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RADIO TEST REPORT

Report ID:
REP066649

Project number:
PRJ0063440

Type of assessment:
Final product testing

Applicant:
Dell Inc.

Product:
5G NR Remote Radio Unit 4TX 4RX 40W-per-TX

Model:
RR4T4RA

FCC identifier:
FCC ID: E2K-DRU77440

Specification:

- FCC 47 CFR Part 27

Date of issue: November 22, 2024

Kevin Rose, EMC/RF Specialist
Tested by

Andrey Adelberg, Senior RF/EMC Specialist
Reviewed by

Adelberg
Signature

Lab and test locations

Company name	Nemko Canada Inc.		
Facilities	***Ottawa site:*** **303 River Road** **Ottawa, Ontario** **Canada** **K1V 1H2** **Tel: +1 613 737 9680** **Fax: +1 613 737 9691**	*Montréal site:* 292 Labrosse Avenue Pointe-Claire, Québec Canada H9R 5L8 Tel: +1 514 694 2684 Fax: +1 514 694 3528	*Cambridge site:* 1-130 Saltsman Drive Cambridge, Ontario Canada N3E 0B2 Tel: +1 519 650 4811

Test site registration	**Organization**	**Recognition numbers and location**
	FCC/ISED	FCC: CA2040; IC: 2040A-4 (Ottawa); FCC: CA2041; IC: 2040G-5 (Montreal); CA0101 (Cambridge)
Website	www.nemko.com	

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.

Copyright notification

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Section 1. Report summary

1.1 Test specifications

FCC 47 CFR Part 27	Miscellaneous wireless communications services

1.2 Test methods

ANSI C63.26 v2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

1.3 Exclusions

None

1.4 Statement of compliance

In the configuration tested, the EUT was found compliant.

Testing was performed against all relevant requirements of the test standard except as noted in section 1.4 below. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

See "Summary of test results" for full details.

1.5 Test report history

Table 1.5-1: *Test report revision history*

Revision #	Date of issue	Details of changes made to test report
REP066649	November 22, 2024	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

None

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 ±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	Dell Inc.
Applicant address	One Dell Way, MS: PS4-30, Round Rock, TX, 78682-1234, United States
Manufacturer name	Dell Technologies
Manufacturer address	1000 Innovation Drive, Suite 300, Ottawa, Ontario, Canada, K2K 3E7

4.3 EUT information

Product description	5G NR Remote Radio Unit 4TX 4RX 40W-per-TX Operating Band: (3700 – 3980) MHz
Model	RR4T4RA
Model name	DRU77440
Serial number	CA0XNXJ2X1A0047B00JZX08
Part number	N/A
Power supply requirements	DC: 48 V
Product description and theory of operation	5G NR Remote Radio Unit Number of TX/RX: 4 Conducted power per TX: 40 W Operating Band: (3700 – 3980) MHz Number of Carriers: 1 Numerology: 30 kHz Channel BW: 100 MHz Modulation schemes: QPSK, 16 QAM, 64 QAM, 256 QAM

4.4 Radio technical information

Frequency band	3700–3980 MHz
Frequency Min	3750 MHz
Frequency Max	3930 MHz
RF power Max (W), Conducted [EIRP]	40 W / 46.0 dBm per TX
Type of modulation	QPSK, 16 QAM, 64 QAM, 256 QAM
Emission classification	100MD7W
Antenna information	Antenna is not supplied with the product, the EIRP and RF Exposure compliance is addressed at the time of licensing.

4.5 EUT setup details

4.5.1 Radio exercise details

Operating conditions	SW build: 1106. SW build version: 1.7.3.0. The following 3GPP waveforms were driven through the optical fronthaul interface by the DU Emulator Keysight S5040A: TM 1_1 QPSK ; TM 3_2 16 QAM ; TM 3_1 64 QAM ; TM 3_1a 256 QAM.
Transmitter state	Transmitter set into continuous mode.

4.5.2 EUT setup configuration

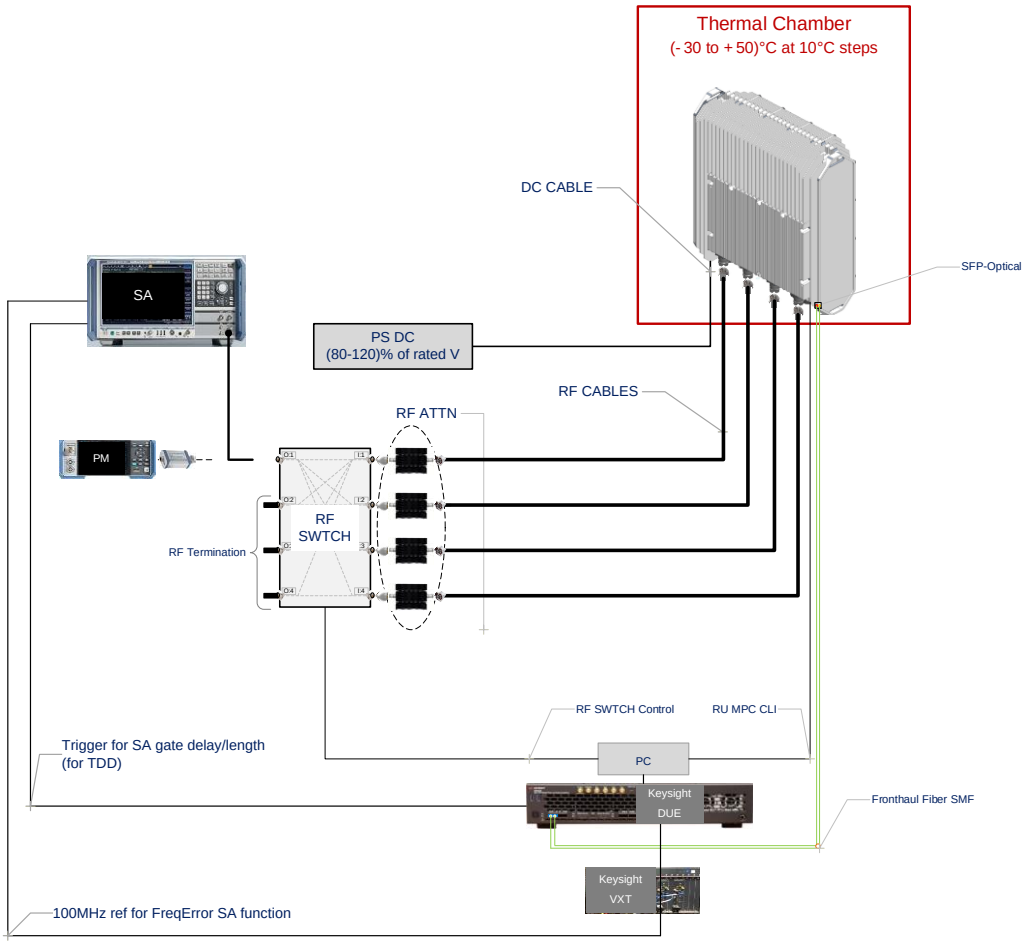


Figure 4.5-1: *block diagram*

Section 5. Summary of test results

5.1 Testing location

Test location (s)	Ottawa

5.2 Testing period

Test start date	October 16, 2024	Test end date	October 17, 2024

5.3 Sample information

Receipt date	October 16, 2024	Nemko sample ID number(s)	PRJ00634400001

5.4 FCC test results

Table 5.4-1: *FCC Part 25 results*

Part	Test description	Verdict
27.53 (l) (1), 2.1046	Occupied bandwidth	Pass
27.50 (j) (2)	RF Power - Average Maximum Conducted	Pass
27.53 (l) (1)	Spurious emissions at the antenna terminal	Pass
27.53 (l) (1)	Field strength of spurious emissions	Pass
27.50 (j) (4)	CCDF	Pass
27.54	Frequency tolerance	Pass

Notes: [1] Measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, was performed with the supply voltage varied between 85 % and 115 % of the nominal rated supply voltage. No noticeable output power variation was observed

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.
3 m EMI test chamber	TDK	SAC-3	FA002047	1 year	January 18, 2025
Flush mount turntable	Sunol	FM2022	FA002082	—	NCR
Controller	Sunol	SC104V	FA002060	—	NCR
Antenna mast	Sunol	TLT2	FA002061	—	NCR
61505 AC/DC programmable source	Chroma	61509	FA003036	—	NCR
Receiver/spectrum analyzer	Rohde & Schwarz	ESU 40	FA002071	1 year	March 7, 2025
Horn (1–18 GHz)	ETS Lindgren	3117	FA002840	1 year	March 8, 2025
Preamp (1–18 GHz)	ETS Lindgren	124334	FA002877	1 year	November 18, 2024
Bilog antenna (20–3000 MHz)	Sunol	JB3	FA002108	1 year	March 27, 2025
Horn antenna (18–40 GHz)	EMCO	3116	FA001847	1 year	May 21, 2025
Signal and Spectrum Analyzer	Rohde & Schwarz	FSW50	FA003267	1 year	November 6, 2024
Signal and Spectrum Analyzer	Rohde & Schwarz	FSW26	Dell	2 year	September 13, 2025
Attenuator	Narda	769-20	FA001394	—	VOU
Attenuator	Narda	768-10	9707	—	VOU
50 Ω coax cable	Carlisle	WHU18-1818-072	FA002391	1 year	October 18, 2025
50 Ω coax cable	Huber+Suhner	104B11NX2/11000	FA003441	1 year	October 18, 2025

Notes: NCR - no calibration required, VOU - verify on use

Table 6.1-2: *Automation software details*

Test description	Manufacturer of Software	Details
Radiated Spurious Emissions	Rohde & Schwarz	EMC32, Software for EMC Measurements, Version 11.20.00

6.2 Measurement Uncertainty

Table 6.2-3: *Measurement uncertainty calculations based on equipment list*

Measurement	Measurement uncertainty, ±dB
Radiated spurious emissions (30 MHz to 1 GHz)	5.8
Radiated spurious emissions (1 GHz to 6 GHz)	4.7
Radiated spurious emissions (6 GHz to 18 GHz)	5.0
RF Output power measurement using Spectrum Analyzer	0.85
Conducted spurious emissions	1.13
Other antenna port measurements	0.94

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 FCC 2.1049 Occupied Bandwidth

7.1.1 References, definitions and limits

FCC Part 27.53 (l) (1)

For base station operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (l)(1) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

7.1.2 Test summary

Verdict	Pass		
Test date	October 16, 2024	Temperature	21 °C
Tested by	Kevin Rose	Air pressure	1003 mbar
Test location	Ottawa	Relative humidity	38 %

7.1.3 Observations, settings and special notes

Spectrum analyser settings:

Resolution bandwidth:	1-5% of OBW
Video bandwidth:	≥3 × RBW
Detector mode:	Peak
Trace mode:	Max Hold

7.1.4 Test data

Table 7.1-1: *26 dB bandwidth results Channel 0*

Frequency, MHz	Modulation	26 dB occupied bandwidth, MHz
3750	QPSK	100.67
3750	16Qam	100.64
3750	64Qam	100.68
3750	256Qam	100.69
3840	QPSK	100.61
3840	16Qam	100.51
3840	64Qam	100.58
3840	256Qam	100.55
3930	QPSK	100.59
3930	16Qam	100.54
3930	64Qam	100.58
3930	256Qam	100.59

Table 7.1-2: *26 dB bandwidth results Channel 1*

Frequency, MHz	Modulation	26 dB occupied bandwidth, MHz
3750	QPSK	100.65
3750	16Qam	100.63
3750	64Qam	100.68
3750	256Qam	100.69
3840	QPSK	100.56
3840	16Qam	100.54
3840	64Qam	100.58
3840	256Qam	100.58
3930	QPSK	100.57
3930	16Qam	100.53
3930	64Qam	100.60
3930	256Qam	100.58

Table 7.1-3: *26 dB bandwidth results Channel 2*

Frequency, MHz	Modulation	26 dB occupied bandwidth, MHz
3750	QPSK	100.69
3750	16Qam	100.65
3750	64Qam	100.62
3750	256Qam	100.68
3840	QPSK	100.61
3840	16Qam	100.53
3840	64Qam	100.57
3840	256Qam	100.59
3930	QPSK	100.61
3930	16Qam	100.54
3930	64Qam	100.56
3930	256Qam	100.62

Table 7.1-4: *26 dB bandwidth results Channel 3*

Frequency, MHz	Modulation	26 dB occupied bandwidth, MHz
3750	QPSK	100.65
3750	16Qam	100.61
3750	64Qam	100.71
3750	256Qam	100.68
3840	QPSK	100.63
3840	16Qam	100.55
3840	64Qam	100.58
3840	256Qam	100.61
3930	QPSK	100.55
3930	16Qam	100.53
3930	64Qam	100.58
3930	256Qam	100.59

Test data, continued

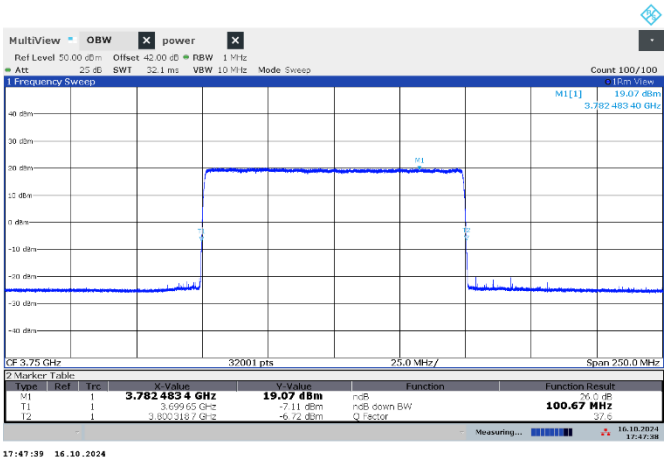


Figure 7.1-1: *26 dB bandwidth on low channel sample*

Figure 7.1-2: *26dB bandwidth on mid channel sample*

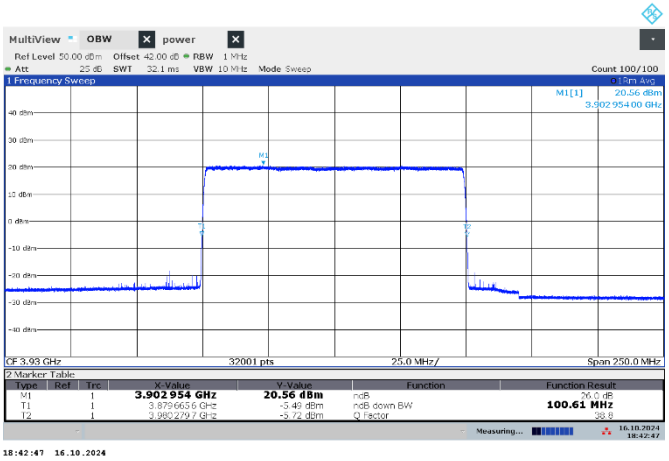


Figure 7.1-3: *26 dB bandwidth on high channel sample*

7.2 FCC 27.50 (j) (2) and (4) RF Power - Average Maximum Conducted and CCDF

7.2.1 References, definitions and limits

FCC §27.50(j)(2)

The power of each fixed or base station transmitting in the 3700-3980 MHz band and situated in any geographic location other than that described in paragraph (j)(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 §27.50(j)(4)

Equipment employed must be authorized in accordance with the provisions of § 27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (j)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

7.2.2 Test summary

Verdict	Pass		
Test date	October 16, 2024	Temperature	21 °C
Tested by	Kevin Rose	Air pressure	1003 mbar
Test location	Ottawa	Relative humidity	38 %

7.2.3 Observations, settings and special notes

Measurement performed with reference to ANSI C63.26 section 5.2.4 for average power of broadband signal using spectrum analyzer.

Spectrum analyser settings

Resolution bandwidth:	1 MHz
Video bandwidth:	>RBW
Detector mode:	RMS
Trace mode:	Max Hold

7.2.4 Test data

Table 7.2-1 *Conducted power results Channel 0*

Frequency, MHz	Modulation	Channel power, dBm	Channel power, W
3750	QPSK	45.65	36.728
3750	16Qam	45.61	36.392
3750	64Qam	45.67	36.898
3750	256Qam	45.62	36.475
3840	QPSK	45.54	35.810
3840	16Qam	45.58	36.141
3840	64Qam	45.61	36.392
3840	256Qam	45.59	36.224
3930	QPSK	45.44	34.995
3930	16Qam	45.49	35.400
3930	64Qam	45.45	35.075
3930	256Qam	45.42	34.834

Table 7.2-2: *Conducted power results Channel 1*

Frequency, MHz	Modulation	Channel power, dBm	Channel power, W
3750	QPSK	45.42	34.834
3750	16Qam	45.63	36.559
3750	64Qam	45.64	36.644
3750	256Qam	45.64	36.644
3840	QPSK	45.64	36.644
3840	16Qam	45.62	36.475
3840	64Qam	45.64	36.644
3840	256Qam	45.66	36.813
3930	QPSK	45.51	35.563
3930	16Qam	45.56	35.975
3930	64Qam	45.50	35.481
3930	256Qam	45.51	35.563

Table 7.2-3: *Conducted power results Channel 2*

Frequency, MHz	Modulation	Channel power, dBm	Channel power, W
3750	QPSK	45.46	35.156
3750	16Qam	45.64	36.644
3750	64Qam	45.66	36.813
3750	256Qam	45.65	36.728
3840	QPSK	45.53	35.727
3840	16Qam	45.53	35.727
3840	64Qam	45.54	35.810
3840	256Qam	45.54	35.810
3930	QPSK	45.25	33.497
3930	16Qam	45.29	33.806
3930	64Qam	45.49	35.400
3930	256Qam	45.49	35.400

Table 7.2-4: *Conducted power results Channel 3*

Frequency, MHz	Modulation	Channel power, dBm	Channel power, W
3750	QPSK	45.91	38.994
3750	16Qam	45.87	38.637
3750	64Qam	45.92	39.084
3750	256Qam	45.93	39.174
3840	QPSK	45.93	39.174
3840	16Qam	45.96	39.446
3840	64Qam	45.98	39.628
3840	256Qam	45.99	39.719
3930	QPSK	45.71	37.239
3930	16Qam	45.76	37.670
3930	64Qam	45.74	37.497
3930	256Qam	45.83	38.282

Test data, continued

Table 7.2-5: *PSD result (worst case measurement result)*

Frequency, MHz	Modulation	PSD, dBm/MHz	MIMO PSD*, dBm/MHz	PSD EIRP Limit, dBm/MHz	Margin, dB
3840	256Qam	35.12	41.14	62.15	21.01

Note: *MIMO PSD was calculated by adding $10\times Log_{10}(4)$ to the single port measurement result.

The margin assumes antenna gain is 0 dBi. The EIRP compliance is address at the time of licensing.

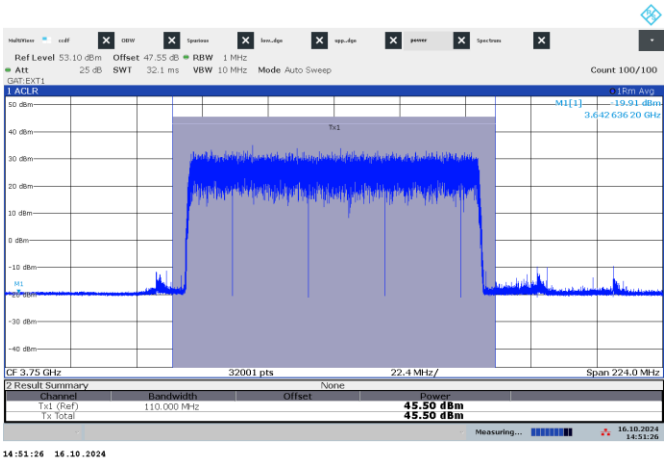


Figure 7.2-1: *Conducted power on low channel sample*

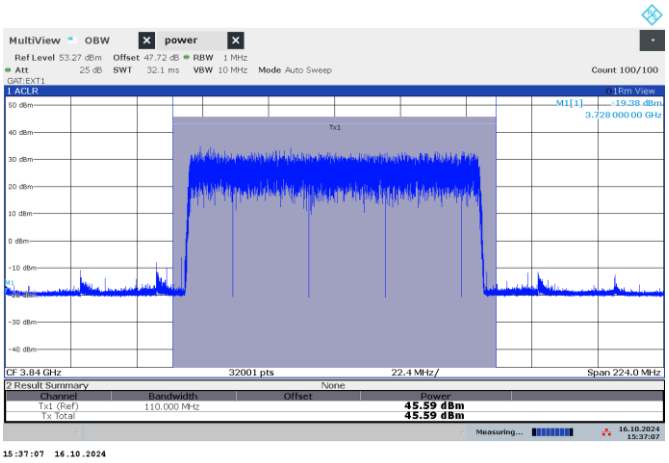


Figure 7.2-2: *Conducted power on mid channel sample*

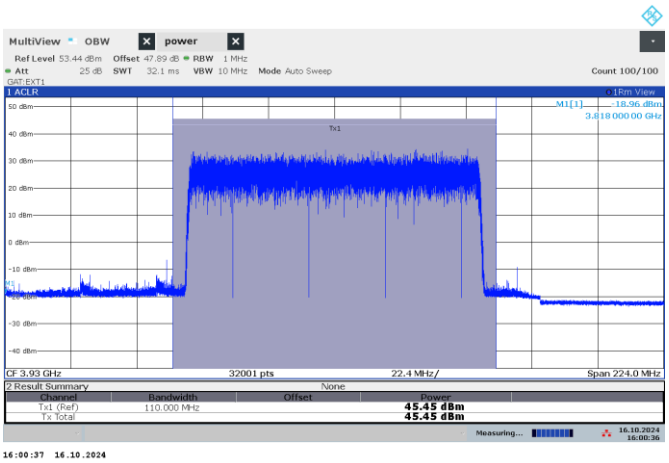


Figure 7.2-3: *Conducted power on high channel sample*

Test data, continued

Table 7.2-6: *CCDF results Channel 3*

Frequency, MHz	CCDF, dB	Limit, dB	Verdict
3750	9.38	13.0	Pass
3840	9.18	13.0	Pass
3930	9.52	13.0	Pass

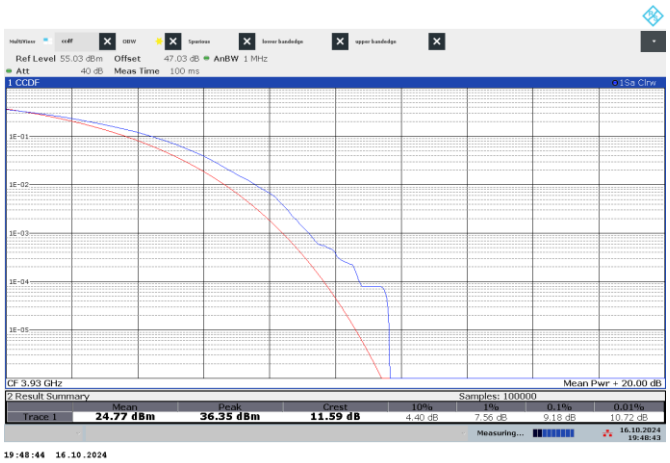


Figure 7.2-4: *CCDF channel sample*

7.3 FCC 27.53 (l) (1) Field strength of spurious emissions

7.3.1 References, definitions and limits

FCC § 27.53 (l) (1)

(1) For base station operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (l)(1) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

7.3.2 Test summary

Verdict	Pass		
Test date	October 17, 2024	Temperature	21 °C
Tested by	Kevin Rose	Air pressure	1003 mbar
Test location	Ottawa	Relative humidity	41 %

7.3.3 Observations, settings and special notes

For Conducted Emissions in the antenna port the limit is -19 dBm/MHz for 4xTX MIMO (as per FCC KDB 662911).
Spectrum analyser settings for conducted spurious emissions measurements 30 MHz – 40 GHz:
Measuring distance below 18 GHz was 3 m and above 18 GHz was 1 m.
Channel 3 and QPSK was determined to be worst case was used for testing.

Resolution bandwidth	100 kHz
Video bandwidth	300 kHz
Detector mode	Peak
Trace mode	Max Hold

Spectrum analyser settings for conducted spurious emissions measurements 1 GHz – 40 GHz

Resolution bandwidth	1 MHz
Video bandwidth	10 MHz
Detector mode	Peak
Trace mode	Max Hold

Spectrum analyser settings for radiated spurious emissions measurements below 1 GHz:

Resolution bandwidth	120 kHz
Video bandwidth	300 kHz
Detector mode	Peak
Trace mode	Max Hold

Spectrum analyser settings for 1 MHz band edge Power integration

Resolution bandwidth	100 kHz
Video bandwidth	1 MHz
Detector mode	RMS
Trace mode	AVG 100 sweeps

Spectrum analyser settings for radiated spurious emissions measurements above 1 GHz:

Resolution bandwidth	1 MHz
Video bandwidth	3 MHz
Detector mode	Peak
Trace mode	Max Hold

7.3.4 Test data

Table 7.3-1: *Band edge results Channel 3*

Frequency, MHz	Measured , dBm	Limit, dB	Margin, dB
3700	-23.47	-19.0	4.47
3980	-24.10	-19.0	5.10

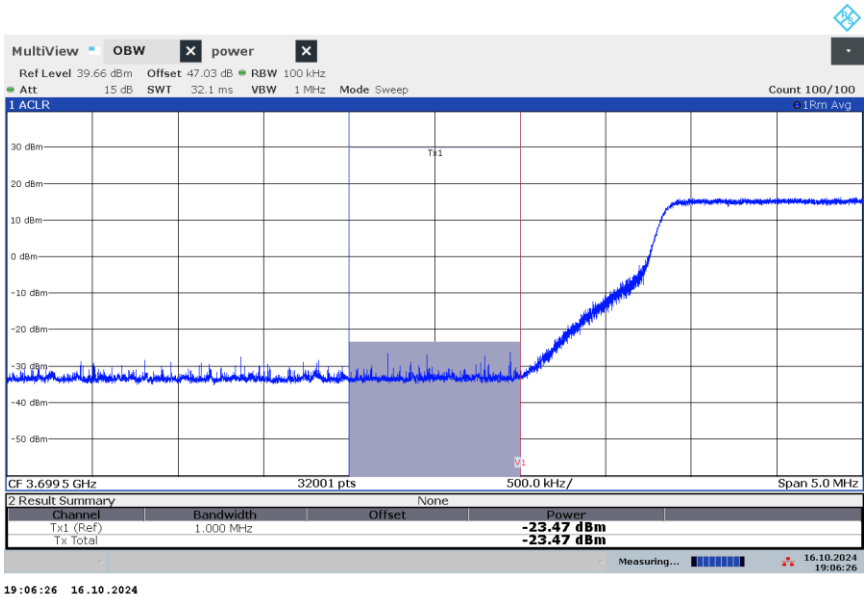


Figure 7.3-1: *Conducted band edge spurious emissions outside assigned bandwidth, low channel*

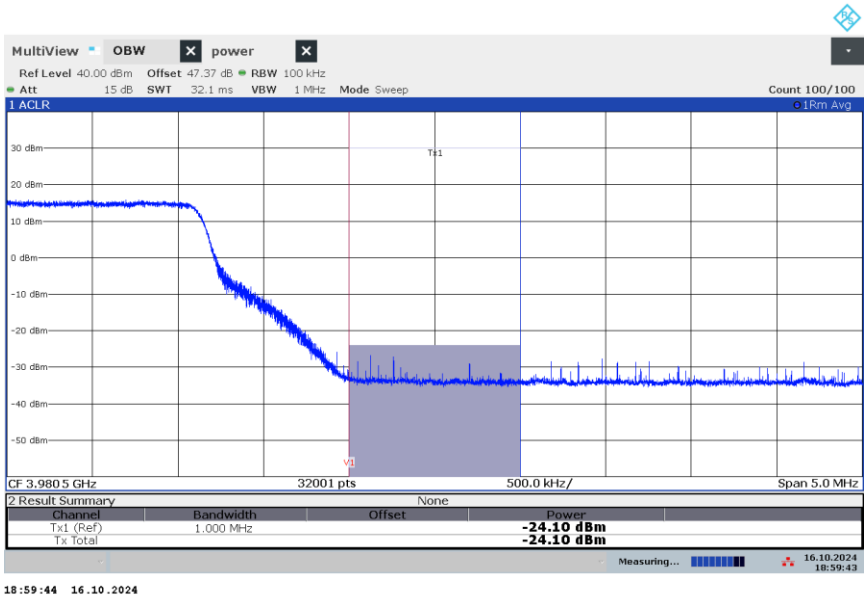


Figure 7.3-2: *Conducted band edge spurious emissions outside assigned bandwidth, high channel*

Test data, continued

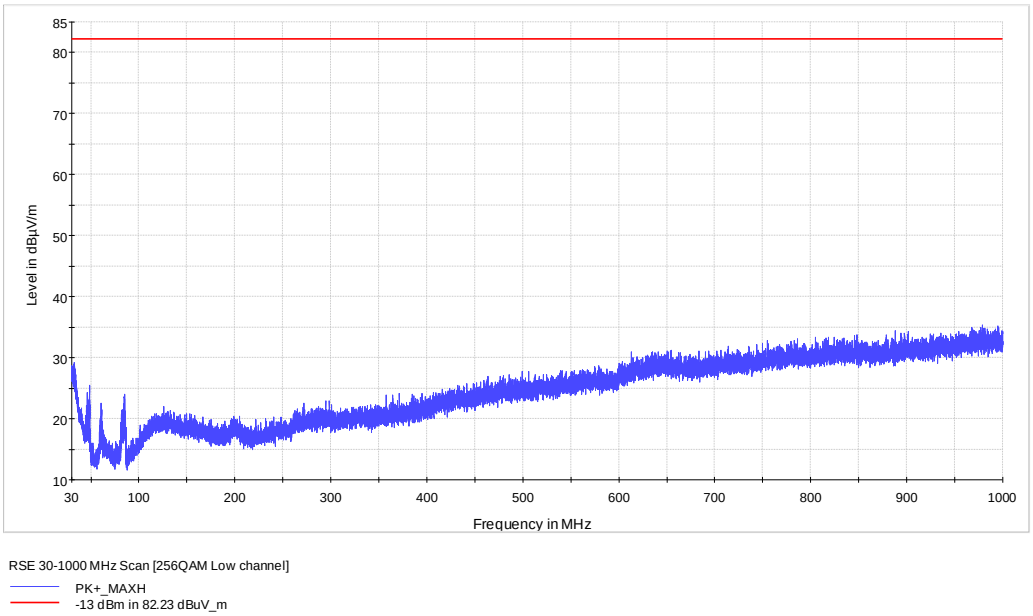


Figure 7.3-3: *Cabinet radiated Spurious emissions below 1 GHz, low channel*

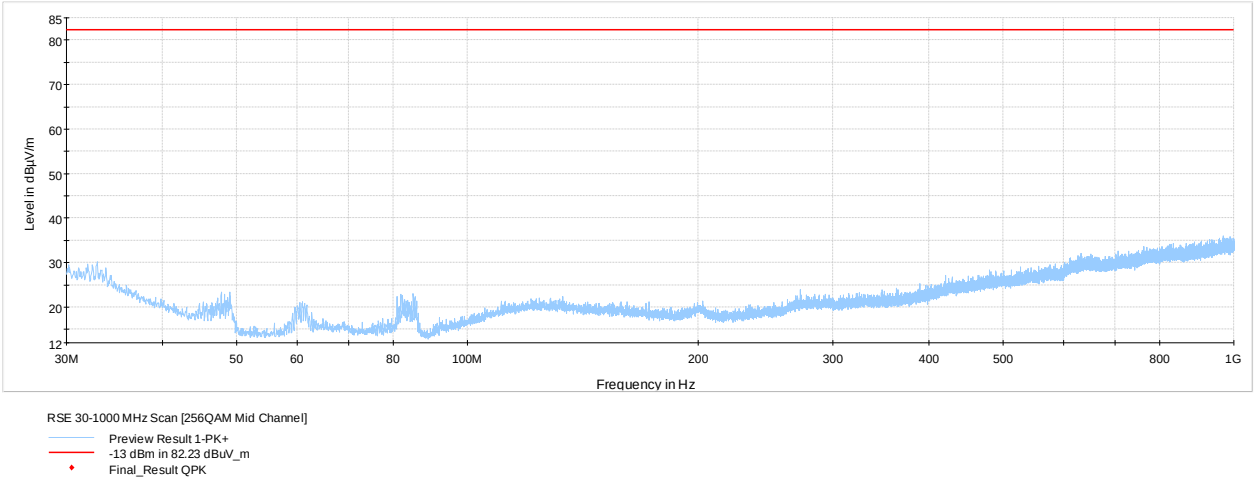


Figure 7.3-4: *Cabinet radiated Spurious emissions below 1 GHz, mid channel*

Test data, continued

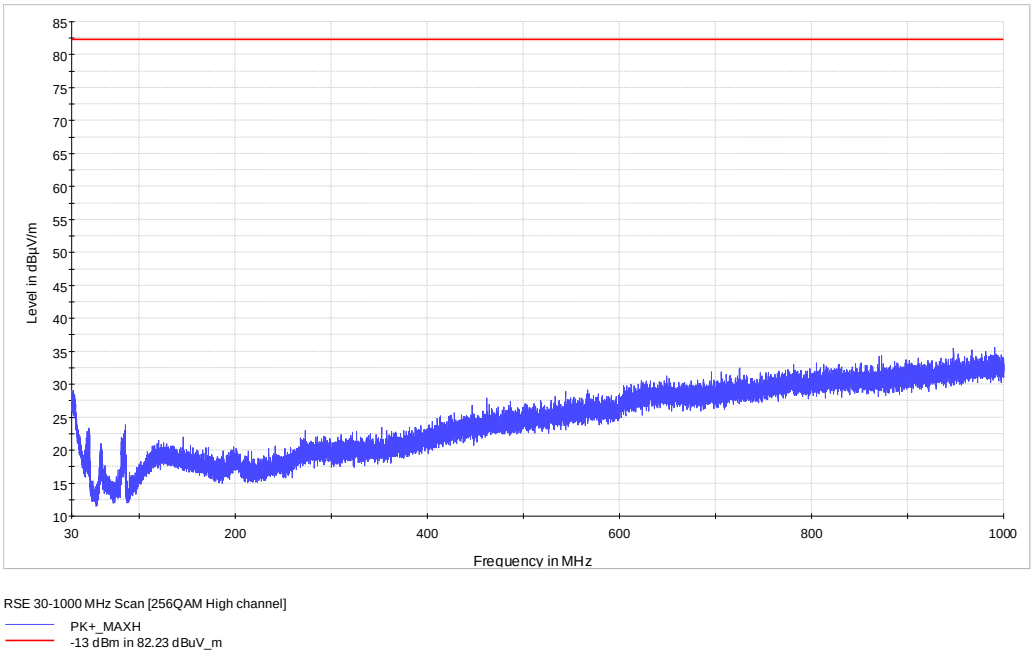


Figure 7.3-5: *Cabinet radiated Spurious emissions below 1 GHz, High channel*

Test data, continued

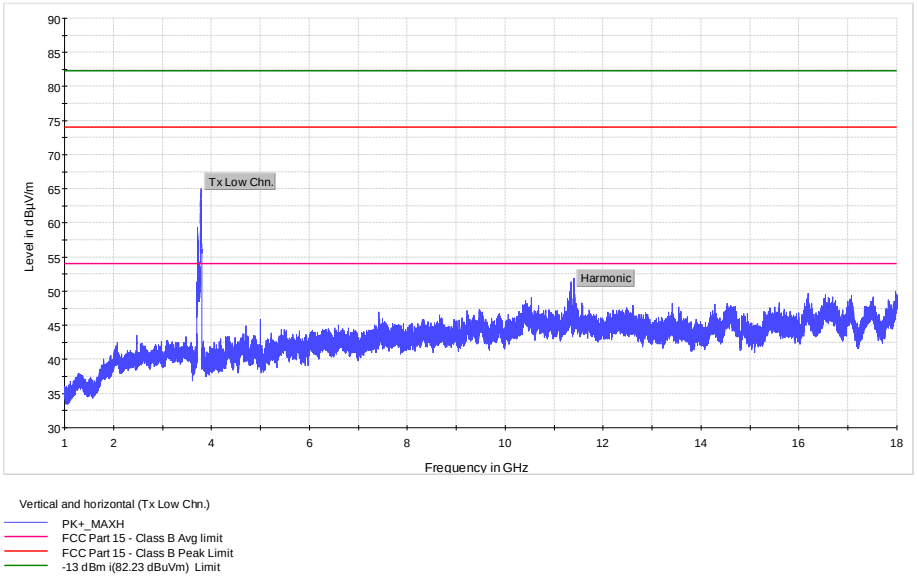


Figure 7.3-6: *Cabinet radiated Spurious emissions 1-18 GHz, low channel*

Note: Only the -13 dBm (82.23 dBµV/m) limit applies to this plot

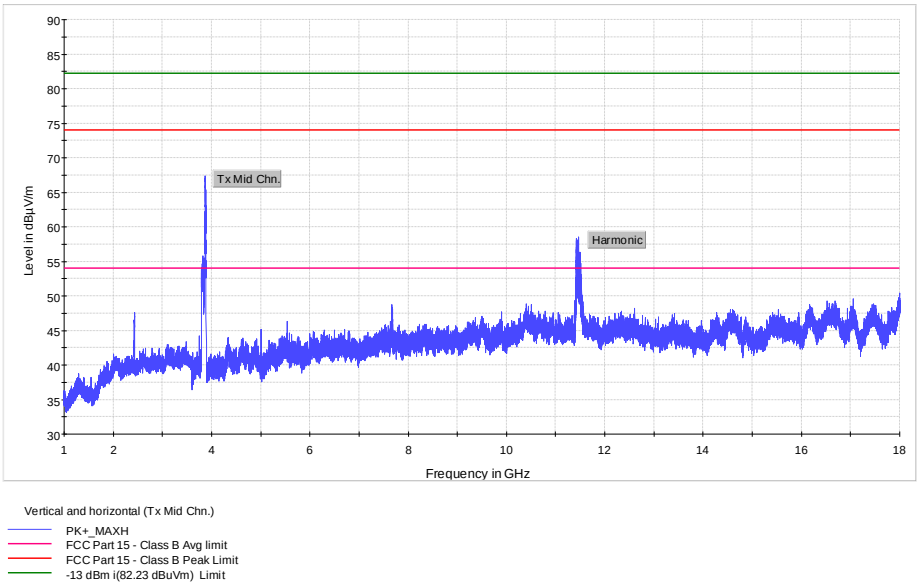


Figure 7.3-7: *Cabinet radiated Spurious emissions 1-18 GHz, mid channel*

Note: Only the -13 dBm (82.23 dBµV/m) limit applies to this plot

Test data, continued

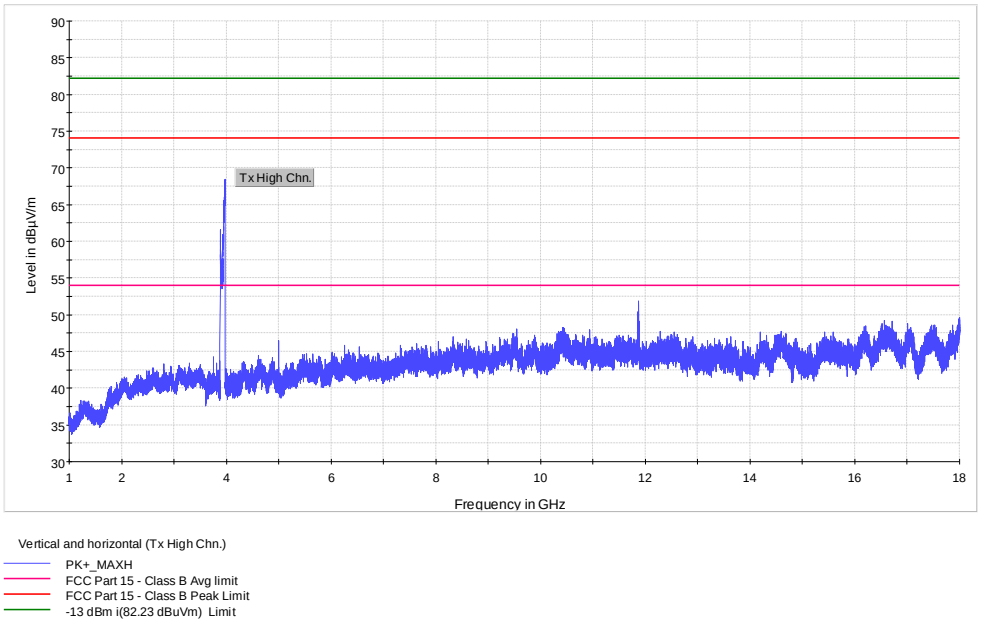


Figure 7.3-8: *Cabinet radiated Spurious emissions 1-18 GHz, high channel*

Note: Only the -13 dBm (82.23 dBµV/m) limit applies to this plot

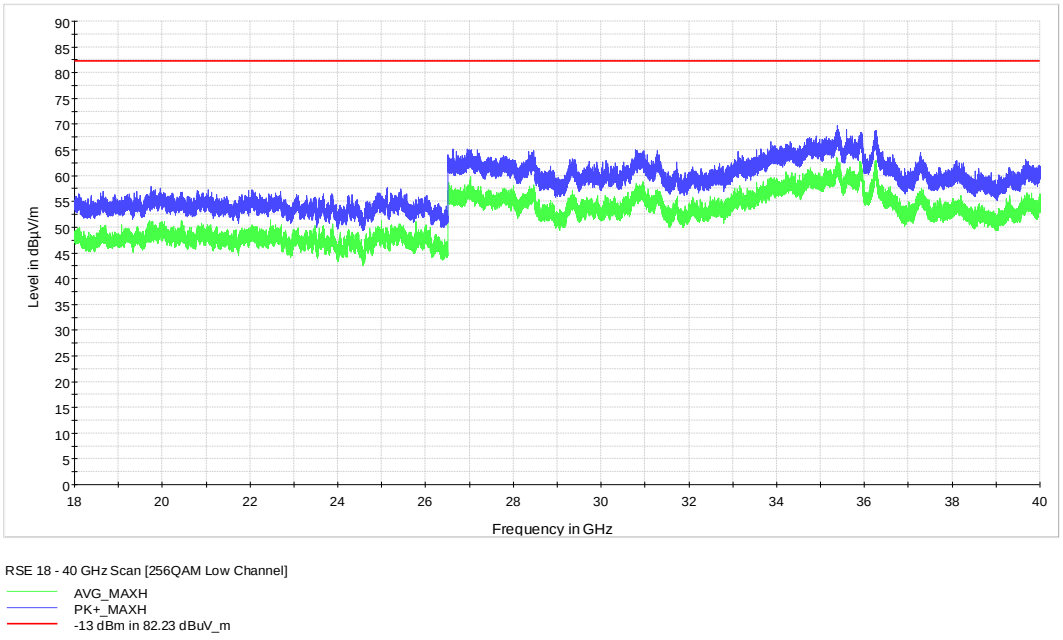


Figure 7.3-9: *Cabinet radiated Spurious emissions 18-40 GHz, low channel*

Note: Only the -13 dBm (82.23 dBµV/m) limit applies to this plot

Test data, continued

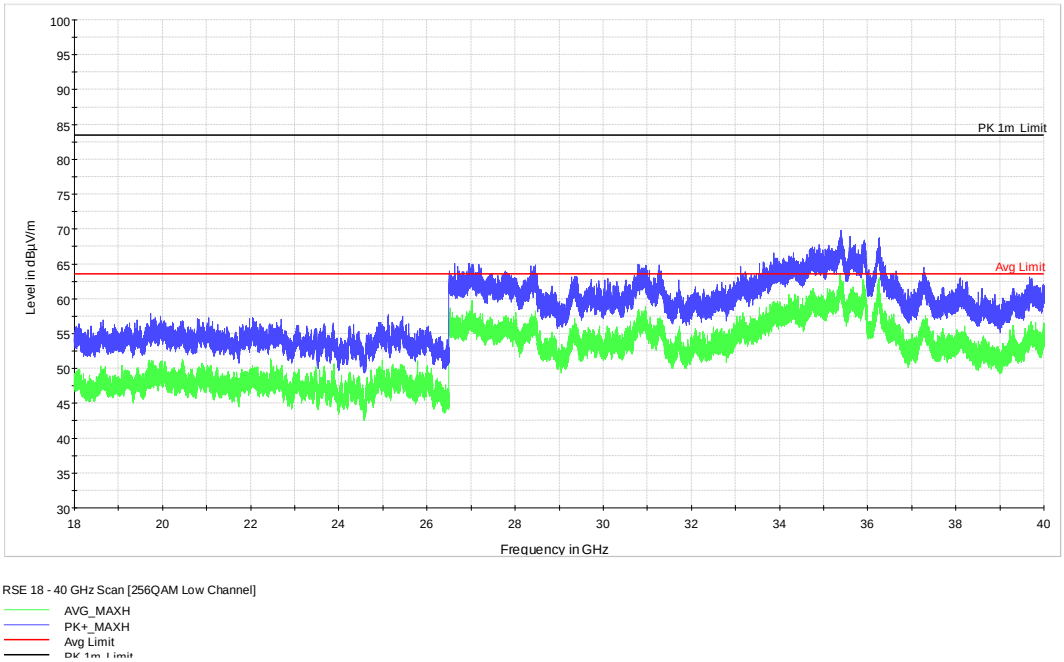


Figure 7.3-10: *Cabinet radiated Spurious emissions 18-40 GHz, mid channel*

Note: Only the -13 dBm (82.23 dBµV/m) limit applies to this plot

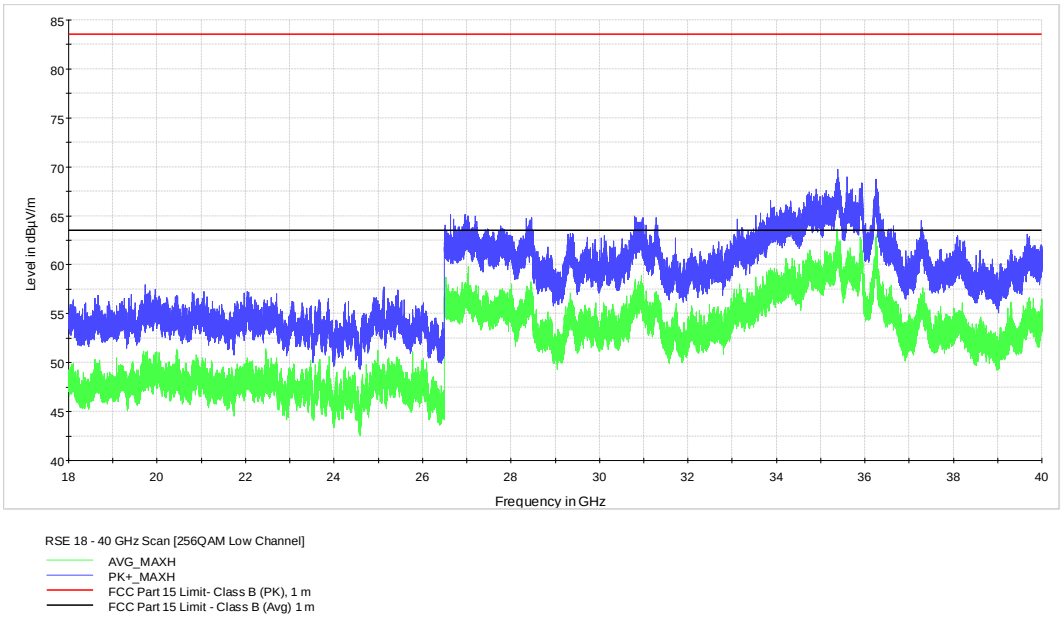


Figure 7.3-11: *Cabinet radiated Spurious emissions 18-40 GHz, high channel*

Note: Only the -13 dBm (82.23 dBµV/m) limit applies to this plot

Test data, continued

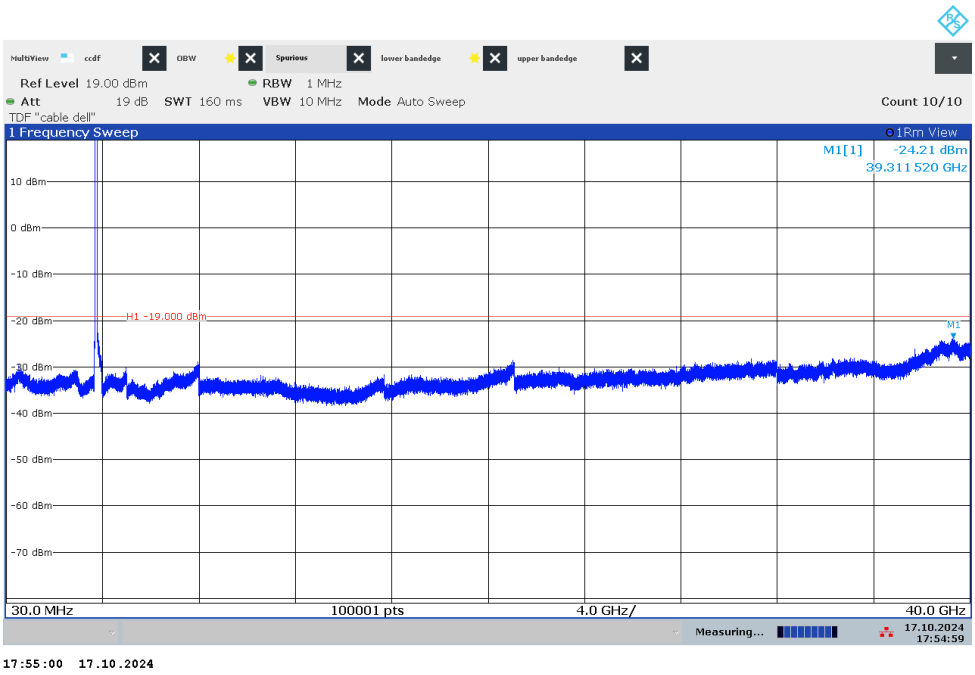


Figure 7.3-12: *Conducted spurious emissions, low channel*

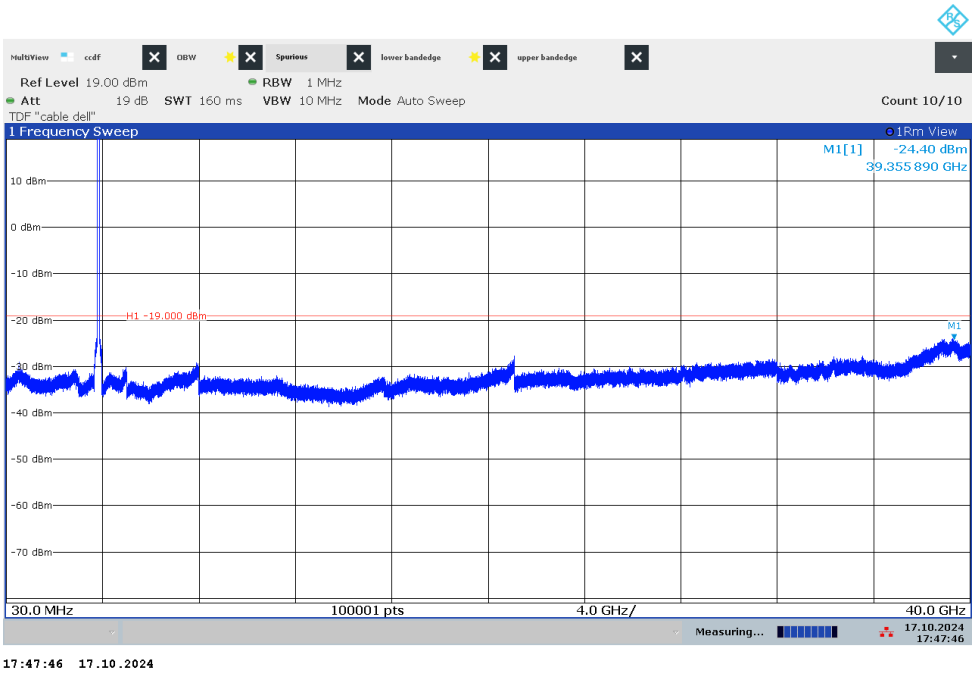


Figure 7.3-13: *Conducted spurious emissions, mid channel*

Test data, continued

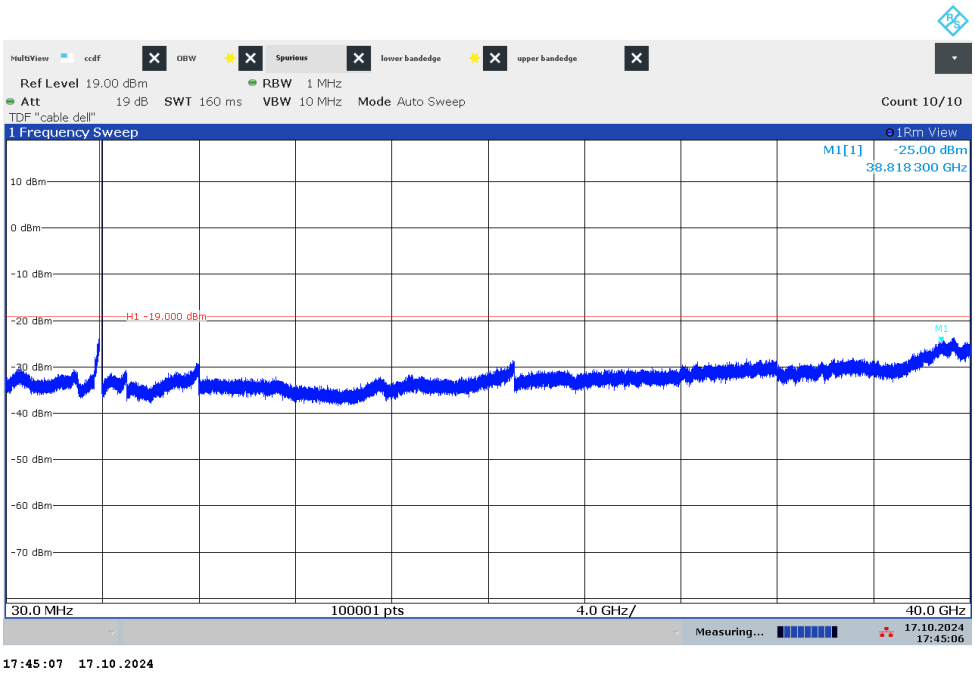


Figure 7.3-14: *Conducted spurious emissions, high channel*

7.4 FCC 27.54 Frequency Stability

7.4.1 References, definitions and limits

FCC §27.54:

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

FCC 2.1055:

(a) The frequency stability shall be measured with variation of ambient temperature as follows:
(1) From −30°C to +50°C for all equipment except that specified in paragraphs (a)(2) and (3) of this section

(b) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10 °C through the range.

(d) The frequency stability shall be measured with variation of primary supply voltage as follows:
(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

3GPP TS 38.141 [1]

± (0.05 ppm + 12 Hz)

7.4.2 Test summary

Verdict	Pass		
Test date	October 17, 2024	Temperature	22 °C
Tested by	Kevin Rose	Air pressure	1003 mbar
Test location	Ottawa	Relative humidity	41 %

7.4.3 Observations, settings and special notes

Frequency stability measurements were performed with reference to ANSI 63.26 section 5.6.3 and section 5.6.5

For Frequency stability, Output Channel 3 has the maximum output power, hence chosen as representative to perform the test.

Spectrum analyser settings
5G NR function was used to perform the testing
1 MHz Band-edge Band Emissions measurements were conducted in parallel to the 5GNR FreqErr function. Results met -19 dBm/MHz 4xTX MIMO limit.

7.4.4 Test data

Table 7.4-1: *Frequency tolerance measurement result – Low channel*

Test conditions	Frequency, GHz	Offset, Hz	3GPP Limit, ±Hz
+50 °C, Nominal	3.75	4.36	199.5
+40 °C, Nominal	3.75	4.60	199.5
+30 °C, Nominal	3.75	-0.90	199.5
+20 °C, +15 %	3.75	-5.19	199.5
+20 °C, Nominal	3.75	5.62	199.5
+20 °C, -15 %	3.75	-0.02	199.5
+10 °C, Nominal	3.75	1.67	199.5
0 °C, Nominal	3.75	-4.28	199.5
−10 °C, Nominal	3.75	1.52	199.5
−20 °C, Nominal	3.75	-6.76	199.5
−30 °C, Nominal	3.75	-4.44	199.5

Table 7.4-2: *Frequency tolerance measurement result – High channel*

Test conditions	Frequency, GHz	Offset, Hz	3GPP Limit, ±Hz
+50 °C, Nominal	3.93	-14.23	208.5
+40 °C, Nominal	3.93	-2.50	208.5
+30 °C, Nominal	3.93	-6.87	208.5
+20 °C, +15 %	3.93	-15.06	208.5
+20 °C, Nominal	3.93	-9.99	208.5
+20 °C, -15 %	3.93	-5.99	208.5
+10 °C, Nominal	3.93	-3.64	208.5
0 °C, Nominal	3.93	-5.81	208.5
−10 °C, Nominal	3.93	-9.83	208.5
−20 °C, Nominal	3.93	-9.28	208.5
−30 °C, Nominal	3.93	-16.29	208.5

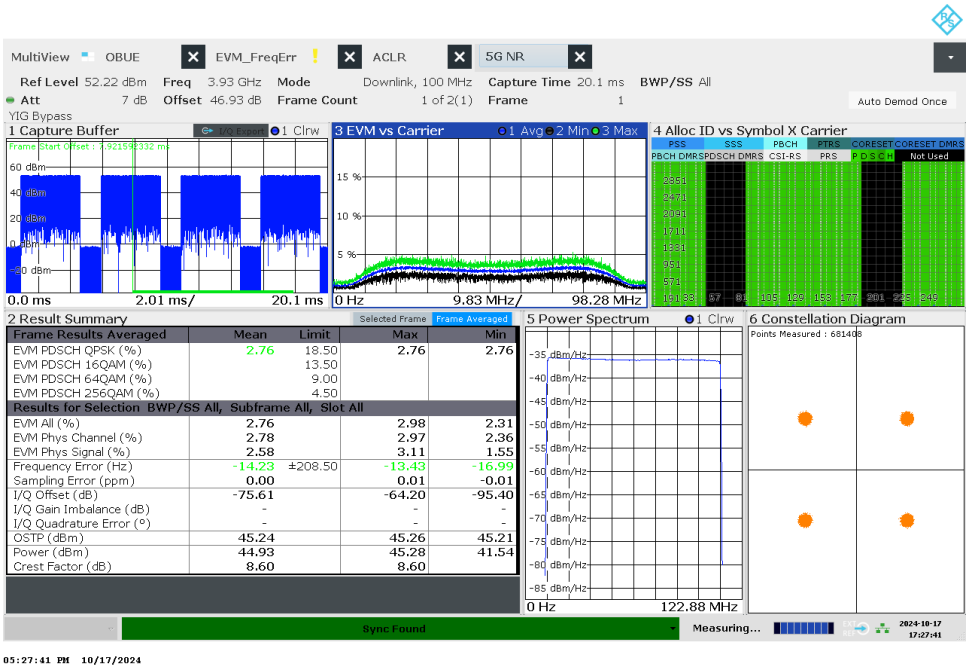
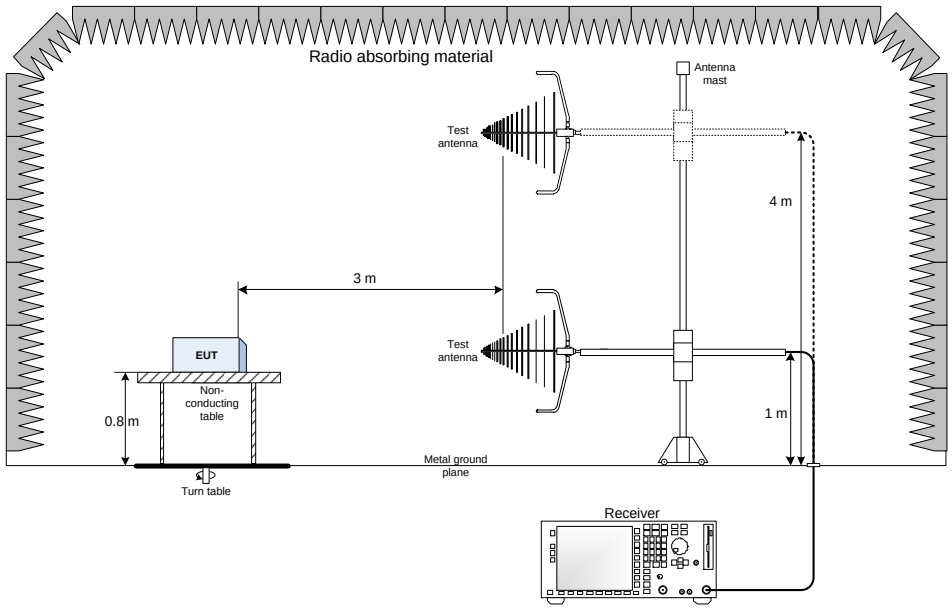


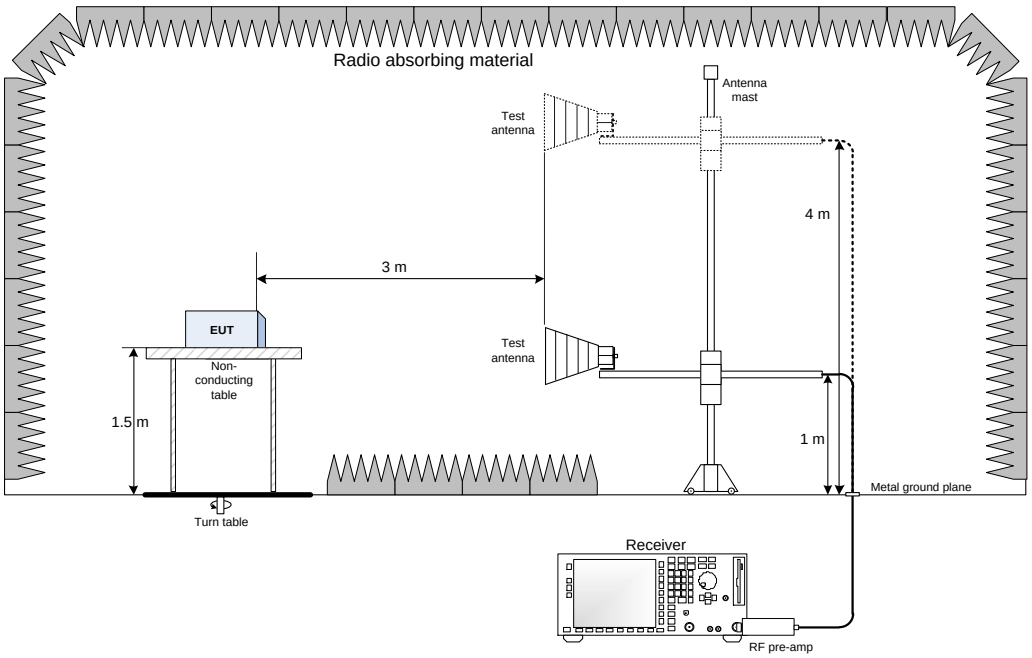
Figure 7.4-1: *Frequency stability sample result*

Section 8. Test setup diagrams

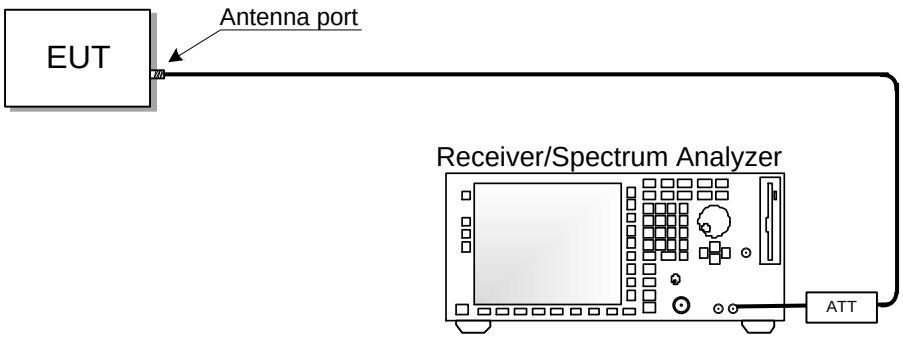
8.1 Radiated emissions set-up for frequencies below 1 GHz



8.2 Radiated emissions set-up for frequencies above 1 GHz



8.3 Antenna port set-up



End of the test report