

# **Annex C Plots of System Performance Check**

# System Performance Check Data (750MHz Head)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.23

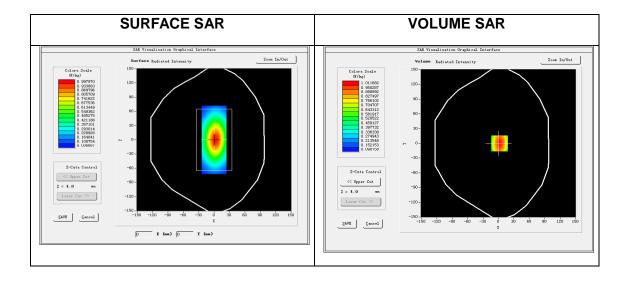
Measurement duration: 13 minutes 28 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt				
Phantom	Flat				
Device Position					
Band	750MHz				
Channels					
Signal	CW				

# **B. SAR Measurement Results**

Frequency (MHz)	750.000000		
Relative permittivity (real part)	41.350601		
Conductivity (S/m)	0.885608		
Power drift (%)	1.030000		
Ambient Temperature:	22.6°C		
Liquid Temperature:	21.2°C		
ConvF:	6.44		
Crest factor:	1:1		



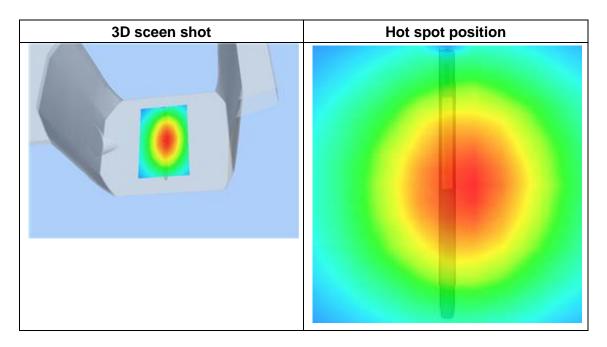




Maximum location: X=2.00, Y=0.00

SAR 10g (W/Kg)	0.539271			
SAR 1g (W/Kg)	0.783215			

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.4197	1.0117	0.6692	0.4600	0.3210	0.2279	0.1624
	1.4- 1.2- 1.0- 1.0- 0.6- 0.4- 0.1-	02.55.07.5	12.5 17	.5 22.5 2 Z (mm)	27.5 32.5	40.0	







# System Performance Check Data (750MHz Body)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.25

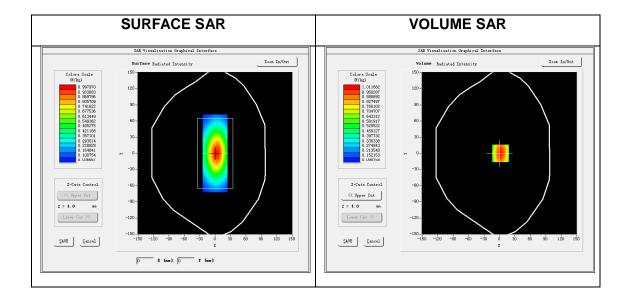
Measurement duration: 13 minutes 36 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat
Device Position	
Band	750MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	750.000000		
Relative permittivity (real part)	53.517799		
Conductivity (S/m)	1.031025		
Power drift (%)	0.320000		
Ambient Temperature:	22.6°C		
Liquid Temperature:	21.2°C		
ConvF:	6.68		
Crest factor:	1:1		





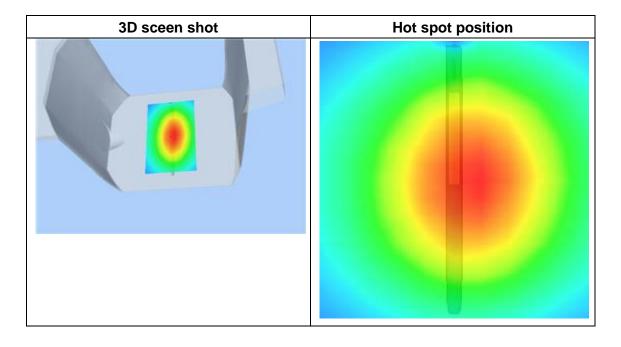


Maximum location: X=2.00, Y=0.00

SAR 10g (W/Kg)	0.609663
SAR 1g (W/Kg)	0.905411

# **Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.4197	1.0117	0.6692	0.4600	0.3210	0.2279	0.1624
	1.4- 1.2- 1.0- 2.8-0 8W 8W 6- 0.4- 0.1-	02.55.07.5	12.5 17.	.5 22.5 2 Z (nm)	27.5 32.5	40.0	





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# System Performance Check Data (835MHz Head)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.23

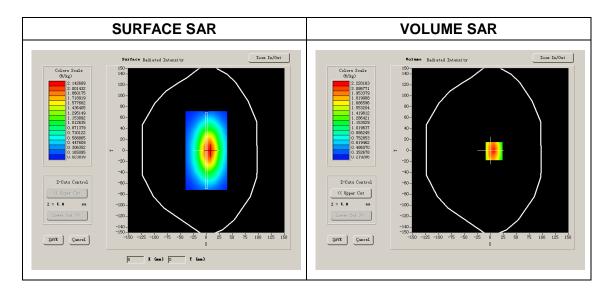
Measurement duration: 13 minutes 35 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt			
Phantom	Flat			
Device Position				
Band	835MHz			
Channels				
Signal	CW			

#### **B. SAR Measurement Results**

Frequency (MHz)	835.000000		
Relative permittivity (real part)	41.182291		
Conductivity (S/m)	0.891718		
Power drift (%)	1.070000		
Ambient Temperature:	22.6°C		
Liquid Temperature:	21.2°C		
ConvF:	6.13		
Crest factor:	1:1		





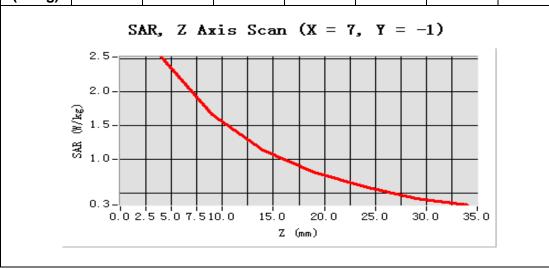


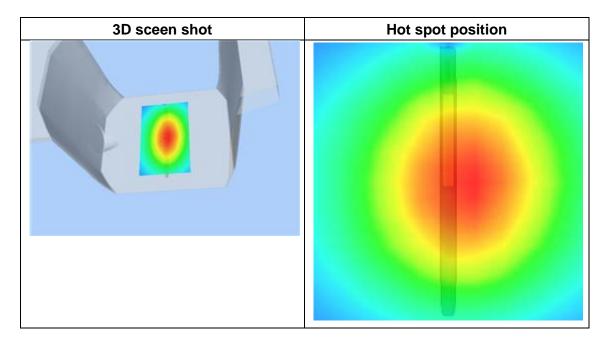
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	0.622151		
SAR 1g (W/Kg)	0.968476		

# **Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	2.5209	1.6629	1.1437	0.8075	0.5889	0.4143
(W/Kg)							







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# System Performance Check Data (835MHz Body)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.25

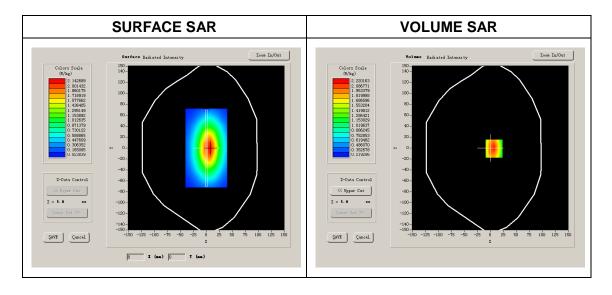
Measurement duration: 13 minutes 28 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt		
Phantom	Flat		
Device Position			
Band	835MHz		
Channels			
Signal	CW		

#### **B. SAR Measurement Results**

Frequency (MHz)	835.000000	
Relative permittivity (real part)	55.382291	
Conductivity (S/m)	0.972171	
Power drift (%)	1.070000	
Ambient Temperature:	22.6°C	
Liquid Temperature:	21.2°C	
ConvF:	6.37	
Crest factor:	1:1	

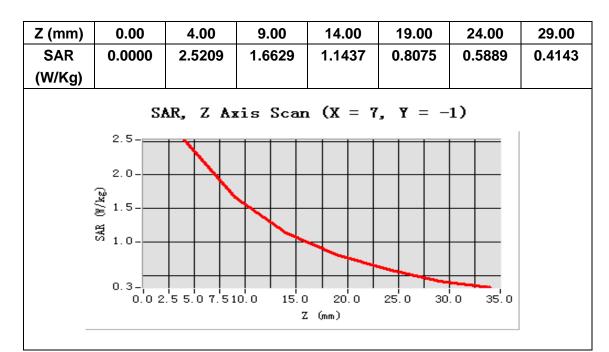


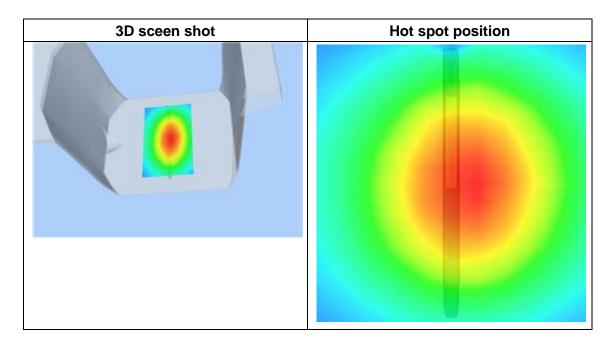




# Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	0.629151	
SAR 1g (W/Kg)	0.986576	







# System Performance Check Data(1800MHz Head)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.19

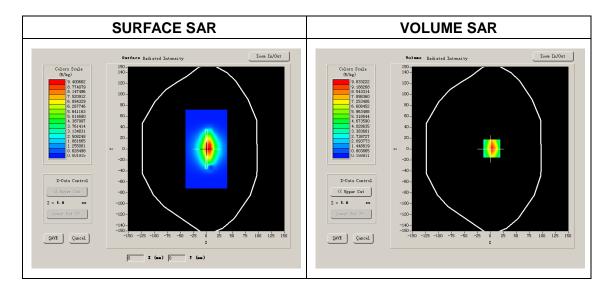
Measurement duration: 13 minutes 27 seconds

# A. Experimental conditions.

	<del>,</del>			
Phantom File	surf_sam_plan.txt			
Phantom	Flat			
Device Position				
Band	1800MHz			
Channels				
Signal	CW			

#### **B. SAR Measurement Results**

Frequency (MHz)	1800.000000		
Relative permittivity (real part)	40.095167		
Conductivity (S/m)	1.365073		
Power drift (%)	0.310000		
Ambient Temperature:	22.3°C		
Liquid Temperature:	22.6°C		
ConvF:	5.21		
Crest factor:	1:1		



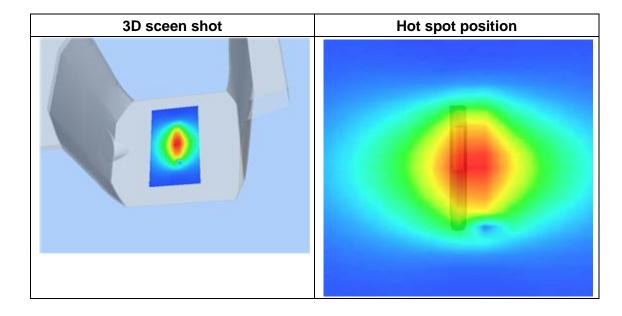




Maximum location: X=3.00, Y=1.00

SAR 10g (W/Kg)	2.048386		
SAR 1g (W/Kg)	3.698154		

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	10.0621	5.6445	3.6226	2.1642	1.4521	0.9078
(W/Kg)							
	10.06 8.00 8.00 8.00 4.00 2.00 0.64 -	2.5 5.0 7.5	510.0 15.			0.0 35.0	







# System Performance Check Data(1800MHz Body)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.24

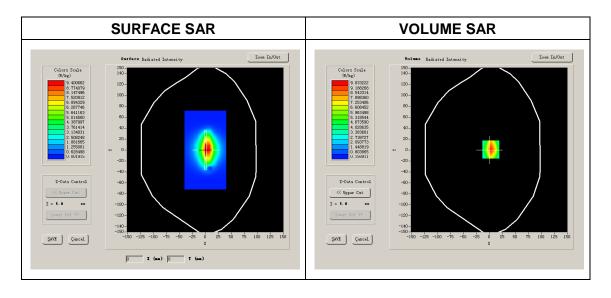
Measurement duration: 13 minutes 27 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt			
Phantom	Flat			
Device Position				
Band	1800MHz			
Channels				
Signal	CW			

# **B. SAR Measurement Results**

Frequency (MHz)	1800.000000	
Relative permittivity (real part)	53.295167	
Conductivity (S/m)	1.515073	
Power drift (%)	0.310000	
Ambient Temperature:	22.3°C	
Liquid Temperature:	22.6°C	
ConvF:	5.38	
Crest factor:	1:1	





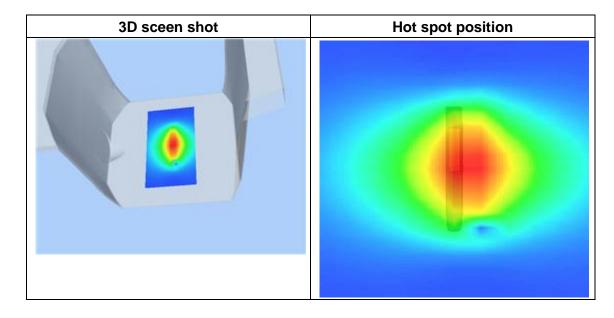


# Maximum location: X=3.00, Y=1.00

SAR 10g (W/Kg)	2.038386		
SAR 1g (W/Kg)	3.753454		

# **Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	10.0621	5.6445	3.6226	2.1642	1.4521	0.9078
(W/Kg)							
	S	AR, ZA	xis Sca	n (X = :	3. Y = 1	ı)	
	10.06-						
	8.00-	$\perp \setminus \setminus$					
	(E) 6.00						
	뚫 4.00-						
	2.00-		$\bot$				
	0.64					<del> </del> ,	
	0.0	12.55.07.5		0 20.0 Z (mm)	25.0 30	).0 35.0	
_							



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# System Performance Check Data(2000MHz Head)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.19

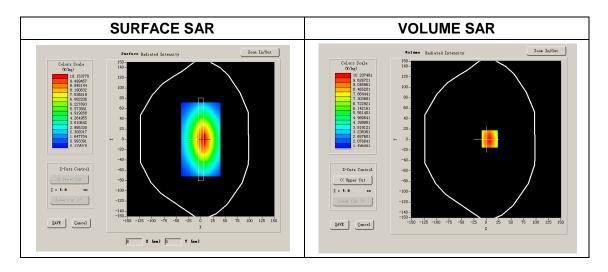
Measurement duration: 13 minutes 27 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat
Device Position	
Band	2000MHz
Channels	
Signal	CW

# **B. SAR Measurement Results**

Frequency (MHz)	2000.000000
Relative permittivity (real part)	39.984477
Conductivity (S/m)	1.414283
Power drift (%)	-0.830000
Ambient Temperature:	22.1°C
Liquid Temperature:	22.4°C
ConvF:	5.61
Crest factor:	1:1

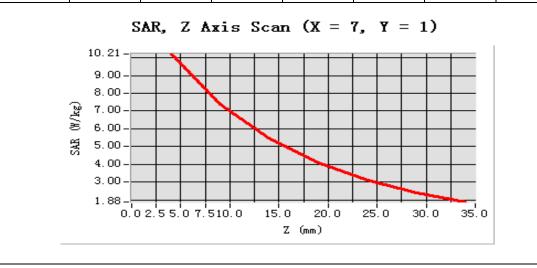


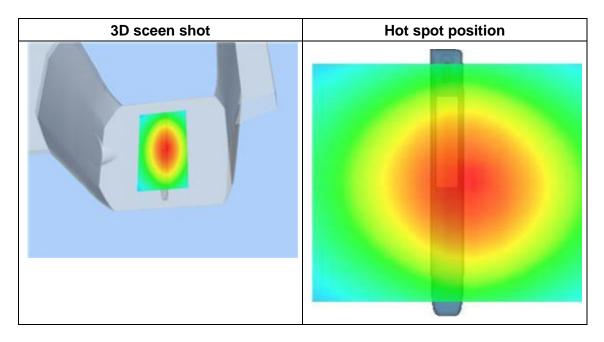


Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	1.992518
SAR 1g (W/Kg)	4.255954

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	10.2075	7.3996	5.4654	4.1101	3.1286	2.4128
(W/Kg)							







# System Performance Check Data(2000MHz Body)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.24

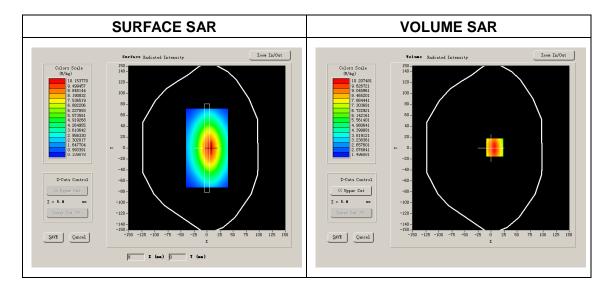
Measurement duration: 13 minutes 27 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat
Device Position	
Band	2000MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	2000.000000
Relative permittivity (real part)	53.285167
Conductivity (S/m)	1.514073
Power drift (%)	-1.860000
Ambient Temperature:	22.1°C
Liquid Temperature:	22.4°C
ConvF:	5.71
Crest factor:	1:1





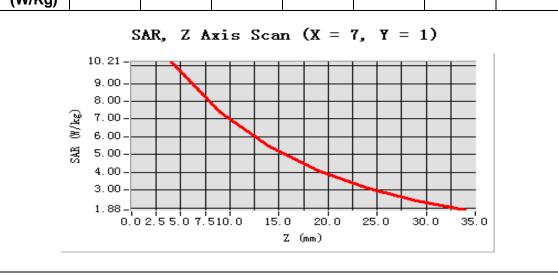


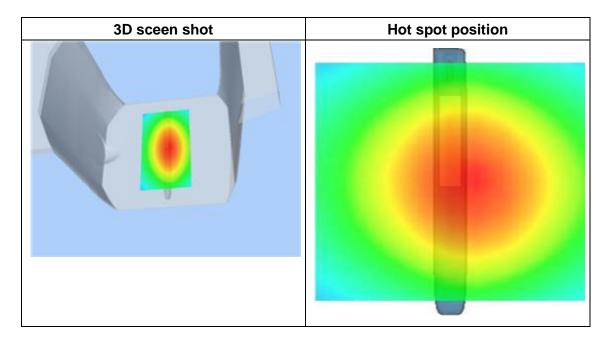
Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	2.092518		
SAR 1g (W/Kg)	4.119540		

# **Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	10.2075	7.3996	5.4654	4.1101	3.1286	2.4128
(W/Kg)							





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# System Performance Check Data(2450MHz Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=12mm,dy=12mm

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

Date of measurement: 2018.06.21

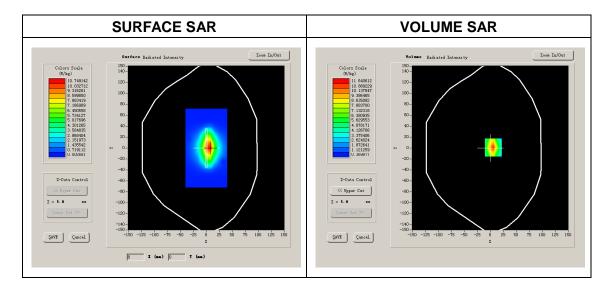
Measurement duration: 13 minutes 31 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat
Device Position	
Band	2450MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	2450.000000
Relative permittivity (real part)	39.284446
Conductivity (S/m)	1.836061
Power Drift (%)	1.080000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	4.82
Crest factor:	1:1

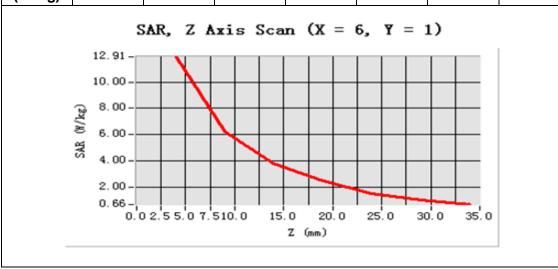


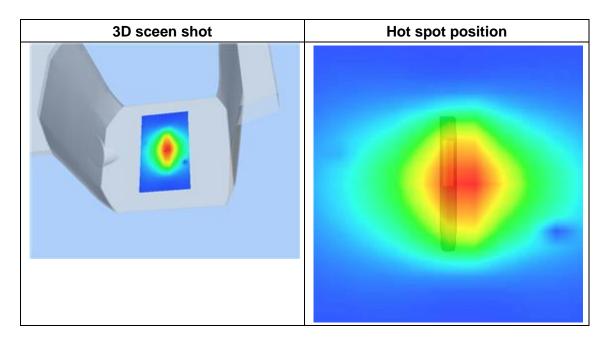


Maximum location: X=6.00, Y=1.00

SAR 10g (W/Kg)	2.377250		
SAR 1g (W/Kg)	5.326074		

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	12.9615	6.2096	3.8187	2.4504	1.5036	1.0219
(W/Kg)							







# System Performance Check Data(2450MHz Body)

Type: Phone measurement (Complete)

Area scan resolution: dx=12mm,dy=12mm

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

Date of measurement: 2018.06.21

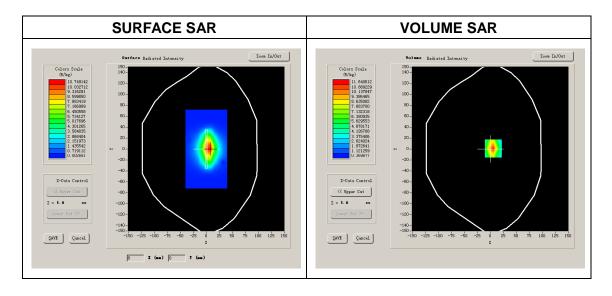
Measurement duration: 13 minutes 31 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat
Device Position	
Band	2450MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	2450.000000
Relative permittivity (real part)	52.884446
Conductivity (S/m)	1.966143
Power Drift (%)	1.080000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	4.93
Crest factor:	1:1



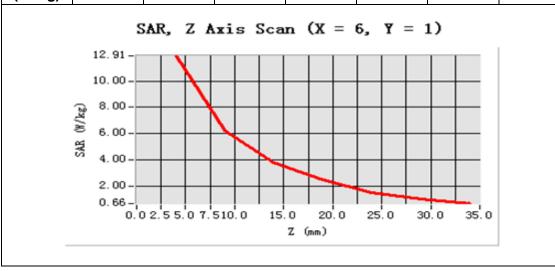


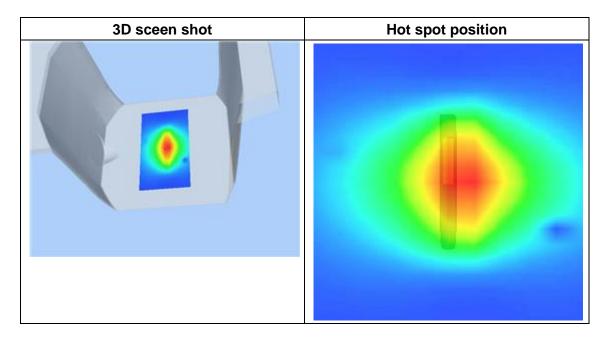


Maximum location: X=6.00, Y=1.00

SAR 10g (W/Kg)	2.377250	
SAR 1g (W/Kg)	5.081074	

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	12.9615	6.2096	3.8187	2.4504	1.5036	1.0219
		•	•	•	•	•	







# System Performance Check Data(2600MHz Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=12mm,dy=12mm

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

Date of measurement: 2018.06.21

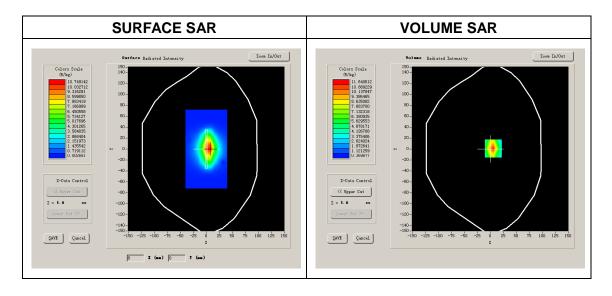
Measurement duration: 13 minutes 31 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat
Device Position	
Band	2600MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	2600.000000
Relative permittivity (real part)	39.024564
Conductivity (S/m)	1.975236
Power Drift (%)	1.080000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	4.74
Crest factor:	1:1



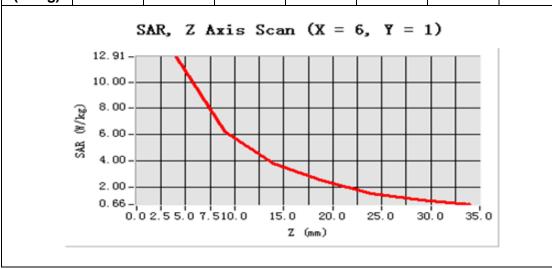


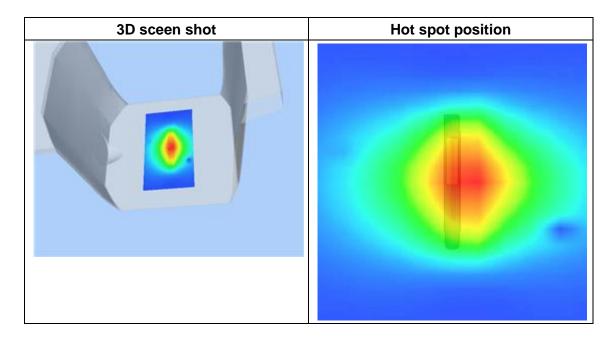


Maximum location: X=6.00, Y=1.00

SAR 10g (W/Kg)	2.498154	
SAR 1g (W/Kg)	5.681472	

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	12.9745	6.2193	3.8245	2.4624	1.5033	1.0220
(W/Kg)							







# System Performance Check Data(2600MHz Body)

Type: Phone measurement (Complete)

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

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2018.06.21

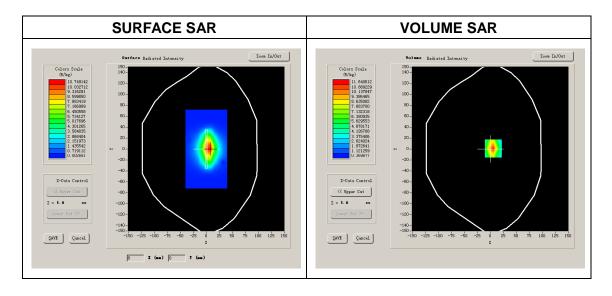
Measurement duration: 13 minutes 31 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt		
Phantom	Flat		
Device Position			
Band	2600MHz		
Channels			
Signal	CW		

#### **B. SAR Measurement Results**

Frequency (MHz)	2600.000000		
Relative permittivity (real part)	52.362564		
Conductivity (S/m)	2.105256		
Power Drift (%)	1.380000		
Ambient Temperature:	22.0°C		
Liquid Temperature:	21.8°C		
ConvF:	4.93		
Crest factor:	1:1		





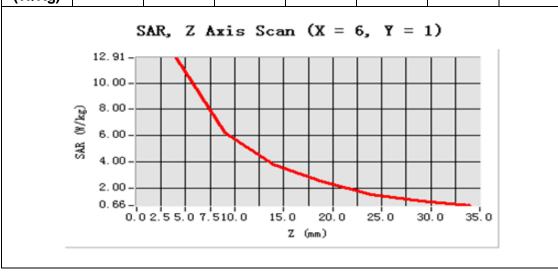


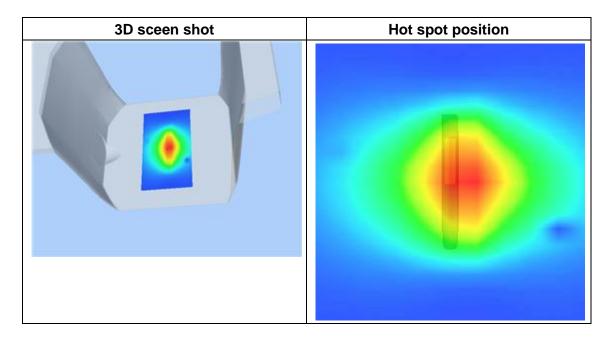
Maximum location: X=6.00, Y=1.00

SAR 10g (W/Kg)	2.369854	
SAR 1g (W/Kg)	5.386472	

# **Z Axis Scan**

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	12.9745	6.2193	3.8245	2.4624	1.5033	1.0220
(W/Kg)							





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# System Performance Check Data(5200MHz Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=10mm,dy=10mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2018.06.22

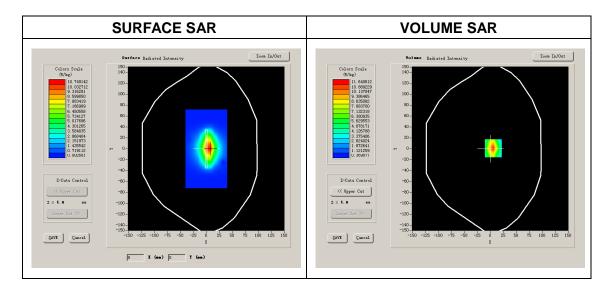
Measurement duration: 23 minutes 27 seconds

# A. Experimental conditions.

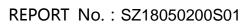
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	5200MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	5200.000000
Relative permittivity (real part)	36.123014
Conductivity (S/m)	4.665260
Power Drift (%)	2.310000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	21.61
Crest factor:	1:1





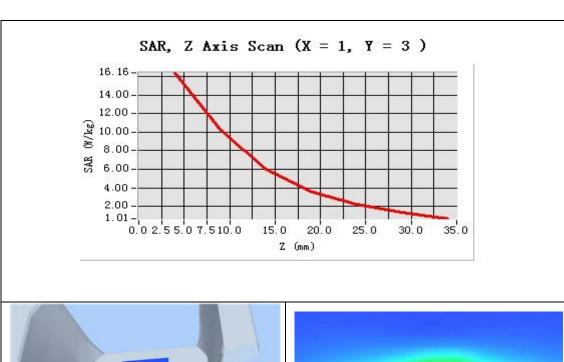


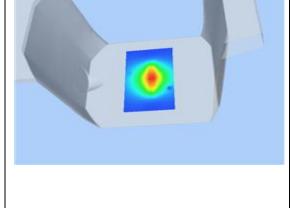


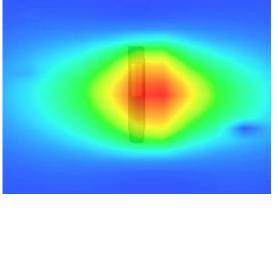
# Maximum location: X=1.00, Y=3.00

SAR 10g (W/Kg)	5.651263
SAR 1g (W/Kg)	16.398864

# **Z Axis Scan**







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# System Performance Check Data(5600MHz Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=10mm,dy=10mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2018.06.22

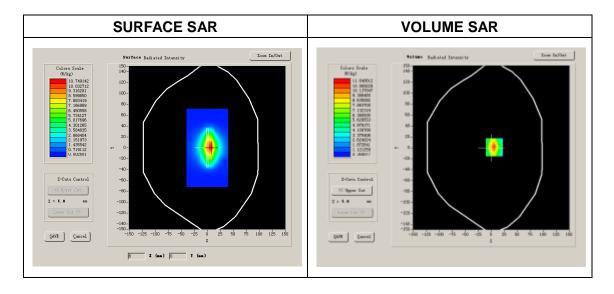
Measurement duration: 13 minutes 27 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	5600MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	5600.000000
Relative permittivity (real part)	35.562139
Conductivity (S/m)	5.100255
Power Drift (%)	1.080000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	22.92
Crest factor:	1:1

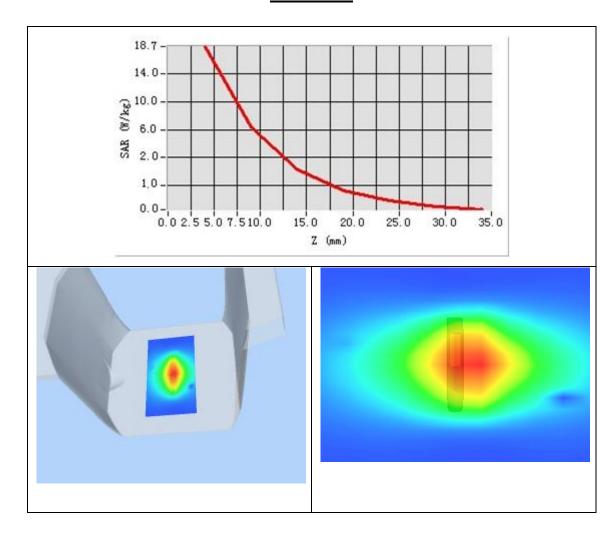






# Maximum location: X=-1.00, Y=-5.00

SAR 10g (W/Kg)	6.0553669
SAR 1g (W/Kg)	17.144263







# System Performance Check Data(5800MHz Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=10mm,dy=10mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2018.06.22

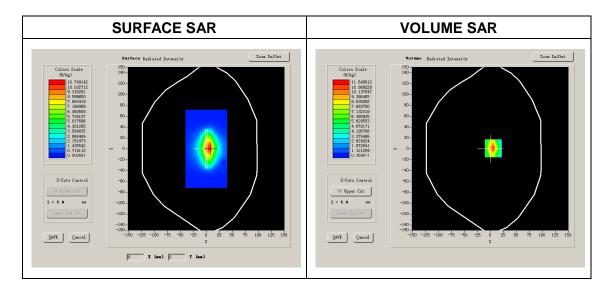
Measurement duration: 13 minutes 27 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	5800MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	5800.000000
Relative permittivity (real part)	35.334675
Conductivity (S/m)	5.310226
Power Drift (%)	1.260000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	22.42
Crest factor:	1:1



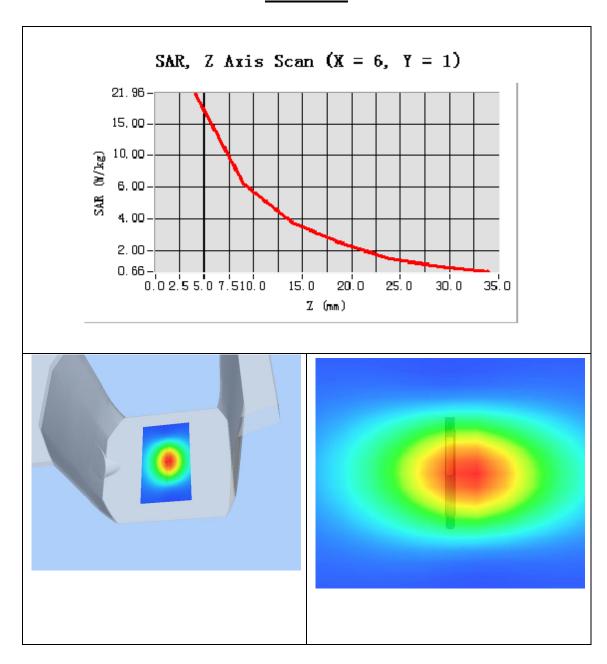




Maximum location: X=-6.00, Y=-1.00

SAR 10g (W/Kg)	5.994412
SAR 1g (W/Kg)	17.711256

# **Z Axis Scan**



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# System Performance Check Data(5200MHz Body)

Type: Phone measurement (Complete)

Area scan resolution: dx=10mm,dy=10mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2018.06.20

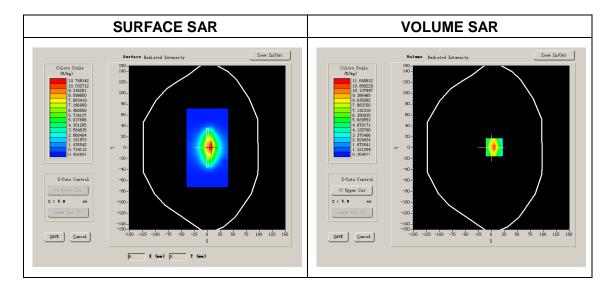
Measurement duration: 23 minutes 27 seconds

# A. Experimental conditions.

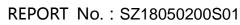
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	5200MHz
Channels	
Signal	CW

# **B. SAR Measurement Results**

Frequency (MHz)	5200.000000
Relative permittivity (real part)	48.273014
Conductivity (S/m)	5.543260
Power Drift (%)	2.310000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	22.11
Crest factor:	1:1



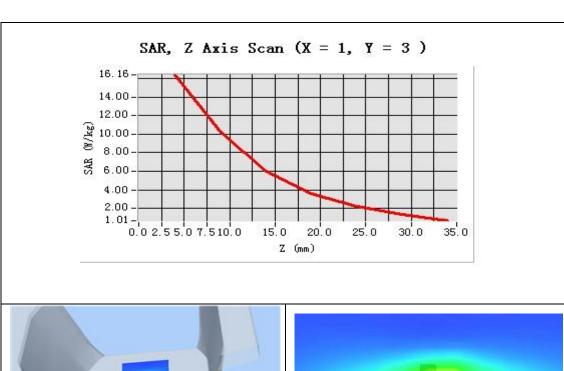


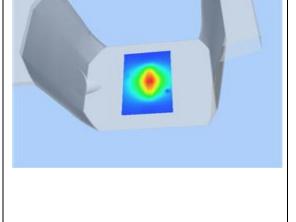


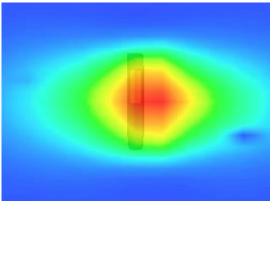


# Maximum location: X=1.00, Y=3.00

SAR 10g (W/Kg)	5.624355
SAR 1g (W/Kg)	16.28442









# System Performance Check Data(5600MHz Body)

Type: Phone measurement (Complete)

Area scan resolution: dx=10mm,dy=10mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2018.06.20

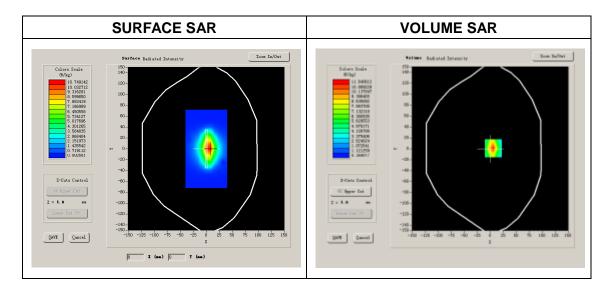
Measurement duration: 13 minutes 27 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	5600MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	5600.000000
Relative permittivity (real part)	48.394381
Conductivity (S/m)	5.7432600
Power Drift (%)	1.080000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	23.69
Crest factor:	1:1



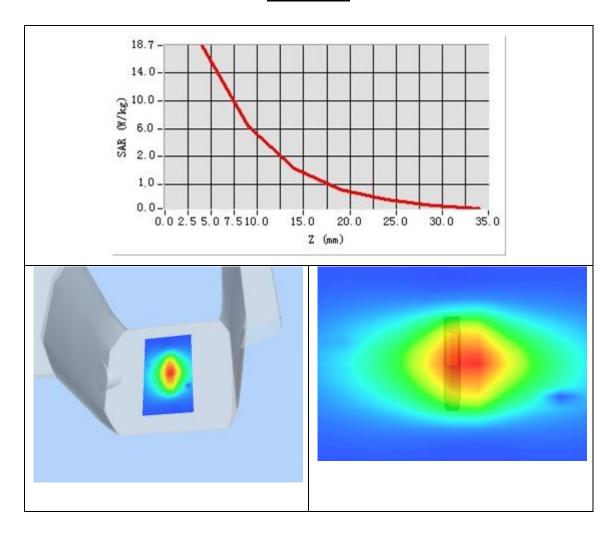




# Maximum location: X=-1.00, Y=-5.00

SAR 10g (W/Kg)	5.906961
SAR 1g (W/Kg)	17.19624

# **Z Axis Scan**





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# System Performance Check Data(5800MHz Body)

Type: Phone measurement (Complete)

Area scan resolution: dx=10mm,dy=10mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2018.06.20

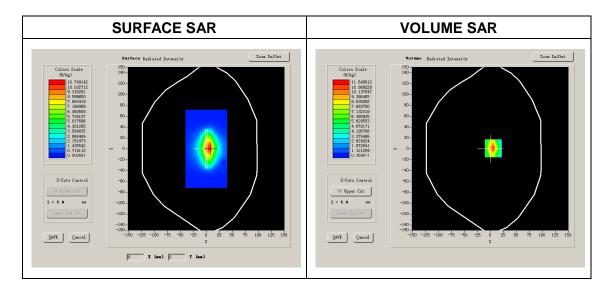
Measurement duration: 23 minutes 27 seconds

# A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	5800MHz
Channels	
Signal	CW

#### **B. SAR Measurement Results**

Frequency (MHz)	5800.000000
Relative permittivity (real part)	48.093428
Conductivity (S/m)	5.930716
Power Drift (%)	1.260000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	23.02
Crest factor:	1:1



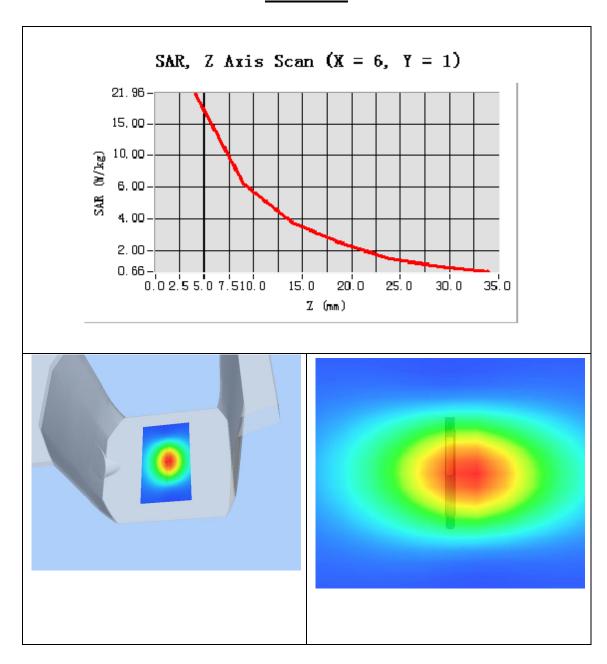




# Maximum location: X=-6.00, Y=-1.00

SAR 10g (W/Kg)	5.982634
SAR 1g (W/Kg)	17.695290

# **Z Axis Scan**



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