

## SAR Test Report

Product Name : GSM/WCDMA MOBILE PHONE  
Model No. : M4 SS1010  
FCC ID : CLNSS1010

Prepared By: : IAC Compliance Laboratory.  
Address: : No.789 Pu Xing Road, Shanghai, PRC  
Date of Receipt : 2013.03.06  
Date of Test : 2013.03.13-2013.03.15  
Report No. : 20130306 SAR



## Test Report Certification

Date of Issue : Mar.15.2013

Report No. : 20130306 SAR

Product Name : GSM/WCDMA MOBILE PHONE  
Model No. : M4 SS1010  
Trade Name : M4  
Applicant : MFOURTEL MEXICO S.A. DE C.V.  
Address : Montecito 38, Piso 23, Oficina 15. Colonia Nápoles. C.P. 03810 Mexico  
Standard : FCC 47 CFR Part2 (2.1093)  
IEEE C95.1-1999  
IEEE 1528-2003  
FCC OET Bulletin 65 supplement C  
FCC KDB 648474 D01 v01r05  
FCC KDB 447498 D01 v05  
FCC KDB 941225 D03 v01  
FCC KDB 248227 D01 v01r02

Test Result : Complied

The Test Results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of IAC Compliance Laboratory.

Documented By : Judy Ge, Mar.15.2013  
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Alice Lee/Engineer

Approved By : Jeff Huang, Mar.15.2013  
Jeff Huang/Director of Operations

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**1. GENERAL INFORMATION****1.1. Applicant**

Company Name: MFOURTEL MEXICO S.A. DE C.V.

Address: Montecito 38, Piso 23, Oficina 15. Colonia Nápoles. C.P. 03810 Mexico

**1.2. Manufacturer**

Company Name: CK Telecom Limited

Address: Technology Road.High-Tech Development Zone. Heyuan, Guangdong,P.R.China.

**1.3. Test Environment**

Ambient conditions in the laboratory:

| Items          | Required | Actural |
|----------------|----------|---------|
| Temperature(℃) | 15~30    | 21.4    |
| Humidity(%RH)  | 30~70    | 46      |

## 2. SAR Measurement System

### 2.1. ALSAS-10U System Description

ALSAS-10-U is fully compliant with the technical and scientific requirements of IEEE 1528, IEC 62209, CENELEC, ARIB, ACA, and the Federal Communications Commission. The system comprises of a six axes articulated robot which utilizes a dedicated controller.

ALSAS-10U uses the latest methodologies and FDTD order to provide a platform which is repeatable with minimum uncertainty.

#### 2.1.1. Applications

Predefined measurement procedures compliant with the guidelines of CENELEC, IEEE, IEC, FCC, etc are utilized during the assessment for the device. Automatic detection for all SAR maxima are embedded within the core architecture for the system, ensuring that peak locations used for centering the zoom scan are within a 1mm resolution and a 0.05mm repeatable position. System operation range currently is available up to 6 GHz in simulated tissue.



### 2.1.2. Area Scans

Area Scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 10mm<sup>2</sup> step integral, with 1mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

### 2.1.3. Zoom Scan (Cube Scan Averaging)

The averaging zoom scan volume utilized in the ALSAS-10U software is in the shape of a cube and the side dimension of a 1g or 10g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000kg/m<sup>3</sup> is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 10mm, with the side length of the 10g cube 21.5mm.

When the cube intersects with the surFront of the phantom, it is oriented so that 3 vertices touch the surFront of the shell or the center of a Front is tangent to the surFront.

The zoom Scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 5 × 5 × 8 (8mm × 8mm × 5mm) providing a volume of 32mm in the X & Y axis, and 35mm in the Z axis.

### 2.1.4. ALSAS-10U Interpolation and Extrapolation Uncertainty

The overall uncertainty for the methodology and algorithms the used during the SAR calculation was evaluated using the data from IEEE 1528 based on the example f3 algorithm:

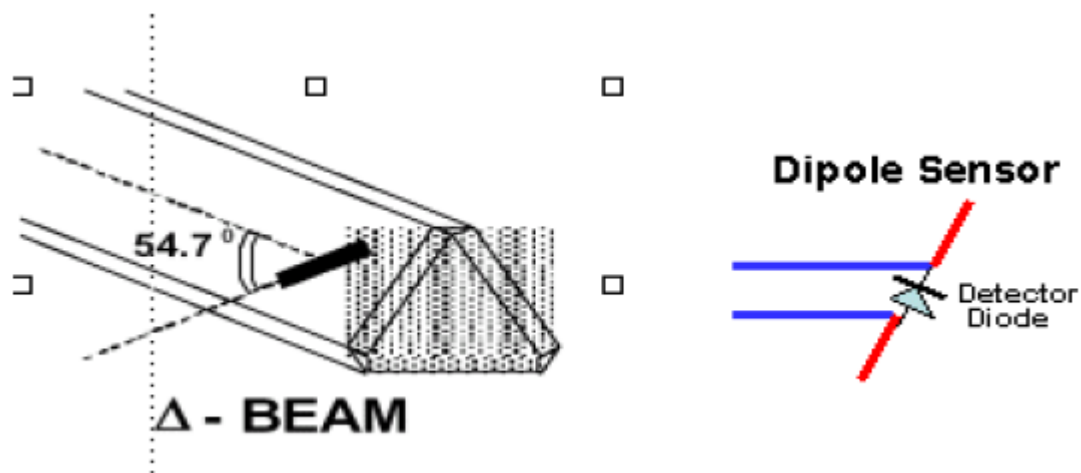
$$f_3(x, y, z) = A \frac{a^2}{\frac{a^2}{4} + x'^2 + y'^2} \cdot \left( e^{-\frac{2z}{a}} + \frac{a^2}{2(a + 2z)^2} \right)$$

## 2.2. Isotropic E-Field Probe

The isotropic E-Field probe has been fully calibrated and assessed for isotropic, and boundary effect within a controlled environment. Depending on the frequency for which the probe is calibrated the method utilized for calibration will change. A number of methods is used for calibrating probes, and these are outlined in the table below:

| Calibration Frequency | Air Calibration | Tissue Calibration |
|-----------------------|-----------------|--------------------|
| 900MHz                | TEM Cell        | Temperature        |
| 1800MHz               | TEM Cell        | Temperature        |

The E-Field probe utilizes a triangular sensor arrangement as detailed in the diagram below:



SAR is assessed with a calibrated probe which moves at a default height of 5mm from the center of the diode, which is mounted to the sensor, to the phantom surFront (in the Z Axis). The 5mm offset height has been selected so as to minimize any resultant boundary effect due to the probe being in close proximity to the phantom surFront.

The following algorithm is an example of the function used by the system for linearization of the output from the probe when measuring complex modulation schemes.

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

### 2.2.1. Isotropic E-Field Probe Specification

|                                      |                                                                                                                                      |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Calibration in Air</b>            | Frequency Dependent<br>Below 2GHz Calibration in air performed in a TEM Cell<br>Above 2GHz Calibration in air performed in waveguide |
| <b>Sensitivity</b>                   | $0.70 \mu\text{V}/(\text{V/m})^2$ to $0.85 \mu\text{V}/(\text{V/m})^2$                                                               |
| <b>Dynamic Range</b>                 | 0.0005 W/kg to 100W/kg                                                                                                               |
| <b>Isotropic Response</b>            | Better than 0.2dB                                                                                                                    |
| <b>Diode Compression point (DCP)</b> | Calibration for Specific Frequency                                                                                                   |
| <b>Probe Tip Radius</b>              | < 5mm                                                                                                                                |
| <b>Sensor Offset</b>                 | 1.56 (+/- 0.02mm)                                                                                                                    |
| <b>Probe Length</b>                  | 290mm                                                                                                                                |
| <b>Video Bandwidth</b>               | @ 500 Hz: 1dB<br>@1.02 KHz: 3dB                                                                                                      |
| <b>Boundary Effect</b>               | Less than 2% for distance greater than 2.4mm                                                                                         |
| <b>Spatial Resolution</b>            | Diameter less than 5mm Compliant with Standards                                                                                      |

Probe model no: ALS-E-020, S/N:500-00273

### 2.3. Boundary detection Unit and Probe Mounting Device

ALSAS-10U incorporates a boundary detection unit with a sensitivity of 0.05mm for detecting all types of surFronts. The robust design allows for detecting during probe tilt (probe normalize) exercises, and utilizes a second stage emergency sTop. The signal electronics are directly into the robot controller for high accuracy surFront detection in lateral and axial detection modes (X, Y, &Z).

The probe is mounted directly onto the Boundary Detection unit for accurate tooling and displacement calculations controlled by the robot kinematics. The probe is connected to an isolated probe interconnect where the output stage of the probe is fed directly into the amplifier stage of the Daq-Paq.



## 2.4. Daq-Paq (Analog to Digital Electronics)

ALSAS-10U incorporates a fully calibrated Daq-Paq (analog to digital conversion system) which has a 4 channel input stage, sent via a 2 stage auto-set amplifier module. The input signal is amplified accordingly so as to offer a dynamic range from  $5 \mu\text{V}$  to 800mV. Integration of the fields measured is carried out at board level utilizing a Co-Processor which then sends the measured fields down into the main computational module in digitized form via a RS232 communications port. Probe linearity and duty cycle compensation is carried out within the main Daq-Paq module.

|                          |                                                                 |
|--------------------------|-----------------------------------------------------------------|
| <b>ADC</b>               | 12 Bit                                                          |
| Amplifier Range          | 20mV to 200mV and 150mV to 800mV                                |
| Field Integration        | Local Co-Processor utilizing proprietary integration algorithms |
| Number of Input Channels | 4 in total 3 dedicated and 1 spare                              |
| Communication            | Packet data via RS232                                           |

## 2.5. Axis Articulated Robot

ALSAS-10U utilizes a six articulated robot, which is controlled using a Pentium based real-time movement controller. The movement kinematics engine utilizes proprietary (Thermo CRS) interpolation and extrapolation algorithms, which allow full freedom of movement for each of the six joints within the working envelop. Utilization of joint 6 allows for full probe rotation with a tolerance better than 0.05mm around the central axis.



|                                      |                                   |
|--------------------------------------|-----------------------------------|
| <b>Robot/Controller Manufacturer</b> | Thermo CRS                        |
| <b>Number of Axis</b>                | Six independently controlled axis |
| <b>Positioning Repeatability</b>     | 0.05mm                            |
| <b>Controller Type</b>               | Single phase Pentium based C500C  |
| <b>Robot Reach</b>                   | 710mm                             |
| <b>Communication</b>                 | RS232 and LAN compatible          |

## 2.6. ALSAS Universal Workstation

ALSAS Universal workstation allows for repeatability and fast adaptability. It allows users to do calibration, testing and measurement using different types of phantoms with one set up, which significantly speeds up the measurement process.

## 2.7. Universal Device Positioner

The universal device positioner allows complete freedom of movement of the EUT. Developed to hold a EUT in a free-space scenario any additional loading attributable to the material used in the construction of the positioner has been eliminated. Repeatability has been enhanced through the linear scales which form the design used to indicate positioning for any given test scenario in all major axes. A 15° tilt movements for head SAR analysis. Overall uncertainty for measurements has been reduced due to the design of the Universal device positioner, which allows positioning of a device in as near to a free-space scenario as possible, and by providing the means for complete repeatability.

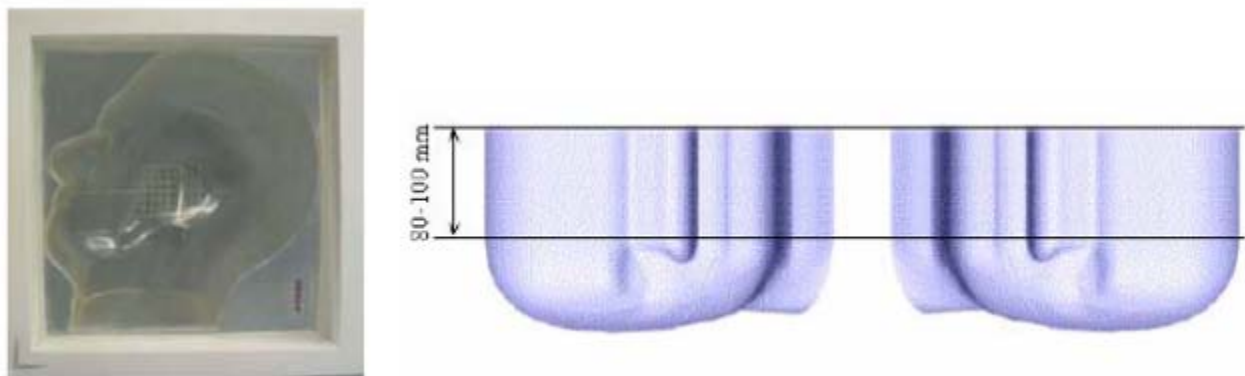


## 2.8. Phantom Types

The ALSAS-10U allows the integration of multiple phantom types. SAM Phantoms fully compliant with IEEE 1528, Universal Phantom, and Universal Flat.

### 2.8.1. APREL SAM Phantoms

The SAM phantoms developed using the IEEE SAM CAD file. They are fully compliant with the requirements for both IEEE 1528 and FCC Supplement C. Both the left and right SAM phantoms are interchangeable, transparent and include the IEEE 1528 grid with visible NF and MB lines.



### 2.8.2. APREL Laboratories Universal Phantom

The Universal Phantom is used on the ALSAS-10U as a system validation phantom. The Universal Phantom has been fully validated both experimentally from 800MHz to 6GHz and numerically using XFDTD numerical software. The shell thickness is 2mm overall, with a 4mm spacer located at the NF/MB intersection providing an overall thickness of 6mm in line with the requirements of IEEE-1528.

The design allows for fast and accurate measurements, of handsets, by allowing the conservative SAR to be evaluated at on frequency for both left and right head experiments in one measurement.



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### 3. Tissue Simulating Liquid

#### 3.1. The composition of the tissue simulating liquid

| INGREDIENT<br>(% Weight) | 850MHz | 1900MHZ | 850MHZ | 1900MHz | 2450MHz | 2450MHz |
|--------------------------|--------|---------|--------|---------|---------|---------|
|                          | Head   | Head    | Body   | Body    | Head    | Body    |
| Water                    | 40.45% | 54.9%   | 45.0%  | 70.17%  | 55%     | 73.2%   |
| Salt                     | 1.45%  | 0.18%   | 52.4%  | 0.39%   | 0%      | 0%      |
| Sugar                    | 57.6%  | 0%      | 1.4%   | 0%      | 0%      | 0%      |
| HEC                      | 0.4%   | 0%      | 1.0%   | 0%      | 0%      | 0%      |
| Preventol                | 0.1%   | 0%      | 0.1%   | 0%      | 0%      | 0%      |
| DGBE                     | 0%     | 44.92%  | 0%     | 29.44%  | 45%     | 26.76%  |

### 3.2. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to SAR evaluation using APREL Dielectric Probe Kit and Agilent E5071B Vector Network Analyzer.

| Head Tissue Simulate Measurement |                  |                       |                |                  |
|----------------------------------|------------------|-----------------------|----------------|------------------|
| Frequency<br>(MHz)               | Description      | Dielectric Parameters |                | Tissue Temp.(°C) |
|                                  |                  | $\epsilon_r$          | $\sigma$ (s/m) |                  |
| 850MHz                           | Reference result | 41.5                  | 0.90           | NA               |
|                                  | +/-5% window     | 39.425to43.575        | 0.855to0.945   |                  |
|                                  | 13-Mar-13        | 40.25                 | 0.93           | 20.7             |
| 1900MHz                          | Reference result | 40.0                  | 1.40           | NA               |
|                                  | +/-5% window     | 38to42                | 1.33 to 1.47   |                  |
|                                  | 13-Mar-13        | 41.53                 | 1.42           | 20.7             |
| 2450MHz                          | Reference result | 39.2                  | 1.80           | NA               |
|                                  | +/-5% window     | 37.24to41.16          | 1.71to1.89     |                  |
|                                  | 13-Mar-13        | 40.27                 | 1.85           | 20.7             |

| Body Tissue Simulate Measurement |                  |                       |                |                  |
|----------------------------------|------------------|-----------------------|----------------|------------------|
| Frequency<br>(MHz)               | Description      | Dielectric Parameters |                | Tissue Temp.(°C) |
|                                  |                  | $\epsilon_r$          | $\sigma$ (s/m) |                  |
| 850MHz                           | Reference result | 55.2                  | 0.97           | NA               |
|                                  | +/-5% window     | 52.44to57.96          | 0.922to1.019   |                  |
|                                  | 13-Mar-13        | 53.14                 | 0.98           | 20.7             |
| 1900MHz                          | Reference result | 53.3                  | 1.52           | NA               |
|                                  | +/-5% window     | 50.635to55.965        | 1.444to1.596   |                  |
|                                  | 13-Mar-13        | 52.95                 | 1.54           | 20.7             |
| 2450MHz                          | Reference result | 52.7                  | 1.95           | NA               |
|                                  | +/-5% window     | 50.065to55.335        | 1.852to2.0475  |                  |
|                                  | 13-Mar-13        | 53.34                 | 1.93           | 20.7             |

### 3.3. Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in PP1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1428 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

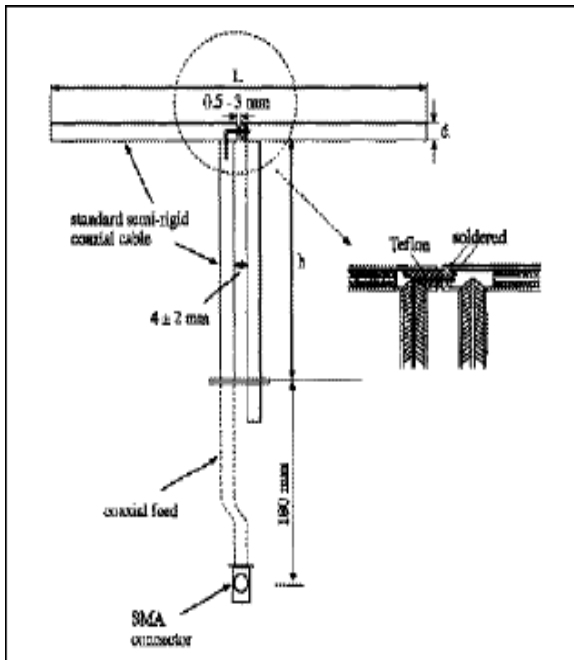
| Target Frequency | Head         |                | Body         |                |
|------------------|--------------|----------------|--------------|----------------|
| (MHz)            | $\epsilon_r$ | $\sigma$ (S/m) | $\epsilon_r$ | $\sigma$ (S/m) |
| 150              | 52.3         | 0.76           | 61.9         | 0.80           |
| 300              | 45.3         | 0.87           | 58.2         | 0.92           |
| 450              | 43.5         | 0.87           | 56.7         | 0.94           |
| 835              | 41.5         | 0.90           | 55.2         | 0.97           |
| 900              | 41.5         | 0.97           | 55.0         | 1.05           |
| 915              | 41.5         | 0.98           | 55.0         | 1.06           |
| 1450             | 40.5         | 1.20           | 54.0         | 1.30           |
| 1610             | 40.3         | 1.29           | 53.8         | 1.40           |
| 1800 – 2000      | 40.0         | 1.40           | 53.3         | 1.52           |
| 2450             | 39.2         | 1.80           | 52.7         | 1.95           |
| 3000             | 38.5         | 2.40           | 52.0         | 2.73           |
| 5800             | 35.3         | 5.27           | 48.2         | 6.00           |

(  $\epsilon_r$  =relative permittivity,  $\sigma$  =conductivity and  $\rho$  =1000 kg/m<sup>3</sup>)

## 4. SAR Measurement Procedure

### 4.1. SAR System Validation

#### 4.1.1. Validation Dipoles



The dipoles used are based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of both IEEE and FCC Supplement C. The table below provides details for the mechanical and electrical specifications for the dipoles.

| Frequency | L(mm) | h(mm) | d(mm) |
|-----------|-------|-------|-------|
| 850MHz    | 161   | 89.8  | 3.6   |
| 1900MHz   | 67.1  | 38.9  | 3.6   |
| 2450MHz   | 51.5  | 30.4  | 3.6   |



## 4.1.2. Validation Result

## Head System Performance Check at 850MHz&amp;1900MHz&amp;2450MHz

## Validation Kit: ASL-D-850-S-2

| Frequency(MHz) | Description      | SAR(W/kg) 1g | SAR(W/kg) 10g | Tissue Temp.(°C) |
|----------------|------------------|--------------|---------------|------------------|
| 850MHz         | Reference result | 9.590        | 6.003         | N/A              |
|                | +/-5%window      | 9.110to10.07 | 5.702to6.303  |                  |
|                | 13-Mar-13(1W)    | 9.487        | 5.851         | 20.7             |

## Validation Kit: ASL-D-1900-S-2

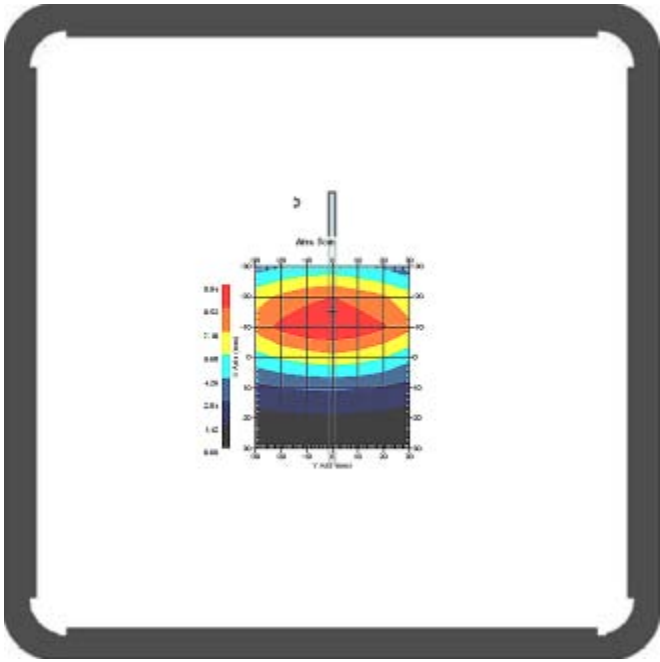
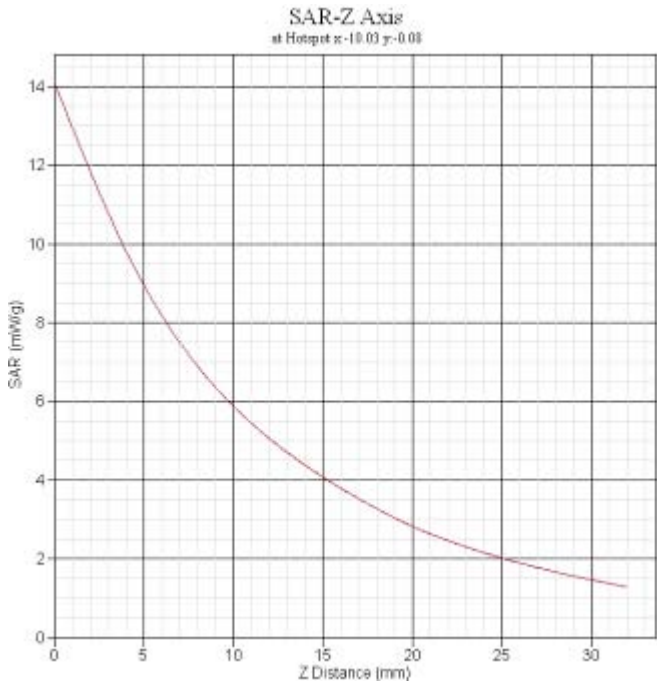
| Frequency(MHz) | Description      | SAR(W/kg) 1g   | SAR(W/kg) 10g  | Tissue Temp.(°C) |
|----------------|------------------|----------------|----------------|------------------|
| 1900MHz        | Reference result | 39.378         | 19.668         | N/A              |
|                | +/-5%window      | 37.418to41.356 | 18.685to20.651 |                  |
|                | 13-Mar-13 (1W)   | 38.672         | 19.234         | 20.7             |

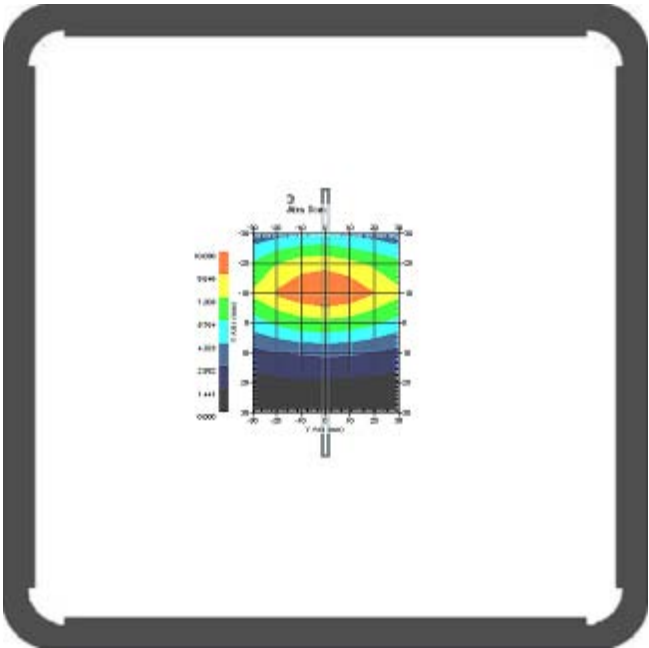
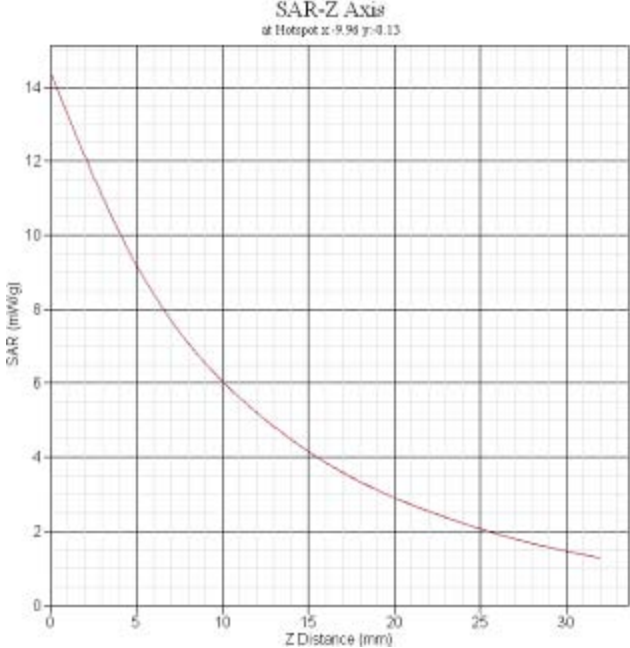
## Validation Kit: ASL-D-2450-S-2

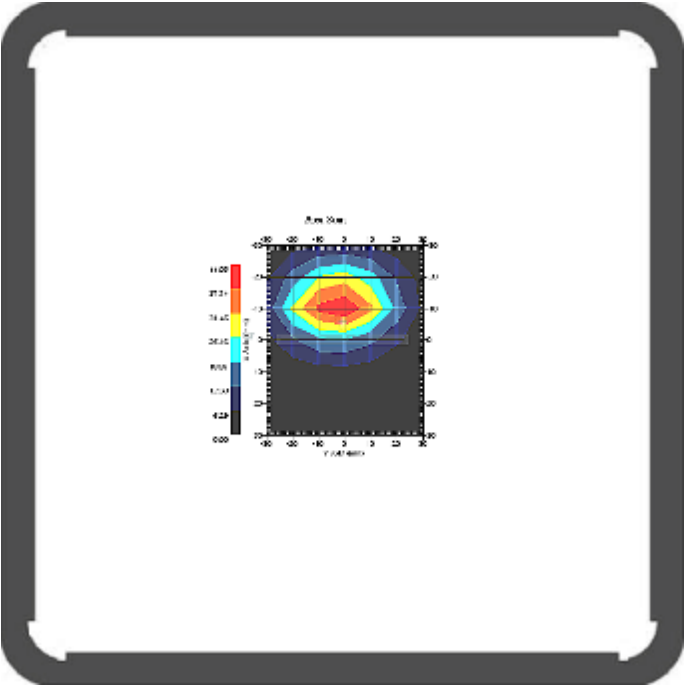
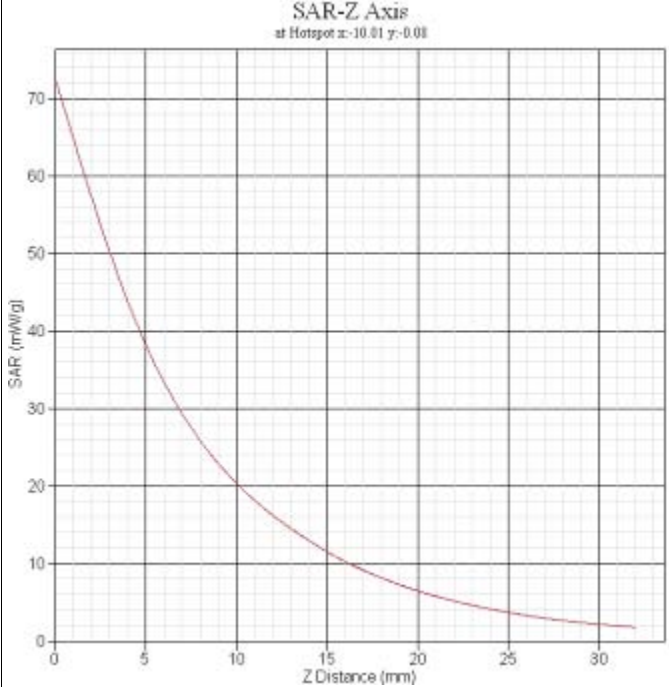
| Frequency(MHz) | Description      | SAR(W/kg) 1g   | SAR(W/kg) 10g  | Tissue Temp.(°C) |
|----------------|------------------|----------------|----------------|------------------|
| 2450MHz        | Reference result | 52.456         | 23.603         | N/A              |
|                | +/-5%window      | 49.833to55.078 | 22.423to24.783 |                  |
|                | 13-Mar-13 (1W)   | 51.873         | 22.745         | 20.7             |

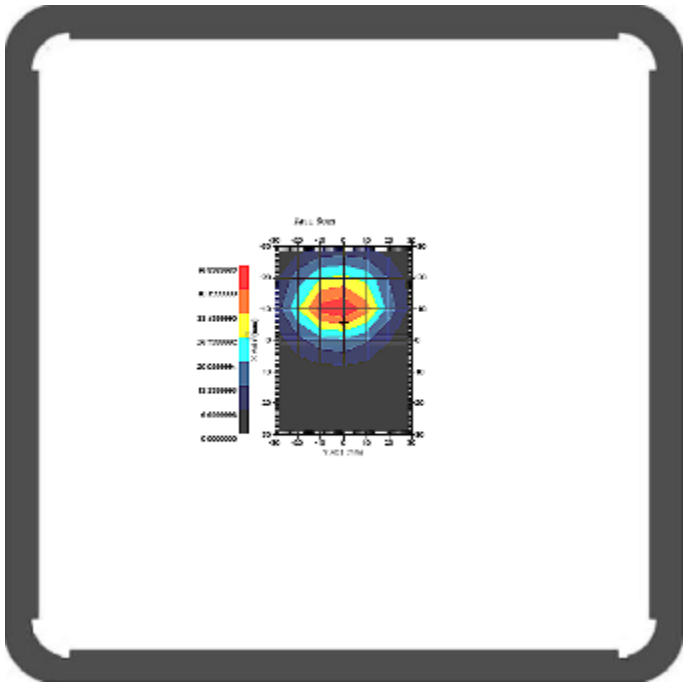
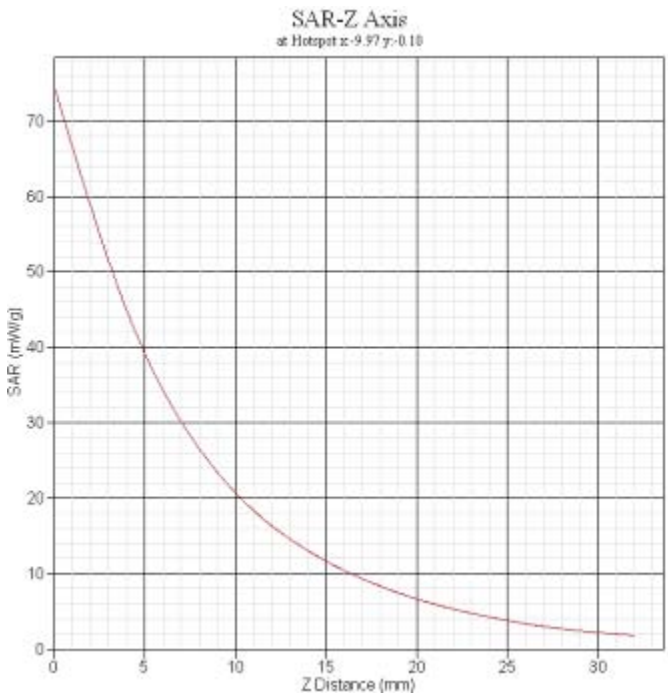
Note: All SAR values are normalized to 1 W forward power.

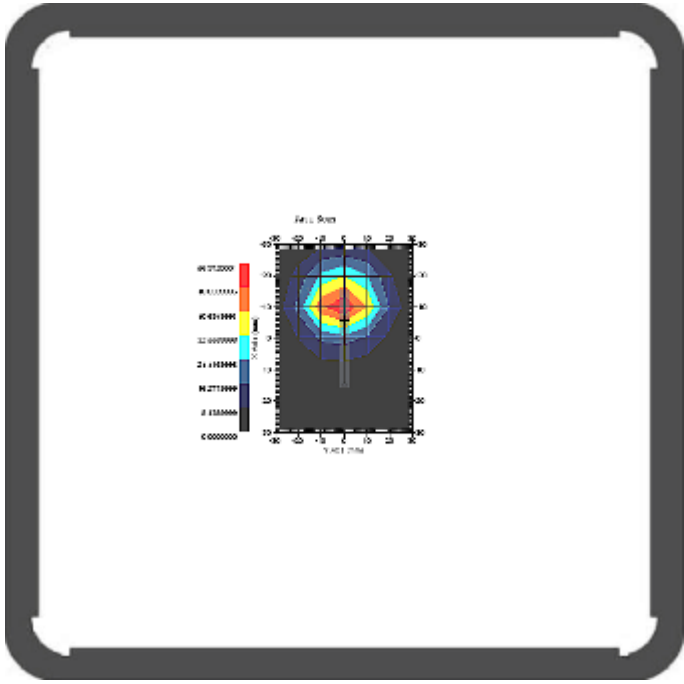
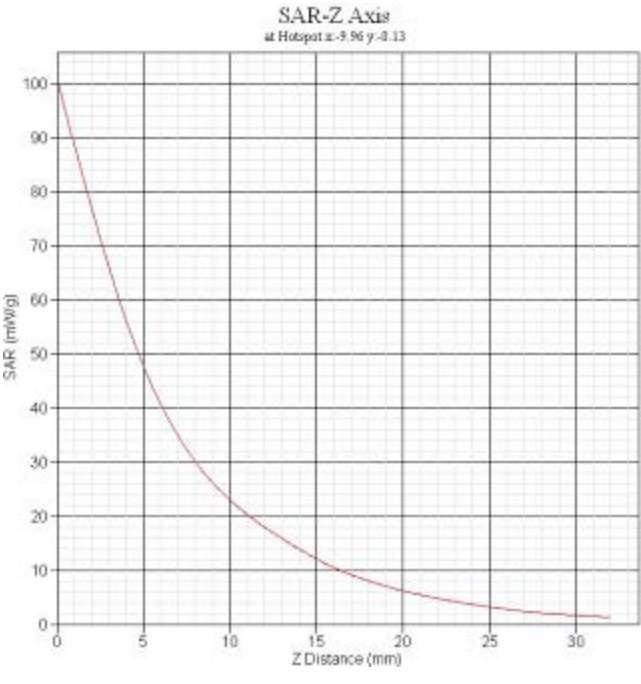
| Body System Performance Check at 850MHz&1900MHz&2450MHz  |                  |                |                |                  |
|----------------------------------------------------------|------------------|----------------|----------------|------------------|
| Validation Kit: ASL-D-850-S-2                            |                  |                |                |                  |
| Frequency(MHz)                                           | Description      | SAR(W/kg) 1g   | SAR(W/kg) 10g  | Tissue Temp.(°C) |
| 850MHz                                                   | Reference result | 9.981          | 6.006          | N/A              |
|                                                          | +/-5%window      | 9.482to10.48   | 5.706to6.306   |                  |
|                                                          | 13-Mar-13 (1W)   | 9.545          | 5.862          | 20.7             |
| Validation Kit: ASL-D-1900-S-2                           |                  |                |                |                  |
| Frequency(MHz)                                           | Description      | SAR(W/kg) 1g   | SAR(W/kg) 10g  | Tissue Temp.(°C) |
| 1900MHz                                                  | Reference result | 39.654         | 19.668         | N/A              |
|                                                          | +/-5%window      | 37.671to41.637 | 18.685to20.651 |                  |
|                                                          | 13-Mar-13 (1W)   | 39.635         | 19.721         | 20.7             |
| Validation Kit: ASL-D-2450-S-2                           |                  |                |                |                  |
| Frequency(MHz)                                           | Description      | SAR(W/kg) 1g   | SAR(W/kg) 10g  | Tissue Temp.(°C) |
| 2450MHz                                                  | Reference result | 52.592         | 24.461         | N/A              |
|                                                          | +/-5%window      | 49.962to55.222 | 23.238to25.684 |                  |
|                                                          | 13-Mar-13 (1W)   | 51.263         | 24.342         | 20.7             |
| Note: All SAR values are normalized to 1W forward power. |                  |                |                |                  |

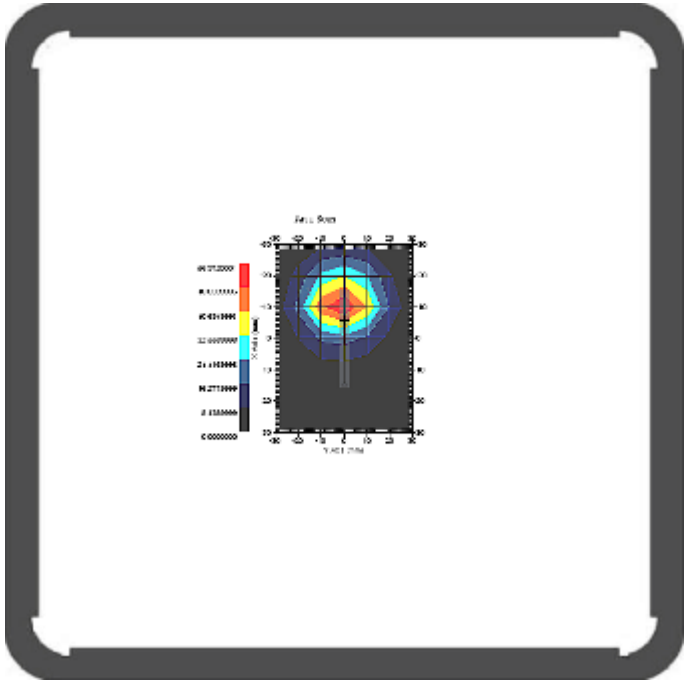
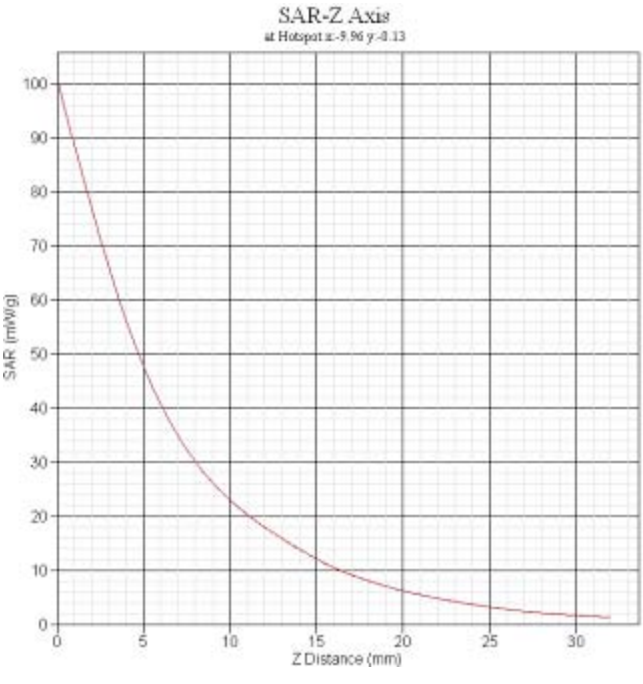
|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 850                                                                                 |
| Relative permittivity(real part)                                                   | 40.25                                                                               |
| Conductivity(S/m)                                                                  | 0.93                                                                                |
| Variation(%)                                                                       | 0.346                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 6.5                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 9.487                                                                               |
| SAR 10g(W/kg)                                                                      | 5.851                                                                               |

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 850                                                                                 |
| Relative permittivity(real part)                                                   | 53.14                                                                               |
| Conductivity(S/m)                                                                  | 0.98                                                                                |
| Variation(%)                                                                       | -2.045                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 6.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 μ V/(V/m)2                                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 9.545                                                                               |
| SAR 10g(W/kg)                                                                      | 5.862                                                                               |

|                                                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1900                                                                                |
| Relative permittivity(real part)                                                  | 41.53                                                                               |
| Conductivity(S/m)                                                                 | 1.42                                                                                |
| Variation(%)                                                                      | -0.623                                                                              |
| Duty Cycle Factor                                                                 | 1                                                                                   |
| Crest factor                                                                      | 1                                                                                   |
| Conversion Factor                                                                 | 5.7                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 μ V/(V/m)2                                                           |
| Data                                                                              | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 38.672                                                                              |
| SAR 10g(W/kg)                                                                     | 19.234                                                                              |

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1900                                                                                |
| Relative permittivity(real part)                                                   | 52.95                                                                               |
| Conductivity(S/m)                                                                  | 1.54                                                                                |
| Variation(%)                                                                       | 0.381                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 5.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 39.635                                                                              |
| SAR 10g(W/kg)                                                                      | 19.721                                                                              |

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 2450                                                                                |
| Relative permittivity(real part)                                                   | 40.27                                                                               |
| Conductivity(S/m)                                                                  | 1.85                                                                                |
| Variation(%)                                                                       | 0.531                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 4.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 51.873                                                                              |
| SAR 10g(W/kg)                                                                      | 22.745                                                                              |

|                                                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 2450                                                                                |
| Relative permittivity(real part)                                                   | 53.34                                                                               |
| Conductivity(S/m)                                                                  | 1.93                                                                                |
| Variation(%)                                                                       | -0.246                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 4.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 51.263                                                                              |
| SAR 10g(W/kg)                                                                      | 24.342                                                                              |



## 4.2. Arrangement Assessment Setup

### 4.2.1. Test Positions of Device Relative to Head

This specifies exactly two test positions for the handset against the head phantom, the “cheek” position and the “tilted” position. The handset should be tested in both positions on the left and right sides of the SAM phantom. If the handset construction is such that it cannot be positioned using the handset positioning procedures described in 4.2.2.1 and 4.2.2.2 to represent normal use conditions (e.g. asymmetric handset), alternative alignment procedures should be considered with details provided in the test report.

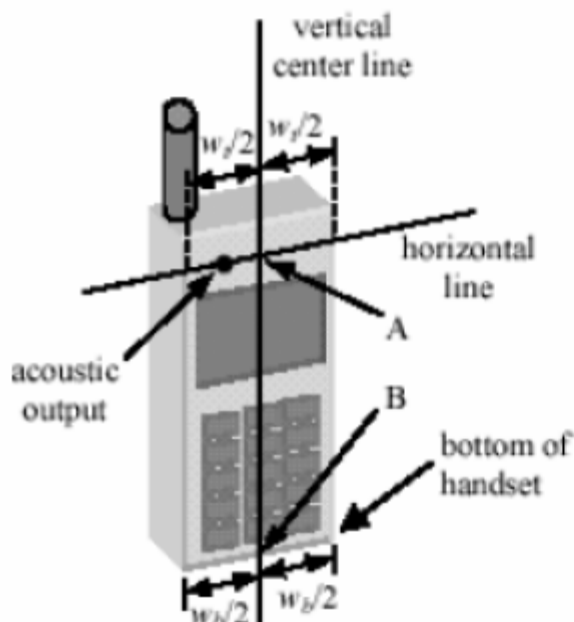


Figure 4.1a Internal Case

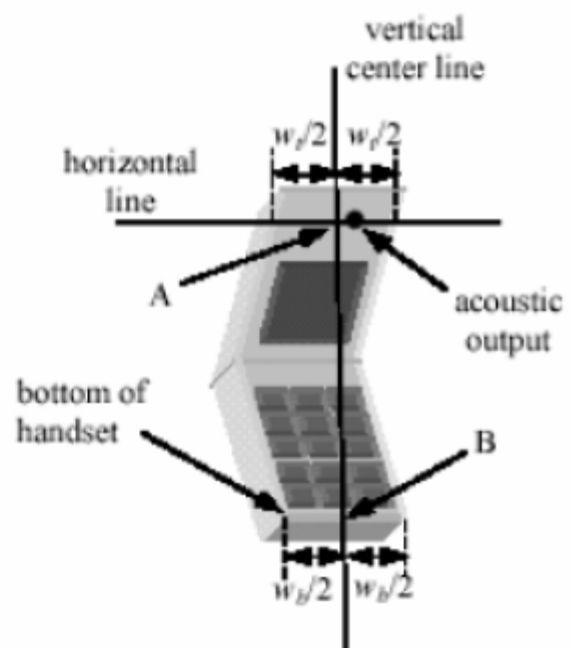


Figure 4.1b Clam Shell

#### 4.2.2.1. Definition of the “Cheek” Position

The “cheek” position is defined as follows:

- Ready the handset for talk operation, if necessary. For example, for hand sets with a cover piece, open the cover. (If the handset can also be used with the cover closed both configurations must be tested.)
- Define two imaginary lines on the handset: the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset: the midpoint of the width  $w_t$  of the handset at the level of the acoustic output (point A on Figures 4.1 a and 4.1 b), and the midpoint of the width  $w_b$  of the Back of the handset through the center of the acoustic output (see Figure 4.1 a). The

two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output. However, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front of the handset (see Figure 4.1 b), especially for clamshell handsets, handsets with flip pieces, and other irregularly-shaped handsets.

- c. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see 4.2), such that the plan defined by the vertical center line and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
- d. Translate the handset towards the phantom along the line passing through RE and LE until the handset touches the pinna.
- e. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to MB-NF including the line MB (called the reference plane).
- f. Rotate the handset around the vertical centerline until the handset (horizontal line) is symmetrical with respect to the line NF.

While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE and maintaining the handset contact with the pinna, rotate the handset about the line NF until any point on the handset is in contact with a phantom point below the pinna (cheek). See Figure 4.2 the physical angles of rotation should be noted.

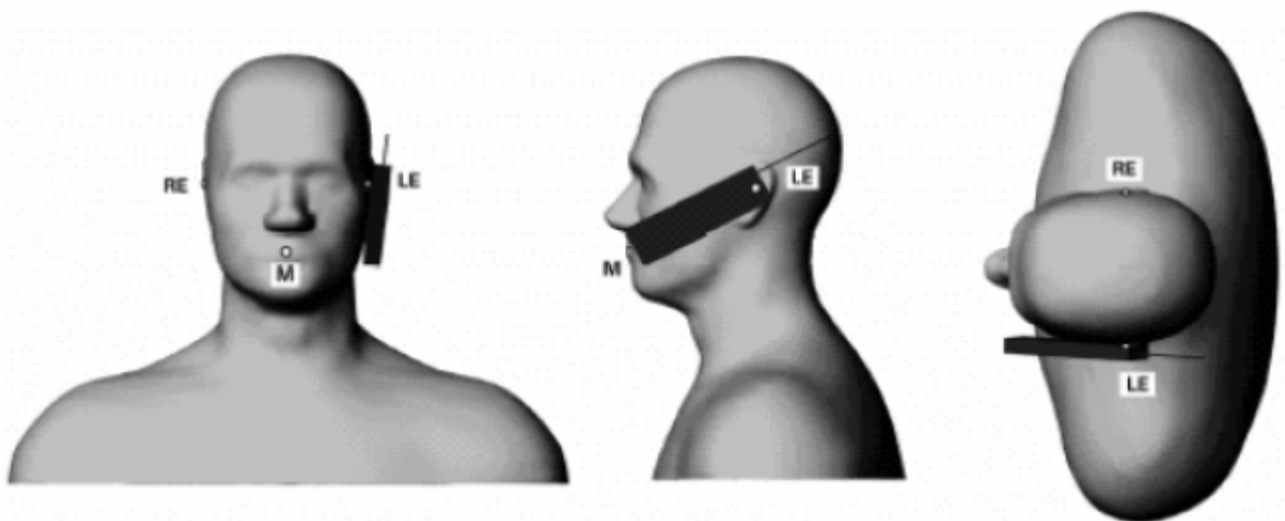


Figure 4.2 – Phone position 1, “cheek” or “touch” position.

#### 4.2.1.2 Definition of the “Tilted” Position

The “tilted” position is defined as follows:

- a. Repeat steps (a) – (g) of 4.2.1.1 to place the device in the “cheek position”.
- b. While maintaining the orientation of the handset move the handset away from the pinna along the line passing through RE and LE in order to enable a rotation of the

handset by 15 degrees.

c. Rotate the handset around the horizontal line by 15 degrees.

d. While maintaining the orientation of the handset, move the handset towards the phantom on a line passing through RE and LE until any part of the handset touches the ear. The tilted position is obtained when the contact is on the pinna. If the contact is at any location other than the pinna (e.g. the antenna with the Back of the phantom head), the angle of the handset should be reduced. In this case, the tilted position is obtained if any part of the handset is in contact with the pinna as well as a second part of the handset is contact with the phantom (e.g. the antenna with Back of the head).

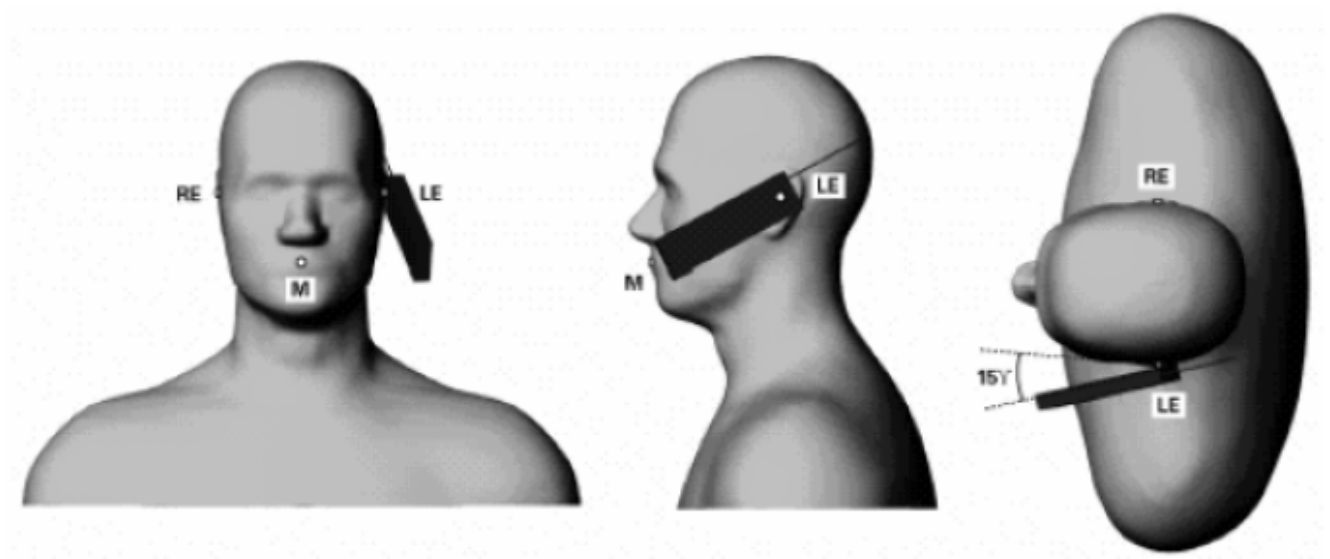


Figure 4.3 – Phone position 2, “tilted” position.

#### 4.2.2. Test Positions for body-worn

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. A separation distance of 1.5 cm between the Back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distance may be use, but not exceed 2.5cm.

#### 4.3. SAR Measurement Procedure

The ALSAS-10U calculates SAR using the following equation,

$$SAR = \frac{\sigma |E|^2}{\rho}$$

$\sigma$  :represents the simulated tissue conductivity

$\rho$  :represents the tissue density

The EUT is set to transmit at the required power in line with product specification, at each frequency relating to the LOW, MID, and HIGH channel settings.

Pre-scans are made on the device to establish the location for the transmitting antenna, using a large area scan in either air or tissue simulation fluid.

The EUT is placed against the Universal Phantom where the maximum area scan dimensions are large than the physical size of the resonating antenna. When the scan size is not large enough to cover the peak SAR distribution, it is modified by either extending the area scan size in both the X and Y directions, or the device is shifted within the predefined area.

The area scan is then run to establish the peak SAR location (interpolated resolution set at 1 mm<sup>2</sup>) which is then used to orient the center of the zoom scan. The zoom scan is then executed and the 1g and 10g averages are derived from the zoom scan volume (interpolated resolution set at 1 mm<sup>3</sup>).

## 5. SAR Exposure Limits

SAR assessments have been made in line with the requirements of IEEE C95.1-1999, IEEE 1528-2003 , FCC OET Bulletin 65 supplement C.

| Type Exposure (W/kg)                                  | Uncontrolled Environment Limit |
|-------------------------------------------------------|--------------------------------|
| Spatial Peak SAR (10g cube tissue for head and trunk) | 1.60 W/kg                      |
| Spatial Average SAR (whole body)                      | 0.08 W/kg                      |
| Spatial Peak SAR (10g for limb)                       | 4.00 W/kg                      |

## 6. Test Equipment List

| Instrument                                                 | Manufacture   | Model No.      | Serial No. | Last Calibration |
|------------------------------------------------------------|---------------|----------------|------------|------------------|
| Universal Work Station                                     | Apriel        | ALS-UWS        | 100-00154  | NCR              |
| Data Acquisition Package                                   | Apriel        | ALS-DAQ-PAQ-3  | 110-00215  | NCR              |
| Probe Mounting Device and Boundary Detection Sensor System | Apriel        | ALS-PMDPS-3    | 120-00265  | NCR              |
| Miniature E-Field Probe                                    | Apriel        | ALS-E-020      | 500-00273  | Oct.01,2012      |
| Left ear SAM Phantom                                       | Apriel        | ALS-P-SAM-L    | 130-00312  | NCR              |
| Right ear SAM Phantom                                      | Apriel        | ALS-P-SAM-R    | 140-00362  | NCR              |
| Universal SAM Phantom                                      | Apriel        | ALS-P-SU-1     | 150-00410  | NCR              |
| Reference Validation Dipole 850MHz                         | Apriel        | ALS-D-850-S-2  | 180-00556  | May.19,2011      |
| Reference Validation Dipole 1900MHz                        | Apriel        | ALS-D-1900-S-2 | 210-00707  | May.16,2011      |
| Reference Validation Dipole 2450MHz                        | Apriel        | ALS-D-2450-S-2 | 220-00755  | May.19,2011      |
| Dielectric Probe Kit                                       | Apriel        | ALS-PR-DIEL    | 260-00955  | NCR              |
| Device Holder 2.0                                          | Apriel        | ALS-H-E-SET-2  | 170-00506  | NCR              |
| SAR software                                               | Apriel        | ALS-SAR-AL-10  | Ver.2.3.8  | NCR              |
| CRS C500C Controller                                       | Thermo        | ALS-C500       | RCF0504291 | NCR              |
| CRS F3 Robot                                               | Apriel        | ALS-F3-SW      | N/A        | NCR              |
| Power Amplifier                                            | Mini-Circuit  | ZHL- 42        | 040306     | Jul.17,2012      |
| Directional Coupler                                        | Agilent       | 778D-012       | 51011      | Jul.17,2012      |
| Universal Radio Communication Tester                       | Agilent       | E5515C         | 104845     | Mar.06,2013      |
| Vector Network                                             | Agilent       | E5071B         | MY4230146  | Jul.19,2012      |
| Signal Generator                                           | Agilent       | E8257D         | N/A        | Dec.10,2012      |
| Power Meter                                                | Rohde&Schwarz | NRP            | N/A        | Dec.10,2012      |

**Note:** All equipment upon which need to be calibrated are with calibration period of 1 year, except validation dipole antenna of every 3 years.

## 7. Measurement Uncertainty

### Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^1$<br>(1-g) | $c_i^1$<br>(10-g) | Standard Uncertainty<br>(1-g) % | Standard Uncertainty<br>(10-g) % |
|--------------------------------------------------|-----------------|--------------------------|------------|------------------|-------------------|---------------------------------|----------------------------------|
| Measurement System                               |                 |                          |            |                  |                   |                                 |                                  |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                | 1                 | 3.5                             | 3.5                              |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$   | $(1-cp)^{1/2}$    | 1.5                             | 1.5                              |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$      | $\sqrt{cp}$       | 4.4                             | 4.4                              |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 0.6                             | 0.6                              |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 2.7                             | 2.7                              |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 0.6                             | 0.6                              |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                | 1                 | 1.0                             | 1.0                              |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 0.5                             | 0.5                              |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 1.0                             | 1.0                              |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 1.7                             | 1.7                              |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 0.2                             | 0.2                              |
| Restriction                                      |                 |                          |            |                  |                   |                                 |                                  |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 1.7                             | 1.7                              |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 2.1                             | 2.1                              |
| Test Sample Positioning                          | 4.0             | normal                   | 1          | 1                | 1                 | 4.0                             | 4.0                              |
| Device Holder Uncertainty                        | 2.0             | normal                   | 1          | 1                | 1                 | 2.0                             | 2.0                              |
| Drift of Output Power                            | 0.6             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 0.3                             | 0.3                              |
| Phantom and Setup                                |                 |                          |            |                  |                   |                                 |                                  |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                | 1                 | 2.0                             | 2.0                              |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7              | 0.5               | 2.0                             | 1.4                              |
| Liquid Conductivity(meas.)                       | 0.0             | normal                   | 1          | 0.7              | 0.5               | 0.0                             | 0.0                              |

|                                          |     |             |            |     |     |      |      |
|------------------------------------------|-----|-------------|------------|-----|-----|------|------|
| Liquid Permittivity(target)              | 5.0 | rectangular | $\sqrt{3}$ | 0.6 | 0.5 | 1.7  | 1.4  |
| Liquid Permittivity(meas.)               | 2.4 | normal      | 1          | 0.6 | 0.5 | 1.4  | 1.2  |
| Combined Uncertainty                     |     | RSS         |            |     |     | 9.3  | 9.2  |
| Combined Uncertainty (coverage factor=2) |     | Normal(k=2) |            |     |     | 18.7 | 18.3 |



## 8. SAR Test Results

### 8.1. Conducted Power(Unit:dBm)

#### <WWAN Conducted Power>

| Band           | GSM850        |        |        | GSM1900      |        |        |
|----------------|---------------|--------|--------|--------------|--------|--------|
| Channel        | 128           | 190    | 251    | 512          | 661    | 810    |
| Frequency(MHz) | 824.2         | 836.6  | 848.8  | 1850.2       | 1880.0 | 1909.8 |
| GSM            | 31.48         | 31.51  | 31.49  | 29.27        | 28.98  | 29.13  |
| Band           | WCDMA band II |        |        | WCDMA band V |        |        |
| Channel        | 9262          | 9400   | 9538   | 4132         | 4183   | 4233   |
| Frequency(MHz) | 1852.4        | 1880.0 | 1907.6 | 826.4        | 836.6  | 846.6  |
| WCDMA          | 21.75         | 21.84  | 21.82  | 23.25        | 23.28  | 23.24  |

| Band           | Conducted Power (dBm) |       |       | Factor | Average Power (dBm) |       |       |
|----------------|-----------------------|-------|-------|--------|---------------------|-------|-------|
| Channel        | 128                   | 190   | 251   | (dB)   | 128                 | 190   | 251   |
| Frequency(MHz) | 824.2                 | 836.6 | 848.8 |        | 824.2               | 836.6 | 848.8 |
| GPRS8(1up)     | 31.47                 | 31.50 | 31.49 | -9.03  | 22.44               | 22.47 | 22.46 |
| GPRS10(2up)    | 30.71                 | 30.75 | 30.73 | -6.02  | 24.69               | 24.73 | 24.71 |
| GPRS12(4up)    | 28.33                 | 28.31 | 28.47 | -3.01  | 25.32               | 25.30 | 25.46 |

| Band           | Conducted Power (dBm) |        |        | Factor | Average Power (dBm) |        |        |
|----------------|-----------------------|--------|--------|--------|---------------------|--------|--------|
| Channel        | 512                   | 661    | 810    | (dB)   | 512                 | 661    | 810    |
| Frequency(MHz) | 1850.2                | 1880.0 | 1909.8 |        | 1850.2              | 1880.0 | 1909.8 |
| GPRS8(1up)     | 29.28                 | 28.96  | 29.12  | -9.03  | 20.25               | 19.93  | 20.09  |
| GPRS10(2up)    | 28.75                 | 28.42  | 28.45  | -6.02  | 22.73               | 22.40  | 22.43  |
| GPRS12(4up)    | 26.42                 | 26.11  | 26.13  | -3.01  | 23.41               | 23.10  | 23.12  |

#### NOTES:

##### Division Factors:

To average the power, the division factor is as follows:

- 1.TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB
- 2.TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB
- 3.TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB
- 4.TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB
- 5.The EUT do not support DTM mode.

## &lt;Bluetooth Conducted Power&gt;

| Channel | Frequency | Bluetooth RF Output Power (dBm) |                |        |
|---------|-----------|---------------------------------|----------------|--------|
|         |           | Data Rate / Modulation          |                |        |
|         |           | GFSK                            | $\pi$ /4-DQPSK | 8-DPSK |
|         |           | 1Mbps                           | 2Mbps          | 3Mbps  |
| Ch00    | 2402MHz   | 7.36                            | 6.67           | 6.65   |
| Ch39    | 2441MHz   | 7.30                            | 6.61           | 6.55   |
| Ch78    | 2480MHz   | <b>7.58</b>                     | 6.82           | 6.81   |

## &lt;WLAN Conducted Power&gt;

| Channel | Frequency | 2.4GHz 802.11b RF Power (dBm) |        |          |              |
|---------|-----------|-------------------------------|--------|----------|--------------|
|         |           | At DSSS Data Rate             |        |          |              |
|         |           | 1 Mbps                        | 2 Mbps | 5.5 Mbps | 11 Mbps      |
| CH 01   | 2412 MHz  | 14.84                         | 14.74  | 15.03    | 14.93        |
| CH 06   | 2437 MHz  | 15.73                         | 15.71  | 15.85    | 15.86        |
| CH 11   | 2462 MHz  | 16.24                         | 16.35  | 16.41    | <b>16.43</b> |

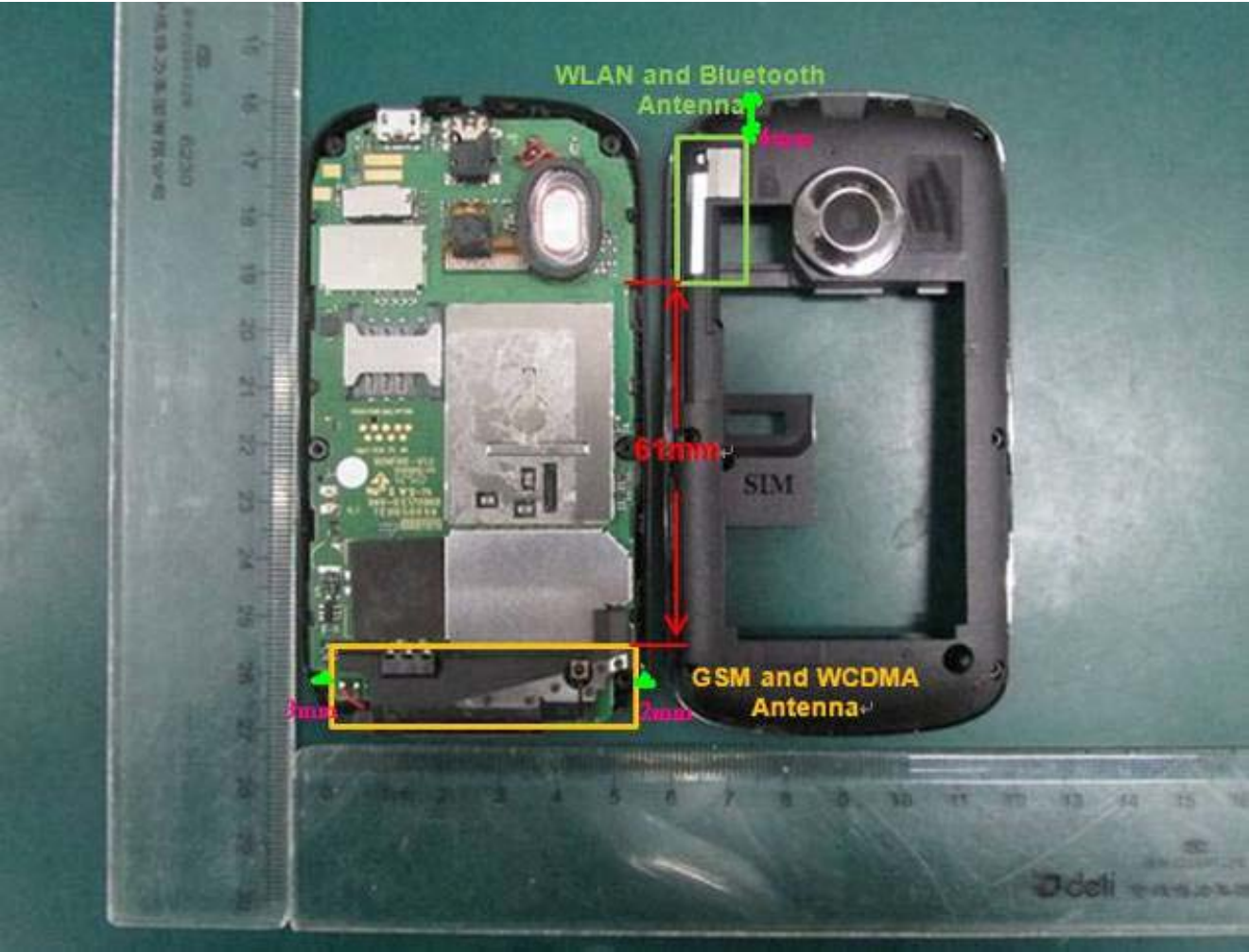
| Channel | Frequency | 2.4GHz 802.11g RF Power (dBm) |       |       |       |       |       |              |       |
|---------|-----------|-------------------------------|-------|-------|-------|-------|-------|--------------|-------|
|         |           | At OFDM Data Rate             |       |       |       |       |       |              |       |
|         |           | 6                             | 9     | 12    | 18    | 24    | 36    | 48           | 54    |
|         |           | Mbps                          | Mbps  | Mbps  | Mbps  | Mbps  | Mbps  | Mbps         | Mbps  |
| CH01    | 2412MHz   | 12.65                         | 12.68 | 12.96 | 13.04 | 13.08 | 13.14 | 13.20        | 12.89 |
| CH06    | 2437MHz   | 13.72                         | 13.79 | 14.05 | 14.10 | 14.16 | 14.19 | 14.23        | 13.98 |
| CH11    | 2462MHz   | 14.21                         | 14.19 | 14.24 | 14.51 | 14.58 | 14.64 | <b>14.70</b> | 14.45 |

| Channel | Frequency | 2.4GHz 802.11n RF Power (dBm) |        |          |        |        |        |          |              |
|---------|-----------|-------------------------------|--------|----------|--------|--------|--------|----------|--------------|
|         |           | At OFDM Data Rate             |        |          |        |        |        |          |              |
|         |           | MCS0                          | MCS1   | MCS2     | MCS3   | MCS4   | MCS5   | MCS6     | MCS7         |
|         |           | 6.5Mbps                       | 13Mbps | 19.5Mbps | 26Mbps | 39Mbps | 52Mbps | 58.5Mbps | 65Mbps       |
| CH01    | 2412MHz   | 13.19                         | 13.23  | 13.46    | 14.69  | 13.74  | 13.67  | 13.72    | 13.91        |
| CH06    | 2437MHz   | 14.28                         | 14.35  | 14.47    | 14.59  | 14.74  | 14.73  | 14.85    | 14.94        |
| CH11    | 2462MHz   | 14.65                         | 14.78  | 14.87    | 14.93  | 14.95  | 15.07  | 15.12    | <b>15.33</b> |

Note:

1. Per KDB 248227, choose the highest output power channel to test SAR and judge further SAR exclusion.
2. Per KDB 248227, 11g and 11n(HT20) output power is less than 1/4 dB higher than 11b mode, thus the SAR can be excluded.
3. For each frequency band, testing at higher data rate and higher order modulations is not required when the maximum average power output for each of these configurations is less than 1/4 dB higher than those measured at the lowest data rate.

8.2. Exposure Positions Consideration



| Sides for SAR tests; Hotspot mode |      |       |     |        |       |      |
|-----------------------------------|------|-------|-----|--------|-------|------|
| Test distance: 10 mm              |      |       |     |        |       |      |
| Band                              | Back | Front | Top | Bottom | Right | Left |
| GSM 850                           | ✓    | ✓     | X   | ✓      | ✓     | ✓    |
| GSM 1900                          | ✓    | ✓     | X   | ✓      | ✓     | ✓    |
| WCDMA Band II                     | ✓    | ✓     | X   | ✓      | ✓     | ✓    |
| WCDMA Band V                      | ✓    | ✓     | X   | ✓      | ✓     | ✓    |
| WLAN 11b/g 2.4GHz                 | ✓    | ✓     | ✓   | X      | ✓     | X    |

| Sides for SAR tests; Body-worn mode<br>Test distance: 10 mm |      |       |     |        |       |      |
|-------------------------------------------------------------|------|-------|-----|--------|-------|------|
| Band                                                        | Back | Front | Top | Bottom | Right | Left |
| GSM 850                                                     | ✓    | ✓     | X   | X      | X     | X    |
| GSM 1900                                                    | ✓    | ✓     | X   | X      | X     | X    |
| WCDMA Band II                                               | ✓    | ✓     | X   | X      | X     | X    |
| WCDMA Band V                                                | ✓    | ✓     | X   | X      | X     | X    |
| WLAN 11b/g 2.4GHz                                           | ✓    | ✓     | X   | X      | X     | X    |

Note:

1. Base on KDB447498 D01v05 4.3.1.1 formula, BT SAR is exclude as below table:

|      | Wireless Interface           | Bluetooth |
|------|------------------------------|-----------|
|      | Tune-up Maximum power(dBm)   | 8         |
|      | Tune-up Maximum power(mW)    | 6         |
| Head | Antenna to user(mm)          | 5         |
|      | SAR exclusion threshold(mW)  | 10        |
|      | SAR testing required or not? | NOT       |
| Body | Antenna to user(mm)          | 10        |
|      | SAR exclusion threshold(mW)  | 19        |
|      | SAR testing required or not? | NOT       |

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR,

$6\text{mW}(8\text{dBm})/5\text{mm} \cdot \sqrt{2.45} = 1.88 < 3.0$ , So standalone Bluetooth SAR test is not required.

The SAR threshold for 5mm distance at 2450MHz is 10mW. The power of the BT transmitter is below 10mW.

Therefore standalone SAR does not required.

### 8.3. SAR Test Results Summary

#### 8.3.1 Test results for Head SAR Test

<WWAN SAR>

| Band    | Position | Channel | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|---------|----------|---------|---------------------|--------------------|---------------|--------------|---------------------|
| GSM850  | LC       | 190     | 31.51               | 32.5               | 0.701         | 1.199        | 0.785               |
|         | LT       | 190     | 31.51               | 32.5               | 0.505         | 1.199        | 0.565               |
|         | RC       | 190     | 31.51               | 32.5               | 0.581         | 1.199        | 0.650               |
|         | RT       | 190     | 31.51               | 32.5               | 0.465         | 1.199        | 0.521               |
| GSM1900 | LC       | 512     | 29.27               | 30                 | 0.536         | 1.183        | 0.634               |
|         | LT       | 512     | 29.27               | 30                 | 0.272         | 1.183        | 0.322               |
|         | RC       | 512     | 29.27               | 30                 | 0.313         | 1.183        | 0.370               |
|         | RT       | 512     | 29.27               | 30                 | 0.211         | 1.183        | 0.250               |

| Band     | Position | Channel | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|----------|----------|---------|---------------------|--------------------|---------------|--------------|---------------------|
| WCDMA V  | LC       | 4183    | 23.28               | 23.5               | 0.612         | 1.052        | 0.644               |
|          | LT       | 4183    | 23.28               | 23.5               | 0.428         | 1.052        | 0.450               |
|          | RC       | 4183    | 23.28               | 23.5               | 0.502         | 1.052        | 0.528               |
|          | RT       | 4183    | 23.28               | 23.5               | 0.398         | 1.052        | 0.419               |
| WCDMA II | LC       | 9262    | 21.75               | 22                 | 0.948         | 1.059        | 1.004               |
|          | LC       | 9400    | 21.84               | 22                 | 0.965         | 1.038        | 1.001               |
|          | LC       | 9538    | 21.82               | 22                 | 0.853         | 1.042        | 0.889               |
|          | LT       | 9400    | 21.84               | 22                 | 0.476         | 1.038        | 0.494               |
|          | RC       | 9400    | 21.84               | 22                 | 0.730         | 1.038        | 0.757               |
|          | RT       | 9400    | 21.84               | 22                 | 0.370         | 1.038        | 0.384               |

<WLAN SAR>

| Band         | Position | Channel | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|--------------|----------|---------|---------------------|--------------------|---------------|--------------|---------------------|
| 802.11b band | LC       | 11      | 16.43               | 17                 | 0.045         | 1.140        | 0.051               |
|              | LT       | 11      | 16.43               | 17                 | 0.043         | 1.140        | 0.049               |
|              | RC       | 11      | 16.43               | 17                 | 0.135         | 1.140        | 0.154               |
|              | RT       | 11      | 16.43               | 17                 | 0.120         | 1.140        | 0.137               |

### 8.3.2 Test results for Hotspot SAR Test

<WWAN SAR 1cm>

| Band     | Position | Channel | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|----------|----------|---------|---------------------|--------------------|---------------|--------------|---------------------|
| GPRS850  | Front    | 190     | 28.31               | 28.5               | 0.724         | 1.045        | 0.756               |
|          | Back     | 128     | 28.33               | 28.5               | 0.923         | 1.040        | 0.960               |
|          | Back     | 190     | 28.31               | 28.5               | 1.006         | 1.045        | 1.051               |
|          | Back     | 251     | 28.47               | 28.5               | 0.917         | 1.007        | 0.923               |
|          | Left     | 190     | 28.31               | 28.5               | 0.755         | 1.045        | 0.789               |
|          | Right    | 190     | 28.31               | 28.5               | 0.744         | 1.045        | 0.777               |
|          | Bottom   | 190     | 28.31               | 28.5               | 0.446         | 1.045        | 0.466               |
| GPRS1900 | Front    | 512     | 26.42               | 27                 | 0.285         | 1.143        | 0.326               |
|          | Back     | 512     | 26.42               | 27                 | 0.478         | 1.143        | 0.546               |
|          | Left     | 512     | 26.42               | 27                 | 0.099         | 1.143        | 0.113               |
|          | Right    | 512     | 26.42               | 27                 | 0.092         | 1.143        | 0.105               |
|          | Bottom   | 512     | 26.42               | 27                 | 0.275         | 1.143        | 0.314               |

| Band     | Position | Channel | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|----------|----------|---------|---------------------|--------------------|---------------|--------------|---------------------|
| WCDMA V  | Front    | 4183    | 23.28               | 23.5               | 0.589         | 1.052        | 0.620               |
|          | Back     | 4132    | 23.25               | 23.5               | 0.836         | 1.059        | 0.886               |
|          | Back     | 4183    | 23.28               | 23.5               | 0.961         | 1.052        | 1.011               |
|          | Back     | 4233    | 23.24               | 23.5               | 0.857         | 1.062        | 0.910               |
|          | Left     | 4183    | 23.28               | 23.5               | 0.450         | 1.052        | 0.473               |
|          | Right    | 4183    | 23.28               | 23.5               | 0.389         | 1.052        | 0.409               |
|          | Bottom   | 4183    | 23.28               | 23.5               | 0.091         | 1.052        | 0.096               |
| WCDMA II | Front    | 9400    | 21.84               | 22                 | 0.411         | 1.038        | 0.426               |
|          | Back     | 9400    | 21.84               | 22                 | 0.683         | 1.038        | 0.709               |
|          | Left     | 9400    | 21.84               | 22                 | 0.205         | 1.038        | 0.213               |
|          | Right    | 9400    | 21.84               | 22                 | 0.100         | 1.038        | 0.104               |
|          | Bottom   | 9400    | 21.84               | 22                 | 0.357         | 1.038        | 0.370               |

## &lt;WLAN SAR 1cm&gt;

| Band         | Position | Channel | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|--------------|----------|---------|---------------------|--------------------|---------------|--------------|---------------------|
| 802.11b band | Front    | 11      | 16.43               | 17                 | 0.024         | 1.140        | 0.027               |
|              | Back     | 11      | 16.43               | 17                 | 0.047         | 1.140        | 0.054               |
|              | Top      | 11      | 16.43               | 17                 | 0.013         | 1.140        | 0.015               |
|              | Right    | 11      | 16.43               | 17                 | 0.087         | 1.140        | 0.099               |

**8.3.3 Test results for Body-worn SAR Test**

## &lt;WWAN SAR 1cm&gt;

| Band               | Position | CH  | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|--------------------|----------|-----|---------------------|--------------------|---------------|--------------|---------------------|
| GPRS850            | Front    | 190 | 28.31               | 28.5               | 0.724         | 1.045        | 0.756               |
|                    | Back     | 128 | 28.33               | 28.5               | 0.923         | 1.040        | 0.960               |
|                    | Back     | 190 | 28.31               | 28.5               | 1.006         | 1.045        | 1.051               |
|                    | Back     | 251 | 28.47               | 28.5               | 0.917         | 1.007        | 0.923               |
| GSM850 + earphone  | Back     | 190 | 31.51               | 32                 | 0.721         | 1.199        | 0.807               |
| GPRS1900           | Front    | 512 | 26.42               | 27                 | 0.285         | 1.143        | 0.326               |
|                    | Back     | 512 | 26.42               | 27                 | 0.478         | 1.143        | 0.546               |
| GSM1900 + earphone | Back     | 512 | 29.27               | 30                 | 0.453         | 1.183        | 0.536               |

| Band                | Position | Channel | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|---------------------|----------|---------|---------------------|--------------------|---------------|--------------|---------------------|
| WCDMA V             | Front    | 4183    | 23.28               | 23.5               | 0.589         | 1.052        | 0.620               |
|                     | Back     | 4132    | 23.25               | 23.5               | 0.836         | 1.059        | 0.886               |
|                     | Back     | 4183    | 23.28               | 23.5               | 0.961         | 1.052        | 1.011               |
|                     | Back     | 4233    | 23.24               | 23.5               | 0.857         | 1.062        | 0.910               |
| WCDMA V + earphone  | Back     | 4132    | 23.28               | 23.5               | 0.932         | 1.052        | 0.980               |
| WCDMA II            | Front    | 9400    | 21.84               | 22                 | 0.411         | 1.038        | 0.426               |
|                     | Back     | 9400    | 21.84               | 22                 | 0.683         | 1.038        | 0.709               |
| WCDMA II + earphone | Back     | 9400    | 21.84               | 22                 | 0.671         | 1.038        | 0.696               |

## &lt;WLAN SAR 1cm&gt;

| Band                    | Position | Channel | Measured Power(dBm) | Tune-up Power(dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|-------------------------|----------|---------|---------------------|--------------------|---------------|--------------|---------------------|
| 802.11b band            | Front    | 11      | 16.43               | 17                 | 0.024         | 1.140        | 0.027               |
|                         | Back     | 11      | 16.43               | 17                 | 0.047         | 1.140        | 0.054               |
| 802.11b band + earphone | Back     | 11      | 16.43               | 17                 | 0.041         | 1.140        | 0.047               |



**8.3.4 Repeated SAR Measurement**

| Band     | Position | CH   | Measured Power (dBm) | Tune-up Power (dBm) | SAR 1g (W/kg) | Scale factor | Scaled SAR 1g(W/kg) |
|----------|----------|------|----------------------|---------------------|---------------|--------------|---------------------|
| WCDMA II | LC       | 9400 | 21.84                | 22                  | 0.965         | 1.038        | 1.001               |
|          | LC       | 9400 | 21.84                | 22                  | 0.961         | 1.038        | 0.997               |
| GPRS850  | Back     | 190  | 28.31                | 28.5                | 1.006         | 1.045        | 1.051               |
|          | Back     | 190  | 28.31                | 28.5                | 1.014         | 1.045        | 1.059               |
| WCDMA V  | Back     | 4183 | 23.28                | 23.5                | 0.961         | 1.052        | 1.011               |
|          | Back     | 4183 | 23.28                | 23.5                | 0.967         | 1.052        | 1.017               |

Note :

1. Per KDB 865664 D01v01, for each frequency band, repeated SAR measurement is required only when the measured SAR is  $\geq 0.8$ W/kg
2. Per KDB 447498D01v05, for each exposure position, if the highest output channel  $< 0.8$ W/kg, other channels SAR testing are not necessary.
3. Per KDB 865664 D01v01, if the deviation among the repeated measurement is  $\leq 20\%$  and the measured SAR  $< 1.45$ W/kg, only one repeated measurement is required.
4. The deviation is the difference in percentage between original and repeated measured SAR.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

#### 8.4. Simultaneous Transmitting Configurations

| Simultaneous Transmitting Configuration | Applicable Combination |
|-----------------------------------------|------------------------|
| Simultaneous Transmission               | WWAN+BT                |
|                                         | WWAN+WiFi              |

1. WLAN and BT use the same antenna, cannot transmit simultaneously.
2. GSM and WCDMA use the same antenna, cannot transmit simultaneously, and the device does not support hotspot mode.
3. If 1g SAR sum > 1.6W/kg, SPLSR calculation is necessary.
4. For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB447498 D01v05 base on formula as below:  

$$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})} / x] \text{ W/kg for test separation distances } \leq 50 \text{ mm};$$
 where  $x = 7.5$  for 1-g SAR, and  $x = 18.75$  for 10-g SAR. 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is > 50 mm.
5. If the test separation distance (antenna-user) is < 5mm, 5mm is used for estimated SAR calculation.

|                     | Head(0 cm) | Body(1 cm) |
|---------------------|------------|------------|
| Estimated SAR(W/kg) | 0.251W/kg  | 0.126W/kg  |

## &lt;Head SAR&gt;

| Position    | Scaled WWAN |               | Scaled BT     | Scaled WWAN+BT |
|-------------|-------------|---------------|---------------|----------------|
|             | WWAN band   | Max. WWAN SAR | Max. WLAN SAR |                |
| Left Cheek  | GSM850      | 0.785         | 0.251         | 1.036          |
|             | GSM1900     | 0.634         | 0.251         | 0.885          |
|             | WCDMA V     | 0.644         | 0.251         | 0.895          |
|             | WCDMA II    | 1.001         | 0.251         | 1.252          |
| Left Tilt   | GSM850      | 0.565         | 0.251         | 0.816          |
|             | GSM1900     | 0.322         | 0.251         | 0.573          |
|             | WCDMA V     | 0.450         | 0.251         | 0.701          |
|             | WCDMA II    | 0.494         | 0.251         | 0.745          |
| Right Cheek | GSM850      | 0.650         | 0.251         | 0.901          |
|             | GSM1900     | 0.370         | 0.251         | 0.621          |
|             | WCDMA V     | 0.528         | 0.251         | 0.779          |
|             | WCDMA II    | 0.757         | 0.251         | 1.008          |
| Right Tilt  | GSM850      | 0.521         | 0.251         | 0.772          |
|             | GSM1900     | 0.250         | 0.251         | 0.501          |
|             | WCDMA V     | 0.419         | 0.251         | 0.670          |
|             | WCDMA II    | 0.384         | 0.251         | 0.635          |

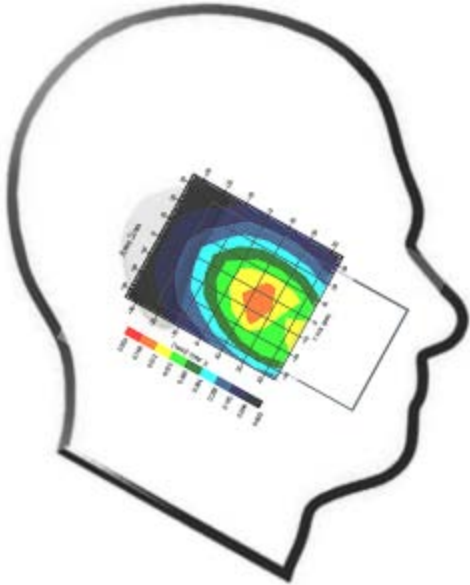
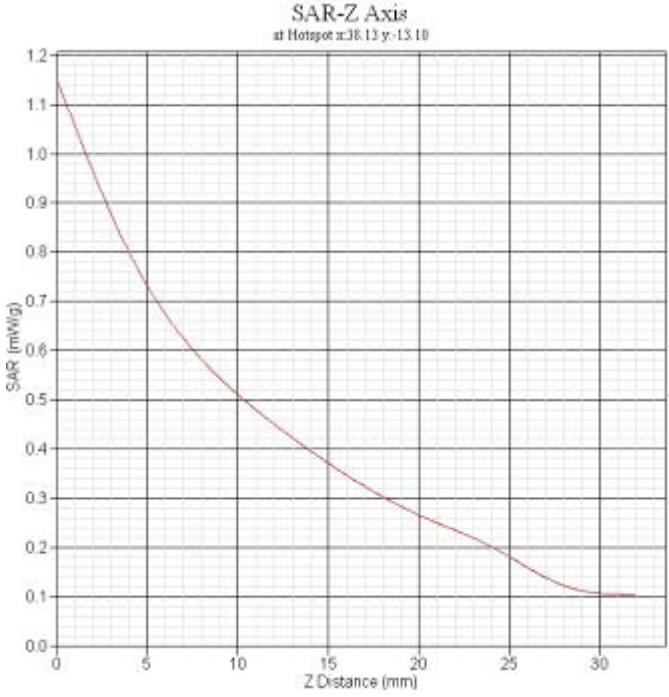
| Position    | Scaled WWAN |               | Scaled WLAN   | Scaled WWAN+WLAN |
|-------------|-------------|---------------|---------------|------------------|
|             | WWAN band   | Max. WWAN SAR | Max. WLAN SAR |                  |
| Left Cheek  | GSM850      | 0.785         | 0.051         | 0.836            |
|             | GSM1900     | 0.634         | 0.051         | 0.685            |
|             | WCDMA V     | 0.644         | 0.051         | 0.695            |
|             | WCDMA II    | 1.001         | 0.051         | 1.052            |
| Left Tilt   | GSM850      | 0.565         | 0.049         | 0.614            |
|             | GSM1900     | 0.322         | 0.049         | 0.371            |
|             | WCDMA V     | 0.450         | 0.049         | 0.499            |
|             | WCDMA II    | 0.494         | 0.049         | 0.543            |
| Right Cheek | GSM850      | 0.650         | 0.154         | 0.804            |
|             | GSM1900     | 0.370         | 0.154         | 0.524            |
|             | WCDMA V     | 0.528         | 0.154         | 0.682            |
|             | WCDMA II    | 0.757         | 0.154         | 0.911            |
| Right Tilt  | GSM850      | 0.521         | 0.137         | 0.658            |
|             | GSM1900     | 0.250         | 0.137         | 0.387            |
|             | WCDMA V     | 0.419         | 0.137         | 0.556            |
|             | WCDMA II    | 0.384         | 0.137         | 0.521            |

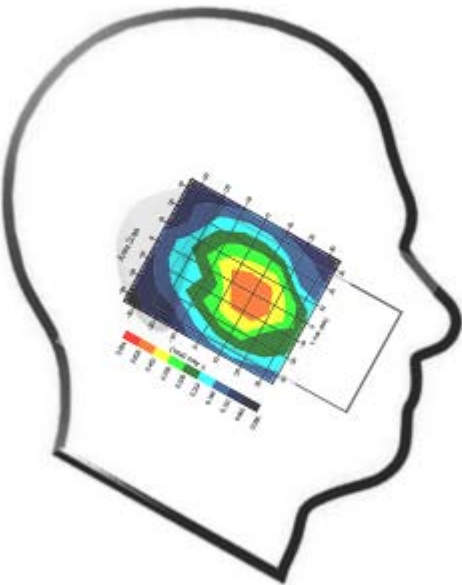
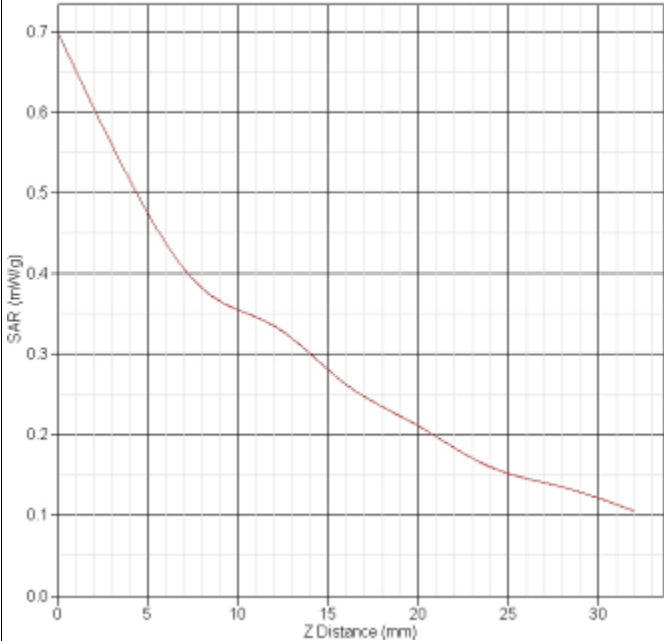
## &lt;Hotspot &amp; Body-worn SAR&gt;

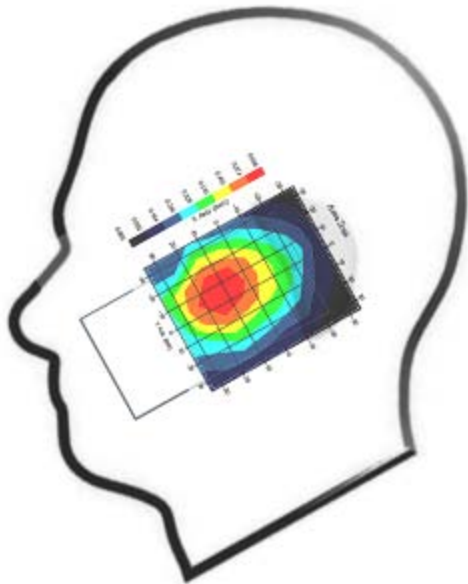
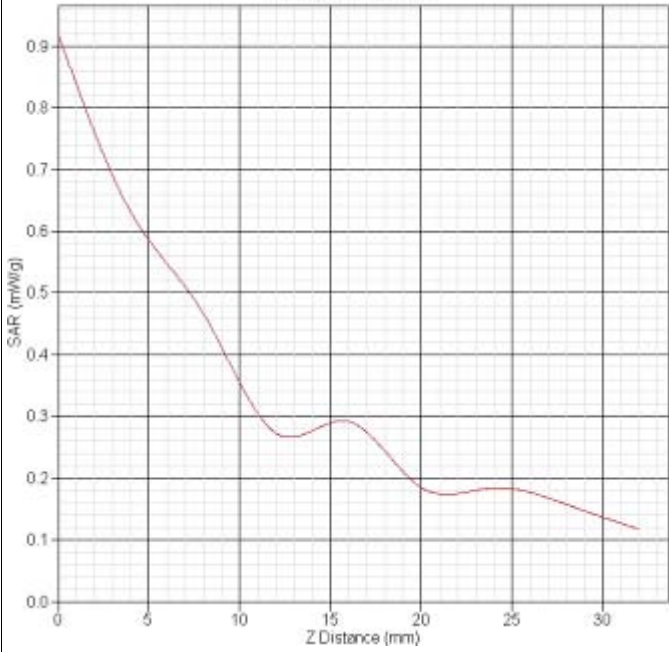
| Position                   | Scaled WWAN |               | Scaled BT     | Scaled WWAN+BT |
|----------------------------|-------------|---------------|---------------|----------------|
|                            | WWAN band   | Max. WWAN SAR | Max. WLAN SAR |                |
| Front                      | GSM850      | 0.756         | 0.126         | 0.882          |
|                            | GSM1900     | 0.326         | 0.126         | 0.672          |
|                            | WCDMA V     | 0.620         | 0.126         | 0.746          |
|                            | WCDMA II    | 0.426         | 0.126         | 0.552          |
| Back                       | GSM850      | 1.051         | 0.126         | 1.177          |
|                            | GSM1900     | 0.546         | 0.126         | 0.672          |
|                            | WCDMA V     | 1.011         | 0.126         | 1.137          |
|                            | WCDMA II    | 0.709         | 0.126         | 0.835          |
| Right                      | GSM850      | 0.777         | 0.126         | 0.903          |
|                            | GSM1900     | 0.105         | 0.126         | 0.231          |
|                            | WCDMA V     | 0.409         | 0.126         | 0.535          |
|                            | WCDMA II    | 0.104         | 0.126         | 0.230          |
| Back<br>(With<br>earphone) | GSM850      | 0.807         | 0.126         | 0.933          |
|                            | GSM1900     | 0.536         | 0.126         | 0.662          |
|                            | WCDMA V     | 0.980         | 0.126         | 1.106          |
|                            | WCDMA II    | 0.696         | 0.126         | 0.822          |

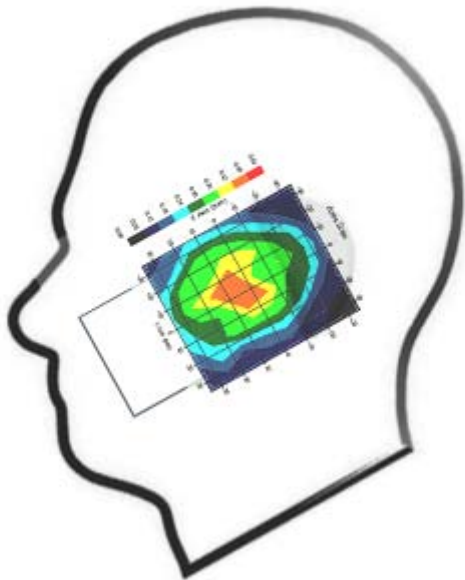
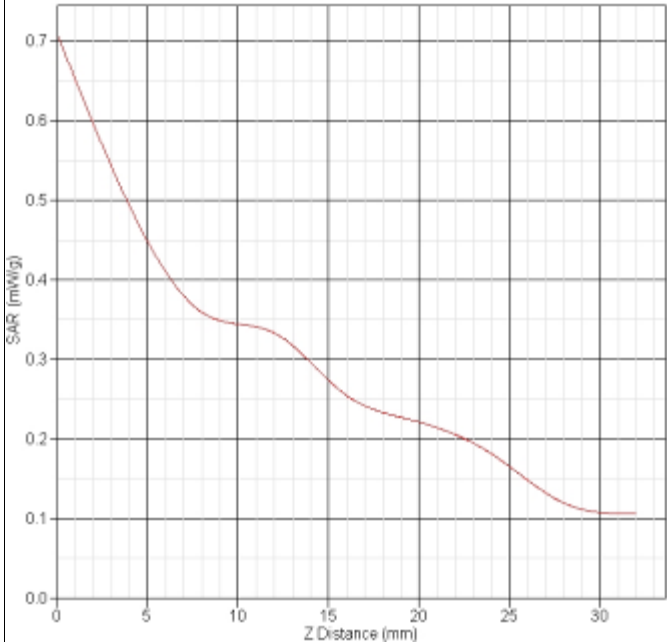
| Position                   | Scaled WWAN |               | Scaled WLAN   | Scaled WWAN+WLAN |
|----------------------------|-------------|---------------|---------------|------------------|
|                            | WWAN band   | Max. WWAN SAR | Max. WLAN SAR |                  |
| Front                      | GSM850      | 0.756         | 0.027         | 0.783            |
|                            | GSM1900     | 0.326         | 0.027         | 0.353            |
|                            | WCDMA V     | 0.620         | 0.027         | 0.647            |
|                            | WCDMA II    | 0.426         | 0.027         | 0.453            |
| Back                       | GSM850      | 1.051         | 0.054         | 1.105            |
|                            | GSM1900     | 0.546         | 0.054         | 0.600            |
|                            | WCDMA V     | 1.011         | 0.054         | 1.065            |
|                            | WCDMA II    | 0.709         | 0.054         | 0.763            |
| Right                      | GSM850      | 0.777         | 0.099         | 0.876            |
|                            | GSM1900     | 0.105         | 0.099         | 0.204            |
|                            | WCDMA V     | 0.409         | 0.099         | 0.508            |
|                            | WCDMA II    | 0.104         | 0.099         | 0.203            |
| Back<br>(With<br>earphone) | GSM850      | 0.807         | 0.054         | 0.861            |
|                            | GSM1900     | 0.536         | 0.054         | 0.590            |
|                            | WCDMA V     | 0.980         | 0.054         | 1.034            |
|                            | WCDMA II    | 0.696         | 0.054         | 0.750            |

8.5. SAR Measurement Data

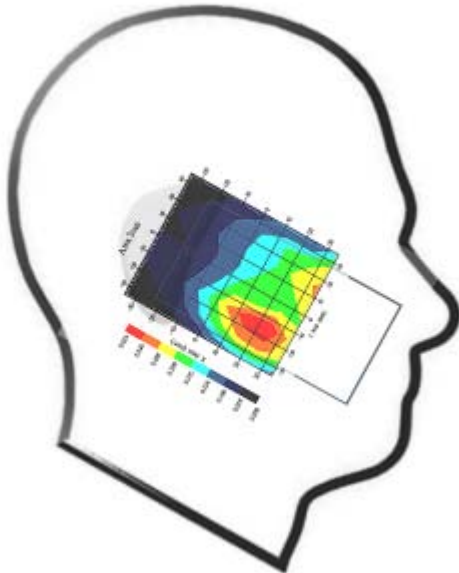
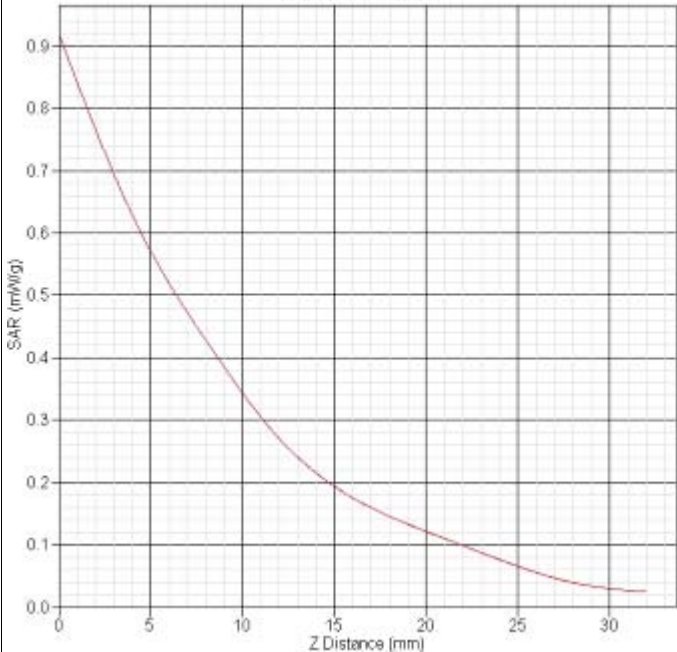
| GSM850 left cheek ch190                                                            |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 836.6                                                                               |
| Relative permittivity(real part)                                                   | 40.25                                                                               |
| Conductivity(S/m)                                                                  | 0.93                                                                                |
| Variation(%)                                                                       | 3.567                                                                               |
| Duty Cycle Factor                                                                  | 8                                                                                   |
| Crest factor                                                                       | 8                                                                                   |
| 4Conversion Factor                                                                 | 6.5                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 0.701                                                                               |
| SAR 10g(W/kg)                                                                      | 0.491                                                                               |

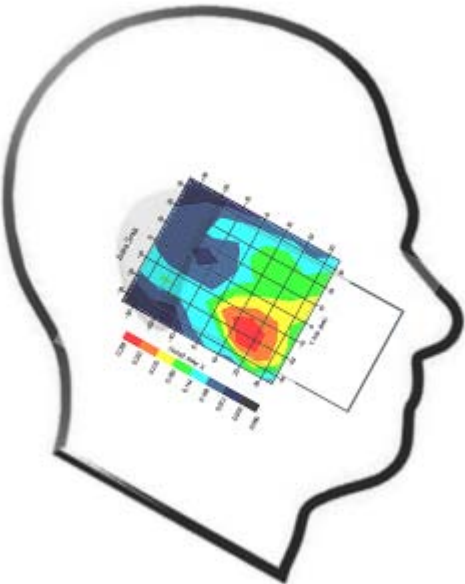
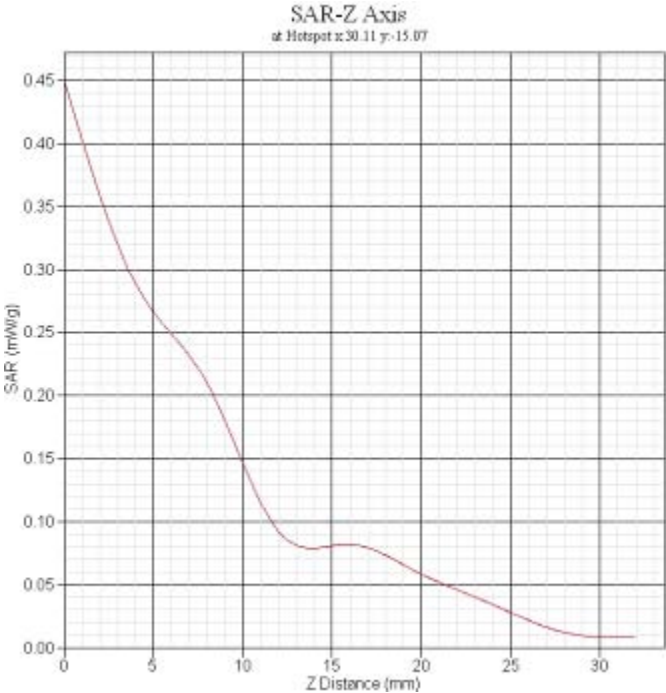
| GSM850 left tilt ch190                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|---|------|---|------|----|------|----|------|----|------|----|------|----|------|
| Frequency(MHz)                                                                     | 836.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Relative permittivity(real part)                                                   | 40.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conductivity(S/m)                                                                  | 0.93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Variation(%)                                                                       | -1.589                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Duty Cycle Factor                                                                  | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Crest factor                                                                       | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conversion Factor                                                                  | 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 μ V/(V/m)2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Data                                                                               | 2013-03-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|  | <p>SAR-Z Axis<br/>at Hotspot x:20.20 y:-5.19</p>  <table border="1"><caption>SAR-Z Axis Data (Estimated)</caption><thead><tr><th>Z Distance (mm)</th><th>SAR (mW/kg)</th></tr></thead><tbody><tr><td>0</td><td>0.70</td></tr><tr><td>5</td><td>0.50</td></tr><tr><td>10</td><td>0.38</td></tr><tr><td>15</td><td>0.30</td></tr><tr><td>20</td><td>0.22</td></tr><tr><td>25</td><td>0.15</td></tr><tr><td>30</td><td>0.10</td></tr></tbody></table> | Z Distance (mm) | SAR (mW/kg) | 0 | 0.70 | 5 | 0.50 | 10 | 0.38 | 15 | 0.30 | 20 | 0.22 | 25 | 0.15 | 30 | 0.10 |
| Z Distance (mm)                                                                    | SAR (mW/kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 0                                                                                  | 0.70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 5                                                                                  | 0.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 10                                                                                 | 0.38                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 15                                                                                 | 0.30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 20                                                                                 | 0.22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 25                                                                                 | 0.15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 30                                                                                 | 0.10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 1g(W/kg)                                                                       | 0.505                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 10g(W/kg)                                                                      | 0.341                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |

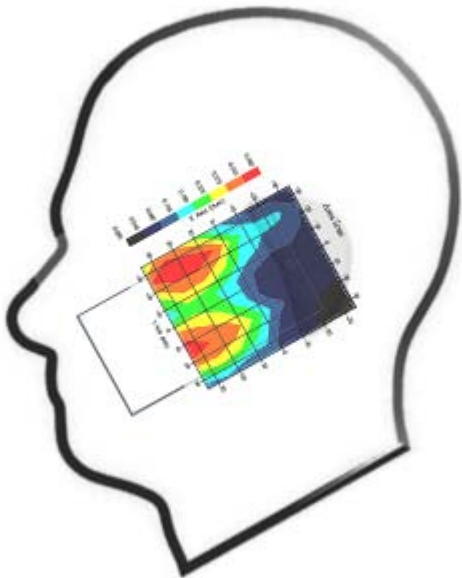
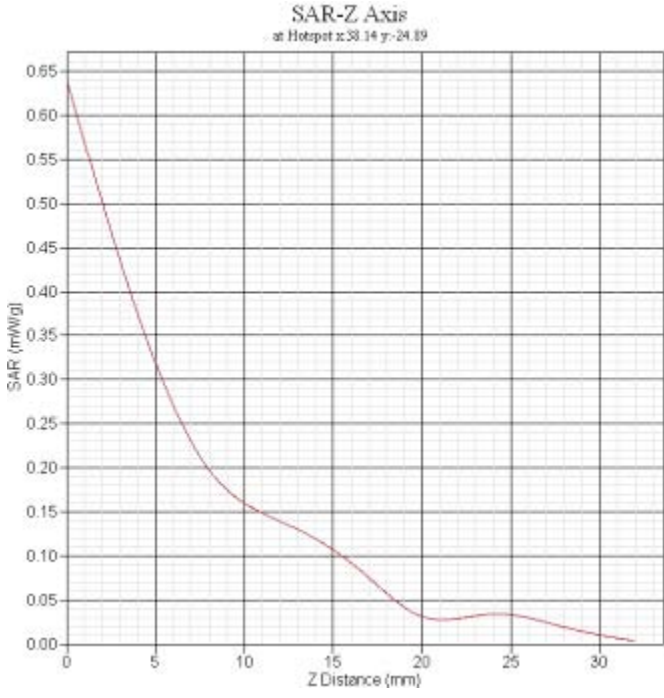
| GSM850 Right cheek ch190                                                           |                                                                                                                                       |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 836.6                                                                                                                                 |
| Relative permittivity(real part)                                                   | 40.25                                                                                                                                 |
| Conductivity(S/m)                                                                  | 0.93                                                                                                                                  |
| Variation(%)                                                                       | -3.867                                                                                                                                |
| Duty Cycle Factor                                                                  | 8                                                                                                                                     |
| Crest factor                                                                       | 8                                                                                                                                     |
| Conversion Factor                                                                  | 6.5                                                                                                                                   |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                             |
| Data                                                                               | 2013-03-13                                                                                                                            |
|  | <p>SAR-Z Axis<br/>at Hotspot x:30.13 y:-12.89</p>  |
| SAR 1g(W/kg)                                                                       | 0.581                                                                                                                                 |
| SAR 10g(W/kg)                                                                      | 0.385                                                                                                                                 |

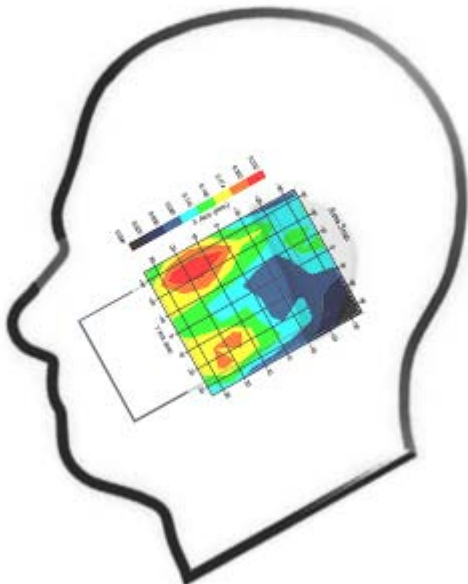
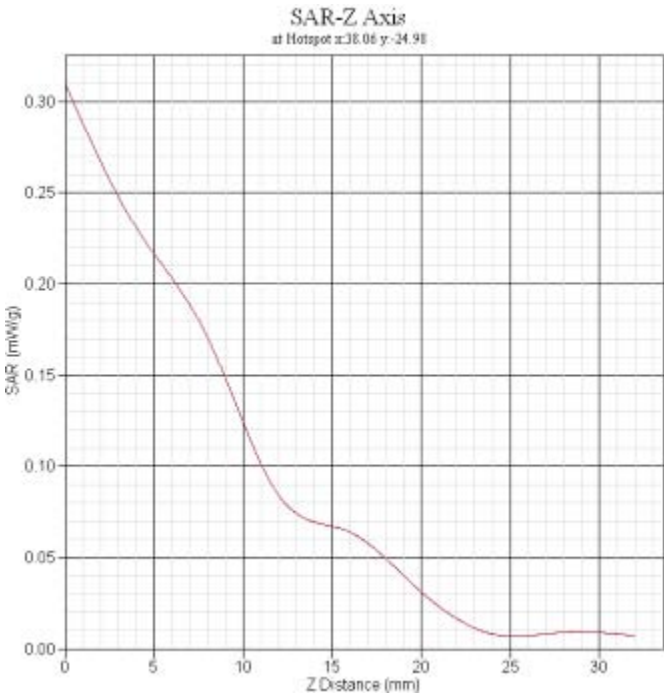
| GSM850 Right tilt CH190                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|---|------|---|------|----|------|----|------|----|------|----|------|----|------|
| Frequency(MHz)                                                                     | 836.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Relative permittivity(real part)                                                   | 40.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conductivity(S/m)                                                                  | 0.93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Variation(%)                                                                       | -1.727                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Duty Cycle Factor                                                                  | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Crest factor                                                                       | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conversion Factor                                                                  | 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Data                                                                               | 2013-03-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|  | <p>SAR-Z Axis<br/>at Hotspot x:20.10 y:-4.95</p>  <table border="1"><caption>SAR-Z Axis Data (Estimated)</caption><thead><tr><th>Z Distance (mm)</th><th>SAR (mW/kg)</th></tr></thead><tbody><tr><td>0</td><td>0.70</td></tr><tr><td>5</td><td>0.50</td></tr><tr><td>10</td><td>0.35</td></tr><tr><td>15</td><td>0.35</td></tr><tr><td>20</td><td>0.25</td></tr><tr><td>25</td><td>0.18</td></tr><tr><td>30</td><td>0.10</td></tr></tbody></table> | Z Distance (mm) | SAR (mW/kg) | 0 | 0.70 | 5 | 0.50 | 10 | 0.35 | 15 | 0.35 | 20 | 0.25 | 25 | 0.18 | 30 | 0.10 |
| Z Distance (mm)                                                                    | SAR (mW/kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 0                                                                                  | 0.70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 5                                                                                  | 0.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 10                                                                                 | 0.35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 15                                                                                 | 0.35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 20                                                                                 | 0.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 25                                                                                 | 0.18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 30                                                                                 | 0.10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 1g(W/kg)                                                                       | 0.465                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 10g(W/kg)                                                                      | 0.302                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |

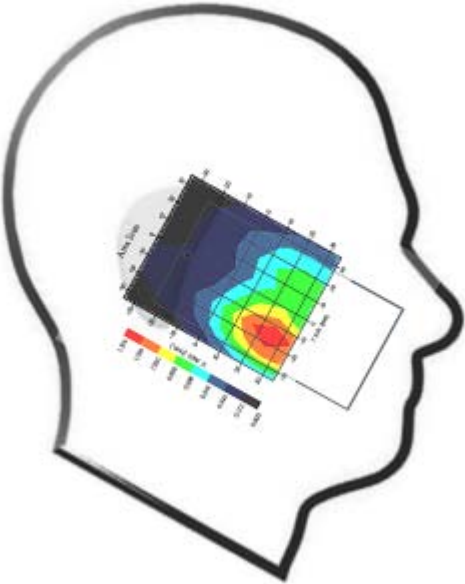
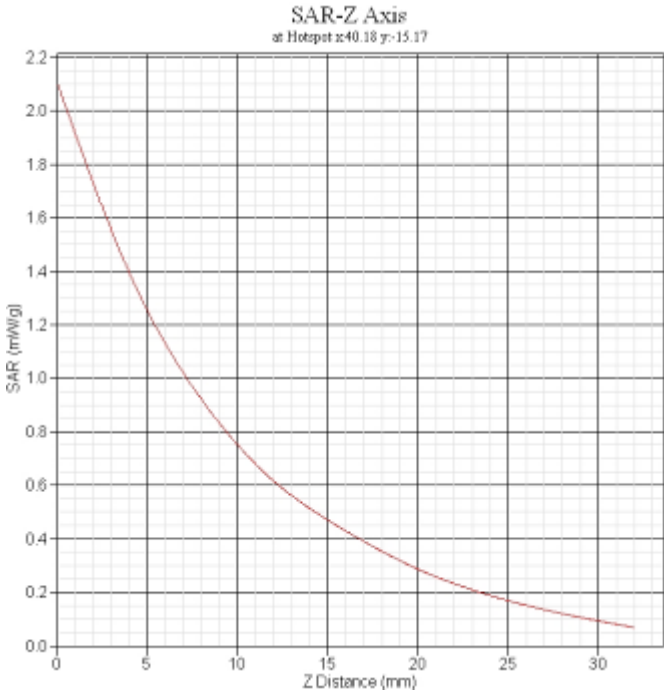


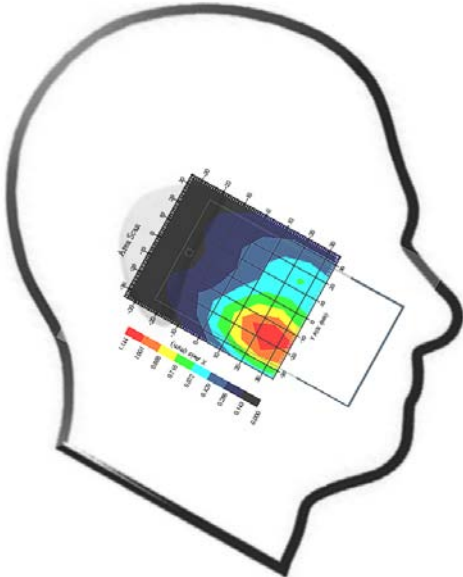
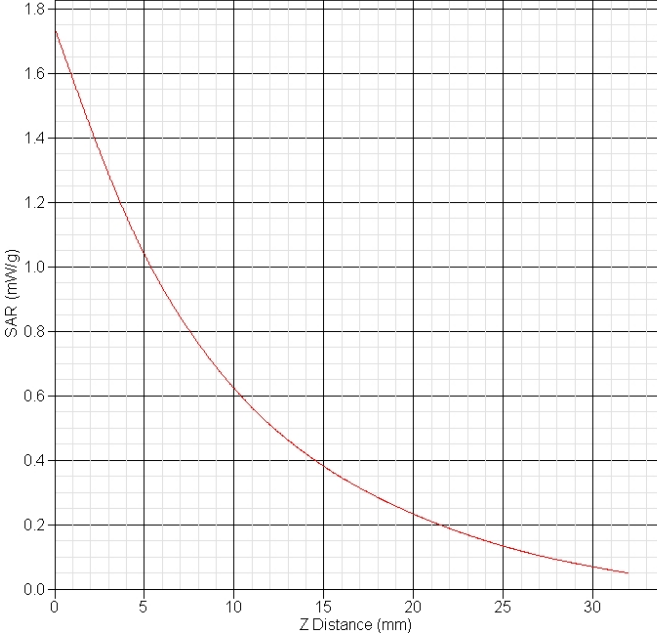
| GSM1900 Left cheek CH512                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|---|------|---|------|----|------|----|------|----|------|----|------|----|------|
| Frequency(MHz)                                                                     | 1850.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Relative permittivity(real part)                                                   | 41.53                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conductivity(S/m)                                                                  | 1.42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Variation(%)                                                                       | 2.154                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Duty Cycle Factor                                                                  | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Crest factor                                                                       | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conversion Factor                                                                  | 5.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Data                                                                               | 2013-03-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|  | <p>SAR-Z Axis<br/>at Hotspot x:32.12 y:-15.08</p>  <table border="1"><caption>SAR-Z Axis Data</caption><thead><tr><th>Z Distance (mm)</th><th>SAR (mW/kg)</th></tr></thead><tbody><tr><td>0</td><td>0.90</td></tr><tr><td>5</td><td>0.58</td></tr><tr><td>10</td><td>0.35</td></tr><tr><td>15</td><td>0.20</td></tr><tr><td>20</td><td>0.12</td></tr><tr><td>25</td><td>0.07</td></tr><tr><td>30</td><td>0.03</td></tr></tbody></table> | Z Distance (mm) | SAR (mW/kg) | 0 | 0.90 | 5 | 0.58 | 10 | 0.35 | 15 | 0.20 | 20 | 0.12 | 25 | 0.07 | 30 | 0.03 |
| Z Distance (mm)                                                                    | SAR (mW/kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 0                                                                                  | 0.90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 5                                                                                  | 0.58                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 10                                                                                 | 0.35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 15                                                                                 | 0.20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 20                                                                                 | 0.12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 25                                                                                 | 0.07                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 30                                                                                 | 0.03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 1g(W/kg)                                                                       | 0.536                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 10g(W/kg)                                                                      | 0.308                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |

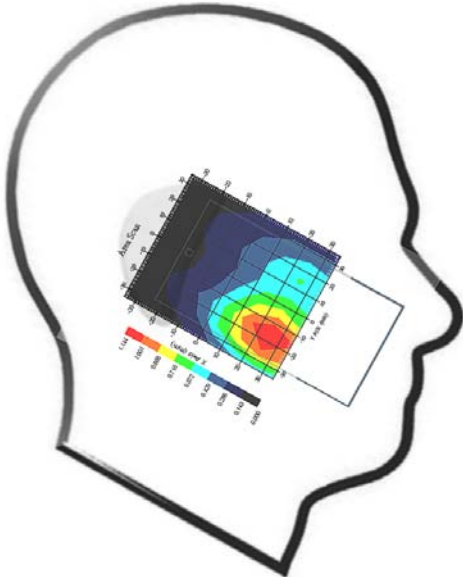
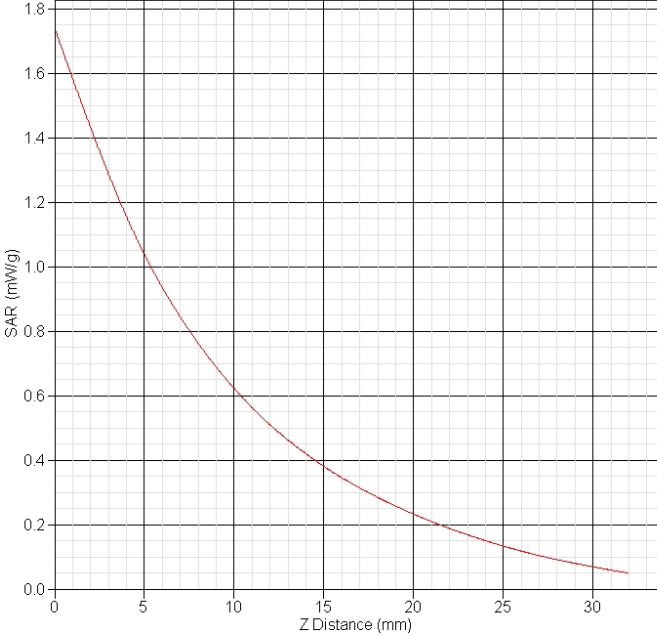
| GSM1900 Left tilt CH512                                                            |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1850.2                                                                              |
| Relative permittivity(real part)                                                   | 41.53                                                                               |
| Conductivity(S/m)                                                                  | 1.42                                                                                |
| Variation(%)                                                                       | 4.970                                                                               |
| Duty Cycle Factor                                                                  | 8                                                                                   |
| Crest factor                                                                       | 8                                                                                   |
| Conversion Factor                                                                  | 5.7                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 0.272                                                                               |
| SAR 10g(W/kg)                                                                      | 0.148                                                                               |

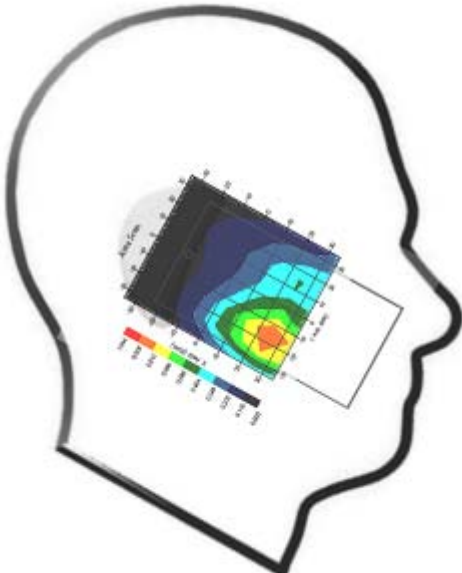
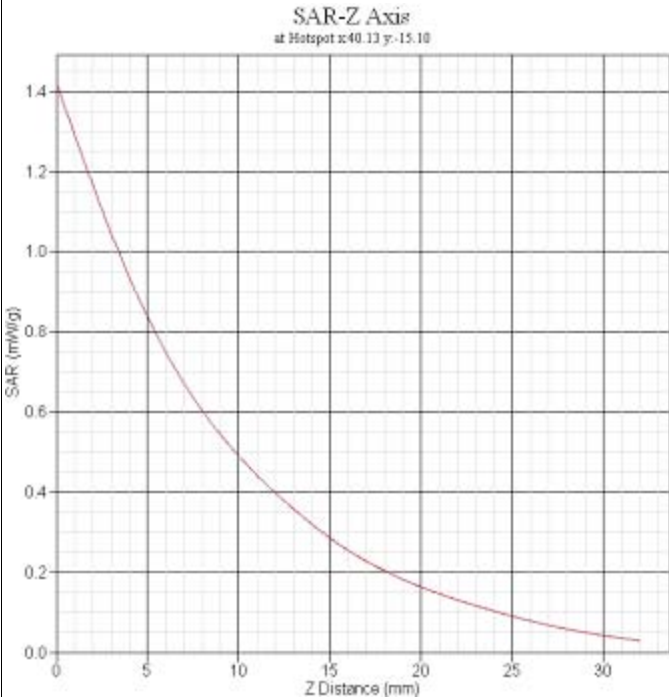
| GSM1900 Right cheek CH512                                                          |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1850.2                                                                              |
| Relative permittivity(real part)                                                   | 41.53                                                                               |
| Conductivity(S/m)                                                                  | 1.42                                                                                |
| Variation(%)                                                                       | 2.317                                                                               |
| Duty Cycle Factor                                                                  | 8                                                                                   |
| Crest factor                                                                       | 8                                                                                   |
| Conversion Factor                                                                  | 5.7                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu V/(V/m)^2$                                                      |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
|                                                                                    | SAR 1g(W/kg)                                                                        |
|                                                                                    | 0.313                                                                               |
| SAR 10g(W/kg)                                                                      | 0.163                                                                               |

| GSM1900 Right tilt CH512                                                           |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1850.2                                                                              |
| Relative permittivity(real part)                                                   | 41.53                                                                               |
| Conductivity(S/m)                                                                  | 1.42                                                                                |
| Variation(%)                                                                       | -1.009                                                                              |
| Duty Cycle Factor                                                                  | 8                                                                                   |
| Crest factor                                                                       | 8                                                                                   |
| Conversion Factor                                                                  | 5.7                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 0.211                                                                               |
| SAR 10g(W/kg)                                                                      | 0.125                                                                               |

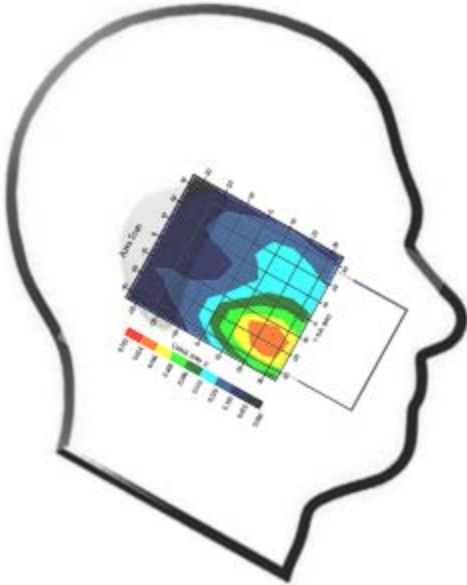
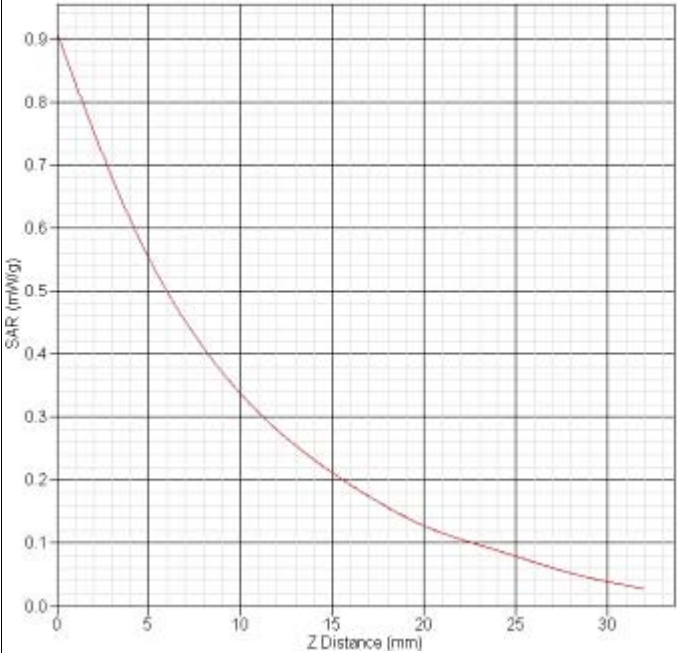
| WCDMA Band II Left cheek CH9262                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1852.4                                                                              |
| Relative permittivity(real part)                                                   | 41.53                                                                               |
| Conductivity(S/m)                                                                  | 1.42                                                                                |
| Variation(%)                                                                       | -0.248                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 5.7                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                       | 0.948                                                                               |
| SAR 10g(W/Kg)                                                                      | 0.603                                                                               |

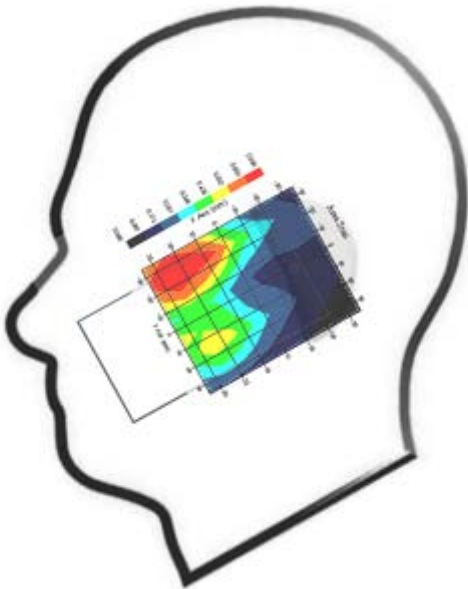
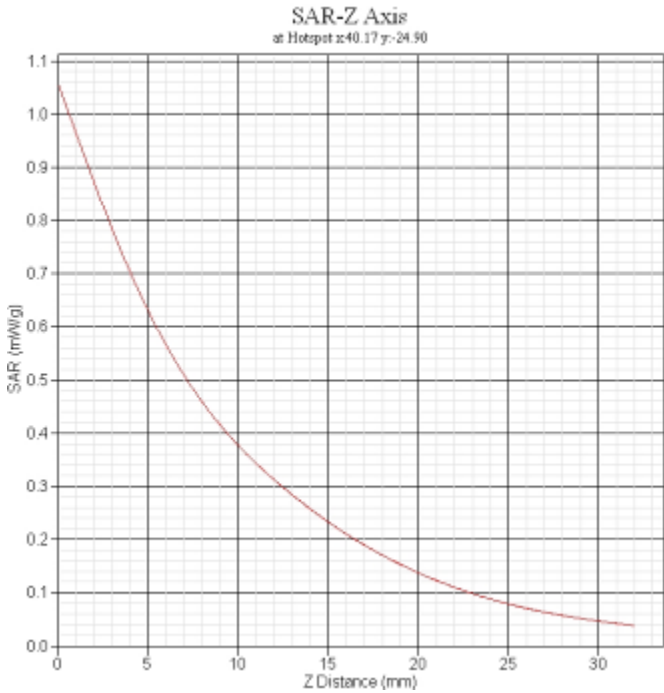
| WCDMA Band II Left cheek CH9400                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------|---|------|---|------|----|------|----|------|----|------|----|------|----|------|
| Frequency(MHz)                                                                     | 1880.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Relative permittivity(real part)                                                   | 41.53                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conductivity(S/m)                                                                  | 1.42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Variation(%)                                                                       | -3.294                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Duty Cycle Factor                                                                  | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Crest factor                                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conversion Factor                                                                  | 5.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 μ V/(V/m)2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Data                                                                               | 2013-03-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|  | <p>SAR-Z Axis<br/>at Hotspot x:40.13 y:-15.10</p>  <table border="1"><caption>SAR-Z Axis Data (Estimated)</caption><thead><tr><th>Z Distance (mm)</th><th>SAR (mW/g)</th></tr></thead><tbody><tr><td>0</td><td>1.75</td></tr><tr><td>5</td><td>1.05</td></tr><tr><td>10</td><td>0.65</td></tr><tr><td>15</td><td>0.40</td></tr><tr><td>20</td><td>0.25</td></tr><tr><td>25</td><td>0.15</td></tr><tr><td>30</td><td>0.10</td></tr></tbody></table> | Z Distance (mm) | SAR (mW/g) | 0 | 1.75 | 5 | 1.05 | 10 | 0.65 | 15 | 0.40 | 20 | 0.25 | 25 | 0.15 | 30 | 0.10 |
| Z Distance (mm)                                                                    | SAR (mW/g)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 0                                                                                  | 1.75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 5                                                                                  | 1.05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 10                                                                                 | 0.65                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 15                                                                                 | 0.40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 20                                                                                 | 0.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 25                                                                                 | 0.15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 30                                                                                 | 0.10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 1g(W/Kg)                                                                       | 0.965                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 10g(W/Kg)                                                                      | 0.607                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |            |   |      |   |      |    |      |    |      |    |      |    |      |    |      |

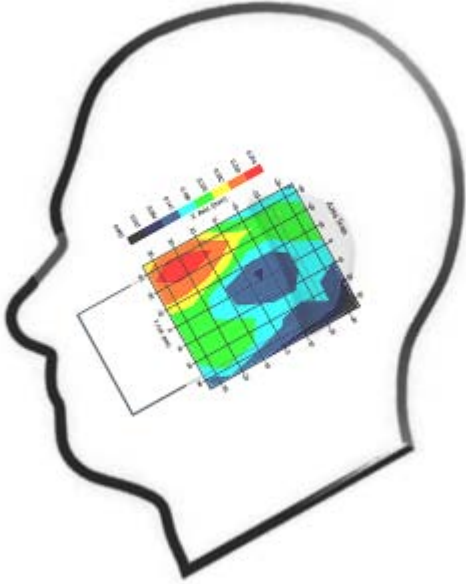
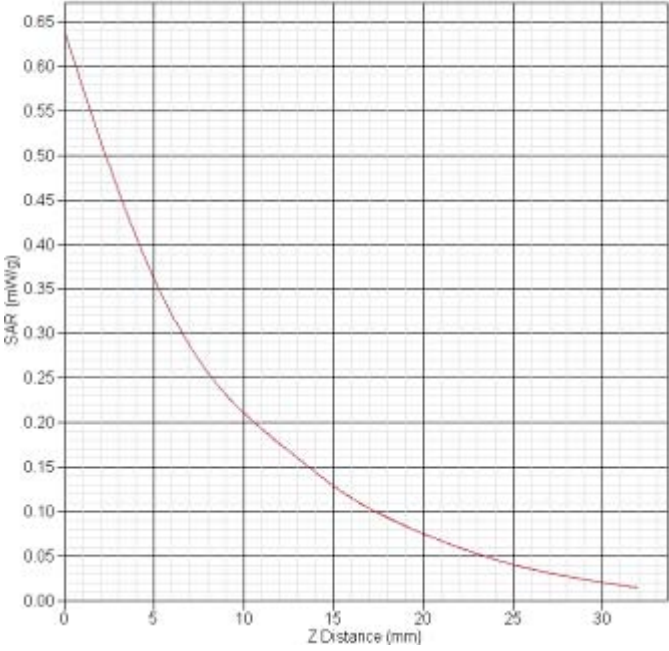
| WCDMA Band II Left cheek CH9400(repeat)                                            |                                                                                                                                       |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1880.0                                                                                                                                |
| Relative permittivity(real part)                                                   | 41.53                                                                                                                                 |
| Conductivity(S/m)                                                                  | 1.42                                                                                                                                  |
| Variation(%)                                                                       | -3.294                                                                                                                                |
| Duty Cycle Factor                                                                  | 1                                                                                                                                     |
| Crest factor                                                                       | 1                                                                                                                                     |
| Conversion Factor                                                                  | 5.7                                                                                                                                   |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                             |
| Data                                                                               | 2013-03-13                                                                                                                            |
|  | <p>SAR-Z Axis<br/>at Hotspot x:40.13 y:-15.10</p>  |
| SAR 1g(W/Kg)                                                                       | 0.961                                                                                                                                 |
| SAR 10g(W/Kg)                                                                      | 0.602                                                                                                                                 |

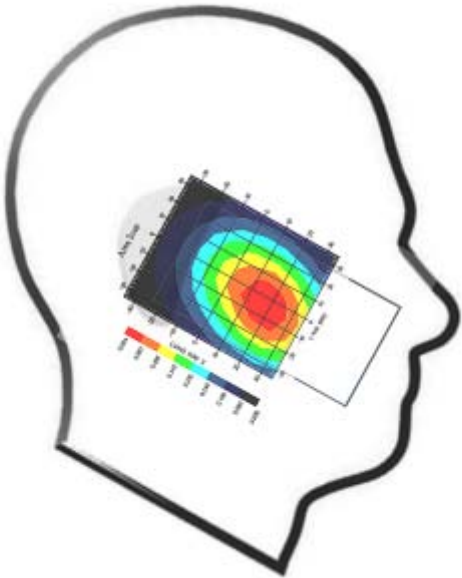
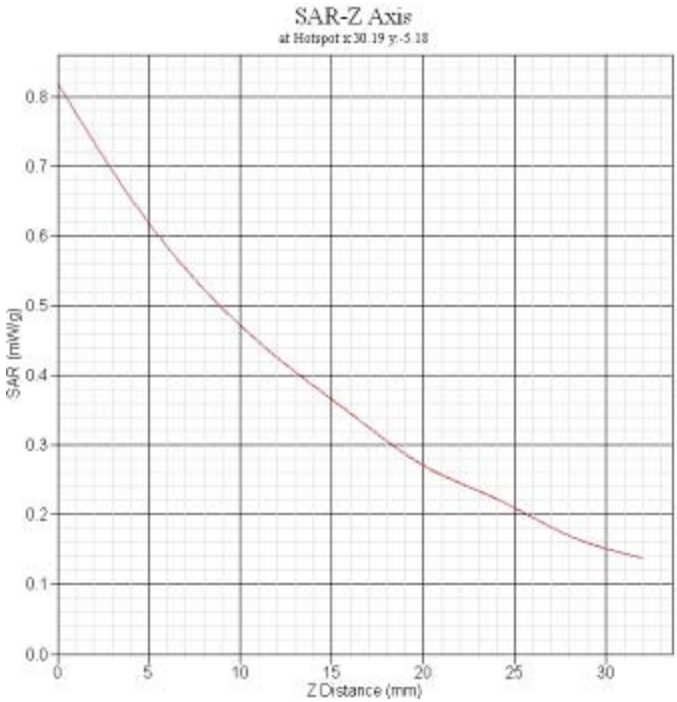
| WCDMA Band II Left cheek CH9538                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1907.6                                                                              |
| Relative permittivity(real part)                                                   | 41.53                                                                               |
| Conductivity(S/m)                                                                  | 1.42                                                                                |
| Variation(%)                                                                       | -2.640                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 5.7                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
|                                                                                    |                                                                                     |
|                                                                                    |                                                                                     |
| SAR 1g(W/Kg)                                                                       | 0.853                                                                               |
| SAR 10g(W/Kg)                                                                      | 0.477                                                                               |

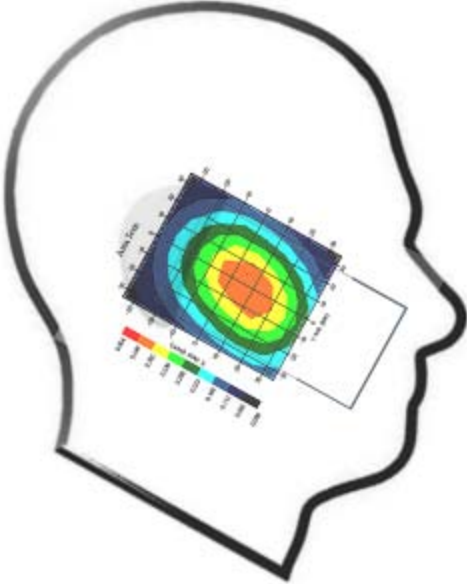
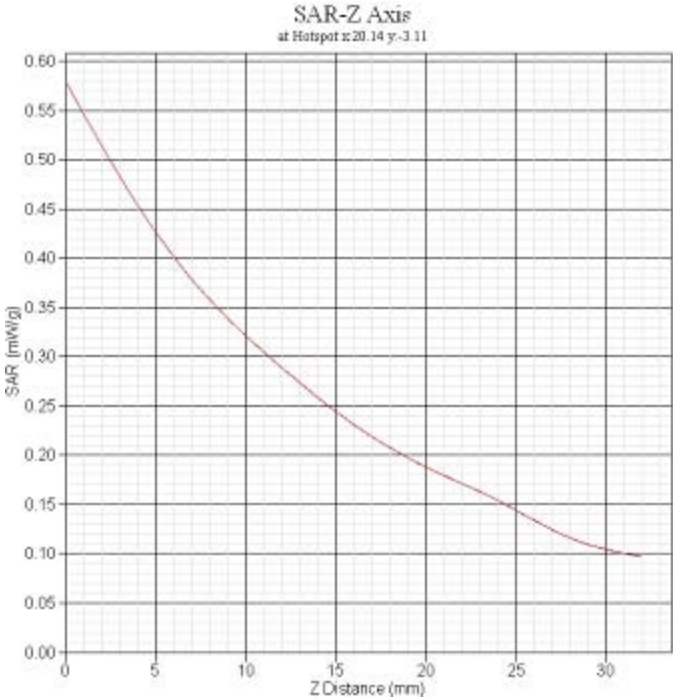


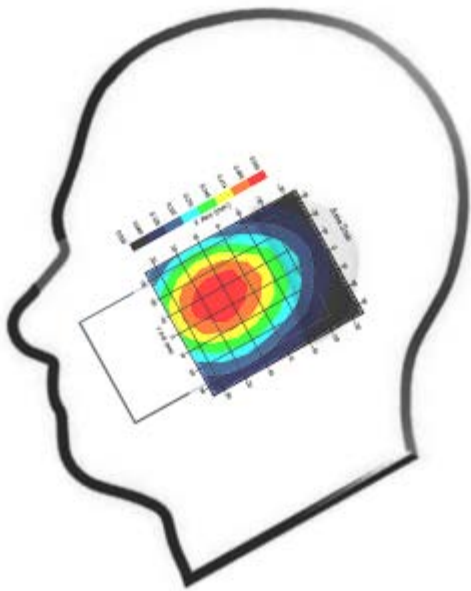
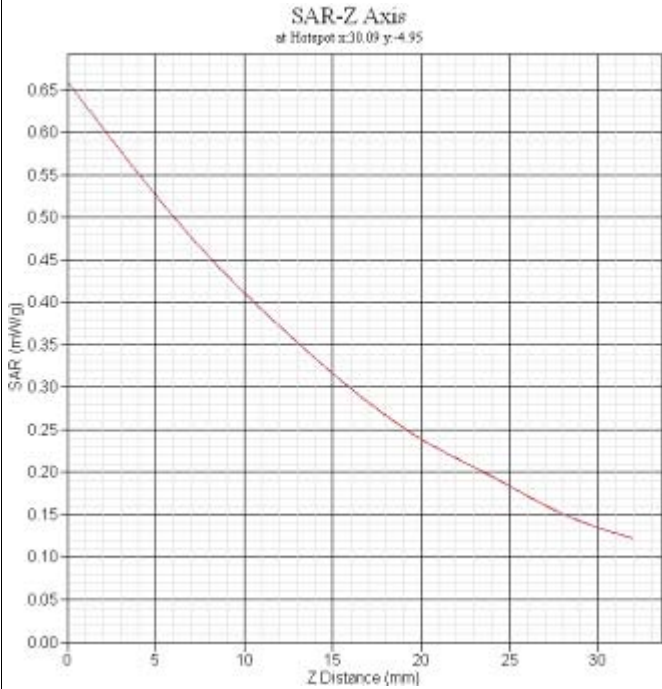
| WCDMA Band II Left tilt CH9400                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|---|------|---|------|----|------|----|------|----|------|----|------|----|------|
| Frequency(MHz)                                                                     | 1800.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Relative permittivity(real part)                                                   | 41.53                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conductivity(S/m)                                                                  | 1.42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Variation(%)                                                                       | -1.765                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Duty Cycle Factor                                                                  | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Crest factor                                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conversion Factor                                                                  | 5.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Data                                                                               | 2013-03-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|  | <p>SAR-Z Axis<br/>at Hotspot x:40.15 y:-15.12</p>  <table border="1"><caption>SAR-Z Axis Data Points (Estimated)</caption><thead><tr><th>Z Distance (mm)</th><th>SAR (mW/kg)</th></tr></thead><tbody><tr><td>0</td><td>0.90</td></tr><tr><td>5</td><td>0.55</td></tr><tr><td>10</td><td>0.35</td></tr><tr><td>15</td><td>0.22</td></tr><tr><td>20</td><td>0.13</td></tr><tr><td>25</td><td>0.08</td></tr><tr><td>30</td><td>0.05</td></tr></tbody></table> | Z Distance (mm) | SAR (mW/kg) | 0 | 0.90 | 5 | 0.55 | 10 | 0.35 | 15 | 0.22 | 20 | 0.13 | 25 | 0.08 | 30 | 0.05 |
| Z Distance (mm)                                                                    | SAR (mW/kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 0                                                                                  | 0.90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 5                                                                                  | 0.55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 10                                                                                 | 0.35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 15                                                                                 | 0.22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 20                                                                                 | 0.13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 25                                                                                 | 0.08                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 30                                                                                 | 0.05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 1g(W/Kg)                                                                       | 0.476                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 10g(W/Kg)                                                                      | 0.320                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |

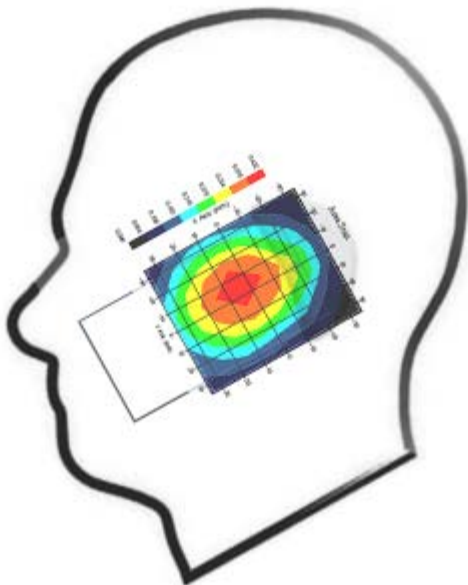
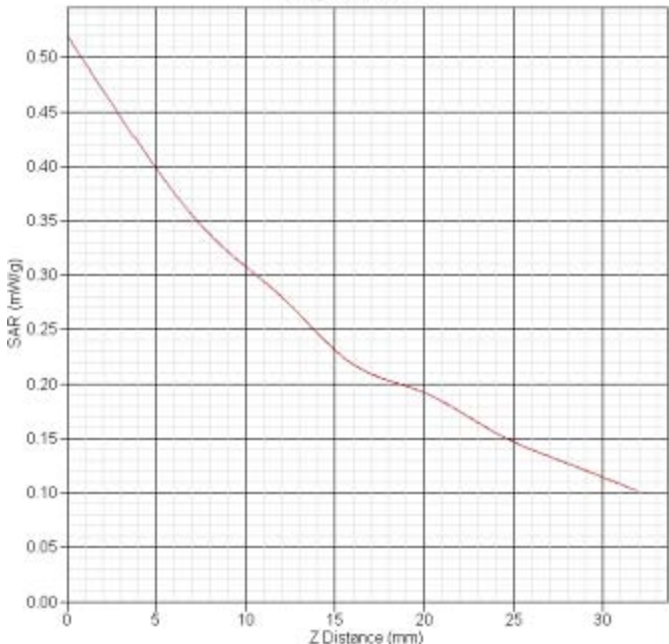
| WCDMA Band II Right cheek CH9400                                                   |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1800.0                                                                              |
| Relative permittivity(real part)                                                   | 41.53                                                                               |
| Conductivity(S/m)                                                                  | 1.42                                                                                |
| Variation(%)                                                                       | 3.367                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 5.7                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                       | 0.730                                                                               |
| SAR 10g(W/Kg)                                                                      | 0.438                                                                               |

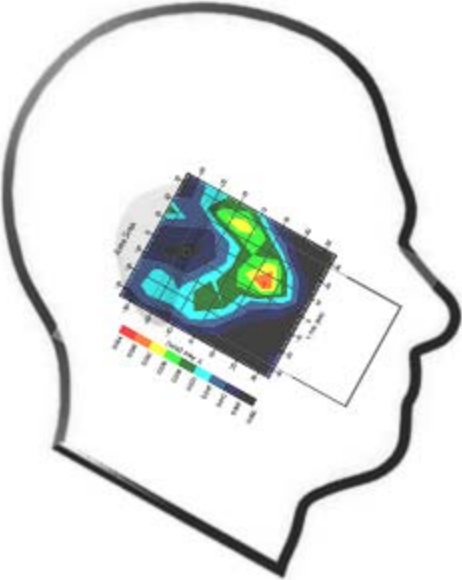
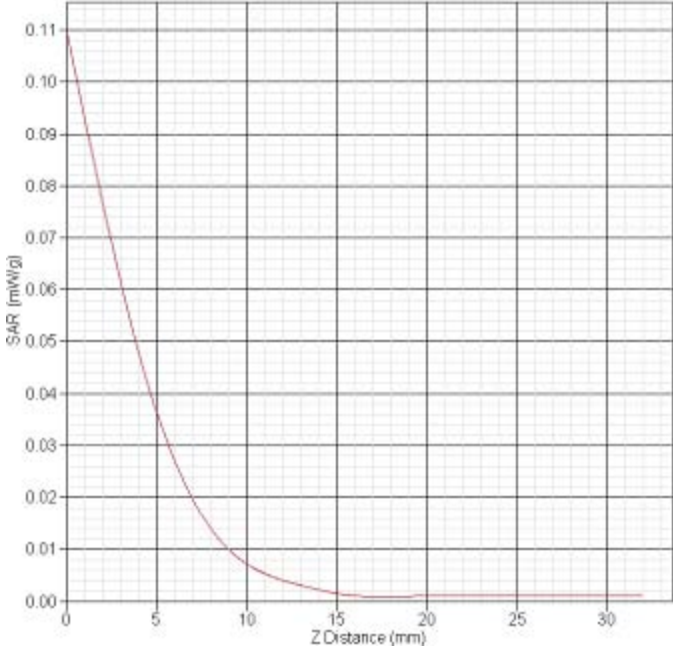
| WCDMA Band II Right tilt CH9400                                                    |                                                                                                                                       |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1800.0                                                                                                                                |
| Relative permittivity(real part)                                                   | 41.53                                                                                                                                 |
| Conductivity(S/m)                                                                  | 1.42                                                                                                                                  |
| Variation(%)                                                                       | -1.049                                                                                                                                |
| Duty Cycle Factor                                                                  | 1                                                                                                                                     |
| Crest factor                                                                       | 1                                                                                                                                     |
| Conversion Factor                                                                  | 5.7                                                                                                                                   |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                             |
| Data                                                                               | 2013-03-13                                                                                                                            |
|  | <p>SAR-Z Axis<br/>at Hotspot x:12.07 y:-24.96</p>  |
|                                                                                    | SAR 1g(W/Kg)                                                                                                                          |
|                                                                                    | SAR 10g(W/Kg)                                                                                                                         |
|                                                                                    | 0.370                                                                                                                                 |
|                                                                                    | 0.209                                                                                                                                 |

| WCDMA Band V Left cheek CH4183                                                     |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 836.6                                                                               |
| Relative permittivity(real part)                                                   | 40.25                                                                               |
| Conductivity(S/m)                                                                  | 0.93                                                                                |
| Variation(%)                                                                       | -2.557                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 6.5                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                       | 0.612                                                                               |
| SAR 10g(W/Kg)                                                                      | 0.412                                                                               |

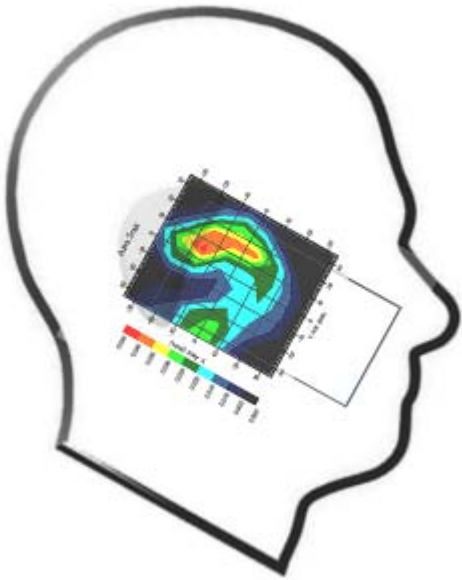
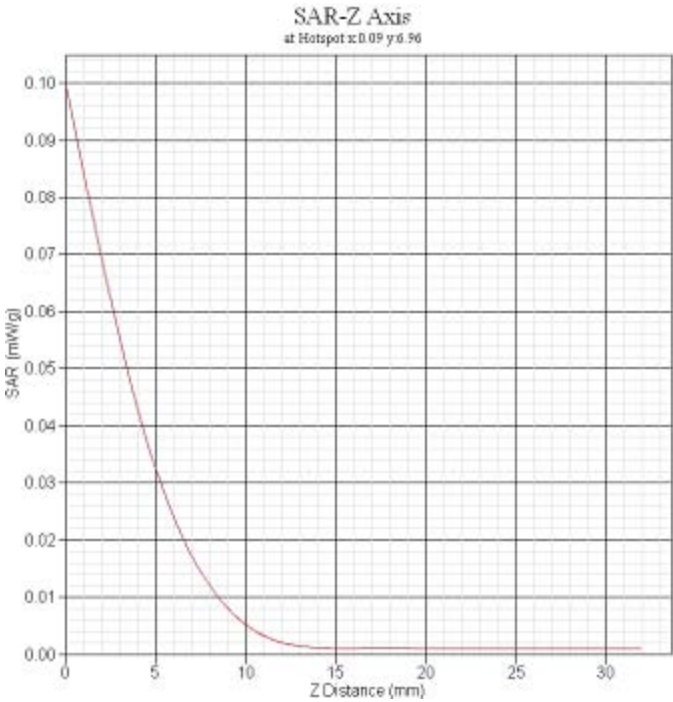
| WCDMA Band V Left tilt CH4183                                                      |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 836.6                                                                               |
| Relative permittivity(real part)                                                   | 40.25                                                                               |
| Conductivity(S/m)                                                                  | 0.93                                                                                |
| Variation(%)                                                                       | -2.723                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 6.5                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
|                                                                                    | SAR 1g(W/Kg)0.428                                                                   |
|                                                                                    | SAR 10g(W/Kg)0.302                                                                  |

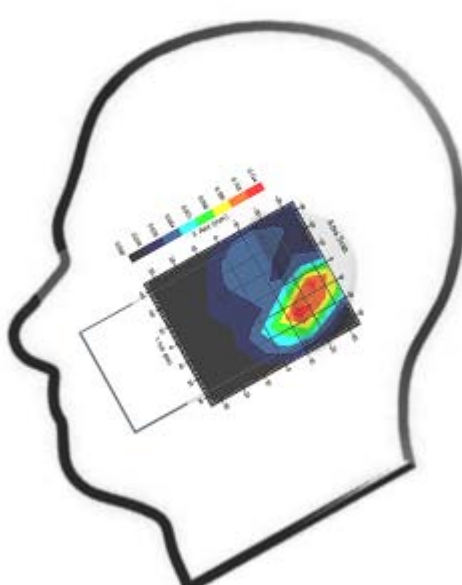
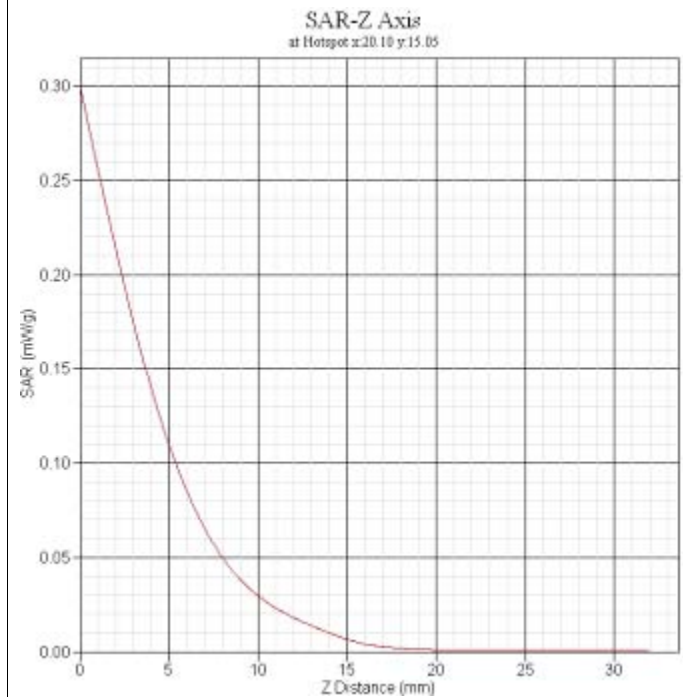
| WCDMA Band V Right cheek CH4183                                                    |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 836.6                                                                               |
| Relative permittivity(real part)                                                   | 40.25                                                                               |
| Conductivity(S/m)                                                                  | 0.93                                                                                |
| Variation(%)                                                                       | -2.263                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 6.5                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                       | 0.502                                                                               |
| SAR 10g(W/Kg)                                                                      | 0.334                                                                               |

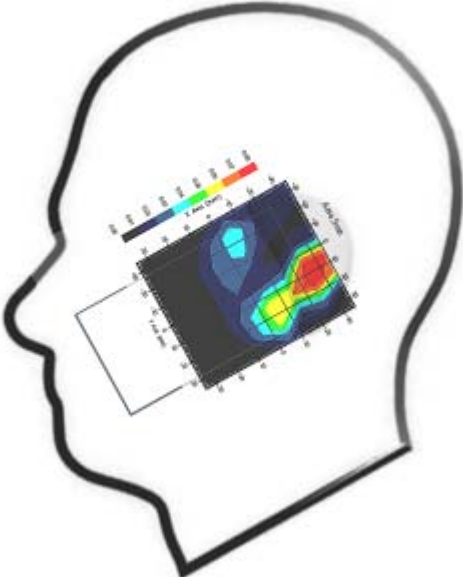
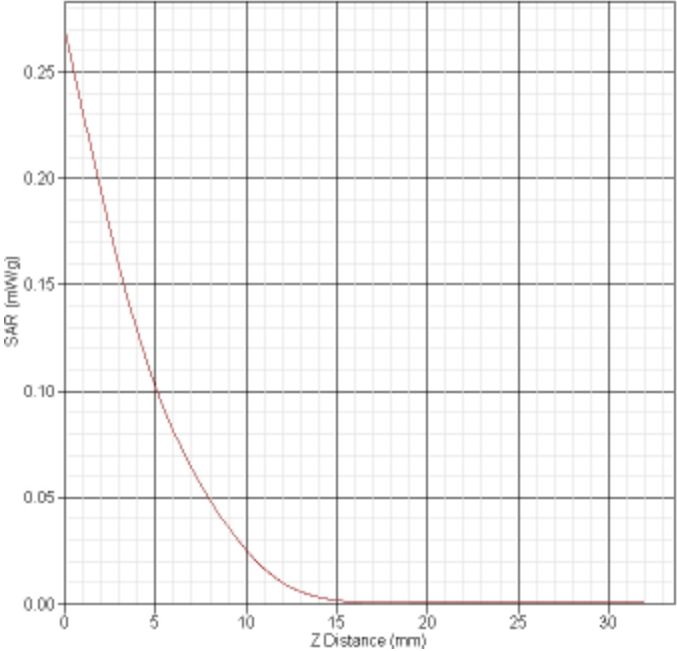
| WCDMA Band V Right tilt CH4183                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|---|------|---|------|----|------|----|------|----|------|----|------|----|------|
| Frequency(MHz)                                                                     | 836.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Relative permittivity(real part)                                                   | 40.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conductivity(S/m)                                                                  | 0.93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Variation(%)                                                                       | -2.947                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Duty Cycle Factor                                                                  | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Crest factor                                                                       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Conversion Factor                                                                  | 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| Data                                                                               | 2013-03-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
|  | <p>SAR-Z Axis<br/>at Hotspot x:20.13 y:-4.91</p>  <table border="1"><caption>SAR-Z Axis Data</caption><thead><tr><th>Z Distance (mm)</th><th>SAR (mW/kg)</th></tr></thead><tbody><tr><td>0</td><td>0.50</td></tr><tr><td>5</td><td>0.40</td></tr><tr><td>10</td><td>0.30</td></tr><tr><td>15</td><td>0.22</td></tr><tr><td>20</td><td>0.18</td></tr><tr><td>25</td><td>0.14</td></tr><tr><td>30</td><td>0.10</td></tr></tbody></table> | Z Distance (mm) | SAR (mW/kg) | 0 | 0.50 | 5 | 0.40 | 10 | 0.30 | 15 | 0.22 | 20 | 0.18 | 25 | 0.14 | 30 | 0.10 |
| Z Distance (mm)                                                                    | SAR (mW/kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 0                                                                                  | 0.50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 5                                                                                  | 0.40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 10                                                                                 | 0.30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 15                                                                                 | 0.22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 20                                                                                 | 0.18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 25                                                                                 | 0.14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| 30                                                                                 | 0.10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 1g(W/Kg)                                                                       | 0.398                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |
| SAR 10g(W/Kg)                                                                      | 0.287                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |      |   |      |    |      |    |      |    |      |    |      |    |      |

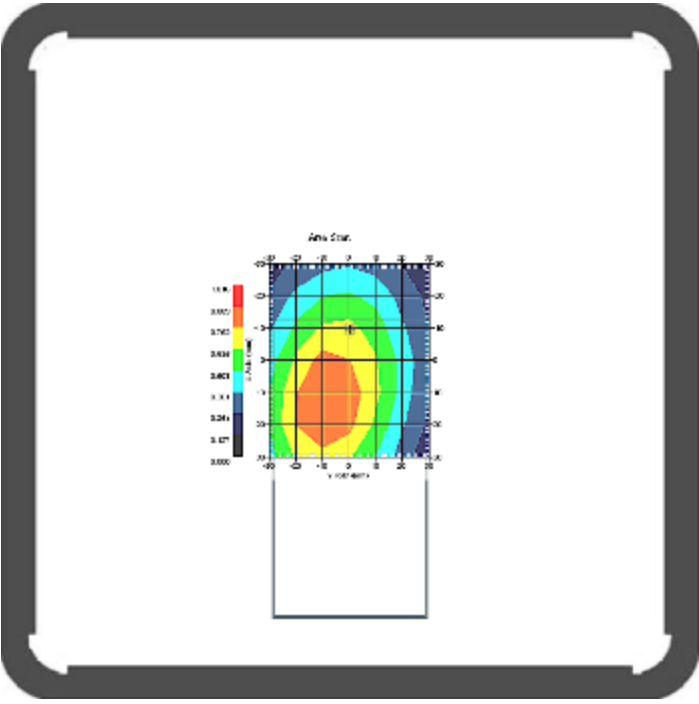
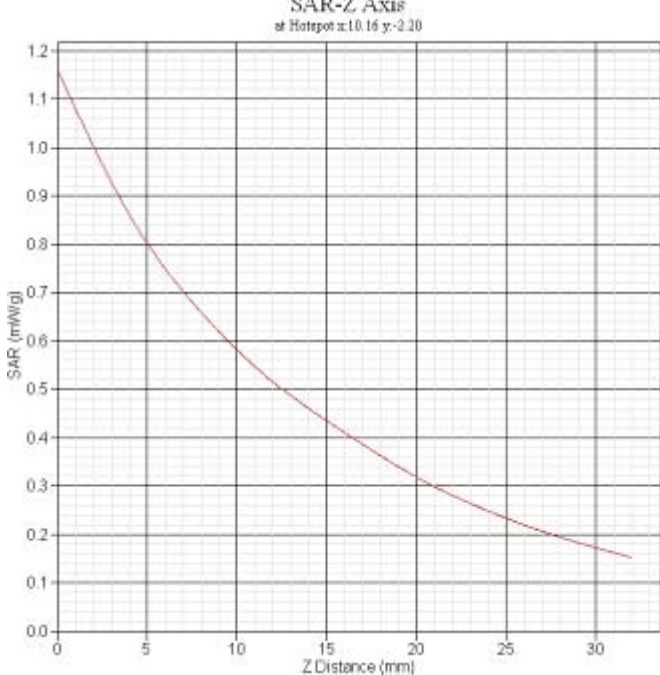
| 802.11b Left cheek CH11                                                            |                                                                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 2462                                                                                                                                |
| Relative permittivity(real part)                                                   | 40.27                                                                                                                               |
| 4Conductivity(S/m)                                                                 | 1.85                                                                                                                                |
| Variation(%)                                                                       | 4.765                                                                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                                                                   |
| Crest factor                                                                       | 1                                                                                                                                   |
| Conversion Factor                                                                  | 4.65                                                                                                                                |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 μ V/(V/m)2                                                                                                           |
| Data                                                                               | 2013-03-15                                                                                                                          |
|  | <p>SAR-Z Axis<br/>at Hotspot x:30.15 y:4.89</p>  |
| SAR 1g(W/kg)                                                                       | 0.045                                                                                                                               |
| SAR 10g(W/kg)                                                                      | 0.018                                                                                                                               |

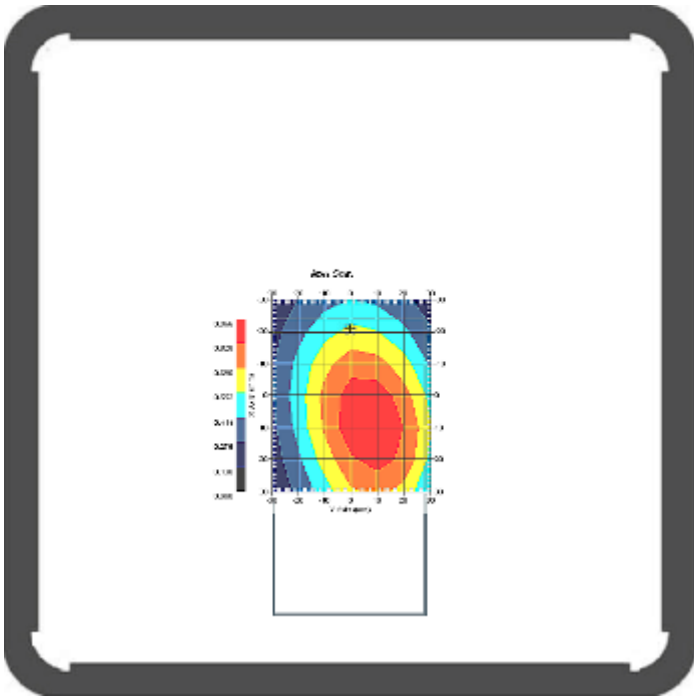
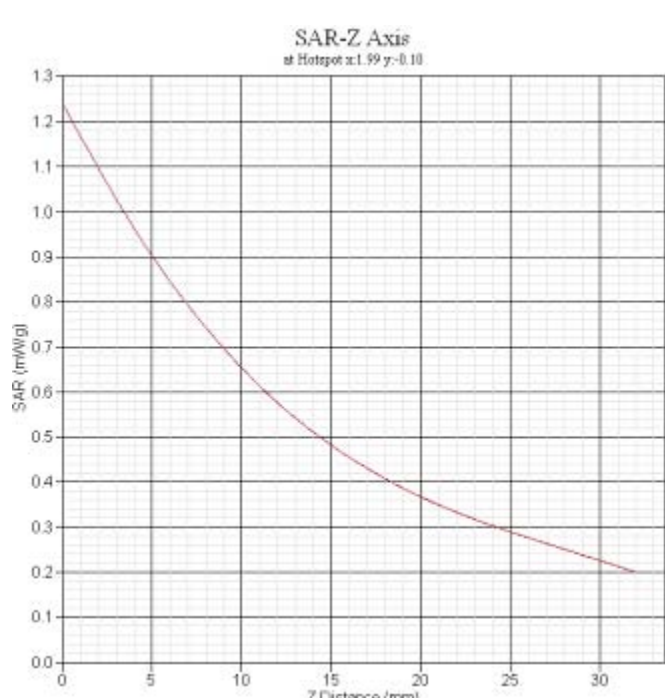


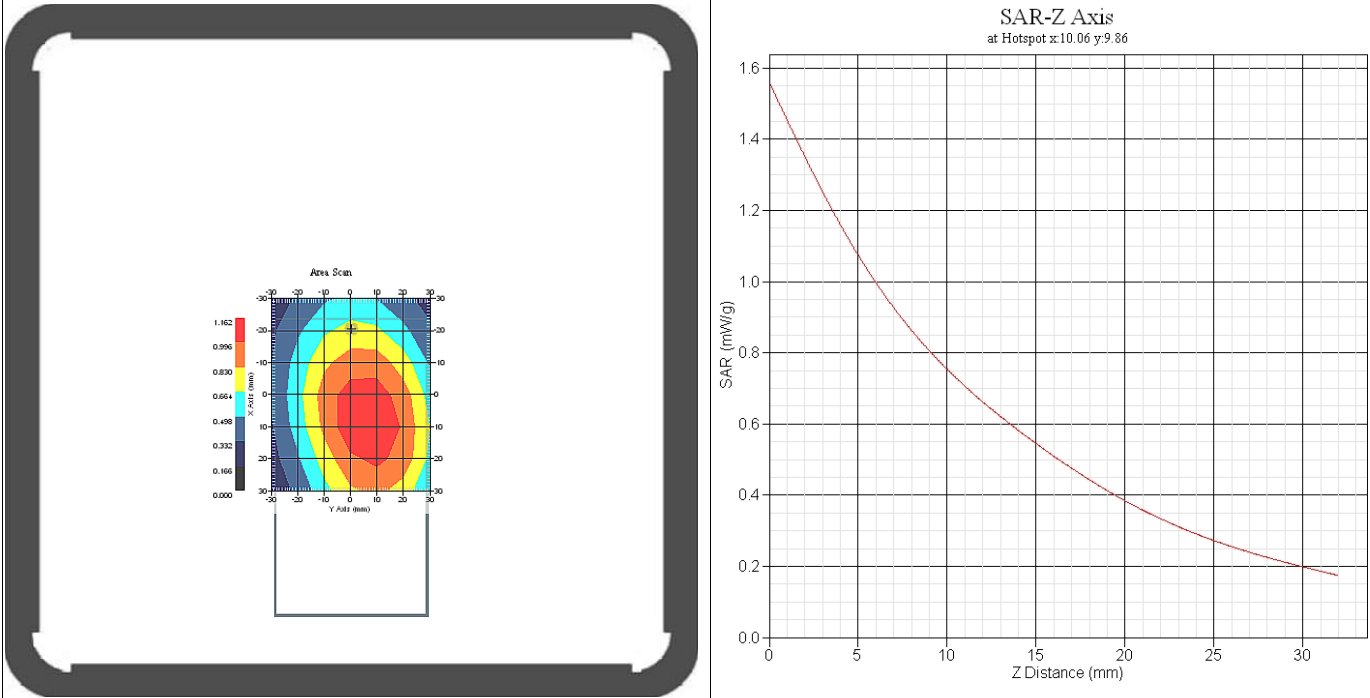
| 802.11b Left tilt CH11                                                             |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 2462                                                                                |
| Relative permittivity(real part)                                                   | 40.27                                                                               |
| Conductivity(S/m)                                                                  | 1.85                                                                                |
| Variation(%)                                                                       | 1.739                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 4.65                                                                                |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 0.043                                                                               |
| SAR 10g(W/kg)                                                                      | 0.016                                                                               |

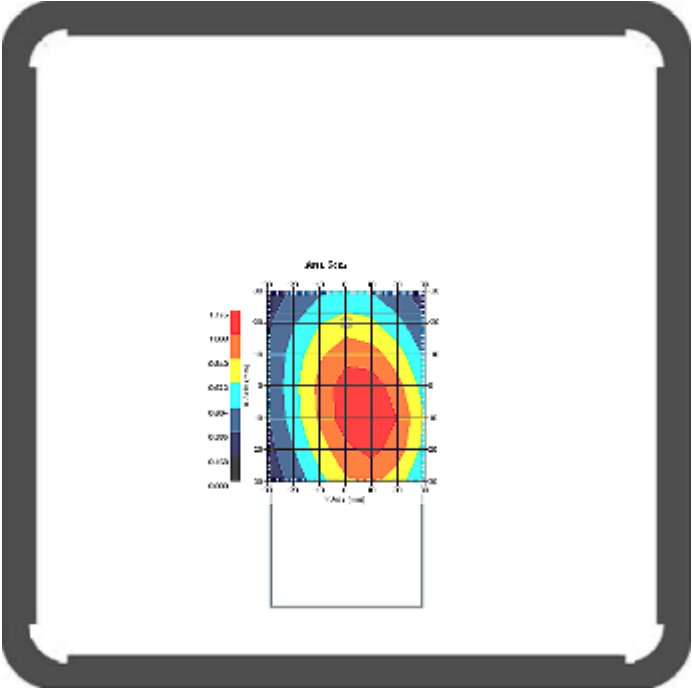
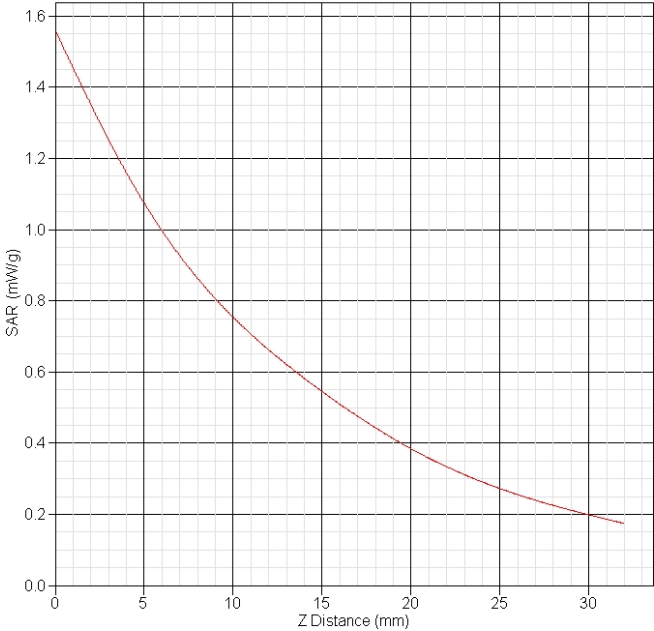
| 802.11b Right cheek CH11                                                           |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 2462                                                                                |
| Relative permittivity(real part)                                                   | 40.27                                                                               |
| Conductivity(S/m)                                                                  | 1.85                                                                                |
| Variation(%)                                                                       | -1.563                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 4.65                                                                                |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu V/(V/m)^2$                                                      |
| Data                                                                               | 2013-03-15                                                                          |
|  |  |
|                                                                                    |                                                                                     |
|                                                                                    |                                                                                     |
| SAR 1g(W/kg)                                                                       | 0.135                                                                               |
| SAR 10g(W/kg)                                                                      | 0.055                                                                               |

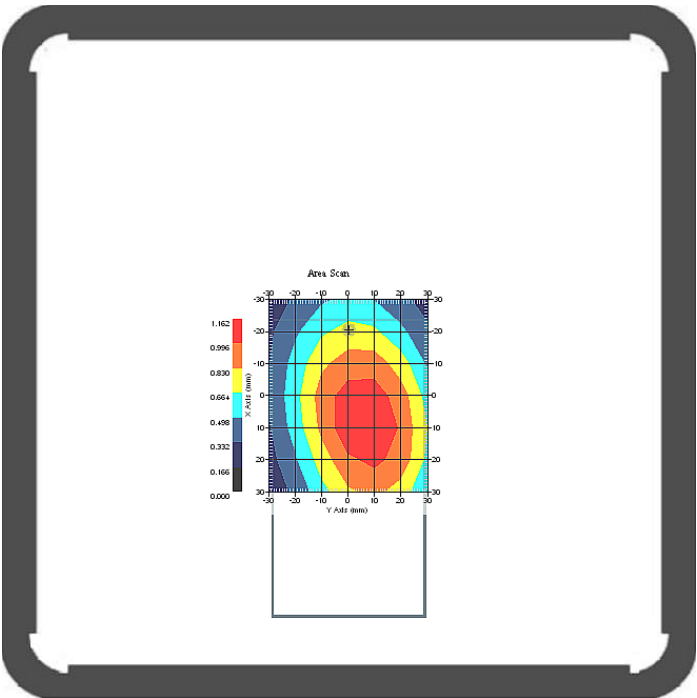
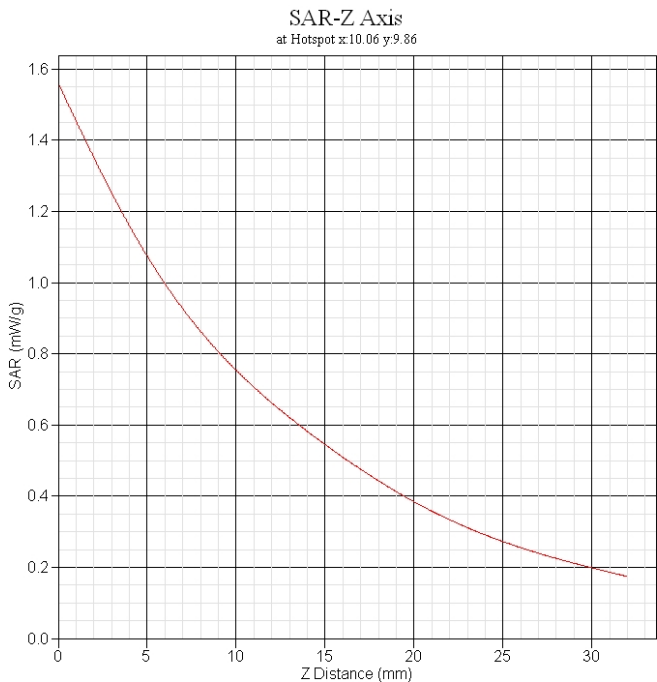
| 802.11b Right tilt CH11                                                            |                                                                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 2462                                                                                                                                |
| Relative permittivity(real part)                                                   | 40.27                                                                                                                               |
| Conductivity(S/m)                                                                  | 1.85                                                                                                                                |
| Variation(%)                                                                       | 4.429                                                                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                                                                   |
| Crest factor                                                                       | 1                                                                                                                                   |
| Conversion Factor                                                                  | 4.65                                                                                                                                |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                           |
| Data                                                                               | 2013-03-15                                                                                                                          |
|  | <p>SAR-Z Axis<br/>at Hotspot x:-9.93 y:7.04</p>  |
| SAR 1g(W/kg)                                                                       | 0.120                                                                                                                               |
| SAR 10g(W/kg)                                                                      | 0.048                                                                                                                               |

| GPRS850 body Front CH190                                                          |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | -1.952                                                                              |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-14                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.724                                                                               |
| SAR 10g(W/kg)                                                                     | 0.547                                                                               |

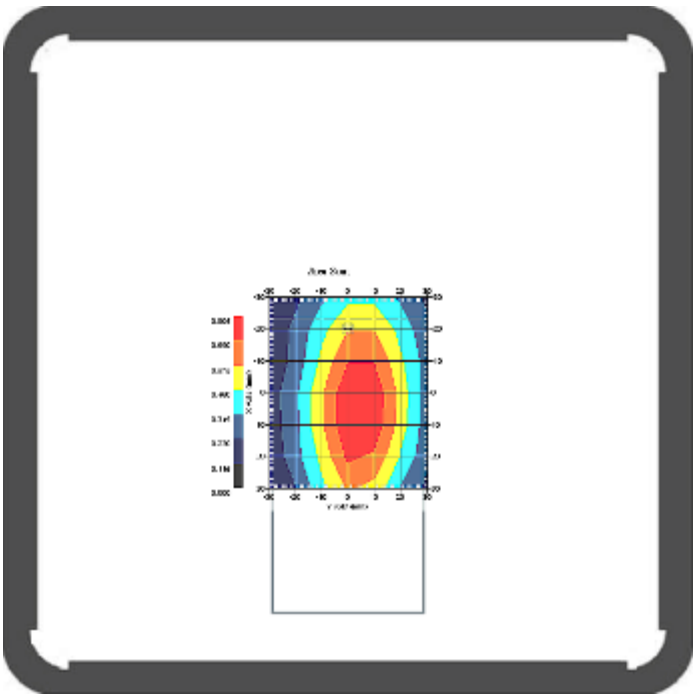
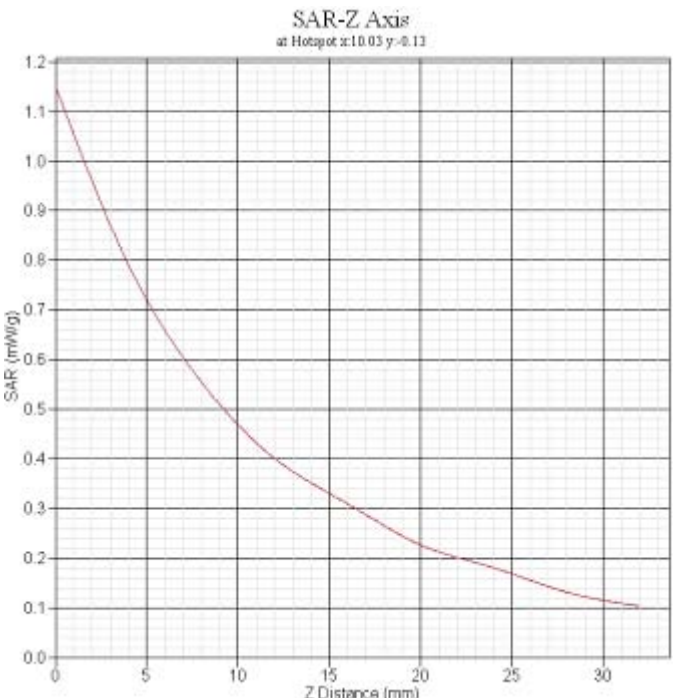
| GPRS850 body Back CH128                                                           |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 824.2                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | -3.539                                                                              |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-14                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.923                                                                               |
| SAR 10g(W/kg)                                                                     | 0.619                                                                               |

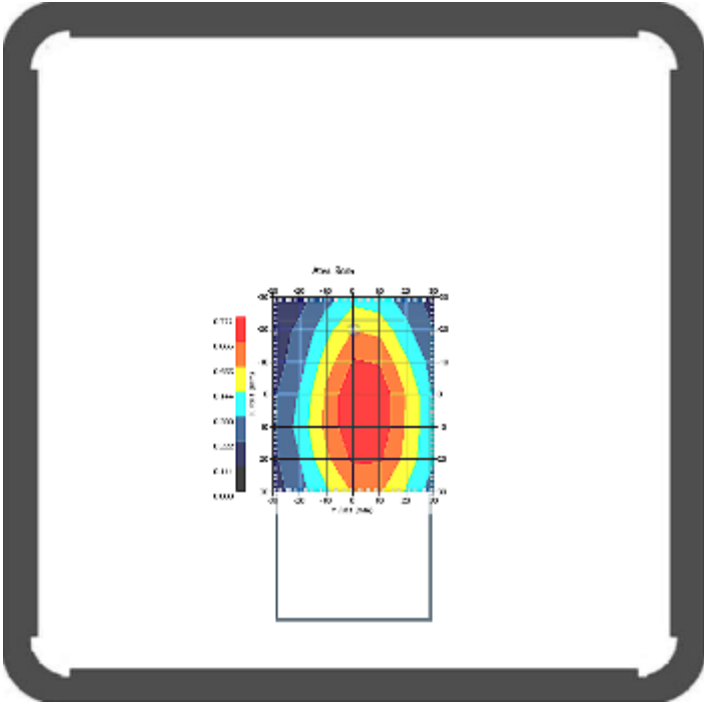
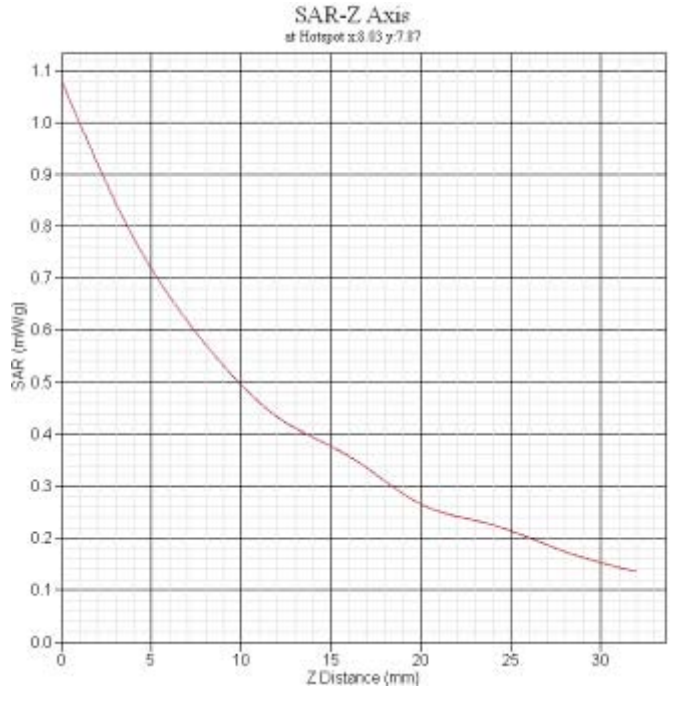
| GPRS850 body Back CH190                                                            |                                           |
|------------------------------------------------------------------------------------|-------------------------------------------|
| Frequency(MHz)                                                                     | 836.6                                     |
| Relative permittivity(real part)                                                   | 53.14                                     |
| Conductivity(S/m)                                                                  | 0.98                                      |
| Variation(%)                                                                       | -4.116                                    |
| Duty Cycle Factor                                                                  | 2                                         |
| Crest factor                                                                       | 2                                         |
| Conversion Factor                                                                  | 6.4                                       |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup> |
| Data                                                                               | 2013-03-14                                |
|  |                                           |
| SAR 1g(W/kg)                                                                       | 1.006                                     |
| SAR 10g(W/kg)                                                                      | 0.740                                     |

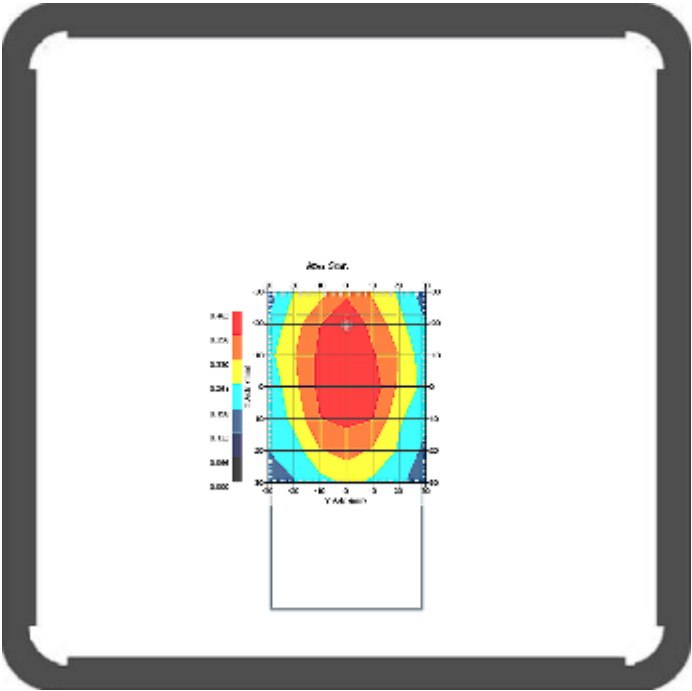
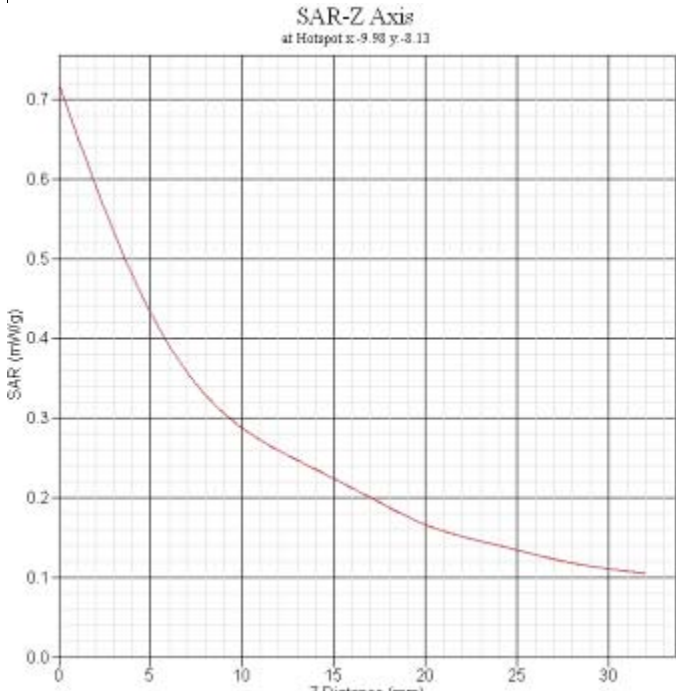
| GPRS850 body Back CH251                                                           |                                                                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 848.8                                                                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                                                                |
| Variation(%)                                                                      | -0.657                                                                                                                              |
| Duty Cycle Factor                                                                 | 2                                                                                                                                   |
| Crest factor                                                                      | 2                                                                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                           |
| Data                                                                              | 2013-03-14                                                                                                                          |
|  | <p>SAR-Z Axis<br/>at Hotspot x:10.06 y:9.86</p>  |
| SAR 1g(W/kg)                                                                      | 0.957                                                                                                                               |
| SAR 10g(W/kg)                                                                     | 0.643                                                                                                                               |

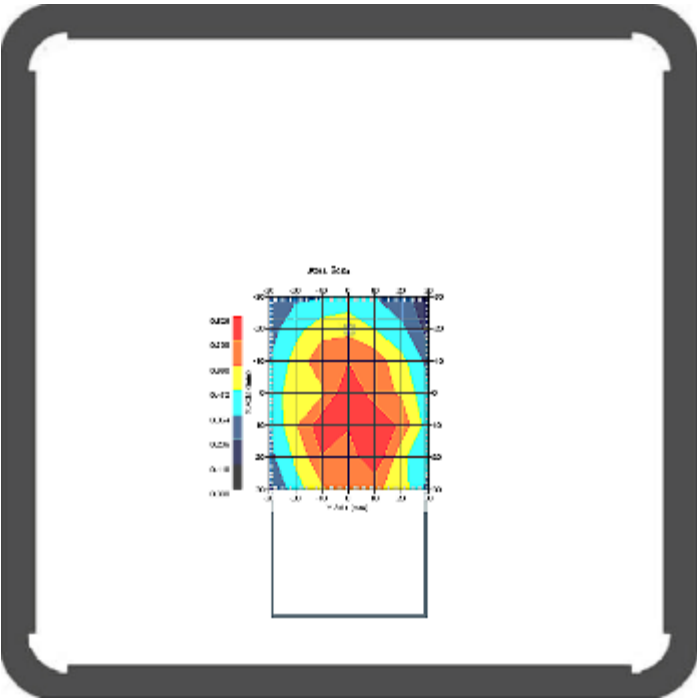
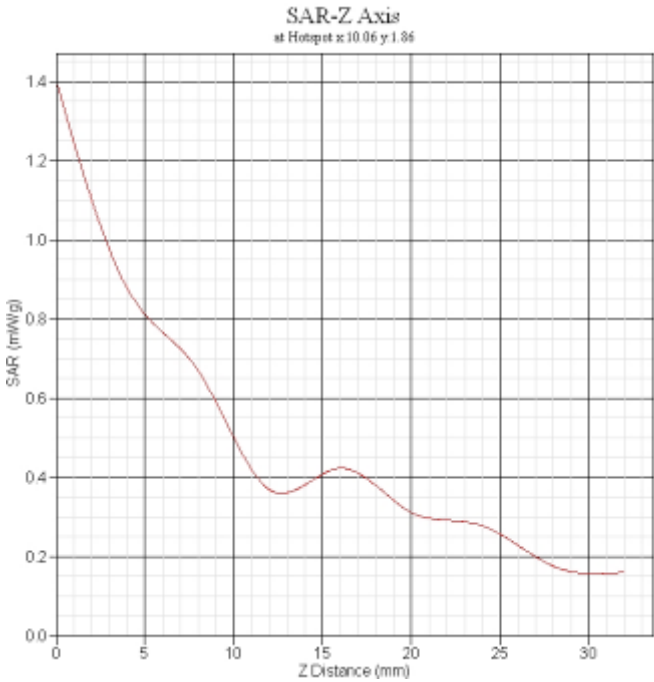
| GPRS850 body Back CH190(repeat)                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | -3.345                                                                              |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-14                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 1.014                                                                               |
| SAR 10g(W/kg)                                                                     | 0.732                                                                               |

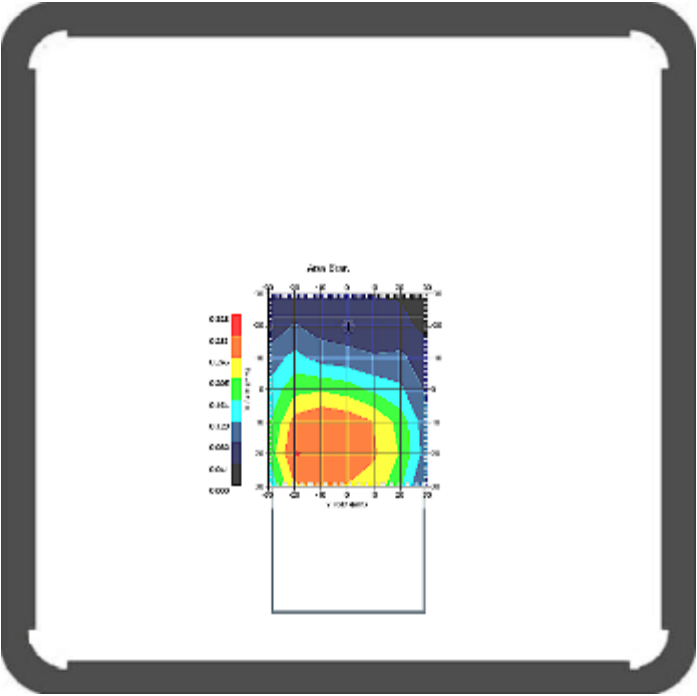
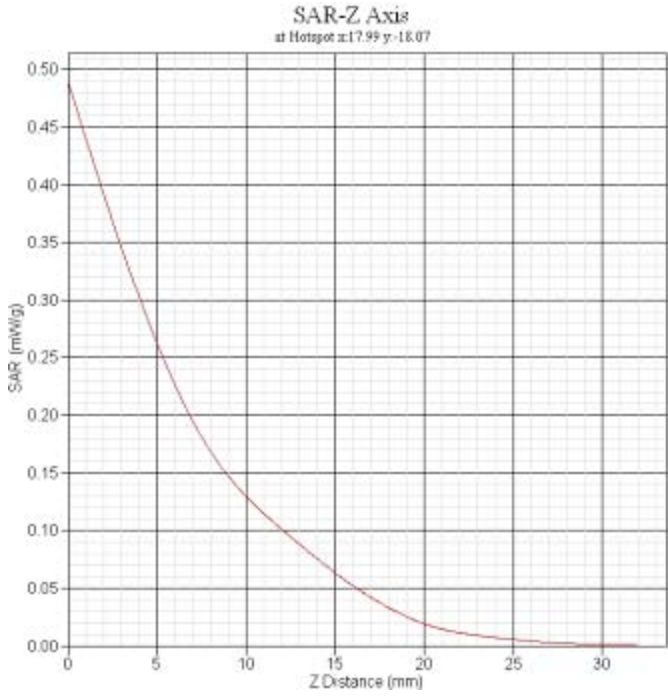


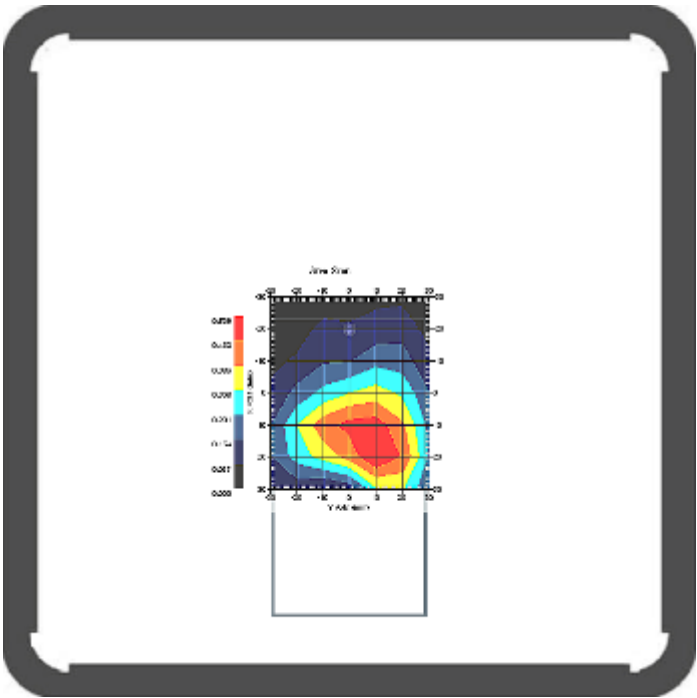
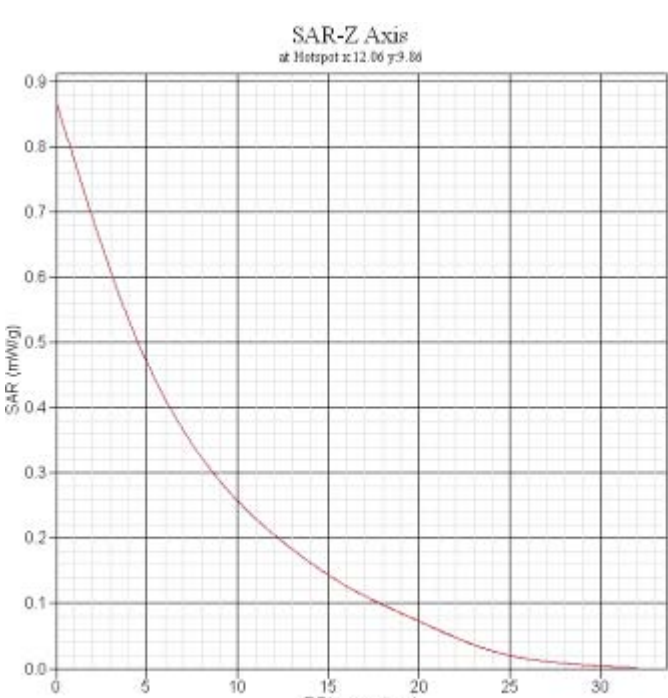
| GPRS850 body Left CH190                                                           |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | 0.696                                                                               |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-14                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.755                                                                               |
| SAR 10g(W/kg)                                                                     | 0.490                                                                               |

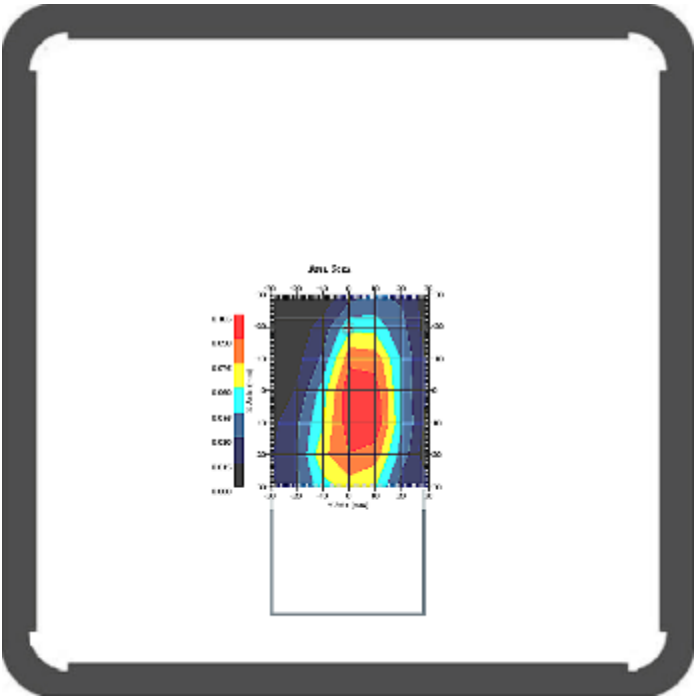
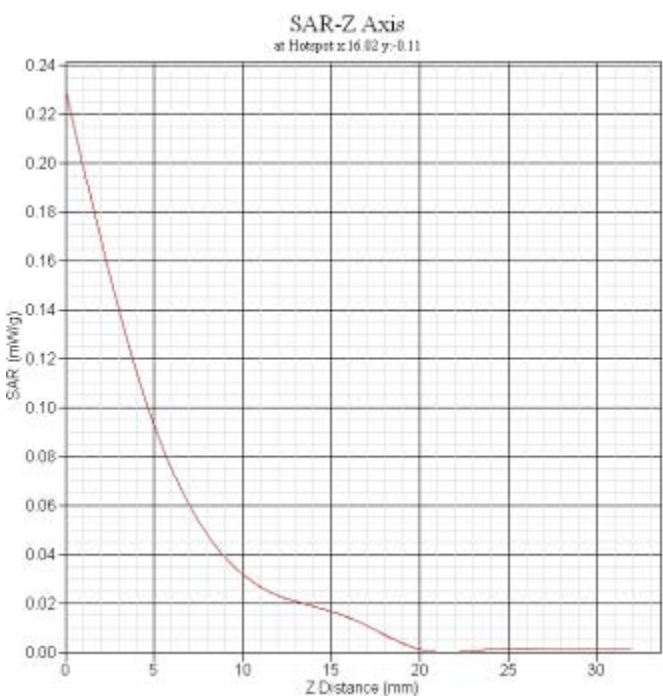
| GPRS850 body Right ch190                                                          |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | -1.330                                                                              |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-14                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.744                                                                               |
| SAR 10g(W/kg)                                                                     | 0.491                                                                               |

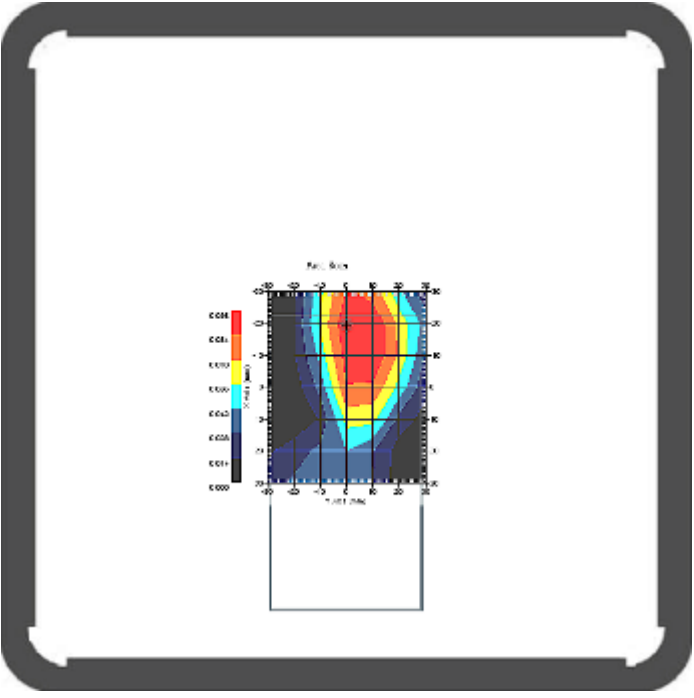
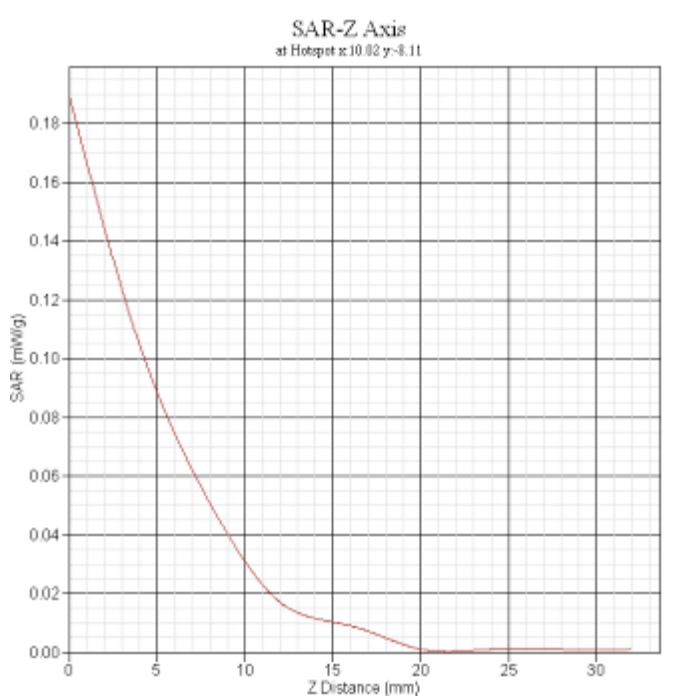
| GPRS850 body Bottom ch190                                                                                                                                                                                                                            |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Frequency(MHz)                                                                                                                                                                                                                                       | 836.6                                     |
| Relative permittivity(real part)                                                                                                                                                                                                                     | 53.14                                     |
| Conductivity(S/m)                                                                                                                                                                                                                                    | 0.98                                      |
| Variation(%)                                                                                                                                                                                                                                         | 1.630                                     |
| Duty Cycle Factor                                                                                                                                                                                                                                    | 2                                         |
| Crest factor                                                                                                                                                                                                                                         | 2                                         |
| Conversion Factor                                                                                                                                                                                                                                    | 6.4                                       |
| Probe Sensitivity                                                                                                                                                                                                                                    | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup> |
| Data                                                                                                                                                                                                                                                 | 2013-03-14                                |
| <div><div></div><div><p>SAR-Z Axis<br/>at Hotspot x=9.98 y=3.13</p></div></div> |                                           |
| SAR 1g(W/kg)                                                                                                                                                                                                                                         | 0.446                                     |
| SAR 10g(W/kg)                                                                                                                                                                                                                                        | 0.305                                     |

| GSM850 body Back ch190+earphone                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | -1.370                                                                              |
| Duty Cycle Factor                                                                 | 8                                                                                   |
| Crest factor                                                                      | 8                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-14                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.721                                                                               |
| SAR 10g(W/kg)                                                                     | 0.579                                                                               |

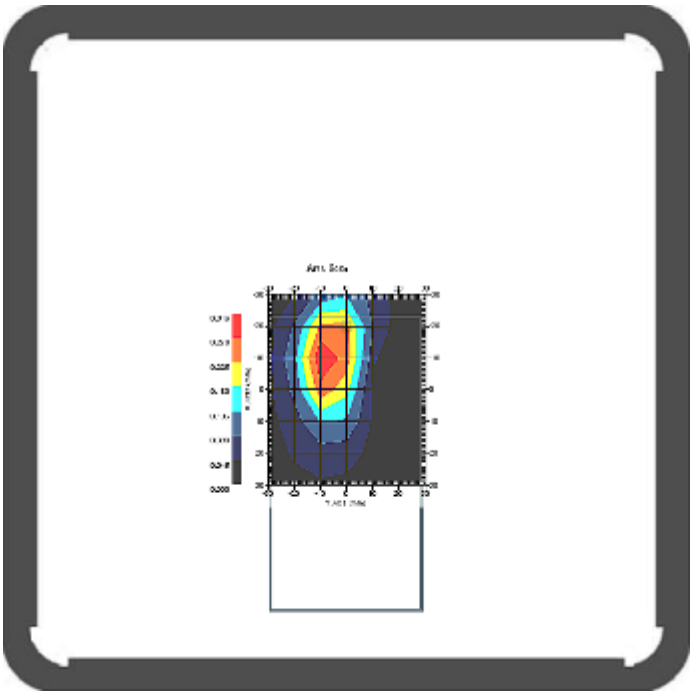
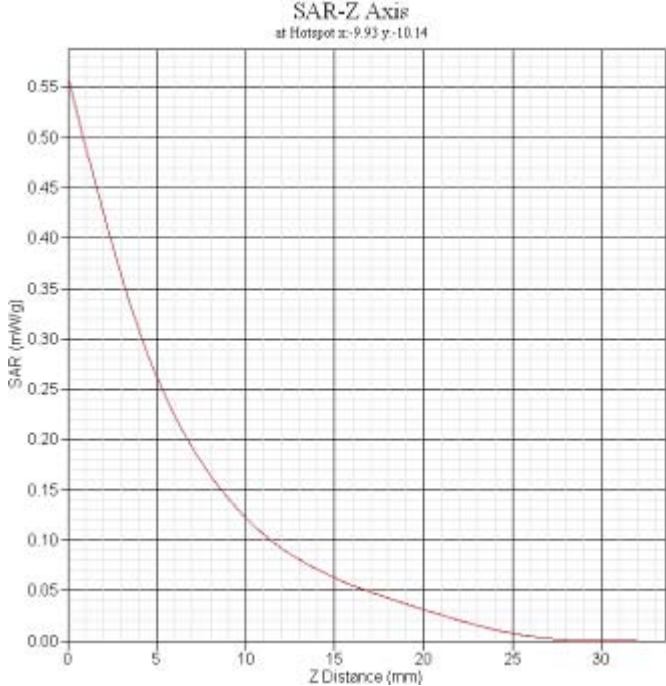
| GPRS1900 body Front CH512                                                         |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1850.2                                                                              |
| Relative permittivity(real part)                                                  | 52.95                                                                               |
| Conductivity(S/m)                                                                 | 1.54                                                                                |
| Variation(%)                                                                      | 2.983                                                                               |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 5.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 μ V/(V/m)2                                                           |
| Data                                                                              | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.285                                                                               |
| SAR 10g(W/kg)                                                                     | 0.152                                                                               |

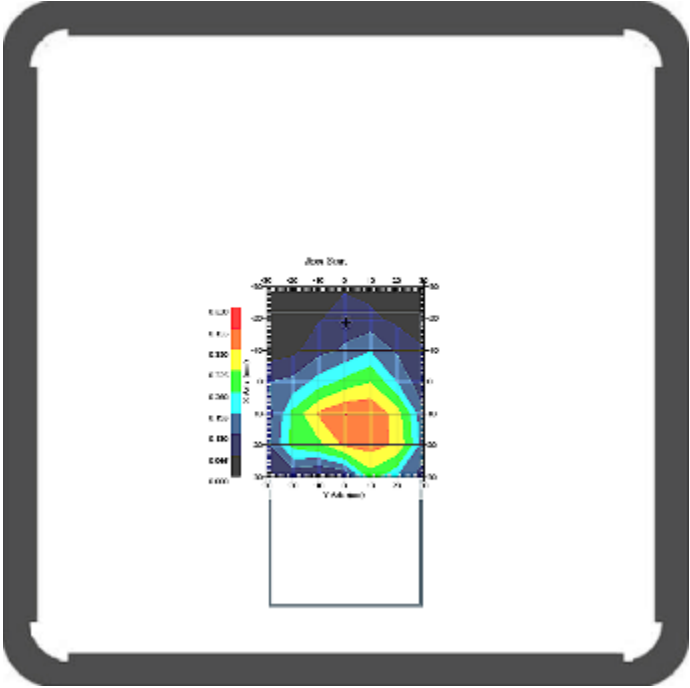
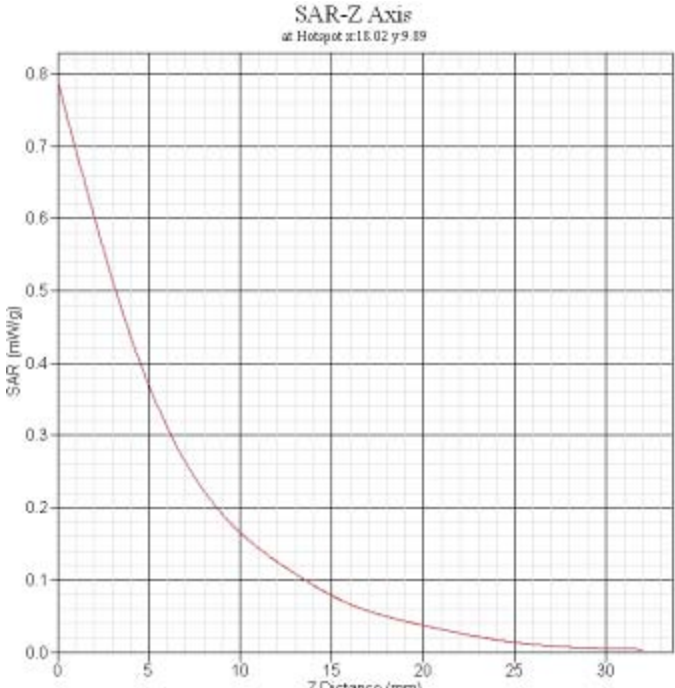
| GPRS1900 body Back CH512                                                          |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1850.2                                                                              |
| Relative permittivity(real part)                                                  | 52.95                                                                               |
| Conductivity(S/m)                                                                 | 1.54                                                                                |
| Variation(%)                                                                      | 3.220                                                                               |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 5.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.478                                                                               |
| SAR 10g(W/kg)                                                                     | 0.241                                                                               |

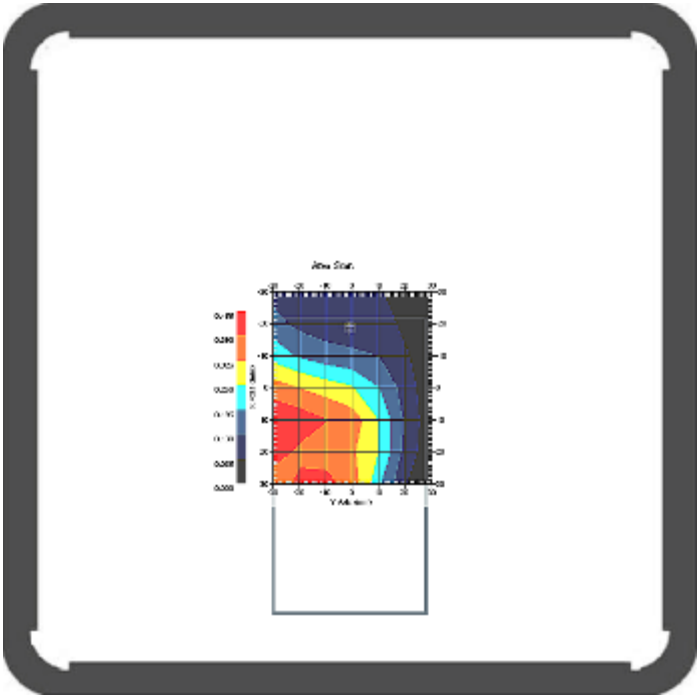
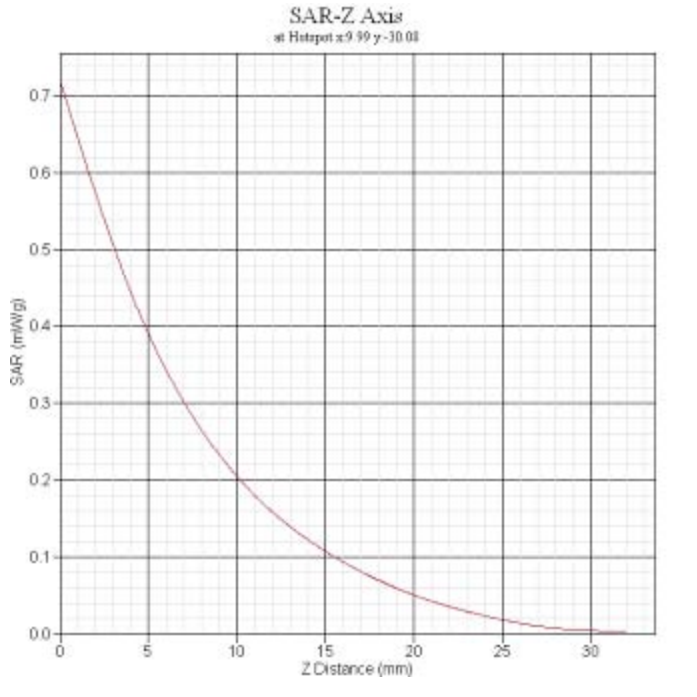
| GPRS1900 body Left CH512                                                          |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1850.2                                                                              |
| Relative permittivity(real part)                                                  | 52.95                                                                               |
| Conductivity(S/m)                                                                 | 1.54                                                                                |
| Variation(%)                                                                      | -0.301                                                                              |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 5.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.099                                                                               |
| SAR 10g(W/kg)                                                                     | 0.061                                                                               |

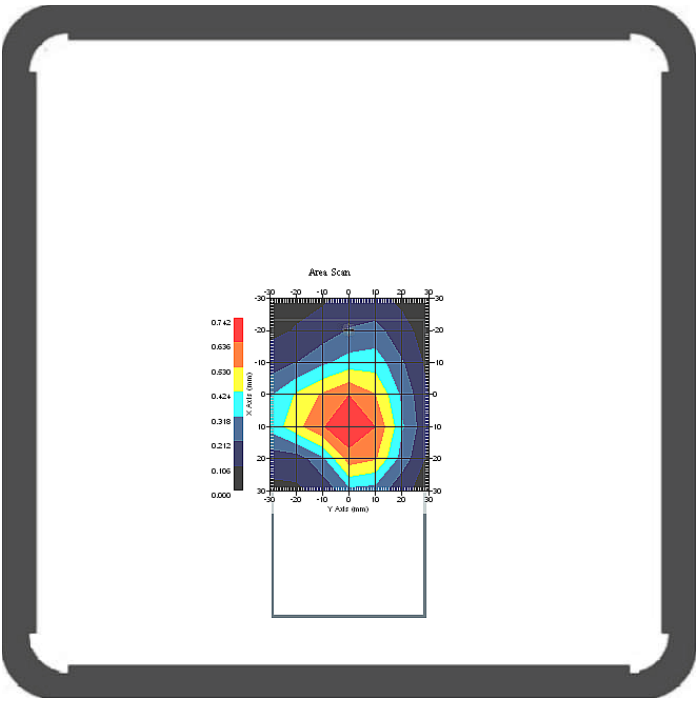
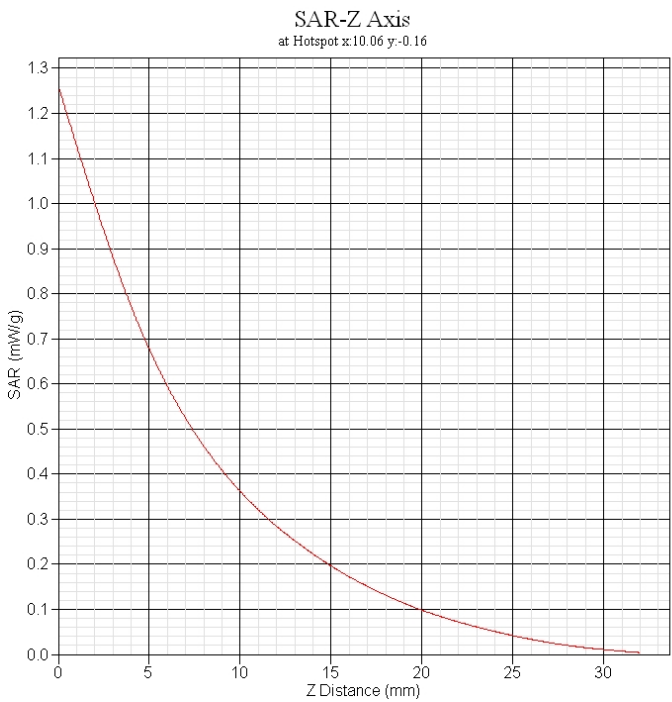
| GPRS1900 body Right CH512                                                         |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1850.2                                                                              |
| Relative permittivity(real part)                                                  | 52.95                                                                               |
| Conductivity(S/m)                                                                 | 1.54                                                                                |
| Variation(%)                                                                      | -2.831                                                                              |
| Duty Cycle Factor                                                                 | 2                                                                                   |
| Crest factor                                                                      | 2                                                                                   |
| Conversion Factor                                                                 | 5.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                      | 0.092                                                                               |
| SAR 10g(W/kg)                                                                     | 0.045                                                                               |

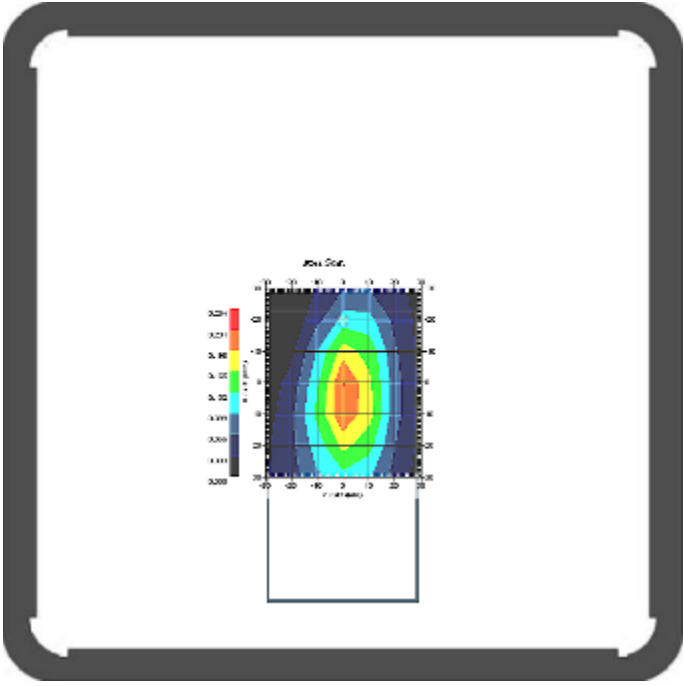
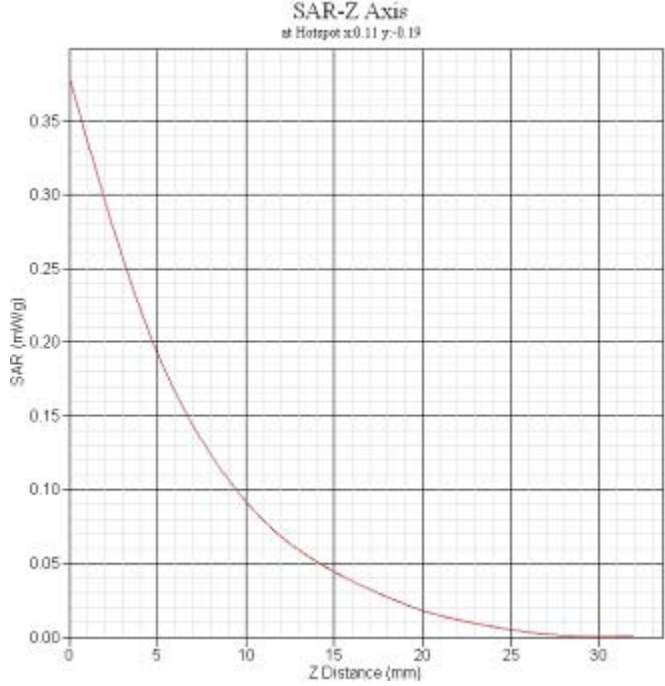


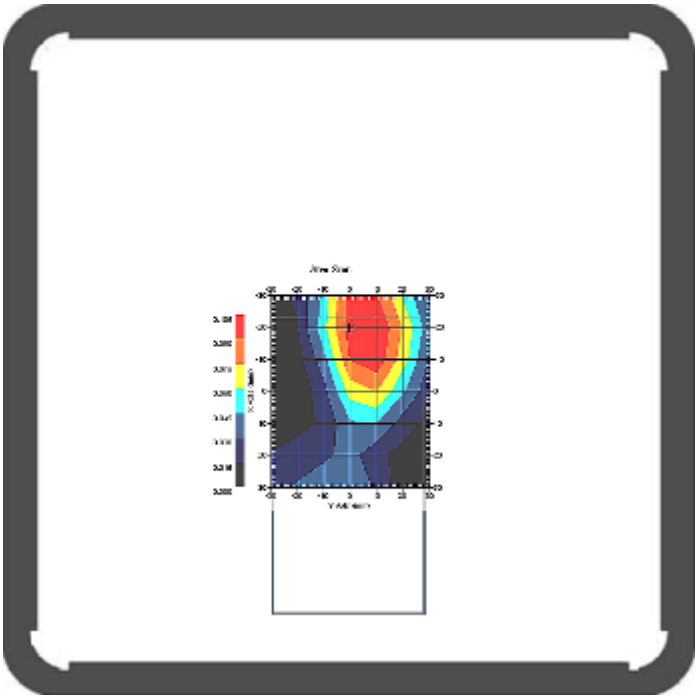
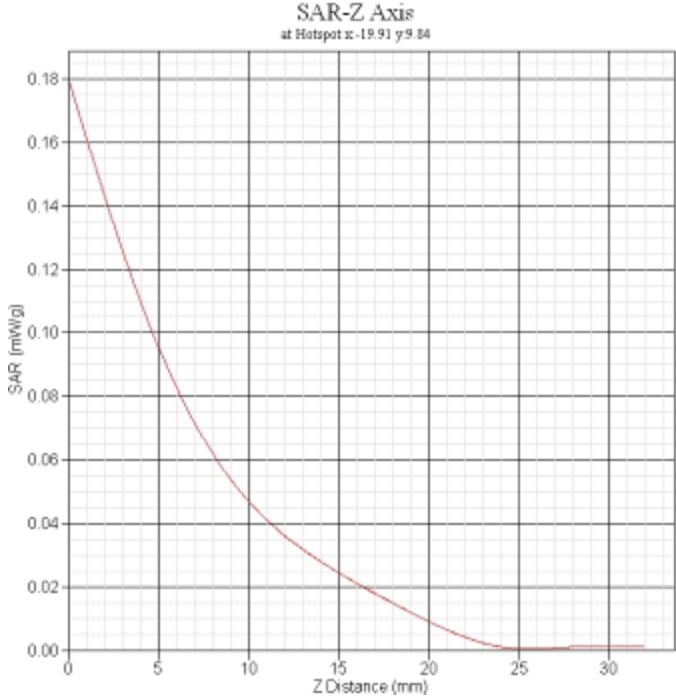
| GPRS1900 body Bottom CH512                                                         |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1850.2                                                                              |
| Relative permittivity(real part)                                                   | 52.95                                                                               |
| Conductivity(S/m)                                                                  | 1.54                                                                                |
| Variation(%)                                                                       | -4.414                                                                              |
| Duty Cycle Factor                                                                  | 2                                                                                   |
| Crest factor                                                                       | 2                                                                                   |
| Conversion Factor                                                                  | 5.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 0.275                                                                               |
| SAR 10g(W/kg)                                                                      | 0.129                                                                               |

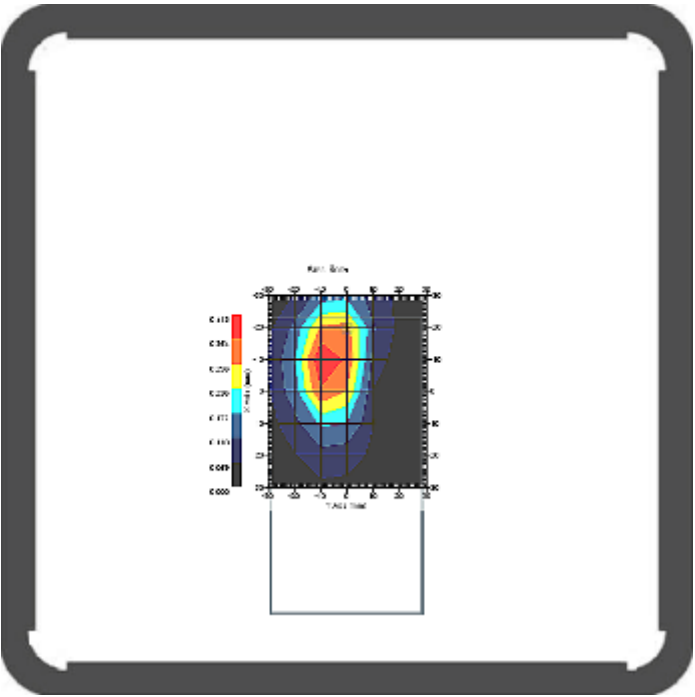
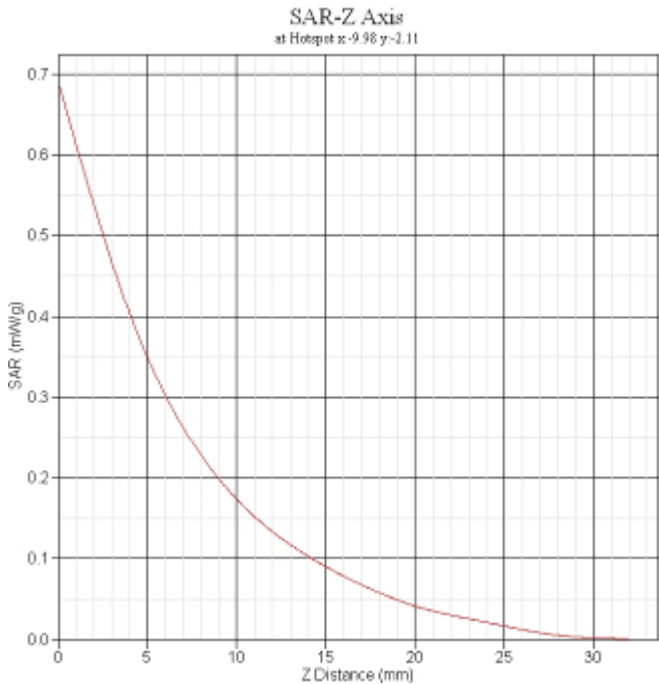
| GSM1900 body Back CH512+earphone                                                   |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 1850.2                                                                              |
| Relative permittivity(real part)                                                   | 52.95                                                                               |
| Conductivity(S/m)                                                                  | 1.54                                                                                |
| Variation(%)                                                                       | 2.472                                                                               |
| Duty Cycle Factor                                                                  | 8                                                                                   |
| Crest factor                                                                       | 8                                                                                   |
| Conversion Factor                                                                  | 5.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 0.443                                                                               |
| SAR 10g(W/kg)                                                                      | 0.208                                                                               |

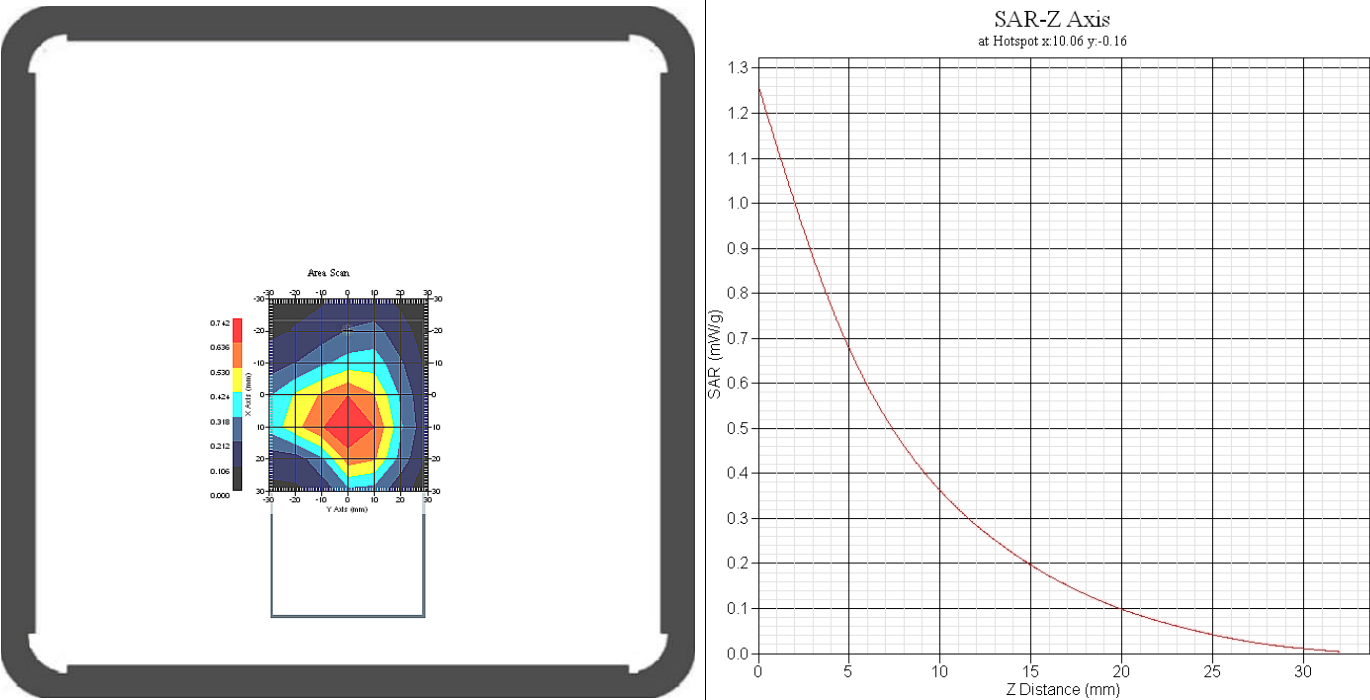
| WCDMA Band II body Front CH9400                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1880.0                                                                              |
| Relative permittivity(real part)                                                  | 52.95                                                                               |
| Conductivity(S/m)                                                                 | 1.54                                                                                |
| Variation(%)                                                                      | 0.200                                                                               |
| Duty Cycle Factor                                                                 | 1                                                                                   |
| Crest factor                                                                      | 1                                                                                   |
| Conversion Factor                                                                 | 5.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                      | 0.411                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.210                                                                               |

| WCDMA Band II body Back CH9400                                                    |                                                                                                                                      |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1880.0                                                                                                                               |
| Relative permittivity(real part)                                                  | 52.95                                                                                                                                |
| Conductivity(S/m)                                                                 | 1.54                                                                                                                                 |
| Variation(%)                                                                      | 2.798                                                                                                                                |
| Duty Cycle Factor                                                                 | 1                                                                                                                                    |
| Crest factor                                                                      | 1                                                                                                                                    |
| Conversion Factor                                                                 | 5.4                                                                                                                                  |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                            |
| Data                                                                              | 2013-03-15                                                                                                                           |
|  | <p>SAR-Z Axis<br/>at Hotspot x:10.06 y:-0.16</p>  |
| SAR 1g(W/Kg)                                                                      | 0.713                                                                                                                                |
| SAR 10g(W/Kg)                                                                     | 0.369                                                                                                                                |

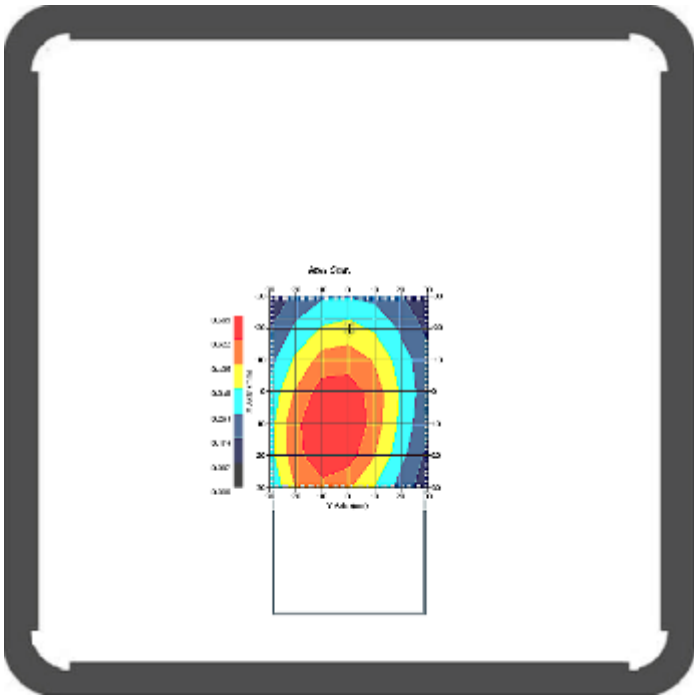
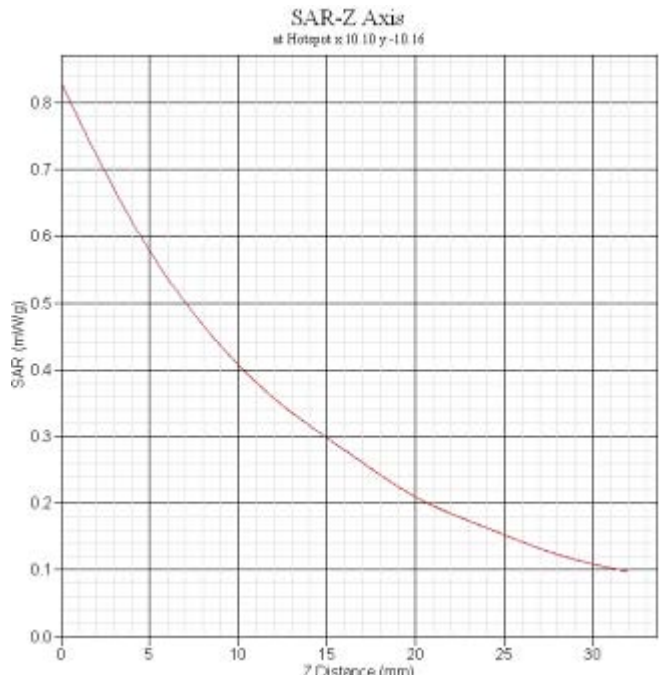
| WCDMA Band II body Left CH9400                                                    |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1880.0                                                                              |
| Relative permittivity(real part)                                                  | 52.95                                                                               |
| Conductivity(S/m)                                                                 | 1.54                                                                                |
| Variation(%)                                                                      | -4.018                                                                              |
| Duty Cycle Factor                                                                 | 1                                                                                   |
| Crest factor                                                                      | 1                                                                                   |
| Conversion Factor                                                                 | 5.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                      | 0.205                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.101                                                                               |

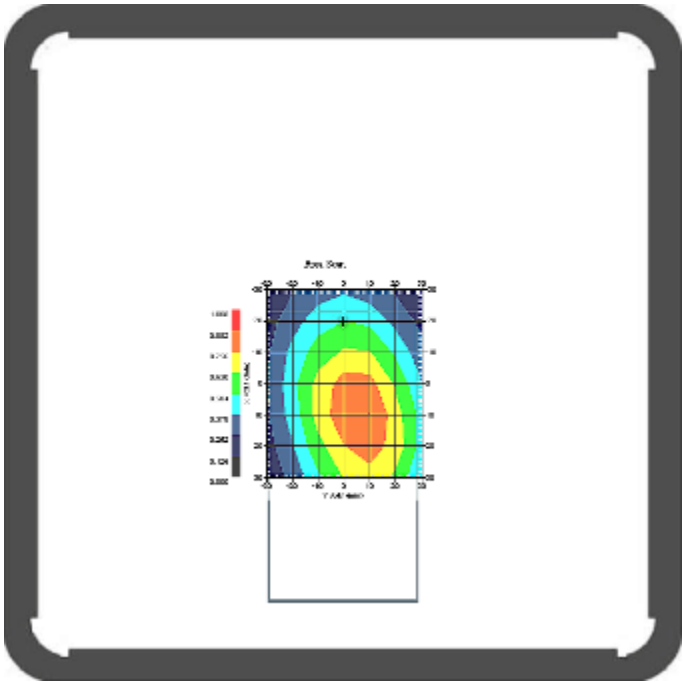
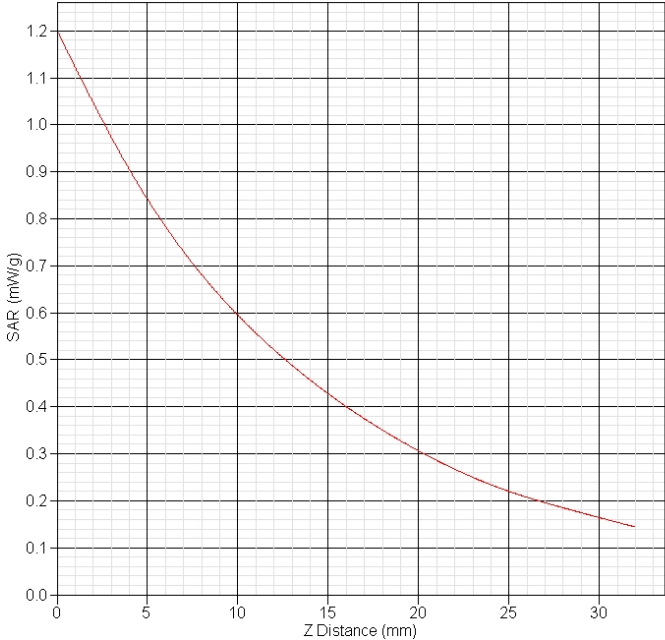
| WCDMA Band II body Right CH9400                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1880.0                                                                              |
| Relative permittivity(real part)                                                  | 52.95                                                                               |
| Conductivity(S/m)                                                                 | 1.54                                                                                |
| Variation(%)                                                                      | -1.336                                                                              |
| Duty Cycle Factor                                                                 | 1                                                                                   |
| Crest factor                                                                      | 1                                                                                   |
| Conversion Factor                                                                 | 5.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                      | 0.100                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.049                                                                               |

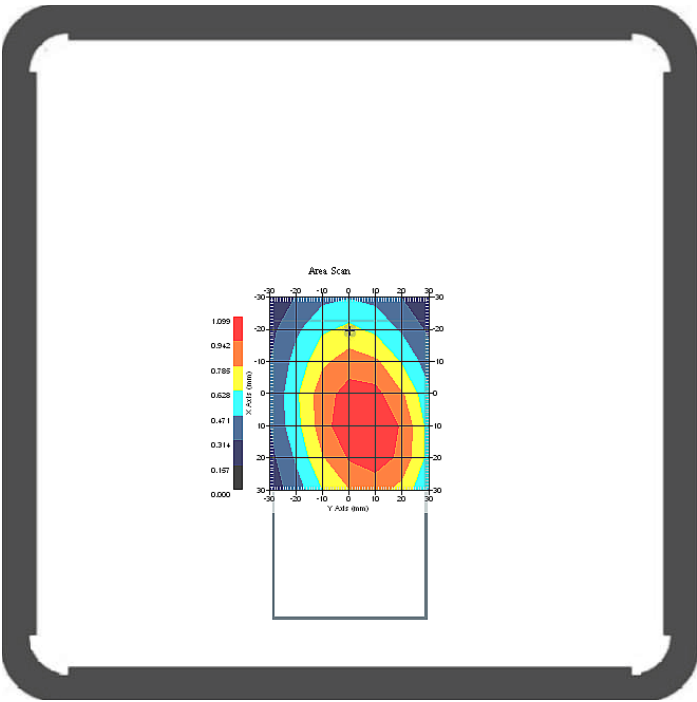
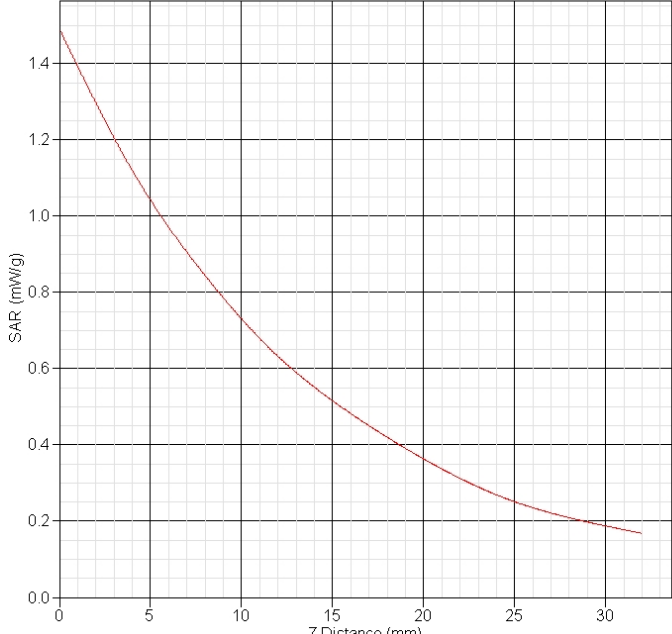
| WCDMA Band II body Bottom CH9400                                                  |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 1880.0                                                                              |
| Relative permittivity(real part)                                                  | 52.95                                                                               |
| Conductivity(S/m)                                                                 | 1.54                                                                                |
| Variation(%)                                                                      | -3.055                                                                              |
| Duty Cycle Factor                                                                 | 1                                                                                   |
| Crest factor                                                                      | 1                                                                                   |
| Conversion Factor                                                                 | 5.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                      | 0.357                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.164                                                                               |

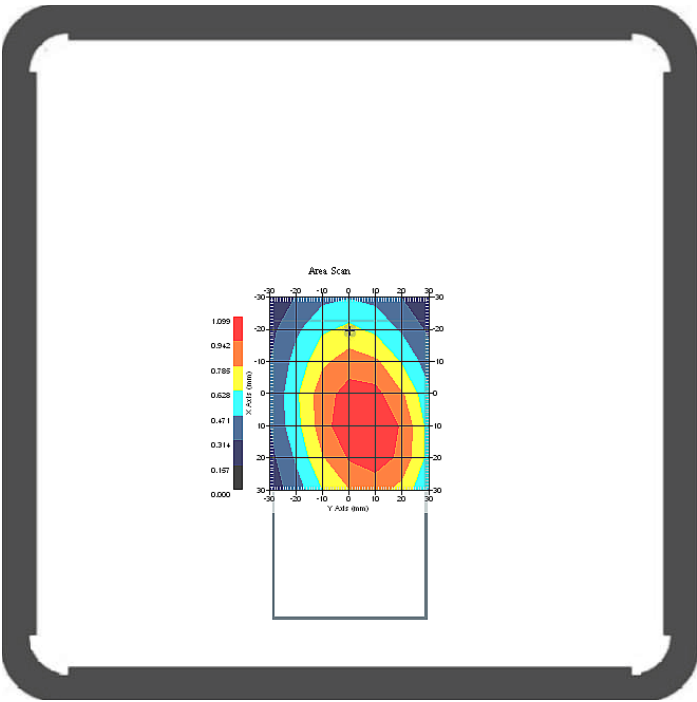
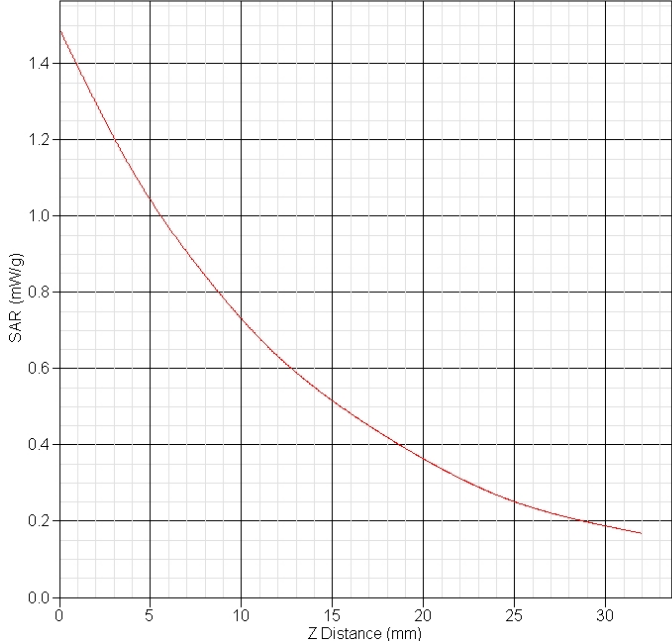
| WCDMA Band II body Back CH9400+earphone                                            |                           |
|------------------------------------------------------------------------------------|---------------------------|
| Frequency(MHz)                                                                     | 1880.0                    |
| Relative permittivity(real part)                                                   | 52.95                     |
| Conductivity(S/m)                                                                  | 1.54                      |
| Variation(%)                                                                       | -1.424                    |
| Duty Cycle Factor                                                                  | 1                         |
| Crest factor                                                                       | 1                         |
| Conversion Factor                                                                  | 5.4                       |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 μ V/(V/m)2 |
| Data                                                                               | 2013-03-15                |
|  |                           |
| SAR 1g(W/Kg)                                                                       | 0.698                     |
| SAR 10g(W/Kg)                                                                      | 0.346                     |

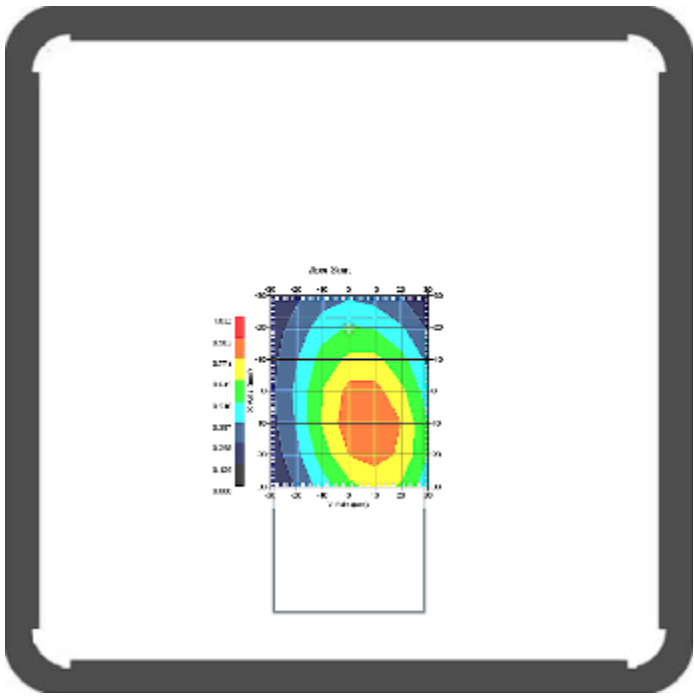
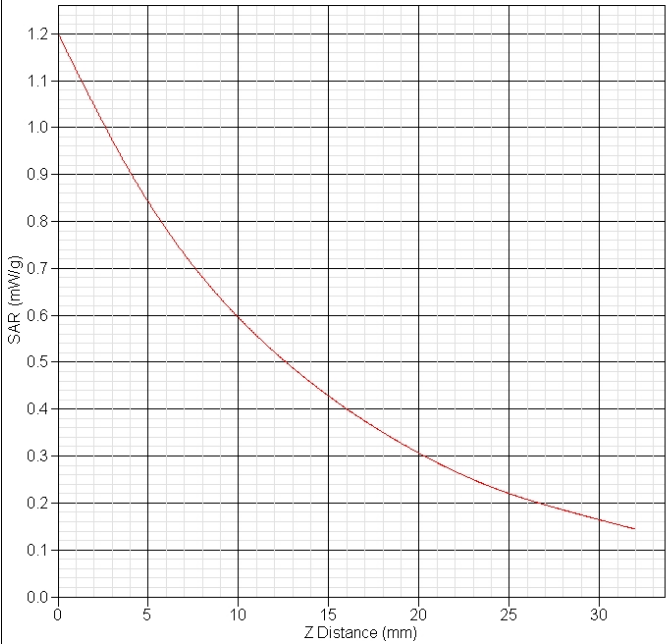


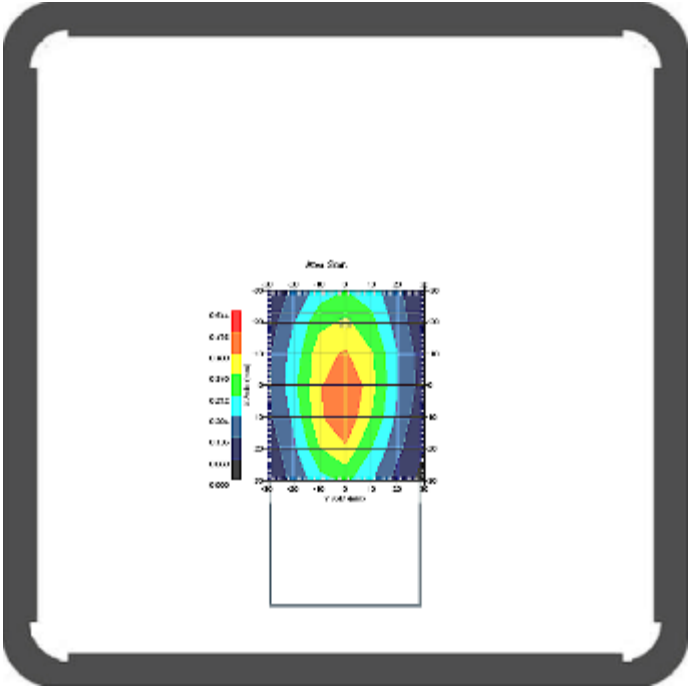
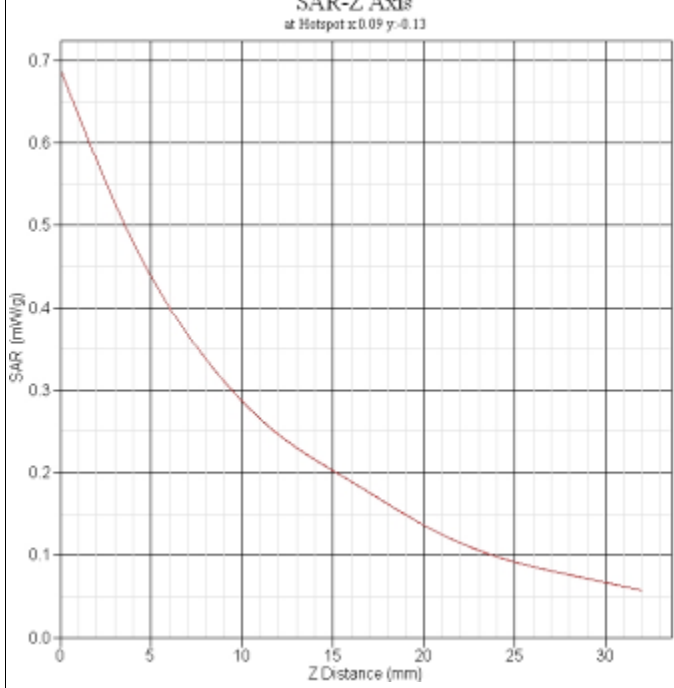
| WCDMA Band V body Front CH4183                                                    |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | -0.118                                                                              |
| Duty Cycle Factor                                                                 | 1                                                                                   |
| Crest factor                                                                      | 1                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                              | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                      | 0.589                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.398                                                                               |

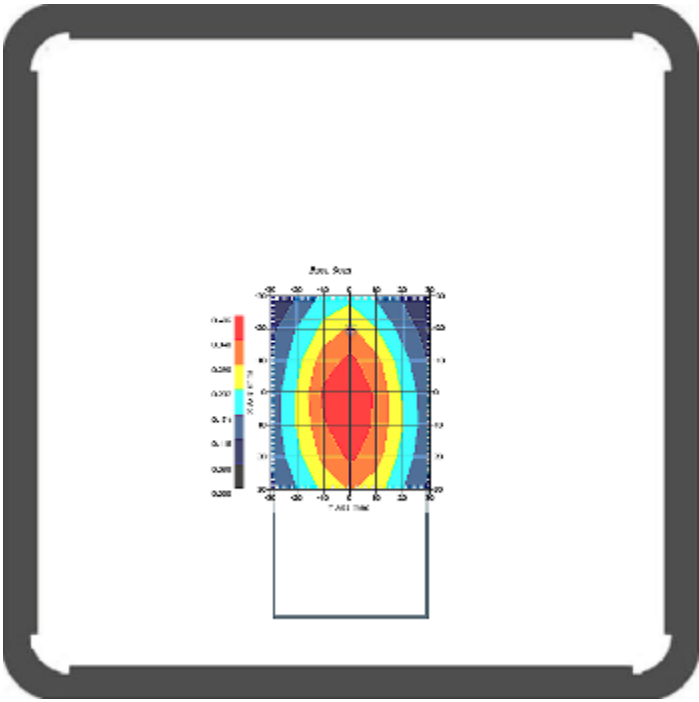
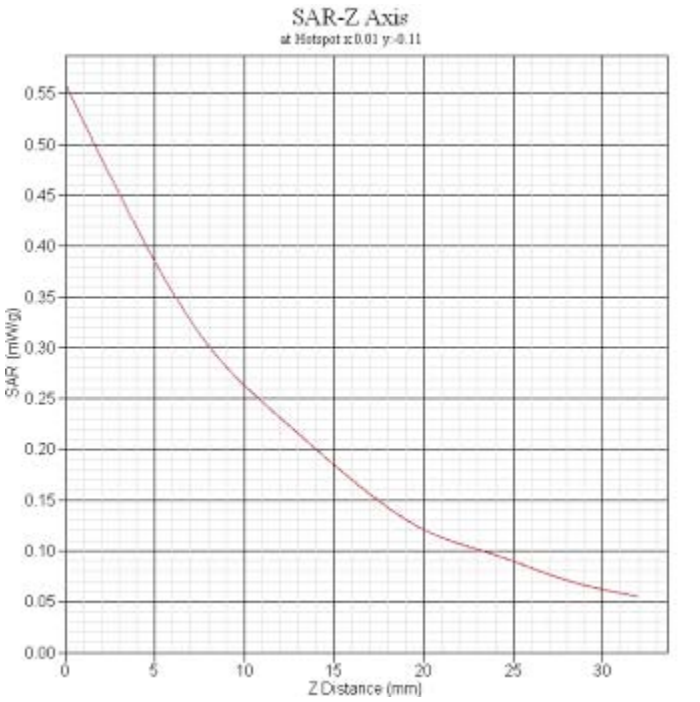
| WCDMA Band V body Back CH4132                                                      |                                                                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 826.4                                                                                                                               |
| Relative permittivity(real part)                                                   | 53.14                                                                                                                               |
| Conductivity(S/m)                                                                  | 0.98                                                                                                                                |
| Variation(%)                                                                       | 2.601                                                                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                                                                   |
| Crest factor                                                                       | 1                                                                                                                                   |
| Conversion Factor                                                                  | 6.4                                                                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                           |
| Data                                                                               | 2013-03-13                                                                                                                          |
|  | <p>SAR-Z Axis<br/>at Hotspot x:10.03 y:9.92</p>  |
| SAR 1g(W/Kg)                                                                       | 0.836                                                                                                                               |
| SAR 10g(W/Kg)                                                                      | 0.568                                                                                                                               |

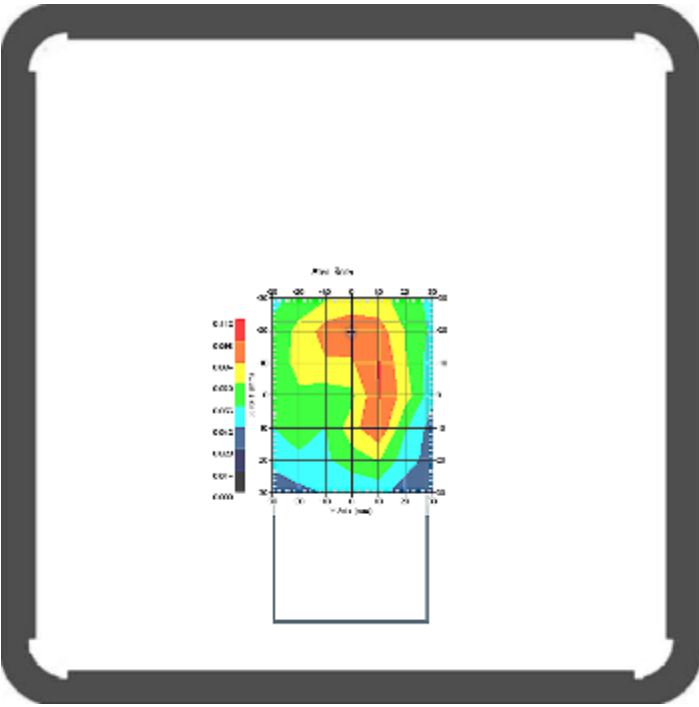
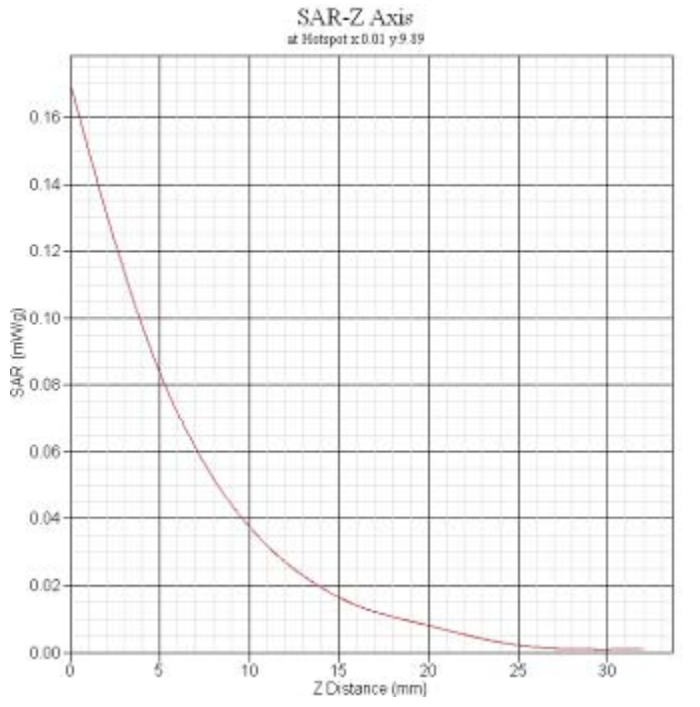
| WCDMA Band V body Back CH4183                                                     |                                                                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                                                                |
| Variation(%)                                                                      | 1.756                                                                                                                               |
| Duty Cycle Factor                                                                 | 1                                                                                                                                   |
| Crest factor                                                                      | 1                                                                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                           |
| Data                                                                              | 2013-03-13                                                                                                                          |
|  | <p>SAR-Z Axis<br/>at Hotspot x:10.04 y:9.87</p>  |
| SAR 1g(W/Kg)                                                                      | 0.961                                                                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.707                                                                                                                               |

| WCDMA Band V body Back CH4183(repeat)                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|---|-----|---|-----|----|------|----|------|----|-----|----|-----|----|-----|
| Frequency(MHz)                                                                    | 836.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| Relative permittivity(real part)                                                  | 53.14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| Conductivity(S/m)                                                                 | 0.98                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| Variation(%)                                                                      | 1.756                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| Duty Cycle Factor                                                                 | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| Crest factor                                                                      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| Conversion Factor                                                                 | 6.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 μ V/(V/m)2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| Data                                                                              | 2013-03-13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
|  | <p>SAR-Z Axis<br/>at Hotspot x:10.04 y:9.87</p>  <table border="1"><caption>SAR-Z Axis Data (Estimated)</caption><thead><tr><th>Z Distance (mm)</th><th>SAR (mW/kg)</th></tr></thead><tbody><tr><td>0</td><td>1.4</td></tr><tr><td>5</td><td>1.0</td></tr><tr><td>10</td><td>0.75</td></tr><tr><td>15</td><td>0.55</td></tr><tr><td>20</td><td>0.4</td></tr><tr><td>25</td><td>0.3</td></tr><tr><td>30</td><td>0.2</td></tr></tbody></table> | Z Distance (mm) | SAR (mW/kg) | 0 | 1.4 | 5 | 1.0 | 10 | 0.75 | 15 | 0.55 | 20 | 0.4 | 25 | 0.3 | 30 | 0.2 |
| Z Distance (mm)                                                                   | SAR (mW/kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| 0                                                                                 | 1.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| 5                                                                                 | 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| 10                                                                                | 0.75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| 15                                                                                | 0.55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| 20                                                                                | 0.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| 25                                                                                | 0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| 30                                                                                | 0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| SAR 1g(W/Kg)                                                                      | 0.967                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |
| SAR 10g(W/Kg)                                                                     | 0.712                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |             |   |     |   |     |    |      |    |      |    |     |    |     |    |     |

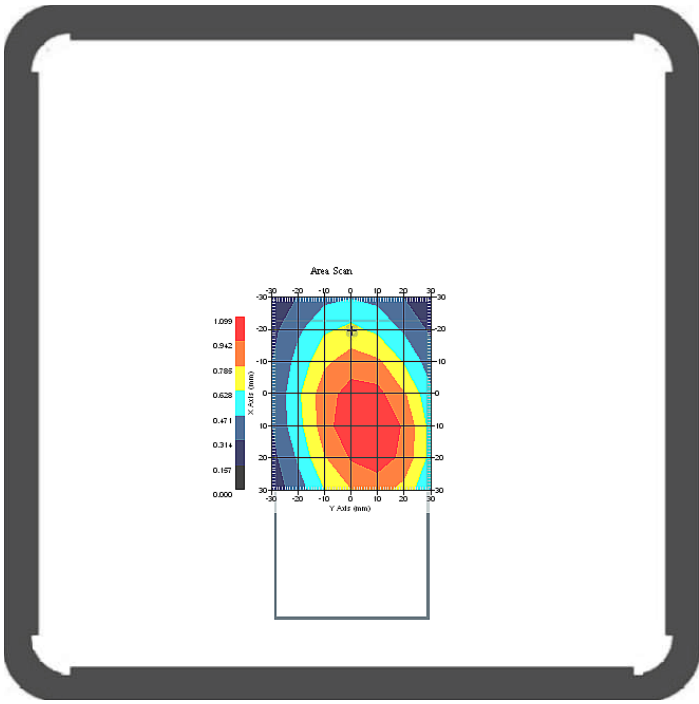
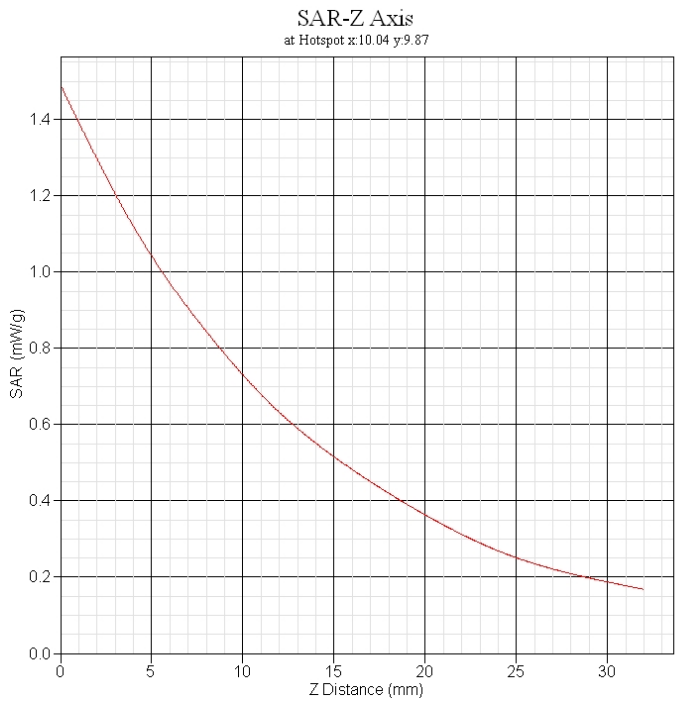
| WCDMA Band V body Back CH4233                                                     |                                                                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 846.6                                                                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                                                                |
| Variation(%)                                                                      | -0.129                                                                                                                              |
| Duty Cycle Factor                                                                 | 1                                                                                                                                   |
| Crest factor                                                                      | 1                                                                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                           |
| Data                                                                              | 2013-03-13                                                                                                                          |
|  | <p>SAR-Z Axis<br/>at Hotspot x:10.03 y:9.92</p>  |
| SAR 1g(W/Kg)                                                                      | 0.857                                                                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.577                                                                                                                               |

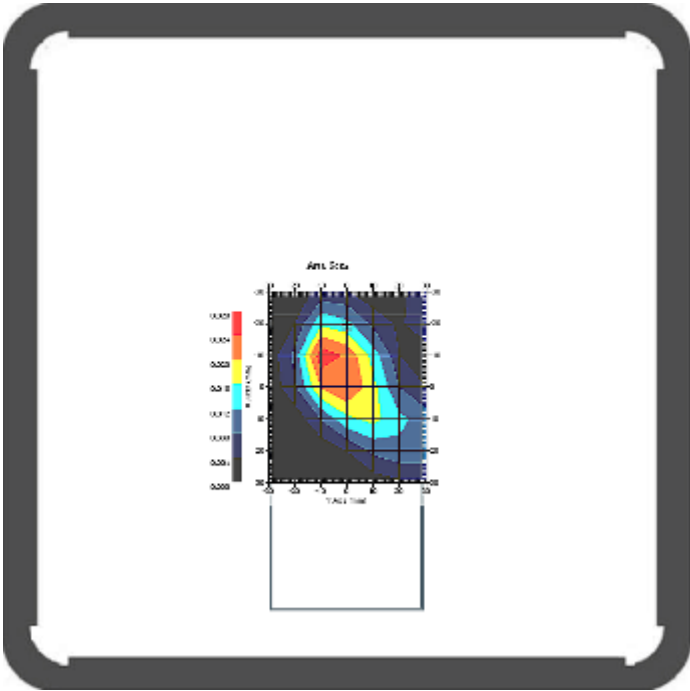
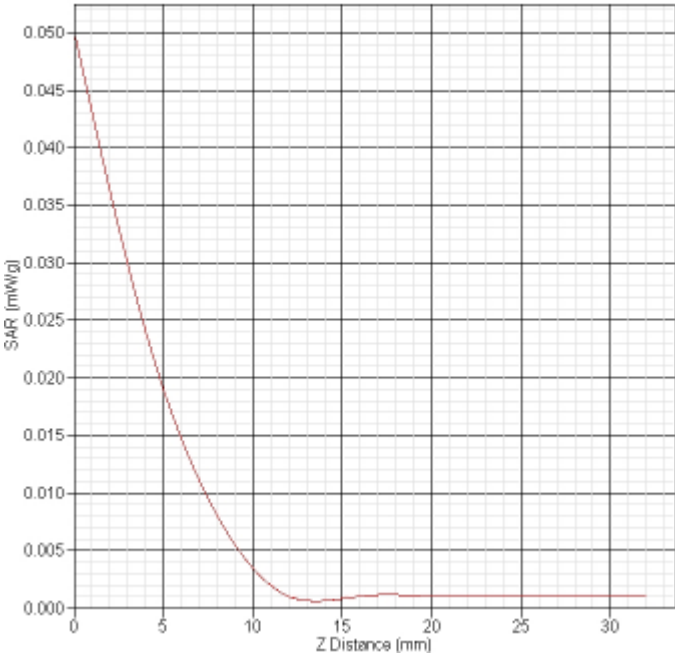
| WCDMA Band V body Left CH4183                                                      |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 836.6                                                                               |
| Relative permittivity(real part)                                                   | 53.14                                                                               |
| Conductivity(S/m)                                                                  | 0.98                                                                                |
| Variation(%)                                                                       | -2.638                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 6.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 μ V/(V/m)2                                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                       | 0.450                                                                               |
| SAR 10g(W/Kg)                                                                      | 0.282                                                                               |

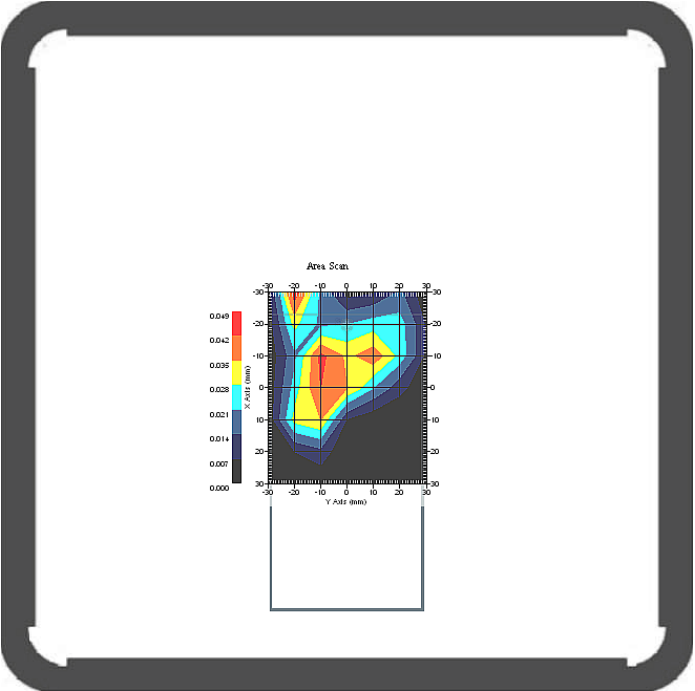
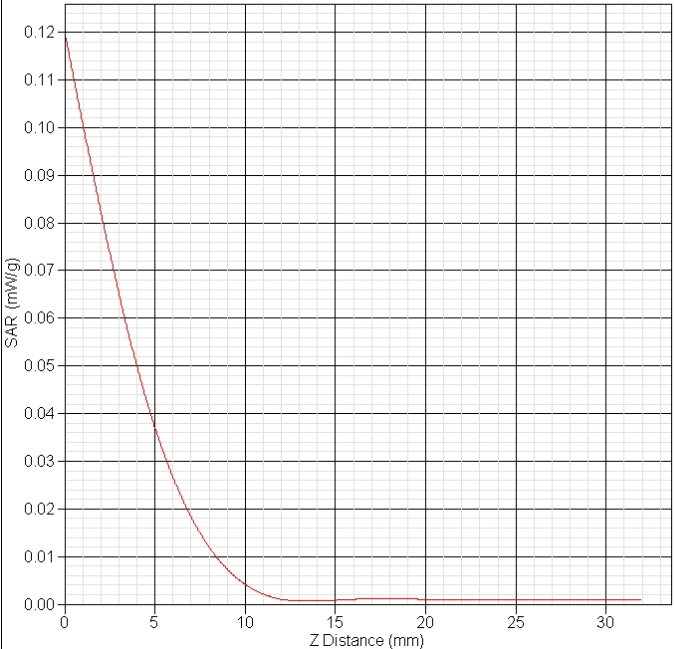
| WCDMA Band V body Right CH4183                                                    |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | 3.975                                                                               |
| Duty Cycle Factor                                                                 | 1                                                                                   |
| Crest factor                                                                      | 1                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 μ V/(V/m)2                                                           |
| Data                                                                              | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                      | 0.389                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.254                                                                               |

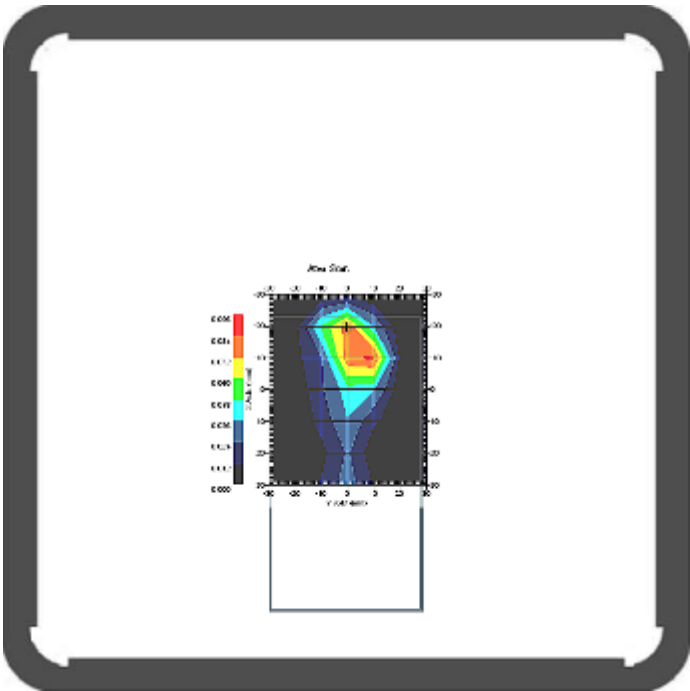
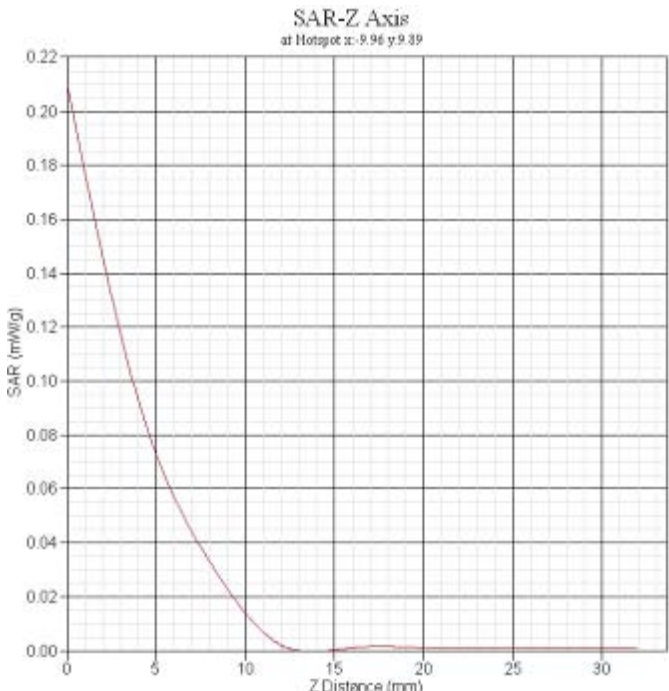
| WCDMA Band V body Bottom CH4183                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                    | 836.6                                                                               |
| Relative permittivity(real part)                                                  | 53.14                                                                               |
| Conductivity(S/m)                                                                 | 0.98                                                                                |
| Variation(%)                                                                      | -2.246                                                                              |
| Duty Cycle Factor                                                                 | 1                                                                                   |
| Crest factor                                                                      | 1                                                                                   |
| Conversion Factor                                                                 | 6.4                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 μ V/(V/m)2                                                           |
| Data                                                                              | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                      | 0.091                                                                               |
| SAR 10g(W/Kg)                                                                     | 0.047                                                                               |

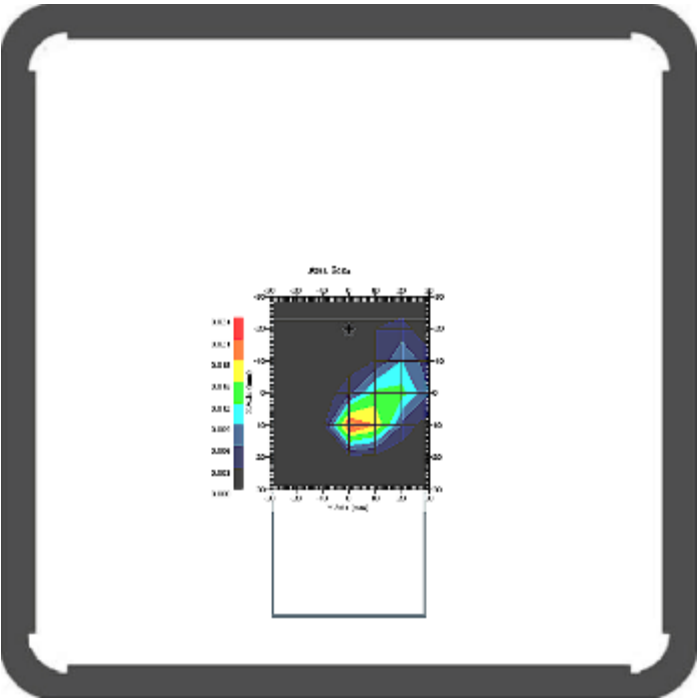
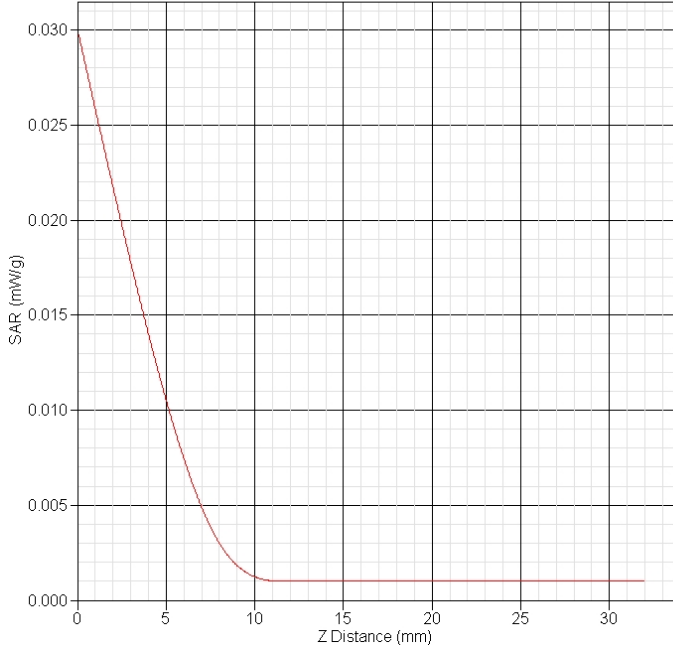


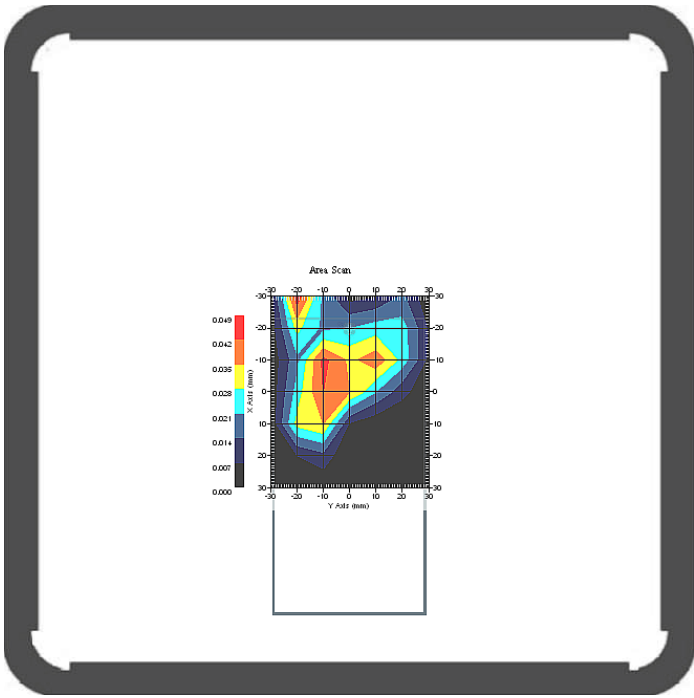
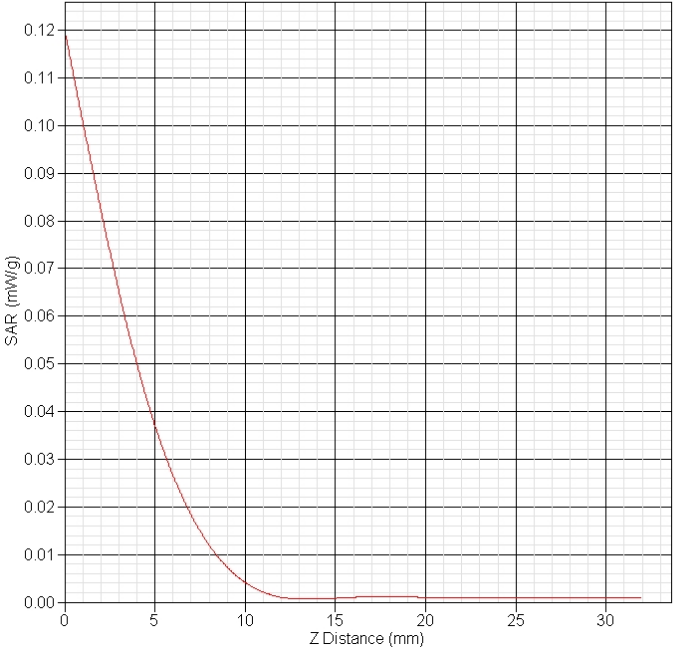
| WCDMA Band V body Back CH4183+earphone                                             |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 836.6                                                                               |
| Relative permittivity(real part)                                                   | 53.14                                                                               |
| Conductivity(S/m)                                                                  | 0.98                                                                                |
| Variation(%)                                                                       | -1.369                                                                              |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 6.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 μ V/(V/m)2                                                           |
| Data                                                                               | 2013-03-13                                                                          |
|  |  |
| SAR 1g(W/Kg)                                                                       | 0.932                                                                               |
| SAR 10g(W/Kg)                                                                      | 0.684                                                                               |

|                                                                                    |                                                                                                                                      |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 802.11b body Front CH11                                                            |                                                                                                                                      |
| Frequency(MHz)                                                                     | 2462                                                                                                                                 |
| Relative permittivity(real part)                                                   | 53.34                                                                                                                                |
| Conductivity(S/m)                                                                  | 1.93                                                                                                                                 |
| Variation(%)                                                                       | -2.536                                                                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                                                                    |
| Crest factor                                                                       | 1                                                                                                                                    |
| Conversion Factor                                                                  | 4.4                                                                                                                                  |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                            |
| Data                                                                               | 2013-03-15                                                                                                                           |
|  | <p>SAR-Z Axis<br/>at Hotspot x:-1.95 y:-2.14</p>  |
| SAR 1g(W/kg)                                                                       | 0.024                                                                                                                                |
| SAR 10g(W/kg)                                                                      | 0.009                                                                                                                                |

| 802.11b body Back CH11                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------|---|-------|---|-------|----|-------|----|-------|----|--------|----|--------|----|--------|
| Frequency(MHz)                                                                    | 2462                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| Relative permittivity(real part)                                                  | 53.34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| Conductivity(S/m)                                                                 | 1.93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| Variation(%)                                                                      | -2.058                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| Duty Cycle Factor                                                                 | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| Crest factor                                                                      | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| Conversion Factor                                                                 | 4.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| Data                                                                              | 2013-03-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
|  | <p>SAR-Z Axis<br/>at Hotspot x:-2.00 y:-10.10</p>  <table border="1"><caption>SAR-Z Axis Data (Estimated)</caption><thead><tr><th>Z Distance (mm)</th><th>SAR (mW/g)</th></tr></thead><tbody><tr><td>0</td><td>0.118</td></tr><tr><td>5</td><td>0.035</td></tr><tr><td>10</td><td>0.005</td></tr><tr><td>15</td><td>0.001</td></tr><tr><td>20</td><td>0.0005</td></tr><tr><td>25</td><td>0.0002</td></tr><tr><td>30</td><td>0.0001</td></tr></tbody></table> | Z Distance (mm) | SAR (mW/g) | 0 | 0.118 | 5 | 0.035 | 10 | 0.005 | 15 | 0.001 | 20 | 0.0005 | 25 | 0.0002 | 30 | 0.0001 |
| Z Distance (mm)                                                                   | SAR (mW/g)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| 0                                                                                 | 0.118                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| 5                                                                                 | 0.035                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| 10                                                                                | 0.005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| 15                                                                                | 0.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| 20                                                                                | 0.0005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| 25                                                                                | 0.0002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| 30                                                                                | 0.0001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| SAR 1g(W/kg)                                                                      | 0.047                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |
| SAR 10g(W/kg)                                                                     | 0.019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |            |   |       |   |       |    |       |    |       |    |        |    |        |    |        |

| 802.11b body Right CH11                                                            |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Frequency(MHz)                                                                     | 2462                                                                                |
| Relative permittivity(real part)                                                   | 53.34                                                                               |
| Conductivity(S/m)                                                                  | 1.93                                                                                |
| Variation(%)                                                                       | 0.930                                                                               |
| Duty Cycle Factor                                                                  | 1                                                                                   |
| Crest factor                                                                       | 1                                                                                   |
| Conversion Factor                                                                  | 4.4                                                                                 |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 $\mu$ V/(V/m) <sup>2</sup>                                           |
| Data                                                                               | 2013-03-15                                                                          |
|  |  |
| SAR 1g(W/kg)                                                                       | 0.087                                                                               |
| SAR 10g(W/kg)                                                                      | 0.033                                                                               |

|                                                                                   |                                                                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 802.11b body Top CH11                                                             |                                                                                                                                     |
| Frequency(MHz)                                                                    | 2462                                                                                                                                |
| Relative permittivity(real part)                                                  | 53.34                                                                                                                               |
| Conductivity(S/m)                                                                 | 1.93                                                                                                                                |
| Variation(%)                                                                      | 0.234                                                                                                                               |
| Duty Cycle Factor                                                                 | 1                                                                                                                                   |
| Crest factor                                                                      | 1                                                                                                                                   |
| Conversion Factor                                                                 | 4.4                                                                                                                                 |
| Probe Sensitivity                                                                 | 1.20 1.20 1.20 μ V/(V/m)2                                                                                                           |
| Data                                                                              | 2013-03-15                                                                                                                          |
|  | <p>SAR-Z Axis<br/>at Hotspot x:2.01 y:15.90</p>  |
| SAR 1g(W/kg)                                                                      | 0.013                                                                                                                               |
| SAR 10g(W/kg)                                                                     | 0.005                                                                                                                               |

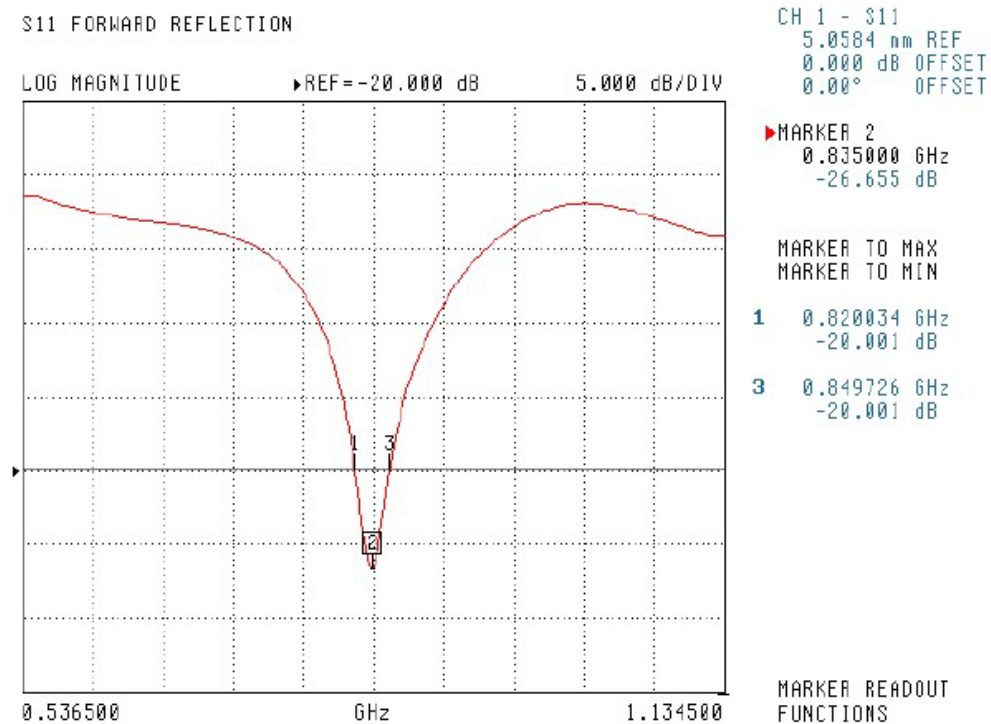
|                                                                                    |                                                                                                                                       |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 802.11b body Back CH11+earphone                                                    |                                                                                                                                       |
| Frequency(MHz)                                                                     | 2462                                                                                                                                  |
| Relative permittivity(real part)                                                   | 53.34                                                                                                                                 |
| Conductivity(S/m)                                                                  | 1.93                                                                                                                                  |
| Variation(%)                                                                       | -1.764                                                                                                                                |
| Duty Cycle Factor                                                                  | 1                                                                                                                                     |
| Crest factor                                                                       | 1                                                                                                                                     |
| Conversion Factor                                                                  | 4.4                                                                                                                                   |
| Probe Sensitivity                                                                  | 1.20 1.20 1.20 μ V/(V/m)2                                                                                                             |
| Data                                                                               | 2013-03-15                                                                                                                            |
|  | <p>SAR-Z Axis<br/>at Hotspot x:-2.00 y:-10.10</p>  |
| SAR 1g(W/kg)                                                                       | 0.041                                                                                                                                 |
| SAR 10g(W/kg)                                                                      | 0.013                                                                                                                                 |

ValidationDipole Calibration

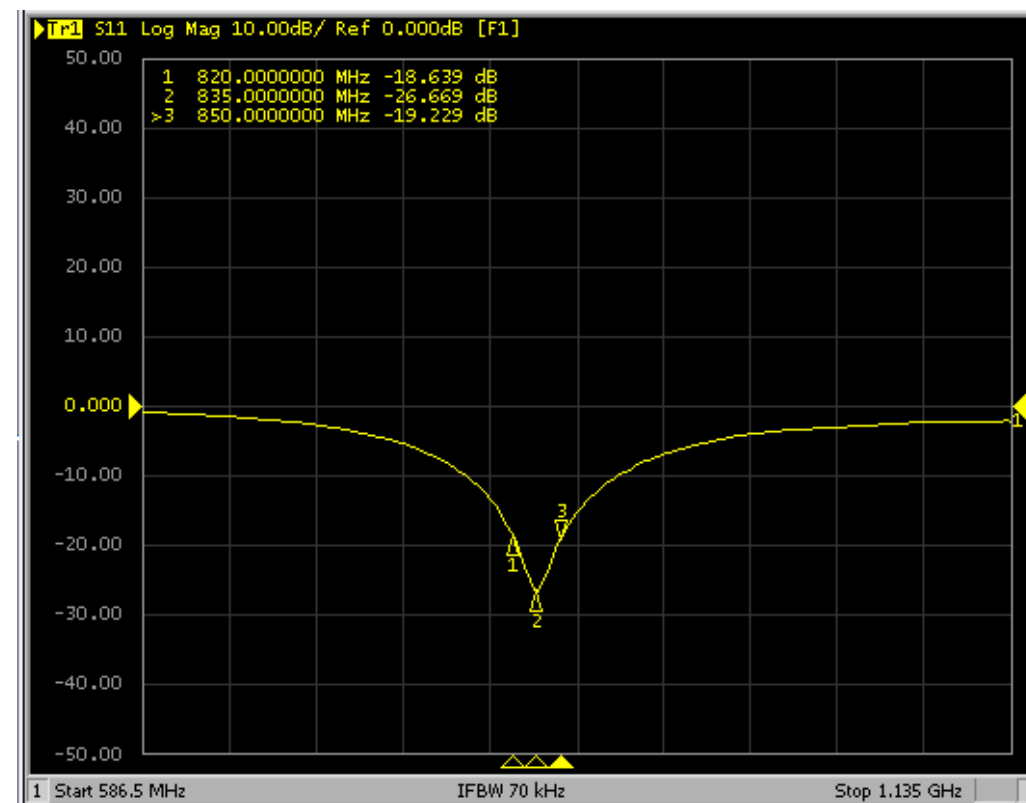
Electrical Specification 835MHz

| Tissue Type       | Return Loss(dB) | Impedance(ohm) |
|-------------------|-----------------|----------------|
| Head(2011)        | -26.655         | 51.666         |
| Head(2012 recent) | -26.669         | 52.536         |
| Body(2011)        | -22.106         | 57.482         |
| Body(2012 recent) | -22.595         | 54.711         |

## Head Tissue of Return Loss(2011)

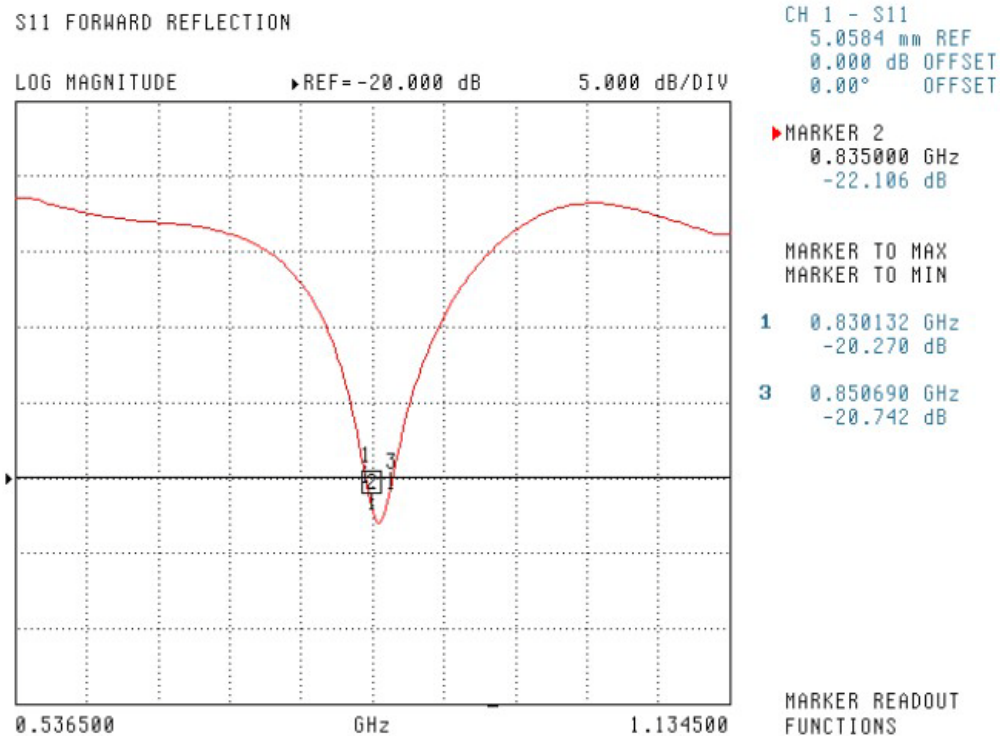


## Head Tissue of Return Loss(2012 recent)

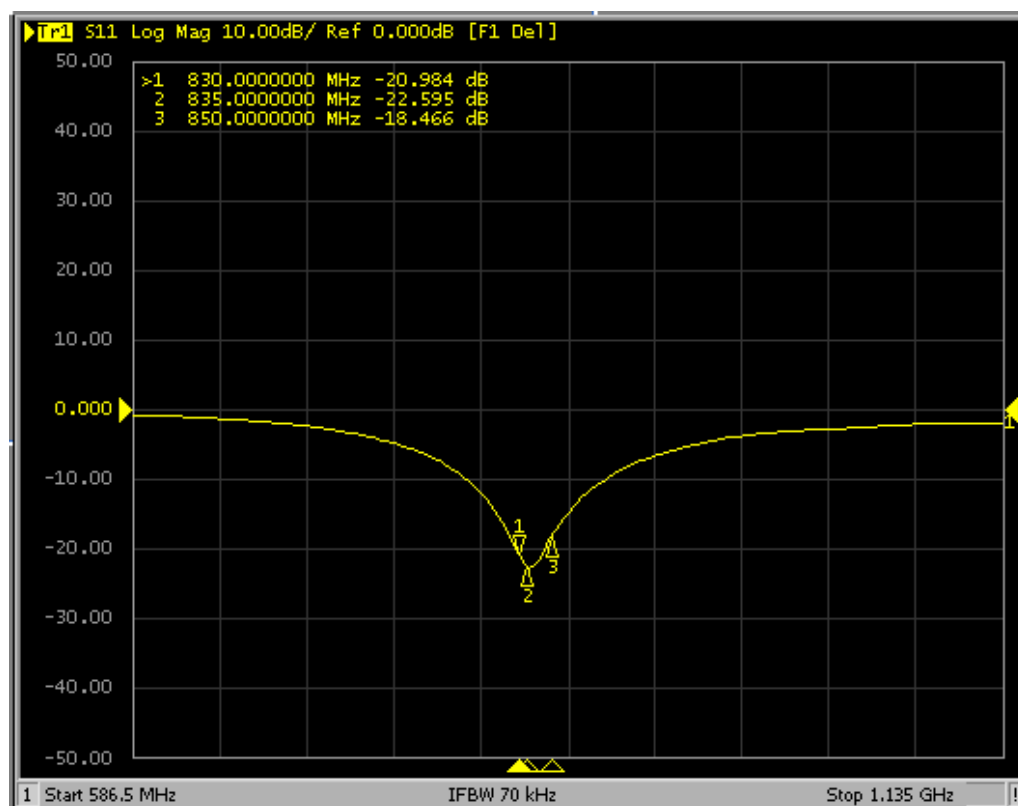




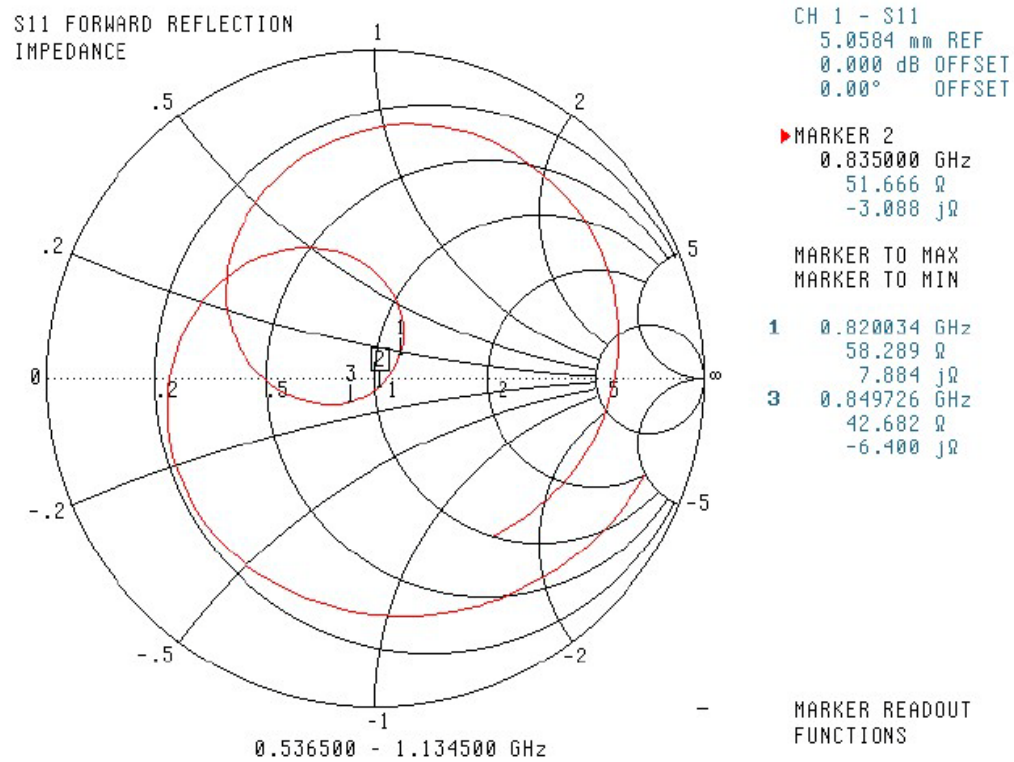
## Body Tissue of Return Loss(2011)



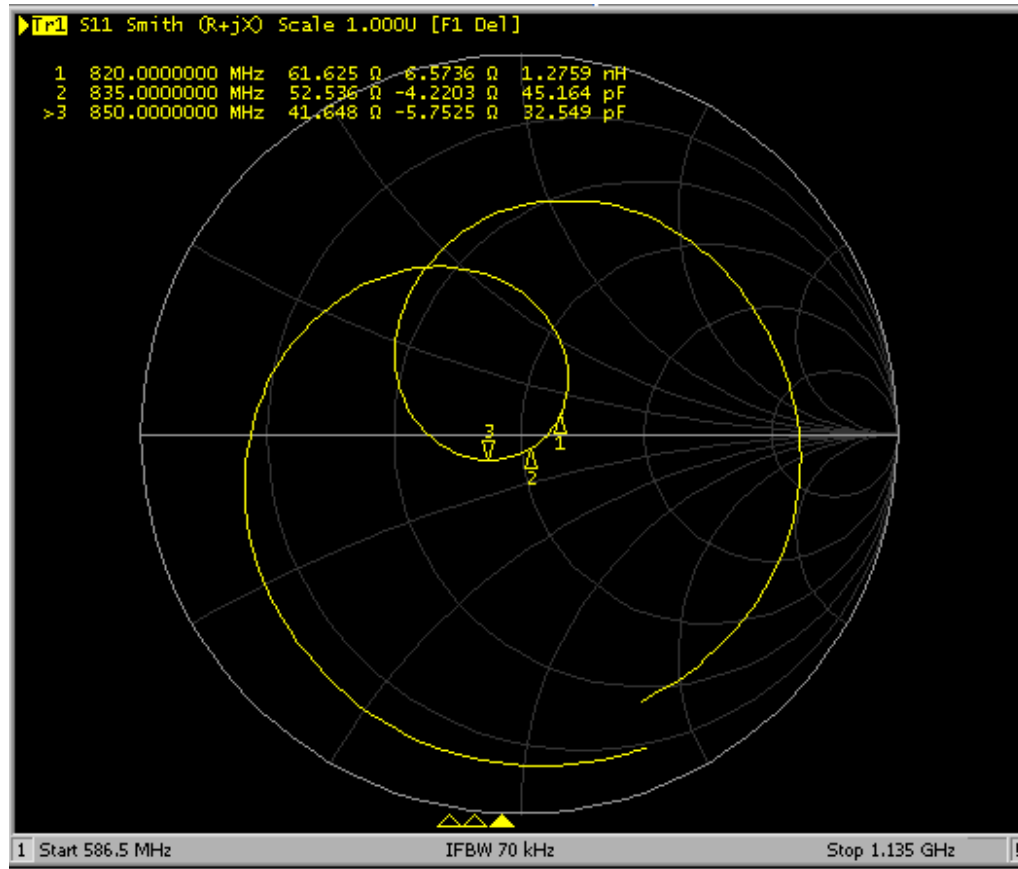
## Body Tissue of Return Loss(2012 recent)



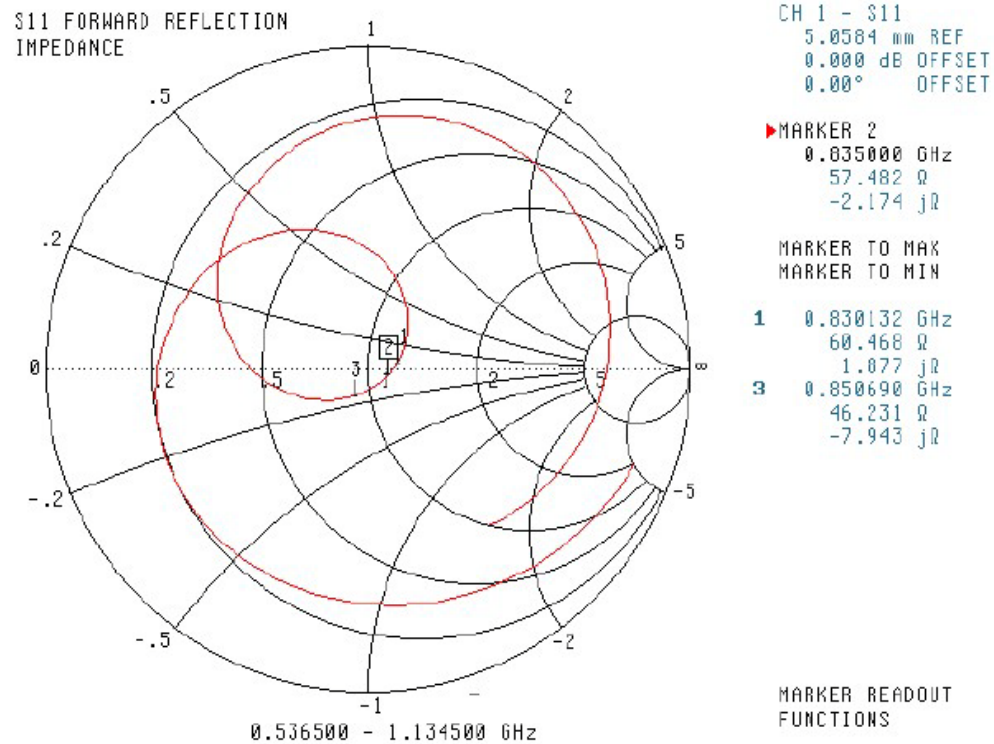
## Head Tissue of Impedance(2011)



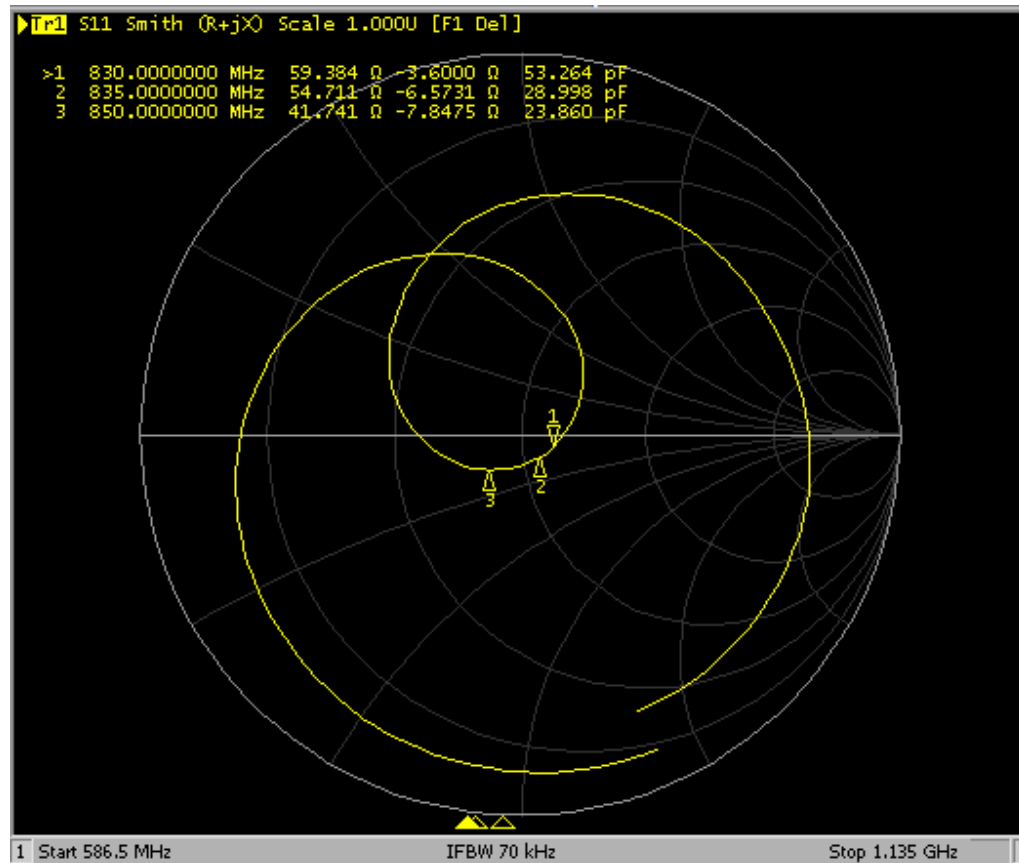
## Head Tissue of Impedance(2012 recent)



## Body Tissue of Impedance(2011)



## Body Tissue of Impedance(2012 recent)

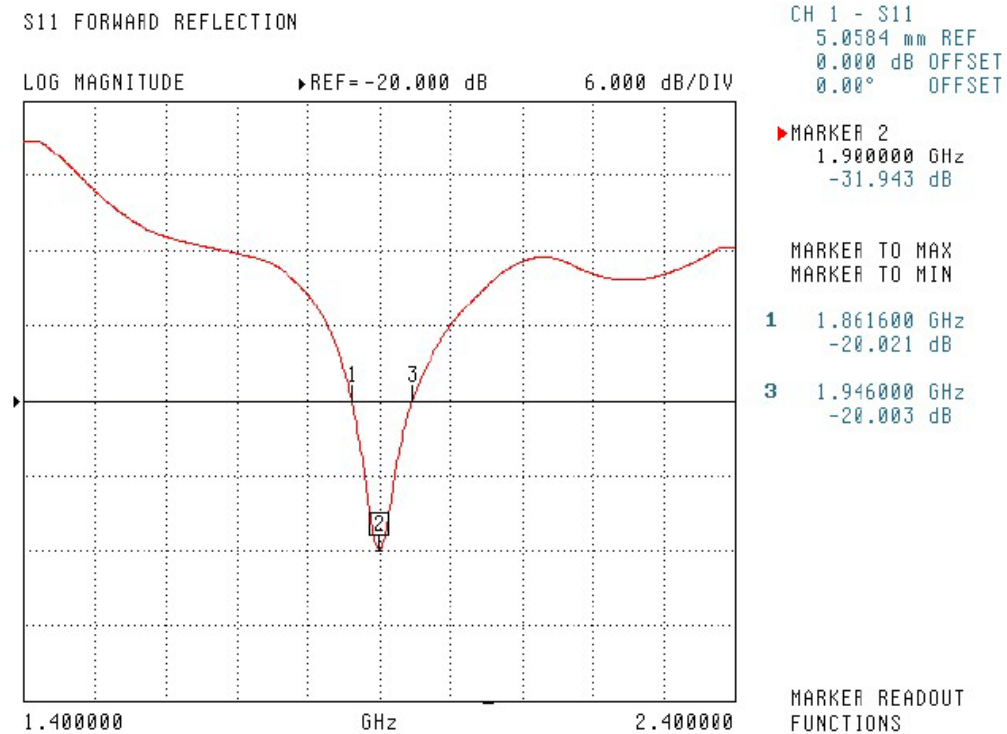


## ValidationDipole Calibration

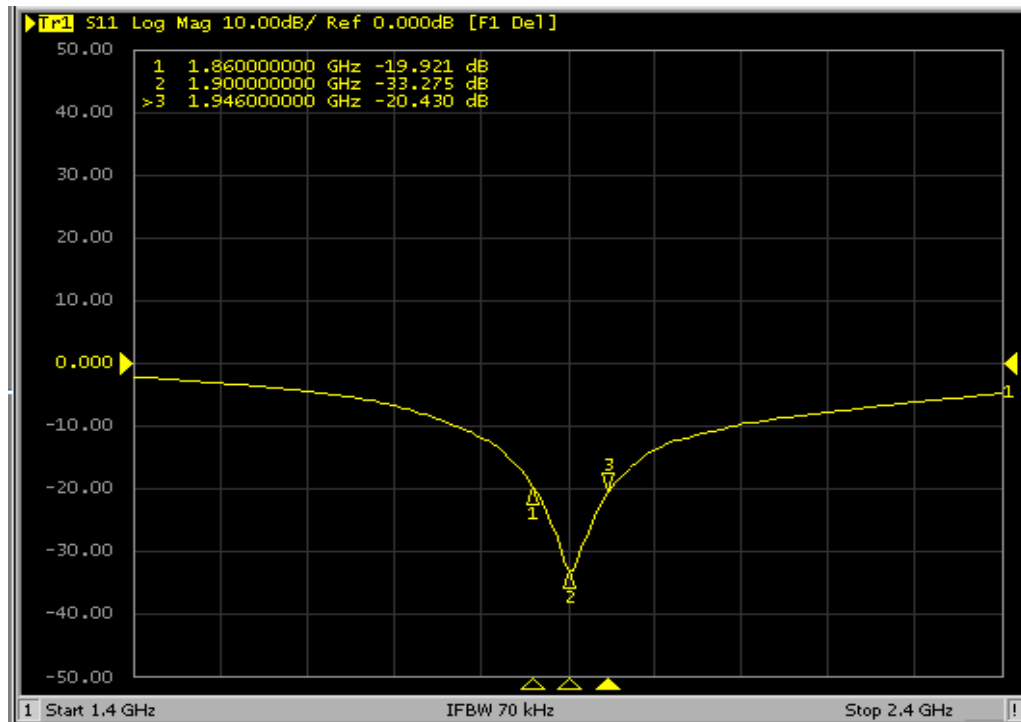
### Electrical Specification 1900MHz

| Tissue Type       | Return Loss(dB) | Impedance(ohm) |
|-------------------|-----------------|----------------|
| Head(2011)        | -31.943         | 51.262         |
| Head(2012 recent) | -33.275         | 49.302         |
| Body(2011)        | -25.099         | 53.750         |
| Body(2012 recent) | -25.606         | 50.197         |

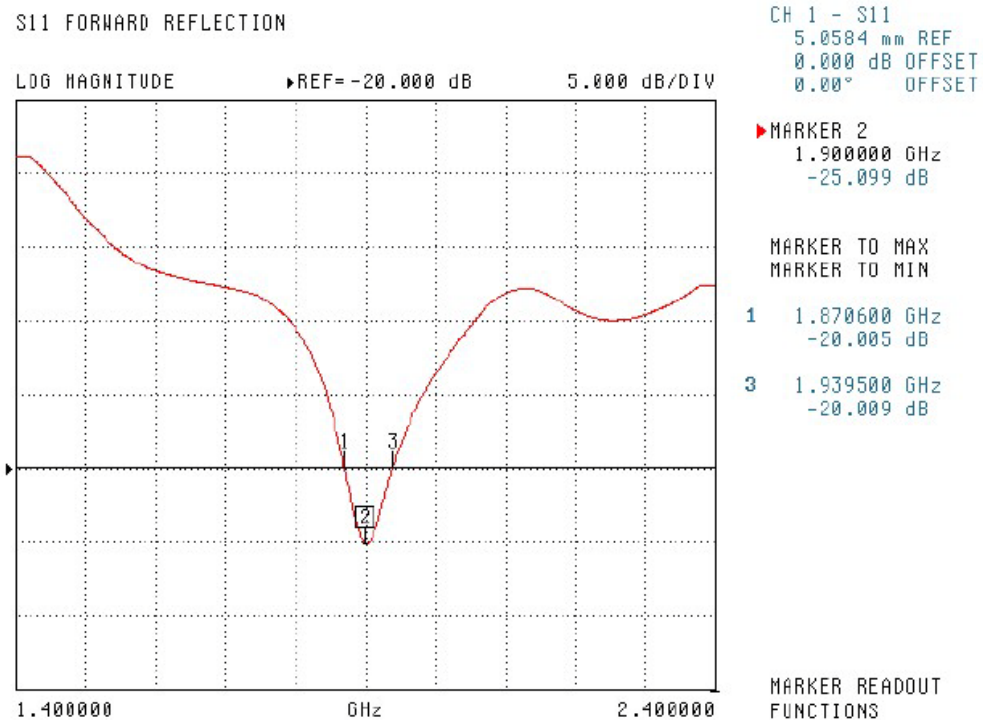
### Head Tissue of Return Loss(2011)



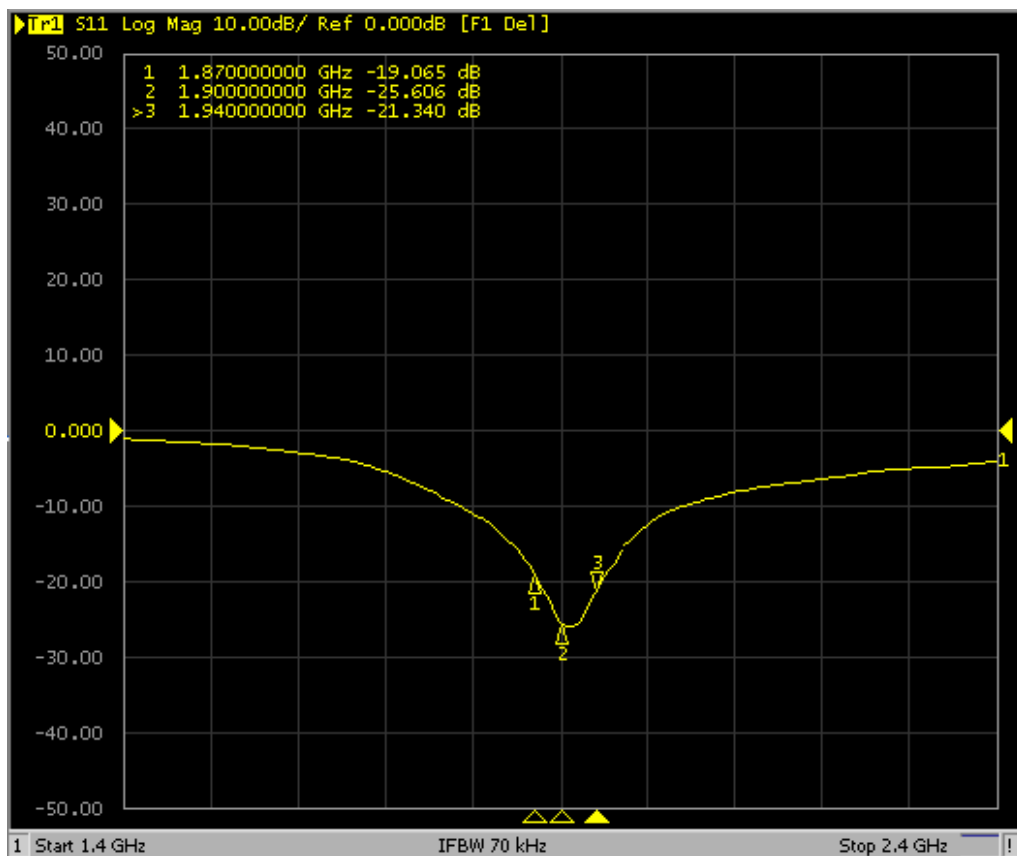
### Head Tissue of Return Loss(2012 recent)



### Body Tissue of Return Loss(2011)

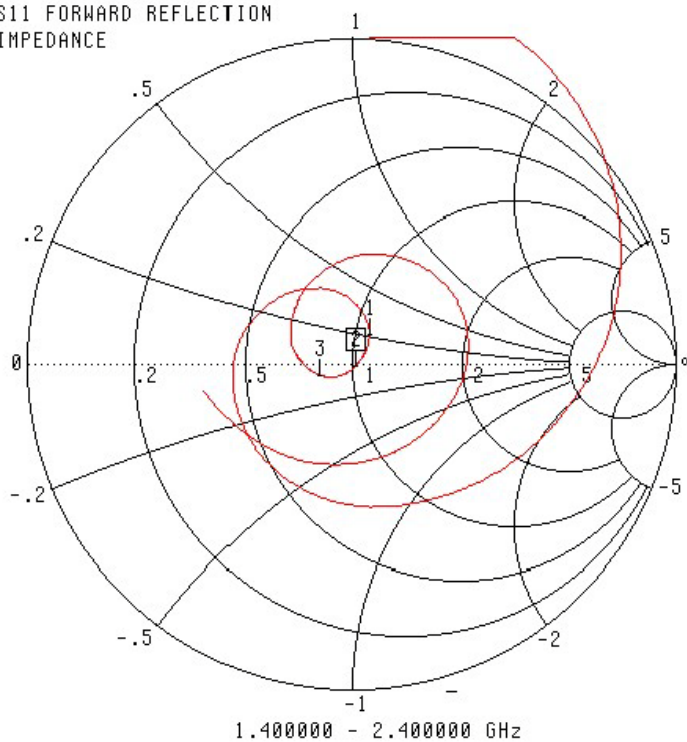


### Body Tissue of Return Loss(2012 recent)



### Head Tissue of Impedance(2011)

S11 FORWARD REFLECTION  
IMPEDANCE



CH 1 - S11  
5.0584 mm REF  
0.000 dB OFFSET  
0.00° OFFSET

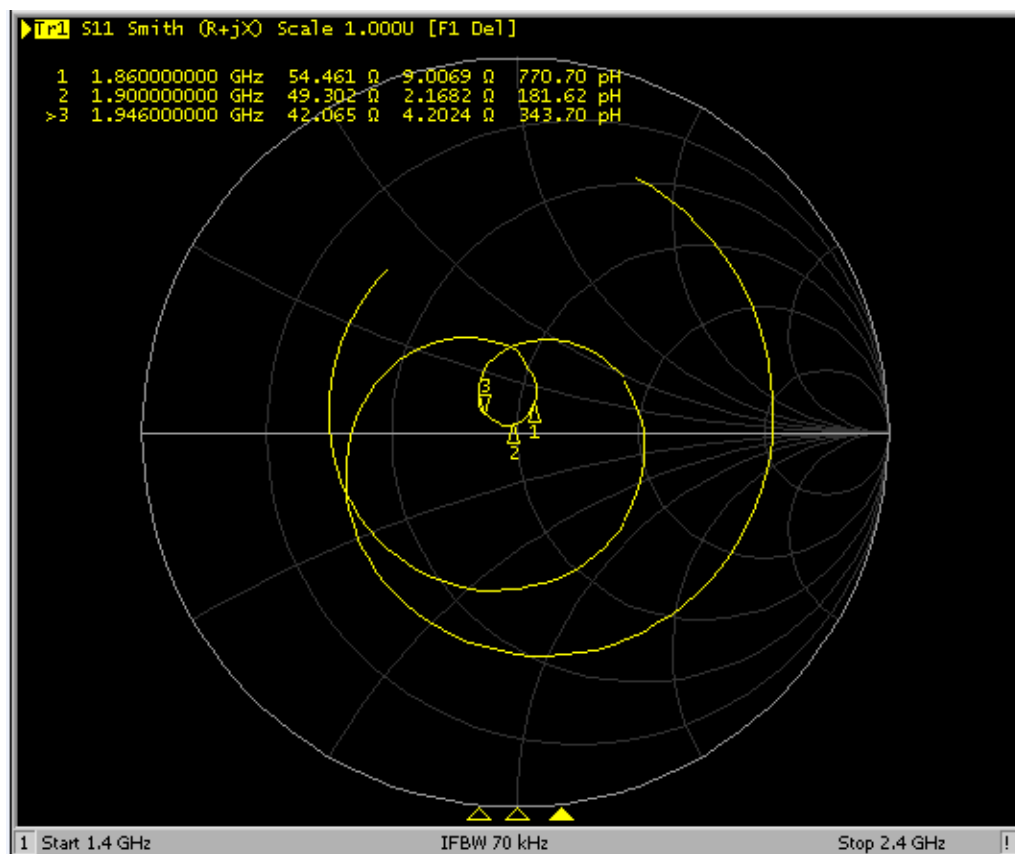
► MARKER 2  
1.900000 GHz  
51.262  $\Omega$   
-1.179  $j\Omega$

MARKER TO MAX  
MARKER TO MIN

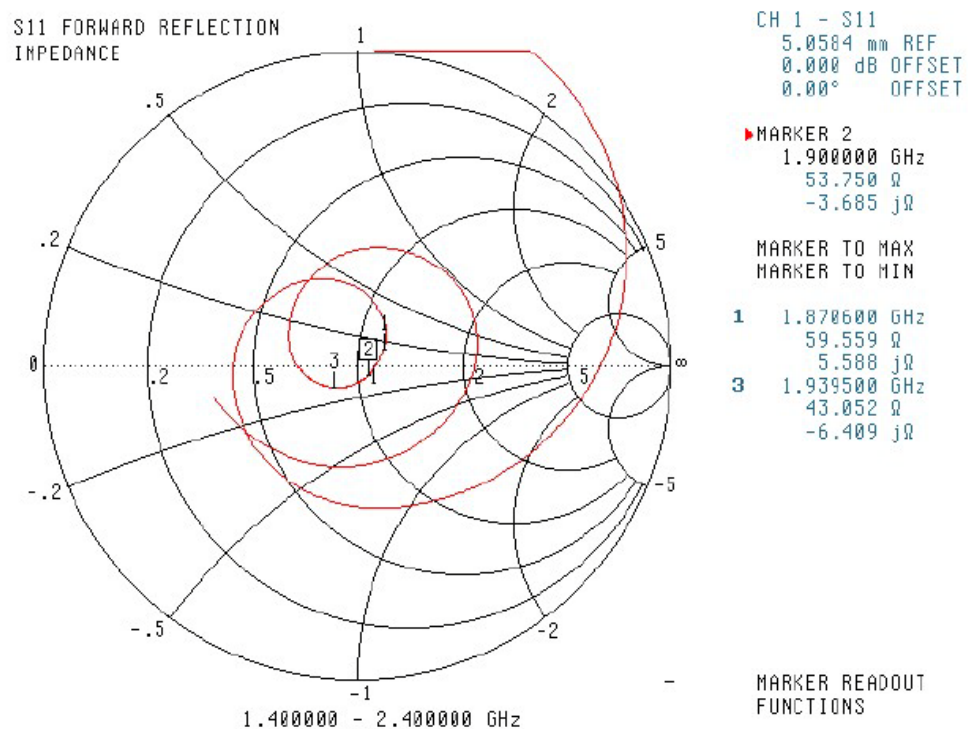
1 1.861600 GHz  
55.137  $\Omega$   
9.602  $j\Omega$   
3 1.946000 GHz  
41.175  $\Omega$   
-3.077  $j\Omega$

MARKER READOUT  
FUNCTIONS

### Head Tissue of Impedance(2012 recent)



Body Tissue of Impedance(2011)



Body Tissue of Impedance(2012 recent)

