## II. 1900MHz Band RESULTS

Report No: KS101208B03-SF



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## **MEASUREMENT 1**

Date of measurement: 12/9/2010

Area Scan: 7 x 7 x 1 dx=15mm dy=15mm

Zoom Scan: 5 x 5 x 7 dx=5mm dy=5mm dz=5mm

Z Axis Scan: 1 x 1 x 21 dx=20mm dy=20mm dz=5mm

## A. Experimental conditions.

Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Body	
Device Position	Face Down toward phantom	
Band	GSM1900	
Channels	High	
Signal	GSM	

## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibration Due: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibration Due: 05/25/2011
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibration Due: 03/24/2011
Voltmeter	Keithley (2000, SN:1015843)	Calibration Due: 05/25/2011
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibration Due: 03/24/2011
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibration Due: 07/29/2011
<b>Power Meter</b>	Agilent (E4416A, SN:QB41292714)	Calibration Due: 03/24/2011
Probe	Antennessa (SN:SN_1109_EP_100)	Calibration Due: 05/04/2011
DIPOLE 1900	Antennessa (DIPG35,SN 48/05)	Calibration Due: 02/09/2012
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibration Due: N/A
Liquid	Antennessa	Calibration Due: N/A
Measurement SW	OPEN SAR V2.1	Calibration Due: N/A

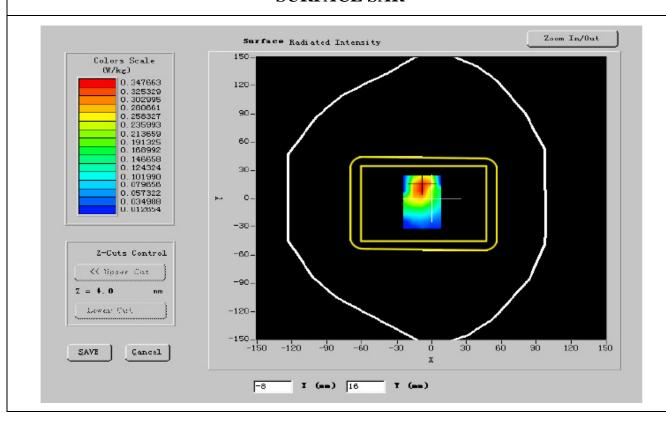
Frequency (MHz)	1910.000000
Relative permitivity (real part)	50.201000
Relative permitivity (imaginary part)	14.254800
Conductivity (S/m)	1.016522
Variation (%)	-0.130000
Ambient Temperature:	21 °C

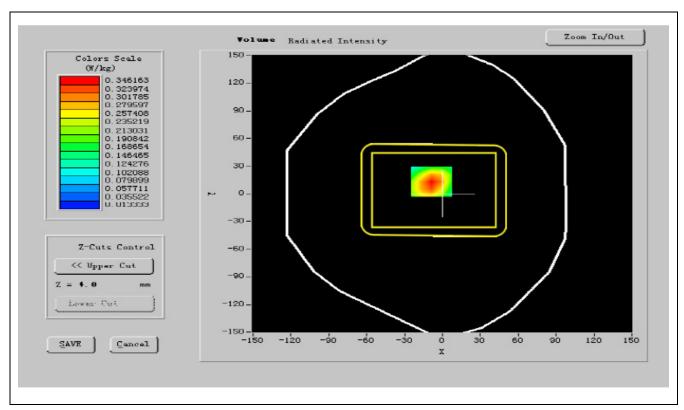


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Liquid Temperature:	20.3 °C
ConvF:	40.42, 41.12, 54.75
Crest factor:	1:8

#### **SURFACE SAR**



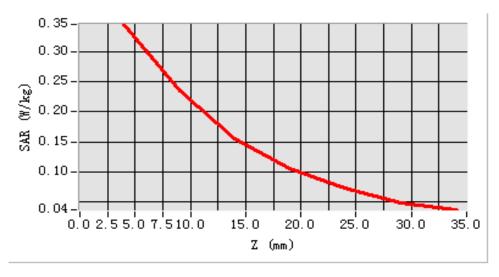


**Maximum location: X=-13.00, Y=-3.00** 

SAR 10g (W/Kg)	0.532857
SAR 1g (W/Kg)	0.302436

Z Axis Scan

SAR, Z Axis Scan (X = -9, Y = 13)





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## **MEASUREMENT 2**

Date of measurement: 12/9/2010

Area Scan: 7 x 7 x 1 dx=15mm dy=15mm

Zoom Scan: 5 x 5 x 7 dx=5mm dy=5mm dz=5mm

Z Axis Scan: 1 x 1 x 21 dx=20mm dy=20mm dz=5mm

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Body	
<b>Device Position</b>	Face UP toward phantom	
Band GSM1900		
Channels	High	
Signal	GSM	

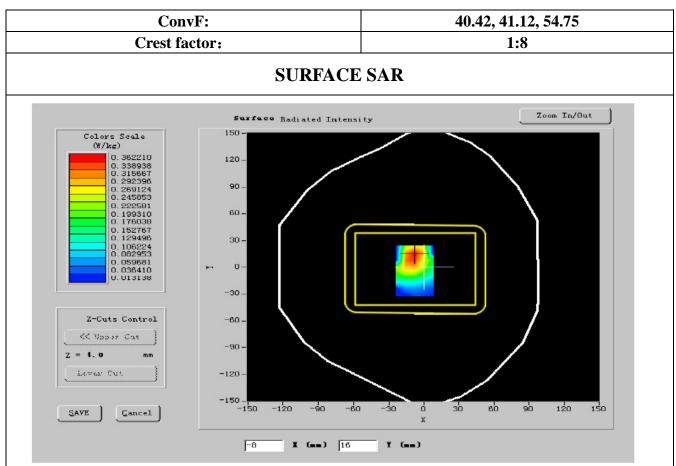
## **B.** Instrumentations.

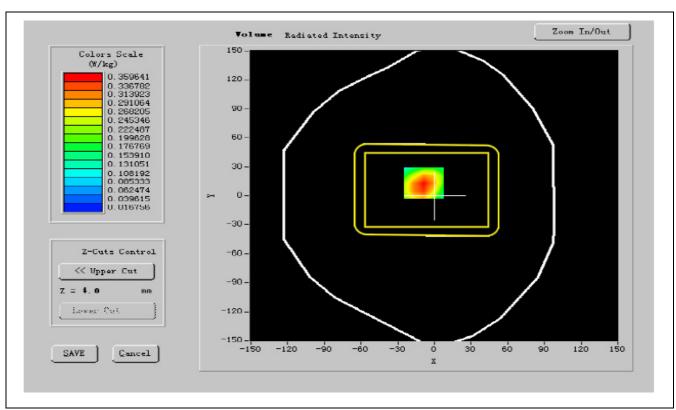
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibration Due: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibration Due: 05/25/2011
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibration Due: 03/24/2011
Voltmeter	Keithley (2000, SN:1015843)	Calibration Due: 05/25/2011
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibration Due: 03/24/2011
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibration Due: 07/29/2011
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibration Due: 03/24/2011
Probe	Antennessa (SN:SN_1109_EP_100)	Calibration Due: 05/04/2011
DIPOLE 1900	Antennessa (DIPG35,SN 48/05)	Calibration Due: 02/09/2012
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibration Due: N/A
Liquid	Antennessa	Calibration Due: N/A
Measurement SW	OPEN SAR V2.1	Calibration Due: N/A

Frequency (MHz)	1910.000000
Relative permitivity (real part)	49.053007
Relative permitivity (imaginary part)	16.763500
Conductivity (S/m)	1.112775
Variation (%)	-0.700000
Ambient Temperature:	21 °C
Liquid Temperature:	20.3 °C



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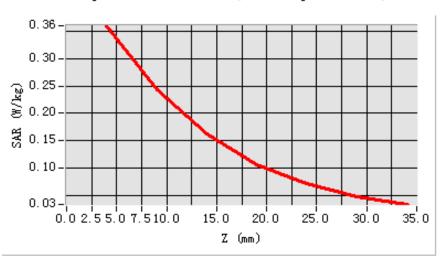


**Maximum location: X=-13.00, Y=-3.00** 

SAR 10g (W/Kg)	0.510125
SAR 1g (W/Kg)	0.257362

#### Z Axis Scan

SAR, Z Axis Scan (X = -9, Y = 13)





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## **MEASUREMENT 3**

Date of measurement: 12/9/2010

Area Scan: 7 x 7 x 1 dx=15mm dy=15mm

Zoom Scan: 5 x 5 x 7 dx=5mm dy=5mm dz=5mm

Z Axis Scan: 1 x 1 x 21 dx=20mm dy=20mm dz=5mm

## A. Experimental conditions.

Phantom File	zinf15.txt, Adaptative 2 max
Phantom	Body
Device Position	Face Down toward phantom
Band	GPRS1900
Channels	High
Signal	GPRS

## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibration Due: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibration Due: 05/25/2011
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibration Due: 03/24/2011
Voltmeter	Keithley (2000, SN:1015843)	Calibration Due: 05/25/2011
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibration Due: 03/24/2011
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibration Due: 07/29/2011
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibration Due: 03/24/2011
Probe	Antennessa (SN:SN_1109_EP_100)	Calibration Due: 05/04/2011
DIPOLE 1900	Antennessa (DIPG35,SN 48/05)	Calibration Due: 02/09/2012
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibration Due: N/A
Liquid	Antennessa	Calibration Due: N/A
Measurement SW	OPEN SAR V2.1	Calibration Due: N/A

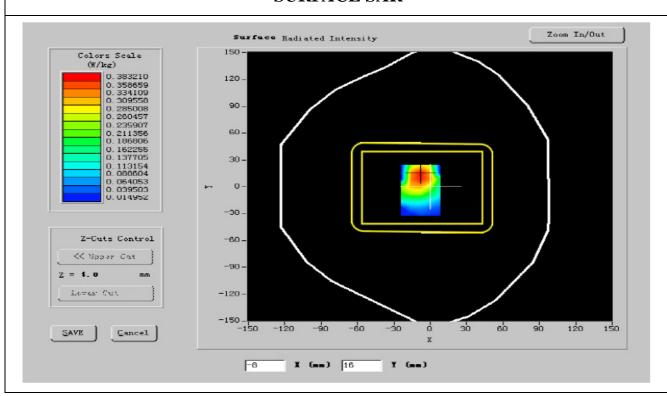
Frequency (MHz)	1910.000000
Relative permitivity (real part)	50.24995
Relative permitivity (imaginary part)	16.249500
Conductivity (S/m)	1.210150
Variation (%)	-0.600000
Ambient Temperature:	21 °C

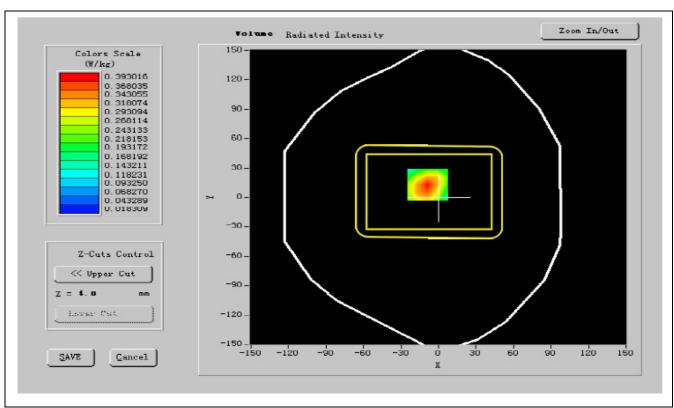


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Liquid Temperature:	20.3 °C
ConvF:	40.42, 41.12, 54.75
Crest factor:	1:8

#### **SURFACE SAR**



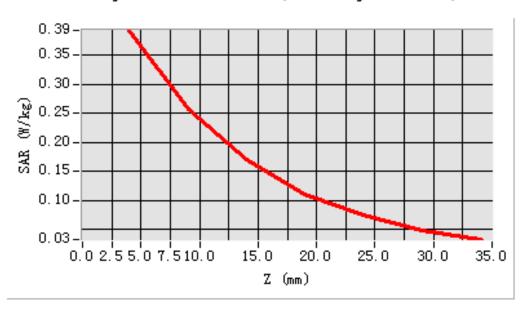


Maximum location: X=-13.00, Y=-3.00

SAR 10g (W/Kg)	0.526702
SAR 1g (W/Kg)	0.220364

#### Z Axis Scan

SAR, Z Axis Scan (X = -9, Y = 13)





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## **MEASUREMENT 4**

Date of measurement: 12/9/2010

Area Scan: 7 x 7 x 1 dx=15mm dy=15mm

Zoom Scan: 5 x 5 x 7 dx=5mm dy=5mm dz=5mm

Z Axis Scan: 1 x 1 x 21 dx=20mm dy=20mm dz=5mm

## A. Experimental conditions.

Phantom File	zinf15.txt, Adaptative 2 max
Phantom	Body
Device Position	Face UP toward phantom
Band	GPRS1900
Channels	High
Signal	GPRS

## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibration Due: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibration Due: 05/25/2011
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibration Due: 03/24/2011
Voltmeter	Keithley (2000, SN:1015843)	Calibration Due: 05/25/2011
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibration Due: 03/24/2011
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibration Due: 07/29/2011
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibration Due: 03/24/2011
Probe	Antennessa (SN:SN_1109_EP_100)	Calibration Due: 05/04/2011
DIPOLE 1900	Antennessa (DIPG35,SN 48/05)	Calibration Due: 02/09/2012
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibration Due: N/A
Liquid	Antennessa	Calibration Due: N/A
Measurement SW	OPEN SAR V2.1	Calibration Due: N/A

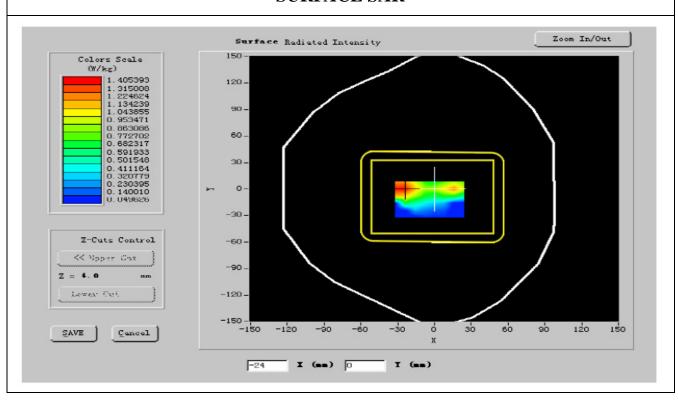
Frequency (MHz)	1910.000000
Relative permitivity (real part)	51.260200
Relative permitivity (imaginary part)	16.030635
Conductivity (S/m)	1.203664
Variation (%)	-0.400000
Ambient Temperature:	21 °C

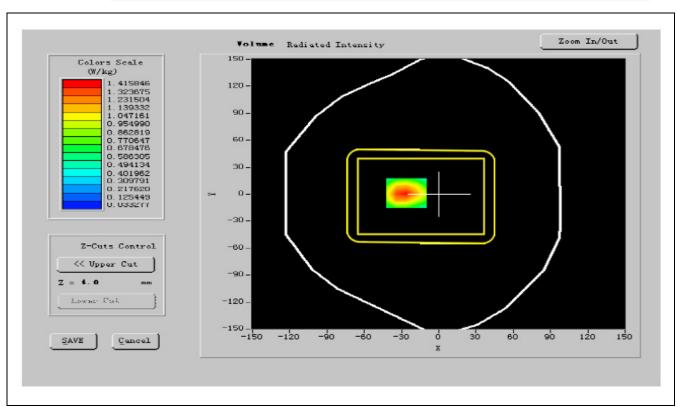


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Liquid Temperature:	20.3 °C
ConvF:	40.42, 41.12, 54.75
Crest factor:	1:2

#### **SURFACE SAR**



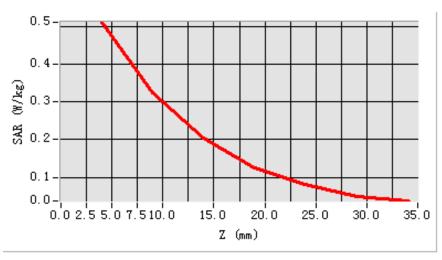


### **Maximum location: X=-13.00, Y=-3.00**

SAR 10g (W/Kg)	0.540215
SAR 1g (W/Kg)	0.230312

### **Z** Axis Scan

SAR, Z Axis Scan (X = -10, Y = 12)





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## **MEASUREMENT 5**

Date of measurement: 12/9/2010

Area Scan: 7 x 7 x 1 dx=15mm dy=15mm

Zoom Scan: 5 x 5 x 7 dx=5mm dy=5mm dz=5mm

Z Axis Scan: 1 x 1 x 21 dx=20mm dy=20mm dz=5mm

## A. Experimental conditions.

Phantom File	zinf15.txt, Adaptative 2 max
Phantom	Body
Device Position	Left edge toward phantom
Band	GSM1900
Channels	High
Signal	GSM

## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibration Due: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibration Due: 05/25/2011
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibration Due: 03/24/2011
Voltmeter	Keithley (2000, SN:1015843)	Calibration Due: 05/25/2011
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibration Due: 03/24/2011
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibration Due: 07/29/2011
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibration Due: 03/24/2011
Probe	Antennessa (SN:SN_1109_EP_100)	Calibration Due: 05/04/2011
DIPOLE 1900	Antennessa (DIPG35,SN 48/05)	Calibration Due: 02/09/2012
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibration Due: N/A
Liquid	Antennessa	Calibration Due: N/A
Measurement SW	OPEN SAR V2.1	Calibration Due: N/A

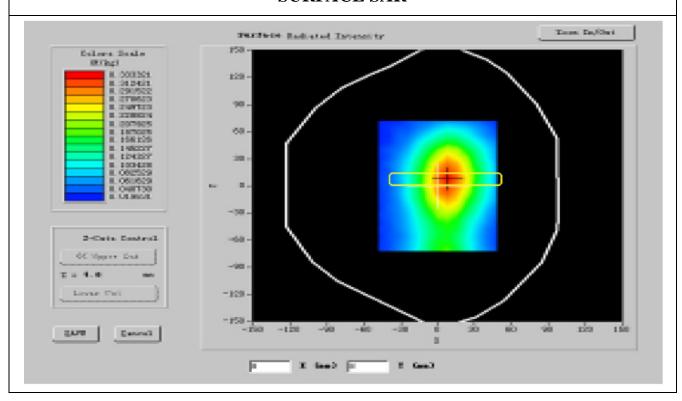
Frequency (MHz)	1910.000000
Relative permitivity (real part)	53.015024
Relative permitivity (imaginary part)	16.053504
Conductivity (S/m)	1.014284
Variation (%)	-1.010000
Ambient Temperature:	21 °C

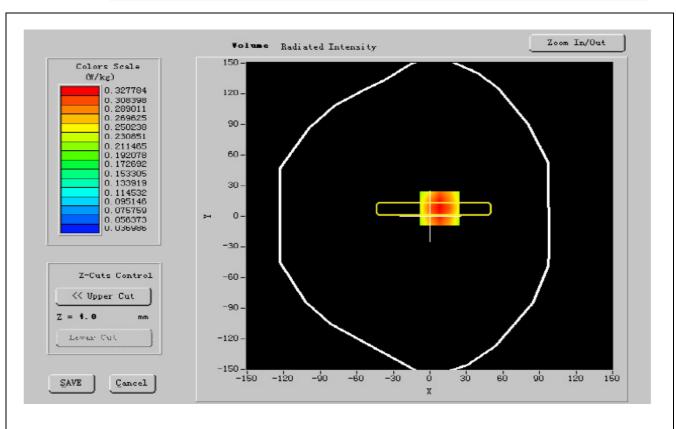


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Liquid Temperature:	20.3°C
ConvF:	40.42, 41.12, 54.75
Crest factor:	1:2

#### **SURFACE SAR**



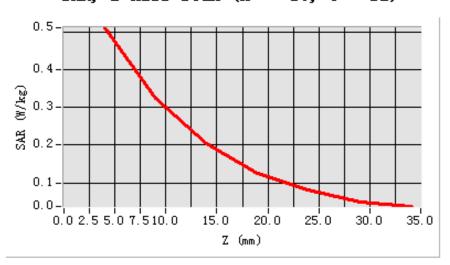


Maximum location: X=-13.00, Y=-3.00

SAR 10g (W/Kg)	0.430232
SAR 1g (W/Kg)	0.280144

Z Axis Scan

SAR, Z Axis Scan (X = -10, Y = 12)





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## **MEASUREMENT 6**

Date of measurement: 12/9/2010

Area Scan: 7 x 7 x 1 dx=15mm dy=15mm

Zoom Scan: 5 x 5 x 7 dx=5mm dy=5mm dz=5mm

Z Axis Scan: 1 x 1 x 21 dx=20mm dy=20mm dz=5mm

## A. Experimental conditions.

Phantom File	zinf15.txt, Adaptative 2 max
Phantom	Body
Device Position	Right edge toward phantom
Band	GSM1900
Channels	High
Signal	GSM

## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibration Due: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibration Due: 05/25/2011
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibration Due: 03/24/2011
Voltmeter	Keithley (2000, SN:1015843)	Calibration Due: 05/25/2011
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibration Due: 03/24/2011
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibration Due: 07/29/2011
<b>Power Meter</b>	Agilent (E4416A, SN:QB41292714)	Calibration Due: 03/24/2011
Probe	Antennessa (SN:SN_1109_EP_100)	Calibration Due: 05/04/2011
DIPOLE 1900	Antennessa (DIPG35,SN 48/05)	Calibration Due: 02/09/2012
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibration Due: N/A
Liquid	Antennessa	Calibration Due: N/A
Measurement SW	OPEN SAR V2.1	Calibration Due: N/A

Frequency (MHz)	1910.000000
Relative permitivity (real part)	50.213852
Relative permitivity (imaginary part)	16.240246
Conductivity (S/m)	1.013224
Variation (%)	-0.130000
Ambient Temperature:	21 °C



Report No: KS101208B03-SF

Liquid Temperature:	20.3 °C
ConvF:	40.42, 41.12, 54.75
Crest factor:	1:2

#### **SURFACE SAR**

