

### Measurement Conditions

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

<b>DASY Version</b>	DASY5	V52.10.0
<b>Phantom</b>	HAC Test Arch	
<b>Distance Dipole Top - Probe Center</b>	10, 15 mm	
<b>Scan resolution</b>	dx, dy = 5 mm	
<b>Frequency</b>	835 MHz $\pm$ 1 MHz	
<b>Input power drift</b>	< 0.05 dB	

### Maximum Field values at 835 MHz

<b>H-field 10 mm above dipole surface</b>	condition	<b>interpolated maximum</b>
Maximum measured	100 mW input power	<b>0.457 A/m <math>\pm</math> 8.2 % (k=2)</b>

<b>E-field 10 mm above dipole surface</b>	condition	<b>Interpolated maximum</b>
Maximum measured above high end	100 mW input power	168.6 V/m = 44.54 dBV/m
Maximum measured above low end	100 mW input power	165.9 V/m = 44.40 dBV/m
Averaged maximum above arm	100 mW input power	<b>167.3 V/m <math>\pm</math> 12.8 % (k=2)</b>

<b>E-field 15 mm above dipole surface</b>	condition	<b>Interpolated maximum</b>
Maximum measured above high end	100 mW input power	108.0 V/m = 40.67 dBV/m
Maximum measured above low end	100 mW input power	107.9 V/m = 40.66 dBV/m
Averaged maximum above arm	100 mW input power	<b>108.0 V/m <math>\pm</math> 12.8 % (k=2)</b>

**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters**

Frequency	Return Loss	Impedance
800 MHz	16.8 dB	41.0 $\Omega$ - 9.7 $j\Omega$
835 MHz	23.2 dB	53.2 $\Omega$ + 6.4 $j\Omega$
900 MHz	15.7 dB	52.8 $\Omega$ - 16.9 $j\Omega$
950 MHz	23.1 dB	48.9 $\Omega$ + 6.9 $j\Omega$
960 MHz	16.9 dB	58.6 $\Omega$ + 13.1 $j\Omega$

**3.2 Antenna Design and Handling**

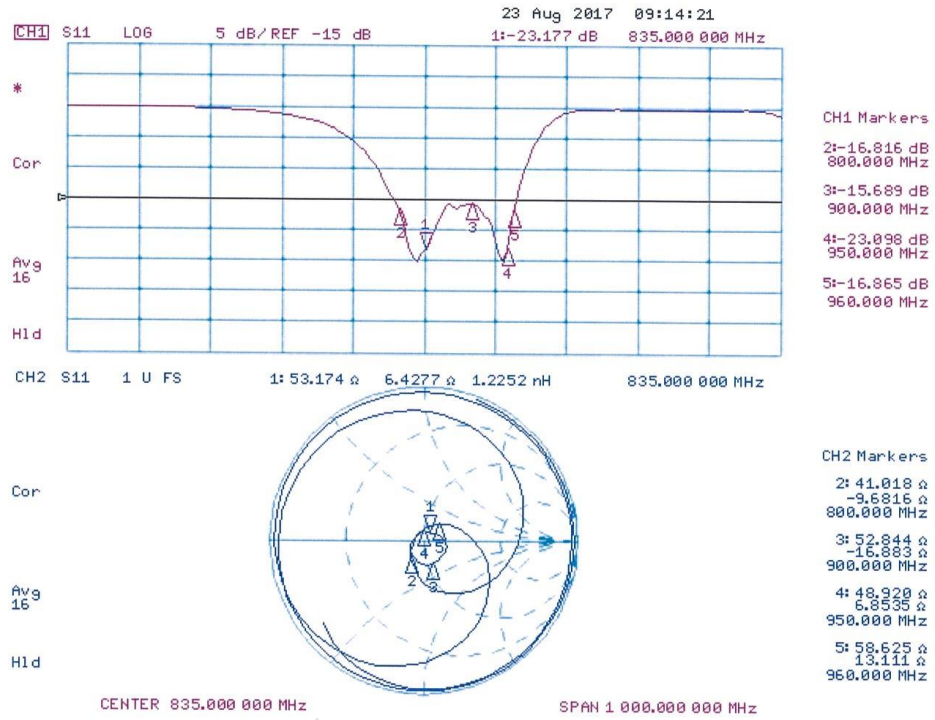
The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

### Impedance Measurement Plot



**DASY5 H-field Result**

Test Laboratory: SPEAG Lab2

Date: 22.08.2017

**DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: CD835V3 - SN: 1023**

Communication System: UID 0 - CW ; Frequency: 835 MHz  
 Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup>  
 Phantom section: RF Section  
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

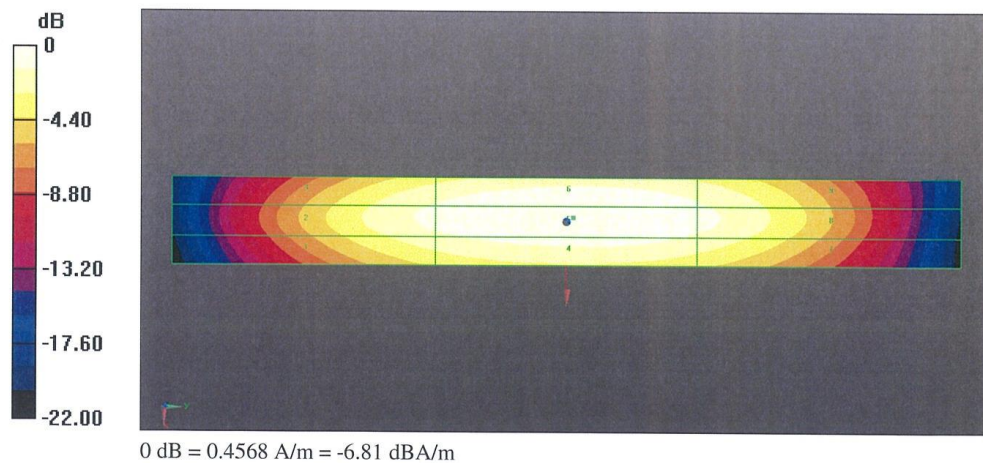
DASY52 Configuration:

- Probe: H3DV6 - SN6065; ; Calibrated: 30.12.2016
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 13.07.2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole H-Field measurement @ 835MHz/H-Scan - 835MHz d=10mm/Hearing Aid Compatibility Test (41x361x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 0.4830 A/m; Power Drift = 0.04 dB  
 PMR not calibrated. PMF = 1.000 is applied.  
 H-field emissions = 0.4568 A/m  
**Near-field category: M4 (AWF 0 dB)**

PMF scaled H-field

Grid 1 M4 <b>0.368 A/m</b>	Grid 2 M4 <b>0.405 A/m</b>	Grid 3 M4 <b>0.392 A/m</b>
Grid 4 M4 <b>0.416 A/m</b>	Grid 5 M4 <b>0.457 A/m</b>	Grid 6 M4 <b>0.446 A/m</b>
Grid 7 M4 <b>0.373 A/m</b>	Grid 8 M4 <b>0.409 A/m</b>	Grid 9 M4 <b>0.398 A/m</b>



**DASY5 E-field Result**

Date: 22.08.2017

Test Laboratory: SPEAG Lab2

**DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: CD835V3 - SN: 1023**

Communication System: UID 0 - CW ; Frequency: 835 MHz  
Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: RF Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ER3DV6 - SN2336; ConvF(1, 1, 1); Calibrated: 30.12.2016;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 13.07.2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole E-Field measurement @ 835MHz/E-Scan - 835MHz d=10mm/Hearing Aid Compatibility Test**

(41x361x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 108.5 V/m; Power Drift = -0.03 dB

Applied MIF = 0.00 dB

RF audio interference level = 44.54 dBV/m

**Emission category: M3**

MIF scaled E-field

Grid 1 M3 44.17 dBV/m	Grid 2 M3 44.4 dBV/m	Grid 3 M3 44.08 dBV/m
Grid 4 M4 38.83 dBV/m	Grid 5 M4 39.1 dBV/m	Grid 6 M4 38.86 dBV/m
Grid 7 M3 44.02 dBV/m	Grid 8 M3 44.54 dBV/m	Grid 9 M3 44.45 dBV/m



**Dipole E-Field measurement @ 835MHz/E-Scan - 835MHz d=15mm/Hearing Aid Compatibility Test**

(41x361x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 108.0 V/m; Power Drift = 0.01 dB

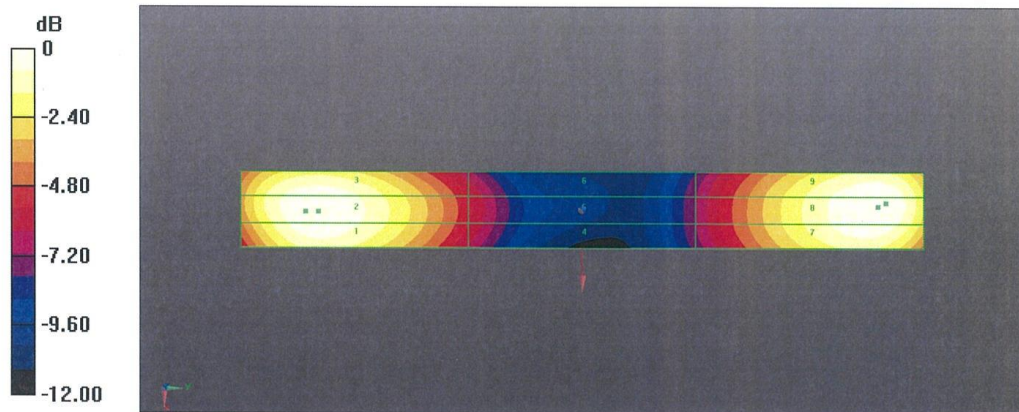
Applied MIF = 0.00 dB

RF audio interference level = 40.67 dBV/m

**Emission category: M3**

MIF scaled E-field

Grid 1 M3 40.52 dBV/m	Grid 2 M3 40.66 dBV/m	Grid 3 M3 40.47 dBV/m
Grid 4 M4 36.06 dBV/m	Grid 5 M4 36.18 dBV/m	Grid 6 M4 36.03 dBV/m
Grid 7 M3 40.48 dBV/m	Grid 8 M3 40.67 dBV/m	Grid 9 M3 40.6 dBV/m



0 dB = 168.6 V/m = 44.54 dBV/m

**Dipole 1880 MHz**

**Calibration Laboratory of  
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Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: **SCS 0108**

Client **CTTL (Auden)**

Certificate No: **CD1880V3-1018\_Aug17**

**CALIBRATION CERTIFICATE**

Object **CD1880V3 - SN: 1018**

Calibration procedure(s) **QA CAL-20.v6  
Calibration procedure for dipoles in air**

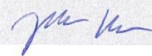

Calibration date: **August 23, 2017**

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 (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Probe ER3DV6	SN: 2336	30-Dec-16 (No. ER3-2336_Dec16)	Dec-17
Probe H3DV6	SN: 6065	30-Dec-16 (No. H3-6065_Dec16)	Dec-17
DAE4	SN: 781	13-Jul-17 (No. DAE4-781_Jul17)	Jul-18
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter Agilent 4419B	SN: GB42420191	09-Oct-09 (in house check Sep-14)	In house check: Oct-17
Power sensor HP E4412A	SN: US38485102	05-Jan-10 (in house check Sep-14)	In house check: Oct-17
Power sensor HP 8482A	SN: US37295597	09-Oct-09 (in house check Sep-14)	In house check: Oct-17
RF generator R&S SMT-06	SN: 832283/011	27-Aug-12 (in house check Oct-15)	In house check: Oct-17
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-16)	In house check: Oct-17

	Name	Function	Signature
Calibrated by:	Johannes Kurikka	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: August 23, 2017

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

#### References

- [1] ANSI-C63.19-2007  
American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.
- [2] ANSI-C63.19-2011  
American National Standard, Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

#### Methods Applied and Interpretation of Parameters:

- **Coordinate System:** y-axis is in the direction of the dipole arms. z-axis is from the basis of the antenna (mounted on the table) towards its feed point between the two dipole arms. x-axis is normal to the other axes. In coincidence with the standards [1], the measurement planes (probe sensor center) are selected to be at a distance of 10 mm (15 mm for [2]) above the top metal edge of the dipole arms.
- **Measurement Conditions:** Further details are available from the hardcopies at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- **Antenna Positioning:** The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- **Feed Point Impedance and Return Loss:** These parameters are measured using a HP 8753E Vector Network Analyzer. The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminated by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- **E-field distribution:** E field is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW forward power to the antenna feed point. In accordance with [1] and [2], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 10 mm (15 mm for [2]) (in z) above the metal top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, in the plane above the dipole surface.
- **H-field distribution:** H-field is measured with an isotropic H-field probe with 100mW forward power to the antenna feed point, in the x-y-plane. The scan area and sensor distance is equivalent to the E-field scan. The maximum of the field is available at the center (subgrid 5) above the feed point. The H-field value stated as calibration value represents the maximum of the interpolated H-field, 10mm above the dipole surface at the feed point.

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%.



### Measurement Conditions

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

<b>DASY Version</b>	DASY5	V52.10.0
<b>Phantom</b>	HAC Test Arch	
<b>Distance Dipole Top - Probe Center</b>	10, 15 mm	
<b>Scan resolution</b>	dx, dy = 5 mm	
<b>Frequency</b>	1880 MHz $\pm$ 1 MHz	
<b>Input power drift</b>	< 0.05 dB	

### Maximum Field values at 1880 MHz

<b>H-field 10 mm above dipole surface</b>	condition	<b>interpolated maximum</b>
Maximum measured	100 mW input power	<b>0.466 A/m <math>\pm</math> 8.2 % (k=2)</b>

<b>E-field 10 mm above dipole surface</b>	condition	<b>Interpolated maximum</b>
Maximum measured above high end	100 mW input power	139.3 V/m = 42.88 dBV/m
Maximum measured above low end	100 mW input power	137.4 V/m = 42.76 dBV/m
Averaged maximum above arm	100 mW input power	<b>138.3 V/m <math>\pm</math> 12.8 % (k=2)</b>

<b>E-field 15 mm above dipole surface</b>	condition	<b>Interpolated maximum</b>
Maximum measured above high end	100 mW input power	91.7 V/m = 39.24 dBV/m
Maximum measured above low end	100 mW input power	87.4 V/m = 38.83 dBV/m
Averaged maximum above arm	100 mW input power	<b>89.5 V/m <math>\pm</math> 12.8 % (k=2)</b>

**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters**

Frequency	Return Loss	Impedance
1730 MHz	28.3 dB	54.0 $\Omega$ + 0.2 j $\Omega$
1880 MHz	22.6 dB	54.2 $\Omega$ + 6.5 j $\Omega$
1900 MHz	22.4 dB	56.3 $\Omega$ + 5.1 j $\Omega$
1950 MHz	33.2 dB	52.2 $\Omega$ - 0.1 j $\Omega$
2000 MHz	19.3 dB	47.9 $\Omega$ + 10.5 j $\Omega$

**3.2 Antenna Design and Handling**

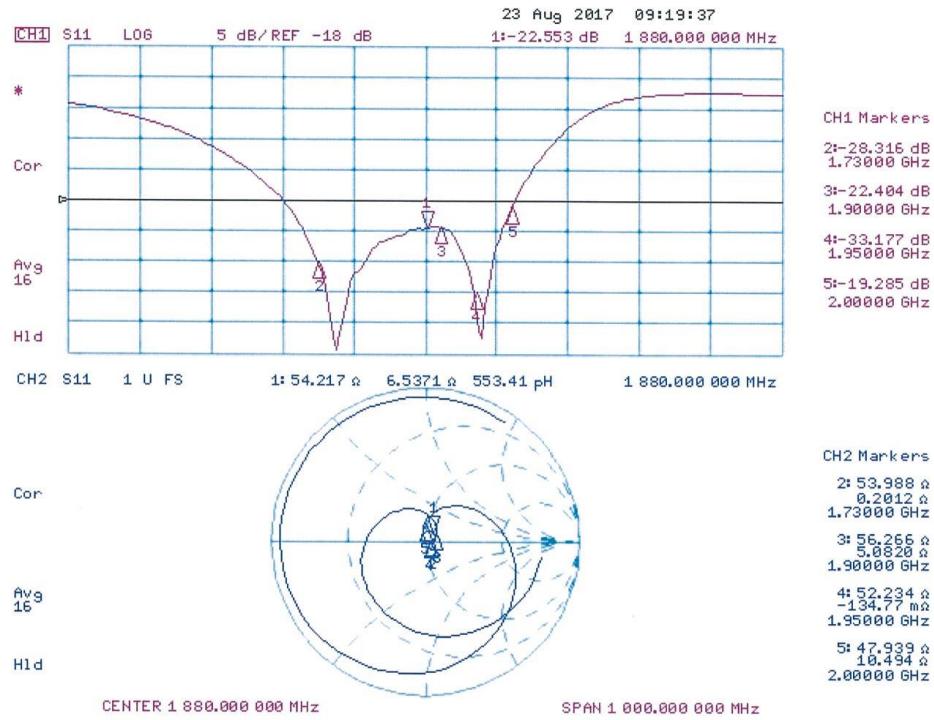
The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

### Impedance Measurement Plot



**DASY5 H-field Result**

Date: 22.08.2017

Test Laboratory: SPEAG Lab2

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: CD1880V3 - SN: 1018**

Communication System: UID 0 - CW ; Frequency: 1880 MHz  
 Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup>  
 Phantom section: RF Section  
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

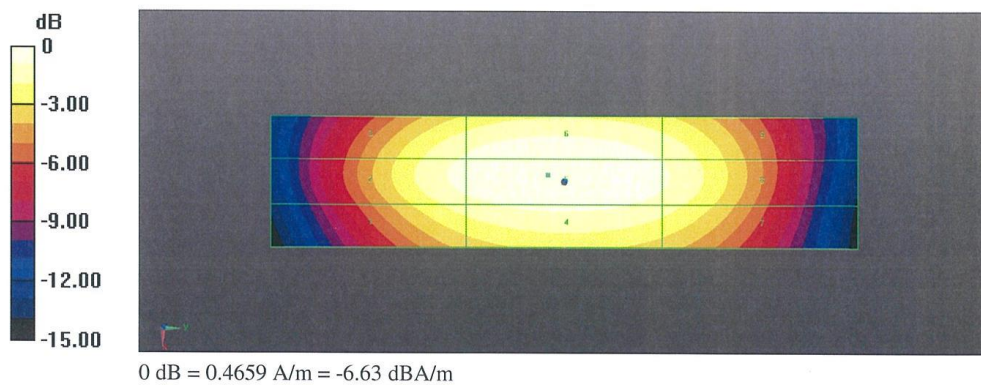
DASY52 Configuration:

- Probe: H3DV6 - SN6065; ; Calibrated: 30.12.2016
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 13.07.2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole H-Field measurement @ 1880MHz/H-Scan - 1880MHz d=10mm/Hearing Aid Compatibility Test (41x181x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm  
 Device Reference Point: 0, 0, -6.3 mm  
 Reference Value = 0.4890 A/m; Power Drift = 0.02 dB  
 PMR not calibrated. PMF = 1.000 is applied.  
 H-field emissions = 0.4659 A/m  
**Near-field category: M2 (AWF 0 dB)**

PMF scaled H-field

Grid 1 M2 <b>0.394 A/m</b>	Grid 2 M2 <b>0.435 A/m</b>	Grid 3 M2 <b>0.424 A/m</b>
Grid 4 M2 <b>0.428 A/m</b>	Grid 5 M2 <b>0.466 A/m</b>	Grid 6 M2 <b>0.456 A/m</b>
Grid 7 M2 <b>0.392 A/m</b>	Grid 8 M2 <b>0.424 A/m</b>	Grid 9 M2 <b>0.413 A/m</b>





**DASY5 E-field Result**

Date: 22.08.2017

Test Laboratory: SPEAG Lab2

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: CD1880V3 - SN: 1018**

Communication System: UID 0 - CW ; Frequency: 1880 MHz  
 Medium parameters used:  $\sigma = 0$  S/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: RF Section  
 Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ER3DV6 - SN2336; ConvF(1, 1, 1); Calibrated: 30.12.2016;
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 13.07.2017
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

**Dipole E-Field measurement @ 1880MHz/E-Scan - 1880MHz d=10mm/Hearing Aid Compatibility Test**

(41x181x1); Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 155.3 V/m; Power Drift = -0.01 dB

Applied MIF = 0.00 dB

RF audio interference level = 42.88 dBV/m

**Emission category: M1**

MIF scaled E-field

Grid 1 M1 42.43 dBV/m	Grid 2 M1 42.88 dBV/m	Grid 3 M1 42.74 dBV/m
Grid 4 M2 39.11 dBV/m	Grid 5 M2 39.45 dBV/m	Grid 6 M2 39.19 dBV/m
Grid 7 M1 42.22 dBV/m	Grid 8 M1 42.76 dBV/m	Grid 9 M1 42.65 dBV/m

**Dipole E-Field measurement @ 1880MHz/E-Scan - 1880MHz d=15mm/Hearing Aid Compatibility Test**

(41x181x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 155.1 V/m; Power Drift = 0.01 dB

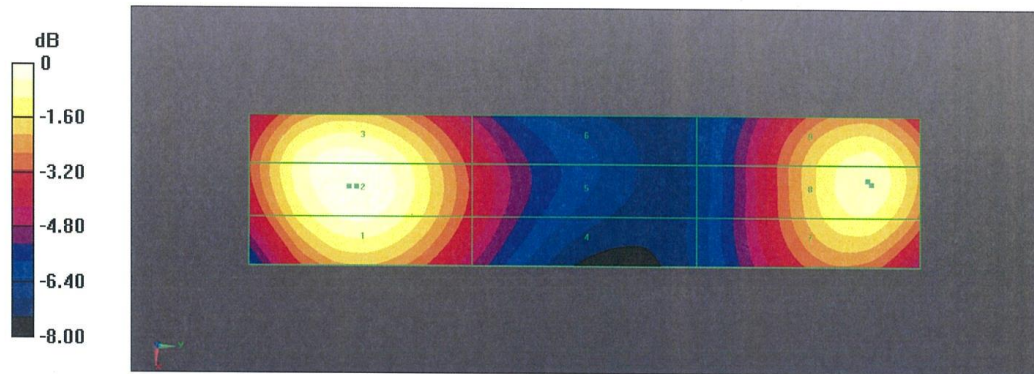
Applied MIF = 0.00 dB

RF audio interference level = 39.24 dBV/m

**Emission category: M2**

MIF scaled E-field

Grid 1 M2 38.99 dBV/m	Grid 2 M2 39.24 dBV/m	Grid 3 M2 39.15 dBV/m
Grid 4 M2 37.01 dBV/m	Grid 5 M2 37.16 dBV/m	Grid 6 M2 37.06 dBV/m
Grid 7 M2 38.56 dBV/m	Grid 8 M2 38.83 dBV/m	Grid 9 M2 38.77 dBV/m



0 dB = 139.3 V/m = 42.88 dBV/m

## ANNEX F DAE CALIBRATION CERTIFICATE

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Accreditation No.: **SCS 0108**

Client **CTTL (Auden)**

Certificate No: **DAE4-777\_Sep17**

### CALIBRATION CERTIFICATE

Object **DAE4 - SD 000 D04 BM - SN: 777**

Calibration procedure(s) **QA CAL-06.v29  
Calibration procedure for the data acquisition electronics (DAE)**

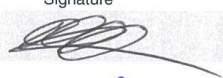

Calibration date: **September 08, 2017**

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 (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	31-Aug-17 (No:21092)	Aug-18
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Auto DAE Calibration Unit	SE UWS 053 AA 1001	05-Jan-17 (in house check)	In house check: Jan-18
Calibrator Box V2.1	SE UMS 006 AA 1002	05-Jan-17 (in house check)	In house check: Jan-18

	Name	Function	Signature
Calibrated by:	Dominique Steffen	Laboratory Technician	
Approved by:	Sven Kühn	Deputy Manager	

Issued: September 8, 2017

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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 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.





**DC Voltage Measurement**

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 $\mu$ 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	405.400 $\pm$ 0.02% (k=2)	405.869 $\pm$ 0.02% (k=2)	405.579 $\pm$ 0.02% (k=2)
Low Range	3.96640 $\pm$ 1.50% (k=2)	3.96264 $\pm$ 1.50% (k=2)	4.00499 $\pm$ 1.50% (k=2)

**Connector Angle**

Connector Angle to be used in DASY system	97.0 $^{\circ}$ $\pm$ 1 $^{\circ}$
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