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# SAR Test Report

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Report No.: AGC14G120401-5S1

**TEST NAME** : QS-G3UCT1BK

**FCC ID** : JJMFUSION

**PRODUCT DESIGNATION** : GSM/WCDMA mobile phone/Smart phone (Fusion)

**BRAND NAME** : NUQLEO

**MODEL NAME** : QS-G3UCT1BK, QS-G3UCT1BL, QS-G3UCT1RD,  
QS-G3UCT1WH, QS-G3UCT1SL, QS-G3UCT1YL,  
QS-G3UCT1PR, QS-G3UCT1GN, QS-G3UCT1PK,  
QS-G3UCT1OR

**CLIENT** : Accvent LLC

**DATE OF ISSUE** : May 7, 2012

**STANDARD(S)** : FCC Oet65 Supplement C June 2001  
IEEE Std. 1528-2003, 47CFR § 2.1093

**REPORT VERSION** : V1.0

**Attestation of Global Compliance Co., Ltd.**

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# Test Report Certificate Mobile

|                                                         |   |                                                                                                                                                        |
|---------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant Name                                          | : | Accvent LLC                                                                                                                                            |
| Applicant Address                                       | : | 454 Holiday Drive Hallandale,Florida,33009.USA                                                                                                         |
| Manufacturer Name                                       | : | Accvent LLC                                                                                                                                            |
| Manufacturer Address                                    | : | 454 Holiday Drive Hallandale,Florida,33009.USA                                                                                                         |
| Product Designation                                     | : | GSM/WCDMA mobile phone/Smart phone (Fusion)                                                                                                            |
| Brand Name                                              | : | NUQLEO                                                                                                                                                 |
| Model Name                                              | : | QS-G3UCT1BL, QS-G3UCT1RD, QS-G3UCT1WH,<br>QS-G3UCT1SL, QS-G3UCT1YL, QS-G3UCT1PR,<br>QS-G3UCT1GN, QS-G3UCT1PK, QS-G3UCT1OR                              |
| Difference Description                                  |   | All above models are the same except for appearance.                                                                                                   |
| EUT Voltage                                             | : | DC3.7V by battery                                                                                                                                      |
| Applicable Standard                                     | : | FCC Oet65 Supplement C June 2001<br>IEEE Std. 1528-2003,47CFR § 2.1093                                                                                 |
| Test Date                                               | : | May 6,2012                                                                                                                                             |
| Test Results                                            | : | MAX SAR MEASUREMENT(1g)<br>Head:0.795 W/Kg (Scaling SAR=0.8499 W/Kg)<br>Body:0.594 W/Kg                                                                |
| Performed LoGSM/WCDMA mobile phone/Smart phone (Fusion) | : | Attestation of Global Compliance Co., Ltd.<br>1F., No.2 Building, Huafeng No.1 Technical Industrial Park, Sanwei,<br>Xixiang, Baoan District, Shenzhen |

Tested By



Angela Li

May 7,2012

Checked By



Forrest Lei

May 7,2012

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May 7,2012

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## 1. General Information

### 1.1. EUT Description

| General Information                                |                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Designation                                | GSM/WCDMA mobile phone/Smart phone (Fusion)                                                                                                                                                                                                                                              |
| Test Model                                         | QS-G3UCT1BK                                                                                                                                                                                                                                                                              |
| Hardware Version                                   | E1117_V1.1                                                                                                                                                                                                                                                                               |
| Software Version                                   | N/A                                                                                                                                                                                                                                                                                      |
| Device GSM/WCDMA mobile phone/Smart phone (Fusion) | Portable                                                                                                                                                                                                                                                                                 |
| RF Exposure Environment                            | Uncontrolled                                                                                                                                                                                                                                                                             |
| Antenna Type                                       | Internal                                                                                                                                                                                                                                                                                 |
| GSM and GPRS                                       |                                                                                                                                                                                                                                                                                          |
| Support Band                                       | <input checked="" type="checkbox"/> GSM 850 <input checked="" type="checkbox"/> PCS 1900 (U.S. Bands)<br><input checked="" type="checkbox"/> GSM 900 <input checked="" type="checkbox"/> DCS 1800 (Non-U.S. Bands)                                                                       |
| GPRS Type                                          | Class B                                                                                                                                                                                                                                                                                  |
| GPRS Class                                         | Class 8,10 ,12(1Tx+4Rx, 2Tx+3Rx, 3Tx+2Rx, 4Tx+1Rx)                                                                                                                                                                                                                                       |
| TX Frequency Range                                 | GSM 850 : 824.2~848.8MHz;<br>PCS 1900: 1850.2~1909.8MHz;                                                                                                                                                                                                                                 |
| RX Frequency Range                                 | GSM 850 : 869~894MHz<br>PCS 1900: 1930~1990MHz                                                                                                                                                                                                                                           |
| Release Version                                    | R99                                                                                                                                                                                                                                                                                      |
| Type of modulation                                 | GMSK for GSM/GPRS                                                                                                                                                                                                                                                                        |
| Antenna Gain                                       | 1.0dBi                                                                                                                                                                                                                                                                                   |
| Max. Output Power (Avg. Burst Power)               | GSM850: 31.51 dBm ( 32.71 dBm Peak Power)<br>PCS1900:29.17 dBm (29.63 dBm Peak Power)                                                                                                                                                                                                    |
| Max. Output Power (Radiated)                       | GSM850: 30.78 dBm- ERP<br>PCS1900: 28.69dBm- EIRP                                                                                                                                                                                                                                        |
| WCDMA                                              |                                                                                                                                                                                                                                                                                          |
| Support Band                                       | U.S. Bands:<br><input checked="" type="checkbox"/> UMTS FDD Band II <input checked="" type="checkbox"/> UMTS FDD Band V<br>Non-U.S. Bands:<br><input checked="" type="checkbox"/> UMTS FDD Band I <input type="checkbox"/> UMTS FDD Band III <input type="checkbox"/> UMTS FDD Band VIII |
| HS Type                                            | HSPA(HSUPA/HSDPA)                                                                                                                                                                                                                                                                        |

|                                                     |                                                                                                                                                                                                               |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TX Frequency Range                                  | WCDMA FDD BAND II: 1852.4 -1907.6MHz<br>WCDMA FDD BAND V: 826.4-846.6MHz                                                                                                                                      |
| RX Frequency Range                                  | WCDMA FDD BAND II: 1930-1990MHz<br>WCDMA FDD BAND V: 869-894MHz                                                                                                                                               |
| Release Version                                     | Rel-6                                                                                                                                                                                                         |
| Type of modulation                                  | QPSK                                                                                                                                                                                                          |
| Antenna Gain                                        | 1.2dBi for GSM850 and UMTS BAND V<br>1.5dBi for PCS1900 and UMTS BAND II                                                                                                                                      |
| Max. Output Power<br>(Avg. Burst Power)             | Band II: 23.28 dBm ( 23.34 dBm Peak Power)<br>Band V:23.33dBm (23.41 dBm Peak Power)                                                                                                                          |
| Max. Output Power<br>(Radiated)                     | Band II: 20.64dBm- ERP<br>Band V: 21.61dBm- EIRP                                                                                                                                                              |
| <b>Bluetooth</b>                                    |                                                                                                                                                                                                               |
| Bluetooth Version                                   | <input type="checkbox"/> V2.0 <input type="checkbox"/> V2.1 <input checked="" type="checkbox"/> V2.1+EDR <input type="checkbox"/> V3.0 <input type="checkbox"/> V3.0+EDR                                      |
| Operation Frequency                                 | 2402~2480MHz                                                                                                                                                                                                  |
| Type of modulation                                  | <input checked="" type="checkbox"/> GFSK <input checked="" type="checkbox"/> π/4-DQPSK <input checked="" type="checkbox"/> 8-DPSK                                                                             |
| Max. Output Power<br>(Peak Conducted)               | 3.47 dBm(max) for GFSK modulation                                                                                                                                                                             |
| Antenna Gain                                        | 1.2dBi                                                                                                                                                                                                        |
| <b>WIFI</b>                                         |                                                                                                                                                                                                               |
| WIFI Specific GSM/WCDMA<br>mobile phone/Smart phone | <input type="checkbox"/> 802.11a <input checked="" type="checkbox"/> 802.11b <input checked="" type="checkbox"/> 802.11g <input checked="" type="checkbox"/> 802.11n(20) <input type="checkbox"/> 802.11n(40) |
| Operation Frequency                                 | 2412~2462MHz                                                                                                                                                                                                  |
| Max. Output Power                                   | 11b:12.88 dBm, 11g:11.74 dBm, 11n(20):11.38 dBm                                                                                                                                                               |
| Antenna Gain                                        | Antenna (max): 1.1dBi                                                                                                                                                                                         |
| <b>Accessories</b>                                  |                                                                                                                                                                                                               |
| Battery                                             | Brand name: NUQLEO<br>Model No. : Fusion<br>Voltage and Capacitance: DC 3.7V/1200mAh                                                                                                                          |
| Adapter                                             | Brand name: NUQLEO<br>Model No. : Fusion<br>Input: 100-240V, 50/60HZ / Output: 0.15A   5.0V   500mA                                                                                                           |
| Earphone                                            | Brand name: NUQLEO<br>Model No. : Fusion                                                                                                                                                                      |

Note: The sample used for testing is end product.

### 1.2. Test Procedure

|   |                                                                                                                                       |
|---|---------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Setup the EUT and simulators as shown on above.                                                                                       |
| 2 | Turn on the power of all equipment.                                                                                                   |
| 3 | EUT Communicate Mobile GSM/WCDMA mobile phone/Smart phone (Fusion) with CMU 200, and test them respectively at BAND V & PCS1900 bands |

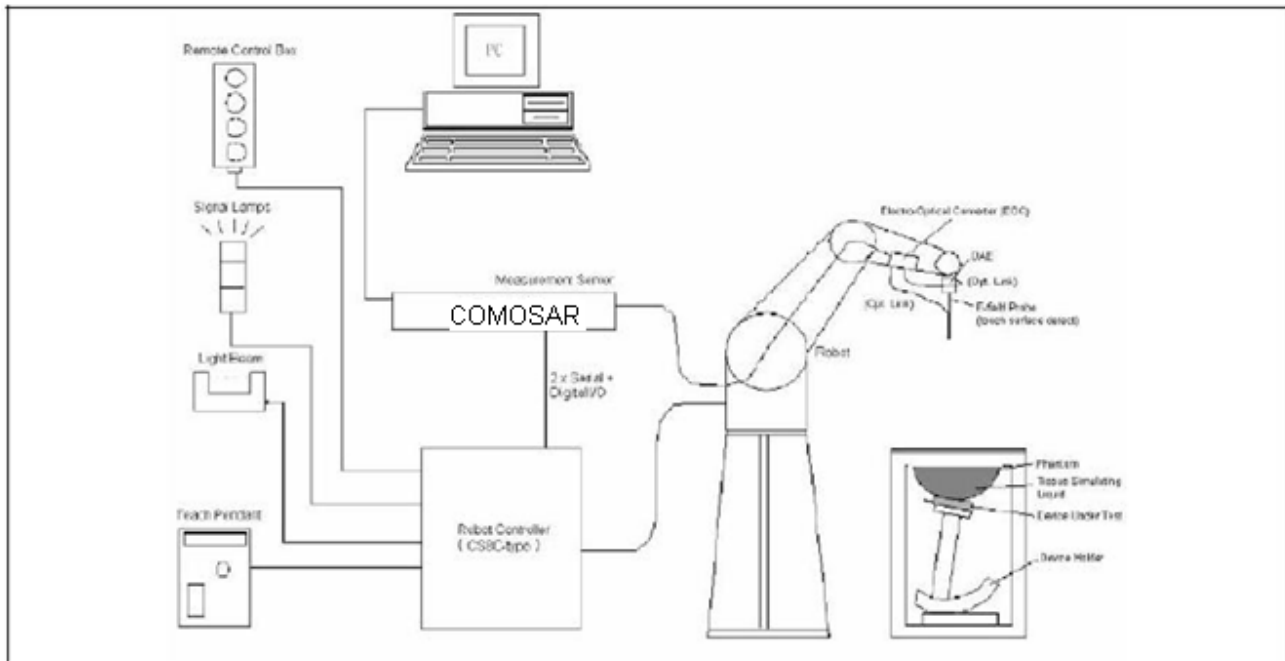
### 1.3. Test Environment

Ambient conditions in the laboratory:

| Items            | Required | Actual |
|------------------|----------|--------|
| Temperature (°C) | 18-25    | 21± 2  |
| Humidity (%RH)   | 30-70    | 55±2   |

## 2. SAR Measurement System

### 2.1. COMOSAR System Description



The COMOSAR system for performing compliance tests consists of the following items:

A standard high precision 6-axis robot with controller, teach pendant and software.

An arm extension for accommodating the data acquisition electronics (DAE).

A data acquisition electronics (DAE) which performs the signal amplification GSM/WCDMA mobile phone/Smart phone (Fusion), signal multiplexing, AD-conversion, offset measurements, mechanical surface detection,

collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital Communicate Mobile GSM/WCDMA mobile phone/Smart phone (Fusion) to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.

The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.

A computer running WinXP and the Opensar software.

Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.

The phantom, the device holder and other accessories according to the targeted measurement.

#### 2.1.1. AppliGSM/WCDMA mobile phone/Smart phone (Fusion)s

Predefined procedures and evaluations for automated compliance testing with all worldwide standards, e.g., IEEE 1528, OET 65, IEC 62209-1, IEC 62209-2, EN 50360, EN 50383 and others.

### 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 appliGSM/WCDMA mobile phone/Smart phone (Fusion)s utilize a 10mm<sup>2</sup> step integral, with 1mm interpolation used to loGSM/WCDMA mobile phone/Smart phone (Fusion)e the peak SAR area used for zoom scan assessments.

When an Area Scan has measured all reachable points, it computes the field maxima found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE 1528-2003, EN 50361 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan).

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

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. A density of 1000 kg/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 1 g cube is 10mm, with the side length of the 10 g cube 21,5mm.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test appliGSM/WCDMA mobile phone/Smart phone (Fusion)s utilize a physical step of 7x7x7 (5mmx5mmx5mm) providing a volume of 30mm in the X & Y axis, and 30mm in the Z axis.

### 2.1.4. Uncertainty of Inter-/Extrapolation and Averaging

In order to evaluate the uncertainty of the interpolation, extrapolation and averaged SAR calculation algorithms of the Post processor, COMOSAR allows the generation of measurement grids which are artificially predefined by analytically based test functions. Therefore, the grids of area scans and zoom scans can be filled with uncertainty test data, according to the SAR benchmark functions of IEEE 1528. The three analytical functions shown in equations as below are used to describe the possible range of the expected SAR distributions for the tested handsets. The field gradients are covered by the spatially flat distribution f1, the spatially steep distribution f3 and f2 accounts for H-field cancellation on the phantom/tissue surface.

$$f_1(x, y, z) = A e^{-\frac{z}{2a}} \cos^2 \left( \frac{\pi}{2} \frac{\sqrt{x'^2 + y'^2}}{5a} \right)$$

$$f_2(x, y, z) = A e^{-\frac{z}{a}} \frac{a^2}{a^2 + x'^2} \left( 3 - e^{-\frac{2z}{a}} \right) \cos^2 \left( \frac{\pi}{2} \frac{y'}{3a} \right)$$

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

## 2.2. COMOSAR E-Field Probe

The SAR measurement is conducted with the dissymmetric probe manufactured by SPEAG.

The probe is specially designed and calibrated for use in liquid with high permittivity. The dissymmetric probe has special calibration in liquid at different frequency.

SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528, EN62209-1, IEC 62209, etc.) Under ISO17025. The calibration data are in Appendix D.

### 2.2.1. Isotropic E-Field Probe Specific for GSM/WCDMA mobile phone/Smart phone (Fusion)

|                                                   |                                                                                                                                                                                                            |                                                                                     |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Model                                             | SSE5                                                                                                                                                                                                       |                                                                                     |
| Manufacture                                       | Satimo                                                                                                                                                                                                     |                                                                                     |
| frequency                                         | 0.3 GHz-3 GHz<br>Linearity:±0.2dB(300 MHz-3 GHz)                                                                                                                                                           |  |
| Dynamic Range                                     | 0.01W/Kg-100W/Kg<br>Linearity:±0.2dB                                                                                                                                                                       |                                                                                     |
| Dimensions                                        | Overall length:330mm<br>Length of individual dipoles:4.5mm<br>Maxmum external diameter:8mm<br>Probe Tip external diameter:5mm<br>Distance between dipoles/ probe extremity:2.7mm                           |                                                                                     |
| AppliGSM/WC DMA mobile phone/Smart phone (Fusion) | High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 3 GHz with precision of better 30%. |                                                                                     |

## 2.3 Robot

The COMOSAR system uses the high precision robots TX90 XL type out of the newer series from Satimo SA (France). For the 6-axis controller COMOSAR system, the KUKA robot controller version from Satimo is used.

The XL robot series have many features that are important for our application: GSM/WCDMA mobile phone/Smart phone (Fusion):

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)
- 6-axis controller



## 2.4. Video Positioning System

The video positioning system is used in OpenSAR to check the probe. Which is composed of a camera, LED, mirror and mechanical parts. The camera is piloted by the main computer with firewire link.

During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

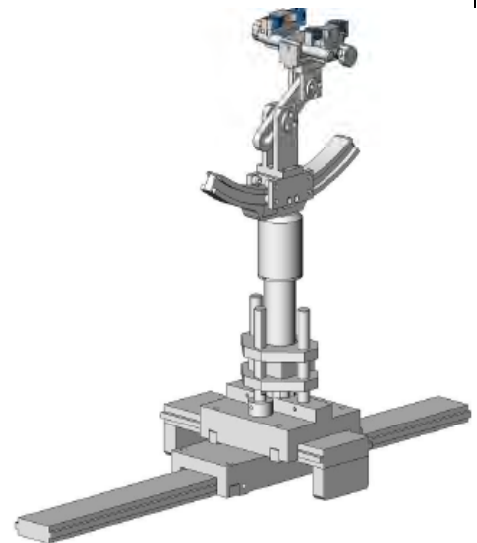


## 2.5. Device Holder

The COMOSAR device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).

Thus the device needs no repositioning when changing the angles.

The COMOSAR device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity  $\epsilon_r = 3$  and loss tangent  $\delta = 0.02$ . The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



## 2.6. SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

- Left head
- Right head
- Flat phantom



The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

### 3. Tissue Simulating Liquid

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

| Ingredient       | 835MHz | 835MHz | 1900MHz | 1900MHz |
|------------------|--------|--------|---------|---------|
| (% Weight)       | Head   | Body   | Head    | Body    |
| <b>Water</b>     | 40.45  | 52.4   | 54.90   | 40.5    |
| <b>Salt</b>      | 1.40   | 1.40   | 0.18    | 0.50    |
| <b>Sugar</b>     | 57.6   | 45.0   | 0.00    | 58.0    |
| <b>HEC</b>       | 0.40   | 1.00   | 0.00    | 0.50    |
| <b>Preventol</b> | 0.10   | 0.20   | 0.00    | 0.50    |
| <b>DGBE</b>      | 0.00   | 0.00   | 44.92   | 0.00    |

#### 3.2. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using COMOSAR Dielectric Probe Kit and R&S Network Analyzer ZVL6 .

| Head Tissue Stimulant Measurement |                                |                                      |                                     |                  |
|-----------------------------------|--------------------------------|--------------------------------------|-------------------------------------|------------------|
| Frequency (MHz)                   | Description                    | Dielectric Parameters                |                                     | Tissue Temp [°C] |
| 835MHz                            | Reference result<br>±5% window | $\epsilon_r$<br>41.48<br>39.43-43.58 | $\delta$ [s/m]<br>0.90<br>0.86-0.95 | N/A              |
|                                   | May 6,2012                     | 42.31                                | 0.90                                | 21               |

| Body Tissue Stimulant Measurement |                                |                                      |                                     |                  |
|-----------------------------------|--------------------------------|--------------------------------------|-------------------------------------|------------------|
| Frequency (MHz)                   | Description                    | Dielectric Parameters                |                                     | Tissue Temp [°C] |
| 835MHz                            | Reference result<br>±5% window | $\epsilon_r$<br>55.20<br>52.44-57.96 | $\delta$ [s/m]<br>0.97<br>0.92-1.02 | N/A              |
|                                   | May 6,2012                     | 53.66                                | 0.96                                | 21               |

| Head Tissue Stimulant Measurement |                                |                                      |                                     |                  |
|-----------------------------------|--------------------------------|--------------------------------------|-------------------------------------|------------------|
| Frequency (MHz)                   | Description                    | Dielectric Parameters                |                                     | Tissue Temp [°C] |
| 1900MHz                           | Reference result<br>±5% window | $\epsilon_r$<br>40.00<br>38.00-42.00 | $\delta$ [s/m]<br>1.40<br>1.33-1.47 | N/A              |
|                                   | May 6,2012                     | 41.06                                | 1.40                                | 21               |

| Body Tissue Stimulant Measurement |                                |                                      |                                     |                  |
|-----------------------------------|--------------------------------|--------------------------------------|-------------------------------------|------------------|
| Frequency (MHz)                   | Description                    | Dielectric Parameters                |                                     | Tissue Temp [°C] |
| 1900MHz                           | Reference result<br>±5% window | $\epsilon_r$<br>53.30<br>50.64-55.97 | $\delta$ [s/m]<br>1.52<br>1.44-1.60 | N/A              |
|                                   | May 6,2012                     | 53.94                                | 1.48                                | 21               |

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

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 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 P1528 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.

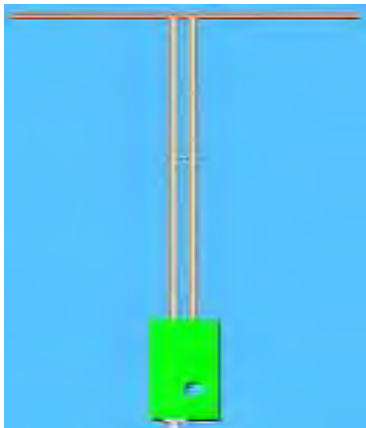
| Target Frequency (MHz) | head         |                | body         |                |
|------------------------|--------------|----------------|--------------|----------------|
|                        | $\epsilon_r$ | $\sigma$ (S/m) | $\epsilon_r$ | $\sigma$ (S/m) |
| 300                    | 45.3         | 0.87           | 58.2         | 0.92           |
| 450                    | 43.5         | 0.87           | 56.7         | 0.94           |
| <b>835</b>             | <b>41.5</b>  | <b>0.90</b>    | <b>55.2</b>  | <b>0.97</b>    |
| 900                    | 41.5         | 0.96           | 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           |
| <b>1800 – 2000</b>     | <b>40.0</b>  | <b>1.40</b>    | <b>53.3</b>  | <b>1.52</b>    |
| 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  $\rho = 1000 \text{ kg/m}^3$ )

## 4. SAR Measurement Procedure

### 4.1. SAR System Validation

#### 4.1.1. Validation Dipoles

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>The dipoles used is based on the IEEE-1528 standard, and is complied with mechanical and electrical specific GSM/WCDMA mobile phone/Smart phone (Fusion)s in line with the requirements of both IEEE and FCC Supplement C. the table below provides details for the mechanical and electrical Specific GSM/WCDMA mobile phone/Smart phone (Fusion)s for the dipoles.</p> |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Frequency | L (mm) | h (mm) | d (mm) |
|-----------|--------|--------|--------|
| 900 MHz   | 149.0  | 83.3   | 3.6    |
| 1900MHz   | 68     | 39.5   | 3.6    |

**4.1.2. Validation Result**

| <b>System Performance Check at 835 MHz &amp;1900MHz for Head</b> |                               |                        |                        |                  |
|------------------------------------------------------------------|-------------------------------|------------------------|------------------------|------------------|
| <b>Validation Kit: SN 46/11DIP 0G900-185</b>                     |                               |                        |                        |                  |
| Frequency [MHz]                                                  | Description                   | SAR [w/kg] 1g          | SAR [w/kg] 10g         | Tissue Temp.[°C] |
| 835 MHz                                                          | Reference result ± 10% window | 10.9<br>9.81 to 11.99  | 6.99<br>6.29 to 7.69   | N/A              |
|                                                                  | May 6,2012                    | 11.3                   | 6.85                   | 21.0             |
| <b>Validation Kit: SN 46/11DIP 1G900-187</b>                     |                               |                        |                        |                  |
| Frequency [MHz]                                                  | Description                   | SAR [w/kg] 1g          | SAR [w/kg] 10g         | Tissue Temp.[°C] |
| 1900 MHz                                                         | Reference result ± 10% window | 39.7<br>35.73 to 43.67 | 20.5<br>18.45 to 22.55 | N/A              |
|                                                                  | May 6,2012                    | 43.12                  | 20.66                  | 21.0             |
| Note: All SAR values are normalized to 1W forward power.         |                               |                        |                        |                  |

#### 4.2. SAR Measurement Procedure

The COMOSAR 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 specific GSM/WCDMA mobile phone/Smart phone (Fusion), at each frequency relating to the LOW, MID, and HIGH channel settings.

Pre-scans are made on the device to establish the GSM/WCDMA mobile phone/Smart phone (Fusion) 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 larger 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 GSM/WCDMA mobile phone/Smart phone (Fusion) (interpolated resolution set at 1mm<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 1mm<sup>3</sup>).

When multiple peak SAR GSM/WCDMA mobile phone/Smart phone (Fusion)s were found during the same configuration or test mode, Zoom scan shall be performed on each peak SAR GSM/WCDMA mobile phone/Smart phone (Fusion), only the peak point with maximum SAR value will be reported for the configuration or test mode.

## 5. SAR Exposure Limits

SAR assessments have been made in line with the requirements of IEEE-1528, FCC Supplement C, and comply with ANSI/IEEE C95.1-1992 “Uncontrolled Environments” limits. These limits apply to a loGSM/WCDMA mobile phone/Smart phone (Fusion) which is deemed as “Uncontrolled Environment” which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

### Limits for General Population/Uncontrolled Exposure (W/kg)

| Type Exposure                                            | Uncontrolled Environment Limit |
|----------------------------------------------------------|--------------------------------|
| Spatial Peak SAR (1g cube tissue for brain or body)      | 1.60 W/kg                      |
| Spatial Average SAR (whole body)                         | 0.08 W/kg                      |
| Spatial Peak SAR (10g for hands, feet, ankles and wrist) | 4.00 W/kg                      |

## 6. Test Equipment List

| Equipment description | Manufacturer/Model  | IdentifiGSM/WCDMA mobile phone/Smart phone (Fusion) No. | Current calibration date    | Next calibration date       |
|-----------------------|---------------------|---------------------------------------------------------|-----------------------------|-----------------------------|
| SAR Probe             | Satimo              | SN_3511_EP132                                           | 12/09/2011                  | 12/08/2012                  |
| Phantom               | Satimo              | SN_4511_SAM90                                           | Validated. No cal required. | Validated. No cal required. |
| Liquid                | Satimo              | -                                                       | Validated. No cal required. | Validated. No cal required. |
| Comm Tester           | R&S - CMU200        | 069Y7-158-13-712                                        | 12/09/2011                  | 12/08/2012                  |
| Multimeter            | Keithley 2000       | 1188656                                                 | 12/09/2011                  | 12/08/2012                  |
| Dipole                | Satimo SID900       | SN46/11 DIP<br>0G900-185                                | 12/09/2011                  | 12/08/2014                  |
| Dipole                | Satimo SID1900      | SN46/11 DIP<br>1G900-187                                | 12/09/2011                  | 12/08/2014                  |
| Amplifier             | Aethercomm          | SN 046                                                  | 12/09/2011                  | 12/08/2012                  |
| Power Meter           | HP E4418A           | US38261498                                              | 12/09/2011                  | 12/08/2012                  |
| Network Analyzer      | Rhode & Schwarz ZVA | SN100132                                                | 12/09/2011                  | 12/08/2012                  |

Note: Per KDB 50824 Dipole SAR Validation VerifiGSM/WCDMA mobile phone/Smart phone (Fusion), AGC Lab has adopted 3 years calibration intervals. On annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss is within 20% of calibrated measurement;
4. Impedance is within  $5\Omega$  of calibrated measurement.

## 7. Measurement Uncertainty

### Satimo Uncertainty

Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram / 10 gram.

| Error Description                                                              | Sec     | Tol<br>(±%) | Prob.<br>Dist. | Div.                                                                                | (Ci)<br>1g      | (Ci)<br>10g     | Std.<br>Unc.<br>(1g) (±%) | Std.<br>Unc.<br>(10g)(±%) | (Vi)<br>Veff |
|--------------------------------------------------------------------------------|---------|-------------|----------------|-------------------------------------------------------------------------------------|-----------------|-----------------|---------------------------|---------------------------|--------------|
| <b>Measurement System</b>                                                      |         |             |                |                                                                                     |                 |                 |                           |                           |              |
| Probe Calibration                                                              | E.2.1   | 6           | N              | 1                                                                                   | 1               | 1               | 6                         | 6                         | ∞            |
| Axial Isotropy                                                                 | E.2.2   | 3           | R              |    | $(1-c_p)^{1/2}$ | $(1-c_p)^{1/2}$ | 1.22474                   | 1.22474                   | ∞            |
| Hemispherical Isotropy                                                         | E.2.2   | 5           | R              |    | $\sqrt{C_p}$    | $\sqrt{C_p}$    | 2.04124                   | 2.04124                   | ∞            |
| Boundary Effects                                                               | E.2.3   | 1           | R              |    | 1               | 1               | 0.57735                   | 0.57735                   | ∞            |
| Linearity                                                                      | E.2.4   | 5           | R              |    | 1               | 1               | 2.88675                   | 2.88675                   | ∞            |
| System Detection Limits                                                        | E.2.5   | 1           | R              |    | 1               | 1               | 0.57735                   | 0.57735                   | ∞            |
| Readout Electronics                                                            | E.2.6   | 0.5         | N              | 1                                                                                   | 1               | 1               | 0.5                       | 0.5                       | ∞            |
| Response Time                                                                  | E.2.7   | 0.2         | R              |    | 1               | 1               | 0.11547                   | 0.11547                   | ∞            |
| Integration Time                                                               | E.2.8   | 2           | R              |    | 1               | 1               | 1.1547                    | 1.1547                    | ∞            |
| RF Ambient Noise                                                               | E.6.1   | 3           | R              |   | 1               | 1               | 1.73205                   | 1.73205                   | ∞            |
| Probe Positioner Mechanical Tolerance                                          | E.6.2   | 2           | R              |  | 1               | 1               | 1.1547                    | 1.1547                    | ∞            |
| Probe Positioning with Respect to Phantom Shell                                | E.6..3  | 1           | R              |  | 1               | 1               | 0.57735                   | 0.57735                   | ∞            |
| Extrapolation,interpolation and Integration Algorithms for Max. SAR Evaluation | E.5.2   | 1.5         | R              |  | 1               | 1               | 0.86603                   | 0.86603                   | ∞            |
| <b>Dipole</b>                                                                  |         |             |                |                                                                                     |                 |                 |                           |                           |              |
| Device Positioning                                                             | 8,E.4.2 | 1           | N              |  | 1               | 1               | 0.57735                   | 0.57735                   | N-1          |
| Power Drift                                                                    | 8.6.6.2 | 2           | R              |  | 1               | 1               | 1.1547                    | 1.1547                    | ∞            |
| <b>Phantom and Tissue Parameters</b>                                           |         |             |                |                                                                                     |                 |                 |                           |                           |              |
| Phantom Uncertainty                                                            | E.3.1   | 4           | R              |  | 1               | 1               | 2.3094                    | 2.3094                    | ∞            |
| Liquid Conductivity (target)                                                   | E.3.2   | 5           | R              |  | 0.64            | 0.43            | 1.84752                   | 1.2413                    | ∞            |
| Liquid Conductivity (meas.)                                                    | E.3.3   | 2.5         | N              | 1                                                                                   | 0.64            | 0.43            | 1.6                       | 1.075                     | ∞            |
| Liquid Permittivity (target)                                                   | E.3.2   | 3           | R              |  | 0.6             | 0.49            | 1.03923                   | 0.8487                    | ∞            |
| Liquid Permittivity (meas.)                                                    | E.3.3   | 2.5         | N              | 1                                                                                   | 0.6             | 0.49            | 1.5                       | 1.225                     | M            |
| Combined Standard Uncertainty                                                  |         |             | RSS            |                                                                                     |                 |                 | 8.09272                   | 7.9296                    |              |
| Expanded Uncertainty (95%CONFIDENCE INTERVAL)                                  |         |             | k              |                                                                                     |                 |                 | 16.18544                  | 15.8592                   |              |

## 8. Conducted Power Measurement

| Mode                 | Frequency(MHz) | Peak Power   | Avg. Burst Power | Duty cycle Factor(dB) | Frame Power(dBm) |
|----------------------|----------------|--------------|------------------|-----------------------|------------------|
| Maximum Power        |                |              |                  |                       |                  |
| GSM850               | 824.2          | <b>32.71</b> | <b>31.51</b>     | -9                    | 22.51            |
|                      | 836.6          | 32.68        | 31.47            | -9                    | 22.47            |
|                      | 848.8          | 32.63        | 31.43            | -9                    | 22.43            |
| GPRS850<br>(1 Slot)  | 824.2          | 32.69        | 31.49            | -9                    | 22.49            |
|                      | 836.6          | 32.67        | 31.47            | -9                    | 22.47            |
|                      | 848.8          | 32.61        | 31.41            | -9                    | 22.41            |
| GPRS850<br>(2 Slot)  | 824.2          | 29.55        | 28.51            | -6                    | 22.51            |
|                      | 836.6          | 29.51        | 28.47            | -6                    | 22.47            |
|                      | 848.8          | 29.47        | 28.44            | -6                    | 22.44            |
| GPRS850<br>(3 Slot)  | 824.2          | 27.51        | 26.52            | -4.26                 | 22.26            |
|                      | 836.6          | 27.48        | 26.48            | -4.26                 | 22.22            |
|                      | 848.8          | 27.44        | 26.45            | -4.26                 | 22.19            |
| GPRS850<br>(4 Slot)  | 824.2          | 26.52        | 25.53            | -3                    | 22.53            |
|                      | 836.6          | 26.49        | 25.49            | -3                    | 22.49            |
|                      | 848.8          | 26.44        | 25.43            | -3                    | 22.43            |
|                      |                |              |                  |                       |                  |
| PCS1900              | 1850.2         | <b>29.63</b> | <b>29.17</b>     | -9                    | 20.17            |
|                      | 1880           | 29.59        | 29.13            | -9                    | 20.13            |
|                      | 1909.8         | 29.55        | 29.09            | -9                    | 20.09            |
| GPRS1900<br>(1 Slot) | 1850.2         | 29.51        | 28.77            | -9                    | 19.77            |
|                      | 1880           | 29.47        | 28.74            | -9                    | 19.74            |
|                      | 1909.8         | 29.44        | 28.71            | -9                    | 19.71            |
| GPRS1900<br>(2 Slot) | 1850.2         | 26.52        | 25.58            | -6                    | 19.58            |
|                      | 1880           | 26.47        | 25.55            | -6                    | 19.55            |
|                      | 1909.8         | 26.43        | 25.51            | -6                    | 19.51            |
| GPRS850<br>(3 Slot)  | 1850.2         | 25.41        | 24.37            | -4.26                 | 20.11            |
|                      | 1880           | 25.37        | 24.33            | -4.26                 | 20.07            |
|                      | 1909.8         | 25.34        | 24.29            | -4.26                 | 20.03            |
| GPRS850<br>(4 Slot)  | 1850.2         | 23.57        | 22.59            | -3                    | 19.59            |
|                      | 1880           | 23.54        | 22.57            | -3                    | 19.57            |
|                      | 1909.8         | 23.49        | 22.53            | -3                    | 19.53            |

Note 1:

The Frame Power (Source-based time-averaged Power) is scaled the maximum burst average power based on time slots. The calculated methods are show as following:

Frame Power = Max burst power (1 Up Slot) – 9 dB

Frame Power = Max burst power (2 Up Slot) – 6 dB

Frame Power = Max burst power (3 Up Slot) – 4.26 dB

Frame Power = Max burst power (2 Up Slot) – 3 dB

**UMTS BAND II**

| <b>Mode</b>                | <b>Frequency<br/>(MHz)</b> | <b>Peak Power</b> | <b>Avg. Burst Power</b> |
|----------------------------|----------------------------|-------------------|-------------------------|
| WCDMA 1900<br>RMC(12.2bps) | 1852.4                     | <b>23.34</b>      | <b>23.28</b>            |
|                            | 1880                       | 23.27             | 23.24                   |
|                            | 1907.6                     | 23.21             | 23.17                   |
| WCDMA 1900<br>AMR          | 1852.4                     | 23.18             | 23.06                   |
|                            | 1880                       | 23.15             | 22.97                   |
|                            | 1907.6                     | 23.09             | 22.91                   |
| HSPA<br>Subtest 1          | 1852.4                     | 22.75             | 22.71                   |
|                            | 1880                       | 22.71             | 22.66                   |
|                            | 1907.6                     | 22.66             | 22.61                   |
| HSPA<br>Subtest 2          | 1852.4                     | 22.57             | 22.54                   |
|                            | 1880                       | 22.53             | 22.49                   |
|                            | 1907.6                     | 22.51             | 22.47                   |
| HSPA<br>Subtest 3          | 1852.4                     | 22.56             | 22.51                   |
|                            | 1880                       | 22.52             | 22.47                   |
|                            | 1907.6                     | 22.47             | 22.43                   |
| HSPA<br>Subtest 4          | 1852.4                     | 22.61             | 22.57                   |
|                            | 1880                       | 22.55             | 22.53                   |
|                            | 1907.6                     | 22.51             | 22.47                   |
| HSPA<br>Subtest 5          | 1852.4                     | 22.87             | 22.83                   |
|                            | 1880                       | 22.81             | 22.78                   |
|                            | 1907.6                     | 22.76             | 22.70                   |

**UMTS BAND V**

| Mode           | Frequency (MHz) | Peak Power   | Avg. Burst Power |
|----------------|-----------------|--------------|------------------|
| WCDMA 850 RMC  | 826.4           | <b>23.41</b> | <b>23.33</b>     |
|                | 835.0           | 23.37        | 23.27            |
|                | 846.6           | 23.33        | 23.19            |
| WCDMA 850 AMR  | 826.4           | 23.27        | 23.09            |
|                | 835.0           | 23.24        | 23.01            |
|                | 846.6           | 23.2         | 22.94            |
| HSPA Subtest 1 | 826.4           | 22.73        | 22.71            |
|                | 835.0           | 22.69        | 22.67            |
|                | 846.6           | 22.67        | 22.64            |
| HSPA Subtest 2 | 826.4           | 22.61        | 22.56            |
|                | 835.0           | 22.57        | 22.51            |
|                | 846.6           | 22.54        | 22.49            |
| HSPA Subtest 3 | 826.4           | 22.57        | 22.54            |
|                | 835.0           | 22.55        | 22.49            |
|                | 846.6           | 22.49        | 22.46            |
| HSPA Subtest 4 | 826.4           | 22.64        | 22.59            |
|                | 835.0           | 22.59        | 22.55            |
|                | 846.6           | 22.51        | 22.49            |
| HSPA Subtest 5 | 826.4           | 22.89        | 22.85            |
|                | 835.0           | 22.85        | 22.80            |
|                | 846.6           | 22.77        | 22.73            |

According to 3GPP 25.101 sub-clause 6.2.2 , the maximum output power is allowed to be reduced by following the table.

Table 6.1aA: UE maximum output power with HS-DPCCH and E-DCH

| UE Transmit Channel Configuration                                                                                                                                                                | CM(db)               | MPR(db)       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|
| For all combinations of ,DPDCH,DPCCH<br>HS-DPDCH,E-DPDCH and E-DPCCH                                                                                                                             | $0 \leq CM \leq 3.5$ | $MAX(CM-1,0)$ |
| Note: $CM=1$ for $\beta_c/\beta_d=12/15$ , $\beta_{hs}/\beta_c=24/15$ .For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference. |                      |               |

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present the beta gains on those channels are reduced firsts to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is

applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done .However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a compensate for the power back-off by increasing the gain of TX\_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.

## **9. Test Results**

### **9.1. SAR Test Results Summary**

#### **9.1.1. Test position and configuration**

Head SAR was performed with the device configured in the positions according to IEEE1528, and Body SAR was performed with the device 15mm from the phantom. Body SAR was also performed with the headset attached and without.

#### **9.1.2. Body SAR with Headset**

Testing with the headset was performed at the position and channels that resulted in the highest body SAR. This testing was performed with GPRS transmitting with 2/3/4 uplink timeslots. This operation mode represents the maximum SAR situation, when downloading data via GPRS and listening to music by headset. SAR without the headset attached was significantly higher than with the headset, and also was verified several times and confirmed, so the final test data shown were the worst case without headset. In the Body SAR test result table, body-worn means display of device down, body-front means display of device up.

#### **9.1.3. Operation Mode**

This is a multi-slot class 12 device capable of 4 uplink timeslots. During the head SAR test, the device was transmitting with maximum 1 uplink timeslot; during the body SAR test, it was transmitting with maximum 4 uplink timeslots. Additionally, this device doesn't support dual transfer mode (DTM), and SIM <1> can't transmit with SIM <2> simultaneously.

#### **9.1.4. Co-located GSM/WCDMA mobile phone/Smart phone (Fusion) SAR**

According to KDB 447498 and KDB 648474, due to the Max peak power for Bluetooth is 3.43dBm less than P<sub>ref</sub> and the Max peak power for Wifi is less than 13.8dBm, the Maximum SAR for GSM part < 1.2W/Kg, thus, regardless the closest separation distance between the GSM antenna and Bluetooth Antenna (The distance between the GSM antenna and Wifi Antenna is more than 5cm), stand-alone SAR and simultaneous transmission SAR is not required.

Other reference document: KDB 941225.

| SAR MEASUREMENT                                      |               |        |                     |           |       |                           |                             |                       |                 |
|------------------------------------------------------|---------------|--------|---------------------|-----------|-------|---------------------------|-----------------------------|-----------------------|-----------------|
| Ambient Temperature (°C) : 21 ± 2                    |               |        |                     |           |       | Relative Humidity (%): 55 |                             |                       |                 |
| Liquid Temperature (°C) : 21 ± 2                     |               |        |                     |           |       | Depth of Liquid (cm):>15  |                             |                       |                 |
| Product: GSM/WCDMA mobile phone/Smart phone (Fusion) |               |        |                     |           |       |                           |                             |                       |                 |
| Test Mode: GSM850 with GMSK modulation               |               |        |                     |           |       |                           |                             |                       |                 |
| Configuration                                        |               |        | Antenna<br>Position | Frequency |       | Frame<br>Power<br>(dBm)   | Power<br>Drift<br>(±0.2 dB) | SAR<br>(1g)<br>(W/kg) | Limit<br>(W/kg) |
| SIM                                                  | Position      | Status |                     | channel   | MHz   |                           |                             |                       |                 |
| <1>                                                  | Left<br>Head  | Cheek  | Fixed               | 128       | 824.2 | 22.51                     | --                          | --                    | 1.6             |
|                                                      |               |        |                     | 190       | 836.6 | 22.47                     | -0.01                       | <b>0.232</b>          | 1.6             |
|                                                      |               |        |                     | 251       | 848.8 | 22.43                     | --                          | --                    | 1.6             |
|                                                      |               | Tilted | Fixed               | 128       | 824.2 | 22.51                     | --                          | --                    | 1.6             |
|                                                      |               |        |                     | 190       | 836.6 | 22.47                     | -0.04                       | 0.135                 | 1.6             |
|                                                      |               |        |                     | 251       | 848.8 | 22.43                     | --                          | --                    | 1.6             |
|                                                      | Right<br>Head | Cheek  | Fixed               | 128       | 824.2 | 22.51                     | --                          | --                    | 1.6             |
|                                                      |               |        |                     | 190       | 836.6 | 22.47                     | -0.02                       | 0.207                 | 1.6             |
|                                                      |               |        |                     | 251       | 848.8 | 22.43                     | --                          | --                    | 1.6             |
|                                                      |               | Tilted | Fixed               | 128       | 824.2 | 22.51                     | --                          | --                    | 1.6             |
|                                                      |               |        |                     | 190       | 836.6 | 22.47                     | -0.03                       | 0.139                 | 1.6             |
|                                                      |               |        |                     | 251       | 848.8 | 22.43                     | --                          | --                    | 1.6             |

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

| SAR MEASUREMENT                                      |               |                     |                     |           |       |                           |                              |                       |                 |
|------------------------------------------------------|---------------|---------------------|---------------------|-----------|-------|---------------------------|------------------------------|-----------------------|-----------------|
| Ambient Temperature (°C) : 21 ± 2                    |               |                     |                     |           |       | Relative Humidity (%): 55 |                              |                       |                 |
| Liquid Temperature (°C) : 21 ± 2                     |               |                     |                     |           |       | Depth of Liquid (cm):>15  |                              |                       |                 |
| Product: GSM/WCDMA mobile phone/Smart phone (Fusion) |               |                     |                     |           |       |                           |                              |                       |                 |
| Test Mode: GSM850 with GMSK modulation               |               |                     |                     |           |       |                           |                              |                       |                 |
| Configuration                                        |               |                     | Antenna<br>Position | Frequency |       | Frame<br>Power<br>(dBm)   | Power<br>Drift<br>(<±0.2 dB) | SAR<br>(1g)<br>(W/kg) | Limit<br>(W/kg) |
| SIM                                                  | Position      | Status              |                     | channel   | MHz   |                           |                              |                       |                 |
| <1>                                                  | Body<br>back  | MS                  | Fixed               | 128       | 824.2 | 22.51                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 190       | 836.6 | 22.47                     | -0.01                        | <b>0.360</b>          | 1.6             |
|                                                      |               |                     |                     | 251       | 848.8 | 22.43                     | --                           | --                    | 1.6             |
|                                                      |               | GPRS<br>2 TS        | Fixed               | 128       | 824.2 | 22.51                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 190       | 836.6 | 22.47                     | -0.03                        | 0.188                 | 1.6             |
|                                                      |               |                     |                     | 251       | 848.8 | 22.44                     | --                           | --                    | 1.6             |
|                                                      |               | GPRS<br>3 TS        | Fixed               | 128       | 824.2 | 22.26                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 190       | 836.6 | 22.22                     | -0.05                        | 0.167                 | 1.6             |
|                                                      |               |                     |                     | 251       | 848.8 | 22.19                     | --                           | --                    | 1.6             |
|                                                      |               | GPRS<br>4 TS        | Fixed               | 128       | 824.2 | 22.53                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 190       | 836.6 | 22.49                     | -0.05                        | 0.167                 | 1.6             |
|                                                      |               |                     |                     | 251       | 848.8 | 22.43                     | --                           | --                    | 1.6             |
|                                                      | Body<br>Front | MS                  | Fixed               | 128       | 824.2 | 22.51                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 190       | 836.6 | 22.47                     | -0.04                        | 0.186                 | 1.6             |
|                                                      |               |                     |                     | 251       | 848.8 | 22.43                     | --                           | --                    | 1.6             |
|                                                      |               | MS with<br>Earphone | Fixed               | 128       | 824.2 | 22.51                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 190       | 836.6 | 22.47                     | -0.02                        | 0.329                 | 1.6             |
|                                                      |               |                     |                     | 251       | 848.8 | 22.43                     | --                           | --                    | 1.6             |

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Note: when the 1-g SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. refer to KDB 941225.

Ambient Temperature (°C) : 21 ± 2

Relative Humidity (%): 55

Liquid Temperature (°C) : 21 ± 2

Depth of Liquid (cm):>15

Product: GSM/WCDMA mobile phone/Smart phone (Fusion)

Test Mode: WCDMA band V with QPSK modulation

| Configuration |          |                                         | Antenn<br>a | Frequency |       | Avg.Burst<br>Power<br>(dBm) | Power<br>Drift<br>(<±0.2 dB) | SAR<br>(1g)<br>(W/kg) | Limit<br>(W/kg) |
|---------------|----------|-----------------------------------------|-------------|-----------|-------|-----------------------------|------------------------------|-----------------------|-----------------|
| SIM           | Position | Status                                  | Position    | channel   | MHz   |                             |                              |                       |                 |
| <2>           | Body     | RMC<br>(towards<br>phantom)             | Fixed       | 4132      | 826.4 | 23.33                       | --                           | --                    | 1.6             |
|               |          |                                         |             | 4182      | 835.0 | 23.27                       | 0.01                         | <b>0.401</b>          | 1.6             |
|               |          |                                         |             | 4233      | 846.6 | 23.19                       | --                           | --                    | 1.6             |
|               |          | RMC<br>(towards<br>grounds)             | Fixed       | 4132      | 826.4 | 23.33                       | --                           | --                    | 1.6             |
|               |          |                                         |             | 4182      | 835.0 | 23.27                       | -0.05                        | 0.205                 | 1.6             |
|               |          |                                         |             | 4233      | 846.6 | 23.19                       | --                           | --                    | 1.6             |
|               |          | HSPA<br>(towards<br>grounds)            | Fixed       | 4132      | 826.4 | 22.85                       | --                           | --                    | 1.6             |
|               |          |                                         |             | 4182      | 835.0 | 22.80                       | -0.05                        | 0.205                 | 1.6             |
|               |          |                                         |             | 4233      | 846.6 | 22.73                       | --                           | --                    | 1.6             |
|               |          | RMC<br>Earphone<br>(towards<br>grounds) | Fixed       | 4132      | 826.4 | 23.33                       | --                           | --                    | 1.6             |
|               |          |                                         |             | 4182      | 835.0 | 23.27                       | -0.03                        | 0.226                 | 1.6             |
|               |          |                                         |             | 4233      | 846.6 | 23.19                       | --                           | --                    | 1.6             |

Note: when the 1-g SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. refer to KDB 941225.

Ambient Temperature (°C) :  $21 \pm 2$

Relative Humidity (%): 55

Liquid Temperature (°C) :  $21 \pm 2$

Depth of Liquid (cm):>15

Product: GSM/WCDMA mobile phone/Smart phone (Fusion)

Test Mode: PCS1900 with GMSK modulation

| Configuration |               |        | Antenna<br>Position | Frequency |        | Frame<br>Power<br>(dBm) | Power<br>Drift<br>( $\leq \pm 0.2$ dB) | SAR<br>(1g)<br>(W/kg) | Limit<br>(W/kg) |
|---------------|---------------|--------|---------------------|-----------|--------|-------------------------|----------------------------------------|-----------------------|-----------------|
| SIM           | Position      | Status |                     | channel   | MHz    |                         |                                        |                       |                 |
| <1>           | Left<br>Head  | Cheek  | Fixed               | 512       | 1850.2 | 20.17                   | --                                     | --                    | 1.6             |
|               |               |        |                     | 661       | 1880.0 | 20.13                   | 0.01                                   | <b>0.795</b>          | 1.6             |
|               |               |        |                     | 810       | 1909.8 | 20.09                   | --                                     | --                    | 1.6             |
|               |               | Tilted | Fixed               | 512       | 1850.2 | 20.17                   | --                                     | --                    | 1.6             |
|               |               |        |                     | 661       | 1880.0 | 20.13                   | -0.07                                  | 0.104                 | 1.6             |
|               |               |        |                     | 810       | 1909.8 | 20.09                   | --                                     | --                    | 1.6             |
|               | Right<br>Head | Cheek  | Fixed               | 512       | 1850.2 | 20.17                   | --                                     | --                    | 1.6             |
|               |               |        |                     | 661       | 1880.0 | 20.13                   | -0.02                                  | 0.522                 | 1.6             |
|               |               |        |                     | 810       | 1909.8 | 20.09                   | --                                     | --                    | 1.6             |
|               |               | Tilted | Fixed               | 512       | 1850.2 | 20.17                   | --                                     | --                    | 1.6             |
|               |               |        |                     | 661       | 1880.0 | 20.13                   | -0.04                                  | 0.129                 | 1.6             |
|               |               |        |                     | 810       | 1909.8 | 20.09                   | --                                     | --                    | 1.6             |

Note: when the 1-g SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. refer to KDB 941225.

| SAR MEASUREMENT                                      |               |                     |                     |           |        |                           |                              |                       |                 |
|------------------------------------------------------|---------------|---------------------|---------------------|-----------|--------|---------------------------|------------------------------|-----------------------|-----------------|
| Ambient Temperature (°C) : 21 ± 2                    |               |                     |                     |           |        | Relative Humidity (%): 55 |                              |                       |                 |
| Liquid Temperature (°C) : 21 ± 2                     |               |                     |                     |           |        | Depth of Liquid (cm):>15  |                              |                       |                 |
| Product: GSM/WCDMA mobile phone/Smart phone (Fusion) |               |                     |                     |           |        |                           |                              |                       |                 |
| Test Mode: GSM1900 with GMSK modulation              |               |                     |                     |           |        |                           |                              |                       |                 |
| Configuration                                        |               |                     | Antenna<br>Position | Frequency |        | Frame<br>Power<br>(dBm)   | Power<br>Drift<br>(<±0.2 dB) | SAR<br>(1g)<br>(W/kg) | Limit<br>(W/kg) |
| SIM                                                  | Position      | Status              |                     | channel   | MHz    |                           |                              |                       |                 |
| <1>                                                  | Body<br>Back  | MS                  | Fixed               | 512       | 1850.2 | 20.17                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 661       | 1880.0 | 20.13                     | -0.02                        | 0.524                 | 1.6             |
|                                                      |               |                     |                     | 810       | 1909.8 | 20.09                     | --                           | --                    | 1.6             |
|                                                      |               | GPRS<br>2 TS        | Fixed               | 512       | 1850.2 | 19.58                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 661       | 1880.0 | 19.55                     | 0.07                         | 0.183                 | 1.6             |
|                                                      |               |                     |                     | 810       | 1909.8 | 19.51                     | --                           | --                    | 1.6             |
|                                                      |               | GPRS<br>3 TS        | Fixed               | 512       | 1850.2 | 20.11                     | --                           |                       | 1.6             |
|                                                      |               |                     |                     | 661       | 1880.0 | 20.07                     | 0.05                         | 0.196                 | 1.6             |
|                                                      |               |                     |                     | 810       | 1909.8 | 20.03                     | --                           |                       | 1.6             |
|                                                      |               | GPRS<br>4 TS        | Fixed               | 512       | 1850.2 | 19.59                     | --                           |                       | 1.6             |
|                                                      |               |                     |                     | 661       | 1880.0 | 19.57                     | -0.04                        | 0.220                 | 1.6             |
|                                                      |               |                     |                     | 810       | 1909.8 | 20.62                     | --                           |                       | 1.6             |
|                                                      | Body<br>front | MS                  | Fixed               | 512       | 1850.2 | 20.17                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 661       | 1880.0 | 20.13                     | -0.03                        | 0.276                 | 1.6             |
|                                                      |               |                     |                     | 810       | 1909.8 | 20.09                     | --                           | --                    | 1.6             |
|                                                      |               | MS with<br>Earphone | Fixed               | 512       | 1850.2 | 20.17                     | --                           | --                    | 1.6             |
|                                                      |               |                     |                     | 661       | 1880.0 | 20.13                     | -0.01                        | <b>0.589</b>          | 1.6             |
|                                                      |               |                     |                     | 810       | 1909.8 | 20.09                     | --                           | --                    | 1.6             |

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Ambient Temperature (°C) :  $21 \pm 2$

Relative Humidity (%): 55

Liquid Temperature (°C) :  $21 \pm 2$

Depth of Liquid (cm):>15

Product: GSM/WCDMA mobile phone/Smart phone (Fusion)

Test Mode: WCDMA band II with QPSK modulation

| Configuration |               |        | Antenna<br>Position | Frequency |        | Avg.Burst<br>Power<br>(dBm) | Power<br>Drift<br>( $\leq \pm 0.2$ dB) | SAR<br>(1g)<br>(W/kg) | Limit<br>(W/kg) |
|---------------|---------------|--------|---------------------|-----------|--------|-----------------------------|----------------------------------------|-----------------------|-----------------|
| SIM           | Position      | Status |                     | channel   | MHz    |                             |                                        |                       |                 |
| <2>           | Left<br>Head  | Cheek  | Fixed               | 9262      | 1852.4 | 23.28                       | --                                     | --                    | 1.6             |
|               |               |        |                     | 9400      | 1880   | 23.24                       | -0.01                                  | <b>0.789</b>          | 1.6             |
|               |               |        |                     | 9538      | 1907.6 | 23.17                       | --                                     | --                    | 1.6             |
|               |               | Tilted | Fixed               | 9262      | 1852.4 | 23.28                       | --                                     | --                    | 1.6             |
|               |               |        |                     | 9400      | 1880   | 23.24                       | -0.05                                  | 0.100                 | 1.6             |
|               |               |        |                     | 9538      | 1907.6 | 23.17                       | --                                     | --                    | 1.6             |
|               | Right<br>Head | Cheek  | Fixed               | 9262      | 1852.4 | 23.28                       | --                                     | --                    | 1.6             |
|               |               |        |                     | 9400      | 1880   | 23.24                       | -0.02                                  | 0.504                 | 1.6             |
|               |               |        |                     | 9538      | 1907.6 | 23.17                       | --                                     | --                    | 1.6             |
|               |               | Tilted | Fixed               | 9262      | 1852.4 | 23.28                       | --                                     | --                    | 1.6             |
|               |               |        |                     | 9400      | 1880   | 23.24                       | -0.04                                  | 0.128                 | 1.6             |
|               |               |        |                     | 9538      | 1907.6 | 23.17                       | --                                     | --                    | 1.6             |

Note: when the 1-g SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. refer to KDB 941225.

Ambient Temperature (°C) :  $21 \pm 2$

Relative Humidity (%): 55

Liquid Temperature (°C) :  $21 \pm 2$

Depth of Liquid (cm):>15

Product: GSM/WCDMA mobile phone/Smart phone (Fusion)

Test Mode: WCDMA band II with QPSK modulation

| Configuration |          |                                         | Antenna<br>Position | Frequency |        | Avg.Burst<br>Power<br>(dBm) | Power<br>Drift<br>(<±0.2 dB) | SAR<br>(1g)<br>(W/kg) | Limit<br>(W/kg) |
|---------------|----------|-----------------------------------------|---------------------|-----------|--------|-----------------------------|------------------------------|-----------------------|-----------------|
| SIM           | Position | Status                                  |                     | channel   | MHz    |                             |                              |                       |                 |
| <2>           | Body     | RMC<br>(towards<br>phantom)             | Fixed               | 9262      | 1852.4 | 23.28                       | --                           | --                    | 1.6             |
|               |          |                                         |                     | 9400      | 1880   | 23.24                       | 0.01                         | <b>0.594</b>          | 1.6             |
|               |          |                                         |                     | 9538      | 1907.6 | 23.17                       | --                           | --                    | 1.6             |
|               |          | RMC<br>(towards<br>grounds)             | Fixed               | 9262      | 1852.4 | 23.28                       | --                           | --                    | 1.6             |
|               |          |                                         |                     | 9400      | 1880   | 23.24                       | -0.07                        | 0.223                 | 1.6             |
|               |          |                                         |                     | 9538      | 1907.6 | 23.17                       | --                           | --                    | 1.6             |
|               |          | HSPA<br>(towards<br>phantom)            | Fixed               | 9262      | 1852.4 | 22.83                       | --                           | --                    | 1.6             |
|               |          |                                         |                     | 9400      | 1880   | 22.78                       | -0.06                        | 0.215                 | 1.6             |
|               |          |                                         |                     | 9538      | 1907.6 | 22.70                       | --                           | --                    | 1.6             |
|               |          | RMC<br>Earphone<br>(towards<br>phantom) | Fixed               | 9262      | 1852.4 | 23.28                       | --                           | --                    | 1.6             |
|               |          |                                         |                     | 9400      | 1880   | 23.24                       | -0.03                        | 0.229                 | 1.6             |
|               |          |                                         |                     | 9538      | 1907.6 | 23.17                       | --                           | --                    | 1.6             |

Note: when the 1-g SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. refer to KDB 941225.

## Appendix A. SAR System Validation Data

Test Laboratory: AGC Lab

Date: May 6, 2012

### System Check Head 900 MHz

**DUT: Dipole 900 MHz    Type: SID 900**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: CW; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: D850(850.0 MHz); Duty Cycle: 1:1;

ConvF=6.79

Frequency: 850 MHz; Medium parameters used:  $f = 850$  MHz;  $\sigma = 0.90$  mho/m;  $\epsilon_r = 42.31$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section ; Input Power=17dBm

Ambient temperature (°C): 21, Liquid temperature (°C): 21

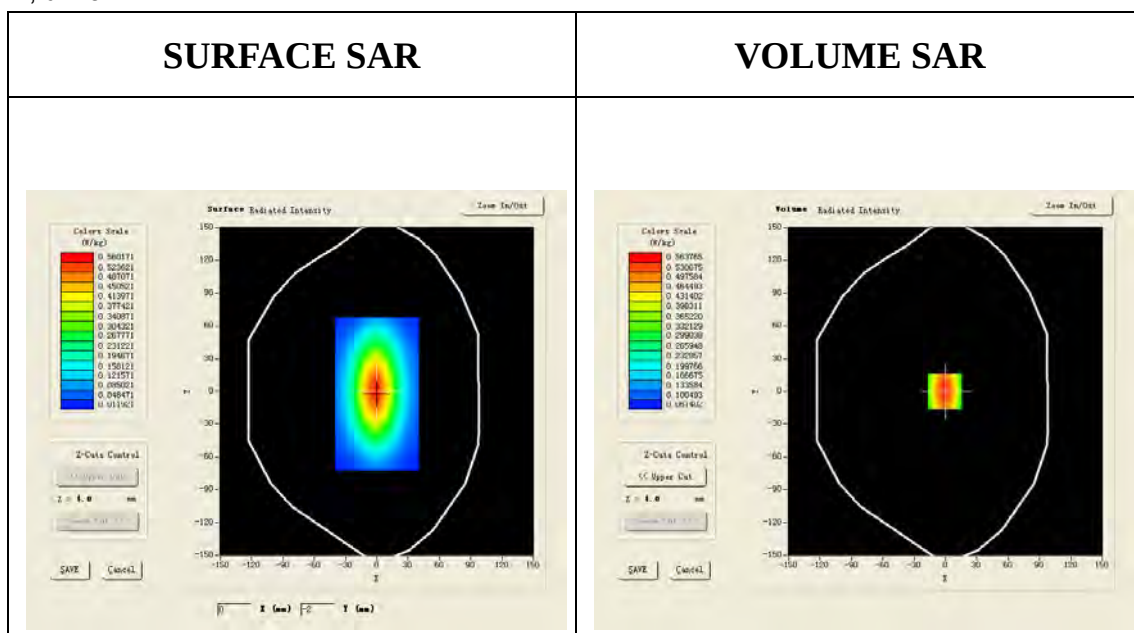
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/System Check GSM850 Head/Area Scan:** Measurement grid: dx=8mm, dy=8mm

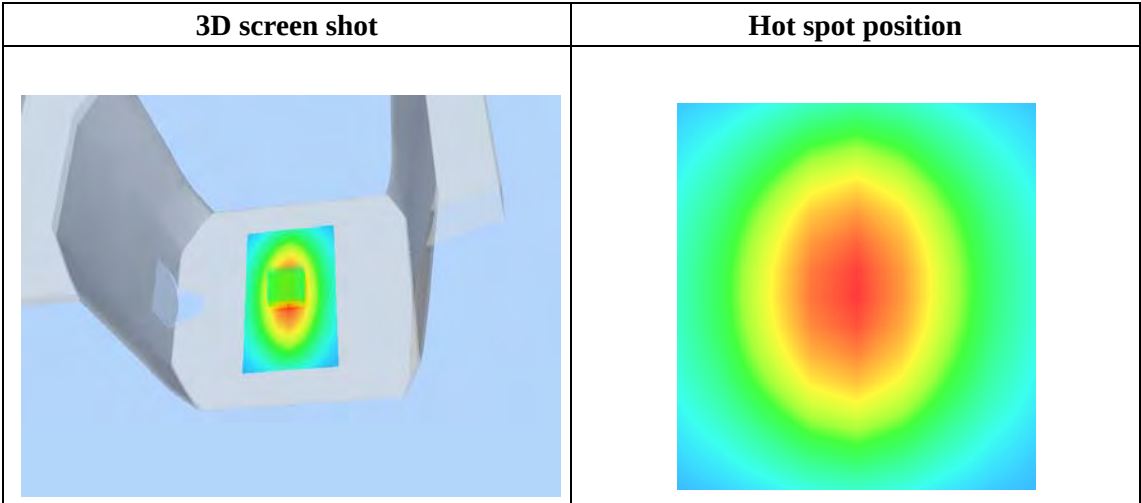
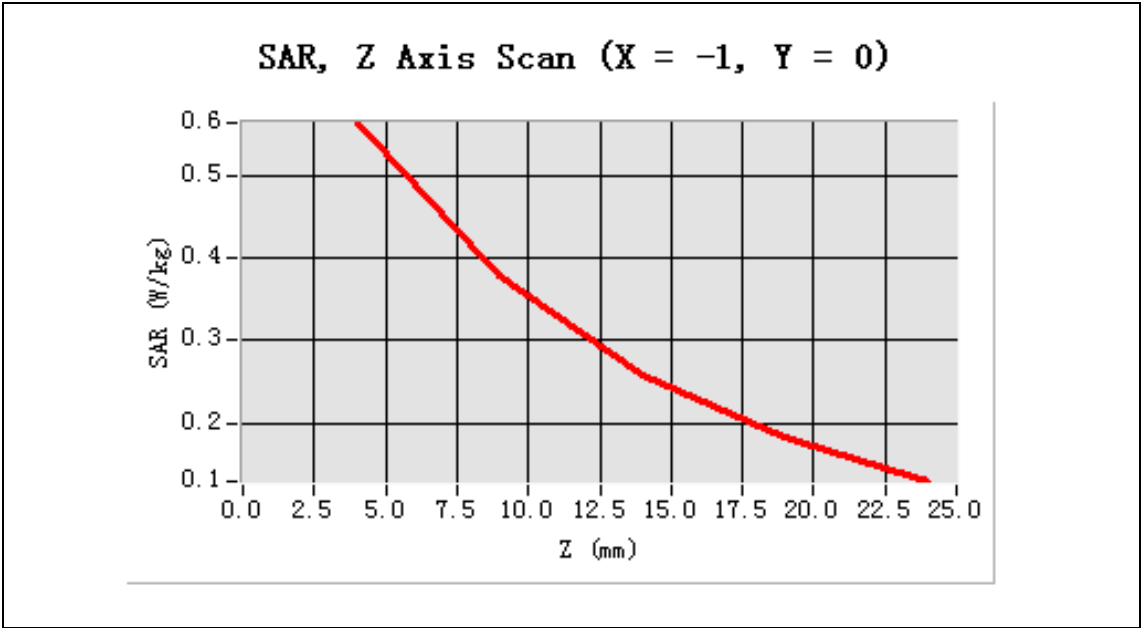
**Configuration/System Check GSM850 Head/Zoom Scan :** Measurement grid: dx=8mm, dy=8mm, dz=5mm



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

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.342647 |
| <b>SAR 1g (W/Kg)</b>  | 0.534372 |

|                   |               |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>0.5638</b> | <b>0.3774</b> | <b>0.2579</b> | <b>0.1824</b> |



Test Laboratory: AGC Lab

Date: May 6, 2012

System Check Head 1900MHz

**DUT: Dipole 1900 MHz ; Type: SID 1900**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: CW; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: D1900 (1900.0 MHz); Duty Cycle:1:1;

ConvF=6.42

Frequency: 1900 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section ; Input Power=17dBm

Ambient temperature (°C): 21, Liquid temperature (°C): 21

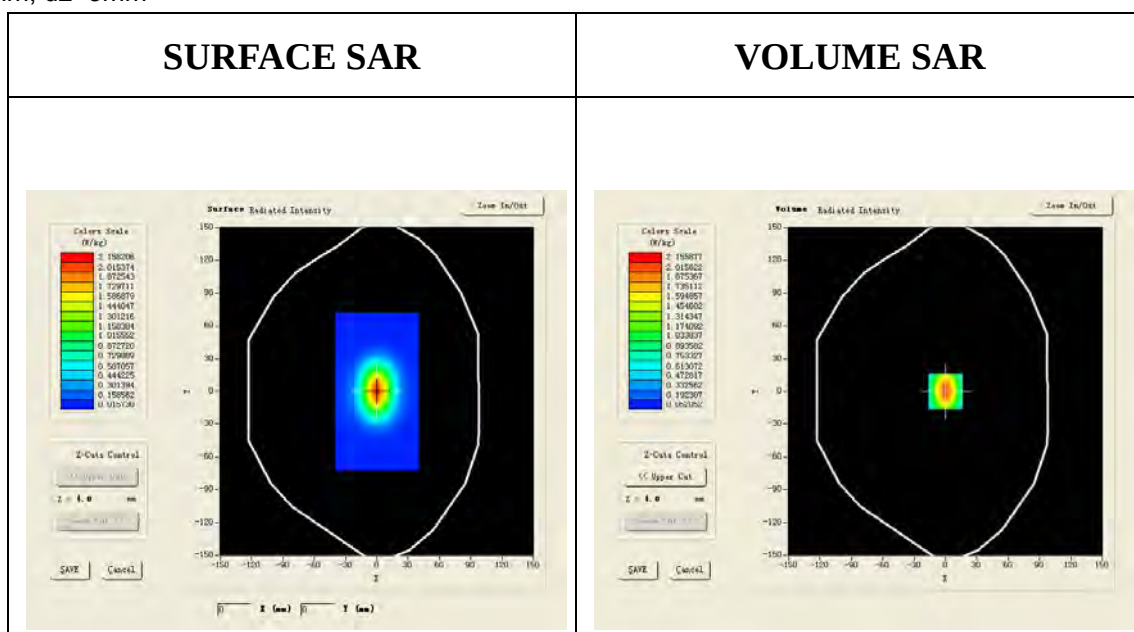
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

• Sensor-Surface: 4mm (Mechanical Surface Detection)

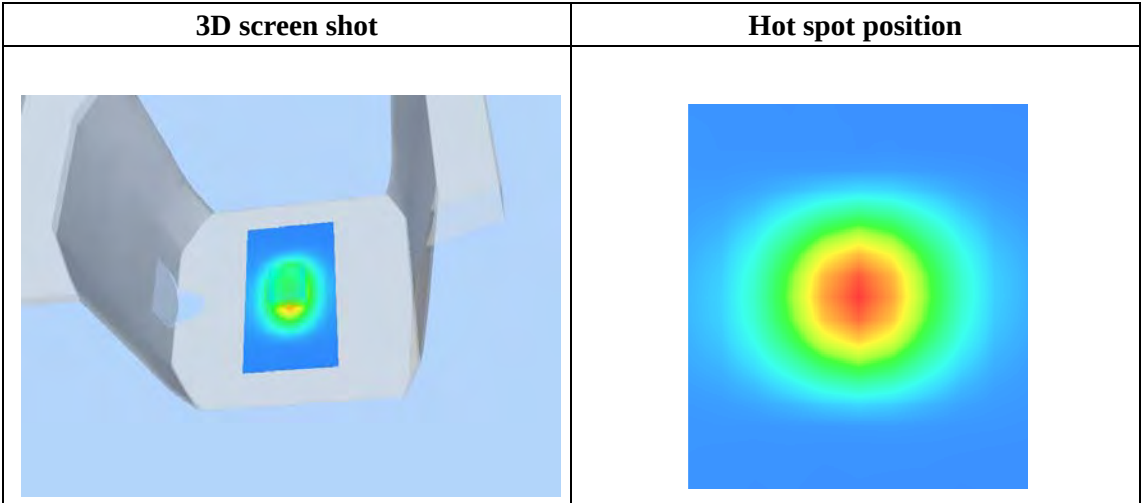
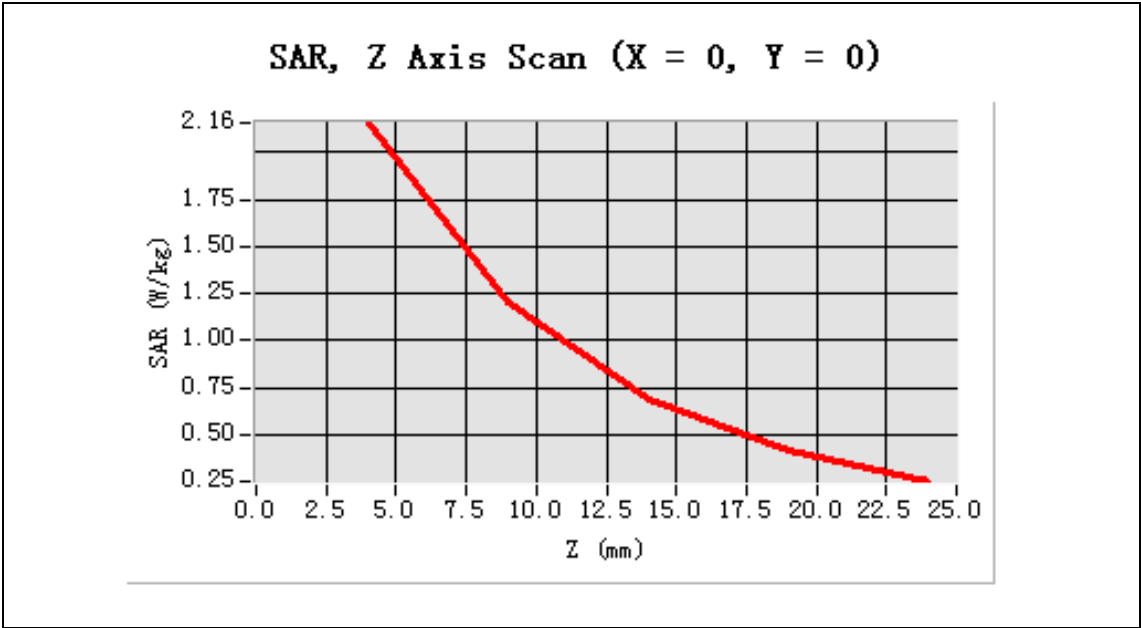
• Phantom: SAM1; Type: SAM

• Measurement SW: OpenSAR V4\_02\_01

**Configuration/System Check PCS1900 Head/Area Scan:** Measurement grid: dx=8mm, dy=8mm**Configuration/System Check PCS1900 Head/Zoom Scan:** Measurement grid: dx=8mm, dy=8mm, dz=5mm**Maximum location: X=0.00, Y=0.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 1.033313 |
| <b>SAR 1g (W/Kg)</b>  | 1.987048 |

|                   |               |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>2.1559</b> | <b>1.2073</b> | <b>0.6870</b> | <b>0.4152</b> |



## Appendix B. SAR measurement Data

Test Laboratory: AGC Lab

Date: May 6, 2012

GSM 850 Middle-touch-Left

DUT: GSM/WCDMA mobile phone/Smart phone (Fusion) ; Type: QS-G3UCT1BK

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;  
ConvF=6.79

Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.90$  mho/m;  $\epsilon_r = 42.31$ ;

$\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

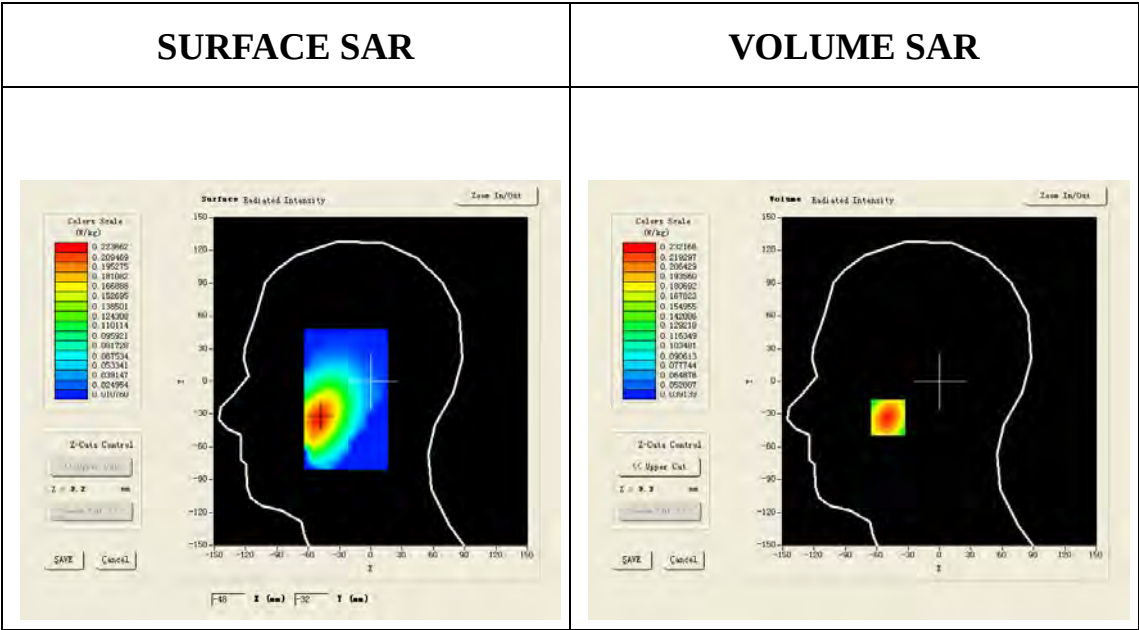
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GSM850 Mid Touch-Left/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm**

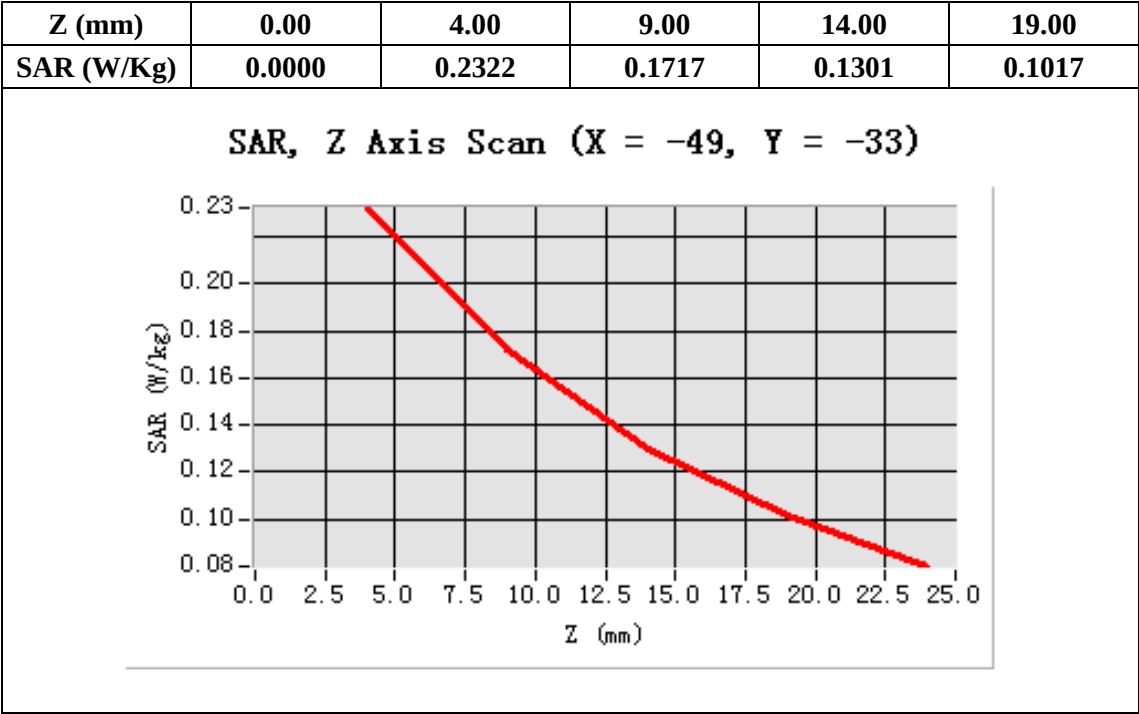
**Configuration/GSM850 Mid Touch-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm**

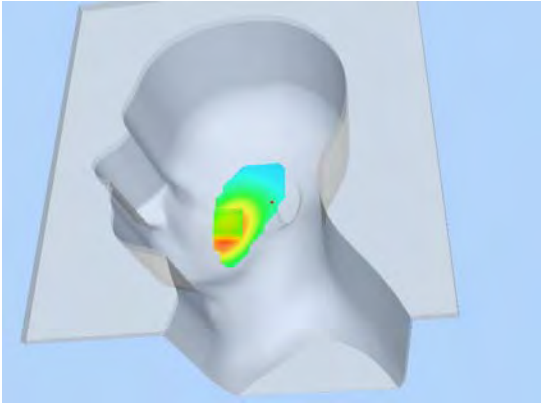
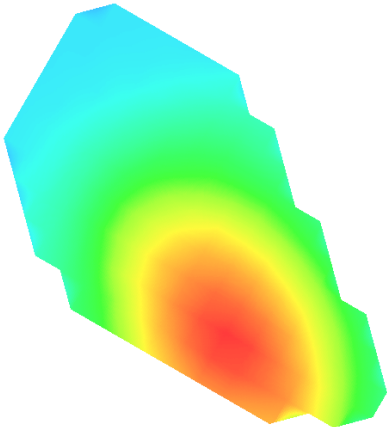
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Left head                            |
| <b>Device Position</b> | Cheek                                |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |



Maximum location: X=-49.00, Y=-33.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.155610 |
| SAR 1g (W/Kg)  | 0.221813 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                            | Hot spot position                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D model of a human head in profile, facing left. The head is rendered in a light blue color. A hot spot is visible on the ear area, indicated by a color gradient from yellow to red. The hot spot is located on the side of the head, near the ear. |  A close-up view of the hot spot position on the ear area. The hot spot is represented by a color gradient from yellow to red, indicating the intensity of the signal. The shape of the hot spot is irregular, following the contour of the ear. |

**Test Laboratory: AGC Lab**

**Date: May 6, 2012**

**GSM 850 Mid Tilt-left**

**DUT: GSM/WCDMA mobile phone/Smart phone (Fusion) ; Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty

Cycle: 1:8.3; ConvF=6.79;Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.90$  mho/m;  $\epsilon_r = 42.31$  ;

$\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section

Ambient temperature (°C): 21.0, Liquid temperature(°C): 21.0

Satimo Configuration:

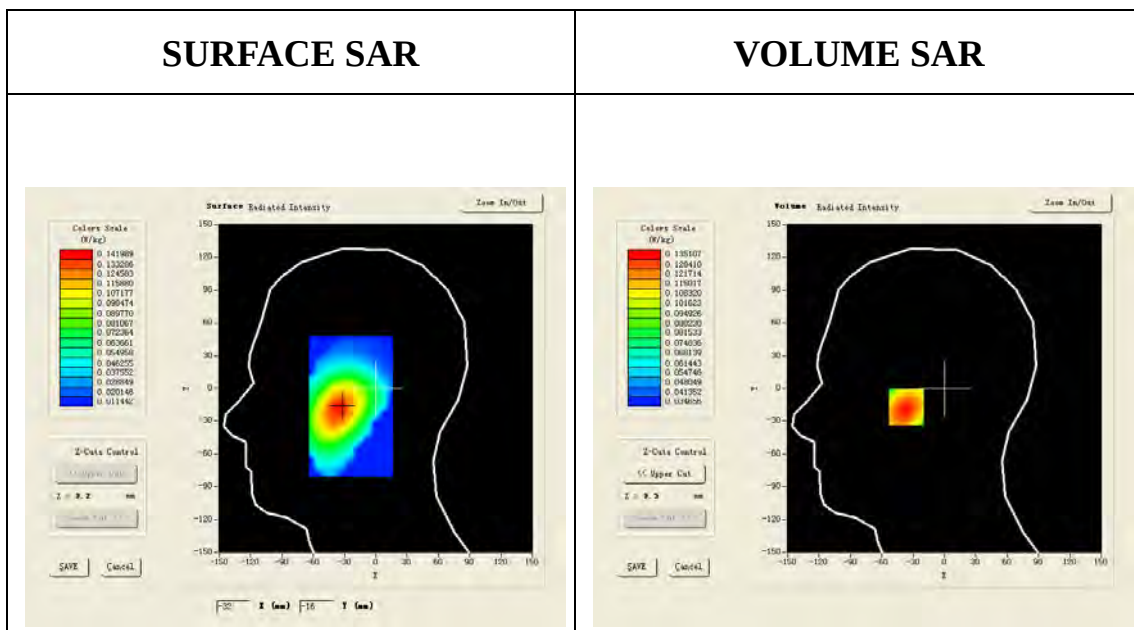
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GSM850 Mid Tilt-Left/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm**

**Configuration/GSM850 Mid Tilt-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Left head                            |
| <b>Device Position</b> | Tilt                                 |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |

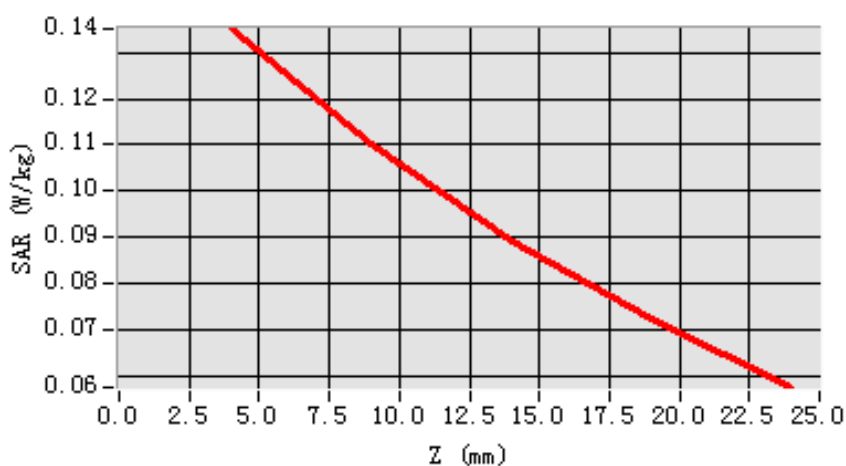


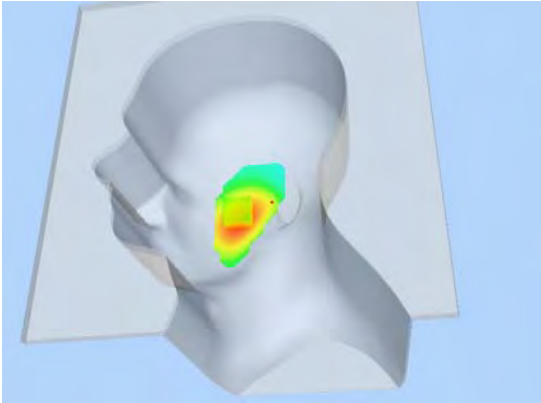
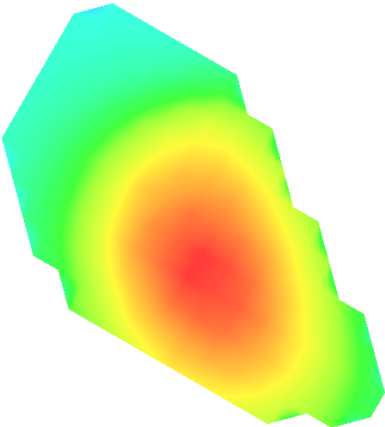
**Maximum location: X=-35.00, Y=-17.00**

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.099740 |
| SAR 1g (W/Kg)  | 0.130792 |

|            |        |        |        |        |        |
|------------|--------|--------|--------|--------|--------|
| Z (mm)     | 0.00   | 4.00   | 9.00   | 14.00  | 19.00  |
| SAR (W/Kg) | 0.0000 | 0.1351 | 0.1100 | 0.0893 | 0.0722 |

**SAR, Z Axis Scan (X = -35, Y = -17)**



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****GSM 850 Middle touch-Right****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion) ; Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;  
ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.90$  mho/m;

$\epsilon_r = 42.31$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Right Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

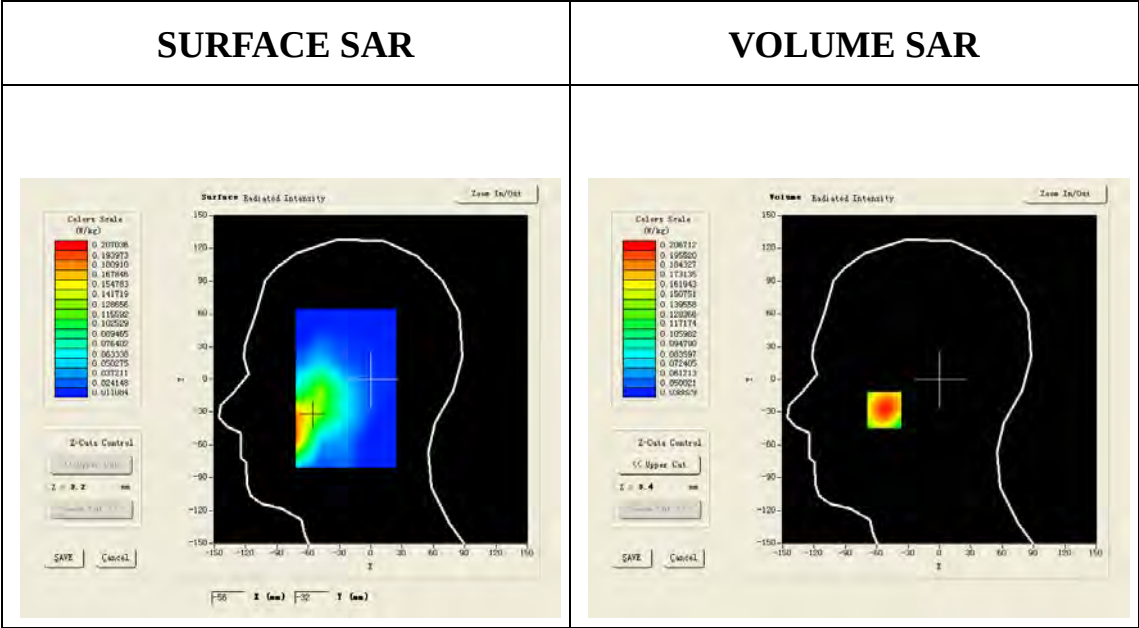
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GSM850 Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm**

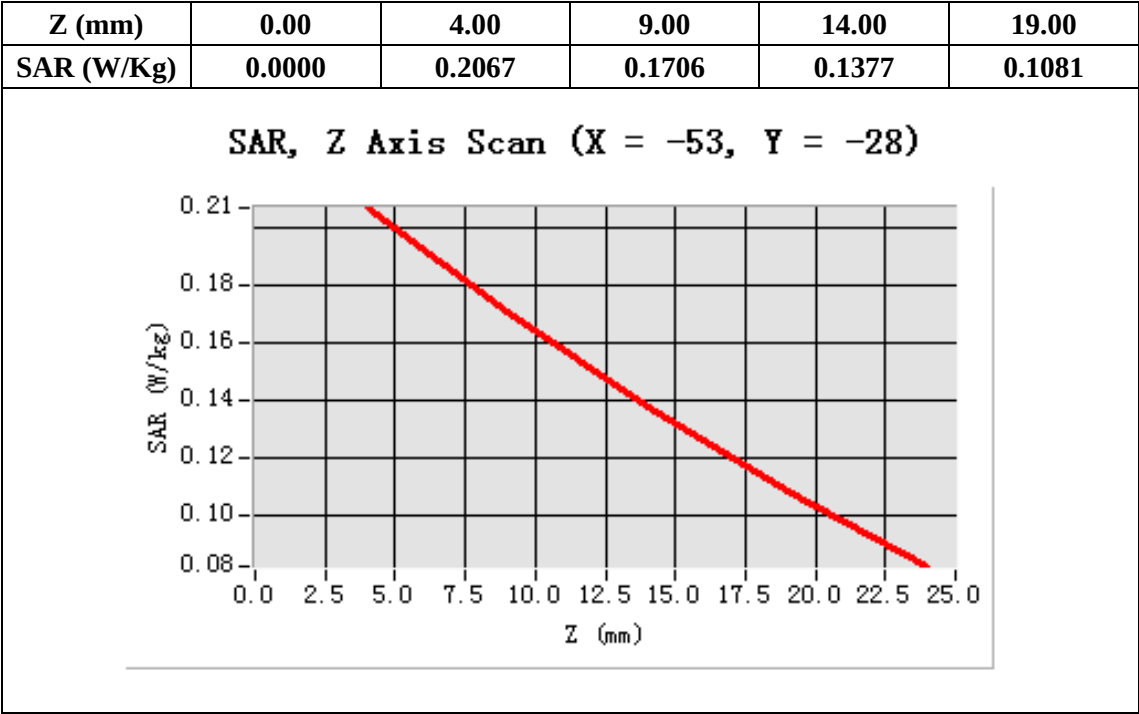
**Configuration/GSM850 Mid Touch-Right/Zoom Scan: Measurement grid: dx=8mm,  
dy=8mm, dz=5mm;**

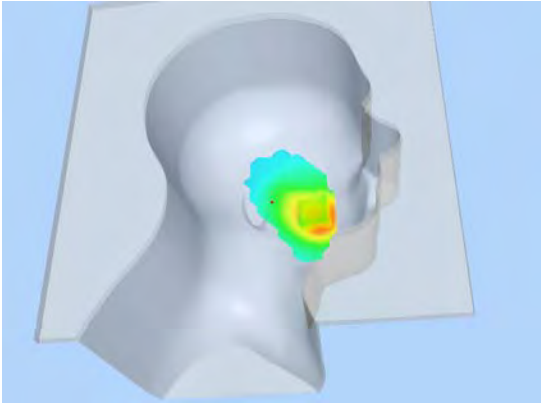
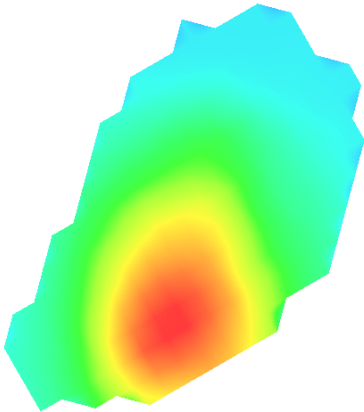
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Right head                           |
| <b>Device Position</b> | Cheek                                |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |



Maximum location: X=-53.00, Y=-28.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.148428 |
| SAR 1g (W/Kg)  | 0.198676 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                  | Hot spot position                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D rendering of a human head model in profile, facing right. A small, irregularly shaped area on the side of the head, near the ear, is highlighted with a color gradient from blue to red, indicating a hot spot. The head is positioned on a light blue rectangular base. |  A 2D diagram showing the hot spot position. It features a color gradient from blue to red, with the red area indicating the highest intensity. The shape is irregular and elongated, with a central red core transitioning through yellow and green to a blue outer edge. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****GSM 850 Mid-tilt-Right****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion) ; Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;  
 ConvF=6.79; Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.90$  mho/m;  $\epsilon_r = 42.31$ ;  $\rho = 1000$  kg/m<sup>3</sup>; Phantom section: Right Section  
 Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

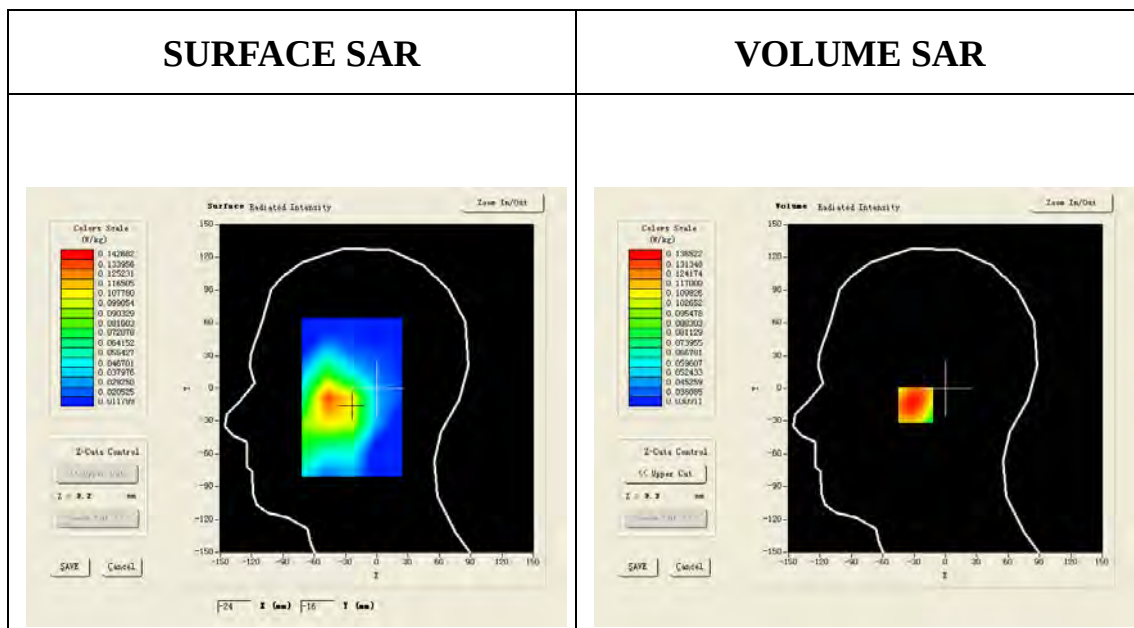
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GSM850 Mid Tilt-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm**

**Configuration/GSM850 Mid Tilt-Right/Zoom Scan: Measurement grid: dx=8mm,  
 dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>Zoom Scan</b>       | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Right head                           |
| <b>Device Position</b> | Tilt                                 |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |

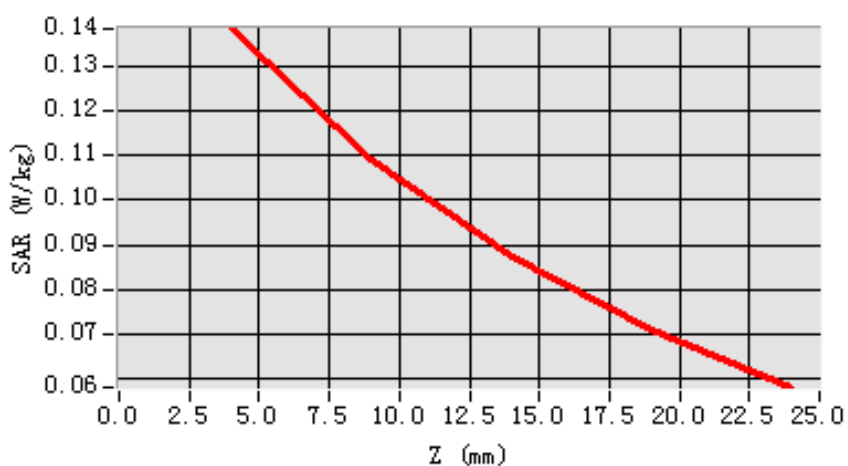


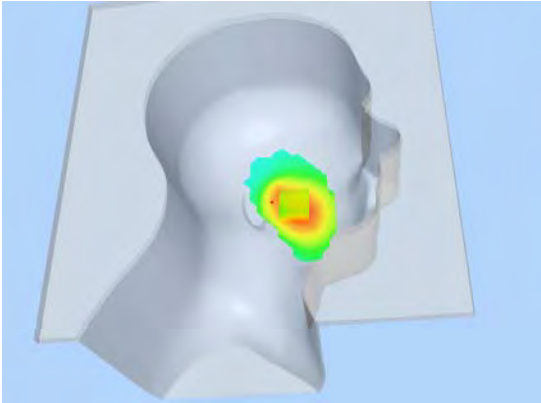
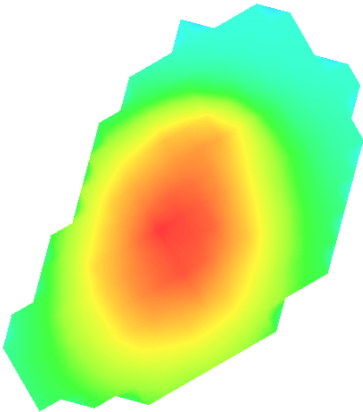
**Maximum location: X=-25.00, Y=-15.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.101663 |
| <b>SAR 1g (W/Kg)</b>  | 0.134744 |

|                   |               |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>0.1385</b> | <b>0.1092</b> | <b>0.0874</b> | <b>0.0711</b> |

**SAR, Z Axis Scan (X = -25, Y = -15)**



| 3D screen shot                                                                                                                                                                                                                                                                 | Hot spot position                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D model of a human head in profile, facing right. A hot spot is visible on the ear area, indicated by a color gradient from green to red. The head is positioned on a light blue surface. |  A close-up view of the hot spot position, showing a color gradient from green to red, indicating the intensity of the hot spot. The shape is irregular and elongated. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****GSM 850 Mid-Body-Back****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;  
 ConvF=6.79;Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 53.66$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

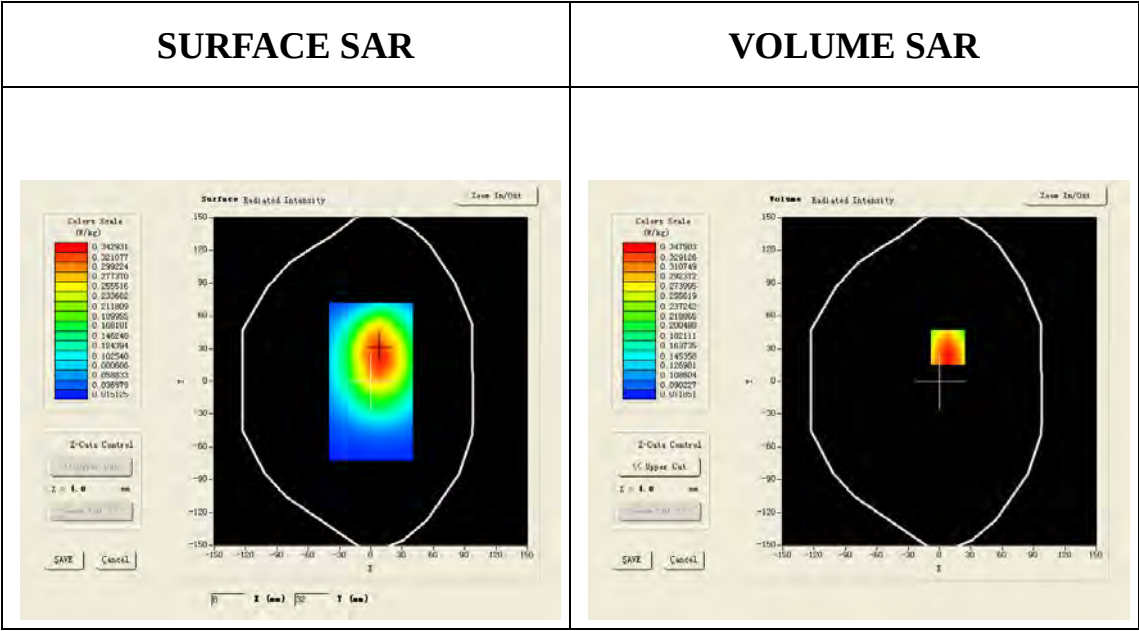
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GSM850 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm**

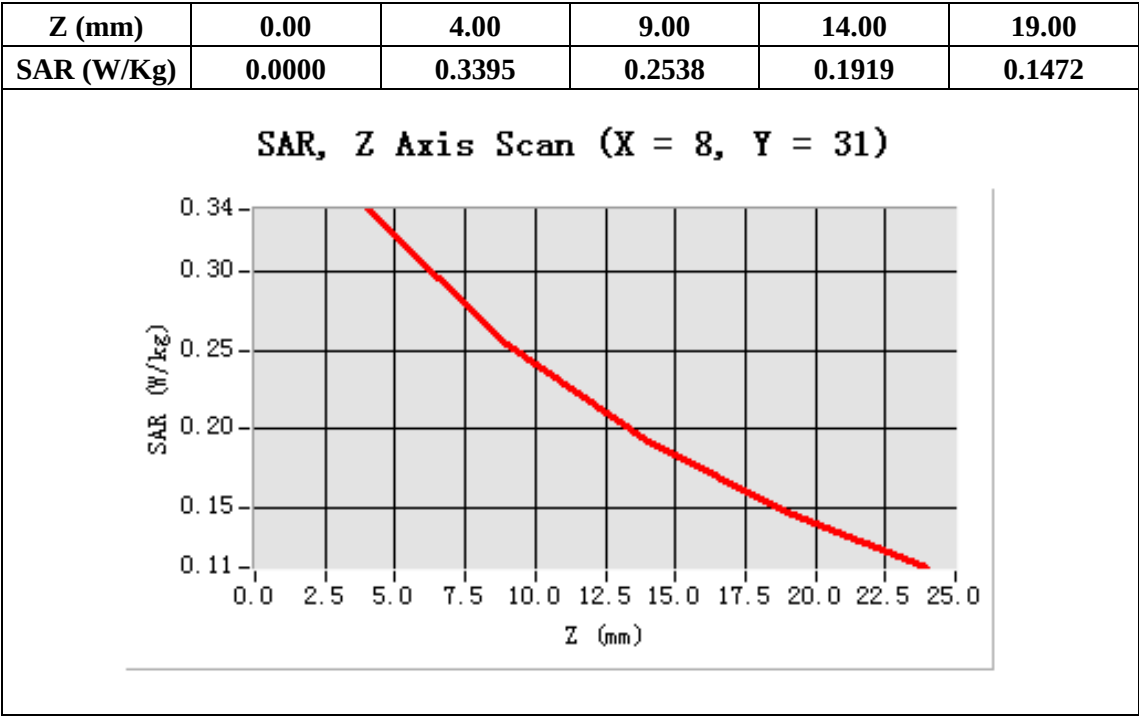
**Configuration/GSM850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

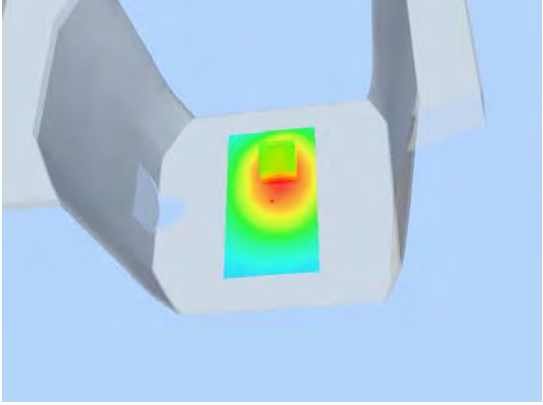
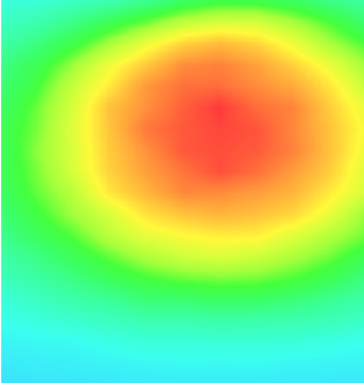
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |



Maximum location: X=8.00, Y=31.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.259225 |
| SAR 1g (W/Kg)  | 0.359948 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****GSM 850 Mid-body Back(2up)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: GPRS -2 Slot; Communication System Band: GSM850; Duty Cycle: 1:4.2 ;

ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 53.66$ ;  $\rho = 1000$ kg/m<sup>3</sup> ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

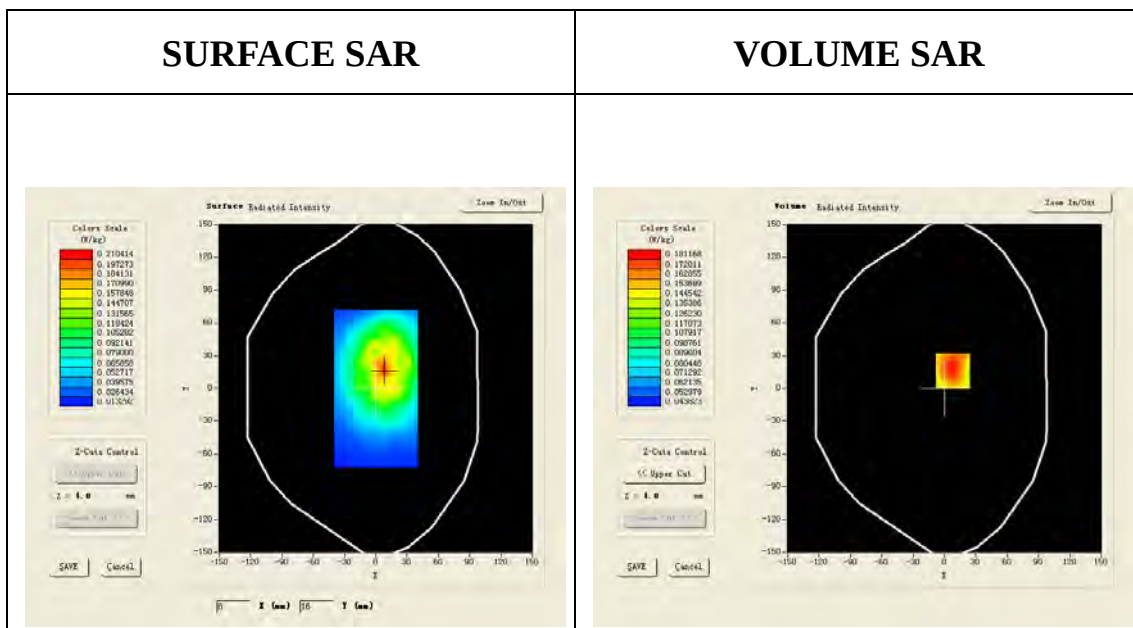
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GPRS850 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm****Configuration/GPRS850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 4.0)             |

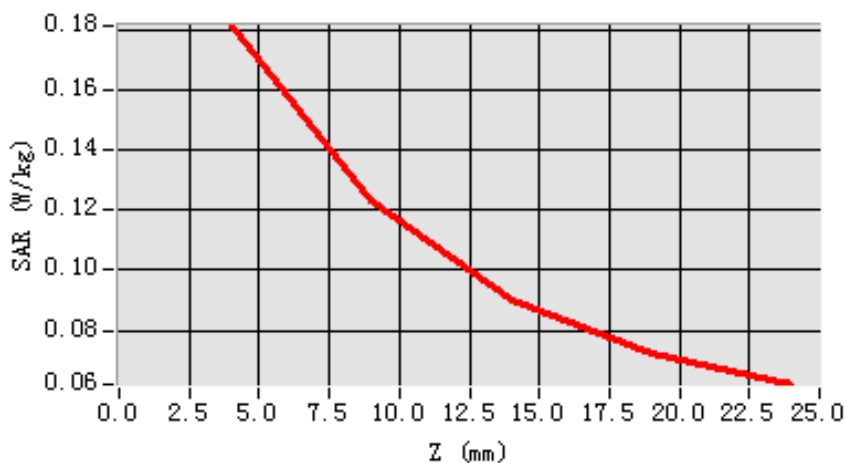


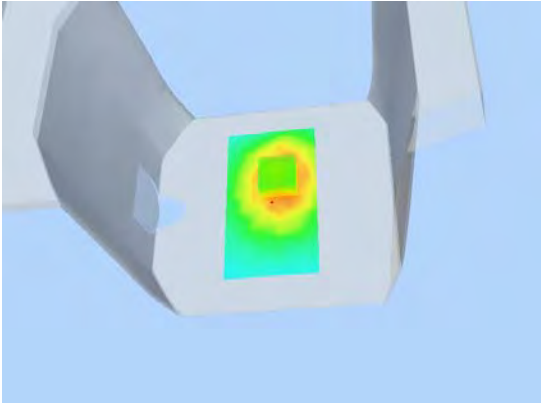
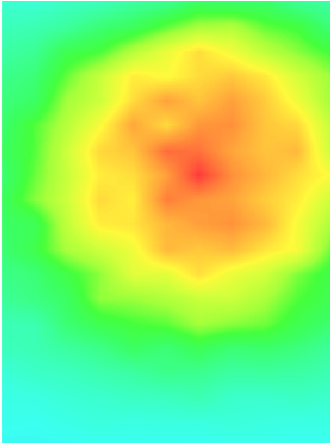
**Maximum location: X=8.00, Y=16.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.131214 |
| <b>SAR 1g (W/Kg)</b>  | 0.188449 |

|                   |               |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>0.1812</b> | <b>0.1230</b> | <b>0.0899</b> | <b>0.0725</b> |

**SAR, Z Axis Scan (X = 8, Y = 16)**



| 3D screen shot                                                                                                                                                                                                                                                                                                                 | Hot spot position                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D perspective view of a grey mechanical component. A rectangular area on its front face is highlighted with a color-coded overlay, showing a central red/yellow region (hot spot) transitioning to green and then blue towards the edges. |  A 2D rectangular heatmap corresponding to the hot spot area in the 3D model. It features a radial color gradient from a bright red/yellow center, through orange and green, to a cyan/blue outer edge, indicating the intensity distribution of the hot spot. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****GPRS 850 Mid-Body-back (3up)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: GPRS -3 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.8 ;  
ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 53.66$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

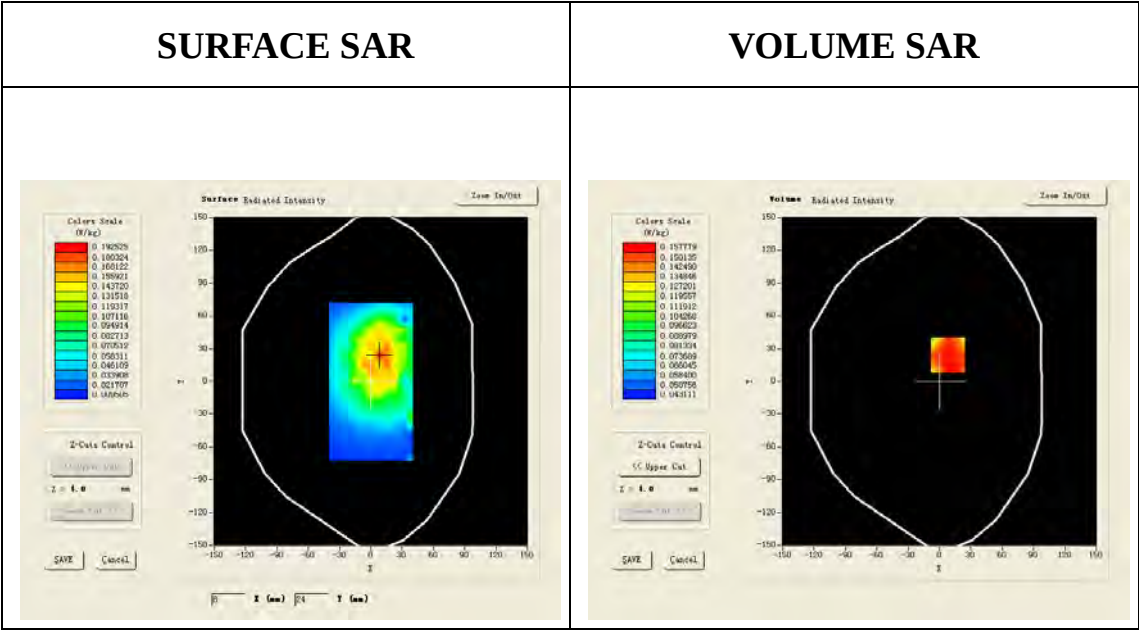
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GPRS850 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm**

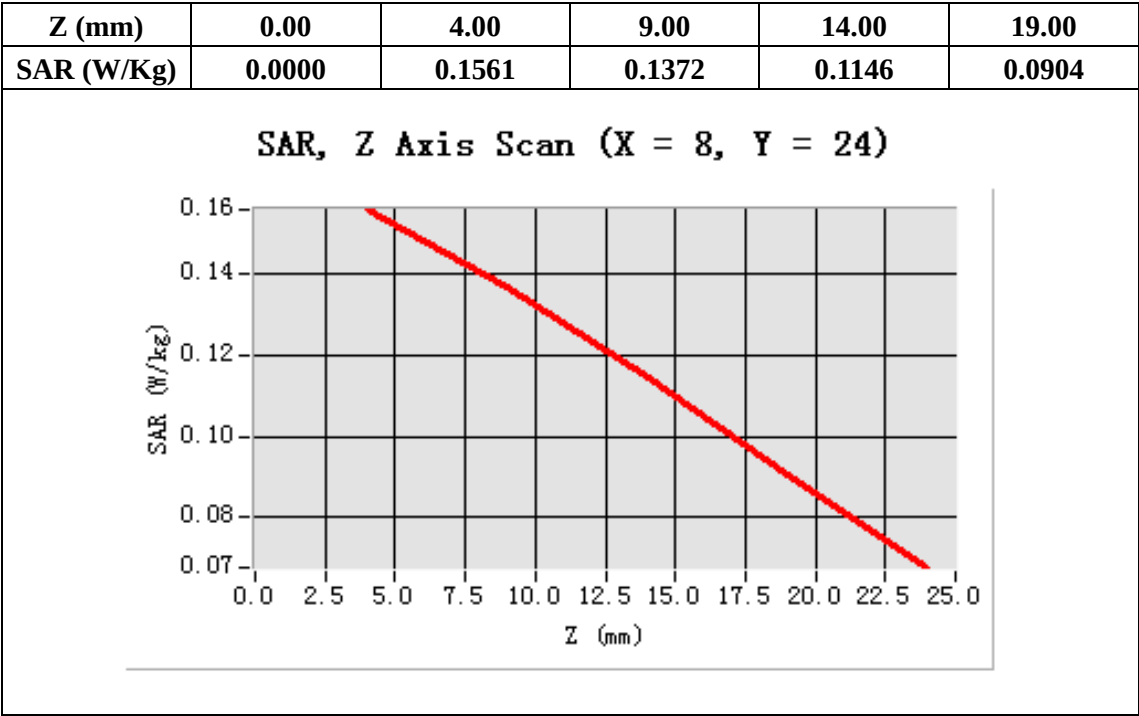
**Configuration/GPRS850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

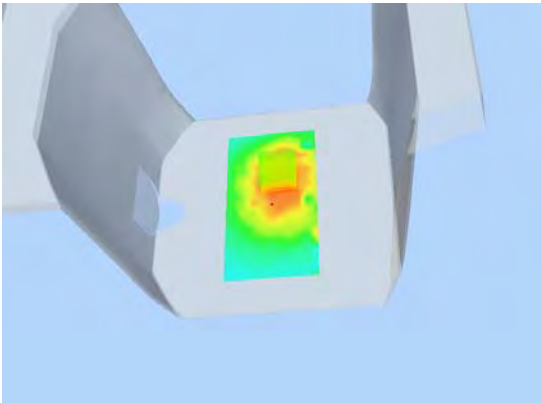
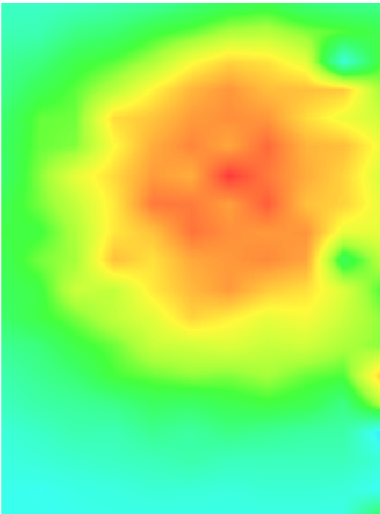
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor:2.7)              |



Maximum location: X=8.00, Y=24.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.134024 |
| SAR 1g (W/Kg)  | 0.167340 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                                                          | Hot spot position                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D perspective view of a grey mechanical component, possibly a bracket or housing, against a light blue background. A rectangular area on the front face of the component is highlighted with a color-coded thermal map, showing a central red/orange hot spot transitioning to yellow and green towards the edges. |  A close-up, square thermal map showing the hot spot in detail. The color scale ranges from cyan/blue at the bottom (cooler) to red at the top (hottest), with yellow and green in between. The hottest area is a concentrated red/orange region in the upper center. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****GPRS 850 Mid-body-Back (4up)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: GPRS -4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.1 ;  
ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 53.66$ ;  $\rho = 1000$   
kg/m<sup>3</sup> ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

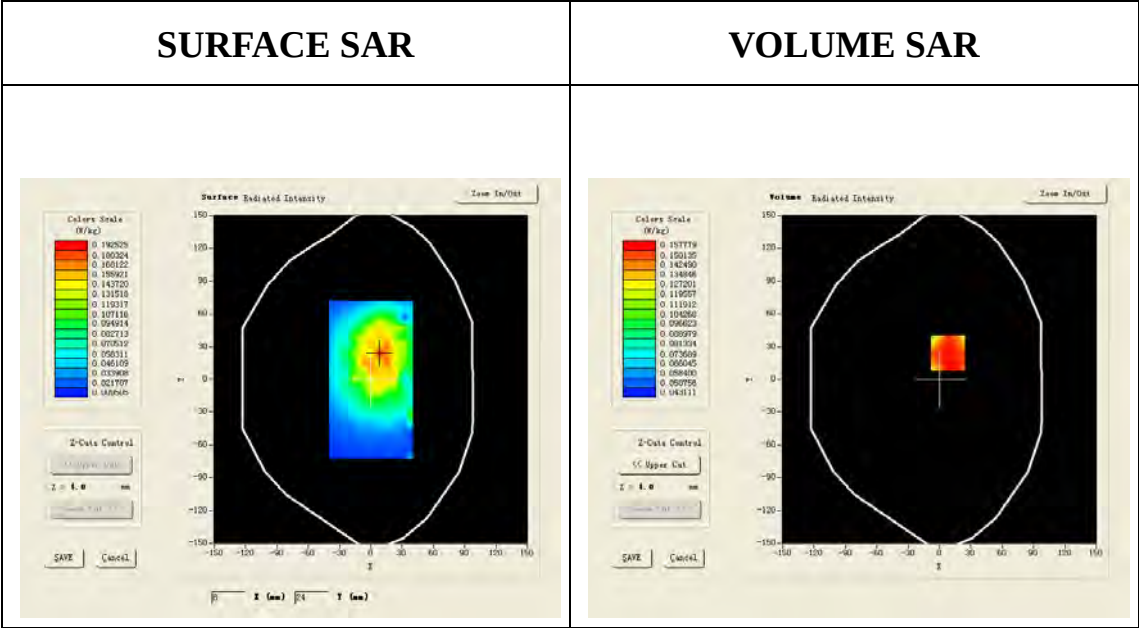
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GPRS850 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm**

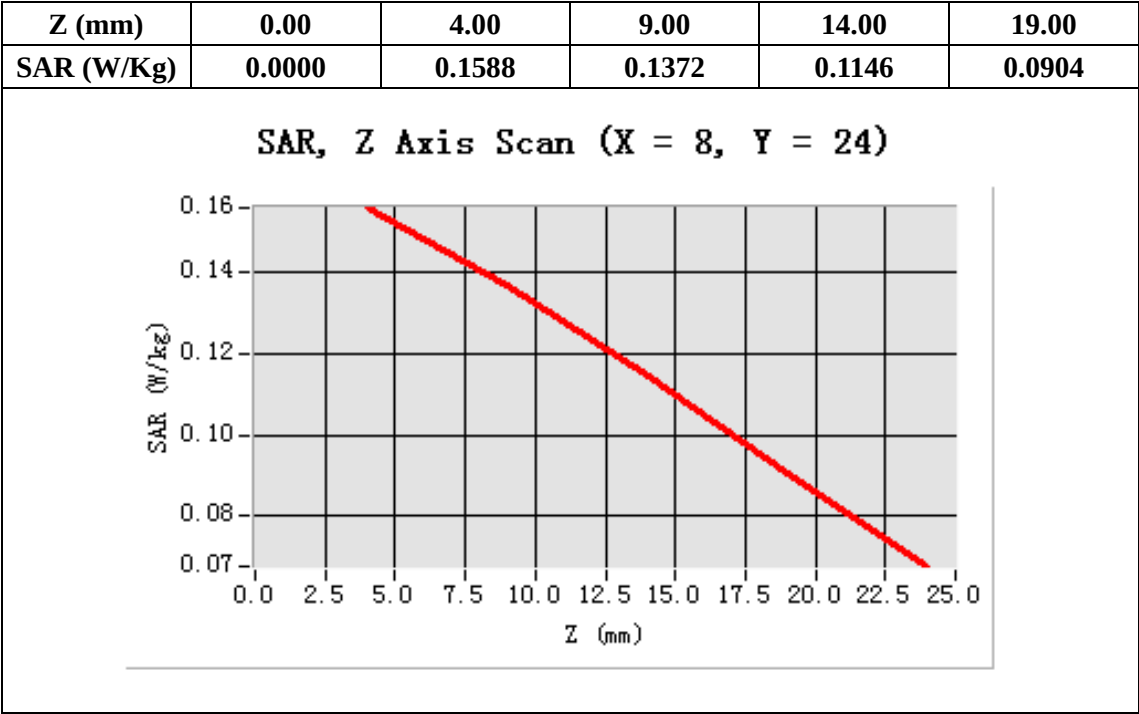
**Configuration/GPRS850 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm,  
dy=8mm, dz=5mm;**

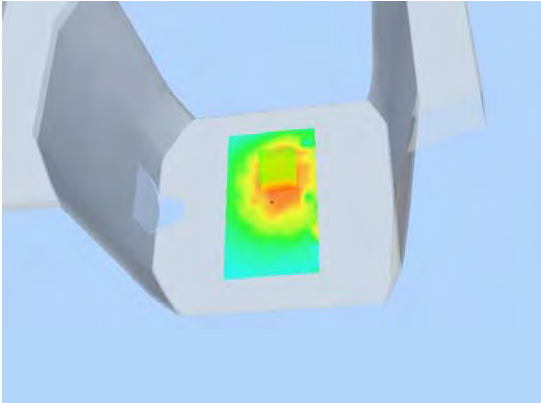
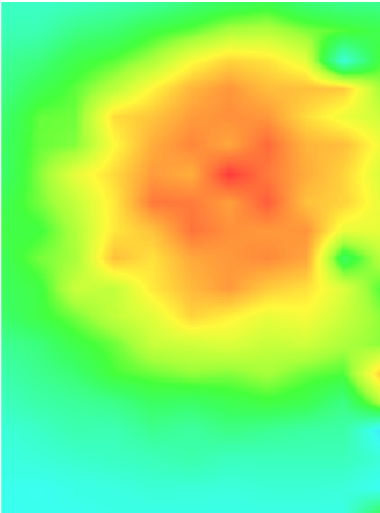
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 2.0)             |



Maximum location: X=8.00, Y=24.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.132591 |
| SAR 1g (W/Kg)  | 0.166714 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                                                                           | Hot spot position                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D CAD model of a mechanical component, possibly a bracket or housing, is shown in a light blue color. A rectangular area on the front face of the component is highlighted with a color-coded heatmap, indicating a hot spot. The heatmap shows a central red/orange area transitioning to yellow and then green towards the edges. |  A square heatmap representing the hot spot position. The color scale ranges from cyan/blue at the bottom to red at the top, with yellow and orange in the middle. The red area is concentrated in the upper-middle portion of the square, indicating the location of the highest temperature or intensity. |

**Test Laboratory: AGC Lab**

**data: May 6,2012**

**GPRS 850 Front-body-front (MS)**

**DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1: 8.3;

ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 53.66$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

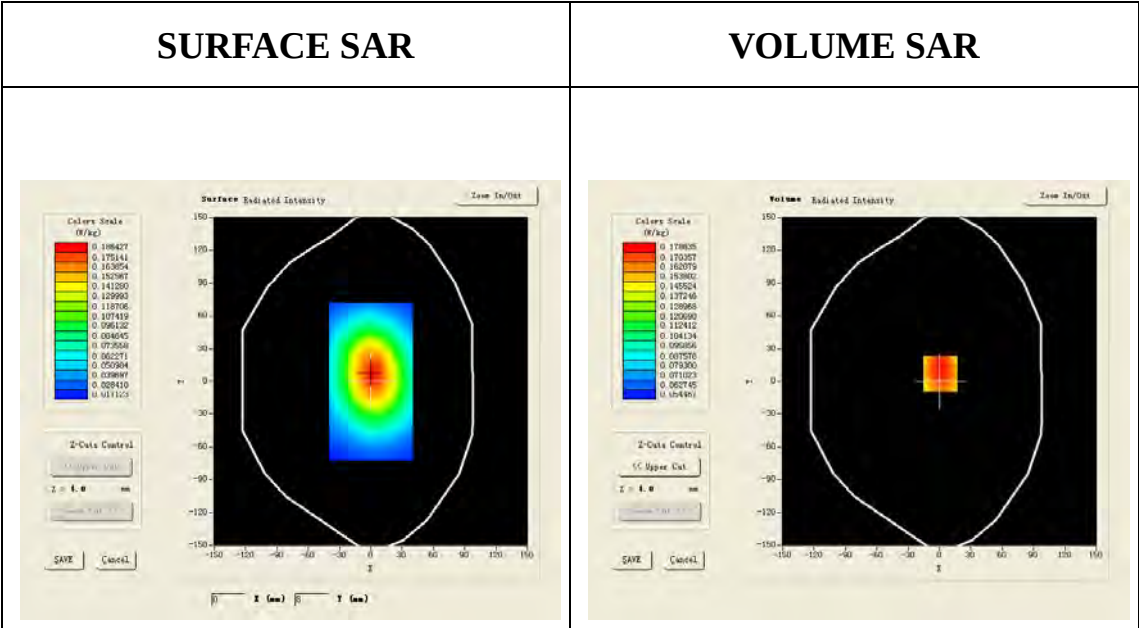
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GPRS850 Mid Body-Front/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm**

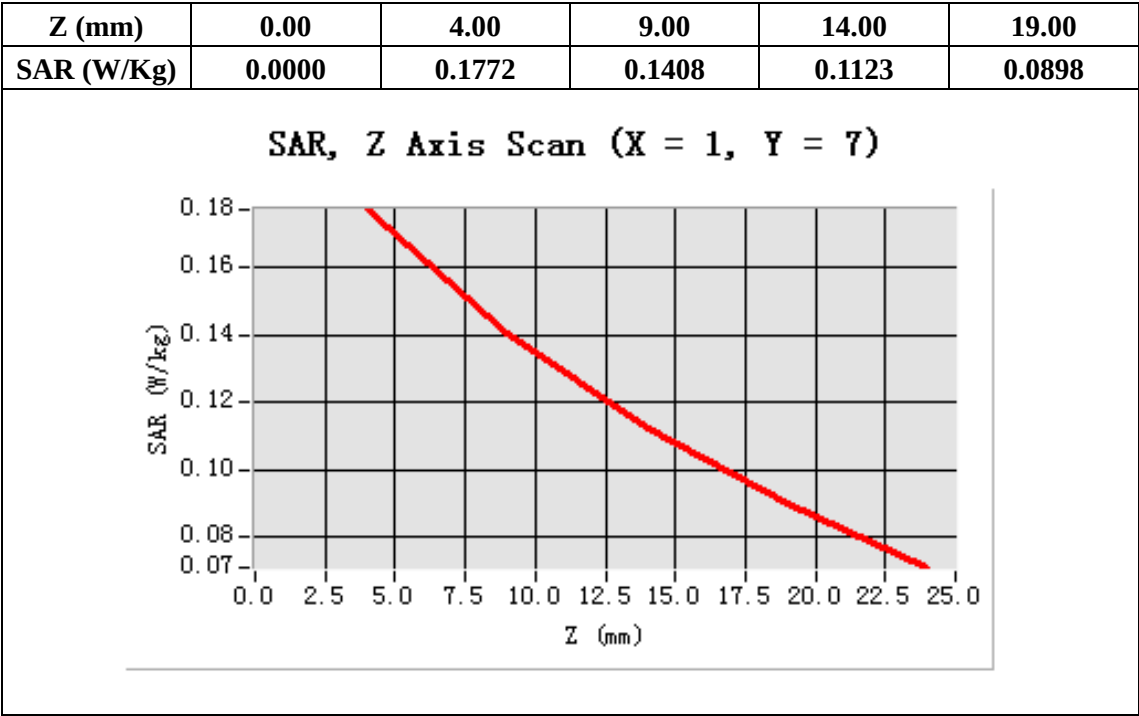
**Configuration/GPRS850 Mid Body-Front/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

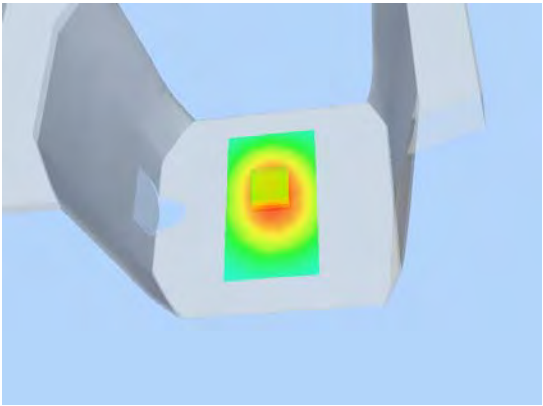
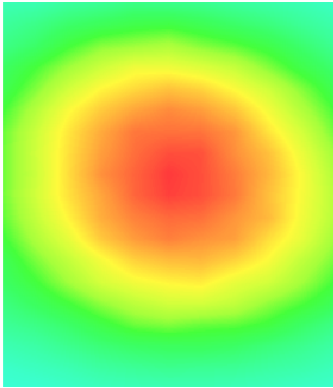
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor:8.0)              |



Maximum location: X=1.00, Y=7.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.142795 |
| SAR 1g (W/Kg)  | 0.186414 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****data: May 6,2012****GPRS 850 Front-body-back (MS)(with earphone)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1: 8.3;  
ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 53.66$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

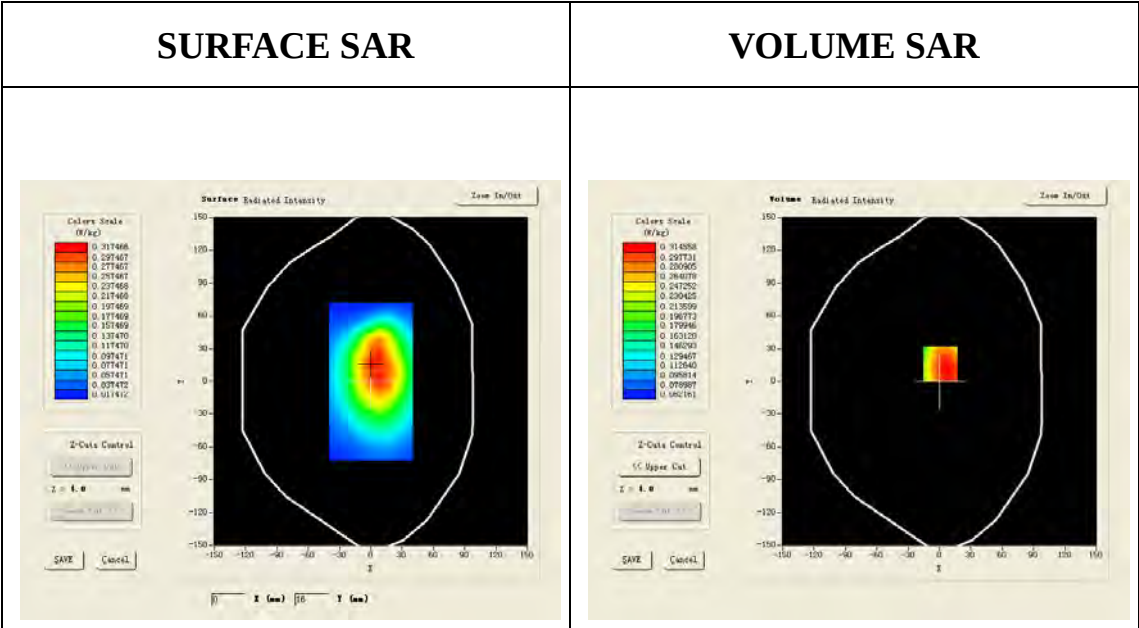
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GPRS850 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm**

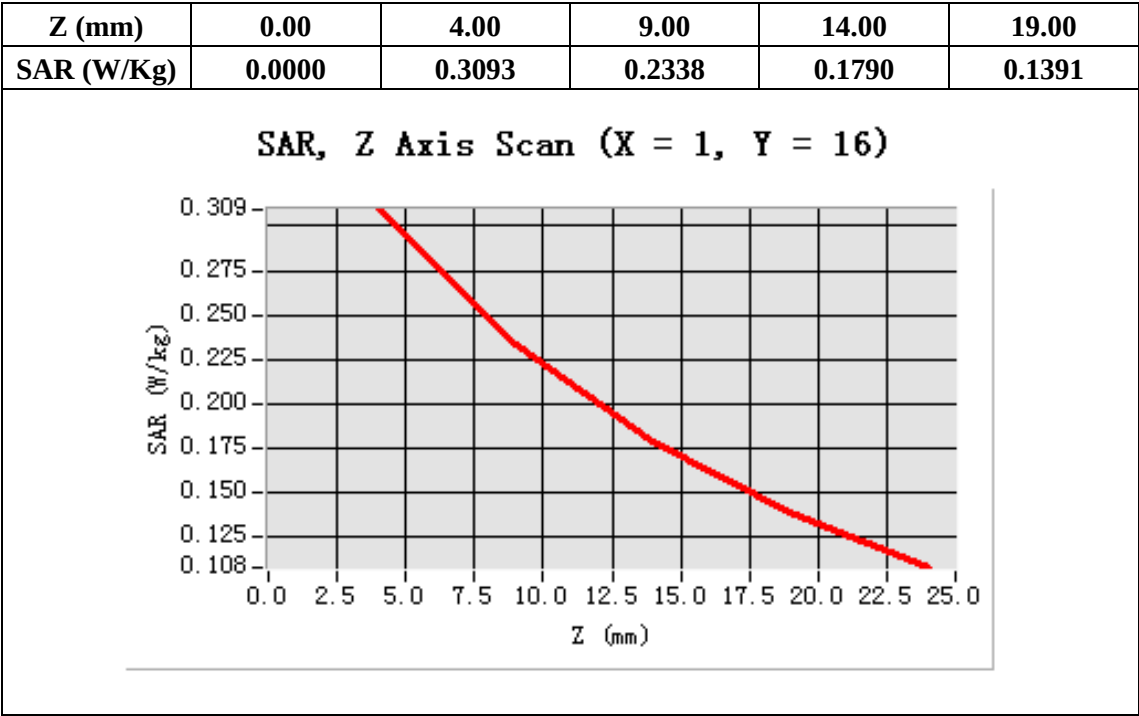
**Configuration/GPRS850 Mid Body- Back /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

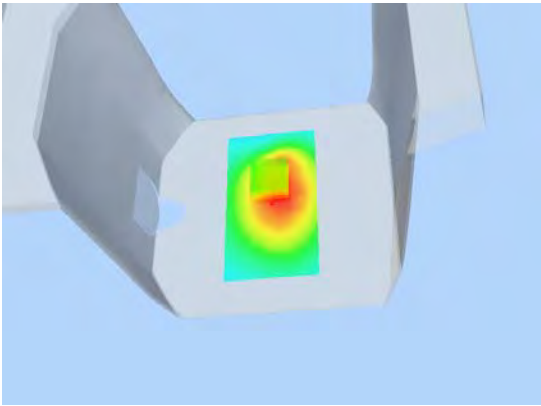
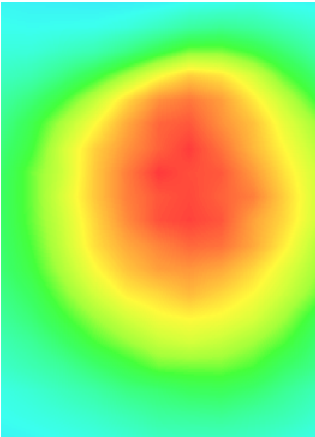
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM850                               |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor:8.0)              |



Maximum location: X=1.00, Y=16.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.243075 |
| SAR 1g (W/Kg)  | 0.329290 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band V Middle-touch-Left (RMC )****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication  
 GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;  
 Conv.F=6.79

Frequency: 835 MHz; Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.90 \text{ mho/m}$ ;  $\epsilon_r = 42.31$ ;

$\rho = 1000 \text{ kg/m}^3$  ; Phantom section: Left Section

Ambient temperature ( $^{\circ}\text{C}$ ): 21, Liquid temperature ( $^{\circ}\text{C}$ ): 21

Satimo Configuration:

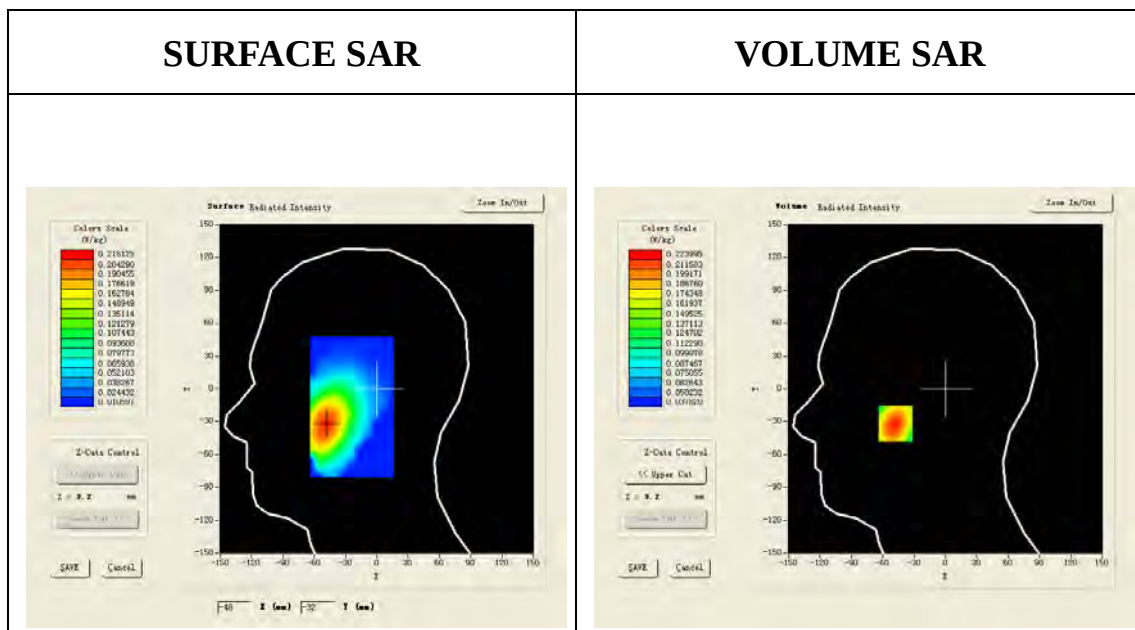
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA Band V Mid Touch-Left/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm**

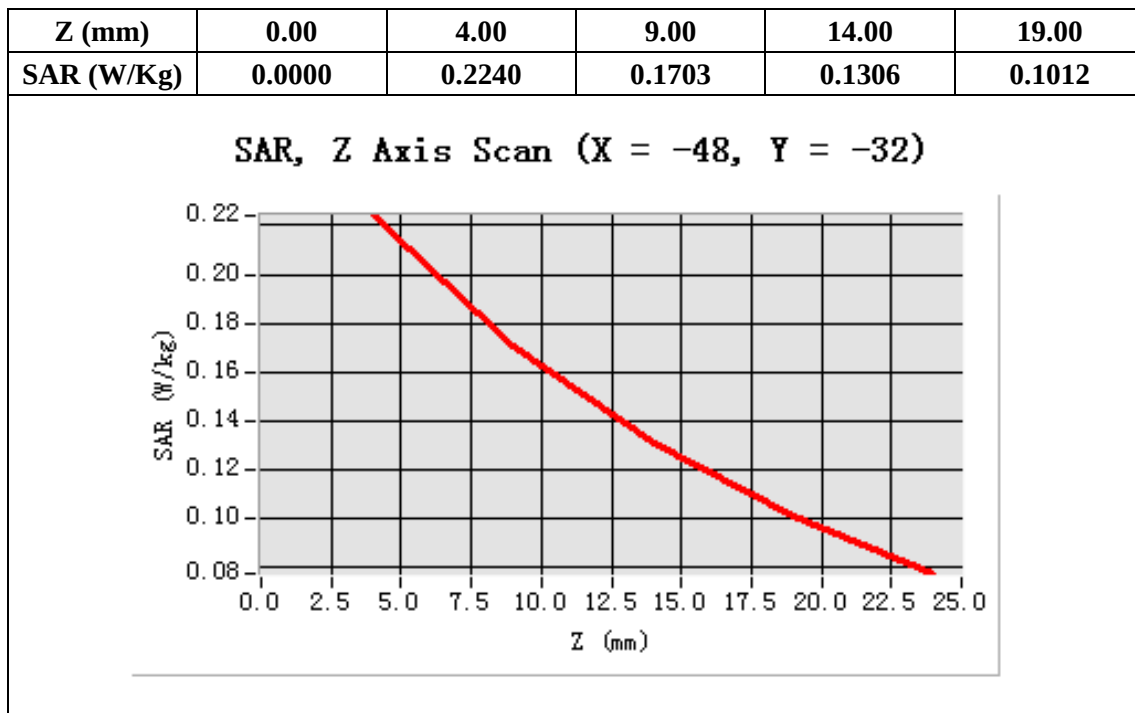
**Configuration/ WCDMA Band V Mid Touch-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm**

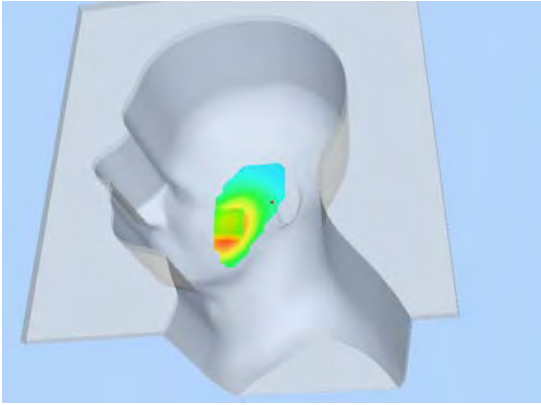
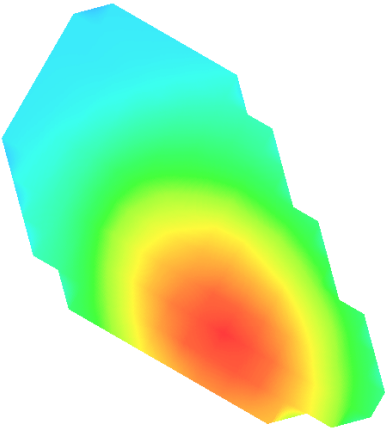
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Left head                            |
| <b>Device Position</b> | Cheek                                |
| <b>Band</b>            | WCDMA Band V                         |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



**Maximum location: X=-48.00, Y=-32.00**

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.151513 |
| SAR 1g (W/Kg)  | 0.214246 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band V Mid Tilt-left (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication  
 GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;  
 Conv.F=6.79

Frequency: 835 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.90$  mho/m;  $\epsilon_r = 42.31$ ;

$\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section

Ambient temperature (°C): 21, Liquid temperature (°C): 21

Satimo Configuration:

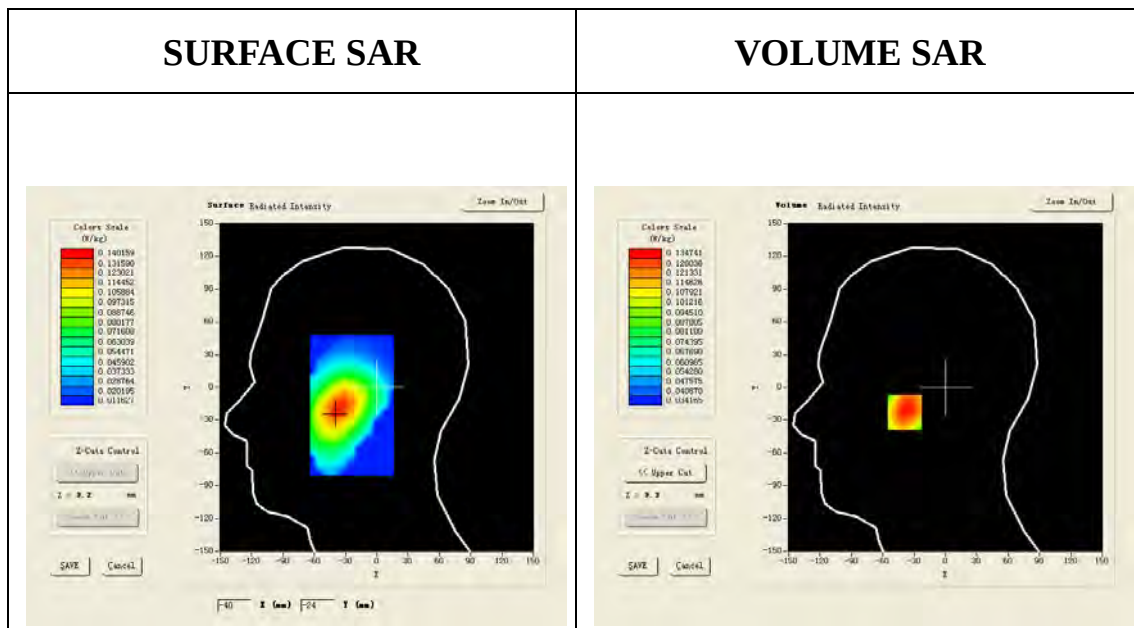
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA Band V Mid Tilt-Left/Area Scan (6x8x1):** Measurement grid: dx=20mm, dy=20mm

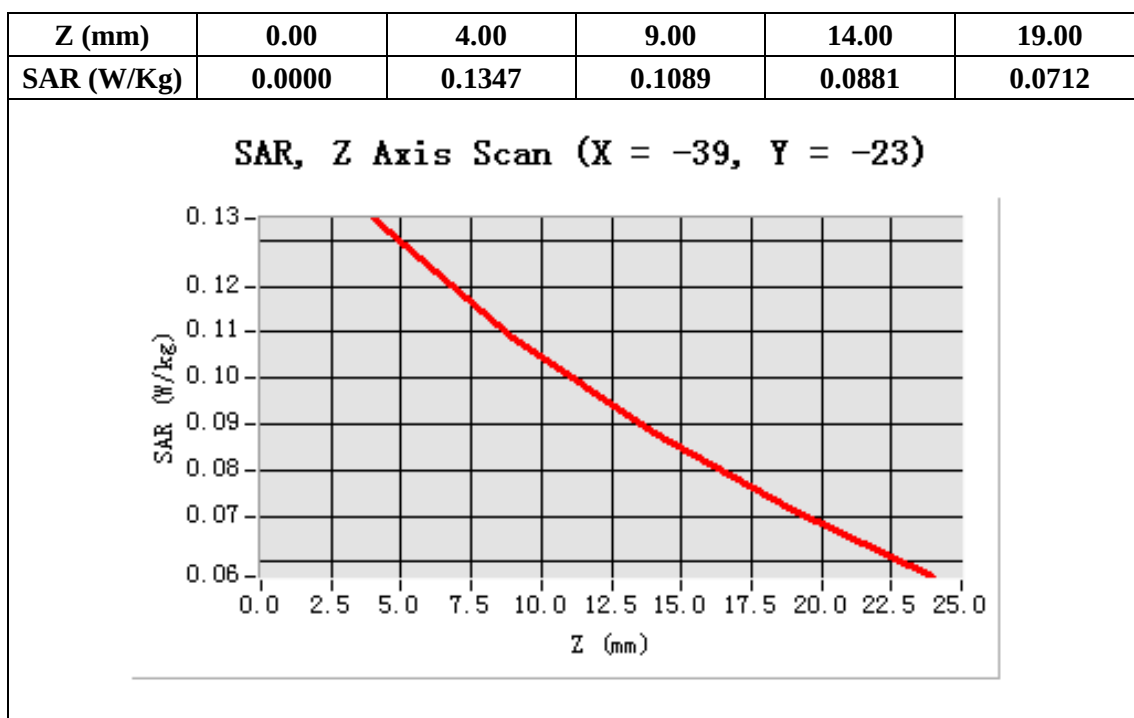
**Configuration/ WCDMA Band V Mid Tilt-Left/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm;

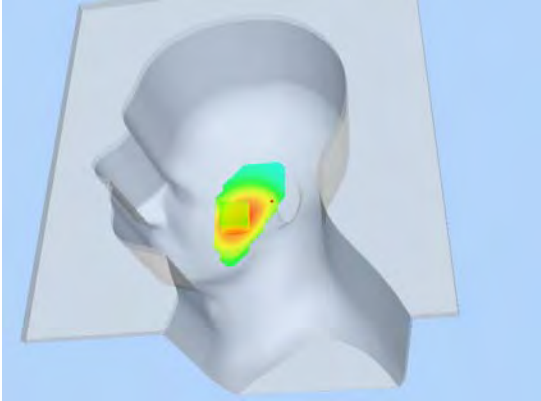
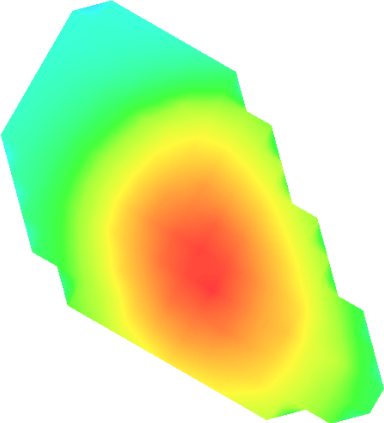
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Left head                            |
| <b>Device Position</b> | Tilt                                 |
| <b>Band</b>            | WCDMA Band V                         |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



Maximum location: X=-39.00, Y=-23.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.099713 |
| SAR 1g (W/Kg)  | 0.130627 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                           | Hot spot position                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D model of a human head in profile, facing left. The head is rendered in a light blue color. A hot spot is visible on the ear area, indicated by a color gradient from green to red. The hot spot is located on the side of the head, near the ear. |  A close-up view of the hot spot position. The hot spot is a circular area with a color gradient from green to red, indicating the intensity of the signal. The red area is the most intense, while the green areas are less intense. The hot spot is located on the side of the head, near the ear. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band V Middle touch-Right (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication  
 GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;  
 Conv.F=6.79

Frequency: 835 MHz; Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.90 \text{ mho/m}$ ;  $\epsilon_r = 42.31$ ;

$\rho = 1000 \text{ kg/m}^3$  ; Phantom section: Right Section

Ambient temperature ( $^{\circ}\text{C}$ ): 21, Liquid temperature ( $^{\circ}\text{C}$ ): 21

Satimo Configuration:

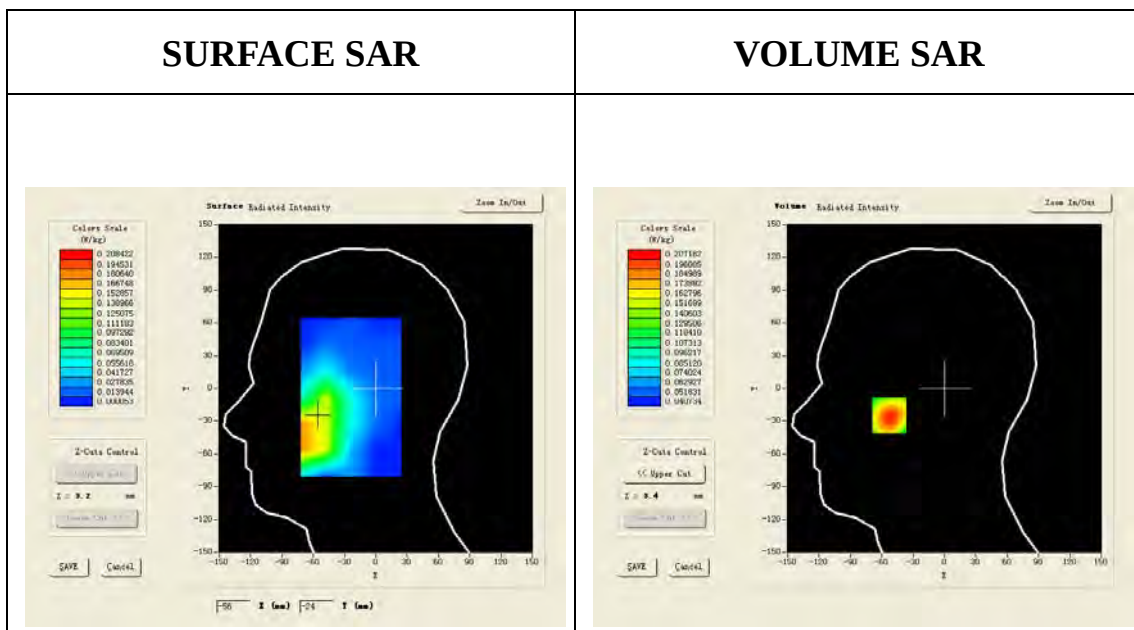
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA Band V Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm**

**Configuration/ WCDMA Band V Mid Touch-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Right head                           |
| <b>Device Position</b> | Cheek                                |
| <b>Band</b>            | WCDMA Band V                         |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |

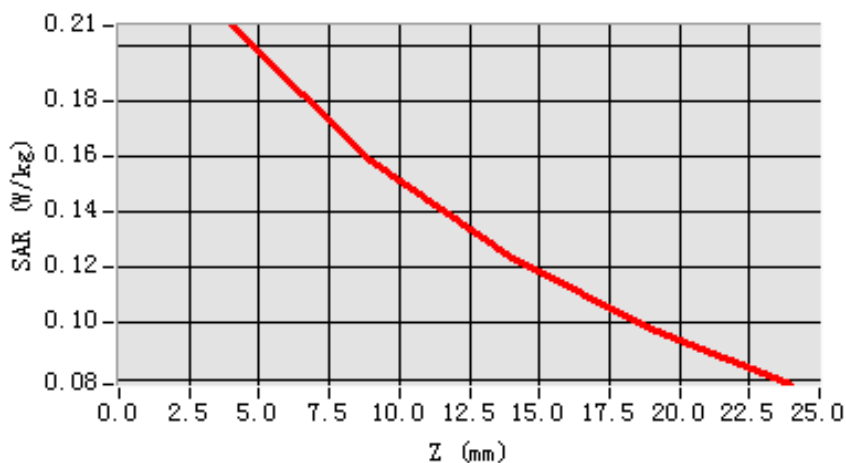


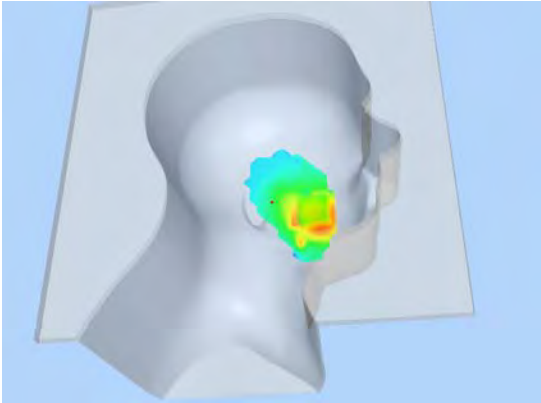
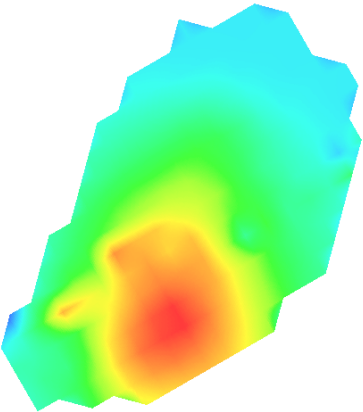
**Maximum location: X=-53.00, Y=-25.00**

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.142041 |
| SAR 1g (W/Kg)  | 0.198733 |

|            |        |        |        |        |        |
|------------|--------|--------|--------|--------|--------|
| Z (mm)     | 0.00   | 4.00   | 9.00   | 14.00  | 19.00  |
| SAR (W/Kg) | 0.0000 | 0.2072 | 0.1584 | 0.1233 | 0.0980 |

**SAR, Z Axis Scan (X = -53, Y = -25)**



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                          | Hot spot position                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D rendering of a human head model in profile, facing right. The head is light gray. A small, irregularly shaped area on the side of the head, near the ear, is highlighted with a color gradient from blue to red, indicating a hot spot. The background is a light blue gradient. |  A 2D map showing the hot spot position. The map is irregularly shaped and filled with a color gradient from blue to red, indicating the intensity of the hot spot. The red area is concentrated in the center, with yellow and green areas surrounding it. The background is white. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band V Mid-tilt-Right (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;

Conv.F=6.79

Frequency: 835 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.90$  mho/m;  $\epsilon_r = 42.31$ ; $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section:Right Section

Ambient temperature (°C): 21, Liquid temperature (°C): 21

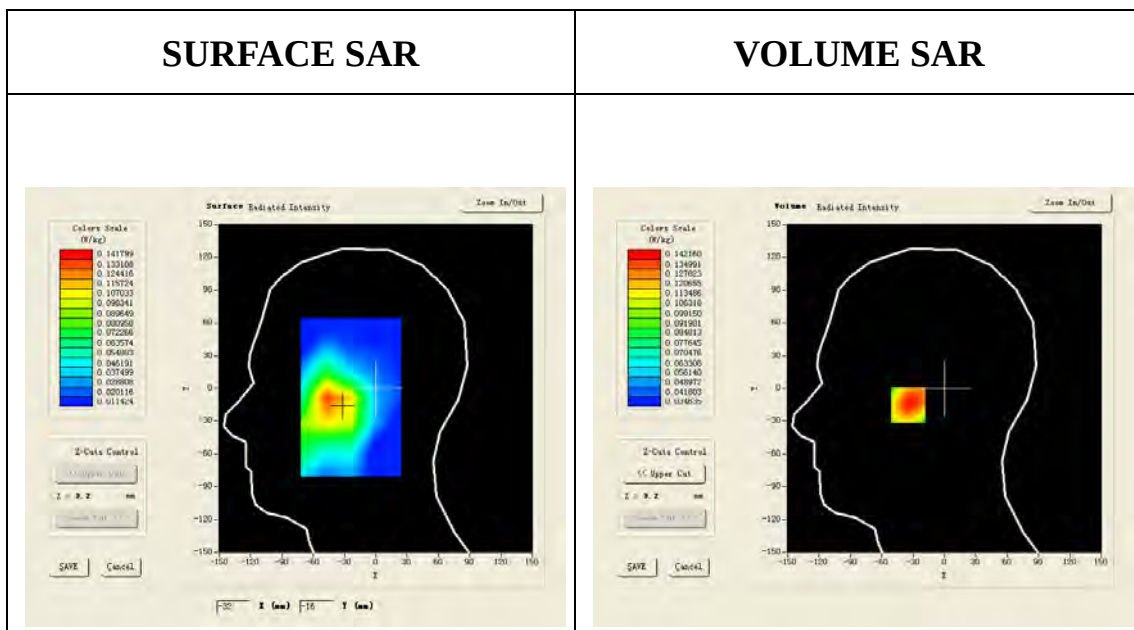
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA Band V Mid Tilt-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/ WCDMA Band V Mid Tilt-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>Zoom Scan</b>       | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Right head                           |
| <b>Device Position</b> | Tilt                                 |
| <b>Band</b>            | WCDMA Band V                         |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |

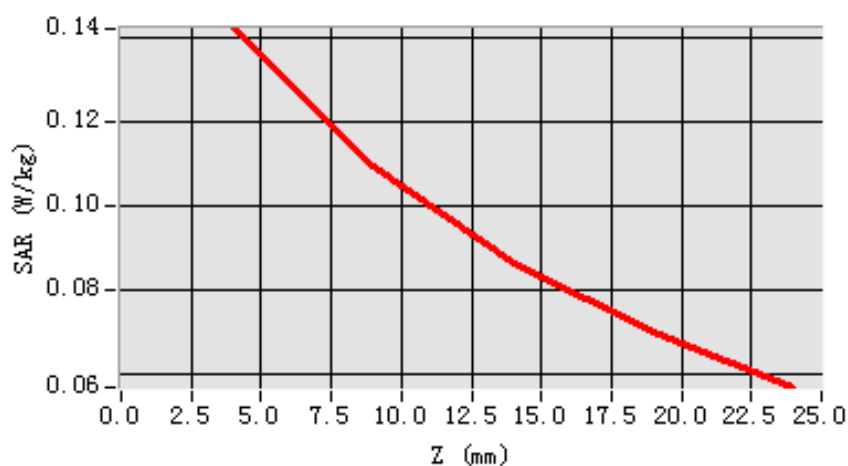


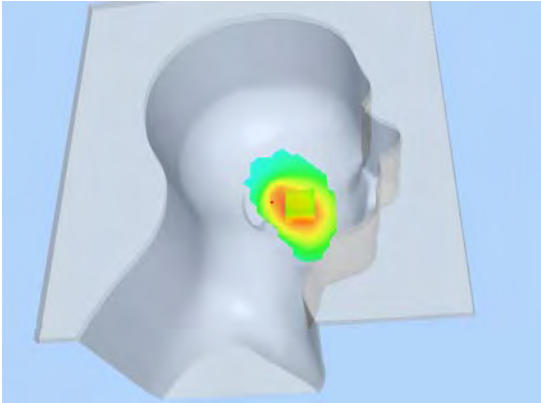
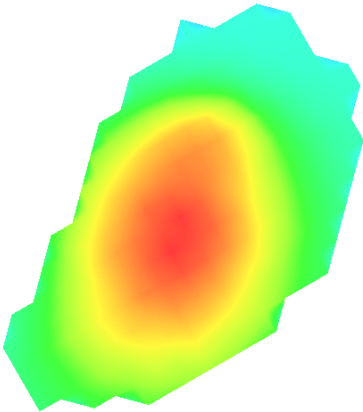
**Maximum location: X=-32.00, Y=-15.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.101823 |
| <b>SAR 1g (W/Kg)</b>  | 0.137325 |

| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>0.1422</b> | <b>0.1097</b> | <b>0.0865</b> | <b>0.0698</b> |

**SAR, Z Axis Scan (X = -32, Y = -15)**



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                       | Hot spot position                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D rendering of a human head model in profile, facing right. A small, irregularly shaped area on the ear is highlighted with a color gradient from green to red, indicating a hot spot. The head is positioned on a light blue rectangular base against a light blue background. |  A 2D map showing the hot spot position. It features a central red core, surrounded by a yellow ring, and then a green outer boundary. The shape is irregular, roughly oval, and is set against a white background. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band V Mid-Body-Towards Phantom (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;

Conv.F=6.79

Frequency: 835 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 53.66$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

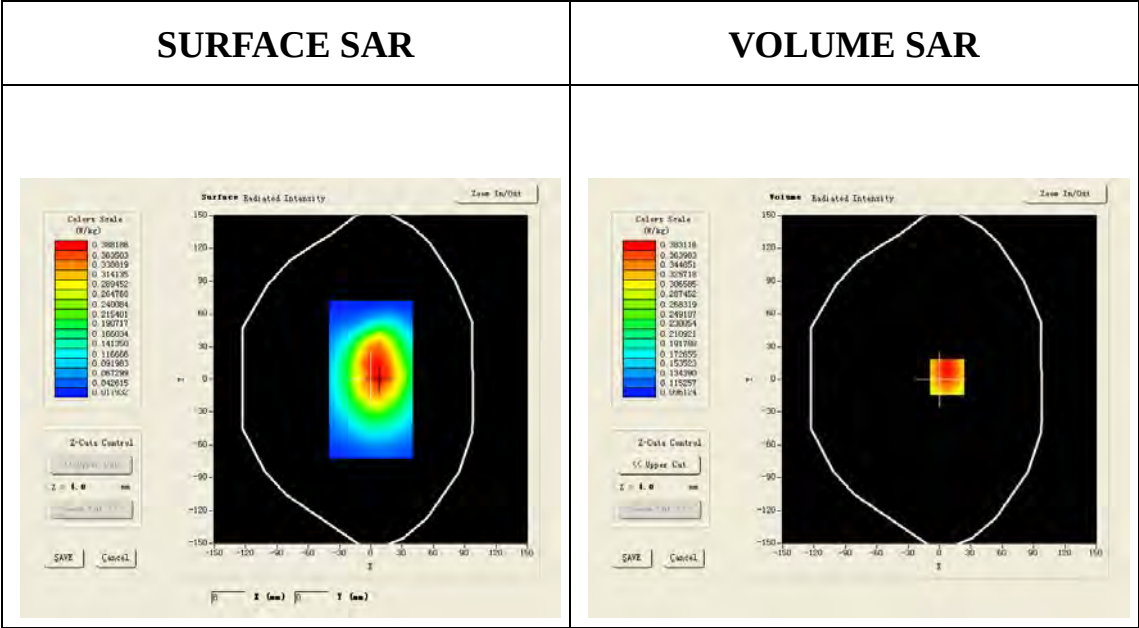
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

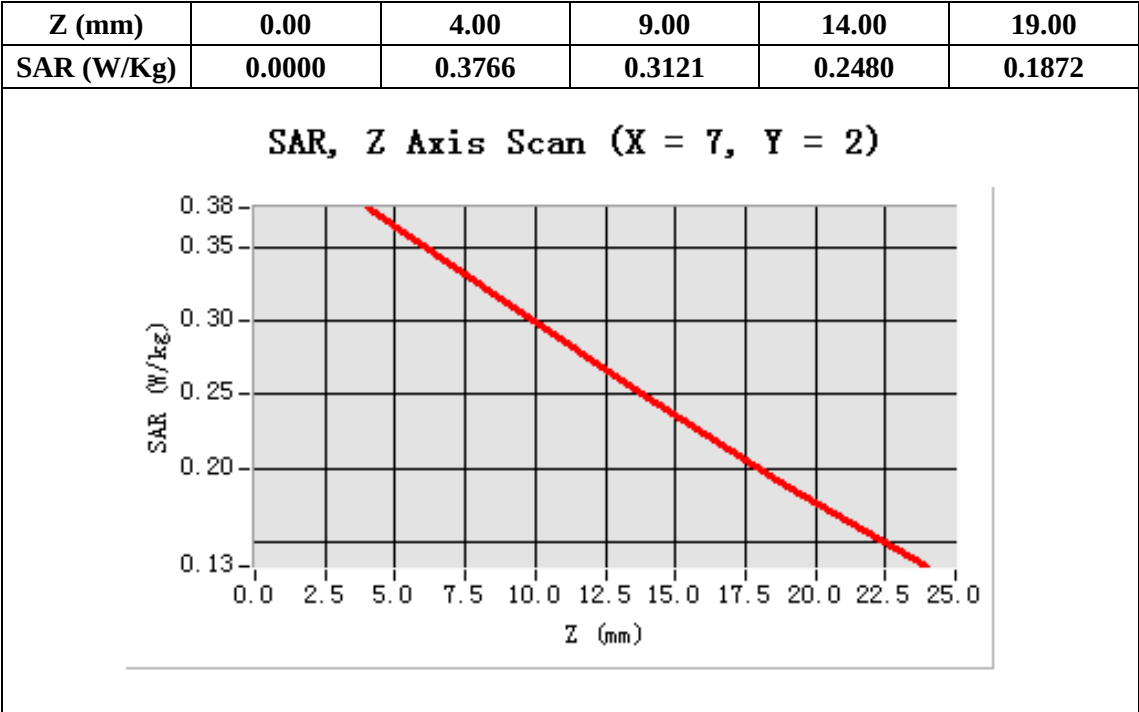
**Configuration/ WCDMA Band V Mid Body-Front/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm****Configuration/ WCDMA Band V Mid Body-Front/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;**

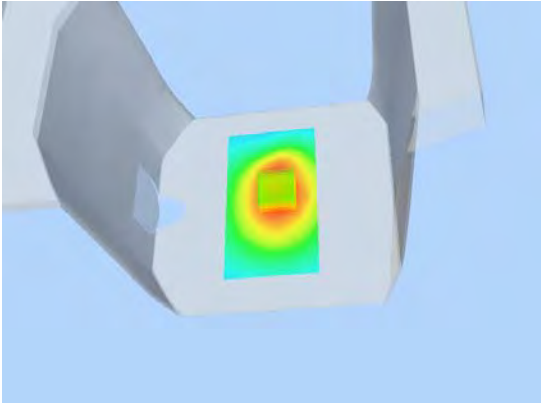
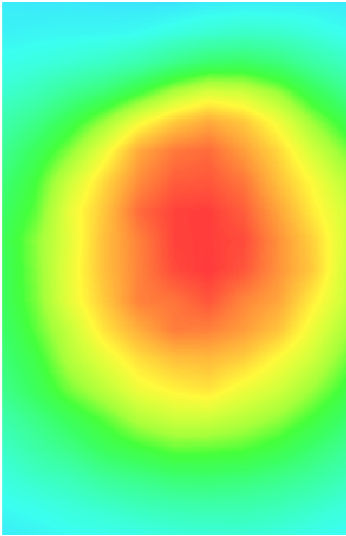
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body Front                           |
| <b>Band</b>            | WCDMA Band V                         |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



Maximum location: X=7.00, Y=2.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.300752 |
| SAR 1g (W/Kg)  | 0.401493 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                                                       | Hot spot position                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D CAD model of a mechanical part, possibly a bracket or housing, shown in a light blue color. A rectangular area on the front face of the part is highlighted with a color gradient overlay, indicating a hot spot. The gradient transitions from red at the center to yellow and then green towards the edges. |  A close-up view of the hot spot position. It shows a circular area with a color gradient. The center is red, transitioning through yellow to green at the outer edges, set against a light blue background. |

Test Laboratory: AGC Lab

Date: May 6, 2012

WCDMA Band V Mid-body- Towards Grounds(RMC)

DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication  
GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;  
Conv.F=6.79  
Frequency: 835 MHz; Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.96 \text{ mho/m}$ ;  $\epsilon_r = 53.66$ ;  $\rho = 1000$   
 $\text{kg/m}^3$  ; Phantom section: Flat Section  
Ambient temperature ( $^{\circ}\text{C}$ ):21, Liquid temperature ( $^{\circ}\text{C}$ ):21

Satimo Configuration:

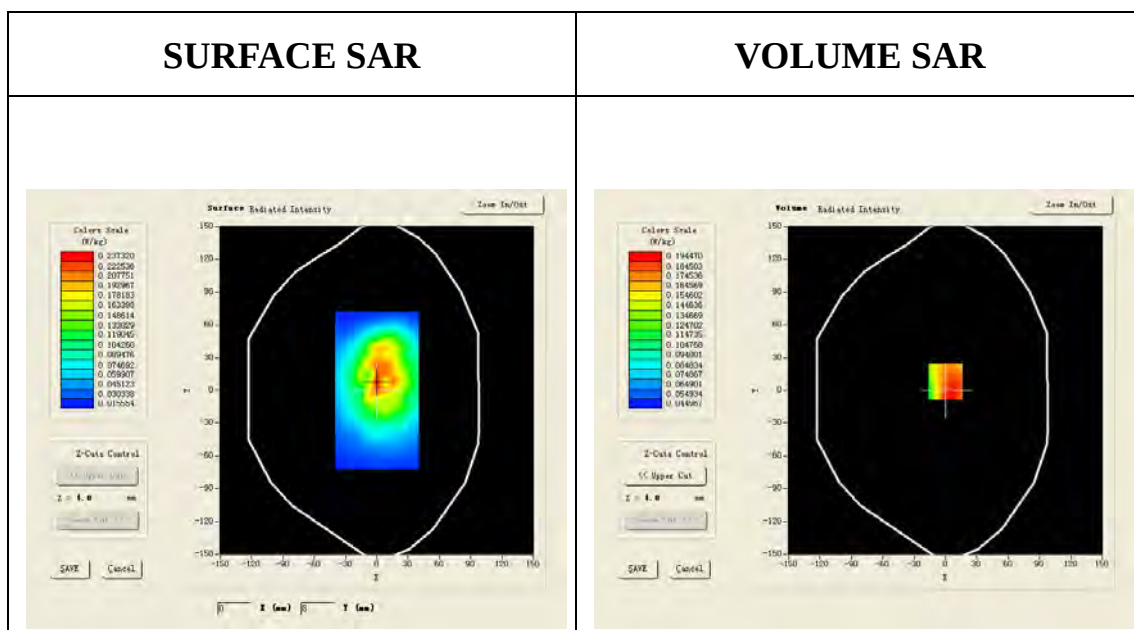
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

Configuration/ WCDMA Band V Mid Body- Back /Area Scan (6x8x1): Measurement grid: dx=20mm,  
dy=20mm

Configuration/ WCDMA Band V Mid Body- Back /Zoom Scan (5x5x7)/Cube 0: Measurement grid:  
dx=8mm,dy=8mm, dz=5mm;

|                 |                                      |
|-----------------|--------------------------------------|
| Area Scan       | surf_sam_plan.txt                    |
| ZoomScan        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| Phantom         | Validation plane                     |
| Device Position | Body Back                            |
| Band            | WCDMA Band V                         |
| Channels        | Middle                               |
| Signal          | TDMA (Crest factor: 1.0)             |

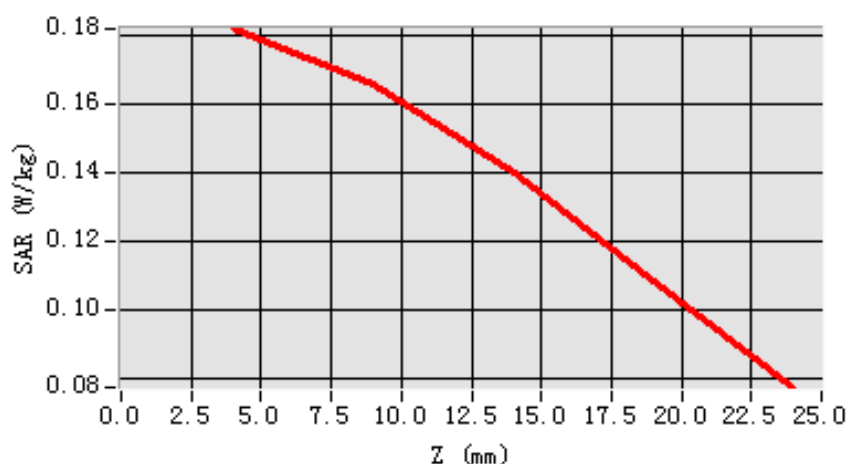


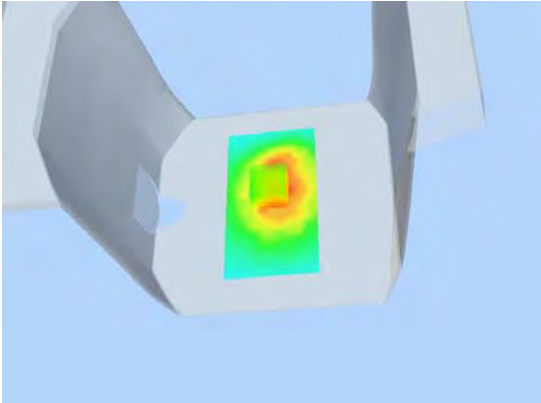
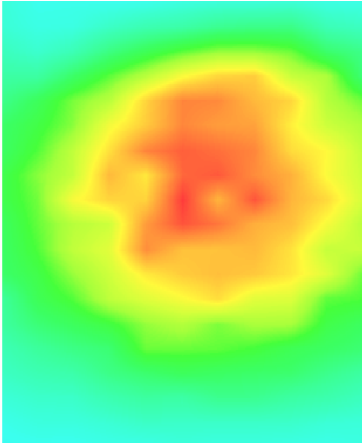
**Maximum location: X=0.00, Y=8.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.160651 |
| <b>SAR 1g (W/Kg)</b>  | 0.205404 |

|                   |               |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>0.1822</b> | <b>0.1660</b> | <b>0.1401</b> | <b>0.1083</b> |

**SAR, Z Axis Scan (X = 0, Y = 8)**



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Hot spot position                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D CAD model of a mechanical component, possibly a bracket or housing, shown in a light blue color. A rectangular area on the front face of the component is highlighted with a color gradient overlay, indicating a hot spot. The gradient ranges from green (low intensity) to red (high intensity), with the highest intensity concentrated in the center of the highlighted area. |  A 2D cross-sectional view of the hot spot area. It shows a circular or oval shape with a color gradient from green to red, indicating the intensity of the hot spot. The highest intensity (red) is concentrated in the center, with the intensity decreasing towards the edges (green). |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band V Mid-body- Towards Grounds(HSDPA)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication  
 GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;  
 Conv.F=6.79

Frequency: 835 MHz; Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.96 \text{ mho/m}$ ;  $\epsilon_r = 53.66$ ;  $\rho = 1000 \text{ kg/m}^3$  ; Phantom section: Flat Section

Ambient temperature ( $^{\circ}\text{C}$ ):21, Liquid temperature ( $^{\circ}\text{C}$ ):21

Satimo Configuration:

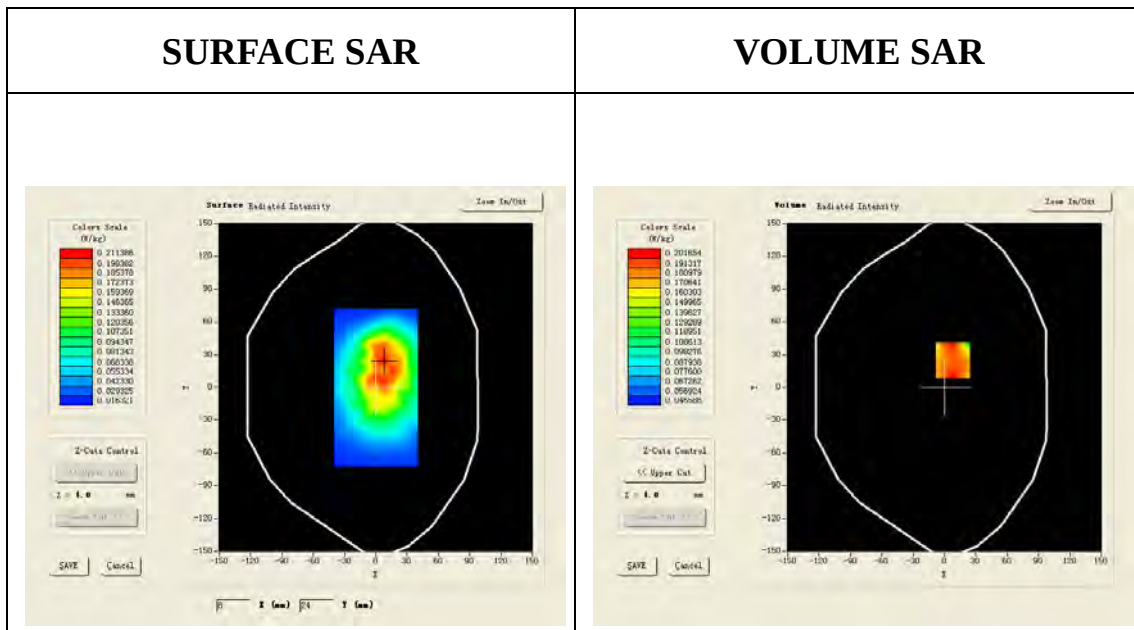
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA Band V Mid Body- Back /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm**

**Configuration/ WCDMA Band V Mid Body- Back /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body Back                            |
| <b>Band</b>            | WCDMA Band V                         |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |

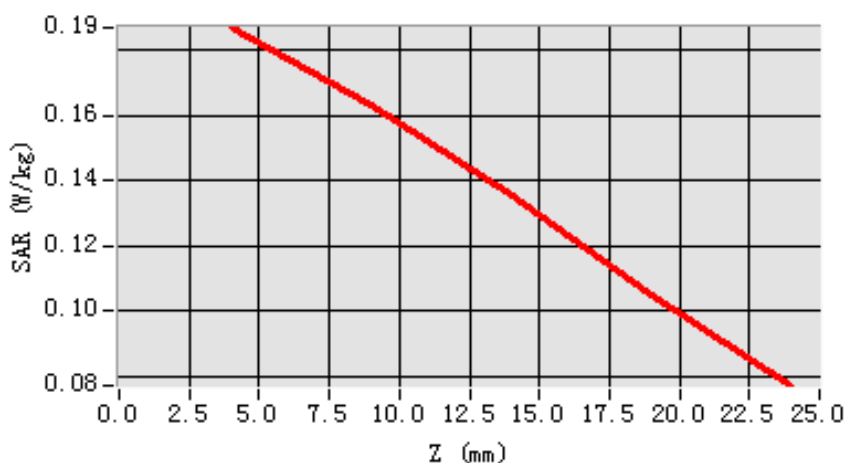


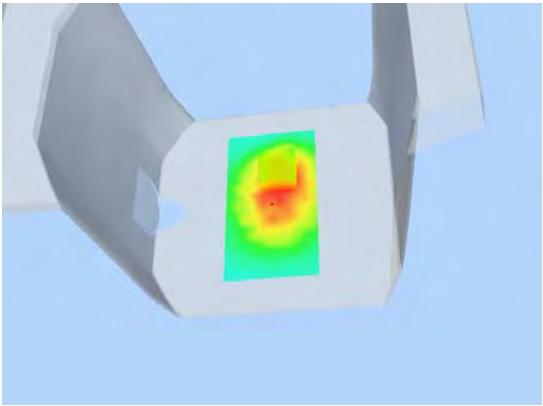
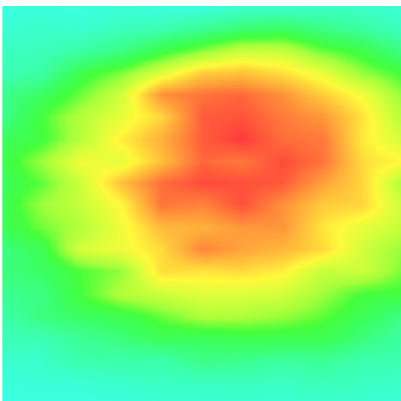
**Maximum location: X=8.00, Y=25.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.159144 |
| <b>SAR 1g (W/Kg)</b>  | 0.205453 |

| Z (mm)     | 0.00   | 4.00   | 9.00   | 14.00  | 19.00  |
|------------|--------|--------|--------|--------|--------|
| SAR (W/Kg) | 0.0000 | 0.1868 | 0.1631 | 0.1350 | 0.1051 |

**SAR, Z Axis Scan (X = 8, Y = 25)**



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band V Mid-body- Towards Grounds(with earphone)(RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;

Conv.F=6.79

Frequency: 835 MHz; Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.96 \text{ mho/m}$ ;  $\epsilon_r = 53.66$ ;  $\rho = 1000$ kg/m<sup>3</sup> ; Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

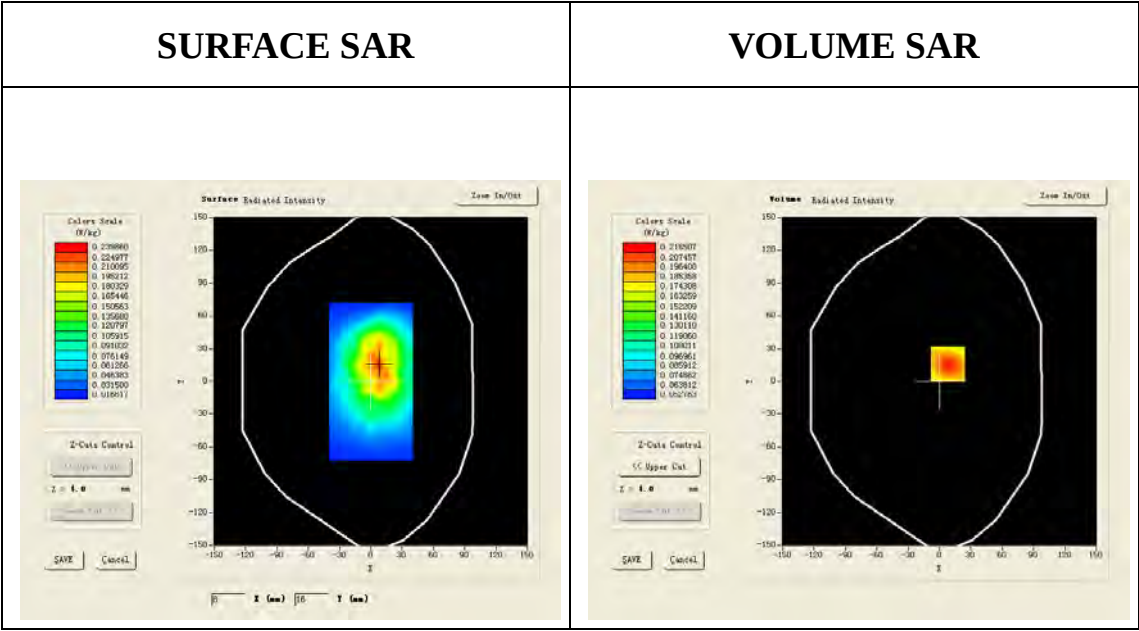
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

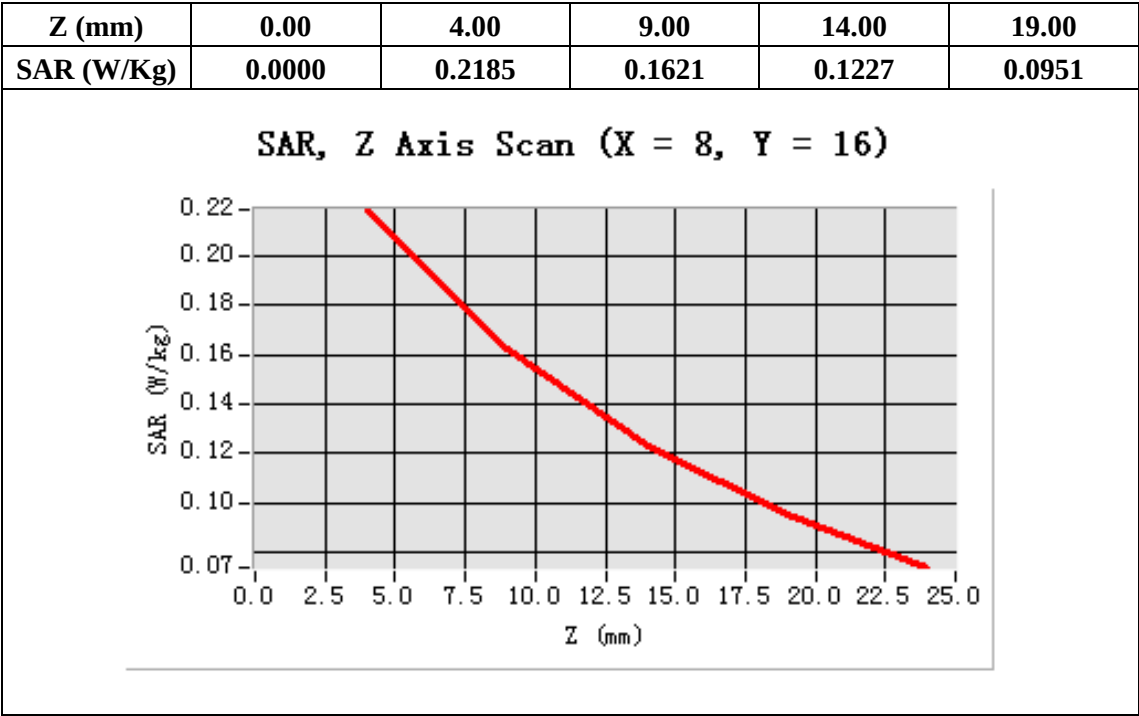
**Configuration/ WCDMA Band V Mid Body- Back /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm****Configuration/ WCDMA Band V Mid Body- Back /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;**

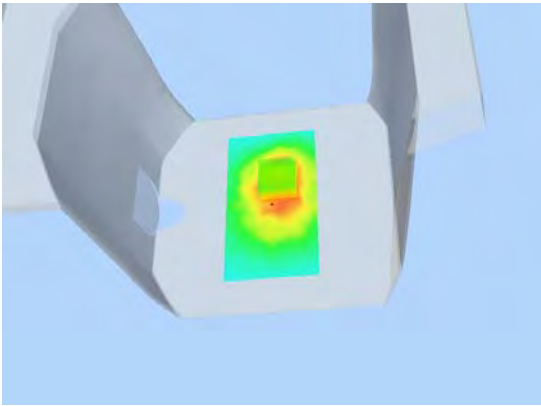
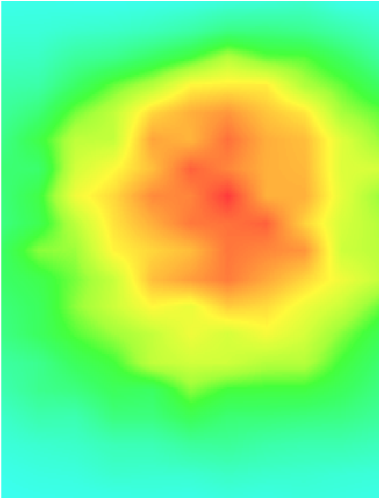
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body Back                            |
| <b>Band</b>            | WCDMA Band V                         |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



Maximum location: X=8.00, Y=16.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.160603 |
| SAR 1g (W/Kg)  | 0.225677 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab**

**data: May 6,2012**

**PCS 1900 Mid-Touch Left**

**DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;  
ConvF=6.42;Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ;  
 $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section  
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

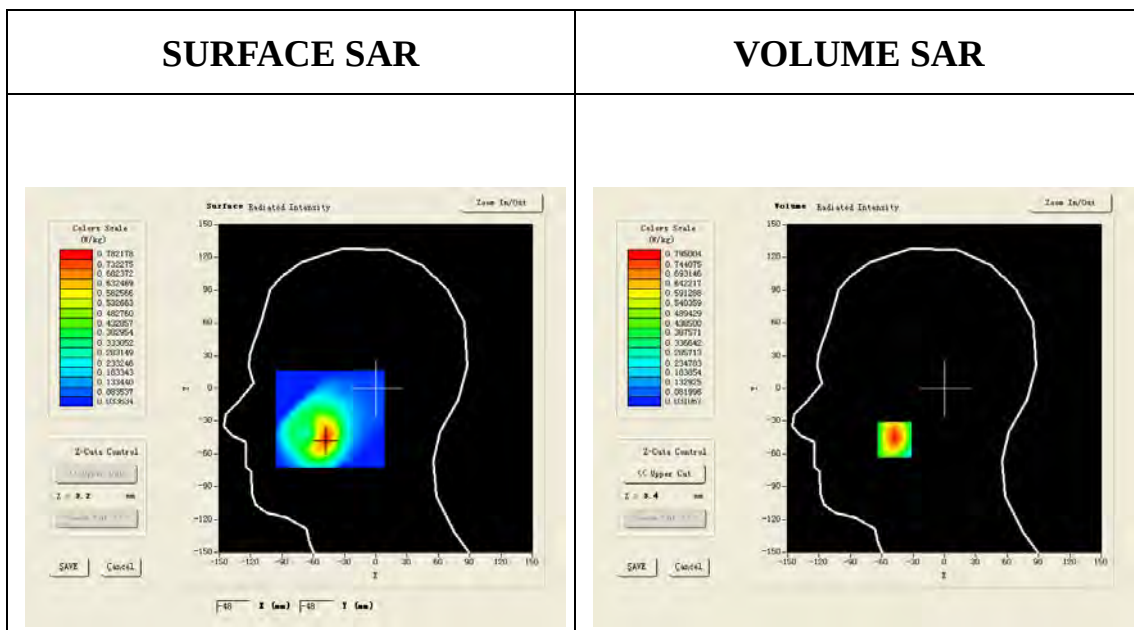
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/PCS1900 Mid Touch-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm**

**Configuration/PCS1900 Mid Touch-Left/Zoom Scan: Measurement grid: dx=8mm,  
dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Left head                            |
| <b>Device Position</b> | Cheek                                |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |

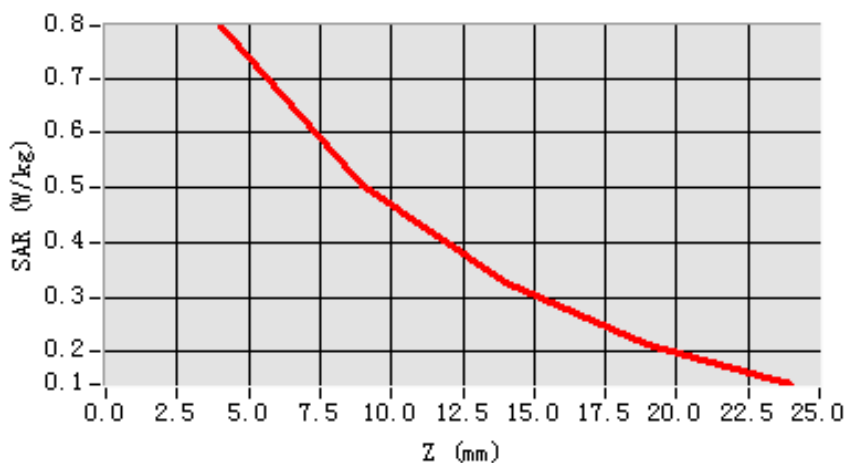


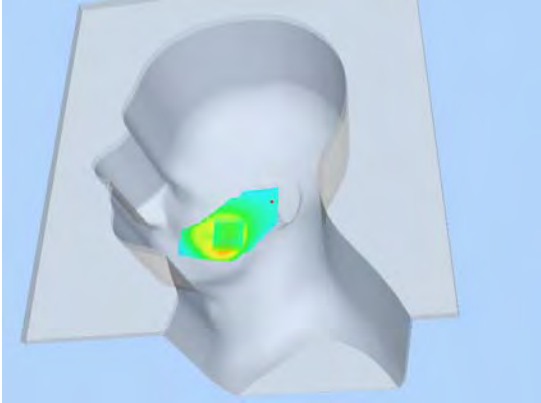
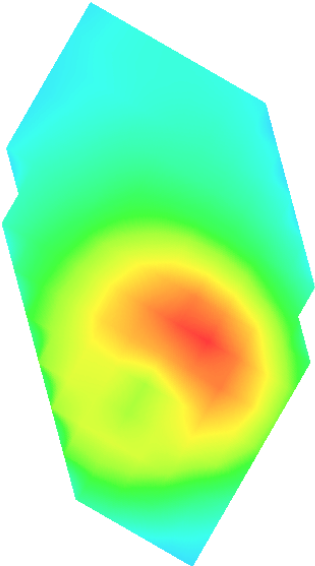
**Maximum location: X=-48.00, Y=-47.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.432558 |
| <b>SAR 1g (W/Kg)</b>  | 0.743700 |

|                   |               |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>0.7950</b> | <b>0.5050</b> | <b>0.3249</b> | <b>0.2151</b> |

**SAR, Z Axis Scan (X = -48, Y = -47)**



| 3D screen shot                                                                                                                                                                                                                                                                                                                                               | Hot spot position                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D rendering of a human head model in profile, facing left. The head is light blue. A small, irregularly shaped area on the face, near the eye, is highlighted with a color gradient from yellow to red, indicating a hot spot. The background is a light blue gradient. |  A 2D map showing the hot spot position. The map is irregularly shaped and filled with a color gradient from cyan to red. The red area is concentrated in the center, indicating the highest intensity of the hot spot. The map is set against a white background. |

**Test Laboratory: AGC Lab****data: May 6,2012****PCS 1900 Mid-Tilt-Left****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

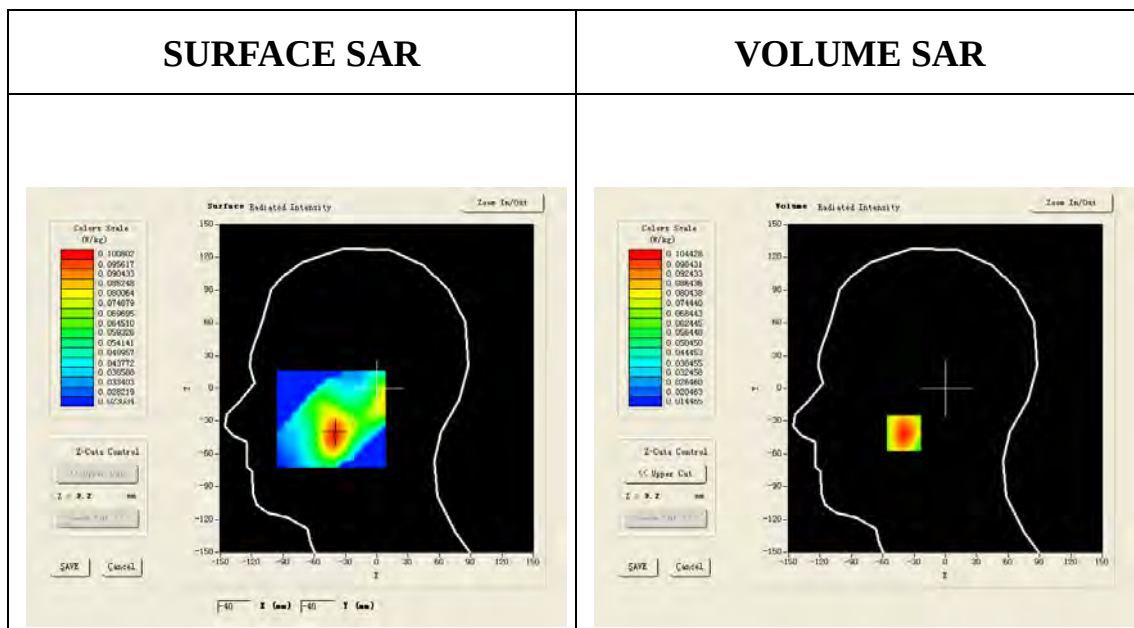
Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;  
 ConvF=6.42;Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section  
 Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/PCS1900 Mid Tilt-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/PCS1900 Mid Tilt-Left/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Left head                            |
| <b>Device Position</b> | Tilt                                 |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |

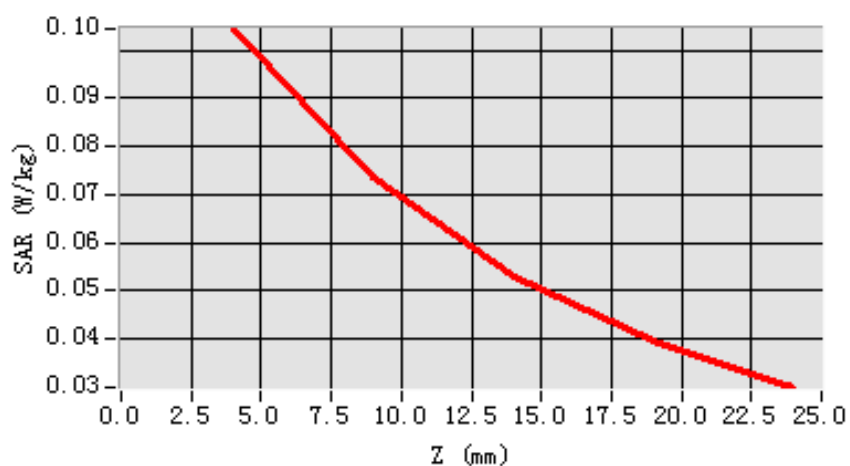


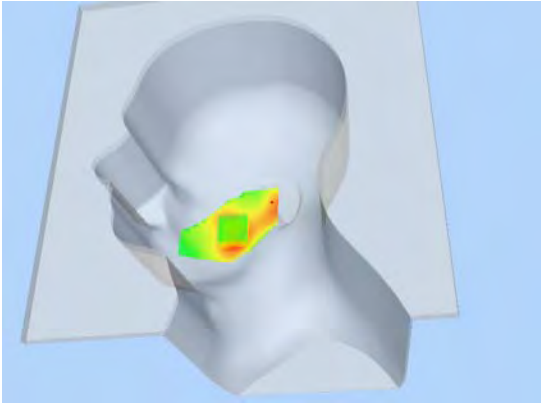
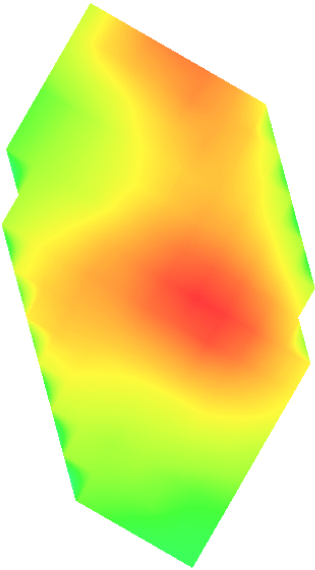
**Maximum location: X=-40.00, Y=-41.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.066365 |
| <b>SAR 1g (W/Kg)</b>  | 0.099151 |

|                   |               |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>0.1044</b> | <b>0.0734</b> | <b>0.0529</b> | <b>0.0396</b> |

**SAR, Z Axis Scan (X = -40, Y = -41)**



| 3D screen shot                                                                                                                                                                                                                                                                                                                                       | Hot spot position                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D model of a human head in profile, facing left. The head is rendered in a light blue color. A small, irregularly shaped area on the cheek is highlighted with a color gradient from green to red, indicating a hot spot. The background is a solid light blue. |  A close-up view of the hot spot area. It shows a color gradient from green to red, with the red area being the most intense. The shape is irregular and somewhat elongated. The background is white. |

**Test Laboratory: AGC Lab****data:May 6,2012****PCS 1900 Mid-Touch Right****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;

ConvF=6.42;Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Right Section

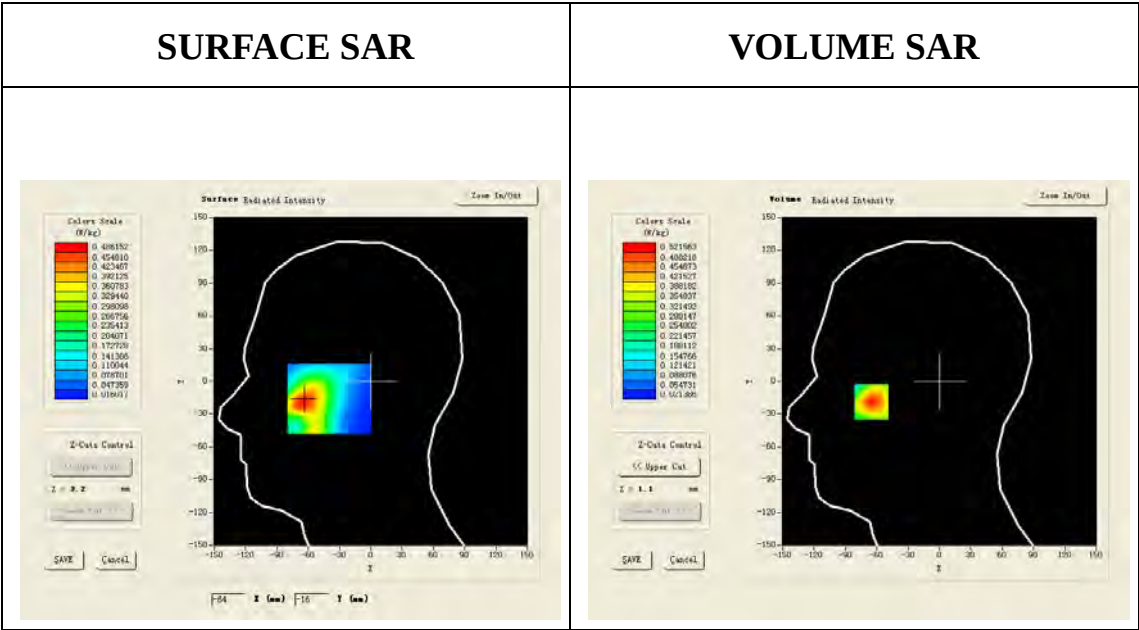
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

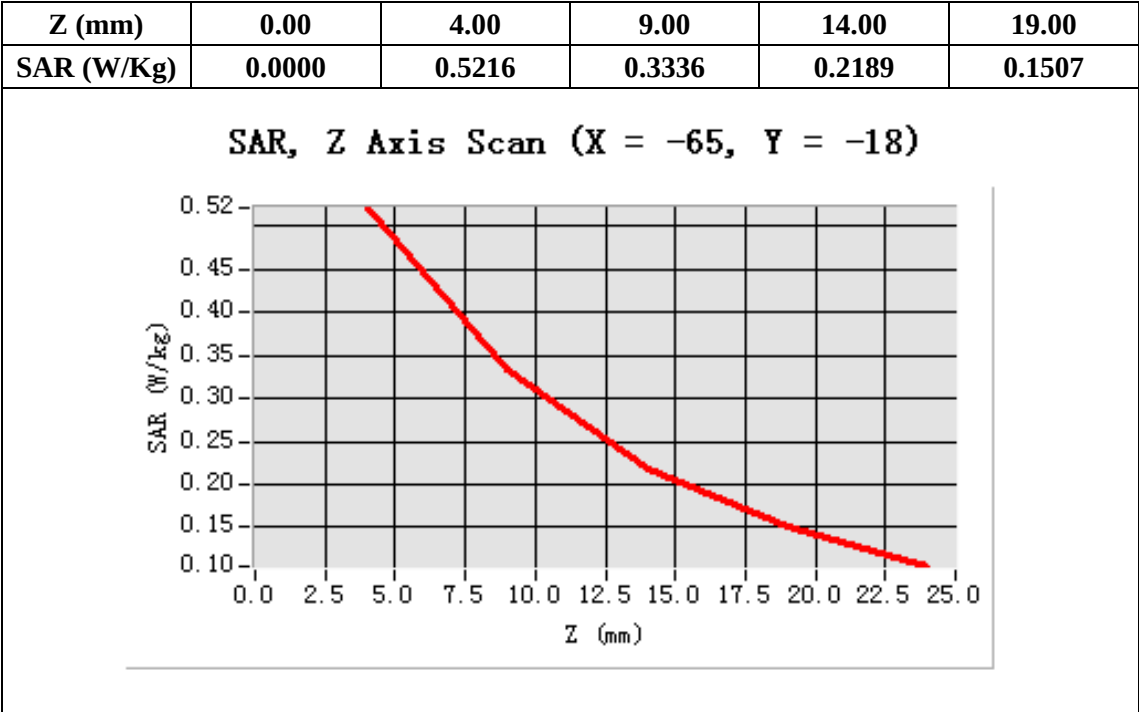
**Configuration/PCS1900 Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/PCS1900 Mid Touch-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

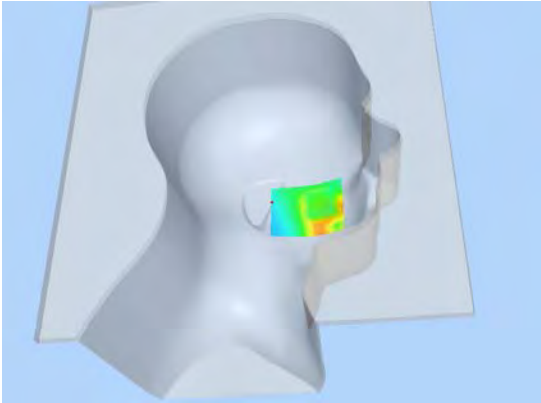
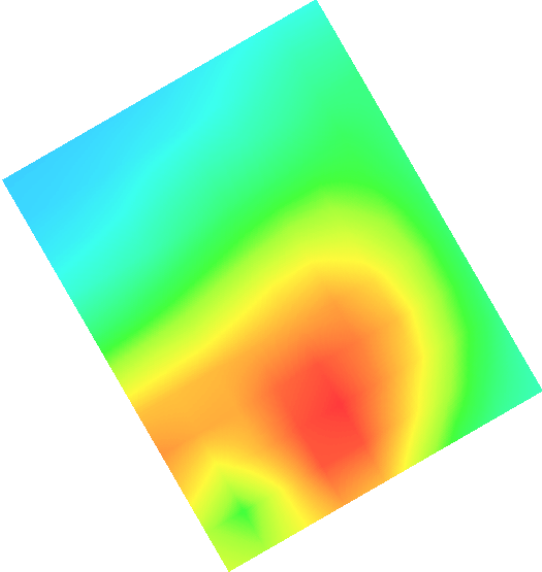
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Right head                           |
| <b>Device Position</b> | Cheek                                |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |



Maximum location: X=-65.00, Y=-18.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.296239 |
| SAR 1g (W/Kg)  | 0.490475 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                               | Hot spot position                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D rendering of a human head and neck model, shown in profile. A small, rectangular area on the side of the head is highlighted with a color gradient from blue to red, indicating a hot spot. The model is positioned on a light blue rectangular base. |  A 2D heatmap representing the hot spot position. The heatmap is tilted at an angle and shows a color gradient from blue (low intensity) to red (high intensity). The red area is concentrated in the lower right portion of the heatmap, indicating the location of the hot spot. |

**Test Laboratory: AGC Lab****data: May 6,2012****PCS 1900 Mid-Tilt Right****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

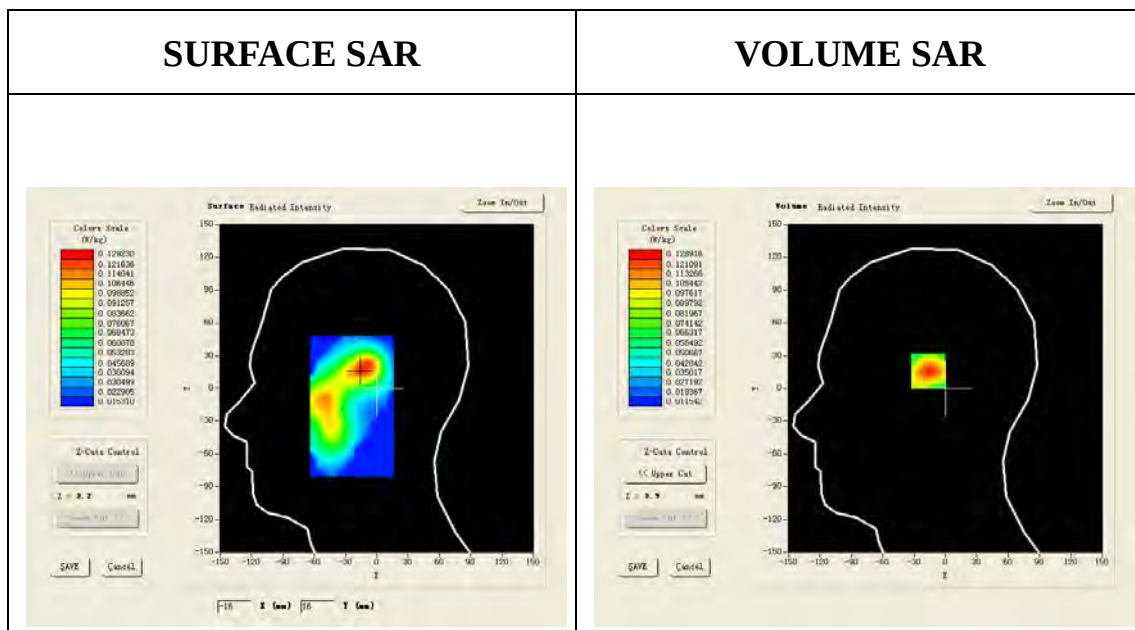
Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;  
ConvF=6.42; Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Right Section  
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/PCS1900 Mid Tilt-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/PCS1900 Mid Tilt-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Right head                           |
| <b>Device Position</b> | Tilt                                 |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |

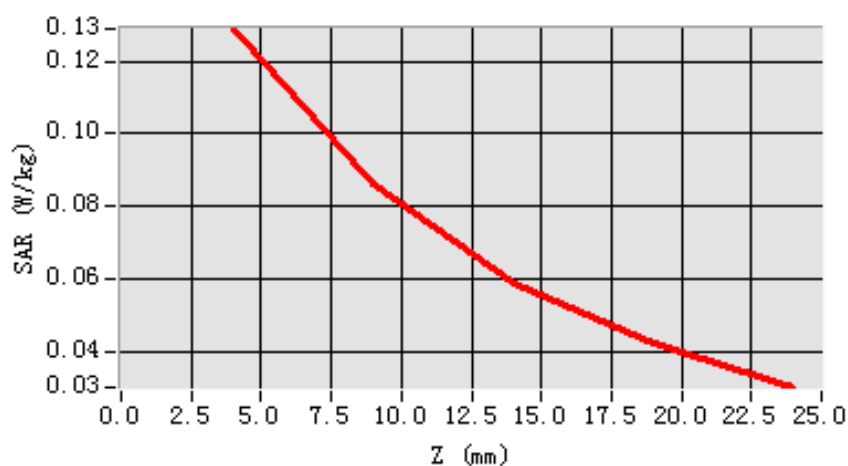


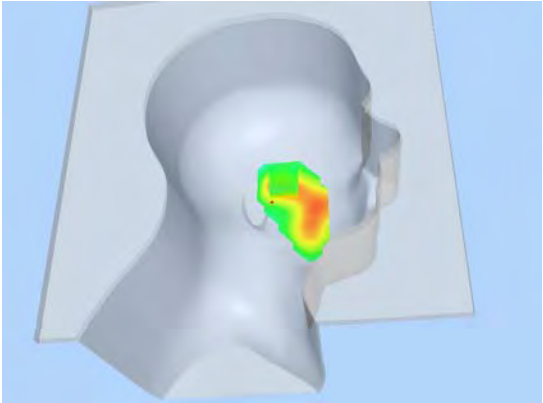
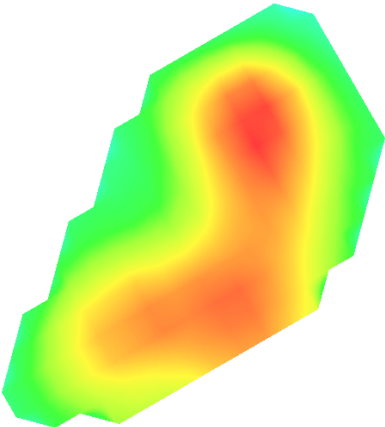
**Maximum location: X=-15.00, Y=17.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.076329 |
| <b>SAR 1g (W/Kg)</b>  | 0.121642 |

| Z (mm)     | 0.00   | 4.00   | 9.00   | 14.00  | 19.00  |
|------------|--------|--------|--------|--------|--------|
| SAR (W/Kg) | 0.0000 | 0.1289 | 0.0861 | 0.0589 | 0.0419 |

**SAR, Z Axis Scan (X = -15, Y = 17)**



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****data:May 6,2012****PCS 1900 Mid-Body Back****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;

ConvF=6.42;Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ;  $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Flat Section

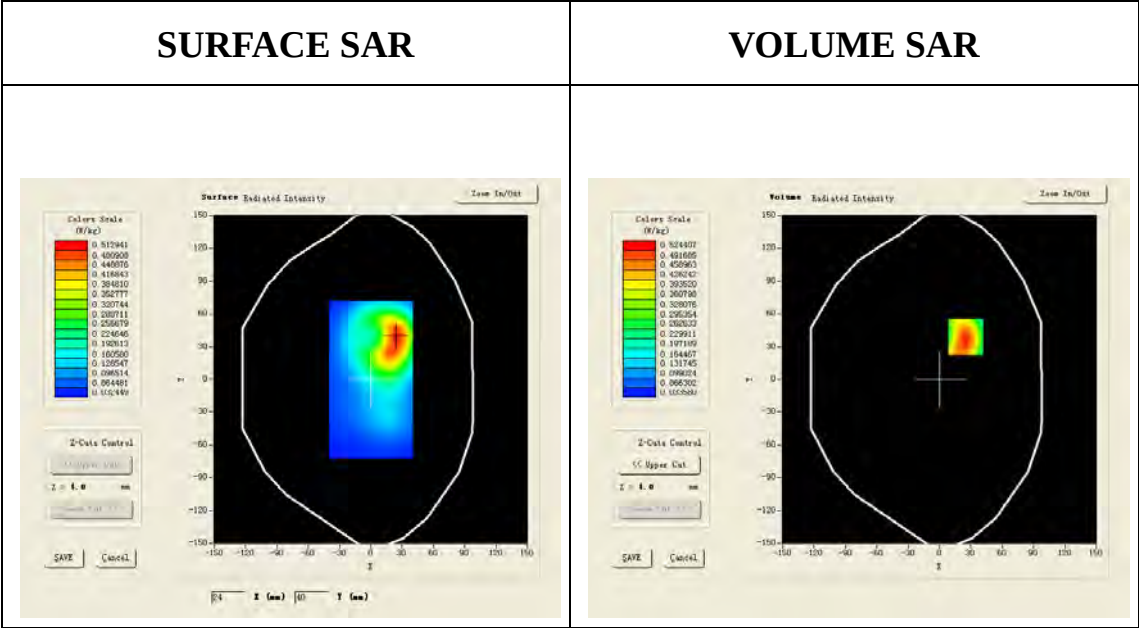
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

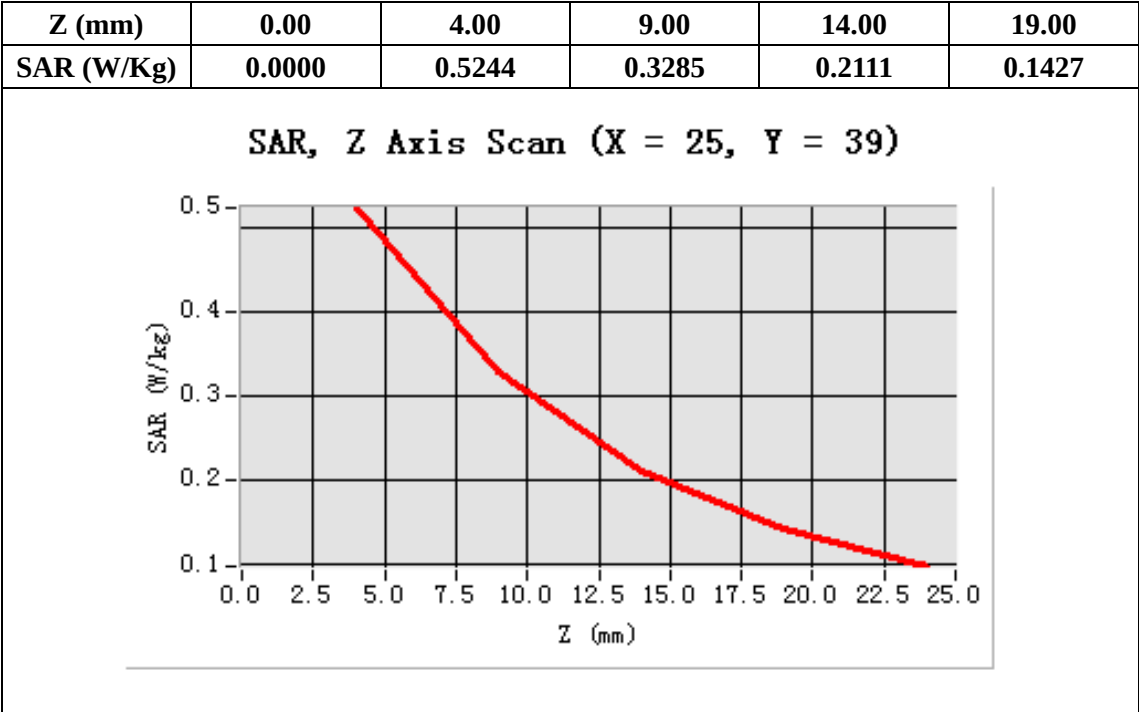
**Configuration/PCS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/PCS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

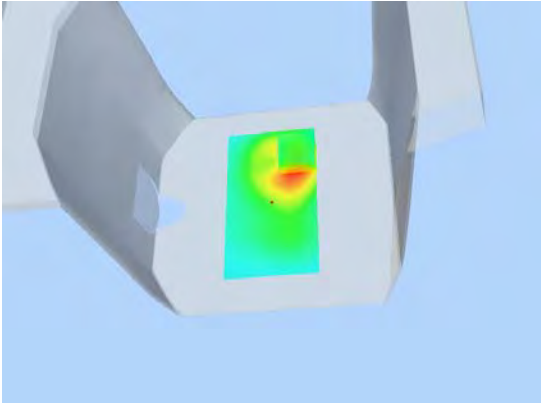
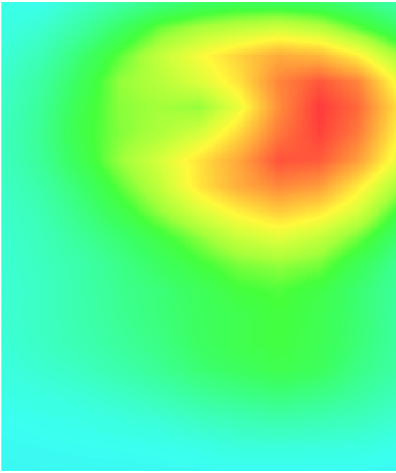
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |



Maximum location: X=25.00, Y=39.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.297065 |
| SAR 1g (W/Kg)  | 0.495308 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Hot spot position                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D CAD model of a mechanical component, possibly a bracket or housing, rendered in a light blue-grey color. A rectangular area on the front face of the part is highlighted with a color gradient overlay, indicating a hot spot. The gradient transitions from green on the left to yellow and then to a small, intense red area on the right, suggesting a localized high-temperature or high-stress region. |  A close-up, 2D view of the hot spot area. It shows a color gradient map where green represents lower values and red represents higher values. The highest intensity (red) is concentrated in a semi-circular or semi-elliptical shape on the right side of the image, fading through yellow to green towards the left. |

**Test Laboratory: AGC Lab****data: May 6,2012****PCS 1900 Mid-Body Back (2up)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: GPRS-2 Slot; Communication System Band: PCS1900; Duty Cycle: 1:4.2 ;

ConvF=6.42;

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section

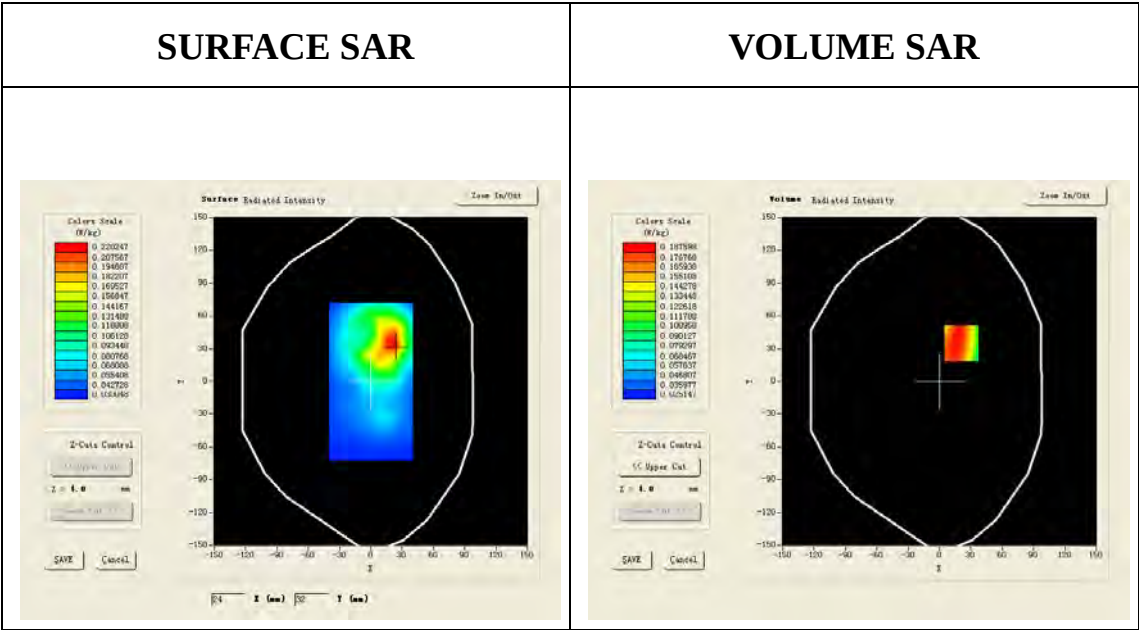
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

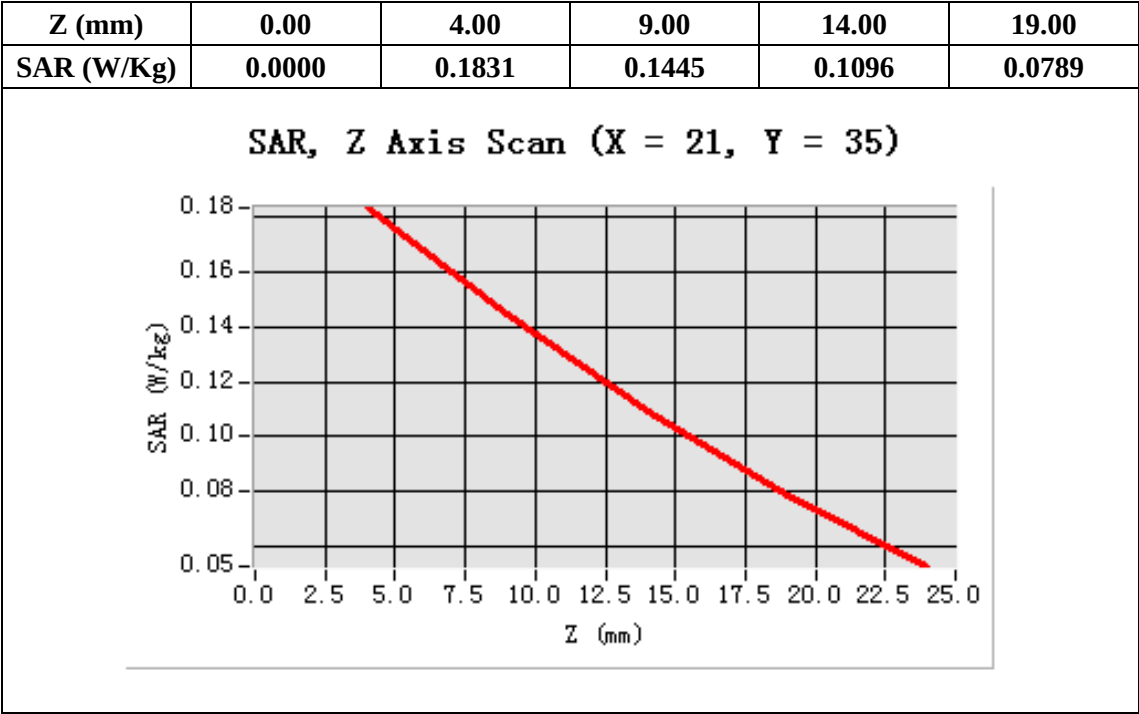
**Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm,  
dy=8mm, dz=5m;**

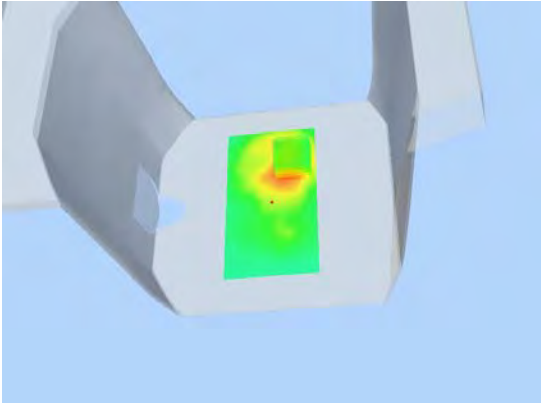
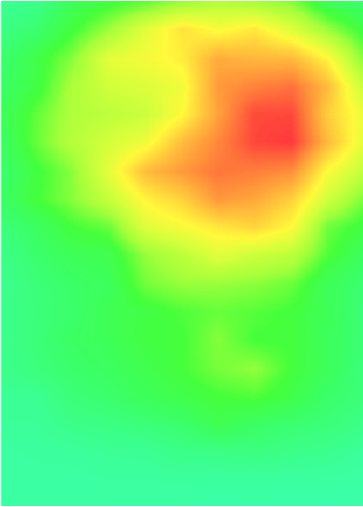
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 4.0)             |



Maximum location: X=21.00, Y=35.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.129941 |
| SAR 1g (W/Kg)  | 0.182405 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                      | Hot spot position                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D perspective view of a grey mechanical component against a light blue background. A rectangular area on the front face of the component is highlighted with a color-coded heatmap, showing a central red/orange hot spot transitioning to green at the edges. |  A rectangular heatmap representing the hot spot position. It features a large, irregularly shaped central region of red and orange, surrounded by a broad area of yellow and green, indicating a gradient of intensity. |

**Test Laboratory: AGC Lab****data:May 6,2012****PCS 1900 Mid-Body Back (3up)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: GPRS-3 Slot; Communication System Band: PCS 1900; Duty Cycle:1:2.8 ;  
ConvF=6.42;

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$   $\rho = 1000$   
kg/m<sup>3</sup> ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

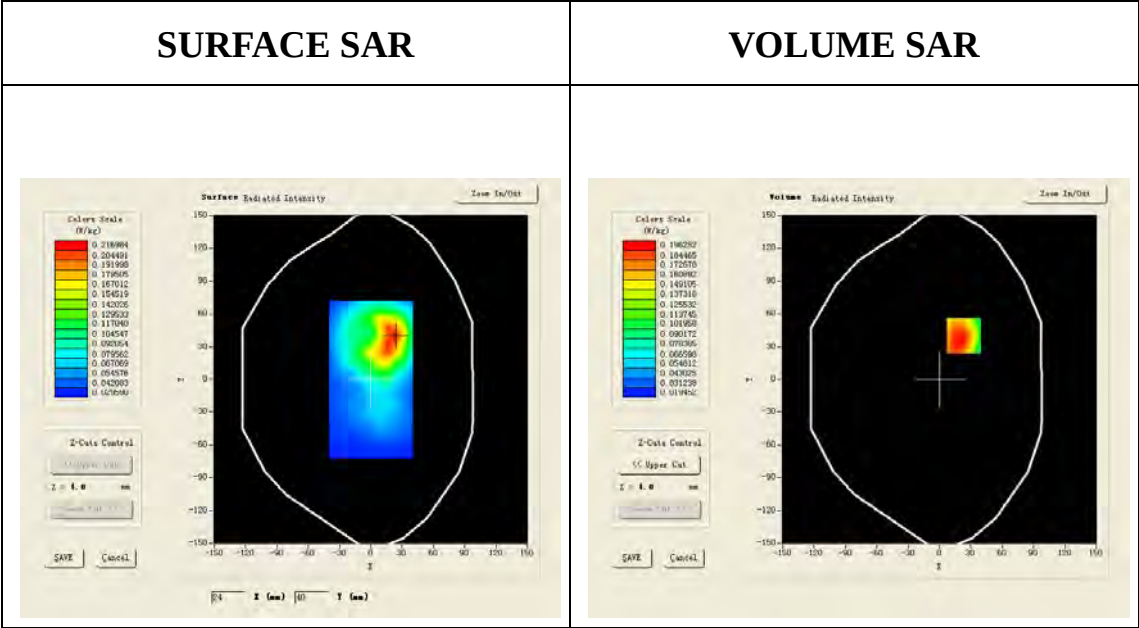
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm**

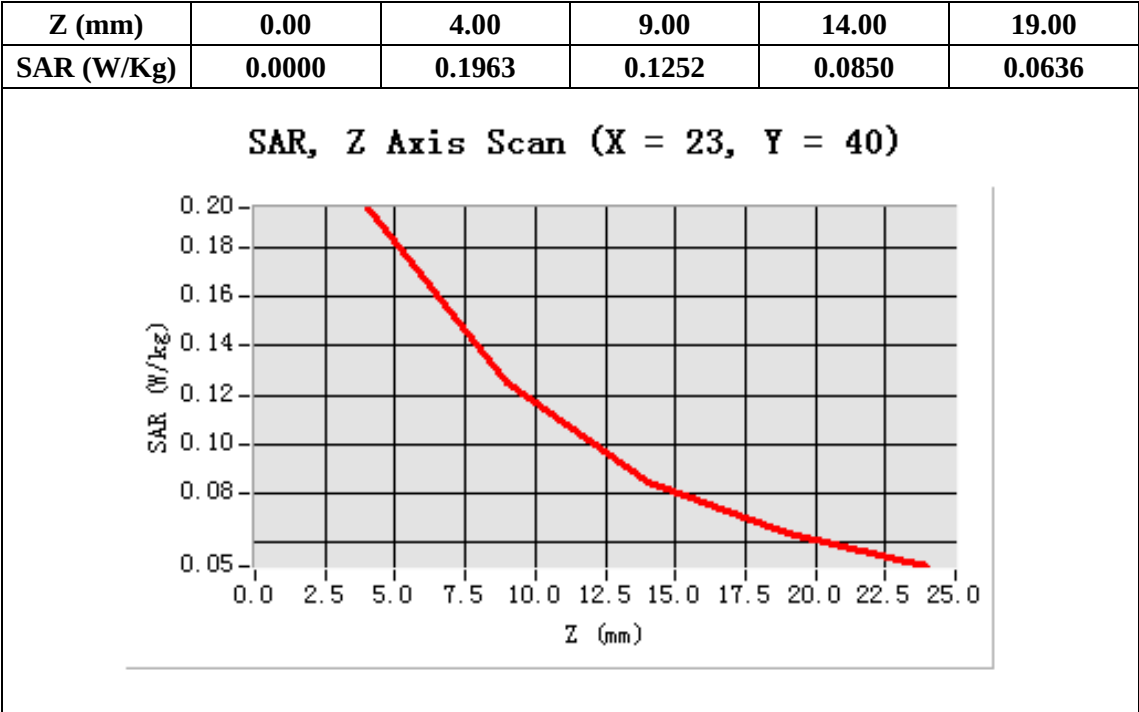
**Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm,  
dy=8mm, dz=5mm;**

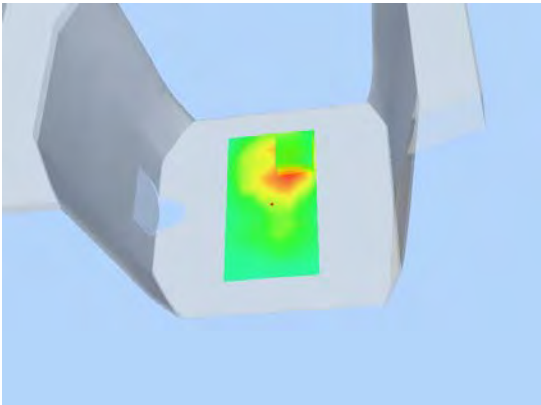
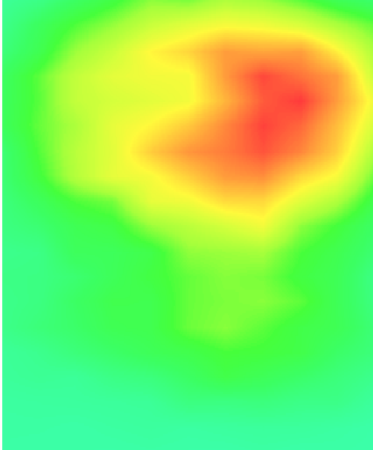
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 2.7)             |



Maximum location: X=23.00, Y=40.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.125253 |
| SAR 1g (W/Kg)  | 0.191211 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                                                                                 | Hot spot position                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D CAD model of a mechanical part, possibly a bracket or housing, shown in a light blue color. A rectangular area on the front face of the part is highlighted with a color gradient overlay, indicating a hot spot. The gradient transitions from green at the edges to a bright red/yellow center, signifying a high-temperature region. |  A close-up, 2D view of the hot spot area. It shows a color gradient map where the central region is bright red, indicating the highest temperature, surrounded by yellow and green areas, which represent decreasing temperature levels. The background is a uniform green. |

**Test Laboratory: AGC Lab****data:May 6,2012****PCS 1900 Mid-Body Back (4up)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: GPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle:1:2.1 ;  
 ConvF=6.42;Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ;  $\rho = 1000$

kg/m<sup>3</sup> ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

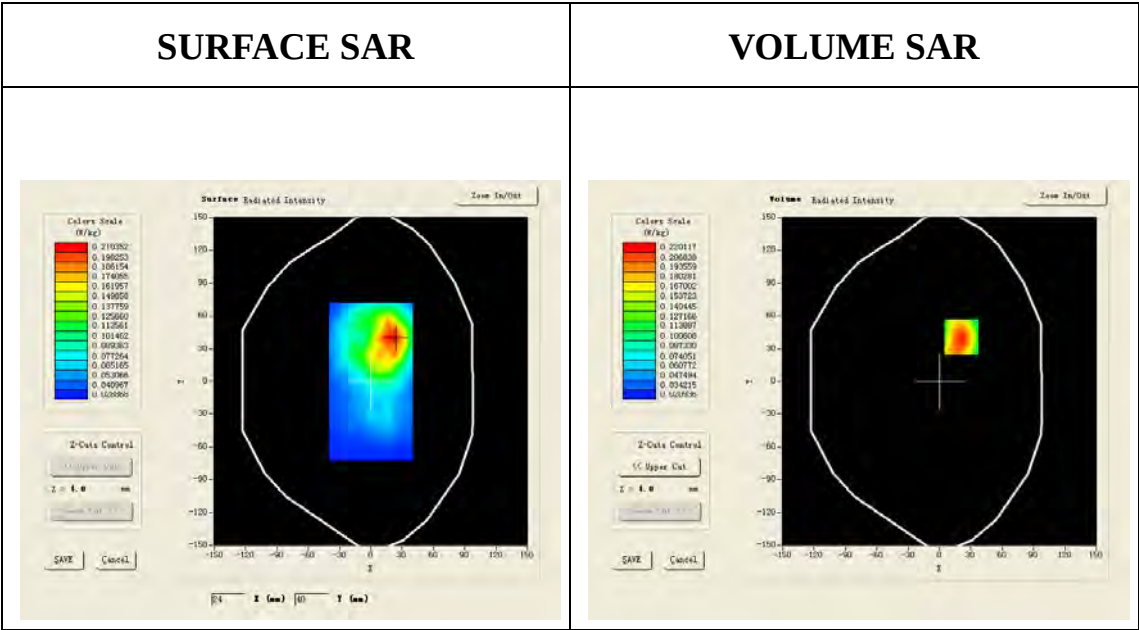
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm**

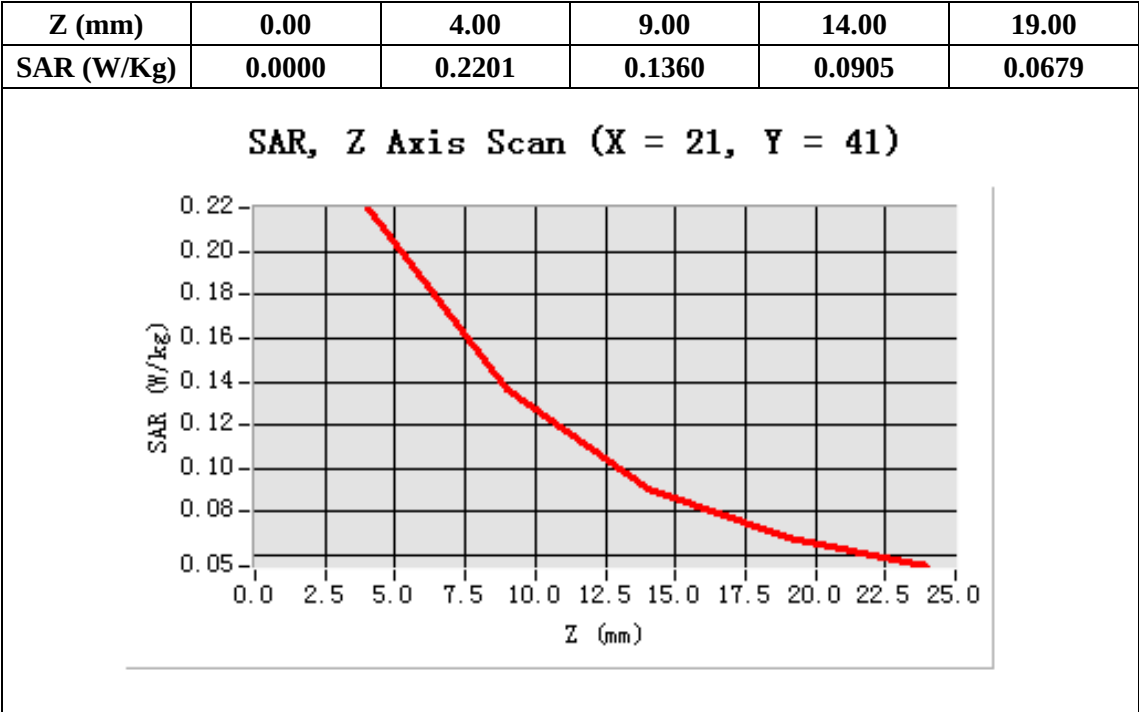
**Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm,  
 dy=8mm, dz=5mm;**

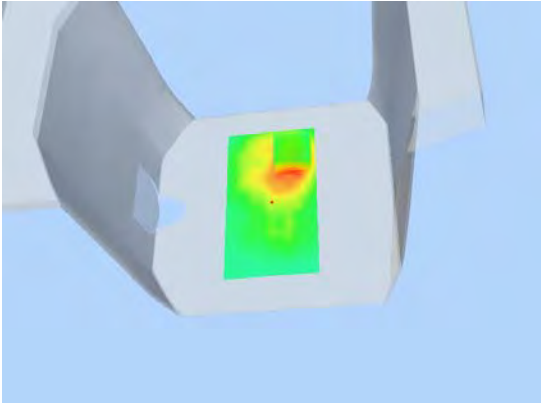
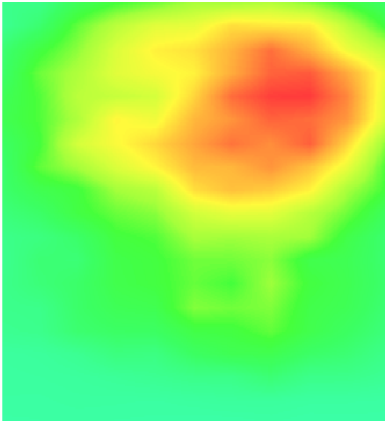
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 2.0)             |



Maximum location: X=21.00, Y=41.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.130240 |
| SAR 1g (W/Kg)  | 0.208895 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                                                                                                | Hot spot position                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D CAD model of a mechanical part, possibly a bracket or housing, shown in a light blue color. A rectangular area on the front face of the part is highlighted with a color gradient overlay, indicating a hot spot. The gradient transitions from green at the edges to a bright red/yellow center, signifying a high-temperature or high-stress region. |  A close-up, 2D view of the hot spot area. It shows a circular or oval-shaped region with a color gradient from green to yellow to a central red core, representing the intensity of the hot spot. The surrounding area is a uniform green. |

**Test Laboratory: AGC Lab****data:May 6,2012****PCS 1900 Body Front (MS)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle:

1:8.3 ; ConvF=6.42;Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ;  $\rho = 1000$ kg/m<sup>3</sup> ; Phantom section: Flat Section

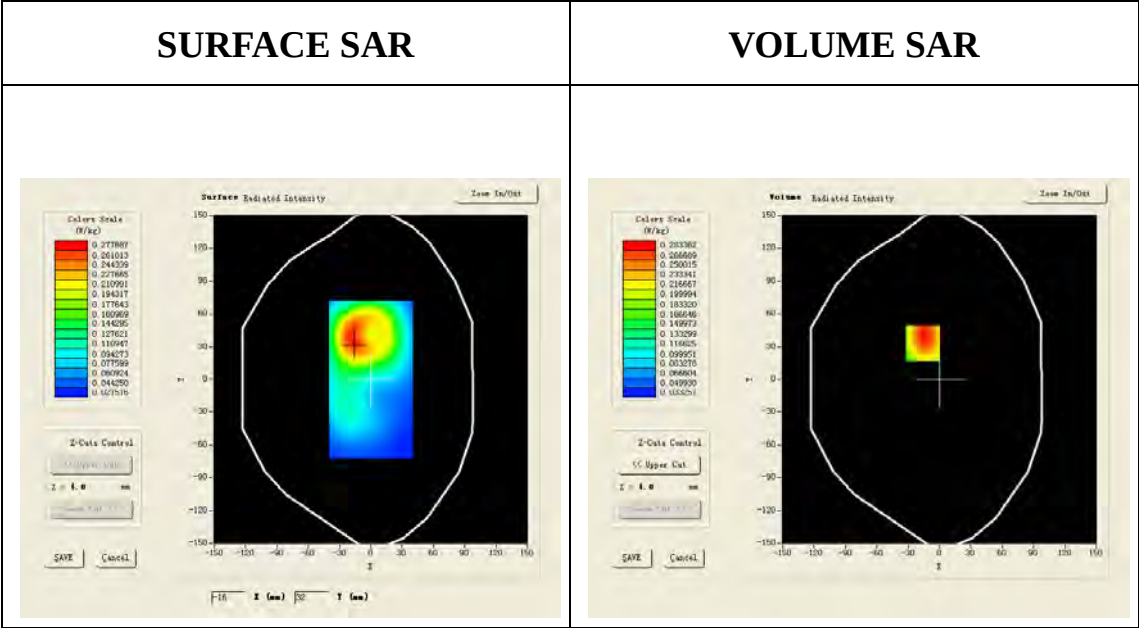
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

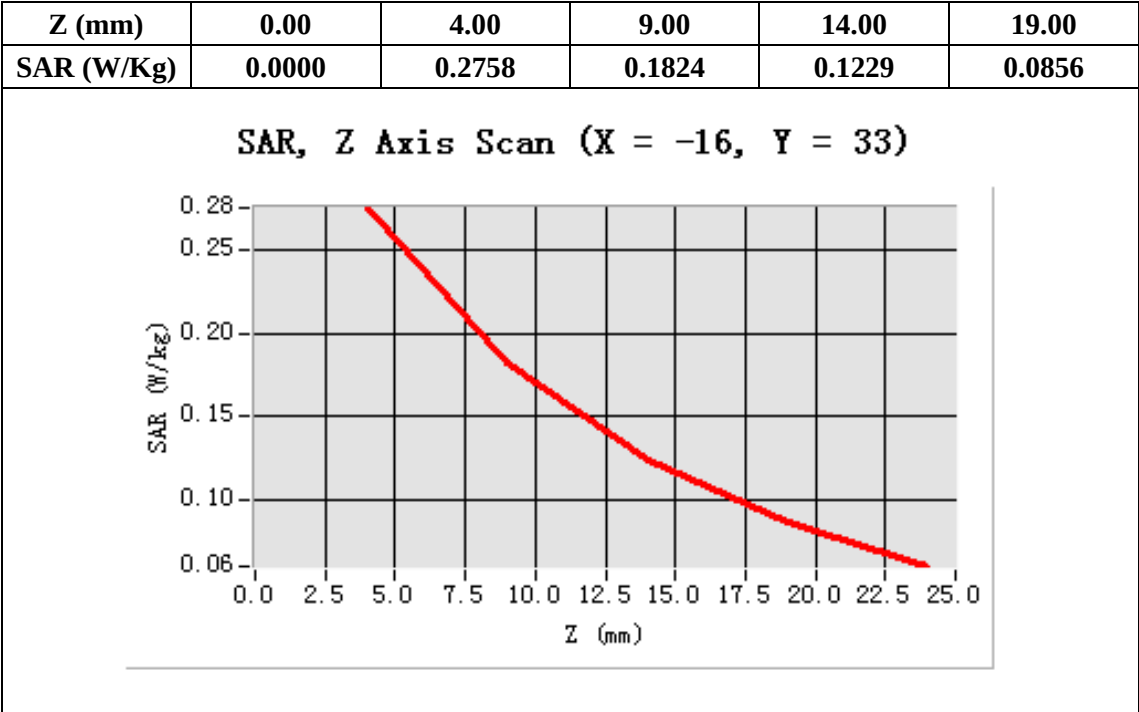
**Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

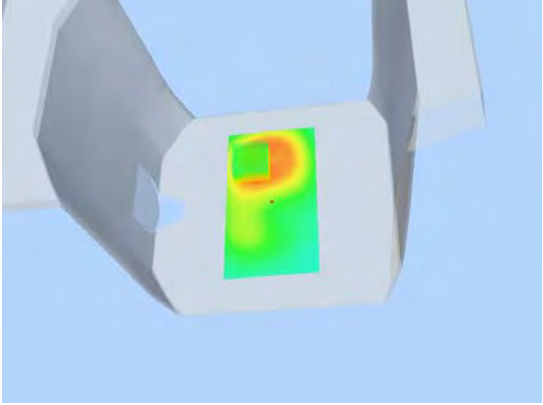
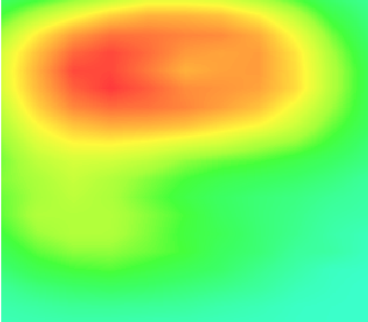
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 8.0)             |



Maximum location: X=-16.00, Y=33.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.176080 |
| SAR 1g (W/Kg)  | 0.270560 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****data: May 6,2012****PCS 1900 Mid-Body Back (MS with headset)****DUT: GSM/WCDMA mobile phone/Smart phone (Fusion); Type: QS-G3UCT1BK**

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle:

1:8.3 ; ConvF=6.42;Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ; $\rho = 1000$ kg/m<sup>3</sup> ; Phantom section: Flat Section

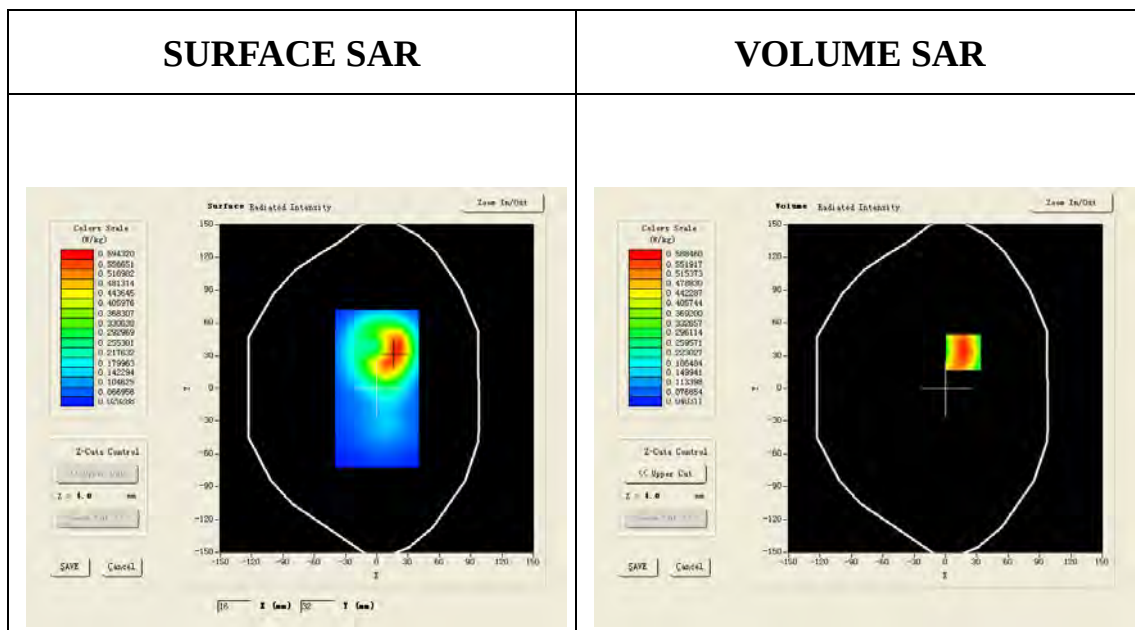
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

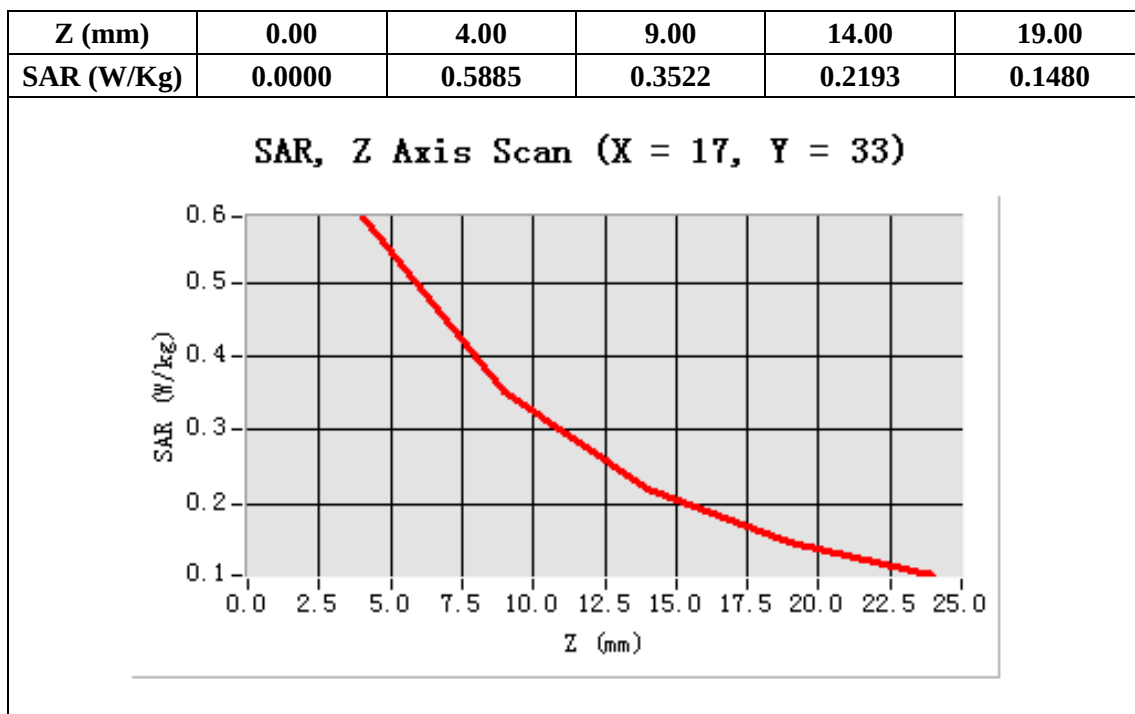
**Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

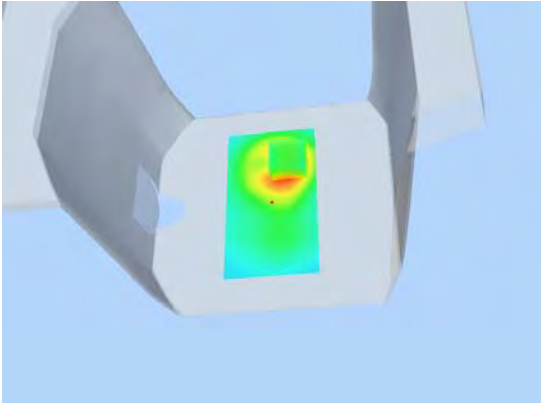
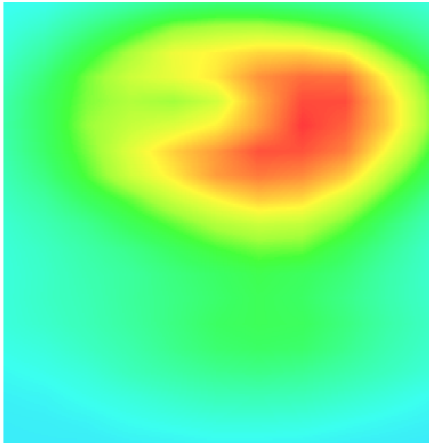
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body                                 |
| <b>Band</b>            | GSM1900                              |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor:8.0)              |



**Maximum location: X=17.00, Y=33.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.333850 |
| <b>SAR 1g (W/Kg)</b>  | 0.557483 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                  | Hot spot position                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D perspective view of a grey mechanical component, possibly a bracket or housing. A rectangular area on its front face is highlighted with a color-coded overlay, showing a hot spot in red and yellow, transitioning to green and blue towards the edges. |  A 2D rectangular heatmap representing the spatial distribution of the hot spot. The color scale ranges from blue (low intensity) to red (high intensity). The highest intensity (red) is concentrated in a central, irregularly shaped region, surrounded by concentric rings of yellow, green, and finally blue at the outer edges. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band II Mid-Touch Left (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ; $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section

Ambient temperature (°C):21, Liquid temperature (°C):21

Satimo Configuration:

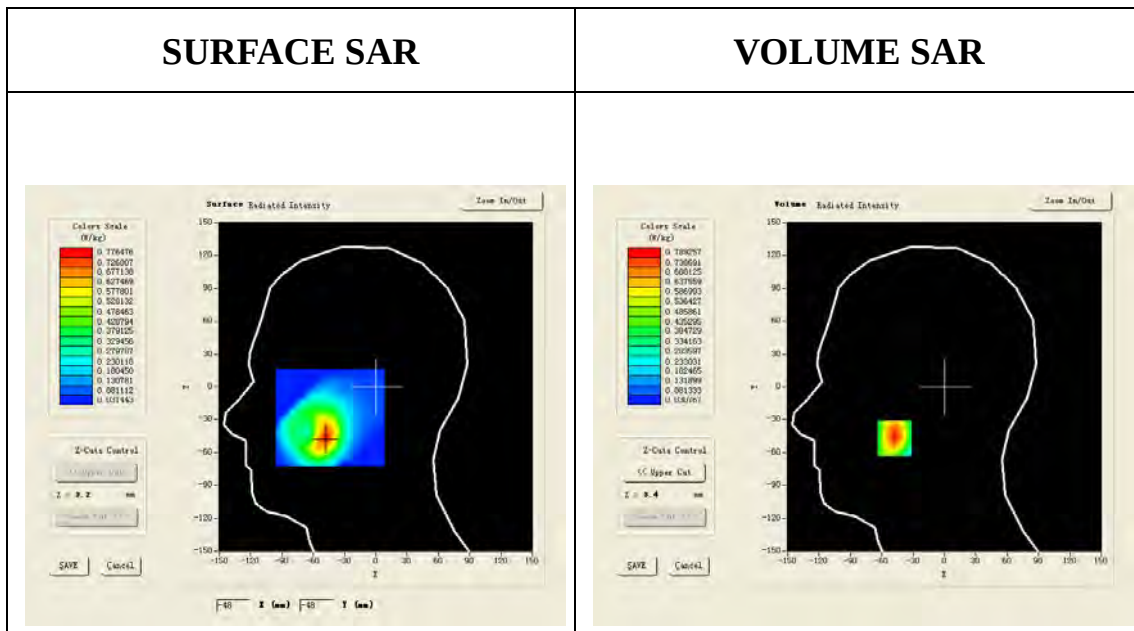
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA Band II Mid Touch-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm**

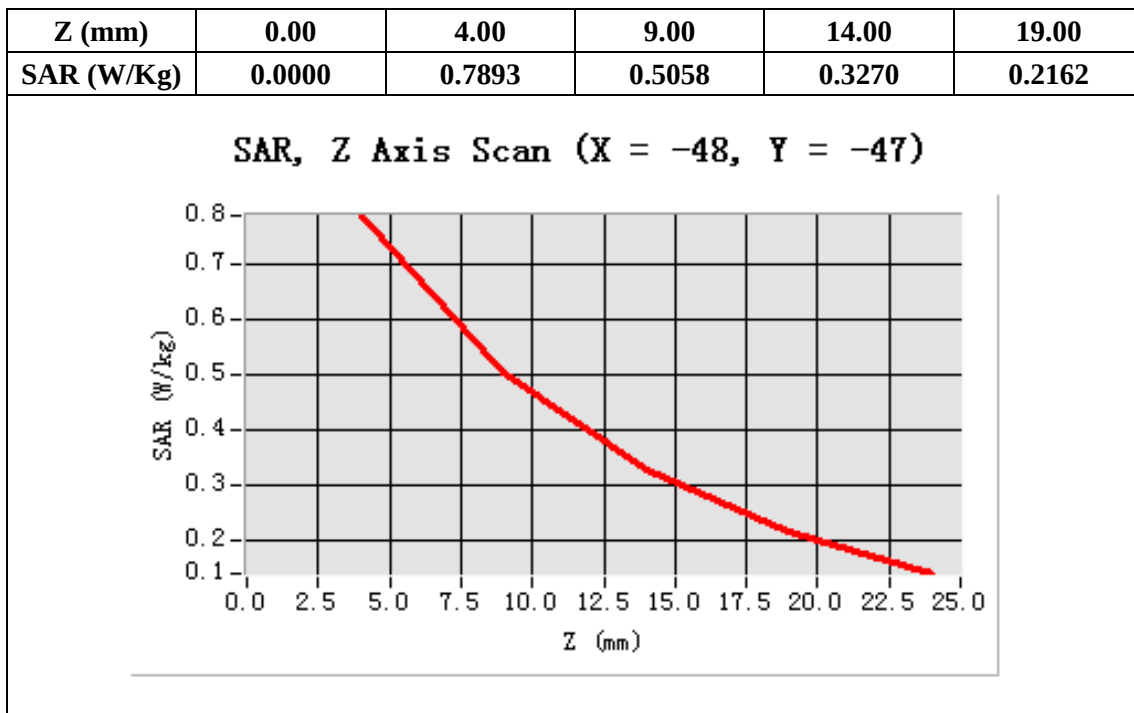
**Configuration/ WCDMA Band II Mid Touch-Left/Zoom Scan: Measurement grid: dx=8mm,**  
**dy=8mm, dz=5mm;**

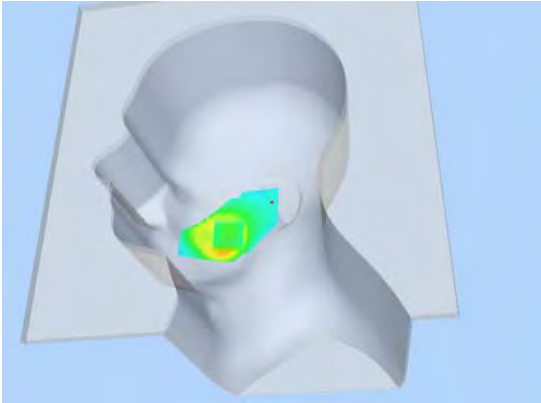
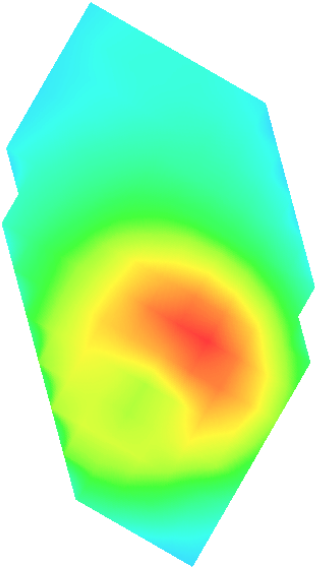
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Left head                            |
| <b>Device Position</b> | Cheek                                |
| <b>Band</b>            | WCDMA Band II                        |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



**Maximum location: X=-48.00, Y=-47.00**

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.433153 |
| SAR 1g (W/Kg)  | 0.739767 |



| 3D screen shot                                                                    | Hot spot position                                                                   |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA Band II Mid-Tilt-Left (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

C Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ; $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section

Ambient temperature (°C):21, Liquid temperature (°C):21

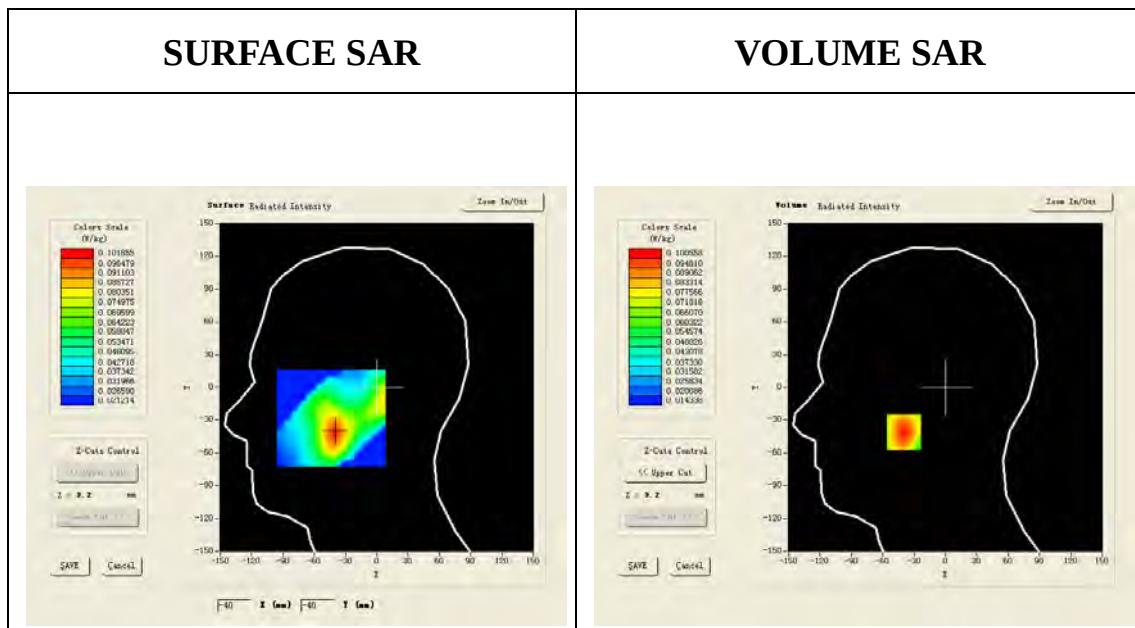
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA Band II Mid Tilt-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/ WCDMA Band II Mid Tilt-Left/Zoom Scan: Measurement grid: dx=8mm,****dy=8mm, dz=5mm;**

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Left head                            |
| <b>Device Position</b> | Tilt                                 |
| <b>Band</b>            | WCDMA Band II                        |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |

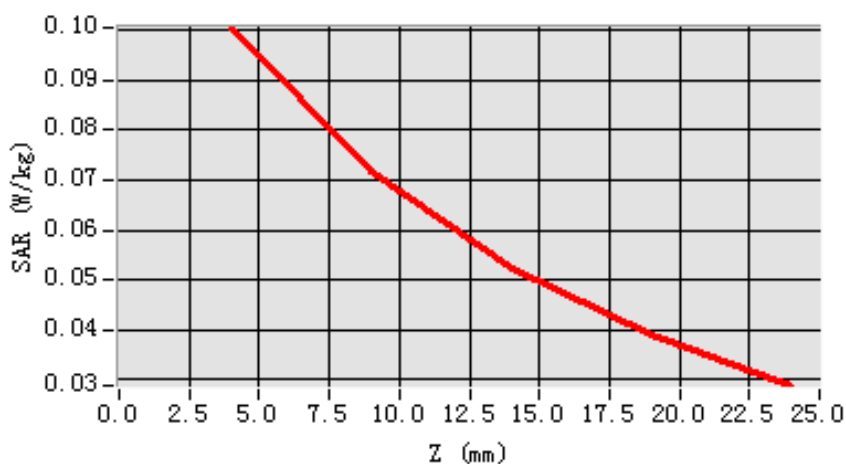


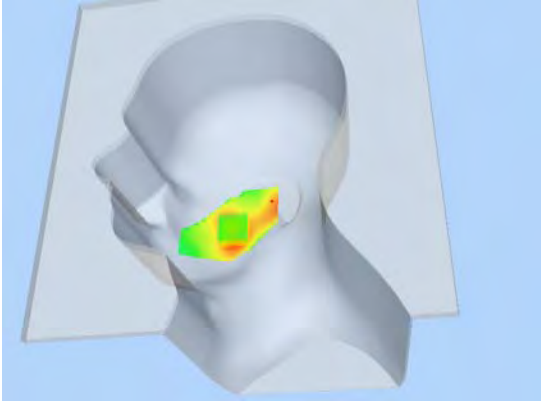
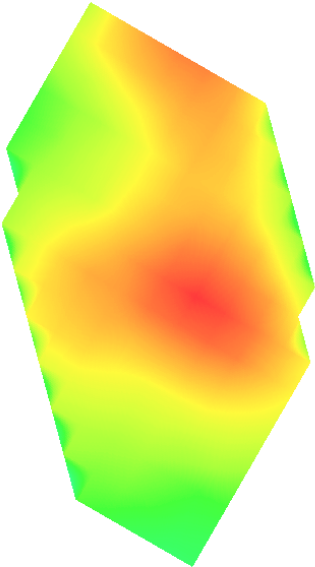
**Maximum location: X=-40.00, Y=-41.00**

|                       |          |
|-----------------------|----------|
| <b>SAR 10g (W/Kg)</b> | 0.064790 |
| <b>SAR 1g (W/Kg)</b>  | 0.095732 |

|                   |               |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| <b>Z (mm)</b>     | <b>0.00</b>   | <b>4.00</b>   | <b>9.00</b>   | <b>14.00</b>  | <b>19.00</b>  |
| <b>SAR (W/Kg)</b> | <b>0.0000</b> | <b>0.1006</b> | <b>0.0719</b> | <b>0.0522</b> | <b>0.0388</b> |

**SAR, Z Axis Scan (X = -40, Y = -41)**



| 3D screen shot                                                                                                                                                                                                                                                                                                                                                                                                     | Hot spot position                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D model of a human head and neck, rendered in a light blue-grey color. The head is positioned in profile, facing left. A small, irregularly shaped area on the side of the face, near the ear, is highlighted with a color gradient from green to yellow to red, indicating a hot spot. The background is a solid light blue. |  A close-up view of the hot spot area, showing a color gradient from green to yellow to red. The shape is irregular and elongated, with a central red area indicating the highest intensity. The background is a solid light grey. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA band II Mid-Touch Right (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ; $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section

Ambient temperature (°C):21, Liquid temperature (°C):21

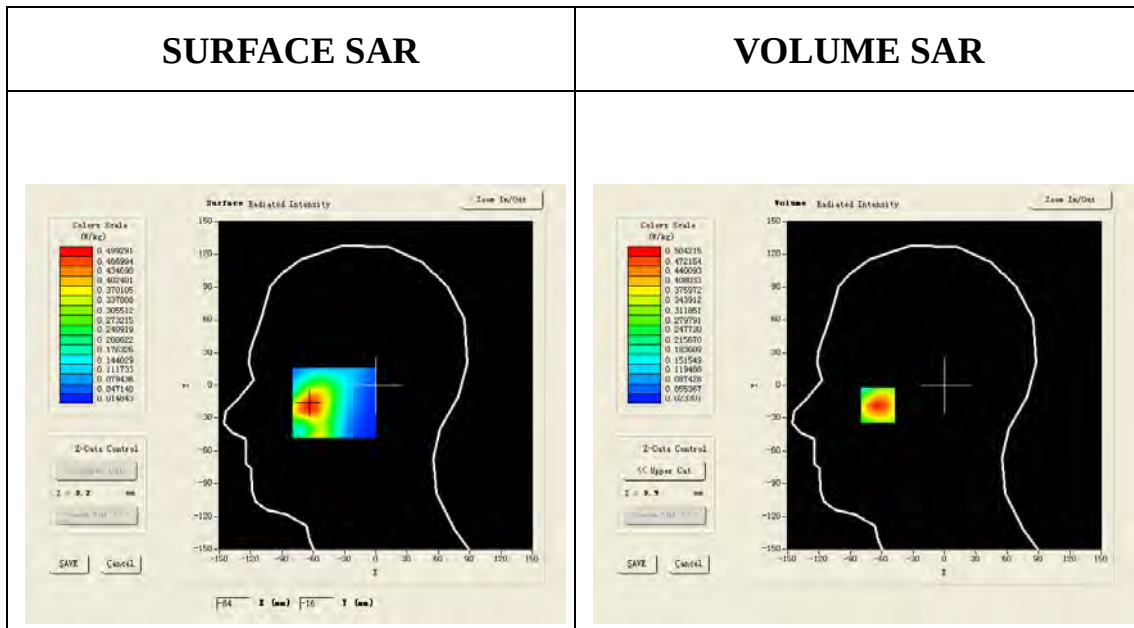
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA band II Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/ WCDMA band II Touch-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

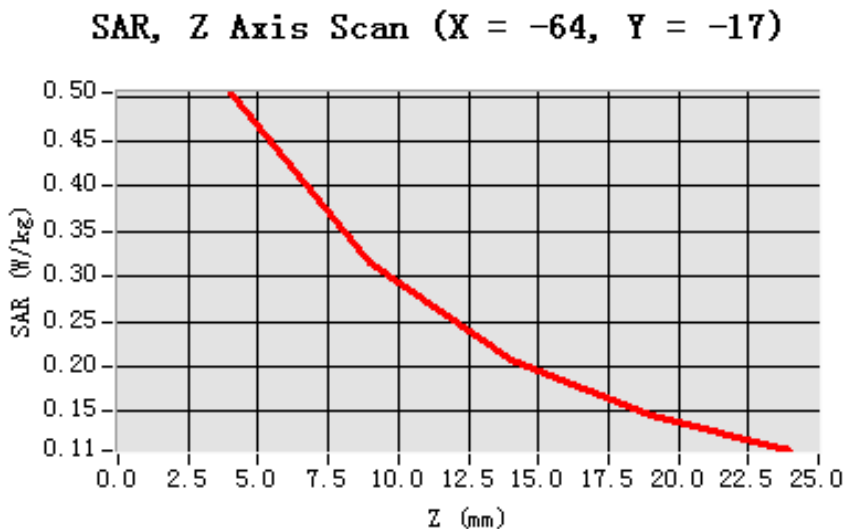
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Right head                           |
| <b>Device Position</b> | Cheek                                |
| <b>Band</b>            | WCDMA band II                        |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |

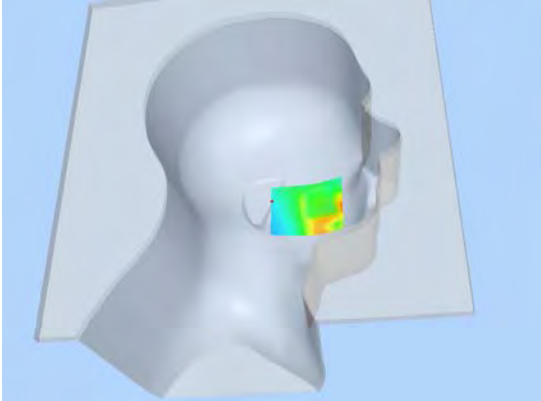
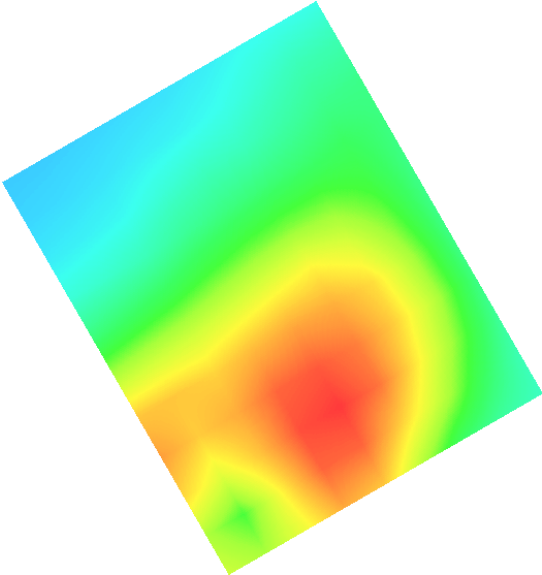


Maximum location: X=-64.00, Y=-17.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.288088 |
| SAR 1g (W/Kg)  | 0.475350 |

|            |        |        |        |        |        |
|------------|--------|--------|--------|--------|--------|
| Z (mm)     | 0.00   | 4.00   | 9.00   | 14.00  | 19.00  |
| SAR (W/Kg) | 0.0000 | 0.5042 | 0.3163 | 0.2069 | 0.1458 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA band II Mid-Tilt Right <RMC>****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 41.06$ ; $\rho = 1000$  kg/m<sup>3</sup> ; Phantom section: Left Section

Ambient temperature (°C):21, Liquid temperature (°C):21

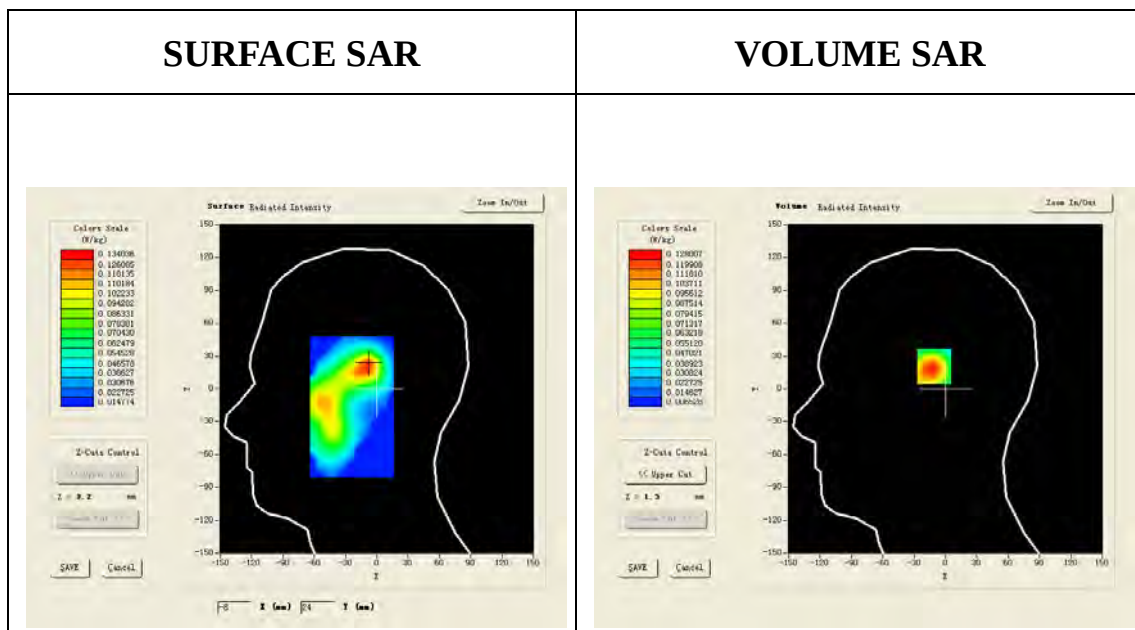
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

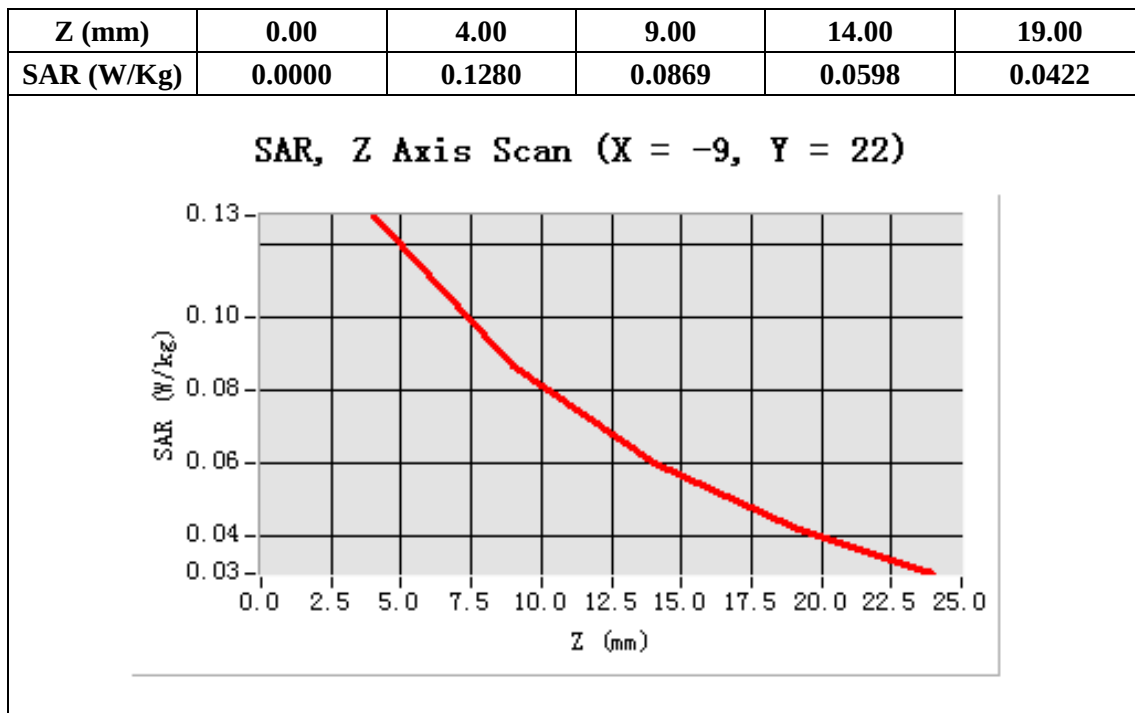
**Configuration/PCS1900 Mid Tilt-Right/Area Scan:** Measurement grid: dx=20mm, dy=20mm**Configuration/PCS1900 Mid Tilt-Right/Zoom Scan:** Measurement grid: dx=8mm, dy=8mm, dz=5mm;

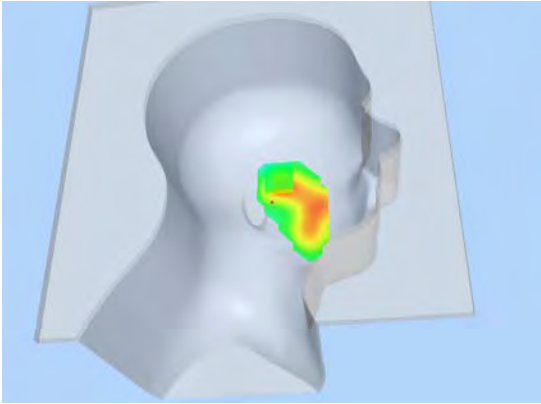
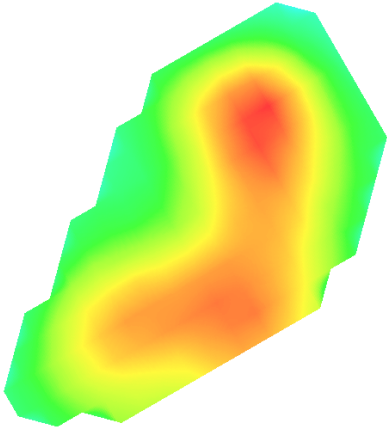
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | sam_direct_droit2_surf8mm.txt        |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Right head                           |
| <b>Device Position</b> | Tilt                                 |
| <b>Band</b>            | WCDMA band II                        |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



**Maximum location: X=-9.00, Y=22.00**

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.075772 |
| SAR 1g (W/Kg)  | 0.122710 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA band II Mid-Body-towards phantom (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

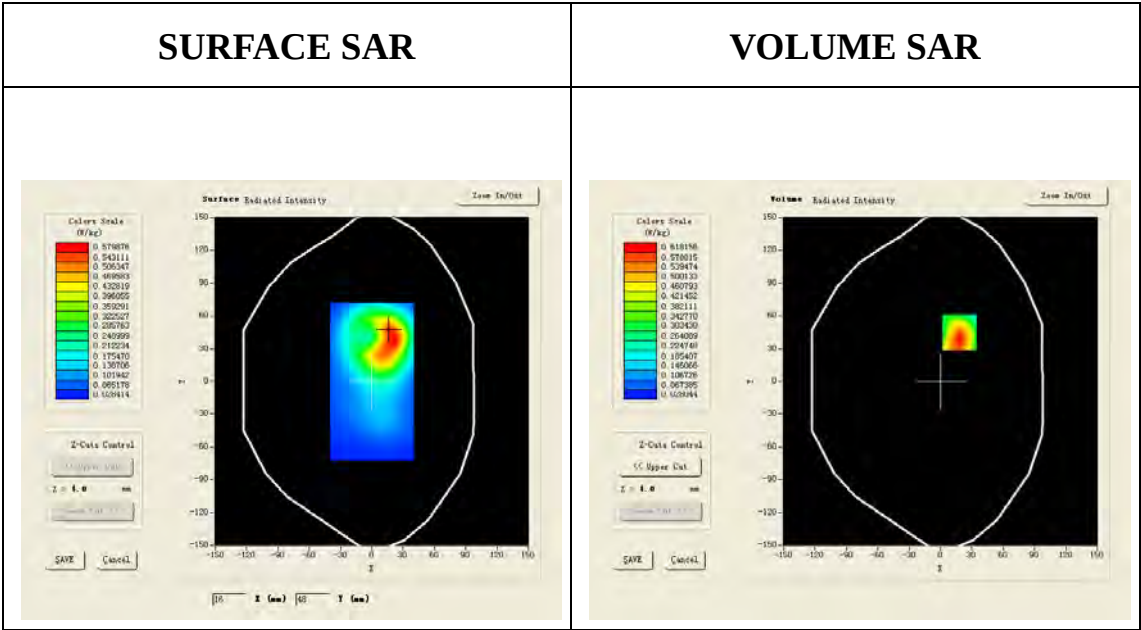
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

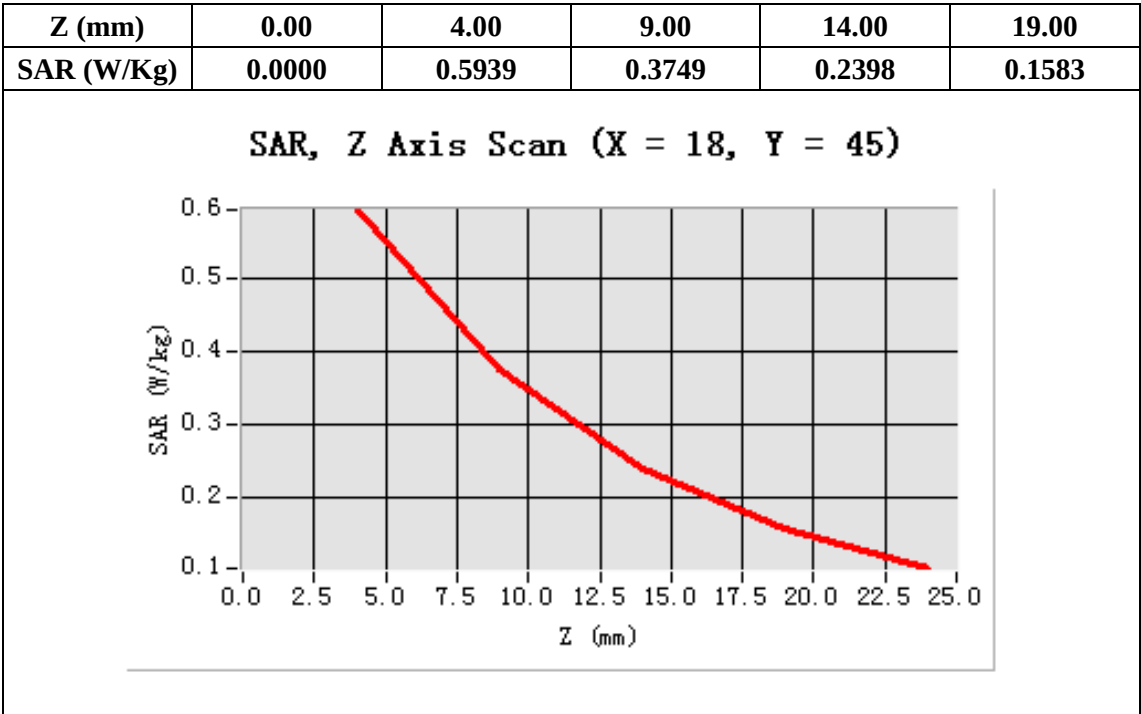
**Configuration/ WCDMA band II Mid Body-Front/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/ WCDMA band II Mid Body-Front/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

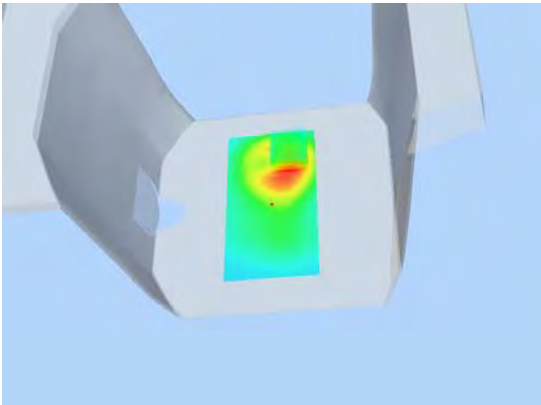
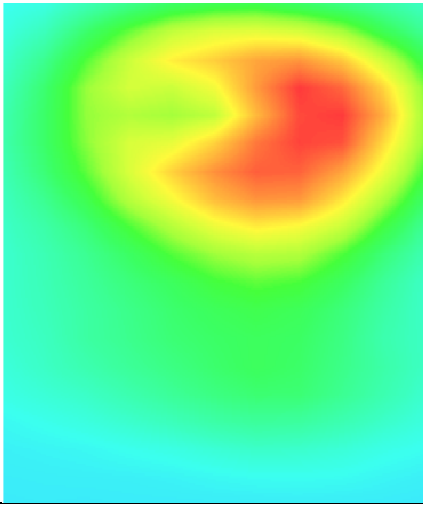
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body Front                           |
| <b>Band</b>            | WCDMA band II                        |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



Maximum location: X=18.00, Y=45.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.348167 |
| SAR 1g (W/Kg)  | 0.581783 |



| 3D screen shot                                                                                                                                                                                                                                                                                                                                         | Hot spot position                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  A 3D perspective view of a grey, box-like electronic device. A rectangular area on the front face is highlighted with a color-coded overlay, showing a bright red/yellow center fading to green and then blue towards the edges, indicating a localized heat source. |  A close-up, 2D view of the hot spot area. It shows a vertical rectangular field with a color gradient from cyan at the bottom to a bright red/yellow oval shape in the upper half, representing the spatial distribution of the heat source. |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA band II Mid-Body-towards ground (RMC)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication  
 GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: Band II UTRA/FDD ;Duty Cycle:1:1;  
 convF=6.42

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

Satimo Configuration:

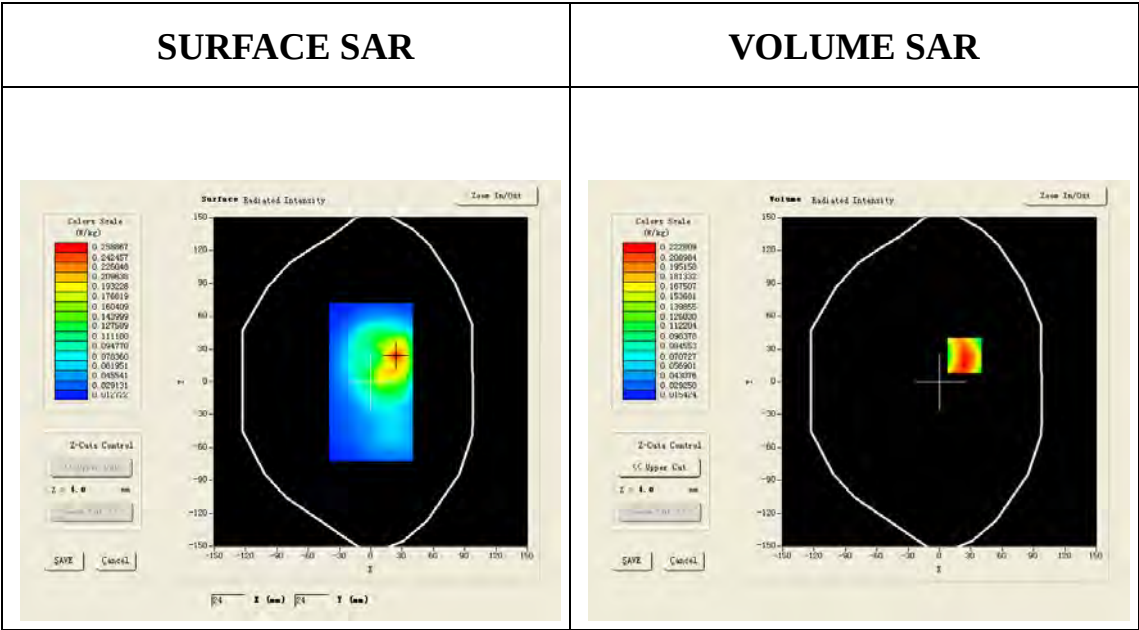
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA band II Mid Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm**

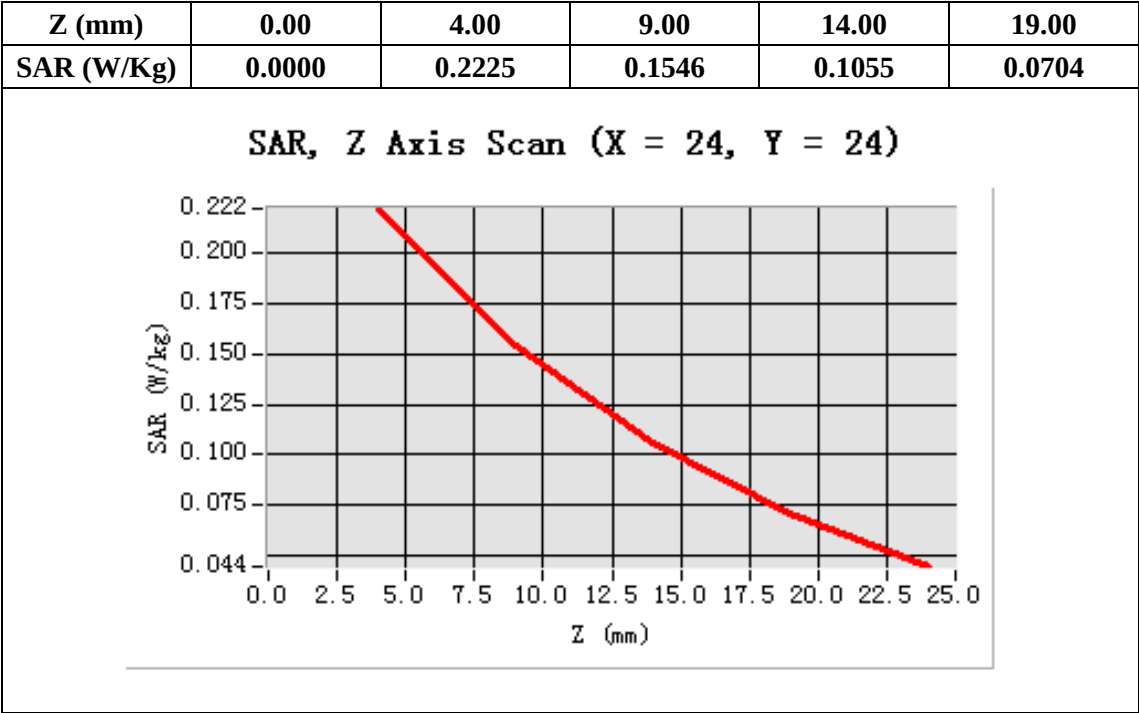
**Configuration/ WCDMA band II Mid Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

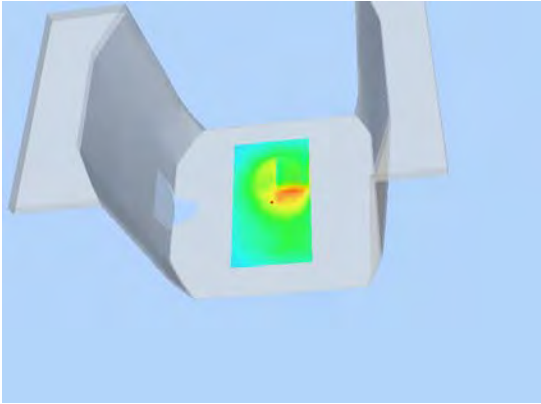
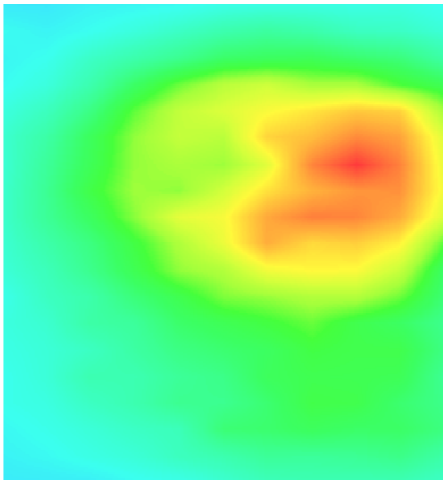
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body Back                            |
| <b>Band</b>            | WCDMA band II                        |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



Maximum location: X=24.00, Y=24.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.135002 |
| SAR 1g (W/Kg)  | 0.211943 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA band II Mid-Body-towards ground (HSDPA)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication  
 GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: Band II UTRA/FDD ;Duty Cycle:1:1;  
 convF=6.42

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

Satimo Configuration:

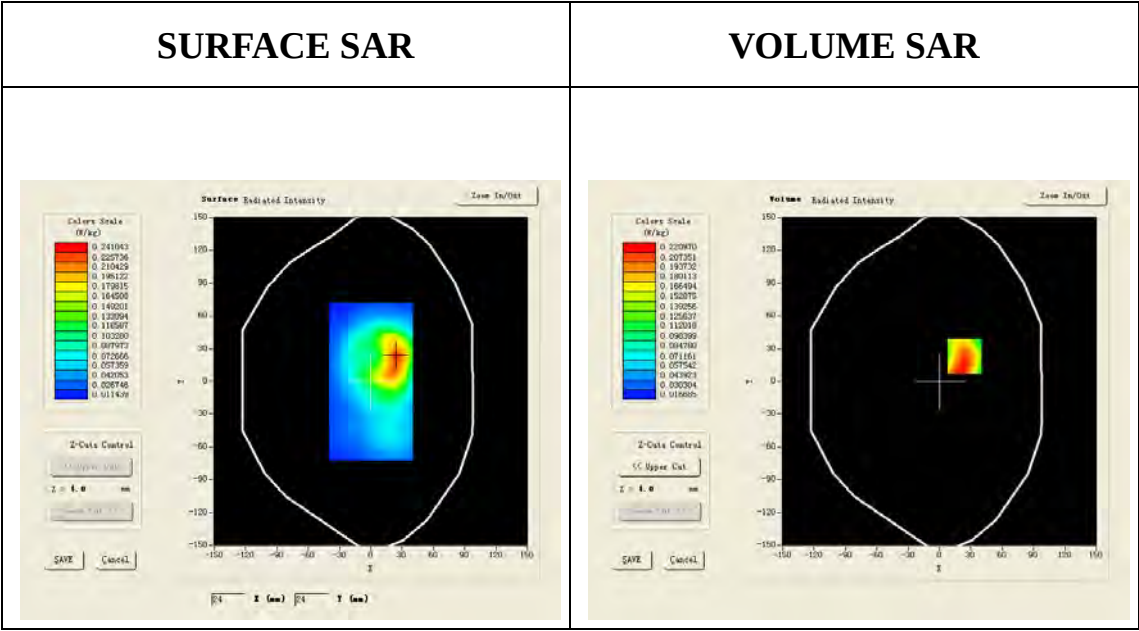
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

**Configuration/ WCDMA band II Mid Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm**

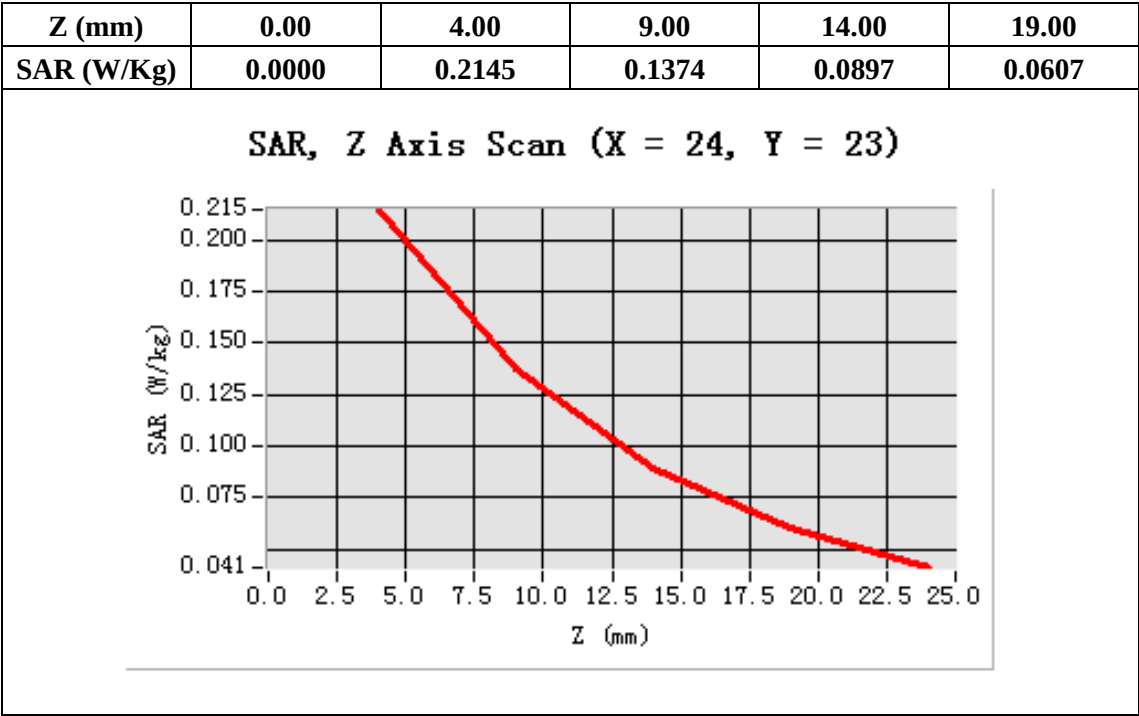
**Configuration/ WCDMA band II Mid Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

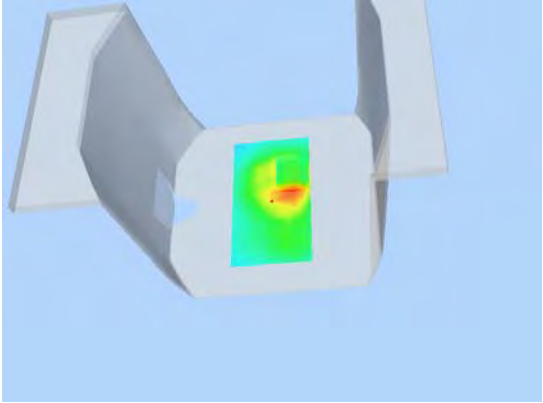
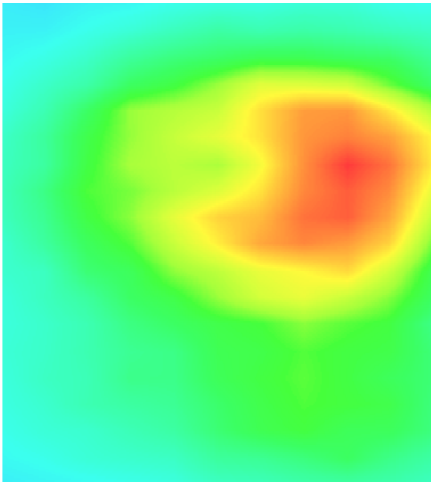
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body Back                            |
| <b>Band</b>            | WCDMA band II                        |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



Maximum location: X=24.00, Y=23.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.129767 |
| SAR 1g (W/Kg)  | 0.210367 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

**Test Laboratory: AGC Lab****Date: May 6, 2012****WCDMA band II Mid-Body-towards ground (RMC with earphone)****DUT:GSM/WCDMA mobile phone/Smart phone (Fusion); Type:QS-G3UCT1BK**

Communication GSM/WCDMA mobile phone/Smart phone (Fusion) System: UMTS; Communication

GSM/WCDMA mobile phone/Smart phone (Fusion) System Band: Band II UTRA/FDD ;Duty Cycle:1:1;

convF=6.42

Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 53.94$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

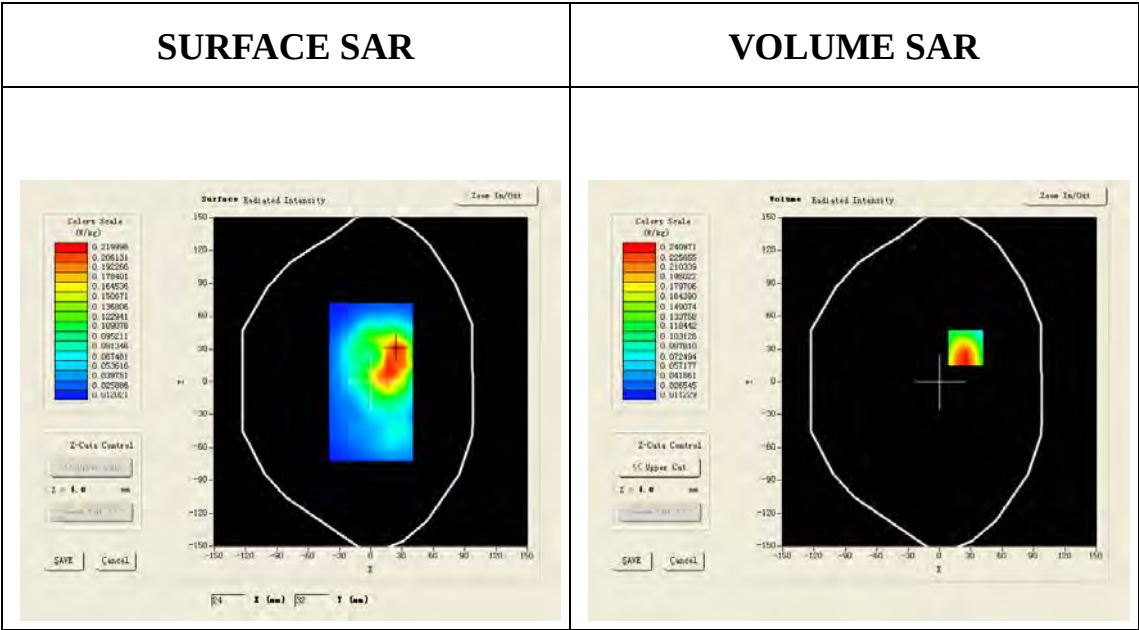
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4\_02\_01

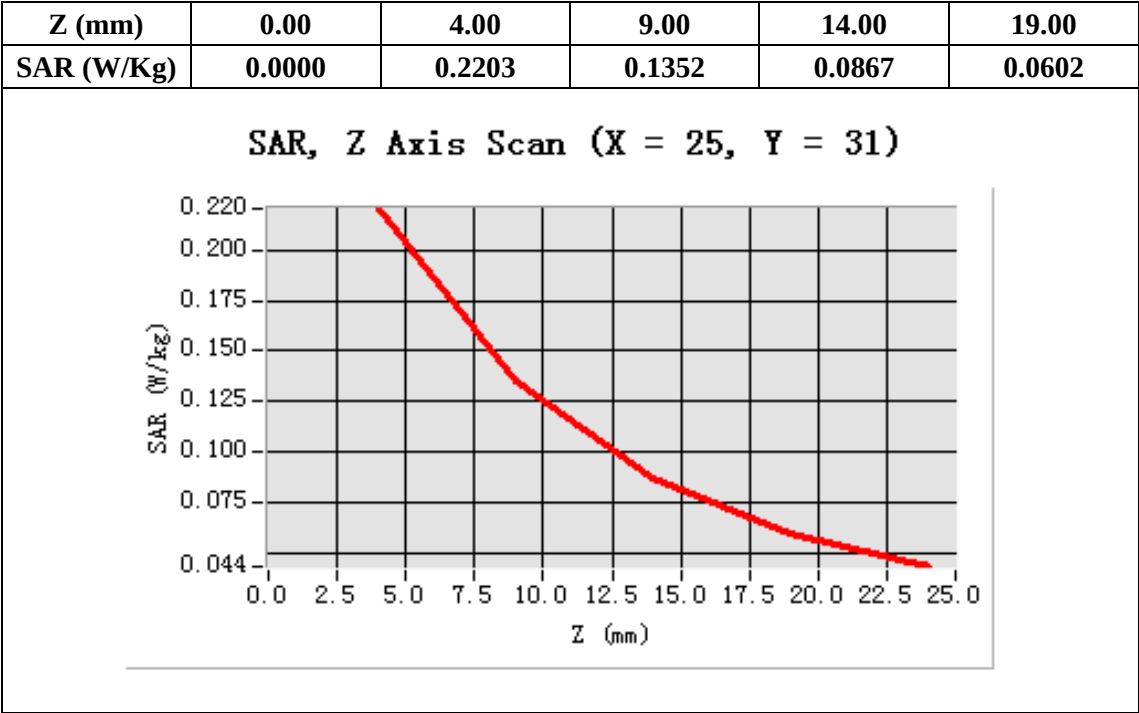
**Configuration/ WCDMA band II Mid Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm****Configuration/ WCDMA band II Mid Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

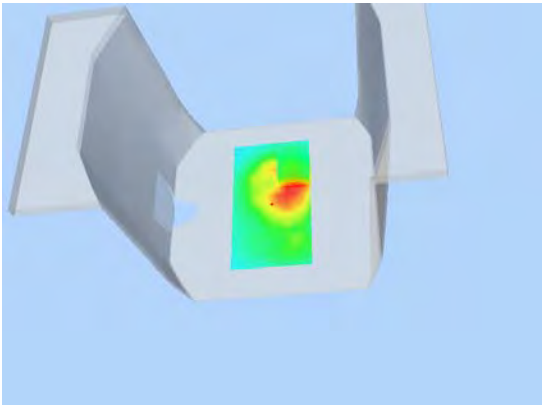
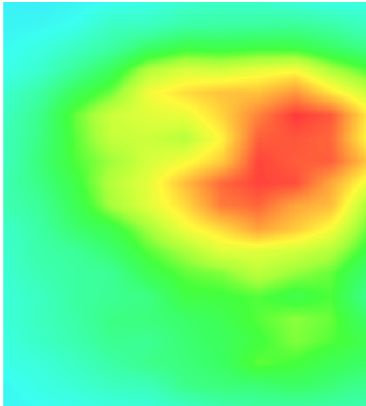
|                        |                                      |
|------------------------|--------------------------------------|
| <b>Area Scan</b>       | surf_sam_plan.txt                    |
| <b>ZoomScan</b>        | 5x5x7,dx=8mm dy=8mm dz=5mm,Very fast |
| <b>Phantom</b>         | Validation plane                     |
| <b>Device Position</b> | Body Back                            |
| <b>Band</b>            | WCDMA band II                        |
| <b>Channels</b>        | Middle                               |
| <b>Signal</b>          | TDMA (Crest factor: 1.0)             |



Maximum location: X=25.00, Y=31.00

|                |          |
|----------------|----------|
| SAR 10g (W/Kg) | 0.136567 |
| SAR 1g (W/Kg)  | 0.228683 |



| 3D screen shot                                                                    | Hot spot position                                                                  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |