Appendix A: SAR System performance Check Plots

Measurement	Liquid	Frequency	Test Date
System Check	Head	850	2019-01-22
System Check	Body	850	2019-01-22
System Check	Head	1800	2019-01-23
System Check	Body	1800	2019-01-23
System Check	Head	1900	2019-01-24
System Check	Body	1900	2019-01-24
System Check	Head	2450	2019-01-25
System Check	Body	2450	2019-01-25
System Check	Head	2600	2019-01-26
System Check	Body	2600	2019-01-26

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: 01/22/2019

Measurement duration: 22 minutes 16 seconds

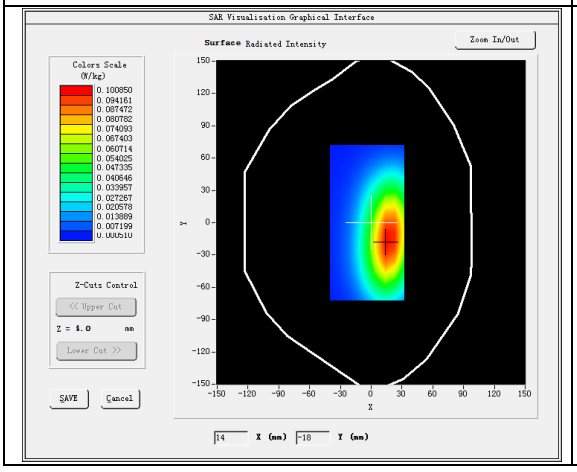
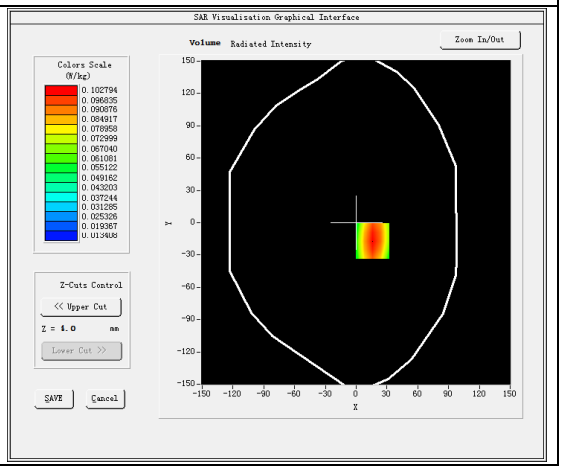
A. Experimental conditions.

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

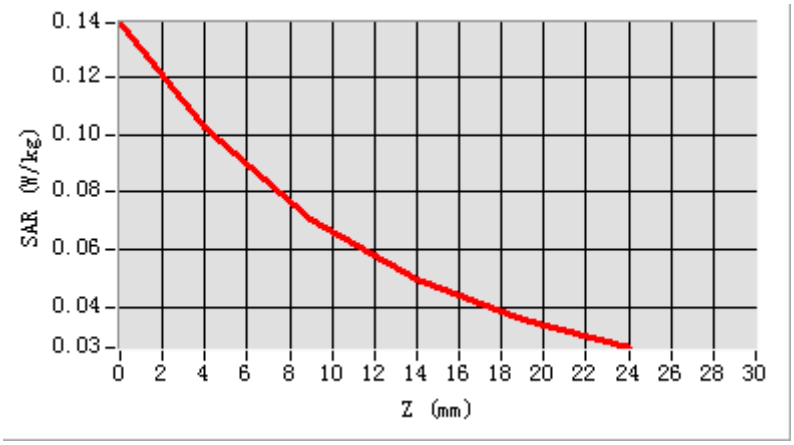
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	850
Relative permittivity (real part)	41.44
Relative permittivity	18.27
Conductivity (S/m)	0.87
Power drift (%)	-0.15
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	5.85
Crest factor:	1:1

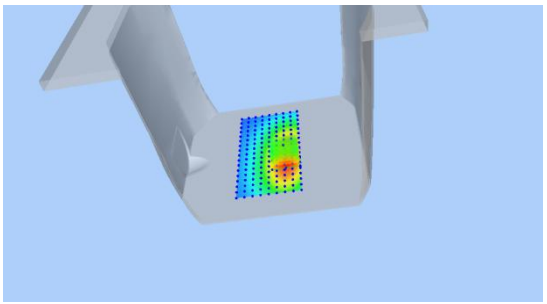
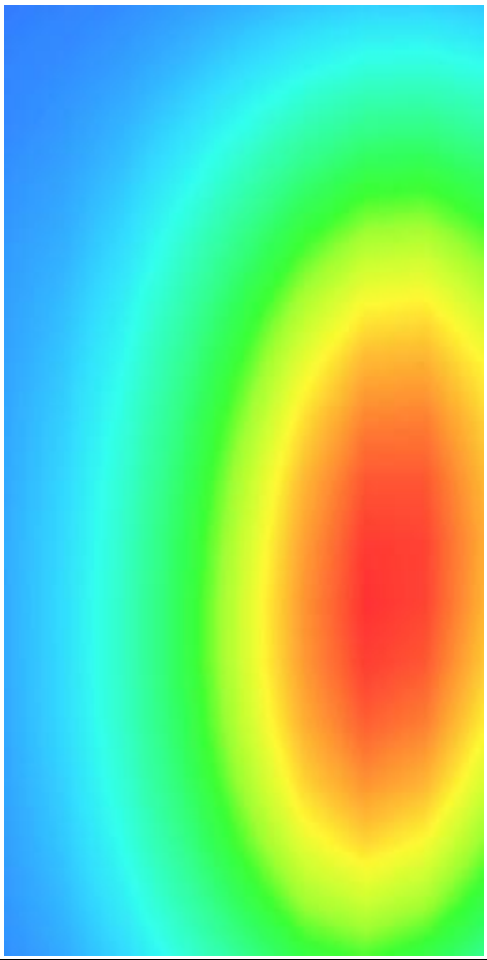
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=16.00, Y=-17.00

SAR 10g (W/Kg)	0.065131
SAR 1g (W/Kg)	0.098424

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1374	0.1015	0.0705	0.0466	0.0353



3D screen shot	Hot spot position
	

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: 01/22/2019

Measurement duration: 22 minutes 22 seconds

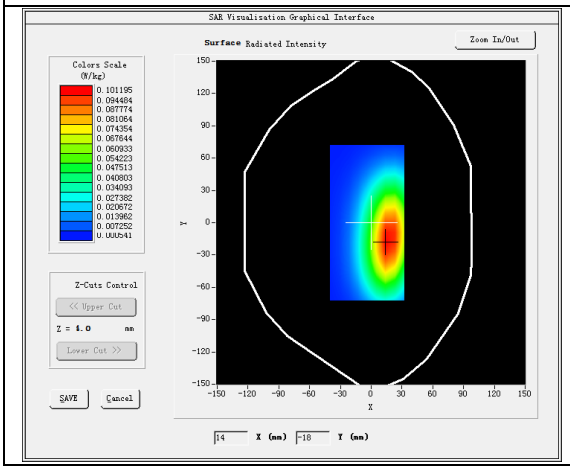
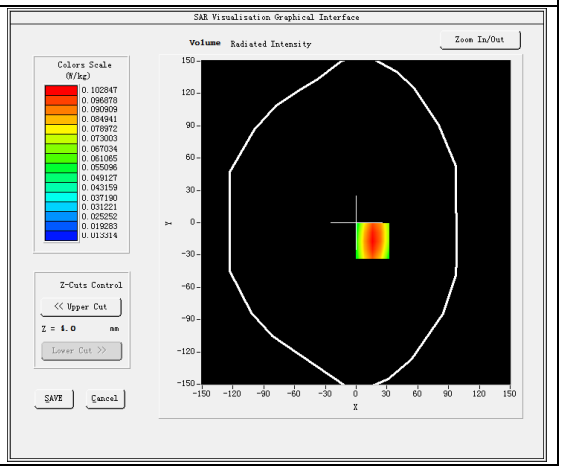
A. Experimental conditions.

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

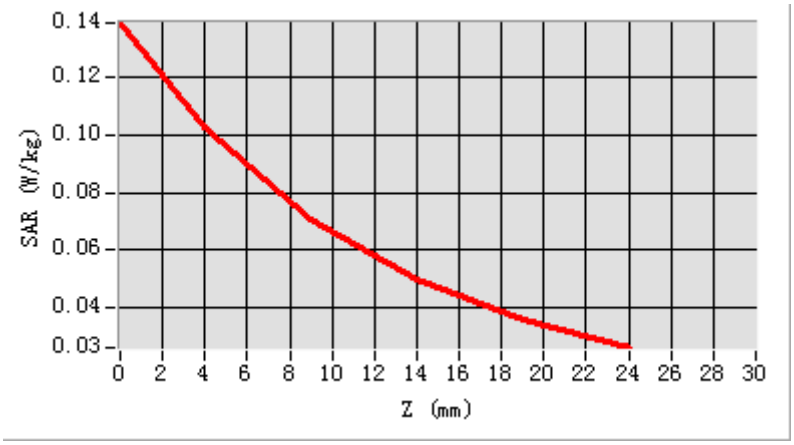
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	850
Relative permittivity (real part)	55.18
Relative permittivity	21.12
Conductivity (S/m)	0.98
Power drift (%)	-2.33
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	6.17
Crest factor:	1:1

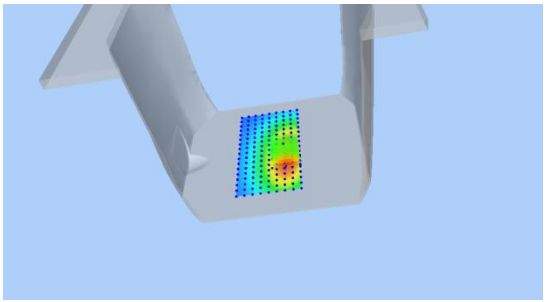
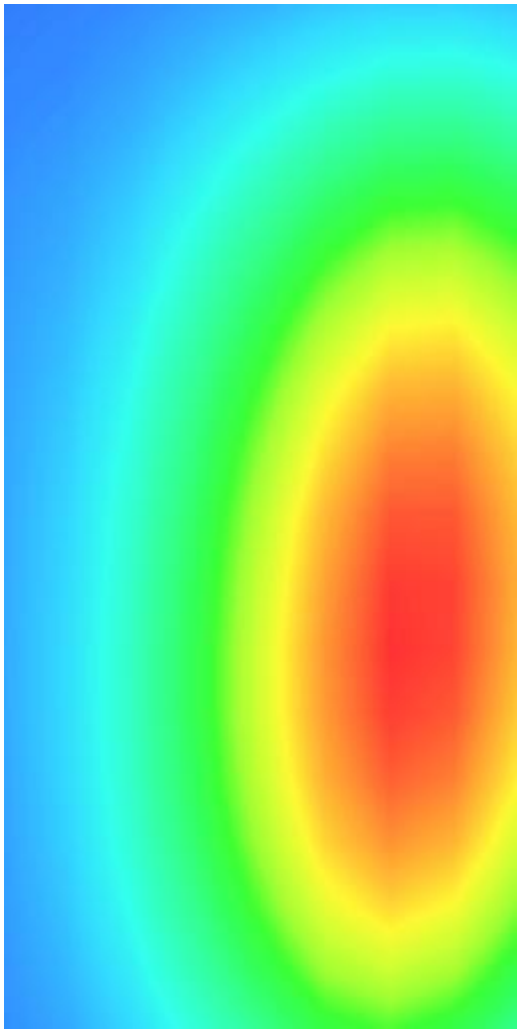
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=16.00, Y=-17.00

SAR 10g (W/Kg)	0.065124
SAR 1g (W/Kg)	0.098741

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1345	0.1036	0.0774	0.0484	0.0383



3D screen shot	Hot spot position
	

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: 01/23/2019

Measurement duration: 22 minutes 25 seconds

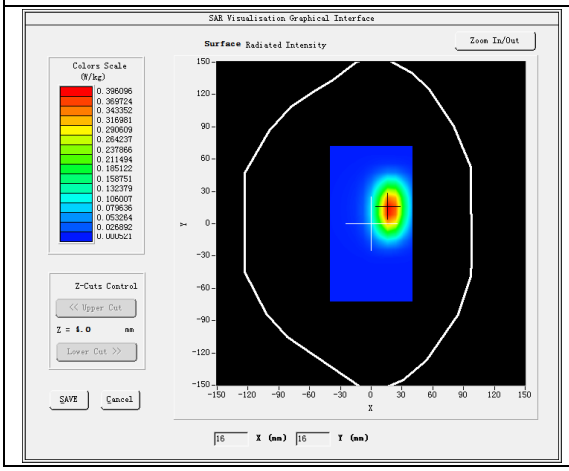
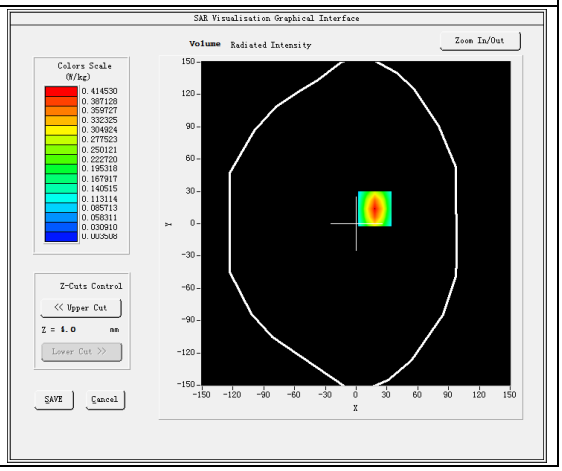
A. Experimental conditions.

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

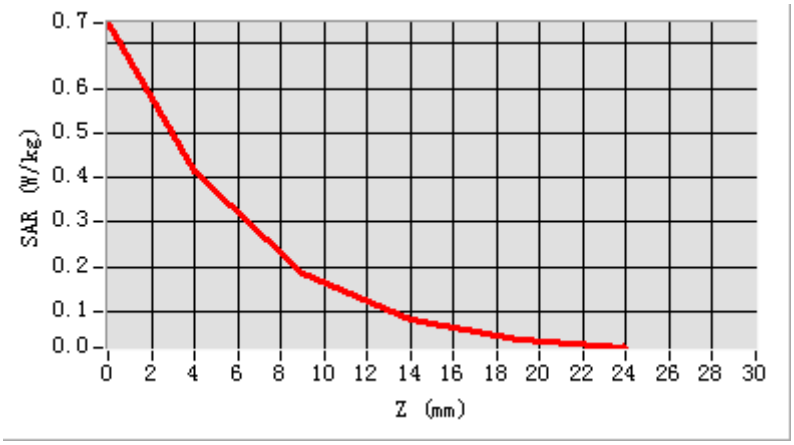
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	1800
Relative permittivity (real part)	40.41
Relative permittivity	14.30
Conductivity (S/m)	1.43
Power Drift (%)	-0.66
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	5.43
Duty factor:	1:1

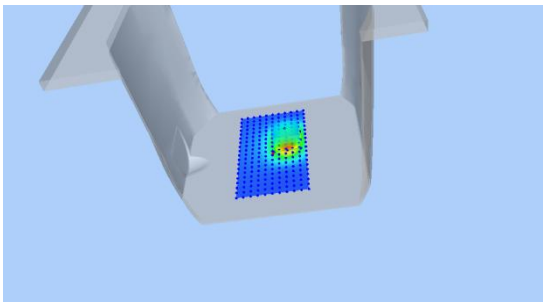
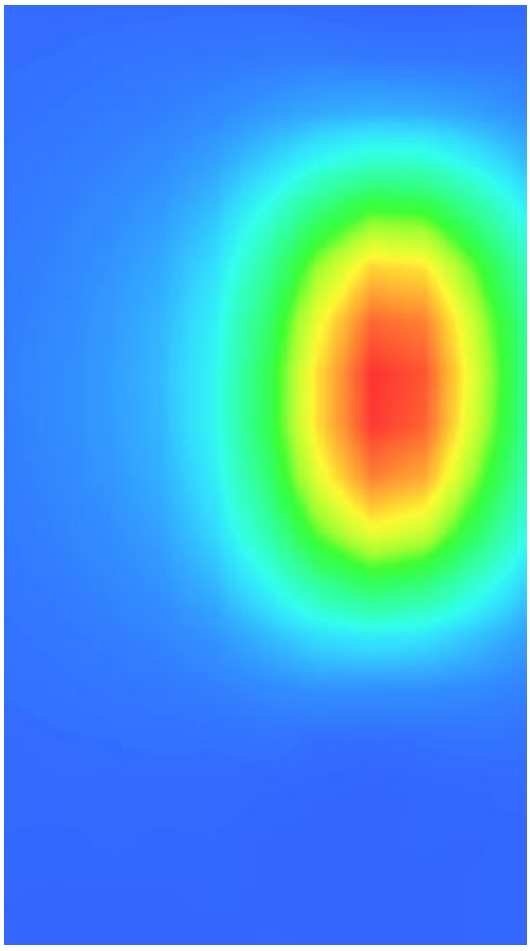
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=18.00, Y=14.00

SAR 10g (W/Kg)	0.184543
SAR 1g (W/Kg)	0.384615

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7466	0.4145	0.1848	0.0805	0.0384



3D screen shot	Hot spot position
	

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: 01/23/2019

Measurement duration: 22 minutes 31 seconds

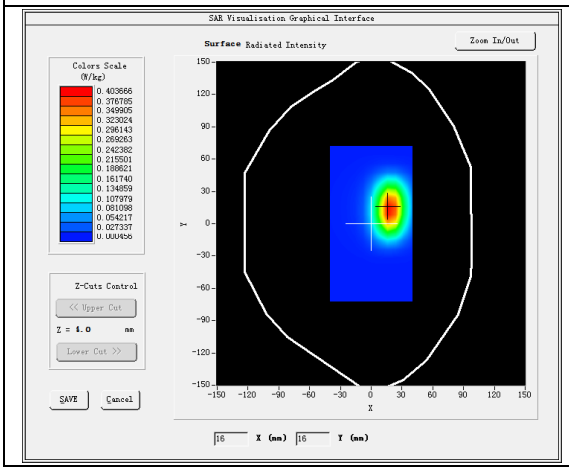
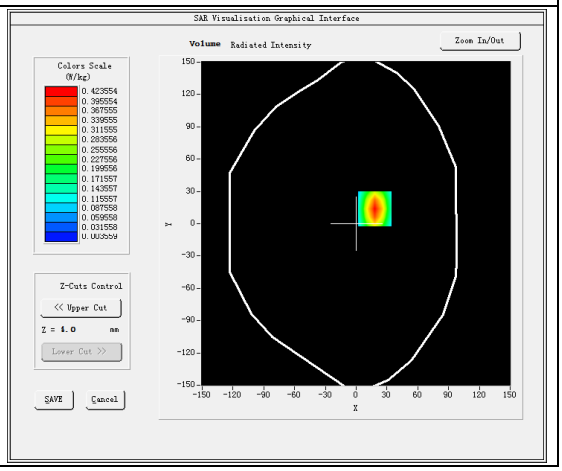
A. Experimental conditions.

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

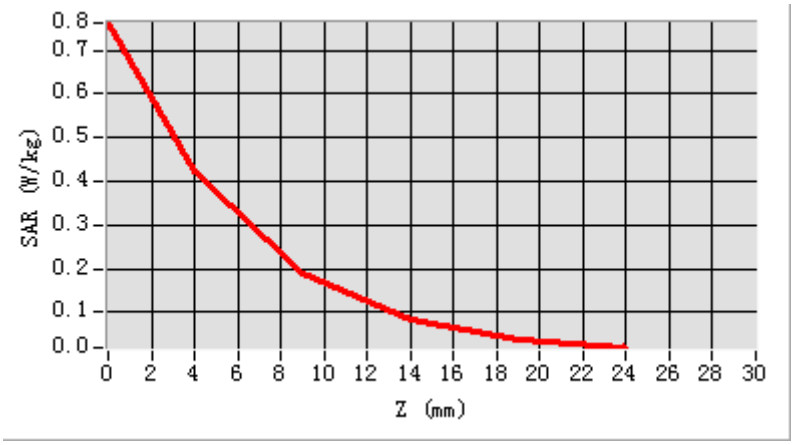
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	1800
Relative permittivity (real part)	53.31
Relative permittivity	15.10
Conductivity (S/m)	1.51
Power Drift (%)	-0.11
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	5.60
Duty factor:	1:1

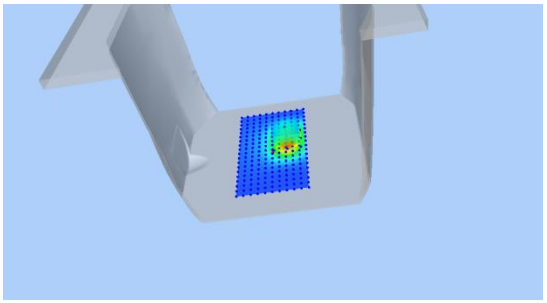
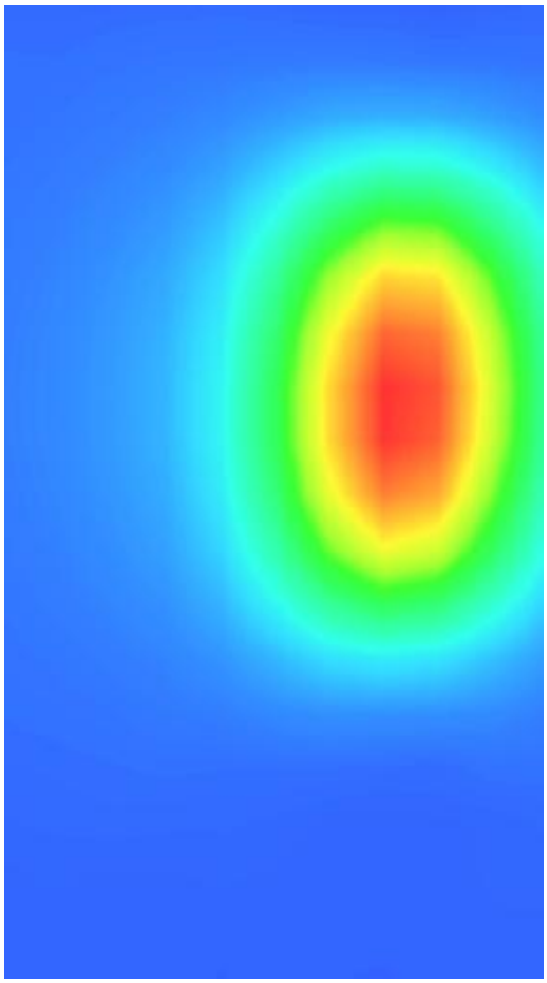
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=18.00, Y=14.00

SAR 10g (W/Kg)	0.181346
SAR 1g (W/Kg)	0.395414

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7615	0.4222	0.1875	0.0829	0.0386



3D screen shot	Hot spot position
	

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: 01/24/2019

Measurement duration: 22 minutes 15 seconds

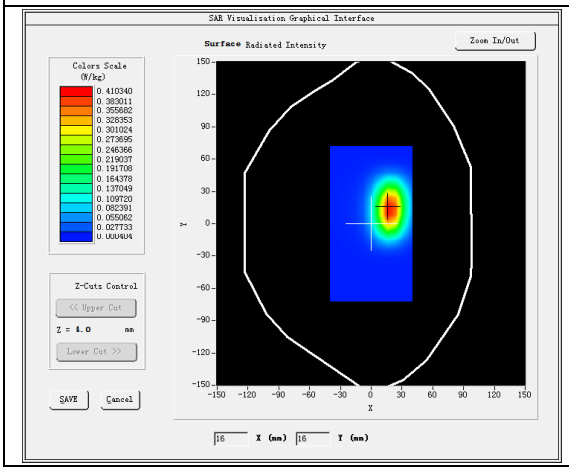
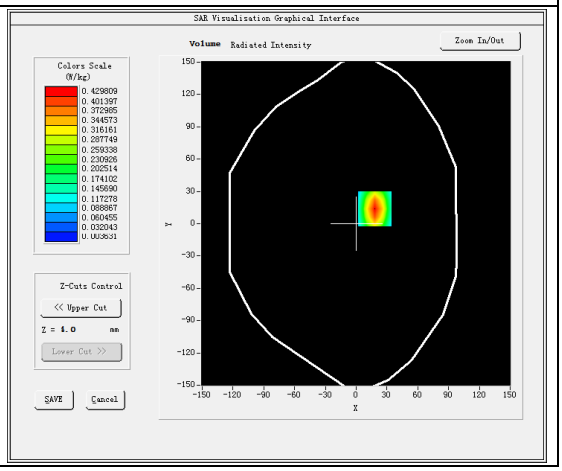
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

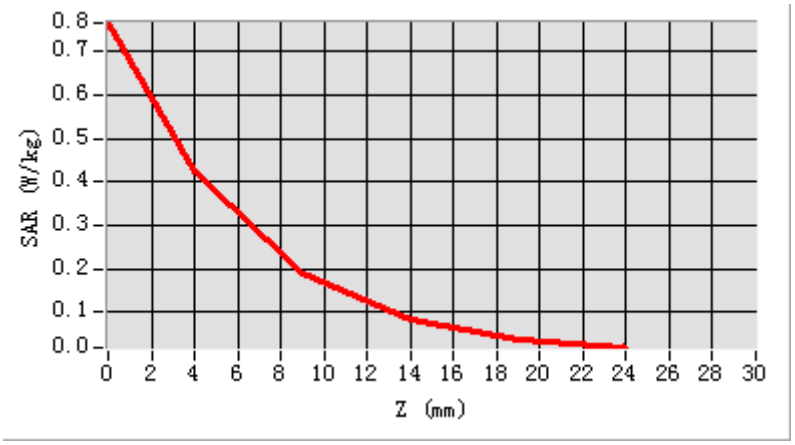
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	1900
Relative permittivity (real part)	40.55
Relative permittivity	13.54
Conductivity (S/m)	1.43
Power Drift (%)	-0.11
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	5.90
Duty factor:	1:1

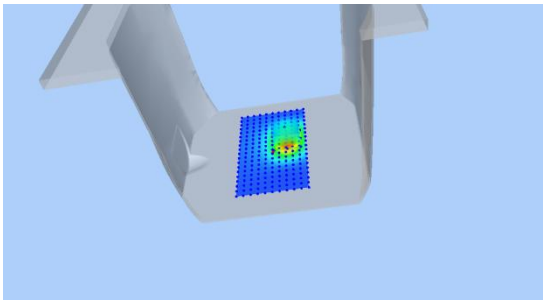
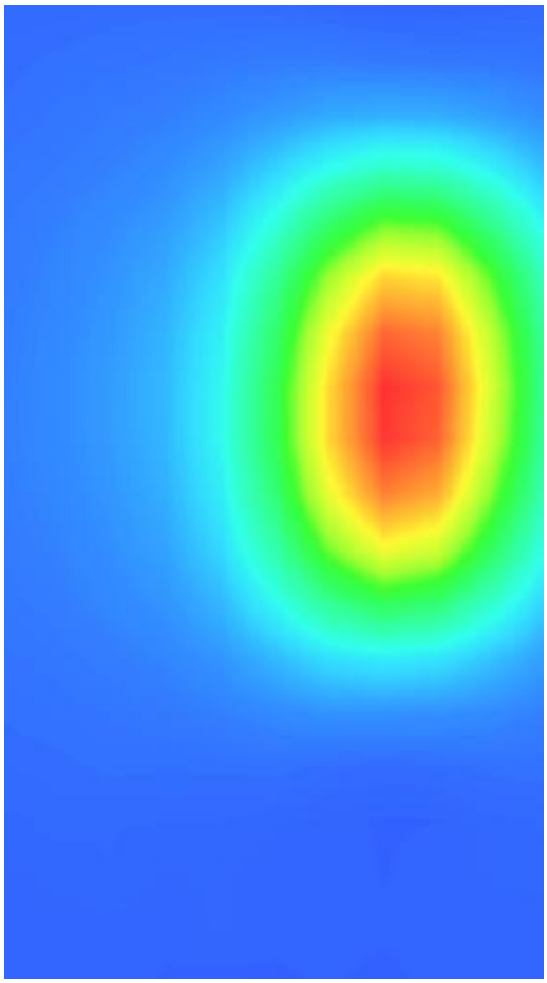
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=18.00, Y=14.00

SAR 10g (W/Kg)	0.184143
SAR 1g (W/Kg)	0.396781

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7642	0.4233	0.1876	0.0812	0.0381



3D screen shot	Hot spot position
	

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: 01/24/2019

Measurement duration: 22 minutes 42 seconds

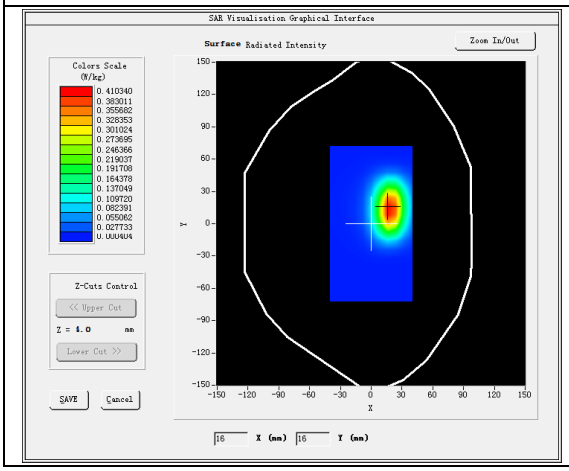
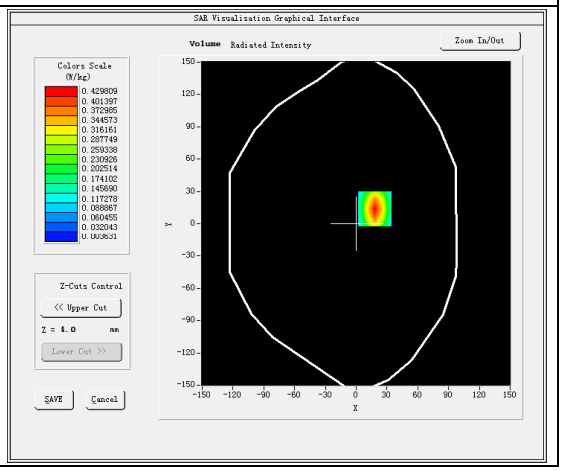
A. Experimental conditions.

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

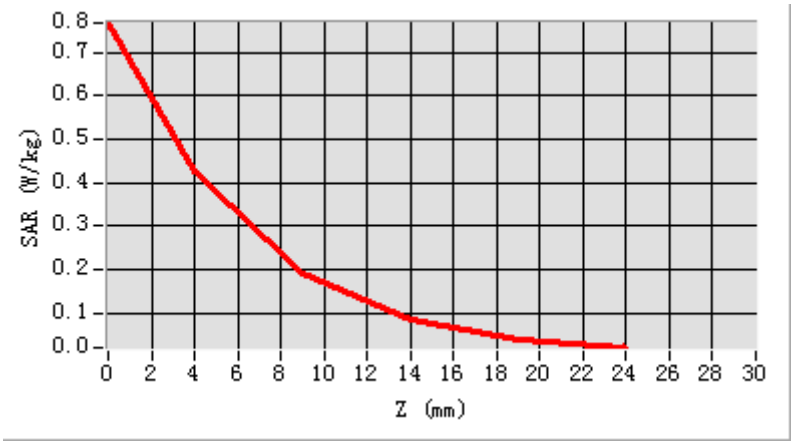
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	1900
Relative permittivity (real part)	53.32
Relative permittivity	14.40
Conductivity (S/m)	1.51
Power Drift (%)	-0.13
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	6.10
Duty factor:	1:1

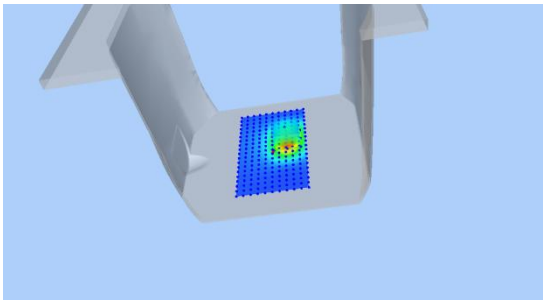
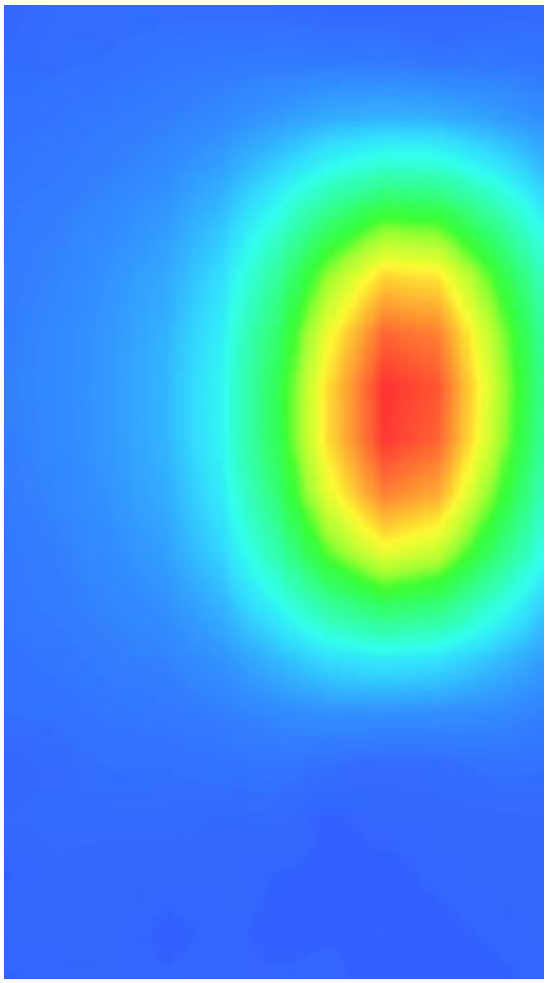
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=18.00, Y=14.00

SAR 10g (W/Kg)	0.185142
SAR 1g (W/Kg)	0.397641

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7675	0.4251	0.1884	0.0821	0.0388



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: 01/25/2019

Measurement duration: 22 minutes 51 seconds

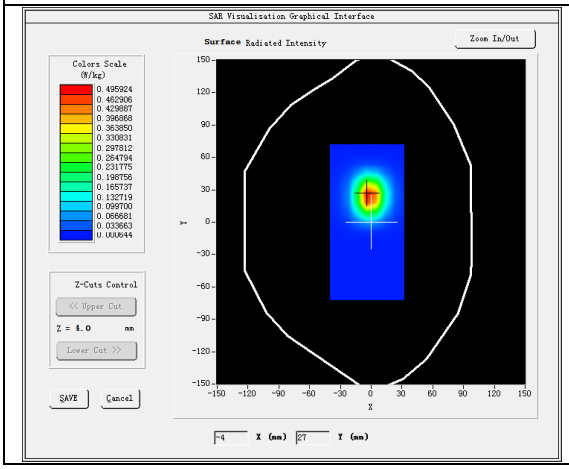
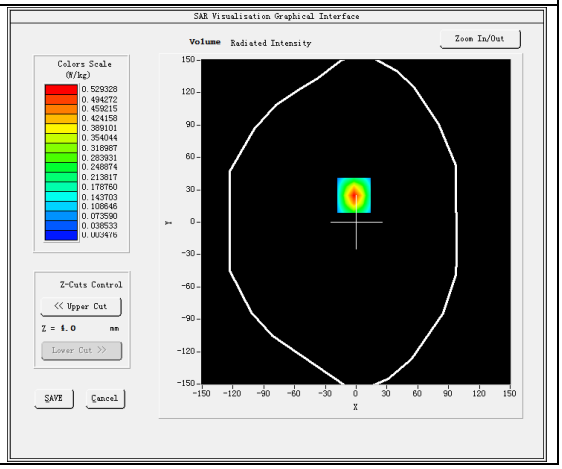
A. Experimental conditions.

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

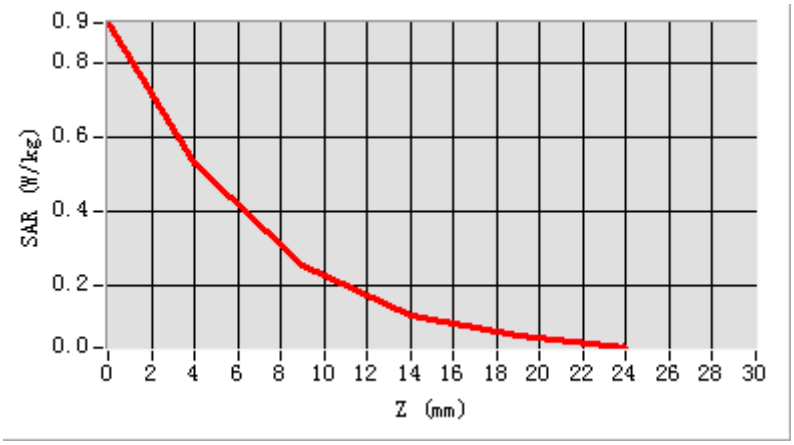
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	2450
Relative permittivity (real part)	39.25
Relative permittivity	13.44
Conductivity (S/m)	1.83
Power Drift (%)	-0.66
Duty factor:	1:1
ConvF:	5.35

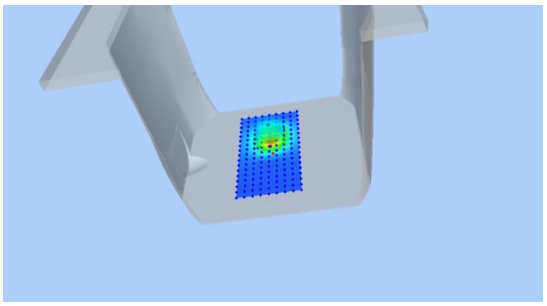
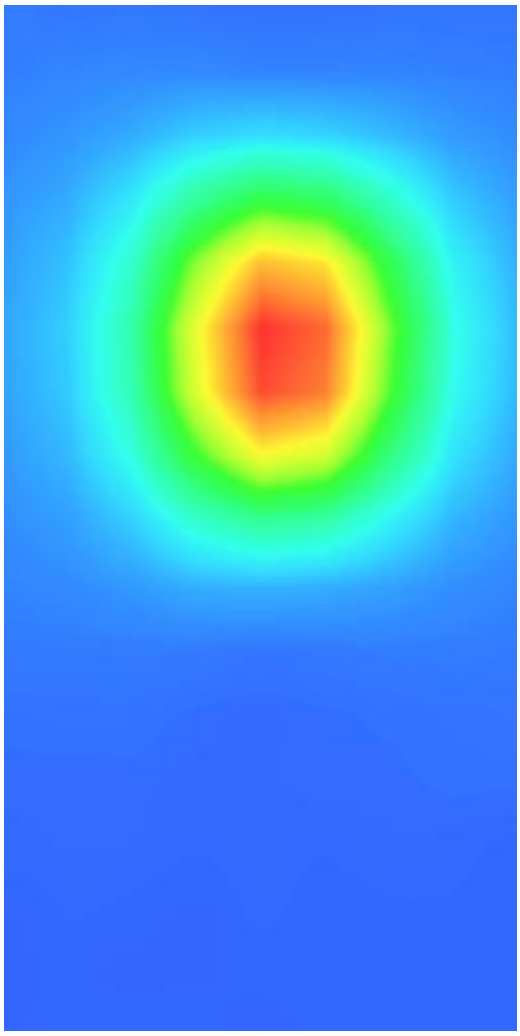
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-2.00, Y=25.00

SAR 10g (W/Kg)	0.224517
SAR 1g (W/Kg)	0.521435

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.9112	0.5275	0.2535	0.1210	0.0612



3D screen shot	Hot spot position
	

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: 01/25/2019

Measurement duration: 22 minutes 48 seconds

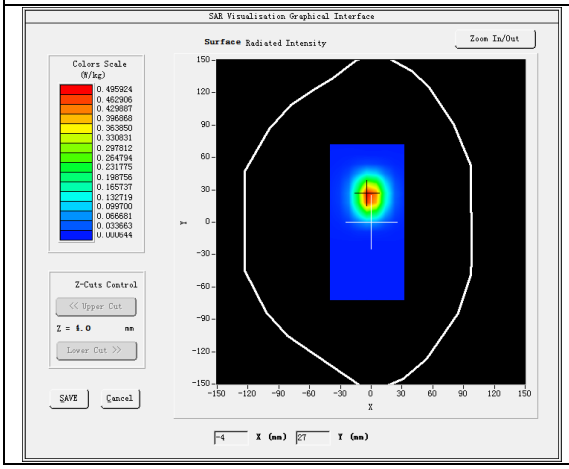
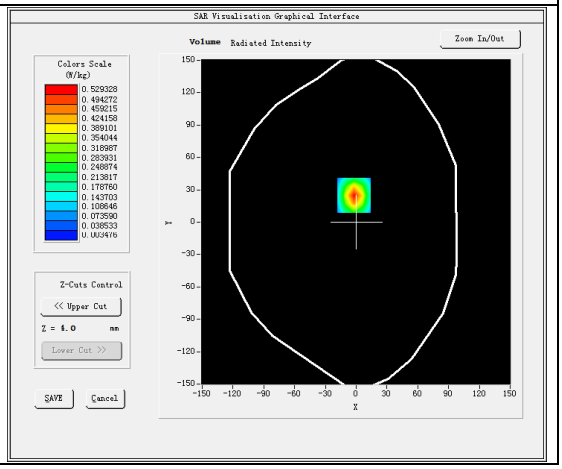
A. Experimental conditions.

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

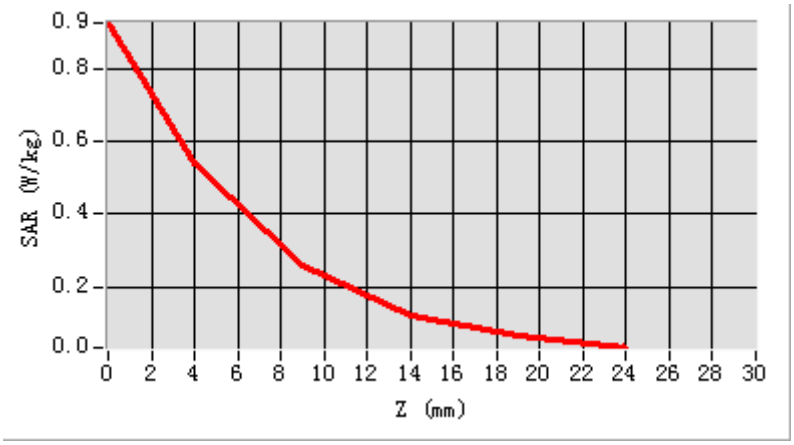
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	2450
Relative permittivity (real part)	52.74
Relative permittivity	14.54
Conductivity (S/m)	1.98
Power Drift (%)	-0.26
Duty factor:	1:1
ConvF:	5.56

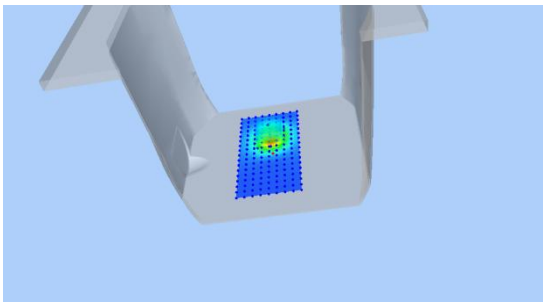
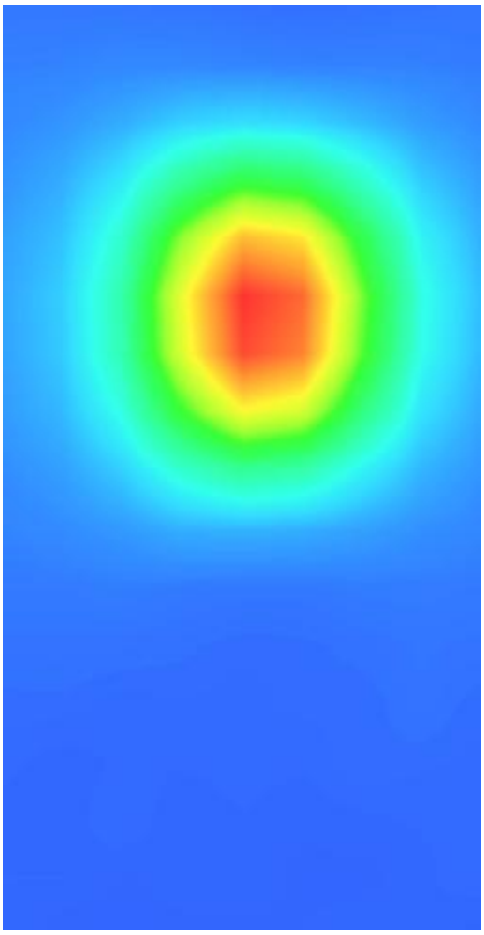
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-2.00, Y=25.00

SAR 10g (W/Kg)	0.231241
SAR 1g (W/Kg)	0.522356

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.9265	0.5374	0.2555	0.1213	0.0612



3D screen shot	Hot spot position
	

System Performance Check (Head, 2600MHz)

Type: Phone measurement

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

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

Date of measurement: 01/26/2019

Measurement duration: 22 minutes 46 seconds

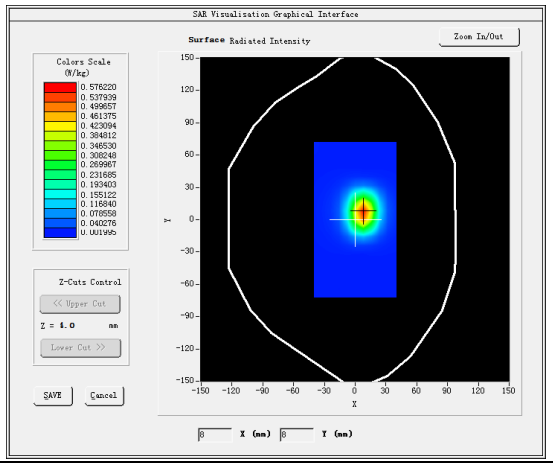
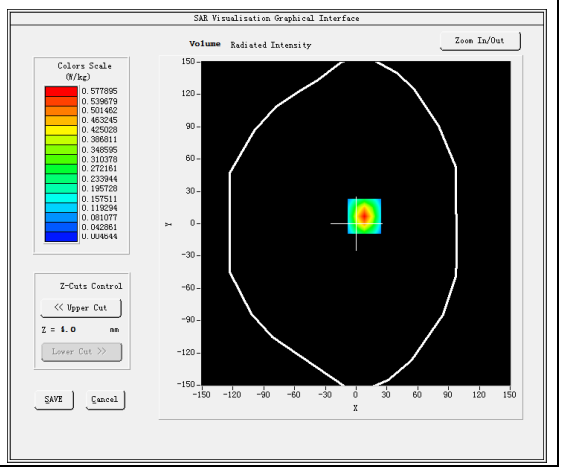
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	7x7x8,dx=5mm dy=5mm dz=4mm
Device Position	Dipole
Band	2600MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

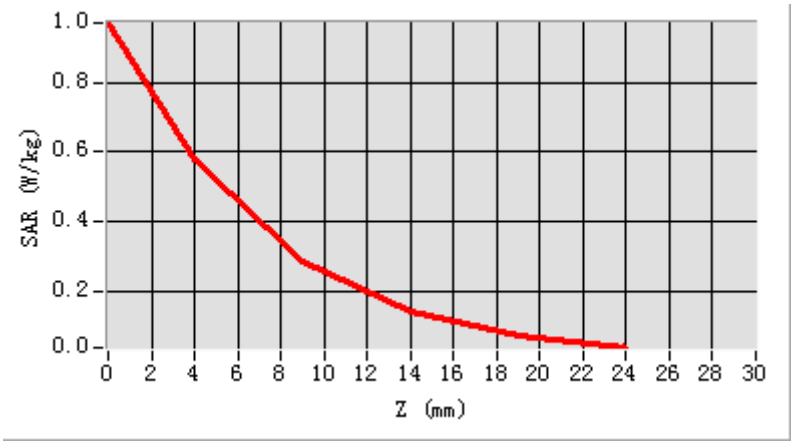
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	2600
Relative permittivity (real part)	39.22
Relative permittivity	13.63
Conductivity (S/m)	1.97
Power drift (%)	-0.15
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	5.25

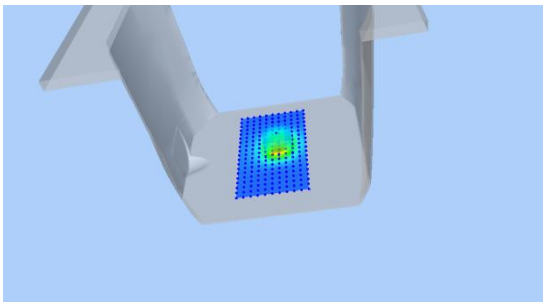
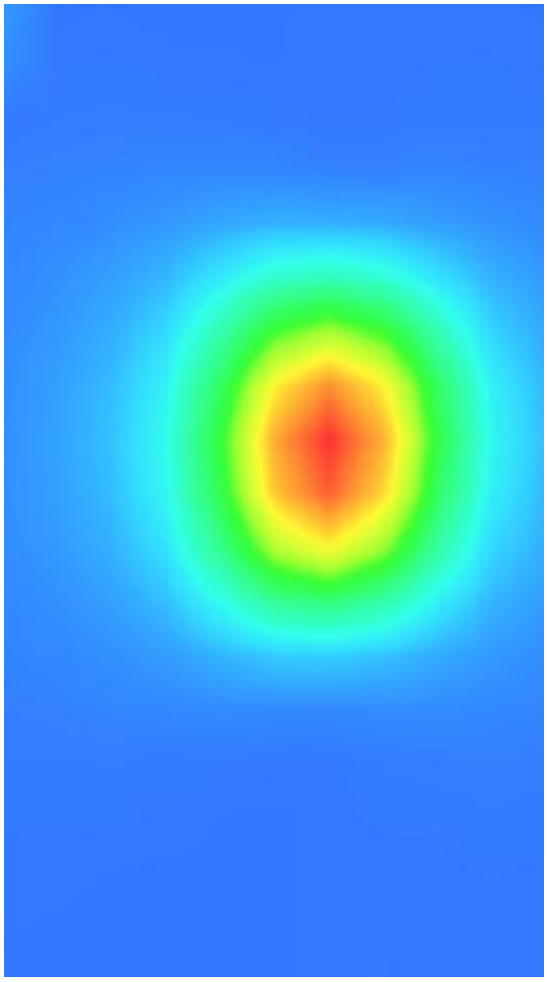
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=7.00

SAR 10g (W/Kg)	0.250315
SAR 1g (W/Kg)	0.556264

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.9688	0.5775	0.2891	0.1442	0.0766



3D screen shot	Hot spot position
	

System Performance Check (Body, 2600MHz)

Type: Phone measurement

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

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

Date of measurement: 01/26/2019

Measurement duration: 22 minutes 53 seconds

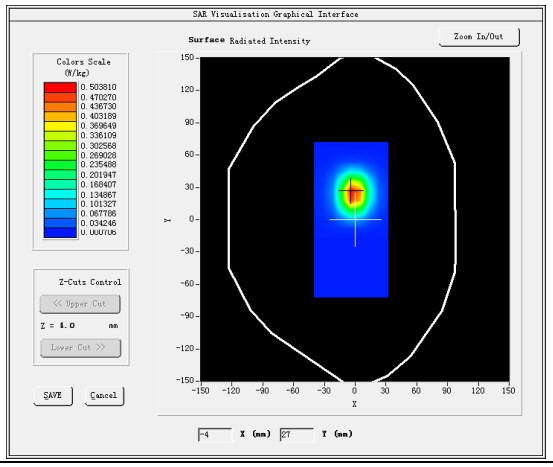
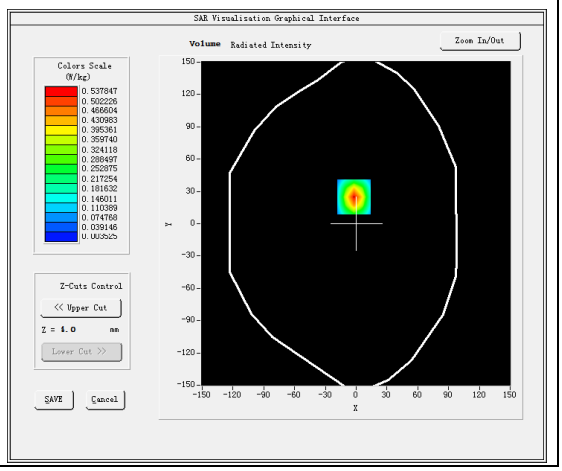
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	7x7x8,dx=5mm dy=5mm dz=4mm
Device Position	Dipole
Band	2600MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

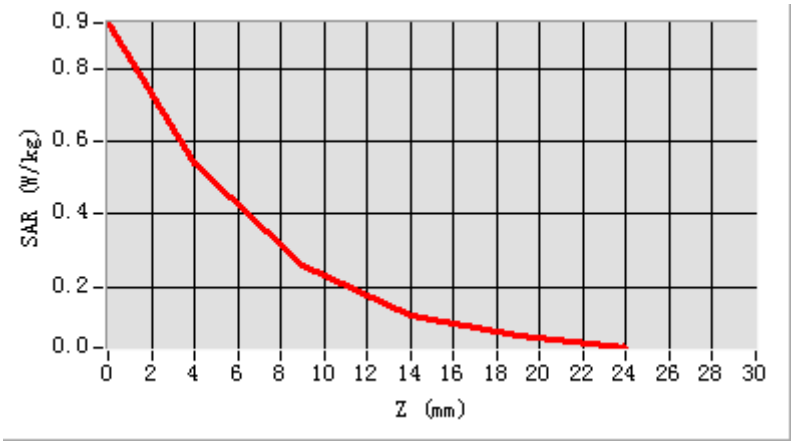
E-Field Probe	SATIMO SN_04/13_EP166
Frequency (MHz)	2600
Relative permittivity (real part)	52.51
Relative permittivity	15.02
Conductivity (S/m)	2.17
Power drift (%)	-0.55
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	5.28

SURFACE SAR	VOLUME SAR
	

Maximum location: X=-2.00, Y=25.00

SAR 10g (W/Kg)	0.242134
SAR 1g (W/Kg)	0.527451

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.9255	0.5363	0.2541	0.1215	0.0622



3D screen shot	Hot spot position