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 Check	Head	5200	2019-08-31
System Check	Body	5200	2019-08-31
System Check	Head	5800	2019-09-02
System Check	Body	5800	2019-09-02

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 04 seconds

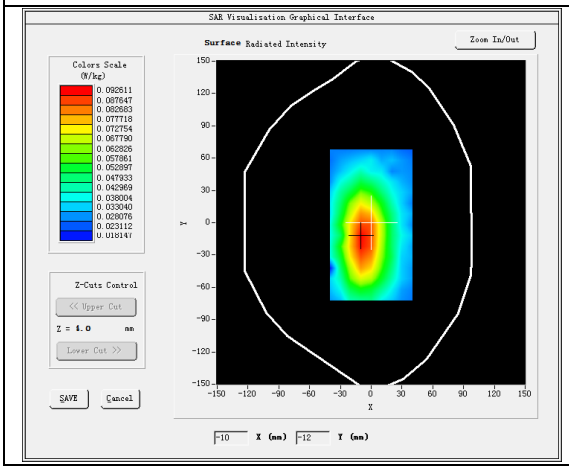
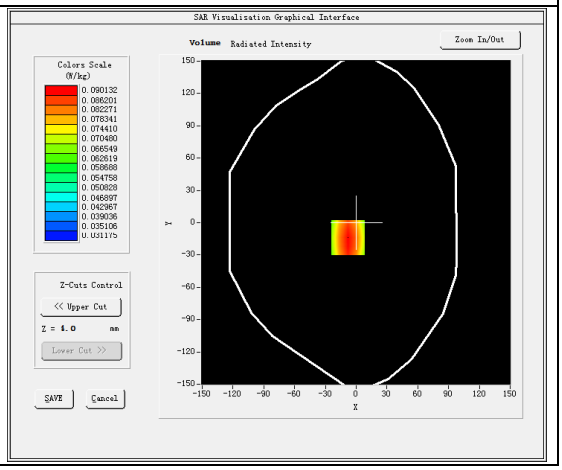
A. Experimental conditions.

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)	41.52
Relative permittivity	20.69
Conductivity (S/m)	0.96
Power drift (%)	-3.49
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	1.92
Crest factor:	1:1

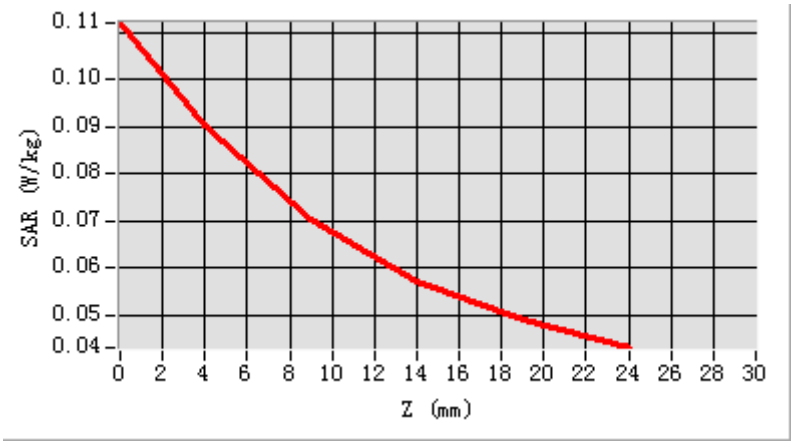
SURFACE SAR	**VOLUME SAR**
	

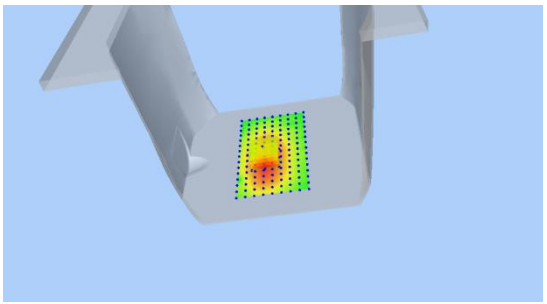
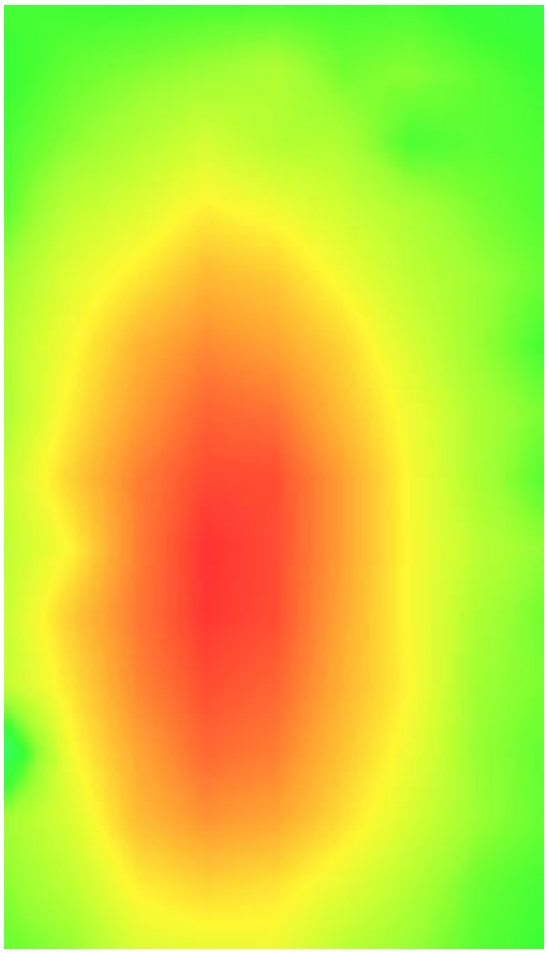
Maximum location: X=-8.00, Y=-14.00

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 07 seconds

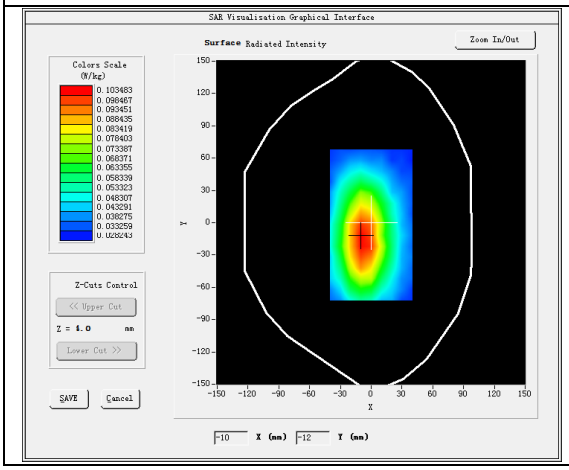
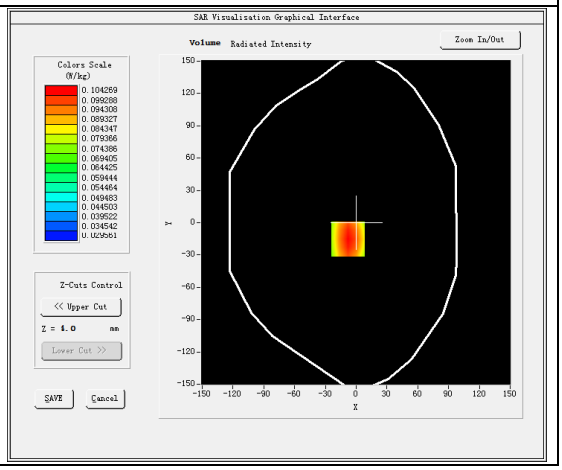
A. Experimental conditions.

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_27/15_EPG0261
Frequency (MHz)	835
Relative permittivity (real part)	55.57
Relative permittivity	20.48
Conductivity (S/m)	0.95
Power drift (%)	-2.16
Ambient Temperature:	22.2°C
Liquid Temperature:	22.6°C
ConvF:	1.99
Crest factor:	1:1

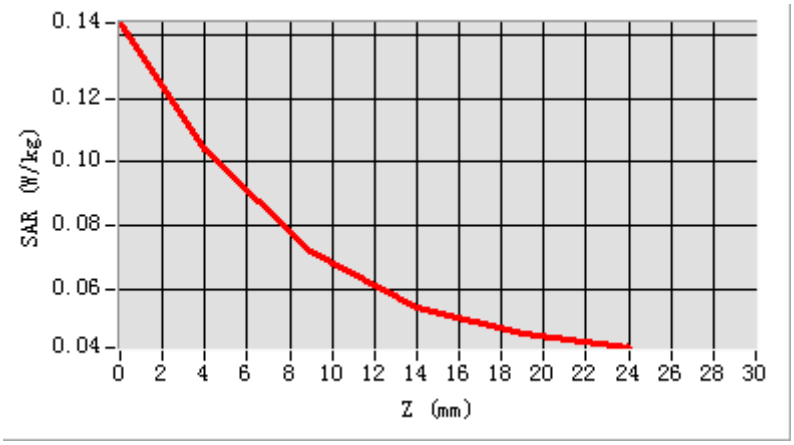
SURFACE SAR	**VOLUME SAR**
	

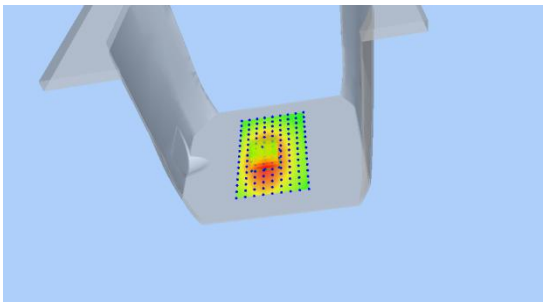
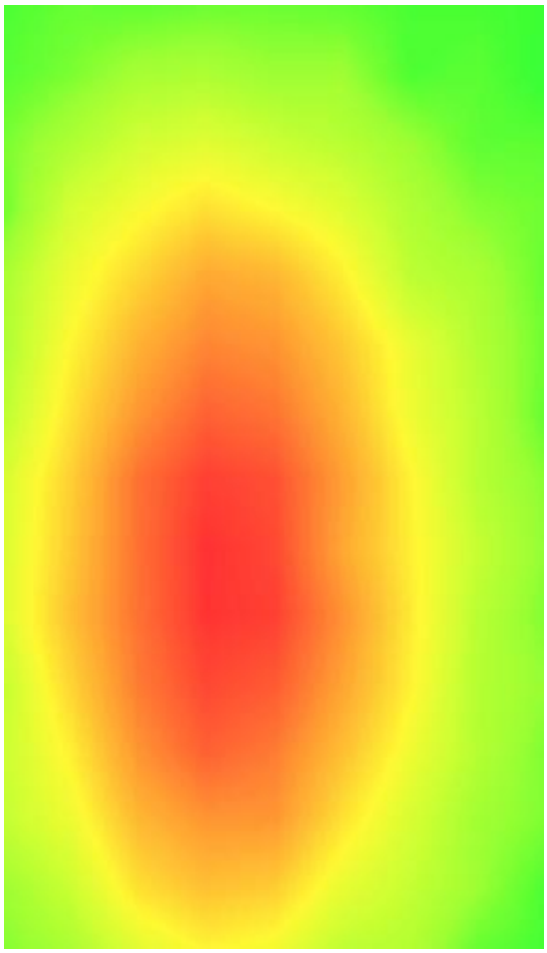
Maximum location: X=-8.00, Y=-15.00

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 02 seconds

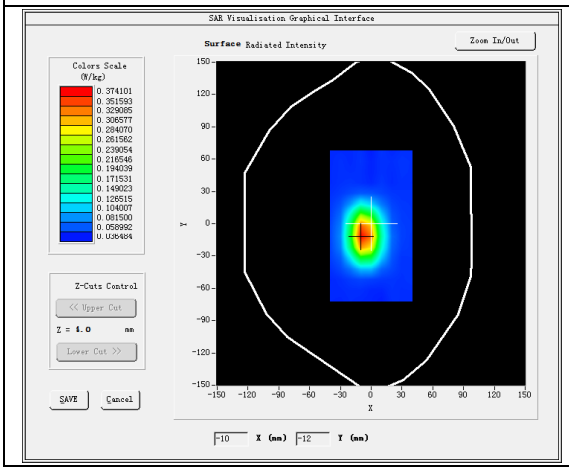
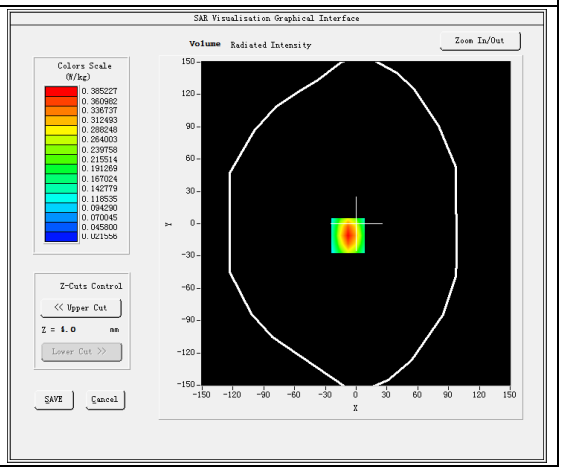
A. Experimental conditions.

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)	40.96
Relative permittivity	14.10
Conductivity (S/m)	1.41
Power Drift (%)	-1.88
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.14
Duty factor:	1:1

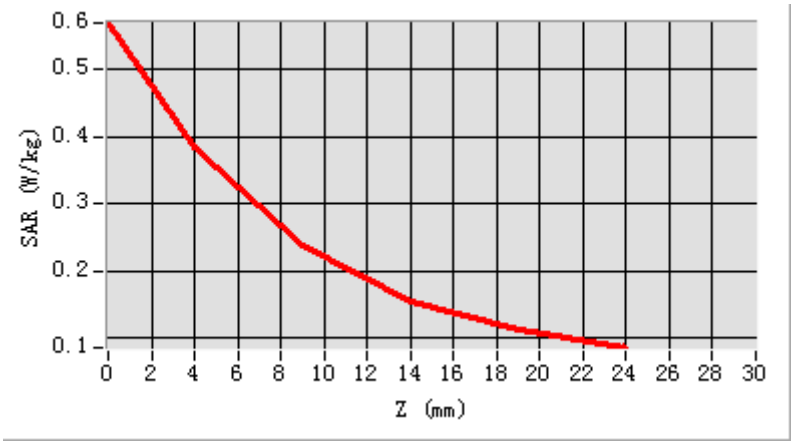
SURFACE SAR	**VOLUME SAR**
	

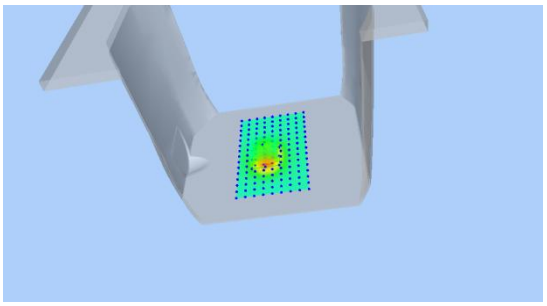
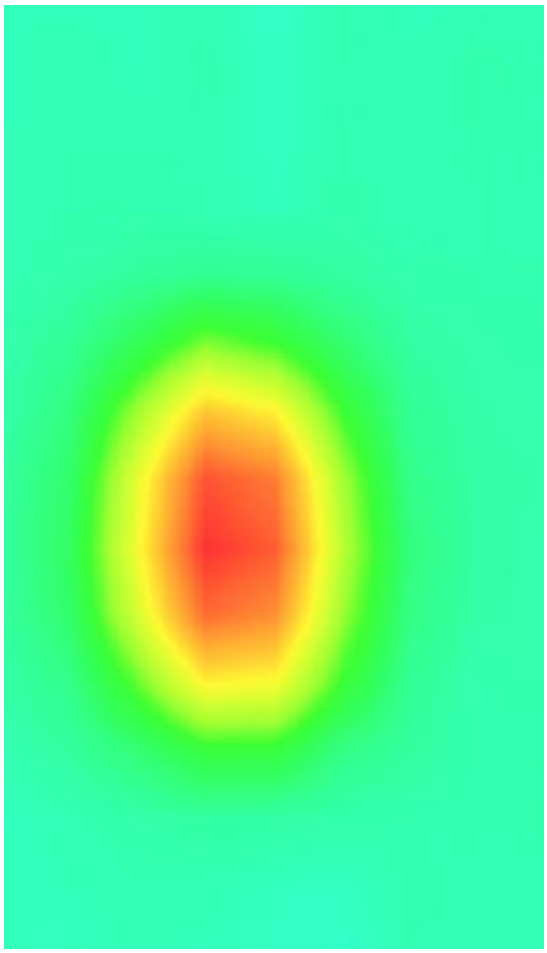
Maximum location: X=-8.00, Y=-11.00

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 11 seconds

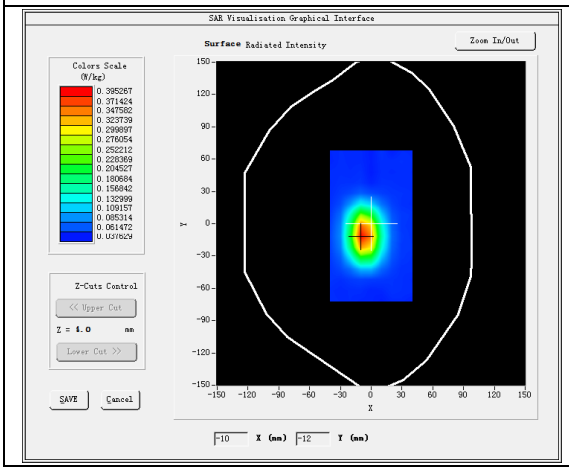
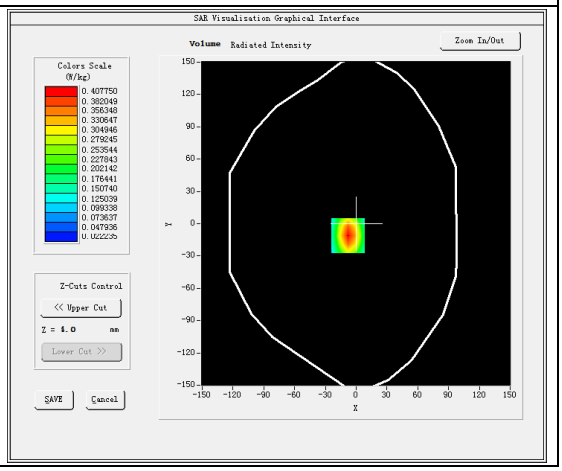
A. Experimental conditions.

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)	53.87
Relative permittivity	15.40
Conductivity (S/m)	1.54
Power Drift (%)	-1.45
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.22
Duty factor:	1:1

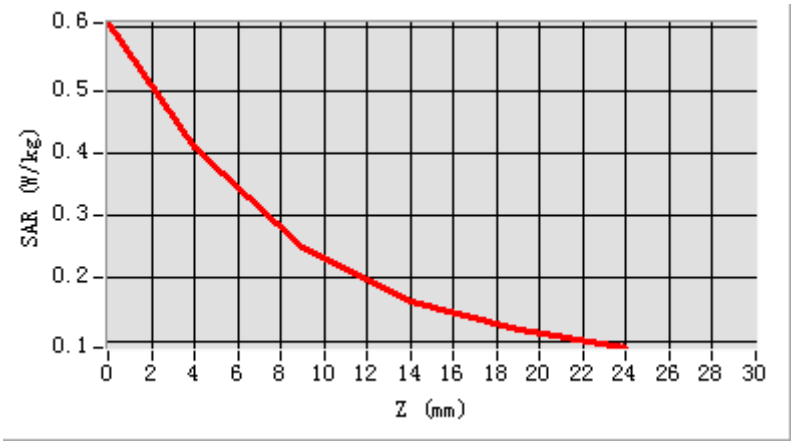
SURFACE SAR	**VOLUME SAR**
	

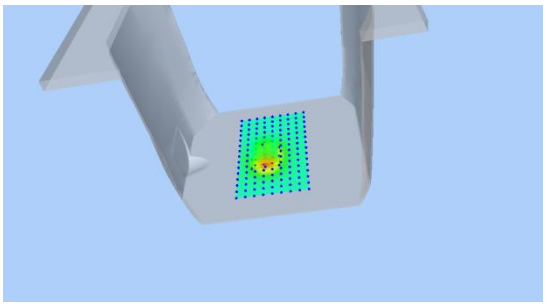
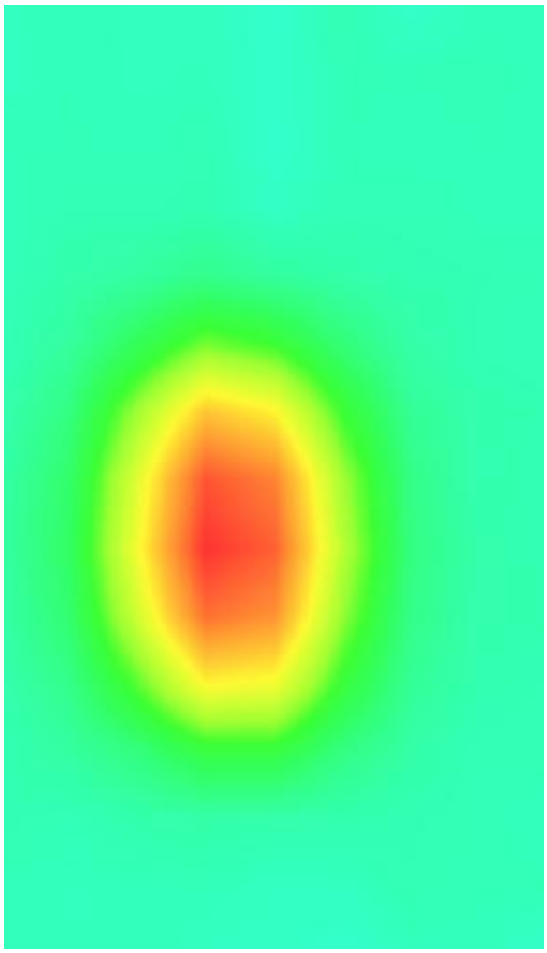
Maximum location: X=-8.00, Y=-11.00

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 15 seconds

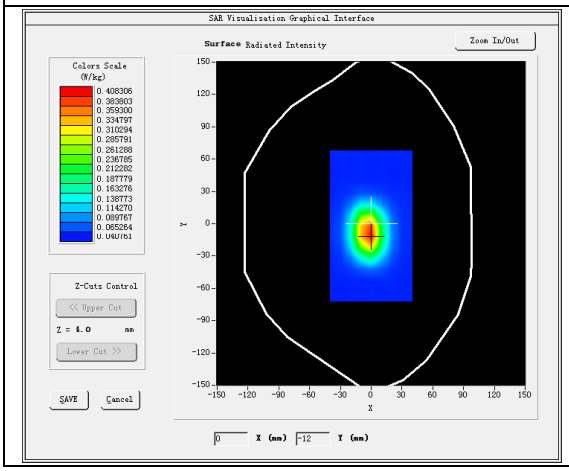
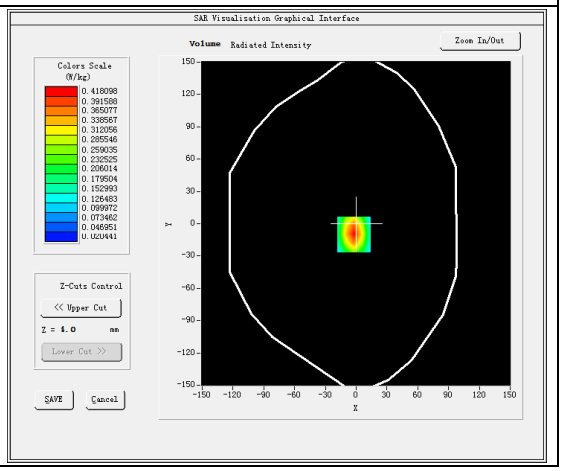
A. Experimental conditions.

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)	40.76
Relative permittivity	13.55
Conductivity (S/m)	1.43
Power Drift (%)	-0.76
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.34
Duty factor:	1:1

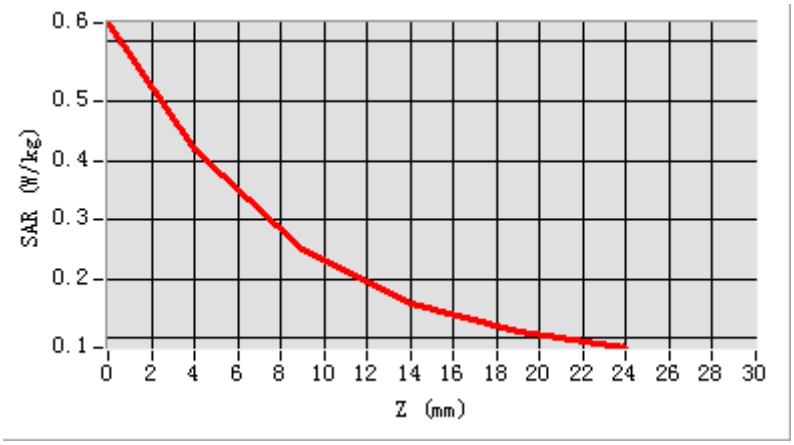
SURFACE SAR	**VOLUME SAR**
	

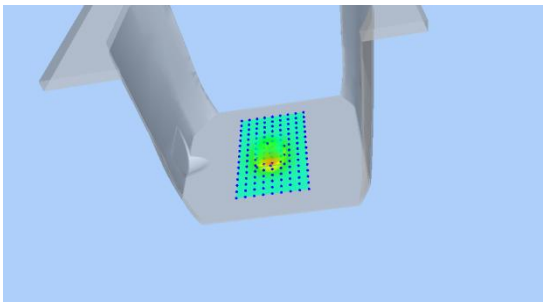
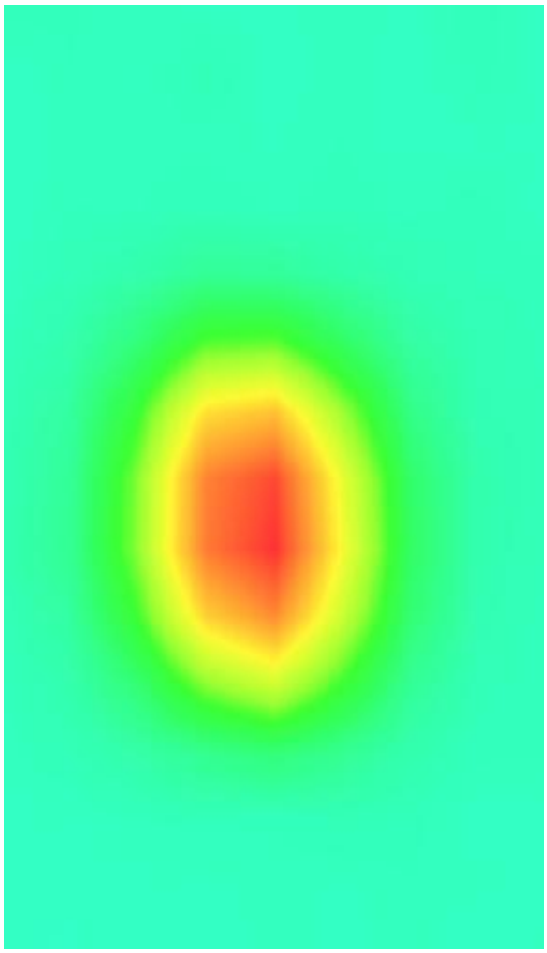
Maximum location: X=-2.00, Y=-10.00

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 17 seconds

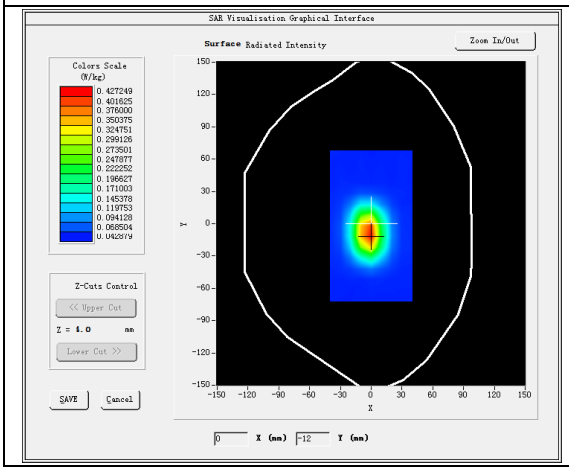
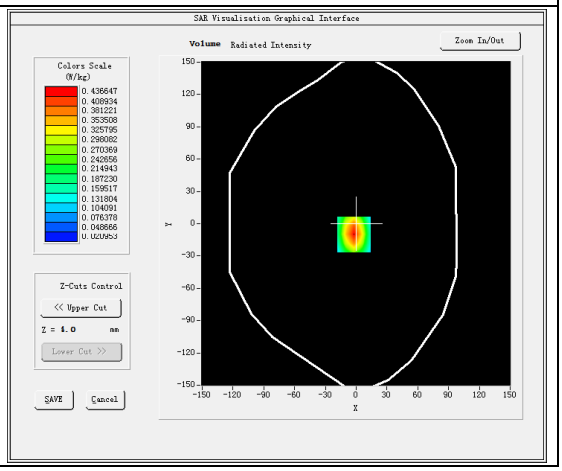
A. Experimental conditions.

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)	53.62
Relative permittivity	14.87
Conductivity (S/m)	1.57
Power Drift (%)	-1.95
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.39
Duty factor:	1:1

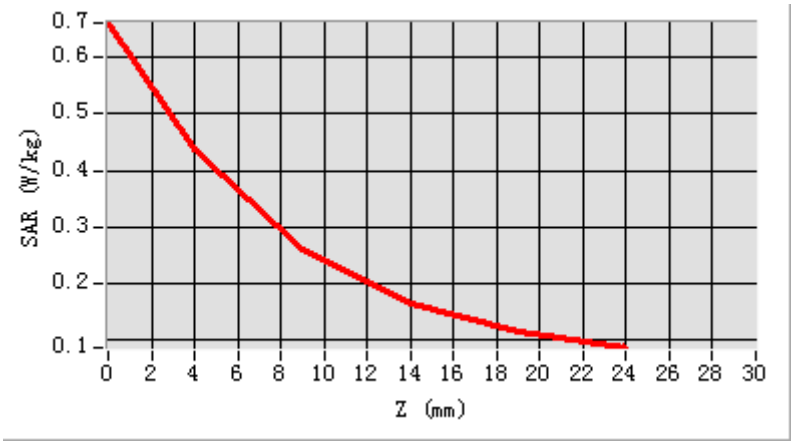
SURFACE SAR	**VOLUME SAR**
	

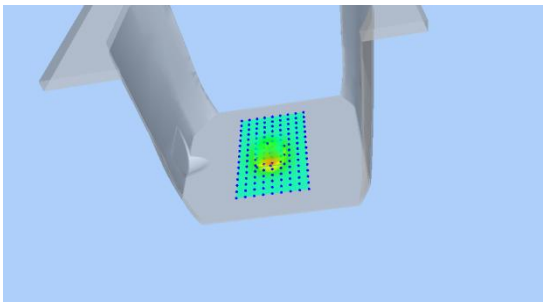
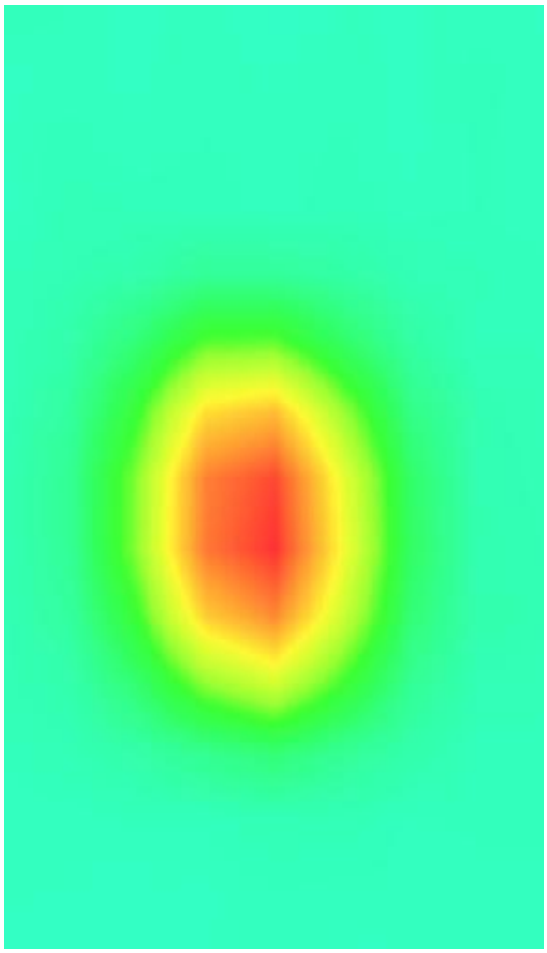
Maximum location: X=-2.00, Y=-10.00

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 18 seconds

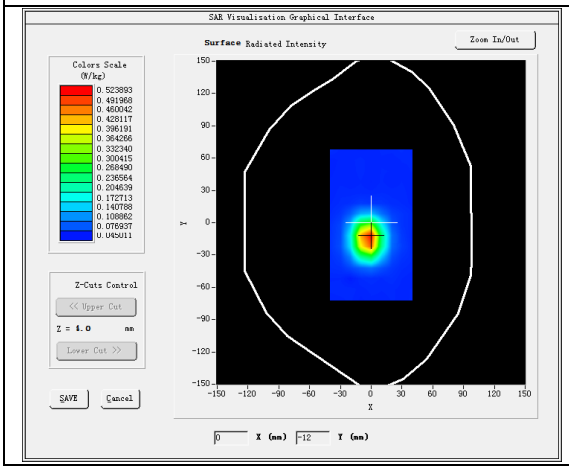
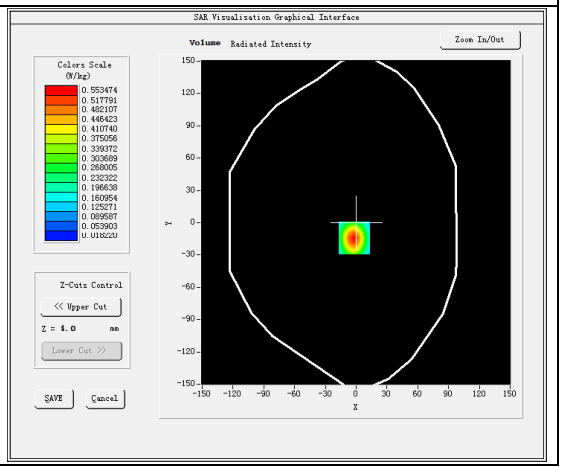
A. Experimental conditions.

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)	40.25
Relative permittivity	13.44
Conductivity (S/m)	1.83
Power Drift (%)	-2.16
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.37
Duty factor:	1:1

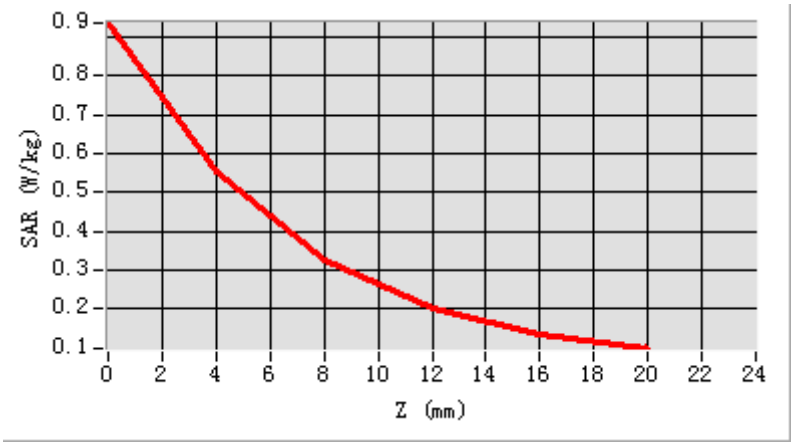
SURFACE SAR	**VOLUME SAR**
	

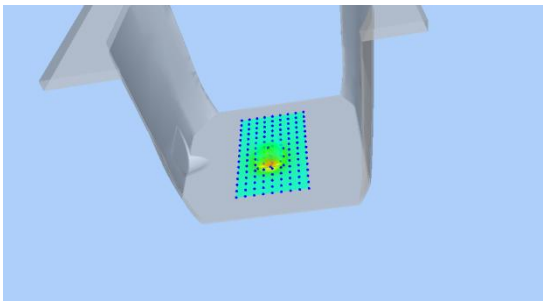
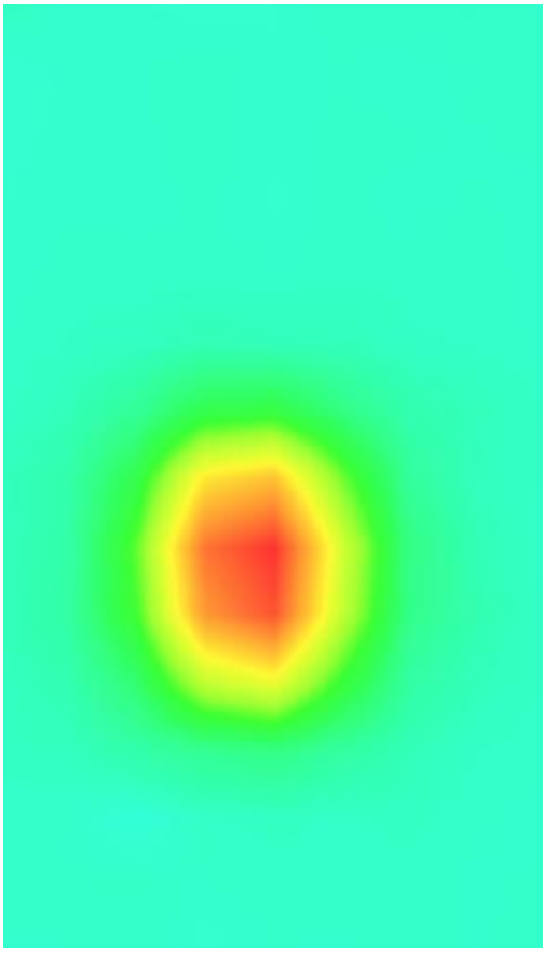
Maximum location: X=-2.00, Y=-14.00

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 16 seconds

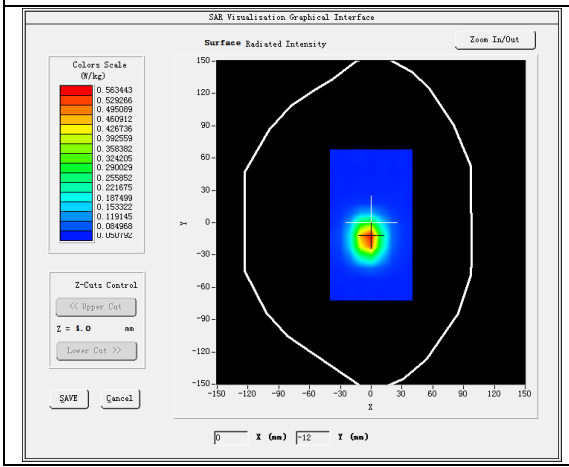
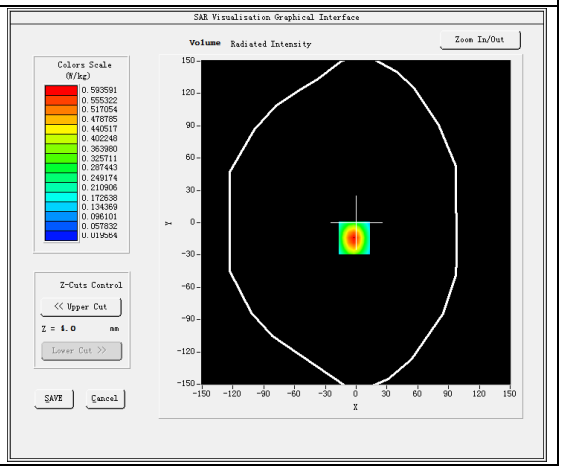
A. Experimental conditions.

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)	52.88
Relative permittivity	14.40
Conductivity (S/m)	1.96
Power Drift (%)	-2.35
Ambient Temperature:	22.1°C
Liquid Temperature:	22.6°C
ConvF:	2.46
Duty factor:	1:1

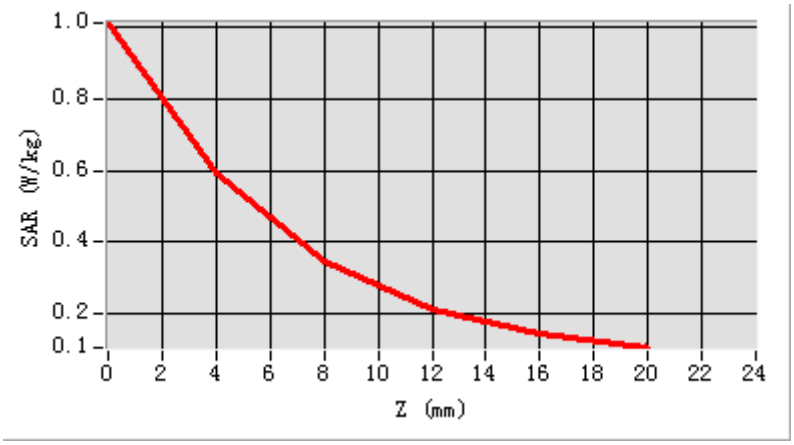
SURFACE SAR	**VOLUME SAR**
	

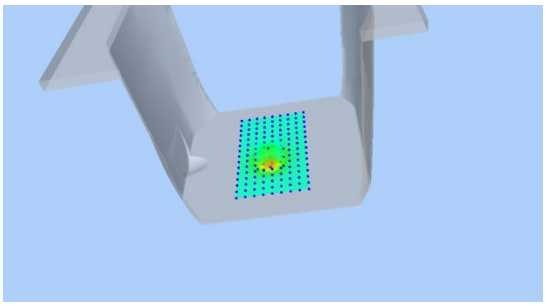
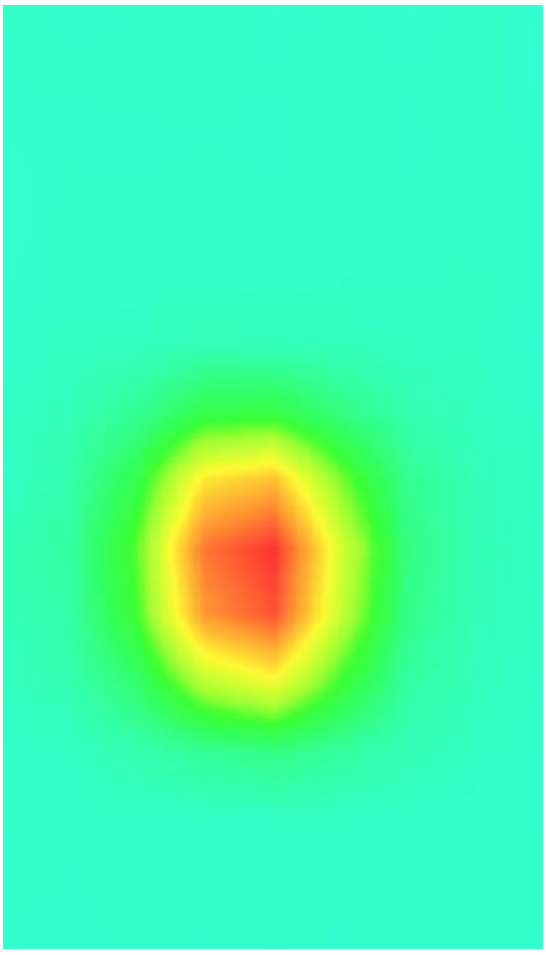
Maximum location: X=-2.00, Y=-14.00

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 10 seconds

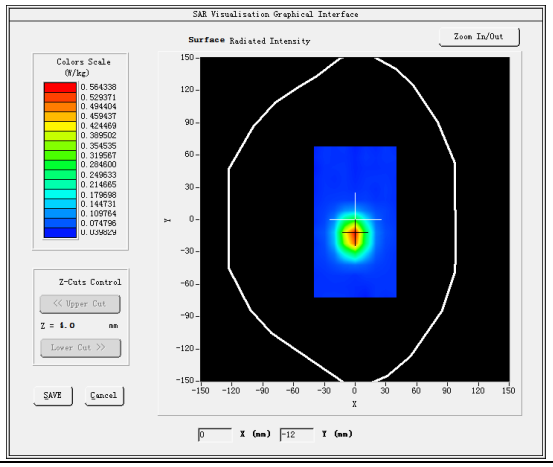
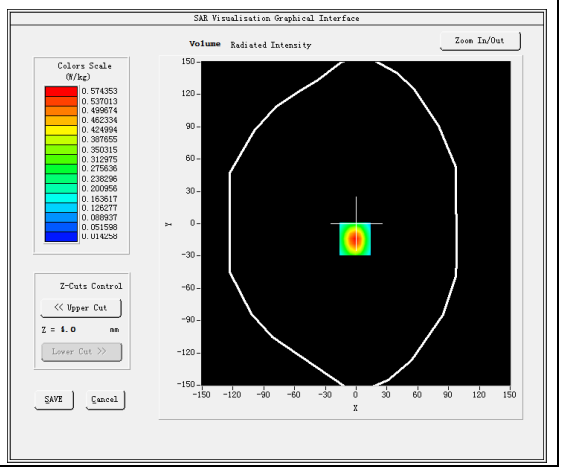
A. Experimental conditions.

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)	40.08
Relative permittivity	13.57
Conductivity (S/m)	1.96
Power drift (%)	-2.07
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	2.35

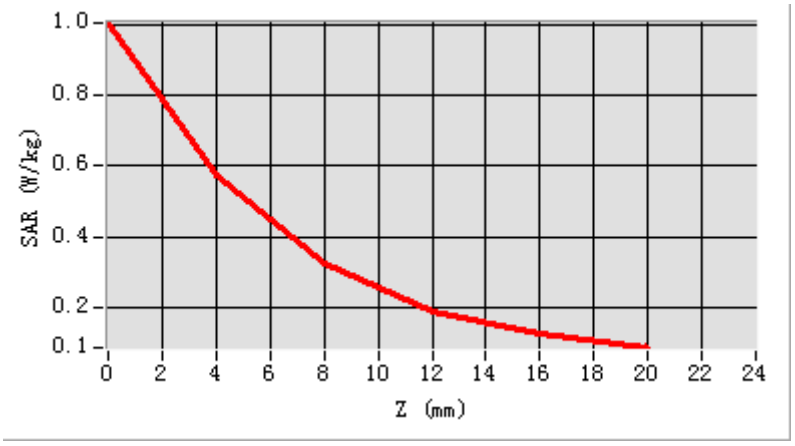
SURFACE SAR	**VOLUME SAR**
	

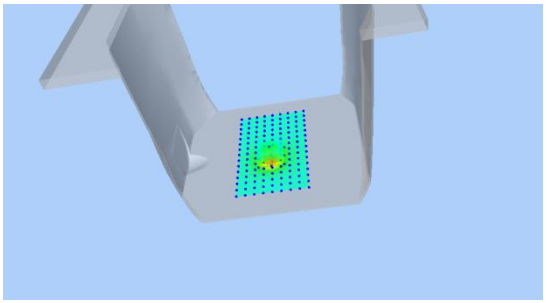
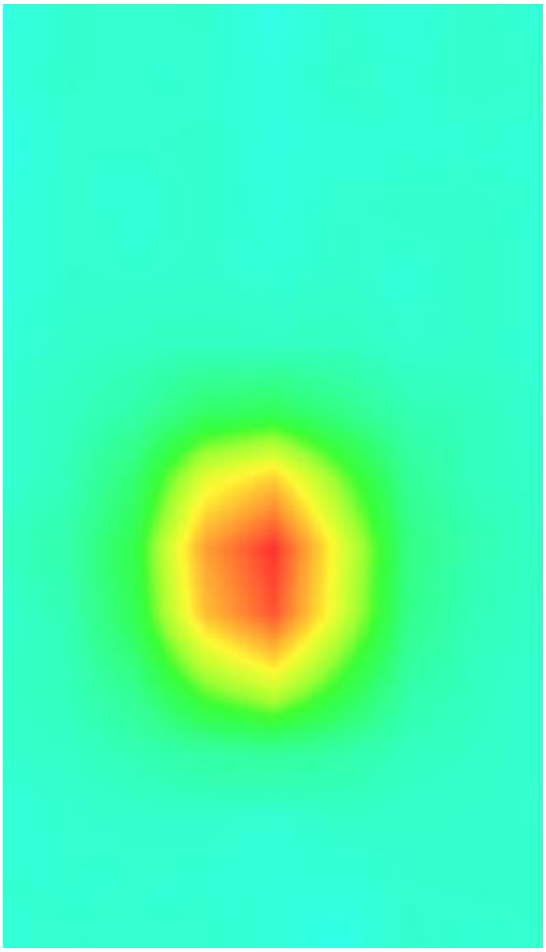
Maximum location: X=-1.00, Y=-14.00

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 14 seconds

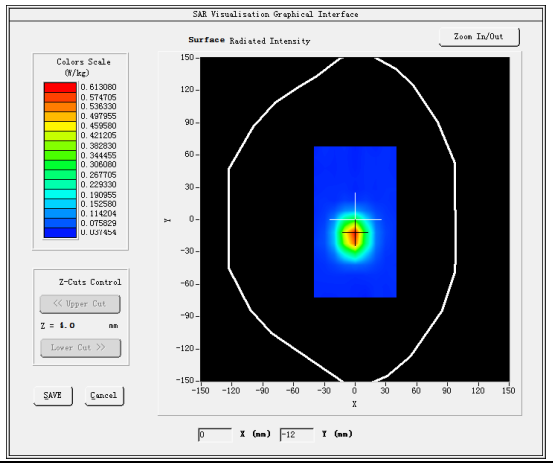
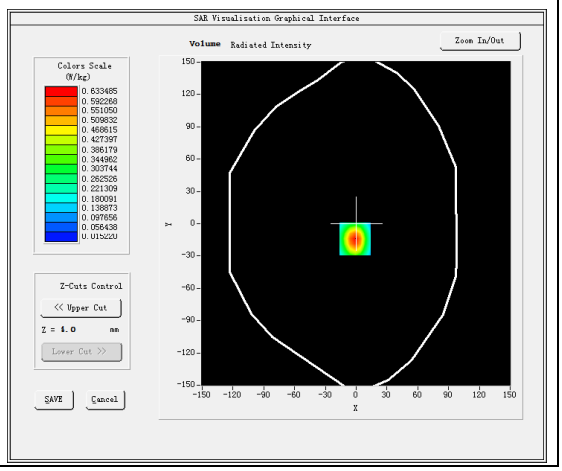
A. Experimental conditions.

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)	52.65
Relative permittivity	15.09
Conductivity (S/m)	2.18
Power drift (%)	-2.03
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	2.43

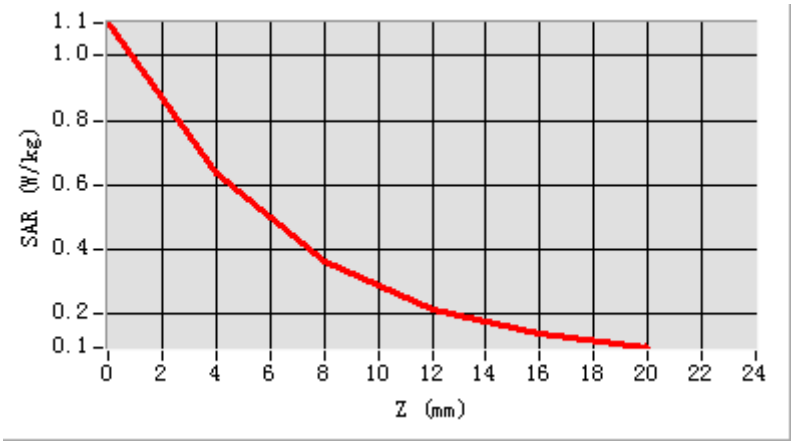
SURFACE SAR	**VOLUME SAR**
	

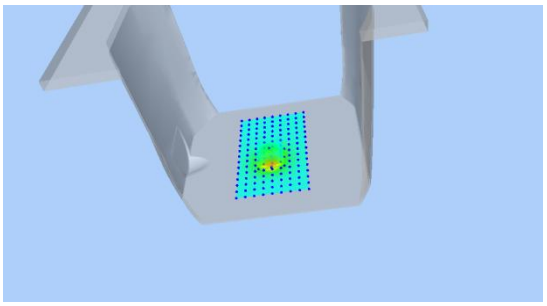
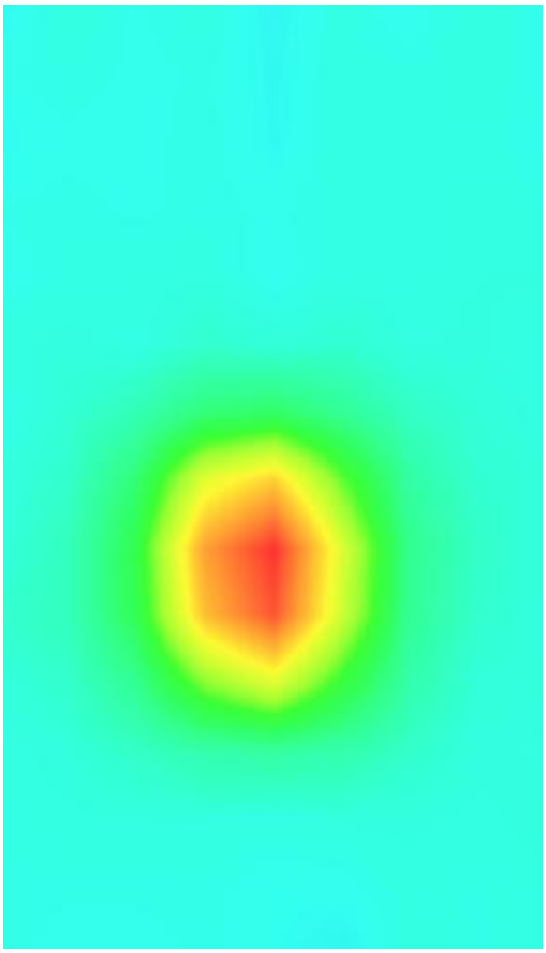
Maximum location: X=-1.00, Y=-14.00

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
	

System Performance Check (Head, 5200MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=4mm

Date of measurement: 08/31/2019

Measurement duration: 22 minutes 22 seconds

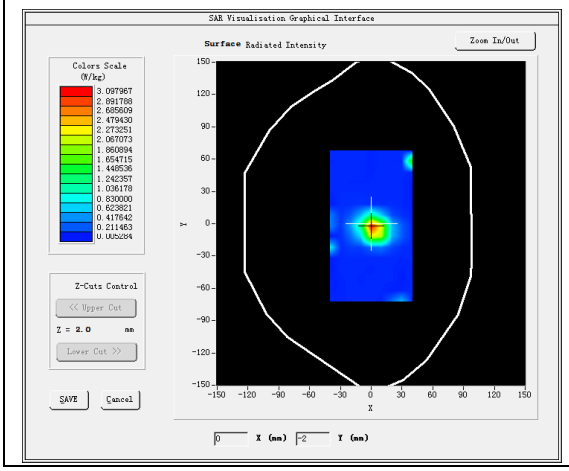
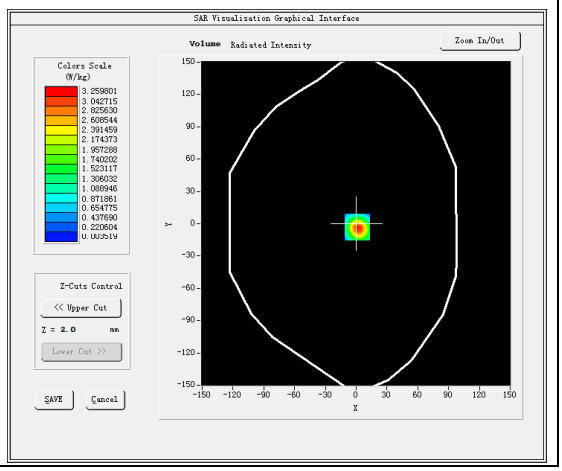
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	7x7x8,dx=4mm dy=4mm dz=2mm
Device Position	Dipole
Band	5200MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	5200
Relative permittivity (real part)	36.66
Relative permittivity	16.20
Conductivity (S/m)	4.68
Power drift (%)	-0.21
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	2.15

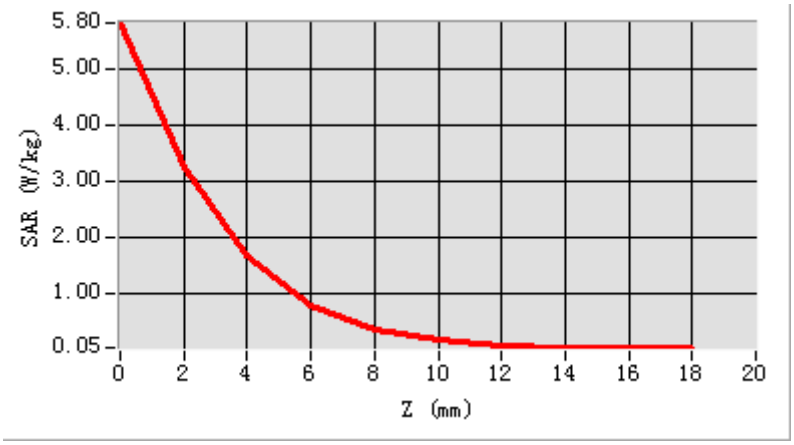
SURFACE SAR	**VOLUME SAR**
	

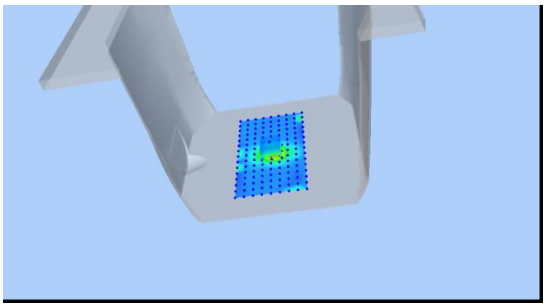
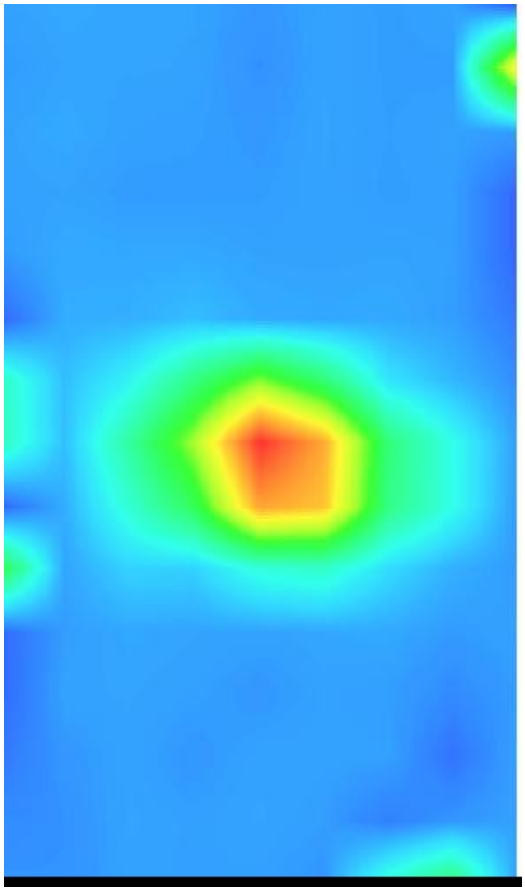
Maximum location: X=1.00, Y=-3.00

SAR Peak: 6.10W/kg

SAR 10g (W/Kg)	0.538683
SAR 1g (W/Kg)	1.786498

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	5.8048	3.2598	1.6842	0.8056	0.3734	0.1759	0.0922	0.0599	0.0501



3D screen shot	Hot spot position
	

System Performance Check (Body, 5200MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=4mm

Date of measurement: 08/31/2019

Measurement duration: 22 minutes 27 seconds

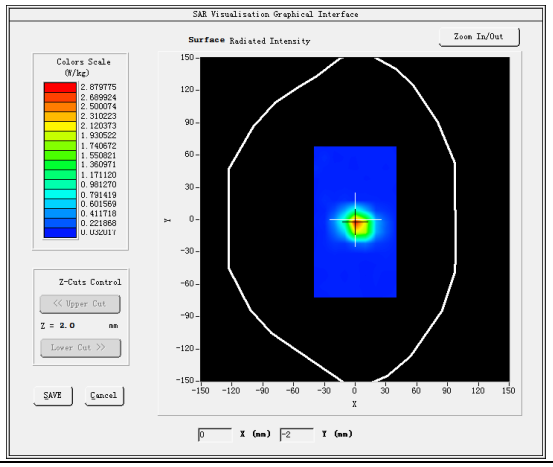
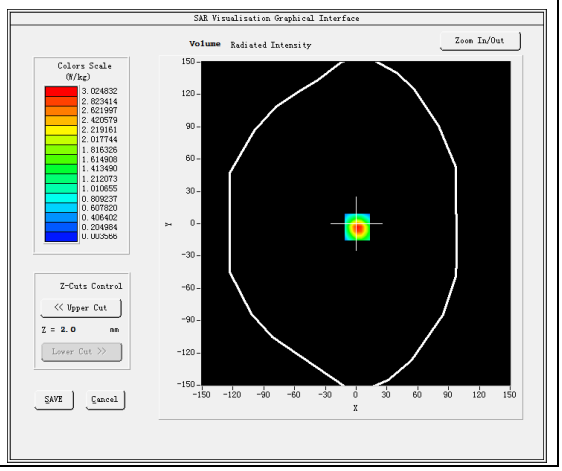
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	7x7x8,dx=4mm dy=4mm dz=2mm
Device Position	Dipole
Band	5200MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	5200
Relative permittivity (real part)	50.23
Relative permittivity	18.10
Conductivity (S/m)	5.23
Power drift (%)	-0.72
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	2.21

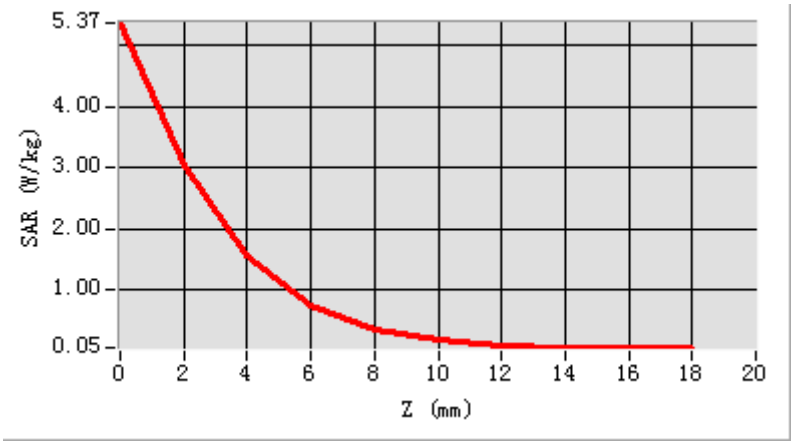
SURFACE SAR	VOLUME SAR
	

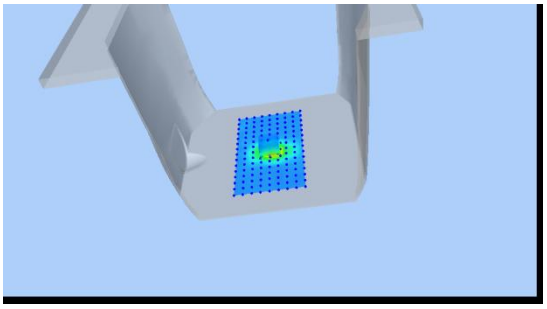
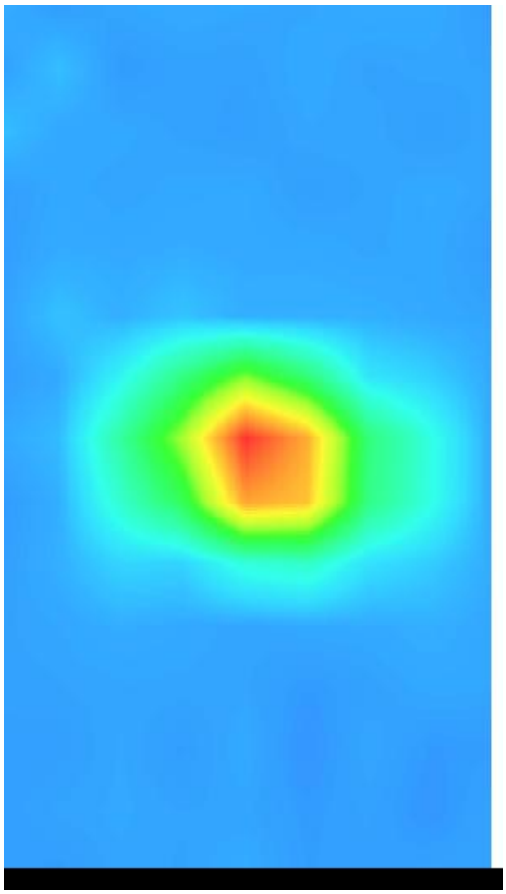
Maximum location: X=1.00, Y=-3.00

SAR Peak: 5.64 W/kg

SAR 10g (W/Kg)	0.497649
SAR 1g (W/Kg)	1.637941

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	5.3732	3.0248	1.5690	0.7551	0.3532	0.1685	0.0896	0.0589	0.0495



3D screen shot	Hot spot position
	

System Performance Check (Head, 5800MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=4mm

Date of measurement: 09/02/2019

Measurement duration: 22 minutes 26 seconds

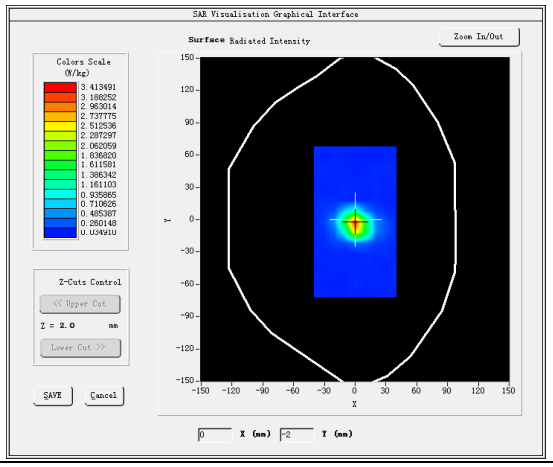
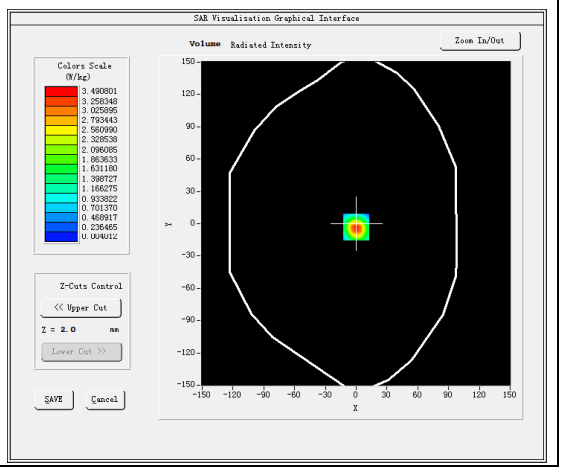
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	7x7x8,dx=4mm dy=4mm dz=2mm
Device Position	Dipole
Band	5800MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	5800
Relative permittivity (real part)	35.84
Relative permittivity	16.42
Conductivity (S/m)	5.29
Power drift (%)	-0.74
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	2.19

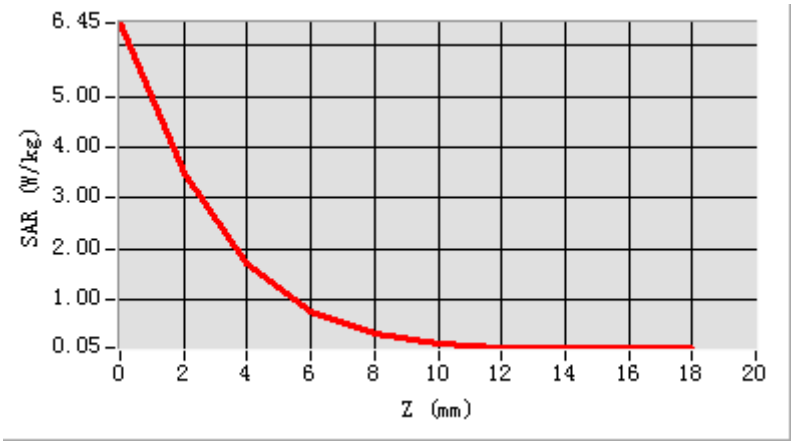
SURFACE SAR	**VOLUME SAR**
	

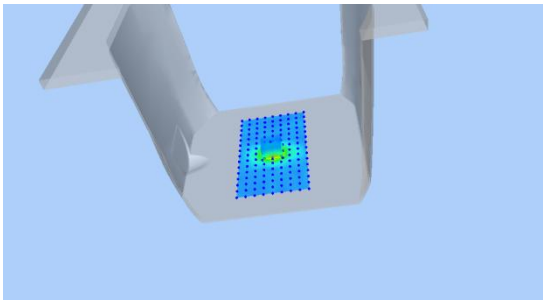
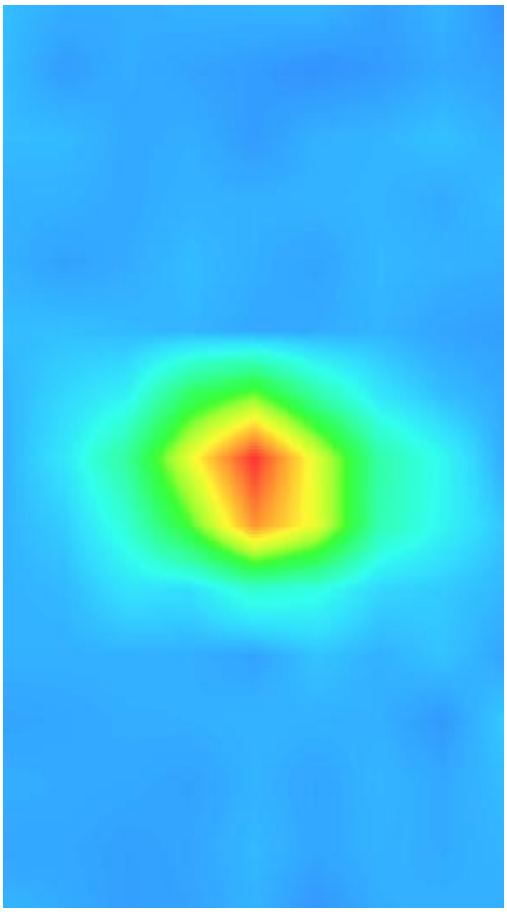
Maximum location: X=0.00, Y=-3.00

SAR Peak: 6.79 W/kg

SAR 10g (W/Kg)	0.553951
SAR 1g (W/Kg)	1.858542

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	6.4452	3.4908	1.7030	0.7526	0.3175	0.1373	0.0711	0.0525	0.0559



3D screen shot	Hot spot position
	

System Performance Check (Body, 5800MHz)

Type: Phone measurement

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=4mm

Date of measurement: 09/02/2019

Measurement duration: 22 minutes 21 seconds

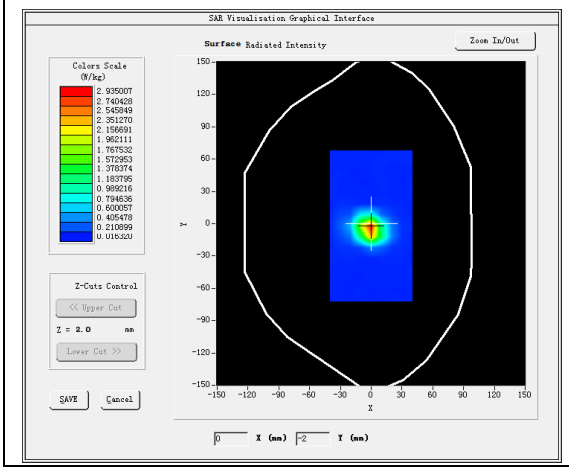
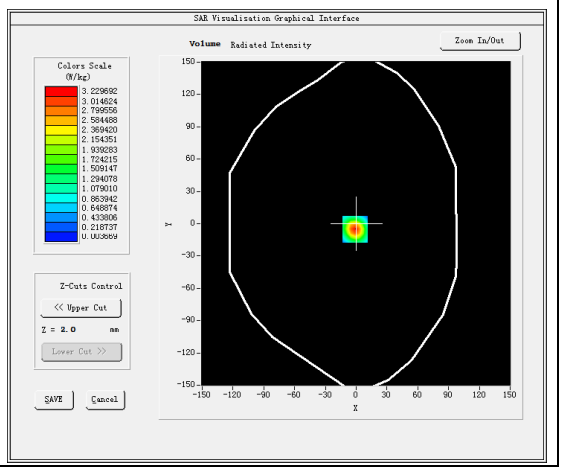
A. Experimental conditions.

Phantom File	dx=8mm dy=8mm
Phantom	7x7x8,dx=4mm dy=4mm dz=2mm
Device Position	Dipole
Band	5800MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

E-Field Probe	SATIMO SN_27/15_EPG0261
Frequency (MHz)	5800
Relative permittivity (real part)	49.15
Relative permittivity	18.25
Conductivity (S/m)	5.88
Power drift (%)	-0.67
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
Crest factor:	1:1
ConvF:	2.26

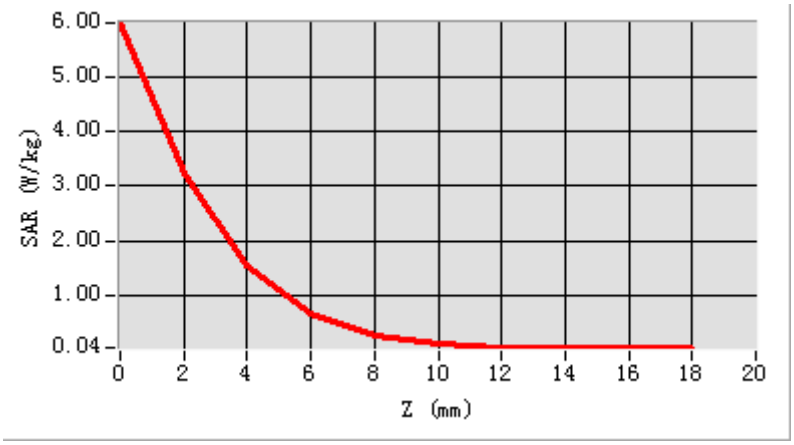
SURFACE SAR	**VOLUME SAR**
	

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

SAR Peak: 6.27 W/kg

SAR 10g (W/Kg)	0.487687
SAR 1g (W/Kg)	1.675639

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00
SAR (W/Kg)	5.9953	3.2297	1.5609	0.6790	0.2790	0.1159	0.0572	0.0410	0.0438



3D screen shot	Hot spot position