



UNDP-1 Lenovo T400 SAR Report

80-VH688-3 Rev. A

February 8, 2008

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15. SAR System Calibration Data

The following pages show calibration certification data for the Schmid & Partner AG DASY4 SAR system.



Based on the Accreditation and Designation Ordinance dated 17 June 1996 (as of 9 December 2003) and on the advice of the Federal Accreditation Commission, the Swiss Accreditation Service (SAS) grants to

Schmid & Partner Engineering AG
Zeughausstrasse 43
CH-8004 Zürich

the accreditation as

Calibration Laboratory for Specific Electric and Magnetic RF Fields and SAR Measurements

in accordance with the Standard ISO/IEC 17025. The ranges and measurement uncertainties are listed in the Official SCS-Directory of the Accredited Calibration Laboratories.



Accreditation mark and number: SCS 108

Date of accreditation: 17 September 2004

The accreditation is valid until: 16 September 2009

CH-3003 Berne-Wabern, 17 September 2004

Swiss Accreditation Service

The Head

Hanspeter Ischi

SAS is a signatory of the multilateral agreements of the European co-operation for Accreditation (EA) for calibration, testing, inspection and certification of products, personnel, quality and environmental management systems, of the International Accreditation Forum (IAF) for quality management systems and of the International Laboratory Accreditation Cooperation (ILAC) for calibration and testing.

Bundesamt für Metrologie und Akkreditierung
 Office fédéral de métrologie et d'accréditation
 Ufficio federale di metrologia e di accreditamento
 Swiss Federal Office of Metrology and Accreditation

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 Swiss Federal Department of Justice and Police

accreditation



Schweizerische Akkreditierungsstelle
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Swiss Accreditation Service

Accreditation number SCS 108

SCS Directory

page 1 of 3

Calibration Laboratory for Specific Electric and Magnetic RF Fields and SAR Measurements

Schmid & Partner
Engineering AG
Zeughausstrasse 43
8004 Zürich
Phone 044/ 245 97 00
Fax 044/ 245 97 79

Head of laboratory : Dr. Katja Pokovic
Deputy of head of laboratory : Dr. Fin Bomholt
Responsible person for QA : Prof. Dr. Niels Kuster
First accreditation (d,m,y) : 17.09.2004
Last accreditation (d,m,y) : 17.09.2004

Measured Quantity:

Electric field
Magnetic field
Specific Absorption Rate (SAR)
Temperature
DC Voltage

Change:

Staff :
Scope extension : 01.10.2005
Address :
Edition : SCS108/D

The reported expanded 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%.

Measured Quantity Instrument	Range	Conditions of measurements	Best Measurement Capability BMC at $(22 \pm 3) ^\circ\text{C}$	Remarks
Electric field Calibration of E-field probes	0.8 V/m ... 800 V/m	10 MHz ... 3 GHz	5,1 %	e.g. ER3DV6x, EF3DVx, EU2DVx, EE3DVx
Magnetic field Calibration of H-field probes	2 mA/m ... 2 A/m	10 MHz ... 3 GHz	5,1 %	e.g. H2DVx, H3DVx
Specific absorption rate (SAR) Calibration of dosimetric E-field probes	E* field (typical ¹) 0,5 V/m ... 500 V/m	300 MHz ... 450 MHz	6,7 % (13,3 % for SAR)	e.g. ET3DVx, ES3DVx, EX3DVx, ET1DVx, EU2DVx Temperature transfer calibration *) As example, the indicated range corresponds to 0,2 mW/kg - 200 W/kg for head tissue simulating liquid and $f = 450$ MHz



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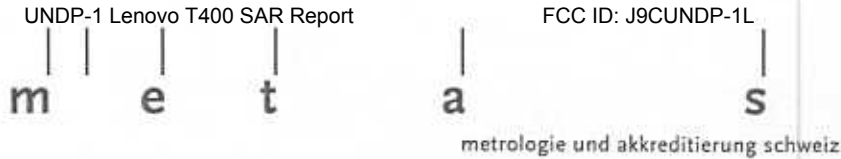
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page 2 of 3

Calibration Laboratory for Specific Electric and Magnetic RF Fields and SAR Measurements

The reported expanded 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%.

Measured Quantity Instrument	Range	Conditions of measurements	Best Measurement Capability BMC at $(22 \pm 3) ^\circ\text{C}$	Remarks
Specific absorption rate (SAR) Calibration of dosimetric E-field probes	E* field (typical ¹) 0,45 V/m ... 450 V/m	800 MHz ... 2 GHz	5,5% (11,0 % for SAR)	e.g. ET3DVx, ES3DVx, EX3DVx, ET1DVx, EU2DVx Waveguide analytical calibration *) As example, the indicated range corresponds to 0,2 mW/kg - 200 W/kg for head tissue simulating liquid and $f = 1800$ MHz
	E* field (typical ¹) 0,4 V/m ... 400 V/m	2,45 GHz	5,9 % (11,8 % for SAR)	Waveguide analytical calibration *) As example, the indicated range corresponds to 0,2 mW/kg - 200 W/kg for head tissue simulating liquid and $f = 2450$ MHz
Specific absorption rate (SAR)	E* field (typical ¹) 0,4 V/m ... 450 V/m	3 GHz ... 6 GHz	6,5 % (13,1 % for SAR)	e.g. EX3DVx, ET1DVx Waveguide analytical calibration *) As example, the indicated range corresponds to 0,2 mW/kg - 200 W/kg for head tissue simulating liquid and $f = 5200$ MHz
Calibration of temperature SAR probes	0 °C ... +60 °C	Tissue simulating Liquids	0,15 K (5 % temperature gradient for SAR)	As example, the temperature gradient of T1Vx probe can be determined to 5 %, which is also contribution to SAR accuracy. (Noise is dominating the lower SAR threshold to typically 0,2 W/kg)



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page 3 of 3

Calibration Laboratory for Specific Electric and Magnetic RF Fields and SAR Measurements

The reported expanded 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%.

Measured Quantity Instrument	Range	Conditions of measurements	Best Measurement Capability BMC at $(22 \pm 3) ^\circ\text{C}$	Remarks
Calibration of test system validation dipoles	SAR* 1 g and 10 g per 1 W input power	300 MHz ... 450 MHz 835 MHz ... 3 GHz	18,1 % for SAR 1 g 17,6 % for SAR 10 g 17,0 % for SAR 1 g 16,5 % for SAR 10 g	e.g. D835V2 - D3000V2 according to IEEE 1528-2003, for 1 g and 10 g SAR *) SAR given (as example) for head tissue simulating liquid
Calibration of test system validation dipoles	SAR* 1 g and 10 g per 1 W input power	3 GHz ... 6 GHz	19,9 % for SAR 1 g 19,5 % for SAR 10 g	e.g. D3500V2 – D5GHzV2 according to IEC 62209-2, for 1 g and 10 g SAR *) SAR given (as example) for head tissue simulating liquid
Calibration of dipoles in air	E* field per 0.1 W input power 30 V/m ... 300 V/m H* field per 0.1 W input power 0.07 A/m ... 0.7 A/m	800 MHz 3000 MHz	12,8 % for E field 8,2 % for H field	e.g. CD835V3 – CD2450V3 according to ANSI PC63.19- 2001, for E field and H field
DC Voltage Calibration of readout units for field and SAR probes	2 mV 200 mV		0,65 % 0,06 %	e.g. DAE3Vx, DAE4Vx, DAEasyVx

¹ Slightly depending on the frequency and probe type

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **Qualcomm USA**

Certificate No: **DAE3-566_Apr07**

CALIBRATION CERTIFICATE

Object **DAE3 - SD 000 D03 AA - SN: 566**

Calibration procedure(s) **QA CAL-06.v12
Calibration procedure for the data acquisition electronics (DAE)**

Calibration date: **April 11, 2007**

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
Fluke Process Calibrator Type 702	SN: 6295803	13-Oct-06 (Elcal AG, No: 5492)	Oct-07
Keithley Multimeter Type 2001	SN: 0810278	03-Oct-06 (Elcal AG, No: 5478)	Oct-07
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Calibrator Box V1.1	SE UMS 006 AB 1002	15-Jun-06 (SPEAG, in house check)	In house check Jun-07

	Name	Function	Signature
Calibrated by:	Eric Hainfeld	Technician	
Approved by:	Fin Bomholt	R&D Director	

Issued: April 11, 2007

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Glossary

DAE data acquisition electronics
Connector angle information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement*: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle*: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters contain technical information as a result from the performance test and require no uncertainty.
- *DC Voltage Measurement Linearity*: Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
- *Common mode sensitivity*: Influence of a positive or negative common mode voltage on the differential measurement.
- *Channel separation*: Influence of a voltage on the neighbor channels not subject to an input voltage.
- *AD Converter Values with inputs shorted*: Values on the internal AD converter corresponding to zero input voltage
- *Input Offset Measurement*: Output voltage and statistical results over a large number of zero voltage measurements.
- *Input Offset Current*: Typical value for information; Maximum channel input offset current, not considering the input resistance.
- *Input resistance*: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
- *Low Battery Alarm Voltage*: Typical value for information. Below this voltage, a battery alarm signal is generated.
- *Power consumption*: Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 μ V , full range = -100...+300 mV

Low Range: 1LSB = 61nV , full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	405.001 \pm 0.1% (k=2)	404.298 \pm 0.1% (k=2)	405.138 \pm 0.1% (k=2)
Low Range	3.96874 \pm 0.7% (k=2)	3.95260 \pm 0.7% (k=2)	3.93920 \pm 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	95 $^{\circ}$ \pm 1 $^{\circ}$
---	----------------------------------

1. DC Voltage Linearity

High Range	Input (μV)	Reading (μV)	Error (%)
Channel X + Input	200000	199999.5	0.00
Channel X + Input	20000	20004.93	0.02
Channel X - Input	20000	-19999.82	0.00
Channel Y + Input	200000	199999.6	0.00
Channel Y + Input	20000	20002.57	0.01
Channel Y - Input	20000	-19999.76	0.00
Channel Z + Input	200000	200000	0.00
Channel Z + Input	20000	20004.35	0.02
Channel Z - Input	20000	-20003.51	0.02

Low Range	Input (μV)	Reading (μV)	Error (%)
Channel X + Input	2000	1999.9	0.00
Channel X + Input	200	200.09	0.05
Channel X - Input	200	-200.51	0.25
Channel Y + Input	2000	2000.1	0.00
Channel Y + Input	200	199.09	-0.45
Channel Y - Input	200	-200.77	0.39
Channel Z + Input	2000	2000.1	0.00
Channel Z + Input	200	199.38	-0.31
Channel Z - Input	200	-201.10	0.55

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	11.33	11.55
	- 200	-11.41	-11.26
Channel Y	200	8.96	8.25
	- 200	-9.72	-9.64
Channel Z	200	-3.90	-4.48
	- 200	2.82	3.01

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	1.77	-0.53
Channel Y	200	1.90	-	2.01
Channel Z	200	-3.37	0.27	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16246	14392
Channel Y	15698	16248
Channel Z	16123	15281

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input 10M Ω

	Average (μ V)	min. Offset (μ V)	max. Offset (μ V)	Std. Deviation (μ V)
Channel X	-0.51	-1.87	0.62	0.28
Channel Y	-1.44	-2.46	0.24	0.38
Channel Z	-0.70	-1.42	0.03	0.26

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance

	Zeroing (MOhm)	Measuring (MOhm)
Channel X	0.2000	201.1
Channel Y	0.2000	202.1
Channel Z	0.2001	203.2

8. Low Battery Alarm Voltage (verified during pre test)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (verified during pre test)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.0	+6	+14
Supply (- Vcc)	-0.01	-8	-9

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Accreditation No.: **SCS 108**

Client **Qualcomm USA**

Certificate No: **D835V2-466_Nov07**

CALIBRATION CERTIFICATE

Object **D835V2 - SN: 466**

Calibration procedure(s) **QA CAL-05.v7
Calibration procedure for dipole validation kits**

Calibration date: **November 12, 2007**

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-442A	GB37480704	04-Oct-07 (METAS, No. 217-00736)	Oct-08
Power sensor HP 8481A	US37292783	04-Oct-07 (METAS, No. 217-00736)	Oct-08
Reference 20 dB Attenuator	SN: 5086 (20g)	07-Aug-07 (METAS, No 217-00718)	Aug-08
Reference 10 dB Attenuator	SN: 5047.2 (10r)	07-Aug-07 (METAS, No 217-00718)	Aug-08
Reference Probe ET3DV6 (HF)	SN 1507	26-Oct-07 (SPEAG, No. ET3-1507_Oct07)	Oct-08
DAE4	SN 601	30-Jan-07 (SPEAG, No. DAE4-601_Jan07)	Jan-08

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (SPEAG, in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	04-Aug-99 (SPEAG, in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (SPEAG, in house check Oct-07)	In house check: Oct-08

Calibrated by: **Mike Meill** (Name), **Laboratory Technician** (Function), *[Signature]* (Signature)

Approved by: **Katja Pokovic** (Name), **Technical Manager** (Function), *[Signature]* (Signature)

Issued: November 14, 2007

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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:

- 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
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- 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:

- 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	V4.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V4.9	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz \pm 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 \pm 0.2) °C	40.4 \pm 6 %	0.88 mho/m \pm 6 %
Head TSL temperature during test	(21.9 \pm 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	2.34 mW / g
SAR normalized	normalized to 1W	9.36 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	9.34 mW / g \pm 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.53 mW / g
SAR normalized	normalized to 1W	6.12 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	6.09 mW / g \pm 16.5 % (k=2)

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

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.9 ± 6 %	1.00 mho/m ± 6 %
Body TSL temperature during test	(22.0 ± 0.2) °C	---	---

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.37 mW / g
SAR normalized	normalized to 1W	9.48 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	9.27 mW / g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.56 mW / g
SAR normalized	normalized to 1W	6.24 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	6.15 mW / g ± 16.5 % (k=2)

² Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.1 Ω - 5.1 j Ω
Return Loss	- 25.3 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.5 Ω - 6.6 j Ω
Return Loss	- 22.8 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.384 ns
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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	August 27, 2002

DASY4 Validation Report for Head TSL

Date/Time: 07.11.2007 12:23:00

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:466

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL 900 MHz;

Medium parameters used: $f = 835$ MHz; $\sigma = 0.88$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(6.01, 6.01, 6.01); Calibrated: 26.10.2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2007
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0:

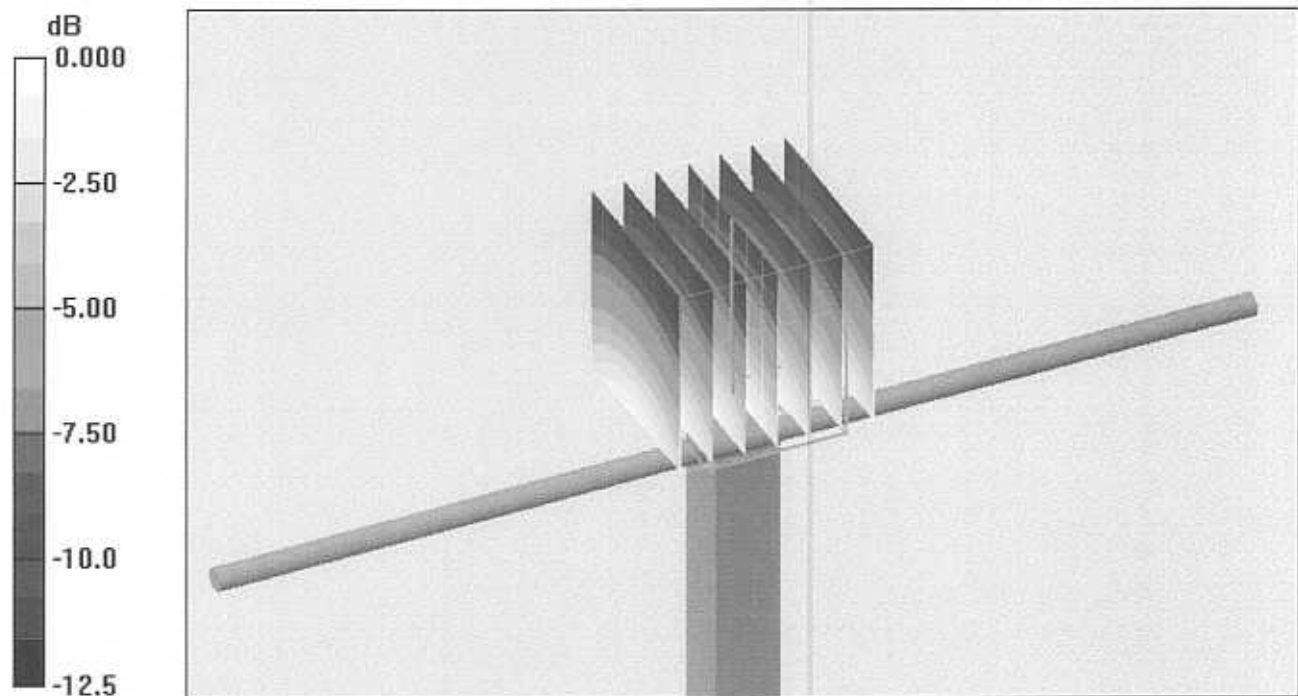
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.5 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 3.44 W/kg

SAR(1 g) = 2.34 mW/g; SAR(10 g) = 1.53 mW/g

Maximum value of SAR (measured) = 2.51 mW/g

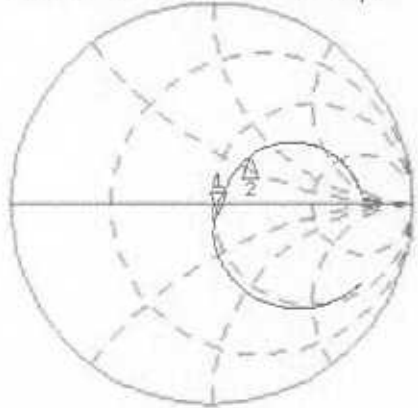


0 dB = 2.51mW/g

Impedance Measurement Plot for Head TSL

7 Nov 2007 11:48:42
CH1 S11 1 U FS 1: 52.111 Ω -5.1230 Ω 37.205 pF 935.000 000 MHz

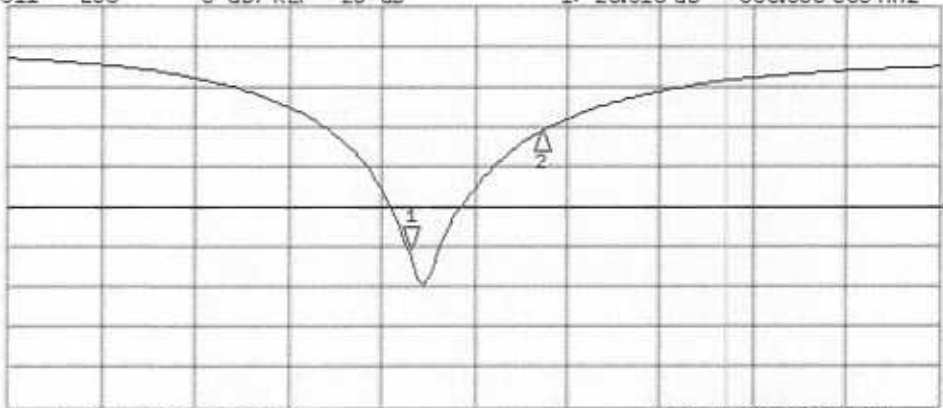
*
De1
Cor
Avg
16
↑



CH1 Markers
2: 63.166 Ω
31.707 Ω
900.000 MHz

CH2 S11 LOG 5 dB/REF -20 dB 1: -25.318 dB 835.000 000 MHz

Cor
Avg
16
↑



CH2 Markers
2: -10.688 dB
900.000 MHz

DASY4 Validation Report for Body TSL

Date/Time: 12.11.2007 12:06:39

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:466

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: MSL900;

Medium parameters used: $f = 835$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507 (HF); ConvF(5.83, 5.83, 5.83); Calibrated: 26.10.2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2007
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; ;
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 172

Pin = 250mW, d = 15mm/Zoom Scan (7x7x7)/Cube 0:

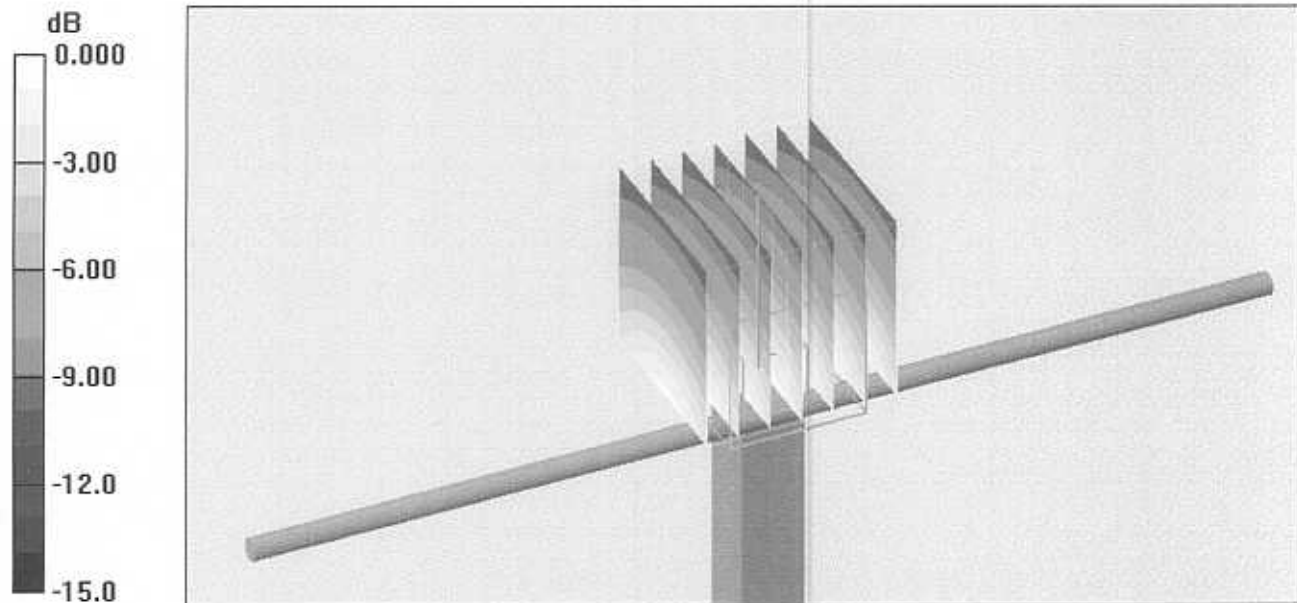
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.1 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 3.41 W/kg

SAR(1 g) = 2.37 mW/g; SAR(10 g) = 1.56 mW/g

Maximum value of SAR (measured) = 2.56 mW/g

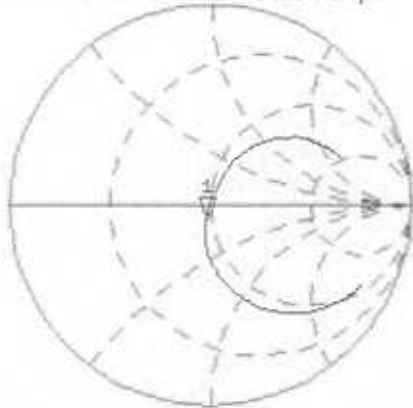


0 dB = 2.56mW/g

Impedance Measurement Plot for Body TSL

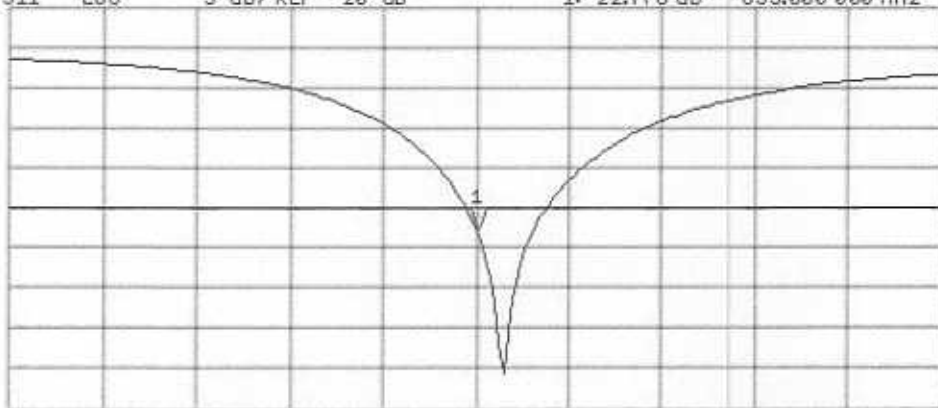
12 Nov 2007 11:54:33
[CH1] S11 1 U FS 1: 47.484 Ω -6.6328 Ω 28.737 pF 835.000 000 MHz

*
Del
CA
Avg
16
↑



CH2 S11 LOG 5 dB/REF -20 dB 1:-22.778 dB 835.000 000 MHz

CA
Avg
16
↑



CENTER 835.000 000 MHz

SPAN 400.000 000 MHz