EX3DV4- SN:3816

October 3, 2011

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3816

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	⁻ 2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm

ANNEX E: D450V3 Dipole Calibration Certificate

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





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

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CALIBRATION C	ERTIFICATE		
Object	D450V3 - SN: 10	065	
Calibration procedure(s)	QA CAL-15.v5 Calibration Proce	edure for dipole validation kits below	w 800 MHz
Calibration date:	November 09, 20	010	
the measurements and the unct	mainiles with confidence p	robability are given on the following pages and	are part or the certificate.
All calibrations have been conduc Calibration Equipment used (M&	cted in the closed laborator	ry facility: environment temperature (22 \pm 3)°C a	and humidity < 70%.
All calibrations have been conduc Calibration Equipment used (M& Primary Standards	TE critical for calibration)	ry facility: environment temperature (22 ± 3)°C a Cal Date (Calibrated by, Certificate No.)	and humidity < 70%. Scheduled Calibration
NI calibrations have been conduc Calibration Equipment used (M& Primary Standards Power meter E4419B	TE critical for calibration) ID # GB41293874	ry facility: environment temperature (22 ± 3)°C a Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030)	Scheduled Calibration Apr-11
All calibrations have been conducted (M& Calibration Equipment used (M& Calibration Equipment	TE critical for calibration) ID # GB41293874 MY41495277	ry facility: environment temperature (22 ± 3)°C a Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030)	Scheduled Calibration Apr-11 Apr-11
All calibrations have been conducted (M& Calibration Equipment used (M& Calibration Equipment	TE critical for calibration) ID # GB41293874 MY41496277 MY41498087	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030)	Scheduled Calibration Apr-11 Apr-11 Apr-11
All calibrations have been conductive Calibration Equipment used (M& Primary Standards Power meter E4419B Power sensor E4412A Reference 3 dB Attenuator	TE critical for calibration) ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c)	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11
All calibrations have been conduction. Calibration Equipment used (M& Primary Standards. Power meter E4419B. Power sensor E4412A. Reference 3 dB Attenuator. Reference 20 dB Attenuator.	TE critical for calibration) ID # GB41293874 MY41496277 MY41498087	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026) 31-Mar-10 (No. 217-01028)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11
Calibrations have been conductive Calibration Equipment used (M& Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Type-N mismatch combination	TE critical for calibration) ID # GB41293874 MY41496277 MY41498087 SN: S5054 (3c) SN: S5086 (20b)	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026) 31-Mar-10 (No. 217-01028) 31-Mar-10 (No. 217-01029)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11 Mar-11
Calibrations have been conducted (M& Calibration Equipment used (M& Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ET3DV6 (LF)	TE critical for calibration) ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: 5047.2 / 06327	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026) 31-Mar-10 (No. 217-01028)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11
Calibrations have been conducted (M& Calibration Equipment used (M& Primary Standards Power meter E4419B Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ET3DV6 (LF) DAE4 Secondary Standards	TE critical for calibration) ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: 5047.2 / 06327 SN: 1507	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026) 31-Mar-10 (No. 217-01028) 31-Mar-10 (No. 217-01029) 03-Jul-10 (No. ET3-1507_Jul10)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11 Mar-11 Jul-11
Calibrations have been conducted (M& Calibration Equipment used (M& Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ET3DV6 (LF) DAE4 Secondary Standards	TE critical for calibration) ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: 5047.2 / 06327 SN: 1507 SN: 654	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026) 31-Mar-10 (No. 217-01028) 31-Mar-10 (No. 217-01029) 03-Jul-10 (No. ET3-1507_Jul10) 04-May-10 (No. DAE4-654_May10)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11 Mar-11 Jul-11 May-11
	TE critical for calibration) ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: 5047.2 / 06327 SN: 1507 SN: 654	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026) 31-Mar-10 (No. 217-01028) 31-Mar-10 (No. 217-01029) 03-Jul-10 (No. ET3-1507_Jul10) 04-May-10 (No. DAE4-654_May10) Check Date (in house)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11 Mar-11 Jul-11 May-11 Scheduled Check
Calibrations have been conducted (M& Calibration Equipment used (M& Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ET3DV6 (LF) DAE4 Secondary Standards RF generator HP 8648C	TE critical for calibration) ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: 5047.2 / 06327 SN: 1507 SN: 654 ID # US3642U01700	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026) 31-Mar-10 (No. 217-01028) 31-Mar-10 (No. 217-01029) 03-Jul-10 (No. ET3-1507_Jul10) 04-May-10 (No. DAE4-654_May10) Check Date (in house) 04-Aug-99 (in house check Oct-10)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11 Mar-11 Jul-11 May-11 Scheduled Check In house check: Oct-11
Calibrations have been conducted (M& Calibration Equipment used (M& Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ET3DV6 (LF) DAE4 Secondary Standards RF generator HP 8648C	TE critical for calibration) ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c) SN: S5086 (20b) SN: 5047.2 / 06327 SN: 1507 SN: 654 ID # US3642U01700 US37390585 S4206	Cal Date (Calibrated by, Certificate No.) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 1-Apr-10 (No. 217-01030) 31-Mar-10 (No. 217-01026) 31-Mar-10 (No. 217-01028) 31-Mar-10 (No. 217-01028) 31-Mar-10 (No. 217-01029) 03-Jul-10 (No. ET3-1507_Jul10) 04-May-10 (No. DAE4-654_May10) Check Date (in house) 04-Aug-99 (in house check Oct-10) 18-Oct-01 (in house check Oct-10)	Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11 Mar-11 Mar-11 Jul-11 May-11 Scheduled Check In house check: Oct-11 In house check: Oct-11

Certificate No: D450V3-1065_Nov10

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Report No. RZA1203-0315SAR

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Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonnage

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S Swiss Calibration Service

Accreditation No.: SCS 108

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Glossary:

TSL

tissue simulating liquid

ConF N/A sensitivity in TSL / NORM x,y,z 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) 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
- 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 eriented
 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.

Certificate No: D450V3-1065_Nov10

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Measurement Conditions

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

DASY Version	DASY5	V5.2
Extrapolation	Advanced Extrapolation	
Phantom	ELI4 Flat Phantom	Shell thickness: 2 ± 0.2 mm
Distance Dipole Center - TSL	15 mm	with Spacer
Area Scan Resolution	dx, dy = 15 mm	
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	450 MHz ± 1 MHz	

Head TSL parameters The following parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	43.5	-0.87 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	44.2 ± 6 %	0.86 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	398 mW input power	1.87 mW / g
SAR normalized	normalized to 1W	4.70 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	4.76 mW / g ± 18.1 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	398 mW input power	1.25 mW / g
SAR normalized	normalized to 1W	3.14 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	3.17 mW / g ± 17.6 % (k=2)

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Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	56.7	0.94 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.1 ± 6 %	0.90 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	398 mW input power	1.77 mW / g
SAR normalized	normalized to 1W	4.37 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	4.51 mW / g ± 18.1 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	398 mW input power	1.18 mW / g
SAR normalized	normalized to 1W	2.94 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	3.03 mW / g ± 17.6 % (k=2)

Certificate No: D450V3-1065_Nov10

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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	59.2 Ω - 4.9 jΩ
Return Loss	- 20.5 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	56.5 Ω - 7.9 jΩ
Return Loss	- 20.4 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.354 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	July 16, 2010	

Certificate No: D450V3-1065_Nov10

DASY5 Validation Report for Head TSL

Date/Time: 09.11.2010 10:36:58

Test Laboratory: The name of your organization

DUT: Dipole 450 MHz; Type: D450V3; Serial: D450V3 - SN:1065

Communication System: CW; Frequency: 450 MHz; Duty Cycle: 1:1

Medium: HSL450

Medium parameters used: f = 450 MHz; $\sigma = 0.86 \text{ mho/m}$; $\varepsilon_r = 44.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ET3DV6 SN1507 (LF); ConvF(6.66, 6.66, 6.66); Calibrated: 03.07.2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn654; Calibrated: 04.05.2010
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1003
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Pin=398mW /d=15mm /Area Scan (41x111x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.99 mW/g

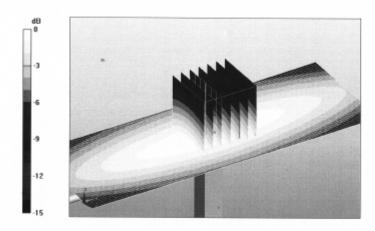
Pin=398mW /d=15mm /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.3 V/m; Power Drift = -0.00664 dB

Peak SAR (extrapolated) = 2.81 W/kg

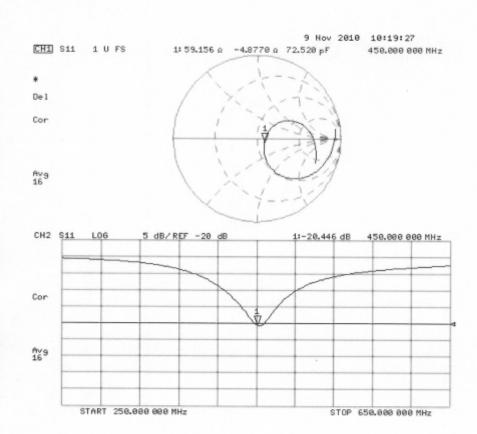
SAR(1 g) = 1.87 mW/g; SAR(10 g) = 1.25 mW/g

Maximum value of SAR (measured) = 2.01 mW/g



0 dB = 2.01 mW/g





DASY5 Validation Report for Body TSL

Date/Time: 09.11.2010 13:52:55

Test Laboratory: The name of your organization

DUT: Dipole 450 MHz; Type: D450V3; Serial: D450V3 - SN:1065

Communication System: CW; Frequency: 450 MHz; Duty Cycle: 1:1

Medium: MSL450

Medium parameters used: f = 450 MHz; $\sigma = 0.9 \text{ mho/m}$; $\varepsilon_f = 54.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ET3DV6 SN1507 (LF); ConvF(7.11, 7.11, 7.11); Calibrated: 03.07.2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn654; Calibrated: 04.05.2010
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1003
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Pin=398mW /d=15mm /Area Scan (61x201x1): Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (interpolated) = 1.89 mW/g

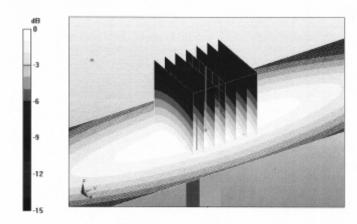
Pin=398mW /d=15mm, /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 47.4 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 2.7 W/kg

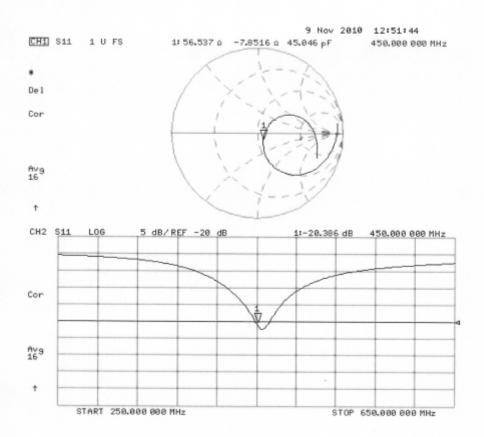
SAR(1 g) = 1.77 mW/g; SAR(10 g) = 1.18 mW/g

Maximum value of SAR (measured) = 1.89 mW/g



0 dB = 1.89 mW/g

Impedance Measurement Plot for Body TSL



ANNEX F: DAE4 Calibration Certificate

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





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Client

TA-SH (Auden)

Certificate No: DAE4-871_Nov11

Accreditation No.: SCS 108

CALIBRATION	I CERTIFICAT			
Object	DAE4 - SD 000	D04 BJ - SN: 871		
Calibration procedure(s)	QA CAL-06.v23 Calibration proc	edure for the data acqu	ilsition electronic	s (DAĖ)
Calibration date:	November 22, 2	011		
		ational standards, which realize to probability are given on the follo	· •	• •
All calibrations have been co	nducted in the closed laborat	ory facility: environment tempera	ature (22 ± 3)°C and hu	umidity < 70%.
Calibration Equipment used	(M&TE critical for calibration)			
Primary Standards	ID#	Cal Date (Certificate No.)		Scheduled Calibration
Keithley Multimeter Type 200	01 SN: 0810278	28-Sep-11 (No:11450)	5	Sep-12
Secondary Standards	ID#	Check Date (in house)		Scheduled Check
Calibrator Box V1.1	SE UMS 006 AB 100	94 08-Jun-11 (in house check)	li	n house check: Jun-12
Calibrated by:	Name Andrea Guntli	Function Technician		Signaturo Additional de la companya
Approved by:	Fin Bomholt	R&D Director	. v. i	Muur
				Issued: November 22, 2011
I his calibration certificate sh	all not be reproduced except	in full without written approval of	the laboratory.	

Certificate No: DAE4-871_Nov11

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S Swiss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS)

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Multilateral Agreement for the recognition of calibration certificates

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 as documented in the Appendix 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: Typical value for information: 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.

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DC Voltage Measurement

A/D - Converter Resolution nominal

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

Calibration Factors	х	Y	Z
High Range	404.749 ± 0.1% (k=2)	404.733 ± 0.1% (k=2)	405.174 ± 0.1% (k=2)
Low Range	3.98175 ± 0.7% (k=2)	3.93601 ± 0.7% (k=2)	3.96830 ± 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	90.0 ° ± 1 °

Appendix

1. DC Voltage Linearity

High Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	199991.9	-0.91	-0.00
Channel X	+ Input	20000.28	0.48	0.00
Channel X	- Input	-19998.51	0.59	-0.00
Channel Y	+ Input	200003.0	1.24	0.00
Channel Y	+ Input	19999.67	0.17	0.00
Channel Y	- Input	-20000.04	-0.34	0.00
Channel Z	+ Input	200010.1	-0.11	-0.00
Channel Z	+ Input	19999.33	-0.07	-0.00
Channel Z	- Input	-20001.45	-0.85	0.00

Low Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	2000.0	0.05	0.00
Channel X	+ Input	199.81	-0.09	-0.04
Channel X	- Input	-199.63	0.37	-0.19
Channel Y	+ Input	1999.9	-0.22	-0.01
Channel Y	+ Input	198.81	-1.19	-0.59
Channel Y	- Input	-201.62	-1.72	0.86
Channel Z	+ Input	2000.4	0.48	0.02
Channel Z	+ Input	199.30	-0.70	-0.35
Channel Z	- Input	-200.86	-1.06	0.53

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	14.43	13.13
	- 200 *	-12.22	-13.72
Channel Y	200	-10.07	-9.78
	- 200	9.61	8.66
Channel Z	200	-0.56	-0.83
	- 200	-0.01	0.11

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	-	3.08	0.09
Channel Y	200	3.19	-	4.59
Channel Z	200	0.90	-0.06	-

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	15920	15519
Channel Y	16179	17567
Channel Z	15791	15270

5. Input Offset Measurement

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

Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	0.03	-1.16	2.66	0.46
Channel Y	-0.63	-3.22	0.29	0.46
Channel Z	-0.87	-2.03	0.28	0.46

6. Input Offset Current

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

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

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

9. Power Consumption (Typical values for information)

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

ANNEX G: The EUT Appearances and Test Configuration



Picture 3-1: EUT

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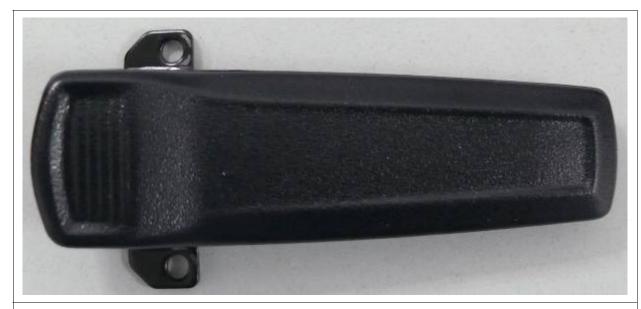
Picture 3-2: Thicker Battery

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Picture 3-3: Thinner Battery





Picture 3-4: Belt



Picture 3-5: Earphone 1



Picture 3-6: Earphone 2

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Picture 3-7: Pocket and Leather



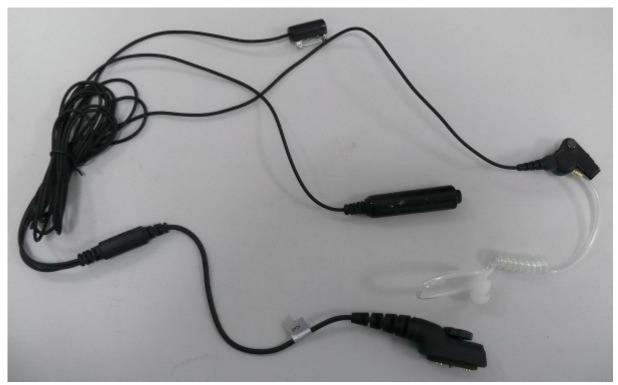
Picture 3-8: Accessory 1



Picture 3-9: Audio Accessory 2



Picture 3-10: Audio Accessory 3

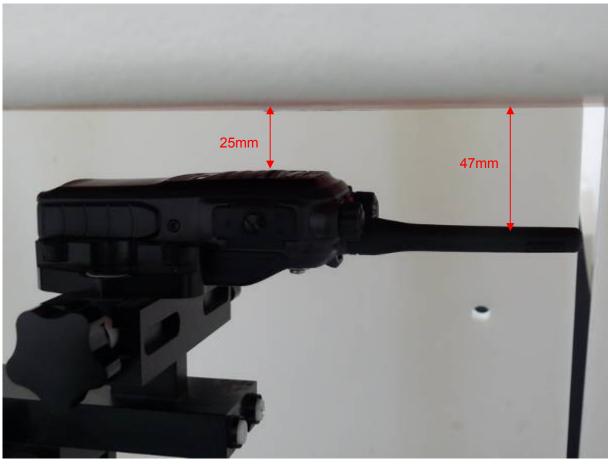


Picture 3-11: Audio Accessory 4

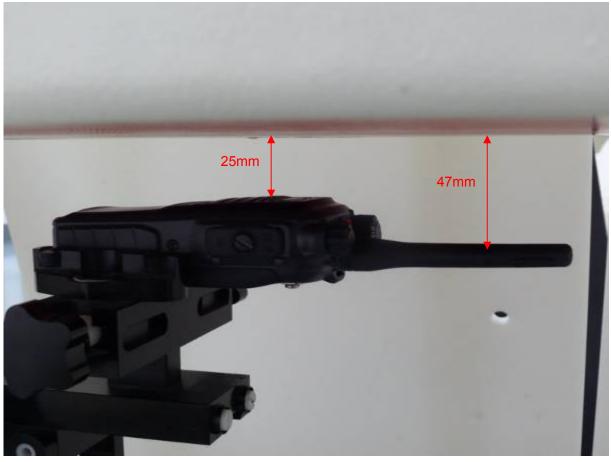


Picture 3-12: Audio Accessory 5

Picture 3: Constituents of the sample



Picture 4: Face-held with Thicker Battery, the front of the EUT towards phantom, the distance from EUT Antenna to the bottom of the Phantom is 47mm



Picture 5: Face-held with Thinner Battery, the front of the EUT towards phantom, the distance from EUT Antenna to the bottom of the Phantom is 47mm





Picture 6: Body-worn with Thinner Battery, Belt and Accessory 1, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 26mm





Picture 7: Body-worn with Thinner Battery, Belt, Accessory 1 and Earphone 1, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 26mm





Picture 8: Body-worn with Thinner Battery, Belt, Accessory 1 and Earphone 2, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 26mm





Picture 9: Body-worn with Thinner Battery, Belt and Audio Accessory 2, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 26mm





Picture 10: Body-worn with Thinner Battery, Belt and Audio Accessory 3, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 26mm

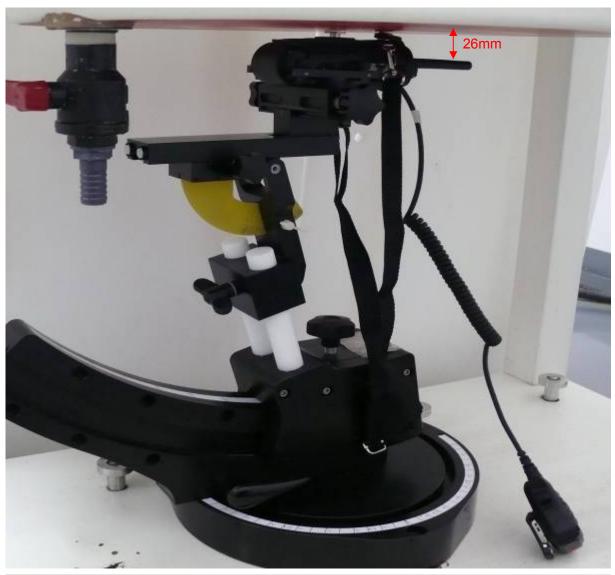




Picture 11: Body-worn with Thinner Battery, Belt and Audio Accessory 4, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 26mm



Picture 12: Body-worn with Thinner Battery, Belt and Audio Accessory 5, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 26mm





Picture 13: Body-worn with Thinner Battery, Pocket and Accessory 1, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 26mm





Picture 14: Body-worn with Thinner Battery, Pocket, Leather and Accessory 1, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 37mm





Picture 15: Body-worn with Thicker Battery, Belt and Audio Accessory 2, the front of the EUT towards ground, the distance from EUT Antenna to the bottom of the Phantom is 24mm