| | |
|---|---|
| | **System Validation Plots** |
| | **Project name :** |
| | **KS100823B02-SF** |

**EUT DESCRIPTION**

| | |
|---|---|
| Product: | Mobile Phone |
| Model: | Tike |
| Trade name: | Xeuss |
| Tested: | August 24, 2010 |
| Applicant: | **Mastercell LLC**<br>759 Bloomfield Ave 161 West Caldwell, NJ 07006 USA |

Air Temperature: 21 °C Liqued Temperature: 20 °C

Crest Factor: CW:___1__ GSM:__8___ GPRS 10: __4___

**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

**Probe：** Antennessa (SN:SN_1109_EP_100)

**Compliance Certification Services (Kunshan) Inc.**
**No.10, Weiye Rd., Innovation Park, Eco & Tec. Development Part,**
**Kunshan City, Jiangsu Province, PRC.**
**TEL: 86-512-57355888**
**FAX: 86-512-57370818**
**http://www.ccsrf.com**

# 850 HEAD VALIDATION

## I. RESULTS

| | TYPE | PARAMETERS |
|---|---|---|
| **GSM850** | Noise | -- |
| | Validation | Measurement 1: Validation Plane with Dipole device position on Middle Channel in CW mode |
| | Phone | -- |

# MEASUREMENT 1

Type: Validation measurement (Complete)

Date of measurement: 08/24/2010

Measurement duration: 6 minutes 41 seconds

Mobile Phone IMEI number: --

## A. Experimental conditions.

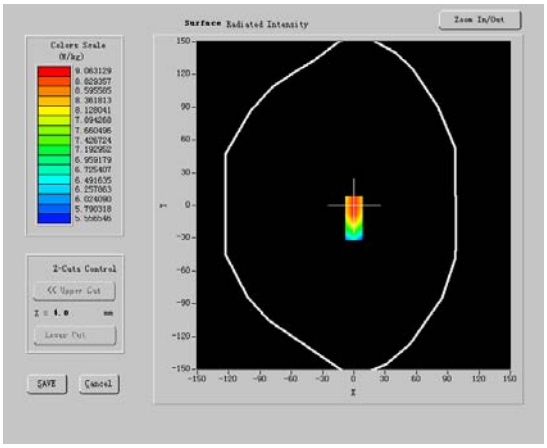
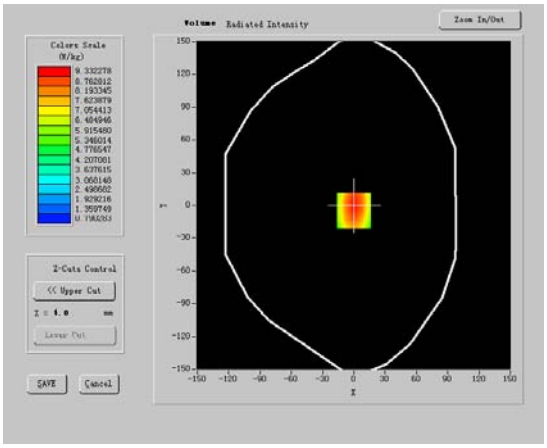
| | |
|---|---|
| **Phantom File** | surf_sam_plan.txt, Adaptative 2 max |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | GSM850 |
| **Channels** | Middle |
| **Signal** | CW |

## B. Instrumentations.

| | |
|---|---|
| **PC** | HP (Pentium(R) V 3.06GHz, SN:375052-AA1) |
| **Network Emulator** | R&S (CMU200, SN:B23-03291) |
| **Voltmeter** | Keithley (2000, SN:1015843) |
| **Synthetizer** | Agilent (E8257C, SN:MY43321570) |
| **Amplifier** | Mini-Circuits (ZHL-42, SN:110405) |
| **Power Meter** | Agilent (E4416A, SN:QB41292714) |
| **Probe** | Antennessa (SN:SN_1109_EP_100) |
| **Phantom** | Antennessa (SN:SN41_05_SAM29) |
| **Liquid** | Antennessa |

## C. SAR Measurement Results

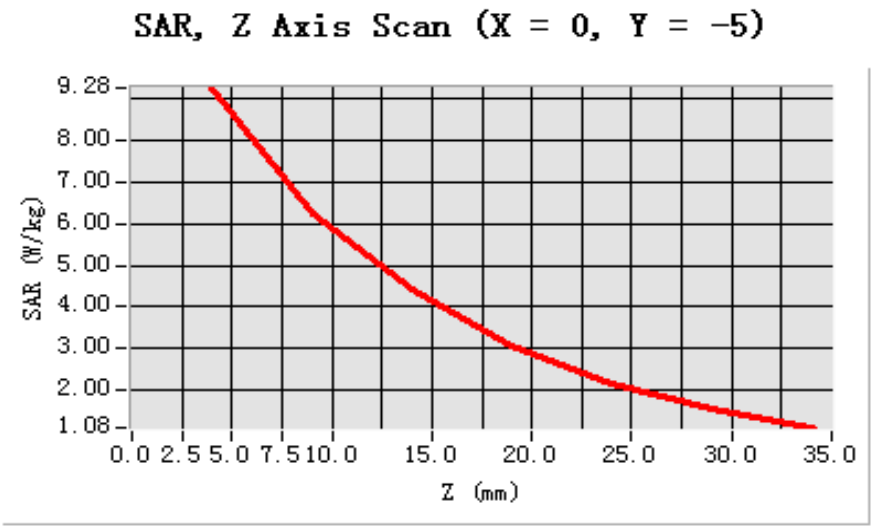
| | |
|---|---|
| **Frequency (MHz)** | 835.000000 |
| **Relative permitivity (real part)** | 41.467443 |
| **Relative permitivity (imaginary part)** | 19.592850 |
| **Conductivity (S/m)** | 0.908114 |
| **Variation (%)** | 0.600000 |

| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=0.00, Y=-5.00**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 6.143568 |
| **SAR 1g (W/Kg)** | 9.321774 |

## Z Axis Scan


SAR, Z Axis Scan (X = 0, Y = -5)
SAR (W/kg)
9.28
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.08
0.0 2.5 5.0 7.5 10.0 15.0 20.0 25.0 30.0 35.0
Z (mm)

# 1900 HEAD VALIDATION

## I. RESULTS

| | TYPE | PARAMETERS |
|---|---|---|
| **GSM1900** | Noise | -- |
| | Validation | Measurement 1: Validation Plane with Cheek device position on Middle Channel in CW mode |
| | Phone | -- |

# MEASUREMENT 1

Type: Validation measurement (Complete)

Date of measurement: 08/24/2010

Measurement duration: 7 minutes 3 seconds

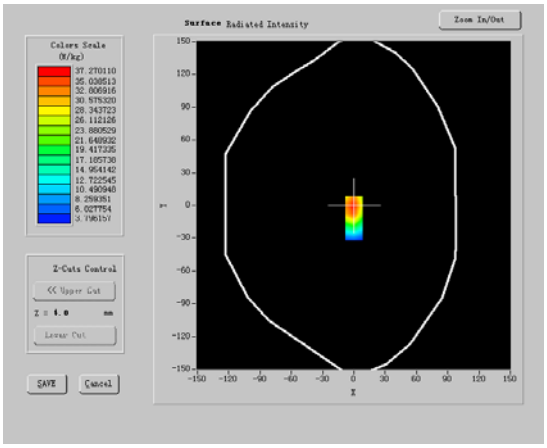
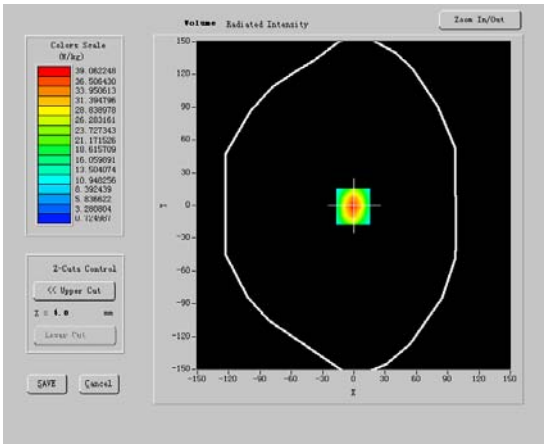
Mobile Phone IMEI number: --

## A. Experimental conditions.

| | |
|---|---|
| **Phantom File** | surf_sam_plan.txt, Adaptative 2 max |
| **Phantom** | Validation plane |
| **Device Position** | Cheek |
| **Band** | GSM1900 |
| **Channels** | Middle |
| **Signal** | CW |

## B. SAR Measurement Results

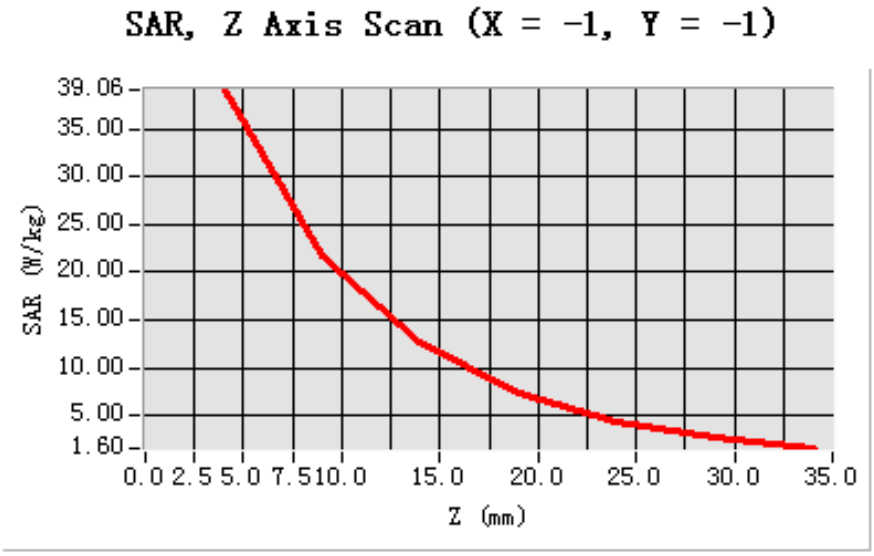
| | |
|---|---|
| **Frequency (MHz)** | 1900.000000 |
| **Relative permitivity (real part)** | 40.233659 |
| **Relative permitivity (imaginary part)** | 13.740258 |
| **Conductivity (S/m)** | 1.412467 |
| **Variation (%)** | 0.085000 |

| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

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

| | |
|---|---|
| **SAR 10g (W/Kg)** | 20.427734 |
| **SAR 1g (W/Kg)** | 38.993579 |

## Z Axis Scan


SAR, Z Axis Scan (X = -1, Y = -1)
39.06
35.00
30.00
25.00
20.00
15.00
10.00
5.00
1.60
SAR (W/kg)
0.0 2.5 5.0 7.5 10.0 15.0 20.0 25.0 30.0 35.0
Z (mm)

# 850 BODY VALIDATION

## I. RESULTS

| | TYPE | PARAMETERS |
|---|---|---|
| **GSM850** | Noise | -- |
| | Validation | Measurement 1: Validation Plane with Dipole device position on Middle Channel in CW mode |
| | Phone | -- |

# MEASUREMENT 1

Type: Validation measurement (Complete)

Date of measurement: 08/24/2010

Measurement duration: 6 minutes 51 seconds

Mobile Phone IMEI number: --

## A. Experimental conditions.

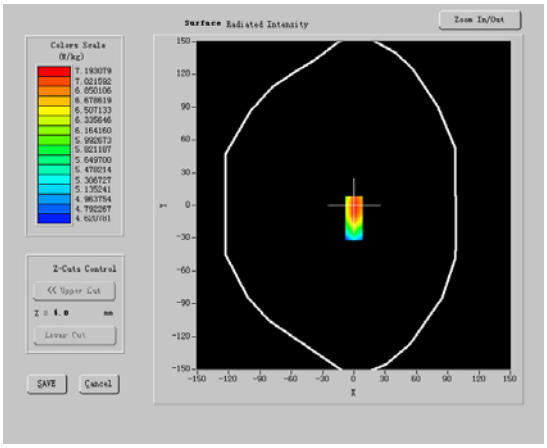
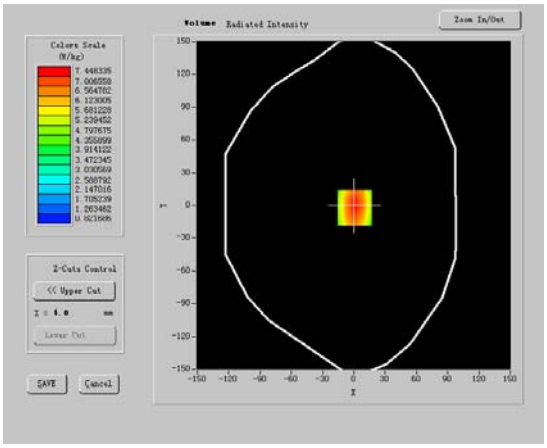
| | |
|---|---|
| **Phantom File** | surf_sam_plan.txt, Adaptative 2 max |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | GSM850 |
| **Channels** | Middle |
| **Signal** | CW |

## B. Instrumentations.

| | |
|---|---|
| **PC** | HP (Pentium(R) V 3.06GHz, SN:375052-AA1) |
| **Network Emulator** | R&S (CMU200, SN:B23-03291) |
| **Voltmeter** | Keithley (2000, SN:1015843) |
| **Synthetizer** | Agilent (E8257C, SN:MY43321570) |
| **Amplifier** | Mini-Circuits (ZHL-42, SN:110405) |
| **Power Meter** | Agilent (E4416A, SN:QB41292714) |
| **Probe** | Antennessa (SN:SN_1109_EP_100) |
| **Phantom** | Antennessa (SN:SN41_05_SAM29) |
| **Liquid** | Antennessa |

## C. SAR Measurement Results

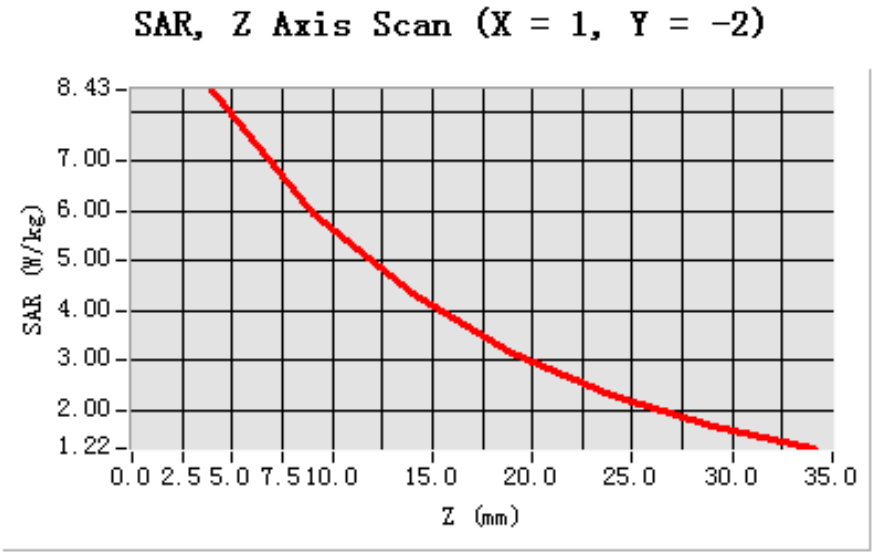
| | |
|---|---|
| **Frequency (MHz)** | 835.000000 |
| **Relative permitivity (real part)** | 55.403325 |
| **Relative permitivity (imaginary part)** | 22.115744 |
| **Conductivity (S/m)** | 0.964369 |
| **Variation (%)** | 0.240000 |

| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=1.00, Y=-2.00**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 6.237842 |
| **SAR 1g (W/Kg)** | 9.627885 |

## Z Axis Scan


SAR, Z Axis Scan (X = 1, Y = -2)
8.43
7.00
6.00
5.00
4.00
3.00
2.00
1.22
SAR (W/kg)
0.0 2.5 5.0 7.5 10.0 15.0 20.0 25.0 30.0 35.0
Z (mm)

# 1900 BODY VALIDATION

## I. RESULTS

| | TYPE | PARAMETERS |
|---|---|---|
| **GSM1900** | Noise | -- |
| | Validation | Measurement 1: Validation Plane with Dipole device position on Middle Channel in CW mode |
| | Phone | -- |

# MEASUREMENT 1

Type: Validation measurement (Complete)

Date of measurement:08/24/2010

Measurement duration: 6 minutes 43 seconds

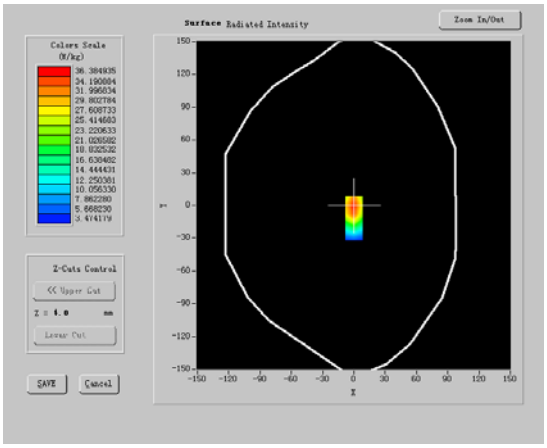
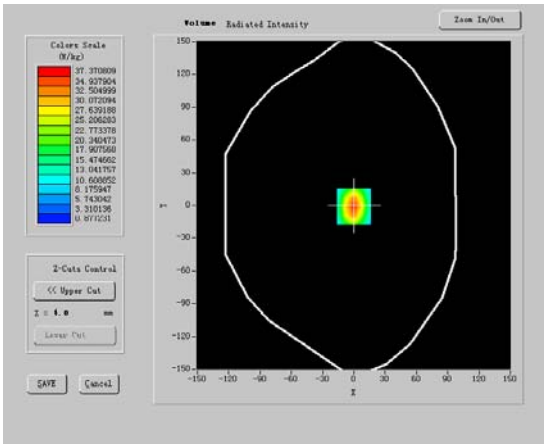
Mobile Phone IMEI number: --

## A. Experimental conditions.

| | |
|---|---|
| **Phantom File** | surf_sam_plan.txt, Adaptative 2 max |
| **Phantom** | Validation plane |
| **Device Position** | Dipole |
| **Band** | GSM1900 |
| **Channels** | Middle |
| **Signal** | CW |

## B. SAR Measurement Results

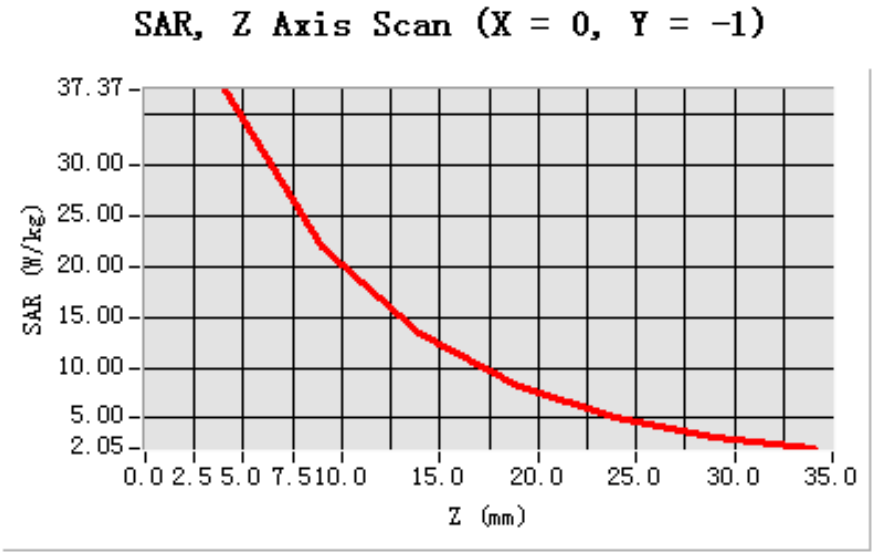
| | |
|---|---|
| **Frequency (MHz)** | 1900.000000 |
| **Relative permitivity (real part)** | 52.993168 |
| **Relative permitivity (imaginary part)** | 13.820000 |
| **Conductivity (S/m)** | 1.515666 |
| **Variation (%)** | -0.500000 |

| **SURFACE SAR** | **VOLUME SAR** |
|---|---|
|  |  |

**Maximum location: X=0.00, Y=-1.00**

| | |
|---|---|
| **SAR 10g (W/Kg)** | 19.693444 |
| **SAR 1g (W/Kg)** | 38.957625 |

## Z Axis Scan


SAR, Z Axis Scan (X = 0, Y = -1)
37.37
30.00
25.00
20.00
15.00
10.00
5.00
2.05
SAR (W/kg)
0.0 2.5 5.0 7.5 10.0 15.0 20.0 25.0 30.0 35.0
Z (mm)