



Appendix A: SAR System performance Check Plots

Measurement	Liquid	Frequency	Test Date
System Check	Head	750	2023/11/14
System Check	Head	835	2023/10/19
System Check	Head	835	2023/10/21
System Check	Head	835	2023/11/11
System Check	Head	835	2023/11/20
System Check	Head	1800	2023/10/28
System Check	Head	1800	2023/11/13
System Check	Head	1900	2023/10/23
System Check	Head	1900	2023/11/09
System Check	Head	2300	2023/11/07
System Check	Head	2450	2023/11/06
System Check	Head	2600	2023/10/25
System Check	Head	2600	2023/11/08
System Check	Head	3500	2023/10/27
System Check	Head	3700	2023/11/18
System Check	Head	3900	2023/11/18
System Check	Head	5200	2023/11/01
System Check	Head	5400	2023/11/01
System Check	Head	5600	2023/11/03
System Check	Head	5800	2023/11/03

System Performance Check (750MHz)

Type: Validation measurement

Date of measurement: 11/14/2023

A. Experimental conditions.

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

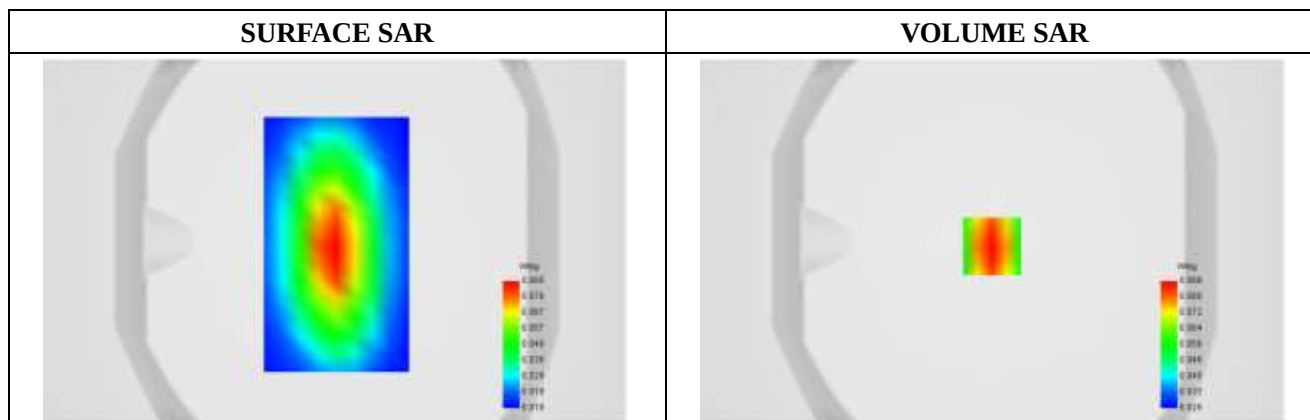
B. SAR Measurement Results

Frequency (MHz)	750
ConvF	2.12
Relative permittivity (real part)	42.31
Conductivity (S/m)	0.88
Variation (%)	0.29

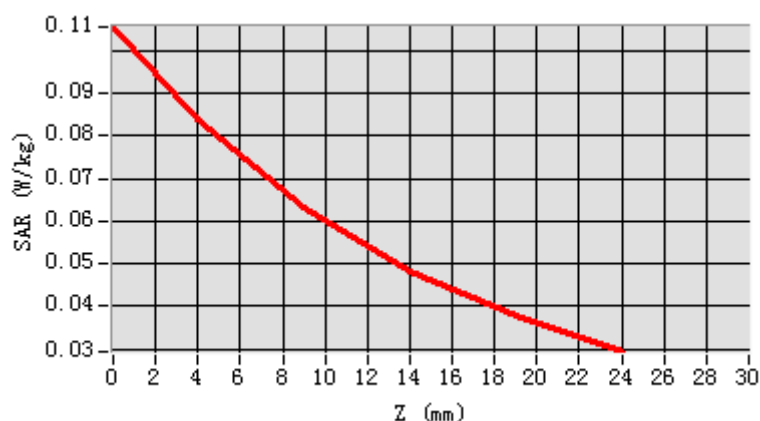
Maximum location: X=1.00, Y=-3.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.056653
SAR 1g (W/Kg)	0.086020



Z Axis Scan



System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 10/19/2023

A. Experimental conditions.

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

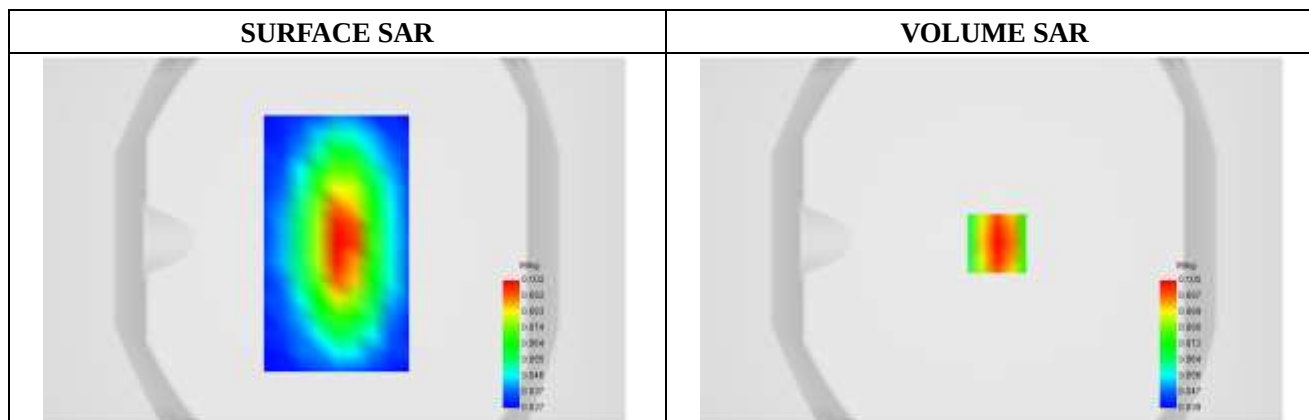
B. SAR Measurement Results

Frequency (MHz)	835
ConvF	1.99
Relative permittivity (real part)	41.35
Conductivity (S/m)	0.92
Variation (%)	0.20

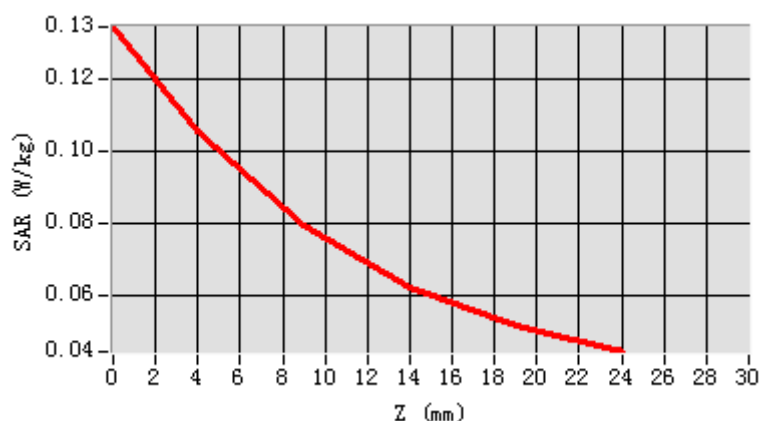
Maximum location: X=2.00, Y=-2.00

SAR Peak: 0.13 W/kg

SAR 10g (W/Kg)	0.067976
SAR 1g (W/Kg)	0.103314



Z Axis Scan



System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 10/21/2023

A. Experimental conditions.

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

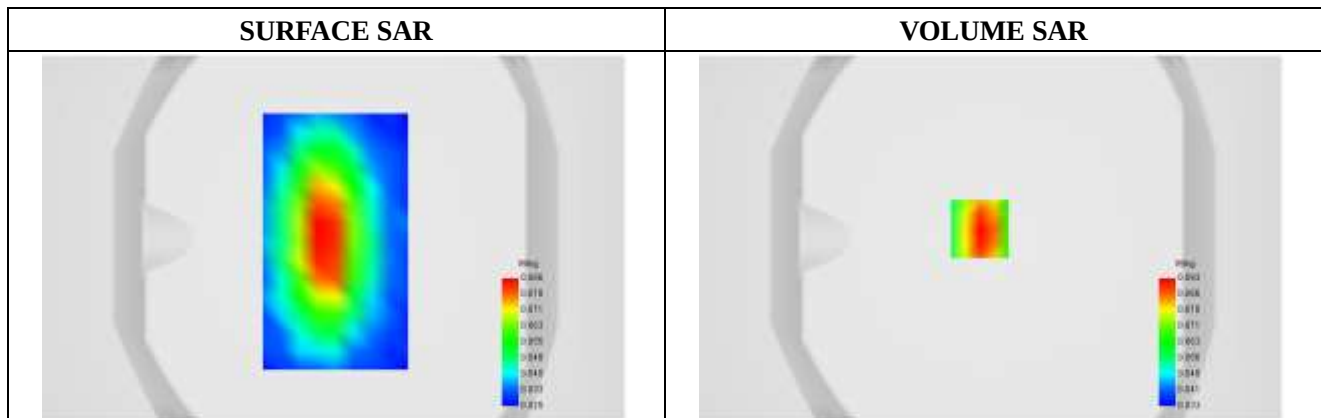
B. SAR Measurement Results

Frequency (MHz)	835
Relative permittivity (real part)	41.92
Conductivity (S/m)	0.91
Variation (%)	0.40
ConvF	1.99

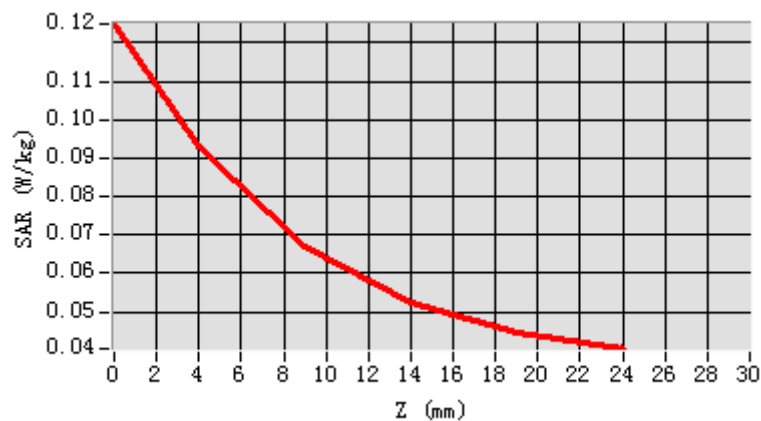
Maximum location: X=-7.00, Y=5.00

SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	0.064775
SAR 1g (W/Kg)	0.095868



Z Axis Scan



System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 11/11/2023

A. Experimental conditions.

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

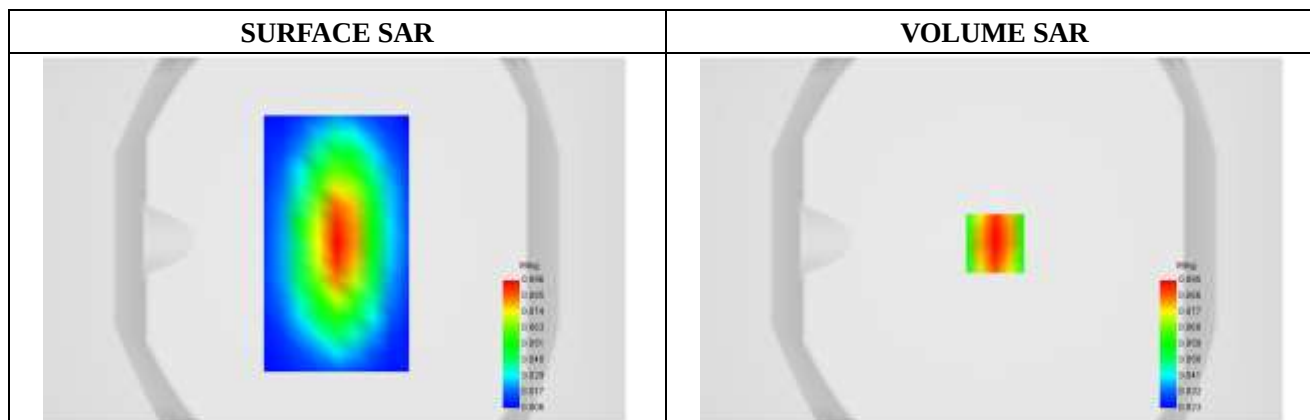
B. SAR Measurement Results

Frequency (MHz)	835
Relative permittivity (real part)	41.67
Conductivity (S/m)	0.91
Variation (%)	-0.41
ConvF	1.99

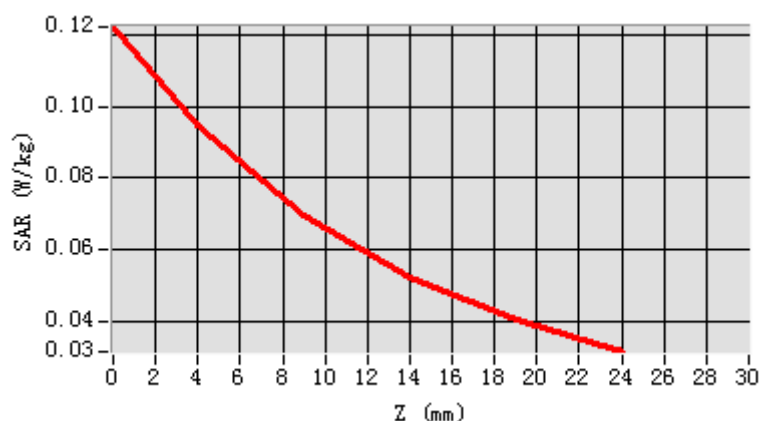
Maximum location: X=1.00, Y=-2.00

SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	0.062764
SAR 1g (W/Kg)	0.094061



Z Axis Scan



System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 11/20/2023

A. Experimental conditions.

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

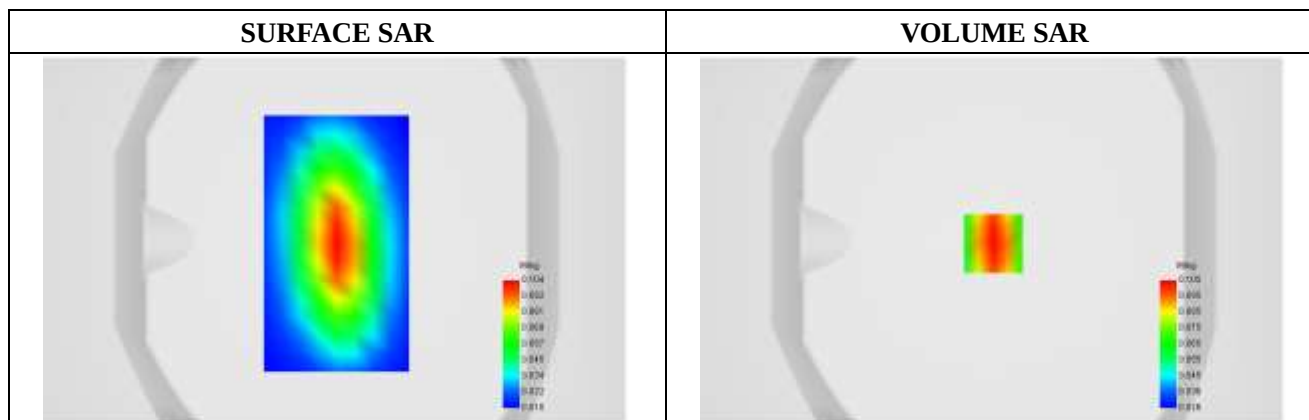
B. SAR Measurement Results

Frequency (MHz)	835
Relative permittivity (real part)	42.35
Conductivity (S/m)	0.93
Variation (%)	-0.09
ConvF	1.99

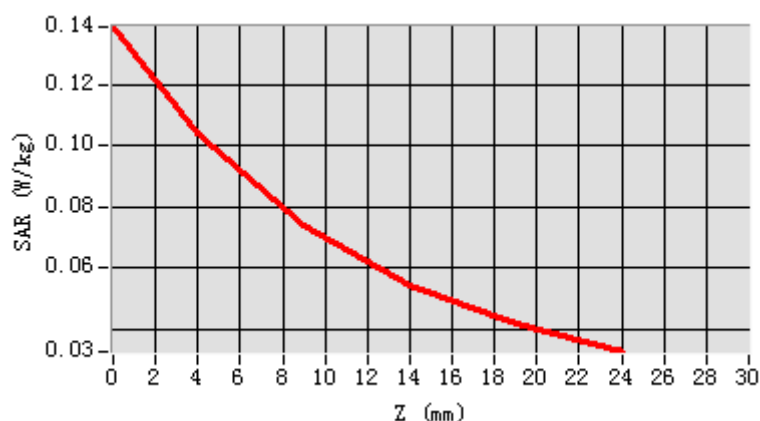
Maximum location: X=0.00, Y=-2.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.065765
SAR 1g (W/Kg)	0.101853



Z Axis Scan



System Performance Check (1800MHz)

Type: Validation measurement

Date of measurement: 10/28/2023

A. Experimental conditions.

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

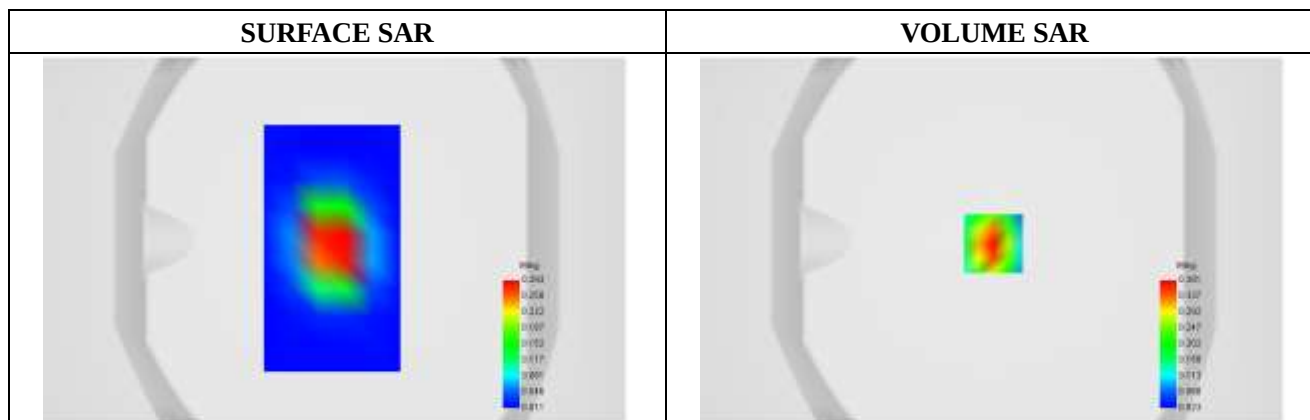
B. SAR Measurement Results

Frequency (MHz)	1800
Relative permittivity (real part)	41.12
Conductivity (S/m)	1.41
Variation (%)	0.10
ConvF	2.08

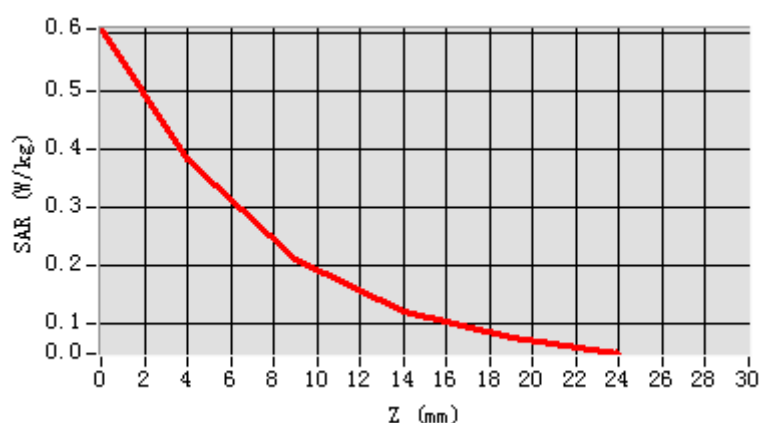
Maximum location: X=0.00, Y=-2.00

SAR Peak: 0.61 W/kg

SAR 10g (W/Kg)	0.189402
SAR 1g (W/Kg)	0.360452



Z Axis Scan



System Performance Check (1800MHz)

Type: Validation measurement

Date of measurement: 11/13/2023

A. Experimental conditions.

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

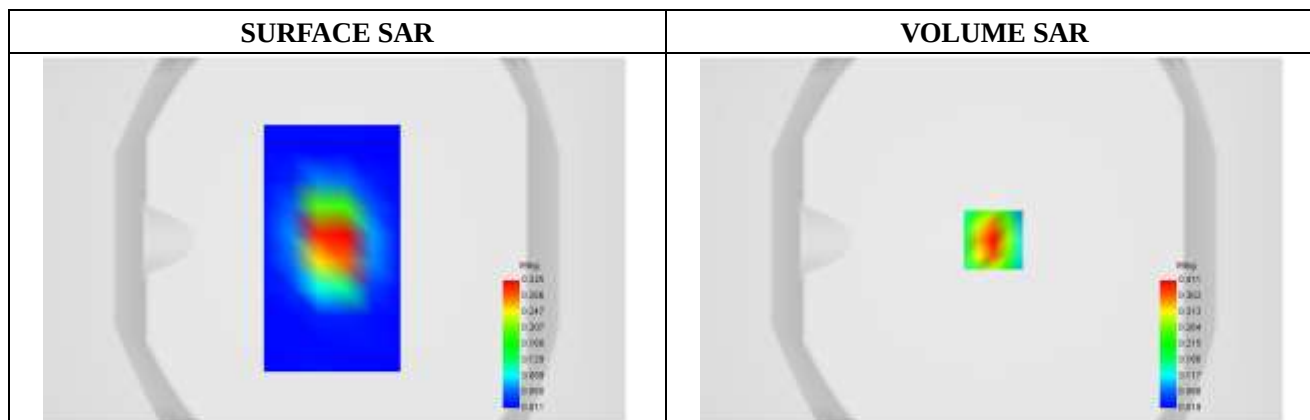
B. SAR Measurement Results

Frequency (MHz)	1800
Relative permittivity (real part)	40.59
Conductivity (S/m)	1.39
Variation (%)	0.62
ConvF	2.08

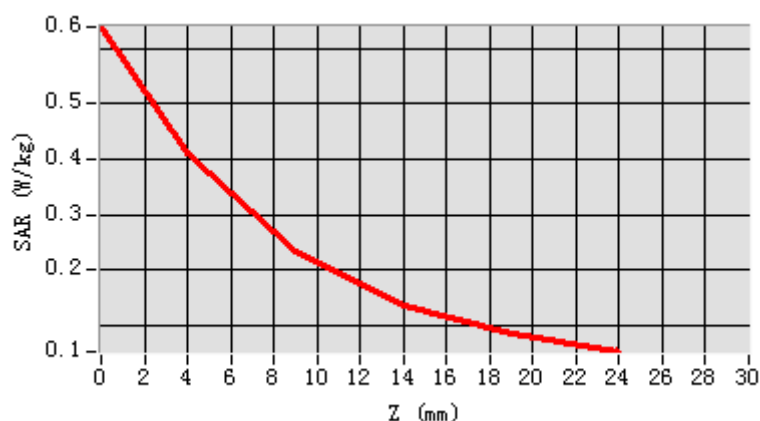
Maximum location: X=0.00, Y=0.00

SAR Peak: 0.61 W/kg

SAR 10g (W/Kg)	0.204072
SAR 1g (W/Kg)	0.383523



Z Axis Scan



System Performance Check (1900MHz)

Type: Validation measurement

Date of measurement: 10/23/2023

A. Experimental conditions.

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

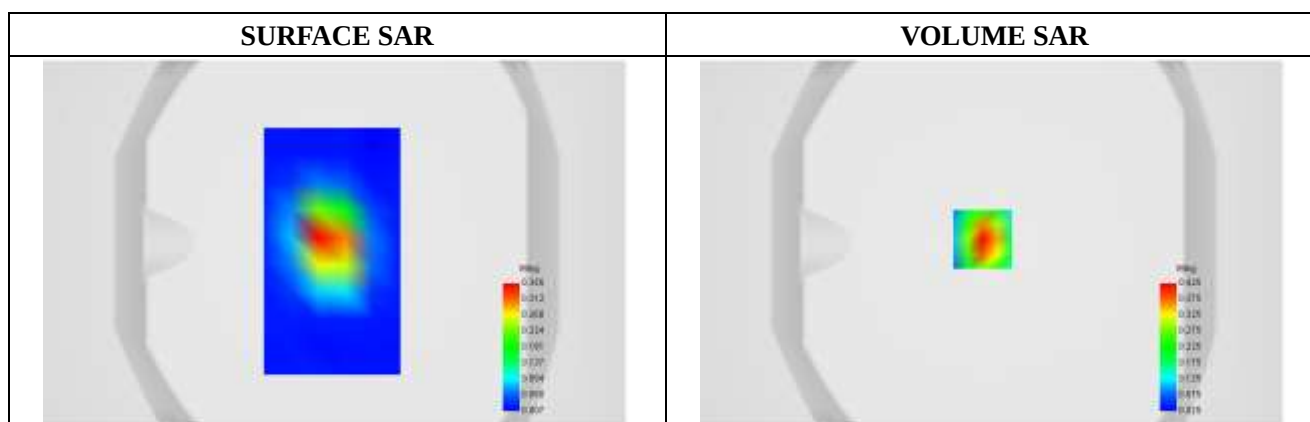
B. SAR Measurement Results

Frequency (MHz)	1900
Relative permittivity (real part)	40.09
Conductivity (S/m)	1.42
Variation (%)	0.10

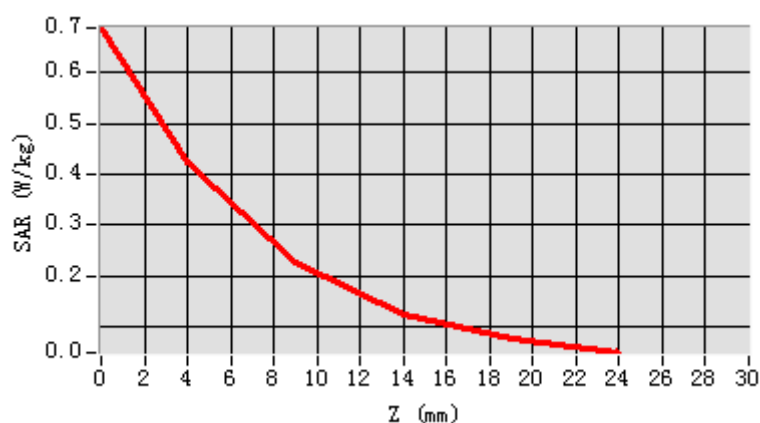
Maximum location: X=-6.00, Y=2.00

SAR Peak: 0.68 W/kg

SAR 10g (W/Kg)	0.203166
SAR 1g (W/Kg)	0.408275



Z Axis Scan



System Performance Check (1900MHz)

Type: Validation measurement

Date of measurement: 11/09/2023

A. Experimental conditions.

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

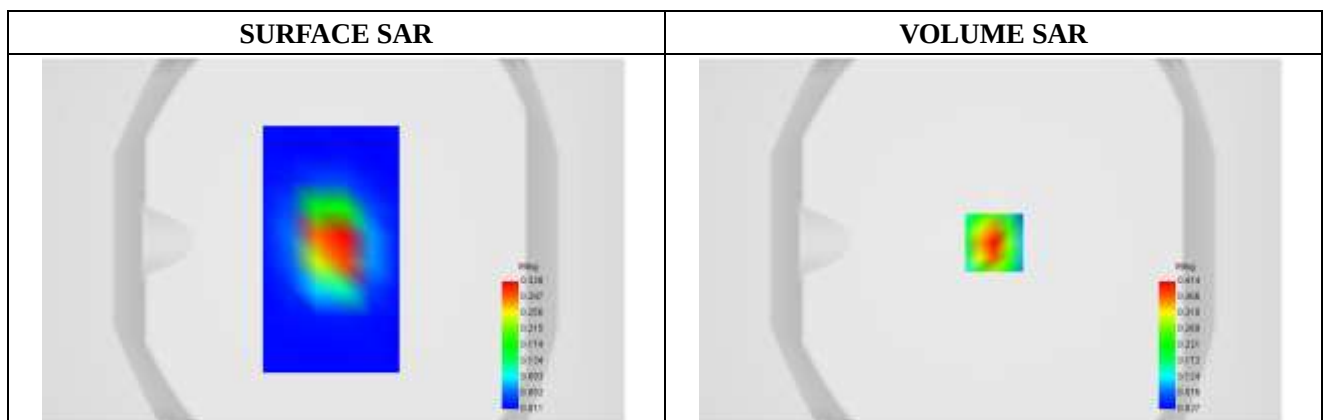
B. SAR Measurement Results

Frequency (MHz)	1900
Relative permittivity (real part)	40.08
Conductivity (S/m)	1.42
Variation (%)	0.15

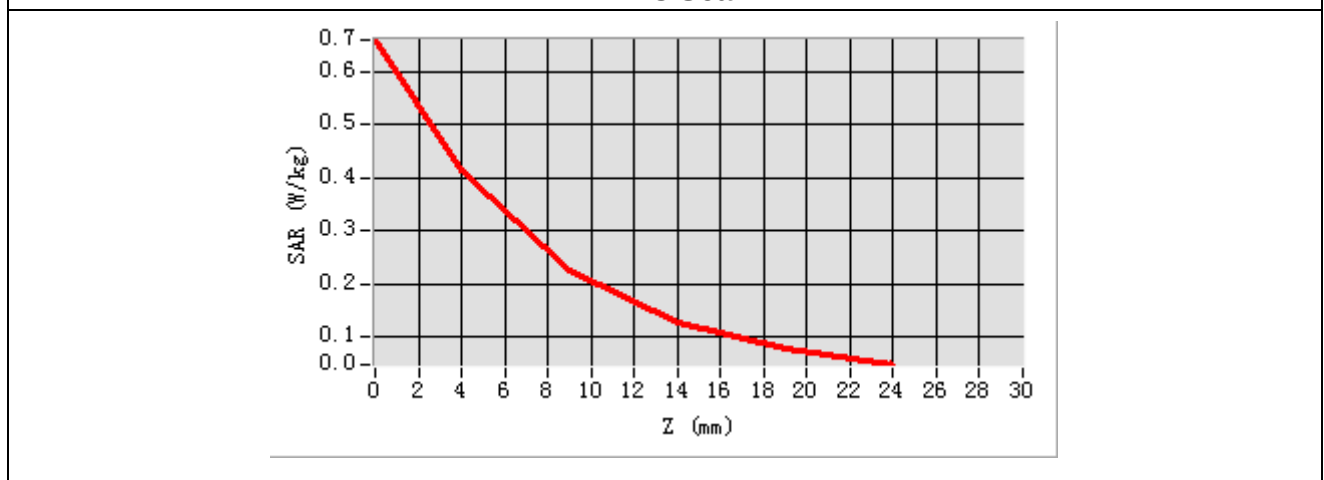
Maximum location: X=1.00, Y=-1.00

SAR Peak: 0.65 W/kg

SAR 10g (W/Kg)	0.206905
SAR 1g (W/Kg)	0.399583



Z Axis Scan



System Performance Check (2300MHz)

Type: Validation measurement

Date of measurement: 11/07/2023

A. Experimental conditions.

E-Field Probe	SATIMO 0523-EPGO-403
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x7, dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	2300MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

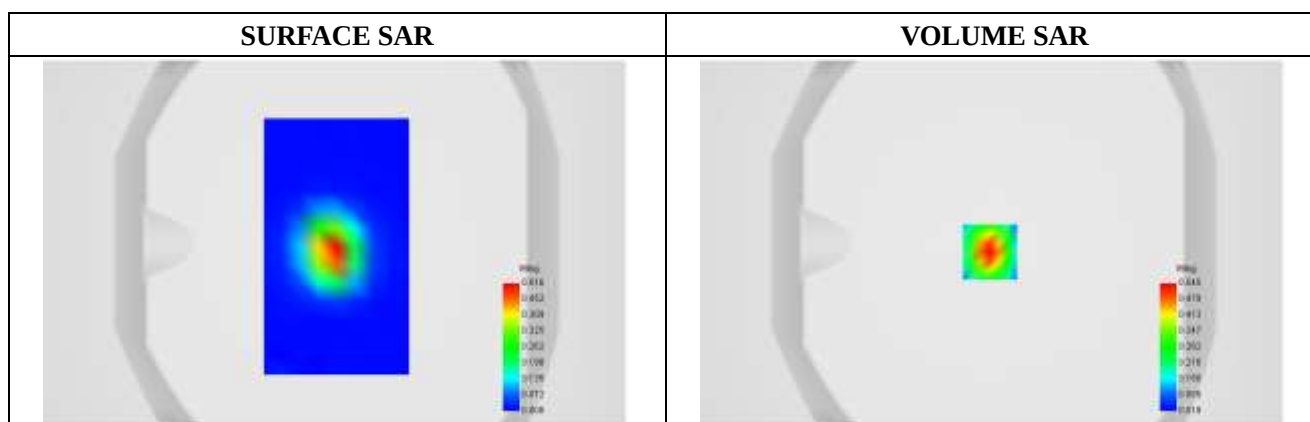
B. SAR Measurement Results

Frequency (MHz)	2300
Relative permittivity (real part)	39.92
Conductivity (S/m)	1.66
Variation (%)	-0.19

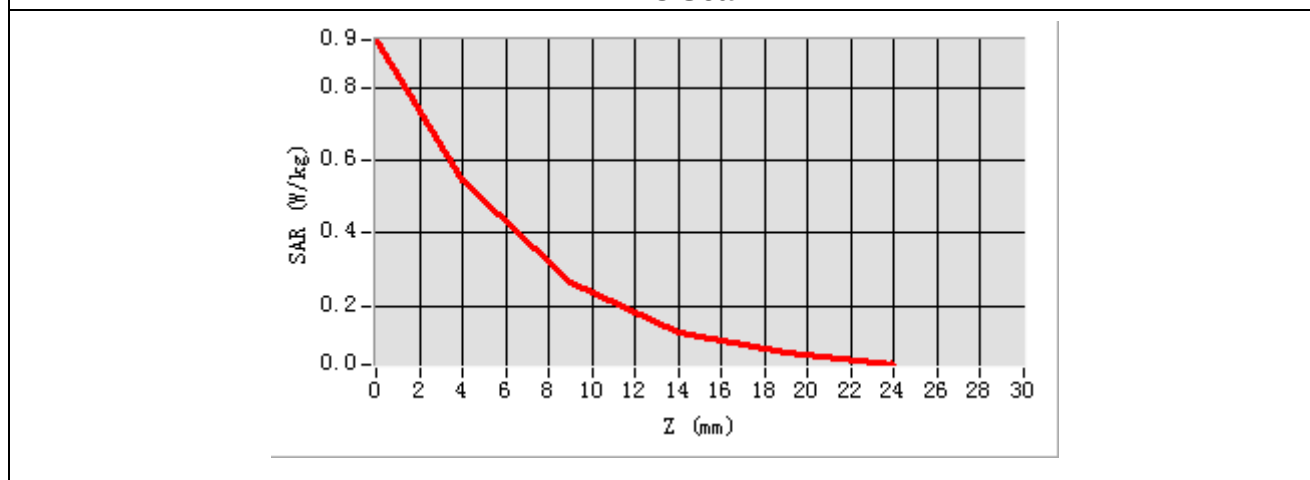
Maximum location: X=-2.00, Y=-4.00

SAR Peak: 0.93 W/kg

SAR 10g (W/Kg)	0.235311
SAR 1g (W/Kg)	0.506247



Z Axis Scan



System Performance Check (2450MHz)

Type: Validation measurement

Date of measurement: 11/06/2023

A. Experimental conditions.

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

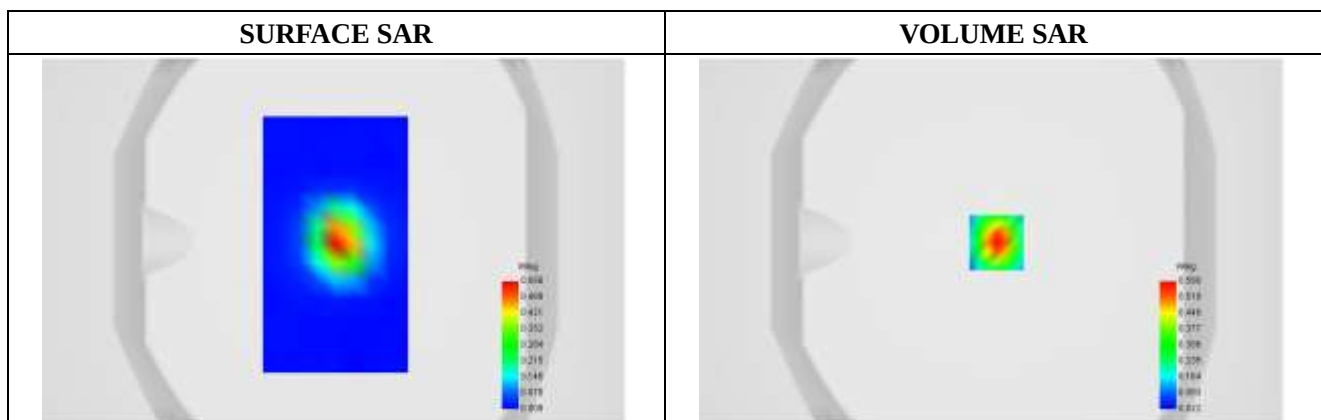
B. SAR Measurement Results

Frequency (MHz)	2450
Relative permittivity (real part)	38.79
Conductivity (S/m)	1.78
Variation (%)	0.48

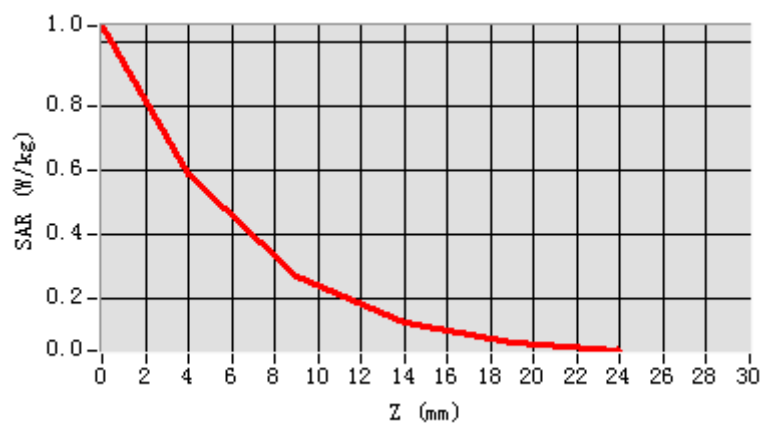
Maximum location: X=2.00, Y=-1.00

SAR Peak: 1.03 W/kg

SAR 10g (W/Kg)	0.245895
SAR 1g (W/Kg)	0.527040



Z Axis Scan



System Performance Check (2600MHz)

Type: Validation measurement

Date of measurement: 10/25/2023

A. Experimental conditions.

E-Field Probe	SATIMO 0523-EPGO-403
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x7, dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	2600MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

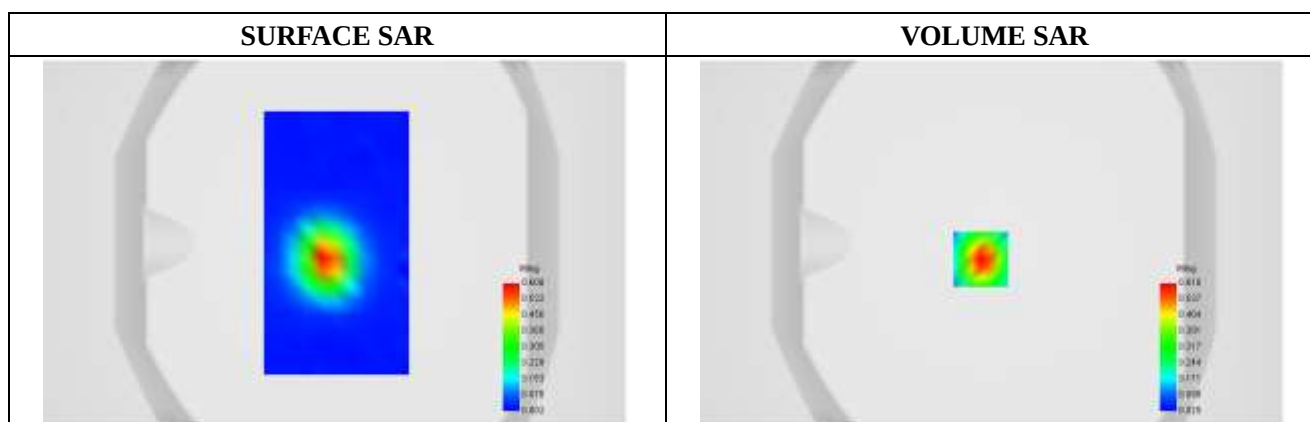
B. SAR Measurement Results

Frequency (MHz)	2600
Relative permittivity (real part)	39.49
Conductivity (S/m)	1.98
Variation (%)	-0.23

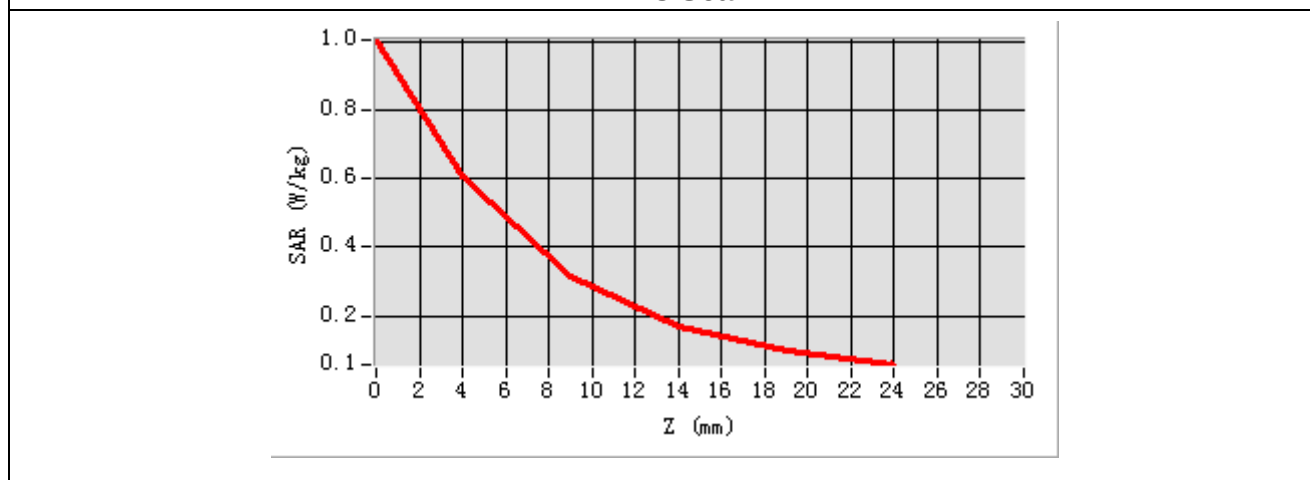
Maximum location: X=-7.00, Y=-9.00

SAR Peak: 1.14 W/kg

SAR 10g (W/Kg)	0.261930
SAR 1g (W/Kg)	0.551104



Z Axis Scan



System Performance Check (2600MHz)

Type: Validation measurement

Date of measurement: 11/08/2023

A. Experimental conditions.

E-Field Probe	SATIMO 0523-EPGO-403
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x7, dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	2600MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

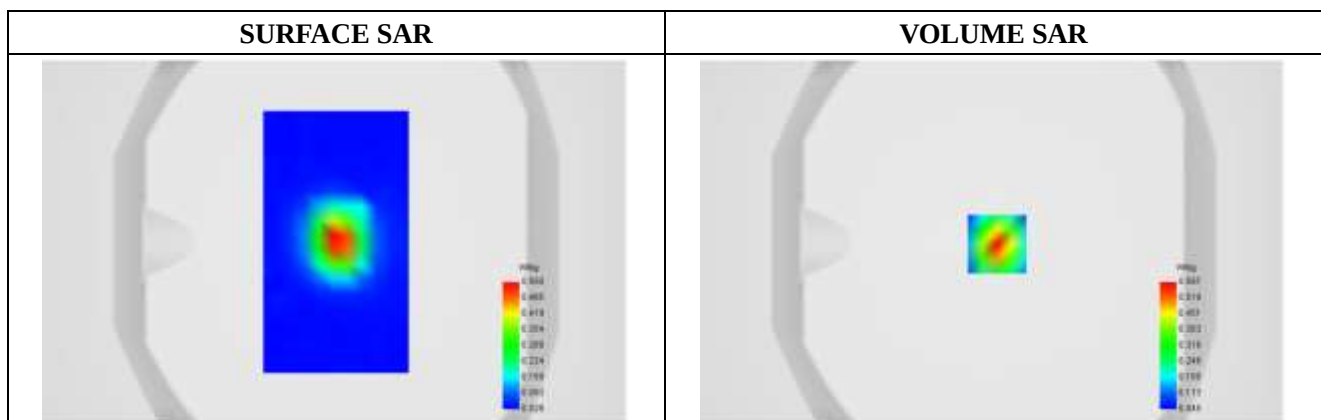
B. SAR Measurement Results

Frequency (MHz)	2600
Relative permittivity (real part)	39.49
Conductivity (S/m)	1.97
Variation (%)	0.45

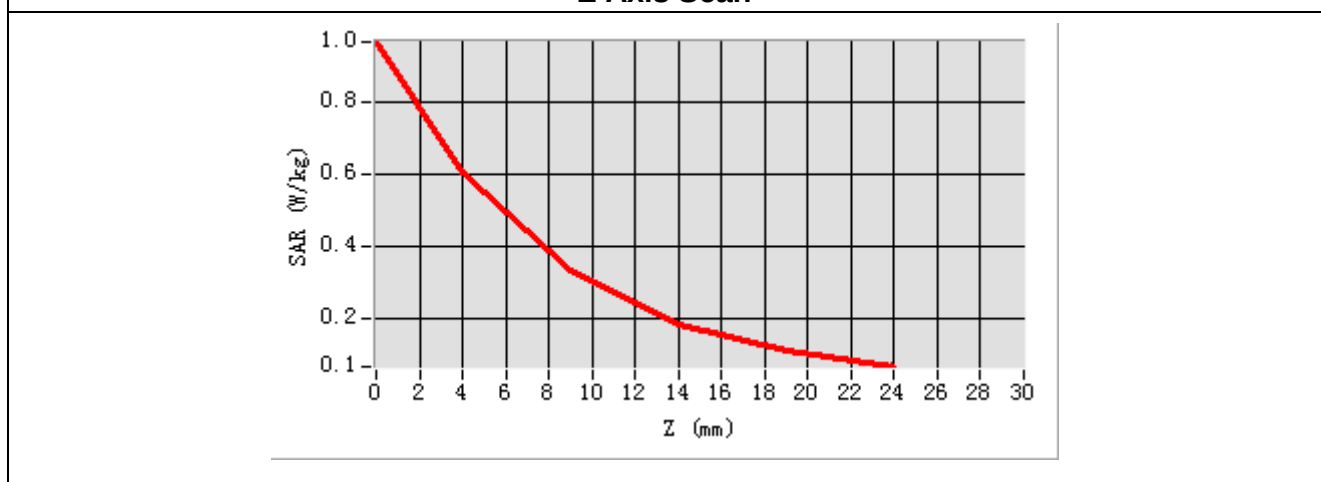
Maximum location: X=1.00, Y=0.00

SAR Peak: 0.96 W/kg

SAR 10g (W/Kg)	0.251940
SAR 1g (W/Kg)	0.549061



Z Axis Scan



System Performance Check (3500MHz)

Type: Validation measurement

Date of measurement: 10/27/2023

A. Experimental conditions.

E-Field Probe	SATIMO 0523-EPGO-403
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	3500MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

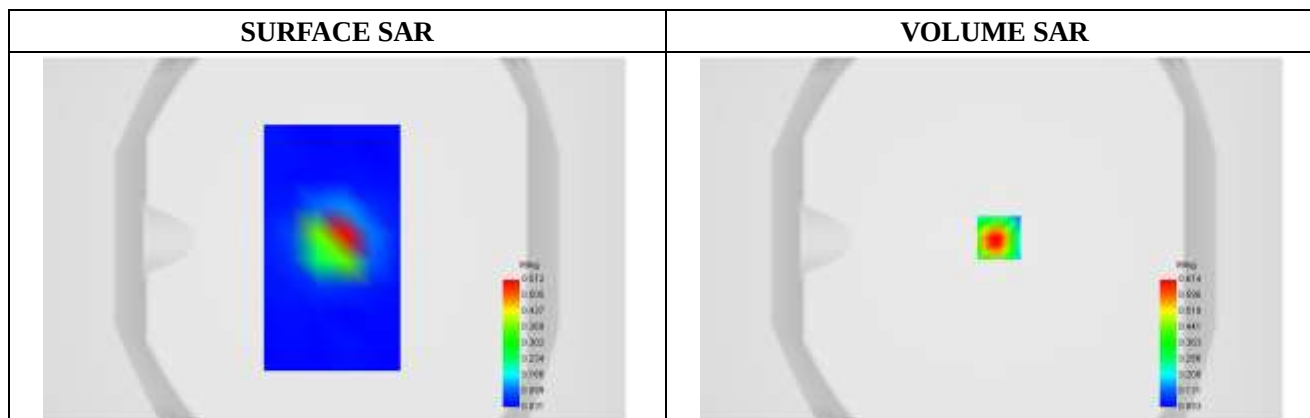
B. SAR Measurement Results

Frequency (MHz)	3500
Relative permittivity (real part)	38.65
Conductivity (S/m)	2.96
Variation (%)	0.09

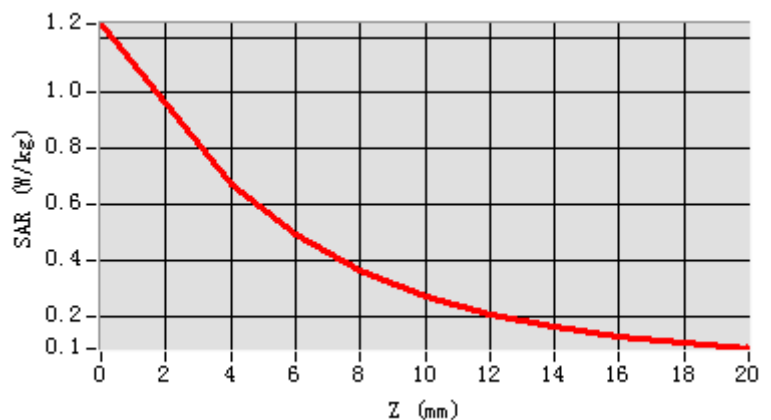
Maximum location: X=2.00, Y=1.00

SAR Peak: 1.25 W/kg

SAR 10g (W/Kg)	0.273451
SAR 1g (W/Kg)	0.663995



Z Axis Scan



System Performance Check (3700MHz)

Type: Validation measurement

Date of measurement: 11/18/2023

A. Experimental conditions.

E-Field Probe	SATIMO 0523-EPGO-403
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	3700MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

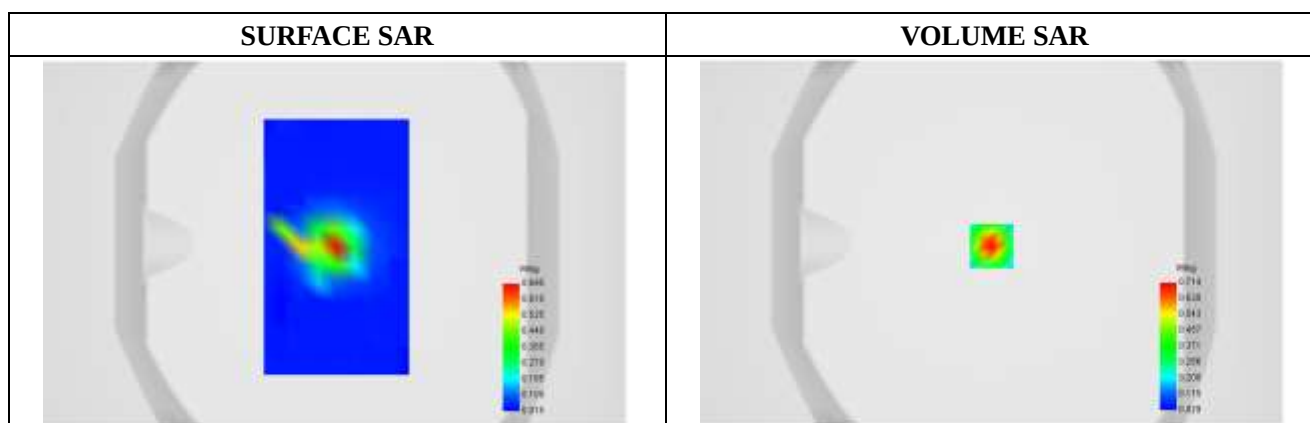
B. SAR Measurement Results

Frequency (MHz)	3700
Relative permittivity (real part)	37.69
Conductivity (S/m)	3.07
Variation (%)	-0.12

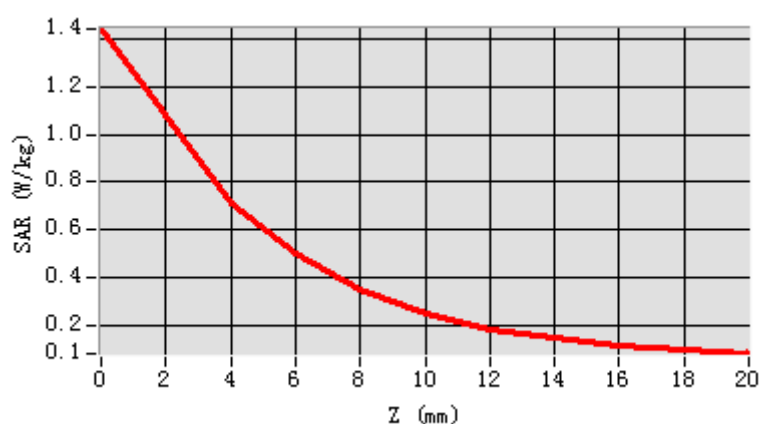
Maximum location: X=1.00, Y=-2.00

SAR Peak: 1.43 W/kg

SAR 10g (W/Kg)	0.264860
SAR 1g (W/Kg)	0.638607



Z Axis Scan



System Performance Check (3900MHz)

Type: Validation measurement

Date of measurement: 11/18/2023

A. Experimental conditions.

E-Field Probe	SATIMO 0523-EPGO-403
Area Scan	dx=8mm dy=8mm
Zoom Scan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	3900MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

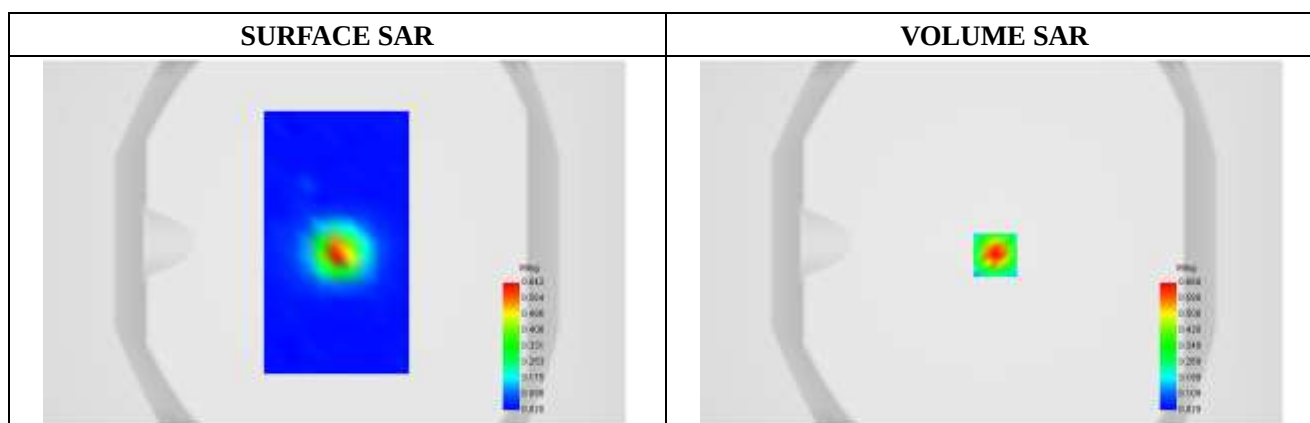
B. SAR Measurement Results

Frequency (MHz)	3900
Relative permittivity (real part)	37.41
Conductivity (S/m)	3.24
Variation (%)	0.03

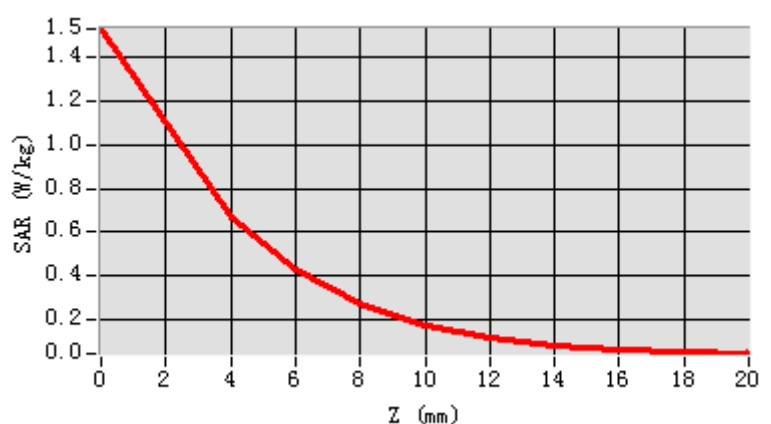
Maximum location: X=1.00, Y=-8.00

SAR Peak: 1.52 W/kg

SAR 10g (W/Kg)	0.2391511
SAR 1g (W/Kg)	0.658250



Z Axis Scan



System Performance Check (5200MHz)

Type: Validation measurement

Date of measurement: 11/01/2023

A. Experimental conditions.

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

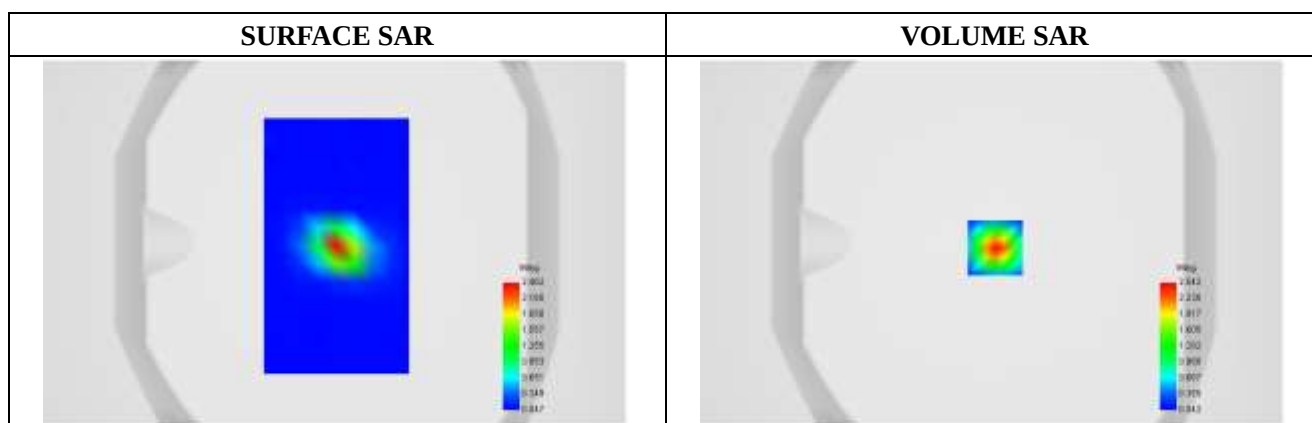
B. SAR Measurement Results

Frequency (MHz)	5200
Relative permittivity (real part)	35.44
Conductivity (S/m)	4.53
Variation (%)	0.17

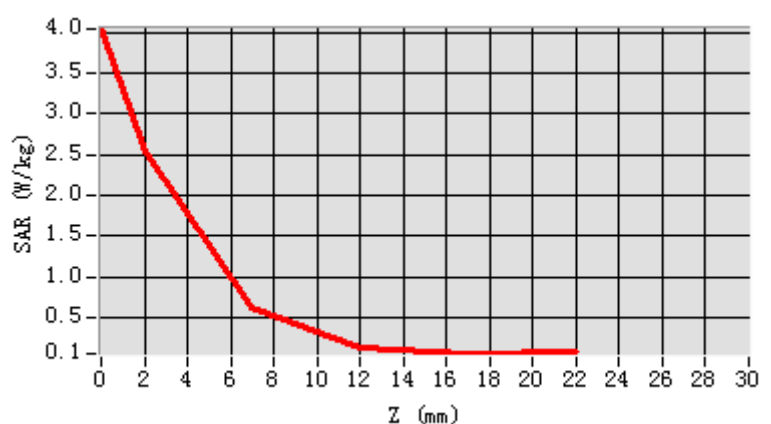
Maximum location: X=1.00, Y=-3.00

SAR Peak: 4.06 W/kg

SAR 10g (W/Kg)	0.528191
SAR 1g (W/Kg)	1.473507



Z Axis Scan



System Performance Check (5400MHz)

Type: Validation measurement

Date of measurement: 11/01/2023

A. Experimental conditions.

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

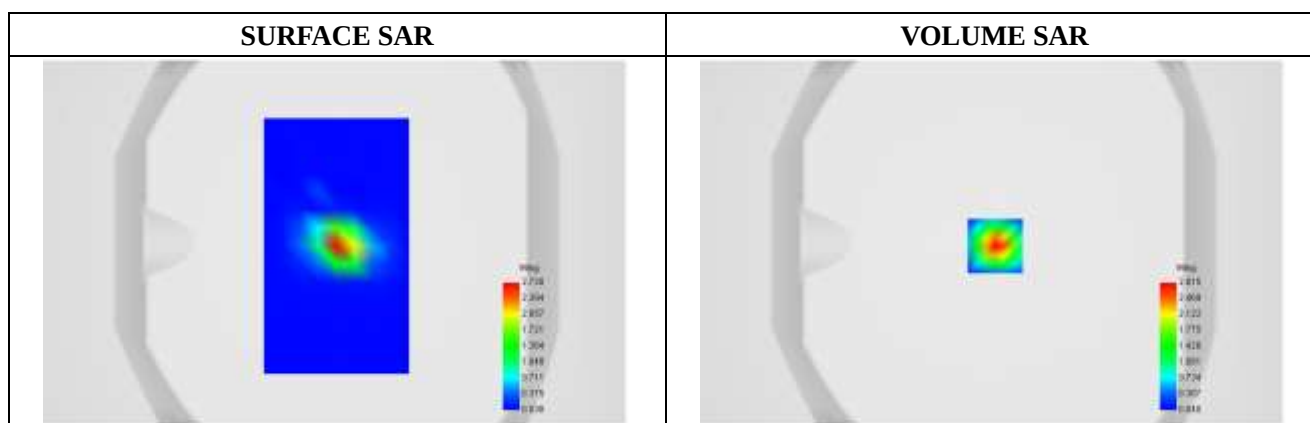
B. SAR Measurement Results

Frequency (MHz)	5400
Relative permittivity (real part)	35.21
Conductivity (S/m)	4.85
Variation (%)	-0.31

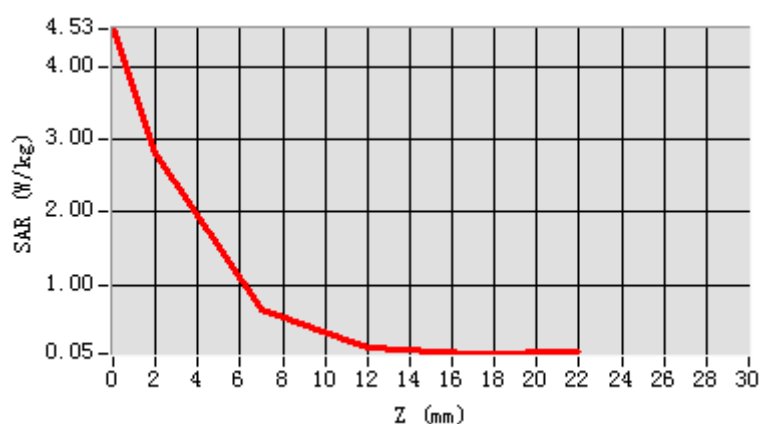
Maximum location: X=1.00, Y=-2.00

SAR Peak: 4.68 W/kg

SAR 10g (W/Kg)	0.558405
SAR 1g (W/Kg)	1.547562



Z Axis Scan



System Performance Check (5600MHz)

Type: Validation measurement

Date of measurement: 11/03/2023

A. Experimental conditions.

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

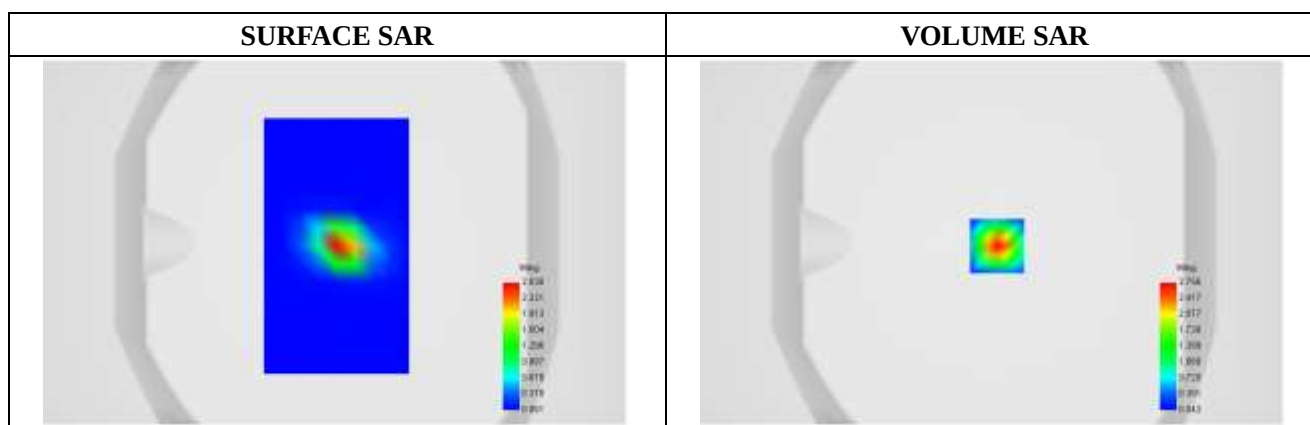
B. SAR Measurement Results

Frequency (MHz)	5600
Relative permittivity (real part)	35.98
Conductivity (S/m)	4.94
Variation (%)	-0.20

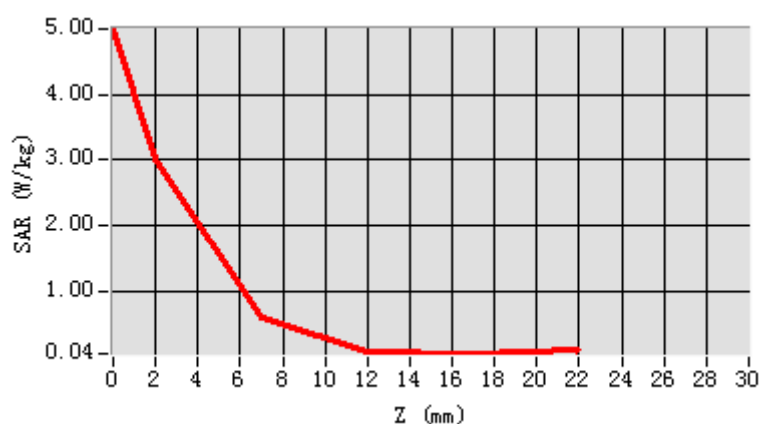
Maximum location: X=2.00, Y=-2.00

SAR Peak: 4.96 W/kg

SAR 10g (W/Kg)	0.561387
SAR 1g (W/Kg)	1.572284



Z Axis Scan



System Performance Check (5800MHz)

Type: Validation measurement

Date of measurement: 11/03/2023

A. Experimental conditions.

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

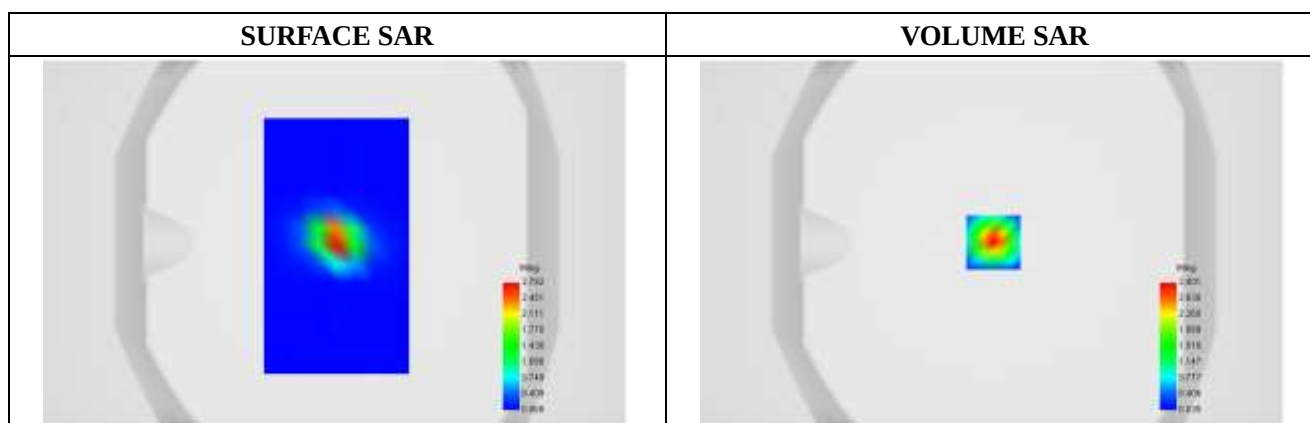
B. SAR Measurement Results

Frequency (MHz)	5800
Relative permittivity (real part)	35.71
Conductivity (S/m)	5.23
Variation (%)	-0.14

Maximum location: X=0.00, Y=0.00

SAR Peak: 5.16 W/kg

SAR 10g (W/Kg)	0.585168
SAR 1g (W/Kg)	1.697860



Z Axis Scan

