APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION

Date/Time: 06/06/2006 10:41:17 AM

Test Laboratory: RTS
File Name: Dipole_Validation_835 MHz_Amb_Temp. 24.1_Liq_Temp. 22.8_06_06_06.da4

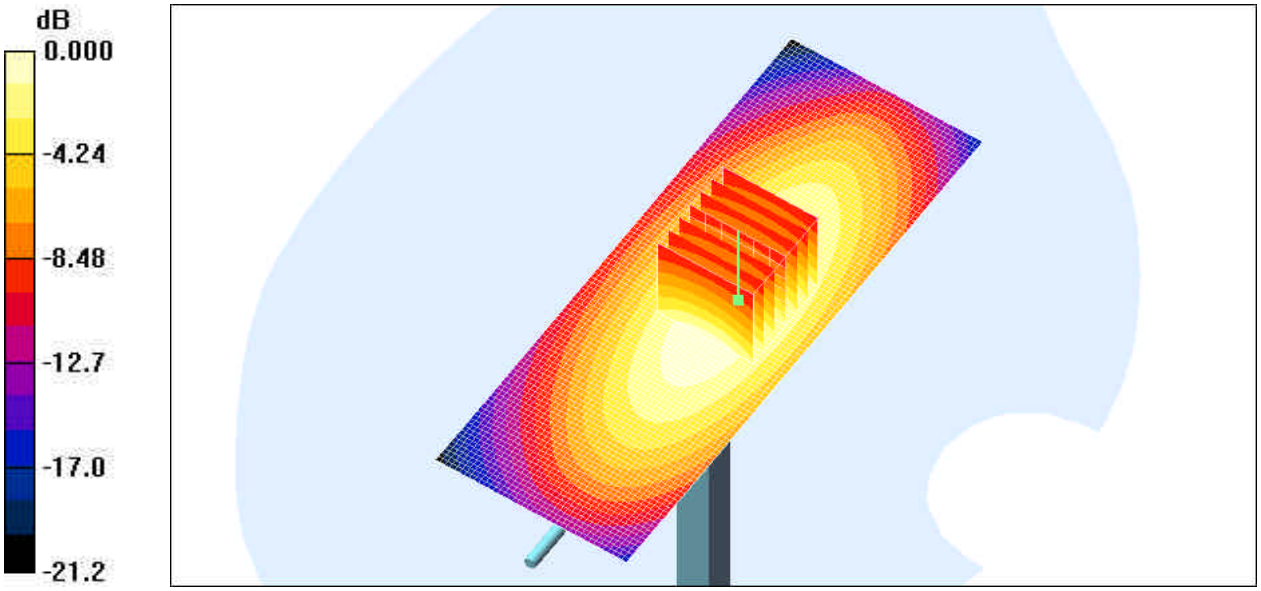
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:446
Program Name: System Performance Check at 835 MHz

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; s = 0.88 mho/m; e_r = 40.6; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(6.36, 6.36, 6.36); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 104.3 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 13.8 W/kg
SAR(1 g) = 9.22 mW/g; SAR(10 g) = 5.99 mW/g
Maximum value of SAR (measured) = 9.96 mW/g

d=15mm, Pin=250mW/Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 9.76 mW/g



0 dB = 9.76mW/g

Date/Time: 05/06/2006 3:38:31 PM

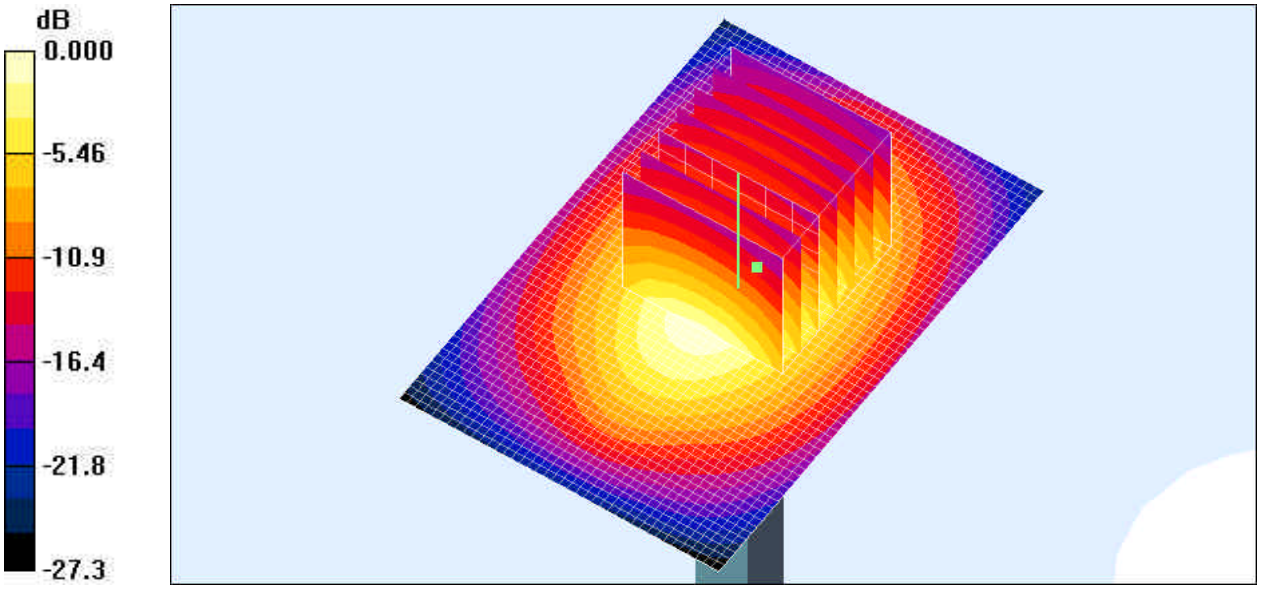
Test Laboratory: RTS
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:545
Program Name: Unnamed Program

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; s = 1.44 mho/m; e, = 38.8; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(5.18, 5.18, 5.18); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Dipole Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 194.3 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 76.8 W/kg
SAR(1 g) = 43.2 mW/g; SAR(10 g) = 22.6 mW/g
Maximum value of SAR (measured) = 48.9 mW/g

Dipole Validation/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 51.0 mW/g



0 dB = 51.0mW/g

Date/Time: 09/06/2006 10:02:55 AM

Test Laboratory: RTS

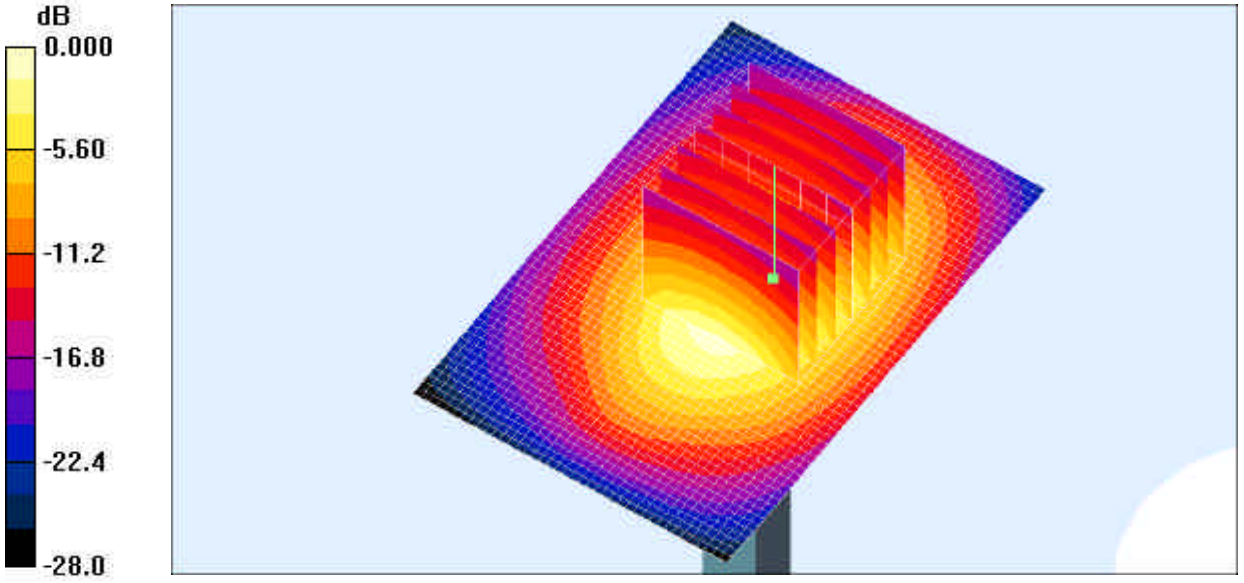
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:545
Program Name: Unnamed Program

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; s = 1.45 mho/m; e, = 38.3; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(5.18, 5.18, 5.18); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Dipole Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 176.1 V/m; Power Drift = 0.107 dB
Peak SAR (extrapolated) = 68.1 W/kg
SAR(1 g) = 39.2 mW/g; SAR(10 g) = 20.6 mW/g
Maximum value of SAR (measured) = 44.3 mW/g

Dipole Validation/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 46.7 mW/g



0 dB = 46.7mW/g

APPENDIX B: SAR DISTRIBUTION PLOTS FOR HEAD CONFIGURATION

Date/Time: 06/06/2006 11:32:26 AM

Test Laboratory: RTS
File Name:
RightHandSide_Touch_GSM850_High_Chan_Amb_Temp_23_4_Liq_Temp_22_8.da4

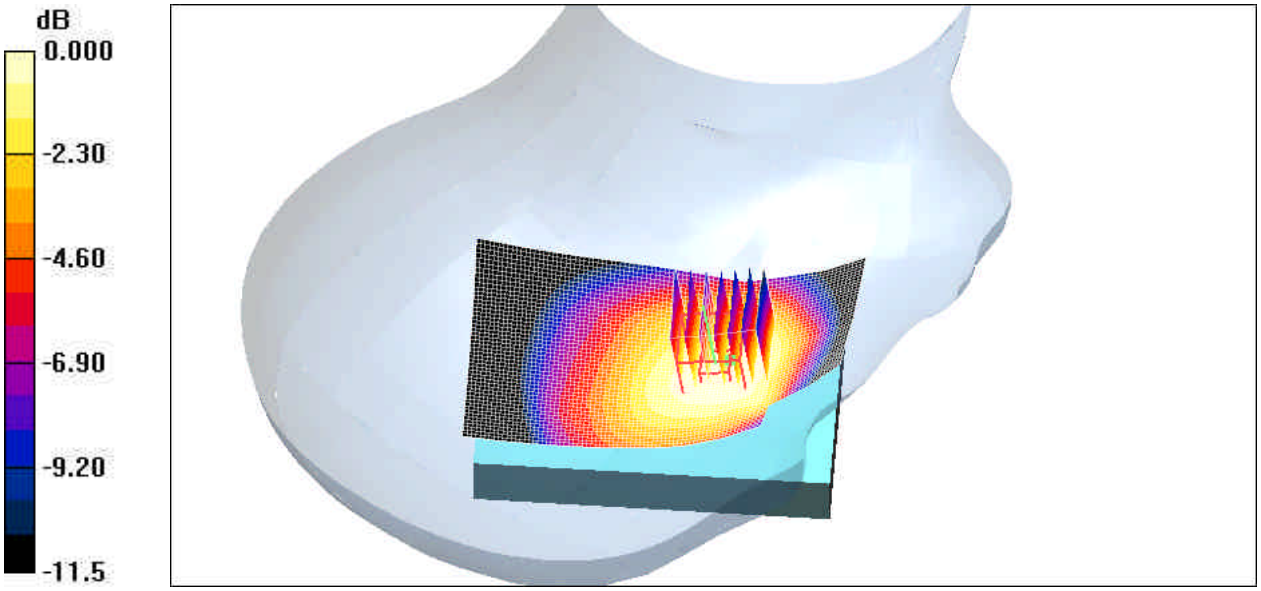
DUT: BlackBerry Wireless Handheld Model RBD52UW; Type: Sample
Program Name: Compliance Testing: P1528 Protocol (Right-Hand Side)

Communication System: GSM 850; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 848.8 MHz; s = 0.88 mho/m; e, = 40.6; ? = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(6.36, 6.36, 6.36); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Touch position - Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.16 mW/g

Touch position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.5 V/m; Power Drift = -0.173 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.807 mW/g
Maximum value of SAR (measured) = 1.18 mW/g



0 dB = 1.18mW/g

Date/Time: 09/06/2006 11:09:02 AM

Test Laboratory: RTS
File Name: Right_Touch_GSM1900_Low_Chan_ _Amb_Temp_23.9_C_Liq_Temp_22_1_C.da4

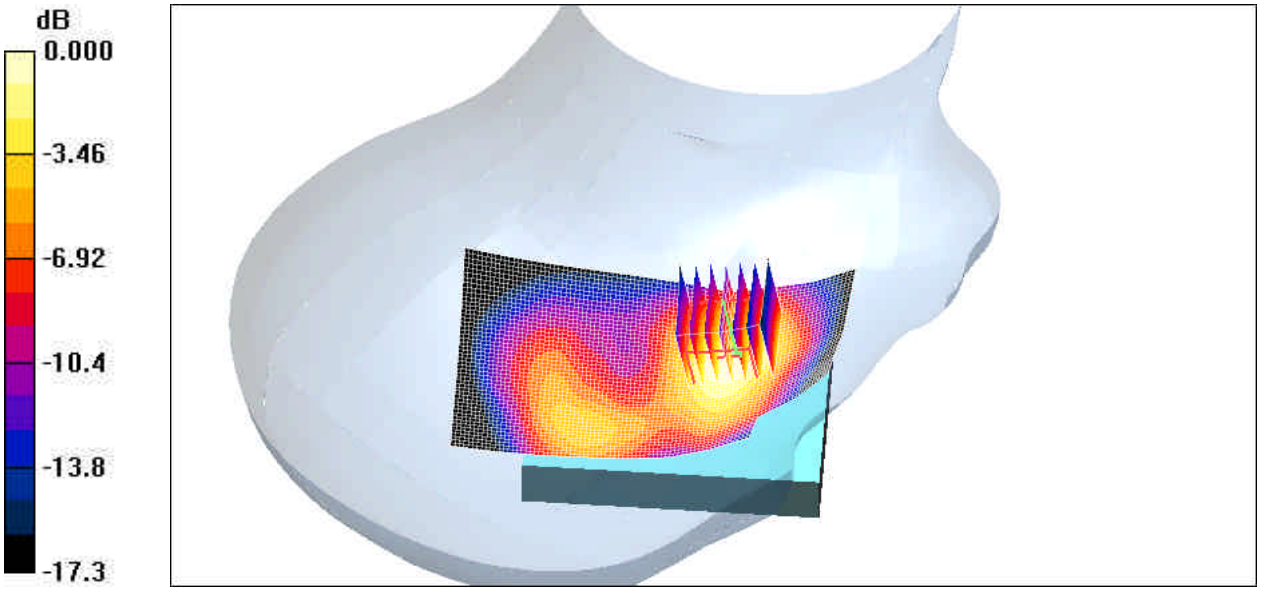
DUT: BlackBerry Wireless Handheld Model RBD51UW; Type: Sample ;
Program Name: Compliance Testing: P1528 Protocol (Right-Hand Side)

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1850.2 MHz; s = 1.45 mho/m; e_r = 38.3; ? = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(5.18, 5.18, 5.18); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Touch position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.907 mW/g

Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.793 mW/g; SAR(10 g) = 0.477 mW/g
Maximum value of SAR (measured) = 0.877 mW/g



0 dB = 0.877mW/g

Date/Time: 05/06/2006 4:01:26 PM

Test Laboratory: RTS
File Name:
Right_Touch_GSM1900_Low_Chan_Battery_2_Amb_Temp_24_3_C_Liq_Temp_23_5_C.da4

DUT: BlackBerry Wireless Handheld Model RBD52UW; Type: Sample
Program Name: Compliance Testing: P1528 Protocol (Right-Hand Side)

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1850.2 MHz; s = 1.44 mho/m; e, = 38.8; ? = 1000 kg/m^3
Phantom section: Right Section

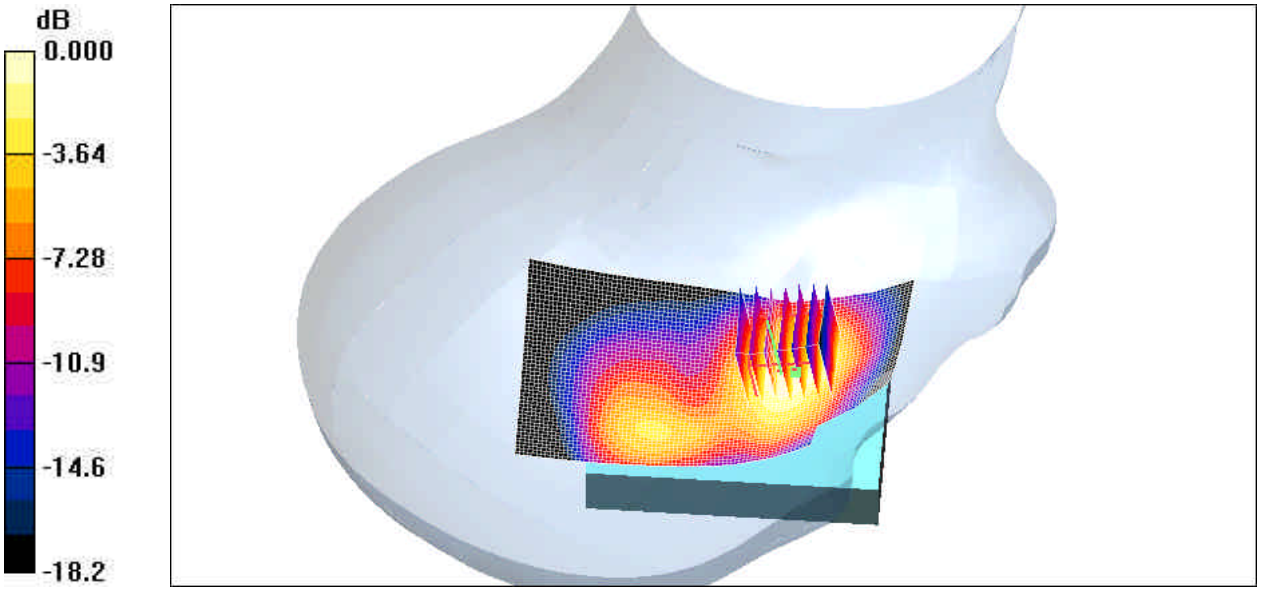
DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(5.18, 5.18, 5.18); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Touch position - Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.30 mW/g

Touch position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.1 V/m; Power Drift = -0.594 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.671 mW/g
Maximum value of SAR (measured) = 1.22 mW/g

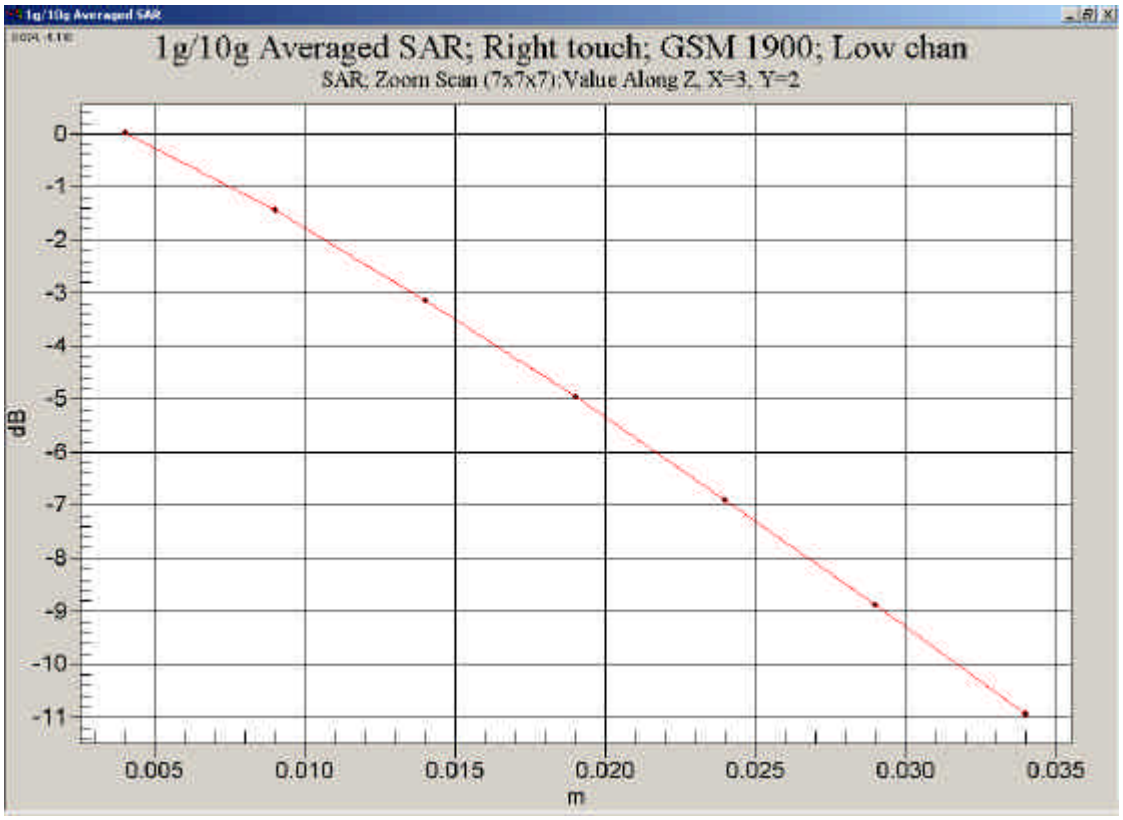
Interpolated calculated SAR due to large power drift:

SAR(1 g) = 1.13 mW/g * 10 ^ (0.594/10)
= 1.30 mW/g



0 dB = 1.22mW/g

Z-axis plot for worst-case head figuration:



APPENDIX C: SAR DISTRIBUTION PLOTS FOR BODY-WORN CONFIGURATION

Date/Time: 07/06/2006 10:55:08 AM

Test Laboratory: RTS
File Name:
Body_worn_Holster1_RBD52UW_GPRS850_High_Chan_Front_2_Slots_Uplink_31dBm_Amb_Temp_24_4_C_Liq_Temp_24_0_C.da4

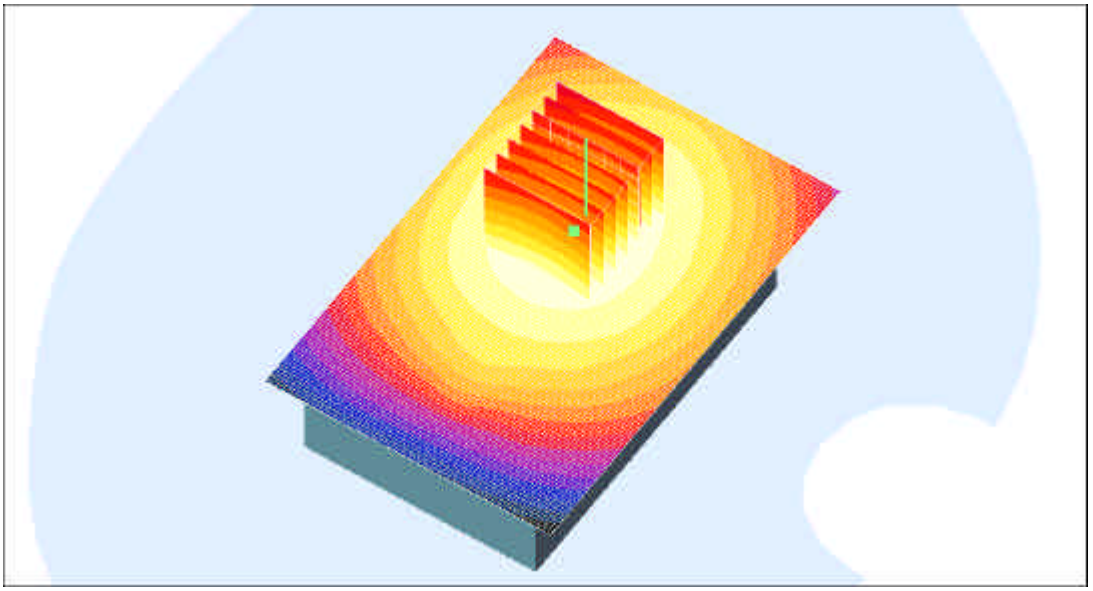
DUT: BlackBerry Wireless Handheld ; Type: Sample ; Serial: Not Specified
Program Name: Compliance Testing: Body-worn with holster

Communication System: GPRS 850; Frequency: 848.8 MHz;Duty Cycle: 1:4.2
Medium parameters used: f = 848.8 MHz; s = 0.99 mho/m; e_r = 52.9; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(6.13, 6.13, 6.13); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.4 V/m; Power Drift = -0.038 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.880 mW/g
Maximum value of SAR (measured) = 1.26 mW/g

Unnamed procedure/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.26 mW/g



0 dB = 1.26mW/g

Date/Time: 07/06/2006 9:58:24 AM

Test Laboratory: RTS
File Name: Body_worn_Holster2_ RBD52UW GPRS850_High_Chan_Front_2_Slots_Uplink_31dBm_Amb_Temp_23_8_C_Liq_Temp_22_7_C.da4

DUT: BlackBerry Wireless Handheld ; Type: Sample ; Serial: Not Specified
Program Name: Compliance Testing: Body-worn with holster

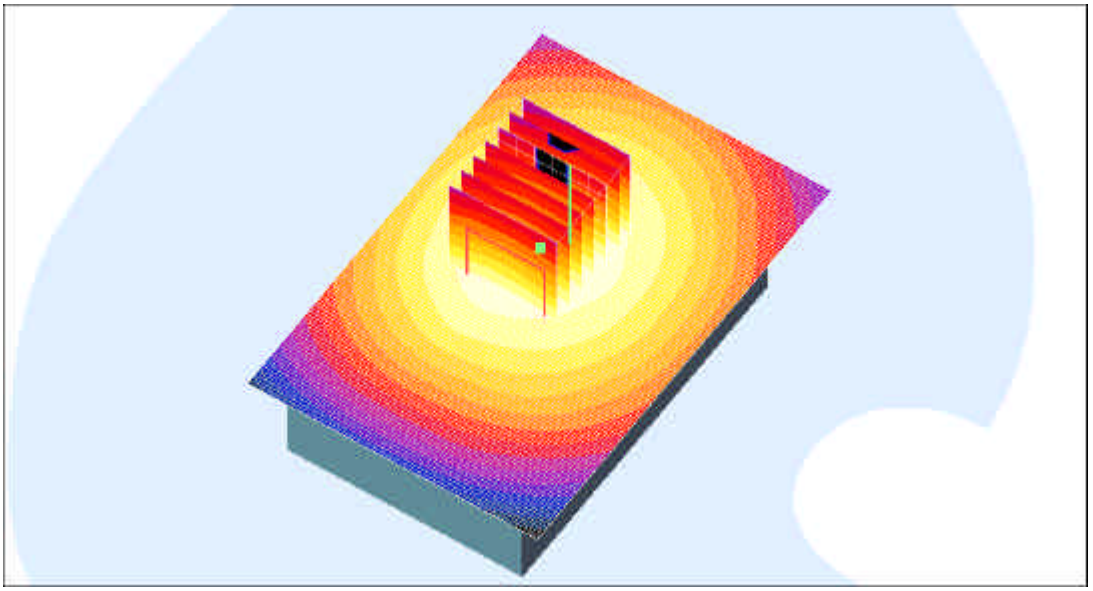
Communication System: GPRS 850; Frequency: 848.8 MHz;Duty Cycle: 1:4.2
Medium parameters used: f = 848.8 MHz; s = 0.99 mho/m; e_r = 52.9; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(6.13, 6.13, 6.13); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 32.3 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.985 mW/g; SAR(10 g) = 0.647 mW/g

Maximum value of SAR (measured) = 0.992 mW/g

Unnamed procedure/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.981 mW/g



0 dB = 0.981mW/g

Date/Time: 07/06/2006 10:25:53 AM

Test Laboratory: RTS
File Name: Body_worn_Holster2_GPRS850_ RBD52UW High_Chan_Back_2_Slots_Uplink_31dBm_Amb_Temp_24_7_C_Liq_Temp_23_0_C.da4

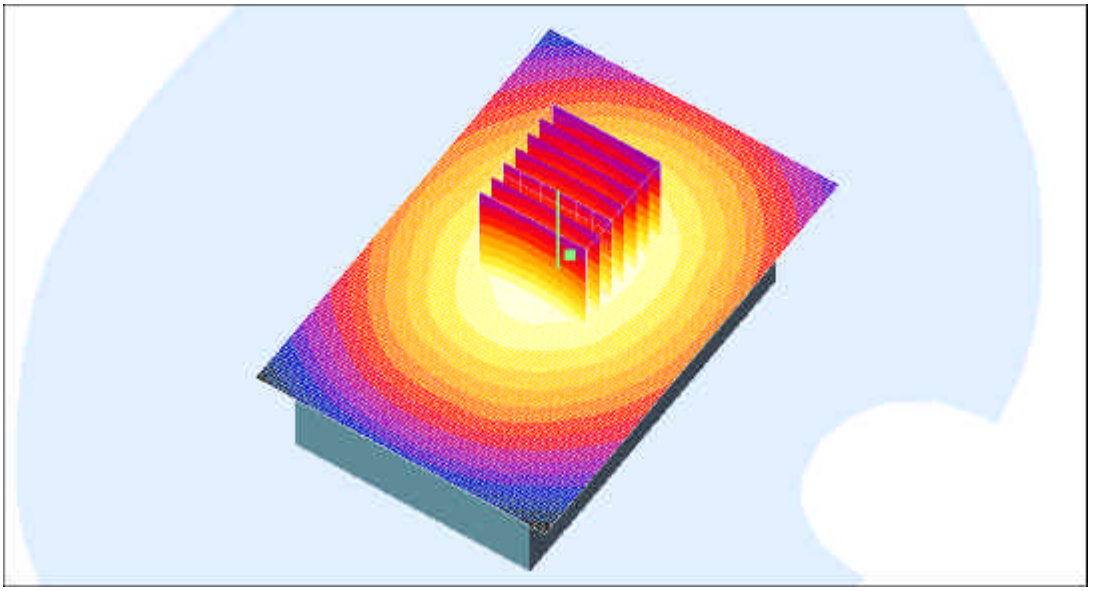
DUT: BlackBerry Wireless Handheld ; Type: Sample ; Serial: Not Specified
Program Name: Compliance Testing: Body-worn with holster

Communication System: GPRS 850; Frequency: 848.8 MHz;Duty Cycle: 1:4.2
Medium parameters used: f = 848.8 MHz; s = 0.99 mho/m; e, = 52.9; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(6.13, 6.13, 6.13); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.8 V/m; Power Drift = -0.009 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.780 mW/g
Maximum value of SAR (measured) = 1.13 mW/g

Unnamed procedure/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.13 mW/g



0 dB = 1.13mW/g

Date/Time: 07/06/2006 4:39:54 PM

Test Laboratory: RTS
File Name: Body_worn_Holster3_GPRS850_ RBD51UW High_Chan_Back_2_Slots_Uplink_31dBm_Amb_Temp_24_2_C_Liq_Temp_23_1_C.da4

DUT: BlackBerry Wireless Handheld ; Type: Sample ; Serial: Not Specified
Program Name: Compliance Testing: Body-worn with holster

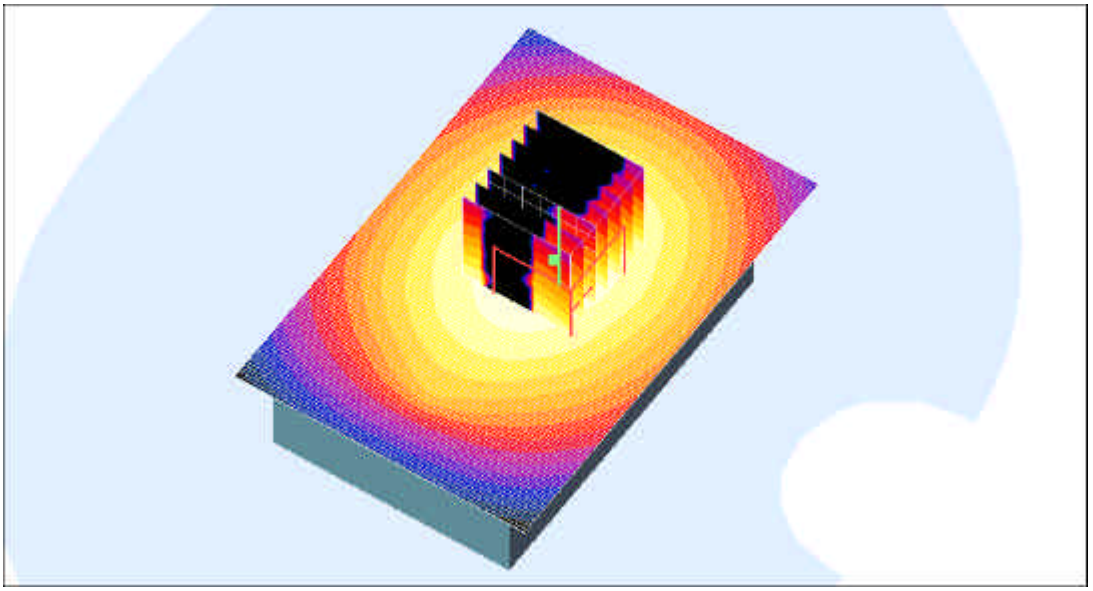
Communication System: GPRS 850; Frequency: 848.8 MHz;Duty Cycle: 1:4.2
Medium parameters used: f = 848.8 MHz; s = 0.99 mho/m; e_r = 52.9; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(6.13, 6.13, 6.13); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.6 V/m; Power Drift = 0.151 dB
Peak SAR (extrapolated) = 1.60 W/kg
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.381 mW/g

Maximum value of SAR (measured) = 1.10 mW/g

Unnamed procedure/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.15 mW/g



0 dB = 1.15mW/g

Date/Time: 07/06/2006 11:24:40 AM

Test Laboratory: RTS
File Name: Body_worn_Holster3_GPRS850_ RBD52UW
High_Chan_Back_2_Slots_Uplink_31dBm_Amb_Temp_24_2_C_Liq_Temp_23_6_C.da4

DUT: BlackBerry Wireless Handheld ; Type: Sample ; Serial: Not Specified
Program Name: Compliance Testing: Body-worn with holster

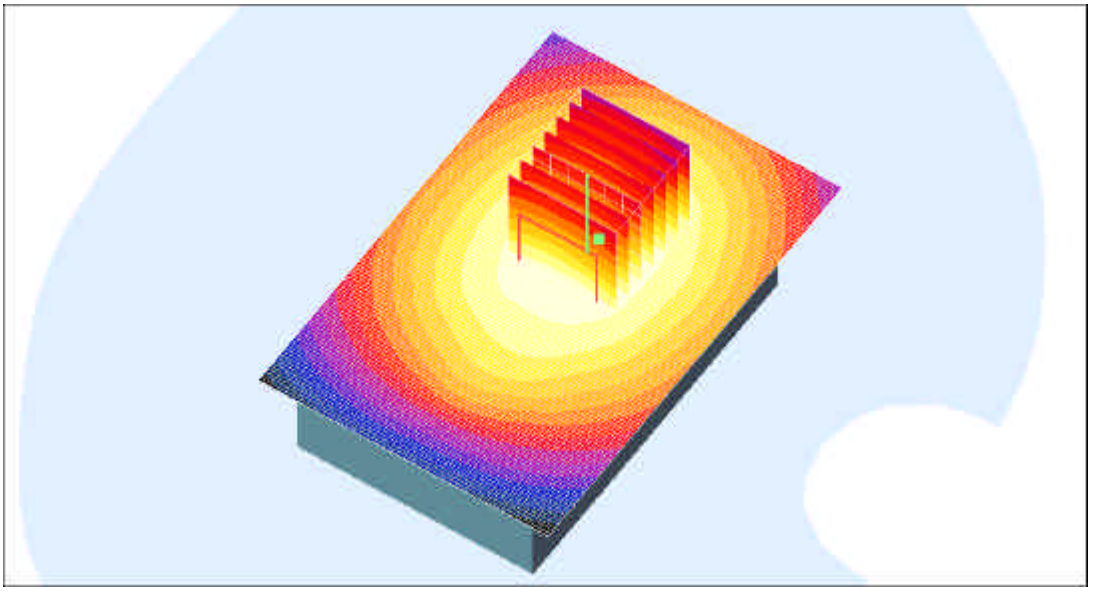
Communication System: GPRS 850; Frequency: 848.8 MHz;Duty Cycle: 1:4.2
Medium parameters used: f = 848.8 MHz; s = 0.99 mho/m; e, = 52.9; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(6.13, 6.13, 6.13); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.5 V/m; Power Drift = -0.118 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.896 mW/g

Maximum value of SAR (measured) = 1.27 mW/g

Unnamed procedure/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.28 mW/g



0 dB = 1.28mW/g

Date/Time: 07/06/2006 12:22:18 PM

Test Laboratory: RTS
File Name: Body_worn_Holster4_GPRS850_ RBD52UW
High_Chan_Back_2_Slots_Uplink_31dBm_Amb_Temp_23_4_C_Liq_Temp_23_0_C.da4

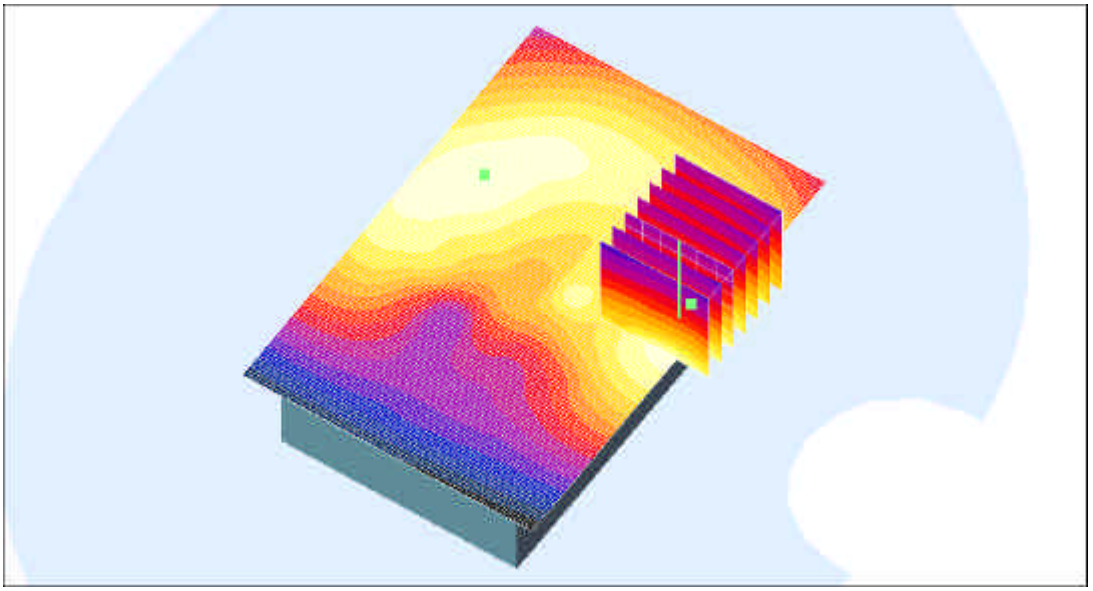
DUT: BlackBerry Wireless Handheld ; Type: Sample ; Serial: Not Specified
Program Name: Compliance Testing: Body-worn with holster

Communication System: GPRS 850; Frequency: 848.8 MHz;Duty Cycle: 1:4.2
Medium parameters used: f = 848.8 MHz; s = 0.99 mho/m; e_r = 52.9; ? = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1642; ConvF(6.13, 6.13, 6.13); Calibrated: 19/01/2006
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 25/04/2006
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

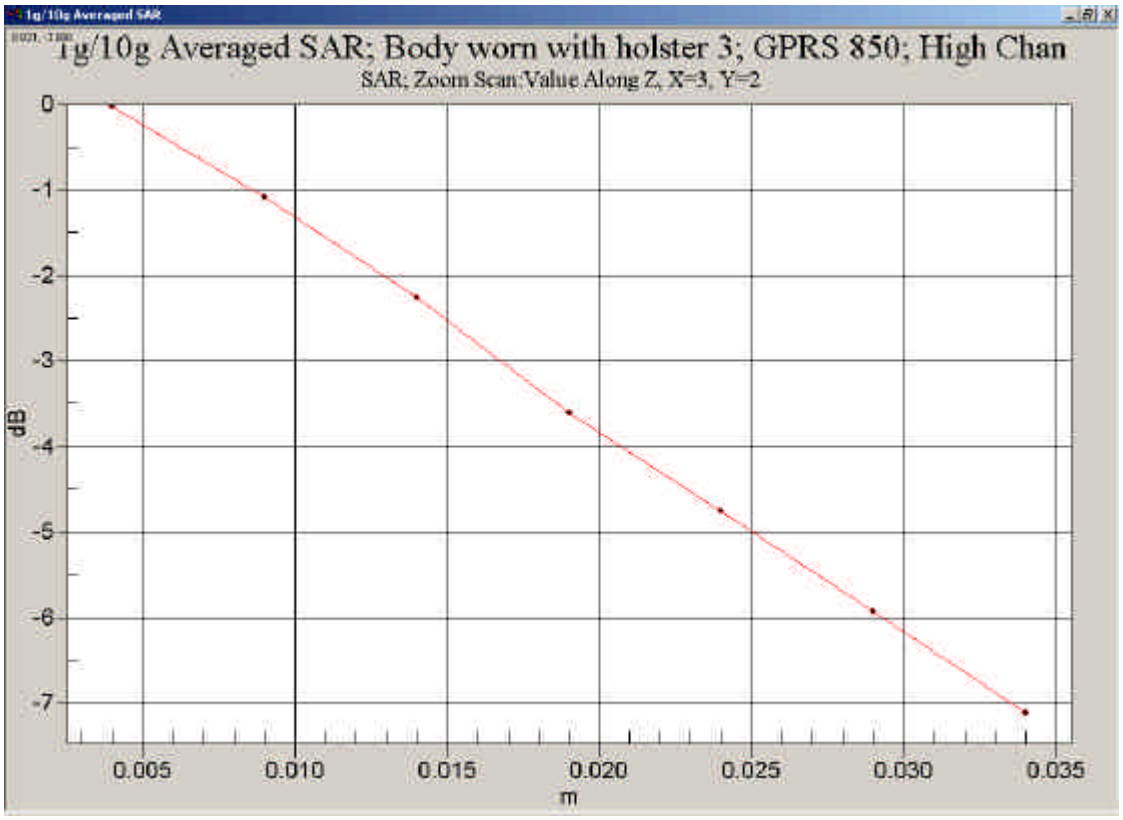
Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.6 V/m; Power Drift = 0.175 dB
Peak SAR (extrapolated) = 0.871 W/kg
SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.348 mW/g
Maximum value of SAR (measured) = 0.585 mW/g

Unnamed procedure/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.578 mW/g

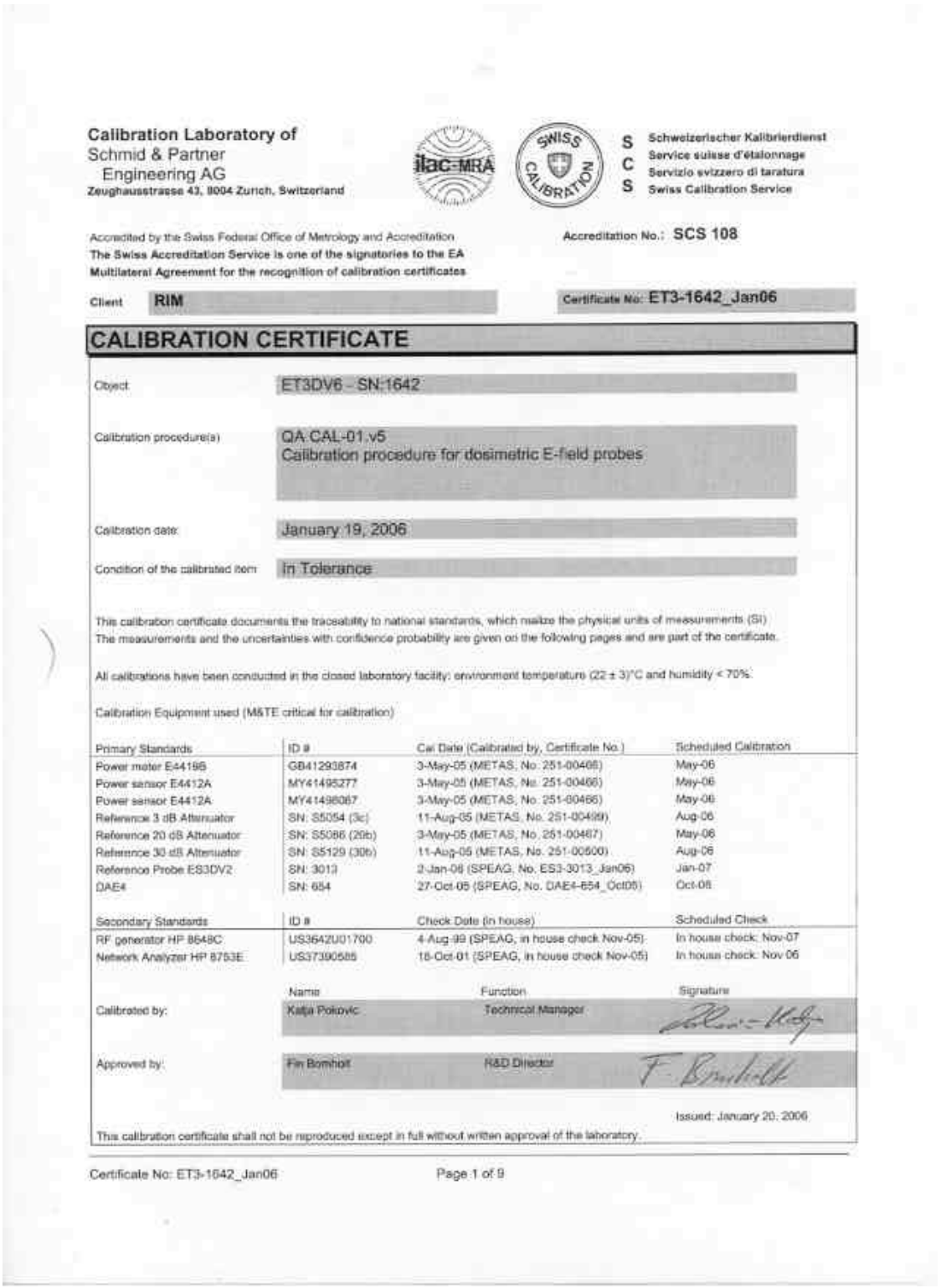


0 dB = 0.578mW/g

Z-axis plot for worst-case body worn configuration:



APPENDIX D: PROBE & DIPOLE CALIBRATION DATA



Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client RIM

Certificate No: ET3-1642_Jan06

CALIBRATION CERTIFICATE

Object: ET3DV6 - SN:1642

Calibration procedure(s): QA CAL-01.v5
Calibration procedure for dosimetric E-field probes

Calibration date: January 19, 2006

Condition of the calibrated item: In Tolerance

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	3-May-05 (METAS, No. 251-00466)	May-06
Power sensor E4412A	MY41495277	3-May-05 (METAS, No. 251-00466)	May-06
Power sensor E4412A	MY41498087	3-May-05 (METAS, No. 251-00466)	May-06
Reference 3 dB Attenuator	SN: S5054 (3c)	11-Aug-05 (METAS, No. 251-00499)	Aug-06
Reference 20 dB Attenuator	SN: S5086 (20b)	3-May-05 (METAS, No. 251-00467)	May-06
Reference 30 dB Attenuator	SN: S5129 (30b)	11-Aug-05 (METAS, No. 251-00500)	Aug-06
Reference Probe ES3DV2	SN: 3013	2-Jan-06 (SPEAG, No. ES3-3013_Jan06)	Jan-07
DAE4	SN: 654	27-Oct-05 (SPEAG, No. DAE4-654_Oct05)	Oct-06

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Nov-05)	In house check: Nov-07
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-05)	In house check: Nov-06

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Fin Bomholt	R&D Director	

Issued: January 20, 2006

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: ET3-1642_Jan06 Page 1 of 9

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

a) 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: Measurement Techniques", December 2003
b) CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe ET3DV6

SN:1642

Manufactured: November 7, 2001
Last calibrated: January 7, 2005
Recalibrated: January 19, 2006

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

ET3DV6 SN:1642 **January 19, 2006**

DASY - Parameters of Probe: ET3DV6 SN:1642

Sensitivity in Free Space[A]

Diode Compression[B]

NormX	1.66 ± 10.1%	$\mu V/(V/m)^2$	DCP X	94 mV
NormY	1.91 ± 10.1%	$\mu V/(V/m)^2$	DCP Y	94 mV
NormZ	1.64 ± 10.1%	$\mu V/(V/m)^2$	DCP Z	94 mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL **900 MHz** **Typical SAR gradient: 5 % per mm**

Sensor Center to Phantom Surface Distance		3.7 mm	4.7 mm
SAR_{be} [%]	Without Correction Algorithm	8.5	4.6
SAR_{be} [%]	With Correction Algorithm	0.1	0.1

TSL **1810 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		3.7 mm	4.7 mm
SAR_{be} [%]	Without Correction Algorithm	12.3	8.1
SAR_{be} [%]	With Correction Algorithm	0.6	0.3

Sensor Offset

Probe Tip to Sensor Center	2.7 mm

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

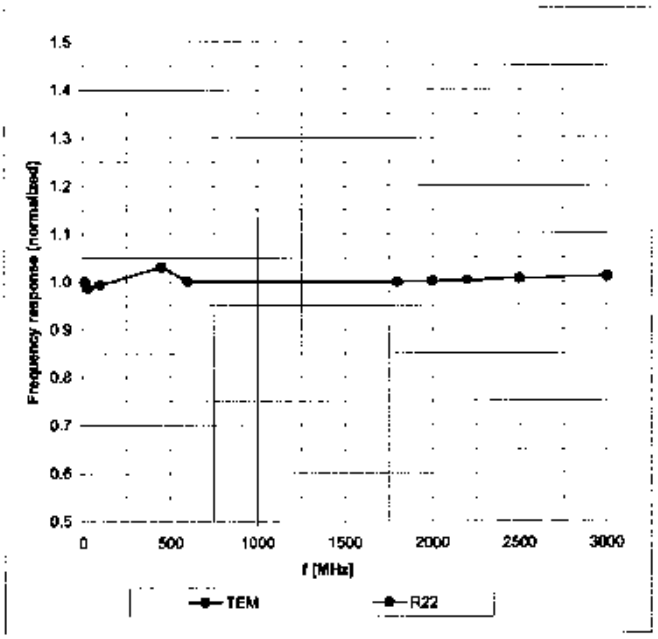
[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

[B] Numerical linearization parameter: uncertainty not required.

ET3DV6 SN:1642 January 19, 2006

Frequency Response of E-Field

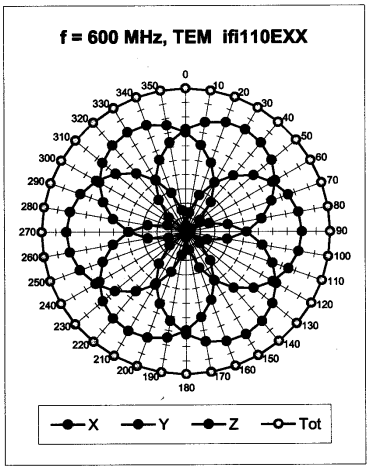
(TEM-Cell:ifi110 EXX, Waveguide: R22)

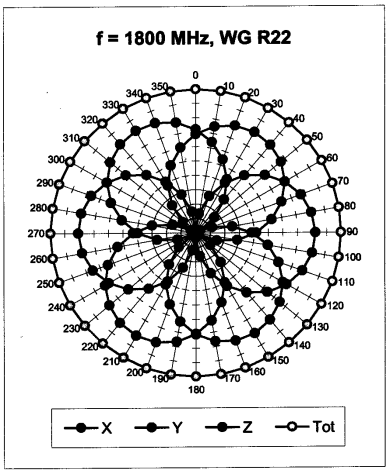


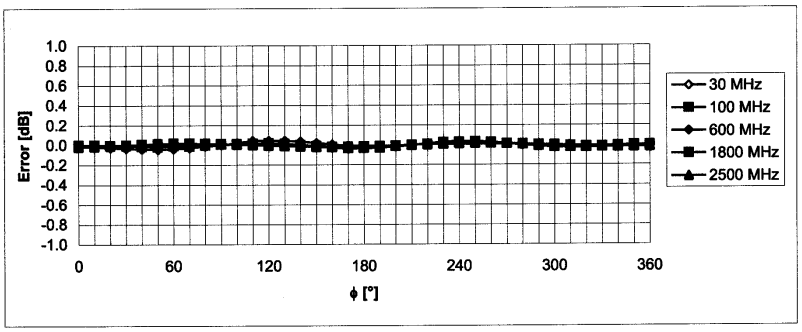
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

ET3DV6 SN:1642 **January 19, 2006**

Receiving Pattern (ϕ), ϑ = 0°





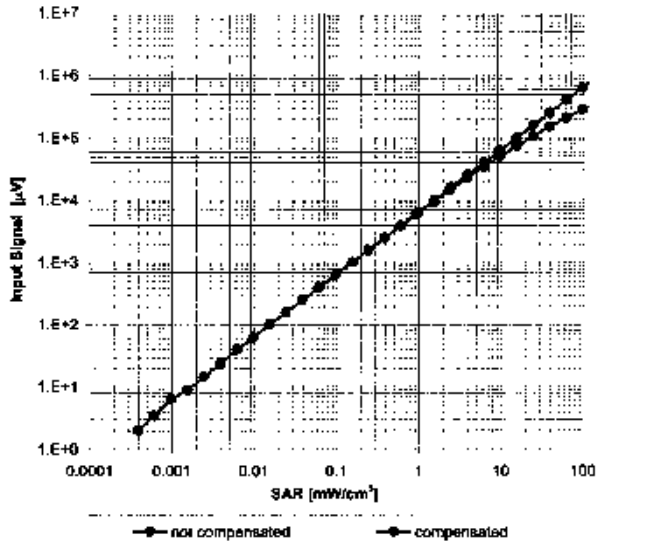


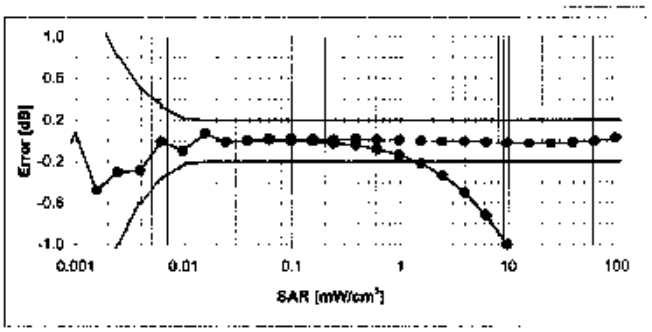
Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

ET3DV6 SN:1642 January 19, 2006

Dynamic Range f(SAR_{head})

(Waveguide R22, f = 1800 MHz)



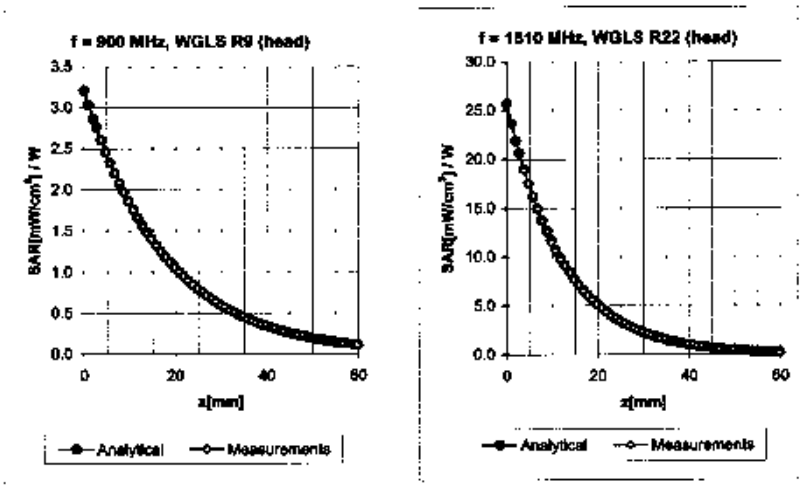


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Certificate No: ET3-1642_Jan06 Page 7 of 9

ET3DV6 SN:1642 January 19, 2006

Conversion Factor Assessment



f [MHz]	Validity [MHz][C]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.57	1.66	6.38 ± 11.0% (k=2)
1810	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.66	2.12	5.18 ± 11.0% (k=2)
1950	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.73	1.55	5.02 ± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.50	2.06	6.13 ± 11.0% (k=2)
1810	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.67	2.05	4.72 ± 11.0% (k=2)
1950	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.64	2.44	4.36 ± 11.0% (k=2)

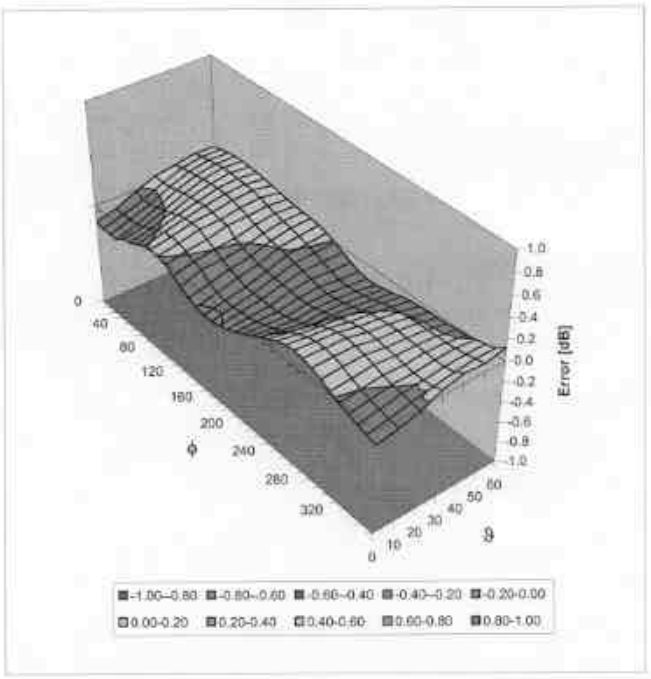
[C] The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

Certificate No: ET3-1642_Jan06 Page 8 of 9

ET3DV6 SN:1642 January 19, 2006

Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

Certificate No: ET3-1642_Jan06 Page 9 of 9

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client RIM

Certificate No: D835V2-446_Jan05

CALIBRATION CERTIFICATE

Object	D835V2 - SN: 446
Calibration procedure(s)	QA CAL-05.v6 Calibration procedure for dipole validation kits
Calibration date:	January 7, 2005
Condition of the calibrated item	In Tolerance

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E442	GB37480704	12-Oct-04 (METAS, No. 251-00412)	Oct-05
Power sensor HP 8481A	US37292783	12-Oct-04 (METAS, No. 251-00412)	Oct-05
Reference 20 dB Attenuator	SN: 5086 (20g)	10-Aug-04 (METAS, No 251-00402)	Aug-05
Reference 10 dB Attenuator	SN: 5047.2 (10r)	10-Aug-04 (METAS, No 251-00402)	Aug-05
Reference Probe ET3DV6	SN 1507	26-Oct-04 (SPEAG, No. ET3-1507_Oct04)	Oct-05
DAE4	SN 907	03-May-04 (SPEAG, No. DAE4-907_May04)	May-05

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (SPEAG, in house check Oct-03)	In house check: Oct-05
RF generator R&S SML-03	100698	27-Mar-02 (SPEAG, in house check Dec-03)	In house check: Dec-05
Network Analyzer HP 8753E	US37390585 S4206	Oct-01 (SPEAG, in house check Nov-04)	In house check: Nov-05

	Name	Function	Signature
Calibrated by:	Judith Müller	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: January 13, 2005

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D835V2-446_Jan05 Page 1 of 6

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) 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: Measurement Techniques", December 2003
b) CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is 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.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY4	V4.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V4.9	
Distance Dipole Center - TSL	15 mm	with Spacer
Area Scan resolution	dx, dy = 15 mm	
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.2 ± 6 %	0.91 mho/m ± 6 %
Head TSL temperature during test	(22.0 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	condition	
SAR measured	250 mW input power	2.27 mW / g
SAR normalized	normalized to 1W	9.08 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**9.10 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.48 mW / g
SAR normalized	normalized to 1W	5.92 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**5.93 mW / g ± 16.5 % (k=2)**

[1] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.1 Ω - 7.1 jΩ
Return Loss	- 22.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.385 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	October 24, 2001

DASY4 Validation Report for Head TSL

Date/Time: 01/07/05 15:08:43

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN446

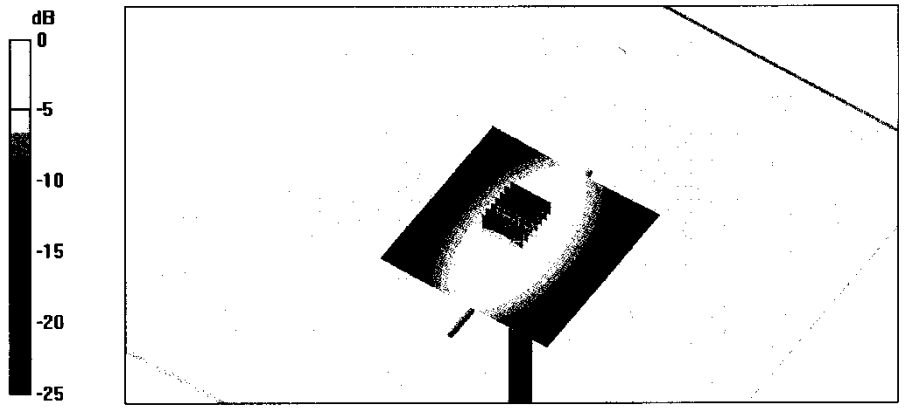
Communication System: CW-835; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL 900 MHz;
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507; ConvF(6.24, 6.24, 6.24); Calibrated: 26.10.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn907; Calibrated: 03.05.2004
- Phantom: Flat Phantom 4.9L; Type: QD000P50AA; Serial: SN:1001;
- Measurement SW: DASY4, V4.4 Build 10; Postprocessing SW: SEMCAD, V1.8 Build 133

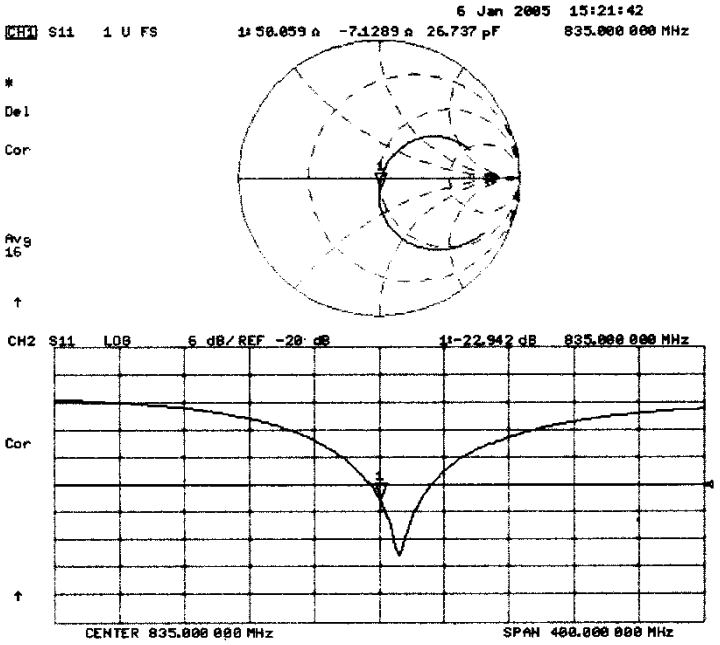
Pin = 250 mW; d = 15 mm/Area Scan (81x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.44 mW/g

Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.2 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 3.36 W/kg
SAR(1 g) = 2.27 mW/g; SAR(10 g) = 1.48 mW/g
Maximum value of SAR (measured) = 2.45 mW/g



0 dB = 2.45mW/g

Impedance Measurement Plot for Head TSL



Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client RIM

Certificate No: D1900V2-545_Jan05

CALIBRATION CERTIFICATE

Object	D1900V2 - SN: 545
Calibration procedure(s)	QA CAL-05.v6 Calibration procedure for dipole validation kits
Calibration date:	January 06, 2005
Condition of the calibrated item	In Tolerance

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E442	GB37480704	12-Oct-04 (METAS, No. 251-00412)	Oct-05
Power sensor HP 8481A	US37292783	12-Oct-04 (METAS, No. 251-00412)	Oct-05
Reference 20 dB Attenuator	SN: 5086 (20g)	10-Aug-04 (METAS, No 251-00402)	Aug-05
Reference 10 dB Attenuator	SN: 5047.2 (10r)	10-Aug-04 (METAS, No 251-00402)	Aug-05
Reference Probe ET3DV6	SN 1507	26-Oct-04 (SPEAG, No. ET3-1507_Oct04)	Oct-05
DAE4	SN 907	03-May-04 (SPEAG, No. DAE4-907_May04)	May-05

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (SPEAG, in house check Oct-03)	In house check: Oct-05
RF generator R&S SML-03	100698	27-Mar-02 (SPEAG, in house check Dec-03)	In house check: Dec-05
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (SPEAG, in house check Nov-04)	In house check: Nov 05

	Name	Function	Signature
Calibrated by:	Judith Müller	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: January 13, 2005

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) 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: Measurement Techniques", December 2003
b) CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is 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.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY4	V4.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V4.9	
Distance Dipole Center - TSL	10 mm	with Spacer
Area Scan resolution	dx, dy = 15 mm	
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.9 ± 6 %	1.45 mho/m ± 6 %
Head TSL temperature during test	(22.0 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	condition	
SAR measured	250 mW input power	10.2 mW / g
SAR normalized	normalized to 1W	40.8 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**39.5 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.34 mW / g
SAR normalized	normalized to 1W	21.4 mW / g
SAR for nominal Head TSL parameters [1]	normalized to 1W	**20.7 mW / g ± 16.5 % (k=2)**

[1] Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.7 Ω + 2.1 jΩ
Return Loss	- 31.5 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.198 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	November 15, 2001

DASY4 Validation Report for Head TSL

Date/Time: 01/06/05 18:30:23

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN545

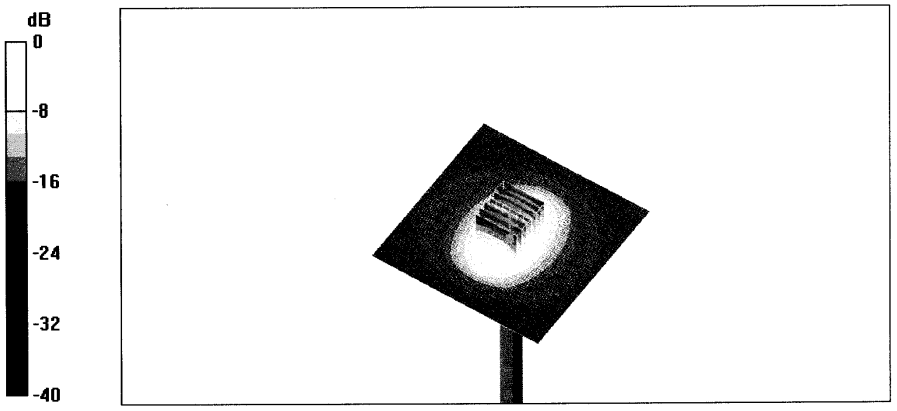
Communication System: CW-1900; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL 1900 MHz;
Medium parameters used: f = 1900 MHz; σ = 1.45 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507; ConvF(4.96, 4.96, 4.96); Calibrated: 26.10.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn907; Calibrated: 03.05.2004
- Phantom: Flat Phantom quarter size; Type: QD000P50AA; Serial: SN:1001;
- Measurement SW: DASY4, V4.4 Build 10; Postprocessing SW: SEMCAD, V1.8 Build 133

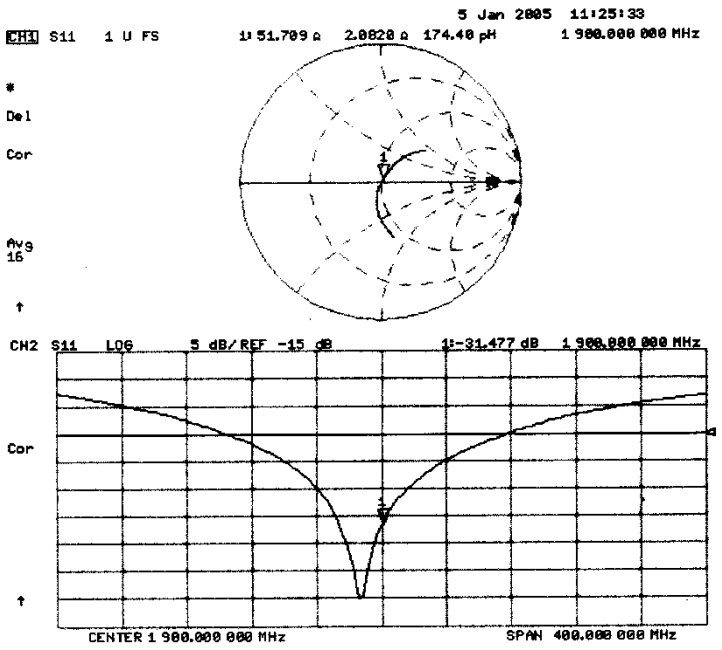
Pin = 250 mW; d = 10 mm/Area Scan (81x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 11.6 mW/g

Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.2 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 18 W/kg
SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.34 mW/g
Maximum value of SAR (measured) = 11.7 mW/g



0 dB = 11.7mW/g

Impedance Measurement Plot for Head TSL



APPENDIX E: SAR SET UP PHOTOS

Figure E1. Right touch position (RBD51UW)

Figure E2. Right touch position (RBD52UW)

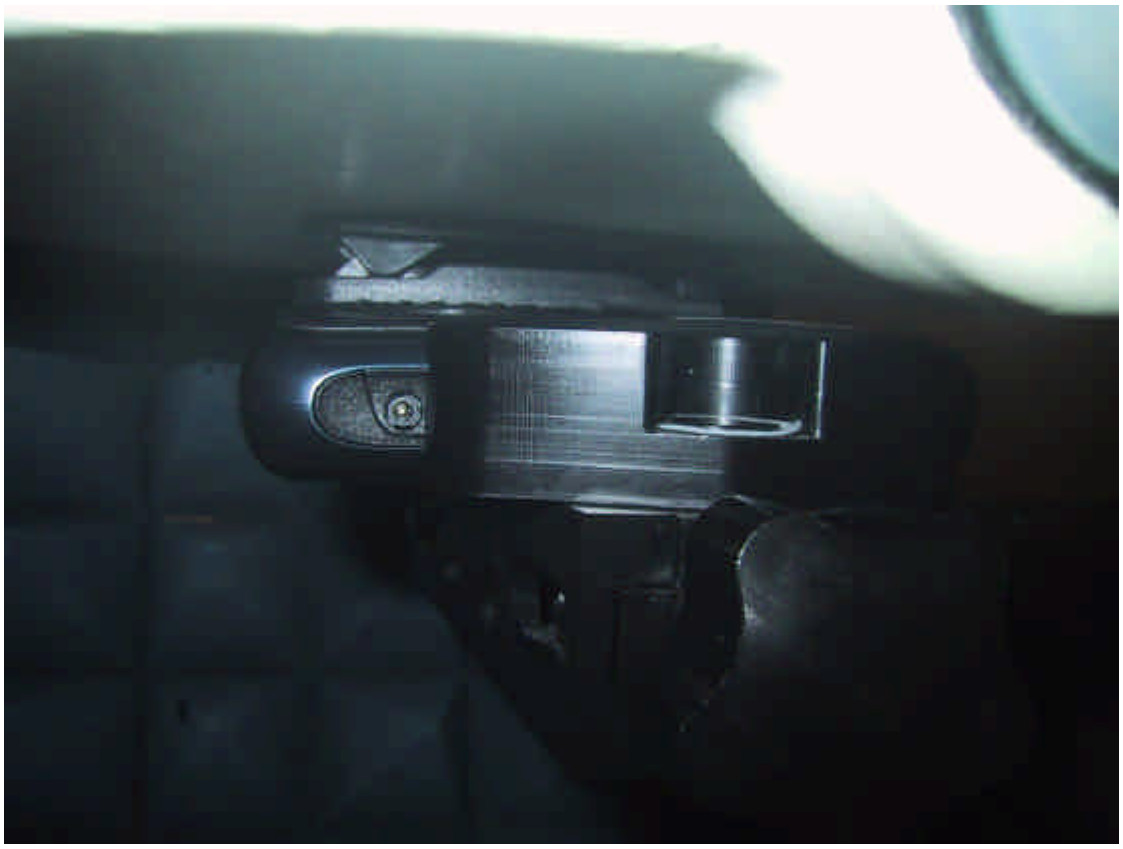


Figure E3. Body worn with Holster 1; front (RBD52UW)

Figure E4. Body worn with Holster 2; front (RBD52UW)

Figure E5. Body worn with Holster 2; back (RBD52UW)

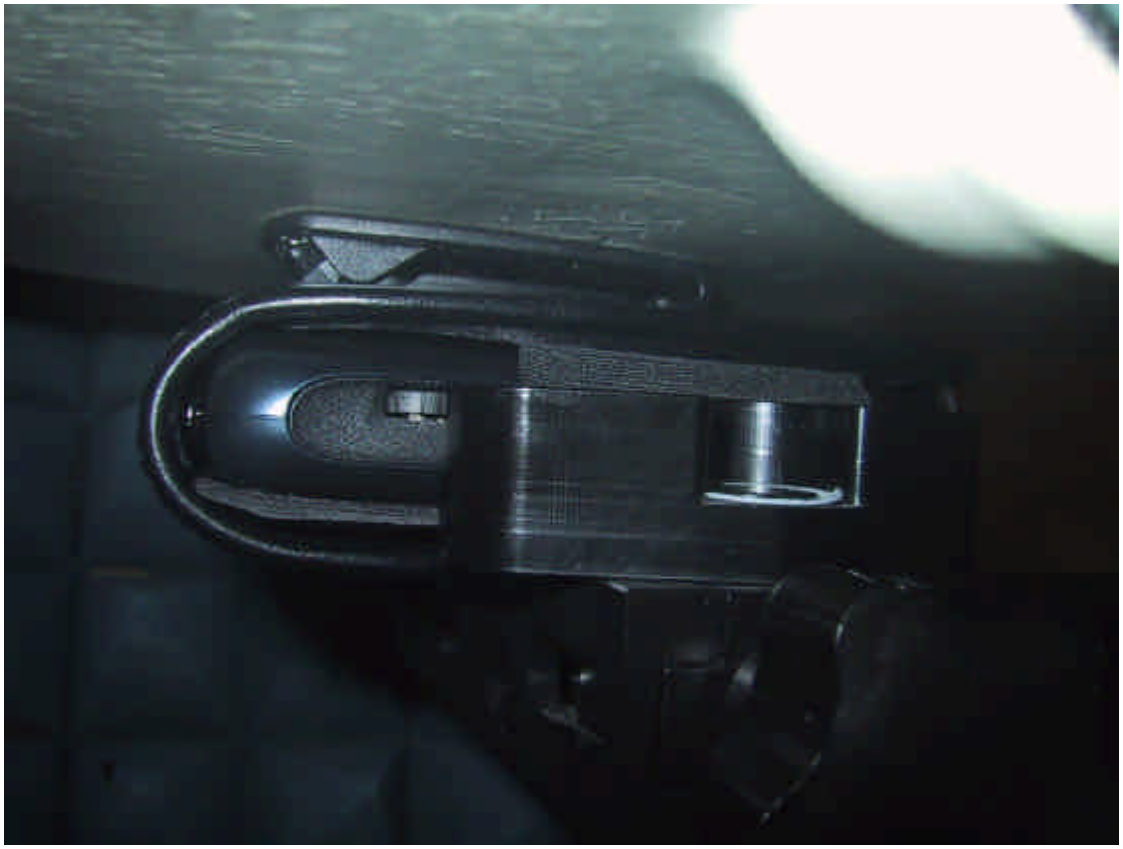


Figure E6. Body worn with Holster 3; back (RBD52UW)

Figure E7. Body worn with Holster 3; back (RBD51UW)

Figure E8. Body worn with Holster 4; back (RBD52UW)