

TEST REPORT

of the accredited test laboratory

TÜV Nr.: 2022-IN-AT-TICL-E-EX-000109-FG-001

Applicant: Metrilog Data Services GmbH
Office Park 4, C38
Vienna Airport City 1300 Wien-Flughafen
Österreich

Product: Remote Terminal Unit M717 (Rev D)

FCC-ID 2A6UM-M717D

Manufacturer: see above

Output power Various (see page 6) **power supply:** 12V DC

Frequency range: Various (see page 6) **Channel separation:** Various (see page 6)

Accredited Standards: FCC: 47 CFR Part 15 (eCFR 22.03.2022);
FCC: 47 CFR Part 22 (eCFR 22.03.2022);
FCC: 47 CFR Part 24 (eCFR 22.03.2022);
FCC: 47 CFR Part 27 (eCFR 22.03.2022);
FCC: 47 CFR Part 90 (eCFR 22.03.2022)

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Inspection Body,
Certification Body,
Calibration Laboratory,
Verifizierungsstelle

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19.05.2022

Ing. Andreas Malek

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1. Applicant

Company: Metrilog Data Services GmbH

Department: ---

Address: Office Park 4, C38
Vienna Airport City 1300 Wien-Flughafen
Österreich

Contact person: Lix N. Paulian

EUT received on: 22.03.2022

Tests were performed on: 23.03.2022

2. Description of EUT

EUT: Remote Terminal Unit M717 (Rev D)

Manufacturer: Metrilog Data Services GmbH
Office Park 4, C38
Vienna Airport City 1300 Wien-Flughafen
Österreich

Description: Metrilog Data Services GmbH provided the following configuration for the measurements

Prototype

Operating mode: The measurements were carried out at the following running states:

GNSS module continuously enabled + Active LTE connection with maximum duty cycle and transmission power

Technical data EUT: Rated voltage: 12V
Rated frequency: DC

Mains voltage during the tests: 12VDC

Climatic conditions in the emc laboratory: Relative humidity: 29%
Temperature: 23°C

3. Standards / Final result

Name	Title	Deviation	Result
FCC: 47 CFR Part 15 (eCFR 22.03.2022)	RADIO FREQUENCY DEVICES	*)	OK
FCC: 47 CFR Part 22 (eCFR 22.03.2022)	PUBLIC MOBILE SERVICES	*)	OK
FCC: 47 CFR Part 24 (eCFR 22.03.2022)	PERSONAL COMMUNICATIONS SERVICES	*)	OK
FCC: 47 CFR Part 27 (eCFR 22.03.2022)	MISSCELLANEOUS WIRELESS COMMUNICATION SERVICES	*)	OK
FCC: 47 CFR Part 90 (eCFR 22.03.2022)	PRIVATE LAND MOBILE RADIO SERVICES	*)	OK
Result: Opinions and interpretation of testing laboratory OK: EUT passed NOK: EUT failed			

*) Only measurements of spurious emissions were performed to show correct integration of the LTE module.

4. Test results

4.1 TEST OBJECT DATA

This Data Logger System incorporates a LTE and a GNSS module.
All modules have FCC Certification and CE declaration of conformity. Following transmission techniques are in use:

1. LTE Module with:

Operating Mode	Max. Output Power	Bandwidth	Tx Operating Frequency	Modulation
LTE Band 2	21,92 dBm	1,4/3/5/10/15/20 MHz	1850 – 1910 MHz	QPSK / 16QAM
LTE Band 4	24,03 dBm	1,4/3/5/10/15/20 MHz	1710 – 1755 MHz	QPSK / 16QAM
LTE Band 5	24,03 dBm	1,4/3/5/10 MHz	824 – 849 MHz	QPSK / 16QAM
LTE Band 12	23,10 dBm	1,4/3/5/10 MHz	699 – 716 MHz	QPSK / 16QAM
LTE Band 13	22,19 dBm	5/10 MHz	777 – 787 MHz	QPSK / 16QAM
LTE Band 25	22,34 dBm	1,4/3/5/10/15/20 MHz	1850 – 1915 MHz	QPSK / 16QAM
LTE Band 26	22,86 dBm	1,4/3/5/10/15 MHz	814 – 849 MHz	QPSK / 16QAM
LTE Band 41	21,93 dBm	5/10/15/20 MHz	2496 – 2690 MHz	QPSK / 16QAM
LTE Band 66	21,71 dBm	1,4/3/5/10/15/20 MHz	1710 – 1780 MHz	QPSK / 16QAM

2. GNSS Module (Receive only)

As these modules are operated simultaneously, spurious emissions were checked under the following operating conditions:

1. LTE Band 2 + GNSS enabled
2. LTE Band 4 + GNSS enabled
3. LTE Band 5 + GNSS enabled
4. LTE Band 12 + GNSS enabled
5. LTE Band 13 + GNSS enabled
6. LTE Band 25 + GNSS enabled
7. LTE Band 26 + GNSS enabled
8. LTE Band 41 + GNSS enabled
9. LTE Band 66 + GNSS enabled
10. GNSS enabled only

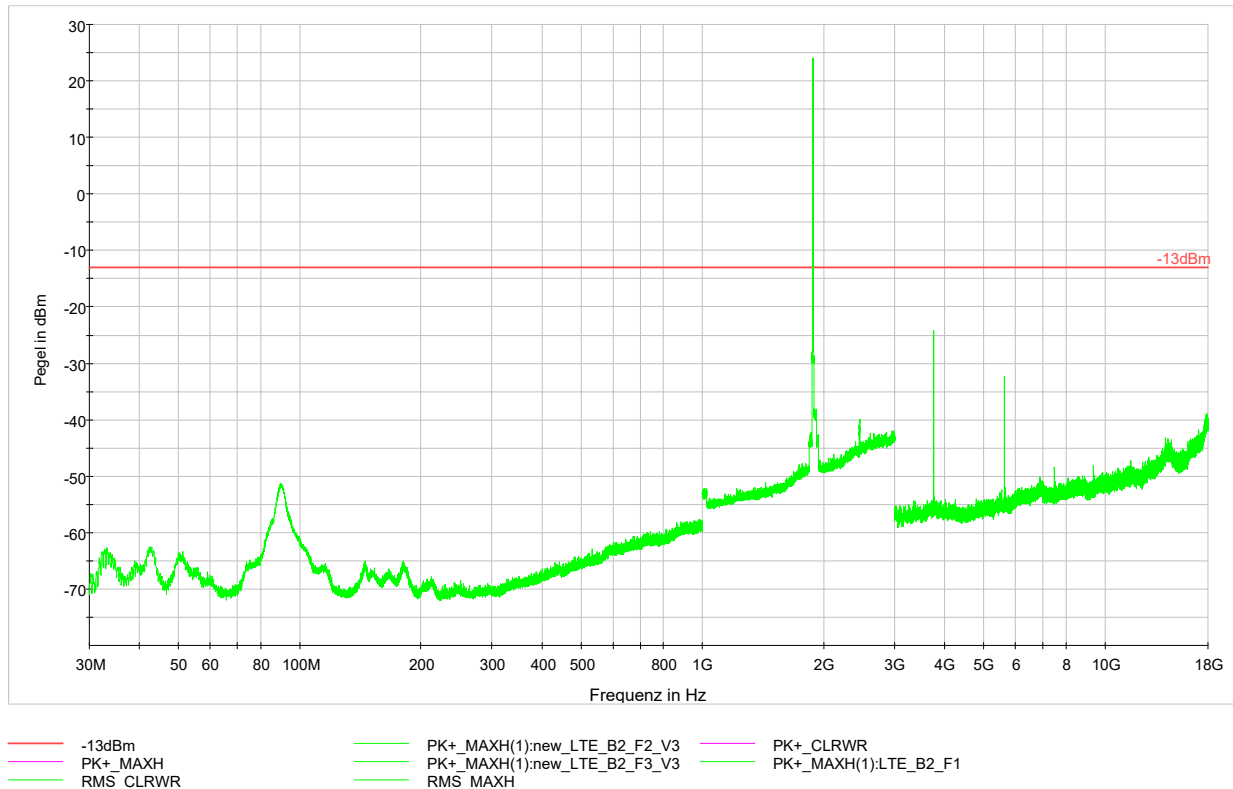
The LTE transmissions were provoked by a CMW500 set to 100% Duty cycle and all transmissions operating at the highest available transmit power. The upload channel was reduced to one resource block to achieve the smallest possible bandwidth giving the highest power spectral density.

If no additional emissions due to simultaneous transmission were found, only one modulation type and only middle channel frequency of the mobile radio frequency band was used for the test. In case of additional emissions found or in case of doubt additional measurements were made at the corner frequencies of the mobile radio frequency bands.

4.2 Spurious Emissions

§24.238 (a)

Operating mode: LTE Band 2 + GNSS enabled



LIMIT FCC §24.238 (a)

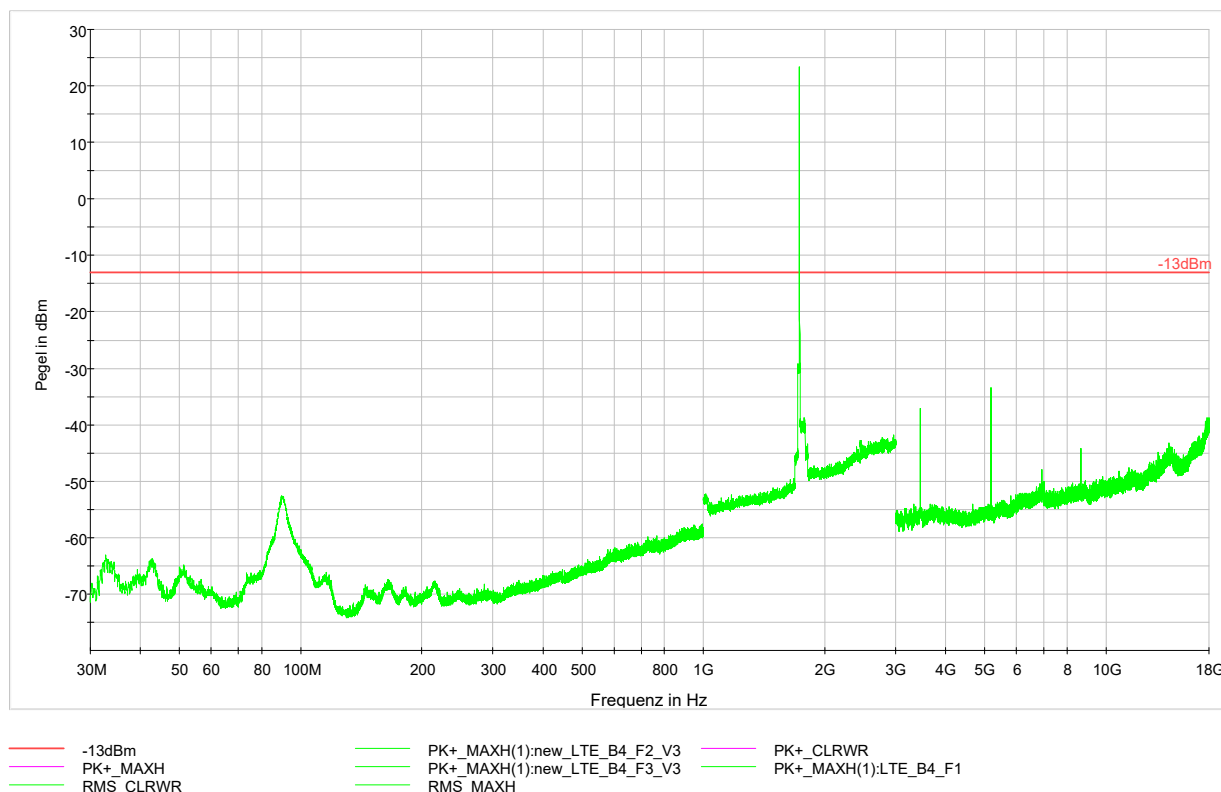
(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Spurious Emissions

§27.53 (h)

Operating mode: LTE Band 4 + GNSS enabled



LIMIT

FCC §27.53 (h)

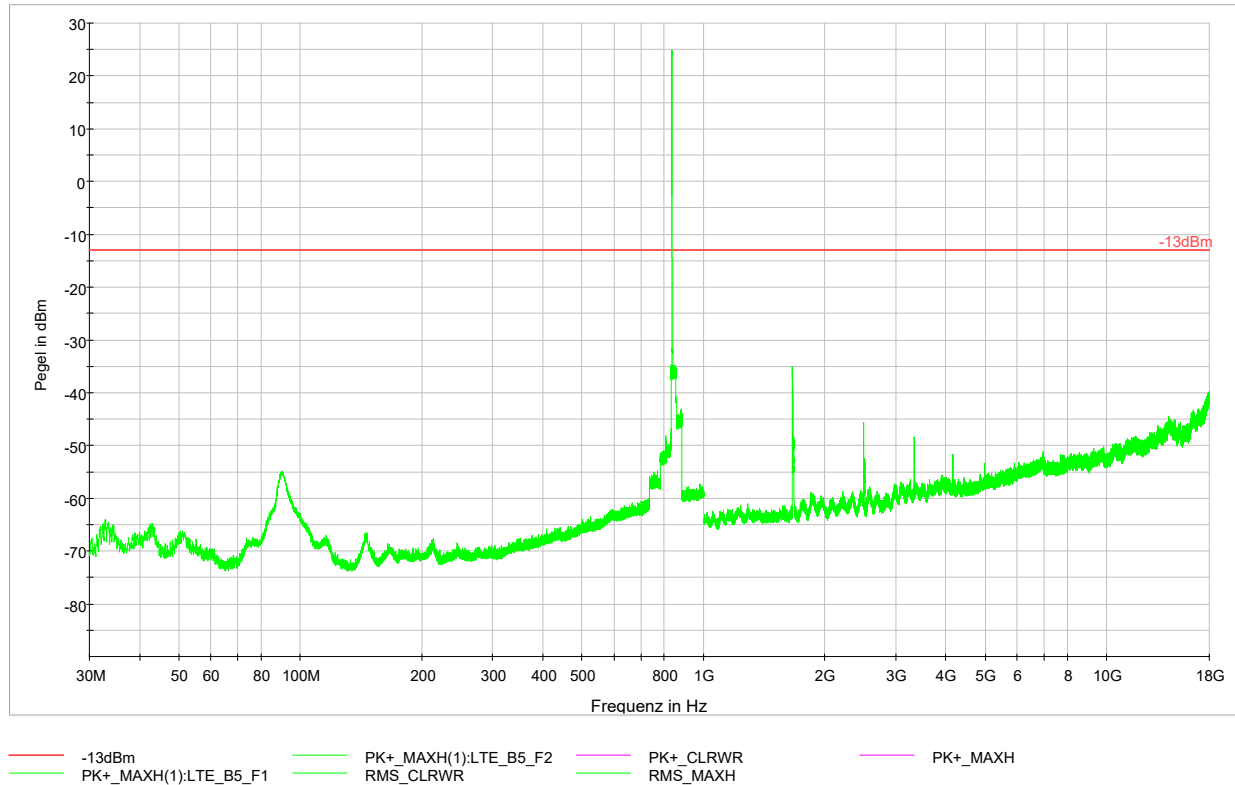
(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Spurious Emissions

§22.917 (a)

Operating mode: LTE Band 5 + GNSS enabled



LIMIT FCC §22.917 (a)

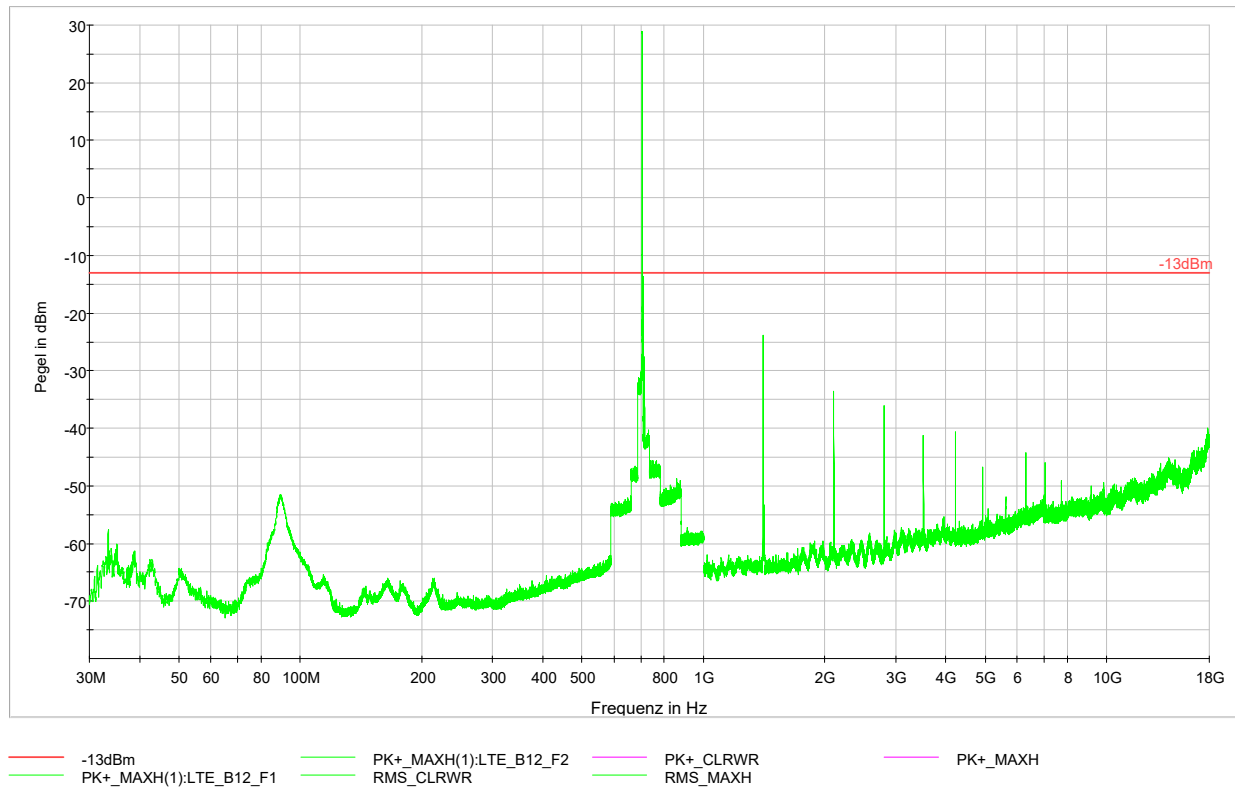
(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Spurious Emissions

§27.53 (g)

Operating mode: LTE Band 12 + GNSS enabled



LIMIT

FCC §27.53 (g)

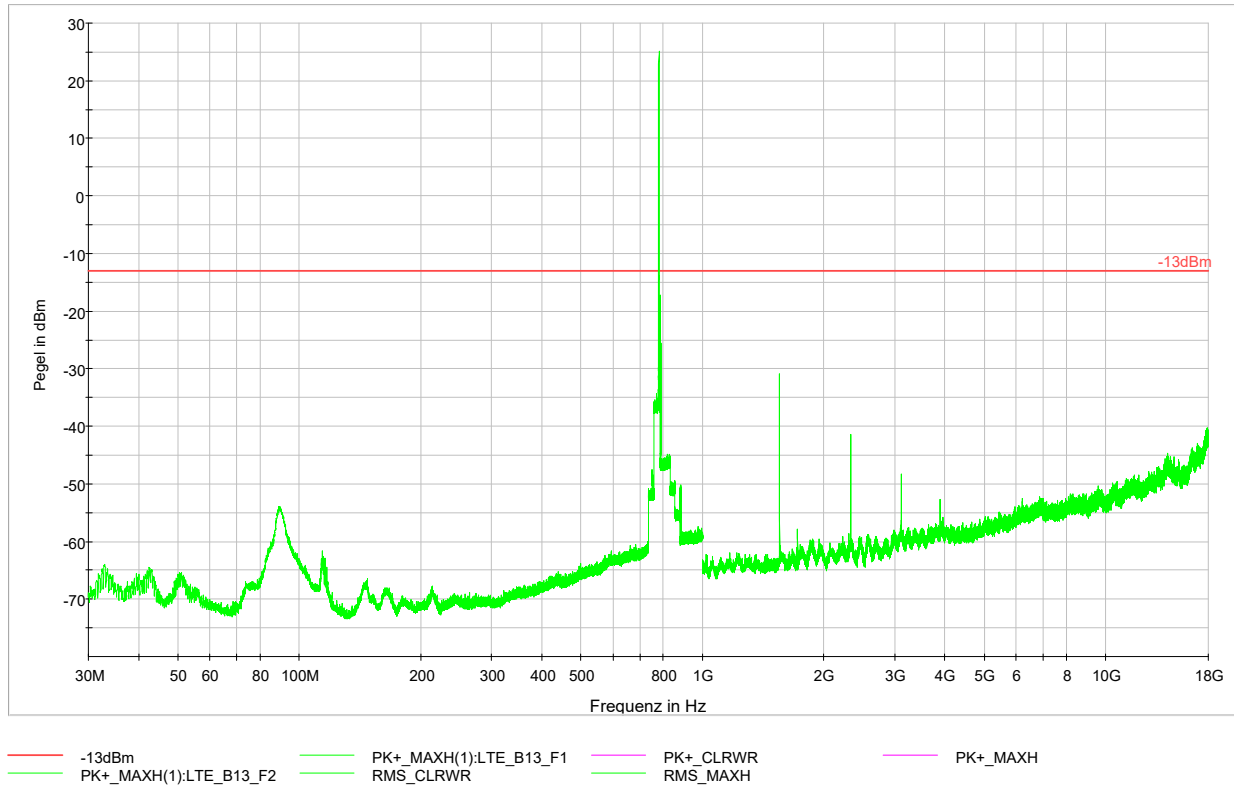
For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Spurious Emissions

§27.53 (c)
§27.53 (f)

Operating mode: LTE Band 13 + GNSS enabled



Limit see page 13

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Limit FCC §27.53 (c)

For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;
- (6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

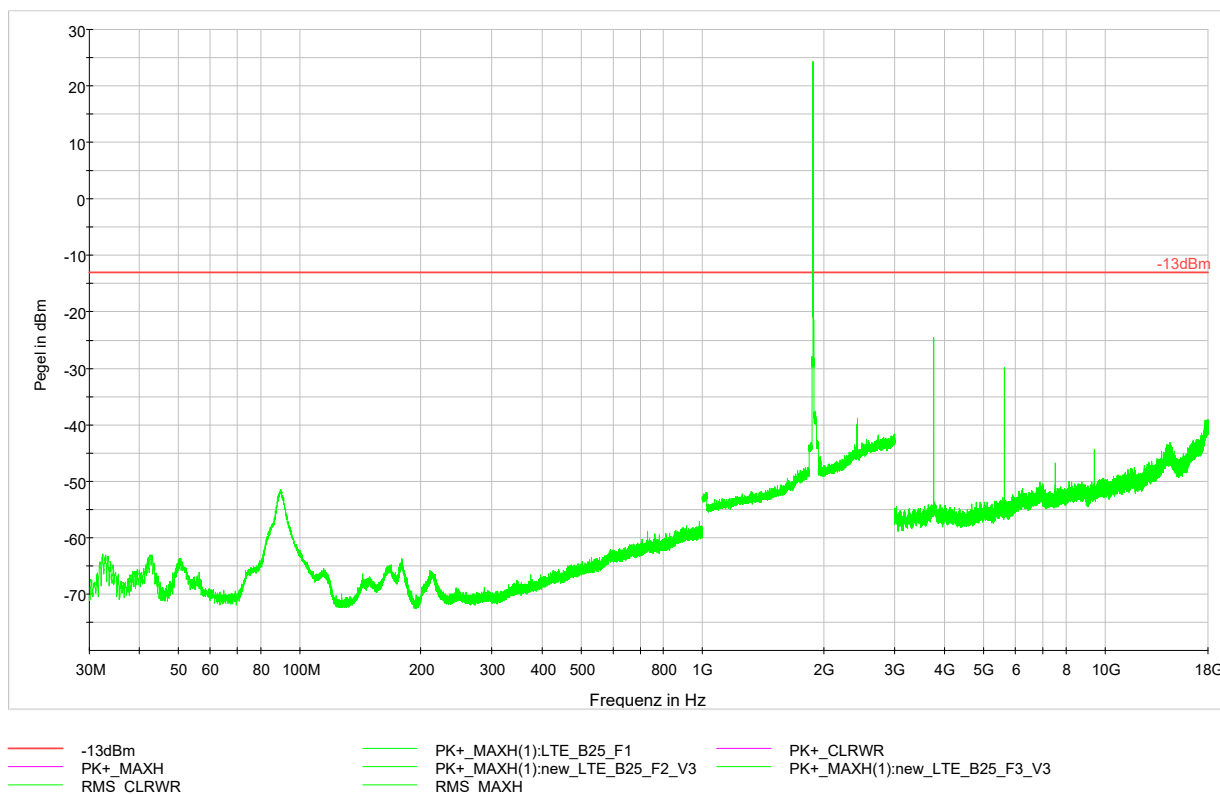
Limit FCC §27.53 (f)

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

Spurious Emissions

§24.238 (a)

Operating mode: LTE Band 25 + GNSS enabled



LIMIT

FCC §24.238 (a)

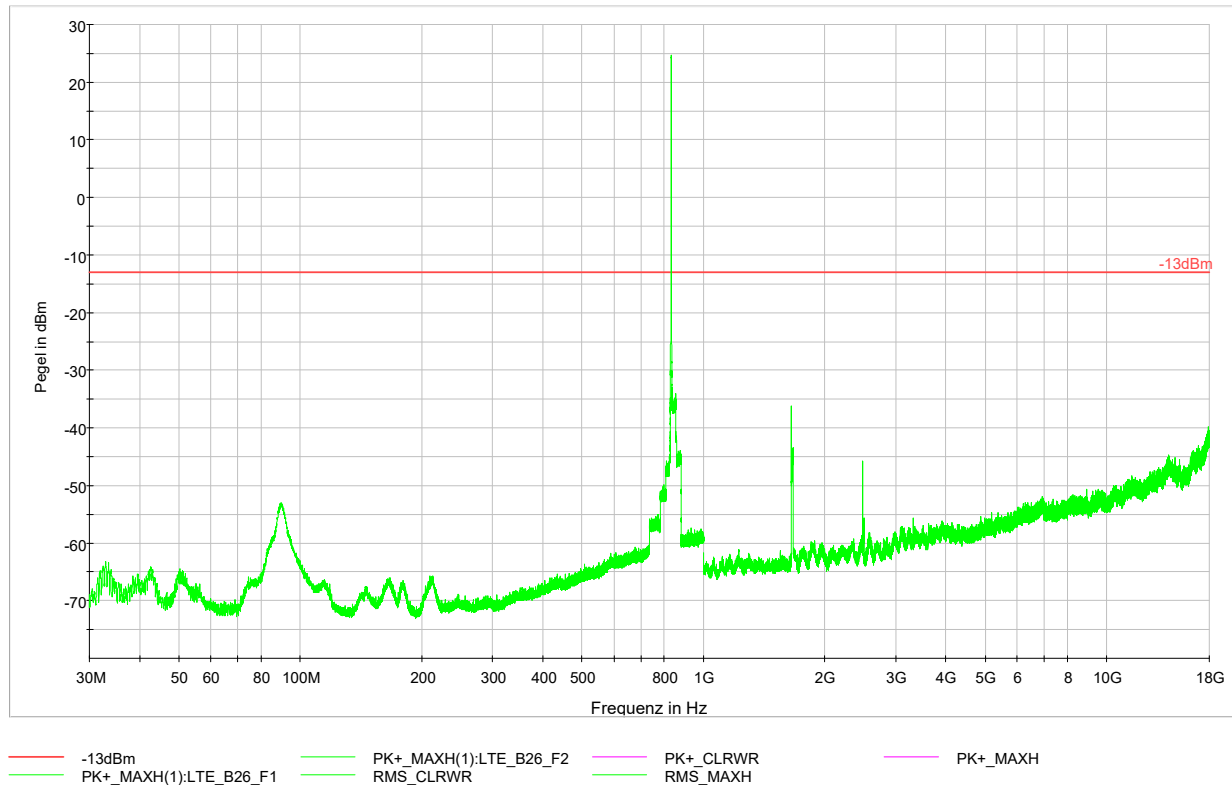
(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Spurious Emissions

§90.669 (a)
§22.917 (a)

Operating mode: LTE B26 + GNSS enabled



LIMIT FCC §90.669 (a)

(a) On any frequency in an MTA licensee's spectrum block that is adjacent to a non-MTA frequency, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 plus 10 log₁₀(P) decibels or 80 decibels, whichever is the lesser attenuation.

LIMIT FCC §22.917 (a)

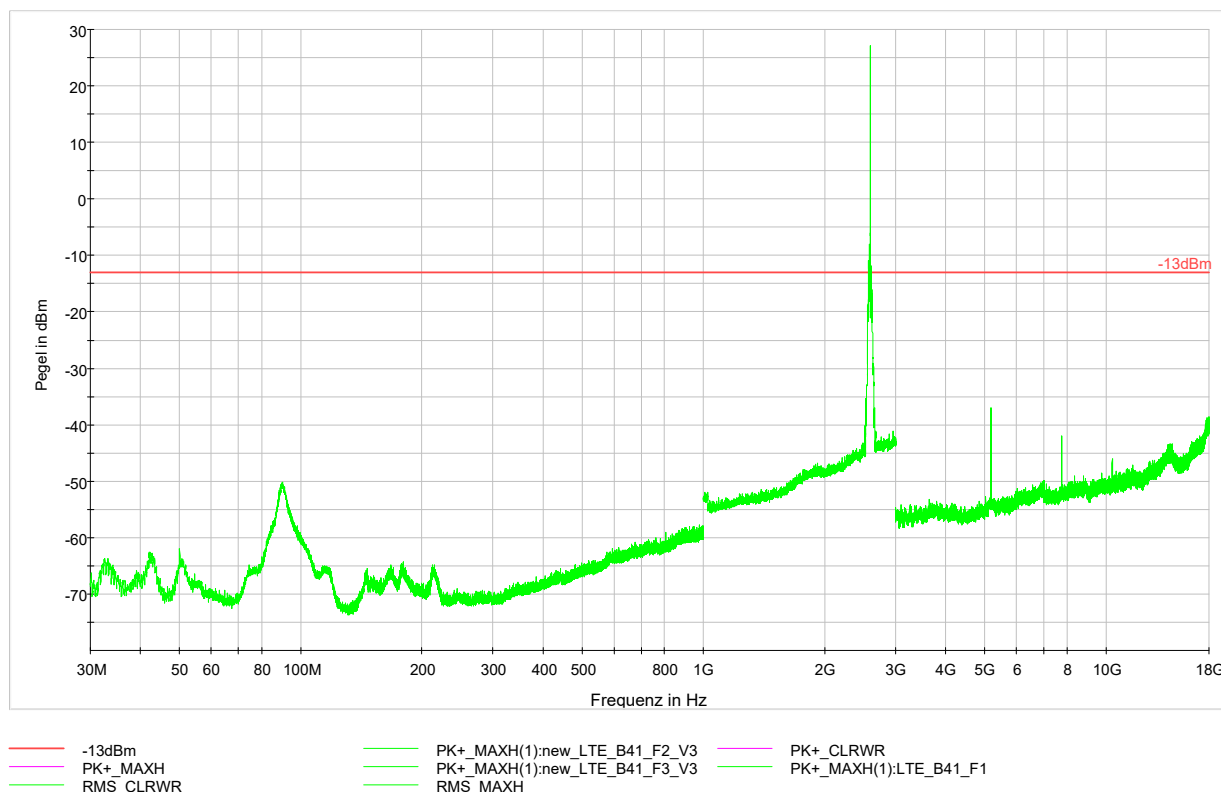
(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Spurious Emissions

§27.53 (m) (4)

Operating mode: LTE B41 + GNSS enabled



LIMIT

FCC §27.53 (m) (4)

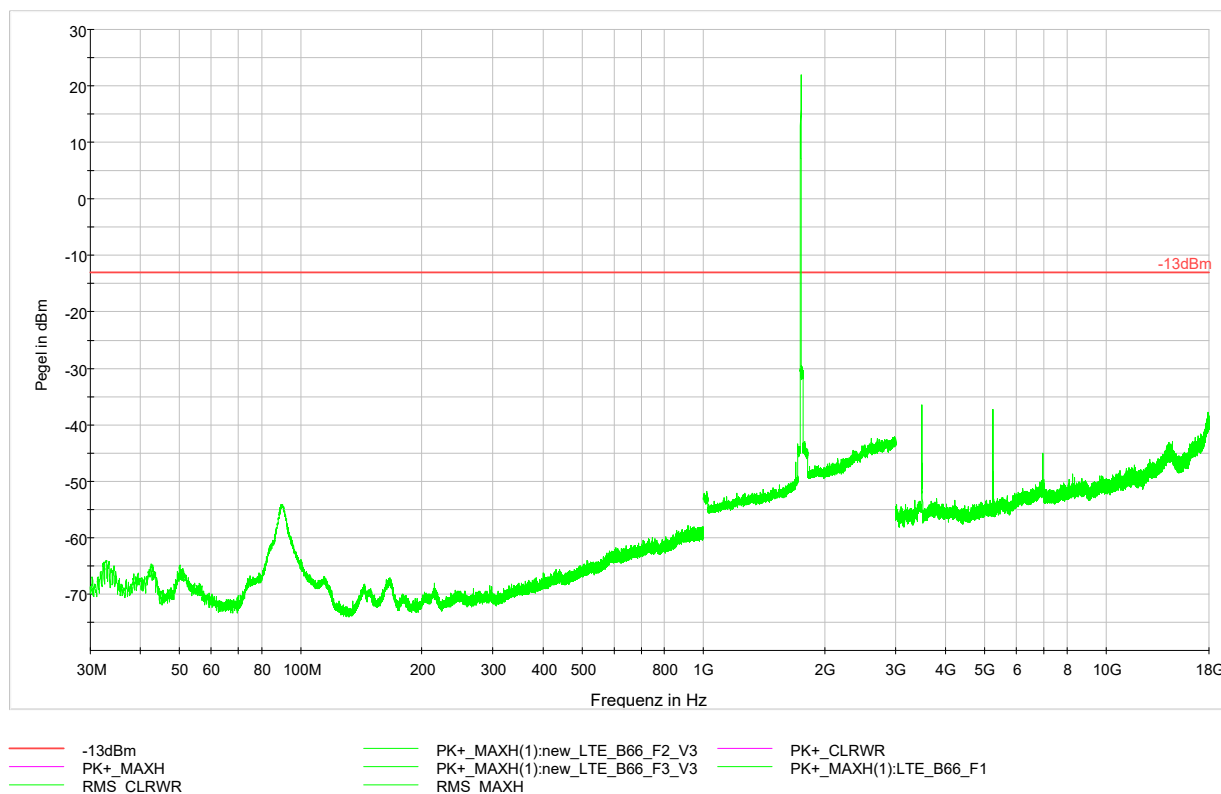
(4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Spurious Emissions

§27.53 (h)

Operating mode: LTE B66 + GNSS enabled



LIMIT

§27.53 (h)

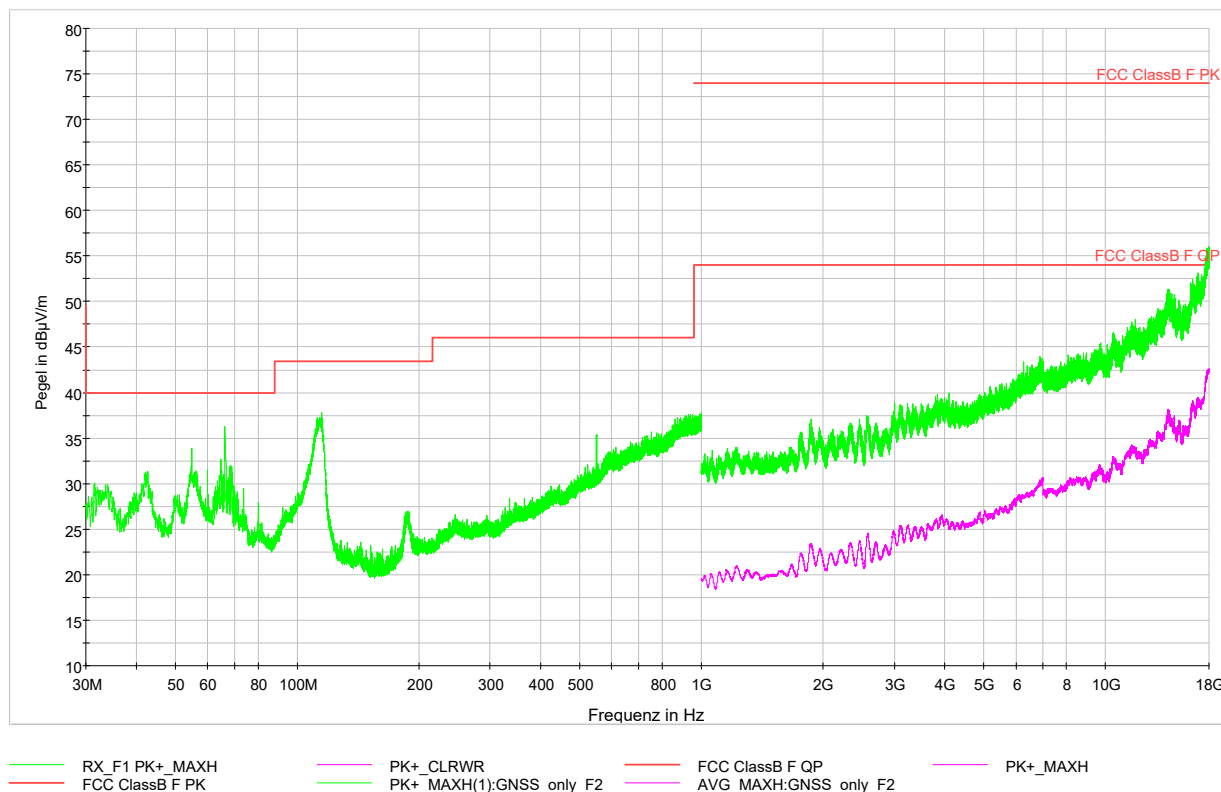
(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Spurious Emissions

§15.109 (b)

Operating mode: GNSS enabled only



LIMIT

§15.109 (b)

(b) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of emission (MHz)	Field strength (microvolts/meter)
33-88	100
88-216	150
216-960	200
Above 960	500

Measuring equipment used: NT-100; NT-110; NT-125; NT-131/1; NT-207/1; NT-208/1

Appendix 1

Test equipment used

☐	Anechoic Chamber with 3m measurement distance	NT-100	☐	Power quality analyzer Fluke 1760 (complete set)	NT-160 - NT-173
☐	Stripline according to ISO 11452-5	NT-108	☐	Spectrumanalyzer – FSP7 9 kHz – 7 GHz	NT-200
☐	MA4000 - Antenna mast 1 - 4 m height	NT-110/1	☐	ESCI - Test receiver 9 kHz - 7 GHz	NT-203/1
☐	DS - Turntable 0 - 400 ° Azimuth	NT-111/1	☐	ESR – Test receiver 20 Hz – 26,5 GHz	NT-207/1
☐	CO3000 Controller Mast+Turntable	NT-112/1	☐	Digital Radio Tester CMW500	NT-208/1
☐	HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz	NT-121	☐	Noise-gen., ITU-R 559-2 20 Hz – 20 kHz	NT-209
☐	FMZB1513 - Loop Antenna 9 kHz - 30 MHz	NT-122/1	☐	CMTA - Radiocommunication analyzer ; 0,1 - 1000 MHz	NT-210
☐	HFH-Z6 - Rod Antenna 9 kHz - 30 MHz	NT-123	☐	3271 - Spectrum analyzer 100 Hz - 26,5 GHz	NT-211
☐	3121C - Dipole Antenna 28 - 1000 MHz	NT-124	☐	Digital Radio Tester Aeroflex 3920	NT-212/1
☐	3109 - Horn Antenna 1 - 18 GHz (immunity)	NT-125	☐	Mixer M28HW 26,5 GHz - 40 GHz	NT-214
☐	3116 - Horn Antenna 18 - 40 GHz	NT-126	☐	RubiSource T&M Timing reference	NT-216
☐	SAS-200/543 - Bicon. Antenna 20 MHz - 300 MHz	NT-127	☐	Radiocommunicationanalyzer SWR 1180 MD	NT-217
☐	AT-1080 - Log. Per. Antenna 80 - 1000 MHz	NT-128	☐	Mixer M19HWD 40 GHz – 60 GHz	NT-218
☐	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-129	☐	Mixer M12HWD 60 GHz – 90 GHz	NT-219
☐	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-130	☐	DSO9104 Digital scope	NT-220/1
☐	3146 - Log. Per. Antenna 200 – 1000 MHz	NT-131	☐	TPS 2014 Digital scope	NT-222
☐	VULB 9163 Trilog Antenna 30 – 3000 MHz	NT-131/1	☐	Artificial Ear according to IEC 60318	NT-224
☐	Loop Antenna H-Field	NT-132	☐	1 kHz Sound calibrator	NT-225
☐	Horn Antenna 500 MHz - 2900 MHz	NT-133	☐	SRM-3006 Spectrumanalyzer	NT-233/1a
☐	Horn Antenna 500 MHz - 6000 MHz	NT-133/1	☐	E-field probe SRM 75 MHz – 3 GHz	NT-234
☐	Log. per. Antenna 800 MHz - 2500 MHz	NT-134	☐	Field Meter NBM-500 incl. E- and H-Field probes	NT-240a-e
☐	Log. per. Antenna 800 MHz - 2500 MHz	NT-135	☐	Magnetometer HP-01	NT-241/1
☐	BiConiLog Antenna 26 MHz – 2000 MHz	NT-137	☐	EFA-3 H-field- / E-field probe	NT-243
☐	Conical Dipol Antenna PCD8250	NT-138	☐	EHP-50F H-field- / E-field probe	NT-243/1
☐	HF 906 - Horn Antenna 1 - 18 GHz (emission)	NT-139	☐	Field Meter EMR-200 100 kHz – 3 GHz	NT-244
☐	HZ-1 Antenna tripod	NT-150	☐	E-field probe 100 kHz – 3 GHz	NT-245
☐	BN 1500 Antenna tripod	NT-151	☐	H-field probe 300 kHz – 30 MHz	NT-246
☐	Ant. tripod for EN61000-4-3 Model TP1000A	NT-156			

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Appendix 1 (continued)

Test equipment used

☐ E-field probe 3 MHz – 18 GHz	NT-247	☐ 500W1000M7 - RF-Amplifier 80 - 1000 MHz / 500 W	NT-332
☐ H-field probe 27 MHz – 1 GHz	NT-248	☐ AS0102-65R - RF-Amplifier 1 GHz - 2 GHz	NT-333
☐ ELT-400 1 Hz – 400 kHz	NT-249	☐ APA01 – RF-Amplifier 0,5 GHz – 2,5 GHz	NT-334
☐ MDS 21 - Absorbing clamp 30 - 1000 MHz	NT-250	☐ Preamplifier 1 GHz - 4 GHz	NT-335
☐ FCC-203I EM Injection clamp	NT-251	☐ Preamplifier for GPS MKU 152 A	NT-336
☐ FCC-203I-DCN Ferrite decoupling network	NT-252	☐ Preamplifier 1 GHz – 18 GHz	NT-337/1
☐ PR50 Current Probe	NT-253	☐ DC Block 10 MHz – 18 GHz Model 8048	NT-338
☐ i310s Current Probe	NT-254/1	☐ 2-97201 Electronic load	NT-341
☐ Fluke 87 V True RMS Multimeter	NT-260	☐ TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-344
☐ Model 2000 Digital Multimeter	NT-261	☐ TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-345
☐ Fluke 87 V Digital Multimeter	NT-262/1	☐ VDS 200 Mobil-impuls-generator	NT-350
☐ ESH2-Z5-U1 Artificial mains network 4x25A	NT-300	☐ LD 200 Mobil-impuls-generator	NT-351
☐ ESH3-Z5-U1 Artificial mains network 2x10A	NT-301	☐ MPG 200 Mobil-Impuls-Generators	NT-352
☐ ESH3-Z6-U1 Artificial mains network 1x100A	NT-302	☐ EFT 200 Mobil-impuls-generator	NT-353
☐ ESH3-Z6-U1 Artificial mains network 1x100A	NT-302a	☐ AN 200 S1 Artificial Network	NT-354
☐ EZ10 T-Artificial Network	NT-305	☐ FP-EFT 32M 3 ph. Coupling filter (Burst)	NT-400/1
☐ SMG - Signal generator 0,1 - 1000 MHz	NT-310	☐ PHE 4500 - Mains impedance network	NT-401
☐ SMA100A - Signal generator 9 kHz - 6 GHz	NT-310/1	☐ IP 6.2 Coupling filter for data lines (Surge)	NT-403
☐ RefRad Reference generator	NT-312	☐ TK 9421 High Power Volt. Probe 150 kHz - 30 MHz	NT-409
☐ SMP 02 Signal generator 10 MHz - 20 GHz	NT-313	☐ ESH2-Z3 - Probe 9 kHz - 30 MHz	NT-410
☐ 40 MHz Arbitrary Generator TGA1241	NT-315	☐ IP 4 - Capacitive clamp (Burst)	NT-411
☐ Artificial mains network NSLK 8127-PLC	NT-316	☐ Highpass-Filter 100 MHz – 3 GHz	NT-412
☐ PSURGE 4.1 Surge generator	NT-324	☐ Highpass-Filter 600 MHz – 4 GHz	NT-413
☐ IMU4000 Immunity test system	NT-325/1	☐ Highpass-Filter 1250 MHz – 4 GHz	NT-414
☐ VCS 500-M6 Surge-Generator	NT-326	☐ Highpass-Filter 1800 MHz – 16 GHz	NT-415
☐ Oscillatory Wave Simulator incl. Coupling networks	NT-328a+b+c		
☐ BTA-250 - RF-Amplifier 9 kHz - 220 MHz / 250 W	NT-330		
☐ T82-50 RF-Amplifier 2 GHz – 8 GHz	NT-331		

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Appendix 1 (continued)

Test equipment used

☐	RF-Attenuator 10 dB DC – 18 GHz / 50 W	NT-417/1	☐	FCC-801-T4 Coupling decoupling network	NT-463	Division: Industry & Energy Department: FG Test report number: 2022-IN-AT-TICL-E-EX- 000109-FG-001 Page: 3 of 5 Date: 19.05.2022
☐	RF-Attenuator 6 dB DC – 18 GHz / 50 W	NT-418	☐	FCC-801-C1 Coupling decoupling network	NT-464	
☐	RF-Attenuator 3 dB DC – 18 GHz / 50 W	NT-419	☐	SW 9605 - Current probe 150 kHz – 30 MHz	NT-465/1	
☐	RF-Attenuator 20 dB DC - 1000 MHz / 25 W	NT-421	☐	95242-1 – Current probe 1 MHz – 400 MHz	NT-468	
☐	RF-Attenuator 30 dB DC - 1000 MHz / 1 W	NT-423	☐	94106-1L-1 – Current probe 100 kHz – 450 MHz	NT-471	
☐	RF-Attenuator 30 dB	NT-424	☐	WHKX12-2700-3000-18000 3 GHz Highpass filter	NT-472	
☐	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-425	☐	WHKX10-3870-4500-18000 4,5 GHz Highpass filter	NT-473	
☐	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-426	☐	GA 1240 Power amplifier according to EN 61000-4-16	NT-480	
☐	RF-Attenuator 6 dB	NT-428	☐	Coupling networks according to EN 61000-4-16	NT-481 - NT-483	
☐	RF-Attenuator 0 dB - 81 dB	NT-429	☐	Van der Hoofden Test Head	NT-484	
☐	WRU 27 - Band blocking 27 MHz	NT-430	☐	WRCJV12-5820-5850-5950-5980 5,9 GHz Band Reject Filter	NT-490	
☐	WHJ450C9 AA - High pass 450 MHz	NT-431	☐	WHKX10-5670-6300-18000 6 GHz Highpass filter	NT-491	
☐	WHJ250C9 AA - High pass 250 MHz	NT-432	☐	WHK12-935-1000-7000 1 GHz Highpass filter	NT-492	
☐	RF-Load 150 W	NT-433	☐	EMC Video/Audiosystem	NT-511/1	
☐	Impedance transducer 1:4 ; 1:9 ; 1:16	NT-435	☐	ES-K1 Version 1.71 SP2 Test software	NT-520	
☐	RF-Attenuator DC – 18 GHz 6 dB	NT-436	☐	EMC32 Version 10.60.20 Test software	NT-520/1	
☐	RF-Attenuator DC – 18 GHz 6 dB	NT-437	☐	SRM-TS Version 1.3 software for SRM-3000	NT-522	
☐	RF-Attenuator DC – 18 GHz 10 dB	NT-438	☐	SRM-TS Version 1.3.1 software for SRM-3006	NT-522/1	
☐	RF-Attenuator DC – 18 GHz 20 dB	NT-439	☐	Spitzenberger und Spies Test software V4.1	NT-525	
☐	I+P 7780 Directional coupler 100 - 2000 MHz	NT-440	☐	Vertical coupling plane (ESD)	NT-531	
☐	ESH3-Z2 - Pulse limiter 9 kHz - 30 MHz	NT-441	☐	Test cable #4 for EN 61000-4-6	NT-553	
☐	Power Divider 6 dB/1 W/50 Ohm	NT-443	☐	Test cable #3 for conducted emission	NT-554	
☐	Directional coupler 0,1 MHz – 70 MHz	NT-444	☐	Test cable #5+#6 ESD-cable (2x470k)	NT-555 + NT-556	
☐	Directional coupler 0,1 MHz – 70 MHz	NT-445	☐	Test cable #8 Sucoflex 104EA	NT-559	
☐	Tube imitations according to EN 55015	NT-450	☐	Test cable #9 (for outdoor measurements)	NT-580	
☐	FCC-801-M3-16A Coupling decoupling network	NT-458	☐	Test cable #10 (for outdoor measurements)	NT-581	
☐	FCC-801-M2-50A Coupling decoupling network	NT-459	☐	Test cable #13 Sucoflex 104PE	NT-584	
☐	FCC-801-M5-25 Coupling decoupling network	NT-460	☐	Test cable #21 for SRM-3000	NT-592	
☐	FCC-801-AF10 Coupling decoupling network	NT-461	☐	Shield chamber	NT-600	
☐	FCC-801-S25 Coupling decoupling network	NT-462	☐	Climatic chamber	M-1200	

Appendix 1 (continued)

Test equipment used

☐	Anechoic Chamber 3 m / 5 m measuring distance	EMV-100	☐	HF- Amplifier 9 kHz-225 MHz BBL200	EMV-300/1
☐	Turntable 6 m diameter	EMV-101	☐	HF- Amplifier 80 -1000 MHz BBA150	EMV-301
☐	Antenna mast + controller	EMV-102+ EMV-103	☐	HF- Amplifier 0,8 - 6 GHz BBA150	EMV-302
☐	EMC Video/Audiosystem	EMV-104	☐	High Power Ant. 20-200 MHz HPBA-2510	EMV-303/1
☐	EMC Software EMC32 Version 10.60.20	EMV-105	☐	High Power Ant. 20-200 MHz S12018-21	EMV-303/2
☐	Hornantenna 1 – 18 GHz HF 907	EMV-110	☐	Log.per Antenna 80-2700 MHz STLP 9128 E special	EMV-304
☐	Antennapre.amp. 1 – 18 GHz ERZ-LNA0200-1800-30-2	EMV-111	☐	Log.per Antenna 0,7 – 9 GHz STLP9149	EMV-305
☐	Trilog Antenna 30-3000 MHz VULB9163	EMV-112	☐	HF- Amplifier 9 kHz-250 MHz BBA150 (low noise)	EMV-306
☐	Monopol 9 kHz – 30 MHz VAMP 9243	EMV-113	☐	ISO11451-2 TLS 10 kHz – 30 MHz	EMV-307
☐	Antennapre.amp 18 – 40 GHz BBV 9721	EMV-114	☐	Load Dump Generator LD 200N	EMV-350
☐	Hornantenna 200 – 2000 MHz AH-220	EMV-109	☐	Ultra Compact Symulator UCS 200N100	EMV-351
☐	DC Artificial Network PVDC 8300	EMV-150	☐	Automotive Power fail module PFM 200N100.1	EMV-352
☐	AC Artificial Network NNLK 8121 RC	EMV-151	☐	Voltage Drop Symulator VDS 200Q100	EMV-353
☐	EMI Receiver ESW44	EMV-200/1	☐	Arb. Generator AutoWave	EMV-354
☐	Signalgenerator 9 kHz – 40 GHz N5173B	EMV-201	☐	Ultra Compact Symulator UCS 500N7	EMV-355
☐	GPS Frequency normal B-88	EMV-202	☐	Coupling decoupling network CNI 503B7 / 32 A	EMV-356
☐	DC Power supply N5745A	EMV-203	☐	Coupling decoupling network CNI 503B7 / 63 A	EMV-357
☐	Spektrum Analyzator FSV40	EMV-205	☐	Telecom Surge Generator TSurge 7	EMV-358
☐	Thd Multimeter Model 2015	EMV-206	☐	Coupling decoupling network CNI 508N2	EMV-359
☐	Poweramplifier PAS15000	EMV- 207/abc	☐	Coupling decoupling network CNV 504N2.2	EMV-360
☐	Inrush Current Source	EMV- 208/abc	☐	Immunity generator NSG4060/NSG4060-1	EMV-361
☐	Arb.-generator Sycore	EMV-209	☐	Coupling network CDND M316-2	EMV-362
☐	Harmonics/Flicker analyzer ARS 16/3	EMV-210	☐	Coupling network CT419-5	EMV-363
☐	Power Supply Regatron AC	EMV-214	☐	ESD Generator NSG 437	EMV-364
☐	Power Supply Regatron DC	EMV-215	☐	Pulse Limiter VTSD 9561-F BNC	EMV-405
☐	Harmonics/Flicker analyser Zimmer	EMV-216	☐	Transient emission BSM200N40+BS200N100	EMV- 450+451
☐	Flicker Impedanz Newtons4th 753	EMV-218	☐	Cap. Coupling Clamp HFK	EMV-455
☐	Comemso	EMV-219	☐	Mag. Field System MS100N+MC26100+MC2630	EMV- 456-458

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Appendix 1 (continued)

Test equipment used

☐	Coupling network CDN M2-100A	EMV-459
☐	Coupling network CDN M3-32A	EMV-460
☐	Coupling network CDN M5-100A	EMV-461
☐	Current Clamp CIP 9136A	EMV-462
☐	DC Artificial Network HV-AN 150	EMV-464+465
☐	Coupling Clamp EM 101	EMV-466
☐	Decoupling Clamp FTC 101	EMV-467
☐	Power attenuator 10 dB / 250 Watt	EMV-469/2
☐	HV AMN NNHV 8123 800A	EMV-472
☐	HV AMN NNHV 8123 800A	EMV-473

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Appendix 2 Photodocumentation

Description: view #1

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Appendix 2 Photodocumentation

Description: view #2

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Appendix 2 Photodocumentation

Description: view #3

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Appendix 2 Photodocumentation

Description: detail view #1

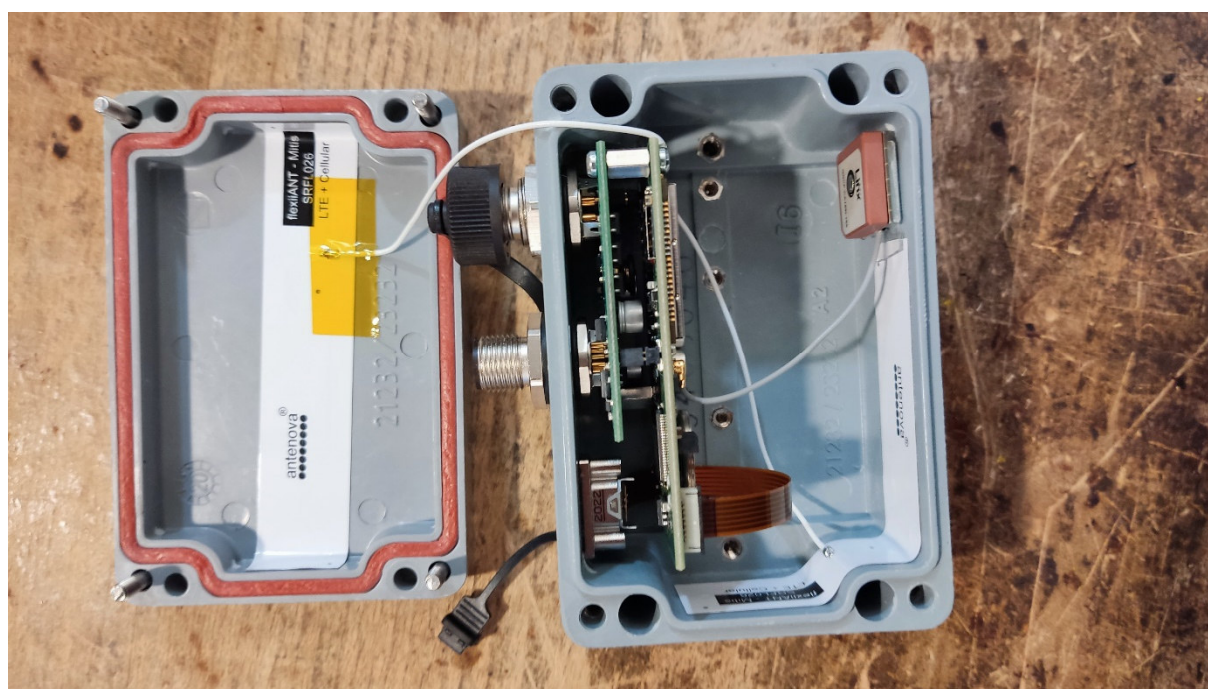
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Appendix 2 Photodocumentation

Description: detail view #2

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Appendix 2

Photodocumentation

Description: detail view #3

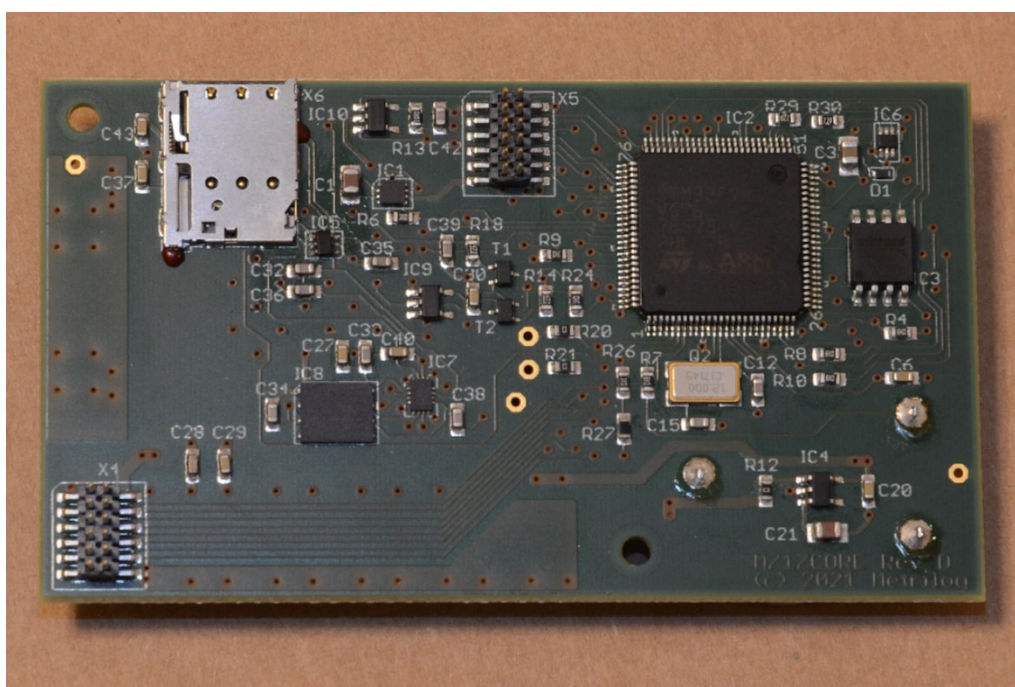
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Appendix 2

Photodocumentation

Description: detail view #4

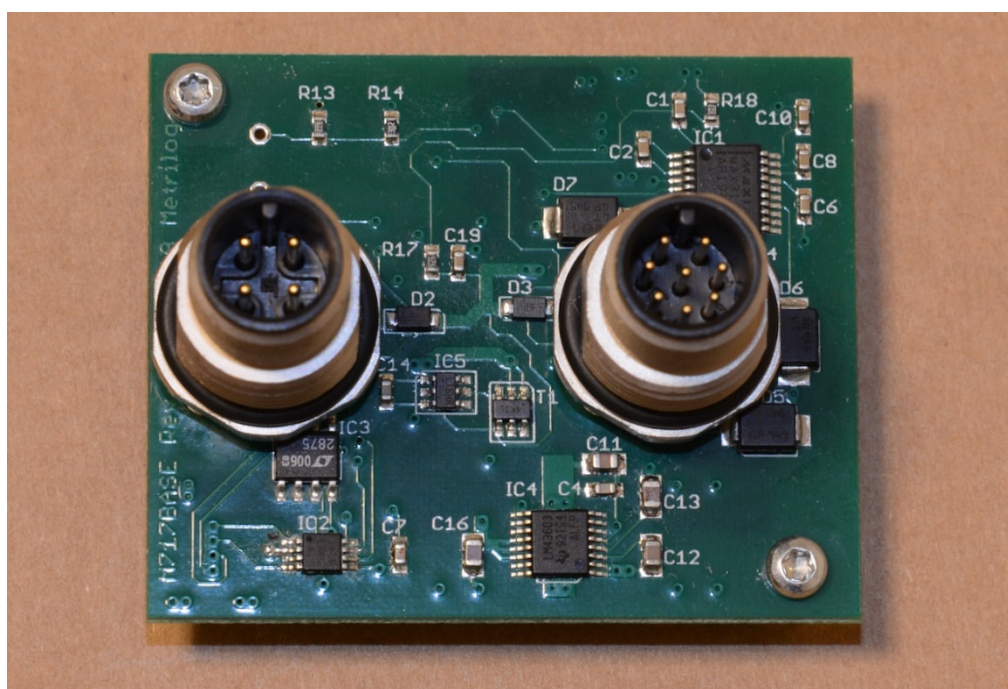
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Appendix 2

Photodocumentation

Description: etail view #5

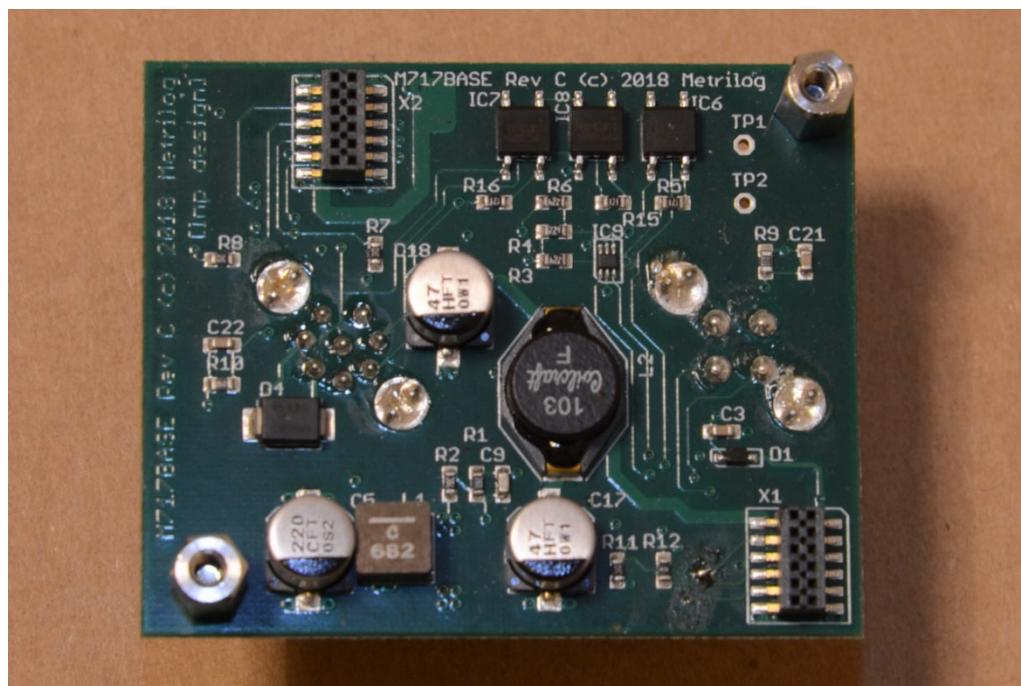
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Appendix 2

Photodocumentation

Description: test setup #1

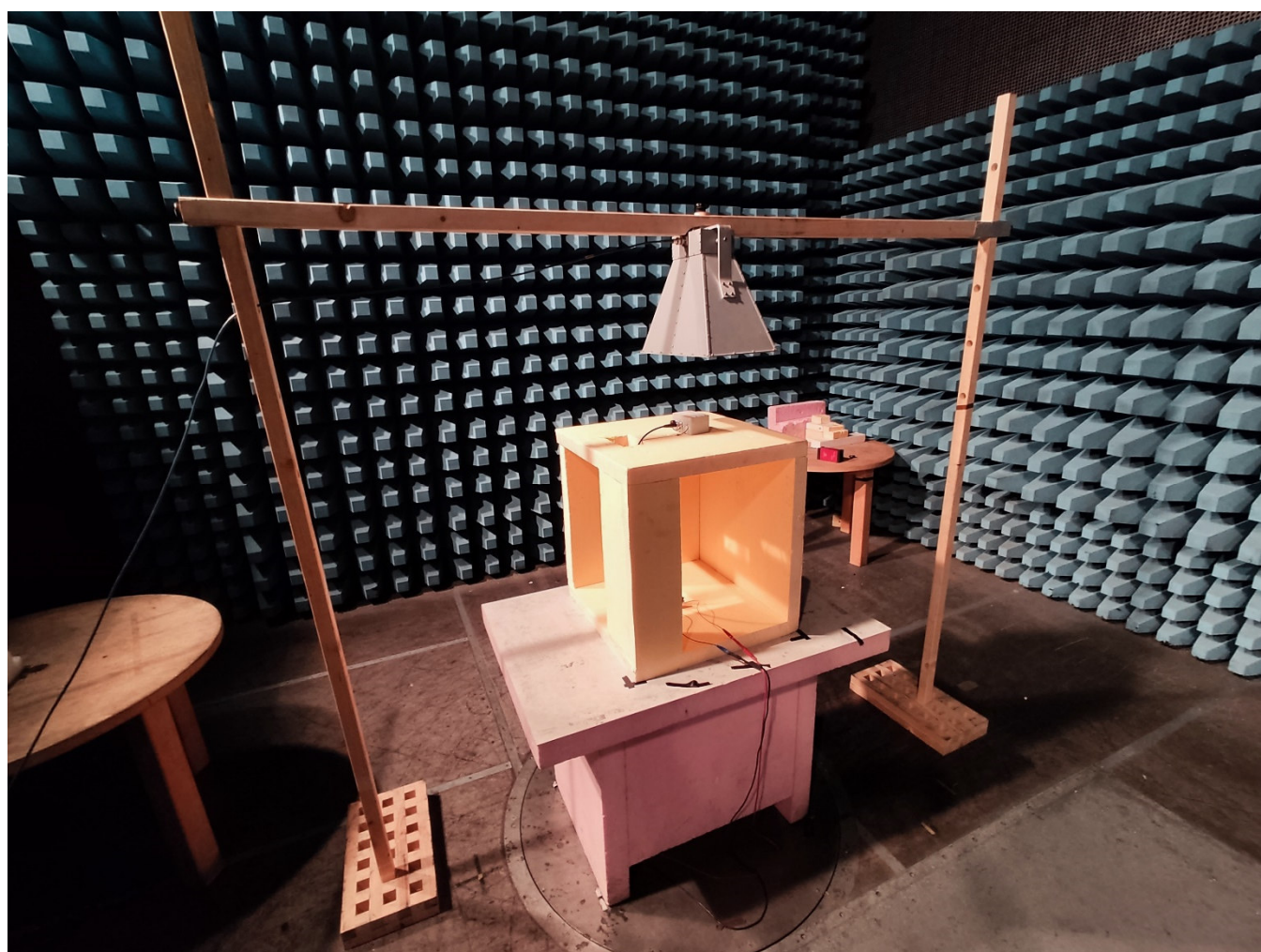
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Department: FG

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Appendix 2 Photodocumentation

Description: test setup #2

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Appendix 2

Photodocumentation

Description: test setup #3

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