RF Exposure Report

FCC ID : HQXTT03
Equipment : TPMS Trigger
Brand Name : SYSGRATION
Model Name : TT03
Applicant : Sysgration Ltd.
6F.,No.1,Sec.1,Tiding Blvd.,Neihu Dist. Taipei City 114, Taiwan
Standard : FCC 47 CFR Part 2.1093

The product was received on May 14, 2024 and testing was started from Jun. 12, 2024 and completed on Jun. 12, 2024. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and has been pass the FCC requirement.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager

Sporton International Inc. Wensan Laboratory
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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA440911	Rev. 01	Initial issue of report	Jun. 24, 2024

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
FCC ID	HQXTT03
Equipment	TPMS Trigger
Brand Name	SYSGRATION
Model Name	TT03
Frequency Range	RFID: 125 kHz Tx 2440MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	RFID: ASK Tx 2440MHz: GFSK Bluetooth: BLE
HW Version	V4R2
SW Version	V007

2. RF Exposure Limit

<Limits for Maximum Permissible Exposure>

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency(RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	* 100	6
3.0-30	1842/f	4.89/f	* $900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* 100	30
1.34-30	824/f	2.19/f	* $180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

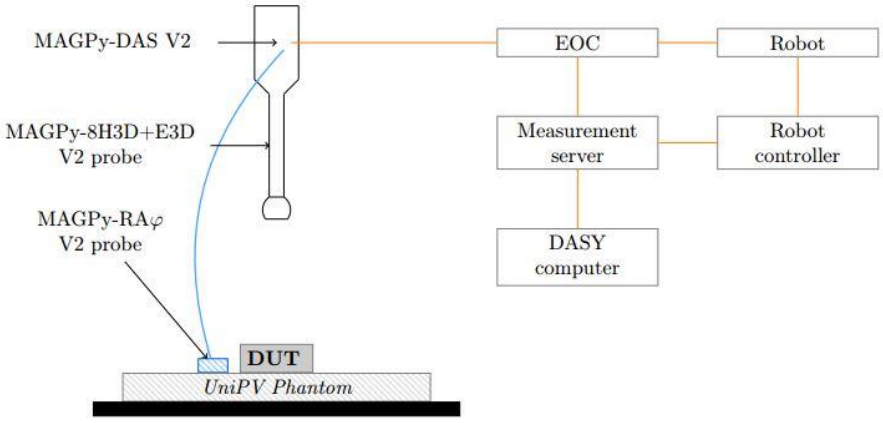
(1) Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure. The phrase fully aware in the context of applying these exposure limits means that an exposed person has received written and/or verbal information fully explaining the potential for RF exposure resulting from his or her employment. With the exception of transient persons, this phrase also means that an exposed person has received appropriate training regarding work practices relating to controlling or mitigating his or her exposure. Such training is not required for transient persons, but they must receive written and/or verbal information and notification (for example, using signs) concerning their exposure potential and appropriate means available to mitigate their exposure. The phrase exercise control means that an exposed person is allowed to and knows how to reduce or avoid exposure by administrative or engineering controls and work practices, such as use of personal protective equipment or time averaging of exposure.

(2) General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

<Limit for peak spatial-average SAR>

The SAR limits for general population/uncontrolled exposure are 0.08 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 1.6 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit is 4 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 30 minutes to determine compliance with general population/uncontrolled SAR limits.

3. System Description and Setup



General Note:

1. DASY8 Module WPT v2.6+ is a special solution for high precision evaluations in the laboratory. The precision is achieved by combining the MAGPy system with the DASY robotics system and Sim4Life simulation platform. It is the fist and only fully automated system for demonstrating compliance of WPT devices.
2. The setup figure shows a typical setup for the measurements with DASY8 Module WPT. The MAGPy-8H3D+E3D V2 probe with MAGPy-DAS V2 is mounted on a TX-90 or TX2-90 robot allowing to scan volumes as large as 2000 × 1000 × 1500 mm with a precision of ±0.2 mm. The H-fild distributions can be analyzed directly and the values are compared to the reference level, or they are converted into Maxwell fild and used as excitations for determining the basic restriction quantities for further dosimetric analysis with the Magneto Quasi-Static (MQS) solver. This specifi solution is optimized for evaluation of H-field sources (3kHz–10MHz) and demonstration of compliance (3KHz–4 MHz)
3. Sicne the DASY8 Module WPT system alternatively, curve-tting techniques may be used to estimate the eld value(s) at dsep based on measurements taken at larger distances . The test equipment permits the estimation of fields at 0mm separation distance based on measurements near the surface; Maxwell total field reconstruction is employed.
4. The DASY8 Module WPT with MAGPy-8H3D+E3D V2 Probe is capable of measuring the H-fild in frequency and time-domain in the frequency band from 3 kHz to 10 MHz, covering a dynamic range from 0.1 to >3100 A/m.
5. The DASY8 Module WPT provides the relation between an externally applied H-field to each of the three sensors and the corresponding ADC reading over the frequency range from 3 kHz to 10 MHz. The frequency-dependent adjustment factors are used to determine the incident measured H-fild from an ADC reading. For the frequency range from 1 to 10 MHz, the adjustment factors are applied with fiite impulse response (FIR) fiters directly inside the MAGPy-8H3D+E3D V2 in time-domain and frequencies <1 MHz in the frequency domain in the PC-based post-processing software.
6. In summary, this system of DASY8 Module WPT with MAGPy-8H3D+E3D V2 Probe fully meets the requirements of SPR002 Issue2 table A2

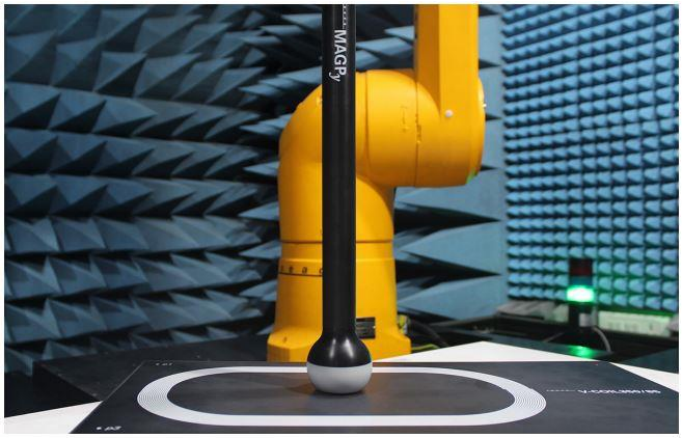
Probe Spec

The MAGPy-8H3D+E3D V2 probe consists of eight isotropic H-field sensors and one isotropic E-field sensor:
Probe design:

- Probe length: 335 mm
- Probe tip diameter: 60 mm
- 8H3D: eight isotropic 1 cm3-H-field sensors, arranged at the corners of a 22 mm cube
- First isotropic H-field sensor plane: 7.5 mm from the tip
- E3D: one isotropic E-field sensor (dipole / monopole)

Sensor specifications:

- Frequency range: 3 kHz – 10 MHz
- H-field dynamic range: 0.1 A/m – 3200 A/m (0.12 µT – 4 mT)
- H-field extrapolation uncertainty: 0.6 dB (k = 2)
- E-field dynamic range: 0.08 V/m – 2000 V/m



- **Compliance Evaluation**

DASY8 Module WPT SW version v2.6+ offers compliance evaluation with respect to:

• **Reference levels** on the basis of the incident *H*- and *E*-fields measured from the volume scan

• **Basic restrictions** on the basis of the peak induced *E*-field, peak induced current density, and

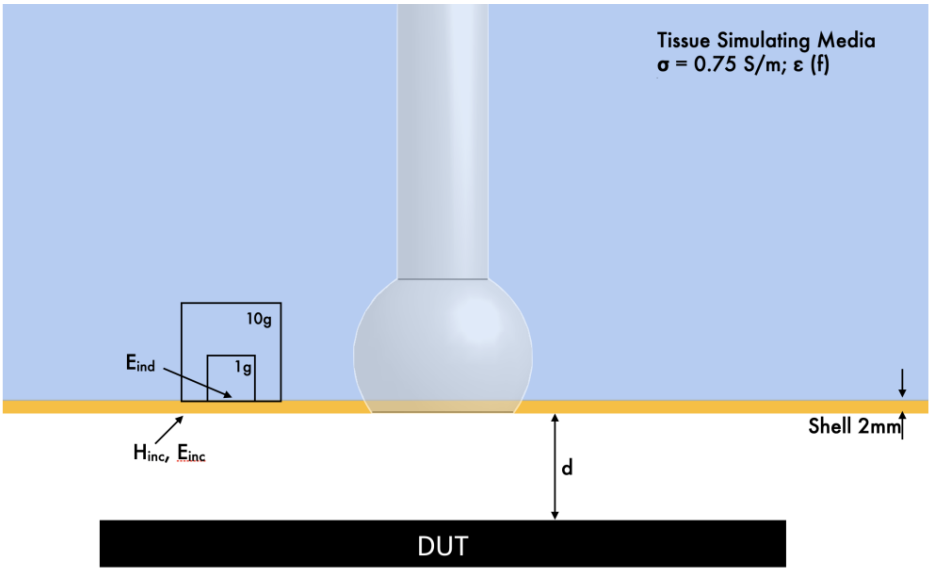
• **peak spatial-average SAR** calculated from the Sim4Life simulation.

Since SPEAG release a DASY8 Module WPT system (*SW Module WPT V2.6+*) for E and H-Field measurement, and also the system support Sim4Life plug-in includes the components to import the 3D H-field scan data (Hx, Hy, Hz values in the measurement volume) to the Sim4Life simulation platform. And a magneto quasi-static (MQS) simulation is automatically setup to solve for a lossy halfspace Phantom setup. The lossy half-space has muscle tissue dielectric properties (σ = 0.75 S/m, ρ = 1000 kg/m3,), The induced electric (E-) fields and **specific absorption rate (SAR)** are assessed with Sim4Life's Quasi-Static EM Solver (P-EM-QS) using only the measured data.

The post-processing engine determines the maximum induced E-field, current density, and SAR values in a homogeneous half-space of muscle tissue equivalent media (half-space muscle phantom) positioned at the compliance distance. In general, the compliance distance corresponds to the closest point (with respect to the exposure source) the human body (e.g., a part of the hand) can reach during the operation of the source.

The relative dielectric constant, conductivity, and mass density of the homogeneous phantom used in the simulations were 55, 0.75 S/m, and 1000 kg/m3 respectively, which correspond to the phantom.

- **Simulation Results**



The distance used in the test raw data for simulation and compliance evaluation results is defined as the spacing between the top surface of the DUT and the bottom surface of the fictive phantom shell (with a thickness of 2 mm). In this case, the evaluation is made at distance d. Typically d = 0, i.e., at the DUT surface. The evaluation locations of the incident fields (i.e., Hinc and Einc) as well as the induced fields (e.g., Eind, psSAR1g, and psSAR10g) are also illustrated.

The following settings is used in the Dasy8 module WPT v2.6 software:

1. Total field evaluation: ON
2. Multi-frequency: ON
3. Coverage Factor: ON

The test plots in appendix B provided by the Dasy8 module WPT software is include the following information:

1. The field distribution, with a clear illustration of the -20 dB boundary. It is recommended to use the auto extend mode to ensure the full -20 dB boundary is assessed.
2. All three tables produced by the system including the "incident fields, and induced quantities in the standardized phantom and anatomical model", "Standard compliance evaluation, Absolute" and "Standard compliance evaluation, Relative" tables.
3. The test plot(s) shall clearly display the fundamental frequency, amplitude, and all emissions within the frequency range from 3 kHz to 10 MHz.

4. Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	Near-field Electric and Megnetic Field Sensor System	MAGPy-8H3D+E3D	3059	May. 15, 2024	May. 14, 2025
SPEAG	Near-field Electric and Megnetic Field Sensor System	MAGPy-DAS	3064	May. 15, 2024	May. 14, 2025
SPEAG	Calibration Procedure for MAGPy Validation Source	V-Coil350/85	1023	May. 22, 2024	May. 21, 2025

5. System Validiation

SPEAG developed the evaluation system DASY8 Module WPT for small-to-large size wireless power transfer (WPT) devices that combines subsystems of DASY8, MAGPy, and Sim4Life. The IT'IS Foundation was mandated to develop the system check and validation sources for WPT evaluations.
Below table shows the target value and measured value after normalized to 1A and comparing to the Target value provided by SPEAG calibration, the verification data should be within its specification of 1.24dB.

System Verification										
Test Date	Calibrated Parameters (kHz)	Distance of the Virtual Phantom from the Surface (mm)		Peak H-field (A/m)	Induced peak current density 1cm^2 area avg.(A/m^2)	Induced peak E-field (V/m)			peak spatial SAR (mW/kg)	
						cube avg.	Local	line avg.	1g avg.	10g avg.
2024/6/12	85	Target	0	208	2.35	3.35	3.38	3.39	6.5	4.84
			2	189	2.22	3.15	3.18	3.19	5.81	4.38
		Raw Measurement	0	195	2.36	3.34	3.37	3.38	6.56	4.91
			2	178	2.23	3.15	3.18	3.19	5.88	4.46
		Deviation (dB)	0	-0.56	0.04	-0.03	-0.03	-0.03	0.04	0.06
			2	-0.52	0.04	0.00	0.00	0.00	0.05	0.08

6. RF Exposure Results

General Note:

1. The device is tire-pressure and tire-wear monitoring system and operate at 125KHz. When the device is turn on, the 125KHz transmitter will always active.
2. Since the device will using close to human body, RF exposure testing at 0mm distance conservatively assessed.

6.1. Maximum Permissible Exposure Evaluation

Electric field Strength Result

Plot No.	Position	Test Distance (mm)	Measured Einc (V/m)	Einc Limit (V/m)	Result
	Front	0	93.9	614	Pass
1	Back	0	114	614	Pass
	Left Side	0	40.2	614	Pass
	Right Side	0	36.3	614	Pass
	Top Side	0	94.7	614	Pass
	Bottom Side	0	50.3	614	Pass

Magnetic field Strength Result

Plot No.	Position	Test Distance (mm)	Measured Hinc (A/m)	Hinc Limit (A/m)	Result
	Front	0	64.5	1.63	Exceed(1)
	Back	0	56.2	1.63	Exceed(1)
	Left Side	0	18.8	1.63	Exceed(1)
	Right Side	0	2.71	1.63	Exceed(1)
2	Top Side	0	107	1.63	Exceed(1)
	Bottom Side	0	0.306	1.63	Pass

1. An assessment against the Limit for peak spatial-average SAR shall be performed for the EUT when the Limits for Maximum Permissible Exposure are exceeded.

6.2. Peak Spatial-Average SAR Evaluation

Peak spatial-average SAR Result

Plot No.	Position	Test Distance (mm)	Measured 1g avg. (W/kg)	1g Limit (W/kg)	Result
3	Front	0	0.000127	1.6	Pass
	Back	0	0.0000917	1.6	Pass
	Left Side	0	0.0000238	1.6	Pass
	Right Side	0	0.00000207	1.6	Pass
	Top Side	0	0.0000539	1.6	Pass
	Bottom Side	0	0.000000072	1.6	Pass

Conclusion:

Based on SPEAG DASY8 Module WPT-MAGPY system, a magneto quasi-static (MQS) simulation is automatically setup to solve for a lossy halfspace Phantom setup. The lossy half-space has muscle tissue dielectric properties (σ = 0.75 S/m, ρ = 1000 kg/m3,), The induced electric (E-) fields and specific absorption rate (SAR) are assessed with Sim4Life's Quasi-Static EM Solver (P-EM-QS) that the the product is compliance with Peak spatial-average SAR Result < 1.6W/kg.

7. Standalone SAR test exclusion considerations

Mode / Band	Average Power (dBm)	
	Bluetooth BLE	TX 2440MHz GFSK
2.4 GHz	-1.5	5.5

Wireless	Max Power (dBm)	mW	Separation Distance (mm)	Frequency (GHz)	Calculation Result	Limit Threshold
Bluetooth	-1.5	0.71	5	2.48	0.22	3
TX 2440MHz	5.5	3.55	5	2.44	1.11	3

Note:

1. Per KDB 447498 D01v06 the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:
   [(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] ·[$\sqrt{}$f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
   - f(GHz) is the RF channel transmit frequency in GHz
   - Power and distance are rounded to the nearest mW and mm before calculation
   - The result is rounded to one decimal place for comparison

Conclusion:

1. According to KDB 447498 D01 section4.3.1 as above table, the Bluetooth standalone SAR is not required. And the Bluetooth cannot transmit simultaneous with RFID 125KHz.
2. According to KDB 447498 D01 section4.3.1 as above table, the TX 2440MHz standalone SAR is not required. Consider the TX 2440 MHz can transmit with RFID 125KHz, the estimated 1g SAR 0.4W/kg and the Ratio is 0.4/1.6=0.25 for TX 2440 MHz, the Peak spatial-average SAR Ratio is < 0.0001 and the combine total TER ratio is less than 1

8. Uncertainty

Uncertainty Budget for Peak Incident H-field					
Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (dB)
Measurement System					
Amplitude calibration uncertainty	0.35	N	1	1	0.35
Probe anisotropy	0.60	R	1.732	1	0.35
Probe dynamic linearity	0.20	R	1.732	1	0.12
Probe frequency domain response	0.30	R	1.732	1	0.17
Probe frequency linear interp. fit	0.15	R	1.732	1	0.09
Spatial averaging	0.10	R	1.732	1	0.06
Parasitic E-field sensitivity	0.10	R	1.732	1	0.06
Detection limit	0.15	R	1.732	1	0.09
Readout electronics	0.0	N	1	1	0.0
Probe positioning	0.19	N	1	1	0.19
Repeatability	0.10	N	1	1	0.10
Surface fild reconstruction	0.30	N	1	1	0.30
Combined uncertainty (k = 1)					0.67 dB
Expanded uncertainty (k = 2)					1.33 dB

Uncertainty Budget for Peak Incident E-field					
Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (dB)
Measurement System					
Amplitude calibration uncertainty	0.53	N	1	1	0.53
Probe anisotropy	0.80	R	1.732	1	0.46
Probe dynamic linearity	1.00	R	1.732	1	0.58
Probe frequency domain response	0.30	R	1.732	1	0.17
Probe frequency linear interp. fit	0.15	R	1.732	1	0.09
Parasitic H-fild sensitivity	0.20	R	1.732	1	0.12
Detection limit	0.15	R	1.732	1	0.09
Readout electronics	0	N	1	1	0
Repeatability	0.10	N	1	1	0.10
Combined uncertainty (k = 1)					0.95 dB
Expanded uncertainty (k = 2)					1.89 dB

DASY8 Uncertainty Budget for psSAR1g according to IEC/IEEE 63184					
Error Description	**Uncertainty Value (±%)**	**Probability**	**Divisor**	**(Ci)**	**Standard Uncertainty (± dB)**
Measurement system					
Amplitude calibration uncertainty	0.35	N	1	1	0.35
Probe anisotropy	0.60	R	1.732	1	0.35
Probe dynamic linearity	0.20	R	1.732	1	0.12
Probe frequency domain response	0.30	R	1.732	1	0.17
Probe frequency linear interp. fit	0.15	R	1.732	1	0.09
Spatial averaging	0.10	R	1.732	1	0.06
Parasitic E-field sensitivity	010	R	1.732	1	0.06
Detection limit	0.15	R	1.732	1	0.09
Readout electronics	0	N	1	1	0
Probe positioning	0.19	N	1	1	0.19
Repeatibility	0.10	N	1	1	0.10
Surface fild reconstruction	0.20	N	1	1	0.20
Numerical Simulations					
Grid resolution	0.02	R	1.732	1	0.01
Tissue parameters	0	R	1.732	1	0
Exposure position	0	R	1.732	1	0
Model and exposure location	0.09	N	1.732	1	0.09
Convergence and power budget	0	R	1.732	1	0
Boundary conditions	0.10	R	1.732	1	0.06
Phantom loading/backscattering	0.10	R	1.732	1	0.06
Combined uncertainty (k = 1)					0.63 dB
Expanded uncertainty (k = 2)					1.27 dB

9. Reference

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8. IEC/IEEE 62704-4, Recommended Practice for Determining the Spatial-Peak Specifi Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices, 30 MHz–6 GHz – Part 1: General Requirements for using the Finite-Element Method (FEM) for SAR Calculations, International Electrotechnical Commission (IEC), IEC Technical Committee 106, Geneva, Switzerland, 2020
9. Assessment methods of the human exposure to electric and magnetic filds from wireless power transfer systems. Models, instrumentation, measurement and numerical methods and procedures (frequency range of 1 kHz to 30 MHz), IEC PAS 63184:2021

DASY8 Module WPT Measurement Report

Device under test

Info:
VCoil35085

Tool info

DASY software version:
DASY8 Module WPT 2.6.0.5002

Probe model, serial no. and configuration date:
MAGPy-8H3D+E3Dv2, WP000211, *2024/05/16*

Software version:
2.0.61, *backend: 2.2.22*

Scan info

Center location:
X: 60.91 mm, **Y:** -149.23 mm, **Z:** 36.65 mm

Dimensions:
X: 433.0 mm, **Y:** 520.4 mm, **Z:** 36.7 mm

Resolution:
X: 7.33 mm, **Y:** 7.33 mm, **Z:** 7.33 mm

Completed on:
2024/06/12

Measurement results

Maximum H-field [RMS]:
MAGNITUDE: 128.98 A/m
X: 65.86 A/m, **Y:** 94.50 A/m, **Z:** 58.05 A/m

Maximum H-field location relative to DUT:
X: 55.00 mm, **Y:** -143.00 mm, **Z:** 8.50 mm

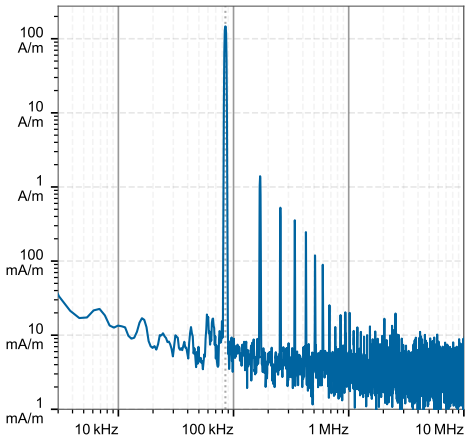
Maximum E-field [RMS]:
MAGNITUDE: 199.84 V/m
X: 9.05 V/m, **Y:** 7.62 V/m, **Z:** 199.49 V/m

Maximum E-field location relative to DUT:
X: 88.00 mm, **Y:** 176.00 mm, **Z:** 0.00 m

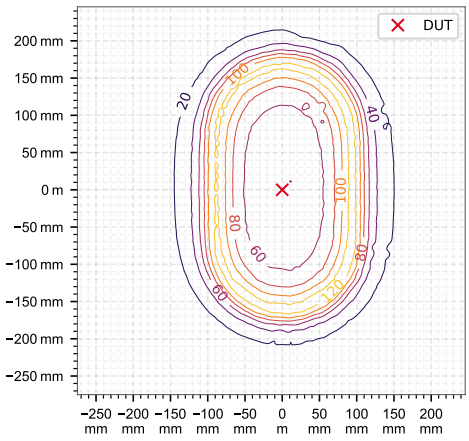
Distance to -20.0 dB boundary:
63.08 mm

Offset relative to DUT:
X: 0.00 m, **Y:** 0.00 m, **Z:** 1.00 mm

H-field magnitude [RMS] at maximum location



H-field magnitude [RMS] at lowest plane



Incident fields and induced fields in the homogeous phantom at the peak frequency

Distance [mm]	Peak incident fields [RMS]		Peak E_{ind} [V/m, RMS]			Peak J_{ind} [A/m^2, RMS]	psSAR [mW/kg]		H-field extent
	H_{inc} [A/m]	E_{inc} [V/m]	Cube avg.	Local	Line avg.	Surface avg.	1g avg.	10g avg.	-20 dB radius [mm]
0.00	195	200	3.34	3.37	3.38	2.36	6.56	4.91	184
2.00	178	183	3.15	3.18	3.19	2.23	5.88	4.46	186

Compliance evaluation (Field values at the peak frequency)

Distance [mm]	ICNIRP 2010/2020				ICNIRP 1998				IEEE 2019				FCC				HC Code 6			
	RL [RMS]		BR [RMS]		RL [RMS]		BR [RMS]		ERL [RMS]		DRL [RMS]		MPE [RMS]		BR [RMS]		RL [RMS]		BR [RMS]	
	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pJ_{ind} [A/m^2]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]
0.00	195	200	3.35	4.91	195	200	2.36	4.91	195	200	3.39	4.91	195	200	N/A	6.56	195	200	3.38	6.56
2.00	178	183	3.16	4.46	178	183	2.23	4.46	178	183	3.19	4.46	178	183	N/A	5.88	178	183	3.19	5.88

Compliance evaluation (Exposure ratios) *(with multi-frequency enhancement, total field evaluation)*

Distance [mm]	ICNIRP 2010/2020						ICNIRP 1998				IEEE 2019						FCC				HC Code 6					
	RL				BR		RL		BR		ERL				DRL		MPE		BR		RL				BR	
	pH_{inc}		pE_{inc}		pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pJ_{ind}	psSAR	pH_{inc}		pE_{inc}		pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pE_{ind}	psSAR	pH_{inc}		pE_{inc}		pE_{ind}	psSAR
	NS	TH	NS	TH	NS	TH	N/A	N/A	NS	TH	NS	TH	NS	TH	NS	TH	N/A	N/A	N/A	TH	NS	TH	NS	TH	NS	TH
0.00	9.29	N/A	10.3	N/A	0.29	N/A	39.0	13.1	14.0	N/A	1.2	N/A	1.39	N/A	0.19	N/A	2.17	6.13	N/A	N/A	2.17	N/A	10.3	N/A	0.30	N/A
2.00	8.5	N/A	9.44	N/A	0.28	N/A	35.7	12.0	13.2	N/A	1.09	N/A	1.28	N/A	0.18	N/A	1.98	5.62	N/A	N/A	1.98	N/A	9.44	N/A	0.28	N/A

DASY8 Module WPT Measurement Report

Device under test

Info:
1_Back_0mm

Tool info

DASY software version:
DASY8 Module WPT 2.6.0.5002

Probe model, serial no. and configuration date:
MAGPy-8H3D+E3Dv2, WP000211, *2024/05/16*

Software version:
2.0.63, *backend: 2.2.22*

Scan info

Center location:
X: 64.24 mm, **Y:** 15.11 mm, **Z:** 29.03 mm

Dimensions:
X: 212.8 mm, **Y:** 301.0 mm, **Z:** 36.7 mm

Resolution:
X: 7.33 mm, **Y:** 7.33 mm, **Z:** 7.33 mm

Completed on:
2024/06/12

Measurement results

Maximum H-field [RMS]:
MAGNITUDE: 28.46 A/m
X: 1.30 A/m, **Y:** 20.97 A/m, **Z:** 19.19 A/m

Maximum H-field location relative to DUT:
X: 18.33 mm, **Y:** 40.33 mm, **Z:** 8.50 mm

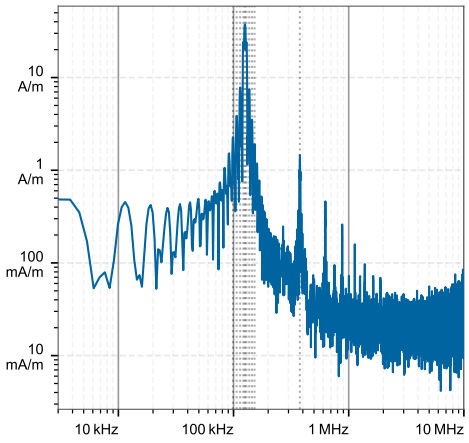
Maximum E-field [RMS]:
MAGNITUDE: 113.52 V/m
X: 7.38 V/m, **Y:** 4.53 V/m, **Z:** 113.19 V/m

Maximum E-field location relative to DUT:
X: 14.67 mm, **Y:** 44.00 mm, **Z:** 0.00 m

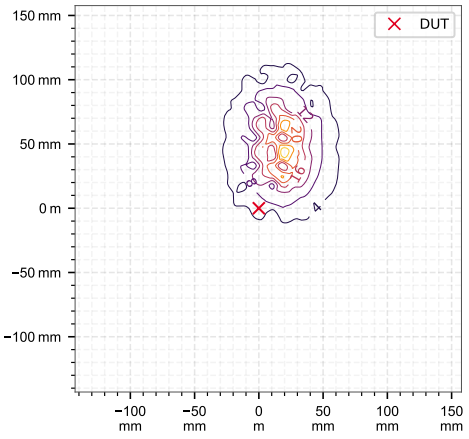
Distance to -20.0 dB boundary:
44.61 mm

Offset relative to DUT:
X: 0.00 m, **Y:** 0.00 m, **Z:** 1.00 mm

H-field magnitude [RMS] at maximum location



H-field magnitude [RMS] at lowest plane



Incident fields and induced fields in the homogeous phantom at the peak frequency

	Peak incident fields [RMS]		Peak E_{ind} [V/m, RMS]			Peak J_{ind} [A/m^2, RMS]	psSAR [mW/kg]		H-field extent
Distance [mm]	H_{inc} [A/m]	E_{inc} [V/m]	Cube avg.	Local	Line avg.	Surface avg.	1g avg.	10g avg.	-20 dB radius [mm]
0.00	56.2	114	0.469	0.480	0.480	0.303	0.0917	0.0473	50.8

Compliance evaluation (Field values at the peak frequency)

	ICNIRP 2010/2020				ICNIRP 1998				IEEE 2019				FCC				HC Code 6			
	RL [RMS]		BR [RMS]		RL [RMS]		BR [RMS]		ERL [RMS]		DRL [RMS]		MPE [RMS]		BR [RMS]		RL [RMS]		BR [RMS]	
Distance [mm]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pJ_{ind} [A/m^2]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]
0.00	56.2	114	2.61	0.0473	56.2	114	0.306	0.0473	56.2	114	1.46	0.0473	56.2	114	N/A	0.0917	56.2	114	3.78	0.0917

Coverage factors: $w_{E_{ind,\ cube\ avg.}}$ = [5.56], $w_{E_{ind,\ local}}$ = [7.86], $w_{E_{ind,\ line\ avg.}}$ = [3.03]

Compliance evaluation (Exposure ratios) *(with multi-frequency enhancement, total field evaluation, coverage evaluation)*

	ICNIRP 2010/2020						ICNIRP 1998				IEEE 2019						FCC				HC Code 6					
	RL				BR		RL		BR		ERL				DRL		MPE		BR		RL				BR	
Distance [mm]	pH_{inc}		pE_{inc}		pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pJ_{ind}	psSAR	pH_{inc}		pE_{inc}		pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pE_{ind}	psSAR	pH_{inc}		pE_{inc}		pE_{ind}	psSAR
	NS	TH	NS	TH	NS	TH	N/A	N/A	NS	TH	NS	TH	NS	TH	NS	TH	N/A	N/A	N/A	TH	NS	TH	NS	TH	NS	TH
0.00	2.68	1.44	5.85	0.13	0.15	<0.01	11.2	5.78	1.26	<0.01	0.35	0.19	0.79	0.18	0.06	<0.01	34.5	1.7	N/A	<0.01	0.62	9.67	5.85	1.12	0.22	<0.01

Coverage factors: $w_{E_{ind,\ cube\ avg.}}$ = [5.56], $w_{E_{ind,\ local}}$ = [7.86], $w_{E_{ind,\ line\ avg.}}$ = [3.03]

DASY8 Module WPT Measurement Report

Device under test

Info:
2_Top Side_0mm

Tool info

DASY software version:
DASY8 Module WPT 2.6.0.5002

Probe model, serial no. and configuration date:
MAGPy-8H3D+E3Dv2, WP000211, *2024/05/16*

Software version:
2.0.63, *backend: 2.2.22*

Scan info

Center location:
X: 31.18 mm, **Y:** -23.48 mm, **Z:** 176.06 mm

Dimensions:
X: 168.8 mm, **Y:** 168.2 mm, **Z:** 36.0 mm

Resolution:
X: 7.33 mm, **Y:** 7.33 mm, **Z:** 7.33 mm

Completed on:
2024/06/12

Measurement results

Maximum H-field [RMS]:
MAGNITUDE: 53.36 A/m
X: 25.53 A/m, **Y:** 7.35 A/m, **Z:** 46.27 A/m

Maximum H-field location relative to DUT:
X: 11.00 mm, **Y:** -11.00 mm, **Z:** 8.50 mm

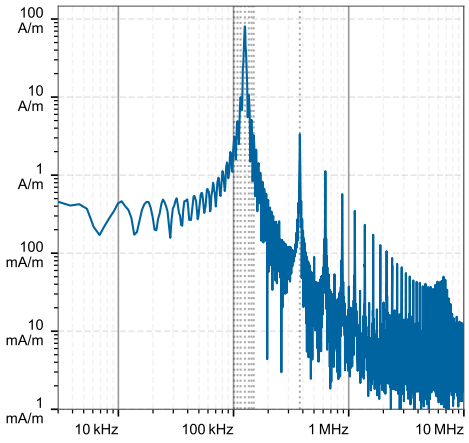
Maximum E-field [RMS]:
MAGNITUDE: 94.72 V/m
X: 3.59 V/m, **Y:** 3.71 V/m, **Z:** 94.58 V/m

Maximum E-field location relative to DUT:
X: 0.00 m, **Y:** 0.00 m, **Z:** 0.00 m

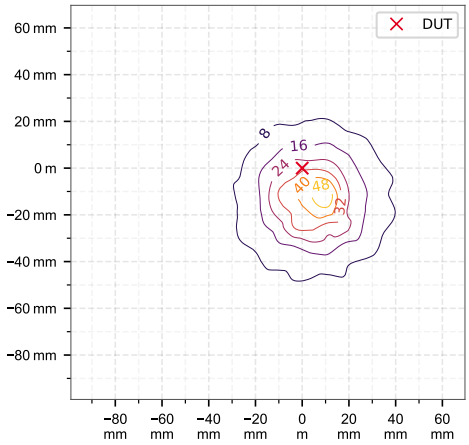
Distance to -20.0 dB boundary:
32.80 mm

Offset relative to DUT:
X: 0.00 m, **Y:** 0.00 m, **Z:** 1.00 mm

H-field magnitude [RMS] at maximum location



H-field magnitude [RMS] at lowest plane



Incident fields and induced fields in the homogeous phantom at the peak frequency

	Peak incident fields [RMS]		Peak E_{ind} [V/m, RMS]			Peak J_{ind} [A/m^2, RMS]	psSAR [mW/kg]		H-field extent
Distance [mm]	H_{inc} [A/m]	E_{inc} [V/m]	Cube avg.	Local	Line avg.	Surface avg.	1g avg.	10g avg.	-20 dB radius [mm]
0.00	107	94.7	0.364	0.372	0.372	0.234	0.0539	0.0296	34.0

Compliance evaluation (Field values at the peak frequency)

	ICNIRP 2010/2020				ICNIRP 1998				IEEE 2019				FCC				HC Code 6			
	RL [RMS]		BR [RMS]		RL [RMS]		BR [RMS]		ERL [RMS]		DRL [RMS]		MPE [RMS]		BR [RMS]		RL [RMS]		BR [RMS]	
Distance	pH_{inc}	pE_{inc}	pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pJ_{ind}	psSAR	pH_{inc}	pE_{inc}	pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pE_{ind}	psSAR
[mm]	[A/m]	[V/m]	[V/m]	[mW/kg]	[A/m]	[V/m]	[A/m^2]	[mW/kg]	[A/m]	[V/m]	[V/m]	[mW/kg]	[A/m]	[V/m]	[V/m]	[mW/kg]	[A/m]	[V/m]	[V/m]	[mW/kg]
0.00	107	94.7	1.94	0.0296	107	94.7	0.236	0.0296	107	94.7	1.09	0.0296	107	94.7	N/A	0.0539	107	94.7	2.79	0.0539

Coverage factors: $w_{E_{ind,\ cube\ avg.}}$ = [5.31], $w_{E_{ind,\ local}}$ = [7.50], $w_{E_{ind,\ line\ avg.}}$ = [2.92]

Compliance evaluation (Exposure ratios) *(with multi-frequency enhancement, total field evaluation, coverage evaluation)*

	ICNIRP 2010/2020						ICNIRP 1998				IEEE 2019						FCC				HC Code 6					
	RL				BR		RL		BR		ERL				DRL		MPE		BR		RL				BR	
Distance [mm]	pH_{inc}		pE_{inc}		pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pJ_{ind}	psSAR	pH_{inc}		pE_{inc}		pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pE_{ind}	psSAR	pH_{inc}		pE_{inc}		pE_{ind}	psSAR
	NS	TH	NS	TH	NS	TH	N/A	N/A	NS	TH	NS	TH	NS	TH	NS	TH	N/A	N/A	N/A	TH	NS	TH	NS	TH	NS	TH
0.00	15.1	5.01	2.4	0.04	0.34	<0.01	39.0	2.02	2.77	<0.01	1.95	0.67	0.32	0.08	0.12	<0.01	119.0	0.54	N/A	<0.01	3.53	33.6	2.4	0.45	0.49	<0.01

Coverage factors: $w_{E_{ind,\ cube\ avg.}}$ = [5.31], $w_{E_{ind,\ local}}$ = [7.50], $w_{E_{ind,\ line\ avg.}}$ = [2.92]

DASY8 Module WPT Measurement Report

Device under test

Info:
3_Front_0mm

Tool info

DASY software version:
DASY8 Module WPT 2.6.0.5002

Probe model, serial no. and configuration date:
MAGPy-8H3D+E3Dv2, WP000211, *2024/05/16*

Software version:
2.0.63, *backend: 2.2.22*

Scan info

Center location:
X: 64.29 mm, **Y:** 7.18 mm, **Z:** 28.92 mm

Dimensions:
X: 168.7 mm, **Y:** 301.0 mm, **Z:** 36.7 mm

Resolution:
X: 7.33 mm, **Y:** 7.33 mm, **Z:** 7.33 mm

Completed on:
2024/06/12

Measurement results

Maximum H-field [RMS]:
MAGNITUDE: 33.46 A/m
X: 3.04 A/m, **Y:** 32.50 A/m, **Z:** 7.37 A/m

Maximum H-field location relative to DUT:
X: -11.00 mm, **Y:** 77.00 mm, **Z:** 8.50 mm

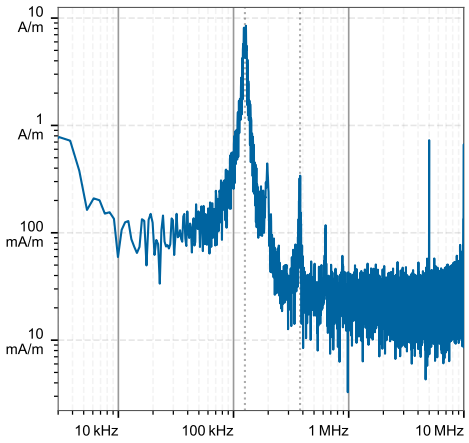
Maximum E-field [RMS]:
MAGNITUDE: 93.92 V/m
X: 1.97 V/m, **Y:** 4.65 V/m, **Z:** 93.78 V/m

Maximum E-field location relative to DUT:
X: -36.67 mm, **Y:** 95.33 mm, **Z:** 0.00 m

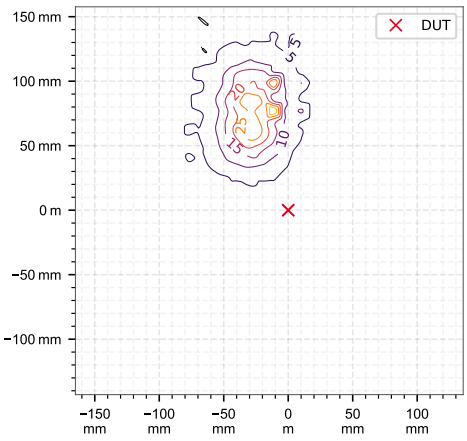
Distance to -20.0 dB boundary:
36.67 mm

Offset relative to DUT:
X: 0.00 m, **Y:** 0.00 m, **Z:** 1.00 mm

H-field magnitude [RMS] at maximum location



H-field magnitude [RMS] at lowest plane



Incident fields and induced fields in the homogeous phantom at the peak frequency

	Peak incident fields [RMS]		Peak E_{ind} [V/m, RMS]			Peak J_{ind} [A/m^2, RMS]	psSAR [mW/kg]		H-field extent
Distance [mm]	H_{inc} [A/m]	E_{inc} [V/m]	Cube avg.	Local	Line avg.	Surface avg.	1g avg.	10g avg.	-20 dB radius [mm]
0.00	64.5	93.9	0.548	0.56	0.562	0.358	0.127	0.0629	50.0

Compliance evaluation (Field values at the peak frequency)

	ICNIRP 2010/2020				ICNIRP 1998				IEEE 2019				FCC				HC Code 6			
	RL [RMS]		BR [RMS]		RL [RMS]		BR [RMS]		ERL [RMS]		DRL [RMS]		MPE [RMS]		BR [RMS]		RL [RMS]		BR [RMS]	
Distance [mm]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pJ_{ind} [A/m^2]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{inc} [V/m]	pE_{ind} [V/m]	psSAR [mW/kg]
0.00	64.5	93.9	3.04	0.0629	64.5	93.9	0.360	0.0629	64.5	93.9	1.70	0.0629	64.5	93.9	N/A	0.127	64.5	93.9	4.39	0.127

Coverage factors: $w_{E_{ind,\ cube\ avg.}}$ = [5.55], $w_{E_{ind,\ local}}$ = [7.84], $w_{E_{ind,\ line\ avg.}}$ = [3.02]

Compliance evaluation (Exposure ratios) *(with multi-frequency enhancement, total field evaluation, coverage evaluation)*

	ICNIRP 2010/2020						ICNIRP 1998				IEEE 2019						FCC				HC Code 6					
	RL				BR		RL		BR		ERL				DRL		MPE		BR		RL				BR	
Distance [mm]	pH_{inc}		pE_{inc}		pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pJ_{ind}	psSAR	pH_{inc}		pE_{inc}		pE_{ind}	psSAR	pH_{inc}	pE_{inc}	pE_{ind}	psSAR	pH_{inc}		pE_{inc}		pE_{ind}	psSAR
	NS	TH	NS	TH	NS	TH	N/A	N/A	NS	TH	NS	TH	NS	TH	NS	TH	N/A	N/A	N/A	TH	NS	TH	NS	TH	NS	TH
0.00	3.07	1.65	3.79	0.06	0.18	<0.01	12.9	3.07	1.46	<0.01	0.40	0.22	0.51	0.12	0.07	<0.01	39.6	1.0	N/A	<0.01	0.72	11.1	3.79	0.68	0.26	<0.01

Coverage factors: $w_{E_{ind,\ cube\ avg.}}$ = [5.55], $w_{E_{ind,\ local}}$ = [7.84], $w_{E_{ind,\ line\ avg.}}$ = [3.02]

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

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

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 **Sporton**
Taoyuan

Certificate No. **MAGPy-8H3D-3059**

CALIBRATION CERTIFICATE

Object	MAGPy-8H3D+E3DV2 SN:3059 MAGPy-DASV2 SN:3064
Calibration procedure(s)	QA CAL-46.v1 Calibration Procedure for MAGPy–8H3D+E3D Near-field Electric and Magnetic Field Sensor System
Calibration date	May 15, 2024

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Oscilloscope	SN: 112135	25-Sep-23 (No. 17A1162175)	Sep-24
Reference 20 dB Attenuator	SN: CC2552 (20x)	26-Mar-24 (No. 217-04046)	Mar-25
Type-N mismatch	SN: 310982 / 06327	26-Mar-24 (No. 217-04047)	Mar-25

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Network Analyzer E5061B	SN: MY49810822	In house check: Nov-23	In house check: Nov-24
TEM Cell	SN: S6029i	In house check: Nov-23	In house check: Nov-24
Plate Capacitor	SN: 6028i	In house check: Nov-23	In house check: Nov-24
Resonator (160kHz)	SN: 6030i	In house check: Nov-23	In house check: Nov-24

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

Issued: May 15, 2024

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 ϑ, and $\phi = 0° \ldots 360°$; $\vartheta = 90°$, and $\phi = 0° \ldots 360°$; for the XYZ sensors (in TEM-Cell at 4 kHz, 40 kHz, 400 kHz and 4 MHz).
- Receiving Pattern: Assessed for E-field polarizations ϑ, and $\phi = 0° \ldots 360°$; $\vartheta = 90°$, and $\phi = 0° \ldots 360°$; 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+E3DV2 (SP MGY 303 AA)	3059
	MAGPy–DASV2 (SE UMS 303 AC)	3064
	MAGPy FPGA Board	WP000211
Adjustment Date	Last MAGPy Adjustment	May 15, 2024
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)			
x	y	z	x	y	z	x	y	z	Tolerance/(dB)
0.370	0.360	0.350	0.390	0.380	0.350	0.46	0.47	0.00	±1.00
0.510	0.490	0.470	0.500	0.510	0.480	−0.17	0.35	0.18	±1.00
0.700	0.670	0.650	0.690	0.680	0.650	−0.12	0.13	0.00	±1.00
0.910	0.880	0.850	0.910	0.870	0.850	0.00	−0.10	0.00	±1.00
1.23	1.19	1.15	1.25	1.18	1.16	0.14	−0.07	0.08	±1.00
1.69	1.63	1.57	1.69	1.64	1.59	0.00	0.05	0.11	±1.00
2.25	2.17	2.09	2.25	2.19	2.12	0.00	0.08	0.12	±0.20
3.01	2.91	2.80	3.01	2.92	2.82	0.00	0.03	0.06	±0.20
4.08	3.95	3.81	4.08	3.95	3.82	0.00	0.00	0.02	±0.20
5.53	5.34	5.15	5.53	5.35	5.16	0.00	0.02	0.02	±0.20
7.44	7.19	6.93	7.46	7.20	6.95	0.02	0.01	0.03	±0.20
9.94	9.60	9.26	9.95	9.61	9.26	0.01	0.01	0.00	±0.20
13.4	13.0	12.5	13.4	13.0	12.5	0.00	0.00	0.00	±0.20
18.1	17.5	16.9	18.1	17.5	16.9	0.00	0.00	0.00	±0.20
24.4	23.6	22.8	24.5	23.6	22.8	0.04	0.00	0.00	±0.20
32.6	31.5	30.4	32.8	31.7	30.6	0.05	0.05	0.06	±0.20
44.1	42.6	41.1	44.3	42.8	41.2	0.04	0.04	0.02	±0.20
59.6	57.6	55.6	60.0	58.1	56.0	0.06	0.08	0.06	±0.20
82.2	79.4	76.6	81.8	79.1	76.2	−0.04	−0.03	−0.05	±0.20
108	104	100	107	104	99.9	−0.08	0.00	−0.01	±0.20
148	143	138	147	142	137	−0.06	−0.06	−0.06	±0.20
206	199	192	205	198	191	−0.04	−0.04	−0.05	±0.20
286	276	266	287	271	267	0.03	−0.16	0.03	±0.20
424	410	395	416	404	388	−0.17	−0.13	−0.16	±0.20
588	568	548	582	565	542	−0.09	−0.05	−0.10	±0.20
884	854	823	885	858	823	0.01	0.04	0.00	±0.20
1350	1300	1250	1370	1330	1270	0.13	0.20	0.14	±0.30
1850	1790	1720	1890	1840	1760	0.19	0.24	0.20	±0.30
3030	2930	2820	3140	3050	2920	0.31	0.35	0.30	±0.50
3630	3500	3370	3780	3660	3510	0.35	0.39	0.35	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±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

[1] 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	
0.370	0.360	0.360	0.400	0.380	0.380	0.68	0.47	0.47	±1.00
0.510	0.490	0.490	0.540	0.520	0.490	0.50	0.52	0.00	±1.00
0.700	0.680	0.670	0.710	0.710	0.660	0.12	0.37	−0.13	±1.00
0.910	0.880	0.870	0.920	0.900	0.870	0.09	0.20	0.00	±1.00
1.23	1.20	1.18	1.26	1.20	1.18	0.21	0.00	0.00	±1.00
1.69	1.65	1.63	1.70	1.65	1.64	0.05	0.00	0.05	±1.00
2.25	2.19	2.17	2.28	2.21	2.19	0.12	0.08	0.08	±0.20
3.01	2.93	2.90	3.03	2.94	2.91	0.06	0.03	0.03	±0.20
4.09	3.98	3.94	4.10	4.01	3.96	0.02	0.07	0.04	±0.20
5.53	5.39	5.33	5.54	5.42	5.36	0.02	0.05	0.05	±0.20
7.44	7.25	7.17	7.46	7.27	7.20	0.02	0.02	0.04	±0.20
9.94	9.68	9.58	9.95	9.69	9.62	0.01	0.01	0.04	±0.20
13.4	13.1	12.9	13.4	13.1	13.0	0.00	0.00	0.07	±0.20
18.1	17.6	17.4	18.1	17.6	17.5	0.00	0.00	0.05	±0.20
24.4	23.8	23.6	24.5	23.8	23.6	0.04	0.00	0.00	±0.20
32.6	31.8	31.4	32.8	31.9	31.6	0.05	0.03	0.06	±0.20
44.1	42.9	42.5	44.3	43.1	42.7	0.04	0.04	0.04	±0.20
59.6	58.1	57.5	60.0	58.5	57.9	0.06	0.06	0.06	±0.20
82.2	80.0	79.2	81.9	79.7	78.8	−0.03	−0.03	−0.04	±0.20
108	105	104	107	104	103	−0.08	−0.08	−0.08	±0.20
148	144	143	148	144	142	0.00	0.00	−0.06	±0.20
206	200	198	205	200	198	−0.04	0.00	0.00	±0.20
286	278	275	287	273	276	0.03	−0.16	0.03	±0.20
424	413	409	417	407	401	−0.14	−0.13	−0.17	±0.20
588	573	567	582	569	560	−0.09	−0.06	−0.11	±0.20
884	861	851	885	865	852	0.01	0.04	0.01	±0.20
1350	1310	1300	1370	1340	1320	0.13	0.20	0.13	±0.30
1850	1800	1780	1890	1850	1820	0.19	0.24	0.19	±0.30
3030	2950	2920	3140	3070	3020	0.31	0.35	0.29	±0.50
3630	3530	3490	3780	3690	3640	0.35	0.39	0.37	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] 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	
0.370	0.370	0.360	0.400	0.380	0.380	0.68	0.23	0.47	±1.00
0.510	0.500	0.490	0.510	0.520	0.510	0.00	0.34	0.35	±1.00
0.700	0.680	0.680	0.690	0.700	0.690	−0.12	0.25	0.13	±1.00
0.910	0.890	0.880	0.900	0.910	0.880	−0.10	0.19	0.00	±1.00
1.23	1.20	1.20	1.25	1.21	1.18	0.14	0.07	−0.15	±1.00
1.68	1.65	1.64	1.68	1.64	1.63	0.00	−0.05	−0.05	±1.00
2.24	2.20	2.19	2.25	2.21	2.20	0.04	0.04	0.04	±0.20
3.00	2.94	2.93	3.00	2.95	2.92	0.00	0.03	−0.03	±0.20
4.07	4.00	3.97	4.08	3.99	3.97	0.02	−0.02	0.00	±0.20
5.52	5.41	5.38	5.53	5.42	5.39	0.02	0.02	0.02	±0.20
7.42	7.28	7.23	7.44	7.28	7.23	0.02	0.00	0.00	±0.20
9.91	9.72	9.67	9.91	9.71	9.66	0.00	−0.01	−0.01	±0.20
13.4	13.1	13.1	13.4	13.1	13.1	0.00	0.00	0.00	±0.20
18.1	17.7	17.6	18.1	17.7	17.6	0.00	0.00	0.00	±0.20
24.4	23.9	23.8	24.4	23.9	23.9	0.00	0.00	0.04	±0.20
32.5	31.9	31.8	32.7	32.0	31.9	0.05	0.03	0.03	±0.20
43.9	43.1	42.9	44.1	43.3	43.0	0.04	0.04	0.02	±0.20
59.5	58.3	58.0	59.9	58.8	58.4	0.06	0.07	0.06	±0.20
81.9	80.3	79.9	81.6	80.0	79.6	−0.03	−0.03	−0.03	±0.20
107	105	105	107	105	104	0.00	0.00	−0.08	±0.20
148	145	144	147	144	143	−0.06	−0.06	−0.06	±0.20
205	201	200	205	201	200	0.00	0.00	0.00	±0.20
285	279	278	286	274	279	0.03	−0.16	0.03	±0.20
423	415	413	415	409	405	−0.17	−0.13	−0.17	±0.20
587	575	572	580	572	566	−0.10	−0.05	−0.09	±0.20
882	864	859	882	869	860	0.00	0.05	0.01	±0.20
1340	1320	1310	1360	1340	1330	0.13	0.13	0.13	±0.30
1840	1810	1800	1890	1860	1840	0.23	0.24	0.19	±0.30
3020	2960	2940	3140	3090	3050	0.34	0.37	0.32	±0.50
3620	3540	3520	3770	3710	3670	0.35	0.41	0.36	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±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

[1] 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)			
x	y	z	x	y	z	x	y	z	Tolerance/(dB)
0.370	0.360	0.350	0.370	0.380	0.370	0.00	0.47	0.48	±1.00
0.500	0.490	0.480	0.490	0.520	0.490	−0.18	0.52	0.18	±1.00
0.680	0.680	0.660	0.680	0.680	0.670	0.00	0.00	0.13	±1.00
0.890	0.890	0.860	0.900	0.880	0.870	0.10	−0.10	0.10	±1.00
1.21	1.20	1.17	1.24	1.21	1.18	0.21	0.07	0.07	±1.00
1.66	1.65	1.60	1.68	1.67	1.62	0.10	0.10	0.11	±1.00
2.21	2.19	2.13	2.24	2.20	2.17	0.12	0.04	0.16	±0.20
2.95	2.93	2.85	2.98	2.93	2.89	0.09	0.00	0.12	±0.20
4.01	3.98	3.88	4.02	3.99	3.89	0.02	0.02	0.02	±0.20
5.43	5.39	5.24	5.43	5.37	5.27	0.00	−0.03	0.05	±0.20
7.31	7.25	7.05	7.31	7.27	7.11	0.00	0.02	0.07	±0.20
9.77	9.68	9.43	9.75	9.72	9.49	−0.02	0.04	0.06	±0.20
13.2	13.1	12.7	13.2	13.1	12.8	0.00	0.00	0.07	±0.20
17.8	17.6	17.2	17.8	17.6	17.2	0.00	0.00	0.00	±0.20
24.0	23.8	23.2	24.0	23.8	23.2	0.00	0.00	0.00	±0.20
32.0	31.8	31.0	32.2	31.9	31.1	0.05	0.03	0.03	±0.20
43.3	43.0	41.8	43.4	43.2	42.0	0.02	0.04	0.04	±0.20
58.6	58.1	56.6	59.0	58.6	57.0	0.06	0.07	0.06	±0.20
80.7	80.1	78.0	80.4	79.8	77.7	−0.03	−0.03	−0.03	±0.20
106	105	102	105	104	102	−0.08	−0.08	0.00	±0.20
145	144	141	145	144	140	0.00	0.00	−0.06	±0.20
202	201	195	202	200	195	0.00	−0.04	0.00	±0.20
281	278	271	282	273	272	0.03	−0.16	0.03	±0.20
416	413	402	409	408	395	−0.15	−0.11	−0.15	±0.20
578	573	558	571	570	552	−0.11	−0.05	−0.09	±0.20
868	861	838	869	865	839	0.01	0.04	0.01	±0.20
1320	1310	1280	1340	1340	1300	0.13	0.20	0.13	±0.30
1820	1800	1750	1860	1850	1800	0.19	0.24	0.24	±0.30
2980	2950	2870	3090	3050	2980	0.31	0.29	0.33	±0.40
3560	3530	3440	3710	3640	3580	0.36	0.27	0.35	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±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

[1] 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)			
x	y	z	x	y	z	x	y	z	Tolerance/(dB)
0.370	0.370	0.360	0.390	0.390	0.370	0.46	0.46	0.24	±1.00
0.500	0.500	0.490	0.520	0.520	0.500	0.34	0.34	0.18	±1.00
0.690	0.690	0.680	0.700	0.710	0.680	0.12	0.25	0.00	±1.00
0.890	0.900	0.880	0.890	0.910	0.880	0.00	0.10	0.00	±1.00
1.21	1.22	1.19	1.21	1.22	1.20	0.00	0.00	0.07	±1.00
1.66	1.68	1.64	1.67	1.68	1.66	0.05	0.00	0.11	±1.00
2.22	2.23	2.18	2.22	2.24	2.20	0.00	0.04	0.08	±0.20
2.96	2.99	2.91	2.97	2.98	2.93	0.03	-0.03	0.06	±0.20
4.02	4.05	3.96	4.02	4.06	3.99	0.00	0.02	0.07	±0.20
5.44	5.49	5.36	5.44	5.49	5.39	0.00	0.00	0.05	±0.20
7.32	7.38	7.21	7.32	7.38	7.24	0.00	0.00	0.04	±0.20
9.79	9.85	9.63	9.77	9.86	9.66	-0.02	0.01	0.03	±0.20
13.2	13.3	13.0	13.2	13.3	13.0	0.00	0.00	0.00	±0.20
17.8	17.9	17.6	17.8	18.0	17.5	0.00	0.05	-0.05	±0.20
24.1	24.2	23.7	24.1	24.2	23.7	0.00	0.00	0.00	±0.20
32.1	32.4	31.6	32.3	32.5	31.8	0.05	0.03	0.05	±0.20
43.4	43.7	42.7	43.6	43.9	42.9	0.04	0.04	0.04	±0.20
58.7	59.2	57.8	59.1	59.6	58.2	0.06	0.06	0.06	±0.20
80.9	81.5	79.6	80.6	81.2	79.3	-0.03	-0.03	-0.03	±0.20
106	107	104	105	106	104	-0.08	-0.08	0.00	±0.20
146	147	144	145	146	143	-0.06	-0.06	-0.06	±0.20
203	204	199	202	204	199	-0.04	0.00	0.00	±0.20
281	283	277	282	278	278	0.03	-0.15	0.03	±0.20
417	421	411	410	415	404	-0.15	-0.12	-0.15	±0.20
579	584	570	572	581	564	-0.11	-0.04	-0.09	±0.20
870	877	856	870	882	856	0.00	0.05	0.00	±0.20
1330	1340	1310	1350	1360	1320	0.13	0.13	0.07	±0.30
1820	1830	1790	1860	1890	1830	0.19	0.28	0.19	±0.30
2980	3010	2930	3100	3140	3040	0.34	0.37	0.32	±0.50
3570	3590	3510	3720	3760	3660	0.36	0.40	0.36	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] 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)			
x	y	z	x	y	z	x	y	z	Tolerance/(dB)
0.370	0.370	0.370	0.380	0.380	0.380	0.23	0.23	0.23	±1.00
0.500	0.500	0.510	0.510	0.520	0.520	0.17	0.34	0.17	±1.00
0.690	0.690	0.690	0.690	0.710	0.700	0.00	0.25	0.12	±1.00
0.890	0.900	0.900	0.890	0.920	0.920	0.00	0.19	0.19	±1.00
1.21	1.22	1.22	1.23	1.24	1.25	0.14	0.14	0.21	±1.00
1.66	1.68	1.68	1.68	1.70	1.71	0.10	0.10	0.15	±1.00
2.21	2.24	2.24	2.24	2.27	2.28	0.12	0.12	0.15	±0.20
2.96	2.99	3.00	2.98	3.04	3.03	0.06	0.14	0.09	±0.20
4.02	4.06	4.07	4.04	4.10	4.09	0.04	0.09	0.04	±0.20
5.44	5.50	5.51	5.47	5.53	5.53	0.05	0.05	0.03	±0.20
7.32	7.40	7.41	7.35	7.44	7.43	0.04	0.05	0.02	±0.20
9.78	9.88	9.90	9.79	9.93	9.92	0.01	0.04	0.02	±0.20
13.2	13.3	13.4	13.2	13.4	13.4	0.00	0.07	0.00	±0.20
17.8	18.0	18.0	17.8	18.1	18.1	0.00	0.05	0.05	±0.20
24.0	24.3	24.3	24.1	24.4	24.4	0.04	0.04	0.04	±0.20
32.1	32.4	32.5	32.2	32.6	32.7	0.03	0.05	0.05	±0.20
43.3	43.8	43.9	43.5	44.1	44.1	0.04	0.06	0.04	±0.20
58.6	59.3	59.5	59.0	59.8	59.9	0.06	0.07	0.06	±0.20
80.8	81.7	81.9	80.5	81.4	81.5	−0.03	−0.03	−0.04	±0.20
106	107	107	105	107	107	−0.08	0.00	0.00	±0.20
146	147	148	145	147	147	−0.06	0.00	−0.06	±0.20
202	205	205	202	204	204	0.00	−0.04	−0.04	±0.20
281	284	284	282	279	286	0.03	−0.15	0.06	±0.20
417	422	423	410	416	415	−0.15	−0.12	−0.17	±0.20
578	585	586	572	581	579	−0.09	−0.06	−0.10	±0.20
869	879	880	870	883	880	0.01	0.04	0.00	±0.20
1330	1340	1340	1350	1360	1360	0.13	0.13	0.13	±0.30
1820	1840	1840	1860	1890	1880	0.19	0.23	0.19	±0.30
2980	3010	3010	3090	3140	3130	0.31	0.37	0.34	±0.50
3570	3600	3610	3720	3760	3760	0.36	0.38	0.35	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±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

[1] 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	
0.370	0.370	0.370	0.380	0.390	0.380	0.23	0.46	0.23	±1.00
0.510	0.510	0.500	0.520	0.530	0.500	0.17	0.33	0.00	±1.00
0.690	0.690	0.680	0.710	0.720	0.680	0.25	0.37	0.00	±1.00
0.910	0.900	0.890	0.920	0.930	0.880	0.09	0.28	−0.10	±1.00
1.22	1.22	1.20	1.25	1.22	1.19	0.21	0.00	−0.07	±1.00
1.68	1.68	1.65	1.68	1.68	1.63	0.00	0.00	−0.11	±1.00
2.24	2.24	2.20	2.23	2.27	2.19	−0.04	0.12	−0.04	±0.20
2.99	3.00	2.94	2.99	3.00	2.92	0.00	0.00	−0.06	±0.20
4.07	4.07	4.00	4.08	4.09	3.97	0.02	0.04	−0.07	±0.20
5.51	5.51	5.41	5.51	5.52	5.39	0.00	0.02	−0.03	±0.20
7.41	7.41	7.27	7.43	7.42	7.26	0.02	0.01	−0.01	±0.20
9.90	9.89	9.72	9.91	9.91	9.72	0.01	0.02	0.00	±0.20
13.4	13.4	13.1	13.4	13.4	13.1	0.00	0.00	0.00	±0.20
18.0	18.0	17.7	18.0	18.0	17.7	0.00	0.00	0.00	±0.20
24.3	24.3	23.9	24.4	24.3	23.9	0.04	0.00	0.00	±0.20
32.5	32.5	31.9	32.6	32.6	32.1	0.03	0.03	0.05	±0.20
43.9	43.9	43.1	44.0	44.1	43.3	0.02	0.04	0.04	±0.20
59.4	59.4	58.4	59.8	59.8	58.8	0.06	0.06	0.06	±0.20
81.8	81.8	80.4	81.5	81.5	80.1	−0.03	−0.03	−0.03	±0.20
107	107	105	107	107	105	0.00	0.00	0.00	±0.20
147	147	145	147	147	144	0.00	0.00	−0.06	±0.20
205	205	201	204	204	201	−0.04	−0.04	0.00	±0.20
284	284	279	286	279	281	0.06	−0.15	0.06	±0.20
422	422	415	414	417	407	−0.17	−0.10	−0.17	±0.20
586	586	575	579	582	569	−0.10	−0.06	−0.09	±0.20
880	880	864	881	885	865	0.01	0.05	0.01	±0.20
1340	1340	1320	1360	1370	1340	0.13	0.19	0.13	±0.30
1840	1840	1810	1890	1890	1850	0.23	0.23	0.19	±0.30
3020	3020	2960	3130	3140	3070	0.31	0.34	0.32	±0.50
3610	3610	3540	3760	3770	3700	0.35	0.38	0.38	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±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

[1] 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	
0.370	0.370	0.350	0.400	0.390	0.360	0.68	0.46	0.24	±1.00
0.510	0.500	0.480	0.540	0.520	0.490	0.50	0.34	0.18	±1.00
0.700	0.680	0.660	0.710	0.690	0.640	0.12	0.13	−0.27	±1.00
0.910	0.890	0.860	0.910	0.900	0.850	0.00	0.10	−0.10	±1.00
1.23	1.20	1.16	1.22	1.22	1.16	−0.07	0.14	0.00	±1.00
1.69	1.65	1.60	1.69	1.67	1.62	0.00	0.10	0.11	±1.00
2.26	2.20	2.13	2.27	2.25	2.14	0.04	0.20	0.04	±0.20
3.02	2.95	2.85	3.01	2.97	2.85	−0.03	0.06	0.00	±0.20
4.10	4.00	3.87	4.09	4.03	3.89	−0.02	0.06	0.04	±0.20
5.55	5.41	5.23	5.55	5.45	5.25	0.00	0.06	0.03	±0.20
7.46	7.28	7.04	7.46	7.32	7.07	0.00	0.05	0.04	±0.20
9.97	9.72	9.41	9.97	9.76	9.46	0.00	0.04	0.05	±0.20
13.5	13.1	12.7	13.5	13.2	12.8	0.00	0.07	0.07	±0.20
18.2	17.7	17.1	18.2	17.7	17.2	0.00	0.00	0.05	±0.20
24.5	23.9	23.1	24.6	24.0	23.2	0.04	0.04	0.04	±0.20
32.7	31.9	30.9	32.9	32.1	31.1	0.05	0.05	0.06	±0.20
44.2	43.1	41.8	44.4	43.4	41.9	0.04	0.06	0.02	±0.20
59.8	58.4	56.5	60.2	58.8	56.9	0.06	0.06	0.06	±0.20
82.4	80.4	77.8	82.1	80.1	77.5	−0.03	−0.03	−0.03	±0.20
108	105	102	107	105	101	−0.08	0.00	−0.09	±0.20
148	145	140	148	144	140	0.00	−0.06	0.00	±0.20
206	201	195	206	201	194	0.00	0.00	−0.04	±0.20
286	280	270	288	275	272	0.06	−0.16	0.06	±0.20
425	415	402	418	409	394	−0.14	−0.13	−0.17	±0.20
590	576	557	583	572	551	−0.10	−0.06	−0.09	±0.20
886	865	837	887	869	837	0.01	0.04	0.00	±0.20
1350	1320	1280	1370	1340	1290	0.13	0.13	0.07	±0.30
1850	1810	1750	1900	1860	1790	0.23	0.24	0.20	±0.30
3040	2970	2870	3150	3090	2970	0.31	0.34	0.30	±0.50
3640	3540	3430	3790	3710	3580	0.35	0.41	0.37	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] 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
0.340	0.220	0.090	0.360	0.220	0.100	0.50	0.00	0.92	±5.00	±5.00	±5.00
0.460	0.300	0.130	0.480	0.290	0.150	0.37	−0.29	1.24	±5.00	±5.00	±5.00
0.630	0.410	0.170	0.670	0.400	0.170	0.53	−0.21	0.00	±5.00	±5.00	±5.00
0.830	0.530	0.230	0.860	0.540	0.230	0.31	0.16	0.00	±5.00	±5.00	±5.00
1.12	0.720	0.300	1.16	0.760	0.320	0.30	0.47	0.56	±5.00	±5.00	±5.00
1.54	0.980	0.420	1.58	0.990	0.450	0.22	0.09	0.60	±5.00	±5.00	±5.00
2.05	1.31	0.560	2.11	1.30	0.550	0.25	−0.07	−0.16	±1.00	±5.00	±5.00
2.74	1.75	0.740	2.80	1.76	0.730	0.19	0.05	−0.12	±1.00	±5.00	±5.00
3.72	2.38	1.01	3.77	2.41	1.01	0.12	0.11	0.00	±1.00	±1.00	±5.00
5.04	3.22	1.37	5.14	3.24	1.36	0.17	0.05	−0.06	±1.00	±1.00	±5.00
6.78	4.33	1.84	6.87	4.36	1.81	0.11	0.06	−0.14	±1.00	±1.00	±5.00
9.05	5.78	2.46	9.18	5.78	2.41	0.12	0.00	−0.18	±1.00	±1.00	±1.00
12.2	7.81	3.32	12.4	7.81	3.27	0.14	0.00	−0.13	±1.00	±1.00	±1.00
16.5	10.5	4.48	16.7	10.5	4.40	0.10	0.00	−0.16	±1.00	±1.00	±1.00
22.3	14.2	6.05	22.6	14.2	5.95	0.12	0.00	−0.14	±1.00	±1.00	±1.00
29.7	19.0	8.07	30.1	19.0	7.97	0.12	0.00	−0.11	±1.00	±1.00	±1.00
40.2	25.6	10.9	40.6	25.7	10.8	0.09	0.03	−0.08	±1.00	±1.00	±1.00
54.4	34.7	14.8	55.0	34.9	14.6	0.10	0.05	−0.12	±1.00	±1.00	±1.00
74.9	47.8	20.3	75.0	47.5	19.9	0.01	−0.05	−0.17	±1.00	±1.00	±1.00
98.1	62.7	26.6	98.1	62.2	26.1	0.00	−0.07	−0.16	±1.00	±1.00	±1.00
135	86.1	36.6	135	85.4	36.0	0.00	−0.07	−0.14	±1.00	±1.00	±1.00
187	120	51.0	187	119	50.0	0.00	−0.07	−0.17	±1.00	±1.00	±1.00
260	166	70.7	261	166	70.0	0.03	0.00	−0.09	±1.00	±1.00	±1.00
386	247	105	364	234	104	−0.51	−0.47	−0.08	±1.00	±1.00	±1.00
536	342	146	508	327	146	−0.47	−0.39	0.00	±1.00	±1.00	±1.00
806	514	219	772	498	222	−0.37	−0.27	0.12	±1.00	±1.00	±1.00
1230	785	334	1190	769	343	−0.29	−0.18	0.23	±1.00	±1.00	±1.00
1680	1080	458	1650	1070	475	−0.16	−0.08	0.32	±1.00	±1.00	±1.00
2760	1760	751	2750	1770	752	−0.03	0.05	0.01	±1.00	±1.00	±1.00
3300	2110	898	3300	2130	905	0.00	0.08	0.07	±1.00	±1.00	±1.00

SPEAG E-field linearity tolerance criteria[1]:
±5.0dB for applied E-field < 2V/m
±1.0dB for applied E-field ≥ 2V/m

[1] 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	1.48	1.48	1.48	1.46	1.47	1.47	-0.12	-0.06	-0.06	±0.3
3200	1.47	1.47	1.47	1.47	1.49	1.49	0.00	0.12	0.12	±0.3
4000	1.46	1.46	1.46	1.46	1.46	1.46	0.00	0.00	0.00	±0.3
5200	1.45	1.45	1.45	1.44	1.43	1.46	-0.06	-0.12	0.06	±0.3
6600	1.44	1.44	1.44	1.44	1.44	1.44	0.00	0.00	0.00	±0.3
8200	1.43	1.43	1.43	1.42	1.42	1.42	-0.06	-0.06	-0.06	±0.3
9000	1.43	1.42	1.43	1.42	1.42	1.42	-0.06	0.00	-0.06	±0.3
10600	4.28	4.23	4.22	4.29	4.23	4.21	0.02	0.00	-0.02	±0.3
13400	4.27	4.24	4.24	4.26	4.22	4.23	-0.02	-0.04	-0.02	±0.3
17000	4.28	4.24	4.24	4.25	4.23	4.22	-0.06	-0.02	-0.04	±0.3
21400	4.30	4.26	4.26	4.29	4.26	4.26	-0.02	0.00	0.00	±0.3
27200	4.30	4.26	4.26	4.29	4.26	4.25	-0.02	0.00	-0.02	±0.3
34400	4.30	4.28	4.27	4.28	4.27	4.26	-0.04	-0.02	-0.02	±0.3
40000	4.29	4.27	4.27	4.29	4.27	4.27	0.00	0.00	0.00	±0.3
43600	4.28	4.26	4.26	4.28	4.25	4.26	0.00	-0.02	0.00	±0.3
55400	4.27	4.25	4.25	4.27	4.25	4.25	0.00	0.00	0.00	±0.3
70000	4.26	4.24	4.24	4.26	4.24	4.24	0.00	0.00	0.00	±0.3
88800	4.25	4.23	4.23	4.25	4.22	4.23	0.00	-0.02	0.00	±0.3
112400	4.24	4.22	4.22	4.24	4.22	4.21	0.00	0.00	-0.02	±0.3
142400	4.22	4.20	4.20	4.21	4.20	4.20	-0.02	0.00	0.00	±0.3
161750	4.20	4.18	4.18	4.20	4.18	4.18	0.00	0.00	0.00	±0.3
180400	4.19	4.17	4.17	4.18	4.17	4.17	-0.02	0.00	0.00	±0.3
228400	4.16	4.14	4.14	4.15	4.13	4.13	-0.02	-0.02	-0.02	±0.3
289400	4.12	4.10	4.10	4.11	4.10	4.10	-0.02	0.00	0.00	±0.3
366400	4.08	4.06	4.06	4.08	4.06	4.06	0.00	0.00	0.00	±0.3
400000	4.06	4.04	4.04	4.05	4.04	4.04	-0.02	0.00	0.00	±0.3
464000	4.03	4.02	4.01	4.02	4.01	4.01	-0.02	-0.02	0.00	±0.3
587800	3.98	3.98	3.97	3.98	3.97	3.97	0.00	-0.02	0.00	±0.3
744200	3.93	3.93	3.93	3.93	3.93	3.92	0.00	0.00	-0.02	±0.3
942600	3.92	3.92	3.92	3.92	3.92	3.91	0.00	0.00	-0.02	±0.3
1193600	3.90	3.89	3.89	3.90	3.89	3.89	0.00	0.00	0.00	±0.3
1511600	3.89	3.88	3.88	3.89	3.89	3.88	0.00	0.02	0.00	±0.3
1914400	3.88	3.87	3.86	3.87	3.87	3.86	-0.02	0.00	0.00	±0.3
2424400	3.86	3.85	3.85	3.86	3.85	3.85	0.00	0.00	0.00	±0.3
3070200	3.83	3.82	3.81	3.82	3.82	3.81	-0.02	0.00	0.00	±0.3
3888000	3.78	3.77	3.76	3.78	3.76	3.76	0.00	-0.02	0.00	±0.3
4000000	3.77	3.76	3.75	3.78	3.76	3.75	0.02	0.00	0.00	±0.3
4923800	3.70	3.69	3.69	3.71	3.69	3.69	0.02	0.00	0.00	±0.3
6235400	3.60	3.59	3.60	3.59	3.60	3.59	-0.02	0.02	-0.02	±0.3
7896400	3.45	3.44	3.44	3.44	3.43	3.45	-0.03	-0.03	0.03	±0.3
10000000	3.30	3.30	3.30	3.27	3.29	3.28	-0.08	-0.03	-0.05	±0.3

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

[1] 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	1.48	1.48	1.48	1.46	1.47	1.48	-0.12	-0.06	0.00	±0.3
3200	1.47	1.47	1.47	1.46	1.49	1.48	-0.06	0.12	0.06	±0.3
4000	1.46	1.46	1.46	1.46	1.46	1.46	0.00	0.00	0.00	±0.3
5200	1.45	1.45	1.45	1.43	1.44	1.45	-0.12	-0.06	0.00	±0.3
6600	1.44	1.44	1.44	1.44	1.44	1.43	0.00	0.00	-0.06	±0.3
8200	1.43	1.43	1.43	1.42	1.43	1.43	-0.06	0.00	0.00	±0.3
9000	1.43	1.42	1.43	1.42	1.43	1.42	-0.06	0.06	-0.06	±0.3
10600	4.28	4.23	4.22	4.28	4.23	4.20	0.00	0.00	-0.04	±0.3
13400	4.27	4.24	4.24	4.27	4.24	4.24	0.00	0.00	0.00	±0.3
17000	4.28	4.24	4.24	4.25	4.24	4.25	-0.06	0.00	0.02	±0.3
21400	4.30	4.26	4.26	4.27	4.25	4.25	-0.06	-0.02	-0.02	±0.3
27200	4.30	4.26	4.26	4.27	4.25	4.26	-0.06	-0.02	0.00	±0.3
34400	4.30	4.28	4.27	4.28	4.28	4.27	-0.04	0.00	0.00	±0.3
40000	4.29	4.27	4.27	4.27	4.27	4.27	-0.04	0.00	0.00	±0.3
43600	4.28	4.26	4.26	4.26	4.27	4.27	-0.04	0.02	0.02	±0.3
55400	4.27	4.25	4.25	4.26	4.25	4.25	-0.02	0.00	0.00	±0.3
70000	4.26	4.24	4.24	4.25	4.24	4.24	-0.02	0.00	0.00	±0.3
88800	4.25	4.23	4.23	4.23	4.23	4.24	-0.04	0.00	0.02	±0.3
112400	4.24	4.22	4.22	4.22	4.21	4.22	-0.04	-0.02	0.00	±0.3
142400	4.22	4.20	4.20	4.21	4.19	4.20	-0.02	-0.02	0.00	±0.3
161750	4.20	4.18	4.18	4.19	4.18	4.18	-0.02	0.00	0.00	±0.3
180400	4.19	4.17	4.17	4.17	4.17	4.17	-0.04	0.00	0.00	±0.3
228400	4.16	4.14	4.14	4.15	4.14	4.14	-0.02	0.00	0.00	±0.3
289400	4.12	4.10	4.10	4.11	4.10	4.10	-0.02	0.00	0.00	±0.3
366400	4.08	4.06	4.06	4.07	4.06	4.07	-0.02	0.00	0.02	±0.3
400000	4.06	4.04	4.04	4.05	4.05	4.05	-0.02	0.02	0.02	±0.3
464000	4.03	4.02	4.01	4.02	4.02	4.03	-0.02	0.00	0.04	±0.3
587800	3.98	3.98	3.97	3.98	3.98	3.97	0.00	0.00	0.00	±0.3
744200	3.93	3.93	3.93	3.92	3.92	3.93	-0.02	-0.02	0.00	±0.3
942600	3.92	3.92	3.92	3.91	3.92	3.93	-0.02	0.00	0.02	±0.3
1193600	3.90	3.89	3.89	3.90	3.89	3.90	0.00	0.00	0.02	±0.3
1511600	3.89	3.88	3.88	3.89	3.88	3.88	0.00	0.00	0.00	±0.3
1914400	3.88	3.87	3.86	3.88	3.86	3.86	0.00	-0.02	0.00	±0.3
2424400	3.86	3.85	3.85	3.86	3.85	3.85	0.00	0.00	0.00	±0.3
3070200	3.83	3.82	3.81	3.83	3.82	3.81	0.00	0.00	0.00	±0.3
3888000	3.78	3.77	3.76	3.77	3.76	3.76	-0.02	-0.02	0.00	±0.3
4000000	3.77	3.76	3.75	3.76	3.76	3.75	-0.02	0.00	0.00	±0.3
4923800	3.70	3.69	3.69	3.69	3.69	3.70	-0.02	0.00	0.02	±0.3
6235400	3.60	3.59	3.60	3.59	3.58	3.59	-0.02	-0.02	-0.02	±0.3
7896400	3.45	3.44	3.44	3.44	3.44	3.40	-0.03	0.00	-0.10	±0.3
10000000	3.30	3.30	3.30	3.32	3.32	3.31	0.05	0.05	0.03	±0.3

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

[1] 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	1.48	1.48	1.48	1.48	1.47	1.48	0.00	−0.06	0.00	±0.3
3200	1.47	1.47	1.47	1.47	1.49	1.48	0.00	0.12	0.06	±0.3
4000	1.46	1.46	1.46	1.46	1.46	1.46	0.00	0.00	0.00	±0.3
5200	1.45	1.45	1.45	1.44	1.44	1.46	−0.06	−0.06	0.06	±0.3
6600	1.44	1.44	1.44	1.44	1.44	1.43	0.00	0.00	−0.06	±0.3
8200	1.43	1.43	1.43	1.42	1.42	1.43	−0.06	−0.06	0.00	±0.3
9000	1.43	1.42	1.43	1.43	1.42	1.42	0.00	0.00	−0.06	±0.3
10600	4.28	4.23	4.22	4.29	4.21	4.21	0.02	−0.04	−0.02	±0.3
13400	4.27	4.24	4.24	4.26	4.22	4.23	−0.02	−0.04	−0.02	±0.3
17000	4.28	4.24	4.24	4.27	4.23	4.22	−0.02	−0.02	−0.04	±0.3
21400	4.30	4.26	4.26	4.28	4.25	4.26	−0.04	−0.02	0.00	±0.3
27200	4.30	4.26	4.26	4.28	4.24	4.26	−0.04	−0.04	0.00	±0.3
34400	4.30	4.28	4.27	4.29	4.26	4.27	−0.02	−0.04	0.00	±0.3
40000	4.29	4.27	4.27	4.29	4.26	4.26	0.00	−0.02	−0.02	±0.3
43600	4.28	4.26	4.26	4.29	4.25	4.26	0.02	−0.02	0.00	±0.3
55400	4.27	4.25	4.25	4.26	4.25	4.25	−0.02	0.00	0.00	±0.3
70000	4.26	4.24	4.24	4.25	4.24	4.24	−0.02	0.00	0.00	±0.3
88800	4.25	4.23	4.23	4.24	4.22	4.22	−0.02	−0.02	−0.02	±0.3
112400	4.24	4.22	4.22	4.23	4.21	4.21	−0.02	−0.02	−0.02	±0.3
142400	4.22	4.20	4.20	4.21	4.19	4.20	−0.02	−0.02	0.00	±0.3
161750	4.20	4.18	4.18	4.19	4.18	4.18	−0.02	0.00	0.00	±0.3
180400	4.19	4.17	4.17	4.17	4.17	4.17	−0.04	0.00	0.00	±0.3
228400	4.16	4.14	4.14	4.15	4.13	4.13	−0.02	−0.02	−0.02	±0.3
289400	4.12	4.10	4.10	4.12	4.09	4.09	0.00	−0.02	−0.02	±0.3
366400	4.08	4.06	4.06	4.07	4.06	4.07	−0.02	0.00	0.02	±0.3
400000	4.06	4.04	4.04	4.05	4.04	4.04	−0.02	0.00	0.00	±0.3
464000	4.03	4.02	4.01	4.02	4.01	4.01	−0.02	−0.02	0.00	±0.3
587800	3.98	3.98	3.97	3.98	3.97	3.97	0.00	−0.02	0.00	±0.3
744200	3.93	3.93	3.93	3.93	3.92	3.92	0.00	−0.02	−0.02	±0.3
942600	3.92	3.92	3.92	3.92	3.92	3.91	0.00	0.00	−0.02	±0.3
1193600	3.90	3.89	3.89	3.91	3.89	3.89	0.02	0.00	0.00	±0.3
1511600	3.89	3.88	3.88	3.89	3.89	3.88	0.00	0.02	0.00	±0.3
1914400	3.88	3.87	3.86	3.88	3.87	3.87	0.00	0.00	0.02	±0.3
2424400	3.86	3.85	3.85	3.86	3.85	3.85	0.00	0.00	0.00	±0.3
3070200	3.83	3.82	3.81	3.84	3.82	3.81	0.02	0.00	0.00	±0.3
3888000	3.78	3.77	3.76	3.78	3.76	3.77	0.00	−0.02	0.02	±0.3
4000000	3.77	3.76	3.75	3.76	3.76	3.76	−0.02	0.00	0.02	±0.3
4923800	3.70	3.69	3.69	3.70	3.69	3.69	0.00	0.00	0.00	±0.3
6235400	3.60	3.59	3.60	3.60	3.60	3.60	0.00	0.02	0.00	±0.3
7896400	3.45	3.44	3.44	3.44	3.43	3.42	−0.03	−0.03	−0.05	±0.3
10000000	3.30	3.30	3.30	3.28	3.29	3.29	−0.05	−0.03	−0.03	±0.3

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

[1] 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	1.48	1.48	1.48	1.47	1.48	1.47	-0.06	0.00	-0.06	±0.3
3200	1.47	1.47	1.47	1.47	1.48	1.49	0.00	0.06	0.12	±0.3
4000	1.46	1.46	1.46	1.46	1.46	1.46	0.00	0.00	0.00	±0.3
5200	1.45	1.45	1.45	1.43	1.43	1.46	-0.12	-0.12	0.06	±0.3
6600	1.44	1.44	1.44	1.45	1.44	1.43	0.06	0.00	-0.06	±0.3
8200	1.43	1.43	1.43	1.43	1.42	1.43	0.00	-0.06	0.00	±0.3
9000	1.43	1.42	1.43	1.42	1.43	1.42	-0.06	0.06	-0.06	±0.3
10600	4.28	4.23	4.22	4.29	4.21	4.22	0.02	-0.04	0.00	±0.3
13400	4.27	4.24	4.24	4.26	4.24	4.22	-0.02	0.00	-0.04	±0.3
17000	4.28	4.24	4.24	4.27	4.23	4.22	-0.02	-0.02	-0.04	±0.3
21400	4.30	4.26	4.26	4.28	4.27	4.27	-0.04	0.02	0.02	±0.3
27200	4.30	4.26	4.26	4.29	4.28	4.24	-0.02	0.04	-0.04	±0.3
34400	4.30	4.28	4.27	4.28	4.27	4.27	-0.04	-0.02	0.00	±0.3
40000	4.29	4.27	4.27	4.28	4.27	4.26	-0.02	0.00	-0.02	±0.3
43600	4.28	4.26	4.26	4.27	4.25	4.25	-0.02	-0.02	-0.02	±0.3
55400	4.27	4.25	4.25	4.26	4.24	4.24	-0.02	-0.02	-0.02	±0.3
70000	4.26	4.24	4.24	4.25	4.24	4.23	-0.02	0.00	-0.02	±0.3
88800	4.25	4.23	4.23	4.24	4.23	4.22	-0.02	0.00	-0.02	±0.3
112400	4.24	4.22	4.22	4.23	4.21	4.21	-0.02	-0.02	-0.02	±0.3
142400	4.22	4.20	4.20	4.22	4.19	4.19	0.00	-0.02	-0.02	±0.3
161750	4.20	4.18	4.18	4.19	4.17	4.18	-0.02	-0.02	0.00	±0.3
180400	4.19	4.17	4.17	4.18	4.17	4.17	-0.02	0.00	0.00	±0.3
228400	4.16	4.14	4.14	4.15	4.13	4.13	-0.02	-0.02	-0.02	±0.3
289400	4.12	4.10	4.10	4.10	4.11	4.09	-0.04	0.02	-0.02	±0.3
366400	4.08	4.06	4.06	4.07	4.06	4.06	-0.02	0.00	0.00	±0.3
400000	4.06	4.04	4.04	4.05	4.04	4.04	-0.02	0.00	0.00	±0.3
464000	4.03	4.02	4.01	4.02	4.01	4.01	-0.02	-0.02	0.00	±0.3
587800	3.98	3.98	3.97	3.98	3.97	3.97	0.00	-0.02	0.00	±0.3
744200	3.93	3.93	3.93	3.93	3.93	3.93	0.00	0.00	0.00	±0.3
942600	3.92	3.92	3.92	3.92	3.92	3.91	0.00	0.00	-0.02	±0.3
1193600	3.90	3.89	3.89	3.90	3.89	3.89	0.00	0.00	0.00	±0.3
1511600	3.89	3.88	3.88	3.88	3.88	3.88	-0.02	0.00	0.00	±0.3
1914400	3.88	3.87	3.86	3.87	3.86	3.87	-0.02	-0.02	0.02	±0.3
2424400	3.86	3.85	3.85	3.85	3.85	3.85	-0.02	0.00	0.00	±0.3
3070200	3.83	3.82	3.81	3.83	3.82	3.81	0.00	0.00	0.00	±0.3
3888000	3.78	3.77	3.76	3.78	3.77	3.77	0.00	0.00	0.02	±0.3
4000000	3.77	3.76	3.75	3.77	3.76	3.75	0.00	0.00	0.00	±0.3
4923800	3.70	3.69	3.69	3.70	3.70	3.69	0.00	0.02	0.00	±0.3
6235400	3.60	3.59	3.60	3.60	3.59	3.60	0.00	0.00	0.00	±0.3
7896400	3.45	3.44	3.44	3.44	3.44	3.42	-0.03	0.00	-0.05	±0.3
10000000	3.30	3.30	3.30	3.32	3.28	3.32	0.05	-0.05	0.05	±0.3

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

[1] 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	1.48	1.48	1.48	1.47	1.47	1.45	-0.06	-0.06	-0.18	±0.3
3200	1.47	1.47	1.47	1.46	1.49	1.47	-0.06	0.12	0.00	±0.3
4000	1.46	1.46	1.46	1.46	1.46	1.46	0.00	0.00	0.00	±0.3
5200	1.45	1.45	1.45	1.44	1.44	1.46	-0.06	-0.06	0.06	±0.3
6600	1.44	1.44	1.44	1.44	1.43	1.43	0.00	-0.06	-0.06	±0.3
8200	1.43	1.43	1.43	1.42	1.42	1.43	-0.06	-0.06	0.00	±0.3
9000	1.43	1.42	1.43	1.42	1.42	1.42	-0.06	0.00	-0.06	±0.3
10600	4.28	4.23	4.22	4.26	4.19	4.22	-0.04	-0.08	0.00	±0.3
13400	4.27	4.24	4.24	4.26	4.23	4.25	-0.02	-0.02	0.02	±0.3
17000	4.28	4.24	4.24	4.25	4.24	4.24	-0.06	0.00	0.00	±0.3
21400	4.30	4.26	4.26	4.28	4.24	4.27	-0.04	-0.04	0.02	±0.3
27200	4.30	4.26	4.26	4.28	4.26	4.25	-0.04	0.00	-0.02	±0.3
34400	4.30	4.28	4.27	4.28	4.27	4.27	-0.04	-0.02	0.00	±0.3
40000	4.29	4.27	4.27	4.28	4.26	4.26	-0.02	-0.02	-0.02	±0.3
43600	4.28	4.26	4.26	4.27	4.25	4.26	-0.02	-0.02	0.00	±0.3
55400	4.27	4.25	4.25	4.26	4.25	4.25	-0.02	0.00	0.00	±0.3
70000	4.26	4.24	4.24	4.25	4.23	4.24	-0.02	-0.02	0.00	±0.3
88800	4.25	4.23	4.23	4.24	4.22	4.22	-0.02	-0.02	-0.02	±0.3
112400	4.24	4.22	4.22	4.22	4.21	4.21	-0.04	-0.02	-0.02	±0.3
142400	4.22	4.20	4.20	4.21	4.20	4.19	-0.02	0.00	-0.02	±0.3
161750	4.20	4.18	4.18	4.19	4.18	4.17	-0.02	0.00	-0.02	±0.3
180400	4.19	4.17	4.17	4.18	4.17	4.17	-0.02	0.00	0.00	±0.3
228400	4.16	4.14	4.14	4.15	4.14	4.14	-0.02	0.00	0.00	±0.3
289400	4.12	4.10	4.10	4.11	4.10	4.10	-0.02	0.00	0.00	±0.3
366400	4.08	4.06	4.06	4.07	4.07	4.06	-0.02	0.02	0.00	±0.3
400000	4.06	4.04	4.04	4.05	4.05	4.04	-0.02	0.02	0.00	±0.3
464000	4.03	4.02	4.01	4.03	4.02	4.01	0.00	0.00	0.00	±0.3
587800	3.98	3.98	3.97	3.98	3.98	3.97	0.00	0.00	0.00	±0.3
744200	3.93	3.93	3.93	3.93	3.92	3.93	0.00	-0.02	0.00	±0.3
942600	3.92	3.92	3.92	3.92	3.92	3.92	0.00	0.00	0.00	±0.3
1193600	3.90	3.89	3.89	3.90	3.89	3.89	0.00	0.00	0.00	±0.3
1511600	3.89	3.88	3.88	3.89	3.88	3.87	0.00	0.00	-0.02	±0.3
1914400	3.88	3.87	3.86	3.87	3.87	3.87	-0.02	0.00	0.02	±0.3
2424400	3.86	3.85	3.85	3.86	3.85	3.85	0.00	0.00	0.00	±0.3
3070200	3.83	3.82	3.81	3.83	3.82	3.81	0.00	0.00	0.00	±0.3
3888000	3.78	3.77	3.76	3.78	3.76	3.77	0.00	-0.02	0.02	±0.3
4000000	3.77	3.76	3.75	3.76	3.76	3.75	-0.02	0.00	0.00	±0.3
4923800	3.70	3.69	3.69	3.70	3.70	3.70	0.00	0.02	0.02	±0.3
6235400	3.60	3.59	3.60	3.57	3.59	3.60	-0.07	0.00	0.00	±0.3
7896400	3.45	3.44	3.44	3.45	3.44	3.40	0.00	0.00	-0.10	±0.3
10000000	3.30	3.30	3.30	3.27	3.32	3.32	-0.08	0.05	0.05	±0.3

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

[1] 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	1.48	1.48	1.48	1.46	1.47	1.48	-0.12	-0.06	0.00	±0.3
3200	1.47	1.47	1.47	1.46	1.48	1.48	-0.06	0.06	0.06	±0.3
4000	1.46	1.46	1.46	1.45	1.46	1.46	-0.06	0.00	0.00	±0.3
5200	1.45	1.45	1.45	1.44	1.44	1.46	-0.06	-0.06	0.06	±0.3
6600	1.44	1.44	1.44	1.43	1.44	1.43	-0.06	0.00	-0.06	±0.3
8200	1.43	1.43	1.43	1.41	1.42	1.42	-0.12	-0.06	-0.06	±0.3
9000	1.43	1.42	1.43	1.42	1.42	1.42	-0.06	0.00	-0.06	±0.3
10600	4.28	4.23	4.22	4.25	4.22	4.21	-0.06	-0.02	-0.02	±0.3
13400	4.27	4.24	4.24	4.28	4.25	4.22	0.02	0.02	-0.04	±0.3
17000	4.28	4.24	4.24	4.26	4.23	4.22	-0.04	-0.02	-0.04	±0.3
21400	4.30	4.26	4.26	4.28	4.25	4.25	-0.04	-0.02	-0.02	±0.3
27200	4.30	4.26	4.26	4.28	4.25	4.25	-0.04	-0.02	-0.02	±0.3
34400	4.30	4.28	4.27	4.28	4.27	4.26	-0.04	-0.02	-0.02	±0.3
40000	4.29	4.27	4.27	4.27	4.27	4.26	-0.04	0.00	-0.02	±0.3
43600	4.28	4.26	4.26	4.27	4.26	4.25	-0.02	0.00	-0.02	±0.3
55400	4.27	4.25	4.25	4.26	4.25	4.24	-0.02	0.00	-0.02	±0.3
70000	4.26	4.24	4.24	4.25	4.24	4.23	-0.02	0.00	-0.02	±0.3
88800	4.25	4.23	4.23	4.23	4.22	4.22	-0.04	-0.02	-0.02	±0.3
112400	4.24	4.22	4.22	4.22	4.21	4.21	-0.04	-0.02	-0.02	±0.3
142400	4.22	4.20	4.20	4.21	4.19	4.19	-0.02	-0.02	-0.02	±0.3
161750	4.20	4.18	4.18	4.18	4.18	4.18	-0.04	0.00	0.00	±0.3
180400	4.19	4.17	4.17	4.18	4.17	4.16	-0.02	0.00	-0.02	±0.3
228400	4.16	4.14	4.14	4.14	4.13	4.13	-0.04	-0.02	-0.02	±0.3
289400	4.12	4.10	4.10	4.12	4.10	4.09	0.00	0.00	-0.02	±0.3
366400	4.08	4.06	4.06	4.07	4.06	4.06	-0.02	0.00	0.00	±0.3
400000	4.06	4.04	4.04	4.05	4.04	4.04	-0.02	0.00	0.00	±0.3
464000	4.03	4.02	4.01	4.02	4.01	4.01	-0.02	-0.02	0.00	±0.3
587800	3.98	3.98	3.97	3.98	3.97	3.97	0.00	-0.02	0.00	±0.3
744200	3.93	3.93	3.93	3.93	3.92	3.92	0.00	-0.02	-0.02	±0.3
942600	3.92	3.92	3.92	3.92	3.91	3.92	0.00	-0.02	0.00	±0.3
1193600	3.90	3.89	3.89	3.90	3.89	3.90	0.00	0.00	0.02	±0.3
1511600	3.89	3.88	3.88	3.89	3.88	3.88	0.00	0.00	0.00	±0.3
1914400	3.88	3.87	3.86	3.88	3.86	3.86	0.00	-0.02	0.00	±0.3
2424400	3.86	3.85	3.85	3.85	3.85	3.84	-0.02	0.00	-0.02	±0.3
3070200	3.83	3.82	3.81	3.83	3.82	3.81	0.00	0.00	0.00	±0.3
3888000	3.78	3.77	3.76	3.78	3.77	3.77	0.00	0.00	0.02	±0.3
4000000	3.77	3.76	3.75	3.76	3.76	3.75	-0.02	0.00	0.00	±0.3
4923800	3.70	3.69	3.69	3.69	3.69	3.69	-0.02	0.00	0.00	±0.3
6235400	3.60	3.59	3.60	3.60	3.57	3.60	0.00	-0.05	0.00	±0.3
7896400	3.45	3.44	3.44	3.45	3.44	3.41	0.00	0.00	-0.08	±0.3
10000000	3.30	3.30	3.30	3.29	3.30	3.32	-0.03	0.00	0.05	±0.3

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

[1] 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	1.48	1.48	1.48	1.52	1.47	1.46	0.23	-0.06	-0.12	±0.3
3200	1.47	1.47	1.47	1.46	1.49	1.47	-0.06	0.12	0.00	±0.3
4000	1.46	1.46	1.46	1.46	1.46	1.46	0.00	0.00	0.00	±0.3
5200	1.45	1.45	1.45	1.44	1.44	1.45	-0.06	-0.06	0.00	±0.3
6600	1.44	1.44	1.44	1.44	1.43	1.44	0.00	-0.06	0.00	±0.3
8200	1.43	1.43	1.43	1.42	1.42	1.43	-0.06	-0.06	0.00	±0.3
9000	1.43	1.42	1.43	1.43	1.42	1.43	0.00	0.00	0.00	±0.3
10600	4.28	4.23	4.22	4.28	4.20	4.21	0.00	-0.06	-0.02	±0.3
13400	4.27	4.24	4.24	4.27	4.22	4.23	0.00	-0.04	-0.02	±0.3
17000	4.28	4.24	4.24	4.26	4.22	4.23	-0.04	-0.04	-0.02	±0.3
21400	4.30	4.26	4.26	4.28	4.26	4.26	-0.04	0.00	0.00	±0.3
27200	4.30	4.26	4.26	4.29	4.26	4.25	-0.02	0.00	-0.02	±0.3
34400	4.30	4.28	4.27	4.29	4.26	4.27	-0.02	-0.04	0.00	±0.3
40000	4.29	4.27	4.27	4.28	4.26	4.26	-0.02	-0.02	-0.02	±0.3
43600	4.28	4.26	4.26	4.26	4.25	4.25	-0.04	-0.02	-0.02	±0.3
55400	4.27	4.25	4.25	4.26	4.24	4.24	-0.02	-0.02	-0.02	±0.3
70000	4.26	4.24	4.24	4.25	4.23	4.24	-0.02	-0.02	0.00	±0.3
88800	4.25	4.23	4.23	4.24	4.22	4.23	-0.02	-0.02	0.00	±0.3
112400	4.24	4.22	4.22	4.22	4.21	4.21	-0.04	-0.02	-0.02	±0.3
142400	4.22	4.20	4.20	4.21	4.19	4.19	-0.02	-0.02	-0.02	±0.3
161750	4.20	4.18	4.18	4.18	4.18	4.17	-0.04	0.00	-0.02	±0.3
180400	4.19	4.17	4.17	4.18	4.17	4.16	-0.02	0.00	-0.02	±0.3
228400	4.16	4.14	4.14	4.15	4.13	4.13	-0.02	-0.02	-0.02	±0.3
289400	4.12	4.10	4.10	4.11	4.09	4.10	-0.02	-0.02	0.00	±0.3
366400	4.08	4.06	4.06	4.07	4.06	4.06	-0.02	0.00	0.00	±0.3
400000	4.06	4.04	4.04	4.05	4.04	4.04	-0.02	0.00	0.00	±0.3
464000	4.03	4.02	4.01	4.02	4.01	4.01	-0.02	-0.02	0.00	±0.3
587800	3.98	3.98	3.97	3.98	3.97	3.97	0.00	-0.02	0.00	±0.3
744200	3.93	3.93	3.93	3.93	3.92	3.92	0.00	-0.02	-0.02	±0.3
942600	3.92	3.92	3.92	3.92	3.91	3.92	0.00	-0.02	0.00	±0.3
1193600	3.90	3.89	3.89	3.90	3.89	3.89	0.00	0.00	0.00	±0.3
1511600	3.89	3.88	3.88	3.89	3.89	3.88	0.00	0.02	0.00	±0.3
1914400	3.88	3.87	3.86	3.88	3.86	3.86	0.00	-0.02	0.00	±0.3
2424400	3.86	3.85	3.85	3.86	3.85	3.85	0.00	0.00	0.00	±0.3
3070200	3.83	3.82	3.81	3.84	3.82	3.81	0.02	0.00	0.00	±0.3
3888000	3.78	3.77	3.76	3.77	3.77	3.76	-0.02	0.00	0.00	±0.3
4000000	3.77	3.76	3.75	3.75	3.76	3.75	-0.05	0.00	0.00	±0.3
4923800	3.70	3.69	3.69	3.69	3.69	3.69	-0.02	0.00	0.00	±0.3
6235400	3.60	3.59	3.60	3.60	3.59	3.59	0.00	0.00	-0.02	±0.3
7896400	3.45	3.44	3.44	3.44	3.44	3.43	-0.03	0.00	-0.03	±0.3
10000000	3.30	3.30	3.30	3.29	3.29	3.34	-0.03	-0.03	0.10	±0.3

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

[1] 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	1.48	1.48	1.48	1.47	1.46	1.46	-0.06	-0.12	-0.12	±0.3
3200	1.47	1.47	1.47	1.46	1.48	1.48	-0.06	0.06	0.06	±0.3
4000	1.46	1.46	1.46	1.45	1.45	1.46	-0.06	-0.06	0.00	±0.3
5200	1.45	1.45	1.45	1.43	1.43	1.46	-0.12	-0.12	0.06	±0.3
6600	1.44	1.44	1.44	1.43	1.42	1.43	-0.06	-0.12	-0.06	±0.3
8200	1.43	1.43	1.43	1.41	1.42	1.43	-0.12	-0.06	0.00	±0.3
9000	1.43	1.42	1.43	1.41	1.42	1.42	-0.12	0.00	-0.06	±0.3
10600	4.28	4.23	4.22	4.28	4.24	4.20	0.00	0.02	-0.04	±0.3
13400	4.27	4.24	4.24	4.26	4.22	4.24	-0.02	-0.04	0.00	±0.3
17000	4.28	4.24	4.24	4.25	4.24	4.23	-0.06	0.00	-0.02	±0.3
21400	4.30	4.26	4.26	4.29	4.27	4.26	-0.02	0.02	0.00	±0.3
27200	4.30	4.26	4.26	4.28	4.25	4.27	-0.04	-0.02	0.02	±0.3
34400	4.30	4.28	4.27	4.28	4.28	4.26	-0.04	0.00	-0.02	±0.3
40000	4.29	4.27	4.27	4.26	4.27	4.26	-0.06	0.00	-0.02	±0.3
43600	4.28	4.26	4.26	4.27	4.26	4.25	-0.02	0.00	-0.02	±0.3
55400	4.27	4.25	4.25	4.25	4.25	4.25	-0.04	0.00	0.00	±0.3
70000	4.26	4.24	4.24	4.25	4.25	4.23	-0.02	0.02	-0.02	±0.3
88800	4.25	4.23	4.23	4.24	4.22	4.23	-0.02	-0.02	0.00	±0.3
112400	4.24	4.22	4.22	4.22	4.22	4.21	-0.04	0.00	-0.02	±0.3
142400	4.22	4.20	4.20	4.21	4.20	4.20	-0.02	0.00	0.00	±0.3
161750	4.20	4.18	4.18	4.18	4.18	4.18	-0.04	0.00	0.00	±0.3
180400	4.19	4.17	4.17	4.18	4.17	4.18	-0.02	0.00	0.02	±0.3
228400	4.16	4.14	4.14	4.15	4.15	4.14	-0.02	0.02	0.00	±0.3
289400	4.12	4.10	4.10	4.11	4.09	4.10	-0.02	-0.02	0.00	±0.3
366400	4.08	4.06	4.06	4.07	4.07	4.07	-0.02	0.02	0.02	±0.3
400000	4.06	4.04	4.04	4.05	4.05	4.04	-0.02	0.02	0.00	±0.3
464000	4.03	4.02	4.01	4.02	4.03	4.01	-0.02	0.02	0.00	±0.3
587800	3.98	3.98	3.97	3.98	3.98	3.98	0.00	0.00	0.02	±0.3
744200	3.93	3.93	3.93	3.93	3.94	3.93	0.00	0.02	0.00	±0.3
942600	3.92	3.92	3.92	3.92	3.92	3.93	0.00	0.00	0.02	±0.3
1193600	3.90	3.89	3.89	3.90	3.90	3.89	0.00	0.02	0.00	±0.3
1511600	3.89	3.88	3.88	3.89	3.89	3.87	0.00	0.02	-0.02	±0.3
1914400	3.88	3.87	3.86	3.88	3.87	3.86	0.00	0.00	0.00	±0.3
2424400	3.86	3.85	3.85	3.86	3.85	3.85	0.00	0.00	0.00	±0.3
3070200	3.83	3.82	3.81	3.84	3.83	3.81	0.02	0.02	0.00	±0.3
3888000	3.78	3.77	3.76	3.78	3.76	3.77	0.00	-0.02	0.02	±0.3
4000000	3.77	3.76	3.75	3.75	3.76	3.75	-0.05	0.00	0.00	±0.3
4923800	3.70	3.69	3.69	3.70	3.69	3.69	0.00	0.00	0.00	±0.3
6235400	3.60	3.59	3.60	3.59	3.60	3.61	-0.02	0.02	0.02	±0.3
7896400	3.45	3.44	3.44	3.44	3.43	3.41	-0.03	-0.03	-0.08	±0.3
10000000	3.30	3.30	3.30	3.29	3.32	3.34	-0.03	0.05	0.10	±0.3

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

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, E-field, Channel 0

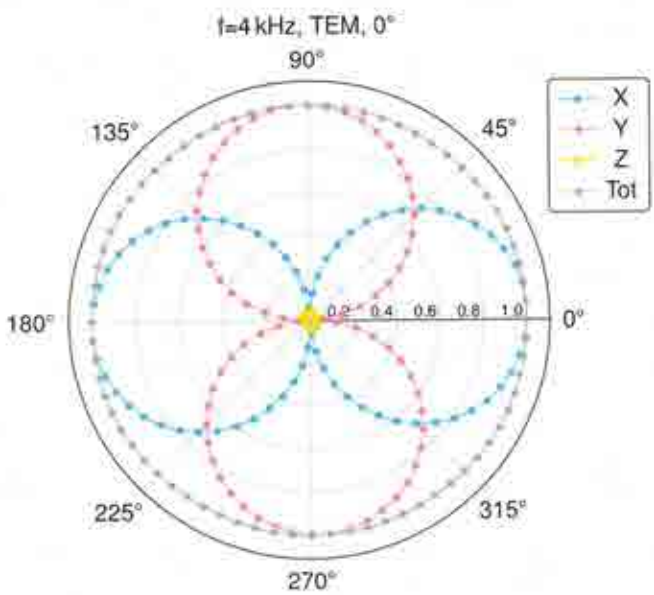
f/(Hz)	E-field/(V/m) Applied			E-field/(V/m) Reading			Difference/(dB)			Tolerance/(dB)
	x	y	z	x	y	z	x	y	z	
3000	169	169	172	170	170	172	0.05	0.05	0.00	±0.3
3200	167	167	162	167	169	163	0.00	0.10	0.05	±0.3
4000	175	175	170	175	175	170	0.00	0.00	0.00	±0.3
5200	165	165	163	166	165	163	0.05	0.00	0.00	±0.3
6600	163	163	160	163	163	160	0.00	0.00	0.00	±0.3
8200	162	162	159	163	162	159	0.05	0.00	0.00	±0.3
9000	163	163	164	164	163	164	0.05	0.00	0.00	±0.3
10600	166	166	159	167	166	159	0.05	0.00	0.00	±0.3
13400	163	163	162	164	164	161	0.05	0.05	-0.05	±0.3
17000	161	161	163	162	162	163	0.05	0.05	0.00	±0.3
21400	157	157	158	158	157	158	0.06	0.00	0.00	±0.3
27200	158	158	157	158	158	157	0.00	0.00	0.00	±0.3
34400	162	162	159	163	162	159	0.05	0.00	0.00	±0.3
40000	161	161	161	162	161	161	0.05	0.00	0.00	±0.3
43600	162	162	160	162	162	160	0.00	0.00	0.00	±0.3
55400	161	161	159	161	161	159	0.00	0.00	0.00	±0.3
70000	162	162	160	162	162	160	0.00	0.00	0.00	±0.3
88800	161	161	160	162	162	160	0.05	0.05	0.00	±0.3
112400	161	161	160	162	161	160	0.05	0.00	0.00	±0.3
142400	162	162	160	163	162	160	0.05	0.00	0.00	±0.3
161750	163	163	162	164	163	162	0.05	0.00	0.00	±0.3
180400	164	164	162	164	164	162	0.00	0.00	0.00	±0.3
228400	165	165	163	166	166	163	0.05	0.05	0.00	±0.3
289400	166	166	164	166	166	164	0.00	0.00	0.00	±0.3
366400	166	166	165	167	166	165	0.05	0.00	0.00	±0.3
400000	167	167	165	168	167	165	0.05	0.00	0.00	±0.3
464000	168	168	166	169	169	166	0.05	0.05	0.00	±0.3
587800	169	169	167	170	169	167	0.05	0.00	0.00	±0.3
744200	169	169	167	170	170	168	0.05	0.05	0.05	±0.3
942600	170	170	168	171	170	168	0.05	0.00	0.00	±0.3
1193600	171	171	169	171	171	169	0.00	0.00	0.00	±0.3
1511600	170	170	169	171	170	169	0.05	0.00	0.00	±0.3
1914400	170	170	168	170	170	168	0.00	0.00	0.00	±0.3
2424400	170	170	168	170	170	168	0.00	0.00	0.00	±0.3
3070200	171	171	169	171	171	169	0.00	0.00	0.00	±0.3
3888000	171	171	169	171	171	169	0.00	0.00	0.00	±0.3
4000000	171	171	169	171	171	170	0.00	0.00	0.05	±0.3
4923800	172	172	170	172	172	170	0.00	0.00	0.00	±0.3
6235400	174	174	172	174	174	172	0.00	0.00	0.00	±0.3
7896400	180	180	179	180	180	179	0.00	0.00	0.00	±0.3
10000000	201	201	199	201	201	199	0.00	0.00	0.00	±0.3

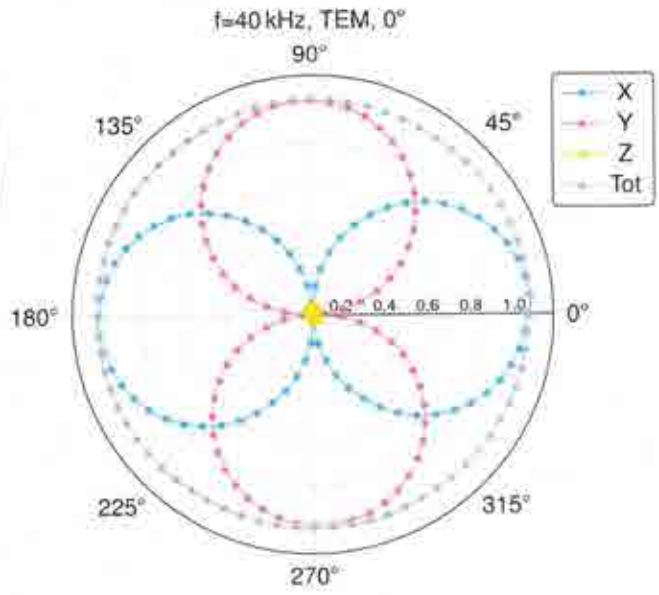
SPEAG E-field frequency response tolerance criteria[1]:
±0.3dB for applied E-fields at calibration points from 3kHz to 10MHz

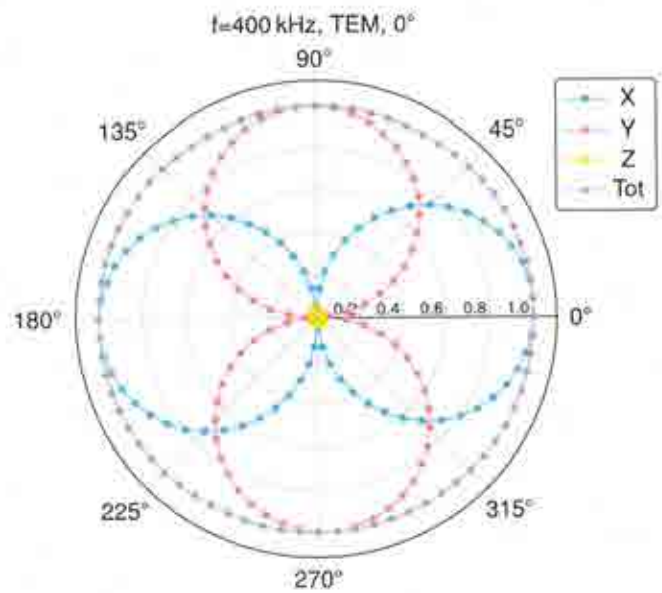
[1] Calibration uncertainty not taken into account (shared risk 50%).

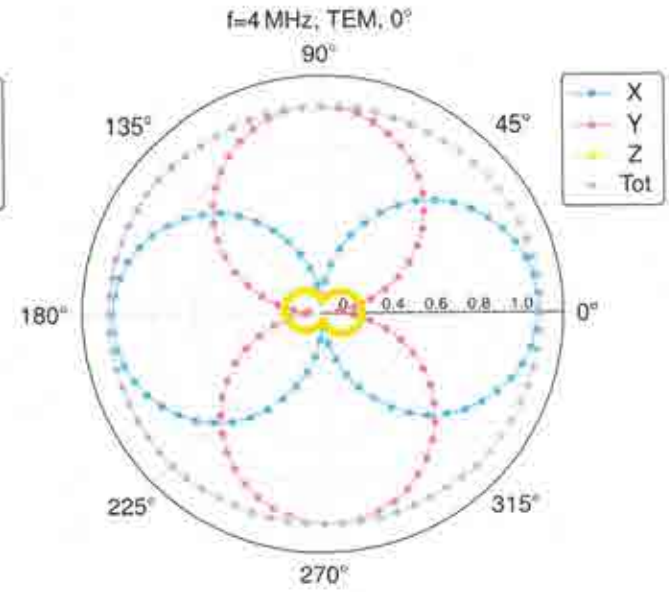
Isotropy H-Field

H-Field Receiving Pattern (ϕ), $\vartheta = 0°$

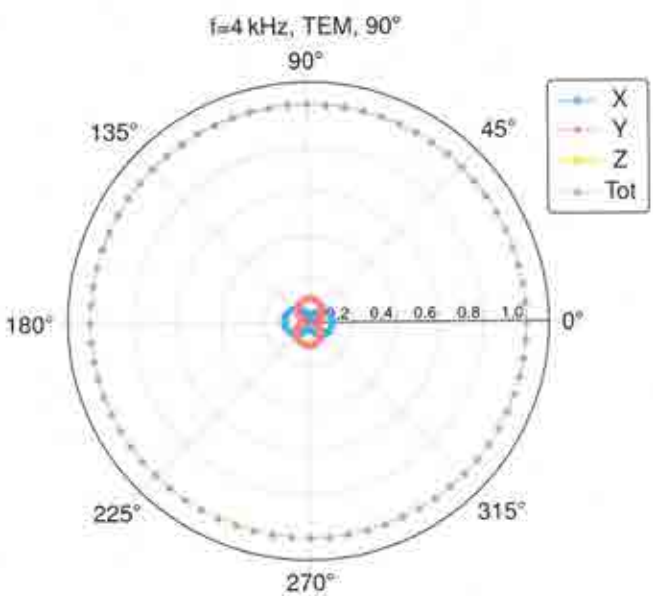


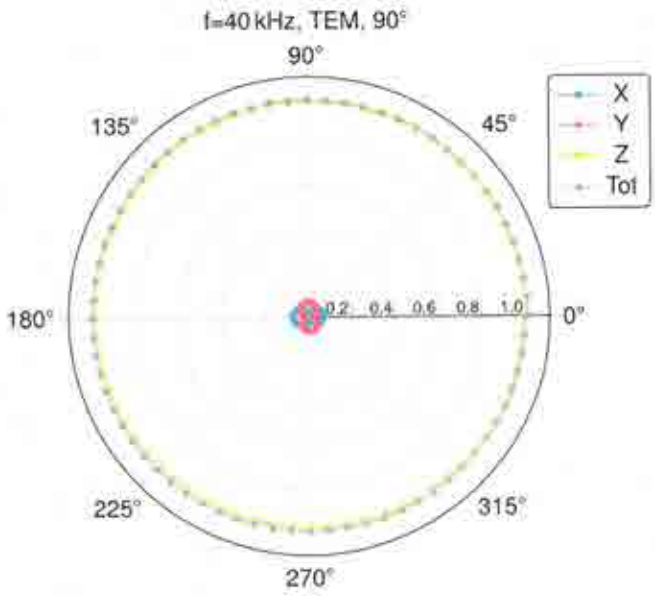


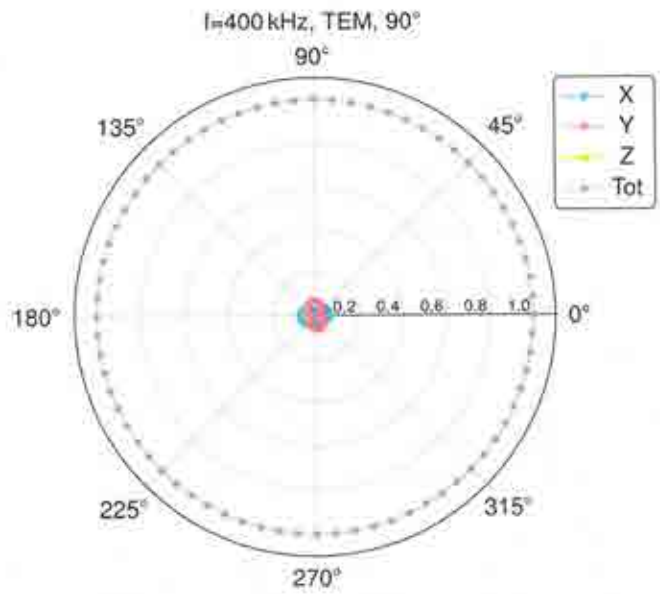


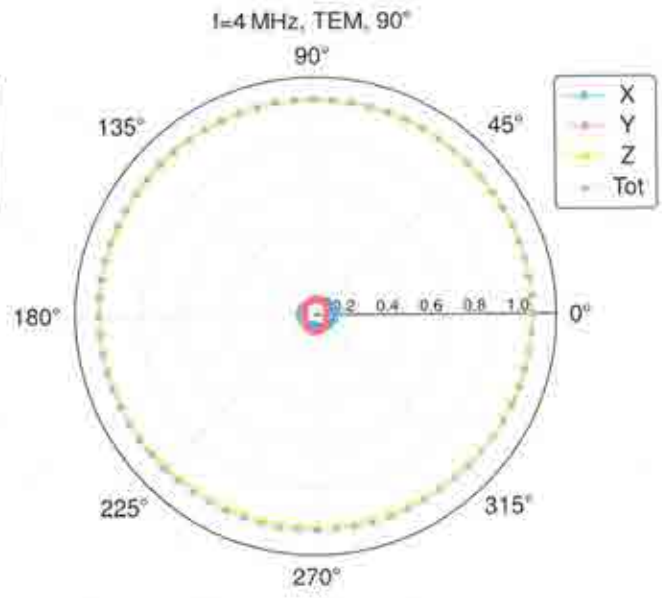


H-Field Receiving Pattern (ϕ), $\vartheta = 90°$

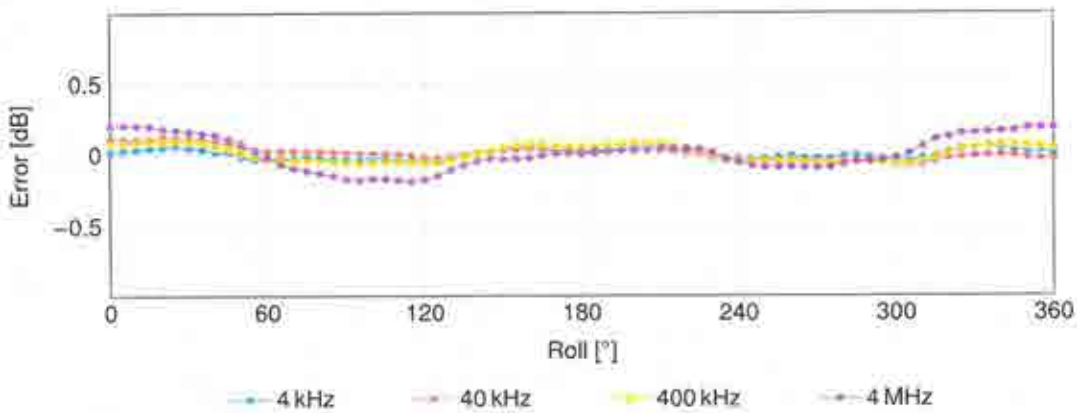




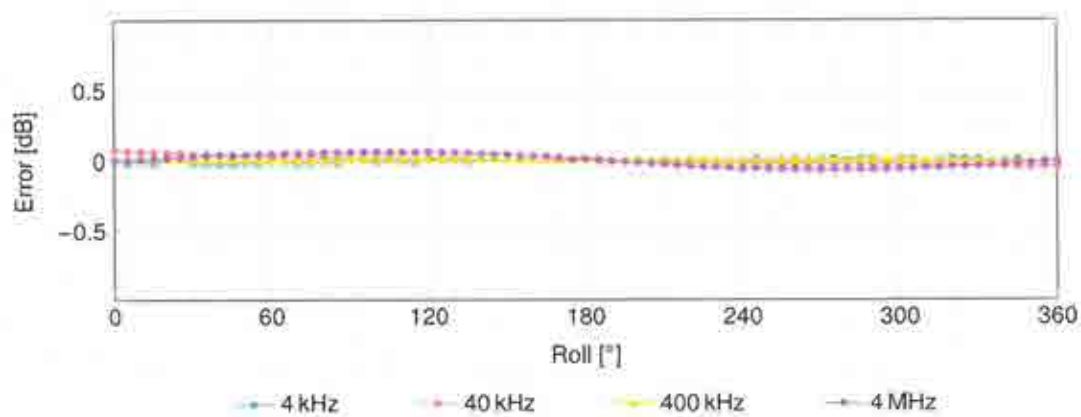




H-Field Receiving Pattern (ϕ), $\vartheta = 0°$



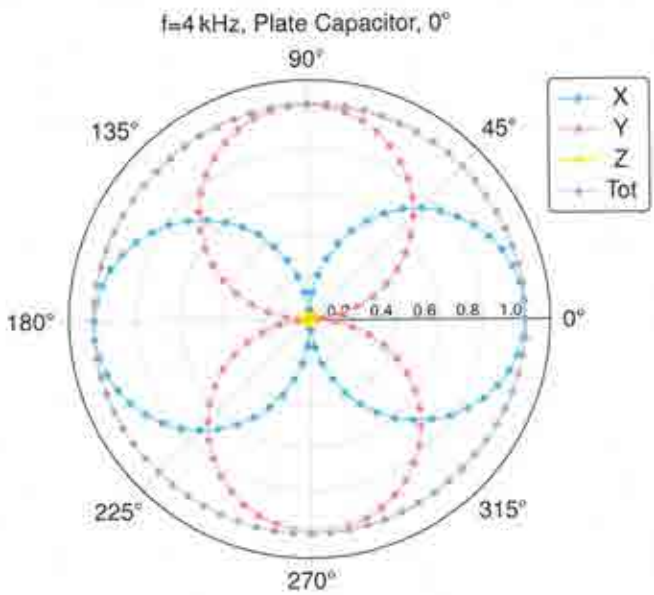
H-Field Receiving Pattern (ϕ), $\vartheta = 90°$

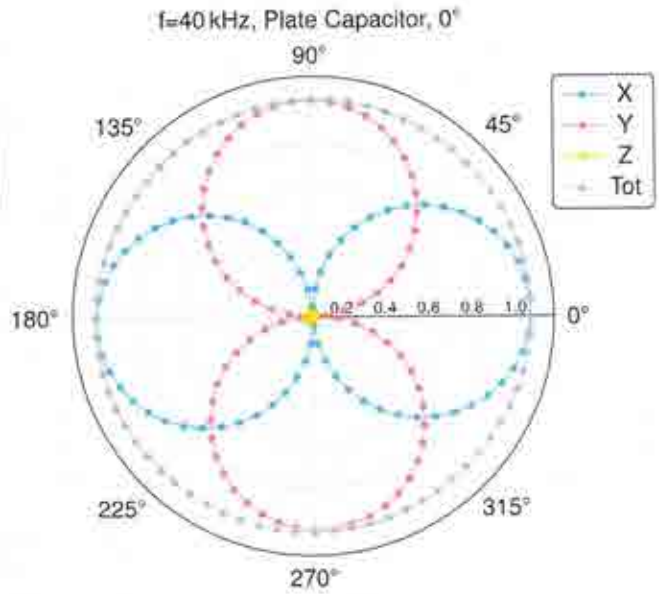


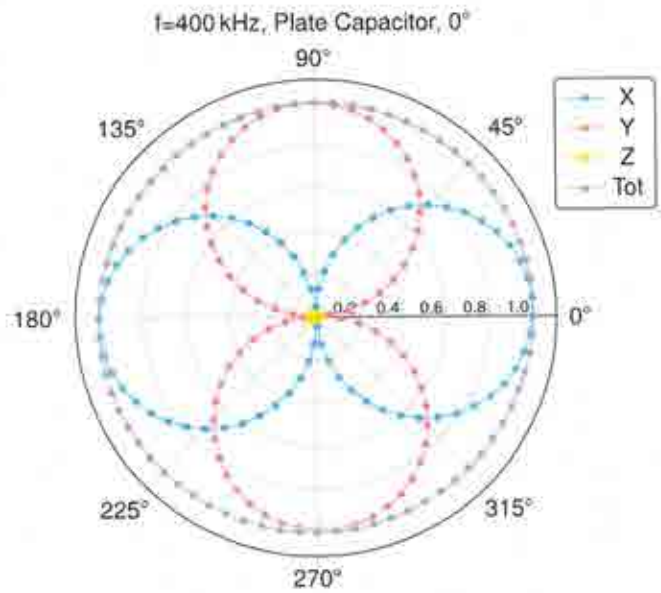
SPEAG axial deviation from the ideal response tolerance for H-field: ±0.6 dB

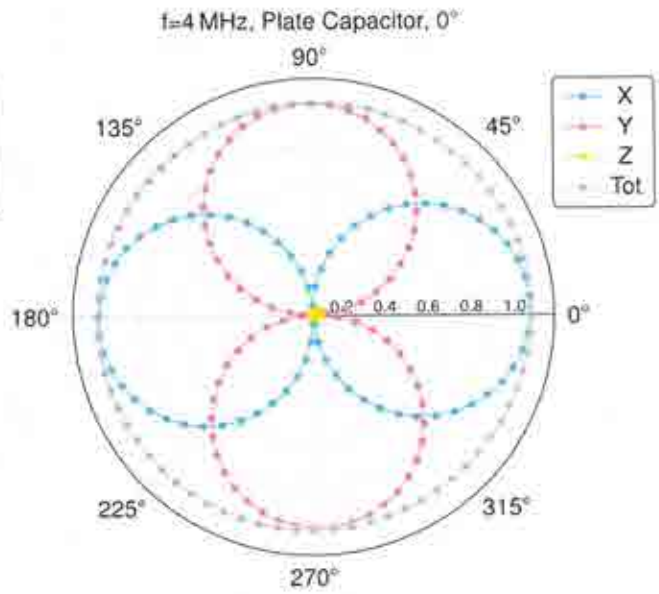
Isotropy E-Field

E-Field Receiving Pattern (ϕ), $\vartheta = 0°$

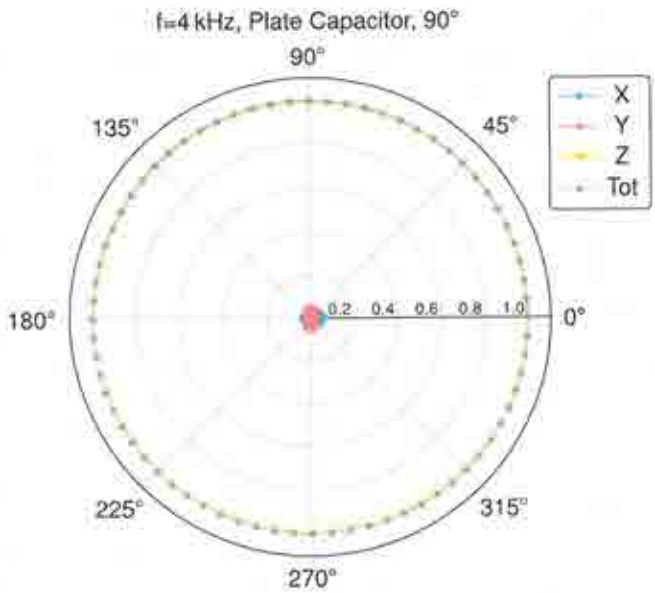


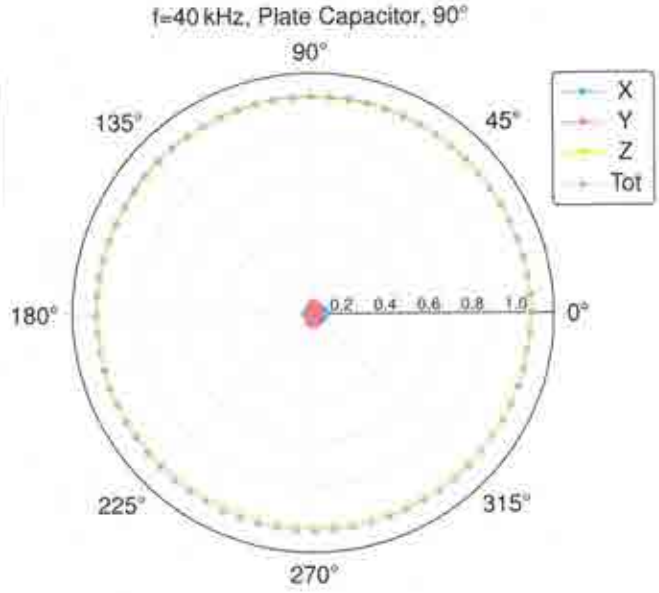


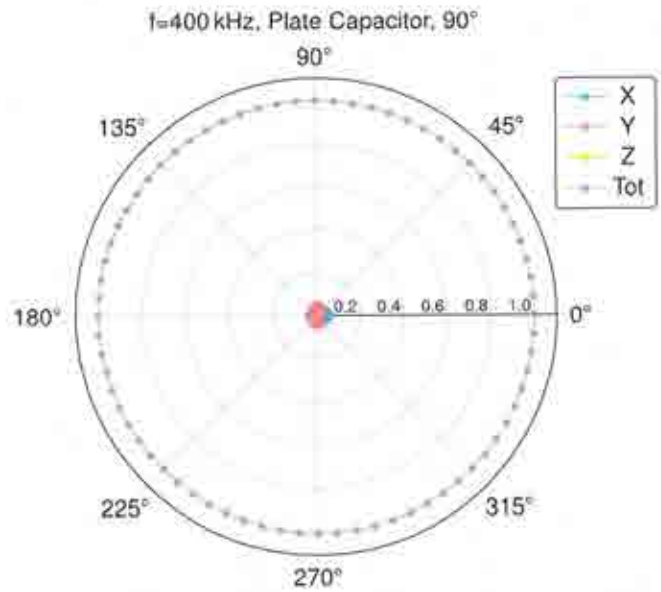


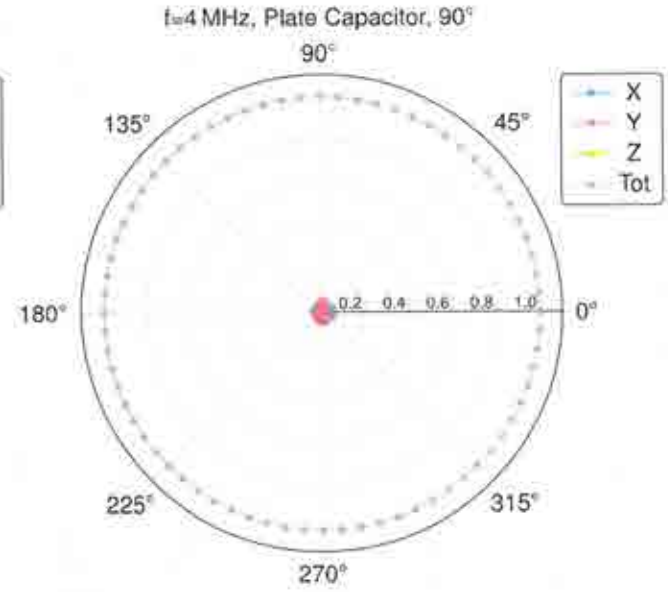


E-Field Receiving Pattern (ϕ), $\vartheta = 90°$

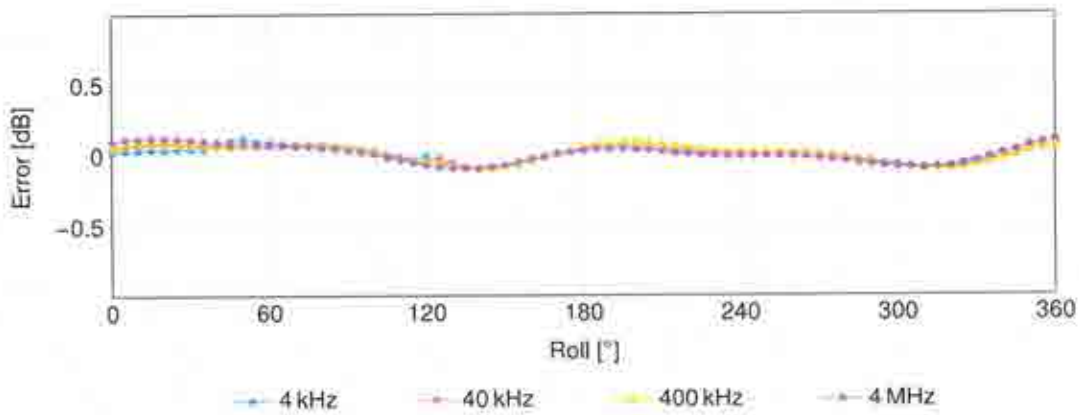




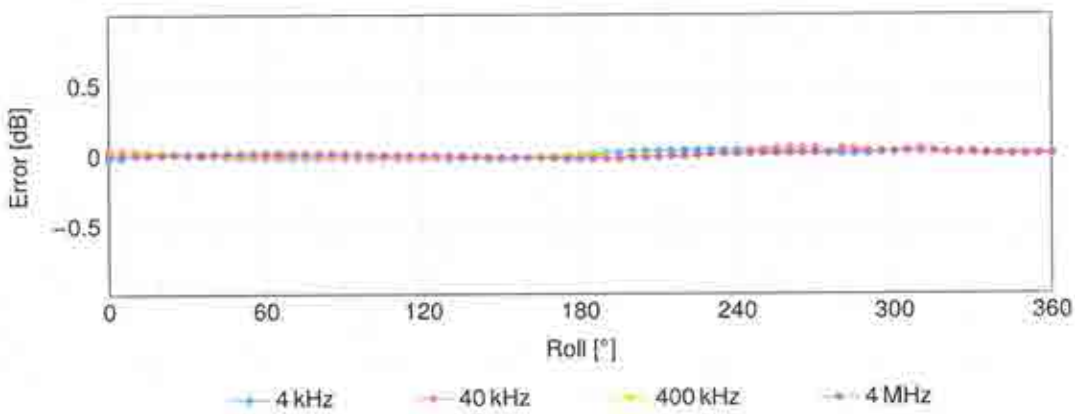




E-Field Receiving Pattern (ϕ), $\vartheta = 0°$



E-Field Receiving Pattern (ϕ), $\vartheta = 90°$



SPEAG axial deviation from the ideal response tolerance for E-field: ±0.8 dB

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

Client	**Sporton** Taoyuan	Certificate No: **V-Coil350/85V2-1023_May24**

CALIBRATION CERTIFICATE

Object	V-Coil350/85V2 - SN: 1023
Calibration procedure(s)	QA CAL-47.v13 Calibration Procedure for WPT Verification & Validation Sources
Calibration date	May 22, 2024

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

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
MAGPy-8H3D+E3D/DAS	SN: 3089/3079	17-Nov-23 (MAGPy-8H3D+E3D-3089)	Nov-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: May 29, 2024

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

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

- Spatial peak of H-field (RMS value) at *d* mm from the DUT surface (extrapolated from measurements)

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	2.4.0.4346
	Notebook GUI	2.4.0.2
	Sim4Life	7.2.4
Scan setup	Grid dimensions	x: 477 mm, y: 389 mm, z: 36.7 mm
	Grid resolutions	dx, dy, dz: 7.33 mm
Nominal frequency	85 kHz	

Calibrated Quantities

Distance (relative to source surface) (mm)	Peak H-field (A/m)	Uncertainty (k=2) (dB)
0	208	1.13
2	189	1.13

Appendix (Additional assessments outside the scope of SCS 0108)

Peak values of induced fields[1]

Distance (relative to source surface) (mm)	Induced peak current density, 1cm² area avg. (A/m²)	Induced peak E-field (V/m)			peak spatial SAR (mW/kg)	
		2mm cube avg.	Local	5mm line avg.	1g avg.	10g avg.
0	2.35	3.35	3.38	3.39	6.50	4.84
2	2.22	3.15	3.18	3.19	5.81	4.38

Voltage measurement

Total voltage (V)	Voltages at harmonics (dBc)
0.414	Highest harmonic: -40.1 2nd highest harmonic: -48.0

[1] determined for a virtual half-space phantom with tissue properties ε_r = 55, σ = 0.75 S/m, ρ=1000 kg/m³

Measurement report

cDASY6 Module WPT Measurement Report

Device under test

Info:
V-Coil350/85

Serial number:
1023

Scenario:
source calibration

Tool info

DASY software version:
cDASY6 Module WPT 2.4.0.4346

Probe model, serial no. and configuration data:
MAGPy-8H3D+E3Dv2, WP000231, *2024/01/10*

Software version:
2.0.49, *backend: 2.2.3*

Scan info

Center location:
x: -48.08 mm, y: -119.86 mm, z: 35.83 mm

Dimensions:
x: 477.0 mm, y: 389.0 mm, z: 36.7 mm

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

Completed on:
2024/05/22 21:39:05

Measurement results

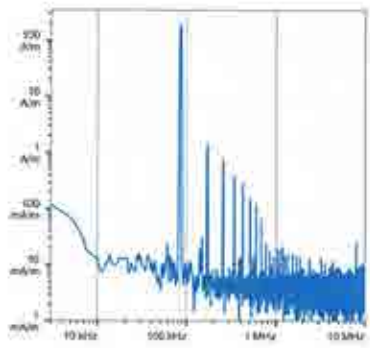
Maximum H-field [RMS]:
MAGNITUDE: 131.92 A/m
x: 113.01 A/m, y: 32.68 A/m, z: 59.70 A/m

Maximum H-field location relative to DUT:
x: 157.67 mm, y: -25.67 mm, z: 8.50 mm

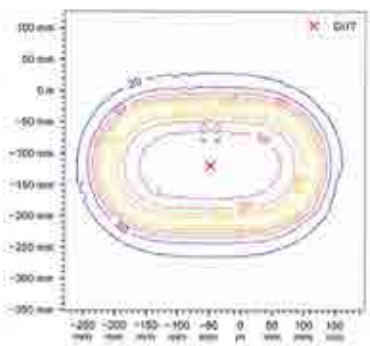
Distance to -20.0 dB boundary:
51.33 mm

Offset relative to DUT:
x: 0.00 m, y: 0.00 m, z: 1.00 mm

H-field magnitude [RMS] at maximum location



H-field magnitude [RMS] at lowest plane



Incident fields, and induced quantities in the anatomical model (f = 85.00 kHz, σ = 0.750 S/m, tissue density = 1,000 kg/m³)

Distance [mm]	Peak incident fields [RMS] H_{inc} [A/m]	Peak E_{ind} [V/m, RMS] Cube avg.	Local	Line avg.	Peak J_{ind} [A/m², RMS] Surface avg.	psSAR [mW/kg] 1g avg.	10g avg	H-field extent -20 dB radius [mm]	Errors Sign	Vector potential	Boundary effect
0.0	208.0	3.35	3.38	3.39	2.35	6.5	4.84	182.0	1%	07%	36%
2.0	189.0	3.15	3.18	3.19	2.22	5.81	4.38	184.0	1%	07%	38%

Standard compliance evaluation, Absolute

	ICNIRP 2010/2020			ICNIRP 1998			IEEE 2019			FCC			HC Code 6		
	RL [RMS]	BR [RMS]		RL [RMS]	BR [RMS]		ERL [RMS]	DRL [RMS]		MPE [RMS]	BR [RMS]		RL [RMS]	BR [RMS]	
Distance [mm]	pH_{inc} [A/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pJ_{ind} [A/m²]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{ind} [V/m]	psSAR [mW/kg]	pH_{inc} [A/m]	pE_{ind} [V/m]	psSAR [mW/kg]
0.0	208.0	3.35	4.84	208.0	2.35	4.84	208.0	3.39	4.84	208.0	N/A	6.5	208.0	3.38	6.5
2.0	189.0	3.15	4.38	189.0	2.22	4.38	189.0	3.19	4.38	189.0	N/A	5.81	189.0	3.18	5.81

Standard compliance evaluation, Relative

	ICNIRP 2010/2020 [dB]			ICNIRP 1998 [dB]			IEEE 2019 [dB]			FCC [dB]			HC Code 6 [dB]		
	RL	BR		RL	BR		ERL	DRL		MPE	BR		RL	BR	
Distance [mm]	pH_{inc}	pE_{ind}	psSAR	pH_{inc}	pJ_{ind}	psSAR	pH_{inc}	pE_{inc}	psSAR	pH_{inc}	pE_{ind}	psSAR	pH_{inc}	pE_{ind}	psSAR
0.0	19.9	-10.7	-26.2	32.4	22.8	-26.2	2.1	-14.4	-26.2	7.3	N/A	N/A	27.7	-10.6	-23.9
2.0	19.1	-11.2	-26.6	31.5	22.3	-26.6	1.3	-14.9	-26.6	6.4	N/A	N/A	26.8	-11.1	-24.4

Document generated at 2024/05/22 22:14:05. simulation performed at 2024/05/22 22:01:24 using Sim4Life version 7.2.4.14019

Appendix D. Test Setup Photos

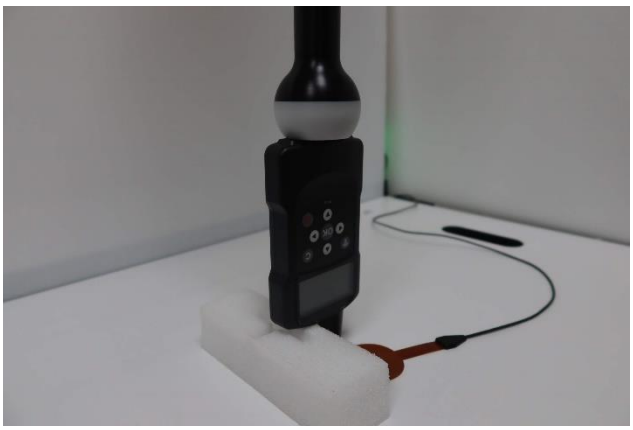
Front test at 0mm

Back test at 0mm

Left Side test at 0mm

Right Side test at 0mm

Top Side test at 0mm



Bottom Side test at 0mm

1. External Photograph of EUT

Brand Name: SYSGRATION / Model Name: TT03


C
OK
TT-03


OK
TT-03


OK


OK
TF-03

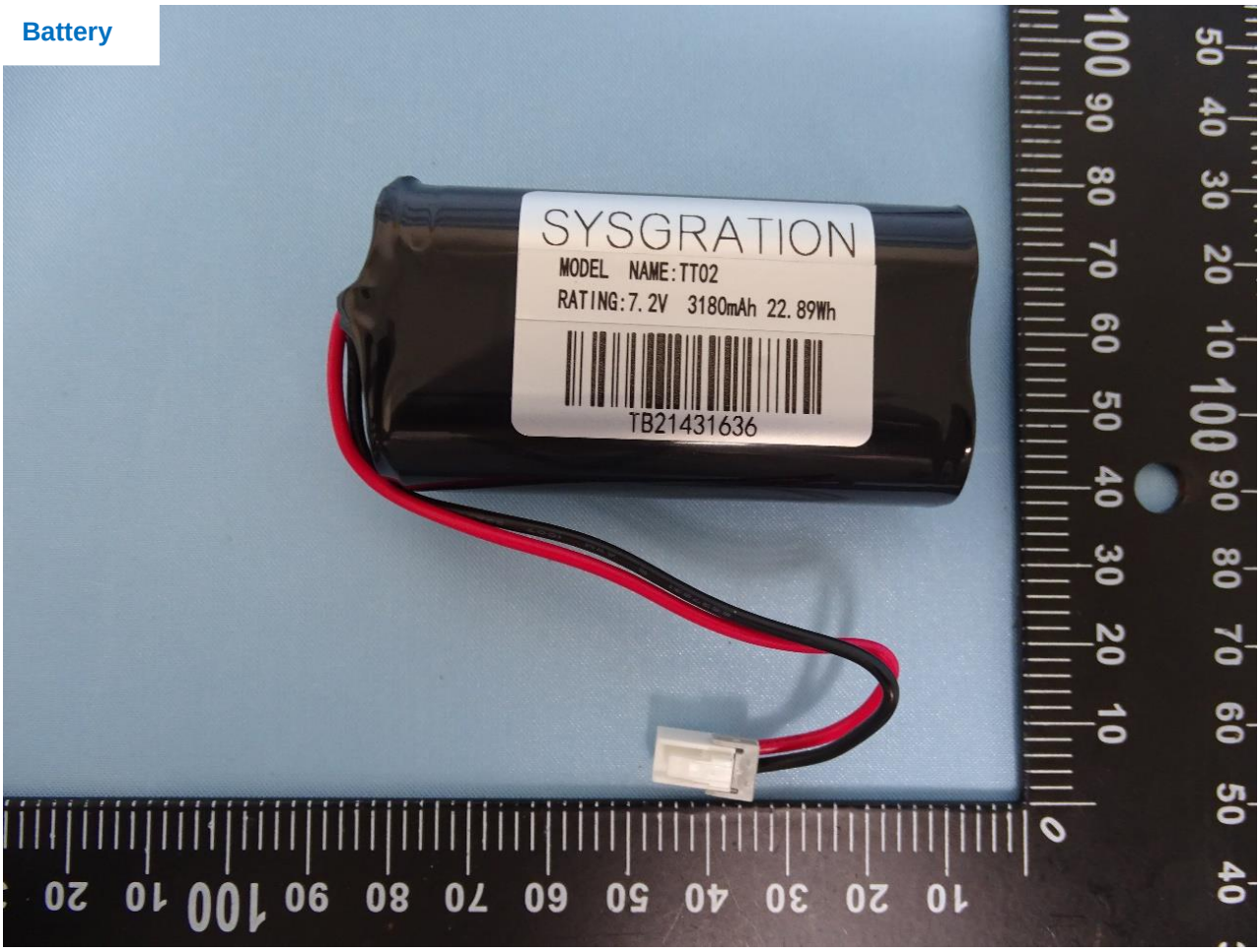
2. Photograph of Accessory

Brand Name: SYSGRATION / Model Name: TT03

Specification of Accessory		
Battery	**Brand Name**	SYSGRATION
	Model Name	TT02

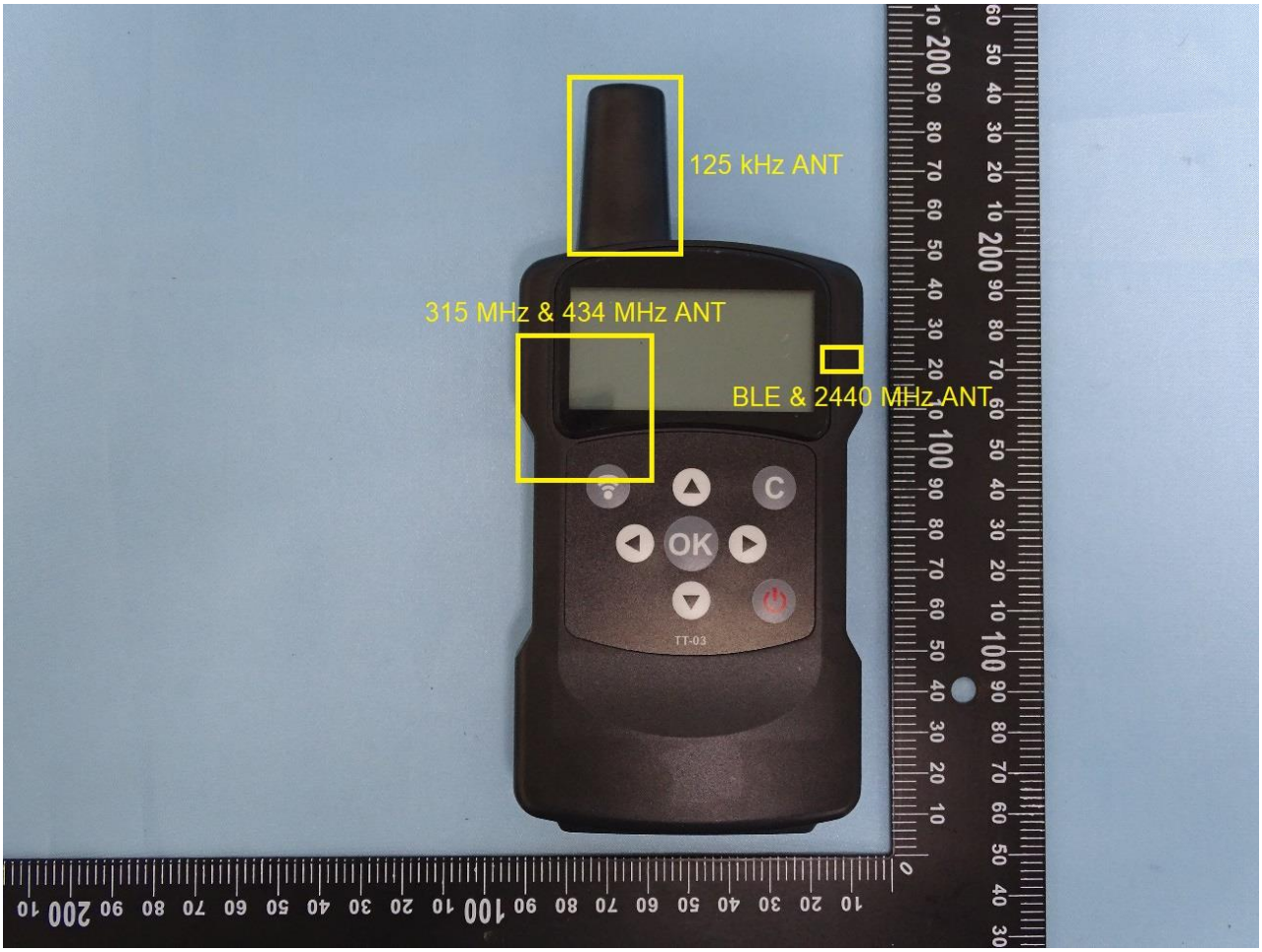
Remark: For accessories equipped with this EUT, please refer to the following photos.

Battery

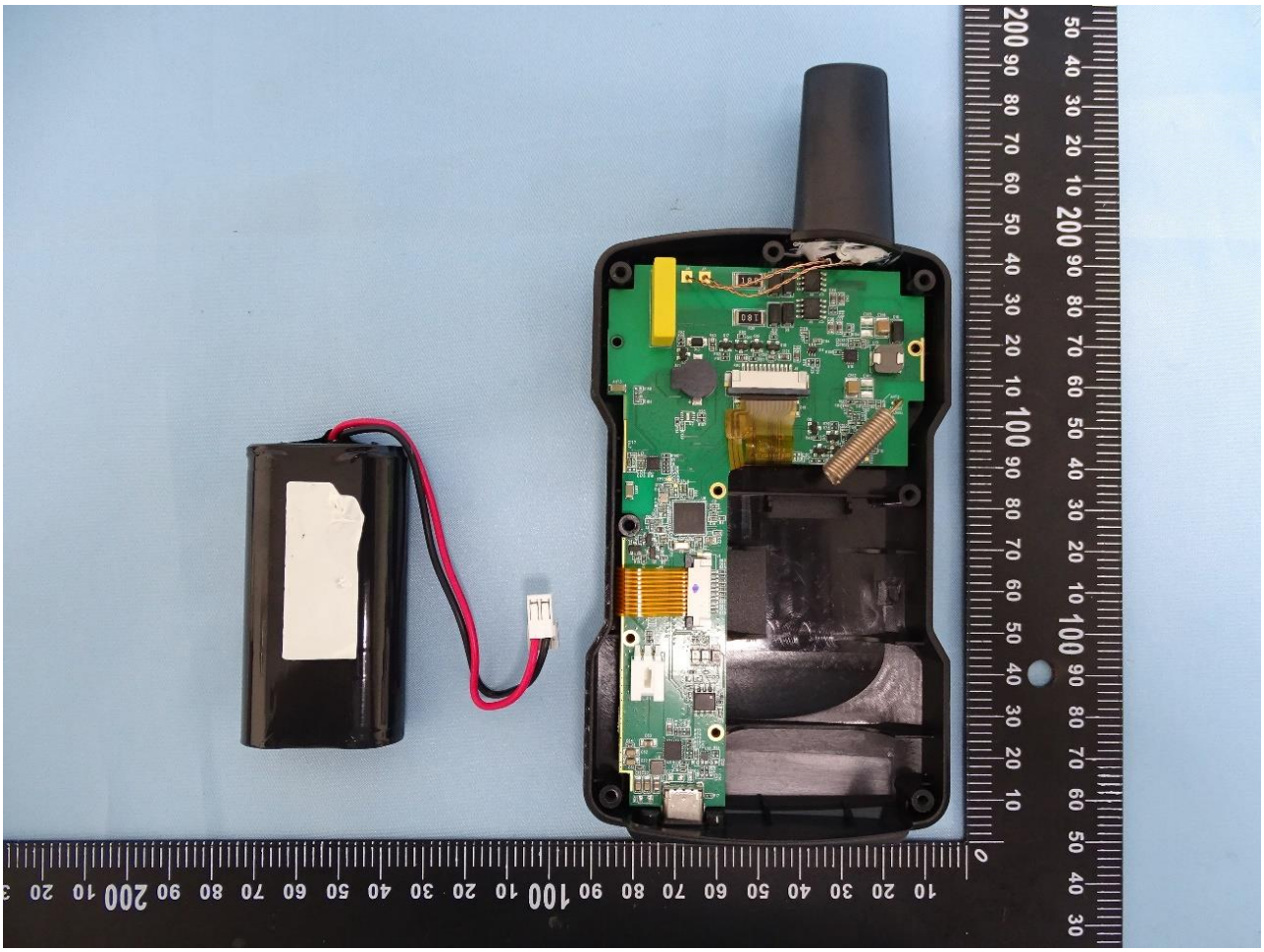

SYSGRATION
MODEL NAME:TT02
RATING:7.2V 3180mAh 22.89Wh
TB21431636

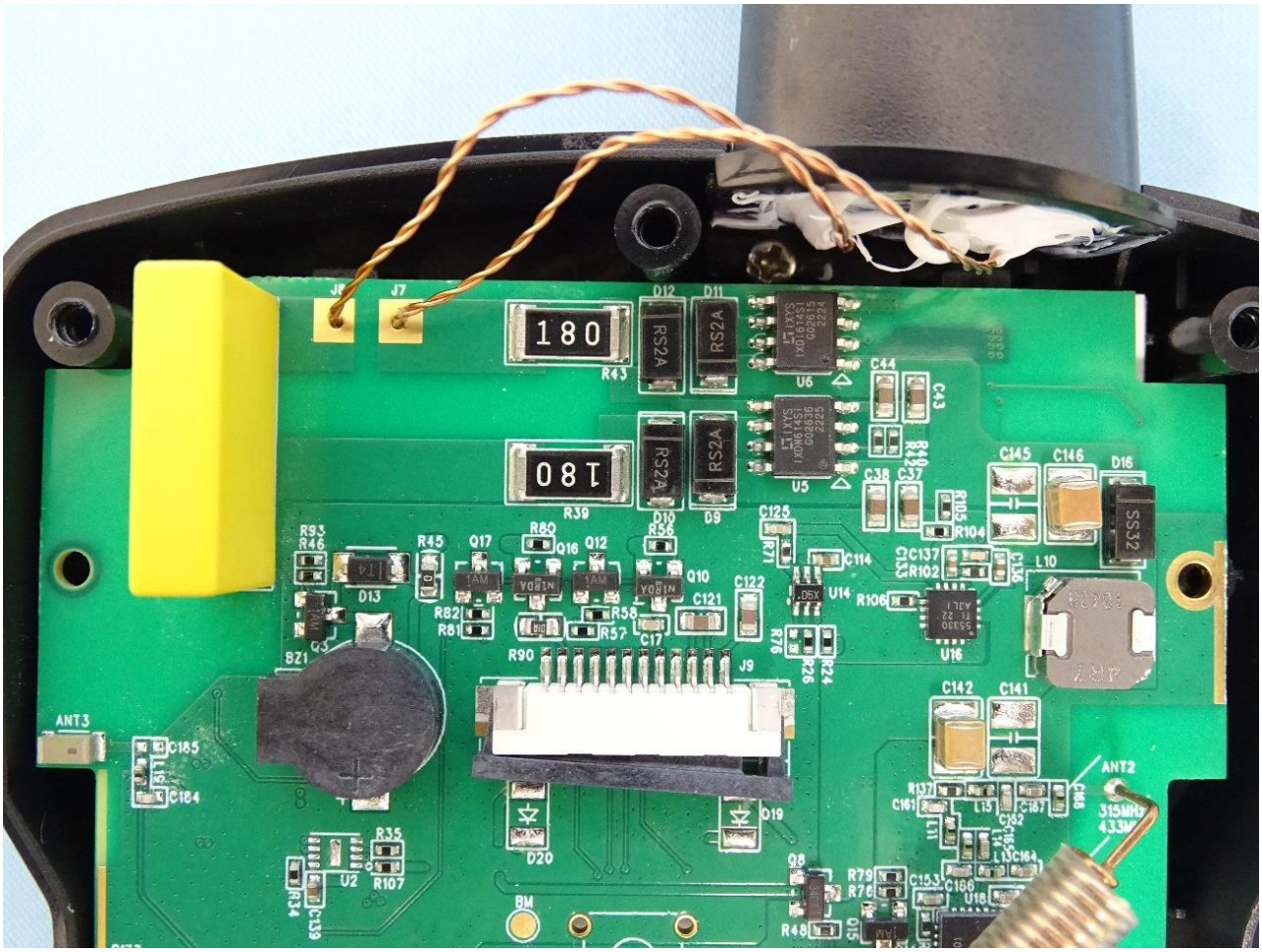
3. Internal Photograph of EUT

Brand Name: SYSGRATION / Model Name: TT03




SYSGRATION
MODEL NAME:TIT02
RATING:7.2V 3180mAh 22.89Wh

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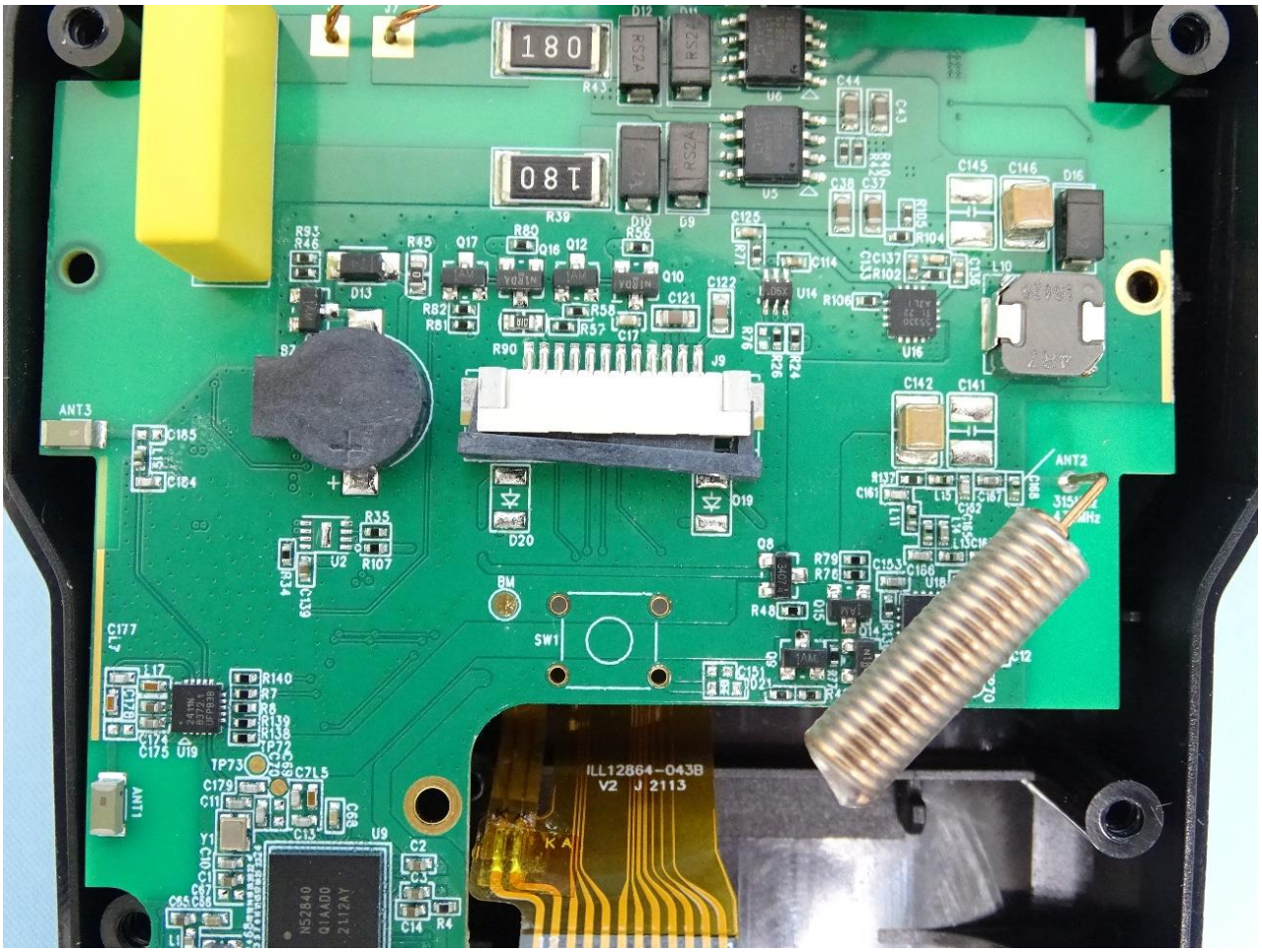
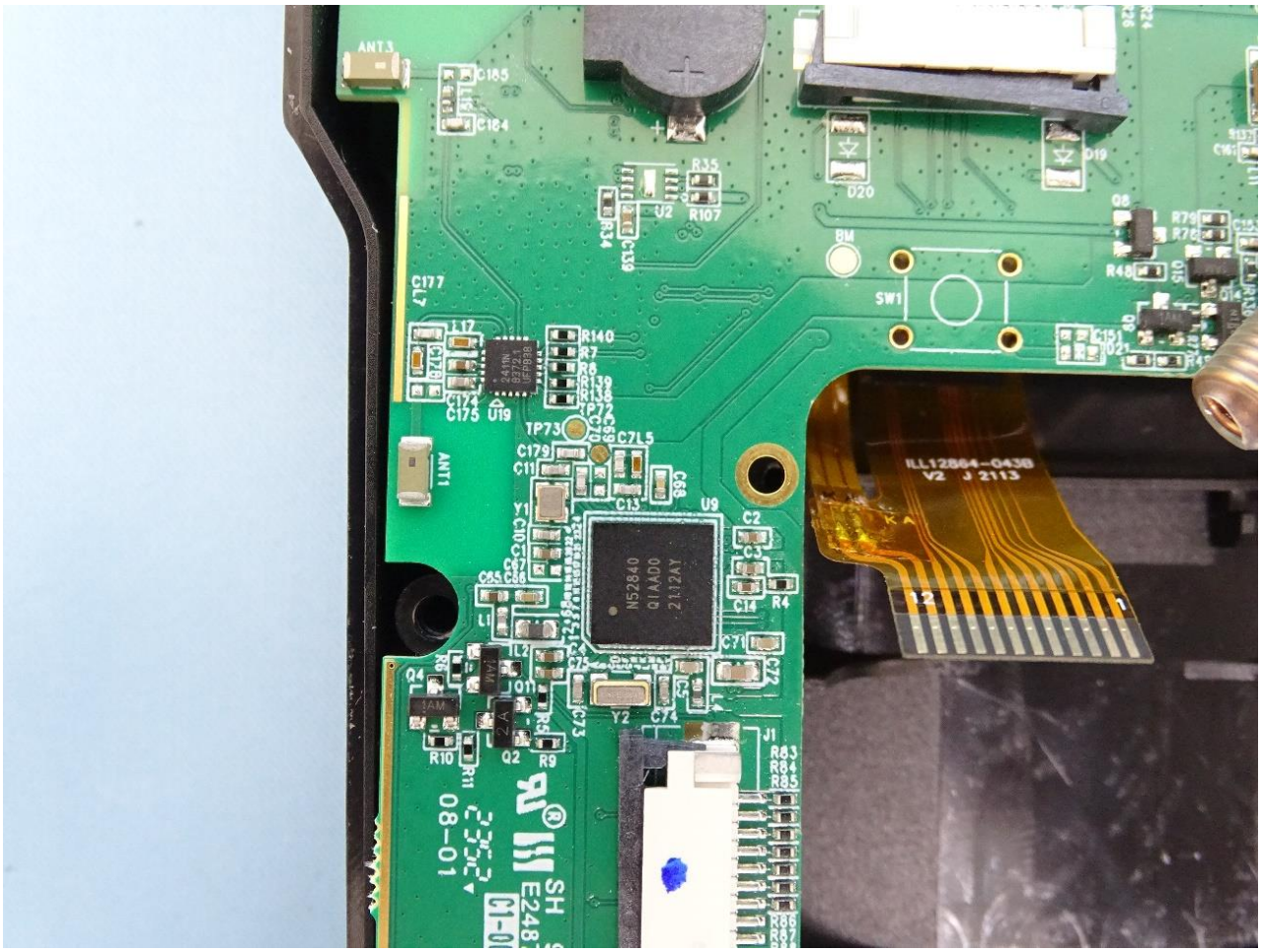
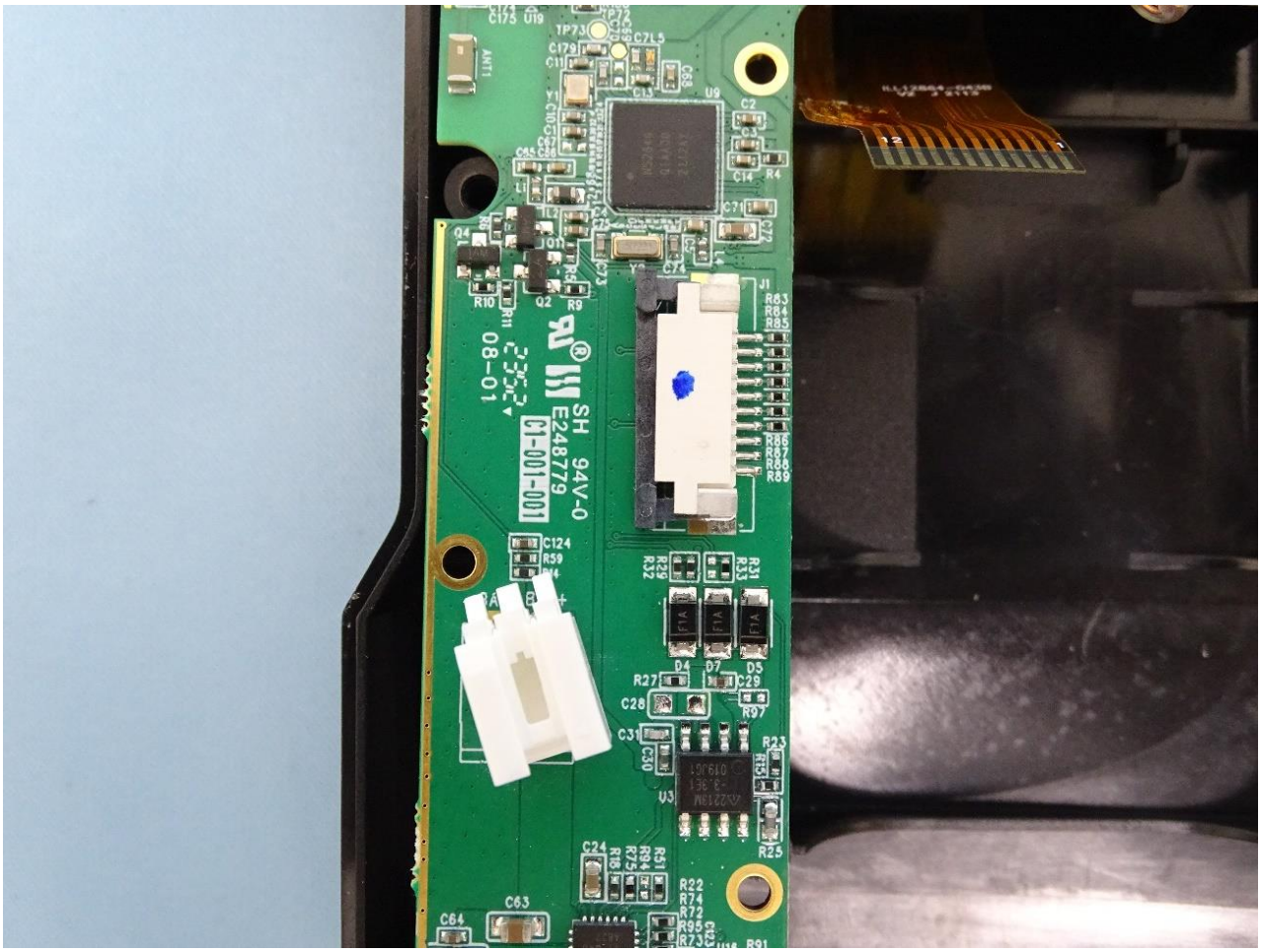
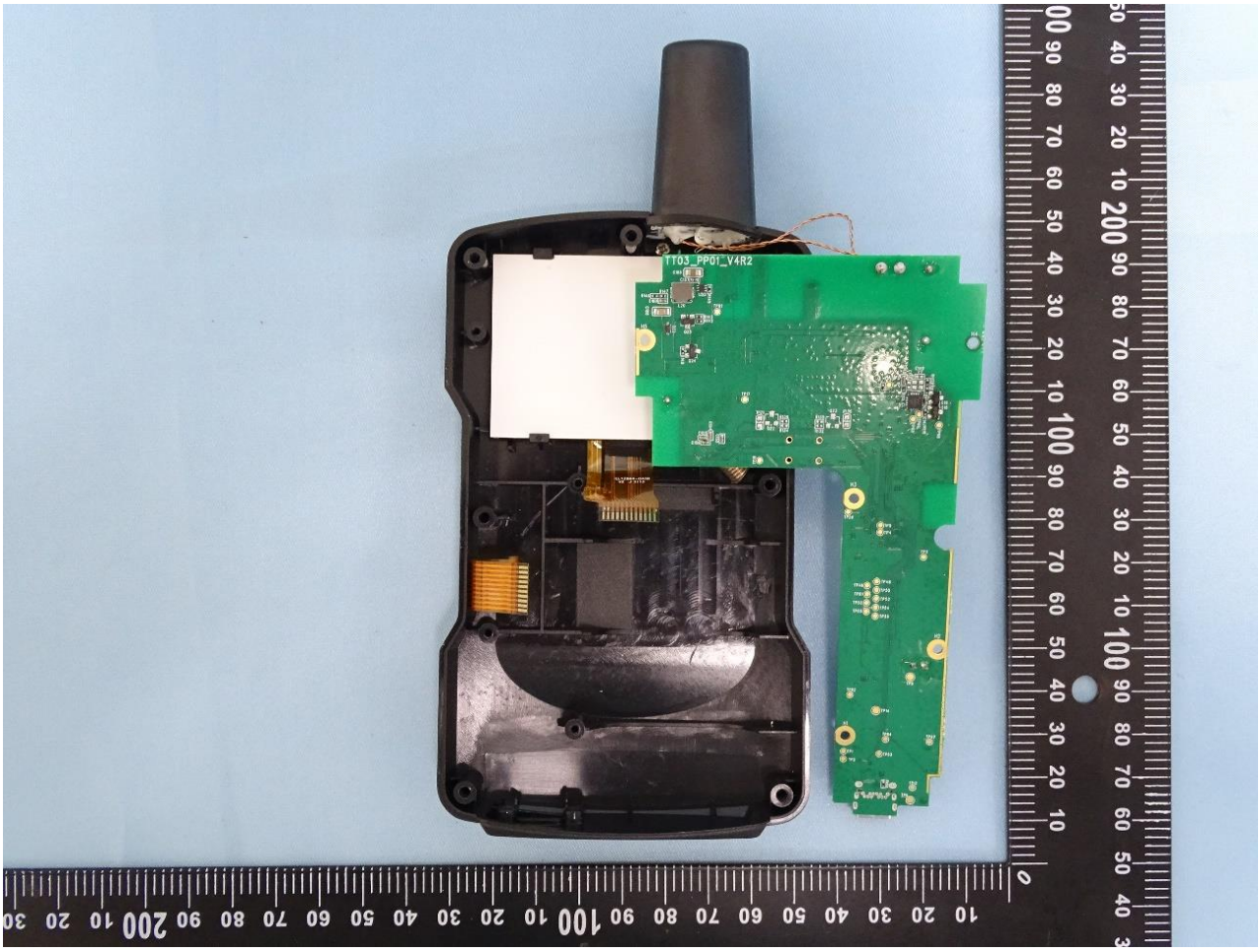
180
RS2A
RS2A
RS2A
RS2A
SS32
ANT3
ANT2
315MHz
433M


180
180
ANT3
ANT2
ANT1
SW1
BM
ILL12864-043B
V2 J 2113


ANT3
C185
C184
R35
U2
R107
D20
D19
Q8
R79
R78
R48
BM
SW1
C177
C174
C175
U19
R140
R7
R8
TP73
C7L5
C179
C11
ANT1
C15
U9
C2
C3
C14
R4
C10
C71
C72
C73
C74
Y2
Q4
Q2
R9
R10
R11
J1
R83
R84
R85
N52840
Q1AA00
2112AY
RLL12864-0438
V2 J 2113
08-01


SH
94V-0
E248779
C1-001-001
08-01


SH 94V-0
E248779
C1-001-001
08-01
C124
R59
R27
C28
C31
C30
U3
R25
C24
C63
C64
C62
C22
C61
C19
C20
C18
R17
R96


TT03_PP01_V4R2