Appendix A: SAR System performance Check Plots

Measurement	Liquid	Frequency	Test Date
System Check	Head	835	2020-05-14
System Check	Body	835	2020-05-14
System Check	Head	1800	2020-05-16
System Check	Body	1800	2020-05-16
System Check	Head	1900	2020-05-17
System Check	Body	1900	2020-05-17
System Check	Head	2450	2020-05-18
System Check	Body	2450	2020-05-18
System Check	Head	2600	2020-05-18
System Check	Body	2600	2020-05-18

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: 05/14/2020

Measurement duration: 22 minutes 04 seconds

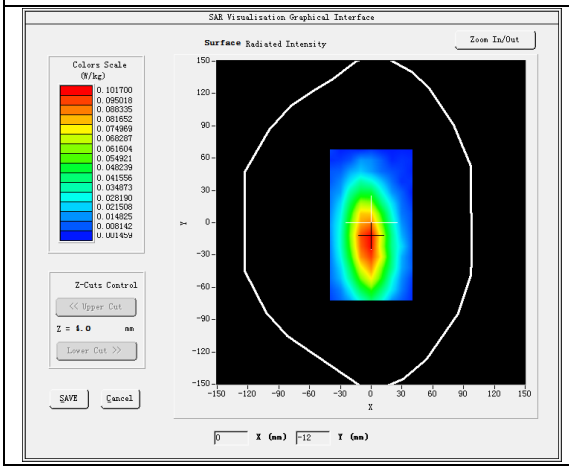
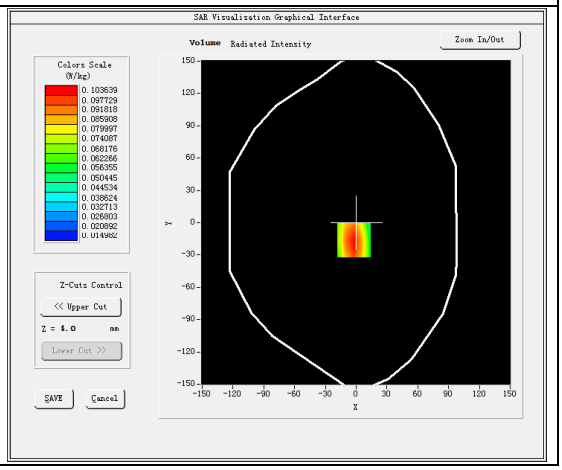
A. Experimental conditions.

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_41/18_EPG0330
Frequency (MHz)	835
Relative permittivity (real part)	41.51
Relative permittivity	19.62
Conductivity (S/m)	0.91
Power drift (%)	-2.66
Ambient Temperature:	22.2 ℃
Liquid Temperature:	22.6 ℃
ConvF:	1.92
Crest factor:	1:1

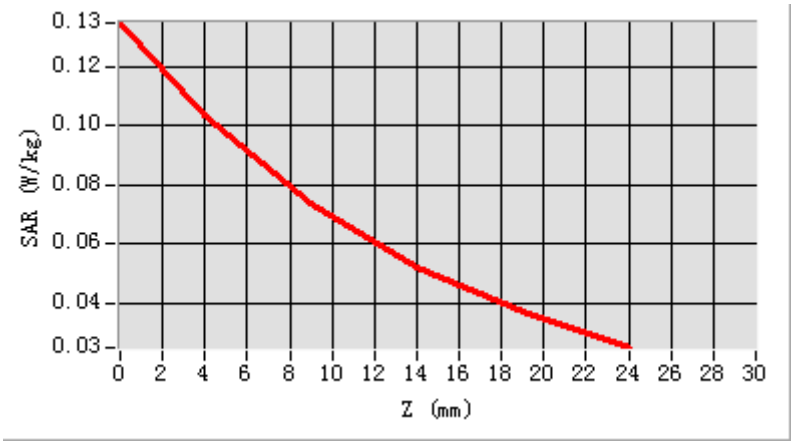
SURFACE SAR	**VOLUME SAR**
	

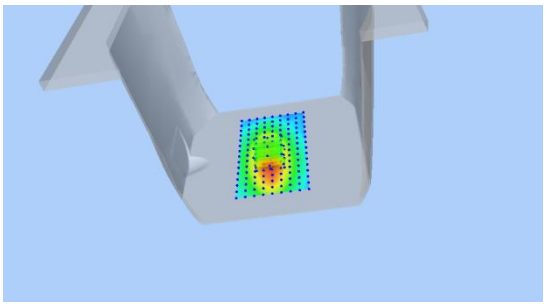
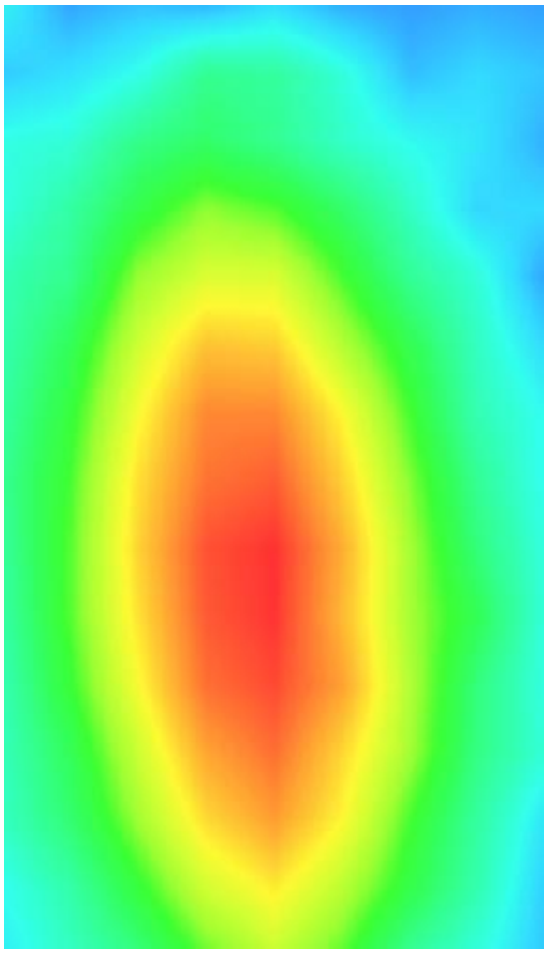
Maximum location: X=-2.00, Y=-16.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.065465
SAR 1g (W/Kg)	0.098655

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1346	0.1036	0.0740	0.0526	0.0371



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: 05/14/2020

Measurement duration: 22 minutes 07 seconds

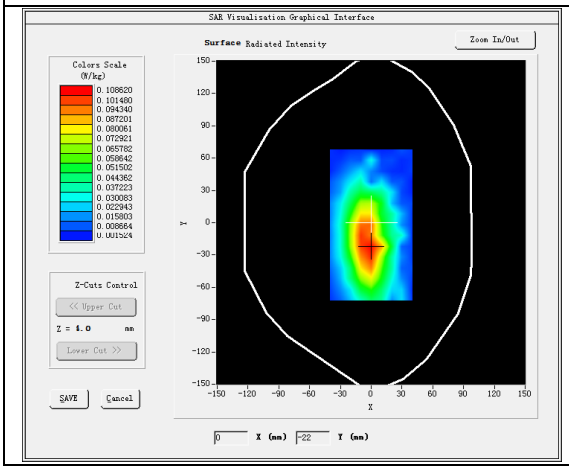
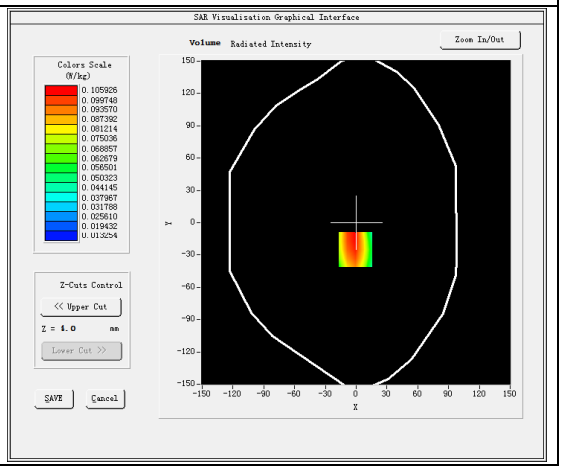
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_41/18_EPG0330
Frequency (MHz)	835
Relative permittivity (real part)	55.21
Relative permittivity	20.69
Conductivity (S/m)	0.96
Power drift (%)	-2.52
Ambient Temperature:	22.2 ℃
Liquid Temperature:	22.6 ℃
ConvF:	1.99
Crest factor:	1:1

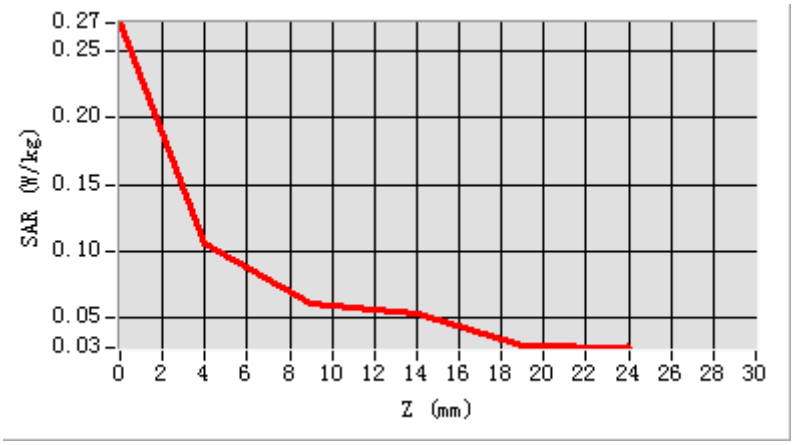
SURFACE SAR	**VOLUME SAR**
	

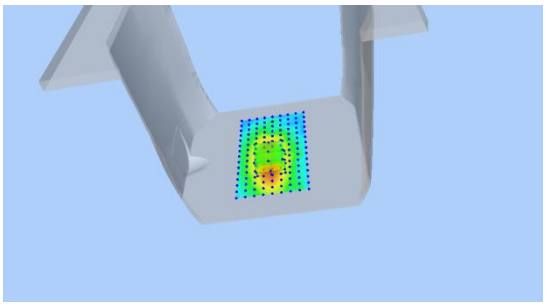
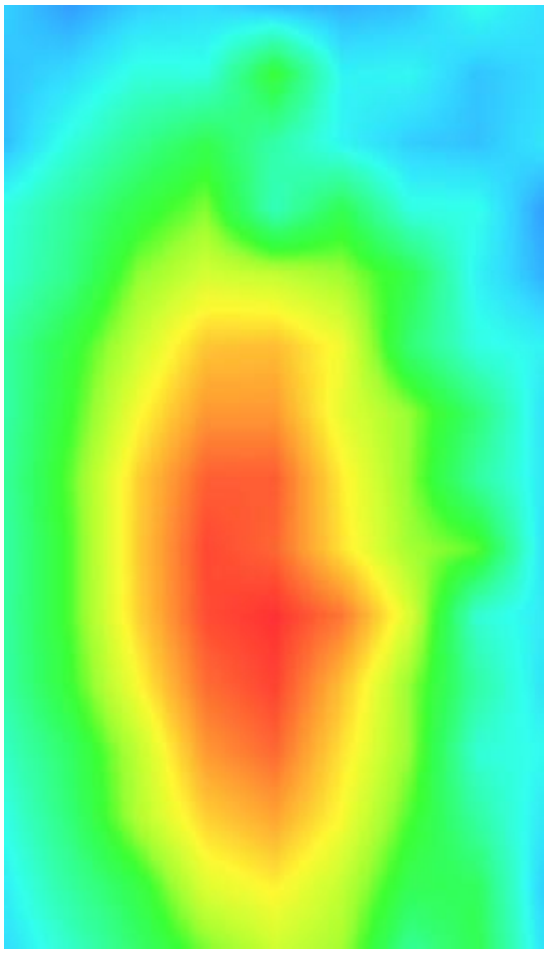
Maximum location: X=-1.00, Y=-25.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.070150
SAR 1g (W/Kg)	0.103740

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.2714	0.1059	0.0600	0.0535	0.0292



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: 05/16/2020

Measurement duration: 22 minutes 08 seconds

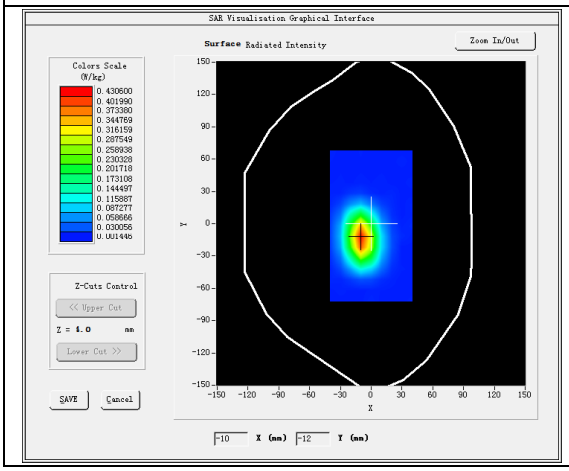
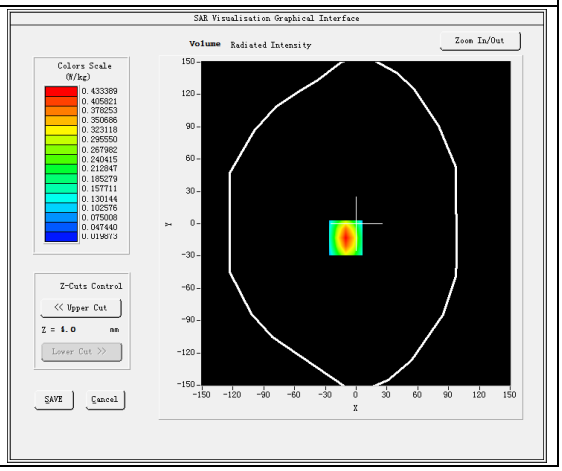
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	1800MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_41/18_EPG0330
Frequency (MHz)	1800
Relative permittivity (real part)	40.53
Relative permittivity	13.90
Conductivity (S/m)	1.39
Power Drift (%)	-0.50
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.14
Duty factor:	1:1

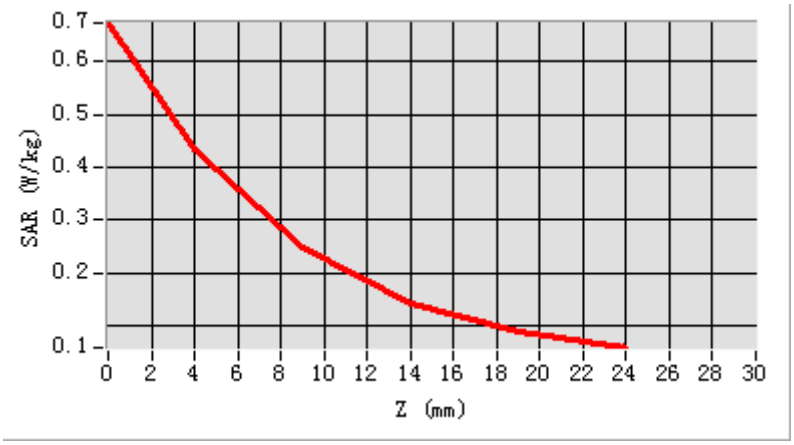
SURFACE SAR	VOLUME SAR
	

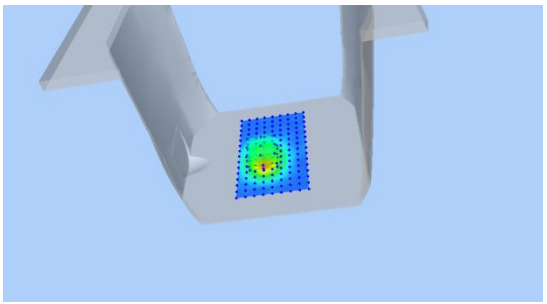
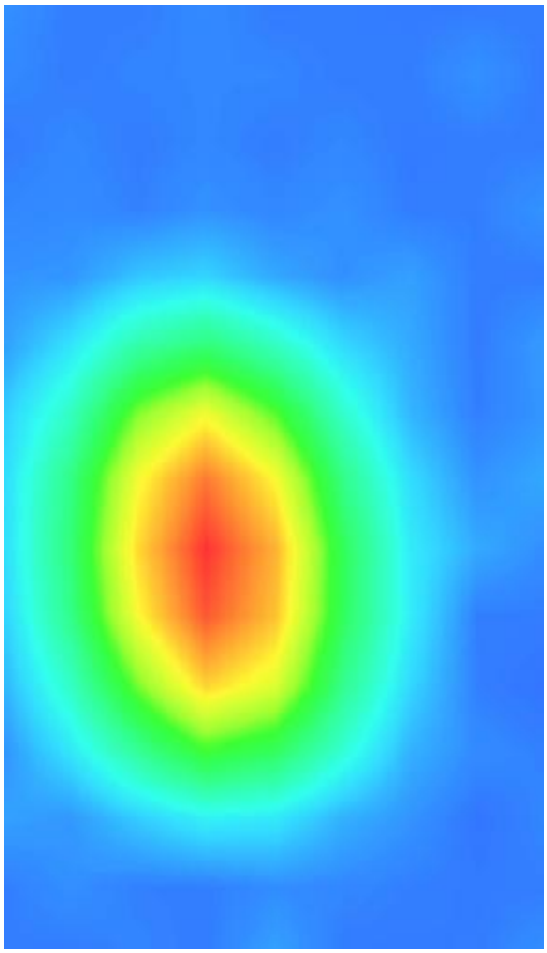
Maximum location: X=-10.00, Y=-13.00

SAR Peak: 0.67 W/kg

SAR 10g (W/Kg)	0.217404
SAR 1g (W/Kg)	0.405953

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6728	0.4334	0.2463	0.1439	0.0907



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: 05/16/2020

Measurement duration: 22 minutes 06 seconds

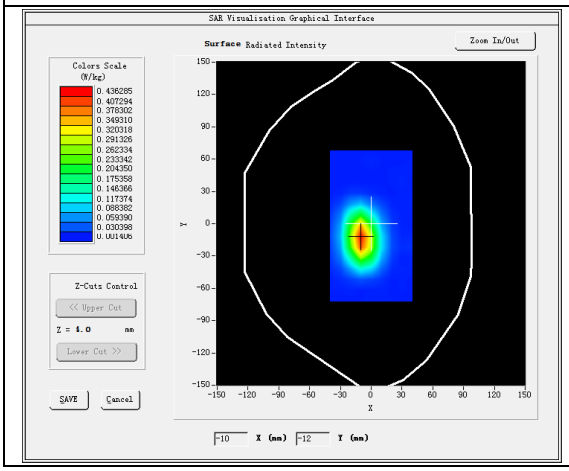
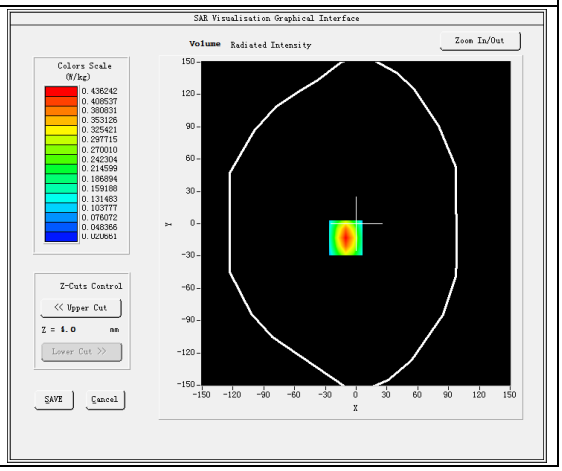
A. Experimental conditions.

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_41/18_EPG0330
Frequency (MHz)	1800
Relative permittivity (real part)	53.35
Relative permittivity	15.30
Conductivity (S/m)	1.53
Power Drift (%)	-0.92
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.22
Duty factor:	1:1

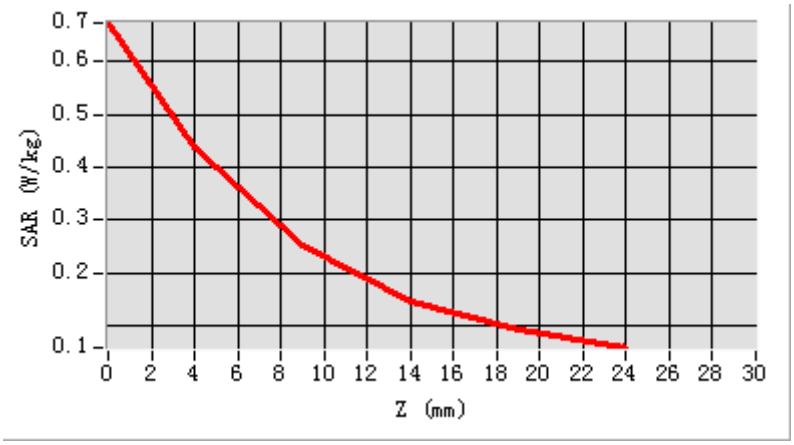
SURFACE SAR	VOLUME SAR
	

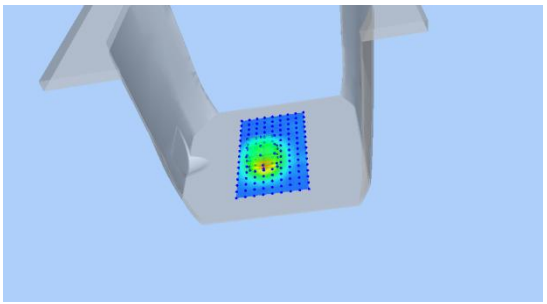
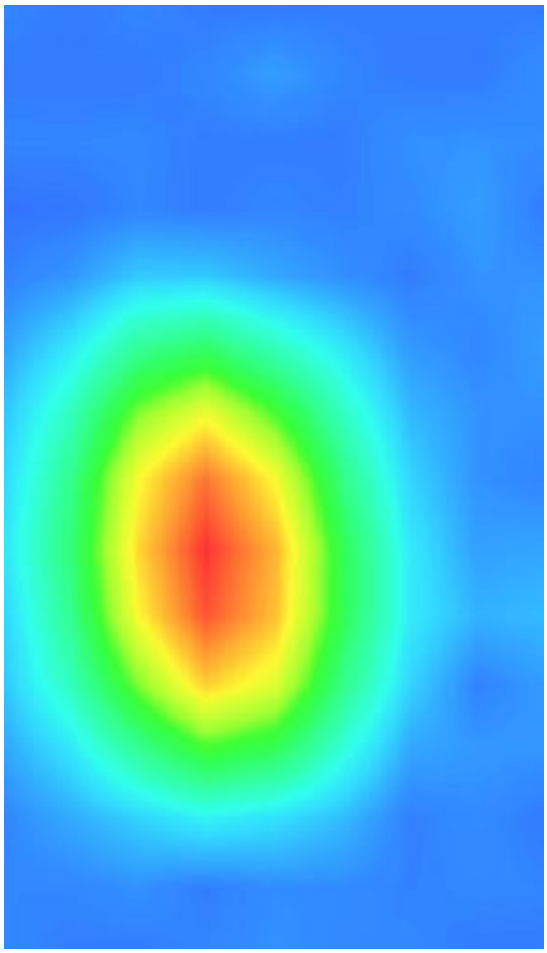
Maximum location: X=-10.00, Y=-13.00

SAR Peak: 0.67 W/kg

SAR 10g (W/Kg)	0.217185
SAR 1g (W/Kg)	0.403154

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6729	0.4362	0.2497	0.1463	0.0915



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: 05/17/2020

Measurement duration: 22 minutes 09 seconds

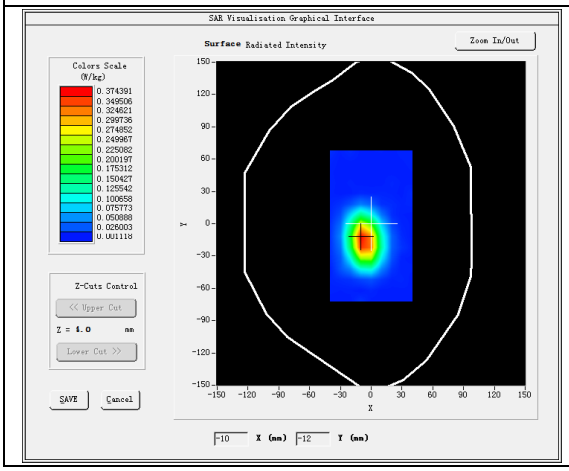
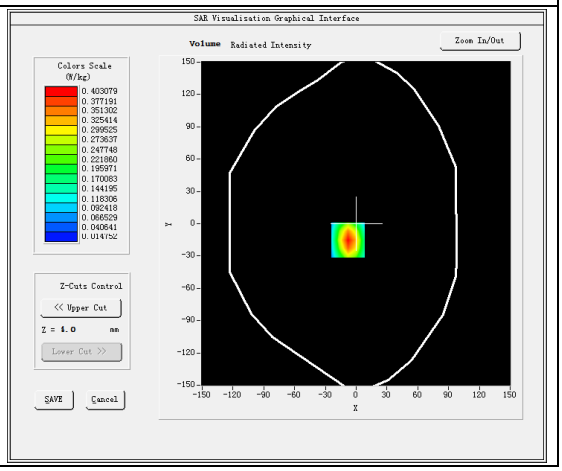
A. Experimental conditions.

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_41/18_EPG0330
Frequency (MHz)	1900
Relative permittivity (real part)	40.47
Relative permittivity	13.36
Conductivity (S/m)	1.41
Power Drift (%)	-1.87
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.34
Duty factor:	1:1

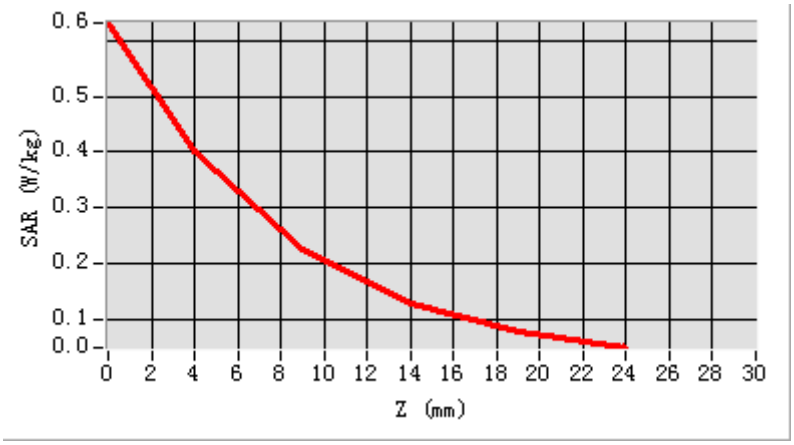
SURFACE SAR	VOLUME SAR
	

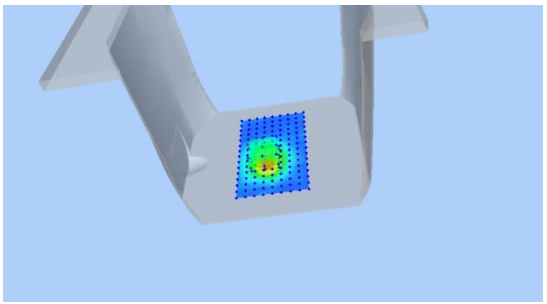
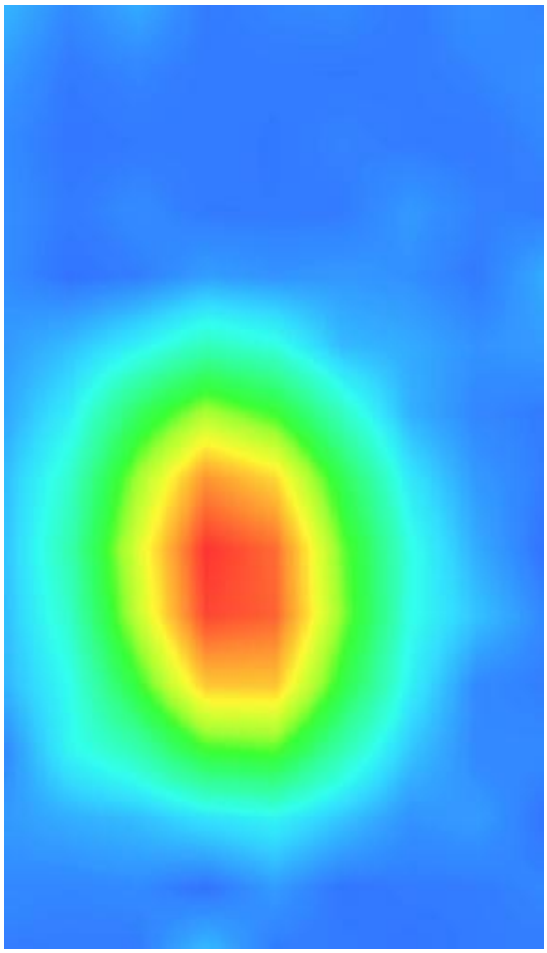
Maximum location: X=-8.00, Y=-15.00

SAR Peak: 0.63 W/kg

SAR 10g (W/Kg)	0.196324
SAR 1g (W/Kg)	0.373255

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6319	0.4031	0.2252	0.1284	0.0783



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: 05/17/2020

Measurement duration: 22 minutes 05 seconds

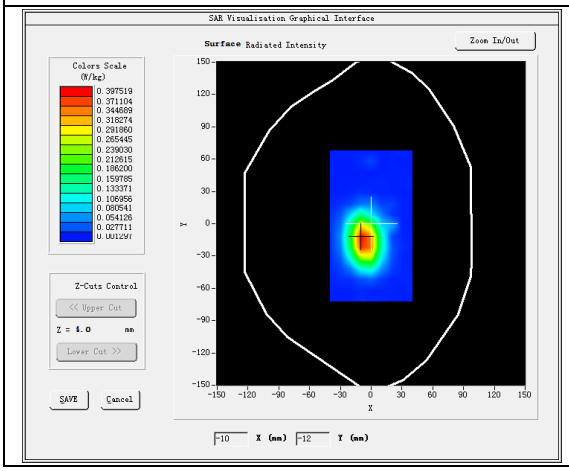
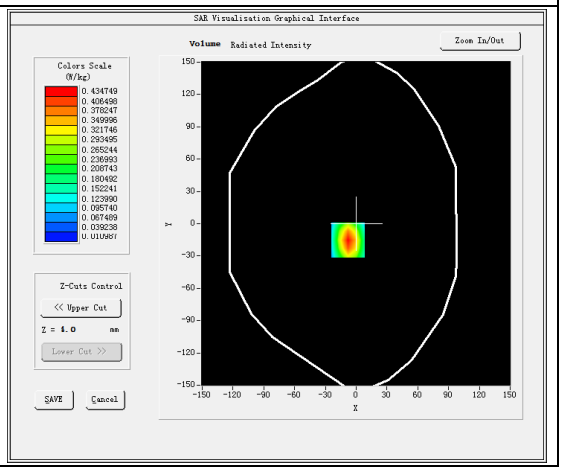
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_41/18_EPG0330
Frequency (MHz)	1900
Relative permittivity (real part)	53.30
Relative permittivity	14.31
Conductivity (S/m)	1.51
Power Drift (%)	-1.35
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.39
Duty factor:	1:1

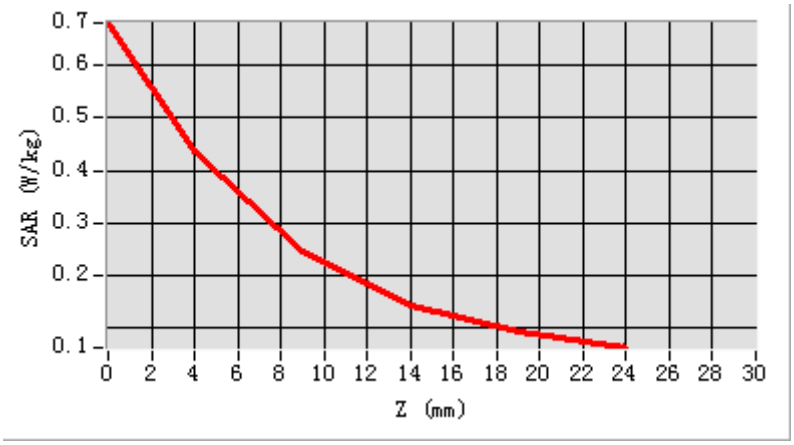
SURFACE SAR	VOLUME SAR
	

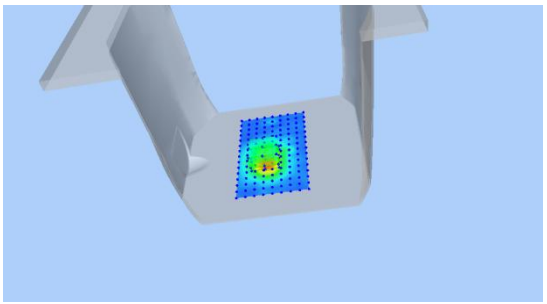
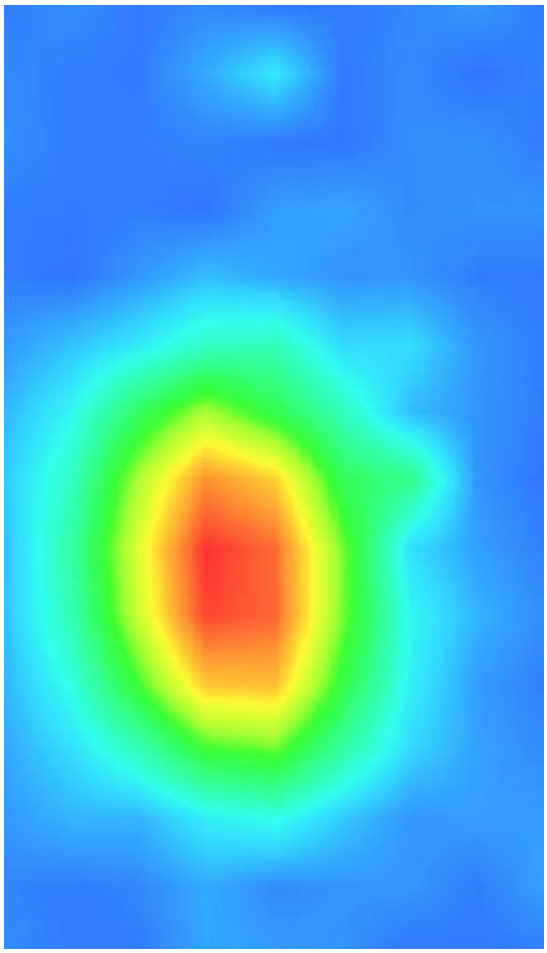
Maximum location: X=-8.00, Y=-15.00

SAR Peak: 0.68 W/kg

SAR 10g (W/Kg)	0.213142
SAR 1g (W/Kg)	0.402610

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6823	0.4347	0.2441	0.1421	0.0907



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: 05/18/2020

Measurement duration: 22 minutes 03 seconds

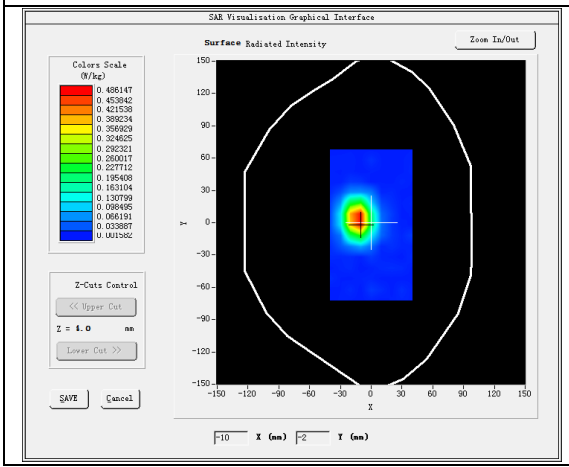
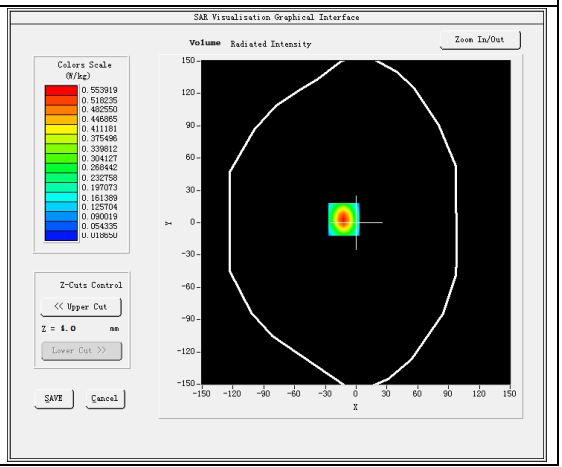
A. Experimental conditions.

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_41/18_EPG0330
Frequency (MHz)	2450
Relative permittivity (real part)	39.22
Relative permittivity	13.37
Conductivity (S/m)	1.82
Power Drift (%)	1.12
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.37
Duty factor:	1:1

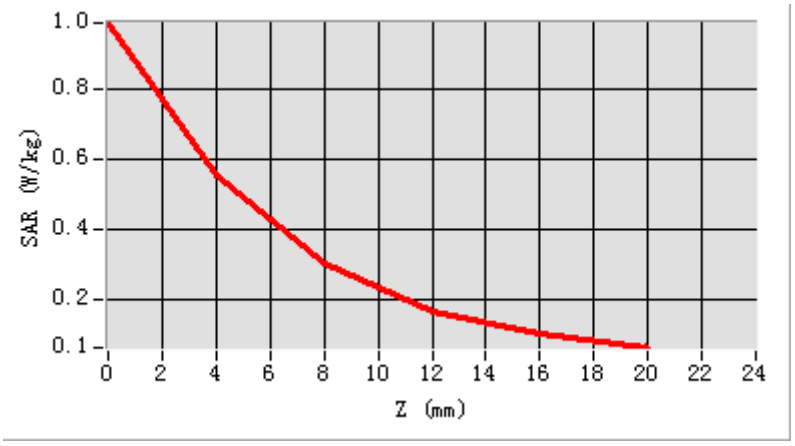
SURFACE SAR	**VOLUME SAR**
	

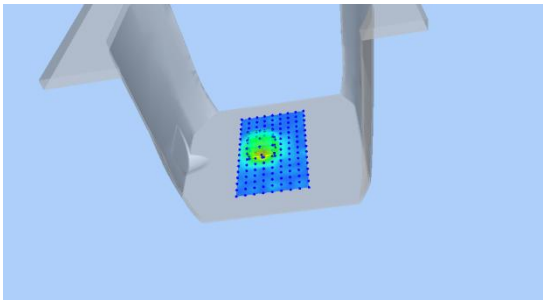
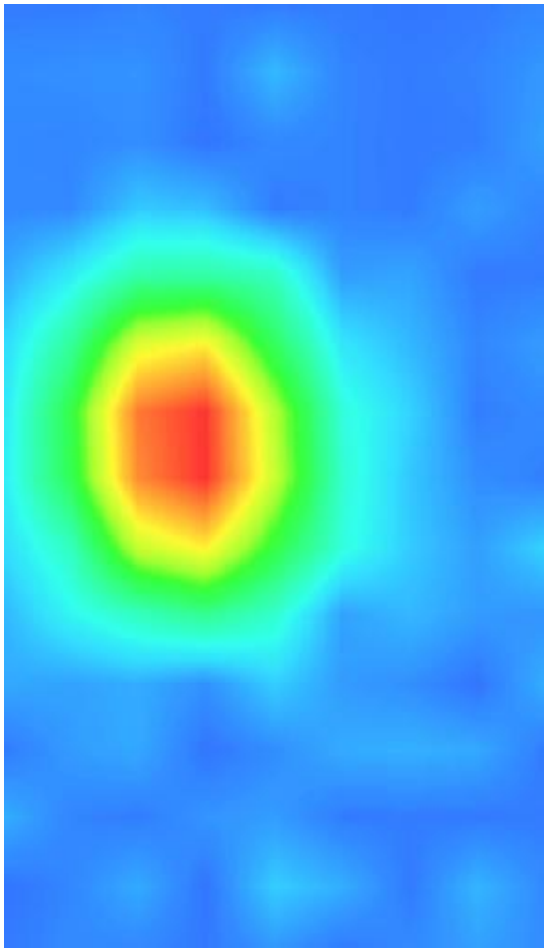
Maximum location: X=-12.00, Y=3.00

SAR Peak: 0.99 W/kg

SAR 10g (W/Kg)	0.236854
SAR 1g (W/Kg)	0.501619

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	0.9878	0.5539	0.3028	0.1701	0.1040



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: 05/18/2020

Measurement duration: 22 minutes 01 seconds

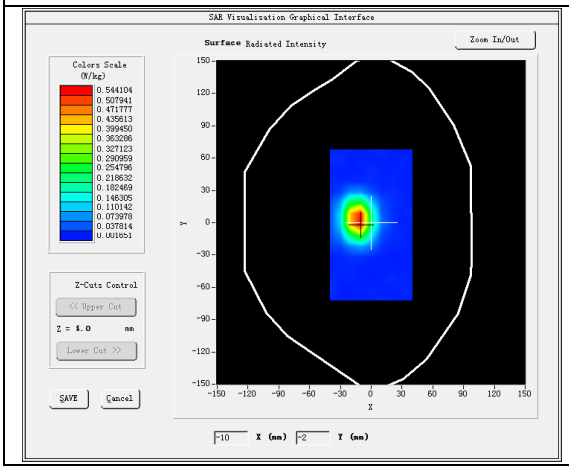
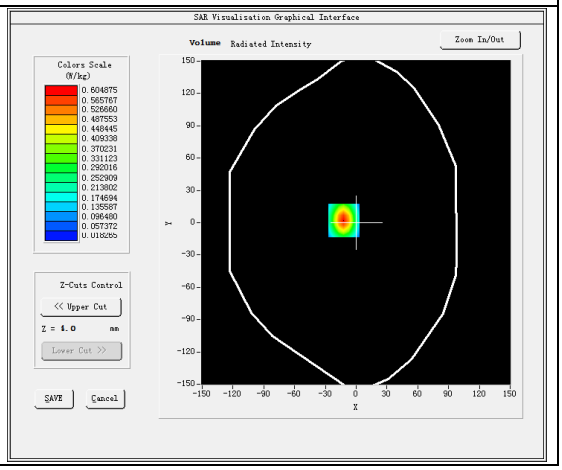
A. Experimental conditions.

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_41/18_EPG0330
Frequency (MHz)	2450
Relative permittivity (real part)	52.72
Relative permittivity	14.33
Conductivity (S/m)	1.95
Power Drift (%)	0.15
Ambient Temperature:	22.1℃
Liquid Temperature:	22.6℃
ConvF:	2.46
Duty factor:	1:1

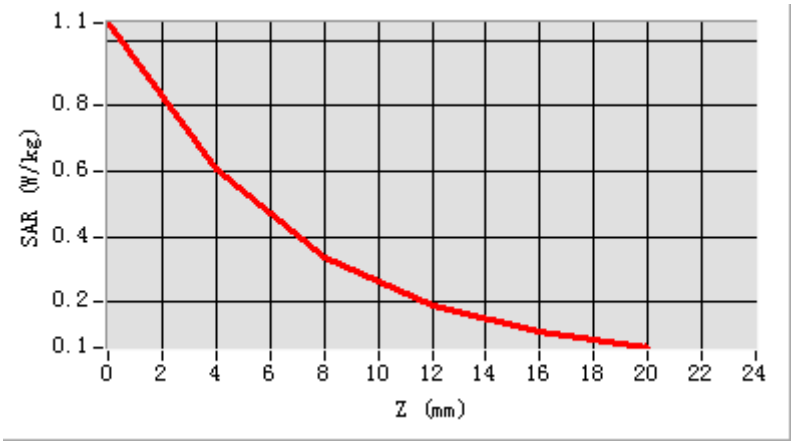
SURFACE SAR	**VOLUME SAR**
	

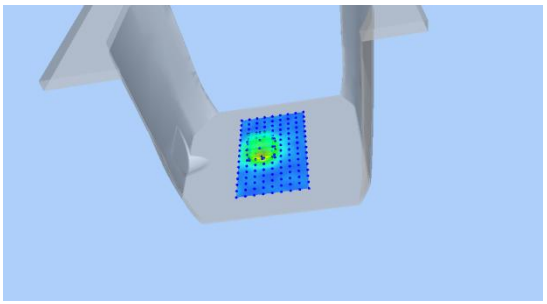
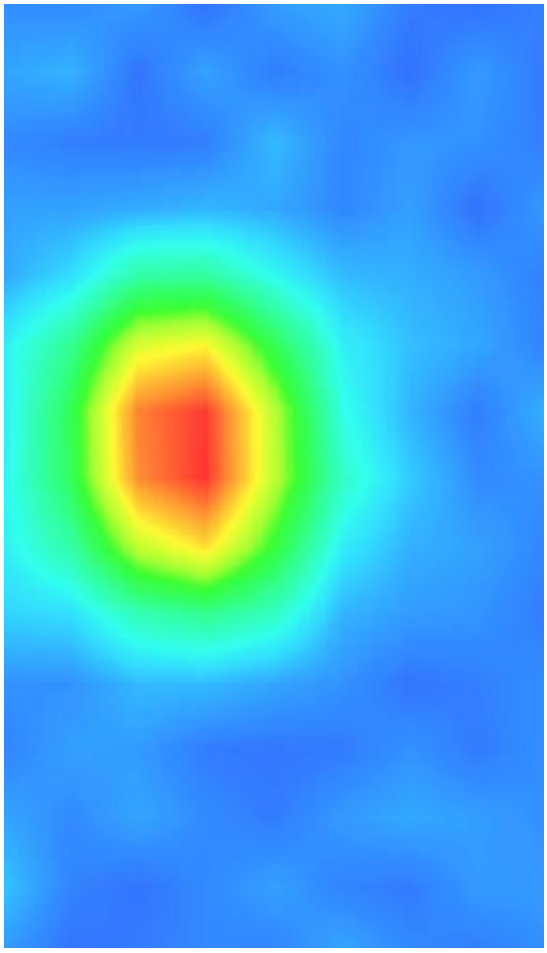
Maximum location: X=-12.00, Y=2.00

SAR Peak: 1.05 W/kg

SAR 10g (W/Kg)	0.254848
SAR 1g (W/Kg)	0.546589

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.0533	0.6049	0.3365	0.1874	0.1082



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: 05/18/2020

Measurement duration: 22 minutes 02 seconds

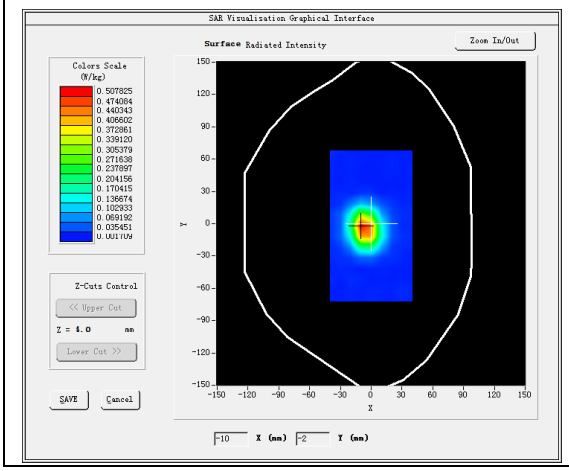
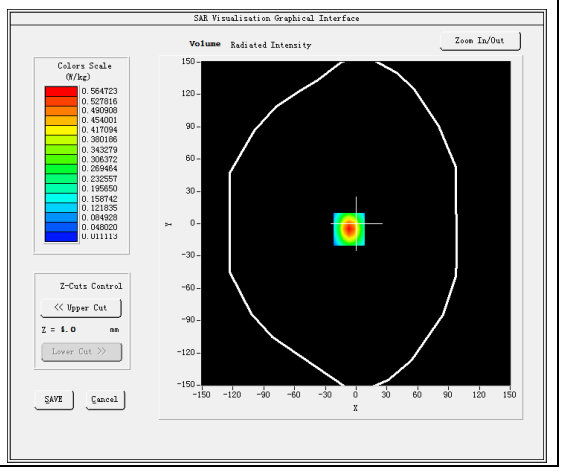
A. Experimental conditions.

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)	39.03
Relative permittivity	13.36
Conductivity (S/m)	1.93
Power drift (%)	-1.76
Ambient Temperature:	22.2 ℃
Liquid Temperature:	22.5 ℃
Crest factor:	1:1
ConvF:	2.35

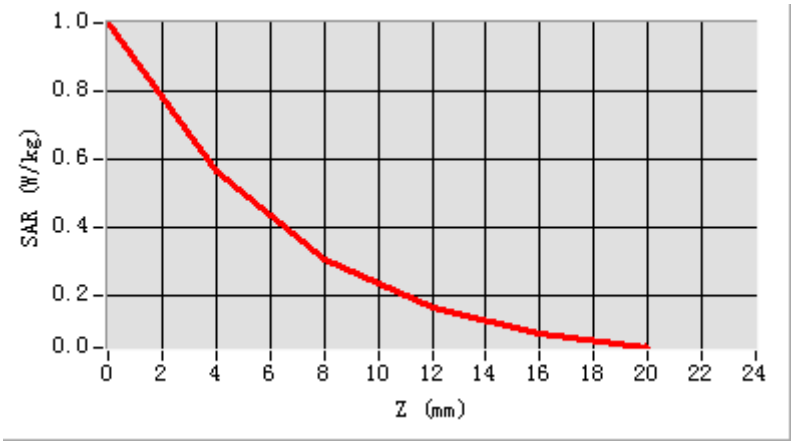
SURFACE SAR	**VOLUME SAR**
	

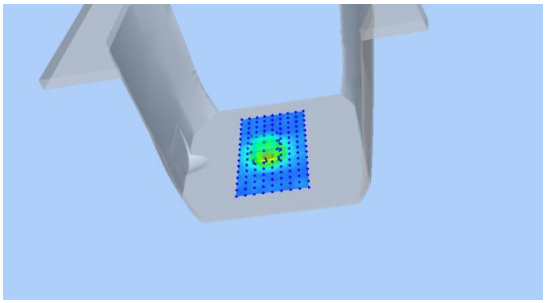
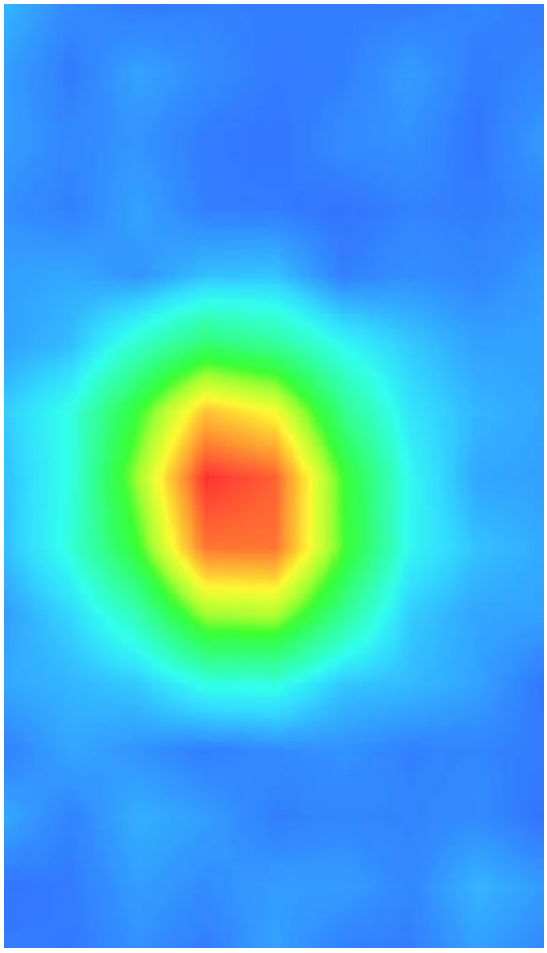
Maximum location: X=-7.00, Y=-5.00

SAR Peak: 1.00 W/kg

SAR 10g (W/Kg)	0.233682
SAR 1g (W/Kg)	0.513803

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	0.9980	0.5647	0.3075	0.1662	0.0922



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: 05/18/2020

Measurement duration: 22 minutes 10 seconds

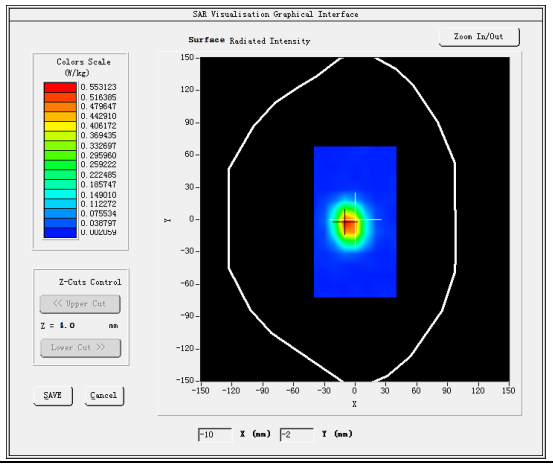
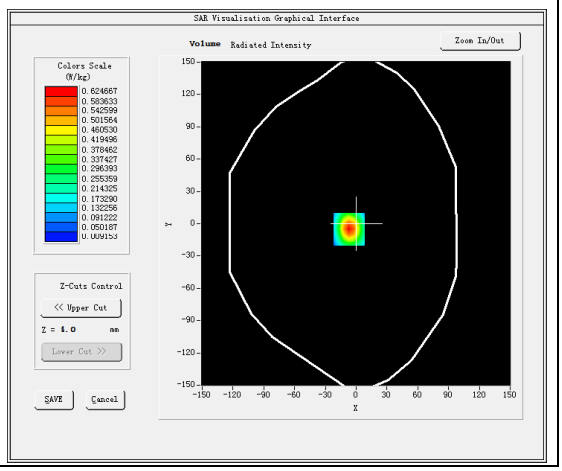
A. Experimental conditions.

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)	52.52
Relative permittivity	14.95
Conductivity (S/m)	2.16
Power drift (%)	-2.35
Ambient Temperature:	22.2 ℃
Liquid Temperature:	22.5 ℃
Crest factor:	1:1
ConvF:	2.43

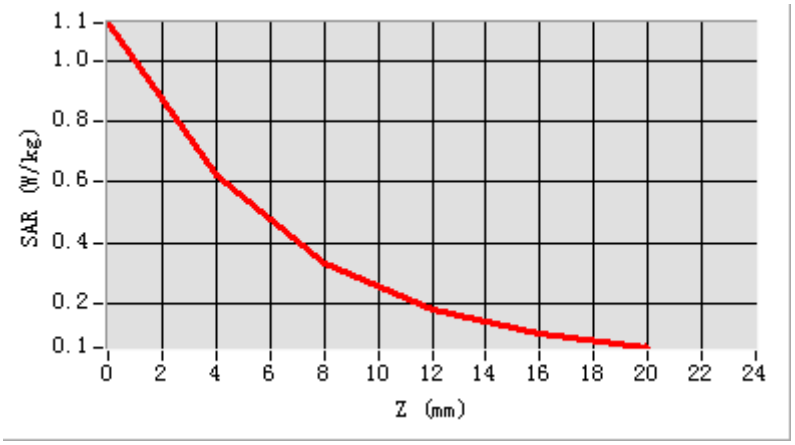
SURFACE SAR	**VOLUME SAR**
	

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

SAR Peak: 1.13 W/kg

SAR 10g (W/Kg)	0.253862
SAR 1g (W/Kg)	0.563329

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.1240	0.6247	0.3340	0.1785	0.0998



3D screen shot	Hot spot position