Appendix A: SAR System performance Check Plots

Measurement	Liquid	Frequency	Test Date
System Check	Head	835	2019-08-26
System Check	Body	835	2019-08-26
System Check	Head	1800	2019-08-27
System Check	Body	1800	2019-08-27
System Check	Head	1900	2019-08-28
System Check	Body	1900	2019-08-28
System Check	Head	2450	2019-08-29
System Check	Body	2450	2019-08-29
System Check	Head	2600	2019-08-30
System Check	Body	2600	2019-08-30

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: 08/26/2019

Measurement duration: 22 minutes 06 seconds

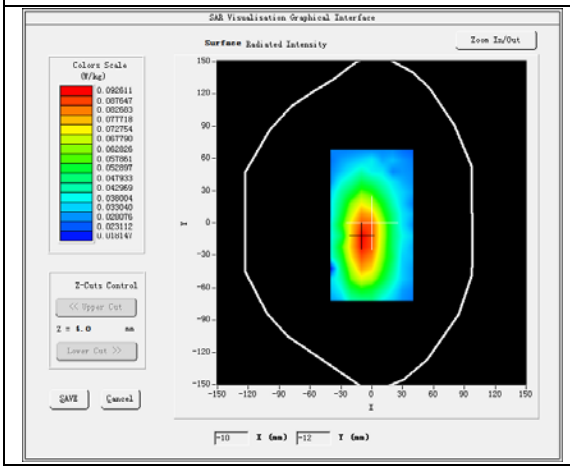
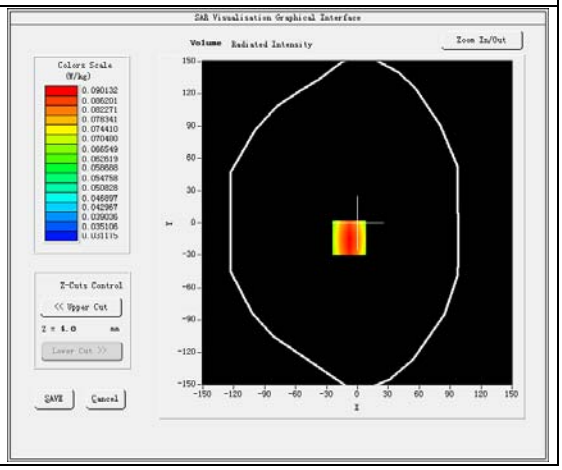
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	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)	41.47
Relative permittivity	20.48
Conductivity (S/m)	0.95
Power drift (%)	-3.49
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	1.92
Crest factor:	1:1

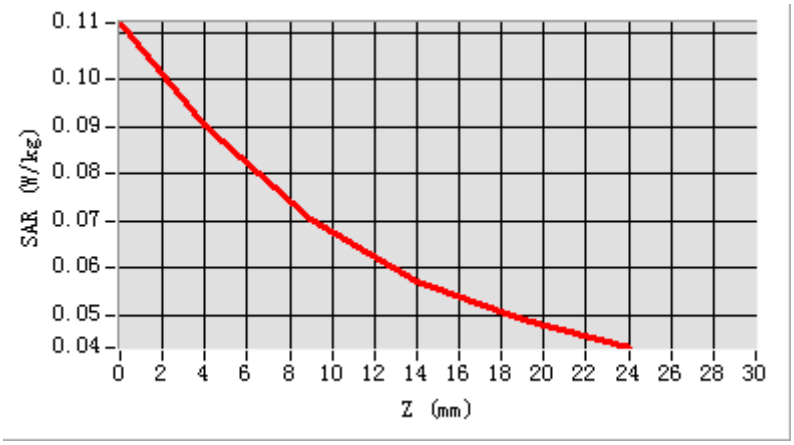
SURFACE SAR	**VOLUME SAR**
	

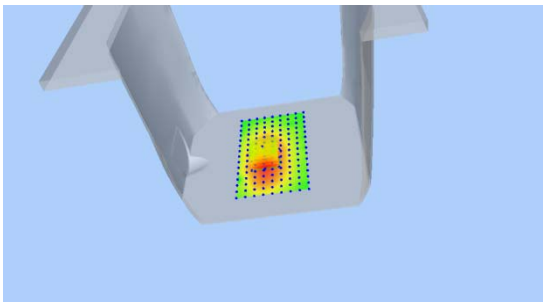
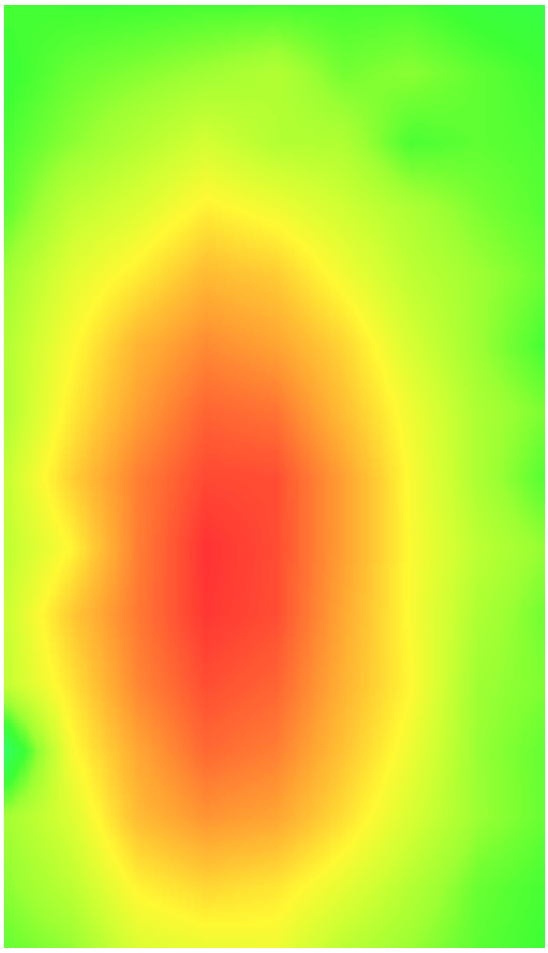
Maximum location: X=-8.00, Y=-14.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.067556
SAR 1g (W/Kg)	0.087667

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1120	0.0901	0.0703	0.0572	0.0490



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: 08/26/2019

Measurement duration: 22 minutes 08 seconds

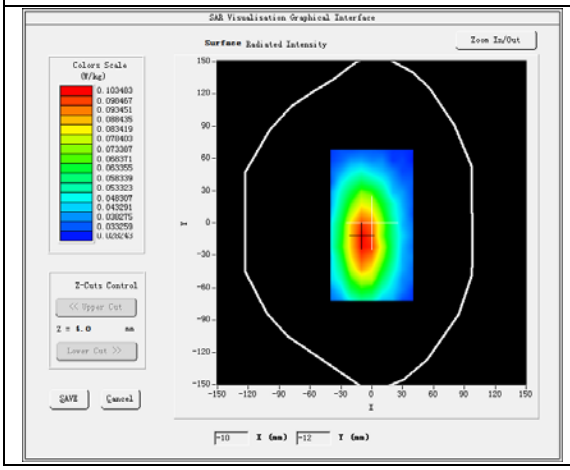
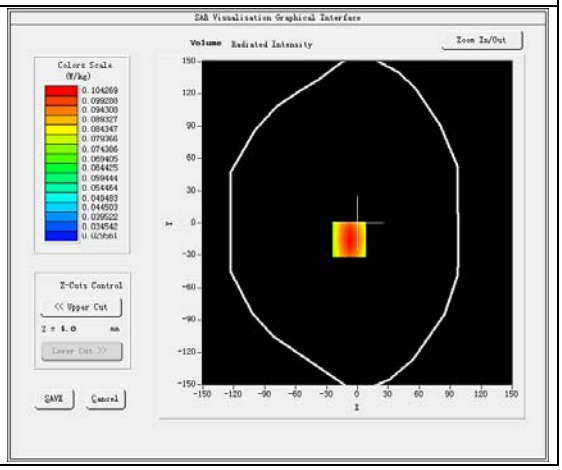
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	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)	55.50
Relative permittivity	20.91
Conductivity (S/m)	0.97
Power drift (%)	-2.16
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	1.99
Crest factor:	1:1

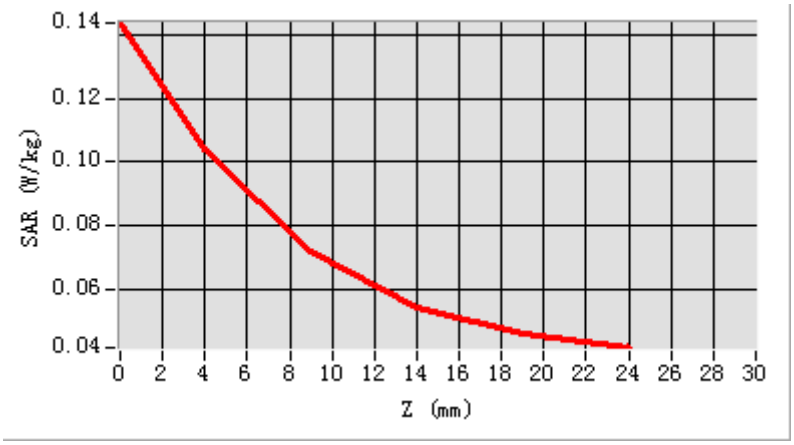
SURFACE SAR	**VOLUME SAR**
	

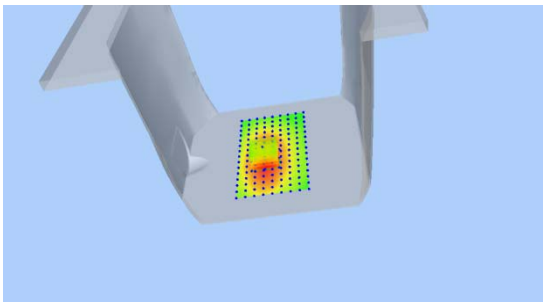
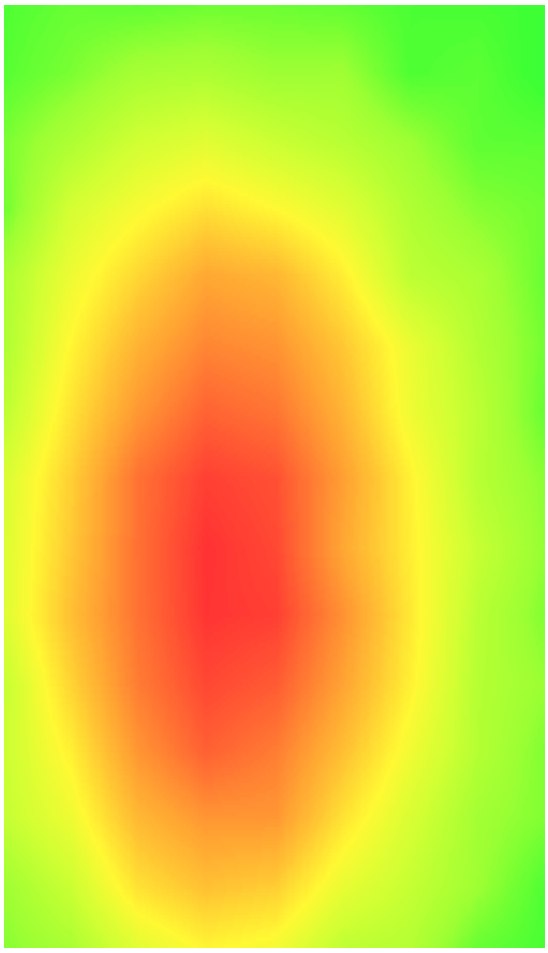
Maximum location: X=-8.00, Y=-15.00

SAR Peak: 0.14 W/kg

SAR 10g (W/Kg)	0.073758
SAR 1g (W/Kg)	0.103015

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.1439	0.1043	0.0721	0.0544	0.0460



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: 08/27/2019

Measurement duration: 22 minutes 10 seconds

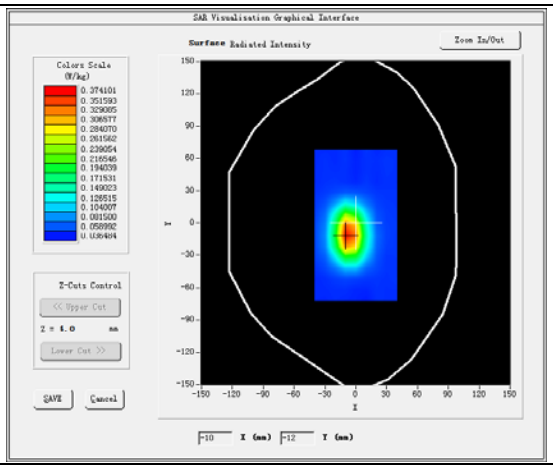
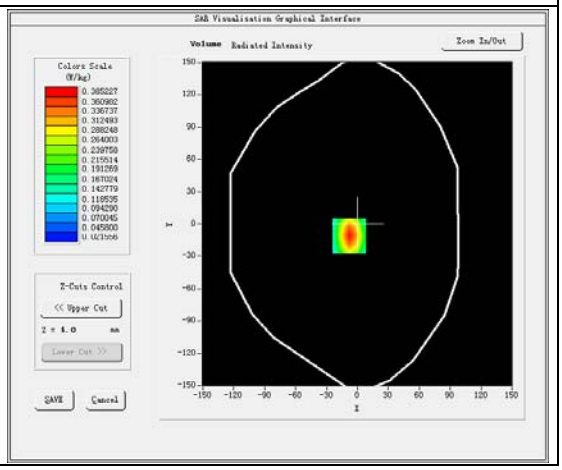
A. Experimental conditions.

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)	40.91
Relative permittivity	13.90
Conductivity (S/m)	1.39
Power Drift (%)	-1.88
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.14
Duty factor:	1:1

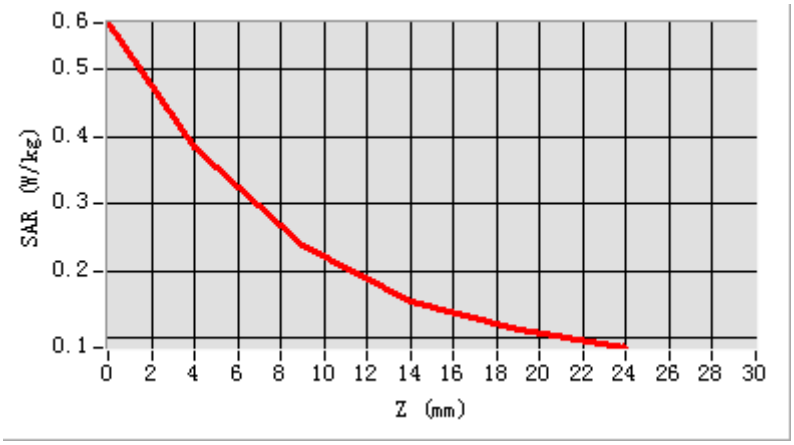
SURFACE SAR	**VOLUME SAR**
	

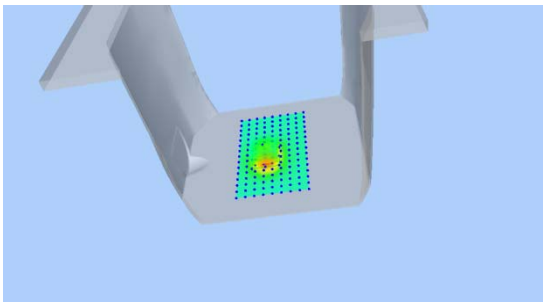
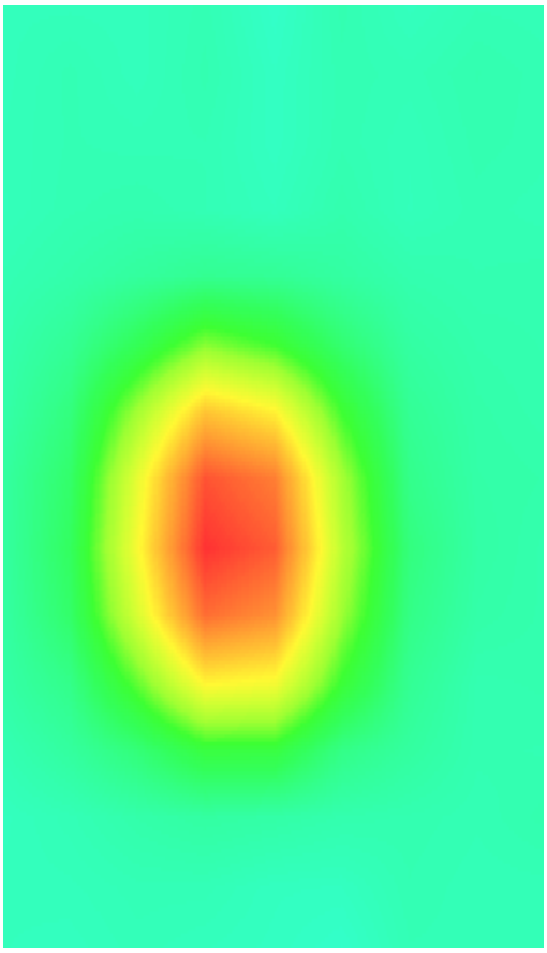
Maximum location: X=-8.00, Y=-11.00

SAR Peak: 0.57 W/kg

SAR 10g (W/Kg)	0.211239
SAR 1g (W/Kg)	0.364960

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.5697	0.3852	0.2379	0.1555	0.1122



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: 08/27/2019

Measurement duration: 22 minutes 04 seconds

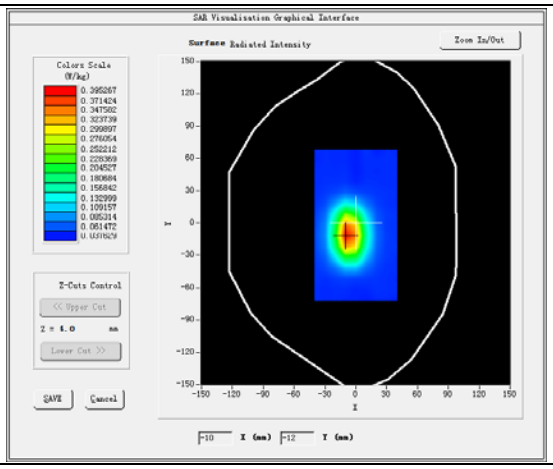
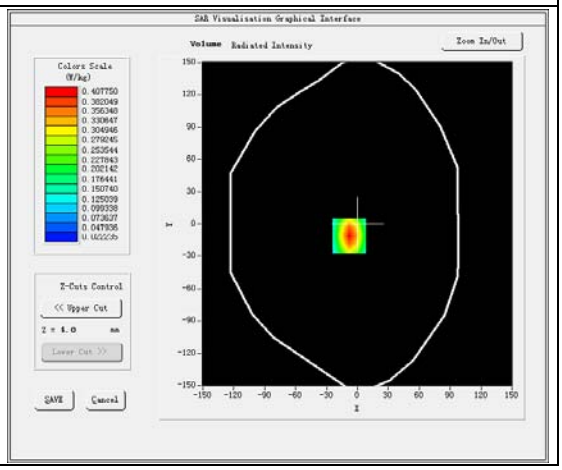
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	5x5x7,dx=8mm dy=8mm dz=5mm
Device Position	Dipole
Band	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)	53.79
Relative permittivity	15.10
Conductivity (S/m)	1.51
Power Drift (%)	-1.45
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.22
Duty factor:	1:1

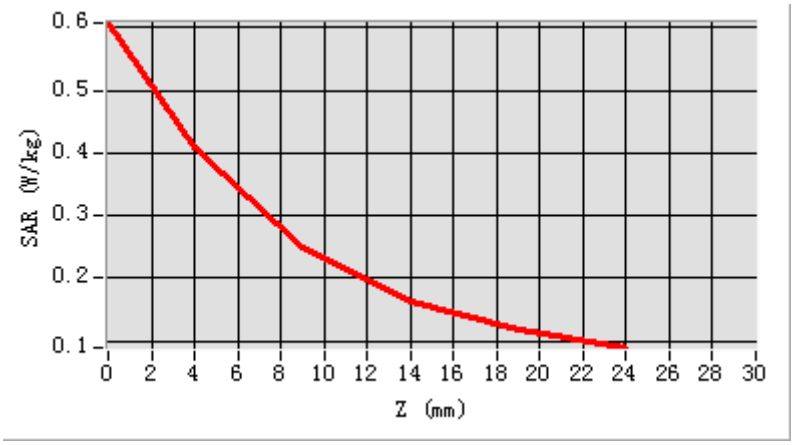
SURFACE SAR	**VOLUME SAR**
	

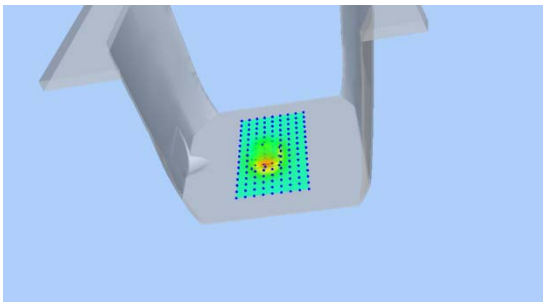
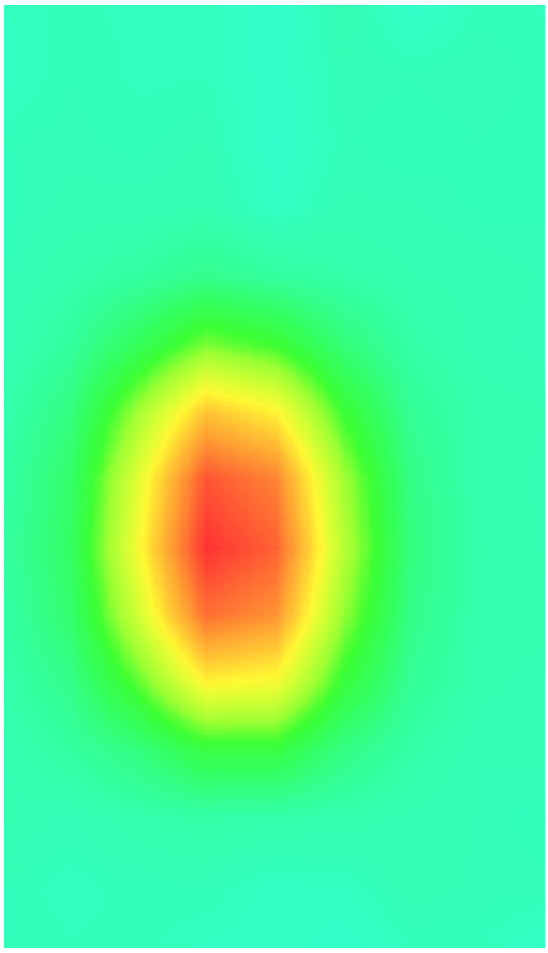
Maximum location: X=-8.00, Y=-11.00

SAR Peak: 0.61 W/kg

SAR 10g (W/Kg)	0.219953
SAR 1g (W/Kg)	0.380664

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6075	0.4078	0.2494	0.1618	0.1164



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: 08/28/2019

Measurement duration: 22 minutes 12 seconds

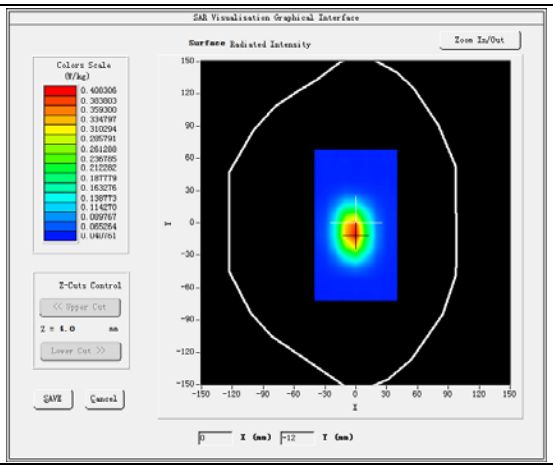
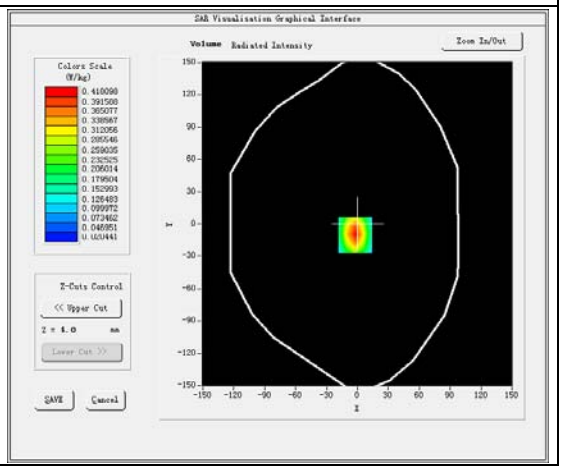
A. Experimental conditions.

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)	40.70
Relative permittivity	13.36
Conductivity (S/m)	1.41
Power Drift (%)	-0.76
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.34
Duty factor:	1:1

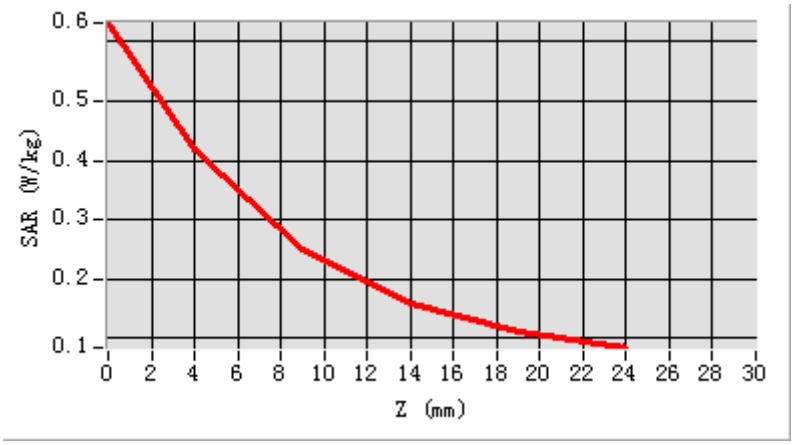
SURFACE SAR	**VOLUME SAR**
	

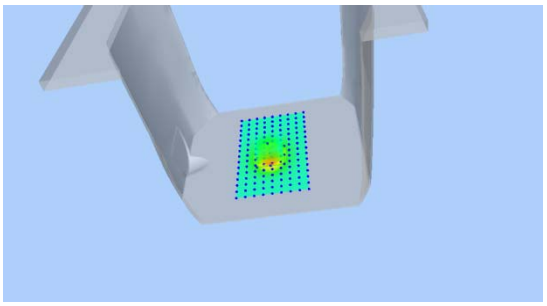
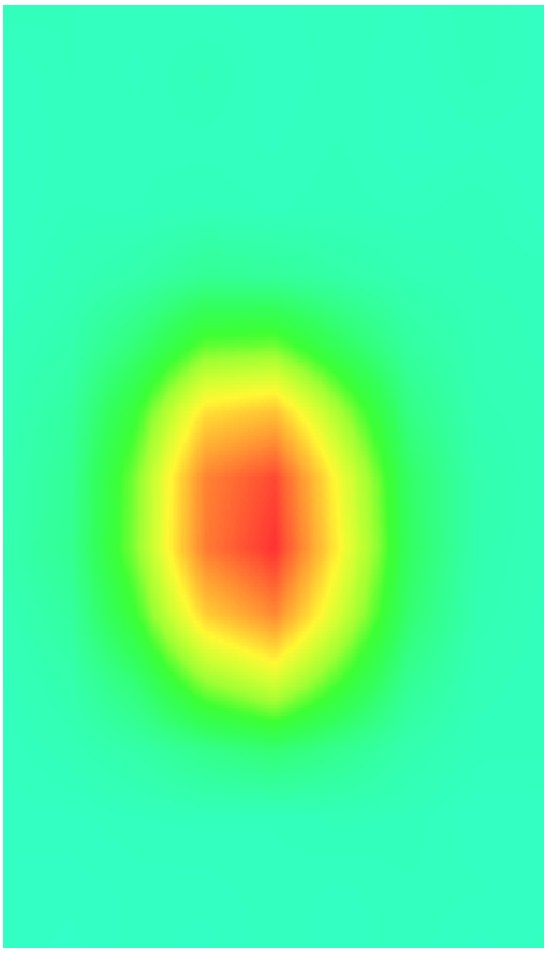
Maximum location: X=-2.00, Y=-10.00

SAR Peak: 0.63 W/kg

SAR 10g (W/Kg)	0.219740
SAR 1g (W/Kg)	0.391041

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6319	0.4181	0.2502	0.1586	0.1117



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: 08/28/2019

Measurement duration: 22 minutes 14 seconds

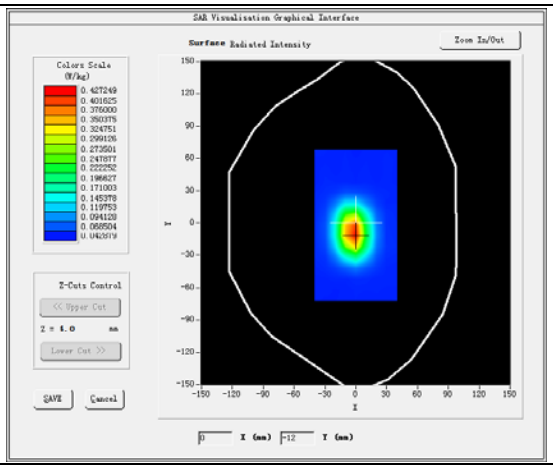
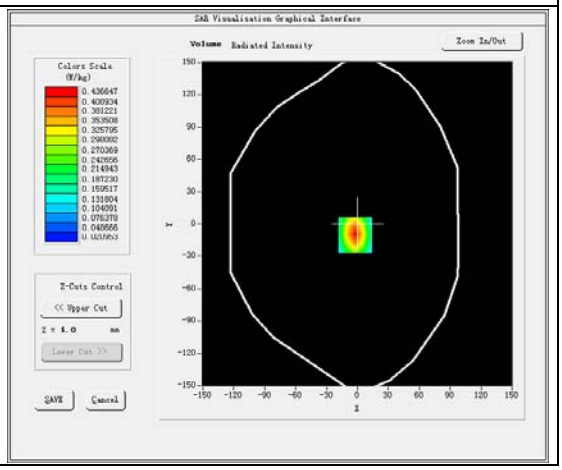
A. Experimental conditions.

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)	53.55
Relative permittivity	14.49
Conductivity (S/m)	1.53
Power Drift (%)	-1.95
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.39
Duty factor:	1:1

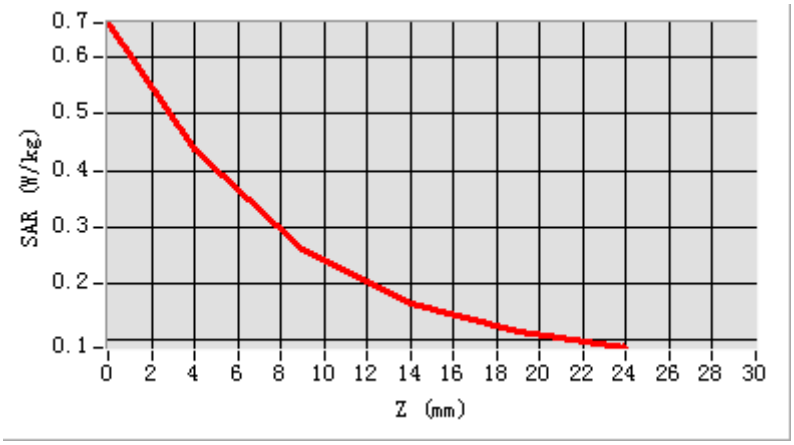
SURFACE SAR	**VOLUME SAR**
	

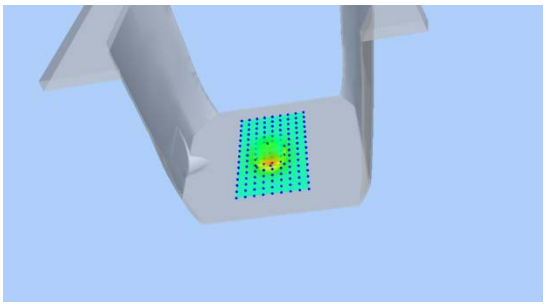
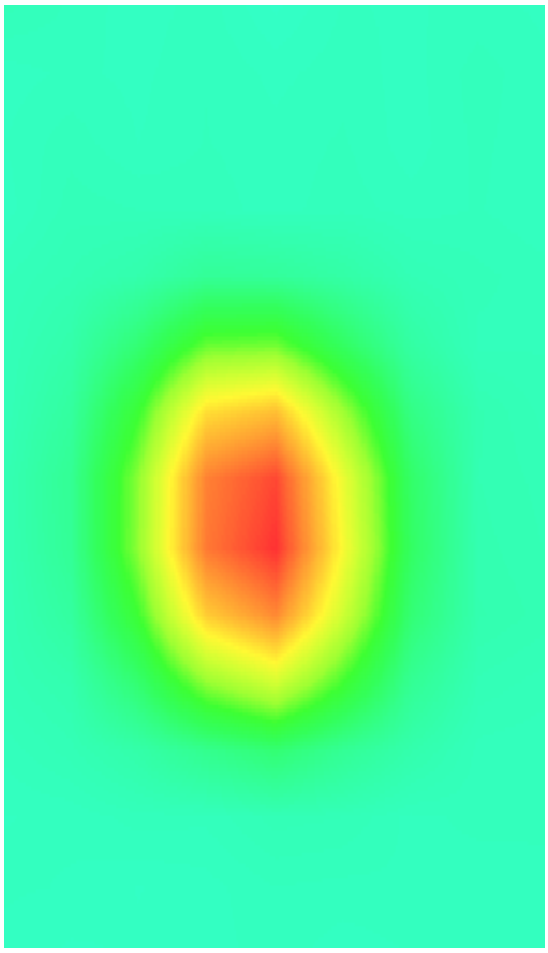
Maximum location: X=-2.00, Y=-10.00

SAR Peak: 0.66 W/kg

SAR 10g (W/Kg)	0.228103
SAR 1g (W/Kg)	0.405144

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.6604	0.4366	0.2611	0.1653	0.1163



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: 08/29/2019

Measurement duration: 22 minutes 11 seconds

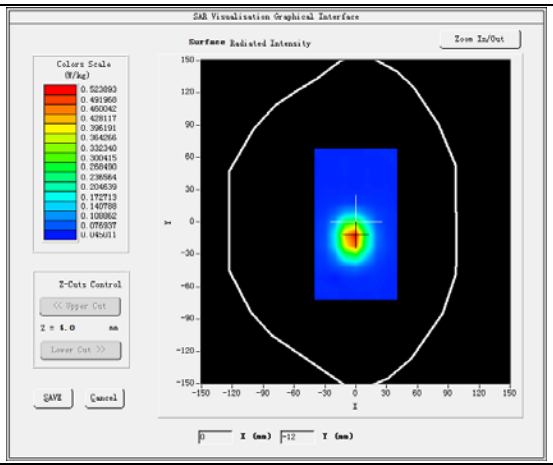
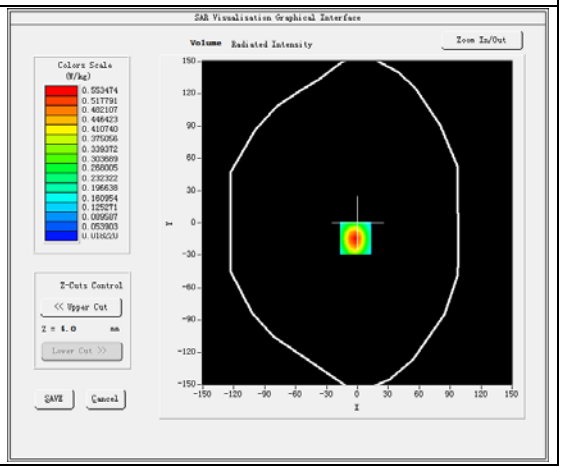
A. Experimental conditions.

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)	40.21
Relative permittivity	13.30
Conductivity (S/m)	1.81
Power Drift (%)	-2.16
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.37
Duty factor:	1:1

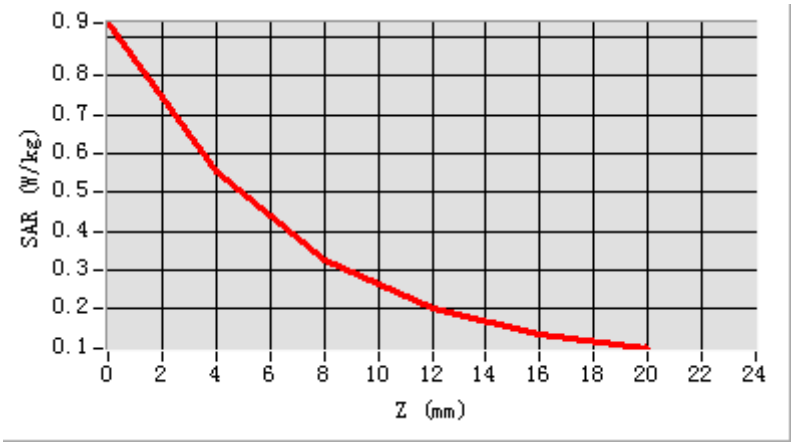
SURFACE SAR	**VOLUME SAR**
	

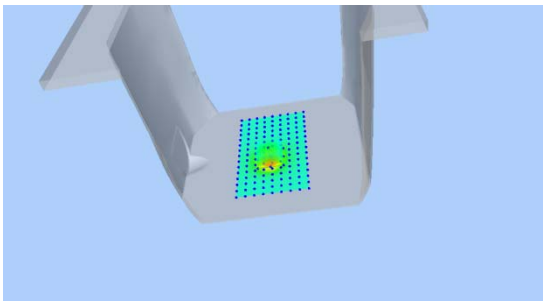
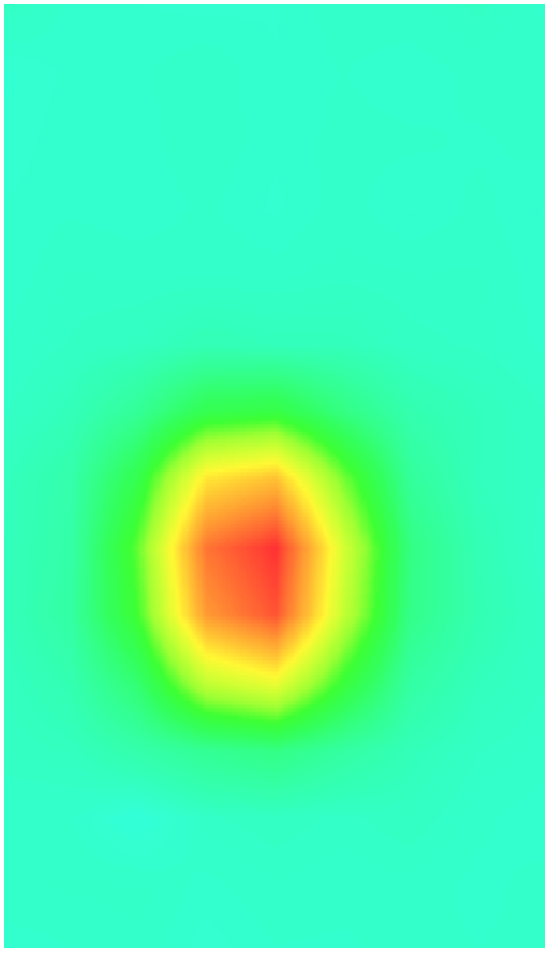
Maximum location: X=-2.00, Y=-14.00

SAR Peak: 0.94 W/kg

SAR 10g (W/Kg)	0.253090
SAR 1g (W/Kg)	0.503371

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	0.9371	0.5535	0.3250	0.2003	0.1361



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: 08/29/2019

Measurement duration: 22 minutes 17 seconds

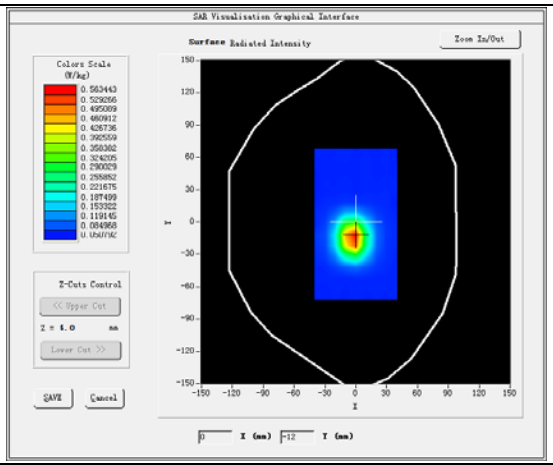
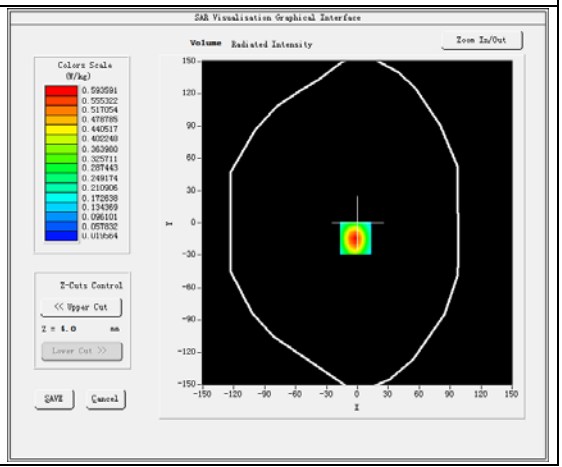
A. Experimental conditions.

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)	52.82
Relative permittivity	14.11
Conductivity (S/m)	1.92
Power Drift (%)	-2.35
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.46
Duty factor:	1:1

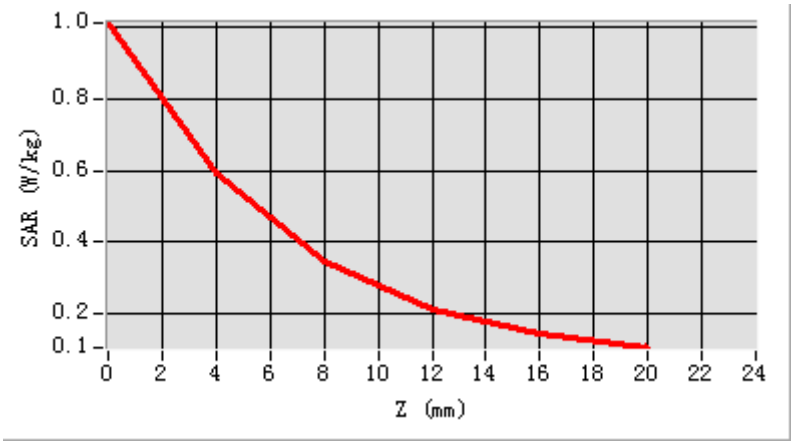
SURFACE SAR	**VOLUME SAR**
	

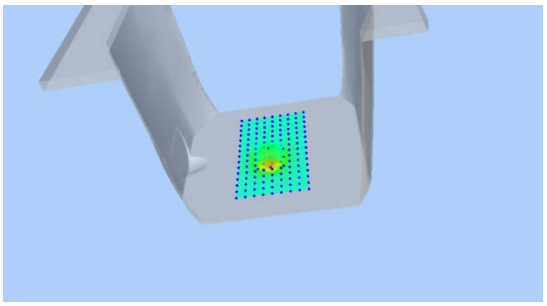
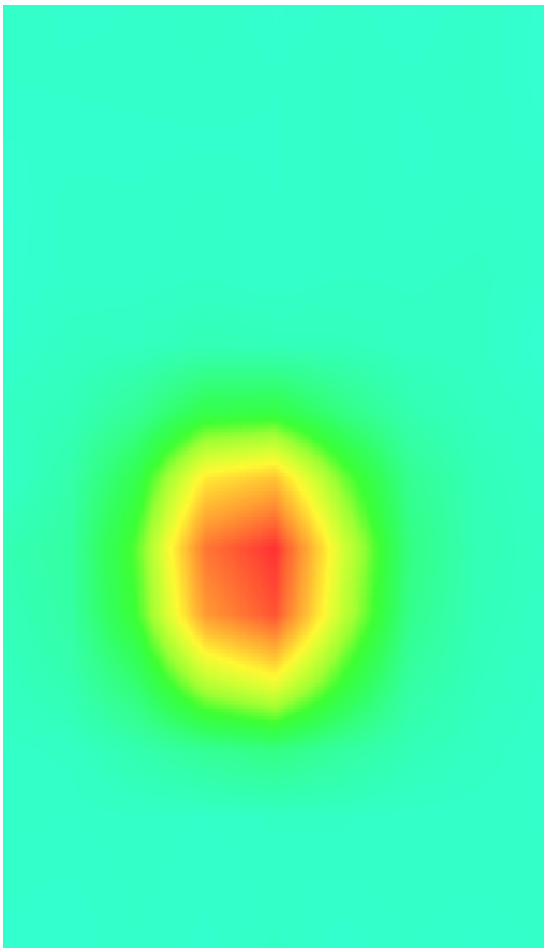
Maximum location: X=-2.00, Y=-14.00

SAR Peak: 1.01 W/kg

SAR 10g (W/Kg)	0.271903
SAR 1g (W/Kg)	0.543720

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.0119	0.5936	0.3462	0.2125	0.1447



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: 08/30/2019

Measurement duration: 22 minutes 19 seconds

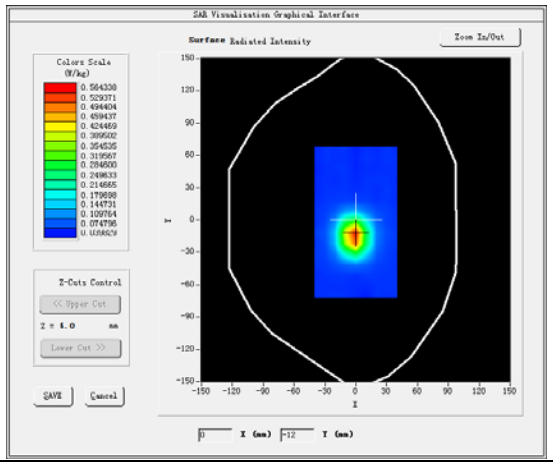
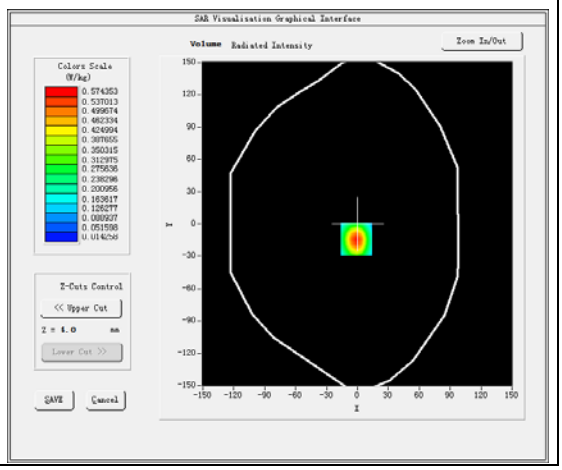
A. Experimental conditions.

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)	40.00
Relative permittivity	13.43
Conductivity (S/m)	1.94
Power drift (%)	-2.07
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	2.35

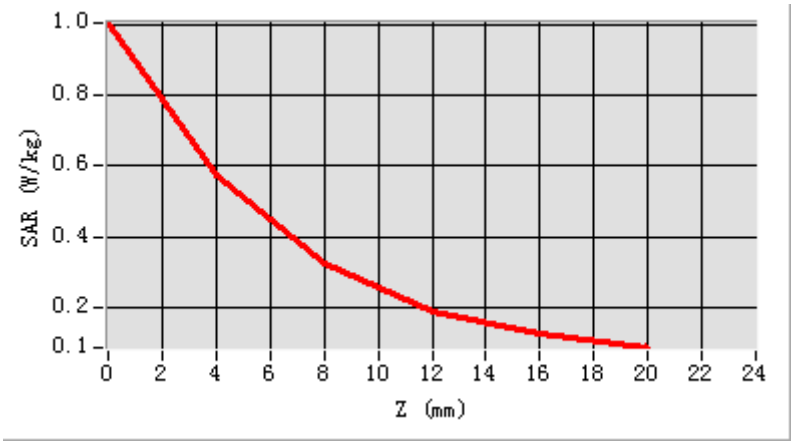
SURFACE SAR	**VOLUME SAR**
	

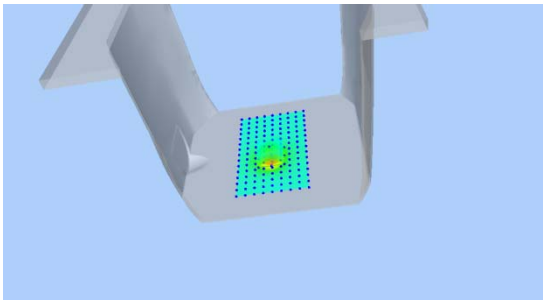
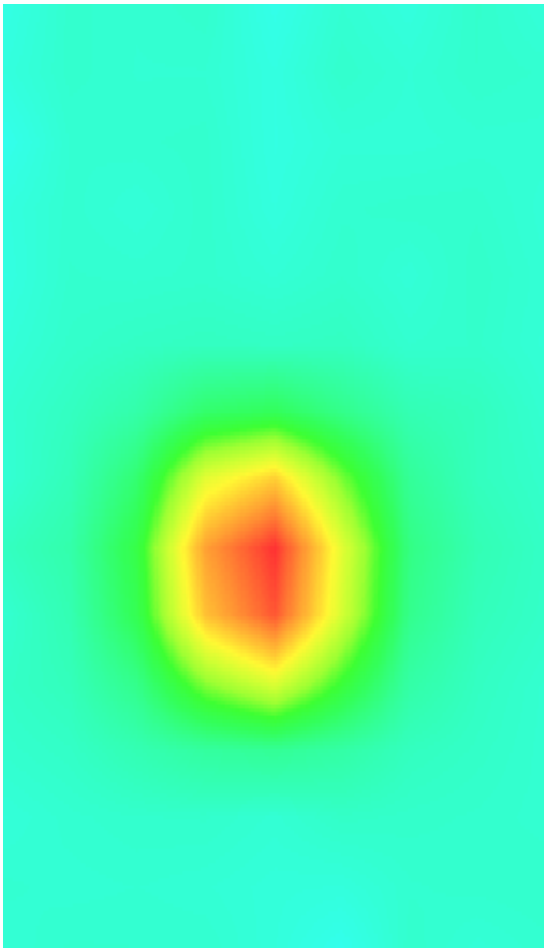
Maximum location: X=-1.00, Y=-14.00

SAR Peak: 1.01 W/kg

SAR 10g (W/Kg)	0.254021
SAR 1g (W/Kg)	0.526778

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.0071	0.5744	0.3227	0.1893	0.1230



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: 08/30/2019

Measurement duration: 22 minutes 21 seconds

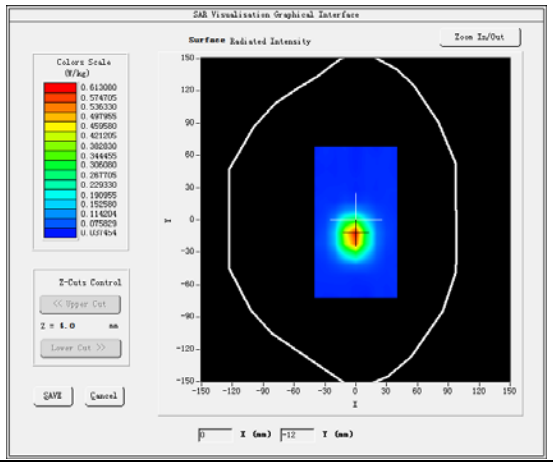
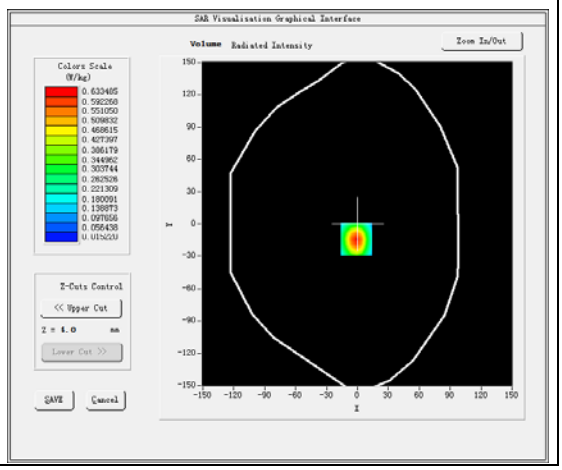
A. Experimental conditions.

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)	52.60
Relative permittivity	14.88
Conductivity (S/m)	2.15
Power drift (%)	-2.03
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	2.43

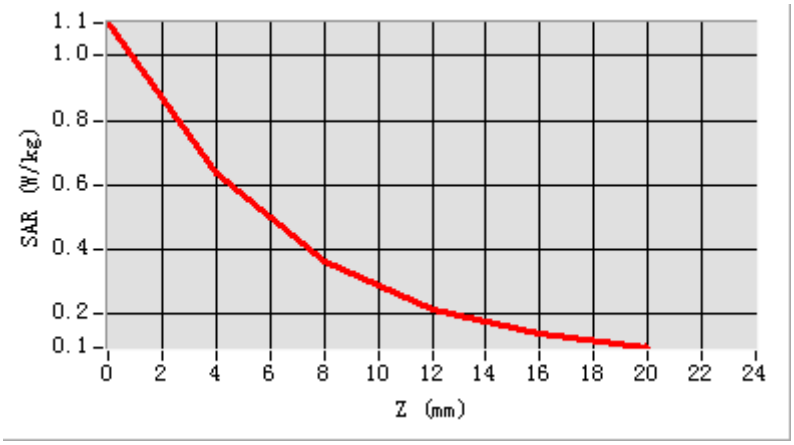
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-1.00, Y=-14.00

SAR Peak: 1.10 W/kg

SAR 10g (W/Kg)	0.276975
SAR 1g (W/Kg)	0.574112

Z (mm)	0.00	4.00	8.00	12.00	16.00
SAR (W/Kg)	1.1028	0.6335	0.3585	0.2111	0.1367



3D screen shot	Hot spot position