

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

<b>Measurement</b>	<b>Liquid</b>	<b>Frequency</b>	<b>Test Date</b>
System Check	Head	750	2021-01-31
System Check	Body	750	2021-01-31
System Check	Head	835	2021-01-25
System Check	Body	835	2021-01-25
System Check	Head	1800	2021-01-27
System Check	Body	1800	2021-01-27
System Check	Head	1900	2021-01-28
System Check	Body	1900	2021-01-28
System Check	Head	2450	2021-01-29
System Check	Body	2450	2021-01-29
System Check	Head	2600	2021-01-30
System Check	Body	2600	2021-01-30

## 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: 01/31/2021

Measurement duration: 22 minutes 02 seconds

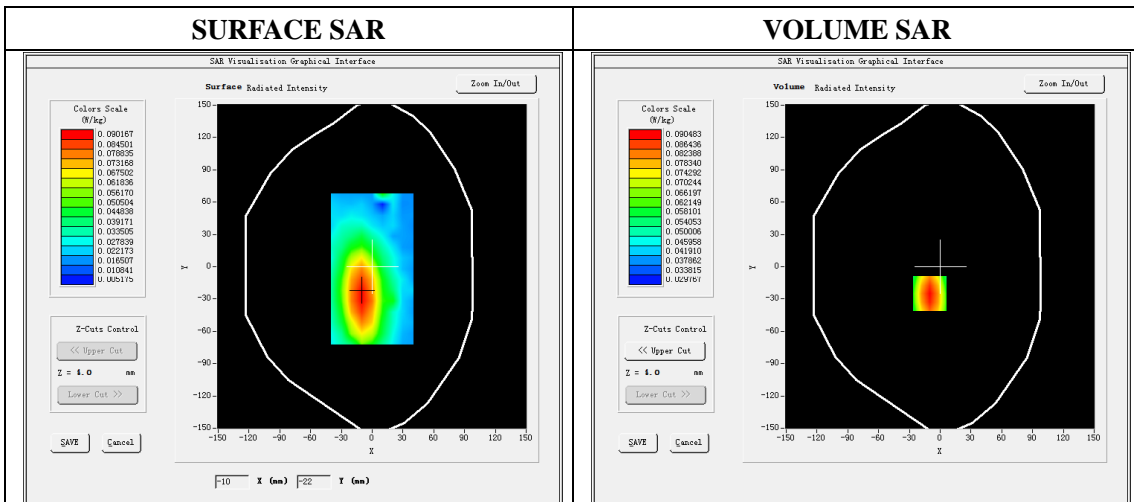
### A. Experimental conditions.

<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>	750MHz
<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>	750
<b>Relative permittivity (real part)</b>	41.94
<b>Relative permittivity</b>	22.32
<b>Conductivity (S/m)</b>	0.93
<b>Power drift (%)</b>	-1.84
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	1.78
<b>Crest factor:</b>	1:1

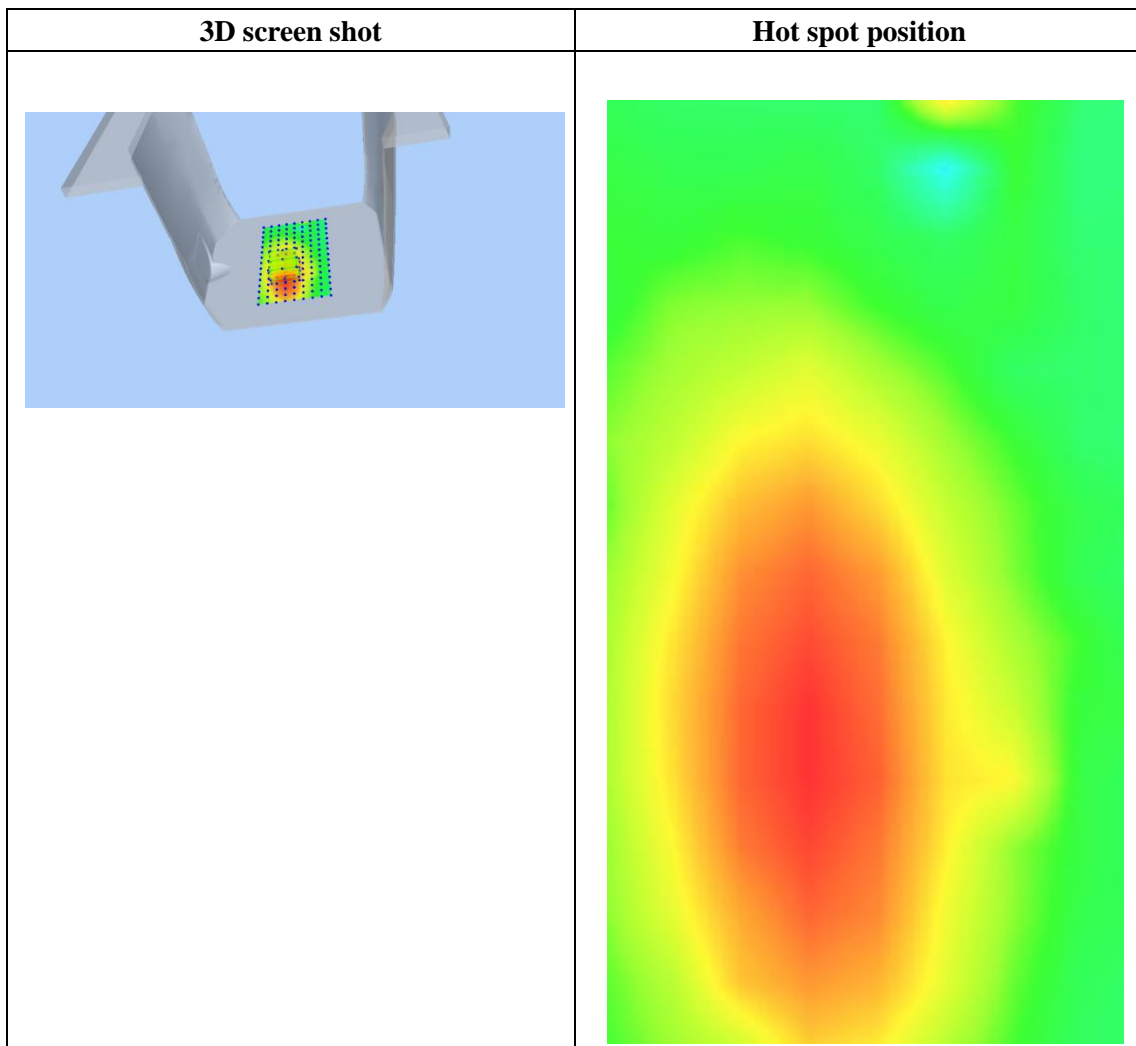
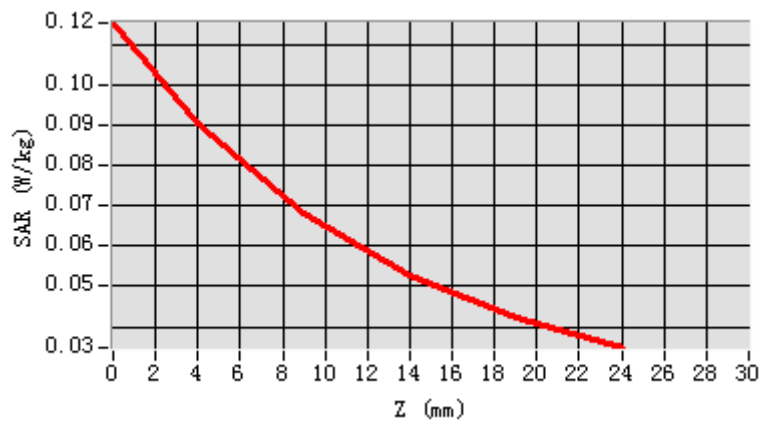


**Maximum location: X=-10.00, Y=-25.00**

**SAR Peak: 0.12 W/kg**

<b>SAR 10g (W/Kg)</b>	0.063334
<b>SAR 1g (W/Kg)</b>	0.087409

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1152	0.0905	0.0678	0.0526	0.0424



## 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: 01/31/2021

Measurement duration: 22 minutes 05 seconds

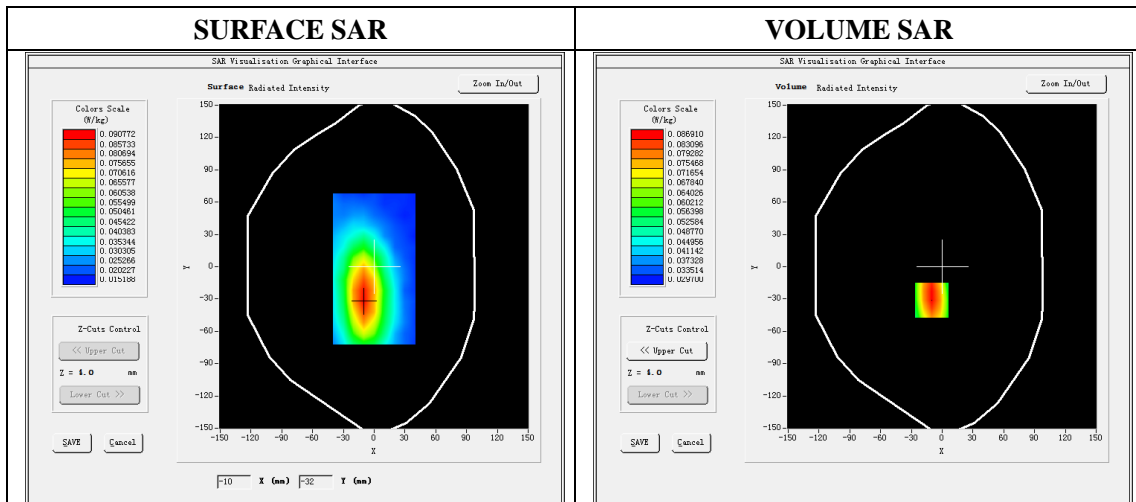
### A. Experimental conditions.

<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>	750MHz
<b>Channels</b>	
<b>Signal</b>	CW

### B. SAR Measurement Results

#### Band SAR

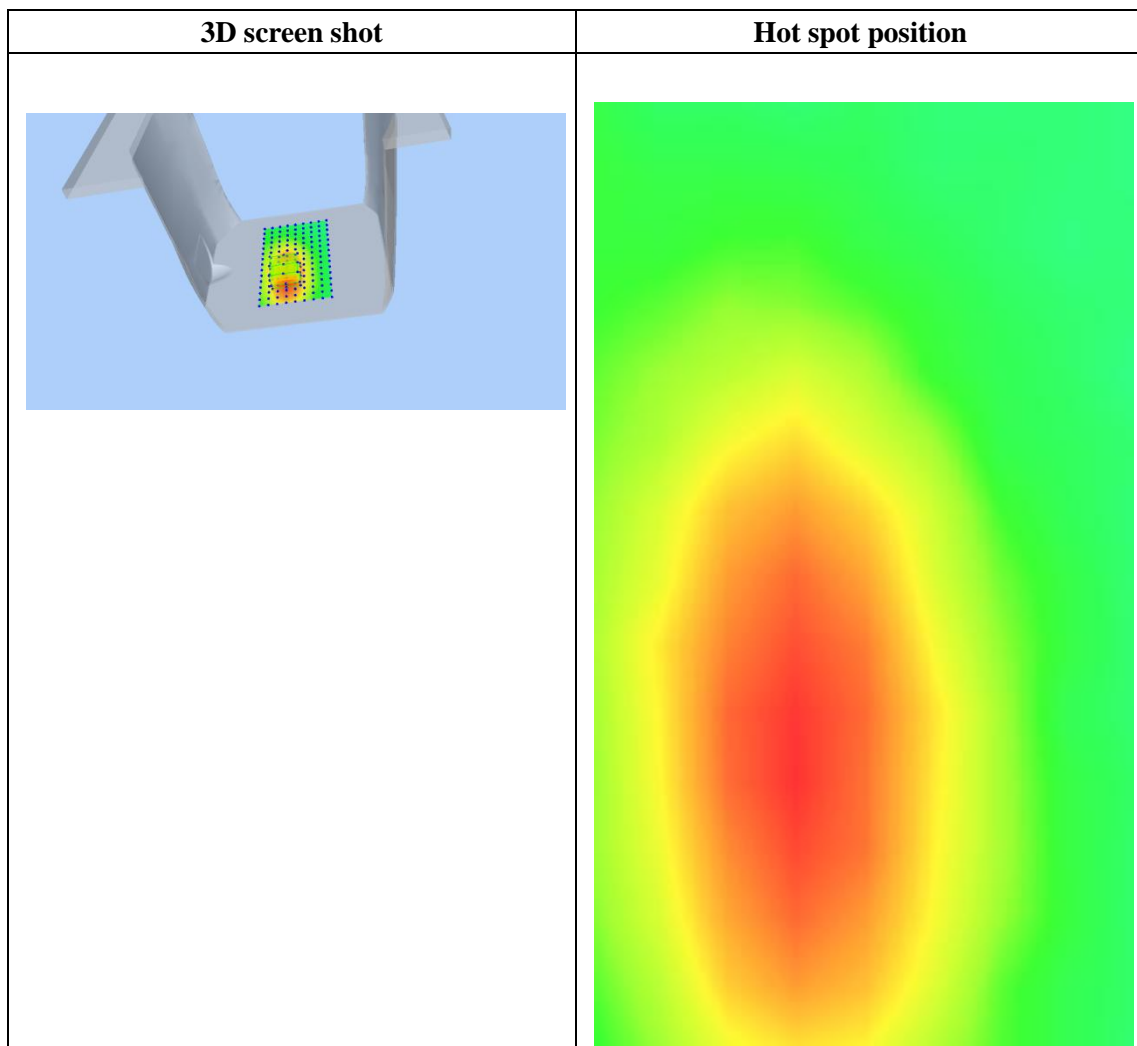
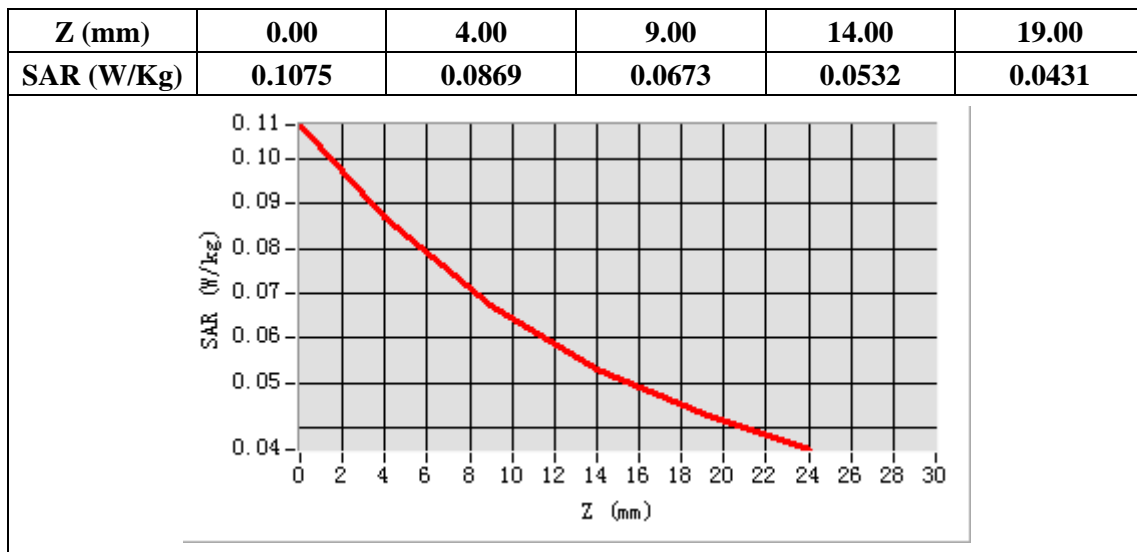
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	750
<b>Relative permittivity (real part)</b>	55.52
<b>Relative permittivity</b>	23.28
<b>Conductivity (S/m)</b>	0.97
<b>Power drift (%)</b>	-2.45
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	1.88
<b>Crest factor:</b>	1:1



**Maximum location: X=-10.00, Y=-31.00**

**SAR Peak: 0.11 W/kg**

<b>SAR 10g (W/Kg)</b>	0.062127
<b>SAR 1g (W/Kg)</b>	0.084292



## 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: 01/25/2021

Measurement duration: 22 minutes 08 seconds

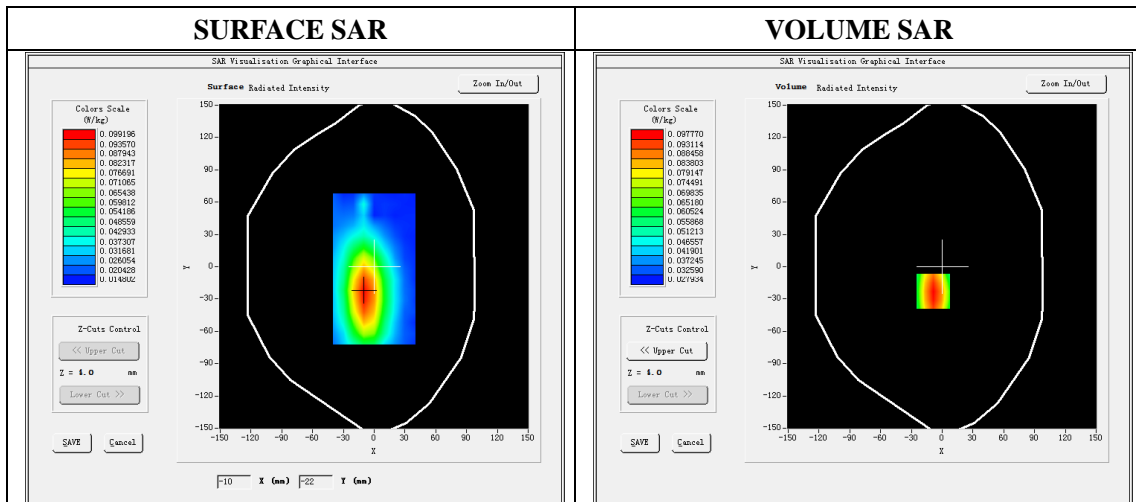
### A. Experimental conditions.

<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

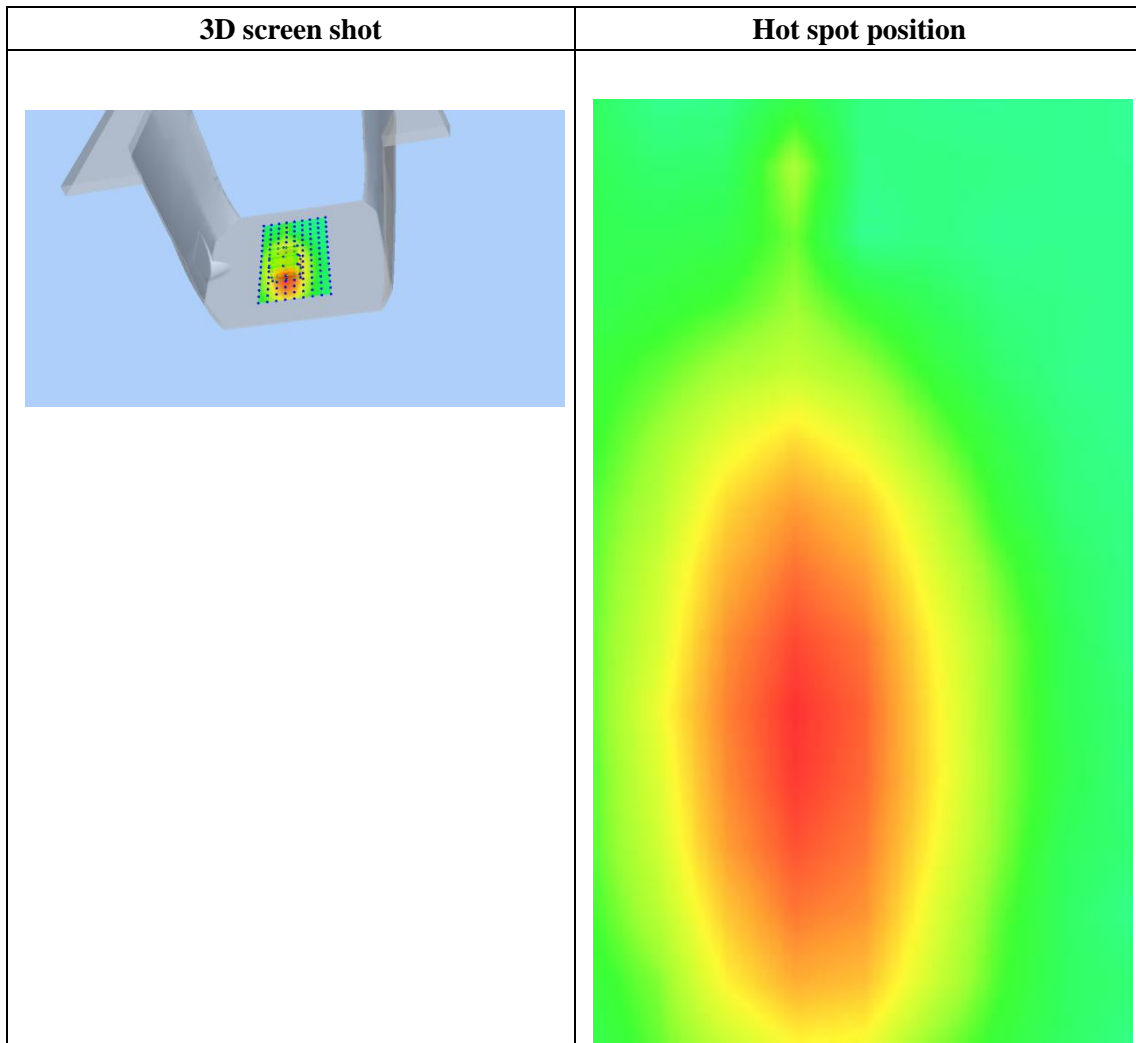
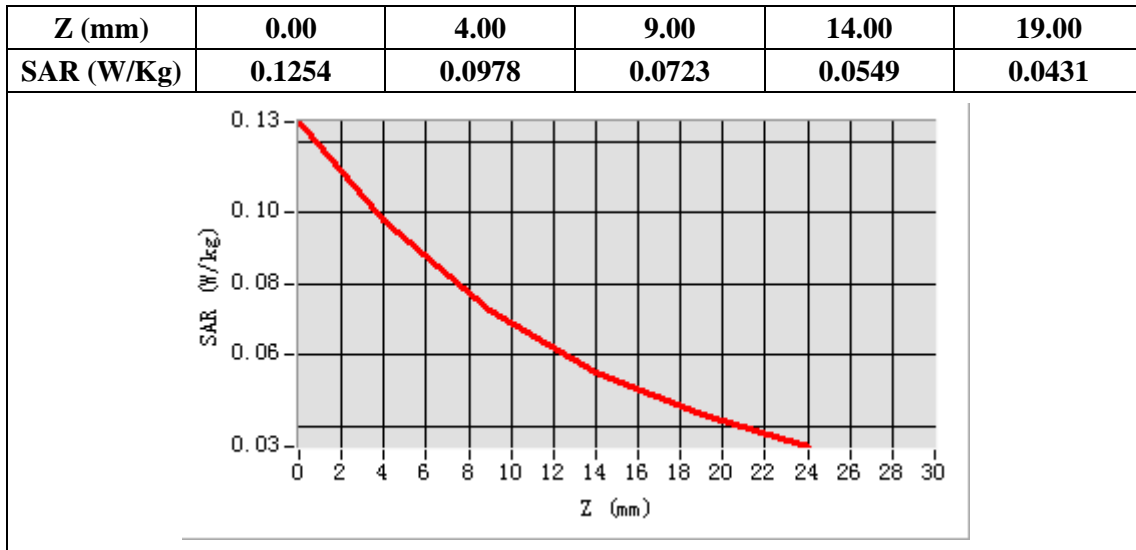
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	835
<b>Relative permittivity (real part)</b>	41.53
<b>Relative permittivity</b>	19.83
<b>Conductivity (S/m)</b>	0.92
<b>Power drift (%)</b>	-2.23
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	1.86
<b>Crest factor:</b>	1:1



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

**SAR Peak: 0.13 W/kg**

<b>SAR 10g (W/Kg)</b>	0.066381
<b>SAR 1g (W/Kg)</b>	0.093596



## 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: 01/25/2021

Measurement duration: 22 minutes 03 seconds

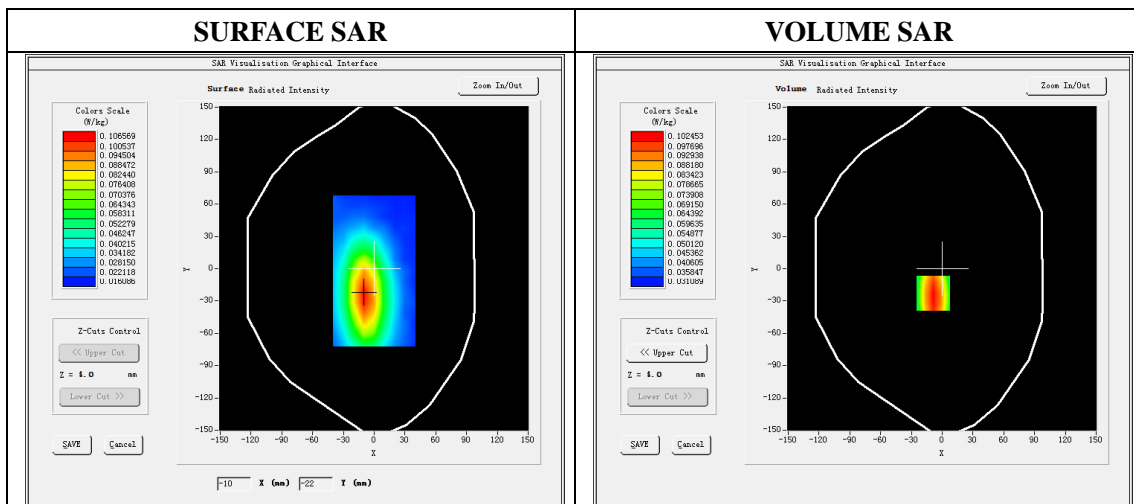
### A. Experimental conditions.

<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>	55.21
<b>Relative permittivity</b>	20.91
<b>Conductivity (S/m)</b>	0.97
<b>Power drift (%)</b>	-3.44
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	1.90
<b>Crest factor:</b>	1:1

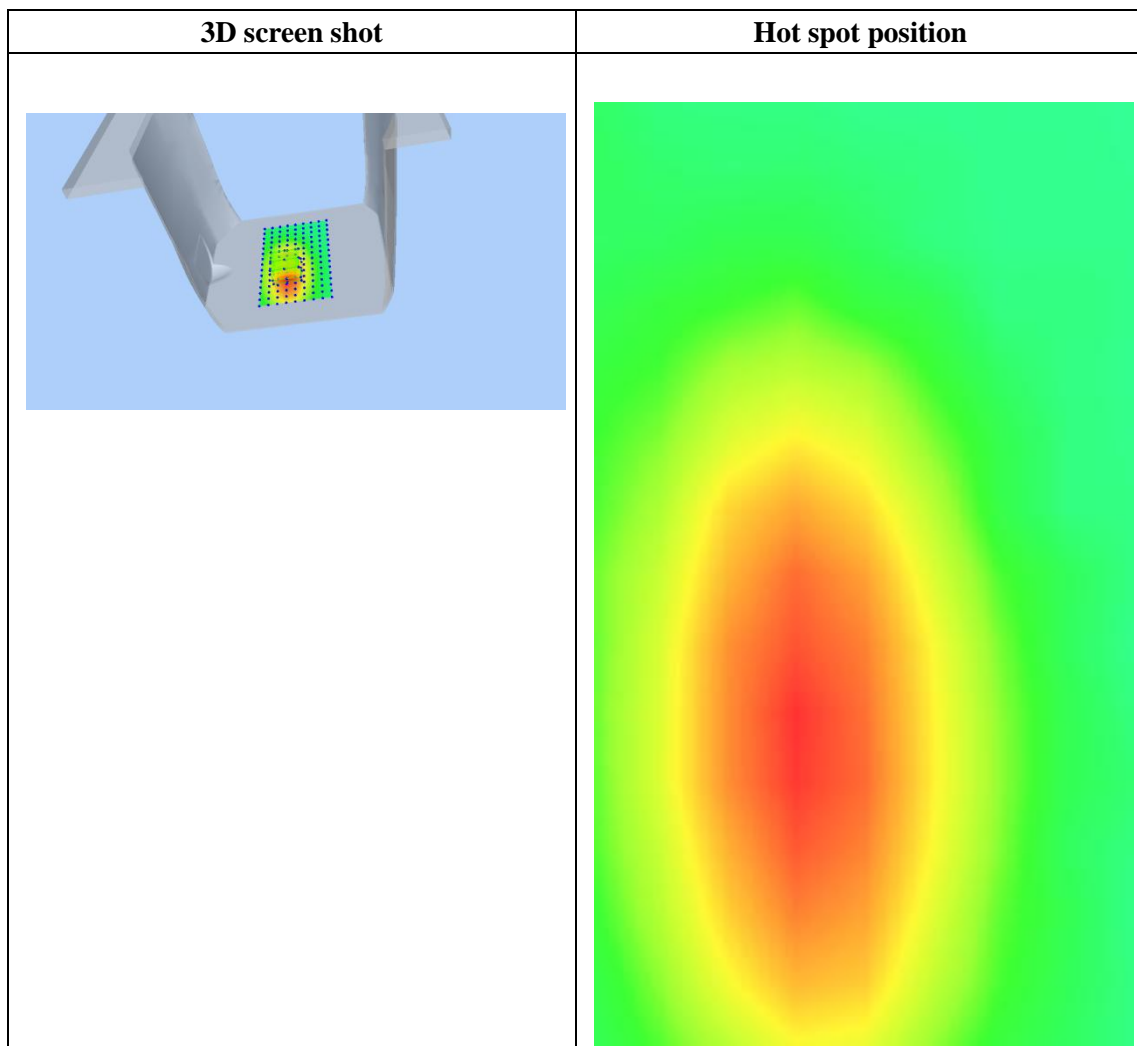
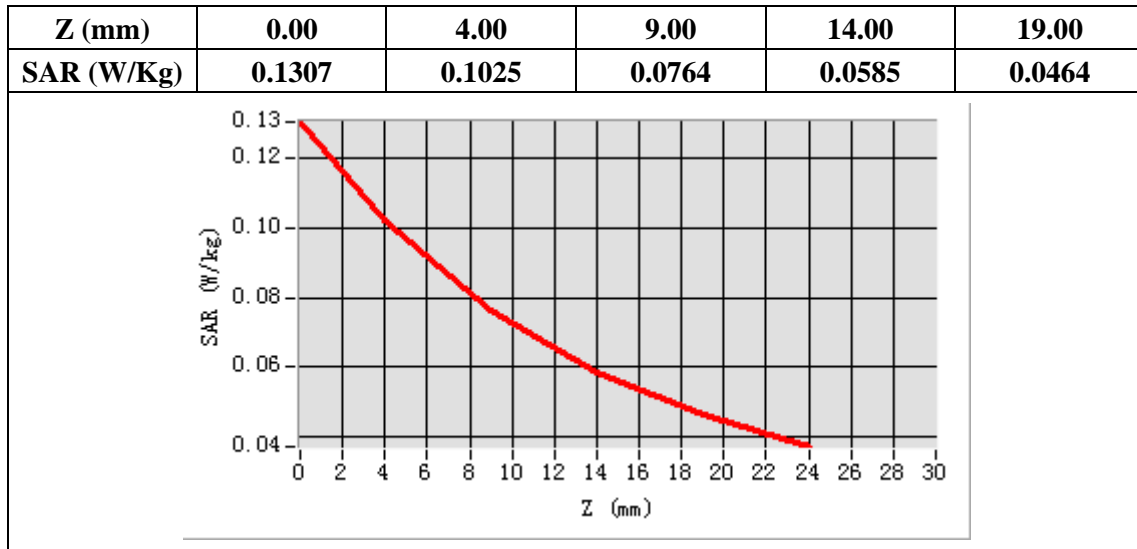


**Maximum location: X=-9.00, Y=-23.00**

**SAR Peak: 0.13 W/kg**

<b>SAR 10g (W/Kg)</b>	0.071299
<b>SAR 1g (W/Kg)</b>	0.100293





## 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: 01/27/2021

Measurement duration: 22 minutes 06 seconds

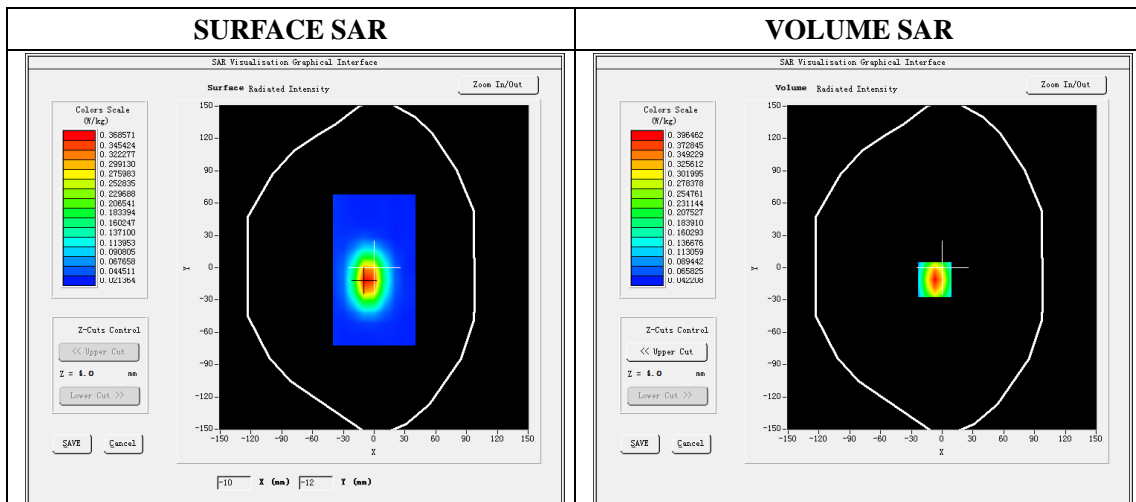
### A. Experimental conditions.

<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

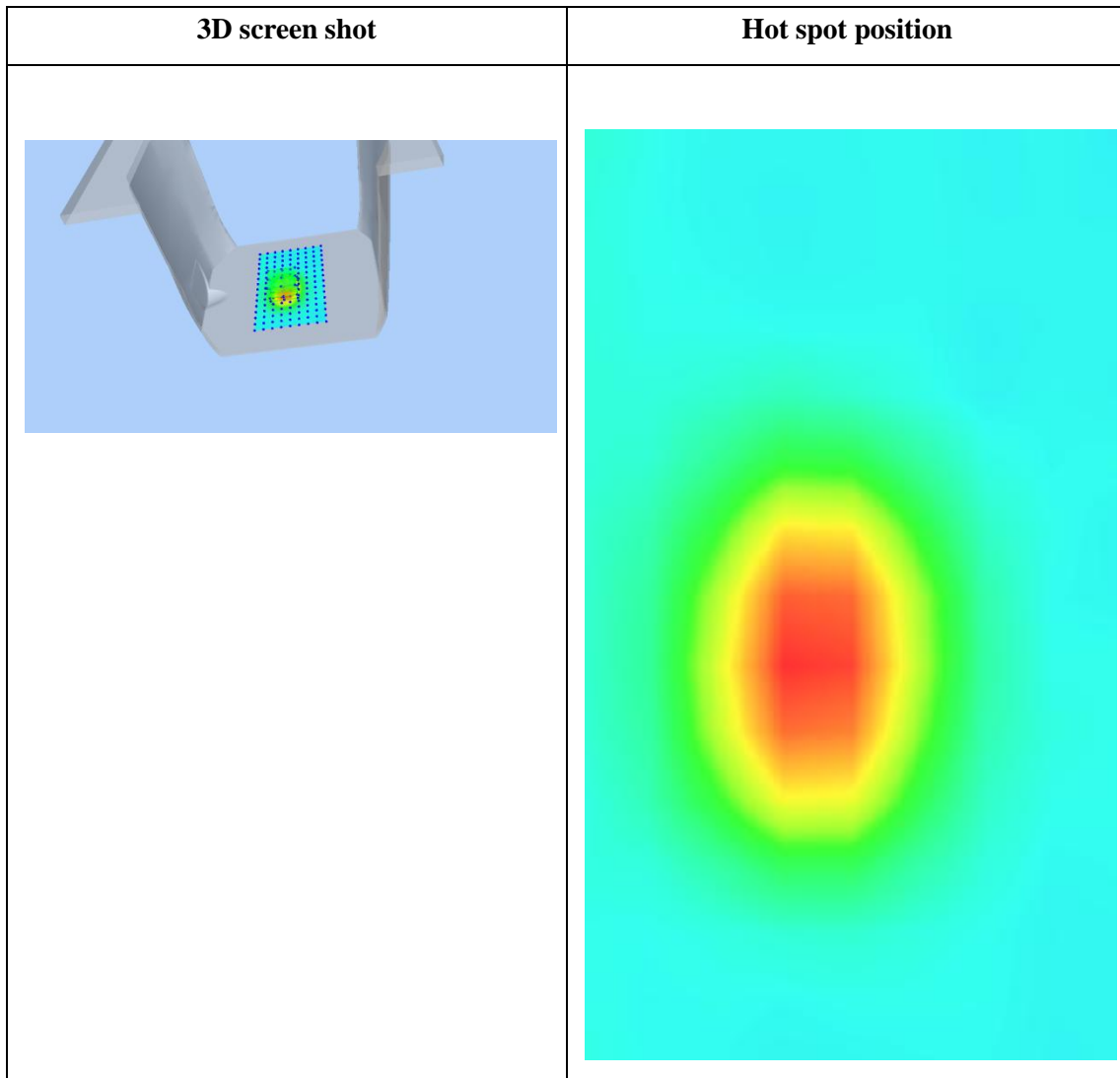
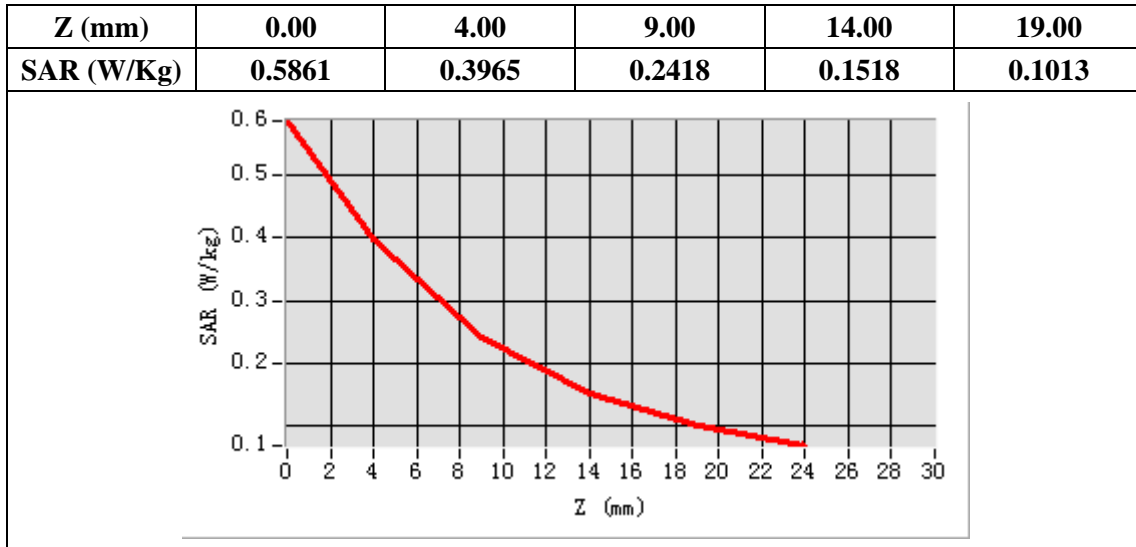
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	1800
<b>Relative permittivity (real part)</b>	40.55
<b>Relative permittivity</b>	14.50
<b>Conductivity (S/m)</b>	1.45
<b>Power Drift (%)</b>	-1.09
<b>Ambient Temperature:</b>	22.1 °C
<b>Liquid Temperature:</b>	22.6 °C
<b>ConvF:</b>	2.04
<b>Duty factor:</b>	1:1



**Maximum location: X=-7.00, Y=-11.00**

**SAR Peak: 0.59 W/kg**

<b>SAR 10g (W/Kg)</b>	0.209919
<b>SAR 1g (W/Kg)</b>	0.372796



## 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: 01/27/2021

Measurement duration: 22 minutes 09 seconds

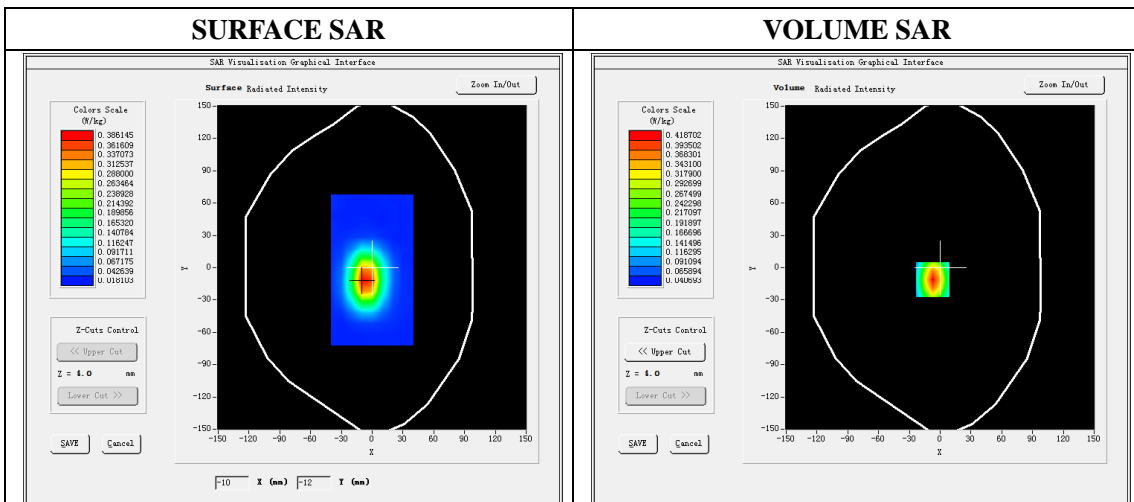
### A. Experimental conditions.

<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

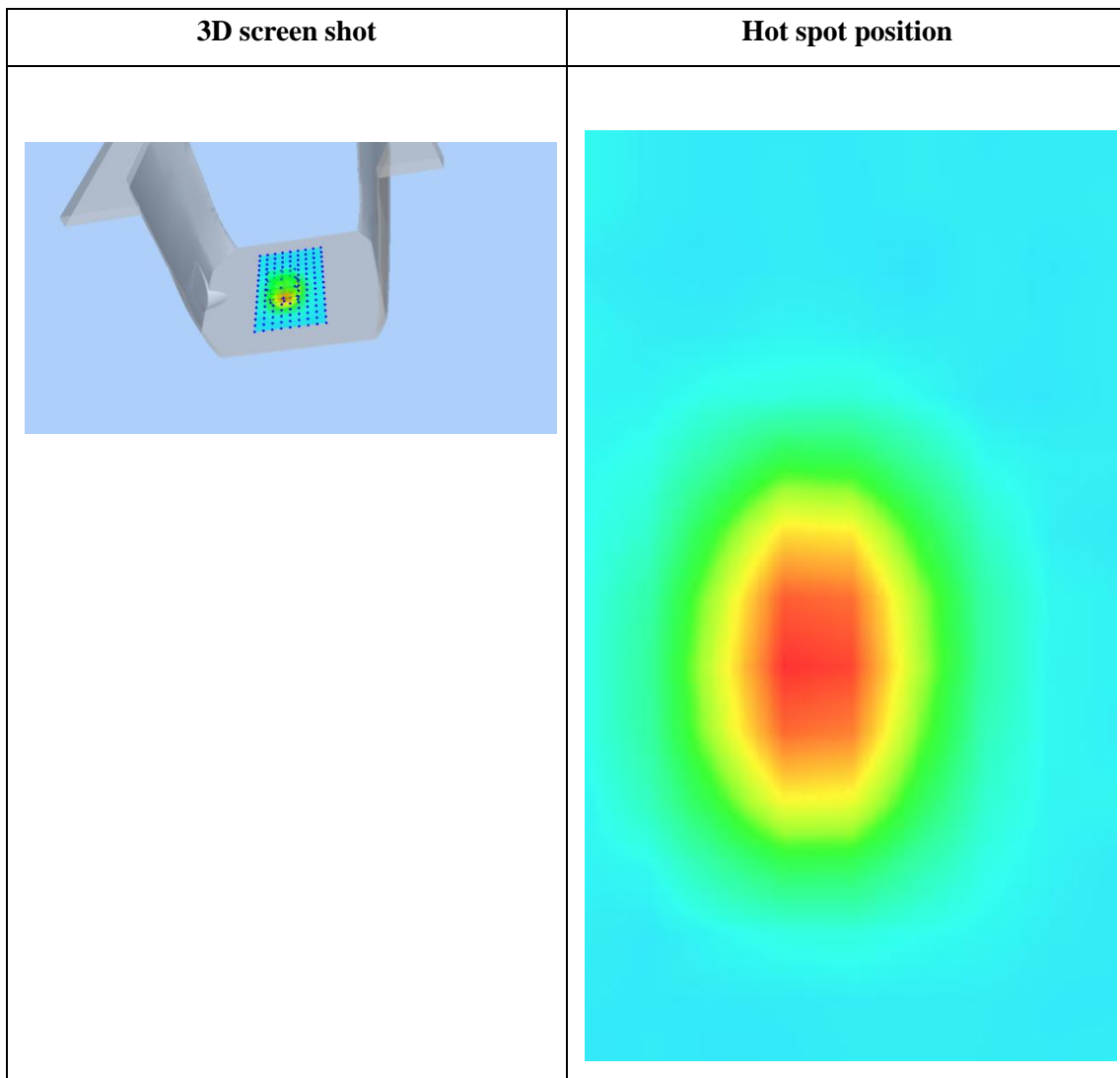
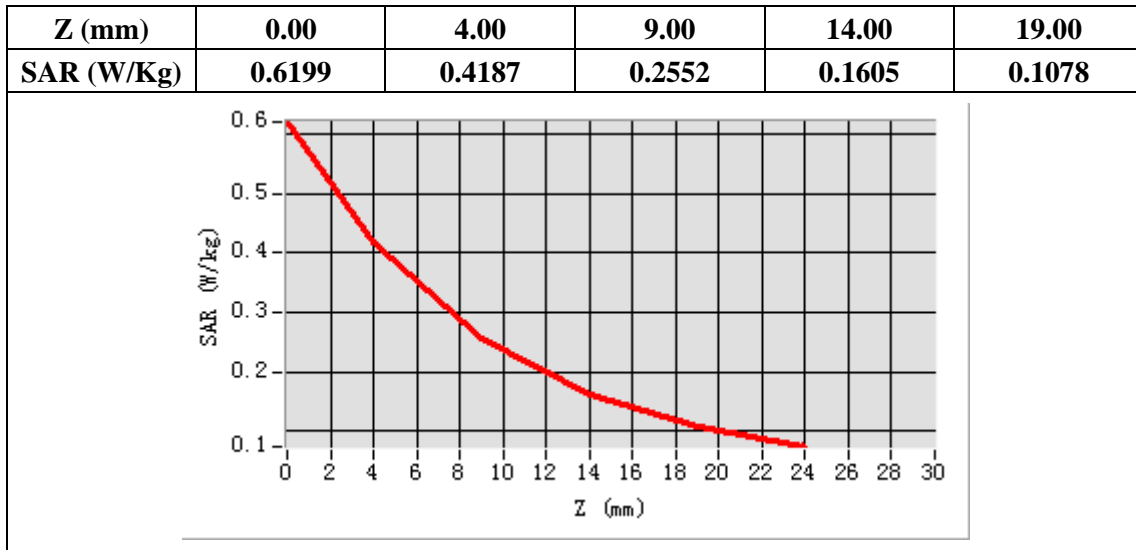
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	1800
<b>Relative permittivity (real part)</b>	55.21
<b>Relative permittivity</b>	20.91
<b>Conductivity (S/m)</b>	0.97
<b>Power Drift (%)</b>	-1.90
<b>Ambient Temperature:</b>	22.1 °C
<b>Liquid Temperature:</b>	22.6 °C
<b>ConvF:</b>	2.09
<b>Duty factor:</b>	1:1



**Maximum location: X=-7.00, Y=-11.00**

**SAR Peak: 0.62 W/kg**

<b>SAR 10g (W/Kg)</b>	0.219682
<b>SAR 1g (W/Kg)</b>	0.387832



## 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: 01/28/2021

Measurement duration: 22 minutes 01 seconds

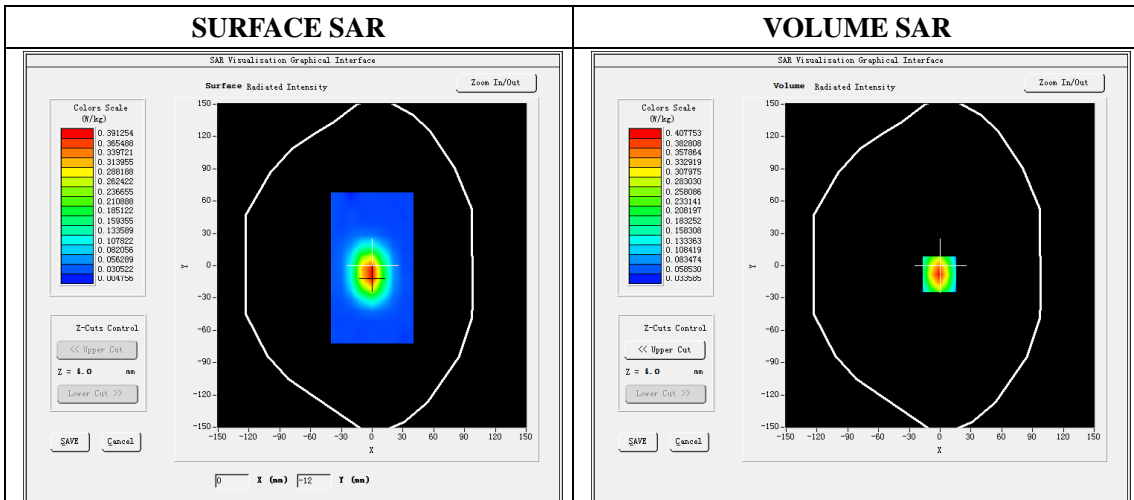
### A. Experimental conditions.

<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

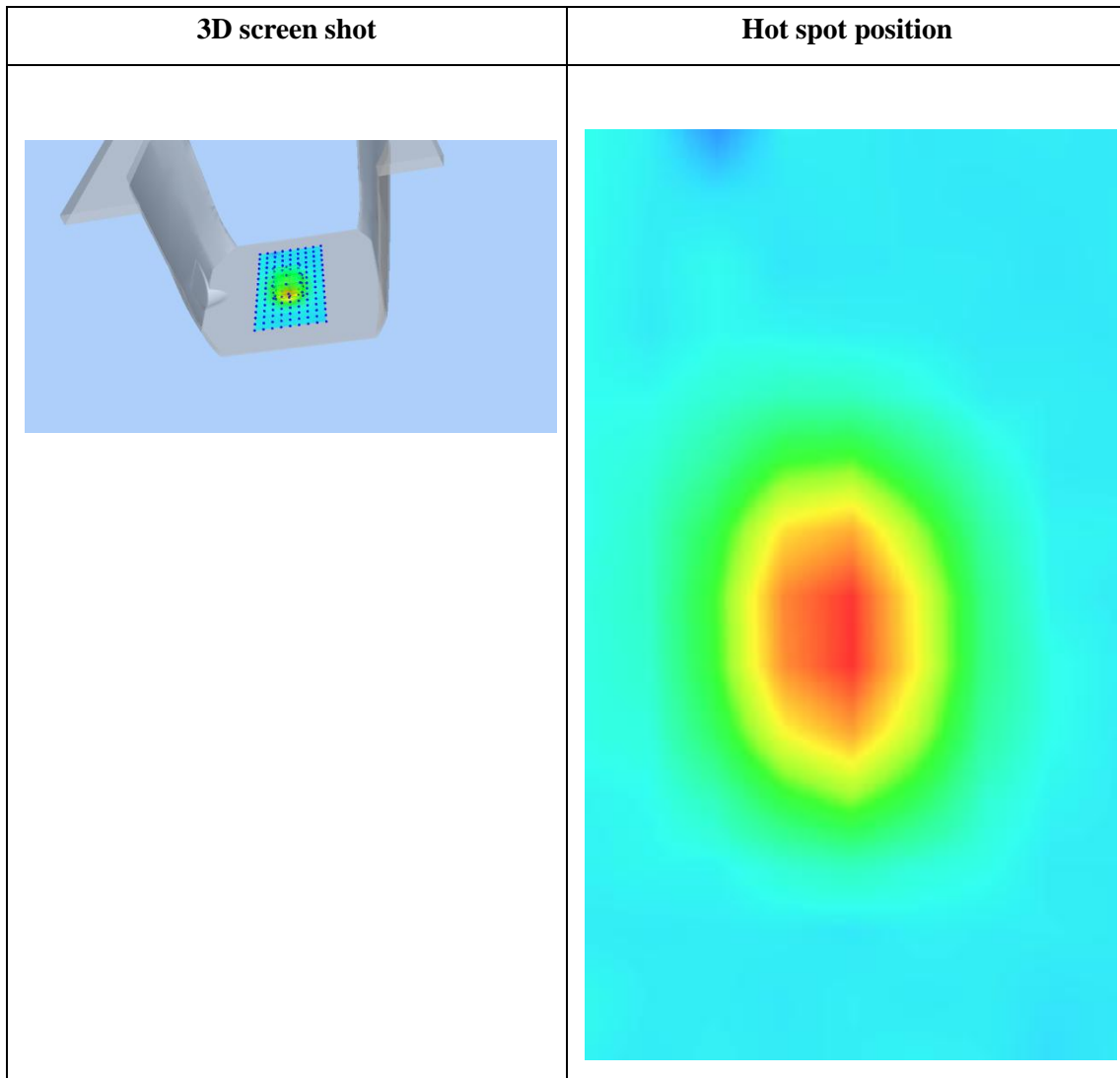
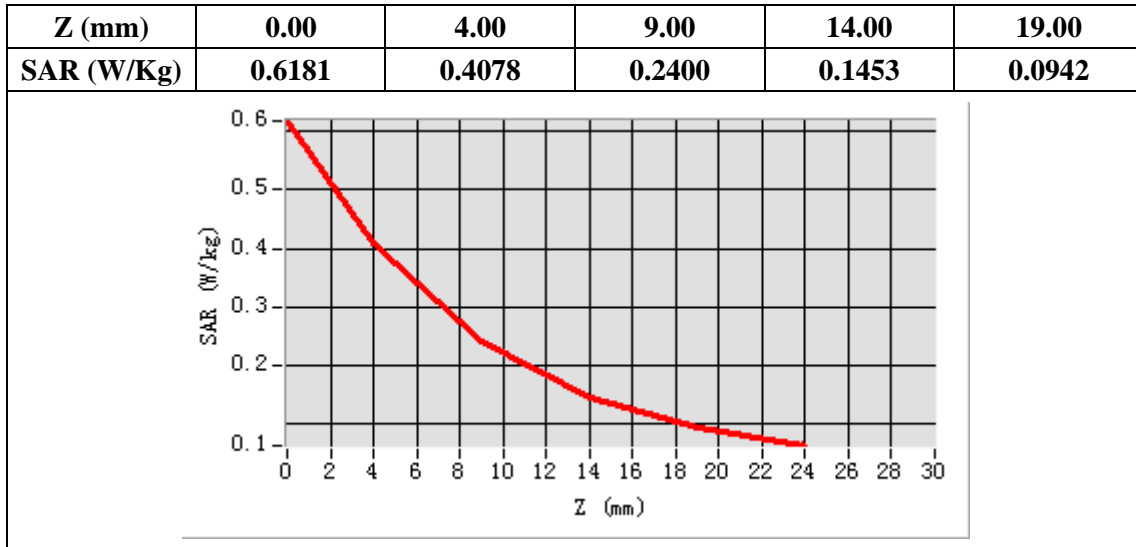
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	1900
<b>Relative permittivity (real part)</b>	40.49
<b>Relative permittivity</b>	13.17
<b>Conductivity (S/m)</b>	1.39
<b>Power Drift (%)</b>	-0.92
<b>Ambient Temperature:</b>	22.1 °C
<b>Liquid Temperature:</b>	22.6 °C
<b>ConvF:</b>	2.20
<b>Duty factor:</b>	1:1



**Maximum location: X=-1.00, Y=-8.00**

**SAR Peak: 0.62 W/kg**

<b>SAR 10g (W/Kg)</b>	0.206838
<b>SAR 1g (W/Kg)</b>	0.377203



## 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: 01/28/2021

Measurement duration: 22 minutes 04 seconds

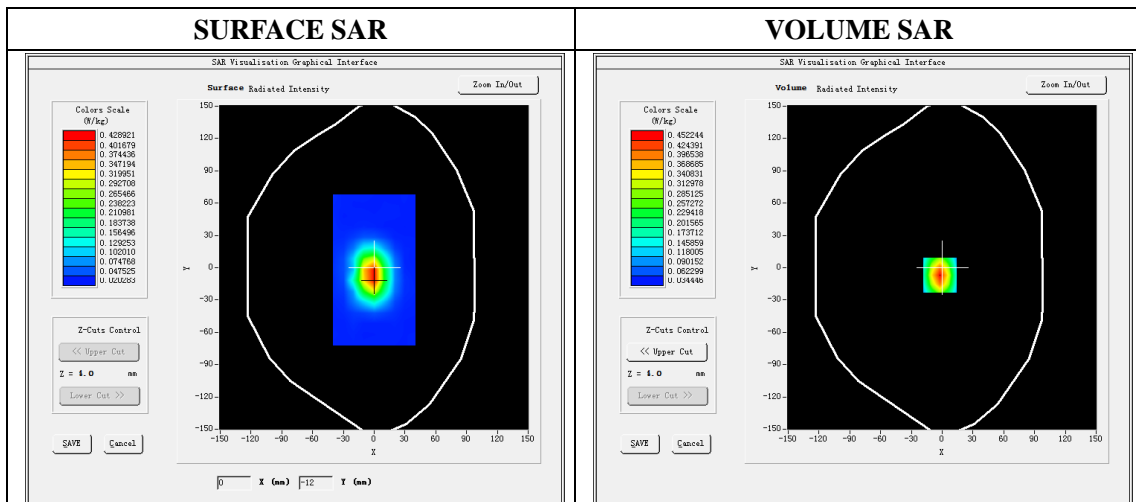
### A. Experimental conditions.

<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>	53.28
<b>Relative permittivity</b>	14.21
<b>Conductivity (S/m)</b>	1.50
<b>Power Drift (%)</b>	-1.77
<b>Ambient Temperature:</b>	22.1 °C
<b>Liquid Temperature:</b>	22.6 °C
<b>ConvF:</b>	2.26
<b>Duty factor:</b>	1:1

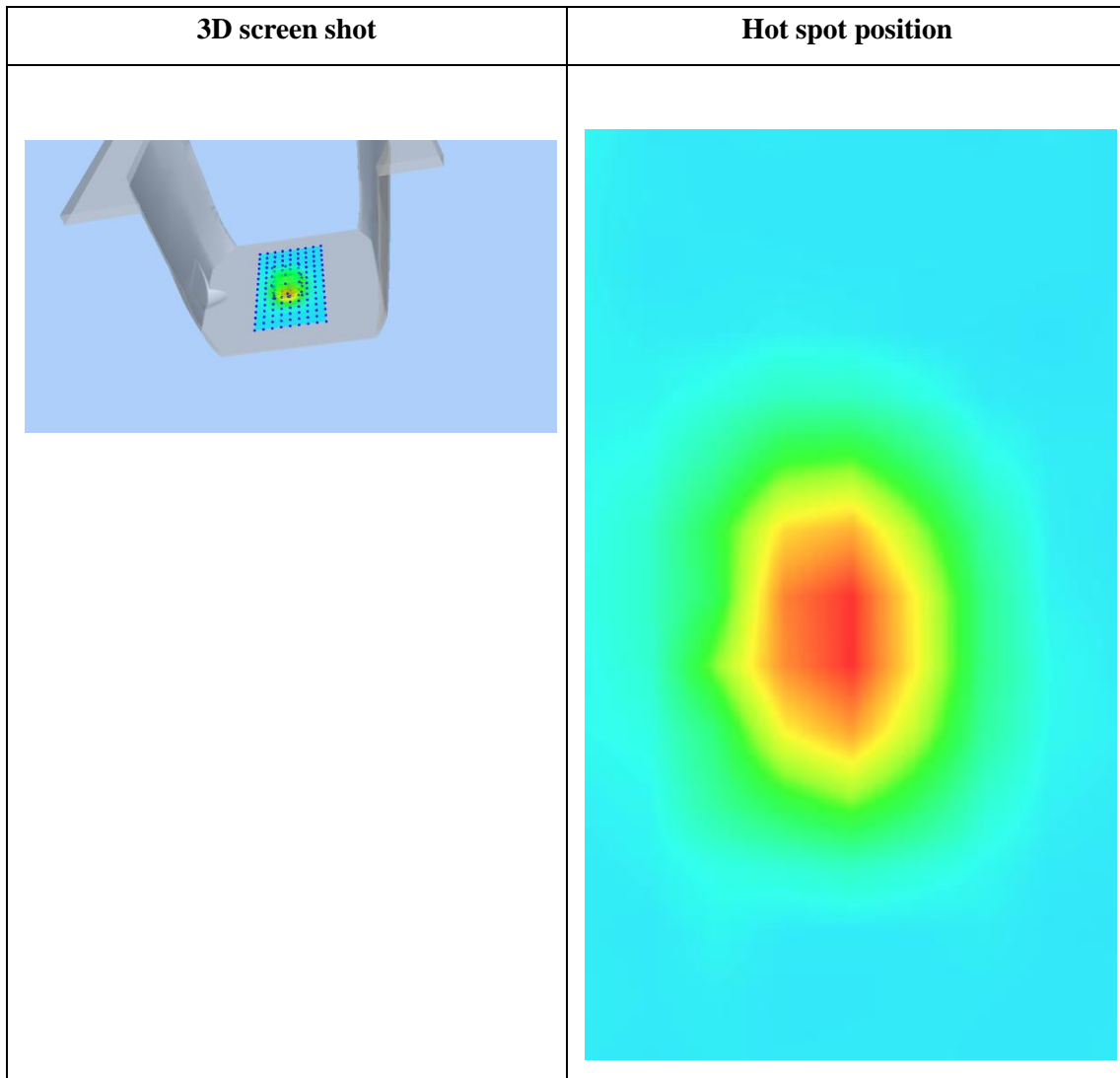
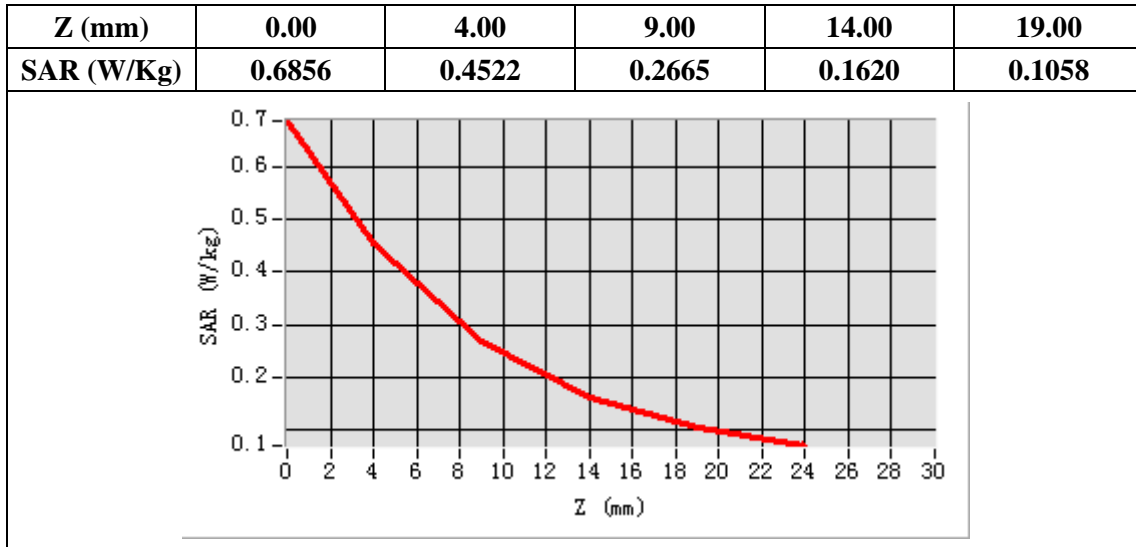


**Maximum location: X=-2.00, Y=-7.00**

**SAR Peak: 0.69 W/kg**

<b>SAR 10g (W/Kg)</b>	0.228857
<b>SAR 1g (W/Kg)</b>	0.416963





## 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: 01/29/2021

Measurement duration: 22 minutes 07 seconds

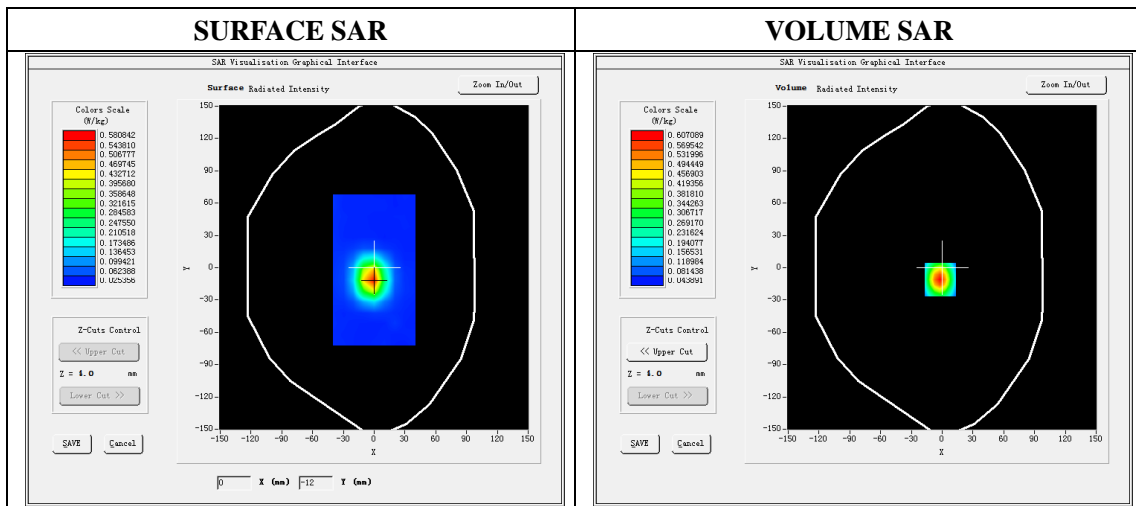
### A. Experimental conditions.

<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

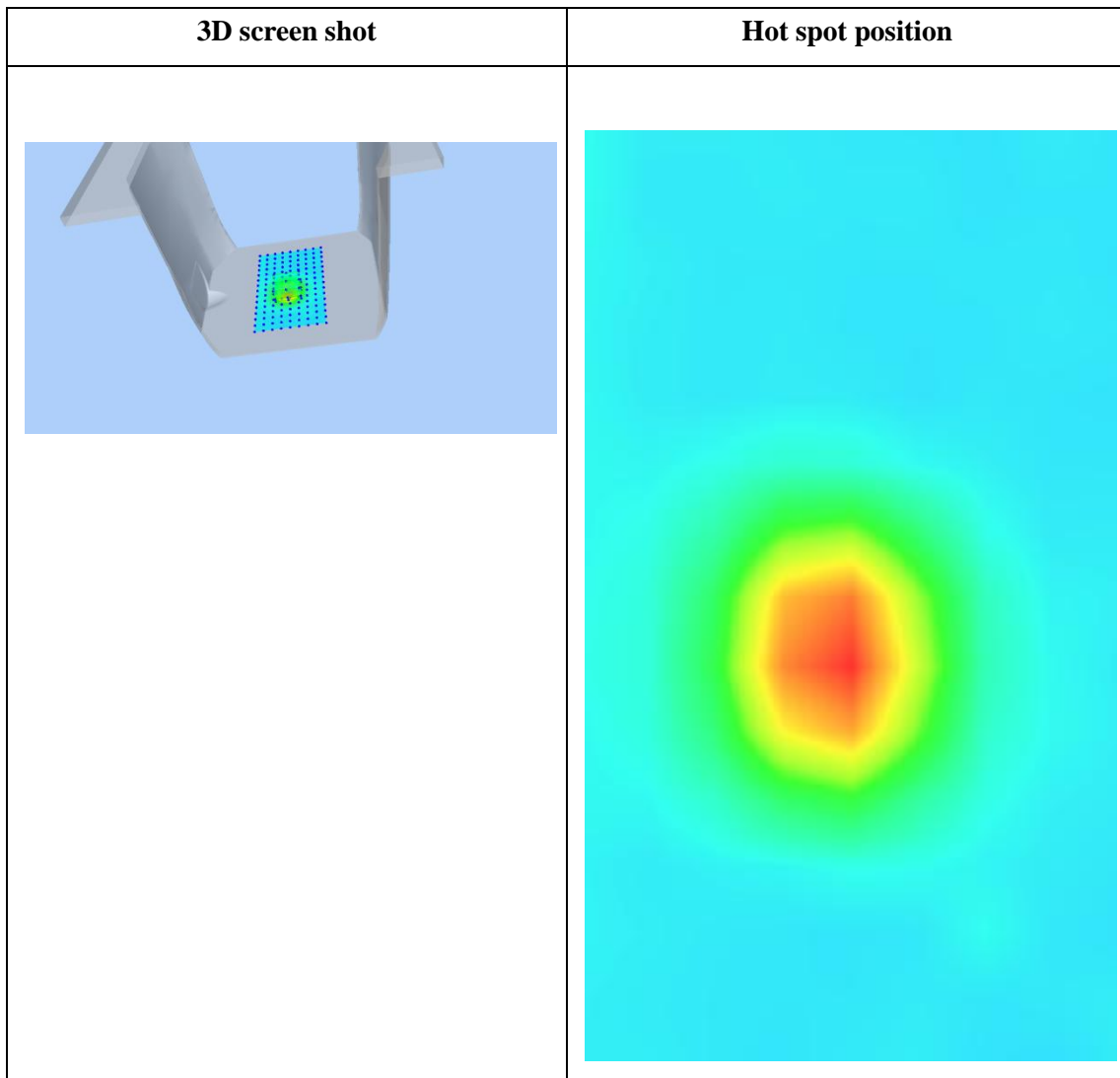
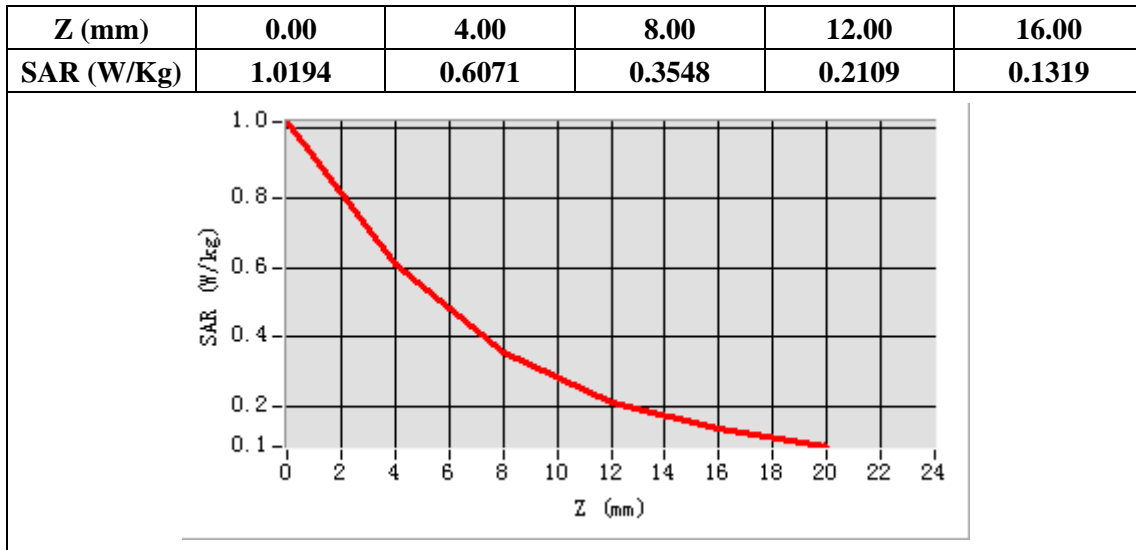
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	2450
<b>Relative permittivity (real part)</b>	39.21
<b>Relative permittivity</b>	13.30
<b>Conductivity (S/m)</b>	1.81
<b>Power Drift (%)</b>	-0.65
<b>Ambient Temperature:</b>	22.1°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	2.18
<b>Duty factor:</b>	1:1



**Maximum location: X=-2.00, Y=-11.00**

**SAR Peak: 1.02 W/kg**

<b>SAR 10g (W/Kg)</b>	0.266620
<b>SAR 1g (W/Kg)</b>	0.543696



## 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: 01/29/2021

Measurement duration: 22 minutes 10 seconds

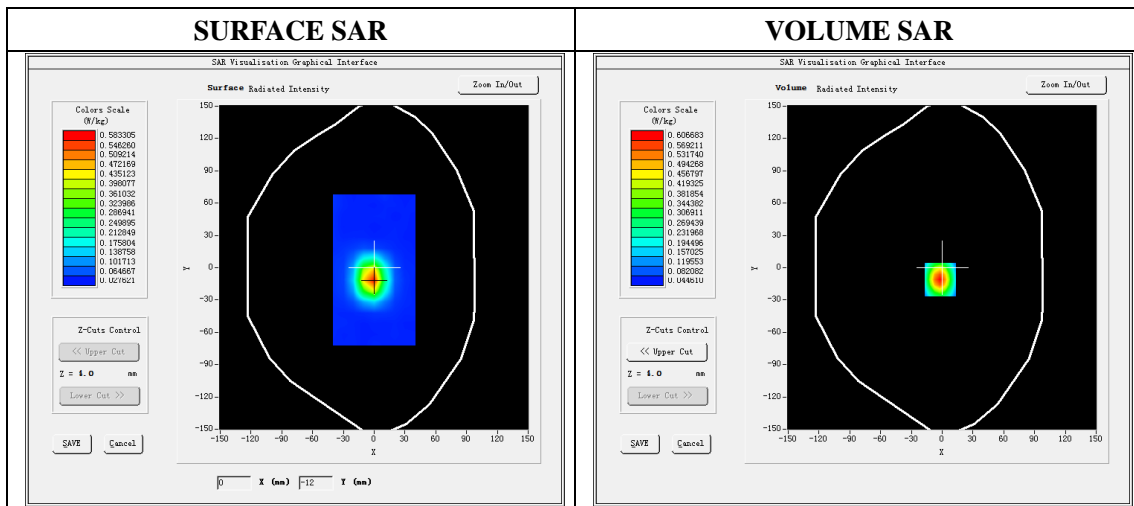
### A. Experimental conditions.

<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>	52.69
<b>Relative permittivity</b>	14.33
<b>Conductivity (S/m)</b>	1.95
<b>Power Drift (%)</b>	-1.29
<b>Ambient Temperature:</b>	22.1°C
<b>Liquid Temperature:</b>	22.6°C
<b>ConvF:</b>	2.47
<b>Duty factor:</b>	1:1

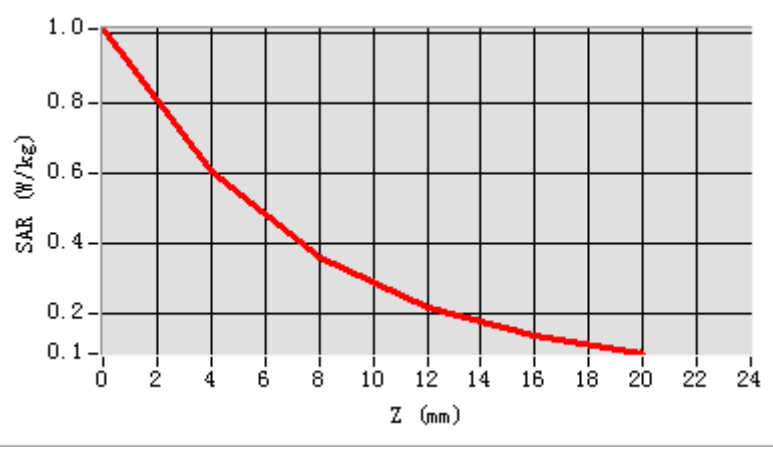


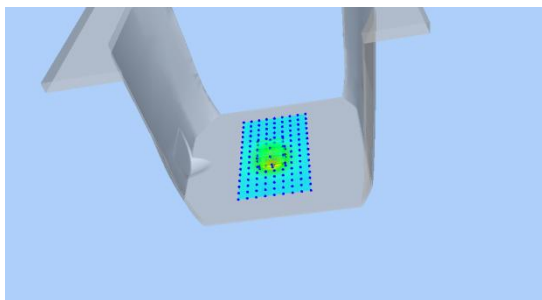
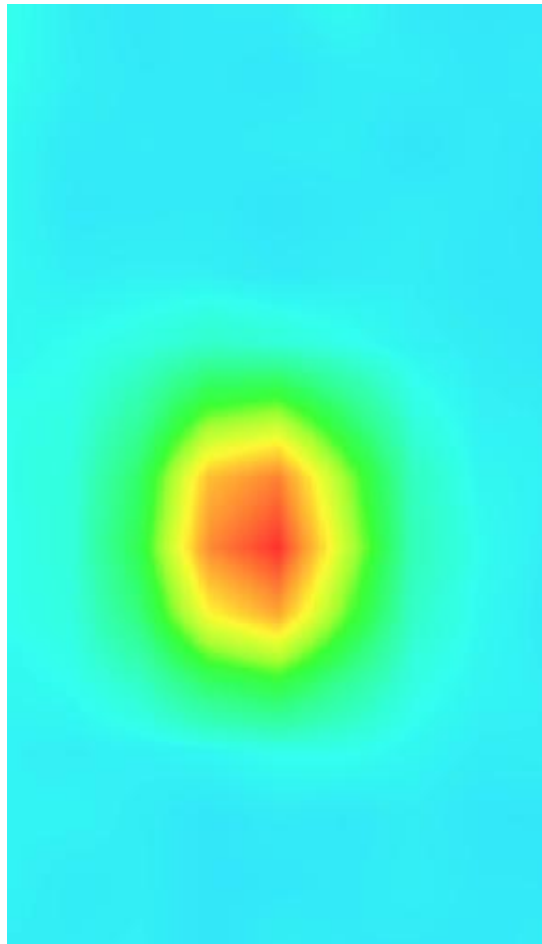
**Maximum location: X=-2.00, Y=-11.00**

**SAR Peak: 1.01 W/kg**

<b>SAR 10g (W/Kg)</b>	0.268813
<b>SAR 1g (W/Kg)</b>	0.548990

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.0107	0.6067	0.3576	0.2142	0.1344



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: 01/30/2021

Measurement duration: 22 minutes 12 seconds

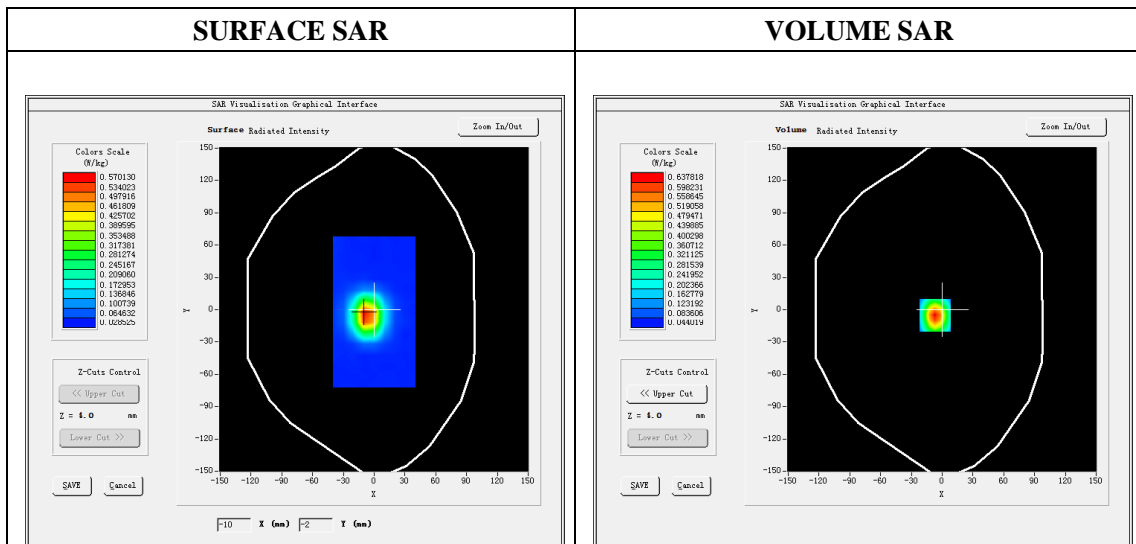
### A. Experimental conditions.

<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

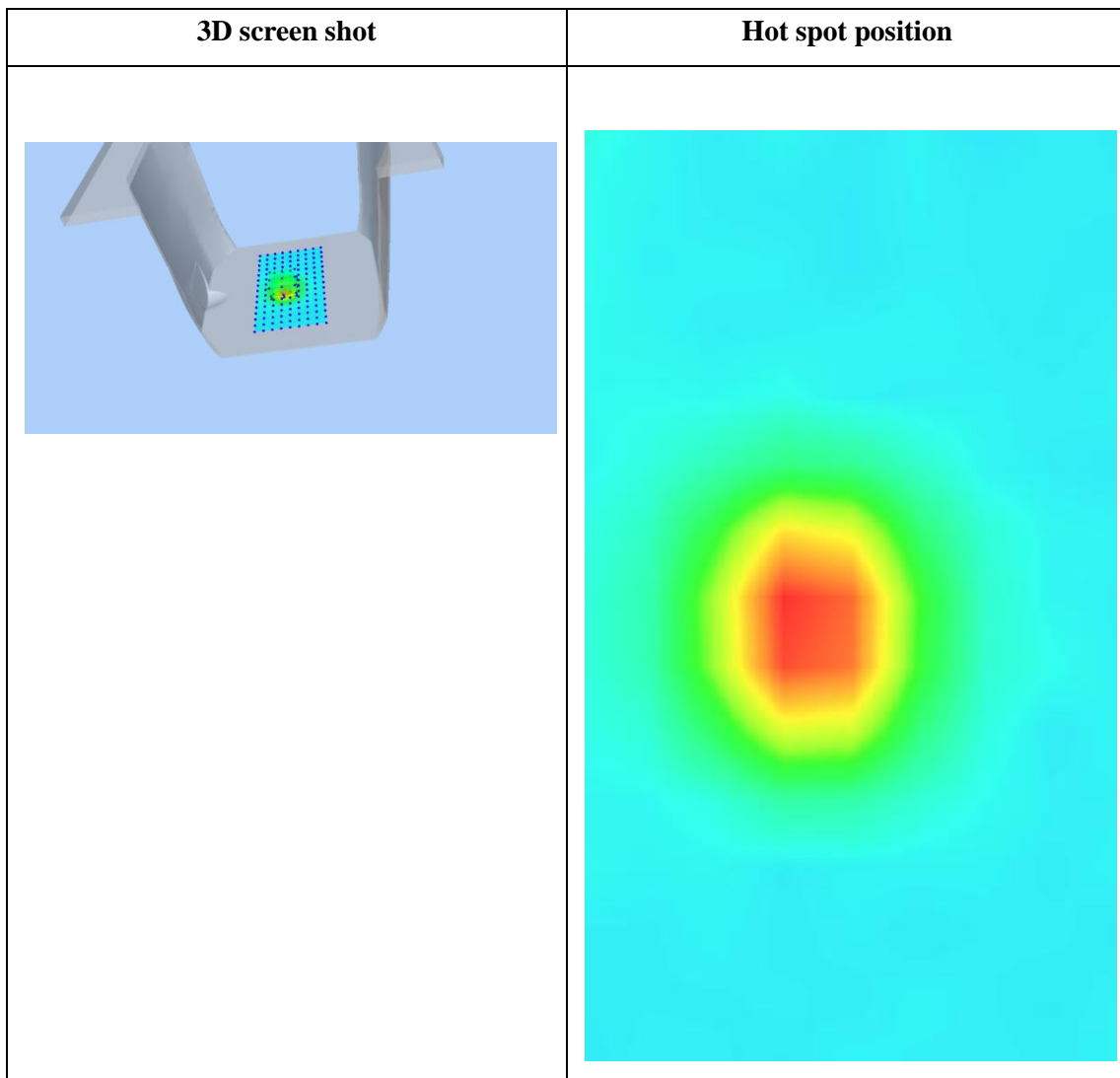
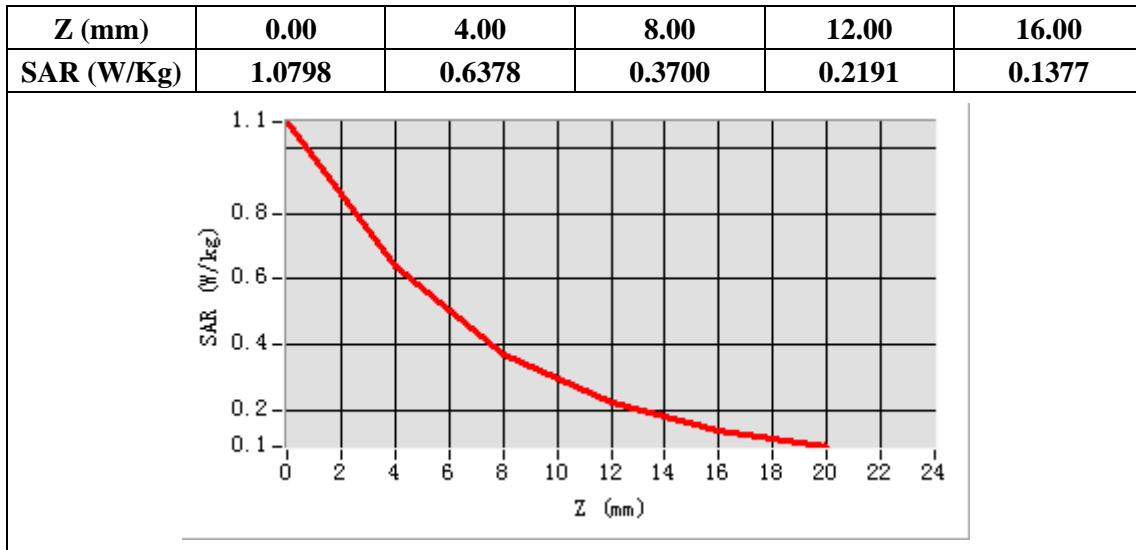
<b>E-Field Probe</b>	SATIMO SN_27/15_EPG0261
<b>Frequency (MHz)</b>	2600
<b>Relative permittivity (real part)</b>	39.00
<b>Relative permittivity</b>	13.57
<b>Conductivity (S/m)</b>	1.96
<b>Power drift (%)</b>	-0.55
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.5°C
<b>Crest factor:</b>	1:1
<b>ConvF:</b>	2.07



**Maximum location: X=-7.00, Y=-5.00**

**SAR Peak: 1.08 W/kg**

<b>SAR 10g (W/Kg)</b>	0.278868
<b>SAR 1g (W/Kg)</b>	0.573945



## 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: 01/30/2021

Measurement duration: 22 minutes 11 seconds

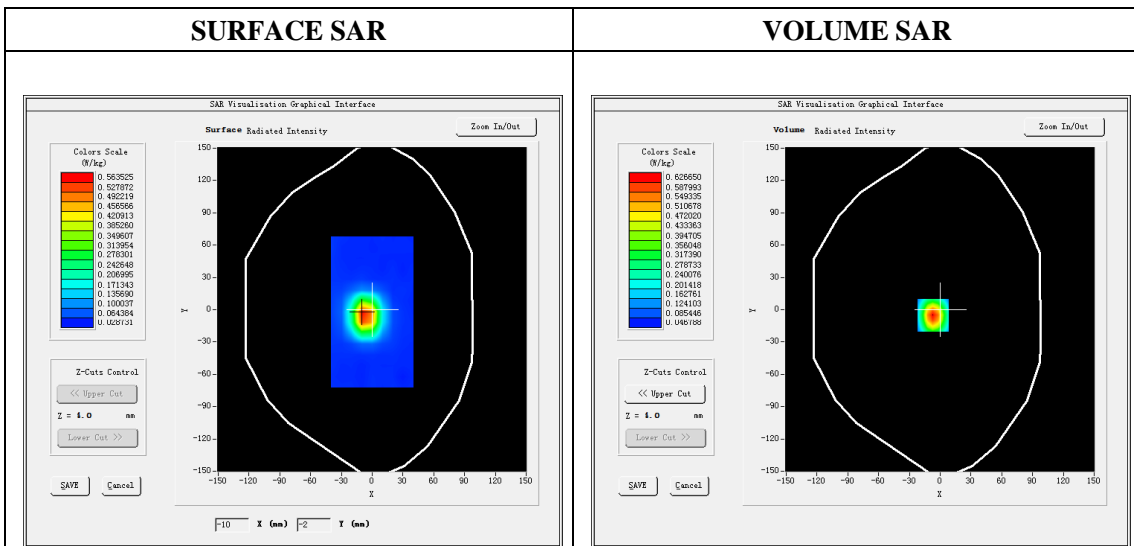
### A. Experimental conditions.

<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>	52.53
<b>Relative permittivity</b>	15.09
<b>Conductivity (S/m)</b>	2.18
<b>Power drift (%)</b>	-0.96
<b>Ambient Temperature:</b>	22.2°C
<b>Liquid Temperature:</b>	22.5°C
<b>Crest factor:</b>	1:1
<b>ConvF:</b>	2.25



**Maximum location: X=-7.00, Y=-5.00**

**SAR Peak: 1.06 W/kg**

<b>SAR 10g (W/Kg)</b>	0.275080
<b>SAR 1g (W/Kg)</b>	0.565703



