



## Annex C

Appendix No.: 1-2295-21-02-07\_TR1-A301-R04

### Testing Laboratory

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**Accredited Test Laboratory:**

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2018-03) by the Deutsche Akkreditierungsstelle GmbH (DAkkS)

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate starting with the registration number: D-PL-12047-01-00.

### Appendix with Calibration data



Accredited by the Swiss Accreditation Service (SAS)  
**The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates**

Accreditation No.: **SCS 0108**

Client

**CTC Advanced**  
Saarbrücken, Germany

Certificate No.

**MAGPy-8H3D-3079**

## CALIBRATION CERTIFICATE

Object

**MAGPy-8H3D+E3D SN:3079**  
**MAGPy-DAS SN:1023**

Calibration procedure(s)

**QA CAL-46.v1**  
**Calibration Procedure for MAGPy-8H3D+E3D**  
**Near-field Electric and Magnetic Field Sensor System**

Calibration date

**October 24, 2023**

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  $(22 \pm 3)^{\circ}\text{C}$  and humidity  $< 70\%$ .

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID                 | Cal Date (Certificate No.)   | Scheduled Calibration |
|----------------------------|--------------------|------------------------------|-----------------------|
| Oscilloscope               | SN: 110918         | 22-Oct-22 (No. 1335.8794K04) | Oct-23                |
| Reference 20 dB Attenuator | SN: CC2552 (20x)   | 04-Apr-23 (No. 217-03527)    | Apr-24                |
| Type-N mismatch            | SN: 310982 / 06327 | 04-Apr-23 (No. 217-03528)    | Apr-24                |

| Secondary Standards     | ID             | Check Date (in house)  | Scheduled Check        |
|-------------------------|----------------|------------------------|------------------------|
| Network Analyzer E5061B | SN: MY49810822 | In house check: Nov-22 | In house check: Nov-23 |
| TEM Cell                | SN: S6029i     | In house check: Nov-22 | N.A                    |
| Plate Capacitor         | SN: 6028i      | In house check: Nov-22 | In house check: Nov-23 |
| Resonator (160kHz)      | SN: 6030i      | In house check: Nov-22 | In house check: Nov-23 |

|               | Name               | Function            | Signature |
|---------------|--------------------|---------------------|-----------|
| Calibrated by | Aidonia Georgiadou | Laboratory Engineer |           |
| Approved by   | Sven Kühn          | Technical Manager   |           |

Issued: October 24, 2023

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



Accredited by the Swiss Accreditation Service (SAS)  
**The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates**

**Accreditation No.: SCS 0108**

## Glossary

MAGPy-8H3D-E3D    Magnetic Amplitude and Gradient Probe – Eight H-field Sensors, Single E-field sensor  
MAGPy-DAS        Magnetic Amplitude and Gradient Data Acquisition System

## Calibration is Performed According to the Following Standards:

- a) IEEE Std 1309-2013, "IEEE Standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz", November 2013

## Methods Applied and Interpretation of Parameters

- Calibration has been performed after the adjustment of the device.
- *Linearity*: Calibration of the linearity of the field reading over the specified dynamic range at 161.75 kHz. Influence of offset voltage is included in this measurement.
- *Frequency response*: Calibration of the field reading over the specified frequency range from 3.0 kHz to 10.0 MHz.
- Receiving Pattern: Assessed for H-field polarizations  $\vartheta$ , and  $\phi = 0^\circ \dots 360^\circ$ ;  $\vartheta = 90^\circ$ , and  $\phi = 0^\circ \dots 360^\circ$ ; for the XYZ sensors (in TEM-Cell at 4 kHz, 40 kHz, 400 kHz and 4 MHz).
- Receiving Pattern: Assessed for E-field polarizations  $\vartheta$ , and  $\phi = 0^\circ \dots 360^\circ$ ;  $\vartheta = 90^\circ$ , and  $\phi = 0^\circ \dots 360^\circ$ ; for the XYZ sensor (in parallel plate capacitor at 4 kHz, 40 kHz, 400 kHz and 4 MHz).

## Calibration Uncertainty

The calibration uncertainty is 0.7 dB for the H-field readings and 1.06 dB for the E-field readings. The calibration uncertainty is specified over the frequency range from 3.0 kHz to 10.0 MHz and a dynamic range from 0.1 A/m to 3200 A/m and from 0.08 V/m to 2000 V/m respectively.

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

|                        |                                |                  |
|------------------------|--------------------------------|------------------|
| Unit Type              | MAGPy-8H3D+E3D (SP MGY 303 AA) | 3079             |
|                        | MAGPy-DAS (SE UMS 303 AC)      | 1023             |
|                        | MAGPy FPGA Board               | WP000009         |
| Adjustment Date        | Last MAGPy Adjustment          | October 24, 2023 |
| Firmware SW Version    | MAGPy Firmware                 | Ver. 1.00        |
| Backend SW Version     | MAGPy Backend                  | Ver. 1.0.2       |
| Calibration SW Version | MAGACAP                        | Ver. 1.0         |

## Dynamic Range

### Dynamic Range, H-field, Channel 0

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.380 | 0.370 | 0.420                 | 0.400 | 0.390 | 0.42            | 0.45  | 0.46  | ±1.00          |
| 0.540                 | 0.520 | 0.510 | 0.560                 | 0.540 | 0.520 | 0.32            | 0.33  | 0.17  | ±1.00          |
| 0.740                 | 0.710 | 0.690 | 0.740                 | 0.740 | 0.680 | 0.00            | 0.36  | -0.13 | ±1.00          |
| 0.960                 | 0.930 | 0.910 | 0.970                 | 0.960 | 0.890 | 0.09            | 0.28  | -0.19 | ±1.00          |
| 1.30                  | 1.26  | 1.22  | 1.30                  | 1.28  | 1.22  | 0.00            | 0.14  | 0.00  | ±1.00          |
| 1.79                  | 1.73  | 1.68  | 1.79                  | 1.73  | 1.69  | 0.00            | 0.00  | 0.05  | ±1.00          |
| 2.38                  | 2.31  | 2.24  | 2.39                  | 2.31  | 2.24  | 0.04            | 0.00  | 0.00  | ±0.20          |
| 3.19                  | 3.09  | 3.00  | 3.18                  | 3.09  | 3.01  | -0.03           | 0.00  | 0.03  | ±0.20          |
| 4.33                  | 4.20  | 4.07  | 4.32                  | 4.20  | 4.09  | -0.02           | 0.00  | 0.04  | ±0.20          |
| 5.85                  | 5.67  | 5.51  | 5.86                  | 5.70  | 5.52  | 0.01            | 0.05  | 0.02  | ±0.20          |
| 7.87                  | 7.63  | 7.40  | 7.89                  | 7.65  | 7.42  | 0.02            | 0.02  | 0.02  | ±0.20          |
| 10.5                  | 10.2  | 9.89  | 10.5                  | 10.2  | 9.91  | 0.00            | 0.00  | 0.02  | ±0.20          |
| 14.2                  | 13.8  | 13.4  | 14.2                  | 13.8  | 13.4  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.1                  | 18.6  | 18.0  | 19.2                  | 18.6  | 18.1  | 0.05            | 0.00  | 0.05  | ±0.20          |
| 25.9                  | 25.1  | 24.3  | 25.9                  | 25.1  | 24.3  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 34.5                  | 33.5  | 32.4  | 34.7                  | 33.6  | 32.6  | 0.05            | 0.03  | 0.05  | ±0.20          |
| 46.6                  | 45.2  | 43.9  | 46.8                  | 45.4  | 44.0  | 0.04            | 0.04  | 0.02  | ±0.20          |
| 63.0                  | 61.2  | 59.4  | 63.4                  | 61.5  | 59.6  | 0.05            | 0.04  | 0.03  | ±0.20          |
| 86.5                  | 84.0  | 81.5  | 86.3                  | 83.8  | 81.3  | -0.02           | -0.02 | -0.02 | ±0.20          |
| 113                   | 110   | 107   | 113                   | 110   | 106   | 0.00            | 0.00  | -0.08 | ±0.20          |
| 156                   | 151   | 147   | 155                   | 151   | 146   | -0.06           | 0.00  | -0.06 | ±0.20          |
| 216                   | 210   | 203   | 215                   | 209   | 203   | -0.04           | -0.04 | 0.00  | ±0.20          |
| 299                   | 290   | 281   | 300                   | 285   | 276   | 0.03            | -0.15 | -0.16 | ±0.20          |
| 441                   | 428   | 415   | 435                   | 423   | 410   | -0.12           | -0.10 | -0.11 | ±0.20          |
| 608                   | 590   | 572   | 603                   | 587   | 568   | -0.07           | -0.04 | -0.06 | ±0.20          |
| 905                   | 880   | 853   | 908                   | 884   | 856   | 0.03            | 0.04  | 0.03  | ±0.20          |
| 1370                  | 1330  | 1290  | 1390                  | 1350  | 1310  | 0.13            | 0.13  | 0.13  | ±0.30          |
| 1880                  | 1830  | 1770  | 1930                  | 1880  | 1820  | 0.23            | 0.23  | 0.24  | ±0.30          |
| 3040                  | 2960  | 2870  | 3160                  | 3080  | 2980  | 0.34            | 0.35  | 0.33  | ±0.50          |
| 3670                  | 3570  | 3470  | 3820                  | 3730  | 3620  | 0.35            | 0.38  | 0.37  | ±0.50          |

SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

# Dynamic Range, H-field, Channel 1

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.390                 | 0.390 | 0.380 | 0.400                 | 0.410 | 0.420 | 0.22            | 0.43  | 0.87  | ±1.00          |
| 0.540                 | 0.530 | 0.520 | 0.540                 | 0.540 | 0.560 | 0.00            | 0.16  | 0.64  | ±1.00          |
| 0.740                 | 0.720 | 0.720 | 0.730                 | 0.720 | 0.740 | -0.12           | 0.00  | 0.24  | ±1.00          |
| 0.960                 | 0.940 | 0.930 | 0.970                 | 0.940 | 0.950 | 0.09            | 0.00  | 0.18  | ±1.00          |
| 1.30                  | 1.28  | 1.26  | 1.31                  | 1.29  | 1.29  | 0.07            | 0.07  | 0.20  | ±1.00          |
| 1.78                  | 1.75  | 1.74  | 1.79                  | 1.75  | 1.77  | 0.05            | 0.00  | 0.15  | ±1.00          |
| 2.38                  | 2.34  | 2.31  | 2.38                  | 2.36  | 2.32  | 0.00            | 0.07  | 0.04  | ±0.20          |
| 3.18                  | 3.13  | 3.10  | 3.18                  | 3.13  | 3.12  | 0.00            | 0.00  | 0.06  | ±0.20          |
| 4.32                  | 4.25  | 4.20  | 4.33                  | 4.25  | 4.22  | 0.02            | 0.00  | 0.04  | ±0.20          |
| 5.84                  | 5.74  | 5.68  | 5.84                  | 5.76  | 5.69  | 0.00            | 0.03  | 0.02  | ±0.20          |
| 7.86                  | 7.73  | 7.64  | 7.87                  | 7.76  | 7.65  | 0.01            | 0.03  | 0.01  | ±0.20          |
| 10.5                  | 10.3  | 10.2  | 10.5                  | 10.3  | 10.2  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.2                  | 13.9  | 13.8  | 14.2                  | 14.0  | 13.8  | 0.00            | 0.06  | 0.00  | ±0.20          |
| 19.1                  | 18.8  | 18.6  | 19.1                  | 18.8  | 18.6  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 25.8                  | 25.4  | 25.1  | 25.8                  | 25.4  | 25.1  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 34.5                  | 33.9  | 33.5  | 34.6                  | 34.0  | 33.7  | 0.03            | 0.03  | 0.05  | ±0.20          |
| 46.5                  | 45.8  | 45.3  | 46.7                  | 45.9  | 45.5  | 0.04            | 0.02  | 0.04  | ±0.20          |
| 63.0                  | 61.9  | 61.3  | 63.3                  | 62.2  | 61.6  | 0.04            | 0.04  | 0.04  | ±0.20          |
| 86.4                  | 85.1  | 84.2  | 86.2                  | 84.8  | 83.9  | -0.02           | -0.03 | -0.03 | ±0.20          |
| 113                   | 111   | 110   | 113                   | 111   | 110   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 156                   | 153   | 151   | 155                   | 153   | 151   | -0.06           | 0.00  | 0.00  | ±0.20          |
| 216                   | 212   | 210   | 215                   | 212   | 209   | -0.04           | 0.00  | -0.04 | ±0.20          |
| 298                   | 294   | 290   | 300                   | 289   | 285   | 0.06            | -0.15 | -0.15 | ±0.20          |
| 441                   | 433   | 428   | 434                   | 428   | 423   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 607                   | 598   | 591   | 602                   | 594   | 586   | -0.07           | -0.06 | -0.07 | ±0.20          |
| 904                   | 890   | 880   | 907                   | 895   | 884   | 0.03            | 0.05  | 0.04  | ±0.20          |
| 1370                  | 1350  | 1330  | 1390                  | 1370  | 1350  | 0.13            | 0.13  | 0.13  | ±0.30          |
| 1880                  | 1850  | 1830  | 1930                  | 1910  | 1880  | 0.23            | 0.28  | 0.23  | ±0.30          |
| 3040                  | 3000  | 2960  | 3150                  | 3120  | 3080  | 0.31            | 0.34  | 0.35  | ±0.50          |
| 3670                  | 3610  | 3580  | 3820                  | 3770  | 3730  | 0.35            | 0.38  | 0.36  | ±0.50          |

## SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000A/m
- ±0.5dB for applied H-fields ≥ 3000A/m

<sup>1</sup>Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 2

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.390 | 0.410                 | 0.410 | 0.420 | 0.21            | 0.43  | 0.64  | ±1.00          |
| 0.550                 | 0.530 | 0.530 | 0.550                 | 0.550 | 0.550 | 0.00            | 0.32  | 0.32  | ±1.00          |
| 0.750                 | 0.720 | 0.720 | 0.750                 | 0.740 | 0.730 | 0.00            | 0.24  | 0.12  | ±1.00          |
| 0.970                 | 0.940 | 0.940 | 0.990                 | 0.940 | 0.950 | 0.18            | 0.00  | 0.09  | ±1.00          |
| 1.32                  | 1.27  | 1.27  | 1.35                  | 1.26  | 1.29  | 0.20            | -0.07 | 0.14  | ±1.00          |
| 1.81                  | 1.75  | 1.75  | 1.83                  | 1.74  | 1.78  | 0.10            | -0.05 | 0.15  | ±1.00          |
| 2.42                  | 2.33  | 2.34  | 2.43                  | 2.34  | 2.36  | 0.04            | 0.04  | 0.07  | ±0.20          |
| 3.24                  | 3.11  | 3.12  | 3.24                  | 3.11  | 3.13  | 0.00            | 0.00  | 0.03  | ±0.20          |
| 4.39                  | 4.23  | 4.24  | 4.39                  | 4.23  | 4.25  | 0.00            | 0.00  | 0.02  | ±0.20          |
| 5.94                  | 5.72  | 5.73  | 5.93                  | 5.71  | 5.73  | -0.01           | -0.02 | 0.00  | ±0.20          |
| 7.99                  | 7.70  | 7.71  | 7.99                  | 7.70  | 7.70  | 0.00            | 0.00  | -0.01 | ±0.20          |
| 10.7                  | 10.3  | 10.3  | 10.7                  | 10.3  | 10.3  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.4                  | 13.9  | 13.9  | 14.4                  | 13.9  | 13.9  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.4                  | 18.8  | 18.8  | 19.5                  | 18.8  | 18.8  | 0.04            | 0.00  | 0.00  | ±0.20          |
| 26.3                  | 25.3  | 25.3  | 26.3                  | 25.3  | 25.4  | 0.00            | 0.00  | 0.03  | ±0.20          |
| 35.0                  | 33.8  | 33.8  | 35.2                  | 33.9  | 34.0  | 0.05            | 0.03  | 0.05  | ±0.20          |
| 47.3                  | 45.6  | 45.7  | 47.5                  | 45.7  | 45.9  | 0.04            | 0.02  | 0.04  | ±0.20          |
| 64.0                  | 61.7  | 61.8  | 64.3                  | 62.0  | 62.1  | 0.04            | 0.04  | 0.04  | ±0.20          |
| 87.9                  | 84.8  | 84.9  | 87.7                  | 84.5  | 84.6  | -0.02           | -0.03 | -0.03 | ±0.20          |
| 115                   | 111   | 111   | 115                   | 111   | 111   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 158                   | 152   | 153   | 158                   | 152   | 152   | 0.00            | 0.00  | -0.06 | ±0.20          |
| 219                   | 211   | 212   | 219                   | 211   | 211   | 0.00            | 0.00  | -0.04 | ±0.20          |
| 303                   | 293   | 293   | 305                   | 288   | 288   | 0.06            | -0.15 | -0.15 | ±0.20          |
| 448                   | 432   | 432   | 441                   | 427   | 427   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 617                   | 595   | 596   | 612                   | 592   | 592   | -0.07           | -0.04 | -0.06 | ±0.20          |
| 919                   | 887   | 888   | 923                   | 892   | 892   | 0.04            | 0.05  | 0.04  | ±0.20          |
| 1390                  | 1340  | 1340  | 1410                  | 1370  | 1360  | 0.12            | 0.19  | 0.13  | ±0.30          |
| 1910                  | 1850  | 1850  | 1960                  | 1900  | 1900  | 0.22            | 0.23  | 0.23  | ±0.30          |
| 3090                  | 2980  | 2990  | 3210                  | 3100  | 3100  | 0.33            | 0.34  | 0.31  | ±0.50          |
| 3730                  | 3600  | 3610  | 3880                  | 3760  | 3770  | 0.34            | 0.38  | 0.38  | ±0.50          |

### SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000A/m
- ±0.3dB for applied H-fields ≥ 1000A/m and < 2000A/m
- ±0.4dB for applied H-fields ≥ 2000A/m and < 3000A/m
- ±0.5dB for applied H-fields ≥ 3000A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

### Dynamic Range, H-field, Channel 3

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.380 | 0.420                 | 0.410 | 0.390 | 0.42            | 0.43  | 0.23  | ±1.00          |
| 0.550                 | 0.530 | 0.520 | 0.550                 | 0.550 | 0.510 | 0.00            | 0.32  | -0.17 | ±1.00          |
| 0.750                 | 0.720 | 0.710 | 0.750                 | 0.710 | 0.710 | 0.00            | -0.12 | 0.00  | ±1.00          |
| 0.980                 | 0.940 | 0.920 | 0.980                 | 0.940 | 0.930 | 0.00            | 0.00  | 0.09  | ±1.00          |
| 1.32                  | 1.28  | 1.25  | 1.33                  | 1.28  | 1.24  | 0.07            | 0.00  | -0.07 | ±1.00          |
| 1.82                  | 1.76  | 1.72  | 1.82                  | 1.74  | 1.72  | 0.00            | -0.10 | 0.00  | ±1.00          |
| 2.42                  | 2.34  | 2.29  | 2.42                  | 2.35  | 2.29  | 0.00            | 0.04  | 0.00  | ±0.20          |
| 3.24                  | 3.13  | 3.06  | 3.24                  | 3.13  | 3.07  | 0.00            | 0.00  | 0.03  | ±0.20          |
| 4.40                  | 4.25  | 4.16  | 4.39                  | 4.25  | 4.17  | -0.02           | 0.00  | 0.02  | ±0.20          |
| 5.95                  | 5.75  | 5.62  | 5.95                  | 5.76  | 5.63  | 0.00            | 0.02  | 0.02  | ±0.20          |
| 8.00                  | 7.74  | 7.55  | 8.01                  | 7.76  | 7.57  | 0.01            | 0.02  | 0.02  | ±0.20          |
| 10.7                  | 10.3  | 10.1  | 10.7                  | 10.3  | 10.1  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.4                  | 14.0  | 13.7  | 14.4                  | 14.0  | 13.6  | 0.00            | 0.00  | -0.06 | ±0.20          |
| 19.5                  | 18.8  | 18.4  | 19.5                  | 18.8  | 18.4  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 26.3                  | 25.4  | 24.8  | 26.3                  | 25.4  | 24.8  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 35.1                  | 33.9  | 33.1  | 35.2                  | 34.1  | 33.3  | 0.02            | 0.05  | 0.05  | ±0.20          |
| 47.4                  | 45.9  | 44.8  | 47.5                  | 46.0  | 44.9  | 0.02            | 0.02  | 0.02  | ±0.20          |
| 64.1                  | 62.0  | 60.6  | 64.4                  | 62.3  | 60.9  | 0.04            | 0.04  | 0.04  | ±0.20          |
| 88.0                  | 85.2  | 83.2  | 87.8                  | 84.9  | 82.9  | -0.02           | -0.03 | -0.03 | ±0.20          |
| 115                   | 111   | 109   | 115                   | 111   | 109   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 158                   | 153   | 150   | 158                   | 153   | 149   | 0.00            | 0.00  | -0.06 | ±0.20          |
| 220                   | 212   | 207   | 219                   | 212   | 207   | -0.04           | 0.00  | 0.00  | ±0.20          |
| 304                   | 294   | 287   | 305                   | 289   | 282   | 0.03            | -0.15 | -0.15 | ±0.20          |
| 449                   | 434   | 424   | 442                   | 429   | 419   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 618                   | 598   | 584   | 613                   | 595   | 580   | -0.07           | -0.04 | -0.06 | ±0.20          |
| 921                   | 891   | 870   | 924                   | 895   | 874   | 0.03            | 0.04  | 0.04  | ±0.20          |
| 1390                  | 1350  | 1320  | 1410                  | 1370  | 1340  | 0.12            | 0.13  | 0.13  | ±0.30          |
| 1910                  | 1850  | 1810  | 1960                  | 1900  | 1860  | 0.22            | 0.23  | 0.24  | ±0.30          |
| 3100                  | 3000  | 2930  | 3210                  | 3090  | 3040  | 0.30            | 0.26  | 0.32  | ±0.50          |
| 3730                  | 3620  | 3540  | 3890                  | 3730  | 3690  | 0.36            | 0.26  | 0.36  | ±0.50          |

#### SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 4

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.390 | 0.400                 | 0.400 | 0.400 | 0.00            | 0.22  | 0.22  | ±1.00          |
| 0.540                 | 0.530 | 0.520 | 0.540                 | 0.520 | 0.530 | 0.00            | -0.17 | 0.17  | ±1.00          |
| 0.740                 | 0.730 | 0.720 | 0.730                 | 0.730 | 0.720 | -0.12           | 0.00  | 0.00  | ±1.00          |
| 0.970                 | 0.950 | 0.940 | 0.960                 | 0.960 | 0.940 | -0.09           | 0.09  | 0.00  | ±1.00          |
| 1.31                  | 1.29  | 1.27  | 1.32                  | 1.32  | 1.27  | 0.07            | 0.20  | 0.00  | ±1.00          |
| 1.80                  | 1.77  | 1.74  | 1.79                  | 1.78  | 1.74  | -0.05           | 0.05  | 0.00  | ±1.00          |
| 2.40                  | 2.36  | 2.32  | 2.40                  | 2.38  | 2.32  | 0.00            | 0.07  | 0.00  | ±0.20          |
| 3.21                  | 3.16  | 3.11  | 3.20                  | 3.17  | 3.10  | -0.03           | 0.03  | -0.03 | ±0.20          |
| 4.36                  | 4.29  | 4.22  | 4.36                  | 4.31  | 4.22  | 0.00            | 0.04  | 0.00  | ±0.20          |
| 5.90                  | 5.80  | 5.70  | 5.90                  | 5.82  | 5.70  | 0.00            | 0.03  | 0.00  | ±0.20          |
| 7.93                  | 7.81  | 7.66  | 7.94                  | 7.82  | 7.66  | 0.01            | 0.01  | 0.00  | ±0.20          |
| 10.6                  | 10.4  | 10.2  | 10.6                  | 10.4  | 10.2  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.3                  | 14.1  | 13.8  | 14.3                  | 14.1  | 13.8  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.3                  | 19.0  | 18.7  | 19.3                  | 19.0  | 18.7  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 26.1                  | 25.6  | 25.2  | 26.1                  | 25.7  | 25.2  | 0.00            | 0.03  | 0.00  | ±0.20          |
| 34.8                  | 34.2  | 33.6  | 35.0                  | 34.4  | 33.8  | 0.05            | 0.05  | 0.05  | ±0.20          |
| 47.0                  | 46.3  | 45.4  | 47.1                  | 46.4  | 45.6  | 0.02            | 0.02  | 0.04  | ±0.20          |
| 63.5                  | 62.5  | 61.5  | 63.9                  | 62.8  | 61.8  | 0.05            | 0.04  | 0.04  | ±0.20          |
| 87.3                  | 86.0  | 84.4  | 87.0                  | 85.7  | 84.2  | -0.03           | -0.03 | -0.02 | ±0.20          |
| 114                   | 112   | 110   | 114                   | 112   | 110   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 157                   | 155   | 152   | 157                   | 154   | 151   | 0.00            | -0.06 | -0.06 | ±0.20          |
| 218                   | 214   | 210   | 217                   | 214   | 210   | -0.04           | 0.00  | 0.00  | ±0.20          |
| 301                   | 297   | 291   | 303                   | 292   | 286   | 0.06            | -0.15 | -0.15 | ±0.20          |
| 445                   | 438   | 430   | 438                   | 432   | 424   | -0.14           | -0.12 | -0.12 | ±0.20          |
| 613                   | 604   | 593   | 607                   | 600   | 589   | -0.09           | -0.06 | -0.06 | ±0.20          |
| 913                   | 899   | 883   | 915                   | 903   | 887   | 0.02            | 0.04  | 0.04  | ±0.20          |
| 1380                  | 1360  | 1330  | 1400                  | 1380  | 1360  | 0.12            | 0.13  | 0.19  | ±0.30          |
| 1900                  | 1870  | 1840  | 1950                  | 1920  | 1890  | 0.23            | 0.23  | 0.23  | ±0.30          |
| 3070                  | 3030  | 2970  | 3180                  | 3140  | 3090  | 0.31            | 0.31  | 0.34  | ±0.50          |
| 3700                  | 3650  | 3590  | 3850                  | 3810  | 3750  | 0.35            | 0.37  | 0.38  | ±0.50          |

### SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 5

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.400 | 0.400 | 0.410                 | 0.420 | 0.420 | 0.21            | 0.42  | 0.42  | ±1.00          |
| 0.550                 | 0.540 | 0.540 | 0.540                 | 0.570 | 0.550 | -0.16           | 0.47  | 0.16  | ±1.00          |
| 0.750                 | 0.740 | 0.740 | 0.750                 | 0.730 | 0.740 | 0.00            | -0.12 | 0.00  | ±1.00          |
| 0.980                 | 0.960 | 0.970 | 0.990                 | 0.970 | 0.960 | 0.09            | 0.09  | -0.09 | ±1.00          |
| 1.32                  | 1.31  | 1.31  | 1.33                  | 1.32  | 1.32  | 0.07            | 0.07  | 0.07  | ±1.00          |
| 1.82                  | 1.79  | 1.80  | 1.82                  | 1.79  | 1.82  | 0.00            | 0.00  | 0.10  | ±1.00          |
| 2.43                  | 2.39  | 2.40  | 2.42                  | 2.40  | 2.42  | -0.04           | 0.04  | 0.07  | ±0.20          |
| 3.25                  | 3.20  | 3.21  | 3.24                  | 3.19  | 3.22  | -0.03           | -0.03 | 0.03  | ±0.20          |
| 4.41                  | 4.35  | 4.36  | 4.41                  | 4.34  | 4.37  | 0.00            | -0.02 | 0.02  | ±0.20          |
| 5.97                  | 5.87  | 5.90  | 5.97                  | 5.88  | 5.91  | 0.00            | 0.01  | 0.01  | ±0.20          |
| 8.02                  | 7.90  | 7.93  | 8.03                  | 7.95  | 7.96  | 0.01            | 0.05  | 0.03  | ±0.20          |
| 10.7                  | 10.6  | 10.6  | 10.7                  | 10.6  | 10.6  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.5                  | 14.3  | 14.3  | 14.5                  | 14.3  | 14.3  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.5                  | 19.2  | 19.3  | 19.5                  | 19.3  | 19.3  | 0.00            | 0.05  | 0.00  | ±0.20          |
| 26.4                  | 26.0  | 26.1  | 26.4                  | 26.0  | 26.1  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 35.2                  | 34.7  | 34.7  | 35.4                  | 34.8  | 34.9  | 0.05            | 0.02  | 0.05  | ±0.20          |
| 47.5                  | 46.8  | 47.0  | 47.7                  | 47.0  | 47.1  | 0.04            | 0.04  | 0.02  | ±0.20          |
| 64.3                  | 63.3  | 63.6  | 64.6                  | 63.6  | 63.9  | 0.04            | 0.04  | 0.04  | ±0.20          |
| 88.2                  | 87.0  | 87.3  | 88.0                  | 86.8  | 87.0  | -0.02           | -0.02 | -0.03 | ±0.20          |
| 116                   | 114   | 114   | 115                   | 113   | 114   | -0.08           | -0.08 | 0.00  | ±0.20          |
| 159                   | 157   | 157   | 158                   | 156   | 157   | -0.05           | -0.06 | 0.00  | ±0.20          |
| 220                   | 217   | 218   | 220                   | 217   | 217   | 0.00            | 0.00  | -0.04 | ±0.20          |
| 304                   | 300   | 301   | 306                   | 295   | 296   | 0.06            | -0.15 | -0.15 | ±0.20          |
| 450                   | 443   | 444   | 443                   | 438   | 439   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 620                   | 611   | 613   | 614                   | 607   | 609   | -0.08           | -0.06 | -0.06 | ±0.20          |
| 923                   | 911   | 913   | 925                   | 915   | 918   | 0.02            | 0.04  | 0.05  | ±0.20          |
| 1400                  | 1380  | 1380  | 1420                  | 1400  | 1400  | 0.12            | 0.12  | 0.12  | ±0.30          |
| 1920                  | 1890  | 1900  | 1970                  | 1950  | 1950  | 0.22            | 0.27  | 0.23  | ±0.30          |
| 3100                  | 3060  | 3070  | 3220                  | 3180  | 3190  | 0.33            | 0.33  | 0.33  | ±0.50          |
| 3740                  | 3690  | 3710  | 3900                  | 3850  | 3880  | 0.36            | 0.37  | 0.39  | ±0.50          |

### SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 6

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.400 | 0.420                 | 0.400 | 0.400 | 0.42            | 0.22  | 0.00  | ±1.00          |
| 0.540                 | 0.540 | 0.540 | 0.550                 | 0.550 | 0.540 | 0.16            | 0.16  | 0.00  | ±1.00          |
| 0.740                 | 0.730 | 0.740 | 0.750                 | 0.760 | 0.740 | 0.12            | 0.35  | 0.00  | ±1.00          |
| 0.960                 | 0.960 | 0.970 | 0.970                 | 0.990 | 0.980 | 0.09            | 0.27  | 0.09  | ±1.00          |
| 1.31                  | 1.29  | 1.31  | 1.32                  | 1.32  | 1.31  | 0.07            | 0.20  | 0.00  | ±1.00          |
| 1.80                  | 1.78  | 1.80  | 1.80                  | 1.79  | 1.82  | 0.00            | 0.05  | 0.10  | ±1.00          |
| 2.40                  | 2.37  | 2.40  | 2.41                  | 2.39  | 2.43  | 0.04            | 0.07  | 0.11  | ±0.20          |
| 3.21                  | 3.17  | 3.20  | 3.21                  | 3.19  | 3.23  | 0.00            | 0.05  | 0.08  | ±0.20          |
| 4.35                  | 4.31  | 4.35  | 4.35                  | 4.30  | 4.38  | 0.00            | -0.02 | 0.06  | ±0.20          |
| 5.89                  | 5.83  | 5.88  | 5.88                  | 5.83  | 5.90  | -0.01           | 0.00  | 0.03  | ±0.20          |
| 7.92                  | 7.84  | 7.91  | 7.92                  | 7.85  | 7.94  | 0.00            | 0.01  | 0.03  | ±0.20          |
| 10.6                  | 10.5  | 10.6  | 10.6                  | 10.5  | 10.6  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.3                  | 14.2  | 14.3  | 14.3                  | 14.2  | 14.3  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.3                  | 19.1  | 19.2  | 19.3                  | 19.1  | 19.3  | 0.00            | 0.00  | 0.05  | ±0.20          |
| 26.0                  | 25.8  | 26.0  | 26.0                  | 25.8  | 26.0  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 34.7                  | 34.4  | 34.7  | 34.9                  | 34.5  | 34.9  | 0.05            | 0.03  | 0.05  | ±0.20          |
| 46.9                  | 46.5  | 46.9  | 47.0                  | 46.6  | 47.0  | 0.02            | 0.02  | 0.02  | ±0.20          |
| 63.4                  | 62.8  | 63.4  | 63.8                  | 63.1  | 63.7  | 0.05            | 0.04  | 0.04  | ±0.20          |
| 87.1                  | 86.3  | 87.1  | 86.9                  | 86.0  | 86.8  | -0.02           | -0.03 | -0.03 | ±0.20          |
| 114                   | 113   | 114   | 114                   | 113   | 114   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 157                   | 155   | 157   | 156                   | 155   | 156   | -0.06           | 0.00  | -0.06 | ±0.20          |
| 217                   | 215   | 217   | 217                   | 215   | 217   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 301                   | 298   | 300   | 302                   | 293   | 295   | 0.03            | -0.15 | -0.15 | ±0.20          |
| 444                   | 440   | 443   | 437                   | 434   | 437   | -0.14           | -0.12 | -0.12 | ±0.20          |
| 612                   | 606   | 611   | 607                   | 602   | 607   | -0.07           | -0.06 | -0.06 | ±0.20          |
| 911                   | 903   | 911   | 913                   | 907   | 915   | 0.02            | 0.04  | 0.04  | ±0.20          |
| 1380                  | 1370  | 1380  | 1400                  | 1390  | 1400  | 0.12            | 0.13  | 0.12  | ±0.30          |
| 1890                  | 1880  | 1890  | 1940                  | 1930  | 1950  | 0.23            | 0.23  | 0.27  | ±0.30          |
| 3060                  | 3040  | 3070  | 3180                  | 3160  | 3180  | 0.33            | 0.34  | 0.31  | ±0.50          |
| 3690                  | 3660  | 3700  | 3850                  | 3820  | 3860  | 0.37            | 0.37  | 0.37  | ±0.50          |

SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 7

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.380 | 0.380                 | 0.410 | 0.380 | -0.45           | 0.43  | 0.00  | ±1.00          |
| 0.540                 | 0.530 | 0.520 | 0.530                 | 0.550 | 0.500 | -0.16           | 0.32  | -0.34 | ±1.00          |
| 0.740                 | 0.730 | 0.710 | 0.740                 | 0.740 | 0.700 | 0.00            | 0.12  | -0.12 | ±1.00          |
| 0.960                 | 0.960 | 0.920 | 0.980                 | 0.950 | 0.930 | 0.18            | -0.09 | 0.09  | ±1.00          |
| 1.31                  | 1.29  | 1.25  | 1.32                  | 1.29  | 1.26  | 0.07            | 0.00  | 0.07  | ±1.00          |
| 1.80                  | 1.78  | 1.71  | 1.80                  | 1.78  | 1.74  | 0.00            | 0.00  | 0.15  | ±1.00          |
| 2.40                  | 2.37  | 2.29  | 2.40                  | 2.37  | 2.31  | 0.00            | 0.00  | 0.08  | ±0.20          |
| 3.21                  | 3.17  | 3.06  | 3.21                  | 3.18  | 3.07  | 0.00            | 0.03  | 0.03  | ±0.20          |
| 4.35                  | 4.31  | 4.15  | 4.35                  | 4.33  | 4.17  | 0.00            | 0.04  | 0.04  | ±0.20          |
| 5.89                  | 5.82  | 5.61  | 5.89                  | 5.85  | 5.63  | 0.00            | 0.04  | 0.03  | ±0.20          |
| 7.92                  | 7.83  | 7.54  | 7.92                  | 7.87  | 7.55  | 0.00            | 0.04  | 0.01  | ±0.20          |
| 10.6                  | 10.5  | 10.1  | 10.6                  | 10.5  | 10.1  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.3                  | 14.1  | 13.6  | 14.3                  | 14.2  | 13.6  | 0.00            | 0.06  | 0.00  | ±0.20          |
| 19.3                  | 19.1  | 18.4  | 19.2                  | 19.1  | 18.4  | -0.05           | 0.00  | 0.00  | ±0.20          |
| 26.0                  | 25.7  | 24.8  | 26.0                  | 25.7  | 24.8  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 34.7                  | 34.4  | 33.1  | 34.9                  | 34.5  | 33.2  | 0.05            | 0.03  | 0.03  | ±0.20          |
| 46.9                  | 46.4  | 44.7  | 47.1                  | 46.5  | 44.9  | 0.04            | 0.02  | 0.04  | ±0.20          |
| 63.4                  | 62.7  | 60.5  | 63.8                  | 63.0  | 60.8  | 0.05            | 0.04  | 0.04  | ±0.20          |
| 87.1                  | 86.2  | 83.1  | 86.9                  | 86.0  | 82.8  | -0.02           | -0.02 | -0.03 | ±0.20          |
| 114                   | 113   | 109   | 114                   | 112   | 108   | 0.00            | -0.08 | -0.08 | ±0.20          |
| 157                   | 155   | 149   | 156                   | 155   | 149   | -0.06           | 0.00  | 0.00  | ±0.20          |
| 217                   | 215   | 207   | 217                   | 215   | 207   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 301                   | 298   | 287   | 302                   | 293   | 282   | 0.03            | -0.15 | -0.15 | ±0.20          |
| 444                   | 439   | 423   | 437                   | 434   | 418   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 612                   | 606   | 583   | 606                   | 603   | 579   | -0.09           | -0.04 | -0.06 | ±0.20          |
| 911                   | 902   | 869   | 913                   | 907   | 872   | 0.02            | 0.05  | 0.03  | ±0.20          |
| 1380                  | 1360  | 1310  | 1400                  | 1390  | 1340  | 0.12            | 0.19  | 0.20  | ±0.30          |
| 1890                  | 1880  | 1810  | 1940                  | 1930  | 1860  | 0.23            | 0.23  | 0.24  | ±0.30          |
| 3060                  | 3040  | 2930  | 3180                  | 3160  | 3040  | 0.33            | 0.34  | 0.32  | ±0.50          |
| 3690                  | 3660  | 3530  | 3850                  | 3820  | 3690  | 0.37            | 0.37  | 0.39  | ±0.50          |

SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup>Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, E-field, Channel 0

| E-field/(V/m) Applied |       |       | E-field/(V/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |       |       |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|-------|-------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     | x              | y     | z     |
| 0.360                 | 0.210 | 0.080 | 0.370                 | 0.210 | 0.080 | 0.24            | 0.00  | 0.00  | ±5.00          | ±5.00 | ±5.00 |
| 0.490                 | 0.290 | 0.100 | 0.500                 | 0.310 | 0.090 | 0.18            | 0.58  | -0.92 | ±5.00          | ±5.00 | ±5.00 |
| 0.680                 | 0.400 | 0.140 | 0.680                 | 0.400 | 0.140 | 0.00            | 0.00  | 0.00  | ±5.00          | ±5.00 | ±5.00 |
| 0.880                 | 0.520 | 0.180 | 0.890                 | 0.530 | 0.190 | 0.10            | 0.17  | 0.47  | ±5.00          | ±5.00 | ±5.00 |
| 1.19                  | 0.700 | 0.250 | 1.19                  | 0.700 | 0.230 | 0.00            | 0.00  | -0.72 | ±5.00          | ±5.00 | ±5.00 |
| 1.64                  | 0.970 | 0.340 | 1.67                  | 0.950 | 0.350 | 0.16            | -0.18 | 0.25  | ±5.00          | ±5.00 | ±5.00 |
| 2.18                  | 1.29  | 0.450 | 2.18                  | 1.28  | 0.430 | 0.00            | -0.07 | -0.39 | ±1.00          | ±5.00 | ±5.00 |
| 2.92                  | 1.72  | 0.610 | 2.95                  | 1.70  | 0.600 | 0.09            | -0.10 | -0.14 | ±1.00          | ±5.00 | ±5.00 |
| 3.97                  | 2.34  | 0.820 | 3.98                  | 2.32  | 0.820 | 0.02            | -0.07 | 0.00  | ±1.00          | ±1.00 | ±5.00 |
| 5.37                  | 3.16  | 1.11  | 5.40                  | 3.14  | 1.08  | 0.05            | -0.06 | -0.24 | ±1.00          | ±1.00 | ±5.00 |
| 7.22                  | 4.26  | 1.50  | 7.27                  | 4.22  | 1.46  | 0.06            | -0.08 | -0.23 | ±1.00          | ±1.00 | ±5.00 |
| 9.64                  | 5.68  | 2.00  | 9.68                  | 5.65  | 1.94  | 0.04            | -0.05 | -0.26 | ±1.00          | ±1.00 | ±1.00 |
| 13.0                  | 7.68  | 2.70  | 13.1                  | 7.63  | 2.60  | 0.07            | -0.06 | -0.33 | ±1.00          | ±1.00 | ±1.00 |
| 17.6                  | 10.4  | 3.65  | 17.6                  | 10.3  | 3.54  | 0.00            | -0.08 | -0.27 | ±1.00          | ±1.00 | ±1.00 |
| 23.7                  | 14.0  | 4.92  | 23.8                  | 13.9  | 4.75  | 0.04            | -0.06 | -0.31 | ±1.00          | ±1.00 | ±1.00 |
| 31.7                  | 18.7  | 6.57  | 31.9                  | 18.6  | 6.41  | 0.05            | -0.05 | -0.21 | ±1.00          | ±1.00 | ±1.00 |
| 42.8                  | 25.2  | 8.88  | 43.0                  | 25.2  | 8.63  | 0.04            | 0.00  | -0.25 | ±1.00          | ±1.00 | ±1.00 |
| 57.8                  | 34.1  | 12.0  | 58.3                  | 34.1  | 11.7  | 0.07            | 0.00  | -0.22 | ±1.00          | ±1.00 | ±1.00 |
| 79.5                  | 46.9  | 16.5  | 79.4                  | 46.5  | 15.9  | -0.01           | -0.07 | -0.32 | ±1.00          | ±1.00 | ±1.00 |
| 104                   | 61.3  | 21.6  | 104                   | 60.7  | 20.9  | 0.00            | -0.09 | -0.29 | ±1.00          | ±1.00 | ±1.00 |
| 143                   | 84.3  | 29.7  | 143                   | 83.5  | 28.8  | 0.00            | -0.08 | -0.27 | ±1.00          | ±1.00 | ±1.00 |
| 198                   | 117   | 41.1  | 198                   | 116   | 39.9  | 0.00            | -0.07 | -0.26 | ±1.00          | ±1.00 | ±1.00 |
| 274                   | 162   | 56.9  | 277                   | 162   | 55.6  | 0.09            | 0.00  | -0.20 | ±1.00          | ±1.00 | ±1.00 |
| 405                   | 239   | 84.0  | 391                   | 229   | 82.5  | -0.31           | -0.37 | -0.16 | ±1.00          | ±1.00 | ±1.00 |
| 558                   | 329   | 116   | 543                   | 317   | 114   | -0.24           | -0.32 | -0.15 | ±1.00          | ±1.00 | ±1.00 |
| 832                   | 490   | 172   | 817                   | 478   | 172   | -0.16           | -0.22 | 0.00  | ±1.00          | ±1.00 | ±1.00 |
| 1260                  | 742   | 261   | 1250                  | 733   | 264   | -0.07           | -0.11 | 0.10  | ±1.00          | ±1.00 | ±1.00 |
| 1730                  | 1020  | 358   | 1740                  | 1020  | 367   | 0.05            | 0.00  | 0.22  | ±1.00          | ±1.00 | ±1.00 |
| 2800                  | 1650  | 580   | 2850                  | 1670  | 574   | 0.15            | 0.10  | -0.09 | ±1.00          | ±1.00 | ±1.00 |
| 3370                  | 1990  | 699   | 3450                  | 2020  | 696   | 0.20            | 0.13  | -0.04 | ±1.00          | ±1.00 | ±1.00 |

SPEAG E-field linearity tolerance criteria<sup>1</sup>:

±5.0dB for applied E-field < 2V/m

±1.0dB for applied E-field ≥ 2V/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response

### Frequency Response, H-field, Channel 0

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |      |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y    | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.48 | 1.48 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.50                  | 1.49 | 1.50 | 0.12            | 0.06 | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.48 | 0.00            | 0.00 | 0.06  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.46 | 0.06            | 0.06 | 0.00  | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.46 | 0.06            | 0.00 | 0.06  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00 | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.44 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.32                  | 4.31 | 4.29 | -0.02           | 0.02 | -0.02 | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.36                  | 4.32 | 4.33 | 0.02            | 0.02 | 0.04  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.30 | 4.31 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.32 | 4.33 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.32 | 4.34 | 0.00            | 0.00 | 0.02  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.33 | 4.34 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.36                  | 4.32 | 4.32 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.34                  | 4.31 | 4.31 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.33                  | 4.30 | 4.30 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.29 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.28 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.25 | 4.25 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.23 | 4.24 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.22 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.19 | 4.18 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.15 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.11 | 4.11 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.12                  | 4.09 | 4.09 | 0.04            | 0.02 | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.08                  | 4.06 | 4.06 | 0.00            | 0.02 | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.03                  | 4.02 | 4.02 | 0.00            | 0.02 | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.98                  | 3.97 | 3.96 | 0.00            | 0.02 | 0.00  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.95 | 3.95 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.94                  | 3.92 | 3.92 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.93                  | 3.92 | 3.92 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.91                  | 3.90 | 3.90 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.81 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.80 | 0.00            | 0.02 | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.73 | 3.73 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.62 | 3.60 | 0.02            | 0.05 | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.49                  | 3.50 | 3.48 | 0.00            | 0.05 | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.36                  | 3.35 | 3.36 | 0.03            | 0.00 | 0.03  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:

±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 1

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |      |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y    | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.48 | 1.49 | 0.00            | 0.00 | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.50                  | 1.49 | 1.50 | 0.12            | 0.06 | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.47 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.46 | 0.06            | 0.06 | 0.00  | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.45 | 0.06            | 0.00 | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.44                  | 1.44 | 1.44 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.44 | 1.44 | 0.00            | 0.06 | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.32                  | 4.30 | 4.33 | -0.02           | 0.00 | 0.06  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.35                  | 4.33 | 4.32 | 0.00            | 0.04 | 0.02  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.30 | 4.31 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.00            | 0.02 | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.33 | 4.33 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.34 | 4.33 | 0.00            | 0.02 | -0.02 | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.32 | 4.32 | 0.02            | 0.00 | -0.02 | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.35                  | 4.33 | 4.33 | 0.00            | 0.02 | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.34                  | 4.31 | 4.31 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.33                  | 4.30 | 4.30 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.29 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.27 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.25 | 4.25 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.24 | 4.24 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.23 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.18 | 4.18 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.15 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.11 | 4.11 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.09 | 4.09 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.06 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.01 | 4.02 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.98                  | 3.96 | 3.96 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.96 | 3.95 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.95                  | 3.92 | 3.93 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.93                  | 3.92 | 3.91 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.92                  | 3.90 | 3.90 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.79 | 0.00            | 0.02 | 0.00  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.74 | 3.73 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.61 | 3.60 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.50                  | 3.48 | 3.48 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.36                  | 3.36 | 3.35 | 0.03            | 0.03 | 0.00  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 2

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.50                  | 1.48 | 1.49 | 0.06            | 0.00  | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.50 | 0.06            | 0.06  | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.48 | 0.00            | 0.00  | 0.06  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.45 | 0.06            | 0.06  | -0.06 | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.47                  | 1.45 | 1.45 | 0.12            | 0.00  | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.44 | 1.44 | 0.00            | 0.06  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.33                  | 4.31 | 4.30 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.36                  | 4.30 | 4.32 | 0.02            | -0.02 | 0.02  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.31 | 4.31 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.34 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.33 | 4.34 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.35                  | 4.32 | 4.33 | 0.00            | 0.00  | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.35                  | 4.31 | 4.31 | 0.04            | 0.02  | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.33                  | 4.30 | 4.31 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.31                  | 4.29 | 4.29 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.27 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.25 | 4.25 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.24 | 4.24 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.22 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.18 | 4.18 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.15 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.11 | 4.12 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.10 | 4.08 | 0.02            | 0.04  | -0.02 | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.06 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.03                  | 4.02 | 4.01 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.99                  | 3.97 | 3.96 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.95 | 3.95 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.94                  | 3.93 | 3.93 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.93                  | 3.92 | 3.91 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.91                  | 3.90 | 3.90 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.80 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.74 | 3.73 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.60 | 3.60 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.48                  | 3.49 | 3.48 | -0.02           | 0.02  | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.35                  | 3.35 | 3.36 | 0.00            | 0.00  | 0.03  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

### Frequency Response, H-field, Channel 3

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.48                  | 1.48 | 1.49 | -0.06           | 0.00  | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.51 | 0.06            | 0.06  | 0.17  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.47 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.45 | 0.06            | 0.06  | -0.06 | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.46 | 0.06            | 0.00  | 0.06  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.45 | 1.45 | 0.06            | 0.06  | 0.06  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.43                  | 1.44 | 1.44 | -0.06           | 0.06  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.34                  | 4.31 | 4.32 | 0.02            | 0.02  | 0.04  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.35                  | 4.30 | 4.33 | 0.00            | -0.02 | 0.04  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.29 | 4.31 | 0.02            | -0.02 | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.34 | 4.35 | 0.02            | 0.04  | 0.04  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.32 | 0.00            | 0.02  | -0.02 | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.33 | 4.35 | 0.00            | 0.00  | 0.02  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.36                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.35                  | 4.32 | 4.32 | 0.04            | 0.04  | 0.02  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.32                  | 4.30 | 4.31 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.28 | 4.29 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.31                  | 4.28 | 4.28 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.29                  | 4.25 | 4.26 | 0.04            | 0.00  | 0.02  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.27                  | 4.24 | 4.24 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.23 | 4.23 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.19 | 4.19 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.16 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.12 | 4.12 | 0.02            | 0.04  | 0.02  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.09 | 4.10 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.07 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.02 | 4.02 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.99                  | 3.97 | 3.97 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.96 | 3.96 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.96                  | 3.92 | 3.93 | 0.07            | 0.00  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.94                  | 3.92 | 3.92 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.92                  | 3.90 | 3.91 | 0.04            | 0.02  | 0.04  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.89 | 3.89 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.87 | 0.02            | 0.02  | 0.05  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.83                  | 3.81 | 3.81 | 0.05            | 0.02  | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.80 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.74                  | 3.74 | 3.74 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.63 | 3.60 | 0.02            | 0.07  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.49                  | 3.49 | 3.49 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.36                  | 3.35 | 3.35 | 0.03            | 0.00  | 0.00  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 4

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.48                  | 1.49 | 1.47 | -0.06           | 0.06  | -0.06 | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.49                  | 1.50 | 1.50 | 0.06            | 0.12  | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.49                  | 1.47 | 1.47 | 0.12            | 0.00  | 0.00  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.46 | 1.46 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.45                  | 1.45 | 1.45 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.44 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.33                  | 4.30 | 4.29 | 0.00            | 0.00  | -0.02 | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.36                  | 4.30 | 4.33 | 0.02            | -0.02 | 0.04  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.34                  | 4.31 | 4.31 | -0.02           | 0.02  | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.32 | 4.33 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.34 | 4.34 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.35                  | 4.32 | 4.33 | 0.00            | 0.00  | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.34                  | 4.31 | 4.31 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.32                  | 4.30 | 4.30 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.30 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.29                  | 4.28 | 4.27 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.26 | 4.26 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.23 | 4.23 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.23 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.19 | 4.18 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.18                  | 4.15 | 4.15 | 0.04            | 0.02  | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.11 | 4.11 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.09 | 4.09 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.06 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.02 | 4.01 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.98                  | 3.97 | 3.97 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.96 | 3.95 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.94                  | 3.93 | 3.93 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.94                  | 3.91 | 3.91 | 0.04            | 0.00  | 0.00  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.91                  | 3.90 | 3.90 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.81 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.80 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.74                  | 3.74 | 3.74 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.61 | 3.60 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.50                  | 3.48 | 3.48 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.36                  | 3.36 | 3.34 | 0.03            | 0.03  | -0.03 | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 5

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.48 | 1.49 | 0.00            | 0.00  | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.50 | 0.06            | 0.06  | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.48                  | 1.47 | 1.48 | 0.06            | 0.00  | 0.06  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.46 | 1.45 | 0.06            | 0.00  | -0.06 | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.44 | 1.45 | 0.06            | -0.06 | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.44 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.33                  | 4.32 | 4.34 | 0.00            | 0.04  | 0.08  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.37                  | 4.32 | 4.30 | 0.04            | 0.02  | -0.02 | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.35                  | 4.30 | 4.31 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.35 | 4.32 | 0.02            | 0.06  | -0.02 | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.31 | 4.32 | 0.02            | -0.02 | -0.02 | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.34 | 4.33 | 0.00            | 0.02  | -0.02 | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.36                  | 4.34 | 4.33 | 0.00            | 0.04  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.35                  | 4.34 | 4.32 | 0.00            | 0.04  | 0.00  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.34                  | 4.30 | 4.31 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.33                  | 4.31 | 4.30 | 0.02            | 0.04  | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.29 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.27 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.25 | 4.26 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.23 | 4.24 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.23 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.19 | 4.19 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.15 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.12 | 4.11 | 0.02            | 0.04  | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.09 | 4.09 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.08                  | 4.06 | 4.06 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.03                  | 4.02 | 4.02 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.98                  | 3.96 | 3.97 | 0.00            | 0.00  | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.96 | 3.95 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.95                  | 3.93 | 3.93 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.93                  | 3.91 | 3.92 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.91                  | 3.90 | 3.90 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.81 | 3.80 | 0.00            | 0.05  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.74                  | 3.74 | 3.73 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.62 | 3.60 | 0.02            | 0.05  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.49                  | 3.49 | 3.48 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.35                  | 3.36 | 3.35 | 0.00            | 0.03  | 0.00  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup>Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 6

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |      |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y    | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.49 | 0.00            | 0.06 | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.50                  | 1.50 | 1.50 | 0.12            | 0.12 | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.48 | 0.00            | 0.00 | 0.06  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.46 | 1.45 | 0.06            | 0.00 | -0.06 | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.45 | 0.06            | 0.00 | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00 | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.43 | 0.00            | 0.00 | -0.06 | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.36                  | 4.32 | 4.31 | 0.06            | 0.04 | 0.02  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.36                  | 4.31 | 4.33 | 0.02            | 0.00 | 0.04  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.31 | 4.32 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.34 | 4.33 | 0.02            | 0.04 | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.32 | 4.32 | 0.00            | 0.00 | -0.02 | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.38                  | 4.33 | 4.35 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.32 | 4.33 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.37                  | 4.32 | 4.33 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.35                  | 4.31 | 4.31 | 0.04            | 0.02 | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.34                  | 4.29 | 4.30 | 0.04            | 0.00 | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.29 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.28 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.29                  | 4.25 | 4.26 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.24 | 4.24 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.26                  | 4.22 | 4.23 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.23                  | 4.19 | 4.19 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.18                  | 4.15 | 4.15 | 0.04            | 0.02 | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.14                  | 4.12 | 4.12 | 0.04            | 0.04 | 0.02  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.12                  | 4.09 | 4.10 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.07 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.02 | 4.02 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.99                  | 3.97 | 3.97 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.98                  | 3.95 | 3.96 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.95                  | 3.93 | 3.93 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.94                  | 3.91 | 3.92 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.92                  | 3.90 | 3.90 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.89 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.88                  | 3.86 | 3.86 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.83                  | 3.81 | 3.81 | 0.05            | 0.02 | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.05 | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.73 | 3.73 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.61 | 3.60 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.50                  | 3.48 | 3.49 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.35                  | 3.35 | 3.35 | 0.00            | 0.00 | 0.00  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 7

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.48 | 0.00            | 0.06  | 0.00  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.51                  | 1.50 | 1.50 | 0.17            | 0.12  | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.48                  | 1.47 | 1.47 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.46 | 0.06            | 0.06  | 0.00  | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.45 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.45 | 1.44 | 0.06            | 0.06  | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.44 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.34                  | 4.29 | 4.31 | 0.02            | -0.02 | 0.02  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.37                  | 4.32 | 4.32 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.37                  | 4.32 | 4.31 | 0.04            | 0.04  | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.40                  | 4.34 | 4.33 | 0.06            | 0.04  | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.38                  | 4.34 | 4.33 | 0.02            | 0.02  | -0.02 | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.38                  | 4.34 | 4.33 | 0.04            | 0.04  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.36                  | 4.33 | 4.31 | 0.02            | 0.02  | -0.02 | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.35                  | 4.32 | 4.31 | 0.04            | 0.04  | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.35                  | 4.30 | 4.30 | 0.06            | 0.02  | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.33                  | 4.29 | 4.29 | 0.04            | 0.02  | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.31                  | 4.28 | 4.28 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.30                  | 4.26 | 4.25 | 0.06            | 0.02  | 0.00  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.28                  | 4.24 | 4.24 | 0.06            | 0.02  | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.27                  | 4.23 | 4.23 | 0.06            | 0.02  | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.23                  | 4.19 | 4.19 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.19                  | 4.15 | 4.15 | 0.06            | 0.02  | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.14                  | 4.12 | 4.11 | 0.04            | 0.04  | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.13                  | 4.10 | 4.09 | 0.06            | 0.04  | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.10                  | 4.06 | 4.06 | 0.04            | 0.02  | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.02 | 4.02 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.99                  | 3.97 | 3.97 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.98                  | 3.96 | 3.96 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.95                  | 3.93 | 3.93 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.94                  | 3.92 | 3.92 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.92                  | 3.90 | 3.90 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.88                  | 3.87 | 3.87 | 0.04            | 0.05  | 0.05  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.81 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.05  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.74 | 3.74 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.61 | 3.60 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.49                  | 3.50 | 3.48 | 0.00            | 0.05  | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.35                  | 3.36 | 3.36 | 0.00            | 0.03  | 0.03  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, E-field, Channel 0

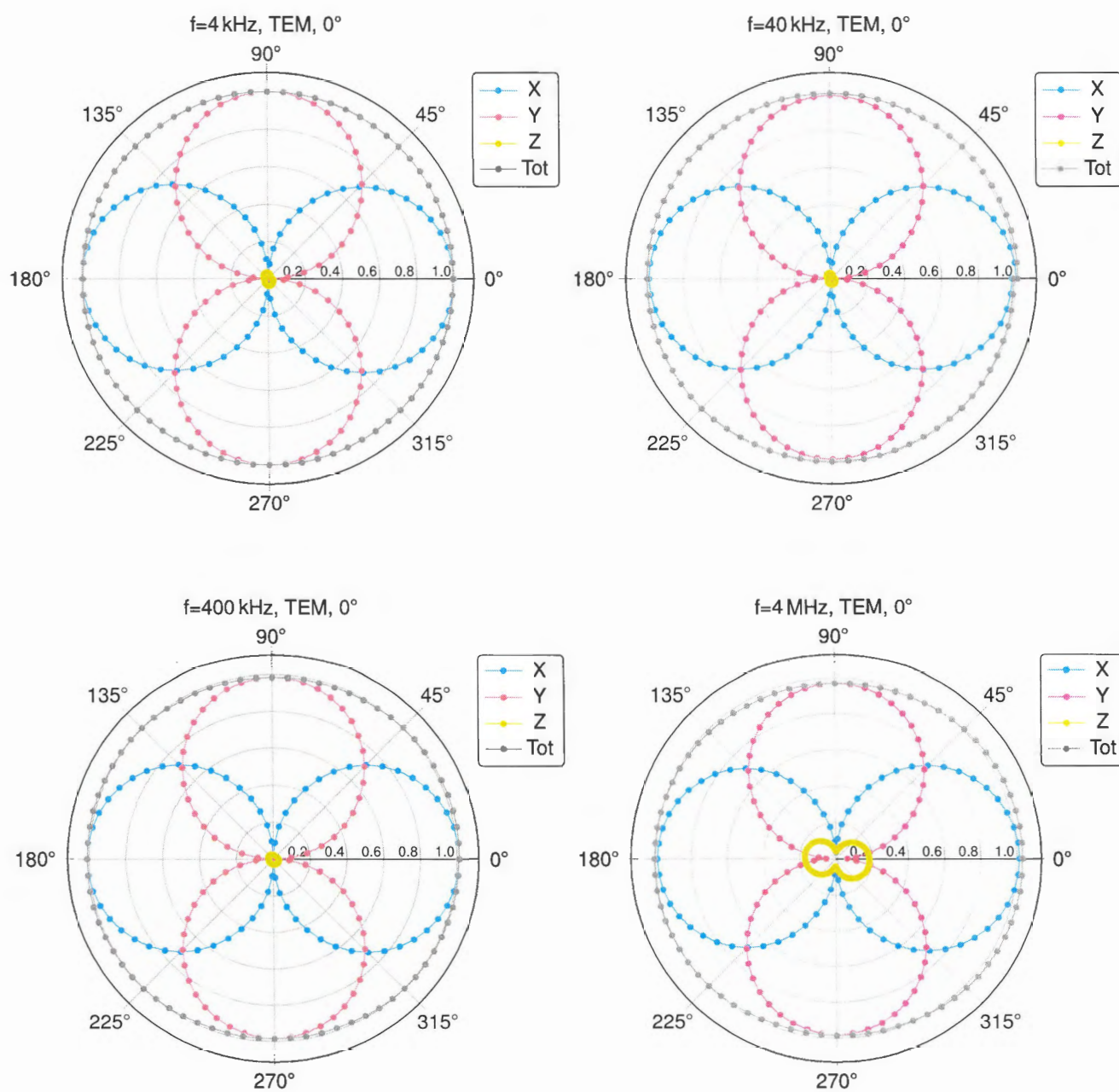
| f/(Hz)   | E-field/(V/m) Applied |     |     | E-field/(V/m) Reading |     |     | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|-----|-----|-----------------------|-----|-----|-----------------|-------|-------|----------------|
|          | x                     | y   | z   | x                     | y   | z   | x               | y     | z     |                |
| 3000     | 165                   | 165 | 167 | 165                   | 165 | 167 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 3200     | 164                   | 164 | 171 | 165                   | 165 | 170 | 0.05            | 0.05  | -0.05 | ±0.3           |
| 4000     | 169                   | 169 | 163 | 169                   | 169 | 163 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 5200     | 165                   | 165 | 165 | 164                   | 165 | 166 | -0.05           | 0.00  | 0.05  | ±0.3           |
| 6600     | 171                   | 171 | 167 | 170                   | 171 | 167 | -0.05           | 0.00  | 0.00  | ±0.3           |
| 8200     | 159                   | 159 | 163 | 158                   | 159 | 163 | -0.05           | 0.00  | 0.00  | ±0.3           |
| 9000     | 167                   | 167 | 167 | 168                   | 168 | 168 | 0.05            | 0.05  | 0.05  | ±0.3           |
| 10600    | 168                   | 168 | 164 | 168                   | 168 | 165 | 0.00            | 0.00  | 0.05  | ±0.3           |
| 13400    | 165                   | 165 | 165 | 165                   | 164 | 166 | 0.00            | -0.05 | 0.05  | ±0.3           |
| 17000    | 163                   | 163 | 166 | 164                   | 164 | 166 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 21400    | 166                   | 166 | 166 | 167                   | 167 | 166 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 27200    | 164                   | 164 | 165 | 164                   | 165 | 165 | 0.00            | 0.05  | 0.00  | ±0.3           |
| 34400    | 167                   | 167 | 164 | 167                   | 167 | 165 | 0.00            | 0.00  | 0.05  | ±0.3           |
| 40000    | 168                   | 168 | 166 | 168                   | 168 | 166 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 43600    | 167                   | 167 | 166 | 167                   | 167 | 166 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 55400    | 167                   | 167 | 167 | 168                   | 167 | 167 | 0.05            | 0.00  | 0.00  | ±0.3           |
| 70000    | 166                   | 166 | 166 | 167                   | 166 | 166 | 0.05            | 0.00  | 0.00  | ±0.3           |
| 88800    | 167                   | 167 | 167 | 168                   | 167 | 167 | 0.05            | 0.00  | 0.00  | ±0.3           |
| 112400   | 168                   | 168 | 168 | 168                   | 168 | 168 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 142400   | 168                   | 168 | 168 | 169                   | 169 | 168 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 161750   | 168                   | 168 | 169 | 169                   | 169 | 169 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 180400   | 170                   | 170 | 169 | 170                   | 170 | 169 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 228400   | 170                   | 170 | 170 | 170                   | 170 | 170 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 289400   | 171                   | 171 | 171 | 172                   | 171 | 171 | 0.05            | 0.00  | 0.00  | ±0.3           |
| 366400   | 173                   | 173 | 172 | 173                   | 173 | 172 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 400000   | 173                   | 173 | 173 | 173                   | 173 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 464000   | 174                   | 174 | 174 | 174                   | 174 | 174 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 587800   | 175                   | 175 | 175 | 175                   | 175 | 175 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 744200   | 175                   | 175 | 175 | 175                   | 175 | 175 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 942600   | 176                   | 176 | 175 | 176                   | 176 | 175 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 1193600  | 176                   | 176 | 175 | 176                   | 176 | 175 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 1511600  | 175                   | 175 | 174 | 175                   | 175 | 174 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 1914400  | 174                   | 174 | 174 | 175                   | 175 | 174 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 2424400  | 174                   | 174 | 173 | 174                   | 174 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 174                   | 174 | 173 | 174                   | 174 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 3888000  | 174                   | 174 | 173 | 174                   | 174 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 4000000  | 174                   | 174 | 173 | 174                   | 174 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 4923800  | 175                   | 175 | 174 | 175                   | 175 | 174 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 6235400  | 177                   | 177 | 176 | 177                   | 177 | 176 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 7896400  | 182                   | 182 | 181 | 182                   | 182 | 181 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 10000000 | 191                   | 191 | 190 | 191                   | 191 | 190 | 0.00            | 0.00  | 0.00  | ±0.3           |

SPEAG E-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied E-fields at calibration points from 3kHz to 10MHz

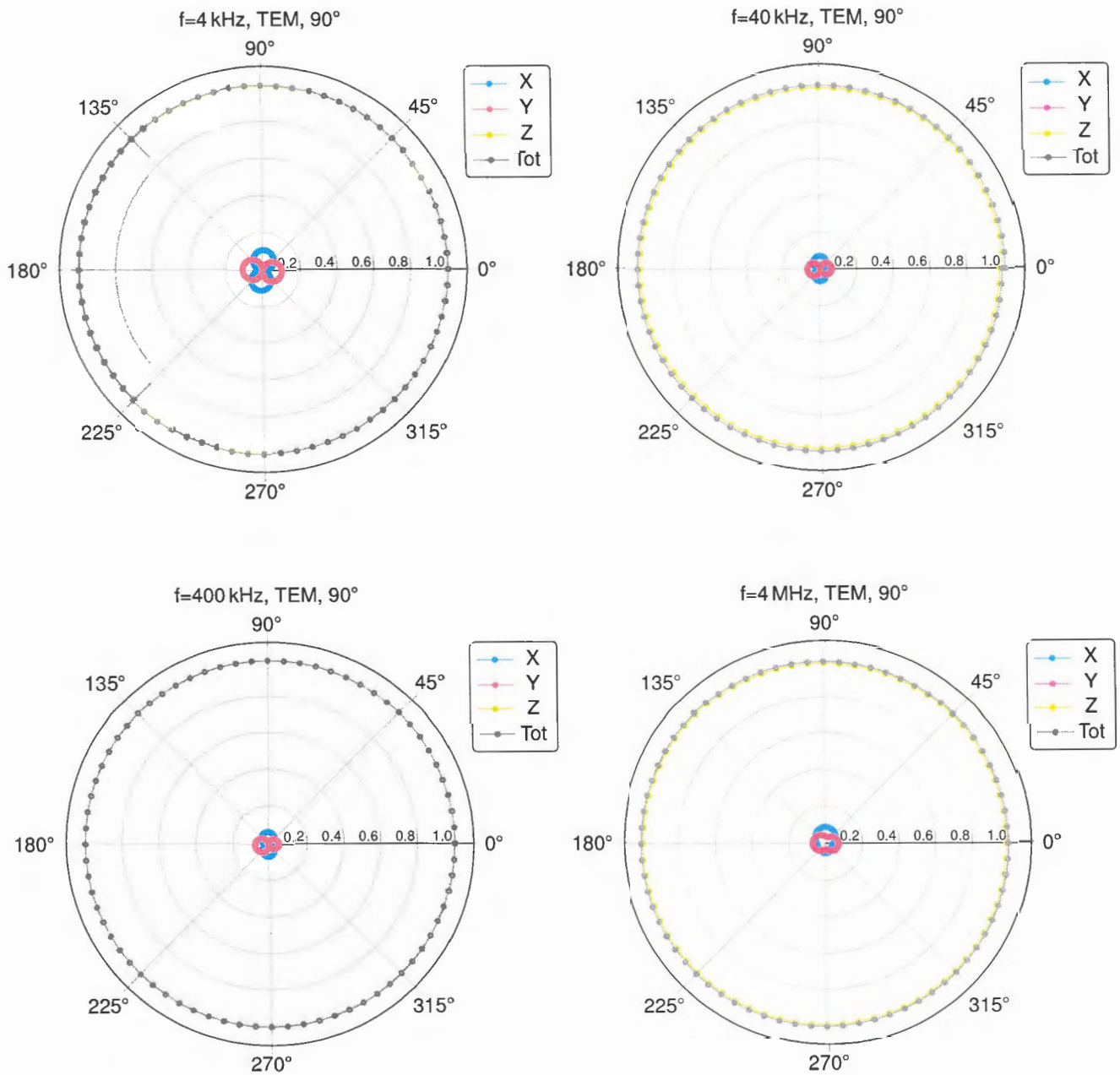
<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Isotropy H-Field

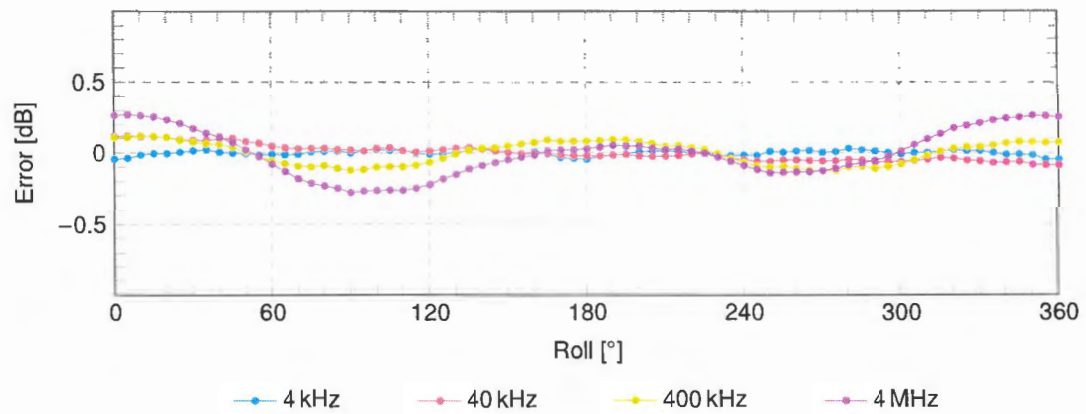
### H-Field Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



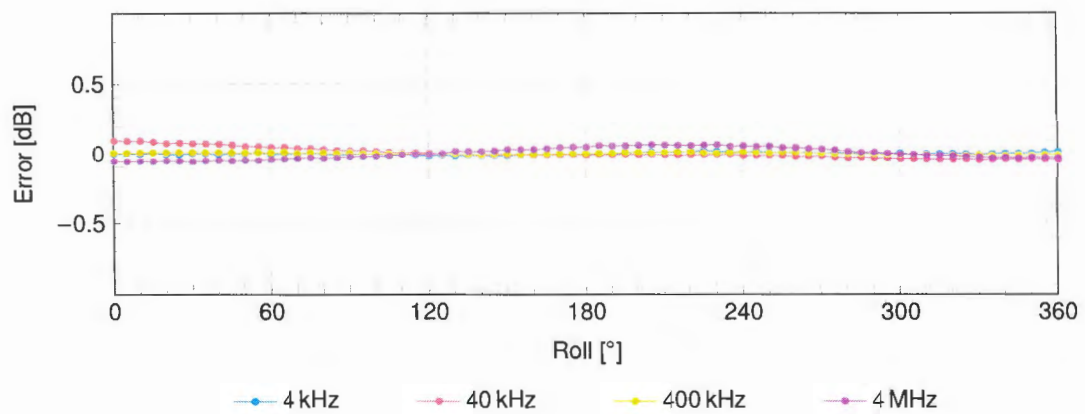
### H-Field Receiving Pattern ( $\phi$ ), $\vartheta = 90^\circ$



### H-Field Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



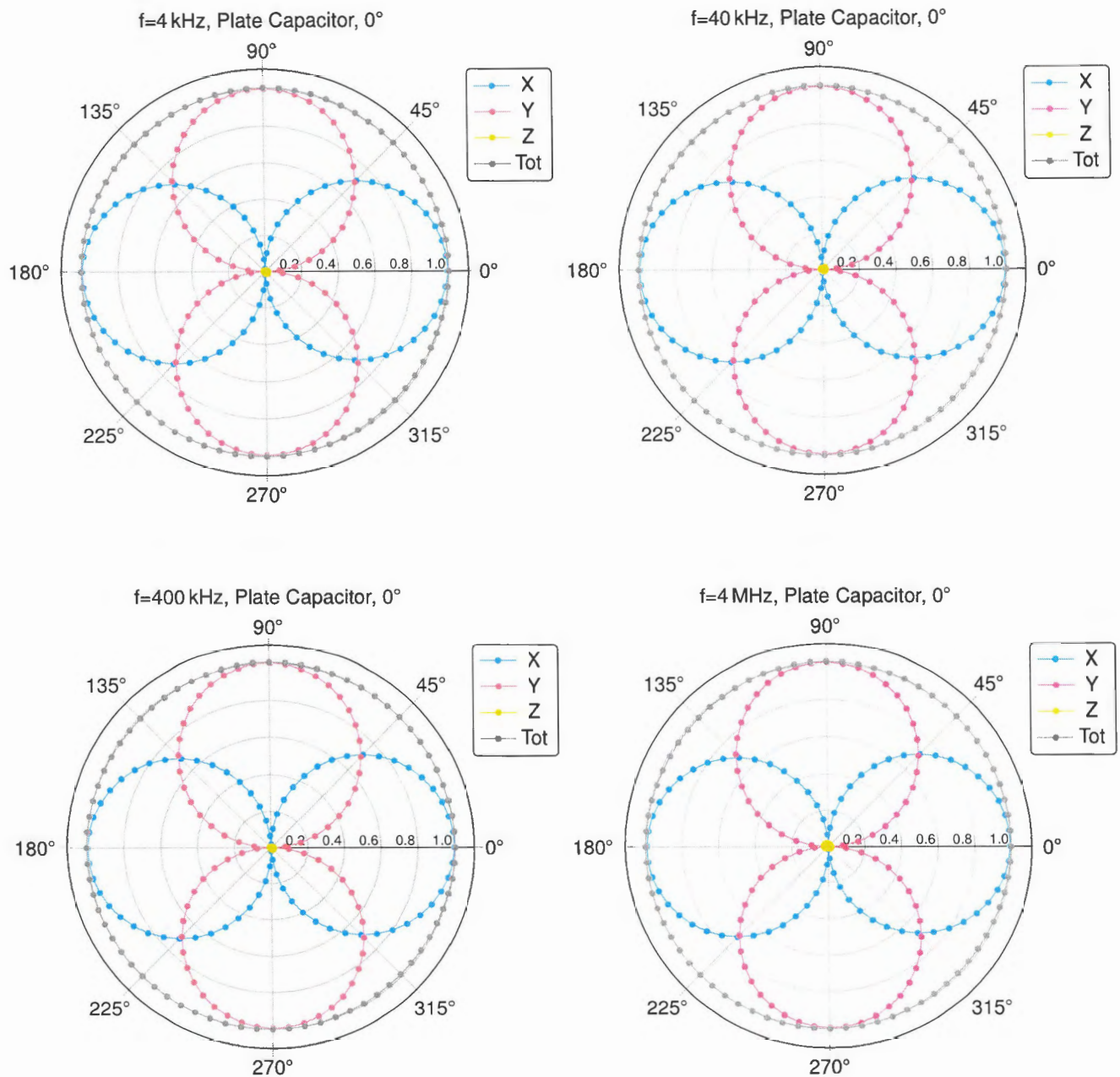
### H-Field Receiving Pattern ( $\phi$ ), $\vartheta = 90^\circ$



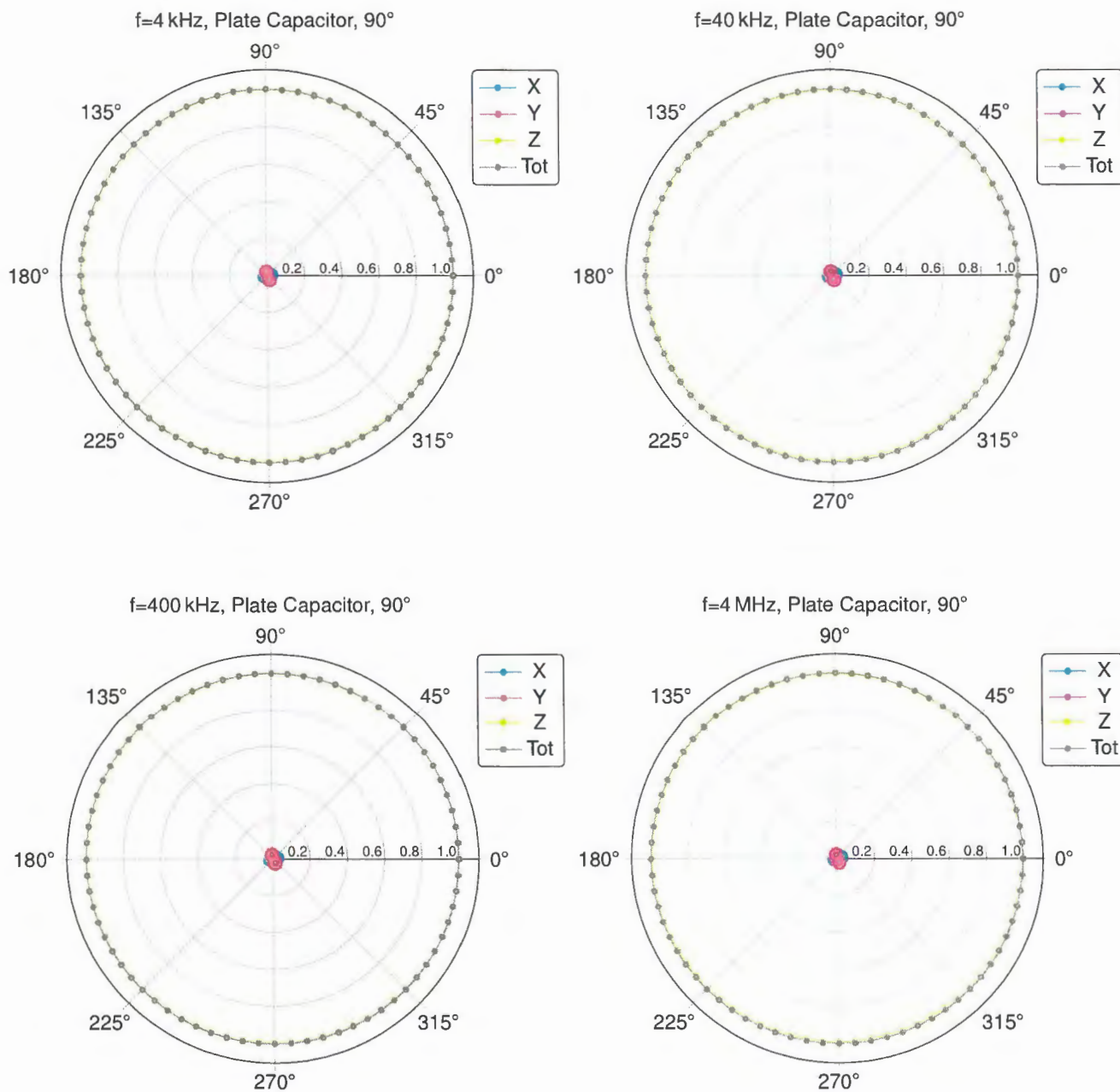
SPEAG axial deviation from the ideal response tolerance for H-field:  $\pm 0.6$  dB

## Isotropy E-Field

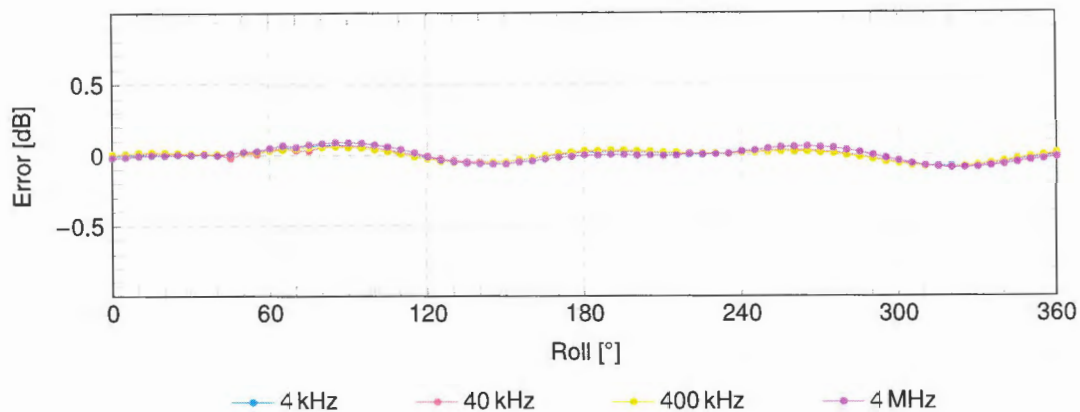
### E-Field Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



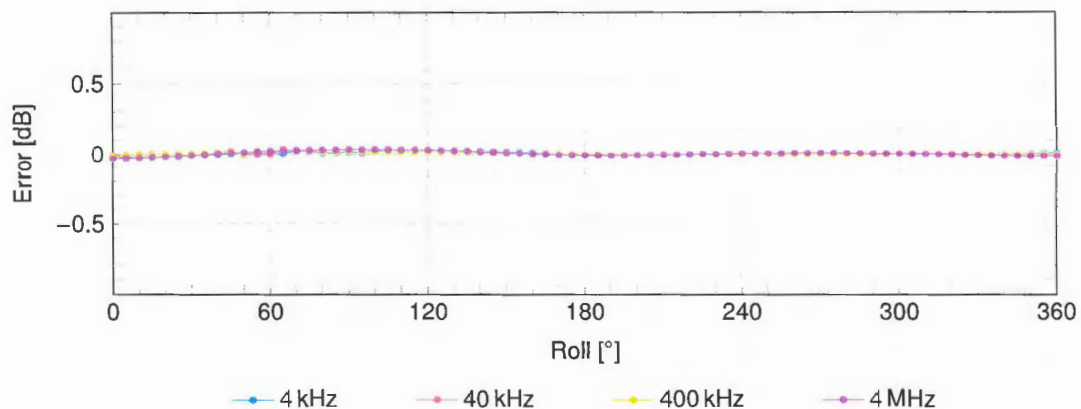
### E-Field Receiving Pattern ( $\phi$ ), $\vartheta = 90^\circ$



### E-Field Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



### E-Field Receiving Pattern ( $\phi$ ), $\vartheta = 90^\circ$



SPEAG axial deviation from the ideal response tolerance for E-field:  $\pm 0.8$  dB

Client **CTC Advanced**  
**Saarbrücken, Germany**

Certificate No: **V-Coil50/400-1021\_Nov23**

## CALIBRATION CERTIFICATE

Object **V-Coil50/400 - SN: 1021**

Calibration procedure(s) **QA CAL-47.v2**  
**Calibration Procedure for WPT Verification & Validation Sources**

Calibration date: **November 2, 2023**

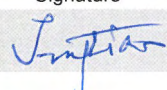
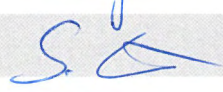
This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards  | ID #          | Cal Date (Certificate No.)      | Scheduled Calibration |
|--------------------|---------------|---------------------------------|-----------------------|
| MAGPy-8H3D+E3D/DAS | SN: 3065/3056 | 06-Apr-23 (MAGPy-8H3D+E3D-3065) | Apr-24                |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---------------------|------|-----------------------|-----------------|
|---------------------|------|-----------------------|-----------------|

|                | Name        | Function          | Signature                                                                             |
|----------------|-------------|-------------------|---------------------------------------------------------------------------------------|
| Calibrated by: | Jingtian Xi | Project Leader    |  |
| Approved by:   | Sven Kühn   | Technical Manager |  |

Issued: November 3, 2023

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

**Glossary:**

|     |                           |
|-----|---------------------------|
| WPT | wireless power transfer   |
| V&V | verification & validation |

**Calibration is Performed According to the Following Standards:**

- Internal procedure QA CAL-47 Calibration procedure for WPT verification & validation sources from 3 kHz to 10 MHz
- IEC/IEEE 63164, "Assessment methods of the human exposure to electric and magnetic fields from wireless power transfer systems – Models, instrumentation, measurement and computational methods and procedures (Frequency range 3 kHz to 30 MHz)", draft standard, 2023

**Additional Documentation:**

- a) cDASY6/DASY8 Module WPT Manual

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* The V&V source is switched on for at least 30 minutes.
- *Source Positioning:* The V&V source is placed in the center of the UniPV1 phantom such that the source surface is parallel to phantom surface. The probe location used for DUT teaching is the top center of the coil (marked on the source casing). The probe distance is verified using mechanical gauges placed on the source surface.
- *H-field distribution:* H-field is measured in the volume above the V&V source in a rectilinear grid with a uniform grid step of 7.33 mm.

**Calibrated Quantity**

- Local peak H-field at  $d$  mm

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

## Measurement Conditions

|                                       |                   |                                  |
|---------------------------------------|-------------------|----------------------------------|
| Software version                      | cDASY6 Module WPT | 2.2.0                            |
|                                       | Notebook GUI      | 2.2.0                            |
|                                       | Sim4Life          | 7.2.4                            |
| Scan setup                            | Grid dimensions   | x: 169 mm, y: 169 mm, z: 36.7 mm |
|                                       | Grid resolutions  | dx, dy, dz: 7.33 mm              |
| Distance (relative to source surface) | 0 mm              |                                  |
| Frequency                             | 400 kHz           |                                  |

## Calibrated Quantities

| Distance (relative to source surface) (mm) | Peak H-field (A/m) | Uncertainty (k=2) (dB) |
|--------------------------------------------|--------------------|------------------------|
| 0                                          | 280                | 1.13                   |

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

### Peak values of induced fields<sup>1</sup>

| Distance<br>(relative to<br>source surface)<br>(mm) | Induced<br>peak current<br>density, 1cm <sup>2</sup> area<br>avg. (A/m <sup>2</sup> ) | Induced peak E-field (V/m) |               | peak spatial SAR (mW/kg) |          |
|-----------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------|---------------|--------------------------|----------|
|                                                     |                                                                                       | 2mm cube avg.              | 5mm line avg. | 1g avg.                  | 10g avg. |
| 0                                                   | 2.79                                                                                  | 4.42                       | 4.53          | 7.67                     | 3.79     |

### Voltage measurement

| Total voltage (V) | Voltages at harmonics (dBc)                                          |
|-------------------|----------------------------------------------------------------------|
| 0.4133            | Highest harmonic: -21.76<br>2 <sup>nd</sup> highest harmonic: -31.64 |

<sup>1</sup> determined for a virtual half-space phantom with tissue properties  $\epsilon_r = 55$ ,  $\sigma = 0.75$  S/m,  $\rho = 1000$  kg/m<sup>3</sup>

# Measurement report

## cDASY6 Module WPT Measurement Report

### Device under test

Info:  
V-Coil50/400

Serial number:  
1021

Scenario:  
source calibration

### Tool info

DASY software version:  
cDASY6 Module WPT 2.2.0.3801

Probe model, serial no. and configuration date:  
MAGPy-8H3D+E3Dv2, WP000030, 2023/06/16

Software version:  
2.0.39, backend: 0.9.2

### Scan info

Center location:  
x: -9.27 mm, y: 71.92 mm, z: 85.67 mm

Dimensions:  
x: 80.7 mm, y: 80.7 mm, z: 36.7 mm

Resolution:  
x: 7.33 mm, y: 7.33 mm, z: 7.33 mm

Completed on:  
2023/11/02 18:51:36

### Measurement results

Maximum H-field [RMS]:

MAGNITUDE: 142.78 A/m

x: 27.99 A/m, y: 19.03 A/m, z: 138.71 A/m

Maximum H-field location relative to DUT:

x: 3.67 mm, y: 3.67 mm, z: 8.00 mm

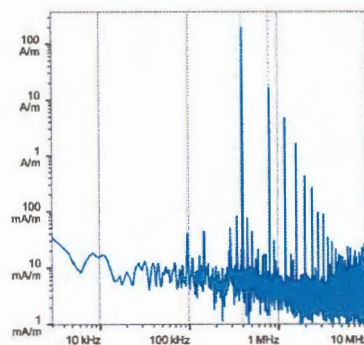
Distance to -20.0 dB boundary:

36.67 mm

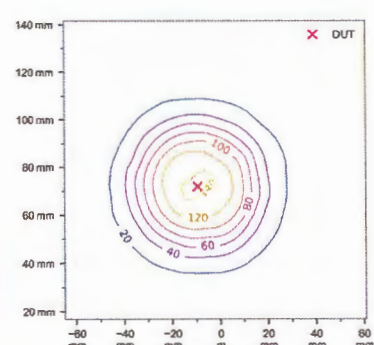
Offset relative to DUT:

x: 0.00 m, y: 0.00 m, z: 500.00  $\mu$ m

### H-field magnitude [RMS] at maximum location



### H-field magnitude [RMS] at lowest plane



### Incident fields, and induced quantities in the anatomical model (f = 400.00 kHz, $\sigma = 0.750$ S/m, tissue density = 1,000 kg/m<sup>3</sup>)

| Distance [mm] | Peak incident fields<br>H <sub>inc</sub> [A/m, rms] | Peak E <sub>ind</sub> [V/m, rms] |       |           | Peak J <sub>ind</sub> [A/m <sup>2</sup> , rms] | psSAR [mW/kg] |          | H-field extent<br>-20 dB radius [mm] | Errors |                  |                 |
|---------------|-----------------------------------------------------|----------------------------------|-------|-----------|------------------------------------------------|---------------|----------|--------------------------------------|--------|------------------|-----------------|
|               |                                                     | Cube avg.                        | Local | Line avg. |                                                | 1g avg.       | 10g avg. |                                      | Sign   | Vector potential | Boundary effect |
| 0.0           | 280.0                                               | 4.42                             | 4.54  | 4.53      | 2.79                                           | 7.67          | 3.79     | 38.7                                 | 1%     | 8%               | 23%             |

### Standard compliance evaluation (with multi-frequency enhancement, total field evaluation)

| Distance [mm] | ICNIRP 2010/2020 [dB] |                       |       | ICNIRP 1998 [dB]      |                       |       | IEEE 2019 [dB]        |                       |       | FCC [dB]              |                       |       | HC Code 6 [dB]        |                       |       |
|---------------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|
|               | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak J <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR |
| 0.0           | 27.2                  | -19.8                 | -27.2 | 43.7                  | 13.1                  | -27.2 | 9.8                   | -23.4                 | -27.2 | 44.7                  | -19.8                 | -23.2 | 43.7                  | -19.6                 | -23.2 |

### Standard compliance evaluation (coverage factor-adjusted) (with multi-frequency enhancement, total field evaluation)

| Distance [mm] | ICNIRP 2010/2020 [dB] |                       |       | ICNIRP 1998 [dB]      |                       |       | IEEE 2019 [dB]        |                       |       | FCC [dB]              |                       |       | HC Code 6 [dB]        |                       |       |
|---------------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|
|               | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak J <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR |
| 0.0           | 27.2                  | -6.7                  | -27.2 | 43.7                  | 13.1                  | -27.2 | 9.8                   | -15.2                 | -27.2 | 44.7                  | -6.7                  | -23.2 | 43.7                  | -3.6                  | -23.2 |

Coverage factors:  $W_{E_{ind}, \text{cube avg.}} = [5.381]$ ,  $W_{E_{ind}, \text{line avg.}} = [2.949]$

Document generated at 2023/11/02 18:56:24, simulation performed at 2023/11/02 18:53:41 using Sim4Life version 7.2.4.14019



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Accreditation No.: **SCS 0108**

Client

**CTC Advanced**  
Saarbrücken, Germany

Certificate No.

**MAGPy-8H3D-3079**

## CALIBRATION CERTIFICATE

Object

**MAGPy-8H3D+E3D SN:3079**  
**MAGPy-DAS SN:1023**

Calibration procedure(s)

**QA CAL-46.v1**  
**Calibration Procedure for MAGPy-8H3D+E3D**  
**Near-field Electric and Magnetic Field Sensor System**

Calibration date

**October 24, 2023**

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  $(22 \pm 3)^{\circ}\text{C}$  and humidity  $< 70\%$ .

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID                 | Cal Date (Certificate No.)   | Scheduled Calibration |
|----------------------------|--------------------|------------------------------|-----------------------|
| Oscilloscope               | SN: 110918         | 22-Oct-22 (No. 1335.8794K04) | Oct-23                |
| Reference 20 dB Attenuator | SN: CC2552 (20x)   | 04-Apr-23 (No. 217-03527)    | Apr-24                |
| Type-N mismatch            | SN: 310982 / 06327 | 04-Apr-23 (No. 217-03528)    | Apr-24                |

| Secondary Standards     | ID             | Check Date (in house)  | Scheduled Check        |
|-------------------------|----------------|------------------------|------------------------|
| Network Analyzer E5061B | SN: MY49810822 | In house check: Nov-22 | In house check: Nov-23 |
| TEM Cell                | SN: S6029i     | In house check: Nov-22 | N.A                    |
| Plate Capacitor         | SN: 6028i      | In house check: Nov-22 | In house check: Nov-23 |
| Resonator (160kHz)      | SN: 6030i      | In house check: Nov-22 | In house check: Nov-23 |

|               | Name               | Function            | Signature |
|---------------|--------------------|---------------------|-----------|
| Calibrated by | Aidonia Georgiadou | Laboratory Engineer |           |
| Approved by   | Sven Kühn          | Technical Manager   |           |

Issued: October 24, 2023

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**Accreditation No.: SCS 0108**

## Glossary

MAGPy-8H3D-E3D    Magnetic Amplitude and Gradient Probe – Eight H-field Sensors, Single E-field sensor  
MAGPy-DAS        Magnetic Amplitude and Gradient Data Acquisition System

## Calibration is Performed According to the Following Standards:

- a) IEEE Std 1309-2013, "IEEE Standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz", November 2013

## Methods Applied and Interpretation of Parameters

- Calibration has been performed after the adjustment of the device.
- *Linearity*: Calibration of the linearity of the field reading over the specified dynamic range at 161.75 kHz. Influence of offset voltage is included in this measurement.
- *Frequency response*: Calibration of the field reading over the specified frequency range from 3.0 kHz to 10.0 MHz.
- Receiving Pattern: Assessed for H-field polarizations  $\vartheta$ , and  $\phi = 0^\circ \dots 360^\circ$ ;  $\vartheta = 90^\circ$ , and  $\phi = 0^\circ \dots 360^\circ$ ; for the XYZ sensors (in TEM-Cell at 4 kHz, 40 kHz, 400 kHz and 4 MHz).
- Receiving Pattern: Assessed for E-field polarizations  $\vartheta$ , and  $\phi = 0^\circ \dots 360^\circ$ ;  $\vartheta = 90^\circ$ , and  $\phi = 0^\circ \dots 360^\circ$ ; for the XYZ sensor (in parallel plate capacitor at 4 kHz, 40 kHz, 400 kHz and 4 MHz).

## Calibration Uncertainty

The calibration uncertainty is 0.7 dB for the H-field readings and 1.06 dB for the E-field readings. The calibration uncertainty is specified over the frequency range from 3.0 kHz to 10.0 MHz and a dynamic range from 0.1 A/m to 3200 A/m and from 0.08 V/m to 2000 V/m respectively.

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

|                        |                                |                  |
|------------------------|--------------------------------|------------------|
| Unit Type              | MAGPy-8H3D+E3D (SP MGY 303 AA) | 3079             |
|                        | MAGPy-DAS (SE UMS 303 AC)      | 1023             |
|                        | MAGPy FPGA Board               | WP000009         |
| Adjustment Date        | Last MAGPy Adjustment          | October 24, 2023 |
| Firmware SW Version    | MAGPy Firmware                 | Ver. 1.00        |
| Backend SW Version     | MAGPy Backend                  | Ver. 1.0.2       |
| Calibration SW Version | MAGACAP                        | Ver. 1.0         |

## Dynamic Range

### Dynamic Range, H-field, Channel 0

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.380 | 0.370 | 0.420                 | 0.400 | 0.390 | 0.42            | 0.45  | 0.46  | ±1.00          |
| 0.540                 | 0.520 | 0.510 | 0.560                 | 0.540 | 0.520 | 0.32            | 0.33  | 0.17  | ±1.00          |
| 0.740                 | 0.710 | 0.690 | 0.740                 | 0.740 | 0.680 | 0.00            | 0.36  | -0.13 | ±1.00          |
| 0.960                 | 0.930 | 0.910 | 0.970                 | 0.960 | 0.890 | 0.09            | 0.28  | -0.19 | ±1.00          |
| 1.30                  | 1.26  | 1.22  | 1.30                  | 1.28  | 1.22  | 0.00            | 0.14  | 0.00  | ±1.00          |
| 1.79                  | 1.73  | 1.68  | 1.79                  | 1.73  | 1.69  | 0.00            | 0.00  | 0.05  | ±1.00          |
| 2.38                  | 2.31  | 2.24  | 2.39                  | 2.31  | 2.24  | 0.04            | 0.00  | 0.00  | ±0.20          |
| 3.19                  | 3.09  | 3.00  | 3.18                  | 3.09  | 3.01  | -0.03           | 0.00  | 0.03  | ±0.20          |
| 4.33                  | 4.20  | 4.07  | 4.32                  | 4.20  | 4.09  | -0.02           | 0.00  | 0.04  | ±0.20          |
| 5.85                  | 5.67  | 5.51  | 5.86                  | 5.70  | 5.52  | 0.01            | 0.05  | 0.02  | ±0.20          |
| 7.87                  | 7.63  | 7.40  | 7.89                  | 7.65  | 7.42  | 0.02            | 0.02  | 0.02  | ±0.20          |
| 10.5                  | 10.2  | 9.89  | 10.5                  | 10.2  | 9.91  | 0.00            | 0.00  | 0.02  | ±0.20          |
| 14.2                  | 13.8  | 13.4  | 14.2                  | 13.8  | 13.4  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.1                  | 18.6  | 18.0  | 19.2                  | 18.6  | 18.1  | 0.05            | 0.00  | 0.05  | ±0.20          |
| 25.9                  | 25.1  | 24.3  | 25.9                  | 25.1  | 24.3  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 34.5                  | 33.5  | 32.4  | 34.7                  | 33.6  | 32.6  | 0.05            | 0.03  | 0.05  | ±0.20          |
| 46.6                  | 45.2  | 43.9  | 46.8                  | 45.4  | 44.0  | 0.04            | 0.04  | 0.02  | ±0.20          |
| 63.0                  | 61.2  | 59.4  | 63.4                  | 61.5  | 59.6  | 0.05            | 0.04  | 0.03  | ±0.20          |
| 86.5                  | 84.0  | 81.5  | 86.3                  | 83.8  | 81.3  | -0.02           | -0.02 | -0.02 | ±0.20          |
| 113                   | 110   | 107   | 113                   | 110   | 106   | 0.00            | 0.00  | -0.08 | ±0.20          |
| 156                   | 151   | 147   | 155                   | 151   | 146   | -0.06           | 0.00  | -0.06 | ±0.20          |
| 216                   | 210   | 203   | 215                   | 209   | 203   | -0.04           | -0.04 | 0.00  | ±0.20          |
| 299                   | 290   | 281   | 300                   | 285   | 276   | 0.03            | -0.15 | -0.16 | ±0.20          |
| 441                   | 428   | 415   | 435                   | 423   | 410   | -0.12           | -0.10 | -0.11 | ±0.20          |
| 608                   | 590   | 572   | 603                   | 587   | 568   | -0.07           | -0.04 | -0.06 | ±0.20          |
| 905                   | 880   | 853   | 908                   | 884   | 856   | 0.03            | 0.04  | 0.03  | ±0.20          |
| 1370                  | 1330  | 1290  | 1390                  | 1350  | 1310  | 0.13            | 0.13  | 0.13  | ±0.30          |
| 1880                  | 1830  | 1770  | 1930                  | 1880  | 1820  | 0.23            | 0.23  | 0.24  | ±0.30          |
| 3040                  | 2960  | 2870  | 3160                  | 3080  | 2980  | 0.34            | 0.35  | 0.33  | ±0.50          |
| 3670                  | 3570  | 3470  | 3820                  | 3730  | 3620  | 0.35            | 0.38  | 0.37  | ±0.50          |

SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

# Dynamic Range, H-field, Channel 1

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.390                 | 0.390 | 0.380 | 0.400                 | 0.410 | 0.420 | 0.22            | 0.43  | 0.87  | ±1.00          |
| 0.540                 | 0.530 | 0.520 | 0.540                 | 0.540 | 0.560 | 0.00            | 0.16  | 0.64  | ±1.00          |
| 0.740                 | 0.720 | 0.720 | 0.730                 | 0.720 | 0.740 | -0.12           | 0.00  | 0.24  | ±1.00          |
| 0.960                 | 0.940 | 0.930 | 0.970                 | 0.940 | 0.950 | 0.09            | 0.00  | 0.18  | ±1.00          |
| 1.30                  | 1.28  | 1.26  | 1.31                  | 1.29  | 1.29  | 0.07            | 0.07  | 0.20  | ±1.00          |
| 1.78                  | 1.75  | 1.74  | 1.79                  | 1.75  | 1.77  | 0.05            | 0.00  | 0.15  | ±1.00          |
| 2.38                  | 2.34  | 2.31  | 2.38                  | 2.36  | 2.32  | 0.00            | 0.07  | 0.04  | ±0.20          |
| 3.18                  | 3.13  | 3.10  | 3.18                  | 3.13  | 3.12  | 0.00            | 0.00  | 0.06  | ±0.20          |
| 4.32                  | 4.25  | 4.20  | 4.33                  | 4.25  | 4.22  | 0.02            | 0.00  | 0.04  | ±0.20          |
| 5.84                  | 5.74  | 5.68  | 5.84                  | 5.76  | 5.69  | 0.00            | 0.03  | 0.02  | ±0.20          |
| 7.86                  | 7.73  | 7.64  | 7.87                  | 7.76  | 7.65  | 0.01            | 0.03  | 0.01  | ±0.20          |
| 10.5                  | 10.3  | 10.2  | 10.5                  | 10.3  | 10.2  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.2                  | 13.9  | 13.8  | 14.2                  | 14.0  | 13.8  | 0.00            | 0.06  | 0.00  | ±0.20          |
| 19.1                  | 18.8  | 18.6  | 19.1                  | 18.8  | 18.6  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 25.8                  | 25.4  | 25.1  | 25.8                  | 25.4  | 25.1  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 34.5                  | 33.9  | 33.5  | 34.6                  | 34.0  | 33.7  | 0.03            | 0.03  | 0.05  | ±0.20          |
| 46.5                  | 45.8  | 45.3  | 46.7                  | 45.9  | 45.5  | 0.04            | 0.02  | 0.04  | ±0.20          |
| 63.0                  | 61.9  | 61.3  | 63.3                  | 62.2  | 61.6  | 0.04            | 0.04  | 0.04  | ±0.20          |
| 86.4                  | 85.1  | 84.2  | 86.2                  | 84.8  | 83.9  | -0.02           | -0.03 | -0.03 | ±0.20          |
| 113                   | 111   | 110   | 113                   | 111   | 110   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 156                   | 153   | 151   | 155                   | 153   | 151   | -0.06           | 0.00  | 0.00  | ±0.20          |
| 216                   | 212   | 210   | 215                   | 212   | 209   | -0.04           | 0.00  | -0.04 | ±0.20          |
| 298                   | 294   | 290   | 300                   | 289   | 285   | 0.06            | -0.15 | -0.15 | ±0.20          |
| 441                   | 433   | 428   | 434                   | 428   | 423   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 607                   | 598   | 591   | 602                   | 594   | 586   | -0.07           | -0.06 | -0.07 | ±0.20          |
| 904                   | 890   | 880   | 907                   | 895   | 884   | 0.03            | 0.05  | 0.04  | ±0.20          |
| 1370                  | 1350  | 1330  | 1390                  | 1370  | 1350  | 0.13            | 0.13  | 0.13  | ±0.30          |
| 1880                  | 1850  | 1830  | 1930                  | 1910  | 1880  | 0.23            | 0.28  | 0.23  | ±0.30          |
| 3040                  | 3000  | 2960  | 3150                  | 3120  | 3080  | 0.31            | 0.34  | 0.35  | ±0.50          |
| 3670                  | 3610  | 3580  | 3820                  | 3770  | 3730  | 0.35            | 0.38  | 0.36  | ±0.50          |

## SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000A/m
- ±0.5dB for applied H-fields ≥ 3000A/m

<sup>1</sup>Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 2

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.390 | 0.410                 | 0.410 | 0.420 | 0.21            | 0.43  | 0.64  | ±1.00          |
| 0.550                 | 0.530 | 0.530 | 0.550                 | 0.550 | 0.550 | 0.00            | 0.32  | 0.32  | ±1.00          |
| 0.750                 | 0.720 | 0.720 | 0.750                 | 0.740 | 0.730 | 0.00            | 0.24  | 0.12  | ±1.00          |
| 0.970                 | 0.940 | 0.940 | 0.990                 | 0.940 | 0.950 | 0.18            | 0.00  | 0.09  | ±1.00          |
| 1.32                  | 1.27  | 1.27  | 1.35                  | 1.26  | 1.29  | 0.20            | -0.07 | 0.14  | ±1.00          |
| 1.81                  | 1.75  | 1.75  | 1.83                  | 1.74  | 1.78  | 0.10            | -0.05 | 0.15  | ±1.00          |
| 2.42                  | 2.33  | 2.34  | 2.43                  | 2.34  | 2.36  | 0.04            | 0.04  | 0.07  | ±0.20          |
| 3.24                  | 3.11  | 3.12  | 3.24                  | 3.11  | 3.13  | 0.00            | 0.00  | 0.03  | ±0.20          |
| 4.39                  | 4.23  | 4.24  | 4.39                  | 4.23  | 4.25  | 0.00            | 0.00  | 0.02  | ±0.20          |
| 5.94                  | 5.72  | 5.73  | 5.93                  | 5.71  | 5.73  | -0.01           | -0.02 | 0.00  | ±0.20          |
| 7.99                  | 7.70  | 7.71  | 7.99                  | 7.70  | 7.70  | 0.00            | 0.00  | -0.01 | ±0.20          |
| 10.7                  | 10.3  | 10.3  | 10.7                  | 10.3  | 10.3  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.4                  | 13.9  | 13.9  | 14.4                  | 13.9  | 13.9  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.4                  | 18.8  | 18.8  | 19.5                  | 18.8  | 18.8  | 0.04            | 0.00  | 0.00  | ±0.20          |
| 26.3                  | 25.3  | 25.3  | 26.3                  | 25.3  | 25.4  | 0.00            | 0.00  | 0.03  | ±0.20          |
| 35.0                  | 33.8  | 33.8  | 35.2                  | 33.9  | 34.0  | 0.05            | 0.03  | 0.05  | ±0.20          |
| 47.3                  | 45.6  | 45.7  | 47.5                  | 45.7  | 45.9  | 0.04            | 0.02  | 0.04  | ±0.20          |
| 64.0                  | 61.7  | 61.8  | 64.3                  | 62.0  | 62.1  | 0.04            | 0.04  | 0.04  | ±0.20          |
| 87.9                  | 84.8  | 84.9  | 87.7                  | 84.5  | 84.6  | -0.02           | -0.03 | -0.03 | ±0.20          |
| 115                   | 111   | 111   | 115                   | 111   | 111   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 158                   | 152   | 153   | 158                   | 152   | 152   | 0.00            | 0.00  | -0.06 | ±0.20          |
| 219                   | 211   | 212   | 219                   | 211   | 211   | 0.00            | 0.00  | -0.04 | ±0.20          |
| 303                   | 293   | 293   | 305                   | 288   | 288   | 0.06            | -0.15 | -0.15 | ±0.20          |
| 448                   | 432   | 432   | 441                   | 427   | 427   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 617                   | 595   | 596   | 612                   | 592   | 592   | -0.07           | -0.04 | -0.06 | ±0.20          |
| 919                   | 887   | 888   | 923                   | 892   | 892   | 0.04            | 0.05  | 0.04  | ±0.20          |
| 1390                  | 1340  | 1340  | 1410                  | 1370  | 1360  | 0.12            | 0.19  | 0.13  | ±0.30          |
| 1910                  | 1850  | 1850  | 1960                  | 1900  | 1900  | 0.22            | 0.23  | 0.23  | ±0.30          |
| 3090                  | 2980  | 2990  | 3210                  | 3100  | 3100  | 0.33            | 0.34  | 0.31  | ±0.50          |
| 3730                  | 3600  | 3610  | 3880                  | 3760  | 3770  | 0.34            | 0.38  | 0.38  | ±0.50          |

### SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000A/m
- ±0.3dB for applied H-fields ≥ 1000A/m and < 2000A/m
- ±0.4dB for applied H-fields ≥ 2000A/m and < 3000A/m
- ±0.5dB for applied H-fields ≥ 3000A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

### Dynamic Range, H-field, Channel 3

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.380 | 0.420                 | 0.410 | 0.390 | 0.42            | 0.43  | 0.23  | ±1.00          |
| 0.550                 | 0.530 | 0.520 | 0.550                 | 0.550 | 0.510 | 0.00            | 0.32  | -0.17 | ±1.00          |
| 0.750                 | 0.720 | 0.710 | 0.750                 | 0.710 | 0.710 | 0.00            | -0.12 | 0.00  | ±1.00          |
| 0.980                 | 0.940 | 0.920 | 0.980                 | 0.940 | 0.930 | 0.00            | 0.00  | 0.09  | ±1.00          |
| 1.32                  | 1.28  | 1.25  | 1.33                  | 1.28  | 1.24  | 0.07            | 0.00  | -0.07 | ±1.00          |
| 1.82                  | 1.76  | 1.72  | 1.82                  | 1.74  | 1.72  | 0.00            | -0.10 | 0.00  | ±1.00          |
| 2.42                  | 2.34  | 2.29  | 2.42                  | 2.35  | 2.29  | 0.00            | 0.04  | 0.00  | ±0.20          |
| 3.24                  | 3.13  | 3.06  | 3.24                  | 3.13  | 3.07  | 0.00            | 0.00  | 0.03  | ±0.20          |
| 4.40                  | 4.25  | 4.16  | 4.39                  | 4.25  | 4.17  | -0.02           | 0.00  | 0.02  | ±0.20          |
| 5.95                  | 5.75  | 5.62  | 5.95                  | 5.76  | 5.63  | 0.00            | 0.02  | 0.02  | ±0.20          |
| 8.00                  | 7.74  | 7.55  | 8.01                  | 7.76  | 7.57  | 0.01            | 0.02  | 0.02  | ±0.20          |
| 10.7                  | 10.3  | 10.1  | 10.7                  | 10.3  | 10.1  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.4                  | 14.0  | 13.7  | 14.4                  | 14.0  | 13.6  | 0.00            | 0.00  | -0.06 | ±0.20          |
| 19.5                  | 18.8  | 18.4  | 19.5                  | 18.8  | 18.4  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 26.3                  | 25.4  | 24.8  | 26.3                  | 25.4  | 24.8  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 35.1                  | 33.9  | 33.1  | 35.2                  | 34.1  | 33.3  | 0.02            | 0.05  | 0.05  | ±0.20          |
| 47.4                  | 45.9  | 44.8  | 47.5                  | 46.0  | 44.9  | 0.02            | 0.02  | 0.02  | ±0.20          |
| 64.1                  | 62.0  | 60.6  | 64.4                  | 62.3  | 60.9  | 0.04            | 0.04  | 0.04  | ±0.20          |
| 88.0                  | 85.2  | 83.2  | 87.8                  | 84.9  | 82.9  | -0.02           | -0.03 | -0.03 | ±0.20          |
| 115                   | 111   | 109   | 115                   | 111   | 109   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 158                   | 153   | 150   | 158                   | 153   | 149   | 0.00            | 0.00  | -0.06 | ±0.20          |
| 220                   | 212   | 207   | 219                   | 212   | 207   | -0.04           | 0.00  | 0.00  | ±0.20          |
| 304                   | 294   | 287   | 305                   | 289   | 282   | 0.03            | -0.15 | -0.15 | ±0.20          |
| 449                   | 434   | 424   | 442                   | 429   | 419   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 618                   | 598   | 584   | 613                   | 595   | 580   | -0.07           | -0.04 | -0.06 | ±0.20          |
| 921                   | 891   | 870   | 924                   | 895   | 874   | 0.03            | 0.04  | 0.04  | ±0.20          |
| 1390                  | 1350  | 1320  | 1410                  | 1370  | 1340  | 0.12            | 0.13  | 0.13  | ±0.30          |
| 1910                  | 1850  | 1810  | 1960                  | 1900  | 1860  | 0.22            | 0.23  | 0.24  | ±0.30          |
| 3100                  | 3000  | 2930  | 3210                  | 3090  | 3040  | 0.30            | 0.26  | 0.32  | ±0.50          |
| 3730                  | 3620  | 3540  | 3890                  | 3730  | 3690  | 0.36            | 0.26  | 0.36  | ±0.50          |

#### SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 4

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.390 | 0.400                 | 0.400 | 0.400 | 0.00            | 0.22  | 0.22  | ±1.00          |
| 0.540                 | 0.530 | 0.520 | 0.540                 | 0.520 | 0.530 | 0.00            | -0.17 | 0.17  | ±1.00          |
| 0.740                 | 0.730 | 0.720 | 0.730                 | 0.730 | 0.720 | -0.12           | 0.00  | 0.00  | ±1.00          |
| 0.970                 | 0.950 | 0.940 | 0.960                 | 0.960 | 0.940 | -0.09           | 0.09  | 0.00  | ±1.00          |
| 1.31                  | 1.29  | 1.27  | 1.32                  | 1.32  | 1.27  | 0.07            | 0.20  | 0.00  | ±1.00          |
| 1.80                  | 1.77  | 1.74  | 1.79                  | 1.78  | 1.74  | -0.05           | 0.05  | 0.00  | ±1.00          |
| 2.40                  | 2.36  | 2.32  | 2.40                  | 2.38  | 2.32  | 0.00            | 0.07  | 0.00  | ±0.20          |
| 3.21                  | 3.16  | 3.11  | 3.20                  | 3.17  | 3.10  | -0.03           | 0.03  | -0.03 | ±0.20          |
| 4.36                  | 4.29  | 4.22  | 4.36                  | 4.31  | 4.22  | 0.00            | 0.04  | 0.00  | ±0.20          |
| 5.90                  | 5.80  | 5.70  | 5.90                  | 5.82  | 5.70  | 0.00            | 0.03  | 0.00  | ±0.20          |
| 7.93                  | 7.81  | 7.66  | 7.94                  | 7.82  | 7.66  | 0.01            | 0.01  | 0.00  | ±0.20          |
| 10.6                  | 10.4  | 10.2  | 10.6                  | 10.4  | 10.2  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.3                  | 14.1  | 13.8  | 14.3                  | 14.1  | 13.8  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.3                  | 19.0  | 18.7  | 19.3                  | 19.0  | 18.7  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 26.1                  | 25.6  | 25.2  | 26.1                  | 25.7  | 25.2  | 0.00            | 0.03  | 0.00  | ±0.20          |
| 34.8                  | 34.2  | 33.6  | 35.0                  | 34.4  | 33.8  | 0.05            | 0.05  | 0.05  | ±0.20          |
| 47.0                  | 46.3  | 45.4  | 47.1                  | 46.4  | 45.6  | 0.02            | 0.02  | 0.04  | ±0.20          |
| 63.5                  | 62.5  | 61.5  | 63.9                  | 62.8  | 61.8  | 0.05            | 0.04  | 0.04  | ±0.20          |
| 87.3                  | 86.0  | 84.4  | 87.0                  | 85.7  | 84.2  | -0.03           | -0.03 | -0.02 | ±0.20          |
| 114                   | 112   | 110   | 114                   | 112   | 110   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 157                   | 155   | 152   | 157                   | 154   | 151   | 0.00            | -0.06 | -0.06 | ±0.20          |
| 218                   | 214   | 210   | 217                   | 214   | 210   | -0.04           | 0.00  | 0.00  | ±0.20          |
| 301                   | 297   | 291   | 303                   | 292   | 286   | 0.06            | -0.15 | -0.15 | ±0.20          |
| 445                   | 438   | 430   | 438                   | 432   | 424   | -0.14           | -0.12 | -0.12 | ±0.20          |
| 613                   | 604   | 593   | 607                   | 600   | 589   | -0.09           | -0.06 | -0.06 | ±0.20          |
| 913                   | 899   | 883   | 915                   | 903   | 887   | 0.02            | 0.04  | 0.04  | ±0.20          |
| 1380                  | 1360  | 1330  | 1400                  | 1380  | 1360  | 0.12            | 0.13  | 0.19  | ±0.30          |
| 1900                  | 1870  | 1840  | 1950                  | 1920  | 1890  | 0.23            | 0.23  | 0.23  | ±0.30          |
| 3070                  | 3030  | 2970  | 3180                  | 3140  | 3090  | 0.31            | 0.31  | 0.34  | ±0.50          |
| 3700                  | 3650  | 3590  | 3850                  | 3810  | 3750  | 0.35            | 0.37  | 0.38  | ±0.50          |

SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 5

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.400 | 0.400 | 0.410                 | 0.420 | 0.420 | 0.21            | 0.42  | 0.42  | ±1.00          |
| 0.550                 | 0.540 | 0.540 | 0.540                 | 0.570 | 0.550 | -0.16           | 0.47  | 0.16  | ±1.00          |
| 0.750                 | 0.740 | 0.740 | 0.750                 | 0.730 | 0.740 | 0.00            | -0.12 | 0.00  | ±1.00          |
| 0.980                 | 0.960 | 0.970 | 0.990                 | 0.970 | 0.960 | 0.09            | 0.09  | -0.09 | ±1.00          |
| 1.32                  | 1.31  | 1.31  | 1.33                  | 1.32  | 1.32  | 0.07            | 0.07  | 0.07  | ±1.00          |
| 1.82                  | 1.79  | 1.80  | 1.82                  | 1.79  | 1.82  | 0.00            | 0.00  | 0.10  | ±1.00          |
| 2.43                  | 2.39  | 2.40  | 2.42                  | 2.40  | 2.42  | -0.04           | 0.04  | 0.07  | ±0.20          |
| 3.25                  | 3.20  | 3.21  | 3.24                  | 3.19  | 3.22  | -0.03           | -0.03 | 0.03  | ±0.20          |
| 4.41                  | 4.35  | 4.36  | 4.41                  | 4.34  | 4.37  | 0.00            | -0.02 | 0.02  | ±0.20          |
| 5.97                  | 5.87  | 5.90  | 5.97                  | 5.88  | 5.91  | 0.00            | 0.01  | 0.01  | ±0.20          |
| 8.02                  | 7.90  | 7.93  | 8.03                  | 7.95  | 7.96  | 0.01            | 0.05  | 0.03  | ±0.20          |
| 10.7                  | 10.6  | 10.6  | 10.7                  | 10.6  | 10.6  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.5                  | 14.3  | 14.3  | 14.5                  | 14.3  | 14.3  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.5                  | 19.2  | 19.3  | 19.5                  | 19.3  | 19.3  | 0.00            | 0.05  | 0.00  | ±0.20          |
| 26.4                  | 26.0  | 26.1  | 26.4                  | 26.0  | 26.1  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 35.2                  | 34.7  | 34.7  | 35.4                  | 34.8  | 34.9  | 0.05            | 0.02  | 0.05  | ±0.20          |
| 47.5                  | 46.8  | 47.0  | 47.7                  | 47.0  | 47.1  | 0.04            | 0.04  | 0.02  | ±0.20          |
| 64.3                  | 63.3  | 63.6  | 64.6                  | 63.6  | 63.9  | 0.04            | 0.04  | 0.04  | ±0.20          |
| 88.2                  | 87.0  | 87.3  | 88.0                  | 86.8  | 87.0  | -0.02           | -0.02 | -0.03 | ±0.20          |
| 116                   | 114   | 114   | 115                   | 113   | 114   | -0.08           | -0.08 | 0.00  | ±0.20          |
| 159                   | 157   | 157   | 158                   | 156   | 157   | -0.05           | -0.06 | 0.00  | ±0.20          |
| 220                   | 217   | 218   | 220                   | 217   | 217   | 0.00            | 0.00  | -0.04 | ±0.20          |
| 304                   | 300   | 301   | 306                   | 295   | 296   | 0.06            | -0.15 | -0.15 | ±0.20          |
| 450                   | 443   | 444   | 443                   | 438   | 439   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 620                   | 611   | 613   | 614                   | 607   | 609   | -0.08           | -0.06 | -0.06 | ±0.20          |
| 923                   | 911   | 913   | 925                   | 915   | 918   | 0.02            | 0.04  | 0.05  | ±0.20          |
| 1400                  | 1380  | 1380  | 1420                  | 1400  | 1400  | 0.12            | 0.12  | 0.12  | ±0.30          |
| 1920                  | 1890  | 1900  | 1970                  | 1950  | 1950  | 0.22            | 0.27  | 0.23  | ±0.30          |
| 3100                  | 3060  | 3070  | 3220                  | 3180  | 3190  | 0.33            | 0.33  | 0.33  | ±0.50          |
| 3740                  | 3690  | 3710  | 3900                  | 3850  | 3880  | 0.36            | 0.37  | 0.39  | ±0.50          |

SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 6

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.400 | 0.420                 | 0.400 | 0.400 | 0.42            | 0.22  | 0.00  | ±1.00          |
| 0.540                 | 0.540 | 0.540 | 0.550                 | 0.550 | 0.540 | 0.16            | 0.16  | 0.00  | ±1.00          |
| 0.740                 | 0.730 | 0.740 | 0.750                 | 0.760 | 0.740 | 0.12            | 0.35  | 0.00  | ±1.00          |
| 0.960                 | 0.960 | 0.970 | 0.970                 | 0.990 | 0.980 | 0.09            | 0.27  | 0.09  | ±1.00          |
| 1.31                  | 1.29  | 1.31  | 1.32                  | 1.32  | 1.31  | 0.07            | 0.20  | 0.00  | ±1.00          |
| 1.80                  | 1.78  | 1.80  | 1.80                  | 1.79  | 1.82  | 0.00            | 0.05  | 0.10  | ±1.00          |
| 2.40                  | 2.37  | 2.40  | 2.41                  | 2.39  | 2.43  | 0.04            | 0.07  | 0.11  | ±0.20          |
| 3.21                  | 3.17  | 3.20  | 3.21                  | 3.19  | 3.23  | 0.00            | 0.05  | 0.08  | ±0.20          |
| 4.35                  | 4.31  | 4.35  | 4.35                  | 4.30  | 4.38  | 0.00            | -0.02 | 0.06  | ±0.20          |
| 5.89                  | 5.83  | 5.88  | 5.88                  | 5.83  | 5.90  | -0.01           | 0.00  | 0.03  | ±0.20          |
| 7.92                  | 7.84  | 7.91  | 7.92                  | 7.85  | 7.94  | 0.00            | 0.01  | 0.03  | ±0.20          |
| 10.6                  | 10.5  | 10.6  | 10.6                  | 10.5  | 10.6  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.3                  | 14.2  | 14.3  | 14.3                  | 14.2  | 14.3  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 19.3                  | 19.1  | 19.2  | 19.3                  | 19.1  | 19.3  | 0.00            | 0.00  | 0.05  | ±0.20          |
| 26.0                  | 25.8  | 26.0  | 26.0                  | 25.8  | 26.0  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 34.7                  | 34.4  | 34.7  | 34.9                  | 34.5  | 34.9  | 0.05            | 0.03  | 0.05  | ±0.20          |
| 46.9                  | 46.5  | 46.9  | 47.0                  | 46.6  | 47.0  | 0.02            | 0.02  | 0.02  | ±0.20          |
| 63.4                  | 62.8  | 63.4  | 63.8                  | 63.1  | 63.7  | 0.05            | 0.04  | 0.04  | ±0.20          |
| 87.1                  | 86.3  | 87.1  | 86.9                  | 86.0  | 86.8  | -0.02           | -0.03 | -0.03 | ±0.20          |
| 114                   | 113   | 114   | 114                   | 113   | 114   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 157                   | 155   | 157   | 156                   | 155   | 156   | -0.06           | 0.00  | -0.06 | ±0.20          |
| 217                   | 215   | 217   | 217                   | 215   | 217   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 301                   | 298   | 300   | 302                   | 293   | 295   | 0.03            | -0.15 | -0.15 | ±0.20          |
| 444                   | 440   | 443   | 437                   | 434   | 437   | -0.14           | -0.12 | -0.12 | ±0.20          |
| 612                   | 606   | 611   | 607                   | 602   | 607   | -0.07           | -0.06 | -0.06 | ±0.20          |
| 911                   | 903   | 911   | 913                   | 907   | 915   | 0.02            | 0.04  | 0.04  | ±0.20          |
| 1380                  | 1370  | 1380  | 1400                  | 1390  | 1400  | 0.12            | 0.13  | 0.12  | ±0.30          |
| 1890                  | 1880  | 1890  | 1940                  | 1930  | 1950  | 0.23            | 0.23  | 0.27  | ±0.30          |
| 3060                  | 3040  | 3070  | 3180                  | 3160  | 3180  | 0.33            | 0.34  | 0.31  | ±0.50          |
| 3690                  | 3660  | 3700  | 3850                  | 3820  | 3860  | 0.37            | 0.37  | 0.37  | ±0.50          |

SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, H-field, Channel 7

| H-field/(A/m) Applied |       |       | H-field/(A/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     |                |
| 0.400                 | 0.390 | 0.380 | 0.380                 | 0.410 | 0.380 | -0.45           | 0.43  | 0.00  | ±1.00          |
| 0.540                 | 0.530 | 0.520 | 0.530                 | 0.550 | 0.500 | -0.16           | 0.32  | -0.34 | ±1.00          |
| 0.740                 | 0.730 | 0.710 | 0.740                 | 0.740 | 0.700 | 0.00            | 0.12  | -0.12 | ±1.00          |
| 0.960                 | 0.960 | 0.920 | 0.980                 | 0.950 | 0.930 | 0.18            | -0.09 | 0.09  | ±1.00          |
| 1.31                  | 1.29  | 1.25  | 1.32                  | 1.29  | 1.26  | 0.07            | 0.00  | 0.07  | ±1.00          |
| 1.80                  | 1.78  | 1.71  | 1.80                  | 1.78  | 1.74  | 0.00            | 0.00  | 0.15  | ±1.00          |
| 2.40                  | 2.37  | 2.29  | 2.40                  | 2.37  | 2.31  | 0.00            | 0.00  | 0.08  | ±0.20          |
| 3.21                  | 3.17  | 3.06  | 3.21                  | 3.18  | 3.07  | 0.00            | 0.03  | 0.03  | ±0.20          |
| 4.35                  | 4.31  | 4.15  | 4.35                  | 4.33  | 4.17  | 0.00            | 0.04  | 0.04  | ±0.20          |
| 5.89                  | 5.82  | 5.61  | 5.89                  | 5.85  | 5.63  | 0.00            | 0.04  | 0.03  | ±0.20          |
| 7.92                  | 7.83  | 7.54  | 7.92                  | 7.87  | 7.55  | 0.00            | 0.04  | 0.01  | ±0.20          |
| 10.6                  | 10.5  | 10.1  | 10.6                  | 10.5  | 10.1  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 14.3                  | 14.1  | 13.6  | 14.3                  | 14.2  | 13.6  | 0.00            | 0.06  | 0.00  | ±0.20          |
| 19.3                  | 19.1  | 18.4  | 19.2                  | 19.1  | 18.4  | -0.05           | 0.00  | 0.00  | ±0.20          |
| 26.0                  | 25.7  | 24.8  | 26.0                  | 25.7  | 24.8  | 0.00            | 0.00  | 0.00  | ±0.20          |
| 34.7                  | 34.4  | 33.1  | 34.9                  | 34.5  | 33.2  | 0.05            | 0.03  | 0.03  | ±0.20          |
| 46.9                  | 46.4  | 44.7  | 47.1                  | 46.5  | 44.9  | 0.04            | 0.02  | 0.04  | ±0.20          |
| 63.4                  | 62.7  | 60.5  | 63.8                  | 63.0  | 60.8  | 0.05            | 0.04  | 0.04  | ±0.20          |
| 87.1                  | 86.2  | 83.1  | 86.9                  | 86.0  | 82.8  | -0.02           | -0.02 | -0.03 | ±0.20          |
| 114                   | 113   | 109   | 114                   | 112   | 108   | 0.00            | -0.08 | -0.08 | ±0.20          |
| 157                   | 155   | 149   | 156                   | 155   | 149   | -0.06           | 0.00  | 0.00  | ±0.20          |
| 217                   | 215   | 207   | 217                   | 215   | 207   | 0.00            | 0.00  | 0.00  | ±0.20          |
| 301                   | 298   | 287   | 302                   | 293   | 282   | 0.03            | -0.15 | -0.15 | ±0.20          |
| 444                   | 439   | 423   | 437                   | 434   | 418   | -0.14           | -0.10 | -0.10 | ±0.20          |
| 612                   | 606   | 583   | 606                   | 603   | 579   | -0.09           | -0.04 | -0.06 | ±0.20          |
| 911                   | 902   | 869   | 913                   | 907   | 872   | 0.02            | 0.05  | 0.03  | ±0.20          |
| 1380                  | 1360  | 1310  | 1400                  | 1390  | 1340  | 0.12            | 0.19  | 0.20  | ±0.30          |
| 1890                  | 1880  | 1810  | 1940                  | 1930  | 1860  | 0.23            | 0.23  | 0.24  | ±0.30          |
| 3060                  | 3040  | 2930  | 3180                  | 3160  | 3040  | 0.33            | 0.34  | 0.32  | ±0.50          |
| 3690                  | 3660  | 3530  | 3850                  | 3820  | 3690  | 0.37            | 0.37  | 0.39  | ±0.50          |

SPEAG H-field linearity tolerance criteria<sup>1</sup>:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

<sup>1</sup>Calibration uncertainty not taken into account (shared risk 50%).

## Dynamic Range, E-field, Channel 0

| E-field/(V/m) Applied |       |       | E-field/(V/m) Reading |       |       | Difference/(dB) |       |       | Tolerance/(dB) |       |       |
|-----------------------|-------|-------|-----------------------|-------|-------|-----------------|-------|-------|----------------|-------|-------|
| x                     | y     | z     | x                     | y     | z     | x               | y     | z     | x              | y     | z     |
| 0.360                 | 0.210 | 0.080 | 0.370                 | 0.210 | 0.080 | 0.24            | 0.00  | 0.00  | ±5.00          | ±5.00 | ±5.00 |
| 0.490                 | 0.290 | 0.100 | 0.500                 | 0.310 | 0.090 | 0.18            | 0.58  | -0.92 | ±5.00          | ±5.00 | ±5.00 |
| 0.680                 | 0.400 | 0.140 | 0.680                 | 0.400 | 0.140 | 0.00            | 0.00  | 0.00  | ±5.00          | ±5.00 | ±5.00 |
| 0.880                 | 0.520 | 0.180 | 0.890                 | 0.530 | 0.190 | 0.10            | 0.17  | 0.47  | ±5.00          | ±5.00 | ±5.00 |
| 1.19                  | 0.700 | 0.250 | 1.19                  | 0.700 | 0.230 | 0.00            | 0.00  | -0.72 | ±5.00          | ±5.00 | ±5.00 |
| 1.64                  | 0.970 | 0.340 | 1.67                  | 0.950 | 0.350 | 0.16            | -0.18 | 0.25  | ±5.00          | ±5.00 | ±5.00 |
| 2.18                  | 1.29  | 0.450 | 2.18                  | 1.28  | 0.430 | 0.00            | -0.07 | -0.39 | ±1.00          | ±5.00 | ±5.00 |
| 2.92                  | 1.72  | 0.610 | 2.95                  | 1.70  | 0.600 | 0.09            | -0.10 | -0.14 | ±1.00          | ±5.00 | ±5.00 |
| 3.97                  | 2.34  | 0.820 | 3.98                  | 2.32  | 0.820 | 0.02            | -0.07 | 0.00  | ±1.00          | ±1.00 | ±5.00 |
| 5.37                  | 3.16  | 1.11  | 5.40                  | 3.14  | 1.08  | 0.05            | -0.06 | -0.24 | ±1.00          | ±1.00 | ±5.00 |
| 7.22                  | 4.26  | 1.50  | 7.27                  | 4.22  | 1.46  | 0.06            | -0.08 | -0.23 | ±1.00          | ±1.00 | ±5.00 |
| 9.64                  | 5.68  | 2.00  | 9.68                  | 5.65  | 1.94  | 0.04            | -0.05 | -0.26 | ±1.00          | ±1.00 | ±1.00 |
| 13.0                  | 7.68  | 2.70  | 13.1                  | 7.63  | 2.60  | 0.07            | -0.06 | -0.33 | ±1.00          | ±1.00 | ±1.00 |
| 17.6                  | 10.4  | 3.65  | 17.6                  | 10.3  | 3.54  | 0.00            | -0.08 | -0.27 | ±1.00          | ±1.00 | ±1.00 |
| 23.7                  | 14.0  | 4.92  | 23.8                  | 13.9  | 4.75  | 0.04            | -0.06 | -0.31 | ±1.00          | ±1.00 | ±1.00 |
| 31.7                  | 18.7  | 6.57  | 31.9                  | 18.6  | 6.41  | 0.05            | -0.05 | -0.21 | ±1.00          | ±1.00 | ±1.00 |
| 42.8                  | 25.2  | 8.88  | 43.0                  | 25.2  | 8.63  | 0.04            | 0.00  | -0.25 | ±1.00          | ±1.00 | ±1.00 |
| 57.8                  | 34.1  | 12.0  | 58.3                  | 34.1  | 11.7  | 0.07            | 0.00  | -0.22 | ±1.00          | ±1.00 | ±1.00 |
| 79.5                  | 46.9  | 16.5  | 79.4                  | 46.5  | 15.9  | -0.01           | -0.07 | -0.32 | ±1.00          | ±1.00 | ±1.00 |
| 104                   | 61.3  | 21.6  | 104                   | 60.7  | 20.9  | 0.00            | -0.09 | -0.29 | ±1.00          | ±1.00 | ±1.00 |
| 143                   | 84.3  | 29.7  | 143                   | 83.5  | 28.8  | 0.00            | -0.08 | -0.27 | ±1.00          | ±1.00 | ±1.00 |
| 198                   | 117   | 41.1  | 198                   | 116   | 39.9  | 0.00            | -0.07 | -0.26 | ±1.00          | ±1.00 | ±1.00 |
| 274                   | 162   | 56.9  | 277                   | 162   | 55.6  | 0.09            | 0.00  | -0.20 | ±1.00          | ±1.00 | ±1.00 |
| 405                   | 239   | 84.0  | 391                   | 229   | 82.5  | -0.31           | -0.37 | -0.16 | ±1.00          | ±1.00 | ±1.00 |
| 558                   | 329   | 116   | 543                   | 317   | 114   | -0.24           | -0.32 | -0.15 | ±1.00          | ±1.00 | ±1.00 |
| 832                   | 490   | 172   | 817                   | 478   | 172   | -0.16           | -0.22 | 0.00  | ±1.00          | ±1.00 | ±1.00 |
| 1260                  | 742   | 261   | 1250                  | 733   | 264   | -0.07           | -0.11 | 0.10  | ±1.00          | ±1.00 | ±1.00 |
| 1730                  | 1020  | 358   | 1740                  | 1020  | 367   | 0.05            | 0.00  | 0.22  | ±1.00          | ±1.00 | ±1.00 |
| 2800                  | 1650  | 580   | 2850                  | 1670  | 574   | 0.15            | 0.10  | -0.09 | ±1.00          | ±1.00 | ±1.00 |
| 3370                  | 1990  | 699   | 3450                  | 2020  | 696   | 0.20            | 0.13  | -0.04 | ±1.00          | ±1.00 | ±1.00 |

SPEAG E-field linearity tolerance criteria<sup>1</sup>:

±5.0dB for applied E-field < 2V/m

±1.0dB for applied E-field ≥ 2V/m

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response

### Frequency Response, H-field, Channel 0

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |      |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y    | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.48 | 1.48 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.50                  | 1.49 | 1.50 | 0.12            | 0.06 | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.48 | 0.00            | 0.00 | 0.06  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.46 | 0.06            | 0.06 | 0.00  | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.46 | 0.06            | 0.00 | 0.06  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00 | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.44 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.32                  | 4.31 | 4.29 | -0.02           | 0.02 | -0.02 | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.36                  | 4.32 | 4.33 | 0.02            | 0.02 | 0.04  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.30 | 4.31 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.32 | 4.33 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.32 | 4.34 | 0.00            | 0.00 | 0.02  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.33 | 4.34 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.36                  | 4.32 | 4.32 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.34                  | 4.31 | 4.31 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.33                  | 4.30 | 4.30 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.29 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.28 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.25 | 4.25 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.23 | 4.24 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.22 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.19 | 4.18 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.15 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.11 | 4.11 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.12                  | 4.09 | 4.09 | 0.04            | 0.02 | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.08                  | 4.06 | 4.06 | 0.00            | 0.02 | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.03                  | 4.02 | 4.02 | 0.00            | 0.02 | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.98                  | 3.97 | 3.96 | 0.00            | 0.02 | 0.00  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.95 | 3.95 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.94                  | 3.92 | 3.92 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.93                  | 3.92 | 3.92 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.91                  | 3.90 | 3.90 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.81 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.80 | 0.00            | 0.02 | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.73 | 3.73 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.62 | 3.60 | 0.02            | 0.05 | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.49                  | 3.50 | 3.48 | 0.00            | 0.05 | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.36                  | 3.35 | 3.36 | 0.03            | 0.00 | 0.03  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:

±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 1

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |      |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y    | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.48 | 1.49 | 0.00            | 0.00 | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.50                  | 1.49 | 1.50 | 0.12            | 0.06 | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.47 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.46 | 0.06            | 0.06 | 0.00  | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.45 | 0.06            | 0.00 | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.44                  | 1.44 | 1.44 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.44 | 1.44 | 0.00            | 0.06 | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.32                  | 4.30 | 4.33 | -0.02           | 0.00 | 0.06  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.35                  | 4.33 | 4.32 | 0.00            | 0.04 | 0.02  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.30 | 4.31 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.00            | 0.02 | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.33 | 4.33 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.34 | 4.33 | 0.00            | 0.02 | -0.02 | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.32 | 4.32 | 0.02            | 0.00 | -0.02 | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.35                  | 4.33 | 4.33 | 0.00            | 0.02 | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.34                  | 4.31 | 4.31 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.33                  | 4.30 | 4.30 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.29 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.27 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.25 | 4.25 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.24 | 4.24 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.23 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.18 | 4.18 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.15 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.11 | 4.11 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.09 | 4.09 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.06 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.01 | 4.02 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.98                  | 3.96 | 3.96 | 0.00            | 0.00 | 0.00  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.96 | 3.95 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.95                  | 3.92 | 3.93 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.93                  | 3.92 | 3.91 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.92                  | 3.90 | 3.90 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.79 | 0.00            | 0.02 | 0.00  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.74 | 3.73 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.61 | 3.60 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.50                  | 3.48 | 3.48 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.36                  | 3.36 | 3.35 | 0.03            | 0.03 | 0.00  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 2

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.50                  | 1.48 | 1.49 | 0.06            | 0.00  | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.50 | 0.06            | 0.06  | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.48 | 0.00            | 0.00  | 0.06  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.45 | 0.06            | 0.06  | -0.06 | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.47                  | 1.45 | 1.45 | 0.12            | 0.00  | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.44 | 1.44 | 0.00            | 0.06  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.33                  | 4.31 | 4.30 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.36                  | 4.30 | 4.32 | 0.02            | -0.02 | 0.02  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.31 | 4.31 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.34 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.33 | 4.34 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.35                  | 4.32 | 4.33 | 0.00            | 0.00  | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.35                  | 4.31 | 4.31 | 0.04            | 0.02  | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.33                  | 4.30 | 4.31 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.31                  | 4.29 | 4.29 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.27 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.25 | 4.25 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.24 | 4.24 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.22 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.18 | 4.18 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.15 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.11 | 4.12 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.10 | 4.08 | 0.02            | 0.04  | -0.02 | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.06 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.03                  | 4.02 | 4.01 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.99                  | 3.97 | 3.96 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.95 | 3.95 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.94                  | 3.93 | 3.93 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.93                  | 3.92 | 3.91 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.91                  | 3.90 | 3.90 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.80 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.74 | 3.73 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.60 | 3.60 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.48                  | 3.49 | 3.48 | -0.02           | 0.02  | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.35                  | 3.35 | 3.36 | 0.00            | 0.00  | 0.03  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

### Frequency Response, H-field, Channel 3

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.48                  | 1.48 | 1.49 | -0.06           | 0.00  | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.51 | 0.06            | 0.06  | 0.17  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.47 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.45 | 0.06            | 0.06  | -0.06 | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.46 | 0.06            | 0.00  | 0.06  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.45 | 1.45 | 0.06            | 0.06  | 0.06  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.43                  | 1.44 | 1.44 | -0.06           | 0.06  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.34                  | 4.31 | 4.32 | 0.02            | 0.02  | 0.04  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.35                  | 4.30 | 4.33 | 0.00            | -0.02 | 0.04  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.29 | 4.31 | 0.02            | -0.02 | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.34 | 4.35 | 0.02            | 0.04  | 0.04  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.32 | 0.00            | 0.02  | -0.02 | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.33 | 4.35 | 0.00            | 0.00  | 0.02  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.36                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.35                  | 4.32 | 4.32 | 0.04            | 0.04  | 0.02  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.32                  | 4.30 | 4.31 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.28 | 4.29 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.31                  | 4.28 | 4.28 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.29                  | 4.25 | 4.26 | 0.04            | 0.00  | 0.02  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.27                  | 4.24 | 4.24 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.23 | 4.23 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.19 | 4.19 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.16 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.12 | 4.12 | 0.02            | 0.04  | 0.02  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.09 | 4.10 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.07 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.02 | 4.02 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.99                  | 3.97 | 3.97 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.96 | 3.96 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.96                  | 3.92 | 3.93 | 0.07            | 0.00  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.94                  | 3.92 | 3.92 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.92                  | 3.90 | 3.91 | 0.04            | 0.02  | 0.04  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.89 | 3.89 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.87 | 0.02            | 0.02  | 0.05  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.83                  | 3.81 | 3.81 | 0.05            | 0.02  | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.80 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.74                  | 3.74 | 3.74 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.63 | 3.60 | 0.02            | 0.07  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.49                  | 3.49 | 3.49 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.36                  | 3.35 | 3.35 | 0.03            | 0.00  | 0.00  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 4

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.48                  | 1.49 | 1.47 | -0.06           | 0.06  | -0.06 | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.49                  | 1.50 | 1.50 | 0.06            | 0.12  | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.49                  | 1.47 | 1.47 | 0.12            | 0.00  | 0.00  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.46 | 1.46 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.45                  | 1.45 | 1.45 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.44 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.33                  | 4.30 | 4.29 | 0.00            | 0.00  | -0.02 | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.36                  | 4.30 | 4.33 | 0.02            | -0.02 | 0.04  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.34                  | 4.31 | 4.31 | -0.02           | 0.02  | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.32 | 4.33 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.34 | 4.34 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.35                  | 4.32 | 4.33 | 0.00            | 0.00  | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.34                  | 4.31 | 4.31 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.32                  | 4.30 | 4.30 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.30 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.29                  | 4.28 | 4.27 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.26 | 4.26 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.23 | 4.23 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.23 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.19 | 4.18 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.18                  | 4.15 | 4.15 | 0.04            | 0.02  | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.11 | 4.11 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.09 | 4.09 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.06 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.02 | 4.01 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.98                  | 3.97 | 3.97 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.96 | 3.95 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.94                  | 3.93 | 3.93 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.94                  | 3.91 | 3.91 | 0.04            | 0.00  | 0.00  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.91                  | 3.90 | 3.90 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.81 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.80 | 3.80 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.74                  | 3.74 | 3.74 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.61 | 3.60 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.50                  | 3.48 | 3.48 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.36                  | 3.36 | 3.34 | 0.03            | 0.03  | -0.03 | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 5

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.48 | 1.49 | 0.00            | 0.00  | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.50 | 0.06            | 0.06  | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.48                  | 1.47 | 1.48 | 0.06            | 0.00  | 0.06  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.46 | 1.45 | 0.06            | 0.00  | -0.06 | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.44 | 1.45 | 0.06            | -0.06 | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.44 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.33                  | 4.32 | 4.34 | 0.00            | 0.04  | 0.08  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.37                  | 4.32 | 4.30 | 0.04            | 0.02  | -0.02 | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.35                  | 4.30 | 4.31 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.35 | 4.32 | 0.02            | 0.06  | -0.02 | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.31 | 4.32 | 0.02            | -0.02 | -0.02 | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.37                  | 4.34 | 4.33 | 0.00            | 0.02  | -0.02 | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.36                  | 4.34 | 4.33 | 0.00            | 0.04  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.35                  | 4.34 | 4.32 | 0.00            | 0.04  | 0.00  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.34                  | 4.30 | 4.31 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.33                  | 4.31 | 4.30 | 0.02            | 0.04  | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.29 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.27 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.28                  | 4.25 | 4.26 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.23 | 4.24 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.25                  | 4.22 | 4.23 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.22                  | 4.19 | 4.19 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.17                  | 4.15 | 4.15 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.13                  | 4.12 | 4.11 | 0.02            | 0.04  | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.11                  | 4.09 | 4.09 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.08                  | 4.06 | 4.06 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.03                  | 4.02 | 4.02 | 0.00            | 0.02  | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.98                  | 3.96 | 3.97 | 0.00            | 0.00  | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.97                  | 3.96 | 3.95 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.95                  | 3.93 | 3.93 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.93                  | 3.91 | 3.92 | 0.02            | 0.00  | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.91                  | 3.90 | 3.90 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.87                  | 3.86 | 3.86 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.81                  | 3.81 | 3.80 | 0.00            | 0.05  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.74                  | 3.74 | 3.73 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.62 | 3.60 | 0.02            | 0.05  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.49                  | 3.49 | 3.48 | 0.00            | 0.02  | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.35                  | 3.36 | 3.35 | 0.00            | 0.03  | 0.00  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup>Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 6

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |      |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y    | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.49 | 0.00            | 0.06 | 0.06  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.50                  | 1.50 | 1.50 | 0.12            | 0.12 | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.47                  | 1.47 | 1.48 | 0.00            | 0.00 | 0.06  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.46 | 1.45 | 0.06            | 0.00 | -0.06 | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.45 | 0.06            | 0.00 | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.44 | 1.44 | 0.06            | 0.00 | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.43 | 0.00            | 0.00 | -0.06 | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.36                  | 4.32 | 4.31 | 0.06            | 0.04 | 0.02  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.36                  | 4.31 | 4.33 | 0.02            | 0.00 | 0.04  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.36                  | 4.31 | 4.32 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.34 | 4.33 | 0.02            | 0.04 | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.37                  | 4.32 | 4.32 | 0.00            | 0.00 | -0.02 | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.38                  | 4.33 | 4.35 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.37                  | 4.32 | 4.33 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.37                  | 4.32 | 4.33 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.35                  | 4.31 | 4.31 | 0.04            | 0.02 | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.34                  | 4.29 | 4.30 | 0.04            | 0.00 | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.32                  | 4.29 | 4.29 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.30                  | 4.27 | 4.28 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.29                  | 4.25 | 4.26 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.26                  | 4.24 | 4.24 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.26                  | 4.22 | 4.23 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.23                  | 4.19 | 4.19 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.18                  | 4.15 | 4.15 | 0.04            | 0.02 | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.14                  | 4.12 | 4.12 | 0.04            | 0.04 | 0.02  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.12                  | 4.09 | 4.10 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.09                  | 4.06 | 4.07 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.02 | 4.02 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.99                  | 3.97 | 3.97 | 0.02            | 0.02 | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.98                  | 3.95 | 3.96 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.95                  | 3.93 | 3.93 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.94                  | 3.91 | 3.92 | 0.04            | 0.00 | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.92                  | 3.90 | 3.90 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.89 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.88                  | 3.86 | 3.86 | 0.04            | 0.02 | 0.02  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.83                  | 3.81 | 3.81 | 0.05            | 0.02 | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.05 | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.73 | 3.73 | 0.02            | 0.00 | 0.00  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.61 | 3.60 | 0.02            | 0.02 | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.50                  | 3.48 | 3.49 | 0.02            | 0.00 | 0.02  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.35                  | 3.35 | 3.35 | 0.00            | 0.00 | 0.00  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, H-field, Channel 7

| f/(Hz)   | H-field/(A/m) Applied |      |      | H-field/(A/m) Reading |      |      | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|------|------|-----------------------|------|------|-----------------|-------|-------|----------------|
|          | x                     | y    | z    | x                     | y    | z    | x               | y     | z     |                |
| 3000     | 1.49                  | 1.48 | 1.48 | 1.49                  | 1.49 | 1.48 | 0.00            | 0.06  | 0.00  | ±0.3           |
| 3200     | 1.48                  | 1.48 | 1.48 | 1.51                  | 1.50 | 1.50 | 0.17            | 0.12  | 0.12  | ±0.3           |
| 4000     | 1.47                  | 1.47 | 1.47 | 1.48                  | 1.47 | 1.47 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 5200     | 1.46                  | 1.46 | 1.46 | 1.47                  | 1.47 | 1.46 | 0.06            | 0.06  | 0.00  | ±0.3           |
| 6600     | 1.45                  | 1.45 | 1.45 | 1.46                  | 1.45 | 1.45 | 0.06            | 0.00  | 0.00  | ±0.3           |
| 8200     | 1.44                  | 1.44 | 1.44 | 1.45                  | 1.45 | 1.44 | 0.06            | 0.06  | 0.00  | ±0.3           |
| 9000     | 1.44                  | 1.43 | 1.44 | 1.44                  | 1.43 | 1.44 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 10600    | 4.33                  | 4.30 | 4.30 | 4.34                  | 4.29 | 4.31 | 0.02            | -0.02 | 0.02  | ±0.3           |
| 13400    | 4.35                  | 4.31 | 4.31 | 4.37                  | 4.32 | 4.32 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 17000    | 4.35                  | 4.30 | 4.31 | 4.37                  | 4.32 | 4.31 | 0.04            | 0.04  | 0.00  | ±0.3           |
| 21400    | 4.37                  | 4.32 | 4.33 | 4.40                  | 4.34 | 4.33 | 0.06            | 0.04  | 0.00  | ±0.3           |
| 27200    | 4.37                  | 4.32 | 4.33 | 4.38                  | 4.33 | 4.33 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 34400    | 4.37                  | 4.33 | 4.34 | 4.38                  | 4.34 | 4.33 | 0.02            | 0.02  | -0.02 | ±0.3           |
| 40000    | 4.36                  | 4.32 | 4.33 | 4.38                  | 4.34 | 4.33 | 0.04            | 0.04  | 0.00  | ±0.3           |
| 43600    | 4.35                  | 4.32 | 4.32 | 4.36                  | 4.33 | 4.31 | 0.02            | 0.02  | -0.02 | ±0.3           |
| 55400    | 4.33                  | 4.30 | 4.31 | 4.35                  | 4.32 | 4.31 | 0.04            | 0.04  | 0.00  | ±0.3           |
| 70000    | 4.32                  | 4.29 | 4.30 | 4.35                  | 4.30 | 4.30 | 0.06            | 0.02  | 0.00  | ±0.3           |
| 88800    | 4.31                  | 4.28 | 4.29 | 4.33                  | 4.29 | 4.29 | 0.04            | 0.02  | 0.00  | ±0.3           |
| 112400   | 4.29                  | 4.27 | 4.27 | 4.31                  | 4.28 | 4.28 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 142400   | 4.27                  | 4.25 | 4.25 | 4.30                  | 4.26 | 4.25 | 0.06            | 0.02  | 0.00  | ±0.3           |
| 161750   | 4.25                  | 4.23 | 4.23 | 4.28                  | 4.24 | 4.24 | 0.06            | 0.02  | 0.02  | ±0.3           |
| 180400   | 4.24                  | 4.22 | 4.22 | 4.27                  | 4.23 | 4.23 | 0.06            | 0.02  | 0.02  | ±0.3           |
| 228400   | 4.21                  | 4.18 | 4.18 | 4.23                  | 4.19 | 4.19 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 289400   | 4.16                  | 4.14 | 4.15 | 4.19                  | 4.15 | 4.15 | 0.06            | 0.02  | 0.00  | ±0.3           |
| 366400   | 4.12                  | 4.10 | 4.11 | 4.14                  | 4.12 | 4.11 | 0.04            | 0.04  | 0.00  | ±0.3           |
| 400000   | 4.10                  | 4.08 | 4.09 | 4.13                  | 4.10 | 4.09 | 0.06            | 0.04  | 0.00  | ±0.3           |
| 464000   | 4.08                  | 4.05 | 4.06 | 4.10                  | 4.06 | 4.06 | 0.04            | 0.02  | 0.00  | ±0.3           |
| 587800   | 4.03                  | 4.01 | 4.01 | 4.04                  | 4.02 | 4.02 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 744200   | 3.98                  | 3.96 | 3.96 | 3.99                  | 3.97 | 3.97 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 942600   | 3.96                  | 3.95 | 3.95 | 3.98                  | 3.96 | 3.96 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1193600  | 3.93                  | 3.92 | 3.92 | 3.95                  | 3.93 | 3.93 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1511600  | 3.92                  | 3.91 | 3.91 | 3.94                  | 3.92 | 3.92 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 1914400  | 3.90                  | 3.89 | 3.89 | 3.92                  | 3.90 | 3.90 | 0.04            | 0.02  | 0.02  | ±0.3           |
| 2424400  | 3.89                  | 3.88 | 3.88 | 3.90                  | 3.88 | 3.88 | 0.02            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 3.86                  | 3.85 | 3.85 | 3.88                  | 3.87 | 3.87 | 0.04            | 0.05  | 0.05  | ±0.3           |
| 3888000  | 3.81                  | 3.80 | 3.80 | 3.82                  | 3.81 | 3.81 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 4000000  | 3.81                  | 3.79 | 3.79 | 3.82                  | 3.81 | 3.80 | 0.02            | 0.05  | 0.02  | ±0.3           |
| 4923800  | 3.74                  | 3.73 | 3.73 | 3.75                  | 3.74 | 3.74 | 0.02            | 0.02  | 0.02  | ±0.3           |
| 6235400  | 3.61                  | 3.60 | 3.60 | 3.62                  | 3.61 | 3.60 | 0.02            | 0.02  | 0.00  | ±0.3           |
| 7896400  | 3.49                  | 3.48 | 3.48 | 3.49                  | 3.50 | 3.48 | 0.00            | 0.05  | 0.00  | ±0.3           |
| 10000000 | 3.35                  | 3.35 | 3.35 | 3.35                  | 3.36 | 3.36 | 0.00            | 0.03  | 0.03  | ±0.3           |

SPEAG H-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Frequency Response, E-field, Channel 0

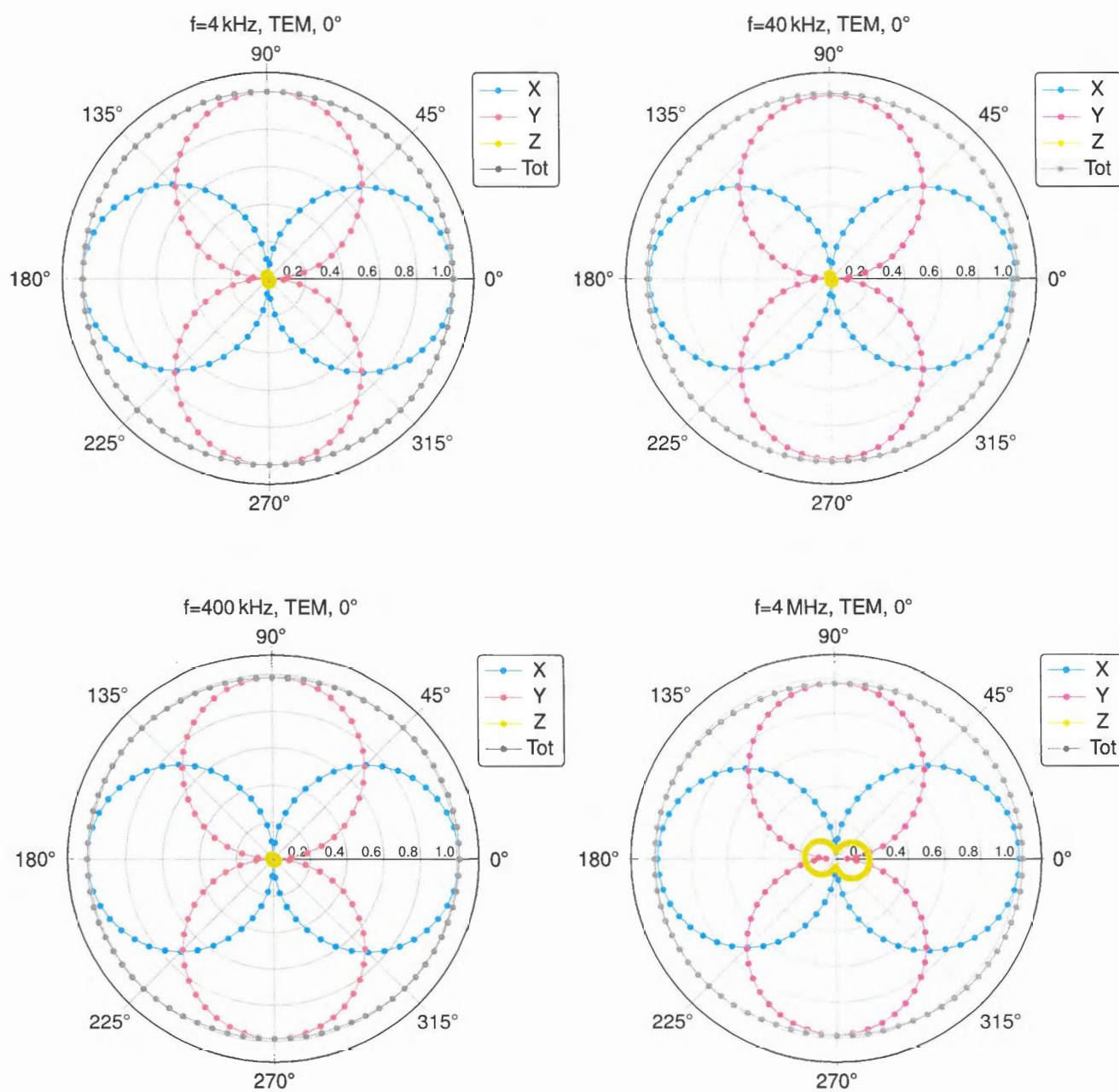
| f/(Hz)   | E-field/(V/m) Applied |     |     | E-field/(V/m) Reading |     |     | Difference/(dB) |       |       | Tolerance/(dB) |
|----------|-----------------------|-----|-----|-----------------------|-----|-----|-----------------|-------|-------|----------------|
|          | x                     | y   | z   | x                     | y   | z   | x               | y     | z     |                |
| 3000     | 165                   | 165 | 167 | 165                   | 165 | 167 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 3200     | 164                   | 164 | 171 | 165                   | 165 | 170 | 0.05            | 0.05  | -0.05 | ±0.3           |
| 4000     | 169                   | 169 | 163 | 169                   | 169 | 163 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 5200     | 165                   | 165 | 165 | 164                   | 165 | 166 | -0.05           | 0.00  | 0.05  | ±0.3           |
| 6600     | 171                   | 171 | 167 | 170                   | 171 | 167 | -0.05           | 0.00  | 0.00  | ±0.3           |
| 8200     | 159                   | 159 | 163 | 158                   | 159 | 163 | -0.05           | 0.00  | 0.00  | ±0.3           |
| 9000     | 167                   | 167 | 167 | 168                   | 168 | 168 | 0.05            | 0.05  | 0.05  | ±0.3           |
| 10600    | 168                   | 168 | 164 | 168                   | 168 | 165 | 0.00            | 0.00  | 0.05  | ±0.3           |
| 13400    | 165                   | 165 | 165 | 165                   | 164 | 166 | 0.00            | -0.05 | 0.05  | ±0.3           |
| 17000    | 163                   | 163 | 166 | 164                   | 164 | 166 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 21400    | 166                   | 166 | 166 | 167                   | 167 | 166 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 27200    | 164                   | 164 | 165 | 164                   | 165 | 165 | 0.00            | 0.05  | 0.00  | ±0.3           |
| 34400    | 167                   | 167 | 164 | 167                   | 167 | 165 | 0.00            | 0.00  | 0.05  | ±0.3           |
| 40000    | 168                   | 168 | 166 | 168                   | 168 | 166 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 43600    | 167                   | 167 | 166 | 167                   | 167 | 166 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 55400    | 167                   | 167 | 167 | 168                   | 167 | 167 | 0.05            | 0.00  | 0.00  | ±0.3           |
| 70000    | 166                   | 166 | 166 | 167                   | 166 | 166 | 0.05            | 0.00  | 0.00  | ±0.3           |
| 88800    | 167                   | 167 | 167 | 168                   | 167 | 167 | 0.05            | 0.00  | 0.00  | ±0.3           |
| 112400   | 168                   | 168 | 168 | 168                   | 168 | 168 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 142400   | 168                   | 168 | 168 | 169                   | 169 | 168 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 161750   | 168                   | 168 | 169 | 169                   | 169 | 169 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 180400   | 170                   | 170 | 169 | 170                   | 170 | 169 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 228400   | 170                   | 170 | 170 | 170                   | 170 | 170 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 289400   | 171                   | 171 | 171 | 172                   | 171 | 171 | 0.05            | 0.00  | 0.00  | ±0.3           |
| 366400   | 173                   | 173 | 172 | 173                   | 173 | 172 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 400000   | 173                   | 173 | 173 | 173                   | 173 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 464000   | 174                   | 174 | 174 | 174                   | 174 | 174 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 587800   | 175                   | 175 | 175 | 175                   | 175 | 175 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 744200   | 175                   | 175 | 175 | 175                   | 175 | 175 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 942600   | 176                   | 176 | 175 | 176                   | 176 | 175 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 1193600  | 176                   | 176 | 175 | 176                   | 176 | 175 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 1511600  | 175                   | 175 | 174 | 175                   | 175 | 174 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 1914400  | 174                   | 174 | 174 | 175                   | 175 | 174 | 0.05            | 0.05  | 0.00  | ±0.3           |
| 2424400  | 174                   | 174 | 173 | 174                   | 174 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 3070200  | 174                   | 174 | 173 | 174                   | 174 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 3888000  | 174                   | 174 | 173 | 174                   | 174 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 4000000  | 174                   | 174 | 173 | 174                   | 174 | 173 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 4923800  | 175                   | 175 | 174 | 175                   | 175 | 174 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 6235400  | 177                   | 177 | 176 | 177                   | 177 | 176 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 7896400  | 182                   | 182 | 181 | 182                   | 182 | 181 | 0.00            | 0.00  | 0.00  | ±0.3           |
| 10000000 | 191                   | 191 | 190 | 191                   | 191 | 190 | 0.00            | 0.00  | 0.00  | ±0.3           |

SPEAG E-field frequency response tolerance criteria<sup>1</sup>:  
±0.3dB for applied E-fields at calibration points from 3kHz to 10MHz

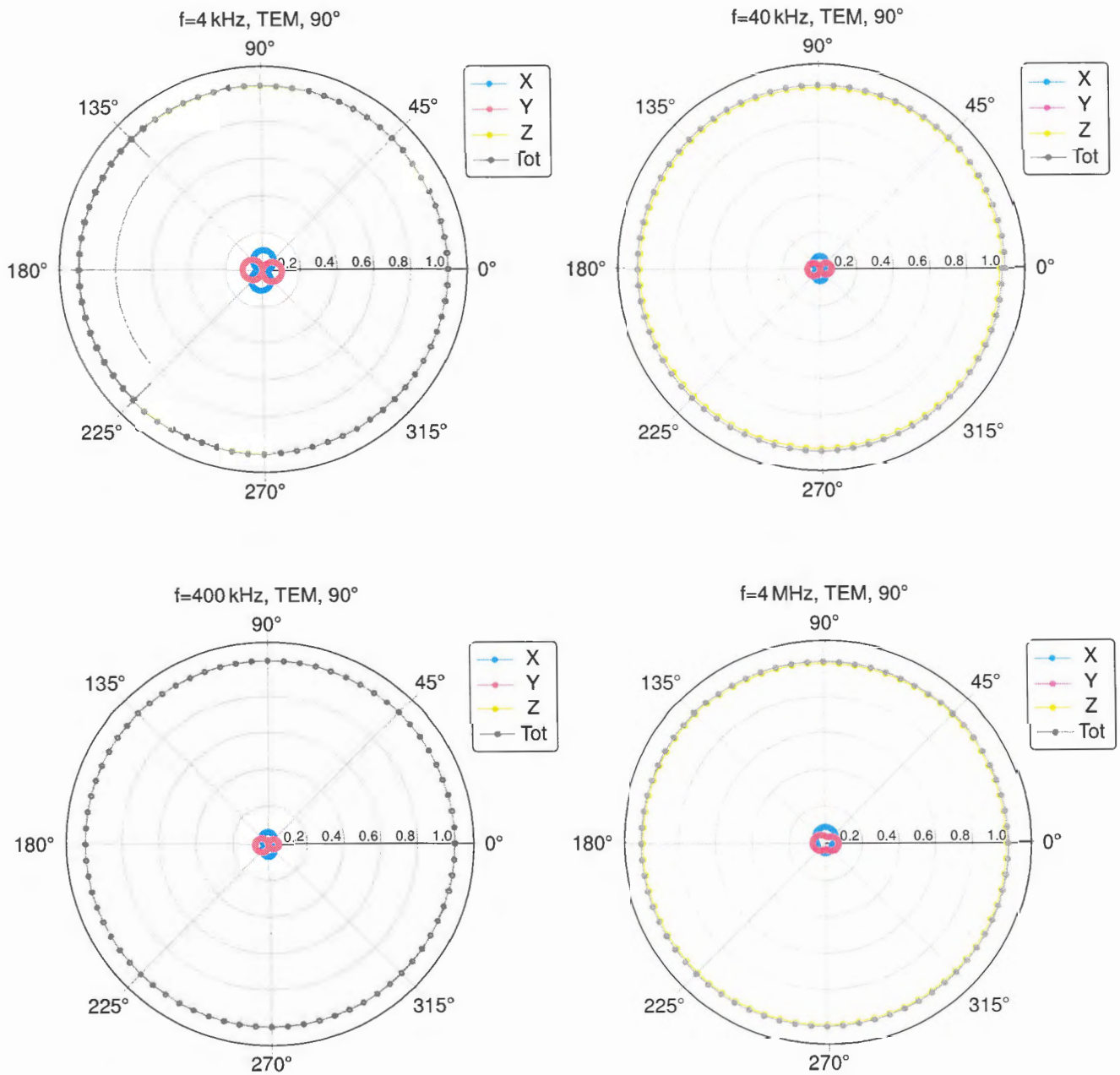
<sup>1</sup> Calibration uncertainty not taken into account (shared risk 50%).

## Isotropy H-Field

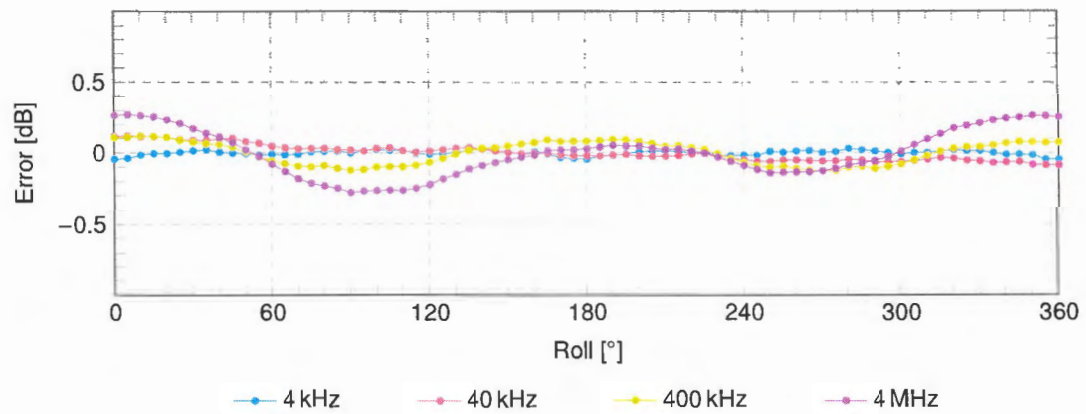
### H-Field Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



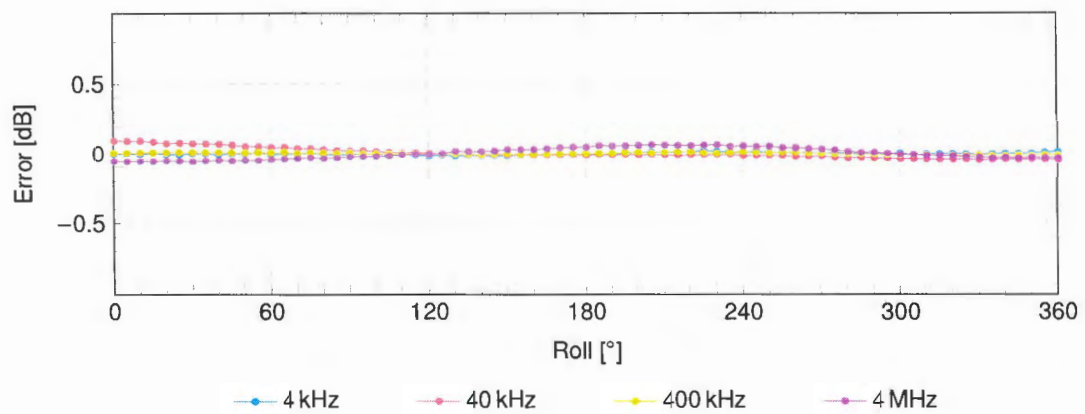
### H-Field Receiving Pattern ( $\phi$ ), $\vartheta = 90^\circ$



### H-Field Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



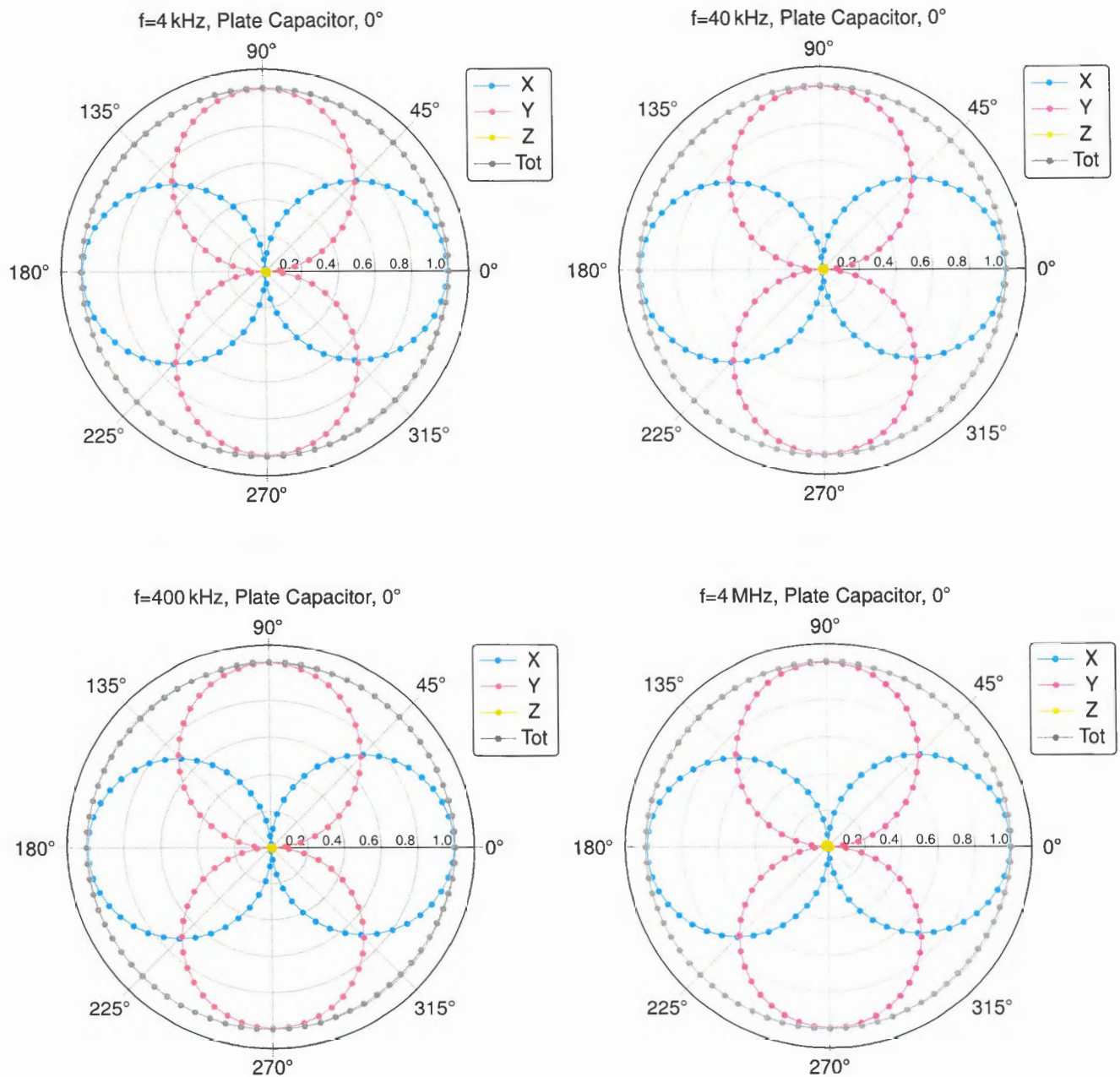
### H-Field Receiving Pattern ( $\phi$ ), $\vartheta = 90^\circ$



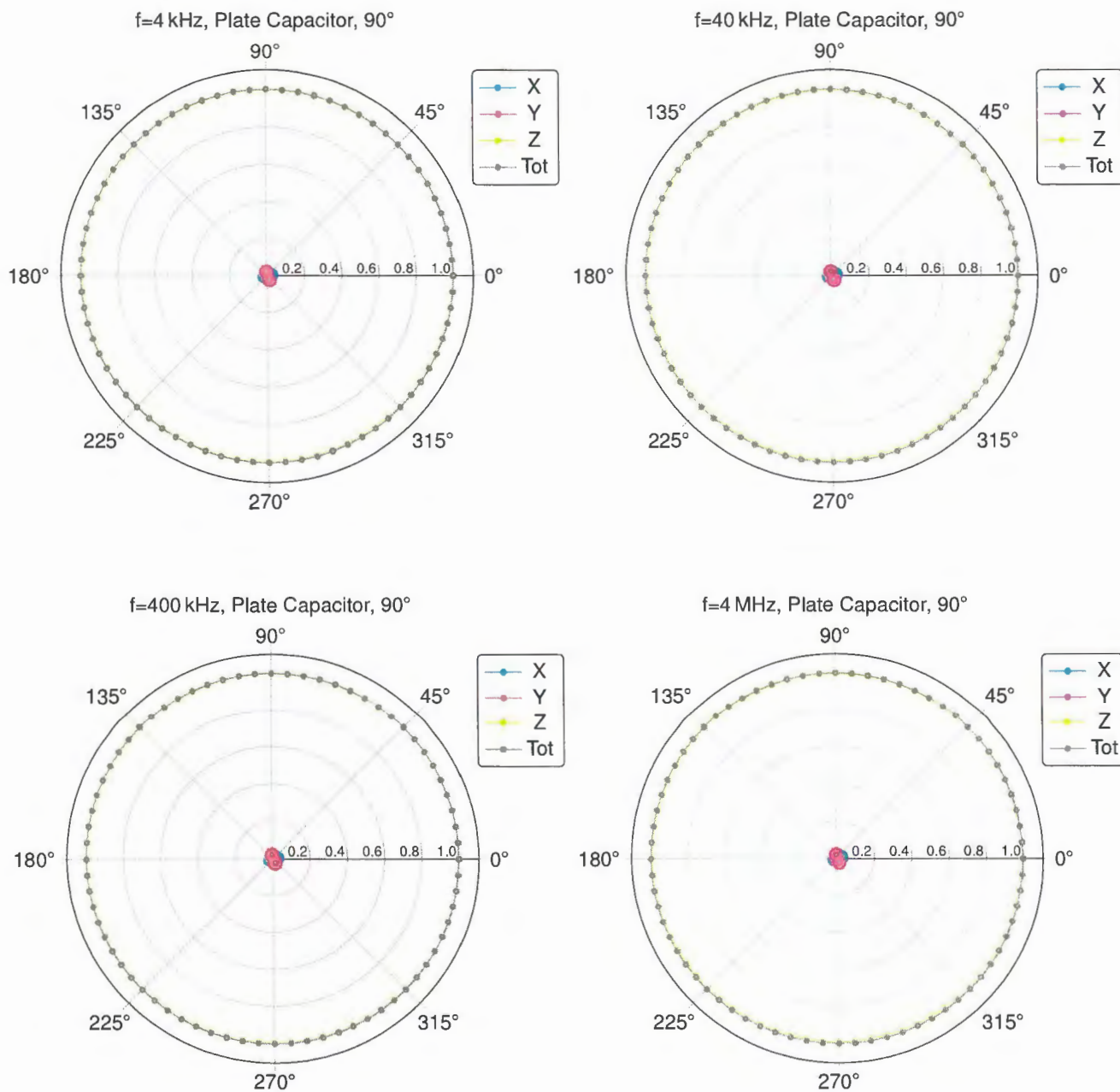
SPEAG axial deviation from the ideal response tolerance for H-field:  $\pm 0.6$  dB

## Isotropy E-Field

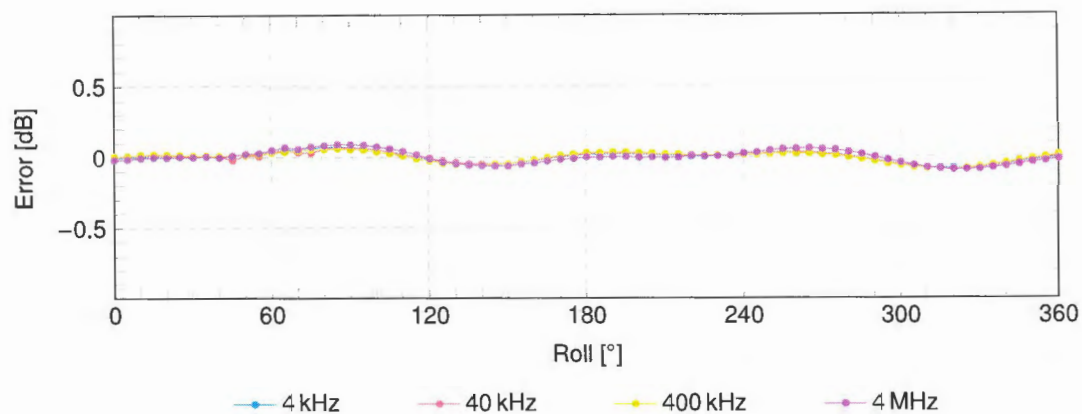
### E-Field Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



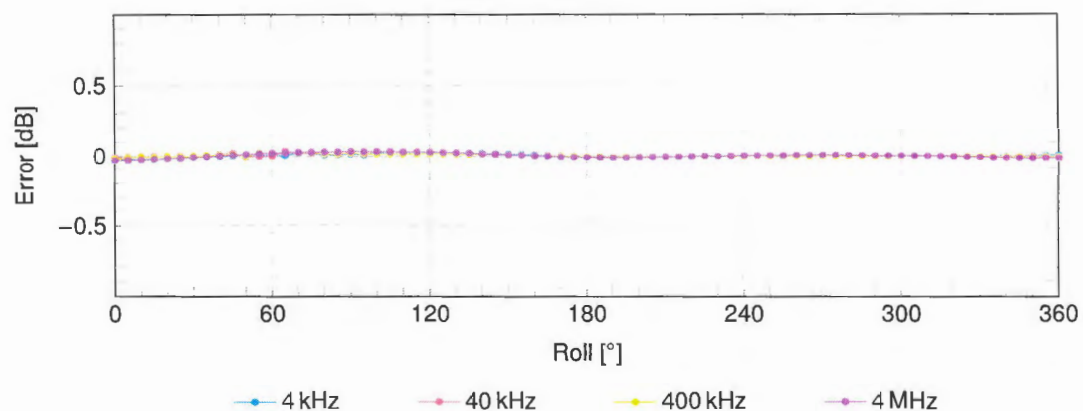
### E-Field Receiving Pattern ( $\phi$ ), $\vartheta = 90^\circ$



### E-Field Receiving Pattern ( $\phi$ ), $\vartheta = 0^\circ$



### E-Field Receiving Pattern ( $\phi$ ), $\vartheta = 90^\circ$



SPEAG axial deviation from the ideal response tolerance for E-field:  $\pm 0.8$  dB

Client **CTC Advanced**  
**Saarbrücken, Germany**

Certificate No: **V-Coil50/400-1021\_Nov23**

## CALIBRATION CERTIFICATE

Object **V-Coil50/400 - SN: 1021**

Calibration procedure(s) **QA CAL-47.v2**  
**Calibration Procedure for WPT Verification & Validation Sources**

Calibration date: **November 2, 2023**

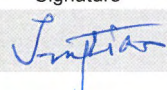
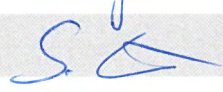
This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards  | ID #          | Cal Date (Certificate No.)      | Scheduled Calibration |
|--------------------|---------------|---------------------------------|-----------------------|
| MAGPy-8H3D+E3D/DAS | SN: 3065/3056 | 06-Apr-23 (MAGPy-8H3D+E3D-3065) | Apr-24                |

| Secondary Standards | ID # | Check Date (in house) | Scheduled Check |
|---------------------|------|-----------------------|-----------------|
|---------------------|------|-----------------------|-----------------|

|                | Name        | Function          | Signature                                                                             |
|----------------|-------------|-------------------|---------------------------------------------------------------------------------------|
| Calibrated by: | Jingtian Xi | Project Leader    |  |
| Approved by:   | Sven Kühn   | Technical Manager |  |

Issued: November 3, 2023

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

**Glossary:**

|     |                           |
|-----|---------------------------|
| WPT | wireless power transfer   |
| V&V | verification & validation |

**Calibration is Performed According to the Following Standards:**

- Internal procedure QA CAL-47 Calibration procedure for WPT verification & validation sources from 3 kHz to 10 MHz
- IEC/IEEE 63164, "Assessment methods of the human exposure to electric and magnetic fields from wireless power transfer systems – Models, instrumentation, measurement and computational methods and procedures (Frequency range 3 kHz to 30 MHz)", draft standard, 2023

**Additional Documentation:**

- a) cDASY6/DASY8 Module WPT Manual

**Methods Applied and Interpretation of Parameters:**

- *Measurement Conditions:* The V&V source is switched on for at least 30 minutes.
- *Source Positioning:* The V&V source is placed in the center of the UniPV1 phantom such that the source surface is parallel to phantom surface. The probe location used for DUT teaching is the top center of the coil (marked on the source casing). The probe distance is verified using mechanical gauges placed on the source surface.
- *H-field distribution:* H-field is measured in the volume above the V&V source in a rectilinear grid with a uniform grid step of 7.33 mm.

**Calibrated Quantity**

- Local peak H-field at  $d$  mm

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

## Measurement Conditions

|                                       |                   |                                  |
|---------------------------------------|-------------------|----------------------------------|
| Software version                      | cDASY6 Module WPT | 2.2.0                            |
|                                       | Notebook GUI      | 2.2.0                            |
|                                       | Sim4Life          | 7.2.4                            |
| Scan setup                            | Grid dimensions   | x: 169 mm, y: 169 mm, z: 36.7 mm |
|                                       | Grid resolutions  | dx, dy, dz: 7.33 mm              |
| Distance (relative to source surface) | 0 mm              |                                  |
| Frequency                             | 400 kHz           |                                  |

## Calibrated Quantities

| Distance (relative to source surface) (mm) | Peak H-field (A/m) | Uncertainty (k=2) (dB) |
|--------------------------------------------|--------------------|------------------------|
| 0                                          | 280                | 1.13                   |

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

### Peak values of induced fields<sup>1</sup>

| Distance<br>(relative to<br>source surface)<br>(mm) | Induced<br>peak current<br>density, 1cm <sup>2</sup> area<br>avg. (A/m <sup>2</sup> ) | Induced peak E-field (V/m) |               | peak spatial SAR (mW/kg) |          |
|-----------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------|---------------|--------------------------|----------|
|                                                     |                                                                                       | 2mm cube avg.              | 5mm line avg. | 1g avg.                  | 10g avg. |
| 0                                                   | 2.79                                                                                  | 4.42                       | 4.53          | 7.67                     | 3.79     |

### Voltage measurement

| Total voltage (V) | Voltages at harmonics (dBc)                                          |
|-------------------|----------------------------------------------------------------------|
| 0.4133            | Highest harmonic: -21.76<br>2 <sup>nd</sup> highest harmonic: -31.64 |

---

<sup>1</sup> determined for a virtual half-space phantom with tissue properties  $\epsilon_r = 55$ ,  $\sigma = 0.75$  S/m,  $\rho = 1000$  kg/m<sup>3</sup>

# Measurement report

## cDASY6 Module WPT Measurement Report

### Device under test

Info:  
V-Coil50/400

Serial number:  
1021

Scenario:  
source calibration

### Tool info

DASY software version:  
cDASY6 Module WPT 2.2.0.3801

Probe model, serial no. and configuration date:  
MAGPy-8H3D+E3Dv2, WP000030, 2023/06/16

Software version:  
2.0.39, backend: 0.9.2

### Scan info

Center location:  
x: -9.27 mm, y: 71.92 mm, z: 85.67 mm

Dimensions:  
x: 80.7 mm, y: 80.7 mm, z: 36.7 mm

Resolution:  
x: 7.33 mm, y: 7.33 mm, z: 7.33 mm

Completed on:  
2023/11/02 18:51:36

### Measurement results

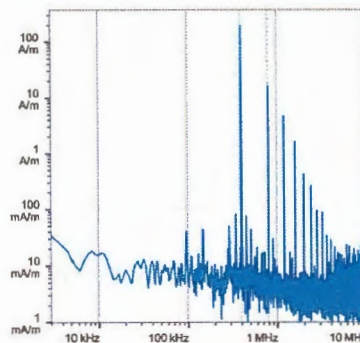
Maximum H-field [RMS]:  
MAGNITUDE: 142.78 A/m  
x: 27.99 A/m, y: 19.03 A/m, z: 138.71 A/m

Maximum H-field location relative to DUT:  
x: 3.67 mm, y: 3.67 mm, z: 8.00 mm

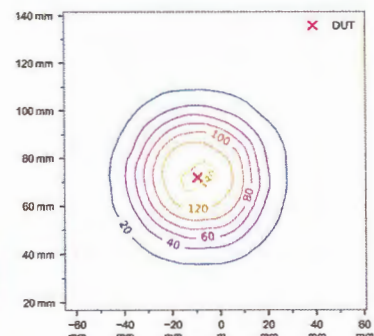
Distance to -20.0 dB boundary:  
36.67 mm

Offset relative to DUT:  
x: 0.00 m, y: 0.00 m, z: 500.00  $\mu$ m

### H-field magnitude [RMS] at maximum location



### H-field magnitude [RMS] at lowest plane



### Incident fields, and induced quantities in the anatomical model (f = 400.00 kHz, $\sigma = 0.750$ S/m, tissue density = 1,000 kg/m<sup>3</sup>)

| Distance [mm] | Peak incident fields<br>H <sub>inc</sub> [A/m, rms] | Peak E <sub>ind</sub> [V/m, rms] |       |           | Peak J <sub>ind</sub> [A/m <sup>2</sup> , rms] | psSAR [mW/kg] |          | H-field extent<br>-20 dB radius [mm] | Errors |                  |                 |
|---------------|-----------------------------------------------------|----------------------------------|-------|-----------|------------------------------------------------|---------------|----------|--------------------------------------|--------|------------------|-----------------|
|               |                                                     | Cube avg.                        | Local | Line avg. |                                                | 1g avg.       | 10g avg. |                                      | Sign   | Vector potential | Boundary effect |
| 0.0           | 280.0                                               | 4.42                             | 4.54  | 4.53      | 2.79                                           | 7.67          | 3.79     | 38.7                                 | 1%     | 8%               | 23%             |

### Standard compliance evaluation (with multi-frequency enhancement, total field evaluation)

| Distance [mm] | ICNIRP 2010/2020 [dB] |                       |       | ICNIRP 1998 [dB]      |                       |       | IEEE 2019 [dB]        |                       |       | FCC [dB]              |                       |       | HC Code 6 [dB]        |                       |       |
|---------------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|
|               | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak J <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR |
| 0.0           | 27.2                  | -19.8                 | -27.2 | 43.7                  | 13.1                  | -27.2 | 9.8                   | -23.4                 | -27.2 | 44.7                  | -19.8                 | -23.2 | 43.7                  | -19.6                 | -23.2 |

### Standard compliance evaluation (coverage factor-adjusted) (with multi-frequency enhancement, total field evaluation)

| Distance [mm] | ICNIRP 2010/2020 [dB] |                       |       | ICNIRP 1998 [dB]      |                       |       | IEEE 2019 [dB]        |                       |       | FCC [dB]              |                       |       | HC Code 6 [dB]        |                       |       |
|---------------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|-----------------------|-----------------------|-------|
|               | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak J <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR | Peak H <sub>inc</sub> | Peak E <sub>ind</sub> | psSAR |
| 0.0           | 27.2                  | -6.7                  | -27.2 | 43.7                  | 13.1                  | -27.2 | 9.8                   | -15.2                 | -27.2 | 44.7                  | -6.7                  | -23.2 | 43.7                  | -3.6                  | -23.2 |

Coverage factors:  $W_{E_{ind}, \text{code avg.}} = [5.381]$ ,  $W_{E_{ext}, \text{line avg.}} = [2.949]$

Document generated at 2023/11/02 18:56:24, simulation performed at 2023/11/02 18:53:41 using Sim4Life version 7.2.4.14019