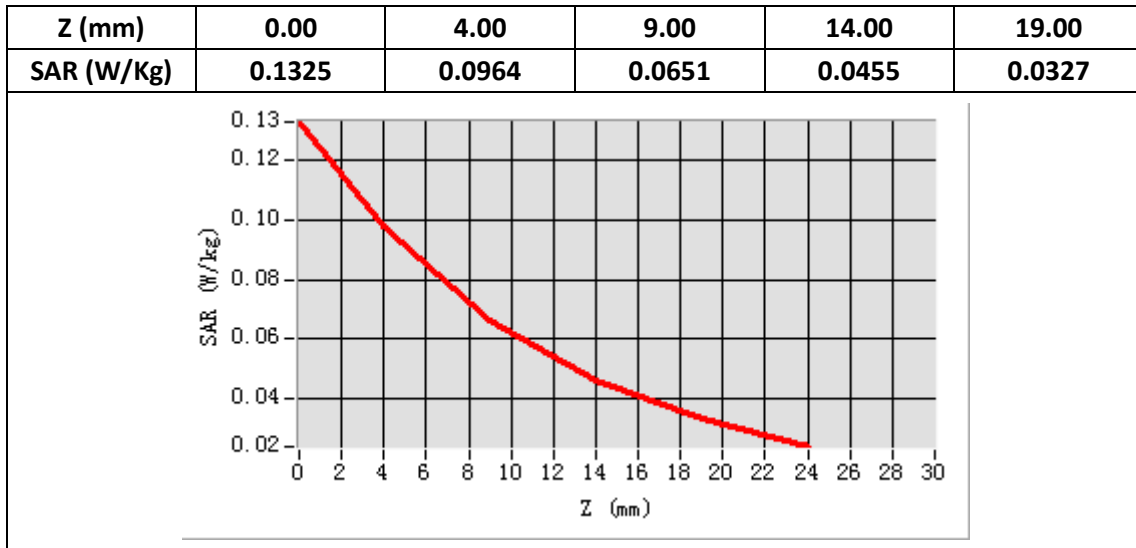
Band SAR

E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	750
Relative permittivity (real part)	41.85
Relative permittivity	21.42
Conductivity (S/m)	0.90
Power drift (%)	0.07
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	1.87
Crest factor:	1:1



Maximum location: X=14.00, Y=-2.00

SAR 10g (W/Kg)	0.051277
SAR 1g (W/Kg)	0.083766



System Performance Check (Body, 750MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 03/06/2019

Measurement duration: 22 minutes 35 seconds

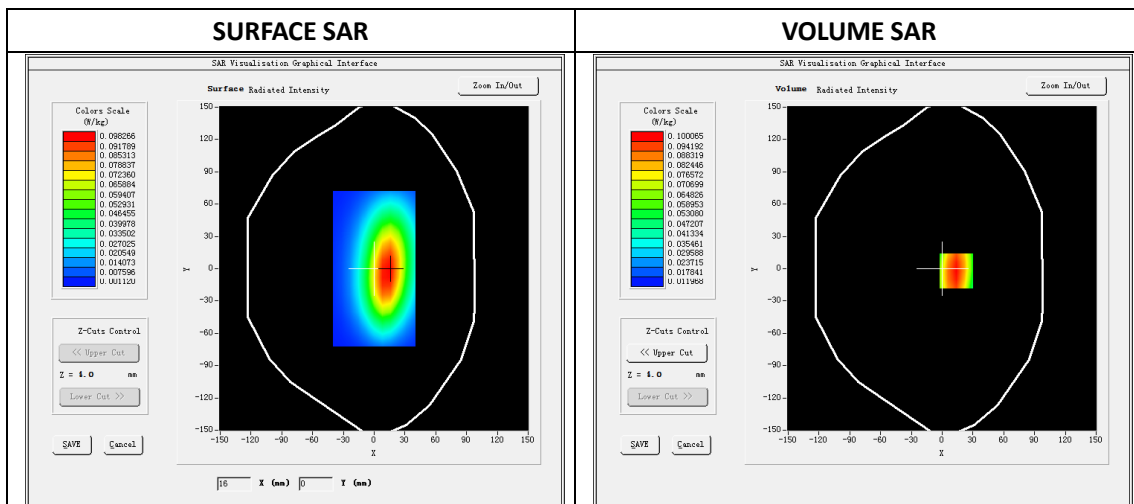
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	750MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

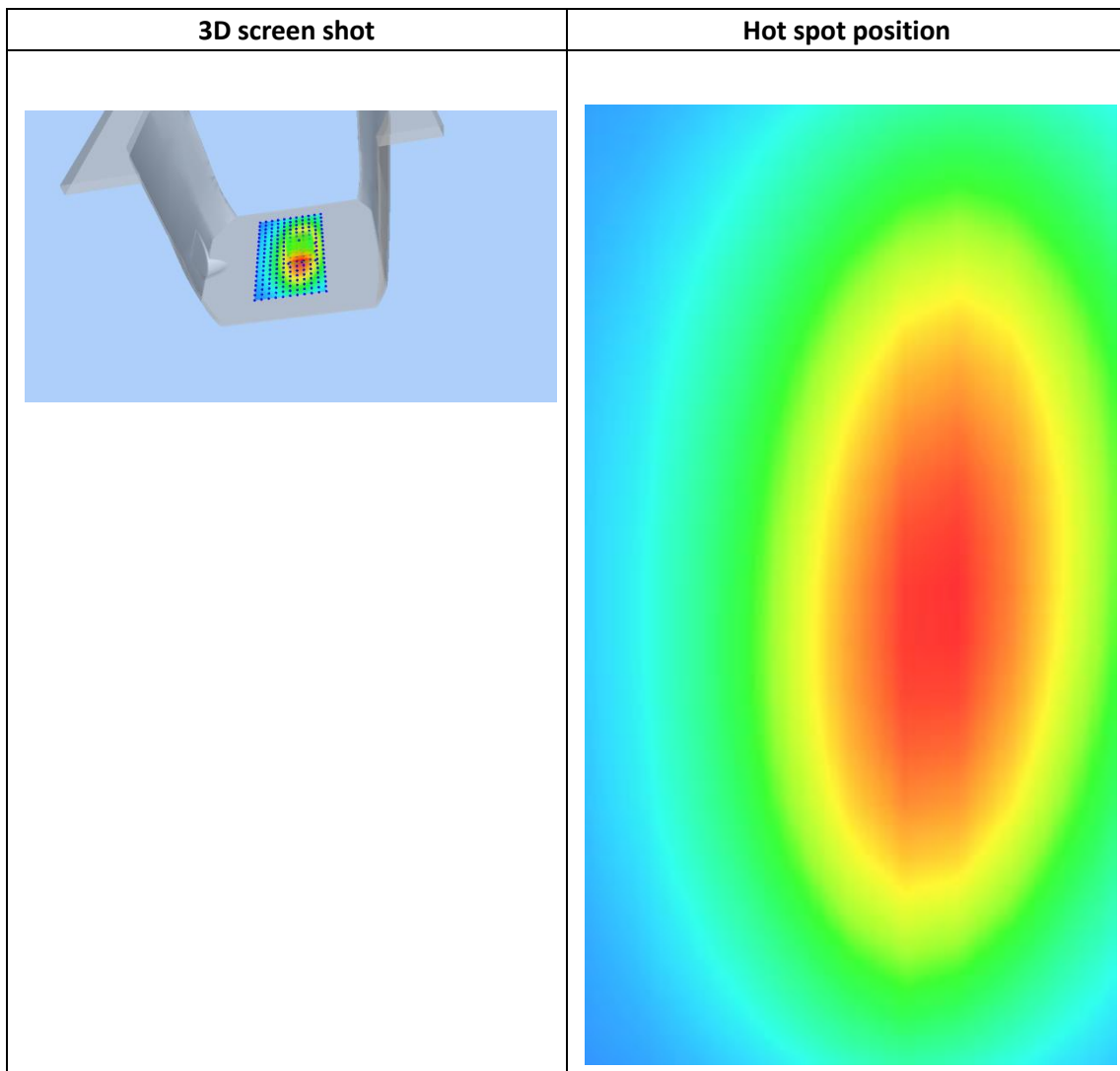
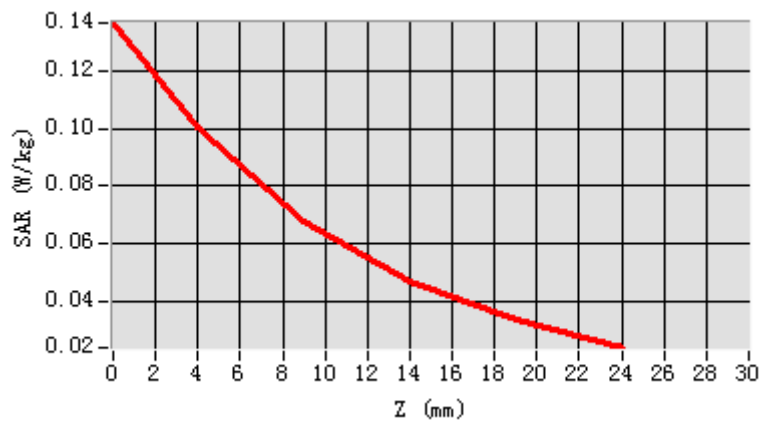
E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	750
Relative permittivity (real part)	55.35
Relative permittivity	23.22
Conductivity (S/m)	0.97
Power drift (%)	0.29
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	1.93
Crest factor:	1:1



Maximum location: X=14.00, Y=-2.00

SAR 10g (W/Kg)	0.062565
SAR 1g (W/Kg)	0.092911

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1364	0.1001	0.0680	0.0471	0.0337



System Performance Check (Head, 850MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 03/07/2019

Measurement duration: 22 minutes 40 seconds

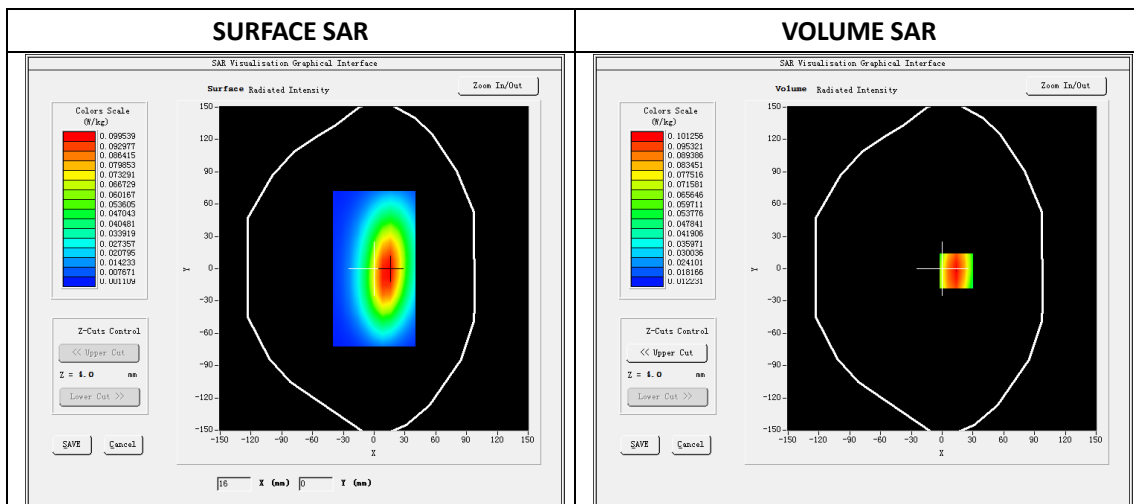
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	850MHz
Channels	
Signal	CW

B. SAR Measurement Results

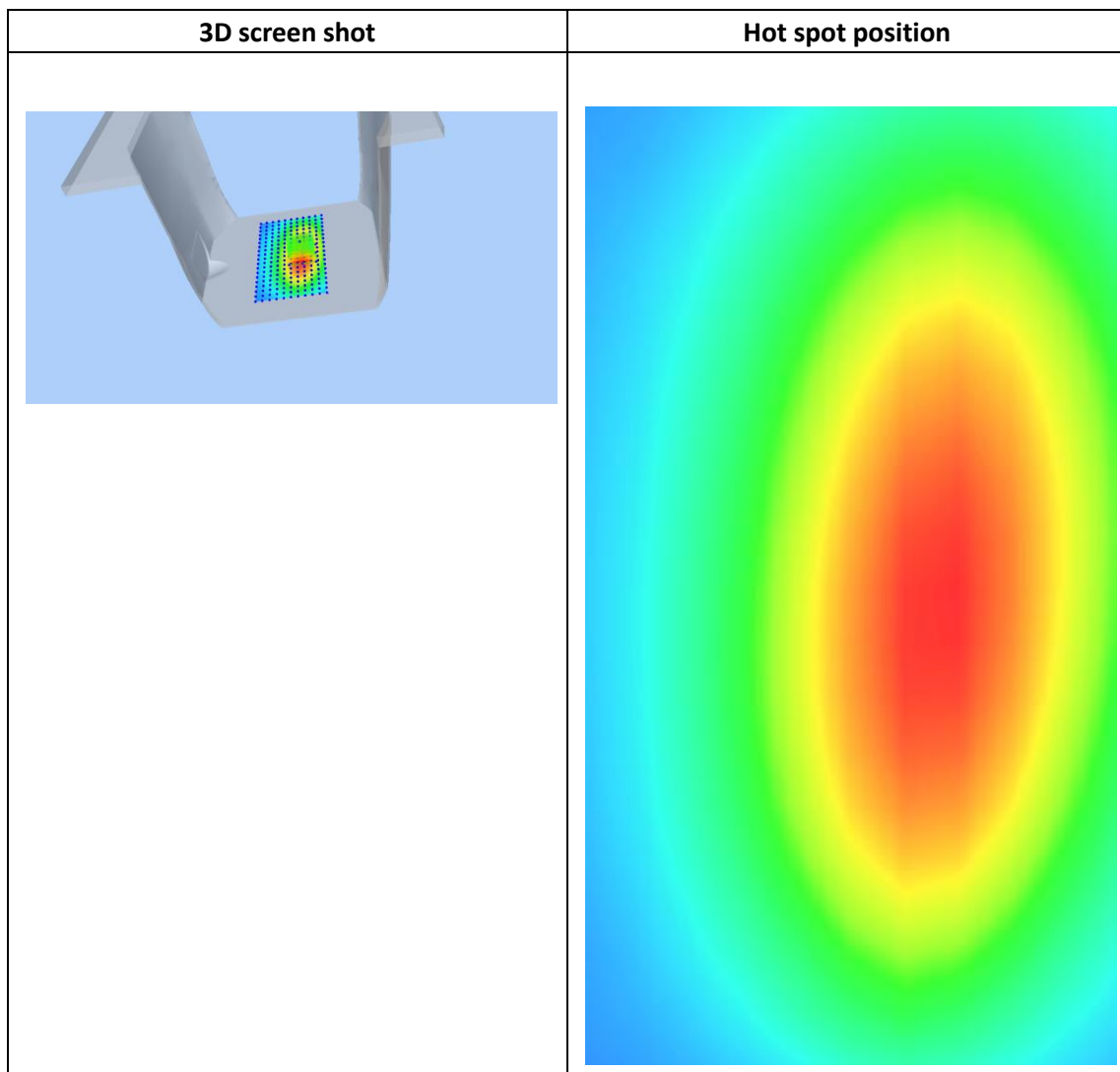
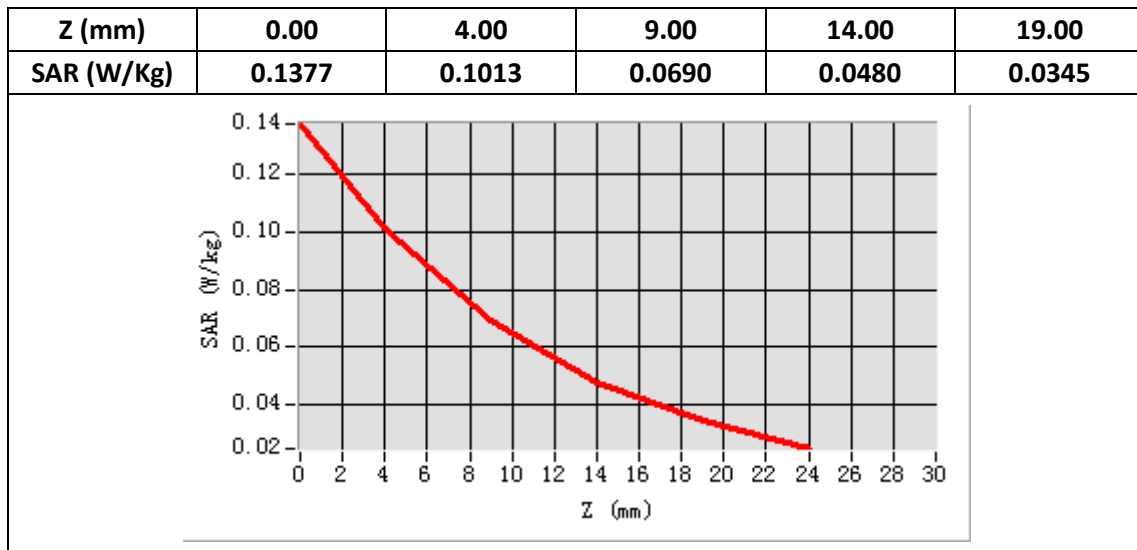
Band SAR

E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	850
Relative permittivity (real part)	41.53
Relative permittivity	19.88
Conductivity (S/m)	0.93
Power drift (%)	-0.30
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	1.92
Crest factor:	1:1



Maximum location: X=14.00, Y=-2.00

SAR 10g (W/Kg)	0.063460
SAR 1g (W/Kg)	0.097058



System Performance Check (Body, 850MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 03/07/2019

Measurement duration: 22 minutes 23 seconds

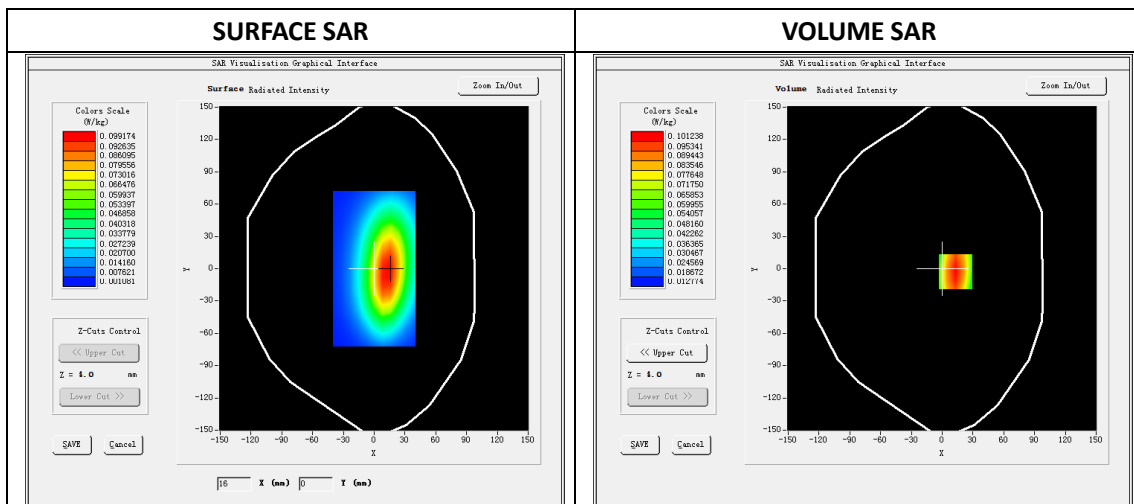
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	850MHz
Channels	
Signal	CW

B. SAR Measurement Results

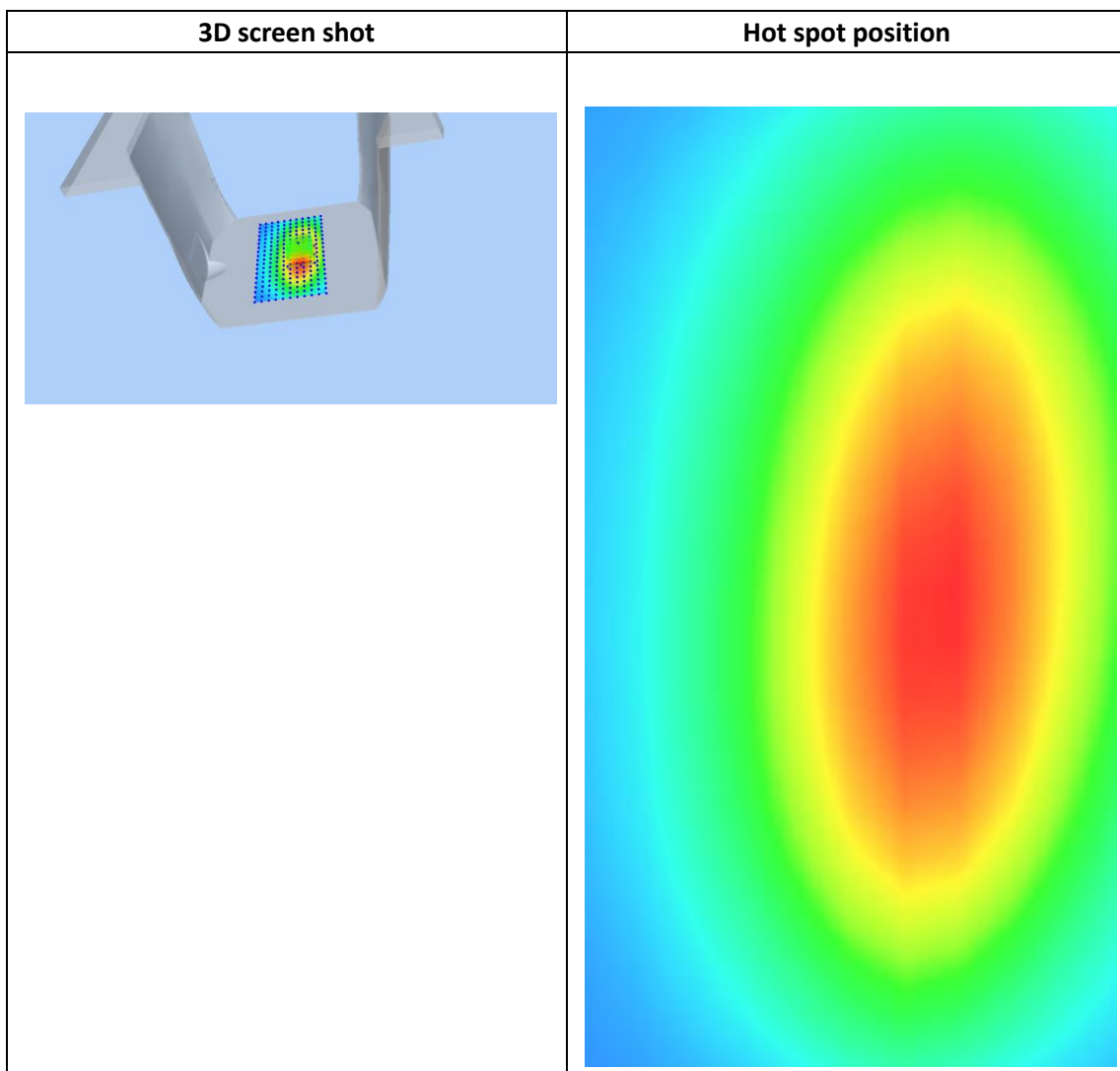
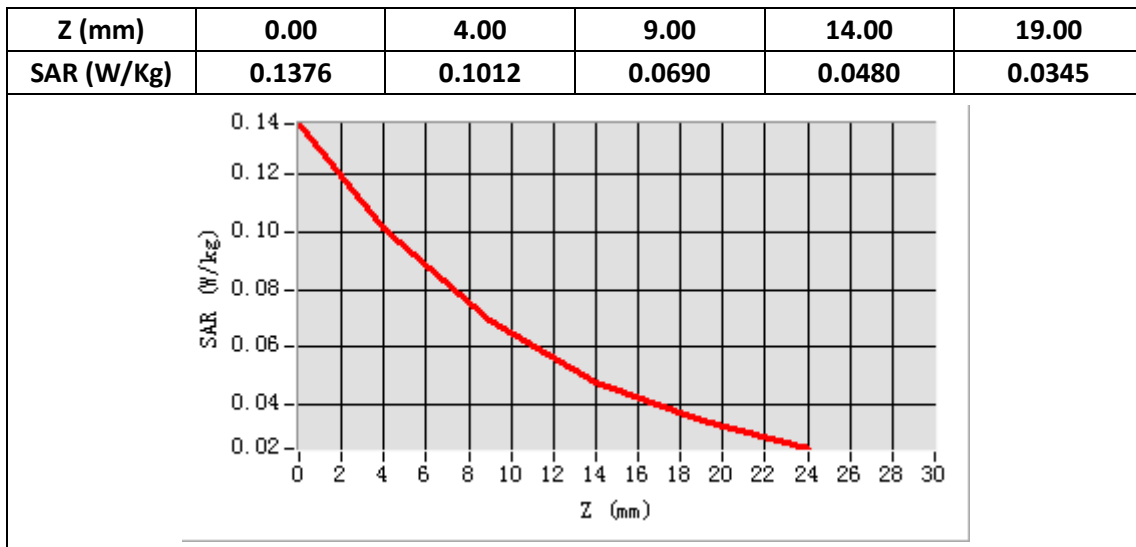
Band SAR

E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	850
Relative permittivity (real part)	55.30
Relative permittivity	21.05
Conductivity (S/m)	0.97
Power drift (%)	-0.03
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	1.99
Crest factor:	1:1



Maximum location: X=13.00, Y=-3.00

SAR 10g (W/Kg)	0.063312
SAR 1g (W/Kg)	0.096811



System Performance Check (Head, 1800MHz)

Type: Validation measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 03/08/2019

Measurement duration: 22 minutes 37 seconds

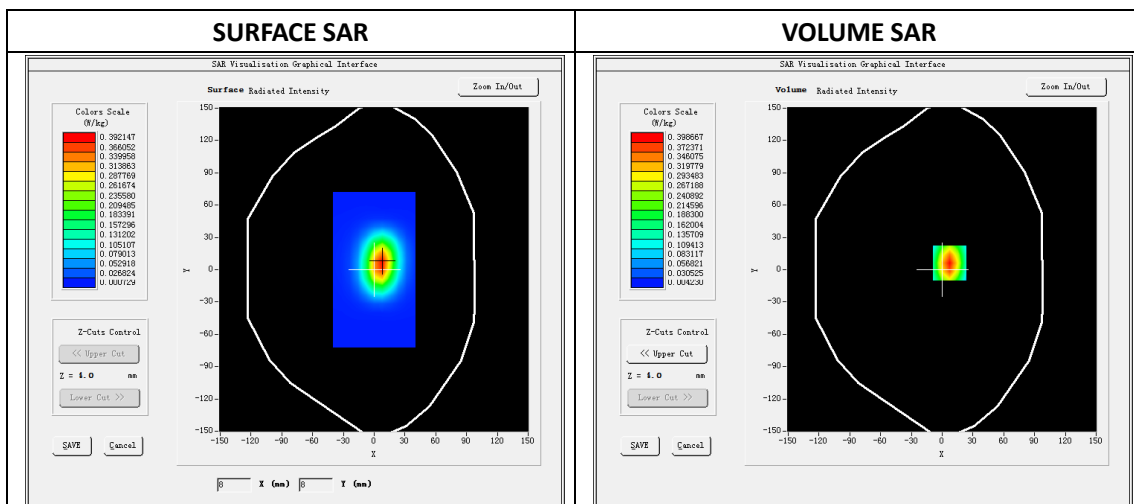
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	1800MHz
Channels	
Signal	CW

B. SAR Measurement Results

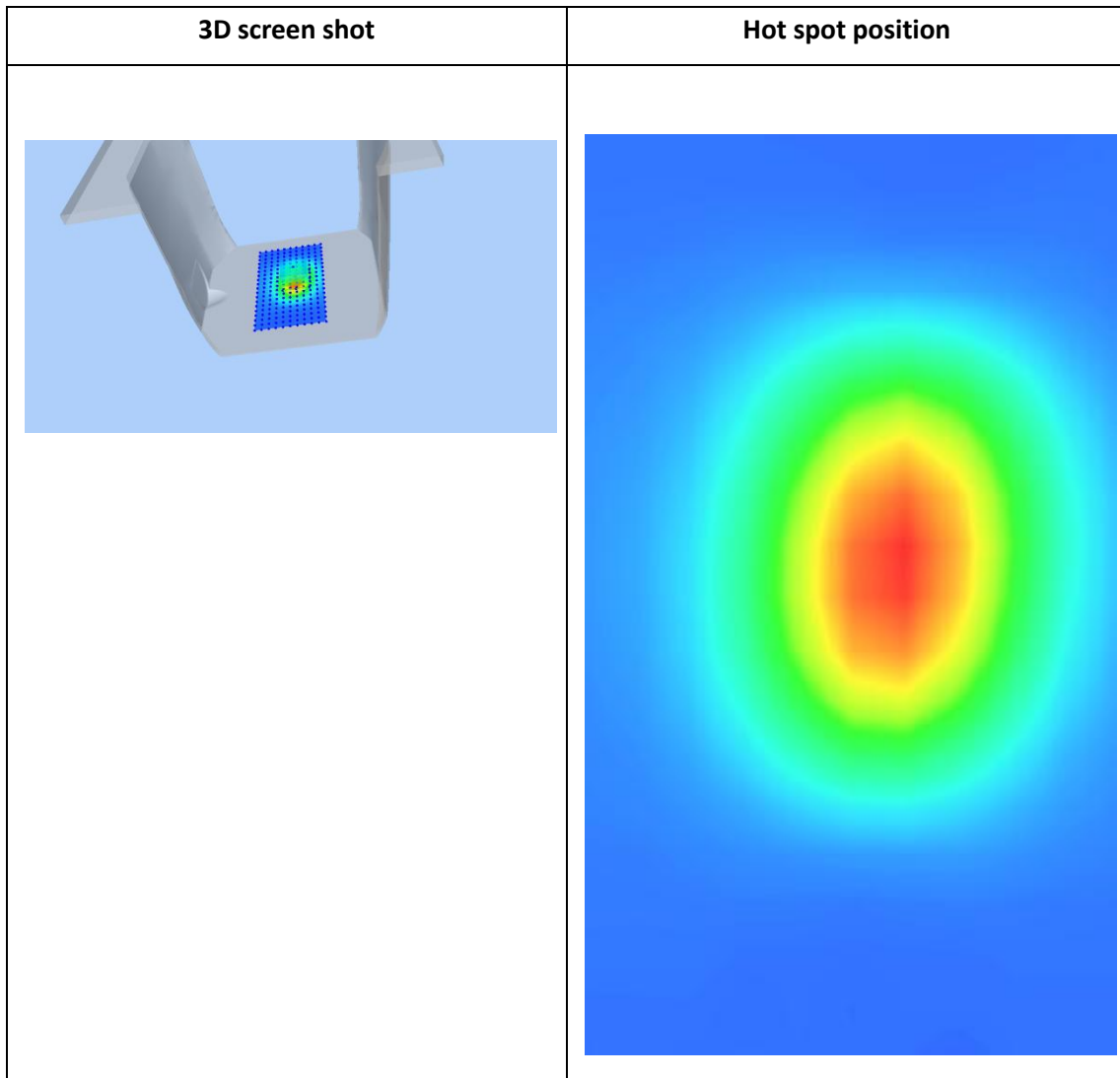
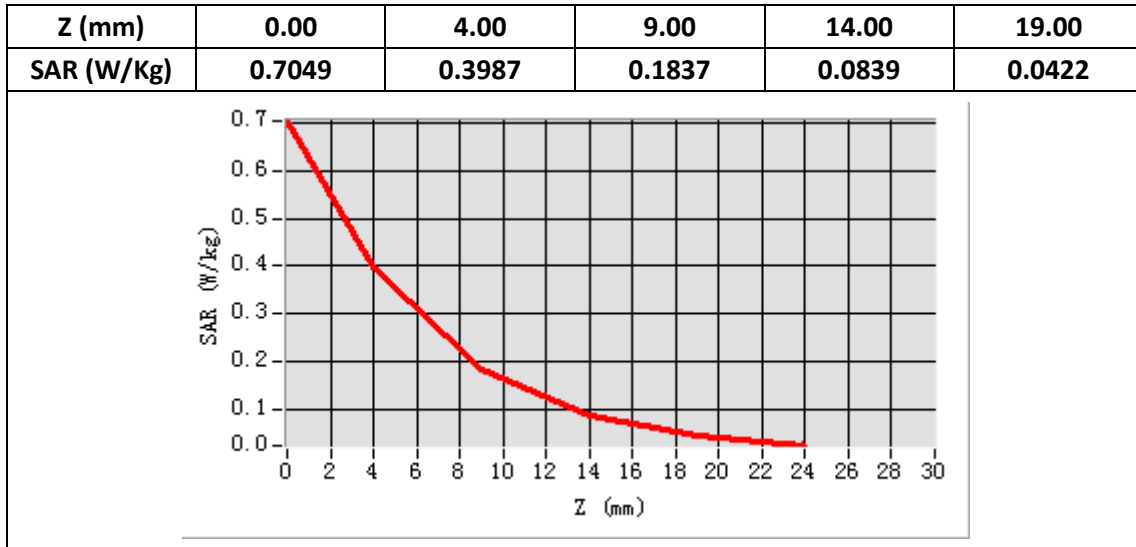
Band SAR

E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	1800
Relative permittivity (real part)	41.33
Relative permittivity	13.8
Conductivity (S/m)	1.42
Power Drift (%)	-0.37
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.14
Duty factor:	1:1



Maximum location: X=7.00, Y=6.00

SAR 10g (W/Kg)	0.176029
SAR 1g (W/Kg)	0.370253



System Performance Check (Body, 1800MHz)

Type: Validation measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 03/08/2019

Measurement duration: 22 minutes 36 seconds

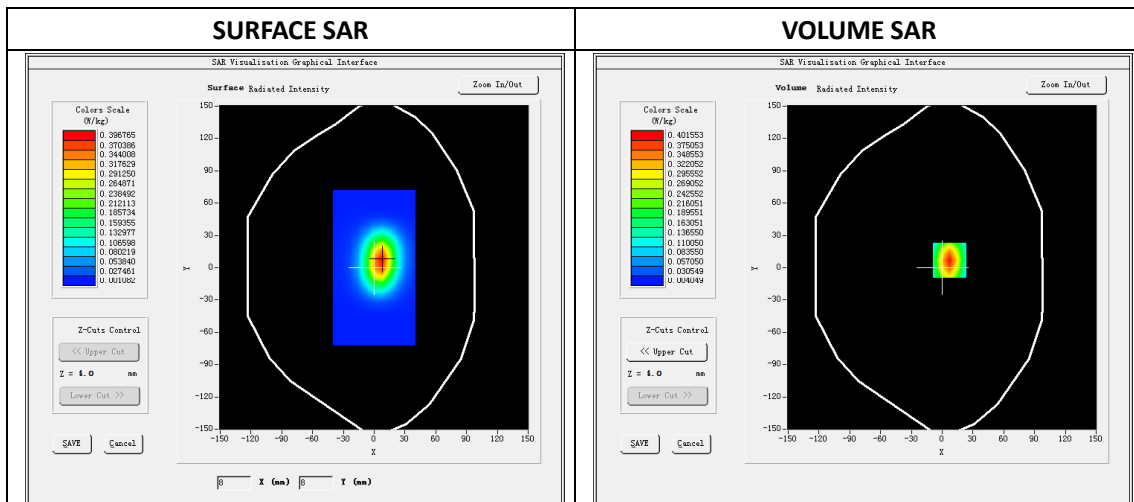
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	1800MHz
Channels	
Signal	CW

B. SAR Measurement Results

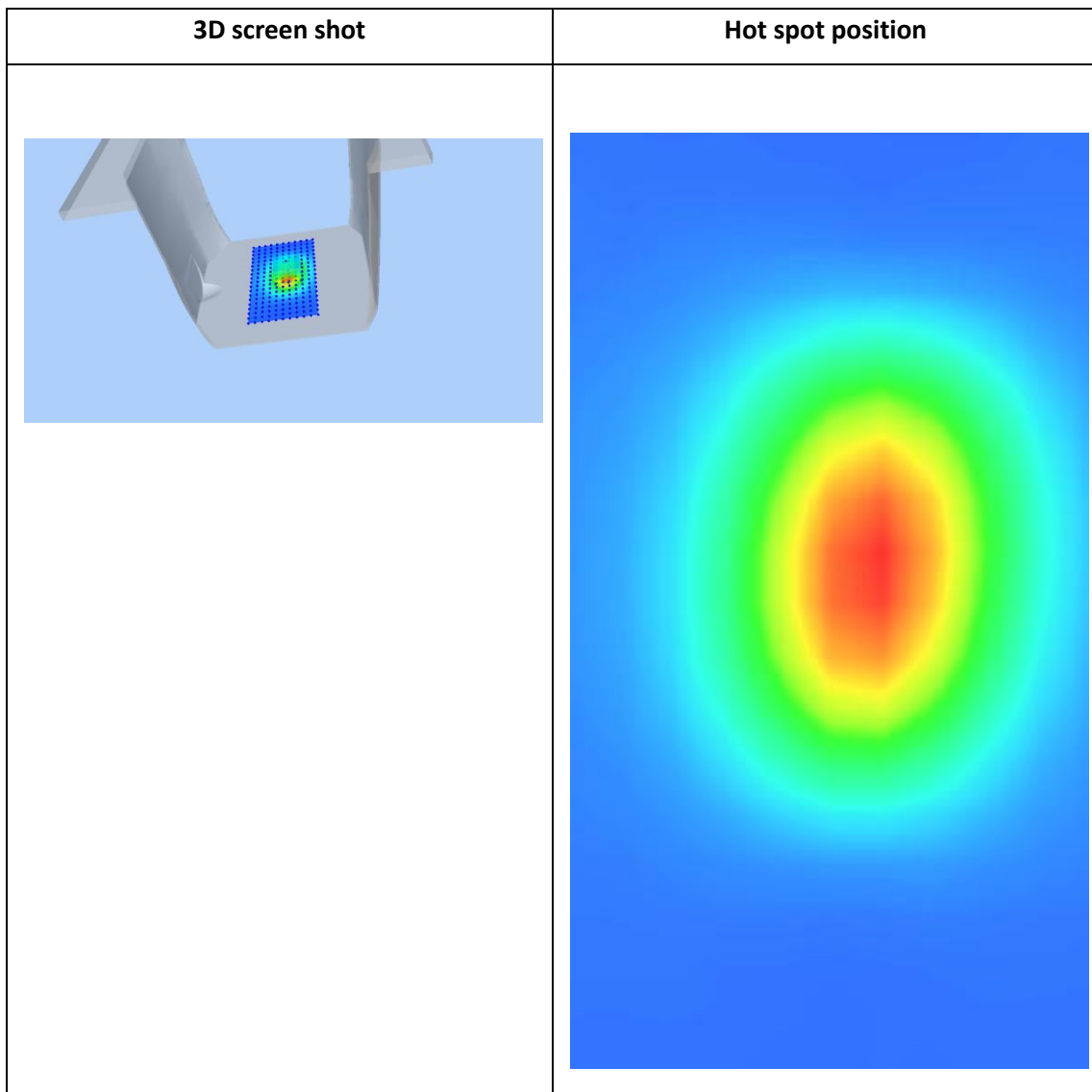
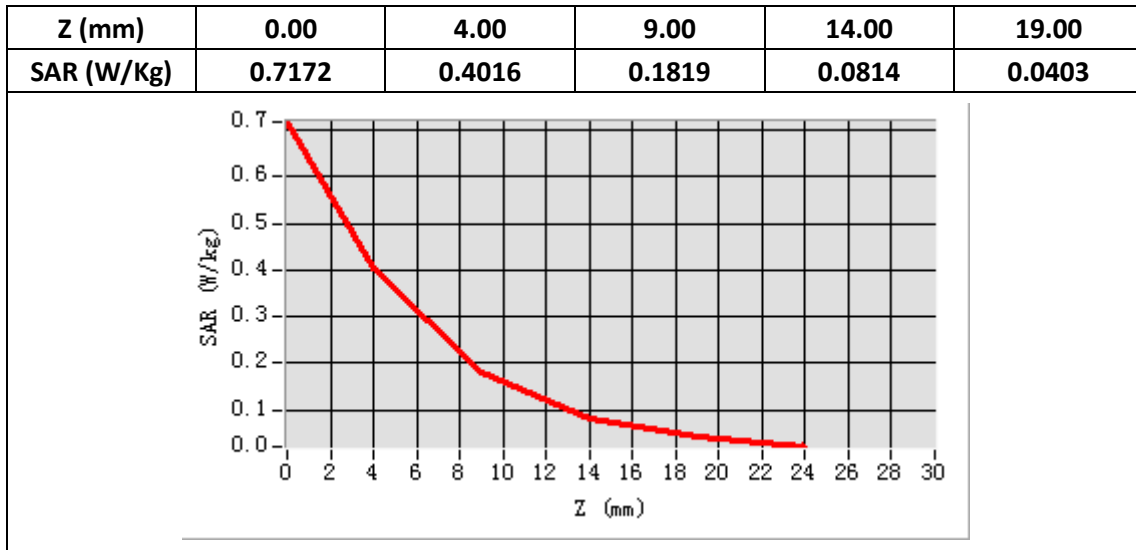
Band SAR

E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	1800
Relative permittivity (real part)	53.22
Relative permittivity	14.80
Conductivity (S/m)	1.48
Power Drift (%)	-0.07
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.22
Duty factor:	1:1



Maximum location: X=7.00, Y=7.00

SAR 10g (W/Kg)	0.176701
SAR 1g (W/Kg)	0.373736



System Performance Check (Head, 1900MHz)

Type: Validation measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 03/11/2019

Measurement duration: 22 minutes 28 seconds

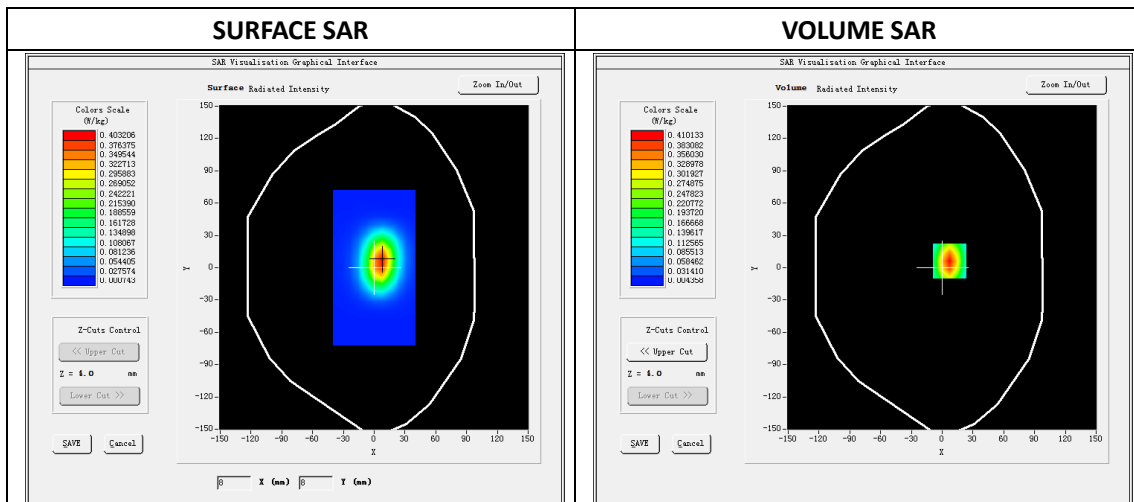
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

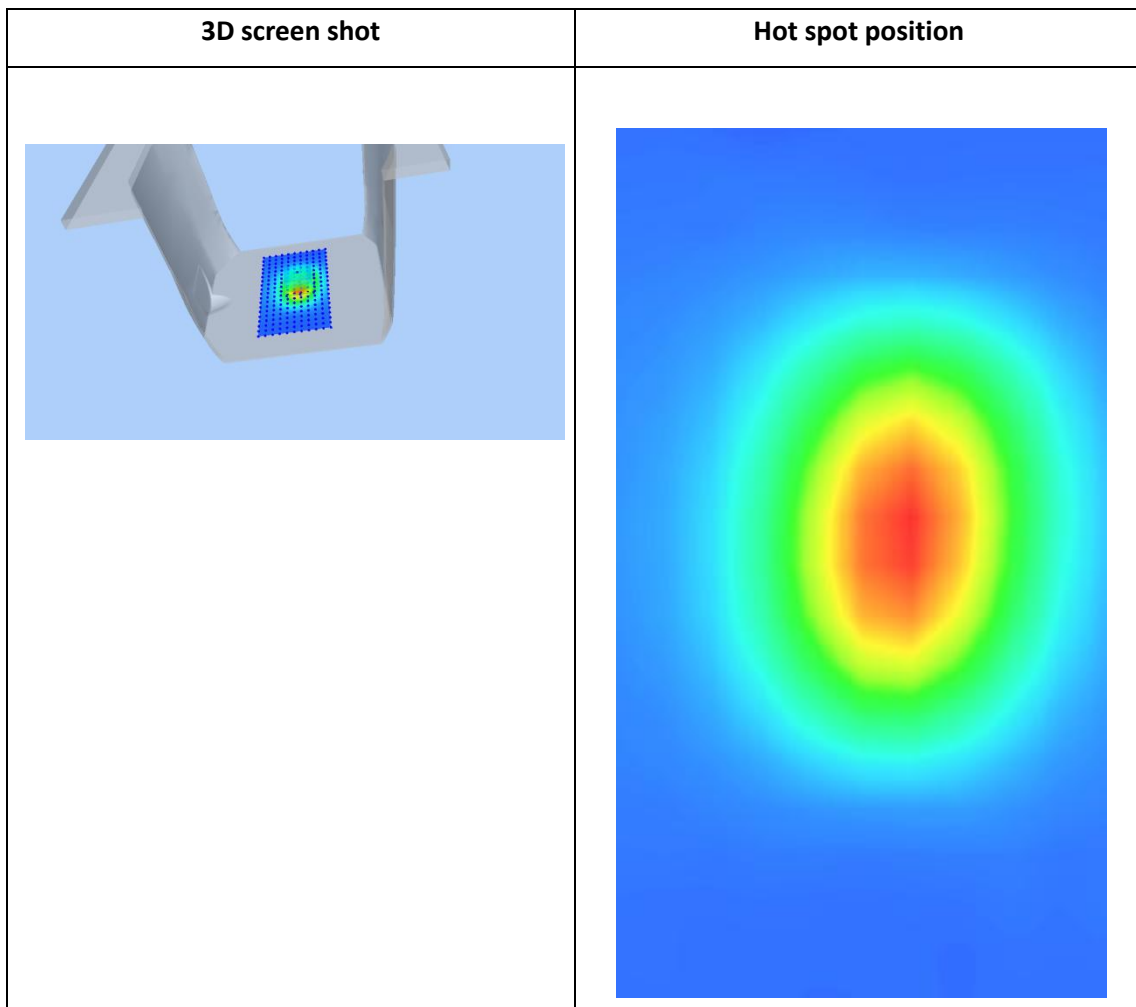
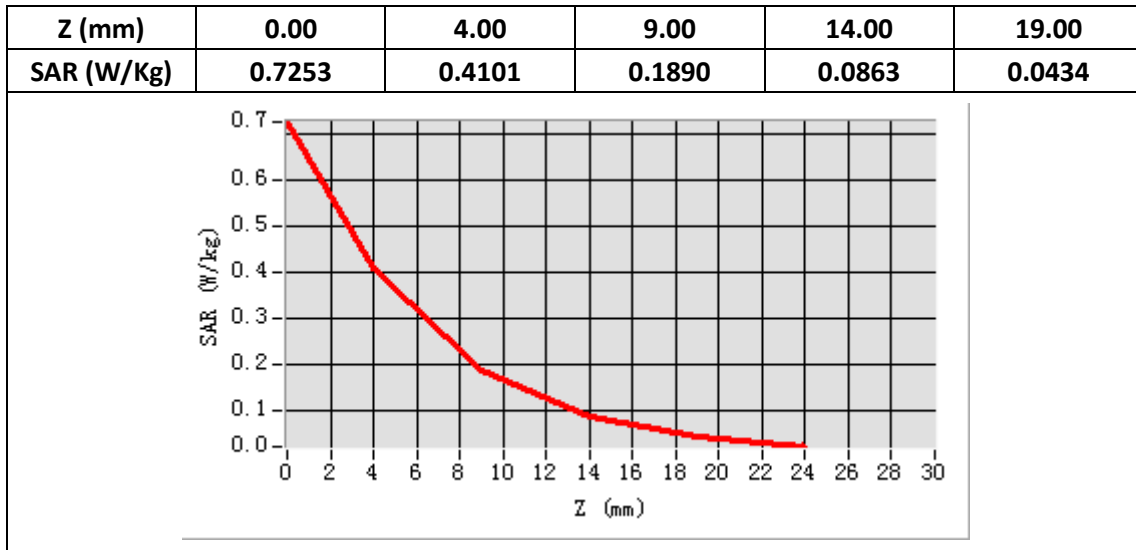
Band SAR

E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	1900
Relative permittivity (real part)	40.52
Relative permittivity	13.35
Conductivity (S/m)	1.41
Power Drift (%)	0.11
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.34
Duty factor:	1:1



Maximum location: X=7.00, Y=6.00

SAR 10g (W/Kg)	0.181123
SAR 1g (W/Kg)	0.380926



System Performance Check (Body, 1900MHz)

Type: Validation measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 03/11/2019

Measurement duration: 22 minutes 35 seconds

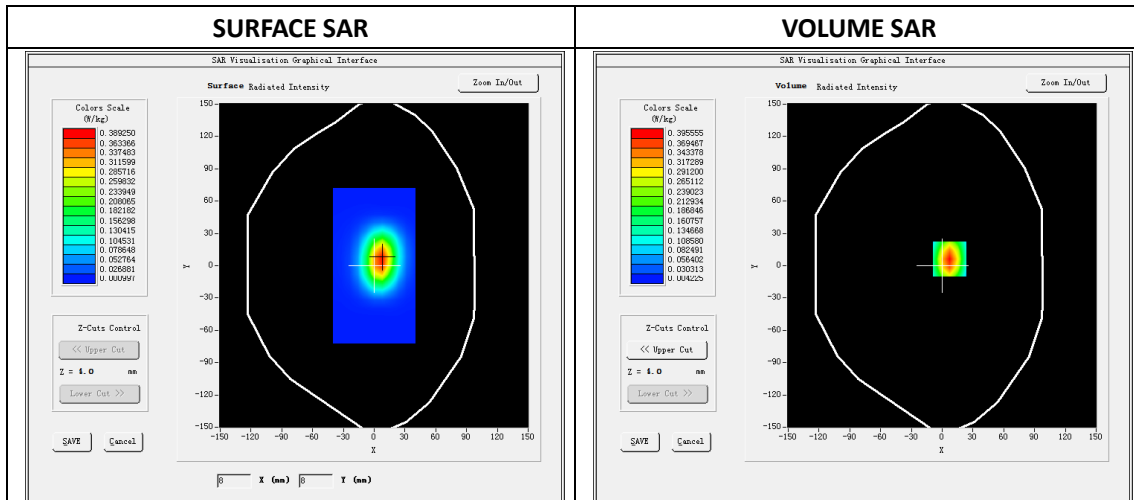
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7, dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

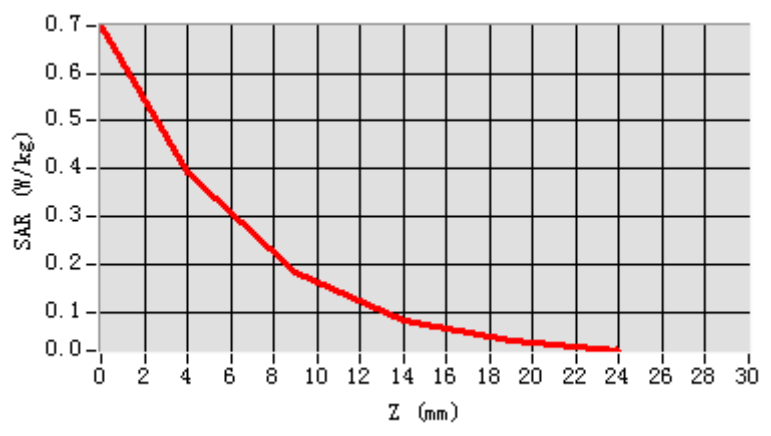
E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	1900
Relative permittivity (real part)	53.38
Relative permittivity	14.02
Conductivity (S/m)	1.48
Power Drift (%)	-0.20
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.39
Duty factor:	1:1

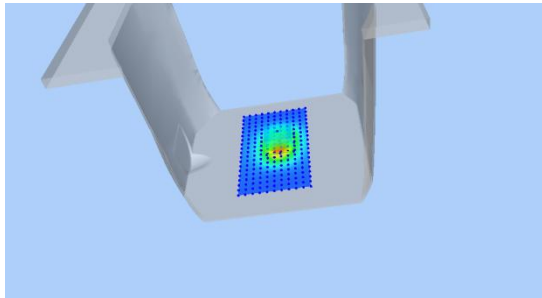
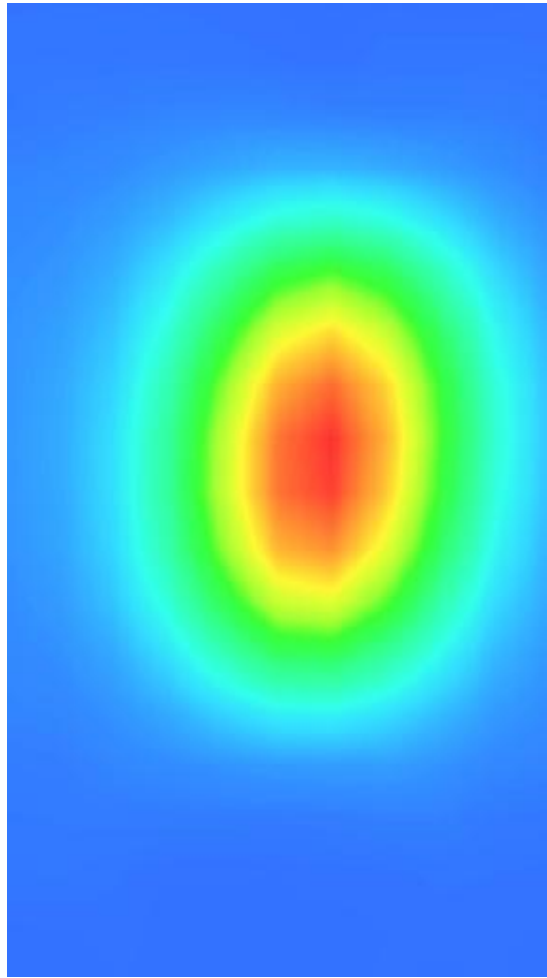


Maximum location: X=7.00, Y=6.00

SAR 10g (W/Kg)	0.174833
SAR 1g (W/Kg)	0.367301

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6982	0.3956	0.1828	0.0838	0.0422



3D screen shot	Hot spot position
	

System Performance Check (Head, 2450MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=4mm

Date of measurement: 03/12/2019

Measurement duration: 22 minutes 43 seconds

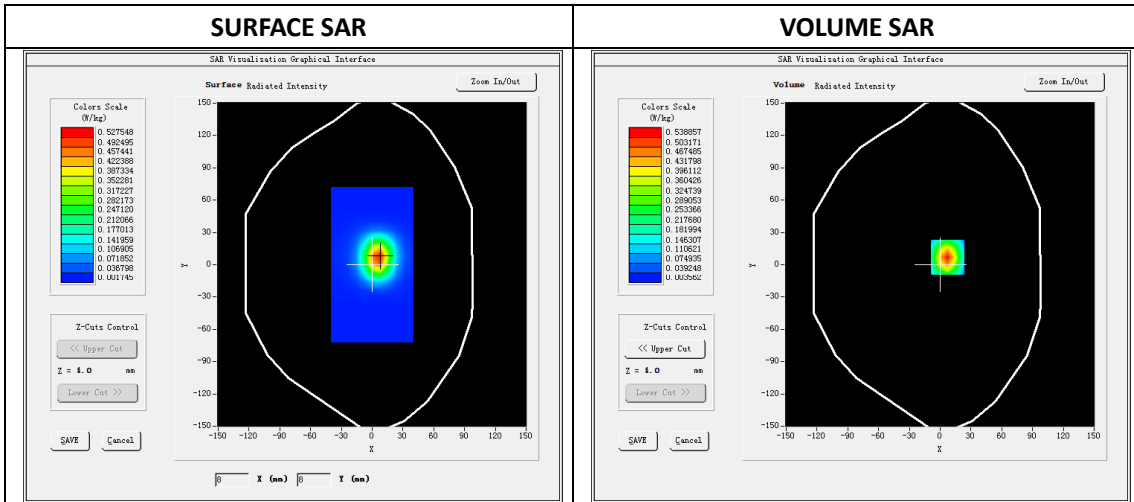
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	7x7x8,dx=5mm dy=5mm dz=4mm
Device Position	Dipole
Band	2450MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

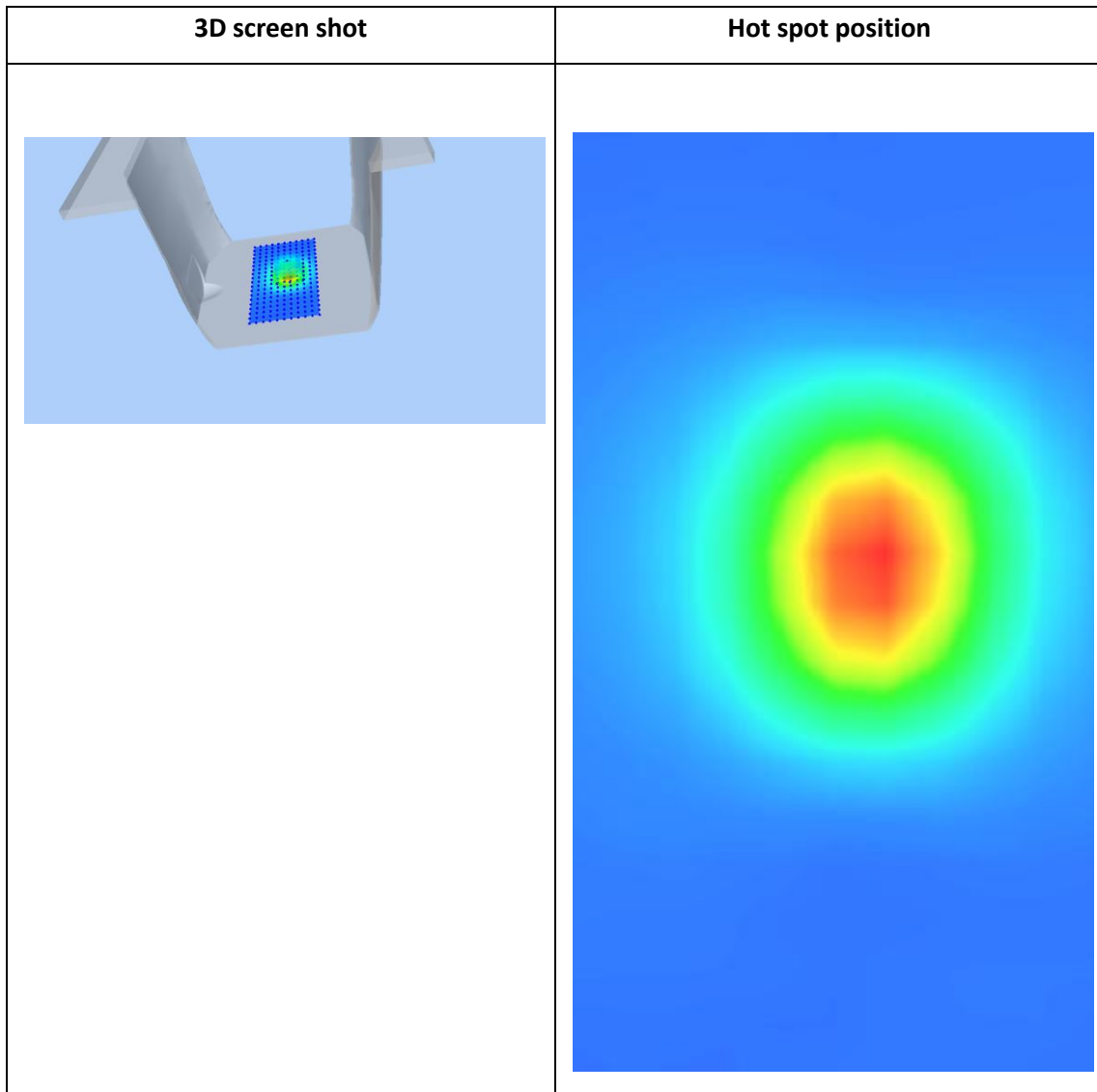
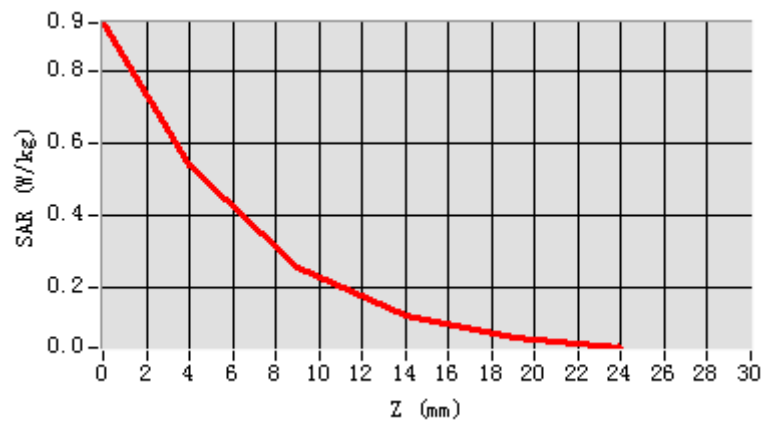
E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	2450
Relative permittivity (real part)	39.21
Relative permittivity	13.07
Conductivity (S/m)	1.78
Power Drift (%)	0.15
Duty factor:	1:1
ConvF:	2.37



Maximum location: X=7.00, Y=7.00

SAR 10g (W/Kg)	0.231938
SAR 1g (W/Kg)	0.524811

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.9366	0.5389	0.2550	0.1195	0.0607



System Performance Check (Body, 2450MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=4mm

Date of measurement: 03/12/2019

Measurement duration: 22 minutes 35 seconds

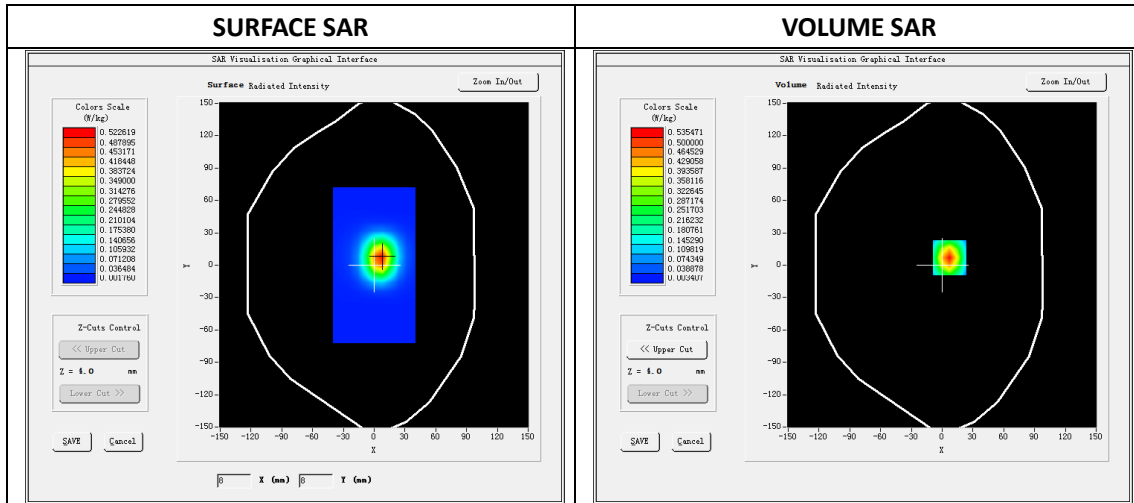
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	7x7x8,dx=5mm dy=5mm dz=4mm
Device Position	Dipole
Band	2450MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPGO261
Frequency (MHz)	2450
Relative permittivity (real part)	52.71
Relative permittivity	14.03
Conductivity (S/m)	1.91
Power Drift (%)	-1.12
Duty factor:	1:1
ConvF:	2.46



Maximum location: X=7.00, Y=7.00

SAR 10g (W/Kg)	0.229603
SAR 1g (W/Kg)	0.522180

