

TEST REPORT

Report Number: 106347494MIN-003

Project Number: G106347494

**Testing performed on the
DERXXXBF7O
FCC ID: 2ASEQDERXXXBF7O
IC: 24733-DERXXXBF7O**

**to
47 CFR, Part 15. 247:2025
RSS- 247, Issue 4, 2025
RSS-Gen, Issue 5, Amendment 2:2021**

**For
Enkoa System, SL**

Test Performed by:
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1.0 GENERAL DESCRIPTION

Model:	DERXXXBF7O
Type of EUT:	iSWITCH non card DIN rail mounted- WIRELESS energy saver
Intertek Sample ID:	MIN2510061029-002 (Configured for antenna port measurements) MIN2510061029-004 (Configured for radiated measurements)
FCC ID:	2ASEQDERXXXBF7O
IC:	24733-DERXXXBF7O
Related Submittal(s) Grants:	None
Company:	Enkoa System, SL
Customer:	Antonio Cid
Address:	Polígono Erramone 45 20850 Mendaro (Guipúzcoa) Spain
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e-mail:	a.cid@enkoa.com
Test Standards:	☒ 47 CFR, Part 15 Subpart C:2025, §15.247 ☒ RSS-247, Issue 4, 2025 ☒ RSS-Gen, Issue 5, 2021, Amendment 2 ☐ Other
Type of radio:	☒ Stand-alone ☐ Module ☐ Hybrid
Date Sample Submitted:	2025-10-06
Test Work Started:	2025-10-06
Test Work Completed:	2025-12-03
Test Sample Conditions:	☐ Damaged ☐ Poor (Usable) ☒ Good

1.1 Product Description; Test Facility

Product Description:	iSWITCH non card DIN rail mounted- WIRELESS energy saver
Transmitter Type:	☐ FHSS ☒ Digital Modulation ☐ WiFi ☐ Blue Tooth
Permitted Band of Operation:	2.4 GHz – 2.4835 GHz
Operating Frequency Range(s):	2.405 GHz – 2.48 GHz
Number of Channels:	26
Modulation:	O-QPSK
Antenna(s) Info:	Microchip Technology AT86RF231 inverted F antenna. Antenna gain: +3.3 dBi
Power settings:	Internal register value set to 0x0, corresponding to an output power of TX_PWR = 3.0 dBm
Antenna Installation:	☐ User ☐ Professional ☒ Factory
Transmitter power configuration:	☐ Internal battery ☒ External power source ☒ 100-240VAC ☐ 230VAC ☐ 400VAC ☐ █ VDC ☐ Other: █ 0.1-0.05 Amp. ☒ 50Hz ☒ 60Hz Note: All measurements were performed while EUT was powered at 120VAC/60Hz.
Special Test Arrangement:	Per client, the EUT is mounted inside electrical boxes with DIN rail mounting in the vertical position.
Test Facility Accreditation:	A2LA (Certificate No. 1427.01)
Test Methodology:	Measurements performed according to the procedures in ANSI C63.10-2020+Cor1:2023+C63.10a:2024 and FCC 558074 D01 DTS Measurement Guidance

1.2 EUT Configuration

The equipment under test was operated during the measurement under the following conditions:

- ☐ - Standby
- ☒ - Continuous transmissions (modulated signal)
- ☐ - Continuous transmissions (un-modulated signal)
- ☐ - Continuous receiving
- ☐ - Test program (customer specific)
- ☐ - [REDACTED]

Operating modes of the EUT:

No.	Description
1	Test Mode – The EUT transmitted continuously and, per client, was configured to transmit with >98% duty cycle.
2	Test was performed at low channel (2.405 GHz), middle channel (2.440 GHz), and upper channel (2.480 GHz).
3	Per client, Channels Output Power Setting, TX_PWR, was set to 0x0 setting for maximum Tx power of 3.0 dBm. Data rate: 250kbits/sec

Cables:

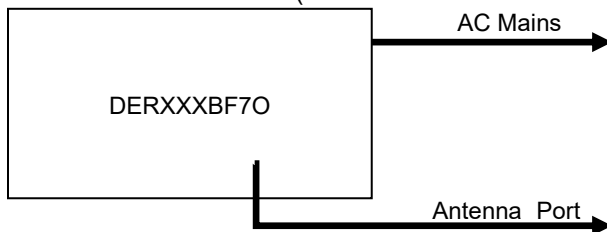
No.	Type	Length	Designation	Note
1	2-wire unshielded	2m	AC Power	

Support equipment/Services:

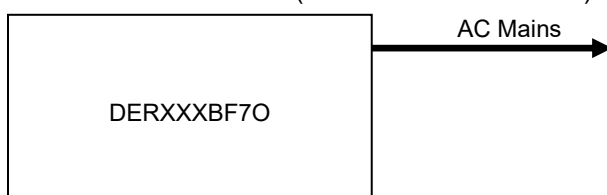
No.	Item	Description
	None	

1.3 EUT Block Diagrams:

EUT MIN2510061029-002 (conducted measurements):



EUT MIN2510061029-004 (radiated measurements):



1.4 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

☒ Normal

Temperature:	+15 to +35 ° C
Humidity:	20-75 %
Atmospheric pressure:	86-106 kPa

☐ Extreme

☐ Temperature:	-20 to +50 ° C
☐ Supply voltage:	85% to +115%

1.5 Measurement uncertainty

Radiated Emissions:

Measurement	Frequency Range	Expanded Uncertainty (k=2)
Radiated Emissions, 3m	9 kHz-30 MHz	3.2 dB
Radiated Emissions, 3m	30-1000 MHz	4.4 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB
Radiated Emissions, 3m	6-18 GHz	4.6 dB
Radiated Emissions, 3m	18-26 GHz	4.7 dB

AC Mains Conducted Emissions:

Measurement	Frequency Range	Expanded Uncertainty (k=2)
AC Line Conducted Emissions	150 kHz - 30 MHz	3.24 dB

Conducted Spurious RF Emissions:

The expanded uncertainty (k = 2) for Conducted Spurious Emissions has been determined to be: ±1.5 dB

1.6 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured emissions reading on the EMI Receiver.

The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

Where: FS = Field Strength in dB(μ V/m)

RA = Receiver Amplitude in dB(μ V)

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB(m^{-1})

AG = Amplifier Gain in dB

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$$RA = 52.0 \text{ dB}\mu\text{V}$$

$$AF = 7.4 \text{ dB/m}$$

$$CF = 1.6 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$FS = 32 \text{ dB}\mu\text{V/m}$$

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$

NF = Net Reading in dB μ V

Example:

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$$

$$UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$$

Conducted Emissions Sample Calculations

The following is how net line-conducted readings were determined:

$$NF = RF + LF + CF + AF$$

Where NF = Net Reading in dB μ V

RF = Reading from receiver in dB μ V

LF = LISN or ISN Correction Factor in dB

CF = Cable Correction Factor in dB

AF = Attenuator Loss Factor in dB

Example:

$$NF = RF + LF + CF + AF = 28.5 + 0.2 + 0.4 + 20.0 = 49.1 \text{ dB}\mu\text{V}$$

2.0 TEST SUMMARY

Referring to the performance criteria and the operating mode during the tests specified in this report, the equipment complies with the requirements according to the following standards.

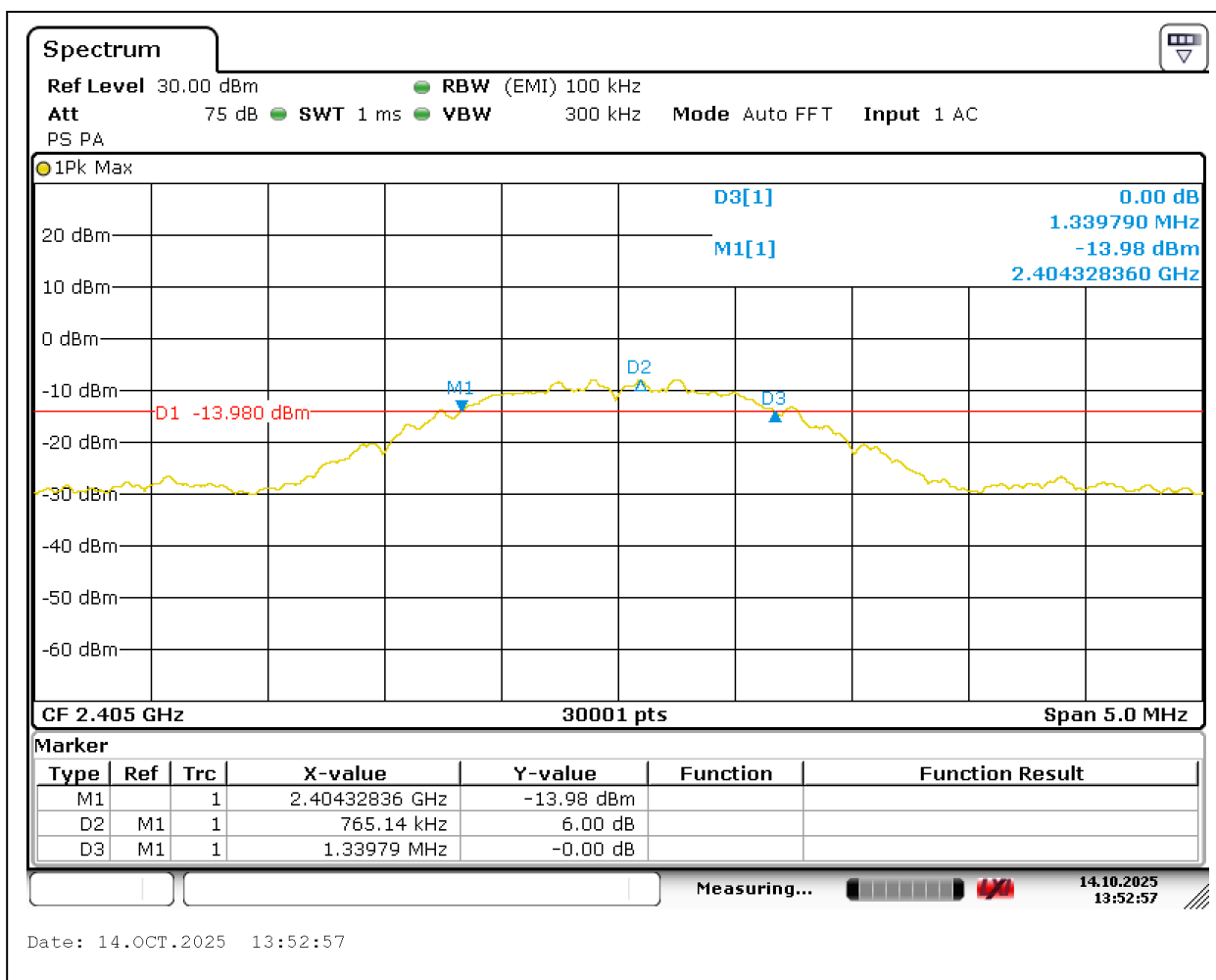
TEST SPECIFICATION	TEST PARAMETERS	RESULT
15.247(a) / RSS-247 6.3.1	6dB emissions bandwidth of the digital modulation	Pass
15.247(b), (c) / RSS-247 6.3.2	Maximum peak output power	Pass
15.247(e) / RSS-247 6.3.1	Power spectral density	Pass
15.247(d) / RSS-247 6.6	Antenna conducted spurious emissions	Pass
15.247(d) / RSS-247 6.6	Radiated spurious emissions	Pass
15.207 / RSS-Gen 7.2	Transmitter Power Line conducted emissions	Pass

3.0 TEST CONDITIONS AND RESULTS

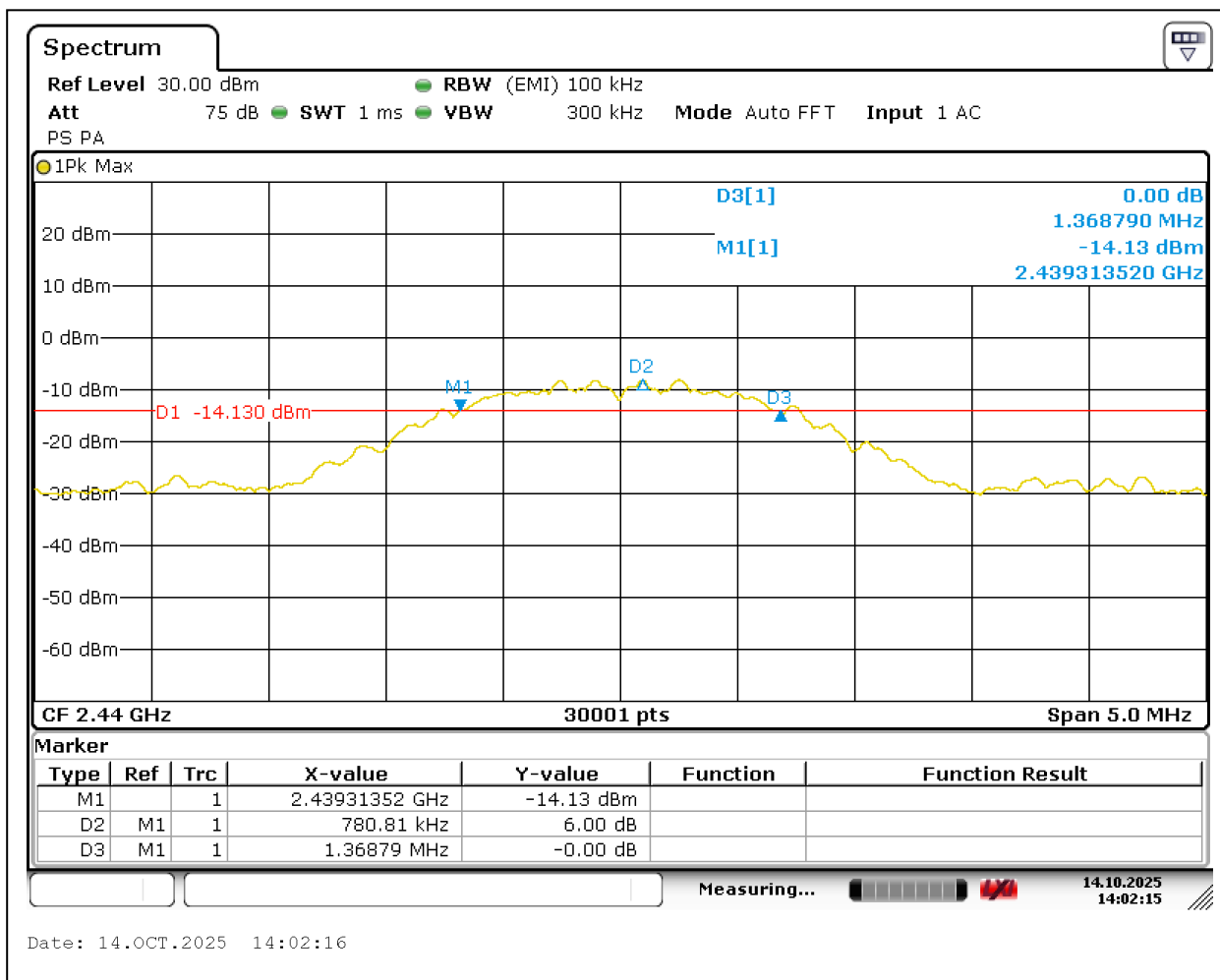
3.1 6dB Emission bandwidth (EBW) of the digital modulation

Low Frequency Channel kHz	Middle Frequency Channel kHz	Upper Frequency Channel kHz	Minimum Bandwidth kHz	Result
1339.79	1368.79	1360.95	500	Pass
RBW: VBW: ☒ 100kHz ☒ 300kHz				

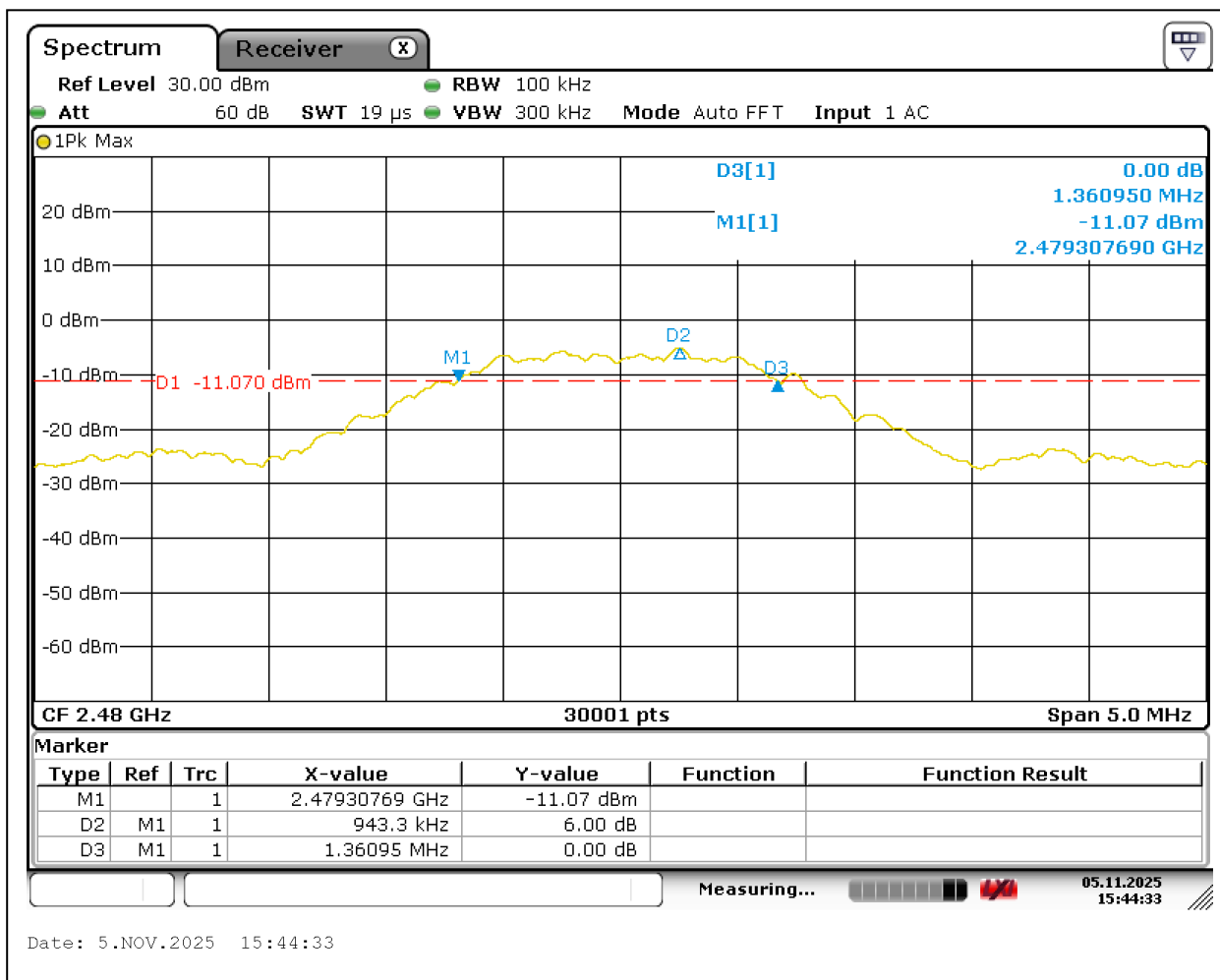
Notes: None



Graph 3.1.1 – Low Channel



Graph 3.1.2 – Middle Channel

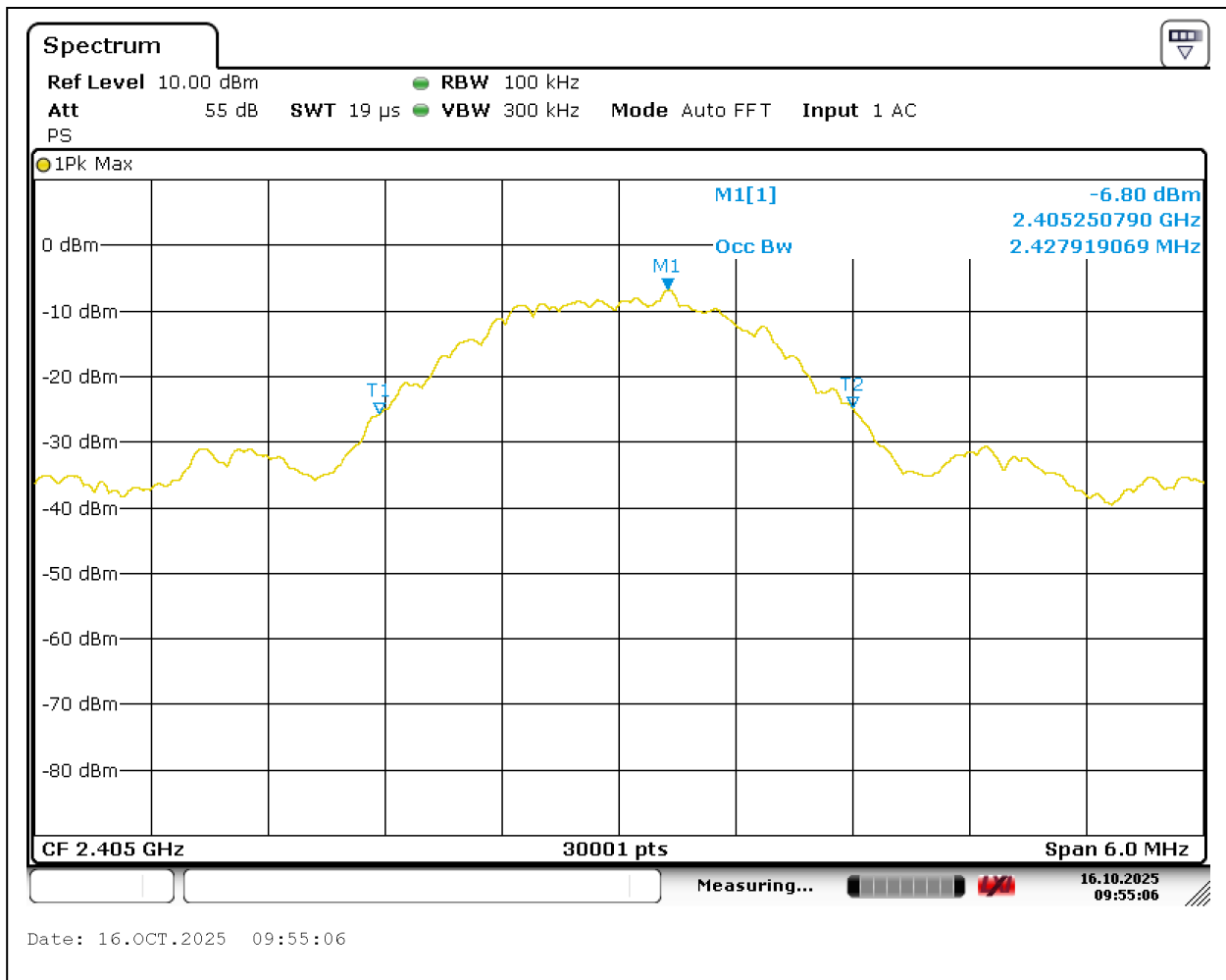


Graph 3.1.3 – High Channel

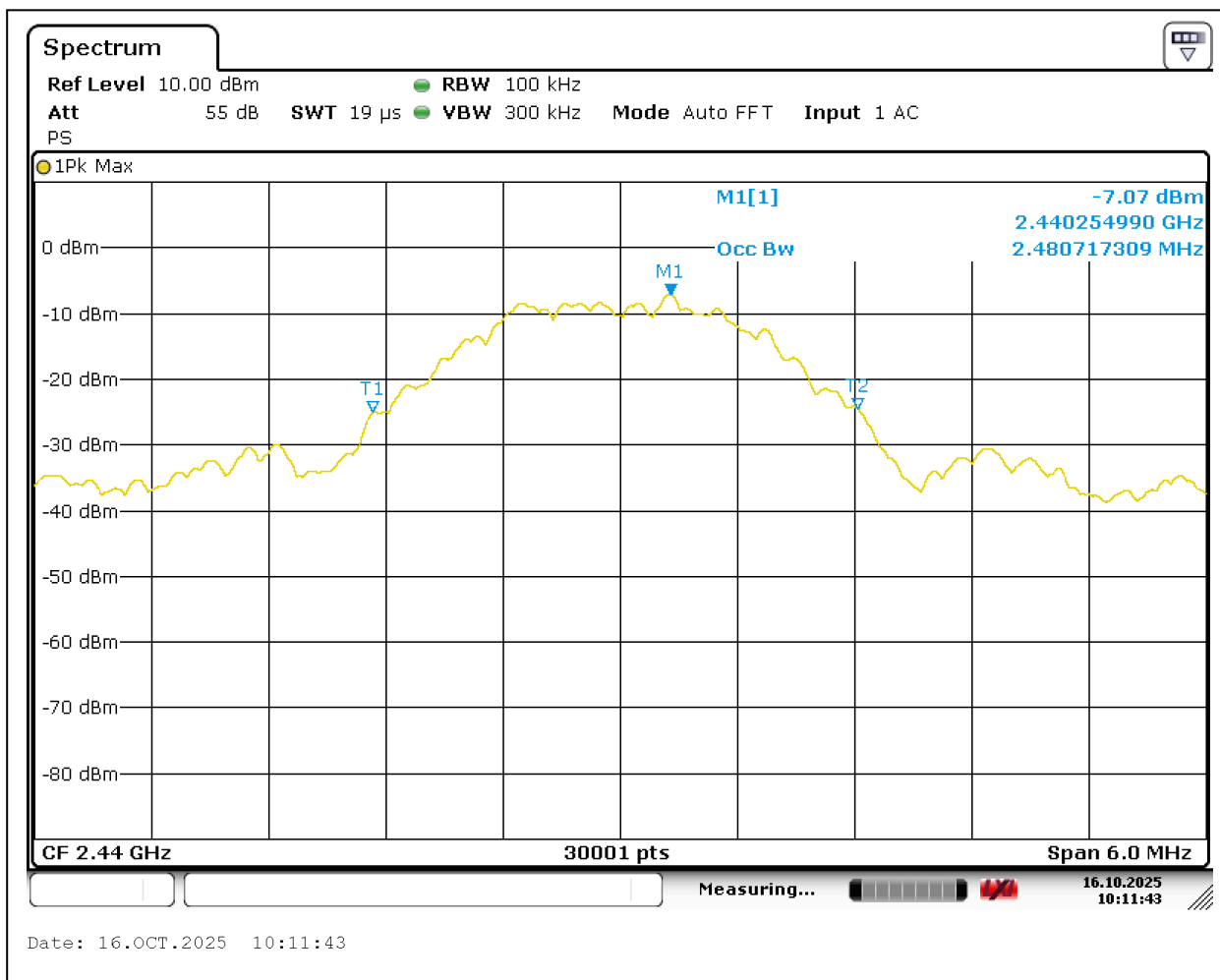
3.1.1 Occupied Bandwidth (OBW) (99%)

Low Frequency Channel kHz		Middle Frequency Channel kHz	Upper Frequency Channel kHz
2427.92		2480.72	2520.32
RBW:	☒ 100kHz		
VBW:	☒ 300kHz		

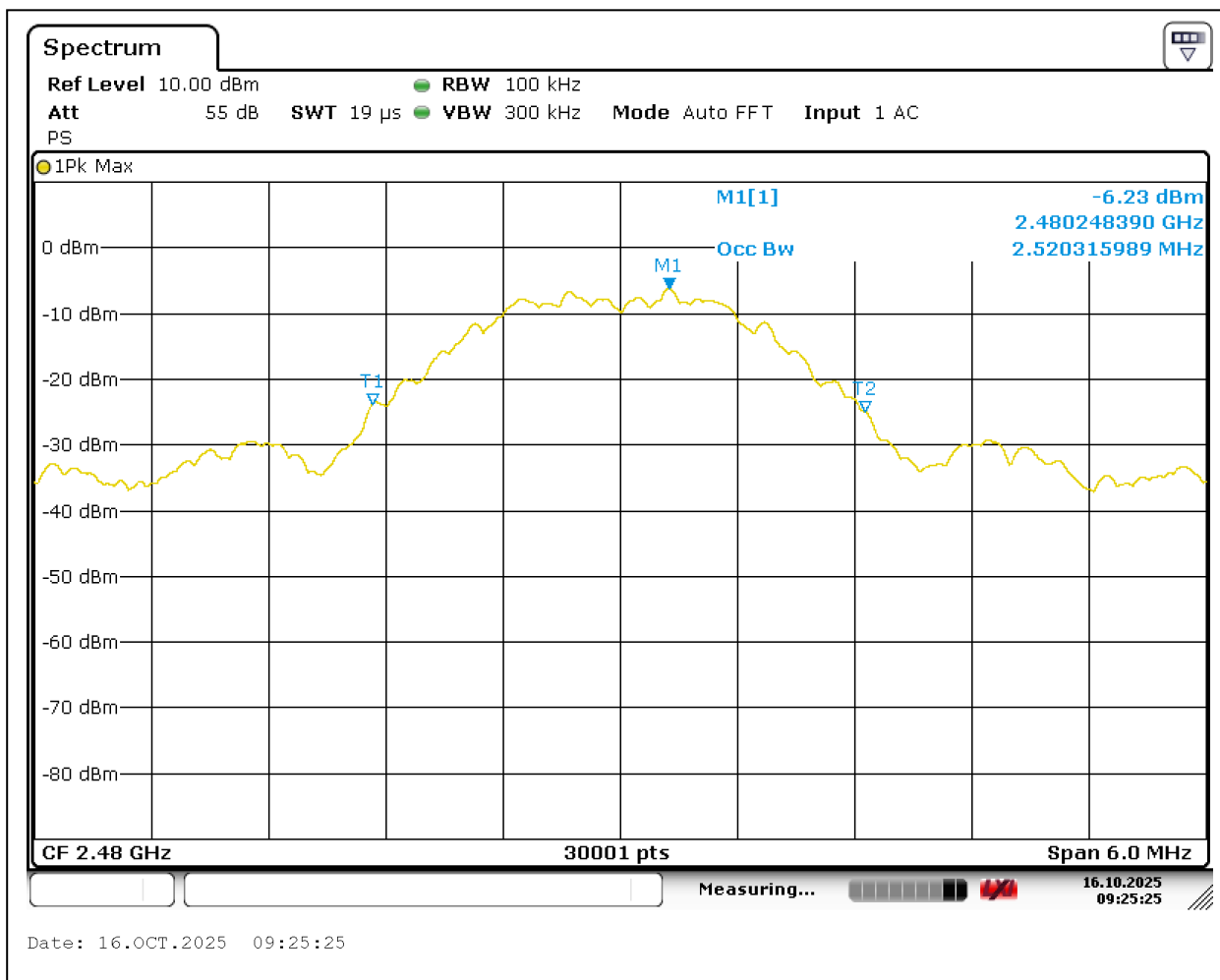
Notes: None



Graph 3.1.1.1 – Low Channel



Graph 3.1.1.2 – Middle Channel



Graph 3.1.1.3 – High Channel

3.2 Maximum peak output power

Test location: ☐ OATS ☐ Anechoic Chamber ☒ Other

Test result: **Pass**

Max. Margin: 30.98dB below the limits

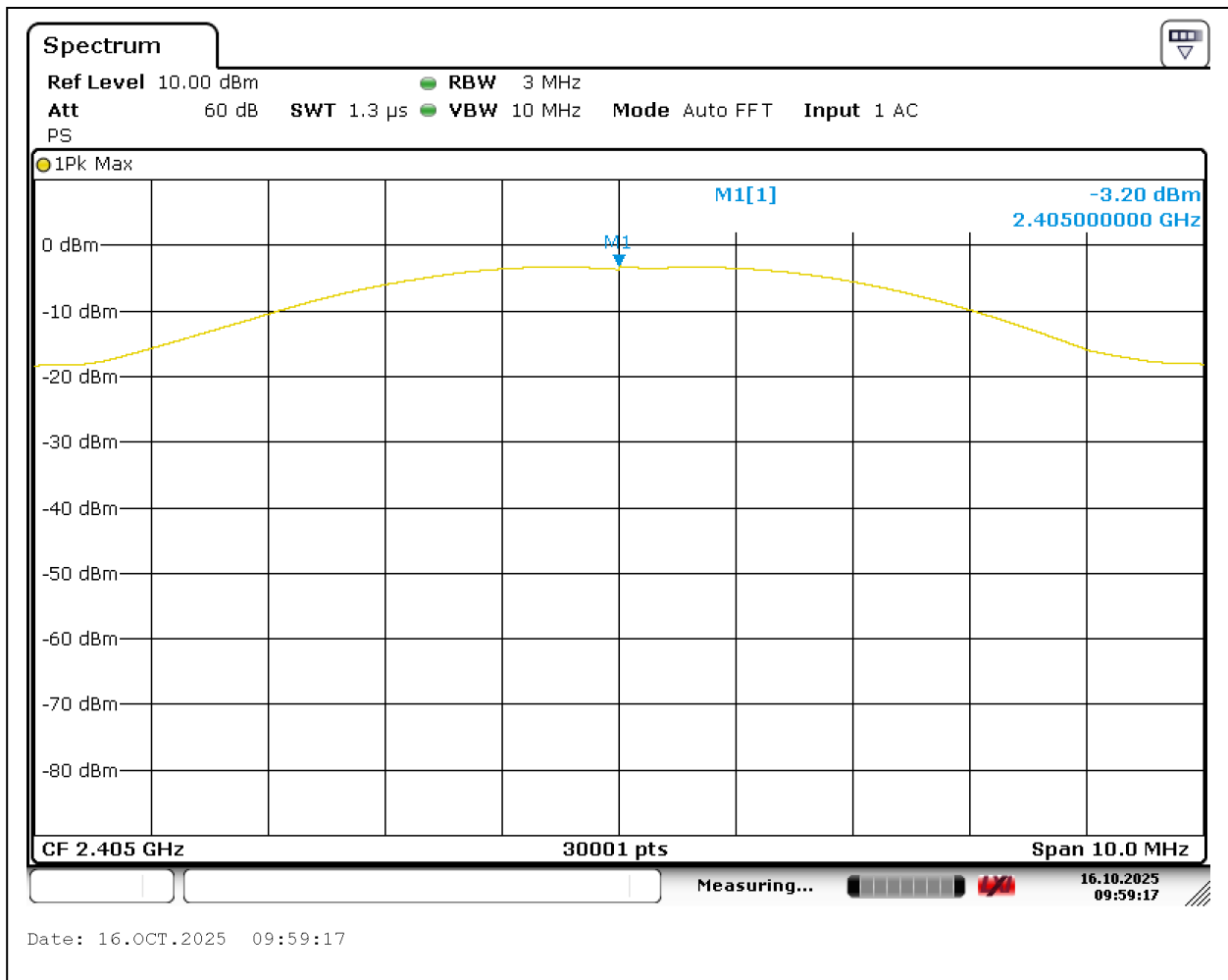
Power Output:	Conducted					
Frequency Range:	☐ 902-928MHz ☒ 2400-2483.5MHz ☐ 5725-5850MHz					
Low Frequency MHz	Measured power dBm	Attenuation dB	Power at Antenna dBm	Limit dBm	Limit Reduction dB	Margin dB
2405	-3.20	1.5	-1.7	30	0	31.7
Middle Frequency MHz						
2440	-3.08	1.5	-1.58	30	0	31.58
Upper Frequency MHz						
2480	-2.48	1.5	-0.98	30	0	30.98
RBW:	☐ 1MHz ☒ 3MHz ☐ 10MHz					
VBW:	☐ 1MHz ☐ 3MHz ☒ 10MHz					
Antenna Gain:	☒ < 6dBi ☐ >6dBi and = dBi, Output power reduction = dB					

Power Output:	Conducted					
Frequency Range:	☐ 902-928MHz ☒ 2400-2483.5MHz ☐ 5725-5850MHz					
Low Frequency MHz	Measured power dBm	Attenuation dB	EIRP dBm	ISED EIRP Limit dBm	Limit Reduction dB	Margin dB
2405	-3.20	1.5	1.6	36	0	34.4
Middle Frequency MHz						
2440	-3.08	1.5	1.72	36	0	34.28
Upper Frequency MHz						
2480	-2.48	1.5	2.32	36	0	33.68
RBW:	☐ 1MHz ☒ 3MHz ☐ 10MHz					
VBW:	☐ 1MHz ☐ 3MHz ☒ 10MHz					
Antenna Gain:	☒ +3.3dBi EIRP= Power + Antenna Gain					

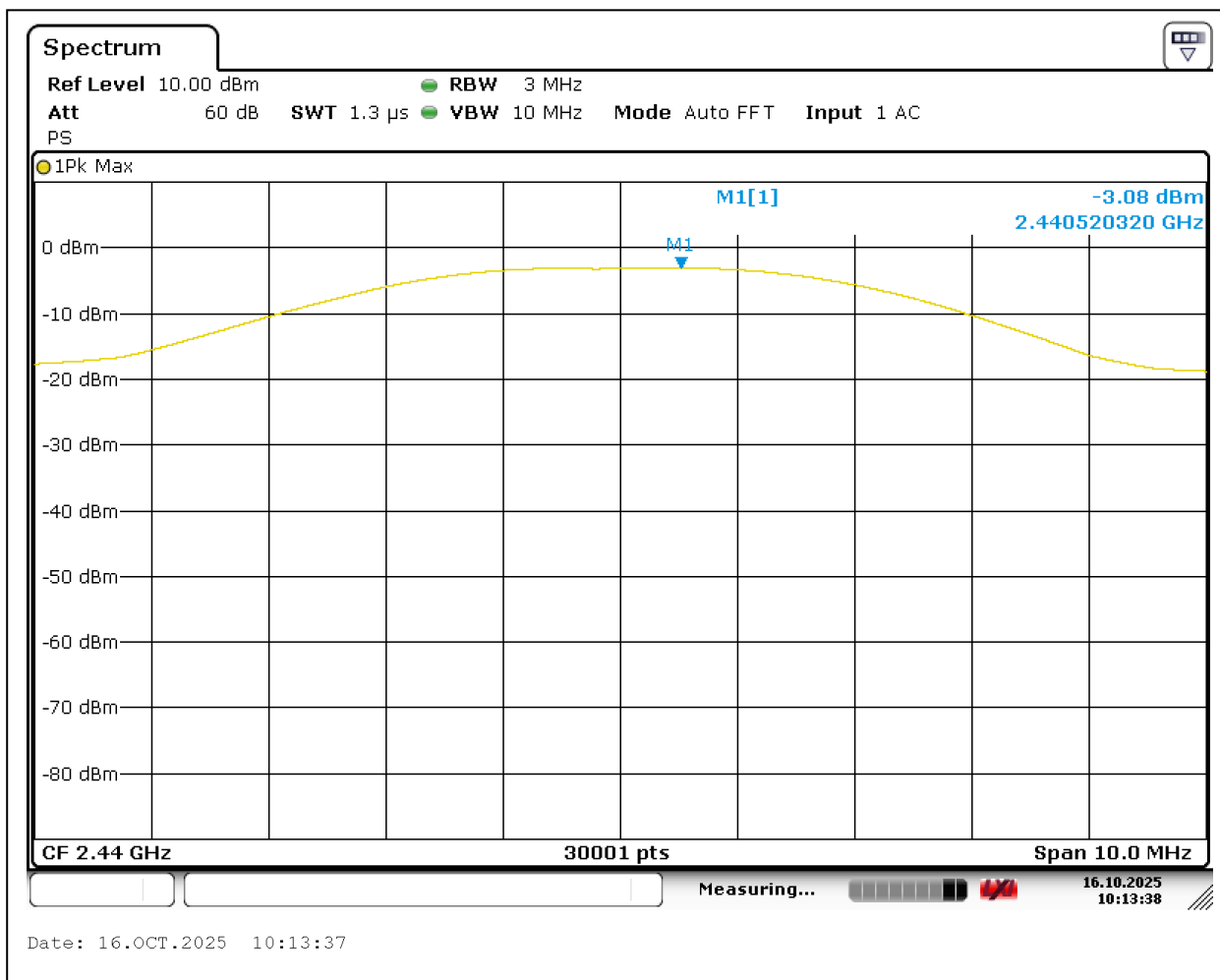
Notes: The procedure described in ANSI C63.10-2020 was used. Specifically, Section 11.9.1.1 RBW $\geq$ DTS bandwidth was utilized as the spectrum analyzer's resolution bandwidth was greater than the DTS bandwidth.

The maximum peak conducted output power limit is 1 W, or 30dBm.
The maximum EIRP limit is 4 W, or 36dBm.

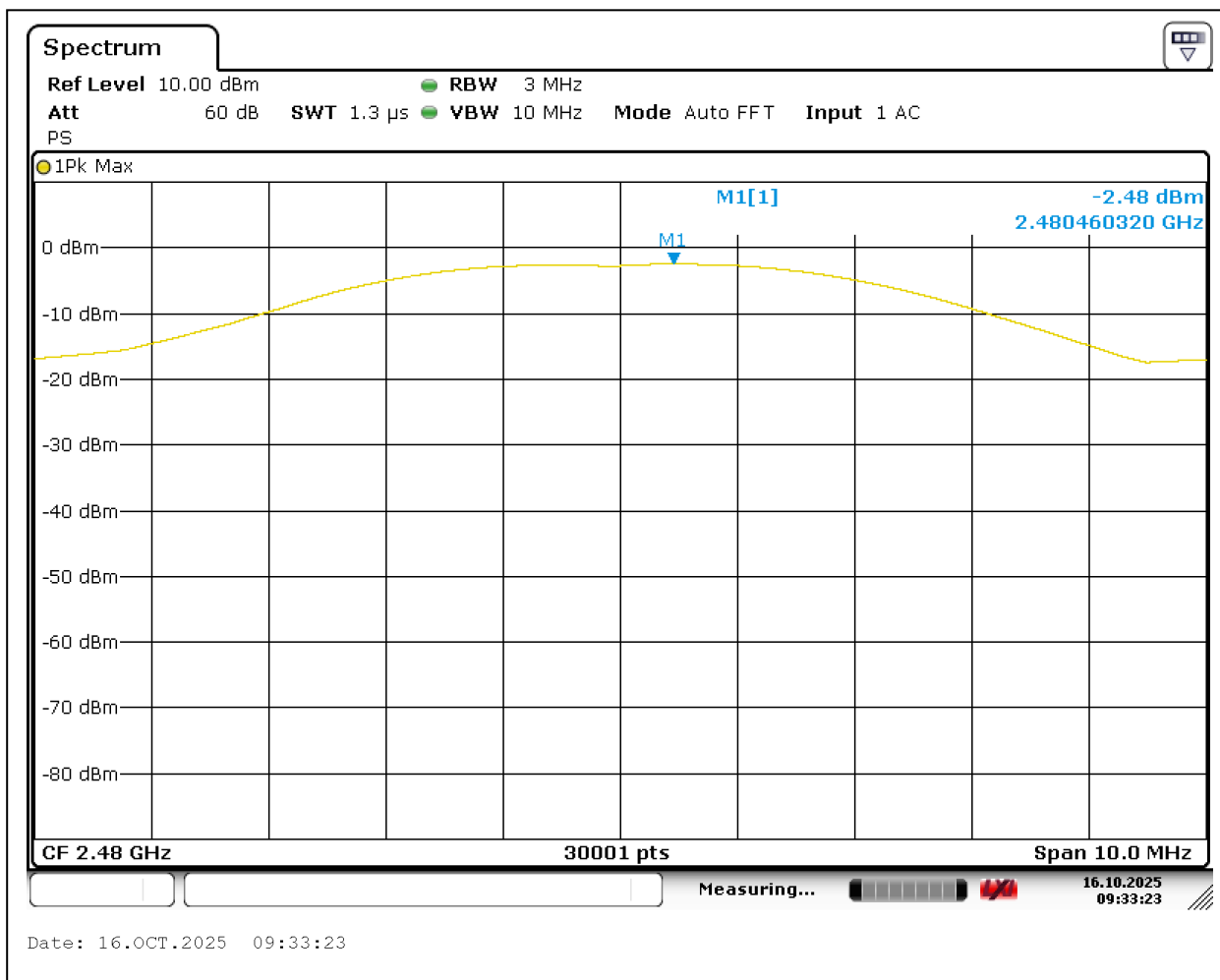
Graphs 3.2.1, 3.2.2, and 3.2.3 show the conducted output power.



Graph 3.2.1 – Low Channel



Graph 3.2.2 – Middle Channel

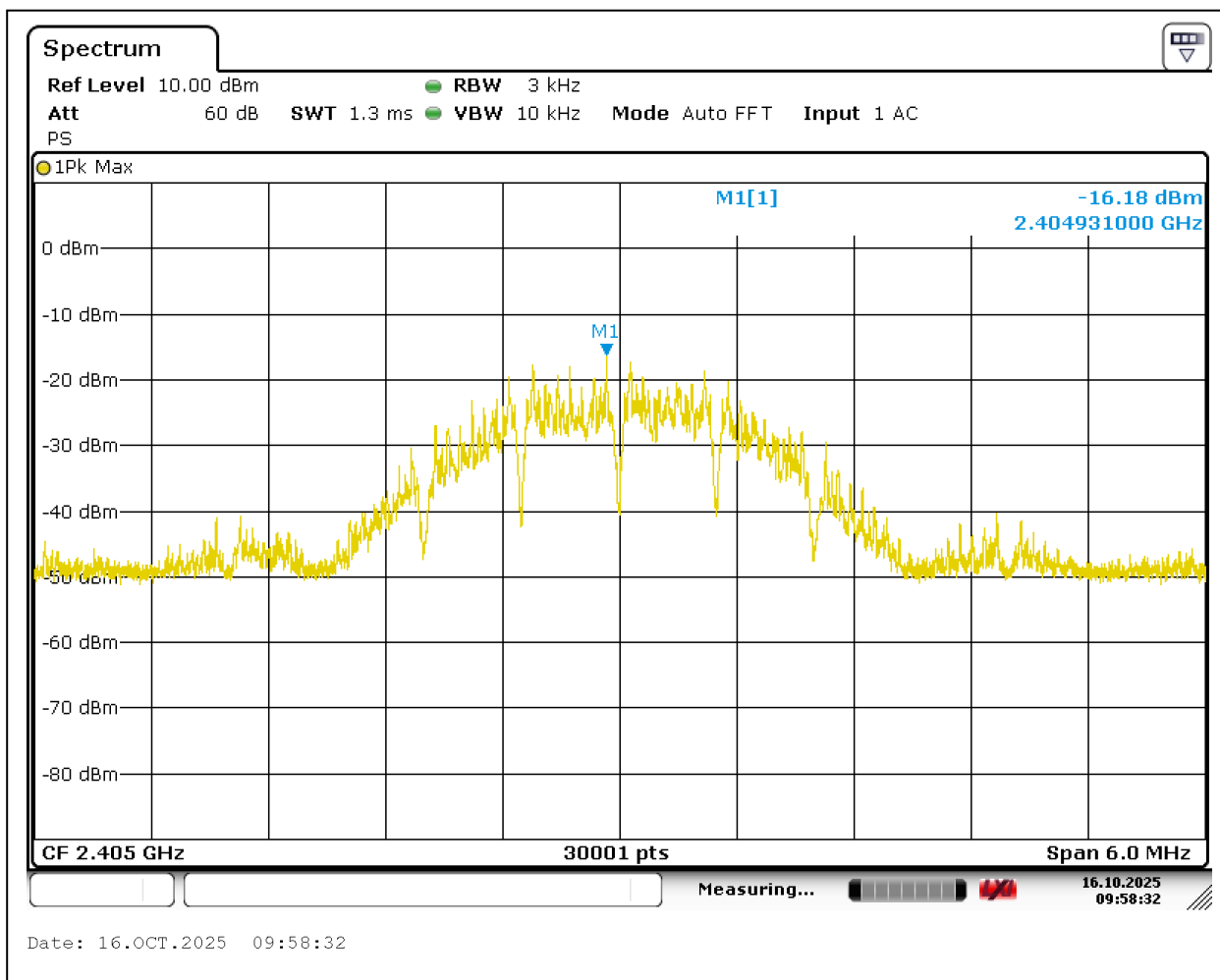


Graph 3.2.3 – High Channel

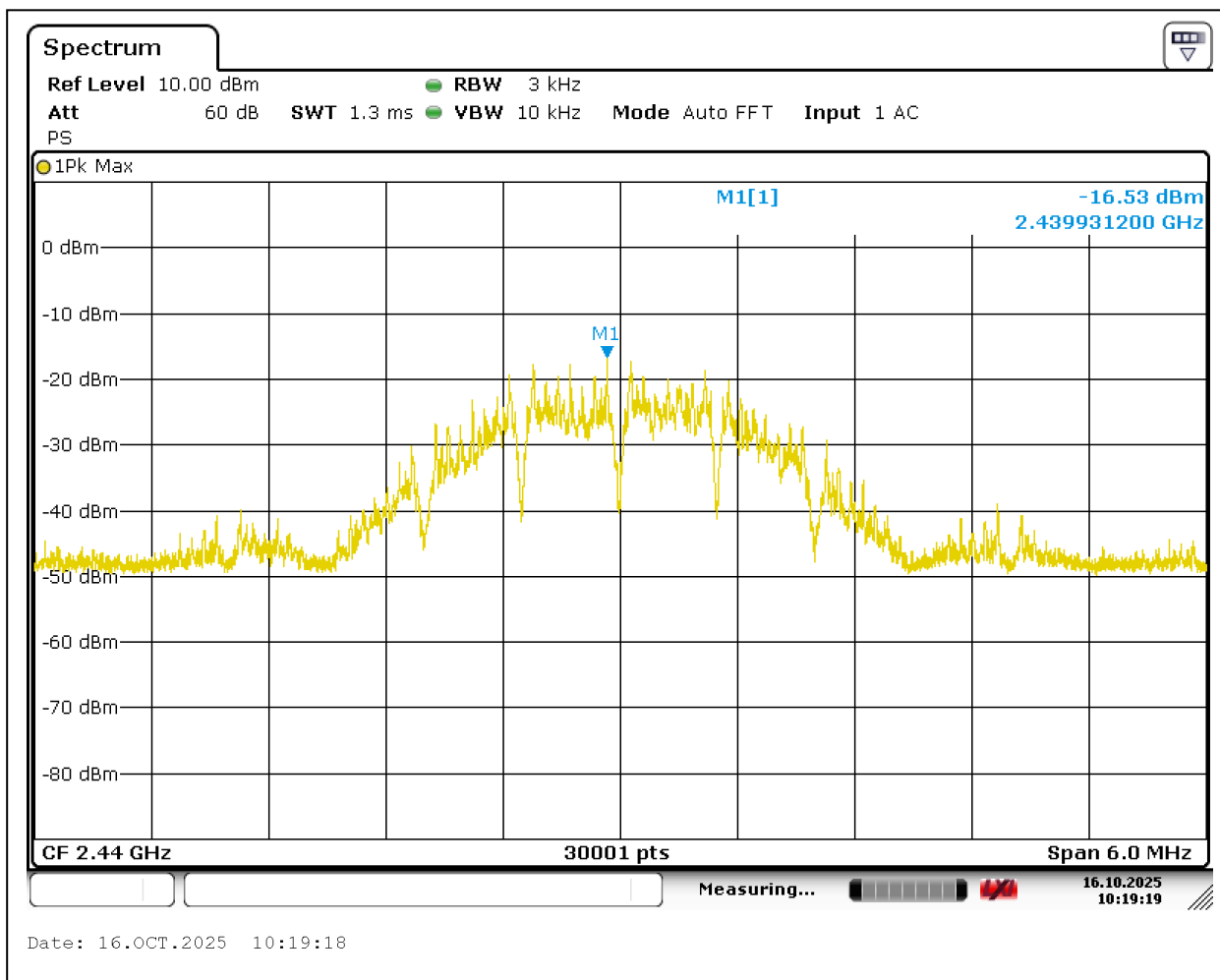
3.3 Power spectral density

Power Output:	☒ Conducted ☐ Radiated			
	Measured Density dBm	Power Density at Antenna dBm	Limit dBm	Margin dB
Low Frequency Channel	-16.18	-14.68	8	-22.68
Middle Frequency Channel	-16.27	-14.77	8	-22.77
Upper Frequency Channel	-16.12	-14.62	8	-22.62
Analyzer Settings:	☒ RBW=3kHz ☒ VBW=10kHz ☒ Span=6MHz ☒ Sweep=Auto			
Antenna Gain:	☒ < 6dBi and = 3.3 dBi ☐ >6dBi and = dBi, limit reduction = dB			

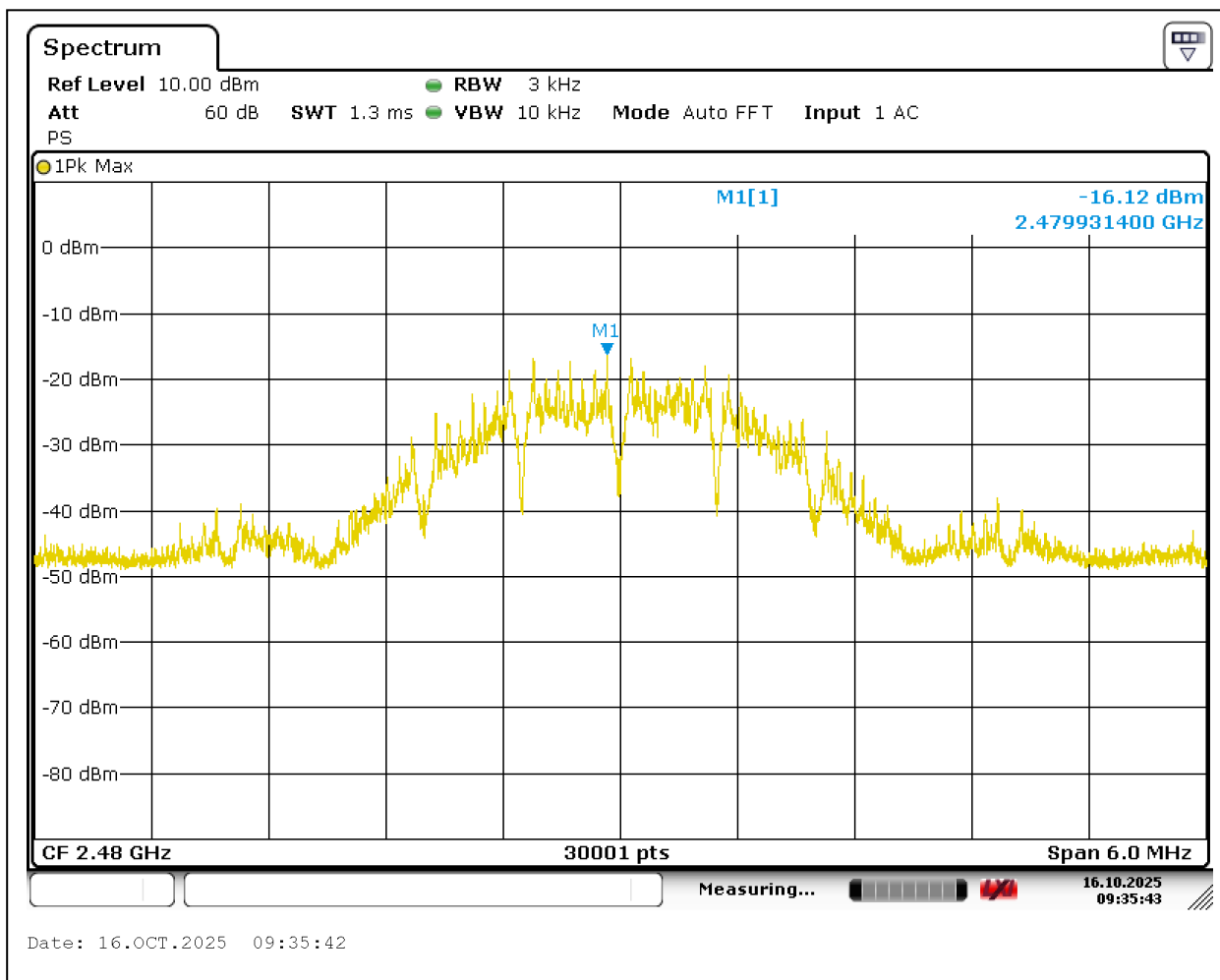
Notes: The Power Spectral Density at Antenna was calculated adding the cable loss of 1.5 dB from the measured density value.



Graph 3.3.1 – Low Channel



Graph 3.3.2 – Middle Channel



Graph 3.3.3 – High Channel

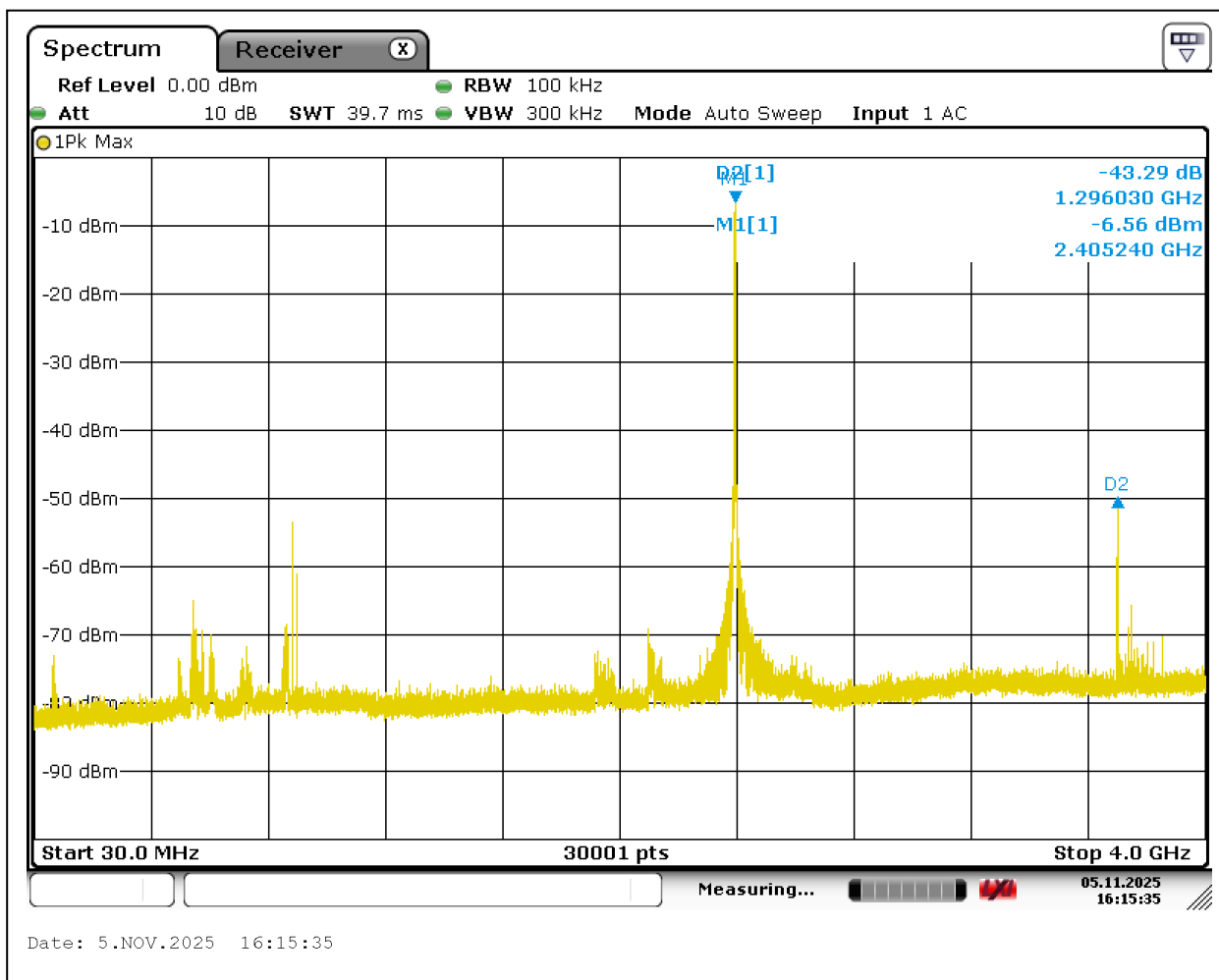
3.4 Antenna conducted spurious emissions

	Minimum Measured Attenuation dB	Minimum Allowed Attenuation dB	Margin dB	
Low Frequency Channel	34.56	20	-14.56	
Middle Frequency Channel	37.50	20	-17.50	
Upper Frequency Channel	36.82	20	-16.82	
Analyzer Settings:	☒ RBW=100kHz			
Minimum Allowed Attenuation:	☒ 20dB ☐ 30dB (for digital systems with conducted power measured using RMS averaging over a time interval)			

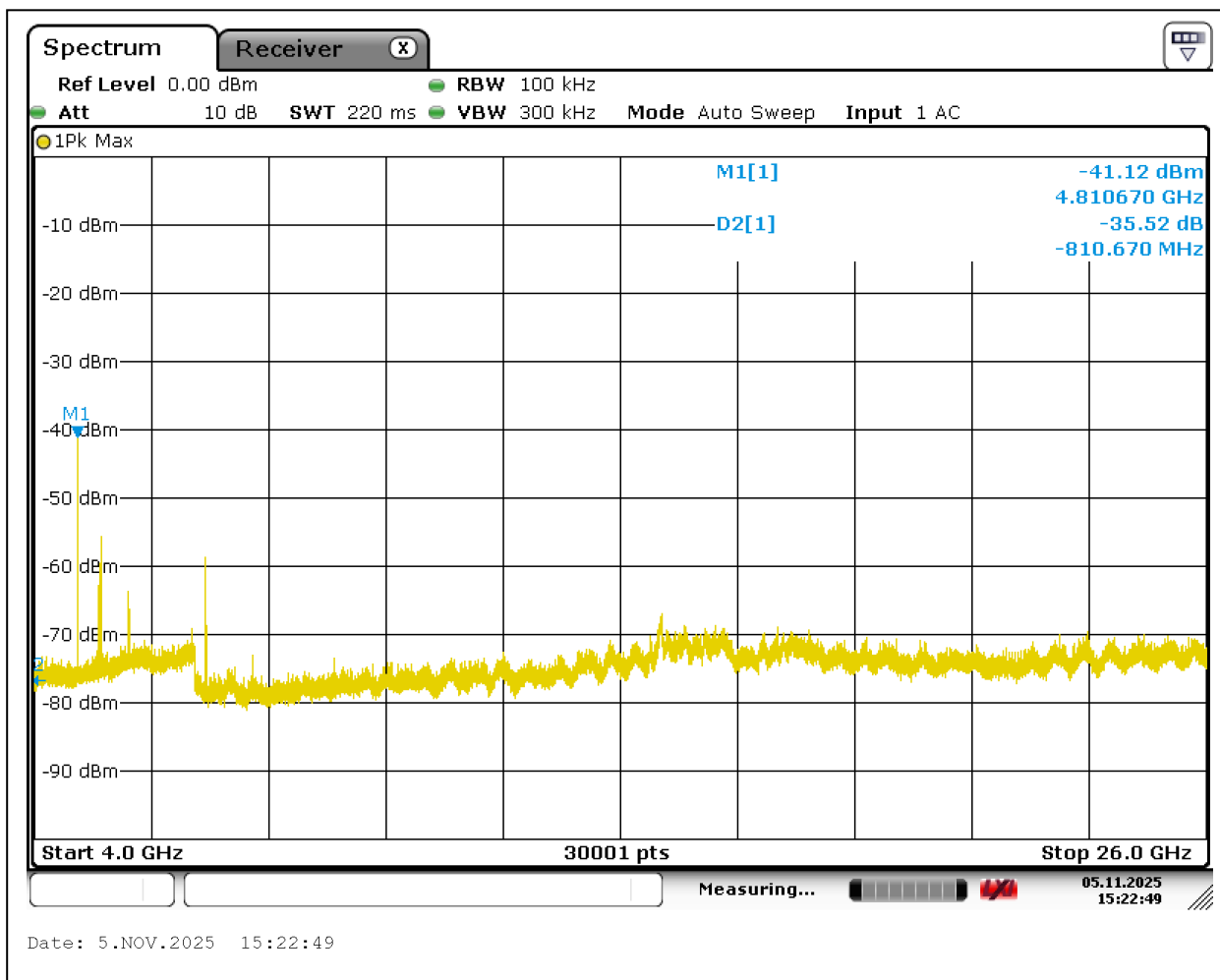
Band Edge emissions

	Minimum Measured Attenuation dB	Minimum Allowed Attenuation dB	Band Edge Margin dB	
Low Frequency Channel	52.68	20	-32.68	
Upper Frequency Channel	39.49	20	-19.49	
Analyzer Settings:	☒ RBW=100kHz			
Minimum Allowed Attenuation:	☒ 20dB ☐ 30dB (for digital systems with conducted power measured using RMS averaging over a time interval)			

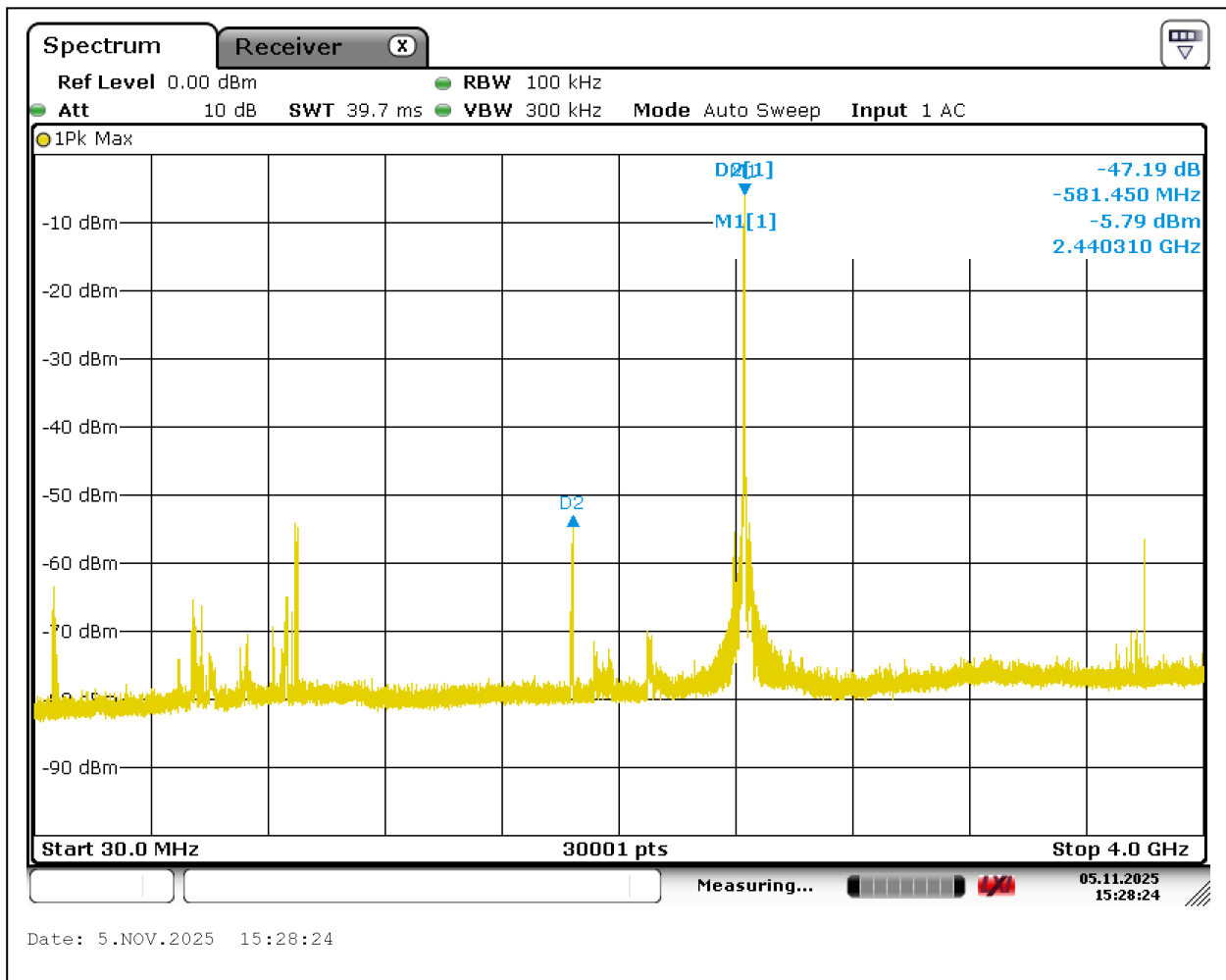
Notes: Graphs 3.4.1 – 3.4.6 show antenna conducted spurious emissions.
 Graphs 3.4.7 – 3.4.8 show band edge compliance.



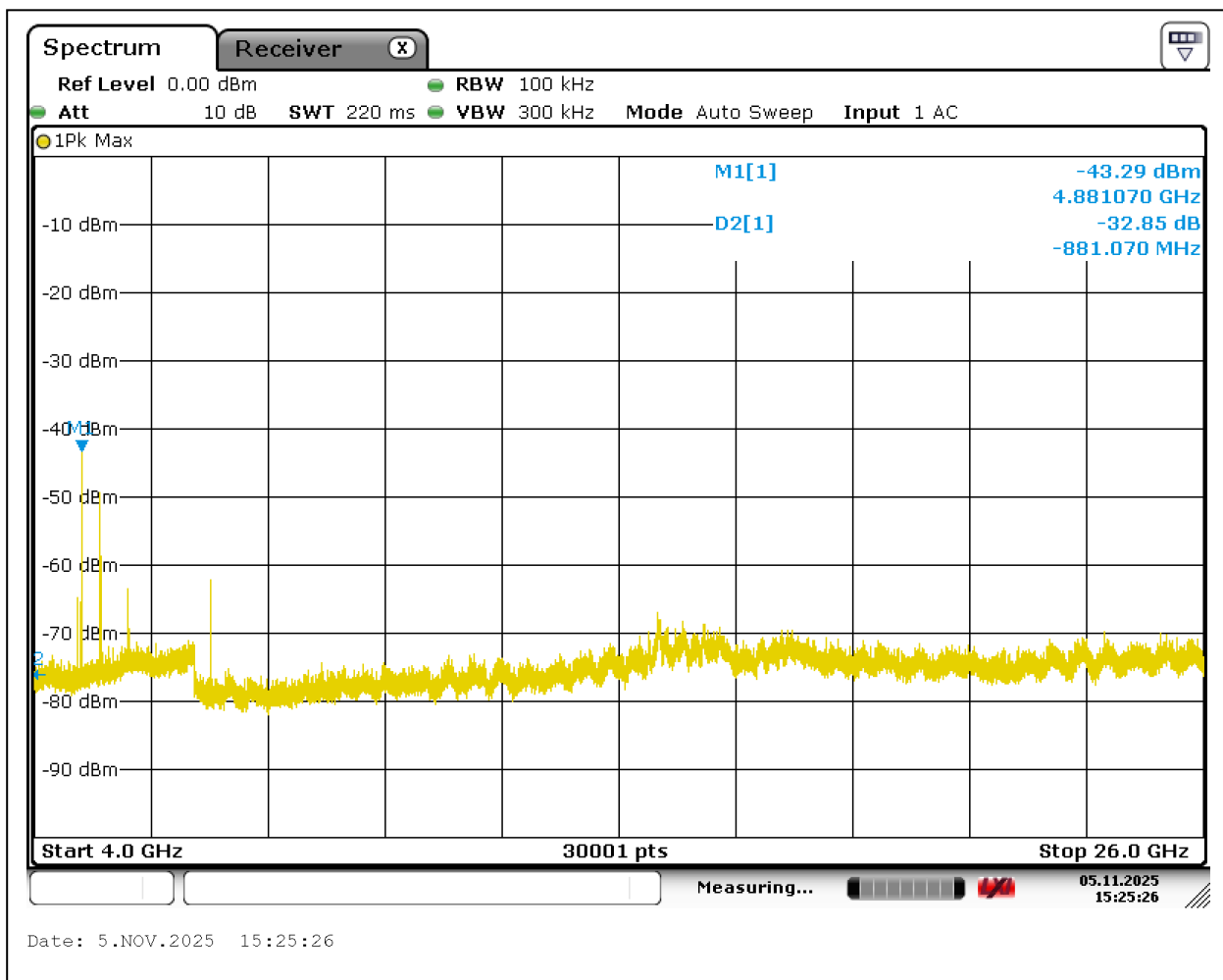
Graph 3.4.1 – Low Channel, 30MHz to 4GHz



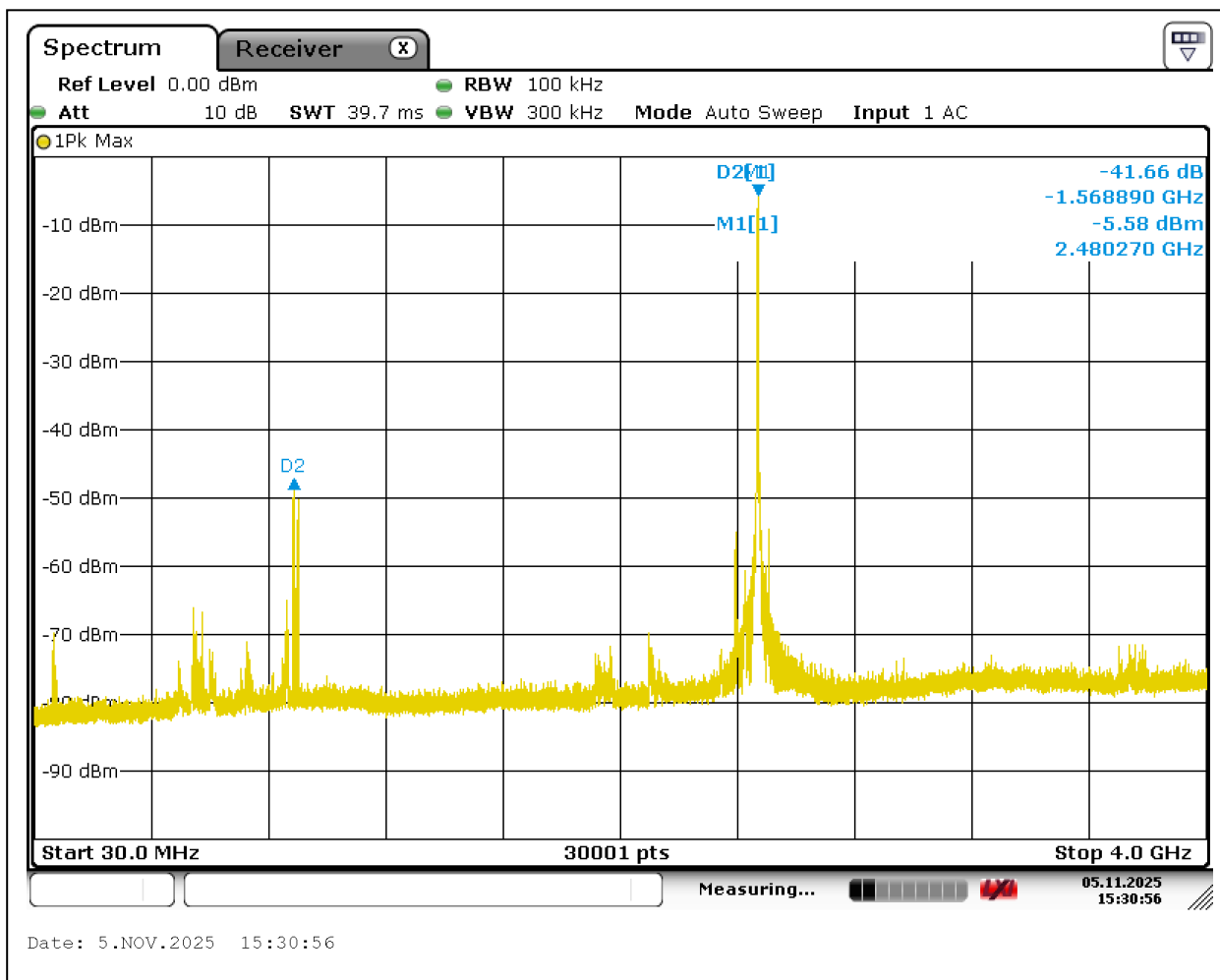
Graph 3.4.2 – Low Channel, 4GHz to 26GHz



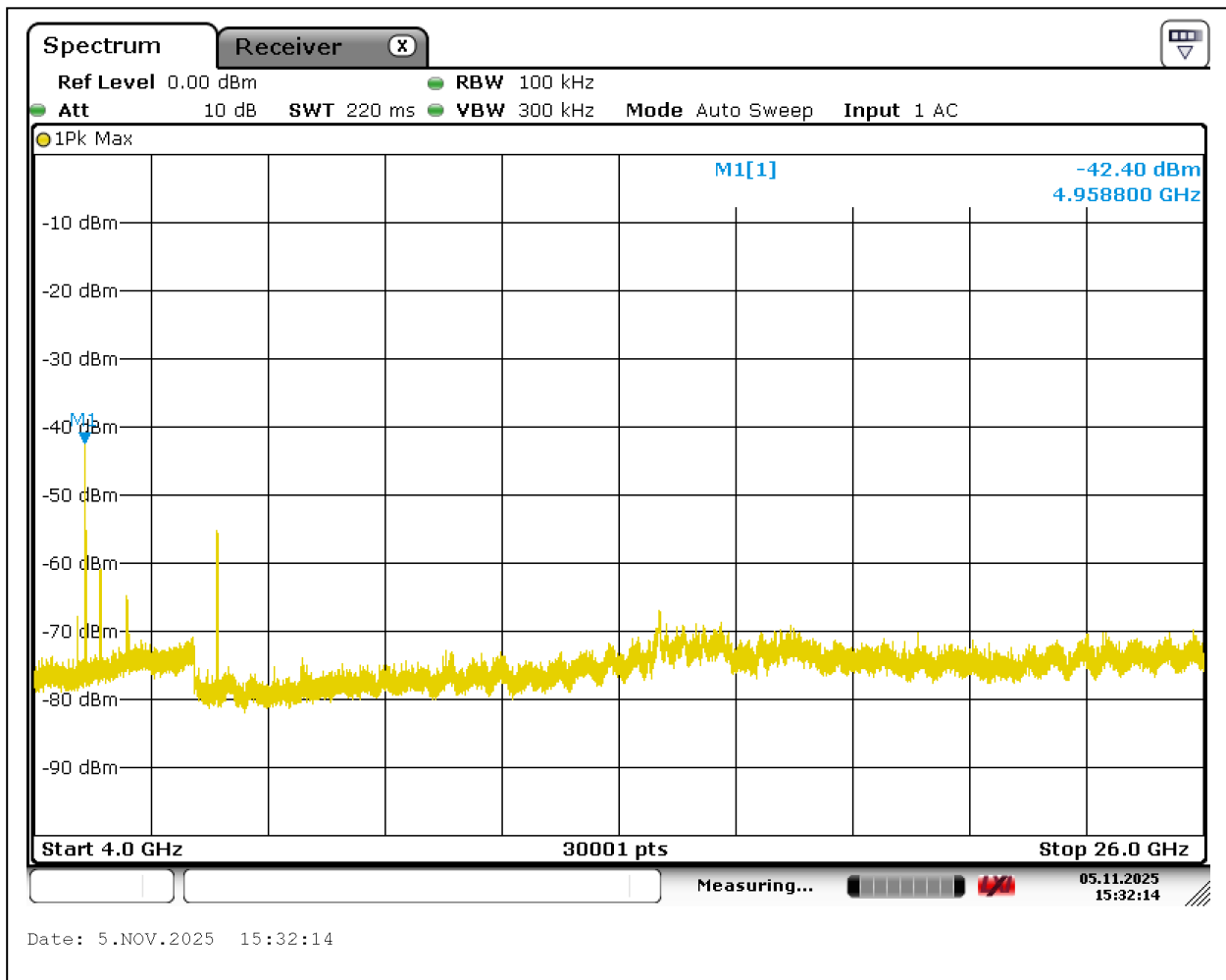
Graph 3.4.3 – Middle Channel, 30MHz to 4GHz



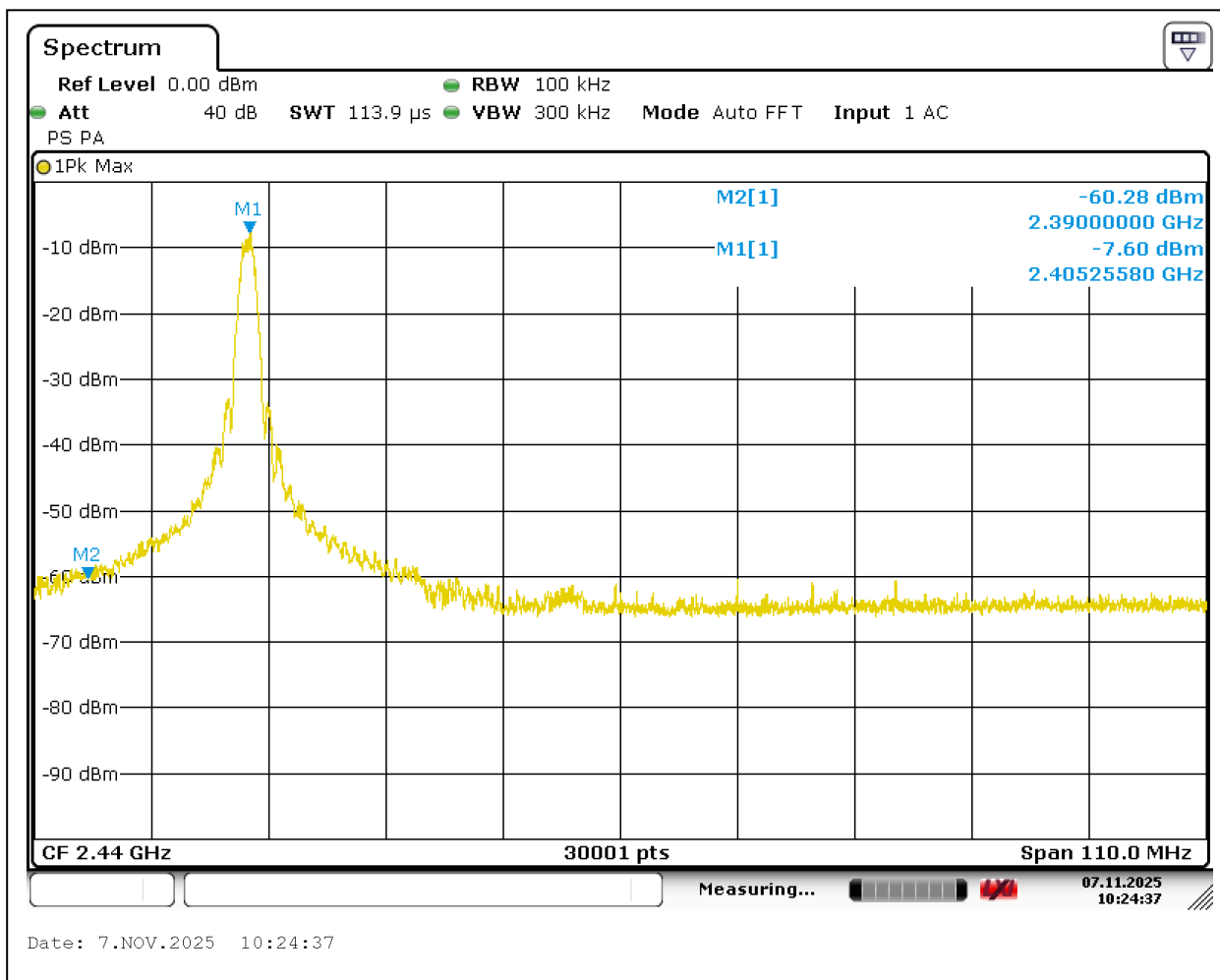
Graph 3.4.4 – Middle Channel, 4GHz to 26GHz



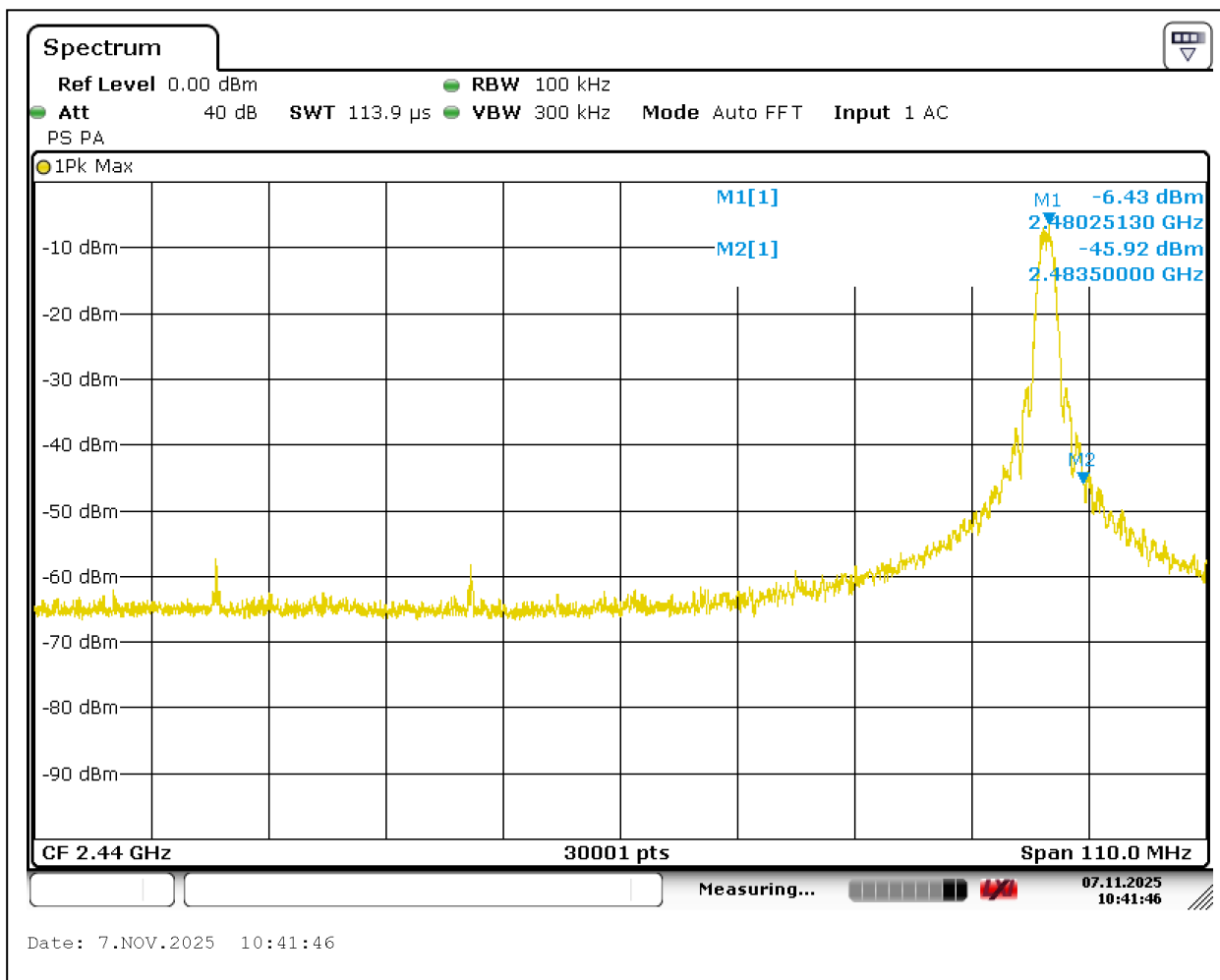
Graph 3.4.5 – High Channel, 30MHz to 4GHz



Graph 3.4.6 – High Channel, 4GHz to 26GHz



Graph 3.4.7 – Low Channel, Band Edge



Graph 3.4.8 – High Channel, Band Edge

3.5 Radiated spurious emissions

Test location: ☐ OATS ☒ Anechoic Chamber ☐ Other

Test result: **Pass**

Max. Margin: 7.7dB below the limits

EUT was configured to transmit continuously. Radiated emission measurements were performed from 9 kHz to 26.5 GHz according to the procedure described in ANSI C64.10.

Spectrum analyzer resolution bandwidth is 200 Hz for frequencies 9 kHz to 150 kHz. Resolution bandwidth is 120 kHz for frequencies 30 MHz to 1000 MHz and 1 MHz for frequencies above 1 GHz. Above 1 GHz, both Peak and Average measurements were performed. The Peak level of radiated emissions was measured with a peak detector. The Average level of radiated emissions was measured with an Average detector. Quasi-peak level of radiated emissions was measured with a CISPR Quasi-peak detector.

The EUT is placed on a non-conductive turntable that is 80 cm in height for frequencies 30 MHz to 1000 MHz, 1.5 meters for frequency above 1000 MHz. If the EUT attaches to peripherals, they are connected and operational (as typical as possible). During testing, all cables were manipulated to produce worst-case emissions. The signal is maximized through rotation. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Data included is representative of the worst-case configuration (the configuration which resulted in the highest emission levels). Data provided is corrected for distance, cables, preamp, filters and antenna factors then compared to the limits

Note 1: Per client specification, the EUT is installed in vertical orientation. The installation orientation should be reflected in the user manual.

Note 2: No Spurious emissions were detected in the frequency ranges 9 kHz to 30MHz, 1GHz to 4GHz (fundamental TX frequency was excluded), and above the third harmonic.

Date:	2025-10-16 to 2025-10-29	Result: Pass
Tested by:	Jayden Alstad	
Standard:	FCC part 15.247(d) / RSS-247 6.6	
Test Point:	Enclosure	
Operation mode:	See page 5	
Environmental Conditions:	22°C; 33%(RH); 102kPa	
Equipment Verification:	☒	
Note:	Frequency Range: 30MHz to 1GHz	

Table 3.5.1

Frequency	Pol.	Height (m)	Total Correction (dB/m)	QP Level (dBµV/m)	QP Limit (dBµV/m)	Margin (dB)	Channel
46.07 MHz	Vertical	3.00	21.06	12.81	40.00	-27.19	Low
315.22 MHz	Vertical	3.28	19.95	10.36	46.00	-35.64	Low
693.18 MHz	Vertical	3.05	27.40	18.91	46.00	-27.09	Low
787.56 MHz	Vertical	3.37	28.84	20.43	46.00	-25.57	Low
45.82 MHz	Horizontal	1.17	21.16	11.58	40.00	-28.42	Low
305.53 MHz	Horizontal	2.15	19.87	11.5	46.00	-34.50	Low
627.25 MHz	Horizontal	2.72	26.27	19	46.00	-27.00	Low
798.14 MHz	Horizontal	2.80	28.89	20.89	46.00	-25.11	Low
73.81 MHz	Vertical	1.82	12.24	11.68	40.00	-28.32	Middle
465.94 MHz	Vertical	2.30	23.31	13.92	46.00	-32.08	Middle
247.17 MHz	Horizontal	3.00	18.47	9.03	46.00	-36.97	Middle
920.26 MHz	Horizontal	2.67	30.45	22.68	46.00	-23.32	Middle
314.99 MHz	Vertical	1.05	19.95	26.49	46.00	-19.51	High
918.26 MHz	Vertical	3.65	30.41	22.62	46.00	-23.38	High
269.32 MHz	Horizontal	2.64	18.82	9.56	46.00	-36.44	High

Date:	2025-10-16 to 2025-10-29	Result: Pass
Tested by:	Jayden Alstad	
Standard:	FCC part 15.247(d) / RSS-247 5.5	
Test Point:	Enclosure	
Operation mode:	See page 5	
Environmental Conditions:	22°C; 33%(RH); 102kPa	
Equipment Verification:	☒	
Note:	Frequency Range: 4GHz to 18GHz	

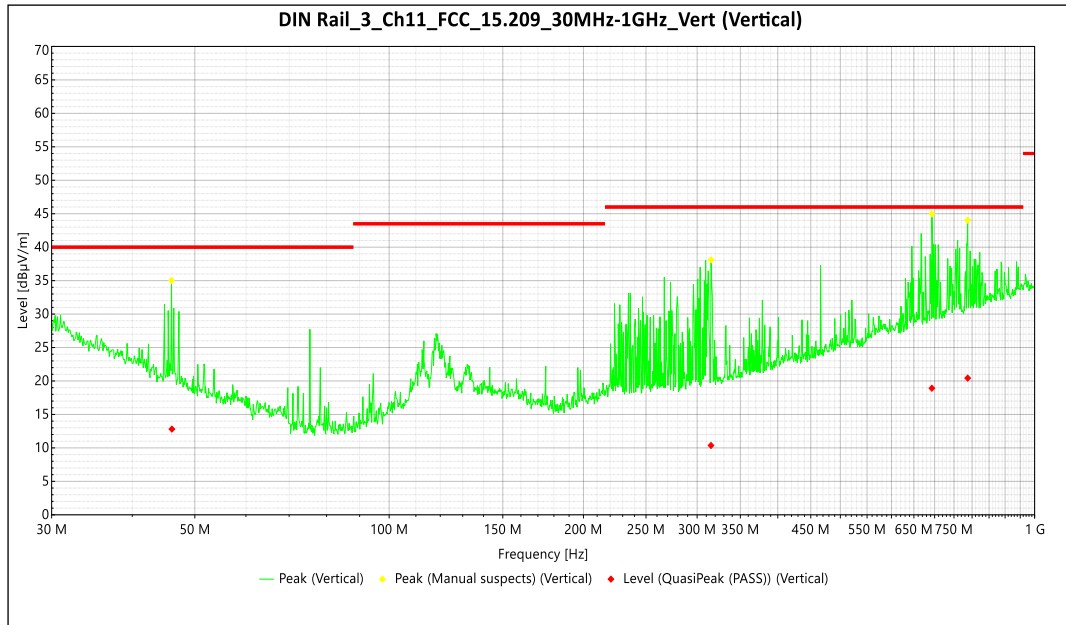
Table 3.5.2

Frequency MHz	Antenna		Ant. CF dB1/m	Cable loss dB	Pre-amp Gain (dB)	Reading dBμV	Total @ 3m dBμV/m	Limit dBμV/m	Margin dB	Comments
Polarity	Hts(cm)									
Low channel										
4810.00	V	116	33.1	7.5	43.9	48.5	45.2	54.0	-8.8	Average
4810.00	H	116	33.1	7.5	43.9	44.4	41.1	54.0	-12.9	Average
4810.00	V	116	33.1	7.5	43.9	62.4	59.0	74.0	-15.0	Peak
4810.00	H	116	33.1	7.5	43.9	59.6	56.3	74.0	-17.7	Peak
Mid channel										
4880.00	V	400	33.2	7.6	44.0	49.2	46.0	54.0	-8.0	Average
4880.00	H	125	33.2	7.6	44.0	44.5	41.2	54.0	-12.7	Average
4880.00	V	400	33.2	7.6	44.0	62.0	58.8	74.0	-15.2	Peak
4880.00	H	125	33.2	7.6	44.0	64.9	61.7	74.0	-12.3	Peak
High channel										
4960.00	V	369	33.4	7.7	44.1	47.3	44.3	54.0	-9.7	Average
4960.00	H	300	33.4	7.7	44.1	49.3	46.3	54.0	-7.7	Average
4960.00	V	369	33.4	7.7	44.1	61.4	58.4	74.0	-15.6	Peak
4960.00	H	300	33.4	7.7	44.1	60.3	57.3	74.0	-16.7	Peak
7438.00	V	102	36.8	9.4	44.6	42.7	44.3	54.0	-9.7	Peak
7438.00	H	300	36.8	9.4	44.6	41.2	42.9	54.0	-11.1	Peak

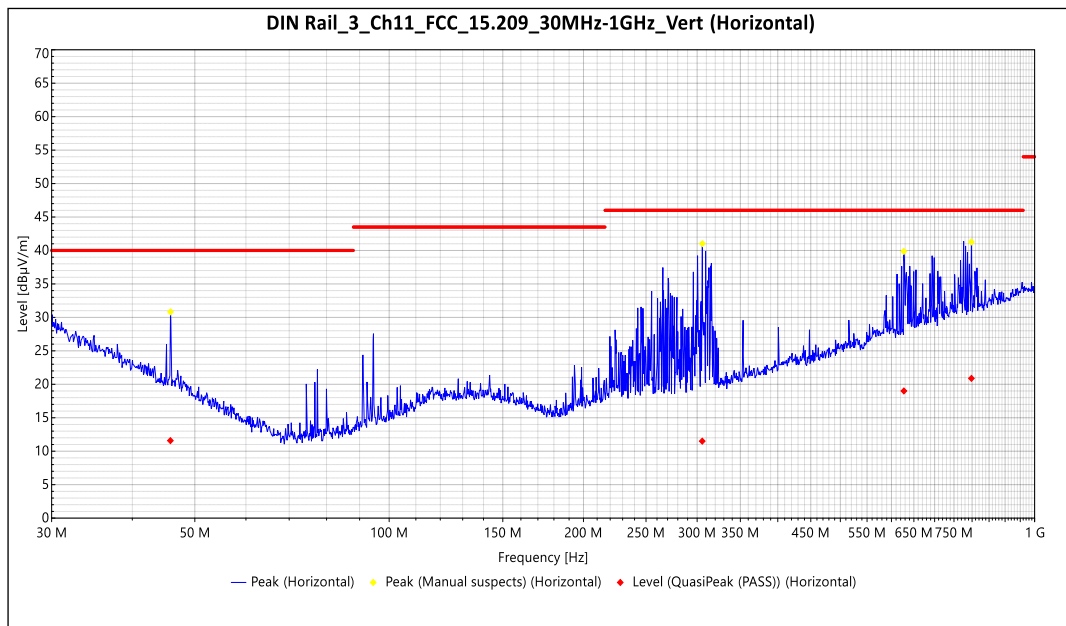
Date:	2025-10-16 to 2025-12-02	Result: Pass
Tested by:	Jayden Alstad	
Standard:	FCC part 15.247(d) / RSS-247 5.5	
Test Point:	Enclosure	
Operation mode:	See page 5	
Environmental Conditions:	22°C; 33%(RH); 102kPa	
Equipment Verification:	☒	
Note:	Band Edge Compliance	

Table 3.5.3

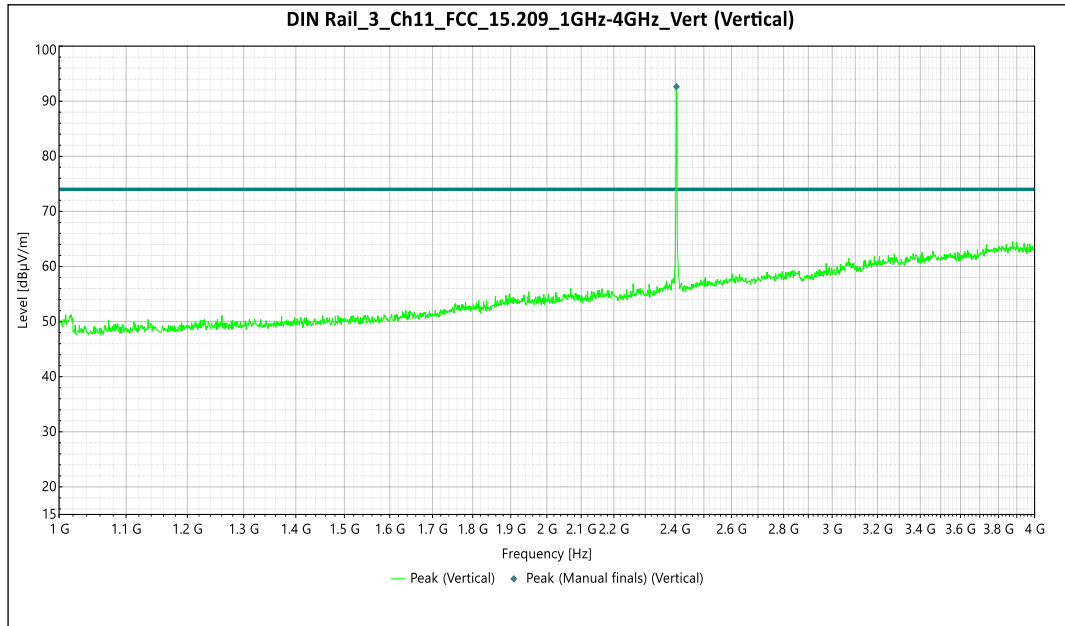
Frequency MHz	Antenna		Ant. CF dB1/m	Cable loss dB	Pre-amp Gain (dB)	Reading dBμV	Total @ 3m dBμV/m	Limit dBμV/m	Margin dB	Comments
	Polarity	Hts(cm)								
2390.00	V	101	28.5	5.3	0.0	9.4	43.2	54.0	-10.8	Average
2390.00	H	100	28.8	5.3	0.0	9.4	43.5	54.0	-10.5	Average
2390.00	V	101	28.5	5.3	0.0	21.6	55.4	74.0	-18.6	Peak
2390.00	H	100	28.8	5.3	0.0	22.3	56.4	74.0	-17.6	Peak
2483.50	V	100	28.3	5.4	0.0	4.8	38.5	54.0	-15.5	Average
2483.50	H	100	28.5	5.4	0.0	4.8	38.7	54.0	-15.3	Average
2483.50	V	100	28.3	5.4	0.0	26.6	60.3	74.0	-13.7	Peak
2483.50	H	100	28.5	5.4	0.0	25.5	59.4	74.0	-14.6	Peak



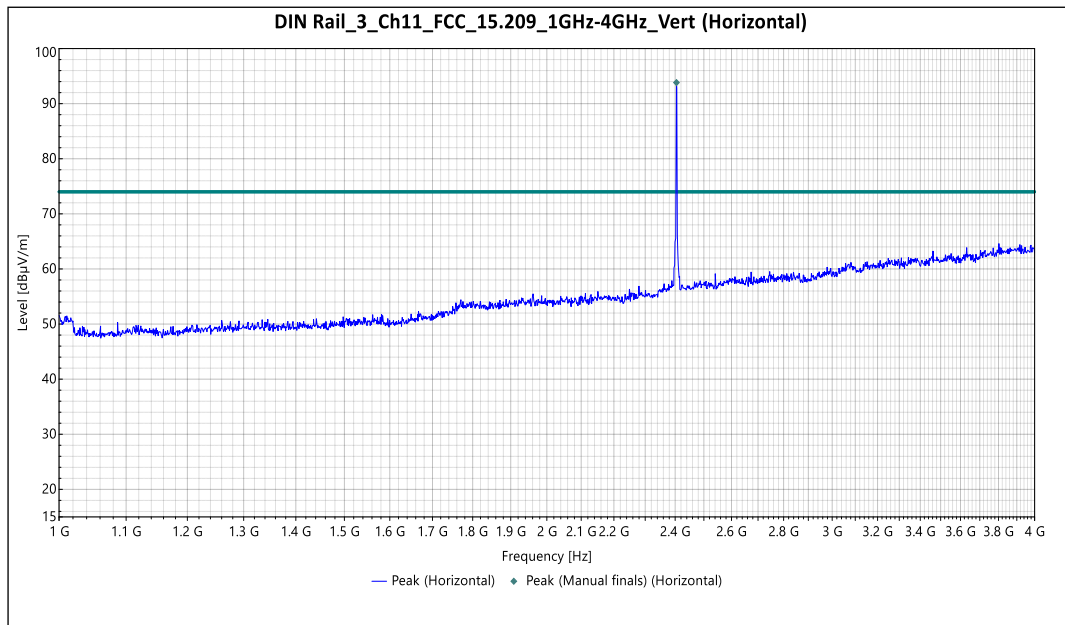
Graph 3.5.1 (Peak Readings, Low Channel)



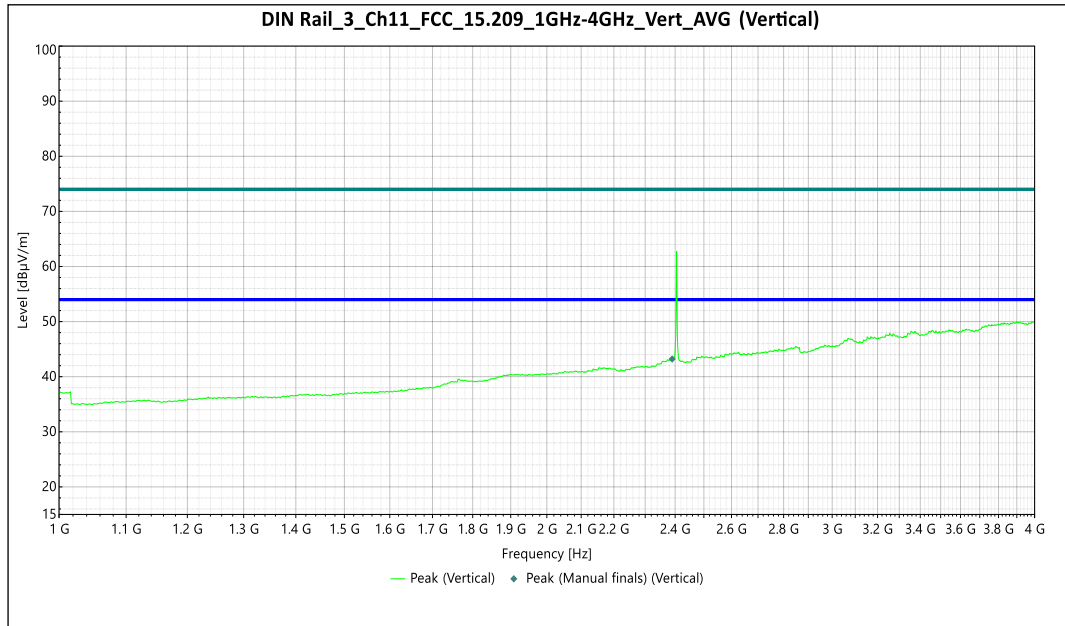
Graph 3.5.2 (Peak Readings, Low Channel)



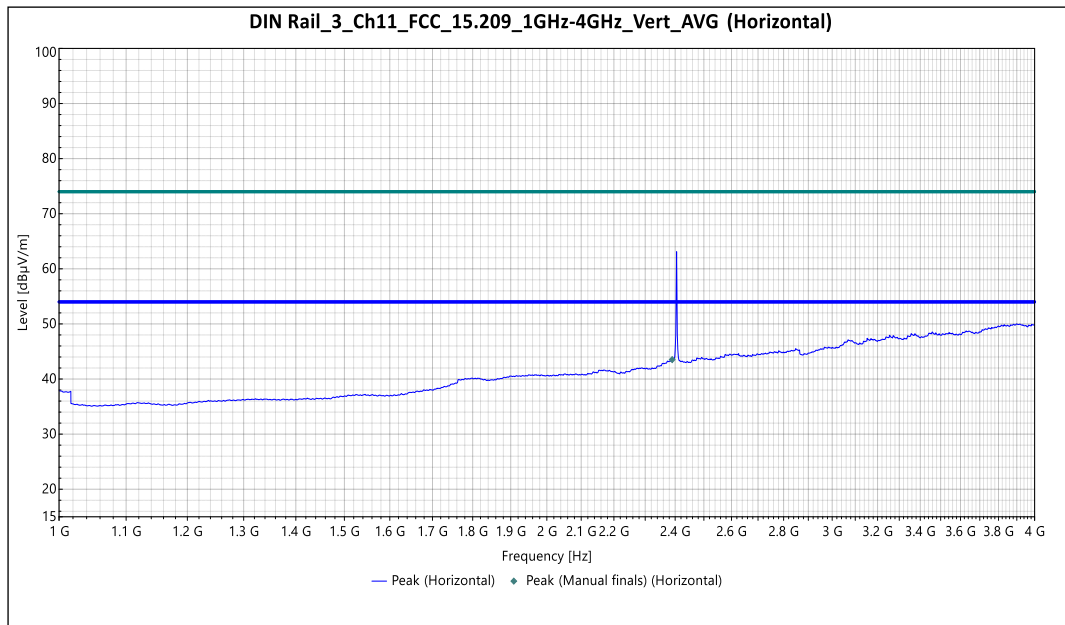
Graph 3.5.3 (Peak Readings, Low Channel)



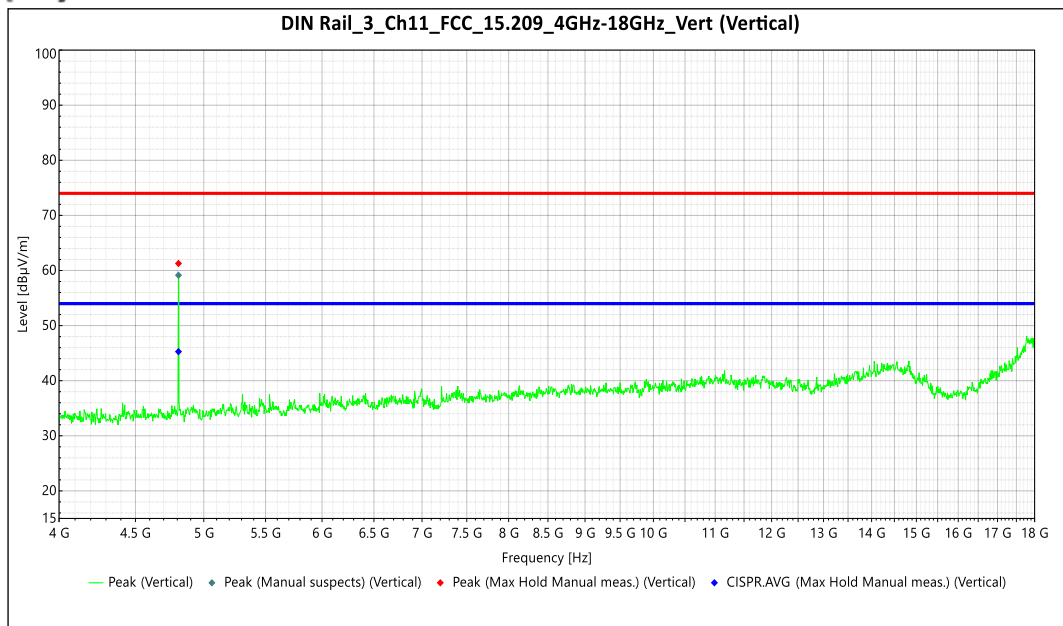
Graph 3.5.4 (Peak Readings, Low Channel)



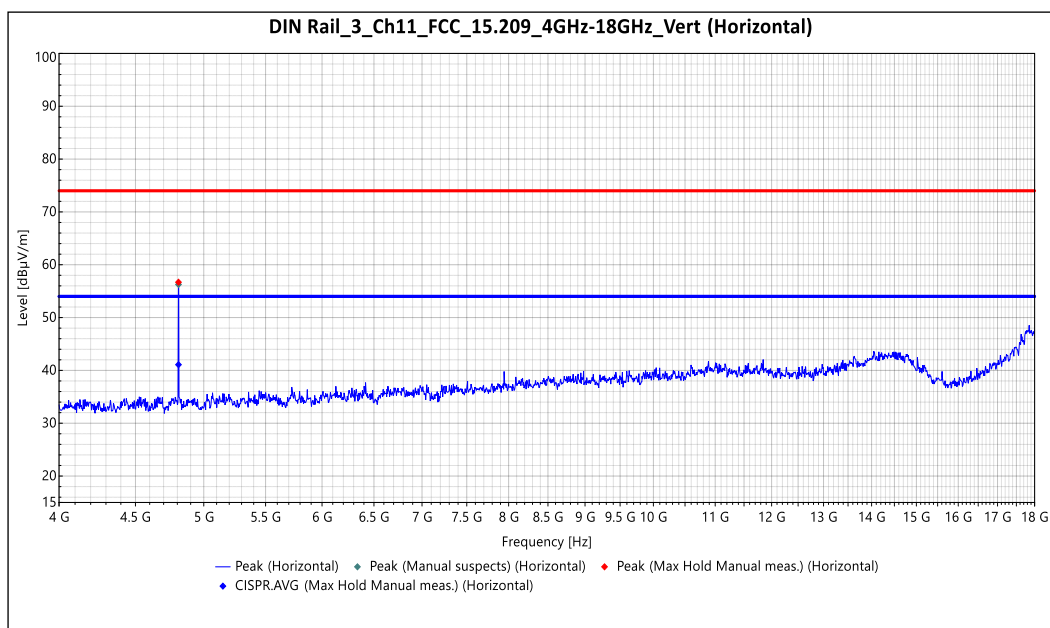
Graph 3.5.5 (Average Readings, Low Channel)



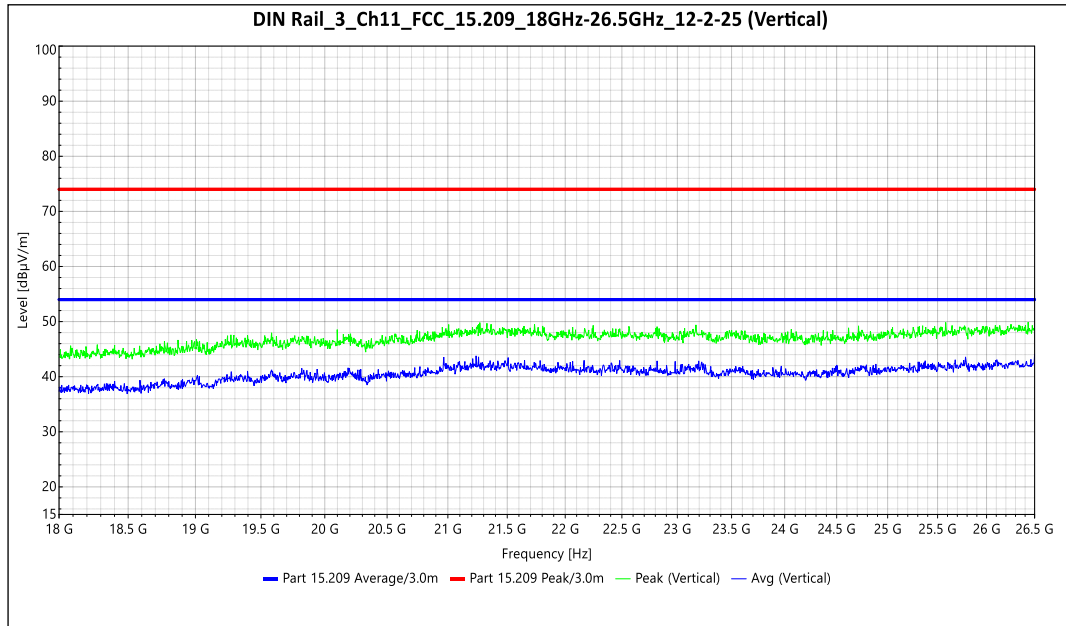
Graph 3.5.6 (Average Readings, Low Channel)



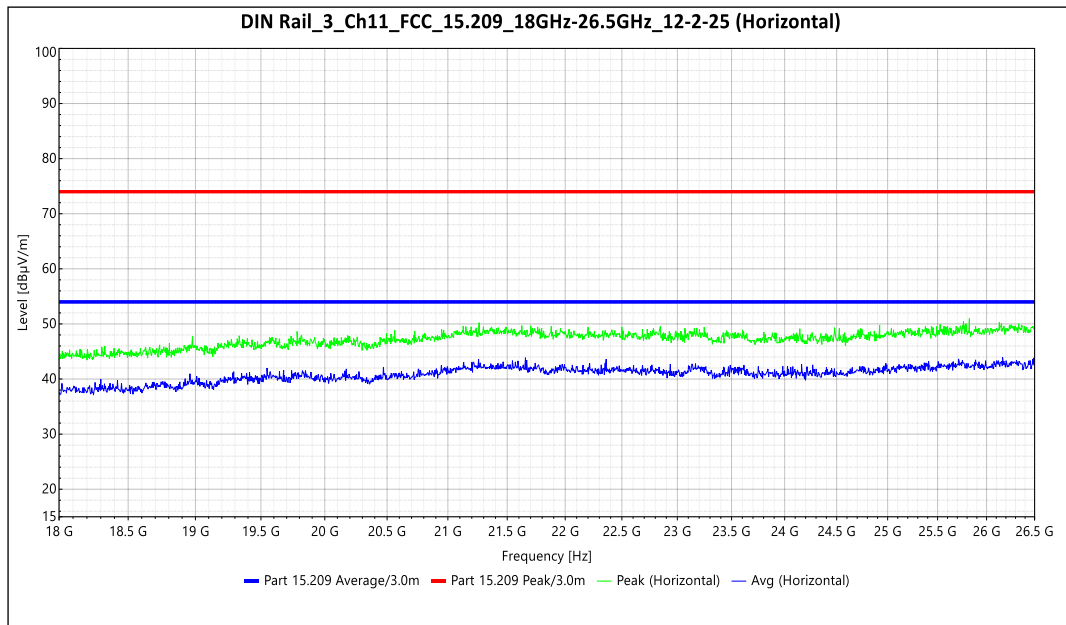
Graph 3.5.7 (Peak Readings, Low Channel)



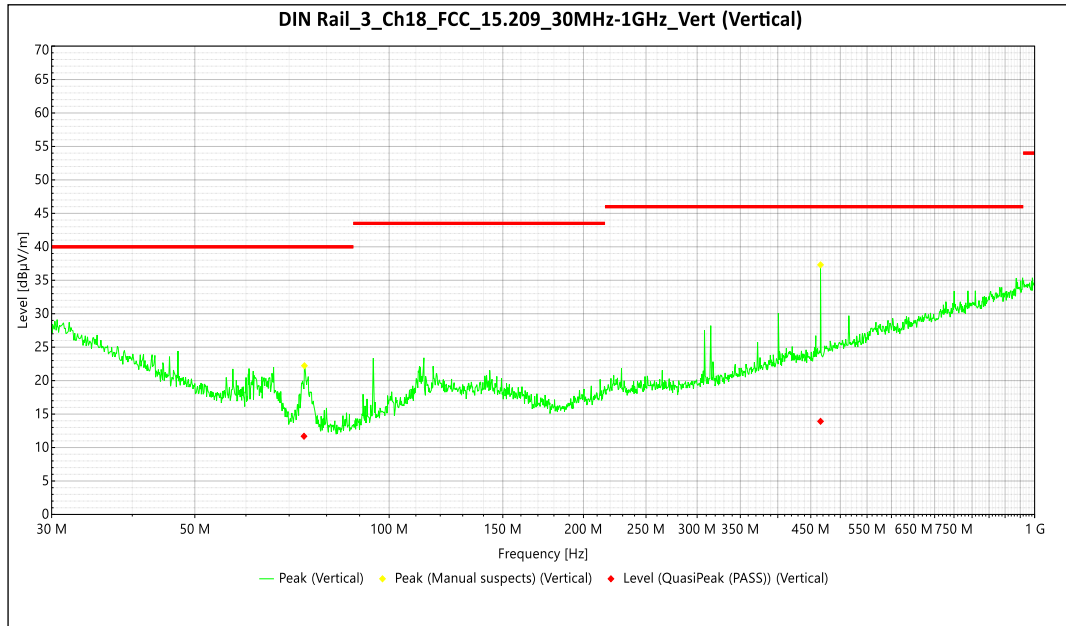
Graph 3.5.8 (Peak Readings, Low Channel)



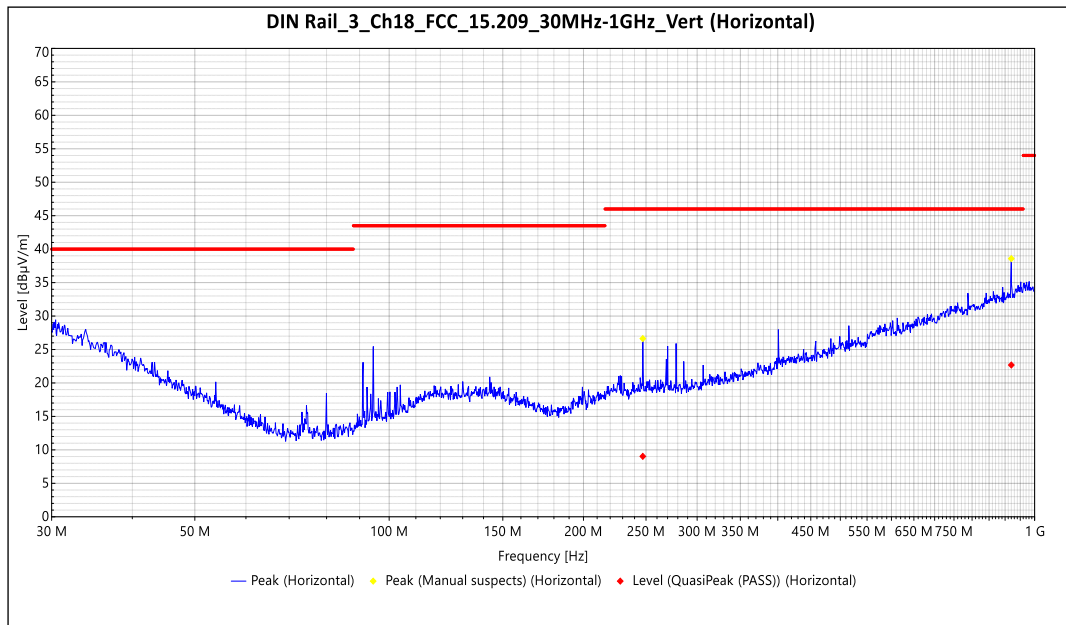
Graph 3.5.9 (Peak and Average Readings, Low Channel)



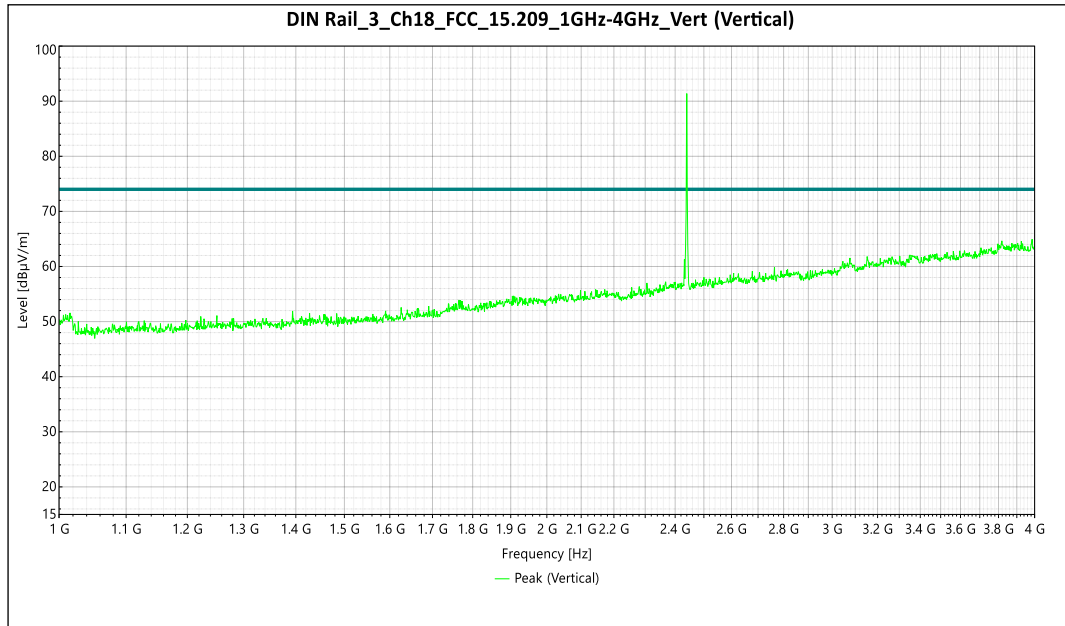
Graph 3.5.10 (Peak and Average Readings, Low Channel)



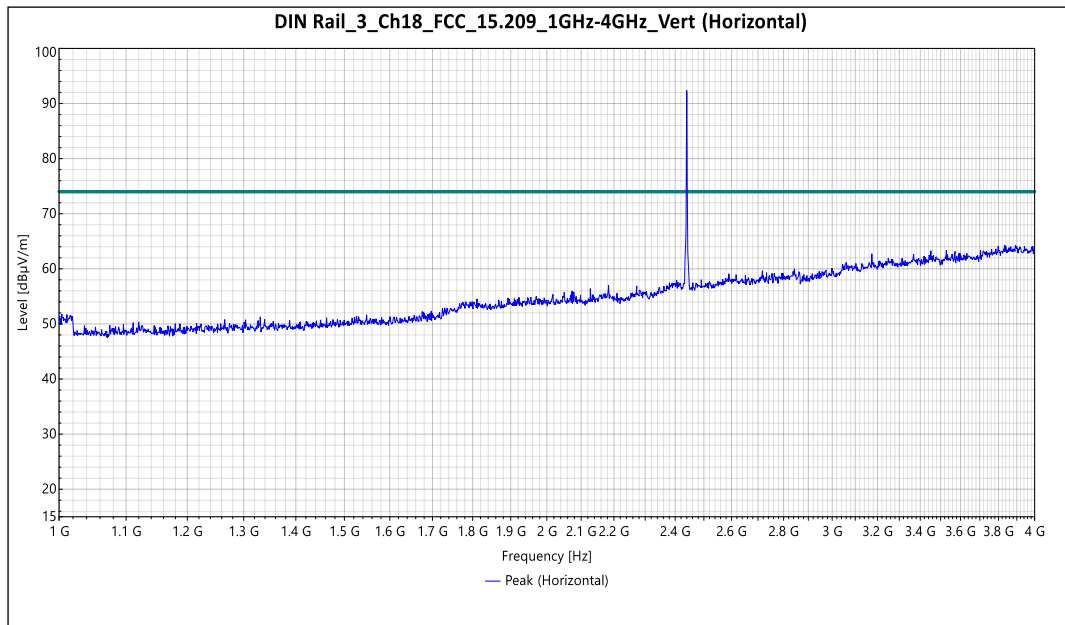
Graph 3.5.11 (Peak Readings, Middle Channel)



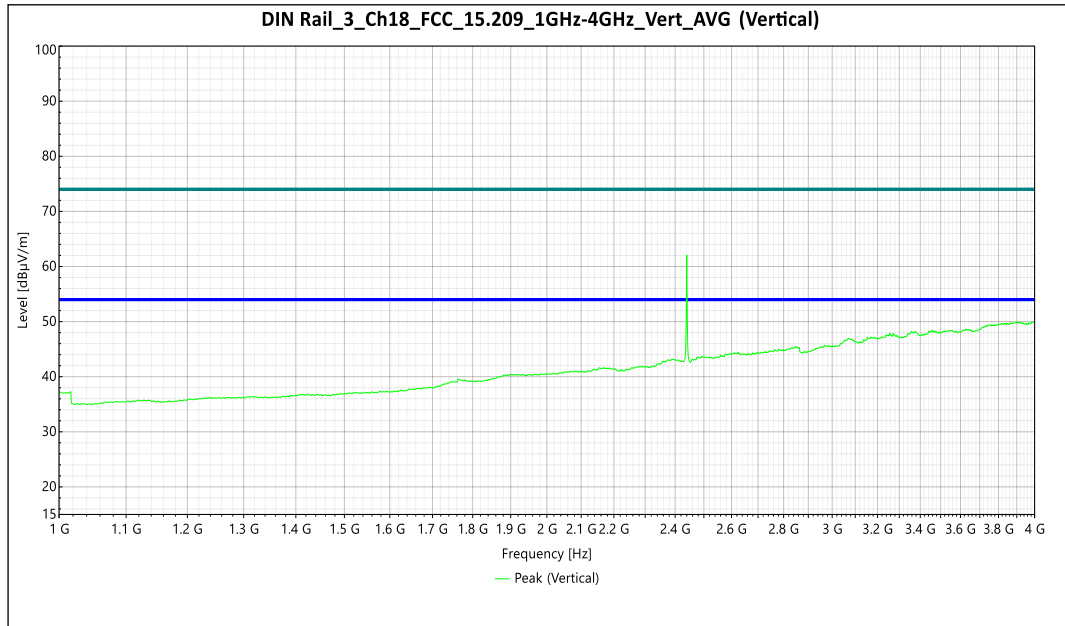
Graph 3.5.12 (Peak Readings, Middle Channel)



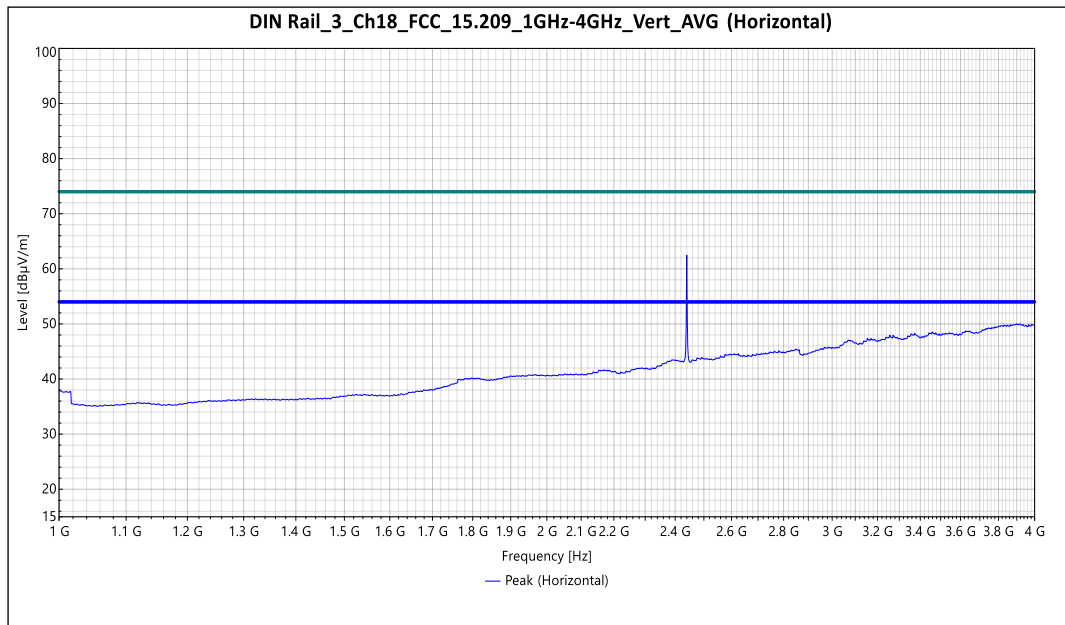
Graph 3.5.13 (Peak Readings, Middle Channel)



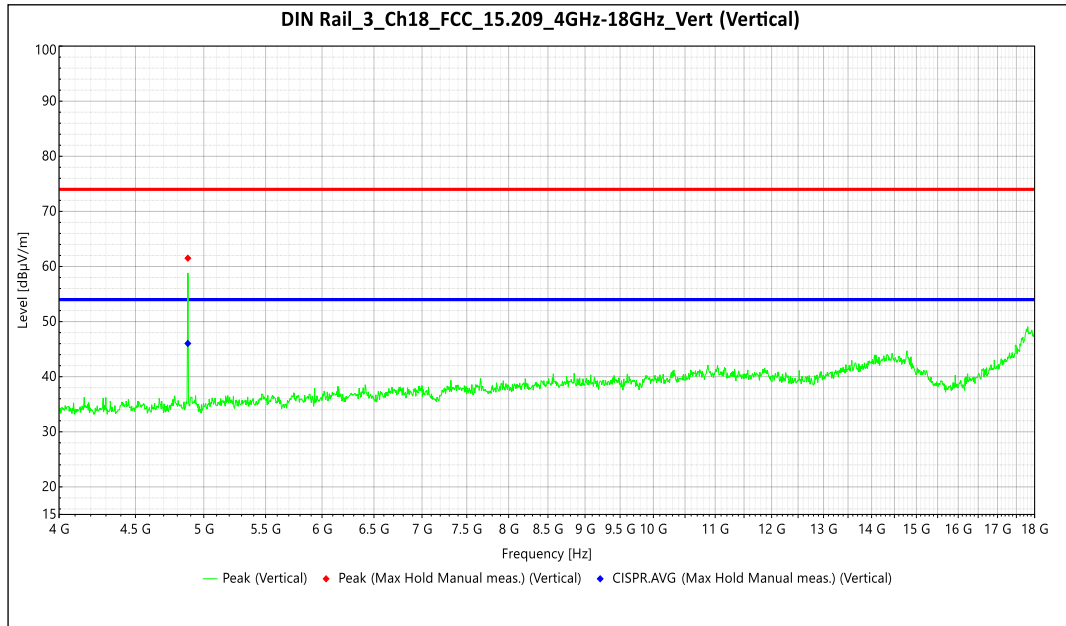
Graph 3.5.14 (Peak Readings, Middle Channel)



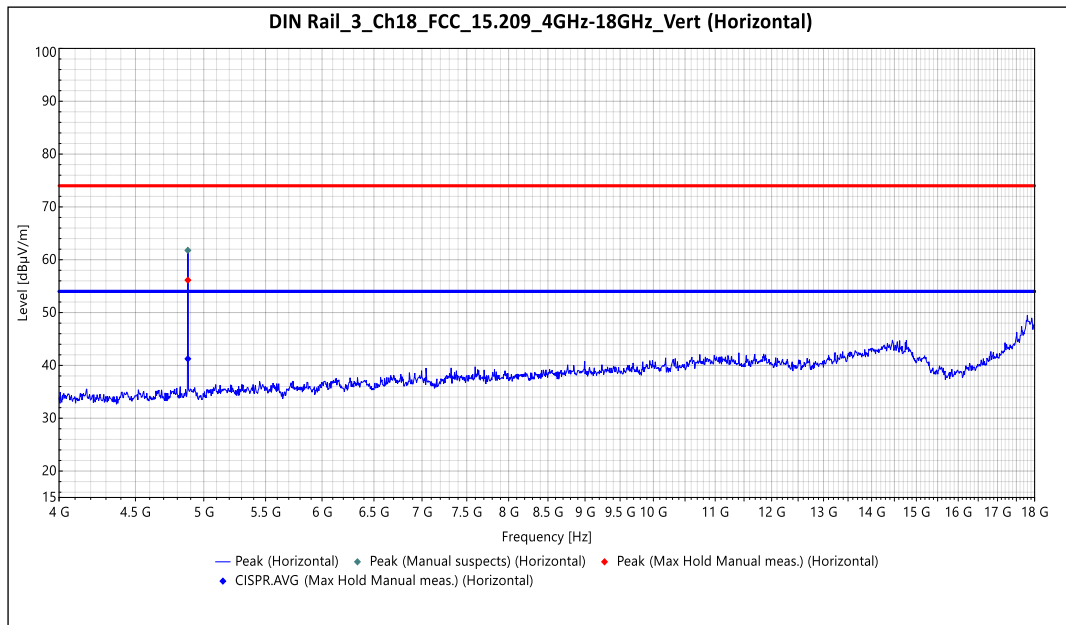
Graph 3.5.15 (Average Readings, Middle Channel)



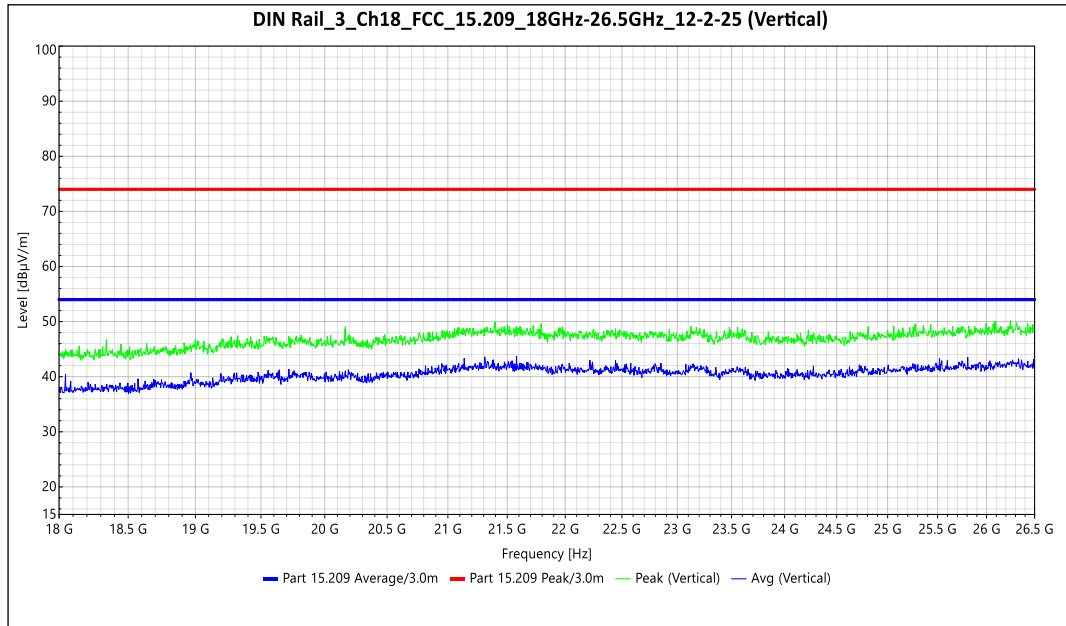
Graph 3.5.16 (Average Readings, Middle Channel)



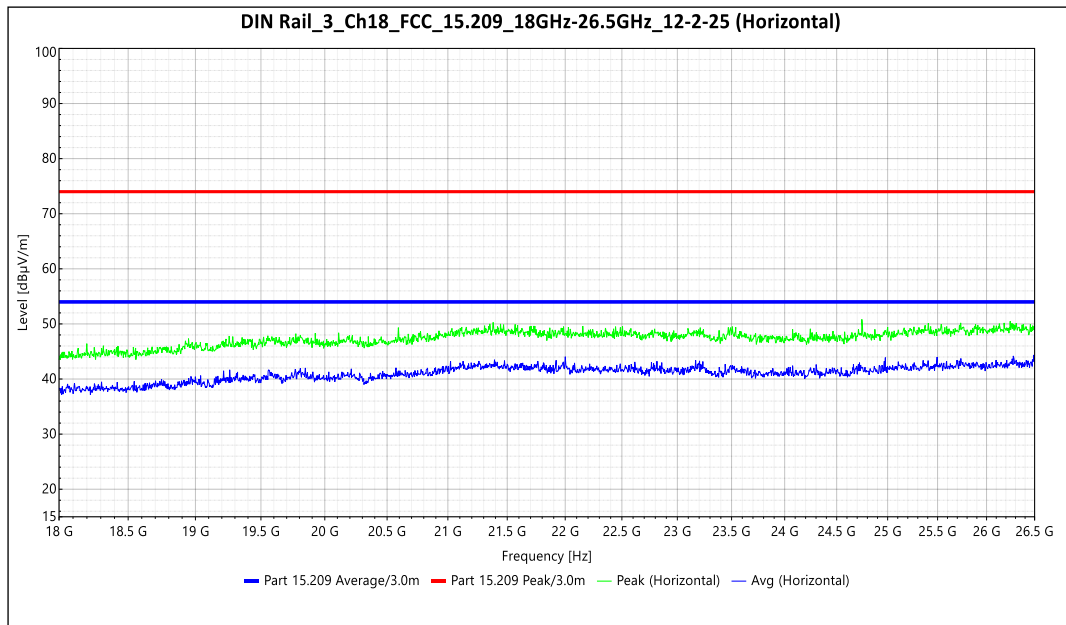
Graph 3.5.17 (Peak Readings, Middle Channel)



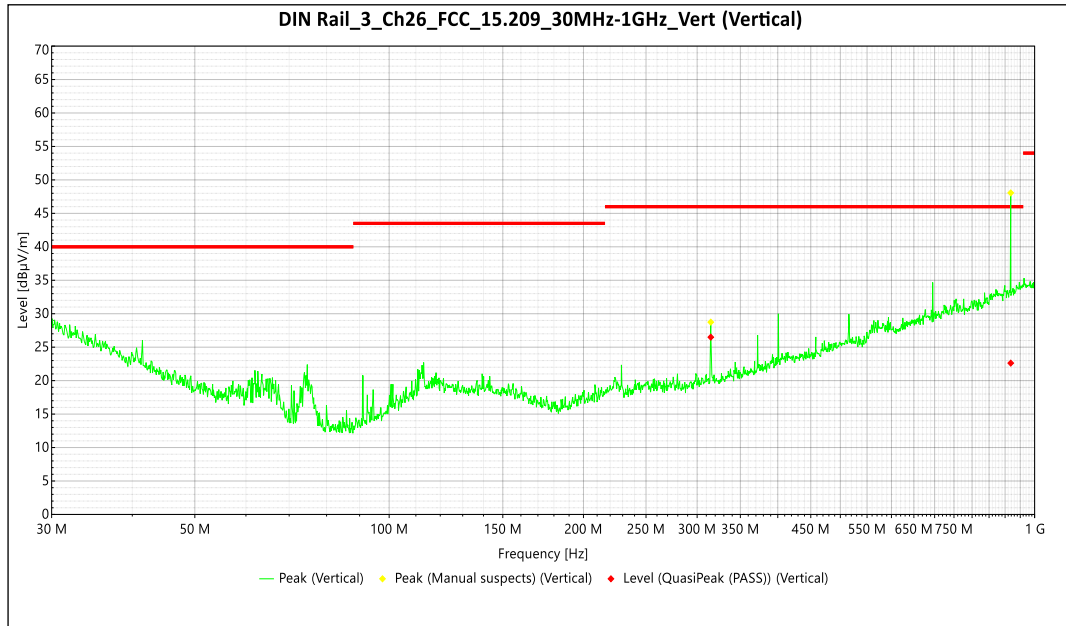
Graph 3.5.18 (Peak Readings, Middle Channel)



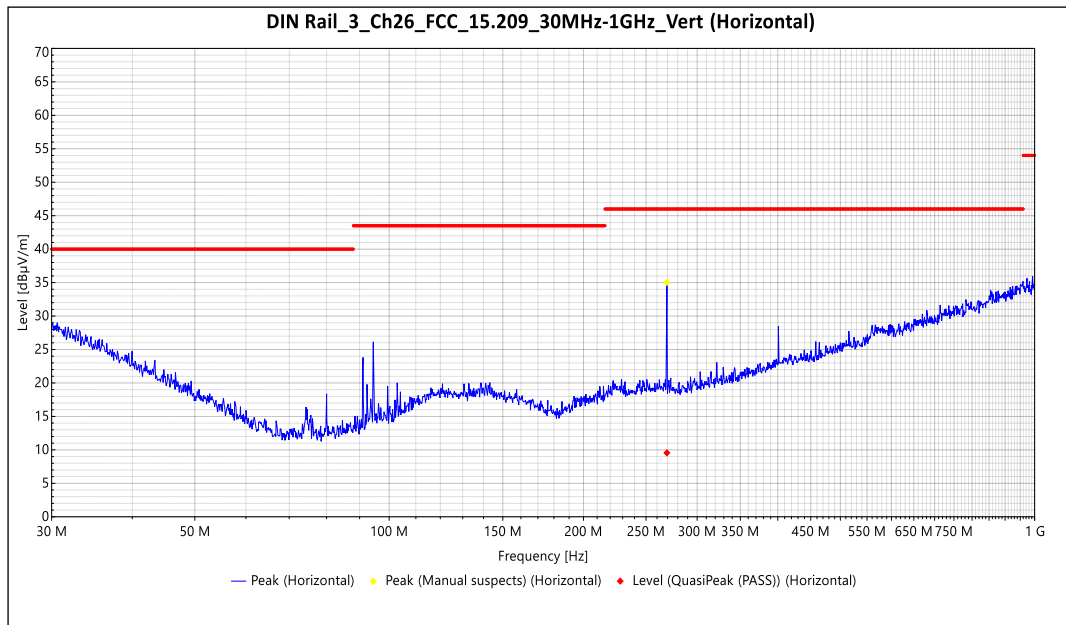
Graph 3.5.19 (Peak and Average Readings, Middle Channel)



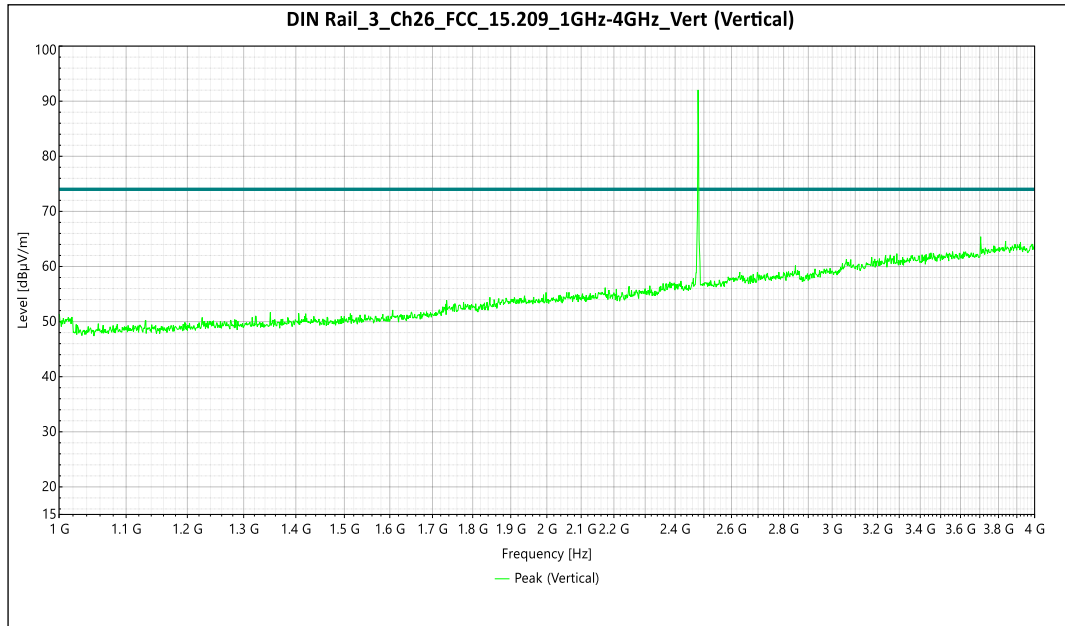
Graph 3.5.20 (Peak and Average Readings, Middle Channel)



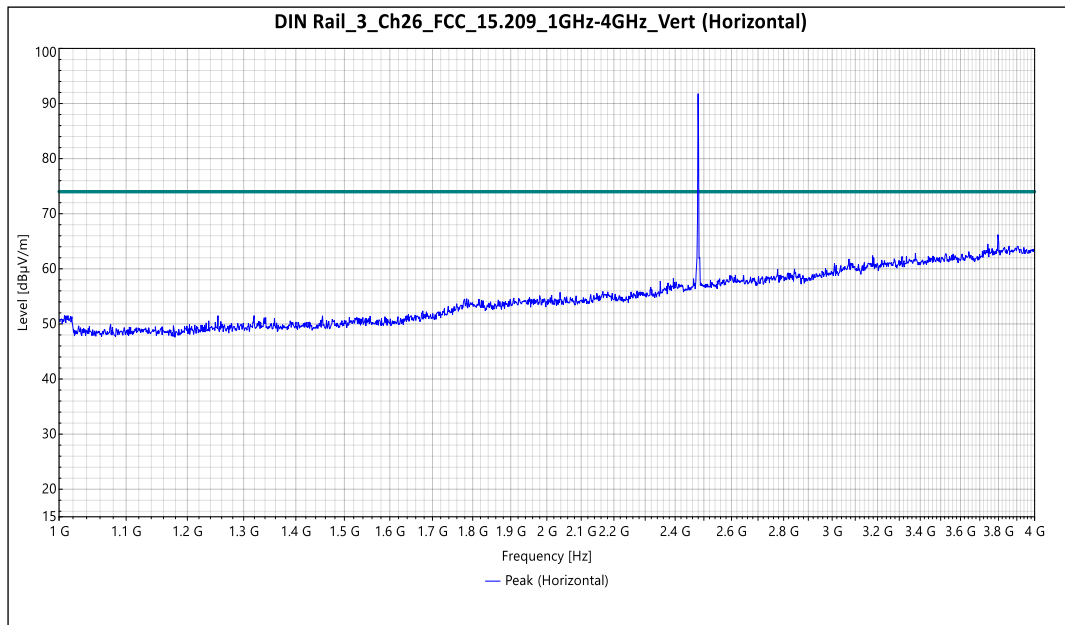
Graph 3.5.21 (Peak Readings, High Channel)



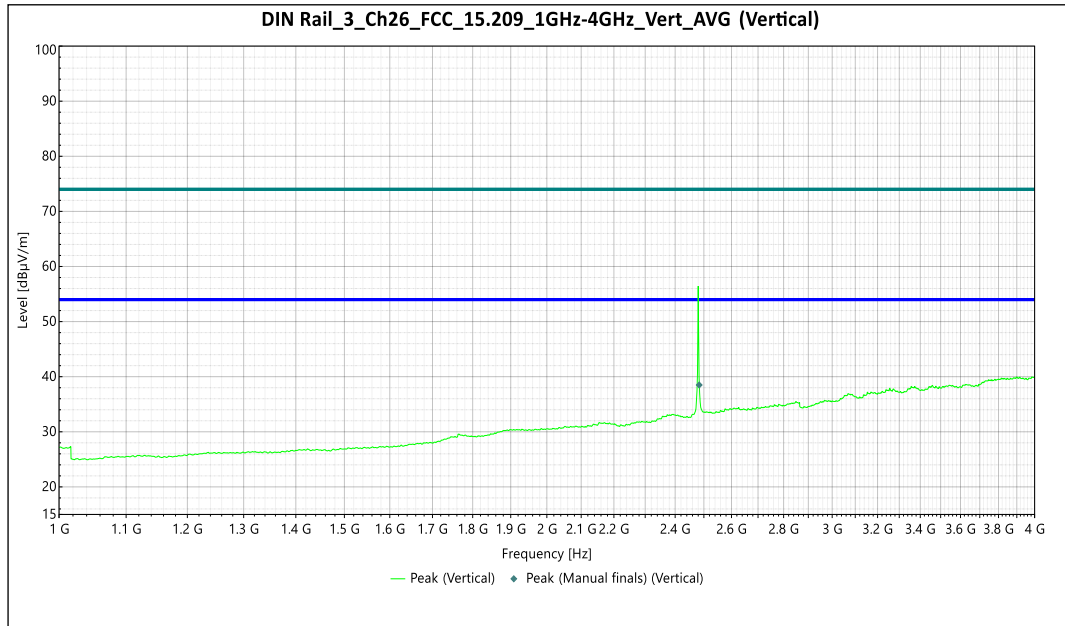
Graph 3.5.22 (Peak Readings, High Channel)



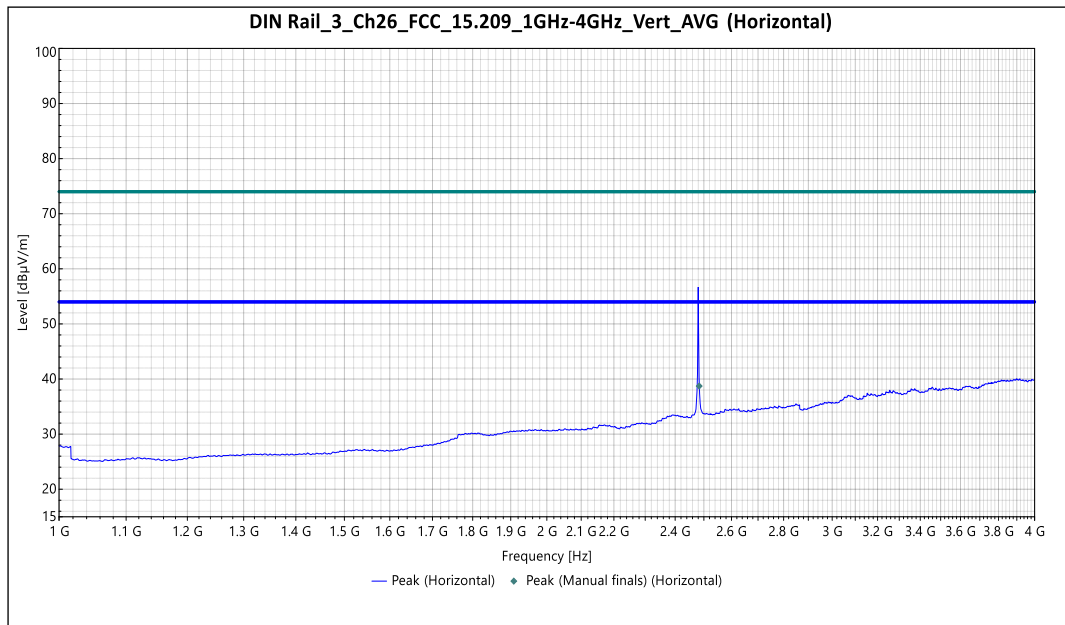
Graph 3.5.23 (Peak Readings, High Channel)



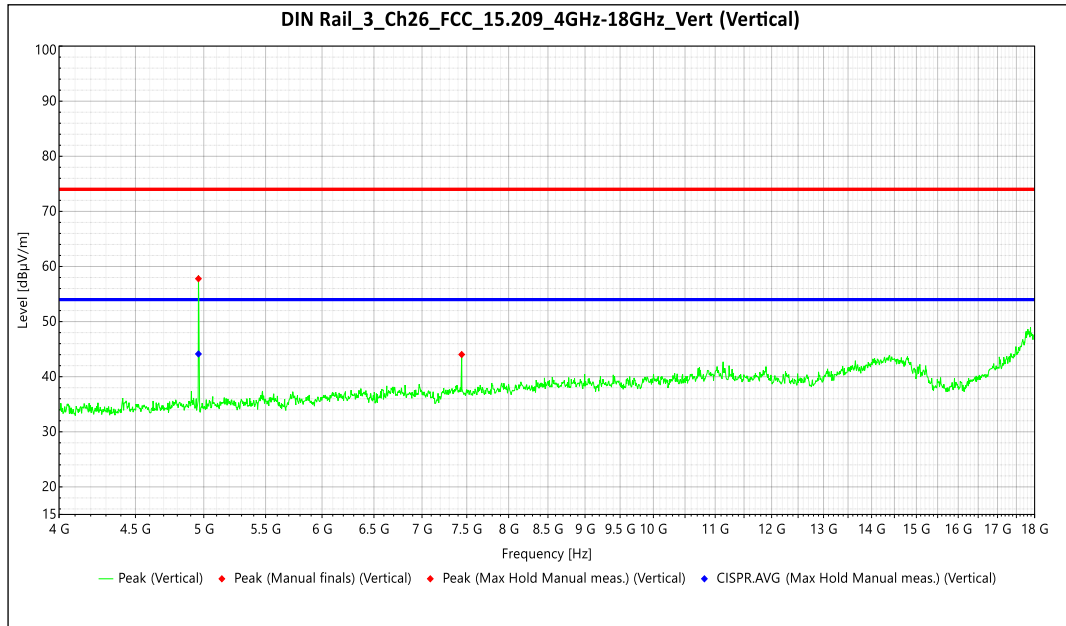
Graph 3.5.24 (Peak Readings, High Channel)



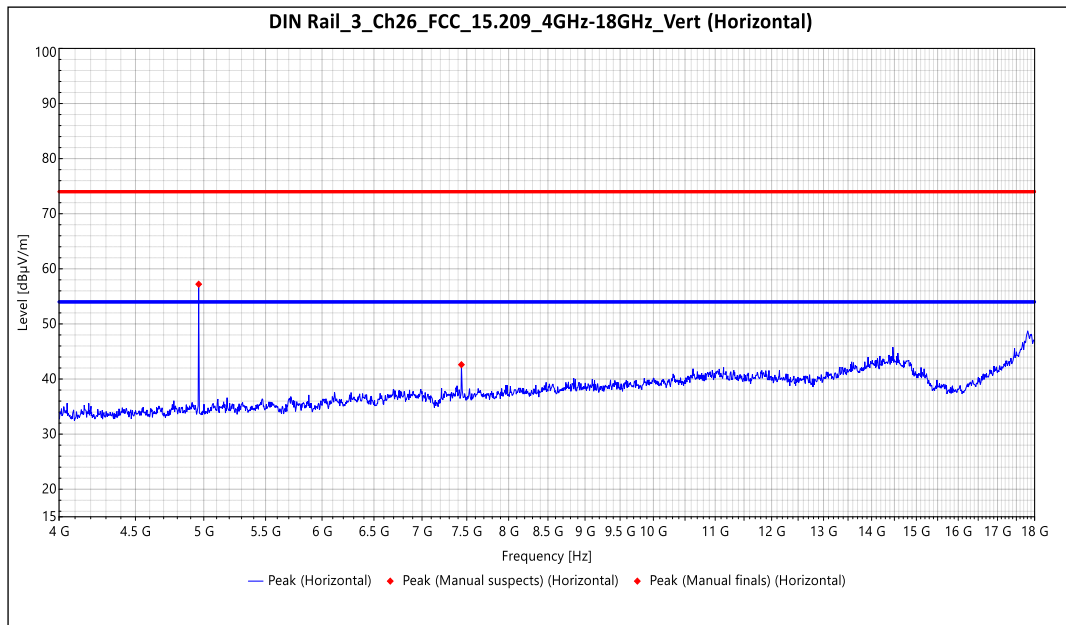
Graph 3.5.25 (Average Readings, High Channel)



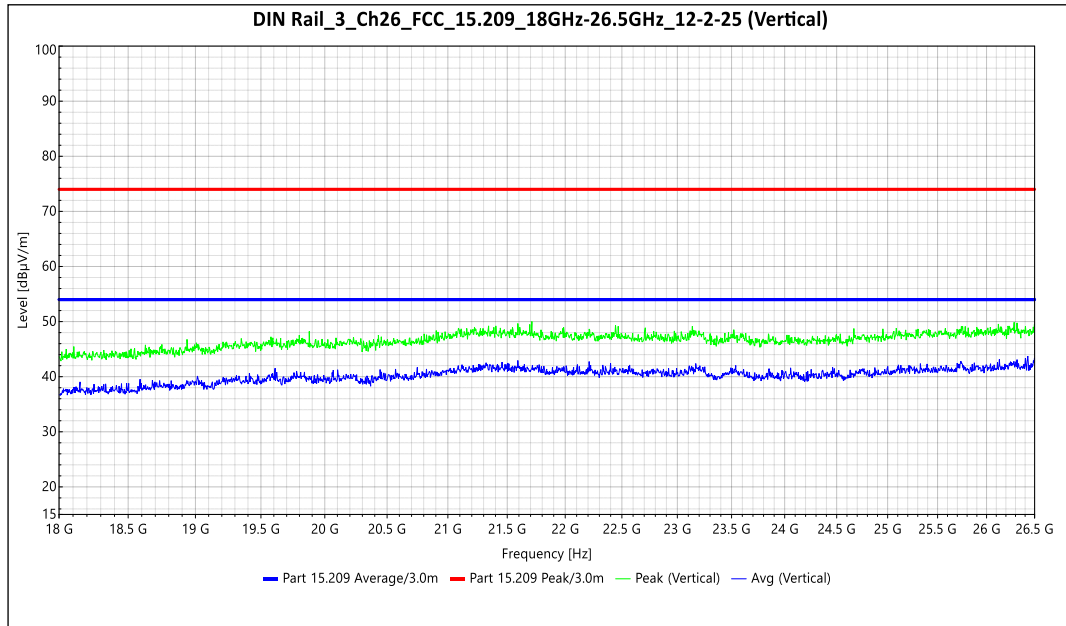
Graph 3.5.26 (Average Readings, High Channel)



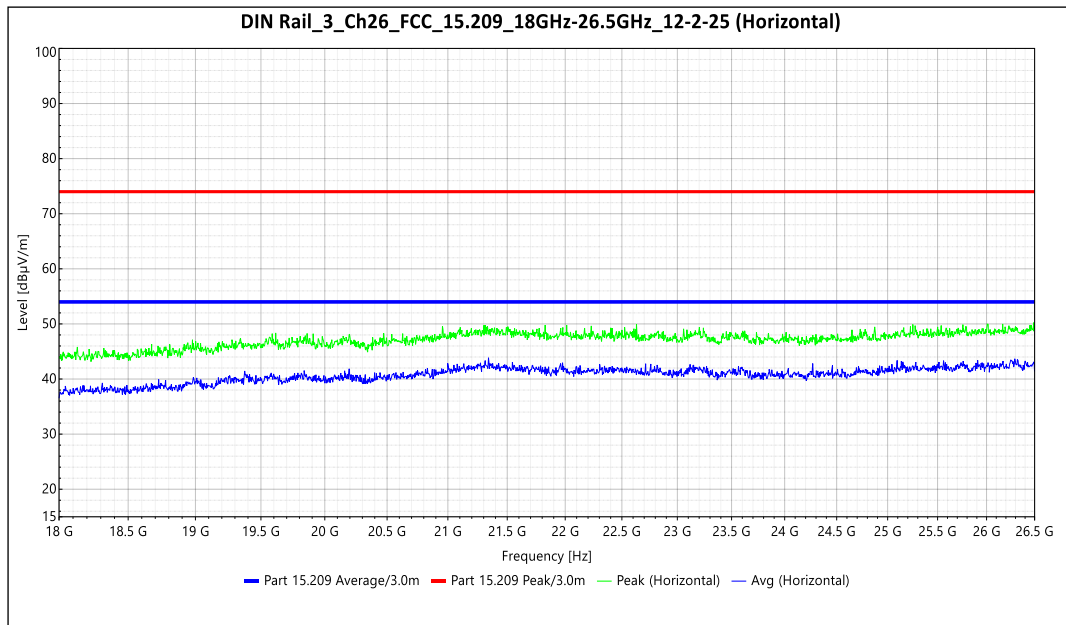
Graph 3.5.27 (Peak Readings, High Channel)



Graph 3.5.28 (Peak Readings, High Channel)



Graph 3.5.29 (Peak and Average Readings, High Channel)



Graph 3.5.30 (Peak and Average Readings, High Channel)

3.6 Transmitter power line conducted emissions

Test location: ☐ OATS ☐ Anechoic Chamber ☒ Other

Test result: **Pass**

Frequency range: 0.15MHz-30MHz

Max. Emissions margin: 13.16 dB below the limits

Notes: Test was performed on Low Channel transmitter setting only.

EUT was configured to transmit continuously.

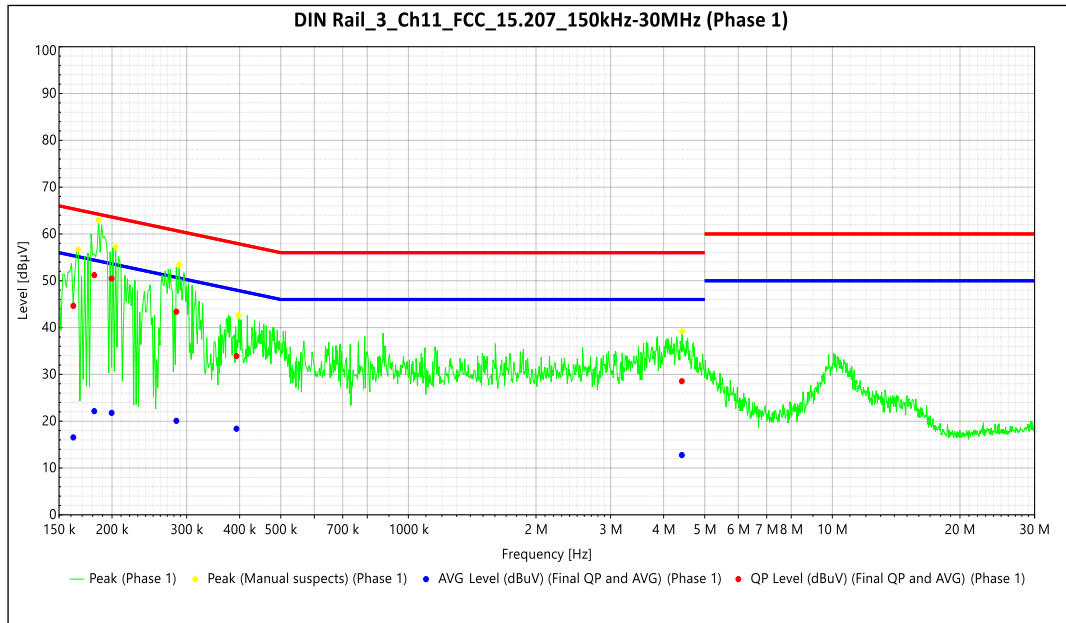
Conducted emission measurements were performed from 150 kHz to 30 MHz.

Analyzer setting used: Resolution Bandwidth is 9 kHz and Video Bandwidth is 30 kHz.

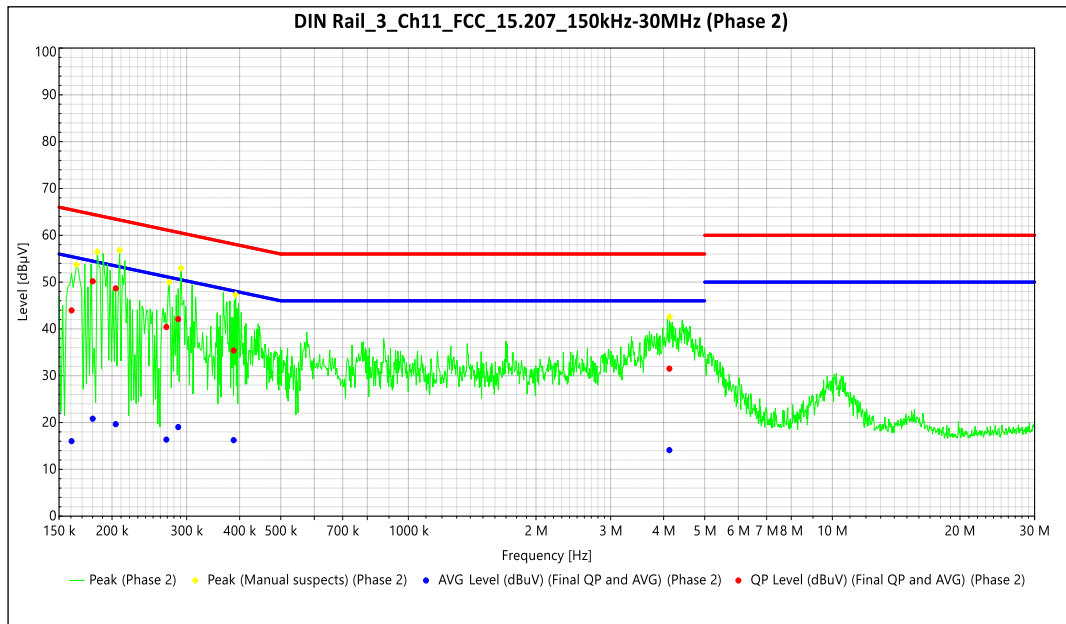
Date:	2025-10-24	Result: Pass
Tested by:	Jayden Alstad	
Standard:	FCC part 15.207 / RSS-Gen 7.2.2	
Test Point:	Power Line	
Operation mode:	See page 5	
Environmental Conditions:	22°C; 29%(RH); 103kPa	
Equipment Verification:	☒	
Note:	None	

Table 3.6.1

Frequency	Line	Total Correction (dB)	AVG Level (dBμV)	QP Level (dBμV)	AVG Limit (dBμV)	QP Limit (dBμV)	AVG Margin (dB)	QP Margin (dB)
162.1 kHz	1	10.10	16.54	44.64	55.36	65.36	-38.82	-20.72
181.62 kHz	1	10.09	22.15	51.21	54.42	64.42	-32.27	-13.20
199.55 kHz	1	10.08	21.79	50.47	53.63	63.63	-31.85	-13.16
283.65 kHz	1	10.07	20.08	43.40	50.71	60.71	-30.64	-17.32
393.15 kHz	1	10.07	18.39	33.91	48.00	58.00	-29.61	-24.09
4.42 MHz	1	10.10	12.77	28.55	46.00	56.00	-33.23	-27.45
160.53 kHz	2	10.07	16.02	43.95	55.44	65.44	-39.42	-21.48
180.06 kHz	2	10.07	20.82	50.17	54.49	64.49	-33.67	-14.32
204.06 kHz	2	10.06	19.65	48.66	53.45	63.45	-33.80	-14.79
268.65 kHz	2	10.05	16.36	40.42	51.16	61.16	-34.81	-20.75
286.51 kHz	2	10.04	19.03	42.09	50.63	60.63	-31.60	-18.54
387.14 kHz	2	10.05	16.23	35.39	48.13	58.13	-31.90	-22.74
4.13 MHz	2	10.07	14.10	31.51	46.00	56.00	-31.90	-24.49



Graph 3.6.1 (Peak Readings)



Graph 3.6.2 (Peak Readings)

4.0 TEST EQUIPMENT

DESCRIPTION	MANUFACTURER	MODEL	SERIAL NO.	INTERTEK ID	LAST CAL DATE	CAL DUE
Spectrum Analyzer	R & S	ESR	101710	172558	07/18/2025	07/18/2026
Bicono-Log Antenna	Teseq-Huber-Suhner	CBL6141B	63450	172571	04/15/2025	04/15/2026
Chamber RE Cable	Coleman	RG214/U M17/164-00001		172505	04/10/2025	04/10/2026
Chamber HF Cable	Insulated Wire Inc.	KPS-1571-3600-KPS		172585	04/10/2025	04/10/2026
Chamber HF Cable	Insulated Wire, Inc.	KPS-1571-125-KPS		172543	04/10/2025	04/10/2026
Chamber HF Cable	Insulated Wire Inc.	NPR-2301-160-SPS		172541	04/10/2025	04/10/2026
Chamber HF Cable	Mini-Circuit	CBL-1.5FT-SMSM	172141	172542	04/10/2025	04/10/2026
High Pass Filter	Reactel, Inc.	9HS-4G/24G-S12	20-01	172538	04/09/2025	04/09/2026
Horn Antenna	EMCO	3115	9504-4504	172463	04/14/2025	04/14/2026
Waveguide Horn Antenna	EMCO	3116	9904-2423	9705	04/15/2025	04/15/2026
Loop Antenna	ETS	6512	00060486	19942	04/15/2025	04/15/2026
CE Cable	Pasternack Enterprises LLC	RG217/U		172515	04/10/2025	04/10/2026
Pre-Amplifier	MITEQ	LNA-40-00101800-35-15P	2108525	172474	04/09/2025	04/09/2026
Pre-Amplifier	MITEQ	AMF-6F-16002600-25-10P	1222383	MIN-0065	10/07/2025	10/07/2026
LISN	COM-Power	Li-215A	191970	172315	04/07/2025	04/07/2026
System	Nexio Inc.	BAT-EMC	v2024.0.16.2	172Nexio	VBV	VBV

5.0 Revision History

REVISION LEVEL	DATE	REPORT NUMBER	PREPARED	REVIEWED	NOTES
0	2025-12-10	106347494MIN-003	PK	US	Original Issue
1	2026-02-05	106347494MIN-003	RL <i>David Kilian</i>	US <i>M. Spender</i>	Added EIRP result, "End of Report" statement and standard edition was updated

END OF REPORT