



## Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240200027001

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# TEST REPORT

**Application No.:** KSCR2402000270AT  
**FCC ID:** VDE20242021950  
**IC:** 8036A-20242021950  
**Applicant:** Generac Power Systems Inc.  
**Address of Applicant:** S45 W29290 Hwy. 59 Waukesha, Wisconsin, United States 53189  
**Manufacturer:** Wistron Technology (Malaysia) Sdn Bhd  
**Address of Manufacturer:** No 1, Jalan Sultan Alauddin 5, Kawasan Perindustrian Fasa 4, Bandar Sultan Suleiman, 42000 Pelabuhan Klang, Selangor, Malaysia.

**Equipment Under Test (EUT):**  
**EUT Name:** Generac Fuel Tracker Gen 5, LTE  
**Model No.:** CG5RUU-M950  
**Standard(s) :** 47 CFR Part 15, Subpart C 15.247  
RSS-247 Issue 3, August 2023  
RSS-Gen Issue 5 Amendment 2 (February 2021)

**Date of Receipt:** 2024-02-22  
**Date of Test:** 2024-03-04 to 2024-03-14  
**Date of Issue:** 2024-03-19

<b>Test Result:</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

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<i>Revision Record</i>			
<i>Version</i>	<i>Description</i>	<i>Date</i>	<i>Remark</i>
00	Original	2024-03-19	/

<b>Authorized for issue by:</b>			
<b>Tested By</b>		<i>Maker Qi</i>	
		_____ Maker_Qi/Project Engineer	
<b>Approved By</b>		<i>Terry Hou</i>	
		_____ Terry Hou /Reviewer	



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## 2 Test Summary

Radio Spectrum Technical Requirement				
Item	FCC Requirement	IC Requirement	Method	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.203 & 15.247(c)	RSS-Gen Clause 6.8	N/A	Customer Declaration

N/A: Not applicable

Radio Spectrum Matter Part				
Item	FCC Requirement	IC Requirement	Method	Result
Minimum 6dB Bandwidth	47 CFR Part 15, Subpart C 15.247a(2)	RSS-247 Clause 5.2(a)	ANSI C63.10 (2013) Section 11.8.1	Pass
Conducted Peak Output Power	47 CFR Part 15, Subpart C 15.247(b)(3)	RSS-247 Clause 5.4(d)	ANSI C63.10 (2013) Section 11.9.1	Pass
Power Spectrum Density	47 CFR Part 15, Subpart C 15.247(e)	RSS-247 Clause 5.2(b)	ANSI C63.10 (2013) Section 11.10.2	Pass
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 15.247(d)	RSS-247 Clause 5.5	ANSI C63.10 (2013) Section 11.13.3.2	Pass
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 15.247(d)	RSS-247 Clause 5.5	ANSI C63.10 (2013) Section 11.11	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	ANSI C63.10 (2013) Section 6.10.5	Pass
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	ANSI C63.10 (2013) Section 6.4,6.5,6.6	Pass
99% Bandwidth	-	RSS-Gen Section 6.7	ANSI C63.10 Section 6.9.3	Pass

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## 4 General Information

### 4.1 Details of E.U.T.

Power supply:	2.2 - 4.35 V, typ. 3.3 V
Operation Frequency:	2402MHz to 2480MHz
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Antenna Type:	Chip Antenna
Antenna Gain:	0.5dBi(Provided by the manufacturer)

### 4.2 Power level setting using in test:

Channel	BLE 1M	BLE 2M
	Ant 1	Ant 1
0	15	15
19	15	15
39	15	15

### 4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Notebook	LENOVO	K27	EB24537645

**4.4 Measurement Uncertainty**

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4 x 10 <sup>-8</sup>
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
<b>RF Conducted Test</b>						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/24/2023	08/23/2024
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/24/2023	08/23/2024
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/15/2024	01/14/2025
4	Signal Generator	R&S	SMBV100B	KSEM032	03/16/2023	03/15/2024
5	Signal Generator	R&S	SMW200A	KSEM020-1	08/24/2023	08/23/2024
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/24/2023	08/23/2024
7	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/24/2023	08/23/2024
8	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	03/16/2023	03/15/2024
9	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/24/2023	08/23/2024
10	Switcher	TST	FY562	KUS2001M001-4	01/15/2024	01/14/2025
11	AC Power Source	EXTECH	6605	KS301178	N.C.R	N.C.R
12	DC Power Supply	Aglient	E3632A	KS301180	N.C.R	N.C.R
13	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	01/15/2024	01/14/2025
14	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	08/24/2023	08/23/2024
15	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	03/22/2023	03/21/2024
16	Software	BST	TST-PASS	/	N/A	N/A
<b>RF Radiated Test</b>						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/24/2023	08/23/2024
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/16/2023	03/15/2024
3	Signal Generator	Agilent	E8257C	KS301066	08/24/2023	08/23/2024
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	SCHWARZBECK	VULB9160	CZ301016	04/13/2021	04/12/2024
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	08/24/2023	08/23/2024
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	02/21/2024	02/20/2025
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	02/26/2024	02/25/2025
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	08/24/2023	08/23/2024
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/24/2023	08/23/2024
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/22/2023	03/21/2024
14	Software	Faratronic	EZ_EMG-v 3A1	/	N/A	N/A



## **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 chip Antenna and no consideration of replacement. The best case gain of the antenna is 0.5dBi.

Antenna location: Refer to internal photo.

## 7 Radio Spectrum Matter Test Results

### 7.1 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 $\geq 50$ hopping channels
	0.25 for $25 \leq$ hopping channels $< 50$
	1 for digital modulation
2400-2483.5	1 for $\geq 75$ 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

#### 7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

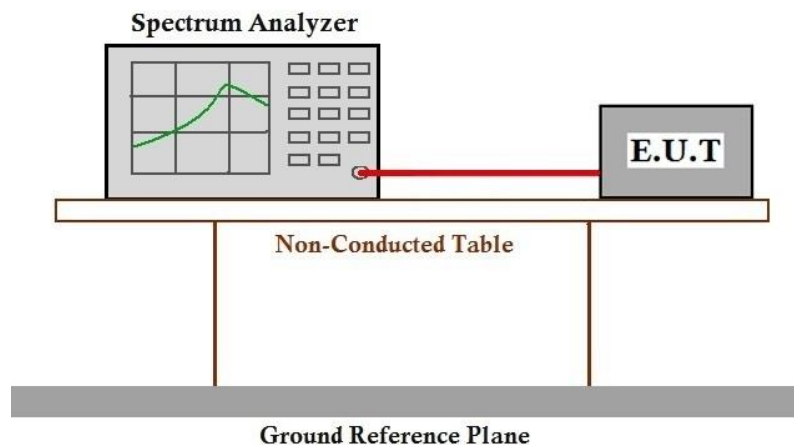
Humidity: 50.5 % RH

Atmospheric Pressure: 1010 mbar

#### 7.1.1 Test Mode Description

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

#### 7.1.2 Test Setup Diagram





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### **7.1.3 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

### 7.2 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

#### 7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

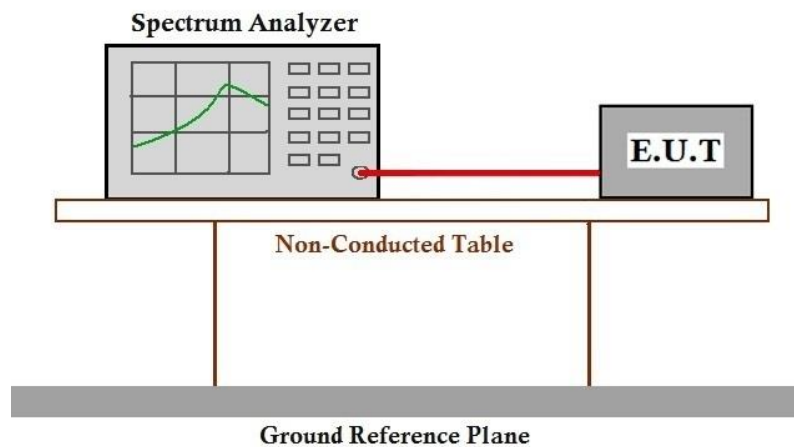
Humidity: 50.5 % RH

Atmospheric Pressure: 1010 mbar

#### 7.2.2 Test Mode Description

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

#### 7.2.3 Test Setup Diagram



#### 7.2.4 Measurement Procedure and Data

Please Refer to Appendix for Details

### 7.3 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

#### 7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

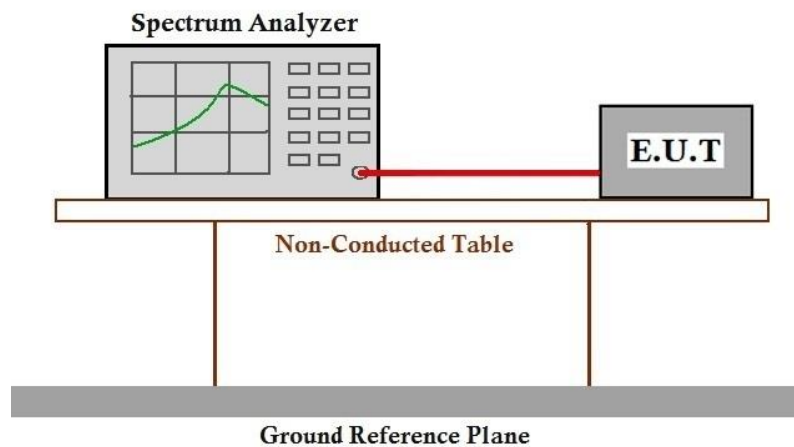
Humidity: 50.5 % RH

Atmospheric Pressure: 1010 mbar

#### 7.3.2 Test Mode Description

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

#### 7.3.3 Test Setup Diagram



#### 7.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details

**7.4 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)).

**7.4.1 E.U.T. Operation**

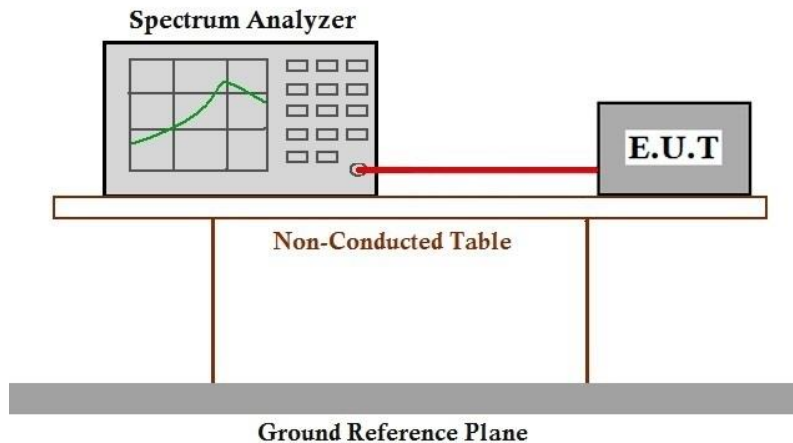
Operating Environment:

Temperature: 20.5 °C Humidity: 50.5 % RH Atmospheric Pressure: 1010 mbar

**7.4.2 Test Mode Description**

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

**7.4.3 Test Setup Diagram**



**7.4.4 Measurement Procedure and Data**

Please Refer to Appendix for Details

### 7.5 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)).

#### 7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

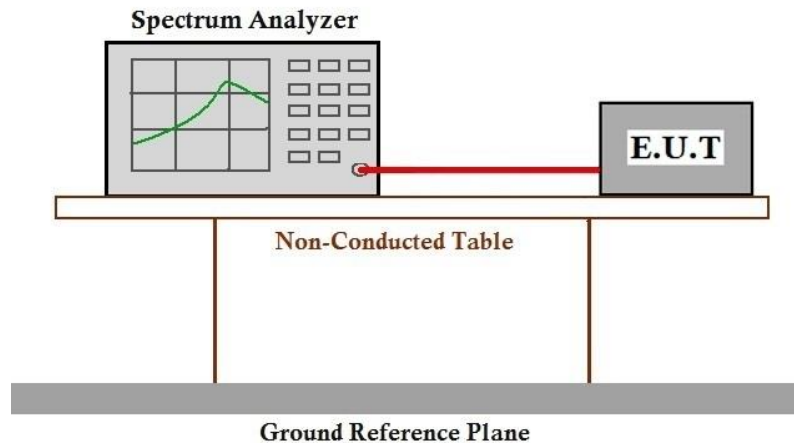
Humidity: 50.5 % RH

Atmospheric Pressure: 1010 mbar

#### 7.5.2 Test Mode Description

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

#### 7.5.3 Test Setup Diagram



#### 7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details

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### 7.6 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

Measurement Distance: 3m

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.

#### 7.6.1 E.U.T. Operation

Operating Environment:

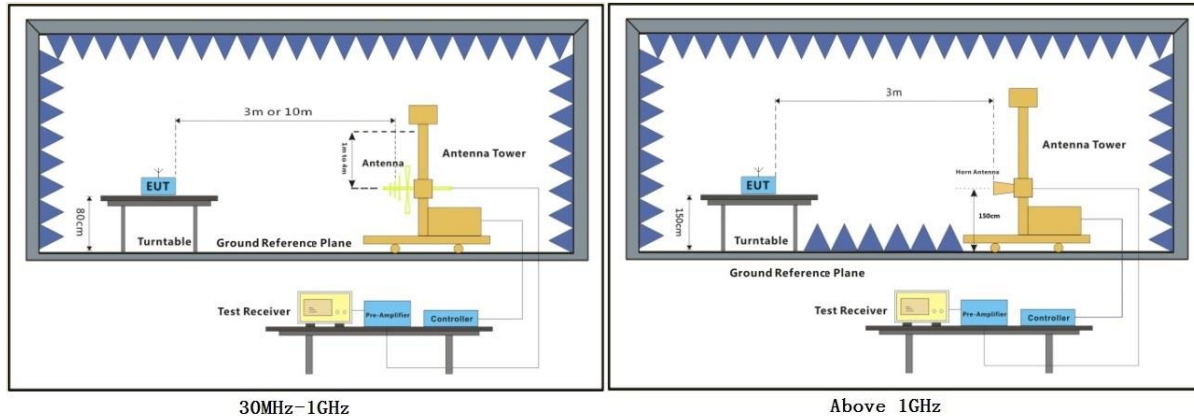
Temperature: 23.5 °C Humidity: 50.1 % RH Atmospheric Pressure: 1010 mbar

#### 7.6.2 Test Mode Description

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



### 7.6.3 Test Setup Diagram



### 7.6.4 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. 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.
- c. 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.
- d. 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.
- e. 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.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. 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.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. 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.
- j. 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.

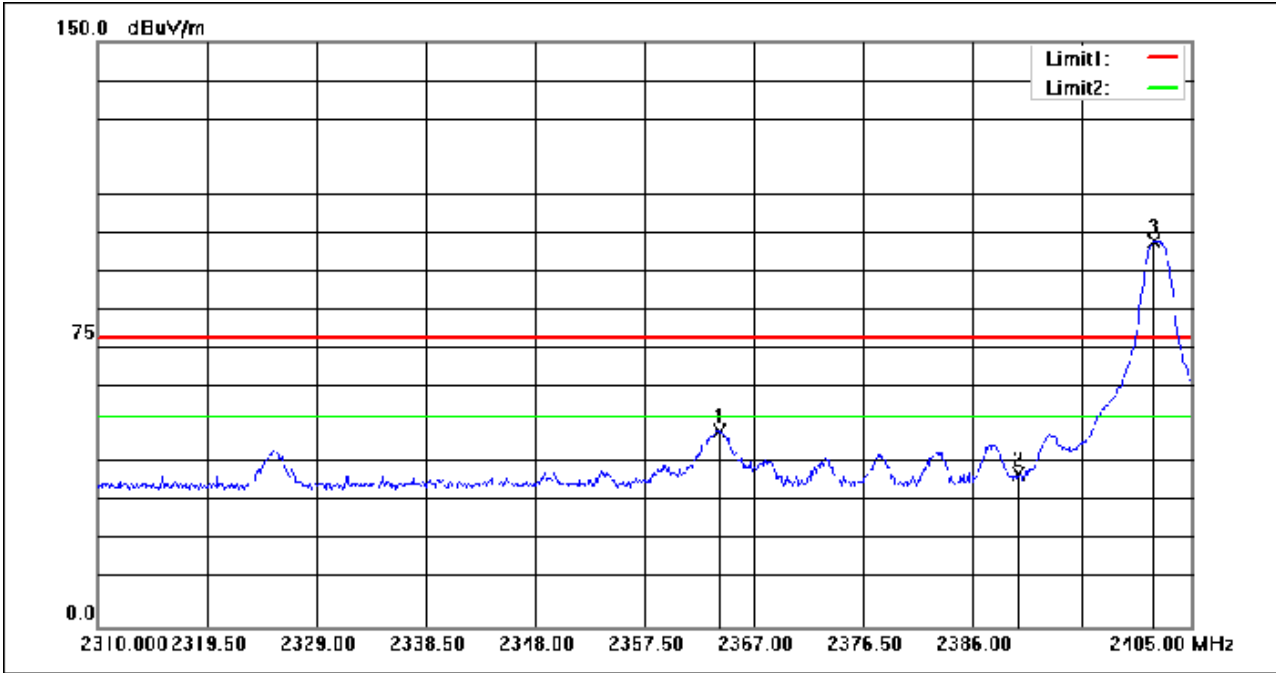
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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2363.960	70.12	-19.98	50.14	74.00	-23.86	peak
2	2390.000	58.93	-19.92	39.01	74.00	-34.99	peak
3	2401.770	118.63	-19.89	98.74	74.00	24.74	peak

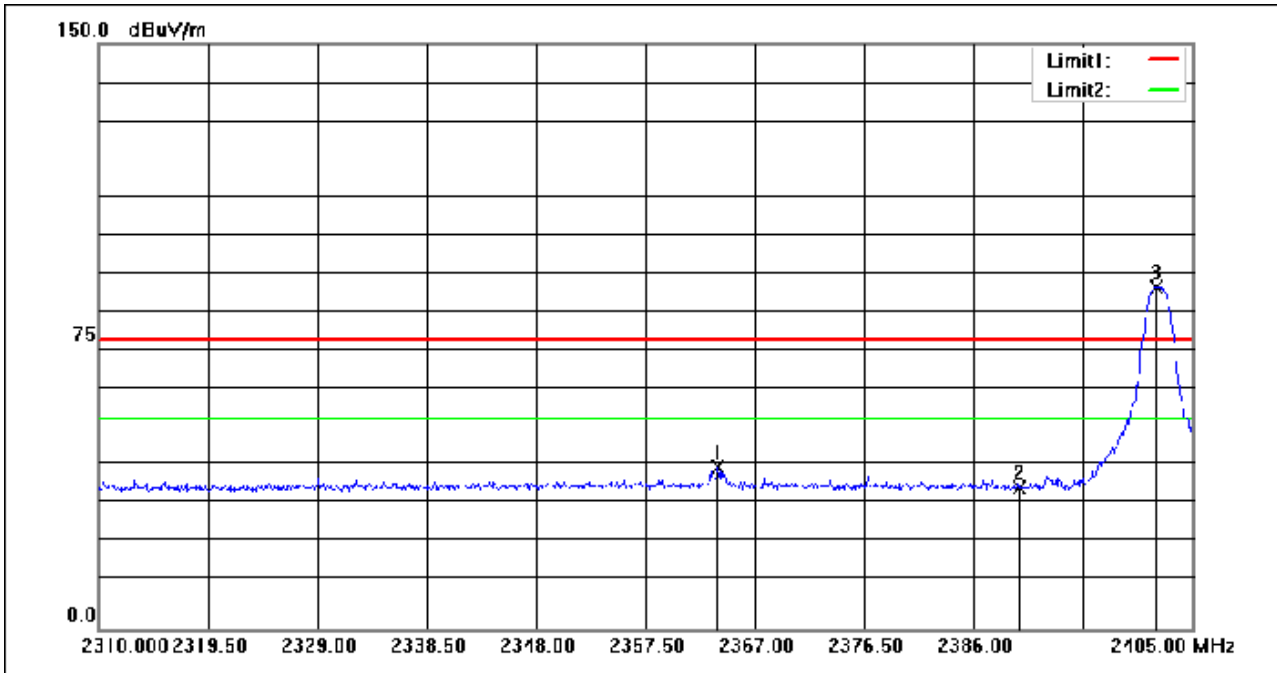
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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2363.770	61.35	-19.98	41.37	74.00	-32.63	peak
2	2390.000	56.01	-19.92	36.09	74.00	-37.91	peak
3	2401.865	107.39	-19.89	87.50	74.00	13.50	peak

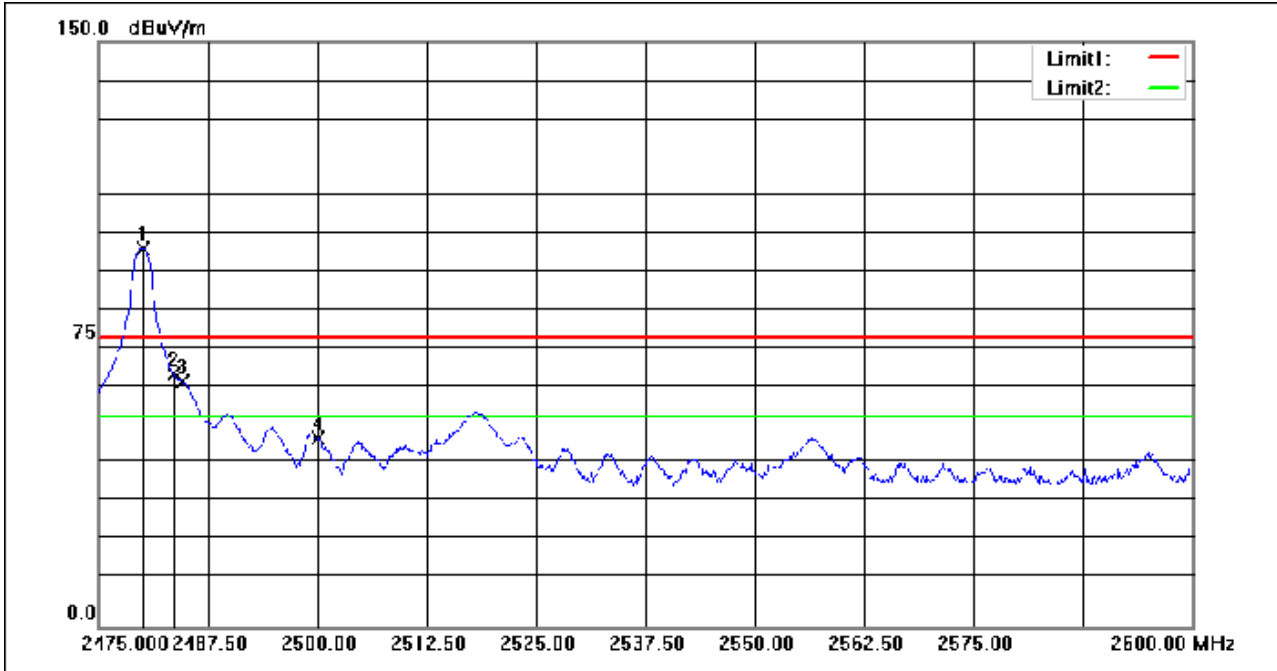
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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.000	116.45	-19.59	96.86	74.00	22.86	peak
2	2483.500	84.18	-19.59	64.59	74.00	-9.41	peak
3	2484.625	82.27	-19.59	62.68	74.00	-11.32	peak
4	2500.000	67.83	-19.61	48.22	74.00	-25.78	peak

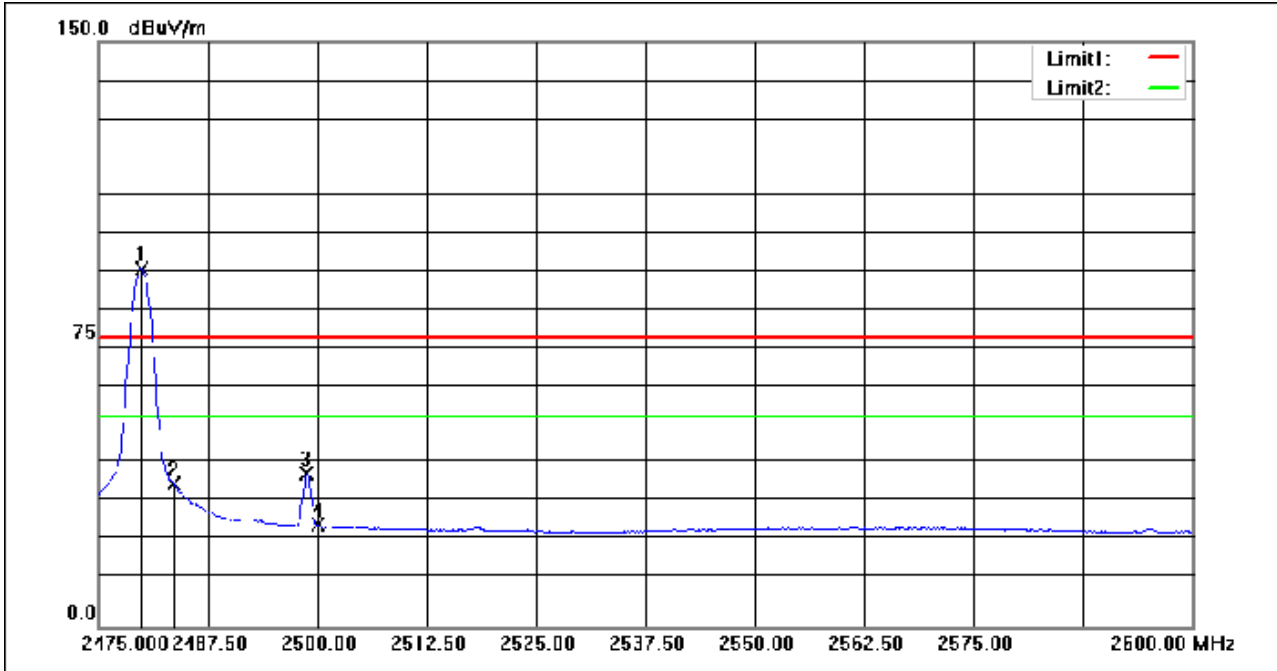
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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.875	111.21	-19.59	91.62	54.00	37.62	AVG
2	2483.500	56.33	-19.59	36.74	54.00	-17.26	AVG
3	2498.750	58.84	-19.61	39.23	54.00	-14.77	AVG
4	2500.000	45.59	-19.61	25.98	54.00	-28.02	AVG

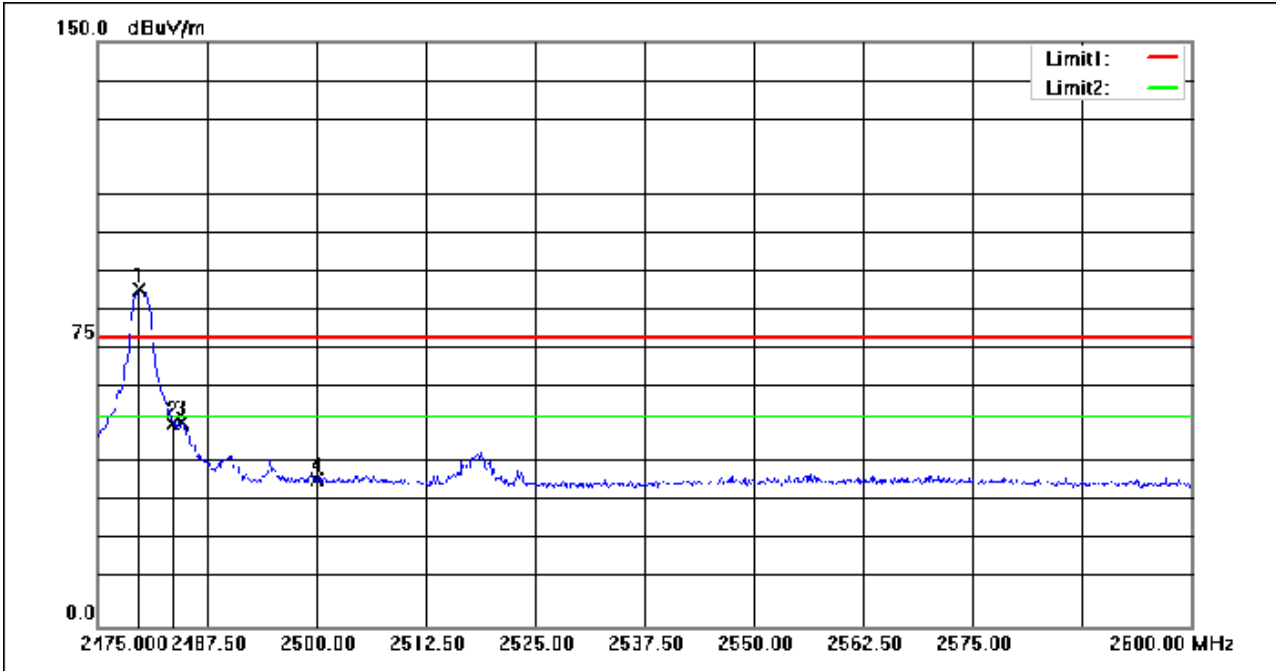
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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	106.06	-19.59	86.47	74.00	12.47	peak
2	2483.500	71.49	-19.59	51.90	74.00	-22.10	peak
3	2484.625	71.85	-19.59	52.26	74.00	-21.74	peak
4	2500.000	57.31	-19.61	37.70	74.00	-36.30	peak

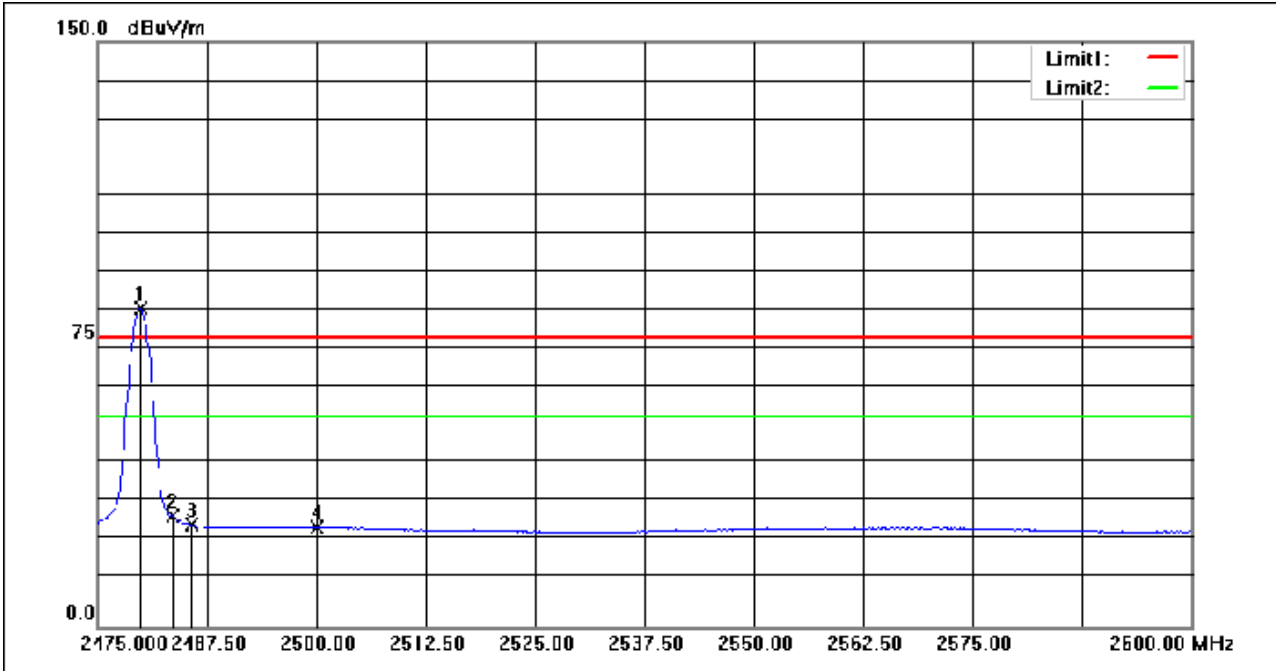
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.875	101.16	-19.59	81.57	54.00	27.57	AVG
2	2483.500	47.84	-19.59	28.25	54.00	-25.75	AVG
3	2485.750	45.54	-19.59	25.95	54.00	-28.05	AVG
4	2500.000	44.86	-19.61	25.25	54.00	-28.75	AVG

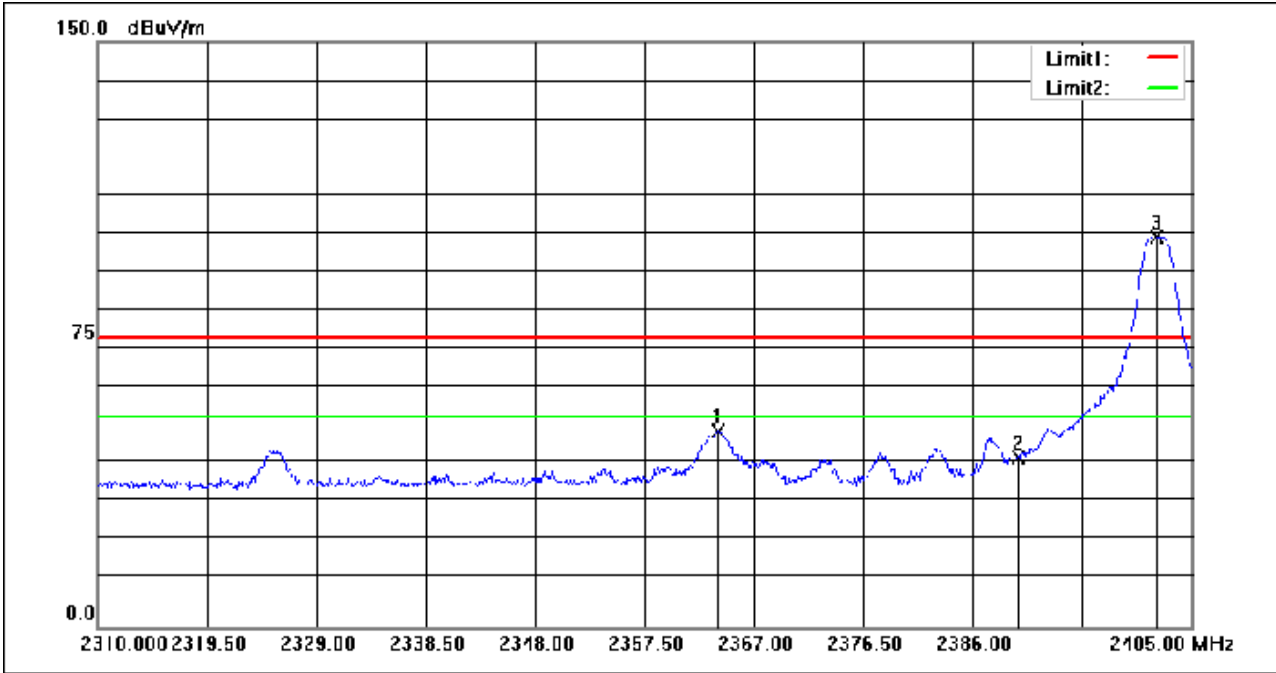
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Test Mode: 02; Polarity: Horizontal; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2363.865	70.04	-19.98	50.06	74.00	-23.94	peak
2	2390.000	63.20	-19.92	43.28	74.00	-30.72	peak
3	2402.055	119.77	-19.89	99.88	74.00	25.88	peak



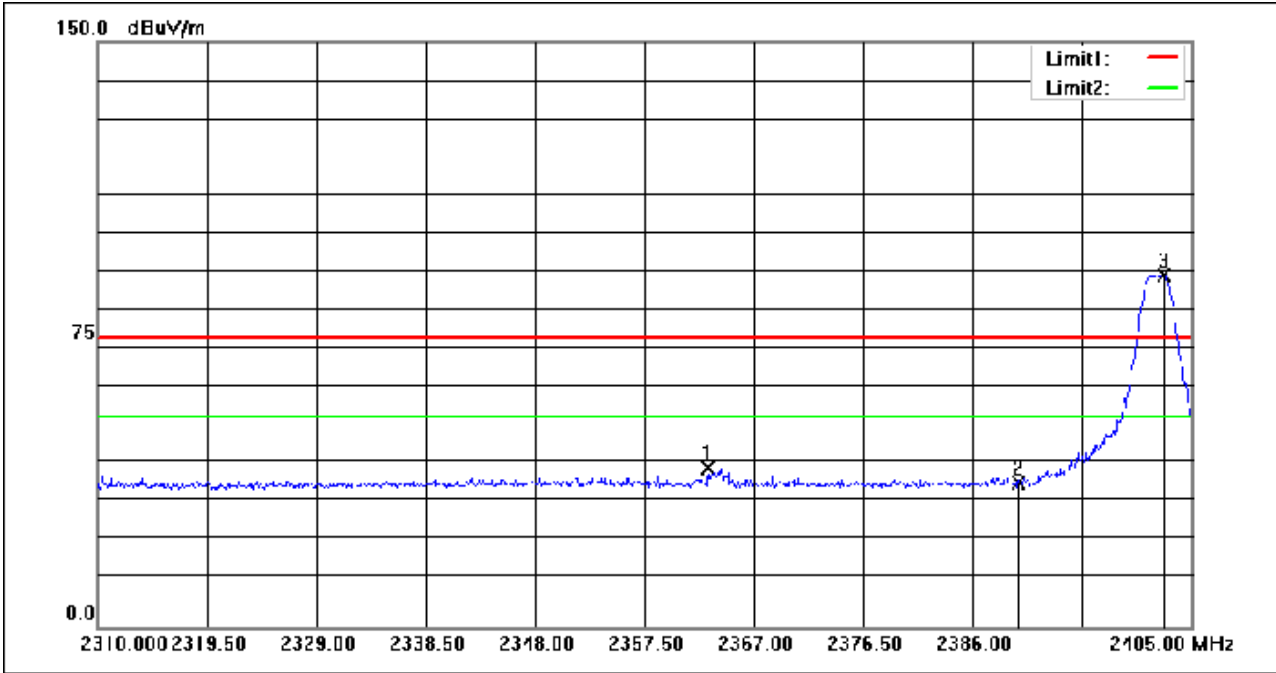
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Test Mode: 02; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2363.010	60.64	-19.98	40.66	74.00	-33.34	peak
2	2390.000	57.01	-19.92	37.09	74.00	-36.91	peak
3	2402.625	109.93	-19.88	90.05	74.00	16.05	peak

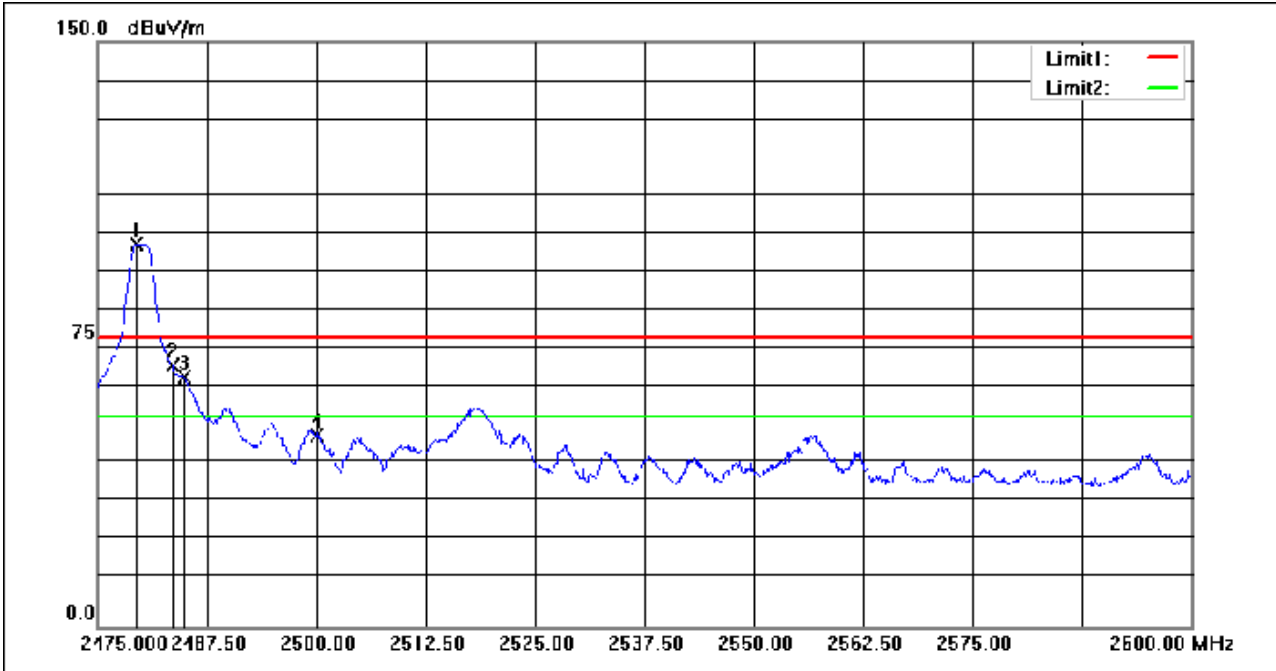
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Test Mode: 02; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.375	117.79	-19.58	98.21	74.00	24.21	peak
2	2483.500	86.43	-19.59	66.84	74.00	-7.16	peak
3	2484.875	83.40	-19.59	63.81	74.00	-10.19	peak
4	2500.000	68.66	-19.61	49.05	74.00	-24.95	peak

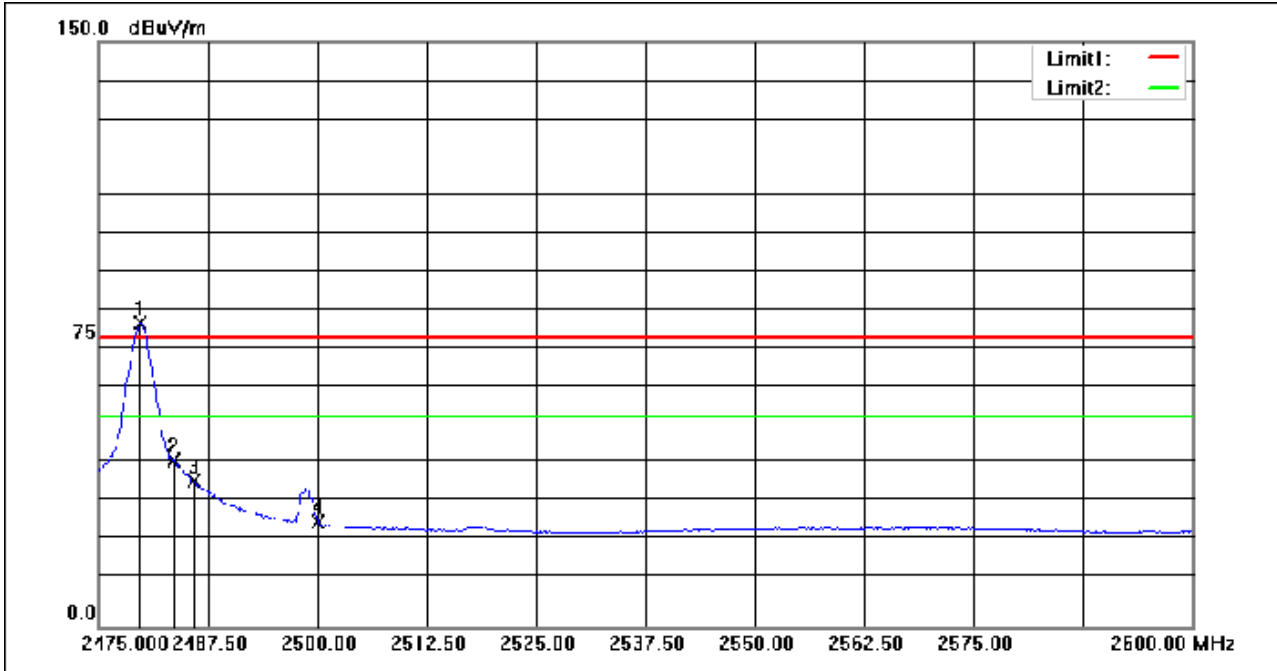
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	97.57	-19.59	77.98	54.00	23.98	AVG
2	2483.500	61.98	-19.59	42.39	54.00	-11.61	AVG
3	2485.875	56.80	-19.59	37.21	54.00	-16.79	AVG
4	2500.000	46.43	-19.61	26.82	54.00	-27.18	AVG

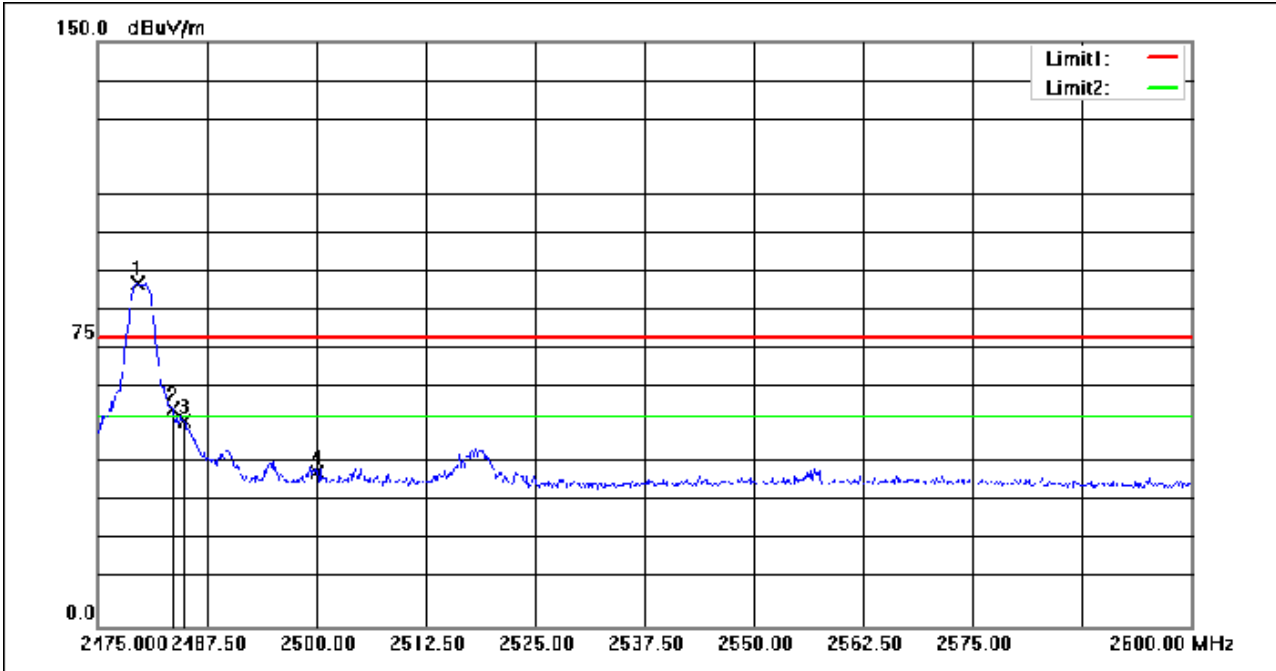
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.500	107.39	-19.58	87.81	74.00	13.81	peak
2	2483.500	75.22	-19.59	55.63	74.00	-18.37	peak
3	2484.875	72.36	-19.59	52.77	74.00	-21.23	peak
4	2500.000	59.05	-19.61	39.44	74.00	-34.56	peak

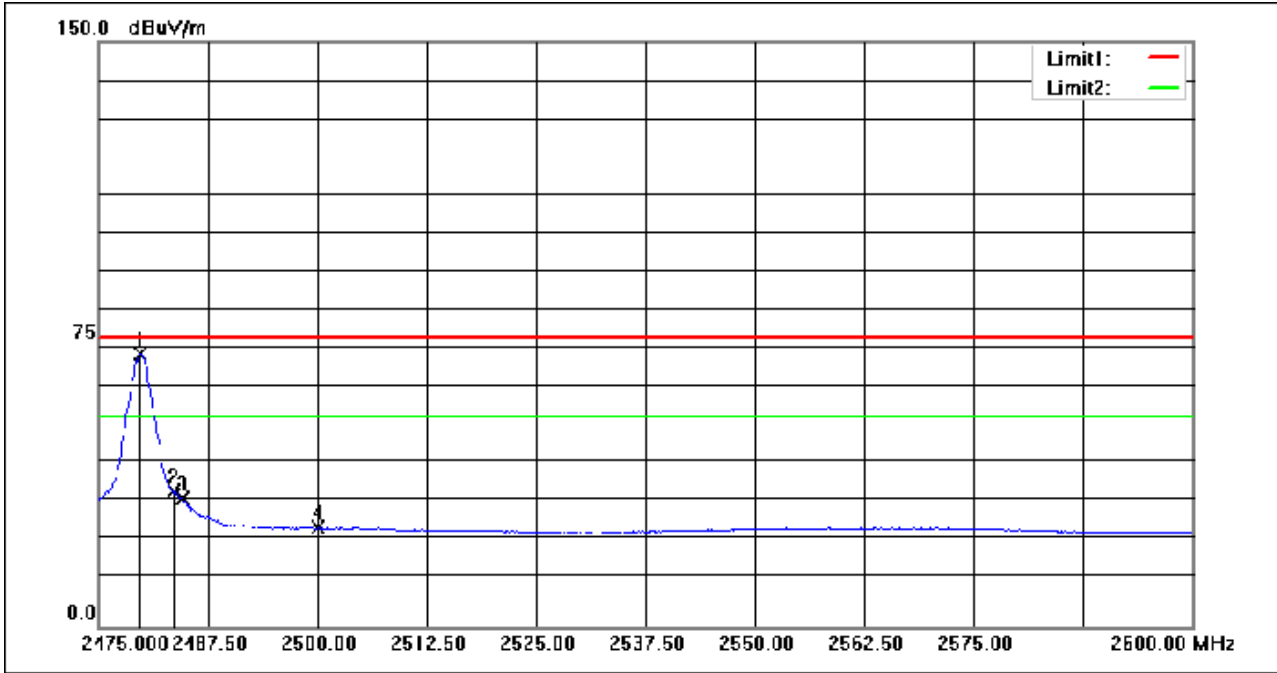
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	89.64	-19.59	70.05	54.00	16.05	AVG
2	2483.500	54.15	-19.59	34.56	54.00	-19.44	AVG
3	2484.625	52.35	-19.59	32.76	54.00	-21.24	AVG
4	2500.000	44.74	-19.61	25.13	54.00	-28.87	AVG

### 7.7 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

Measurement Distance: 3m

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

#### 7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 23.6 °C

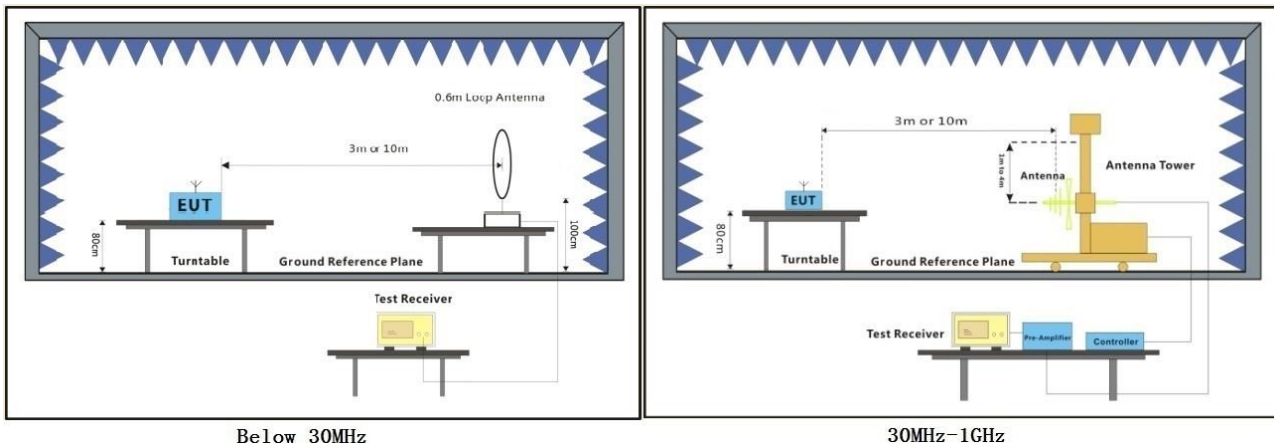
Humidity: 50.3 % RH

Atmospheric Pressure: 1010 mbar

#### 7.7.2 Test Mode Description

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

#### 7.7.3 Test Setup Diagram



**7.7.4 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.  $Level = Read\ Level + Cable\ Loss + Antenna\ Factor - Preamp\ Factor$
- 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.

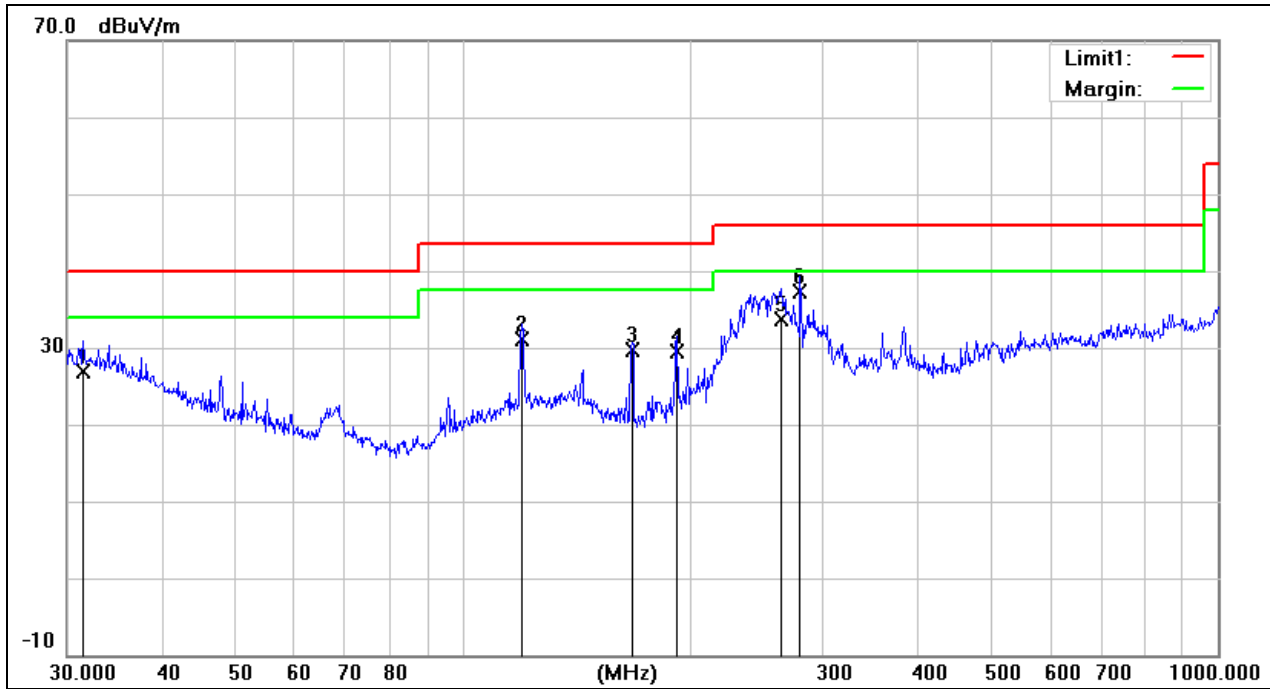
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Test Mode: 00; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	31.5095	1.70	25.20	26.90	40.00	-13.10	100	215	QP
2	119.8556	11.64	19.41	31.05	43.50	-12.45	100	341	QP
3	167.8243	12.57	17.13	29.70	43.50	-13.80	300	227	QP
4	192.4186	13.12	16.40	29.52	43.50	-13.98	100	101	QP
5	263.8190	12.75	20.99	33.74	46.00	-12.26	200	359	QP
6	280.0238	17.10	20.30	37.40	46.00	-8.60	200	233	QP



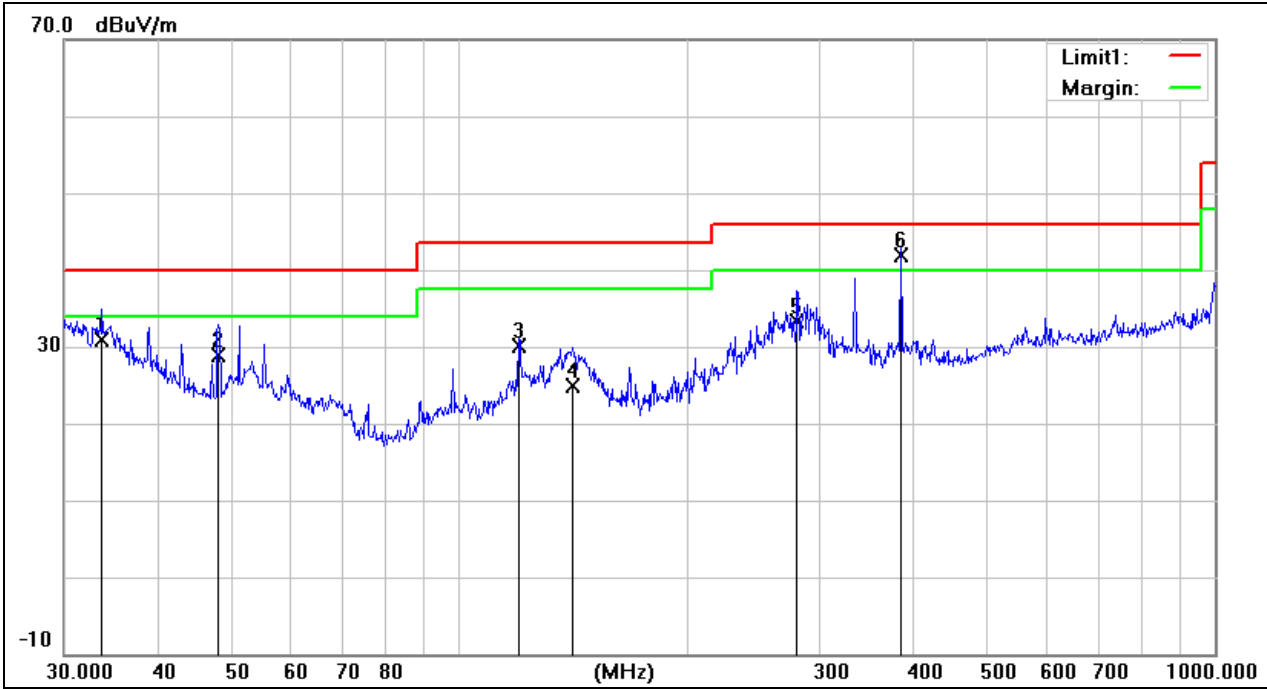
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Test Mode: 00; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	33.6802	5.97	24.98	30.95	40.00	-9.05	100	188	QP
2	47.9940	10.24	18.57	28.81	40.00	-11.19	100	254	QP
3	119.8556	10.75	19.41	30.16	43.50	-13.34	192	360	QP
4	141.3298	6.37	18.44	24.81	43.50	-18.69	100	254	QP
5	280.0237	12.97	20.30	33.27	46.00	-12.73	148	360	QP
6	383.9318	19.38	22.61	41.99	46.00	-4.01	100	177	QP

**7.8 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

Measurement Distance: 3m

Limit:

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

**7.8.1 E.U.T. Operation**

Operating Environment:

Temperature: 23.6 °C

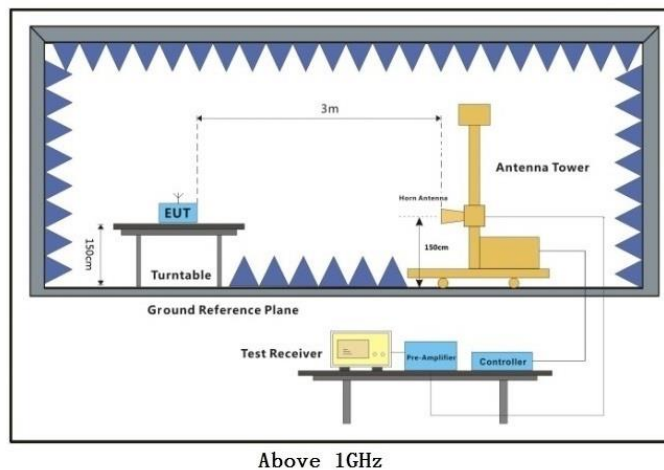
Humidity: 50.3 % RH

Atmospheric Pressure: 1010 mbar

**7.8.2 Test Mode Description**

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

**7.8.3 Test Setup Diagram**



**7.8.4 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.  $Level = Read\ Level + Cable\ Loss + Antenna\ Factor - Preamp\ Factor$
- 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.

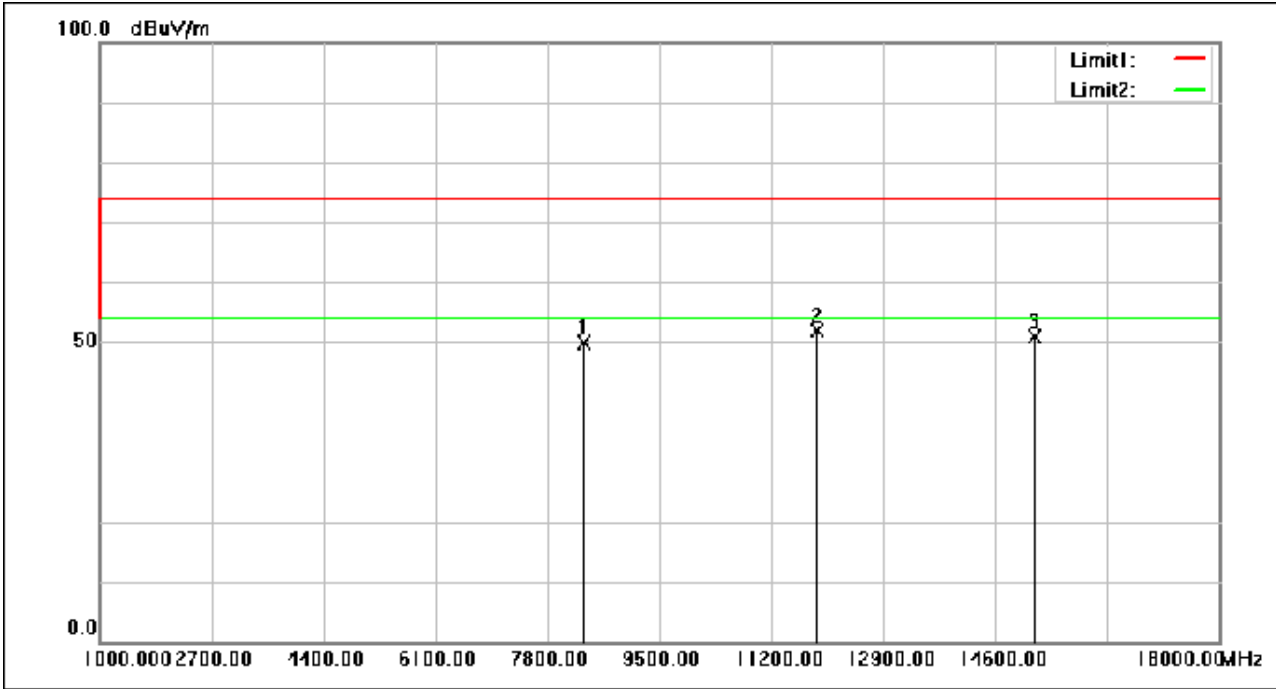
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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8346.550	53.15	-3.39	49.76	74.00	-24.24	peak
2	11910.600	51.68	0.27	51.95	74.00	-22.05	peak
3	15202.650	50.62	0.29	50.91	74.00	-23.09	peak

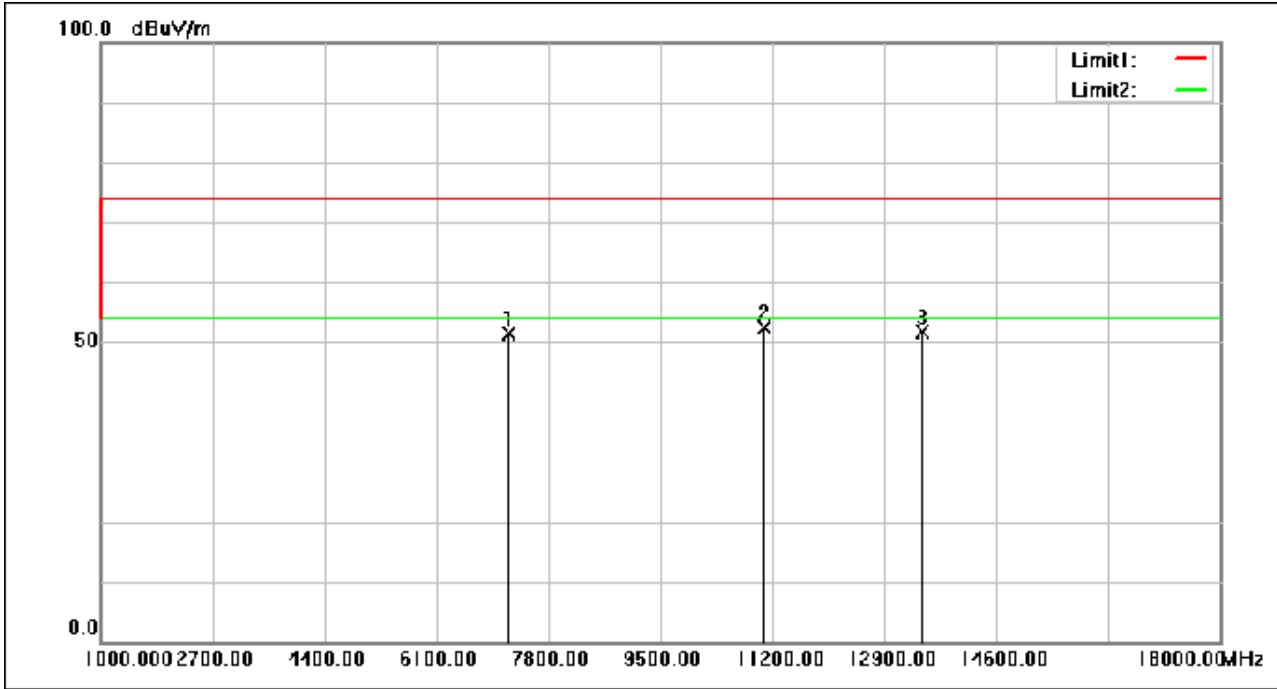
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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:Low



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7206.700	57.09	-5.70	51.39	74.00	-22.61	peak
2	11064.000	51.83	0.47	52.30	74.00	-21.70	peak
3	13478.000	51.29	0.27	51.56	74.00	-22.44	peak

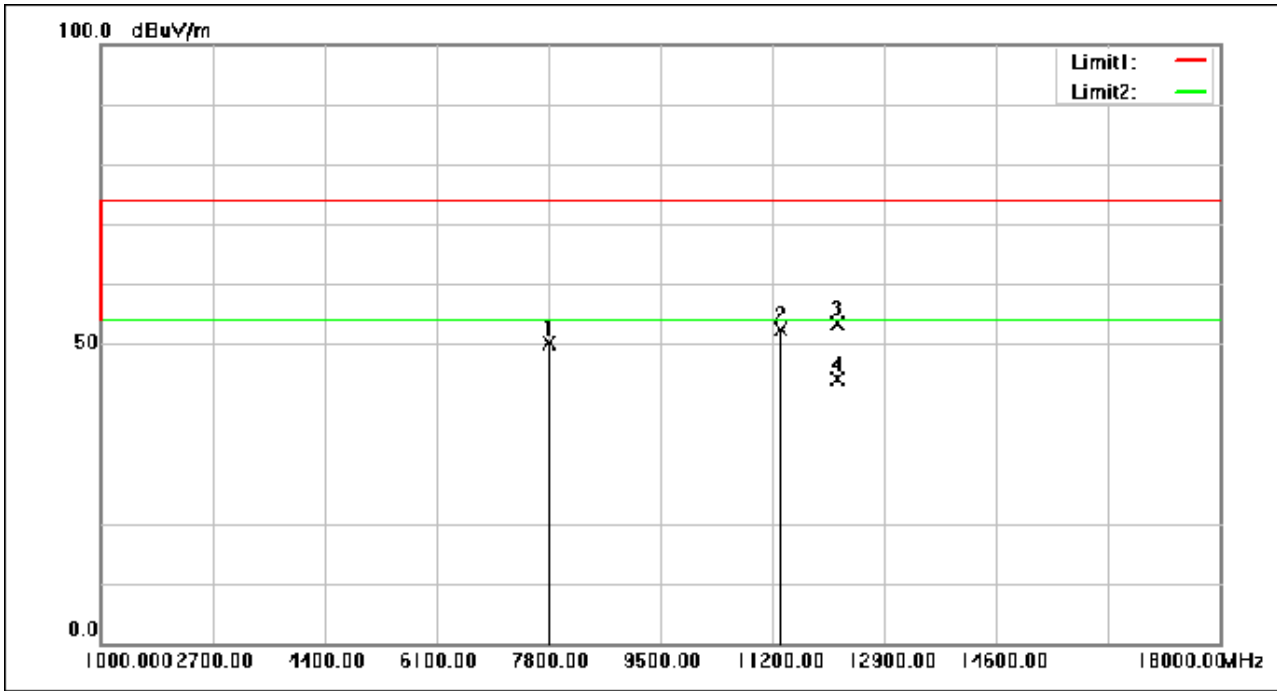
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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7822.950	54.37	-4.12	50.25	74.00	-23.75	peak
2	11330.900	52.09	0.41	52.50	74.00	-21.50	peak
3	12201.300	53.20	0.26	53.46	74.00	-20.54	peak
4	12201.300	43.99	0.26	44.25	54.00	-9.75	AVG

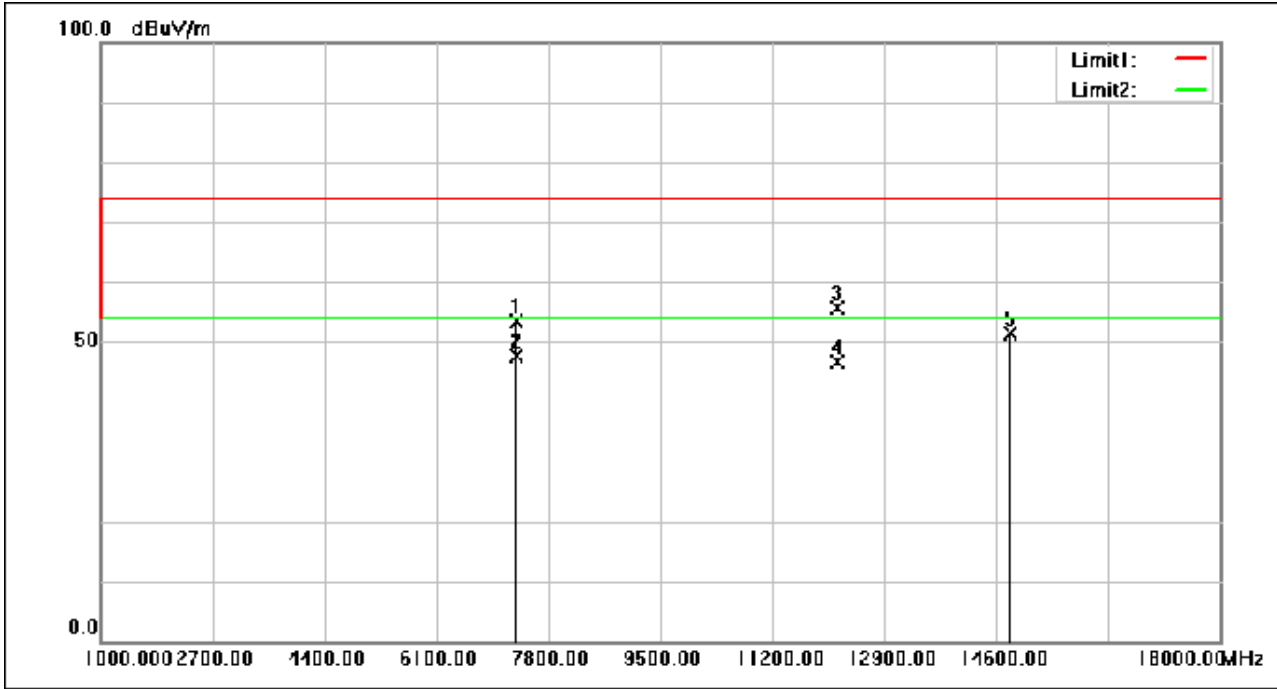
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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:middle



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7320.600	58.58	-5.18	53.40	74.00	-20.60	peak
2	7320.600	52.77	-5.18	47.59	54.00	-6.41	AVG
3	12198.750	55.26	0.26	55.52	74.00	-18.48	peak
4	12198.750	46.42	0.26	46.68	54.00	-7.32	AVG
5	14816.750	51.04	0.31	51.35	74.00	-22.65	peak

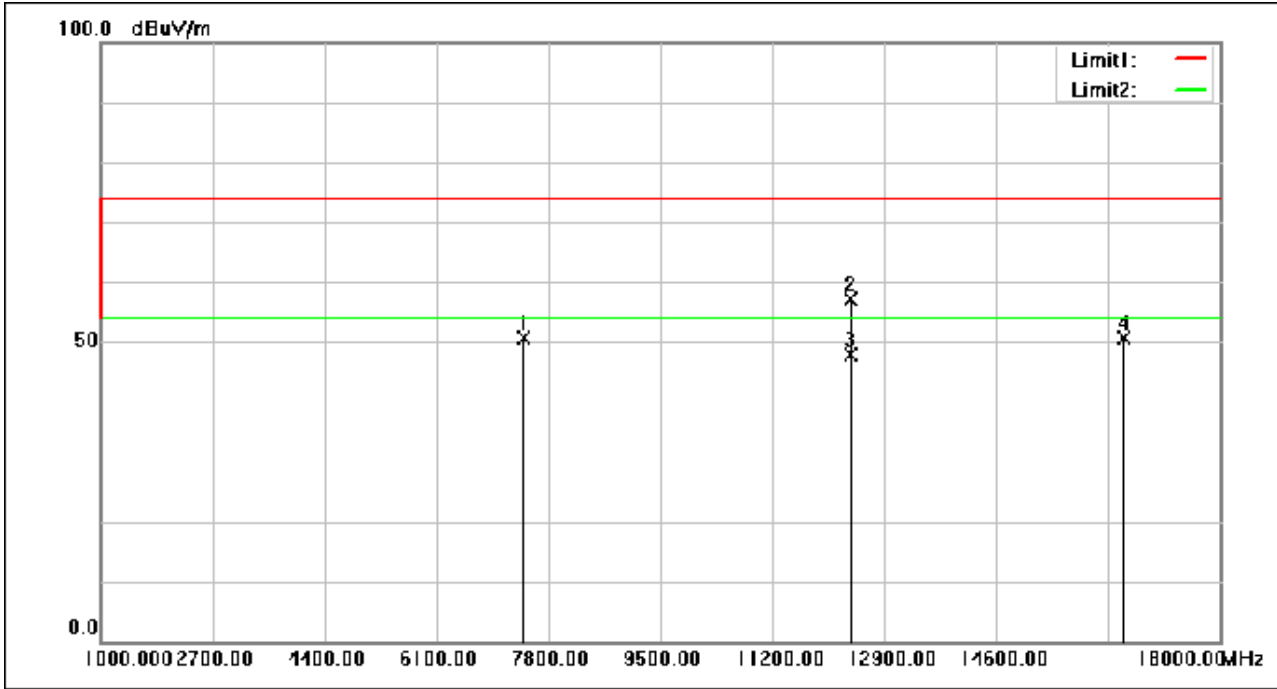
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Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7438.750	55.47	-4.78	50.69	74.00	-23.31	peak
2	12398.500	56.91	0.26	57.17	74.00	-16.83	peak
3	12398.500	47.59	0.26	47.85	54.00	-6.15	AVG
4	16546.500	50.07	0.65	50.72	74.00	-23.28	peak



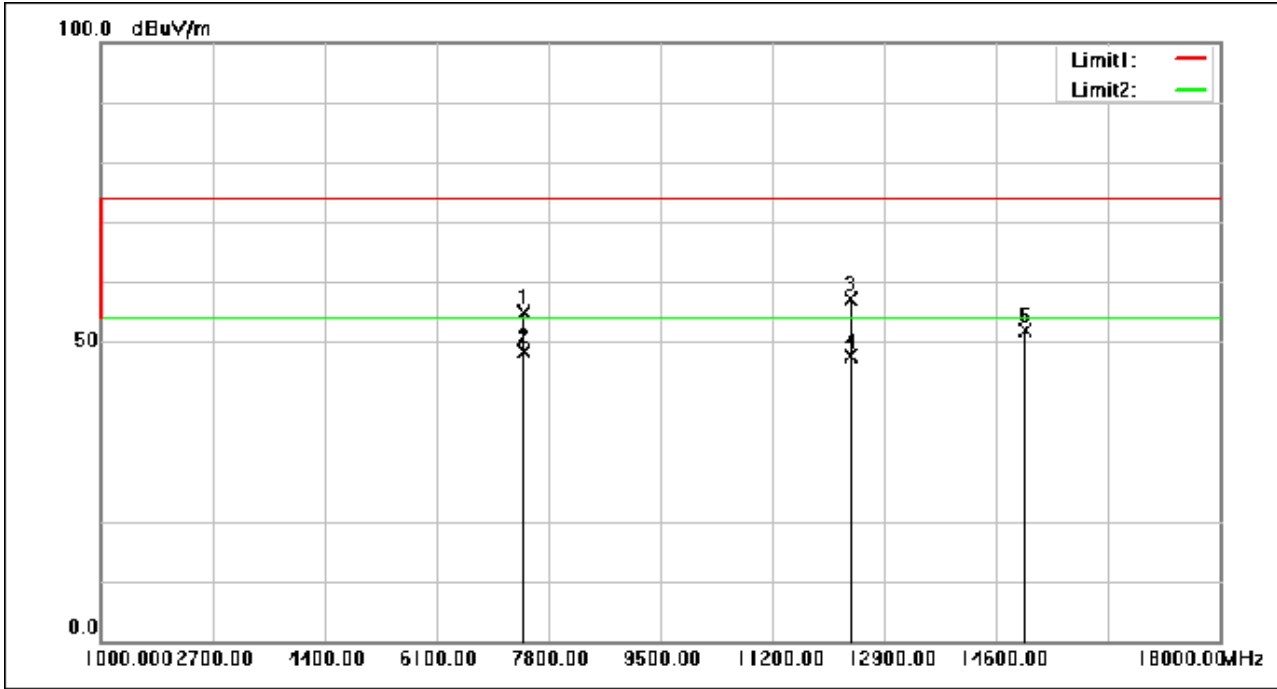
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Test Mode: 01; Polarity: Vertical; Modulation:GFSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7440.450	59.67	-4.78	54.89	74.00	-19.11	peak
2	7440.450	53.28	-4.78	48.50	54.00	-5.50	AVG
3	12399.350	56.81	0.26	57.07	74.00	-16.93	peak
4	12399.350	47.25	0.26	47.51	54.00	-6.49	AVG
5	15047.950	51.66	0.30	51.96	74.00	-22.04	peak

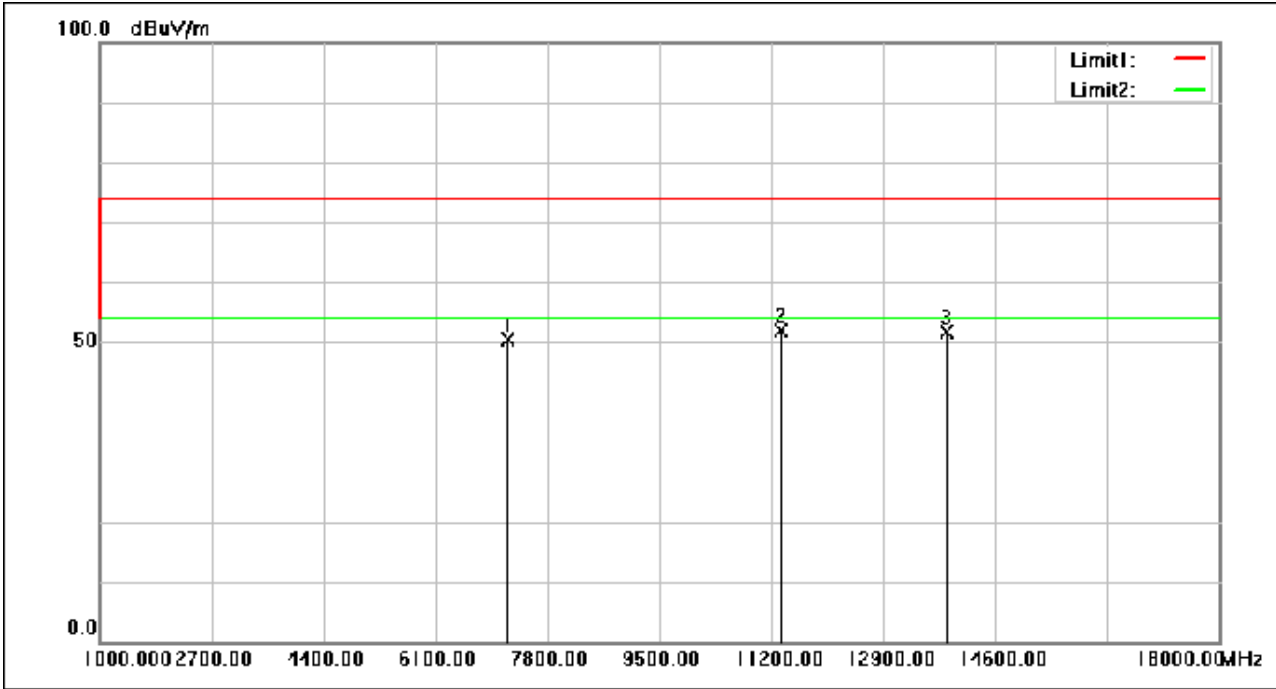
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7206.700	56.09	-5.70	50.39	74.00	-23.61	peak
2	11341.100	51.47	0.41	51.88	74.00	-22.12	peak
3	13853.700	51.23	0.30	51.53	74.00	-22.47	peak

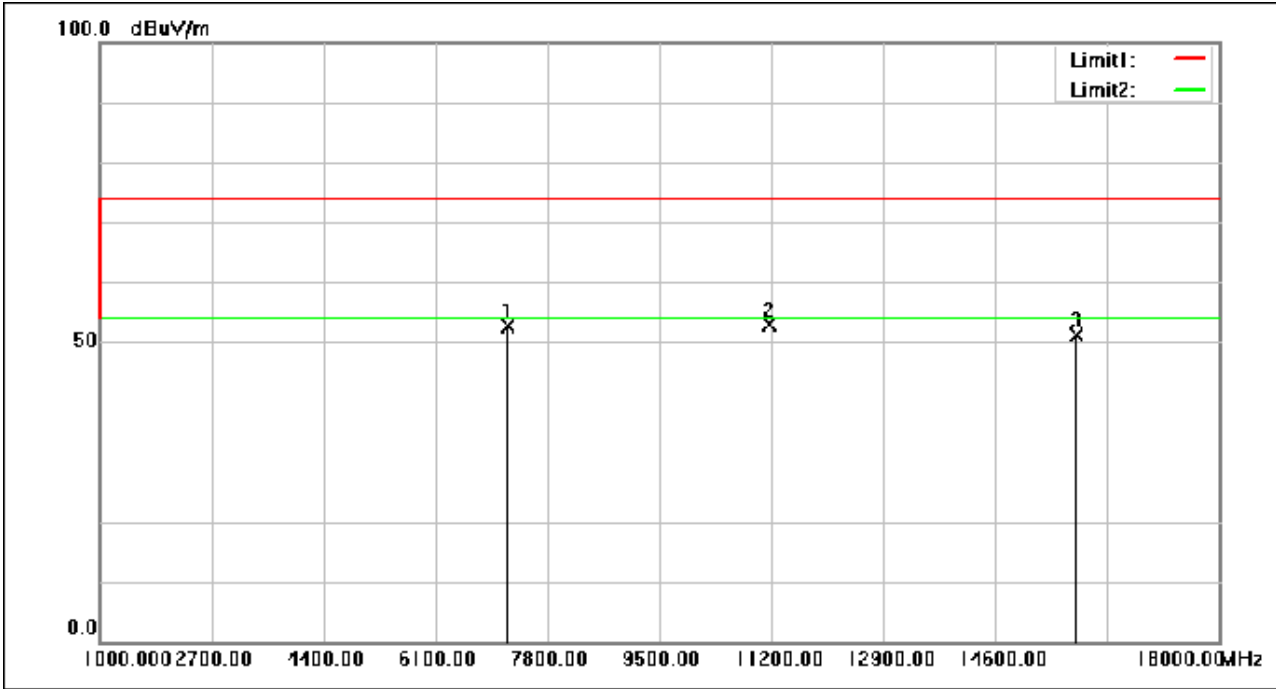
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7205.850	58.36	-5.70	52.66	74.00	-21.34	peak
2	11176.200	52.35	0.44	52.79	74.00	-21.21	peak
3	15842.700	50.90	0.26	51.16	74.00	-22.84	peak

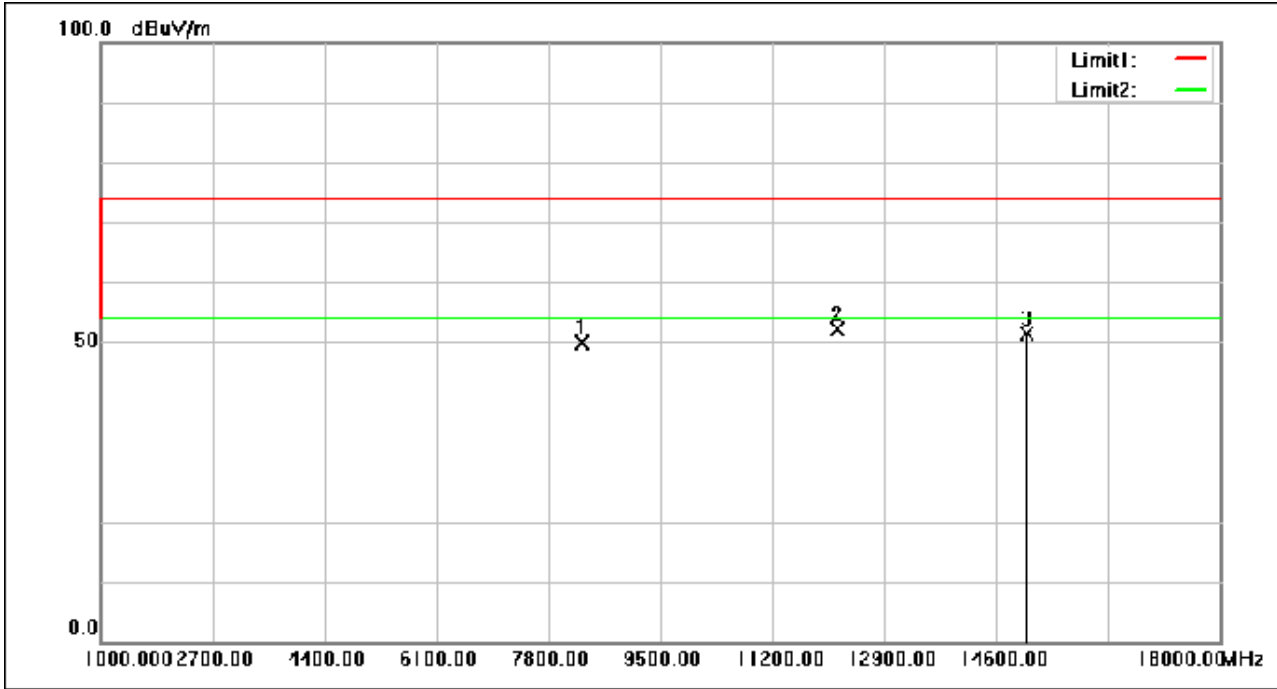
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8323.600	53.34	-3.43	49.91	74.00	-24.09	peak
2	12202.150	51.92	0.26	52.18	74.00	-21.82	peak
3	15067.500	51.16	0.30	51.46	74.00	-22.54	peak

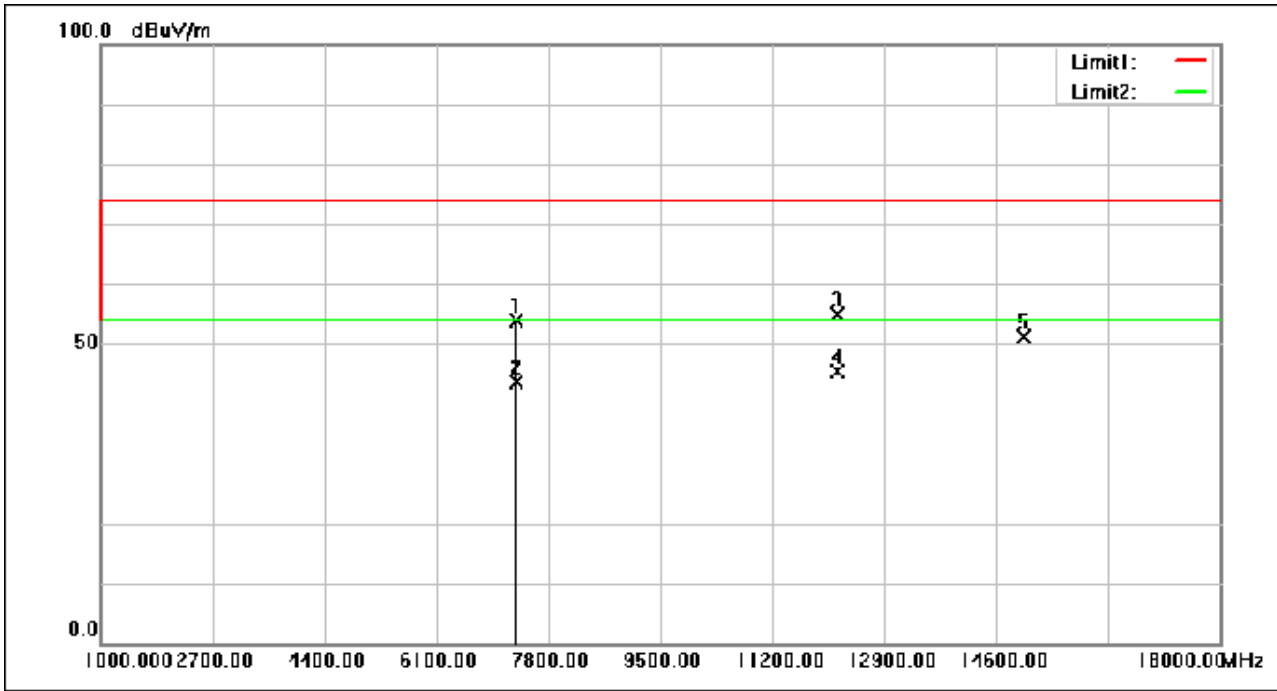
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7321.450	58.93	-5.17	53.76	74.00	-20.24	peak
2	7321.450	48.69	-5.17	43.52	54.00	-10.48	AVG
3	12202.150	54.60	0.26	54.86	74.00	-19.14	peak
4	12202.150	45.11	0.26	45.37	54.00	-8.63	AVG
5	15019.900	50.93	0.30	51.23	74.00	-22.77	peak

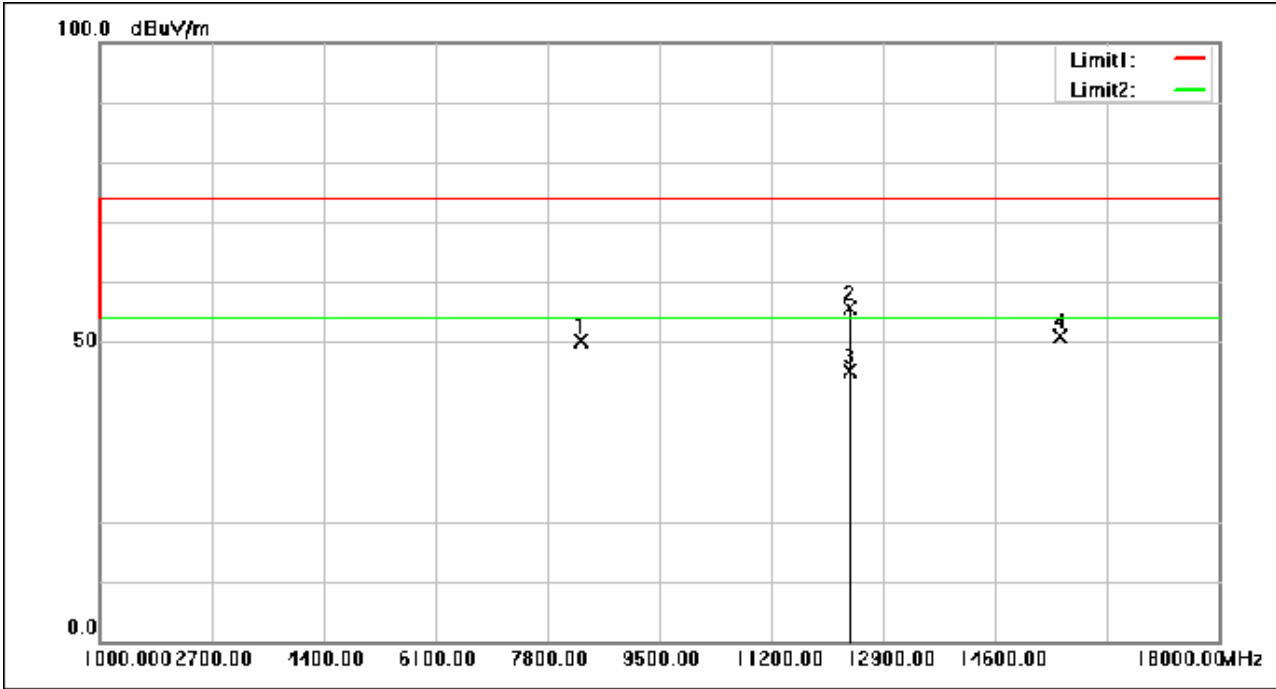
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8319.350	53.66	-3.43	50.23	74.00	-23.77	peak
2	12399.350	55.33	0.26	55.59	74.00	-18.41	peak
3	12399.350	44.83	0.26	45.09	54.00	-8.91	AVG
4	15591.950	50.72	0.27	50.99	74.00	-23.01	peak

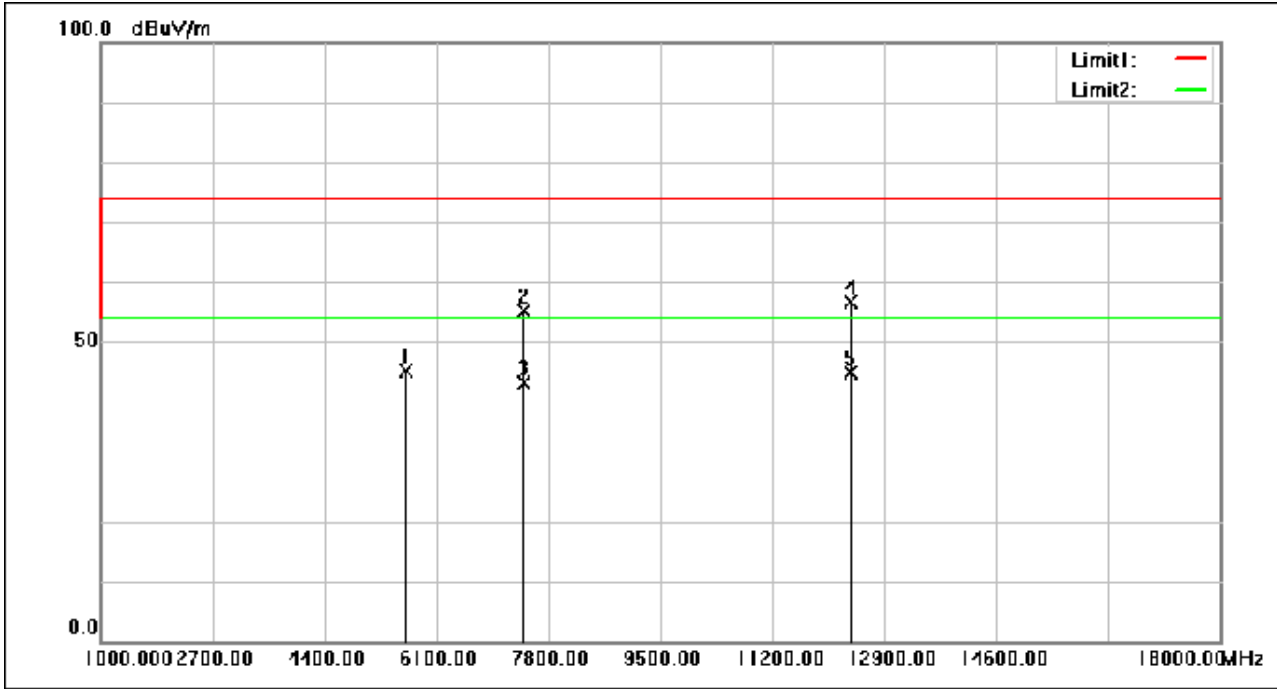
## Compliance Certification Services (Kunshan) Inc.

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



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5657.150	55.74	-10.62	45.12	74.00	-28.88	peak
2	7437.900	60.00	-4.78	55.22	74.00	-18.78	peak
3	7437.900	48.01	-4.78	43.23	54.00	-10.77	AVG
4	12400.200	56.45	0.26	56.71	74.00	-17.29	peak
5	12400.200	44.62	0.26	44.88	54.00	-9.12	AVG

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### 7.9 99% Bandwidth

Test Requirement: RSS-Gen Section 6.7  
 Test Method: ANSI C63.10 (2013) Section 6.9.3

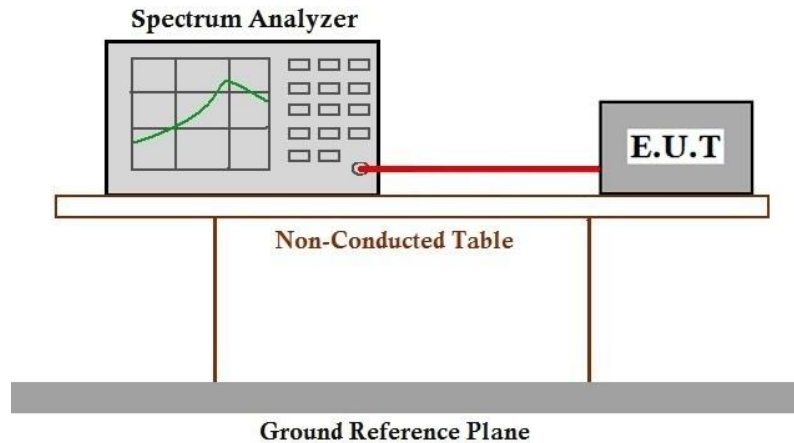
#### 7.9.1 E.U.T. Operation

Operating Environment:  
 Temperature: 25.3 °C      Humidity: 50.0 % RH      Atmospheric Pressure: 1010 mbar

#### 7.9.2 Test Mode Description

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

#### 7.9.3 Test Setup Diagram



#### 7.9.4 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 KSCR2402000270AT

### **9 EUT Constructional Details (EUT Photos)**

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2402000270AT



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### 10 Appendix

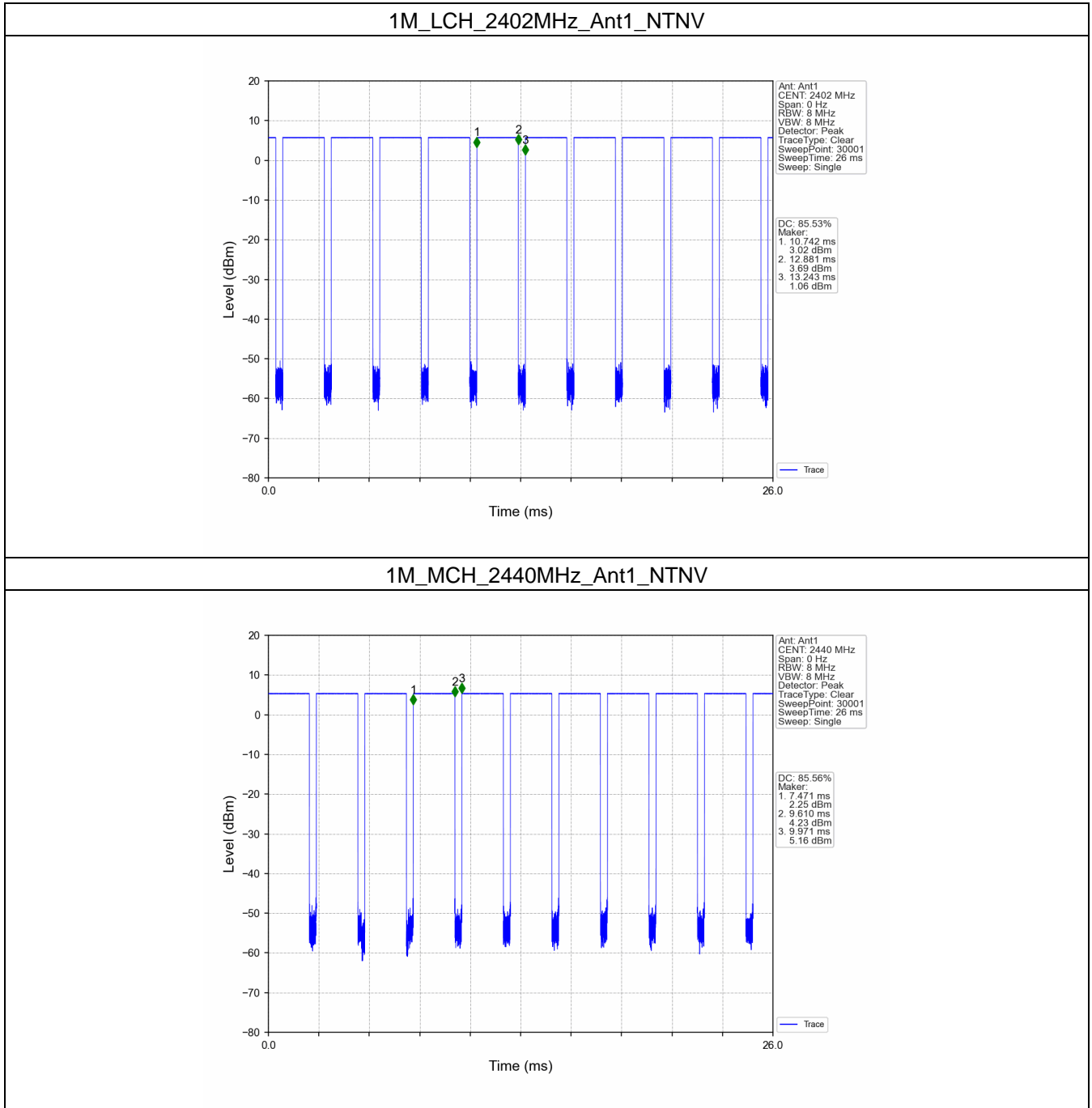
#### 1. Duty Cycle

##### 1.1 Ant1

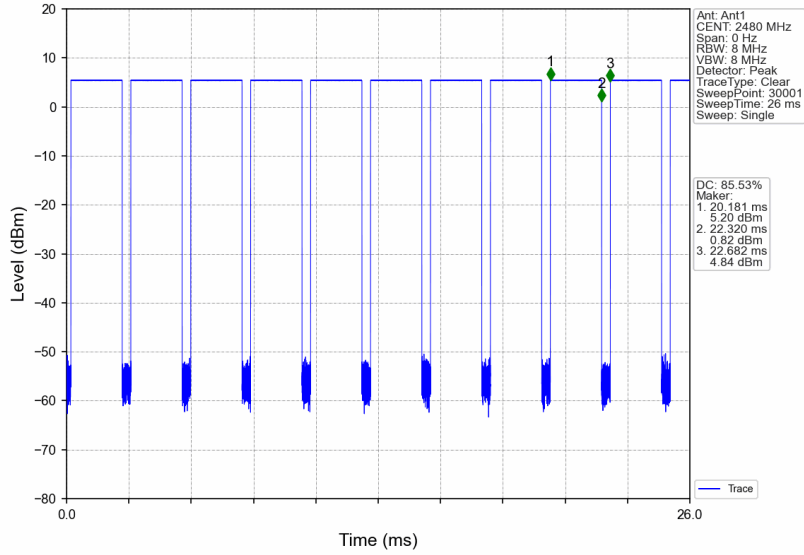
##### 1.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	2.139	2.501	85.53	0.68	0.03
		2440	2.139	2.500	85.56	0.68	0.03
		2480	2.139	2.501	85.53	0.68	0.06
2M	SISO	2402	1.082	1.875	57.71	2.39	0.10
		2440	1.082	1.875	57.71	2.39	0.05
		2480	1.083	1.875	57.76	2.38	0.04

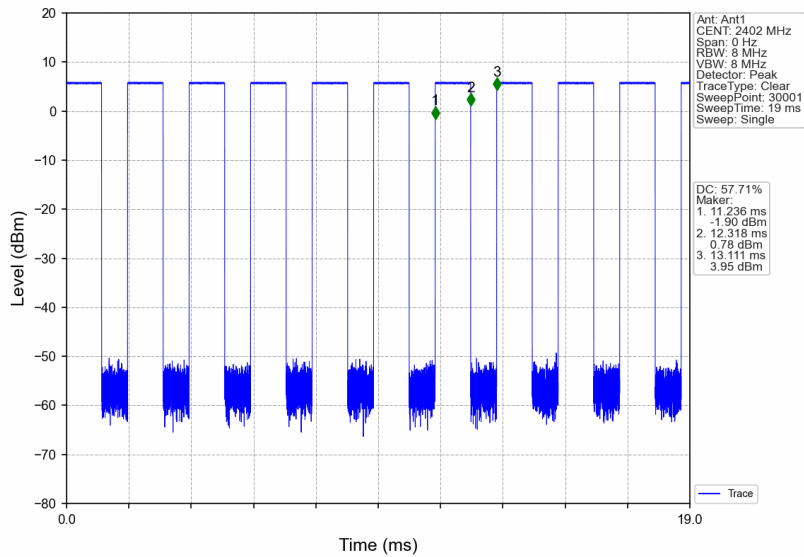
### 1.1.2 Test Graph



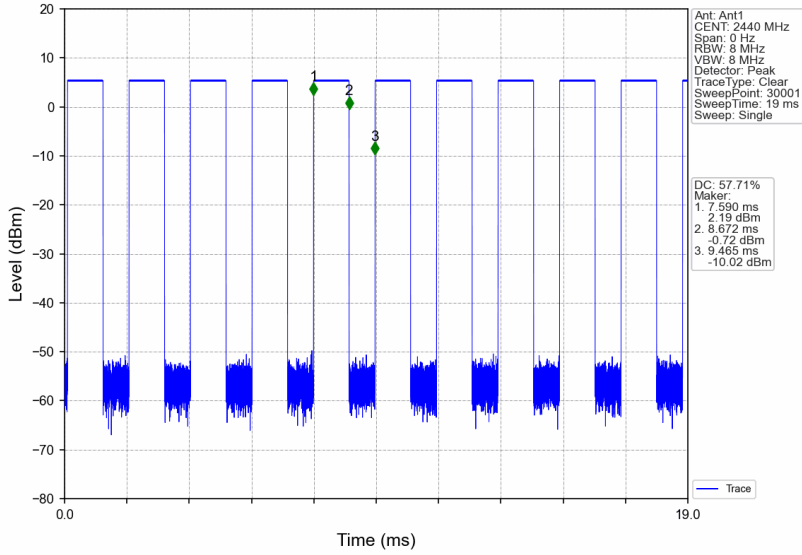
1M\_HCH\_2480MHz\_Ant1\_NTNV



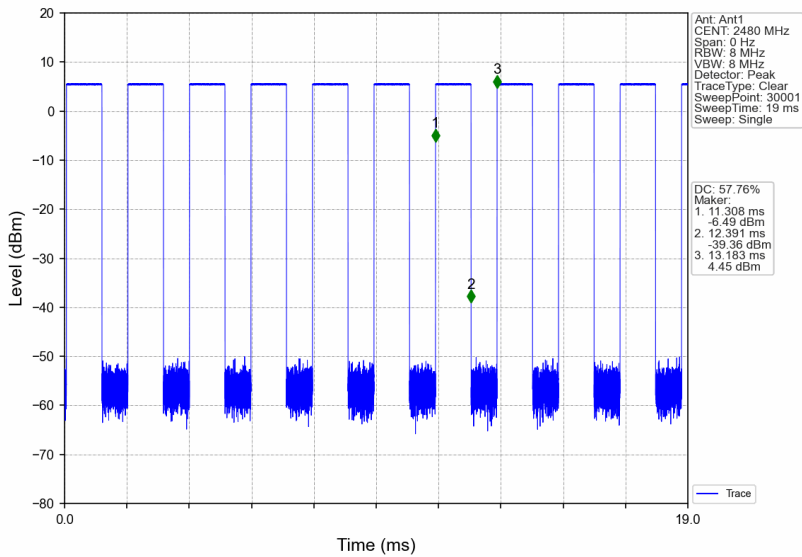
2M\_LCH\_2402MHz\_Ant1\_NTNV



2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV





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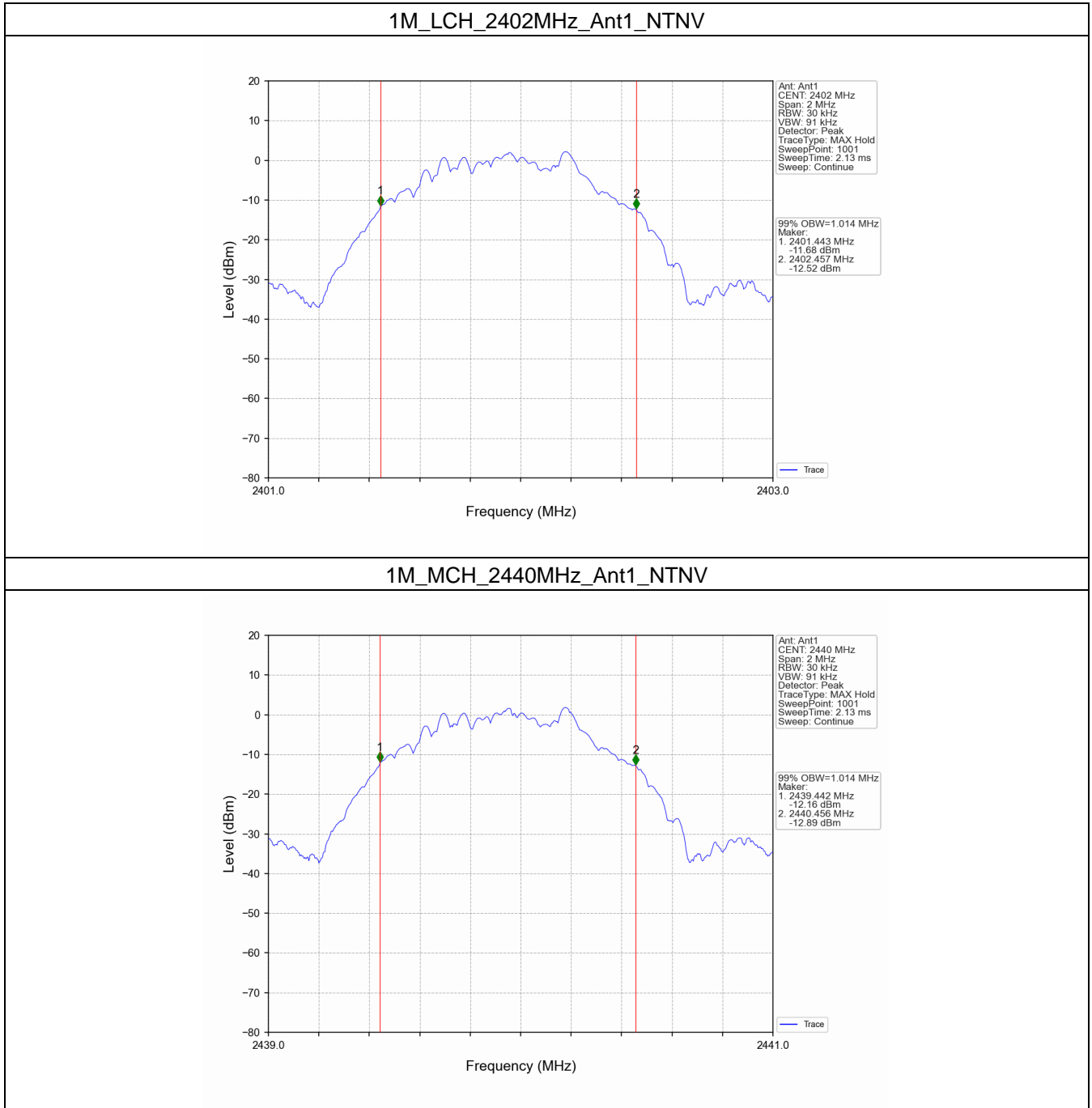
### 2. Bandwidth

#### 2.1 OBW

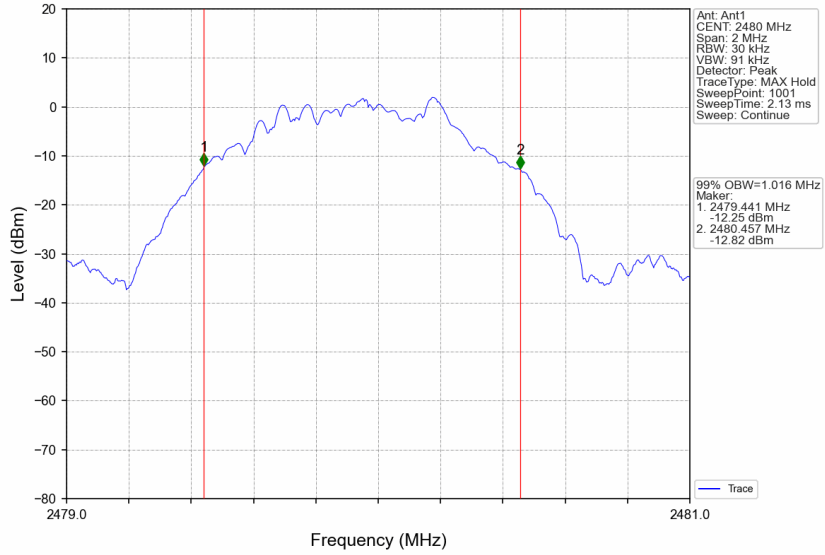
##### 2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.014	/	Pass
		2440	1	1.014	/	Pass
		2480	1	1.016	/	Pass
2M	SISO	2402	1	2.033	/	Pass
		2440	1	2.031	/	Pass
		2480	1	2.036	/	Pass

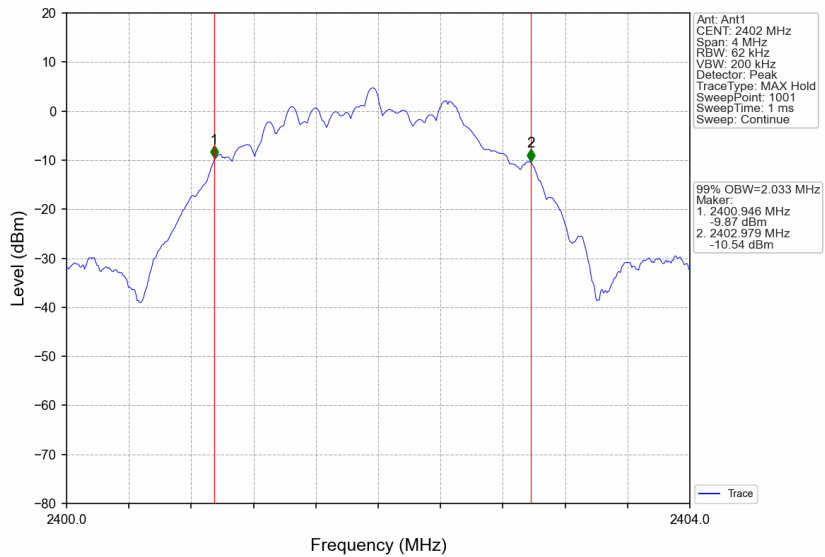
### 2.1.2 Test Graph



1M\_HCH\_2480MHz\_Ant1\_NTNV

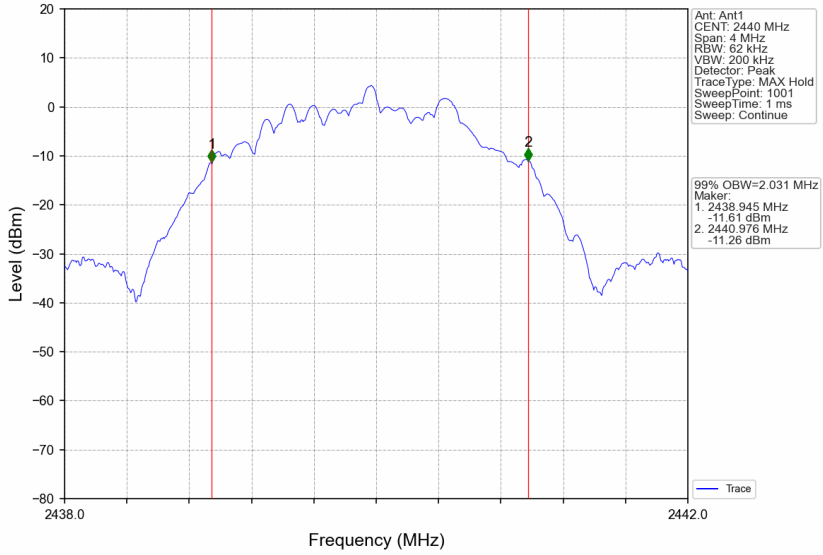


2M\_LCH\_2402MHz\_Ant1\_NTNV

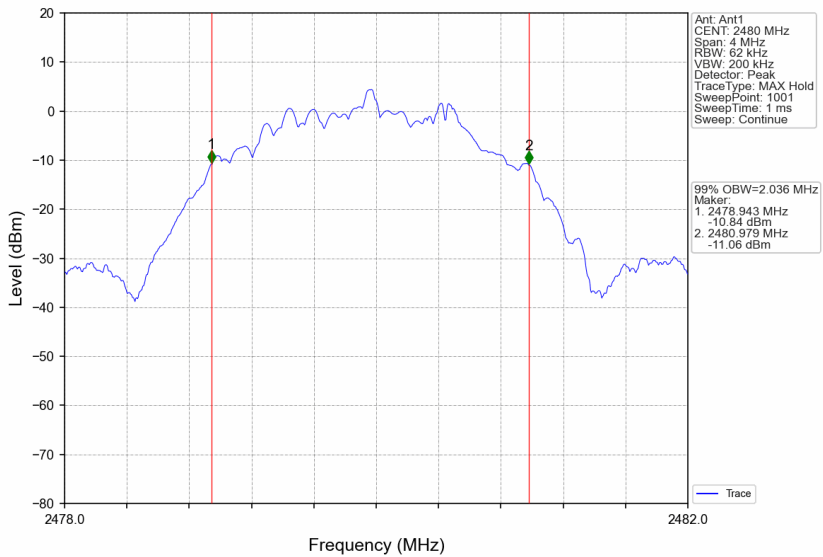




2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV





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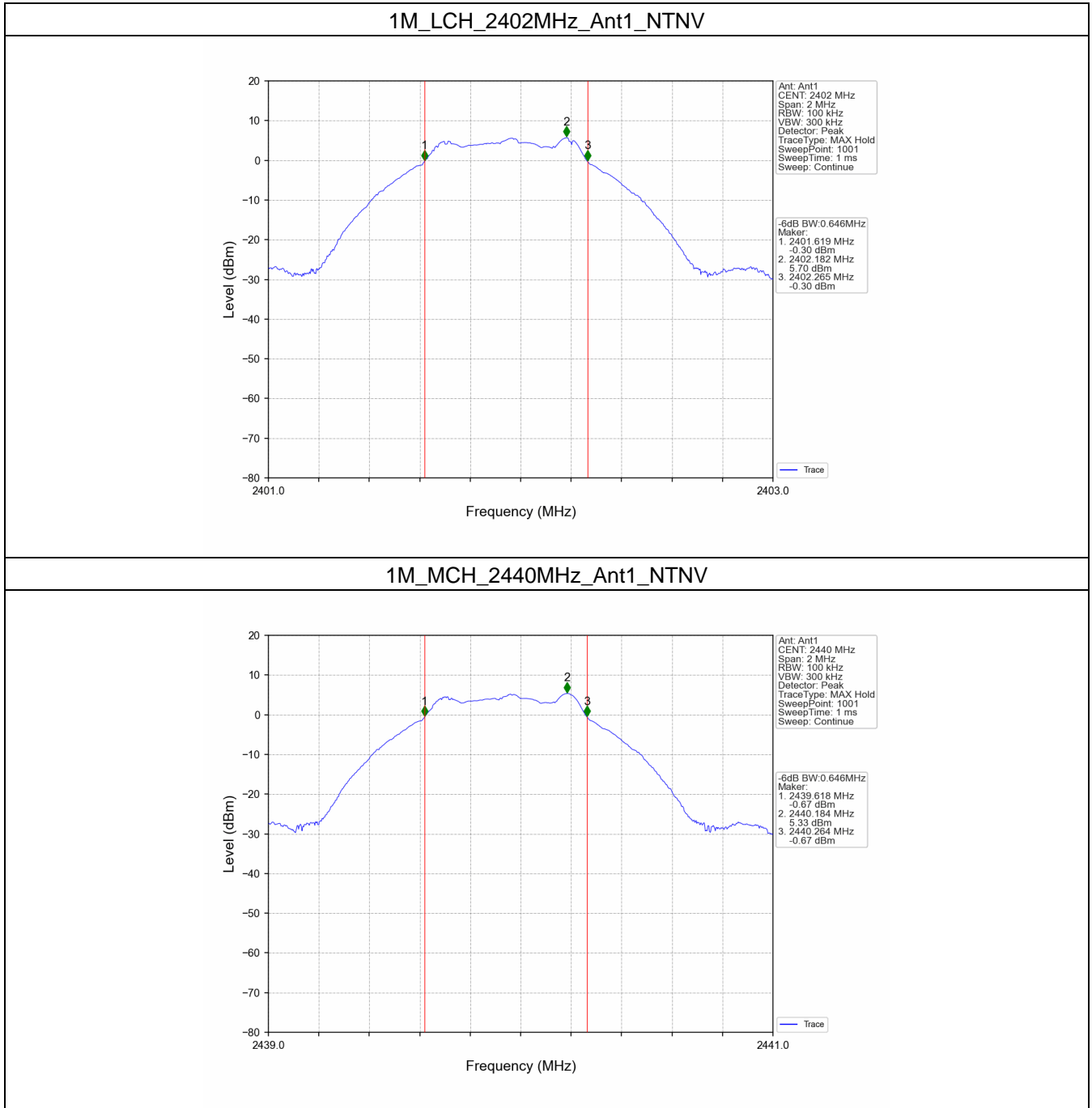
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### 2.2 6dB BW

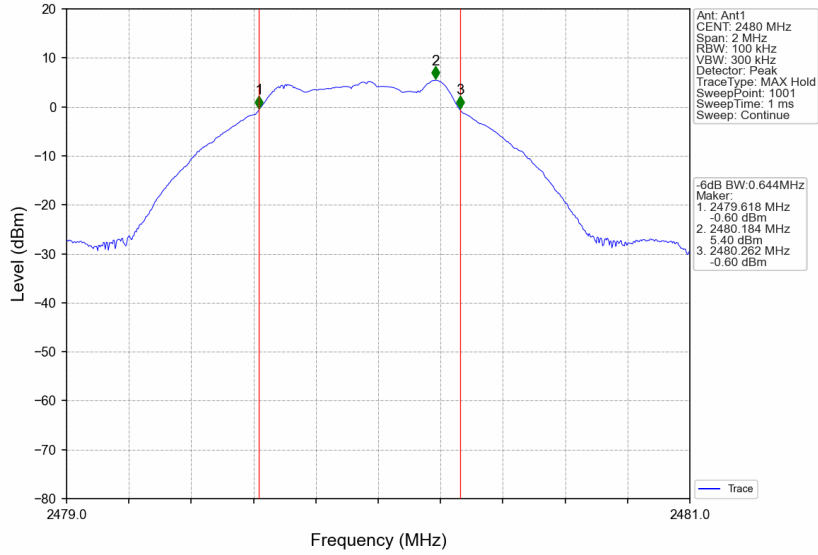
#### 2.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.646	$\geq 0.5$	Pass
		2440	1	0.646	$\geq 0.5$	Pass
		2480	1	0.644	$\geq 0.5$	Pass
2M	SISO	2402	1	1.168	$\geq 0.5$	Pass
		2440	1	1.149	$\geq 0.5$	Pass
		2480	1	1.161	$\geq 0.5$	Pass

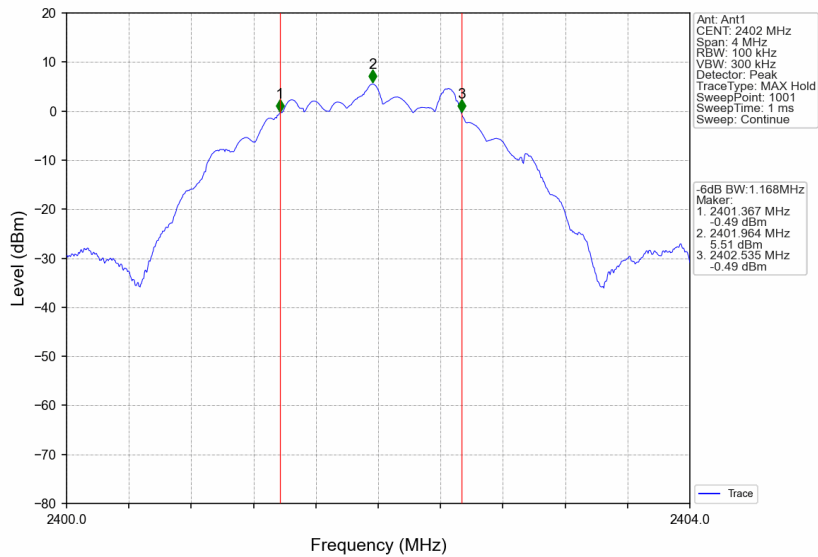
### 2.2.2 Test Graph



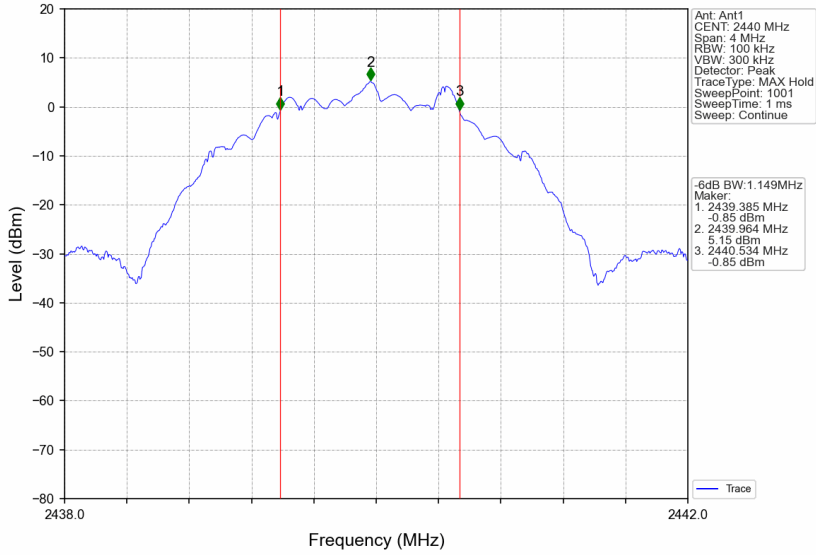
1M\_HCH\_2480MHz\_Ant1\_NTNV



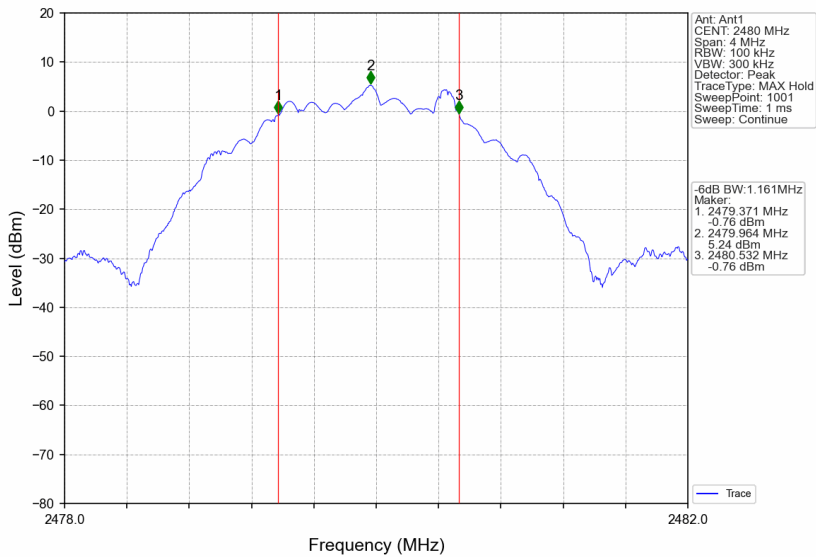
2M\_LCH\_2402MHz\_Ant1\_NTNV



2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV





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### 3. Maximum Conducted Output Power

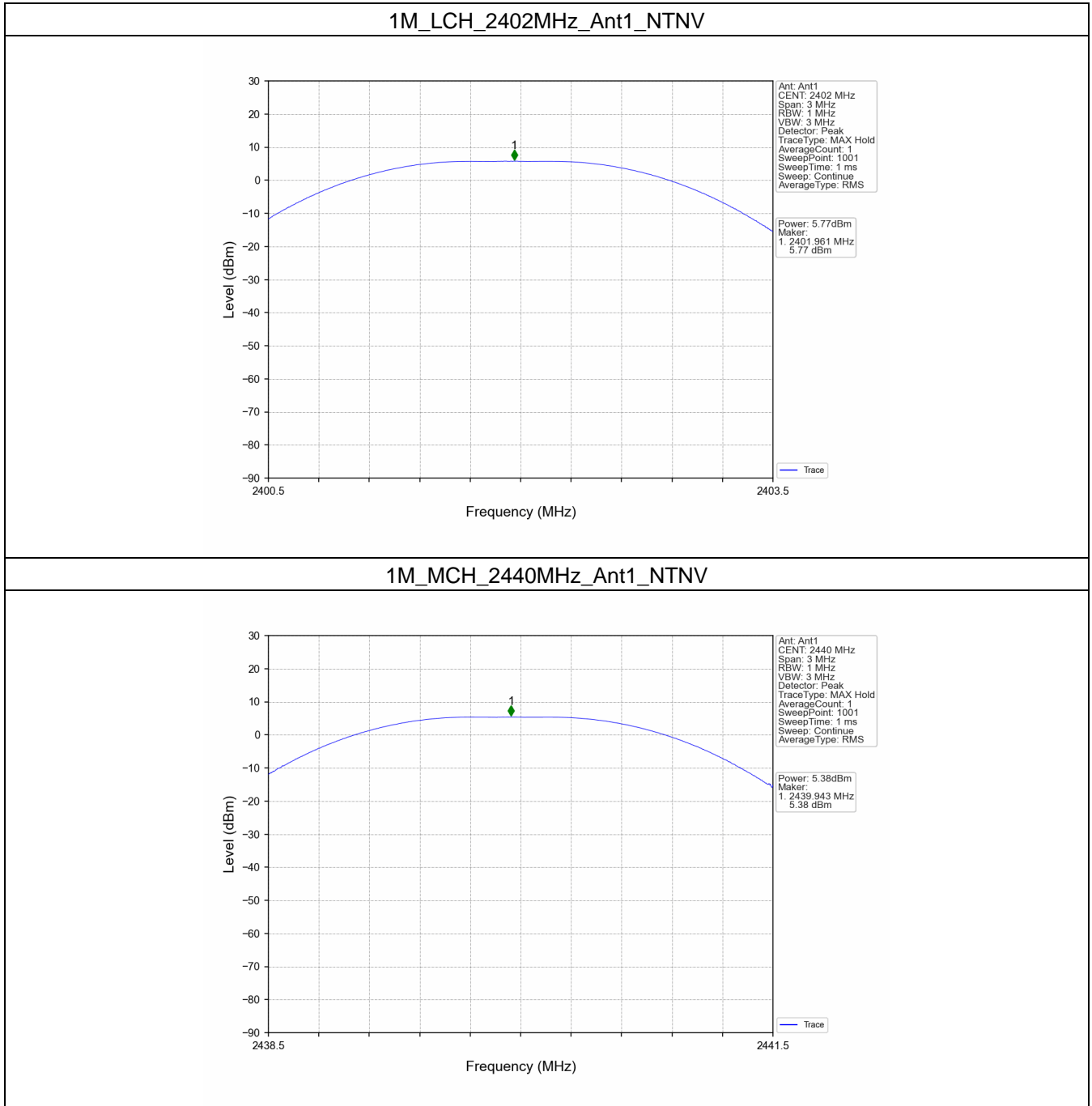
#### 3.1 Power

##### 3.1.1 Test Result

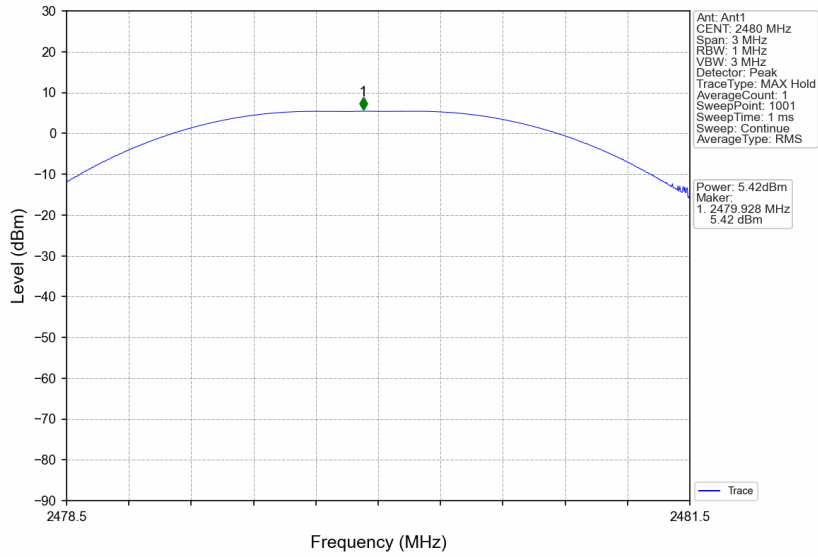
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	5.77	<=30	Pass
		2440	5.38	<=30	Pass
		2480	5.42	<=30	Pass
2M	SISO	2402	5.80	<=30	Pass
		2440	5.40	<=30	Pass
		2480	5.45	<=30	Pass

Note1: Antenna Gain: Ant1: 0.50dBi;

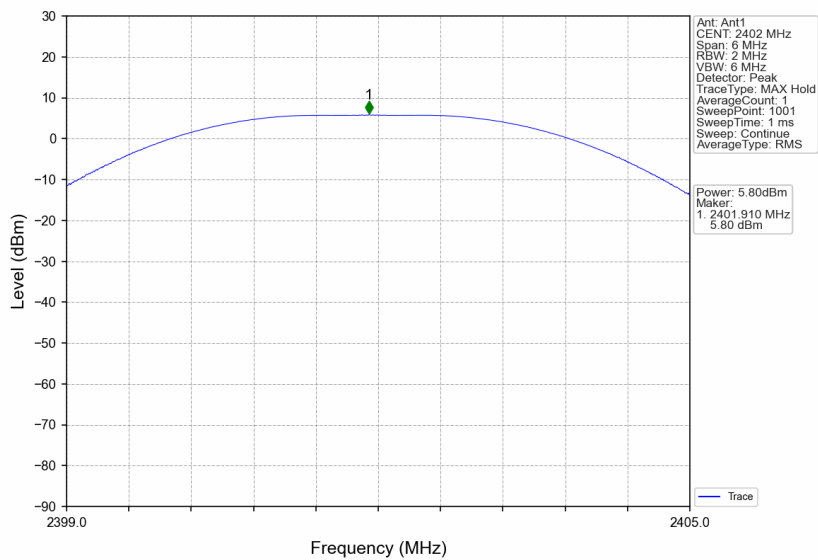
### 3.1.2 Test Graph



1M\_HCH\_2480MHz\_Ant1\_NTNV

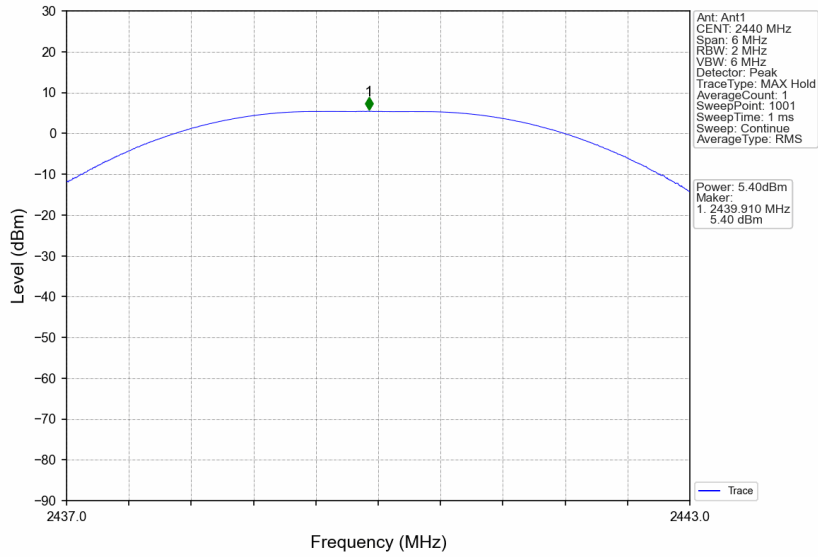


2M\_LCH\_2402MHz\_Ant1\_NTNV

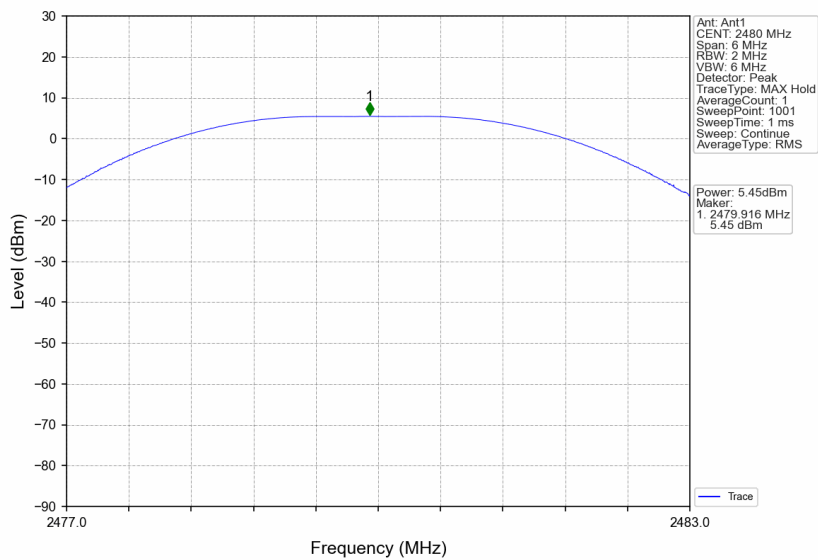




2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV





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### 4. Maximum Power Spectral Density

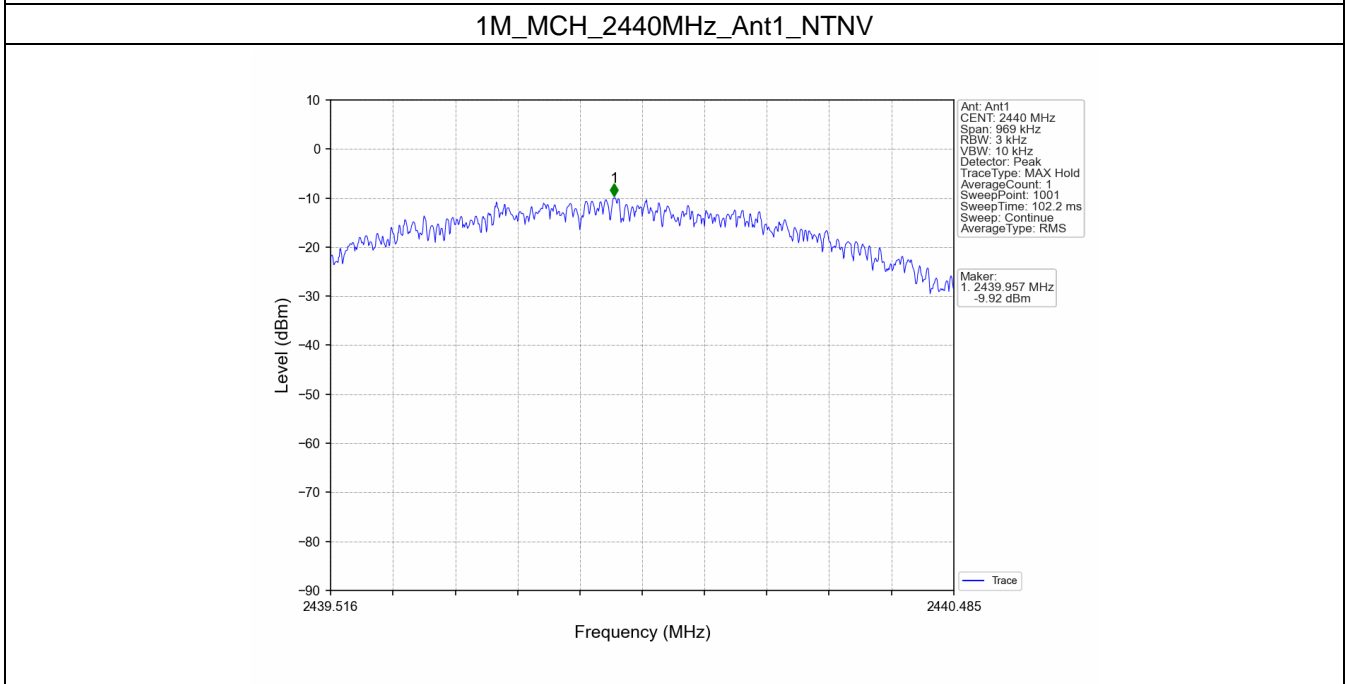
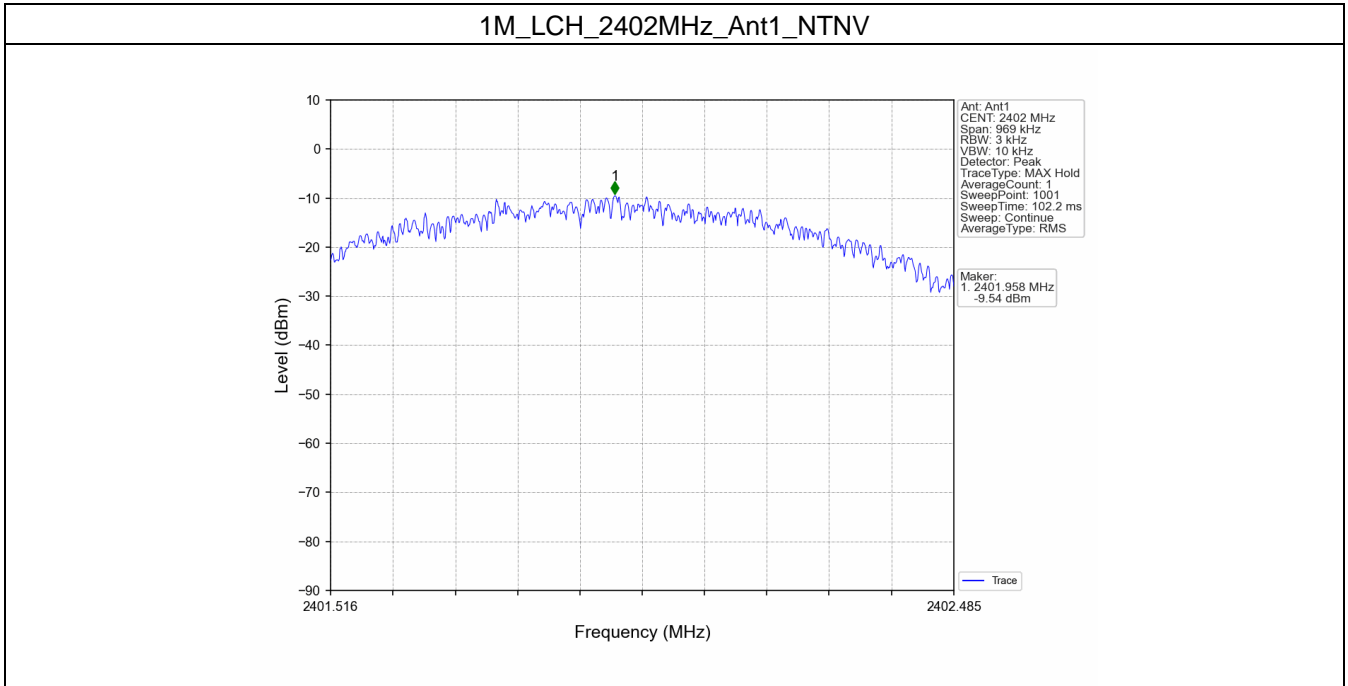
#### 4.1 PSD

##### 4.1.1 Test Result

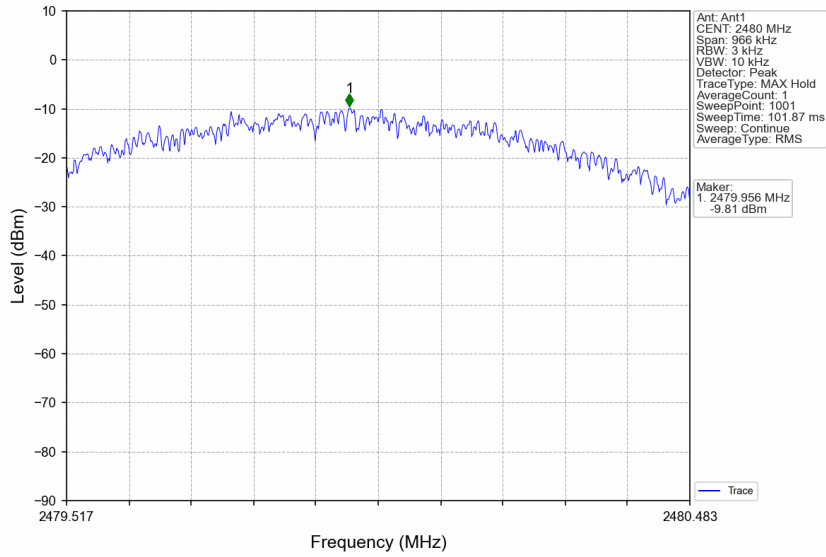
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-9.54	<=8	Pass
		2440	-9.92	<=8	Pass
		2480	-9.81	<=8	Pass
2M	SISO	2402	-13.15	<=8	Pass
		2440	-13.40	<=8	Pass
		2480	-13.67	<=8	Pass

Note1: Antenna Gain: Ant1: 0.50dBi;

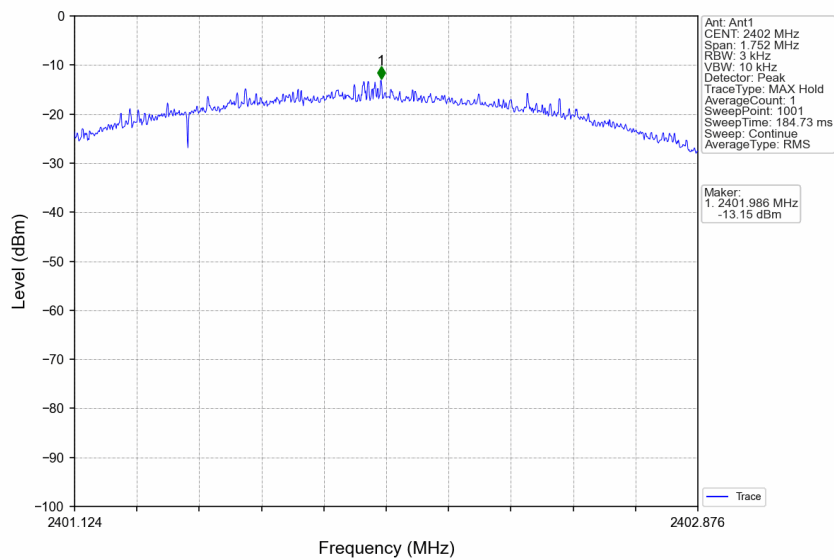
### 4.1.2 Test Graph



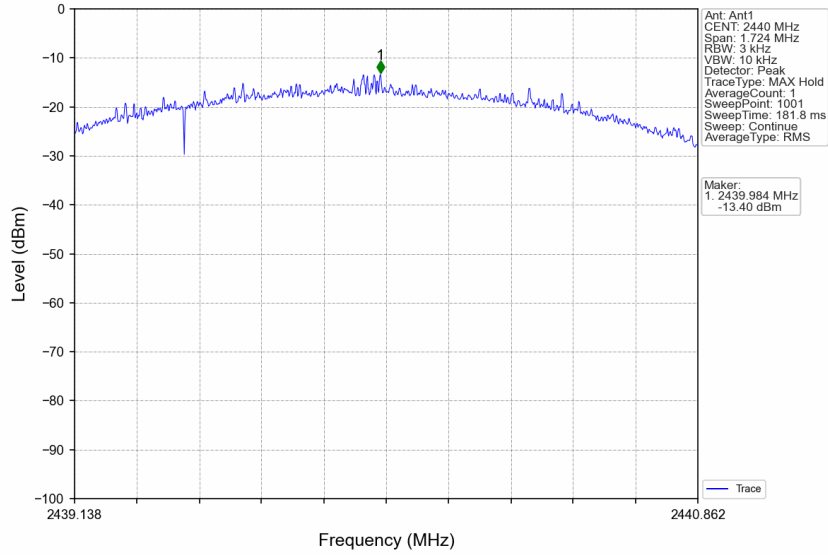
1M\_HCH\_2480MHz\_Ant1\_NTNV



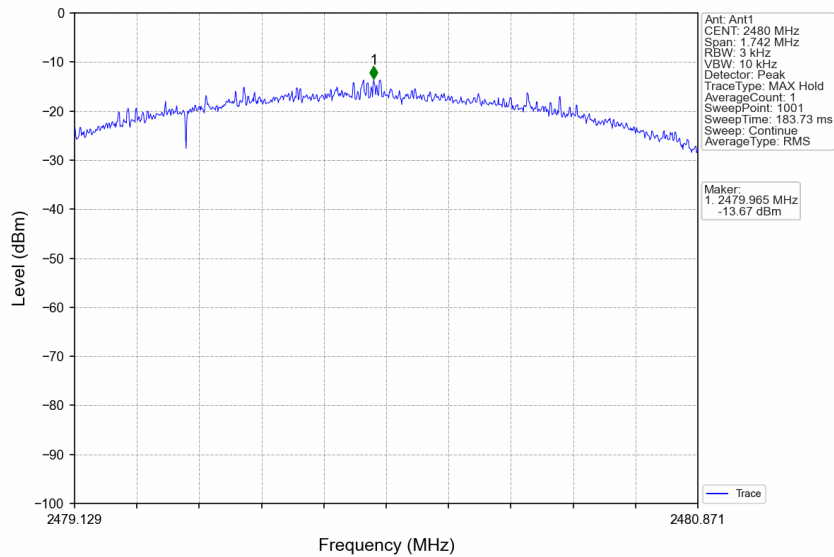
2M\_LCH\_2402MHz\_Ant1\_NTNV



### 2M\_MCH\_2440MHz\_Ant1\_NTNV



### 2M\_HCH\_2480MHz\_Ant1\_NTNV



## 5. Unwanted Emissions In Non-restricted Frequency Bands

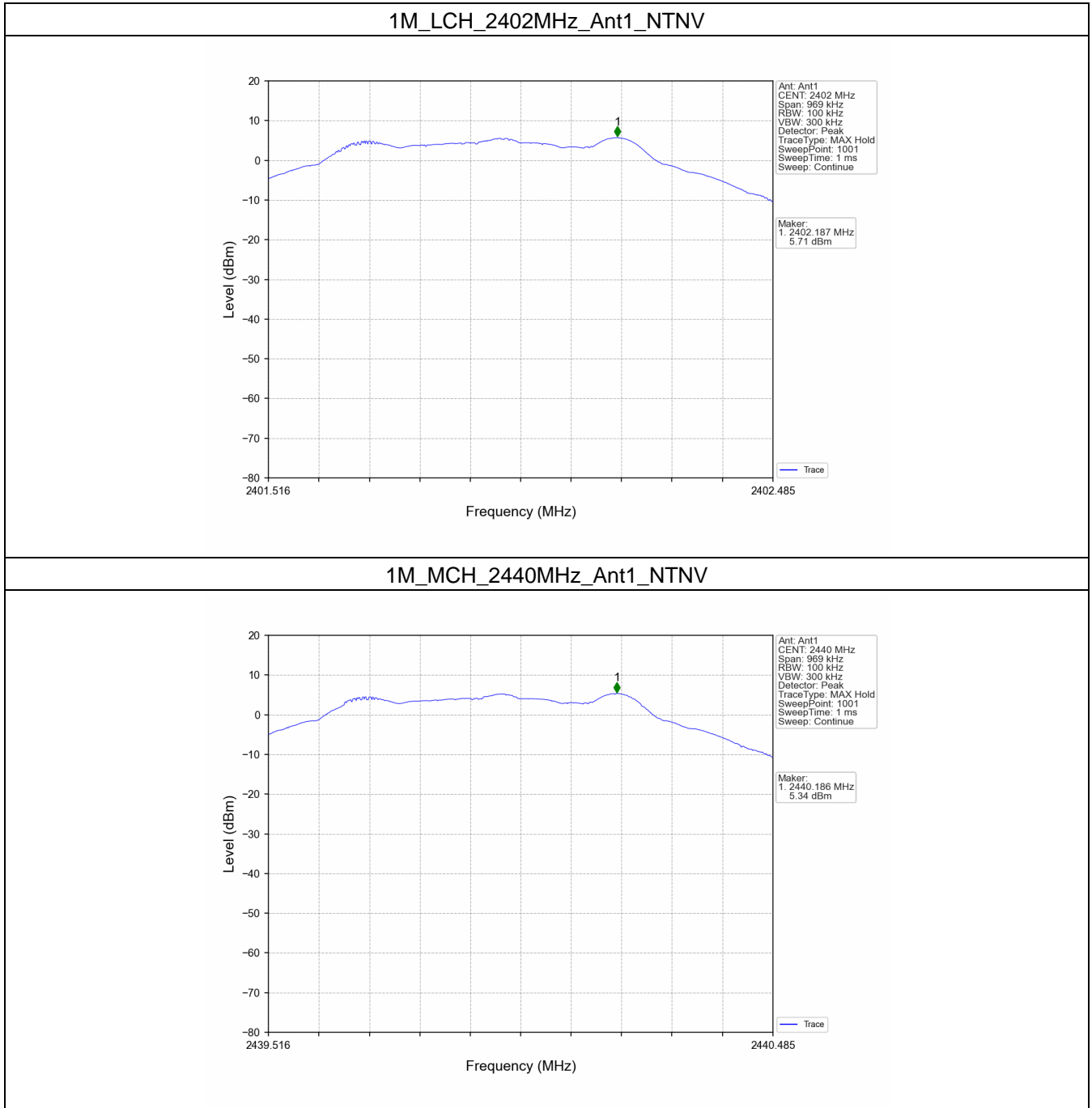
### 5.1 Ref

#### 5.1.1 Test Result

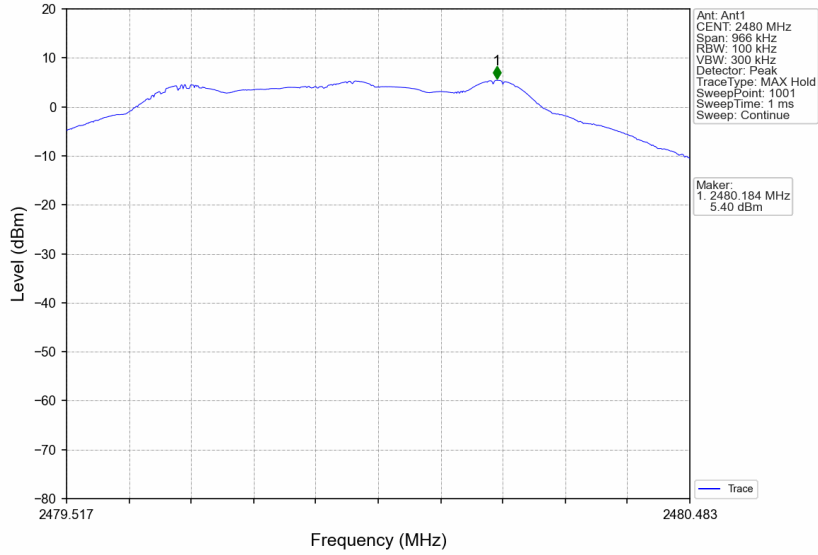
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	5.71
		2440	1	5.34
		2480	1	5.40
2M	SISO	2402	1	5.50
		2440	1	5.16
		2480	1	5.25

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.

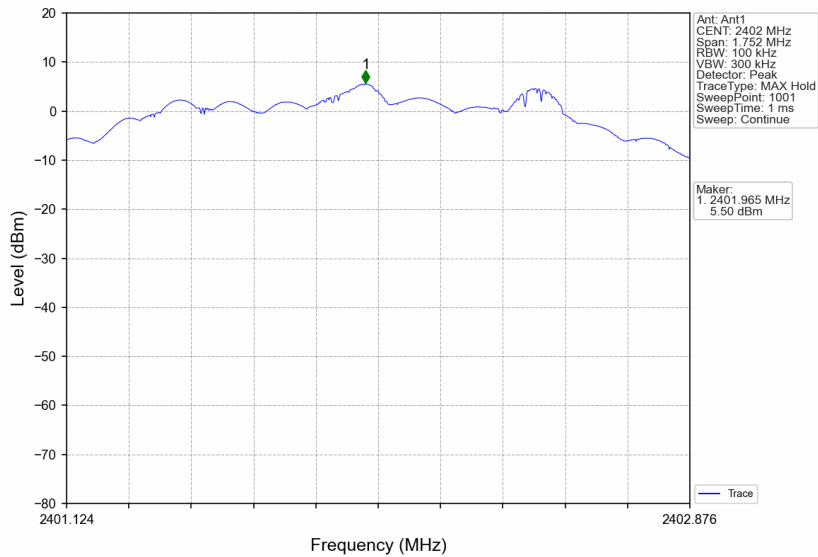
### 5.1.2 Test Graph



1M\_HCH\_2480MHz\_Ant1\_NTNV

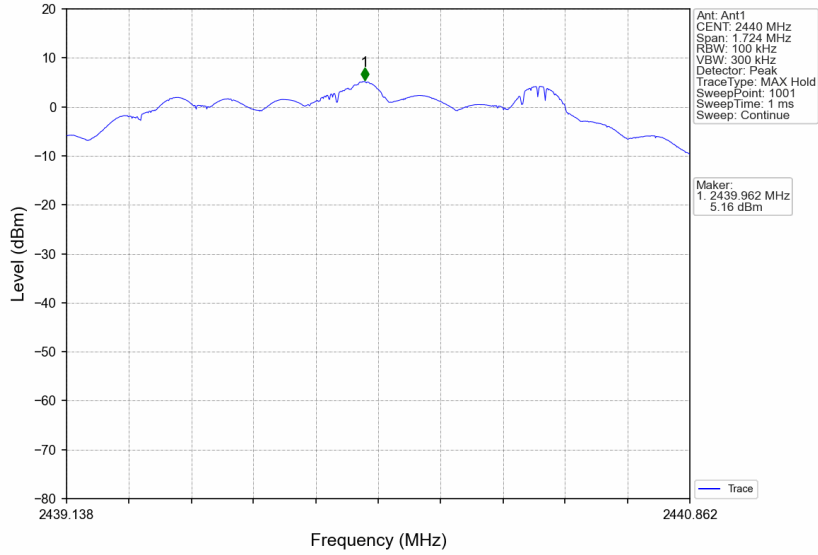


2M\_LCH\_2402MHz\_Ant1\_NTNV

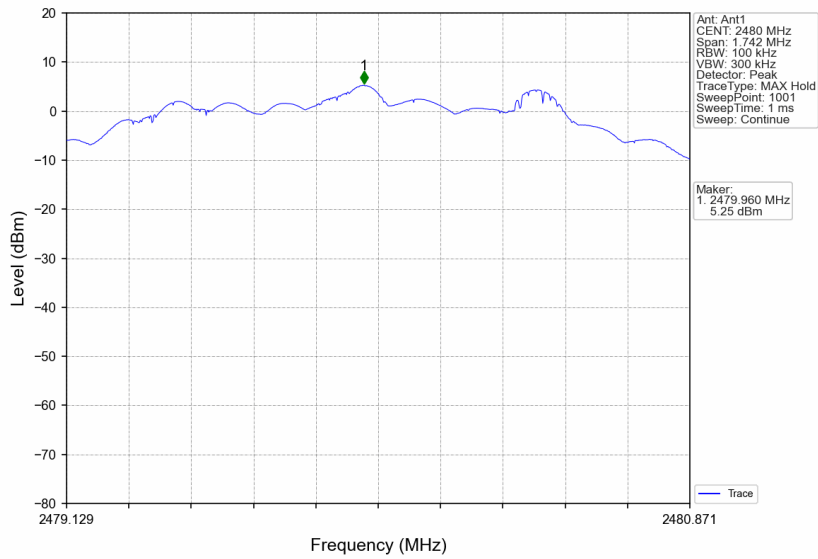




2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV





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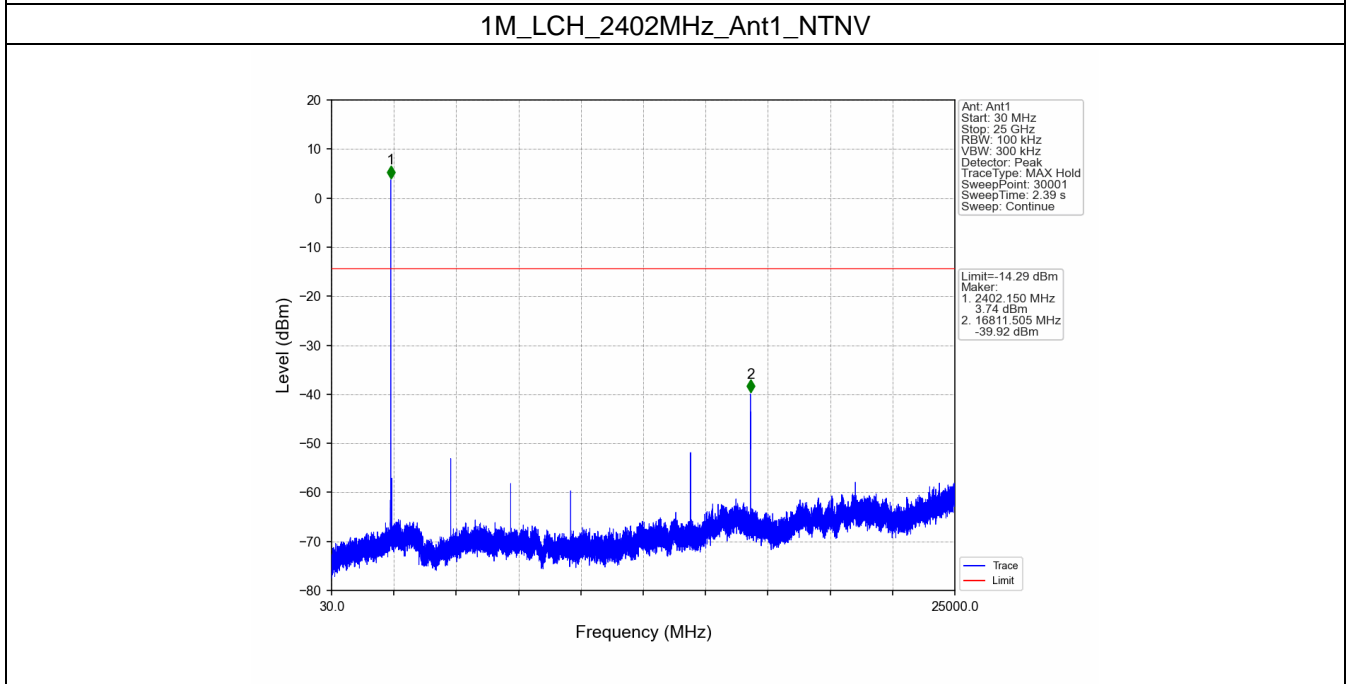
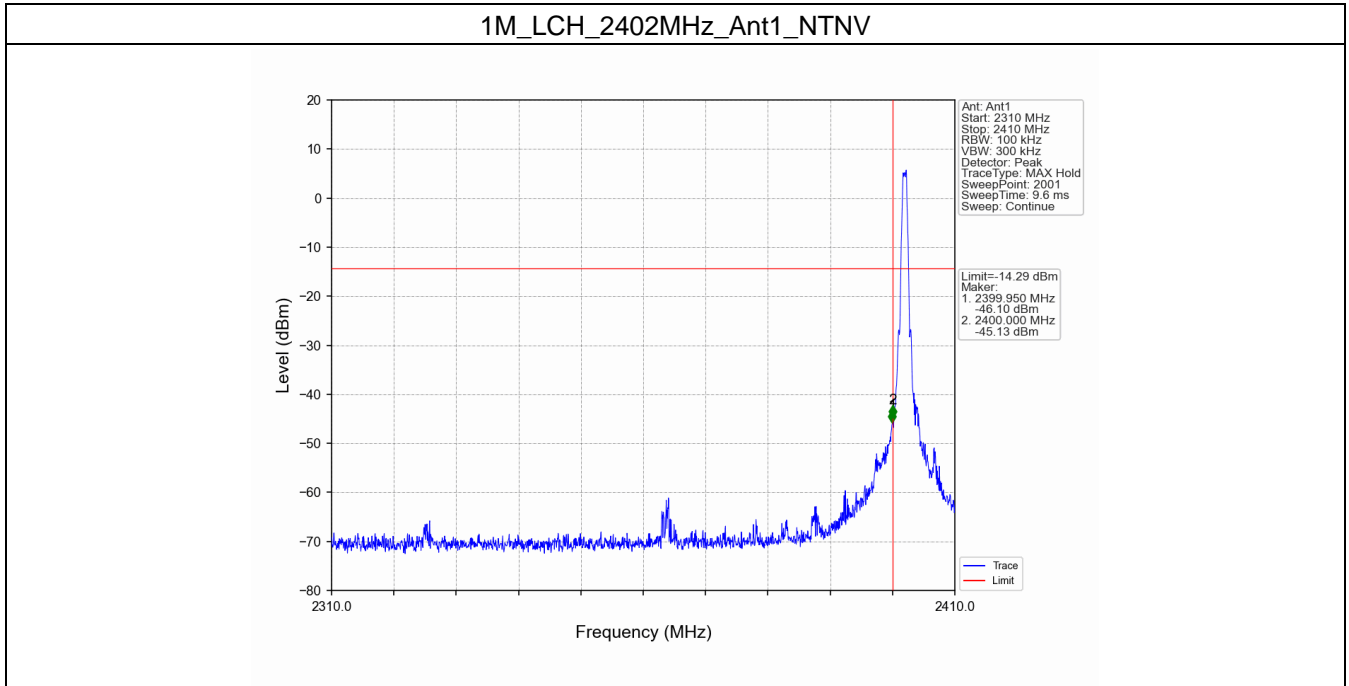
### 5.2 CSE

#### 5.2.1 Test Result

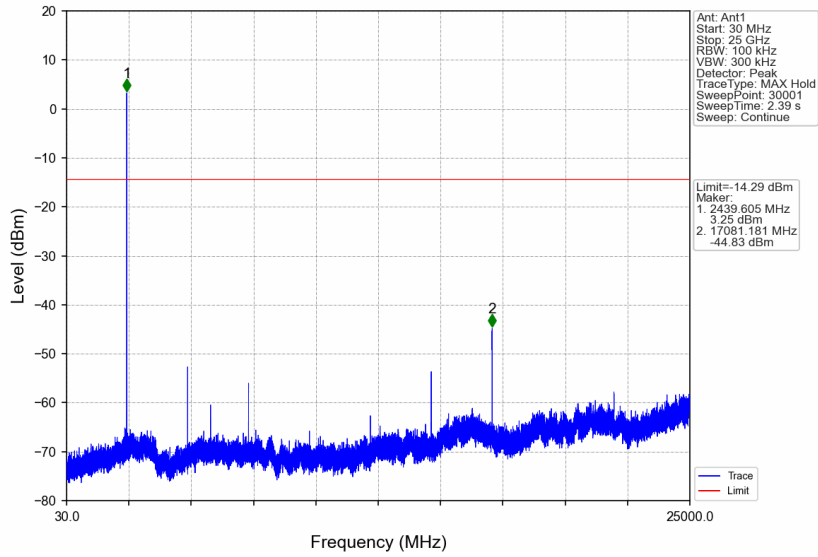
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	5.71	-14.29	Pass
		2440	1	5.71	-14.29	Pass
		2480	1	5.71	-14.29	Pass
2M	SISO	2402	1	5.50	-14.50	Pass
		2440	1	5.50	-14.50	Pass
		2480	1	5.50	-14.50	Pass

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.

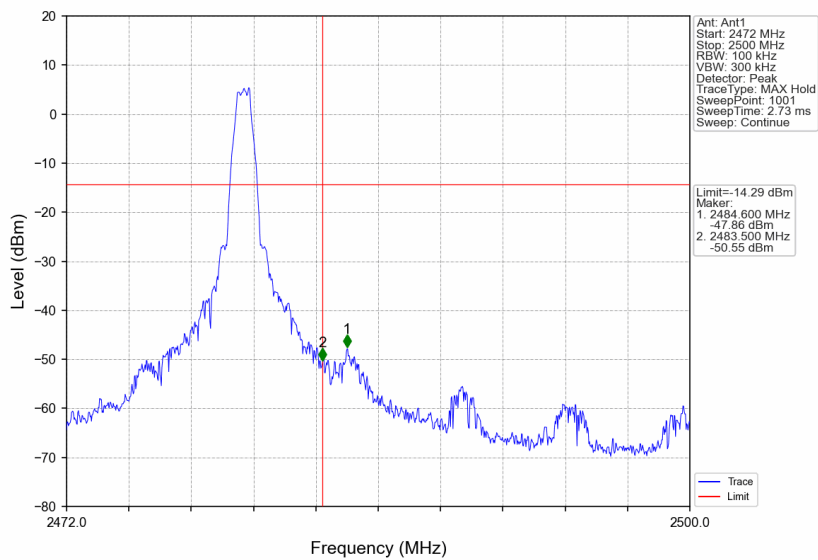
### 5.2.2 Test Graph



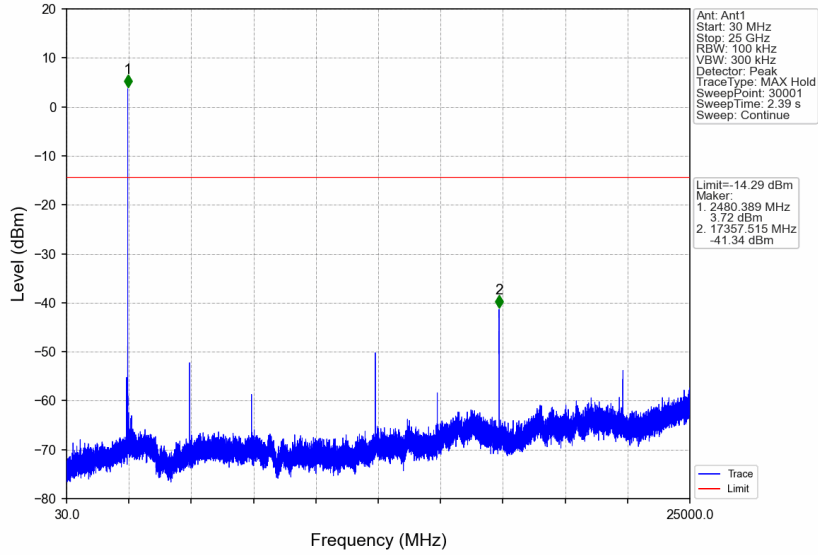
1M\_MCH\_2440MHz\_Ant1\_NTNV



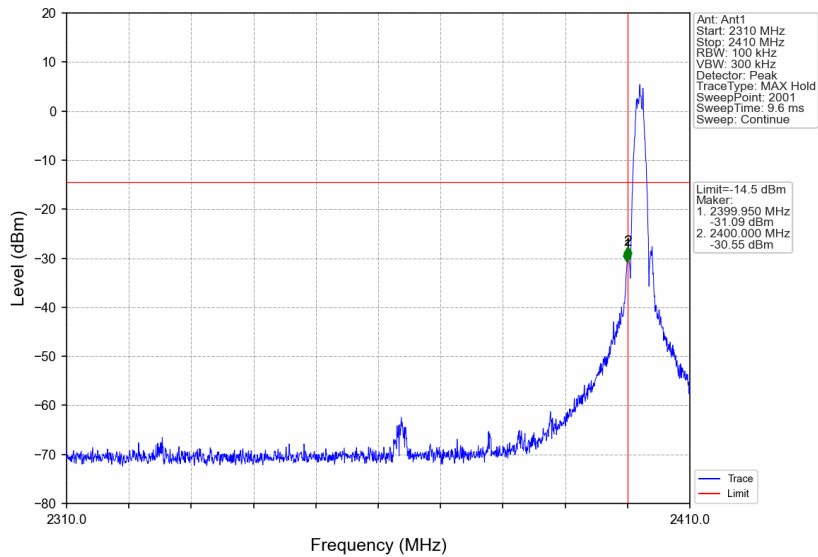
1M\_HCH\_2480MHz\_Ant1\_NTNV



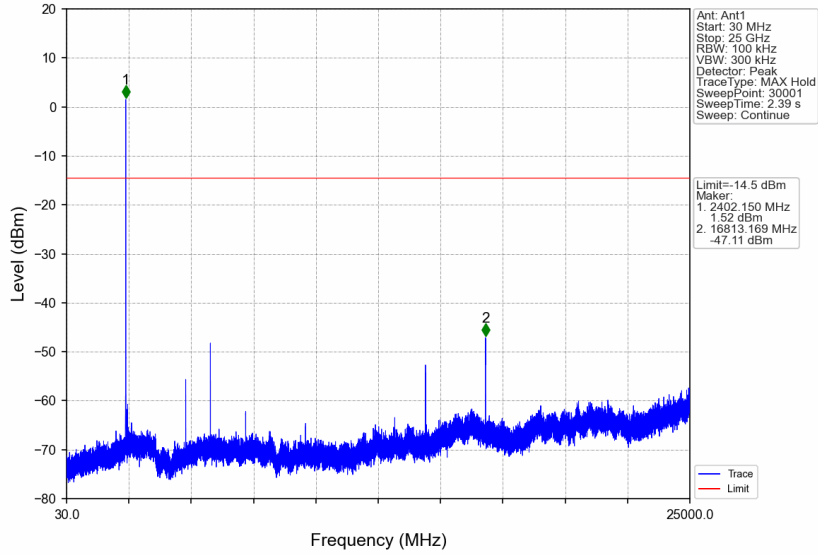
1M\_HCH\_2480MHz\_Ant1\_NTNV



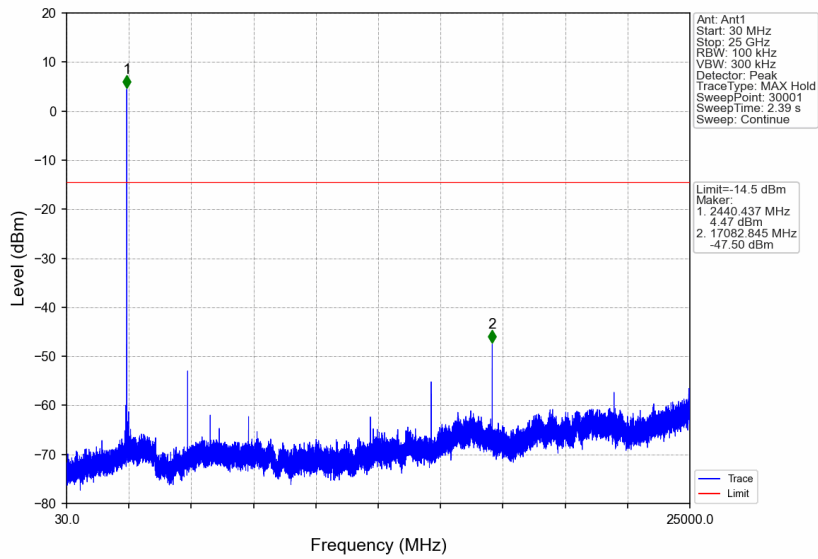
2M\_LCH\_2402MHz\_Ant1\_NTNV



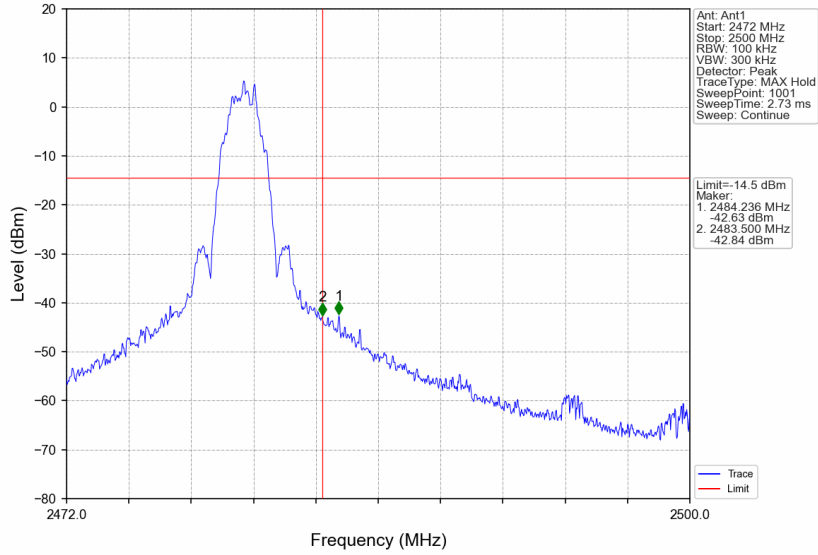
2M\_LCH\_2402MHz\_Ant1\_NTNV



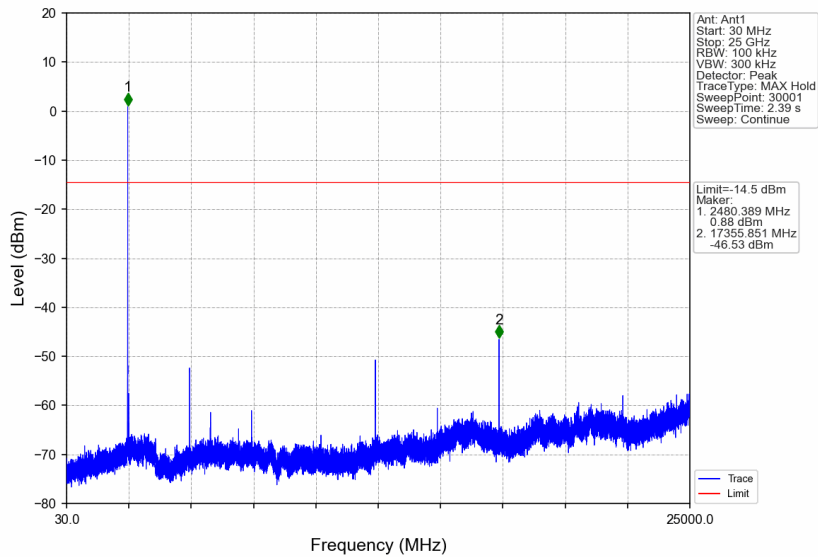
2M\_MCH\_2440MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV



2M\_HCH\_2480MHz\_Ant1\_NTNV



- End of the Report -