



## Appendix A: SAR System performance Check Plots

Measurement	Liquid	Frequency	Test Date
System Check	Head	750	2023/05/30
System Check	Head	835	2023/06/08
System Check	Head	1800	2023/06/10
System Check	Head	1900	2023/06/09
System Check	Head	1900	2023/06/17
System Check	Head	2450	2023/06/11
System Check	Head	5200	2023/06/12
System Check	Head	5400	2023/06/12
System Check	Head	5600	2023/06/13
System Check	Head	5800	2023/06/13

Measurement	Liquid	Frequency	Test Date
System Check	Head	750	2023/08/29
System Check	Head	835	2023/08/22
System Check	Head	1800	2023/09/01
System Check	Head	1800	2023/09/04
System Check	Head	1900	2023/08/30
System Check	Head	2450	2023/08/18
System Check	Head	5200	2023/08/25
System Check	Head	5400	2023/08/25
System Check	Head	5600	2023/08/26
System Check	Head	5800	2023/08/26

## System Performance Check (750MHz)

Type: Validation measurement

Date of measurement: 05/30/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO SN 32/22 EPGO383
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	750MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

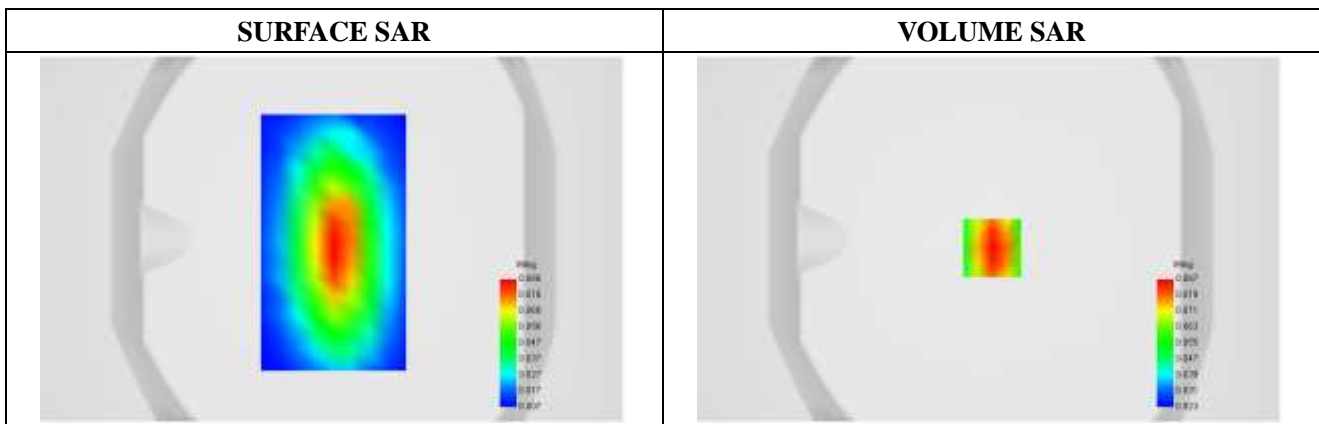
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	750
<b>Relative permittivity (real part)</b>	41.76
<b>Conductivity (S/m)</b>	0.89
<b>Variation (%)</b>	-0.41

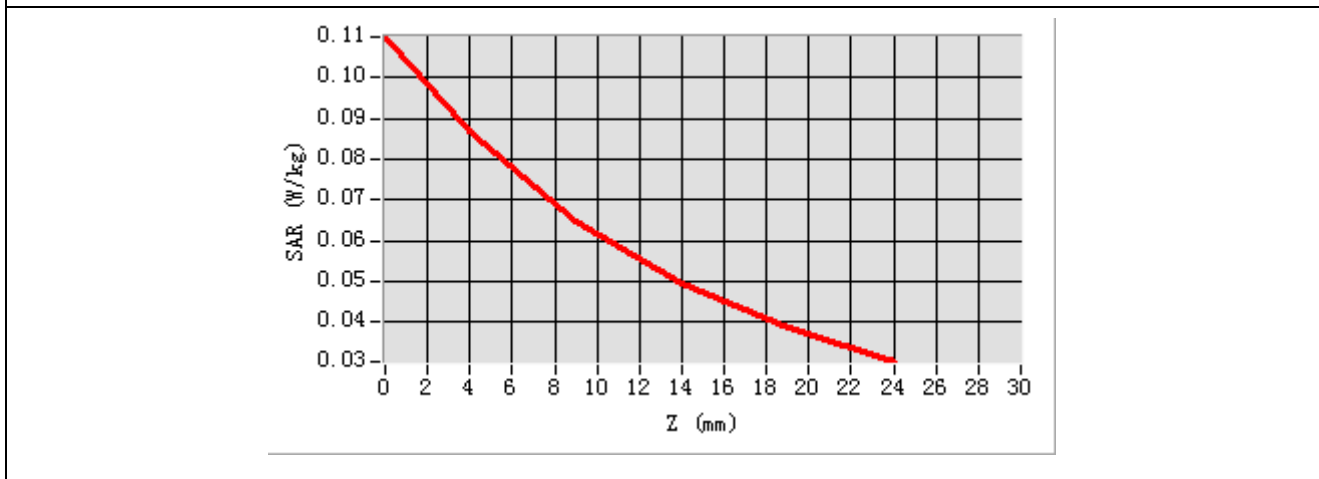
Maximum location: X=1.00, Y=-5.00

SAR Peak: 0.12 W/kg

<b>SAR 10g (W/Kg)</b>	0.059010
<b>SAR 1g (W/Kg)</b>	0.087295



**Z Axis Scan**



## System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 06/08/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO SN 32/22 EPGO383
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	835MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

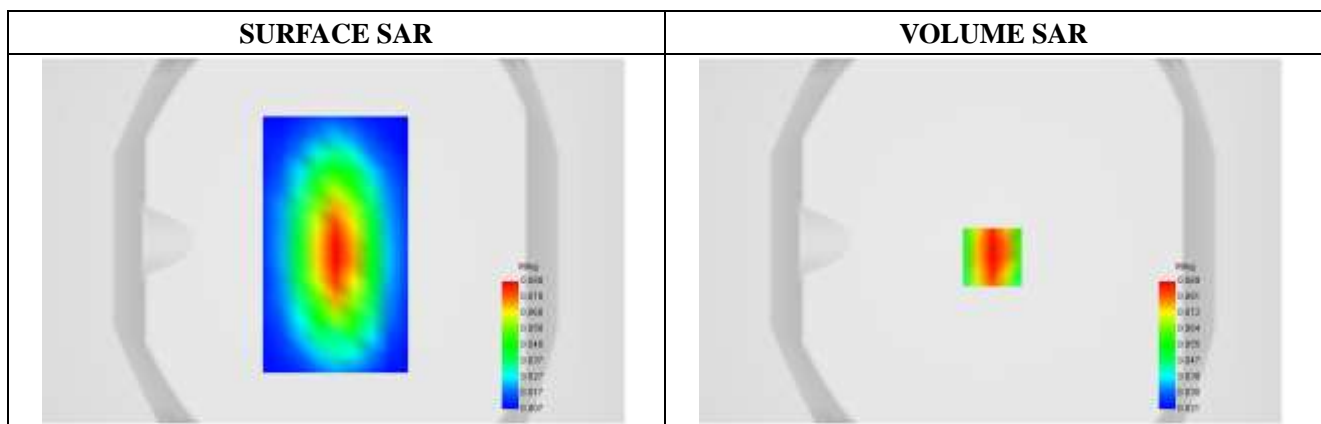
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	835
<b>Relative permittivity (real part)</b>	41.36
<b>Conductivity (S/m)</b>	0.92
<b>Variation (%)</b>	-0.34

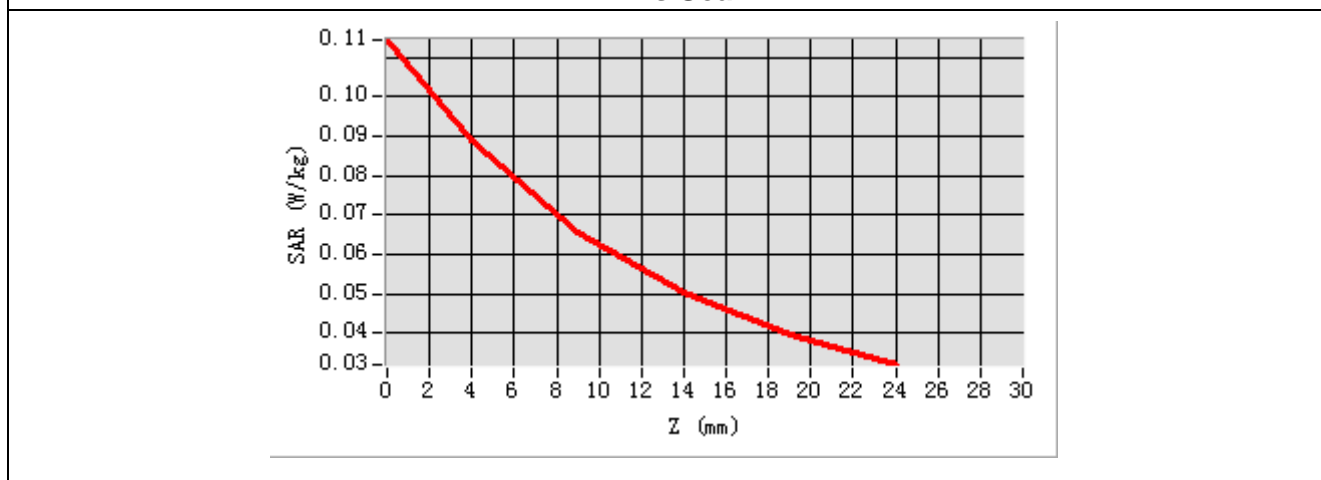
Maximum location: X=0.00, Y=-9.00

SAR Peak: 0.12 W/kg

<b>SAR 10g (W/Kg)</b>	0.059622
<b>SAR 1g (W/Kg)</b>	0.087127



**Z Axis Scan**



## System Performance Check (1800MHz)

Type: Validation measurement

Date of measurement: 06/10/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO SN 32/22 EPGO383
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	1800MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

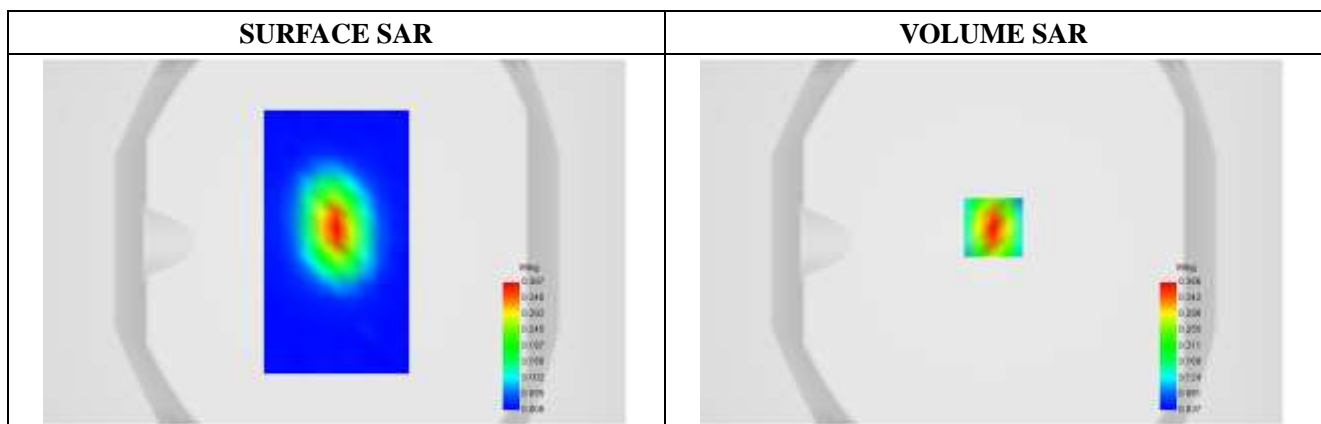
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	1800
<b>Relative permittivity (real part)</b>	39.63
<b>Conductivity (S/m)</b>	1.38
<b>Variation (%)</b>	-0.27

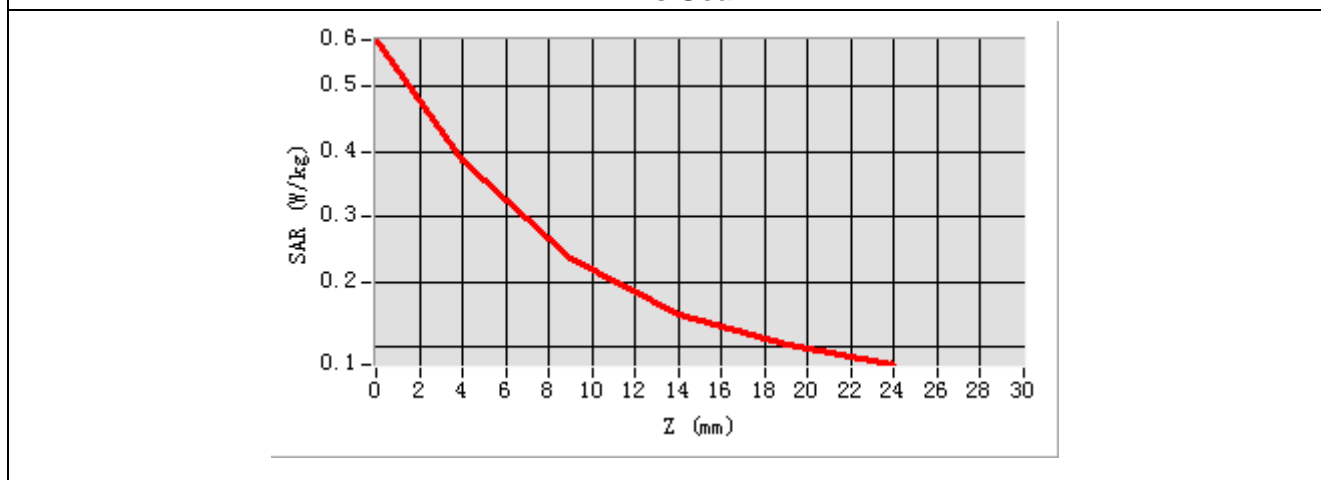
**Maximum location: X=0.00, Y=7.00**

**SAR Peak: 0.56 W/kg**

<b>SAR 10g (W/Kg)</b>	0.196293
<b>SAR 1g (W/Kg)</b>	0.367352



### Z Axis Scan



## System Performance Check (1900MHz)

Type: Validation measurement

Date of measurement: 06/09/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO SN 32/22 EPGO383
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	1900MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

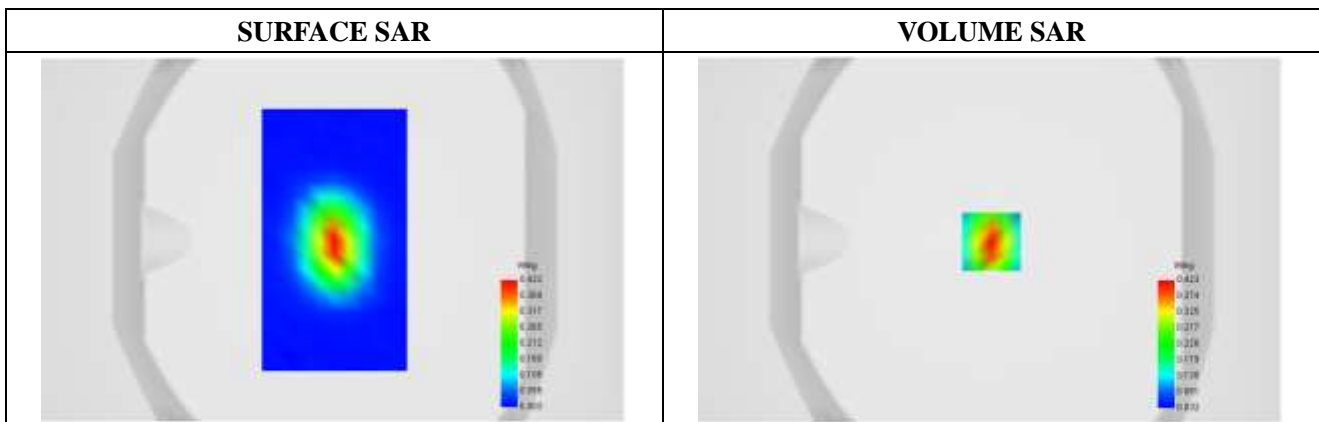
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	1900
<b>Relative permittivity (real part)</b>	40.19
<b>Conductivity (S/m)</b>	1.40
<b>Variation (%)</b>	-0.37

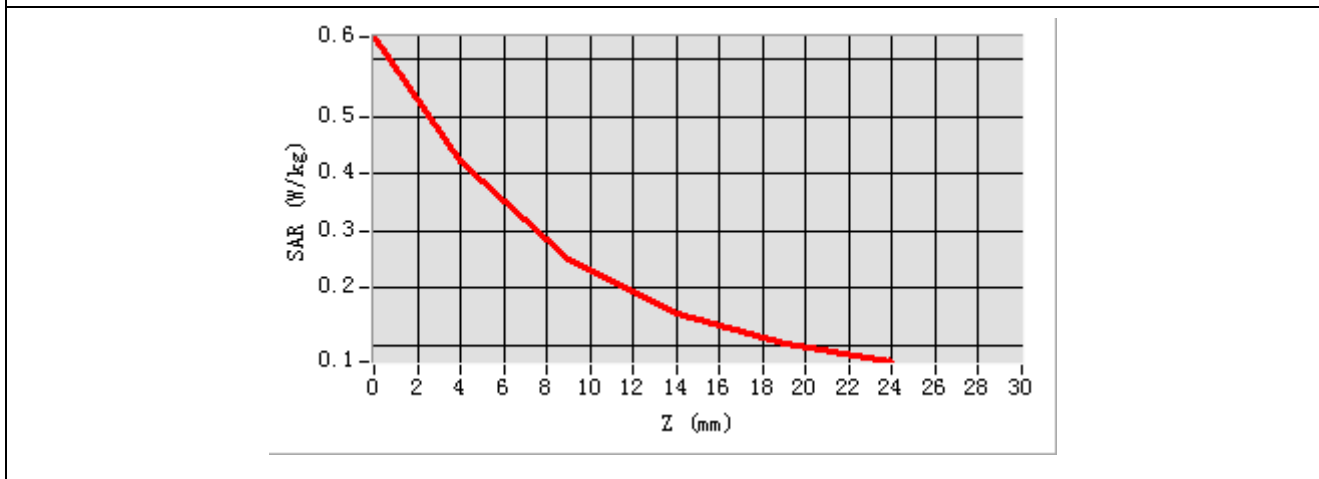
Maximum location: X=0.00, Y=0.00

SAR Peak: 0.64 W/kg

<b>SAR 10g (W/Kg)</b>	0.210751
<b>SAR 1g (W/Kg)</b>	0.402910



**Z Axis Scan**



## System Performance Check (1900MHz)

Type: Validation measurement

Date of measurement: 06/17/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO SN 32/22 EPGO383
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	1900MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

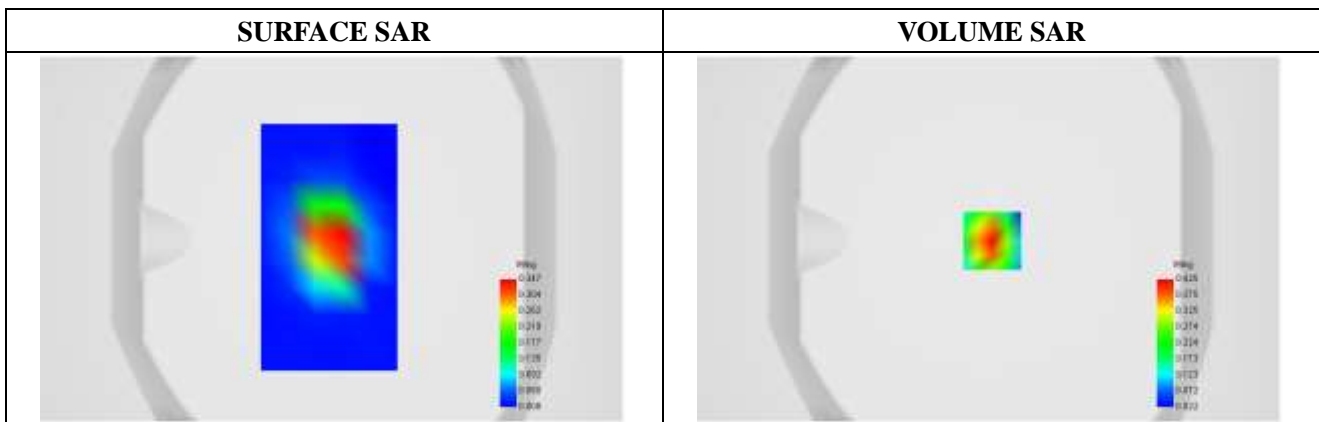
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	1900
<b>Relative permittivity (real part)</b>	38.96
<b>Conductivity (S/m)</b>	1.43
<b>Variation (%)</b>	0.61

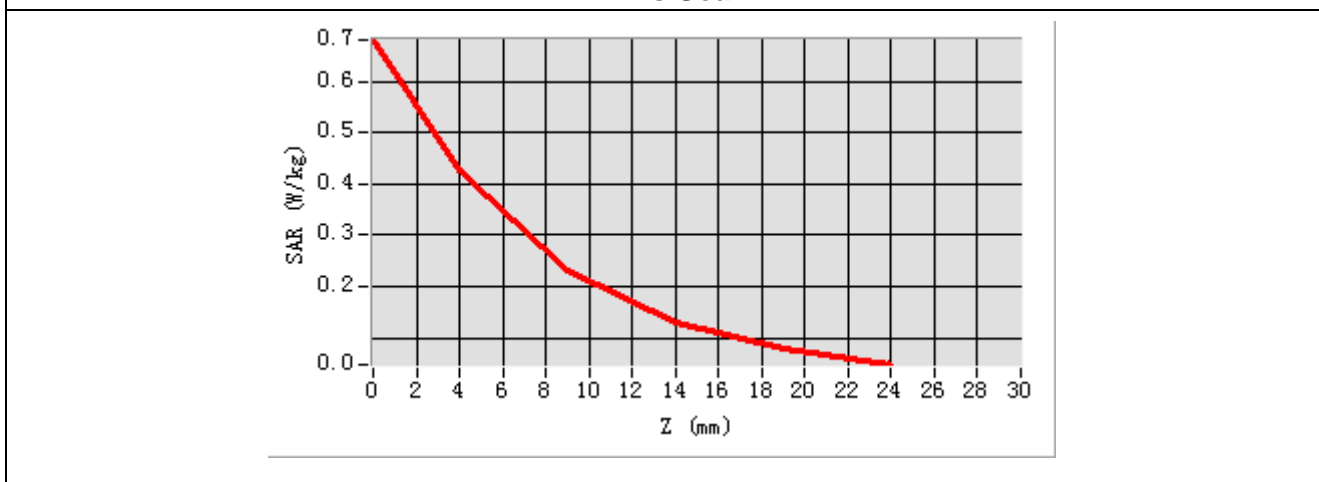
Maximum location: X=1.00, Y=-1.00

SAR Peak: 0.68 W/kg

<b>SAR 10g (W/Kg)</b>	0.207012
<b>SAR 1g (W/Kg)</b>	0.408135



### Z Axis Scan



## System Performance Check (2450MHz)

Type: Validation measurement

Date of measurement: 06/11/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO SN 32/22 EPGO383
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x7,dx=5mm dy=5mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	2450MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

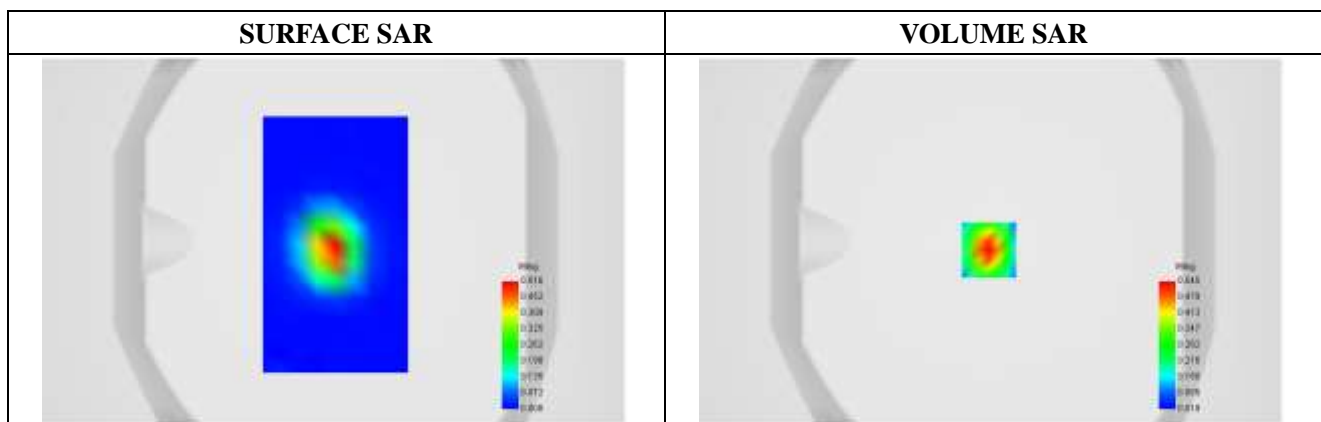
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	2450
<b>Relative permittivity (real part)</b>	38.64
<b>Conductivity (S/m)</b>	1.79
<b>Variation (%)</b>	-0.23

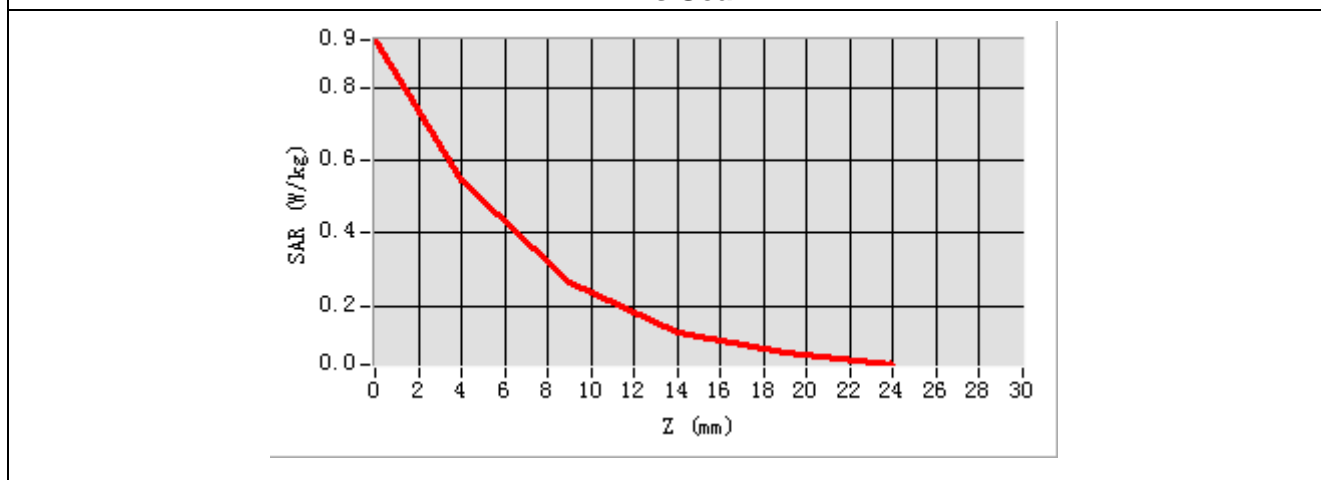
Maximum location: X=2.00, Y=-5.00

SAR Peak: 0.93 W/kg

<b>SAR 10g (W/Kg)</b>	0.235311
<b>SAR 1g (W/Kg)</b>	0.508647



### Z Axis Scan



## System Performance Check (5200MHz)

Type: Validation measurement

Date of measurement: 06/12/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x12,dx=4mm dy=4mm dz=2mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	5200MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

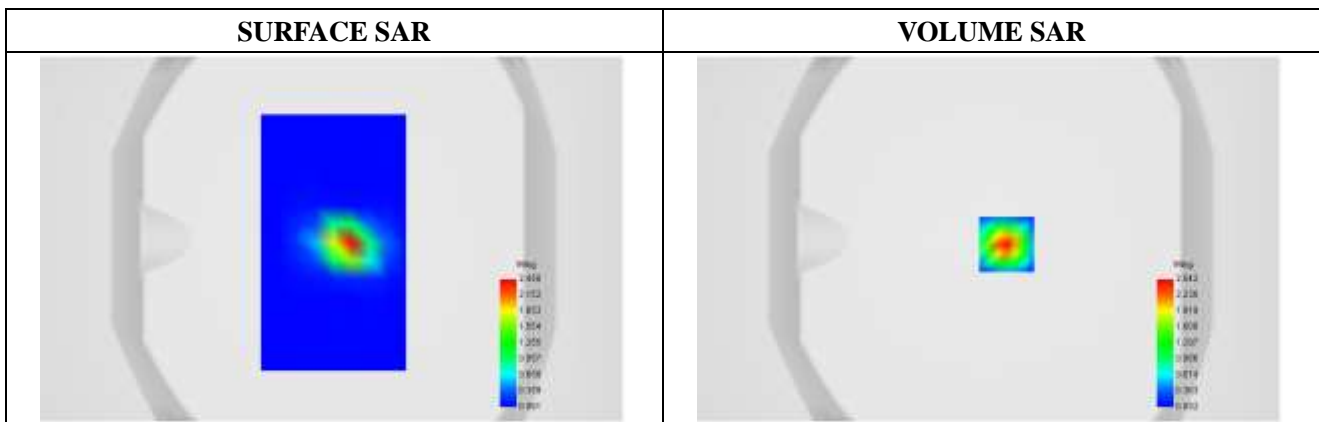
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	5200
<b>Relative permittivity (real part)</b>	36.07
<b>Conductivity (S/m)</b>	4.70
<b>Variation (%)</b>	-0.91

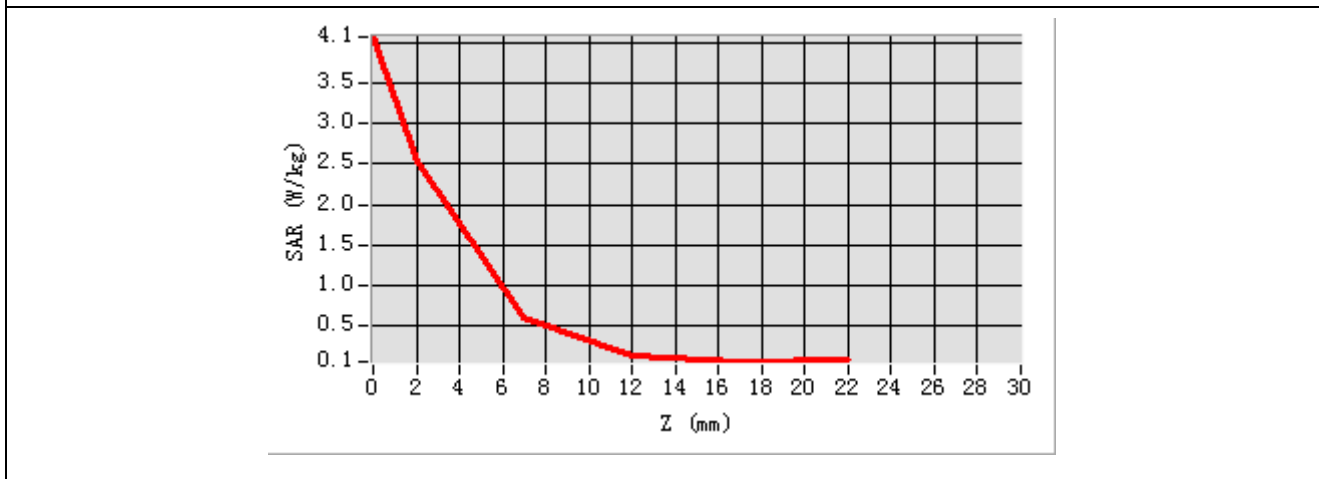
Maximum location: X=9.00, Y=-2.00

SAR Peak: 4.17 W/kg

<b>SAR 10g (W/Kg)</b>	0.556197
<b>SAR 1g (W/Kg)</b>	1.474432



### Z Axis Scan





## System Performance Check (5400MHz)

Type: Validation measurement

Date of measurement: 06/12/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x12,dx=4mm dy=4mm dz=2mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	5400MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

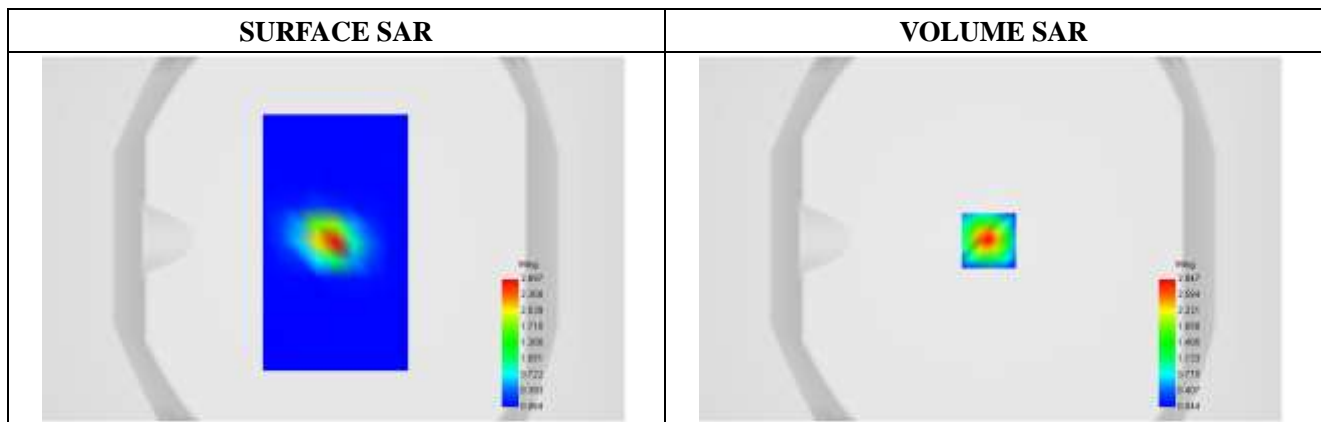
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	5400
<b>Relative permittivity (real part)</b>	35.74
<b>Conductivity (S/m)</b>	4.95
<b>Variation (%)</b>	0.17

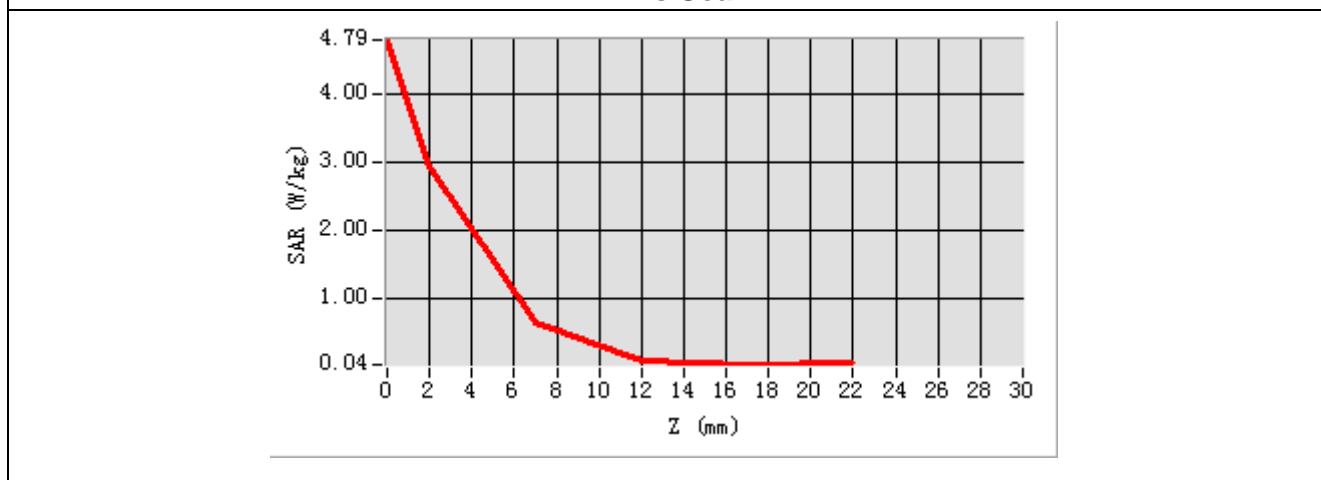
**Maximum location: X=2.00, Y=-1.00**

**SAR Peak: 4.73 W/kg**

<b>SAR 10g (W/Kg)</b>	0.596093
<b>SAR 1g (W/Kg)</b>	1.603032



### Z Axis Scan



## System Performance Check (5600MHz)

Type: Validation measurement

Date of measurement: 06/13/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x12,dx=4mm dy=4mm dz=2mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	5600MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

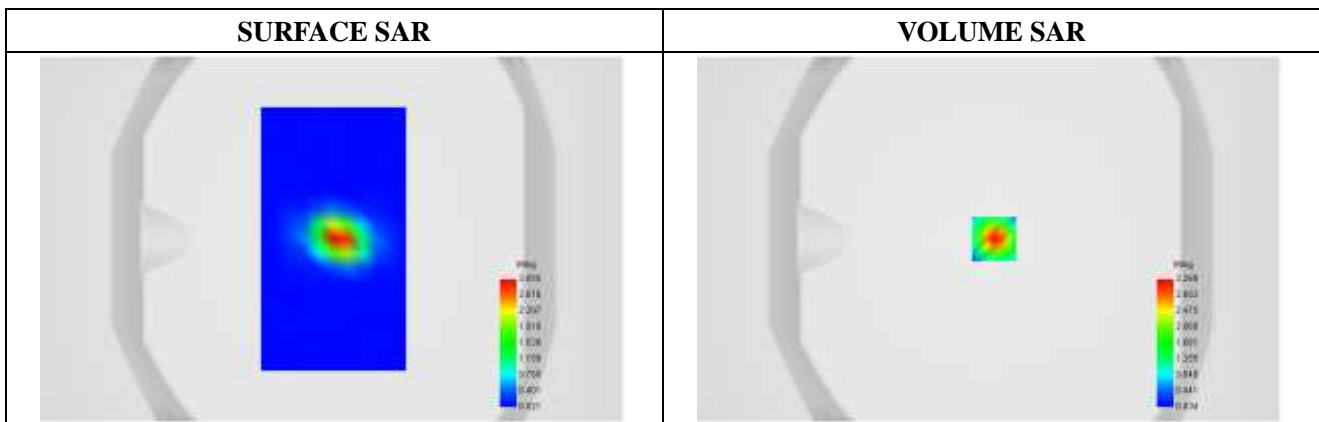
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	5600
<b>Relative permittivity (real part)</b>	35.12
<b>Conductivity (S/m)</b>	5.19
<b>Variation (%)</b>	-0.79

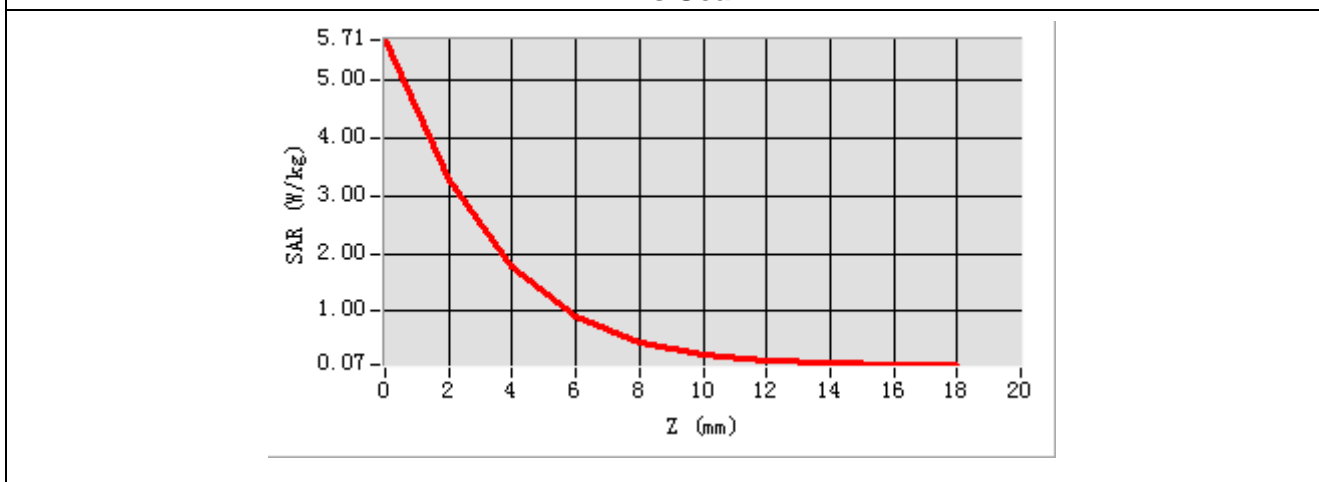
Maximum location: X=1.00, Y=0.00

SAR Peak: 5.60 W/kg

<b>SAR 10g (W/Kg)</b>	0.609907
<b>SAR 1g (W/Kg)</b>	1.771162



**Z Axis Scan**



## System Performance Check (5800MHz)

Type: Validation measurement

Date of measurement: 06/13/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x12,dx=4mm dy=4mm dz=2mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	5800MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

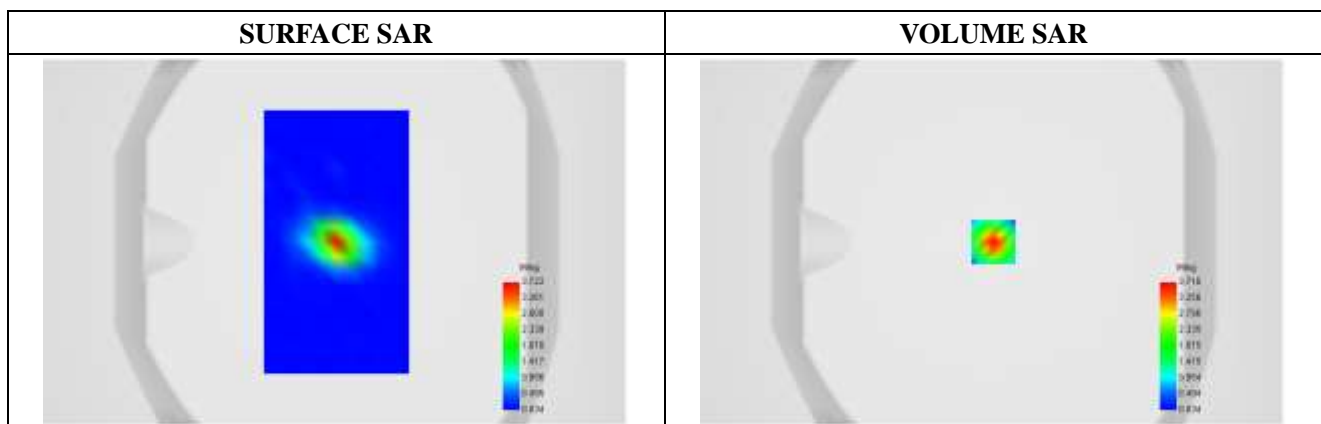
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	5800
<b>Relative permittivity (real part)</b>	34.68
<b>Conductivity (S/m)</b>	5.37
<b>Variation (%)</b>	-0.14

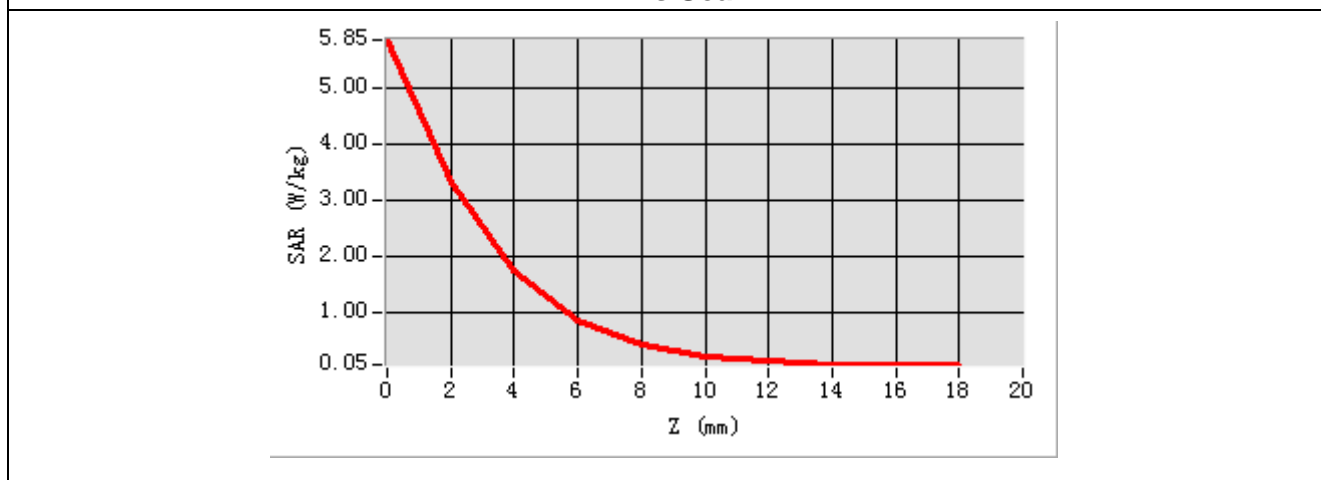
**Maximum location: X=1.00, Y=-2.00**

**SAR Peak: 5.76 W/kg**

<b>SAR 10g (W/Kg)</b>	0.624807
<b>SAR 1g (W/Kg)</b>	1.746183



### Z Axis Scan



## System Performance Check (750MHz)

Type: Validation measurement

Date of measurement: 08/29/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	750MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

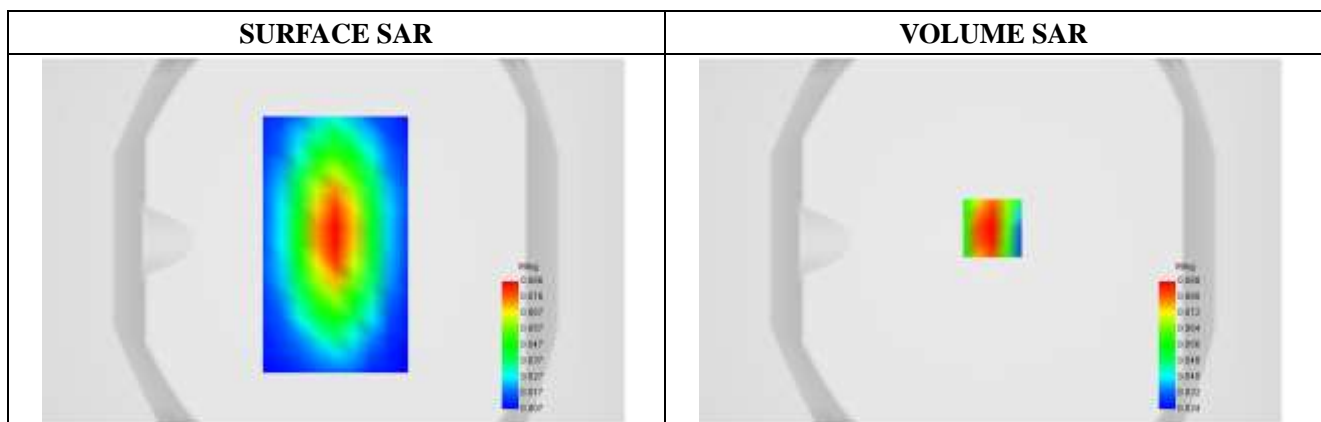
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	750
<b>Relative permittivity (real part)</b>	41.40
<b>Conductivity (S/m)</b>	0.89
<b>Variation (%)</b>	0.35

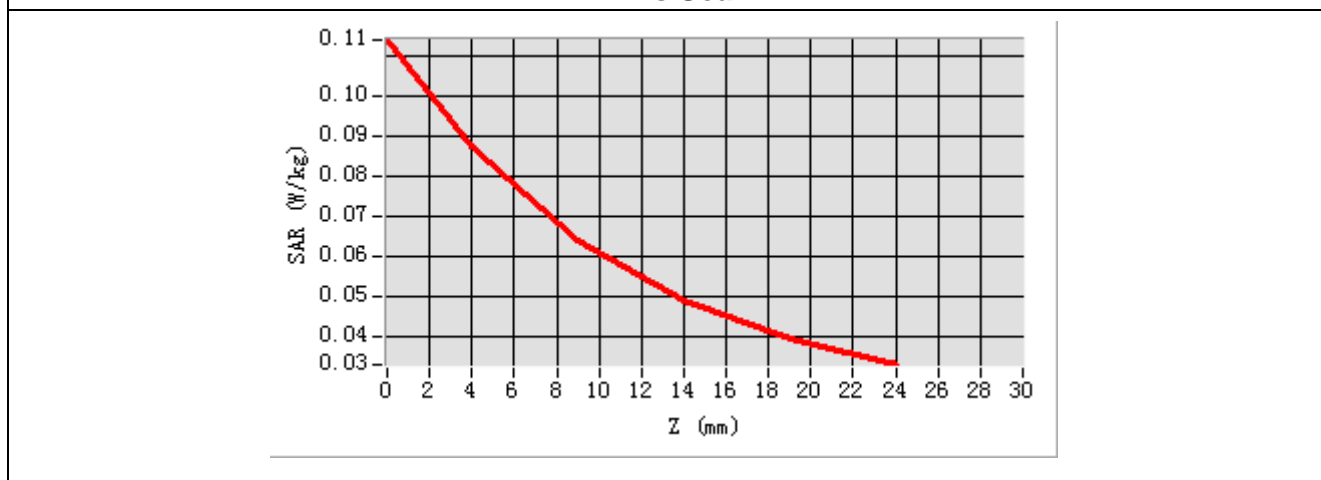
**Maximum location: X=0.00, Y=7.00**

**SAR Peak: 0.11 W/kg**

<b>SAR 10g (W/Kg)</b>	0.057229
<b>SAR 1g (W/Kg)</b>	0.084829



**Z Axis Scan**



## System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 08/22/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	835MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

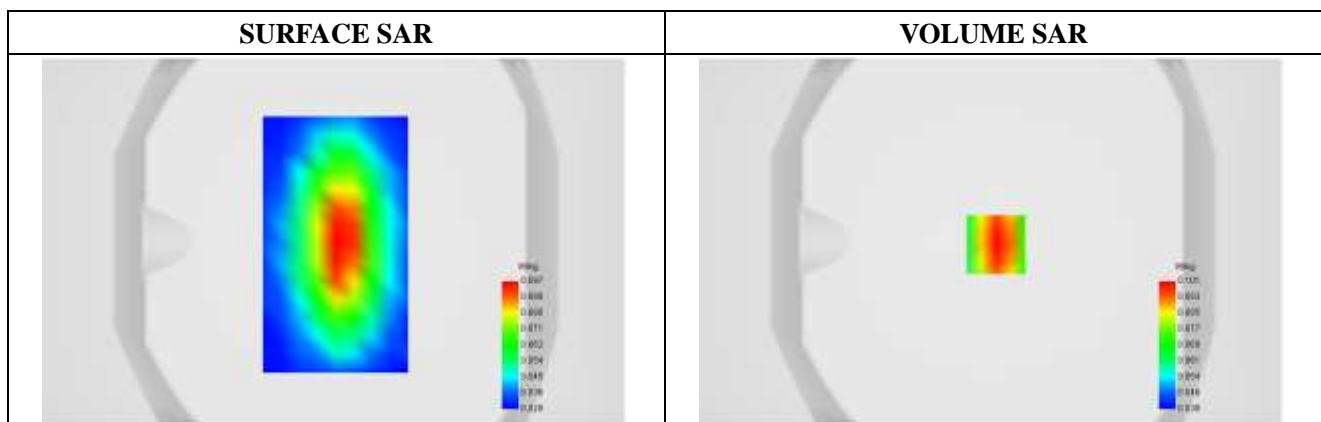
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	835
<b>Relative permittivity (real part)</b>	40.69
<b>Conductivity (S/m)</b>	0.92
<b>Variation (%)</b>	-0.28

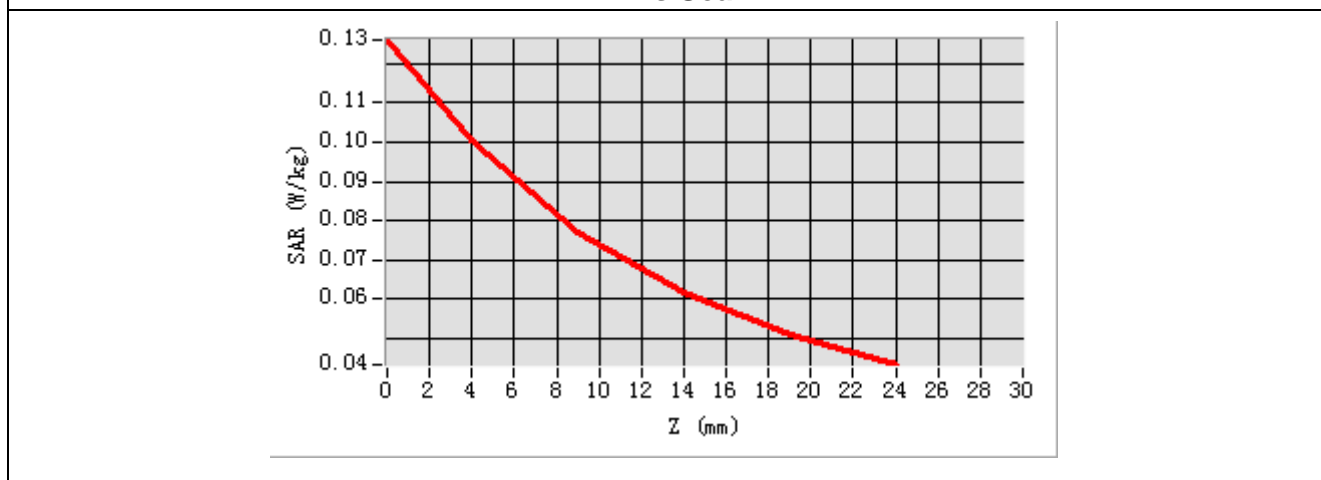
Maximum location: X=2.00, Y=-2.00

SAR Peak: 0.13 W/kg

<b>SAR 10g (W/Kg)</b>	0.068629
<b>SAR 1g (W/Kg)</b>	0.100958



**Z Axis Scan**



## System Performance Check (1800MHz)

Type: Validation measurement

Date of measurement: 09/01/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	1800MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

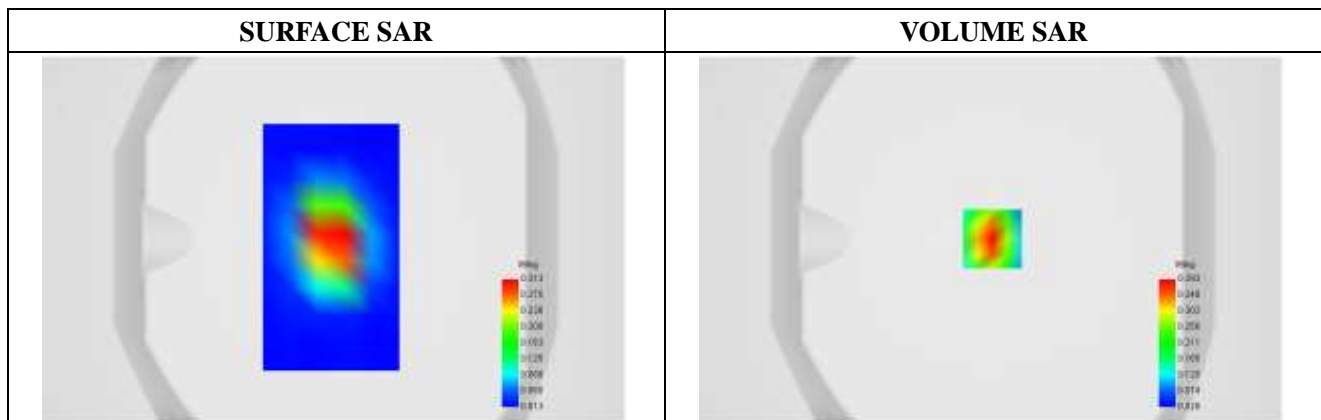
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	1800
<b>Relative permittivity (real part)</b>	40.73
<b>Conductivity (S/m)</b>	1.39
<b>Variation (%)</b>	-0.21

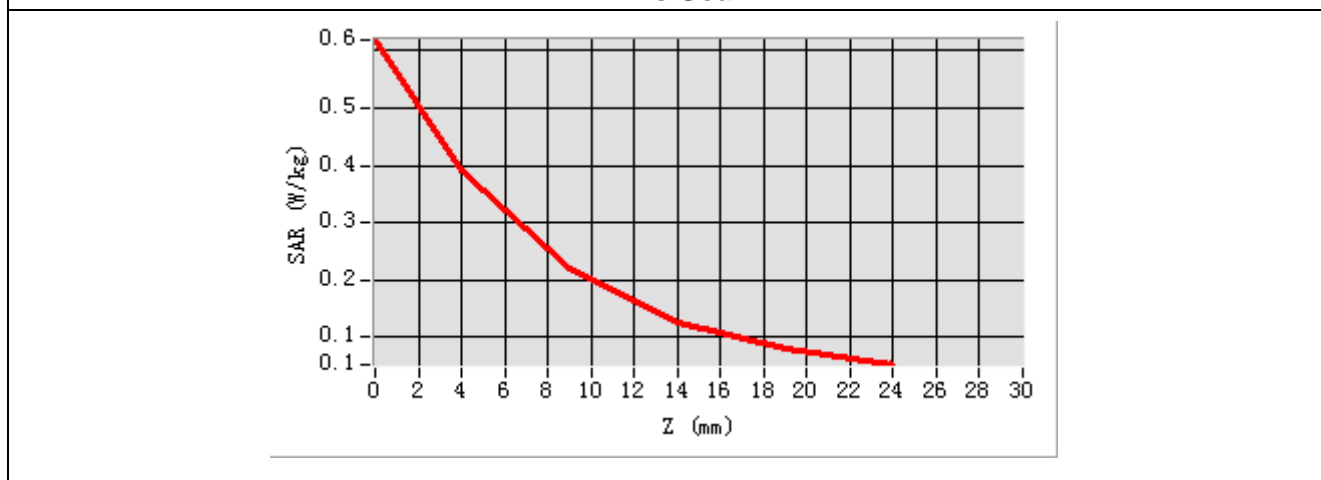
Maximum location: X=0.00, Y=0.00

SAR Peak: 0.62 W/kg

<b>SAR 10g (W/Kg)</b>	0.196719
<b>SAR 1g (W/Kg)</b>	0.366367



### Z Axis Scan



## System Performance Check (1800MHz)

Type: Validation measurement

Date of measurement: 09/04/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	1800MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

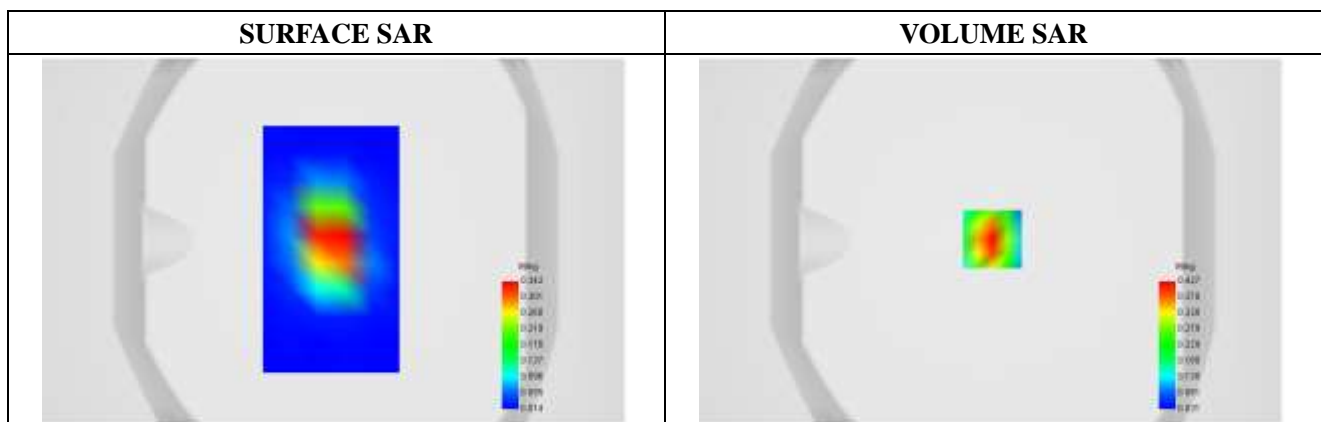
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	1800
<b>Relative permittivity (real part)</b>	40.21
<b>Conductivity (S/m)</b>	1.37
<b>Variation (%)</b>	-0.32

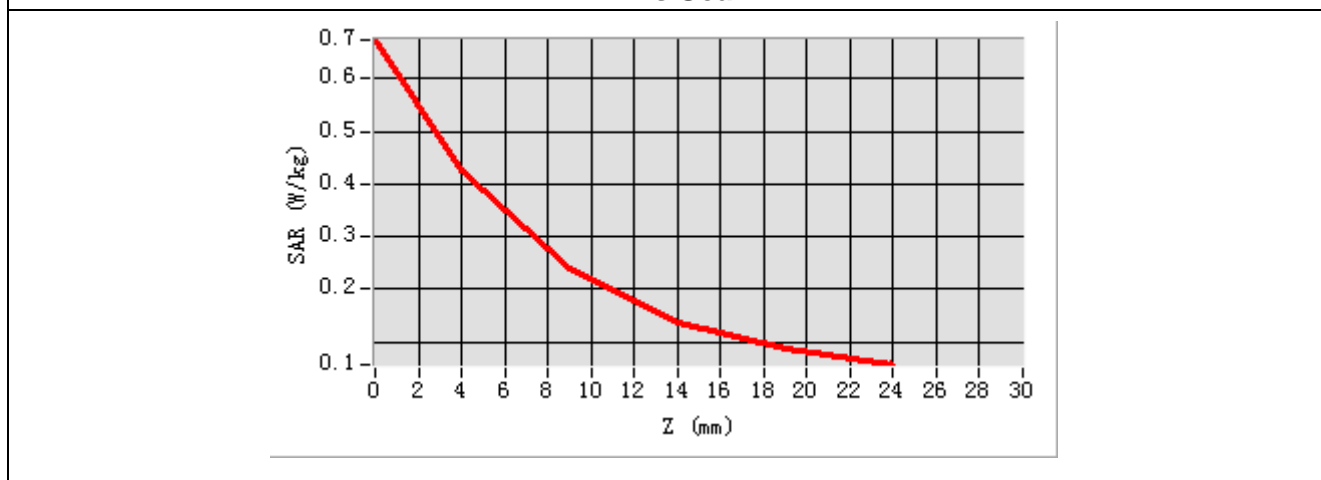
**Maximum location: X=0.00, Y=1.00**

**SAR Peak: 0.68 W/kg**

<b>SAR 10g (W/Kg)</b>	0.211306
<b>SAR 1g (W/Kg)</b>	0.398982



**Z Axis Scan**



## System Performance Check (1900MHz)

Type: Validation measurement

Date of measurement: 08/30/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	5x5x7,dx=8mm dy=8mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	1900MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

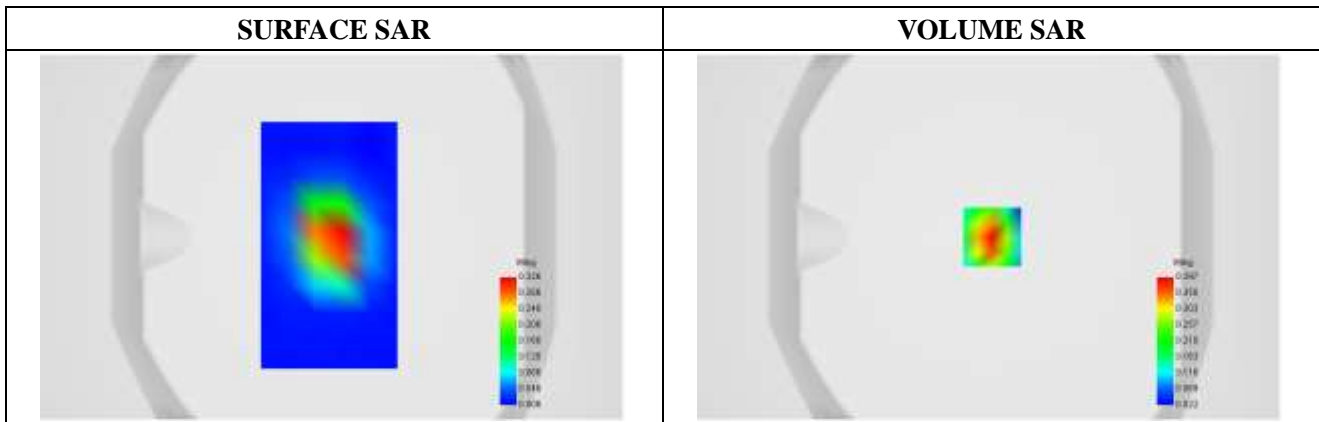
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	1900
<b>Relative permittivity (real part)</b>	38.92
<b>Conductivity (S/m)</b>	1.42
<b>Variation (%)</b>	0.09

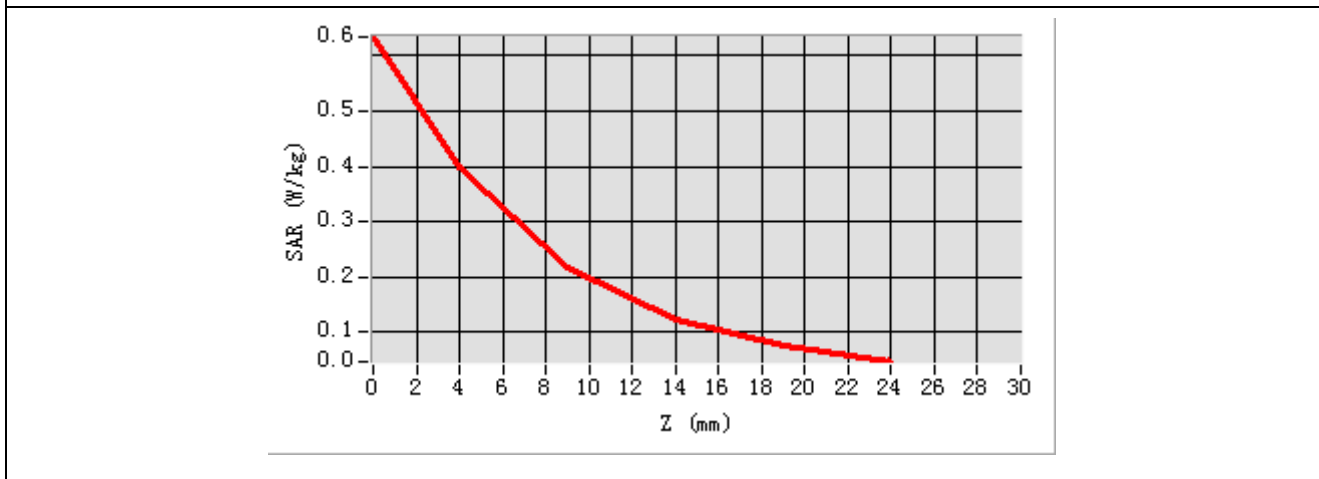
Maximum location: X=1.00, Y=0.00

SAR Peak: 0.63 W/kg

<b>SAR 10g (W/Kg)</b>	0.199873
<b>SAR 1g (W/Kg)</b>	0.397429



**Z Axis Scan**





## System Performance Check (2450MHz)

Type: Validation measurement

Date of measurement: 08/18/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x7,dx=5mm dy=5mm dz=5mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	2450MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

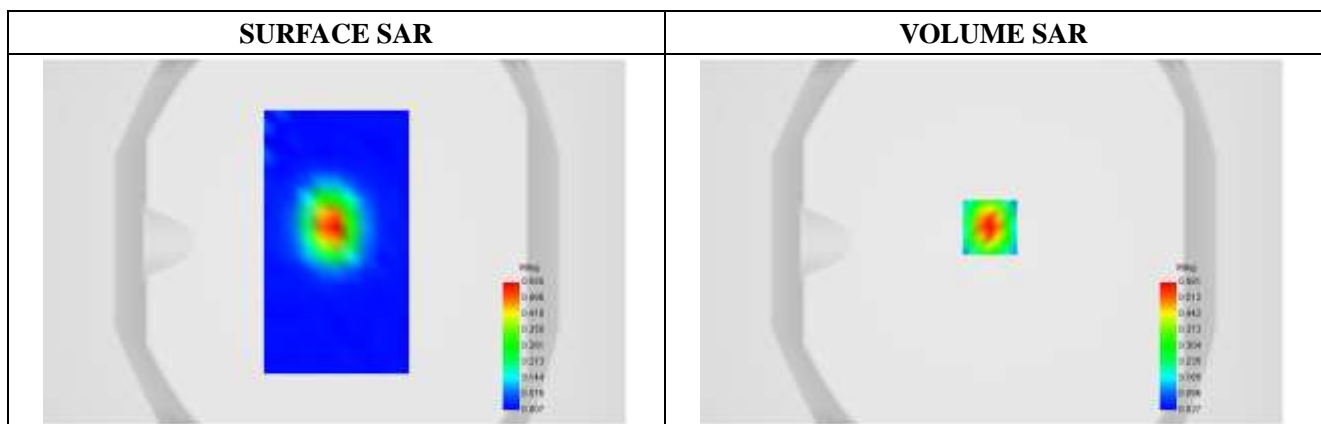
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	2450
<b>Relative permittivity (real part)</b>	38.23
<b>Conductivity (S/m)</b>	1.82
<b>Variation (%)</b>	-0.20

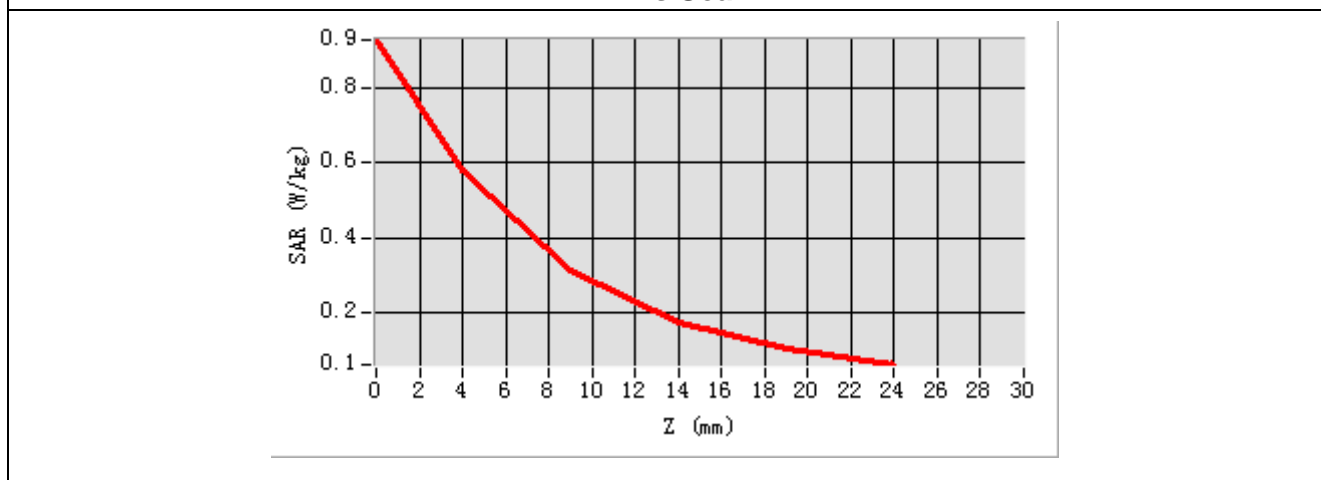
**Maximum location: X=2.00, Y=7.00**

**SAR Peak: 0.92 W/kg**

<b>SAR 10g (W/Kg)</b>	0.257955
<b>SAR 1g (W/Kg)</b>	0.530152



**Z Axis Scan**



## System Performance Check (5200MHz)

Type: Validation measurement

Date of measurement: 08/25/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x12,dx=4mm dy=4mm dz=2mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	5200MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

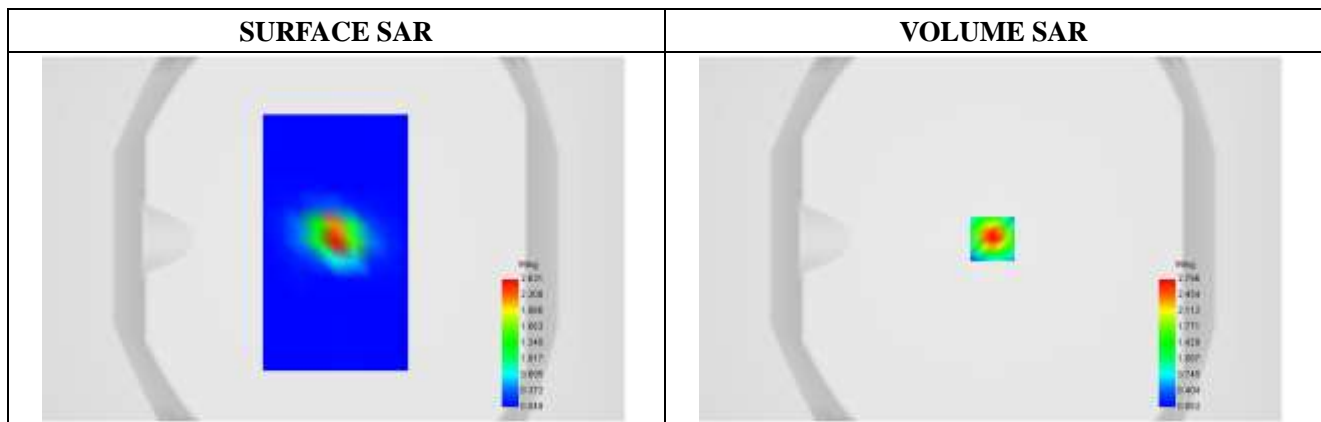
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	5200
<b>Relative permittivity (real part)</b>	37.04
<b>Conductivity (S/m)</b>	4.61
<b>Variation (%)</b>	-0.45

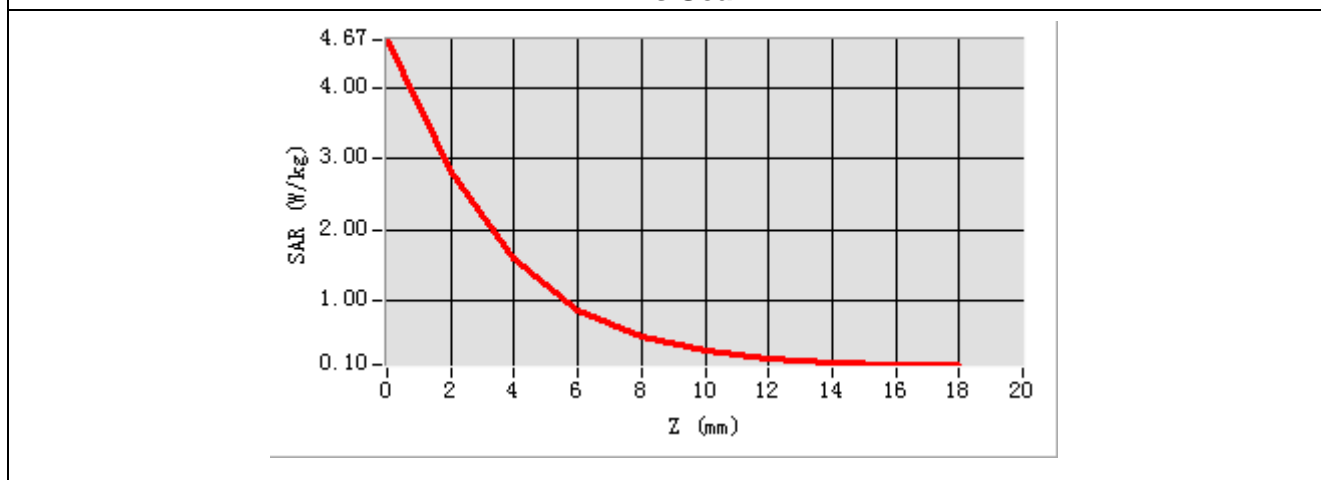
**Maximum location: X=0.00, Y=0.00**

**SAR Peak: 4.67 W/kg**

<b>SAR 10g (W/Kg)</b>	0.520612
<b>SAR 1g (W/Kg)</b>	1.565569



### Z Axis Scan



## System Performance Check (5400MHz)

Type: Validation measurement

Date of measurement: 08/25/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x12,dx=4mm dy=4mm dz=2mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	5400MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

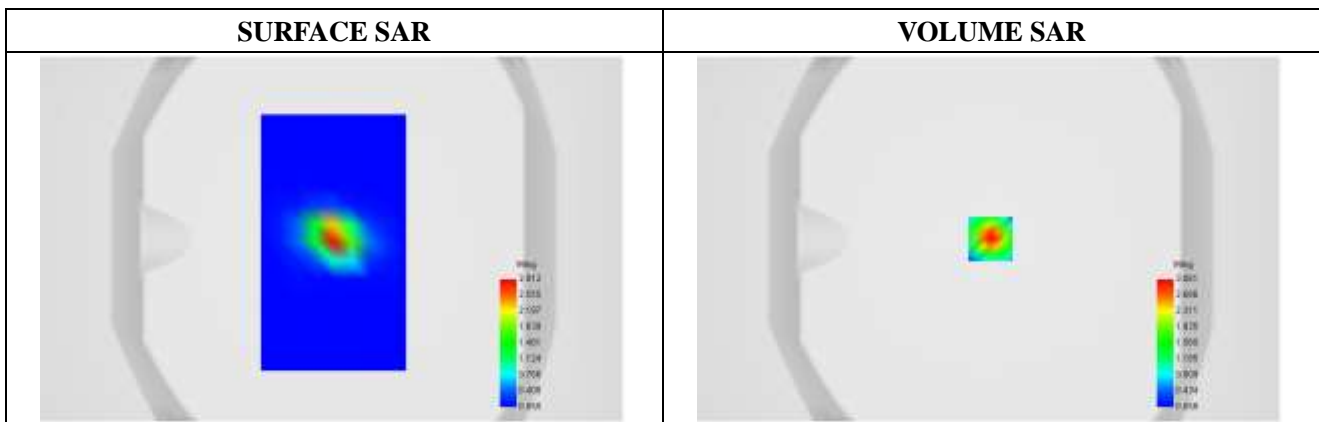
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	5400
<b>Relative permittivity (real part)</b>	36.69
<b>Conductivity (S/m)</b>	4.87
<b>Variation (%)</b>	-0.43

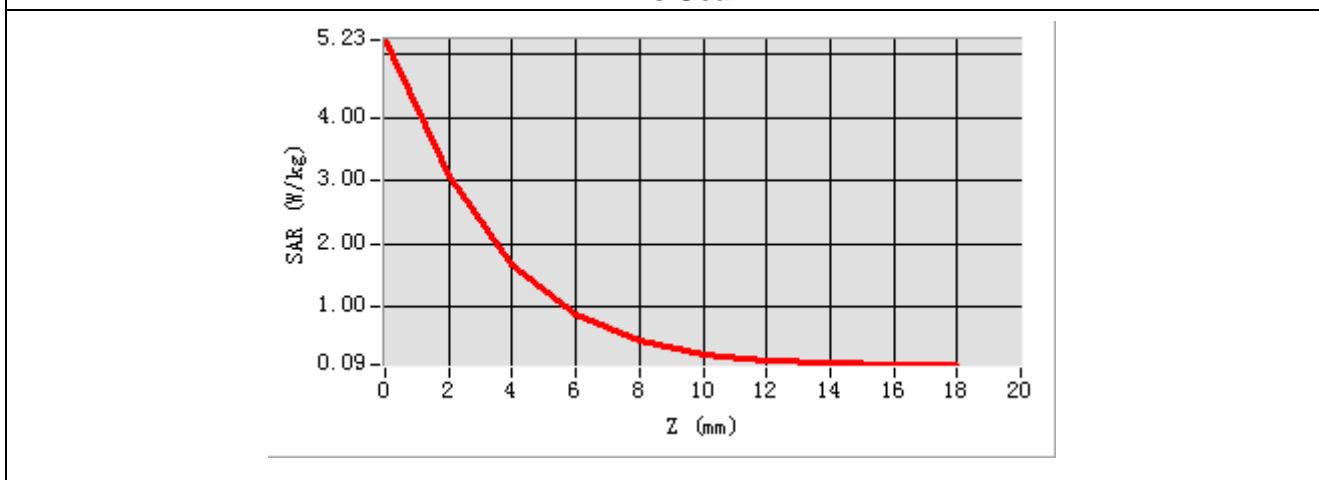
**Maximum location: X=0.00, Y=0.00**

**SAR Peak: 5.23 W/kg**

<b>SAR 10g (W/Kg)</b>	0.559485
<b>SAR 1g (W/Kg)</b>	1.675259



**Z Axis Scan**



## System Performance Check (5600MHz)

Type: Validation measurement

Date of measurement: 08/26/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x12,dx=4mm dy=4mm dz=2mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	5600MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

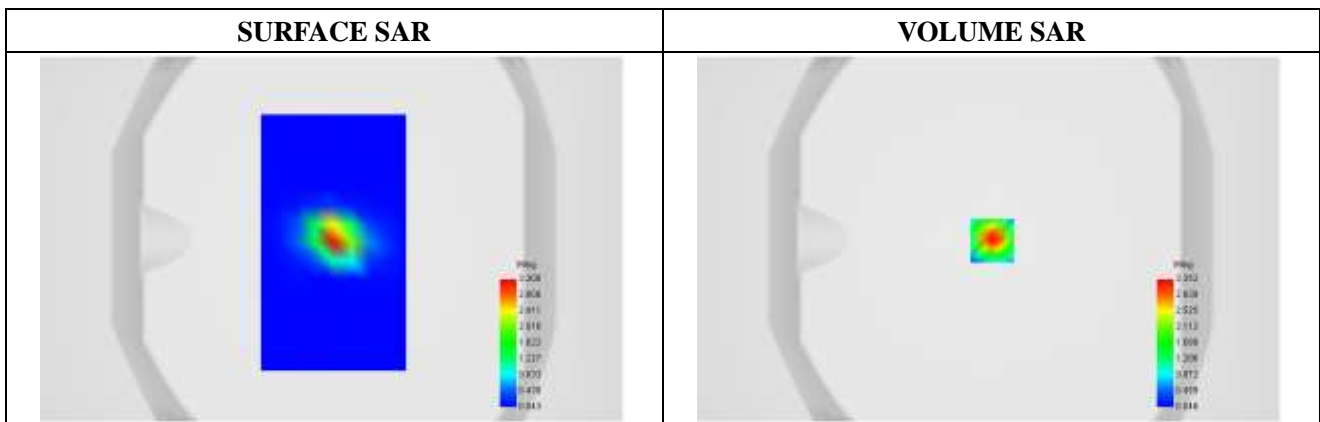
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	5600
<b>Relative permittivity (real part)</b>	35.92
<b>Conductivity (S/m)</b>	5.15
<b>Variation (%)</b>	-0.30

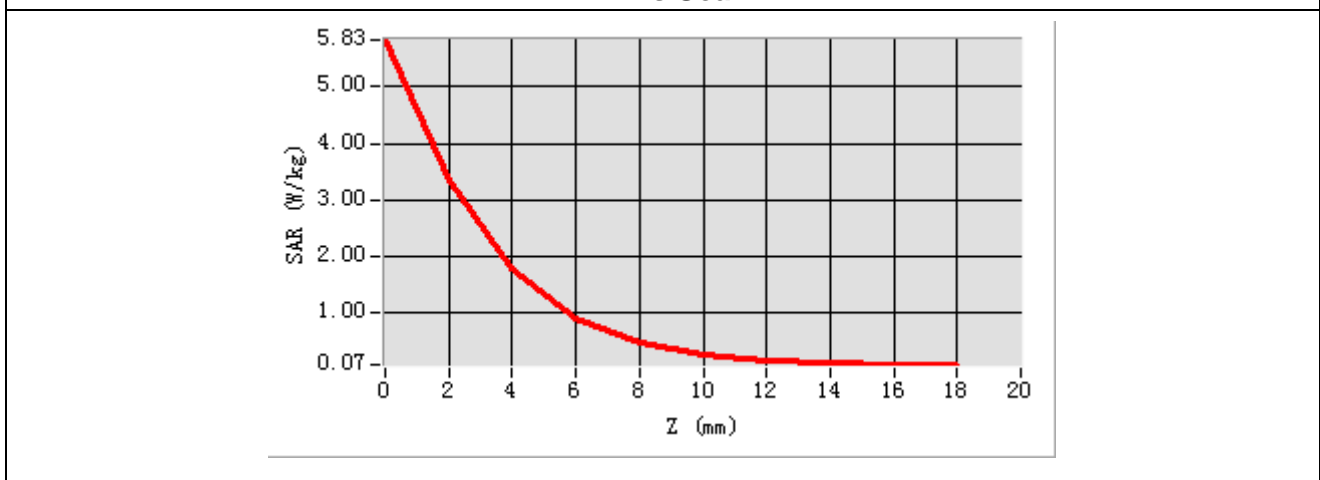
**Maximum location: X=1.00, Y=-1.00**

**SAR Peak: 5.83 W/kg**

<b>SAR 10g (W/Kg)</b>	0.593525
<b>SAR 1g (W/Kg)</b>	1.791108



### Z Axis Scan



## System Performance Check (5800MHz)

Type: Validation measurement

Date of measurement: 08/26/2023

### A. Experimental conditions.

<b>E-Field Probe</b>	SATIMO 0523-EPGO-403
<b>Area Scan</b>	dx=8mm dy=8mm
<b>Zoom Scan</b>	7x7x12,dx=4mm dy=4mm dz=2mm
<b>Phantom</b>	Validation plane
<b>Device Position</b>	Dipole
<b>Band</b>	5800MHz
<b>Channels</b>	Middle
<b>Signal</b>	CW(Crest factor: 1.0)

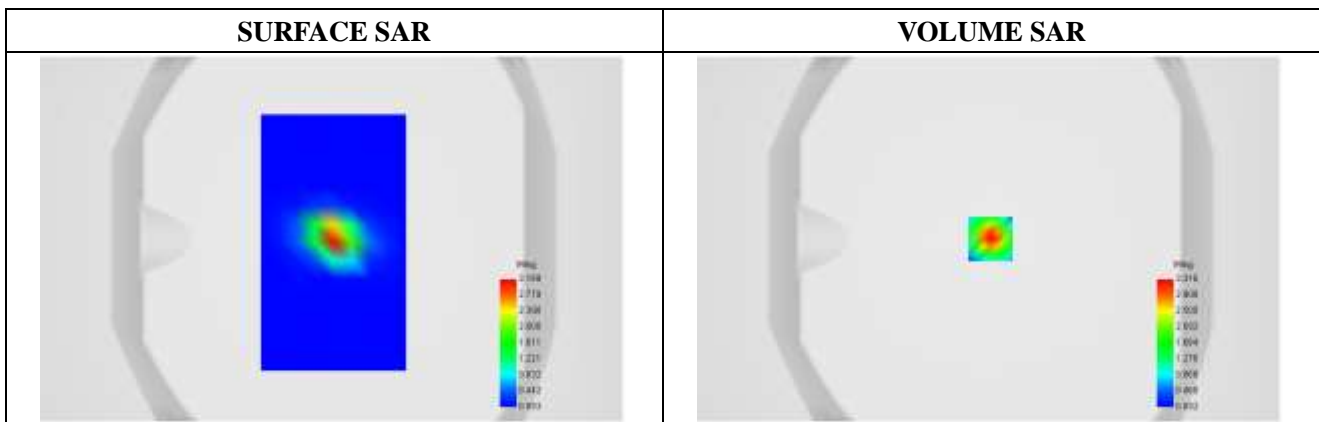
### B. SAR Measurement Results

<b>Frequency (MHz)</b>	5800
<b>Relative permittivity (real part)</b>	35.61
<b>Conductivity (S/m)</b>	5.33
<b>Variation (%)</b>	-0.42

Maximum location: X=0.00, Y=0.00

SAR Peak: 5.75 W/kg

<b>SAR 10g (W/Kg)</b>	0.602104
<b>SAR 1g (W/Kg)</b>	1.793559



**Z Axis Scan**

