Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 12/06/04 15:18:46

Left Tilted_PCS Ch661_20041206_2207

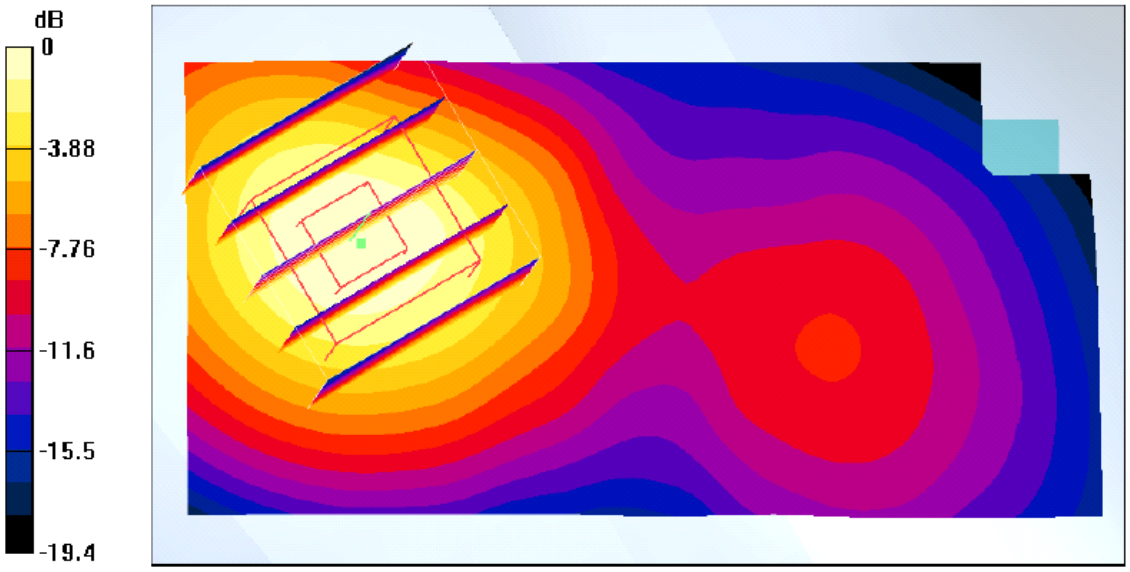
DUT: Arima 2207; Type: GSM850/PCS1900 Dual Band Mobile Phone; Serial: 004601789012342

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 38.8; ρ = 1000 kg/m^3
Ambient Temperature : 21.9 ℃; Liquid Temperature : 21.7 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5.16, 5.16, 5.16); Calibrated: 9/30/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 4/26/2004
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

Ch661/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.799 mW/g

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.5 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.687 mW/g; SAR(10 g) = 0.377 mW/g
Maximum value of SAR (measured) = 0.769 mW/g



0 dB = 0.769mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 12/06/04 12:54:52

Body_GSM850 Ch189_Keypad Down With 1.5cm Gap _20041206_2207

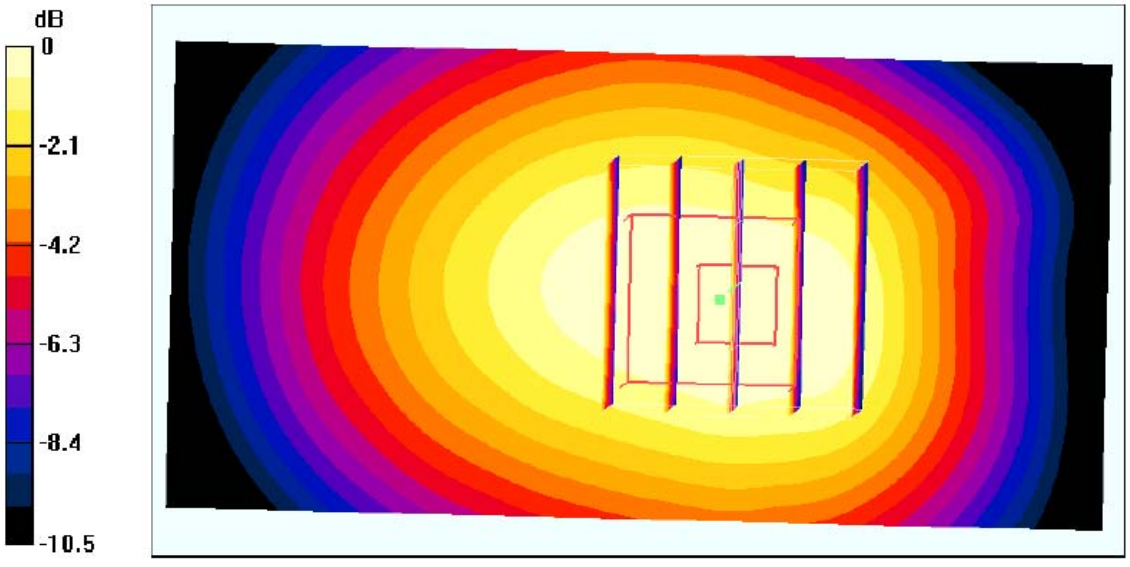
DUT: Arima 2207; Type: GSM850/PCS1900 Dual Band Mobile Phone; Serial: 004601789012342

Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: MSL_850 Medium parameters used : f = 836.4 MHz; σ = 0.937 mho/m; ε_r = 54.8; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.9 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(6.53, 6.53, 6.53); Calibrated: 9/30/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 4/26/2004
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

Ch189/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.715 mW/g

Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.1 V/m; Power Drift = -0.1 dB
Peak SAR (extrapolated) = 0.873 W/kg
SAR(1 g) = 0.656 mW/g; SAR(10 g) = 0.472 mW/g
Maximum value of SAR (measured) = 0.691 mW/g



0 dB = 0.691mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 12/06/04 17:39:17

Body_PCS Ch661_Keypad Down With 1.5cm Gap _20041206_2207

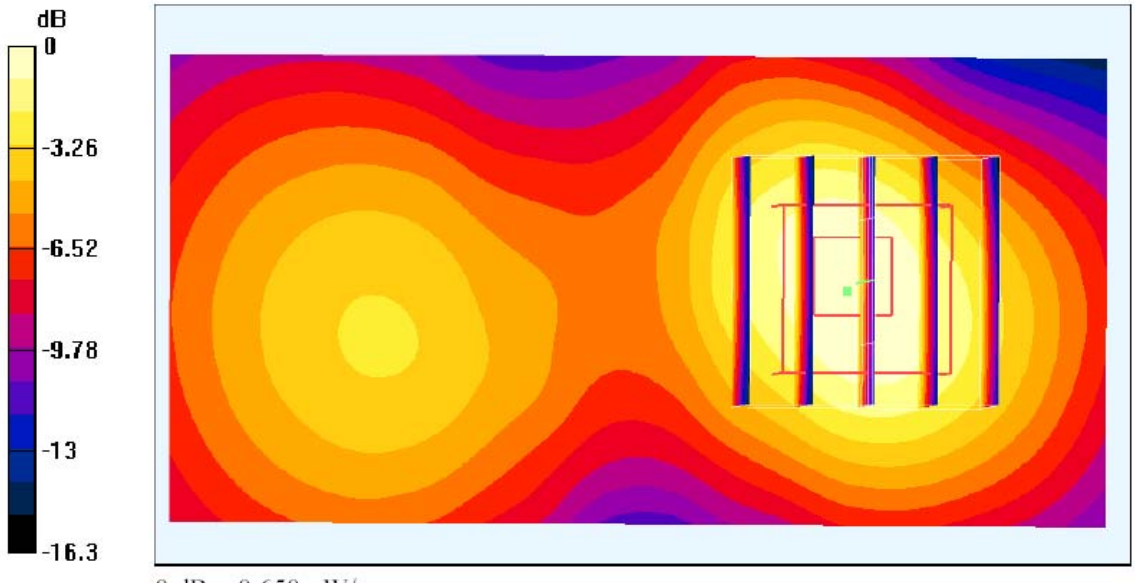
DUT: Arima 2207; Type: GSM850/PCS1900 Dual Band Mobile Phone; Serial: 004601789012342

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: MSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Ambient Temperature : 21.6 ℃; Liquid Temperature : 22.1 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.56, 4.56, 4.56); Calibrated: 9/30/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 4/26/2004
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

Ch661/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.649 mW/g

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.5 V/m; Power Drift = -0.0 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.594 mW/g; SAR(10 g) = 0.341 mW/g
Maximum value of SAR (measured) = 0.650 mW/g



0 dB = 0.650mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 12/06/04 09:52:40

Left Cheek_GSM850 Ch189_20041206_2205

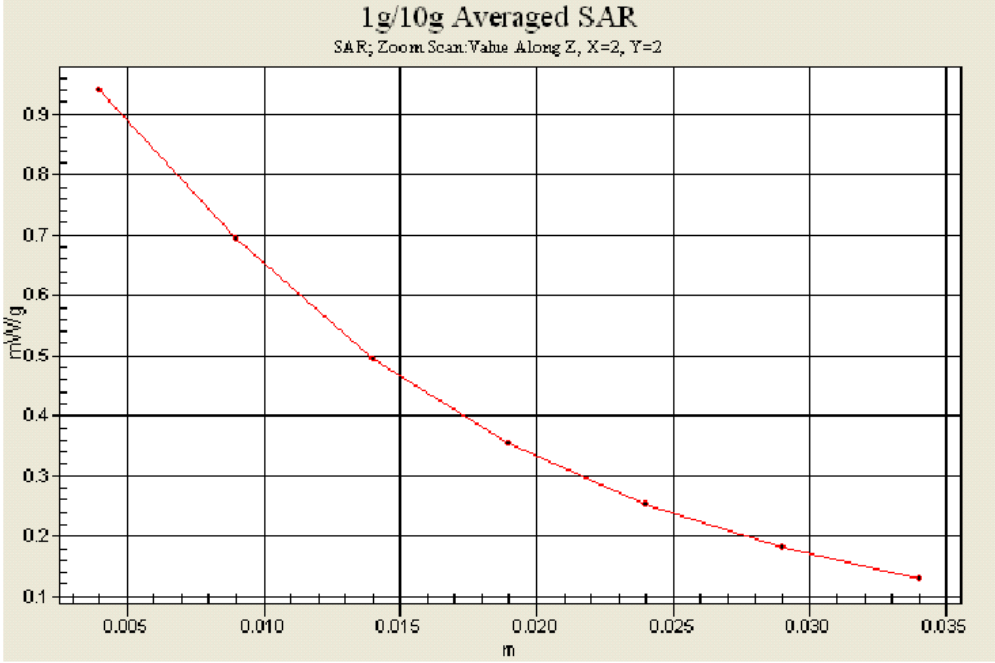
DUT: Arima 2205; Type: GSM Dual Band Mobile Phone; Serial: 004601789012342

Communication System: GSM850; Frequency: 836.4 MHz;Duty Cycle: 1:8.3
Medium: MSL_850 Medium parameters used: f = 836.4 MHz; σ = 0.937 mho/m; ε_r = 54.8; ρ = 1000 kg/m^3
Ambient Temperature：21.8 ℃; Liquid Temperature：22.1 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(6.53, 6.53, 6.53); Calibrated: 9/30/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 4/26/2004
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

Ch189/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.954 mW/g

Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26 V/m; Power Drift = 0.0 dB
Peak SAR (extrapolated) = 1.2 W/kg
SAR(1 g) = 0.892 mW/g; SAR(10 g) = 0.614 mW/g
Maximum value of SAR (measured) = 0.940 mW/g



Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 12/06/04 14:37:42

Left Tilted_PCS Ch661_20041206_2205

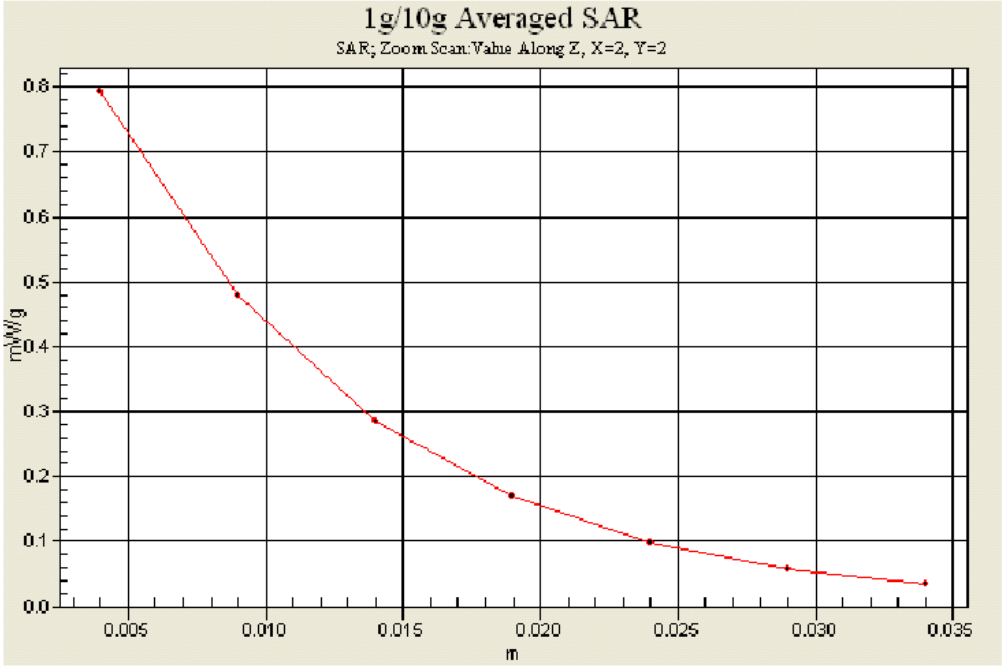
DUT: Arima 2205; Type: GSM Dual Band Mobile Phone; Serial: 004601789012342

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.43 mho/m; ε_r = 38.8; ρ = 1000 kg/m^3
Ambient Temperature：20.8 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5.16, 5.16, 5.16); Calibrated: 9/30/2004
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 4/26/2004
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.3 Build 22; Postprocessing SW: SEMCAD, V1.8 Build 127

Ch661/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.818 mW/g

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.9 V/m; Power Drift = -0.003 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.711 mW/g; SAR(10 g) = 0.389 mW/g
Maximum value of SAR (measured) = 0.792 mW/g



Appendix C – Calibration Data

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

Client Sproton Int. (Auden)

CALIBRATION CERTIFICATE

Object(s) D835V2 - SN:499

Calibration procedure(s) QA CAL-05.v2
Calibration procedure for dipole validation kits

Calibration date: February 12, 2004

Condition of the calibrated item In Tolerance (according to the specific calibration document)

This calibration statement documents traceability of M&TE used in the calibration procedures and conformity of the procedures with the ISO/IEC 17025 international standard.

All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E442	GB37480704	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8481A	US37292783	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8481A	MY41092317	18-Oct-02 (Agilent, No. 20021018)	Oct-04
RF generator R&S SML-03	100698	27-Mar-2002 (R&S, No. 20-92389)	In house check: Mar-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-03)	In house check: Oct 05

	Name	Function	Signature
Calibrated by:	Judith Mueller	Technician	
Approved by:	Katja Pokovic	Laboratory Director	

Date issued: February 18, 2004

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 international Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.

880-KP0301061-A Page 1 (1)

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info@speag.com, http://www.speag.com

DASY

Dipole Validation Kit

Type: D835V2

Serial: 499

Manufactured: July 10, 2003
Calibrated: February 12, 2004

1. Measurement Conditions

The measurements were performed in the flat section of the SAM twin phantom filled with **head simulating solution** of the following electrical parameters at 835 MHz:

Relative Dielectricity	**42.1**	± 5%
Conductivity	**0.89 mho/m**	± 5%

The DASY4 System with a dosimetric E-field probe ET3DV6 (SN:1507, Conversion factor 6.3 at 835 MHz) was used for the measurements.

The dipole was mounted on the small tripod so that the dipole feedpoint was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 15mm from dipole center to the solution surface. The included distance spacer was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 15mm was aligned with the dipole. The 7x7x7 fine cube was chosen for cube integration.
The dipole input power (forward power) was 250 mW ± 3 %. The results are normalized to 1W input power.

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:	**9.96 mW/g** ± 16.8 % (k=2)[1]
averaged over 10 cm^3 (10 g) of tissue:	**6.48 mW/g** ± 16.2 % (k=2)[1]

[1] validation uncertainty

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:	**1.382 ns**	(one direction)
Transmission factor:	**0.985**	(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 835 MHz:	Re{Z} = **51.2 Ω**
	Im {Z} = **-1.7 Ω**
Return Loss at 835 MHz	**-33.9 dB**

4. Measurement Conditions

The measurements were performed in the flat section of the SAM twin phantom filled with **body simulating solution** of the following electrical parameters at 835 MHz:

Relative Dielectricity	**55.5**	± 5%
Conductivity	**0.99 mho/m**	± 5%

The DASY4 System with a dosimetric E-field probe ET3DV6 (SN:1507, Conversion factor 6.13 at 835 MHz) was used for the measurements.

The dipole was mounted on the small tripod so that the dipole feedpoint was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 15mm from dipole center to the solution surface. The included distance spacer was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 15mm was aligned with the dipole. The 7x7x7 fine cube was chosen for cube integration.
The dipole input power (forward power) was 250 mW ± 3 %. The results are normalized to 1W input power.

5. SAR Measurement with DASY4 System

Standard SAR-measurements were performed according to the measurement conditions described in section 4. 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:	**10.3 mW/g** ± 16.8 % (k=2)[2]
averaged over 10 cm^3 (10 g) of tissue:	**6.76 mW/g** ± 16.2 % (k=2)[2]

6. Dipole Impedance and Return Loss

The dipole was positioned at the flat phantom sections according to section 4 and the distance holder was in place during impedance measurements.

Feedpoint impedance at 835 MHz:	Re{Z} = **46.7 Ω**
	Im {Z} = **-4.5 Ω**
Return Loss at 835 MHz	**-24.7 dB**

7. Handling

Do not apply excessive force to the dipole arms, because they might bend. Bending of the dipole arms stresses the soldered connections near the feedpoint leading to a damage of the dipole.

8. Design

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.

9. Power Test

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

[2] validation uncertainty

Date/Time: 02/12/04 12:33:41

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN499

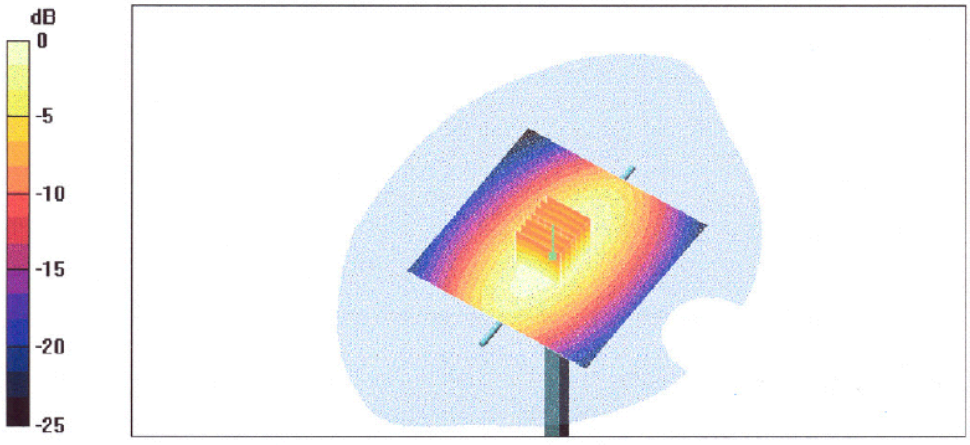
Communication System: CW-835; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.89 mho/m; ε_r = 42.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

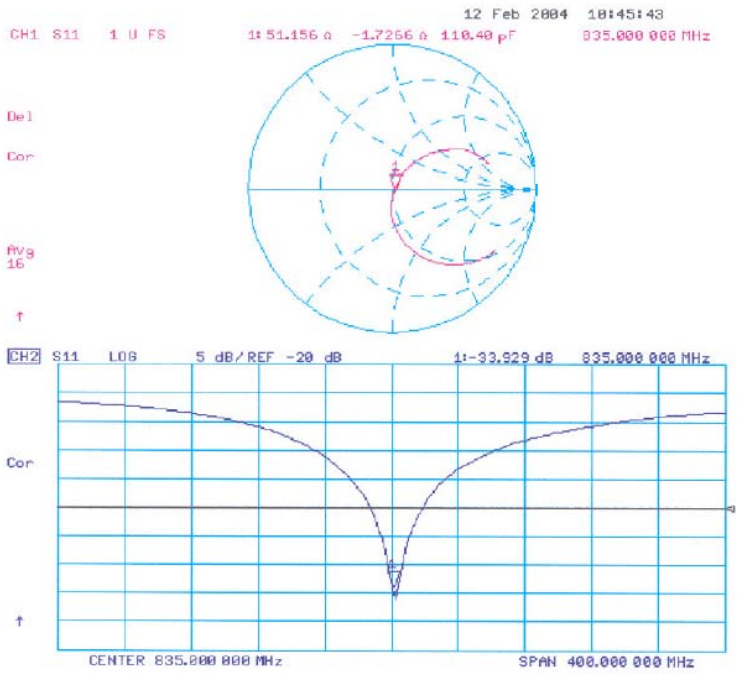
- Probe: ET3DV6 - SN1507; ConvF(6.3, 6.3, 6.3); Calibrated: 1/23/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn411; Calibrated: 11/6/2003
- Phantom: SAM with CRP - TP1006; Type: SAM 4.0; Serial: TP:1006
- Measurement SW: DASY4, V4.2 Build 25; Postprocessing SW: SEMCAD, V1.8 Build 98

Pin = 250 mW; d = 15 mm/Area Scan (81x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 56.5 V/m
Power Drift = -0.0 dB
Maximum value of SAR = 2.68 mW/g

Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 3.81 W/kg
SAR(1 g) = 2.49 mW/g; SAR(10 g) = 1.62 mW/g
Reference Value = 56.5 V/m
Power Drift = -0.0 dB
Maximum value of SAR = 2.68 mW/g



0 dB = 2.68mW/g



Date/Time: 02/10/04 15:14:12

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN499

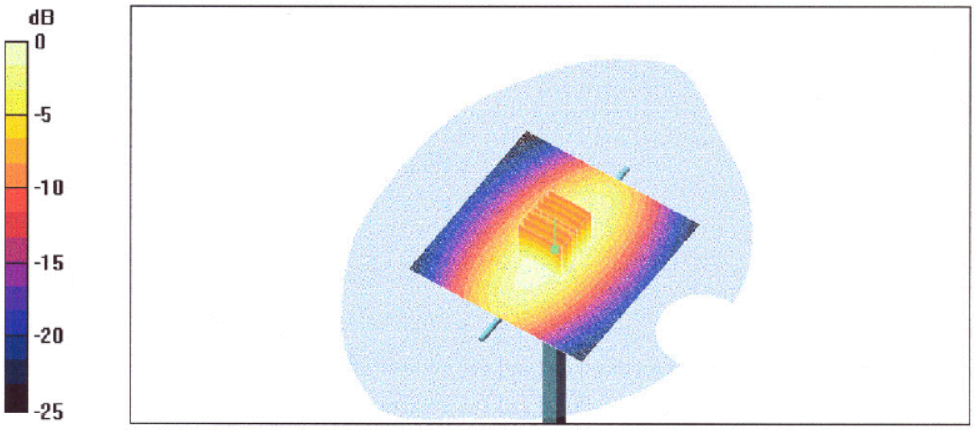
Communication System: CW-835; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: Muscle 835 MHz;
Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 55.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

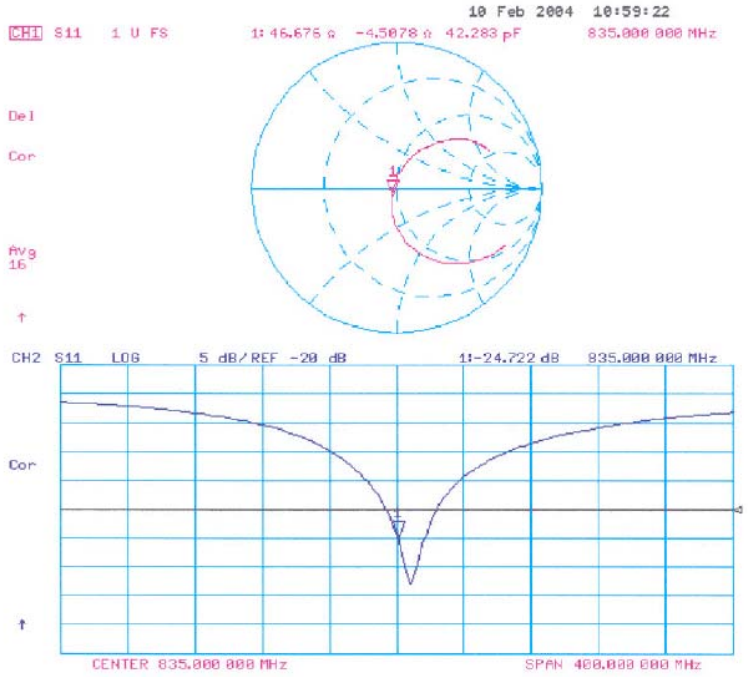
- Probe: ET3DV6 - SN1507; ConvF(6.13, 6.13, 6.13); Calibrated: 1/23/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 - SN411; Calibrated: 11/6/2003
- Phantom: SAM with CRP - TP1006; Type: SAM 4.0; Serial: TP:1006;
- Measurement SW: DASY4, V4.2 Build 25; Postprocessing SW: SEMCAD, V1.8 Build 101

Pin = 250 mW; d = 15 mm/Area Scan (81x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 54.7 V/m; Power Drift = 0.002 dB
Maximum value of SAR (interpolated) = 2.79 mW/g

Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.7 V/m; Power Drift = 0.002 dB
Maximum value of SAR (measured) = 2.79 mW/g
Peak SAR (extrapolated) = 3.82 W/kg
SAR(1 g) = 2.58 mW/g; SAR(10 g) = 1.69 mW/g



0 dB = 2.79mW/g



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

Client Sproton Int. (Auden)

CALIBRATION CERTIFICATE

Object(s)	D1900V2 - SN:5d041
Calibration procedure(s)	QA CAL-05 v2 Calibration procedure for dipole validation kits
Calibration date:	February 17, 2004
Condition of the calibrated item	In Tolerance (according to the specific calibration document)

This calibration statement documents traceability of M&TE used in the calibration procedures and conformity of the procedures with the ISO/IEC 17025 international standard.

All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E442	GB37480704	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8481A	US37292783	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8481A	MY41092317	18-Oct-02 (Agilent, No. 20021018)	Oct-04
RF generator R&S SML-03	100698	27-Mar-2002 (R&S, No. 20-92389)	In house check: Mar-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-03)	In house check: Oct 05

	Name	Function	Signature
Calibrated by:	Judith Mueller	Technician	
Approved by:	Katja Pokovic	Laboratory Director	

Date issued: February 18, 2004

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.

Schmid & Partner Engineering AG
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info@speag.com, http://www.speag.com

DASY

Dipole Validation Kit

Type: D1900V2

Serial: 5d041

Manufactured: July 4, 2003
Calibrated: February 17, 2004

1. Measurement Conditions

The measurements were performed in the flat section of the SAM twin phantom filled with **head simulating liquid** of the following electrical parameters at 1900 MHz:

Relative Dielectricity	**38.8**	± 5%
Conductivity	**1.47 mho/m**	± 5%

The DASY4 System with a dosimetric E-field probe ET3DV6 (SN:1507, Conversion factor 4.96 at 1900 MHz) was used for the measurements.

The dipole was mounted on the small tripod so that the dipole feedpoint was positioned below the center marking of the flat phantom section and the dipole was 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 spacer was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 15mm was aligned with the dipole. The 7x7x7 fine cube was chosen for cube integration.
The dipole input power (forward power) was 250mW ± 3 %. The results are normalized to 1W input power.

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:	**41.6 mW/g** ± 16.8 % (k=2)[1]
averaged over 10 cm^3 (10 g) of tissue:	**21.6 mW/g** ± 16.2 % (k=2)[1]

[1] validation uncertainty