



Appendix A: SAR System performance Check Plots

Measurement	Liquid	Frequency	Test Date
System Check	Head	750	2022/05/20
System Check	Head	835	2022/05/13
System Check	Head	835	2022/05/14
System Check	Head	835	2022/05/23
System Check	Head	835	2022/07/06
System Check	Head	1800	2022/05/17
System Check	Head	1800	2022/06/23
System Check	Head	1900	2022/05/18
System Check	Head	1900	2022/06/22
System Check	Head	2450	2022/06/02
System Check	Head	2600	2022/05/22
System Check	Head	2600	2022/06/14
System Check	Head	2600	2022/06/25
System Check	Head	2600	2022/07/11
System Check	Head	3500	2022/06/13
System Check	Head	5200	2022/06/20
System Check	Head	5200	2022/06/21
System Check	Head	5400	2022/06/21
System Check	Head	5600	2022/06/22
System Check	Head	5800	2022/06/19

System Performance Check (750MHz)

Type: Validation measurement

Date of measurement: 05/20/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPGO330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	750MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

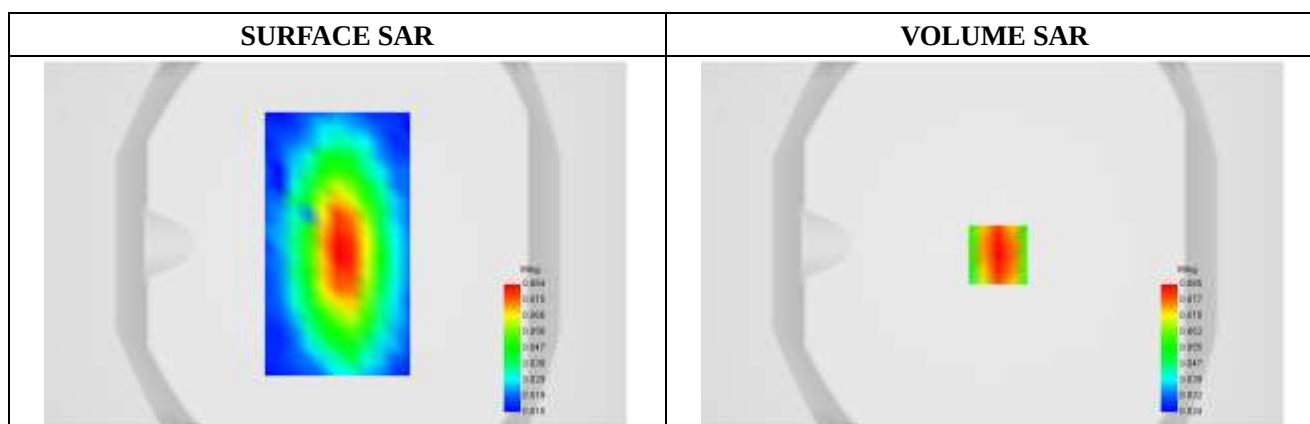
B. SAR Measurement Results

Frequency (MHz)	750
Relative permittivity (real part)	41.63
Conductivity (S/m)	0.90
Variation (%)	0.36

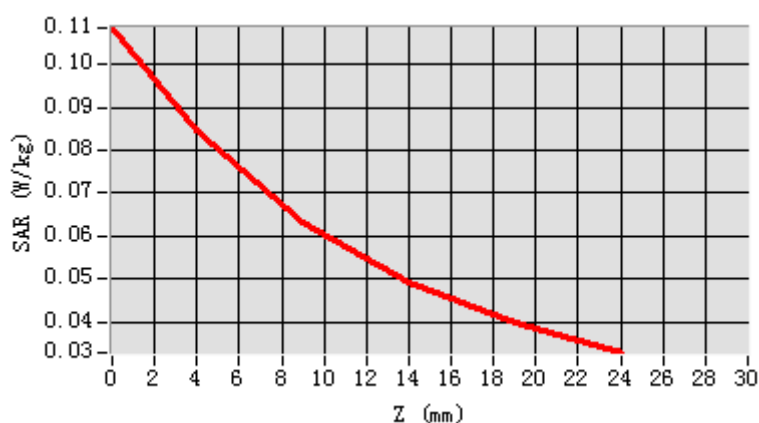
Maximum location: X=2.00, Y=-6.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.057607
SAR 1g (W/Kg)	0.089119



Z Axis Scan



System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 05/13/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	835MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

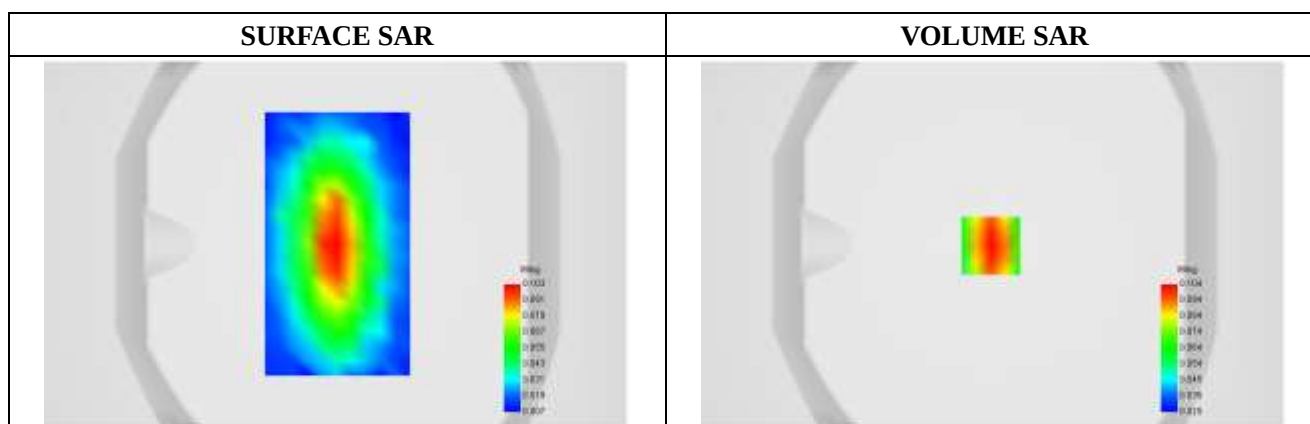
B. SAR Measurement Results

Frequency (MHz)	835
Relative permittivity (real part)	41.24
Conductivity (S/m)	0.91
Variation (%)	0.49

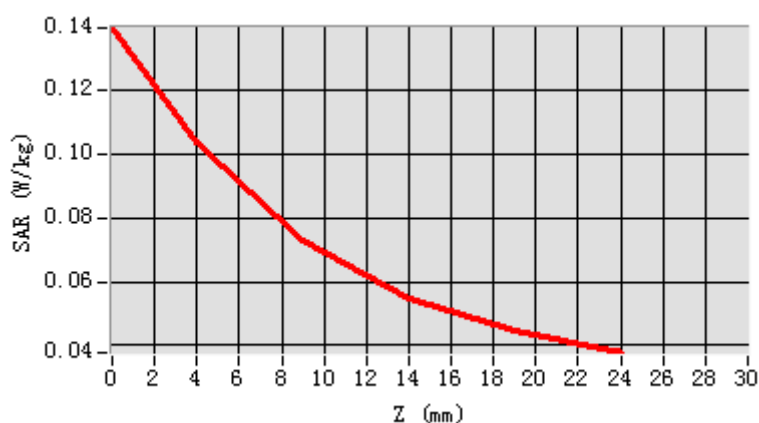
Maximum location: X=-2.00, Y=-1.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.062691
SAR 1g (W/Kg)	0.101870



Z Axis Scan



System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 05/14/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	835MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

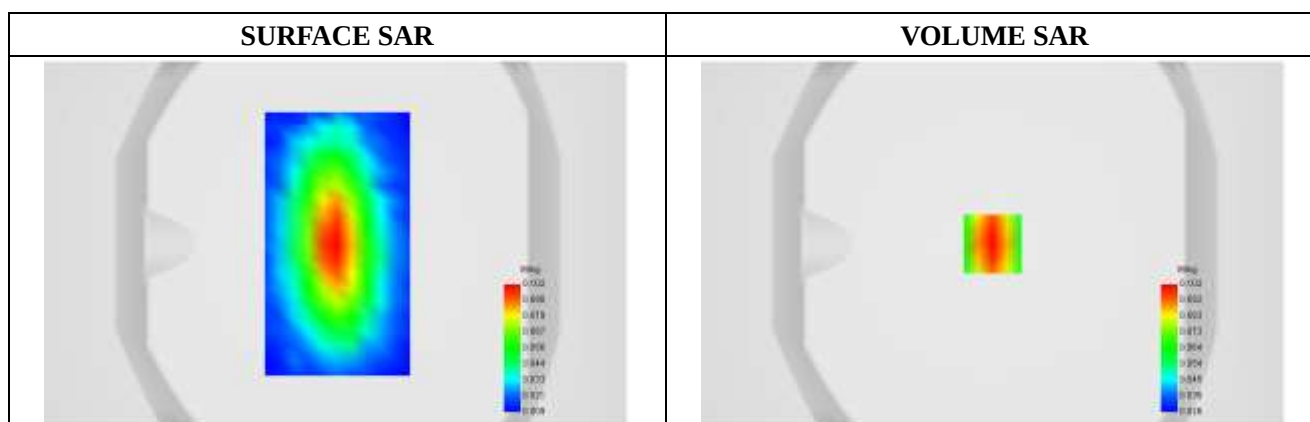
B. SAR Measurement Results

Frequency (MHz)	835
Relative permittivity (real part)	41.40
Conductivity (S/m)	0.88
Variation (%)	2.10

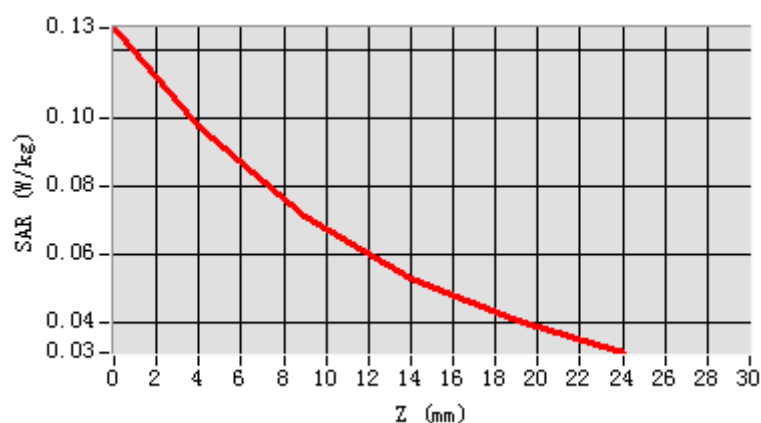
Maximum location: X=-1.00, Y=0.00

SAR Peak: 0.13 W/kg

SAR 10g (W/Kg)	0.059487
SAR 1g (W/Kg)	0.097950



Z Axis Scan



System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 05/23/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	835MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

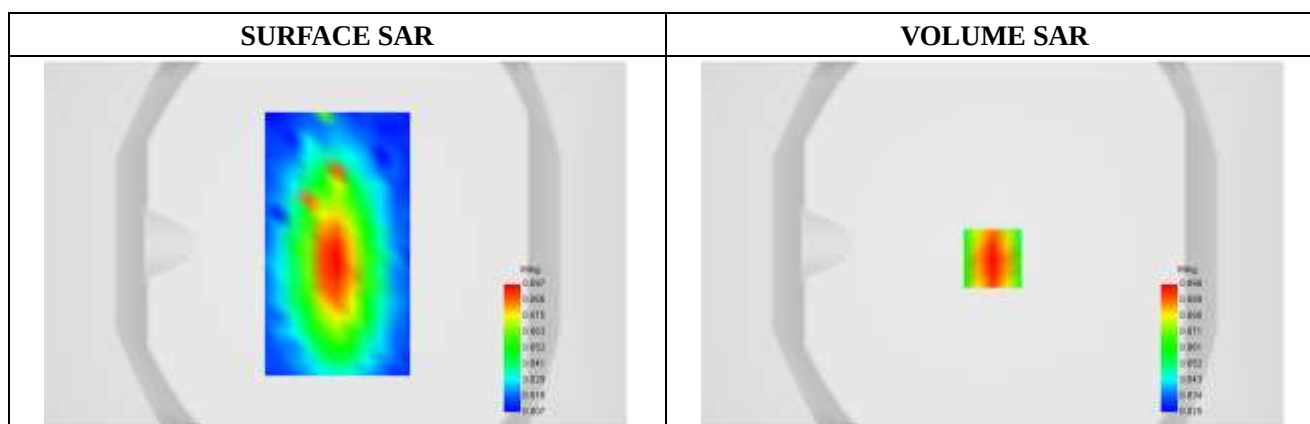
B. SAR Measurement Results

Frequency (MHz)	835
Relative permittivity (real part)	41.16
Conductivity (S/m)	0.89
Variation (%)	2.10

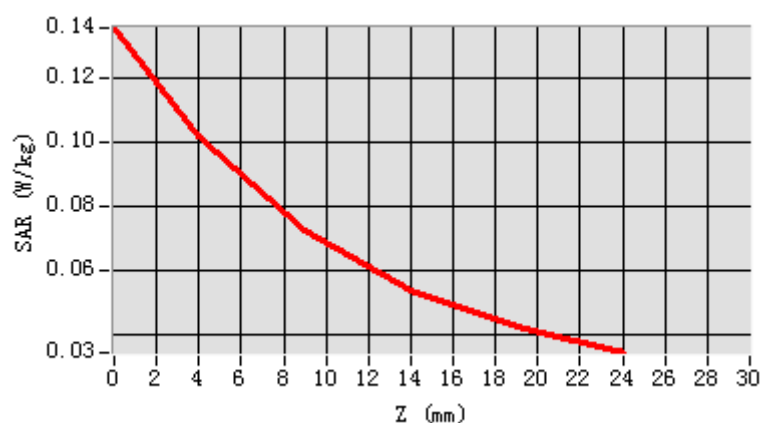
Maximum location: X=-1.00, Y=-8.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.064865
SAR 1g (W/Kg)	0.098356



Z Axis Scan



System Performance Check (835MHz)

Type: Validation measurement

Date of measurement: 07/06/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	835MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

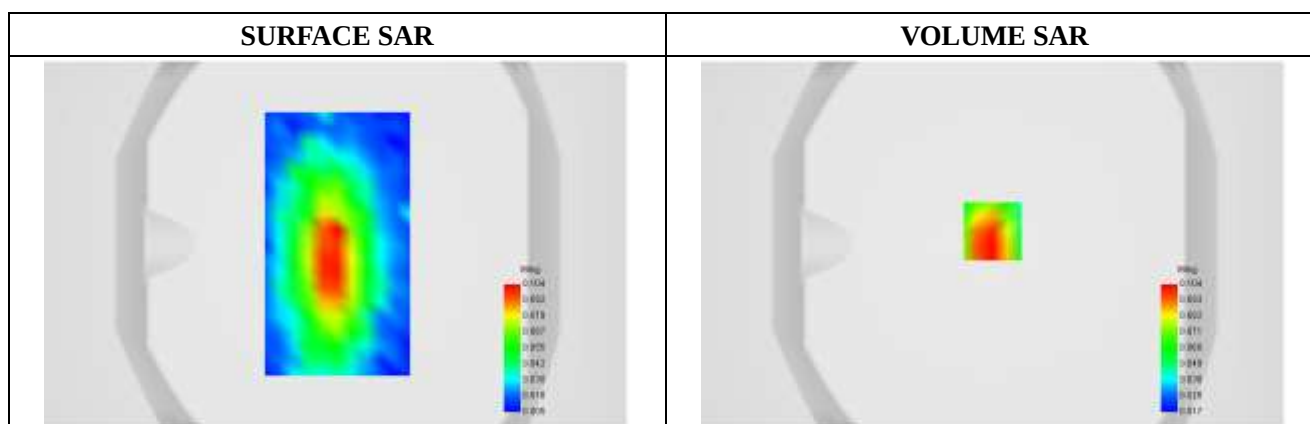
B. SAR Measurement Results

Frequency (MHz)	835
Relative permittivity (real part)	41.69
Conductivity (S/m)	0.92
Variation (%)	-1.15

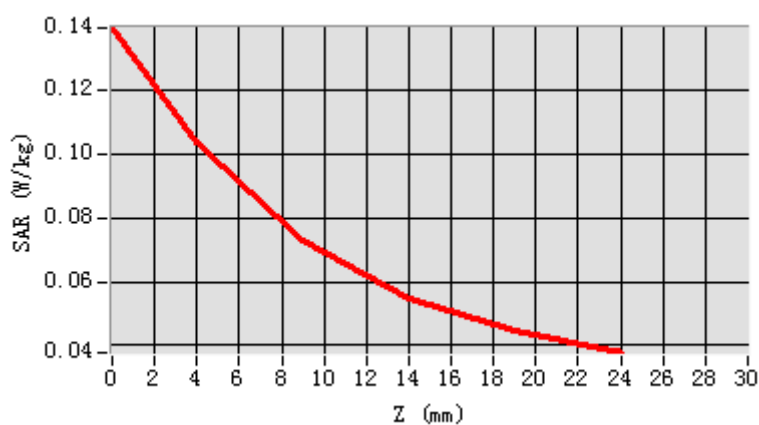
Maximum location: X=-1.00, Y=-7.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.065313
SAR 1g (W/Kg)	0.099870



Z Axis Scan



System Performance Check (1800MHz)

Type: Validation measurement

Date of measurement: 05/17/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPGO330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	1800MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

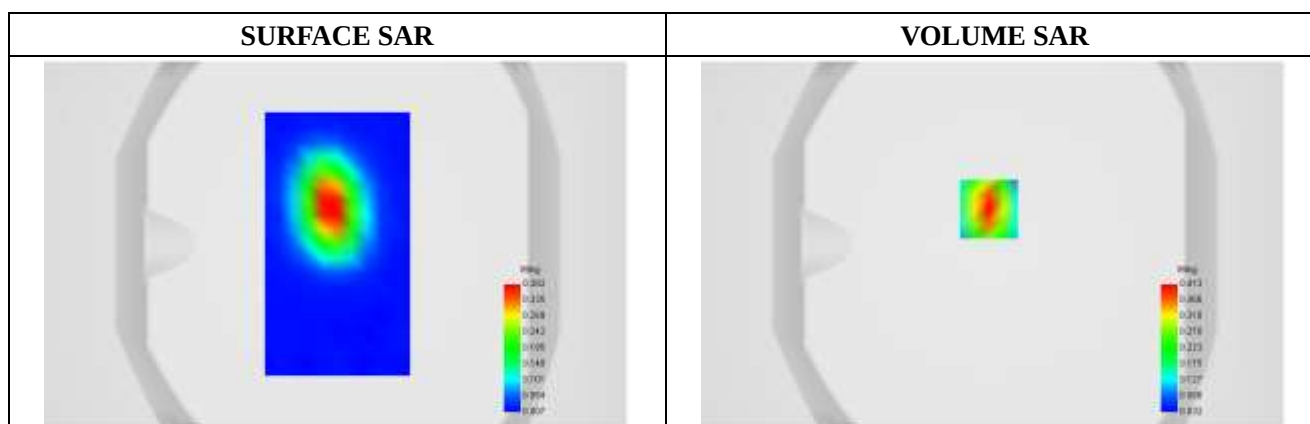
B. SAR Measurement Results

Frequency (MHz)	1800
Relative permittivity (real part)	39.20
Conductivity (S/m)	1.39
Variation (%)	-1.15

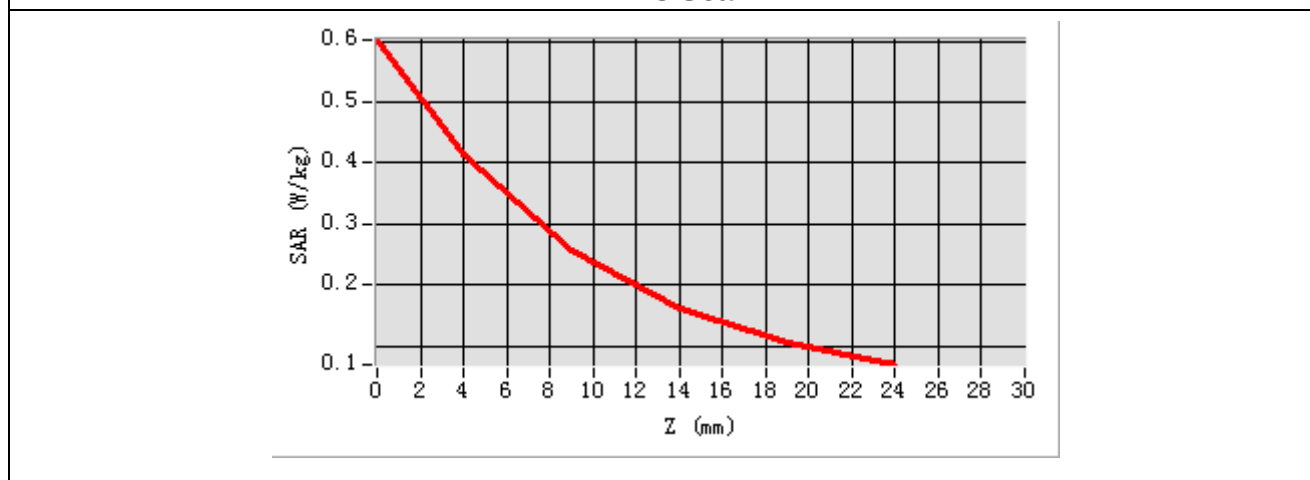
Maximum location: X=-3.00, Y=19.00

SAR Peak: 0.61 W/kg

SAR 10g (W/Kg)	0.207300
SAR 1g (W/Kg)	0.381976



Z Axis Scan



System Performance Check (1800MHz)

Type: Validation measurement

Date of measurement: 06/23/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	1800MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

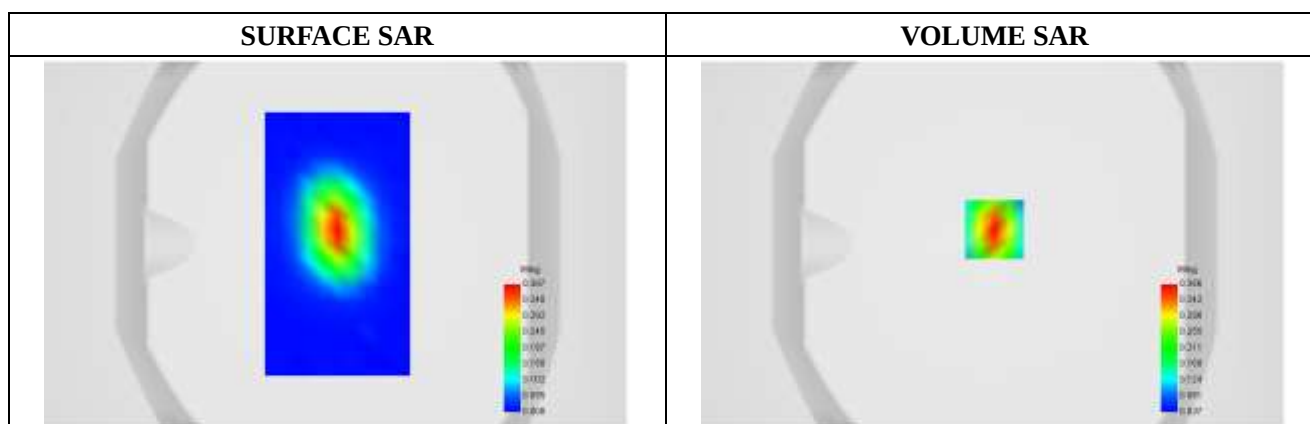
B. SAR Measurement Results

Frequency (MHz)	1800
Relative permittivity (real part)	39.69
Conductivity (S/m)	1.38
Variation (%)	-1.42

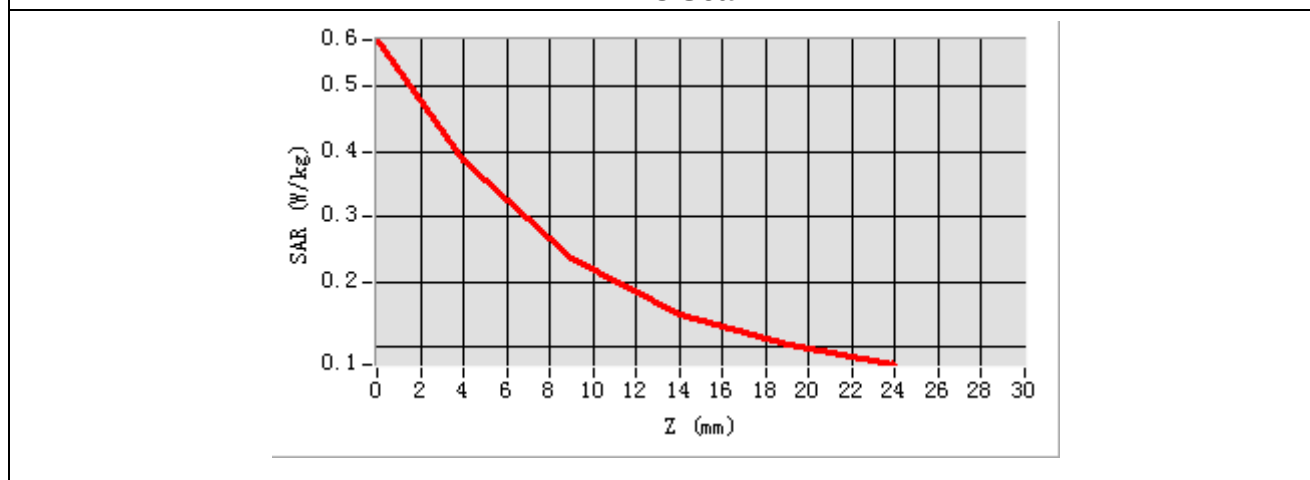
Maximum location: X=0.00, Y=8.00

SAR Peak: 0.60 W/kg

SAR 10g (W/Kg)	0.199693
SAR 1g (W/Kg)	0.367352



Z Axis Scan



System Performance Check (1900MHz)

Type: Validation measurement

Date of measurement: 05/18/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPGO330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	1900MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

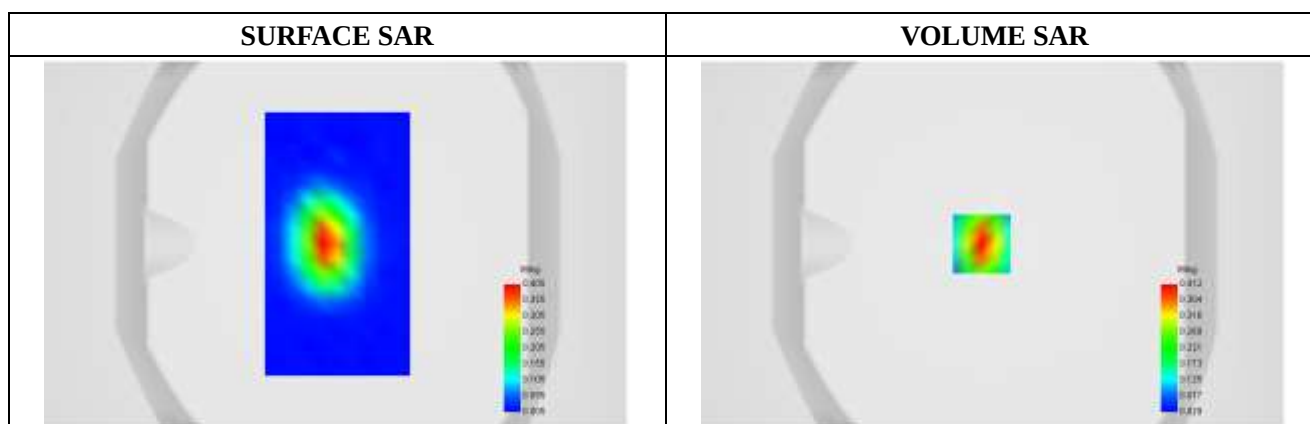
B. SAR Measurement Results

Frequency (MHz)	1900
Relative permittivity (real part)	40.36
Conductivity (S/m)	1.43
Variation (%)	-0.74

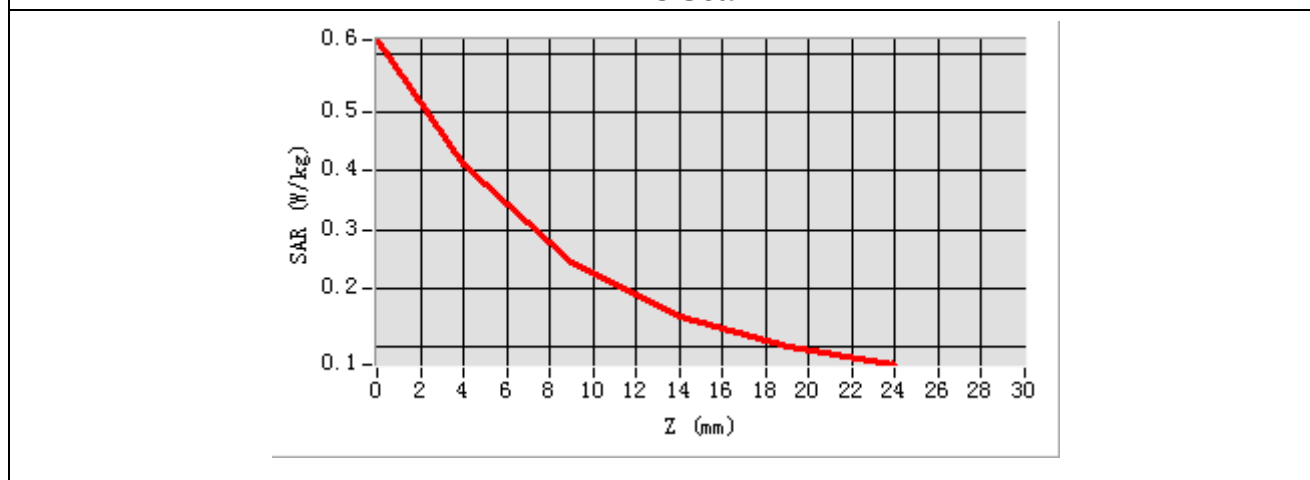
Maximum location: X=-7.00, Y=0.00

SAR Peak: 0.62 W/kg

SAR 10g (W/Kg)	0.209398
SAR 1g (W/Kg)	0.390665



Z Axis Scan



System Performance Check (1900MHz)

Type: Validation measurement

Date of measurement: 06/22/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPGO330
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	1900MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

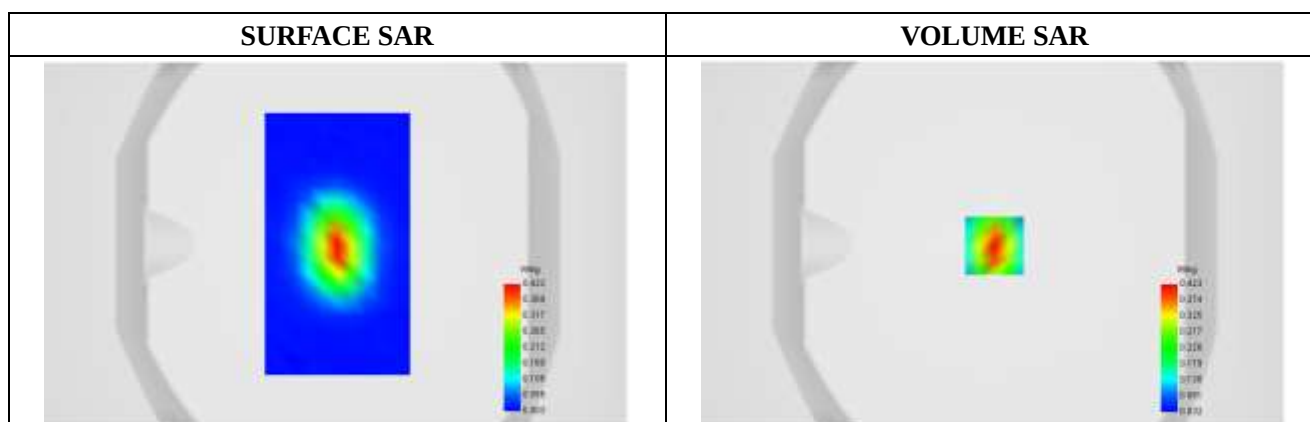
B. SAR Measurement Results

Frequency (MHz)	1900
Relative permittivity (real part)	40.32
Conductivity (S/m)	1.40
Variation (%)	-0.22

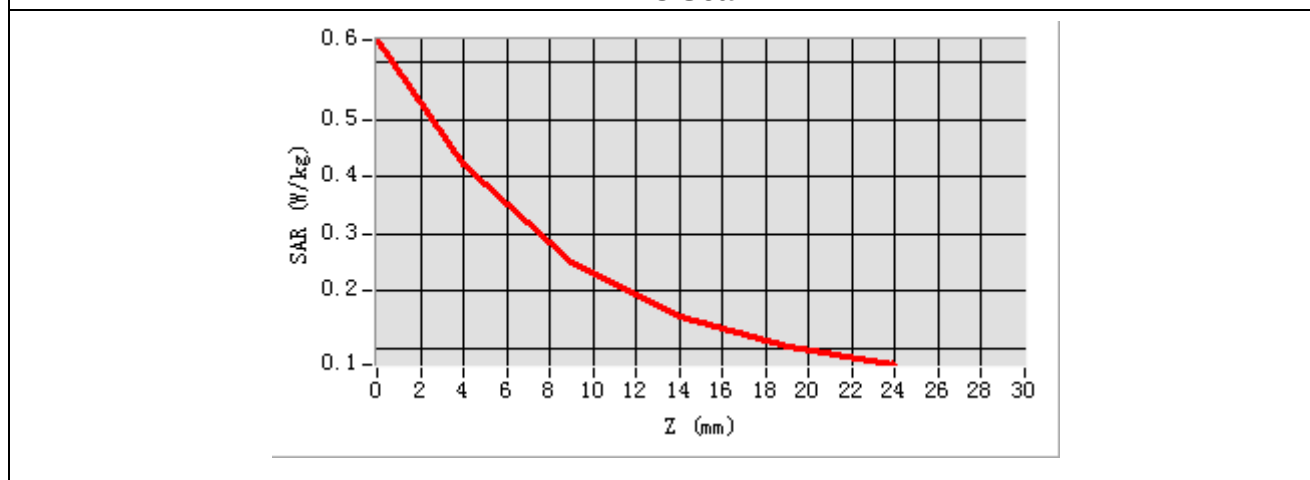
Maximum location: X=0.00, Y=-1.00

SAR Peak: 0.63 W/kg

SAR 10g (W/Kg)	0.213203
SAR 1g (W/Kg)	0.402739



Z Axis Scan



System Performance Check (2450MHz)

Type: Validation measurement

Date of measurement: 06/02/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPGO330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x7, dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	2450MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

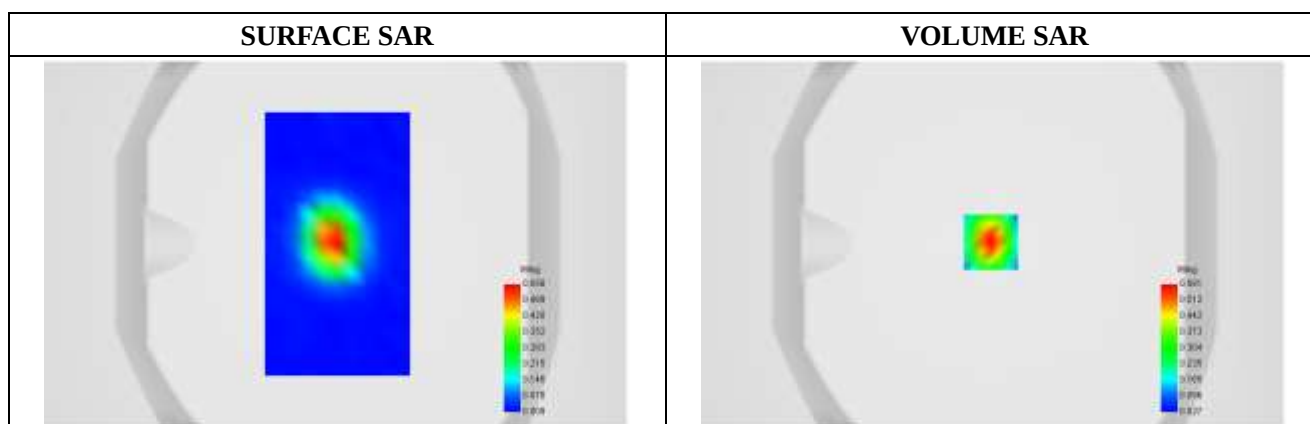
B. SAR Measurement Results

Frequency (MHz)	2450
Relative permittivity (real part)	39.53
Conductivity (S/m)	1.80
Variation (%)	-1.03

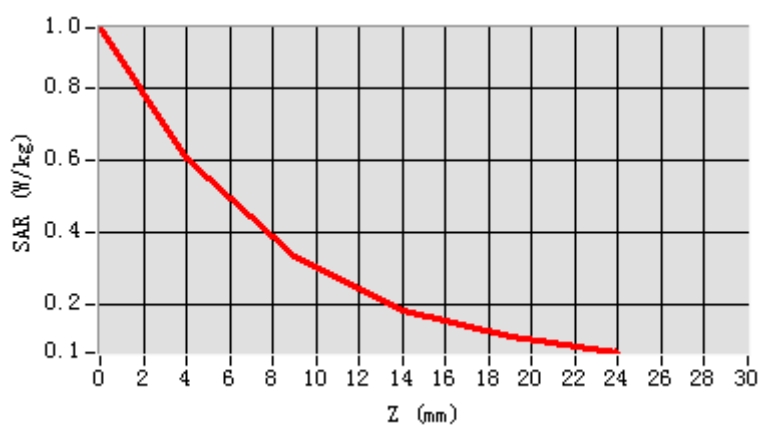
Maximum location: X=-2.00, Y=1.00

SAR Peak:1.00 W/kg

SAR 10g (W/Kg)	0.243809
SAR 1g (W/Kg)	0.551723



Z Axis Scan



System Performance Check (2600MHz)

Type: Validation measurement

Date of measurement: 05/22/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	2600MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

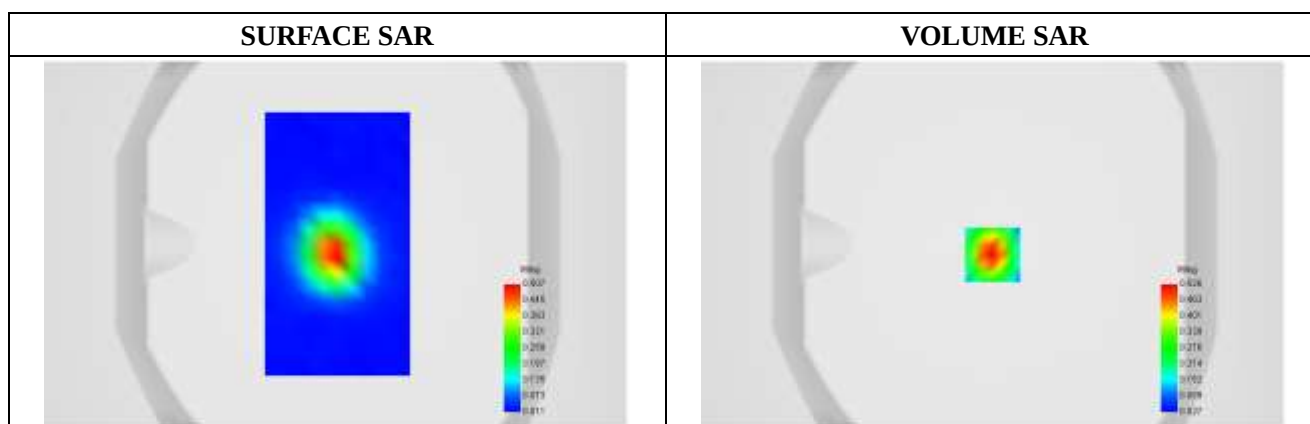
B. SAR Measurement Results

Frequency (MHz)	2600
Relative permittivity (real part)	39.12
Conductivity (S/m)	1.94
Variation (%)	-0.47

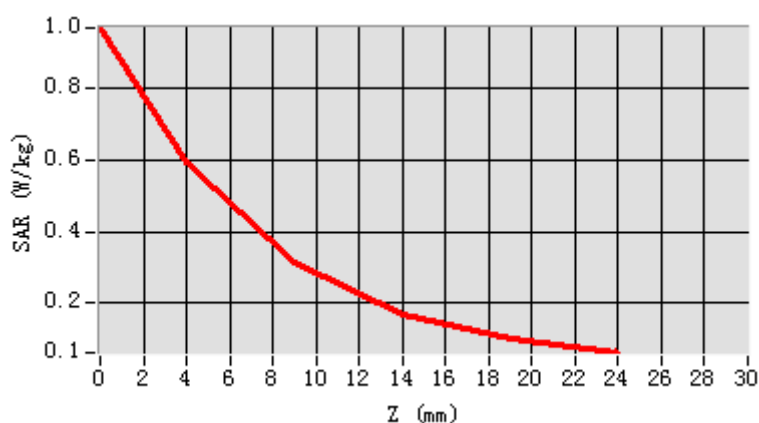
Maximum location: X=-1.00, Y=-6.00

SAR Peak:0.98 W/kg

SAR 10g (W/Kg)	0.239669
SAR 1g (W/Kg)	0.553526



Z Axis Scan



System Performance Check (2600MHz)

Type: Validation measurement

Date of measurement: 06/14/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	2600MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

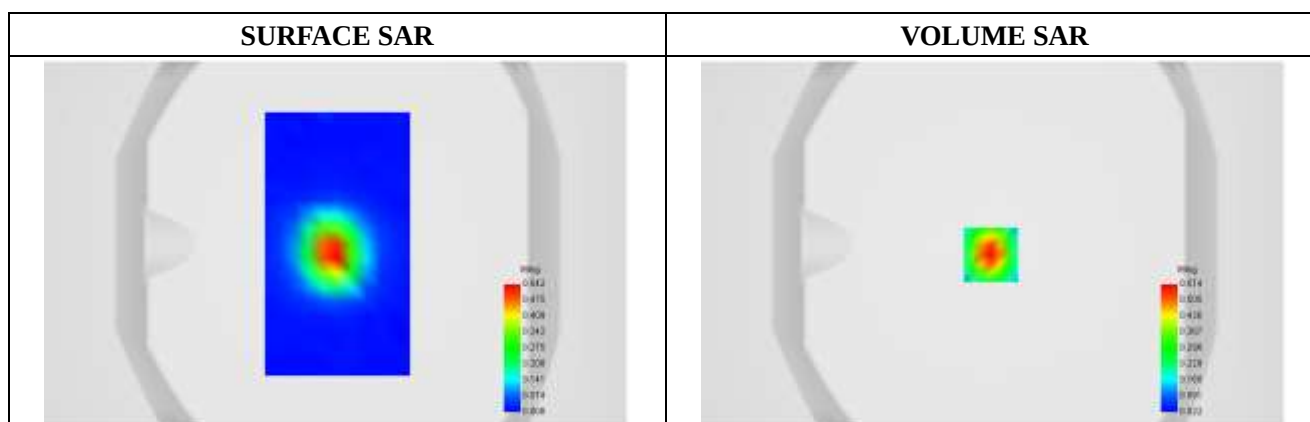
B. SAR Measurement Results

Frequency (MHz)	2600
Relative permittivity (real part)	39.82
Conductivity (S/m)	2.01
Variation (%)	0.16

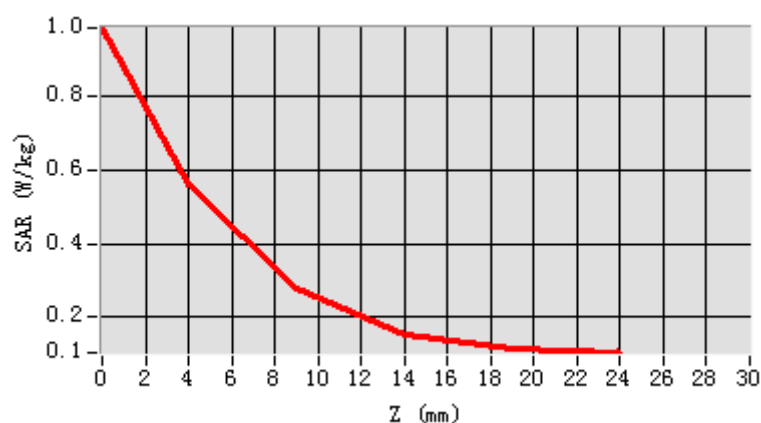
Maximum location: X=-1.00, Y=-7.00

SAR Peak:1.03 W/kg

SAR 10g (W/Kg)	0.249738
SAR 1g (W/Kg)	0.561468



Z Axis Scan



System Performance Check (2600MHz)

Type: Validation measurement

Date of measurement: 06/25/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	2600MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

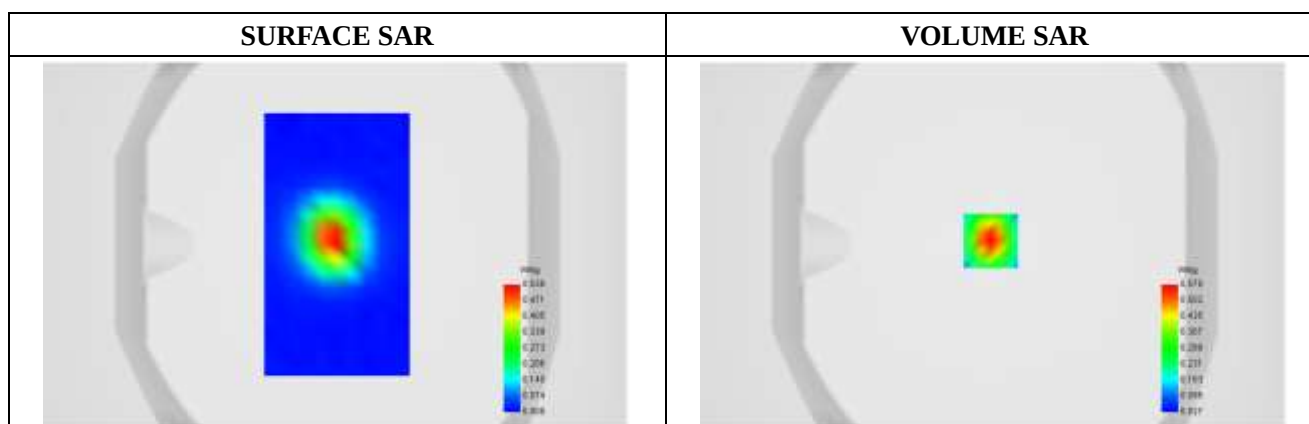
B. SAR Measurement Results

Frequency (MHz)	2600
Relative permittivity (real part)	38.74
Conductivity (S/m)	1.98
Variation (%)	-1.27

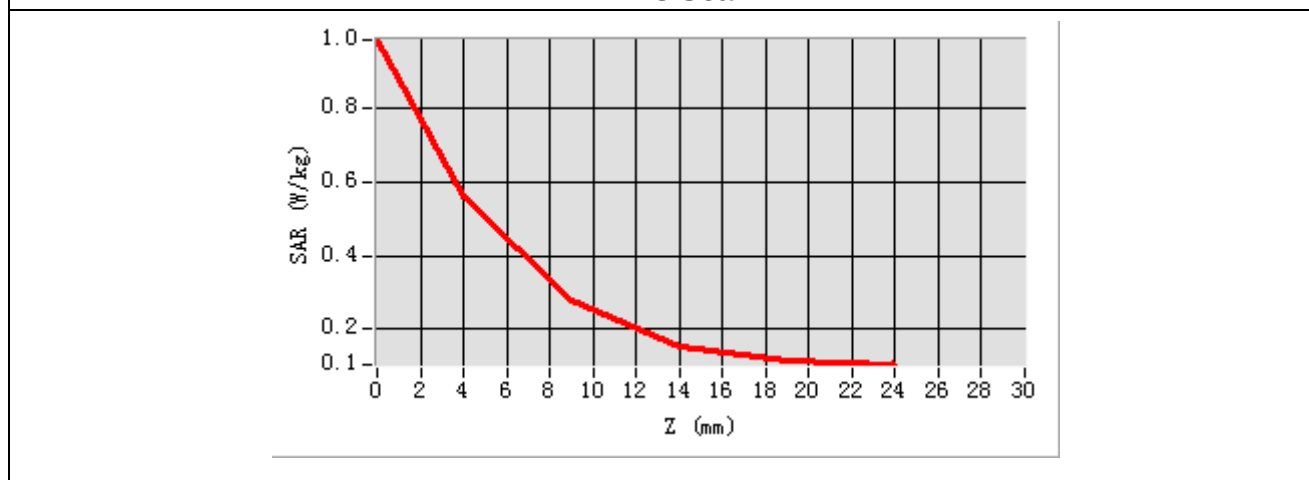
Maximum location: X=-2.00, Y=-3.00

SAR Peak:1.02 W/kg

SAR 10g (W/Kg)	0.248511
SAR 1g (W/Kg)	0.558169



Z Axis Scan



System Performance Check (2600MHz)

Type: Validation measurement

Date of measurement: 07/11/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPGO330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	2600MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

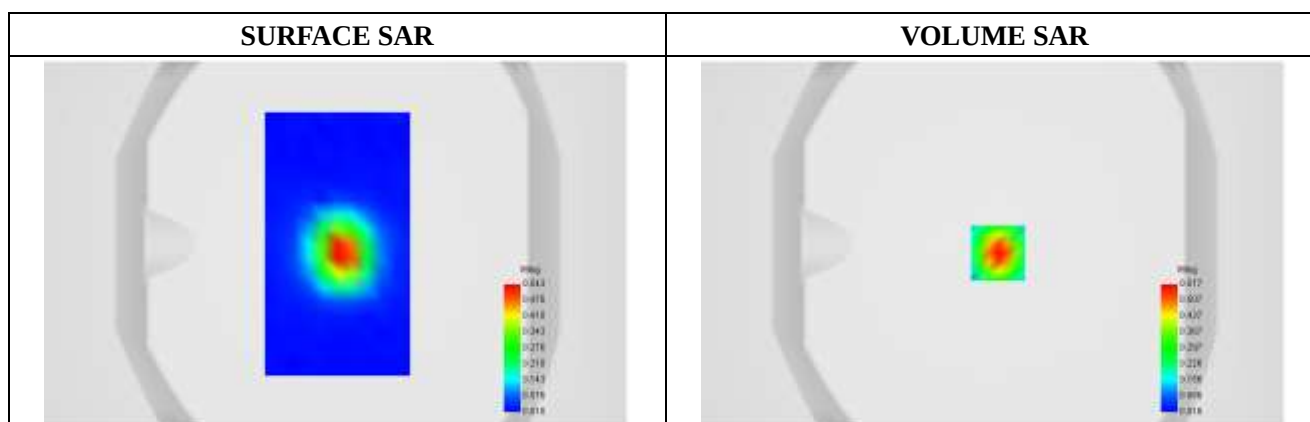
B. SAR Measurement Results

Frequency (MHz)	2600
Relative permittivity (real part)	38.32
Conductivity (S/m)	1.99
Variation (%)	1.05

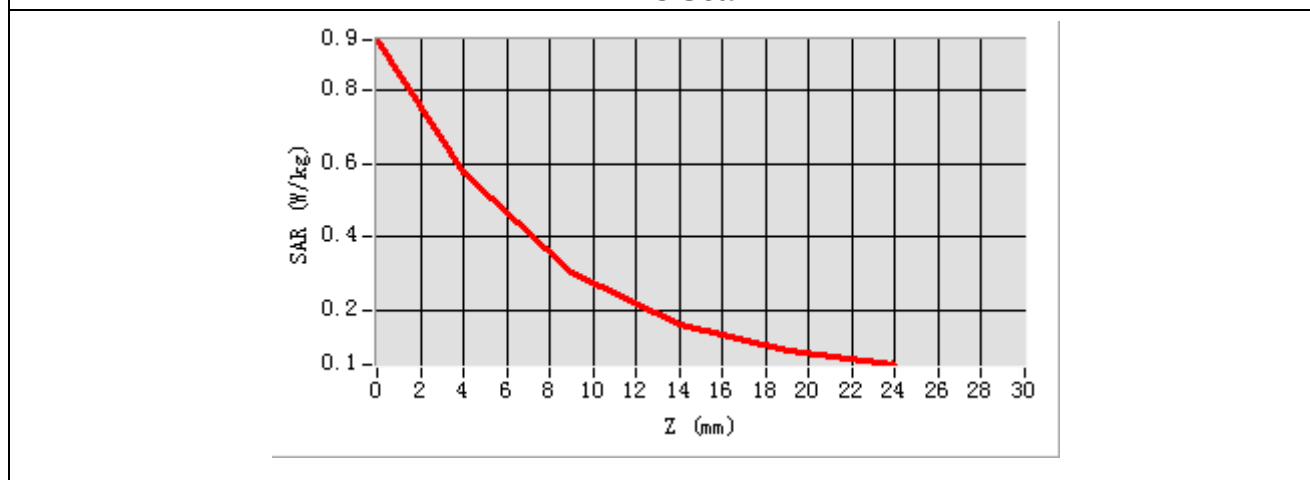
Maximum location: X=-2.00, Y=-3.00

SAR Peak:0.95 W/kg

SAR 10g (W/Kg)	0.242978
SAR 1g (W/Kg)	0.531273



Z Axis Scan



System Performance Check (3500MHz)

Type: Validation measurement

Date of measurement: 06/13/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	3500MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

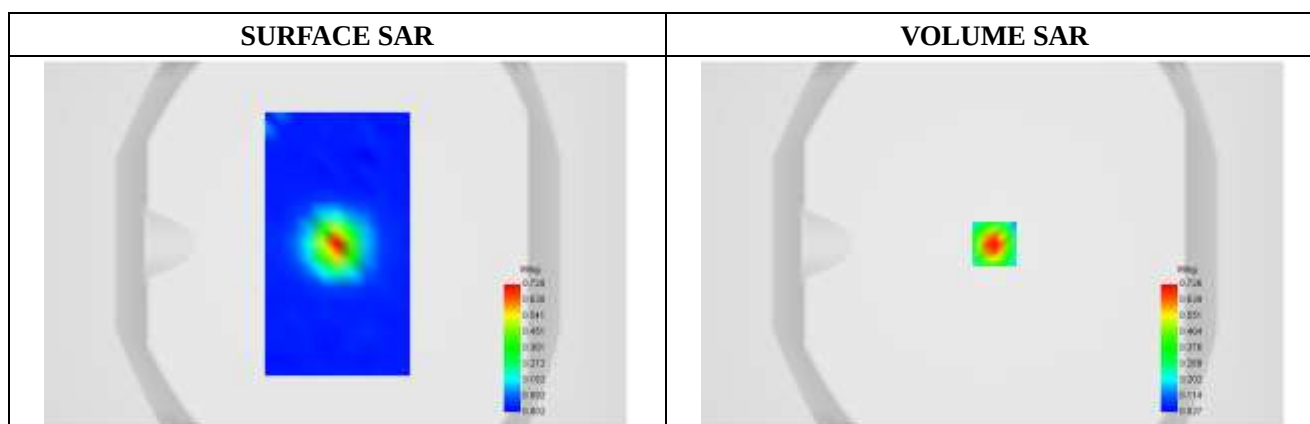
B. SAR Measurement Results

Frequency (MHz)	3500
Relative permittivity (real part)	38.26
Conductivity (S/m)	2.96
Variation (%)	-0.49

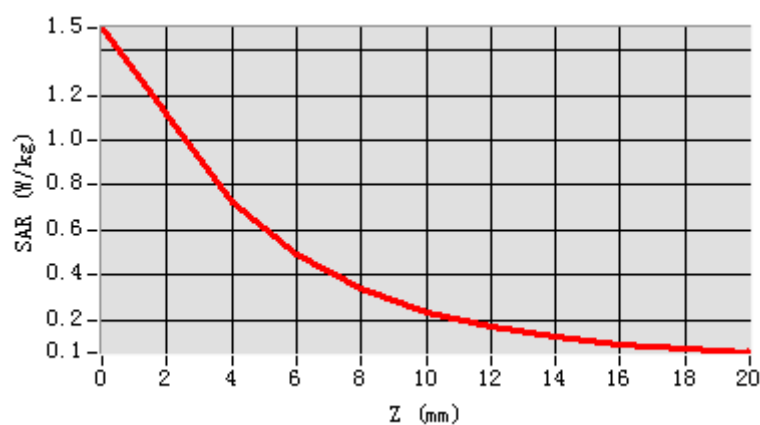
Maximum location: X=0.00, Y=0.00

SAR Peak: 1.49 W/kg

SAR 10g (W/Kg)	0.260291
SAR 1g (W/Kg)	0.690897



Z Axis Scan



System Performance Check (5200MHz)

Type: Validation measurement

Date of measurement: 06/20/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPGO330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	5200MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

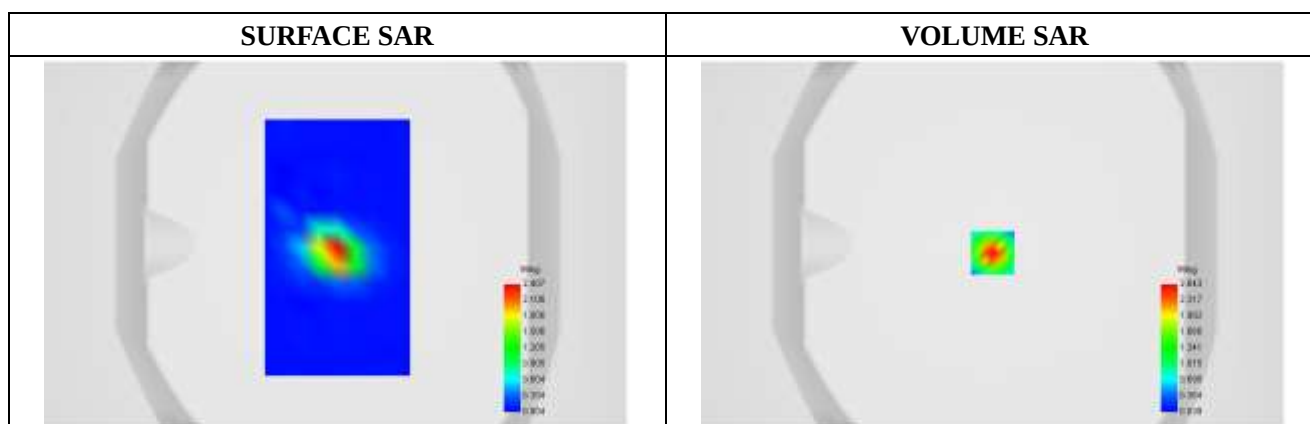
B. SAR Measurement Results

Frequency (MHz)	5200
Relative permittivity (real part)	35.78
Conductivity (S/m)	4.71
Variation (%)	-1.68

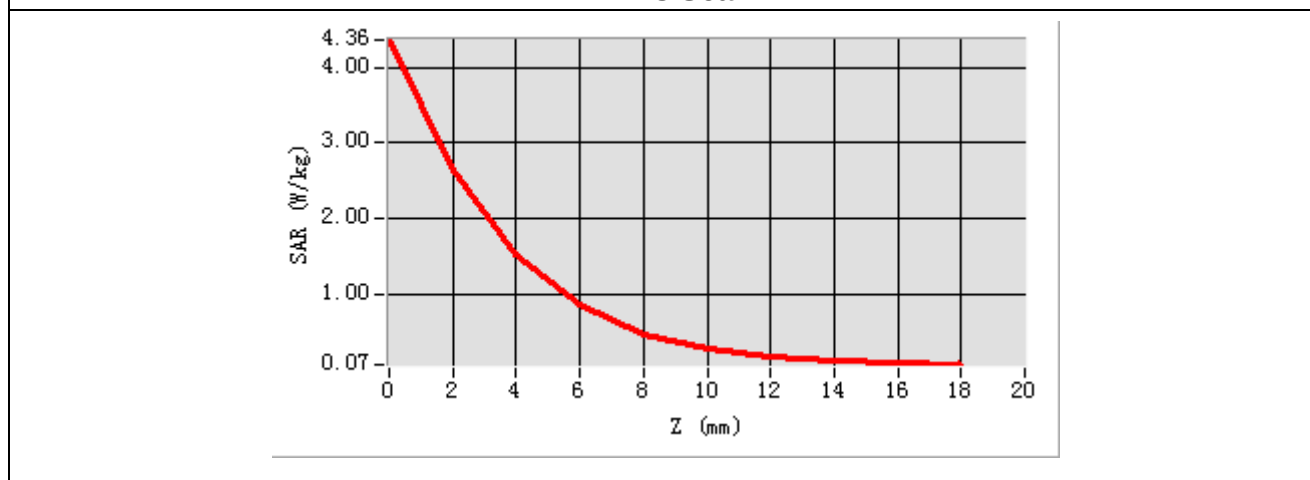
Maximum location: X=-1.00, Y=-5.00

SAR Peak: 4.43 W/kg

SAR 10g (W/Kg)	0.512084
SAR 1g (W/Kg)	1.479265



Z Axis Scan



System Performance Check (5200MHz)

Type: Validation measurement

Date of measurement: 06/21/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	5200MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

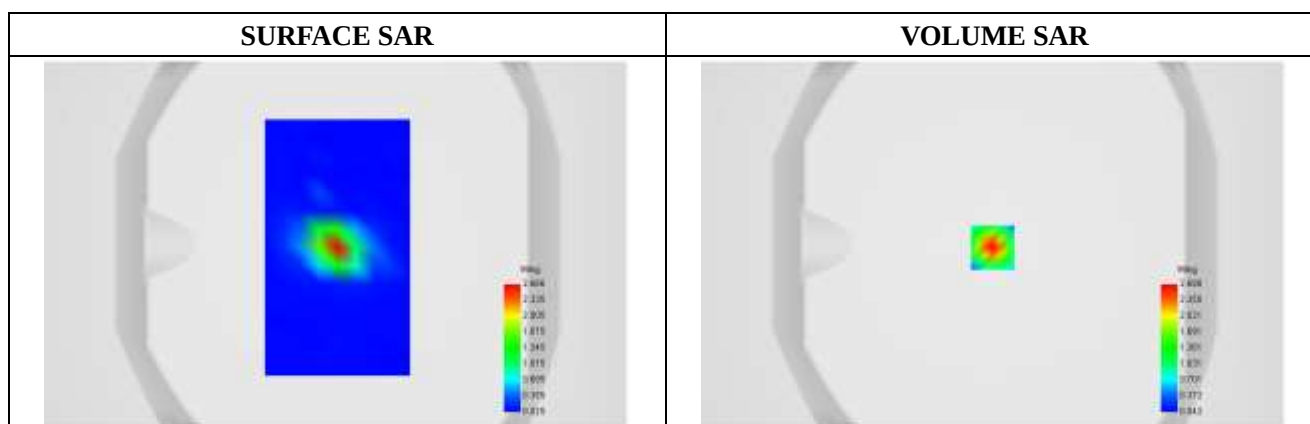
B. SAR Measurement Results

Frequency (MHz)	5200
Relative permittivity (real part)	35.26
Conductivity (S/m)	4.65
Variation (%)	-1.14

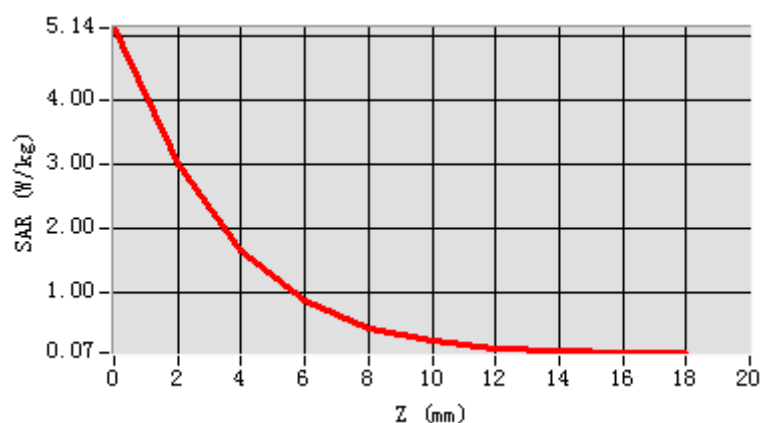
Maximum location: X=-1.00, Y=-2.00

SAR Peak: 4.60 W/kg

SAR 10g (W/Kg)	0.529163
SAR 1g (W/Kg)	1.506079



Z Axis Scan



System Performance Check (5400MHz)

Type: Validation measurement

Date of measurement: 06/21/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	5400MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

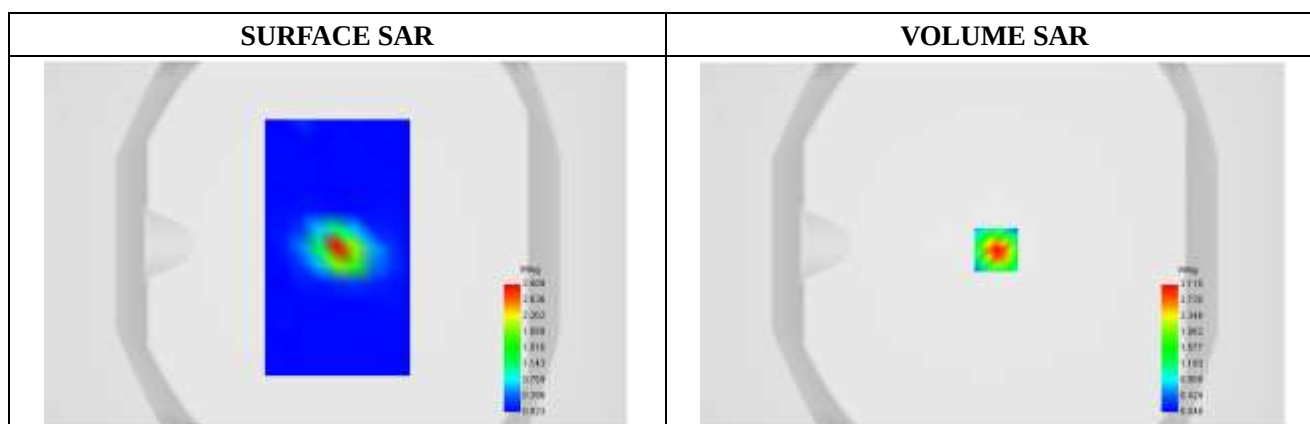
B. SAR Measurement Results

Frequency (MHz)	5400
Relative permittivity (real part)	34.89
Conductivity (S/m)	4.89
Variation (%)	-0.96

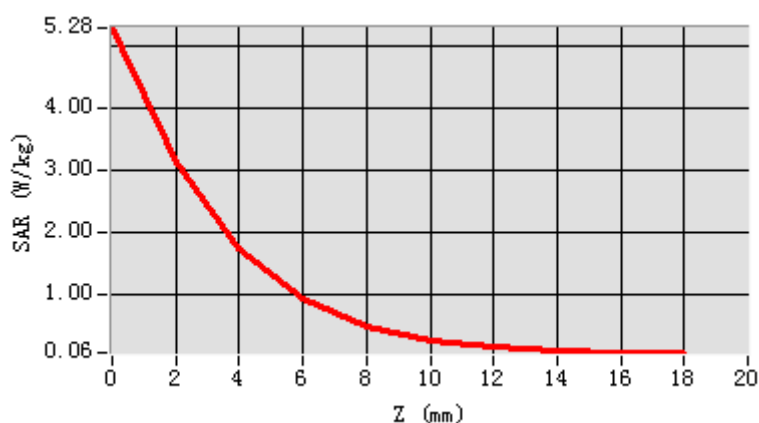
Maximum location: X=1.00, Y=-2.00

SAR Peak: 5.35 W/kg

SAR 10g (W/Kg)	0.578265
SAR 1g (W/Kg)	1.672646



Z Axis Scan



System Performance Check (5600MHz)

Type: Validation measurement

Date of measurement: 06/22/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	5600MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

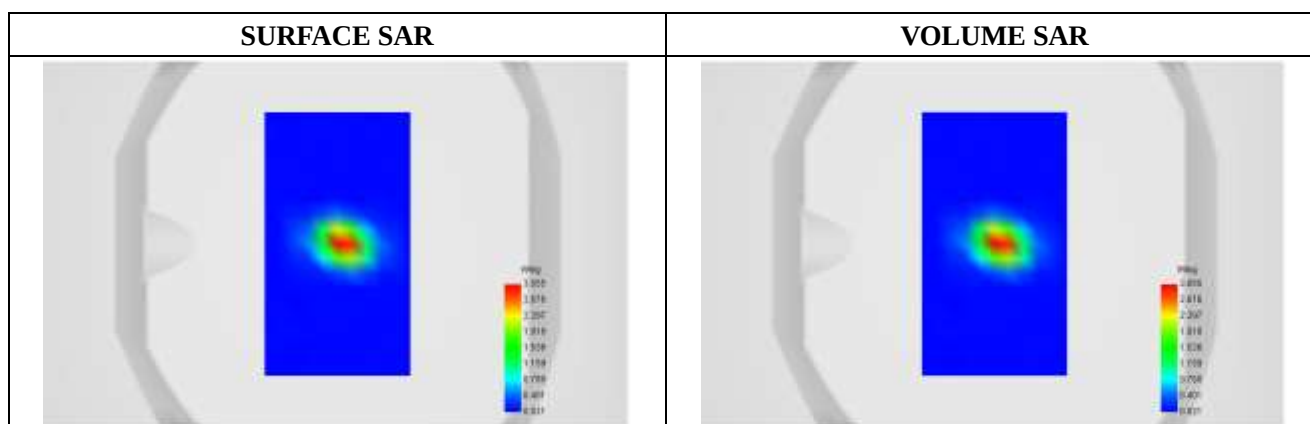
B. SAR Measurement Results

Frequency (MHz)	5600
Relative permittivity (real part)	34.30
Conductivity (S/m)	5.06
Variation (%)	0.52

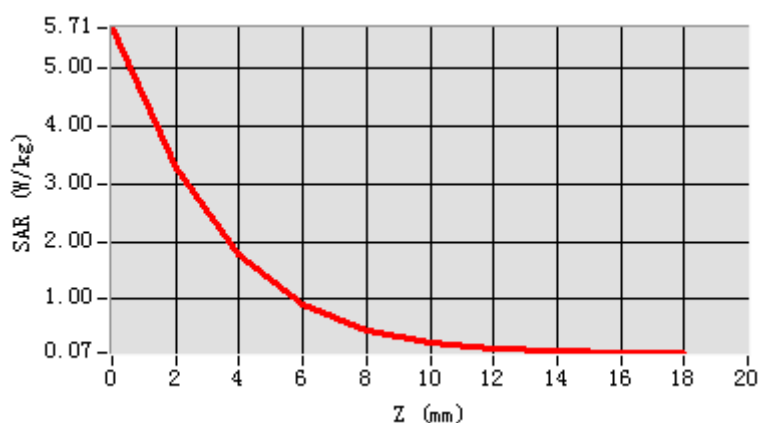
Maximum location: X=2.00, Y=0.00

SAR Peak: 5.74 W/kg

SAR 10g (W/Kg)	0.593625
SAR 1g (W/Kg)	1.725216



Z Axis Scan



System Performance Check (5800MHz)

Type: Validation measurement

Date of measurement: 06/19/2022

A. Experimental conditions.

E-Field Probe	SATIMO SN 41/18 EPG0330
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	5800MHz
Channels	Middle
Signal	CW(Crest factor: 1.0)

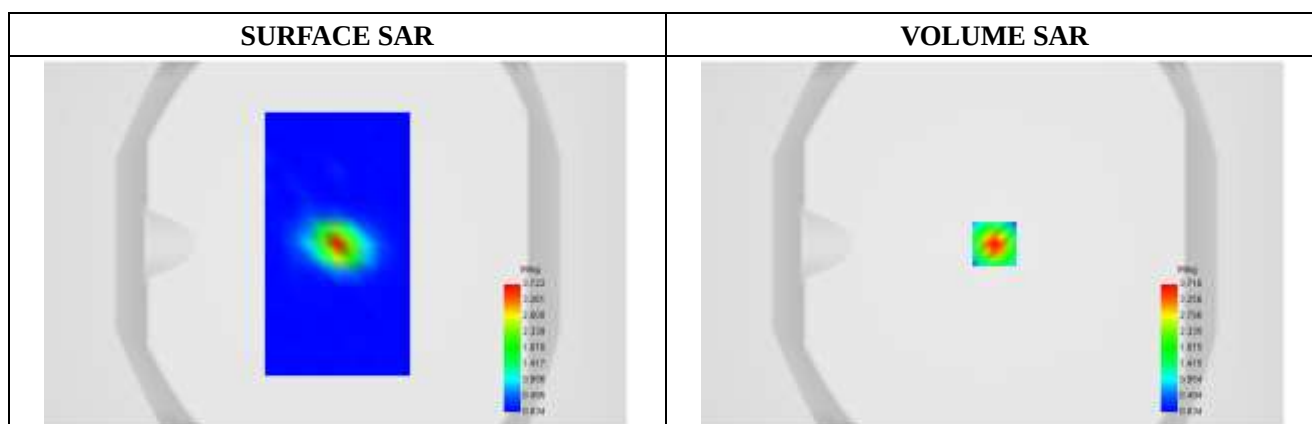
B. SAR Measurement Results

Frequency (MHz)	5800
Relative permittivity (real part)	34.48
Conductivity (S/m)	5.37
Variation (%)	-2.10

Maximum location: X=1.00, Y=-11.00

SAR Peak: 6.22 W/kg

SAR 10g (W/Kg)	0.652429
SAR 1g (W/Kg)	1.851183



Z Axis Scan

