Appendix A: SAR System performance Check Plots

Measurement	Liquid	Frequency	Test Date
System Check	Head	835	2020-01-09
System Check	Body	835	2020-01-09
System Check	Head	1800	2020-01-10
System Check	Body	1800	2020-01-10
System Check	Head	1900	2020-01-11
System Check	Body	1900	2020-01-11
System Check	Head	2450	2020-01-12
System Check	Body	2450	2020-01-12
System Check	Head	2600	2020-01-13
System Check	Body	2600	2020-01-13

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: 01/09/2020

Measurement duration: 22 minutes 02 seconds

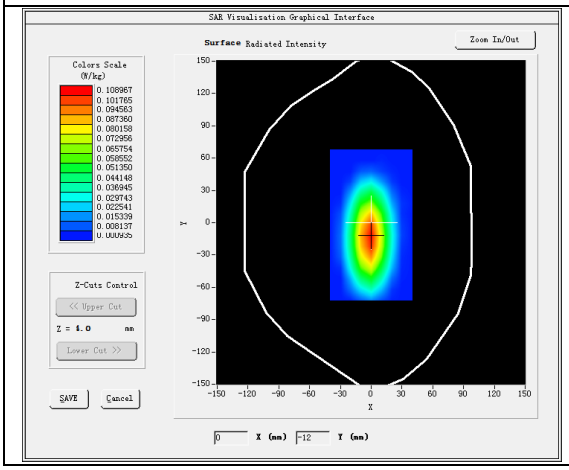
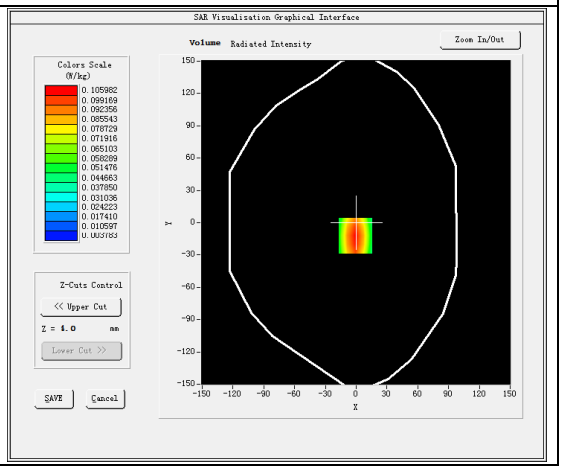
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	835
Relative permittivity (real part)	41.53
Relative permittivity	19.83
Conductivity (S/m)	0.92
Power drift (%)	-3.20
Ambient Temperature:	22.2℃
Liquid Temperature:	22.6℃
ConvF:	1.92
Crest factor:	1:1

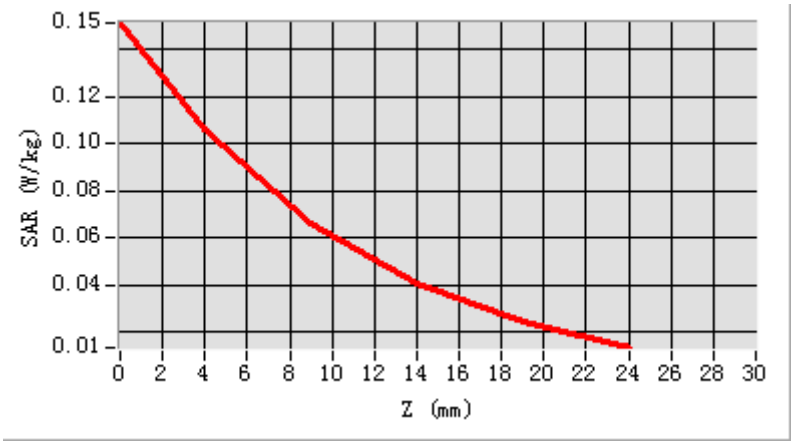
SURFACE SAR	VOLUME SAR
	

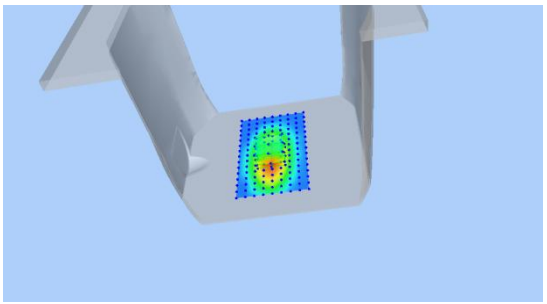
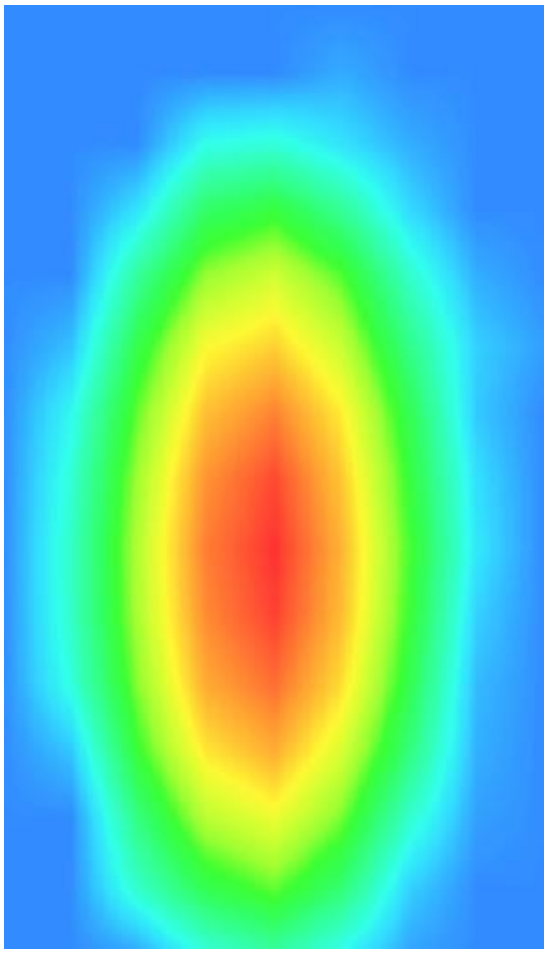
Maximum location: X=-1.00, Y=-12.00

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.058774
SAR 1g (W/Kg)	0.099622

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1515	0.1060	0.0662	0.0405	0.0242



3D screen shot	Hot spot position
	

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: 01/09/2020

Measurement duration: 22 minutes 04 seconds

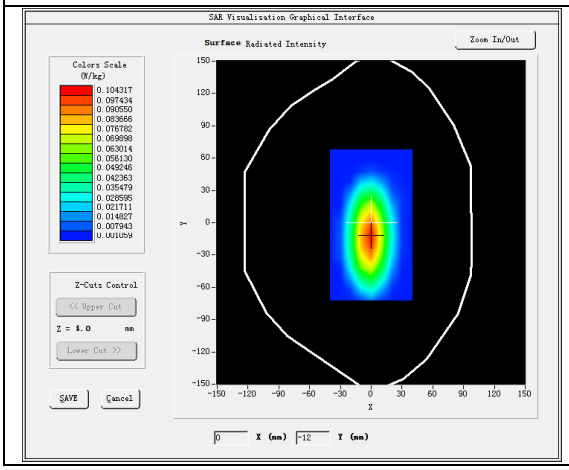
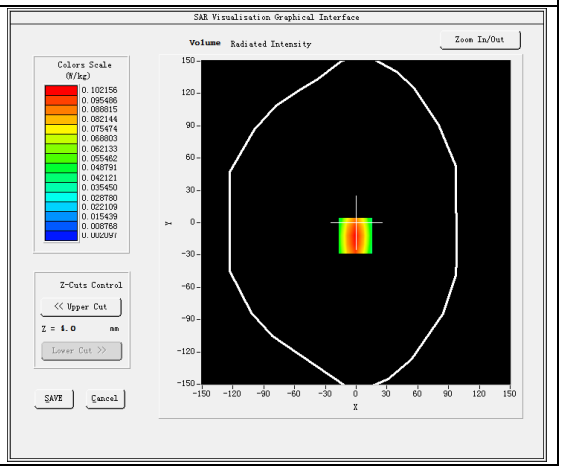
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	835
Relative permittivity (real part)	55.31
Relative permittivity	20.91
Conductivity (S/m)	0.97
Power drift (%)	-1.52
Ambient Temperature:	22.2℃
Liquid Temperature:	22.6℃
ConvF:	1.99
Crest factor:	1:1

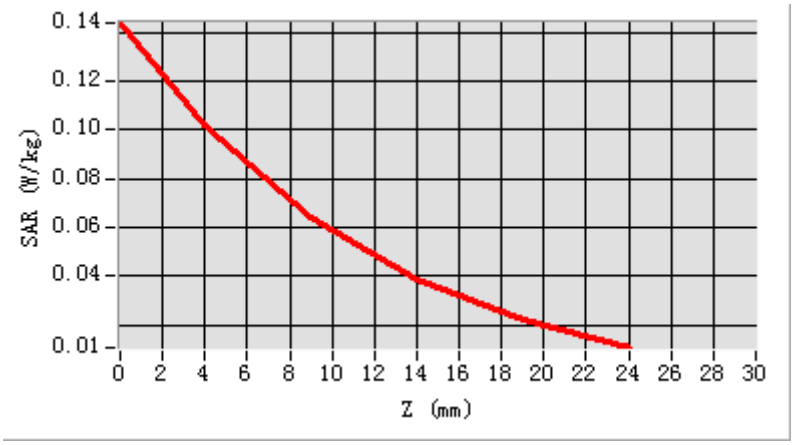
SURFACE SAR	**VOLUME SAR**
	

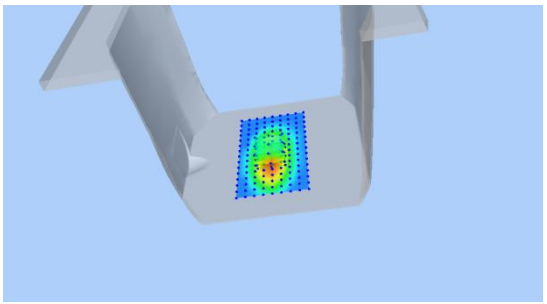
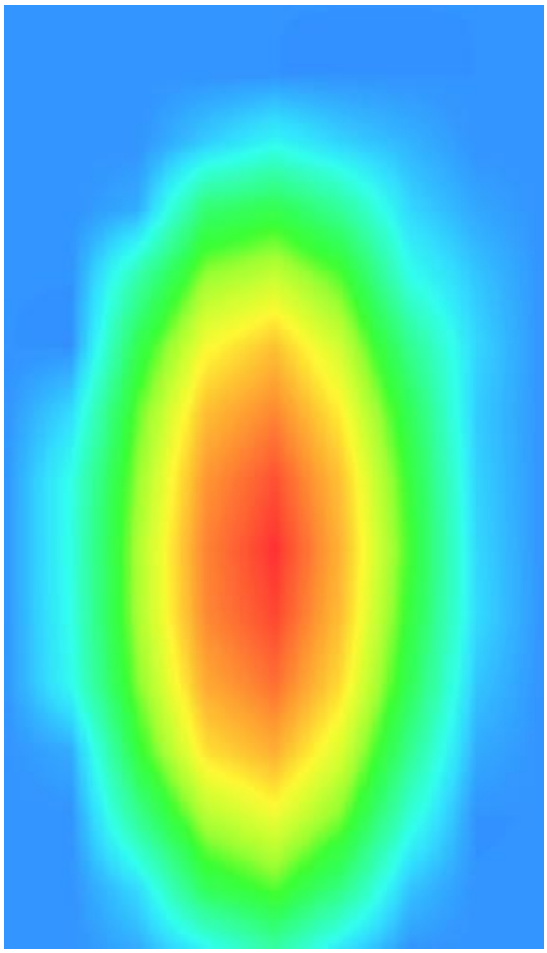
Maximum location: X=-1.00, Y=-12.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.056693
SAR 1g (W/Kg)	0.097610

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1439	0.1022	0.0643	0.0387	0.0218



3D screen shot	Hot spot position
	

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: 01/10/2020

Measurement duration: 22 minutes 01 seconds

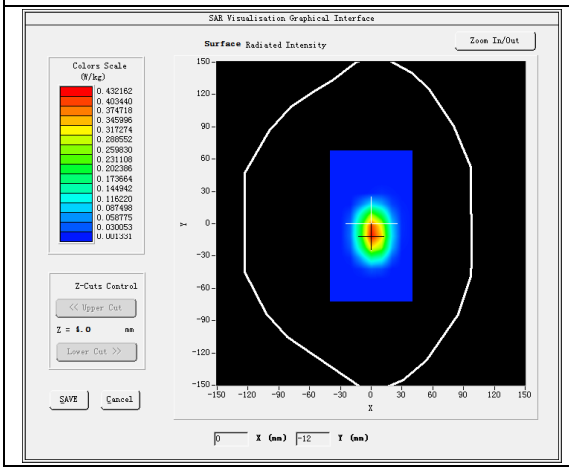
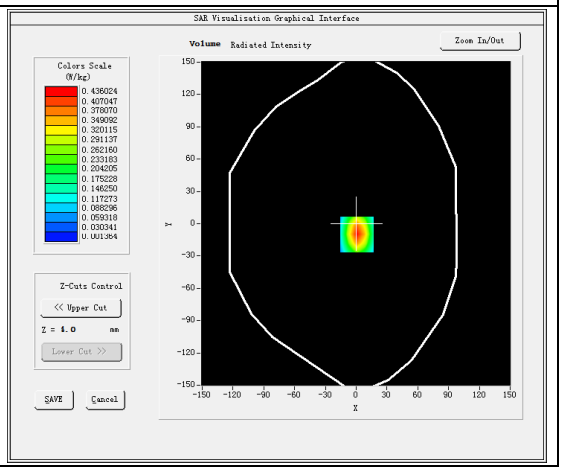
A. Experimental conditions.

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)	40.48
Relative permittivity	14.00
Conductivity (S/m)	1.40
Power Drift (%)	-3.37
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.14
Duty factor:	1:1

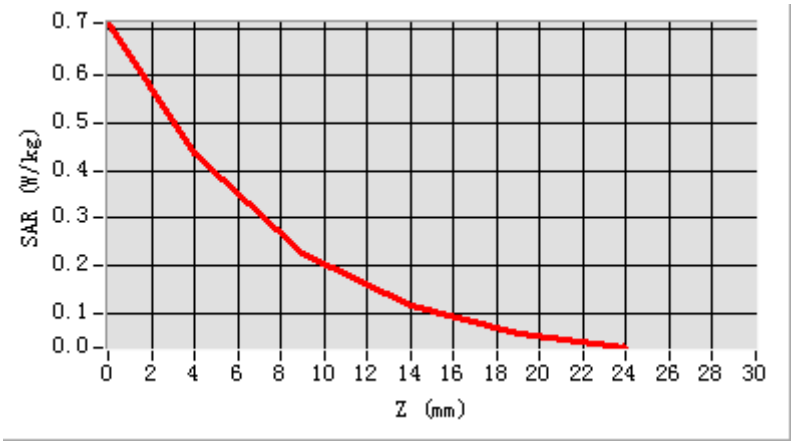
SURFACE SAR	VOLUME SAR
	

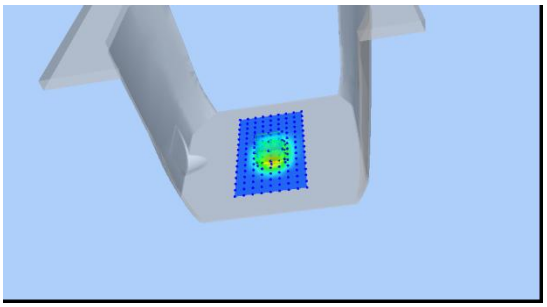
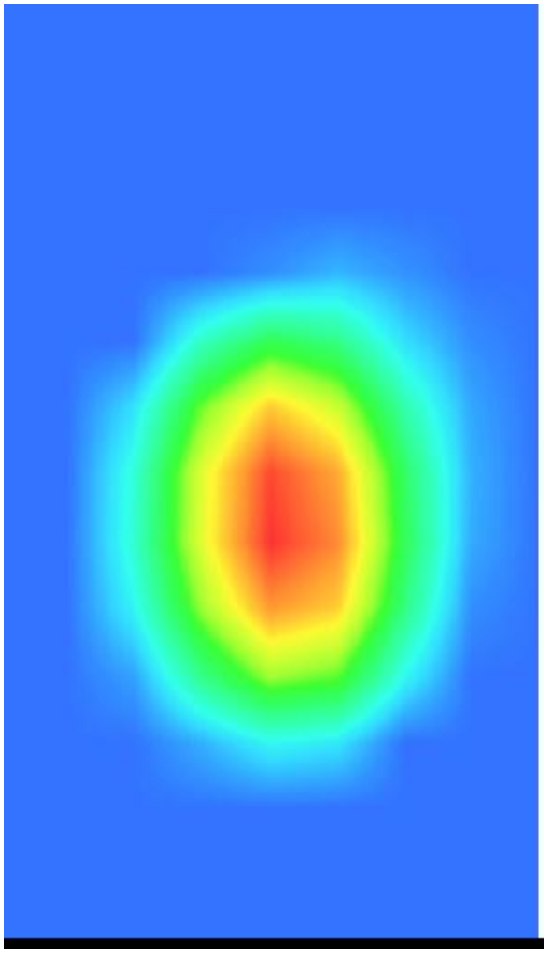
Maximum location: X=1.00, Y=-10.00

SAR Peak: 0.71 W/kg

SAR 10g (W/Kg)	0.197553
SAR 1g (W/Kg)	0.406608

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7116	0.4360	0.2257	0.1139	0.0580



3D screen shot	Hot spot position
	

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: 01/10/2020

Measurement duration: 22 minutes 05 seconds

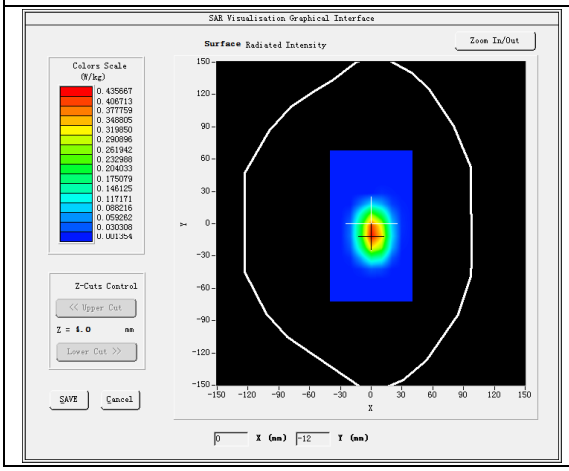
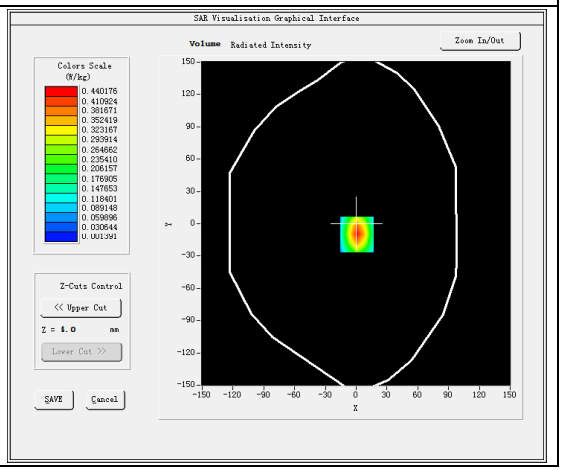
A. Experimental conditions.

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)	53.45
Relative permittivity	15.50
Conductivity (S/m)	1.55
Power Drift (%)	-1.83
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.22
Duty factor:	1:1

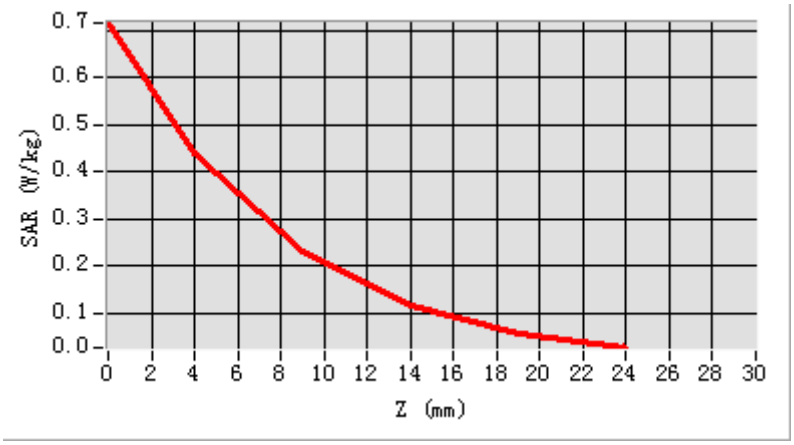
SURFACE SAR	VOLUME SAR
	

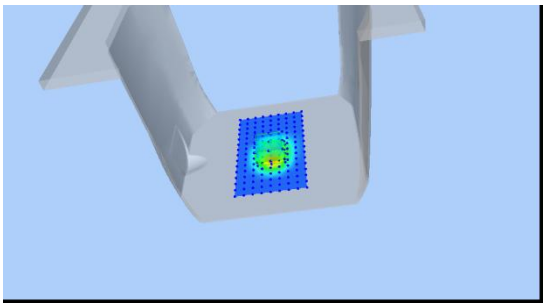
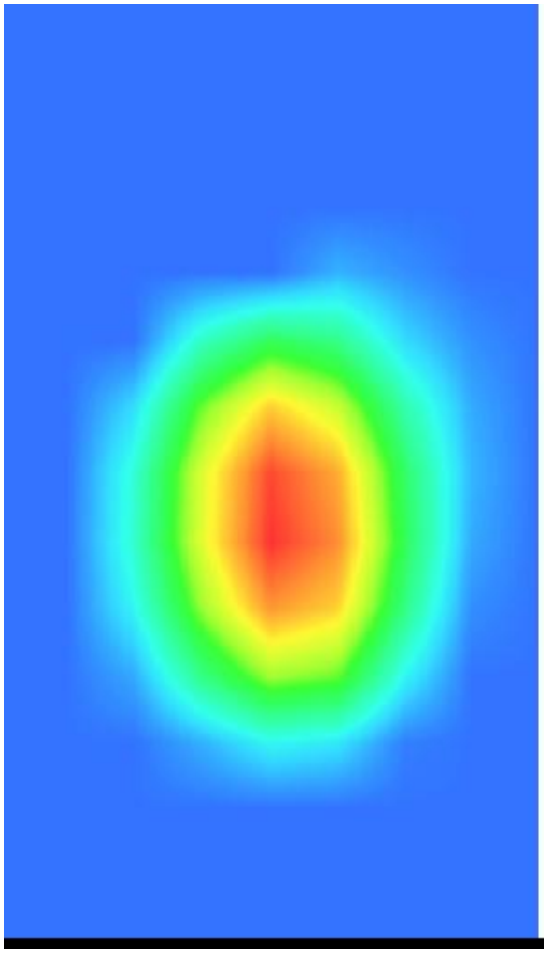
Maximum location: X=1.00, Y=-10.00

SAR Peak: 0.72 W/kg

SAR 10g (W/Kg)	0.197442
SAR 1g (W/Kg)	0.404420

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7159	0.4402	0.2285	0.1150	0.0577



3D screen shot	Hot spot position
	

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: 01/11/2020

Measurement duration: 22 minutes 07 seconds

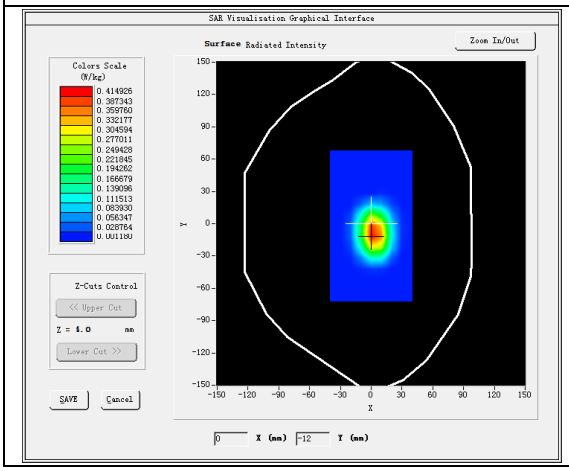
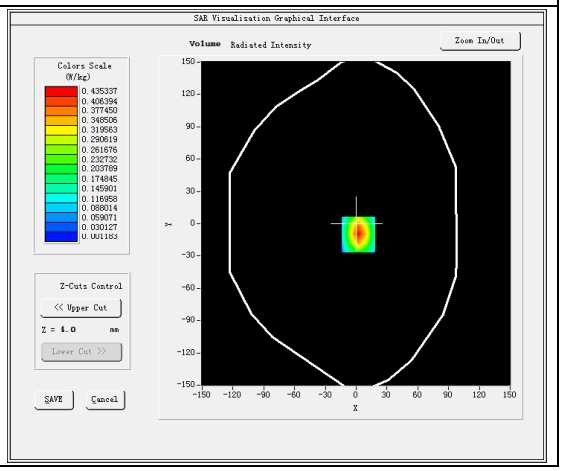
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	1900
Relative permittivity (real part)	40.40
Relative permittivity	13.36
Conductivity (S/m)	1.41
Power Drift (%)	-2.26
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.34
Duty factor:	1:1

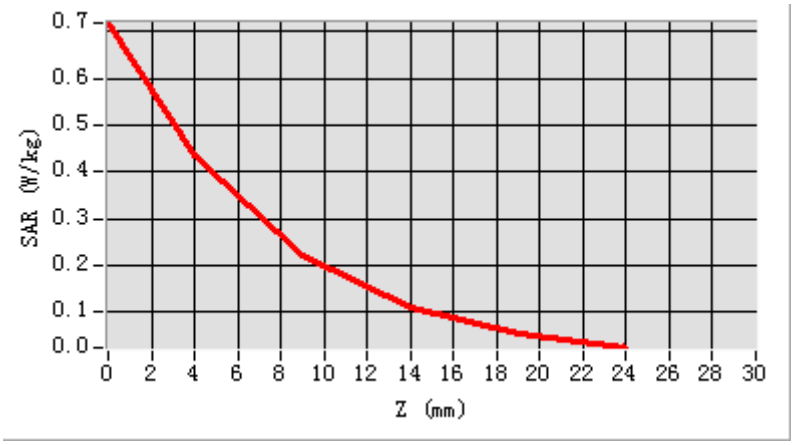
SURFACE SAR	VOLUME SAR
	

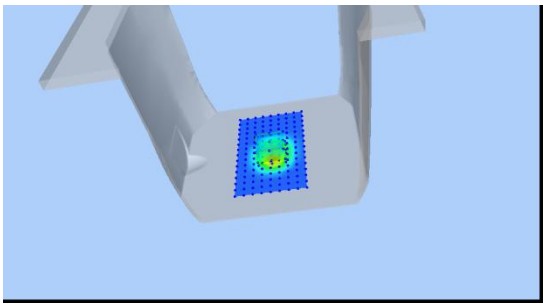
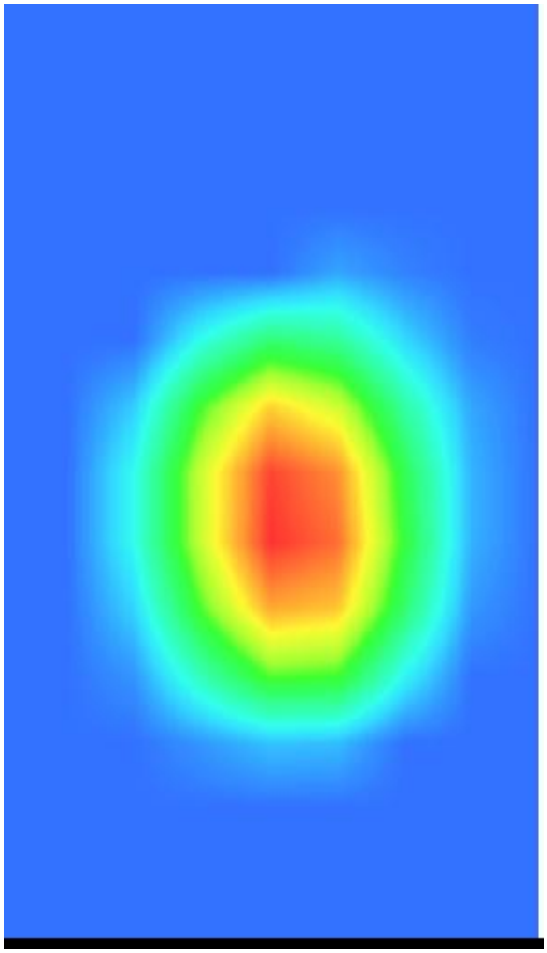
Maximum location: X=2.00, Y=-10.00

SAR Peak: 0.72 W/kg

SAR 10g (W/Kg)	0.190604
SAR 1g (W/Kg)	0.399069

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7193	0.4353	0.2206	0.1080	0.0529



3D screen shot	Hot spot position
	

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: 01/11/2020

Measurement duration: 22 minutes 08 seconds

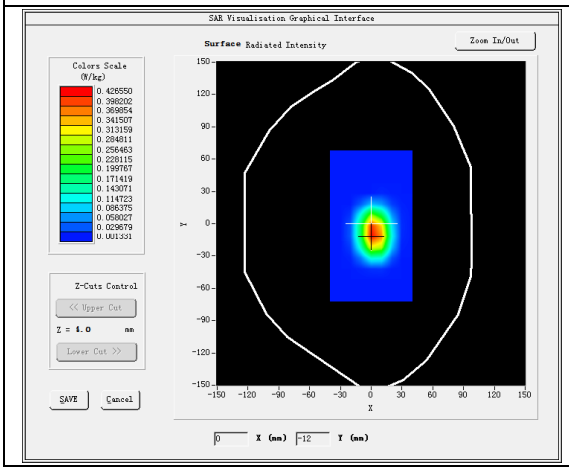
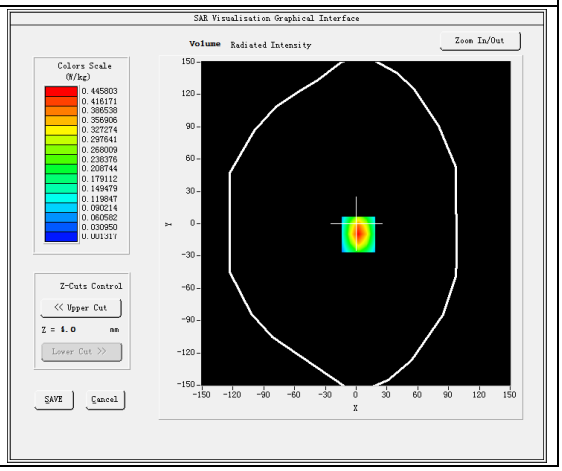
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	1900
Relative permittivity (real part)	53.38
Relative permittivity	14.59
Conductivity (S/m)	1.54
Power Drift (%)	-2.36
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.39
Duty factor:	1:1

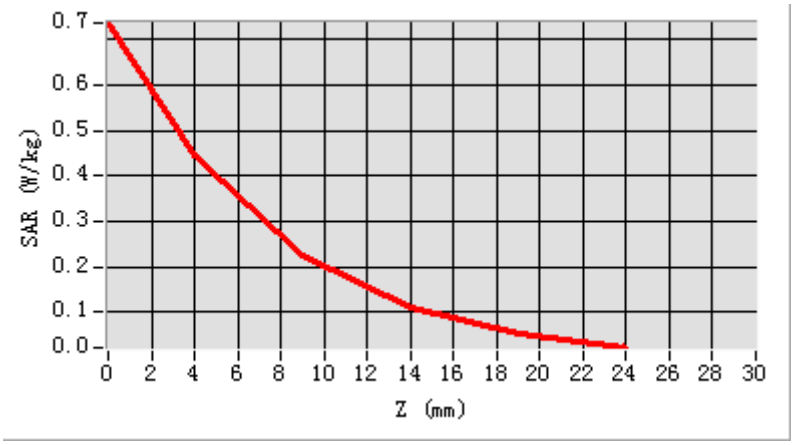
SURFACE SAR	VOLUME SAR
	

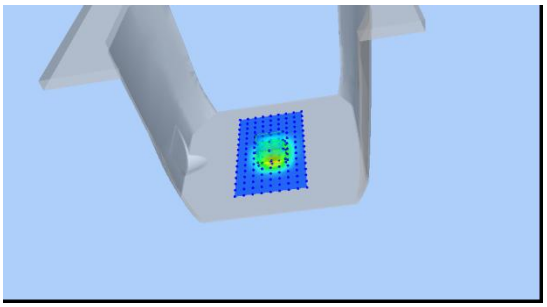
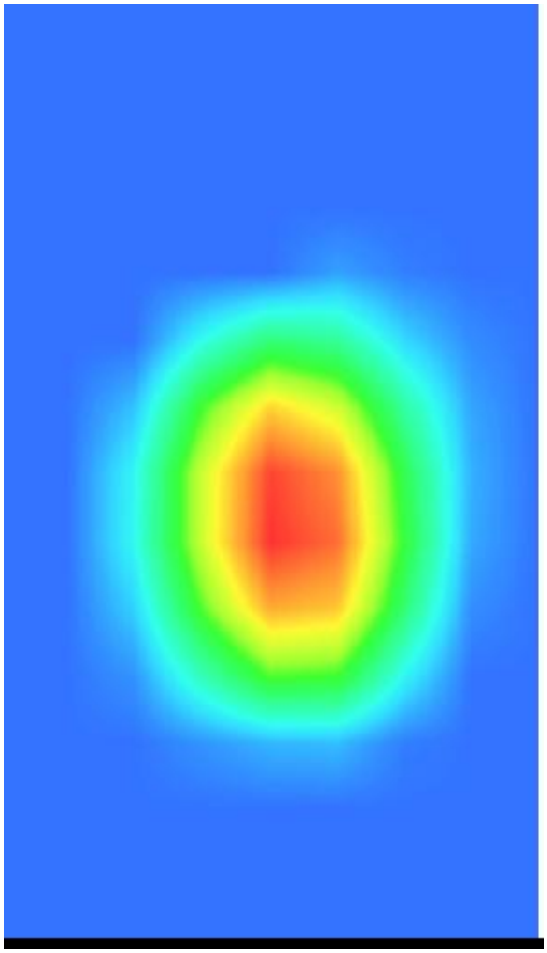
Maximum location: X=2.00, Y=-10.00

SAR Peak: 0.74 W/kg

SAR 10g (W/Kg)	0.194485
SAR 1g (W/Kg)	0.408629

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.7366	0.4458	0.2252	0.1090	0.0519



3D screen shot	Hot spot position
	

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: 01/12/2020

Measurement duration: 22 minutes 06 seconds

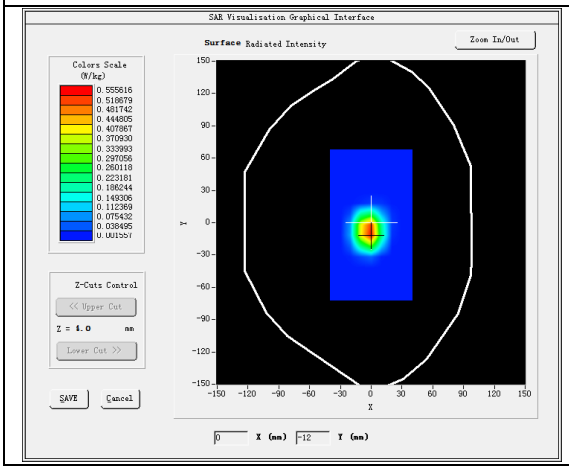
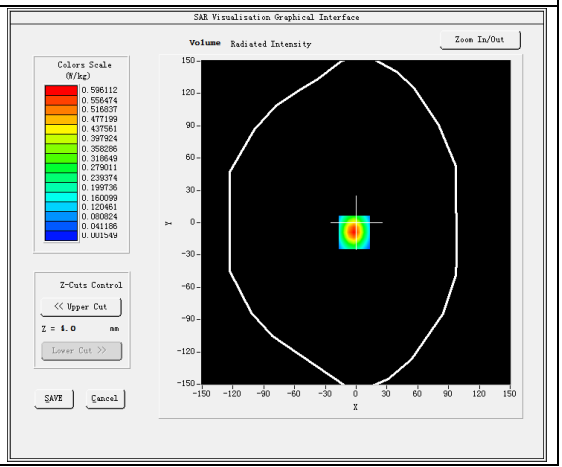
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	2450
Relative permittivity (real part)	39.32
Relative permittivity	13.30
Conductivity (S/m)	1.81
Power Drift (%)	-2.53
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.37
Duty factor:	1:1

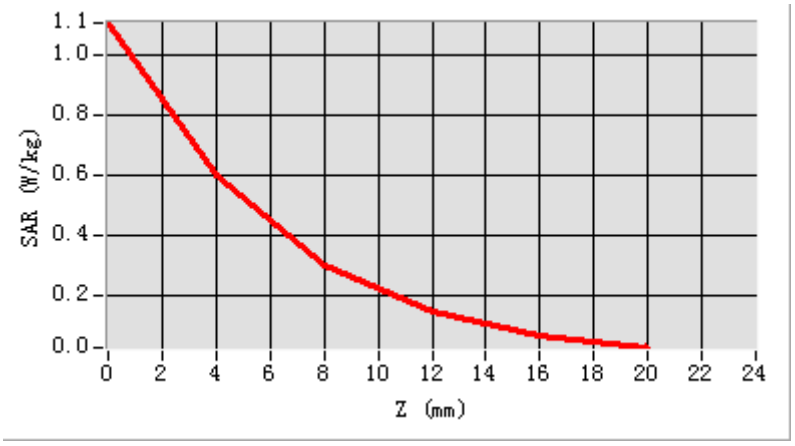
SURFACE SAR	**VOLUME SAR**
	

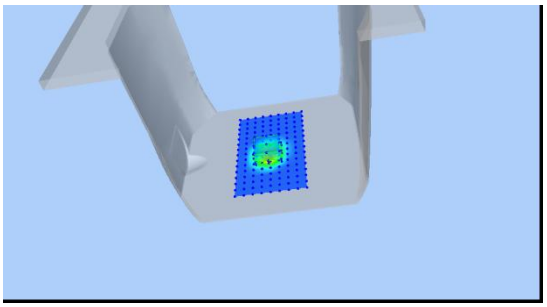
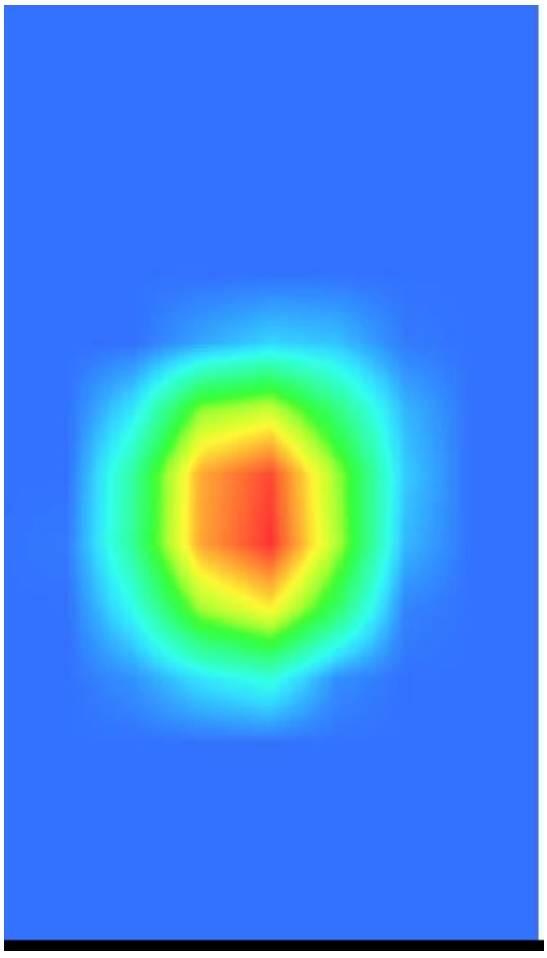
Maximum location: X=-2.00, Y=-9.00

SAR Peak: 1.11 W/kg

SAR 10g (W/Kg)	0.220870
SAR 1g (W/Kg)	0.531722

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.1053	0.5961	0.3008	0.1434	0.0651



3D screen shot	Hot spot position
	

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: 01/12/2020

Measurement duration: 22 minutes 09 seconds

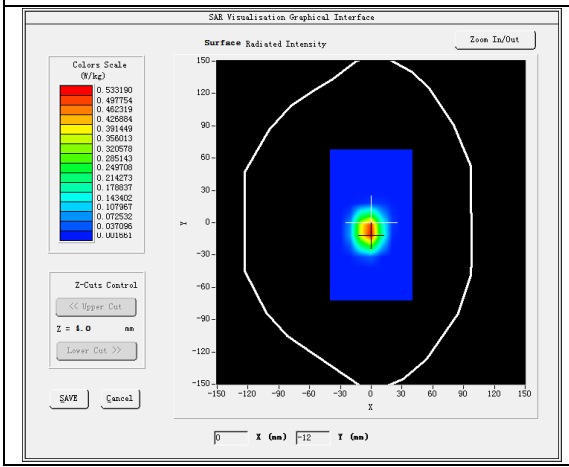
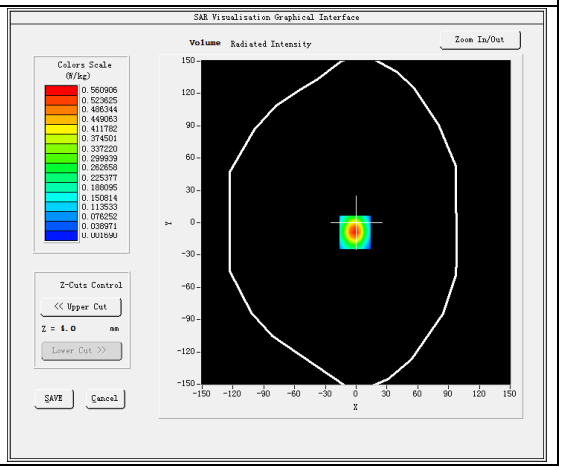
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	2450
Relative permittivity (real part)	52.80
Relative permittivity	14.47
Conductivity (S/m)	1.97
Power Drift (%)	-2.48
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.46
Duty factor:	1:1

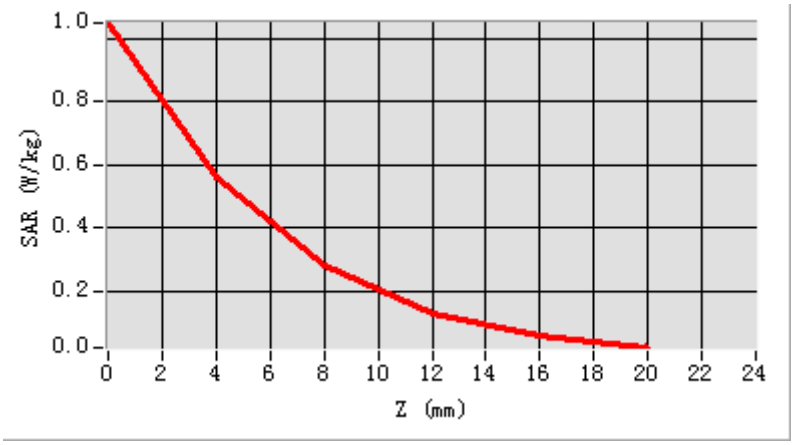
SURFACE SAR	**VOLUME SAR**
	

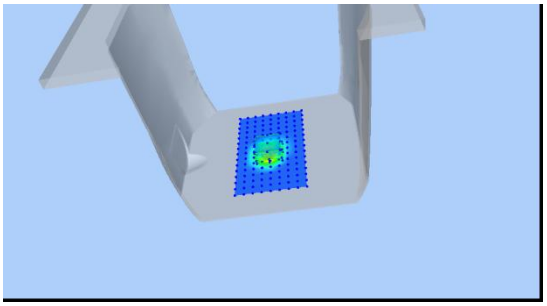
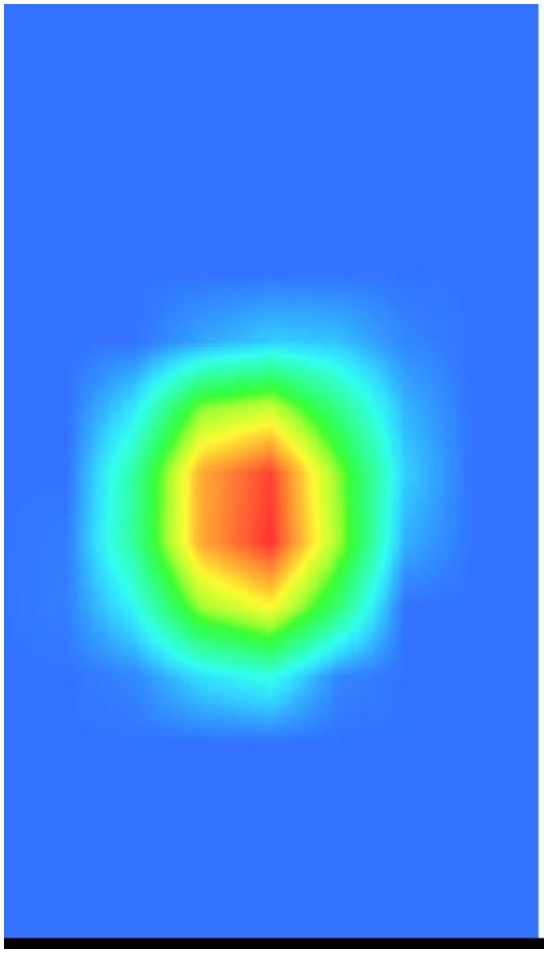
Maximum location: X=-1.00, Y=-9.00

SAR Peak: 1.05 W/kg

SAR 10g (W/Kg)	0.208125
SAR 1g (W/Kg)	0.506883

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.0494	0.5609	0.2794	0.1308	0.0578



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: 01/13/2020

Measurement duration: 22 minutes12 seconds

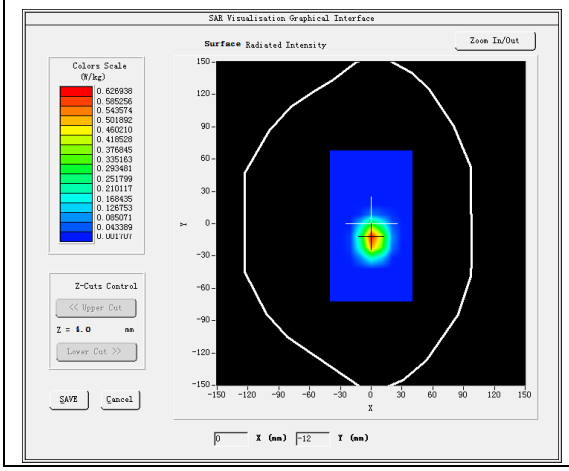
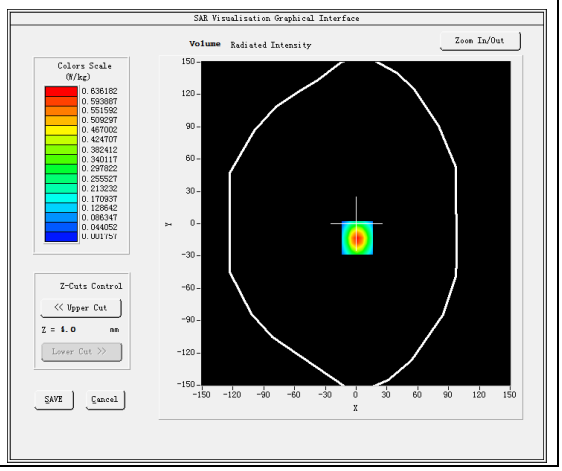
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	2600
Relative permittivity (real part)	39.09
Relative permittivity	13.64
Conductivity (S/m)	1.97
Power drift (%)	-1.12
Ambient Temperature:	22.2℃
Liquid Temperature:	22.5℃
Crest factor:	1:1
ConvF:	2.35

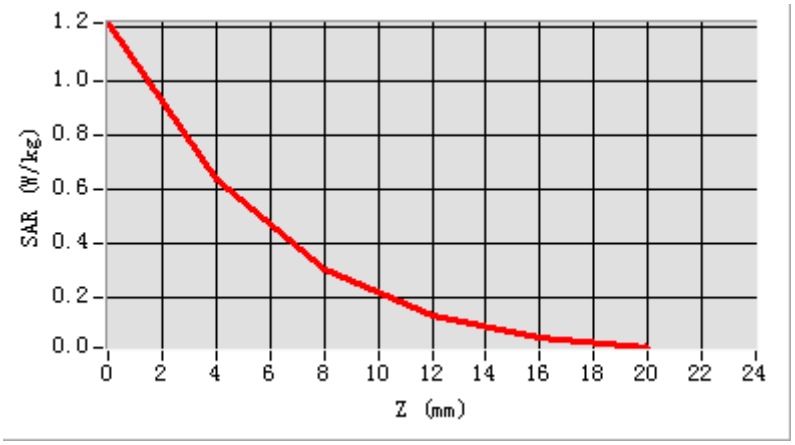
SURFACE SAR	**VOLUME SAR**
	

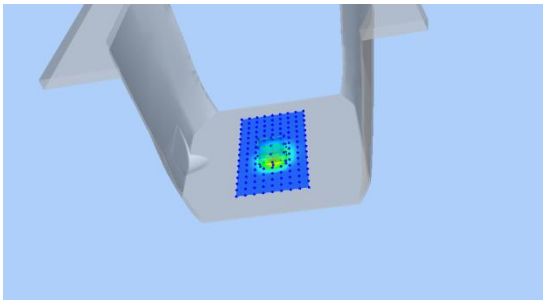
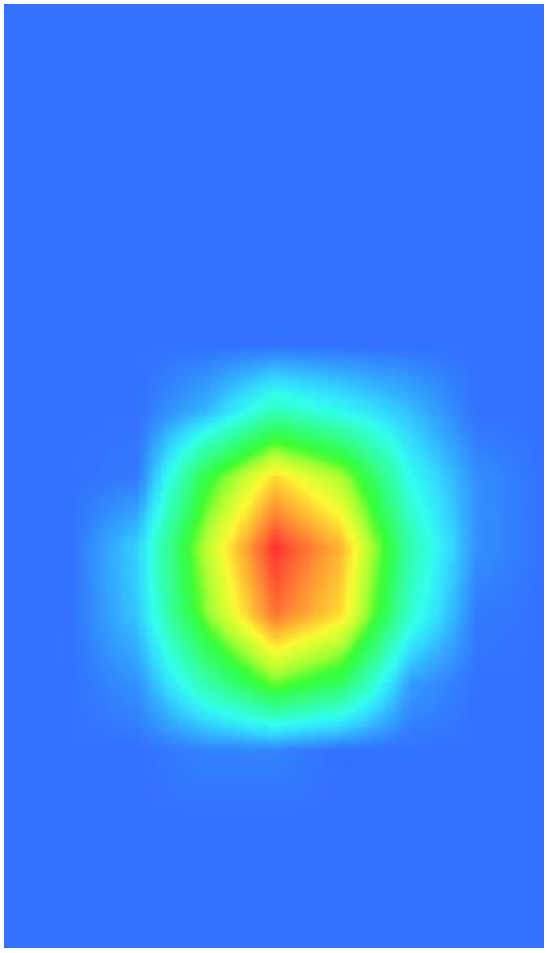
Maximum location: X=1.00, Y=-13.00

SAR Peak: 1.22 W/kg

SAR 10g (W/Kg)	0.230541
SAR 1g (W/Kg)	0.575947

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.2149	0.6362	0.3062	0.1347	0.0531



3D screen shot	Hot spot position
	

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: 01/13/2020

Measurement duration: 22 minutes 10 seconds

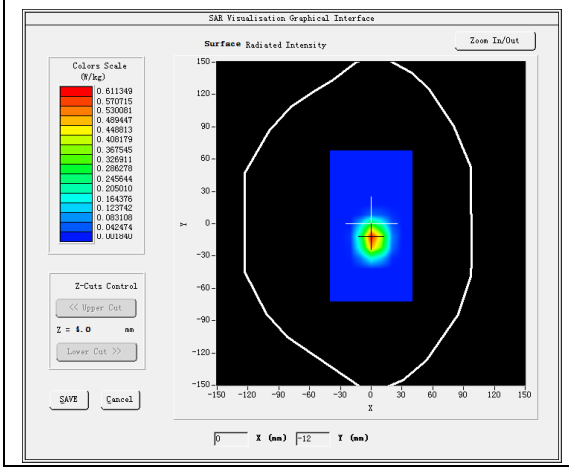
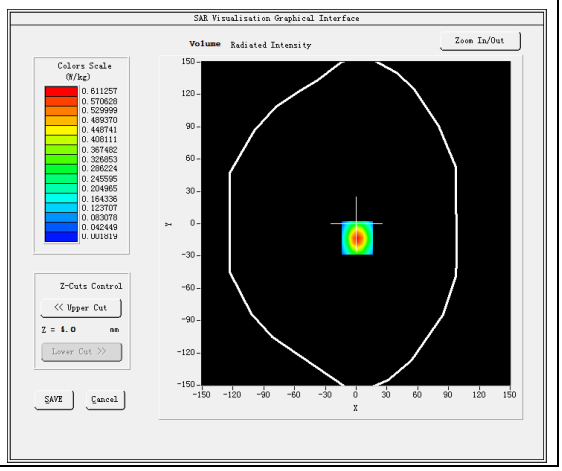
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	2600
Relative permittivity (real part)	52.61
Relative permittivity	15.09
Conductivity (S/m)	2.18
Power drift (%)	-2.98
Ambient Temperature:	22.2℃
Liquid Temperature:	22.5℃
Crest factor:	1:1
ConvF:	2.43

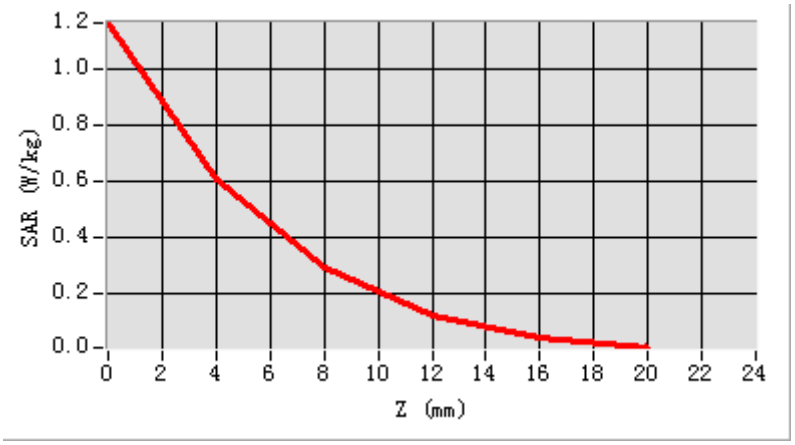
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=1.00, Y=-13.00

SAR Peak: 1.16 W/kg

SAR 10g (W/Kg)	0.218972
SAR 1g (W/Kg)	0.546557

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.1621	0.6113	0.2944	0.1279	0.0481



3D screen shot	Hot spot position