Date/Time: 11/19/03 19:40:26

Test Laboratory: Advance Data Technology

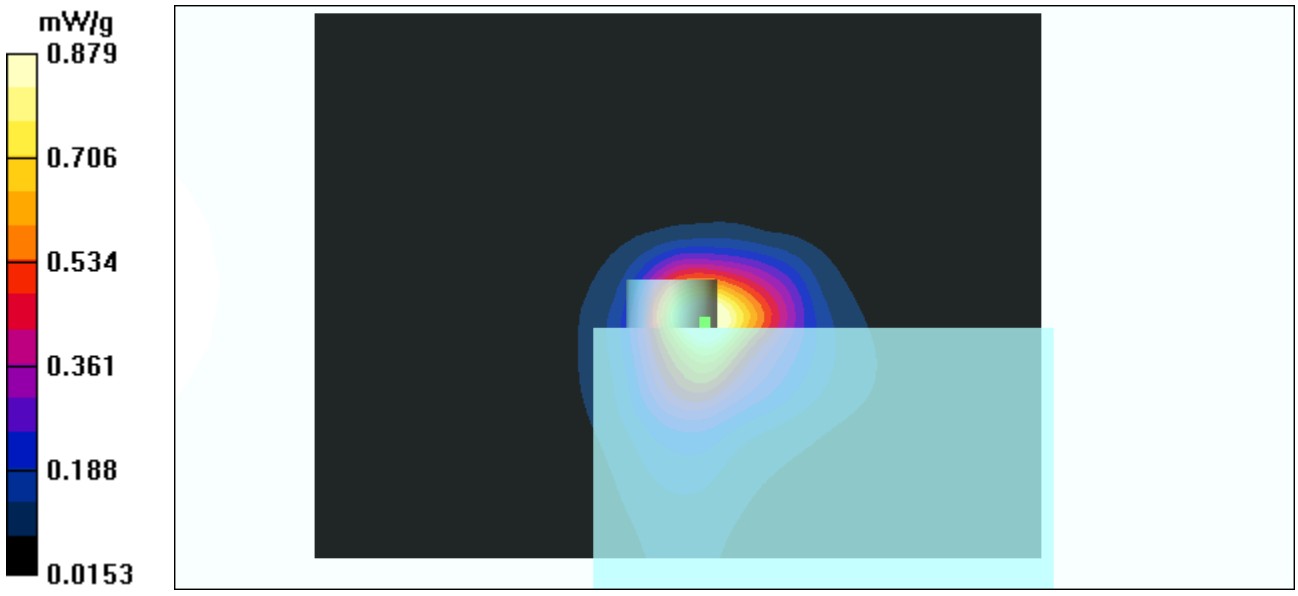
PDA HC02U Mode 7 with Dell Battery Module TYPE X1359

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 2.004 mho/m, ε_r = 52.5335, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23 degrees ; Liquid temp. : 21 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2003/6/2
- 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

PDA Channel 11/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 17.7 V/m
Power Drift = -0.02 dB
Maximum value of SAR = 0.968 mW/g

PDA Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 2.33 W/kg
SAR(1 g) = 0.802 mW/g; SAR(10 g) = 0.317 mW/g
Reference Value = 17.7 V/m
Power Drift = -0.02 dB
Maximum value of SAR = 0.879 mW/g



Date/Time: 11/19/03 20:12:54

Test Laboratory: Advance Data Technology

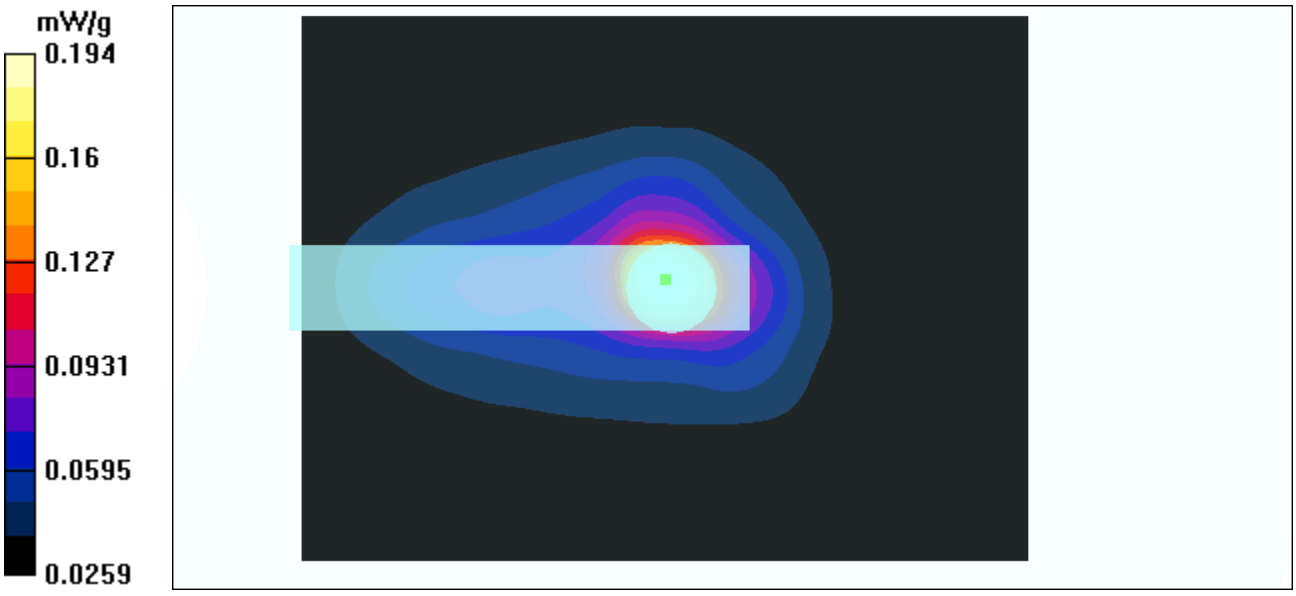
PDA HC02U Mode 8 with Dell Battery Module TYPE X1359

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.961 mho/m, ε_r = 52.6898, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 21.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- 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

PDA Channel 1/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 11 V/m
Power Drift = -0.4 dB
Maximum value of SAR = 0.208 mW/g

PDA Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.915 W/kg
SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.083 mW/g
Reference Value = 11 V/m
Power Drift = -0.4 dB
Maximum value of SAR = 0.194 mW/g



Date/Time: 11/19/03 20:43:00

Test Laboratory: Advance Data Technology

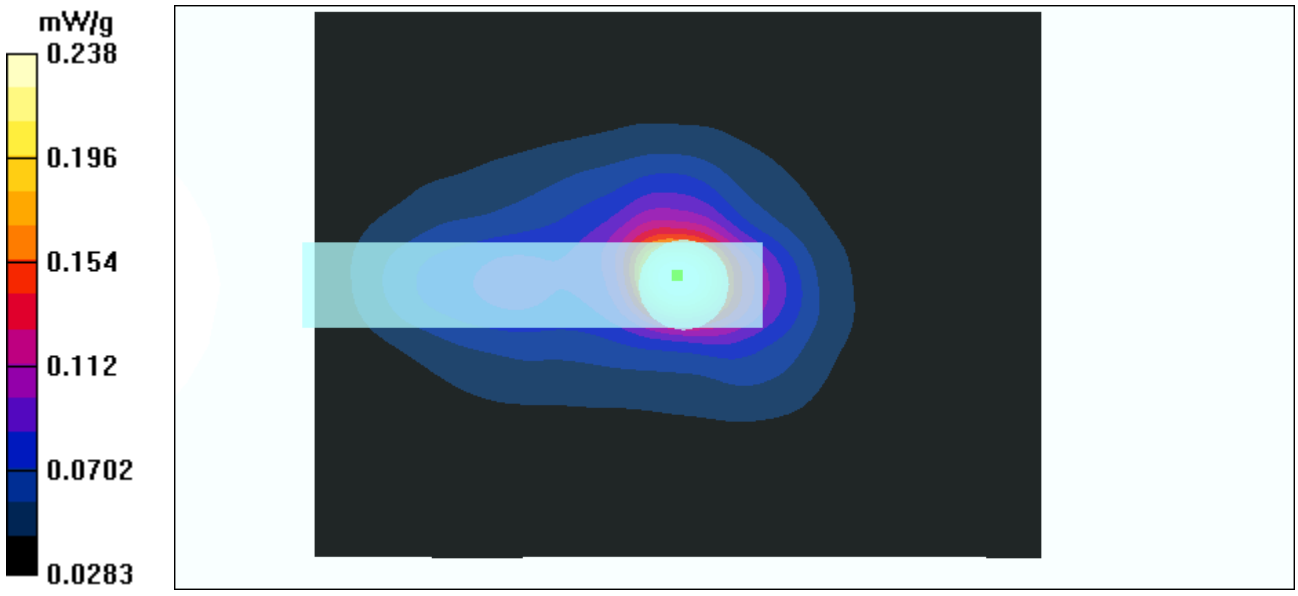
PDA HC02U Mode 8 with Dell Battery Module TYPE X1359

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.982 mho/m, ε_r = 52.6249, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 21.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- 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

PDA Channel 6/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 11.5 V/m
Power Drift = -0.03 dB
Maximum value of SAR = 0.245 mW/g

PDA Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.951 W/kg
SAR(1 g) = 0.24 mW/g; SAR(10 g) = 0.1 mW/g
Reference Value = 11.5 V/m
Power Drift = -0.03 dB
Maximum value of SAR = 0.238 mW/g



Date/Time: 11/19/03 21:06:00

Test Laboratory: Advance Data Technology

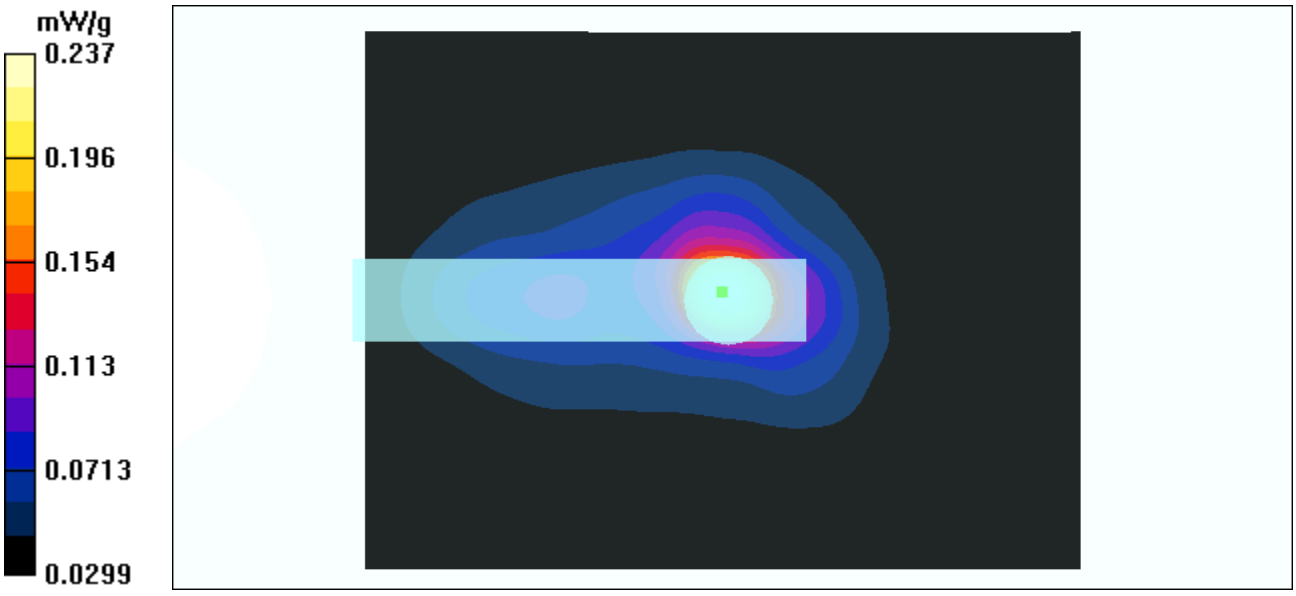
PDA HC02U Mode 8 with Dell Battery Module TYPE X1359

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 2.004 mho/m, ε_r = 52.5335, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 21.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- 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

PDA Channel 11/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 11.3 V/m
Power Drift = -0.07 dB
Maximum value of SAR = 0.238 mW/g

PDA Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.942 W/kg
SAR(1 g) = 0.24 mW/g; SAR(10 g) = 0.101 mW/g
Reference Value = 11.3 V/m
Power Drift = -0.07 dB
Maximum value of SAR = 0.237 mW/g



Date/Time: 11/19/03 21:39:28

Test Laboratory: Advance Data Technology

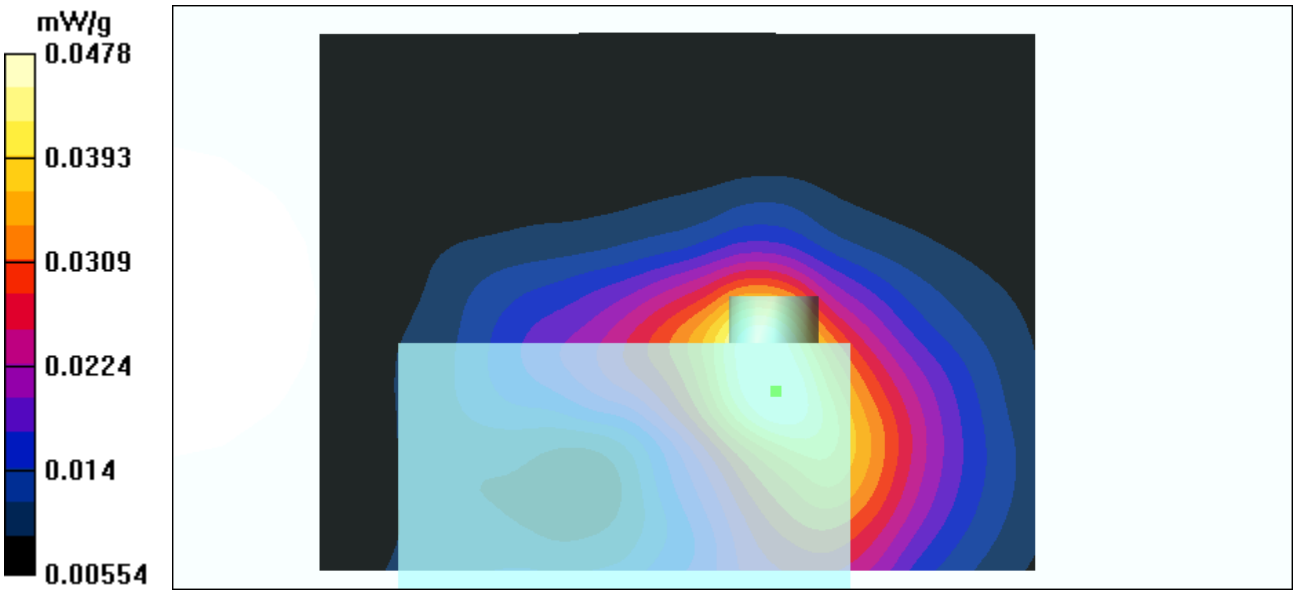
PDA HC02U Mode 9 with Dell Battery Module TYPE X1111

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.961 mho/m, ε_r = 52.6898, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 8mm(The bottom of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 21.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- 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

PDA Channel 1/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 4.66 V/m
Power Drift = -0.3 dB
Maximum value of SAR = 0.0483 mW/g

PDA Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.0942 W/kg
SAR(1 g) = 0.0463 mW/g; SAR(10 g) = 0.0264 mW/g
Reference Value = 4.66 V/m
Power Drift = -0.3 dB
Maximum value of SAR = 0.0478 mW/g



Date/Time: 11/19/03 22:07:06

Test Laboratory: Advance Data Technology

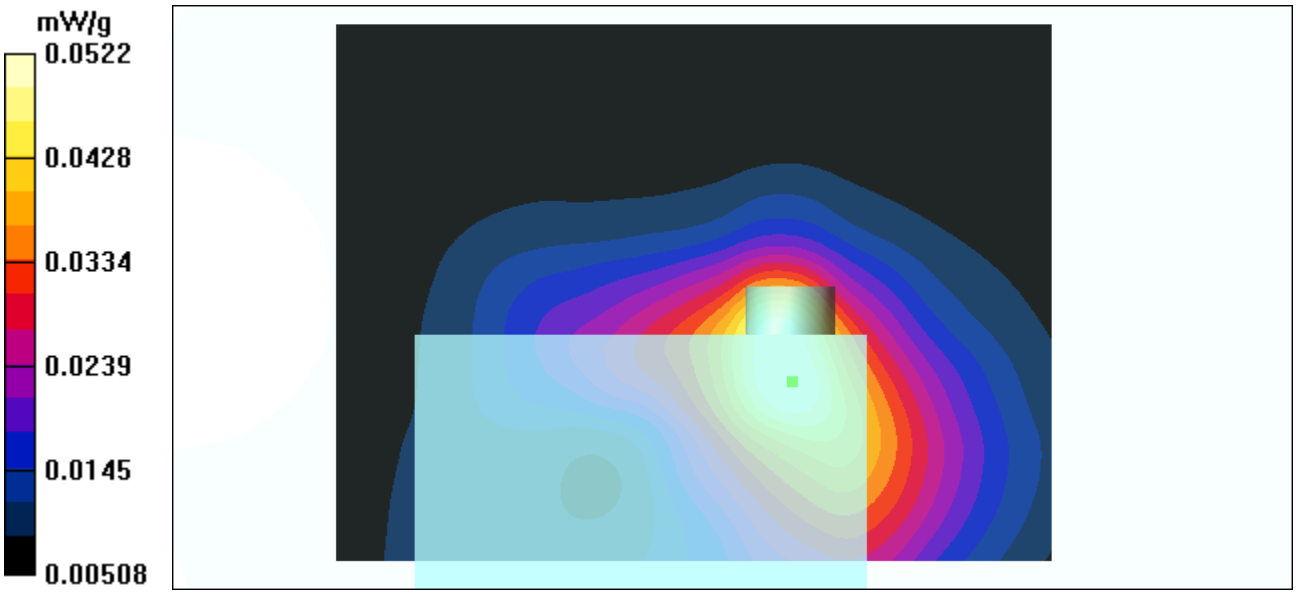
PDA HC02U Mode 9 with Dell Battery Module TYPE X1111

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.982 mho/m, ε_r = 52.6249, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 8mm(The bottom of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 21.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- 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

PDA Channel 6/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 4.72 V/m
Power Drift = -0.2 dB
Maximum value of SAR = 0.0525 mW/g

PDA Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.101 W/kg
SAR(1 g) = 0.0505 mW/g; SAR(10 g) = 0.0283 mW/g
Reference Value = 4.72 V/m
Power Drift = -0.2 dB
Maximum value of SAR = 0.0522 mW/g



Date/Time: 11/19/03 22:35:00

Test Laboratory: Advance Data Technology

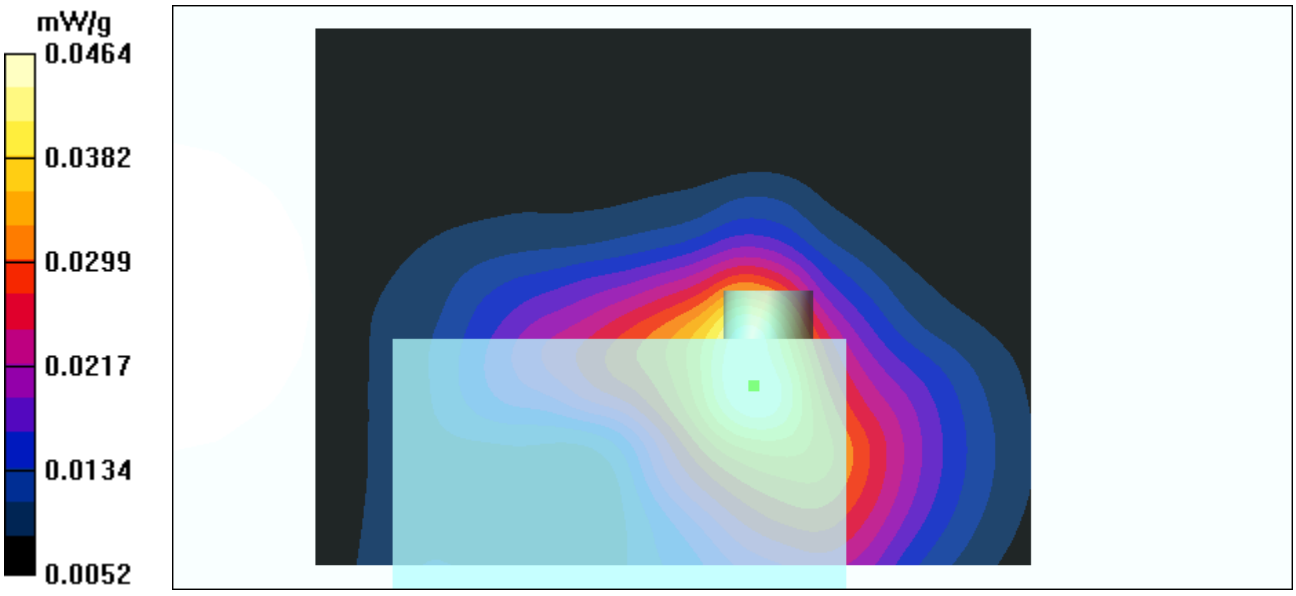
PDA HC02U Mode 9 with Dell Battery Module TYPE X1111

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 2.004 mho/m, ε_r = 52.5335, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 8mm(The bottom of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 21.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- 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

PDA Channel 11/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 4.36 V/m
Power Drift = -0.2 dB
Maximum value of SAR = 0.0467 mW/g

PDA Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.093 W/kg
SAR(1 g) = 0.0451 mW/g; SAR(10 g) = 0.0252 mW/g
Reference Value = 4.36 V/m
Power Drift = -0.2 dB
Maximum value of SAR = 0.0464 mW/g



Date/Time: 11/19/03 23:06:50

Test Laboratory: Advance Data Technology

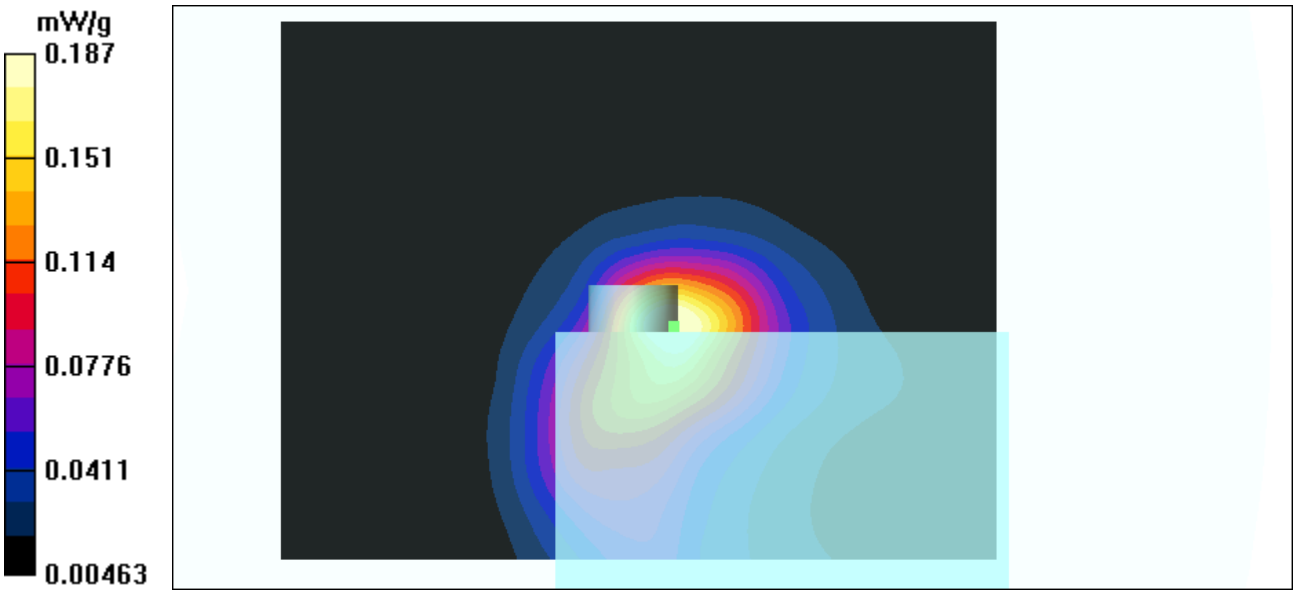
PDA HC02U Mode 10 with Dell Battery Module TYPE X1111

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.961 mho/m, ε_r = 52.6898, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23 degrees ; Liquid temp. : 21 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- 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

PDA Channel 1/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 8.34 V/m
Power Drift = -0.4 dB
Maximum value of SAR = 0.2 mW/g

PDA Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.431 W/kg
SAR(1 g) = 0.176 mW/g; SAR(10 g) = 0.0809 mW/g
Reference Value = 8.34 V/m
Power Drift = -0.4 dB
Maximum value of SAR = 0.187 mW/g



Date/Time: 11/19/03 23:39:32

Test Laboratory: Advance Data Technology

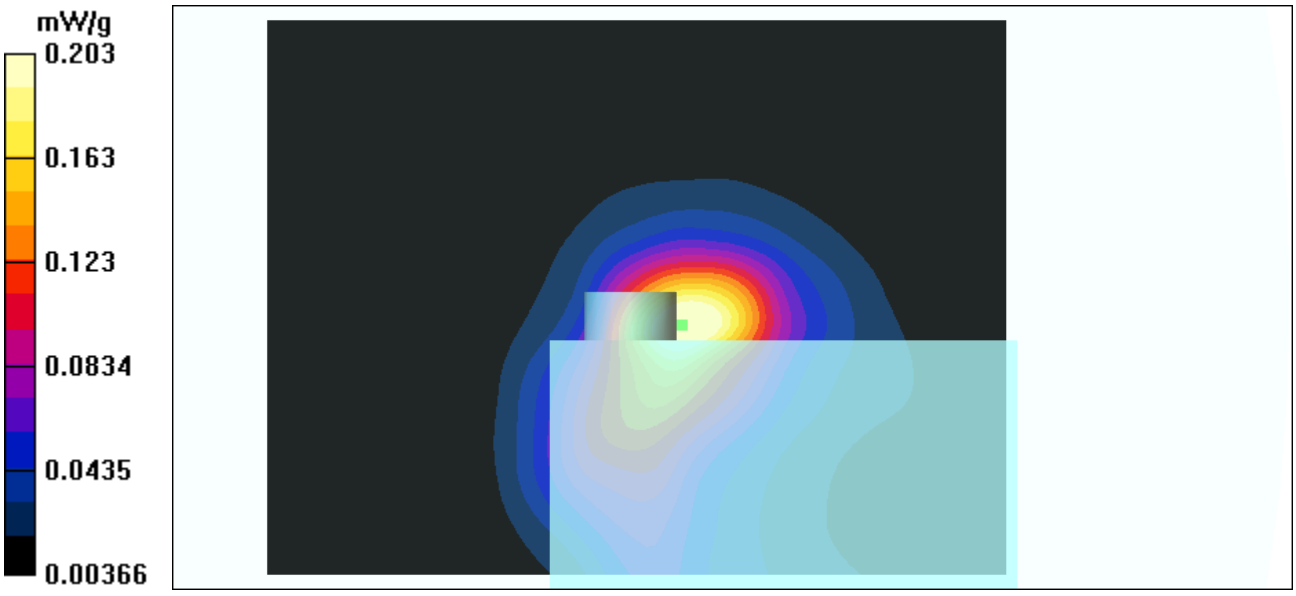
PDA HC02U Mode 10 with Dell Battery Module TYPE X1111

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.982 mho/m, ε_r = 52.6249, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23 degrees ; Liquid temp. : 21 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- 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

PDA Channel 6/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 8.57 V/m
Power Drift = -0.3 dB
Maximum value of SAR = 0.219 mW/g

PDA Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.489 W/kg
SAR(1 g) = 0.19 mW/g; SAR(10 g) = 0.0842 mW/g
Reference Value = 8.57 V/m
Power Drift = -0.3 dB
Maximum value of SAR = 0.203 mW/g



Date/Time: 11/20/03 00:02:02

Test Laboratory: Advance Data Technology

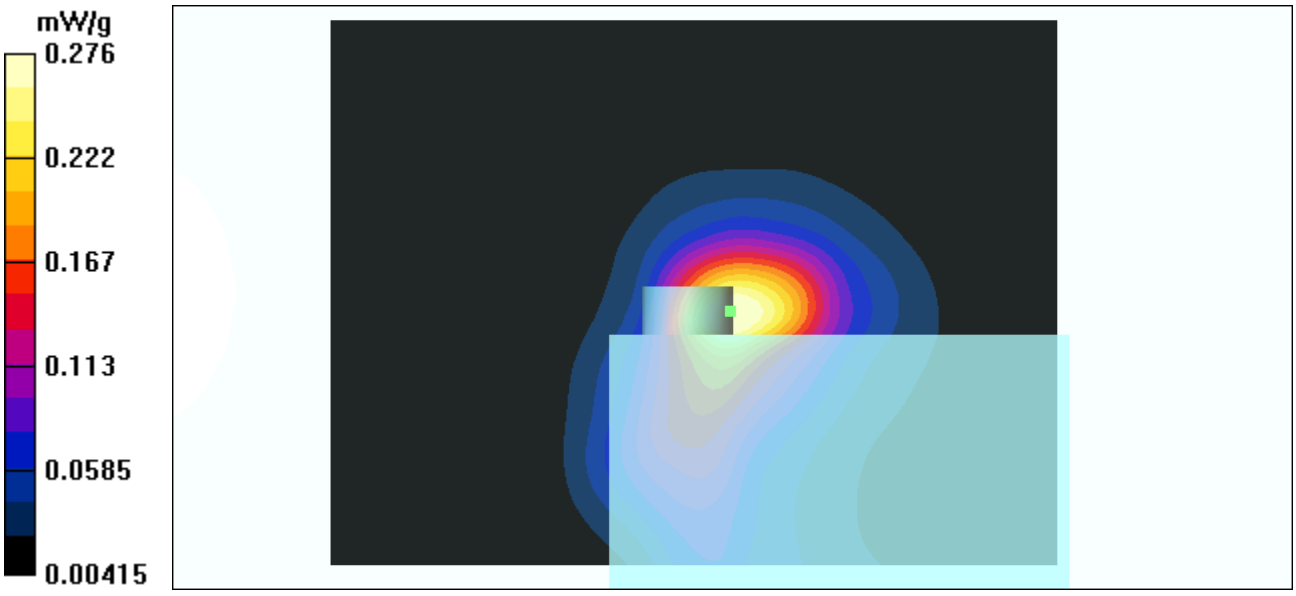
PDA HC02U Mode 10 with Dell Battery Module TYPE X1111

DUT: PDA ; Type: HC02U ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 2.004 mho/m, ε_r = 52.5335, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The front of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23 degrees ; Liquid temp. : 21 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- 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

PDA Channel 11/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 10.2 V/m
Power Drift = -0.09 dB
Maximum value of SAR = 0.285 mW/g

PDA Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.679 W/kg
SAR(1 g) = 0.26 mW/g; SAR(10 g) = 0.112 mW/g
Reference Value = 10.2 V/m
Power Drift = -0.09 dB
Maximum value of SAR = 0.276 mW/g



Date/Time: 11/19/03 22:10:26

Test Laboratory: Advance Data Technology

PDA HC02U Mode 7 with Dell Battery Module TYPE X1359

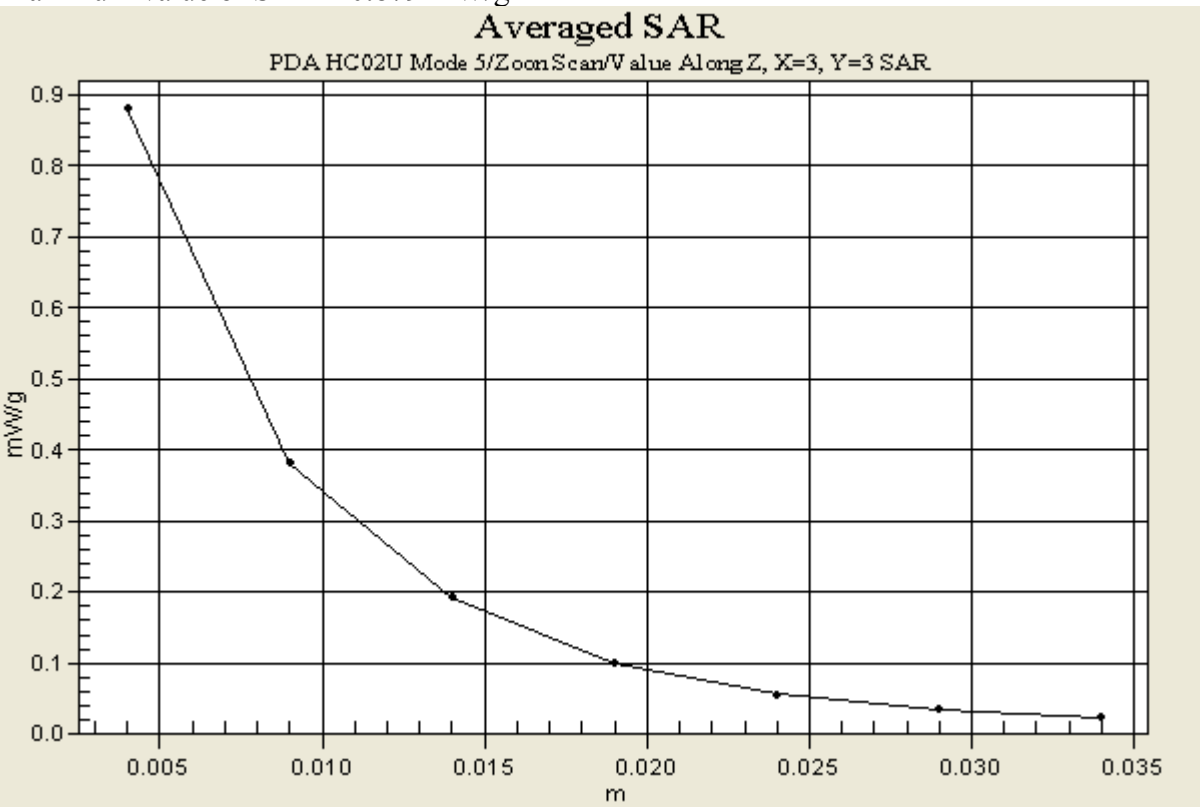
DUT: PDA ; Type: HC02U

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 2.004 mho/m, ε_r = 52.5335, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The front side of EUT to the Phantom)

Antenna type : Internal Antenna; Air tempreature : 23.0 ℄ ; Liquid temperature : 21.0 ℄

DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2003/6/2
- 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

PDA Channel 11/Area Scan (81x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 17.7 V/m
Power Drift = -0.02 dB
Maximum value of SAR = 0.968 mW/g
PDA Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 2.33 W/kg
SAR(1 g) = 0.802 mW/g; SAR(10 g) = 0.317 mW/g
Reference Value = 17.7 V/m
Power Drift = -0.02 dB
Maximum value of SAR = 0.879 mW/g



Date/Time: 11/19/03 09:12:44

Test Laboratory: Advance Data Technology

SystemPerformanceCheck-Body 2450-2003-11-20

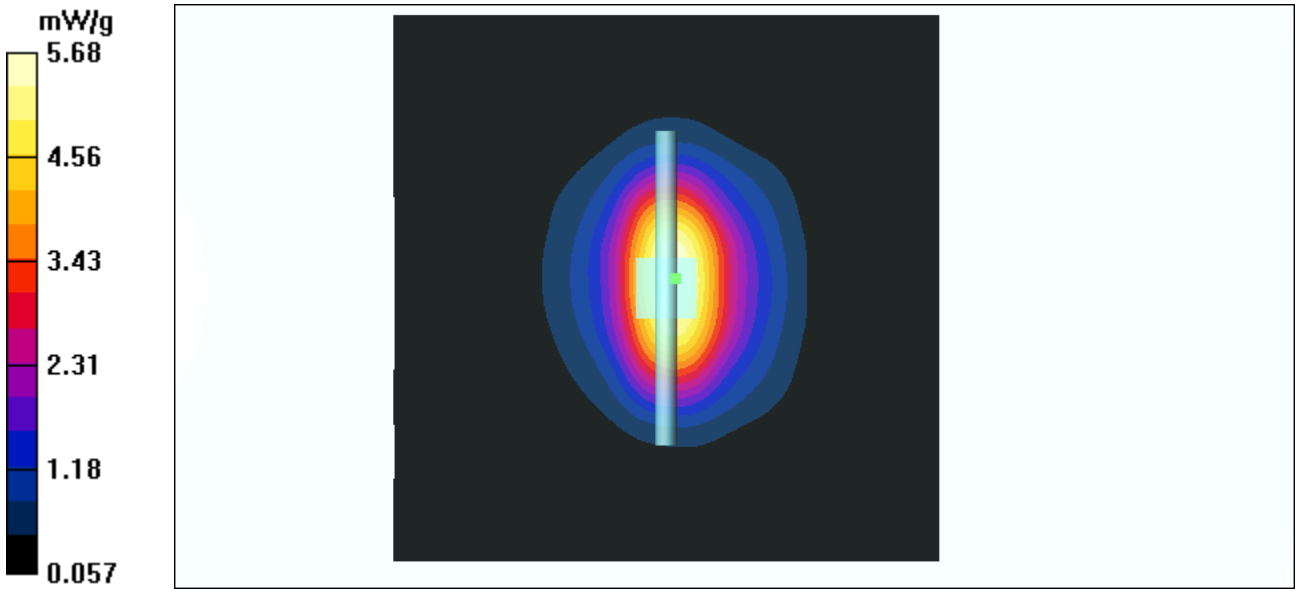
DUT: Dipole 2450 MHz ; Type: D2450V2

Communication System: CW ; Frequency: 2450 MHz; Duty Cycle: 1:1; Modulation type: CW
Medium: MSL2450 (σ = 1.996 mho/m, ε_r = 52.5686, ρ = 1000 kg/m^3) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 10mm(The feetpoint of the dipole to the Phantom)
Air temp. : 23.0 degrees ; Liquid temp. : 21 degrees

DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- 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

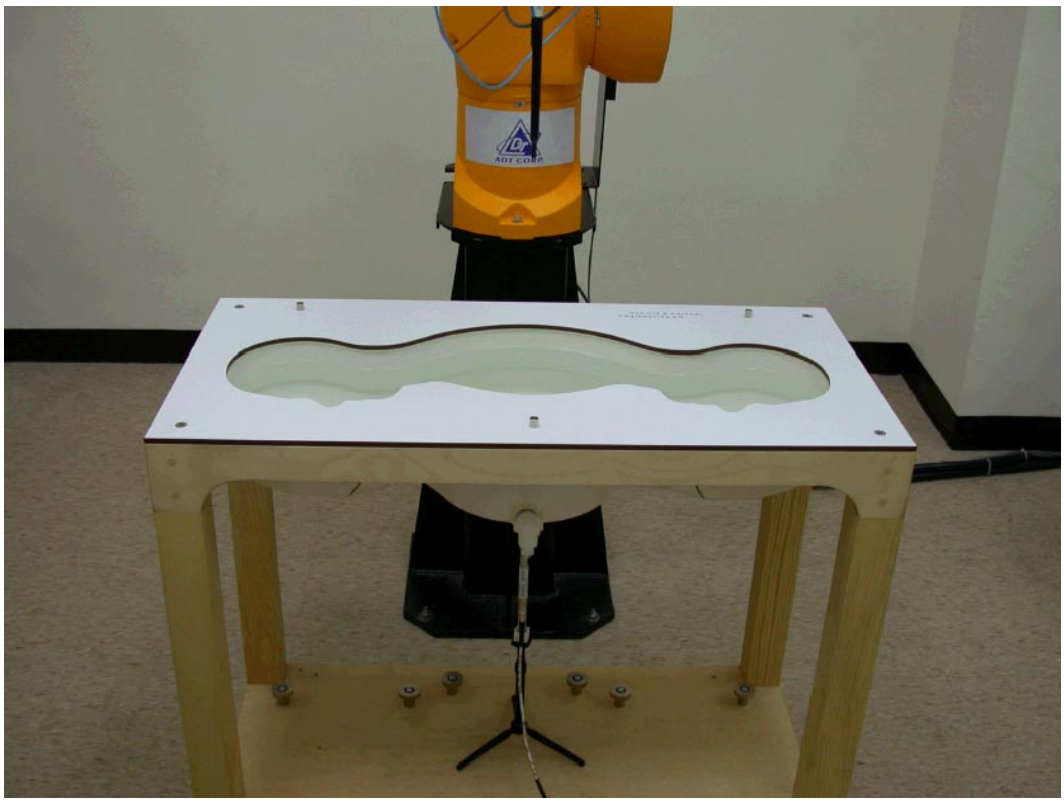
d=10mm, Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 56.2 V/m
Power Drift = -0.1 dB
Maximum value of SAR = 5.69 mW/g

d=10mm, Pin=100mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.6 W/kg
SAR(1 g) = 5.18 mW/g; SAR(10 g) = 2.42 mW/g
Reference Value = 56.2 V/m
Power Drift = -0.1 dB
Maximum value of SAR = 5.68 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. Bomholt

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Valeria Kolya

D2: 2450MHZ SYSTEM VALIDATION DIPOLE

Schmid & Partner
Engineering AG

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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:	N. Kuster
Approved by:	Jelonica Katja

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 permitivity	**37.7**	± 5%
Conductivity	**1.88 mho/m**	± 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 ± 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**