Report No: KS100816B01

## II. 1900MHz Band RESULTS



## **MEASUREMENT 1**

Report No: KS100816B01

Date of measurement: 30/8/2010

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	Right head	
<b>Device Position</b>	Cheek	
Band	GSM1900	
Channels	Low	
Signal	GSM	

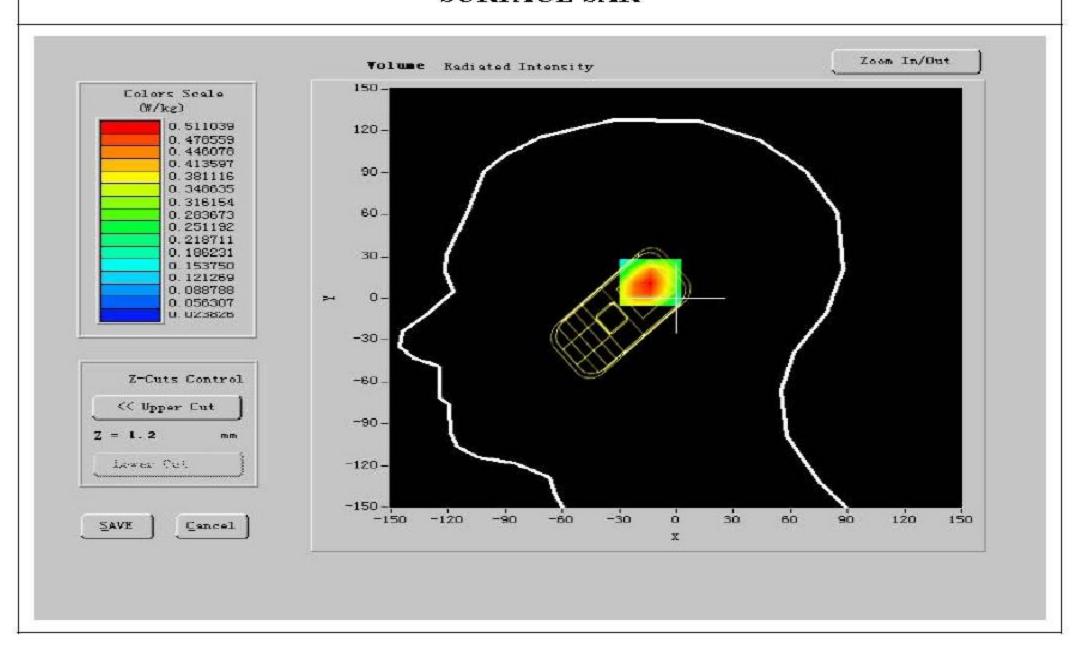
### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

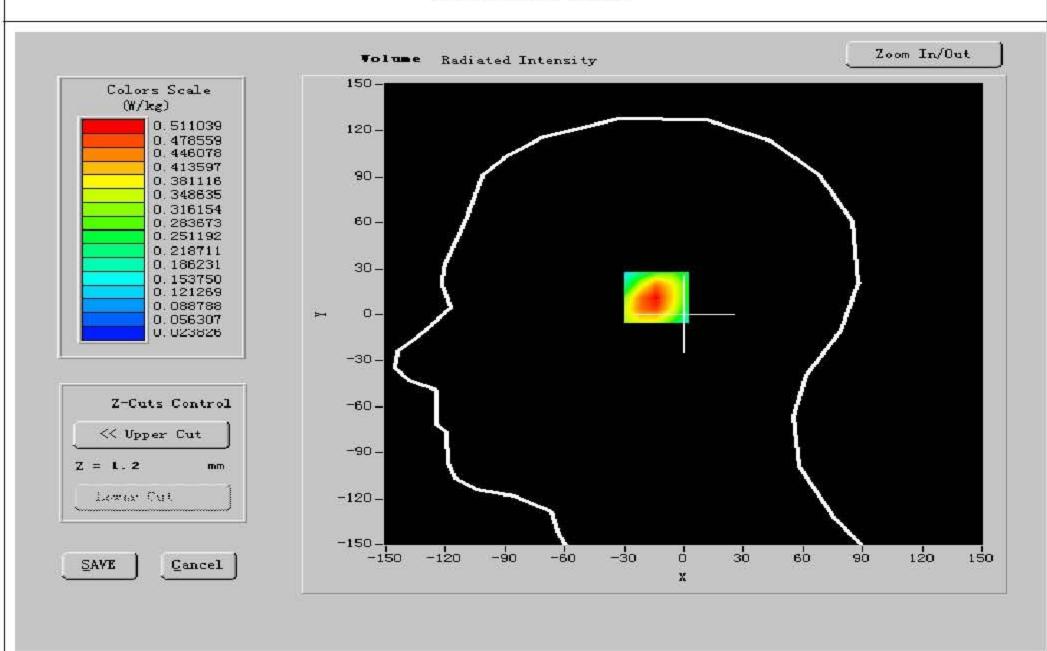
Frequency (MHz)	1850.400024
Relative permitivity (real part)	40.213000
Relative permitivity (imaginary part)	13.584900
Conductivity (S/m)	1.410528
Variation (%)	-1.220000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8

Report No: KS100816B01

## SURFACE SAR







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

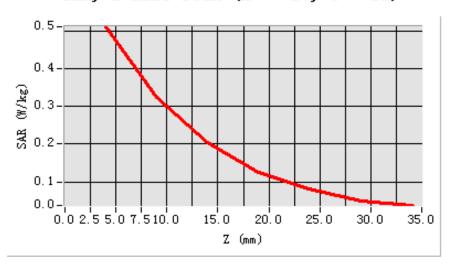
Report No: KS100816B01

SAR 10g (W/Kg)	0.278521	
SAR 1g (W/Kg)	0.473368	

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4722	0.2122	0.1904	0.1224	0.0697	0.0001
(W/kg)	0.0000	0.4733	0.3122	0.1894	0.1224	0.0687	0.0081

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





## **MEASUREMENT 2**

Report No: KS100816B01

Date of measurement: 30/8/2010

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

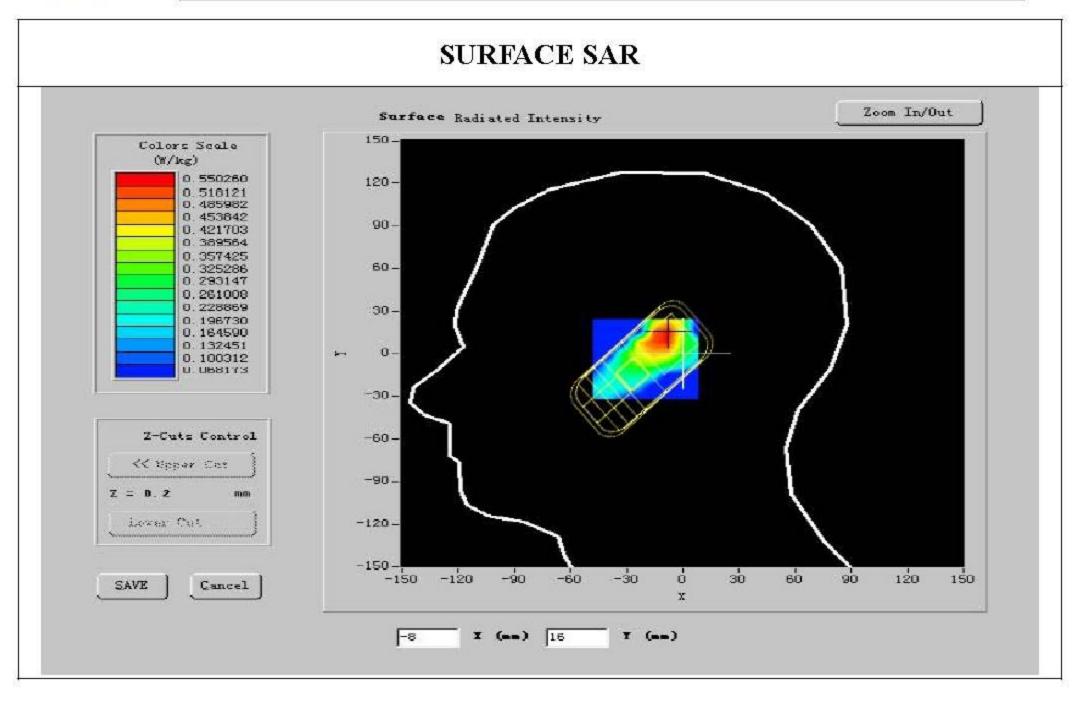
#### A. Experimental conditions.

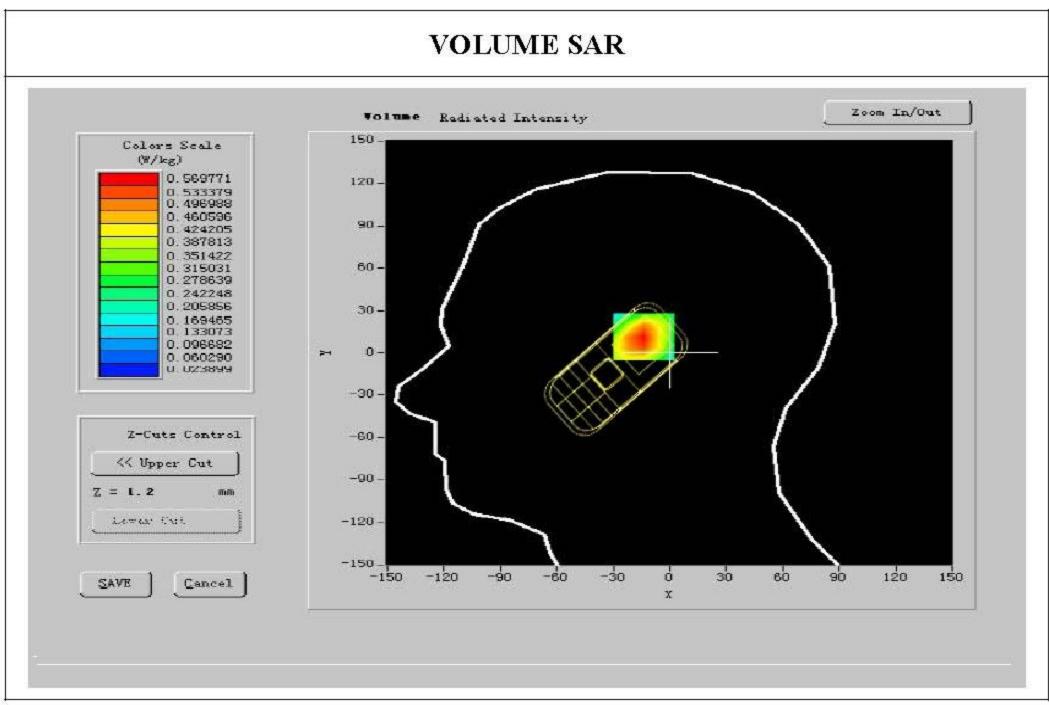
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Right head	
<b>Device Position</b>	Cheek	
Band	GSM1900	
Channels	Middle	
Signal	GSM	

#### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1880.000000
Relative permitivity (real part)	40.198001
Relative permitivity (imaginary part)	13.813800
Conductivity (S/m)	1.422775
Variation (%)	-0.210000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8





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

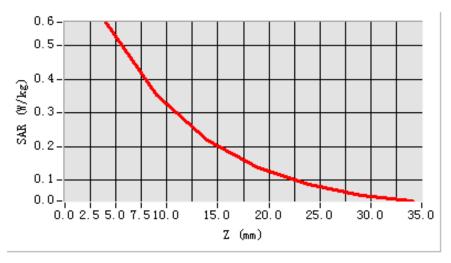
Report No: KS100816B01

SAR 10g (W/Kg)	0.309541	
SAR 1g (W/Kg)	0.515497	

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.5154	0.3322	0.2294	0.1424	0.0789	0.0031
(W/kg)	0.0000	V.3134	0.3322	0.2294	<b>0.1424</b>	0.0769	0.0031

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





**MEASUREMENT 3** 

Report No: KS100816B01

Date of measurement: 30/8/2010

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

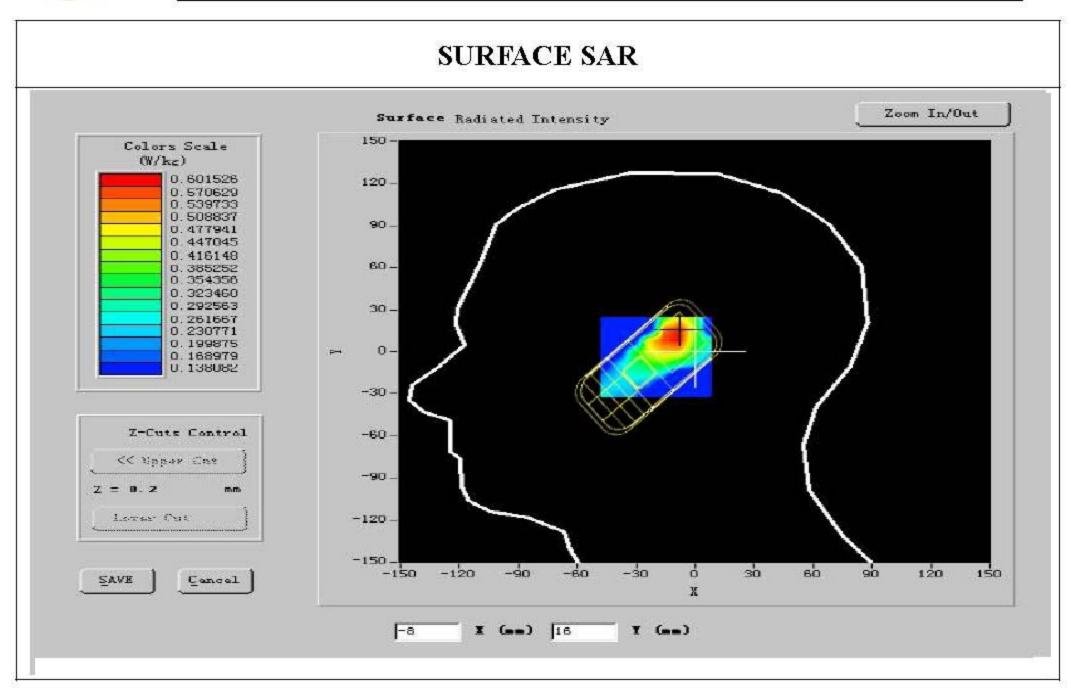
## A. Experimental conditions.

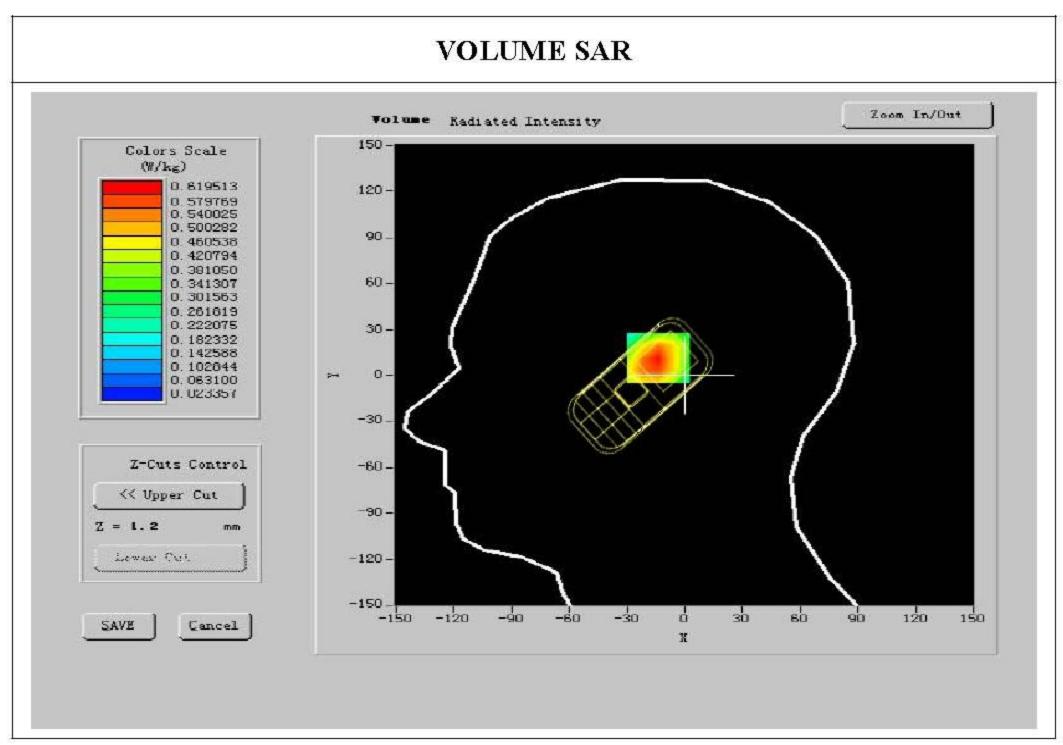
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Right head	
<b>Device Position</b>	Cheek	
Band	GSM1900	
Channels	High	
Signal	GSM	

## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1909.599976
Relative permitivity (real part)	40.205999
Relative permitivity (imaginary part)	13.669900
Conductivity (S/m)	1.420413
Variation (%)	-0.030000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8





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

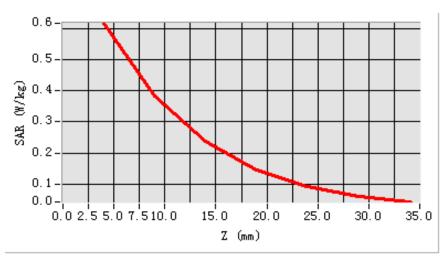
Report No: KS100816B01

SAR 10g (W/Kg)	0.348952
SAR 1g (W/Kg)	0.573654

### Z Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.5726	0.2422	0.2264	0.1724	0.0889	0.0021
(W/kg)	0.0000	0.5736	0.3422	0.2264	0.1724	0.0889	0.0021

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





## **MEASUREMENT 4**

Report No: KS100816B01

Date of measurement: 30/8/2010

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

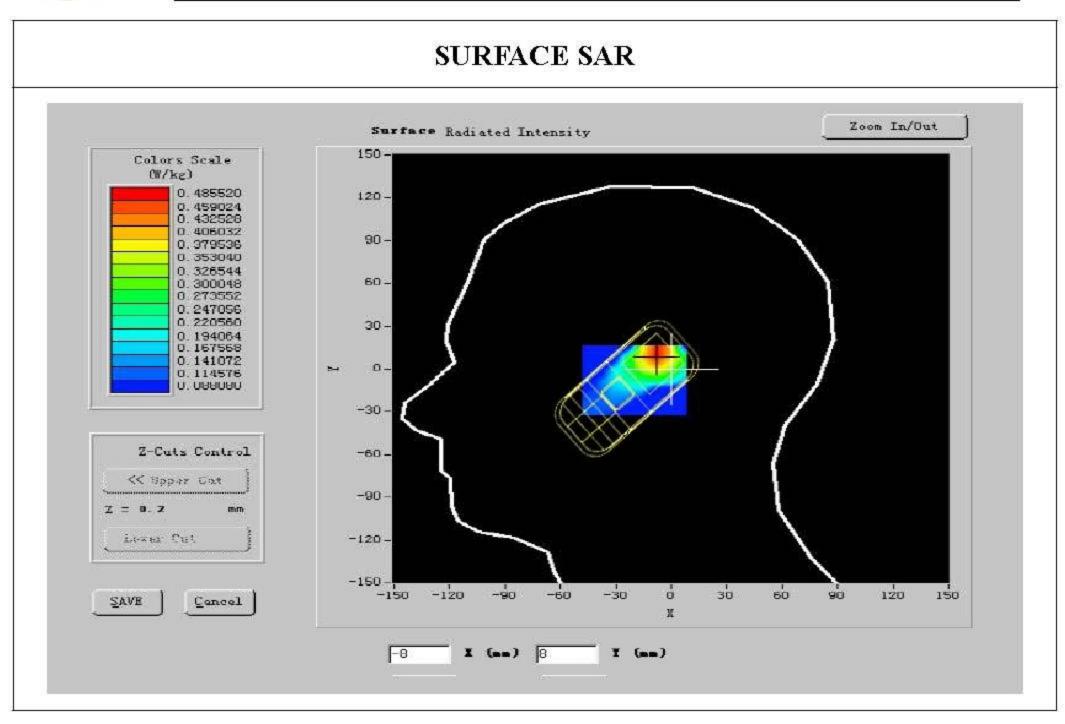
#### A. Experimental conditions.

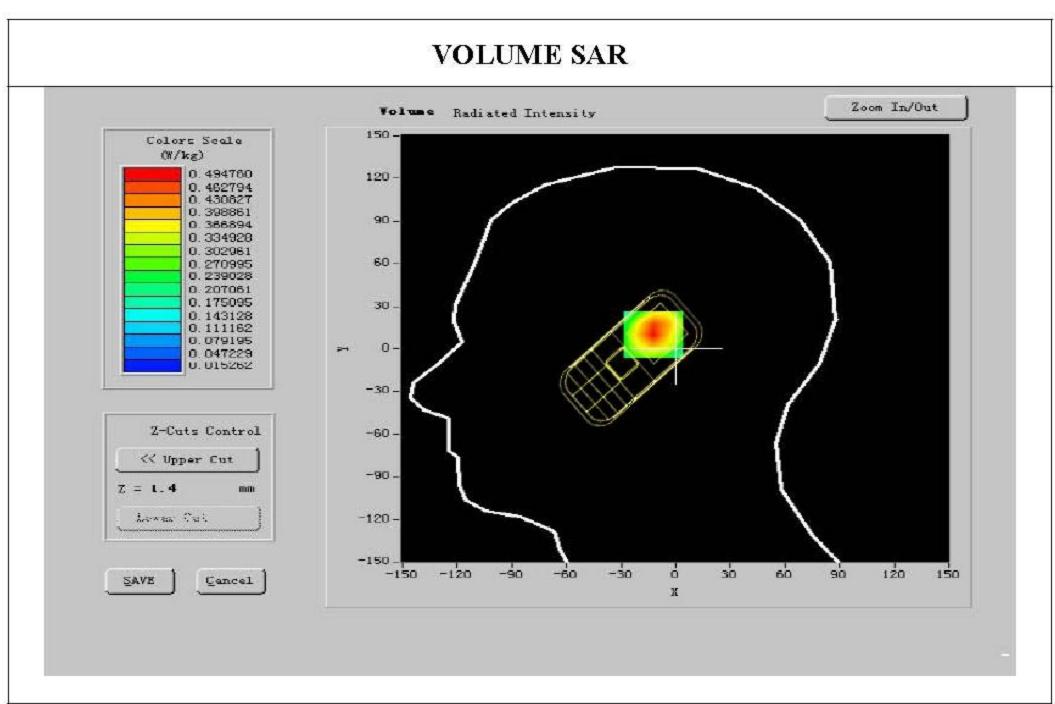
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Right head	
<b>Device Position</b>	Tilt	
Band	GSM1900	
Channels	Low	
Signal	GSM	

### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1850.400024
Relative permitivity (real part)	40.213000
Relative permitivity (imaginary part)	13.584900
Conductivity (S/m)	1.426657
Variation (%)	-1.400000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8





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

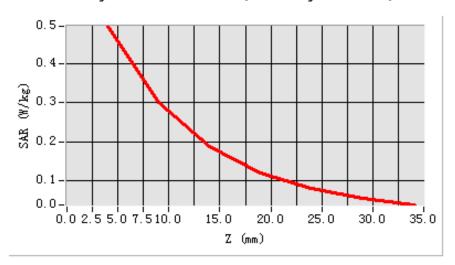
Report No: KS100816B01

SAR 10g (W/Kg)	0.259871
SAR 1g (W/Kg)	0.456381

#### Z Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4563	0.2022	0.1064	0.1124	0.0707	0.0011
(W/kg)	0.0000	0.4563	0.2922	0.1864	0.1124	0.0787	0.0011

### SAR, Z Axis Scan (X = -8, Y = 10)





## **MEASUREMENT 5**

Report No: KS100816B01

Date of measurement: 30/8/2010

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	Right head	
<b>Device Position</b>	Tilt	
Band	GSM1900	
Channels	Middle	
Signal	GSM	

### **B.** Instrumentations.

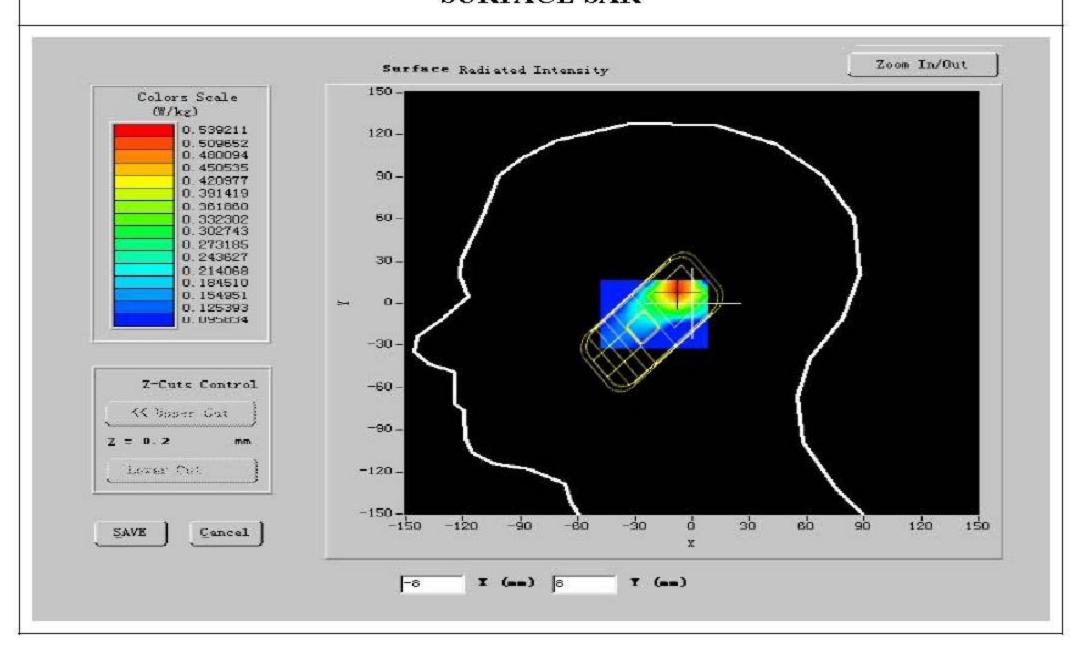
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1880.000000
Relative permitivity (real part)	40.193001
Relative permitivity (imaginary part)	13.813800
Conductivity (S/m)	1.422173
Variation (%)	-0.420000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8

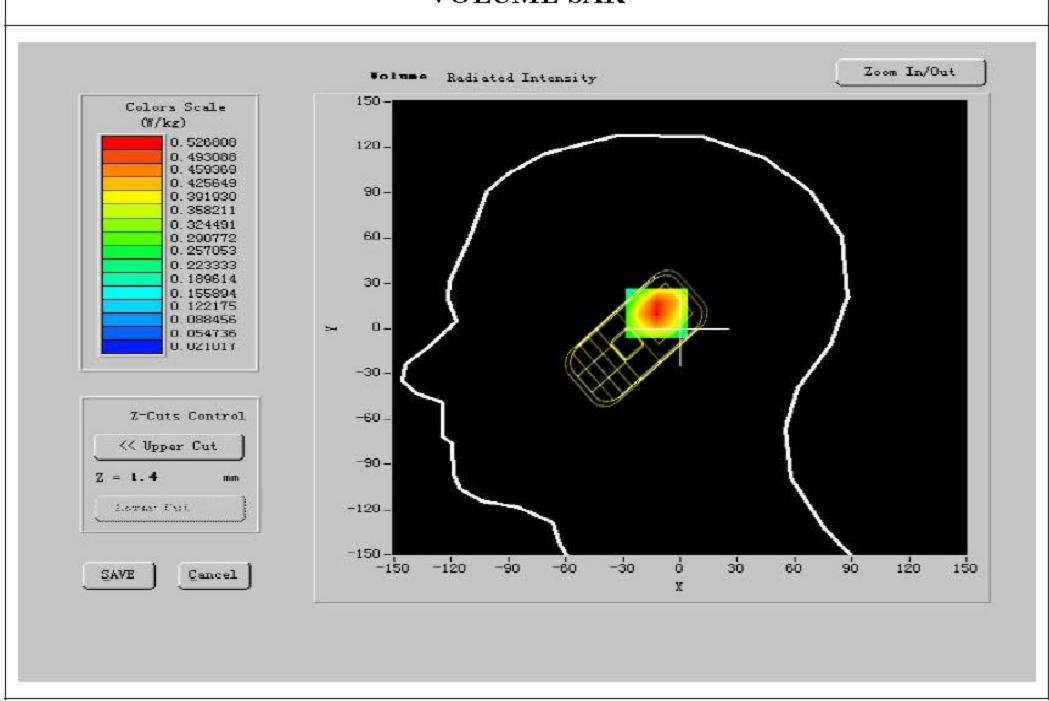


Report No: KS100816B01

## SURFACE SAR



## **VOLUME SAR**



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

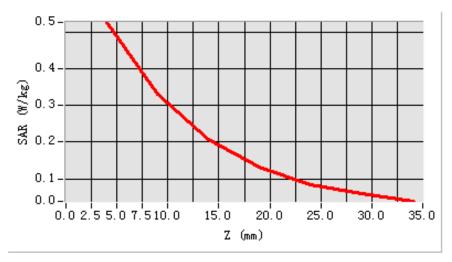
Report No: KS100816B01

SAR 10g (W/Kg)	0.289652
SAR 1g (W/Kg)	0.481892

#### Z Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	Λ 4010	0.2622	0.2064	0.1224	A A007	0.0411
(W/kg)	0.0000	0.4818	0.3622	0.2064	0.1324	0.0887	0.0411

#### SAR, Z Axis Scan (X = -8, Y = 10)





## **MEASUREMENT 6**

Report No: KS100816B01

Date of measurement: 30/8/2010

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

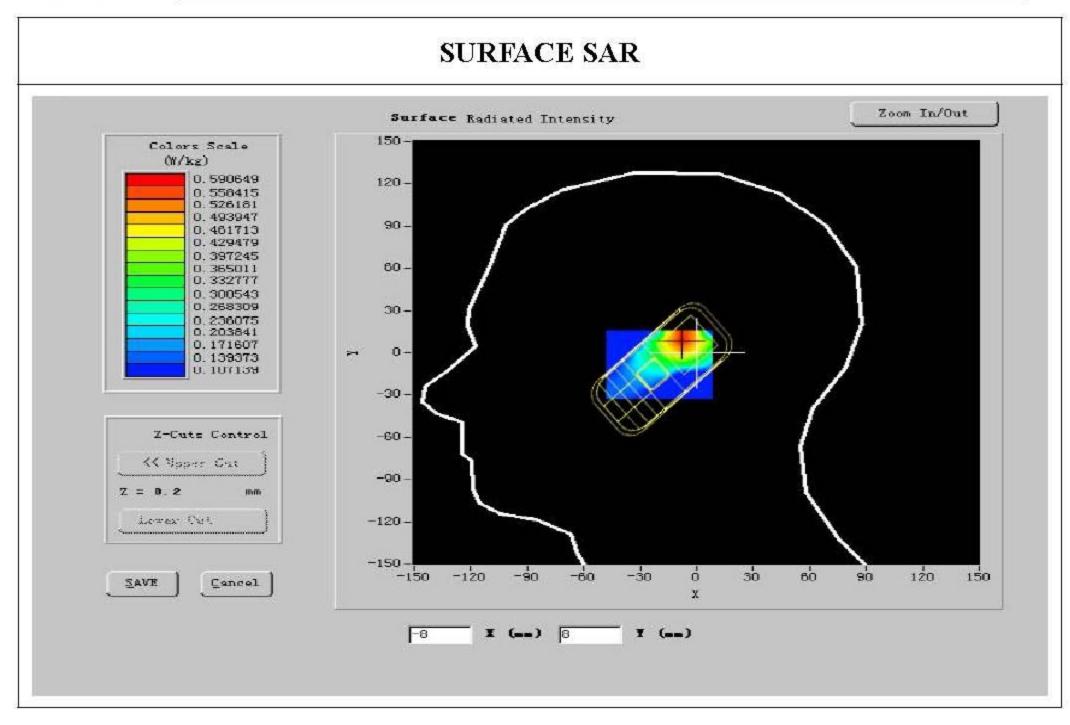
#### A. Experimental conditions.

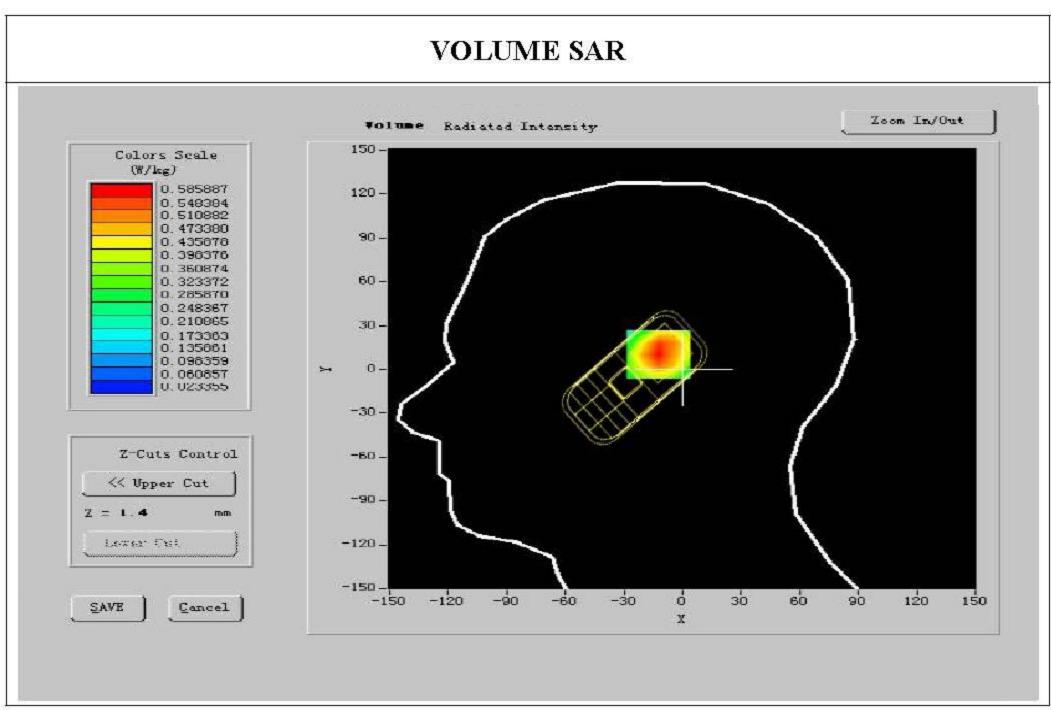
Phantom File	zinf15.txt, Adaptative 2 max	
<b>Phantom</b> Right head		
<b>Device Position</b>	Tilt	
Band	GSM1900	
Channels	High	
Signal	GSM	

### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1909.599976
Relative permitivity (real part)	40.205999
Relative permitivity (imaginary part)	13.669900
Conductivity (S/m)	1.400224
Variation (%)	-1.500000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8





Report No: KS100816B01

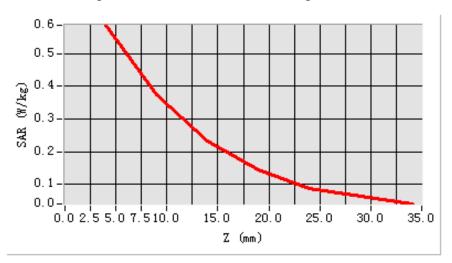
SAR 10g (W/Kg)	0.316982
SAR 1g (W/Kg)	0.535985

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

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.5250	0.2622	0.2064	0.1224	0.0064	0.0422
(W/kg)	0.0000	0.5359	0.3622	0.2064	0.1324	0.0864	0.0432

SAR, Z Axis Scan (X = -8, Y = 10)





Report No: KS100816B01

## **MEASUREMENT 7**

Date of measurement: 30/8/2010

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.

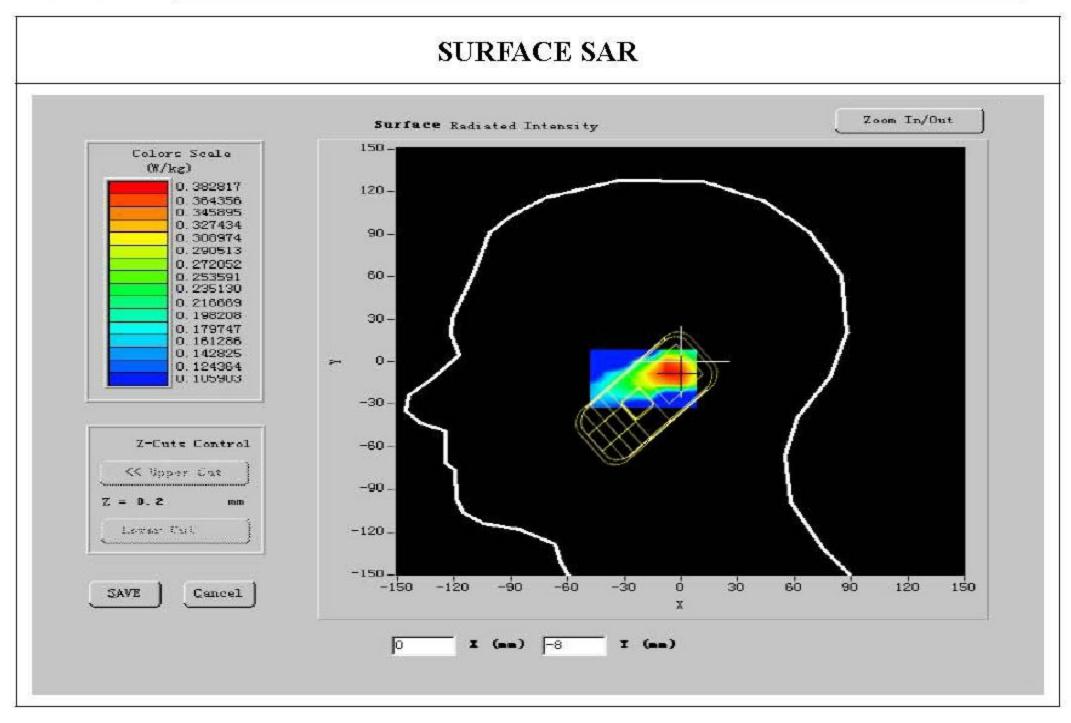
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Left head	
<b>Device Position</b>	Cheek	
Band	GSM1900	
Channels	Low	
Signal	GSM	

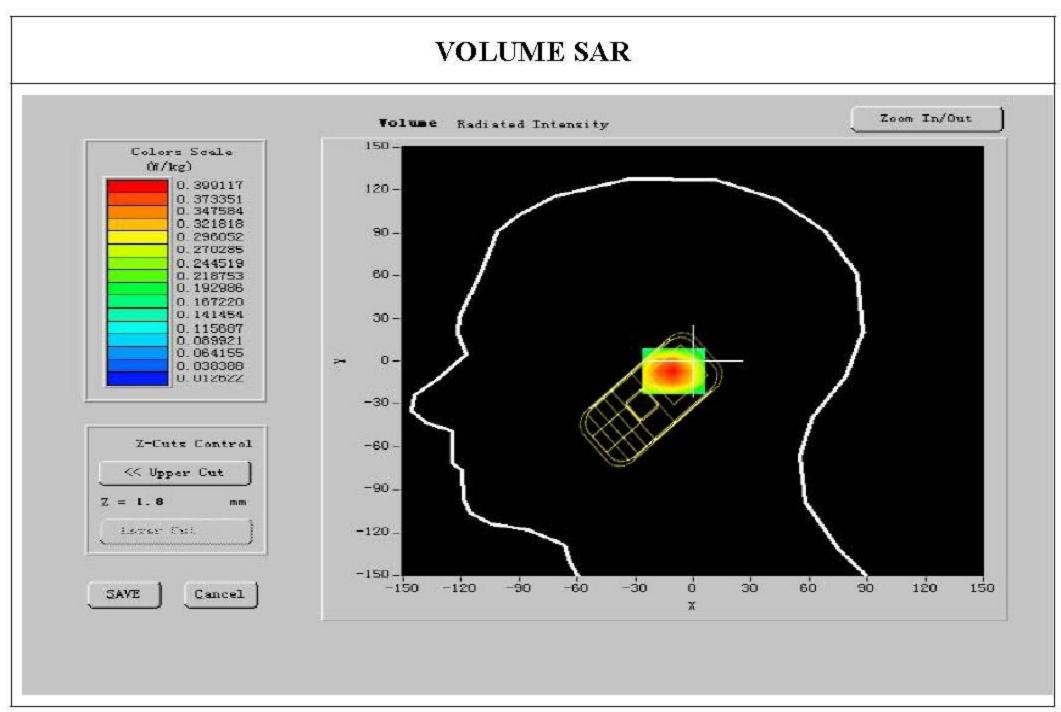
### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1850.400024
Relative permitivity (real part)	40.313000
Relative permitivity (imaginary part)	13.584900
Conductivity (S/m)	1.416528
Variation (%)	0.400000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8







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

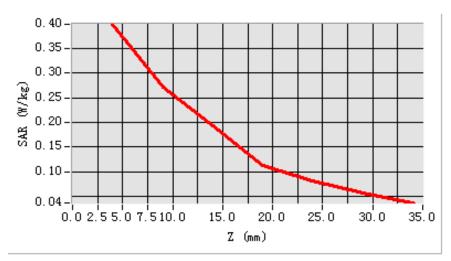
Report No: KS100816B01

SAR 10g (W/Kg)	0.229650
SAR 1g (W/Kg)	0.361058

#### Z Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.2610	0.2622	0.1764	0.1524	0.0764	0.0476
(W/kg)	0.0000	0.3610	0.2622	0.1764	0.1524	0.0764	0.0476

SAR, Z Axis Scan (X = -3, Y = -7)





## **MEASUREMENT 8**

Report No: KS100816B01

Date of measurement: 30/8/2010

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.

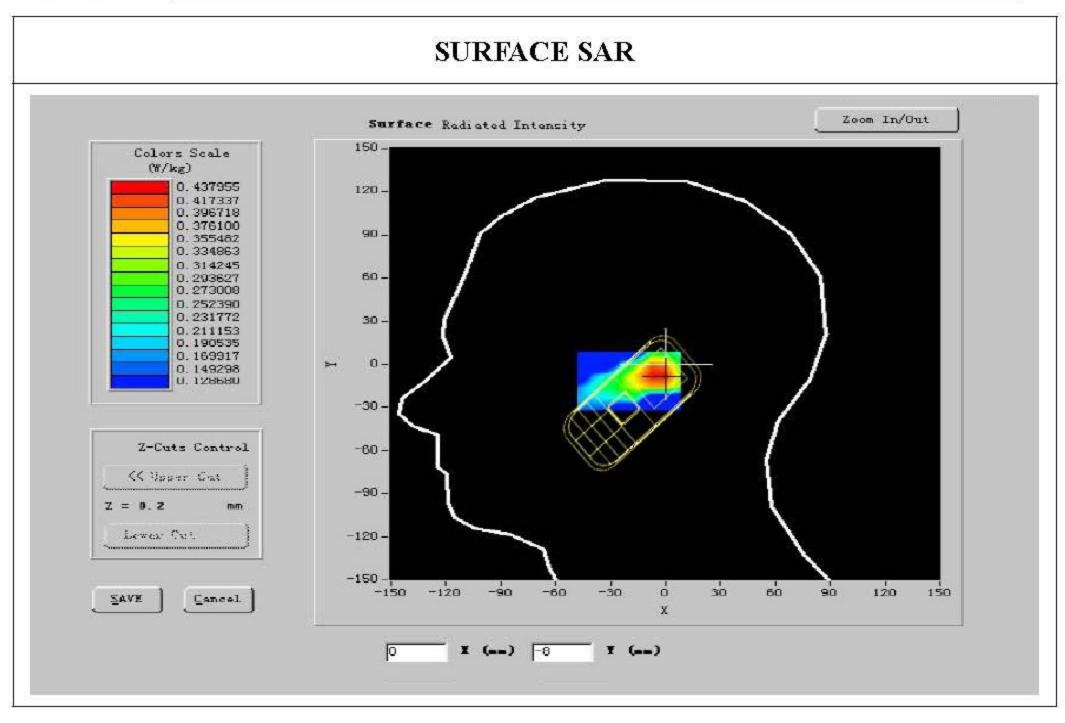
Phantom File zinf15.txt, Adaptative 2 max		
Phantom	Left head	
<b>Device Position</b>	Cheek	
Band	GSM1900	
Channels	Middle	
Signal	GSM	

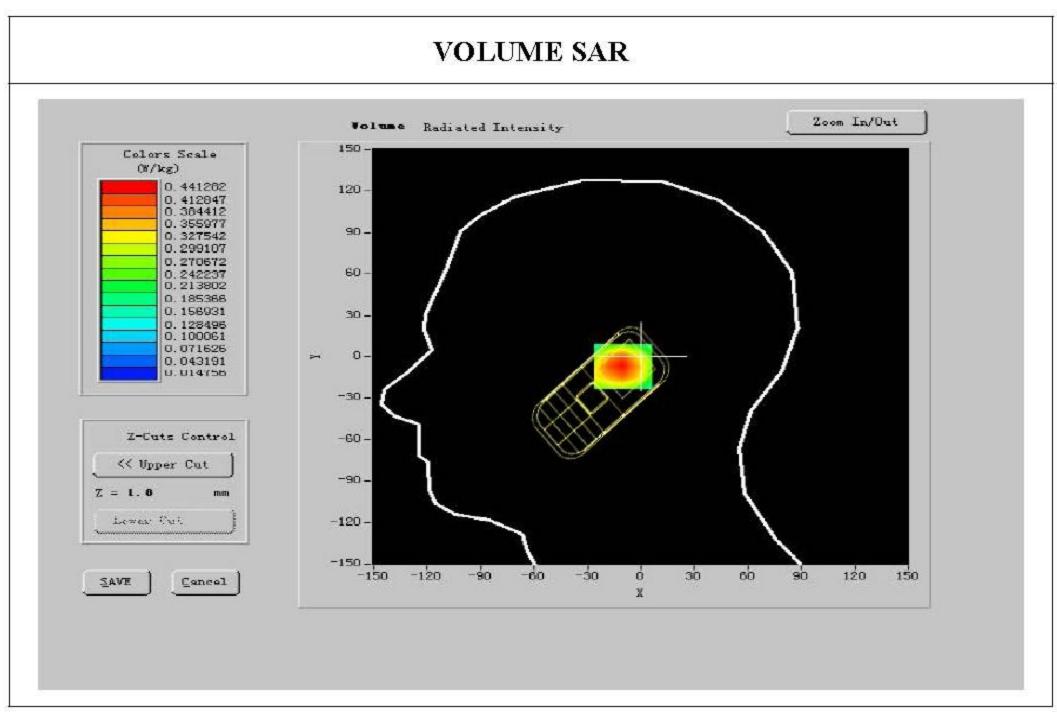
### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1880.000000
Relative permitivity (real part)	40.193001
Relative permitivity (imaginary part)	13.813800
Conductivity (S/m)	1.412324
Variation (%)	1.300000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8







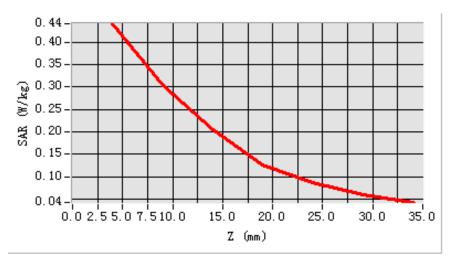
#### **Maximum location: X=-13.00, Y=-3.00**

SAR 10g (W/Kg)	0.262184
SAR 1g (W/Kg)	0.423335

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4233	0.2622	0.1764	0.1324	0.0664	0.0444
(W/kg)	0.0000	0.4255	0.2022	V.1704	0.1324	V.VUU4	V.V444

#### SAR, Z Axis Scan (X = -3, Y = -7)





## **MEASUREMENT 9**

Report No: KS100816B01

Date of measurement: 30/8/2010

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

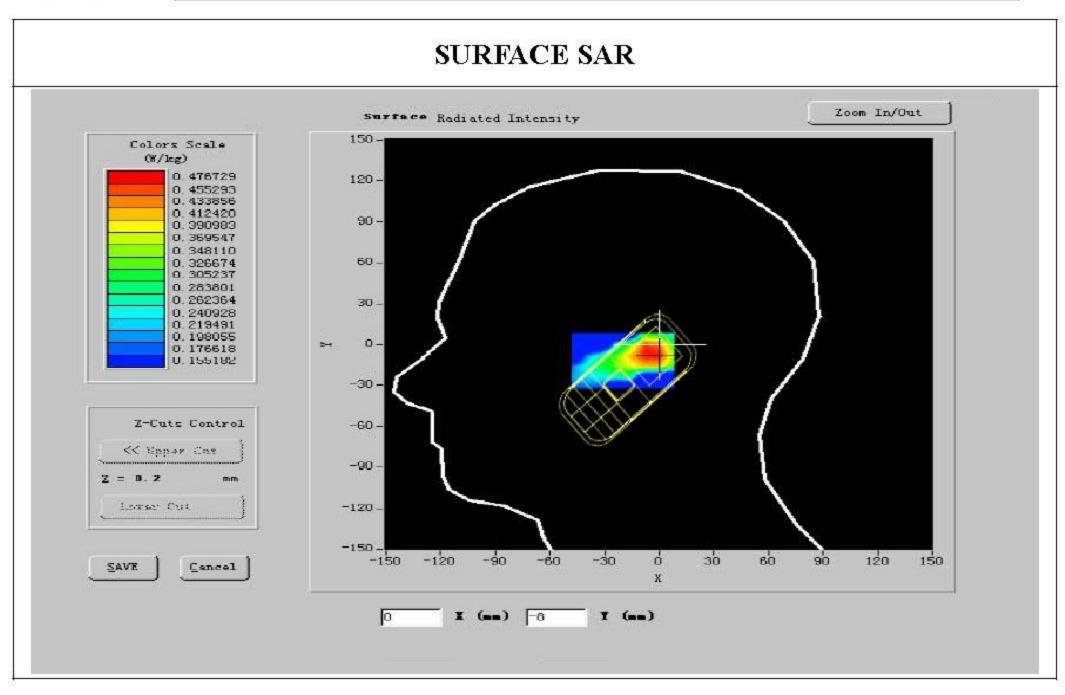
#### A. Experimental conditions.

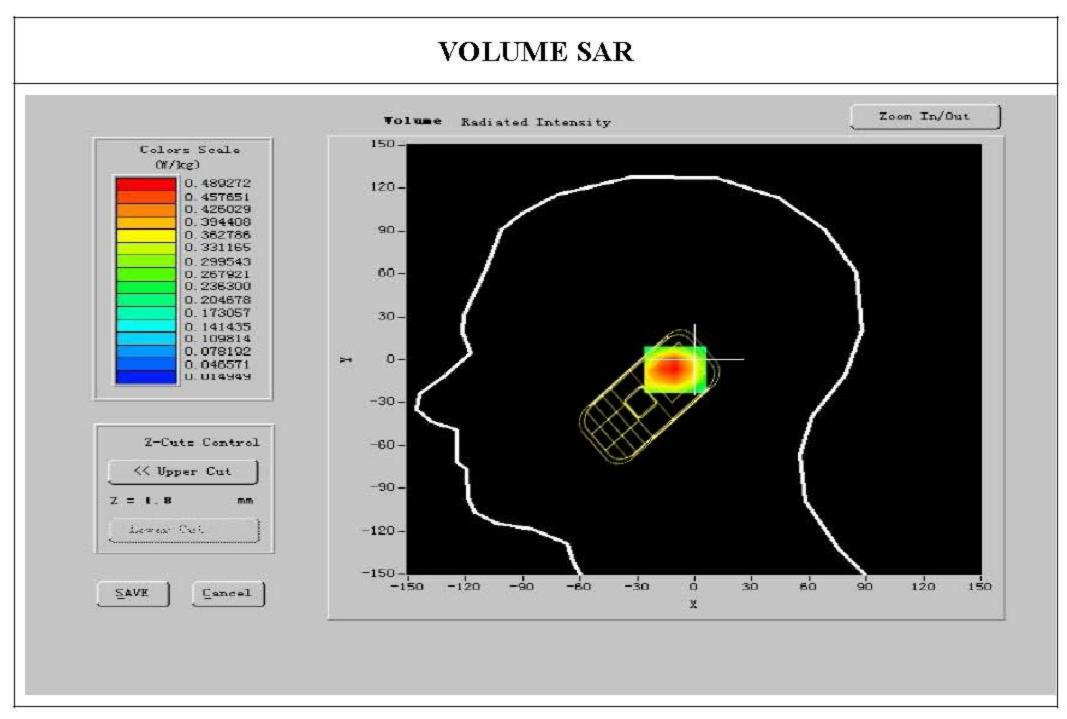
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Left head	
<b>Device Position</b>	Cheek	
Band	GSM1900	
Channels	High	
Signal	GSM	

### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1909.599976
Relative permitivity (real part)	40.285999
Relative permitivity (imaginary part)	13.669900
Conductivity (S/m)	1.410242
Variation (%)	0.400000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8





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

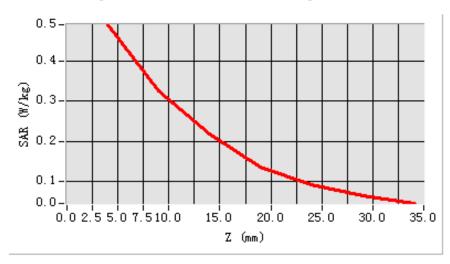
Report No: KS100816B01

SAR 10g (W/Kg)	0.291874
SAR 1g (W/Kg)	0.449005

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4490	0.3222	0.2164	0.1824	0.0864	0.0354
(W/kg)	0.0000	0.4490	0.3444	<b>0.2104</b>	<b>0.1024</b>	V.V00 <del>4</del>	0.0354

### SAR, Z Axis Scan (X = -3, Y = -7)





## **MEASUREMENT 10**

Report No: KS100816B01

Date of measurement: 30/8/2010

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

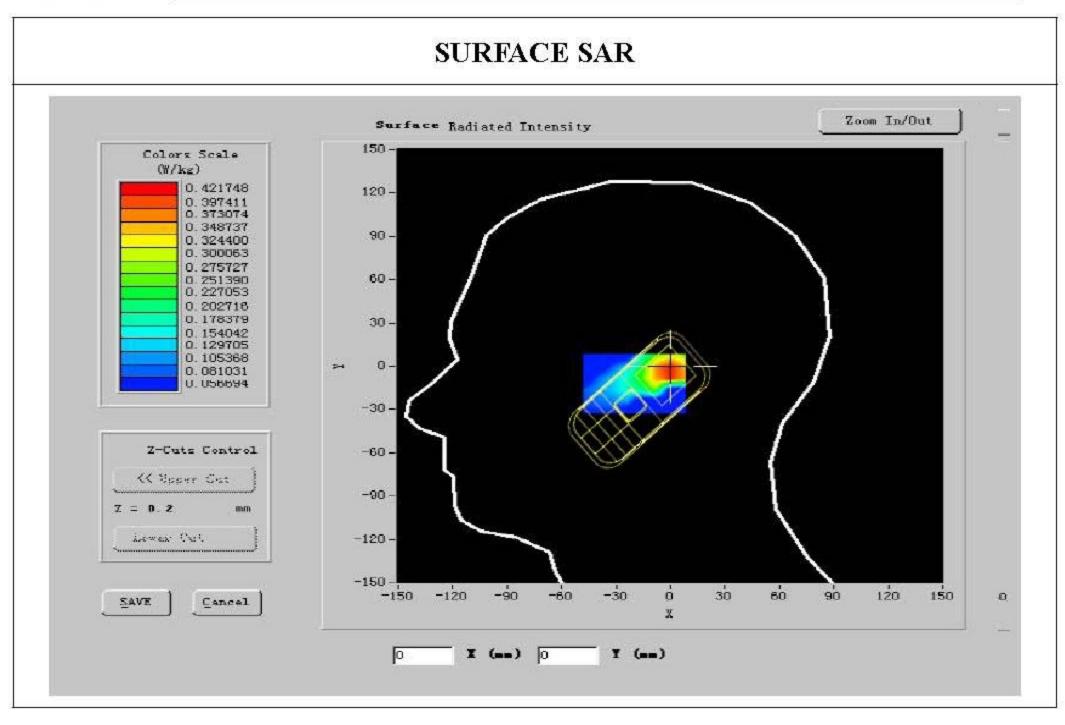
#### A. Experimental conditions.

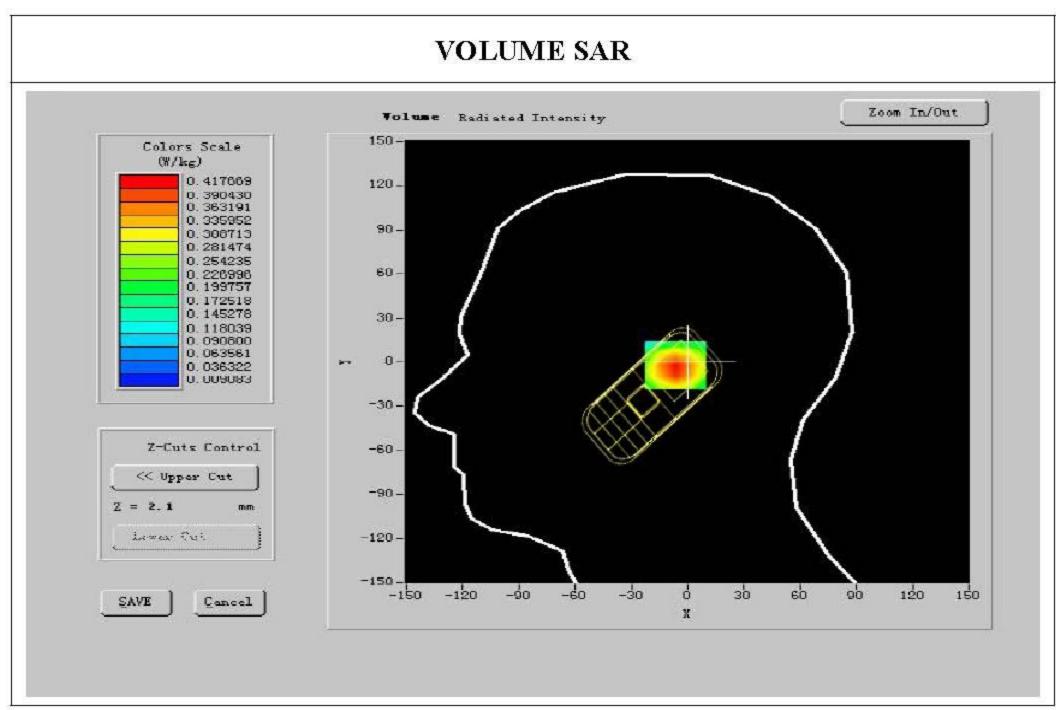
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Left head	
<b>Device Position</b>	Tilt	
Band	GSM1900	
Channels	Low	
Signal	GSM	

### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1850.400024
Relative permitivity (real part)	40.313134
Relative permitivity (imaginary part)	13.584900
Conductivity (S/m)	1.416243
Variation (%)	-0.700000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8





Report No: KS100816B01

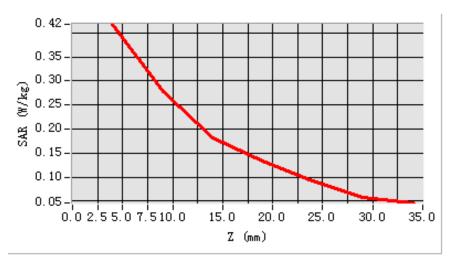
#### **Maximum location: X=-13.00, Y=-3.00**

SAR 10g (W/Kg)	0.256978
SAR 1g (W/Kg)	0.403289

#### Z Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4022	0.2224	0.2124	0.1074	0.0064	0.0554
(W/kg)	0.0000	0.4032	0.3224	0.2134	0.1864	0.0864	0.0554

#### SAR, Z Axis Scan (X = 0, Y = -2)





Report No: KS100816B01

## **MEASUREMENT 11**

Date of measurement: 30/8/2010

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

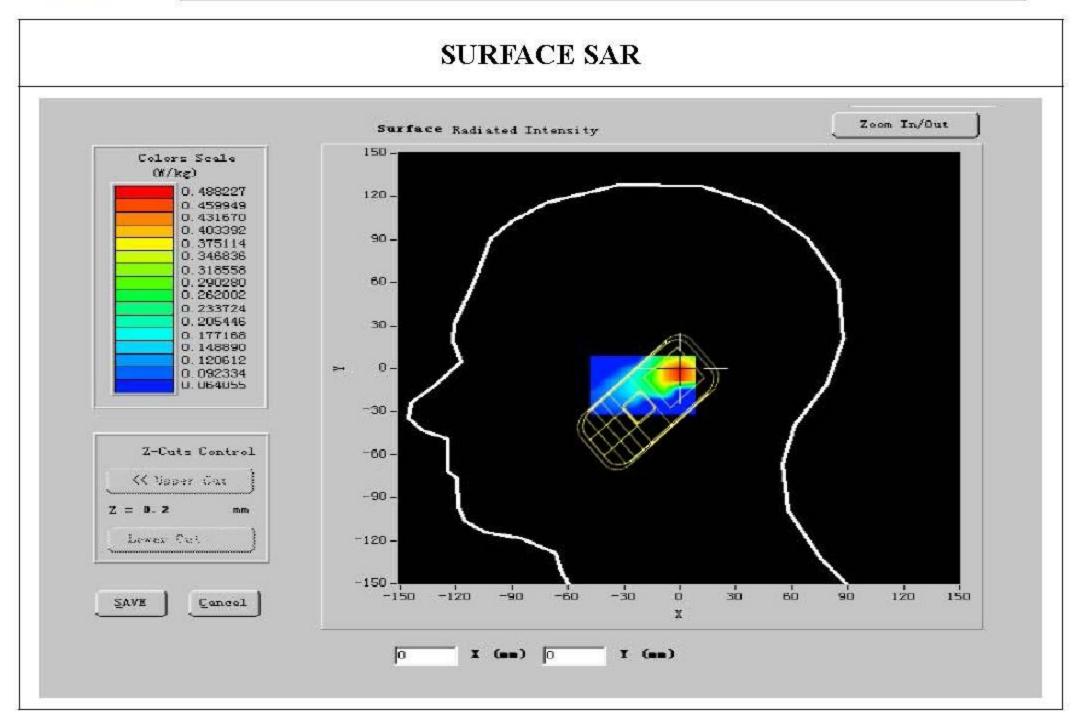
#### A. Experimental conditions.

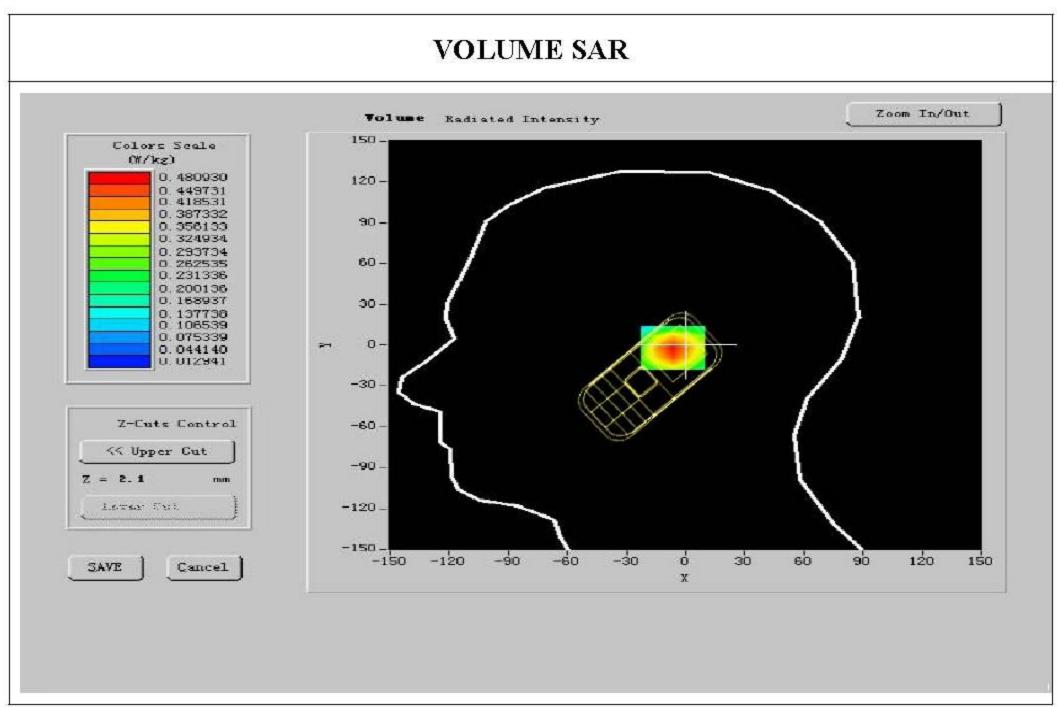
Phantom File	zinf15.txt, Adaptative 2 max
Phantom	Left head
<b>Device Position</b>	Tilt
Band	GSM1900
Channels	Middle
Signal	GSM

### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1880.000000
Relative permitivity (real part)	40.193001
Relative permitivity (imaginary part)	13.813800
Conductivity (S/m)	1.413245
Variation (%)	-1.100000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8





Report No: KS100816B01

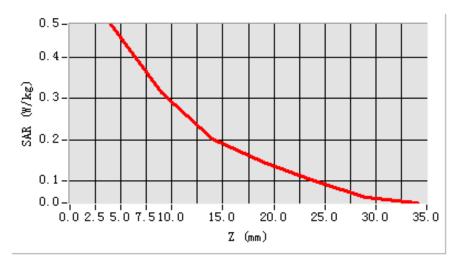
#### **Maximum location: X=-13.00, Y=-3.00**

SAR 10g (W/Kg)	0.256123
SAR 1g (W/Kg)	0.446892

#### Z Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4469	0.2024	0.1024	0.1564	0.0064	0.0004
(W/kg)	0.0000	0.4468	0.3024	0.1934	0.1564	0.0864	0.0084

### SAR, Z Axis Scan (X = 0, Y = -2)





## **MEASUREMENT 12**

Report No: KS100816B01

Date of measurement: 30/8/2010

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

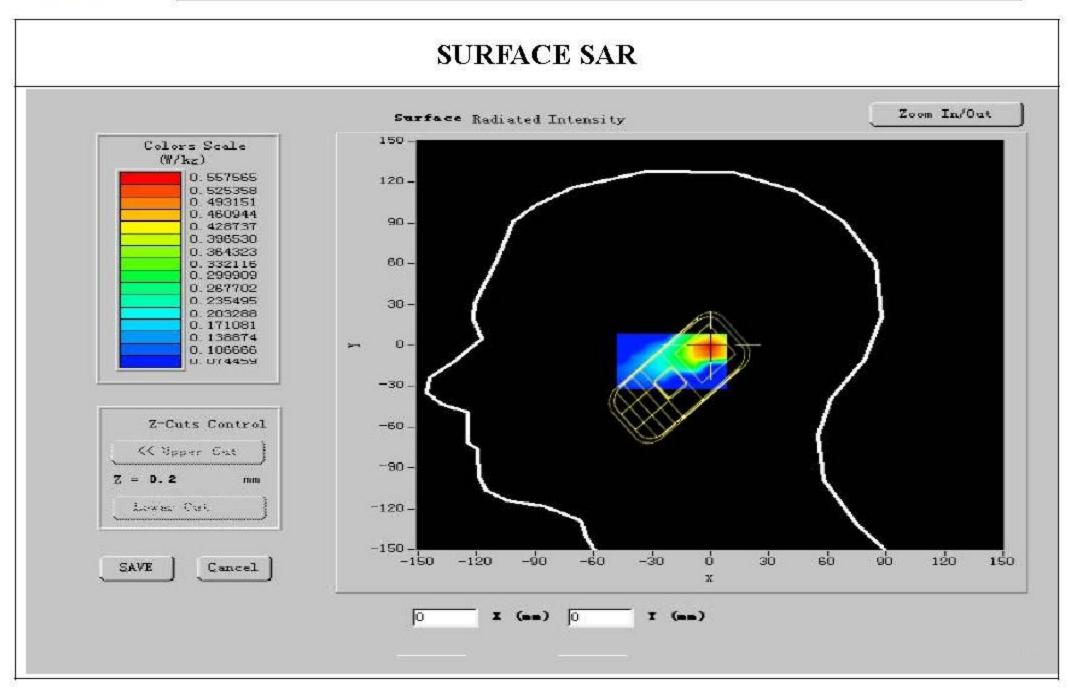
#### A. Experimental conditions.

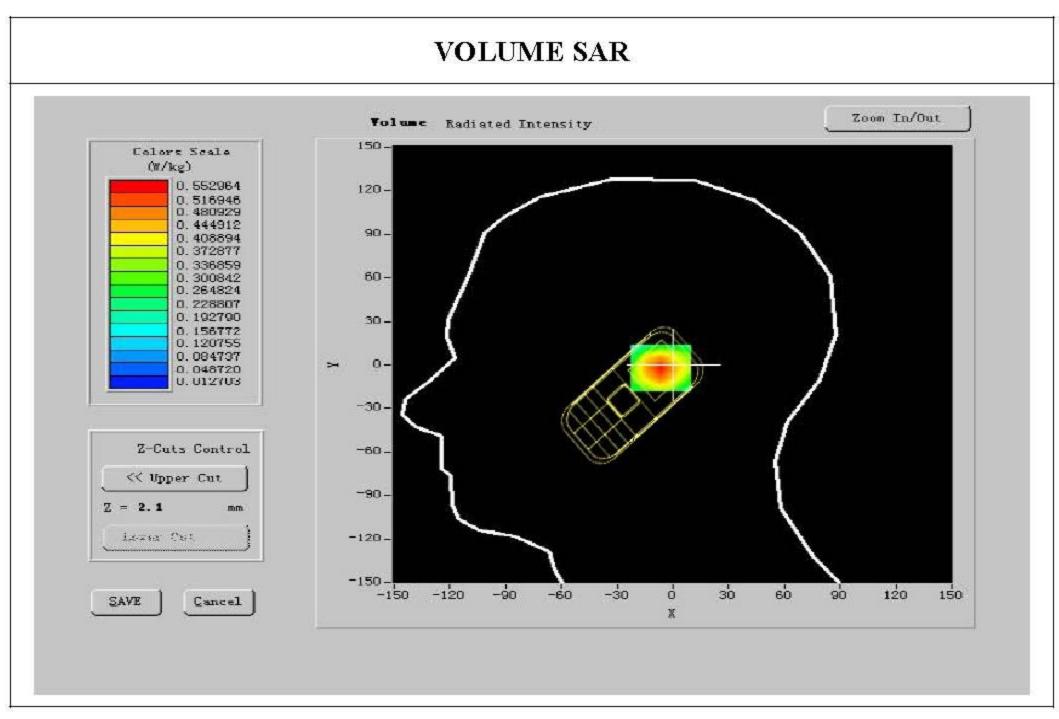
Phantom File	zinf15.txt, Adaptative 2 max
Phantom	Left head
<b>Device Position</b>	Tilt
Band	GSM1900
Channels	High
Signal	GSM

### **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1909.599976
Relative permitivity (real part)	40.285999
Relative permitivity (imaginary part)	13.669900
Conductivity (S/m)	1.420225
Variation (%)	-1.130000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.91, 43.15, 56.44
Crest factor:	1:8





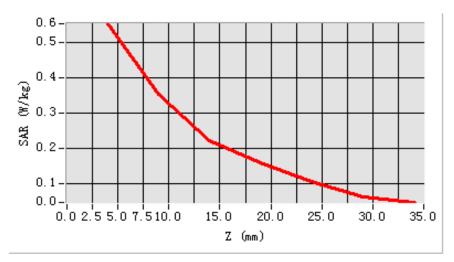
Report No: KS100816B01

SAR 10g (W/Kg)	0.365651
SAR 1g (W/Kg)	0.487752

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0 0000	0.4977	0.2277	0.1024	0.1464	0.1264	0 0000
(W/kg)	0.0000	0.4877	0.3377	0.1934	0.1464	0.1264	0.0089

### SAR, Z Axis Scan (X = 0, Y = -2)





## **MEASUREMENT 13**

Report No: KS100816B01

Date of measurement: 30/8/2010

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.

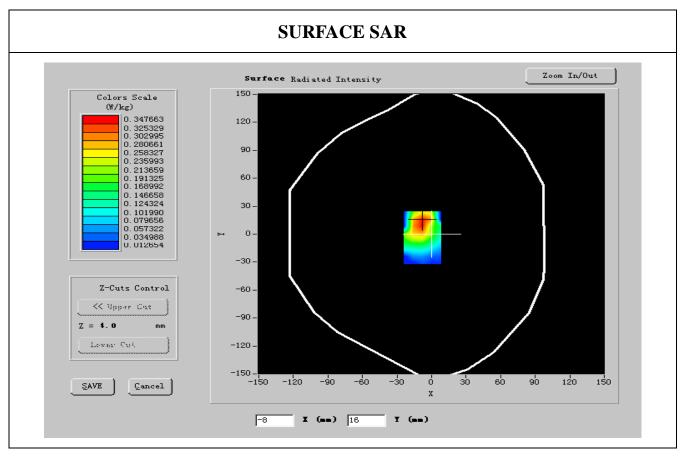
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Body	
<b>Device Position</b>	FrontSide toward phantom	
Band	GSM1900	
Channels	Low	
Signal	GSM	

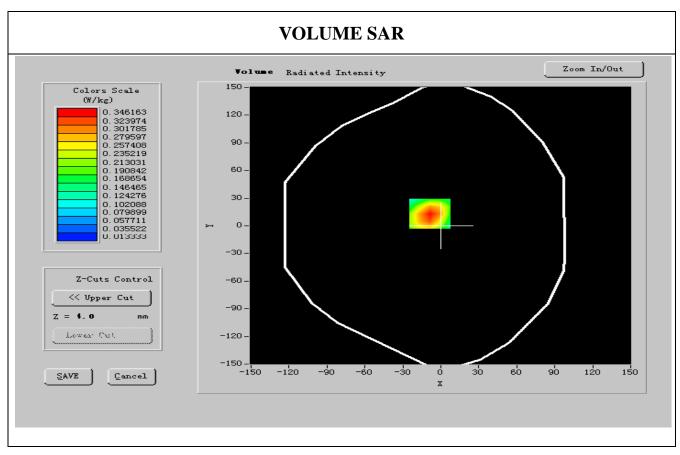
## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1850.400024
Relative permitivity (real part)	52.313000
Relative permitivity (imaginary part)	13.584900
Conductivity (S/m)	1.416522
Variation (%)	-0.130000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.01, 42.41, 55.65
Crest factor:	1:8







Report No: KS100816B01

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

SAR 10g (W/Kg)	0.200652
SAR 1g (W/Kg)	0.313356

### Z Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.2122	0.2873	0.1024	0 1464	0.1264	0.0089
(W/kg)	0.0000	0.3133	0.2873	0.1934	0.1464	0.1264	<b>0.0089</b>

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





## **MEASUREMENT 14**

Report No: KS100816B01

Date of measurement: 30/8/2010

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.

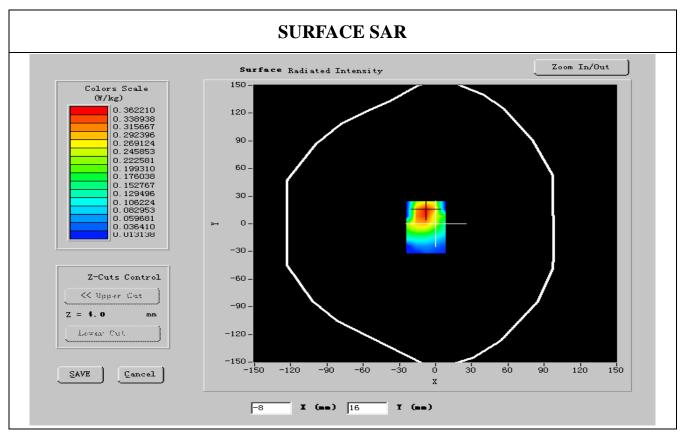
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Body	
<b>Device Position</b>	FrontSide toward phantom	
Band	GSM1900	
Channels	Middle	
Signal	GSM	

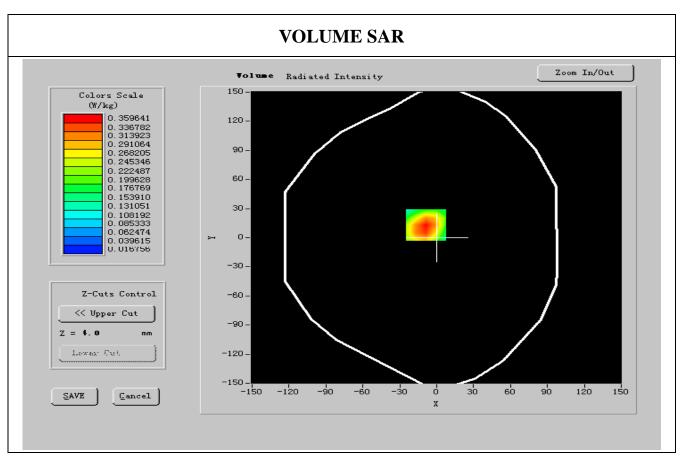
## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1880.000000
Relative permitivity (real part)	52.893001
Relative permitivity (imaginary part)	13.813800
Conductivity (S/m)	1.512775
Variation (%)	-0.700000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.01, 42.41, 55.65
Crest factor:	1:8







Report No: KS100816B01

SAR 10g (W/Kg)	0.203691
SAR 1g (W/Kg)	0.315239

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.2152	0.2022	0.1923	0.1422	0.0022	0.0200
(W/kg)	0.0000	0.3152	0.2832	0.1923	0.1423	0.0932	0.0309

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





## **MEASUREMENT 15**

Report No: KS100816B01

Date of measurement: 30/8/2010

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.

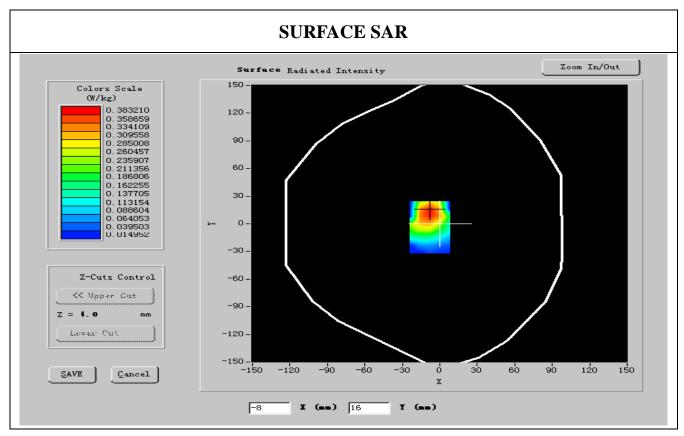
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Body	
<b>Device Position</b>	FrontSide toward phantom	
Band	GSM1900	
Channels	High	
Signal	GSM	

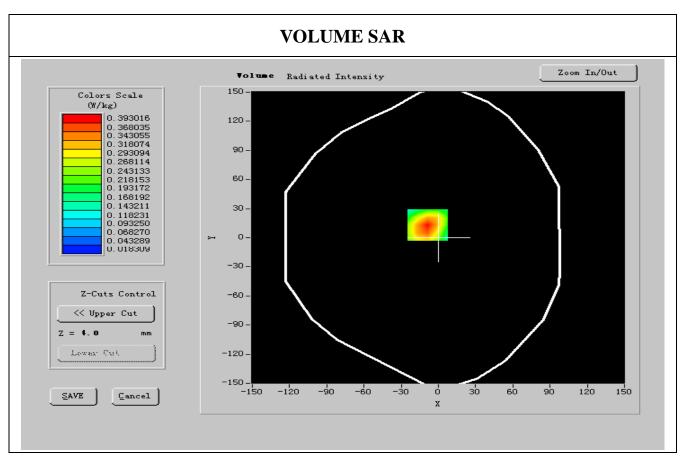
## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1909.599976
Relative permitivity (real part)	52.885999
Relative permitivity (imaginary part)	13.669900
Conductivity (S/m)	1.510225
Variation (%)	-0.600000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.01, 42.41, 55.65
Crest factor:	1:8







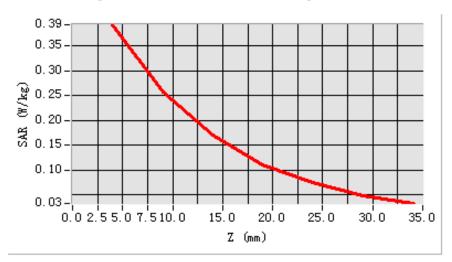
Report No: KS100816B01

SAR 10g (W/Kg)	0.245223
SAR 1g (W/Kg)	0.357196

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.3571	0.2832	0.1823	0.1423	0.0923	0.0322
(W/kg)	0.0000	0.33/1	U.2032	U.1043	U.1423	0.0923	U.U322

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





## **MEASUREMENT 16**

Report No: KS100816B01

Date of measurement: 30/8/2010

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.

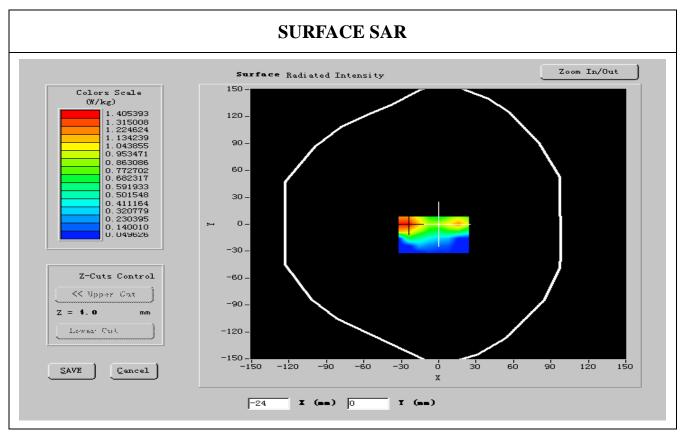
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Body	
<b>Device Position</b>	FrontSide toward phantom	
Band	GPRS1900	
Channels	Low	
Signal	GPRS	

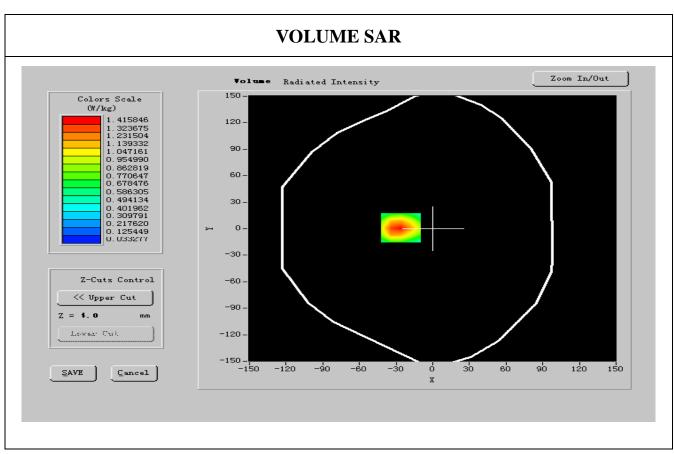
## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1710.199951
Relative permitivity (real part)	52.347400
Relative permitivity (imaginary part)	14.450693
Conductivity (S/m)	1.533698
Variation (%)	-0.400000
Ambient Temperature:	21 °C
Liquid Temperature:	20 °C
ConvF:	41.01, 42.41, 55.65
Crest factor:	1:4







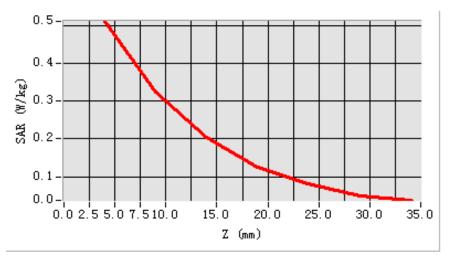
Report No: KS100816B01

SAR 10g (W/Kg)	0.219562
SAR 1g (W/Kg)	0.418852

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4100	0.2024	0.1020	0.1522	0.0054	0.0072
(W/kg)	0.0000	0.4188	0.2834	0.1920	0.1523	0.0854	0.0072

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





# **MEASUREMENT 17**

Report No: KS100816B01

Date of measurement: 30/8/2010

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.

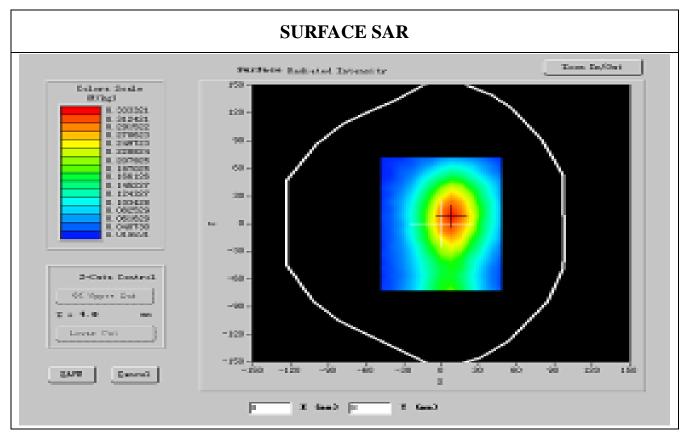
Phantom File	zinf15.txt, Adaptative 2 max	
Phantom	Body	
<b>Device Position</b>	FrontSide toward phantom	
Band	GPRS1900	
Channels	Middle	
Signal	GPRS	

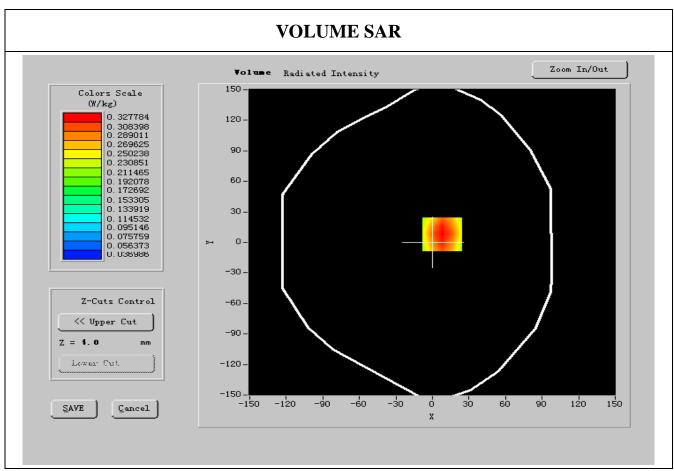
## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1747.400004		
Relative permitivity (real part)	51.417028		
Relative permitivity (imaginary part)	14.293556		
Conductivity (S/m)	1.514286		
Variation (%)	-1.010000		
Ambient Temperature:	21 °C		
Liquid Temperature:	20 °C		
ConvF:	41.01, 42.41, 55.65		
Crest factor:	1:4		







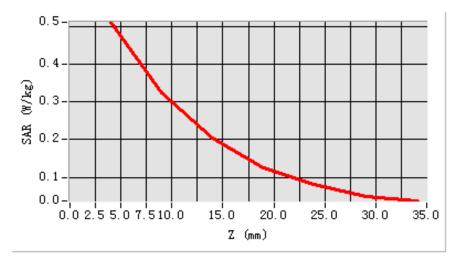
Report No: KS100816B01

SAR 10g (W/Kg)	0.215362
SAR 1g (W/Kg)	0.424258

#### Z Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4242	0.2024	0.1920	0.1222	0.0054	0.0062
(W/kg)	0.0000 0.4242	0.3034	0.1820	0.1323	0.0954	0.0062	

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





## **MEASUREMENT 18**

Report No: KS100816B01

Date of measurement: 30/8/2010

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.

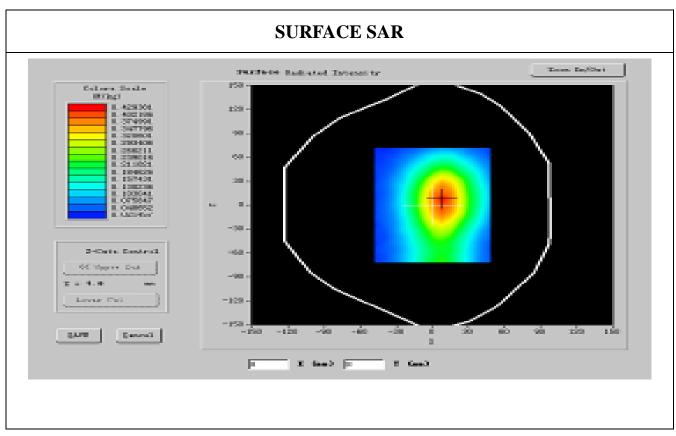
Phantom File	zinf15.txt, Adaptative 2 max		
Phantom	Body		
<b>Device Position</b>	FrontSide toward phantom		
Band	GPRS1900		
Channels	High		
Signal	GPRS		

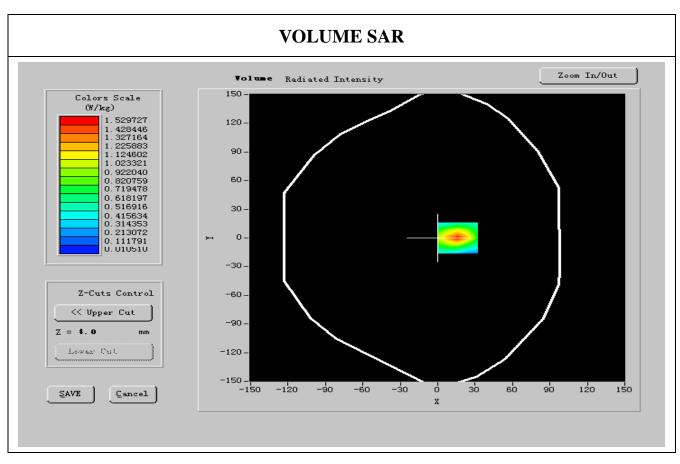
## **B.** Instrumentations.

PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)	Calibrated: N/A
Wireless Communication	R&S (CMU200, SN:B23-03291)	Calibrated: 06/17/2010
Test Set		
Network Analyzer	Agilent(E5071B, MY42301382)	Calibrated: 08/07/2010
Voltmeter	Keithley (2000, SN:1015843)	Calibrated: 05/01/2010
Signal Generator	Agilent (E8257C, SN:MY43321570)	Calibrated: 08/07/2010
Amplifier	Mini-Circuits (ZHL-42, SN:110405)	Calibrated: 07/29/2010
Power Meter	Agilent (E4416A, SN:QB41292714)	Calibrated: 07/29/2010
Probe	Antennessa (SN:SN_1109_EP_100)	Calibrated: 05/05/2011
DIPOLE 1900	Antennessa (DIPI36, SN 48/05)	Calibrated: 12/10/2010
Phantom	Antennessa (SN:SN41_05_SAM29)	Calibrated: N/A
Liquid	Antennessa	Calibrated: N/A
Measurement SW	OPEN SAR V2.1	Calibrated: N/A

Frequency (MHz)	1784.599036		
Relative permitivity (real part)	51.813332		
Relative permitivity (imaginary part)	14.319230		
Conductivity (S/m)	1.513224		
Variation (%)	-0.130000		
Ambient Temperature:	21 °C		
Liquid Temperature:	20 °C		
ConvF:	41.01, 42.41, 55.65		
Crest factor:	1:4		







SAR 10g (W/Kg)	0.265841
SAR 1g (W/Kg)	0.446721

#### **Z** Axis Scan

Z(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR	0.0000	0.4467	0.2054	Λ 10 <i>6</i> 5	0.1224	0.0754	0.0022
(W/kg)	0.0000 0.4467	0.3054	0.1865	0.1234	0.0754	0.0032	

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

