

Full SAR Test Report

Applicant Name: CC&C Technologies, Inc.
 Applicant Address: No.9 Building, 3rd Main Street, Kunshan Export Processing Zone,
 P.R.China

The following samples were submitted and identified on behalf of the client as:

| | |
|-------------------------------|---|
| Sample Description | WLAN 11n Micro USB Adapter, 1T1R |
| SGS Ref | SHEMO09080095103 |
| Model Number | WL-6201-V1 |
| FCC ID | WKLWL6201V1 |
| Final Software Version Tested | MP_Kit_RTL11n_SingleChip_USB_v026 |
| Final Hardware Version Tested | WLAN 11n Micro USB Adapter, 1t1r(wl-6201-v1)) |
| Date Initial Sample Received | 2009-11-10 |
| Testing Start Date | 2009-11-13 |
| Testing End Date | 2009-11-13 |

According to:
 FCC 47CFR § 2.1093, IEEE Std C95.1-2005
 IEEE1528-2003, OET Bulletin 65 Supplement C

Comments/ Conclusion:
 The configuration tested complied to the certification requirements specified in this report.

Signed for on behalf of SGS



Project Manager



Technical Manager

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SHGSM

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Change History

| Version | Change Contents | Author | Date |
|---------|-----------------|----------|------------|
| V1.0 | First edition | Ken Wang | 2009-11-27 |
| | | | |
| | | | |
| | | | |
| | | | |

1. Report Overview

This report details the results of testing carried out on the samples listed in section 17, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this test report is used in any configuration other than that detailed in the test report, the manufacturer must ensure the new configuration complies with all relevant standards and certification requirements. Any mention of SGS Shanghai Wireless Telecommunications lab or testing done by SGS Shanghai Wireless Telecommunications lab made in connection with the distribution or use of the tested product must be approved in writing by SGS Shanghai Wireless Telecommunications lab.

2. Test Lab Declaration or Comments

The manufacturer declares that the equipment WL-6201-V1 is an initial model with test report number SHEMA09080095103 and structurally identical to the basic one.

3. Applicant Declaration or Comments

None

4. Full Test Report

A full test report contains, within the results section, all the applicable test cases from the certification requirements of the permanent reference documents of the listed certification bodies.

5. Partial Test Report

A partial test report contains within the results section a sub-set of all the applicable test cases from the certification requirements of the permanent reference documents of the listed certification bodies.

6. Measurement Uncertainty

Measurements and results are all in compliance with the standards listed in section 12 of this report. All measurements and results are recorded and maintained at the laboratory performing the tests and measurement uncertainties are taken into account when comparing measurements to pass/ fail criteria.

| a | b | c | d | e= f(d,k) | f | g | h= c*f/e | i= c*g/e | k |
|---------------------------|-------|-------------------|----------------|-----------|---------|-------------|----------------|-----------------|----|
| Uncertainty Component | Sec. | Tol (+-% %) | Prob. Dist. | Div. | Ci (1g) | Ci (10g) | 1g Ui (+-%) | 10g Ui (+-%) | Vi |
| Measurement System | | | | | | | | | |
| Probe calibration | E.2.1 | 6.0 | N | 1 | 1 | 1 | 6.0 | 6.0 | ∞ |

| | | | | | | | | | |
|---|---------|-----|-----|------------|------------------|------------------|------|------|----------|
| Axial Isotropy | E.2.2 | 2.5 | R | $\sqrt{3}$ | $(U_{Cp})^{1/n}$ | $(U_{Cp})^{1/n}$ | 1.0 | 1.0 | ∞ |
| Hemispherical Isotropy | E.2.2 | 4.0 | R | $\sqrt{3}$ | $\sqrt{C_u}$ | $\sqrt{C_u}$ | 1.6 | 1.6 | ∞ |
| Boundary effect | E.2.3 | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| Linearity | E.2.4 | 5.0 | R | $\sqrt{3}$ | 1 | 1 | 2.9 | 2.9 | ∞ |
| System detection limits | E.2.5 | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| Readout Electronics | E.2.6 | 0.5 | N | 1 | 1 | 1 | 0.5 | 0.5 | ∞ |
| Reponse Time | E.2.7 | 0.2 | R | $\sqrt{3}$ | 1 | 1 | 0.1 | 0.1 | ∞ |
| Integration Time | E.2.8 | 2.0 | R | $\sqrt{3}$ | 1 | 1 | 1.2 | 1.2 | ∞ |
| RF ambient Conditions | E.6.1 | 3.0 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| Probe positioner Mechanical Tolerance | E.6.2 | 2.0 | R | $\sqrt{3}$ | 1 | 1 | 1.2 | 1.2 | ∞ |
| Probe positioning with respect to Phantom Shell | E.6.3 | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation | E.5.2 | 1.5 | R | $\sqrt{3}$ | 1 | 1 | 0.9 | 0.9 | ∞ |
| Test sample Related | | | | | | | | | |
| Test sample positioning | E.4.2.1 | 1.5 | N | 1 | 1 | 1 | 1.5 | 1.5 | N-1 |
| Device Holder Uncertainty | E.4.1.1 | 5.0 | N | 1 | 1 | 1 | 5.0 | 5.0 | |
| Output power Variation - SAR drift measurement | 6.6.2 | 3.9 | R | $\sqrt{3}$ | 1 | 1 | 2.3 | 2.3 | ∞ |
| Phantom and Tissue Parameters | | | | | | | | | |
| Phantom Uncertainty (Shape and thickness tolerances) | E.3.1 | 4.0 | R | $\sqrt{3}$ | 1 | 1 | 2.3 | 2.3 | ∞ |
| Liquid conductivity - deviation from target value | E.3.2 | 2.1 | R | $\sqrt{3}$ | 0.64 | 0.43 | 0.8 | 0.5 | ∞ |
| Liquid conductivity - measurement uncertainty | E.3.3 | 2.5 | N | 1 | 0.64 | 0.43 | 1.6 | 1.1 | M |
| Liquid permittivity - deviation from target value | E.3.2 | 4.1 | R | $\sqrt{3}$ | 0.6 | 0.49 | 1.4 | 1.2 | ∞ |
| Liquid permittivity - measurement uncertainty | E.3.3 | 2.5 | N | 1 | 0.6 | 0.49 | 1.5 | 1.2 | M |
| Combined Standard Uncertainty | | | RSS | | | | 9.7 | 9.6 | |
| Expanded Uncertainty (95% Confidence interval) | | | k | | | | 19.0 | 18.8 | |

7. Testing Environment

| | |
|--------------------|---------------|
| Normal Temperature | +20 to +24 °C |
| Relative Humidity | 35 to 60 % |

8. Primary Test Laboratory

| | |
|------------|--|
| Name: | Wireless Telecommunications Laboratory SGS-CSTC Standards Technical Services(Shanghai) Co., Ltd |
| Address: | 9F, 3rd Building, No.889, Yishan Rd, Xuhui District, Shanghai, China 200233 |
| Telephone: | +86 (0) 21 6140 2666 |
| Fax: | +86 (0) 21 5450 0149 |
| Internet: | http://www.cn.sgs.com |
| Contact: | Mr. Peter Xue |
| Email: | peter.xue@sgs.com |

9. Details of Applicant

| | |
|------------|---|
| Name: | CC&C Technologies, Inc. |
| Address: | No.9 Building, 3 rd Main Street, Kunshan Export Processing Zone, P.R.China |
| Telephone: | 86-21-5188-6310#100 |
| Contact: | Kenny Chou |
| Email: | Kenny_chou@ccandc.co |

10. Details of Manufacturer

| | |
|------------|---|
| Name: | CC&C Technologies, Inc. |
| Address: | No.9 Building, 3 rd Main Street, Kunshan Export Processing Zone, P.R.China |
| Telephone: | 86-21-5188-6310#100 |
| Contact: | Kenny Chou |
| Email: | Kenny_chou@ccandc.co |

11. Other testing Locations

| | |
|------------|--|
| Name: | SIMT EMC Laboratory, |
| Address: | No.716 Yi shan Road, Shanghai, P.R.China |
| Telephone: | +86 21 64701390 |
| Contact: | Yuehai LI |
| Email: | liyuehai@simit.com.cn |

12. Referenced Documents

The Equipment under Test (EUT) has been tested at SGS's (own or subcontracted) laboratories according to FCC 47CFR § 2.1093, IEEE Std C95.1-2005, IEEE1528-2003, OET Bulletin 65 Supplement C, KDB447498, KDB248227.

The following table summarizes the specific reference documents such as harmonized standards or test specifications which were used for testing as SGS's (own or subcontracted) laboratories.

| Identity | Document Title | Version |
|-------------------------------|--|---------|
| FCC 47CFR § 2.1093 | Radiofrequency radiation exposure evaluation:portable devices | 2001 |
| IEEE Std C95.1 | IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. | 2005 |
| IEEE1528 | IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques | 2003 |
| OET Bulletin 65 Supplement C, | Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions | 2001 |
| KDB447498 | Mobile and Portable Device RF Exposure Procedure and Equipment Authorization Policies | - |
| KDB248227 | SAR Measurement Procedures for 802.11 a/b/g Transmitters | - |

| Human Exposure | Uncontrolled Environment General Population |
|------------------|--|
| Spatial Peak SAR | 1.60 mW/g (averaged over a mass of 1g) |

Notes:

1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.

13. Primary Laboratory Accreditation Details



14. SGS Shanghai Wireless Telecommunications lab, Personnel

SGS Wireless Shanghai Project Management Team and list of approved Testers for SGS Wireless Shanghai.

| Surname | Forename | Initials |
|---------|----------|----------|
| CAI | CAI | CAICAI |
| Xue | Peter | PETERXUE |
| Xu | Anya | ANYA |
| Ni | Lemon | LEMONNI |
| Tao | Kevin | KEVINTAO |

SHGSM

| | | |
|----------|-----------|-------------|
| Wang | Lawrence | LAWRENCE |
| Zhang | Sean | SEANZH |
| Liu | Felix | FILEX |
| Ruan | Roger | ROGER |
| Tan | Terry | TERRY |
| Zhang | Zenger | ZENGER |
| Wang | Ken | KENWANG |
| Gao | Keilefen | KEILEFENGAO |
| Tang | Eva | EVATANG |
| Ho | James | JAMESHO |
| Tang | Kenny | KENNY |
| Hailiang | Cai | HAILIANG |
| Kuang | Connie | CONNIE |
| Chan | Hik Kwong | HKC |
| Nie | Neo | Neo |

Version 2009-10-20

15. Test Equipment Information

15.1 Antennessa

| | | | |
|-----------------------------|--|------------------|-------------------------|
| Test Platform | Antennessa | | |
| Manufacture | Antennessa | | |
| Description | SAR Test System (Frequency range 300MHz-3GHz) 835, 900, 1800, 1900, 2000, 2450 frequency band | | |
| Software Reference | Open SAR V2.0.1e | | |
| Hardware Reference | | | |
| Equipment | Model | Serial Number | Due date of calibration |
| Isotropic E-Field Probe | E-FIELD PROBE | SN_4606_EP_61 | 2009-12-24 |
| 2450 MHz Reference Dipole | Dipole 2450 | SN 36/05 DIP J25 | 2010-10-20 |
| Signal Generator | SMT 06 | 100836 | 2010-6-25 |
| Power Meter | NRVD | 101311 | 2010-6-23 |
| Solid State Power Amplifier | BLMA 2060-2 | 056060B-01 | 2010-6-25 |
| Millivoltmeter | 2000 | 1062728 | 2010-6-18 |
| Vector Network Analyzer | ZVB 8 | 100154 | 2010-6-23 |

15.2 The SAR Measurement System

This SAR Measurement System uses a Computer-controlled 3-D stepper motor system(SAR Handset Assessment Systems from Antennassa). A E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation $SAR = \sigma (|E_i|^2) / \rho$ where σ and ρ are the conductivity and mass density of the tissue simulating liquid.

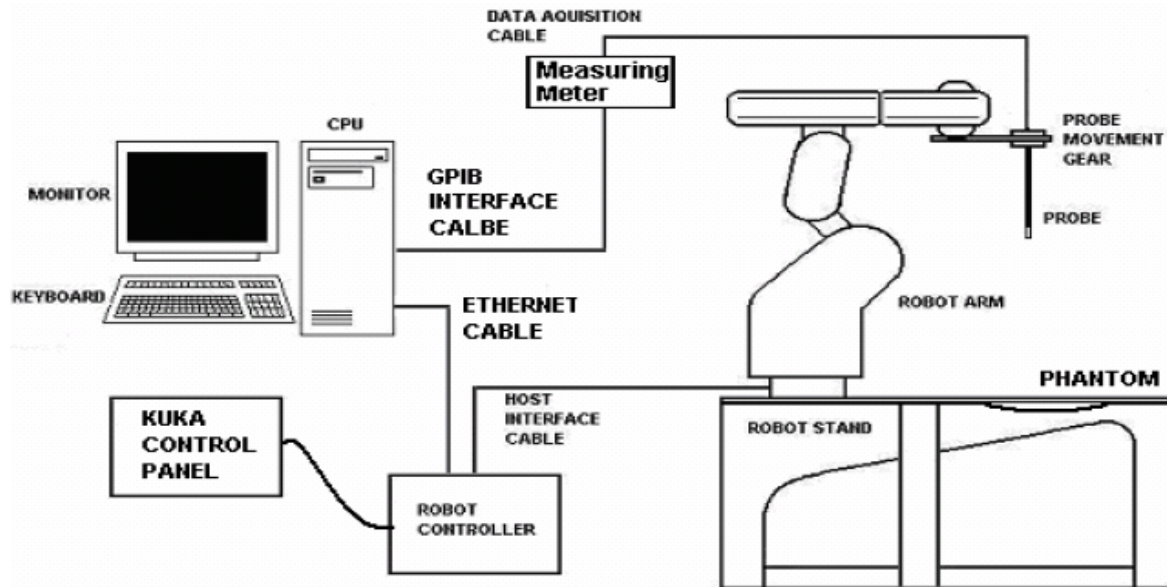


Figure 15-1: SAR Measurement System

During SAR test, The EUT is commanded to operate at maximum transmitting power. The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset by at least 35 dB.

15.3 Isotropic E-field Probe



Figure 15-2: Antennassa probe

E-field probes are constructed with a triangular section bar in alumina. On each face, a dipole and a resistive line are printed. A Schottky diode is placed in the center of each dipole. This probe is designed to fulfill CENELEC and IEEE recommendations for the measurement of electromagnetic fields radiated by mobile phones and base stations. The E-field detection probe is composed of three orthogonal dipoles linked to special Schottky diodes with low detection thresholds. The probe allows the measurement of electric fields in liquids such as the one defined in the IEEE and CENELEC standard. These uncoupled dipoles perform the isotropic and wide-band measurements necessary to assess mobile phones. Figure 15-3 shows E-field probe relevant features.

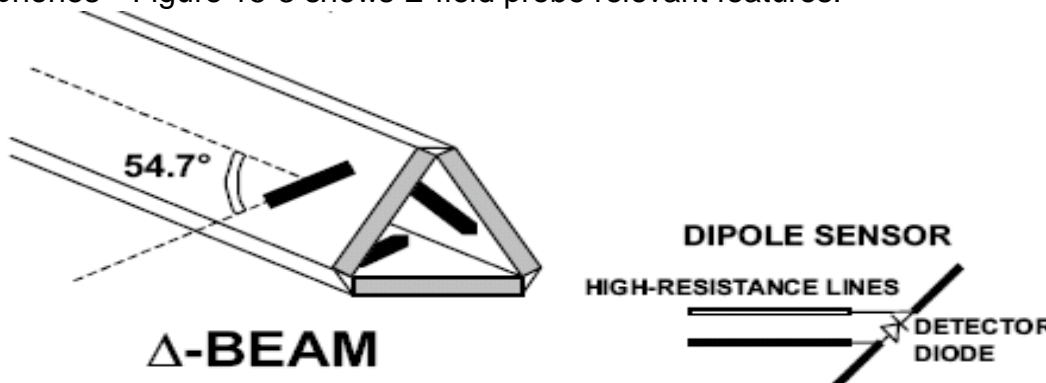


Figure 15-3: Typical E-field probe construction

| The characteristics of the probes | |
|--|----------------------------|
| Frequency range | 100 MHz-30 GHz |
| Maximum external diameter | 8 mm |
| Probe tip external diameter | 5 mm |
| Distance between dipoles and the probe tip | <2.7 mm |
| Dipole resistance(in the connector plane) | 1M to 2M |
| Axial isotropy in human-equivalent liquids | +/-0.25 dB |
| Hemispherical Isotropy in human-equivalent liquids | +/-0.5 dB |
| Linearity | +/-0.5 dB |
| Maximum operating SAR | 100 Watts/Kg |
| Low SAR detection threshold | 0.0015 Watts/Kg |
| Connectors | 6 male wires (Hirose SR30) |

15.4 SAM Twin Phantom

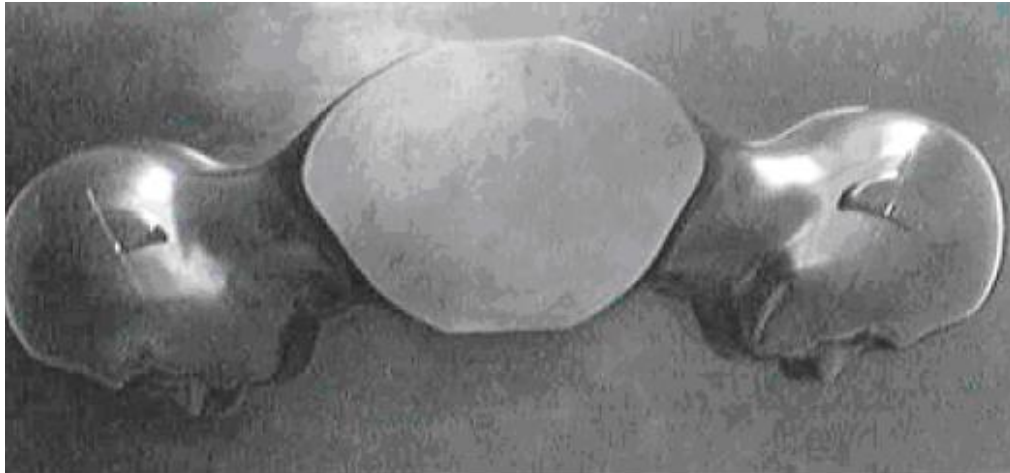


Figure 15-4: SAM phantom

The SAM phantom(Antennassa SN:SN_36_05_SAM25) is used to measure the SAR relative to persons exposure to electro-magnetic field radiated by mobile phones. For thickness control purpose, the phantom has several integrated thickness control points(see crosses on the picture below)

| | |
|---|--|
| Shell thickness | 2 mm +/-0.2 mm |
| Filling volume | 27 liters |
| Dimensions | 1000mm(length);500mm (width);200 mm (height) |
| 5 molded plastic points for high precision reference Delivered with 4 nylon screws | |
| CENELEC 50361 or IEEE 1528-200X versions | |

15.5 Device Holder for Transmitters

The SAR value is approximately inversely proportional to the square of the distance between the source and the internal phantom surface. For a source at 5 mm distance, a positioning uncertainty of +/-0.5 mm would produce a SAR uncertainty of +/-20%. An accurate device positioning is therefore essential for accurate and repeatable measurements

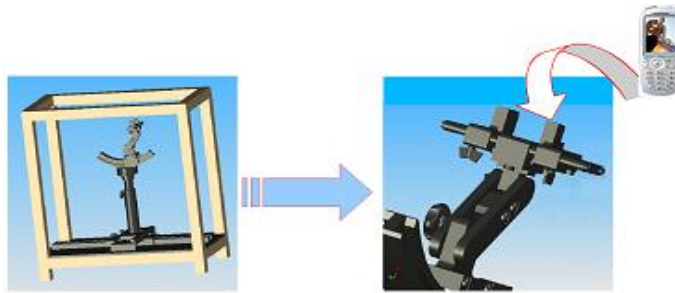


Figure 15-5:device holder

| | |
|---|--|
| <p>max. device width 105 mm</p> <p>180° rotation</p> <p>Curved rail with printed scale Max. angle $\pm 35^\circ$ with a precision of 1°</p> <p>Z axis max. Height regulation ± 110 mm</p> <p>rotation $> 180^\circ$ and max.length regulation 80 mm</p> <p>360° rotation</p> <p>Y axis 250 m</p> <p>Z axis max. High regulation ± 110 mm</p> | Totally metal-free design |
| | Rotation point on ear opening |
| | Translation to lock the device under test under the flat part or under the left or right ear |
| | High repeatability with rotation point external adjustment |
| | Easy and accurate position according to all standards |
| | Compliance with mobile phone, PMR or PDA dimensions |

This positioning system allows the translation of the mobile phone along the X,Y and Z axis, as well as the required rotation around the phantom ear, for the 2 positions defined by standards(0° “cheek” position and 15° “tilt” position).

16. Detailed Test Results

16.1 Summary of Results

16.1.1 Measurement of RF conducted Power

Test Results (802.11b) 1M

| CH | Frequency (MHz) | Reading Power(dBm) | Cable Loss (dB) | Output Power (dBm) |
|------|-----------------|--------------------|-----------------|--------------------|
| LOW | 2412 | 15.55 | 0.00 | 15.55 |
| MID | 2437 | 15.36 | 0.00 | 15.36 |
| HIGH | 2462 | 15.72 | 0.00 | 15.72 |

Test Results (802.11g) 6M

| CH | Frequency (MHz) | Reading Power(dBm) | Cable Loss (dB) | Output Power (dBm) |
|------|-----------------|--------------------|-----------------|--------------------|
| LOW | 2412 | 12.12 | 0.00 | 12.12 |
| MID | 2437 | 11.53 | 0.00 | 11.53 |
| HIGH | 2462 | 12.02 | 0.00 | 12.02 |

Test Results (802.11n_20M) 6.5M

| CH | Frequency (MHz) | Reading Power(dBm) | Cable Loss (dB) | Output Power (dBm) |
|------|-----------------|--------------------|-----------------|--------------------|
| LOW | 2412 | 12.58 | 0.00 | 12.50 |
| MID | 2437 | 12.67 | 0.00 | 12.67 |
| HIGH | 2462 | 13.21 | 0.00 | 13.21 |

Test Results (802.11n_40M) 13.5M

| CH | Frequency (MHz) | Reading Power(dBm) | Cable Loss (dB) | Output Power (dBm) |
|------|-----------------|--------------------|-----------------|--------------------|
| LOW | 2422 | 11.25 | 0.00 | 11.25 |
| MID | 2437 | 11.56 | 0.00 | 11.56 |
| HIGH | 2452 | 11.87 | 0.00 | 11.87 |

16.1.2 Measurement of SAR average value

2.4GHz ISM Band

| Band | EUT Position | Test Configuration | | Averaged SAR over 1g (W/kg) | | | SAR limit (W/kg) | Verdict |
|------|--------------|--------------------|--------------|-----------------------------|----------|----------|------------------|---------|
| | | | | Low | Middle | High | | |
| | | | | 2412 MHz | 2437 MHz | 2462 MHz | | |
| 2450 | Body Worn | P1 | 802.11 b | - | - | 0.360113 | 1.6 | Passed |
| | | P2 | 802.11 b | 0.540494 | 0.483883 | 0.576881 | 1.6 | Passed |
| | | | 802.11 g | 0.950160 | 0.880265 | 0.853215 | 1.6 | Passed |
| | | | 802.11 n_20M | 0.924580 | 0.878442 | 0.860234 | 1.6 | Passed |
| | | P3 | 802.11 b | - | - | 0.324239 | 1.6 | Passed |
| | | P4 | 802.11 b | - | - | 0.207875 | 1.6 | Passed |
| | | P5 | 802.11 b | - | - | 0.055247 | 1.6 | Passed |

2.4GHz ISM Band

| Band | EUT Position | Test Configuration | | Averaged SAR over 1g (W/kg) | | | SAR limit (W/kg) | Verdict |
|------|--------------|--------------------|--------------|-----------------------------|----------|----------|------------------|---------|
| | | | | Low | Middle | High | | |
| | | | | 2422 MHz | 2437 MHz | 2452 MHz | | |
| 2450 | Body Worn | P2 | 802.11 n_40M | 0.843415 | 0.851307 | 0.854594 | 1.6 | Passed |

16.2 Maximum Results

The maximum measured SAR values for Body configuration is given in section 16.2.1.

16.2.1 Body configuration

| Frequency Band | EUT Position | SAR, Averaged over 1g (W/Kg) | Power Drift (%) | SAR limit (W/kg) | Verdict |
|----------------|------------------------------|------------------------------|-----------------|------------------|---------|
| 2450 | Body Worn, P2, 802.11 g, Low | 0.950160 | -1.4400 | 1.6 | Passed |

16.2.2 Maximum Drift

| | |
|----------------------------------|-------------|
| Maximum Drift during measurement | -3.940000 % |
|----------------------------------|-------------|

16.2.3 Measurement Uncertainty

| | |
|--------------------------------|------|
| Extended Uncertainty (k=2) 95% | 19.0 |
|--------------------------------|------|

16.3 Operation Configurations

The EUT is controlled by using the software supplied by applican,and the EUT is set to maximum output power by the software supplied by applicant during all tests.

The tests in the band of 2450 are performed in the 802.11b , g, n mode. In which the EUT is set to maximum output power with the lowest transmitter rate .all other transmitter rate mode is not necessary because of the maximum output power is less than 1/4 dB higher than the lowest transmitter rate.

1. Testing Body Worn SAR at low,middle,high channel with all conditions:P1,P2,P3,P4,P5.
2. In all bands, Low and High channels configurations are not necessary due to the Middle channel produce SAR less than -3dB of the applicable SAR limits.

Note:

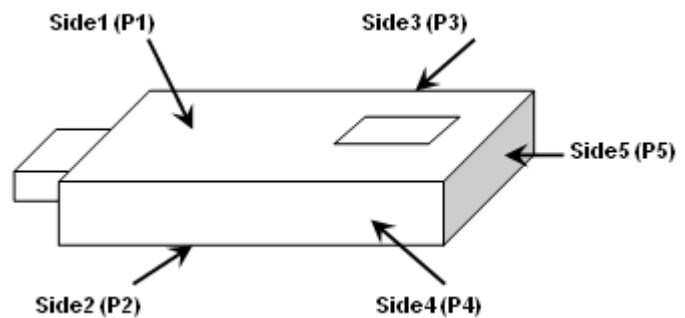
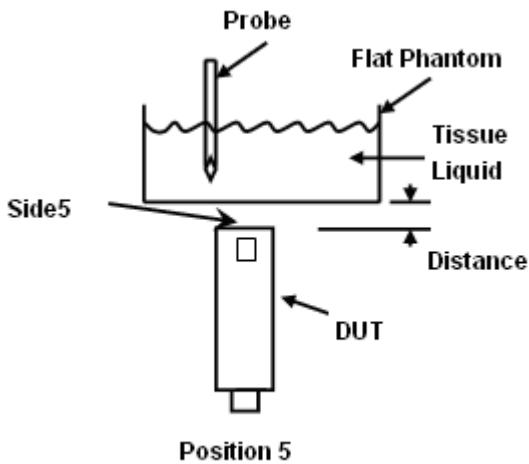
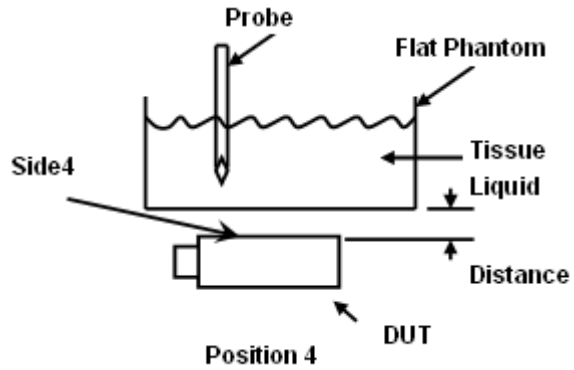
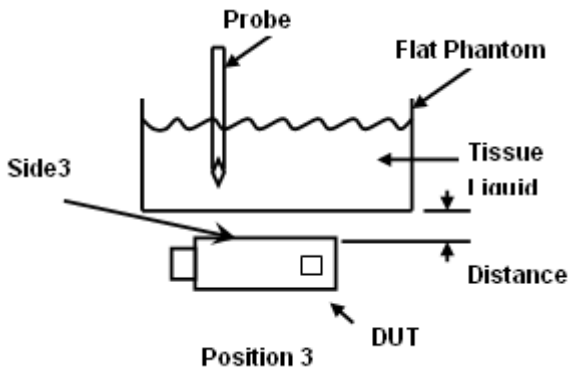
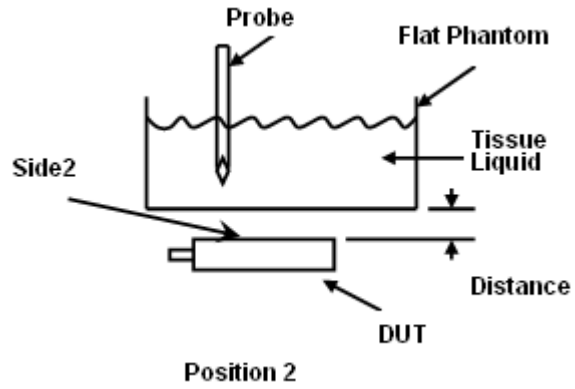
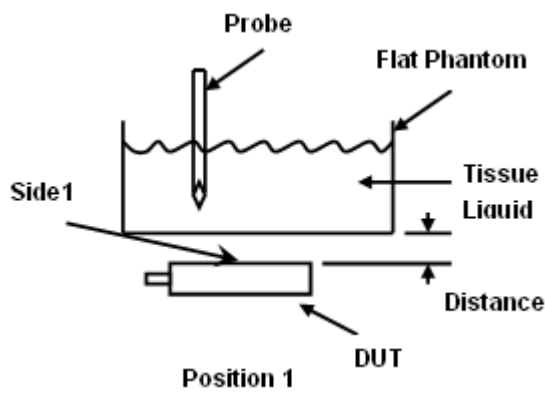
(1) position 1-P1, position 2-P2, position 3-P3, position 4-P4, position 5-P5

(2) An IBM laptop (T42) was used in configuration P2&P5

(3) A short USB cable was used in configuration P1&P3&P4

(4) Distance separation for each position

P1=P2=P3=P4=P5=5mm



16.4 Measurement procedure

Step 1: Power reference measurement

The SAR measurement was taken at a selected spatial reference point to monitor power variations during testing. This fixed location point was measured and used as a reference value.

Step 2: Area scan

The SAR distribution at the exposed side of the head was measured at a distance of 4mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 8mm*8mm. Based on the area scan data, the area of the maximum absorption was determined by spline interpolation.

Step 3: Zoom scan

Around this point, a volume of 30mm*30mm*30mm (fine resolution volume scan, zoom scan) was assessed by measuring 7*7*7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

Step 4: Power reference measurement (drift)

The SAR value at the same location as in step 1 was again measured. (If the value changed by more than 5%, the evaluation should be done repeatedly)

16.5 Detailed Test Results-

16.5.1 802.11.b-BodyWorn-P1-High

802.11.b-BodyWorn-P1-High

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 43 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

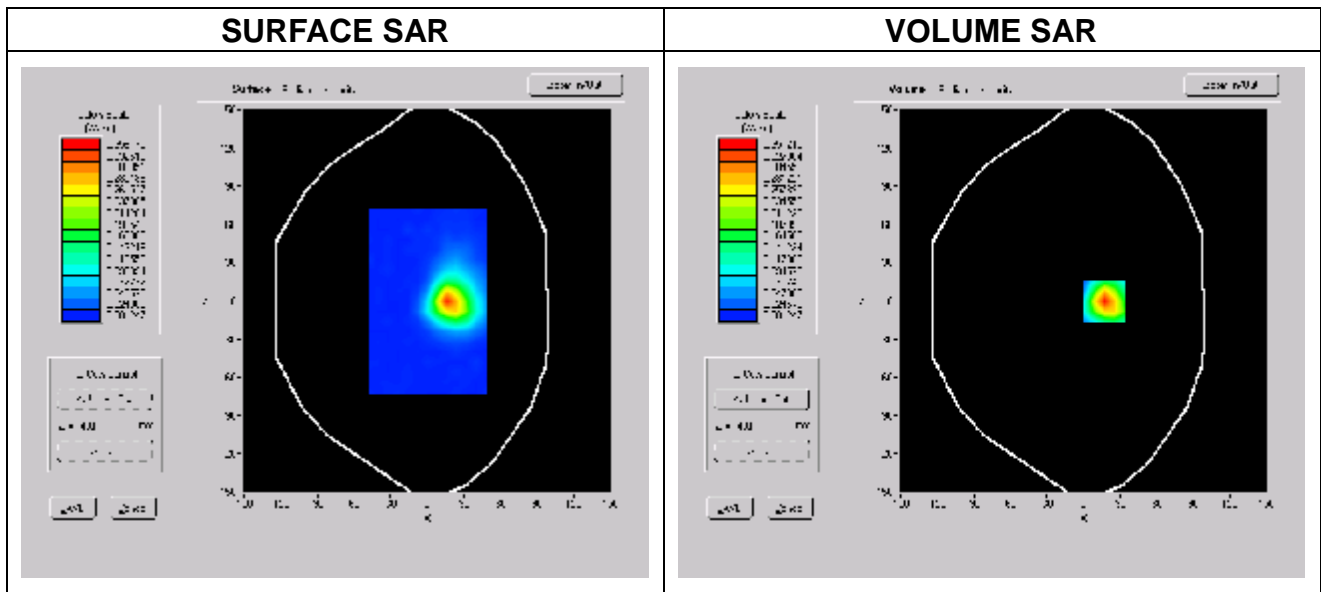
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P1 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2462.000000 |
| Relative permittivity (real part) | 53.814999 |
| Relative permittivity (imaginary part) | 14.994000 |
| Conductivity (S/m) | 2.050846 |
| Variation (%) | -2.130000 |

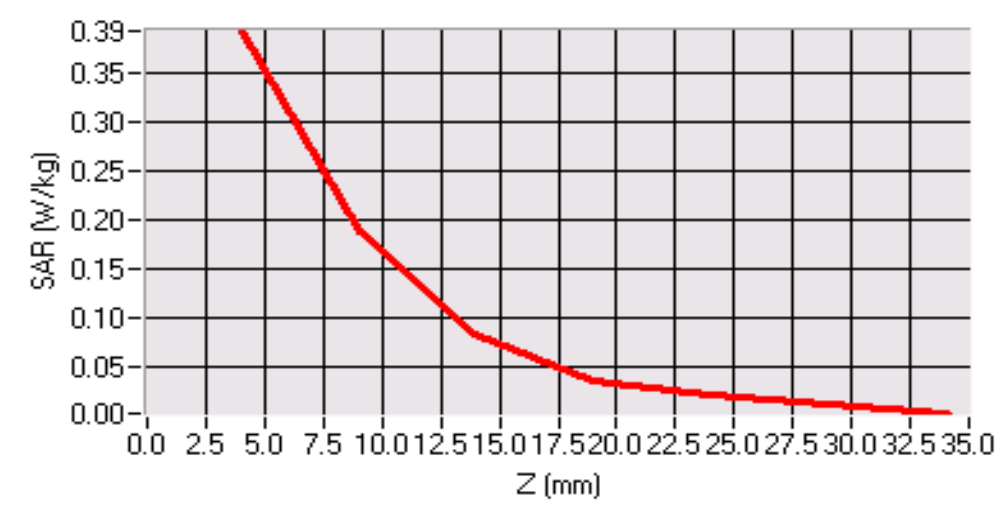


Maximum location: X=17.00, Y=0.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.171435 |
| SAR 1g (W/Kg) | 0.360113 |

Z Axis Scan

SAR, Z Axis Scan (X = 17, Y = 0)



16.5.2 802.11.b-BodyWorn-P2-High

802.11.b-BodyWorn-P2-High

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 28 seconds

Mobile Phone IMEI number: ---

A. Experimental conditions.

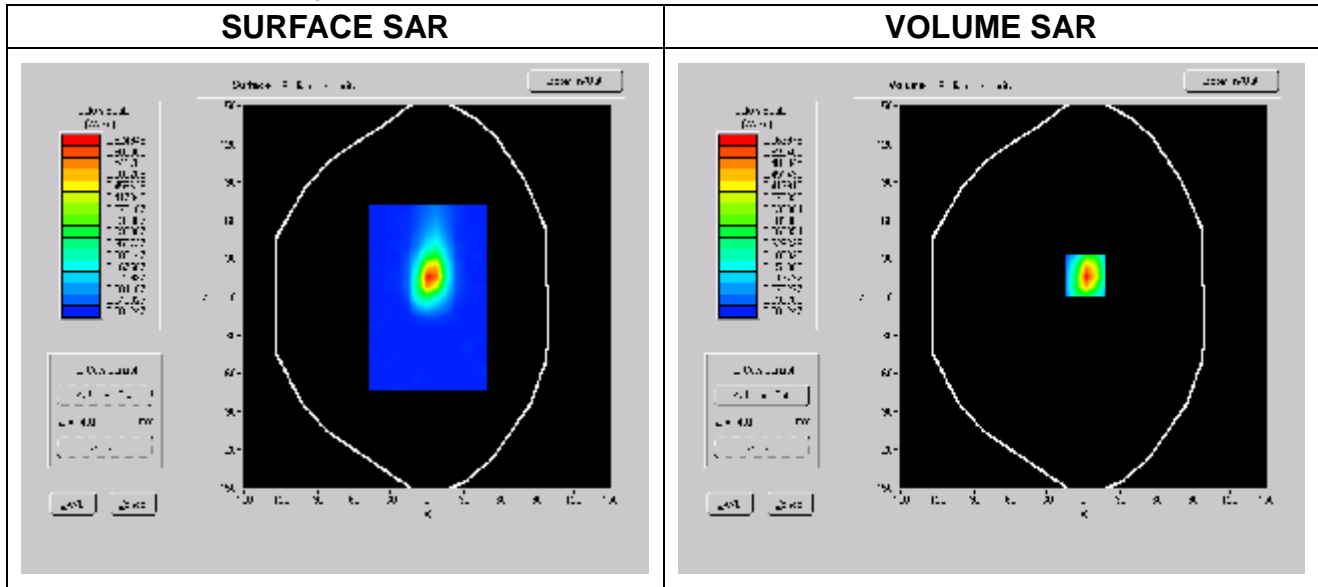
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2462.000000 |
| Relative permittivity (real part) | 53.814999 |
| Relative permittivity (imaginary part) | 14.994000 |
| Conductivity (S/m) | 2.050846 |
| Variation (%) | -2.350000 |

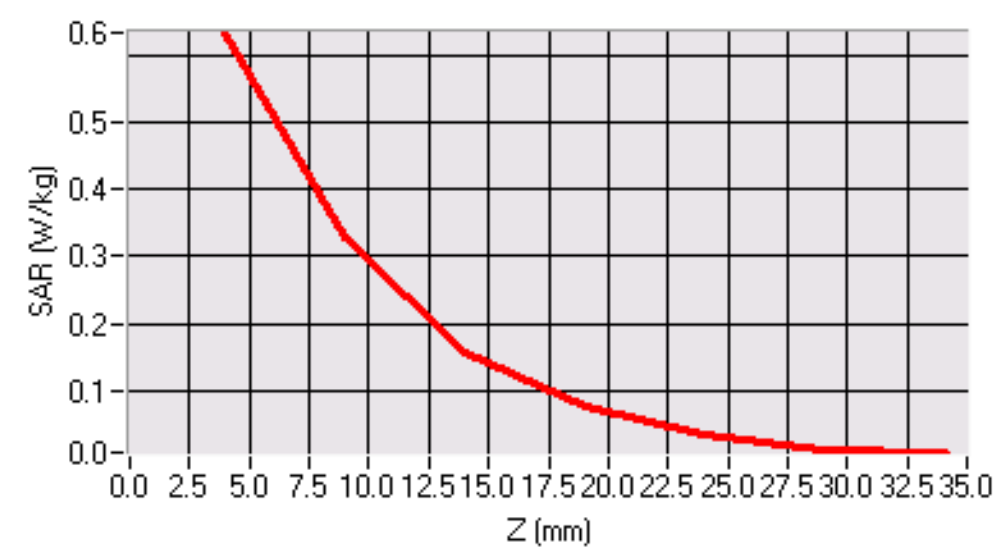


Maximum location: X=2.00, Y=16.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.260572 |
| SAR 1g (W/Kg) | 0.576881 |

Z Axis Scan

SAR, Z Axis Scan (X = 2, Y = 16)



16.5.3 802.11.b-BodyWorn-P3-High

802.11.b-BodyWorn-P3-High

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 6 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

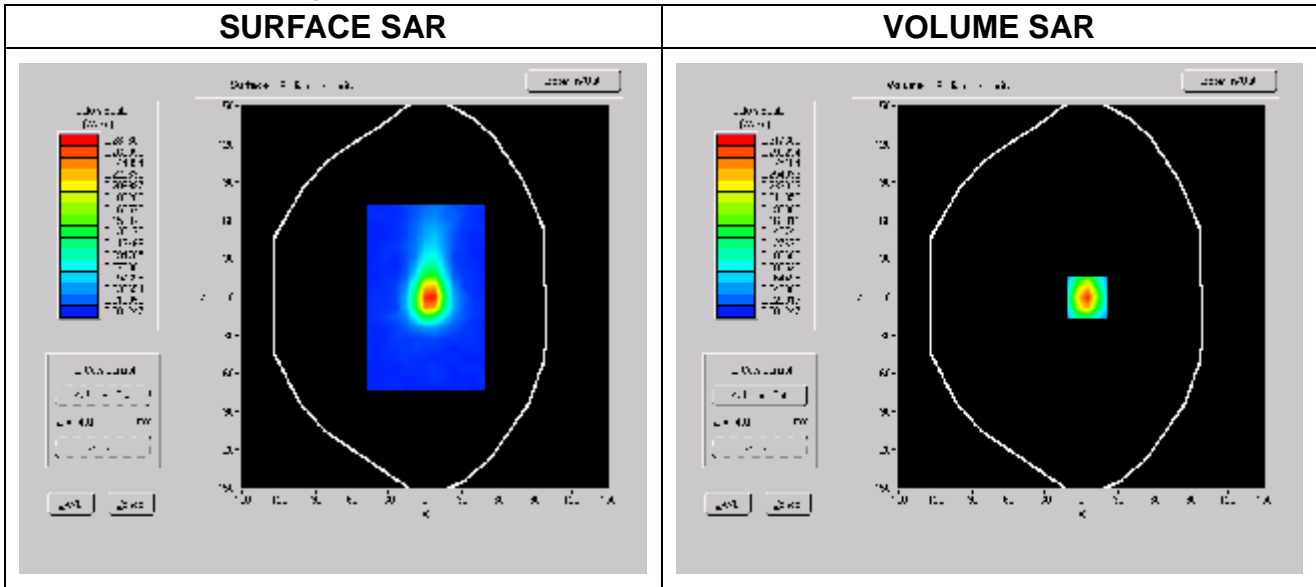
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P3 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2462.000000 |
| Relative permittivity (real part) | 53.814999 |
| Relative permittivity (imaginary part) | 14.994000 |
| Conductivity (S/m) | 2.050846 |
| Variation (%) | 0.890000 |

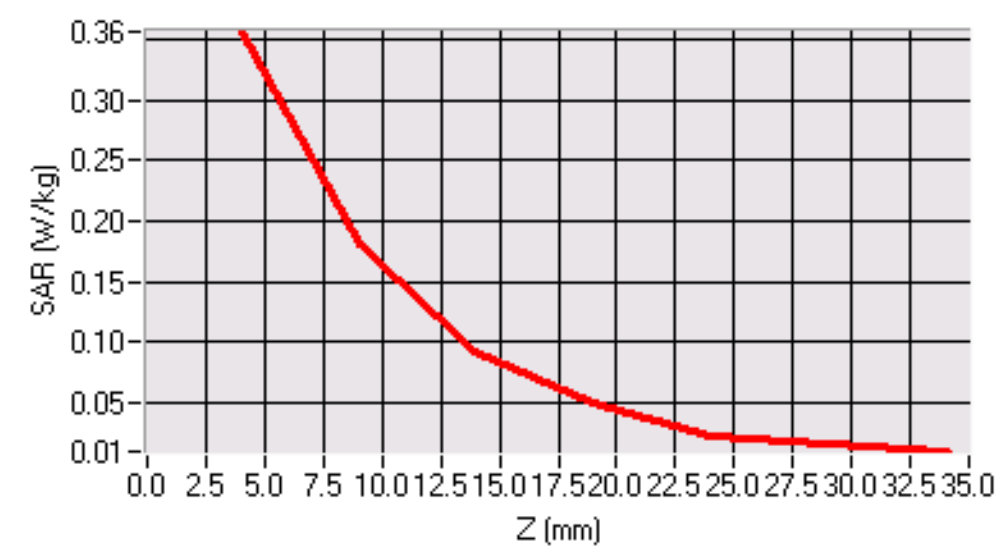


Maximum location: X=5.00, Y=0.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.151690 |
| SAR 1g (W/Kg) | 0.324239 |

Z Axis Scan

SAR, Z Axis Scan (X = 5, Y = 0)



16.5.4 802.11.b-BodyWorn-P4-High

802.11.b-BodyWorn-P4-High

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 2 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

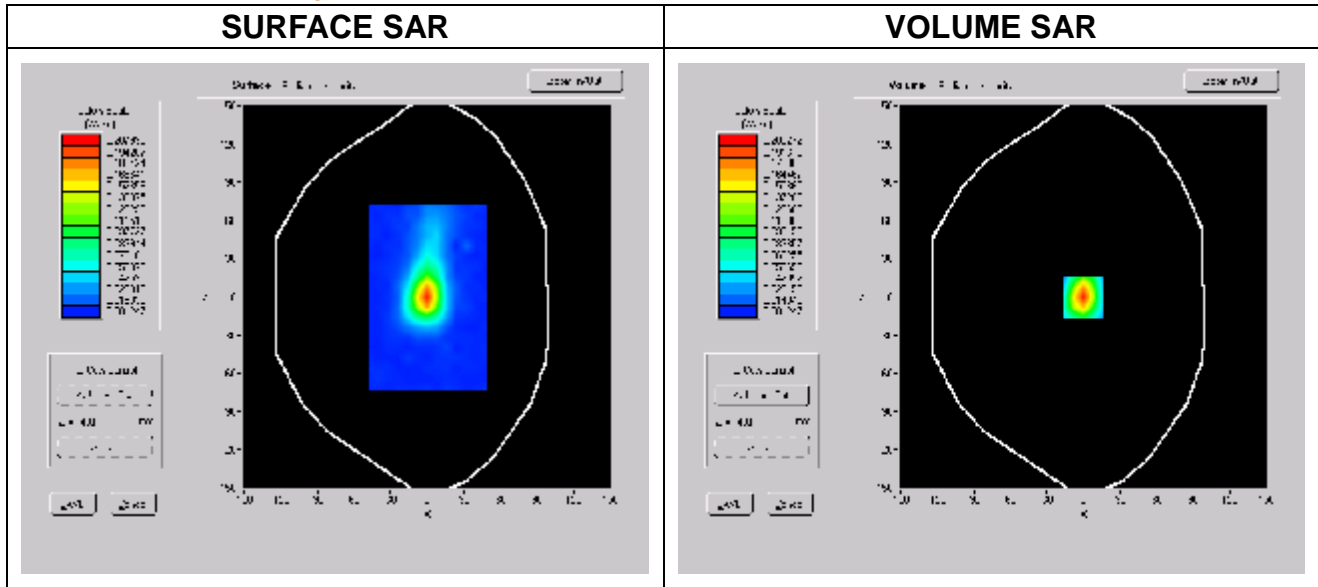
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P4 |
| Band | 24510 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2462.000000 |
| Relative permittivity (real part) | 53.814999 |
| Relative permittivity (imaginary part) | 14.994000 |
| Conductivity (S/m) | 2.050846 |
| Variation (%) | -1.460000 |

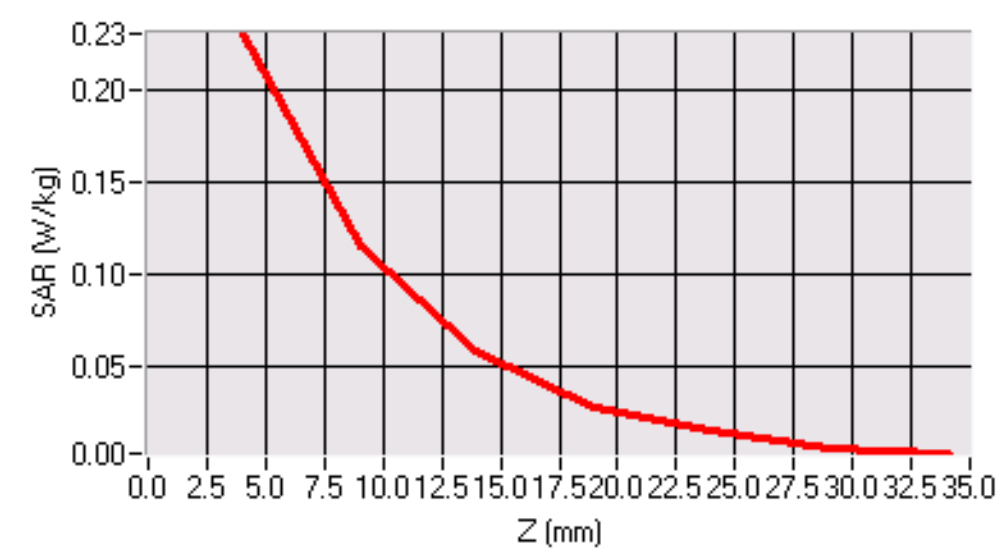


Maximum location: X=0.00, Y=0.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.097195 |
| SAR 1g (W/Kg) | 0.207875 |

Z Axis Scan

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



16.5.5 802.11.b-BodyWorn-P5-High

802.11.b-BodyWorn-P5-High

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 25 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

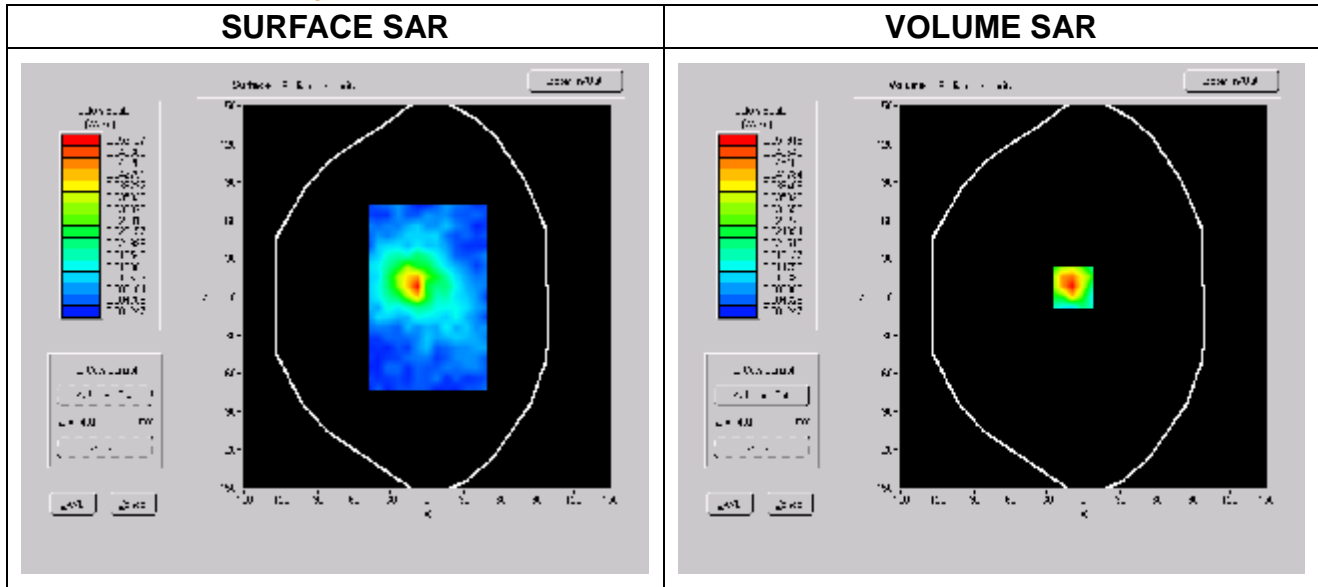
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P5 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2462.000000 |
| Relative permittivity (real part) | 53.814999 |
| Relative permittivity (imaginary part) | 14.994000 |
| Conductivity (S/m) | 2.050846 |
| Variation (%) | -3.940000 |

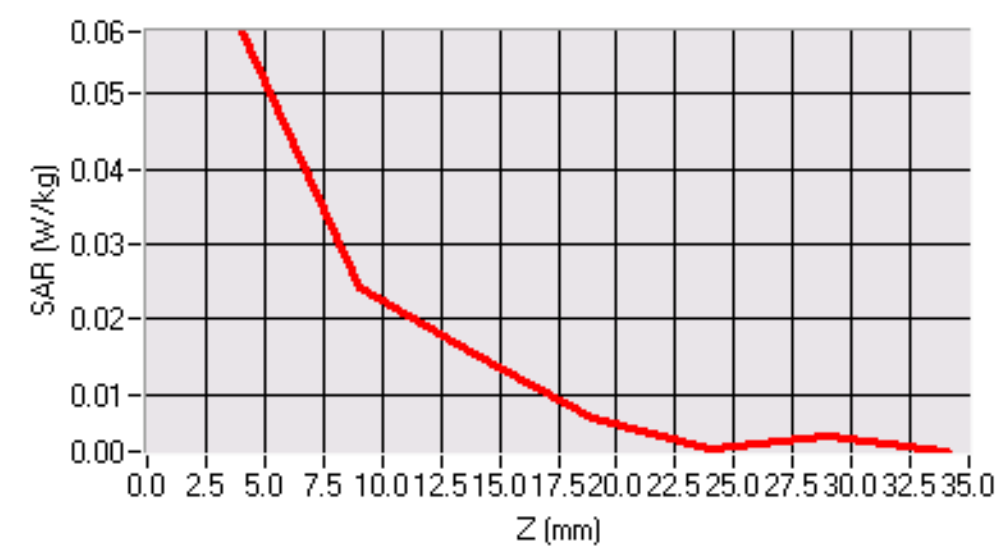


Maximum location: X=-9.00, Y=8.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.026786 |
| SAR 1g (W/Kg) | 0.055247 |

Z Axis Scan

SAR, Z Axis Scan (X = -9, Y = 8)



16.5.6 802.11.b-BodyWorn-P2-Low

802.11.b-BodyWorn-P2-Low

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 27 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

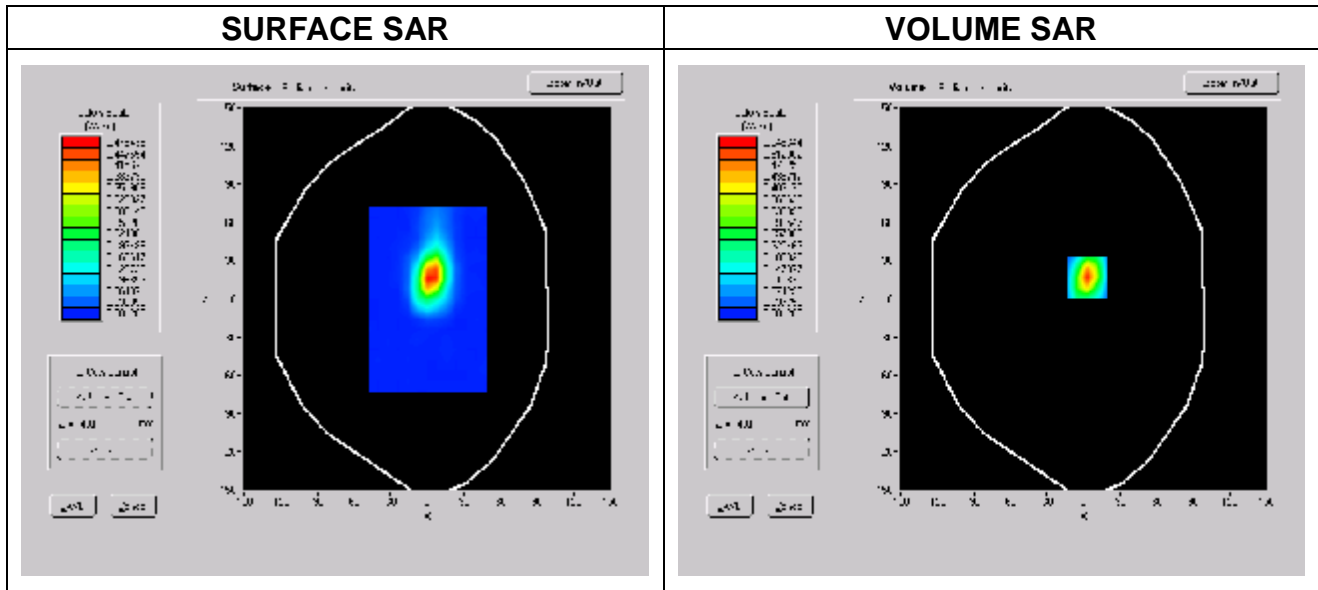
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2412.000000 |
| Relative permittivity (real part) | 53.595001 |
| Relative permittivity (imaginary part) | 14.659050 |
| Conductivity (S/m) | 1.964313 |
| Variation (%) | 1.500000 |

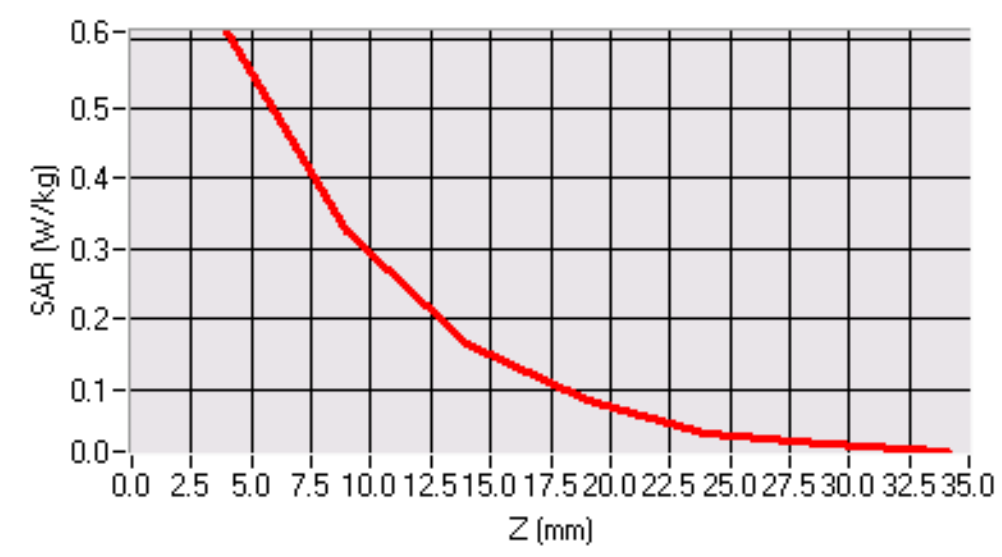


Maximum location: X=3.00, Y=17.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.246846 |
| SAR 1g (W/Kg) | 0.540494 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 17)



16.5.7 802.11.b-BodyWorn-P2-Middle

802.11.b-BodyWorn-P2-Middle

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 26 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

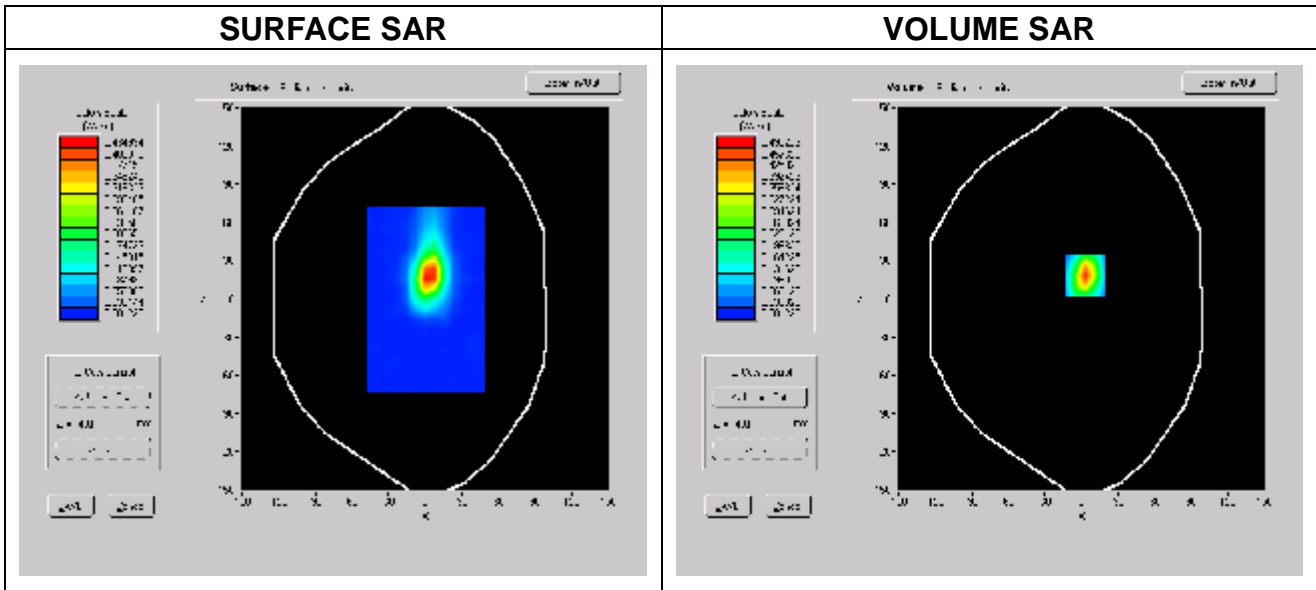
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2437.000000 |
| Relative permittivity (real part) | 53.686001 |
| Relative permittivity (imaginary part) | 14.811300 |
| Conductivity (S/m) | 2.005285 |
| Variation (%) | 0.150000 |

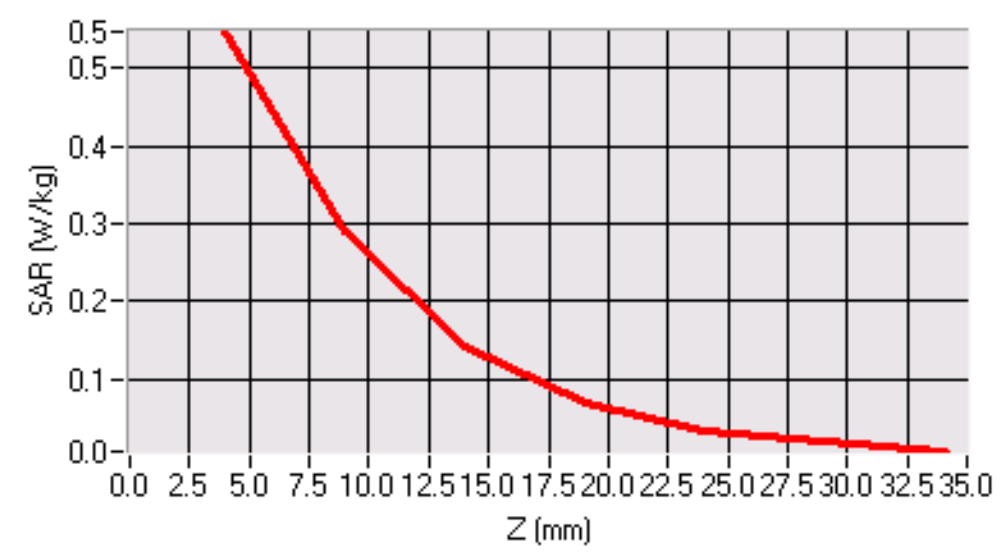


Maximum location: X=3.00, Y=18.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.221199 |
| SAR 1g (W/Kg) | 0.483883 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 18)



16.5.8 802.11g-BodyWorn-P2-Low

802.11g-BodyWorn-P2-Low

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 31 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

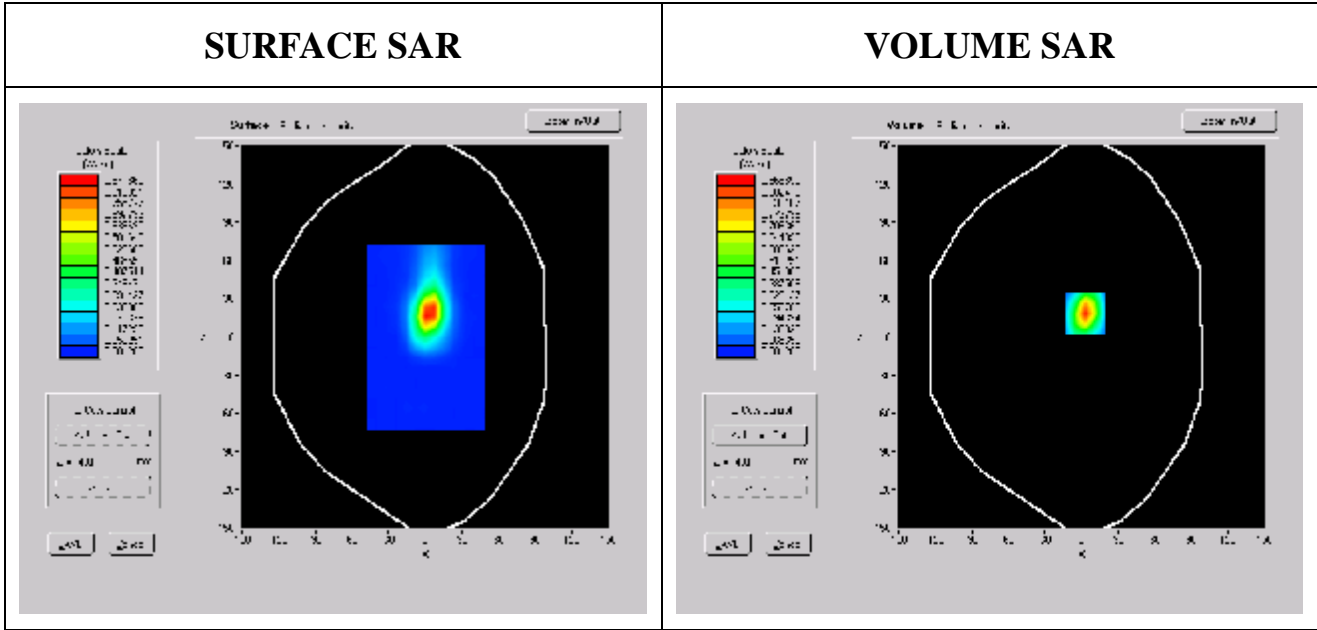
| | |
|-----------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|--|-------------|
| Frequency (MHz) | 2412.000000 |
| Relative permittivity (real part) | 53.595001 |
| Relative permittivity (imaginary part) | 14.659050 |
| Conductivity (S/m) | 1.964313 |
| Variation (%) | -1.440000 |

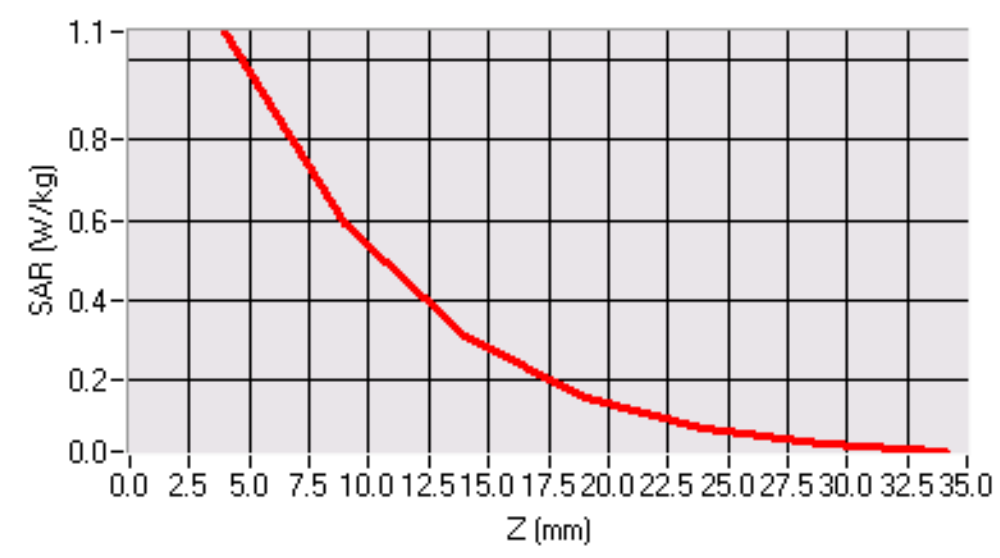


Maximum location: X=3.00, Y=18.00

| | |
|-----------------------|----------|
| SAR 10g (W/Kg) | 0.437435 |
| SAR 1g (W/Kg) | 0.950160 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 18)



16.5.9 802.11g-BodyWorn-P2-Middle

802.11g-BodyWorn-P2-Middle

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 15 minutes 13 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

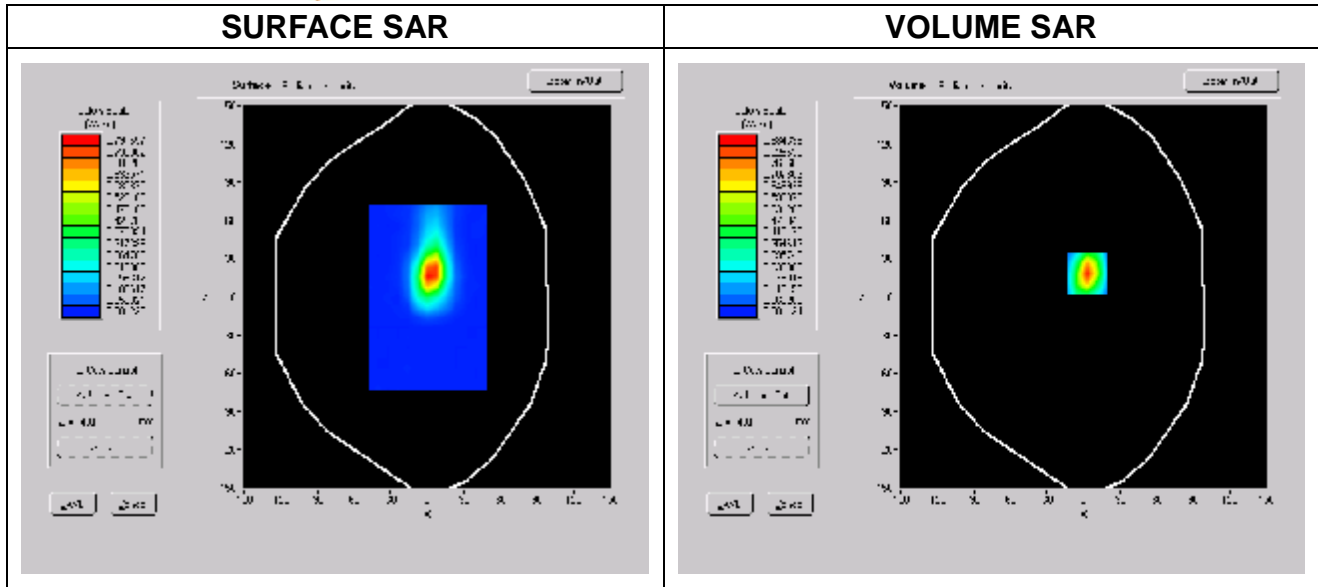
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2437.000000 |
| Relative permittivity (real part) | 53.686001 |
| Relative permittivity (imaginary part) | 14.811300 |
| Conductivity (S/m) | 2.005285 |
| Variation (%) | 0.250000 |

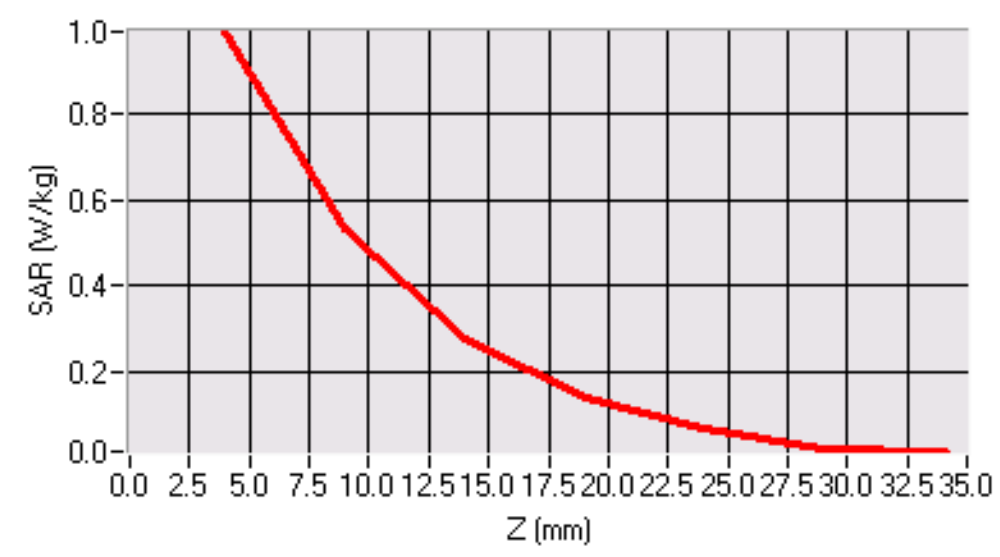


Maximum location: X=3.00, Y=18.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.405438 |
| SAR 1g (W/Kg) | 0.880265 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 18)



16.5.10 802.11g-BodyWorn-P2-High

802.11g-BodyWorn-P2-High

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 55 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

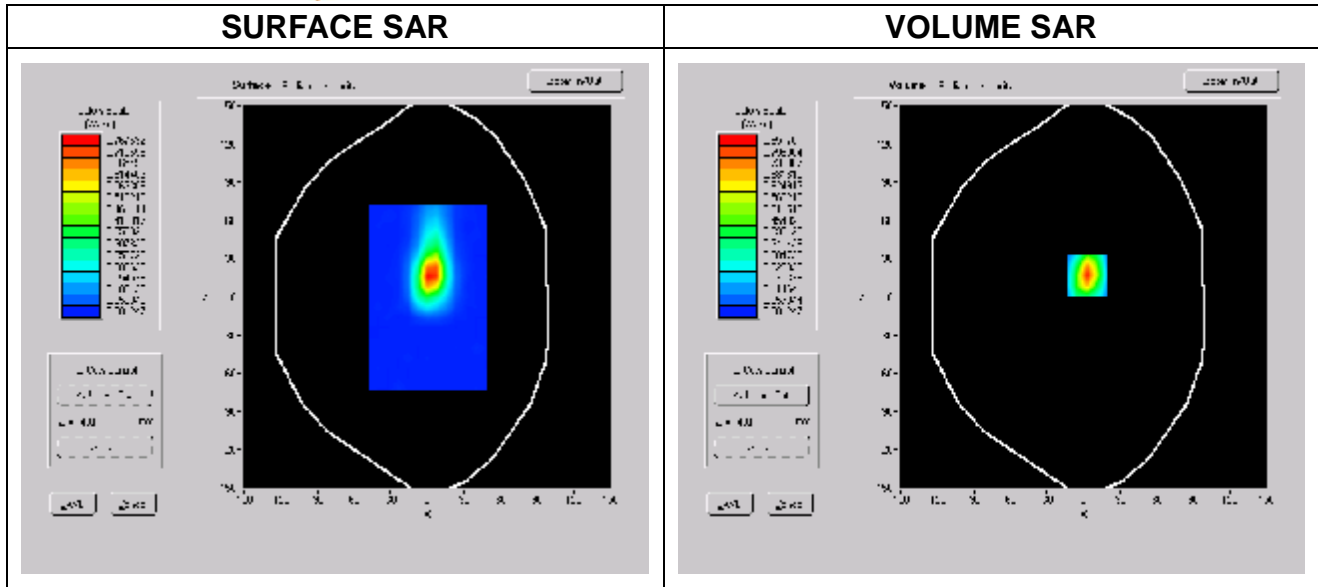
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2462.000000 |
| Relative permittivity (real part) | 53.814999 |
| Relative permittivity (imaginary part) | 14.994000 |
| Conductivity (S/m) | 2.050846 |
| Variation (%) | -0.150000 |

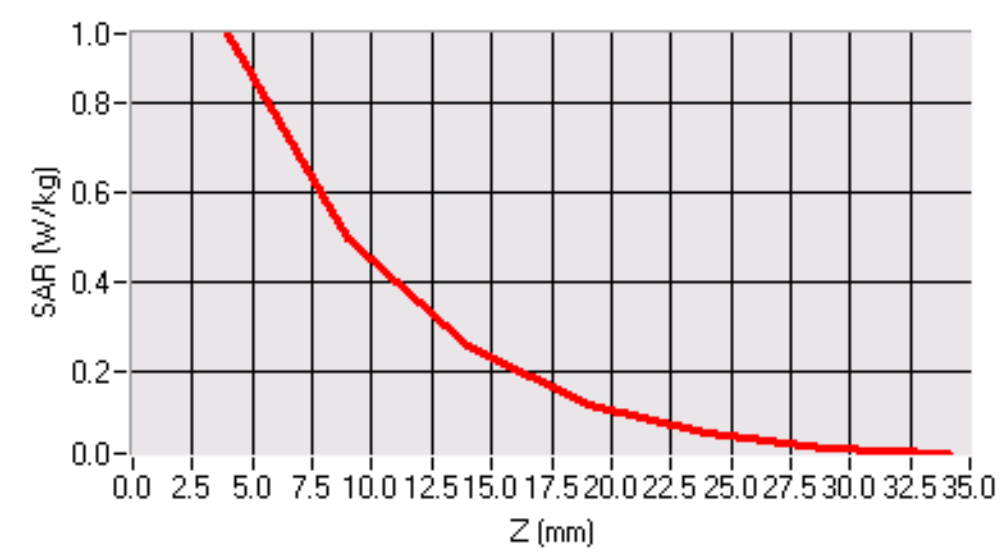


Maximum location: X=3.00, Y=17.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.391840 |
| SAR 1g (W/Kg) | 0.853215 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 17)



16.5.11 802.11n(20MHz)-BodyWorn-P2-Low

802.11n(20MHz)-BodyWorn-P2-Low

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 15 minutes 53 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

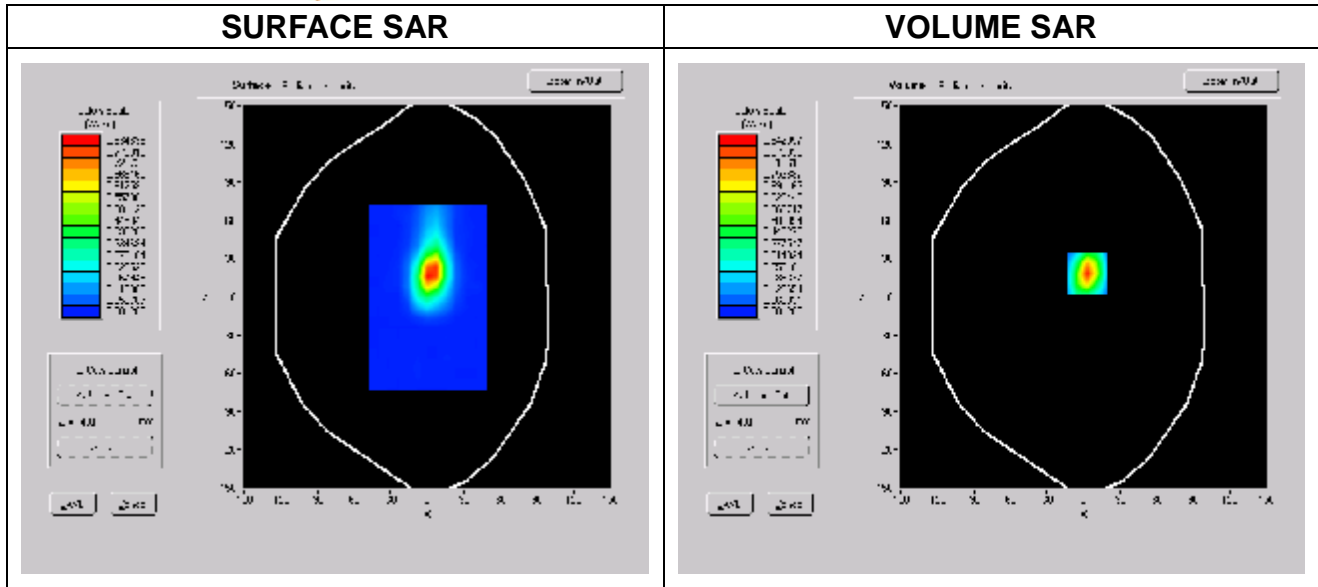
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2412.000000 |
| Relative permittivity (real part) | 53.595001 |
| Relative permittivity (imaginary part) | 14.659050 |
| Conductivity (S/m) | 1.964313 |
| Variation (%) | 0.280000 |

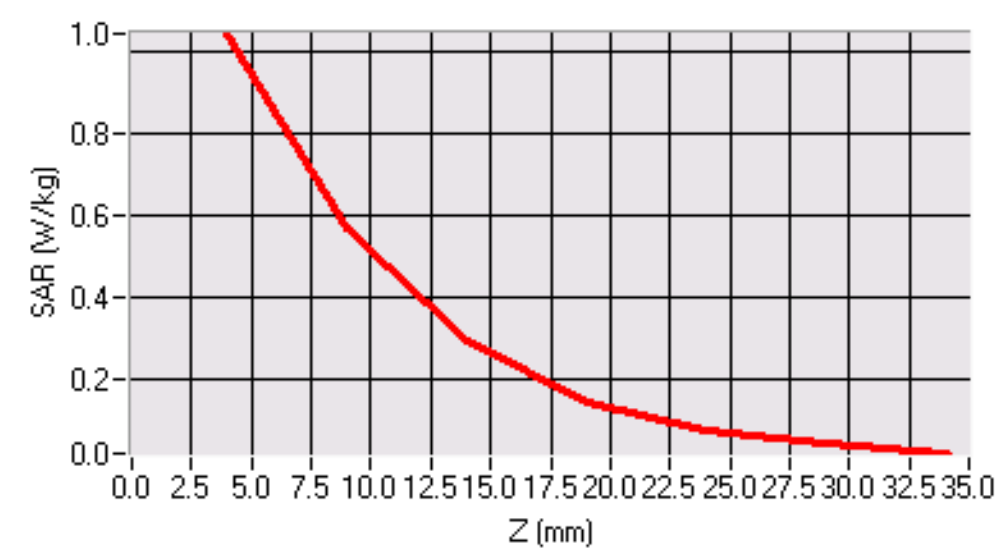


Maximum location: X=3.00, Y=18.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.426289 |
| SAR 1g (W/Kg) | 0.924580 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 18)



16.5.12 802.11n(20MHz)-BodyWorn-P2-Middle

802.11n(20MHz)-BodyWorn-P2-Middle

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 30 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

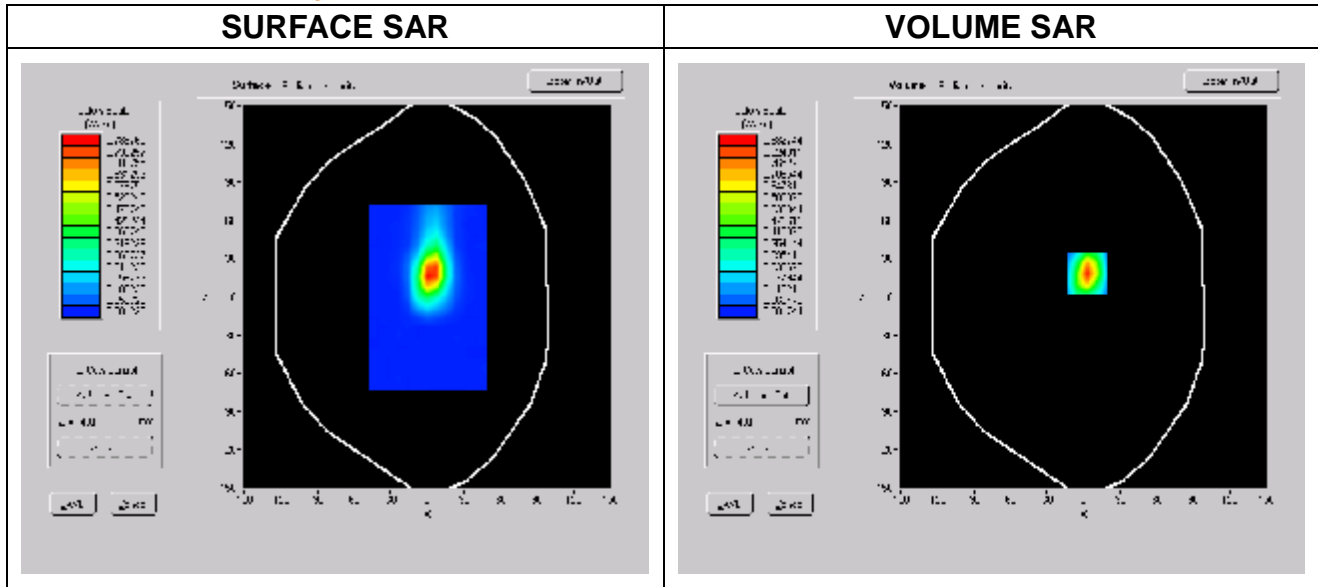
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2437.000000 |
| Relative permittivity (real part) | 53.686001 |
| Relative permittivity (imaginary part) | 14.811300 |
| Conductivity (S/m) | 2.005285 |
| Variation (%) | 0.150000 |

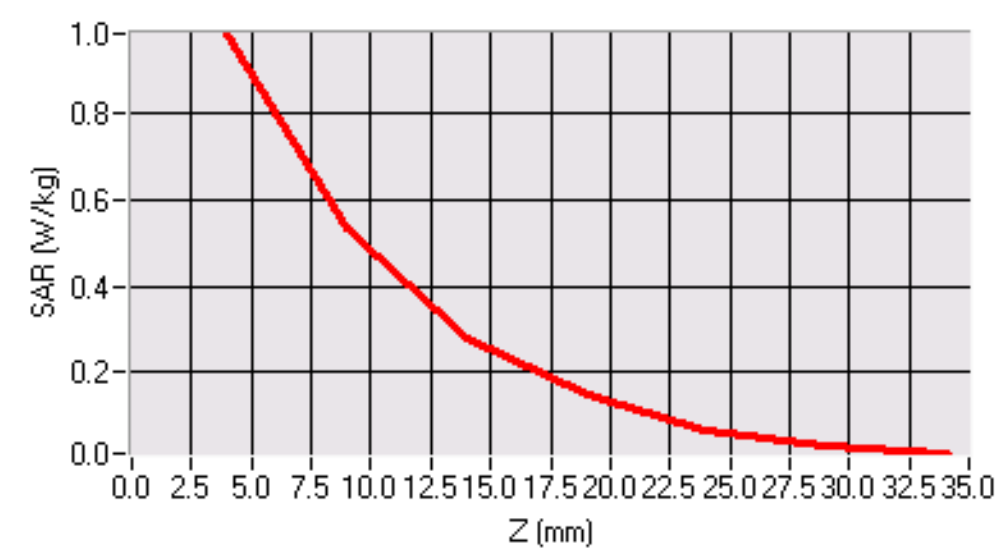


Maximum location: X=3.00, Y=18.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.407113 |
| SAR 1g (W/Kg) | 0.878442 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 18)



16.5.13 802.11n(20MHz)-BodyWorn-P2-High

802.11n(20MHz)-BodyWorn-P2-High

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 15 minutes 1 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

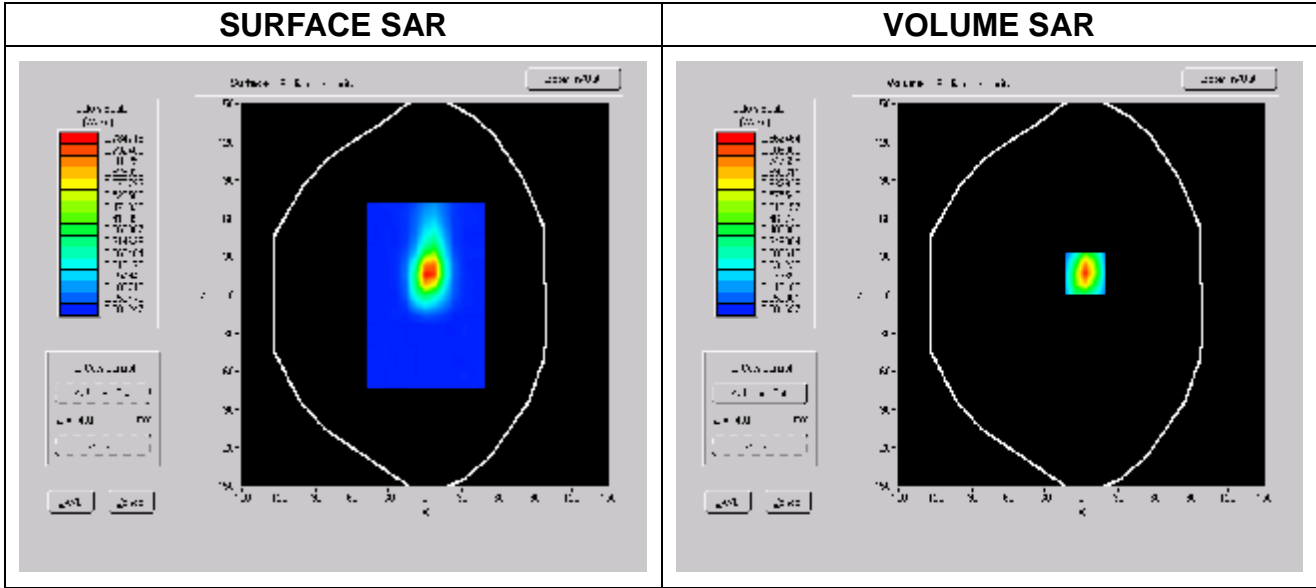
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2462.000000 |
| Relative permittivity (real part) | 53.814999 |
| Relative permittivity (imaginary part) | 14.994000 |
| Conductivity (S/m) | 2.050846 |
| Variation (%) | -0.520000 |

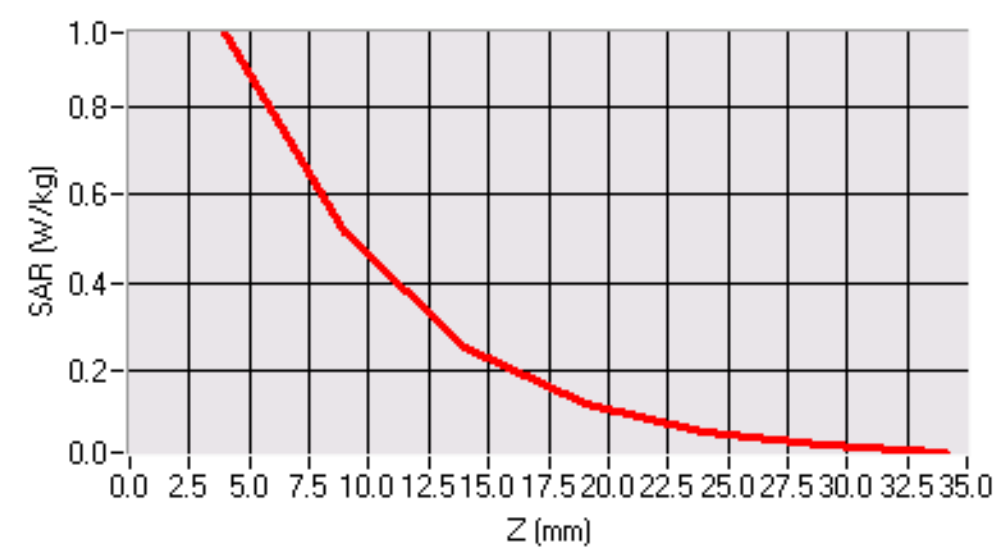


Maximum location: X=3.00, Y=17.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.394415 |
| SAR 1g (W/Kg) | 0.860234 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 17)



16.5.14 802.11n(40MHz)-BodyWorn-P2-Low

802.11n(40MHz)-BodyWorn-P2-Low

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 15 minutes 2 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

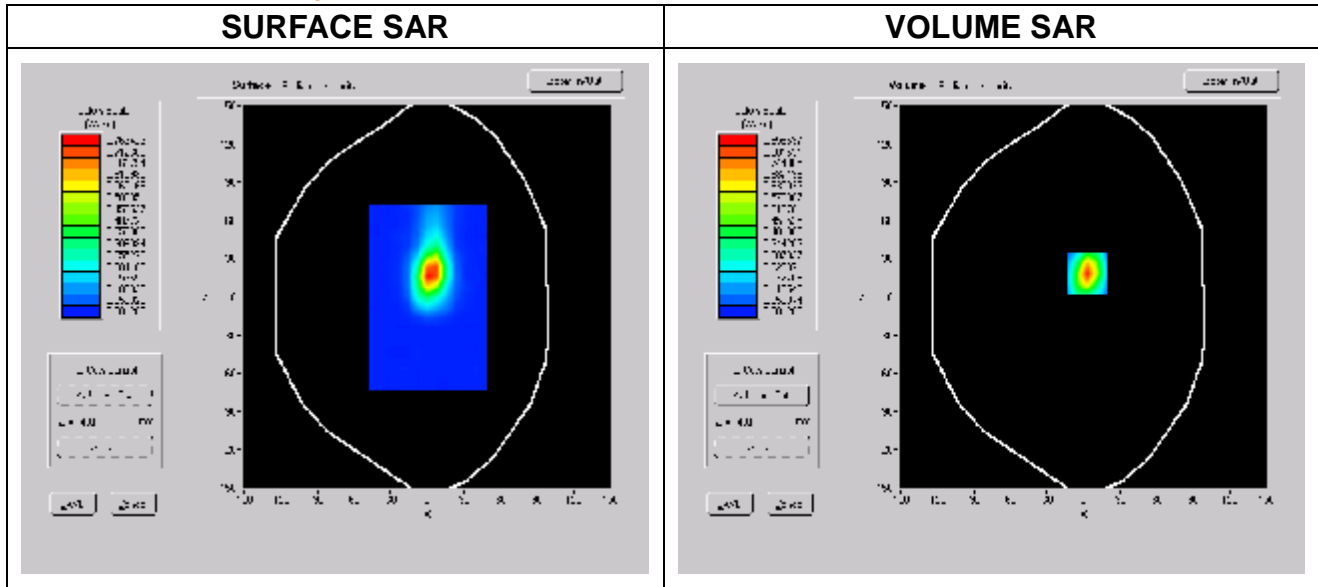
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2422.000000 |
| Relative permittivity (real part) | 53.595001 |
| Relative permittivity (imaginary part) | 14.659050 |
| Conductivity (S/m) | 1.964313 |
| Variation (%) | 0.080000 |

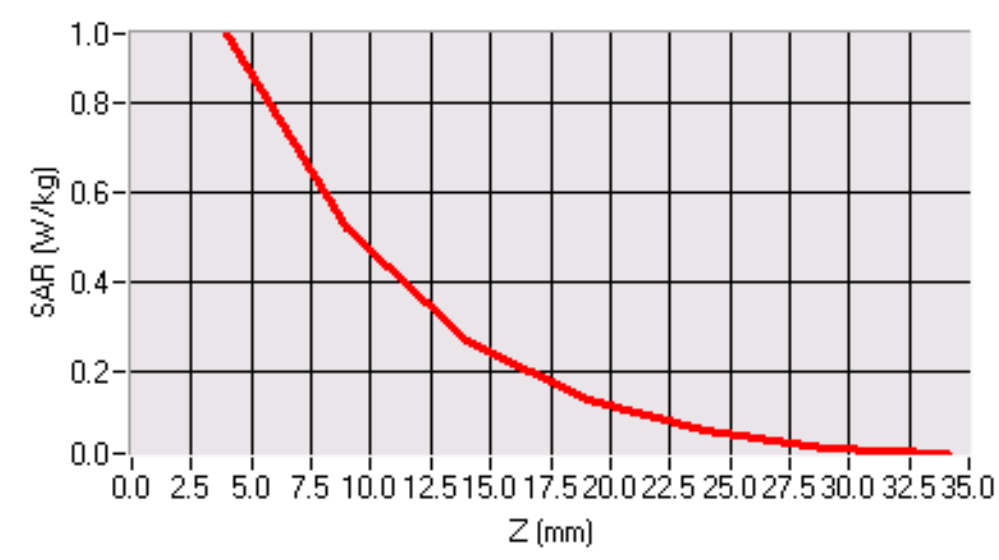


Maximum location: X=3.00, Y=18.00

| | |
|-----------------------|----------|
| SAR 10g (W/Kg) | 0.387664 |
| SAR 1g (W/Kg) | 0.843415 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 18)



16.5.15 802.11n(40MHz)-BodyWorn-P2-Middle

802.11n(40MHz)-BodyWorn-P2-Middle

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 14 minutes 59 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

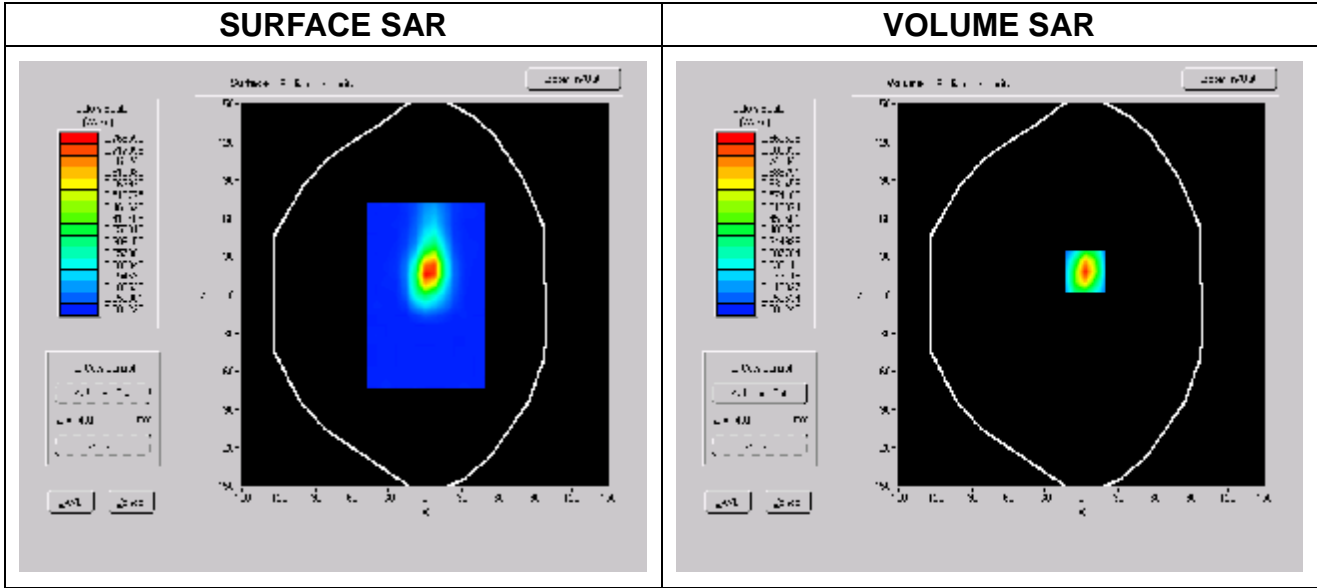
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2437.000000 |
| Relative permittivity (real part) | 53.686001 |
| Relative permittivity (imaginary part) | 14.811300 |
| Conductivity (S/m) | 2.005285 |
| Variation (%) | 0.500000 |

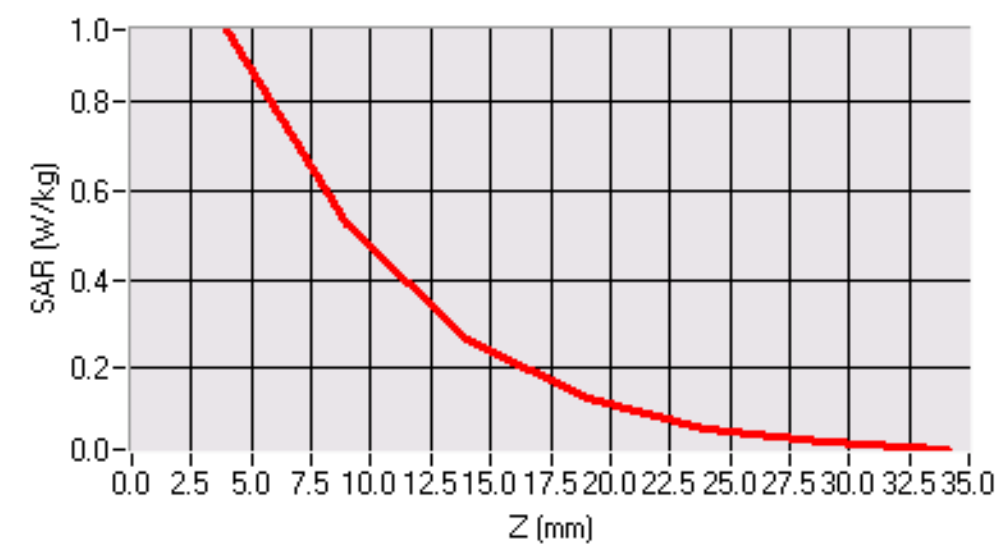


Maximum location: X=3.00, Y=18.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.393575 |
| SAR 1g (W/Kg) | 0.851307 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 18)



16.5.16 802.11n(40MHz)-BodyWorn-P2-High

802.11n(40MHz)-BodyWorn-P2-High

Type: Phone measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 15 minutes 10 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | P2 |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

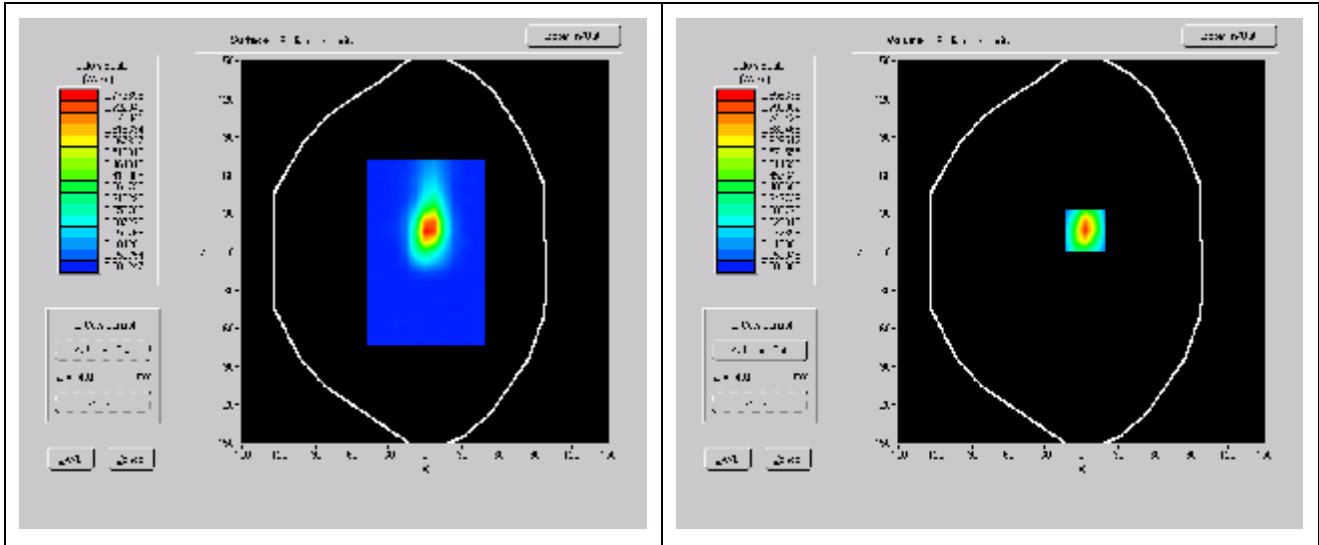
B. Instrumentations.

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2452.000000 |
| Relative permittivity (real part) | 53.814999 |
| Relative permittivity (imaginary part) | 14.994000 |
| Conductivity (S/m) | 2.050846 |
| Variation (%) | -0.180000 |

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

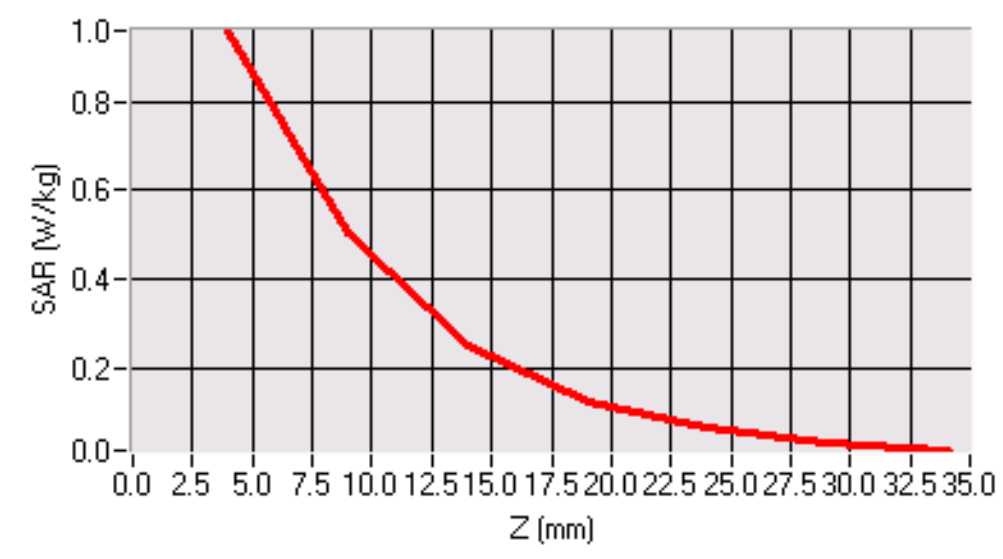


Maximum location: X=3.00, Y=17.00

| | |
|----------------|----------|
| SAR 10g (W/Kg) | 0.390295 |
| SAR 1g (W/Kg) | 0.854594 |

Z Axis Scan

SAR, Z Axis Scan (X = 3, Y = 17)



17. Identification of Samples

| | |
|--------------------------------|--|
| Product Name | WLAN 11n Micro USB Adapter,1T1R |
| Brand Name | - |
| Model Name | WL-6201-V1 |
| Final Hardware Version | WLAN 11n Micro USB Adapter,1t1r(wl-6201-v1)) |
| Final Software Version | MP_Kit_RTL11n_SingleChip_USB_v026 |
| Power Supply: | 5V DC from USB of host PC |
| Antenna Type | Inner Antenna |
| Frequency Band : | 2.4GHz ISM Band |
| Modulation tye | CCK,DQPSK,DBPSK for DSSS 64QAM,16QAM,QPSK,BPSK for OFDM |
| Spread Spectrum: | IEEE 802.11b:DSSS IEEE 802.11g/n :OFDM |
| Frequency Range&Channel number | 802.11b/g/n_20M:2412-2462MHz,11 channels 802.11 n_40M:2422-2452 MHz, 7 channels |
| Reference Number | SHEMA09080095103 |
| Serial Number | SHEMA090800951IT-1 |
| IMEI | -- |
| Date of receipt | 2009-11-10 |
| Date of Testing Start | 2009-11-13 |
| Date of Testing End | 2009-11-13 |

18. Photographs of EUT



Fig.17-1 Front View



Fig.17-2 Back View

Annex A Photographs of Test Setup



Fig.A-1 Photograph of the SAR measurement System

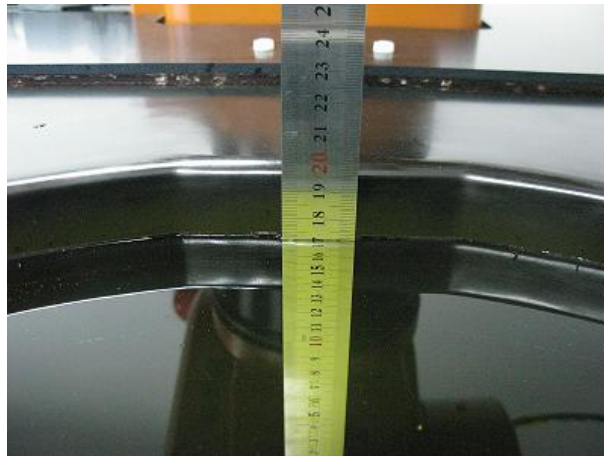


Fig.A-2 Photograph of the Tissue Simulant
Liquid depth 15cm for Body Worn

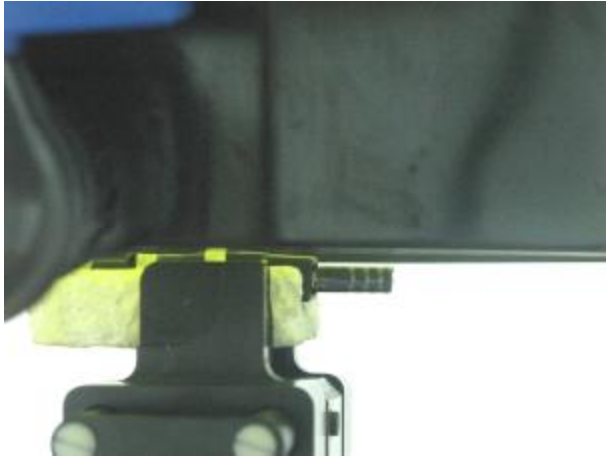


Fig.A-3a Photograph of the BodyWorn status P1



Fig.A-3b Photograph of the BodyWorn status P2

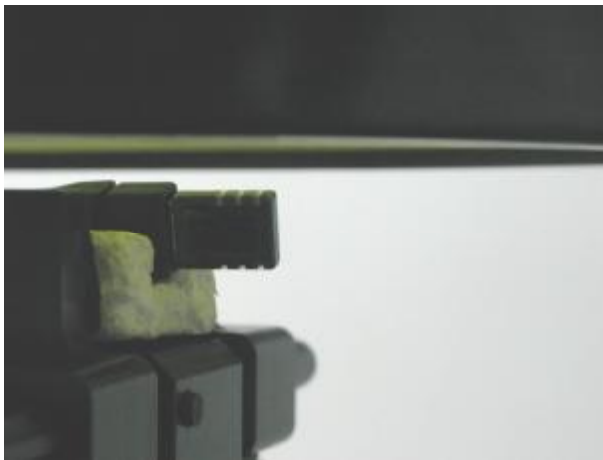


Fig.A-3c Photograph of the BodyWorn status P3

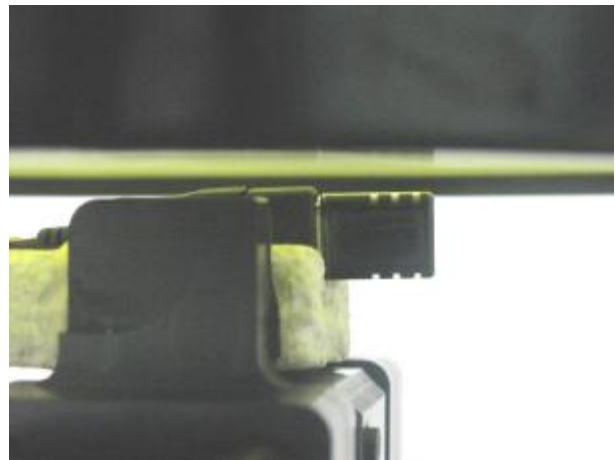


Fig.A-3d Photograph of the BodyWorn status P4

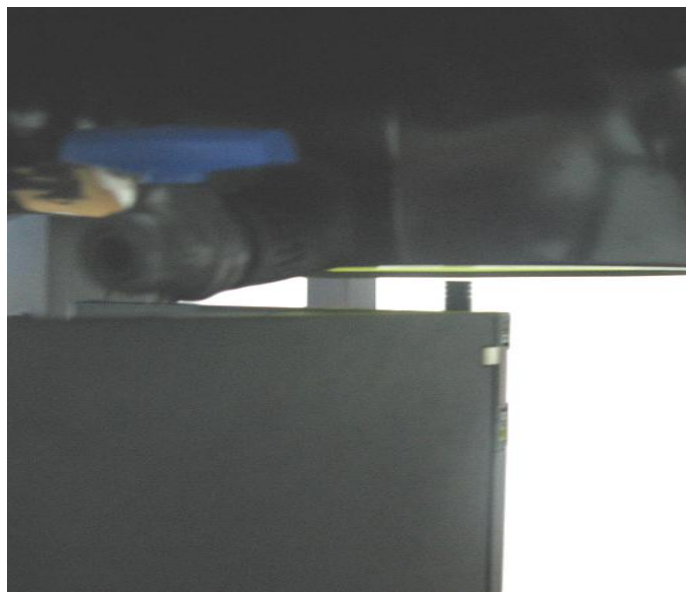


Fig.A-3e Photograph of the BodyWorn status P5

Annex B Tissue Simulant Liquid

Annex B.1 Recipes for Tissue Simulant Liquid

The following tables give the recipes for tissue simulating liquids to be used in different frequency bands.

| Frequency (MHz) | 835 | | 900 | | 1800-2000 | | 2450 | |
|--|-------|-------|-------|-------|---|-------|-------|-------|
| Tissue Type | Head | Body | Head | Body | Head | Body | Head | Body |
| Ingredient (% by weight) | | | | | | | | |
| Water | 40.30 | 50.75 | 40.30 | 50.75 | 55.24 | 70.17 | 55.00 | 68.64 |
| Salt (NaCl) | 1.38 | 0.94 | 1.38 | 0.94 | 0.31 | 0.39 | 0 | 0 |
| Sucrose | 57.90 | 48.21 | 57.90 | 48.21 | 0 | 0 | 0 | 0 |
| HEC | 0.24 | 0 | 0.24 | 0 | 0 | 0 | 0 | 0 |
| Bactericide | 0.18 | 0.10 | 0.10 | 0.10 | 0 | 0 | 0 | 0 |
| DGBE | 0 | 0 | 0 | 0 | 44.45 | 29.44 | 45.00 | 31.37 |
| Measurement dielectric parameters | | | | | | | | |
| Dielectric Constant | 41.9 | 55.0 | 41.1 | 54.5 | 39.2 | 53.2 | 38.9 | 53.0 |
| Conductivity (S/m) | 0.93 | 0.97 | 1.04 | 1.06 | 1.45 | 1.59 | 1.82 | 1.93 |
| Target values | | | | | | | | |
| Dielectric Constant | 41.5 | 55.2 | 41.5 | 55.0 | 40.0 | 53.3 | 39.2 | 52.7 |
| Conductivity (S/m) | 0.90 | 0.97 | 0.97 | 1.05 | 1.40 | 1.52 | 1.80 | 1.95 |
| Salt: 99 ⁺ % Pure Sodium Chloride | | | | | Sucrose: 98 ⁺ % Pure Sucrose | | | |
| Water: De-ionized, 16 MΩ ⁺ resistivity | | | | | HEC: Hydroxyethyl Cellulose | | | |
| DGBE: 99 ⁺ % Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol] | | | | | | | | |

Table B-1 Recipe of Tissue Simulant Liquid

Annex B.2 Measurement for Tissue Simulant Liquid

The dielectric properties for this Tissue Simulant Liquids were measured by using the Agilent Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with Agilent Network Analyzer (300 KHz-8500 MHz). The Conductivity (σ) and Permittivity (ρ) are listed in Table 1. For the SAR measurement given in this report. The temperature variation of the Tissue Simulant Liquids was 22±2°C.

| Frequency (MHz) | Tissue Type | Limit/Measured | Permittivity (ρ) | Conductivity (σ) | Temp (°C) |
|-----------------|-------------|----------------------|--------------------------|---------------------------|-----------|
| 2450 | Body | Recommended Limit | 52.7±5% (50.07~55.33) | 1.95±5% (1.85~2.04) | 22±2 |
| | | Measured, 2009-11-13 | 53.686001 | 2.005285 | 22.2 |

Table B-2 Measurement result of Tissue electric parameters

Annex C SAR System Validation

The microwave circuit arrangement for system verification is sketched in Fig. C-1. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR values. These tests were done at 2450 MHz. The tests were conducted on the same days as the measurement of the EUT. The obtained results from the system accuracy verification are displayed in the table C-1 (A power level of 1w was input to the dipole antenna). During the tests, the ambient temperature of the laboratory was in the range 22°C, the relative humidity was in the range 60% and the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

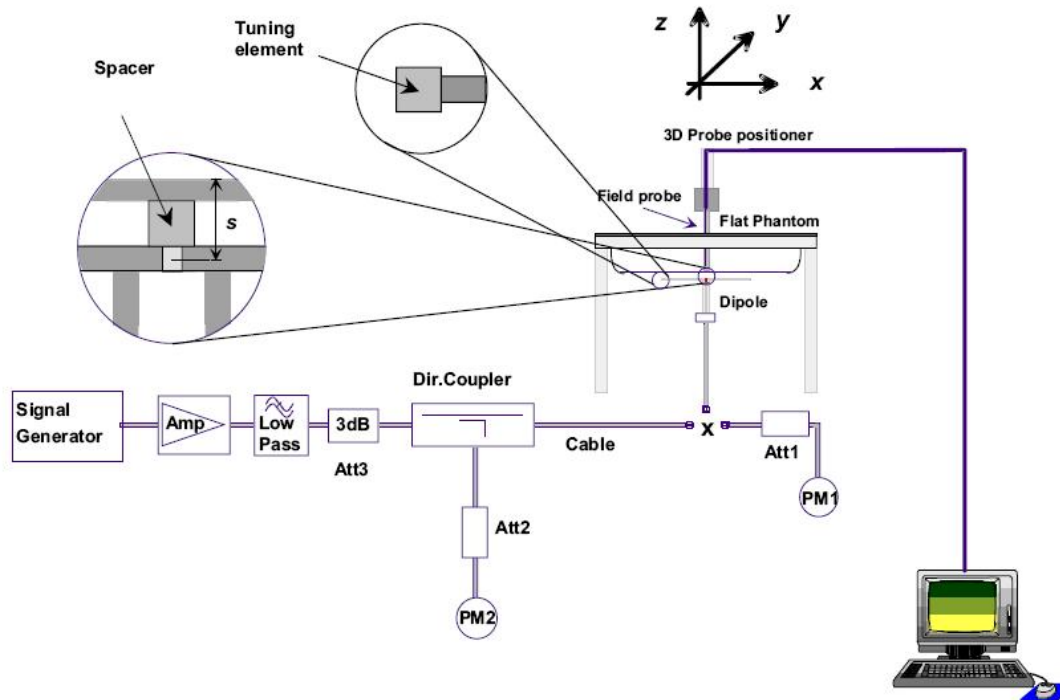


Fig. C-1 the microwave circuit arrangement used for SAR system verification

| Validation Kit | Frequency (MHz) | Tissue Type | Limit/Measurement | | |
|----------------|-----------------|-------------|--------------------------|--|--|
| | | | | 1g | 10g |
| D2450V2 | 2450 | Body | Recommended Limit | 50.14±10% (45.13~55.15) | 23.03±10% (20.73~25.33) |
| | | | Measured, 2009-11-13 | 50.895515 | 23.102520 |

Table C-1 SAR System Validation Result

System Validation for 2450MHz Body

Type: Validation measurement (Complete)

Date of measurement: 13/11/2009

Measurement duration: 15 minutes 18 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

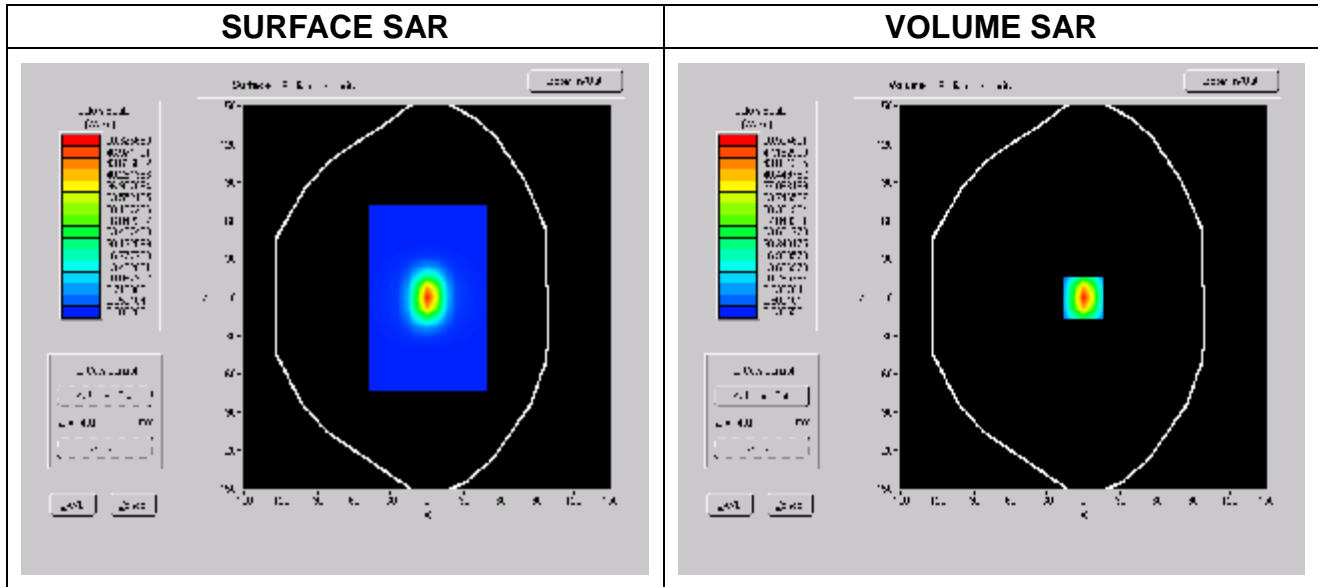
| | |
|------------------------|-------------------|
| Phantom File | surf_sam_plan.txt |
| Phantom | Validation plane |
| Device Position | Dipole |
| Band | 2450 |
| Channels | -- |
| Signal | Duty Cycle: 1.00 |

B. Instrumentations

| | |
|-------------------------|--|
| PC | Dell (Pentium IV 2.4GHz, SN:X10-23533) |
| Network Emulator | Rohde&Schwarz (CMU200, SN:105894) |
| Voltmeter | Keithley (2000, SN:1000572) |
| Synthesizer | Rohde&Schwarz (SML_03, SN:101868) |
| Amplifier | Bonn (BLMA, SN:10800) |
| Power Meter | Rohde&Schwarz (NRVD, SN:101066) |
| Probe | Antennessa (SN:SN_4606_EP_61) |
| Phantom | Antennessa (SN:SN_36_05_SAM25) |
| Liquid | SIMT (Last Calibration:2009.11.13) |

C. SAR Measurement Results

| | |
|---|-------------|
| Frequency (MHz) | 2437.000000 |
| Relative permittivity (real part) | 53.686001 |
| Relative permittivity (imaginary part) | 14.811300 |
| Conductivity (S/m) | 2.005285 |
| Variation (%) | -0.050000 |

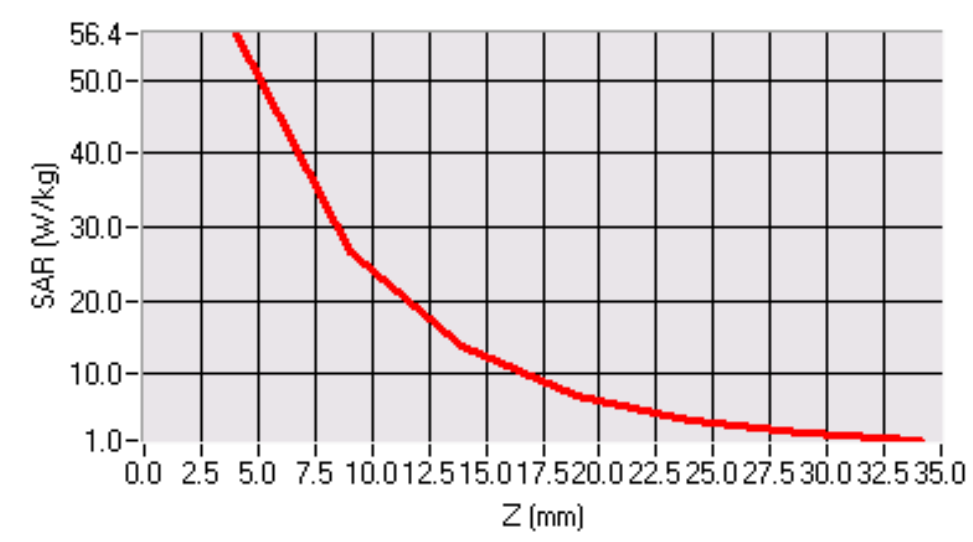


Maximum location: X=0.00, Y=0.00

| | |
|----------------|-----------|
| SAR 10g (W/Kg) | 23.102520 |
| SAR 1g (W/Kg) | 50.895515 |

Z Axis Scan

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



Annex D Description of Test Position

Annex D.1 SAM Phantom Shape

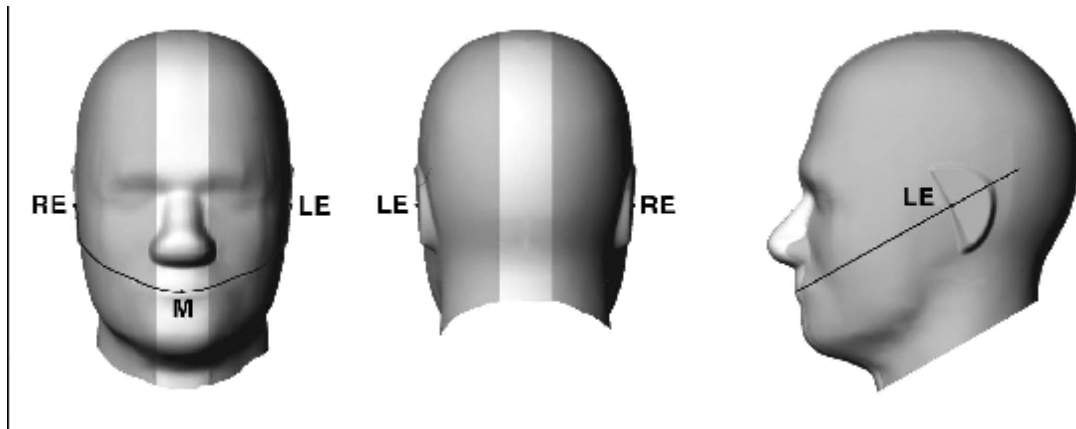


Figure D-1 front, back, and side views of SAM (model for the phantom shell). Full-head model is for illustration purposes only-procedures in this recommended practice are intended primarily for the phantom setup of Figure D-2. Note: The center strip including the nose region has a different thickness tolerance.

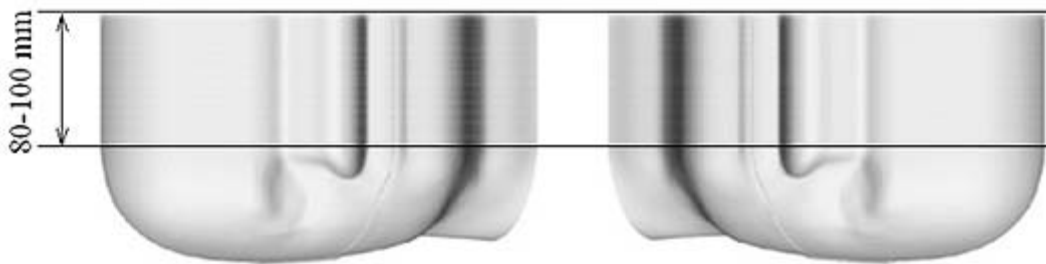


Figure D-2 Sagittally bisected phantom with extended perimeter (shown placed on its side as used for SAR measurements)

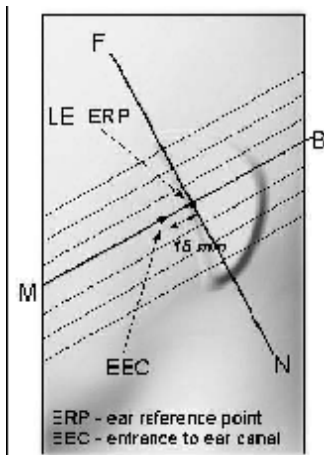


Figure D-3 Close-up side view of phantom showing the ear region, N-F and B-M lines, and seven cross-sectional plane locations

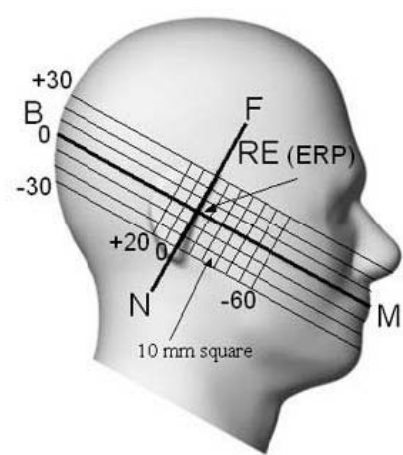


Figure D-4 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

Annex D.2 EUT constructions

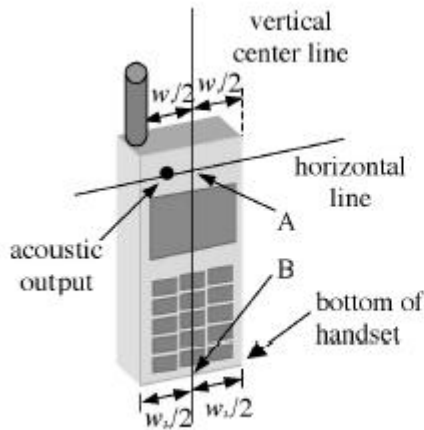


Figure D-5a Handset vertical and horizontal reference lines-“fixed case”

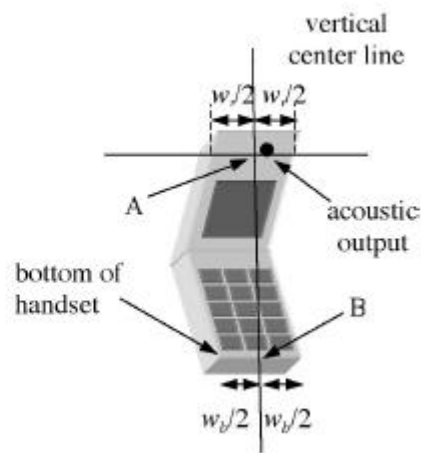


Figure D-5b Handset vertical and horizontal reference lines-“clam-shell case”

Annex D.3 Definition of the “cheek” position

a) Position the device with the vertical centre line of the body of the device and the horizontal line crossing the centre of the ear piece in a plane parallel to the sagittal plane of the phantom ("initial position" see Figure 1-7). While maintaining the device in this plane, align the vertical centre line with the reference plane containing the three ear and mouth reference points (M, RE and LE) and align the centre of the ear piece with the line RE-LE;

b) Translate the mobile phone box towards the phantom with the ear piece aligned with the line LE-RE until the phone touches the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the box until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.

Annex D.4 Definition of the “tilted” position

a) Position the device in the “cheek” position described above;

b) While maintaining the device in the reference plane described above and pivoting against the ear, move it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

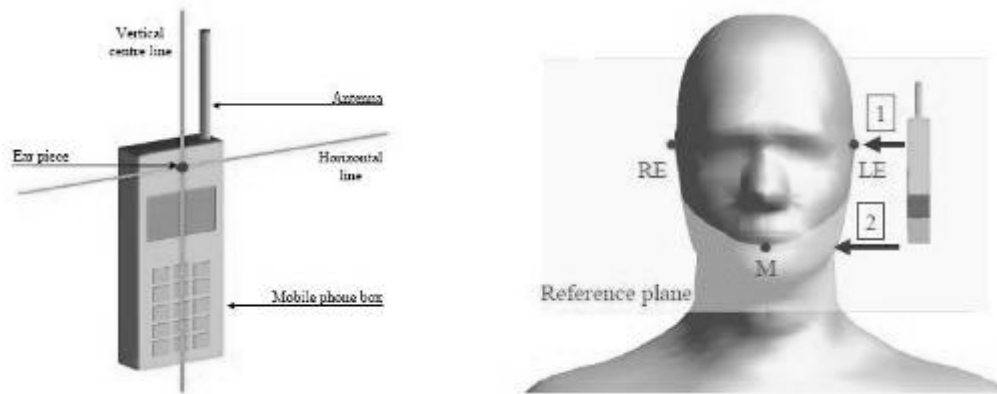


Figure D-6 Definition of the reference lines and points, on the phone and on the phantom and initial position

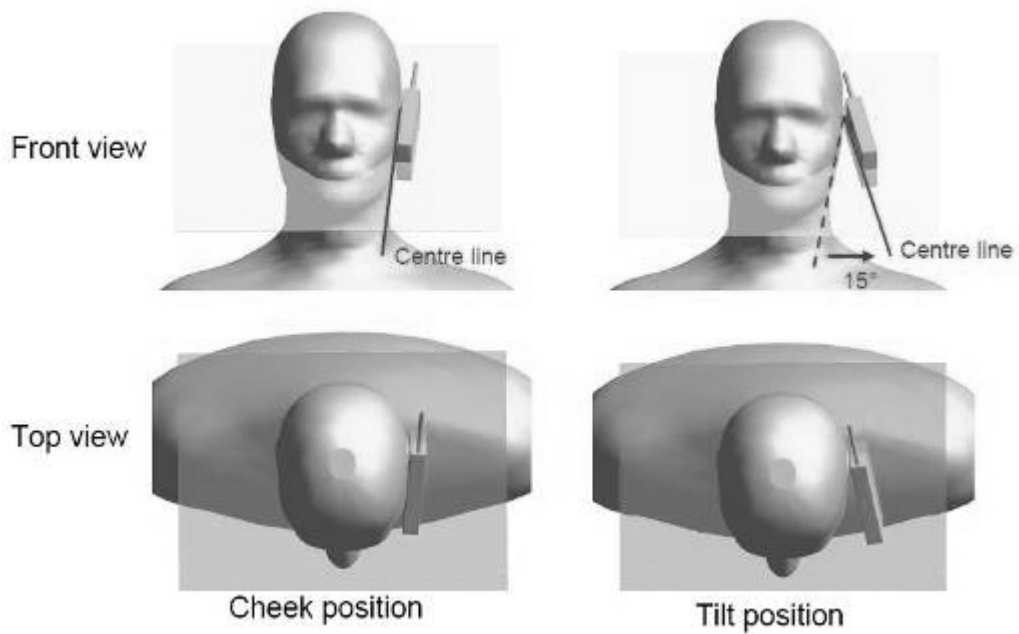


Figure D-7 “Cheek” and “tilt” positions of the mobile phone on the left side

Annex E Calibration certificate

Annex E.1 Probe Calibration certificate

SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY
NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA

校准证书编号: 2008J10-10-912001
Calibrated certificate series No.

CALIBRATION CERTIFICATE

上海市计量测试技术研究院
华东国家计量测试中心

校准证书

| | |
|---|--|
| 委托者 <small>Customer</small> | 本院基础性能试验中心 |
| 委托者地址 <small>Address of customer</small> | 宜山路 716 号 <small>No. 716, Yishan Road</small> |
| 器具名称 <small>Name of instrument</small> | SAR 电场探头 <small>SAR E-field Probe</small> |
| 制造厂 <small>Manufacturer</small> | ANTENNESSA 公司 |
| 型号/规格 <small>Model/specification</small> | E-FIELD PROBE |
| 器具编号 <small>No. of instrument</small> | SN 46/06 EP61 |
| 器具准确度 <small>Instrument accuracy</small> | / |

(机构校准专用章)

证书批准人 王峰
Approved by

校验员 刘彪
Checked by

校准员 马平
Calibrated by

校准日期 2008 年 12 月 25 日
Date for calibration Year Month Day

地址: 上海张衡路 1500 号 (总部) 电话: 021-38838800 传真: 021-50798390 邮编: 201203
Address: No. 1500 Zhangheng Road, Shanghai (Head Office) Tel. Fax Post Code

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No. 716 Yishan Road, Shanghai (Branch) Tel. Fax Post Code

投诉电话: 021-50798262

未经本院批准, 部分采用本证书内容无效。
Partly using the certificate will make selected areas invalid by SIMT.

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| | |
|---|--|
|  <p>SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY NATIONAL CENTER OF MEASUREMENT AND TESTING FOR EAST CHINA</p> | <p>校准证书编号: 2008J10-10-912001 Calibrated certificate serial No.</p> |
| <p>国家法定计量检定机构计量授权证书号(中心/院): 〈国〉法计(2007)01039号/〈2007〉01039号 The number of the Certificate of Metrological Authorization to the Legal Metrological Verification Institution is No. (2007)-81039/No. (2007)-01039</p> <p>中国实验室国家认可委员会(CNAL)实验室认可证书号: No. L0134 The number of the certificate accredited by CNAL is No.L0134</p> | |
| <p>本次校准所依据的技术规范(代号、名称): Reference documents for the calibration (code, name):</p> <p>JCJJ101001.1/0-2007 SAR 电场探头校准规范 (SAR E-FIELD PROBE calibration criterion)</p> <p>IEC 62209-1: 2003 Procedure to measure the Specific Absorption Rate (SAR) in the frequency range of 300 MHz to 3 GHz Part 1: hand-held mobile wireless communication</p> <p>IEEE 1528: 2003 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques</p> | |
| <p>本次校准所使用的主要计量标准器具: Main measurement standards used in this calibration:</p> <p>参见附录一 (Refer to attachment 1)</p> | |
| <p>以上计量标准器具的量值溯源至国家基准。 Quality value of main measurement standards used in this calibration are traced to those of the national primary standards in the P.R. China</p> | |
| <p>校准地点及环境条件: Location and environmental condition for the calibration:</p> <p>地点: 宜山路716号 (No. 716 Yishan Road, Shanghai) Location: _____</p> <p>温度: 21 ℃; 湿度: 50 %RH; 其它: / Ambient temperature: _____ Relative humidity: _____ Other: _____</p> | |
| <p>本次校准结果的扩展不确定度: Expanded uncertainty:</p> <p>Antenna coefficient (Voltage): k=2, U=2U_c(E)=0.92dB</p> | |
| <p>校准结果/说明: Results of calibration and additional explanation:</p> <p>Pass</p> <p>The requirements of the calibration criterion: Linearity less than 0.25dB Isotropy less than 0.25dB Sensitivity less than the Low limit detection (12mW/Kg)</p> | |
| <p>本证书提供的结果仅对本次被校的器具有效。 The results are valid only for the instrument.</p> | |
| <p>校准证书续页专用 Continued page of calibration certificate</p> | <p>第 2 页 共 102 页 Page 2 of 102 pages</p> |

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2.11 Calibration Frequency: 2450.00MHz BODY

2.11.1 Calibration basic information

| S/N | Calibration |
|-----|---------------------------------|
| 1 | Epsilon: 52.42 |
| 2 | Sigma: 2.00 S/m |
| 3 | Temperature: 21°C |
| 4 | Cable loss: 0.20dB |
| 5 | Coupler loss: 20.01dB |
| 6 | Waveguide Return Loss: -12.00dB |

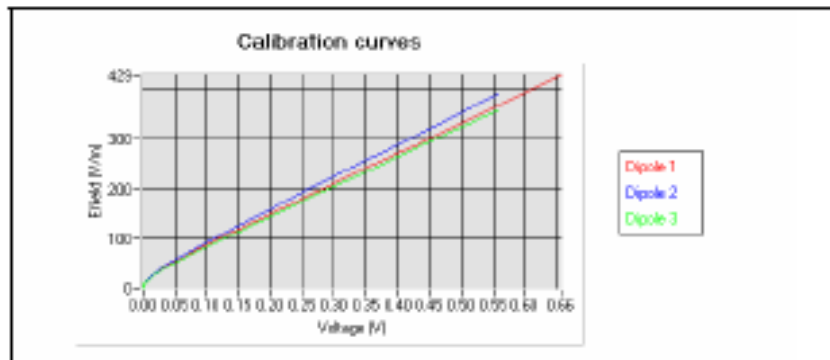
2.11.2 Calibration parameters

2.11.2.1 Sensitivity (Low limit detection): 0.80V/m (1.27mW/Kg)

2.11.2.2 Linearity: 0.04dB

Calibration curves of linearization:

Calibration curves $e_i=f(V)$ ($i=1,2,3$) allow to obtain E-field value using the formula:
 $E=(e_1 \cdot e_1 + e_2 \cdot e_2 + e_3 \cdot e_3)^{1/2}$



Remark: Dipole 1: calibration curves of the dipole 1;
 Dipole 2: calibration curves of the dipole 2;
 Dipole 3: calibration curves of the dipole 3

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Results of calibration and additional explanation (continued page)

Calibration data of linearization (including probe Factor)

| $v_1(V)$ | $e_1(V/m)$ | $v_2(V)$ | $e_2(V/m)$ | $v_3(V)$ | $e_3(V/m)$ |
|----------|------------|----------|------------|----------|------------|
| 0.655847 | 428.548830 | 0.556055 | 390.836704 | 0.556167 | 357.123996 |
| 0.524141 | 348.415504 | 0.450954 | 322.767314 | 0.445741 | 291.691269 |
| 0.426106 | 288.669403 | 0.363645 | 266.102980 | 0.356019 | 238.411807 |
| 0.338265 | 235.005991 | 0.295284 | 221.604423 | 0.283873 | 195.432656 |
| 0.270398 | 193.393959 | 0.235058 | 182.231089 | 0.230079 | 163.245378 |
| 0.217076 | 160.532567 | 0.189295 | 152.126513 | 0.182692 | 134.713740 |
| 0.174701 | 134.234656 | 0.152808 | 127.924135 | 0.148164 | 113.745434 |
| 0.138800 | 111.735244 | 0.123229 | 108.085176 | 0.118753 | 95.680543 |
| 0.111783 | 94.577703 | 0.099488 | 91.926926 | 0.094606 | 80.615321 |
| 0.089747 | 80.344038 | 0.080204 | 78.552166 | 0.076087 | 68.825019 |
| 0.072352 | 68.861780 | 0.063663 | 66.790253 | 0.060448 | 58.607965 |
| 0.057740 | 58.947676 | 0.051247 | 57.681745 | 0.048887 | 50.812700 |
| 0.045930 | 50.649288 | 0.040943 | 49.835809 | 0.031348 | 38.391308 |
| 0.029375 | 38.347133 | 0.026768 | 38.391308 | 0.029999 | 37.259147 |
| 0.028103 | 37.216275 | 0.025605 | 37.302068 | 0.028273 | 35.870126 |
| 0.026413 | 35.828853 | 0.024064 | 35.911447 | 0.026041 | 34.137593 |
| 0.024303 | 34.098314 | 0.022158 | 34.176918 | 0.023441 | 32.079893 |
| 0.021874 | 32.042980 | 0.019888 | 32.116847 | 0.020409 | 29.630085 |
| 0.018998 | 29.595992 | 0.017282 | 29.664218 | 0.017165 | 26.806055 |
| 0.015928 | 26.775211 | 0.014466 | 26.867850 | 0.014098 | 24.028846 |
| 0.013032 | 23.973581 | 0.011819 | 24.056526 | 0.011450 | 21.415731 |
| 0.010578 | 21.366476 | 0.009573 | 21.440401 | 0.009185 | 19.064829 |
| 0.008501 | 19.020981 | 0.007690 | 19.086790 | 0.007393 | 16.971995 |
| 0.006840 | 16.932961 | 0.006158 | 16.991547 | 0.005910 | 15.091518 |
| 0.005446 | 15.056808 | 0.004907 | 15.108902 | 0.004681 | 13.368531 |
| 0.004295 | 13.310439 | 0.003873 | 13.403953 | 0.003714 | 11.918810 |
| 0.003395 | 11.854485 | 0.003066 | 11.932540 | 0.002947 | 10.598220 |
| 0.002710 | 10.613315 | 0.002433 | 10.617906 | 0.002262 | 9.306208 |
| 0.002106 | 9.383690 | 0.001873 | 9.354853 | 0.001730 | 8.172895 |
| 0.001610 | 8.237808 | 0.001417 | 8.183617 | 0.001327 | 7.196549 |
| 0.001213 | 7.190244 | 0.001076 | 7.184035 | 0.001037 | 6.402502 |
| 0.000935 | 6.354701 | 0.000821 | 6.334289 | 0.000805 | 5.688004 |
| 0.000718 | 5.616775 | 0.000631 | 5.618201 | 0.000625 | 5.064682 |
| 0.000553 | 4.983073 | 0.000481 | 4.980667 | 0.000477 | 4.487778 |
| 0.000422 | 4.415655 | 0.000376 | 4.480741 | 0.000361 | 3.977542 |
| 0.000327 | 3.953550 | 0.000286 | 4.002844 | 0.000276 | 3.557502 |
| 0.000254 | 3.557910 | 0.000209 | 3.543176 | 0.000191 | 3.080715 |
| 0.000184 | 3.131937 | 0.000155 | 3.181435 | 0.000158 | 2.874376 |
| 0.000122 | 2.699075 | 0.000115 | 2.884376 | 0.000109 | 2.537222 |
| 0.000061 | 2.191278 | 0.000077 | 2.570567 | 0.000063 | 2.173629 |

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| | | | | | |
|----------|----------|----------|----------|----------|----------|
| 0.000031 | 1.892499 | 0.000045 | 2.272948 | 0.000037 | 1.938180 |
|----------|----------|----------|----------|----------|----------|

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Results of calibration and additional explanation (continued page)

| $v_1(V)$ | $e_1(V/m)$ | $v_2(V)$ | $e_2(V/m)$ | $v_3(V)$ | $e_3(V/m)$ |
|-----------|------------|-----------|------------|-----------|------------|
| 0.000008 | 1.622610 | 0.000006 | 1.846466 | -0.000001 | 1.530226 |
| -0.000010 | 1.379908 | -0.000015 | 1.570428 | -0.000017 | 1.320981 |
| -0.000022 | 1.185150 | -0.000030 | 1.340787 | -0.000030 | 1.129313 |
| -0.000032 | 1.016119 | -0.000040 | 1.154990 | -0.000038 | 0.977716 |
| -0.000038 | 0.874571 | -0.000048 | 0.986403 | -0.000045 | 0.842730 |
| -0.000043 | 0.745701 | -0.000054 | 0.848265 | -0.000050 | 0.716471 |
| -0.000047 | 0.638640 | -0.000058 | 0.729004 | -0.000054 | 0.619351 |
| -0.000050 | 0.547536 | -0.000061 | 0.626152 | -0.000056 | 0.525965 |
| -0.000052 | 0.467431 | -0.000063 | 0.539907 | -0.000058 | 0.453950 |
| / | / | -0.000065 | 0.459473 | / | / |

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2.11.2.3 Isotropy

- Axial Isotropy: 0.21dB
- Hemispherical Isotropy: 0.24 dB

Calibration data of Isotropy

| Axial (°) | Hemispherical (°) | V ₁ (V) | V ₂ (V) | V ₃ (V) | E (V/m) |
|-----------|-------------------|--------------------|--------------------|--------------------|-----------|
| -180 | -30 | 0.001006 | 0.001359 | 0.030868 | 39.376134 |
| -180 | -15 | -0.000022 | 0.004945 | 0.028248 | 38.944802 |
| -180 | 0 | 0.000691 | 0.009985 | 0.022727 | 38.773079 |
| -180 | 15 | 0.002444 | 0.015221 | 0.015371 | 38.707595 |
| -180 | 30 | 0.004476 | 0.019837 | 0.007771 | 38.938313 |
| -165 | -30 | -0.000058 | 0.000117 | 0.033232 | 39.834199 |
| -165 | -15 | 0.001133 | 0.001847 | 0.030166 | 39.156682 |
| -165 | 0 | 0.003811 | 0.005291 | 0.024371 | 38.469849 |
| -165 | 15 | 0.006761 | 0.009895 | 0.016692 | 38.141929 |
| -165 | 30 | 0.009042 | 0.014604 | 0.008670 | 38.151660 |
| -150 | -30 | 0.000816 | 0.000209 | 0.033049 | 40.196706 |
| -150 | -15 | 0.004087 | 0.000014 | 0.029496 | 39.119657 |
| -150 | 0 | 0.008338 | 0.001543 | 0.023485 | 38.180373 |
| -150 | 15 | 0.012174 | 0.004604 | 0.015770 | 37.386412 |
| -150 | 30 | 0.014733 | 0.008753 | 0.007892 | 37.165603 |
| -135 | -30 | 0.002613 | 0.001980 | 0.030347 | 40.132961 |
| -135 | -15 | 0.007544 | 0.000489 | 0.026180 | 38.927627 |
| -135 | 0 | 0.013020 | 0.000009 | 0.019887 | 37.800299 |
| -135 | 15 | 0.017690 | 0.000894 | 0.012494 | 36.767449 |
| -135 | 30 | 0.020373 | 0.003560 | 0.005537 | 36.381884 |
| -120 | -30 | 0.004223 | 0.005751 | 0.025762 | 39.908536 |
| -120 | -15 | 0.010226 | 0.003514 | 0.020721 | 38.668018 |
| -120 | 0 | 0.016667 | 0.001323 | 0.014254 | 37.422595 |
| -120 | 15 | 0.021885 | 0.000132 | 0.007729 | 36.577664 |
| -120 | 30 | 0.024738 | 0.000517 | 0.002637 | 36.245990 |
| -105 | -30 | 0.005028 | 0.011232 | 0.019008 | 39.515128 |
| -105 | -15 | 0.011580 | 0.008812 | 0.013516 | 38.380820 |
| -105 | 0 | 0.018315 | 0.005528 | 0.007694 | 37.372488 |
| -105 | 15 | 0.023822 | 0.002266 | 0.002932 | 36.765510 |
| -105 | 30 | 0.026857 | 0.000284 | 0.000445 | 36.671085 |
| -90 | -30 | 0.004645 | 0.017574 | 0.011307 | 39.245366 |
| -90 | -15 | 0.010987 | 0.014996 | 0.006165 | 38.253836 |
| -90 | 0 | 0.017656 | 0.010809 | 0.002185 | 37.569900 |
| -90 | 15 | 0.023119 | 0.006050 | 0.000218 | 37.269878 |

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| Axial (°) | Hemispherical (°) | V ₁ (V) | V ₂ (V) | V ₃ (V) | E (V/m) |
|-----------|-------------------|--------------------|--------------------|--------------------|-----------|
| -75 | -30 | 0.003205 | 0.023562 | 0.004335 | 39.433329 |
| -75 | -15 | 0.008656 | 0.020653 | 0.001029 | 38.545477 |
| -75 | 0 | 0.014760 | 0.015670 | -0.000012 | 38.041516 |
| -75 | 15 | 0.020239 | 0.009658 | 0.000723 | 37.851301 |
| -75 | 30 | 0.024129 | 0.004121 | 0.002462 | 37.910884 |
| -60 | -30 | 0.001436 | 0.027902 | 0.000419 | 40.291958 |
| -60 | -15 | 0.005248 | 0.024497 | 0.000184 | 39.304720 |
| -60 | 0 | 0.010340 | 0.018922 | 0.001988 | 38.667325 |
| -60 | 15 | 0.015594 | 0.012210 | 0.004586 | 38.392895 |
| -60 | 30 | 0.019931 | 0.005807 | 0.007015 | 38.295996 |
| -45 | -30 | 0.000151 | 0.029835 | 0.000296 | 41.133372 |
| -45 | -15 | 0.002049 | 0.025961 | 0.003020 | 40.212517 |
| -45 | 0 | 0.005641 | 0.019965 | 0.006915 | 39.223866 |
| -45 | 15 | 0.010154 | 0.012997 | 0.010594 | 38.706277 |
| -45 | 30 | 0.014738 | 0.006322 | 0.013020 | 38.475565 |
| -30 | -30 | 0.000152 | 0.029545 | 0.002621 | 41.942984 |
| -30 | -15 | 0.000162 | 0.025010 | 0.007617 | 40.713423 |
| -30 | 0 | 0.001768 | 0.018982 | 0.013024 | 39.736574 |
| -30 | 15 | 0.004850 | 0.011950 | 0.017281 | 38.854721 |
| -30 | 30 | 0.008984 | 0.005476 | 0.019486 | 38.323512 |
| -15 | -30 | 0.001912 | 0.027021 | 0.005355 | 42.125662 |
| -15 | -15 | 0.000397 | 0.022146 | 0.012086 | 40.886194 |
| -15 | 0 | -0.000063 | 0.015896 | 0.018587 | 39.835513 |
| -15 | 15 | 0.001078 | 0.009308 | 0.023341 | 38.930515 |
| -15 | 30 | 0.003914 | 0.003738 | 0.025500 | 38.348355 |
| 0 | -30 | 0.005486 | 0.022812 | 0.007538 | 41.608315 |
| 0 | -15 | 0.003045 | 0.017491 | 0.015311 | 40.607184 |
| 0 | 0 | 0.000954 | 0.011282 | 0.022457 | 39.613683 |
| 0 | 15 | -0.000065 | 0.005696 | 0.027597 | 38.924432 |
| 0 | 30 | 0.000681 | 0.001744 | 0.029845 | 38.606177 |
| 15 | -30 | 0.010741 | 0.017077 | 0.008399 | 40.757603 |
| 15 | -15 | 0.007925 | 0.011545 | 0.016565 | 39.849650 |
| 15 | 0 | 0.004428 | 0.006250 | 0.024050 | 39.189791 |
| 15 | 15 | 0.001463 | 0.002282 | 0.029413 | 38.994252 |
| 15 | 30 | -0.000063 | 0.000289 | 0.031790 | 38.915493 |
| 30 | -30 | 0.017049 | 0.010569 | 0.007490 | 39.696225 |
| 30 | -15 | 0.013900 | 0.005544 | 0.015487 | 38.901058 |
| 30 | 0 | 0.009429 | 0.001893 | 0.023013 | 38.705987 |

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|----|----|----------|----------|----------|-----------|
| 30 | 15 | 0.004766 | 0.000078 | 0.028553 | 38.810092 |
| 30 | 30 | 0.001158 | 0.000084 | 0.031342 | 39.112081 |

校准结果/说明 (续页):

Results of calibration and additional explanation (continued page)

| Axial (°) | Hemispherical (°) | V ₁ (V) | V ₂ (V) | V ₃ (V) | E (V/m) |
|-----------|-------------------|--------------------|--------------------|--------------------|-----------|
| 45 | -30 | 0.023283 | 0.004388 | 0.005087 | 38.760336 |
| 45 | -15 | 0.019901 | 0.001163 | 0.012031 | 38.220733 |
| 45 | 0 | 0.014551 | -0.000090 | 0.019207 | 38.270221 |
| 45 | 15 | 0.008411 | 0.000398 | 0.024985 | 38.568905 |
| 45 | 30 | 0.003166 | 0.001772 | 0.028626 | 38.996346 |
| 60 | -30 | 0.027881 | 0.000636 | 0.002132 | 38.533384 |
| 60 | -15 | 0.024373 | -0.000016 | 0.007087 | 38.000866 |
| 60 | 0 | 0.018176 | 0.001281 | 0.013376 | 37.895082 |
| 60 | 15 | 0.011189 | 0.003354 | 0.019208 | 38.169880 |
| 60 | 30 | 0.004791 | 0.005449 | 0.023735 | 38.671731 |
| 75 | -30 | 0.029868 | 0.000080 | 0.000185 | 38.919439 |
| 75 | -15 | 0.026099 | 0.002054 | 0.002563 | 38.185601 |
| 75 | 0 | 0.019802 | 0.005208 | 0.006864 | 37.746594 |
| 75 | 15 | 0.012432 | 0.008233 | 0.012162 | 37.742142 |
| 75 | 30 | 0.005600 | 0.010468 | 0.017162 | 38.169146 |
| 90 | -30 | 0.029300 | 0.001590 | 0.000391 | 39.455273 |
| 90 | -15 | 0.025317 | 0.005691 | 0.000105 | 38.622113 |
| 90 | 0 | 0.018905 | 0.010246 | 0.001759 | 37.849797 |
| 90 | 15 | 0.011740 | 0.014092 | 0.005243 | 37.579578 |
| 90 | 30 | 0.005132 | 0.016351 | 0.009847 | 37.798345 |
| 105 | -30 | 0.026792 | 0.003718 | 0.002889 | 39.852952 |
| 105 | -15 | 0.022060 | 0.009186 | 0.000916 | 38.869536 |
| 105 | 0 | 0.015871 | 0.014801 | -0.000108 | 38.131745 |
| 105 | 15 | 0.009168 | 0.019288 | 0.000737 | 37.633359 |
| 105 | 30 | 0.003564 | 0.021682 | 0.003547 | 37.698028 |
| 120 | -30 | 0.022267 | 0.005278 | 0.007555 | 39.851868 |
| 120 | -15 | 0.017095 | 0.011411 | 0.004911 | 38.979353 |
| 120 | 0 | 0.011277 | 0.017655 | 0.002044 | 38.313587 |
| 120 | 15 | 0.005752 | 0.022626 | 0.000188 | 38.026498 |
| 120 | 30 | 0.001670 | 0.025182 | 0.000265 | 38.019508 |
| 135 | -30 | 0.016550 | 0.005591 | 0.013676 | 39.570362 |
| 135 | -15 | 0.011223 | 0.012004 | 0.010931 | 38.862933 |
| 135 | 0 | 0.006273 | 0.018503 | 0.007104 | 38.557365 |
| 135 | 15 | 0.002372 | 0.023723 | 0.003087 | 38.515618 |
| 135 | 30 | 0.000249 | 0.026660 | 0.000415 | 38.682480 |
| 150 | -30 | 0.010212 | 0.004827 | 0.020278 | 39.173068 |
| 150 | -15 | 0.005650 | 0.010899 | 0.017720 | 38.833658 |

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|-----|----|----------|----------|----------|-----------|
| 150 | 0 | 0.002147 | 0.017254 | 0.013126 | 38.732972 |
| 150 | 15 | 0.000216 | 0.022696 | 0.007731 | 38.916215 |
| 150 | 30 | 0.000063 | 0.026077 | 0.002729 | 39.157193 |

校准结果/说明 (续页):

Results of calibration and additional explanation (continued page)

| Axial (°) | Hemispherical (°) | V ₁ (V) | V ₂ (V) | V ₃ (V) | E (V/m) |
|-----------|-------------------|--------------------|--------------------|--------------------|-----------|
| 165 | -30 | 0.004701 | 0.003121 | 0.026353 | 38.996023 |
| 165 | -15 | 0.001513 | 0.008319 | 0.023775 | 38.791840 |
| 165 | 0 | 0.000032 | 0.014210 | 0.018654 | 38.739183 |
| 165 | 15 | 0.000226 | 0.019688 | 0.012074 | 38.939948 |
| 165 | 30 | 0.001411 | 0.023671 | 0.005547 | 39.196899 |
| 180 | -30 | 0.001040 | 0.001350 | 0.030682 | 39.237848 |
| 180 | -15 | -0.000044 | 0.004979 | 0.028050 | 38.812080 |
| 180 | 0 | 0.000665 | 0.009931 | 0.022521 | 38.588006 |
| 180 | 15 | 0.002452 | 0.015251 | 0.015199 | 38.632053 |
| 180 | 30 | 0.004452 | 0.019797 | 0.007693 | 38.853739 |

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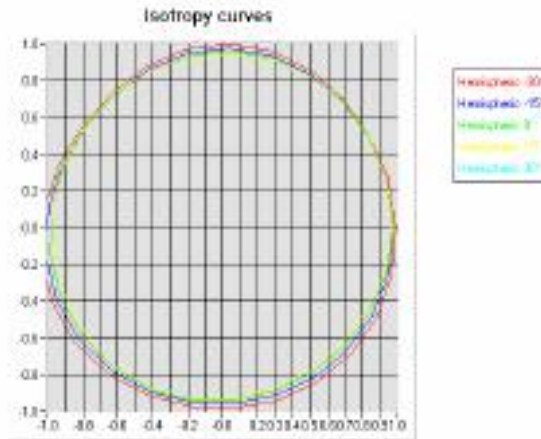
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 Results of calibration and additional explanation (continued page)

Isotropy curves:



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 Continued page of calibration certificate

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校准证书编号: 2008J10-10-912001
 Calibration certificate series No.

Attachment 1

| 名称/型号 Name/Model | 编号 Number | 证书编号/有效期限 Certificate No./Due date | 测量范围/准确度等级或 最大允差或不确定度 Measurement range/accuracy class or maximum permissible error or uncertainty of measurement |
|--|--------------|---------------------------------------|---|
| 6 axis Robot KR3 | 容-027-01 | / | 6 axes, Repeatability: ± 0.05 mm, Nominal payload: 3 kg |
| Vector Network Analyzer ZVB 8 | 容-027-27 | 2008F31-10-001907 2009.06.26 | 300 kHz ~ 8 GHz, Frequency resolution: 100 μ Hz, Measurement time: < 8 ms, Measurement bandwidths: 1 Hz ~ 500 kHz / uncertainty: +10 dB ~ +3 dB : 0.6 dB ; +3 dB ~ -15 dB : 0.4 dB; -15 dB ~ -25 dB : 1 dB; -25 dB ~ -35 dB : 3 dB |
| Signal Generator SMT 06 | 容-027-15 | 2008F33-10-001469 2009.06.26 | 5 kHz ~ 6 GHz, Resolution: 0.1Hz, -144dBm ~ +13 dBm, Max.RF power: 1W, Max.DC voltage: 0V / Level > -127 dBm: f<1.5 GHz: < 1dB; f>1.5 GHz: < 1.5dB; f> 3GHz: < 2dB |
| Power Meter NRVD | 容-027-16 | 2008F31-10-001906 2009.06.24 | 100 kHz ~ 6 GHz, 10nW ~ 500mW |
| Millivoltmeter 2000 | 容-027-26 | 2008F11-10-001004 2009.06.18 | Fastest System rate: 4.5ms Resistance range: 100.0000 Ω ~ 100.000M Ω Measurement Sensibility: 100 μ Ω ~ 100 Ω Voltage range: 100.0000mV ~ 1000.000V Measurement Sensibility : 0.1 μ V ~ 1m V |
| Isotropic E-Field Probe E-FIELD PROBE | 容-027-02 | 2008J10-10-802003 2009.02.17 | Dipole resistance (in the connector plane): 1M Ω to 2M Ω Axial isotropy in human-equivalent liquids: <0.25dB Hemispherical isotropy in humanequivalent liquids <0.5dB, Linearity <0.5dB, Lower SAR detection threshold: 0.0015 Watts/kg |

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校准证书续页专用
 Continue page of calibration certificate

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校准证书编号: 2008J10-10-912001
Calibration Certificate No.:





| | | | |
|--|----------|---------------------------------|--|
| Solid State Power Amplifier BLMA 0620-6 | 容-027-18 | 2008F33-10-001467 2009.06.26 | 0.8 GHz ~ 2 GHz; Output:6W; Gain:min 37.6 / typ 40, ± 2 dB; Harmonics:2nd:20dBc, 3rd:20dBc; Line power:125 W. |
|--|----------|---------------------------------|--|

| 名称/型号 <small>Name/Model</small> | 编号 <small>Number</small> | 证书编号/有效期限 <small>Certificate No./Due date</small> | 测量范围/准确度等级或 最大允差或不确定度 <small>Measurement range/accuracy class or maximum error or uncertainty</small> |
|---|-----------------------------|--|---|
| Directional Coupler CPL-5220-20-SMA-79 | 容-027-31 | 2008J10-10-906002 2009.06.24 | 0.5 GHz ~ 2.0 GHz |
| Waveguide 069Y7-15892-714/D 69Y7-628415-724 | 容-027-39 | 2008F31-10-001904 2009.06.23 | 800 MHz ~ 950 MHz |

以上计量标准器具的量值溯源至国家基准。
Quality value of above measurement standards used in this certificate are based to those of the national primary standards in the P.R. China.

Annex E.2 Dipole Calibration certification

D 2450

| | | | |
|--|---|--|---|
|  | | 校准证书编号: 2009J10-10-910008 <small>Calibration certificate series No.</small> | |
| SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA | | | |
| CALIBRATION CERTIFICATE | | | |
| <h1>华东国家计量测试中心 上海市计量测试技术研究院</h1> <h2>校准证书</h2> | | | |
| 委托者 <small>Customer</small> | 基础性能试验中心 | | |
| 委托者地址 <small>Address of customer</small> | 宜山路 716 号 | | |
| 器具名称 <small>Name of instrument</small> | Dipole Antenna | | |
| 制造厂 <small>Manufacturer</small> | ANTENNESSA 公司 | | |
| 型号/规格 <small>Model/Specification</small> | Dipole 2450 | | |
| 器具编号 <small>No. of instrument</small> | SN 36/05 DIP J25 | | |
| 器具准确度 <small>Instrument accuracy</small> | / | | |
| 批准人/职务 <small>Approved by / Function</small> |  副主任 <small>副副主任</small> | | |
| (机构校准专用章) 校验员 <small>Checked by</small> |  | | |
| 校准员 <small>Calibrated by</small> |  | | |
| 校准日期 <small>Date for calibrated</small> | 2009 | 年 | 10 月 21 日 <small>Year Month Day</small> |
| 地址: 上海市张衡路 1500 号(总部) 电话: 021-38839600 传真: 021-50798390 邮编: 201203 <small>Address: No.1500 Zhangheng Road, Shanghai (Headquarter) Tel Fax Post Code</small> | | | 投诉电话: 021-50798262 <small>Tel. for complaint</small> |
| 上海市宜山路 716 号(分检) 电话: 021-64701390 传真: 021-64701810 邮编: 200233 <small>Address: No.716 Yishan Road, Shanghai (Branch) Tel Fax Post Code</small> | | | |
| 未经本院批准, 部分采用本证书内容无效。 <small>Partly using this certificate will not be accredited unless allowed by SIMT.</small> | | | 第 1 页 共 5 页 <small>Page of total pages</small> |

SHGSM



SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY
NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA

校准证书编号: 2009J10-10-910008
Calibration certificate number:

国家法定计量检定机构计量授权证书号(中心/院): (国)法计(2007)01039号/(2007)01019号
The number of the Certificate of Metrological Authorization to The Legal Metrological Verification Institution is No.: (2007) 01039 / No.: (2007) 01019

中国实验室国家认可委员会(CNAL)实验室认可证书号: No. L0134
The number of the certificate accredited by CNAL is No. L0134

本次校准所依据的技术规范(代号、名称):
Reference documents for the calibration: (code, name):

JC/JJ101002.1/0-2007 SAR 偶极子天线校准规范
IEEE Std 1528-2003 "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measure Techniques".
IEC 62209-1: 2005 Procedure to measure the Specific Absorption Rate (SAR) in the frequency range of 300 MHz to 3 GHz
Part 1: hand-held mobile wireless communication devices.

本次校准所使用的主要计量标准器具:
Main measurement standards used in this calibration:

| 名称/型号 Name/Model | 编号 Number | 证书编号/有效期至 Certificate No./Valid date | 测量范围/准确度 Measuring range/accuracy |
|-------------------------------|--------------|---|--|
| Vector Network Analyzer ZVB B | 容-027-27 | 2009F31-10-002461 2010.06.23 | 300 kHz ~ 8 GHz, Frequency resolution: 100 μHz, Measurement time: < 8 ms, Measurement bandwidths: 1 Hz ~ 500 kHz |

以上计量标准器具的量值溯源至国家基准。
Quantity values of measurement standards used in this calibration are traced to the national primary standards in the P. R. China.

校准地点及环境条件:
Location and environmental conditions for the calibration:

地点: 上海市计量测试技术研究院
Location: Shanghai Institute of Measurement and Testing Technology

温度: (21.7-22.5) °C; 湿度: 49 %RH; 其它: /
Temperature: (21.7-22.5) °C; Relative humidity: 49 %RH; Others: /

本次校准结果的扩展不确定度:
Expanded uncertainty:

+3dB 至 -15dB: $U=0.8$ dB (k=2)
-15dB 至 -25dB: $U=1.2$ dB (k=2)
-25dB 至 -35dB: $U=3.1$ dB (k=2)

校准结果/说明:
Results of calibration and additional explanation:

参见校准结果/说明
See calibration results/explanation

校准规范要求:
Return Loss must be less than -20dB

符合校准规范要求

本证书提供的结果仅对本次被校的器具有效。
The data are not valid for the instruments.

校准证书续页专用
Continued data of calibration certificate

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校准证书编号: 2009J10-10-910008
Calibration certificate number:

SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY
NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA

校准结果/说明 (续页):
Results of calibration and additional explanation (continued page)

1. Calibration procedure:

Return Loss is measured with the dipole mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis. During calibration, the flat phantom is filled with the liquid whose parameters are calibrated relative to different frequency.

2. Calibration Conditions:

A. The spacer from Dipole center to TSL:

| Distance Dipole Center - TSL | Frequency |
|------------------------------|-----------|
| 10mm±0.2mm with spacer | 2450 MHz |

B. Head TSL parameters:

The following parameters and calculation were applied.
Head TSL temperature change is well controlled to be within 22±0.2°C during test.

| Frequency | Nominal Head TSL Parameters (Permittivity/ Conductivity) | Measurement Head TSL parameters (Permittivity/ Conductivity) |
|-----------|--|--|
| 2450 MHz | 39.20/1.80 | 40.03/1.80 |

C. Body TSL parameters:

The following parameters and calculation were applied.
Body TSL temperature change is well controlled to be within 22±0.2°C during test.

| Frequency | Nominal Body TSL Parameters (Permittivity/ Conductivity) | Measurement Body TSL parameters (Permittivity/ Conductivity) |
|-----------|--|--|
| 2450 MHz | 52.70/1.95 | 53.45/2.00 |

3. Measurement Results:

| Frequency | Return Loss with Head TSL | Return Loss with Body TSL |
|-----------|---------------------------|---------------------------|
| 2450 MHz | -40.74 dB | -29.07 dB |

符合技术要求
刘健

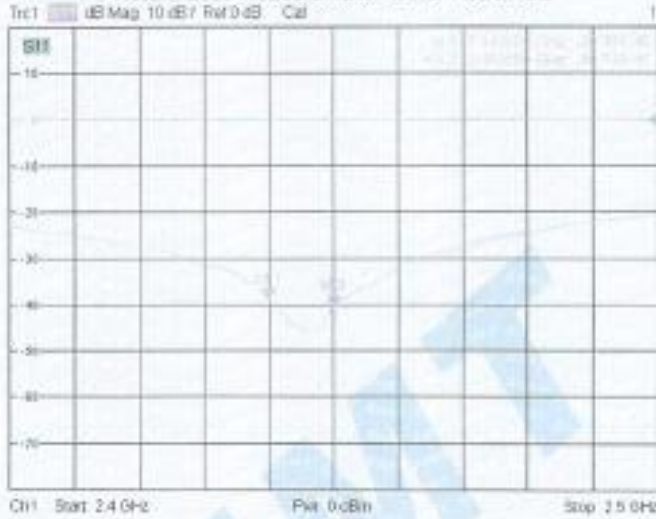


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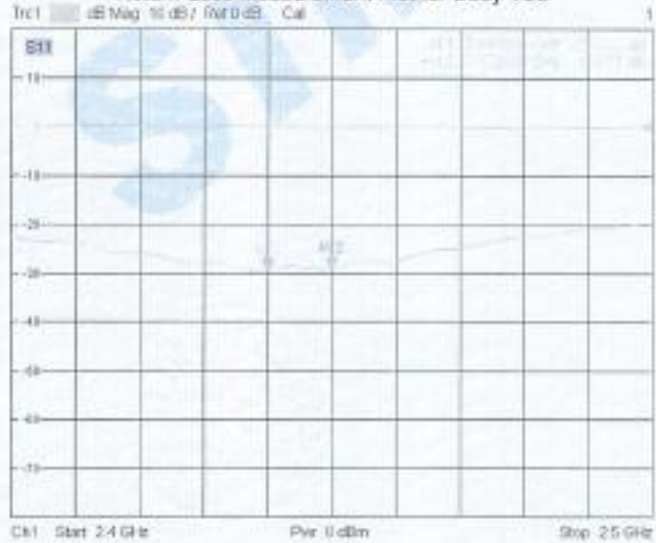
校准证书编号: 2009J10-10-010008
Calibration certificate number: 2009J10-10-010008

校准结果/说明 (续页) /
Results of calibration and additional explanation (continued page)

Return Loss Measurement Plot for Head TSL



Return Loss Measurement Plot for Body TSL



备注: /

校准结果内容结束

校准证书续页专用
Continued page of calibration certificate

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SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY
NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA

校准证书编号: 2009J10-10-910008
Calibration certificate page No.

校准结果/说明 (续页):
Results of calibration and additional explanation (continued page)

Attachment 1: SAR Validation

| Validation | Condition | SAR Value (W/kg) | |
|----------------------------|------------------|------------------|-------|
| | | 1g | 10g |
| SAR measured with Head TSL | 1W (input power) | 50.01 | 23.27 |
| SAR measured with Body TSL | 1W (input power) | 50.14 | 23.03 |

Attachment 2: SAR Test Equipment

本次检测所使用的主要测量仪器:
Main measuring instrument used in this test

| 名称/型号 Name/Model | 编号 Number | 证书编号/有效期限 Certificate No./Due date | 测量范围/准确度 Measuring range/accuracy |
|---------------------------------------|--------------|---------------------------------------|---|
| 6 axis Robot KR3 | 容-027-01 | / | 6 axes, Repeatability: ± 0.05 mm, Nominal payload: 3 kg |
| Vector Network Analyzer ZVB 8 | 容-027-27 | 2009F31-10-002461 2010.06.23 | 300 kHz to 8 GHz, Frequency resolution: 100 μ Hz, Measurement time: < 8 ms, Measurement bandwidths: 1 Hz to 500 kHz |
| Signal Generator SMT 06 | 容-027-15 | 2009F33-10-000470 2010.06.25 | 5 kHz - 6 GHz, Resolution: 0.1Hz, -144 to + 13 dBm, Max. RF power: 1W, Max. DC voltage: 0V / Level > -127 dBm: f < 1.5 GHz: < 1dB; f > 1.5 GHz: < 1.5dB; f > 3GHz: < 2dB |
| Power Meter NRVD | 容-027-16 | 2009F31-10-002965 2010.06.23 | 100 kHz to 6 GHz, 10nW to 500mW |
| Milivolt meter 2000 | 容-027-26 | 2009F11-20-000607 2010.06.18 | Measurement range: 100.0000 mV ~ 1000.000V Sensitivity: 0.1 μ V ~ 1mV |
| Power Amplifier BLMA 0820-6 | 容-027-18 | 2009F33-10-000472 2010.06.25 | 0.8~2 GHz; Output: 6W; Gain: min 37.3 / typ 40, ± 2 dB; Harmonics: 2nd: 20dBc, 3rd: 20dBc; Line power: 125 W |
| Isotropic E-Field Probe E-FIELD PROBE | 容-027-54 | 2008J10-10-912001 2010.12.25 | Dipole resistance (in the connector plane): 1M Ω to 2M Ω Axial isotropy in human-equivalent liquids: < 0.25dB Hemispherical isotropy in human-equivalent liquids: < 0.5dB Linearity: < 0.5dB Lower SAR detection threshold: 0.0015 Watts/kg |
| SAM Phantom | 容-027-22 | / | / |

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END OF REPORT

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