



## Appendix A: SAR System performance Check Plots

<b>Measurement</b>	<b>Liquid</b>	<b>Frequency</b>	<b>Test Date</b>
System Check	Head	835	2019-12-16
System Check	Body	835	2019-12-16
System Check	Head	1800	2019-12-17
System Check	Body	1800	2019-12-17
System Check	Head	1900	2019-12-18
System Check	Body	1900	2019-12-18
System Check	Head	2450	2019-12-19
System Check	Body	2450	2019-12-19
System Check	Head	2600	2019-12-20
System Check	Body	2600	2019-12-20

## System Performance Check (Head, 835MHz)

Type: Phone measurement

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

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

Date of measurement: 12/16/2019

Measurement duration: 22 minutes 05 seconds

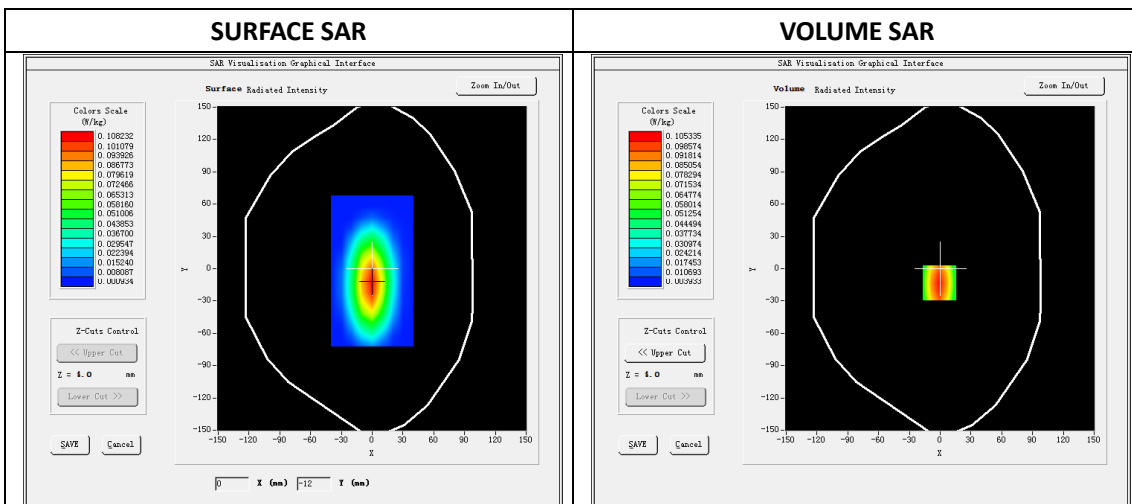
### A. Experimental conditions.

<b>Phantom File</b>	dx=8mm dy=8mm
<b>Phantom</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Device Position</b>	Dipole
<b>Band</b>	835MHz
<b>Channels</b>	
<b>Signal</b>	CW

### B. SAR Measurement Results

#### Band SAR

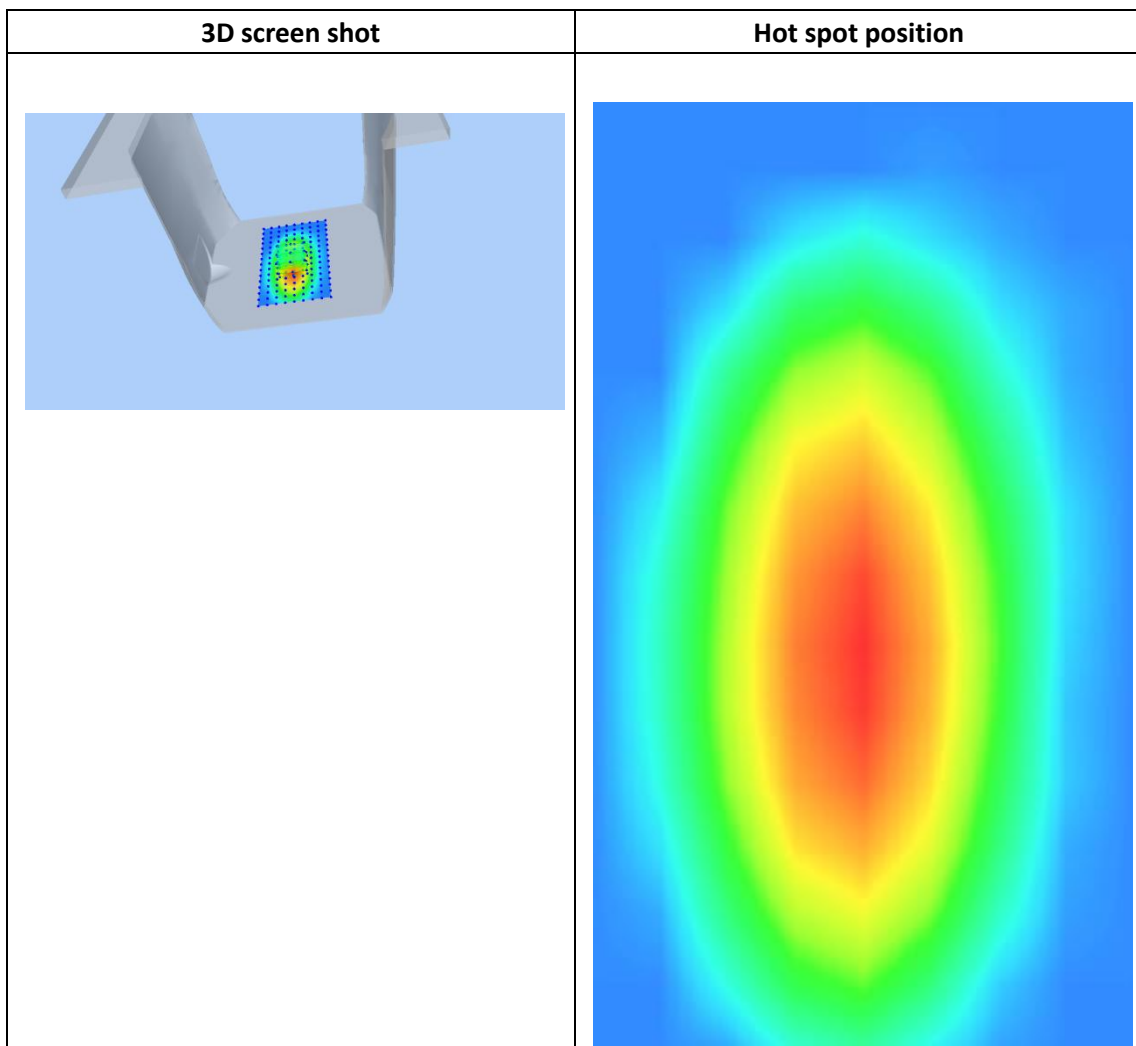
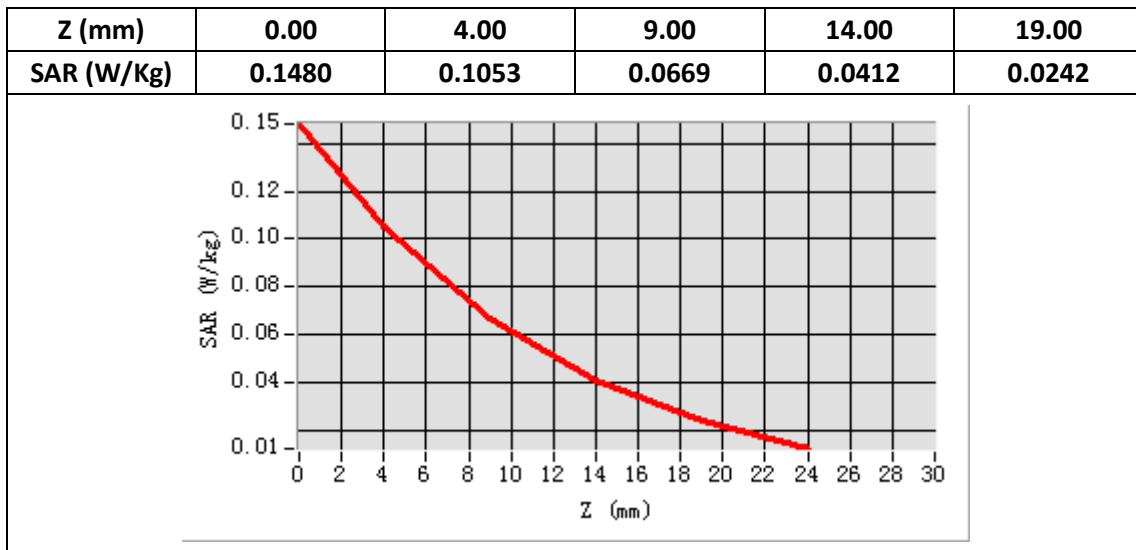
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	835
<b>Relative permittivity (real part)</b>	41.59
<b>Relative permittivity</b>	19.83
<b>Conductivity (S/m)</b>	0.92
<b>Power drift (%)</b>	-2.33
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	1.92
<b>Crest factor:</b>	1:1



**Maximum location: X=-1.00, Y=-13.00**

**SAR Peak: 0.15 W/kg**

<b>SAR 10g (W/Kg)</b>	0.058461
<b>SAR 1g (W/Kg)</b>	0.098813



## System Performance Check (Body, 835MHz)

Type: Phone measurement

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

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

Date of measurement: 12/16/2019

Measurement duration: 22 minutes 02 seconds

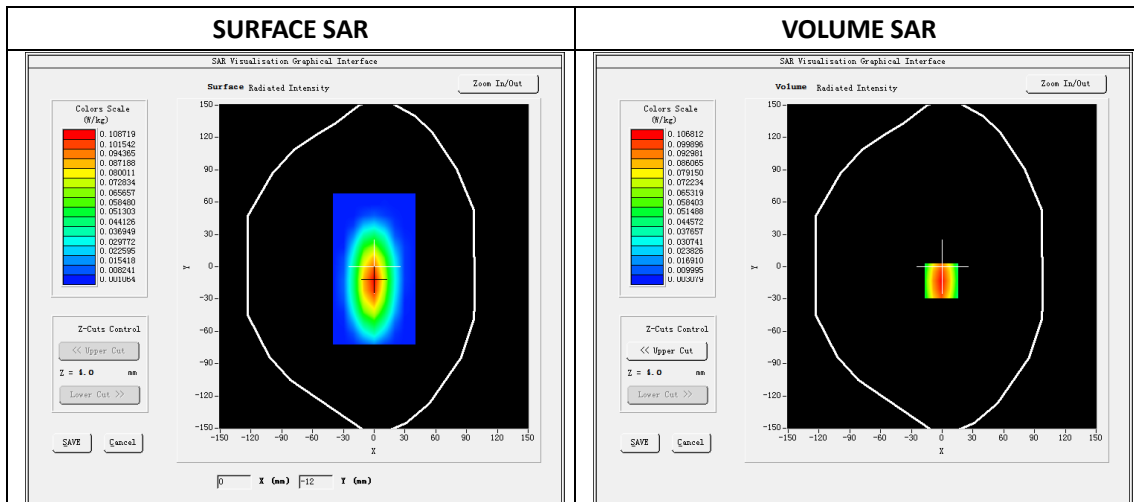
### A. Experimental conditions.

<b>Phantom File</b>	dx=8mm dy=8mm
<b>Phantom</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Device Position</b>	Dipole
<b>Band</b>	835MHz
<b>Channels</b>	
<b>Signal</b>	CW

### B. SAR Measurement Results

#### Band SAR

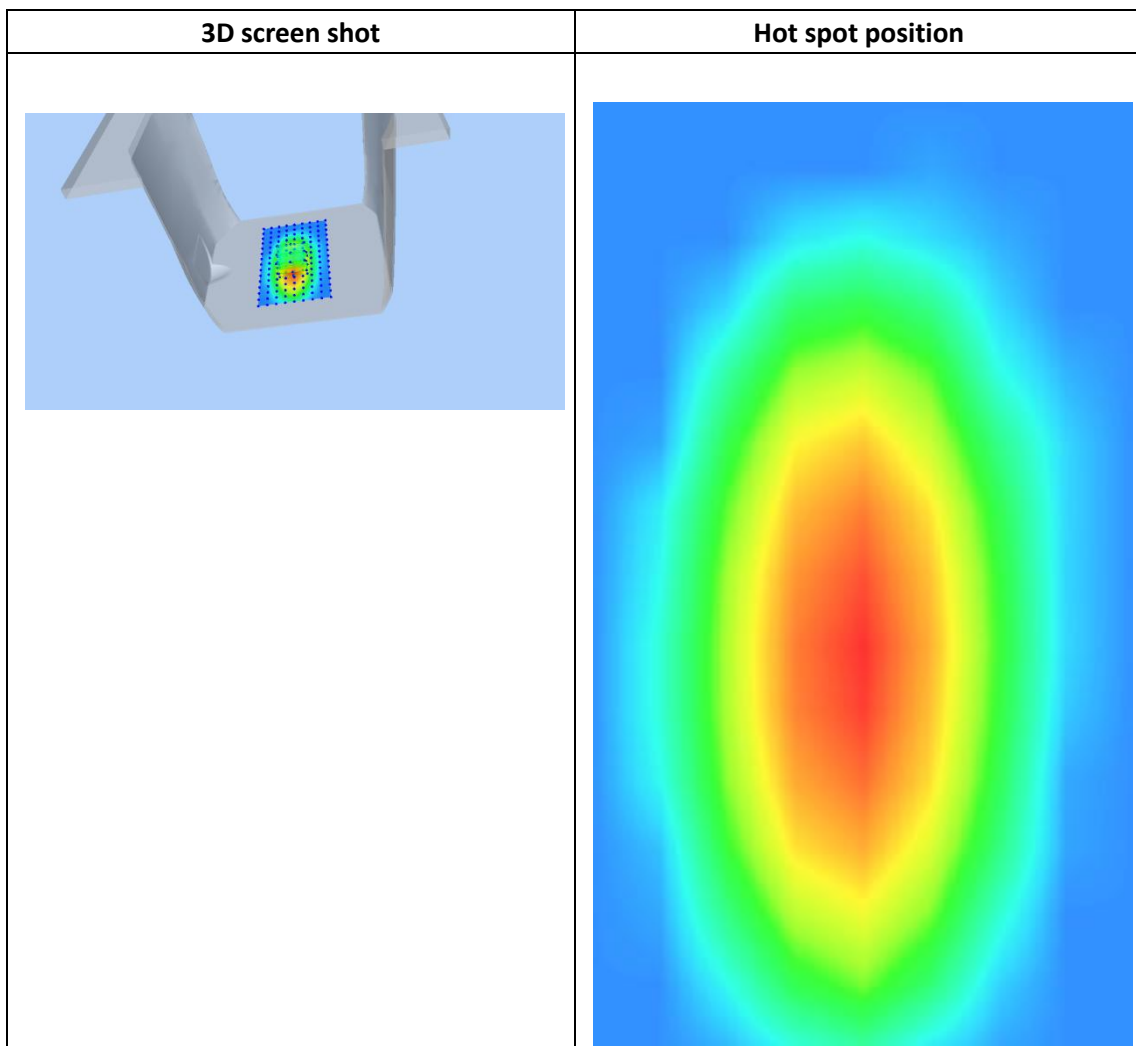
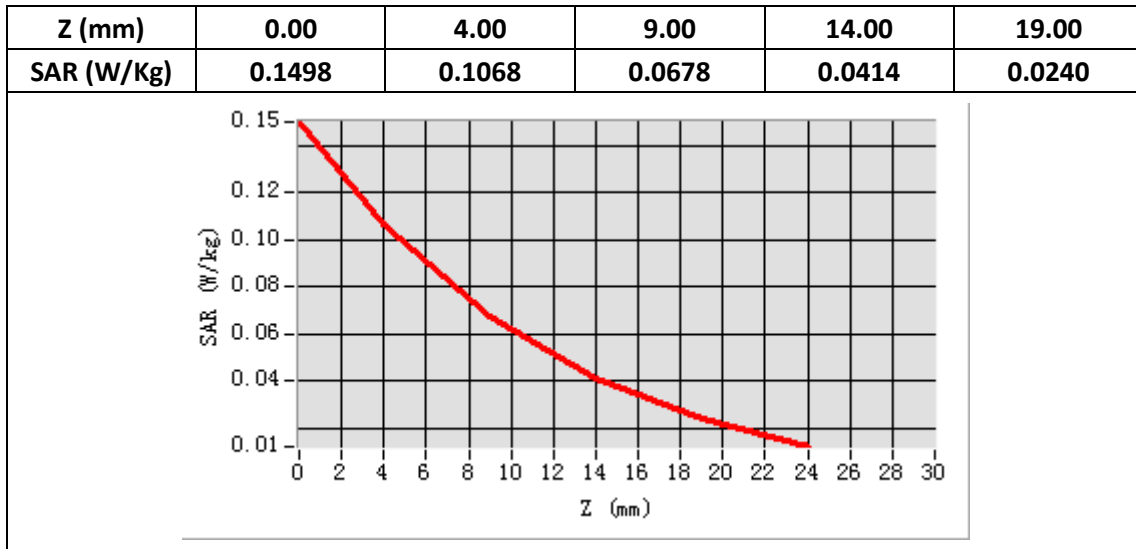
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	835
<b>Relative permittivity (real part)</b>	55.29
<b>Relative permittivity</b>	21.13
<b>Conductivity (S/m)</b>	0.98
<b>Power drift (%)</b>	-2.16
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	1.99
<b>Crest factor:</b>	1:1



Maximum location: X=-1.00, Y=-13.00

SAR Peak: 0.15 W/kg

<b>SAR 10g (W/Kg)</b>	0.059511
<b>SAR 1g (W/Kg)</b>	0.101892



## 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: 12/17/2019

Measurement duration: 22 minutes 07 seconds

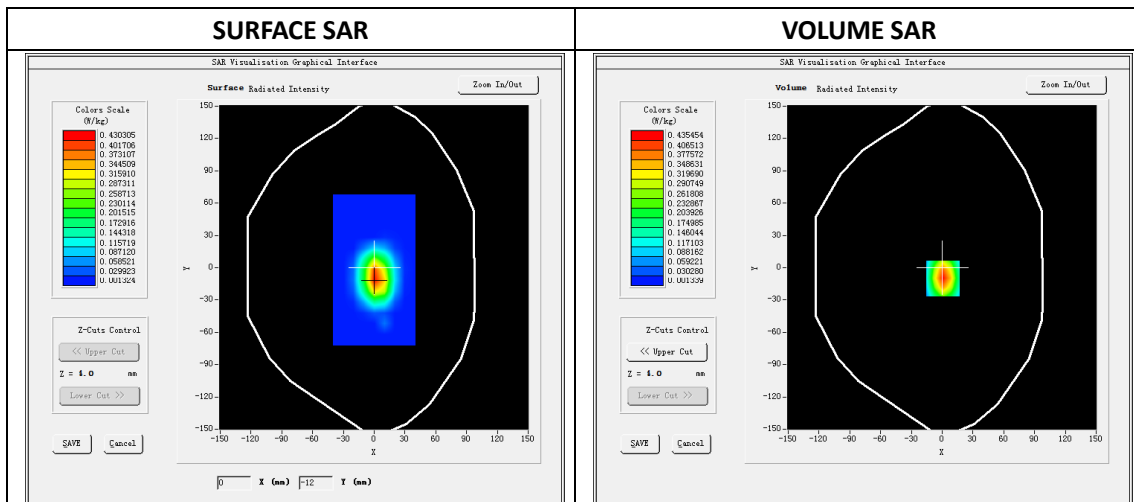
### A. Experimental conditions.

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

### B. SAR Measurement Results

#### Band SAR

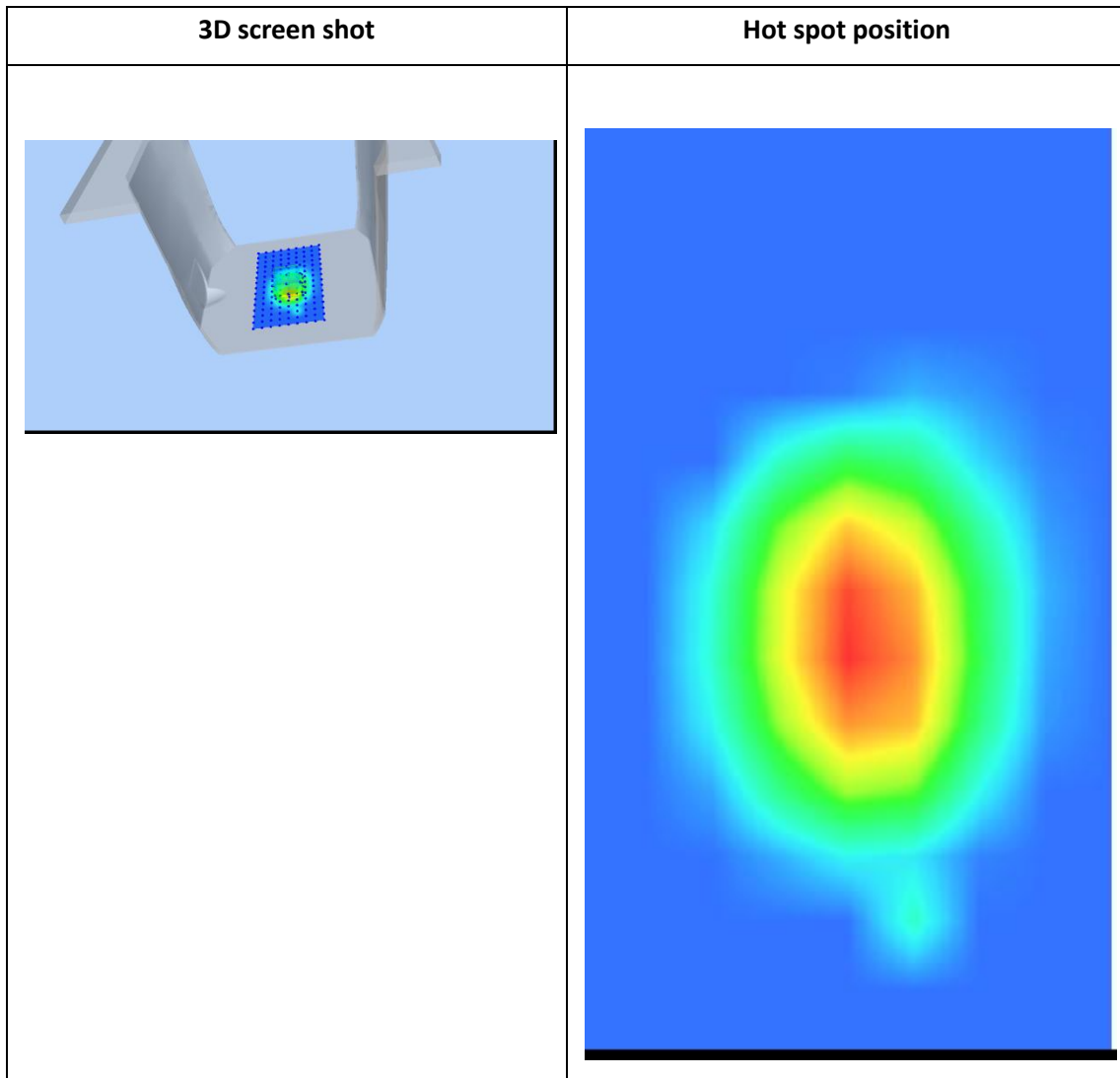
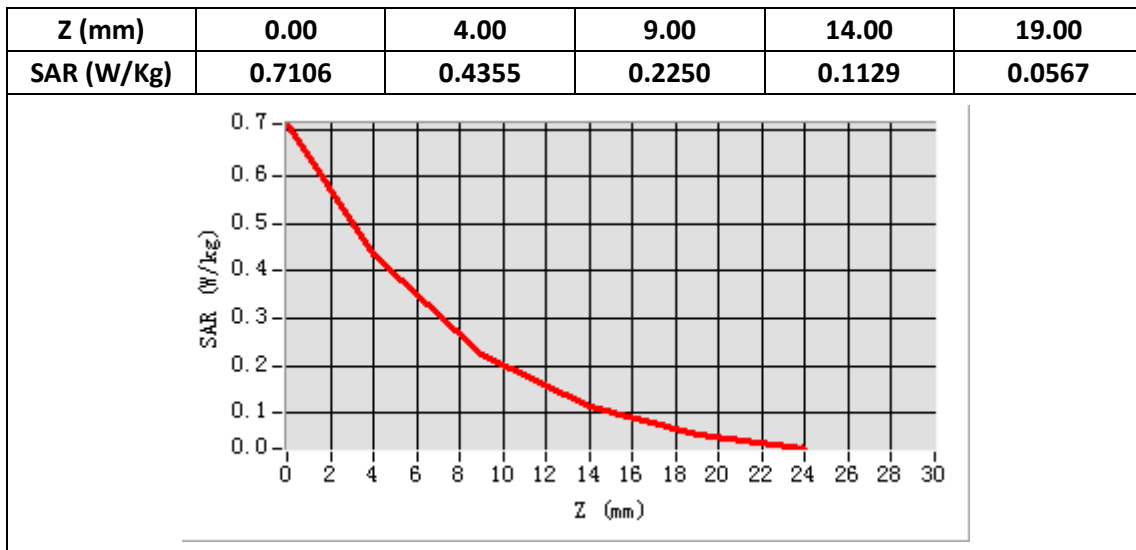
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	1800
<b>Relative permittivity (real part)</b>	40.61
<b>Relative permittivity</b>	14.10
<b>Conductivity (S/m)</b>	1.41
<b>Power Drift (%)</b>	-2.50
<b>Ambient Temperature:</b>	22.1°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	2.14
<b>Duty factor:</b>	1:1



**Maximum location: X=1.00, Y=-10.00**

**SAR Peak: 0.71 W/kg**

<b>SAR 10g (W/Kg)</b>	0.196797
<b>SAR 1g (W/Kg)</b>	0.405952



## 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: 12/17/2019

Measurement duration: 22 minutes 04 seconds

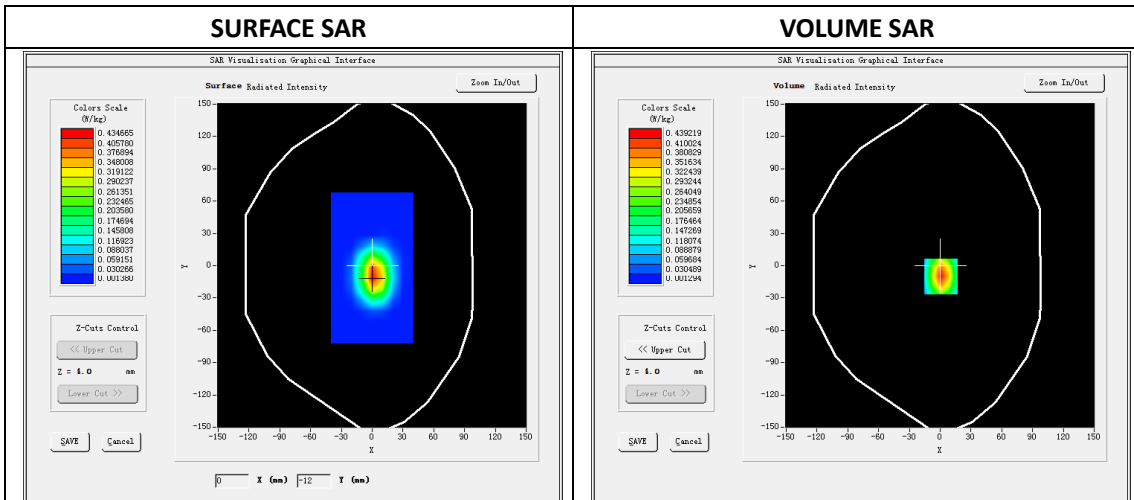
### A. Experimental conditions.

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_EPG0261
Frequency (MHz)	1800
Relative permittivity (real part)	53.50
Relative permittivity	15.40
Conductivity (S/m)	1.54
Power Drift (%)	-2.95
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.22
Duty factor:	1:1



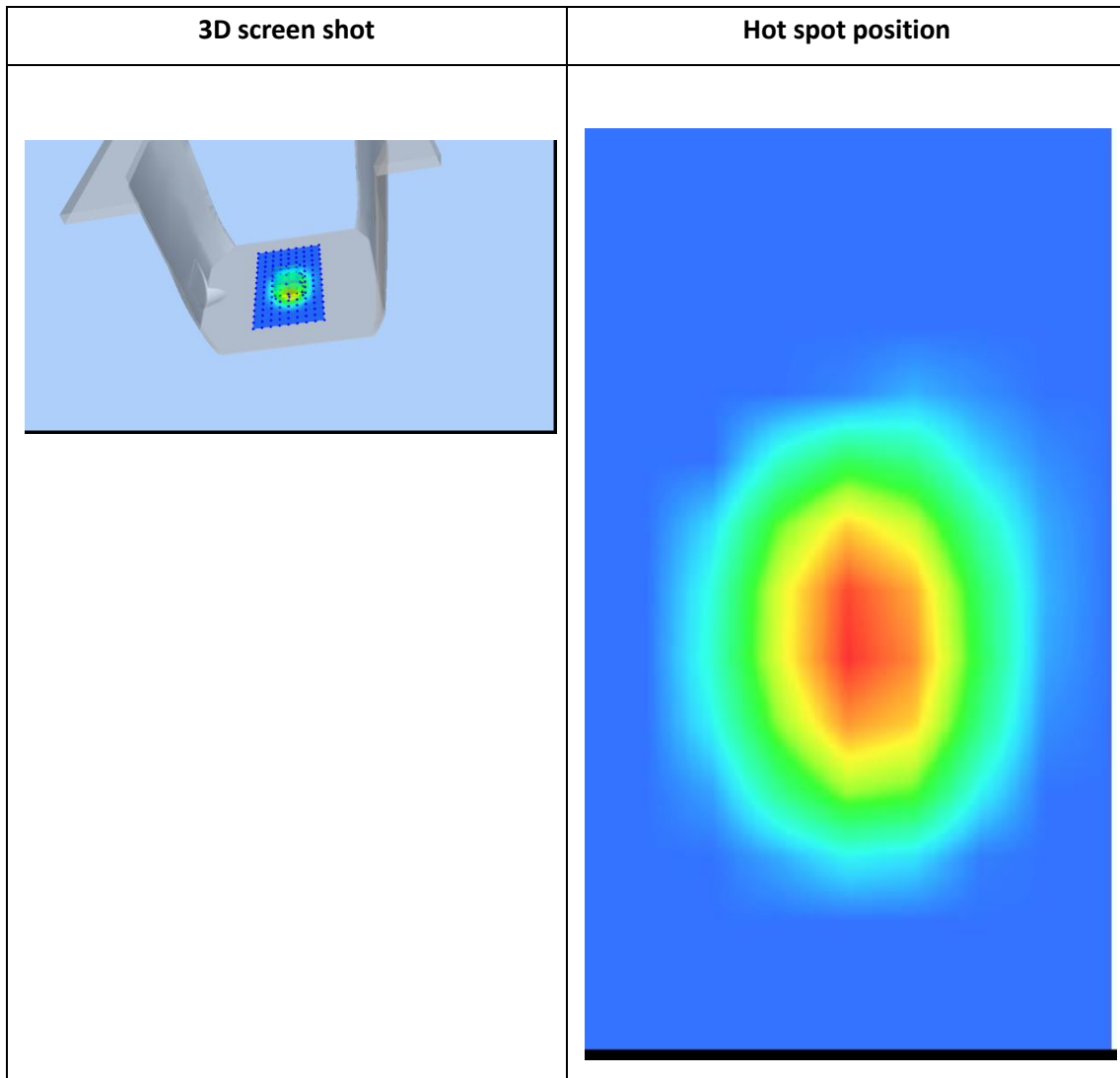
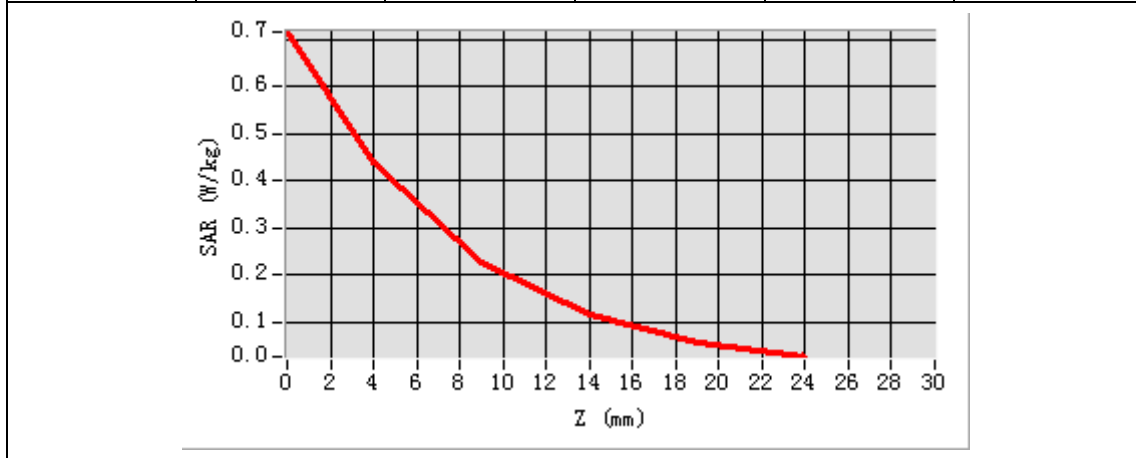
**Maximum location: X=1.00, Y=-10.00**

**SAR Peak: 0.72 W/kg**

<b>SAR 10g (W/Kg)</b>	0.195907
<b>SAR 1g (W/Kg)</b>	0.403010



<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>0.7173</b>	<b>0.4392</b>	<b>0.2268</b>	<b>0.1138</b>	<b>0.0572</b>



## 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: 12/18/2019

Measurement duration: 22 minutes 01 seconds

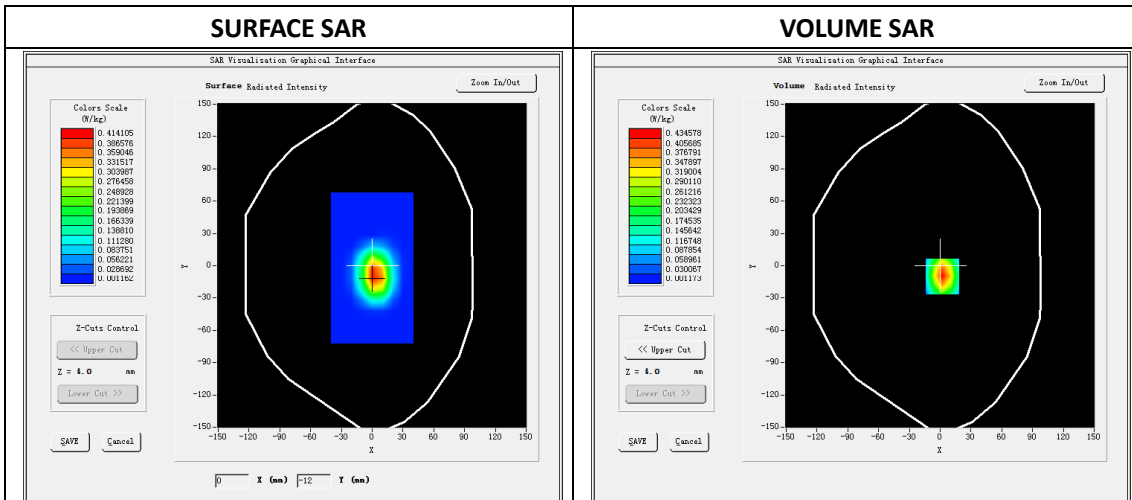
### A. Experimental conditions.

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

### B. SAR Measurement Results

#### Band SAR

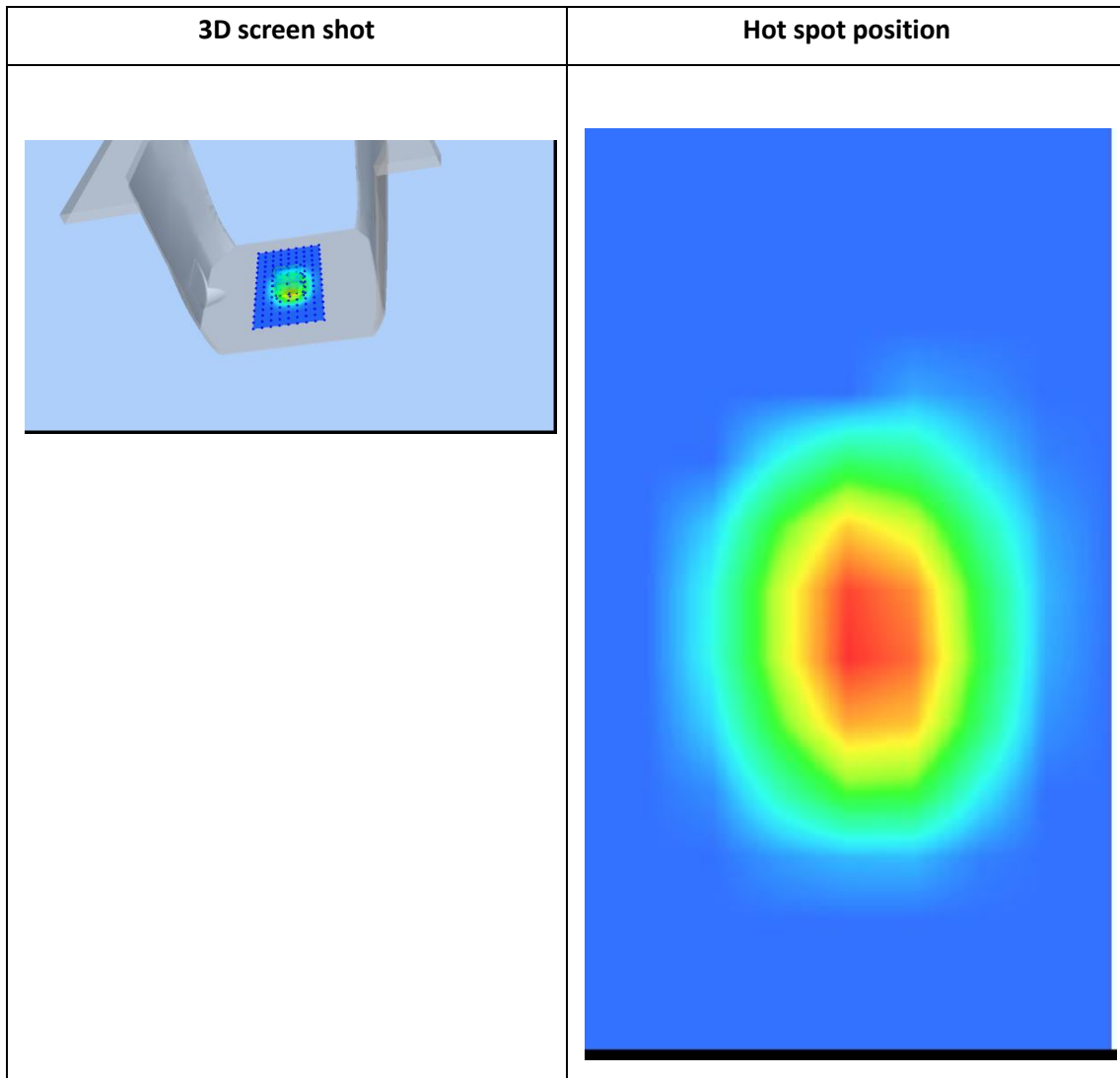
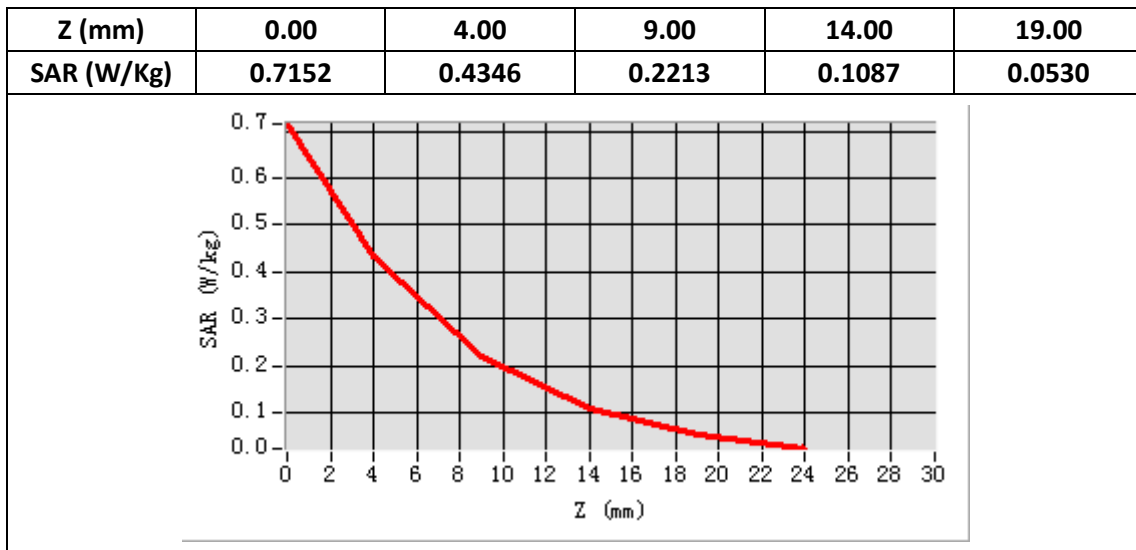
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	1900
<b>Relative permittivity (real part)</b>	40.52
<b>Relative permittivity</b>	13.26
<b>Conductivity (S/m)</b>	1.40
<b>Power Drift (%)</b>	-2.67
<b>Ambient Temperature:</b>	22.1°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	2.34
<b>Duty factor:</b>	1:1



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

**SAR Peak: 0.72 W/kg**

<b>SAR 10g (W/Kg)</b>	0.190294
<b>SAR 1g (W/Kg)</b>	0.398384



## 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: 12/18/2019

Measurement duration: 22 minutes 10 seconds

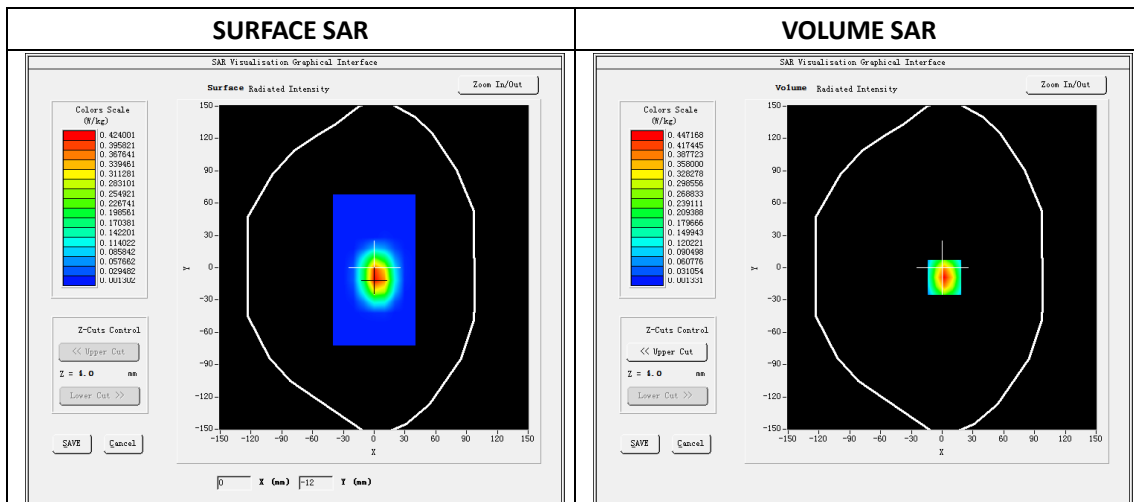
### A. Experimental conditions.

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

### B. SAR Measurement Results

#### Band SAR

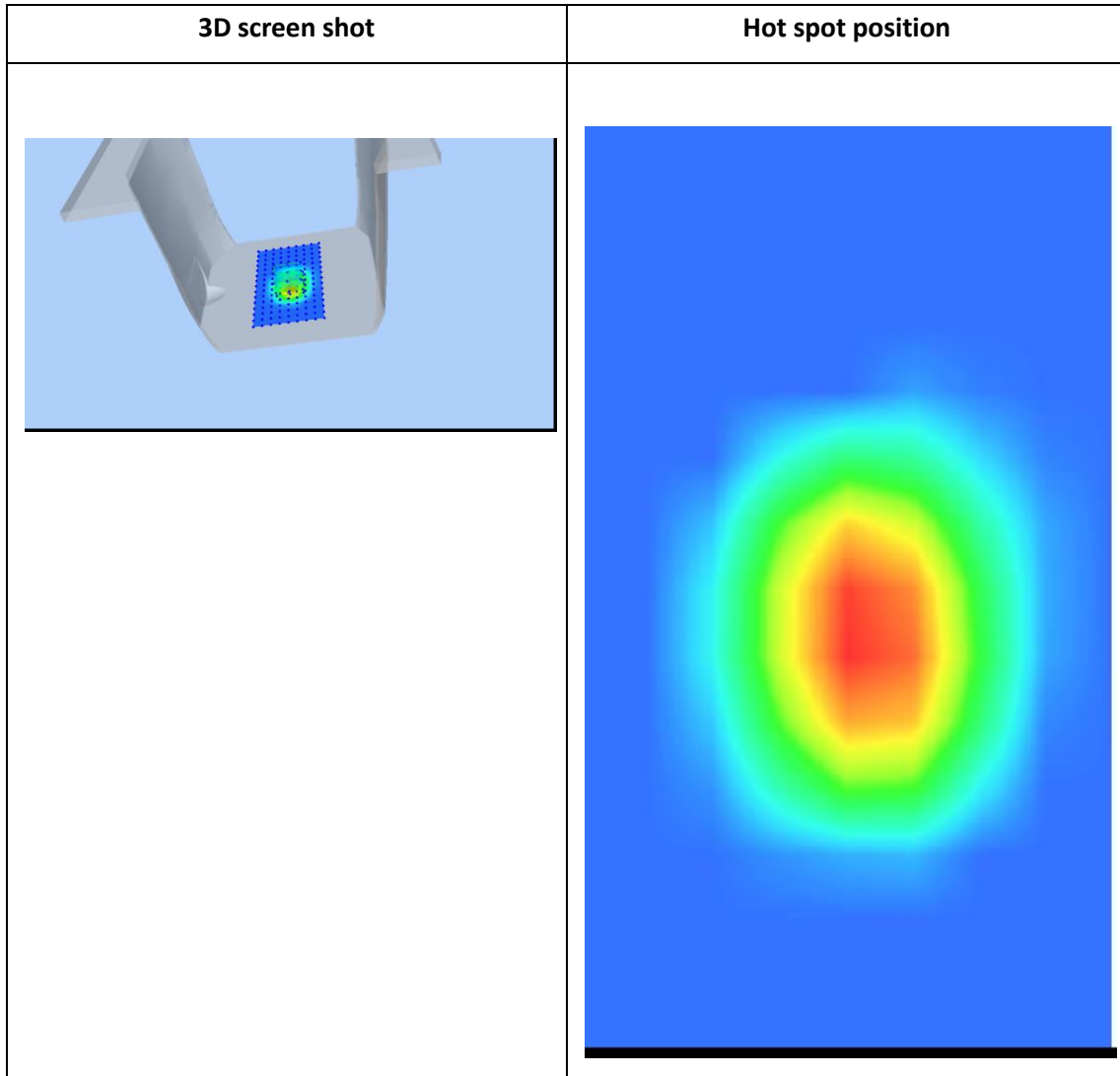
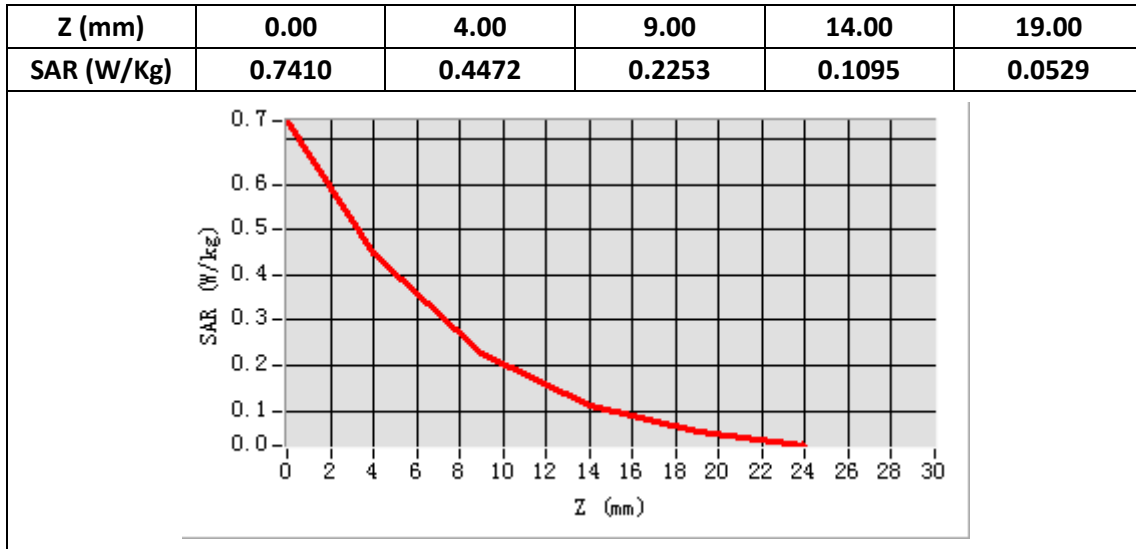
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	1900
<b>Relative permittivity (real part)</b>	53.41
<b>Relative permittivity</b>	14.49
<b>Conductivity (S/m)</b>	1.53
<b>Power Drift (%)</b>	-1.89
<b>Ambient Temperature:</b>	22.1°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	2.39
<b>Duty factor:</b>	1:1



**Maximum location: X=2.00, Y=-9.00**

**SAR Peak: 0.74 W/kg**

<b>SAR 10g (W/Kg)</b>	0.194266
<b>SAR 1g (W/Kg)</b>	0.408734



## 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: 12/19/2019

Measurement duration: 22 minutes 09 seconds

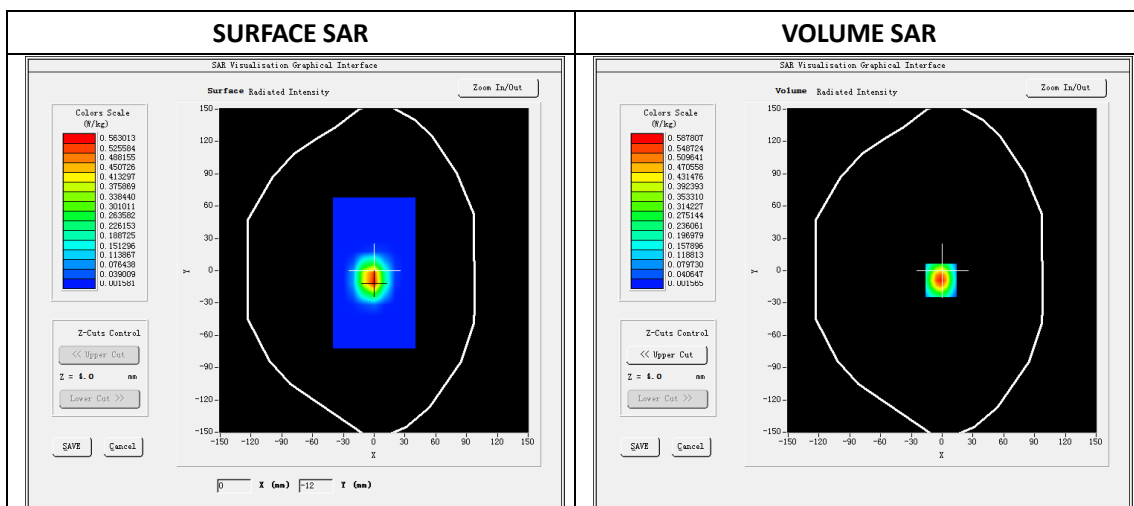
### A. Experimental conditions.

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

### B. SAR Measurement Results

#### Band SAR

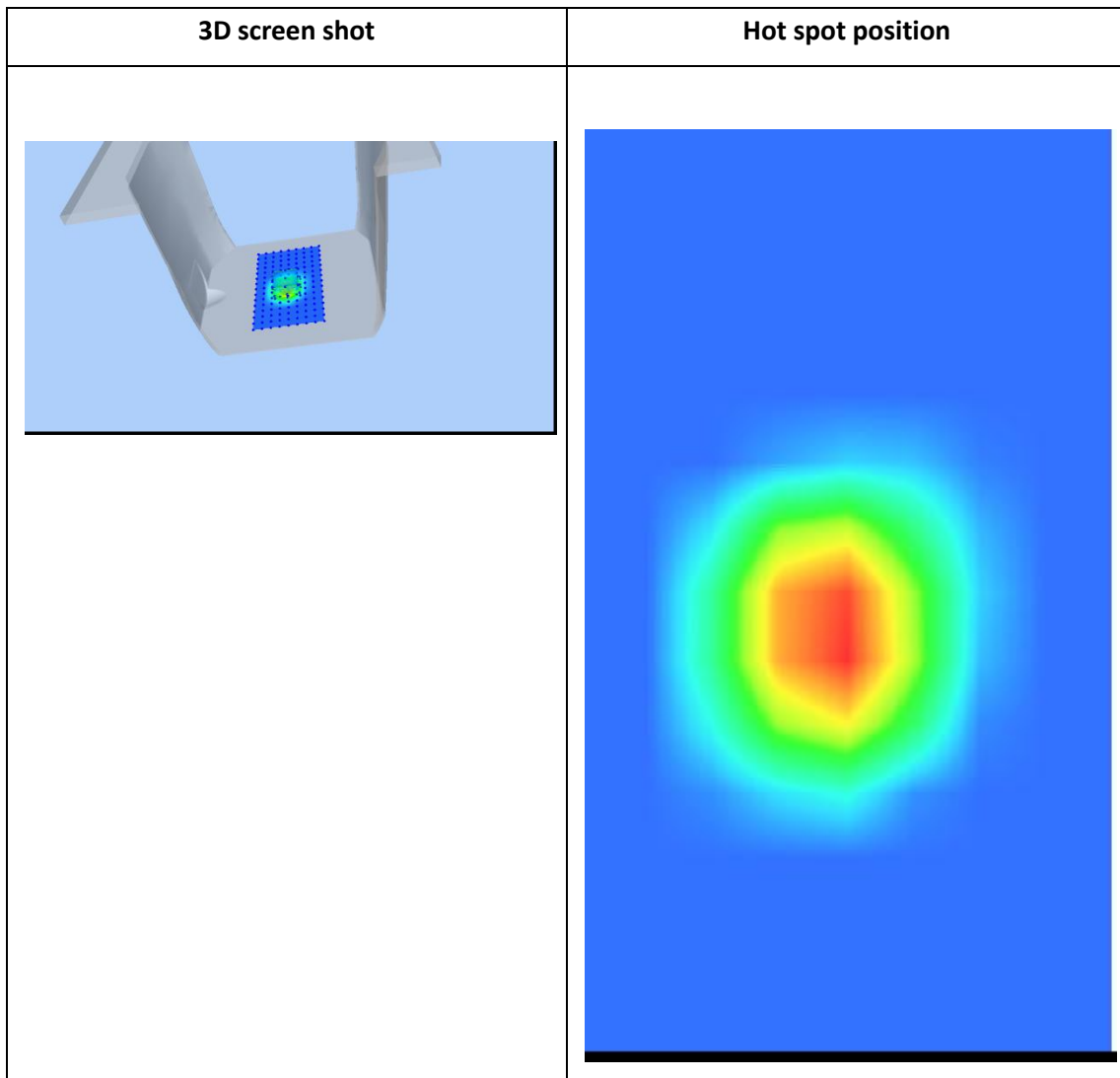
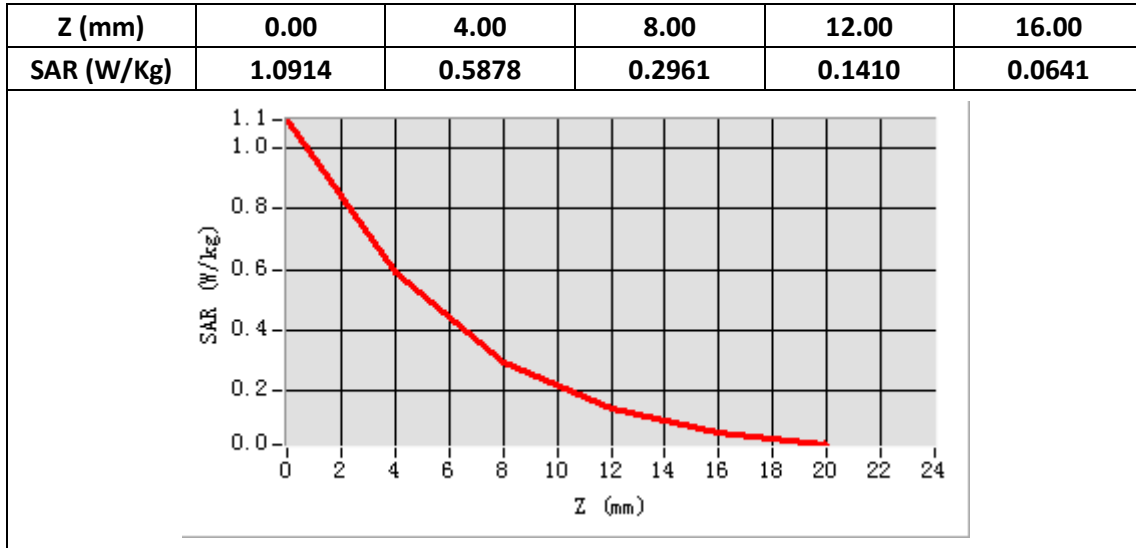
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	2450
<b>Relative permittivity (real part)</b>	39.32
<b>Relative permittivity</b>	13.37
<b>Conductivity (S/m)</b>	1.82
<b>Power Drift (%)</b>	-2.87
<b>Ambient Temperature:</b>	22.1°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	2.37
<b>Duty factor:</b>	1:1



**Maximum location: X=-1.00, Y=-9.00**

**SAR Peak: 1.09 W/kg**

<b>SAR 10g (W/Kg)</b>	0.219097
<b>SAR 1g (W/Kg)</b>	0.528326



## 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: 12/19/2019

Measurement duration: 22 minutes 08 seconds

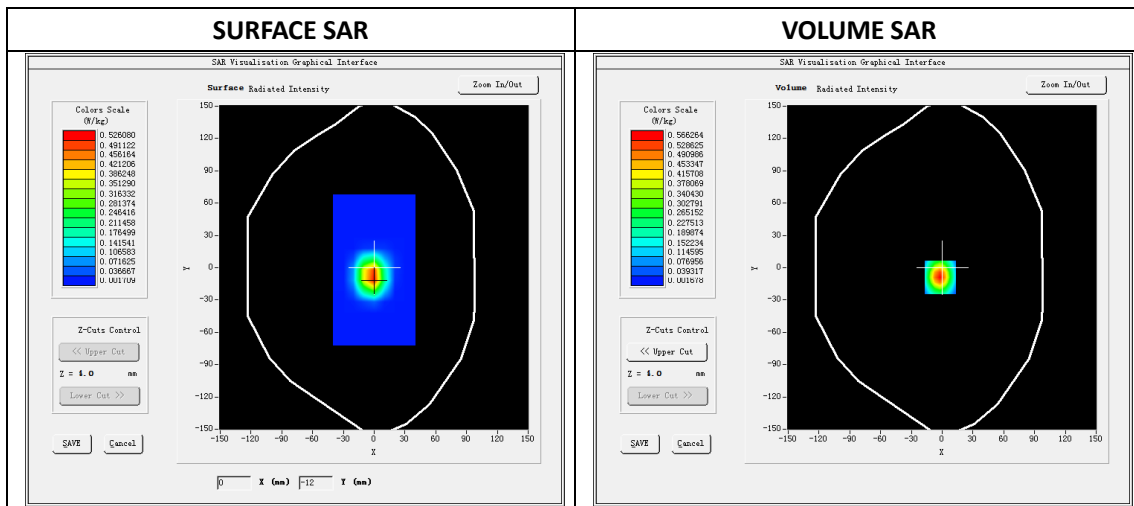
### A. Experimental conditions.

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

### B. SAR Measurement Results

#### Band SAR

<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	2450
<b>Relative permittivity (real part)</b>	52.89
<b>Relative permittivity</b>	14.40
<b>Conductivity (S/m)</b>	1.96
<b>Power Drift (%)</b>	-2.97
<b>Ambient Temperature:</b>	22.1°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	2.46
<b>Duty factor:</b>	1:1



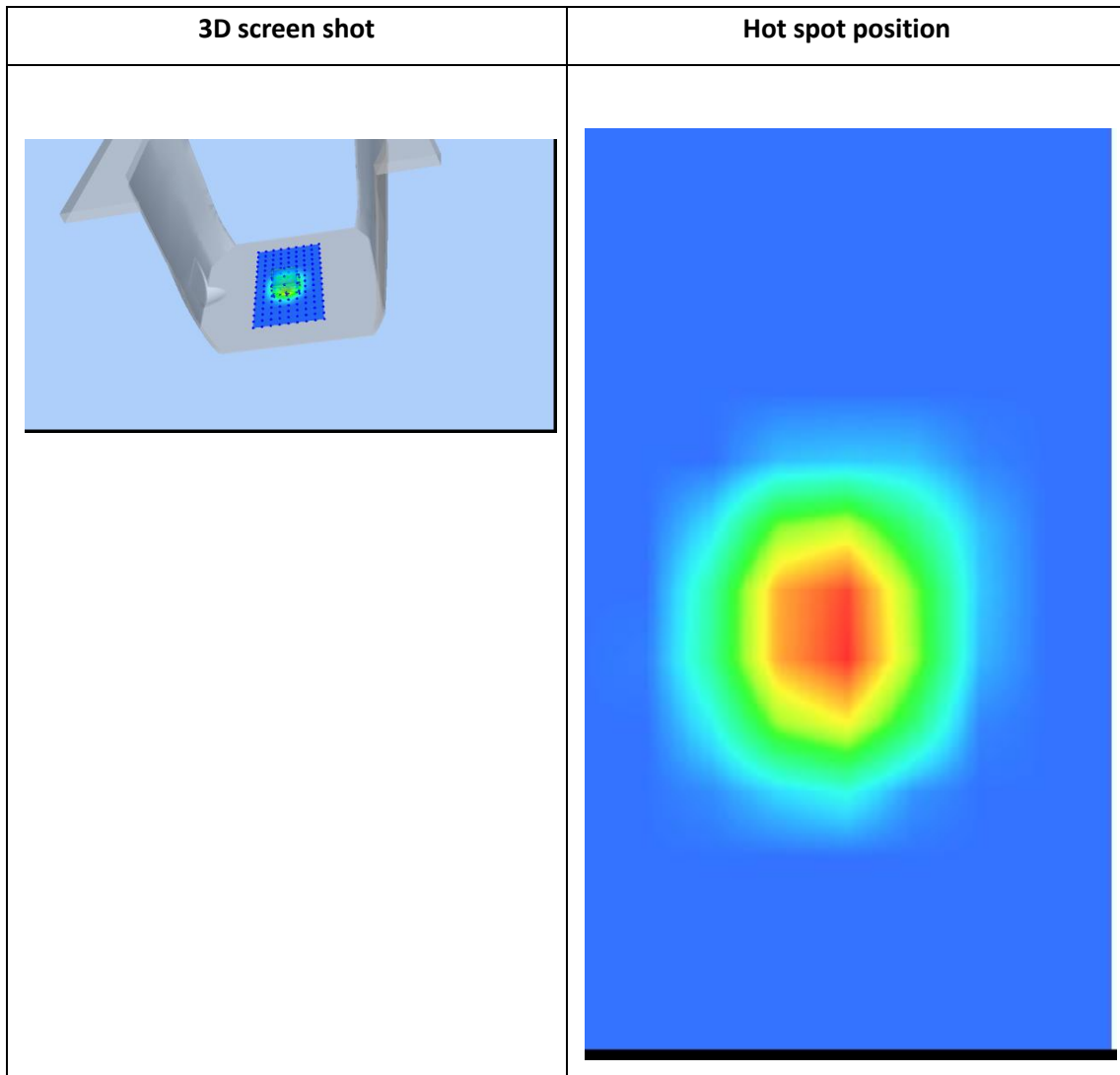
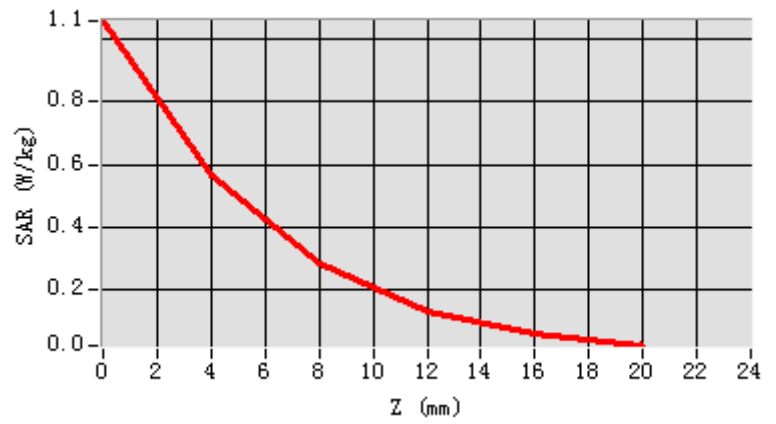
**Maximum location: X=-2.00, Y=-9.00**

**SAR Peak: 1.06 W/kg**

<b>SAR 10g (W/Kg)</b>	0.208463
<b>SAR 1g (W/Kg)</b>	0.508058



Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.0596	0.5663	0.2820	0.1320	0.0584



## 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: 12/20/2019

Measurement duration: 22 minutes 03 seconds

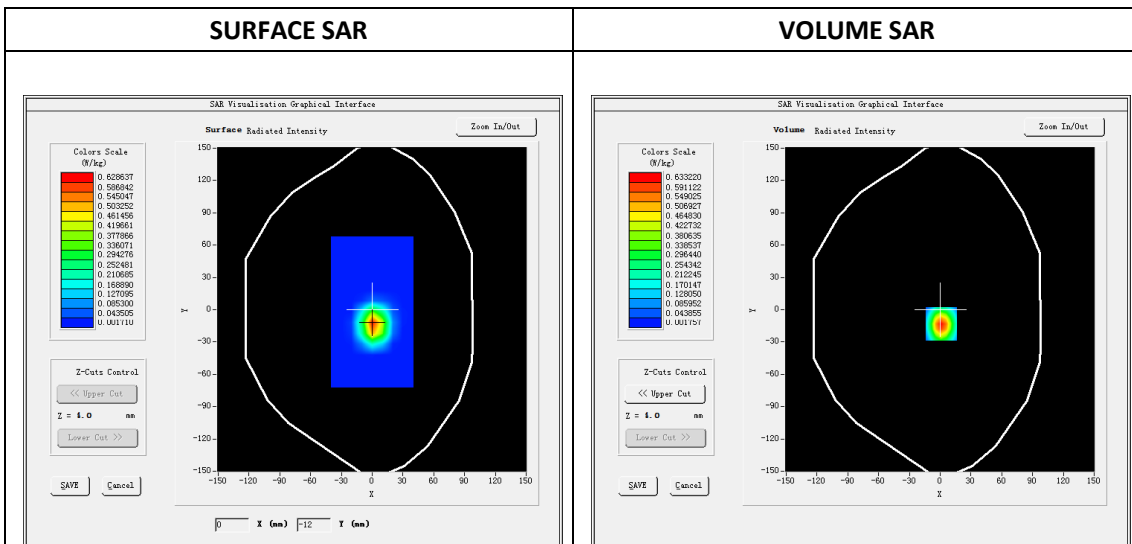
### A. Experimental conditions.

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

### B. SAR Measurement Results

#### Band SAR

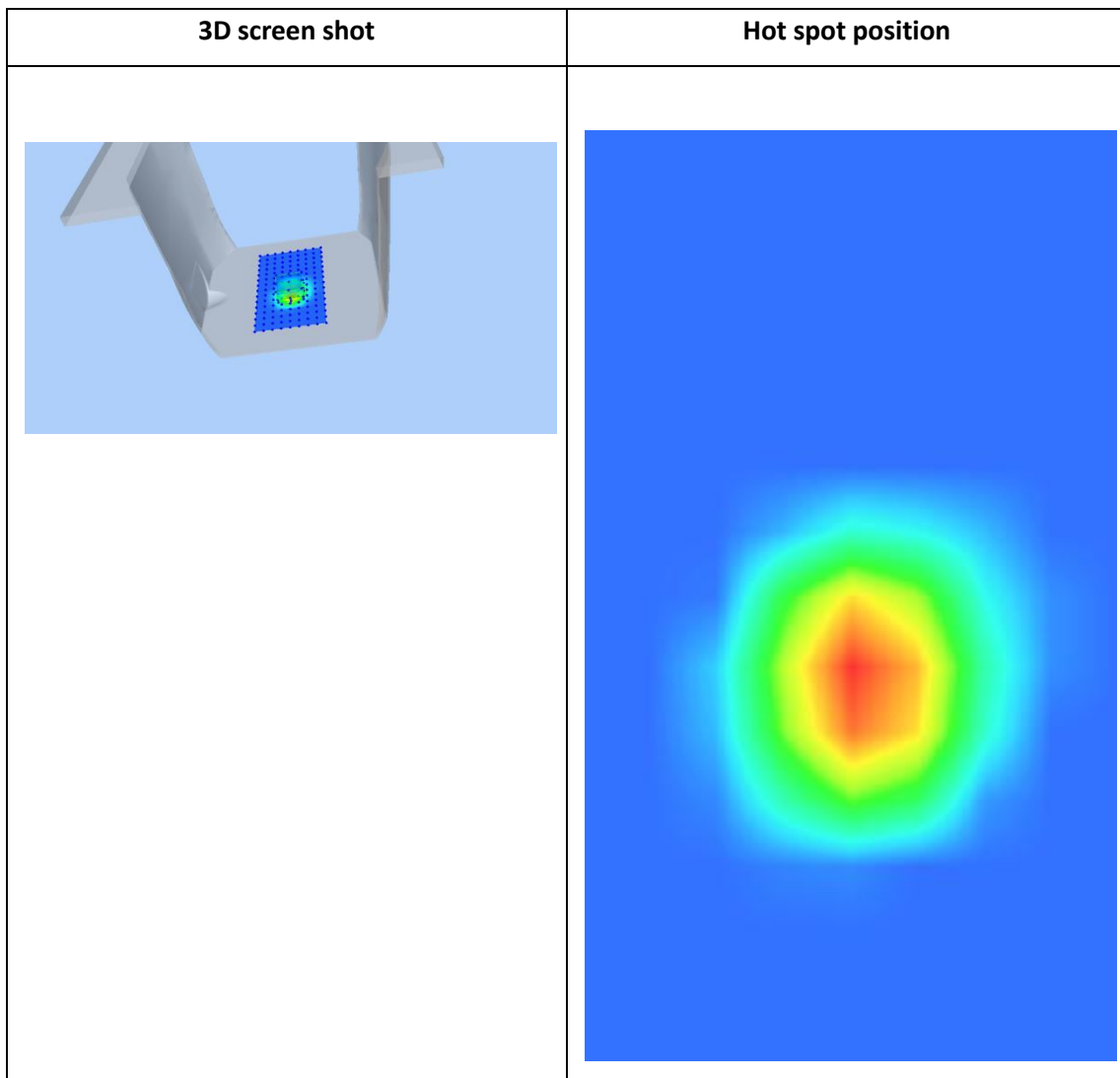
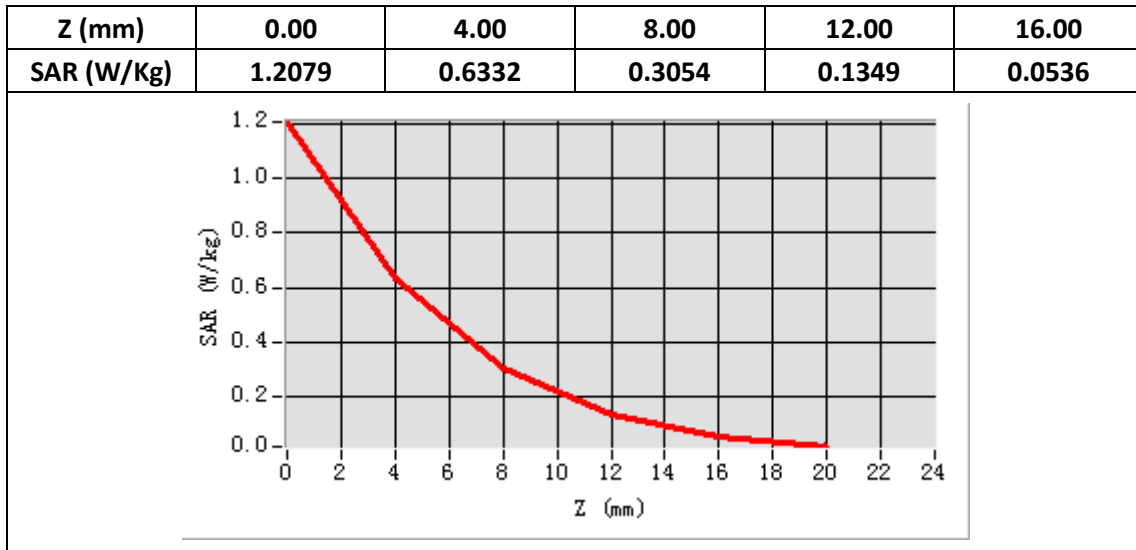
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	2600
<b>Relative permittivity (real part)</b>	39.16
<b>Relative permittivity</b>	13.71
<b>Conductivity (S/m)</b>	1.98
<b>Power drift (%)</b>	-2.45
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.5°C
<b>Crest factor:</b>	1:1
<b>ConvF:</b>	2.35



**Maximum location: X=1.00, Y=-13.00**

**SAR Peak: 1.21 W/kg**

<b>SAR 10g (W/Kg)</b>	0.229208
<b>SAR 1g (W/Kg)</b>	0.573003



## 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: 12/20/2019

Measurement duration: 22 minutes 06 seconds

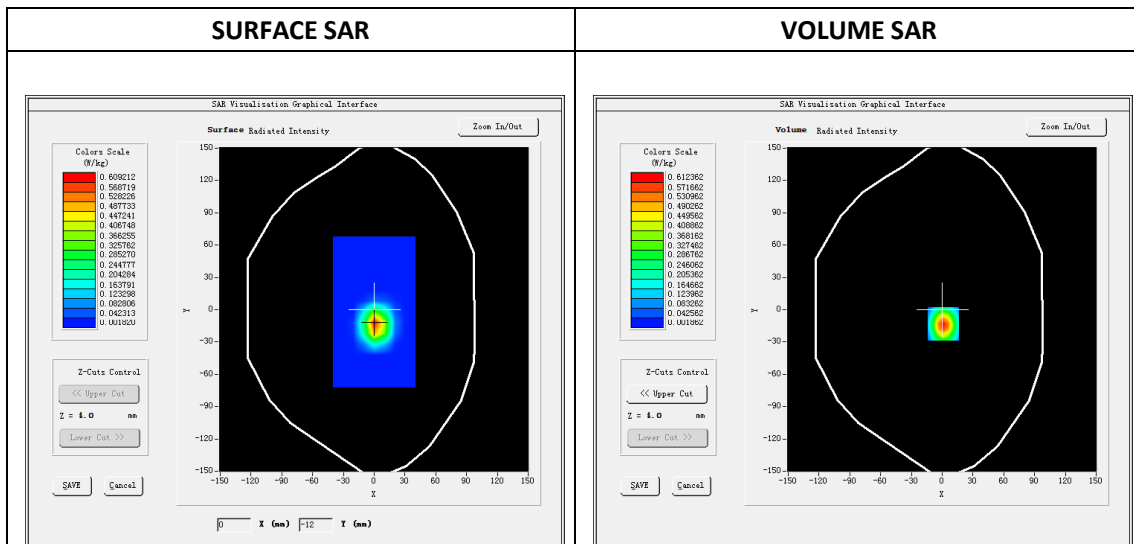
### A. Experimental conditions.

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

### B. SAR Measurement Results

#### Band SAR

<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	2600
<b>Relative permittivity (real part)</b>	52.66
<b>Relative permittivity</b>	15.09
<b>Conductivity (S/m)</b>	2.18
<b>Power drift (%)</b>	-2.92
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.5°C
<b>Crest factor:</b>	1:1
<b>ConvF:</b>	2.43



**Maximum location: X=1.00, Y=-13.00**

**SAR Peak: 1.17 W/kg**

<b>SAR 10g (W/Kg)</b>	0.218561
<b>SAR 1g (W/Kg)</b>	0.548354

