



Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240800156902

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TEST REPORT

Application No.: KSCR2408001569AT
FCC ID: 2AC8UA2427
Applicant: Anhui Huami Information Technology Co., Ltd.
Address of Applicant: 7/F, Building B2, Huami Global Innovation Center, No. 900, Wangjiang West Road, High-tech Zone, Hefei City, China (Anhui) Pilot Free Trade Zone(230088)
Manufacturer: Anhui Huami Information Technology Co., Ltd.
Address of Manufacturer: 7/F, Building B2, Huami Global Innovation Center, No. 900, Wangjiang West Road, High-tech Zone, Hefei City, China (Anhui) Pilot Free Trade Zone(230088)
Equipment Under Test (EUT):
EUT Name: Open-Ear earbuds
Model No.: A2427
Trade Mark: Amazfit
Standard(s) : 47 CFR Part 15, Subpart C 15.247
Date of Receipt: 2024-08-19
Date of Test: 2024-08-28 to 2024-09-05
Date of Issue: 2024-09-13

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

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Revision Record			
Version	Description	Date	Remark
00	Original	2024-09-13	/

Authorized for issue by:			
Tested By		Damon Zhou	
		Damon_Zhou/Project Engineer	
Approved By		Terry Hou	
		Terry Hou /Reviewer	



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2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Below 1GHz		ANSI C63.10 (2013) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Conducted Peak Output Power		ANSI C63.10 (2013) Section 11.9.1	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass
Minimum 6dB Bandwidth		ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Power Spectrum Density		ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Band Edges Measurement		ANSI C63.10 (2013) Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Spurious Emissions		ANSI C63.10 (2013) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3.7V,50mAh by Rechargeable Li-ion Battery
Test Voltage	DC 3.7V
Operation Frequency:	2402MHz to 2480MHz
Modulation Type:	GFSK
Data rate:	1Mbps,2Mbps
Number of Channels:	40
Channel Spacing:	2MHz
Antenna Type:	Monopole Antenna
Antenna Gain:	Left Ear: -1dBi (Provided by the manufacturer) Right Ear: 0.8dBi (Provided by the manufacturer)

4.2 Power level setting using in test:

Channel	BLE	BLE
	1M	2M
0	default	default
19	default	default
39	default	default

4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Notebook	Lenovo	/	/

4.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4.5 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).
3. Sample source: sent by customer.

4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

- **FCC**

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

- **ISED**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

- **VCCI**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None



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5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/01/2024	07/31/2025
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/01/2024	07/31/2025
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/15/2024	01/14/2025
4	Signal Generator	R&S	SMBV100B	KSEM032	03/19/2024	03/18/2025
5	Signal Generator	R&S	SMW200A	KSEM020-1	08/02/2024	08/01/2025
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/01/2024	07/31/2025
7	Signal Generator	Agilent	E8257C	KS301066	08/06/2024	08/05/2025
8	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/01/2024	07/31/2025
9	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	03/19/2024	03/18/2025
10	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/12/2024	08/11/2025
11	Switcher	TST	FY562	KUS2001M001-4	01/15/2024	01/14/2025
12	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	01/15/2024	01/14/2025
13	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	08/26/2024	08/25/2025
14	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	03/19/2024	03/18/2025
15	Software	BST	TST-PASS	/	NCR	NCR
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/06/2024	08/05/2025
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/19/2024	03/18/2025
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/18/2023	03/17/2025
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025
6	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E006	03/19/2024	03/18/2025
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	03/23/2024	08/22/2026
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	04/07/2023	04/06/2025
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/15/2024	01/14/2025
11	Amplifier(18~40GHz)	PANSHAN TECHNOLOGY	LNA180400G40	KSEM038	08/12/2024	08/11/2025
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/12/2024	08/11/2025
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/21/2024	03/20/2025
14	Software	Faratronic	EZ_EMV-3A1	/	NCR	NCR
15	Software	ESE	E3_V 6.111221a	/	NCR	NCR

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

6.1.2 Conclusion

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is Monopole Antenna and no consideration of replacement. The best case gain is:-1dBi for Left Ear ; 0.8dBi for Right Ear.

Antenna location: Refer to internal photo.

7 Radio Spectrum Matter Test Results

7.1 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.10.5

Limit:

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

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 21.6 °C

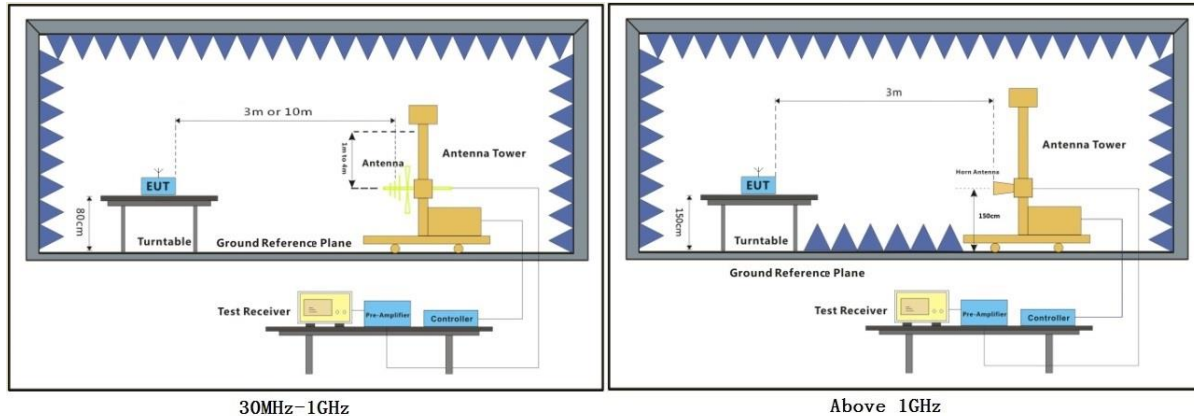
Humidity: 47.8 % RH

Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	01	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	02	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	03	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

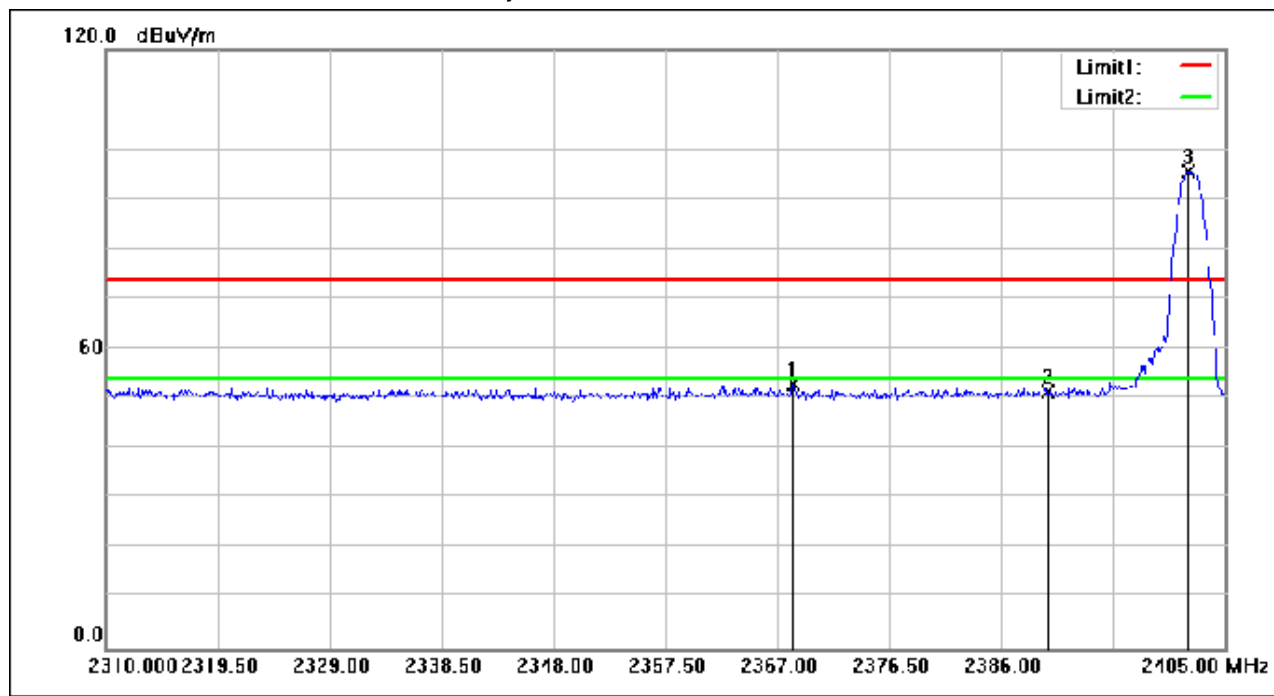
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No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2368.330	77.72	-24.80	52.92	74.00	-21.08	peak
2	2390.000	76.05	-24.71	51.34	74.00	-22.66	peak
3	2401.865	120.18	-24.65	95.53	74.00	21.53	peak

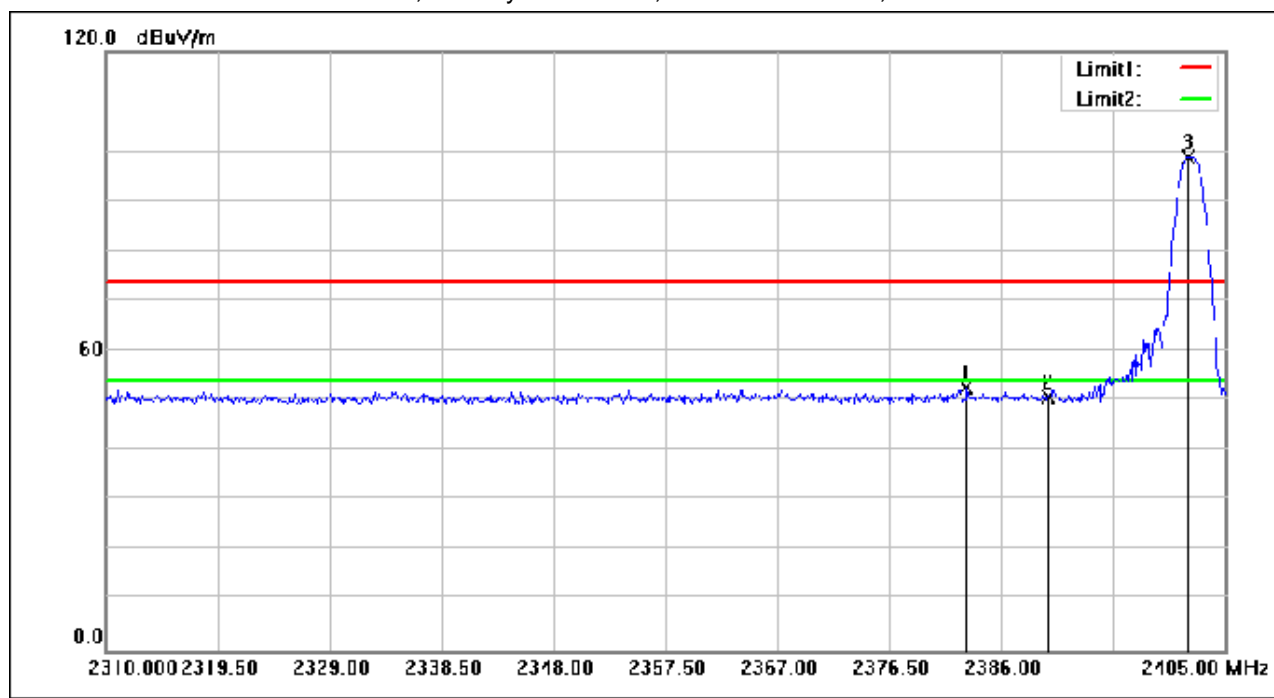
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No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2383.055	77.46	-24.74	52.72	74.00	-21.28	peak
2	2390.000	75.50	-24.71	50.79	74.00	-23.21	peak
3	2401.865	123.65	-24.65	99.00	74.00	25.00	peak

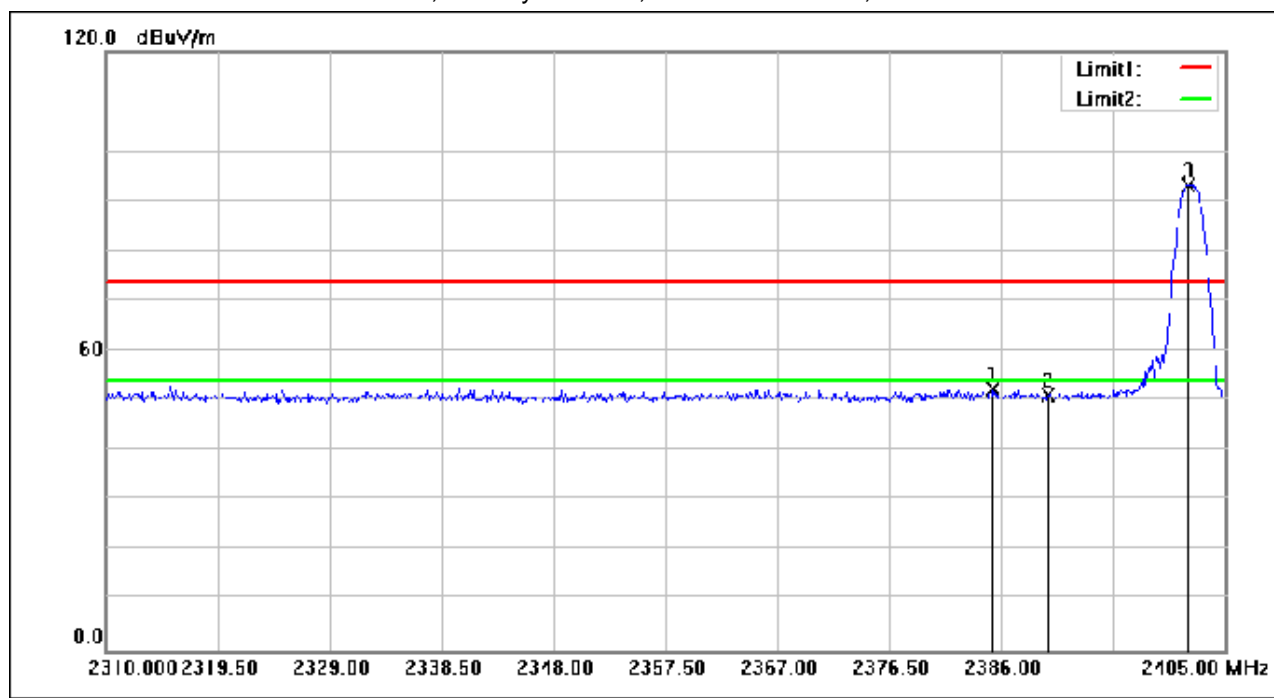
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No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.335	77.18	-24.73	52.45	74.00	-21.55	peak
2	2390.000	75.80	-24.71	51.09	74.00	-22.91	peak
3	2401.865	117.86	-24.65	93.21	74.00	19.21	peak

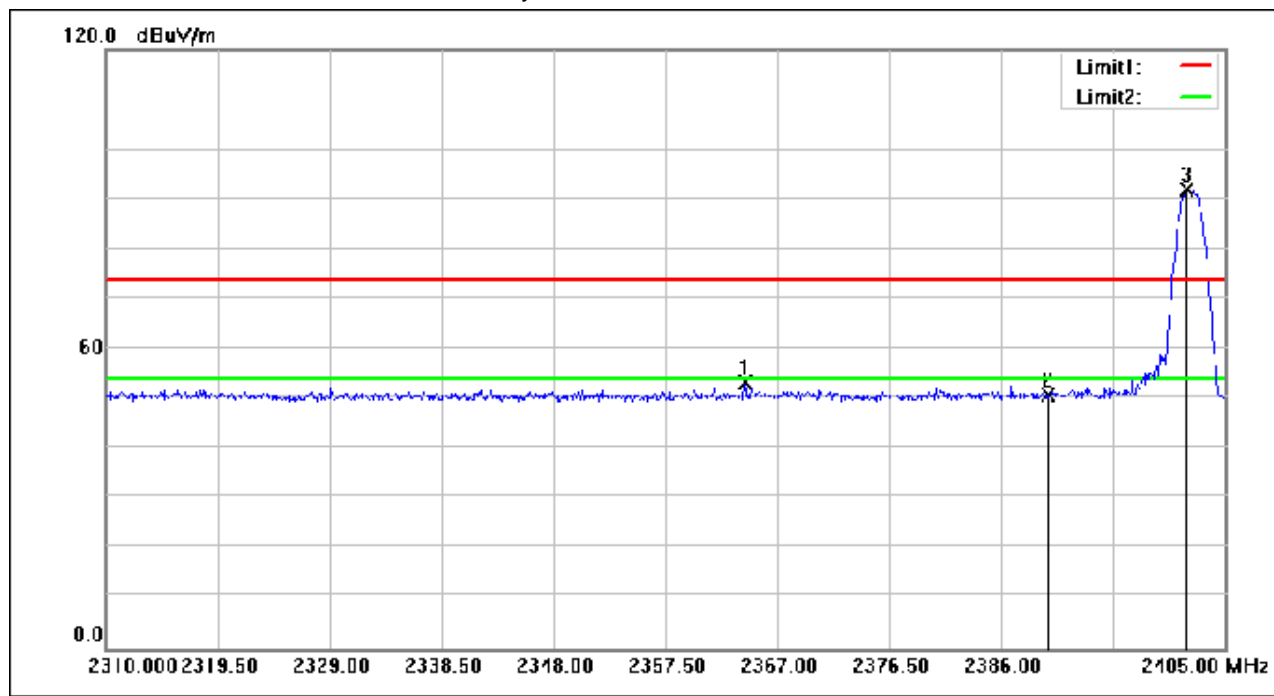
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No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.245	78.03	-24.83	53.20	74.00	-20.80	peak
2	2390.000	75.63	-24.71	50.92	74.00	-23.08	peak
3	2401.770	116.56	-24.65	91.91	74.00	17.91	peak

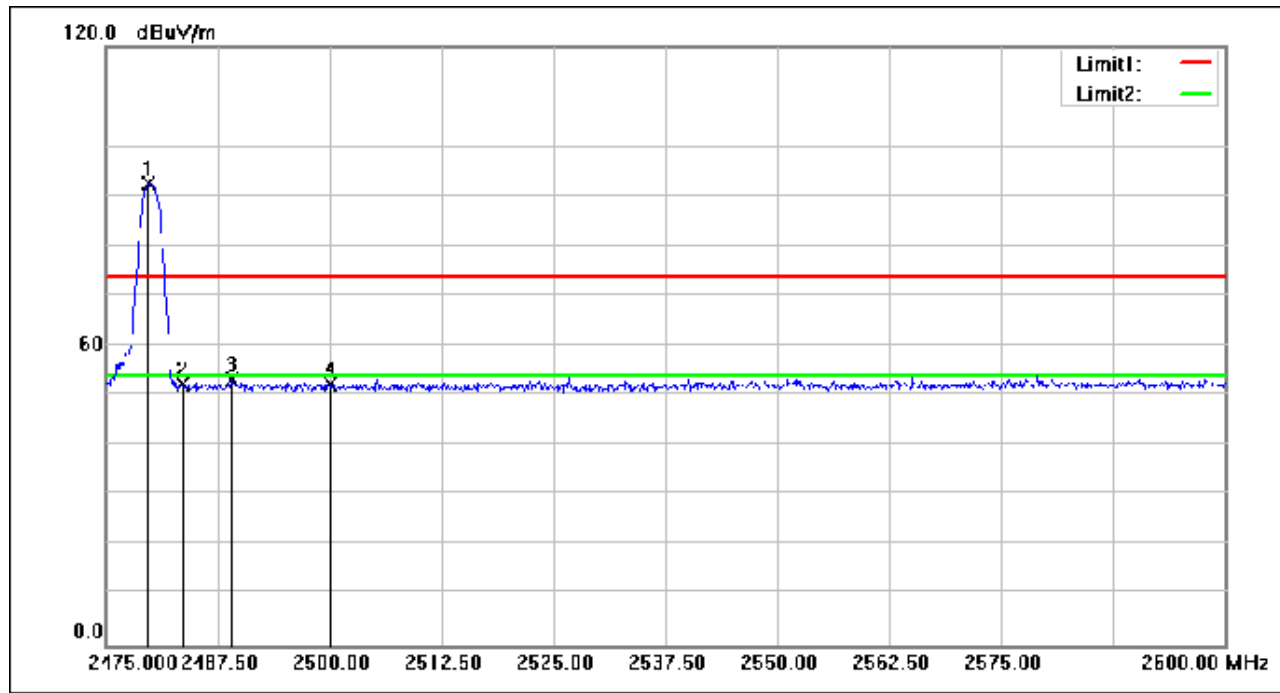
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No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	116.93	-24.28	92.65	74.00	18.65	peak
2	2483.500	76.67	-24.27	52.40	74.00	-21.60	peak
3	2489.000	77.46	-24.24	53.22	74.00	-20.78	peak
4	2500.000	76.43	-24.19	52.24	74.00	-21.76	peak

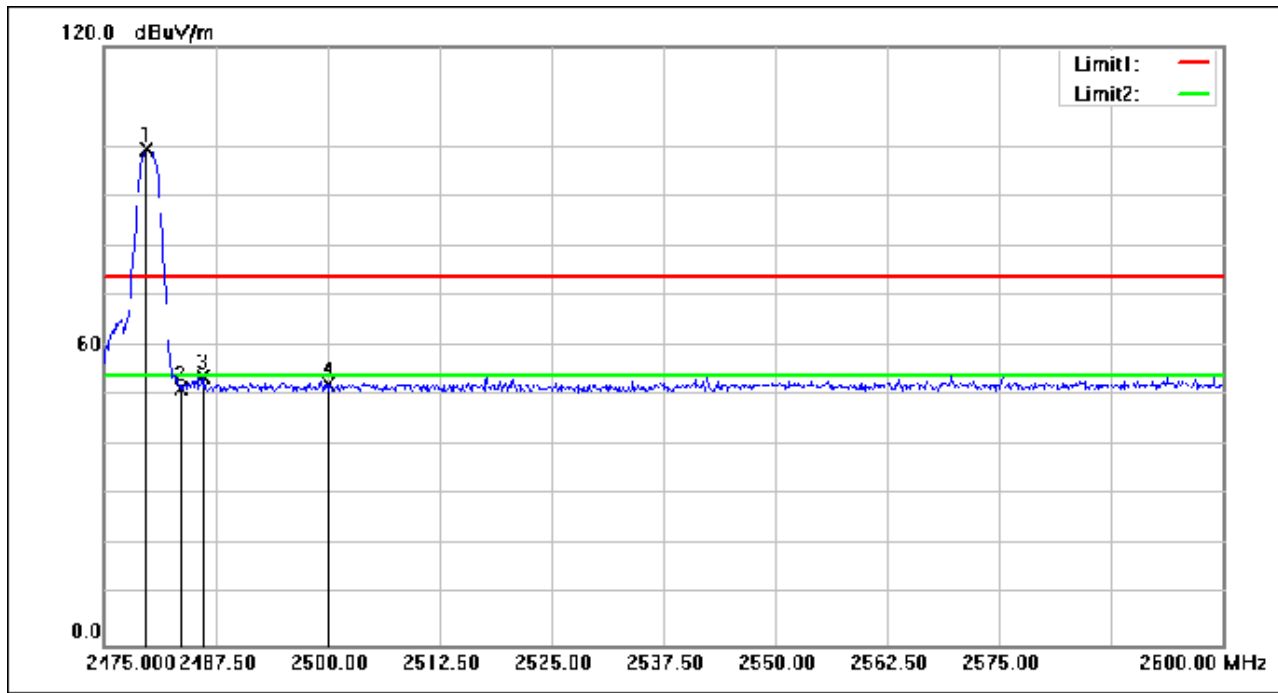
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Test Mode: 02; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	123.84	-24.28	99.56	74.00	25.56	peak
2	2483.500	75.79	-24.27	51.52	74.00	-22.48	peak
3	2486.000	78.22	-24.26	53.96	74.00	-20.04	peak
4	2500.000	76.44	-24.19	52.25	74.00	-21.75	peak

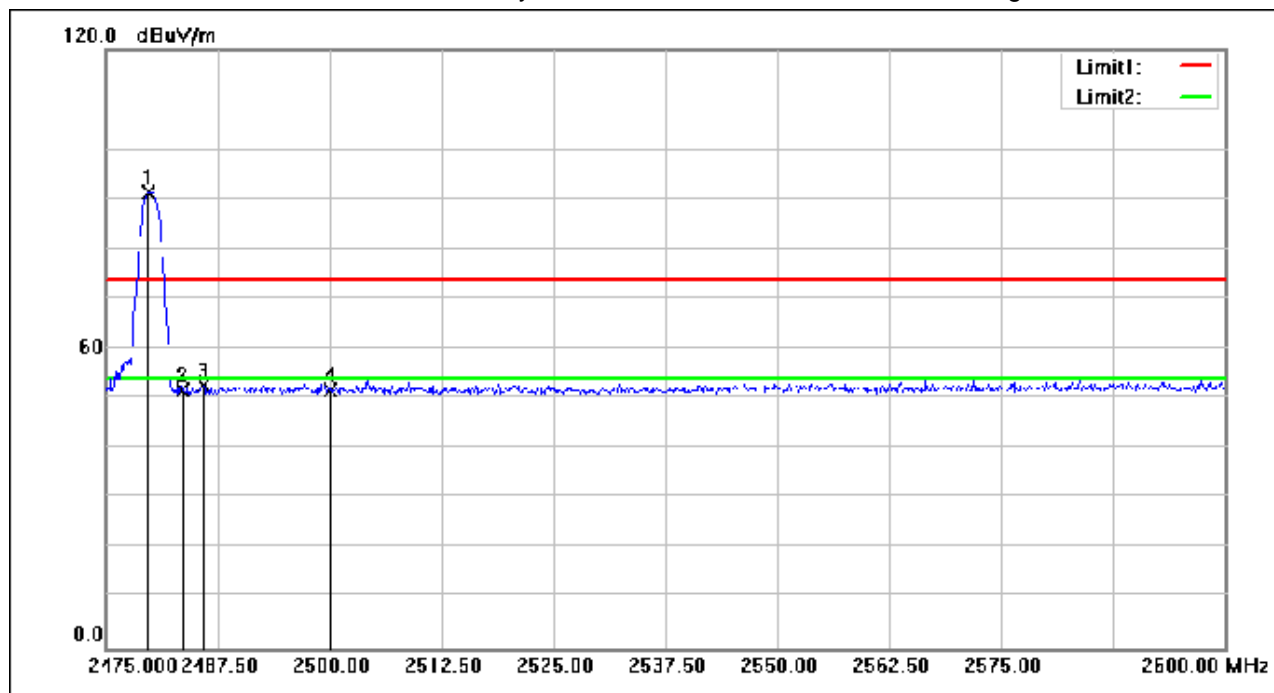
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No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	115.64	-24.28	91.36	74.00	17.36	peak
2	2483.500	75.93	-24.27	51.66	74.00	-22.34	peak
3	2485.875	76.84	-24.26	52.58	74.00	-21.42	peak
4	2500.000	76.03	-24.19	51.84	74.00	-22.16	peak

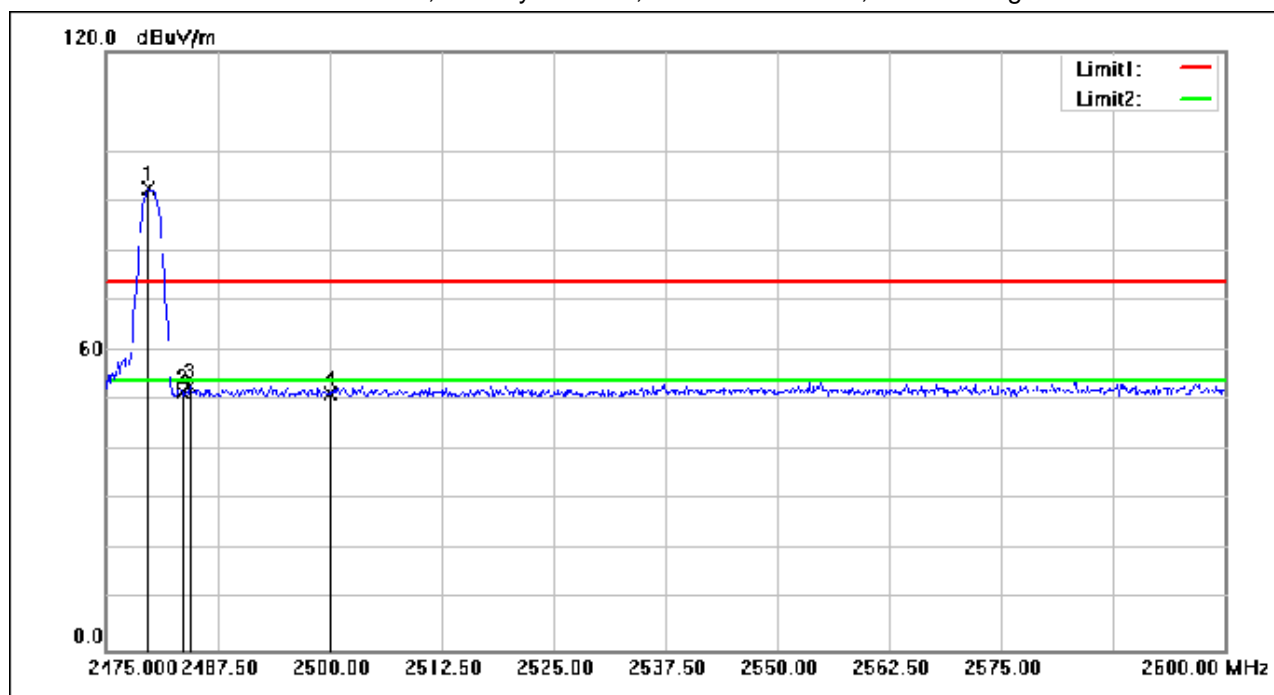
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No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	116.70	-24.28	92.42	74.00	18.42	peak
2	2483.500	76.14	-24.27	51.87	74.00	-22.13	peak
3	2484.375	77.20	-24.26	52.94	74.00	-21.06	peak
4	2500.000	75.58	-24.19	51.39	74.00	-22.61	peak

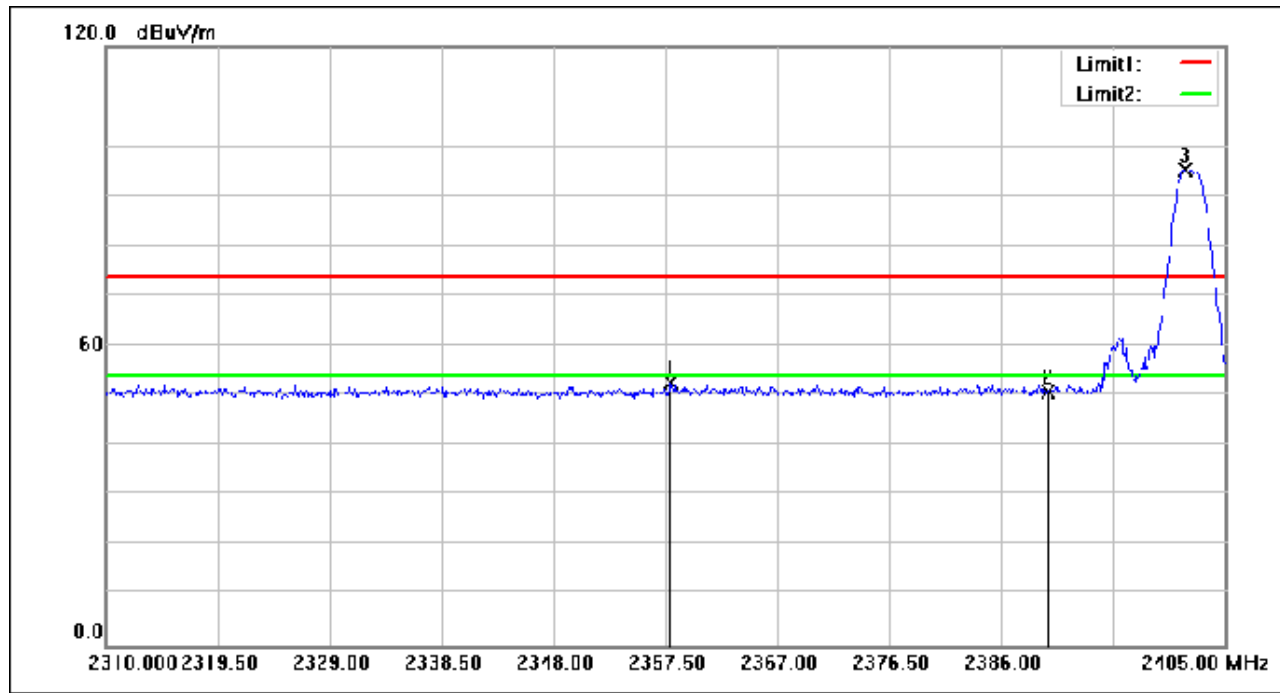
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No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2357.975	77.53	-24.86	52.67	74.00	-21.33	peak
2	2390.000	75.41	-24.71	50.70	74.00	-23.30	peak
3	2401.580	120.00	-24.65	95.35	74.00	21.35	peak

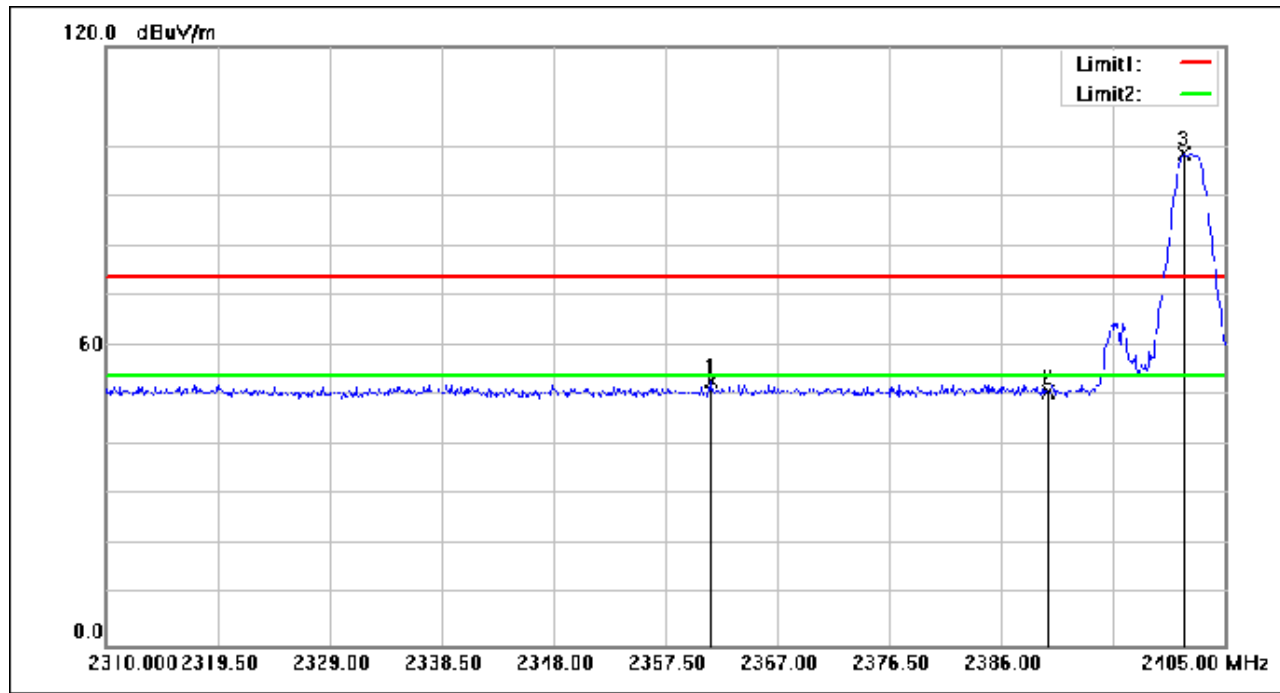
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Test Mode: 03; Polarity: Horizontal; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2361.300	77.66	-24.84	52.82	74.00	-21.18	peak
2	2390.000	75.65	-24.71	50.94	74.00	-23.06	peak
3	2401.485	123.14	-24.65	98.49	74.00	24.49	peak

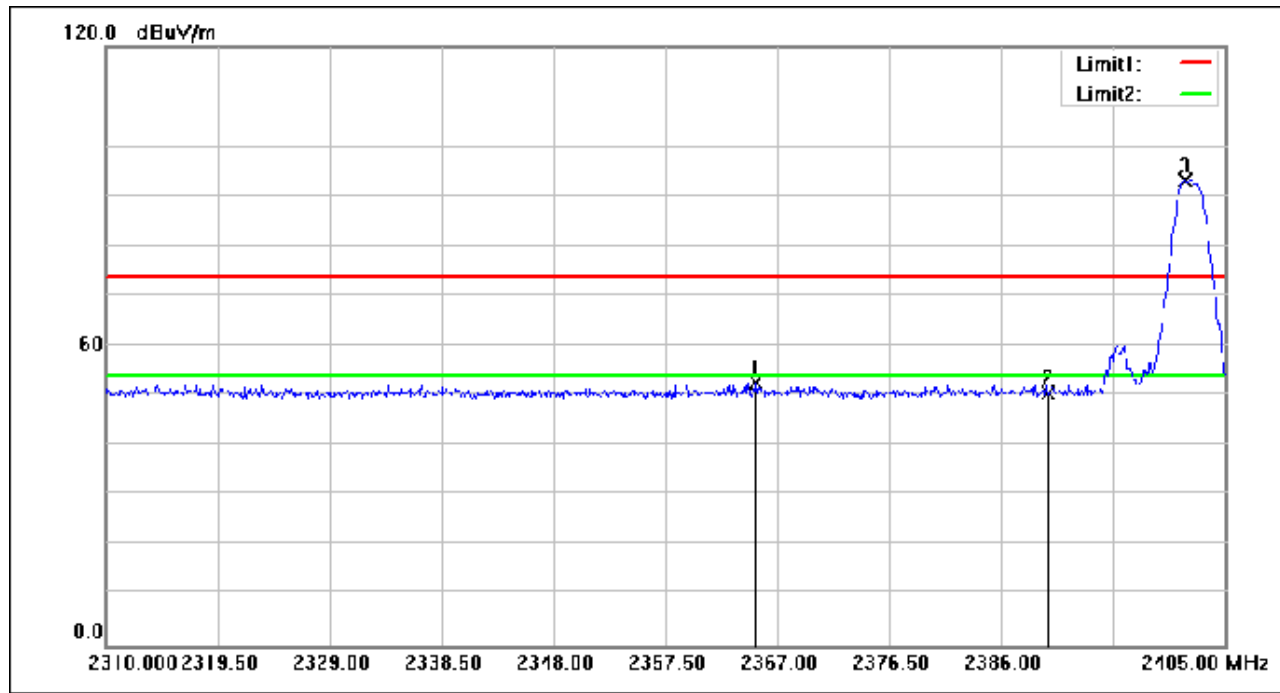
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2365.195	77.34	-24.82	52.52	74.00	-21.48	peak
2	2390.000	75.27	-24.71	50.56	74.00	-23.44	peak
3	2401.580	117.88	-24.65	93.23	74.00	19.23	peak

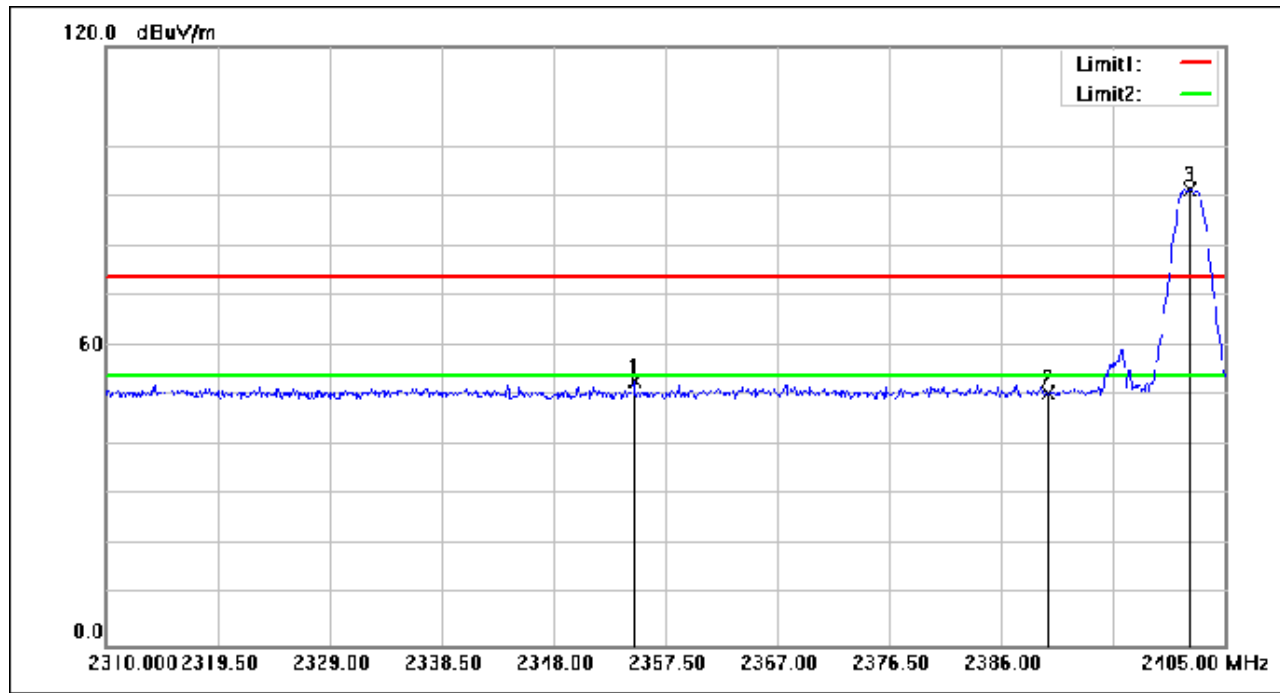
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Test Mode: 03; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2354.840	77.82	-24.87	52.95	74.00	-21.05	peak
2	2390.000	75.26	-24.71	50.55	74.00	-23.45	peak
3	2402.055	116.05	-24.65	91.40	74.00	17.40	peak

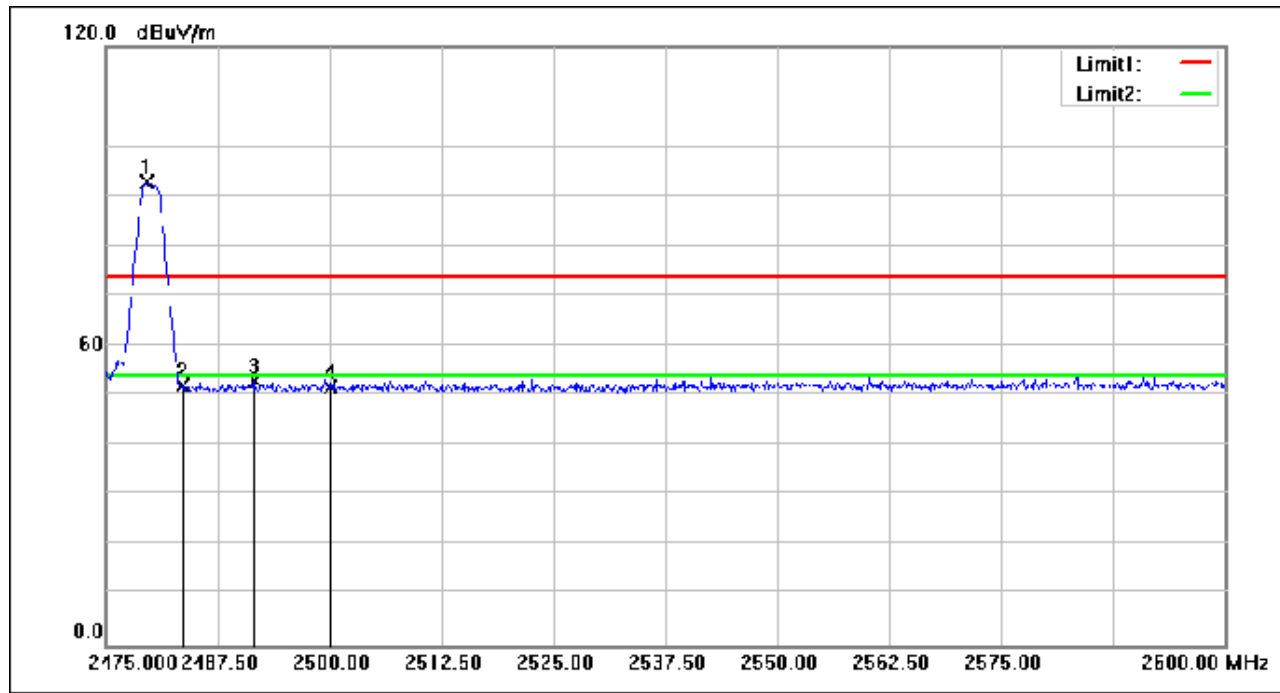
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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.500	117.01	-24.28	92.73	74.00	18.73	peak
2	2483.500	76.40	-24.27	52.13	74.00	-21.87	peak
3	2491.500	77.26	-24.23	53.03	74.00	-20.97	peak
4	2500.000	76.08	-24.19	51.89	74.00	-22.11	peak

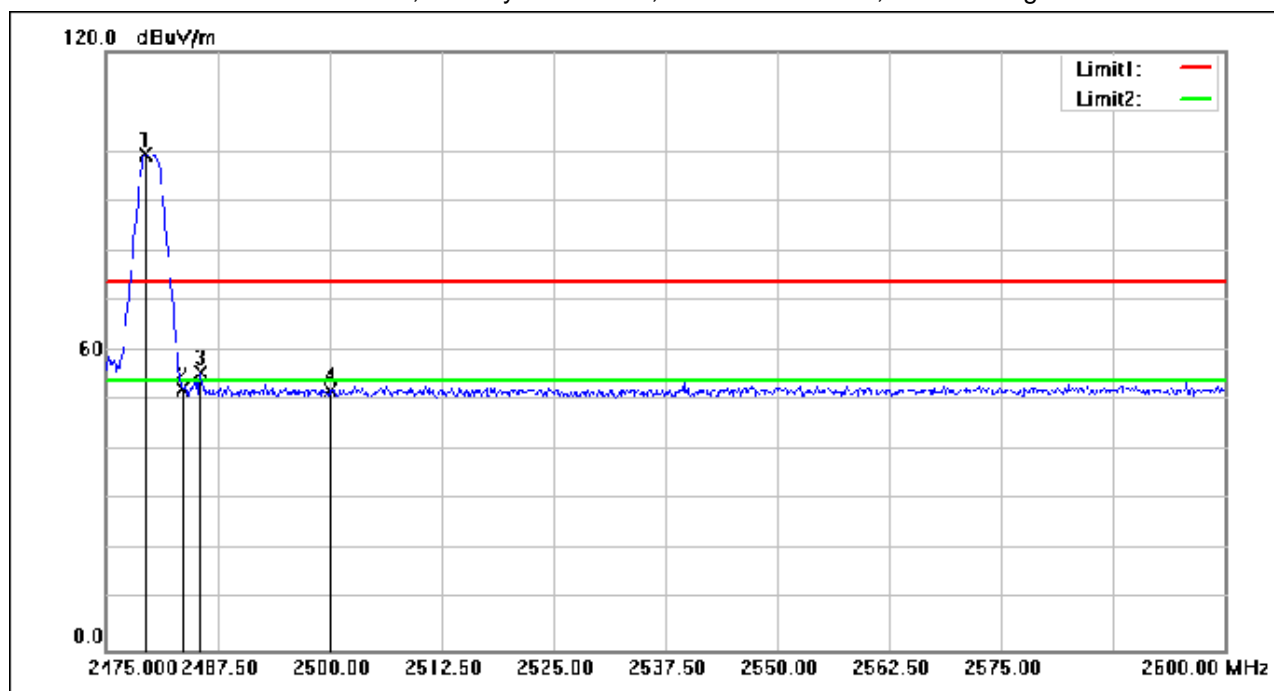
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Test Mode: 03; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.375	123.87	-24.28	99.59	74.00	25.59	peak
2	2483.500	76.49	-24.27	52.22	74.00	-21.78	peak
3	2485.500	80.03	-24.26	55.77	74.00	-18.23	peak
4	2500.000	76.10	-24.19	51.91	74.00	-22.09	peak

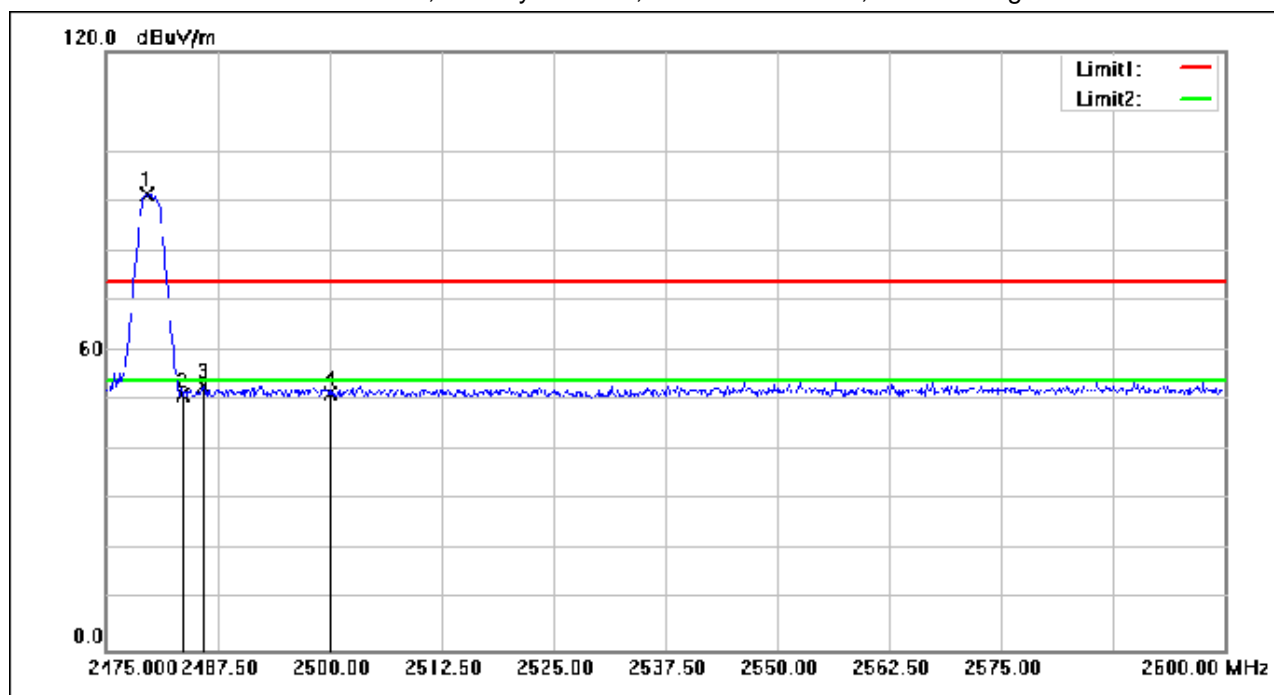
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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.500	115.76	-24.28	91.48	74.00	17.48	peak
2	2483.500	75.46	-24.27	51.19	74.00	-22.81	peak
3	2485.875	77.32	-24.26	53.06	74.00	-20.94	peak
4	2500.000	75.78	-24.19	51.59	74.00	-22.41	peak

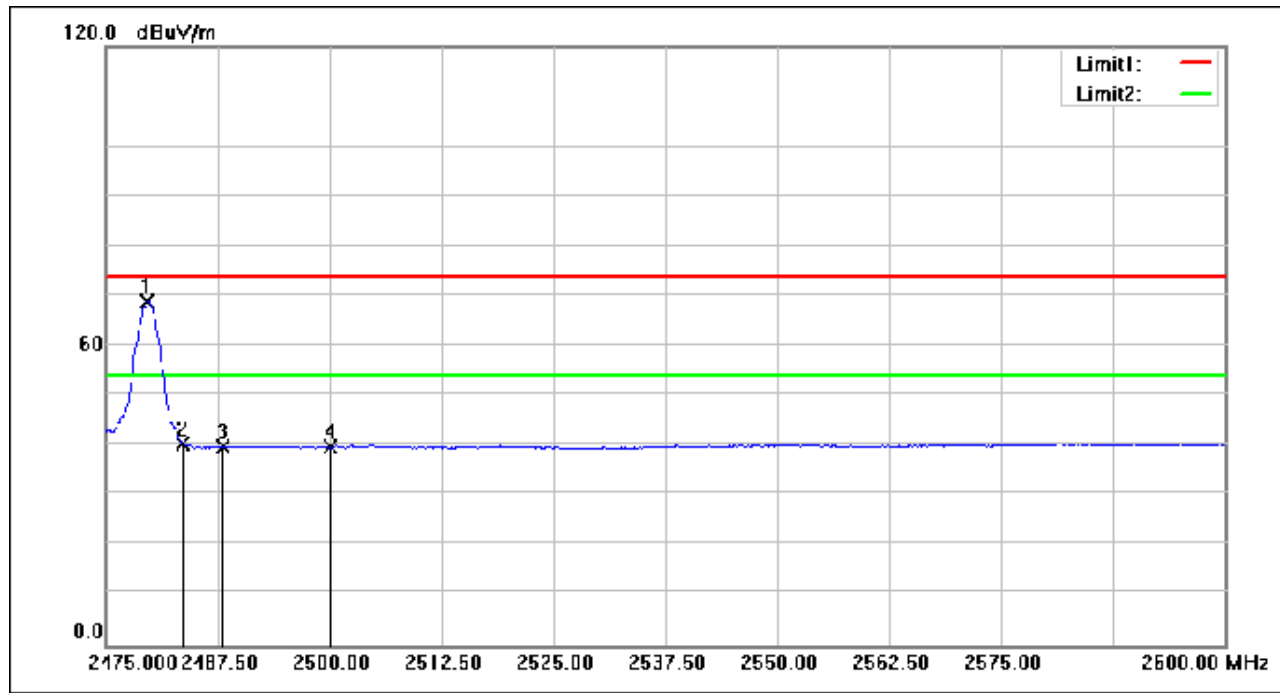
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Test Mode: 03; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.625	93.23	-24.28	68.95	54.00	14.95	AVG
2	2483.500	64.75	-24.27	40.48	54.00	-13.52	AVG
3	2488.125	64.11	-24.25	39.86	54.00	-14.14	AVG
4	2500.000	63.81	-24.19	39.62	54.00	-14.38	AVG

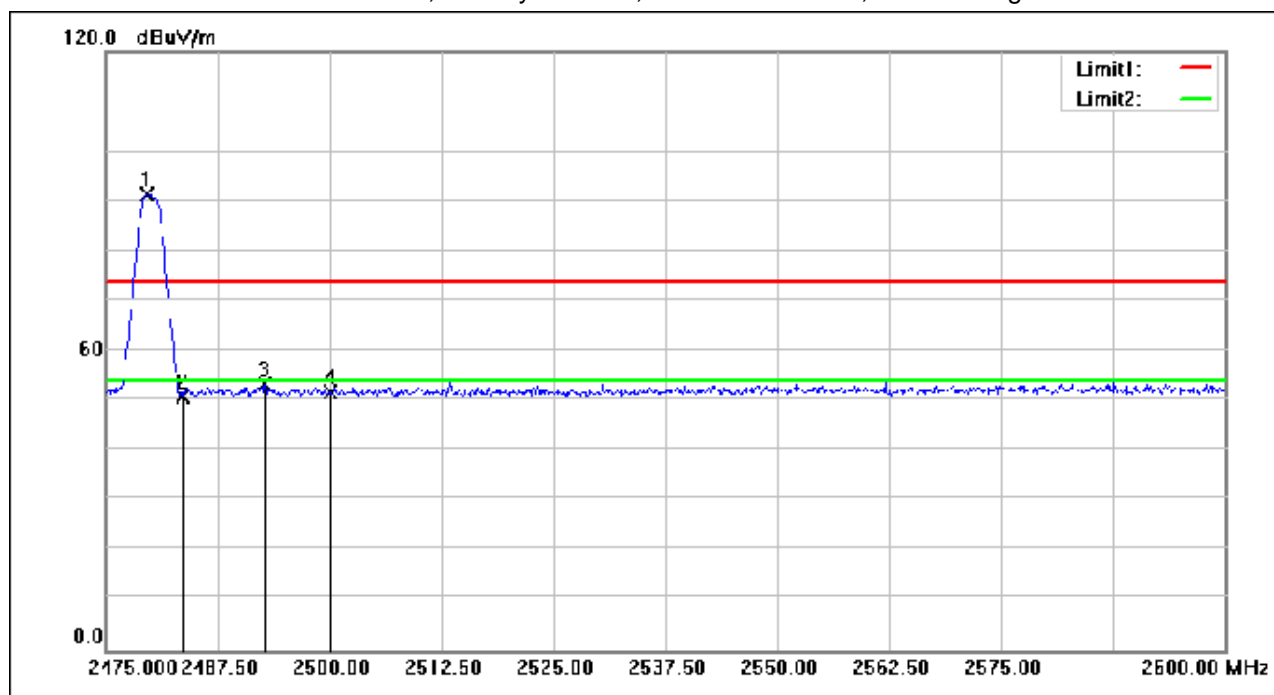
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 03; Polarity: Vertical; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.500	115.65	-24.28	91.37	74.00	17.37	peak
2	2483.500	75.09	-24.27	50.82	74.00	-23.18	peak
3	2492.750	77.53	-24.23	53.30	74.00	-20.70	peak
4	2500.000	76.06	-24.19	51.87	74.00	-22.13	peak

7.2 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5

Limit:

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
960-1000	500	3

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 21.8 °C

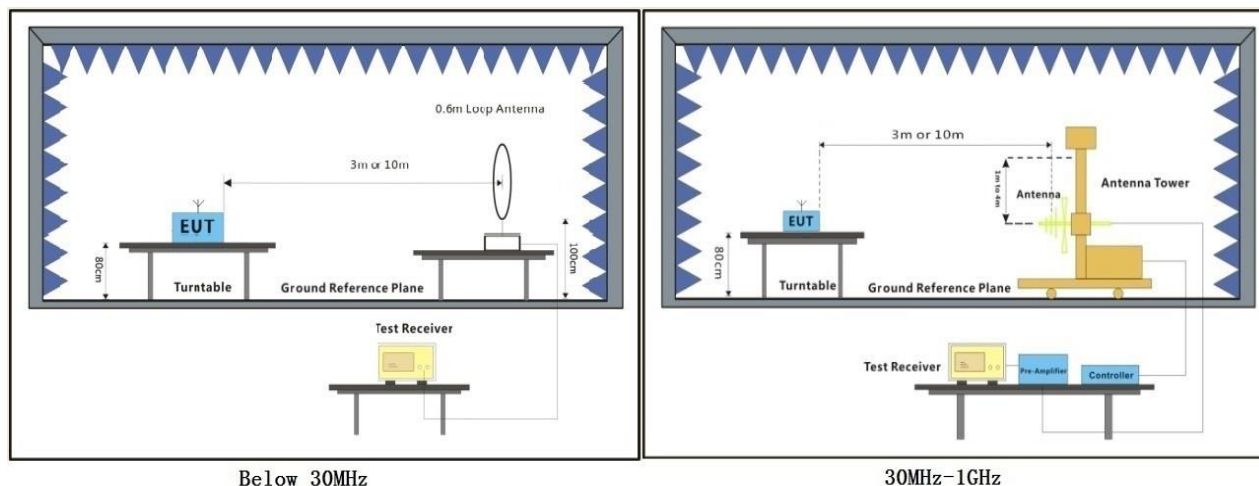
Humidity: 48.1 % RH

Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{Antenna Factor} - \text{Preamplifier Factor}$
2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

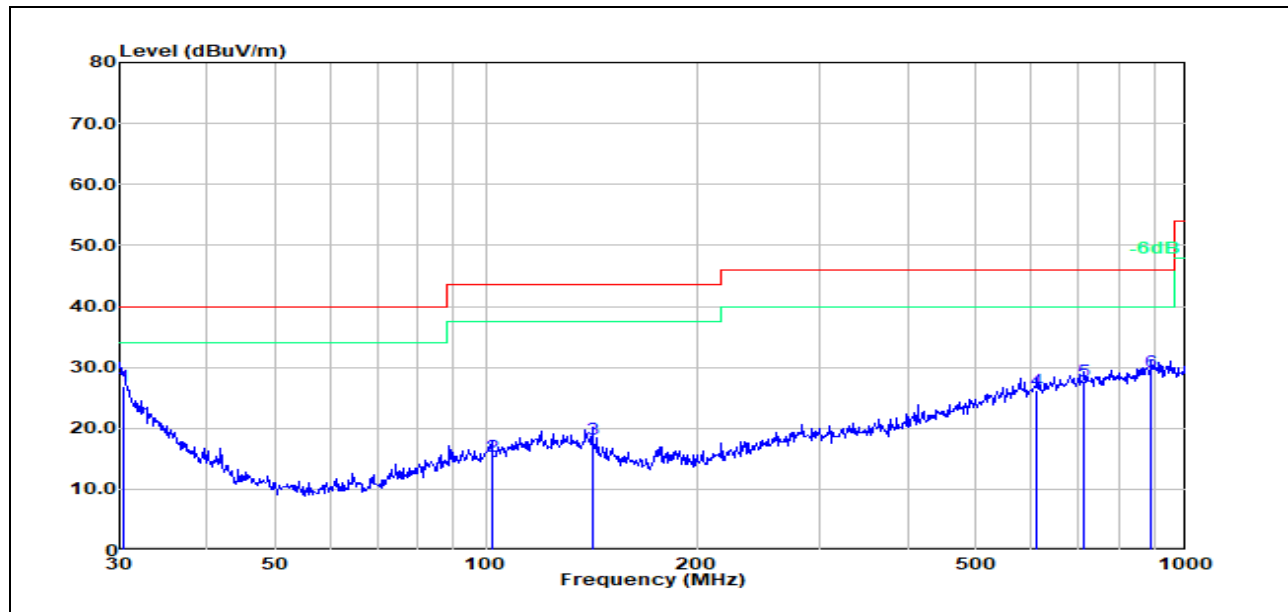
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Test Mode: 00; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	30.4240	7.70	19.08	26.78	40.00	-13.22	100	186	QP
2	102.0010	2.46	12.86	15.32	43.50	-28.18	200	0	QP
3	141.8260	4.33	13.87	18.20	43.50	-25.30	100	215	QP
4	612.0640	3.48	22.85	26.33	46.00	-19.67	100	33	QP
5	714.1730	3.87	23.97	27.84	46.00	-18.16	100	253	QP
6	890.7280	3.76	25.55	29.31	46.00	-16.69	100	215	QP

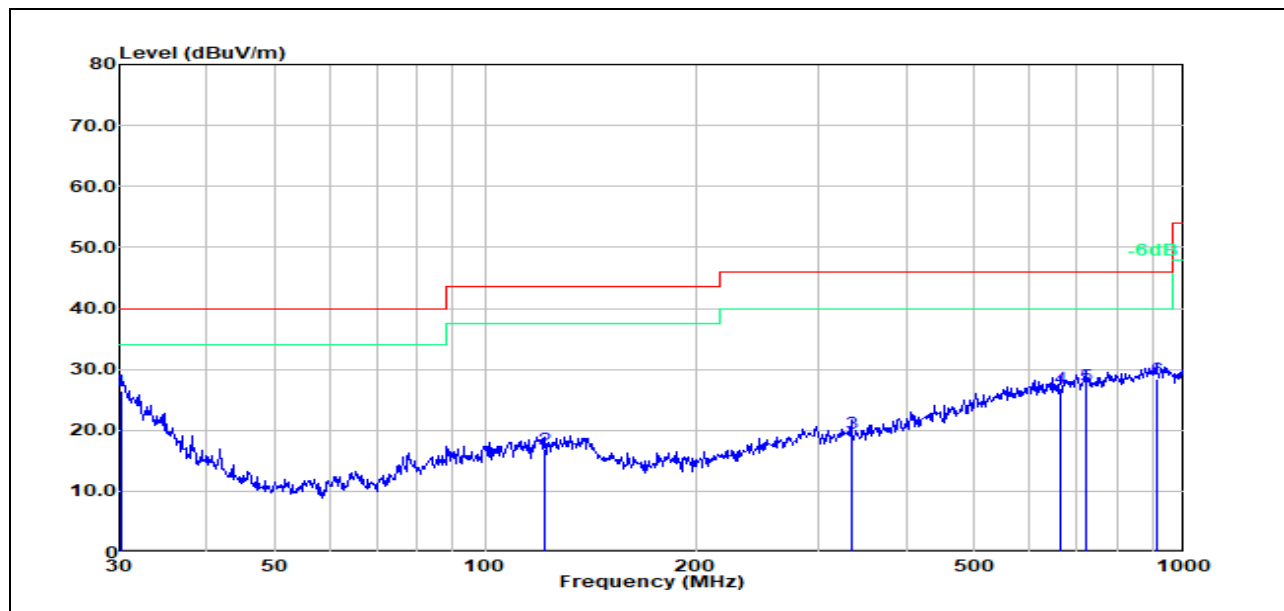
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Test Mode: 00; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	30.1050	7.20	19.34	26.54	40.00	-13.46	100	44	QP
2	121.5490	2.79	14.09	16.88	43.50	-26.62	200	360	QP
3	333.6870	3.05	16.42	19.47	46.00	-26.53	100	16	QP
4	663.4730	3.22	23.65	26.87	46.00	-19.13	100	72	QP
5	721.7260	3.17	24.16	27.33	46.00	-18.67	200	243	QP
6	912.8620	2.85	25.64	28.49	46.00	-17.51	100	92	QP

7.3 Radiated Spurious Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.6

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 22.1 °C

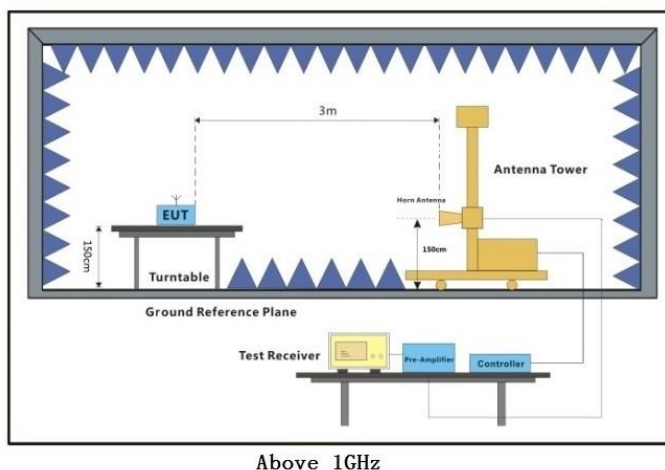
Humidity: 48.3 % RH

Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	01	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	02	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	03	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{Antenna Factor} - \text{Preamplifier Factor}$
2. Scan from 1GHz to 25GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

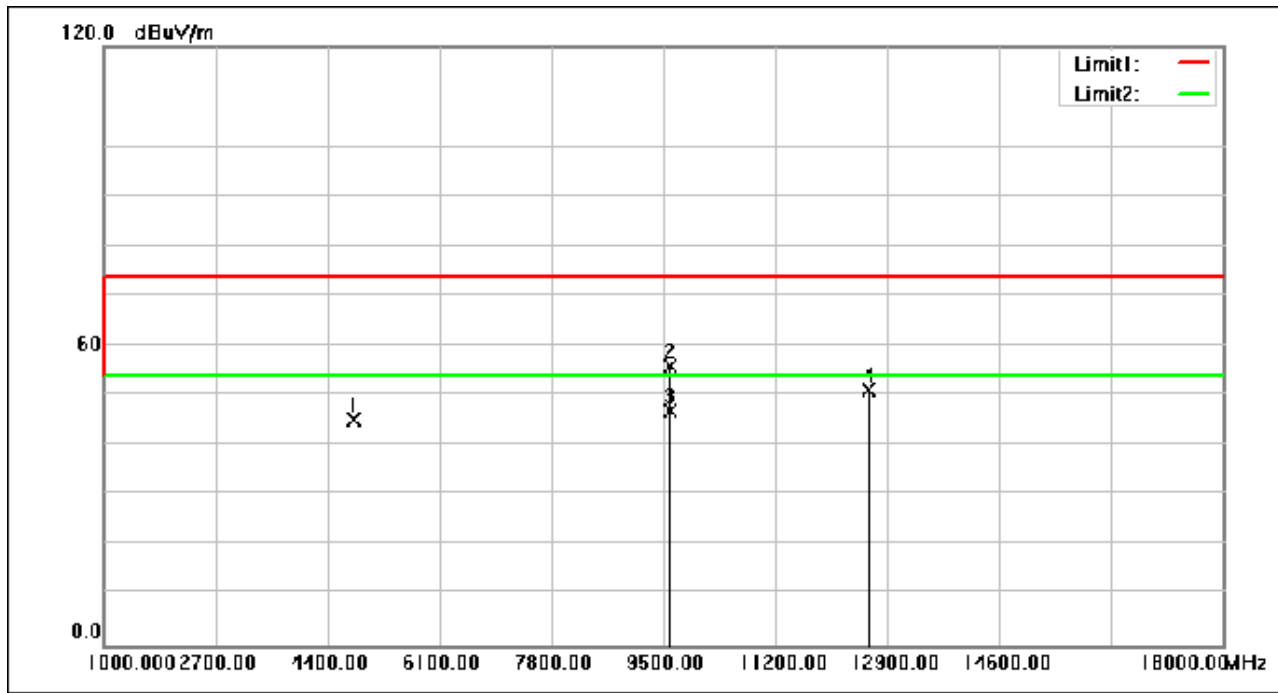
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Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4801.200	63.57	-18.56	45.01	74.00	-28.99	peak
2	9602.000	63.71	-7.76	55.95	74.00	-18.05	peak
3	9602.000	54.76	-7.76	47.00	54.00	-7.00	AVG
4	12625.280	57.47	-6.17	51.30	74.00	-22.70	peak

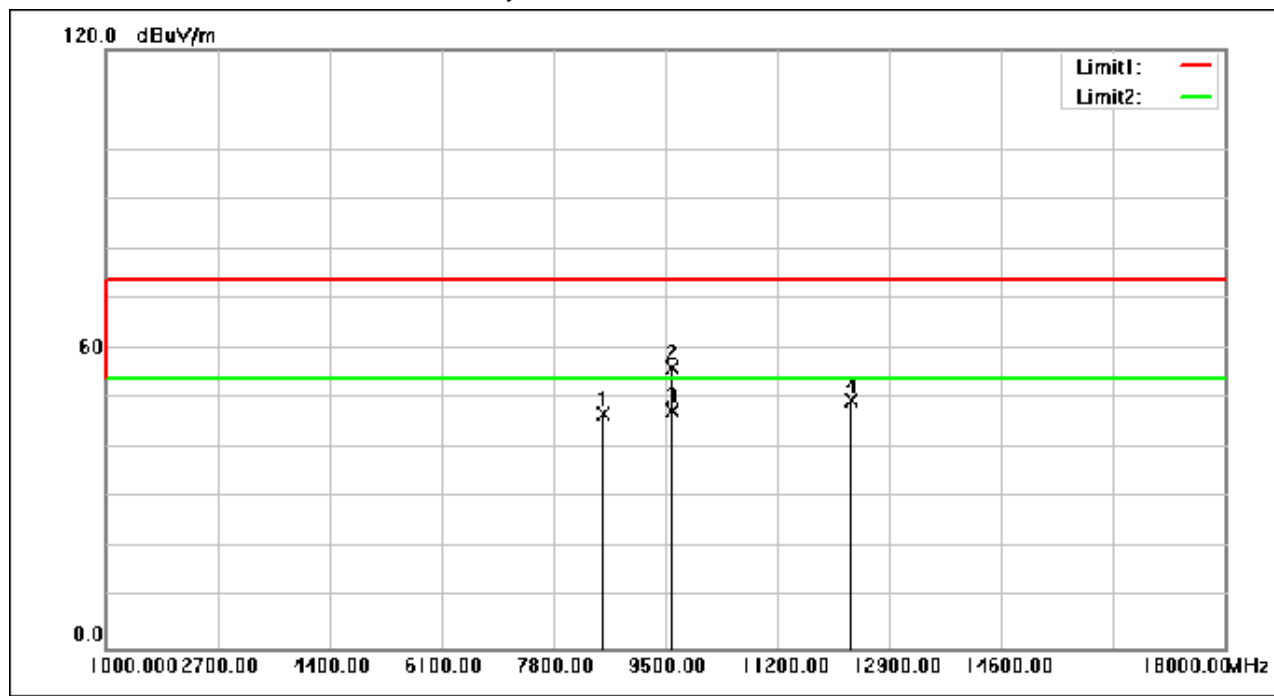
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Test Mode: 02; Polarity: Horizontal; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8565.050	56.59	-9.65	46.94	74.00	-27.06	peak
2	9602.120	64.06	-7.76	56.30	74.00	-17.70	peak
3	9602.120	55.19	-7.76	47.43	54.00	-6.57	AVG
4	12322.370	55.55	-6.03	49.52	74.00	-24.48	peak

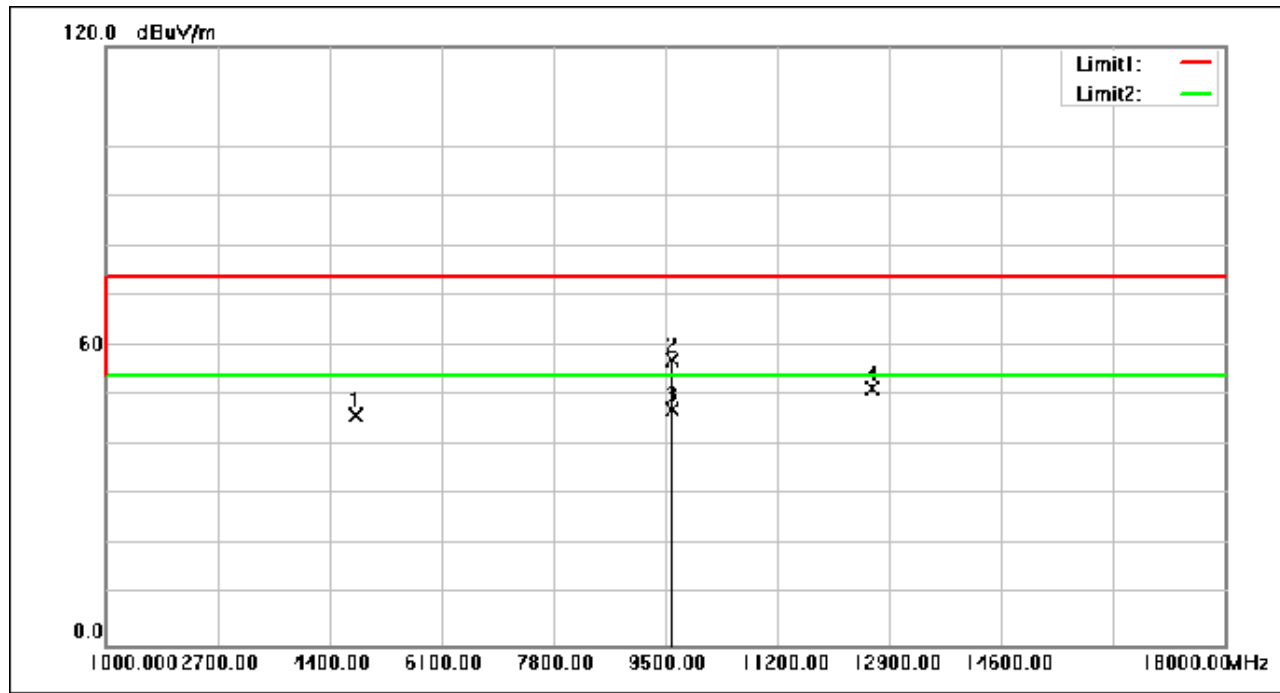
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Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4801.200	64.49	-18.56	45.93	74.00	-28.07	peak
2	9602.000	64.94	-7.76	57.18	74.00	-16.82	peak
3	9602.000	55.15	-7.76	47.39	54.00	-6.61	AVG
4	12649.080	57.65	-6.18	51.47	74.00	-22.53	peak

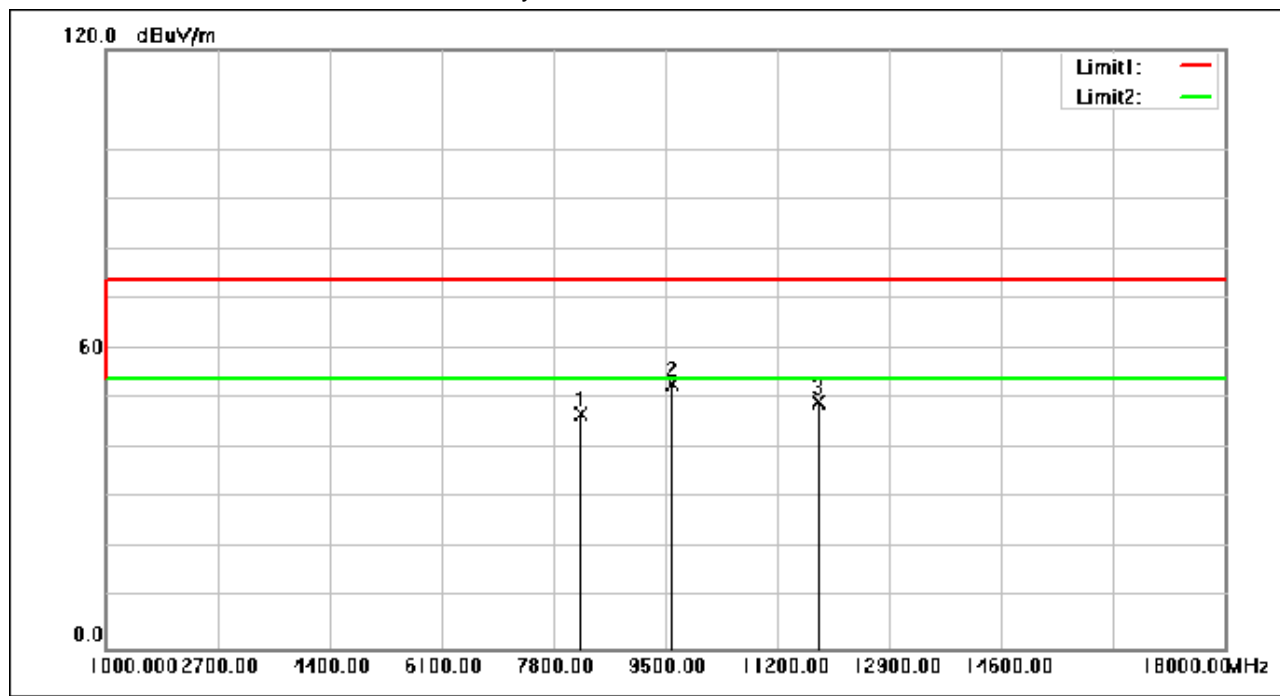
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Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8208.250	57.10	-10.24	46.86	74.00	-27.14	peak
2	9602.120	60.78	-7.76	53.02	74.00	-20.98	peak
3	11812.410	55.31	-6.11	49.20	74.00	-24.80	peak

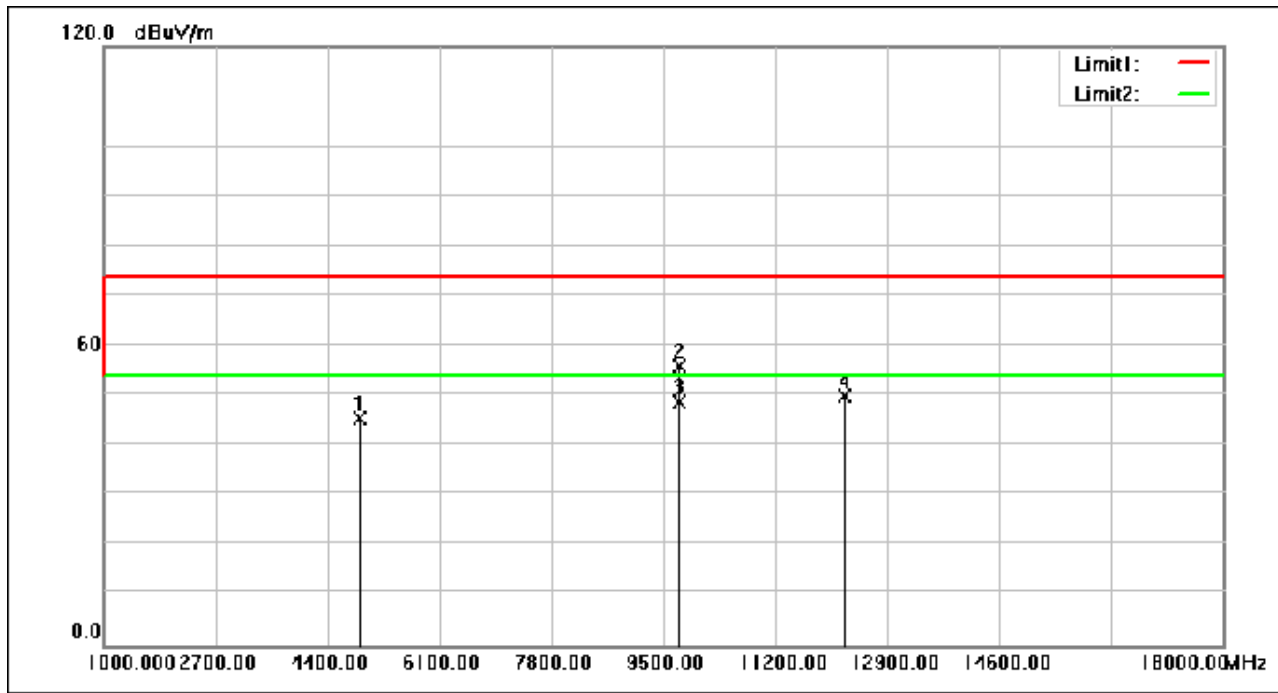
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Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4876.680	64.01	-18.52	45.49	74.00	-28.51	peak
2	9753.640	63.53	-7.48	56.05	74.00	-17.95	peak
3	9753.640	56.37	-7.48	48.89	54.00	-5.11	AVG
4	12258.080	55.88	-6.00	49.88	74.00	-24.12	peak

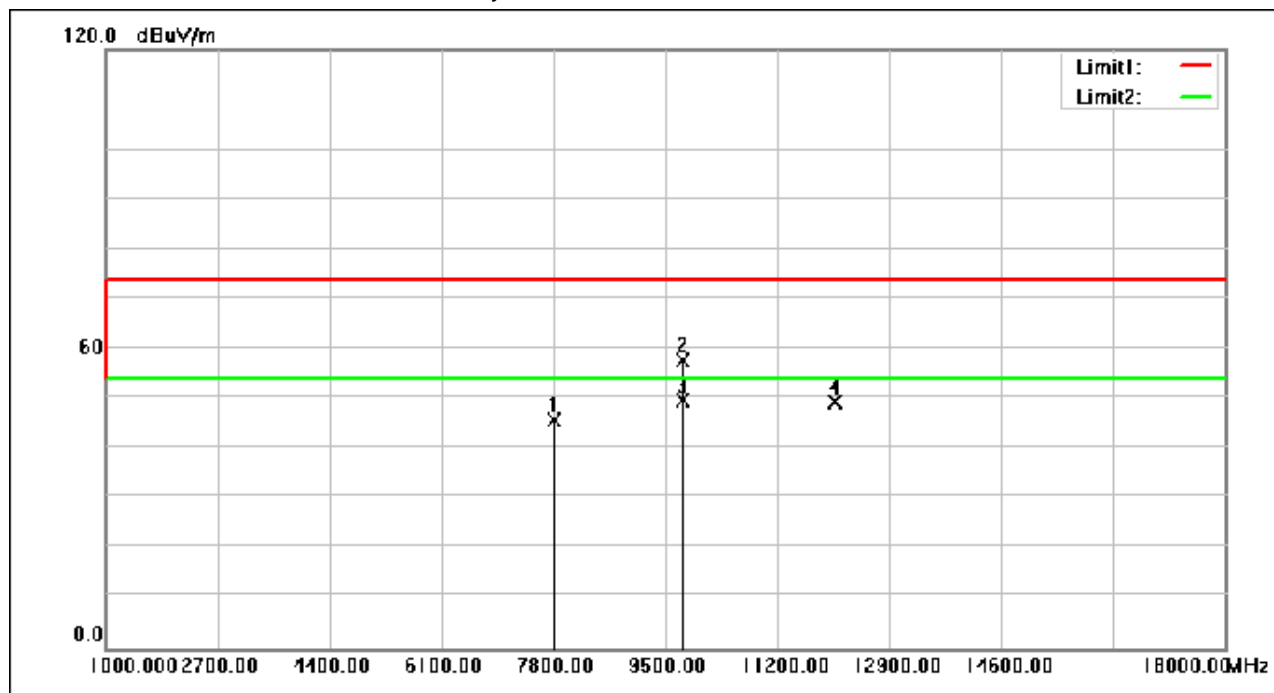
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Test Mode: 02; Polarity: Horizontal; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7817.380	56.73	-10.84	45.89	74.00	-28.11	peak
2	9755.260	65.15	-7.48	57.67	74.00	-16.33	peak
3	9755.260	57.04	-7.48	49.56	54.00	-4.44	AVG
4	12067.410	55.25	-5.91	49.34	74.00	-24.66	peak

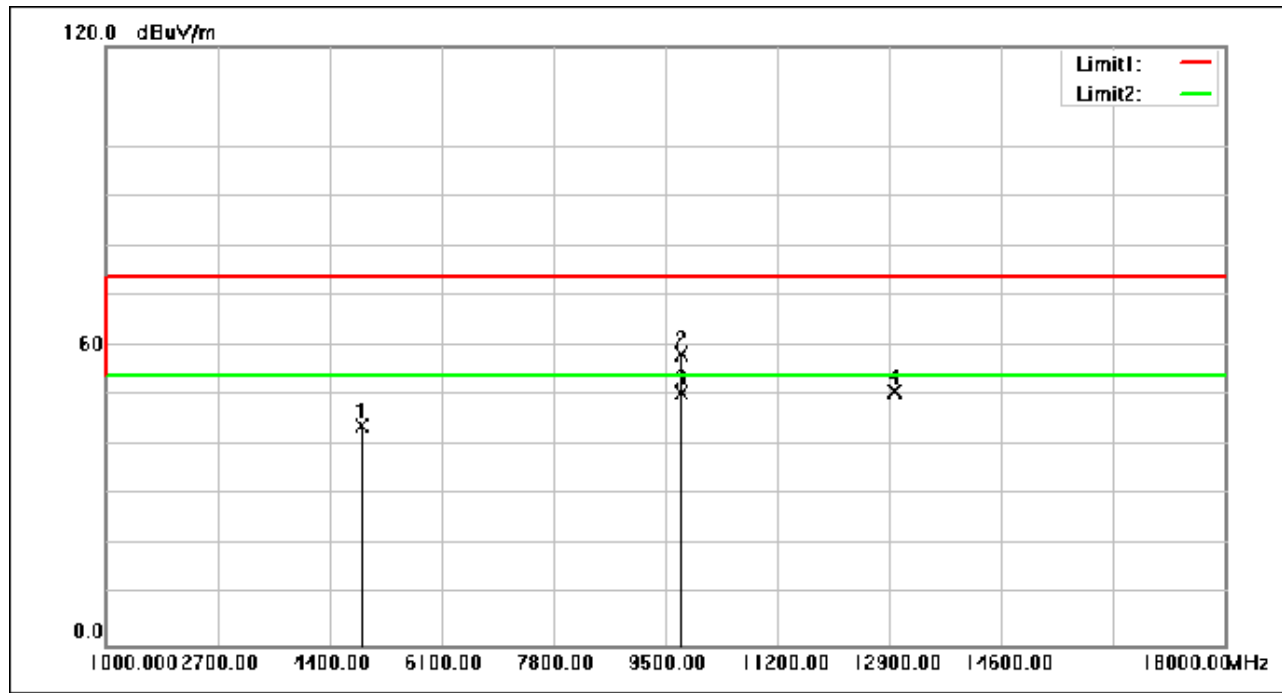
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Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4876.680	62.41	-18.52	43.89	74.00	-30.11	peak
2	9754.320	65.95	-7.48	58.47	74.00	-15.53	peak
3	9754.320	57.94	-7.48	50.46	54.00	-3.54	AVG
4	12972.080	57.18	-6.33	50.85	74.00	-23.15	peak

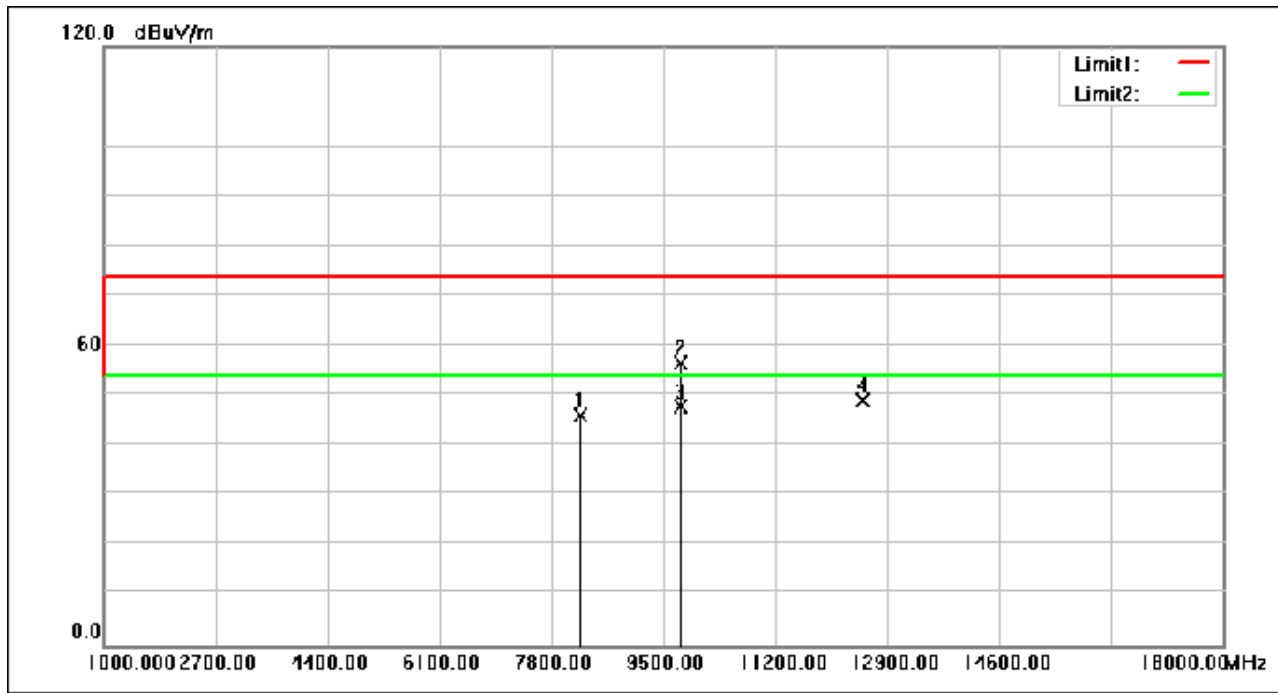
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Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8242.750	56.35	-10.18	46.17	74.00	-27.83	peak
2	9755.260	63.91	-7.48	56.43	74.00	-17.57	peak
3	9755.260	55.29	-7.48	47.81	54.00	-6.19	AVG
4	12526.390	55.18	-6.13	49.05	74.00	-24.95	peak

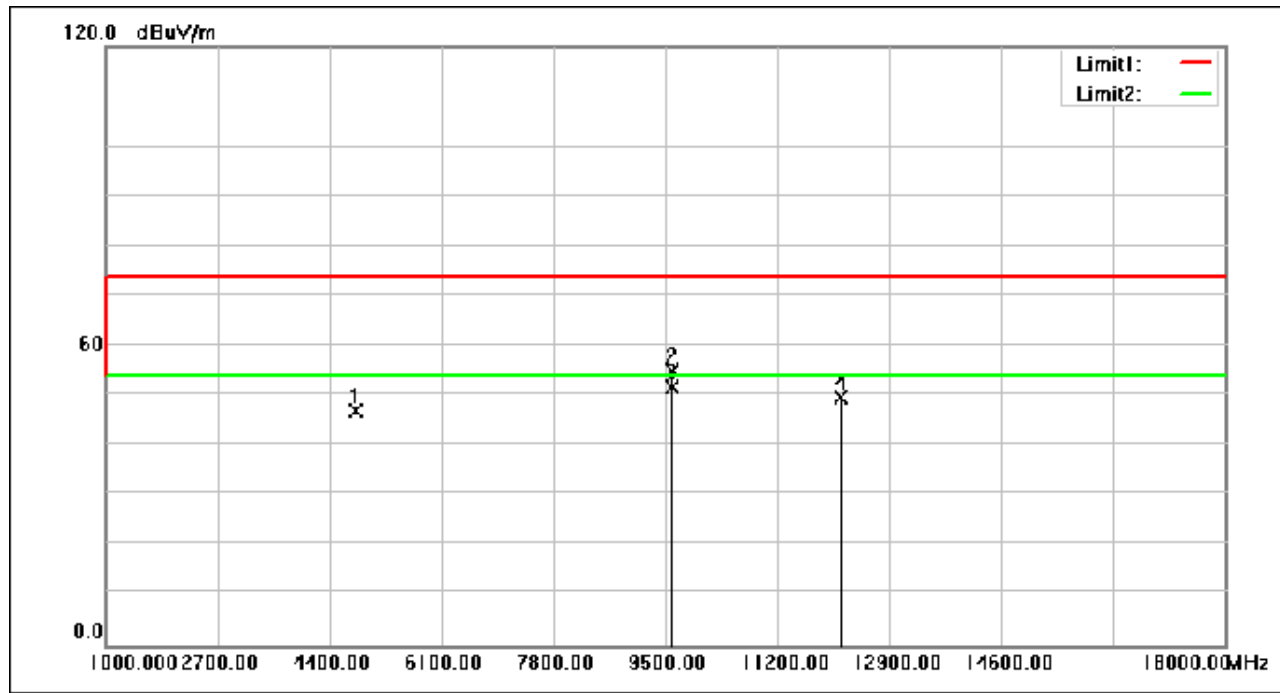
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Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4805.280	65.54	-18.56	46.98	74.00	-27.02	peak
2	9610.160	62.69	-7.75	54.94	74.00	-19.06	peak
3	9610.160	59.40	-7.75	51.65	54.00	-2.35	AVG
4	12162.880	55.54	-5.96	49.58	74.00	-24.42	peak

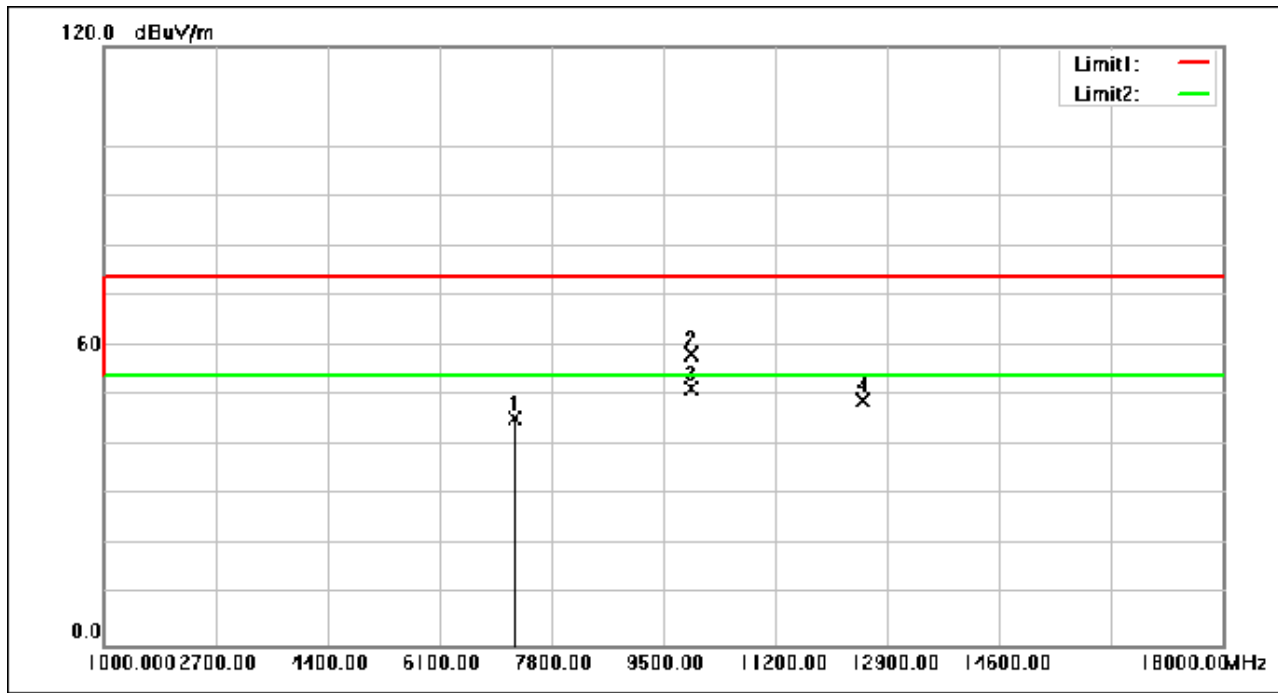
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Test Mode: 02; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7239.560	56.99	-11.46	45.53	74.00	-28.47	peak
2	9908.770	65.62	-7.31	58.31	74.00	-15.69	peak
3	9908.770	58.73	-7.31	51.42	54.00	-2.58	AVG
4	12526.360	55.07	-6.13	48.94	74.00	-25.06	peak

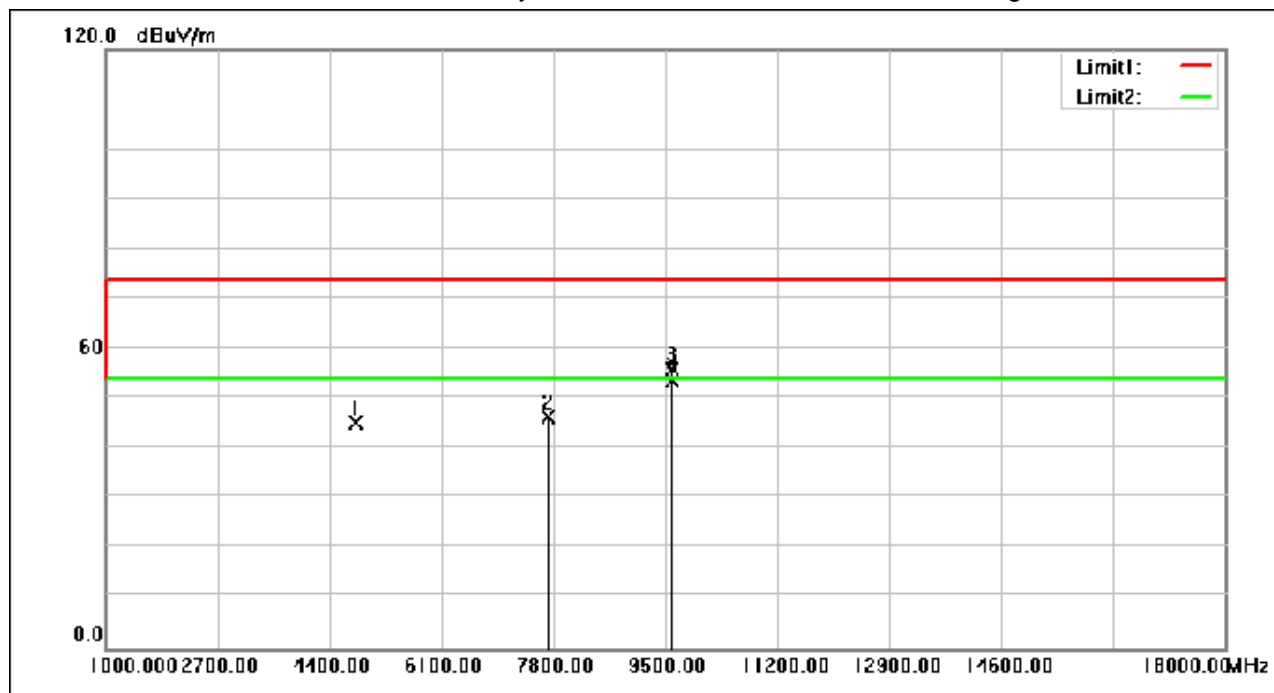
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.600	63.77	-18.56	45.21	74.00	-28.79	peak
2	7727.240	57.22	-10.96	46.26	74.00	-27.74	peak
3	9610.160	63.69	-7.75	55.94	74.00	-18.06	peak
4	9610.160	61.28	-7.75	53.53	54.00	-0.47	AVG

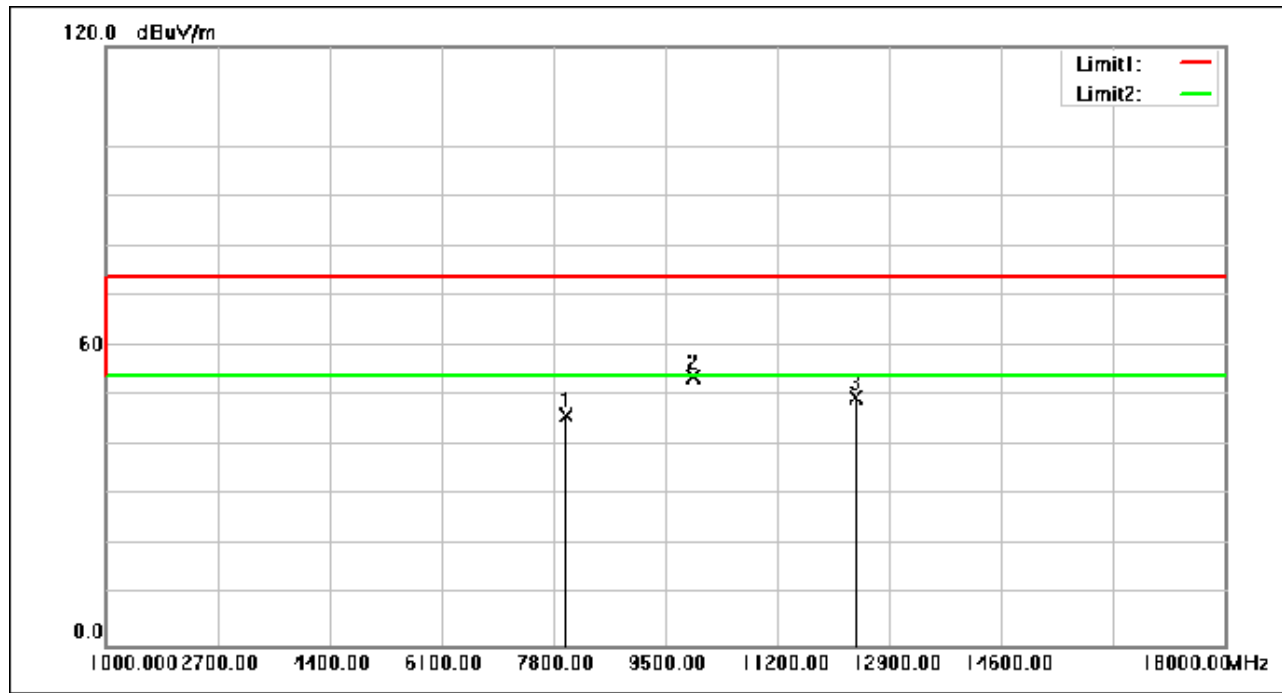
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7987.290	56.75	-10.62	46.13	74.00	-27.87	peak
2	9908.770	61.24	-7.31	53.93	74.00	-20.07	peak
3	12390.610	55.69	-6.06	49.63	74.00	-24.37	peak

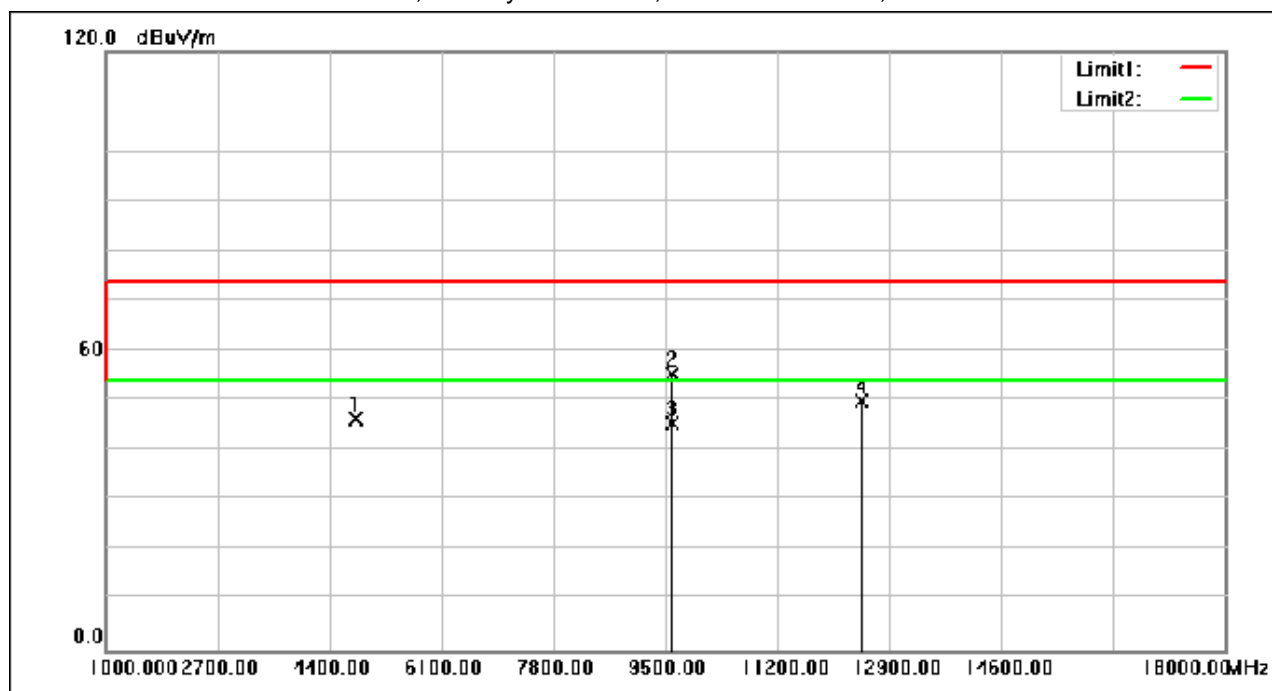
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.520	64.93	-18.56	46.37	74.00	-27.63	peak
2	9602.000	63.20	-7.76	55.44	74.00	-18.56	peak
3	9602.000	53.12	-7.76	45.36	54.00	-8.64	AVG
4	12490.640	55.98	-6.11	49.87	74.00	-24.13	peak

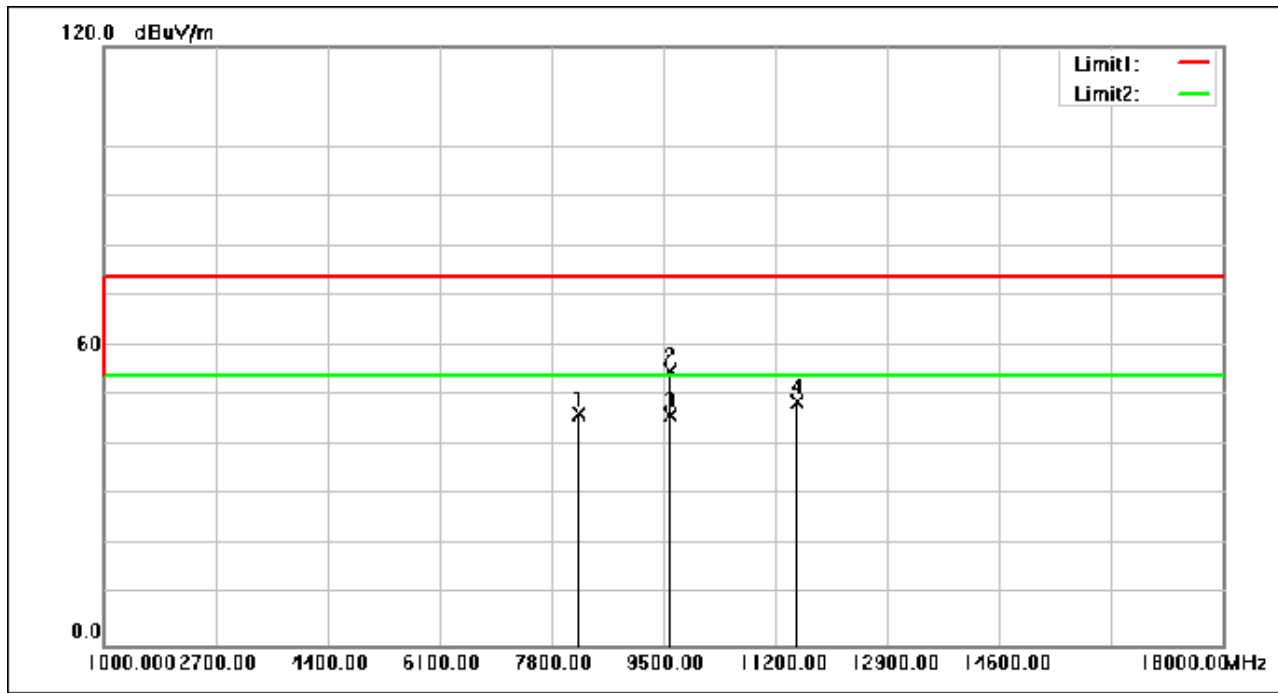
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 03; Polarity: Horizontal; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8225.120	56.67	-10.20	46.47	74.00	-27.53	peak
2	9602.310	62.67	-7.76	54.91	74.00	-19.09	peak
3	9602.310	53.81	-7.76	46.05	54.00	-7.95	AVG
4	11523.680	55.05	-6.34	48.71	74.00	-25.29	peak

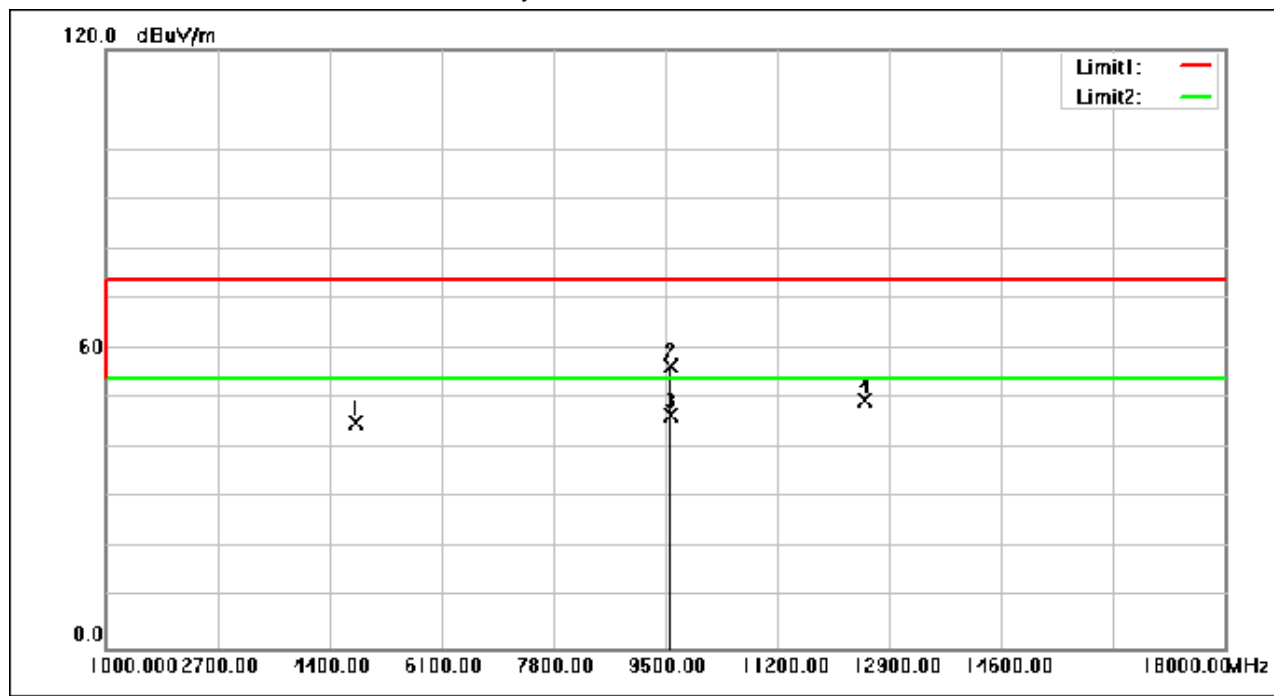
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.520	63.80	-18.56	45.24	74.00	-28.76	peak
2	9601.320	64.25	-7.76	56.49	74.00	-17.51	peak
3	9601.320	54.45	-7.76	46.69	54.00	-7.31	AVG
4	12536.880	55.93	-6.13	49.80	74.00	-24.20	peak

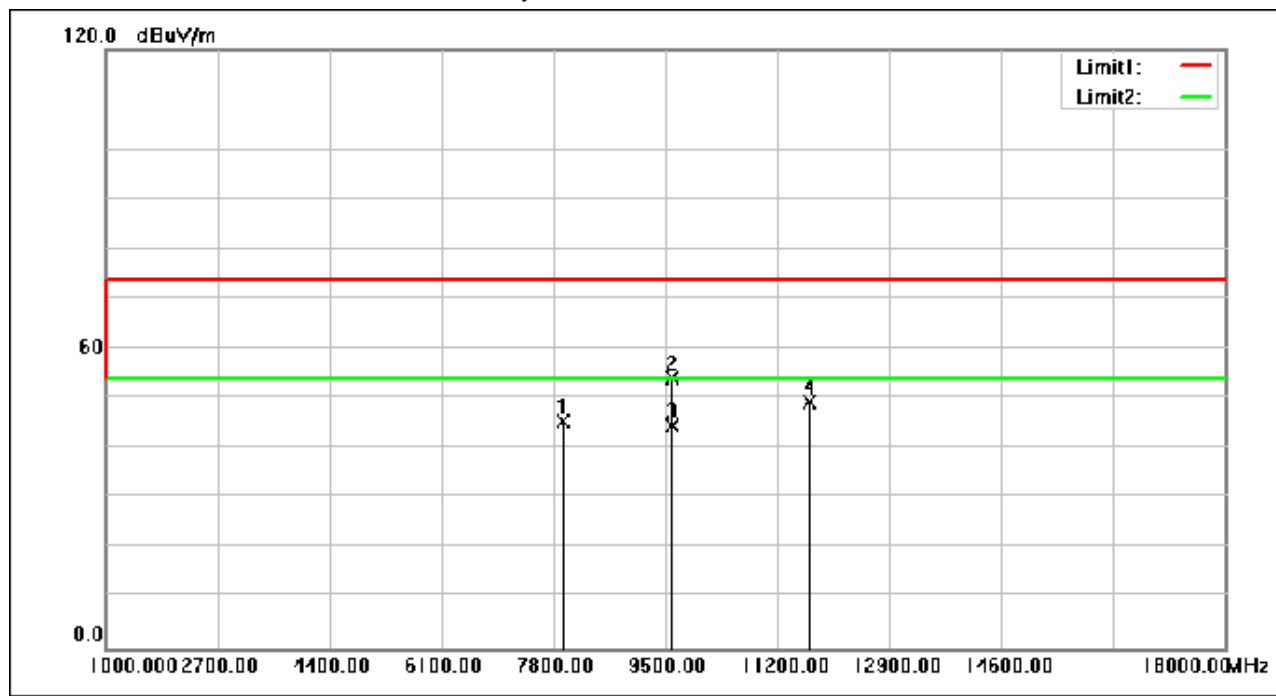
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 03; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7953.110	56.09	-10.66	45.43	74.00	-28.57	peak
2	9602.310	61.86	-7.76	54.10	74.00	-19.90	peak
3	9602.310	52.42	-7.76	44.66	54.00	-9.34	AVG
4	11693.260	55.46	-6.21	49.25	74.00	-24.75	peak

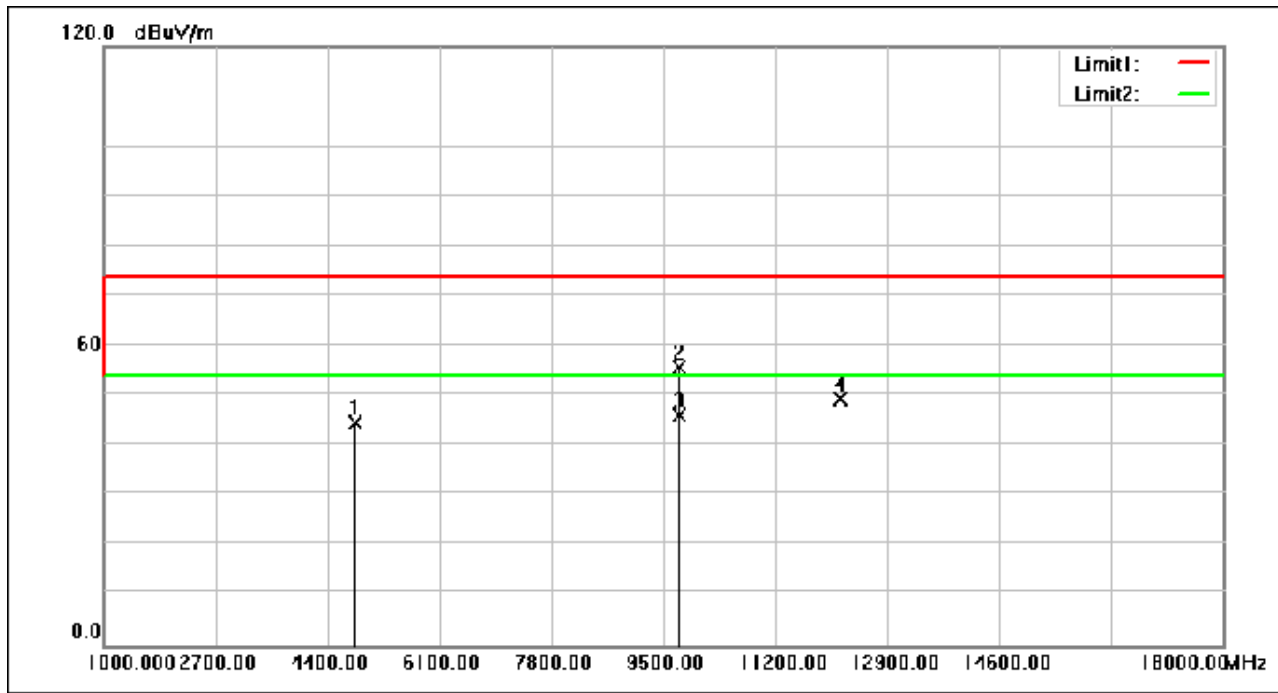
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4820.920	63.15	-18.55	44.60	74.00	-29.40	peak
2	9753.640	63.02	-7.48	55.54	74.00	-18.46	peak
3	9753.640	53.60	-7.48	46.12	54.00	-7.88	AVG
4	12194.160	55.34	-5.97	49.37	74.00	-24.63	peak

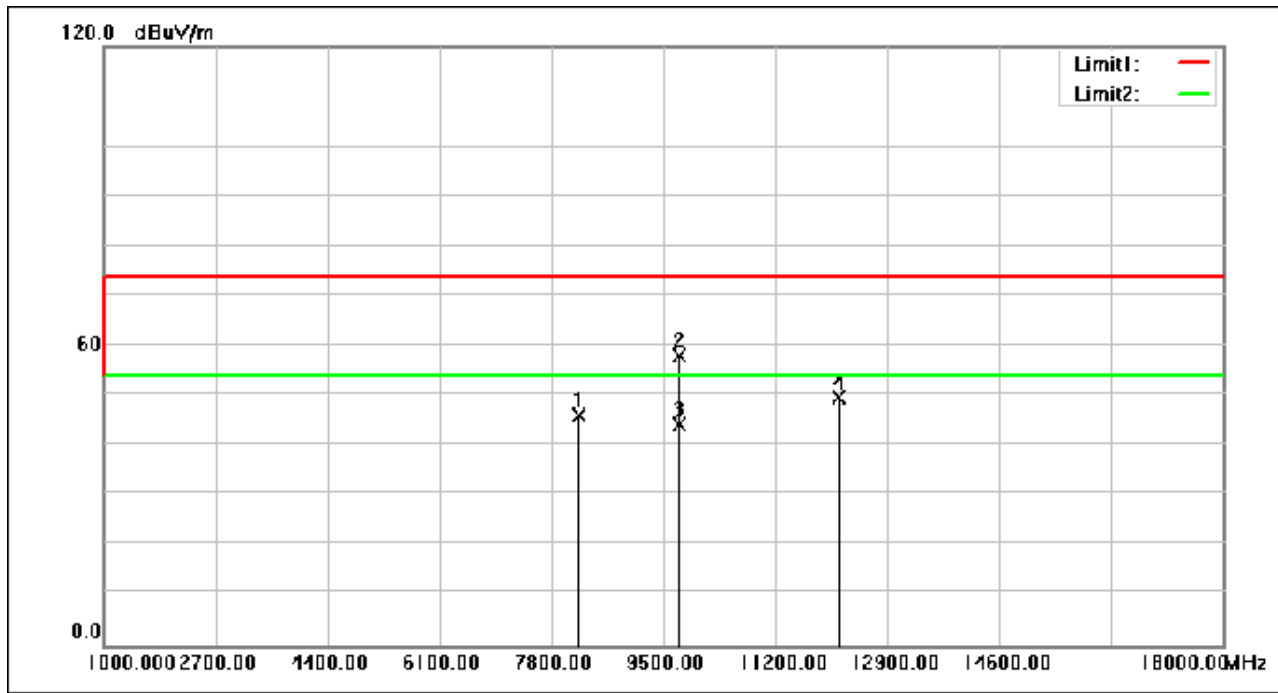
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 03; Polarity: Horizontal; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8210.720	56.41	-10.23	46.18	74.00	-27.82	peak
2	9754.320	65.51	-7.48	58.03	74.00	-15.97	peak
3	9754.320	51.65	-7.48	44.17	54.00	-9.83	AVG
4	12163.560	55.47	-5.96	49.51	74.00	-24.49	peak

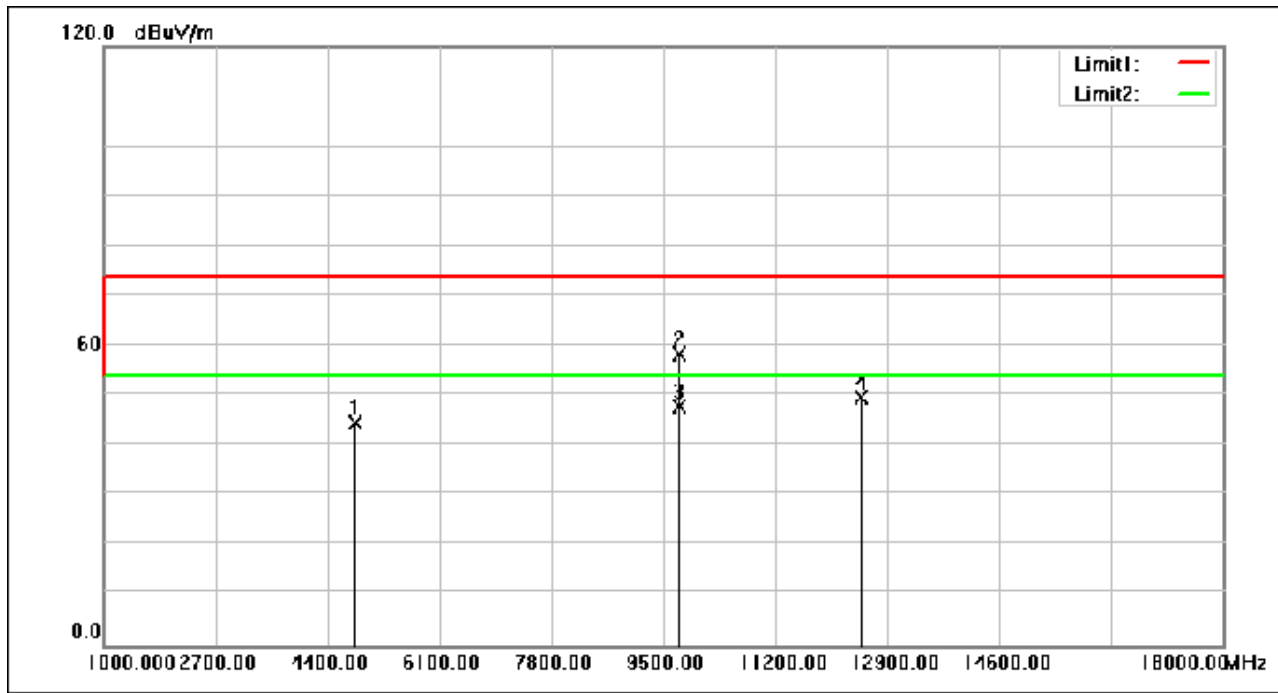
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4821.600	63.15	-18.55	44.60	74.00	-29.40	peak
2	9753.640	65.88	-7.48	58.40	74.00	-15.60	peak
3	9753.640	55.38	-7.48	47.90	54.00	-6.10	AVG
4	12517.840	55.81	-6.12	49.69	74.00	-24.31	peak

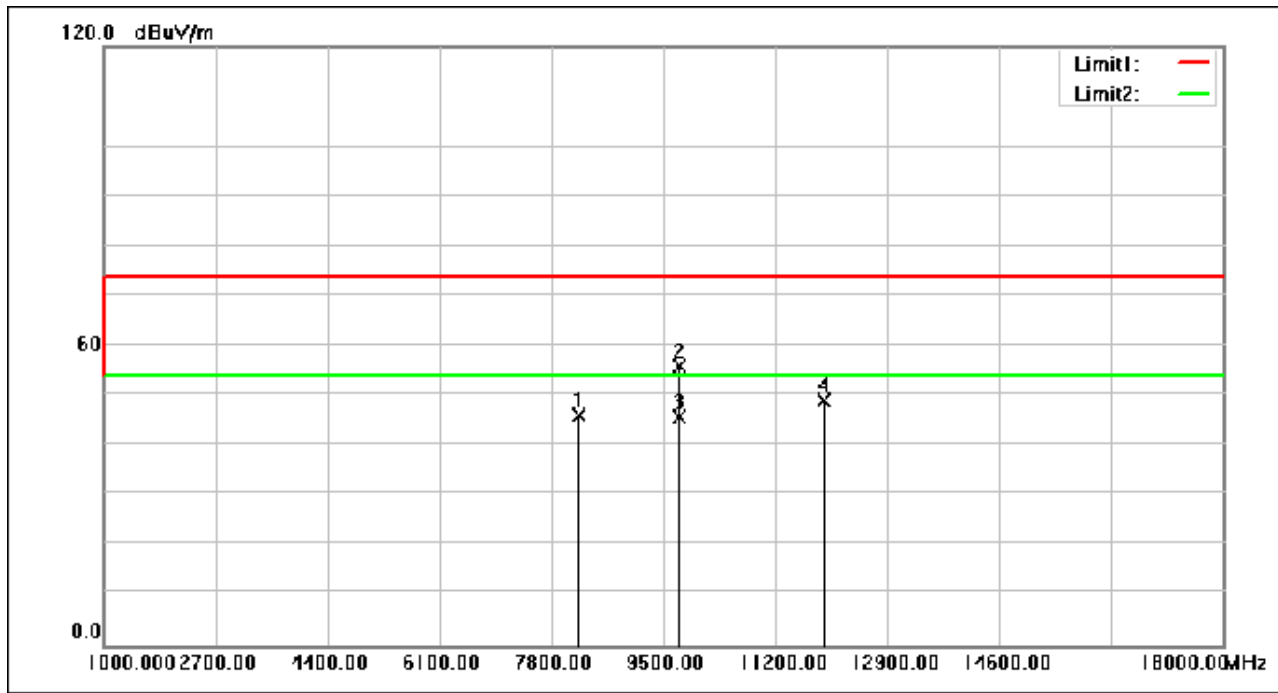
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 03; Polarity: Vertical; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8232.480	56.19	-10.20	45.99	74.00	-28.01	peak
2	9754.320	63.32	-7.48	55.84	74.00	-18.16	peak
3	9754.320	53.15	-7.48	45.67	54.00	-8.33	AVG
4	11943.920	55.01	-5.98	49.03	74.00	-24.97	peak

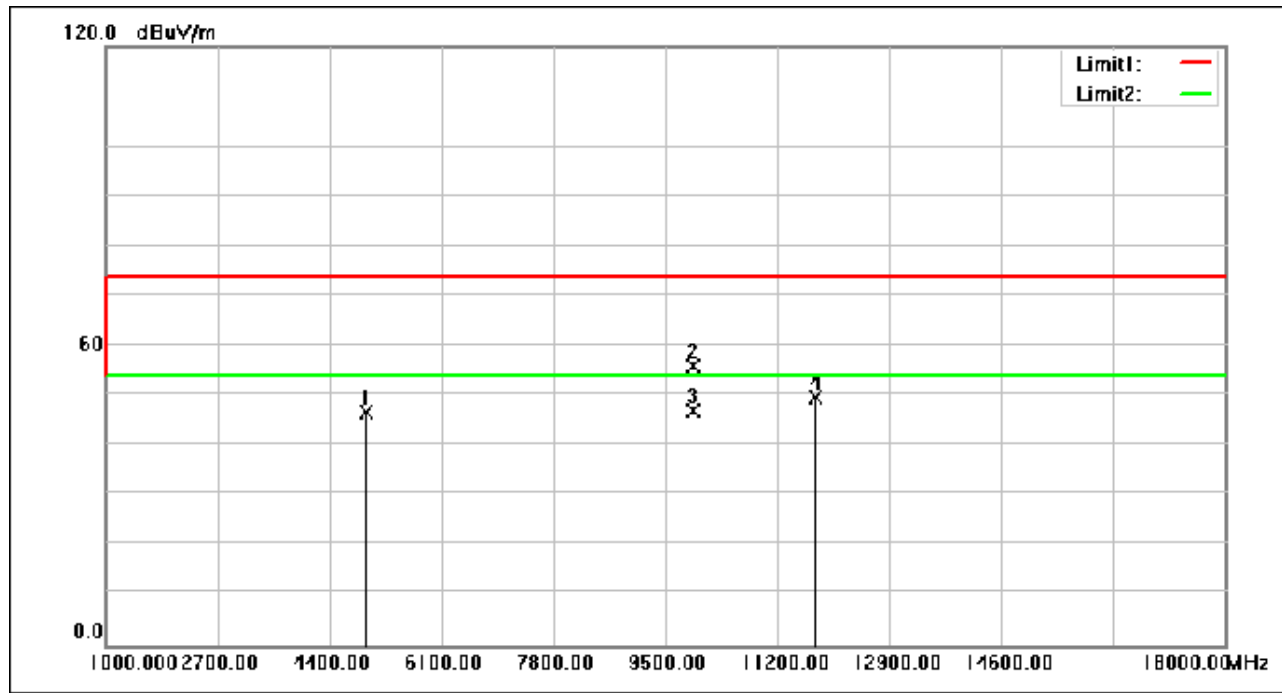
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4956.920	65.08	-18.47	46.61	74.00	-27.39	peak
2	9914.120	63.22	-7.31	55.91	74.00	-18.09	peak
3	9914.120	54.20	-7.31	46.89	54.00	-7.11	AVG
4	11779.360	55.82	-6.13	49.69	74.00	-24.31	peak

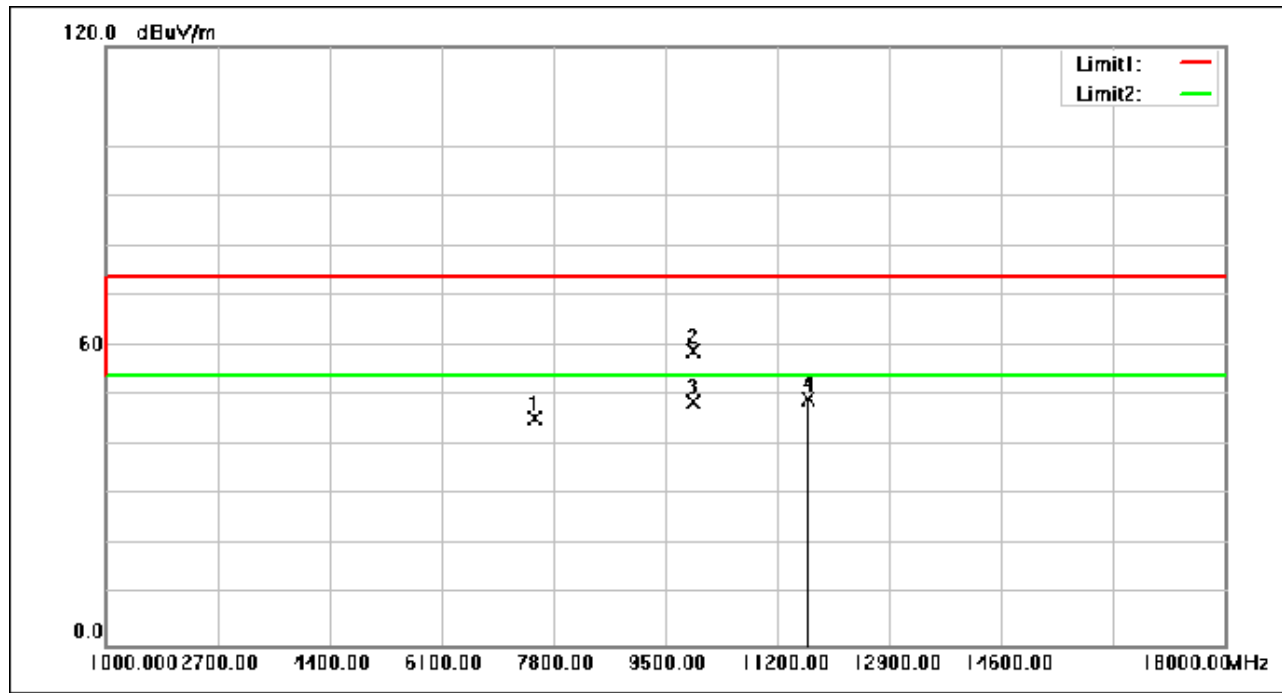
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 03; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7520.520	56.75	-11.23	45.52	74.00	-28.48	peak
2	9914.120	66.13	-7.31	58.82	74.00	-15.18	peak
3	9914.120	56.21	-7.31	48.90	54.00	-5.10	AVG
4	11667.840	55.53	-6.22	49.31	74.00	-24.69	peak

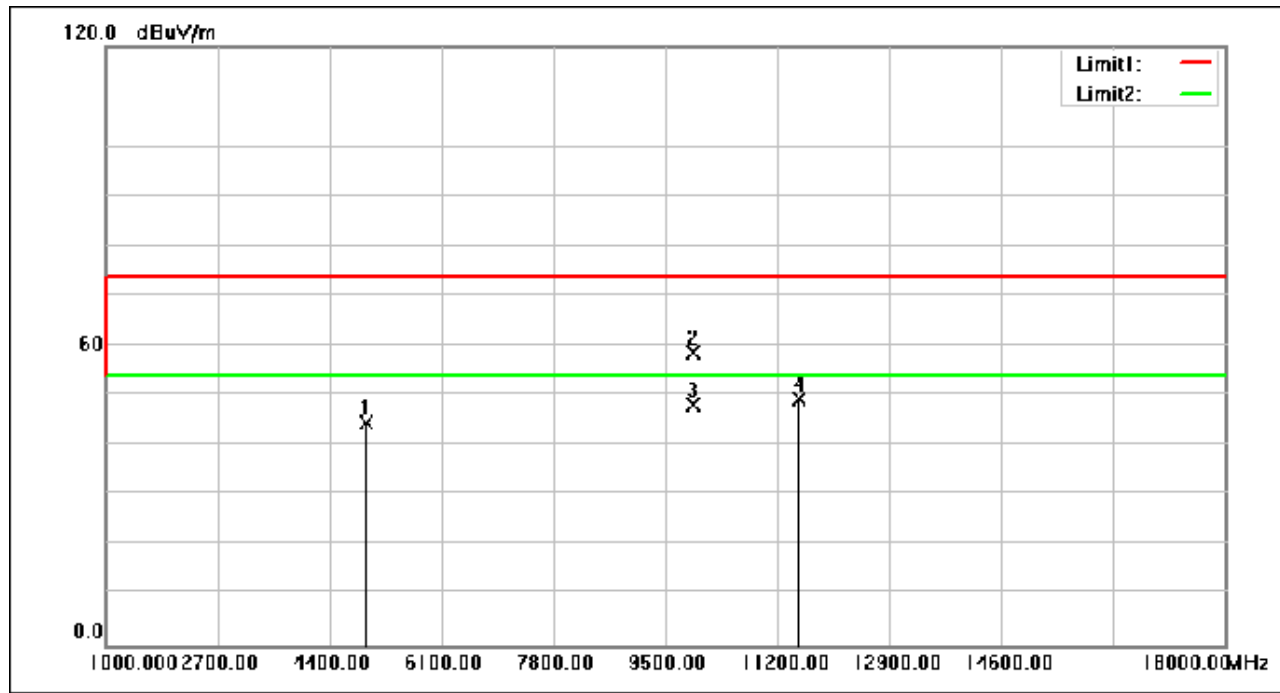
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4958.960	63.05	-18.47	44.58	74.00	-29.42	peak
2	9914.120	66.04	-7.31	58.73	74.00	-15.27	peak
3	9914.120	55.39	-7.31	48.08	54.00	-5.92	AVG
4	11530.480	55.71	-6.33	49.38	74.00	-24.62	peak

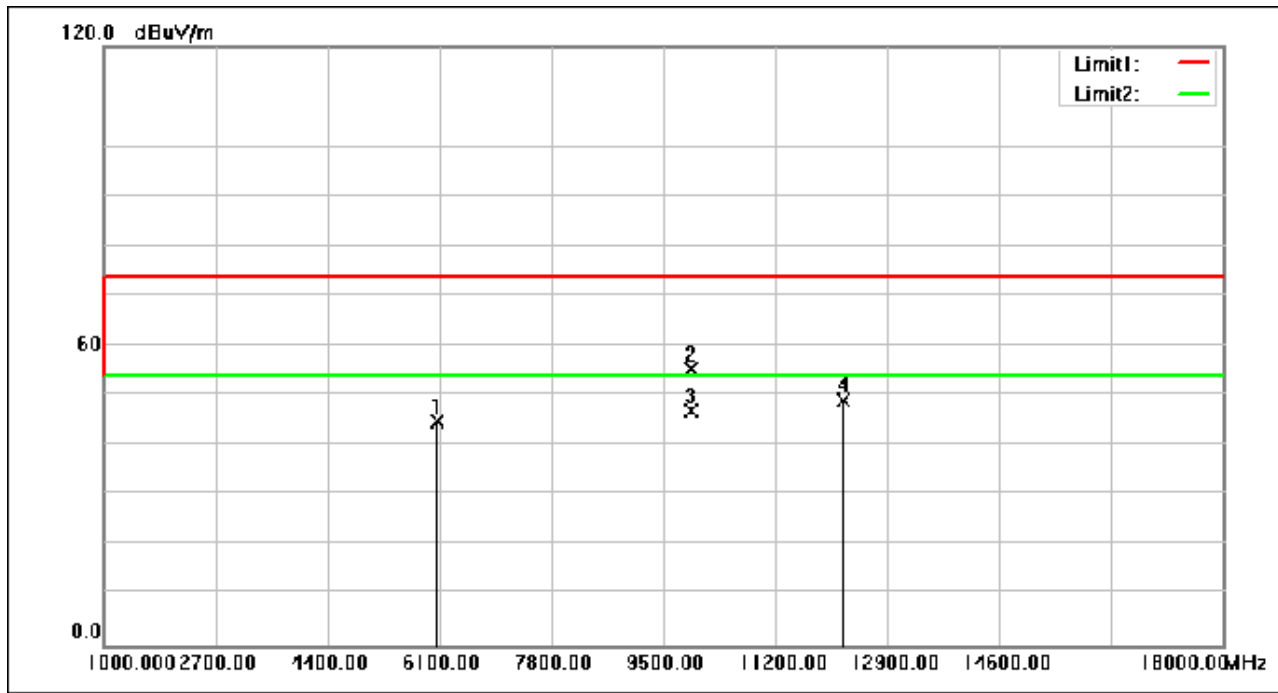
Compliance Certification Services (Kunshan) Inc.

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Test Mode: 03; Polarity: Vertical; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6077.560	60.16	-15.41	44.75	74.00	-29.25	peak
2	9914.120	62.66	-7.31	55.35	74.00	-18.65	peak
3	9914.120	54.14	-7.31	46.83	54.00	-7.17	AVG
4	12237.680	55.18	-5.99	49.19	74.00	-24.81	peak

7.4 Conducted Peak Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)

Test Method: ANSI C63.10 (2013) Section 11.9.1

Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq$ hopping channels < 50
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 29.3 °C

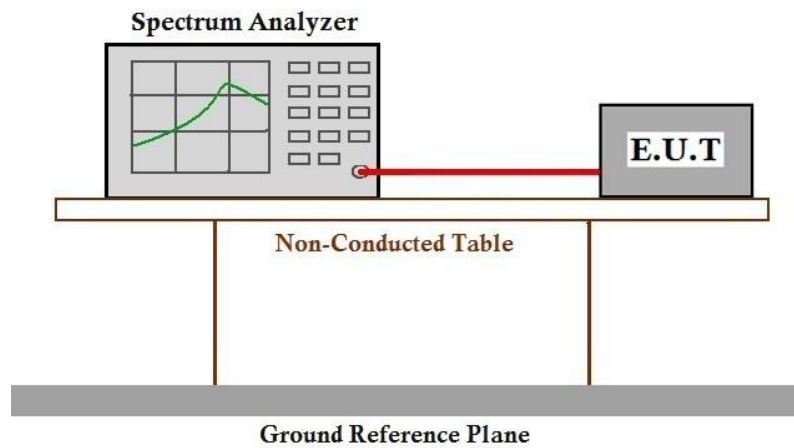
Humidity: 52.9 % RH

Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	01	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	02	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	03	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

Please Refer to Appendix for Details

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7.5 Minimum 6dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)

Test Method: ANSI C63.10 (2013) Section 11.8.1

Limit:

≥500 kHz

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 26.1 °C

Humidity: 52.8 % RH

Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	01	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	02	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	03	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.5.3 Measurement Procedure and Data

Please Refer to Appendix for Details

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7.6 Power Spectrum Density

Test Requirement 47 CFR Part 15, Subpart C 15.247(e)

Test Method: ANSI C63.10 (2013) Section 11.10.2

Limit:

≤8dBm in any 3 kHz band during any time interval of continuous transmission

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 26.1 °C

Humidity: 52.8 % RH

Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	01	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	02	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	03	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.6.3 Measurement Procedure and Data

Please Refer to Appendix for Details

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7.7 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
Test Method: ANSI C63.10 (2013) Section 11.13.3.2

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 29.3 °C Humidity: 52.9 % RH Atmospheric Pressure: 1010 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	01	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	02	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	03	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.7.3 Measurement Procedure and Data

Please Refer to Appendix for Details



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7.8 Conducted Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)

Test Method: ANSI C63.10 (2013) Section 11.11

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 29.3 °C

Humidity: 52.9 % RH

Atmospheric Pressure: 1010 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	01	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	02	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	03	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.8.3 Measurement Procedure and Data

Please Refer to Appendix for Details



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8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2408001569AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2408001569AT

10 Appendix

Channel	BLE	BLE
	1M	2M
0	default	default
19	default	default
39	default	default

Left Ear

1. Duty Cycle

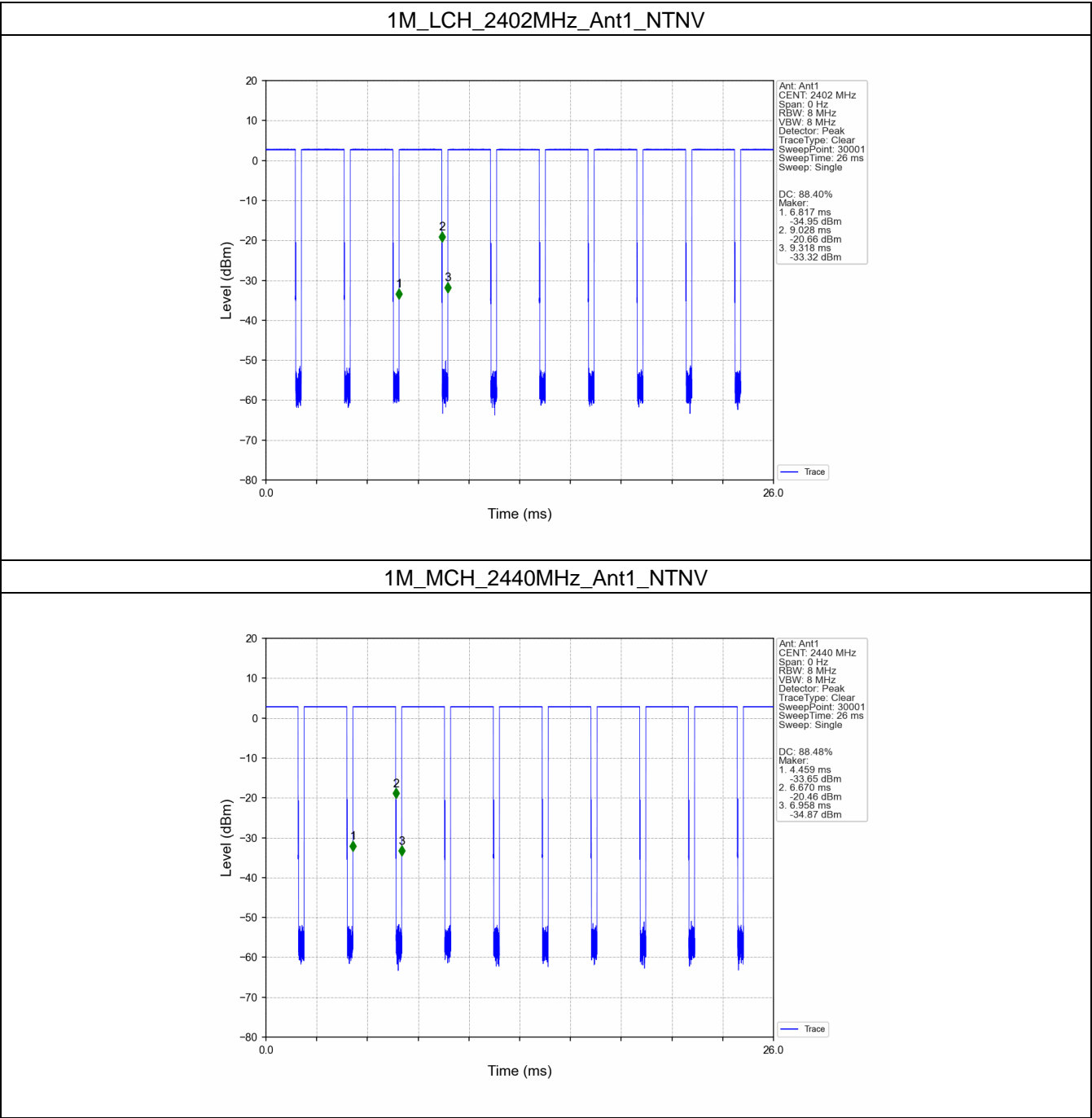
1.1 Test Result

1.1.1 Ant1

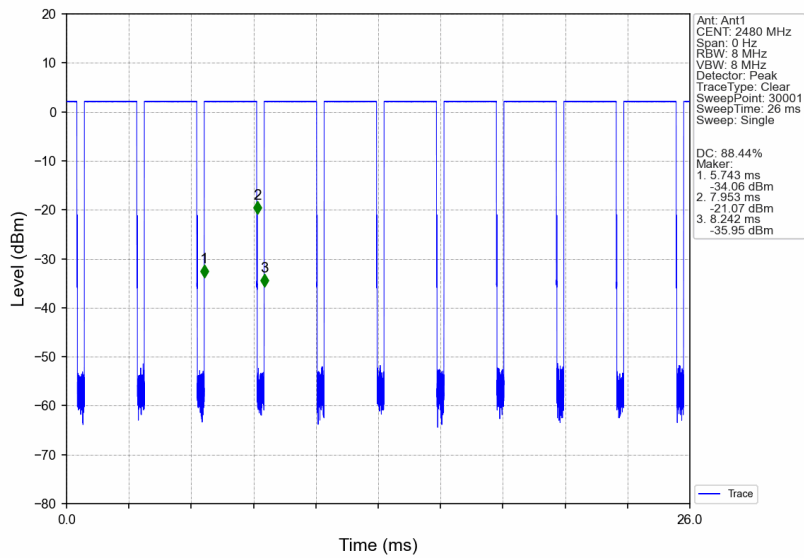
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	2.211	2.501	88.40	0.54	0.03
		2440	2.211	2.499	88.48	0.53	0.00
		2480	2.210	2.499	88.44	0.53	0.00
2M	SISO	2402	1.155	2.500	46.20	3.35	0.03
		2440	1.155	2.500	46.20	3.35	0.02
		2480	1.156	2.501	46.22	3.35	0.02

1.2 Test Graph

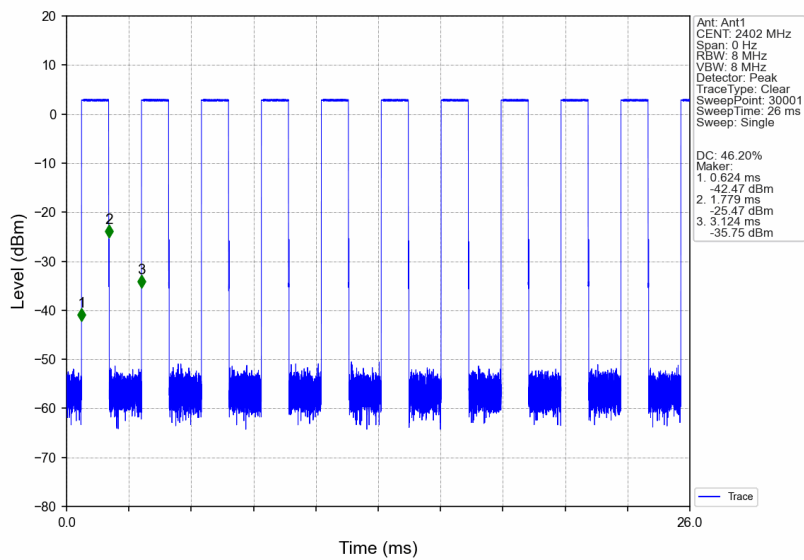
1.2.1 Ant1



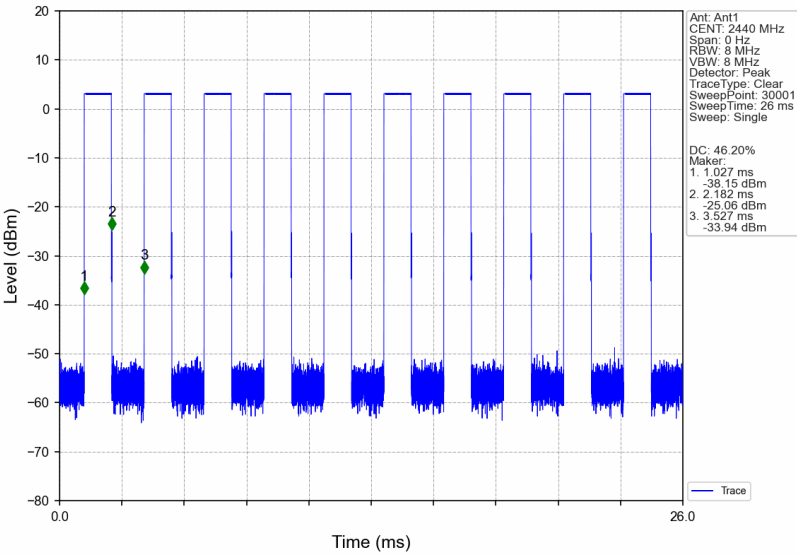
1M_HCH_2480MHz_Ant1_NTNV



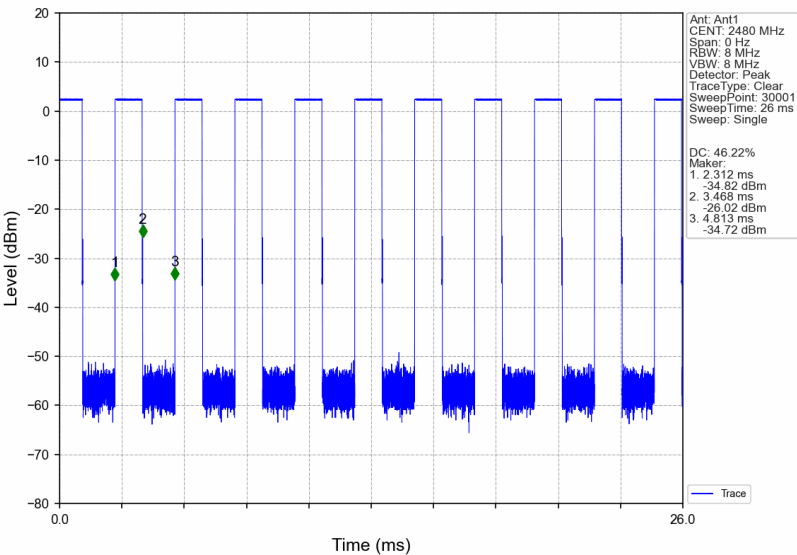
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

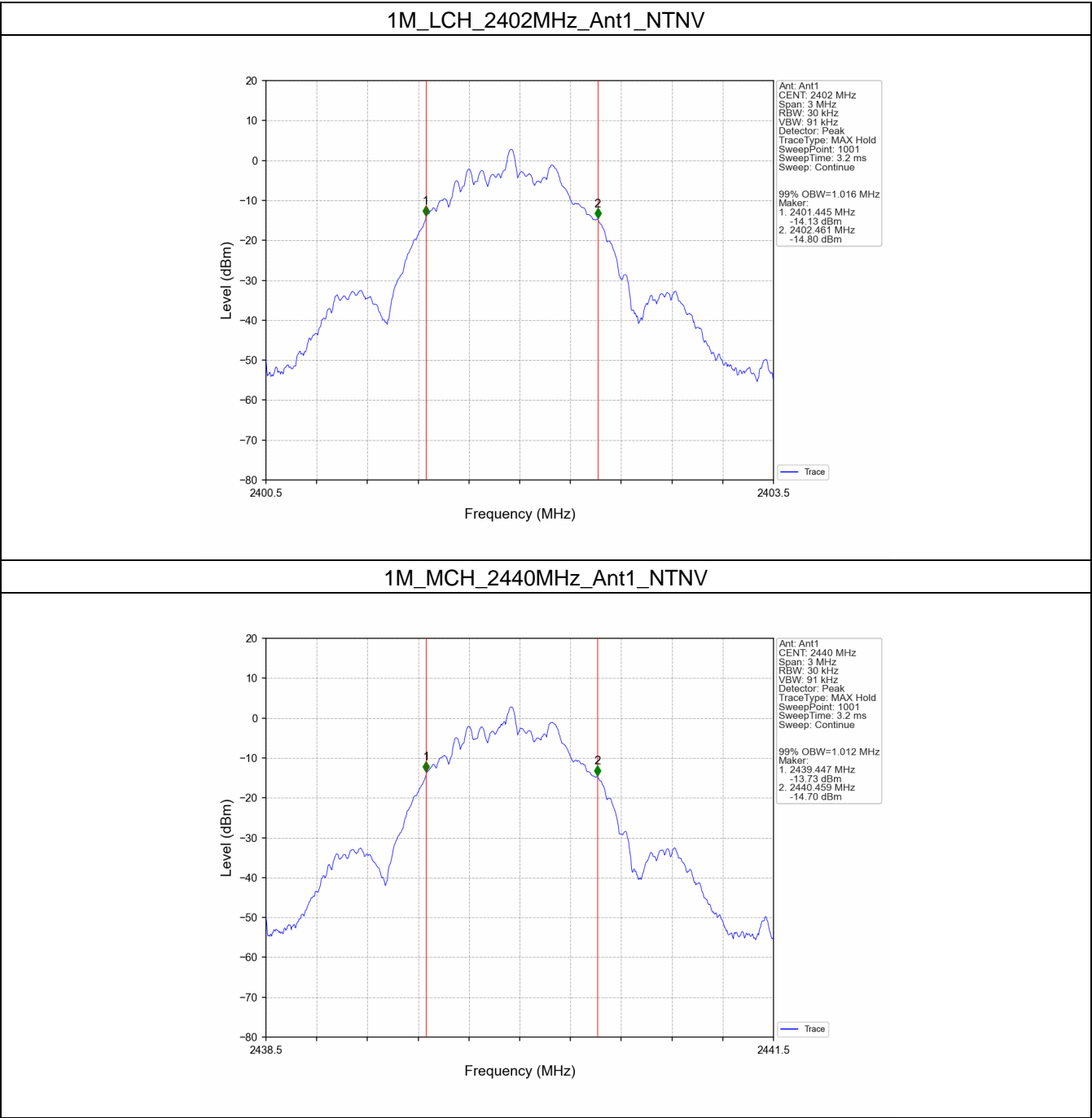
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.016	/	Pass
		2440	1	1.012	/	Pass
		2480	1	1.016	/	Pass
2M	SISO	2402	1	2.045	/	Pass
		2440	1	2.034	/	Pass
		2480	1	2.047	/	Pass

2.1.2 6dB BW

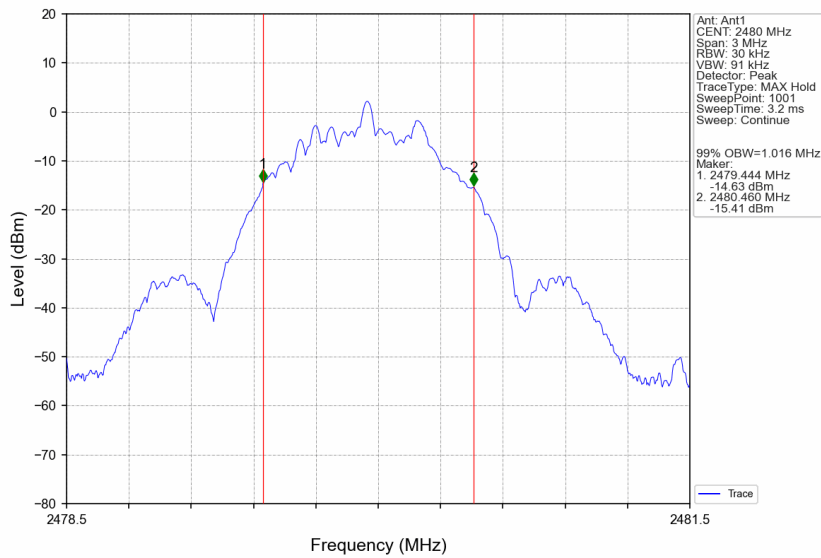
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.666	≥ 0.5	Pass
		2440	1	0.670	≥ 0.5	Pass
		2480	1	0.663	≥ 0.5	Pass
2M	SISO	2402	1	1.155	≥ 0.5	Pass
		2440	1	1.161	≥ 0.5	Pass
		2480	1	1.145	≥ 0.5	Pass

2.2 Test Graph

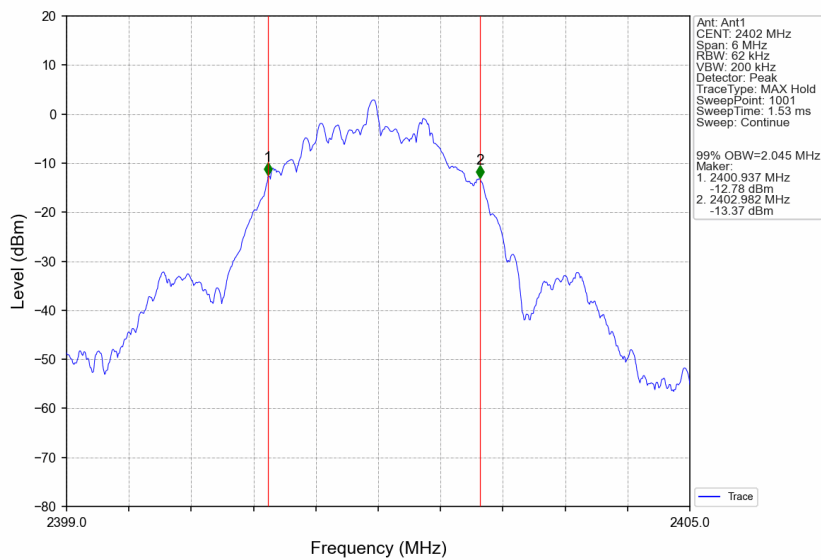
2.2.1 OBW



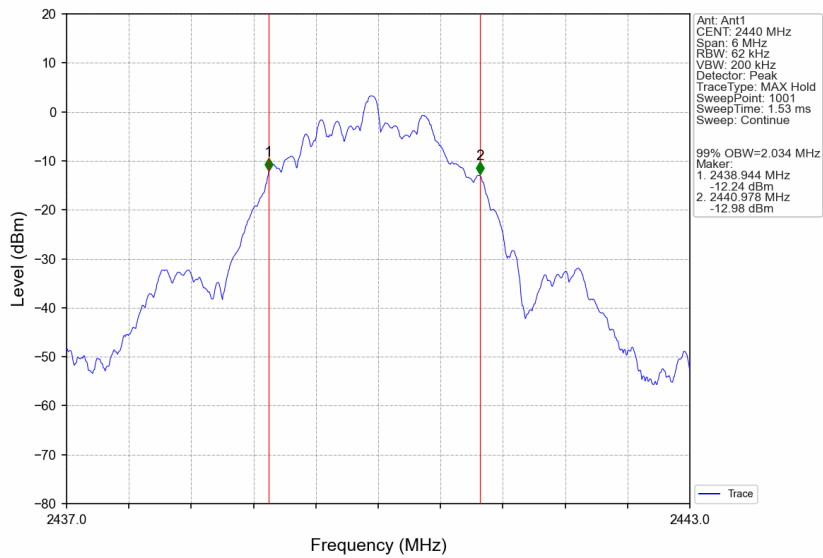
1M_HCH_2480MHz_Ant1_NTNV



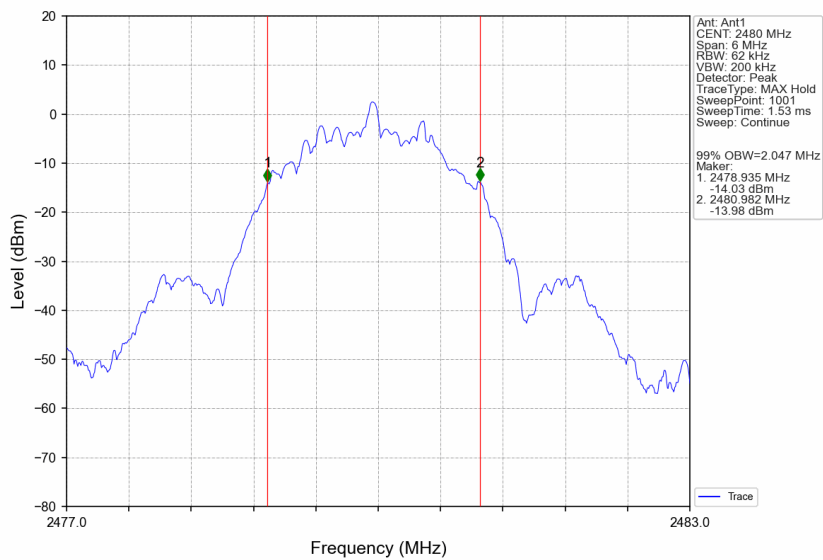
2M_LCH_2402MHz_Ant1_NTNV



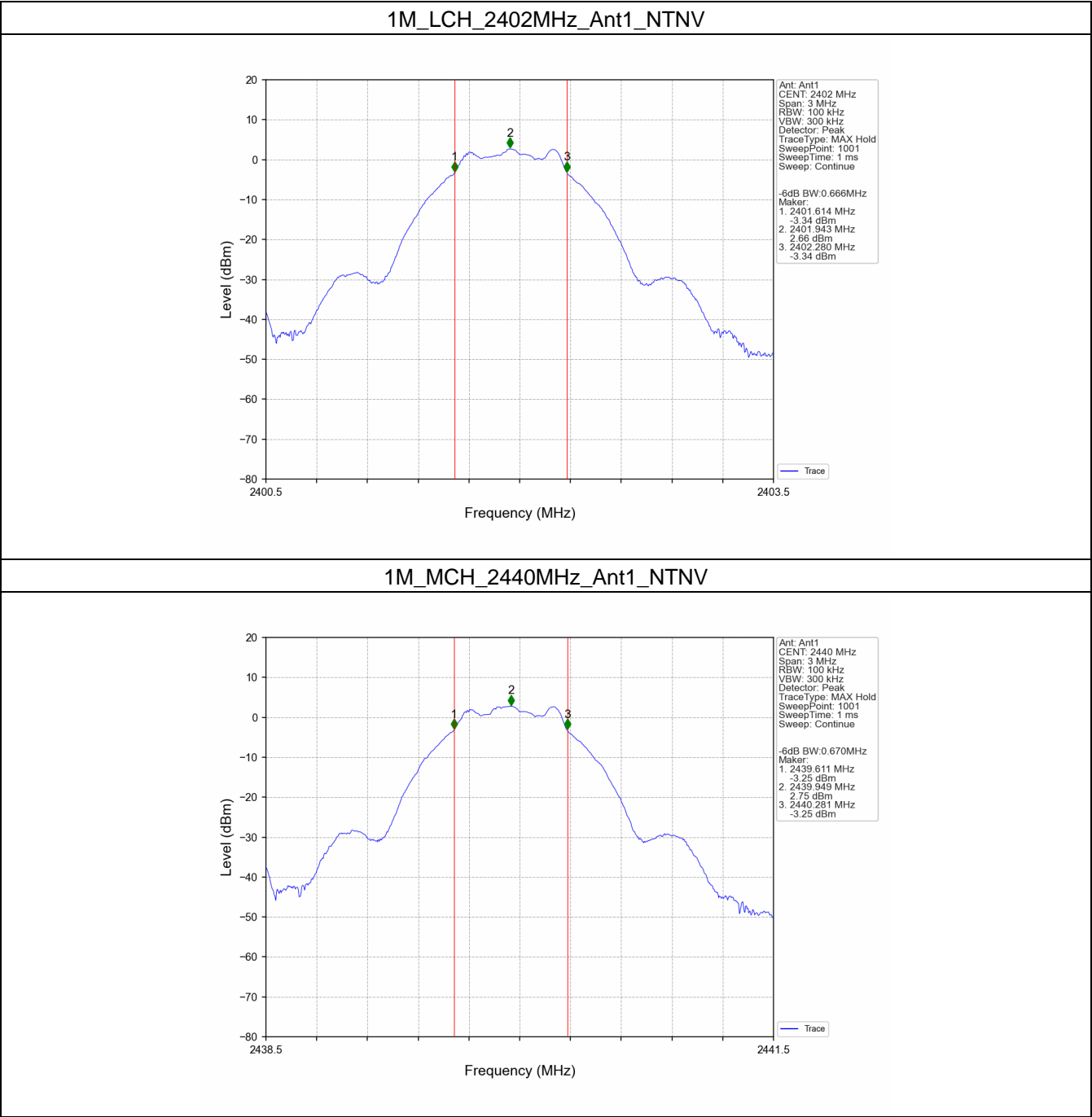
2M_MCH_2440MHz_Ant1_NTNV



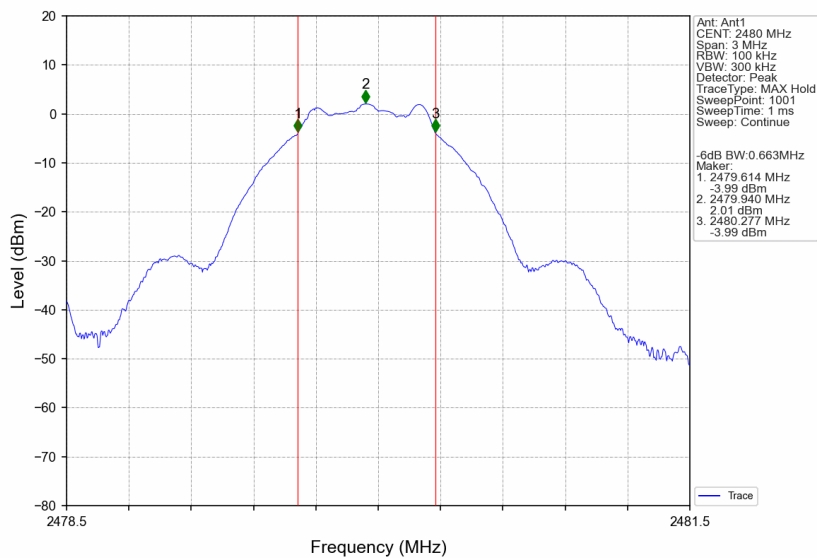
2M_HCH_2480MHz_Ant1_NTNV



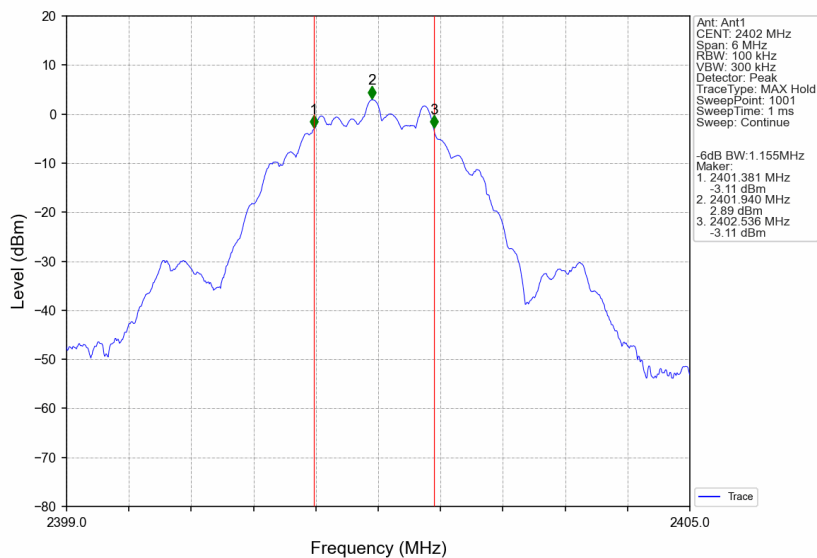
2.2.2 6dB BW



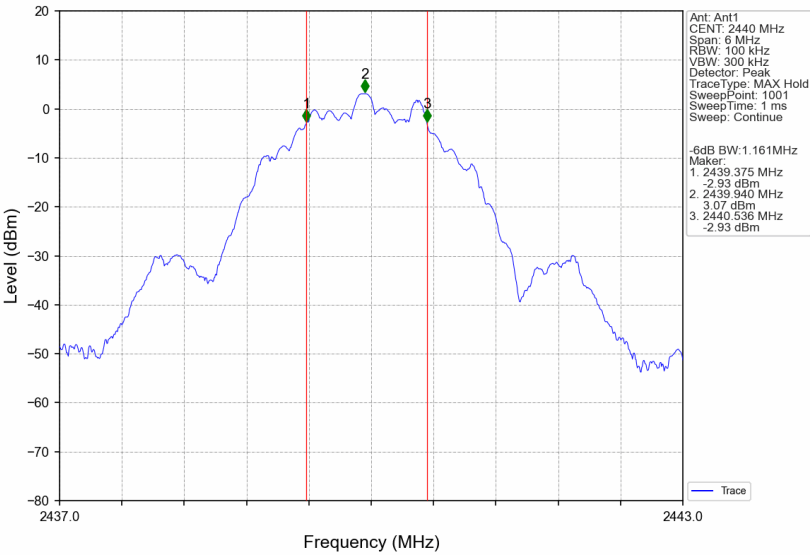
1M_HCH_2480MHz_Ant1_NTNV



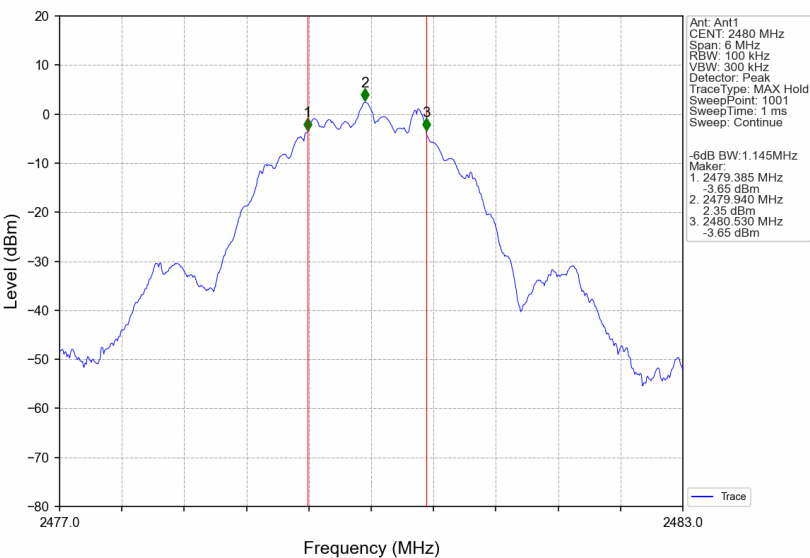
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





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3. Maximum Conducted Output Power

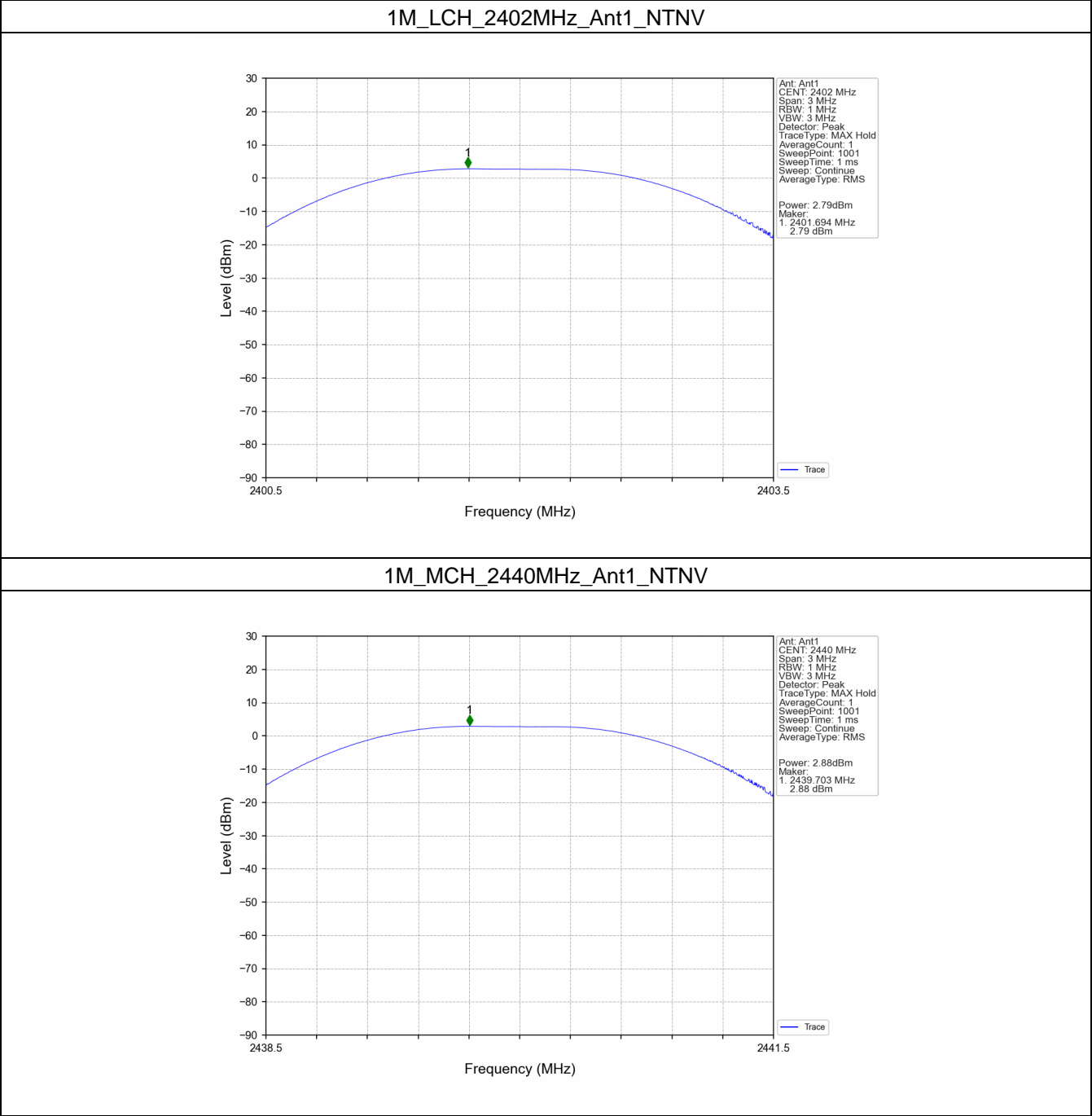
3.1 Test Result

3.1.1 Power

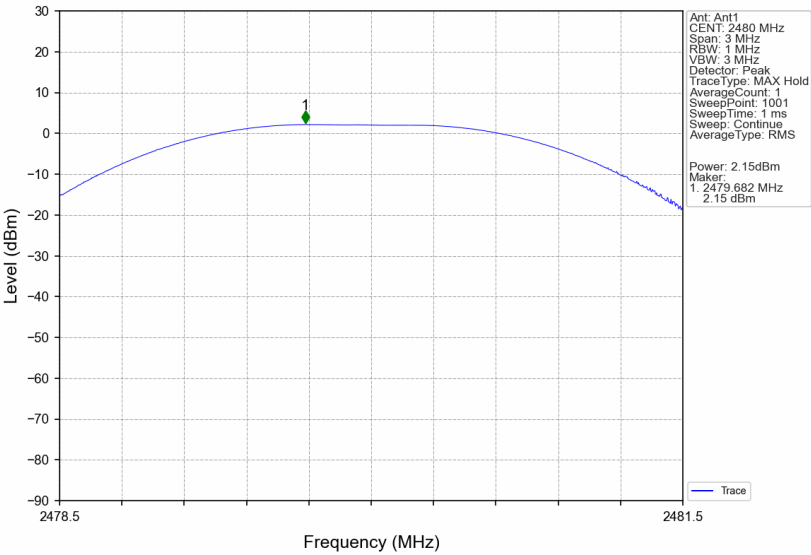
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	2.79	<=30	Pass
		2440	2.88	<=30	Pass
		2480	2.15	<=30	Pass
2M	SISO	2402	1.04	<=30	Pass
		2440	1.19	<=30	Pass
		2480	0.49	<=30	Pass
Note1: Antenna Gain: Ant1: -1dBi;					

3.2 Test Graph

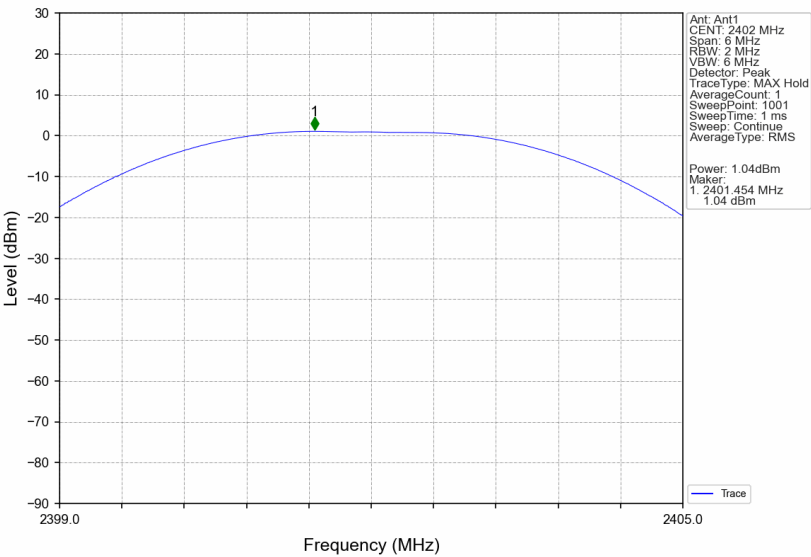
3.2.1 Power



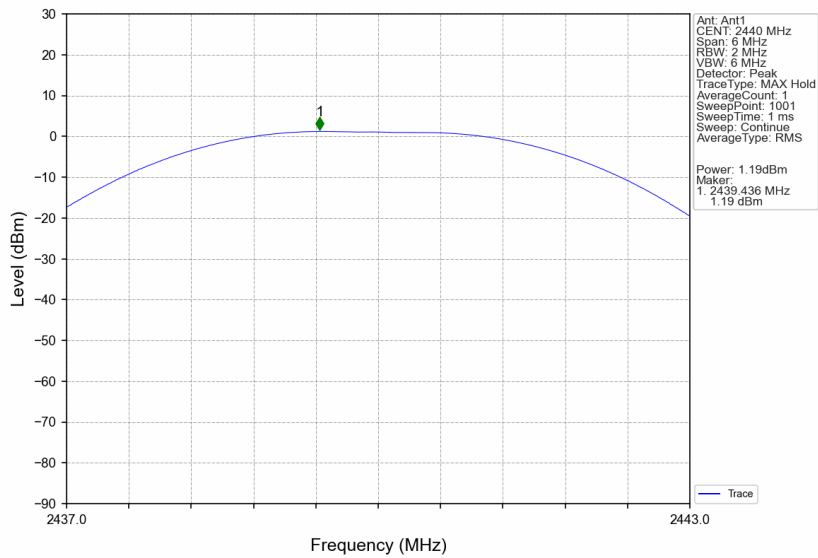
1M_HCH_2480MHz_Ant1_NTNV



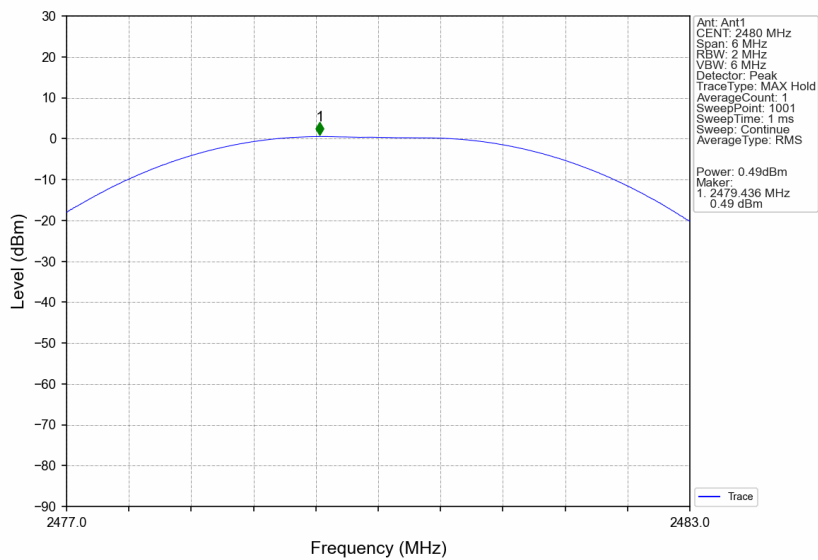
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





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4. Maximum Power Spectral Density

4.1 Test Result

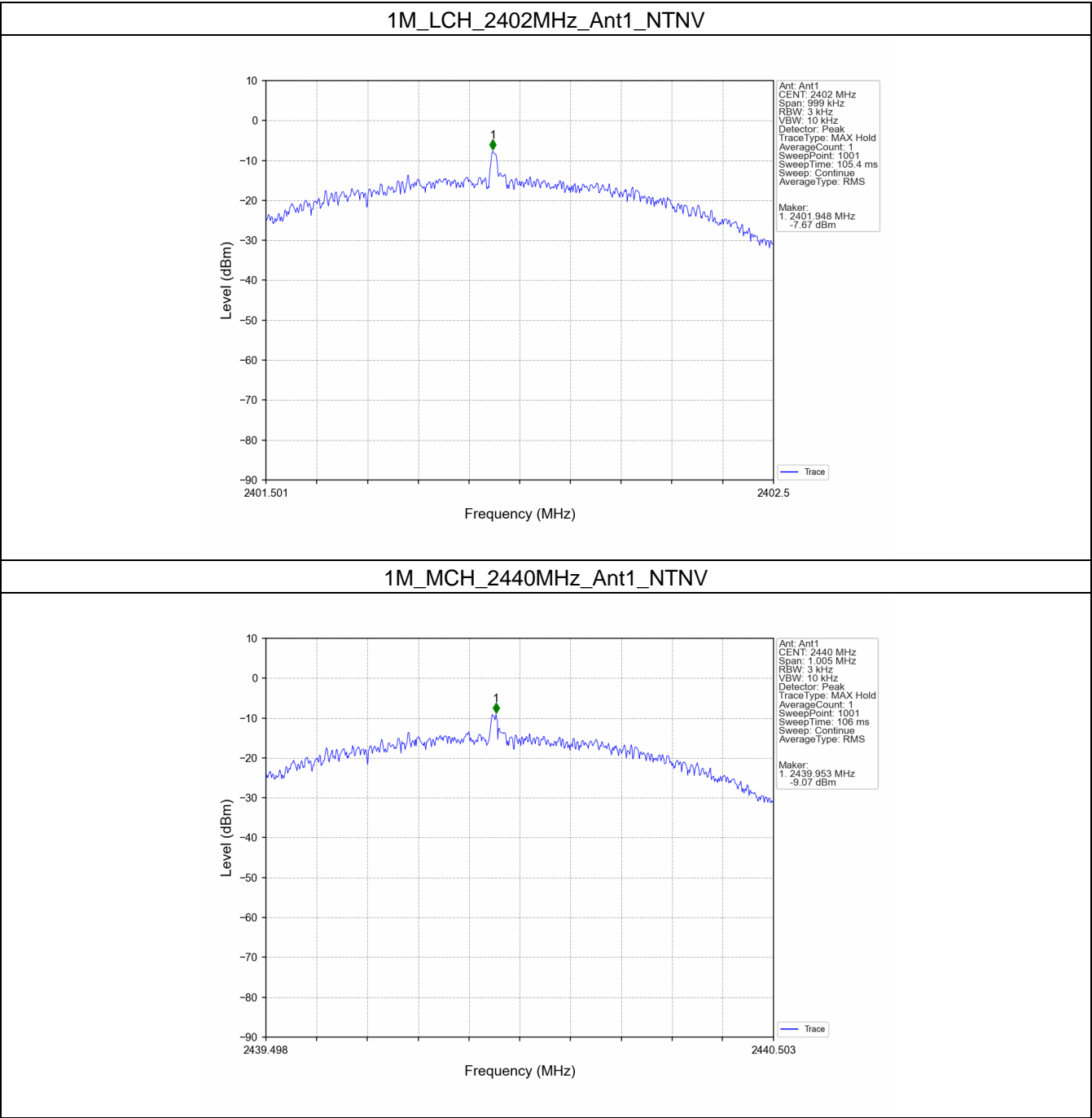
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-7.67	<=8	Pass
		2440	-9.07	<=8	Pass
		2480	-8.33	<=8	Pass
2M	SISO	2402	-10.59	<=8	Pass
		2440	-11.21	<=8	Pass
		2480	-10.66	<=8	Pass

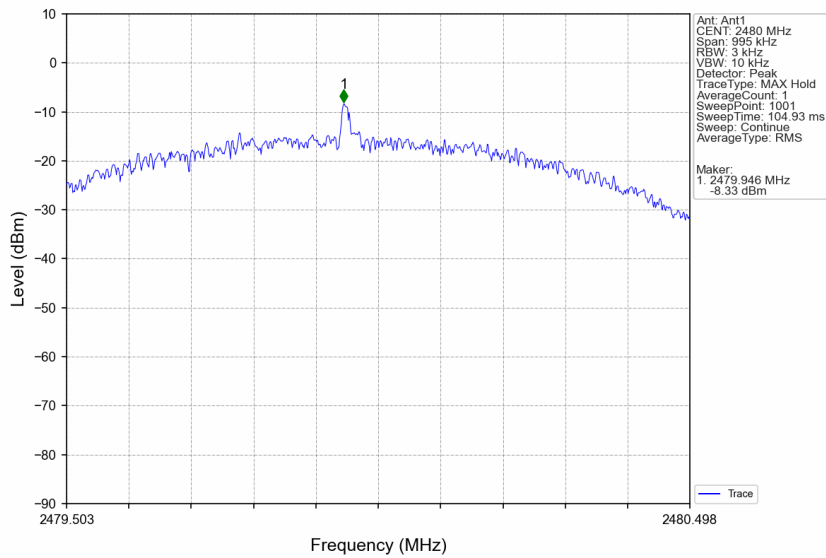
Note1: Antenna Gain: Ant1: -1dBi;

4.2 Test Graph

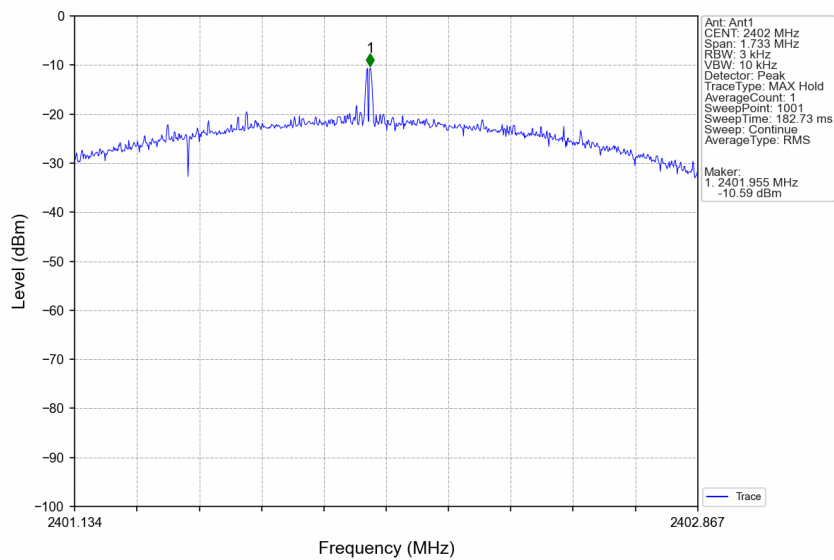
4.2.1 PSD



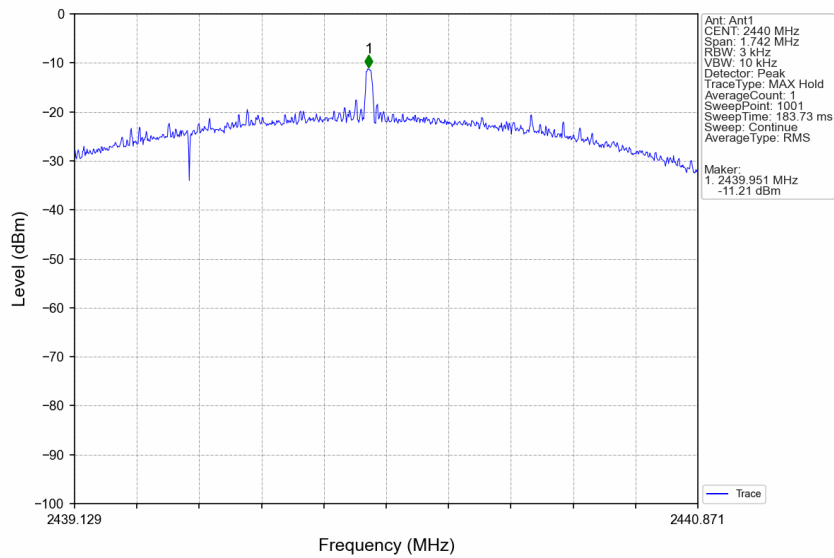
1M_HCH_2480MHz_Ant1_NTNV



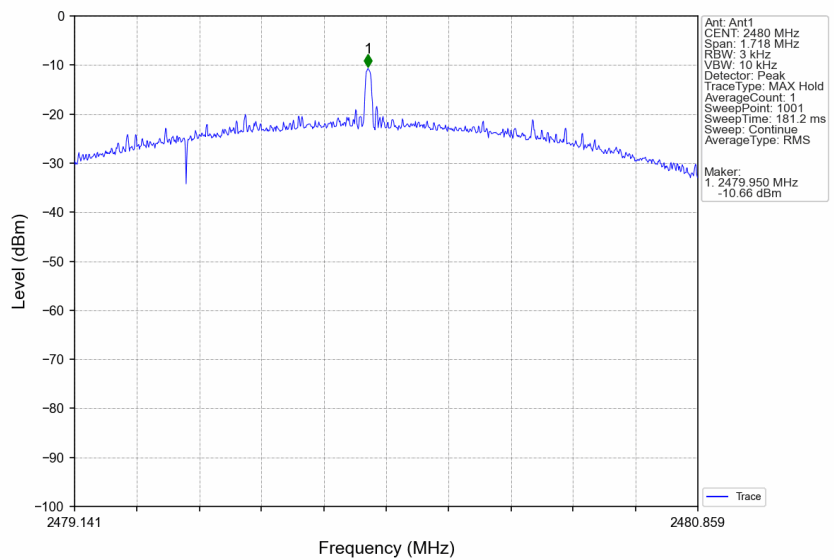
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	2.64
		2440	1	2.72
		2480	1	1.99
2M	SISO	2402	1	0.83
		2440	1	0.98
		2480	1	0.26

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

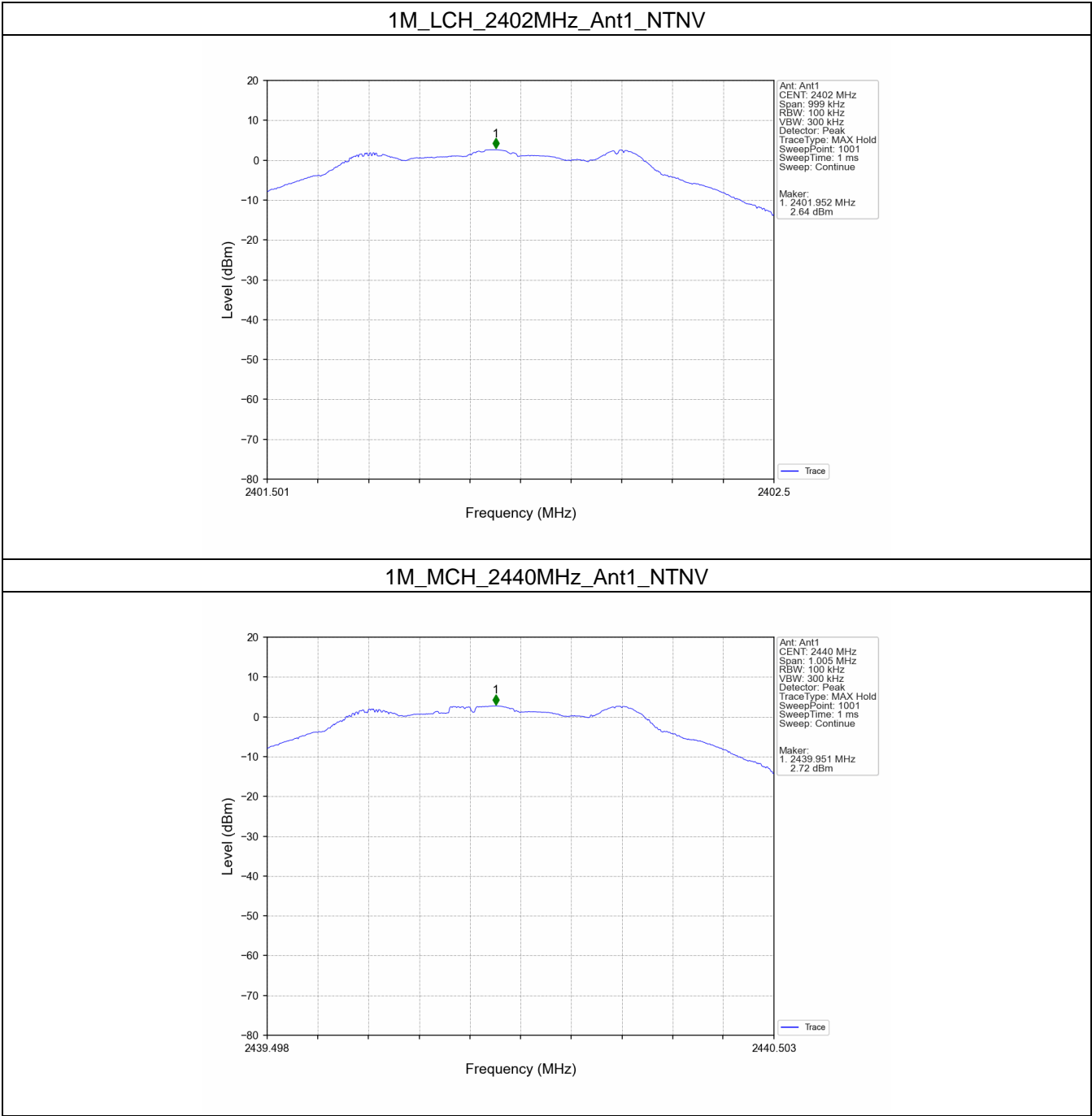
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	2.72	-17.28	Pass
		2440	1	2.72	-17.28	Pass
		2480	1	2.72	-17.28	Pass
2M	SISO	2402	1	0.98	-19.02	Pass
		2440	1	0.98	-19.02	Pass
		2480	1	0.98	-19.02	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

5.2 Test Graph

5.2.1 Ref



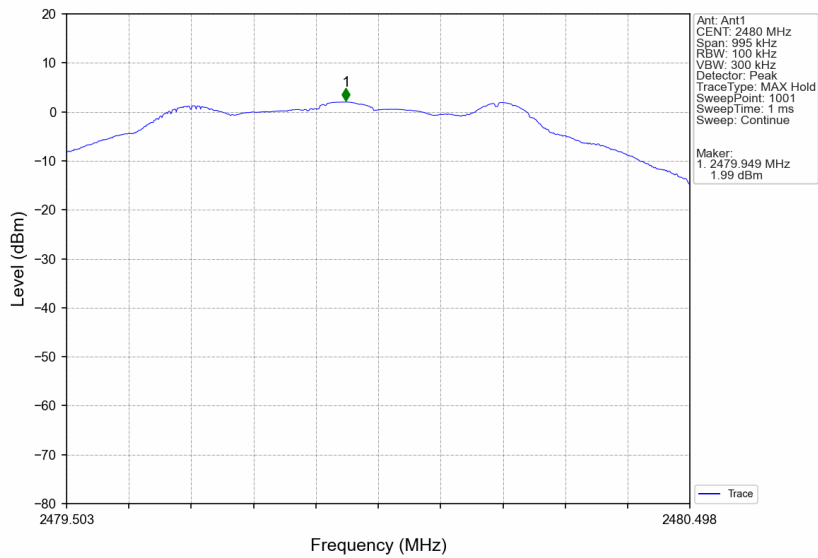
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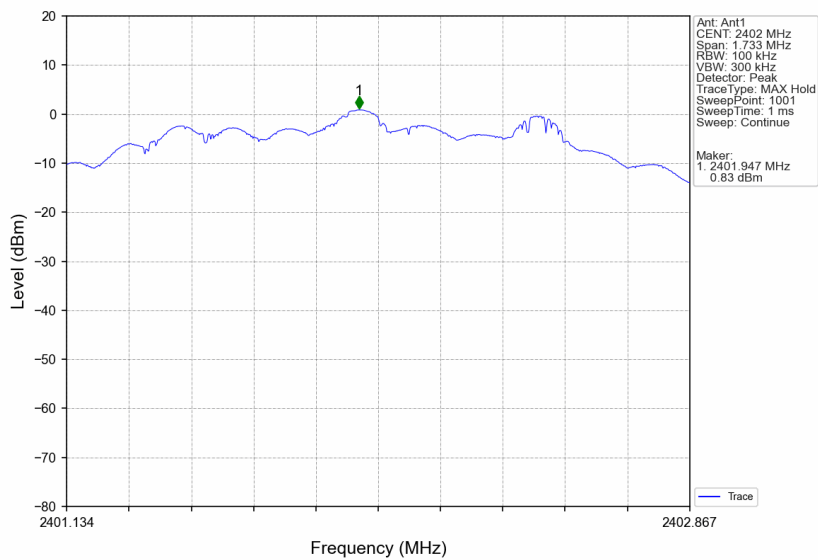
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1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV



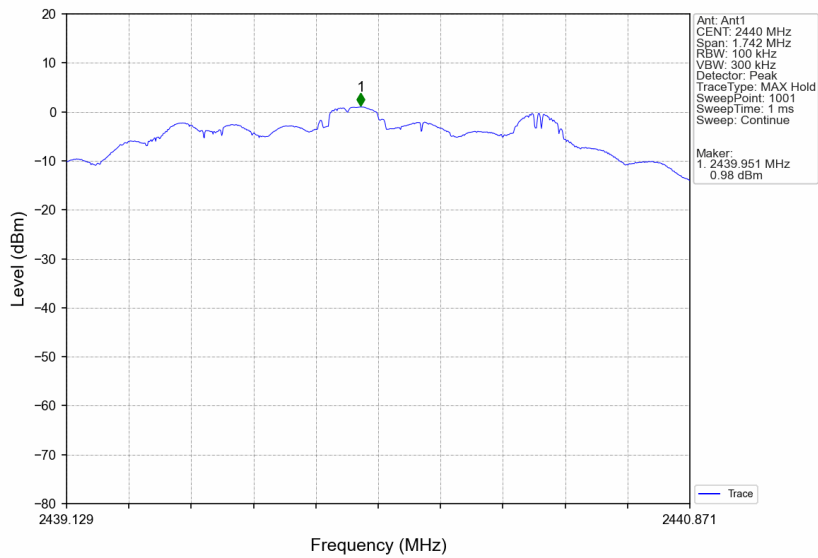
Compliance Certification Services (Kunshan) Inc.

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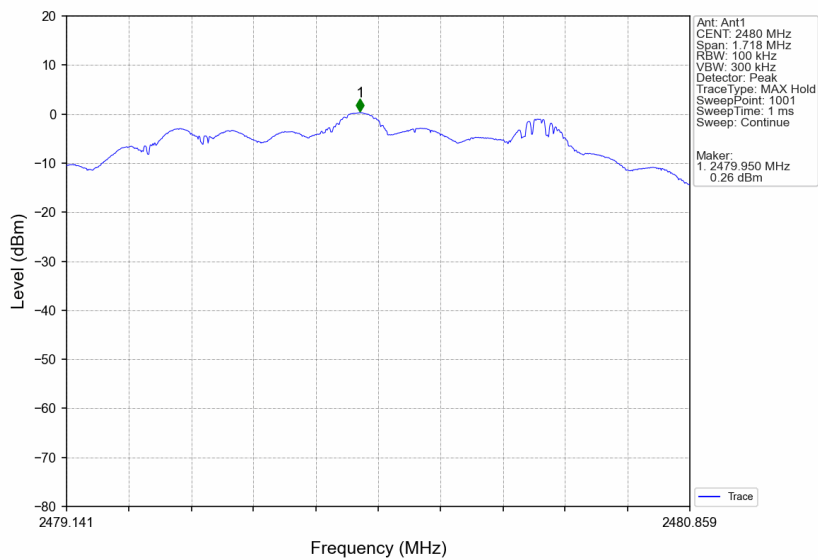
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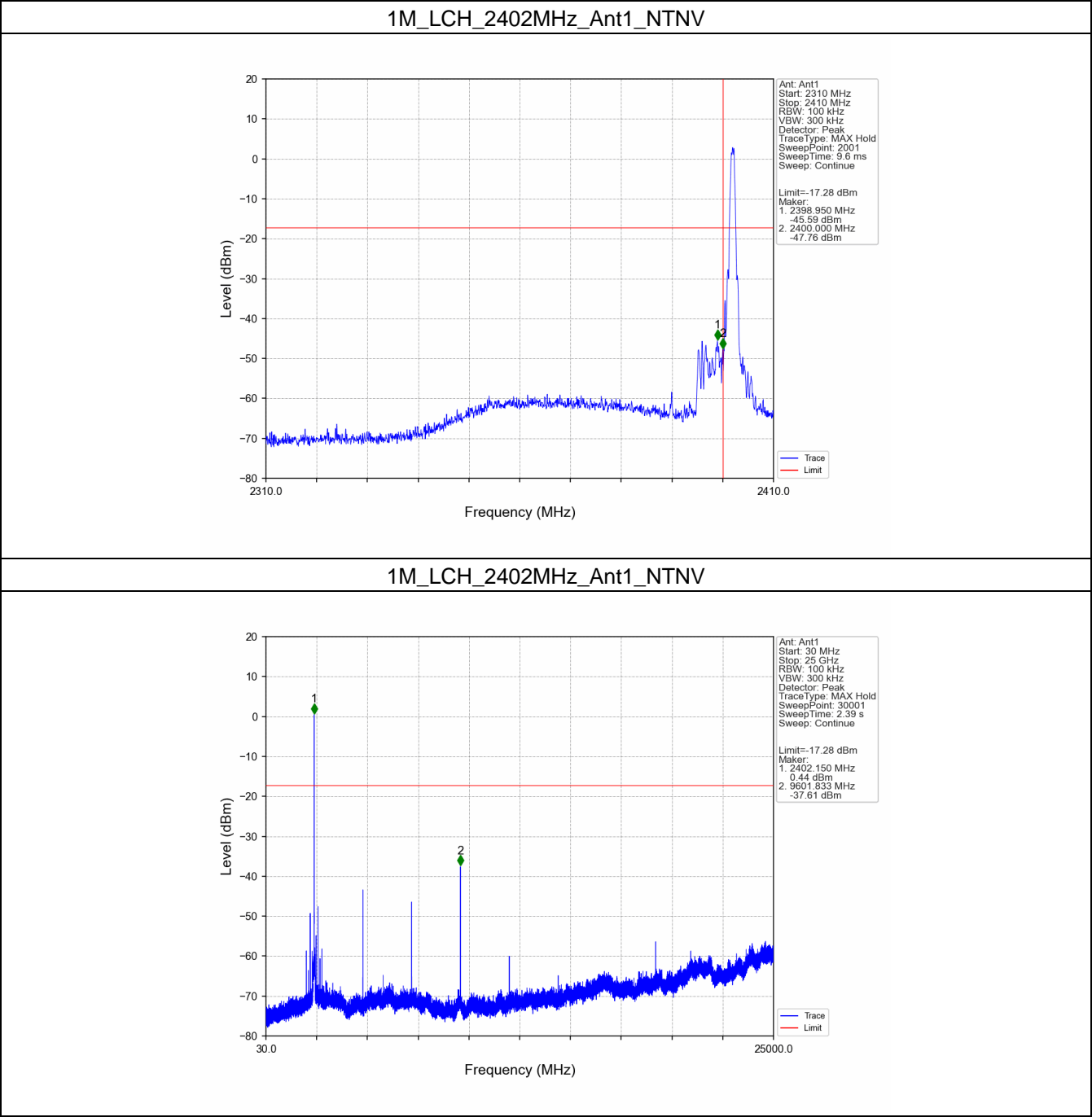
2M_MCH_2440MHz_Ant1_NTNV



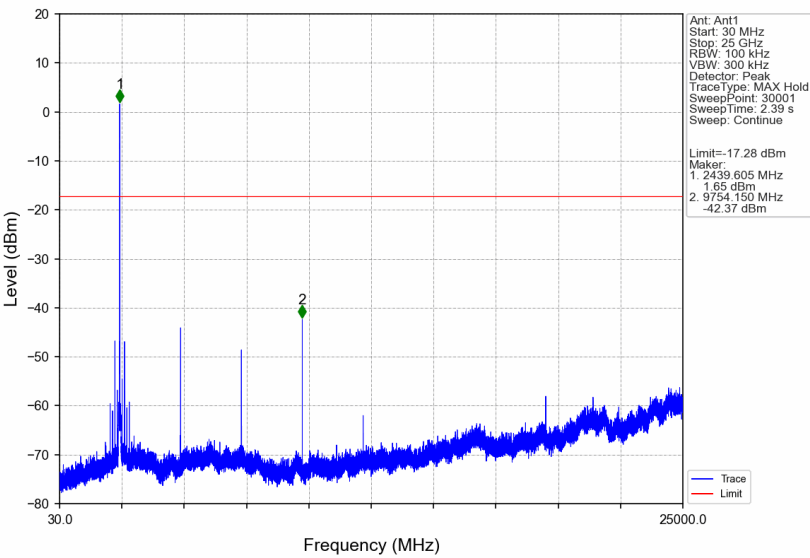
2M_HCH_2480MHz_Ant1_NTNV



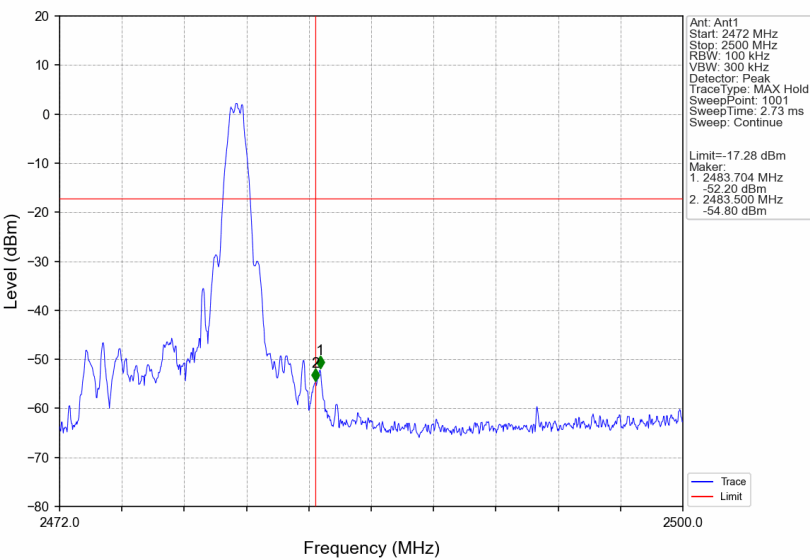
5.2.2 CSE



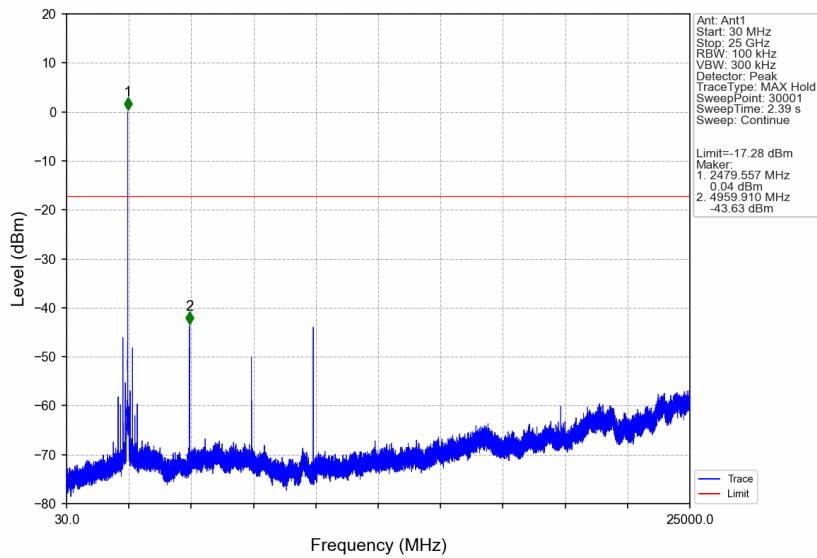
1M_MCH_2440MHz_Ant1_NTNV



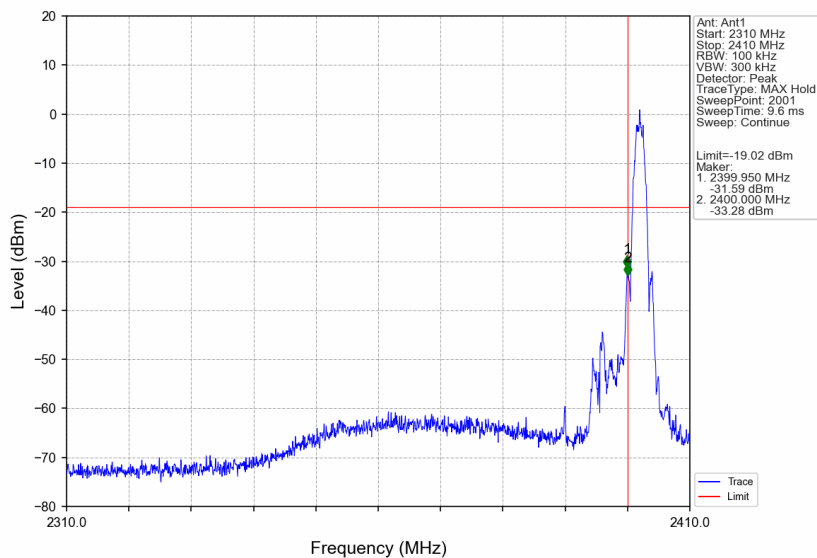
1M_HCH_2480MHz_Ant1_NTNV



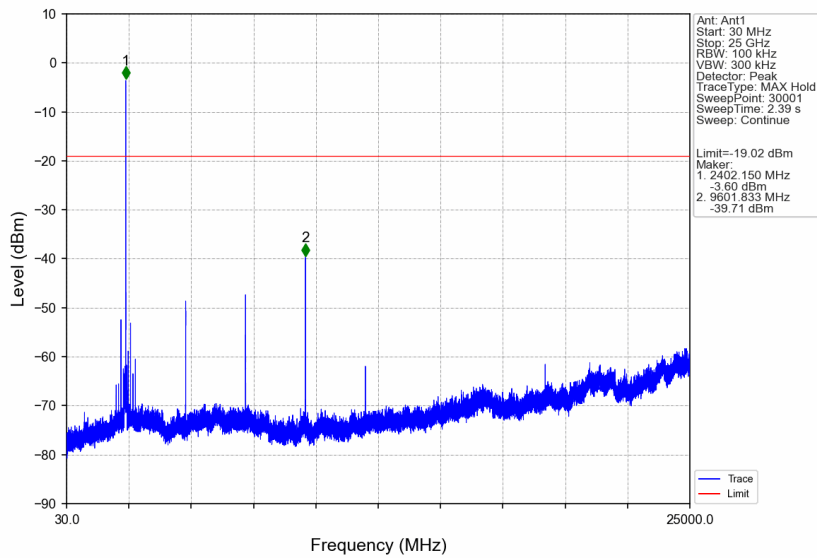
1M_HCH_2480MHz_Ant1_NTNV



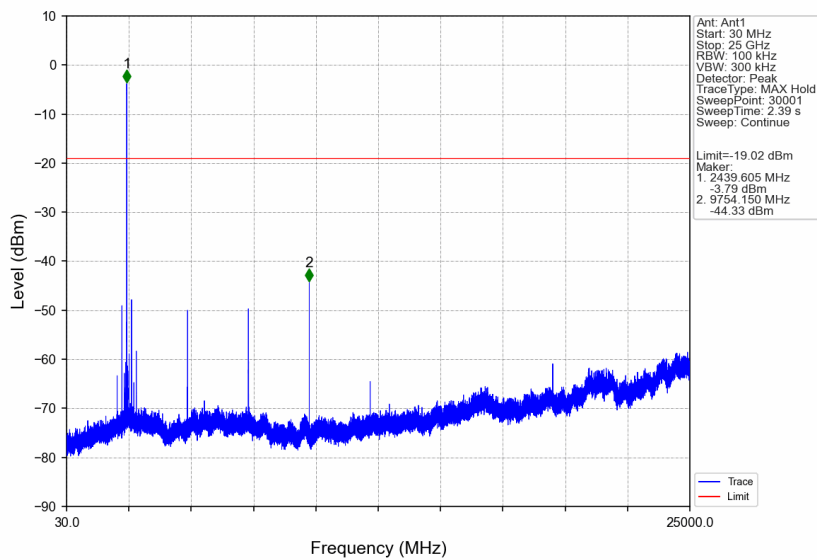
2M_LCH_2402MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



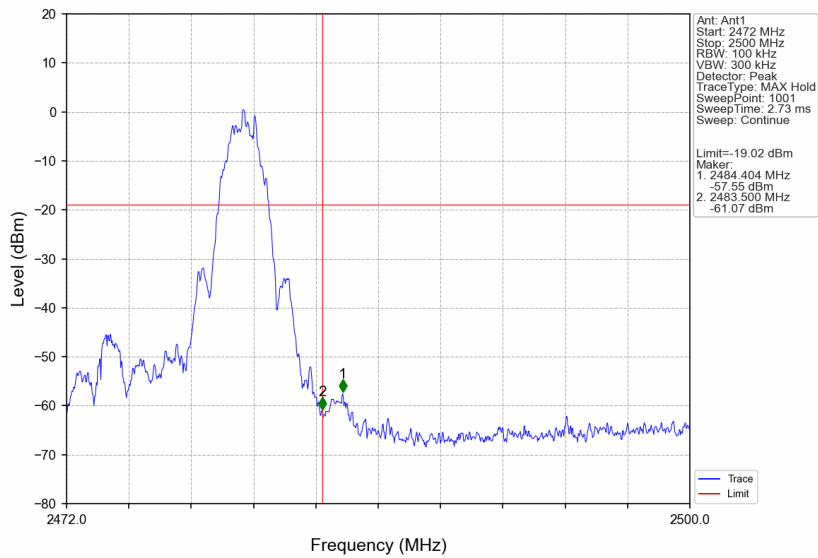
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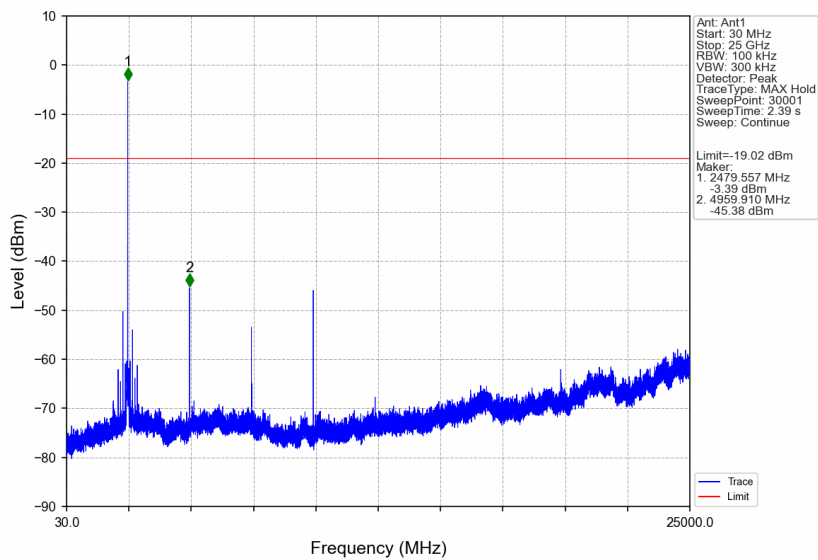
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2M_HCH_2480MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





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Right Ear

1. Duty Cycle

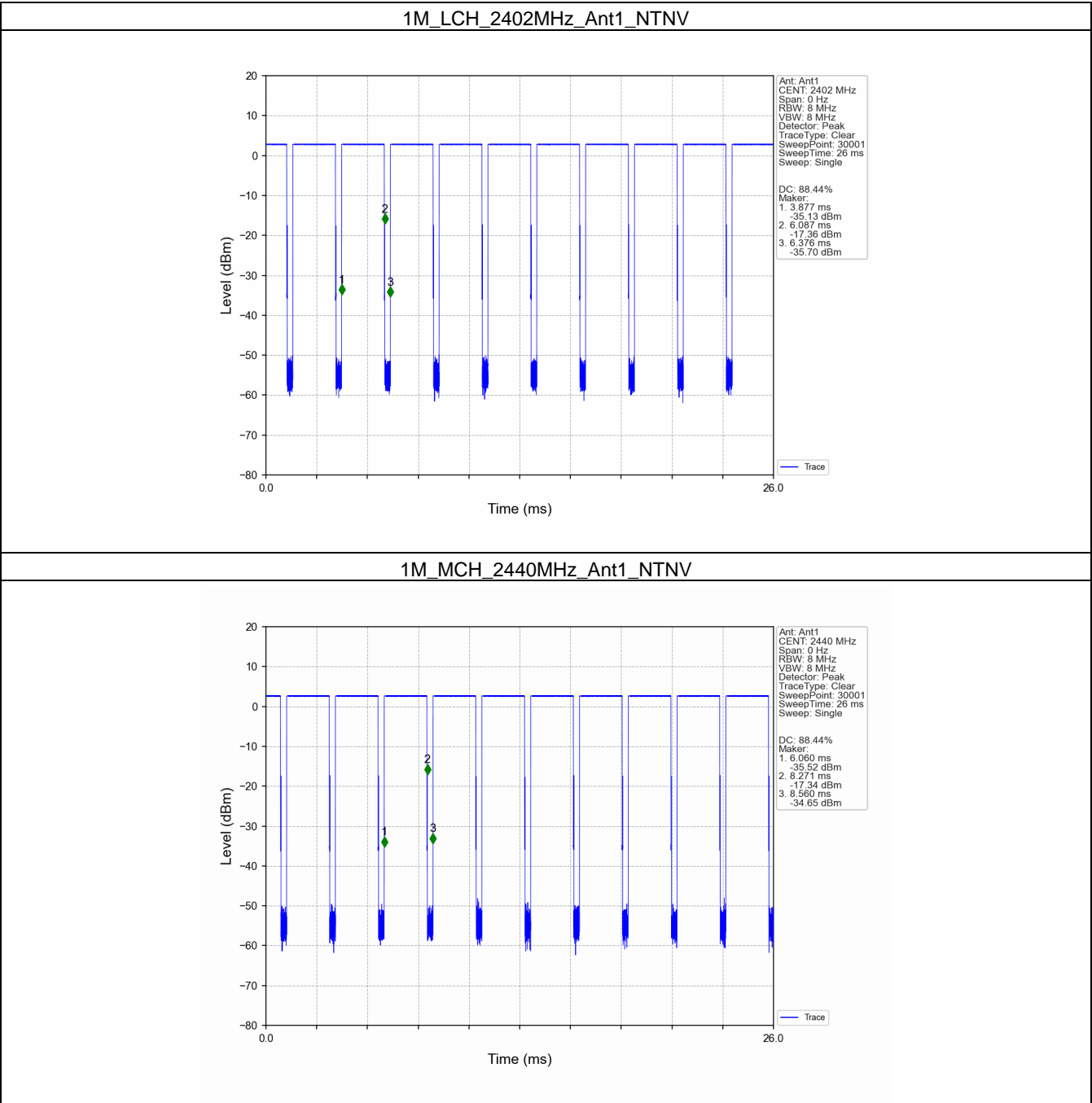
1.1 Test Result

1.1.1 Ant1

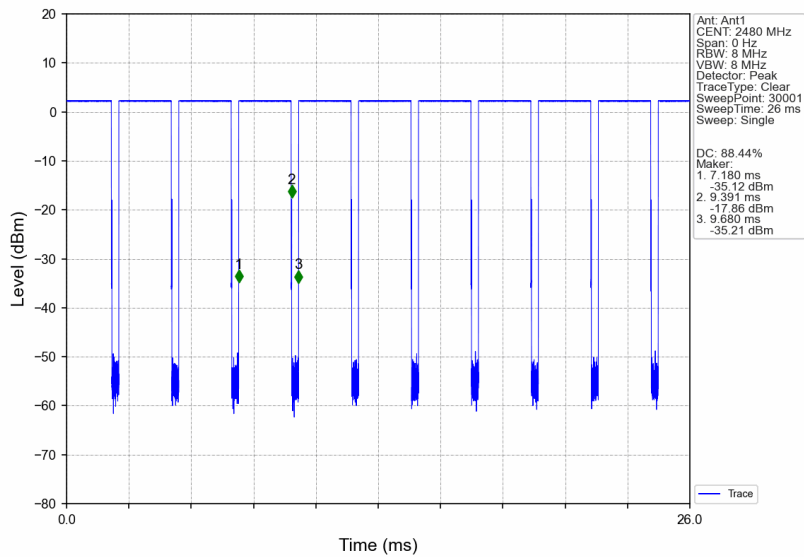
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	2.210	2.499	88.44	0.53	0.00
		2440	2.211	2.500	88.44	0.53	0.03
		2480	2.211	2.500	88.44	0.53	0.00
2M	SISO	2402	1.155	2.500	46.20	3.35	0.02
		2440	1.155	2.500	46.20	3.35	0.02
		2480	1.156	2.501	46.22	3.35	0.02

1.2 Test Graph

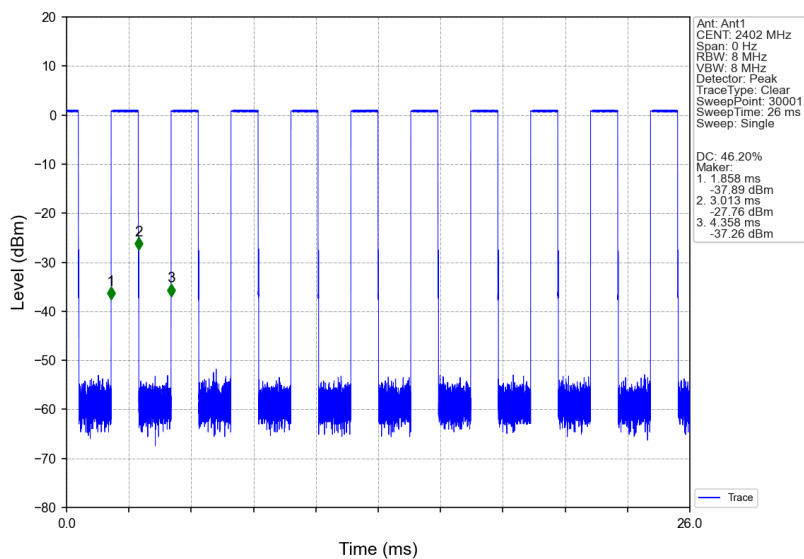
1.2.1 Ant1



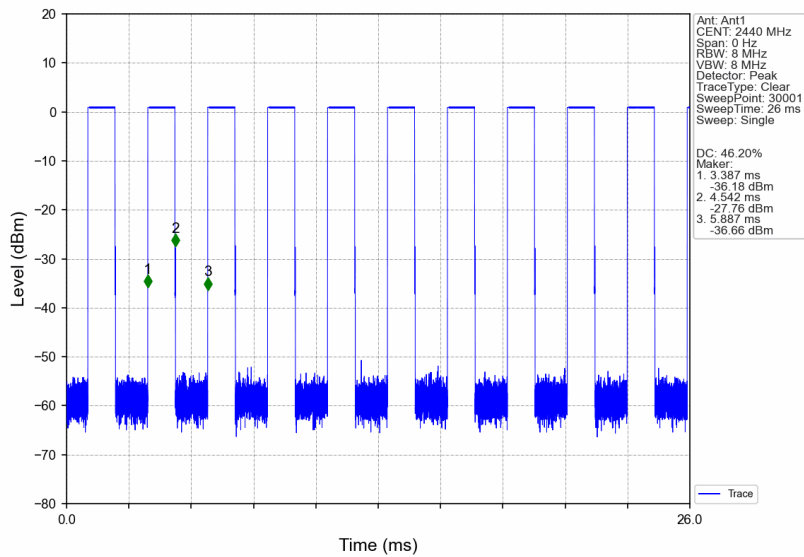
1M_HCH_2480MHz_Ant1_NTNV



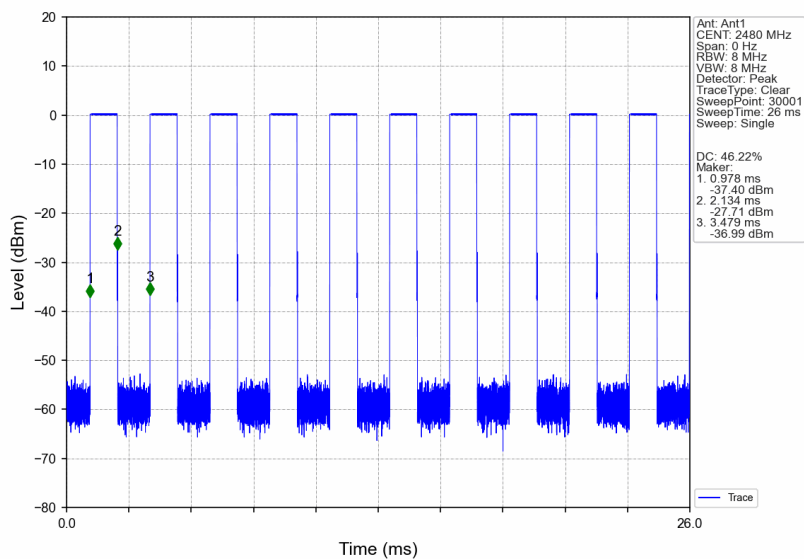
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

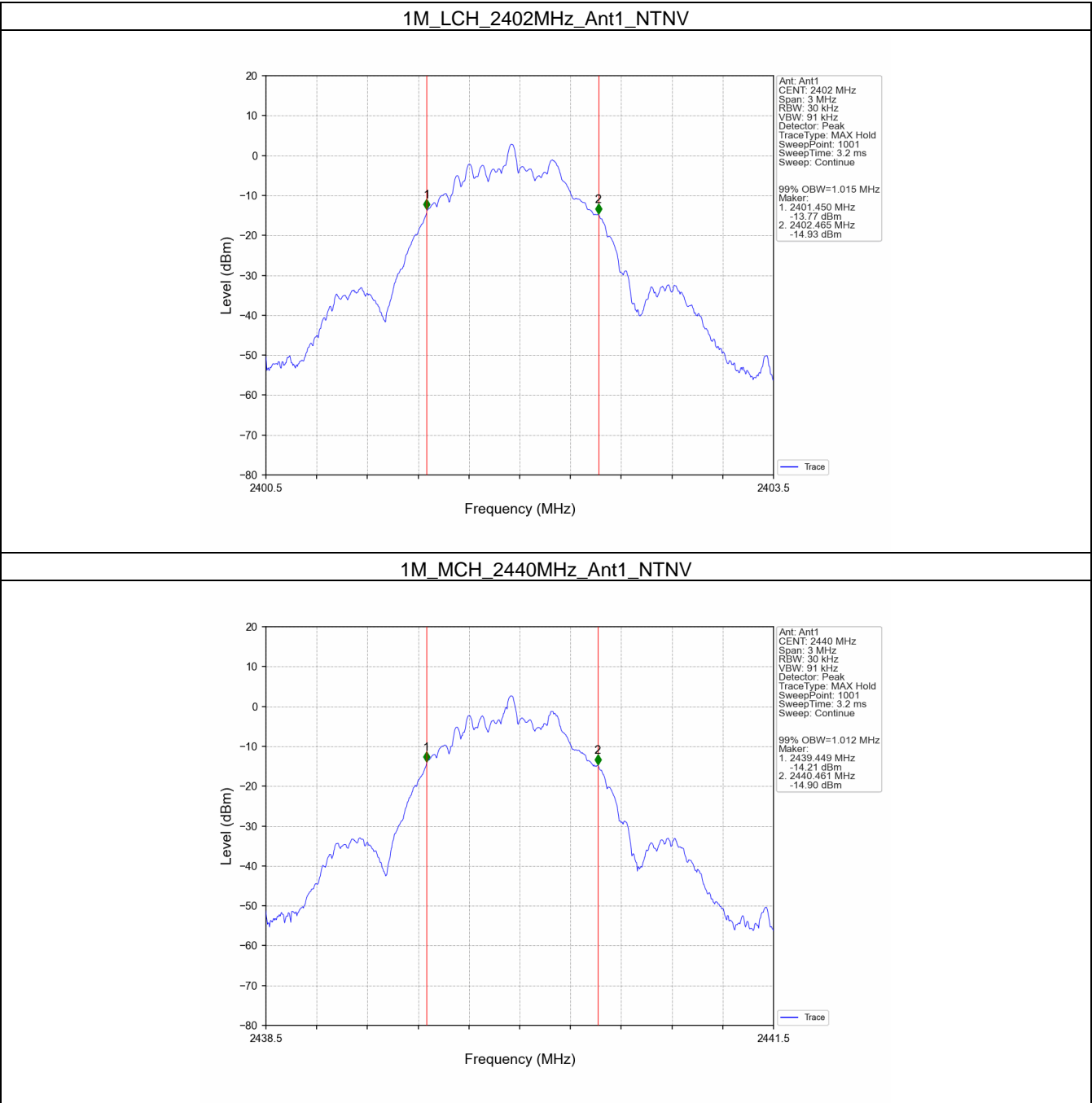
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.015	/	Pass
		2440	1	1.012	/	Pass
		2480	1	1.017	/	Pass
2M	SISO	2402	1	2.042	/	Pass
		2440	1	2.029	/	Pass
		2480	1	2.039	/	Pass

2.1.2 6dB BW

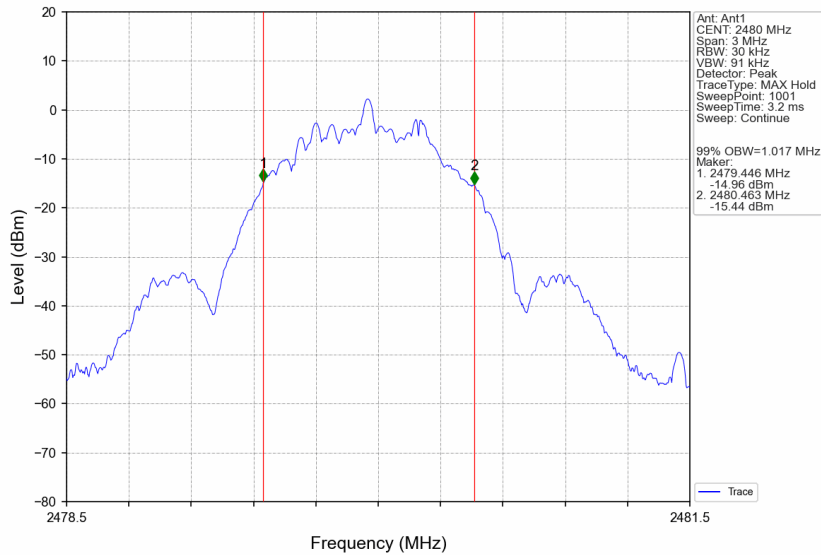
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.665	≥ 0.5	Pass
		2440	1	0.668	≥ 0.5	Pass
		2480	1	0.664	≥ 0.5	Pass
2M	SISO	2402	1	1.148	≥ 0.5	Pass
		2440	1	1.150	≥ 0.5	Pass
		2480	1	1.153	≥ 0.5	Pass

2.2 Test Graph

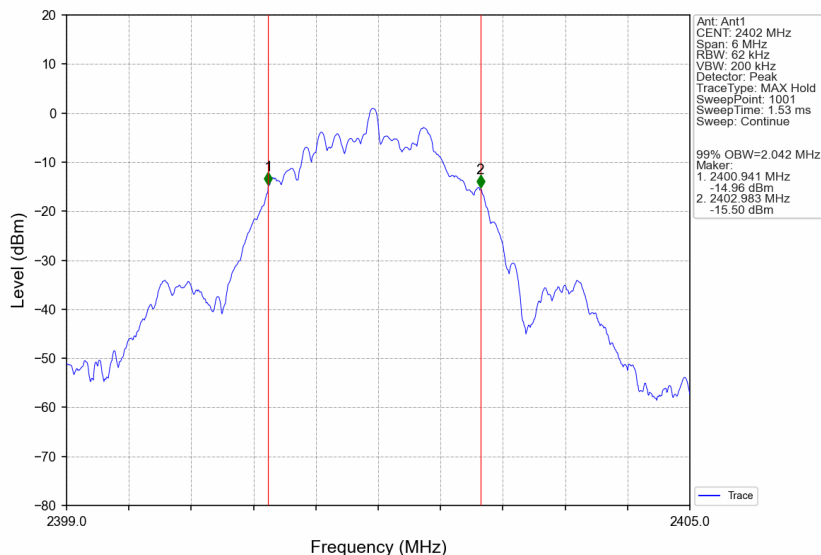
2.2.1 OBW



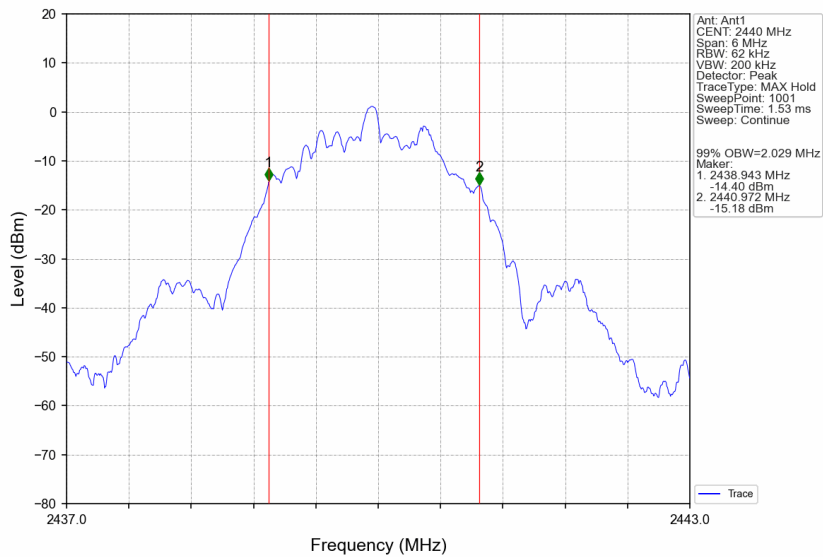
1M_HCH_2480MHz_Ant1_NTNV



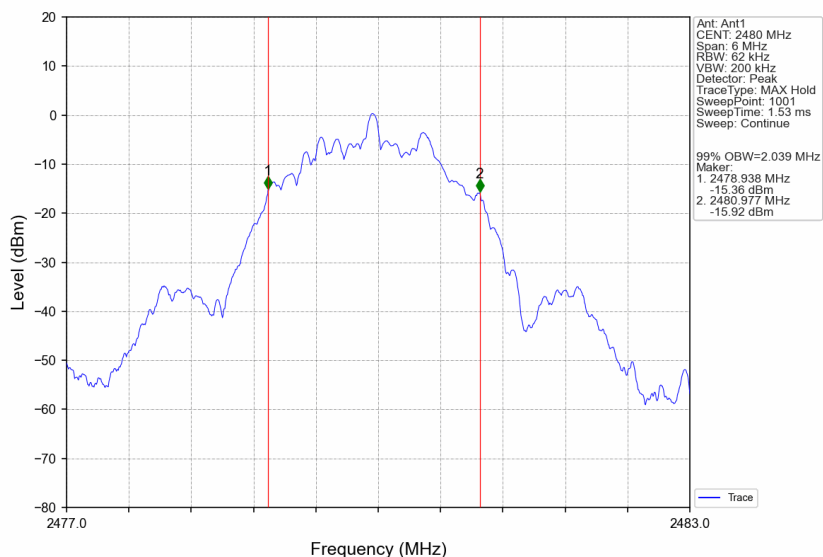
2M_LCH_2402MHz_Ant1_NTNV



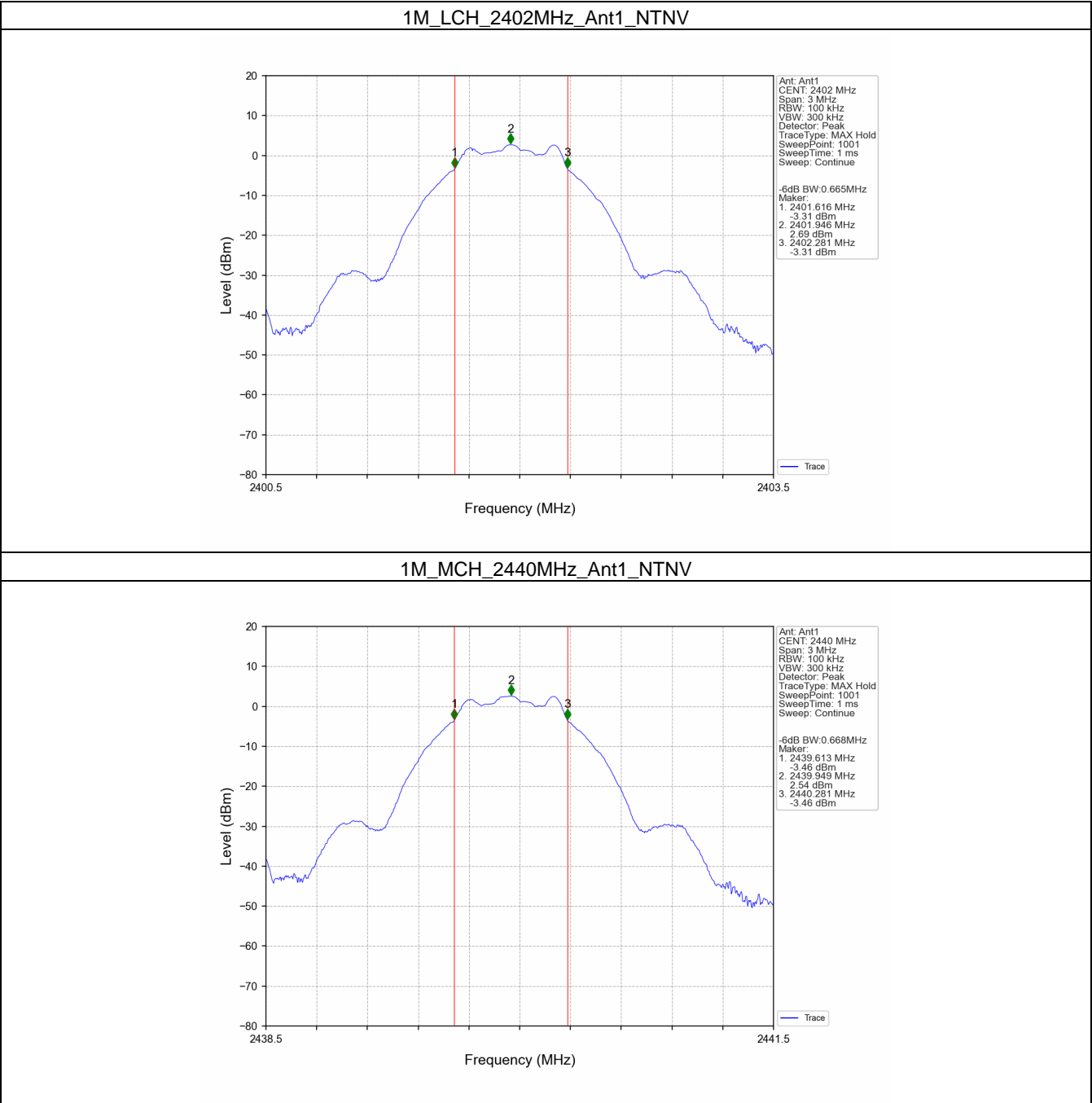
2M_MCH_2440MHz_Ant1_NTNV

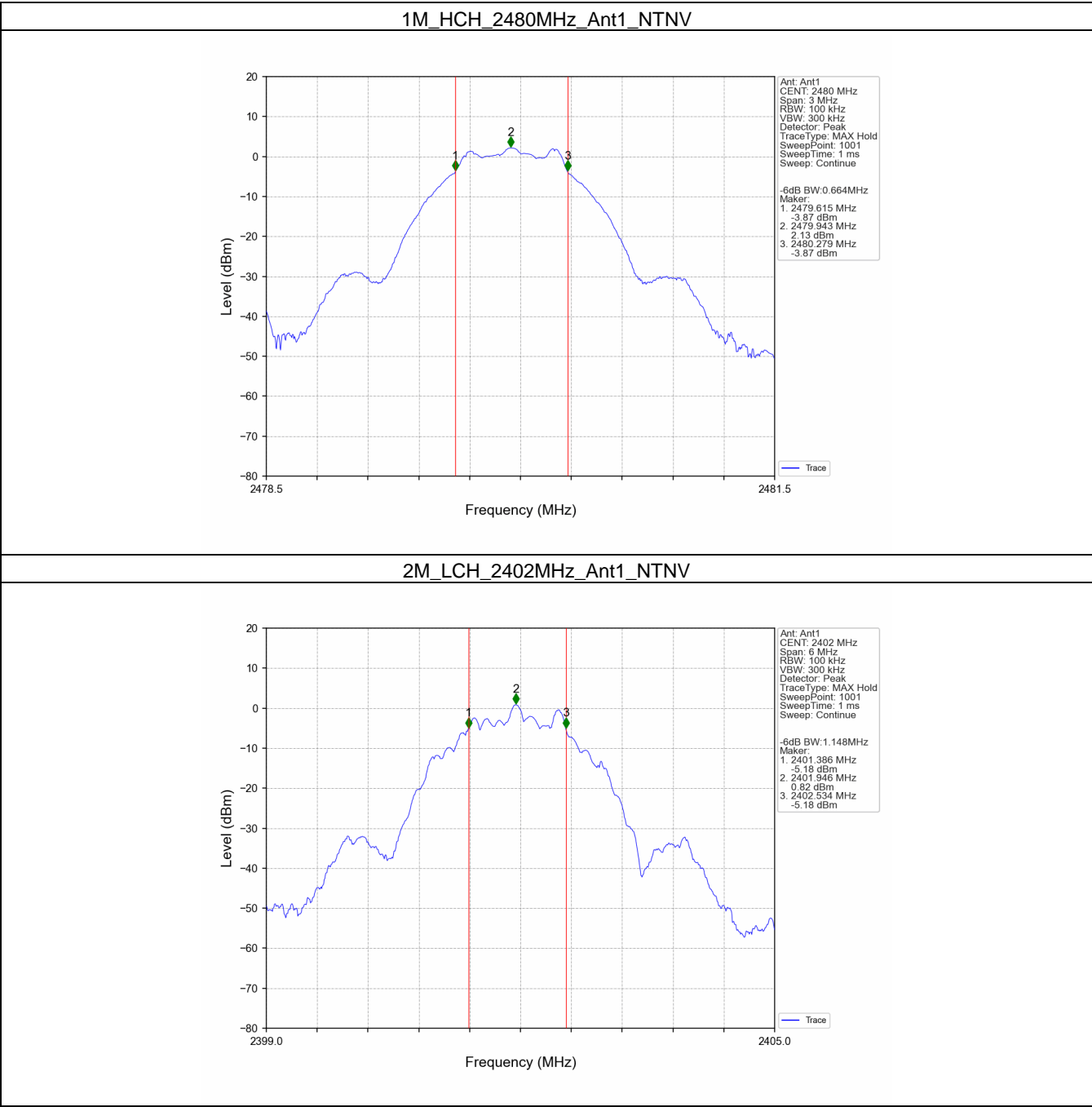


2M_HCH_2480MHz_Ant1_NTNV

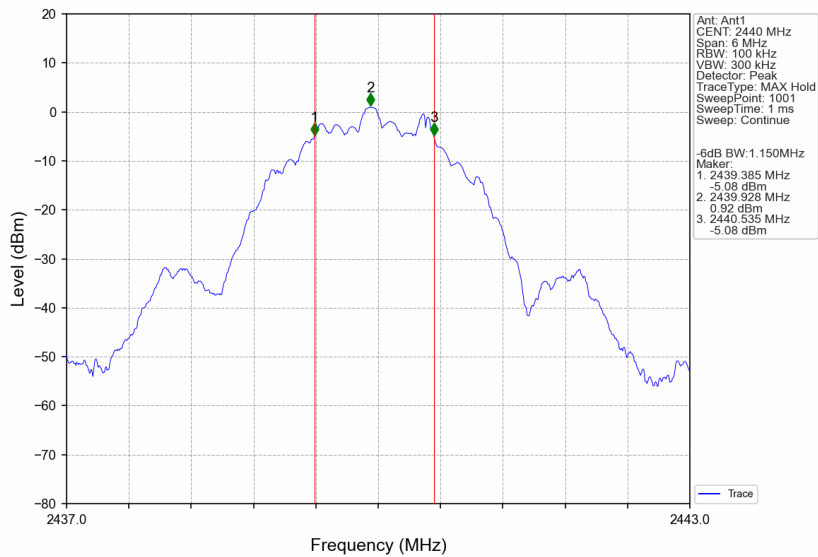


2.2.2 6dB BW

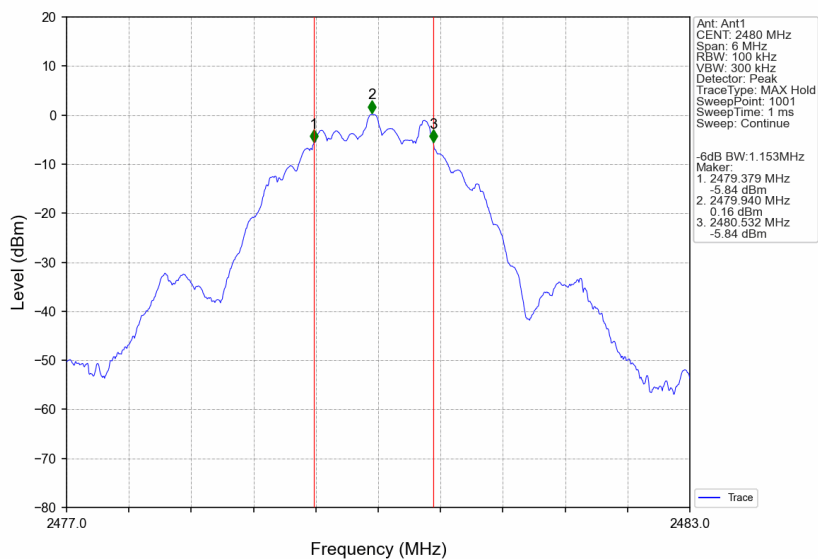




2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





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3. Maximum Conducted Output Power

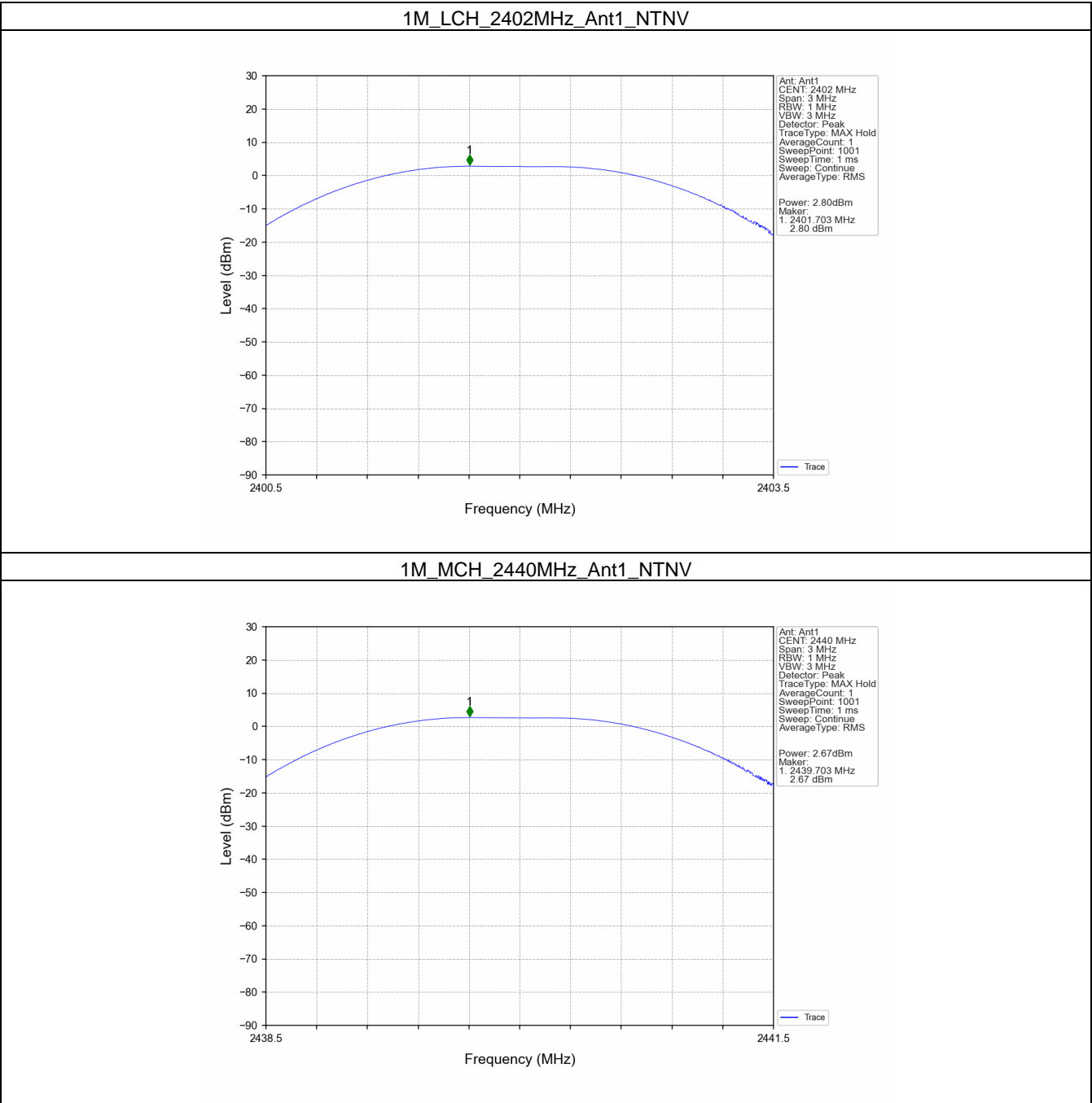
3.1 Test Result

3.1.1 Power

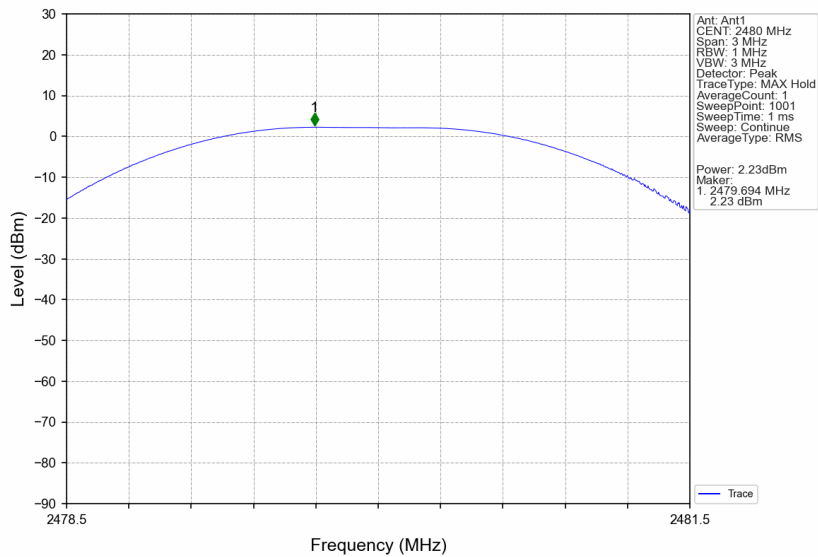
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	2.80	<=30	Pass
		2440	2.67	<=30	Pass
		2480	2.23	<=30	Pass
2M	SISO	2402	0.95	<=30	Pass
		2440	1.01	<=30	Pass
		2480	0.31	<=30	Pass
Note1: Antenna Gain: Ant1: 0.8dBi;					

3.2 Test Graph

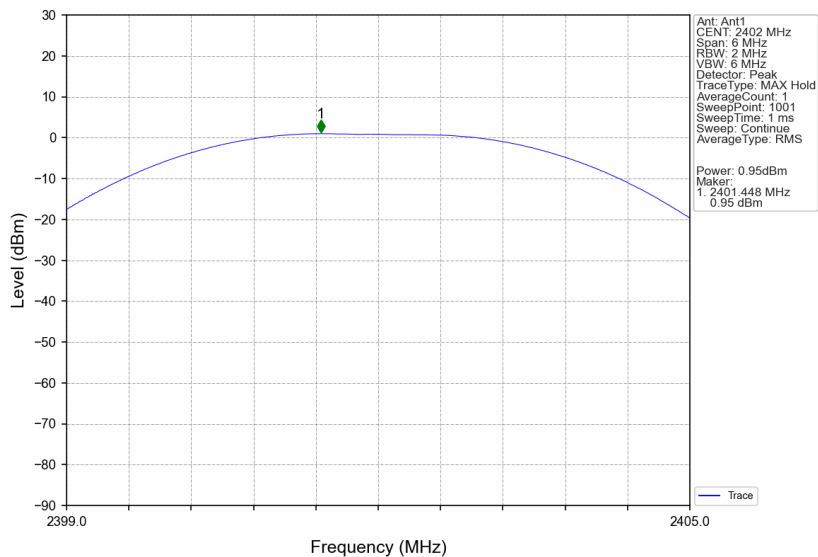
3.2.1 Power



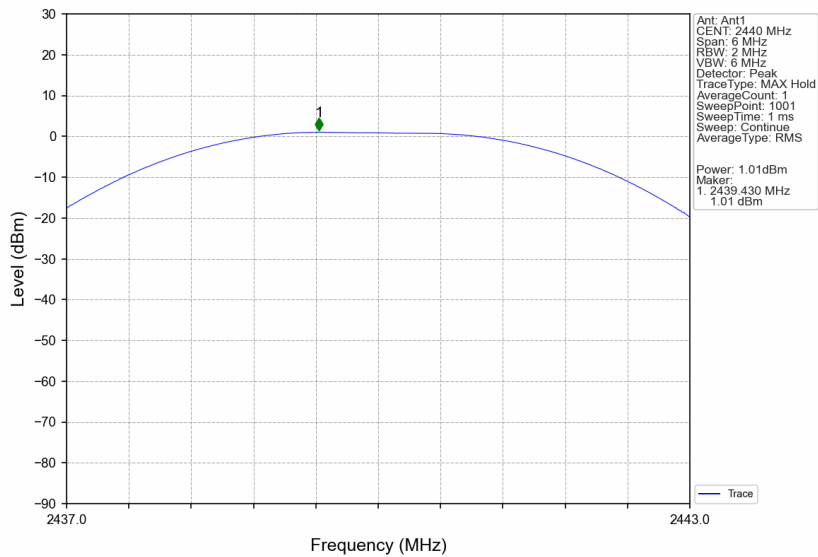
1M_HCH_2480MHz_Ant1_NTNV



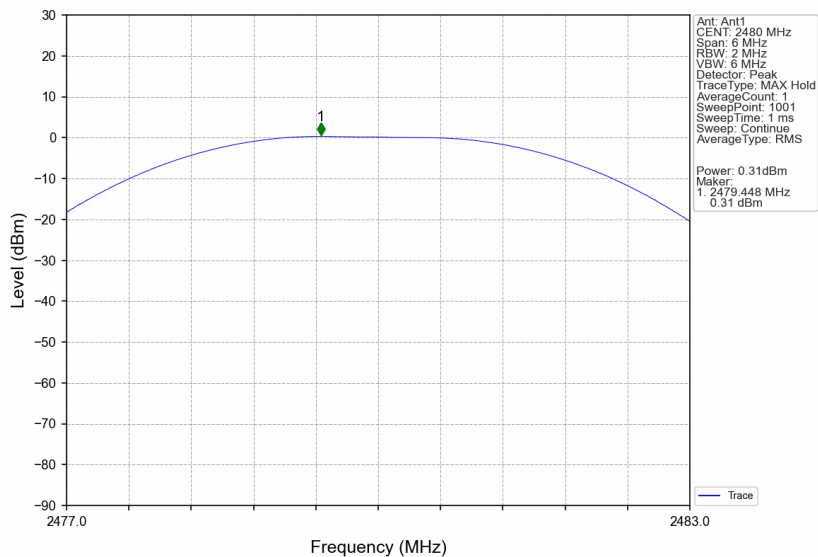
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





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4. Maximum Power Spectral Density

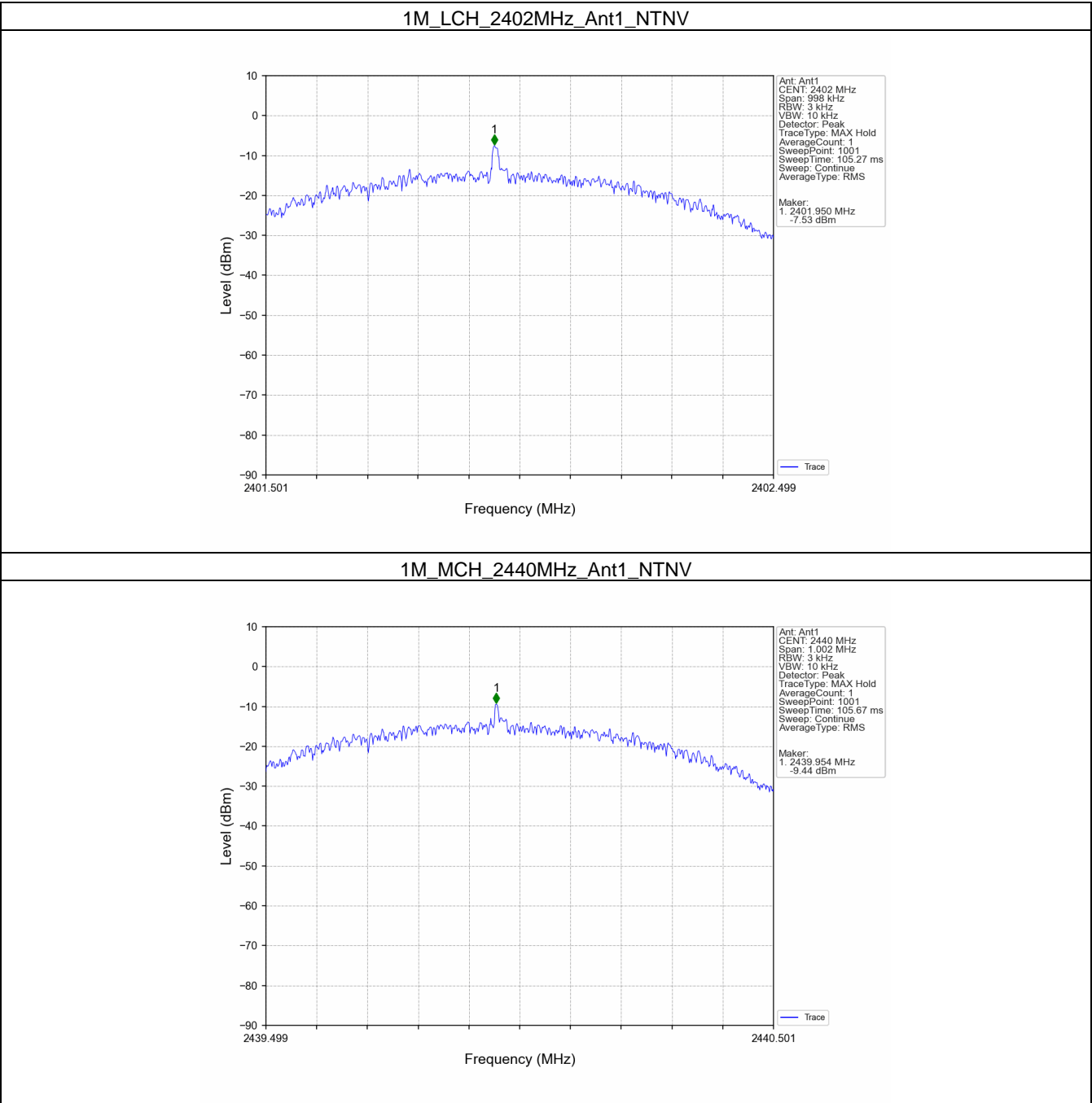
4.1 Test Result

4.1.1 PSD

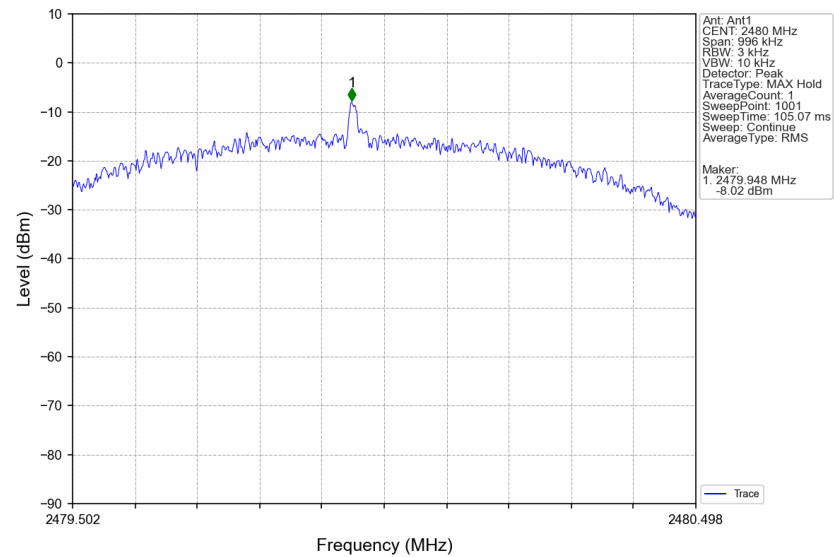
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-7.53	<=8	Pass
		2440	-9.44	<=8	Pass
		2480	-8.02	<=8	Pass
2M	SISO	2402	-10.17	<=8	Pass
		2440	-11.27	<=8	Pass
		2480	-10.89	<=8	Pass
Note1: Antenna Gain: Ant1: 0.8dBi;					

4.2 Test Graph

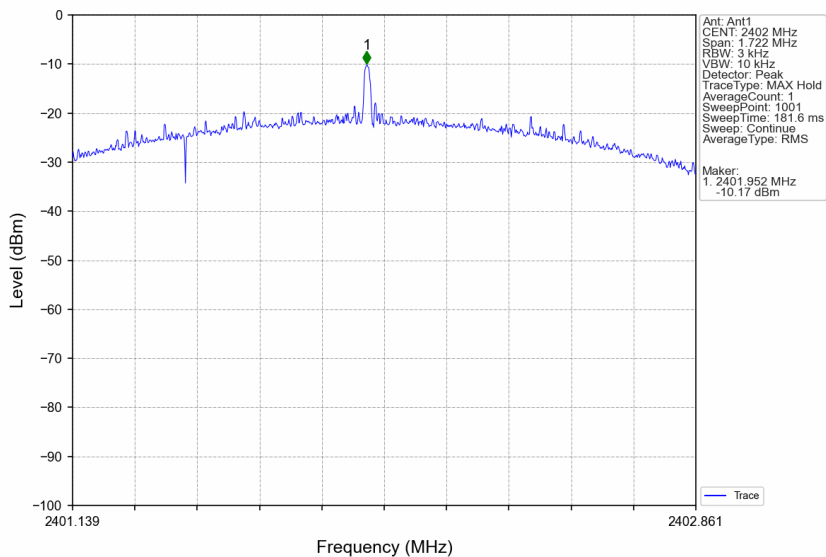
4.2.1 PSD



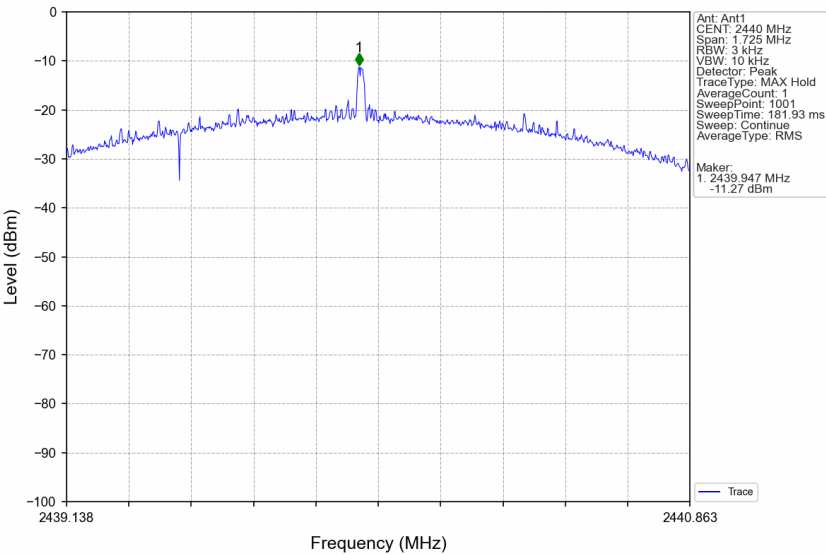
1M_HCH_2480MHz_Ant1_NTNV



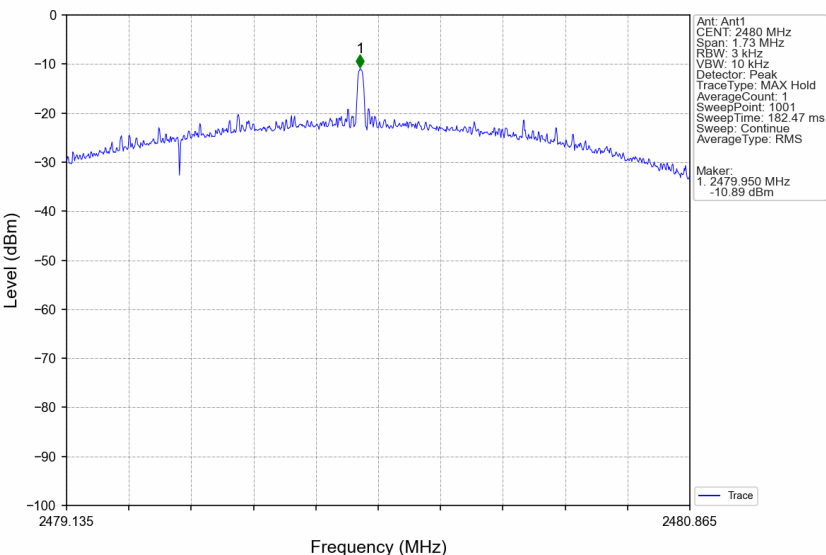
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



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5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	2.65
		2440	1	2.52
		2480	1	2.08
2M	SISO	2402	1	0.73
		2440	1	0.80
		2480	1	0.07

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

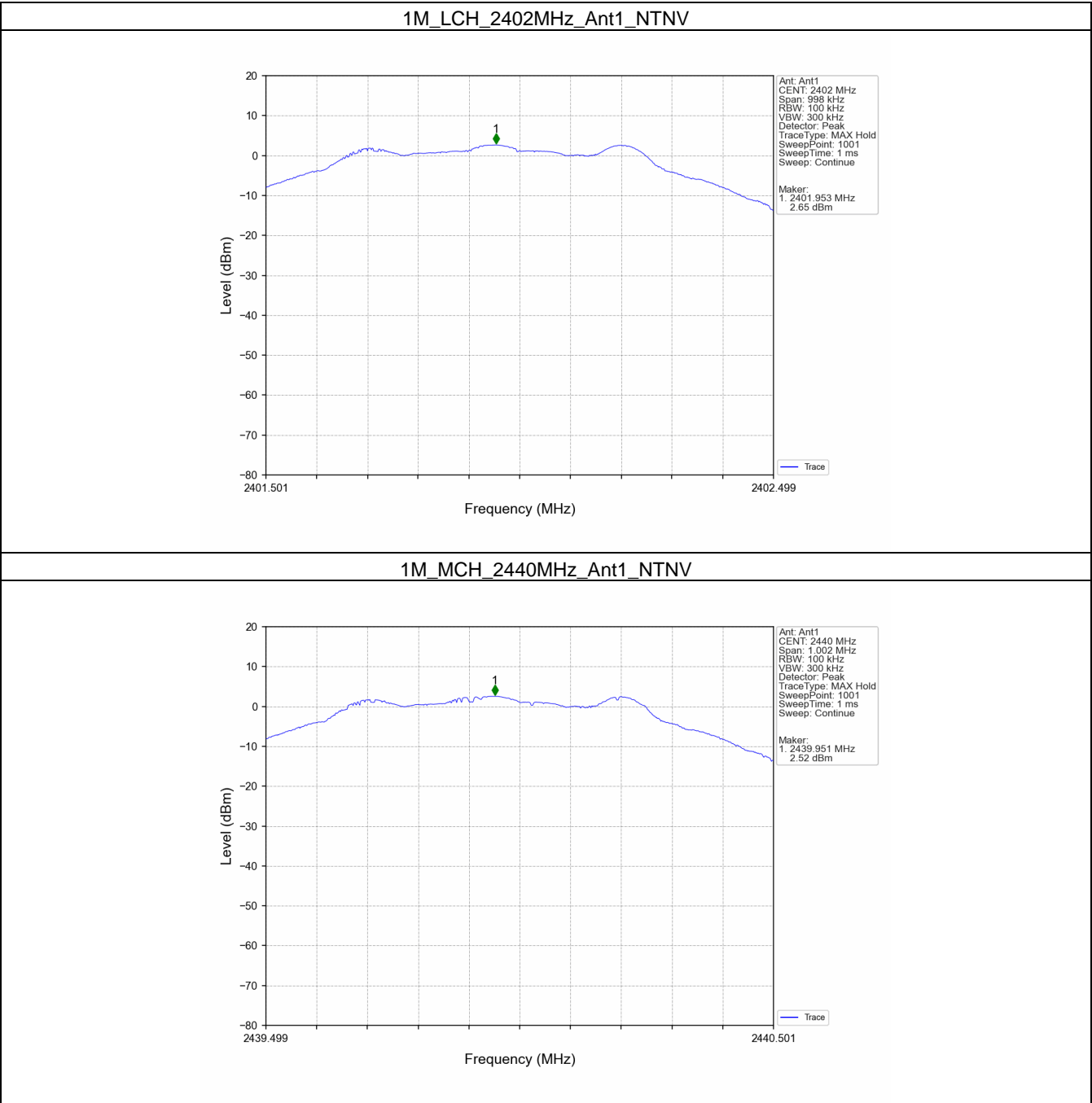
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	2.65	-17.35	Pass
		2440	1	2.65	-17.35	Pass
		2480	1	2.65	-17.35	Pass
2M	SISO	2402	1	0.80	-19.20	Pass
		2440	1	0.80	-19.20	Pass
		2480	1	0.80	-19.20	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

5.2 Test Graph

5.2.1 Ref



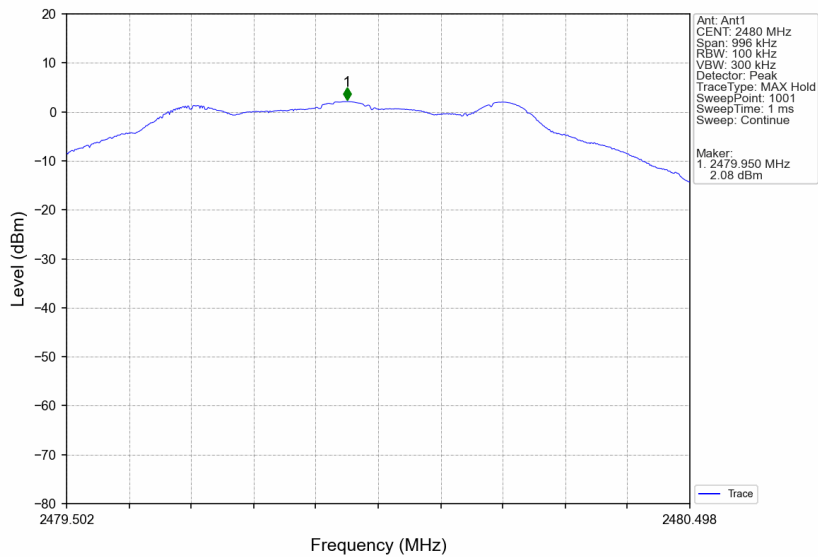
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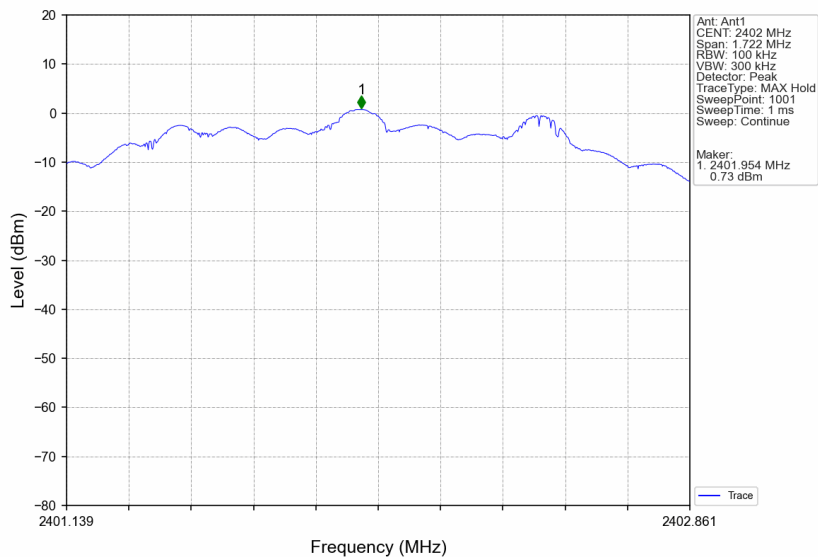
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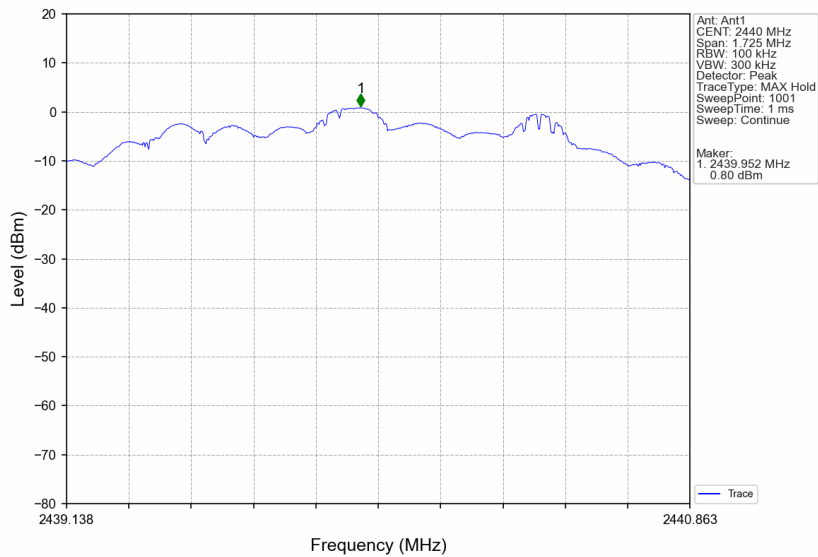
1M_HCH_2480MHz_Ant1_NTNV



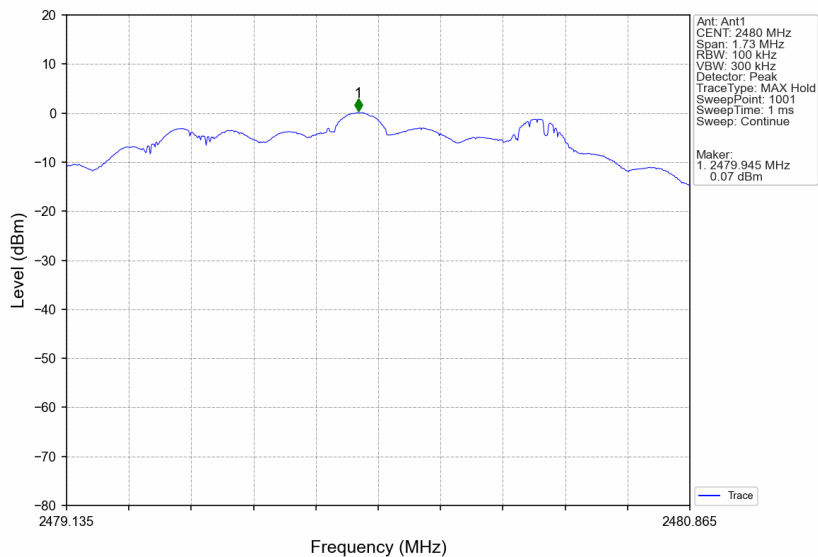
2M_LCH_2402MHz_Ant1_NTNV



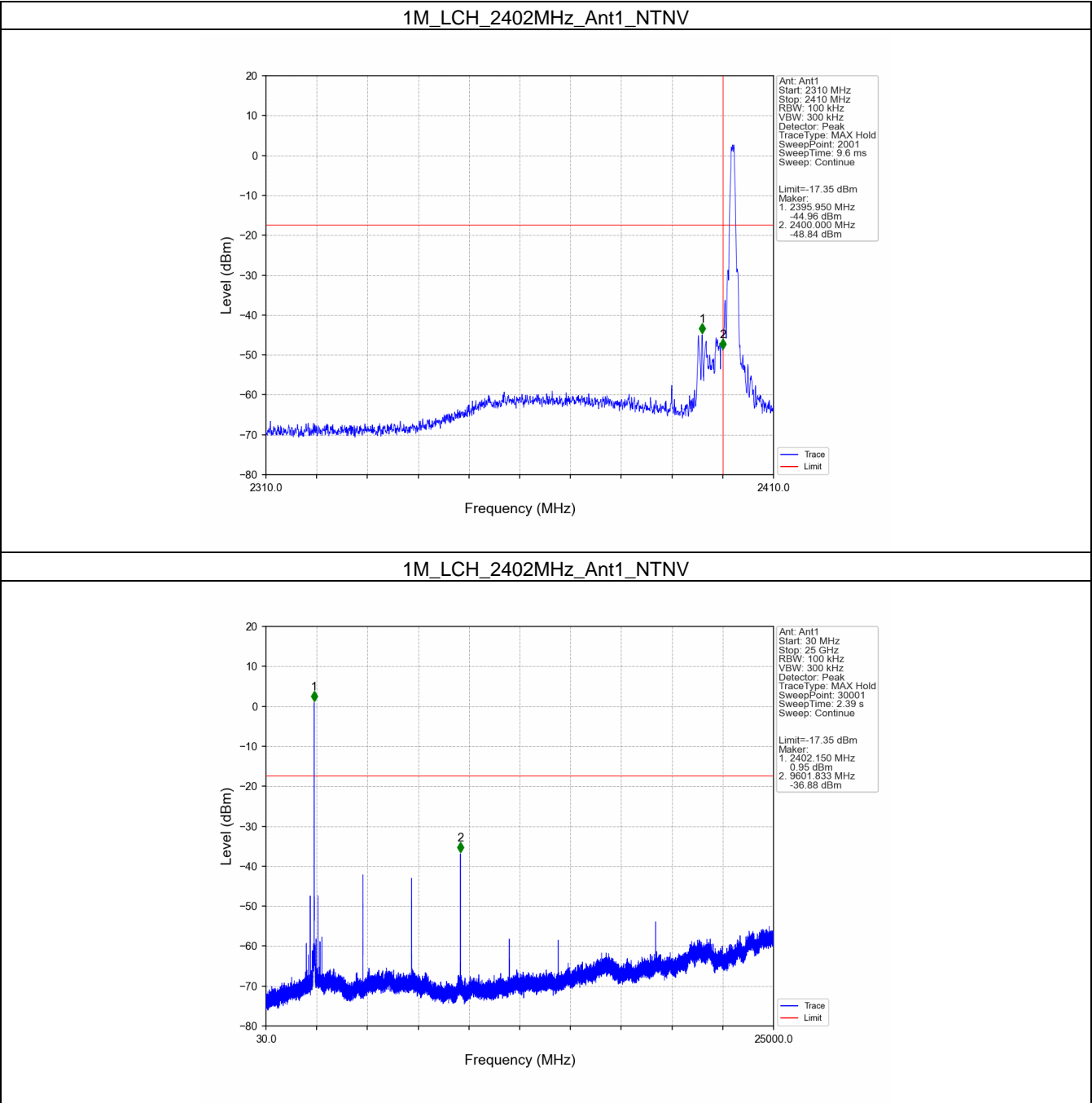
2M_MCH_2440MHz_Ant1_NTNV



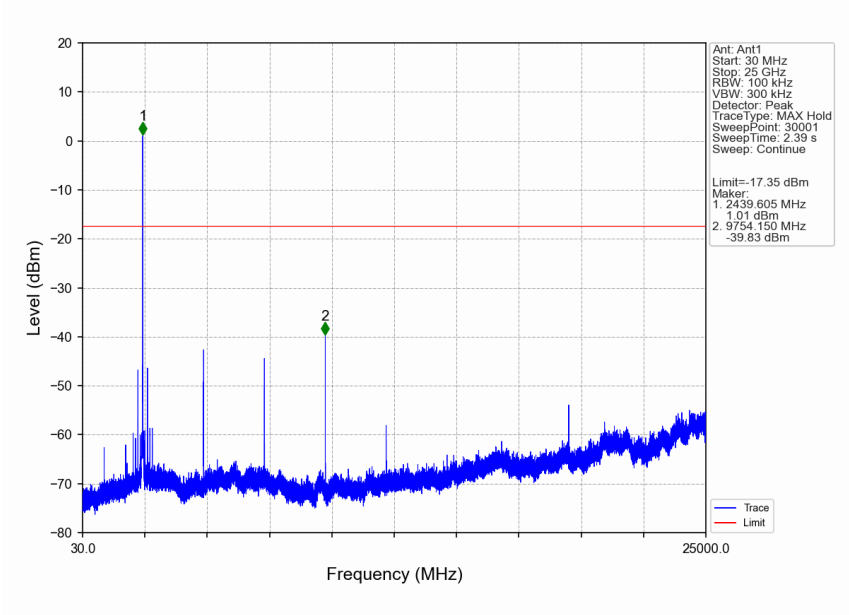
2M_HCH_2480MHz_Ant1_NTNV



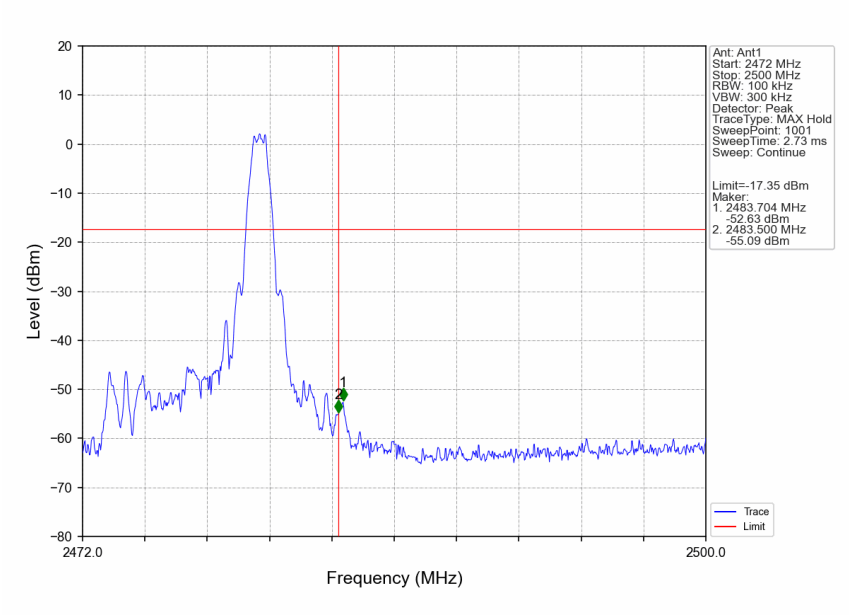
5.2.2 CSE



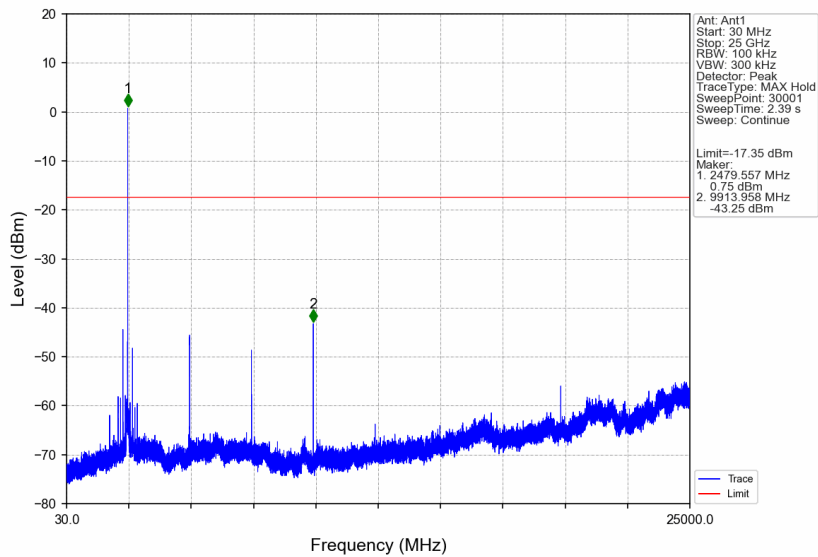
1M_MCH_2440MHz_Ant1_NTNV



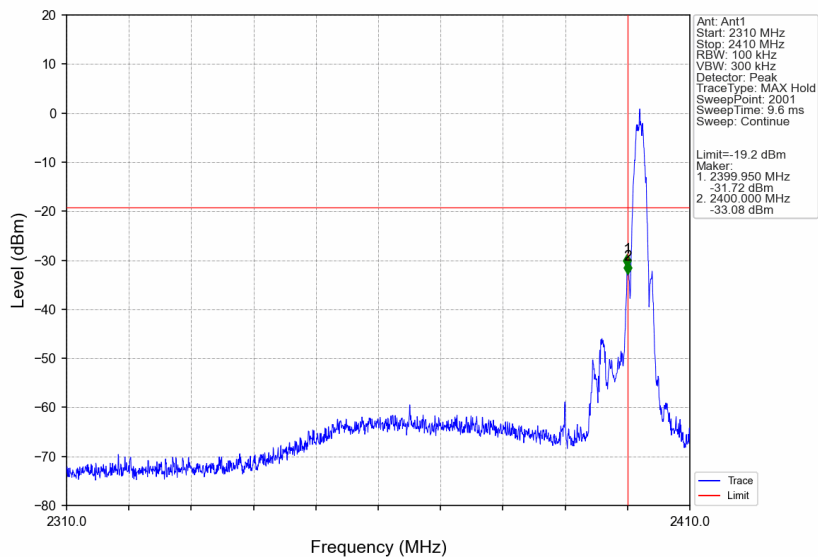
1M_HCH_2480MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV



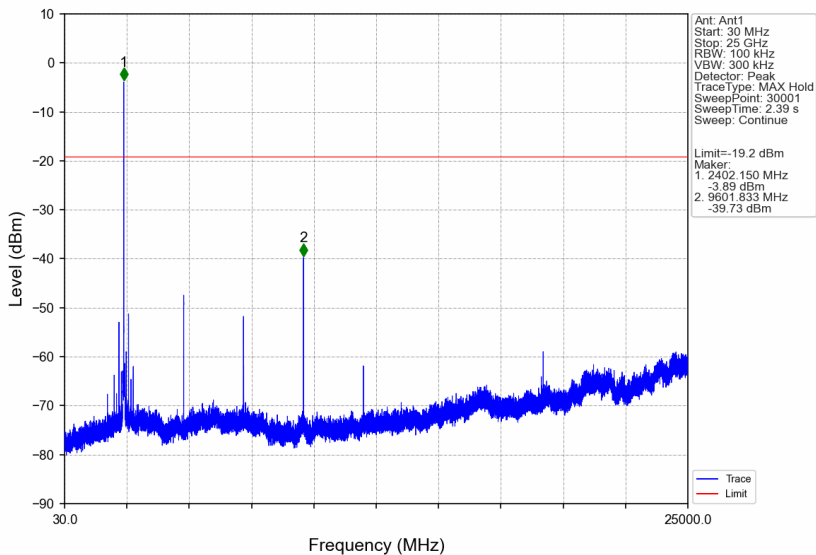
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2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV

