

RADIO TEST REPORT

Report ID:

REP119212

Project number:

PRJ0084878

Type of assessment:

Transmitters co-location

Applicant:

BLINQ Networks Inc.

Product:

5G Enterprise Small cell with Wi-Fi

Model:

PCW-400

Model variants:

PCRF-400, PC-400, PWRF-400

Contains FCC ID:

ROR2003

Specifications:

- ◆ FCC 47 CFR Part 15 Subpart C, §15.247
- ◆ FCC 47 CFR Part 15 Subpart E, §15.407
- ◆ FCC 47 CFR Part 27

Date of issue: January 30, 2026

Tarek Elkholy, EMC/RF Engineer

Tested by



Signature

Alvin Liu, EMC/RF Specialist

Reviewed by



Signature

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ANAB File Number: AT-3195 (Ottawa); AT-3193 (Pointe-Claire); AT-3194 (Cambridge)

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Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contained in this report are within Nemko Canada's ISO/IEC 17025 accreditation.

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Section 1 Report summary

1.1 Test specifications

FCC 47 CFR Part 15, Subpart C, Clause 15.247	Operation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz
FCC 47 CFR Part 15, Subpart E, Clause 15.407	Unlicensed National Information Infrastructure Devices operating in the 5.15–5.35 GHz, 5.47–5.725 GHz, 5.725–5.85 GHz, and 5.925–7.125 GHz bands.
FCC 47 CFR Part 27	Miscellaneous Wireless Communications Services

1.2 Test methods

ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
662911 D02 MIMO with Cross Polarized Antenna v01 (October 25, 2011)	Emissions testing of transmitters with multiple outputs in the same band (MIMO) with Cross Polarized Antenna
996369 D01 Module Certification Guide v04r02 (November 15, 2024)	Transmitter module equipment authorization guide

1.3 Exclusions

Partial testing was performed on the product with the transmitter operating to confirm that the host product meets the FCC requirements. This investigation of the final product was done by spot checking emissions from the device while operating the host as a composite system. This testing was performed with the host product configured in typical operational mode while multiple radios were simultaneously transmitting, (2.4 GHz Wi-Fi, 5 GHz Wi-Fi and 5G cellular) to check the spurious emissions for compliance with all the applicable rules.

The evaluation was done to ensure there are no additional radiated spurious emissions generated due to simultaneous-transmission operations compared to single transmitter operations testing, and to ensure compliance with the applicable FCC rules for the transmitters operating simultaneously.

1.4 Statement of compliance

Statement of Conformity:

The reported results have been evaluated against the specified limits of the standard(s) listed in **Section 1.1** of this report.

Conformity with the specified requirements is determined by comparing the measured results directly to the applicable limits. Measurement uncertainty is not applied to adjust or attribute to the measured value for the purpose of compliance determination.

In the configuration tested, the **Equipment Under Test (EUT)** was found to be compliant. Unless otherwise noted in **Section 1.3**, all testing was performed against the relevant requirements of the applicable test standard(s).

The results obtained indicate that the product under test complies in full with the requirements tested, and the test results relate only to the items tested. Refer to the **Summary of Test Results** section for full details.

1.5 Test report revision history

Table 1.5-1: Test report revision history

Revision #	Date of issue	Details of changes made to test report
REP119212	January 30, 2026	Original report issued

Section 2 Engineering considerations

2.1 Modifications incorporated in the EUT for compliance

There were no modifications performed to the EUT during this assessment.

2.2 Technical judgment

None

2.3 Model variant declaration

As declared by the applicant, the EUT model PCW-400, outdoor variant, has been chosen to be representative for all other models in the model family. The model family, and the description of the variations, are as follows:

PCRf-400	non-Wi-Fi outdoor (detachable antennas)
PC-400	non-Wi-Fi outdoor (integrated antennas)
PCW-400	Wi-Fi outdoor (integrated antennas)
PWRF-400	Wi-Fi outdoor (detachable antennas)

2.4 Deviations from laboratory tests procedures

No deviations were made from laboratory procedures.

Section 3 Test conditions

3.1 Atmospheric conditions

Temperature	15 °C – 35 °C
Relative humidity	20 % – 75 %
Air pressure	86 kPa (860 mbar) – 106 kPa (1060 mbar)

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

3.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages $\pm 5\%$, for which the equipment was designed.

Section 4 Information provided by the applicant

4.1 Disclaimer

This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results contained within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

4.2 Applicant/Manufacturer

Applicant name	BLINQ Networks Inc.
Applicant address	140 Renfrew Dr, Suite 200, Markham, ON, L3R 6B3, Canada
Manufacturer name	Same as applicant
Manufacturer address	Same as applicant

4.3 EUT information

Product	5G Enterprise Small cell with Wi-Fi
Model	PCW-400
Model variant(s)	PCRF-400, PC-400, PWRF-400
Serial number	PU40W-B25220004
Power supply requirements	DC: 55 V from external 100–240 V(AC) PoE injector
Product description and theory of operation	The PCW-400 is a 5G NR small cell with Wi-Fi 7 triband capabilities

4.7 EUT setup details

4.7.1 Radio exercise details

Operating conditions	During this limited assessment, the EUT was powered using the PoE injector, using a laptop loaded with tera term serial interface, the EUT was forced into continuous transmission at the listed worst-case scenarios. - NR 5G, 3450 – 3550 MHz, 1CC 10 MHz, Ch. 3544.98 MHz, power setting of P23 - 2.4 GHz Wi-Fi, 802.11ax HEW20, Ch. 2412 MHz, power setting of P13 - 5 GHz Wi-Fi, 802.11ac VHT20, Ch. 5260 MHz, power setting of P18
Transmitter state	Continuous transmission

4.7.2 EUT setup configuration

Table 4.7-1: EUT sub assemblies

Description	Brand name	Model, Part number, Serial number, Revision level
Outdoor PoE injector	Procet	MN: PT-PSE108GBR-OT, SN: PT2441223025, Ver. 10.0

Table 4.7-2: EUT interface ports

Description	Qty.
PoE AC power input	1
Ethernet port, power and traffic (base station)	1
PoE Ethernet port (PoE injector)	1
LAN Ethernet port (PoE injector)	1
USB Serial port (test purpose only)	1

Table 4.7-3: Support equipment

Description	Brand name	Model, Part number, Serial number, Revision level
Laptop	Dell	MN: Latitude E6420, DPN: VVF52 A01, SN: 28MCCS1

Table 4.7-4: Inter-connection cables

Cable description	From	To	Length (m)
AC power cable	PoE injector	Mains	2
CAT 7 ethernet cable	Base station	PoE injector	2
USB-serial cable	Base station	laptop	2

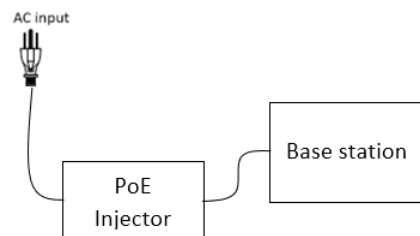


Figure 4.7-1: Radiated testing block diagram

Section 5 Summary of test results

5.1 Testing period

Test start date	October 10, 2025	Test end date	December 23, 2025
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5.2 Sample information

Receipt date	May 7, 2025	Nemko sample ID number(s)	PRJ00848770001
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5.3 FCC, Test results

Table 5.3-1: FCC requirements results

Part	Test description	Verdict
§27.53	Radiated spurious emissions	Pass
§15.247(d)	Spurious emissions	Pass
§15.407(b)	Undesirable emission limits	Pass

Section 6 Test equipment

6.1 Test equipment list

Table 6.1-1: Equipment list

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
Receiver/spectrum analyzer	Rohde & Schwarz	ESR26	FA002969	1 year	May 28, 2026
Spectrum analyzer	Rohde & Schwarz	FSW43	FA002971	1 year	November 24, 2026
3 m EMI test chamber	TDK	SAC-3	FA003012	1 year	March 9, 2026
Antenna mast	SUNAR	TLT2	FA003007	—	NCR
Bilog antenna (30–2000 MHz)	SUNAR	JB3	FA002108	1 year	April 8, 2026
Horn antenna (1–18 GHz)	EMCO	3115	FA000649	1 year	April 16, 2026
Preamp (1–18 GHz)	ETS Lindgren	124334	FA002956	1 year	April 11, 2026
Horn antenna (1–18 GHz)	ETS Lindgren	3117	FA002911	1 year	June 2, 2026
Horn antenna (18–40 GHz)	EMCO	3116B	FA002948	1 year	April 4, 2027
Preamp 18-40 GHz	None	PA1840	FA003323	1 year	April 11, 2026
Notch filter (2.4-2.4835 GHz)	Microwave circuits	N0324413	FA003027	—	NCR
Notch filter (5150 - 5350 MHz)	Microwave circuits	N0452501	FA003030	—	NCR
Notch filter (5470-5725 MHz)	Microwave circuits	N0555983	FA003028	—	NCR
Notch filter (5725-5850 MHz)	Microwave circuits	N0257881	FA001921	—	NCR
50 Ω SMA coaxial attenuator 20 dB	Weinschel Associates	WA7	FA003495	1 year	Apr 14, 2026
50 Ω SMA coaxial attenuator 20 dB	Weinschel Associates	WA7	FA003496	1 year	Apr 14, 2026
50 Ω SMA coax cable	Huber + Suhner	None	FA003056	1 year	Aug 6, 2026
50 Ω coax cable	Huber + Suhner	None	FA003402	1 year	Aug 6, 2026
50 Ω coax cable	Huber + Suhner	None	FA003047	1 year	Aug 6, 2026

Note: NCR - no calibration required

All equipment related to the contribution of measurement has been included in this list. Such items include, but are not limited to, cables, attenuators, directional couplers, and pre-amps.

Table 6.1-2: Automation software details

Test description	Manufacturer of Software	Details
Radio/EMC test software	Rohde & Schwarz	EMC32, Software for EMC Measurements, Version 10.60.00

Table 6.1-3: Measurement uncertainty calculations based on equipment list

Measurement	Measurement uncertainty, $\pm$ dB
Radiated spurious emissions (30 MHz to 1 GHz)	4.14
Radiated spurious emissions (1 GHz to 6 GHz)	4.74
Radiated spurious emissions (6 GHz to 18 GHz)	5.33
Radiated spurious emissions (18 GHz to 40 GHz)	4.82
RF Output power on antenna port (30 MHz – 18 GHz)	1.52

Notes: UKAS Lab 34, TIA-603 and ETSI TR 100 028-1&2 have been used as guidance for measurement uncertainty reasonable estimations with regards to previous experience and validation of data. Nemko Canada Inc. follows these test methods in order to satisfy ISO/IEC 17025 requirements for estimation of uncertainty of measurement for wireless products. Measurement uncertainty calculations assume a coverage factor of $K = 2$ with 95% certainty.

Section 7 Testing data

7.1 Spurious (out-of-band) unwanted emissions

7.1.1 References, definitions and limits

FCC §15.247:

- (d) 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

FCC §27.50

- (k) The following power requirements apply to stations transmitting in the 3450-3550 MHz band:
- (1) The power of each fixed or base station transmitting in the 3450-3550 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.
- (2) The power of each fixed or base station transmitting in the 3450-3550 MHz band and situated in any geographic location other than that described in paragraph (k)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

FCC §15.407:

- (b) Undesirable emission limits.
- Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
- (3) For transmitters operating in the 5.47–5.725 GHz band: All emissions outside of the 5.47–5.725 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.
- (6) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of –27 dBm/MHz.
- (8) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
- (9) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in § 15.207.
- (10) The provisions of § 15.205 apply to intentional radiators operating under this section.

References, definitions and limits, continued

Table 7.1-1: FCC §15.209 and RSS-Gen – Radiated emission limits

Frequency, MHz	Field strength of emissions		Measurement distance, m
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	
0.009–0.490	2400/F	$67.6 - 20 \times \log_{10}(\text{F})$	300
0.490–1.705	24000/F	$87.6 - 20 \times \log_{10}(\text{F})$	30
1.705–30.0	30	29.5	30
30–88	100	40.0	3
88–216	150	43.5	3
216–960	200	46.0	3
above 960	500	54.0	3

Notes: In the emission table above, the tighter limit applies at the band edges.
For frequencies above 1 GHz the limit on peak RF emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

Table 7.1-2: ISED restricted frequency bands

MHz	MHz	MHz	GHz
0.090–0.110	12.57675–12.57725	399.9–410	7.25–7.75
0.495–0.505	13.36–13.41	608–614	8.025–8.5
2.1735–2.1905	16.42–16.423	960–1427	9.0–9.2
3.020–3.026	16.69475–16.69525	1435–1626.5	9.3–9.5
4.125–4.128	16.80425–16.80475	1645.5–1646.5	10.6–12.7
4.17725–4.17775	25.5–25.67	1660–1710	13.25–13.4
4.20725–4.20775	37.5–38.25	1718.8–1722.2	14.47–14.5
5.677–5.683	73–74.6	2200–2300	15.35–16.2
6.215–6.218	74.8–75.2	2310–2390	17.7–21.4
6.26775–6.26825	108–138	2483.5–2500	22.01–23.12
6.31175–6.31225	149.9–150.05	2655–2900	23.6–24.0
8.291–8.294	156.52475–156.52525	3260–3267	31.2–31.8
8.362–8.366	156.7–156.9	3332–3339	36.43–36.5
8.37625–8.38675	162.0125–167.17	3345.8–3358	Above 38.6
8.41425–8.41475	167.72–173.2	3500–4400	
12.29–12.293	240–285	4500–5150	
12.51975–12.52025	322–335.4	5350–5460	

Note: Certain frequency bands listed in Table 7.1-2 and above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

References, definitions and limits, continued

Table 7.1-3: FCC restricted frequency bands

MHz	MHz	MHz	GHz
0.090–0.110	16.42–16.423	399.9–410	4.5–5.15
0.495–0.505	16.69475–16.69525	608–614	5.35–5.46
2.1735–2.1905	16.80425–16.80475	960–1240	7.25–7.75
4.125–4.128	25.5–25.67	1300–1427	8.025–8.5
4.17725–4.17775	37.5–38.25	1435–1626.5	9.0–9.2
4.20725–4.20775	73–74.6	1645.5–1646.5	9.3–9.5
6.215–6.218	74.8–75.2	1660–1710	10.6–12.7
6.26775–6.26825	108–121.94	1718.8–1722.2	13.25–13.4
6.31175–6.31225	123–138	2200–2300	14.47–14.5
8.291–8.294	149.9–150.05	2310–2390	15.35–16.2
8.362–8.366	156.52475–156.52525	2483.5–2500	17.7–21.4
8.37625–8.38675	156.7–156.9	2690–2900	22.01–23.12
8.41425–8.41475	162.0125–167.17	3260–3267	23.6–24.0
12.29–12.293	167.72–173.2	3332–3339	31.2–31.8
12.51975–12.52025	240–285	3345.8–3358	36.43–36.5
12.57675–12.57725	322–335.4	3600–4400	Above 38.6
13.36–13.41			

7.1.2 Test summary

Verdict	Pass		
Test date	October 15, 2025	Temperature	23 °C
Tested by	Tarek Elkholy	Air pressure	986 mbar
Test location	Cambridge	Relative humidity	42 %

7.1.3 Observations, settings and special notes

- Only radiated spurious emissions within restricted bands were evaluated.
- As part of the current assessment, the test range of 9 kHz to 10th harmonic has been fully considered and compared to the actual frequencies utilized within the EUT. Since the EUT contains a transmitter in the GHz range, the EUT has been deemed compliant without formal testing in the 9 kHz to 30 MHz test range, therefore formal test results (tabular data and/or plots) are not provided within this test report.
- EUT was set to transmit with 100 % duty cycle. The EUT was transmitting on all MIMO chains simultaneously.
- Radiated measurements were performed at a distance of 3 m.
- The fundamental signals of the 5GNR was shown in the plots. The fundamental signals of the Wi-Fi 2.4 and 5 GHz were notched out.

Spectrum analyser settings (Measurements within restricted bands)

Resolution bandwidth:	Measurements below 1 GHz: 100 kHz Peak or 120 kHz Q-Peak
Video bandwidth:	Measurements below 1 GHz: 300 kHz
Detector mode:	Peak or Q-Peak
Trace mode:	Max Hold

Spectrum analyser settings (Measurements within restricted bands above 1 GHz)

Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Detector mode:	RMS
Trace mode:	Average

7.1.4 Test data

Table 7.1-4: Radiated field strength measurement results, FCC Part 27, 5G NR

Channel, MHz	Frequency, MHz	Average Field strength, dBμV/m		Margin, dB
		Measured	Limit	
3544.98	7087.200	61.00	82.23	21.23
	10634.000	61.00	82.23	21.23
	14176.400	52.00	82.23	30.23
	17724.400	55.20	82.23	27.03

Notes: Field strength includes correction factor of antenna, cable loss, amplifier, and attenuators where applicable.

Table 7.1-5: Radiated field strength measurement results, FCC 15.247, Wi-Fi 2.4 GHz and 5 GHz

Channel, MHz	Frequency, MHz	Peak Field strength, dBμV/m		Margin, dB	Average Field strength, dBμV/m		Margin, dB
		Measured	Limit		Measured	Limit	
2412 and 5260	1190.000	56.00	74.00	18.00	28.70	54.00	25.30
	1374.500	57.80	74.00	16.20	37.80	54.00	16.20
	1393.500	49.48	74.00	24.52	29.75	54.00	24.25
	2208.250	46.69	74.00	27.31	36.29	54.00	17.71
	3776.000	53.33	74.00	20.67	29.33	54.00	24.67
	3986.500	59.80	74.00	14.20	37.60	54.00	16.40
	4782.000	54.90	74.00	19.10	39.50	54.00	14.50
	8384.000	47.59	74.00	26.41	32.62	54.00	21.38
	11889.600	54.00	74.00	20.00	48.00	54.00	6.00

Notes: Field strength includes correction factor of antenna, cable loss, amplifier, and attenuators where applicable.

Test data, continued

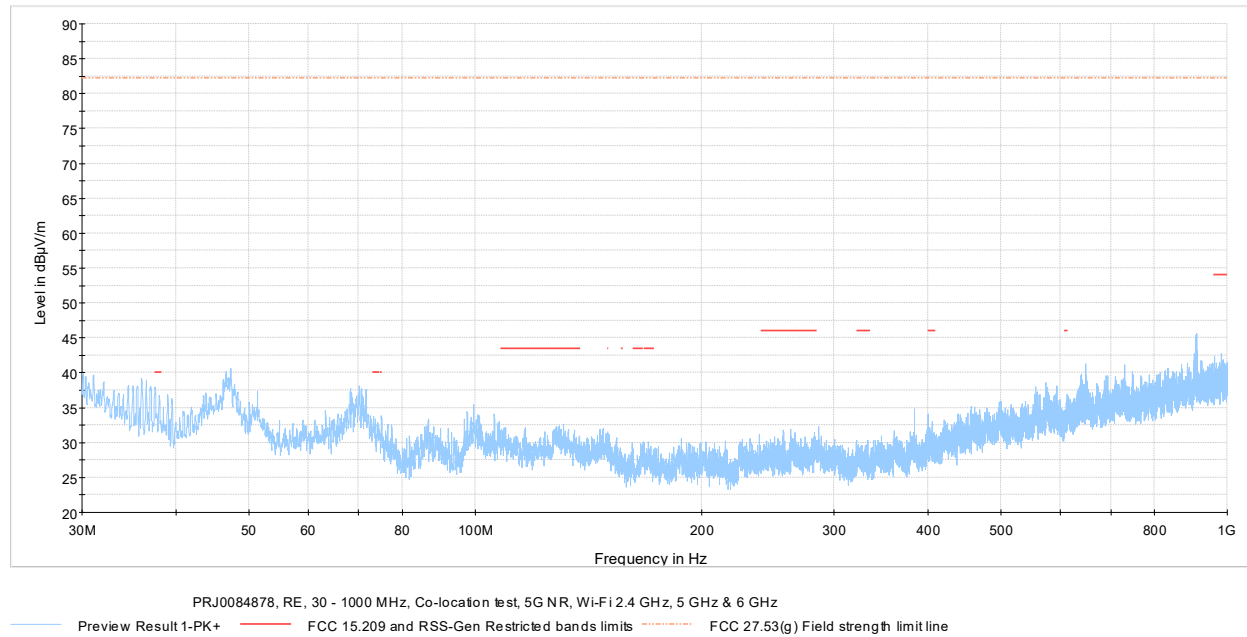


Figure 7.1-1: Radiated spurious emissions, 30 – 1000 MHz

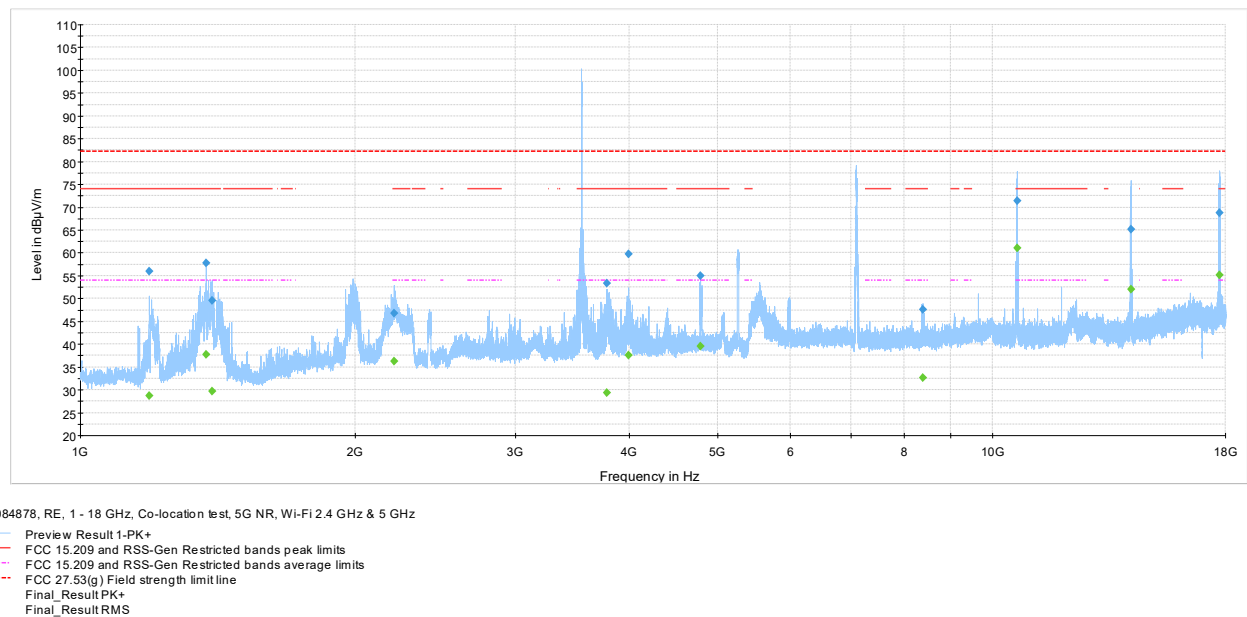
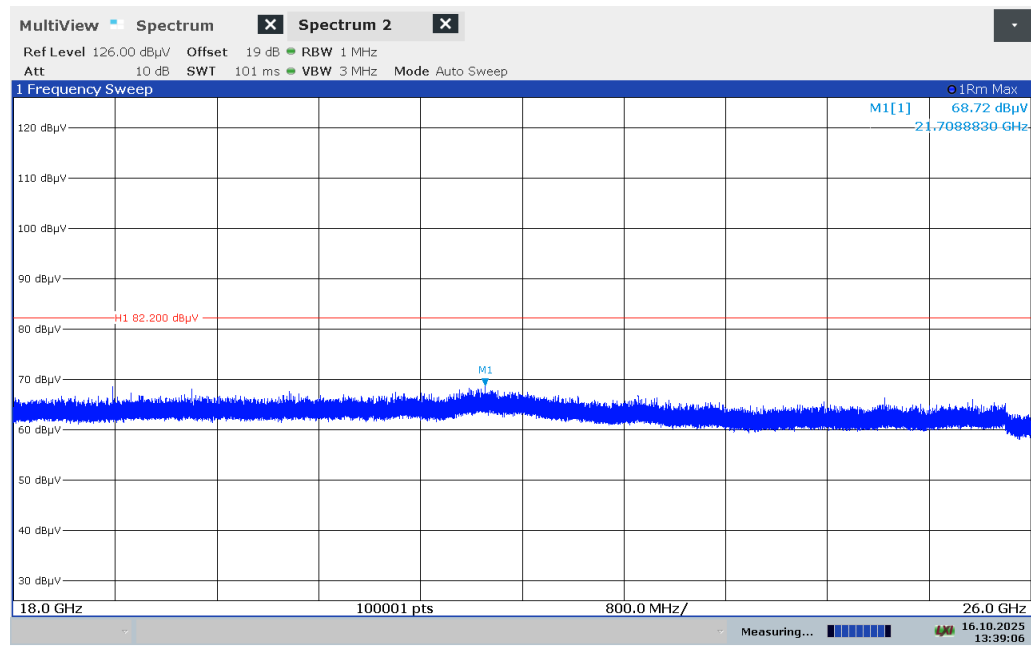


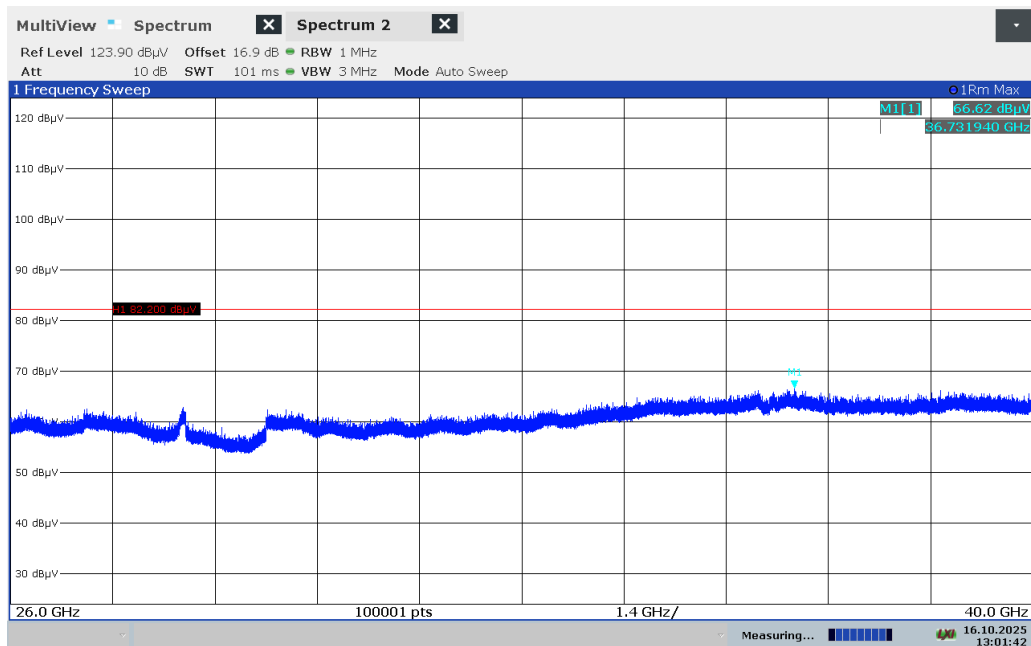
Figure 7.1-2: Radiated spurious emissions, 1 – 18 GHz

Test data, continued



13:39:07 16.10.2025

Figure 7.1-3: Radiated spurious emissions, 18 – 26 GHz



13:01:43 16.10.2025

Figure 7.1-4: Radiated spurious emissions, 26 – 40 GHz

7.1.5 Setup photos



Figure 7.1-5: Radiated spurious emissions – below 1 GHz

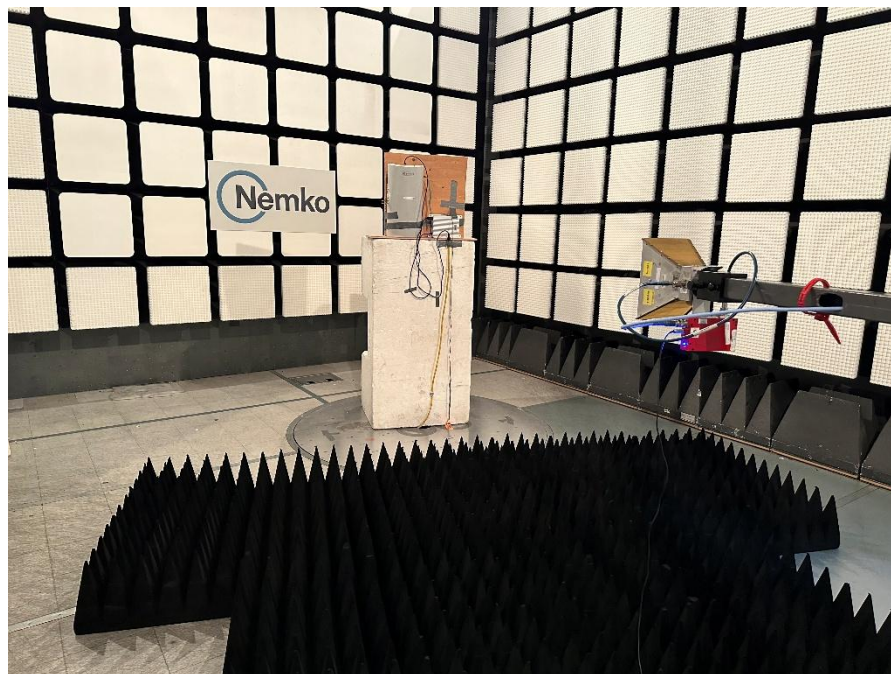


Figure 7.1-6: Radiated spurious emissions – above 1 GHz

End of the test report