

TEST REPORT

Test report no.: 1-3399-26-02-03_TR1-R01



Deutsche
Akkreditierungsstelle
D-PL-12047-01-00

Testing laboratory

cetecom advanced GmbH

Untertuerkheimer Strasse 6 – 10

66117 Saarbruecken / Germany

Phone: + 49 681 5 98 - 0

Fax: + 49 681 5 98 - 9075

Internet: <https://cetecomadvanced.com>

e-mail: mail@cetecomadvanced.com

Accredited Testing Laboratory:

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

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number:

D-PL-12047-01-00.

ISED Testing Laboratory Recognized Listing Number: DE0001

FCC designation number: DE0002

Applicant

Parrot Drones SAS

174 Quai de Jemmapes

75010 Paris / FRANCE

Phone: +33 1 48 03 60 60

Contact: Arezki Guerrab

e-mail: arezki.guerrab@parrot.com

Manufacturer

Parrot Drones SAS

174 Quai de Jemmapes

75010 Paris / FRANCE

Test standard/s

FCC 47 CFR Part 15

FCC - Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices

RSS-247:Issue 4 (2025-07)

RSS-247 – Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands

For further applied test standards please refer to section 3 of this test report.

Test Item

Kind of test item: SKYCONTROLLER UKR

Model name: MPP U2 XLR

FCC ID: 2AG6IMPPU2XLR

ISED certification number: 21053-MPPU2XLR

Frequency: 5150 MHz to 5250 MHz & 5725 MHz to 5850 MHz

Technology tested: Proprietary (MARS)

Antenna: Two integrated antennas

Power supply: 11.55 V DC by Lithium-ion polymer battery

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Test report authorized:

cn=Marco Bertolino, o=cetecom advanced GmbH, ou=BTL-251205, email=Marco.Bertolino@cetecomadvanced.com, c=DE
2026.09.01 06:40:03 +02'00'

Marco Bertolino
Supervisor Radio Lab
Regulatory Services Radio

Test performed:

cn=David Lang, o=cetecom advanced GmbH, ou=LNG-230530, email=david.lang@cetecomadvanced.com, c=DE
2026.08.31 11:10:59 +02'00'

David Lang
Coordinator Area
Regulatory Services Radio

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2 General information

2.1 Notes and disclaimer

The test results of this test report relate exclusively to the test item specified in this test report. cetecom advanced GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

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In no case this test report can be considered as a Letter of Approval.

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

2.2 Application details

Date of receipt of order:	2026-07-09
Date of receipt of test item:	2026-07-27
Start of test:*	2026-08-05
End of test:*	2026-08-27
Person(s) present during the test:	-/-

*Date of each measurement, if not shown in the plot, can be requested. Dates are stored in the measurement software.

2.3 Test laboratories sub-contracted

None

3 Test standard/s, references and accreditations

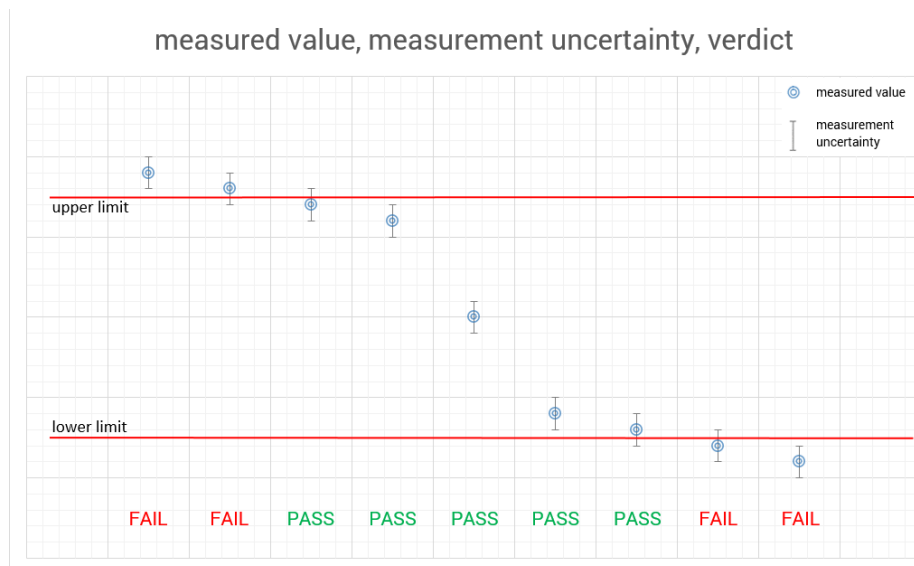
Test standard	Date	Description
FCC 47 CFR Part 15	-/-	FCC - Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices
RSS-247:Issue 4 (2025-07)	2025-07-24	RSS-247 – Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands
RSS-Gen Issue 6	2026-07-30	General Requirements for Compliance of Radio Apparatus

Guidance	Version	Description
KDB 789033 D02	v02r01	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E
ANSI C63.10-2020	-/-	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ANSI/USEMCSC C63.10a-2024 Amendment 1	2024-08-08	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices Amendment 1
ANSI/USEMCSC C63.10a-2024 Amendment 1 Errata	2024-11-18	Errata to American National Standard for Procedures for Compliance Testing of Unlicensed Wireless Devices Amendment 1
KDB 174176 D01	V01r02	Correction Sheet AC POWER LINE CONDUCTED EMISSIONS FREQUENTLY ASKED QUESTIONS

4 Reporting statements of conformity – decision rule

Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed in chapter 3.

The measurement uncertainty is mentioned in this test report, see chapter 9, but is not taken into account - neither to the limits nor to the measurement results. Measurement results with a smaller margin to the corresponding limits than the measurement uncertainty have a potential risk of more than 5% that the decision might be wrong."



5 Test environment

Temperature	:	T _{nom} T _{max} T _{min}	+22 °C during room temperature tests No tests under extreme environmental conditions required. No tests under extreme environmental conditions required.
Relative humidity content	:		50 %
Barometric pressure	:		1021 hpa
Power supply	:	V _{nom} V _{max} V _{min}	11.55 V DC by Lithium-ion polymer battery No testing under extreme voltage conditions required. No testing under extreme voltage conditions required.

6 Test item

6.1 General description

Kind of test item	:	SKYCONTROLLER UKR
Model name	:	MPP U2 XLR
HMN	:	-/-
PMN	:	SKYCONTROLLER UKR
HVIN	:	MPP U2 XLR
FVIN	:	-/-
S/N serial number	:	Rad. PI040508P45K000295 Cond. PI040508P45K000291
Hardware status	:	HW_06
Software status	:	8.4.2
Frequency band	:	5150 MHz to 5250 MHz & 5725 MHz to 5850 MHz
Type of radio transmission	:	OFDM
Use of frequency spectrum	:	
Modulation	:	16-QAM
Antenna	:	Two integrated antennas; Antenna 1 (136): UNII 1: 6.8 dBi, UNII 3: 5.8 dBi Antenna 2 (17): UNII 1: 6.8 dBi, UNII 3: 5.8 dBi Gains declared by the manufacturer.
Power supply	:	11.55 V DC by Lithium-ion polymer battery

6.2 Additional information

The content of the following annexes is defined in the QA. It may be that not all of the listed annexes are necessary for this report, thus some values in between may be missing.

Test setup and EUT photos are included in test report:

1-3399-25-02-01_TR1-A101-R01
1-3399-25-02-01_TR1-A102-R01
1-3399-25-02-01_TR1-A104-R01

7 Description of the test setup

Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, RF generating and signaling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Lab/Item).

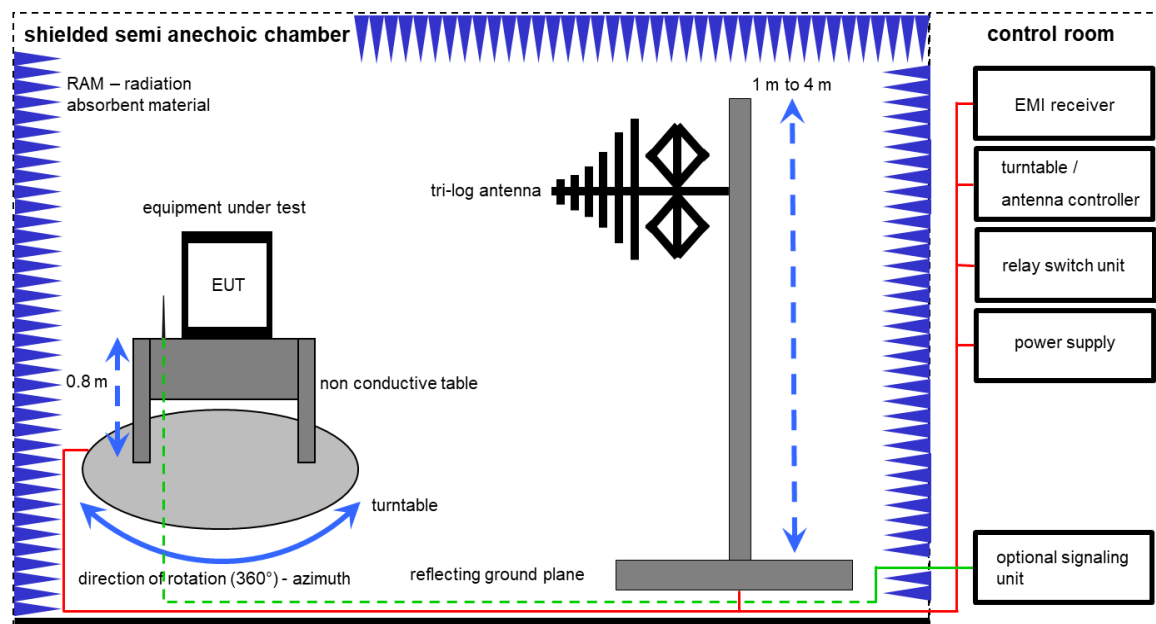
Each block diagram listed can contain several test setup configurations. All devices belonging to a test setup are identified with the same letter syntax. For example: Column Setup and all devices with an A.

Agenda: Kind of Calibration

k/cal	calibration / calibrated	EK	limited calibration
Ne/cnn	not required (k, ev, izw, zw not required)	zw	cyclical maintenance (external cyclical maintenance)
Ev/chk	periodic self verification	izw	internal cyclical maintenance
Ve	long-term stability recognized	g	blocked for accredited testing
vlk!	Attention: extended calibration interval		
NK!	Attention: not calibrated	*)	next calibration ordered / currently in progress
cpu	check prior usage		

7.1 Shielded semi anechoic chamber

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 30 MHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas are conform to specifications ANSI C63. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test setups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received. The wanted and unwanted emissions are received by spectrum analyzers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.



Measurement distance: tri-log antenna 10 meter
EMC32 software version: 10.59.00

FS = UR + CL + AF

(FS-field strength; UR-voltage at the receiver; CL-loss of the cable; AF-antenna factor)

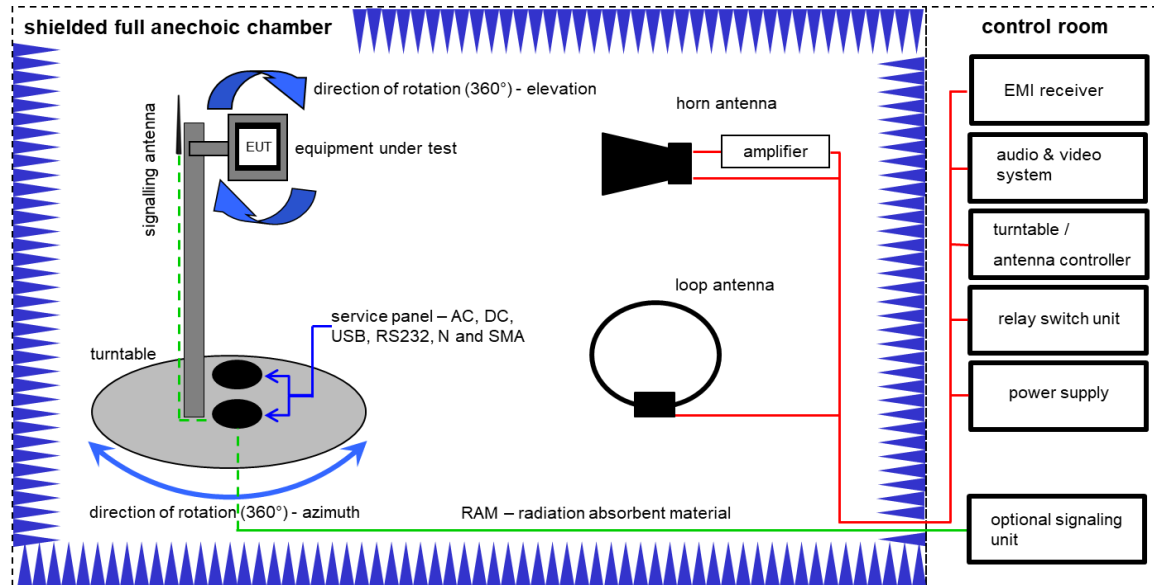
Example calculation:

FS [dBμV/m] = 12.35 [dBμV/m] + 1.90 [dB] + 16.80 [dB/m] = 31.05 [dBμV/m] (35.69 μV/m)

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	Switch-Unit	Switch-Unit 3488A	Hewlett Packard	2719A14505	50160	cpu	-/-	-/-
2	A	Positioning Controller	Positioning Controller 2090	ETS-Lindgren GmbH Taufkirchen	64672	50280	cnn	-/-	-/-
3	A	Spectrum Analyzer	Spectrum Analyzer FSU26	Rohde & Schwarz Messgerätebau GmbH Memmingen	200809	50308	cal	08.12.2025	31.12.2026
4	A	TRILOG Broadband Antenna	TRILOG Broadband Antenna VULB9163	Schwarzbeck MESS-ELEKTRONIK OHG Schönaun	1029	50403	cal	07.11.2025	30.11.2027
5	A	EMI Test Receiver	EMI Test Receiver ESR3 9kHz-3.6GHz	Rohde & Schwarz Messgerätebau GmbH Memmingen	102587	50417	cal	08.12.2025	31.12.2026

7.2 Shielded fully anechoic chamber



Measurement distance: horn antenna 3 meter; loop antenna 3 meter

FS = UR + CA + AF

(FS-field strength; UR-voltage at the receiver; CA-loss of the signal path; AF-antenna factor)

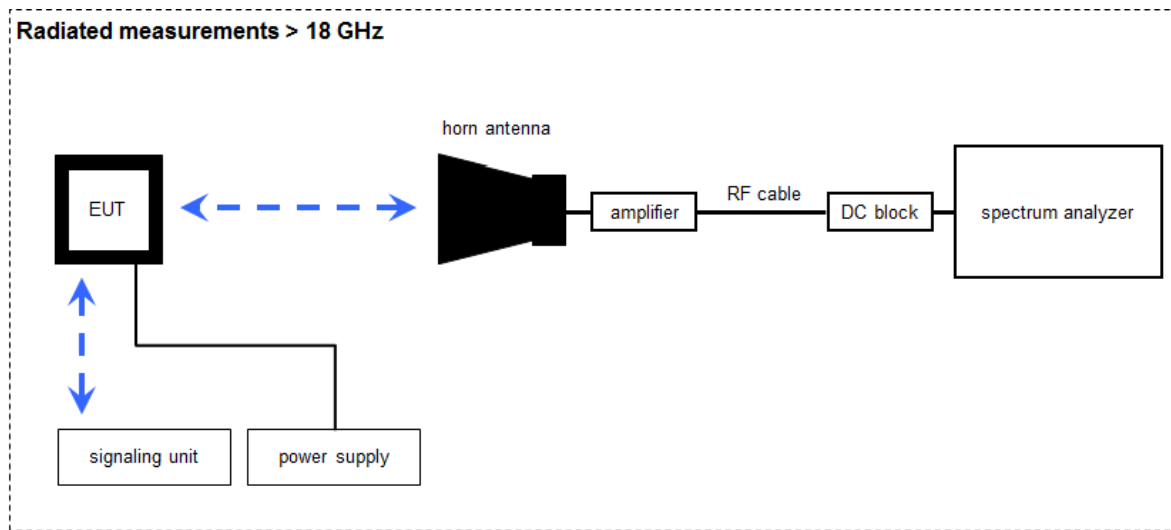
Example calculation:

FS [dBμV/m] = 40.0 [dBμV/m] + (-35.8) [dB] + 32.9 [dB/m] = 37.1 [dBμV/m] (71.61 μV/m)

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A, B, C	Signal- and Spectrum Analyzer	Signal- and Spectrum Analyzer FSW26	Rohde & Schwarz Messgerätebau GmbH Memmingen	101455	40114	cal	08.12.2025	31.12.2026
2	A, C	Double-Ridged Waveguide Horn Antenna	Double-Ridged Waveguide Horn Antenna 3115	EMCO Elektronik GmbH Gilching	8812-3088	40341	cal	30.10.2025	31.10.2027
3	A	Highpass Filter	Highpass Filter WHKX7.0/18G-8SS	Wainwright Instruments GmbH Andechs	18	40364	cpu	-/-	-/-
4	A, C	Broadband Amplifier 0.5-18 GHz	Broadband Amplifier 0.5-18 GHz CBLU5184540	MEC Import: CERNEX	22050	40374	cpu	-/-	-/-
5	A, C	4U RF Switch Platform	4U RF Switch Platform L4491A	Agilent Technologies Deutschland GmbH Böblingen	MY50000032	40376	cnn	-/-	-/-
6	A, C	NEXIO EMV-Software	NEXIO EMV-Software BAT EMC V2022.0.32.0	MEC Import: Nexio	-/-	40383	cnn	-/-	-/-
7	A, C	Anechoic chamber	Anechoic chamber	MEC Import: TDK	-/-	40385	cnn	-/-	-/-
8	A	Band Reject Filter	Band Reject Filter WRCJV12-5120-5150-5350-5380-40SS	Wainwright Instruments GmbH Andechs	5	40395	cpu	-/-	-/-
9	A	Band Reject Filter	Band Reject Filter WRCJV12-5695-5725-5850-5880-40SS	Wainwright Instruments GmbH Andechs	5	40396	cpu	-/-	-/-
10	A	RF-Amplifier	RF-Amplifier AMF-6F06001800-30-10P-R	MEC Import: NARDA-MITEQ Inc	2011572	40400	cpu	-/-	-/-
11	B	Active Loop Antenna	Active Loop Antenna 6502	EMCO Elektronik GmbH Gilching	2210	50044	cal	07.07.2025	31.07.2027

7.3 Radiated measurements > 18 GHz



Measurement distance: horn antenna 50 cm

$$FS = UR + CA + AF$$

(FS-field strength; UR-voltage at the receiver; CA-loss signal path & distance correction; AF-antenna factor)

Example calculation:

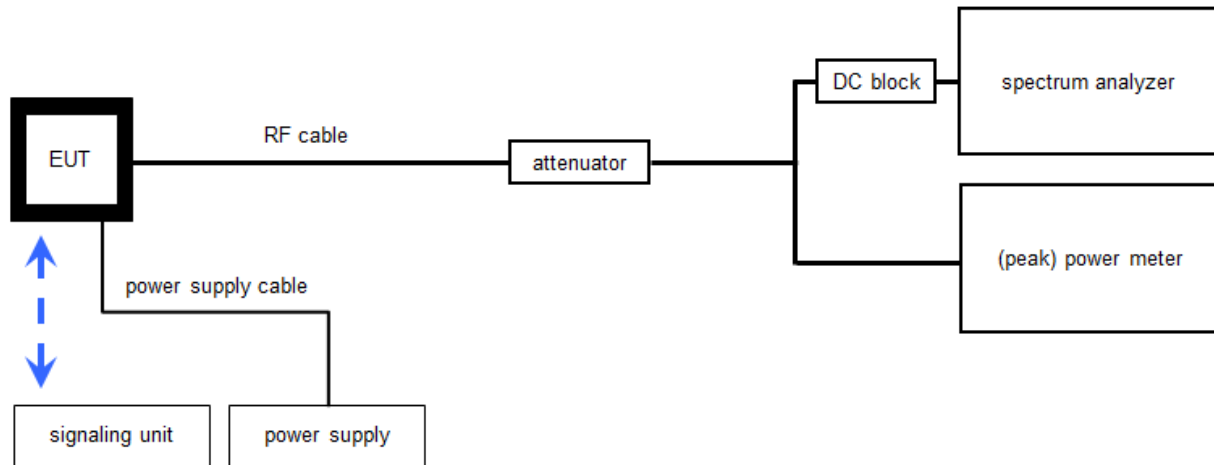
$$FS \text{ [dB}\mu\text{V/m]} = 40.0 \text{ [dB}\mu\text{V/m]} + (-60.1) \text{ [dB]} + 36.74 \text{ [dB/m]} = 16.64 \text{ [dB}\mu\text{V/m]} \text{ (6.79 } \mu\text{V/m)}$$

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
12	A	Low Noise Amplifier, Broadband 18-50 GHz	Low Noise Amplifier, Broadband 18-50 GHz BZT-18005000-550835-SL2525-SL	MEC Import: B&Z Technologies	27887-27889	40789	cpu	-/-	-/-
13	A	Horn Antenna 18,0-40,0 GHz	Horn Antenna 18,0-40,0 GHz LHAF180	MEC Import: Microw.Devel	39180-103-021	40170	cal	16.01.2026	31.01.2028
14	A	Signal analyzer	Signal analyzer FSV40	Rohde & Schwarz Messgerätebau GmbH Memmingen	101353	40201	cal	03.12.2025	31.12.2026

7.4 Conducted measurements with peak power meter & spectrum analyzer

Conducted measurements normal conditions



WLAN tester version: 1.1.13; LabView2015

OP = AV + CA
(OP-output power; AV-analyzer value; CA-loss signal path)

Example calculation:

OP [dBm] = 6.0 [dBm] + 11.7 [dB] = 17.7 [dBm] (58.88 mW)

Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	Signal analyzer	Signal analyzer FSV40	Rohde & Schwarz Messgerätebau GmbH Memmingen	101042	40292	cal	08.01.2026	31.01.2027
2	A	Switch Matrix	Switch Matrix USM	cetecom advanced GmbH Saarbrücken	C001	40340	cnn	-/-	-/-
3	A	RF-Cable	RF-Cable ST18/SMAM/SMAM /60	Huber & Suhner GmbH Unterhaching	Batch no. 606844	40386	cpu	-/-	-/-
4	A	DC-Blocker 0.1-40 GHz	DC-Blocker 0.1-40 GHz 8141A	MEC Import: Inmet	-/-	40390	cpu	-/-	-/-
5	A	Coax Attenuator 10 dB 2W 0-40 GHz	Coax Attenuator 10 dB 2W 0-40 GHz MCL BW-K10-2W44+	Mini-Circuits Brooklyn	-/-	40391	cpu	-/-	-/-

8 Sequence of testing

8.1 Sequence of testing radiated spurious 9 kHz to 30 MHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, it is placed on a table with 0.8 m height.
- If the EUT is a floor standing device, it is placed directly on the turn table.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.10.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 3 m (see ANSI C 63.10) – see test details.
- EUT is set into operation.

Premeasurement*

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna height is 1 m.
- At each turntable position the analyzer sweeps with positive-peak detector to find the maximum of all emissions.

Final measurement

- Identified emissions during the pre-measurement are maximized by the software by rotating the turntable from 0° to 360°.
- Loop antenna is rotated about its vertical axis for maximum response at each azimuth about the EUT. (For certain applications, the loop antenna plane may also need to be positioned horizontally at the specified distance from the EUT)
- The final measurement is done in the position (turntable and elevation) causing the highest emissions with quasi-peak (as described in ANSI C 63.10).
- Final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. A plot with the graph of the premeasurement and the limit is stored.

*)Note: The sequence will be repeated three times with different EUT orientations.

8.2 Sequence of testing radiated spurious 30 MHz to 1 GHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.10.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 10 m or 3 m (see ANSI C 63.10) – see test details.
- EUT is set into operation.

Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 m to 3 m.
- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement

- The final measurement is performed for at least six highest peaks according to the requirements of the ANSI C63.4.
- Based on antenna and turntable positions at which the peak values are measured the software maximize the peaks by changing turntable position $\pm 45^\circ$ and antenna height between 1 and 4 m.
- The final measurement is done with quasi-peak detector (as described in ANSI C 63.10).
- Final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is stored.

8.3 Sequence of testing radiated spurious 1 GHz to 18 GHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, a 2-axis positioner with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed directly on the turn table.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.10.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 3 m (see ANSI C 63.10) – see test details.
- EUT is set into operation.

Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height is 1.5 m.
- At each turntable position and antenna polarization the analyzer sweeps with positive peak detector to find the maximum of all emissions.

Final measurement

- The final measurement is performed for at least six highest peaks according to the requirements of the ANSI C63.4.
- Based on antenna and turntable positions at which the peak values are measured the software maximizes the peaks by rotating the turntable from 0° to 360°. This measurement is repeated for different EUT-table positions (0° to 150° in 30°-steps) and for both antenna polarizations.
- The final measurement is done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and RMS detector (as described in ANSI C 63.10).
- Final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is stored.

8.4 Sequence of testing radiated spurious above 18 GHz

Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.10.
- The AC power port of the EUT (if available) is connected to a power outlet.
- The measurement distance is as appropriate (e.g. 0.5 m).
- The EUT is set into operation.

Premeasurement

- The test antenna is handheld and moved carefully over the EUT to cover the EUT's whole sphere and different polarizations of the antenna.

Final measurement

- The final measurement is performed at the position and antenna orientation causing the highest emissions with Peak and RMS detector (as described in ANSI C 63.10).
- Final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement and the limit is stored.

9 Measurement uncertainty

Measurement uncertainty		
Test case	Uncertainty	
Antenna gain	± 3 dB	
Power spectral density	± 1.56 dB	
DTS bandwidth	± 100 kHz (depends on the used RBW)	
Occupied bandwidth	± 100 kHz (depends on the used RBW)	
Maximum output power conducted	± 1.56 dB	
Detailed spurious emissions @ the band edge - conducted	± 1.56 dB	
Band edge compliance radiated	± 3 dB	
Spurious emissions conducted	> 3.6 GHz	± 1.56 dB
	> 7 GHz	± 1.56 dB
	> 18 GHz	± 2.31 dB
	≥ 40 GHz	± 2.97 dB
Spurious emissions radiated below 30 MHz	± 3 dB	
Spurious emissions radiated 30 MHz to 1 GHz	± 4.1 dB	
Spurious emissions radiated 1 GHz to 12.75 GHz	± 3.7 dB	
Spurious emissions radiated above 12.75 GHz	± 4.5 dB	
Spurious emissions conducted below 30 MHz (AC conducted)	± 2.6 dB	

10 Summary of measurement results

☒	No deviations from the technical specifications were ascertained
☐	There were deviations from the technical specifications ascertained
☐	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC Identifier	Description	Verdict	Date	Remark
RF-Testing	CFR Title 47 Part 15 RSS 247, Issue 4	See table	2026-08-31	-/-

Test specification clause	Test case	C	NC	NA	NP	Remark
-/-	Output power verification (cond.)	-/-				Declared
-/-	Antenna gain	-/-				Declared
U-NII Part 15	Duty cycle	-/-				-/-
§15.407(a) RSS - 247 (6.2.x.1)	Maximum output power (conducted & radiated)	☒	☐	☐	☐	-/-
§15.407(a) RSS - 247 (6.2.x.1)	Power spectral density	☒	☐	☐	☐	-/-
RSS - 247 (6.2.4.1)	Spectrum bandwidth 6dB bandwidth	☒	☐	☐	☐	-/-
§15.407(a) RSS - 247 (6.2.x.2)	Spectrum bandwidth 26dB bandwidth	☒	☐	☐	☐	-/-
RSS Gen clause 6.6	Spectrum bandwidth 99% bandwidth	-/-				-/-
§15.205 RSS - 247 (6.2.x.2)	Band edge compliance radiated	☒	☐	☐	☐	-/-
§15.407(b) RSS - 247 (6.2.x.2)	TX spurious emissions radiated	☒	☐	☐	☐	-/-
§15.209(a) RSS-Gen	Spurious emissions radiated < 30 MHz	☒	☐	☐	☐	-/-
§15.107(a) §15.207	Spurious emissions conducted emissions< 30 MHz	☐	☐	☒	☐	Battery powered
§15.407 RSS - 247 (6.3)	DFS	-/-				Not applicable UNII-1 & UNII-3 band only

Notes:

C:	Compliant	NC:	Not compliant	NA:	Not applicable	NP:	Not performed
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11 Additional comments

Reference documents: None

Special test descriptions: None

Configuration descriptions: Devices tested in normal mode operation (MPP transmitting data to the drone). Power setting 4 has been used for testing on all channels.

EUT selection:

- ☐ Only one device available
- ☒ Devices selected by the customer
- ☐ Devices selected by the laboratory (Randomly)

Provided channels:

UNII-1: 71 channels, spacing 1 MHz, lowest channel @ 5175 MHz, middle channel @ 5215 MHz & highest channel @ 5245 MHz

UNII-3: 91 channels, spacing 1 MHz, lowest channel @ 5730 MHz, middle channel @ 5775 MHz & highest channel @ 5820 MHz

Test mode:

- ☒ No test mode available.
Device tested in normal mode operation.
- ☐ Special software is used.
EUT is transmitting pseudo random data by itself

Antennas and transmit operating modes:

- ☒ Operating mode 1 (single antenna)
 - Equipment with 1 antenna,
 - Equipment with 2 diversity antennas operating in switched diversity mode by which at any moment in time only 1 antenna is used,
 - Smart antenna system with 2 or more transmit/receive chains, but operating in a mode where only 1 transmit/receive chain is used)
- ☐ Operating mode 2 (multiple antennas, no beamforming)
 - Equipment operating in this mode contains a smart antenna system using two or more transmit/receive chains simultaneously but without beamforming.
- ☐ Operating mode 3 (multiple antennas, with beamforming)
 - Equipment operating in this mode contains a smart antenna system using two or more transmit/receive chains simultaneously with beamforming.
In addition to the antenna assembly gain (G), the beamforming gain (Y) may have to be taken into account when performing the measurements.

12 Measurement results

12.1 Antenna gain Identify worst case data rate

Antenna gain as declare by the manufacturer (see section 6.1).

12.2 Identify worst case data rate

Worst case data rates and operating modes as declared by the manufacturer (see section 11.).

12.3 Duty cycle

Description:

The duty cycle is necessary to compute the maximum power during an actual transmission. The shown plots and values are to show an example of the measurement procedure. The real value is measured direct during the power measurement or power density measurement. The correction value is shown in each plot of these measurements.

Measurement:

Measurement parameter	
According to: KDB789033 D02, B.	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf FCC Part 15.407 Max Output Power and PSD
Used test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9

Results:

Duty cycle and correction factor: 10.1 dB (Duty cycle 9.8%).

12.4 Maximum output power according to FCC requirements

Description:

Measurement of the maximum output power conducted

Measurement:

Measurement parameter	
According to: KDB789033 D02, E.2.e.	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf FCC Part 15.407 Max Output Power and PSD
Used test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9
Standard parts:	FCC: § 15.407 (a)

Limits:

Limits	
Radiated output power	Conducted output power
Band 5150 MHz – 5250 MHz	
For an outdoor access point: Conducted power + 6 dBi antenna gain For an indoor access point: Conducted power + 6 dBi antenna gain For fixed point-to-point access points Conducted power + 23 dBi antenna gain For client devices Conducted power + 6 dBi antenna gain (If the Antenna gain is greater than the Limit: 1dB reduction in the max. conducted output power for each 1 dB of antenna gain in excess of the Limit)	For an outdoor access point: output power $\leq 1\text{W}/30\text{dBm}$ The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm) For an indoor access point output power $\leq 1\text{W}/30\text{dBm}$ For fixed point-to-point access points output power $\leq 1\text{W}/30\text{dBm}$ For client devices output power $\leq 250\text{ mW}/24\text{dBm}$
Band 5725MHz – 5850 MHz	
Conducted power + 6 dBi antenna gain (Antenna gain higher than the Limit: 1dB reduction in the max. conducted output power for each 1 dB of antenna gain in excess of the Limit Exception: fixed point-to-point U-NII devices, no corresponding reduction in transmitter conducted power)	output power $\leq 1\text{W}/30\text{dBm}$

Results: Antenna 1

OFDM	Maximum output power conducted [dBm]		
	U-NII-1 (5150 MHz to 5250 MHz)		
	Lowest channel	Middle channel	Highest channel
	3.0	6.1	5.5
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	4.4	4.1	3.8

Results: Antenna 2

OFDM	Maximum output power conducted [dBm]		
	U-NII-1 (5150 MHz to 5250 MHz)		
	Lowest channel	Middle channel	Highest channel
	3.3	5.7	5.1
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	3.2	2.7	3.1

12.5 Maximum output power according to ISED requirements

Description:

Measurement of the maximum output power conducted + radiated

Measurement:

Measurement parameter	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf ISED Max Output Power and PSD
Used test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9

Limits:

Radiated output power	Conducted output power for mobile equipment
The lesser one of 200 mW or 10 dBm + 10 log Bandwidth 5.150-5.250 GHz Conducted power + 6dBi antenna gain 5.725-5.825 GHz	1W 5.725-5.825 GHz

Results: Antenna 1

OFDM	Maximum output power [dBm]		
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Lowest channel	Highest channel
	Conducted		
	2.9	6.1	5.4
	Radiated (calculated – see chapter antenna gain)		
	9.7	12.9	12.2

Results: Antenna 2

OFDM	Maximum output power [dBm]		
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Lowest channel	Highest channel
	Conducted		
	3.1	2.6	3.0
	Radiated (calculated – see chapter antenna gain)		
	8.9	8.4	8.8

12.6 Power spectral density according to FCC requirements

Description:

Measurement of the power spectral density of a digital modulated system. The measurement is repeated at the lowest, middle and highest channel.

Measurement:

Measurement parameter	
According to: KDB789033 D02, F.	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf FCC Part 15.407 Max Output Power and PSD
Used test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9
Standard parts:	FCC: § 15.407 (a)

Limits:

Power Spectral Density
Band 5150 MHz – 5250 MHz
For an outdoor access point power spectral density conducted ≤ 17 dBm in any 1 MHz band* For an indoor access point power spectral density conducted ≤ 17 dBm in any 1 MHz band* For fixed point-to-point access points power spectral density conducted ≤ 17 dBm in any 1 MHz band** For client devices point power spectral density conducted ≤ 11 dBm in any 1 MHz band*
*If transmitting antennas of directional gain greater than 6 dBi are used the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi
**Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.
Band 5725MHz – 5850 MHz
power spectral density conducted ≤ 30 dBm in any 500 kHz band
If transmitting antennas of directional gain greater than 6 dBi are used the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

Results: Antenna 1

OFDMA	Power spectral density (dBm/1MHz or dBm/500kHz)		
	U-NII-1 (5150 MHz to 5250 MHz)		
	Lowest channel	Middle channel	Highest channel
	-5.7	-2.6	-2.2
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	-7.2	-7.7	-7.1

Results: Antenna 2

OFDMA	Power spectral density (dBm/1MHz or dBm/500kHz)		
	U-NII-1 (5150 MHz to 5250 MHz)		
	Lowest channel	Middle channel	Highest channel
	-5.5	-2.9	-3.7
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	-8.4	-8.8	-8.6

12.7 Power spectral density according to ISED requirements

Description:

Measurement of the power spectral density of a digital modulated system. The measurement is repeated at the lowest, middle and highest channel.

Measurement:

Measurement parameter	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf ISED Max Output Power and PSD
Used test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9
Standard parts:	RSS-248i 4.6.2 / 4.6.3

Limits:

Power Spectral Density
power spectral density e.i.r.p. ≤ 10 dBm in any 1 MHz band (band 5150 – 5250 MHz)
power spectral density conducted ≤ 30 dBm in any 500 kHz band (band 5725 – 5850 MHz)

Results: Antenna 1

OFDM	Power spectral density (dBm/1MHz or dBm/500kHz)		
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	-7.2	-7.7	-8.0

Results: Antenna 2

OFDM	Power spectral density (dBm/1MHz or dBm/500kHz)		
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	-8.4	-8.9	-8.6

12.8 Minimum emission bandwidth for the band 5.725-5.85 GHz

Description:

Measurement of the 6 dB bandwidth of the modulated signal.

Measurement:

Measurement parameter	
According to: KDB789033 D02, C.2.	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf FCC Part 15.407 & ISSED Minimum Emission BW
Used test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9

Limits:

FCC	ISED
The minimum 6 dB bandwidth shall be at least 500 kHz.	

Results: Antenna 1

OFDM	6 dB emission bandwidth (MHz)		
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	8.3	8.3	8.3

Results: Antenna 2

OFDM	6 dB emission bandwidth (MHz)		
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	8.3	8.3	8.2

12.9 Spectrum bandwidth / 26 dB bandwidth

Description:

Measurement of the 26 dB bandwidth of the modulated signal.

Measurement:

Measurement parameter	
According to: KDB789033 D02, C.1.	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf FCC Part 15.407 & ISSED Bandwidths
Used test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9

Limits:

Spectrum Bandwidth – 26 dB Bandwidth
IC: Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band. FCC: Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating with any part of its 26 dB emission bandwidth in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems.

Results: Antenna 1

OFDM	26 dB bandwidth (MHz)		
	U-NII-1 (5150 MHz to 5250 MHz)		
	Lowest channel	Middle channel	Highest channel
	9.2	9.3	9.3
	Lowest frequency		Highest frequency
	5170.4		5249.6
	20 dB bandwidth (MHz)		
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	9.0	9.0	9.0
	Lowest frequency		Highest frequency
	5725.55		5824.5

Results: Antenna 2

OFDM	26 dB bandwidth (MHz)		
	U-NII-1 (5150 MHz to 5250 MHz)		
	Lowest channel	Middle channel	Highest channel
	9.2	9.2	9.2
	Lowest frequency		Highest frequency
	5170.5		5249.6
	20 dB bandwidth (MHz)		
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	9.0	9.0	9.0
	Lowest frequency		Highest frequency
	5725.6		5824.5

12.10 Occupied bandwidth / 99% emission bandwidth

Description:

Measurement of the 99% bandwidth of the modulated signal acc. RSS-GEN.

Measurement:

Measurement parameter	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf FCC Part 15.407 & ISSED Bandwidths
Test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9

Usage:

-/-	ISED
OBW is necessary for Emission Designator	

Results: Antenna 1

OFDM	99% bandwidth (kHz)		
	U-NII-1 (5150 MHz to 5250 MHz)		
	Lowest channel	Middle channel	Highest channel
	8392	8442	8442
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	8392	8392	8392

Results: Antenna 2

OFDM	99% bandwidth (kHz)		
	U-NII-1 (5150 MHz to 5250 MHz)		
	Lowest channel	Middle channel	Highest channel
	8342	8392	8392
	U-NII-3 (5725 MHz to 5850 MHz)		
	Lowest channel	Middle channel	Highest channel
	8342	8392	8392

12.11 Undesirable emissions for transmitters operating in the 5725 MHz to 5850 MHz band (conducted)

Description:

Measurement of the spectrum mask as per FCC Part 15.407 (b)(4) and KDB 789033 II.G.2 (c) (ii). The measurement is repeated at the lowest, middle and highest channel and performed in a conducted way as defined in KDB 789033 II.G.3 (b).

The highest antenna gain is considered and was added to the Reference Level Offset. Emission levels are further adjusted to consider the number of antenna outputs (2).

Measurement:

Measurement parameter	
External result file(s)	1-3399-26-02-03_TR1-A201-R01.pdf FCC Part 15.407 & ISED Bandwidths
Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	1 MHz
Video bandwidth:	$\geq 3 \times \text{RBW}$
Span:	See plots!
Trace mode:	Max Hold
Test setup:	See chapter 7.4 – A
Measurement uncertainty:	See chapter 9

Limits:

FCC Part 15.407 (b)(4)
All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Plots:

See external result file

12.12 Band edge compliance radiated

Description:

Measurement of the radiated band edge compliance. The EUT is turned in the position that results in the maximum level at the band edge. Then a sweep over the corresponding restricted band is performed. The EUT is set to the lowest channel for the lower restricted band and to the highest channel for the upper restricted band. Measurement distance is 3m.

Measurement:

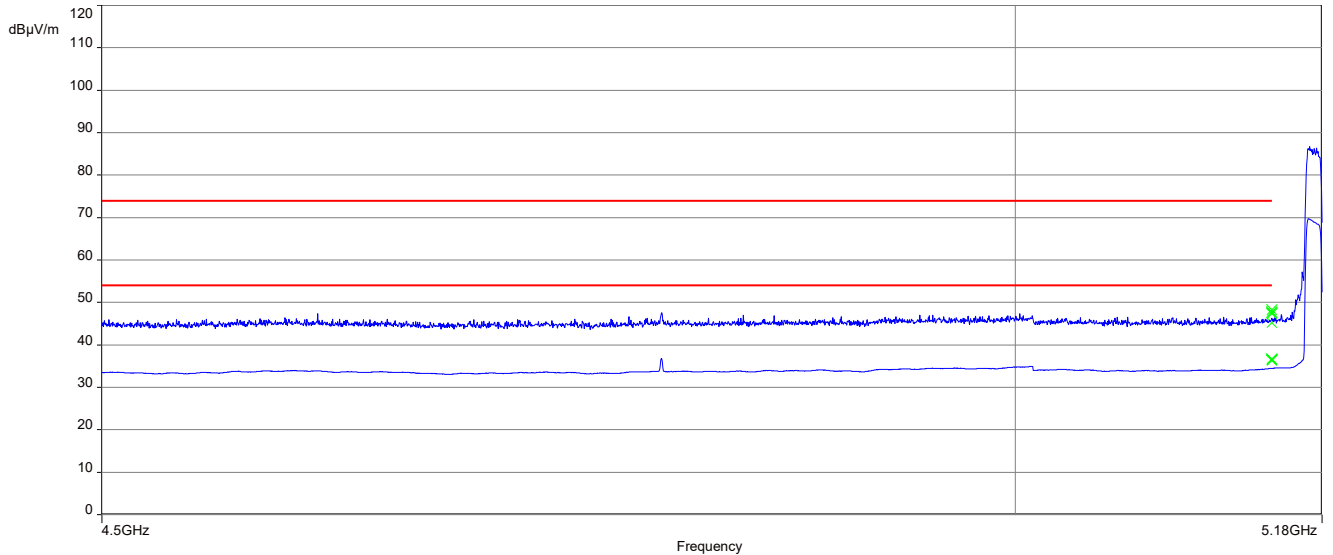
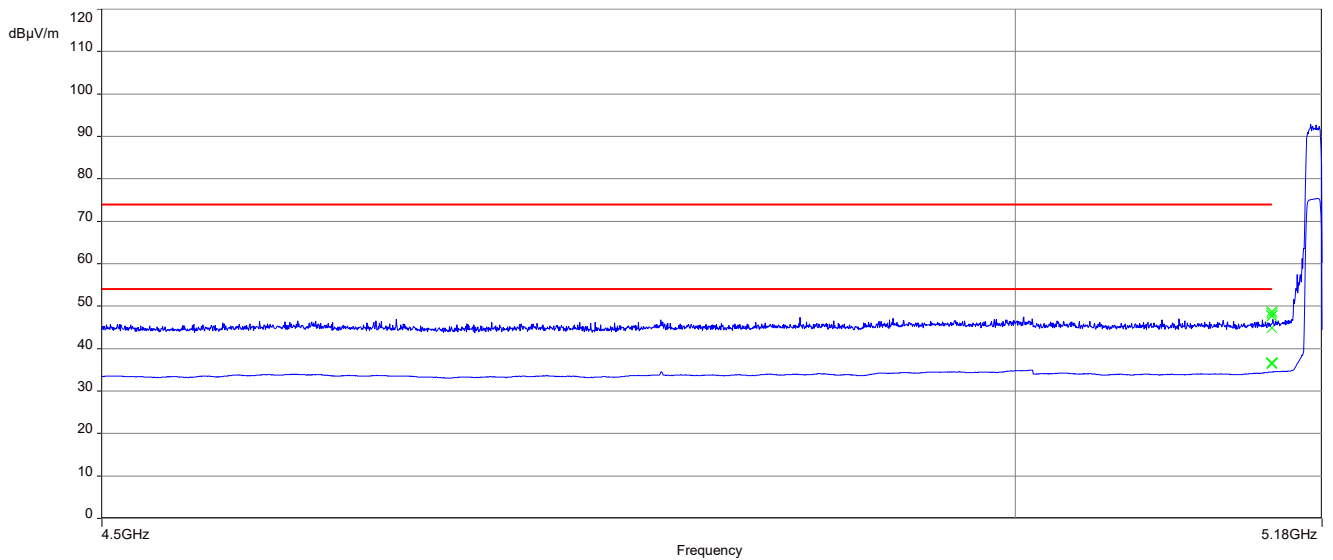
Measurement parameter	
Detector:	Peak / RMS
Sweep time:	Auto
Resolution bandwidth:	1 MHz
Video bandwidth:	$\geq 3 \times \text{RBW}$
Trace mode:	Max Hold
Test setup:	See sub clause 7.2 – C
Measurement uncertainty:	See chapter 9

Limits:

Band Edge Compliance Radiated
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 5.205(c)).
74 dB μ V/m (peak) 54 dB μ V/m (average)

Result:

Scenario	Band Edge Compliance Radiated [dB μ V/m]
Antenna 1 – band edge	48.3 dB μ V/m (peak) 36.5 dB μ V/m (average)
Antenna 2 – band edge	48.7 dB μ V/m (peak) 36.5 dB μ V/m (average)

Plots:**Plot 1:** Antenna 1, lower band edge; U-NII-1; lowest channel**Plot 2:** Antenna 2, lower band edge; U-NII-1; lowest channel

12.13 Spurious emissions radiated below 30 MHz

Description:

Measurement of the radiated spurious emissions in transmit mode below 30 MHz. The limits are re-calculated to a measurement distance of 3 m with 40 dB/decade according CFR Part 2.

Measurement:

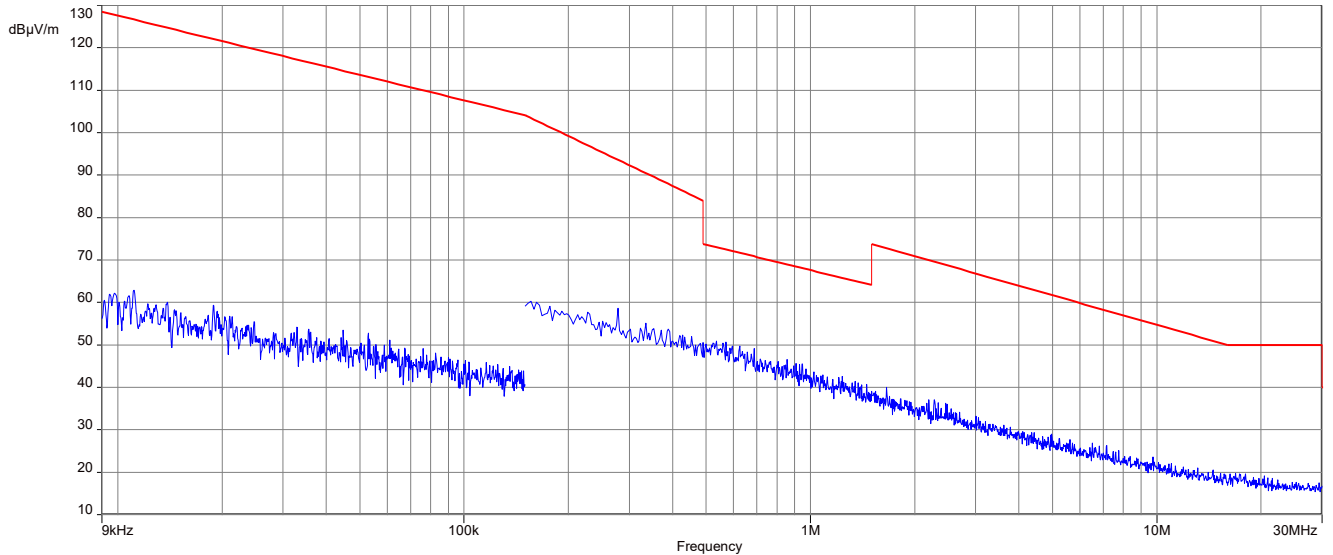
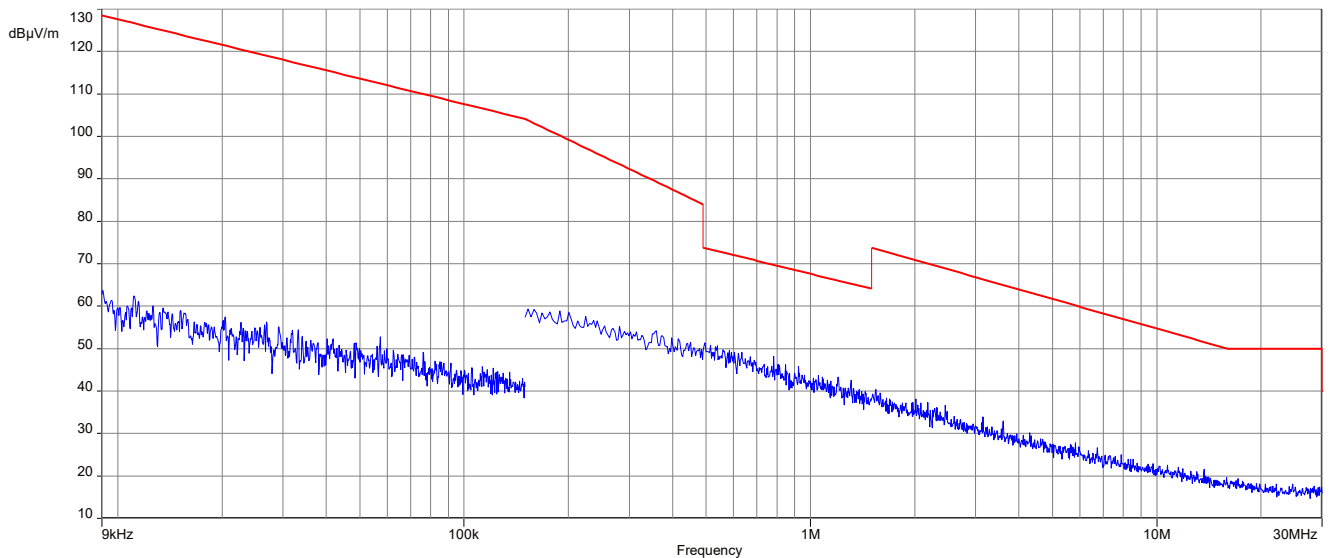
Measurement parameter	
Detector:	Peak / Quasi Peak
Sweep time:	Auto
Video bandwidth:	F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz
Resolution bandwidth:	F < 150 kHz: 1 kHz F > 150 kHz: 100 kHz
Span:	9 kHz to 30 MHz
Trace mode:	Max Hold
Test setup:	See sub clause 7.2 – B
Measurement uncertainty:	See chapter 9

Limits:

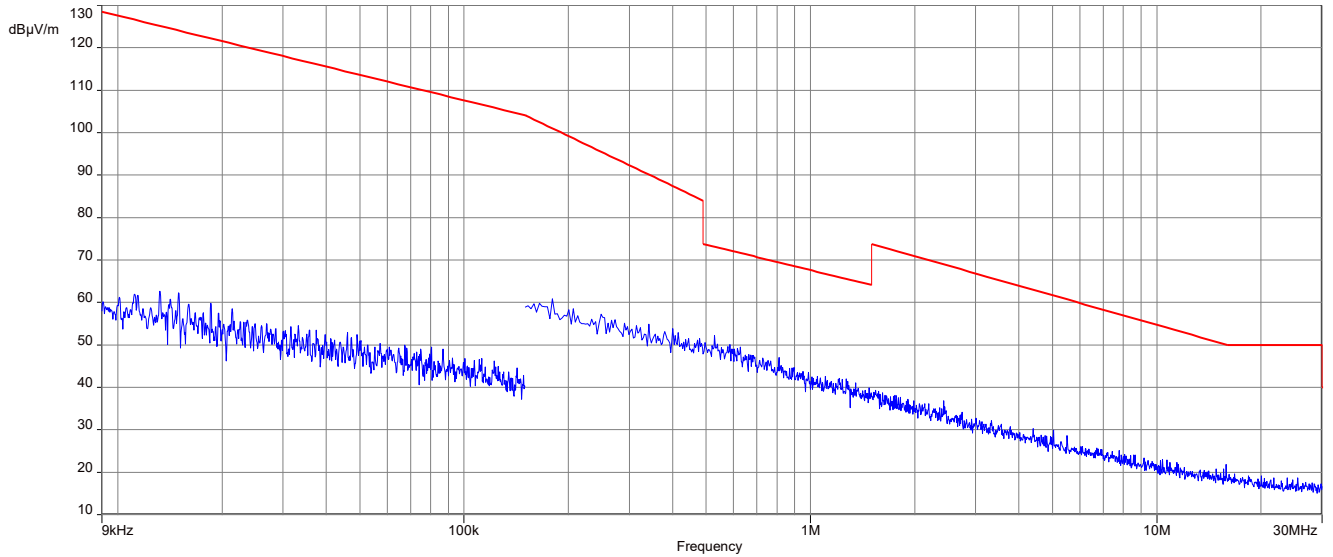
Spurious Emissions Radiated < 30 MHz		
Frequency (MHz)	Field Strength (μV/m)	Measurement distance
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

Results:

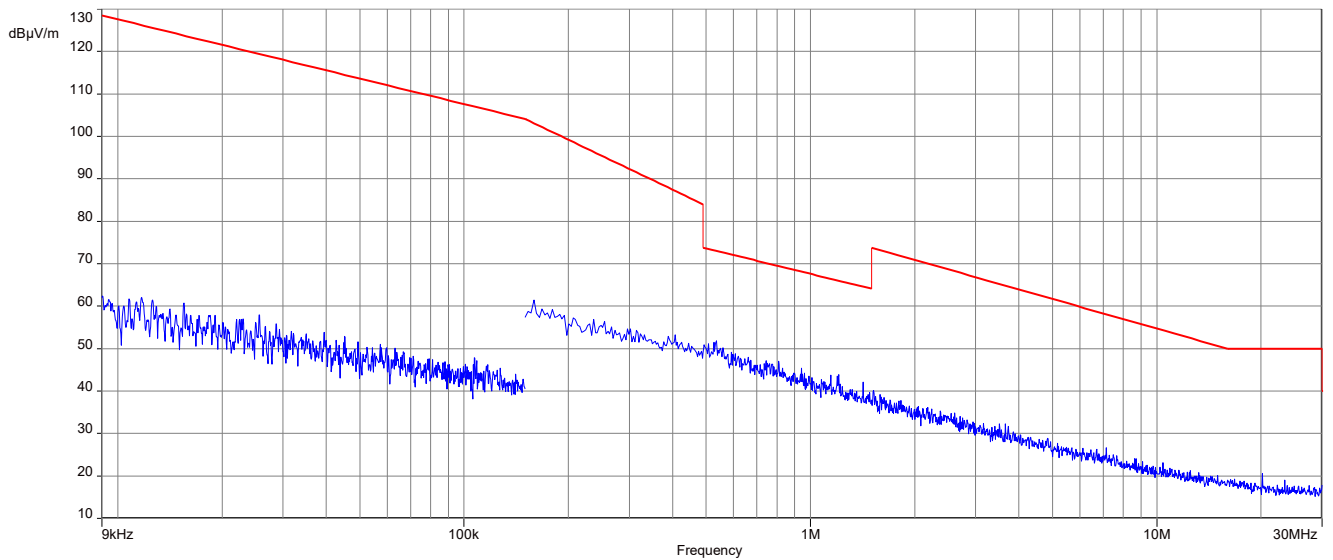
Spurious Emissions Radiated < 30 MHz [dBμV/m]		
F [MHz]	Detector	Level [dBμV/m]
All detected emissions are more than 20 dB below the limit.		

Plots:**Plot 1:** Antenna 1, 9 kHz to 30 MHz, U-NII-1; lowest channel**Plot 2:** Antenna 1, 9 kHz to 30 MHz, U-NII-1; middle channel

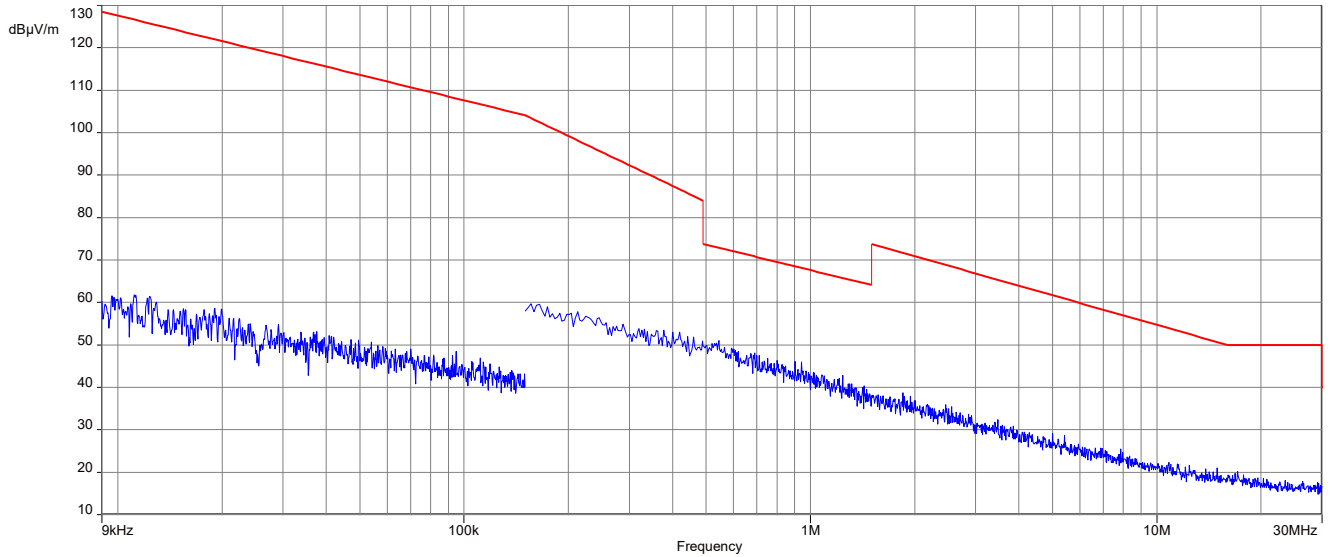
Plot 3: Antenna 1, 9 kHz to 30 MHz, U-NII-1; highest channel



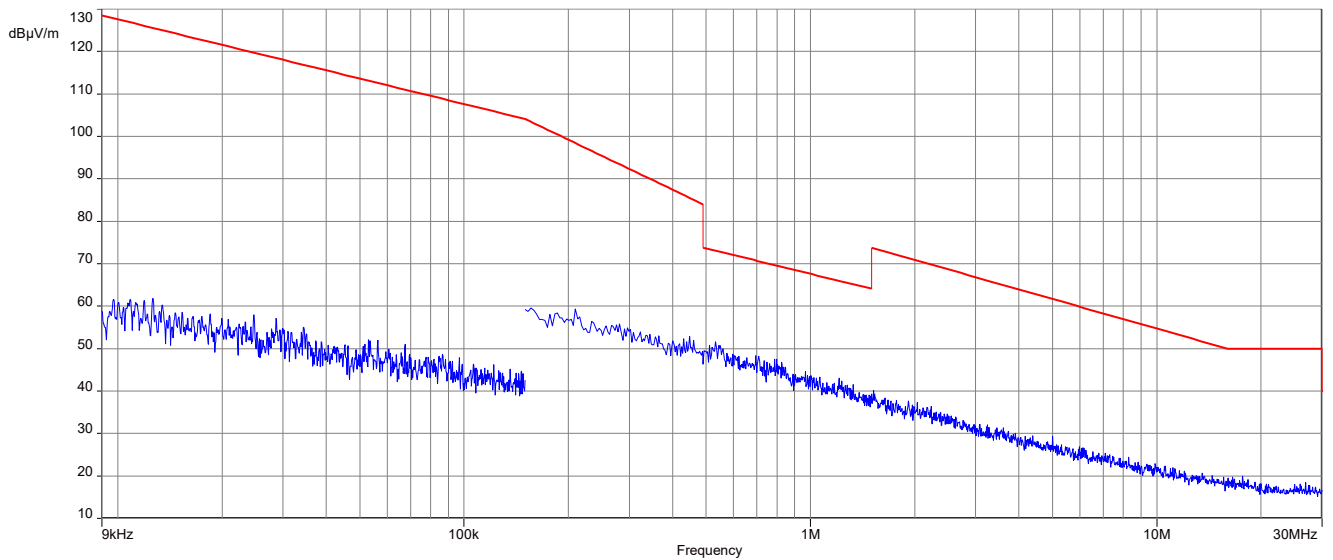
Plot 4: Antenna 1, 9 kHz to 30 MHz, U-NII-3; lowest channel



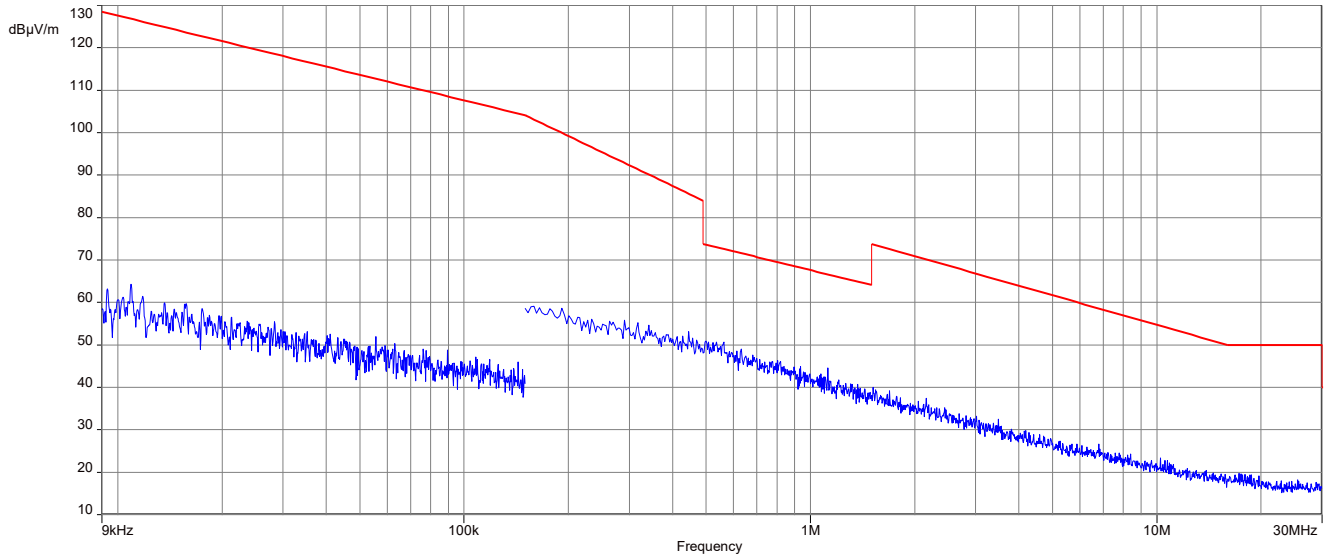
Plot 5: Antenna 1, 9 kHz to 30 MHz, U-NII-3; middle channel



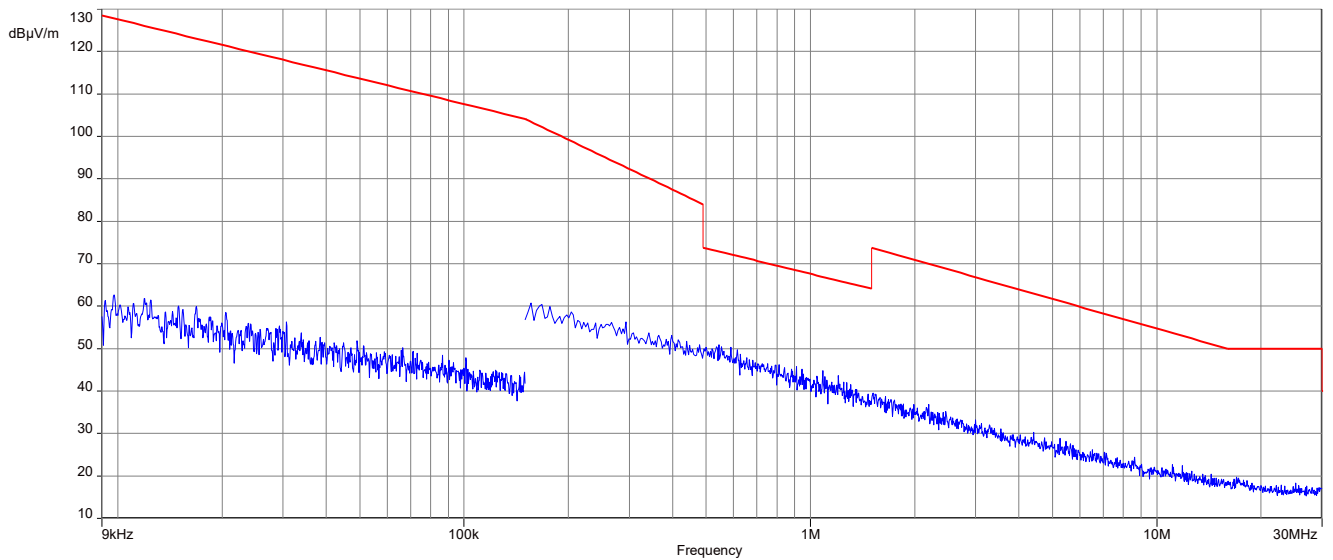
Plot 6: Antenna 1, 9 kHz to 30 MHz, U-NII-3; highest channel



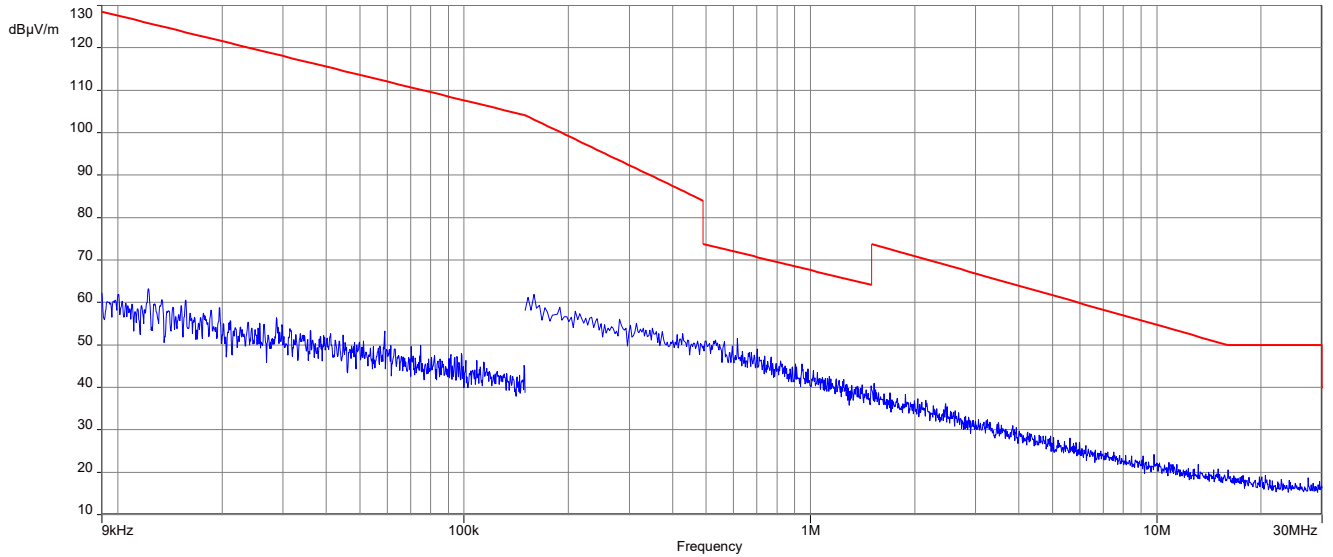
Plot 7: Antenna 2, 9 kHz to 30 MHz, U-NII-1; lowest channel



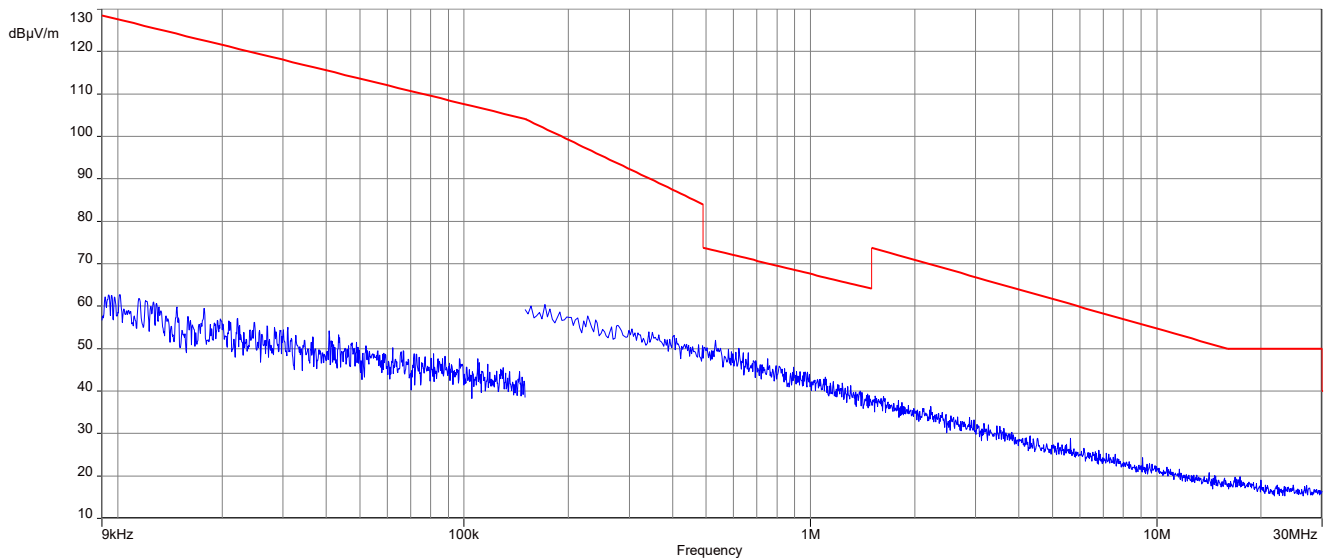
Plot 8: Antenna 2, 9 kHz to 30 MHz, U-NII-1; middle channel



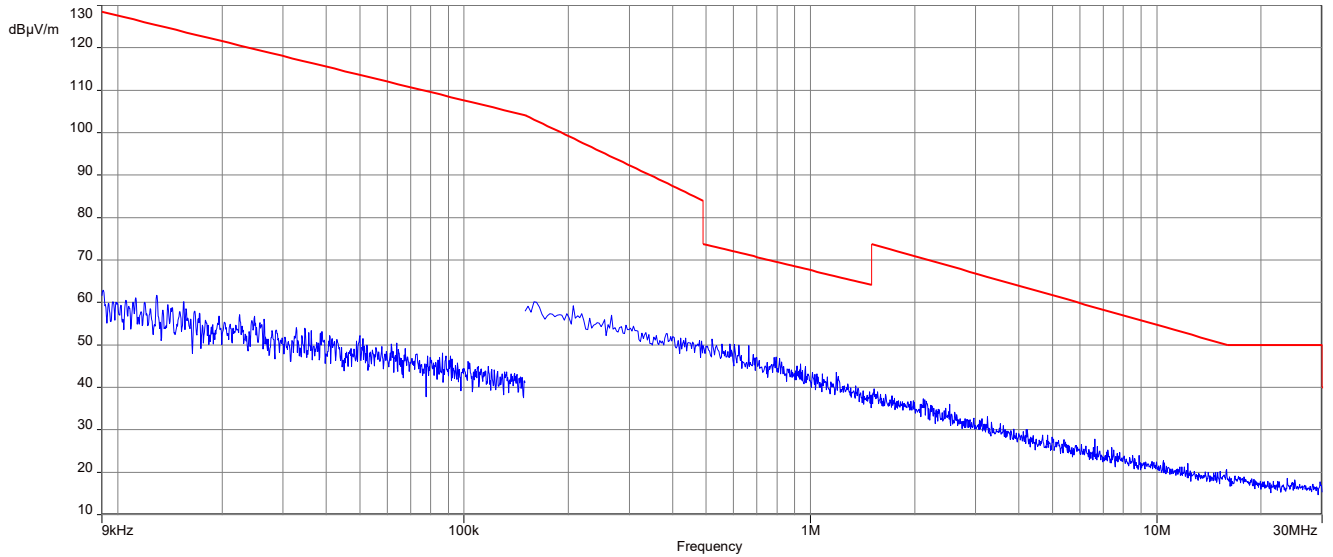
Plot 9: Antenna 2, 9 kHz to 30 MHz, U-NII-1; highest channel



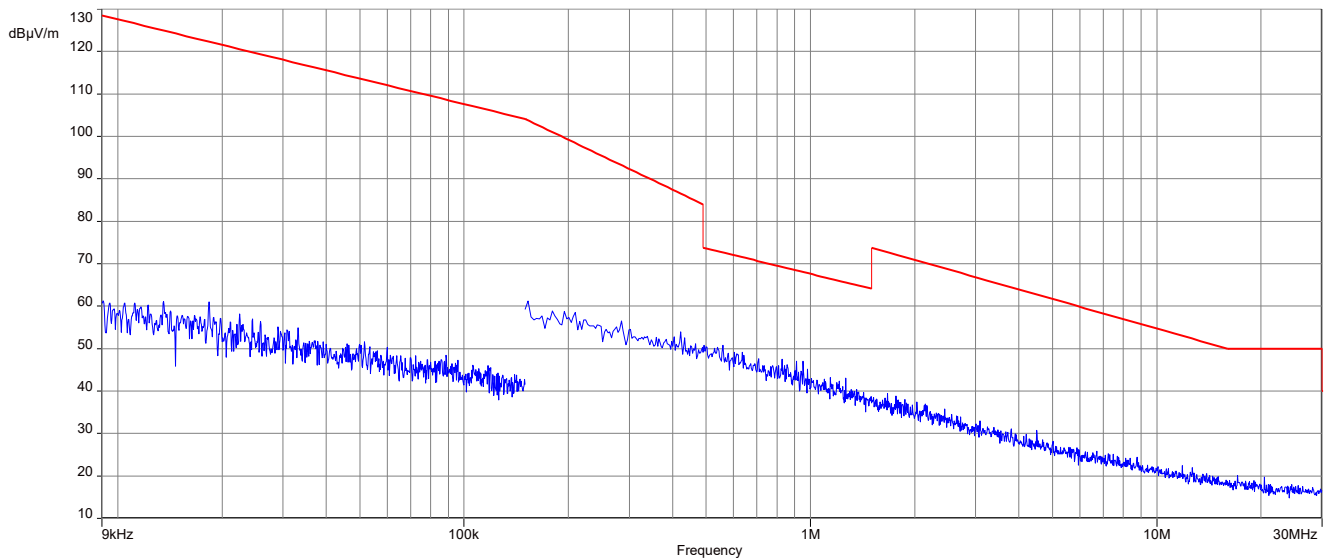
Plot 10: Antenna 2, 9 kHz to 30 MHz, U-NII-3; lowest channel



Plot 11: Antenna 2, 9 kHz to 30 MHz, U-NII-3; middle channel



Plot 12: Antenna 2, 9 kHz to 30 MHz, U-NII-3; highest channel



12.14 Spurious emissions radiated 30 MHz to 1 GHz

Measurement:

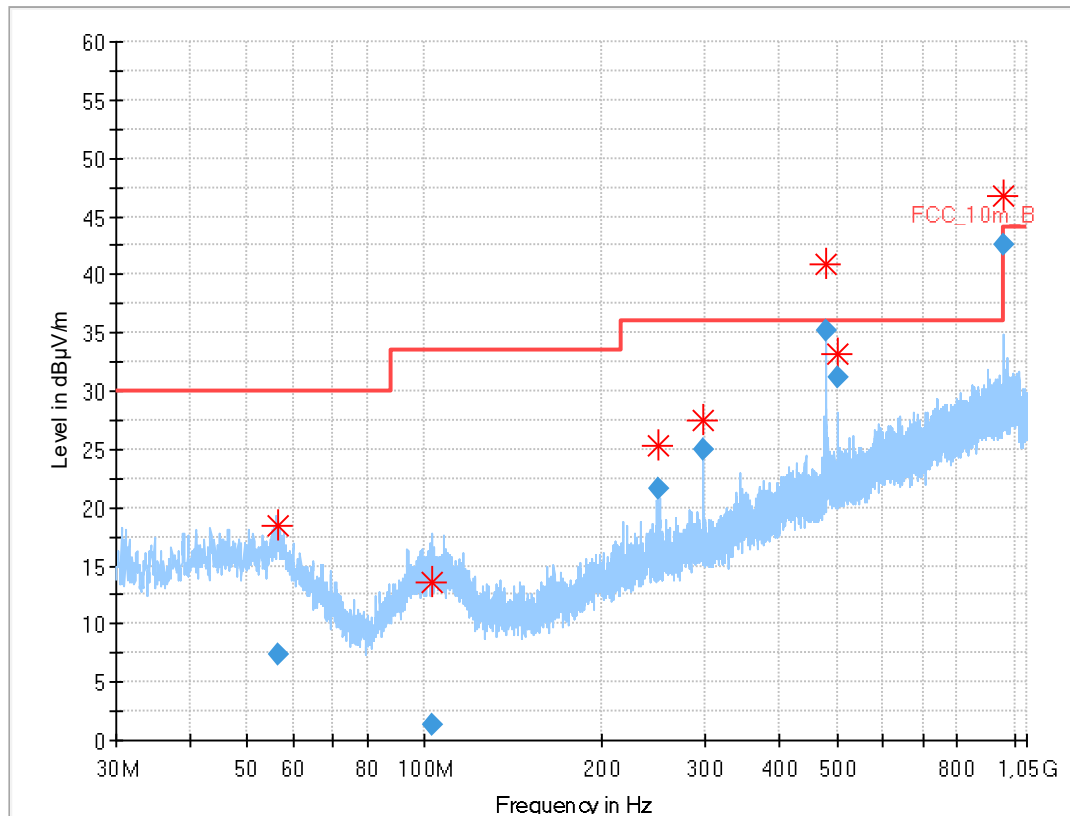
Measurement parameter	
Detector:	Quasi Peak
Sweep time:	Auto
Resolution bandwidth:	120 kHz
Video bandwidth:	500 kHz
Span:	30 MHz to 1 GHz
Test setup:	See sub clause 7.1 – A
Measurement uncertainty:	See chapter 9

Limits:

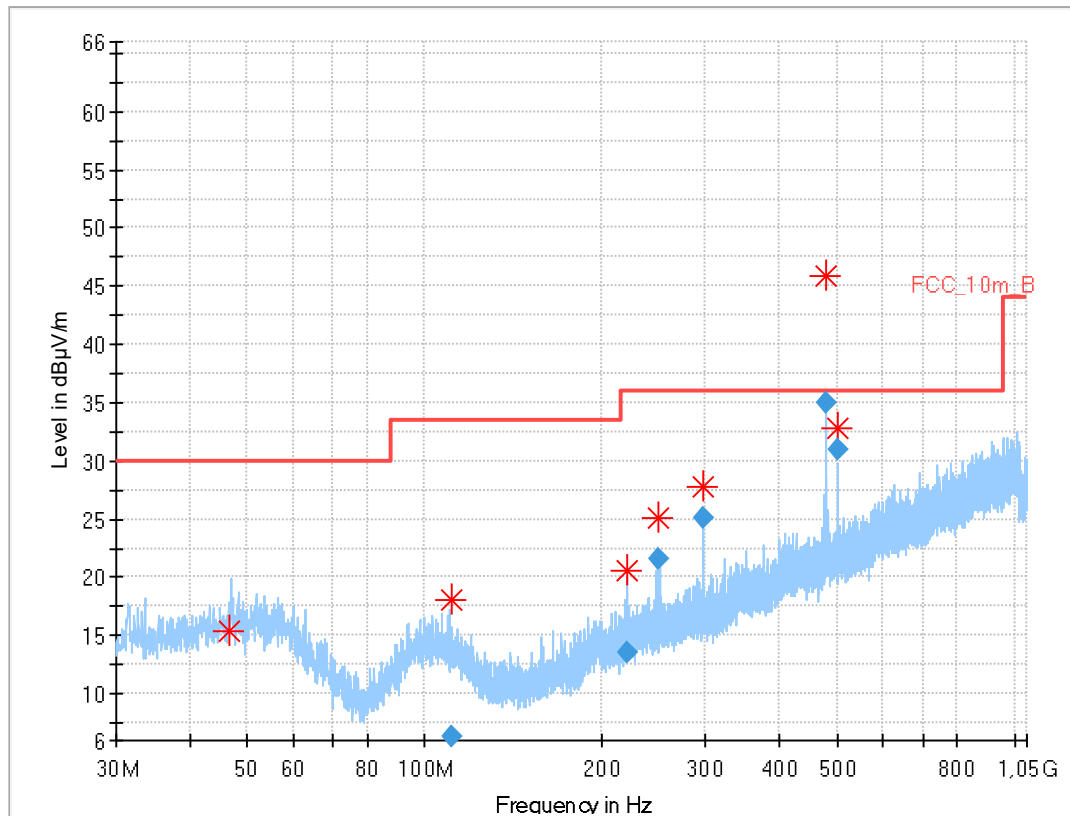
TX Spurious Emissions Radiated		
§15.209 / RSS-247		
Frequency (MHz)	Field Strength (dB μ V/m)	Measurement distance
30 - 88	30.0	10
88 – 216	33.5	10
216 – 960	36.0	10
Above 960	54.0	3
§15.407		
Outside the restricted bands!	-27 dBm / MHz	

Plots:

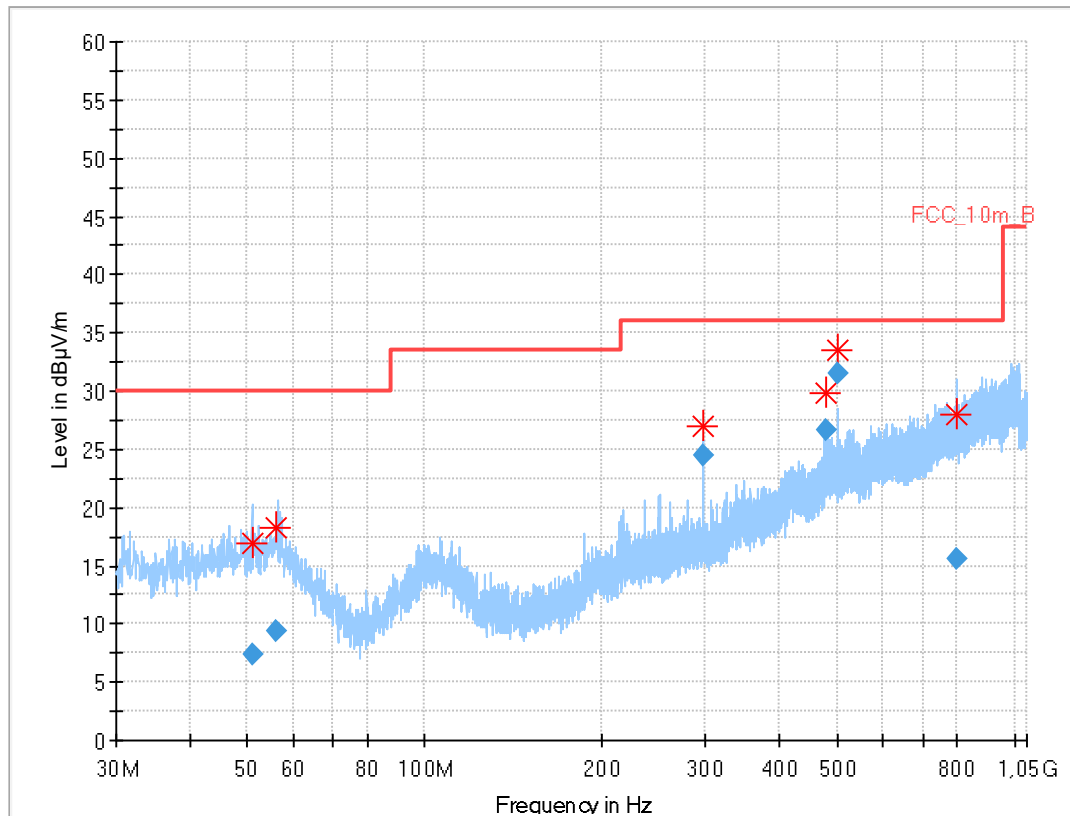
Plot 1: Antenna 1, 30 MHz to 1 GHz; vertical & horizontal polarization; U-NII-1; valid for all channels

**Results:**

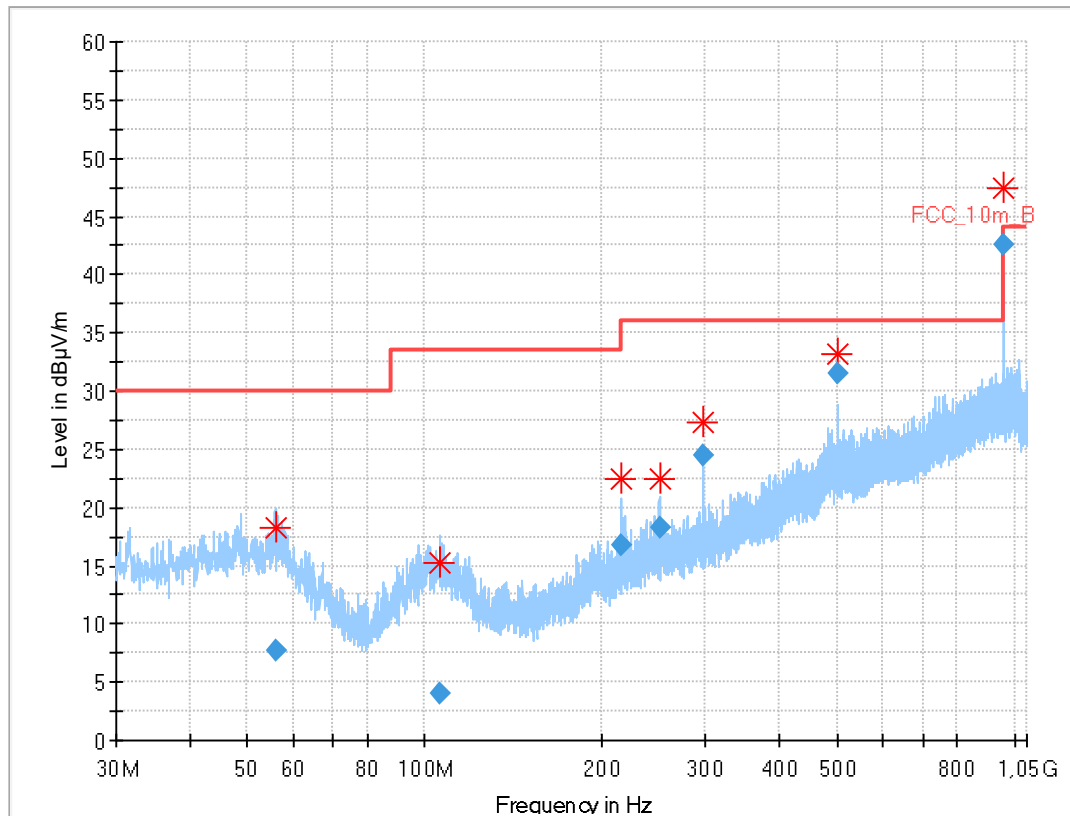
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
56.255400	7.31	30.00	22.69	1000.0	120.000	101.0	V	37.0	15.3
103.207440	1.33	33.50	32.17	1000.0	120.000	113.0	H	202.0	13.0
249.999600	21.58	36.00	14.42	1000.0	120.000	185.0	H	4.0	13.8
297.018000	24.90	36.00	11.10	1000.0	120.000	166.0	V	205.0	14.8
480.033840	35.14	36.00	0.86	1000.0	120.000	145.0	H	307.0	18.6
500.019840	31.24	36.00	4.76	1000.0	120.000	155.0	H	37.0	19.1

Plot 2: Antenna 1, 30 MHz to 1 GHz; vertical & horizontal polarization; U-NII-3; valid for all channels**Results:**

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
46.814280	4.25	30.00	25.75	1000.0	120.000	174.0	H	170.0	14.3
110.782800	6.41	33.50	27.09	1000.0	120.000	195.0	V	-16.0	12.6
220.393320	13.49	36.00	22.51	1000.0	120.000	106.0	V	65.0	12.4
249.993600	21.56	36.00	14.44	1000.0	120.000	195.0	H	-1.0	13.8
297.015120	25.09	36.00	10.91	1000.0	120.000	150.0	V	-3.0	14.8
480.014280	34.96	36.00	1.04	1000.0	120.000	195.0	H	188.0	18.6

Plot 3: Antenna 2, 30 MHz to 1 GHz; vertical & horizontal polarization; U-NII-1; valid for all channels**Results:**

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
50.993160	7.38	30.00	22.62	1000.0	120.000	101.0	V	240.0	14.5
55.876200	9.34	30.00	20.66	1000.0	120.000	98.0	V	37.0	15.3
297.011040	24.54	36.00	11.46	1000.0	120.000	180.0	V	37.0	14.8
479.428080	26.65	36.00	9.35	1000.0	120.000	129.0	H	181.0	18.5
500.030880	31.55	36.00	4.45	1000.0	120.000	176.0	H	-35.0	19.1
798.176160	15.51	36.00	20.49	1000.0	120.000	98.0	H	127.0	23.3

Plot 4: Antenna 2, 30 MHz to 1 GHz; vertical & horizontal polarization; U-NII-3; valid for all channels**Results:**

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
55.809840	7.64	30.00	22.36	1000.0	120.000	195.0	V	-5.0	15.3
106.280160	3.97	33.50	29.53	1000.0	120.000	190.0	V	59.0	12.9
215.982960	16.78	33.50	16.72	1000.0	120.000	98.0	V	147.0	12.2
250.029720	18.34	36.00	17.66	1000.0	120.000	101.0	V	-25.0	13.8
297.011160	24.43	36.00	11.57	1000.0	120.000	180.0	V	-37.0	14.8
500.015160	31.46	36.00	4.54	1000.0	120.000	157.0	H	37.0	19.1

12.15 Spurious emissions radiated 1 GHz to 40 GHz

Measurement:

Measurement parameter	
Detector:	Peak / AVG
Sweep time:	Auto
Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Span:	1 GHz to 40 GHz
Test setup:	See sub clause 7.2 – A See sub clause 7.3 – A
Measurement uncertainty:	See chapter 9

Limits:

TX Spurious Emissions Radiated		
§15.209 / RSS-247		
Frequency (MHz)	Field Strength (dB μ V/m)	Measurement distance
Above 960	54.0	3
§15.407		
Outside the restricted bands!	-27 dBm / MHz (68.2 dB μ V/m@3m, Peak)	

Results: Antenna 1

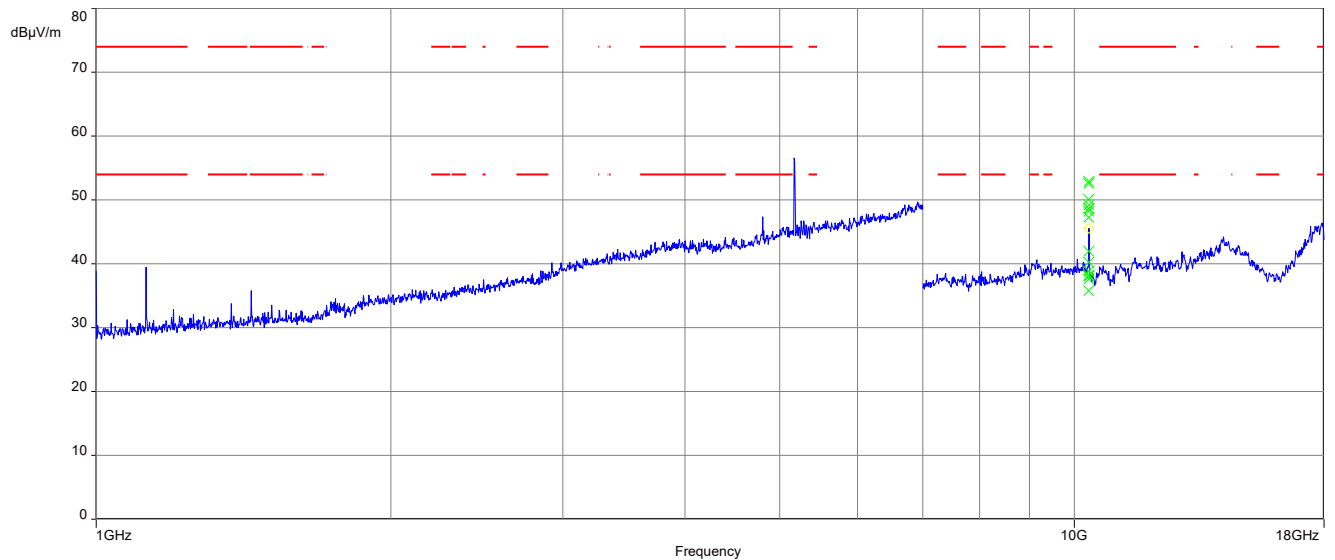
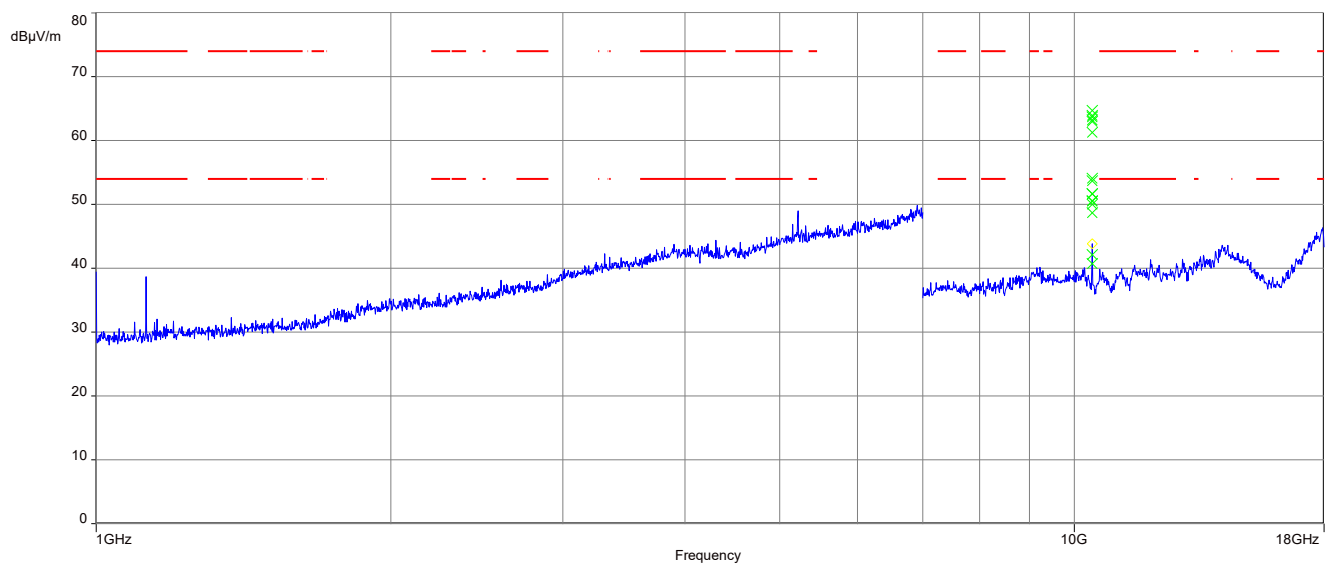
TX Spurious Emissions Radiated [dB μ V/m] / dBm								
U-NII-1 (5150 MHz to 5250 MHz)								
Lowest channel			Middle channel			Highest channel		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
10350	Peak	52.9	10430	Peak	64.7	10490	Peak	67.3
	AVG	40.2		AVG	50.0		AVG	54.9
For emissions above 18 GHz please take look at the plots.			For emissions above 18 GHz please take look at the plots.			For emissions above 18 GHz please take look at the plots.		

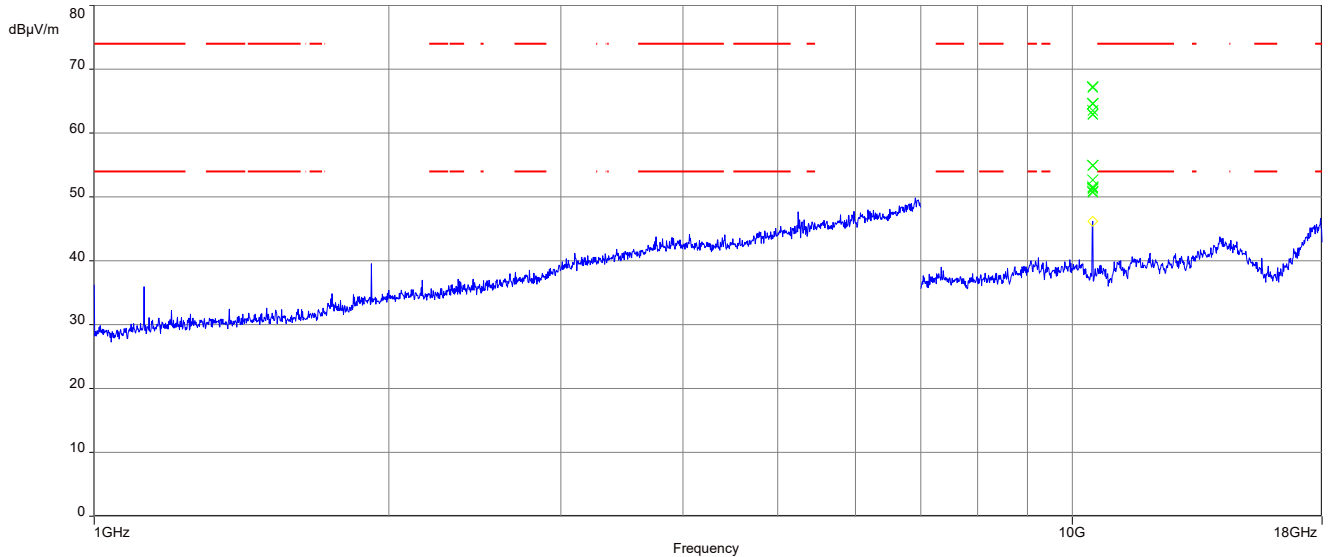
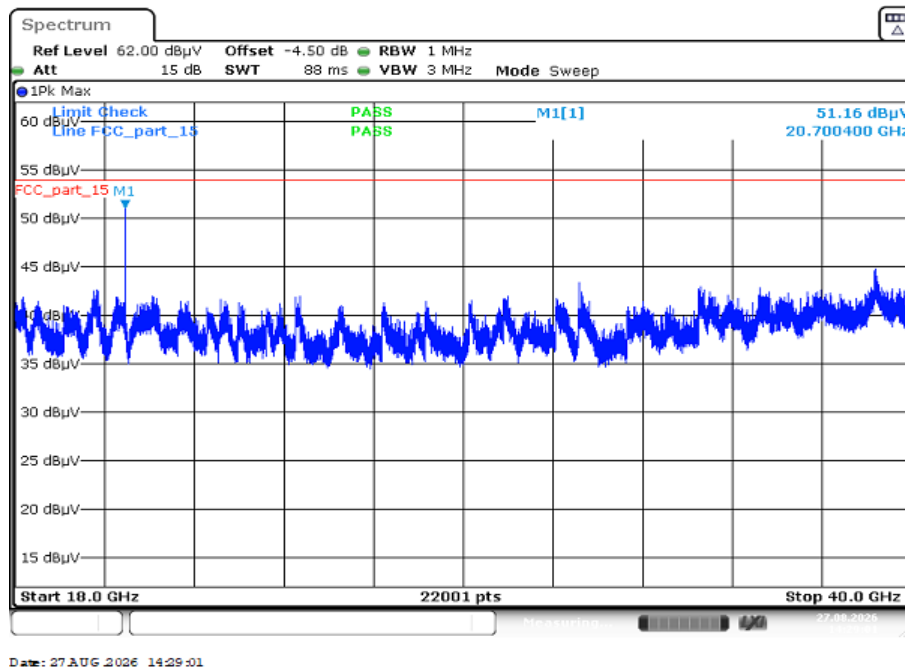
TX Spurious Emissions Radiated [dB μ V/m] / dBm								
U-NII-3 (5725 MHz to 5850 MHz)								
Lowest channel			Middle channel			Highest channel		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
11462	Peak	65.6	11550	Peak	69.9	11640	Peak	72.7
	AVG	53.6		AVG	52.6		AVG	52.0
For emissions above 18 GHz please take look at the plots.			For emissions above 18 GHz please take look at the plots.			For emissions above 18 GHz please take look at the plots.		

Results: Antenna 2

TX Spurious Emissions Radiated [dB μ V/m] / dBm								
U-NII-1 (5150 MHz to 5250 MHz)								
Lowest channel			Middle channel			Highest channel		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
10350	Peak	61.1	10430	Peak	65.7	10490	Peak	65.6
	AVG	48.1		AVG	52.7		AVG	52.5
For emissions above 18 GHz please take look at the plots.			For emissions above 18 GHz please take look at the plots.			For emissions above 18 GHz please take look at the plots.		

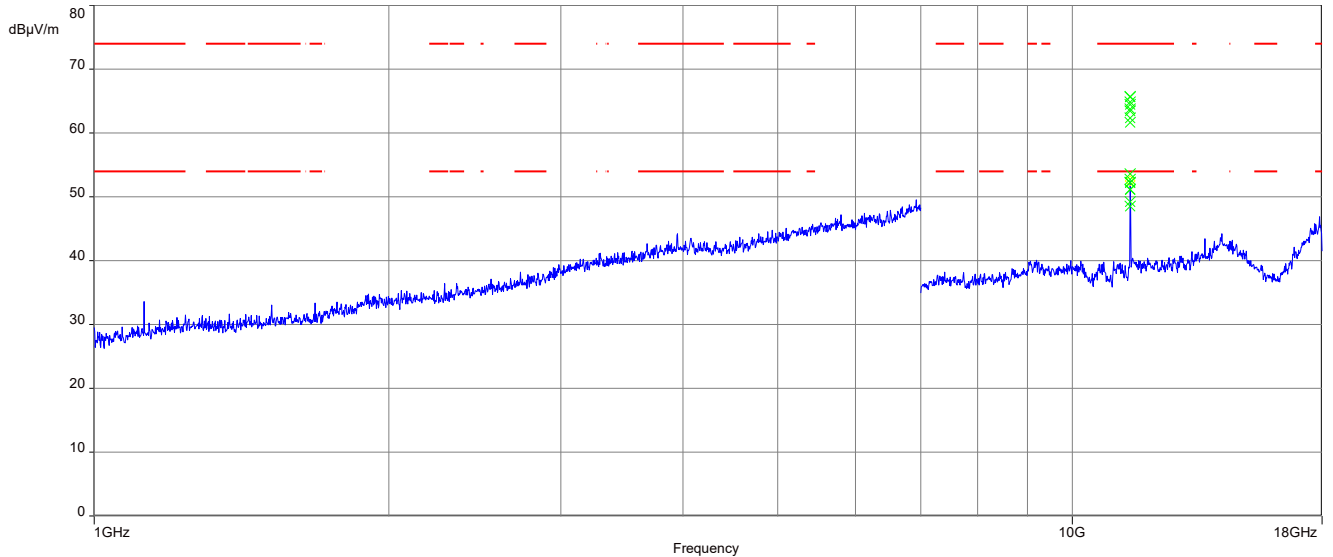
TX Spurious Emissions Radiated [dB μ V/m] / dBm								
U-NII-3 (5725 MHz to 5850 MHz)								
Lowest channel			Middle channel			Highest channel		
F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]	F [MHz]	Detector	Level [dB μ V/m]
11459	Peak	63.4	11550	Peak	72.0	11641	Peak	66.0
	AVG	45.9		AVG	43.1		AVG	47.7
For emissions above 18 GHz please take look at the plots.			For emissions above 18 GHz please take look at the plots.			For emissions above 18 GHz please take look at the plots.		

Plots: Antenna 1**Plot 1:** 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-1; lowest channel**Plot 2:** 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-1; middle channel

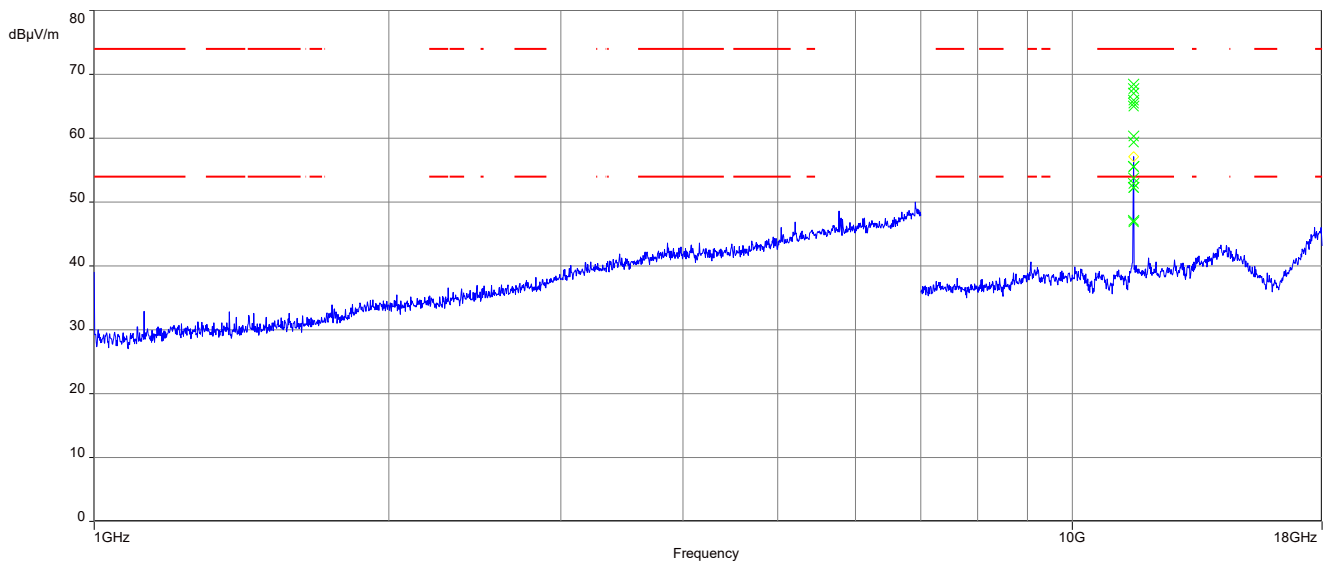
Plot 3: 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-1; highest channel**Plot 4:** 18 GHz to 40 GHz; vertical & horizontal polarization; U-NII-1; all channels

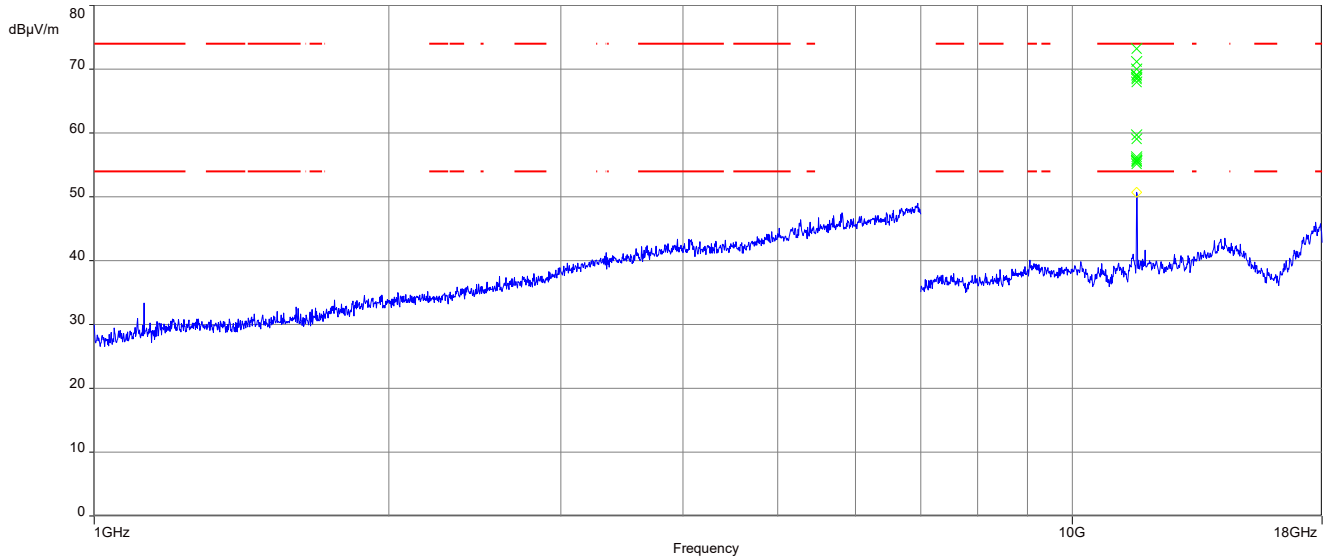
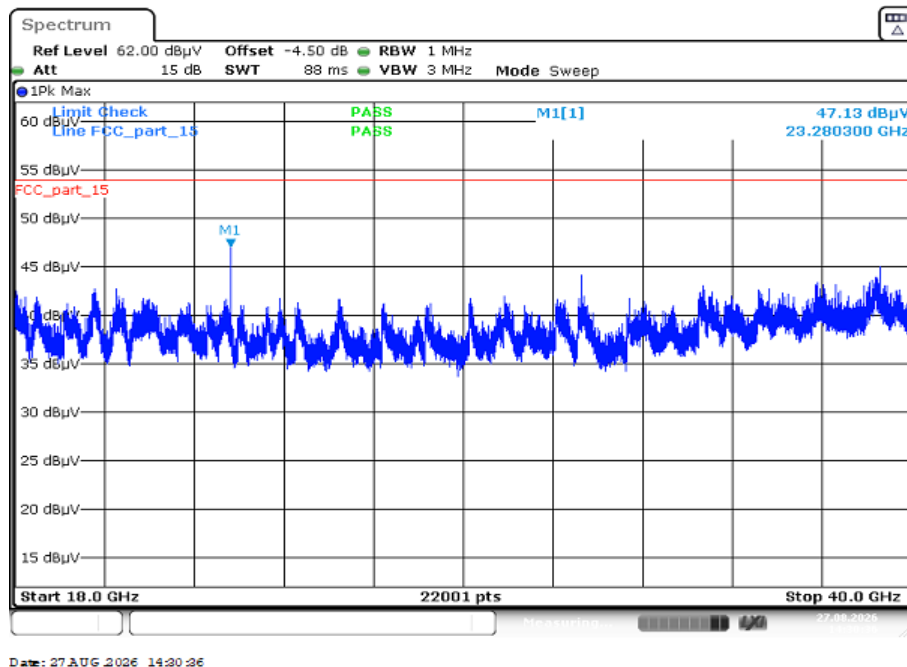
Date: 27 AUG 2026 14:29:01

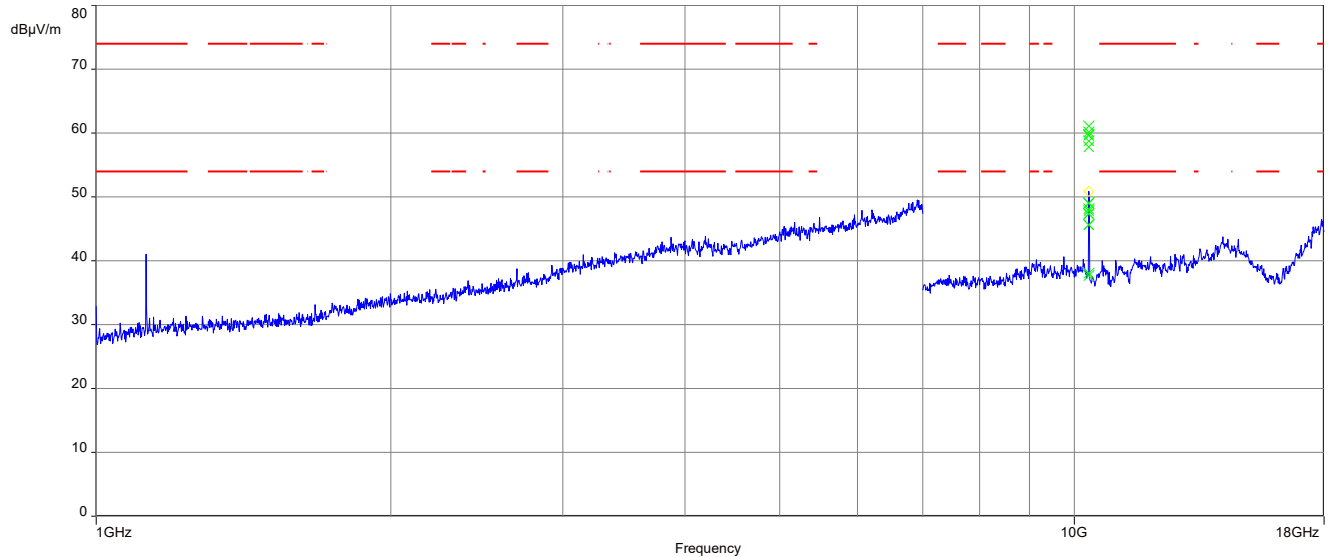
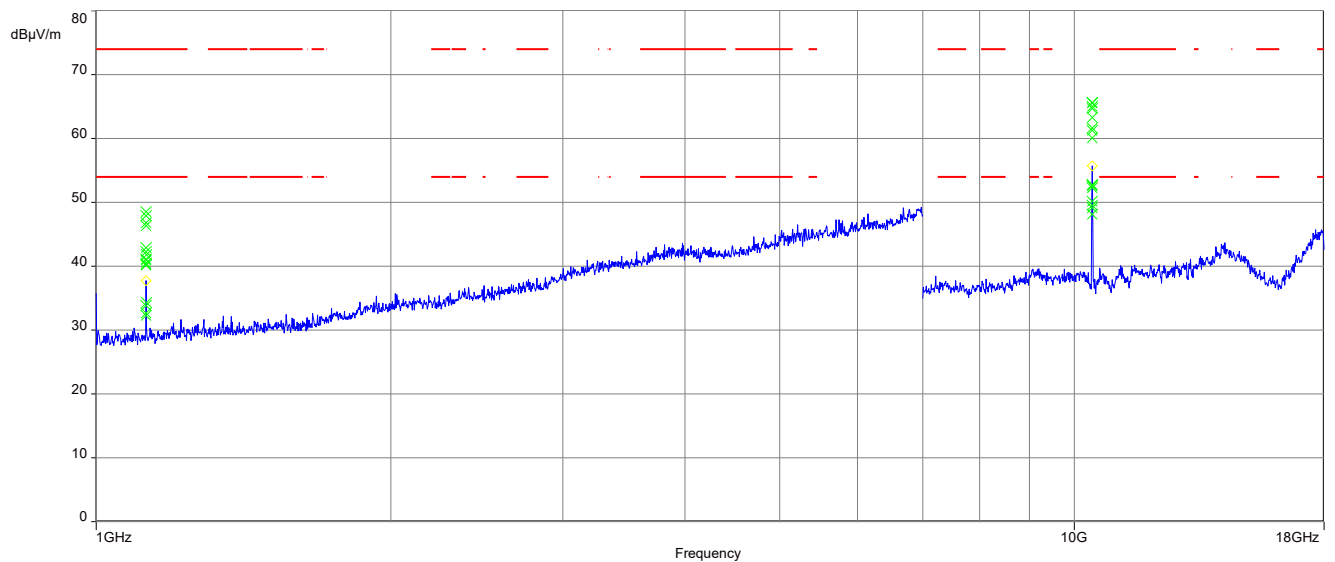
Plot 5: 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-3; lowest channel

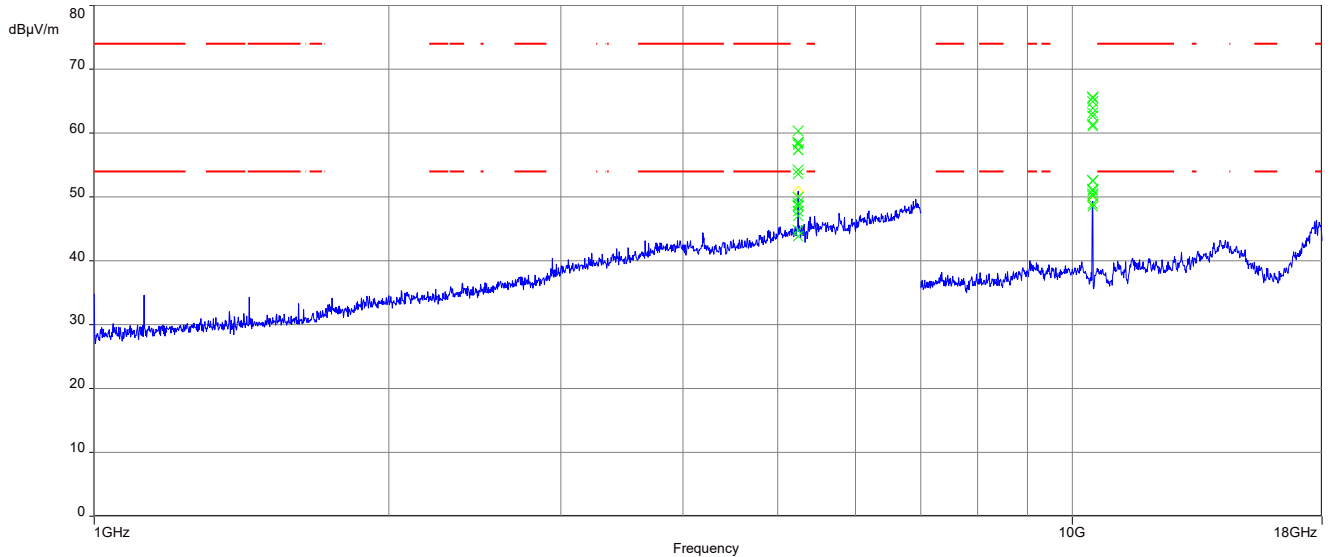
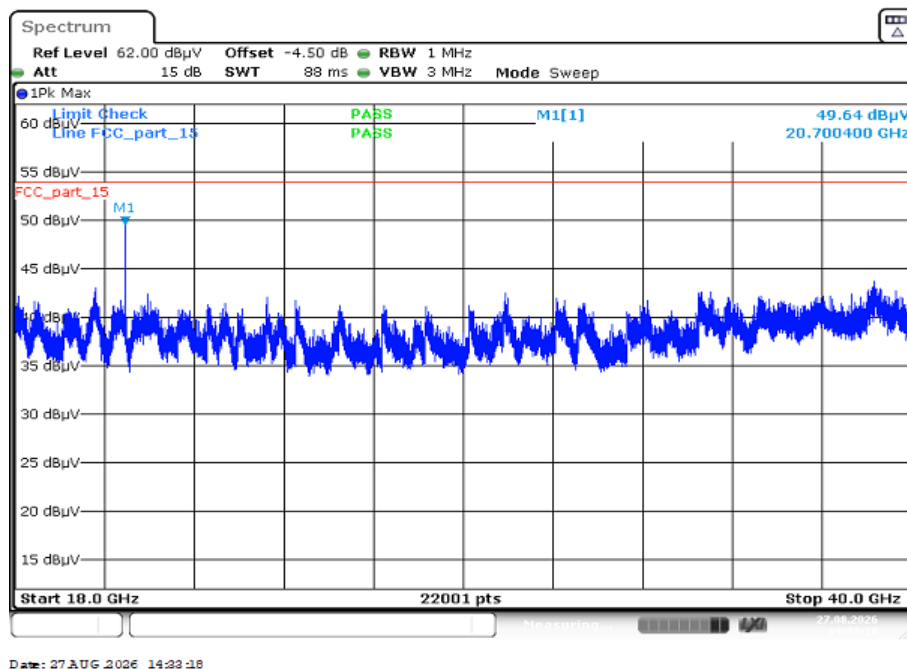


Plot 6: 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-3; middle channel

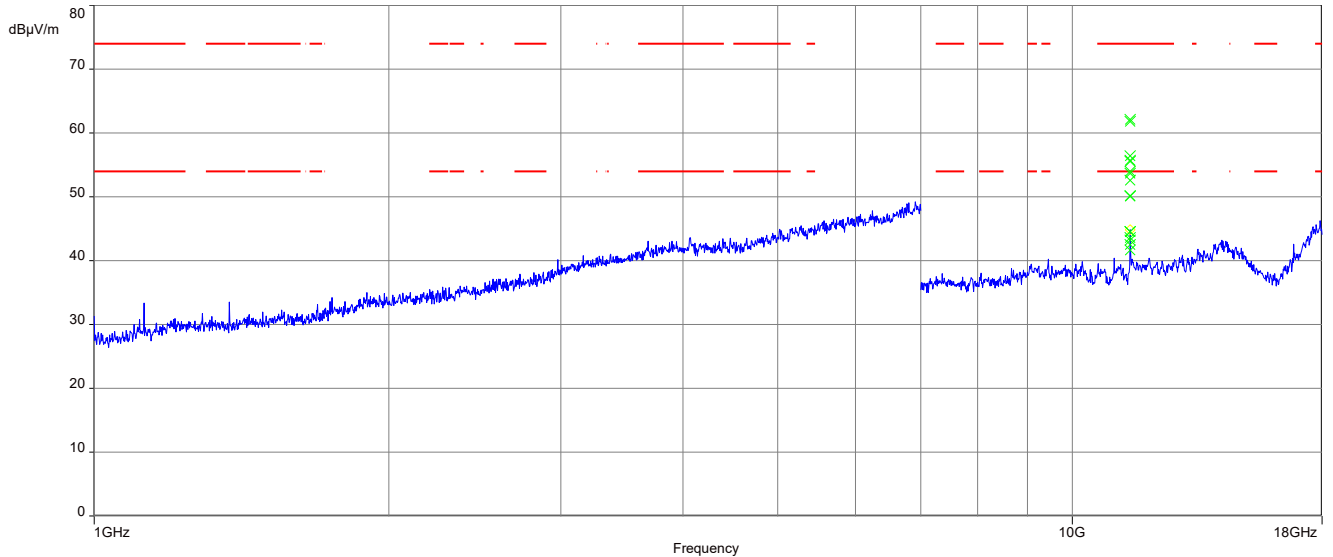


Plot 7: 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-3; highest channel**Plot 8:** 18 GHz to 40 GHz; vertical & horizontal polarization; U-NII-3; all channels

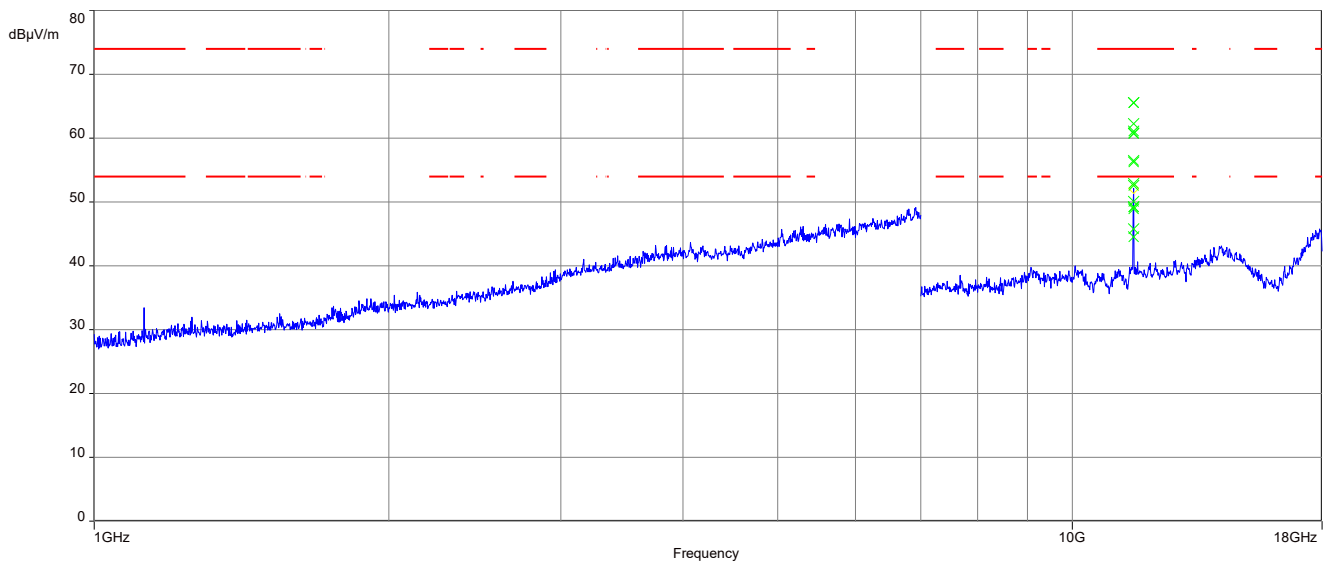
Plots: Antenna 2**Plot 1:** 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-1; lowest channel**Plot 2:** 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-1; middle channel

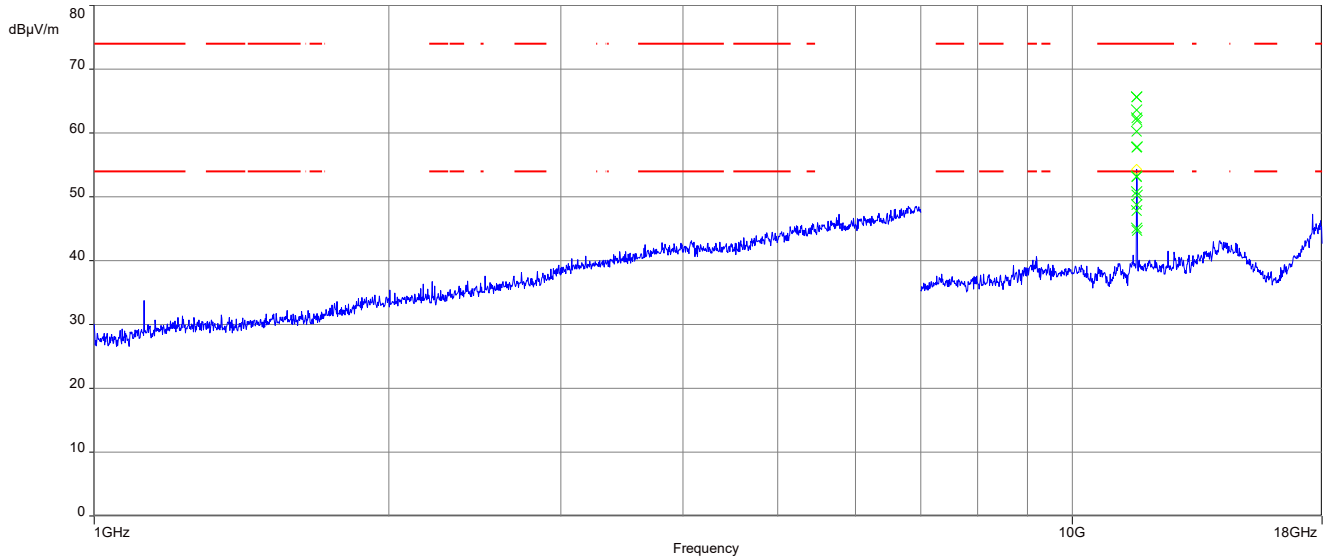
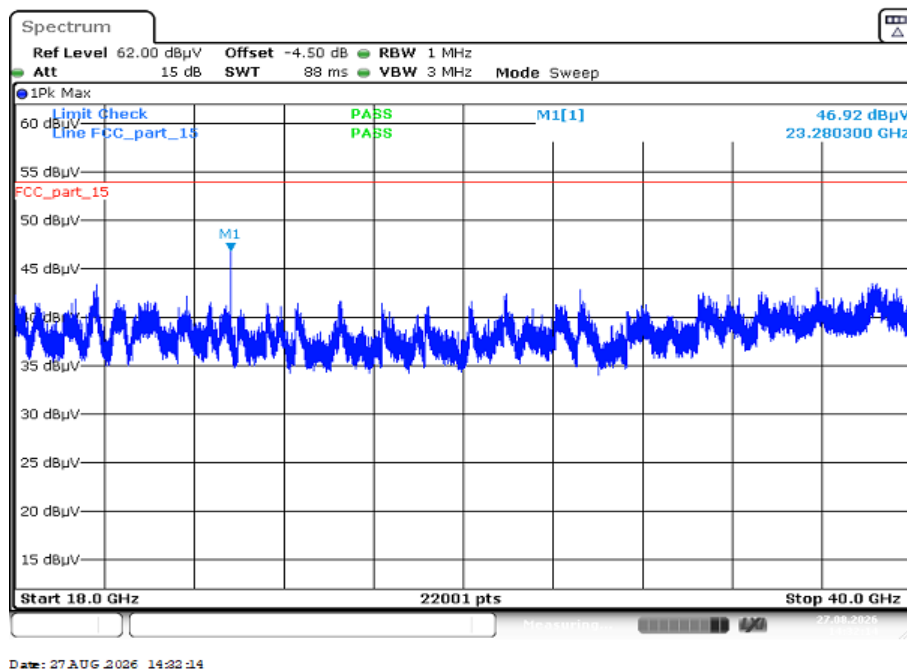
Plot 3: 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-1; highest channel**Plot 4:** 18 GHz to 40 GHz; vertical & horizontal polarization; U-NII-1; all channels

Plot 5: 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-3; lowest channel



Plot 6: 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-3; middle channel



Plot 7: 1 GHz to 18 GHz; vertical & horizontal polarization; U-NII-3; highest channel**Plot 8:** 18 GHz to 40 GHz; vertical & horizontal polarization; U-NII-3; all channels

12.16 Observations

No observations except those reported with the single test cases have been made.

13 Glossary

AVG	Average
C	Compliant
CAC	Channel availability check
CW	Clean wave
DC	Duty cycle
DFS	Dynamic frequency selection
DSSS	Dynamic sequence spread spectrum
DUT	Device under test
EN	European Standard
ETSI	European Telecommunications Standards Institute
EMC	Electromagnetic Compatibility
EUT	Equipment under test
FCC	Federal Communications Commission
FCC ID	Combination of Grantee Code and Equipment Product Code
FHSS	Frequency hopping spread spectrum
FVIN	Firmware version identification number
HMN	Host marketing name
HVIN	Hardware version identification number
HW	Hardware
ISED	Innovation, Science and Economic Development Canada
Inv. No.	Inventory number
NA	Not applicable
NC	Not compliant
NOP	Non occupancy period
NP	Not performed
OBW	Occupied bandwidth
OC	Operating channel
OCW	Operating channel bandwidth
OFDM	Orthogonal frequency division multiplexing
OOB	Out of band
OP	Occupancy period
PER	Packet error rate
PMN	Product marketing name
PP	Positive peak
QP	Quasi peak
RLAN	Radio local area network
S/N or SN	Serial number
SW	Software
UUT	Unit under test
WLAN	Wireless local area network

14 Document history

Version	Applied changes	Date of release
R01	Initial release	2026-08-31

END OF TEST REPORT