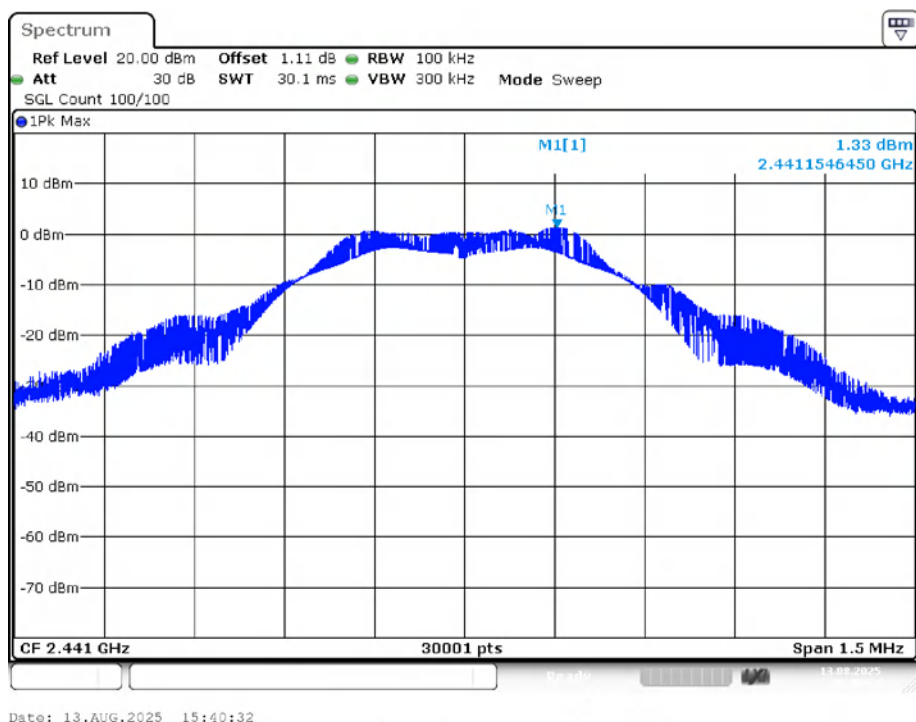
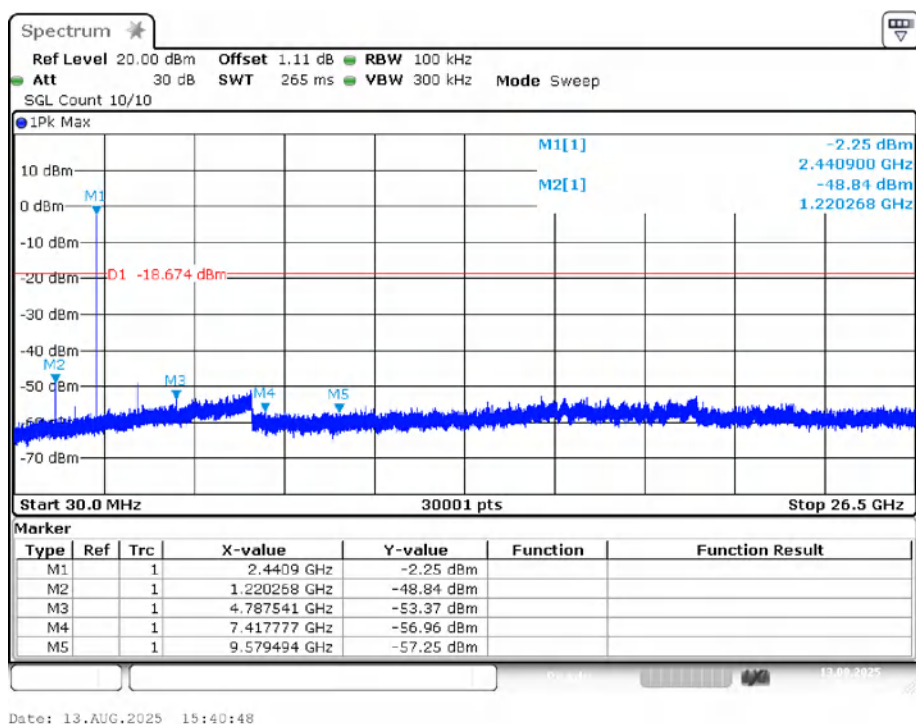
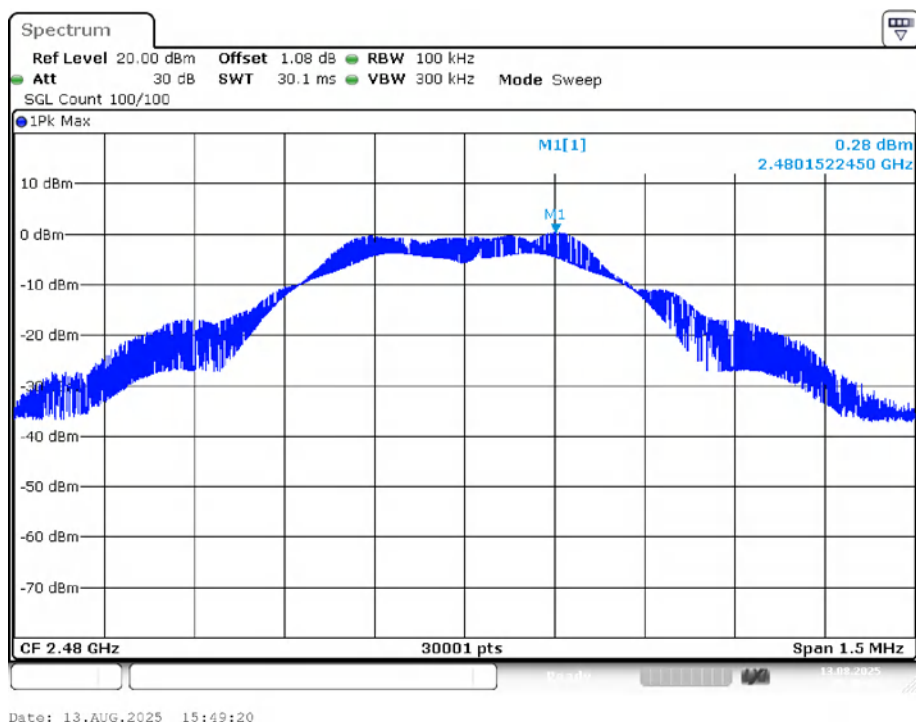




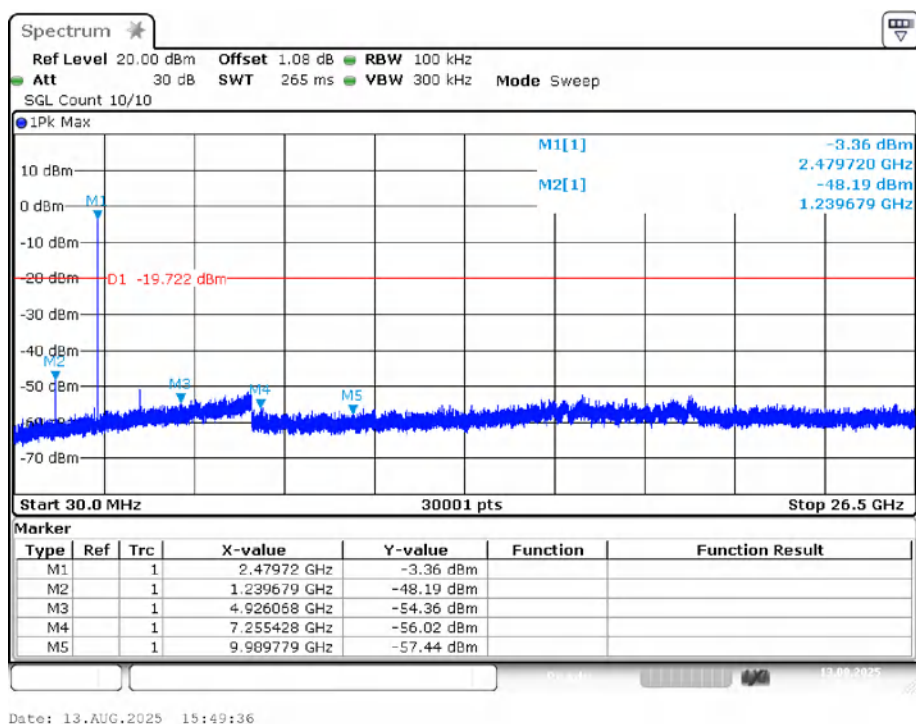
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



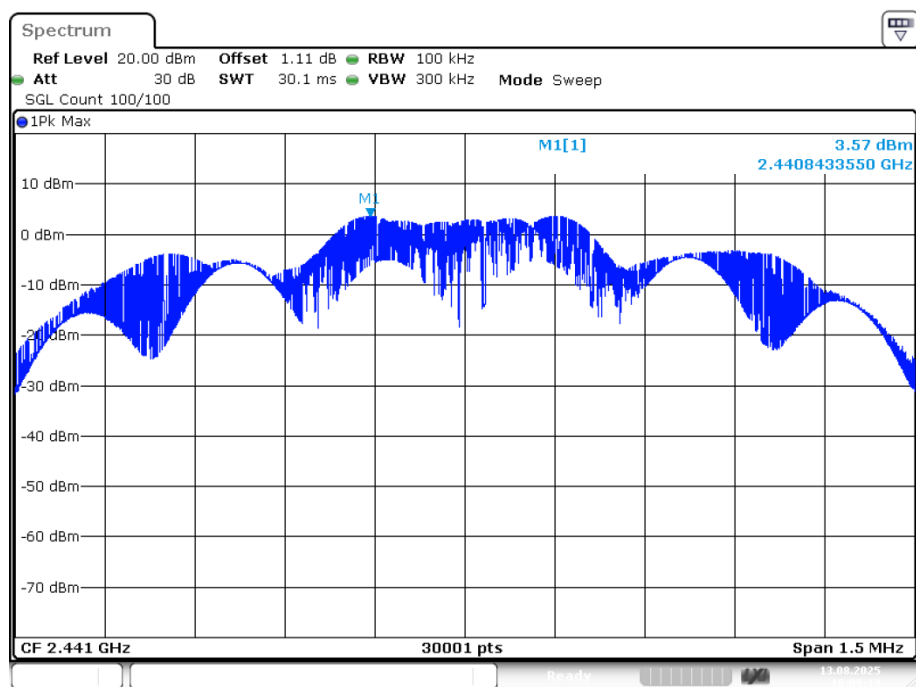
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

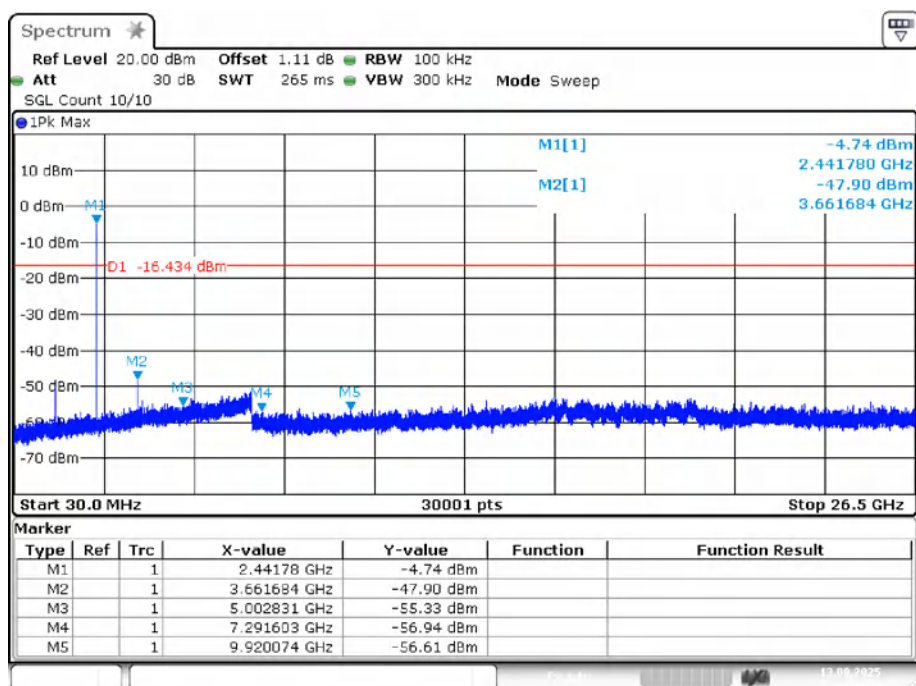


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



Date: 13.AUG.2025 16:09:18

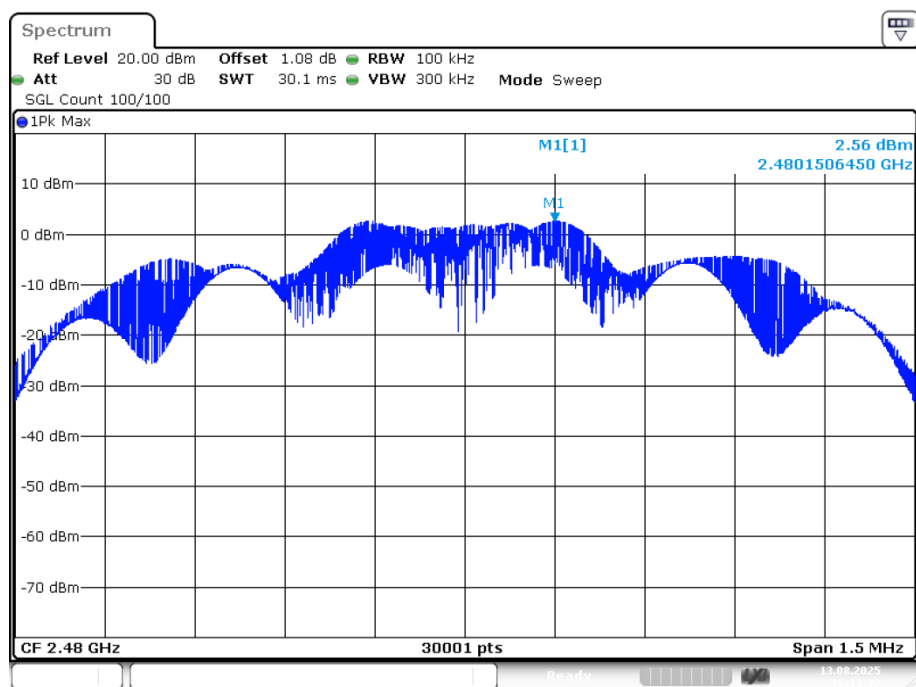
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



Date: 13.AUG.2025 16:09:34

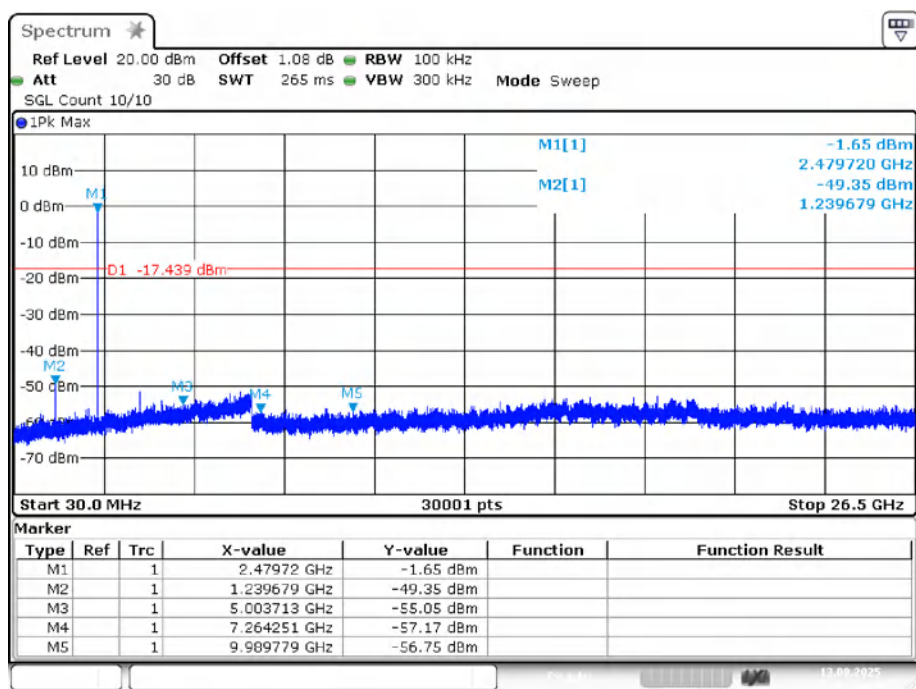
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

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Date: 13.AUG.2025 16:11:31

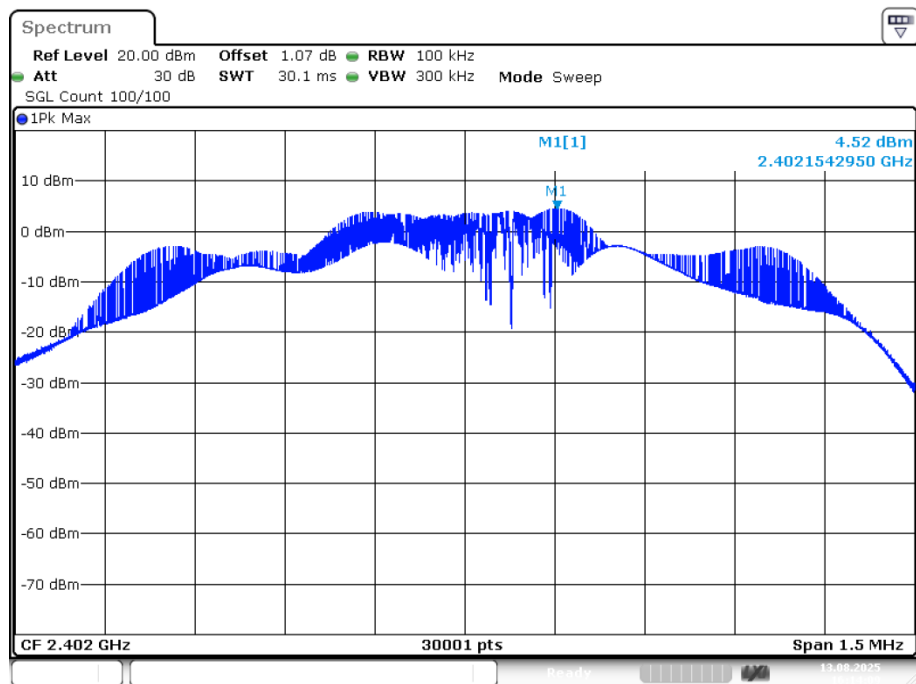
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Date: 13.AUG.2025 16:11:48

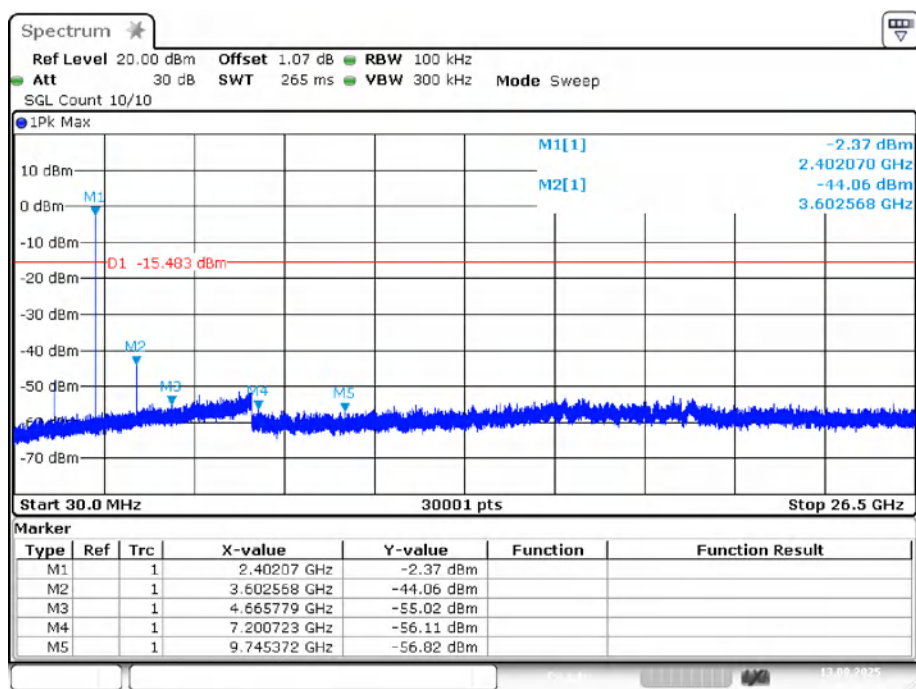
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

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Date: 13.AUG.2025 16:14:09

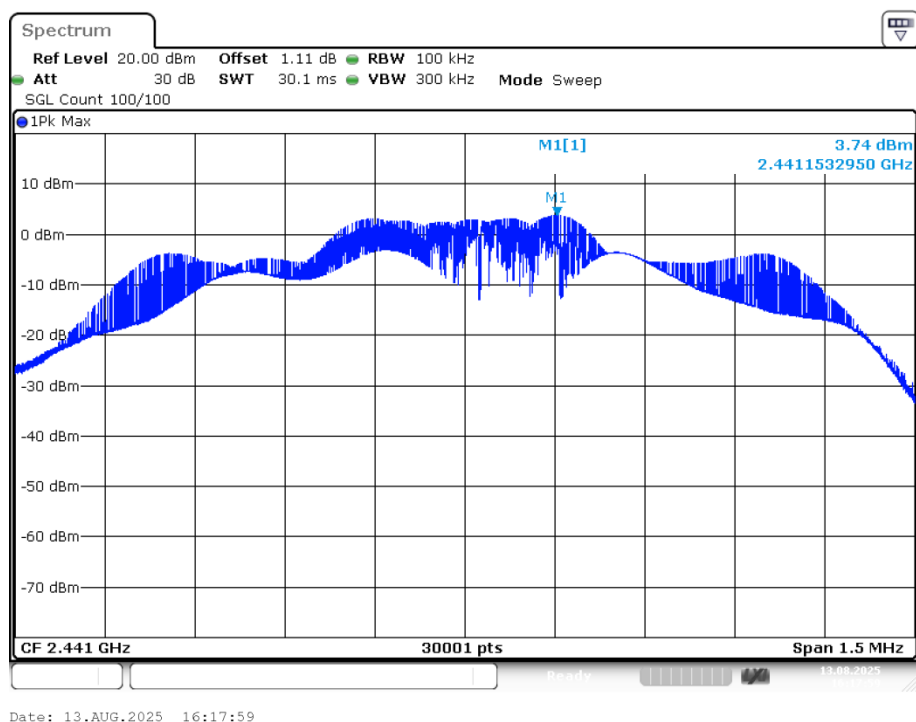
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



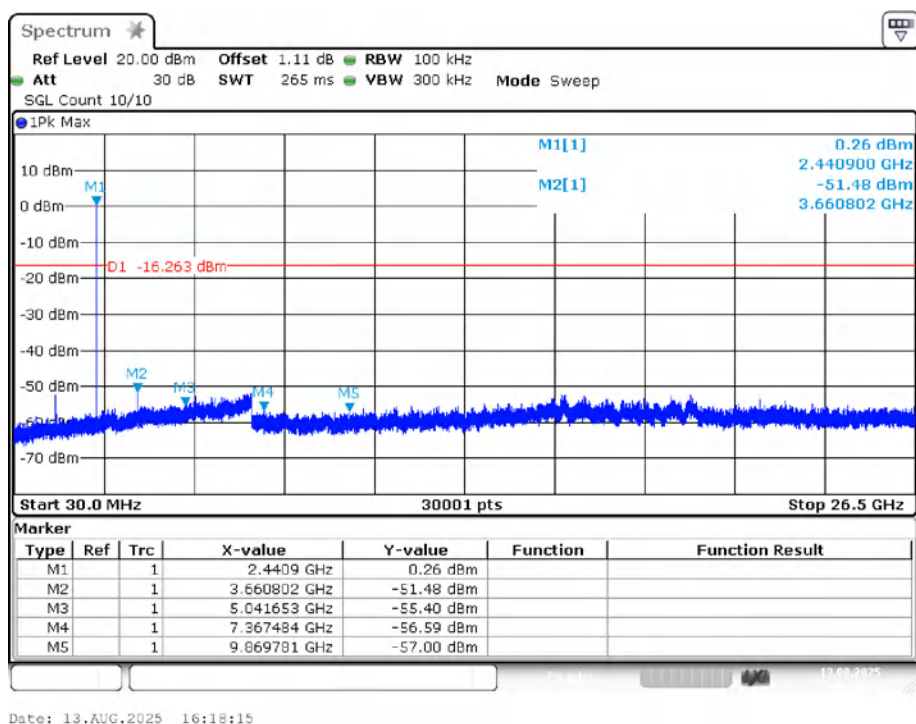
Date: 13.AUG.2025 16:14:25

Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission

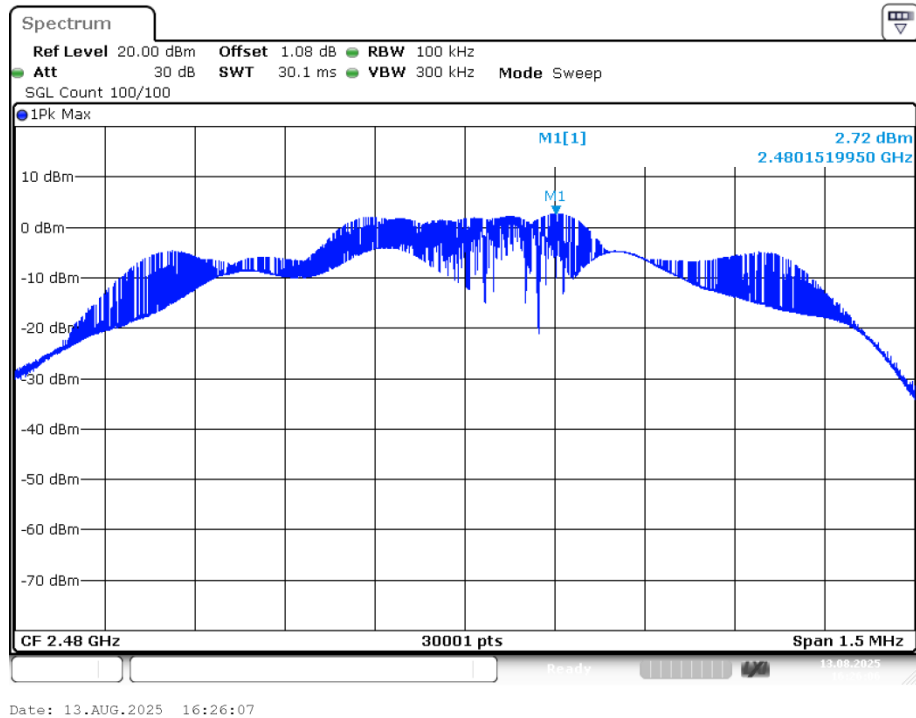
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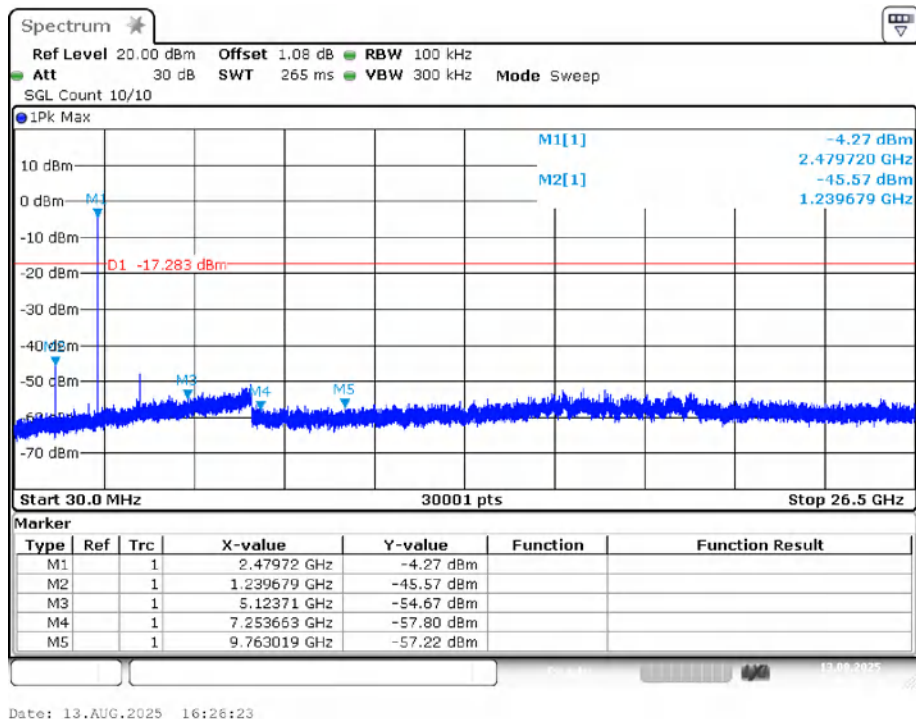
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

Test Result: The unit does meet the FCC requirements.

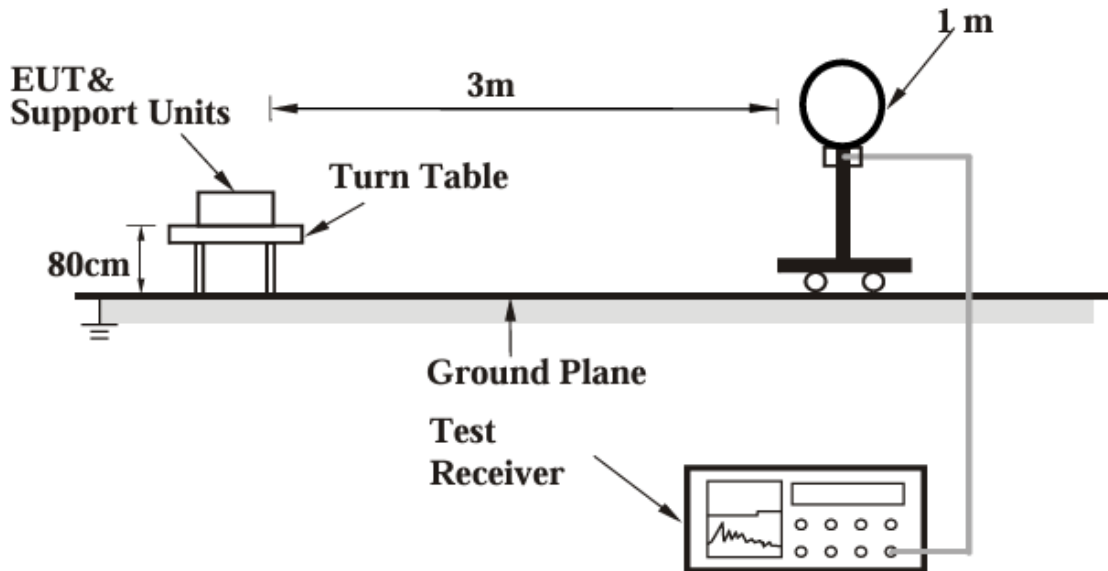
This report is for the exclusive use of ITL's client and is provided pursuant to the agreement between ITL assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the ITL name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by ITL. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an ITL certification program. The test report only allows to be revised within the retention period unless further standard or the requirement was noticed.

5.9 Radiated Spurious Emissions

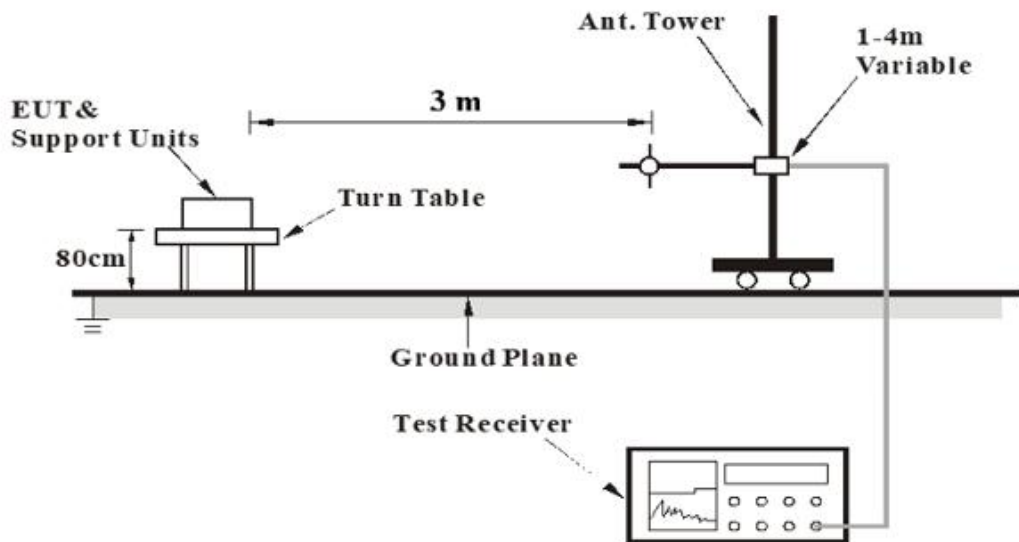
Test Requirement:	FCC Part 15 C section 15.247(d) In any 100 KHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating. The radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 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, and provided the transmitter demonstrates compliance with the peak conducted power limits.
Test Method:	ANSI C63.10:2020
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, channels and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Detector:	 For PK value: RBW = 1 MHz for $f \geq 1$ GHz, 100 KHz for $f < 1$ GHz VBW $\geq$ RBW Sweep = auto Detector function = peak Trace = max hold For AV value: RBW = 1 MHz for $f \geq 1$ GHz, 100 KHz for $f < 1$ GHz, 9 KHz for < 30 MHz VBW = 10Hz Sweep = auto Detector function = peak Trace = max hold
Limit:	40.0 dB μ V/m between 30 MHz & 88MHz 43.5 dB μ V/m between 88MHz & 216MHz 46.0 dB μ V/m between 216MHz & 960MHz 54.0 dB μ V/m above 960MHz

5.9.1 Test Configuration

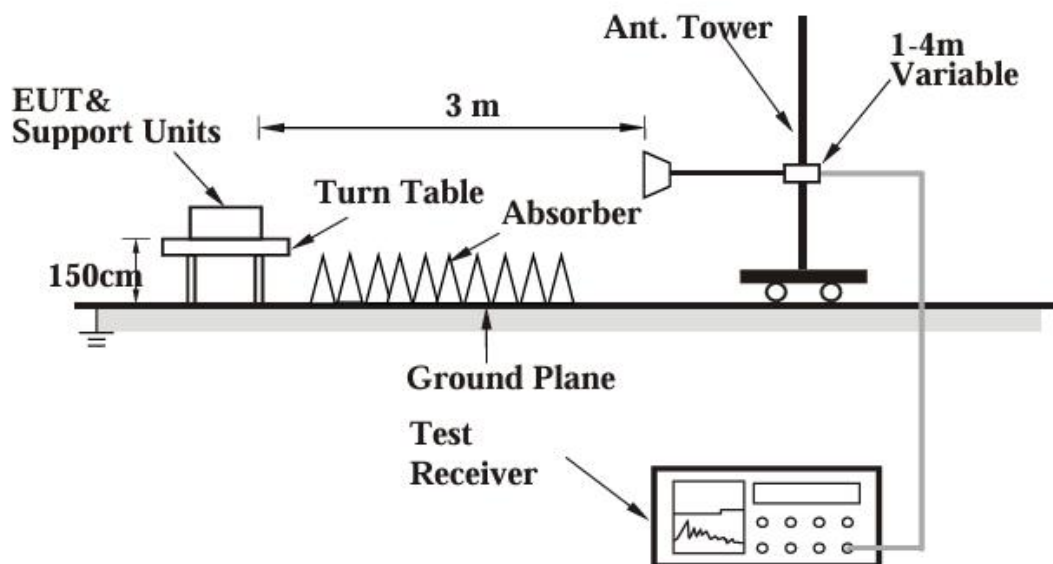
- 1) 9 KHz to 30 MHz emissions:



- 2) 30 MHz to 1 GHz emissions:



3) 1 GHz to 40 GHz emissions:

**Test Procedure:**

- (1) The receiver was scanned from 0.009MHz to 25GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only. The worst case emissions were reported.
- (2) Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from $20\log(\text{dwell time}/100 \text{ ms})$, in an effort to demonstrate compliance with the 15.209 limit. Submit this data.
- (3) Pre-test under all modes below 1GHz; choose the worst case mode record On the report.

5.9.2 Test Result (Radiated Spurious Emissions 30 MHz ~ 1 GHz)

Worst case mode 3DH5

9 kHz~30 MHz Test result

The Low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not report

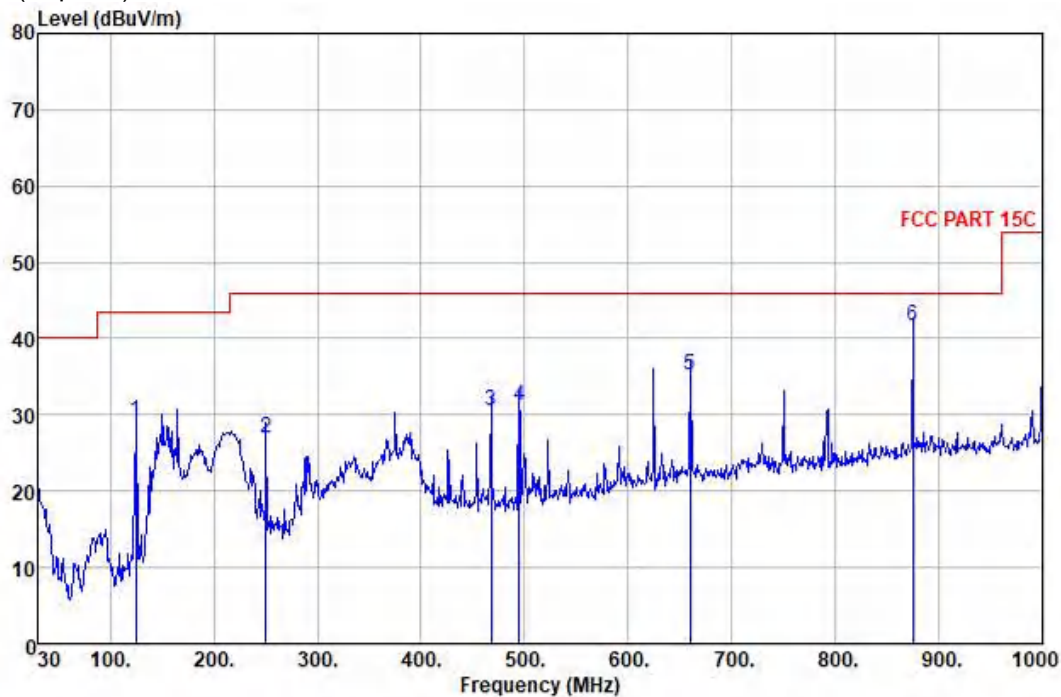
30 MHz~1 GHz Spurious Emissions

Quasi-Peak Measurement

Horizontal:

Peak scan

Level (dBμV/m)



No.	Freq MHz	Read Level dBμV	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Level dBμV/m	Limit Line dBμV/m	Over Limit dB	Pol/Phase	Remark
1	125.060	46.61	9.69	1.33	28.45	29.21	43.50	-14.29	HORIZONTAL	QP
2	250.190	39.23	13.20	1.93	27.31	27.05	46.00	-18.95	HORIZONTAL	QP
3	467.470	39.77	16.55	2.68	28.46	30.54	46.00	-15.46	HORIZONTAL	QP
4	494.630	40.24	16.99	2.76	28.72	31.27	46.00	-14.73	HORIZONTAL	QP
5	659.530	40.98	19.52	3.22	28.45	35.27	46.00	-10.73	HORIZONTAL	QP
6	874.870	42.97	22.19	3.74	27.20	41.70	46.00	-4.30	HORIZONTAL	QP

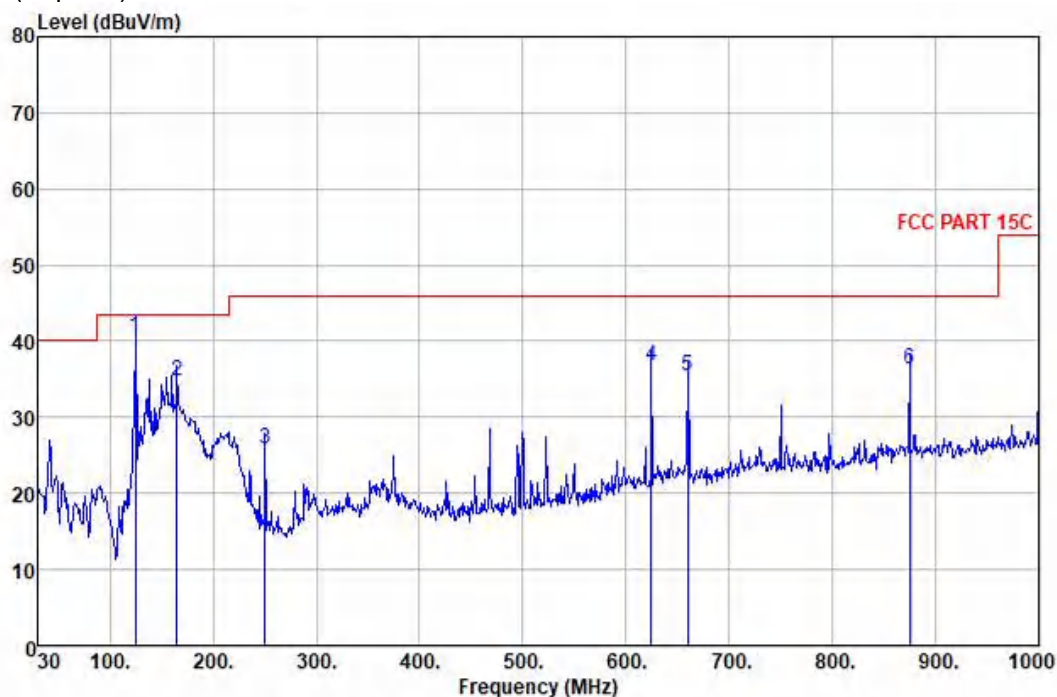
Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

Quasi-peak measurement

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Vertical:

Peak scan

Level (dB μ V/m)

No.	Freq MHz	Read Level dB μ V	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Level dB μ V/m	Limit Line dB μ V/m	Over Limit dB	Pol/Phase	Remark
1	125.060	57.90	9.69	1.33	28.45	40.47	43.50	-3.03	VERTICAL	QP
2	164.830	52.90	8.63	1.53	28.30	34.76	43.50	-8.74	VERTICAL	QP
3	250.190	37.93	13.20	1.93	27.31	25.75	46.00	-20.25	VERTICAL	QP
4	624.610	42.85	19.37	3.13	28.59	36.76	46.00	-9.24	VERTICAL	QP
5	659.530	41.13	19.52	3.22	28.45	35.42	46.00	-10.58	VERTICAL	QP
6	874.870	37.57	22.19	3.74	27.20	36.30	46.00	-9.70	VERTICAL	QP

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

Quasi-peak measurement

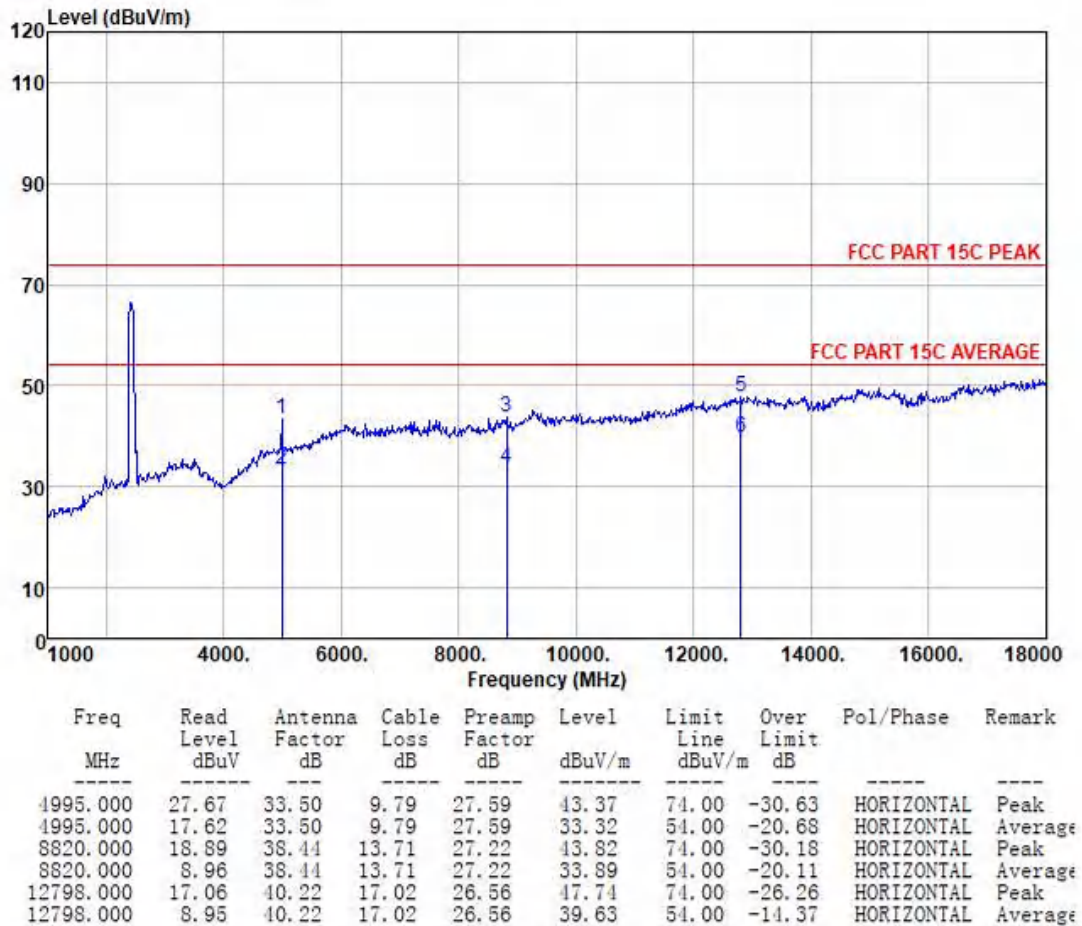
5.9.3 Test Result (Radiated Spurious Emissions above 1 GHz)

Test at Lowest Channel in transmitting status

Horizontal:

Peak scan

Level (dBμV/m)



Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

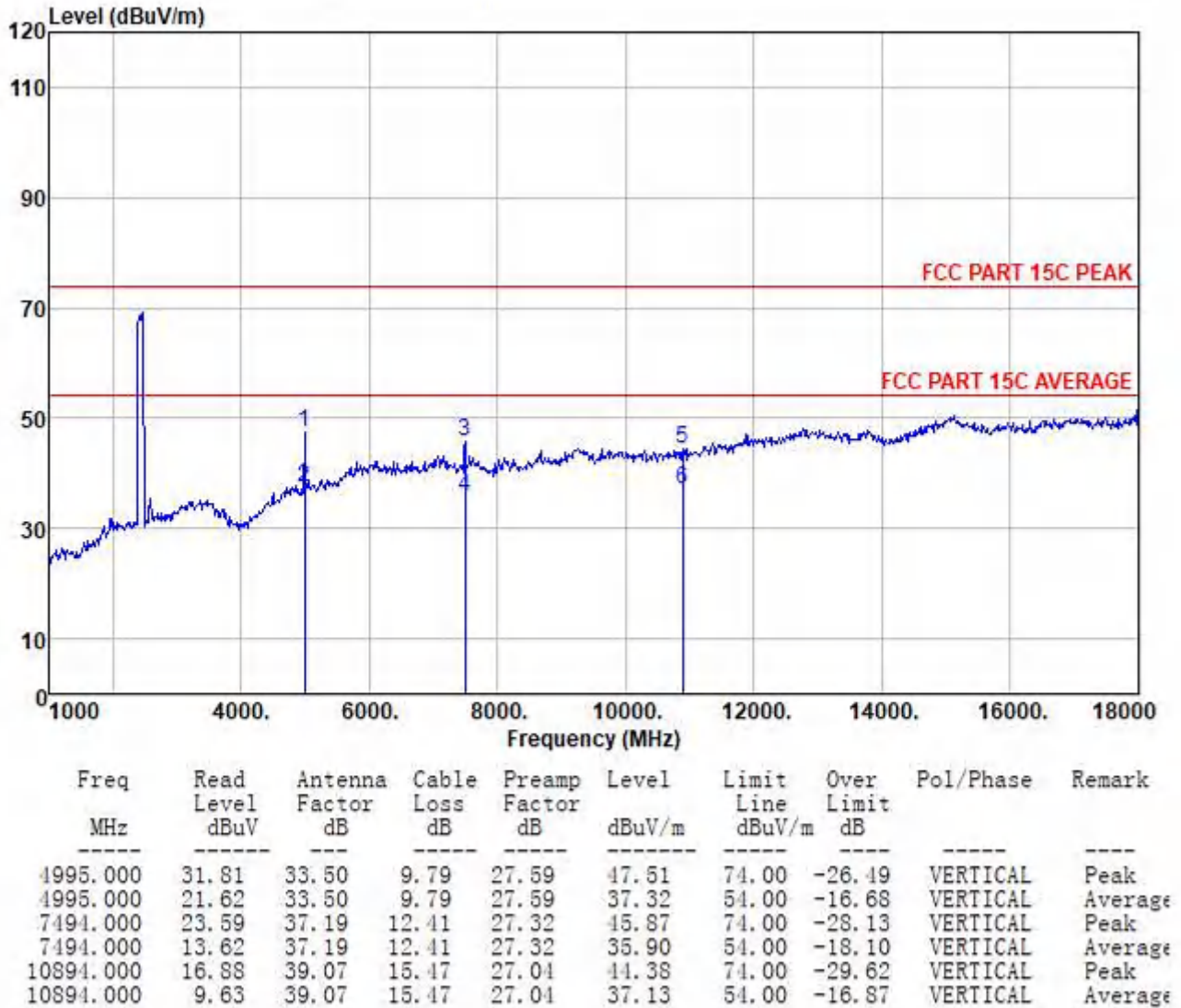
Peak And Average measurement

Note: The emission above limit is fundamental emission, which is not subject to the limit.

Vertical:

Peak scan

Level (dB μ V/m)



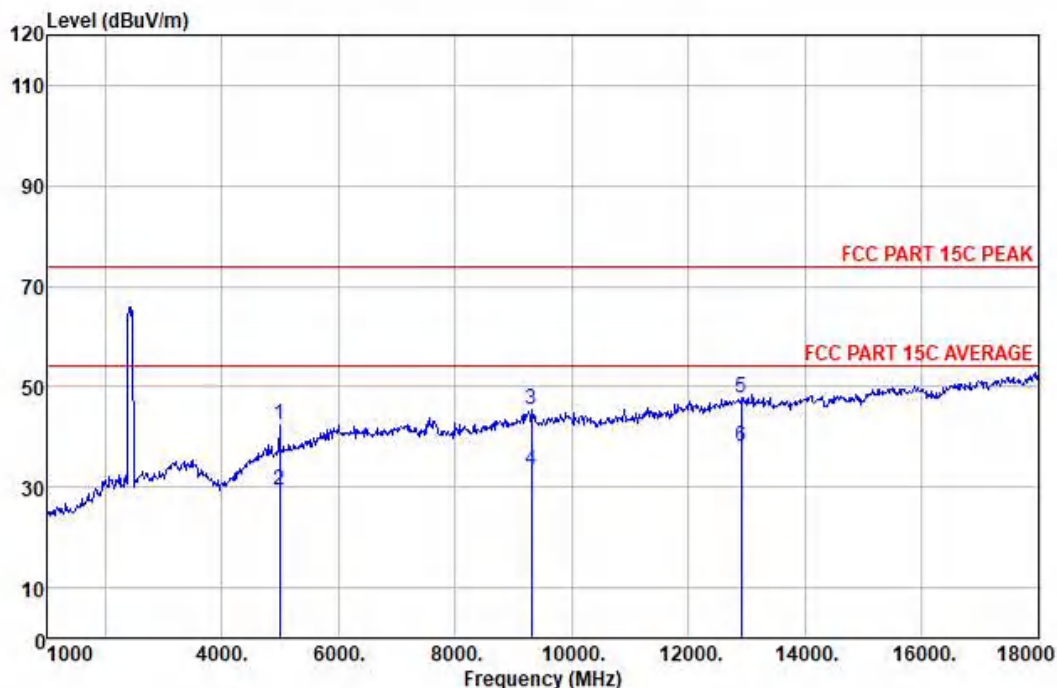
Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

Peak And Average measurement

Note: The emission above limit is fundamental emission, which is not subject to the limit.

Test at Middle Channel in transmitting status**Horizontal:**

Peak scan

Level (dB μ V/m)

Freq MHz	Read Level dBuV	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Pol/Phase	Remark
4995.000	26.88	33.50	9.79	27.59	42.58	74.00	-31.42	HORIZONTAL	Peak
4995.000	13.62	33.50	9.79	27.59	29.32	54.00	-24.68	HORIZONTAL	Average
9313.000	19.60	38.80	14.17	27.17	45.40	74.00	-28.60	HORIZONTAL	Peak
9313.000	7.62	38.80	14.17	27.17	33.42	54.00	-20.58	HORIZONTAL	Average
12900.000	16.77	40.46	17.10	26.52	47.81	74.00	-26.19	HORIZONTAL	Peak
12900.000	6.95	40.46	17.10	26.52	37.99	54.00	-16.01	HORIZONTAL	Average

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

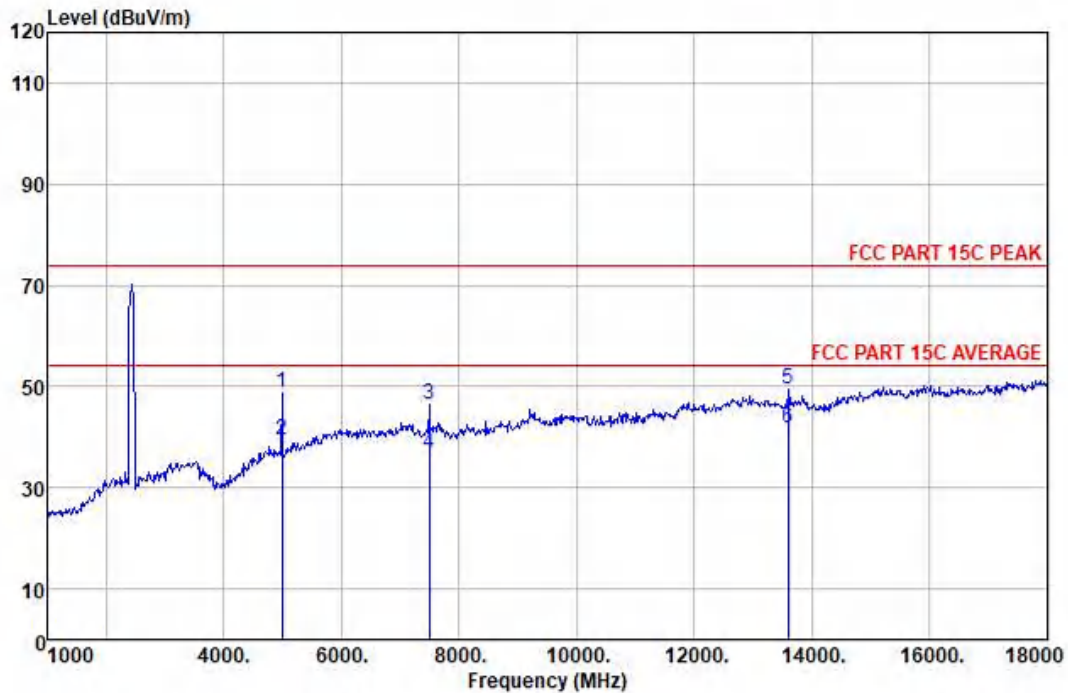
Peak And Average measurement

Note: The emission above limit is fundamental emission, which is not subject to the limit.

Vertical:

Peak scan

Level (dBμV/m)



Freq MHz	Read Level dBuV	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Pol/Phase	Remark
4995.000	33.10	33.50	9.79	27.59	48.80	74.00	-25.20	VERTICAL	Peak
4995.000	23.62	33.50	9.79	27.59	39.32	54.00	-14.68	VERTICAL	Average
7491.000	24.10	37.19	12.41	27.32	46.38	74.00	-27.62	VERTICAL	Peak
7491.000	14.62	37.19	12.41	27.32	36.90	54.00	-17.10	VERTICAL	Average
13597.000	18.43	39.84	17.66	26.30	49.63	74.00	-24.37	VERTICAL	Peak
13597.000	10.63	39.84	17.66	26.30	41.83	54.00	-12.17	VERTICAL	Average

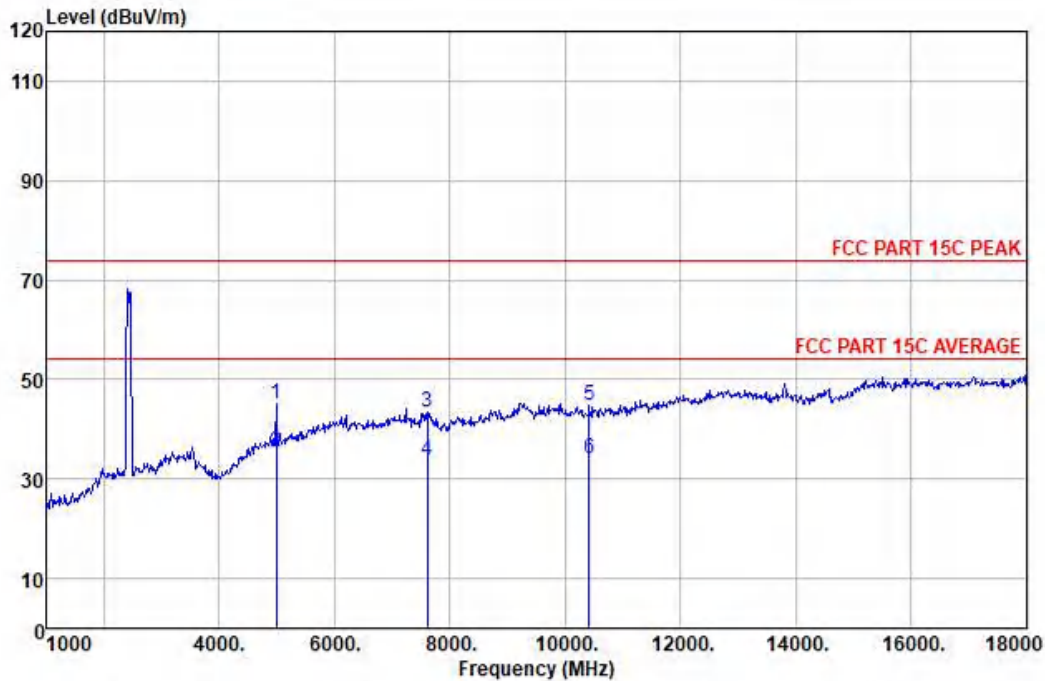
Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

Peak And Average measurement

Note: The emission above limit is fundamental emission, which is not subject to the limit.

Test at Highest Channel in transmitting status**Horizontal:**

Peak scan

Level (dB μ V/m)

Freq MHz	Read Level dBuV	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Pol/Phase	Remark
4995.000	29.48	33.50	9.79	27.59	45.18	74.00	-28.82	HORIZONTAL	Peak
4995.000	19.62	33.50	9.79	27.59	35.32	54.00	-18.68	HORIZONTAL	Average
7613.000	21.10	37.15	12.53	27.32	43.46	74.00	-30.54	HORIZONTAL	Peak
7613.000	11.53	37.15	12.53	27.32	33.89	54.00	-20.11	HORIZONTAL	Average
10118.000	18.35	38.67	15.00	27.07	44.95	74.00	-29.05	HORIZONTAL	Peak
10418.000	7.62	38.67	15.00	27.07	34.22	54.00	-19.78	HORIZONTAL	Average

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

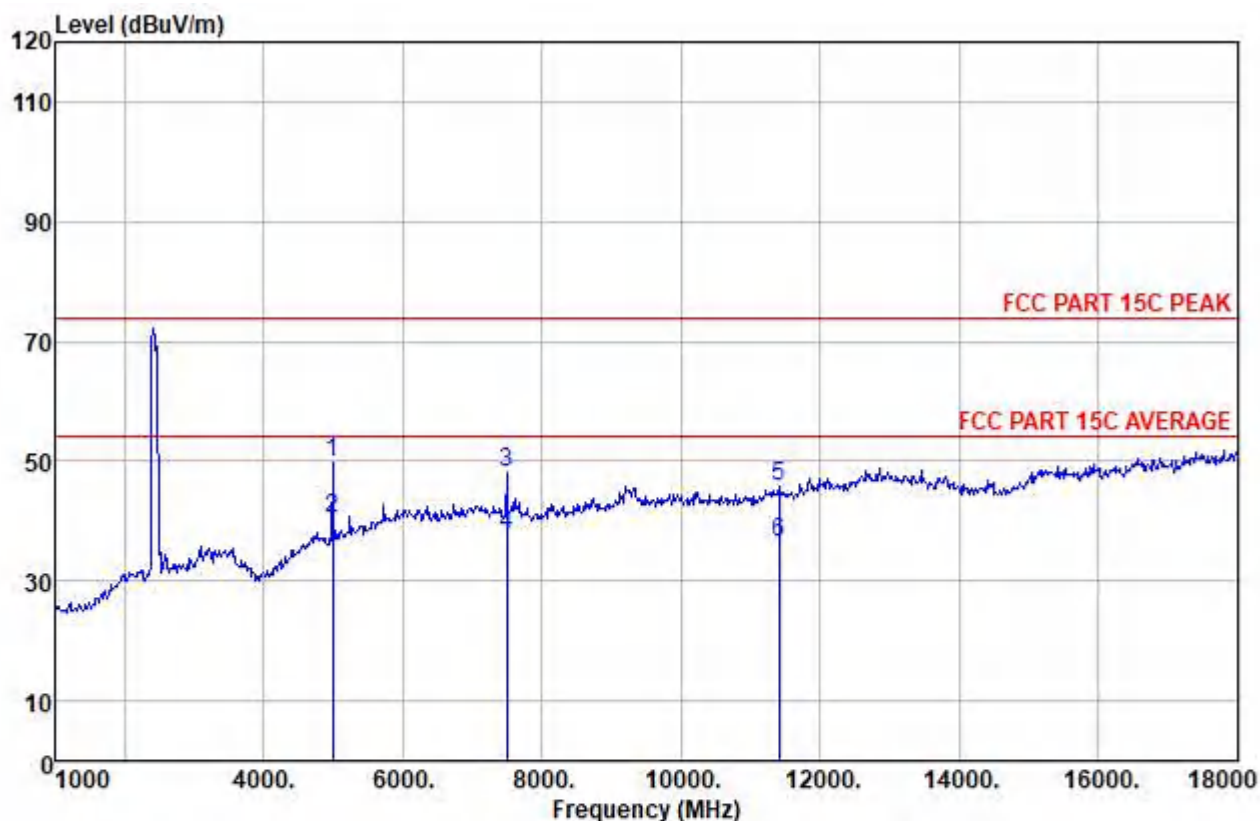
Peak And Average measurement

Note: The emission above limit is fundamental emission, which is not subject to the limit.

Vertical:

Peak scan

Level (dBμV/m)



Freq MHz	Read Level dBuV	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Pol/Phase	Remark
4995.000	34.14	33.50	9.79	27.59	49.84	74.00	-24.16	VERTICAL	Peak
4995.000	24.62	33.50	9.79	27.59	40.32	54.00	-13.68	VERTICAL	Average
7494.000	25.69	37.19	12.41	27.32	47.97	74.00	-26.03	VERTICAL	Peak
7494.000	15.62	37.19	12.41	27.32	37.90	54.00	-16.10	VERTICAL	Average
11404.000	17.31	39.52	15.88	26.98	45.73	74.00	-28.27	VERTICAL	Peak
11404.000	7.96	39.52	15.88	26.98	36.38	54.00	-17.62	VERTICAL	Average

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

Peak And Average measurement

Note: The emission above limit is fundamental emission, which is not subject to the limit.

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier.

The basic equation with a sample calculation is as follows:

Correct= Antenna Factor + Cable Factor –Preamplifier Factor

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), the amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

Remark:

The emission levels of 18~25 GHz are lower than the limit at least 20dB and not show the plots in test report.

Test Result: The unit does meet the FCC requirements.

5.10 Radiated Emissions which fall in the restricted bands

Test Requirement: FCC Part15 C Section 15.247

(d) 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 15.205(c)).

Test Method: ANSI C63.10:2020 Clause 6.4, 6.5 and 6.6

Test Status: Test the EUT in continuous transmitting mode at the lowest (2408MHz) and highest (2478 MHz) channel.

Measurement Distance: 3m (Semi-Anechoic Chamber)

Limit: Section 15.209(a)

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

5.10.1 Test Configuration

Detector:

For PK value:

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW Sweep = auto

Detector function = peak

Trace = max hold

For AV value:

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW =10 Hz

Sweep = auto

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Detector function = peak

Trace = max hold

5.10.2 Test Result (Radiated Emissions which fall in the restricted bands)

Worst case mode 3DH5

Frequency (MHz)	Reading Level (dB μ V/m)	Correct (dB/m)	Emission Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Antenna polarization	Detector
Low Channel							
2310.000	33.19	6.54	38.19	74.00	-40.81	H	PK
2310.000	16.95	6.54	23.38	54.00	-37.05	H	AV
2390.000	29.48	6.61	35.95	74.00	-44.52	V	PK
2390.000	16.93	6.61	23.75	54.00	-37.07	V	AV
High Channel							
2483.500	29.52	6.70	39.18	74.00	-44.48	H	PK
2483.500	15.98	6.70	23.89	54.00	-38.02	H	AV
2500.000	28.19	6.72	34.52	74.00	-45.81	V	PK
2500.000	17.95	6.72	22.30	54.00	-36.05	V	AV

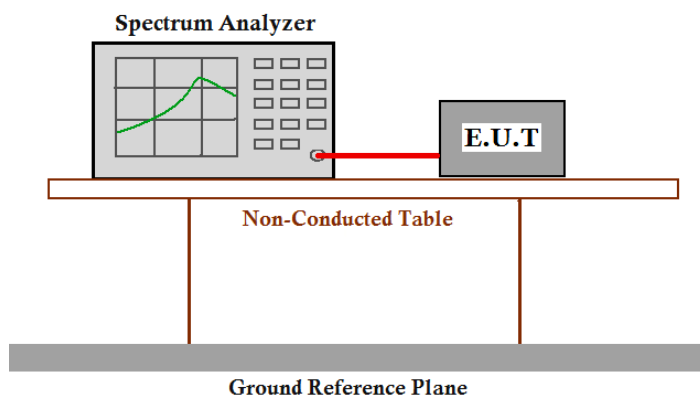
Remark: No any other emission which falls in restricted bands can be detected and be reported.

Test Result: The unit does meet the FCC requirements.

5.11 Band Edges Requirement

Test Requirement:	FCC Part15 C section 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 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 15.205 (c)).
Frequency Band:	2400 MHz to 2483.5 MHz
Test Method:	ANSI C63.10:2020
Test Status:	Test the EUT in continuous transmitting mode at the lowest (2408 MHz), and highest (2478 MHz) channel and hopping mode

5.11.1 Test Configuration



Test Procedure:

1. The testing follows the Measurement Procedure of ANSI C63.10:2020 Section 11.12.2.2.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.

4. Use the following spectrum analyzer settings: Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation / RBW: 100kHz / VBW: 300kHz / Detector: Peak / Sweep time: Auto couple / Trace mode: Max hold / Allow trace to fully stabilize / Use the peak marker function to determine the maximum power level.

5. Enable hopping function or no hopping function of the EUT and then repeat step 3 and 4.

6. Record the measurement results in the test report.

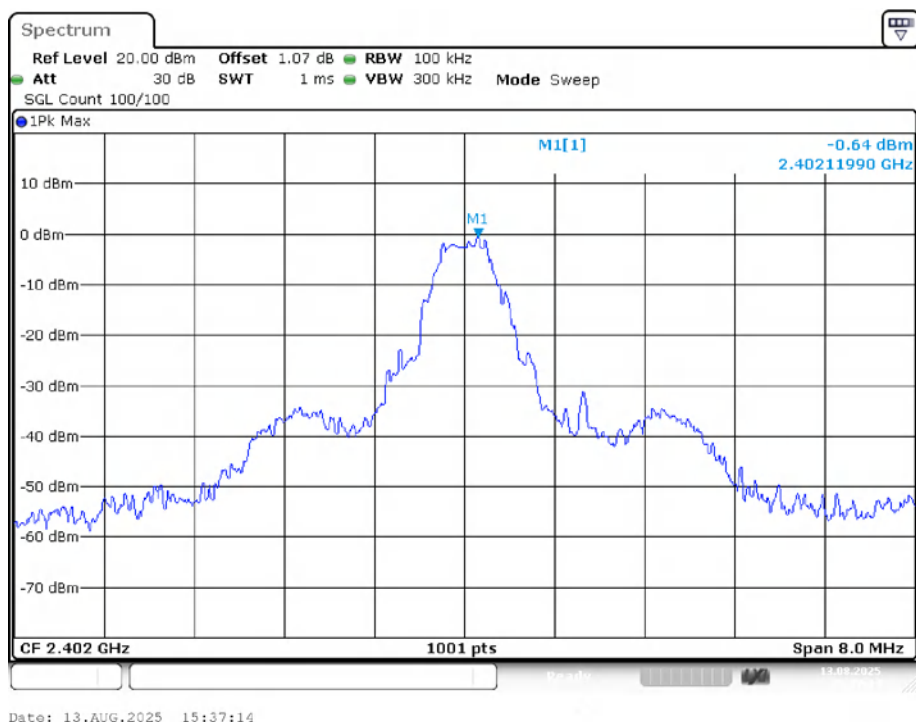
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

5.11.2 Test Result (Band Edges Requirement for No Hopping Mode)

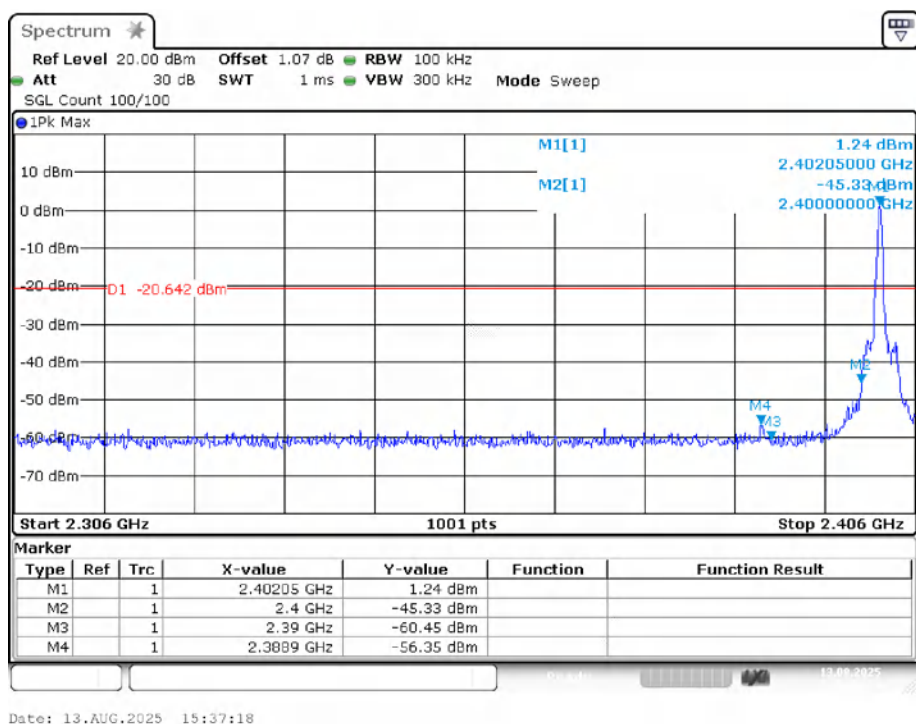
Test mode	Test Frequency (MHz)	Max Value (dBc)	Limit (dBc)
DH5	2402	-55.71	-20
	2480	-53.05	-20
2DH5	2402	-58.14	-20
	2480	-54.67	-20
3DH5	2402	-61.71	-20
	2480	-56.98	-20

Band Edges Requirement for No Hopping Mode

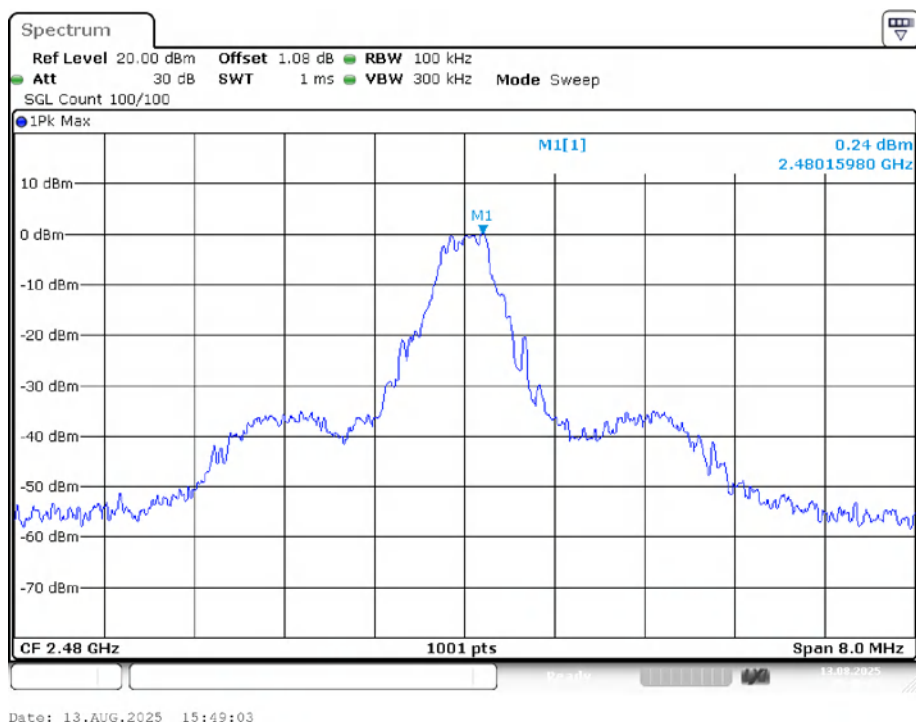
Test result plot as follows



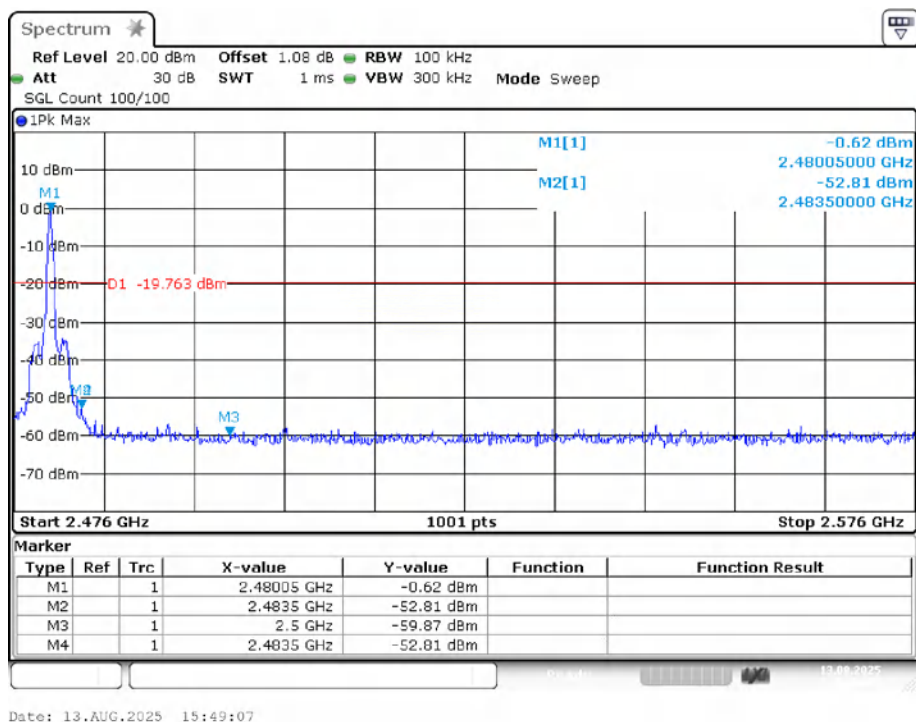
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



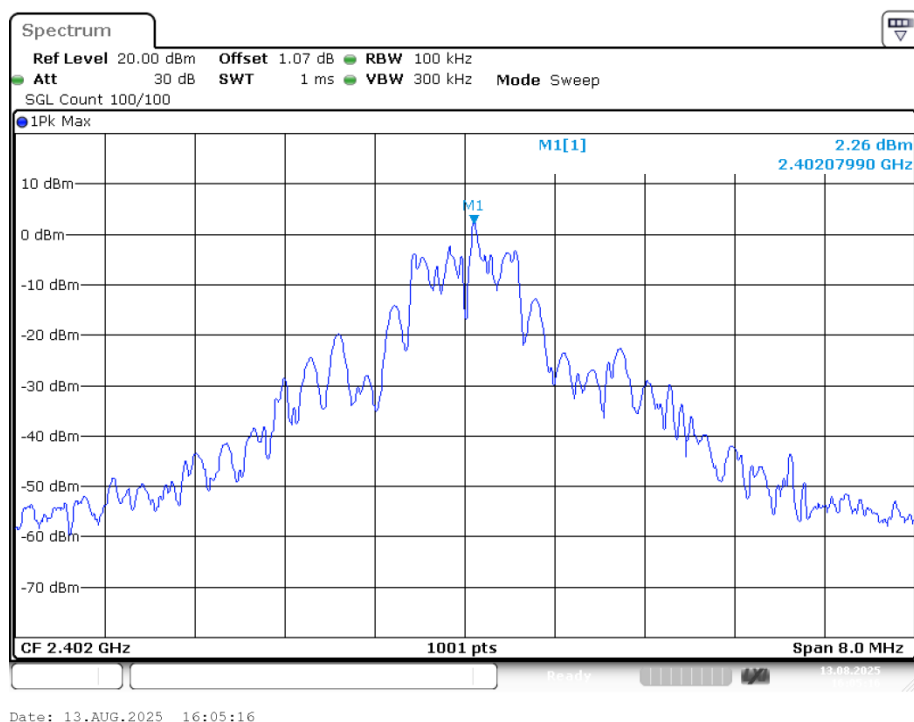
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



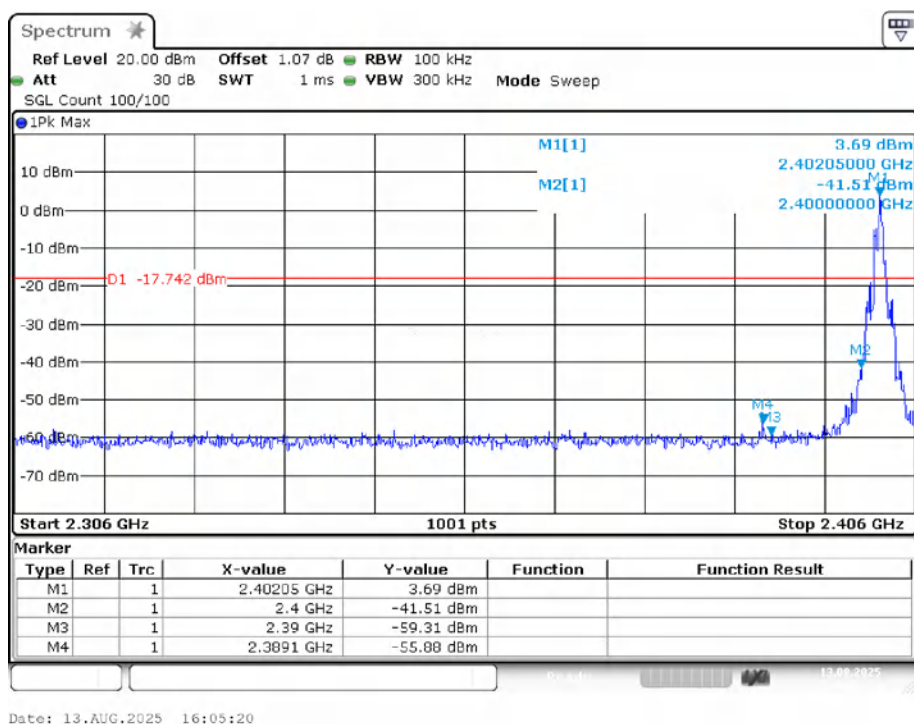
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



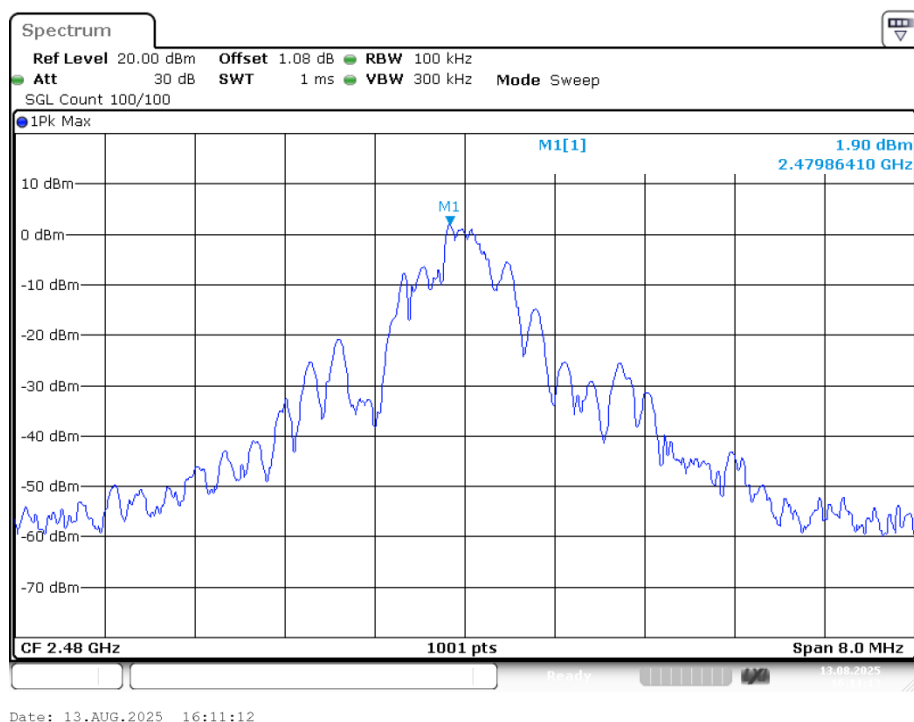
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



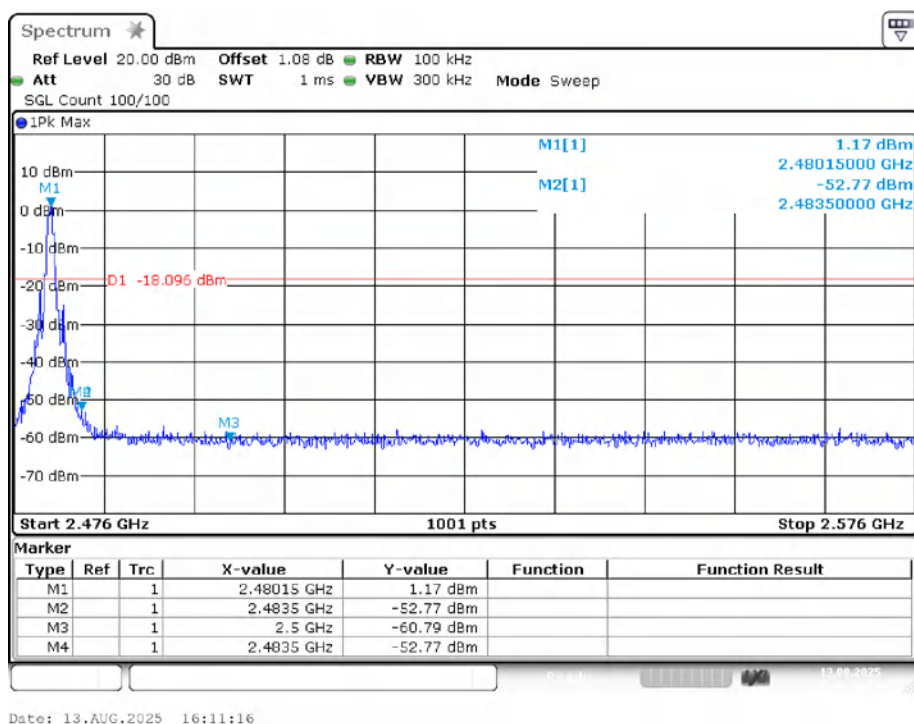
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

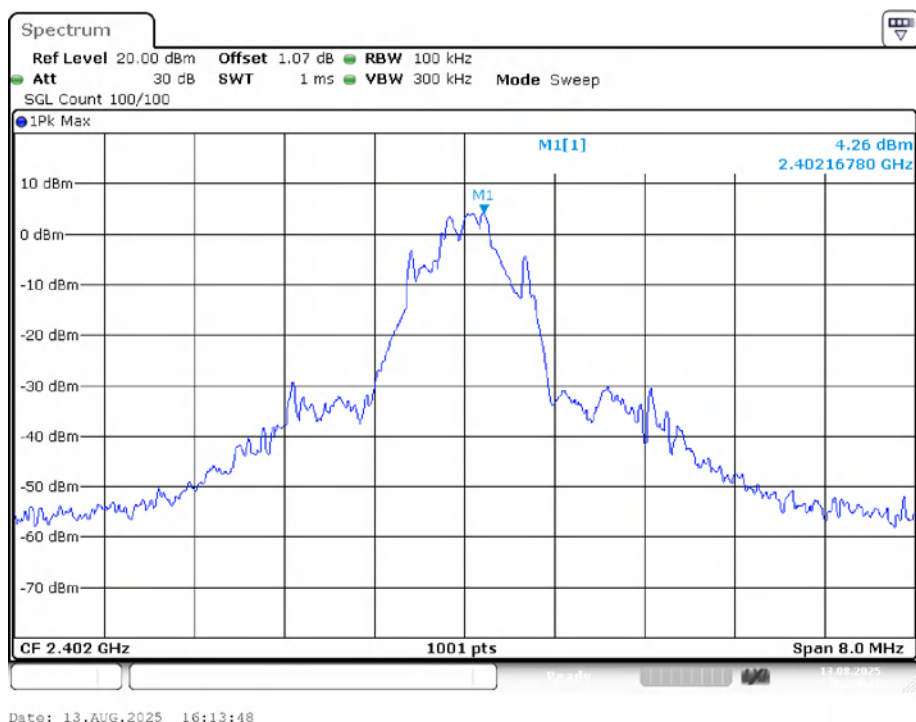


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

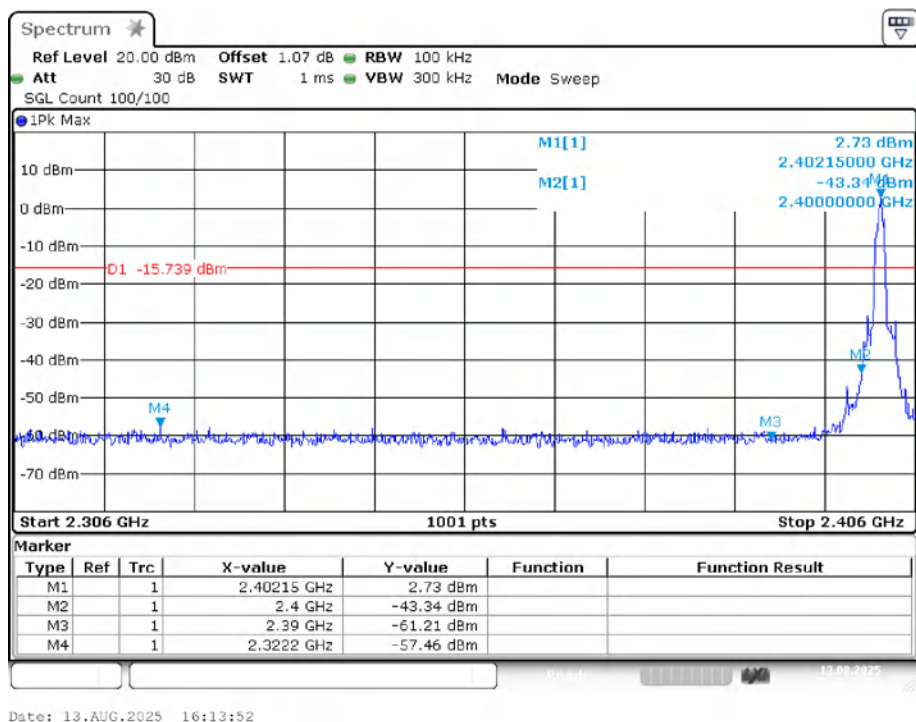


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

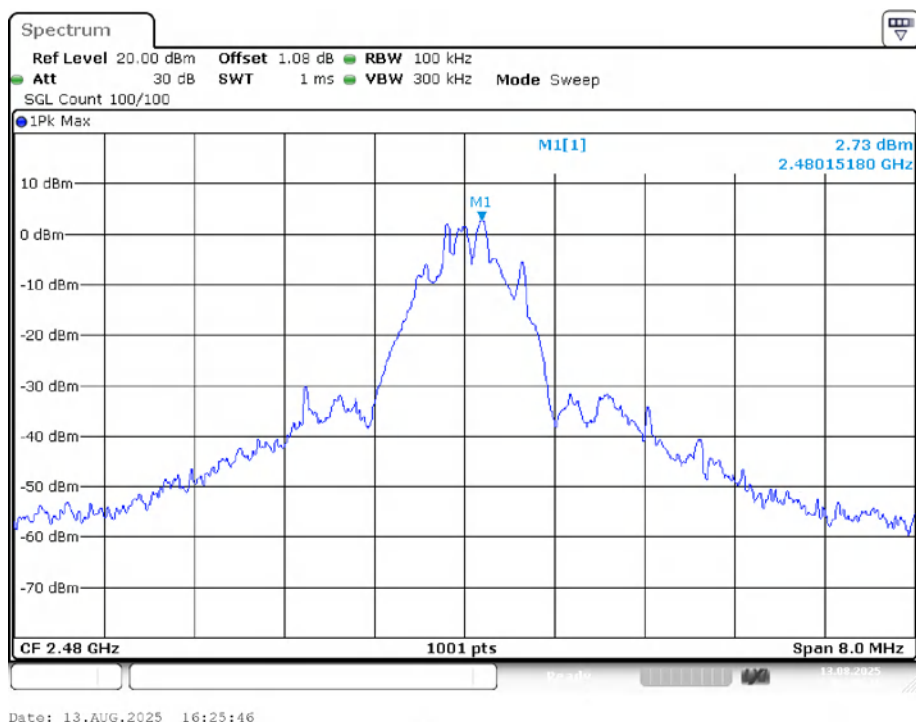
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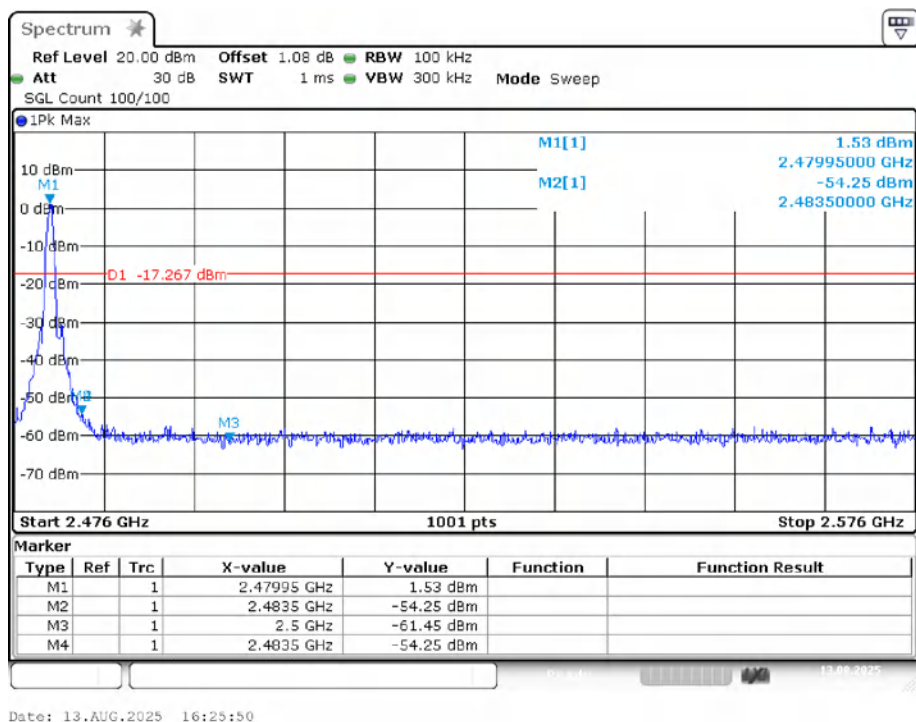
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission

Test Result: The unit does meet the FCC requirements.

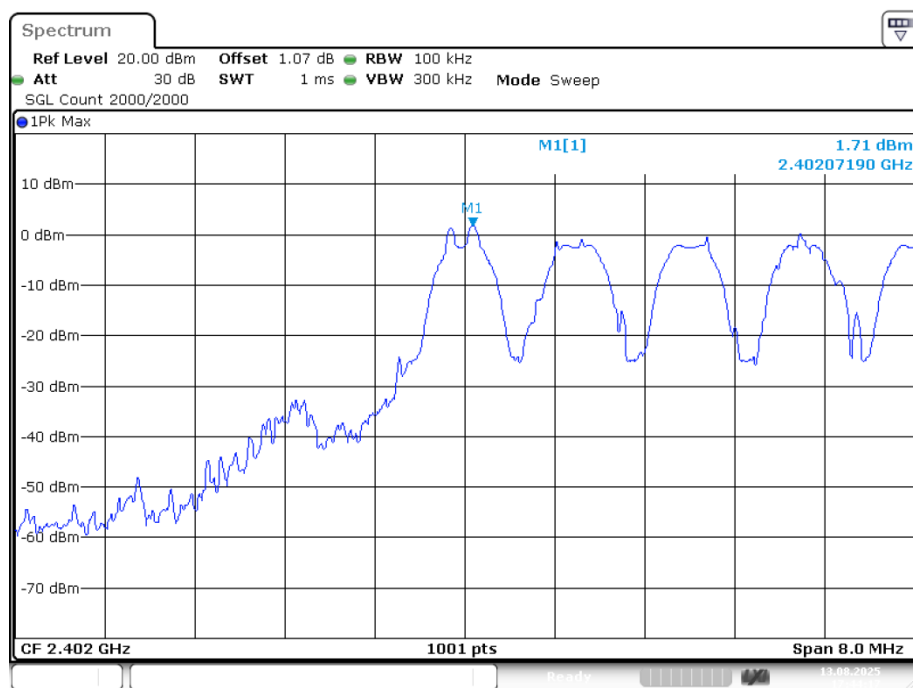
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5.11.3 Test Result (Band Edges Requirement for Hopping Mode)

Test mode	Test Frequency (MHz)	Max Value (dBc)	Limit (dBc)
DH5	2402	-57.58	-20
	2480	-53.54	-20
2DH5	2402	-59.36	-20
	2480	-55.96	-20
3DH5	2402	-57.8	-20
	2480	-58.04	-20

Band Edges Requirement for No Hopping Mode

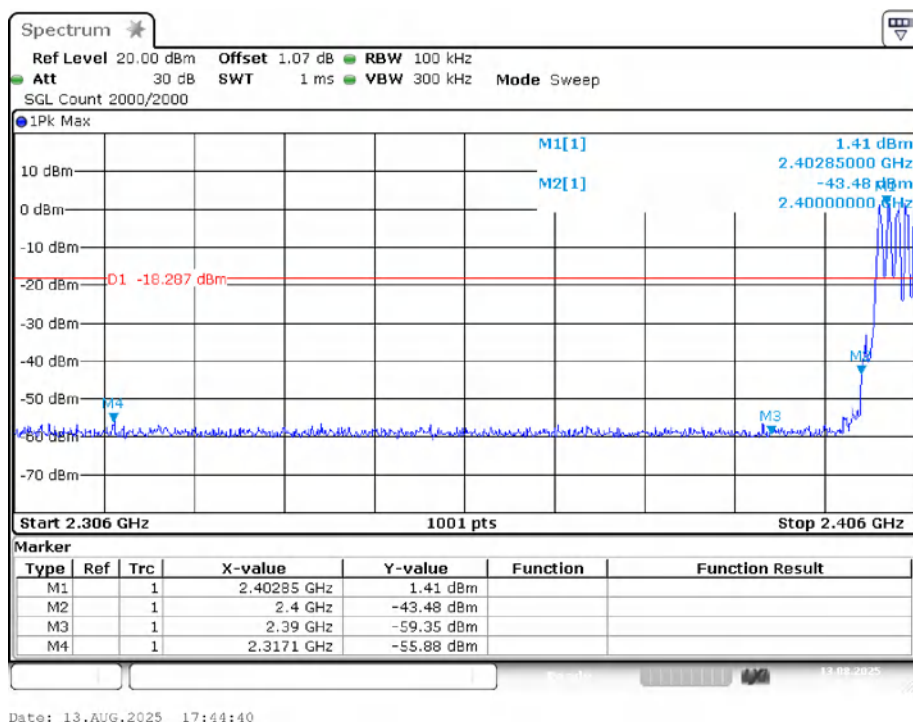
Test result plot as follows



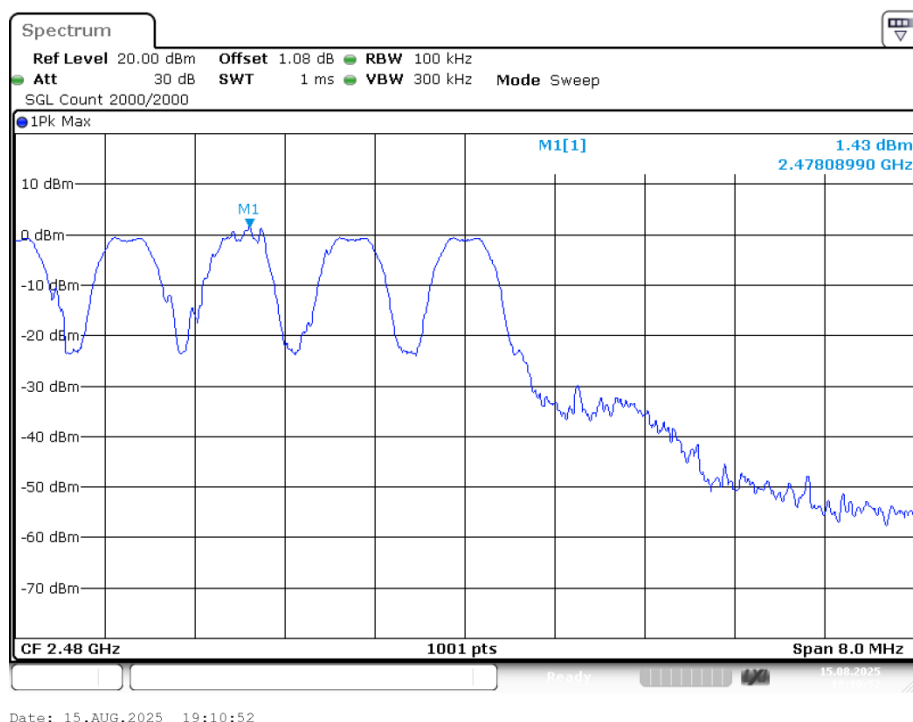
Date: 13.AUG.2025 17:44:16

Band Edge (Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

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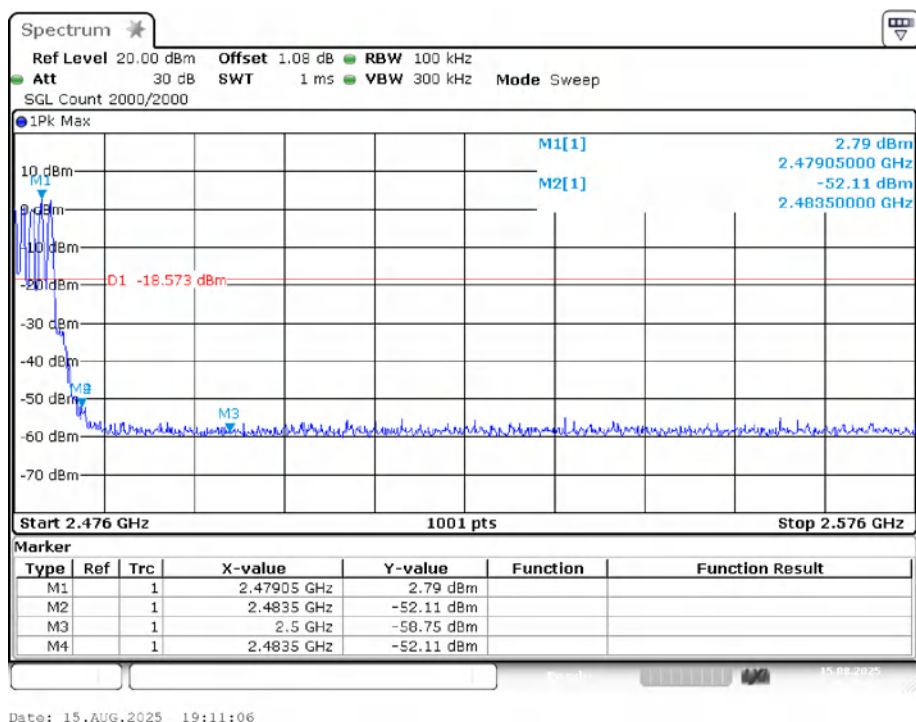


Band Edge (Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

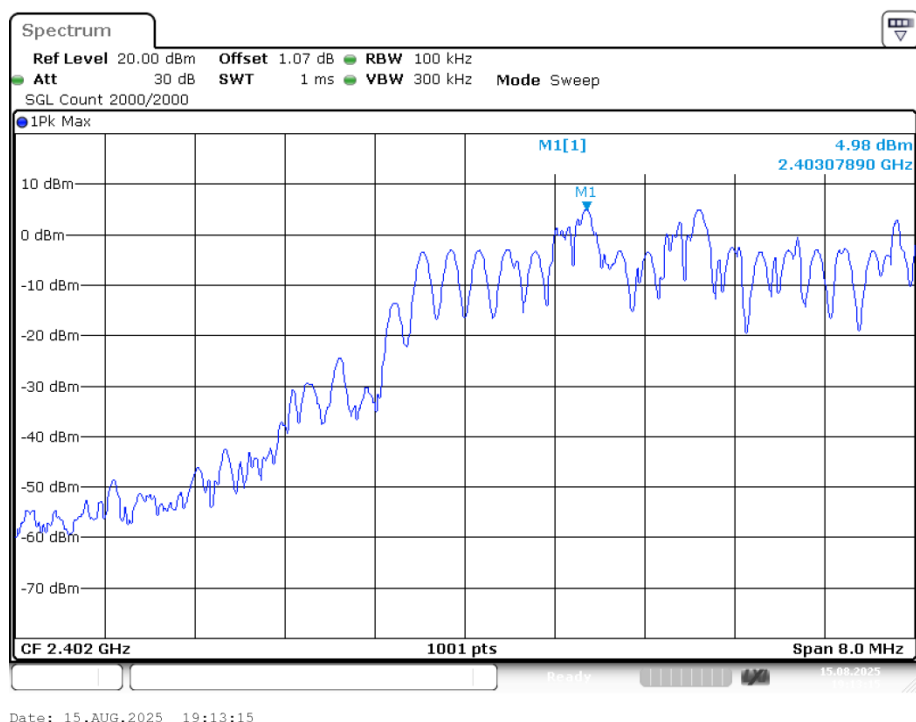


Band Edge (Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

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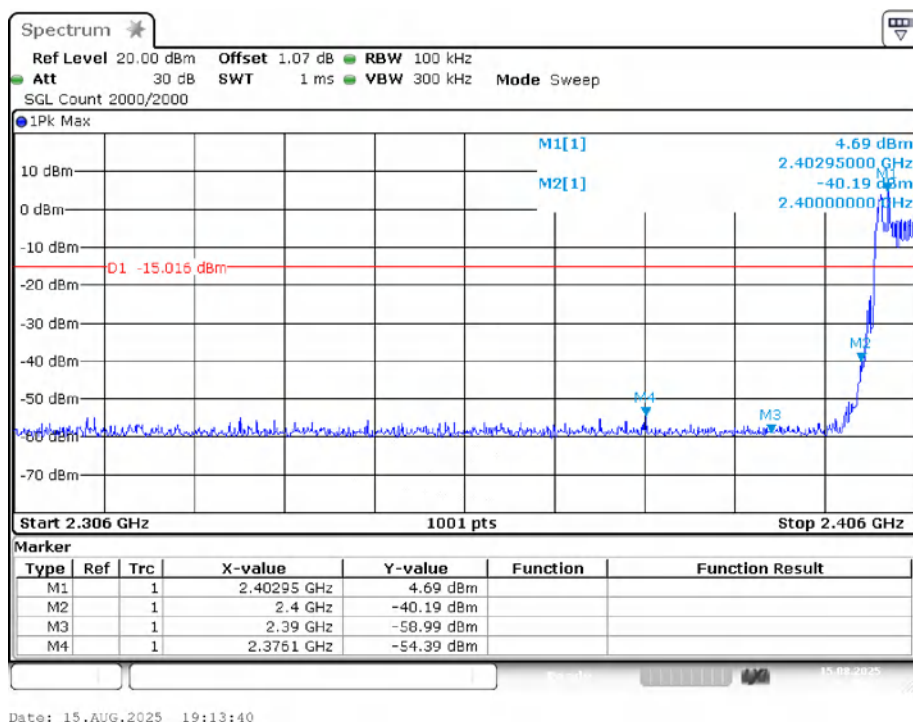


Band Edge (Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

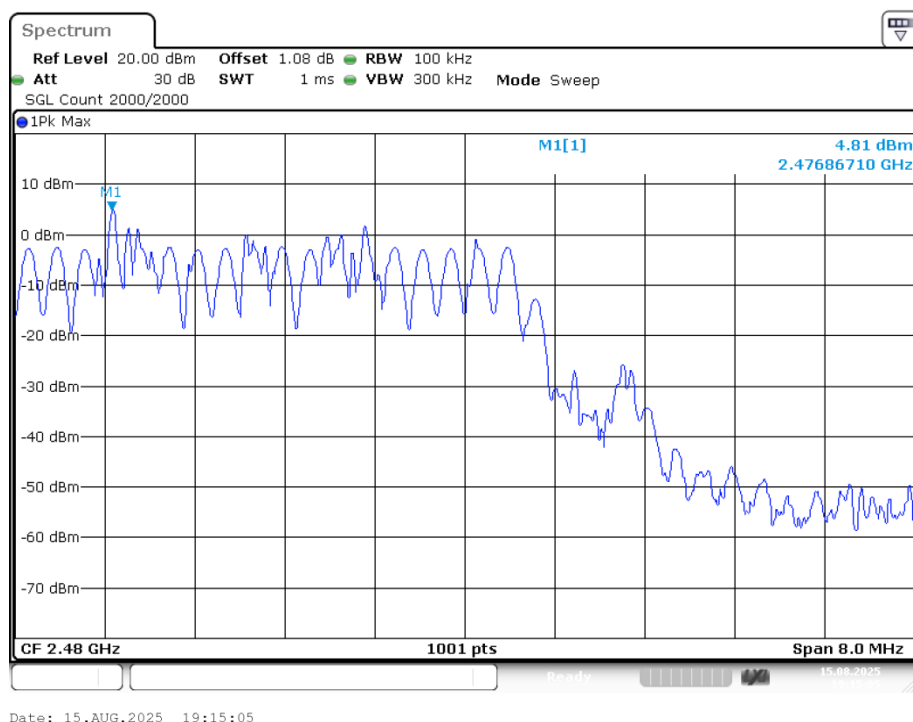


Band Edge (Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

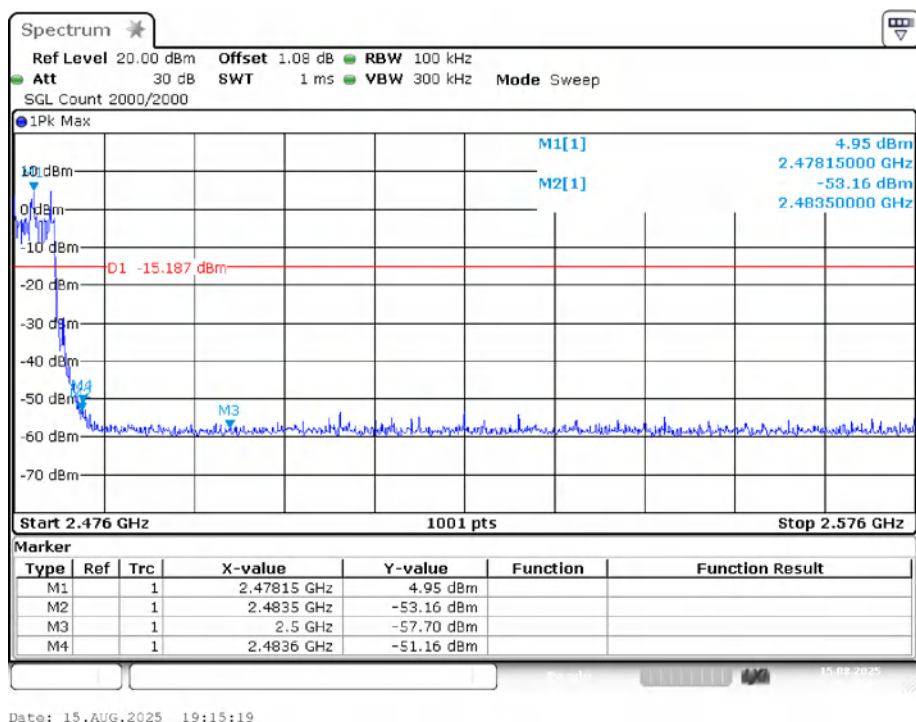
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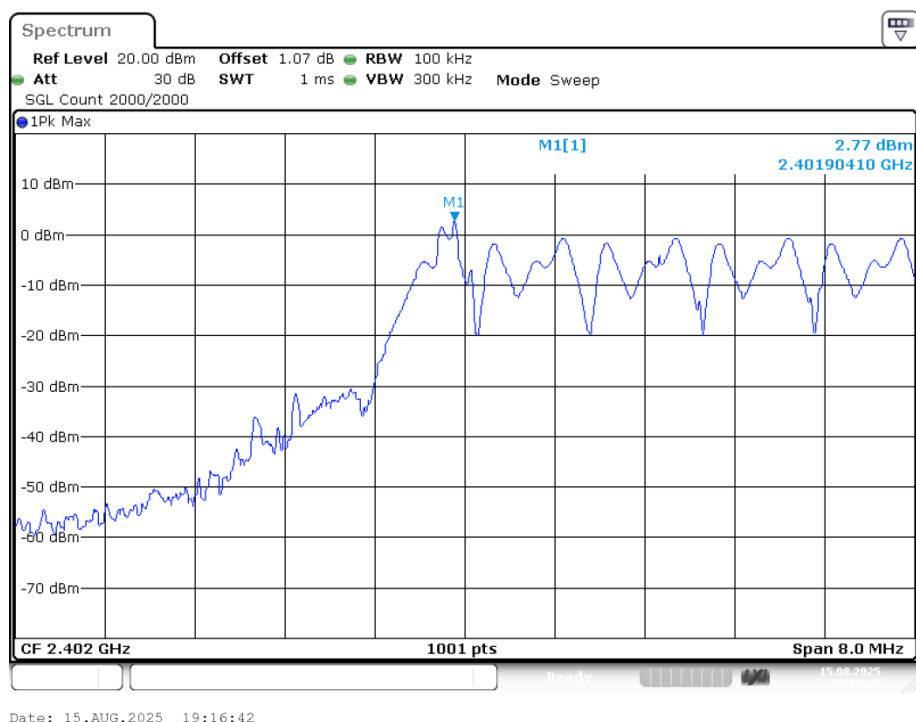
Band Edge (Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



Band Edge (Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref

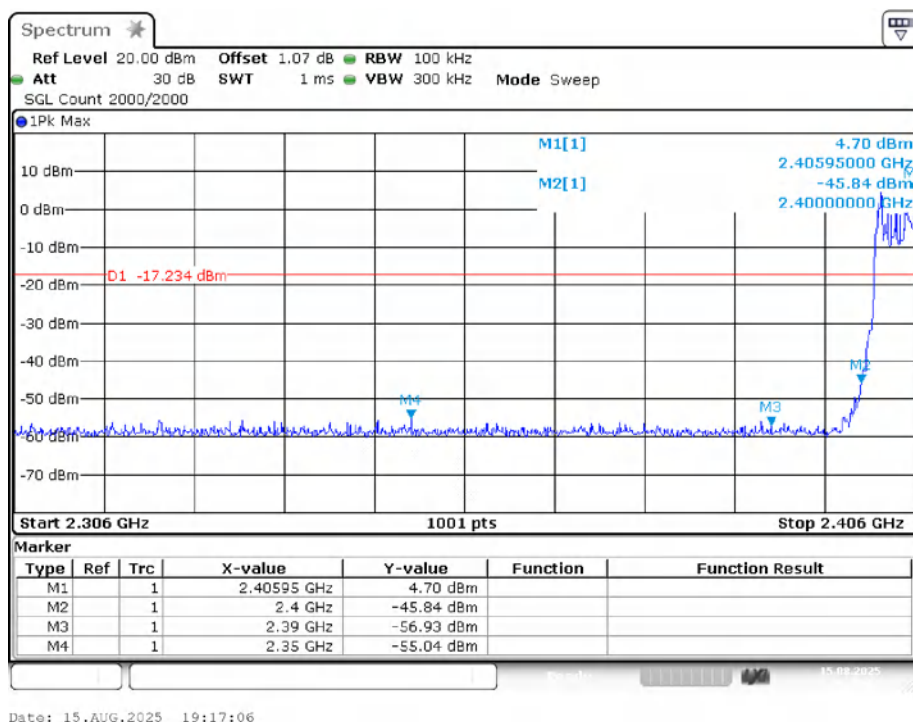


Band Edge (Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

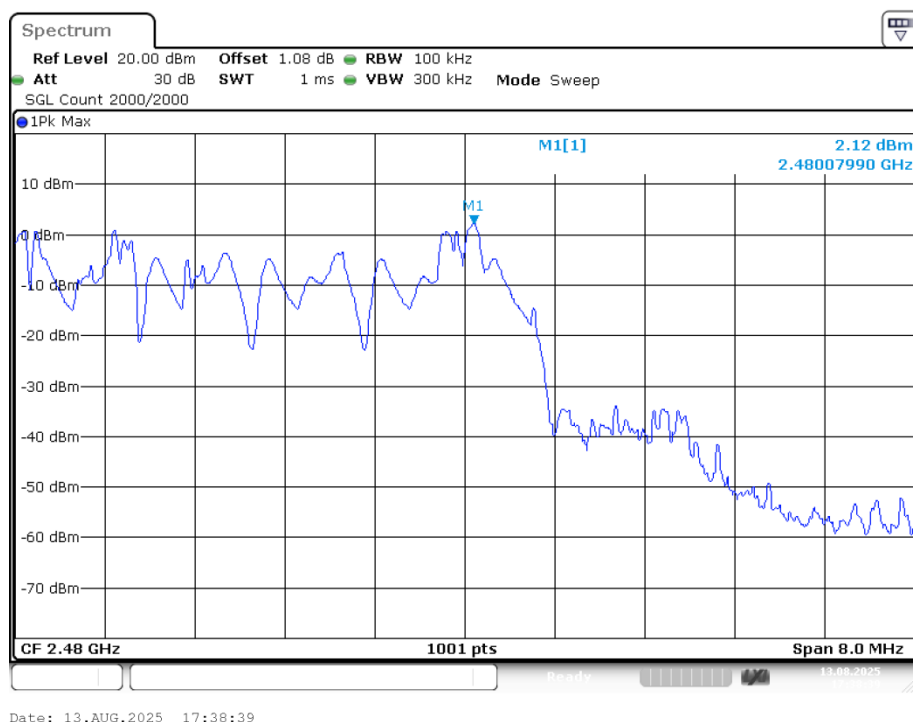


Band Edge (Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

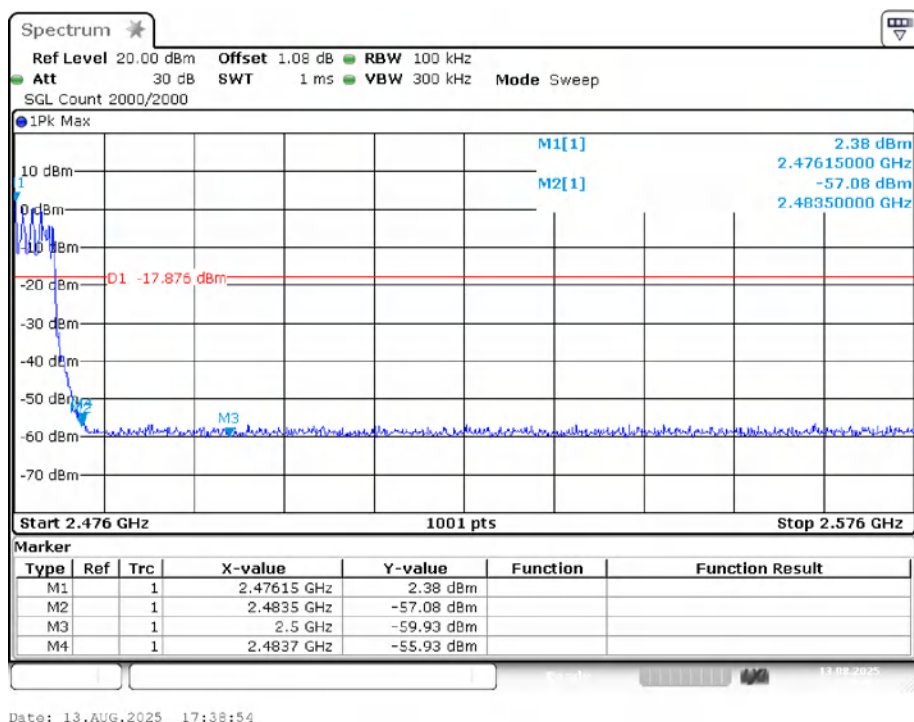
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Band Edge (Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



Band Edge (Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Band Edge (Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission

Test Result: The unit does meet the FCC requirements.

5.12 AC power-line conducted emissions 150 kHz to 30 MHz

Test Requirement:	FCC Part 15 C section 15.207
Test Voltage:	AC 120V, 60Hz
Test Method:	ANSI C63.10:2020 Section 6.2
Frequency Range:	150 KHz to 30 MHz
Detector:	Peak for pre-scan (9 KHz Resolution Bandwidth)
Test Limit:	

Limits for conducted disturbance at the mains ports of class B

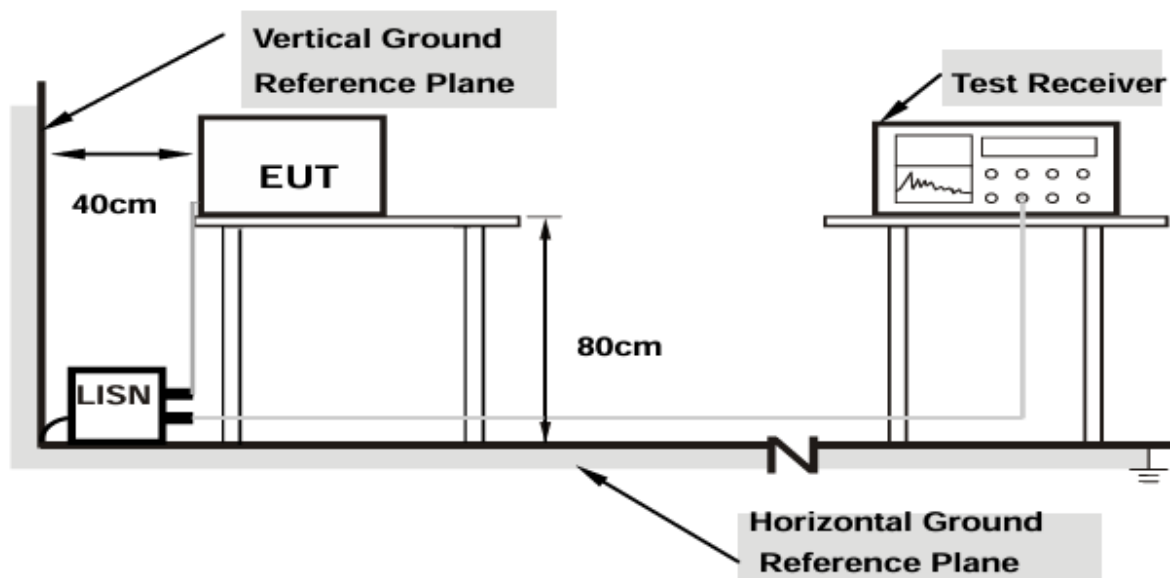
Frequency Range (MHz)	Class B Limit (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
NOTE 1: The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		

EUT Operation:

Test in normal operating mode. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, channels and antenna ports (if EUT with antenna diversity architecture).

5.12.1 Test Configuration



Test procedure:

1. The mains terminal disturbance voltage test was conducted in a shielded room.
2. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
4. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0,8 m from the LISN 2.

5.12.2 Test Result (AC power-line conducted emissions 150 KHz to 30 MHz)

An initial pre-scan was performed on the live and neutral lines with peak detector.

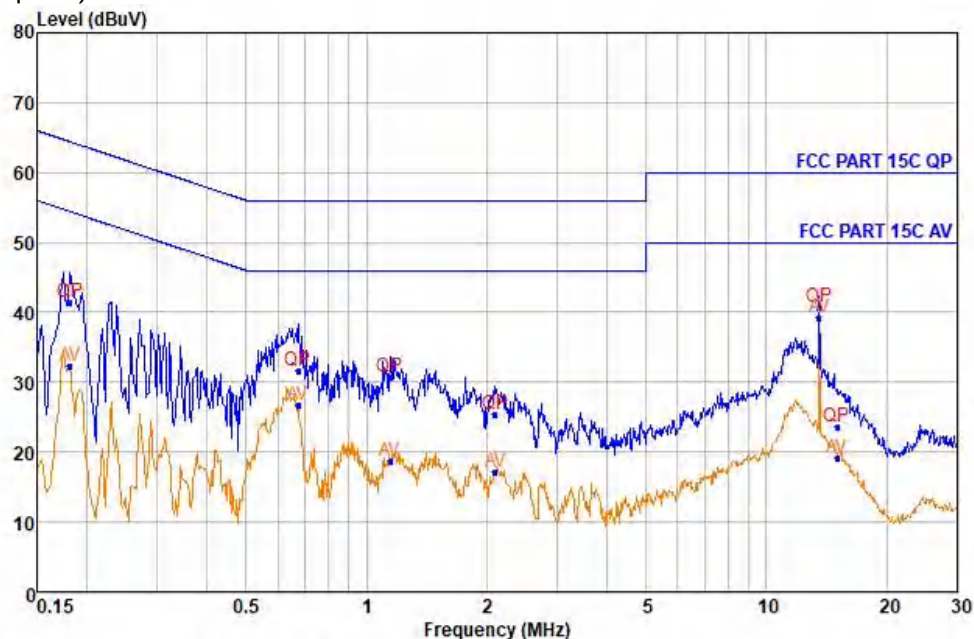
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected. For EUT the communicating was worst case mode.

The following Quasi-Peak and Average measurements were performed on the EUT

Live Line:

Peak scan

Level (dB μ V/m)



NO.	Freq MHz	Level dB μ V	Remark	LISN Factor dB	Cable Loss dB	Limit Line dB μ V	Margin dB
1	0.182	41.34	QP	9.69	0.21	64.42	-23.08
2	0.182	32.41	Average	9.69	0.21	54.42	-22.01
3	0.674	31.63	QP	9.70	0.29	56.00	-24.37
4	0.674	26.66	Average	9.70	0.29	46.00	-19.34
5	1.145	30.78	QP	9.67	0.32	56.00	-25.22
6	1.145	18.68	Average	9.67	0.32	46.00	-27.32
7	2.094	25.33	QP	9.65	0.35	56.00	-30.67
8	2.094	17.15	Average	9.65	0.35	46.00	-28.85
9	13.528	40.76	QP	9.69	0.45	60.00	-19.24
10	13.528	39.16	Average	9.69	0.45	50.00	-10.84
11	15.031	23.55	QP	9.71	0.46	60.00	-36.45
12	15.031	19.21	Average	9.71	0.46	50.00	-30.79

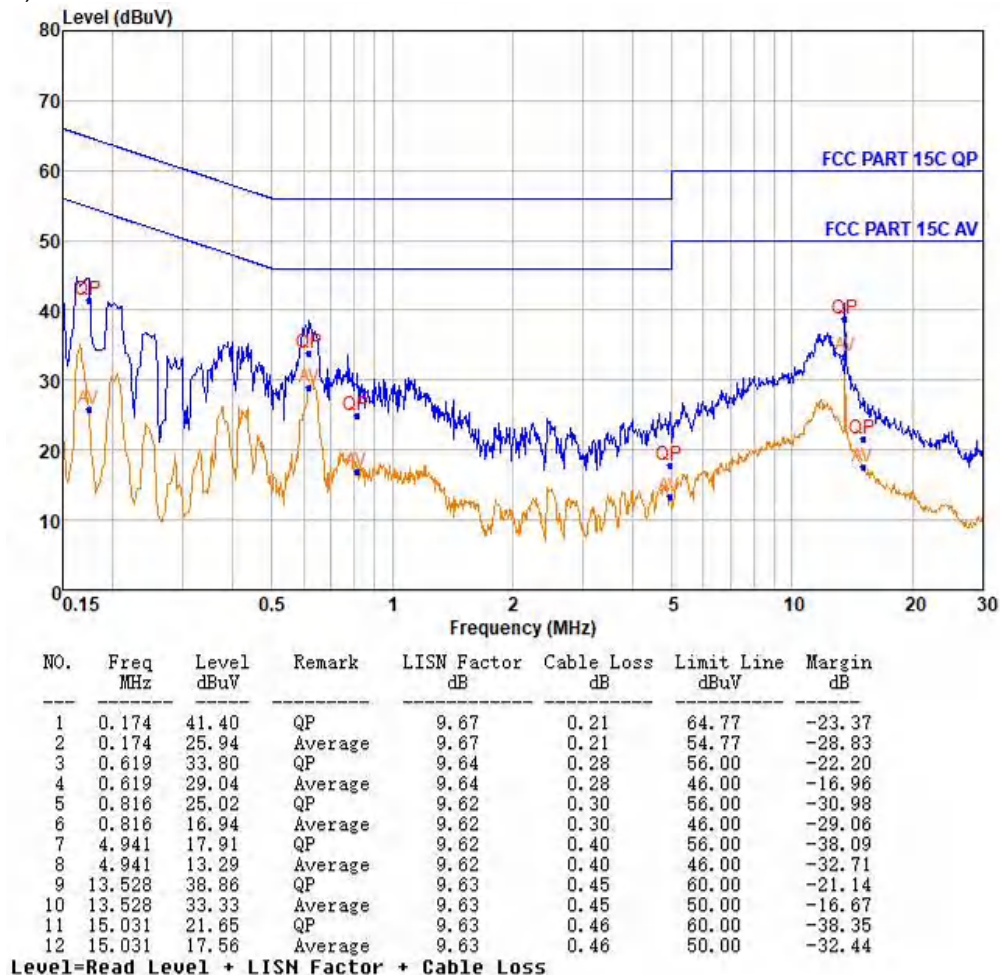
Level=Read Level + LISN Factor + Cable Loss

Quasi-peak and Average measurement

Neutral Line

Peak Scan:

Level (dBμV)



Quasi-peak and Average measurement

Test Result: The unit does meet the FCC requirements.**5.13 Other requirements Frequency Hopping Spread Spectrum System****Test Requirement: 47 CFR Part 15C Section 15.247 (a) (1), (h) requirement**

The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or

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information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

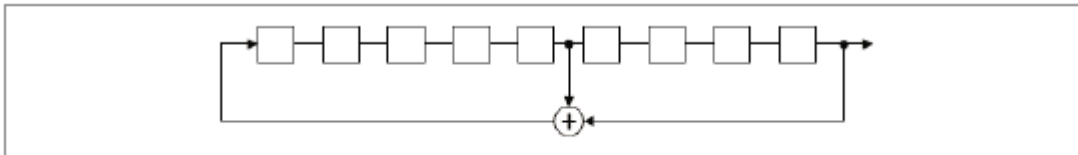
The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hopsets to avoid hopping on occupied channels is permitted.

The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

Compliance for section 15.247(a)(1)

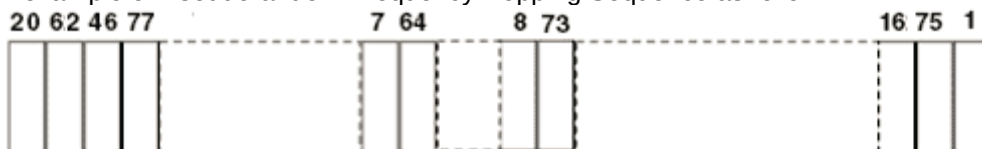
The pseudorandom sequence may be generated in a nine stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONE s; i.e. the shift register is initialized with nine ones.

- Number of shift registers stages: 9
- Length of pseudo-random sequence: $2^9 - 1 = 511$ bits
- Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:



Each frequency used equally on the average by each transmitter.

The receivers are designed to have input and IF bandwidths that match the hopping channel bandwidths of any transmitters and shift frequencies in synchronization with the transmitted signals.

Compliance for section 15.247(g)

The system transmits the packet with the pseudorandom hopping frequency with a continuous data and the short burst transmission from the system is also transmitted under the frequency hopping system with the pseudorandom hopping frequency system.

Compliance for section 15.247(h)

The system incorporates with an adaptive system to detect other user within the spectrum band so that it individually and independently to avoid hopping on the occupied channels.

The system is designed not have the ability to coordinated with other FHSS System in an effort to avoid the simultaneous occupancy of individual hopping frequencies by multiple transmitter.

--End of Report--