

Test Laboratory: Advance Data Technology

ZW9 11.b Auxiliary ANTENNA Mode 6

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 ($\sigma = 1.968$ mho/m, $\epsilon_r = 50.5459$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003

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

- Electronics: DAE3 Sn510;

- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 6/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 9.29 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 0.195 mW/g

Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

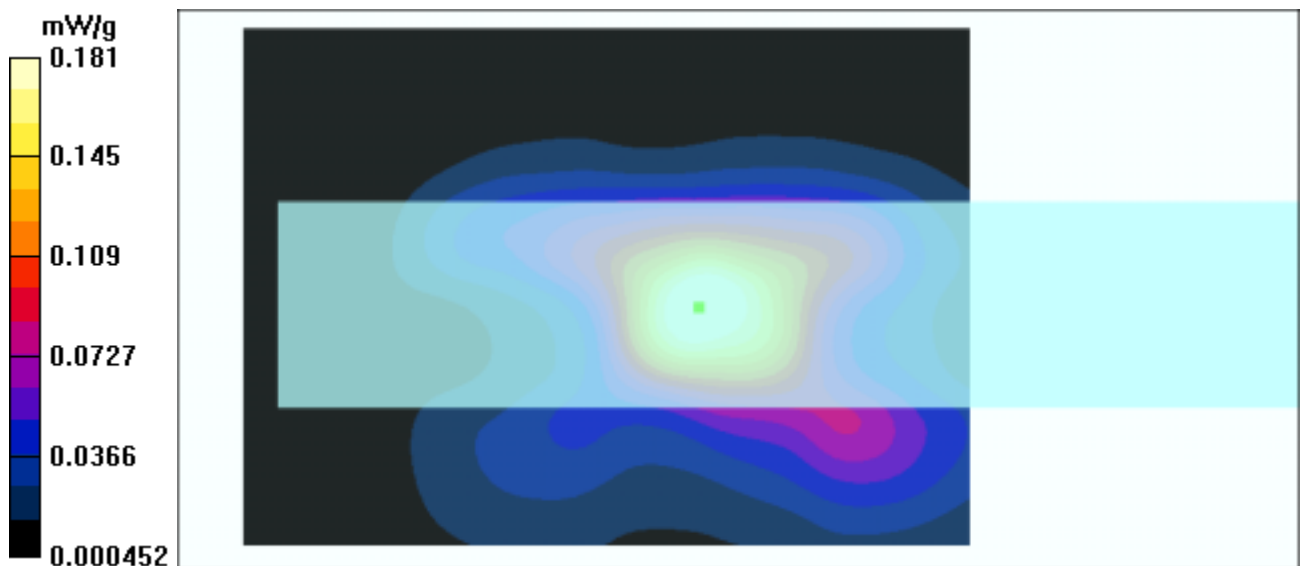
Peak SAR (extrapolated) = 0.383 W/kg

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.0813 mW/g

Reference Value = 9.29 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 0.181 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.b Auxiliary ANTENNA Mode 6

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK

Medium: MSL2450 ($\sigma = 2.01$ mho/m, $\epsilon_r = 50.4886$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003

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

- Electronics: DAE3 Sn510;

- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 11/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 8.62 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.175 mW/g

Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

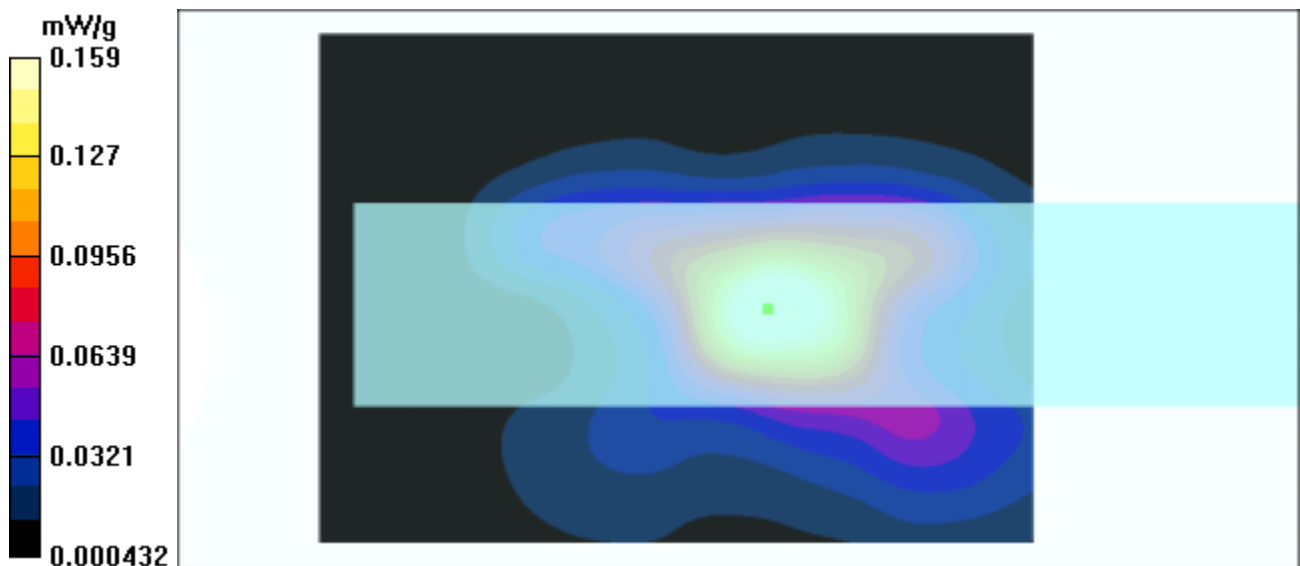
Peak SAR (extrapolated) = 0.347 W/kg

SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.0719 mW/g

Reference Value = 8.62 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.159 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.g MAIN ANTENNA Mode 7

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2412 MHz

Communication System: 802.11g ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: OFDM

Medium: MSL2450 ($\sigma = 1.946$ mho/m, $\epsilon_r = 50.8632$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003

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

- Electronics: DAE3 Sn510;

- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 1/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 8.53 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.131 mW/g

Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

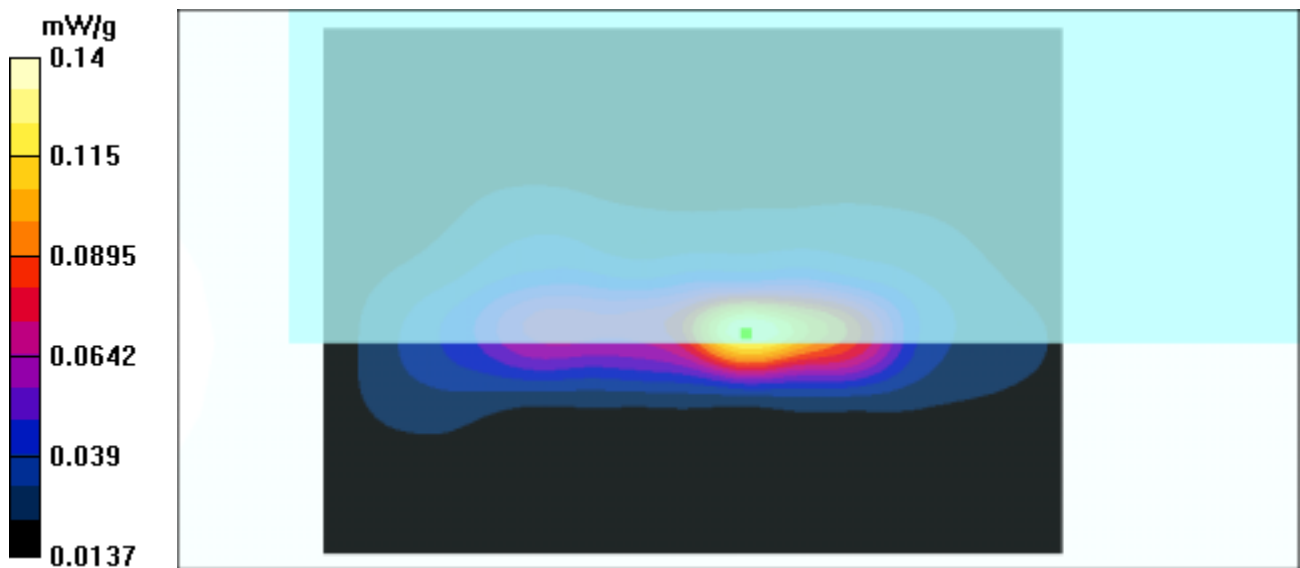
Peak SAR (extrapolated) = 0.396 W/kg

SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.0526 mW/g

Reference Value = 8.53 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.14 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.g MAIN ANTENNA Mode 7

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2437 MHz

Communication System: 802.11g ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: OFDM

Medium: MSL2450 ($\sigma = 1.968$ mho/m, $\epsilon_r = 50.5459$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003

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

- Electronics: DAE3 Sn510;

- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 6/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 13.7 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.356 mW/g

Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

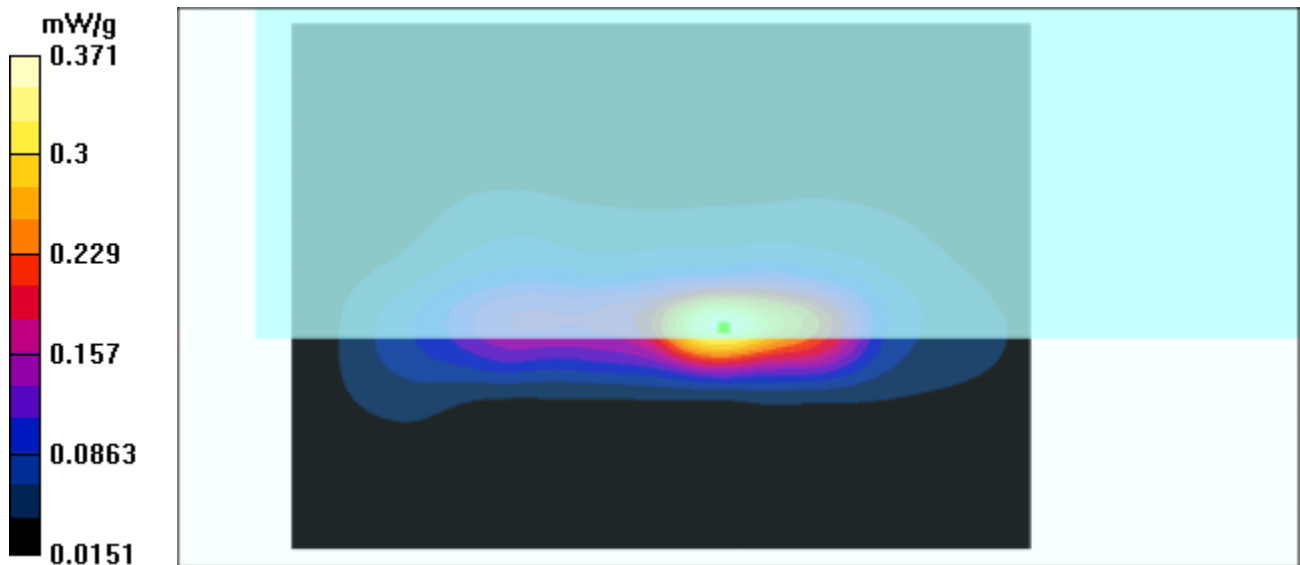
Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.34 mW/g; SAR(10 g) = 0.125 mW/g

Reference Value = 13.7 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.371 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.g MAIN ANTENNA Mode 1

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2462 MHz

Communication System: 802.11g ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: OFDM

Medium: MSL2450 ($\sigma = 2.01$ mho/m, $\epsilon_r = 50.4886$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 11/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 12.4 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.293 mW/g

Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

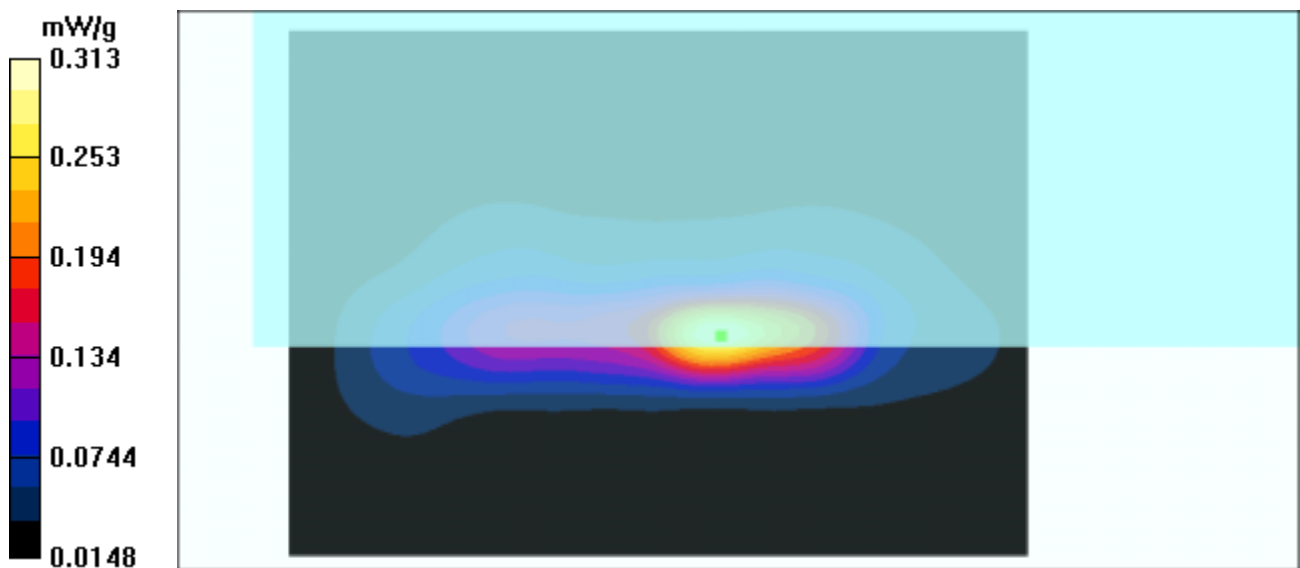
Peak SAR (extrapolated) = 0.929 W/kg

SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.108 mW/g

Reference Value = 12.4 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.313 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.g Auxiliary ANTENNA Mode 8

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2412 MHz

Communication System: 802.11g ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: OFDM

Medium: MSL2450 ($\sigma = 1.946$ mho/m, $\epsilon_r = 50.8632$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 1/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 4.73 V/m

Power Drift = -0.03 dB

Maximum value of SAR = 0.0671 mW/g

Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

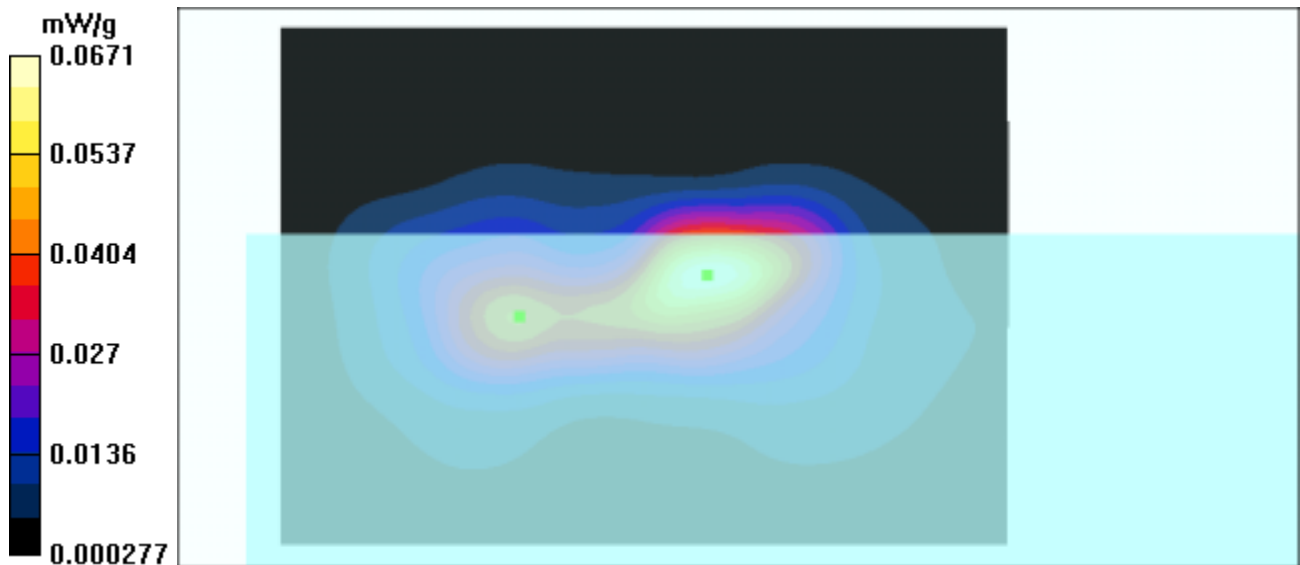
Peak SAR (extrapolated) = 0.337 W/kg

SAR(1 g) = 0.107 mW/g; SAR(10 g) = 0.035 mW/g

Reference Value = 4.73 V/m

Power Drift = -0.03 dB

Maximum value of SAR = 0.129 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.g Auxiliary ANTENNA Mode 8

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2437 MHz

Communication System: 802.11g ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 ($\sigma = 1.968$ mho/m, $\epsilon_r = 50.5459$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003

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

- Electronics: DAE3 Sn510;

- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 6/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 8.95 V/m

Power Drift = -0.06 dB

Maximum value of SAR = 0.228 mW/g

Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

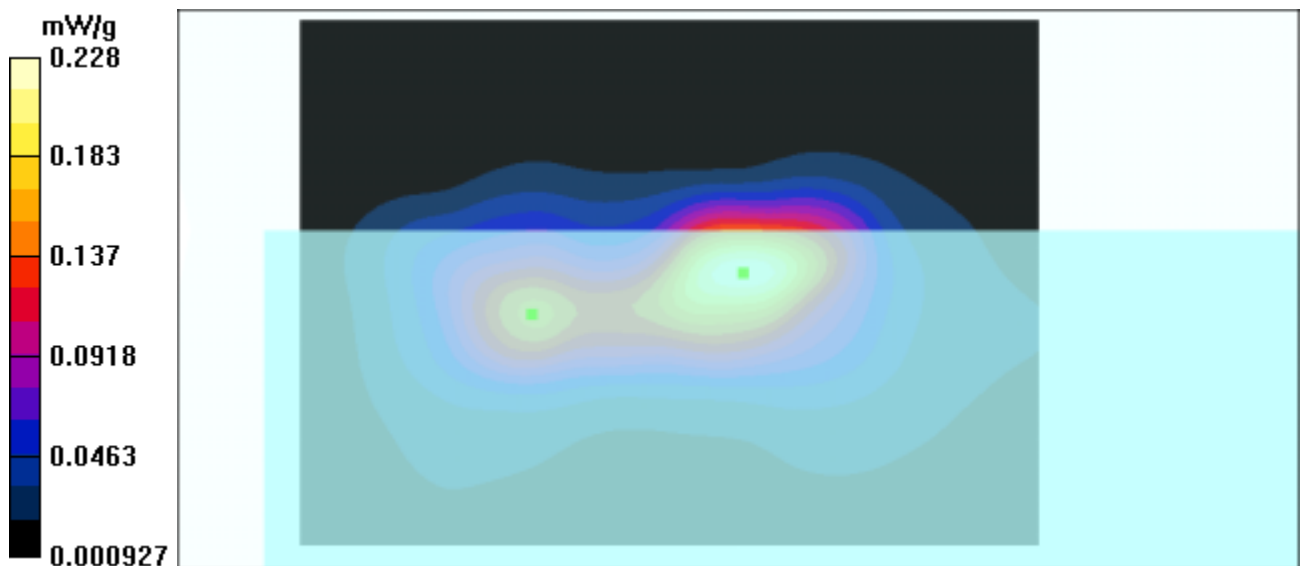
Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.396 mW/g; SAR(10 g) = 0.131 mW/g

Reference Value = 8.95 V/m

Power Drift = -0.06 dB

Maximum value of SAR = 0.454 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.g Auxiliary ANTENNA Mode 8

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2462 MHz

Communication System: 802.11g ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: OFDM

Medium: MSL2450 ($\sigma = 2.01$ mho/m, $\epsilon_r = 50.4886$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 11/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 8.43 V/m

Power Drift = -0.04 dB

Maximum value of SAR = 0.218 mW/g

Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

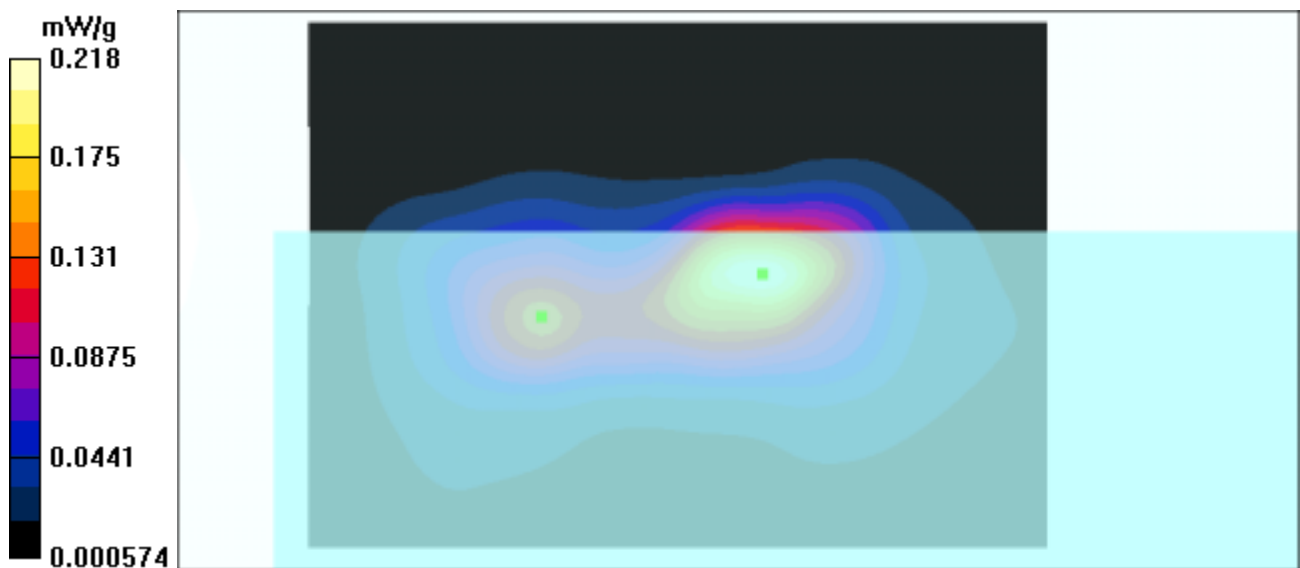
Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.118 mW/g

Reference Value = 8.43 V/m

Power Drift = -0.04 dB

Maximum value of SAR = 0.433 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.b MAIN ANTENNA Mode 1

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 ($\sigma = 1.946$ mho/m, $\epsilon_r = 50.8632$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003

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

- Electronics: DAE3 Sn510;

- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 1/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 21.9 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.851 mW/g

Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

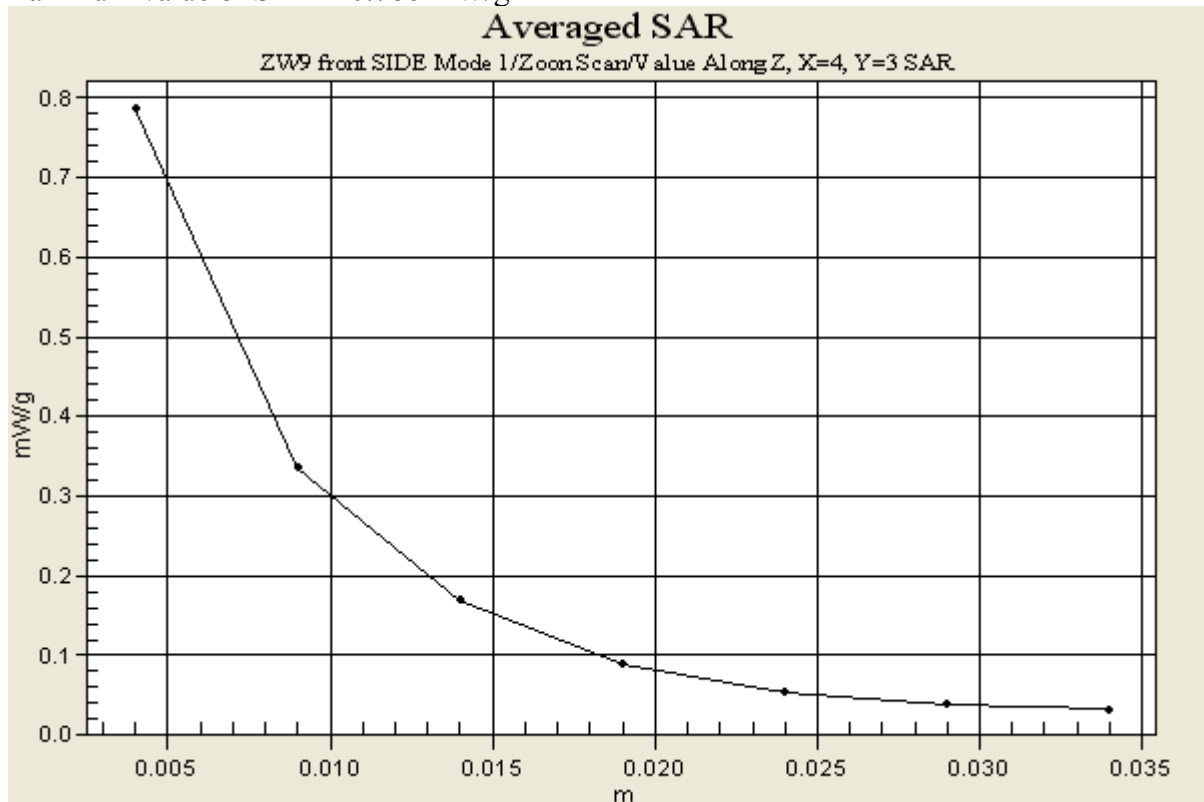
Peak SAR (extrapolated) = 2.15 W/kg

SAR(1 g) = 0.69 mW/g; SAR(10 g) = 0.243 mW/g

Reference Value = 21.9 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.786 mW/g



Test Laboratory: Advance Data Technology

ZW9 11.b Auxiliary ANTENNA Mode 4

DUT: Notebook ; Type: ZW9 ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 ($\sigma = 1.968$ mho/m, $\epsilon_r = 50.5459$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temp. : 21.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003

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

- Electronics: DAE3 Sn510;

- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 6/Area Scan (71x51x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 11.5 V/m

Power Drift = -0.05 dB

Maximum value of SAR = 0.399 mW/g

Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

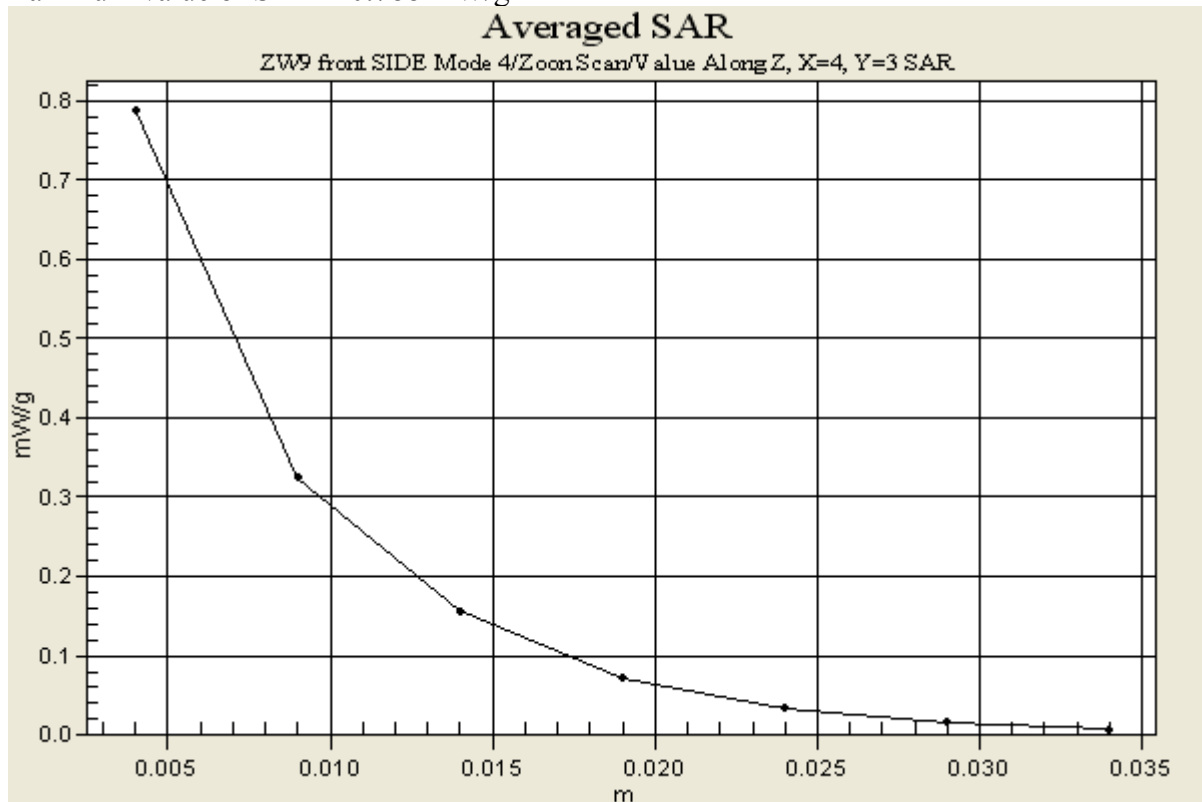
Peak SAR (extrapolated) = 2.14 W/kg

SAR(1 g) = 0.682 mW/g; SAR(10 g) = 0.225 mW/g

Reference Value = 11.5 V/m

Power Drift = -0.05 dB

Maximum value of SAR = 0.788 mW/g



A3 : SYSTEM VALIDATION

Date/Time: 01/14/04 09:48:04

Test Laboratory: Advance Data Technology

System Validation Check-MSL2450MHz 2004-01-14

DUT: Dipole 2450 MHz ; Type: D2450V2

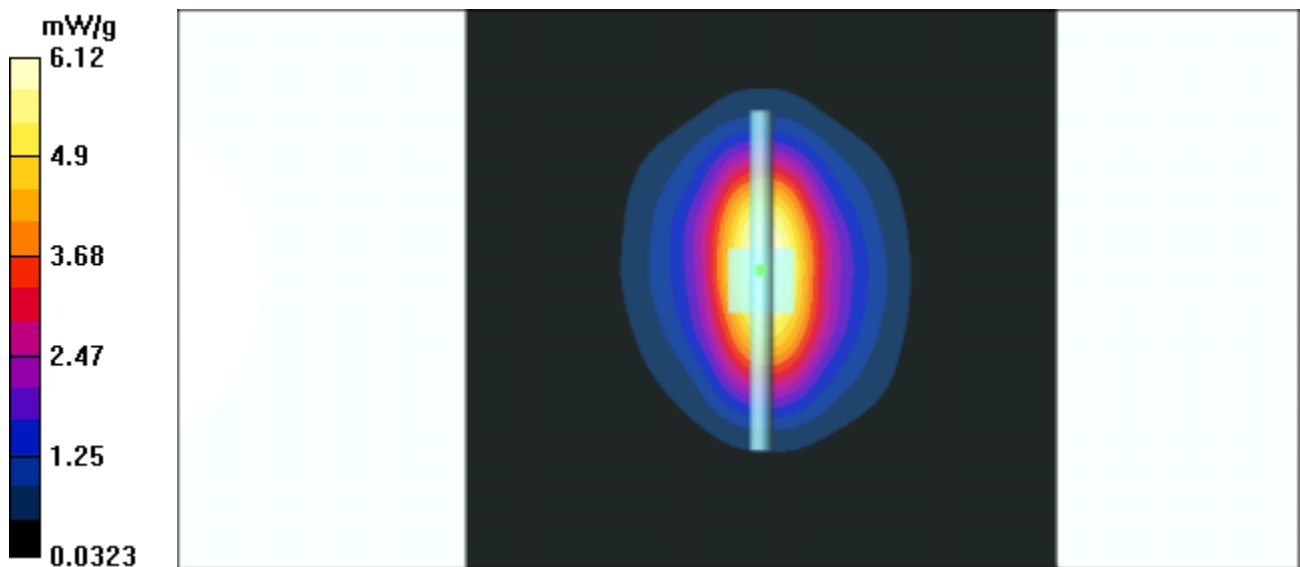
Communication System: CW ; Frequency: 2450 MHz; Duty Cycle: 1:1; Modulation type: CW
Medium: MSL2450 ($\sigma = 1.988$ mho/m, $\epsilon_r = 50.5185$, $\rho = 1000$ kg/m³) ; Liquid level : 155mm
Phantom section: Flat Section ; Separation distance : 10mm(The feetpoint of the dipole to the Phantom)
Air temp. : 21.0 degrees ; Liquid temp. : 21 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 6/18/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

d=10mm, Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 59 V/m
Power Drift = -0.1 dB
Maximum value of SAR = 6.21 mW/g

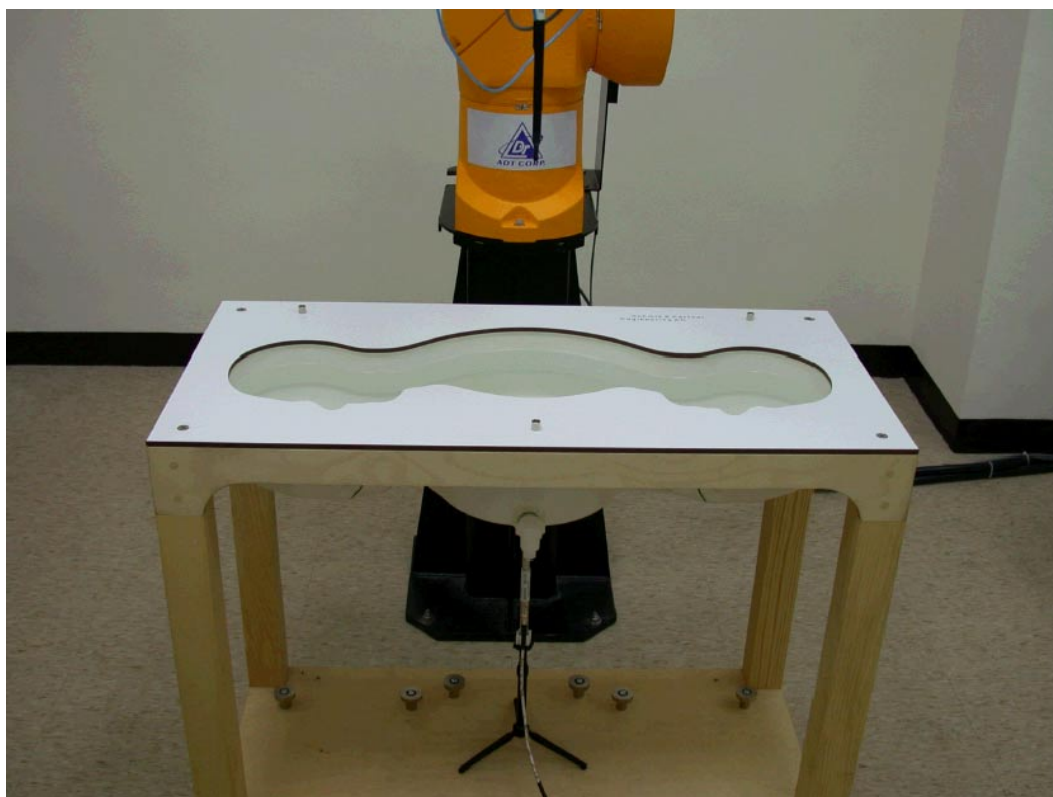
d=10mm, Pin=100mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.8 W/kg
SAR(1 g) = 5.57 mW/g; SAR(10 g) = 2.55 mW/g
Reference Value = 59 V/m
Power Drift = -0.1 dB
Maximum value of SAR = 6.12 mW/g



APPENDIX B: ADT SAR MEASUREMENT SYSTEM



APPENDIX C: PHOTOGRAPHS OF SYSTEM VALIDATION





APPENDIX D: SYSTEM CERTIFICATE & CALIBRATION

D1: SAM PHANTOM

Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Certificate of conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 CA
Series No	TP-1150 and higher
Manufacturer / Origin	Untersee Composites Hauptstr. 69 CH-8559 Fruthwilen Switzerland

Tests

The series production process used allows the limitation to test of first articles. Complete tests were made on the pre-series Type No. QD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006. Certain parameters have been retested using further series units (called samples).

Test	Requirement	Details	Units tested
Shape	Compliance with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness	Compliant with the requirements according to the standards	2mm +/- 0.2mm in specific areas	First article, Samples
Material parameters	Dielectric parameters for required frequencies	200 MHz – 3 GHz Relative permittivity < 5 Loss tangent < 0.05.	Material sample TP 104-5
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards	Liquid type HSL 1800 and others according to the standard.	Pre-series, First article

Standards

- [1] CENELEC EN 50361
- [2] IEEE P1528-200x draft 6.5
- [3] IEC PT 62209 draft 0.9

(*) The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of [1] and [3].

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standard [1] and draft standards [2] and [3].

Date 28.02.2002

Signature / Stamp

F. Bombault

**Schmid & Partner
Engineering AG**

Zeughausstrasse 43, CH-8004 Zurich
Tel. +41 1 245 97 00, Fax +41 1 245 97 79

Thomas Kofler



D2: 2450MHZ SYSTEM VALIDATION DIPOLE

Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Calibration Certificate

2450 MHz System Validation Dipole

Type:

D2450V2

Serial Number:

716

Place of Calibration:

Zurich

Date of Calibration:

September 26, 2002

Calibration Interval:

24 months

Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:

D. Vella

Approved by:

Thomas Kötter

**Schmid & Partner
Engineering AG**

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

DASY

Dipole Validation Kit

Type: D2450V2

Serial: 716

Manufactured: September 10, 2002
Calibrated: September 26, 2002

1. Measurement Conditions

The measurements were performed in the flat section of the new SAM twin phantom filled with head simulating solution of the following electrical parameters at 2450 MHz:

Relative permittivity	37.7	$\pm 5\%$
Conductivity	1.88 mho/m	$\pm 10\%$

The DASY System with a dosimetric E-field probe ET3DV6 (SN:1507, conversion factor 5.0 at 2450 MHz) was used for the measurements.

The dipole feedpoint was positioned below the center marking and oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10mm from dipole center to the solution surface. The included distance holder was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 20mm was aligned with the dipole. The 5x5x7 fine cube was chosen for cube integration. Probe isotropy errors were cancelled by measuring the SAR with normal and 90° turned probe orientations and averaging.

The dipole input power (forward power) was 250mW $\pm 3\%$. The results are normalized to 1W input power.

2.1. SAR Measurement with DASY3 System

Standard SAR-measurements were performed according to the measurement conditions described in section 1. The results (see figure supplied) have been normalized to a dipole input power of 1W (forward power). The resulting averaged SAR-values measured with the dosimetric probe ET3DV6 SN:1507 and applying the worst-case extrapolation are:

averaged over 1 cm ³ (1 g) of tissue:	57.2 mW/g
averaged over 10 cm ³ (10 g) of tissue:	26.4 mW/g

2.2 SAR Measurement with DASY4 System

Standard SAR-measurements were performed according to the measurement conditions described in section 1. The results (see figure supplied) have been normalized to a dipole input power of 1W (forward power). The resulting averaged SAR-values measured with the dosimetric probe ET3DV6 SN:1507 and applying the advanced extrapolation are:

averaged over 1 cm ³ (1 g) of tissue:	54.0 mW/g
averaged over 10 cm ³ (10 g) of tissue:	25.2 mW/g

3. Dipole impedance and return loss

The impedance was measured at the SMA-connector with a network analyzer and numerically transformed to the dipole feedpoint. The transformation parameters from the SMA-connector to the dipole feedpoint are:

Electrical delay:	1.148 ns	(one direction)
Transmission factor:	0.982	(voltage transmission, one direction)

The dipole was positioned at the flat phantom sections according to section 1 and the distance holder was in place during impedance measurements.

Feedpoint impedance at 2450 MHz:	$\text{Re}\{Z\} = 54.1 \Omega$
	$\text{Im}\{Z\} = 2.4 \Omega$
Return Loss at 2450 MHz	- 26.8 dB

4. Measurement Conditions

The measurements were performed in the flat section of the new SAM twin phantom filled with body simulating solution of the following electrical parameters at 2450 MHz:

Relative permittivity	52.4	$\pm 5\%$
Conductivity	1.99 mho/m	$\pm 10\%$

The DASY System with a dosimetric E-field probe ET3DV6 (SN:1507, conversion factor 4.5 at 2450 MHz) was used for the measurements.

The dipole feedpoint was positioned below the center marking and oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10mm from dipole center to the solution surface. The included distance holder was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 20mm was aligned with the dipole. The 5x5x7 fine cube was chosen for cube integration. Probe isotropy errors were cancelled by measuring the SAR with normal and 90° turned probe orientations and averaging.

The dipole input power (forward power) was 250mW $\pm 3\%$. The results are normalized to 1W input power.