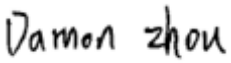
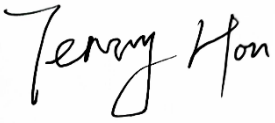
TEST REPORT

Application No.:	KSCR2409001938AT
FCC ID:	2AC8UA2427
Name of Testing Laboratory preparing the Report:	Compliance Certification Services (Kunshan) Inc.
Address of Testing Laboratory preparing the Report:	No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.
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:	2024-09-30
Date of Test:	2024-10-18 to 2024-11-18
Date of Issue:	2024-11-18
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Change Antenna	2024-11-18	Based on KSCR240800156902

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

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

Note: Compared with the original report, this report updated Antenna.

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3.7V,50mAh by Rechargeable Li-ion Battery
Operation Frequency:	2402MHz to 2480MHz
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Antenna Type:	Monopole Antenna
Antenna Gain:	Left Ear: -1.7dBi; (Provided by the manufacturer) Right Ear: -1.6dBi (Provided by the manufacturer)

4.1 Power level setting using in test:

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

4.2 Description of Support Units

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

4.3 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.		

4.4 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.

4.5 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.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

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_EMC-v 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:

-1.7dBi for Left Ear ; -1.6dBi 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
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.		

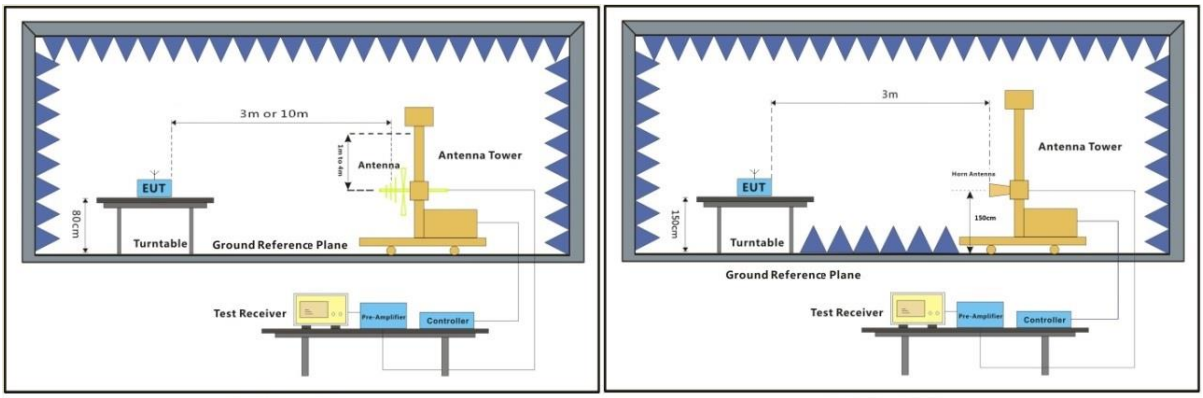
7.1.1 E.U.T. Operation

Operating Environment:
Temperature: 23.3 °C Humidity: 45.2 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	06	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	07	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.1.3 Test Setup Diagram



30MHz-1GHz　　Above 1GHz

7.1.4 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.

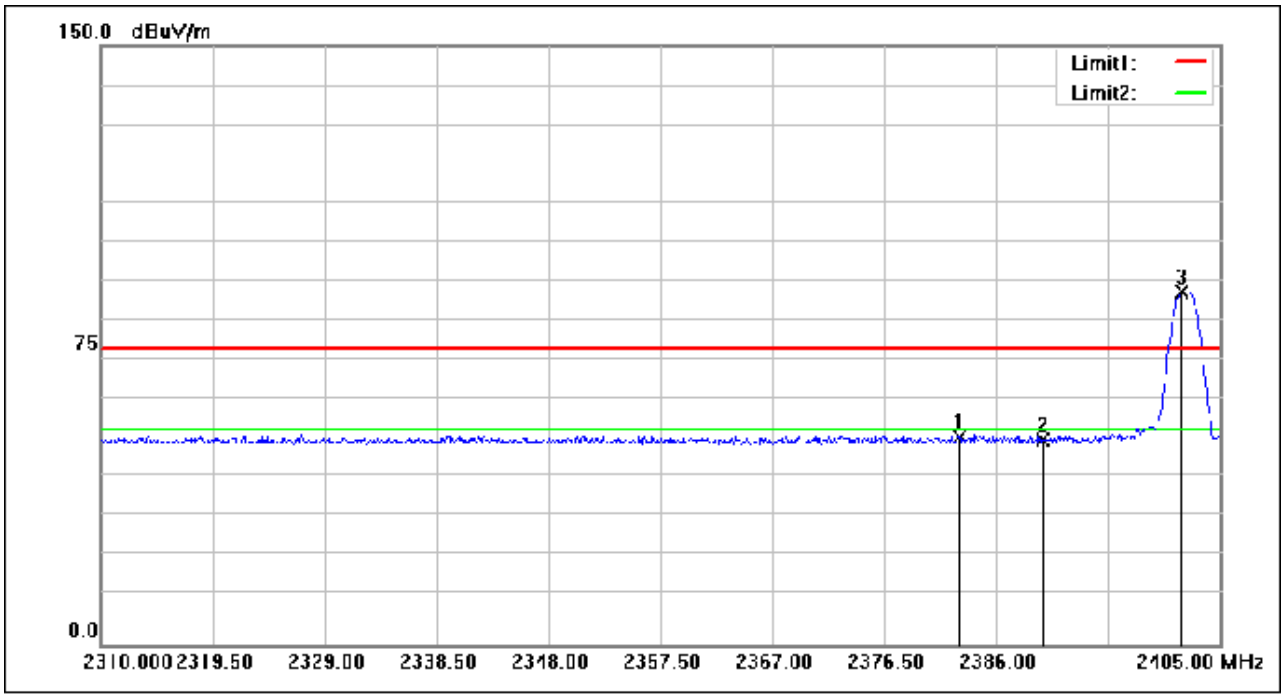
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

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

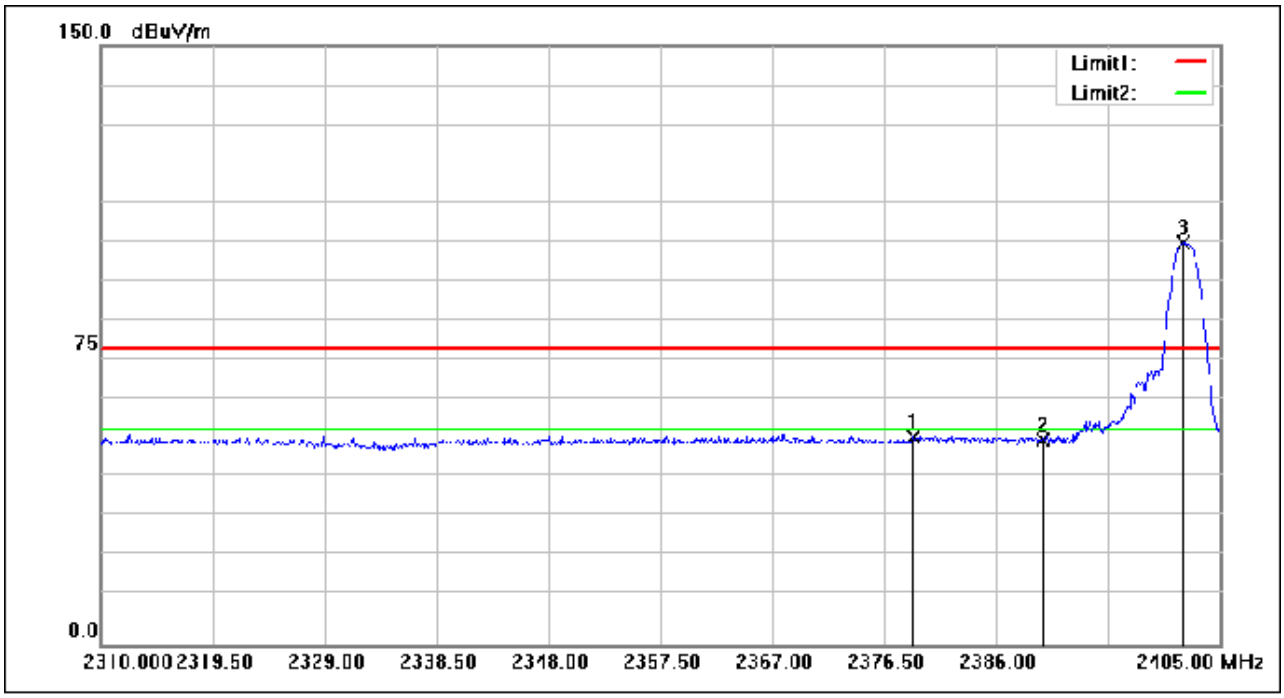
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level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

Test Mode: 04; Polarity: Horizontal; Modulation:GFSK; Channel:Low



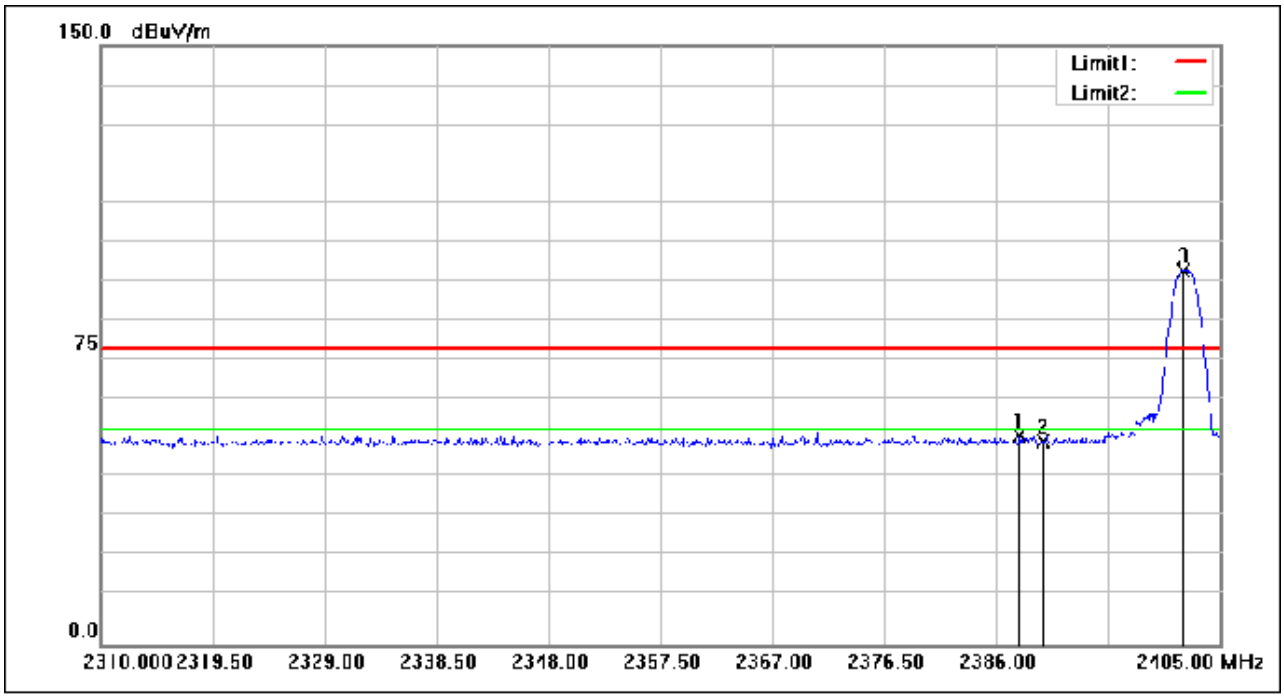
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2382.865	76.82	-24.74	52.08	74.00	-21.92	peak
2	2390.000	75.93	-24.71	51.22	74.00	-22.78	peak
3	2401.770	113.04	-24.65	88.39	74.00	14.39	peak

Test Mode: 06; Polarity: Horizontal; Modulation:GFSK; Channel:Low



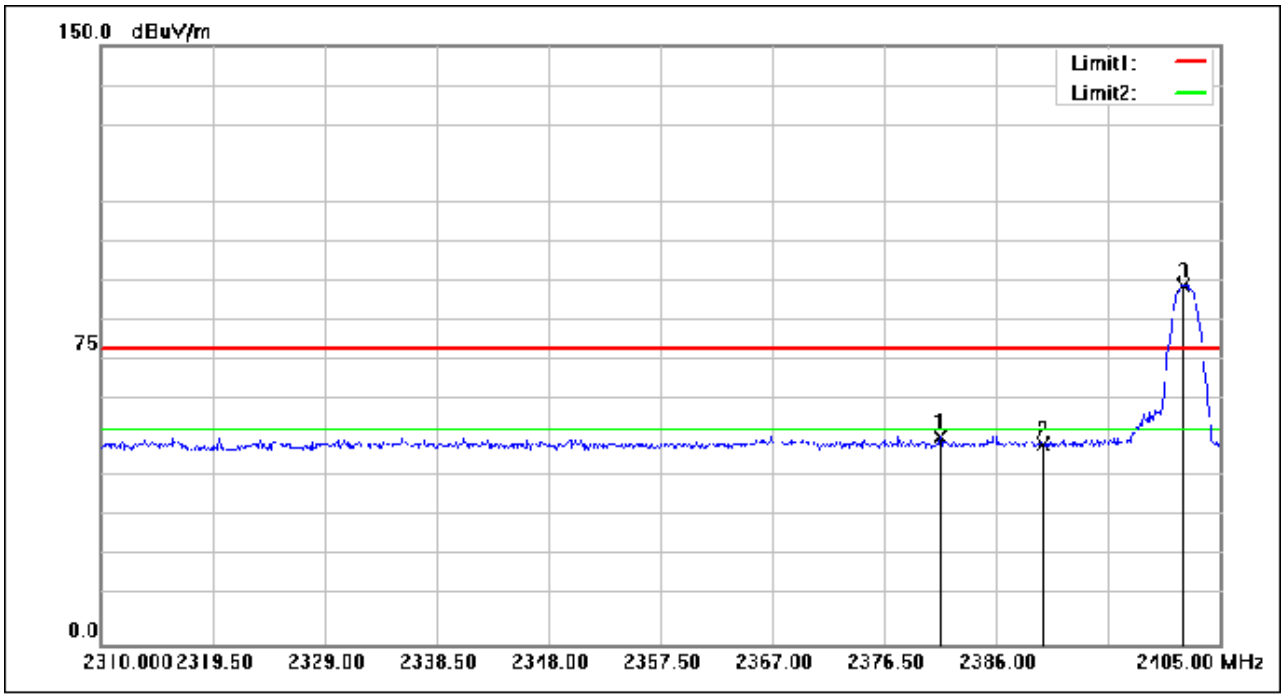
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2378.970	76.62	-24.75	51.87	74.00	-22.13	peak
2	2390.000	75.81	-24.71	51.10	74.00	-22.90	peak
3	2401.865	125.16	-24.65	100.51	74.00	26.51	peak

Test Mode: 04; Polarity: Vertical; Modulation:GFSK; Channel:Low



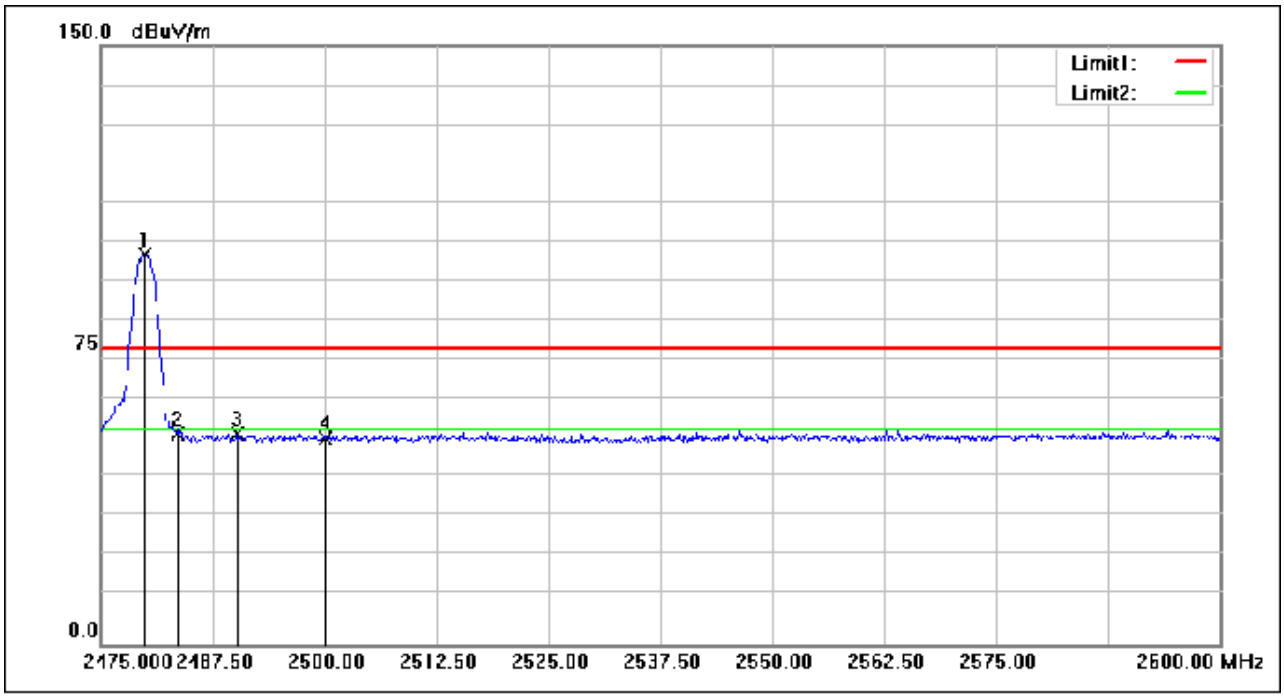
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.995	77.10	-24.72	52.38	74.00	-21.62	peak
2	2390.000	75.52	-24.71	50.81	74.00	-23.19	peak
3	2401.865	118.29	-24.65	93.64	74.00	19.64	peak

Test Mode: 06; Polarity: Vertical; Modulation:GFSK; Channel:Low



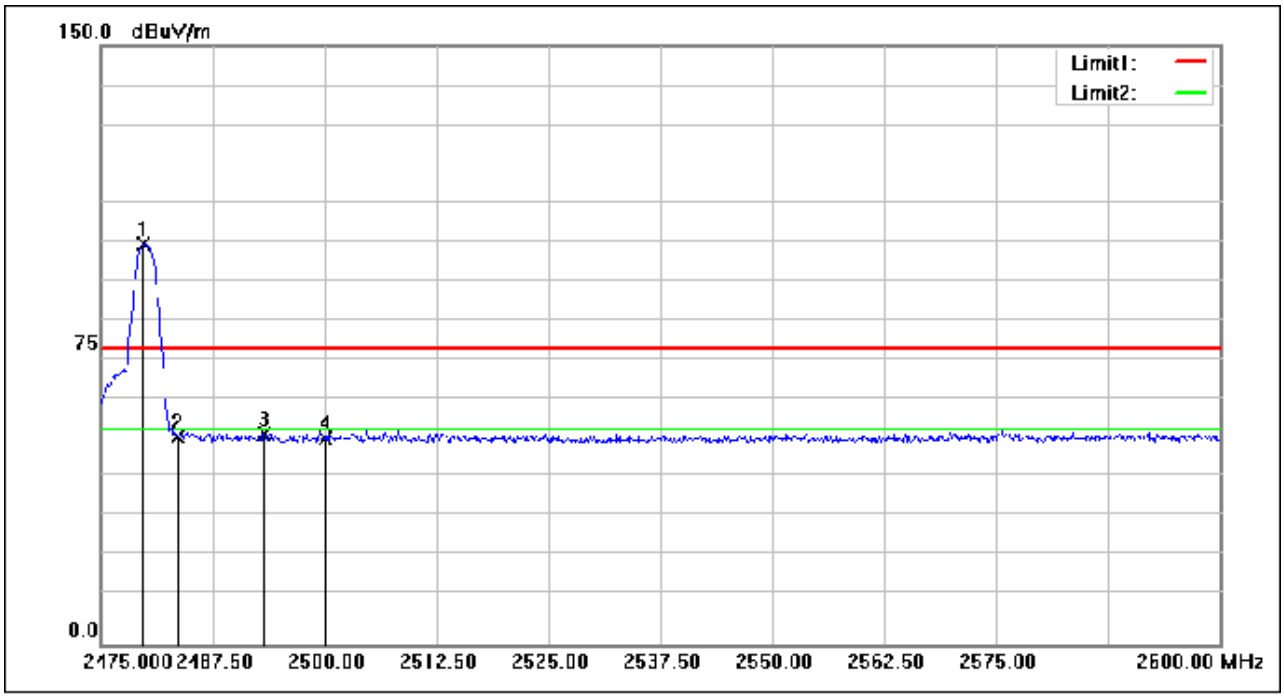
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2381.250	76.64	-24.74	51.90	74.00	-22.10	peak
2	2390.000	74.69	-24.71	49.98	74.00	-24.02	peak
3	2401.865	114.56	-24.65	89.91	74.00	15.91	peak

Test Mode: 04; Polarity: Horizontal; Modulation:GFSK; Channel:High



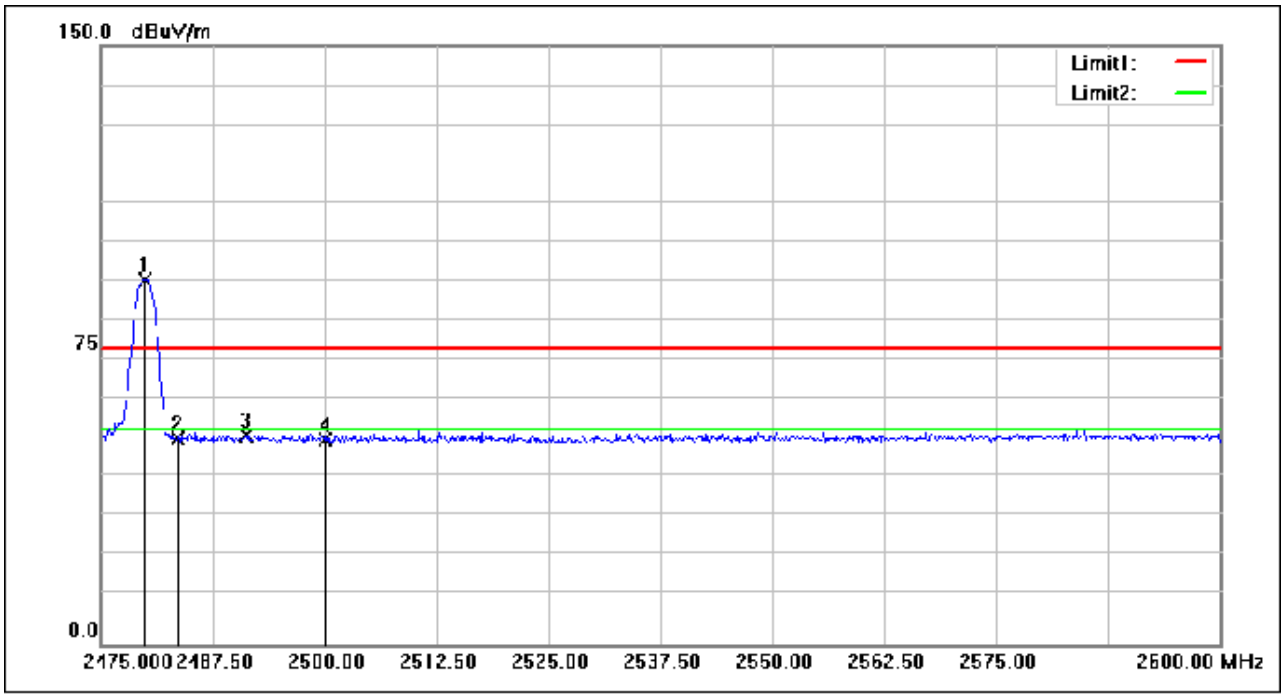
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.938	121.82	-24.28	97.54	74.00	23.54	peak
2	2483.500	76.85	-24.27	52.58	74.00	-21.42	peak
3	2490.213	77.00	-24.24	52.76	74.00	-21.24	peak
4	2500.000	75.85	-24.19	51.66	74.00	-22.34	peak

Test Mode: 06; Polarity: Horizontal; Modulation:GFSK; Channel:High



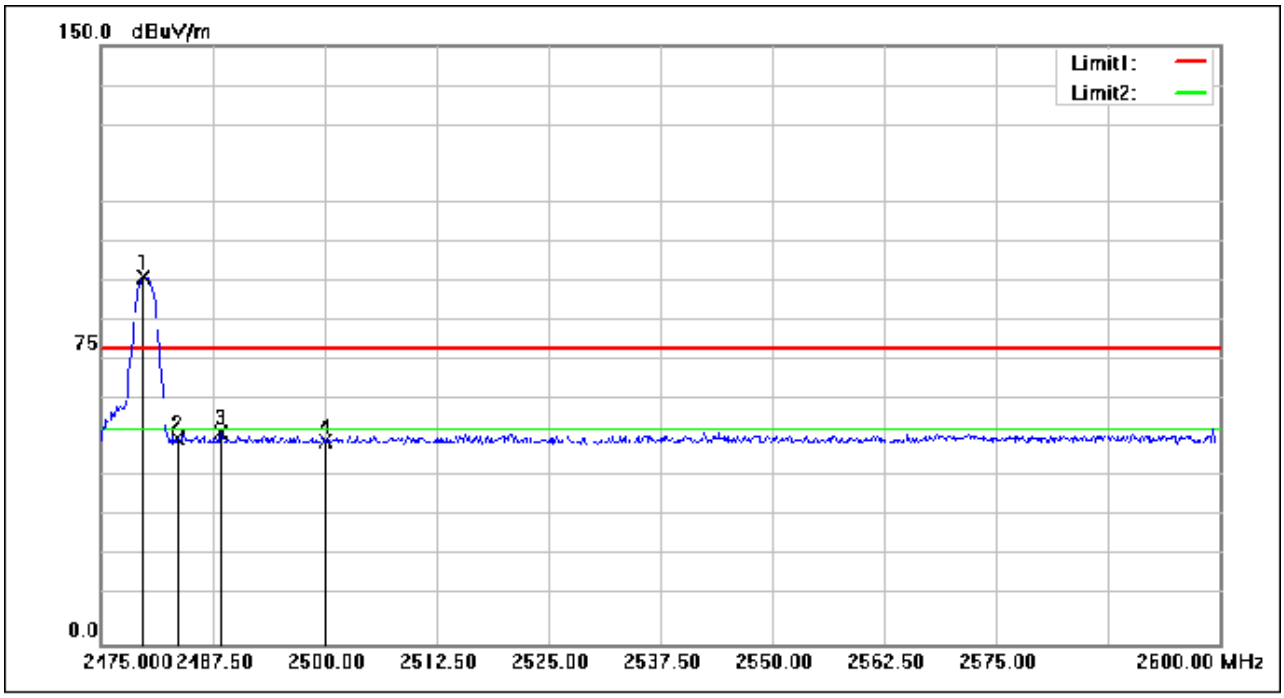
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	124.54	-24.28	100.26	74.00	26.26	peak
2	2483.500	76.11	-24.27	51.84	74.00	-22.16	peak
3	2493.250	76.88	-24.22	52.66	74.00	-21.34	peak
4	2500.000	75.66	-24.19	51.47	74.00	-22.53	peak

Test Mode: 04; Polarity: Vertical; Modulation:GFSK; Channel:High



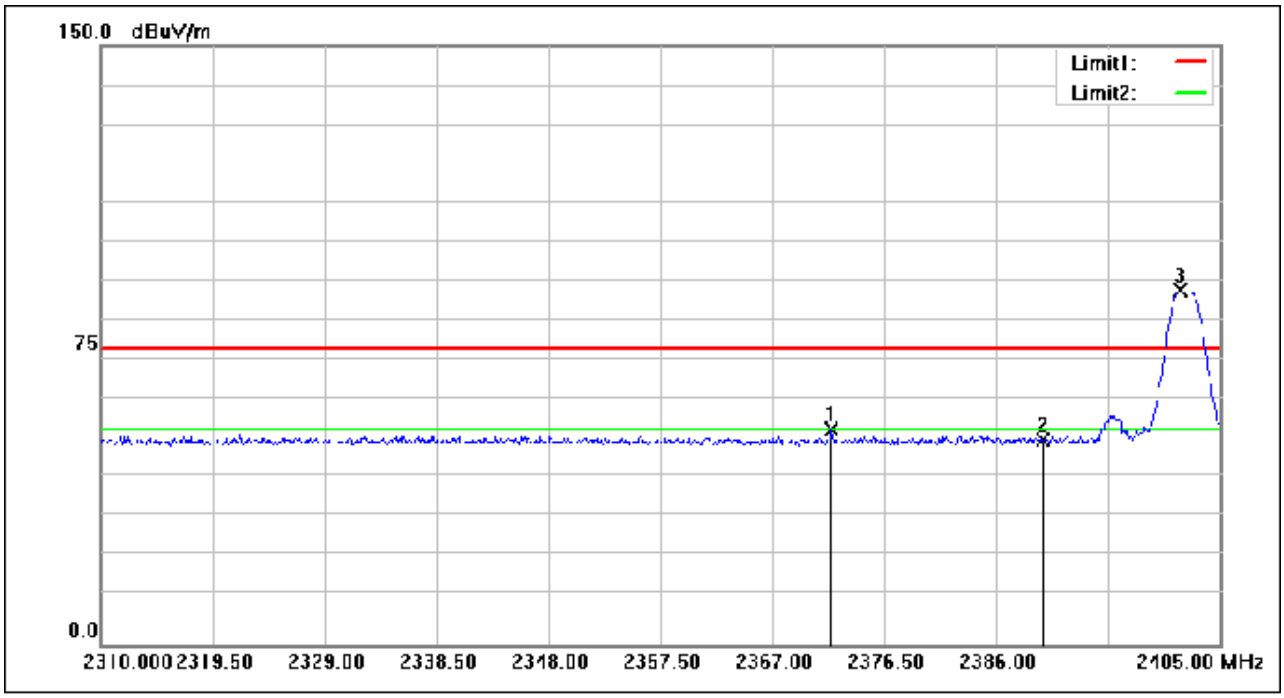
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.956	115.64	-24.28	91.36	74.00	17.36	peak
2	2483.500	75.85	-24.27	51.58	74.00	-22.42	peak
3	2491.219	76.65	-24.24	52.41	74.00	-21.59	peak
4	2500.000	75.53	-24.19	51.34	74.00	-22.66	peak

Test Mode: 06; Polarity: Vertical; Modulation:GFSK; Channel:High



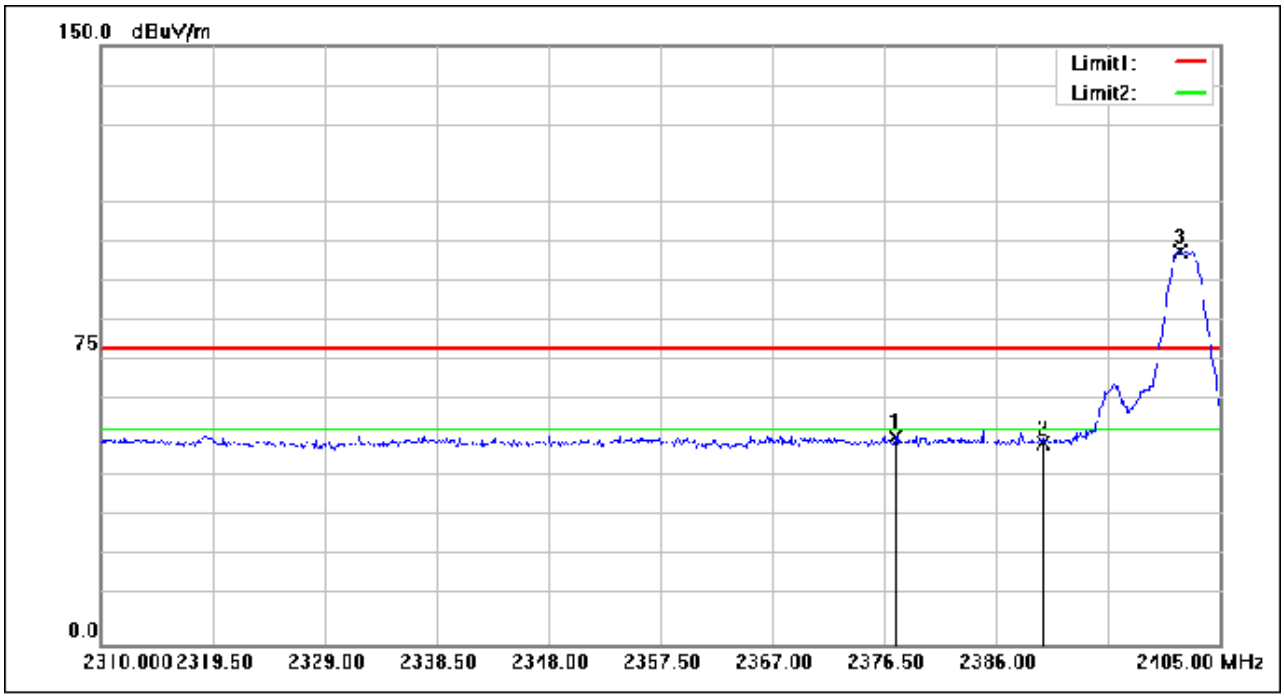
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.750	116.25	-24.28	91.97	74.00	17.97	peak
2	2483.500	75.65	-24.27	51.38	74.00	-22.62	peak
3	2488.375	77.38	-24.25	53.13	74.00	-20.87	peak
4	2500.000	74.85	-24.19	50.66	74.00	-23.34	peak

Test Mode: 05; Polarity: Horizontal; Modulation:GFSK; Channel:Low



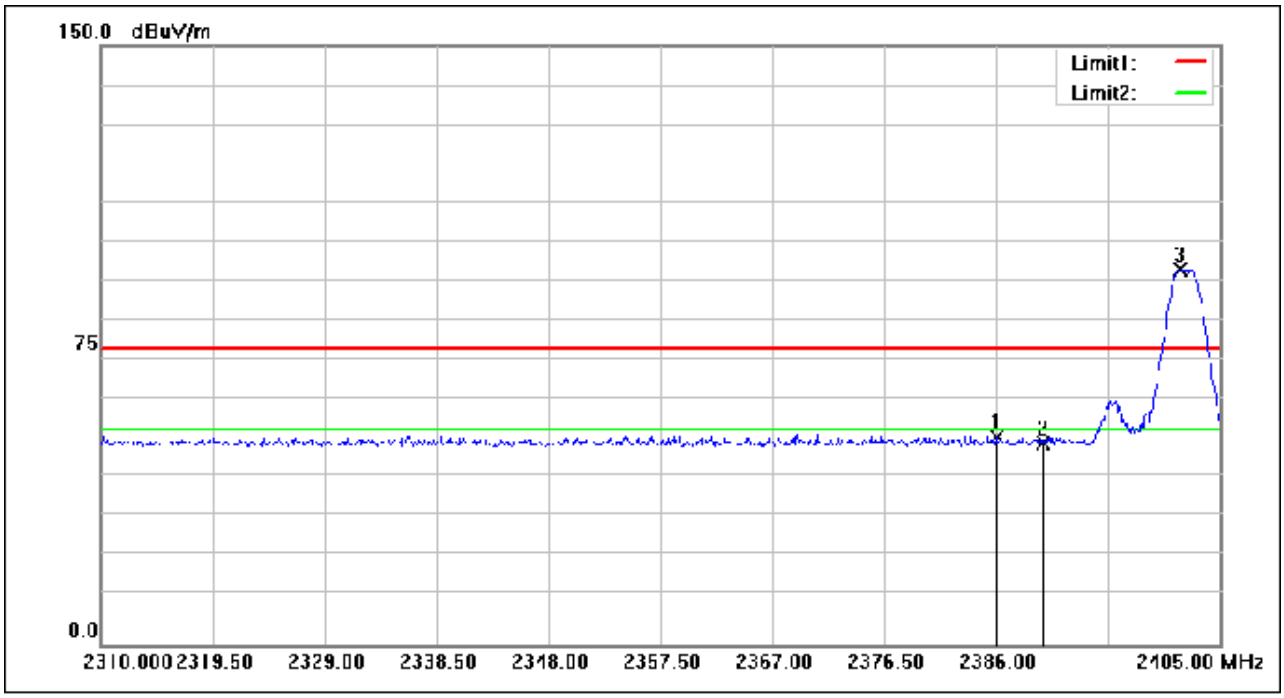
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2372.035	78.54	-24.79	53.75	74.00	-20.25	peak
2	2390.000	76.05	-24.71	51.34	74.00	-22.66	peak
3	2401.580	113.18	-24.65	88.53	74.00	14.53	peak

Test Mode: 07; Polarity: Horizontal; Modulation:GFSK; Channel:Low



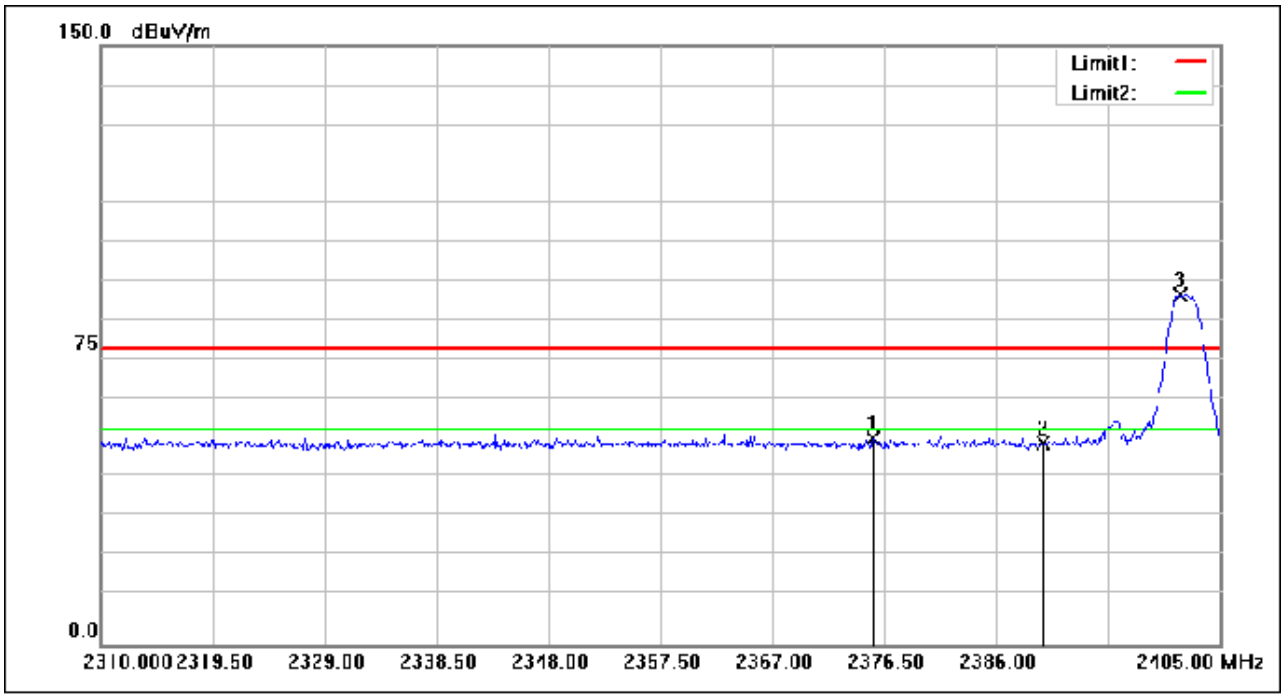
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2377.450	76.68	-24.77	51.91	74.00	-22.09	peak
2	2390.000	75.24	-24.71	50.53	74.00	-23.47	peak
3	2401.580	123.21	-24.65	98.56	74.00	24.56	peak

Test Mode: 05; Polarity: Vertical; Modulation:GFSK; Channel:Low



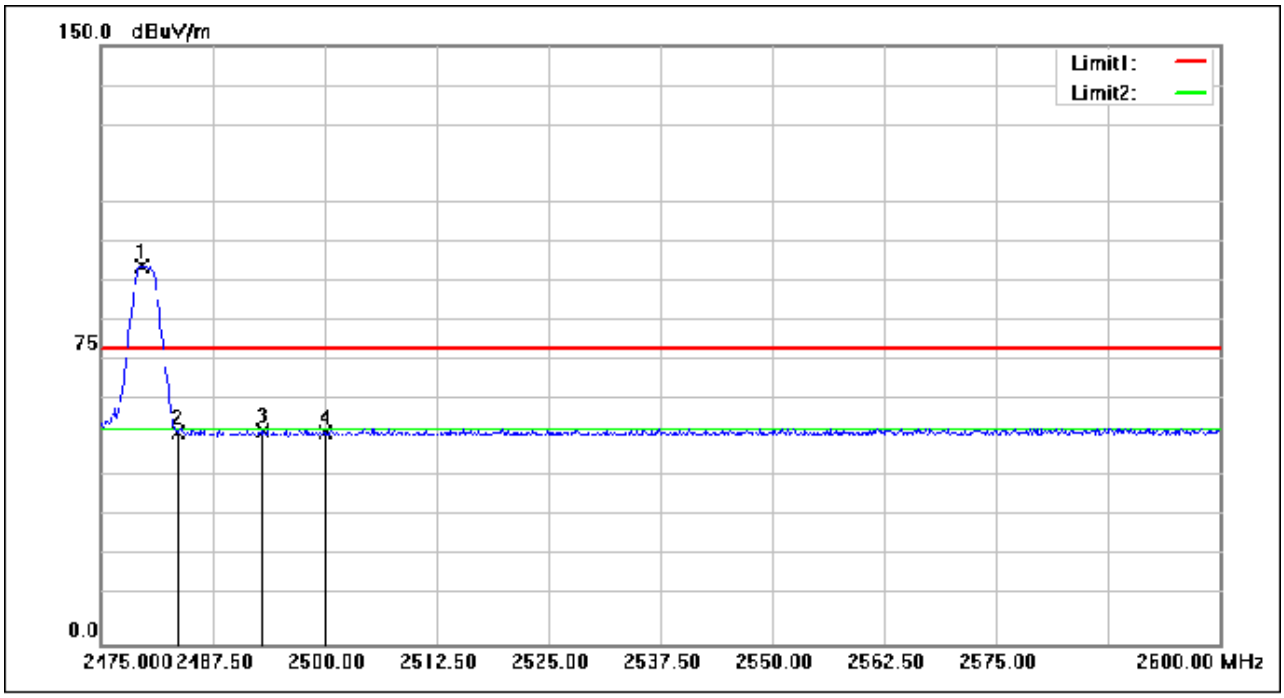
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.000	76.65	-24.72	51.93	74.00	-22.07	peak
2	2390.000	75.23	-24.71	50.52	74.00	-23.48	peak
3	2401.580	118.42	-24.65	93.77	74.00	19.77	peak

Test Mode: 07; Polarity: Vertical; Modulation:GFSK; Channel:Low



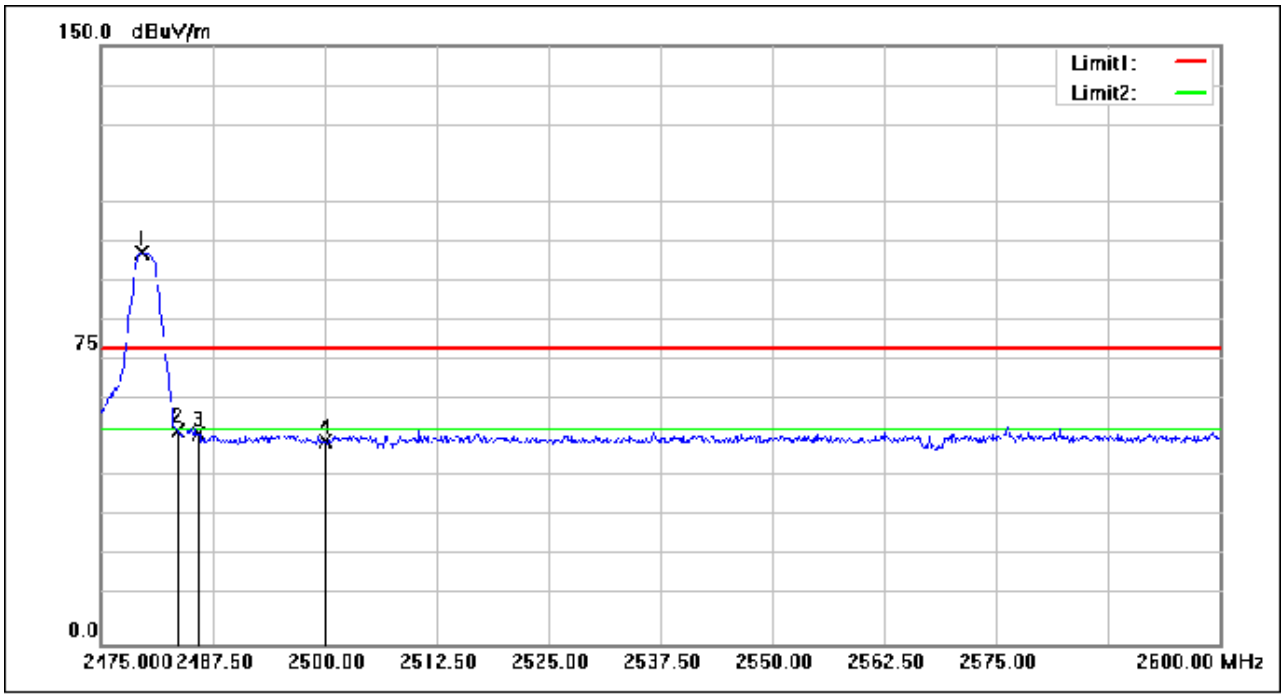
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.550	76.41	-24.78	51.63	74.00	-22.37	peak
2	2390.000	75.17	-24.71	50.46	74.00	-23.54	peak
3	2401.580	112.28	-24.65	87.63	74.00	13.63	peak

Test Mode: 05; Polarity: Horizontal; Modulation:GFSK; Channel:High



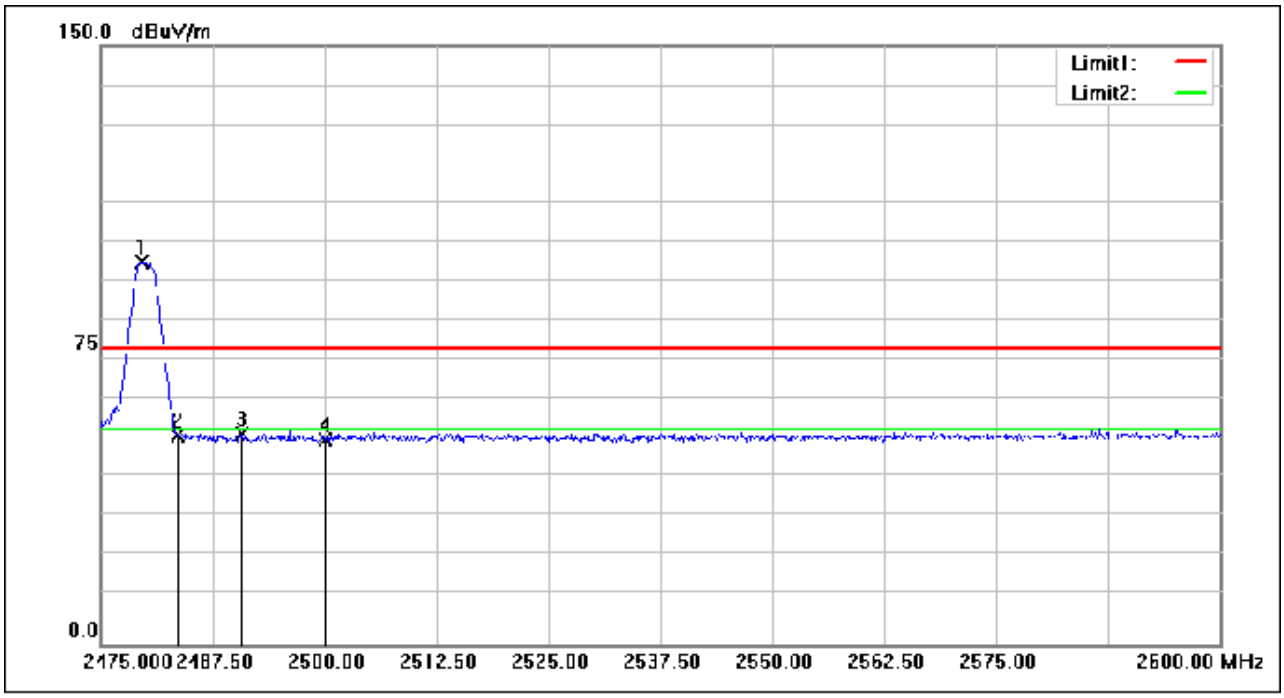
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.500	119.14	-24.28	94.86	74.00	20.86	peak
2	2483.500	77.40	-24.27	53.13	74.00	-20.87	peak
3	2493.000	77.72	-24.22	53.50	74.00	-20.50	peak
4	2500.000	77.28	-24.19	53.09	74.00	-20.91	peak

Test Mode: 07; Polarity: Horizontal; Modulation:GFSK; Channel:High



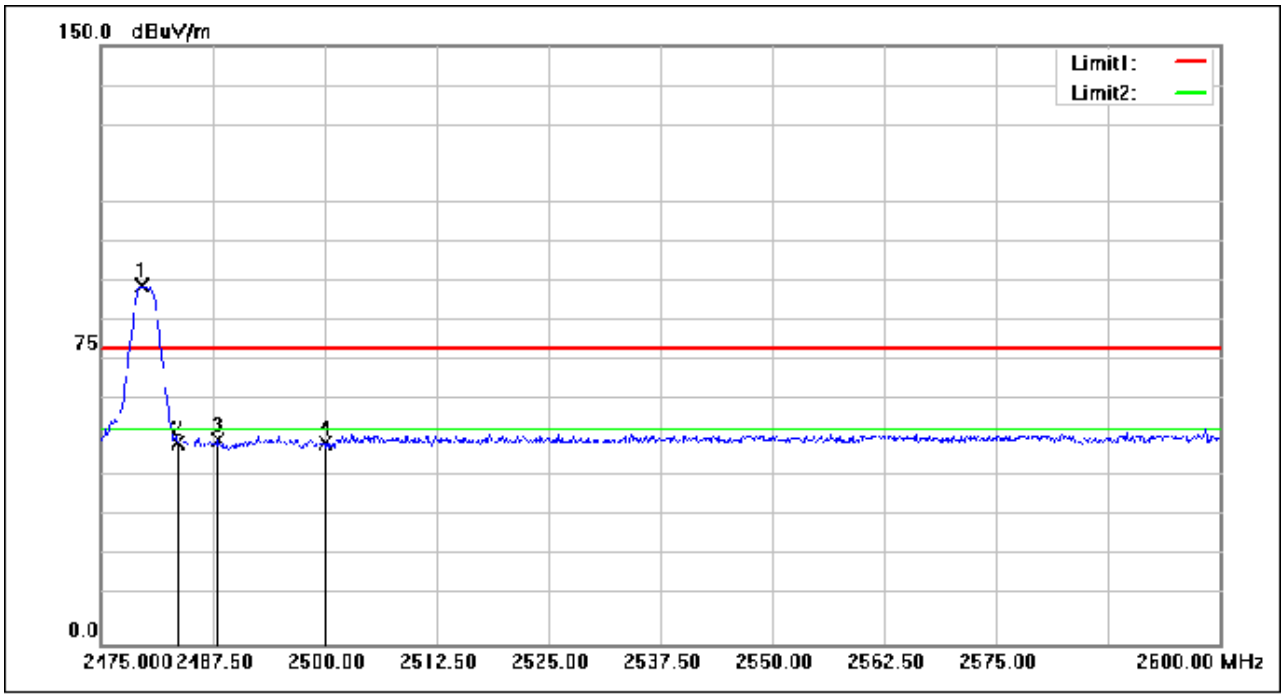
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.500	122.51	-24.28	98.23	74.00	24.23	peak
2	2483.500	77.66	-24.27	53.39	74.00	-20.61	peak
3	2485.875	77.10	-24.26	52.84	74.00	-21.16	peak
4	2500.000	75.02	-24.19	50.83	74.00	-23.17	peak

Test Mode: 05; 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	119.92	-24.28	95.64	74.00	21.64	peak
2	2483.500	76.42	-24.27	52.15	74.00	-21.85	peak
3	2490.750	77.03	-24.24	52.79	74.00	-21.21	peak
4	2500.000	75.37	-24.19	51.18	74.00	-22.82	peak

Test Mode: 07; 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	113.92	-24.28	89.64	74.00	15.64	peak
2	2483.500	74.74	-24.27	50.47	74.00	-23.53	peak
3	2488.125	75.53	-24.25	51.28	74.00	-22.72	peak
4	2500.000	74.46	-24.19	50.27	74.00	-23.73	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

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

7.2.1 E.U.T. Operation

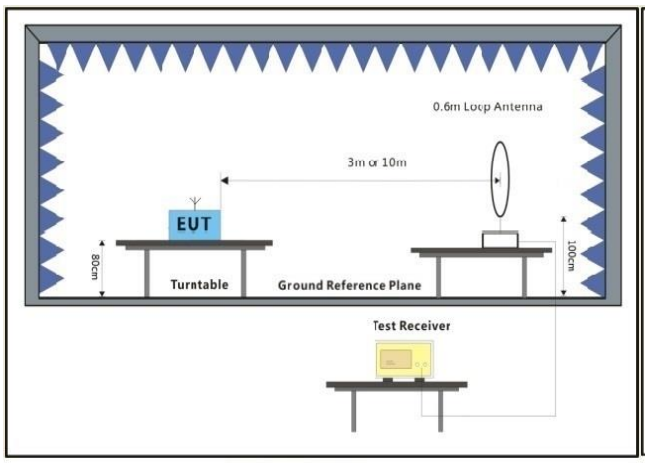
Operating Environment:

Temperature: 23.3 °C Humidity: 45.2 % RH Atmospheric Pressure: 1010 mbar

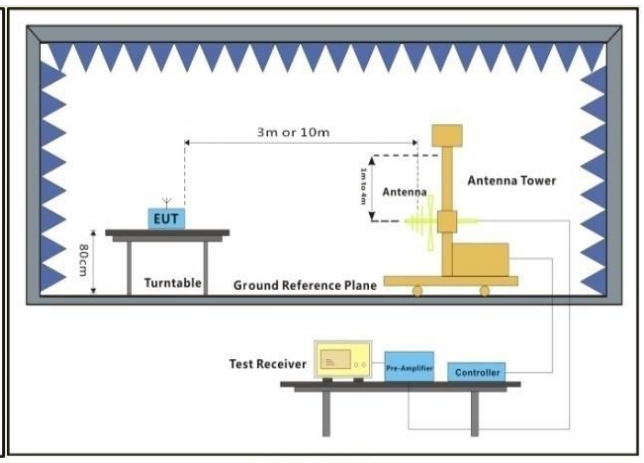
7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.

7.2.3 Test Setup Diagram



Below 30MHz



30MHz-1GHz

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.

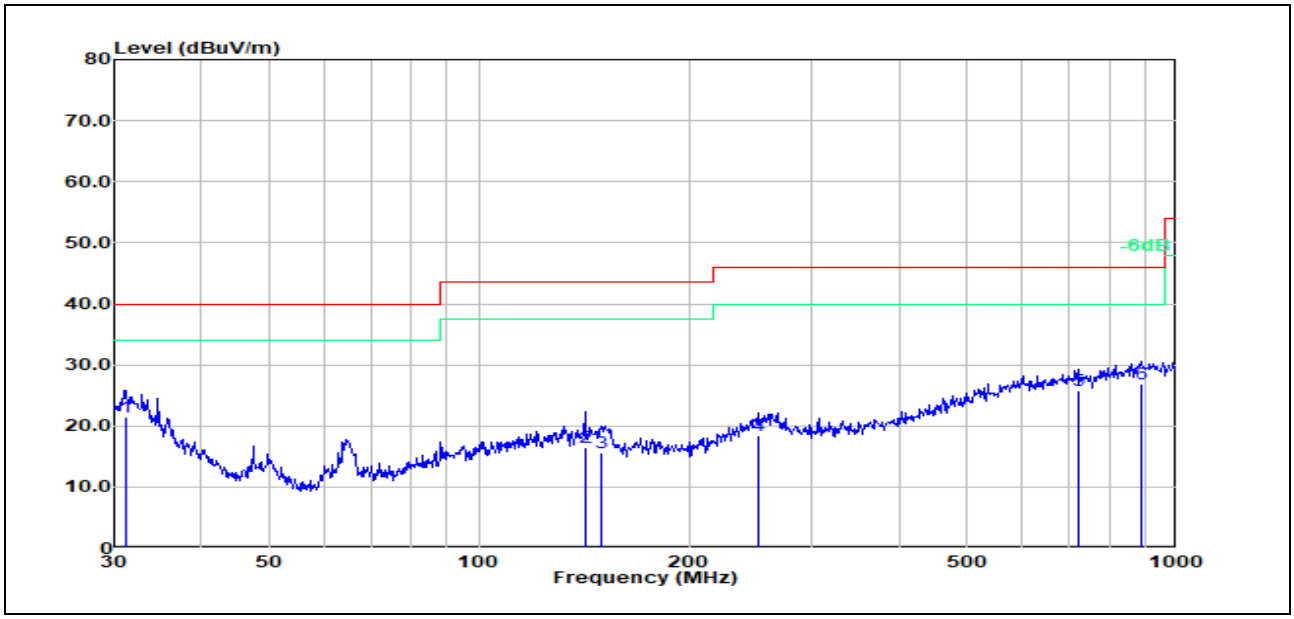
Remark:

1. 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.

Test Mode: 04; Polarity: Horizontal

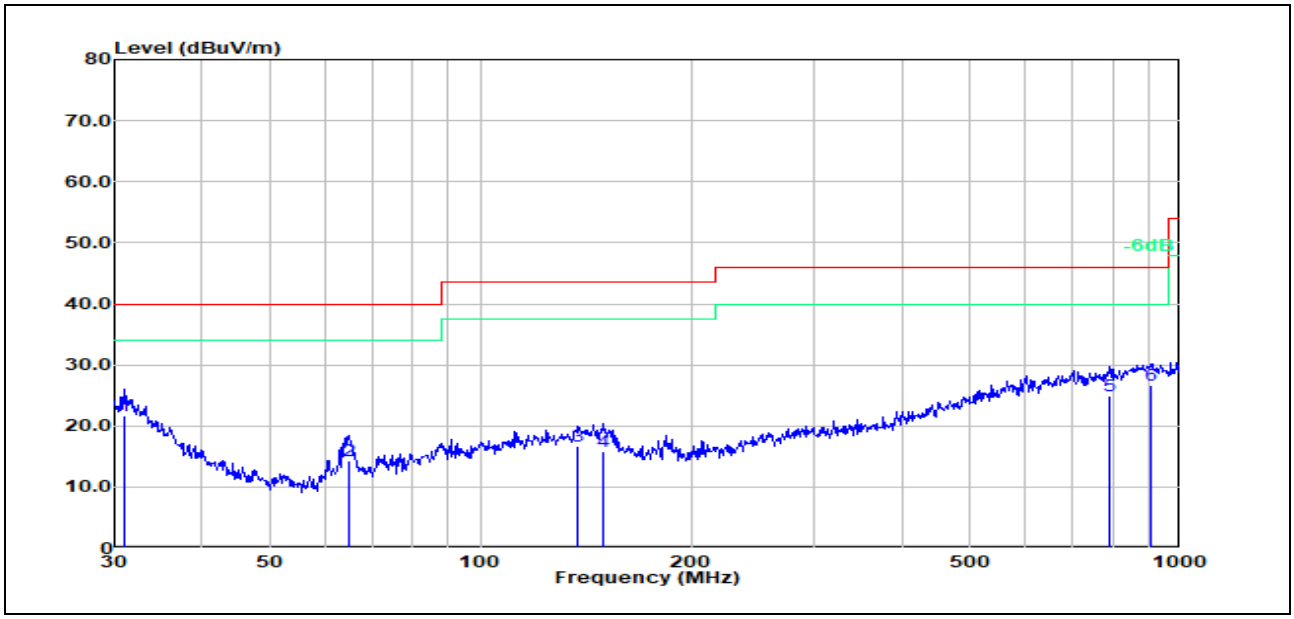
Test Data :



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	31.1800	2.97	18.45	21.42	40.00	-18.58	200	94	QP
2	141.8260	2.58	13.87	16.45	43.50	-27.05	200	356	QP
3	150.0110	3.56	12.15	15.71	43.50	-27.79	200	18	QP
4	252.0630	3.77	14.55	18.32	46.00	-27.68	100	320	QP
5	721.7260	1.62	24.16	25.78	46.00	-20.22	200	236	QP
6	887.6100	1.45	25.49	26.94	46.00	-19.06	100	85	QP

Test Mode: 04; Polarity: Vertical

Test Data :



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	30.9620	2.95	18.66	21.61	40.00	-18.39	200	359	QP
2	64.8870	7.95	6.38	14.33	40.00	-25.67	100	243	QP
3	137.9030	1.90	14.85	16.75	43.50	-26.75	100	106	QP
4	149.4860	3.90	11.99	15.89	43.50	-27.61	100	0	QP
5	793.3960	0.54	24.49	25.03	46.00	-20.97	100	106	QP
6	906.4820	1.27	25.47	26.74	46.00	-19.26	100	289	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
Measurement Distance: 3M

Limit:

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

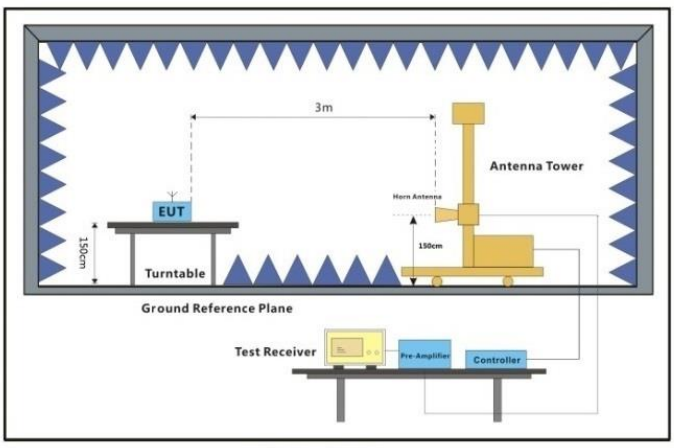
7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 23.3 °C Humidity: 45.2 % RH Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	06	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	07	TX mode(2Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.

7.3.3 Test Setup Diagram



Above 1GHz

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.

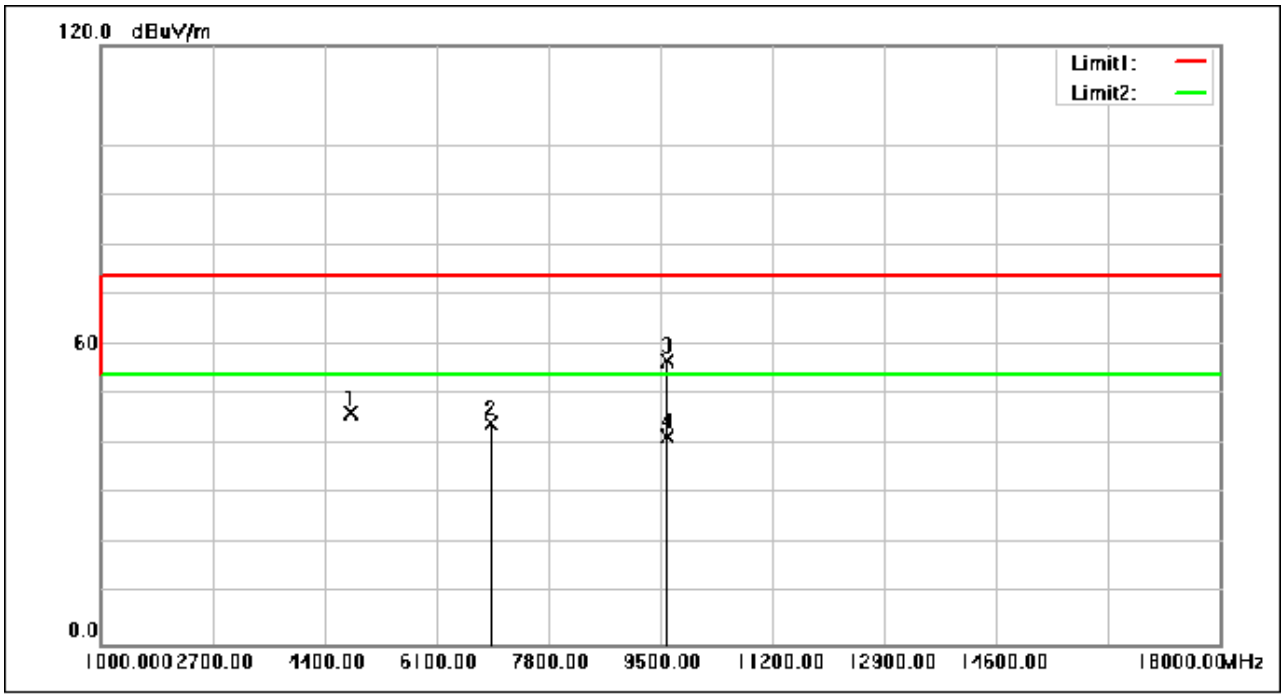
Remark:

1. 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.

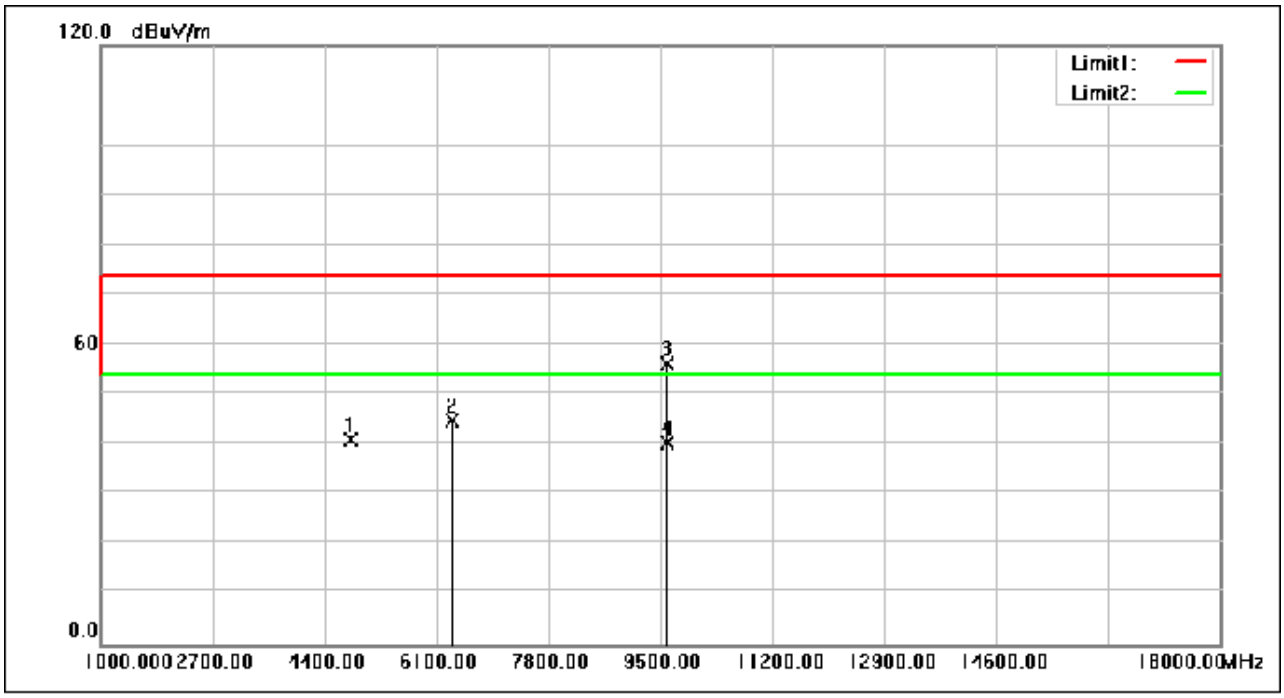
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions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

Test Mode: 04; Polarity: Horizontal; Modulation:GFSK; Channel:Low



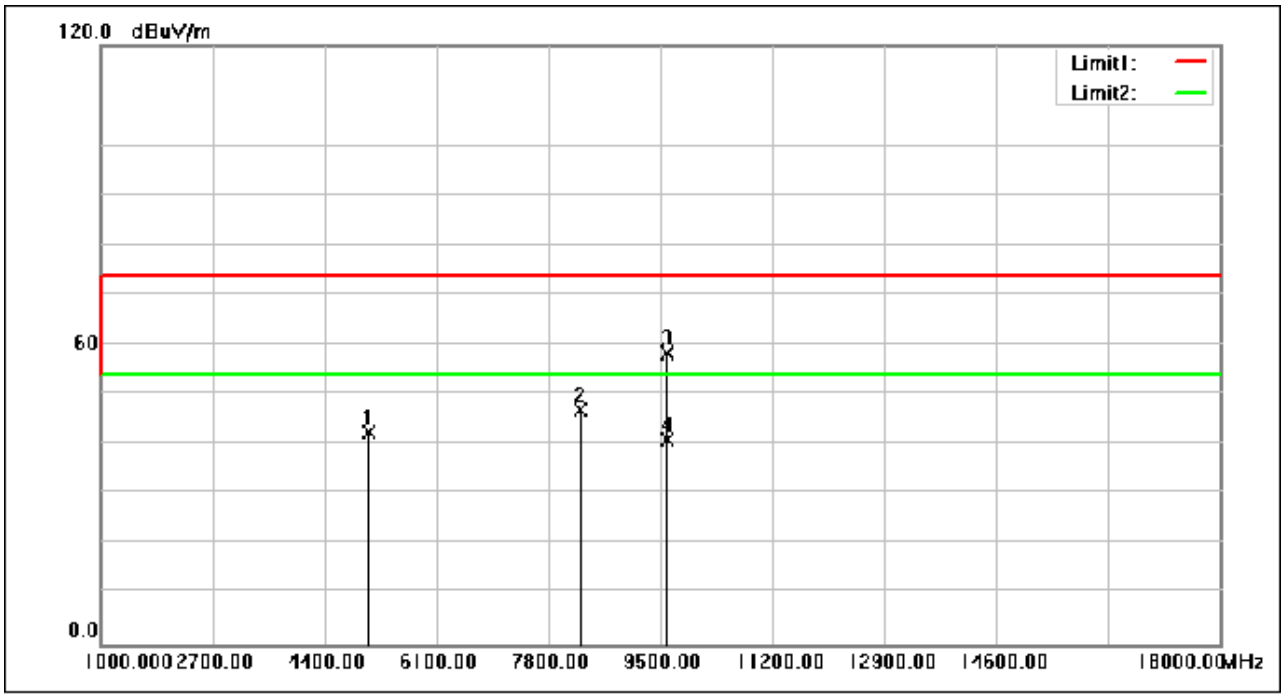
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4803.750	64.83	-18.56	46.27	74.00	-27.73	peak
2	6916.850	55.99	-11.71	44.28	74.00	-29.72	peak
3	9602.000	64.69	-7.76	56.93	74.00	-17.07	peak
4	9602.000	49.27	-7.76	41.51	54.00	-12.49	AVG

Test Mode: 06; Polarity: Horizontal; Modulation:GFSK; Channel:Low



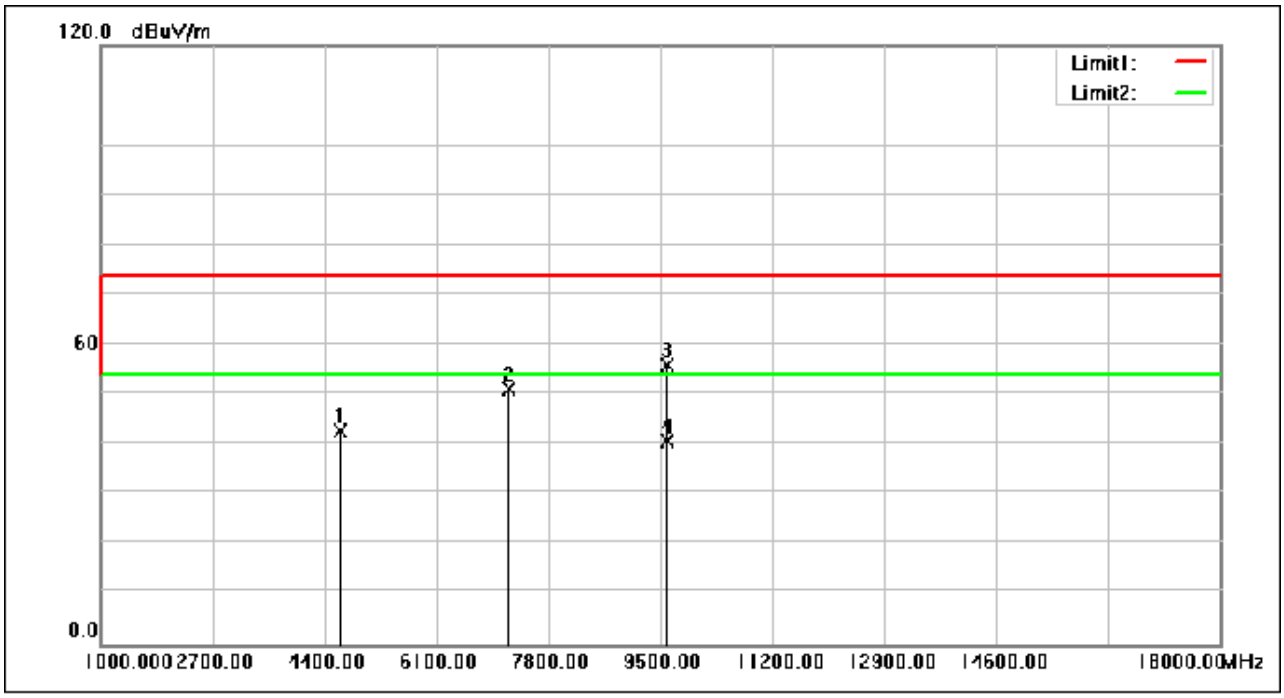
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.600	59.46	-18.56	40.90	74.00	-33.10	peak
2	6345.650	58.74	-14.03	44.71	74.00	-29.29	peak
3	9602.000	64.04	-7.76	56.28	74.00	-17.72	peak
4	9602.000	47.96	-7.76	40.20	54.00	-13.80	AVG

Test Mode: 04; Polarity: Vertical; Modulation:GFSK; Channel:Low



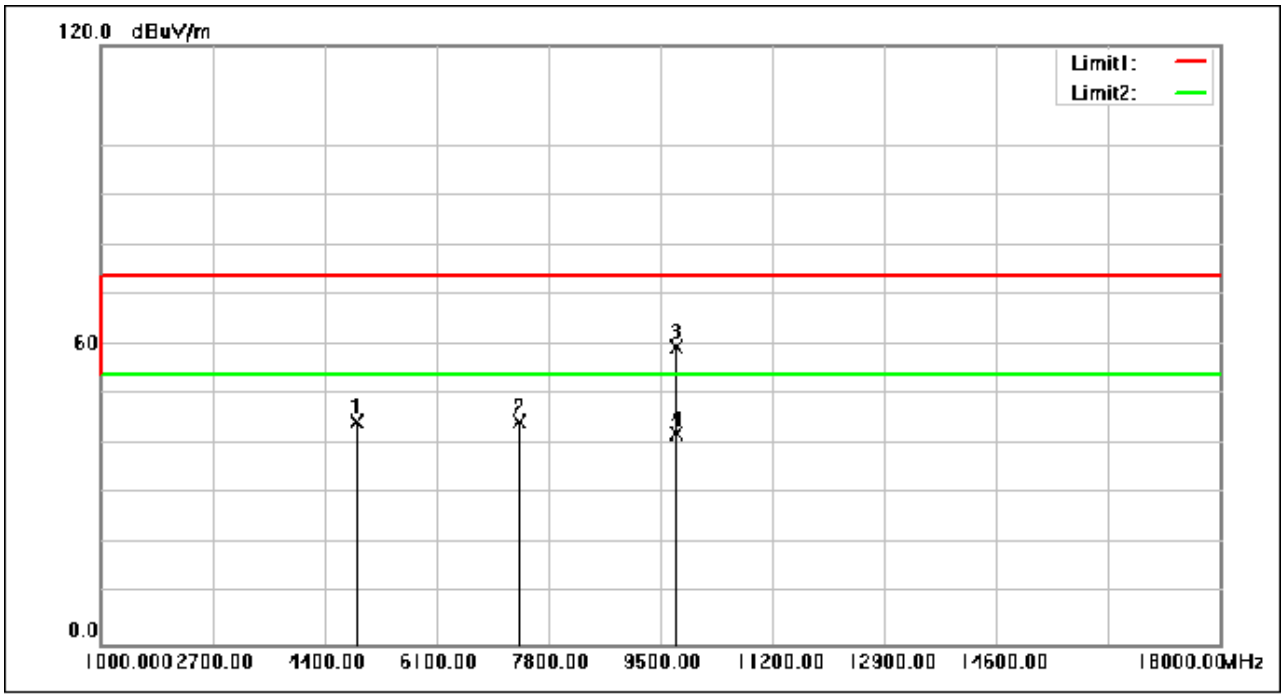
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5064.700	60.89	-18.34	42.55	74.00	-31.45	peak
2	8288.750	57.05	-10.10	46.95	74.00	-27.05	peak
3	9602.000	66.22	-7.76	58.46	74.00	-15.54	peak
4	9602.000	48.81	-7.76	41.05	54.00	-12.95	AVG

Test Mode: 06; Polarity: Vertical; Modulation:GFSK; Channel:Low



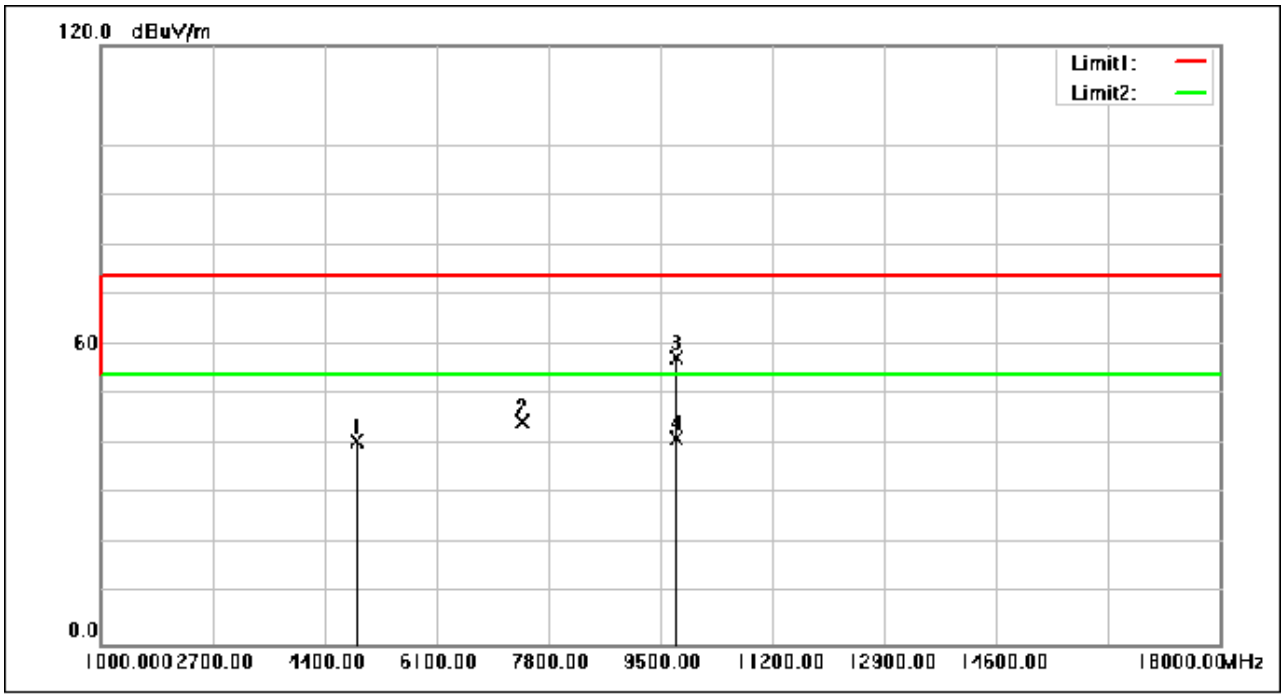
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4650.750	61.33	-18.65	42.68	74.00	-31.32	peak
2	7210.100	62.61	-11.47	51.14	74.00	-22.86	peak
3	9602.000	63.57	-7.76	55.81	74.00	-18.19	peak
4	9602.000	48.49	-7.76	40.73	54.00	-13.27	AVG

Test Mode: 04; Polarity: Horizontal; Modulation:GFSK; Channel:middle



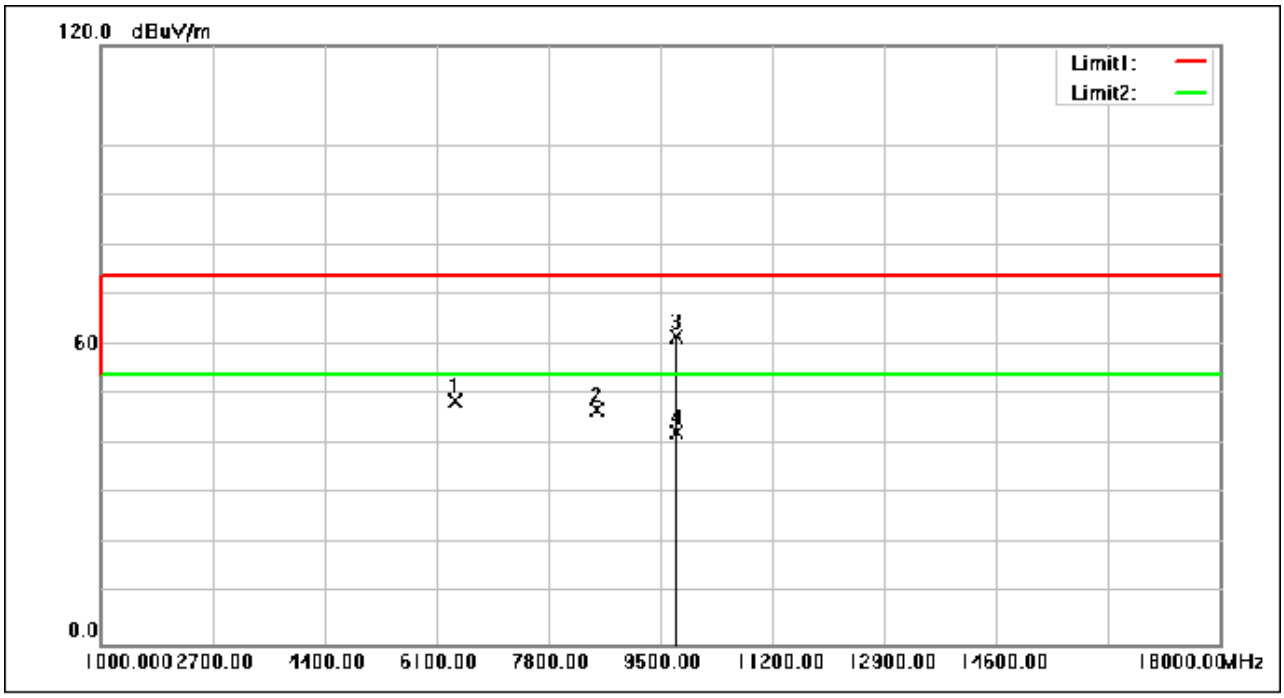
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4879.400	63.21	-18.52	44.69	74.00	-29.31	peak
2	7360.550	56.08	-11.41	44.67	74.00	-29.33	peak
3	9754.150	66.91	-7.48	59.43	74.00	-14.57	peak
4	9754.150	49.54	-7.48	42.06	54.00	-11.94	AVG

Test Mode: 06; Polarity: Horizontal; Modulation:GFSK; Channel:middle



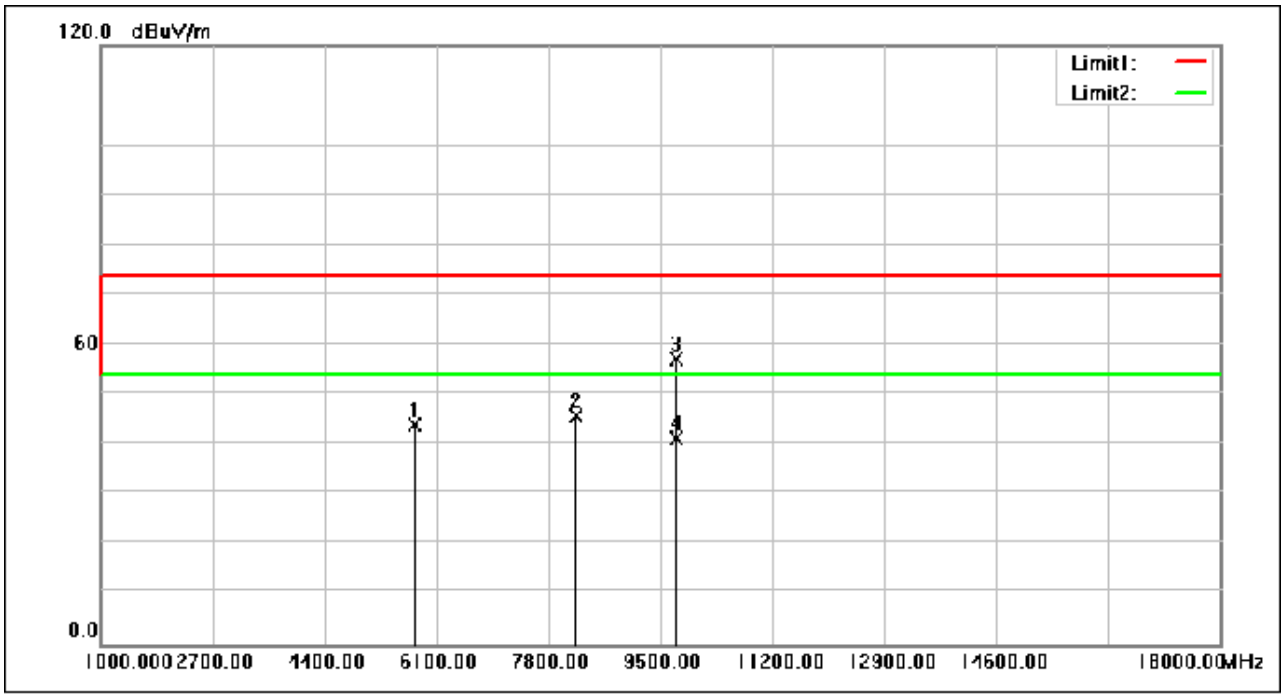
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4879.400	59.15	-18.52	40.63	74.00	-33.37	peak
2	7412.400	55.80	-11.37	44.43	74.00	-29.57	peak
3	9754.150	65.05	-7.48	57.57	74.00	-16.43	peak
4	9754.150	48.87	-7.48	41.39	54.00	-12.61	AVG

Test Mode: 04; Polarity: Vertical; Modulation:GFSK; Channel:middle



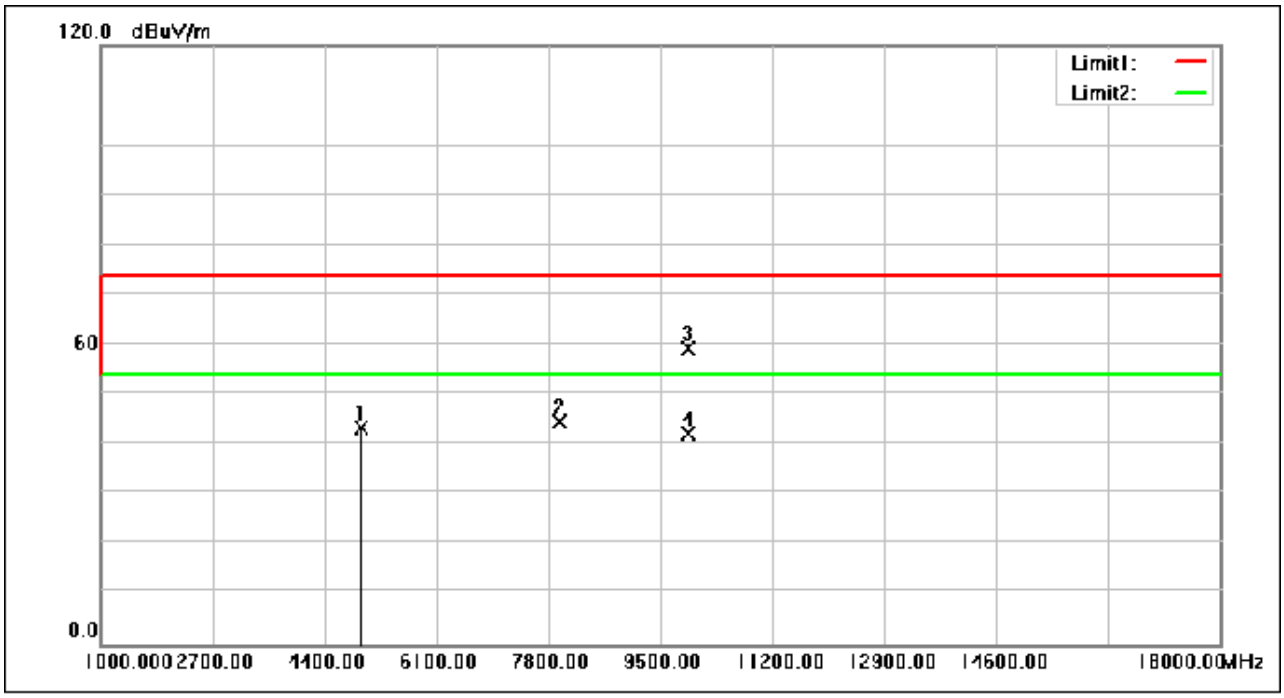
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6383.050	62.59	-13.84	48.75	74.00	-25.25	peak
2	8542.900	56.76	-9.69	47.07	74.00	-26.93	peak
3	9754.150	68.99	-7.48	61.51	74.00	-12.49	peak
4	9754.150	49.98	-7.48	42.50	54.00	-11.50	AVG

Test Mode: 06; Polarity: Vertical; Modulation:GFSK; Channel:middle



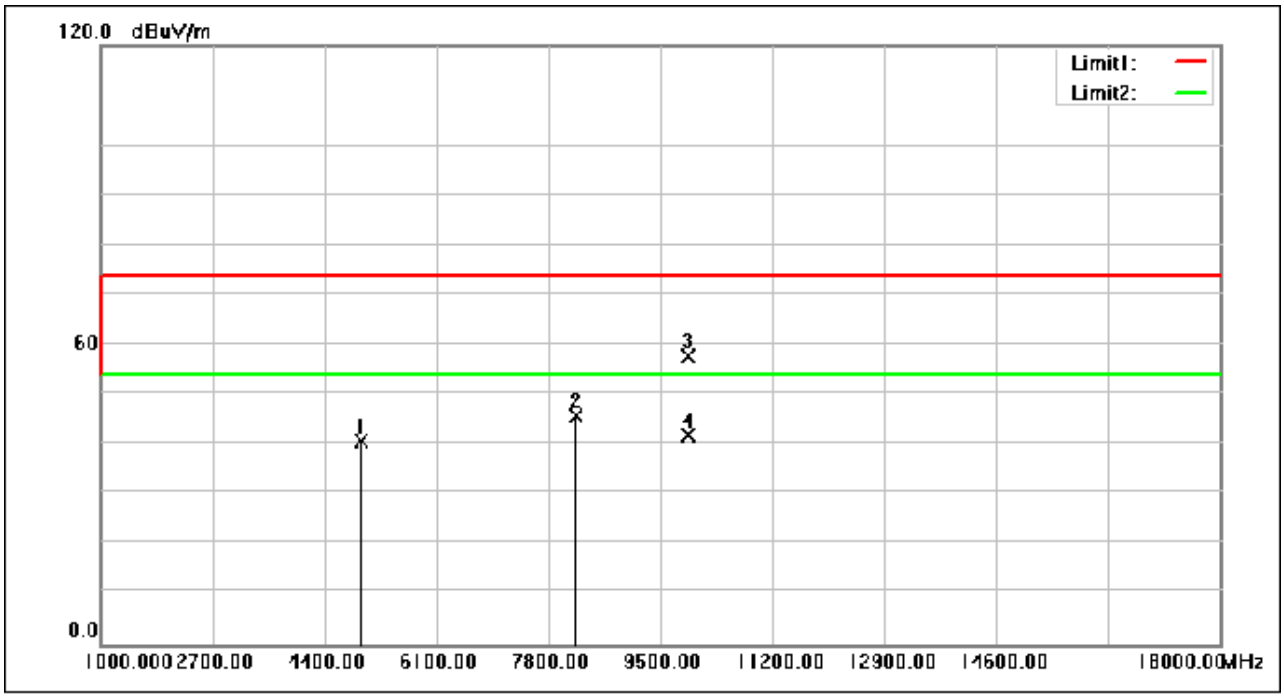
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5777.000	60.77	-16.70	44.07	74.00	-29.93	peak
2	8225.000	56.07	-10.21	45.86	74.00	-28.14	peak
3	9754.150	64.74	-7.48	57.26	74.00	-16.74	peak
4	9754.150	48.59	-7.48	41.11	54.00	-12.89	AVG

Test Mode: 04; Polarity: Horizontal; Modulation:GFSK; Channel:High



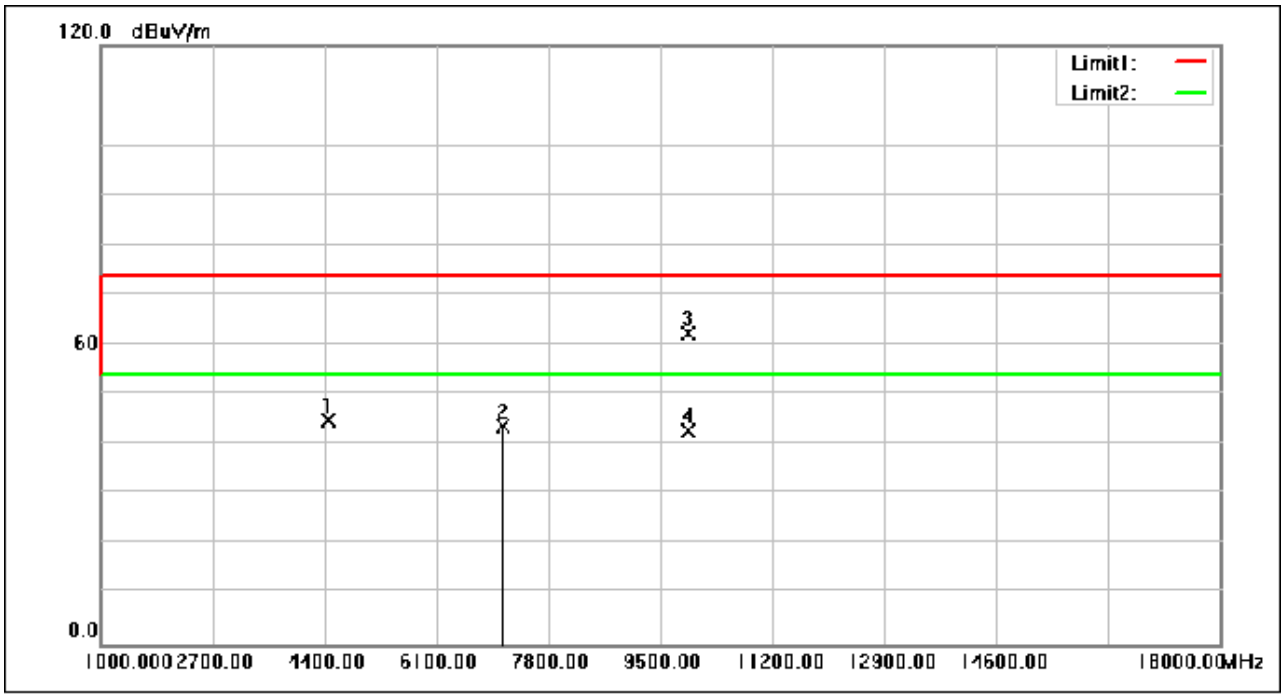
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4959.300	61.97	-18.47	43.50	74.00	-30.50	peak
2	7984.450	55.17	-10.63	44.54	74.00	-29.46	peak
3	9913.950	66.56	-7.31	59.25	74.00	-14.75	peak
4	9913.950	49.61	-7.31	42.30	54.00	-11.70	AVG

Test Mode: 06; Polarity: Horizontal; Modulation:GFSK; Channel:High



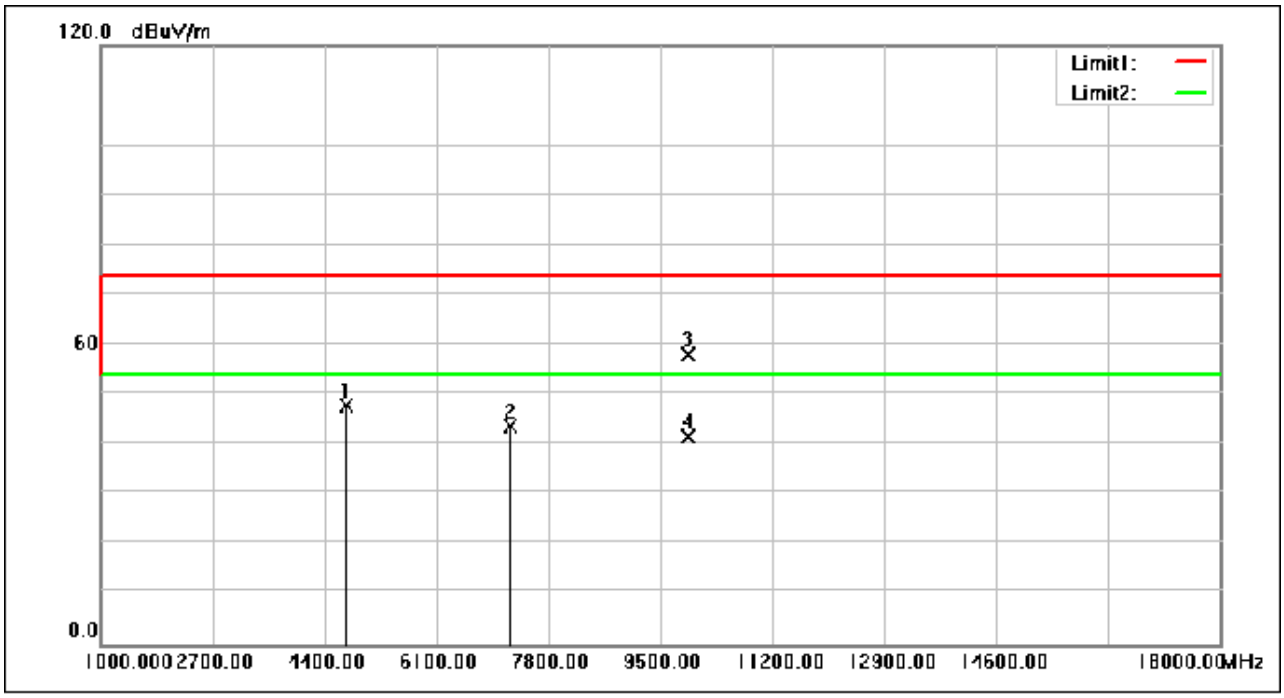
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.150	59.05	-18.47	40.58	74.00	-33.42	peak
2	8230.100	56.08	-10.20	45.88	74.00	-28.12	peak
3	9913.950	65.04	-7.31	57.73	74.00	-16.27	peak
4	9913.950	49.16	-7.31	41.85	54.00	-12.15	AVG

Test Mode: 04; Polarity: Vertical; Modulation:GFSK; Channel:High



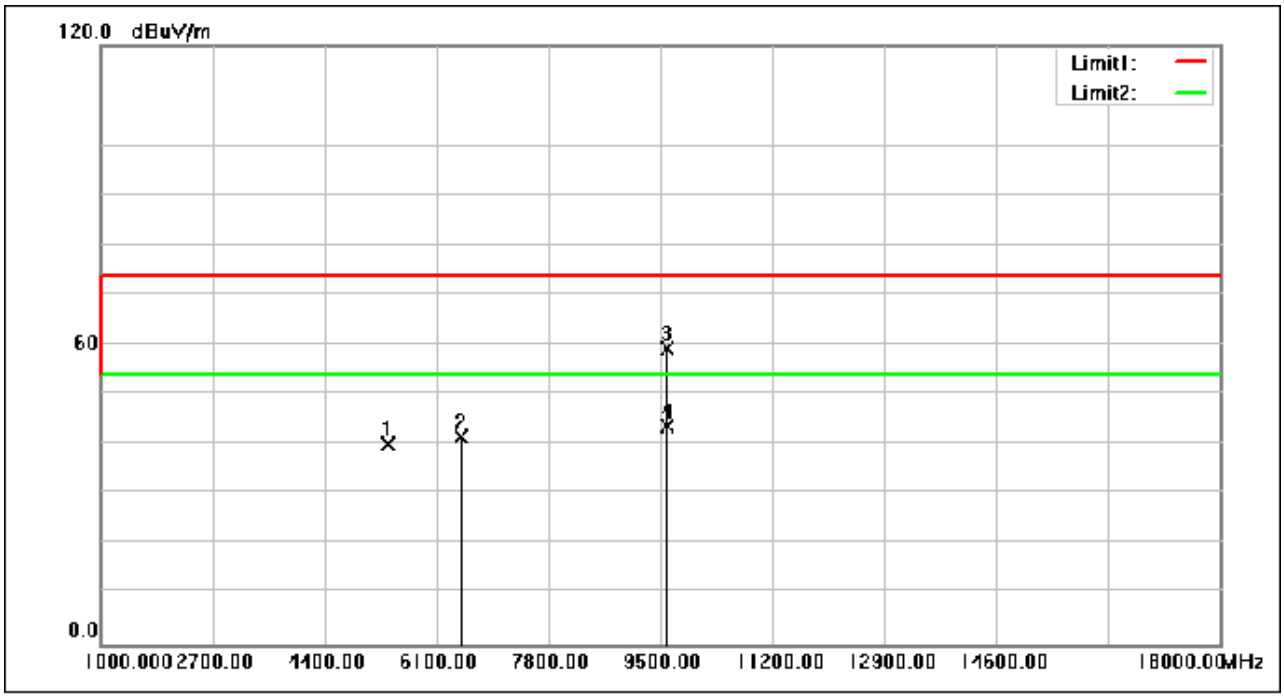
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4460.350	63.81	-19.08	44.73	74.00	-29.27	peak
2	7103.850	55.07	-11.52	43.55	74.00	-30.45	peak
3	9913.950	69.65	-7.31	62.34	74.00	-11.66	peak
4	9913.950	50.16	-7.31	42.85	54.00	-11.15	AVG

Test Mode: 06; Polarity: Vertical; Modulation:GFSK; Channel:High



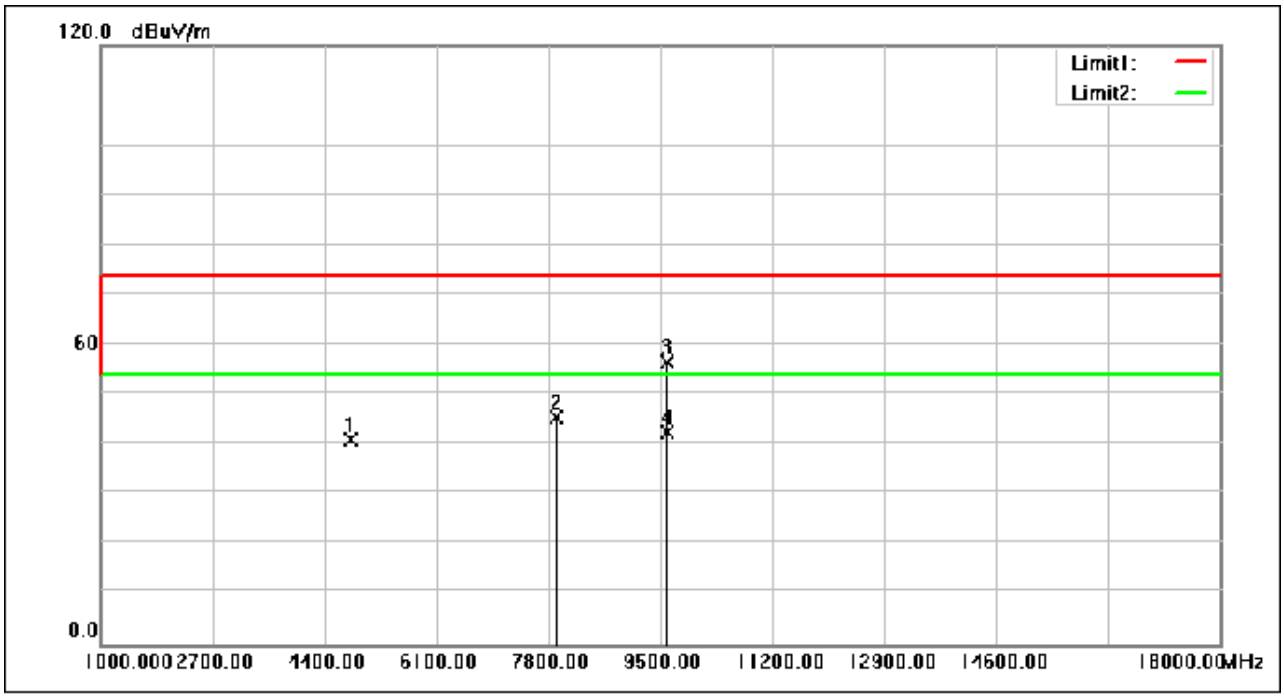
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4725.550	66.54	-18.61	47.93	74.00	-26.07	peak
2	7227.100	55.17	-11.47	43.70	74.00	-30.30	peak
3	9913.950	65.28	-7.31	57.97	74.00	-16.03	peak
4	9913.950	48.89	-7.31	41.58	54.00	-12.42	AVG

Test Mode: 05; Polarity: Horizontal; Modulation:GFSK; Channel:Low



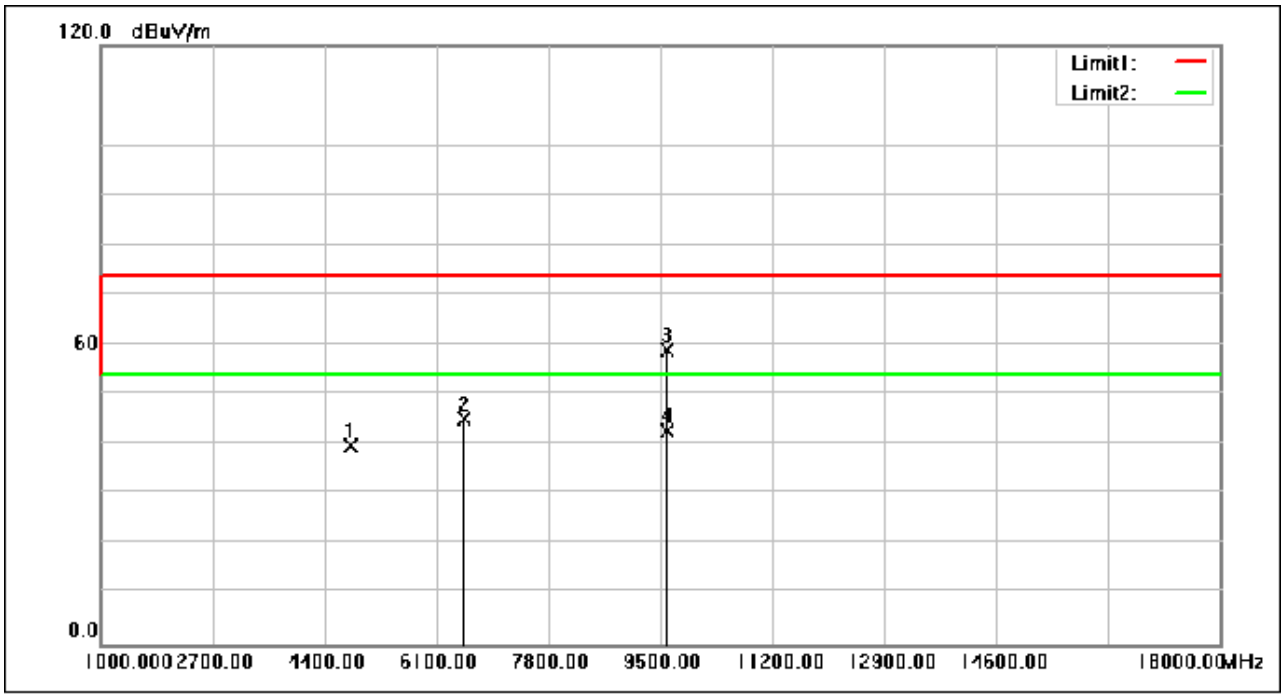
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5379.200	57.82	-17.87	39.95	74.00	-34.05	peak
2	6487.600	54.87	-13.29	41.58	74.00	-32.42	peak
3	9602.000	66.90	-7.76	59.14	74.00	-14.86	peak
4	9602.000	51.40	-7.76	43.64	54.00	-10.36	AVG

Test Mode: 07; Polarity: Horizontal; Modulation:GFSK; Channel:Low



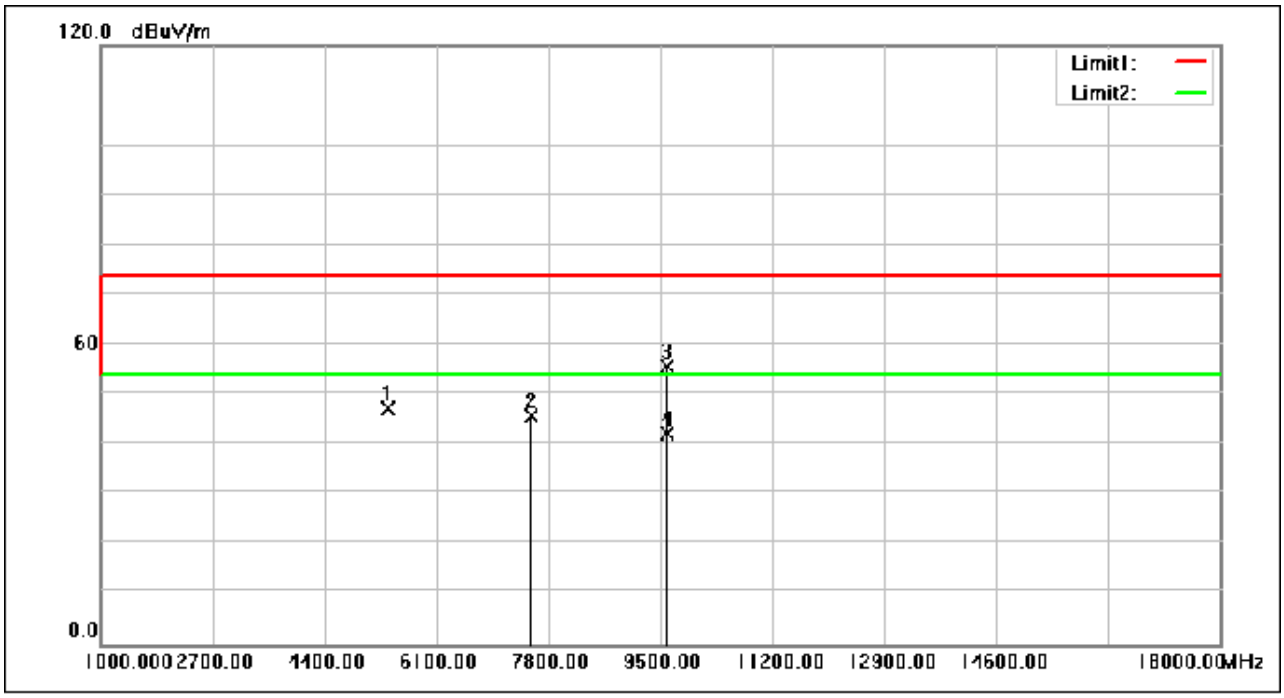
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4803.750	59.51	-18.56	40.95	74.00	-33.05	peak
2	7919.000	56.08	-10.70	45.38	74.00	-28.62	peak
3	9602.000	64.20	-7.76	56.44	74.00	-17.56	peak
4	9602.000	50.11	-7.76	42.35	54.00	-11.65	AVG

Test Mode: 05; Polarity: Vertical; Modulation:GFSK; Channel:Low



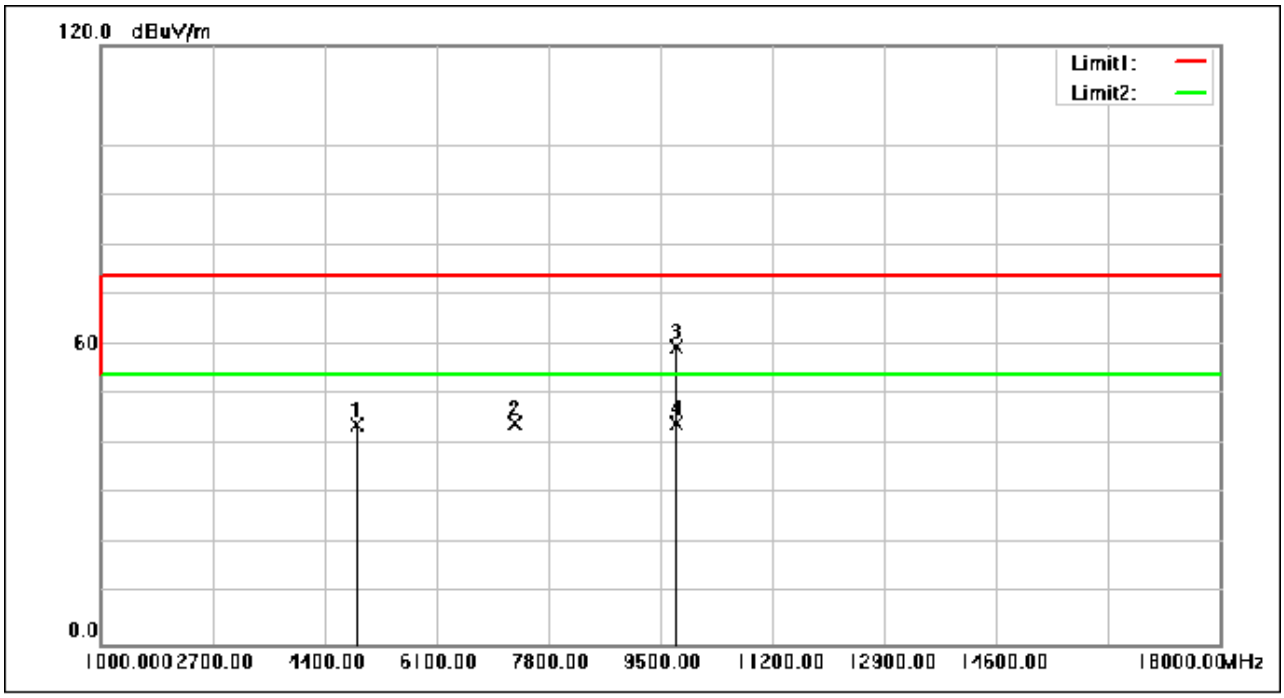
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.350	58.18	-18.56	39.62	74.00	-34.38	peak
2	6526.700	58.10	-13.08	45.02	74.00	-28.98	peak
3	9602.000	66.63	-7.76	58.87	74.00	-15.13	peak
4	9602.000	50.38	-7.76	42.62	54.00	-11.38	AVG

Test Mode: 07; Polarity: Vertical; Modulation:GFSK; Channel:Low



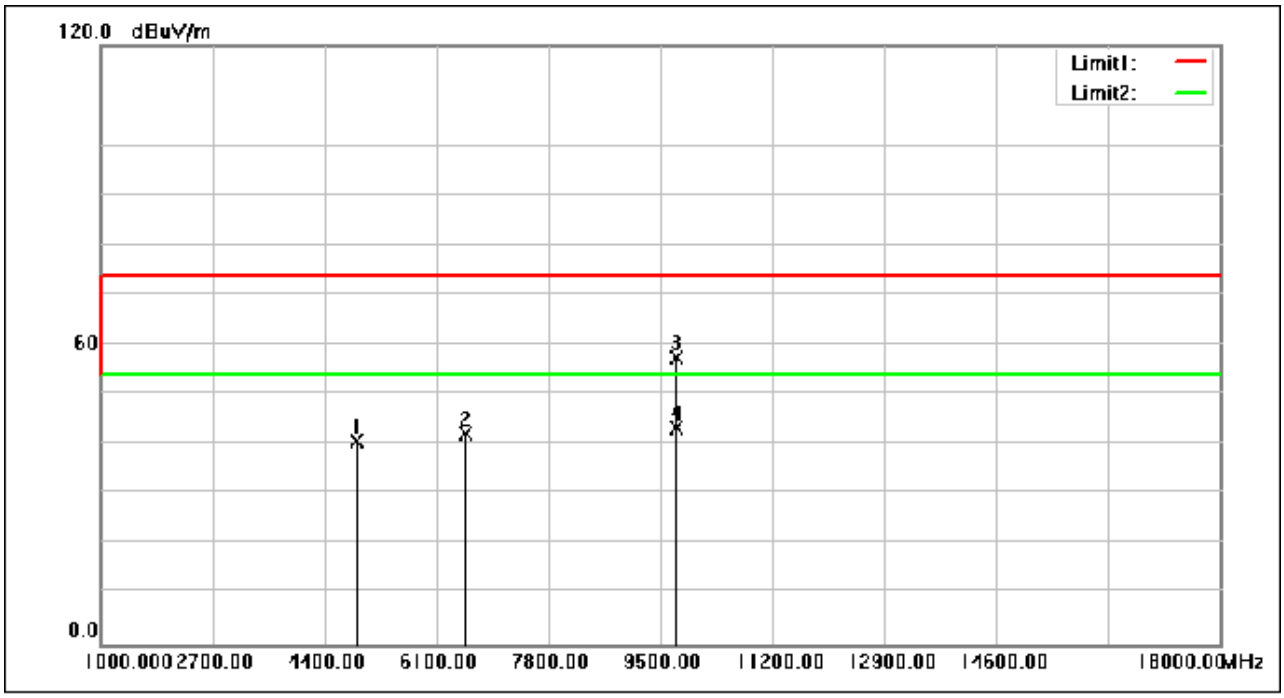
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5353.700	65.21	-17.91	47.30	74.00	-26.70	peak
2	7529.700	57.00	-11.22	45.78	74.00	-28.22	peak
3	9602.000	63.44	-7.76	55.68	74.00	-18.32	peak
4	9602.000	49.91	-7.76	42.15	54.00	-11.85	AVG

Test Mode: 05; Polarity: Horizontal; Modulation:GFSK; Channel:middle



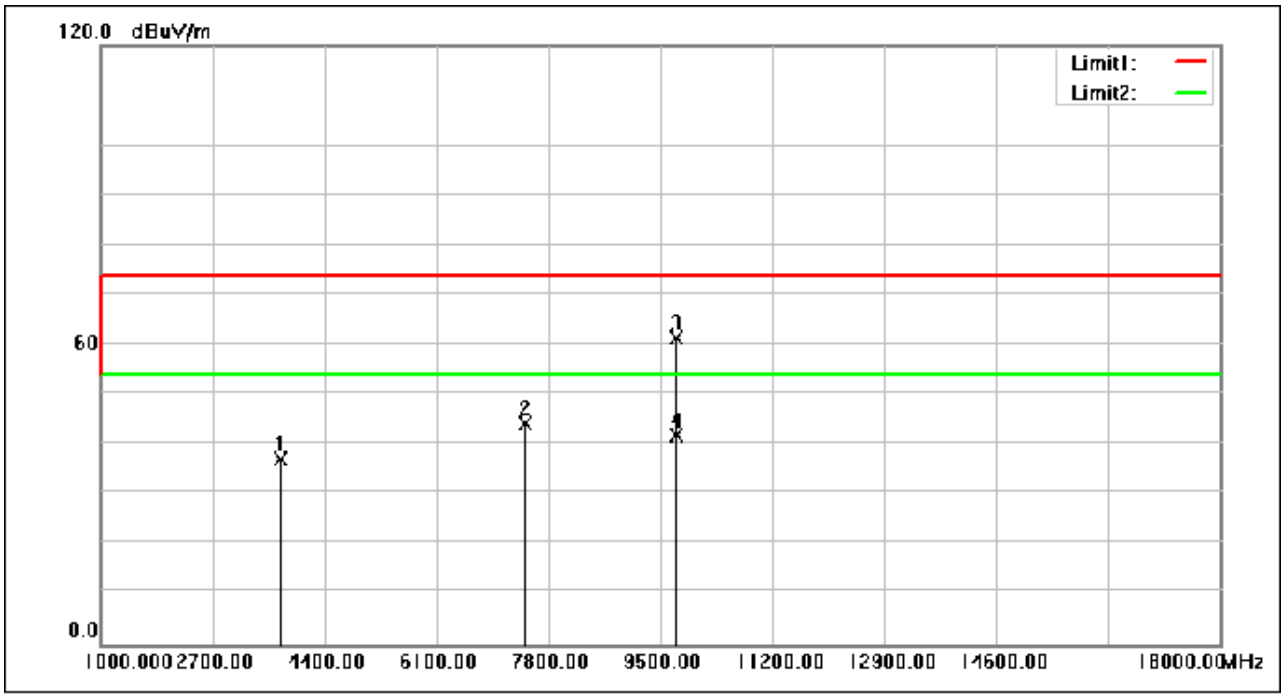
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4879.400	62.55	-18.52	44.03	74.00	-29.97	peak
2	7305.300	55.78	-11.43	44.35	74.00	-29.65	peak
3	9754.150	66.95	-7.48	59.47	74.00	-14.53	peak
4	9754.150	51.71	-7.48	44.23	54.00	-9.77	AVG

Test Mode: 07; Polarity: Horizontal; Modulation:GFSK; Channel:middle



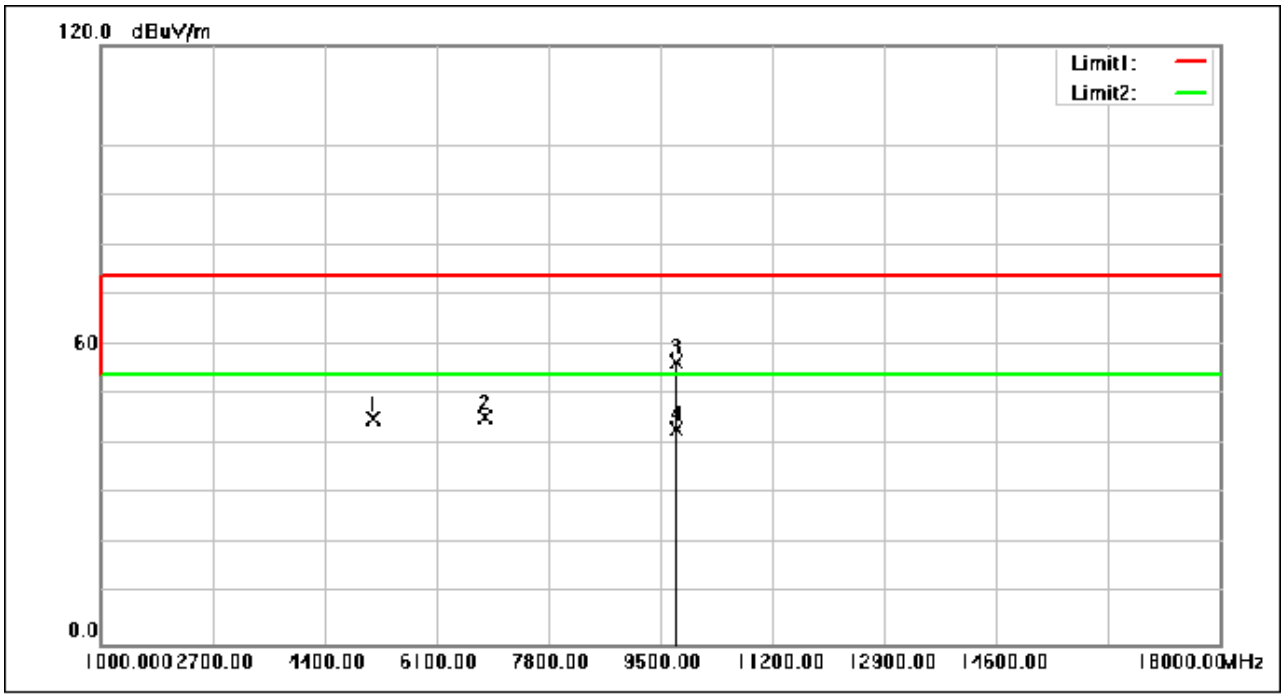
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4878.550	59.27	-18.52	40.75	74.00	-33.25	peak
2	6543.700	55.13	-12.99	42.14	74.00	-31.86	peak
3	9754.150	64.98	-7.48	57.50	74.00	-16.50	peak
4	9754.150	50.82	-7.48	43.34	54.00	-10.66	AVG

Test Mode: 05; Polarity: Vertical; Modulation:GFSK; Channel:middle



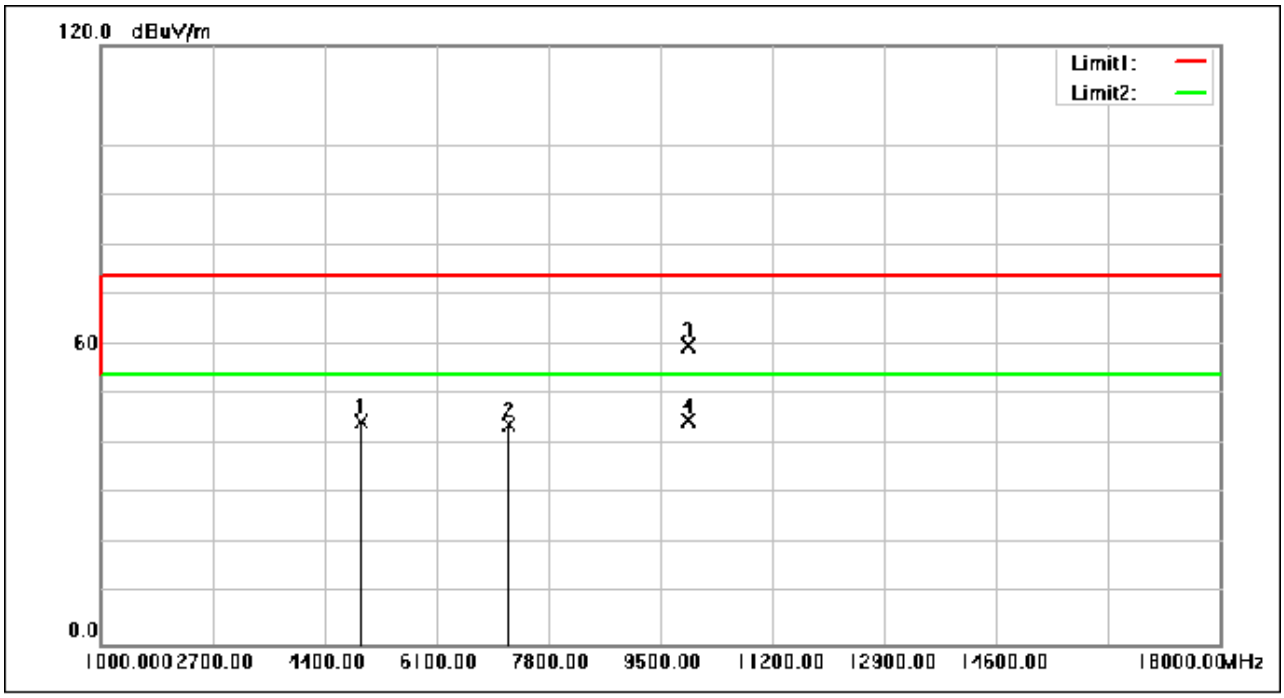
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3731.050	58.00	-21.01	36.99	74.00	-37.01	peak
2	7454.900	55.46	-11.32	44.14	74.00	-29.86	peak
3	9754.150	68.97	-7.48	61.49	74.00	-12.51	peak
4	9754.150	49.33	-7.48	41.85	54.00	-12.15	AVG

Test Mode: 07; Polarity: Vertical; Modulation:GFSK; Channel:middle



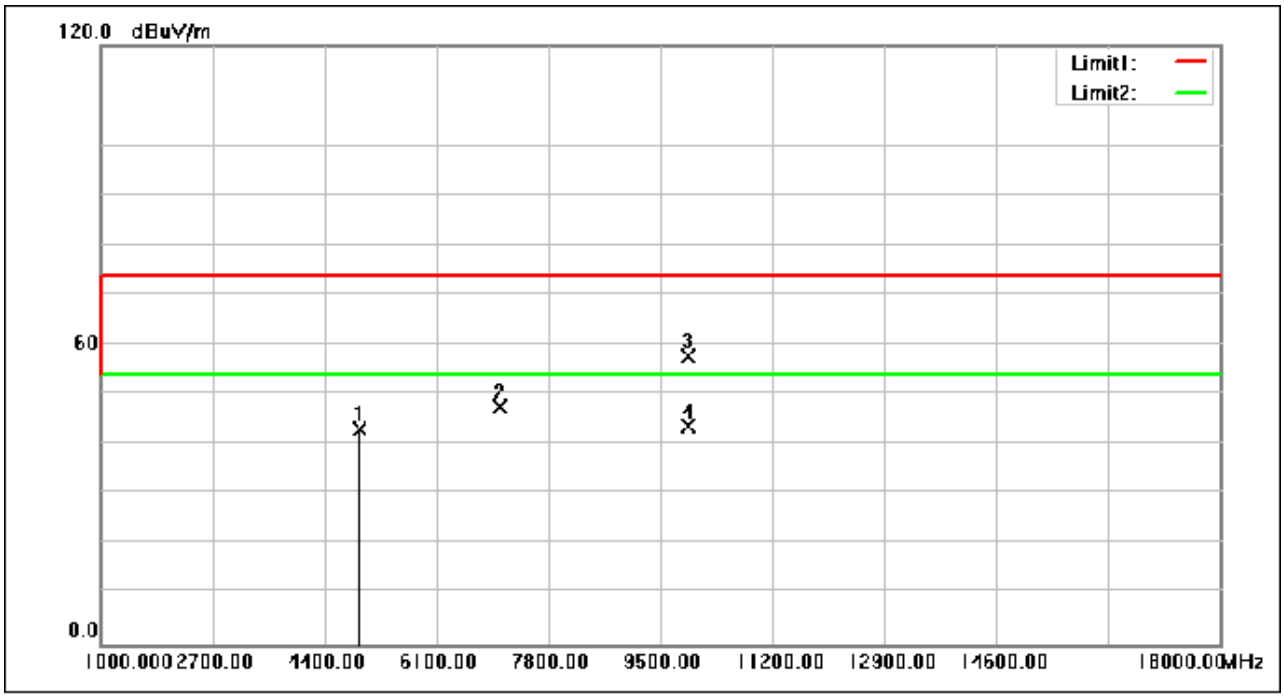
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5145.450	63.38	-18.22	45.16	74.00	-28.84	peak
2	6836.950	57.19	-11.85	45.34	74.00	-28.66	peak
3	9754.150	63.93	-7.48	56.45	74.00	-17.55	peak
4	9754.150	50.58	-7.48	43.10	54.00	-10.90	AVG

Test Mode: 05; Polarity: Horizontal; Modulation:GFSK; Channel:High



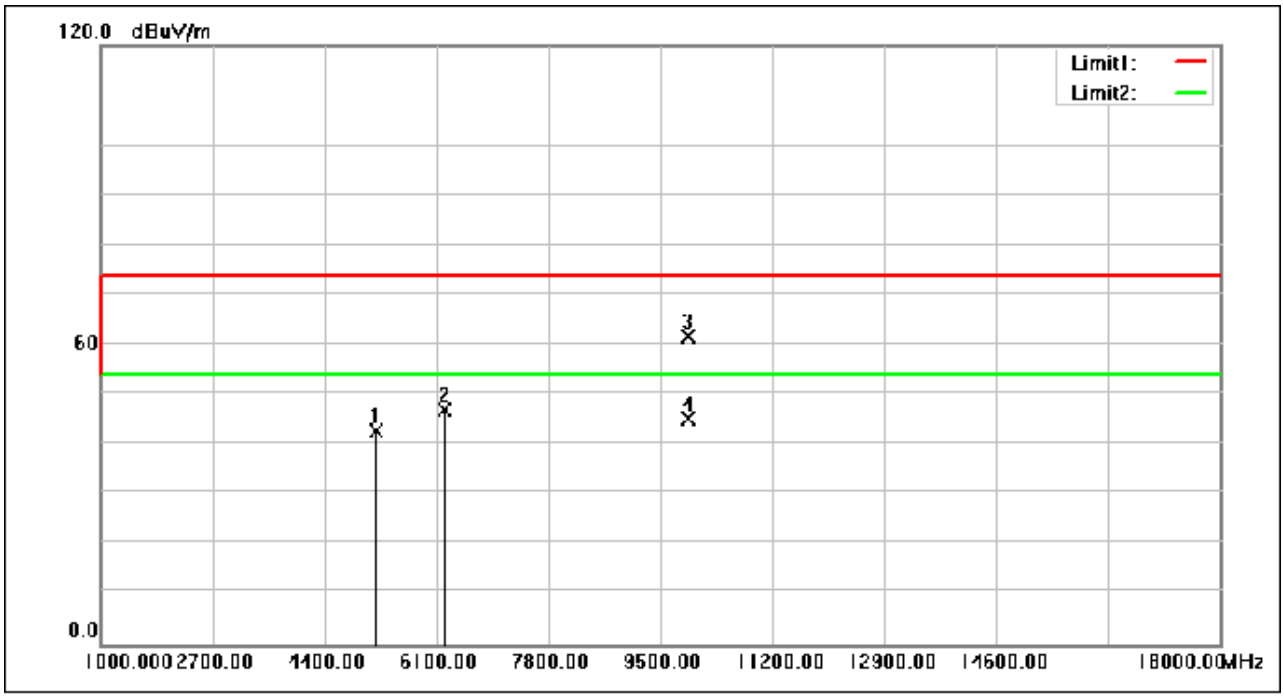
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.150	63.10	-18.47	44.63	74.00	-29.37	peak
2	7217.750	55.29	-11.47	43.82	74.00	-30.18	peak
3	9913.950	67.08	-7.31	59.77	74.00	-14.23	peak
4	9913.950	52.05	-7.31	44.74	54.00	-9.26	AVG

Test Mode: 07; Polarity: Horizontal; Modulation:GFSK; Channel:High



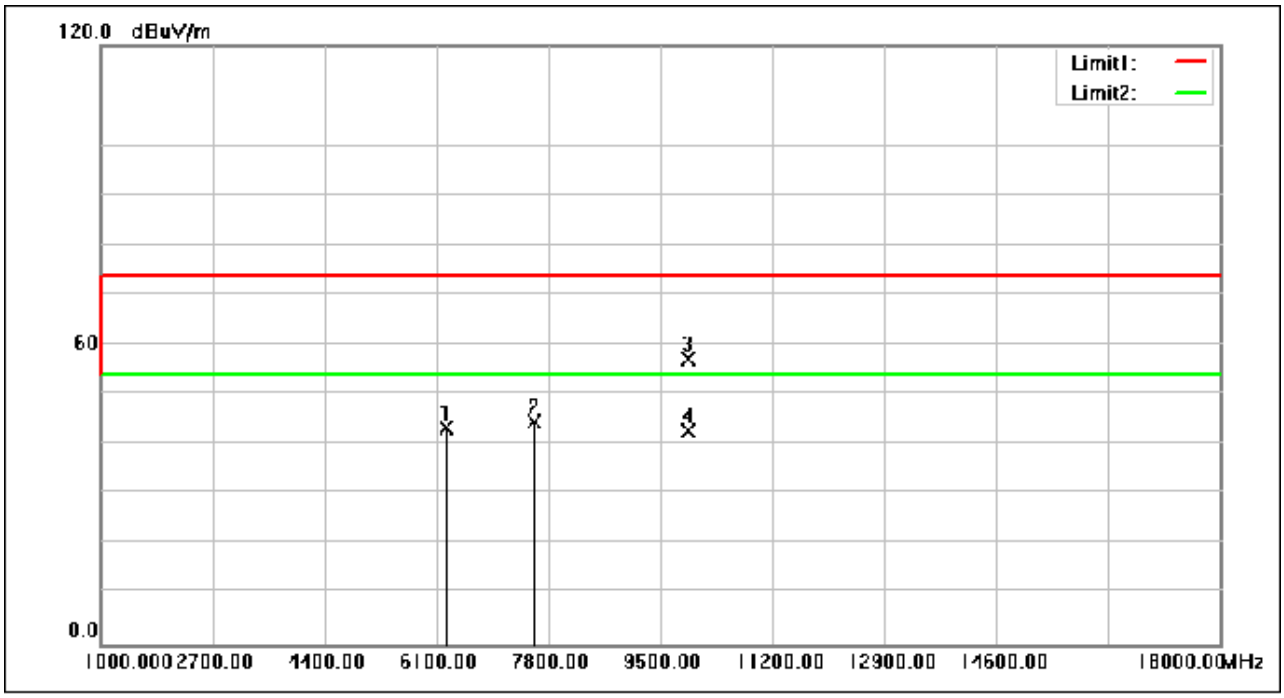
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4930.400	61.61	-18.49	43.12	74.00	-30.88	peak
2	7069.000	59.18	-11.53	47.65	74.00	-26.35	peak
3	9913.950	65.17	-7.31	57.86	74.00	-16.14	peak
4	9913.950	50.97	-7.31	43.66	54.00	-10.34	AVG

Test Mode: 05; 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	5188.800	60.93	-18.16	42.77	74.00	-31.23	peak
2	6222.400	61.54	-14.68	46.86	74.00	-27.14	peak
3	9913.950	68.85	-7.31	61.54	74.00	-12.46	peak
4	9913.950	52.58	-7.31	45.27	54.00	-8.73	AVG

Test Mode: 07; 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	6241.950	57.84	-14.57	43.27	74.00	-30.73	peak
2	7581.550	55.82	-11.16	44.66	74.00	-29.34	peak
3	9913.950	64.38	-7.31	57.07	74.00	-16.93	peak
4	9913.950	50.16	-7.31	42.85	54.00	-11.15	AVG

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≤ 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

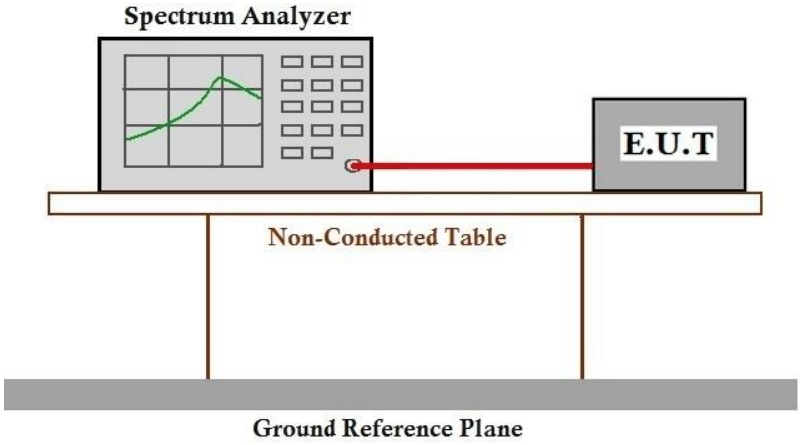
7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 21.2 °C Humidity: 50.7 % RH Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	06	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	07	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

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: 21.2 °C Humidity: 50.7 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	06	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	07	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

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: 21.2 °C Humidity: 50.7 % RH Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	06	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	07	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

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: 21.2 °C Humidity: 50.7 % RH Atmospheric Pressure: 1010 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	06	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	07	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

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: 21.2 °C Humidity: 50.7 % RH Atmospheric Pressure: 1010 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT (Left ear) in continuously transmitting mode with GFSK modulation.
Final test	06	TX mode(1Mbps)_Keep the EUT (Right ear) in continuously transmitting mode with GFSK modulation.
Final test	07	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

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2409001938AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2409001938AT

10 Appendix

Right ear

1. Duty Cycle

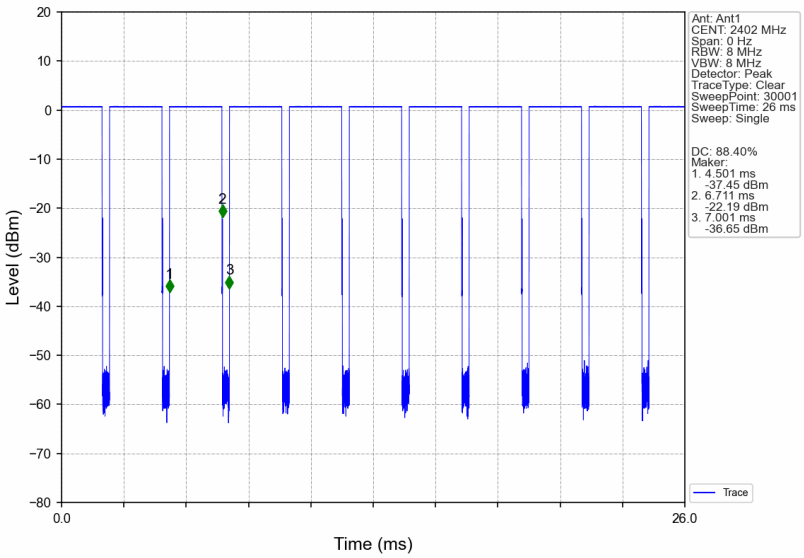
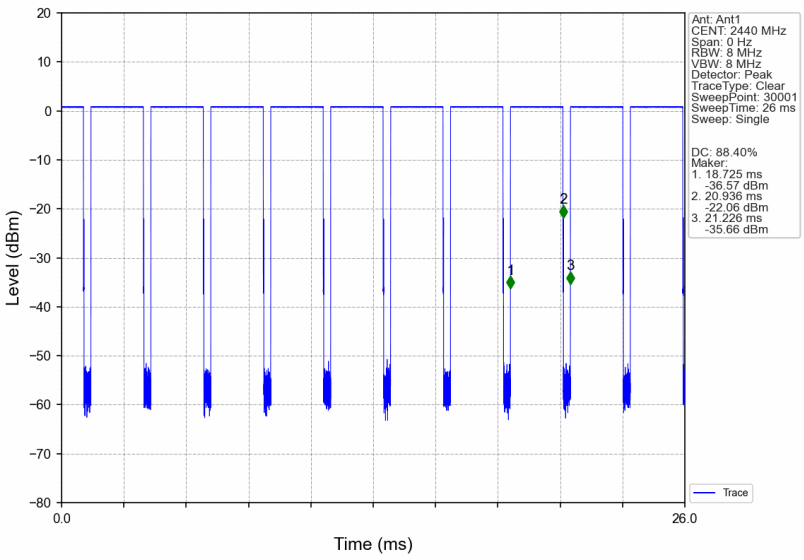
1.1 Test Result

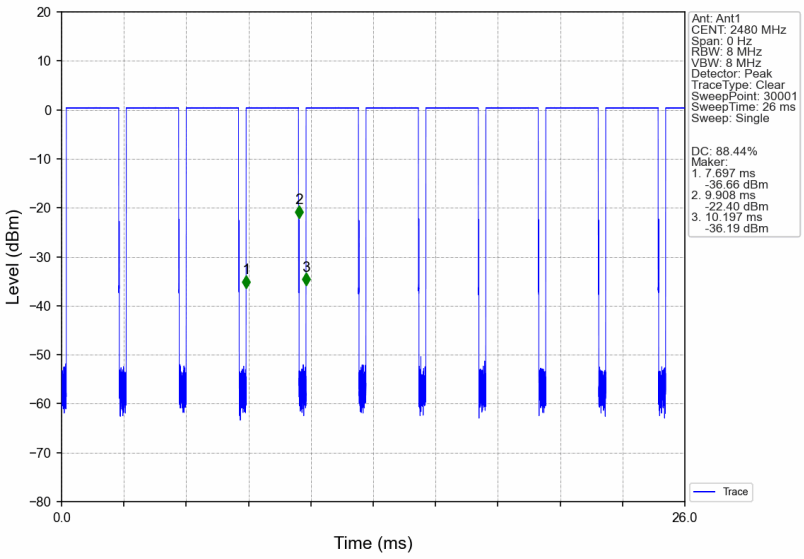
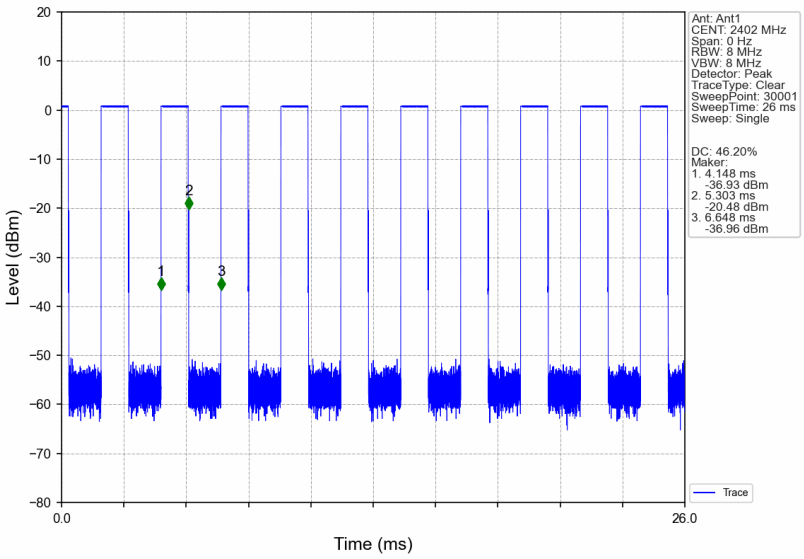
1.1.1 Ant1

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	2.500	88.40	0.54	0.03
		2440	2.211	2.501	88.40	0.54	0.03
		2480	2.211	2.500	88.44	0.53	0.03
2M	SISO	2402	1.155	2.500	46.20	3.35	0.02
		2440	1.154	2.499	46.18	3.36	0.02
		2480	1.155	2.500	46.20	3.35	0.02

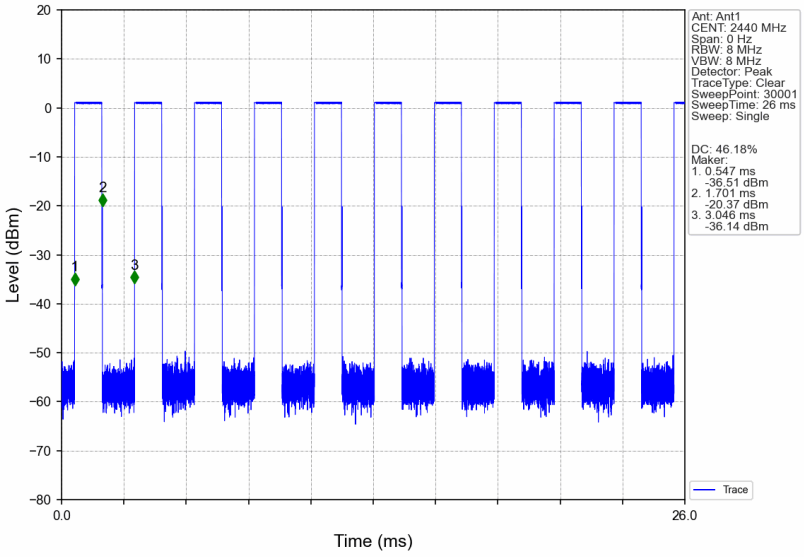
1.2 Test Graph

1.2.1 Ant1

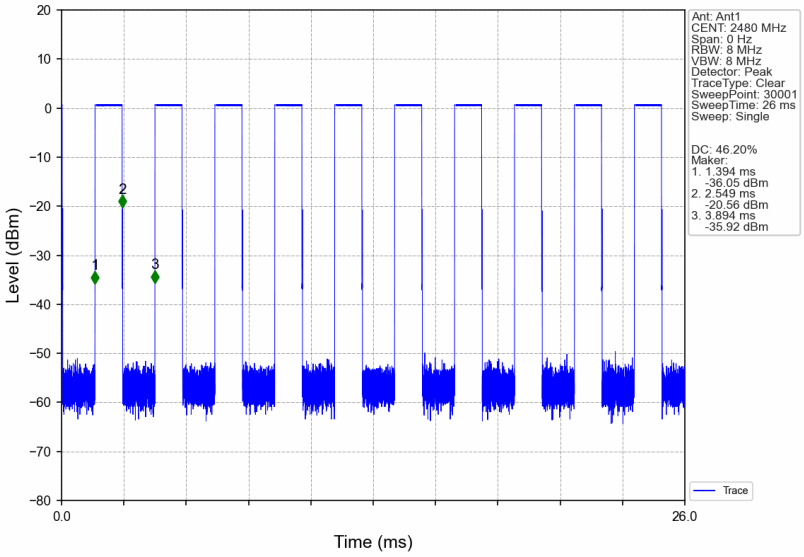
1M_LCH_2402MHz_Ant1_NTNV

1M_MCH_2440MHz_Ant1_NTNV


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	
2M	SISO	2480	1	2.046	/	Pass

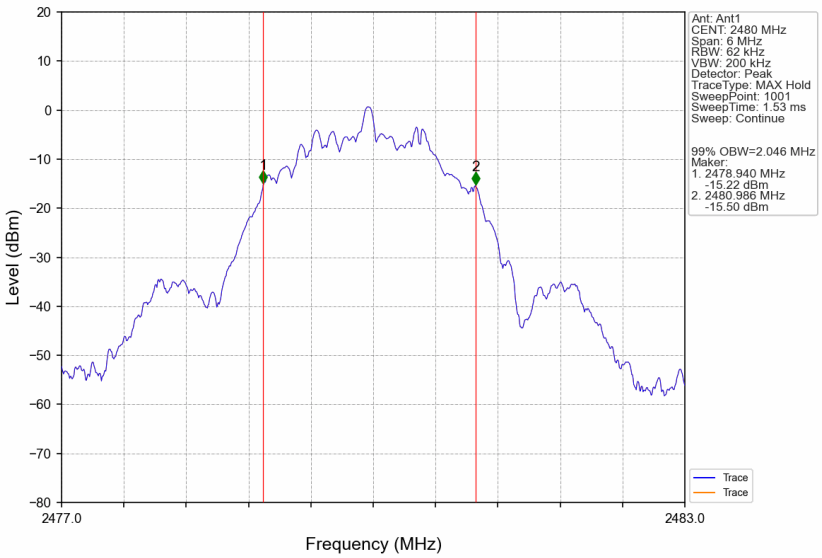
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
2M	SISO	2480	1	1.140	>=0.5	Pass

2.2 Test Graph

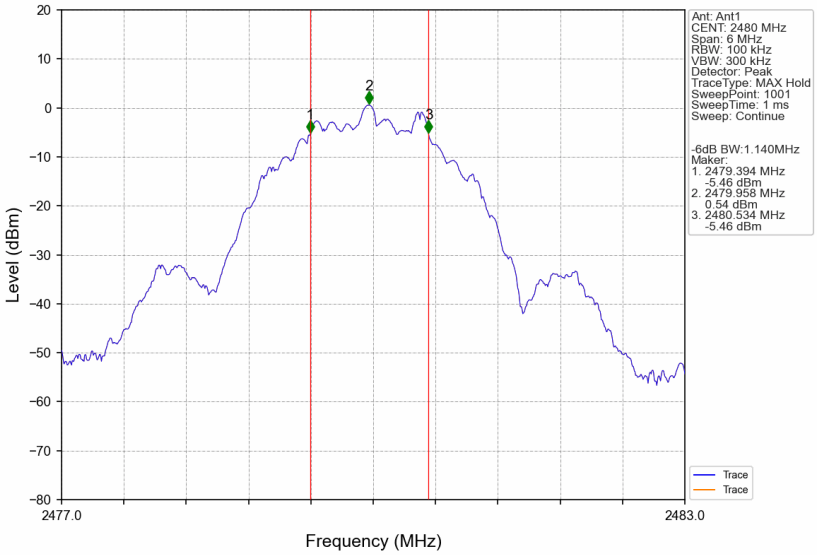
2.2.1 OBW

2M_HCH_2480MHz_Ant1_NTNV



2.2.2 6dB BW

2M_HCH_2480MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

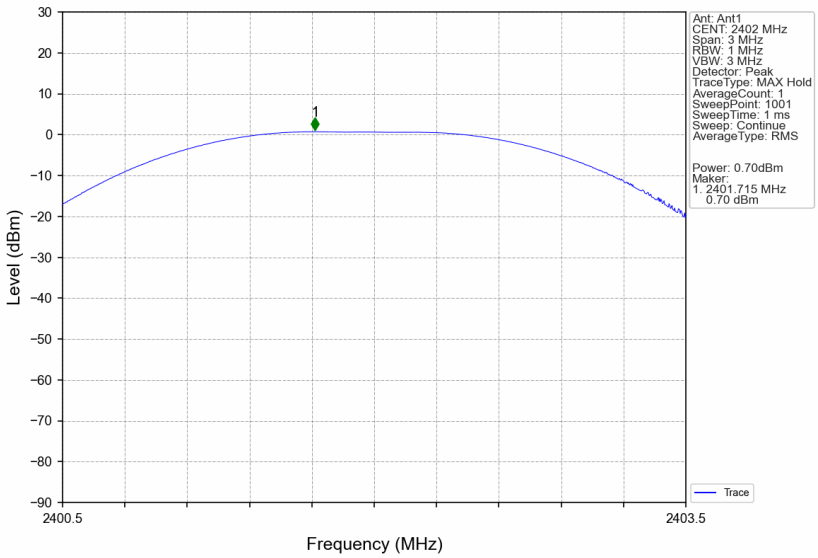
3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	0.70	<=30	Pass
		2440	0.86	<=30	Pass
		2480	0.44	<=30	Pass
2M	SISO	2402	0.93	<=30	Pass
		2440	1.16	<=30	Pass
		2480	0.74	<=30	Pass
Note1: Antenna Gain: Ant1: -1.70dBi;					

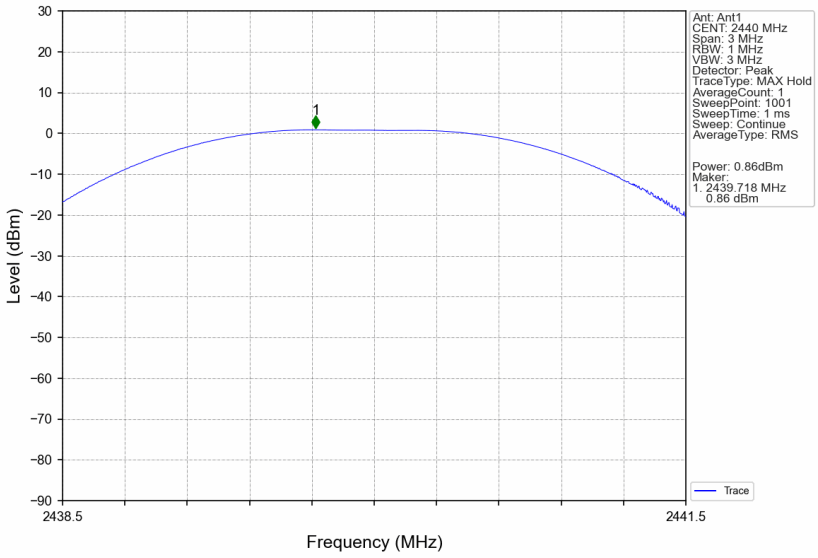
3.2 Test Graph

3.2.1 Power

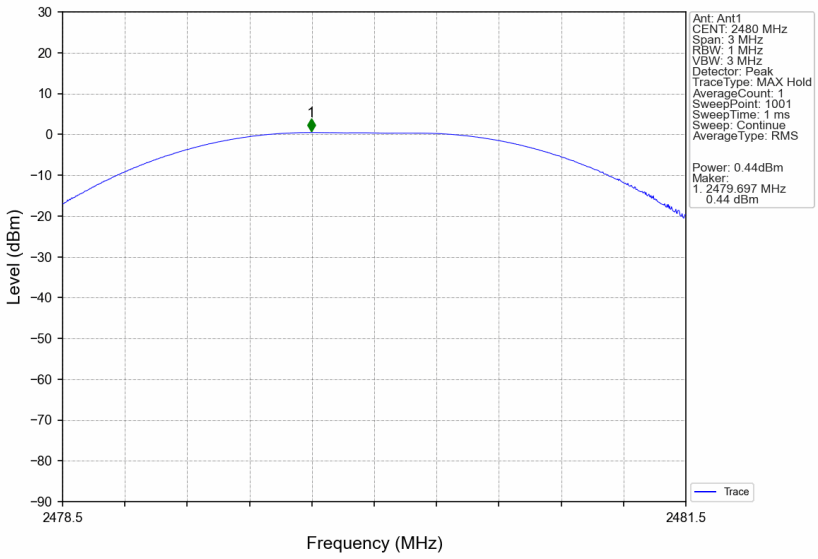
1M_LCH_2402MHz_Ant1_NTNV



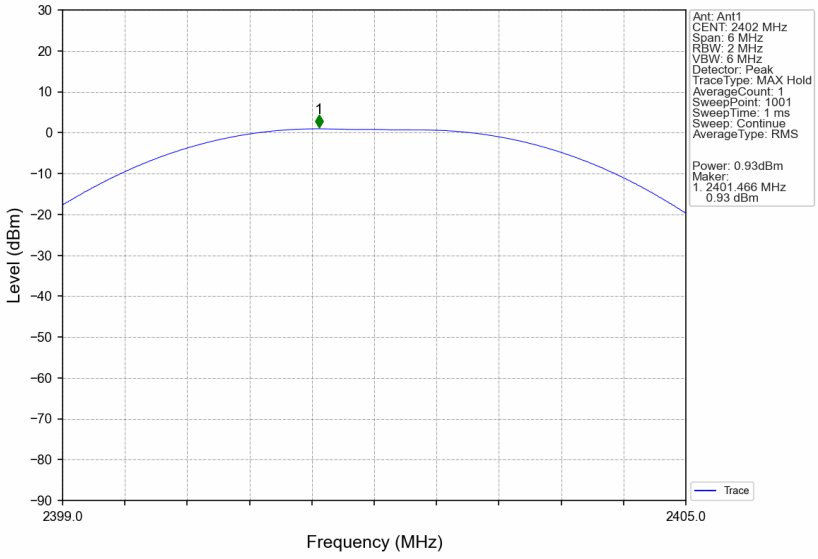
1M_MCH_2440MHz_Ant1_NTNV



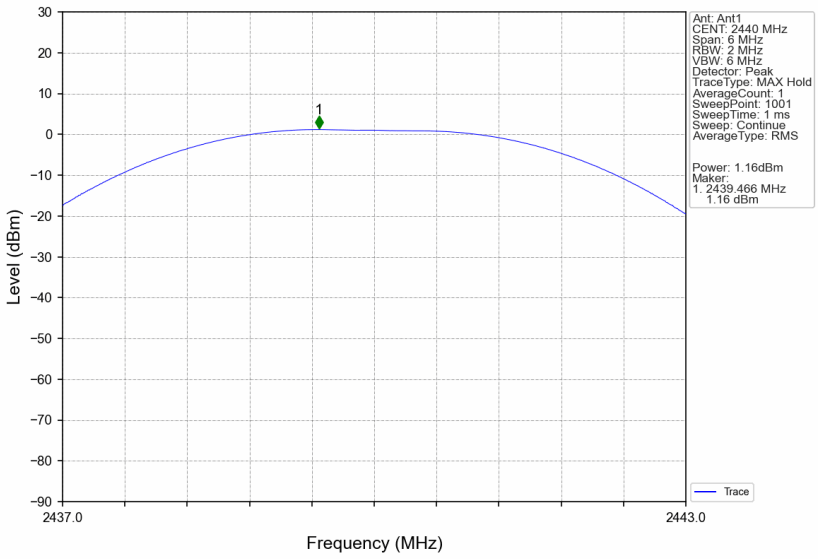
1M_HCH_2480MHz_Ant1_NTNV



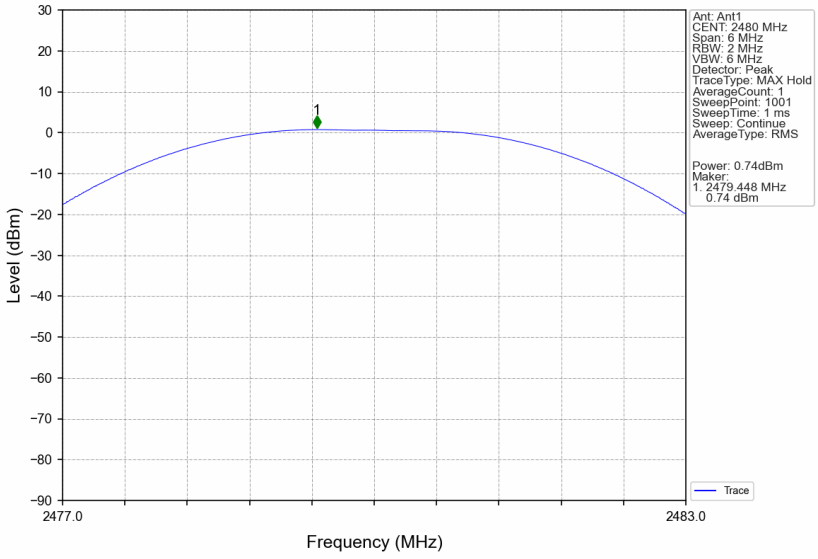
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

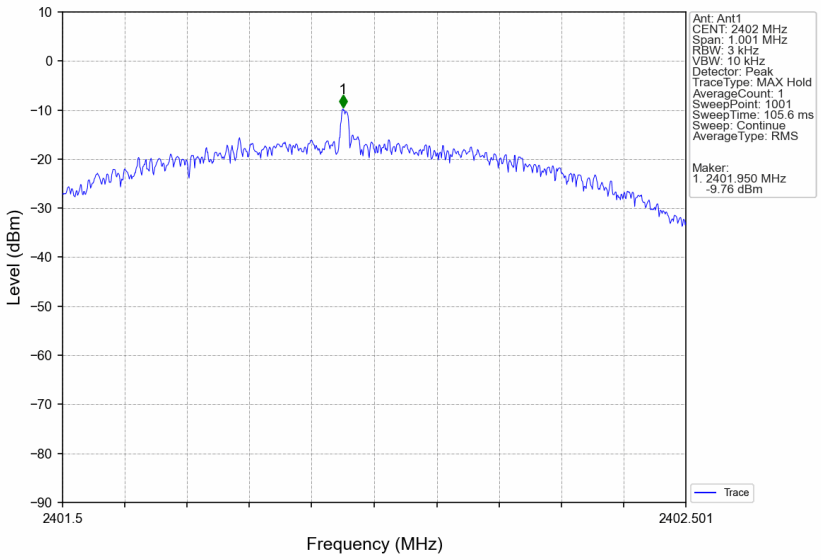
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-9.76	<=8	Pass
		2440	-9.91	<=8	Pass
		2480	-10.23	<=8	Pass
2M	SISO	2402	-10.14	<=8	Pass
		2440	-10.48	<=8	Pass
		2480	-10.31	<=8	Pass
Note1: Antenna Gain: Ant1: -1.70dBi;					

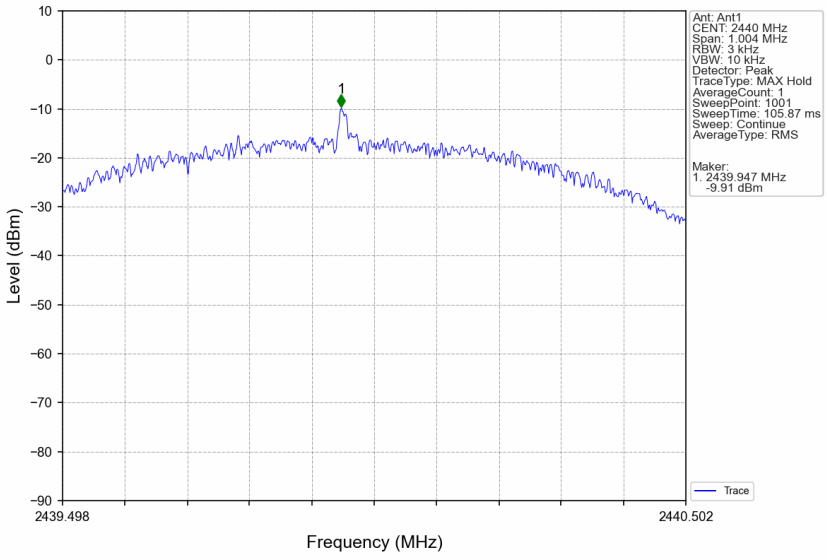
4.2 Test Graph

4.2.1 PSD

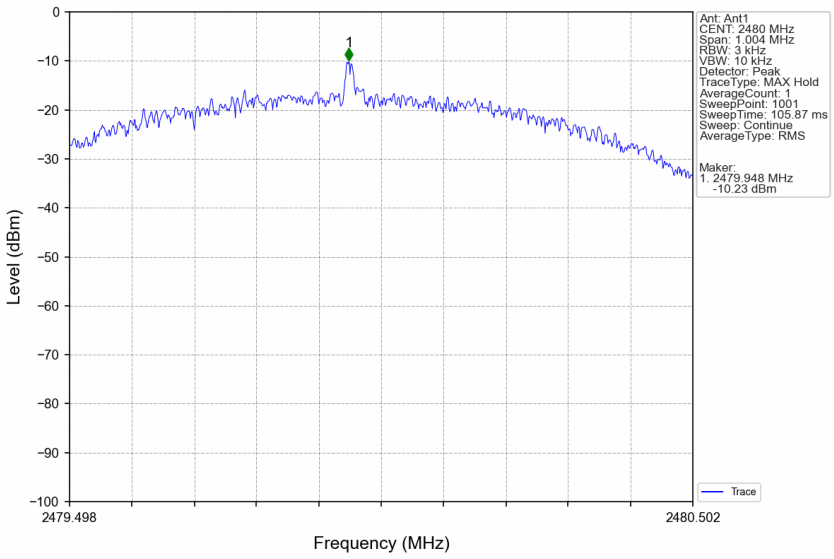
1M_LCH_2402MHz_Ant1_NTNV



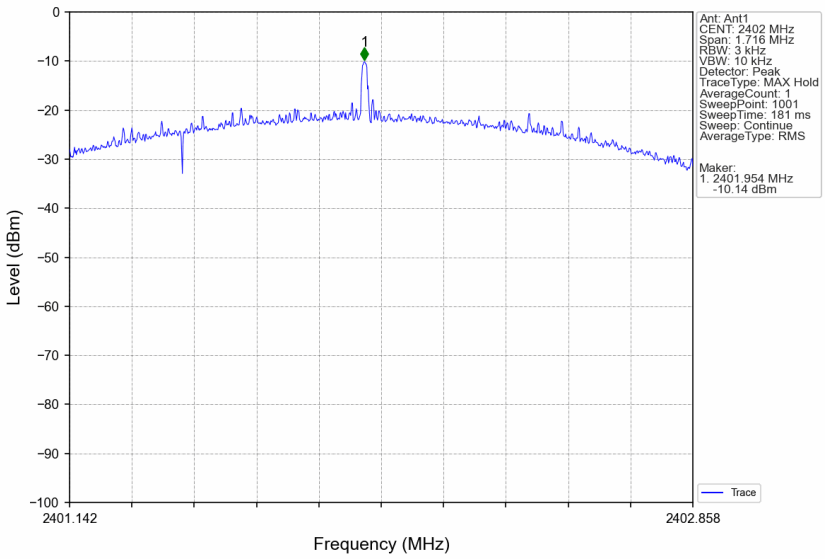
1M_MCH_2440MHz_Ant1_NTNV



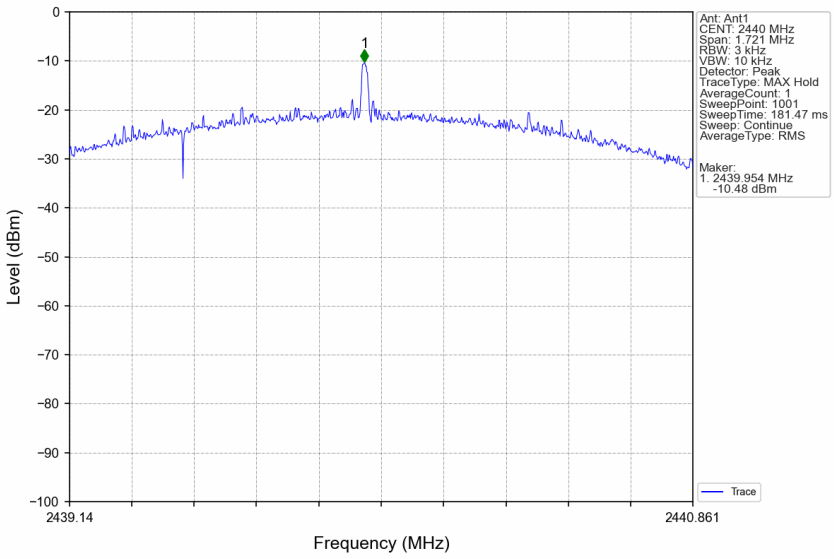
1M_HCH_2480MHz_Ant1_NTNV



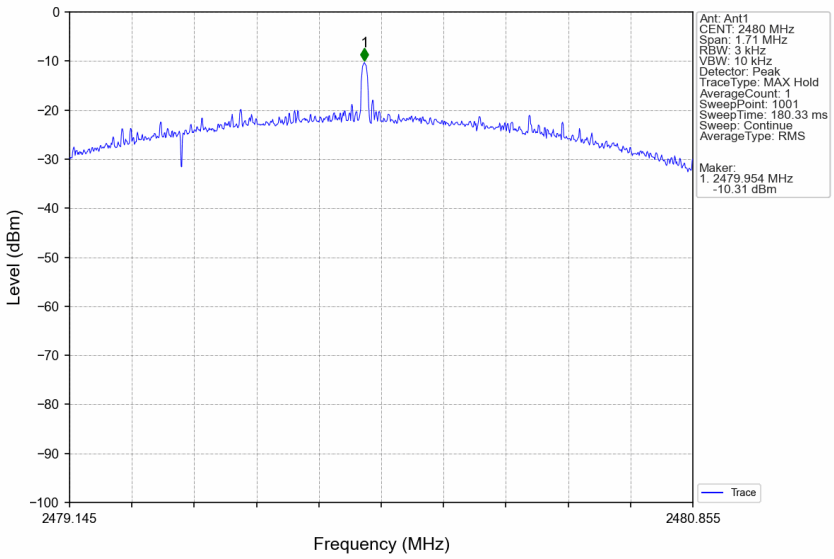
2M_LCH_2402MHz_Ant1_NTNV



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)
2M	SISO	2440	1	0.93
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.				

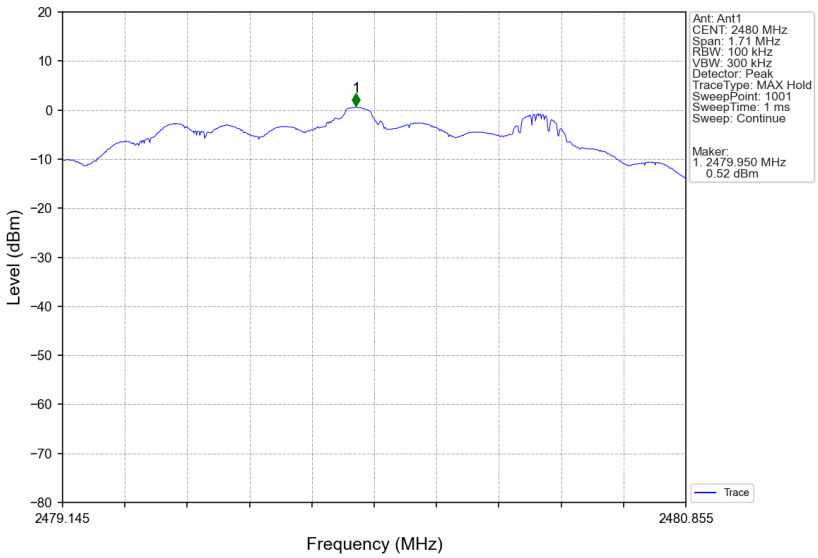
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
2M	SISO	2440	1	0.93	-19.07	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.						

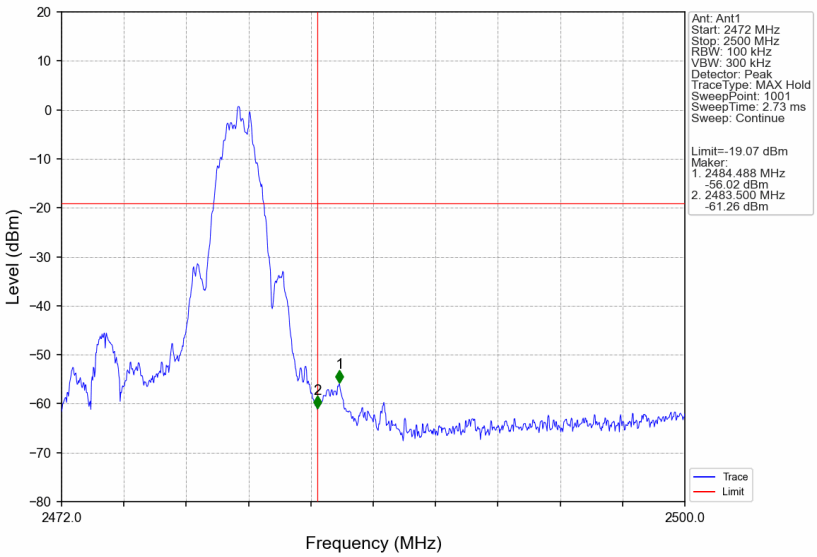
5.2 Test Graph

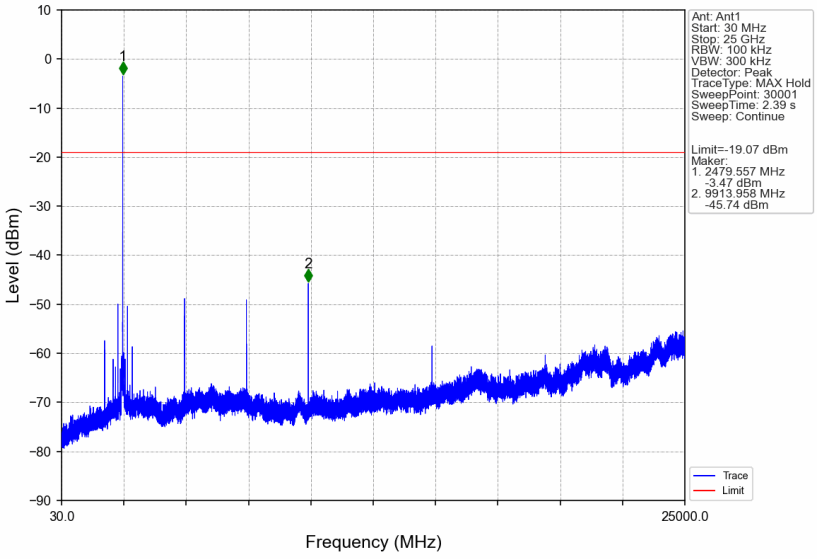
5.2.1 Ref

2M_HCH_2480MHz_Ant1_NTNV



5.2.2 CSE

2M_HCH_2480MHz_Ant1_NTNV


2M_HCH_2480MHz_Ant1_NTNV


Right ear

1. Duty Cycle

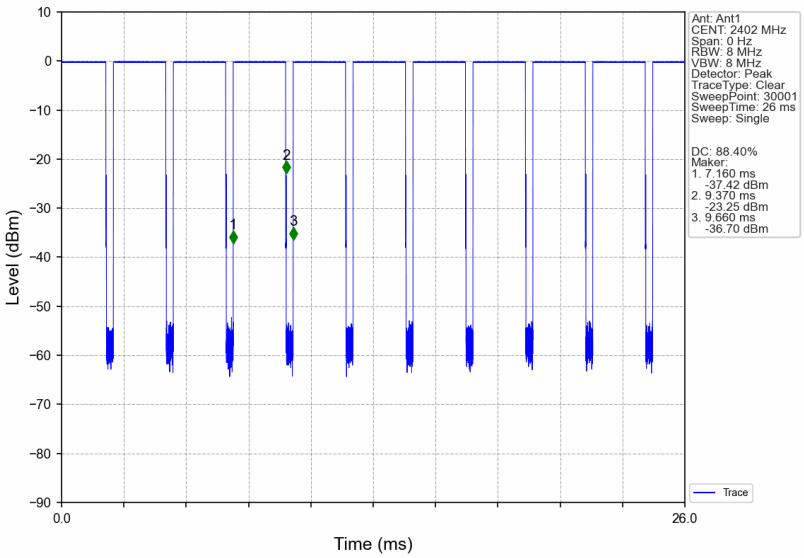
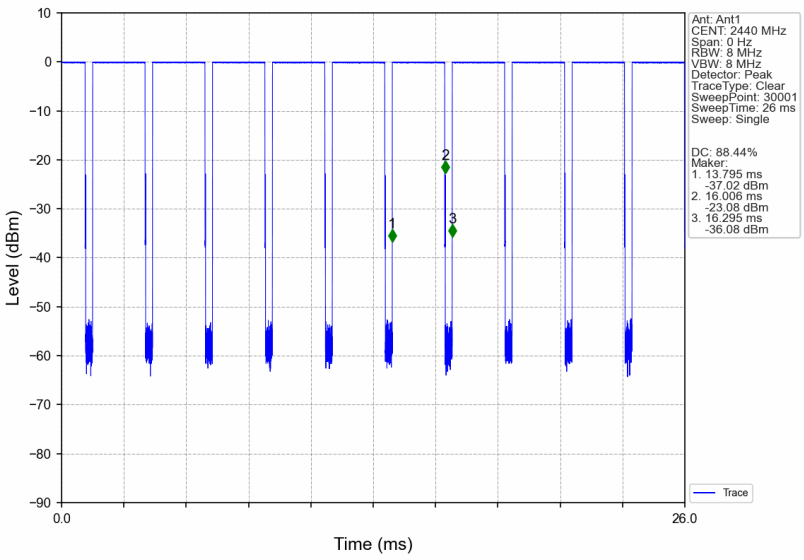
1.1 Test Result

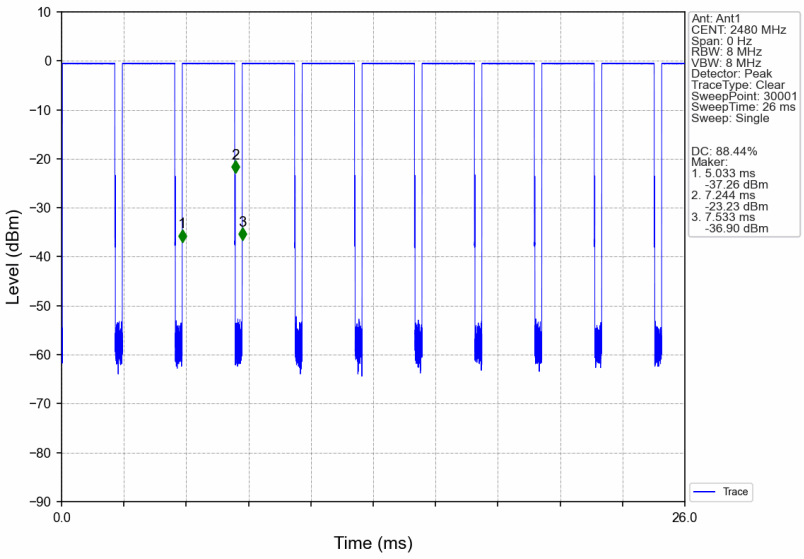
1.1.1 Ant1

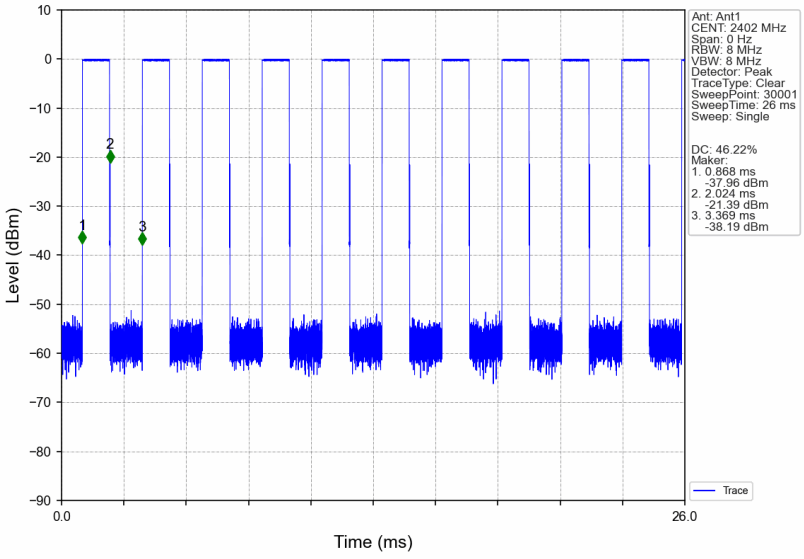
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	2.210	2.500	88.40	0.54	0.03
		2440	2.211	2.500	88.44	0.53	0.03
		2480	2.211	2.500	88.44	0.53	0.03
2M	SISO	2402	1.156	2.501	46.22	3.35	0.02
		2440	1.156	2.501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

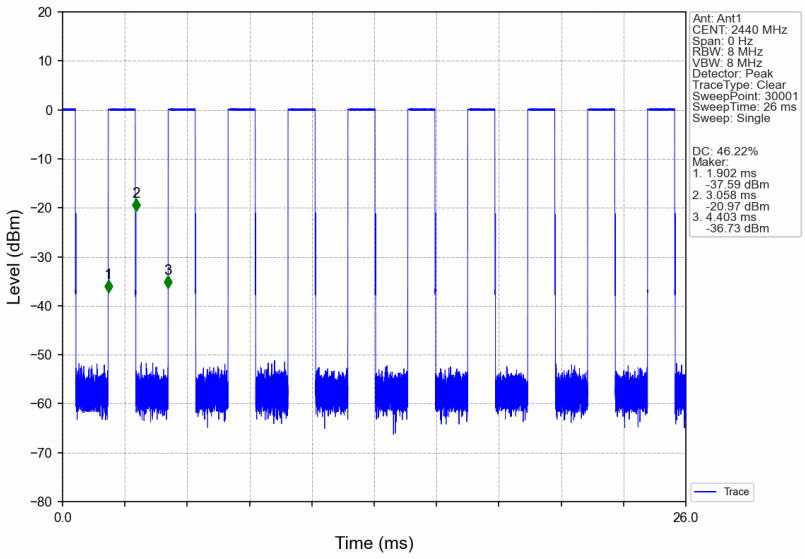
1.2 Test Graph

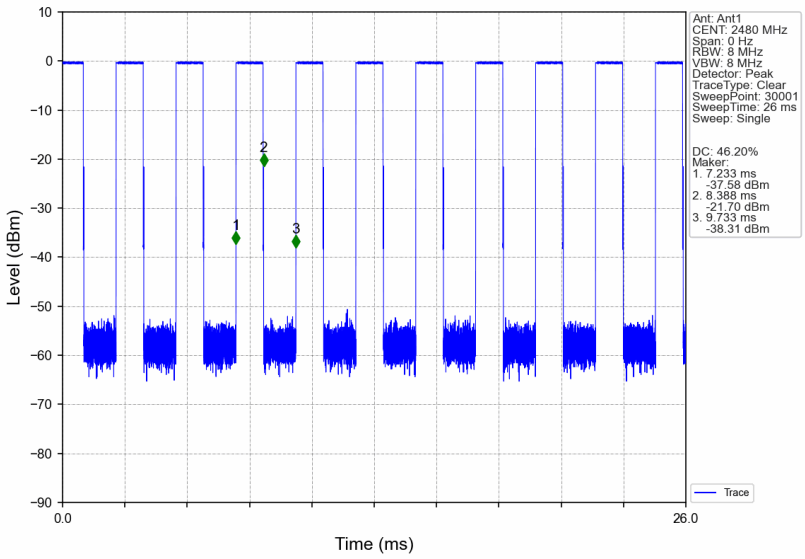
1.2.1 Ant1

1M_LCH_2402MHz_Ant1_NTNV

1M_MCH_2440MHz_Ant1_NTNV


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	
2M	SISO	2480	1	2.040	/	Pass

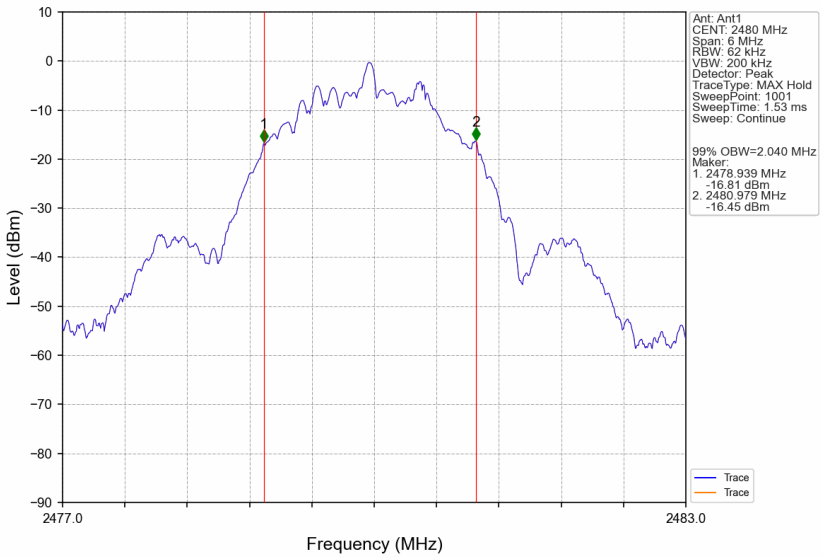
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
2M	SISO	2480	1	1.145	>=0.5	Pass

2.2 Test Graph

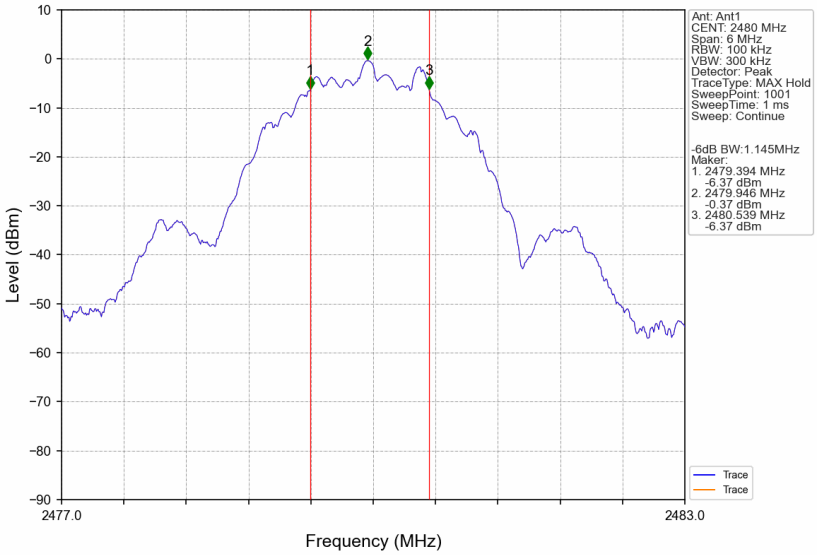
2.2.1 OBW

2M_HCH_2480MHz_Ant1_NTNV



2.2.2 6dB BW

2M_HCH_2480MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

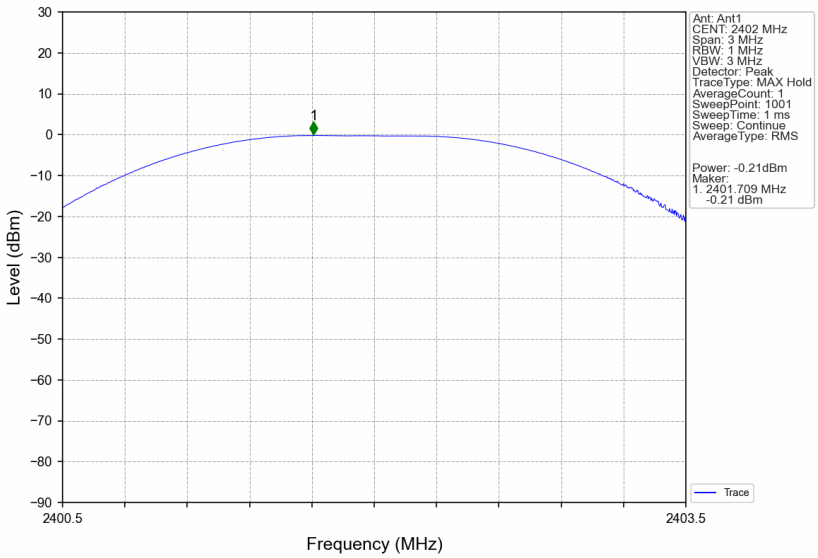
3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	-0.21	<=30	Pass
		2440	-0.07	<=30	Pass
		2480	-0.51	<=30	Pass
2M	SISO	2402	-0.03	<=30	Pass
		2440	0.22	<=30	Pass
		2480	-0.23	<=30	Pass
Note1: Antenna Gain: Ant1: -1.60dBi;					

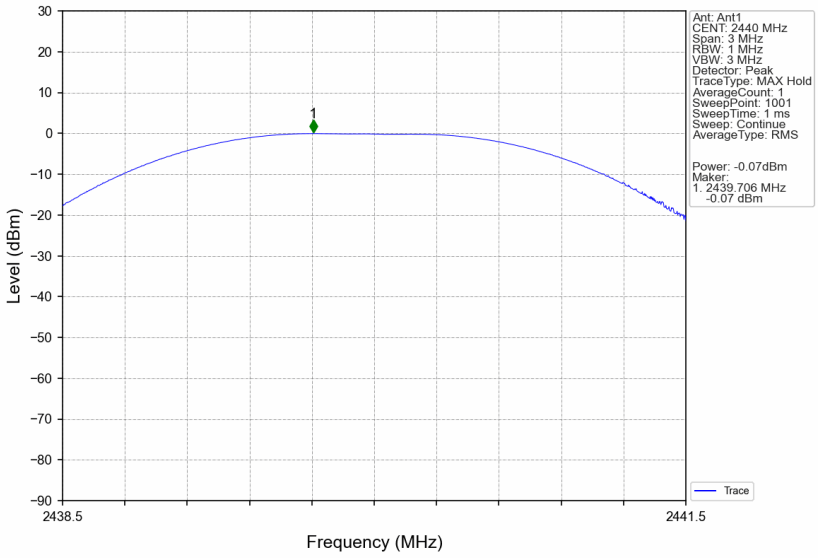
3.2 Test Graph

3.2.1 Power

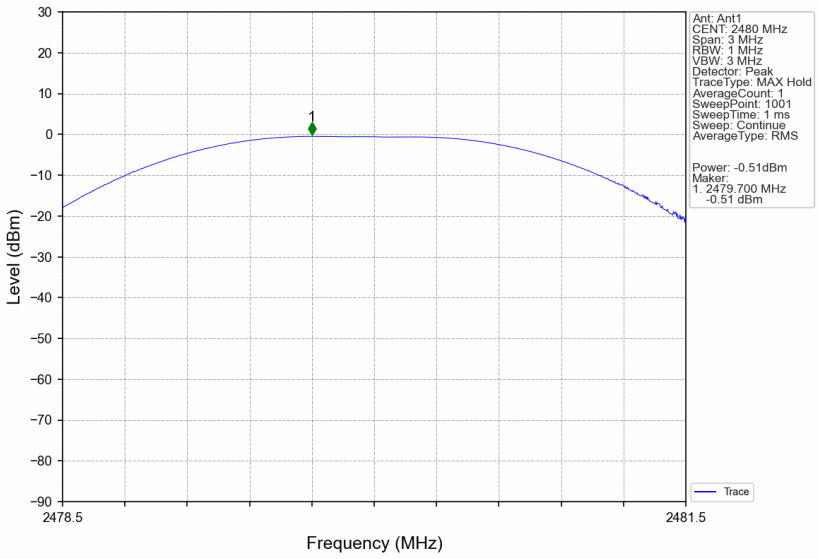
1M_LCH_2402MHz_Ant1_NTNV



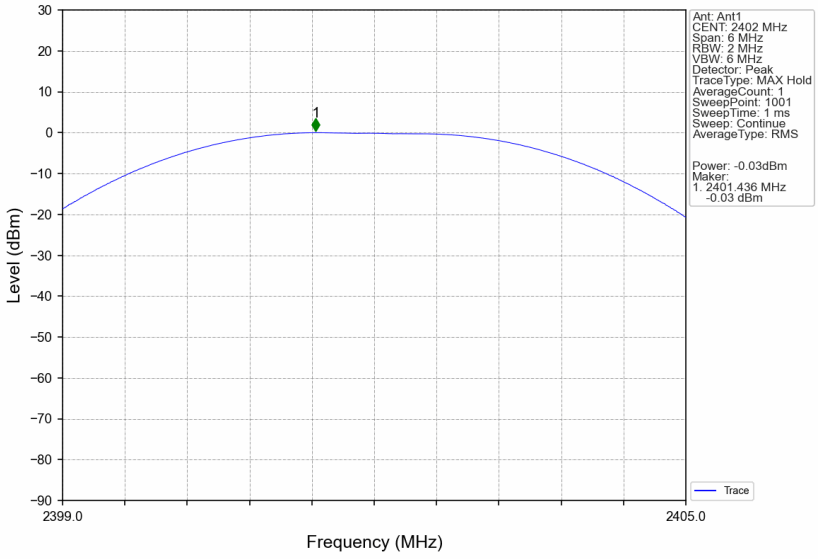
1M_MCH_2440MHz_Ant1_NTNV



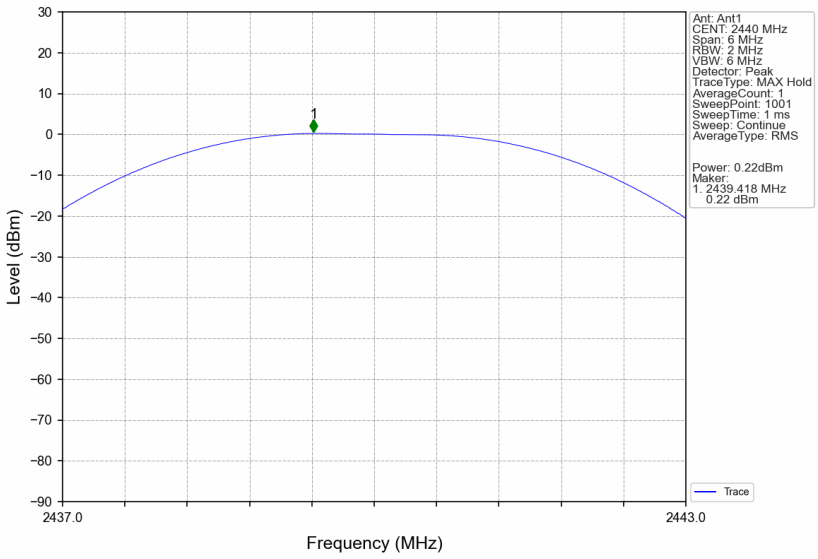
1M_HCH_2480MHz_Ant1_NTNV



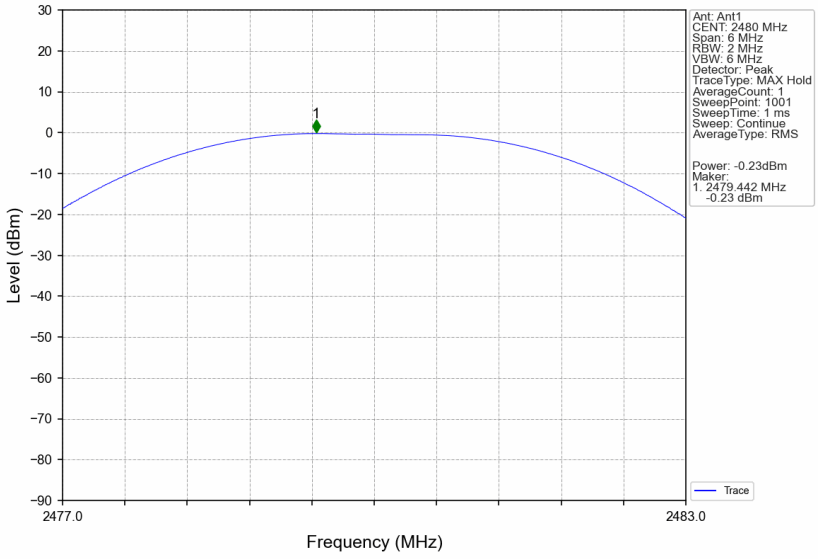
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



4. Maximum Power Spectral Density

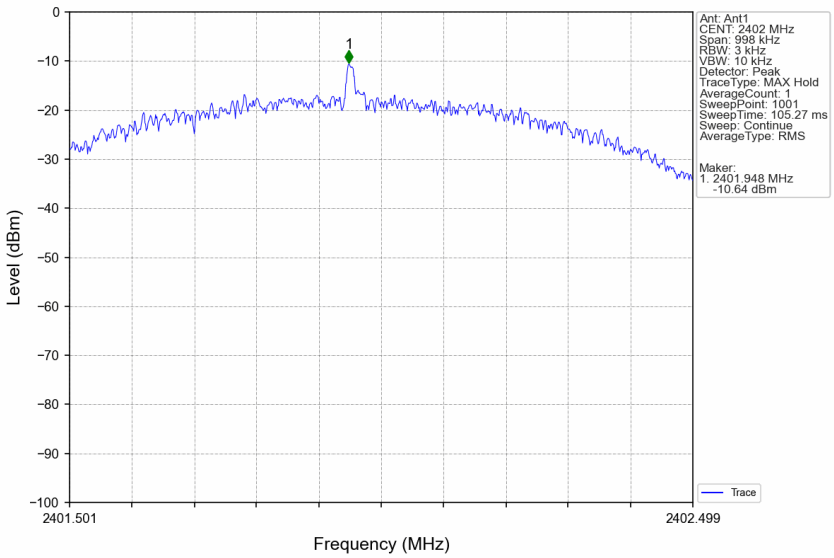
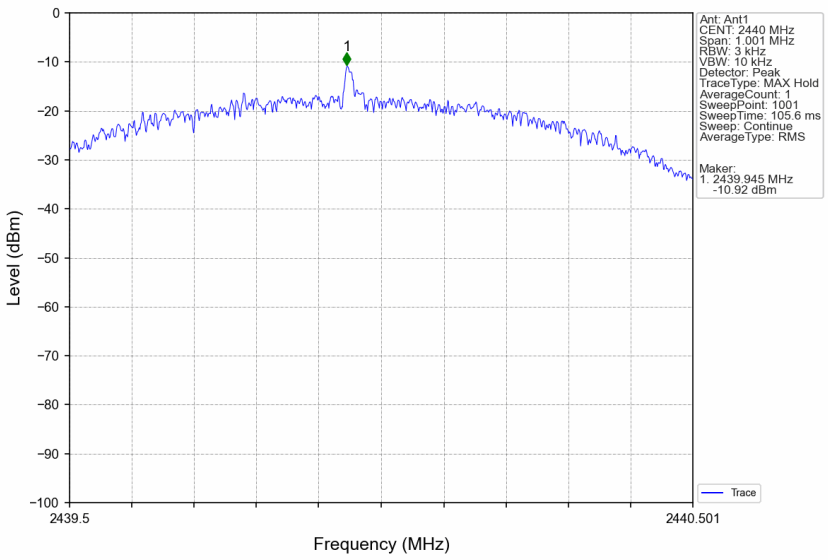
4.1 Test Result

4.1.1 PSD

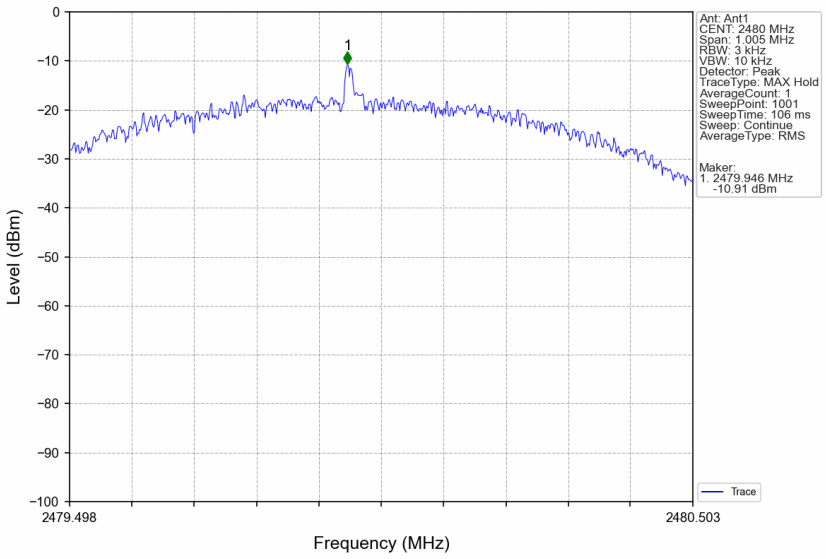
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-10.64	<=8	Pass
		2440	-10.92	<=8	Pass
		2480	-10.91	<=8	Pass
2M	SISO	2402	-11.08	<=8	Pass
		2440	-11.37	<=8	Pass
		2480	-11.30	<=8	Pass
Note1: Antenna Gain: Ant1: -1.60dBi;					

4.2 Test Graph

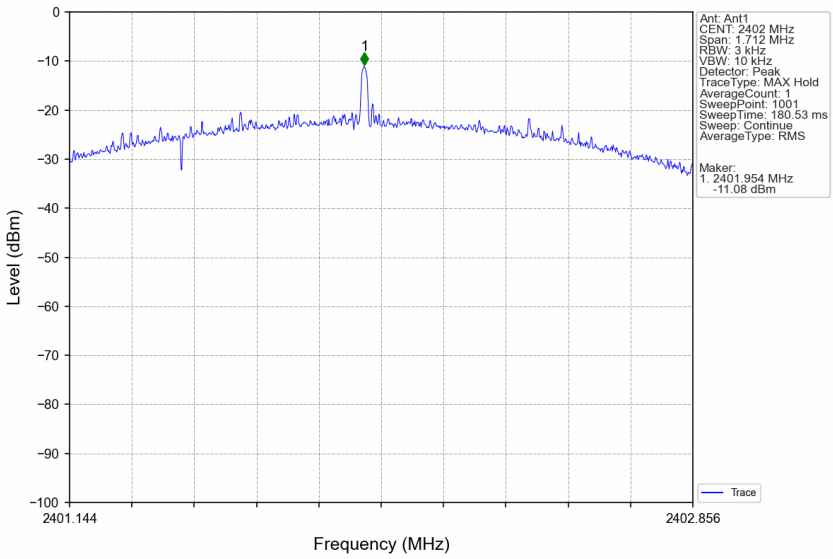
4.2.1 PSD

1M_LCH_2402MHz_Ant1_NTNV

1M_MCH_2440MHz_Ant1_NTNV


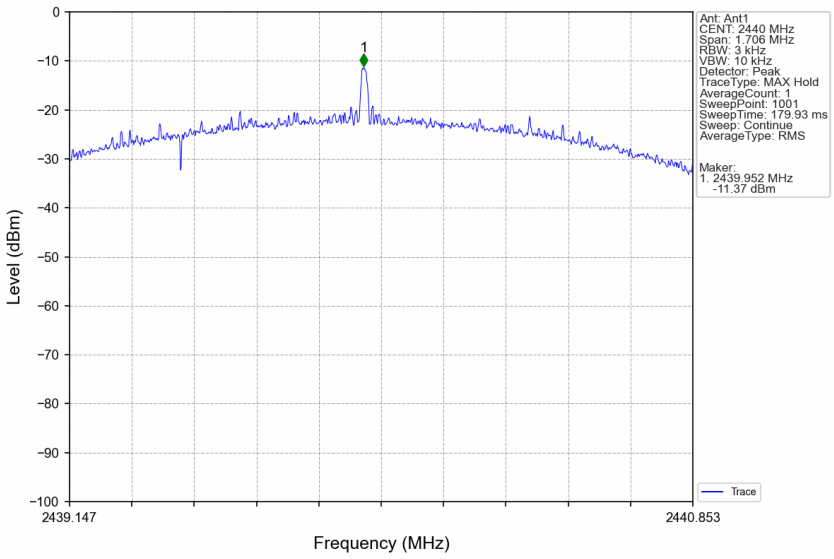
1M_HCH_2480MHz_Ant1_NTNV



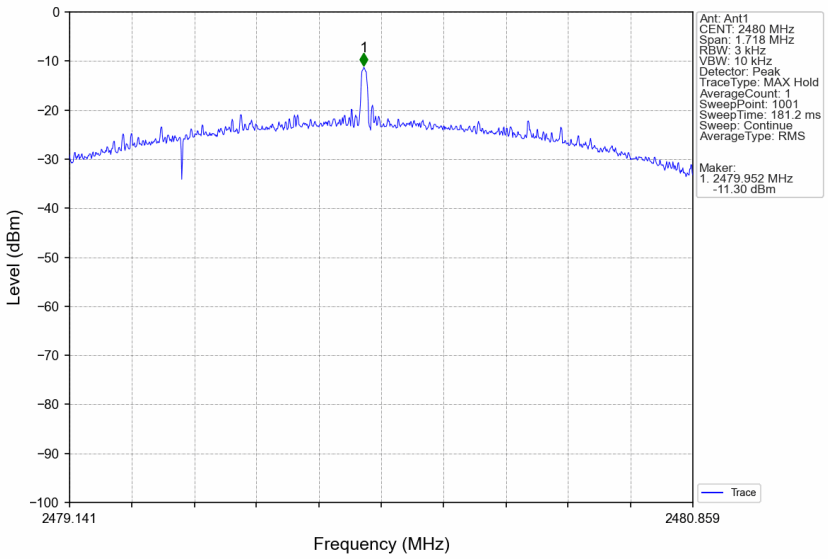
2M_LCH_2402MHz_Ant1_NTNV



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)
2M	SISO	2440	1	**-0.03**
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.				

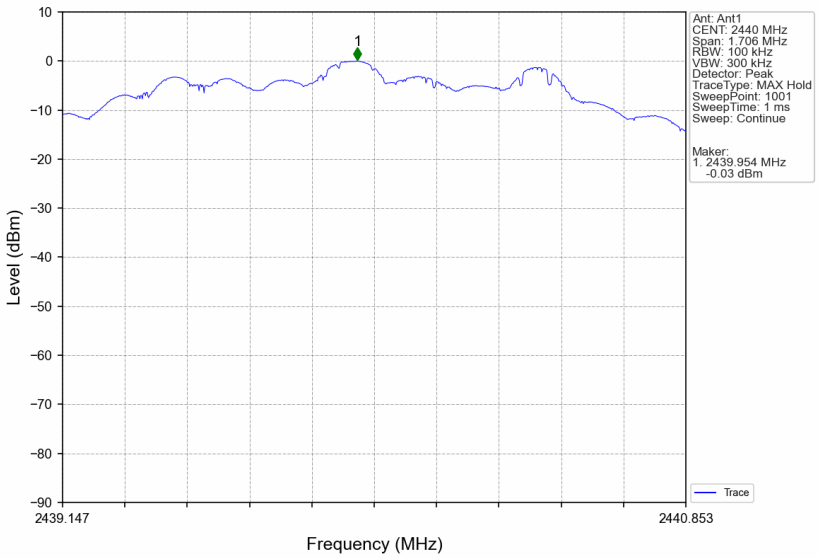
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
2M	SISO	2440	1	-0.03	-20.03	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

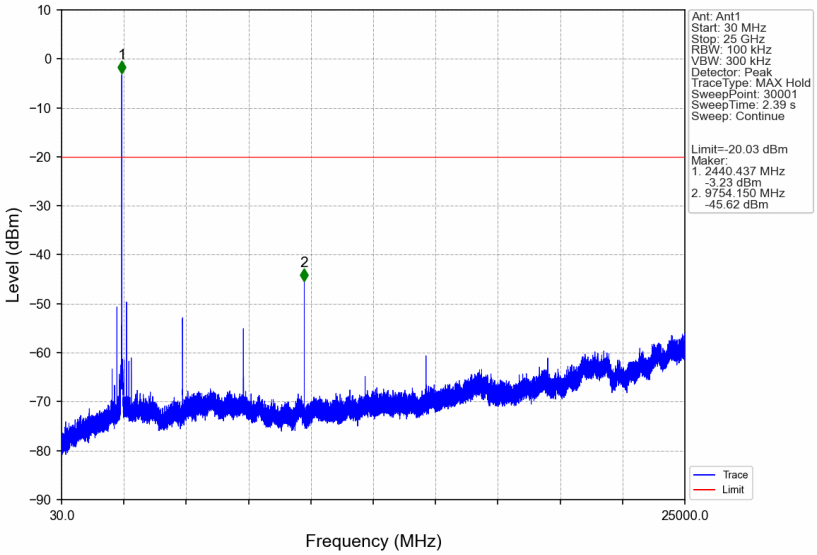
5.2.1 Ref

2M_MCH_2440MHz_Ant1_NTNV



5.2.2 CSE

2M_MCH_2440MHz_Ant1_NTNV



- End of the Report -