

TEST REPORT

of the accredited test laboratory

TÜV Nr.:INE-AT/FG-21/156

Applicant: Liquidtool Systems AG
Winterseistrasse 22
3415 Hasle-Rüegsau
Switzerland

Tested Product: LIQUIDTOOL
FCC ID ---

Manufacturer: See applicant

Output power --- **power supply:** ---

Frequency range: --- **Channel separation:** ---

Accredited Standards: FCC: 47 CFR Part 15 (eCFR 28.06.2021)
RSS-247 Issue 2, February 2017
905462 D03 - Client Without DFS New Rules v01r02
ANSI C63.10-2013

Testing Laboratory,
Inspection Body,
Certification Body,
Calibration Laboratory,
Verifizierungsstelle**Notified Body 0408****Non-executive
Board of Directors:**
KR DI Johann
Marihart**Management:**
DI Dr. Stefan Haas
Mag. Christoph
Wenninger**Registered Office:**
Deutschstrasse 10
1230 Vienna/Austria**Branch Offices:**
www.tuv.at/standorte**Company Register
Court / - Number:**
Vienna / FN 288476 f**Bank Details:**
IBAN
AT131200052949001066
BIC BKAUATWWVAT ATU63240488
DVR 3002476**TÜV AUSTRIA SERVICES GMBH**
Test laboratory for EMC

Ing. Michael Emminger

**examined by / Testing
Laboratory
TÜV AUSTRIA SERVICES
GMBH**

21.07.2021

Ing. Andreas Malek

**approved by / Testing
Laboratory
TÜV AUSTRIA SERVICES
GMBH**

A publication of this test report is only permitted literally.

Copying or reproduction of partial sections needs a written permission of
TÜV AUSTRIA SERVICES GMBH.

The results of this test report only refer to the provided equipment.

Contents

	Designation	PAGE
1.	Applicant	3
2.	Description of EUT	4
3.	Standards / Final result	5
4.	Test results	
	List of measurements according to 47 CFR 15 and RSS-247	
4.1	Test object data	6
4.2	Emissions in restricted bands	7-24
4.3	Conducted Limits	25

Appendix	Designation	PAGES
1	Test equipment used	5
2	Photodocumentation	21

1. Applicant

Company: Liquidtool Systems AG

Department: ---

Address: Winterseistrasse 22
3415 Hasle-Rüegsau
Switzerland

Contact person: ---

EUT received on: 15.07.2021

Tests were performed on: 15.07.2021

2. Description of EUT

EUT: LIQUIDTOOL

Serial Number: ---

Manufacturer: Liquidtool Systems AG
Winterseistrasse 22
3415 Hasle-Rüegsau
Schweiz

Description: Liquidtool Systems AG provided the following configuration for the measurements:

Normal use

Operating mode: The measurements were carried out at the following running states:
test-firmware running, transmitting continuously

Climatic conditions in the emc laboratory: Relative humidity: 35 %
Temperature: 23 °C

3. Standards / Final result

Name	Title	Deviation	Result
FCC: 47 CFR Part 15 (eCFR 28.06.2021)	RADIO FREQUENCY DEVICES	Only the documented results were carried out.	OK
RSS-247 Issue 2, February 2017	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices		OK
ANSI C63.10-2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices		OK
Result: Opinions and interpretation of testing laboratory OK: EUT passed NOK: EUT failed			

Test report number:
INE-AT/FG-21/156
Date: 21.07.2021
Ambient temperature: 25°C

Relative humidity: 25%

4. TEST RESULTS

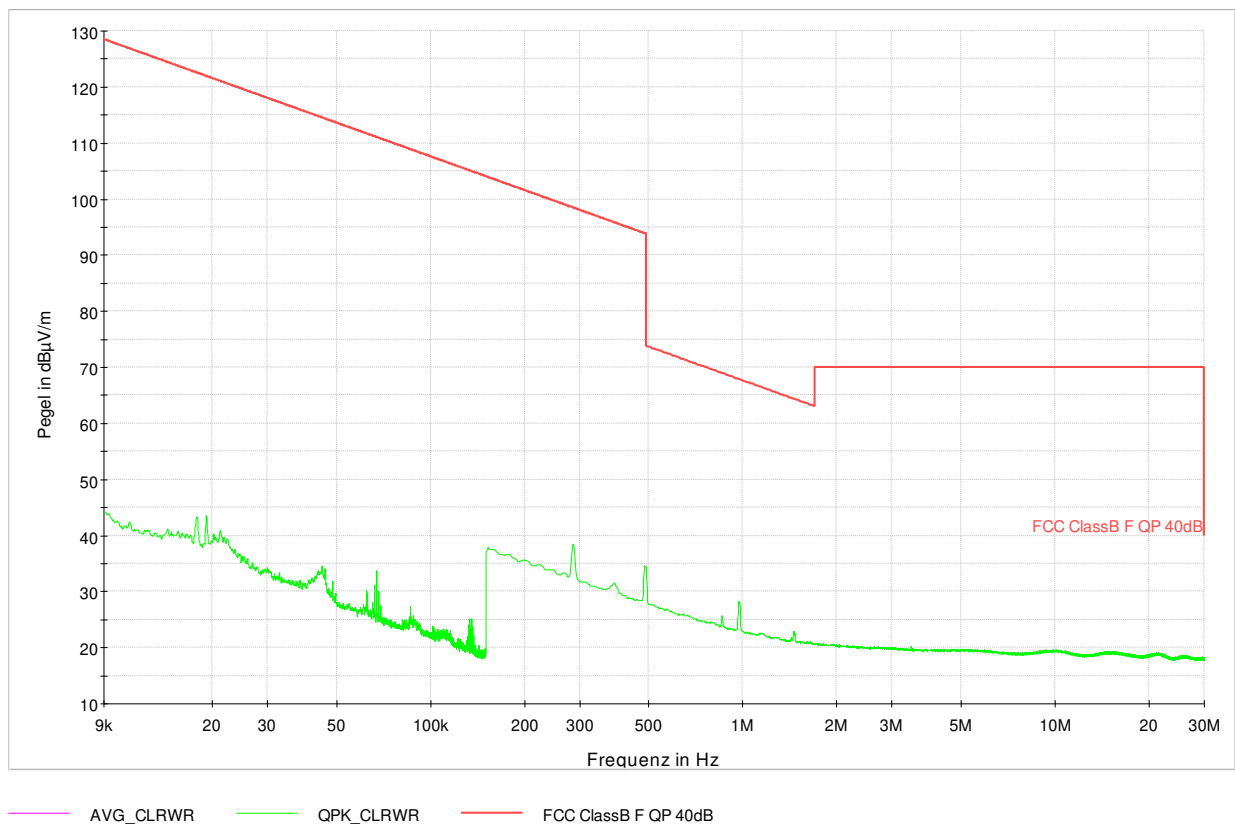
4.1. TEST OBJECT DATA

General EUT Description

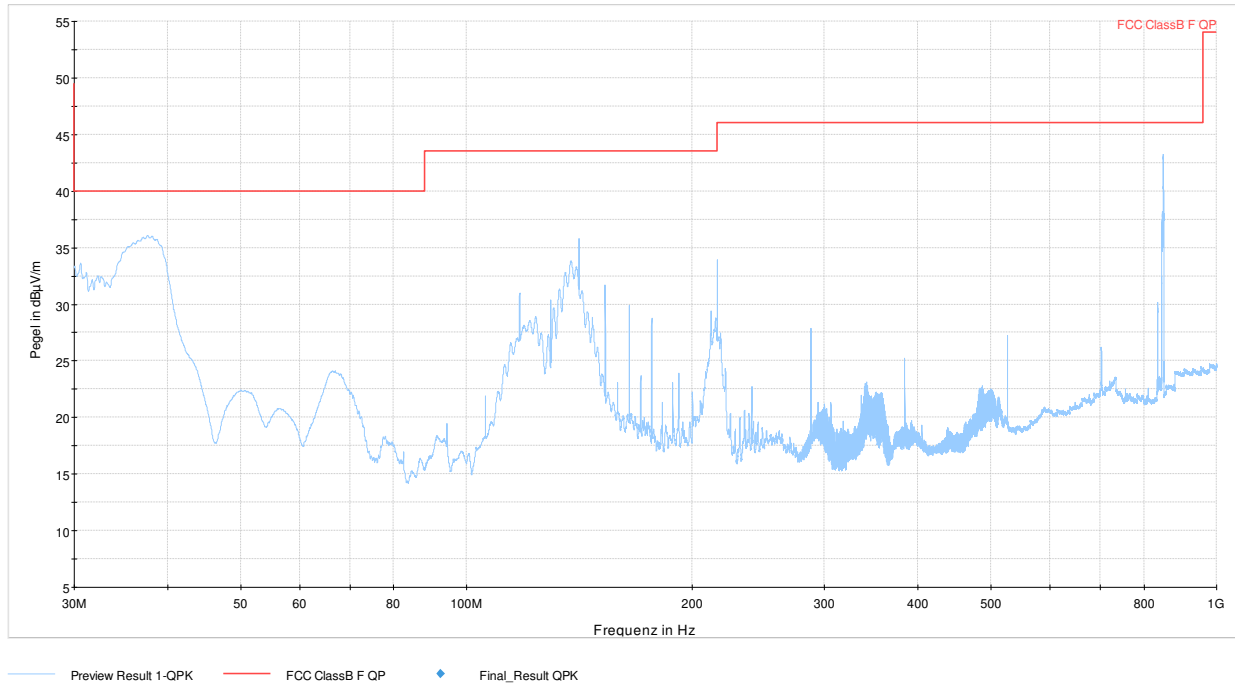
4.2. Emissions in restricted bands § 15.209(a) Emissions falling within restricted frequency bands RSS-Gen

Measurement with Peak-Detector (green line) and Average detector (magenta line):

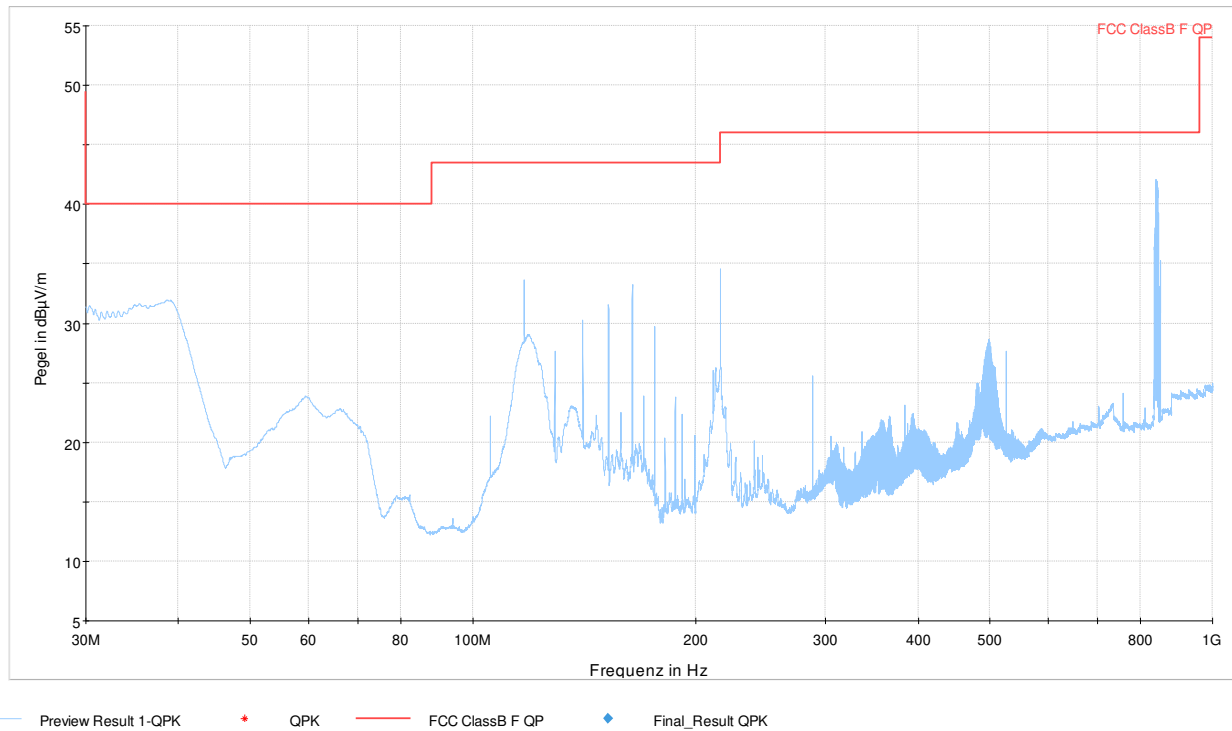
9 kHz – 30 MHz Setup: max. Emission from Bluetooth, 2,4 GHz WLAN (Channel 1, 6, 11) and 5 GHz WLAN (Channel Sweep)



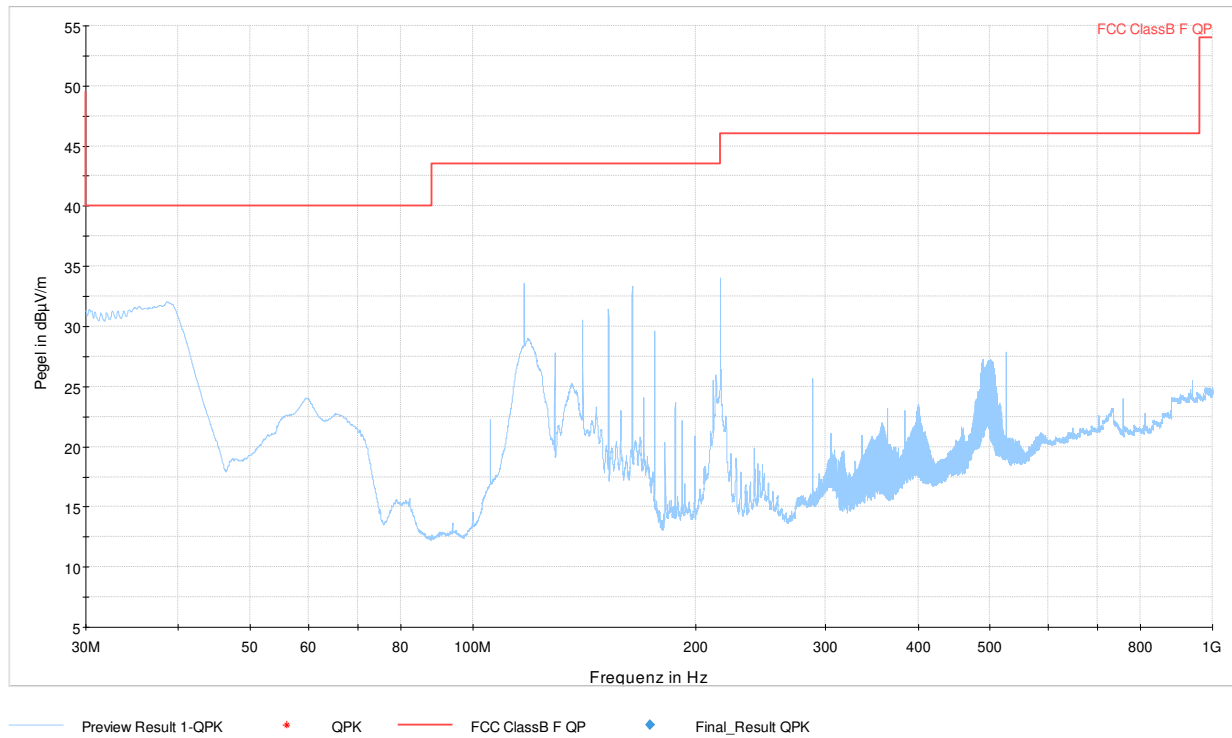
30-1000 MHz Setup: Bluetooth



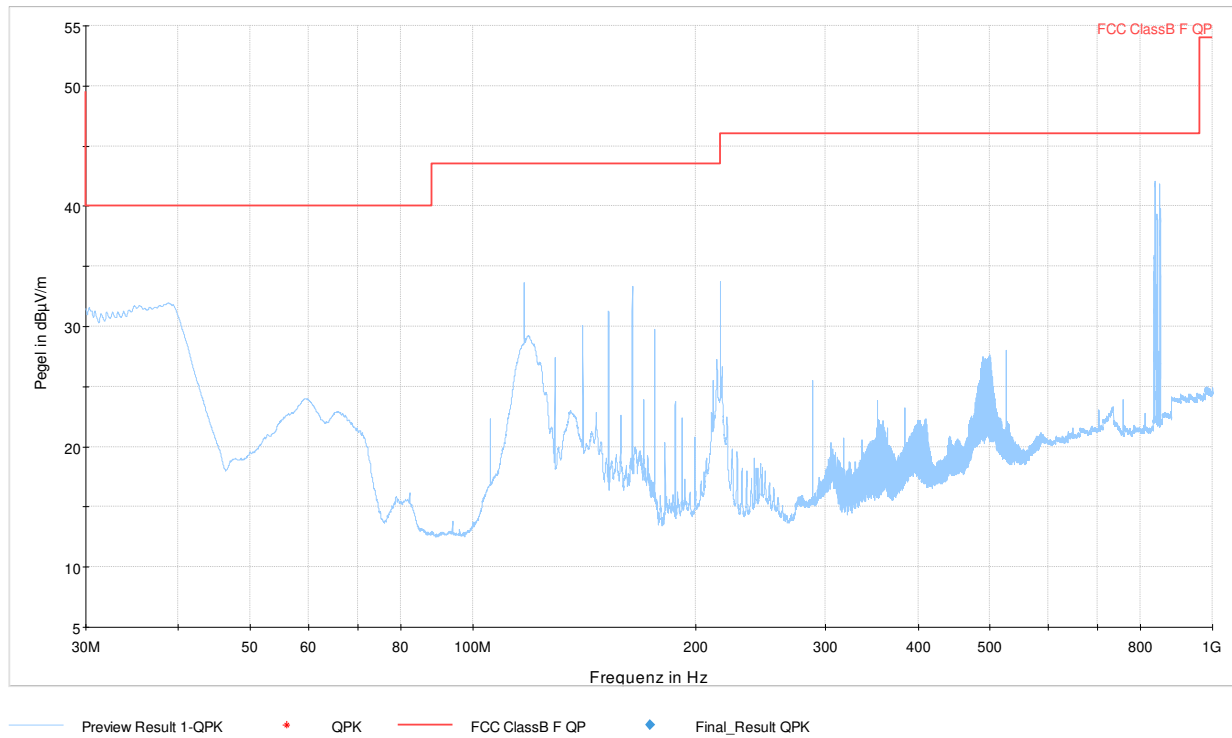
30-1000 MHz Setup: 2,4 GHz WLAN Channel 1



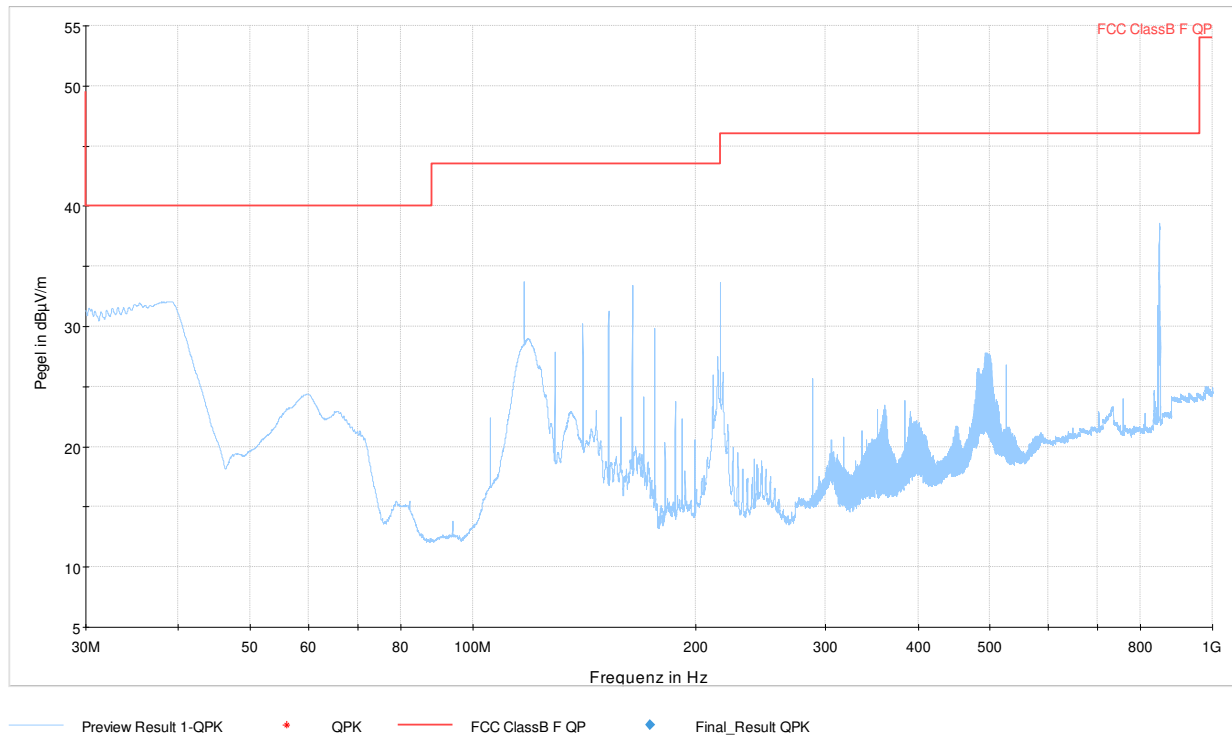
30-1000 MHz Setup: 2,4 GHz WLAN Channel 6



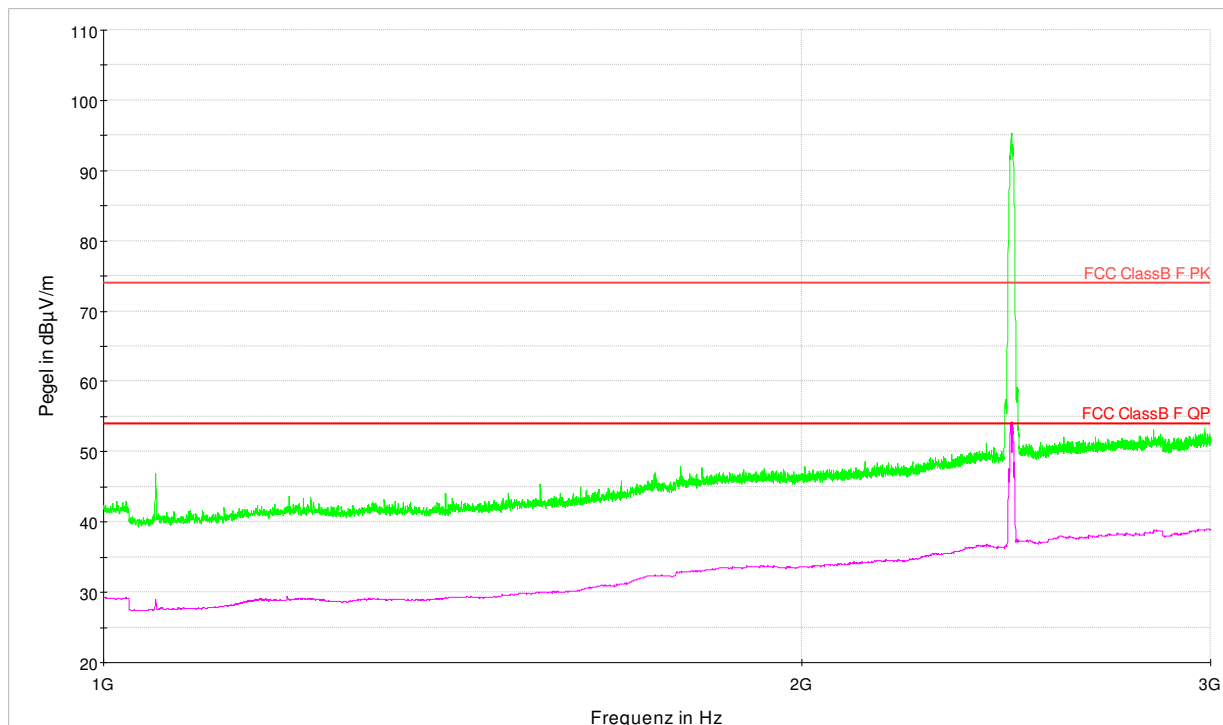
30-1000 MHz Setup: 2,4 GHz WLAN Channel 11



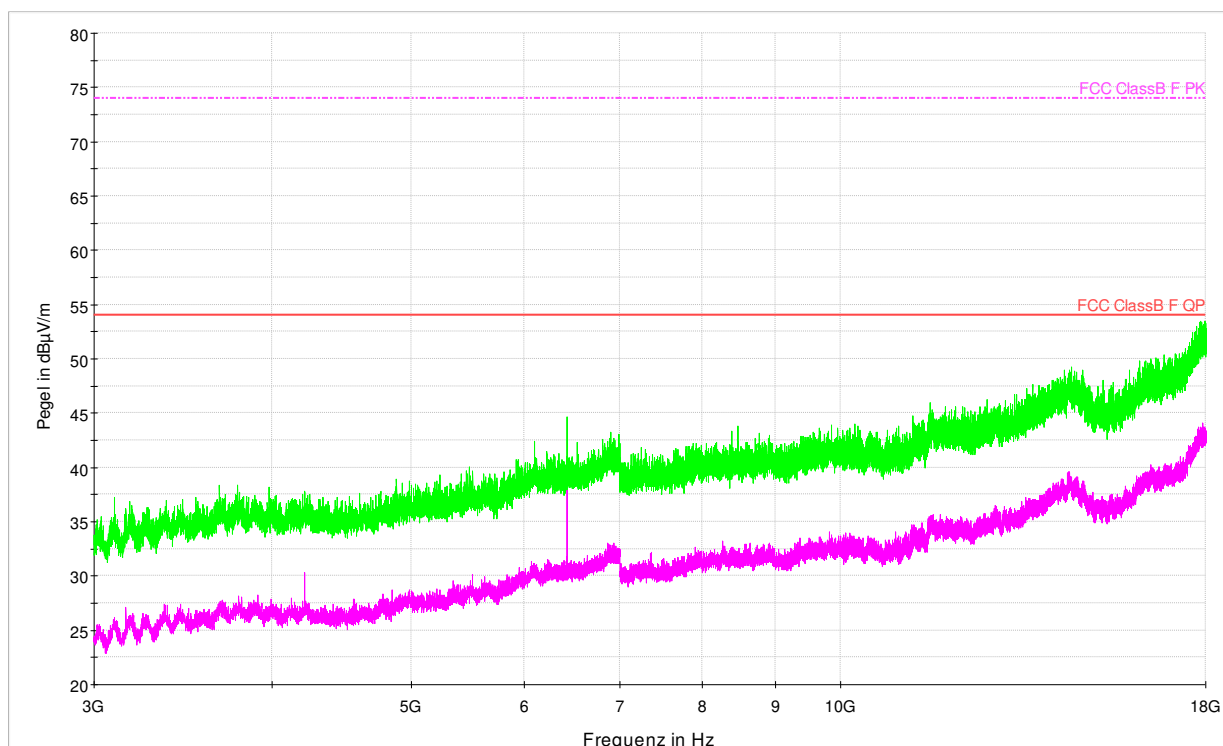
30-1000 MHz Setup: 5 GHz WLAN Channel Sweep max. Hold



1 GHz – 18 GHz Setup: Bluetooth

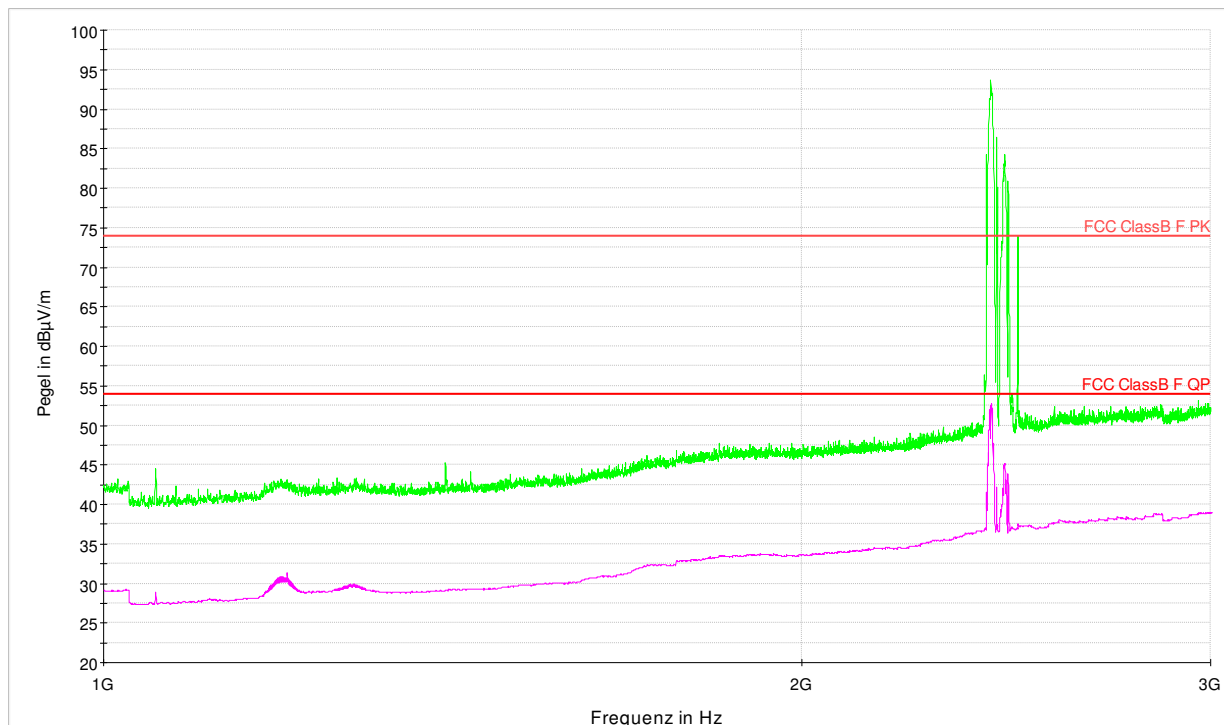


1 - 3 2_45GHz Bluetooth PK+_MAXH
PK+_MAXH
AVG_CLRWR
1 - 3 2_45GHz Bluetooth AVG_MAXH
FCC ClassB F QP
AVG_MAXH
PK+_CLRWR
FCC ClassB F PK

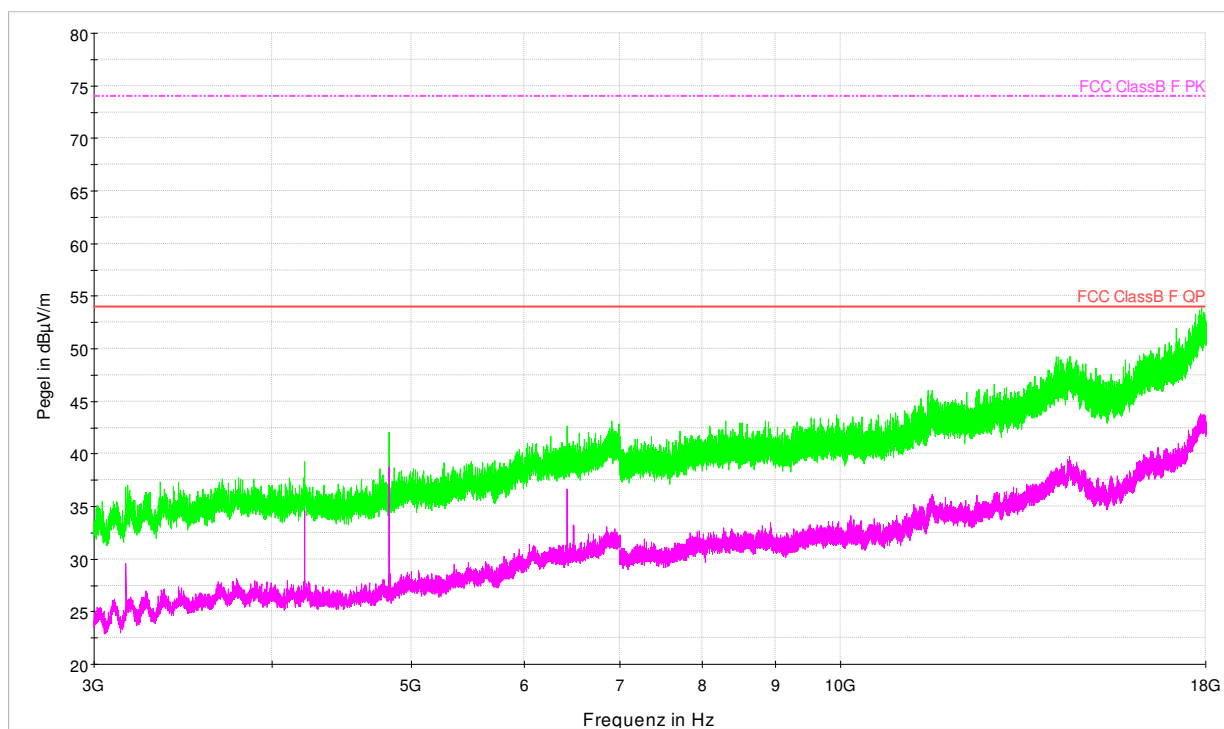


3-18 Bluetooth PK+_MAXH
FCC ClassB F QP
3-18 Bluetooth AVG_MAXH
FCC ClassB F PK
PK+_CLRWR
AVG_CLRWR
PK+_MAXH
AVG_MAXH

1 GHz – 18 GHz Setup: 2,4 GHz WLAN Channel 1

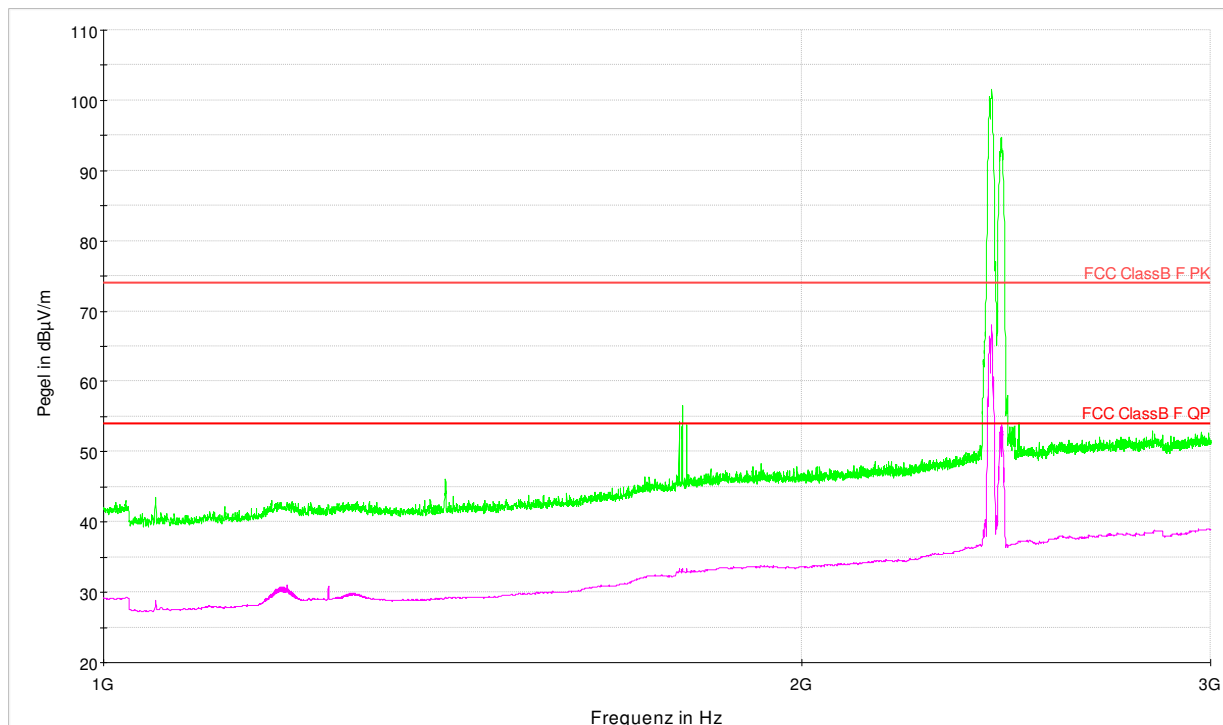


2_45GHz kanal 1 PK+ MAXH
 PK+ MAXH
 AVG_CLRWR
 2_45GHz kanal 1 AVG_MAXH
 FCC ClassB F QP
 AVG_MAXH
 PK+ CLRWR
 FCC ClassB F PK

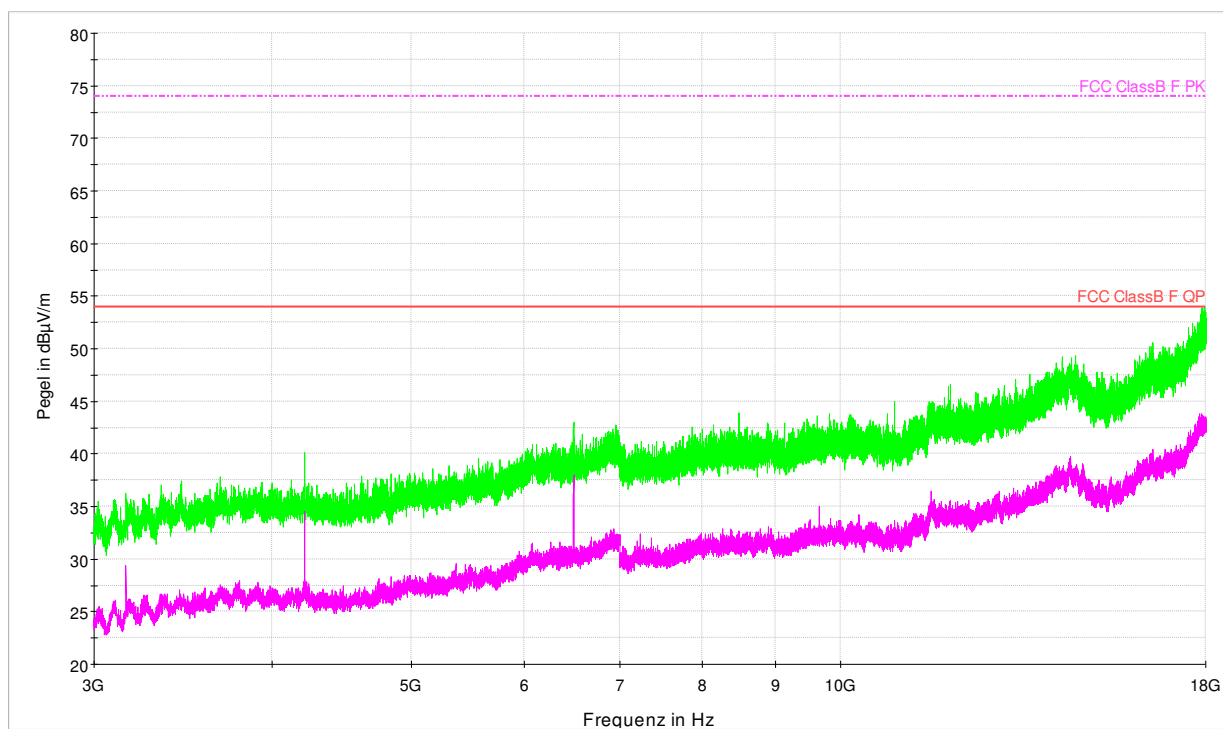


3-18 wlan channel 1 PK+ MAXH
 PK+ MAXH
 AVG_CLRWR
 3-18 wlan channel 1 AVG_MAXH
 FCC ClassB F QP
 AVG_MAXH
 PK+ CLRWR
 FCC ClassB F PK

1 GHz – 18 GHz Setup: 2,4 GHz WLAN Channel 6

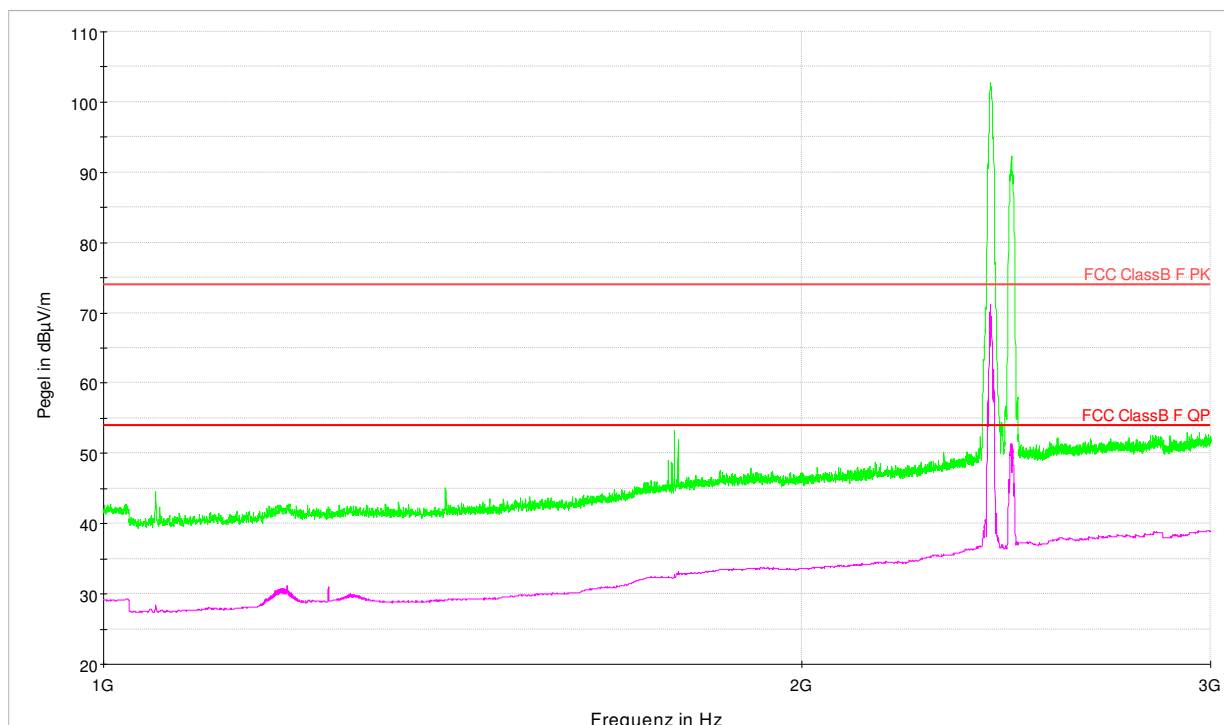


2_45GHz kanal 6 PK+_MAXH
 PK+_MAXH
 AVG_CLRWR
 2_45GHz kanal 6 AVG_MAXH
 FCC ClassB F QP
 AVG_MAXH
 PK+_CLRWR
 FCC ClassB F PK

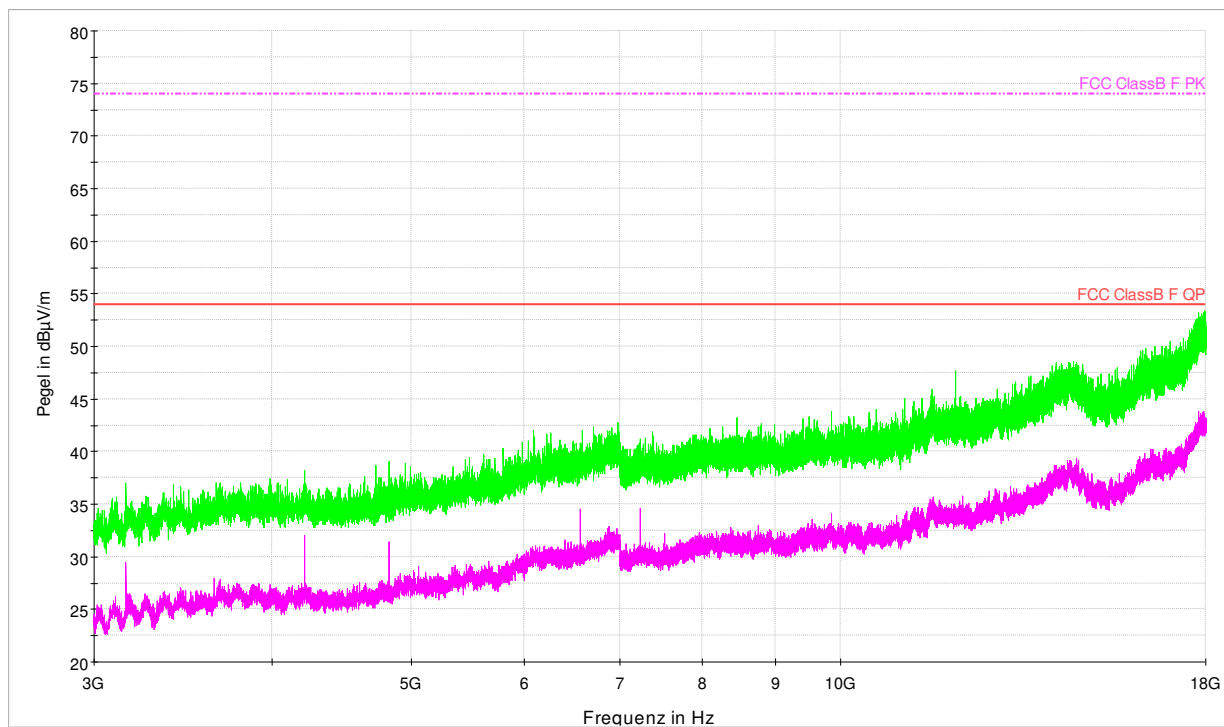


3-18 wlan channel 6 PK+_MAXH
 PK+_MAXH
 AVG_CLRWR
 3-18 wlan channel 6 AVG_MAXH
 FCC ClassB F QP
 AVG_MAXH
 PK+_CLRWR
 FCC ClassB F PK

1 GHz – 18 GHz Setup: 2,4 GHz WLAN Channel 11

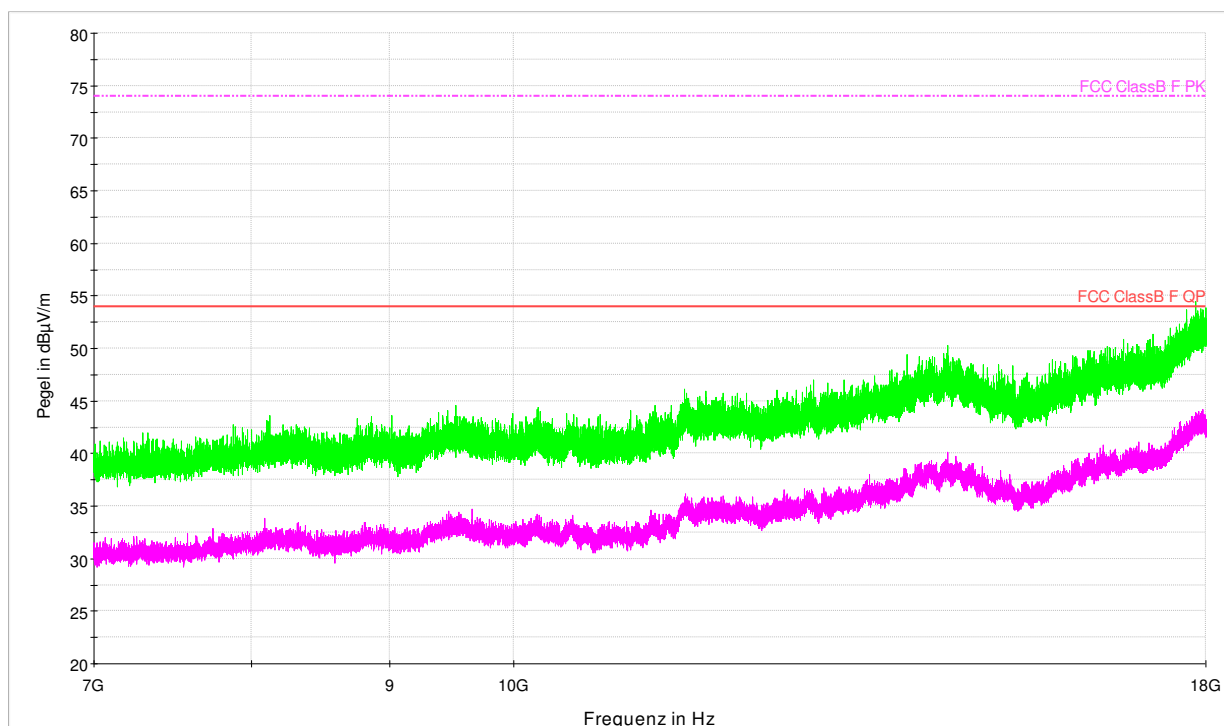
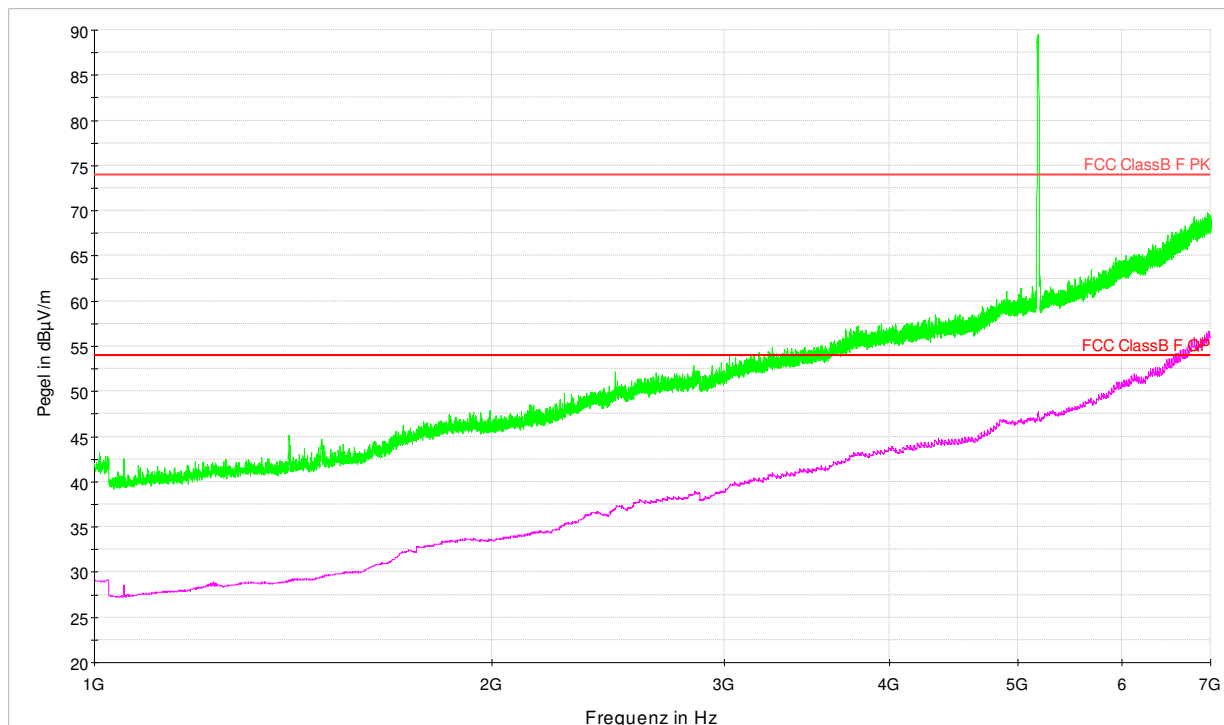


2_45GHz kanal 11 PK+_MAXH 2_45GHz kanal 11 AVG_MAXH PK+_CLRWR
 PK+_MAXH * FCC ClassB F QP FCC ClassB F PK
 AVG_CLRWR AVG_MAXH

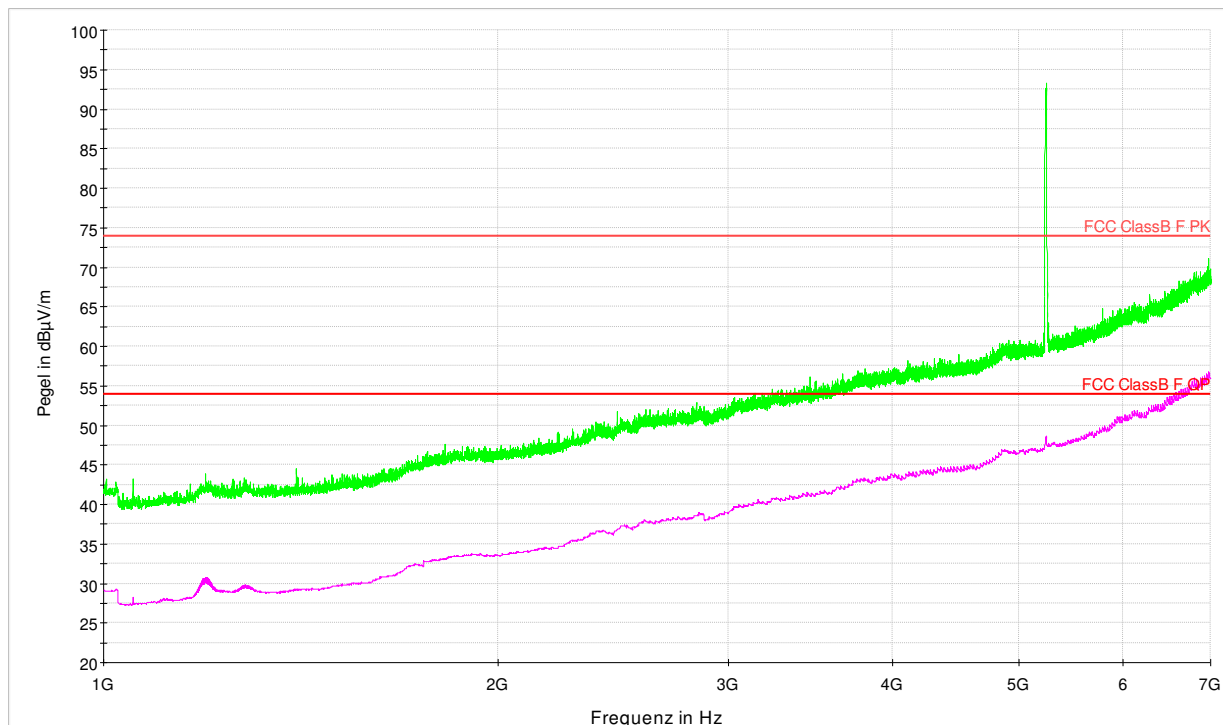


3-18 wlan kanal 11 PK+_MAXH 3-18 wlan kanal 11 AVG_MAXH PK+_CLRWR
 PK+_MAXH FCC ClassB F QP FCC ClassB F PK
 AVG_CLRWR AVG_MAXH

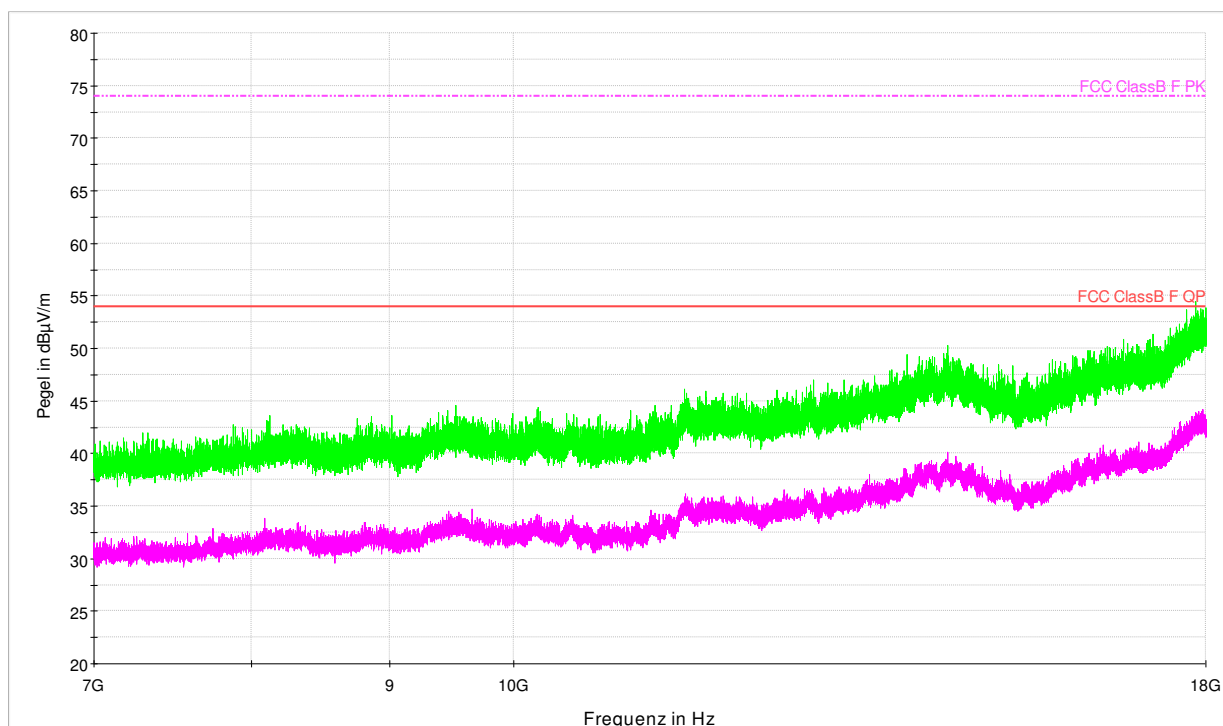
1 GHz – 18 GHz Setup: 5 GHz WLAN Channel 36



1 GHz – 18 GHz Setup: 5 GHz WLAN Channel 48

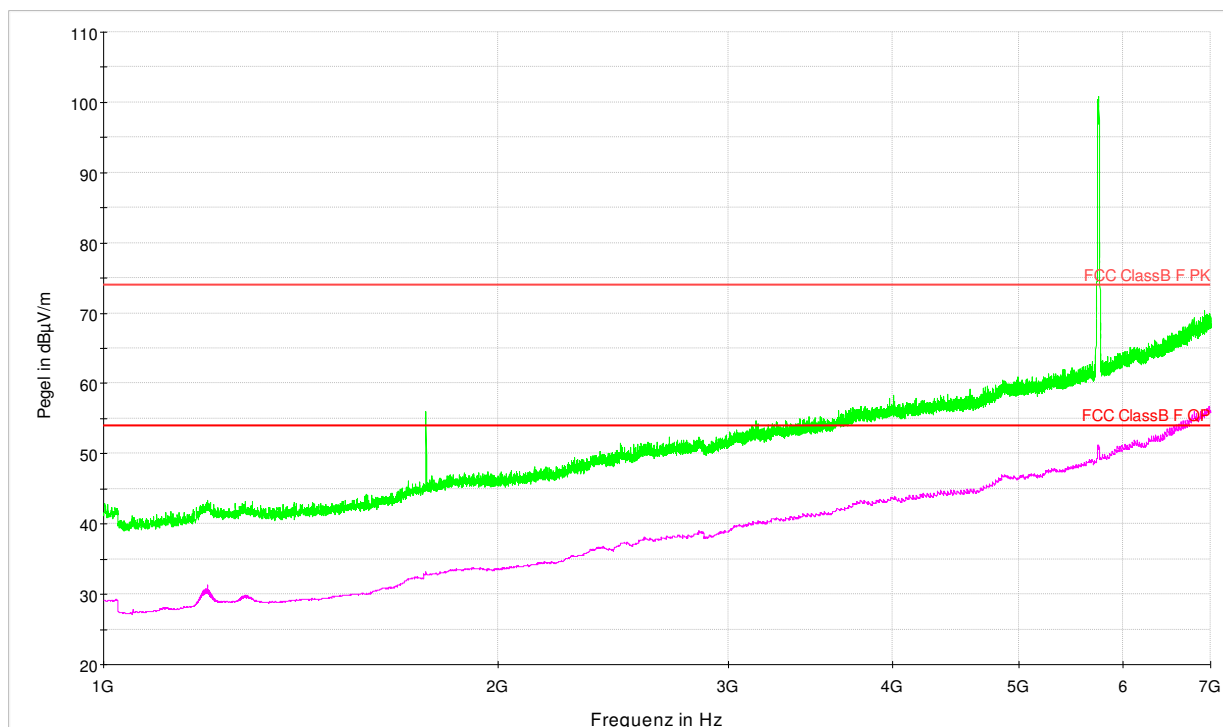


5GHz Channel 48 PK+_MAXH
PK+_MAXH
AVG_CLRWR
5GHz Channel 48 AVG_MAXH
FCC ClassB F QP
AVG_MAXH
PK+_CLRWR
FCC ClassB F PK

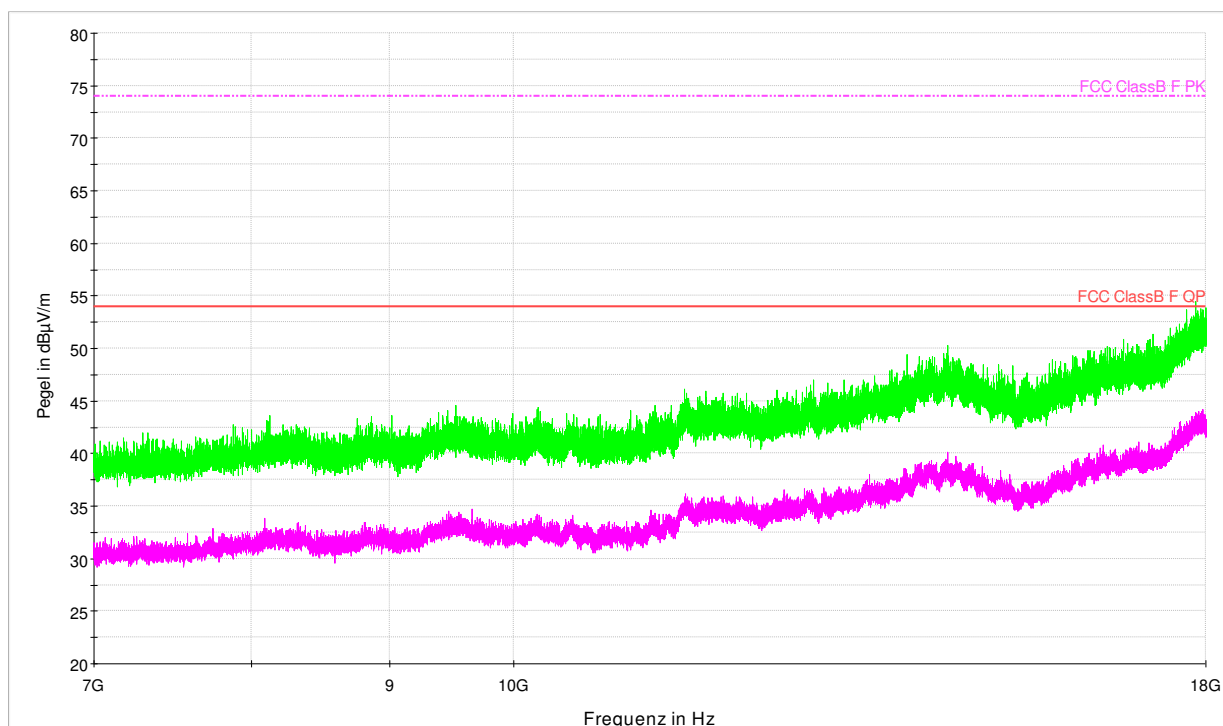


7-18 5GHz sweep PK+_MAXH
PK+_MAXH
AVG_CLRWR
7-18 5GHz sweep AVG_MAXH
FCC ClassB F QP
AVG_MAXH
PK+_CLRWR
FCC ClassB F PK

1 GHz – 18 GHz Setup: 5 GHz WLAN Channel 149

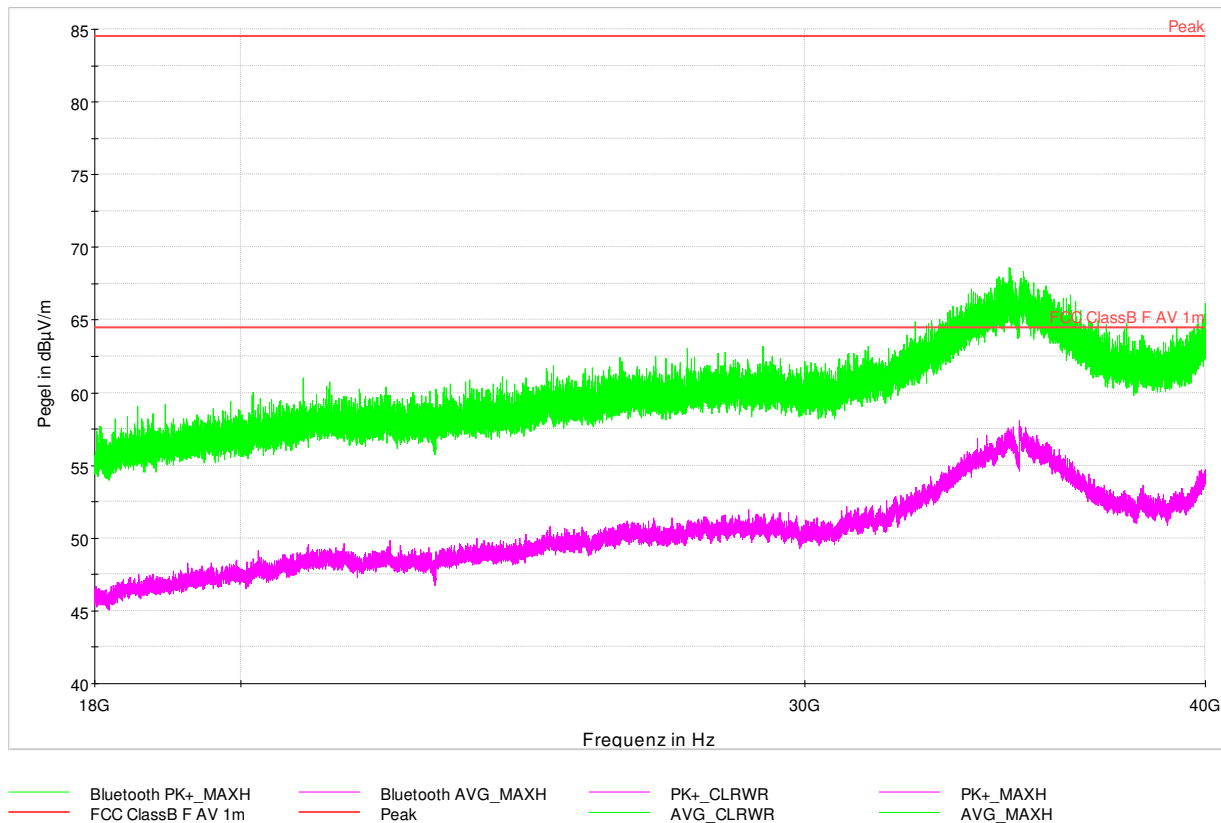


5GHz Channal 149 PK+ _MAXH
 PK+ _MAXH
 AVG _CLRWR
 5GHz Channal 149 AVG _MAXH
 * FCC ClassB F QP
 AVG _MAXH
 PK+ _CLRWR
 FCC ClassB F PK

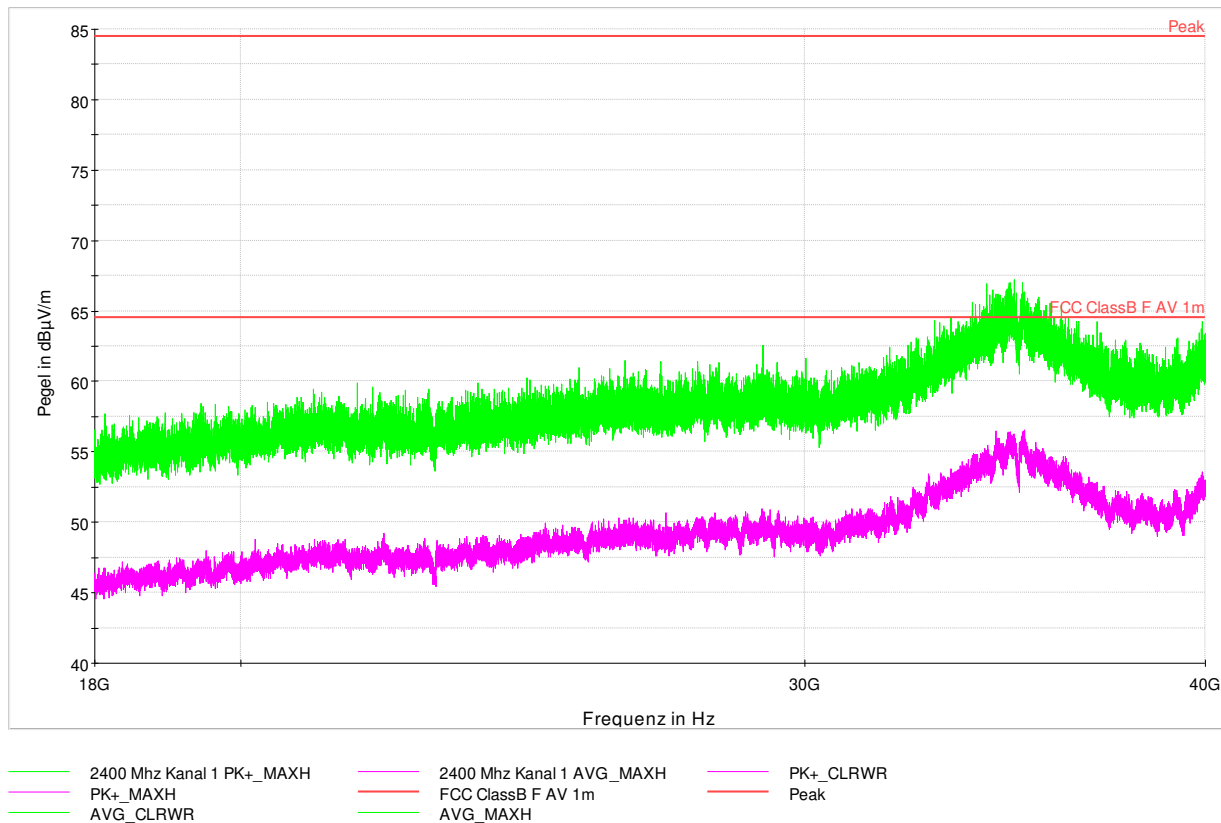


7-18 5GHz sweep PK+ _MAXH
 PK+ _MAXH
 AVG _CLRWR
 7-18 5GHz sweep AVG _MAXH
 FCC ClassB F QP
 AVG _MAXH
 PK+ _CLRWR
 FCC ClassB F PK

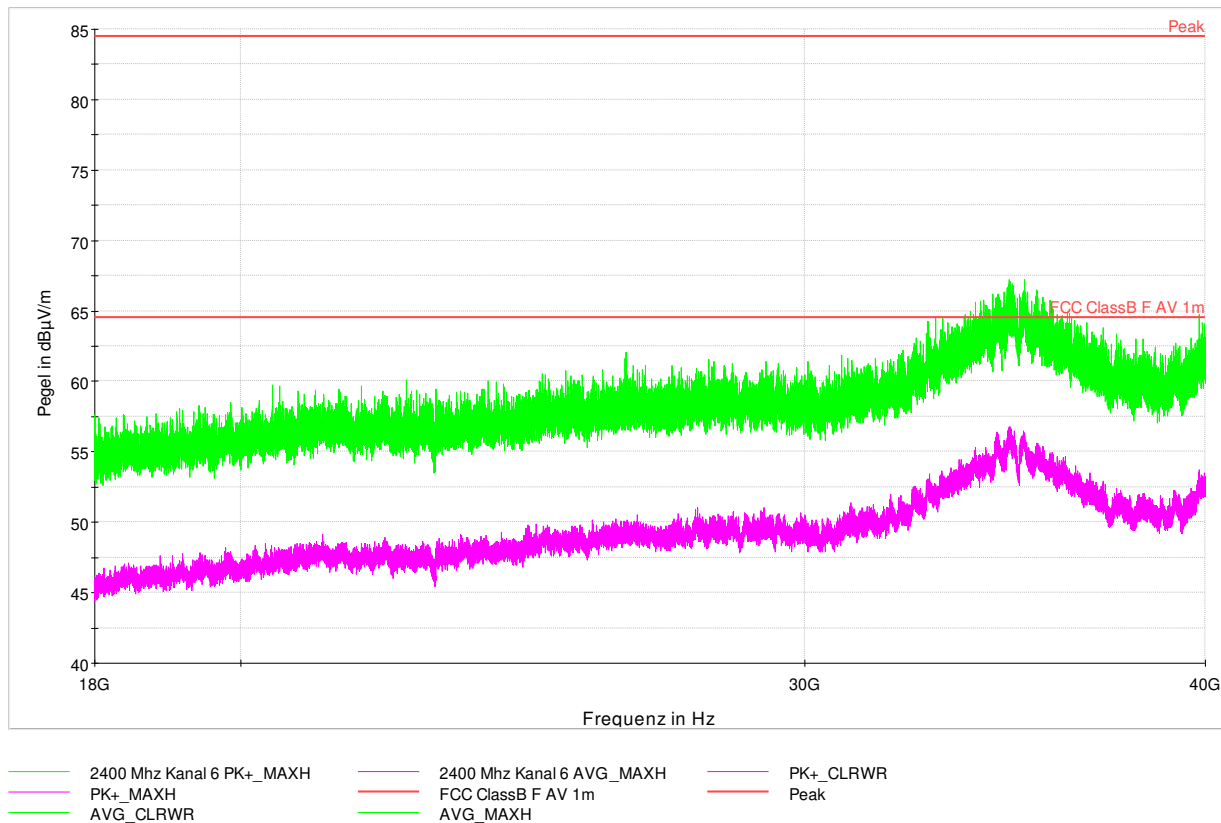
18 GHz – 40 GHz Setup: Bluetooth



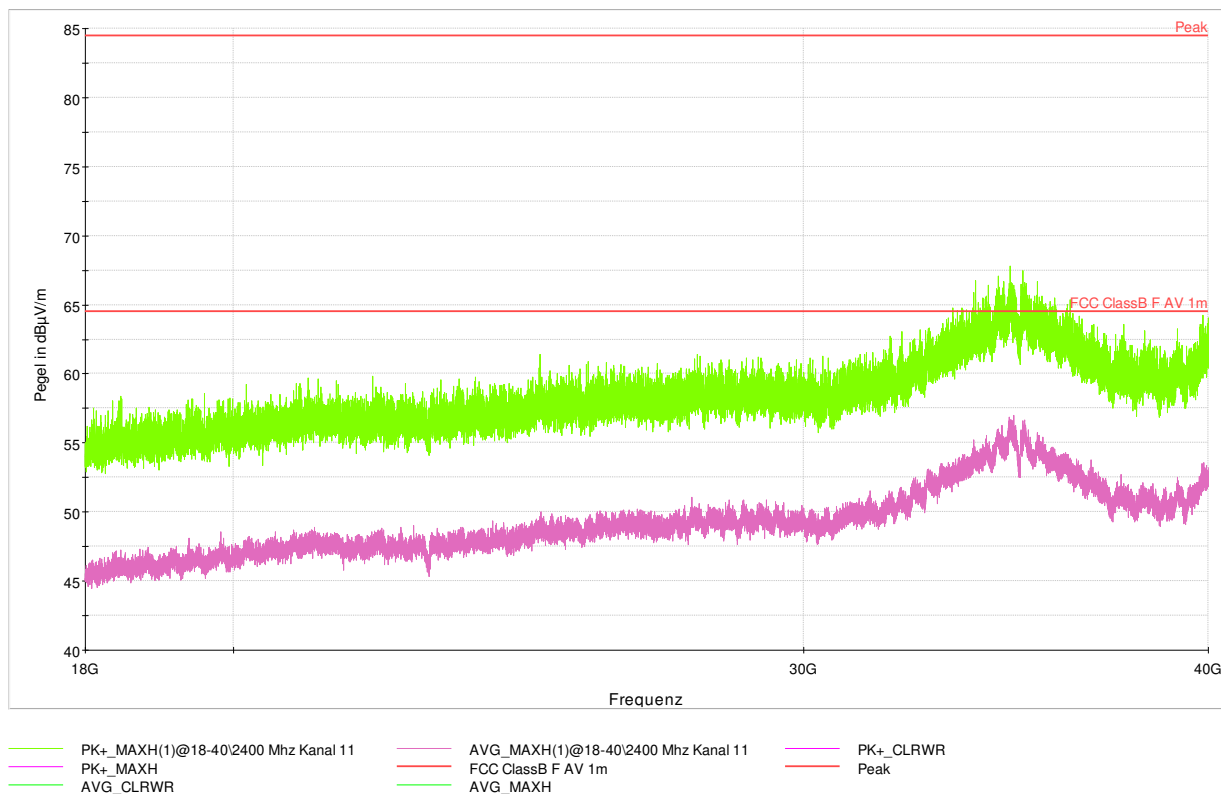
18 GHz – 40 GHz Setup: 2,4 GHz WLAN Channel 1



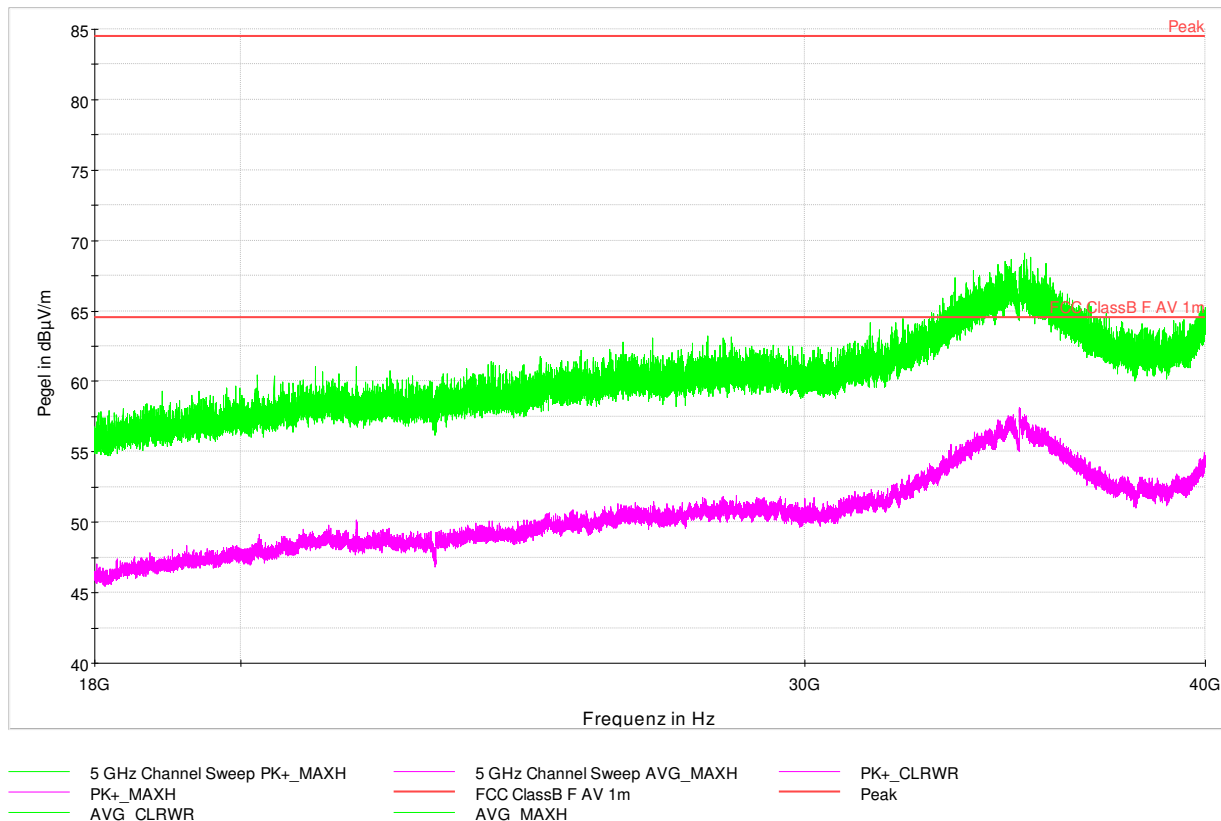
18 GHz – 40 GHz Setup: 2,4 GHz WLAN Channel 6



18 GHz – 40 GHz Setup: 2,4 GHz WLAN Channel 11



18 GHz – 40 GHz Setup: 5 GHz WLAN Channel sweep



LIMIT

SUBCLAUSE 15.209(a) – RSS-Gen

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

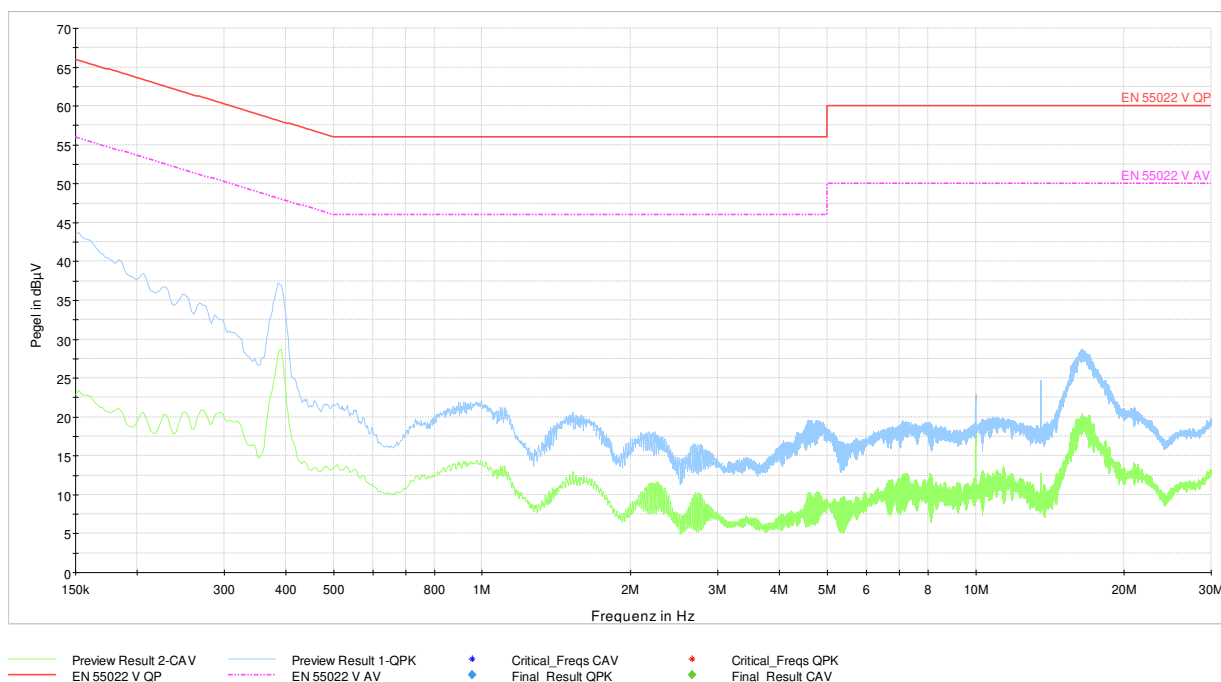
Test Equipment used: EMV-100; EMV-101; EMV-102; EMV-103; EMV-105; EMV-110; EMV-111; EMV-112; EMV-114; EMV-200; EMV-205; NT-122; NT-126; NT-416

4.3. Conducted Limits

§ 15.207
RSS-Gen 8.8

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: max. Emission from Bluetooth, 2,4 GHz WLAN (Channel 1, 6, 11) and 5 GHz WLAN (Channel Sweep)



LIMIT

SUBCLAUSE 15.207(a) – RSS-Gen 8.8

Frequency of emission (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

Test Equipment used: NT-300; NT-554; NT-441; EMV-205

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	☐	Spectrum analyzer – 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
☐	3115 - 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	☐	Radiocommunication analyzer 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 Spectrum analyzer	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			

Division:
Industry & Energy

Department: FG

Test report number:
INE-AT/FG-21/156

Page: 1 of 5

Date: 21.07.2021

Appendix 1 (continued)

Test equipment used

☐	E-field probe 3 MHz – 18 GHz	NT-247	☐	Prana N-MT 500 - RF-Amplifier 80 - 1000 MHz / 500 W	NT-332/1
☐	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			

Division:
Industry & Energy

Department: FG

Test report number:
INE-AT/FG-21/156

Page: 2 of 5

Date: 21.07.2021

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
☐	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

Division:
Industry & Energy

Department: FG

Test report number:
INE-AT/FG-21/156

Page: 3 of 5

Date: 21.07.2021

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	Division: Industry & Energy
☐	Turntabel 6 m diameter	EMV-101	☐	HF- Amplifier 80 -1000 MHz BBA150	EMV-301	Department: FG
☐	Antenna mast + controller	EMV-102+ EMV-103	☐	HF- Amplifier 0,8 - 6 GHz BBA150	EMV-302	Test report number: INE-AT/FG-21/156
☐	EMC Video/Audiosystem	EMV-104	☐	High Power Ant. 20-200 MHz HPBA-2510	EMV-303/1	Page: 4 of 5
☐	EMC Software EMC32 Version 10.60.20	EMV-105	☐	High Power Ant. 20-200 MHz S12018-21	EMV-303/2	Date: 21.07.2021
☐	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-115	☐	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	

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

Division:
Industry & Energy

Department: FG

Test report number:
INE-AT/FG-21/156

Page: 5 of 5

Date: 21.07.2021