TEST REPORT

Application No.:	KSCR2408001639AT
FCC ID:	2AL8S-0235C9BH
Applicant:	Zhejiang Uniview Technologies Co., Ltd.
Address of Applicant:	No. 369, Xietong Road, Xixing Sub-district, Binjiang District, Hangzhou City, 310051, Zhejiang Province, China
Manufacturer:	Zhejiang Uniview Technologies Co., Ltd.
Address of Manufacturer:	No. 369, Xietong Road, Xixing Sub-district, Binjiang District, Hangzhou City, 310051, Zhejiang Province, China
Factory:	Zhejiang Uniview Systems Technology Co., Ltd.
Address of Factory:	No.1277 South Qingfeng South Road, Tongxiang City, Jiaxing City, Zhejiang Province, China
Equipment Under Test (EUT):	
EUT Name:	IP Camera
Model No.:	Uho-P3C-M5F4,Uho-P3C-xxxxxxxx-yyyyyyyy-zzzz,"x" can be 0-9, A-Z, a-z or blank, denoting difference in interface, "y" can be 0-9,A-Z,a-z or blank, denoting performance difference, "z" can be 0-9,A-Z,a-z or blank, denoting target regional, "-" is optional ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Standard(s) :	47 CFR Part 15, Subpart C 15.247
Date of Receipt:	2024-08-26
Date of Test:	2024-08-27 to 2024-09-18
Date of Issue:	2024-09-18
Test Result:	**Pass***

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

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2024-09-18	/

Authorized for issue by:				
Tested By				
		Maker_Qi/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)	Customer Declaration

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Radiated Emissions which fall in the restricted bands		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 Average Output Power		ANSI C63.10 (2013) Section 11.9.2	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

Model No.: Uho-P3C-M5F4,Uho-P3C-xxxxxxxx-yyyyyyyy-zzzz,"x" can be 0-9, A-Z, a-z or blank, denoting difference in interface, "y" can be 0-9,A-Z,a-z or blank, denoting performance difference, "z" can be 0-9,A-Z,a-z or blank, denoting target regional, "-" is optional

Only the model Uho-P3C-M5F4 was tested.

There are series models mentioned in this report, and they are identical in electrical and electronic characters. Only the model Uho-P3C-M5F4 was tested since their differences were the model number and appearance.

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	Power Adapter: Model: DCT24W120150US-A3 INPUT: 100~240V~,50/60Hz,0.7A max OUTPUT: 12V/1.5A
Test voltage:	AC 120V/60Hz
Operation Frequency:	802.11b/g/n(HT20)/ax(HE20):2412MHz to 2462MHz; 802.11n(HT40)/ax(HE40):2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK), 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK), 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Number of Channels:	802.11b/g/n(HT20)/ax(HE20):11;802.11n(HT40)/ax(HE40):7
Channel Spacing:	5MHz
Antenna Type:	Dipole Antenna
Antenna Gain:	4.5dBi (Provided by manufacturer)

4.2 Power level setting using in test

Channel	802.11b	802.11g	802.11n(HT20)	802.11ax(HE20)
	Ant 1	Ant 1	Ant 1	Ant 1
1	19	19	20	20
6	18	19	19	19
11	18	19	19	19

Channel	802.11n(HT40)	802.11ax(HE40)
	Ant 1	Ant 1
3	19	19
6	18	17
9	18	17

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	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%
Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

4.5 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

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

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

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

3. Sample source: sent by customer.

4.6 Test Facility

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

• A2LA

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

• FCC

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

• ISED

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

• VCCI

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

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receive	R&S	ESCI	KS301101	01/15/2024	01/14/2025
2	LISN	R&S	ENV216	KS301197	01/15/2024	01/14/2025
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/15/2024	01/14/2025
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	01/15/2024	01/14/2025
5	CE test Cable	Thermax	/	CZ301102	01/15/2024	01/14/2025
6	Test Software	ESE	E3_V 6.111221a	/	N.C.R	N.C.R
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 Dipole Antenna on the main PCB and no consideration of replacement. The best case gain of the antenna is 4.5dBi.

Antenna location: Refer to internal photo.

7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207
Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency.		
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz		

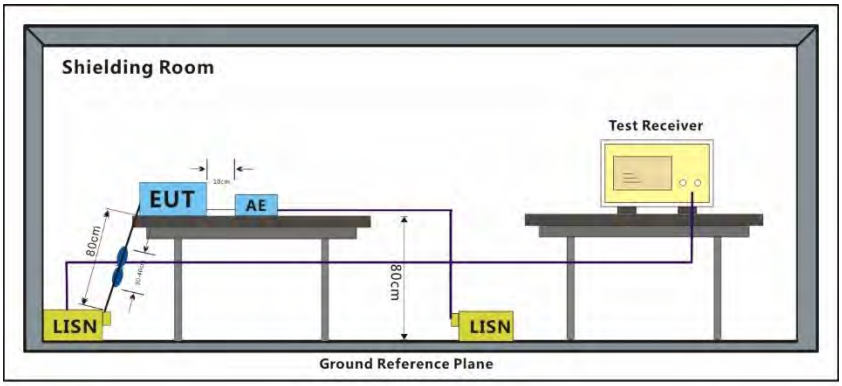
7.1.1 E.U.T. Operation

Operating Environment:
Temperature: 28.9 °C Humidity: 38.5 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

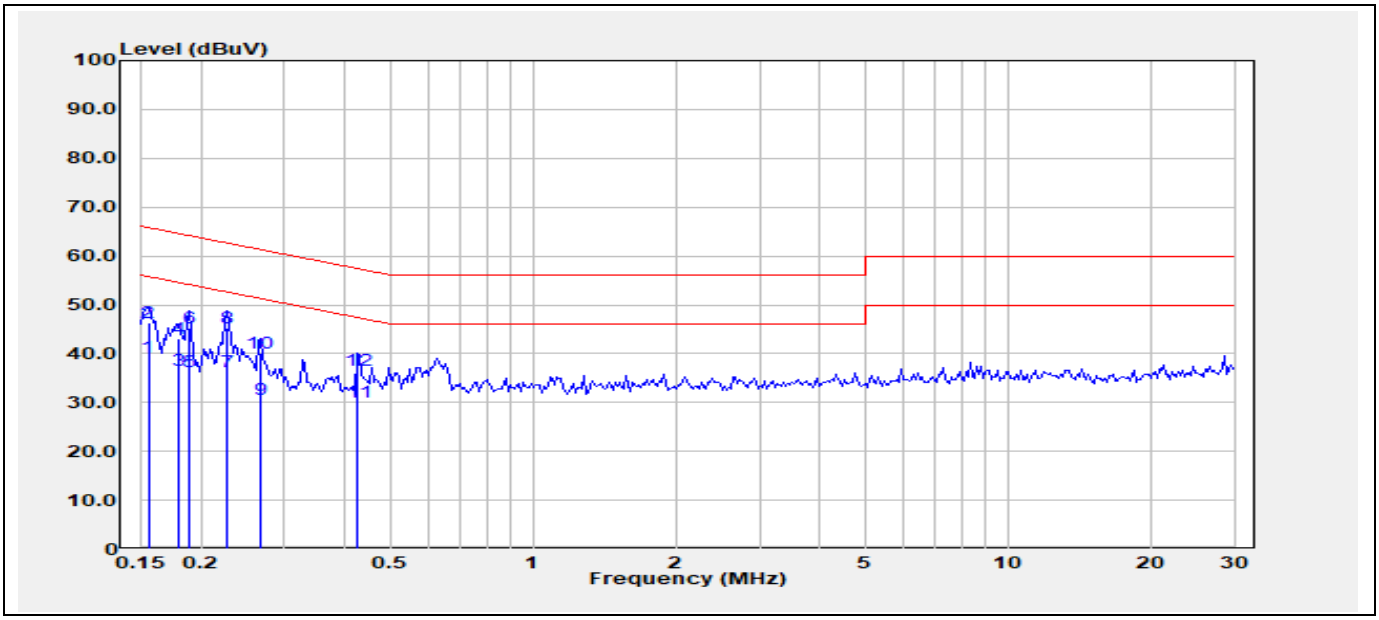
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.

4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

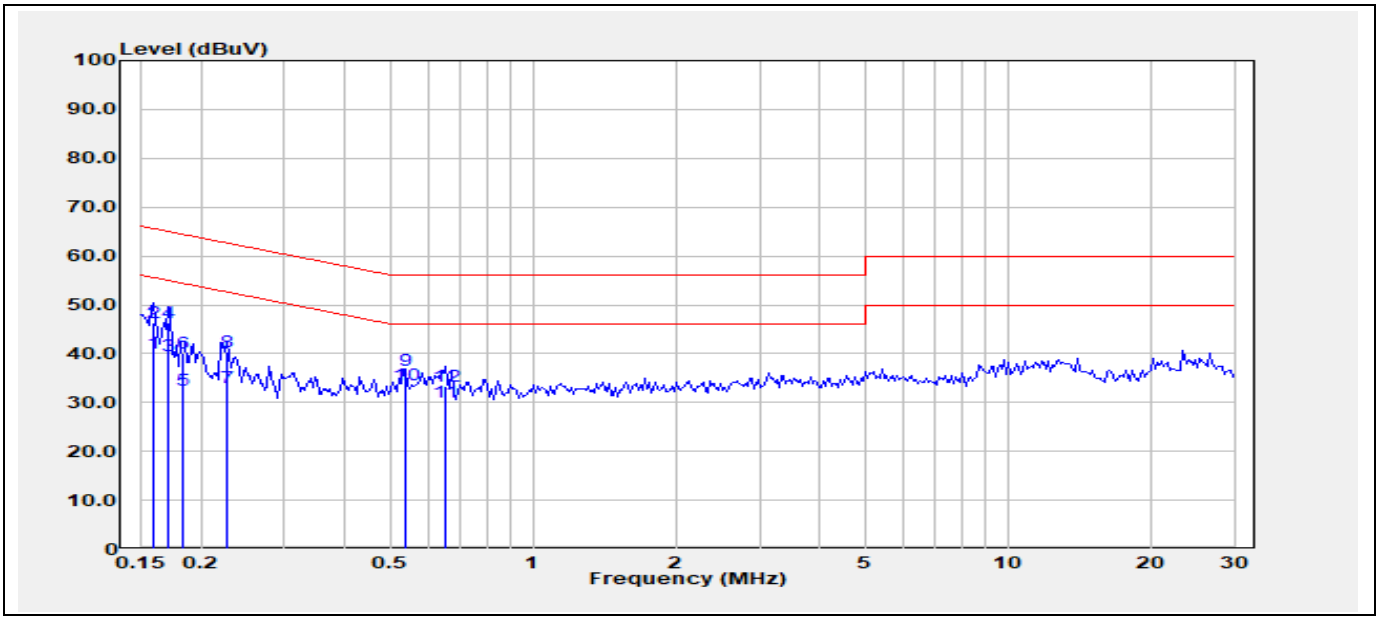
Remark: Level=Read Level+ Cable Loss+ LISN Factor

Test Mode: 00; Line: Live line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1549	18.99	20.23	39.22	55.74	-16.52	Average
2	0.1549	26.10	20.23	46.33	65.74	-19.41	QP
3	0.1796	16.42	20.13	36.55	54.50	-17.95	Average
4	0.1796	23.02	20.13	43.15	64.50	-21.35	QP
5	0.1894	16.23	20.09	36.32	54.06	-17.74	Average
6	0.1894	25.06	20.09	45.15	64.06	-18.91	QP
7	0.2268	16.15	20.06	36.21	52.57	-16.36	Average
8	0.2268	25.16	20.06	45.22	62.57	-17.35	QP
9	0.2658	10.45	20.07	30.52	51.25	-20.73	Average
10	0.2658	20.15	20.07	40.22	61.25	-21.03	QP
11	0.4283	9.97	20.05	30.02	47.29	-17.27	Average
12	0.4283	16.60	20.05	36.65	57.29	-20.64	QP

Test Mode: 00; Line: Neutral Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1582	19.98	20.17	40.15	55.56	-15.41	Average
2	0.1582	26.08	20.17	46.25	65.56	-19.31	QP
3	0.1703	19.37	20.15	39.52	54.94	-15.42	Average
4	0.1703	26.18	20.15	46.33	64.94	-18.61	QP
5	0.1835	12.51	20.14	32.65	54.33	-21.68	Average
6	0.1835	19.97	20.14	40.11	64.33	-24.22	QP
7	0.2268	12.91	20.10	33.01	52.57	-19.56	Average
8	0.2268	20.15	20.10	40.25	62.57	-22.32	QP
9	0.5407	16.67	19.91	36.58	46.00	-9.42	Average
10	0.5407	13.74	19.91	33.65	56.00	-22.35	QP
11	0.6543	10.16	19.85	30.01	46.00	-15.99	Average
12	0.6543	13.57	19.85	33.42	56.00	-22.58	QP

7.2 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2013) Section 6.10.5

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

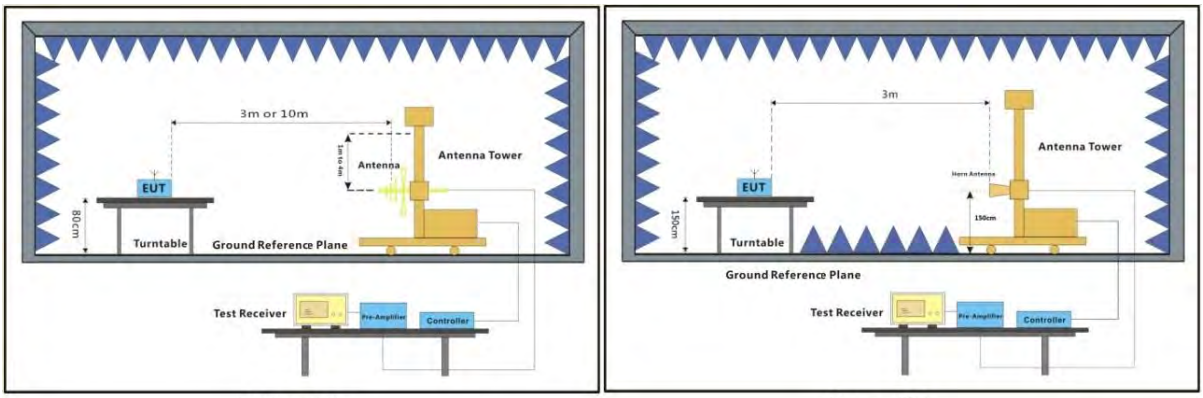
7.2.1 E.U.T. Operation

Operating Environment:
Temperature: 21.8 °C Humidity: 48.6 % RH Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.2.3 Test Setup Diagram



30MHz-1GHz　　Above 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. 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.

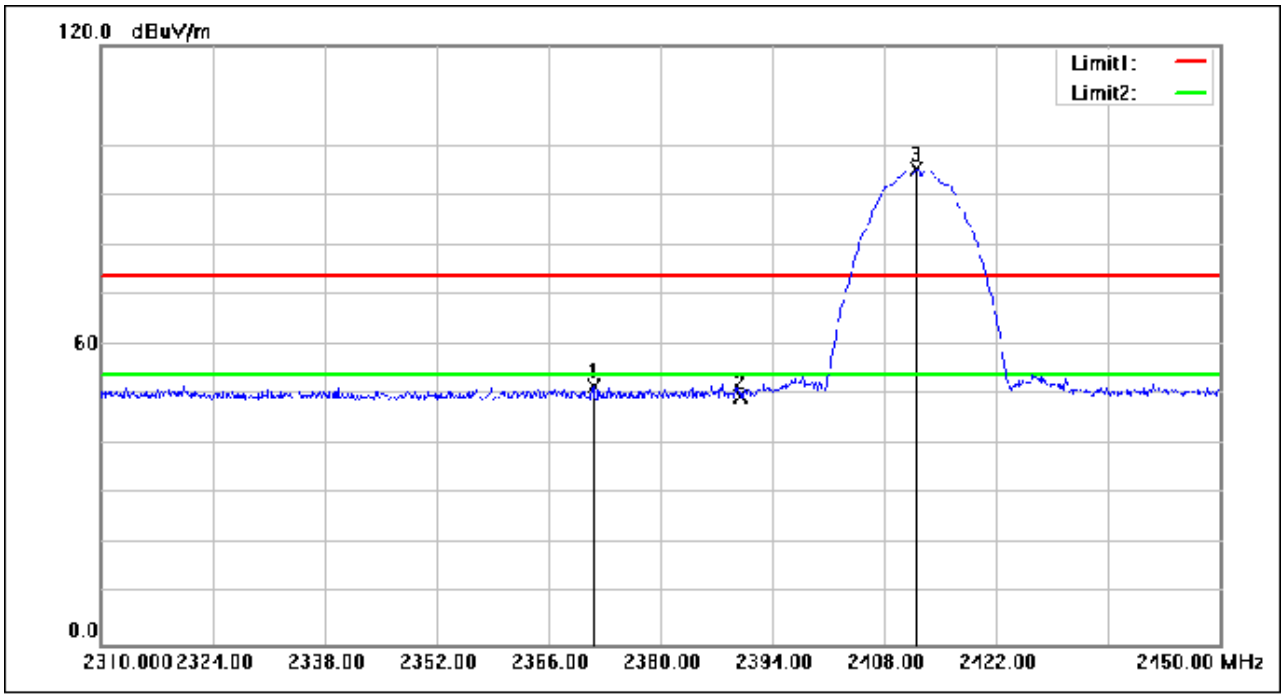
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

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

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

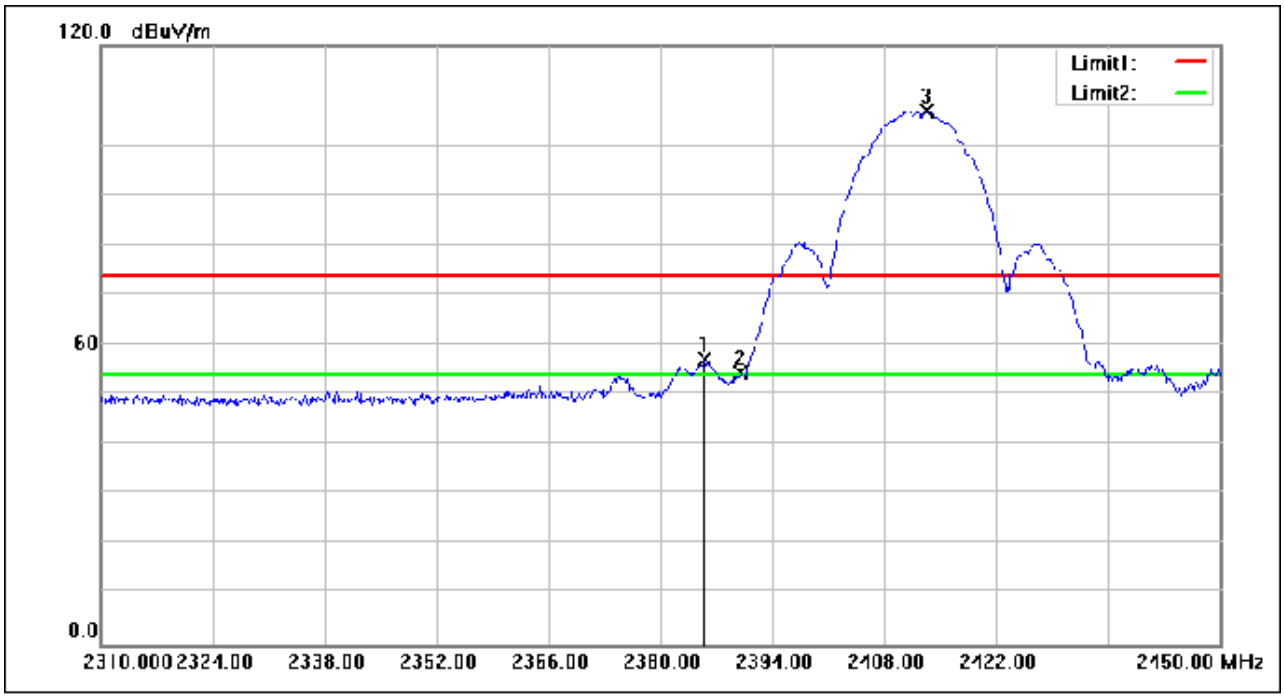
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level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

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



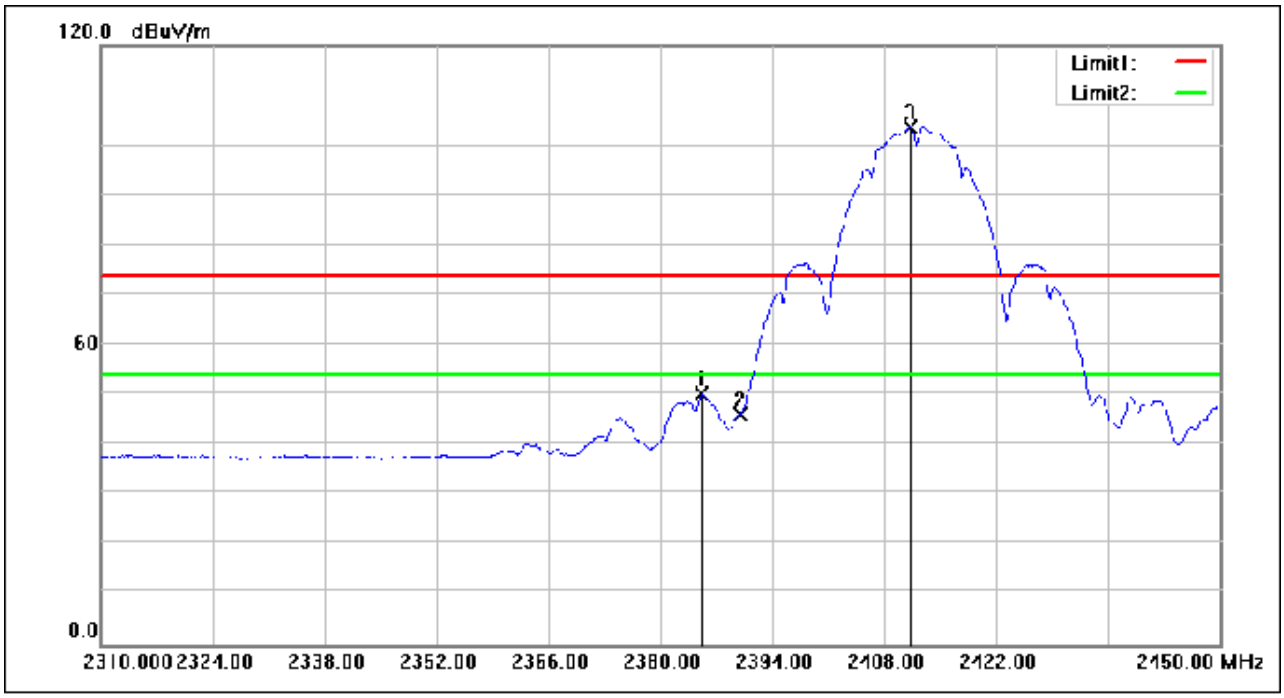
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2371.600	76.69	-24.79	51.90	74.00	-22.10	peak
2	2390.000	74.50	-24.71	49.79	74.00	-24.21	peak
3	2412.060	119.73	-24.60	95.13	74.00	21.13	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



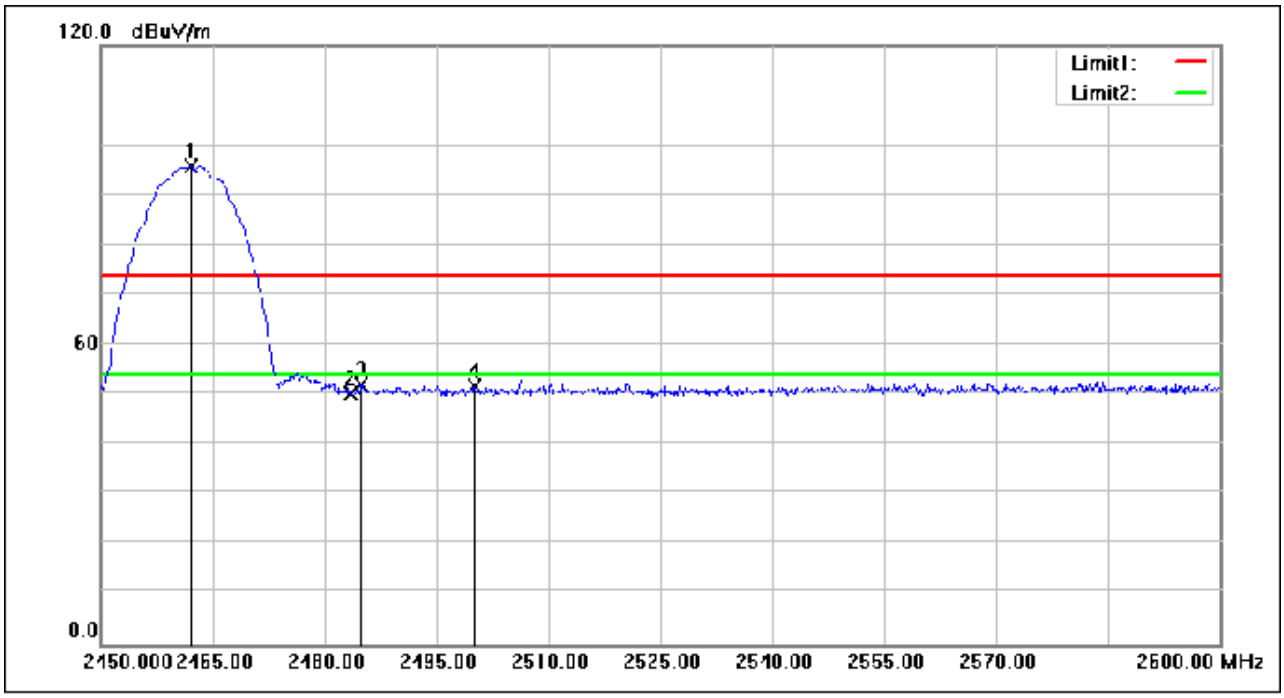
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.460	81.94	-24.73	57.21	74.00	-16.79	peak
2	2390.000	79.24	-24.71	54.53	74.00	-19.47	peak
3	2413.320	131.54	-24.60	106.94	74.00	32.94	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



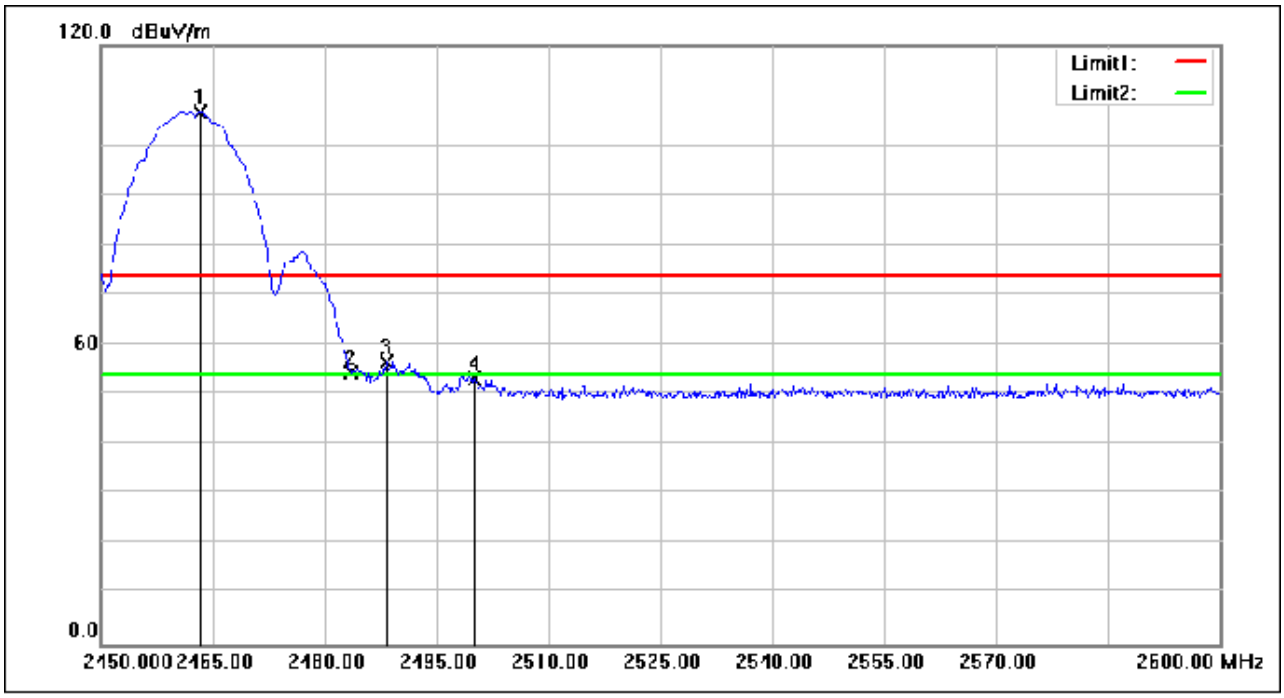
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.180	75.11	-24.73	50.38	54.00	-3.62	AVG
2	2390.000	70.89	-24.71	46.18	54.00	-7.82	AVG
3	2411.220	128.31	-24.60	103.71	54.00	49.71	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:High



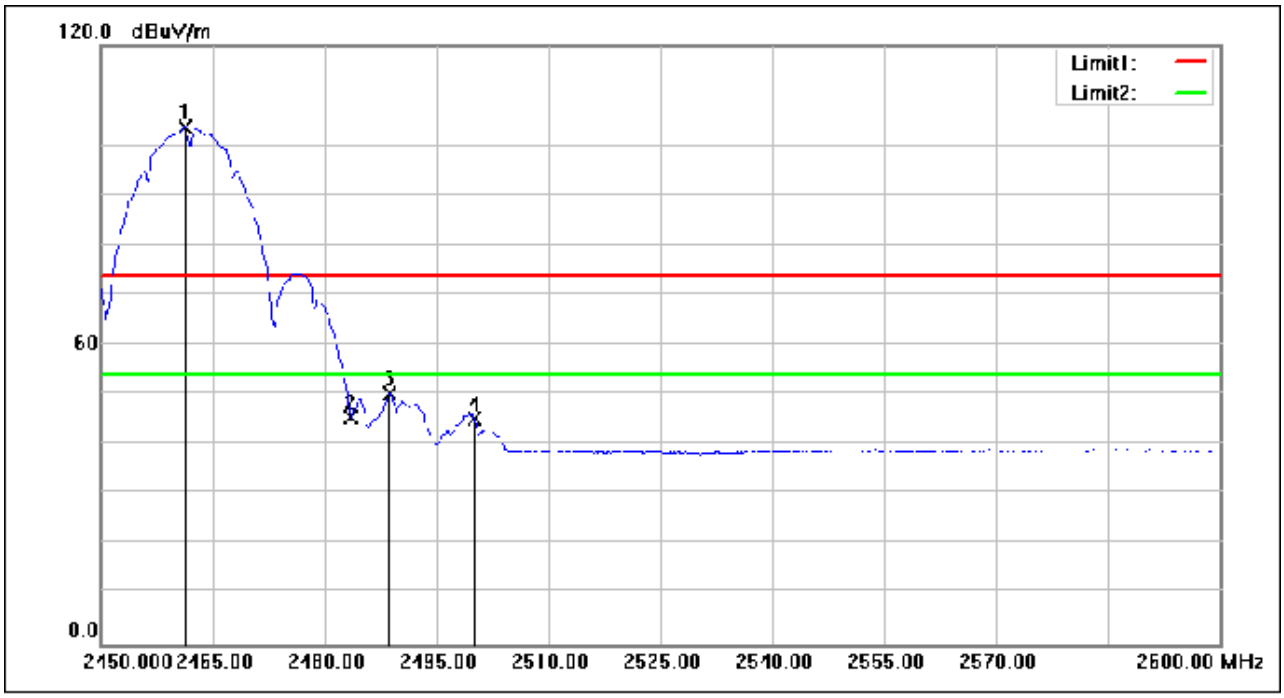
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.000	120.21	-24.37	95.84	74.00	21.84	peak
2	2483.500	74.56	-24.27	50.29	74.00	-23.71	peak
3	2484.950	76.28	-24.26	52.02	74.00	-21.98	peak
4	2500.000	75.80	-24.19	51.61	74.00	-22.39	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



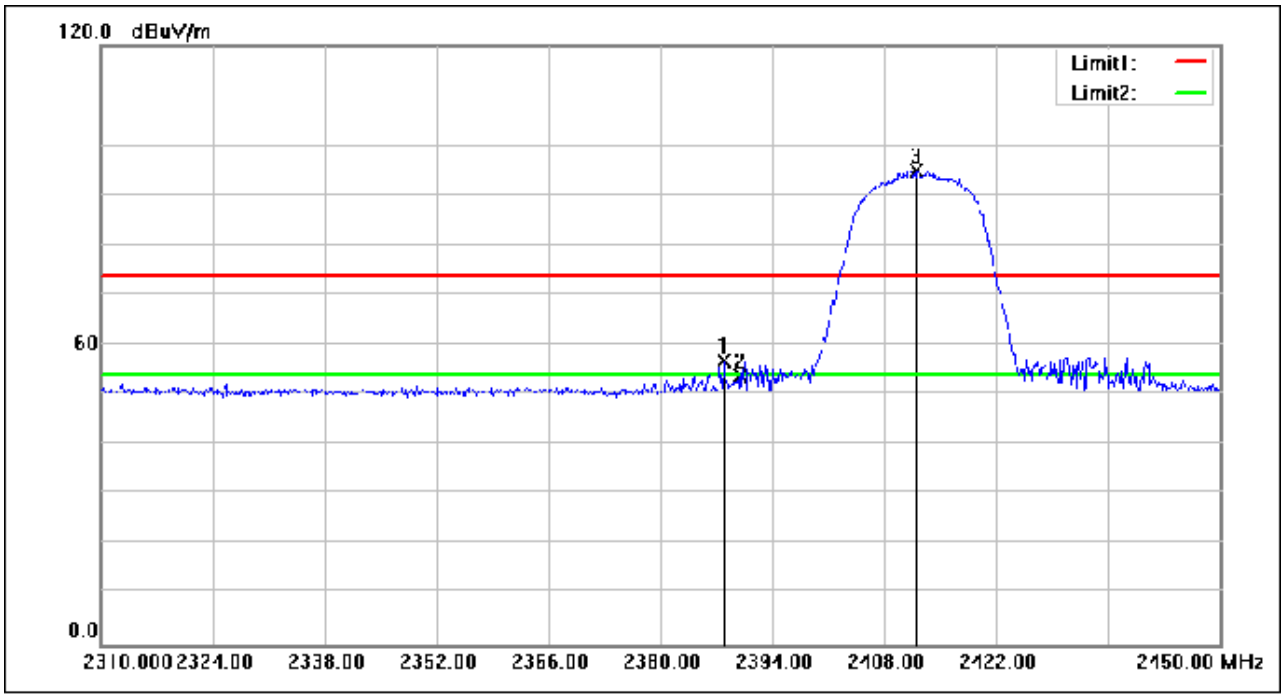
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.350	131.09	-24.37	106.72	74.00	32.72	peak
2	2483.500	78.62	-24.27	54.35	74.00	-19.65	peak
3	2488.250	80.75	-24.25	56.50	74.00	-17.50	peak
4	2500.000	77.48	-24.19	53.29	74.00	-20.71	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



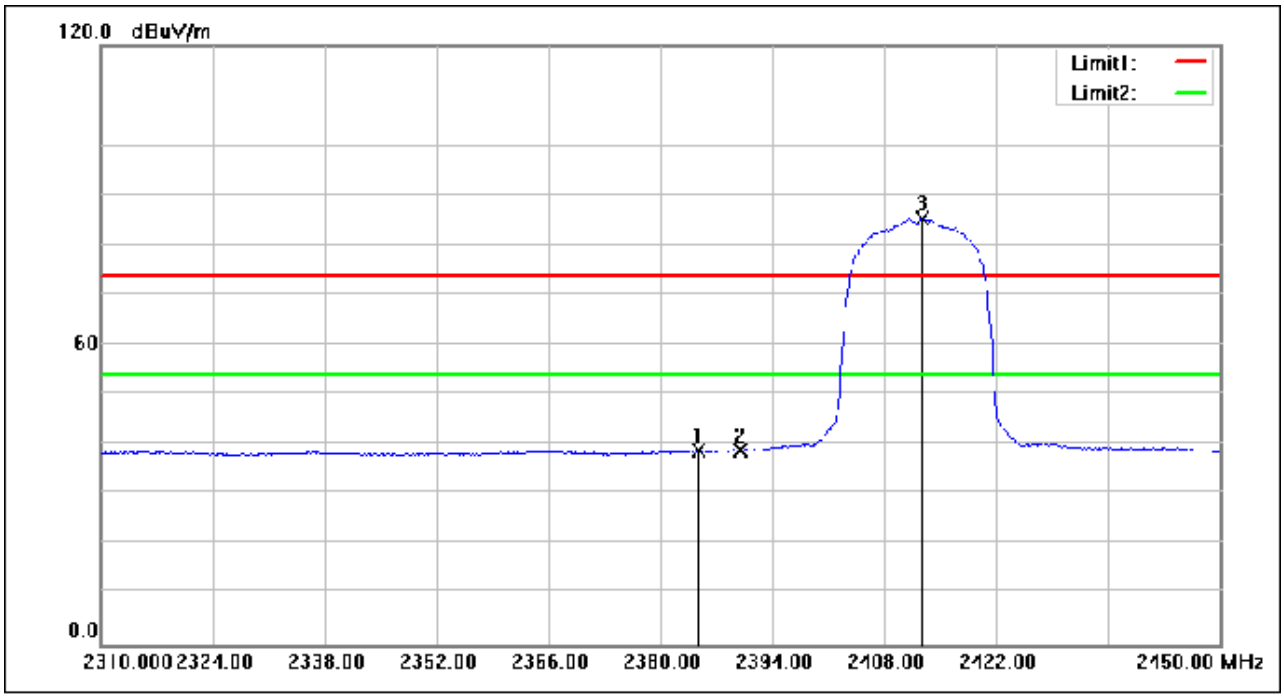
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.250	127.92	-24.37	103.55	54.00	49.55	AVG
2	2483.500	69.76	-24.27	45.49	54.00	-8.51	AVG
3	2488.700	74.39	-24.25	50.14	54.00	-3.86	AVG
4	2500.000	69.46	-24.19	45.27	54.00	-8.73	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



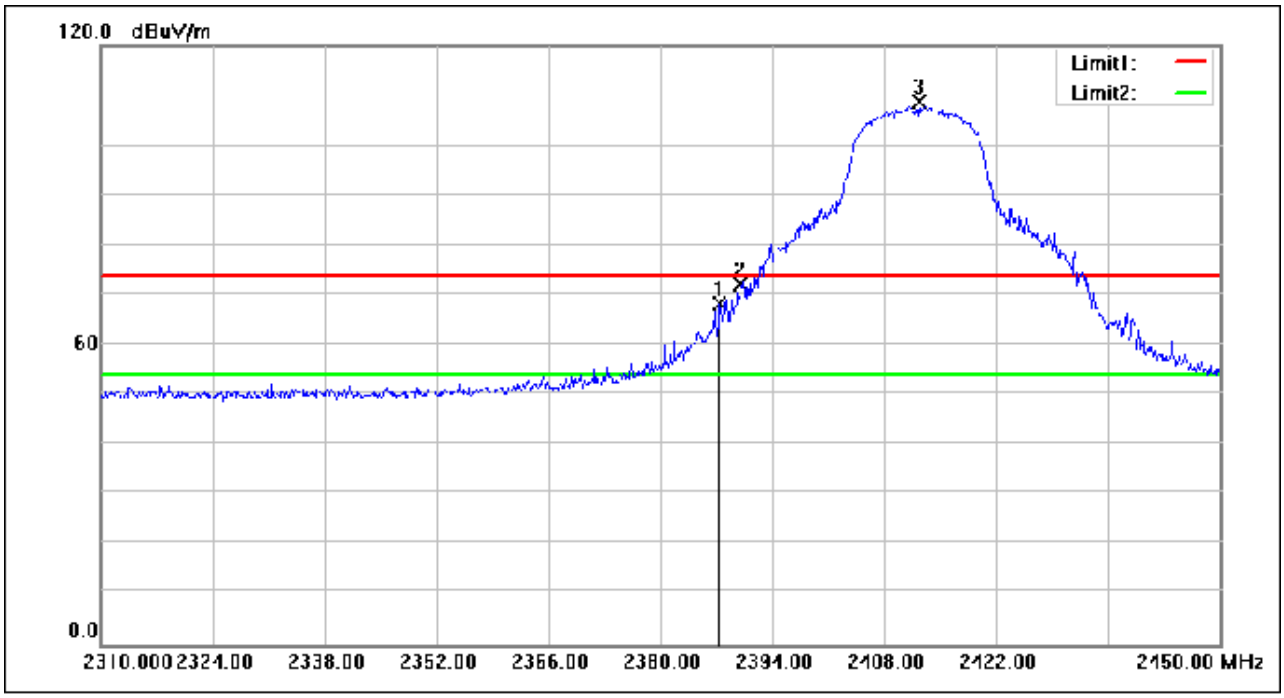
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.980	81.42	-24.72	56.70	74.00	-17.30	peak
2	2390.000	78.50	-24.71	53.79	74.00	-20.21	peak
3	2412.060	119.44	-24.60	94.84	74.00	20.84	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



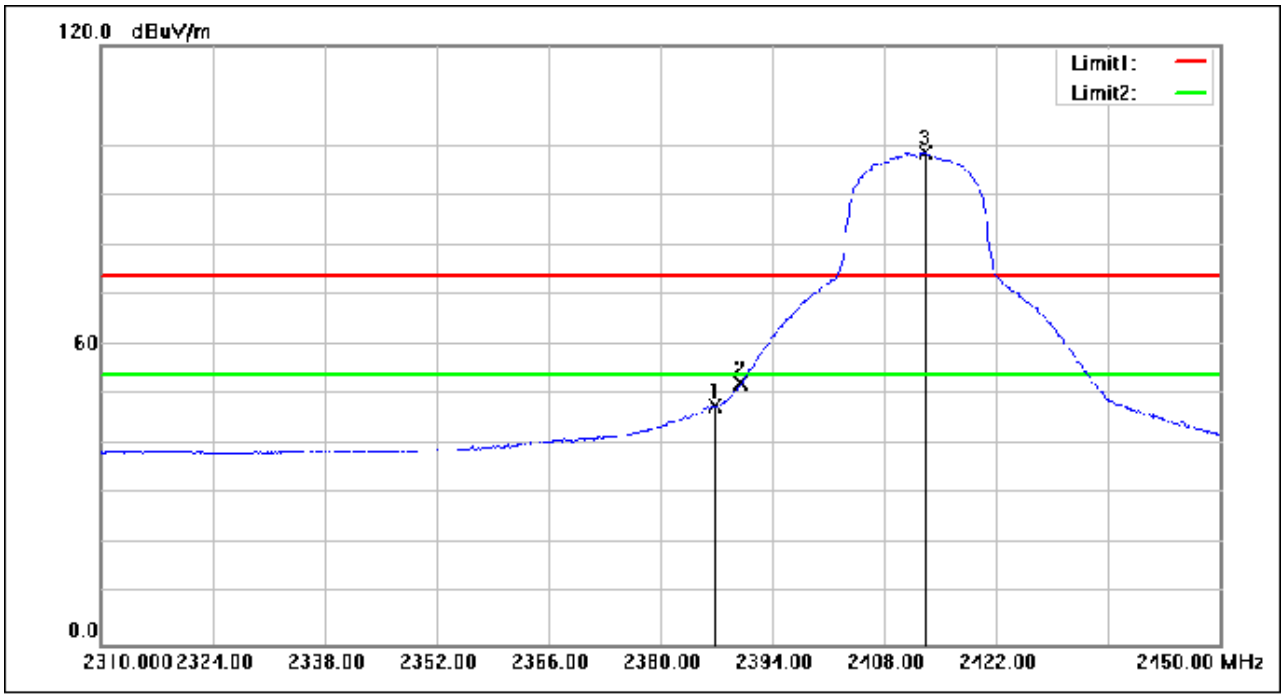
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2384.760	63.56	-24.73	38.83	54.00	-15.17	AVG
2	2390.000	63.67	-24.71	38.96	54.00	-15.04	AVG
3	2412.760	110.10	-24.60	85.50	54.00	31.50	AVG

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.420	92.96	-24.72	68.24	74.00	-5.76	peak
2	2390.000	96.91	-24.71	72.20	74.00	-1.80	peak
3	2412.340	133.33	-24.60	108.73	74.00	34.73	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low

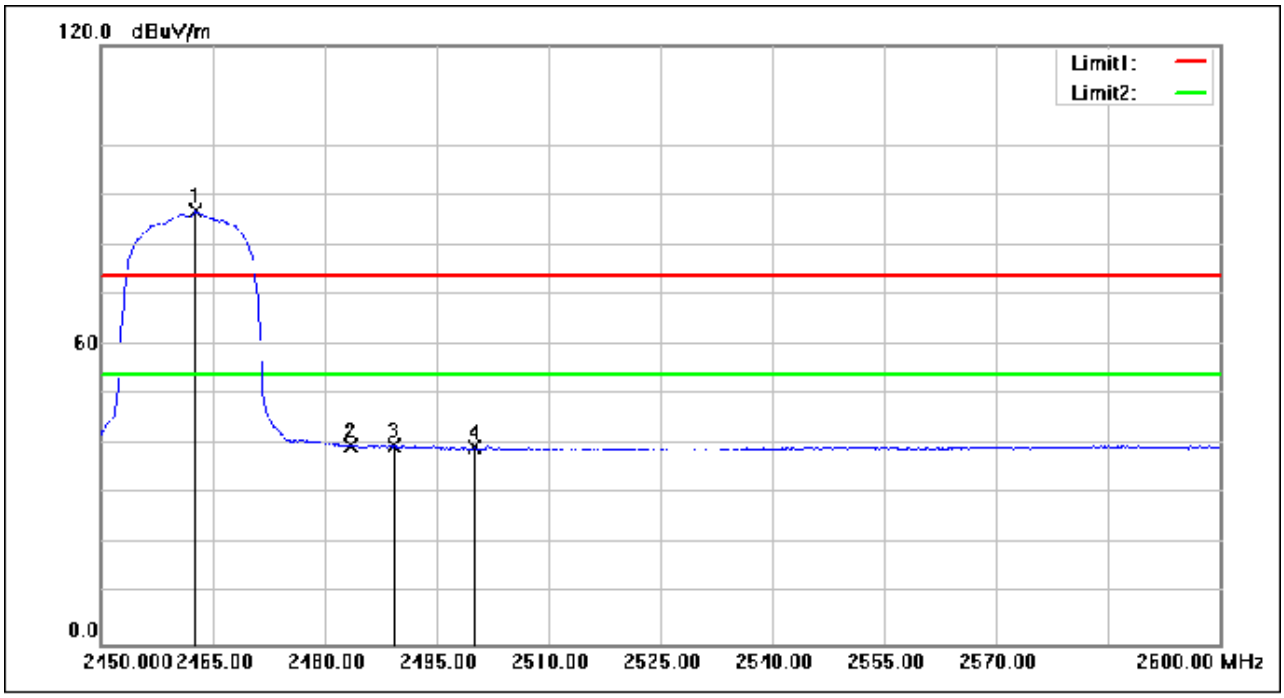


No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.860	72.57	-24.72	47.85	54.00	-6.15	AVG
2	2390.000	76.91	-24.71	52.20	54.00	-1.80	AVG
3	2413.040	123.26	-24.60	98.66	54.00	44.66	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:High

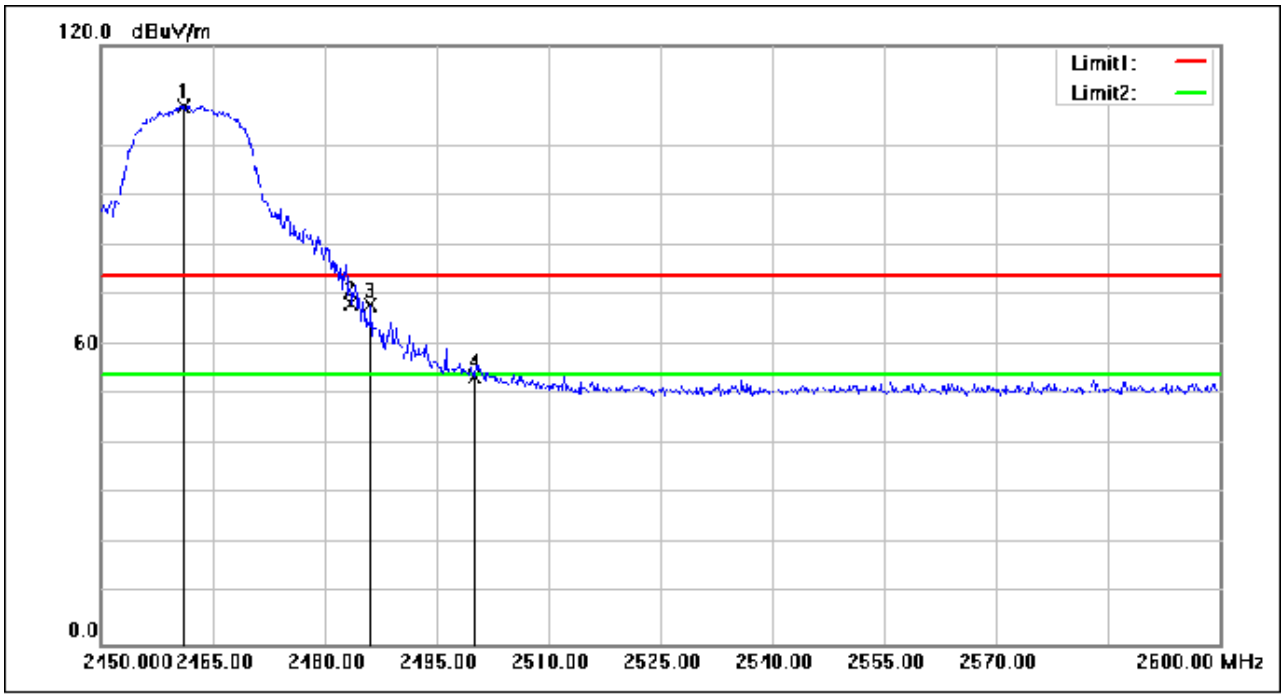
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.050	120.56	-24.37	96.19	74.00	22.19	peak
2	2483.500	82.99	-24.27	58.72	74.00	-15.28	peak
3	2485.700	82.43	-24.26	58.17	74.00	-15.83	peak
4	2500.000	75.14	-24.19	50.95	74.00	-23.05	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:High



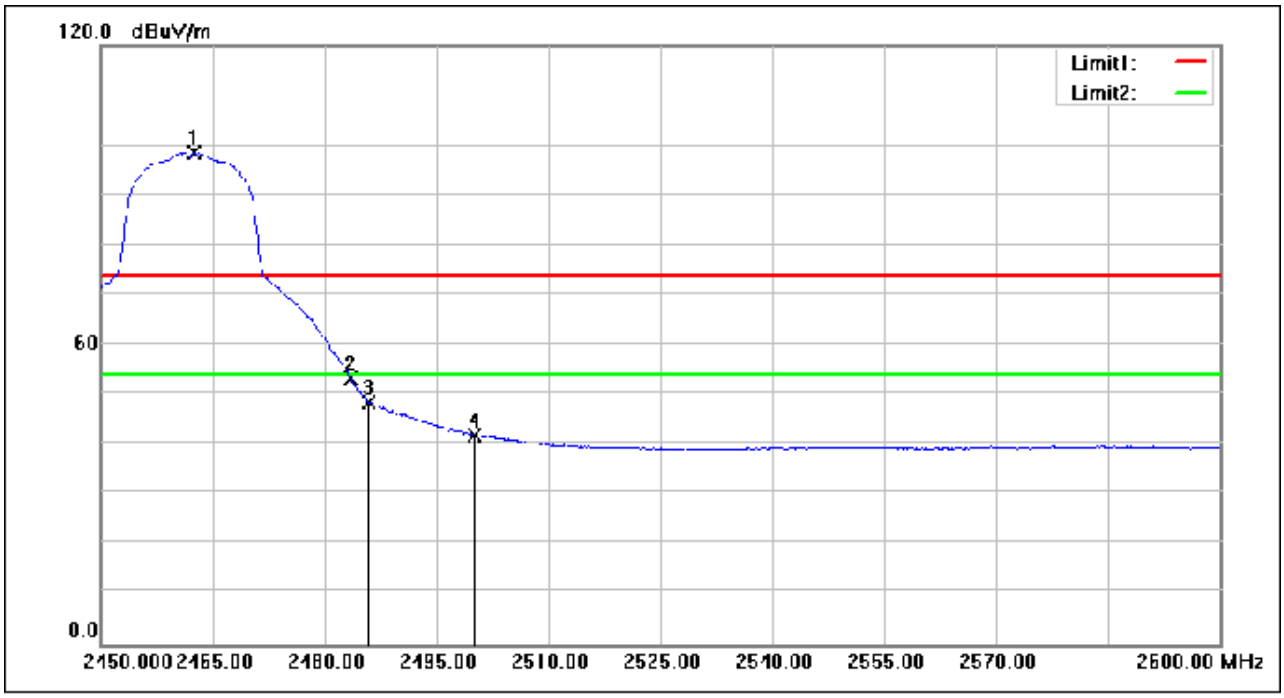
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.750	111.12	-24.37	86.75	54.00	32.75	AVG
2	2483.500	64.01	-24.27	39.74	54.00	-14.26	AVG
3	2489.300	64.01	-24.24	39.77	54.00	-14.23	AVG
4	2500.000	63.53	-24.19	39.34	54.00	-14.66	AVG

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



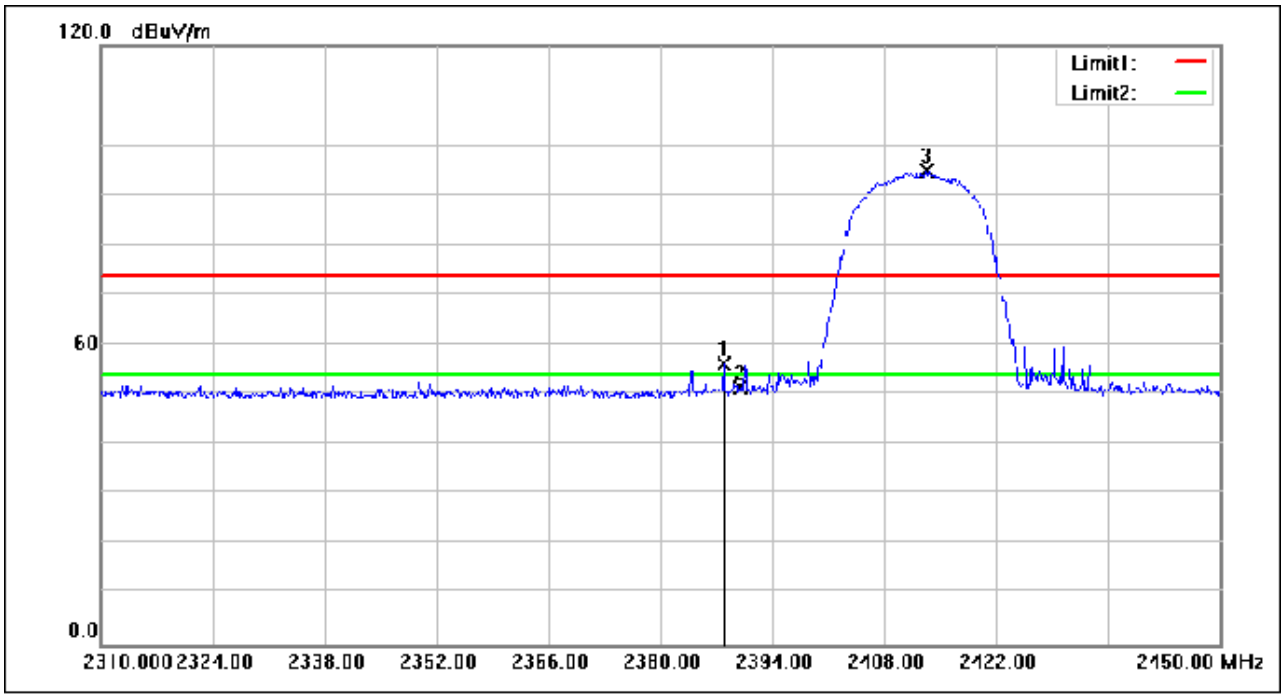
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.100	132.33	-24.38	107.95	74.00	33.95	peak
2	2483.500	92.40	-24.27	68.13	74.00	-5.87	peak
3	2486.150	92.32	-24.26	68.06	74.00	-5.94	peak
4	2500.000	77.72	-24.19	53.53	74.00	-20.47	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



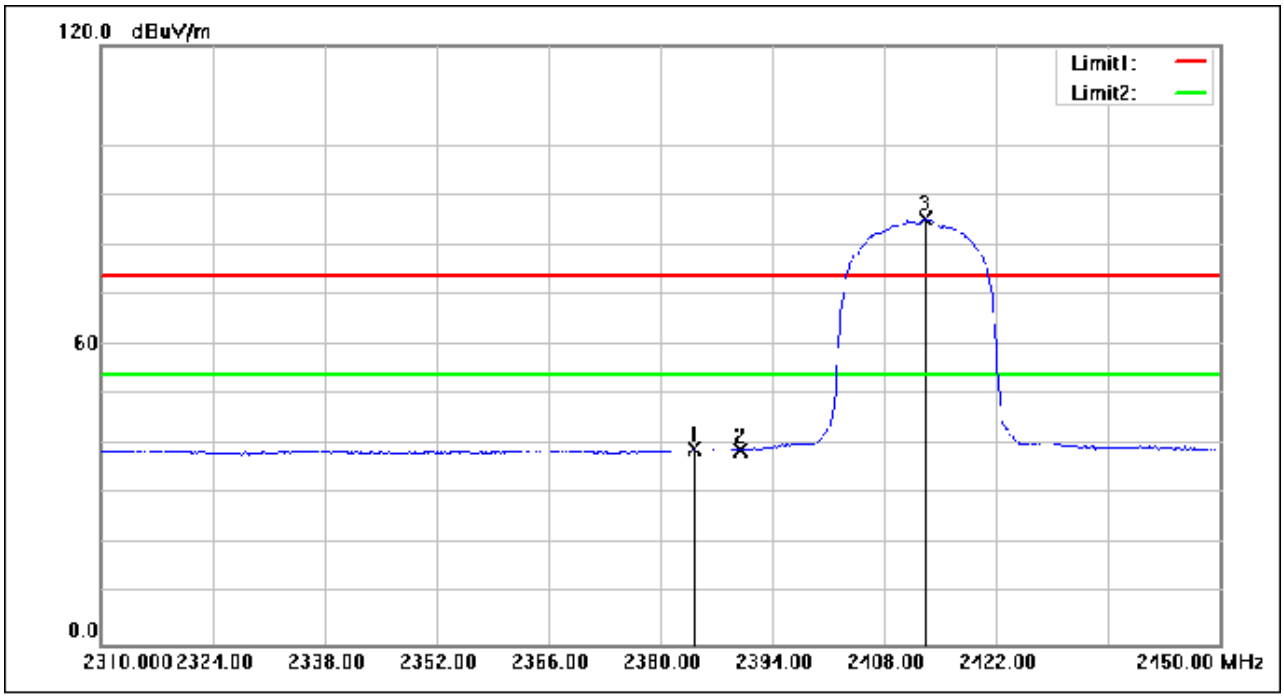
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.450	123.05	-24.37	98.68	54.00	44.68	AVG
2	2483.500	77.54	-24.27	53.27	54.00	-0.73	AVG
3	2485.850	72.81	-24.26	48.55	54.00	-5.45	AVG
4	2500.000	66.18	-24.19	41.99	54.00	-12.01	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



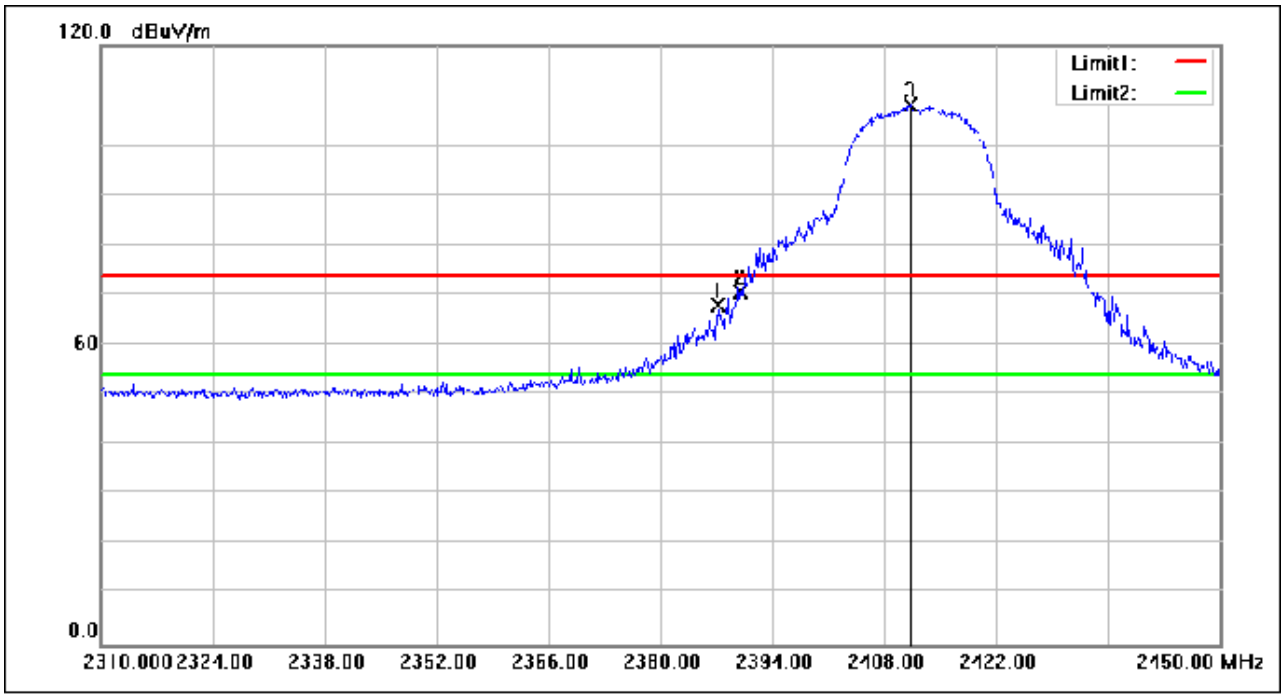
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.840	81.11	-24.72	56.39	74.00	-17.61	peak
2	2390.000	76.20	-24.71	51.49	74.00	-22.51	peak
3	2413.320	119.41	-24.60	94.81	74.00	20.81	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



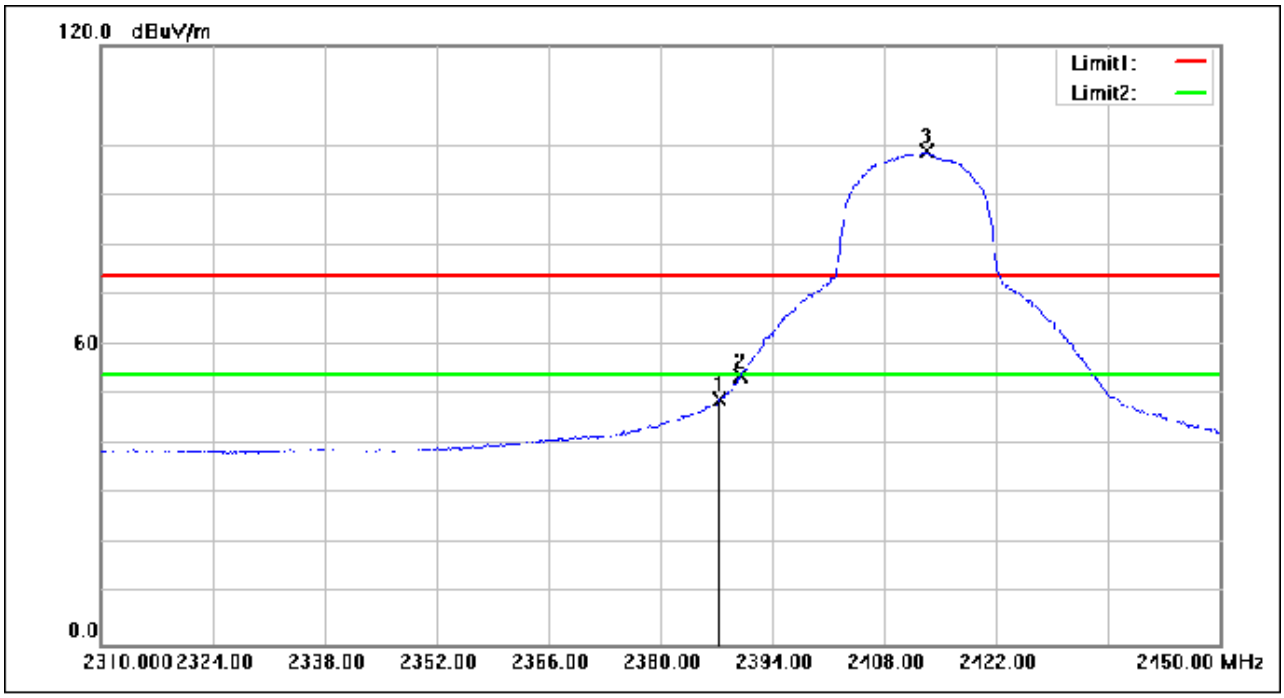
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2384.200	63.75	-24.73	39.02	54.00	-14.98	AVG
2	2390.000	63.68	-24.71	38.97	54.00	-15.03	AVG
3	2413.180	109.98	-24.60	85.38	54.00	31.38	AVG

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.140	92.61	-24.72	67.89	74.00	-6.11	peak
2	2390.000	95.43	-24.71	70.72	74.00	-3.28	peak
3	2411.220	132.70	-24.60	108.10	74.00	34.10	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

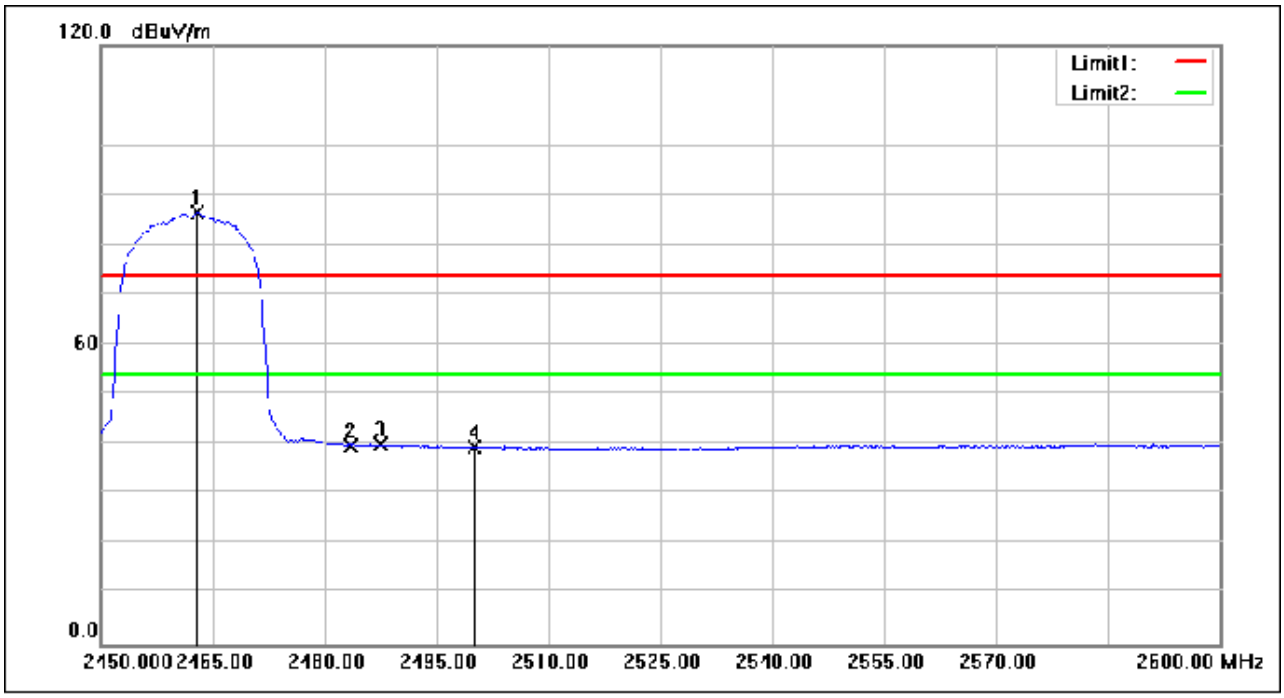


No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.420	73.74	-24.72	49.02	54.00	-4.98	AVG
2	2390.000	78.57	-24.71	53.86	54.00	-0.14	AVG
3	2413.320	123.34	-24.60	98.74	54.00	44.74	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

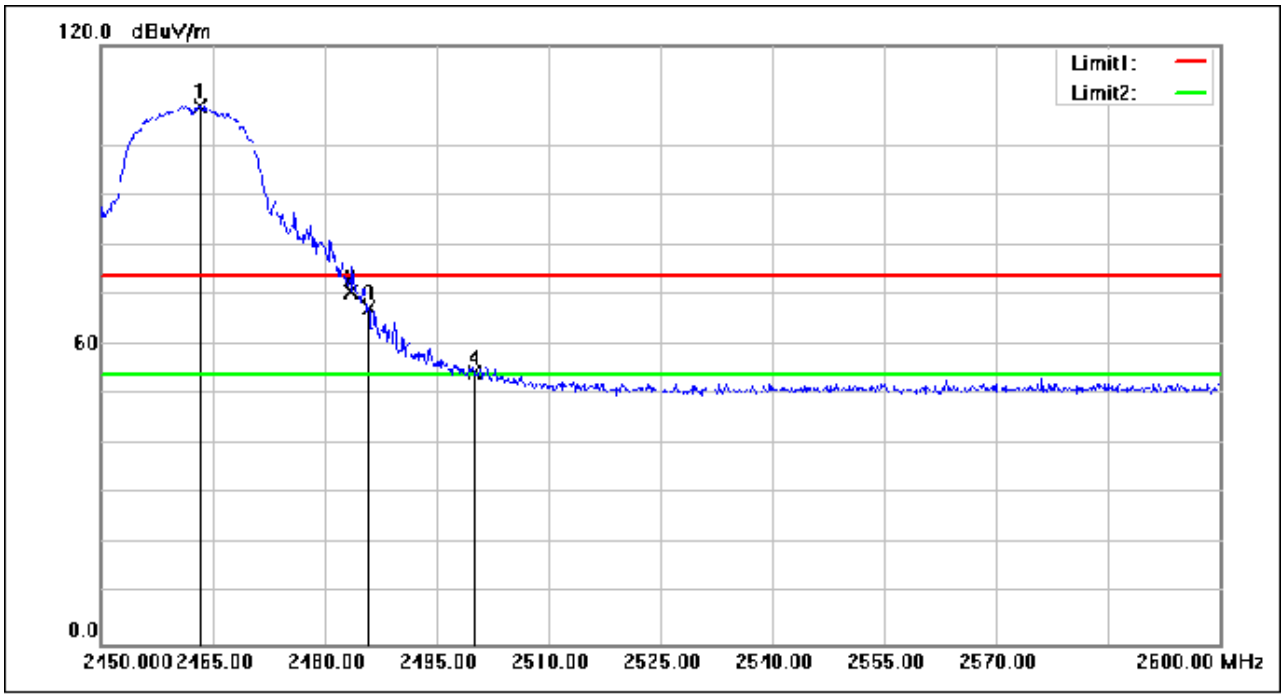
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.800	120.41	-24.36	96.05	74.00	22.05	peak
2	2483.500	76.01	-24.27	51.74	74.00	-22.26	peak
3	2485.700	84.71	-24.26	60.45	74.00	-13.55	peak
4	2500.000	75.32	-24.19	51.13	74.00	-22.87	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



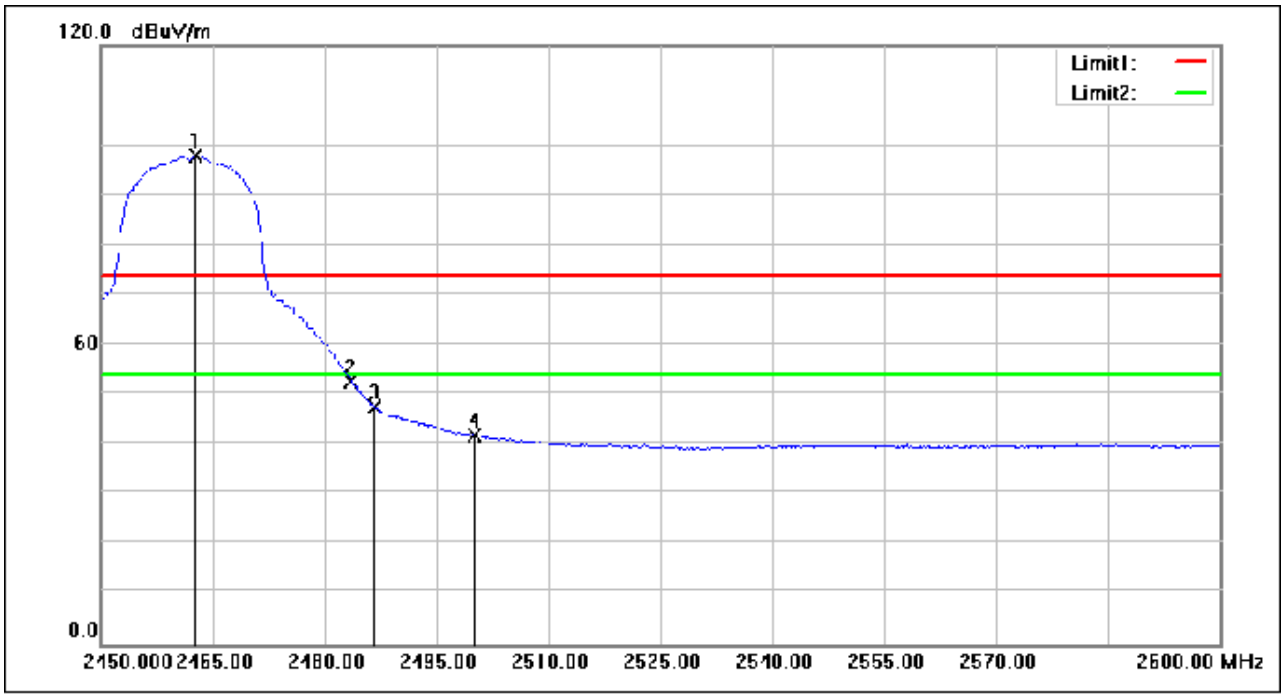
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.900	110.89	-24.37	86.52	54.00	32.52	AVG
2	2483.500	64.07	-24.27	39.80	54.00	-14.20	AVG
3	2487.500	64.28	-24.25	40.03	54.00	-13.97	AVG
4	2500.000	63.54	-24.19	39.35	54.00	-14.65	AVG

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



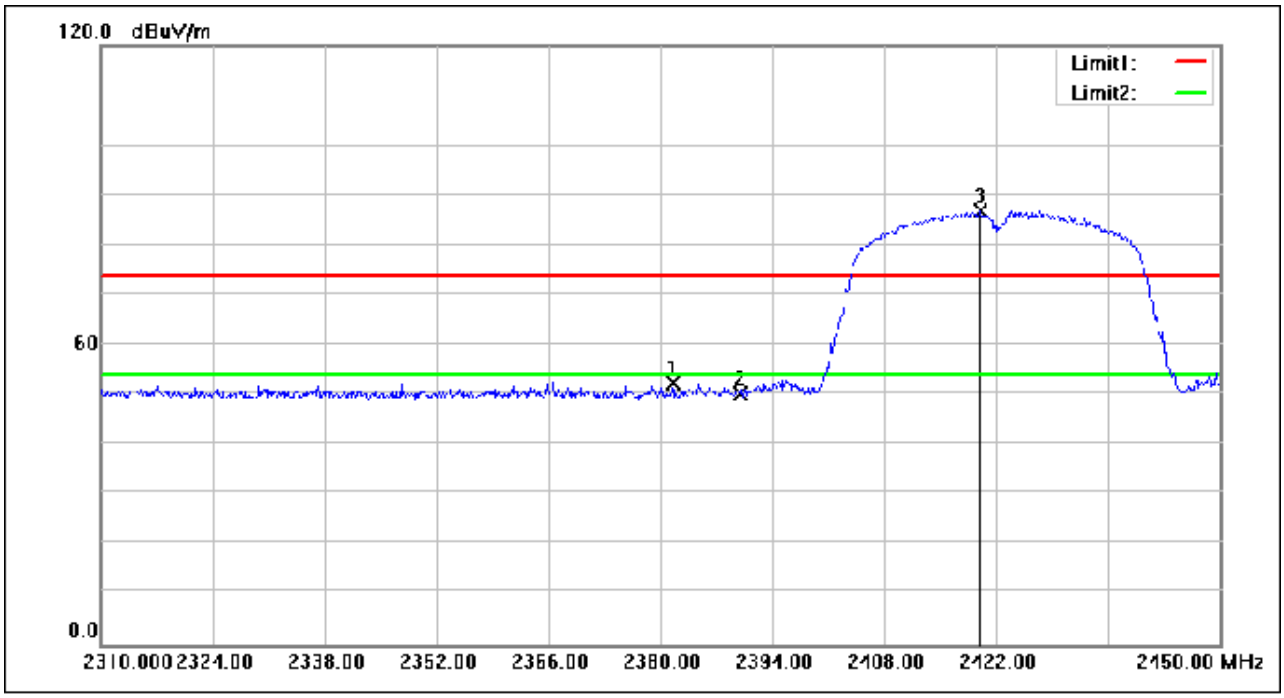
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.350	132.30	-24.37	107.93	74.00	33.93	peak
2	2483.500	94.94	-24.27	70.67	74.00	-3.33	peak
3	2485.850	91.69	-24.26	67.43	74.00	-6.57	peak
4	2500.000	78.79	-24.19	54.60	74.00	-19.40	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



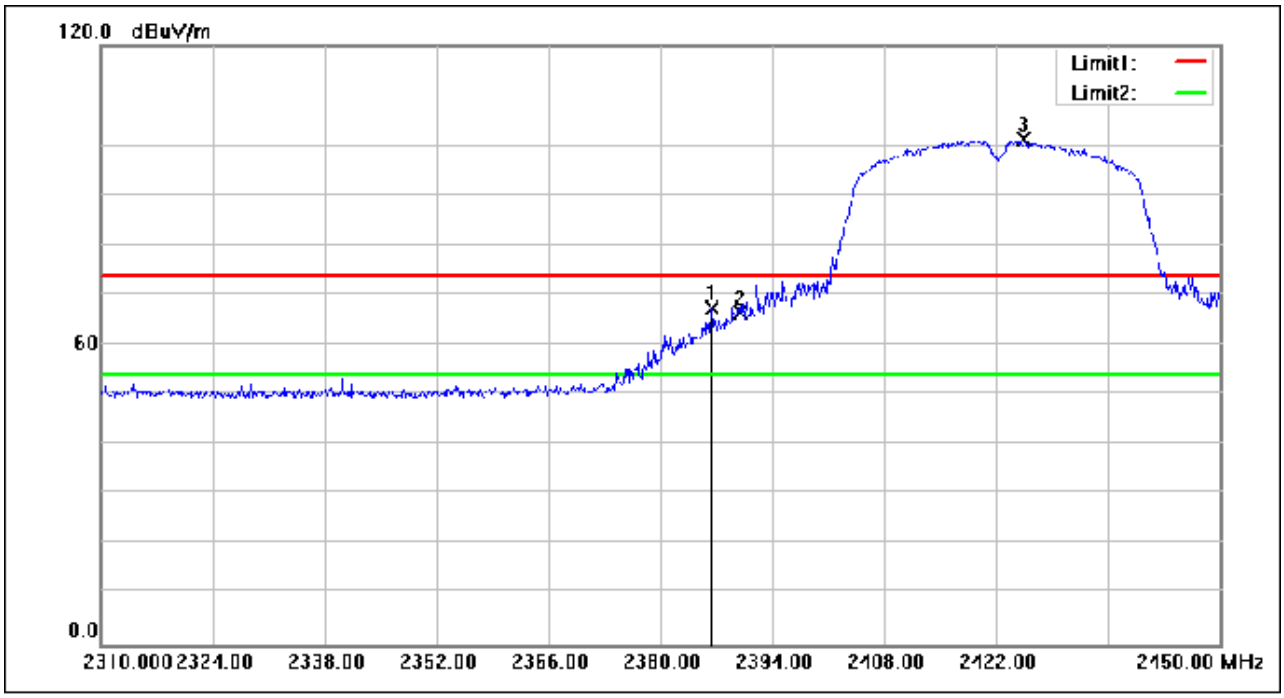
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.750	122.36	-24.37	97.99	54.00	43.99	AVG
2	2483.500	76.81	-24.27	52.54	54.00	-1.46	AVG
3	2486.750	71.72	-24.25	47.47	54.00	-6.53	AVG
4	2500.000	65.93	-24.19	41.74	54.00	-12.26	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



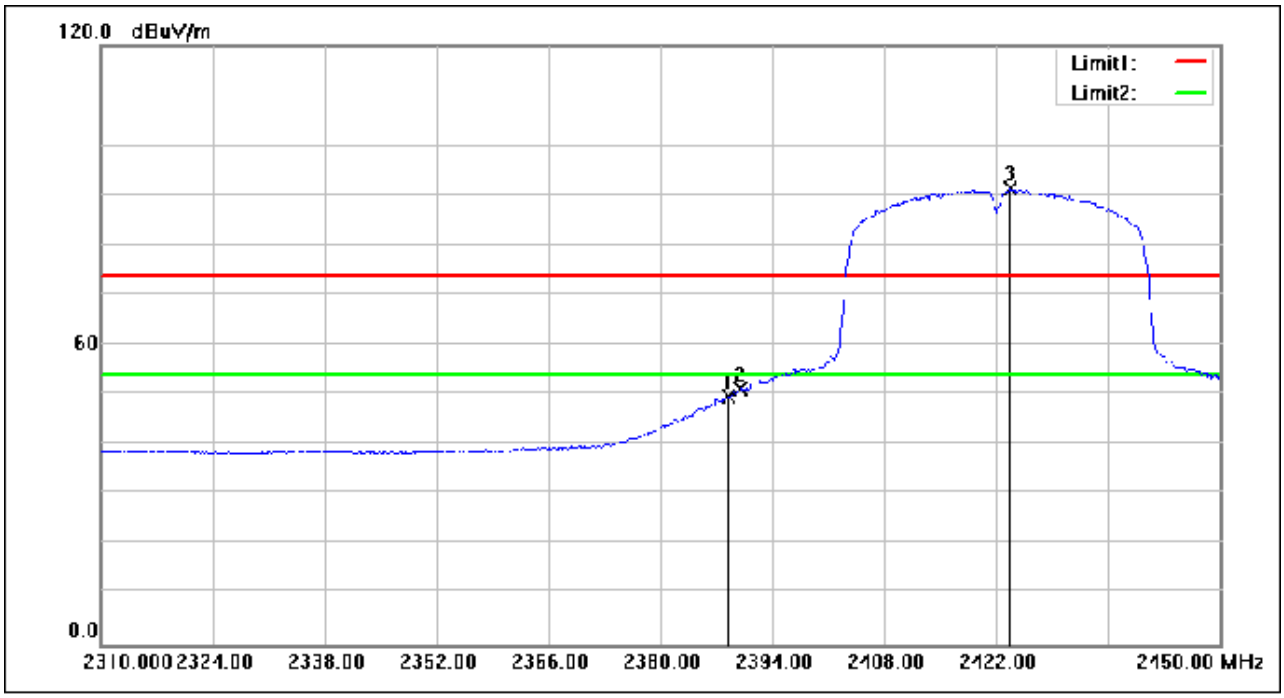
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2381.540	77.10	-24.74	52.36	74.00	-21.64	peak
2	2390.000	75.04	-24.71	50.33	74.00	-23.67	peak
3	2420.040	111.35	-24.57	86.78	74.00	12.78	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



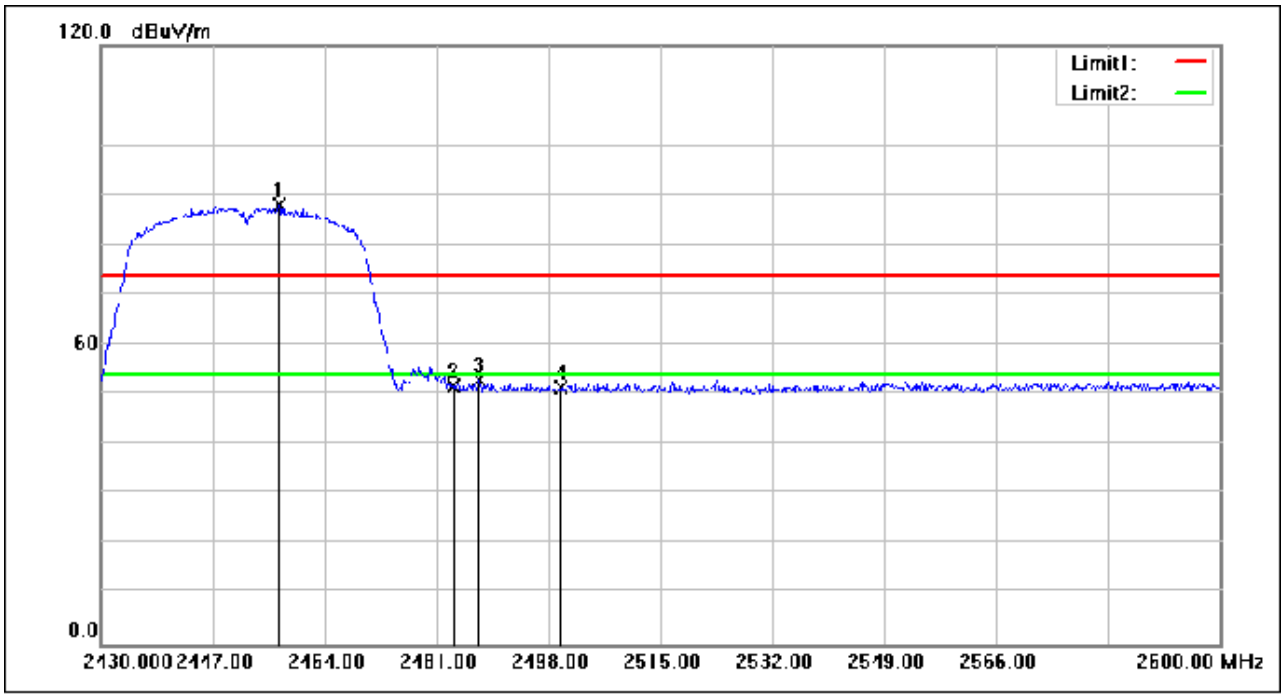
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.440	92.05	-24.72	67.33	74.00	-6.67	peak
2	2390.000	91.26	-24.71	66.55	74.00	-7.45	peak
3	2425.500	125.70	-24.54	101.16	74.00	27.16	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



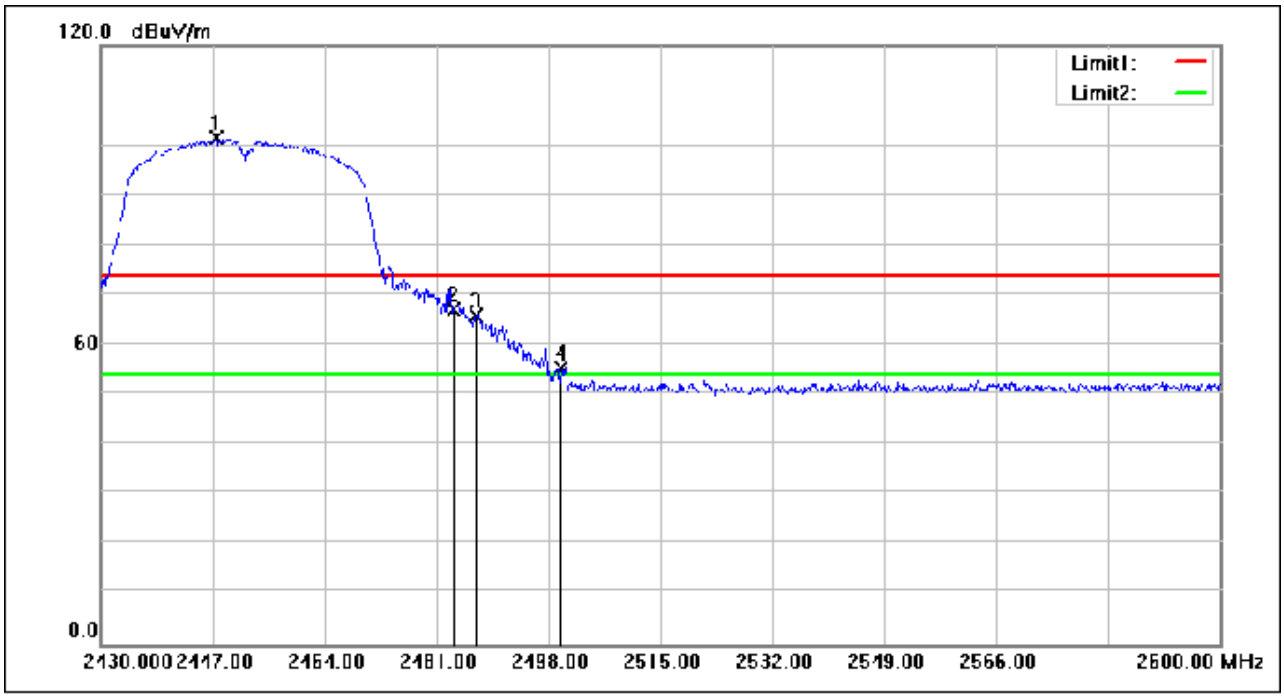
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.540	74.26	-24.71	49.55	54.00	-4.45	AVG
2	2390.000	75.94	-24.71	51.23	54.00	-2.77	AVG
3	2423.820	115.80	-24.54	91.26	54.00	37.26	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



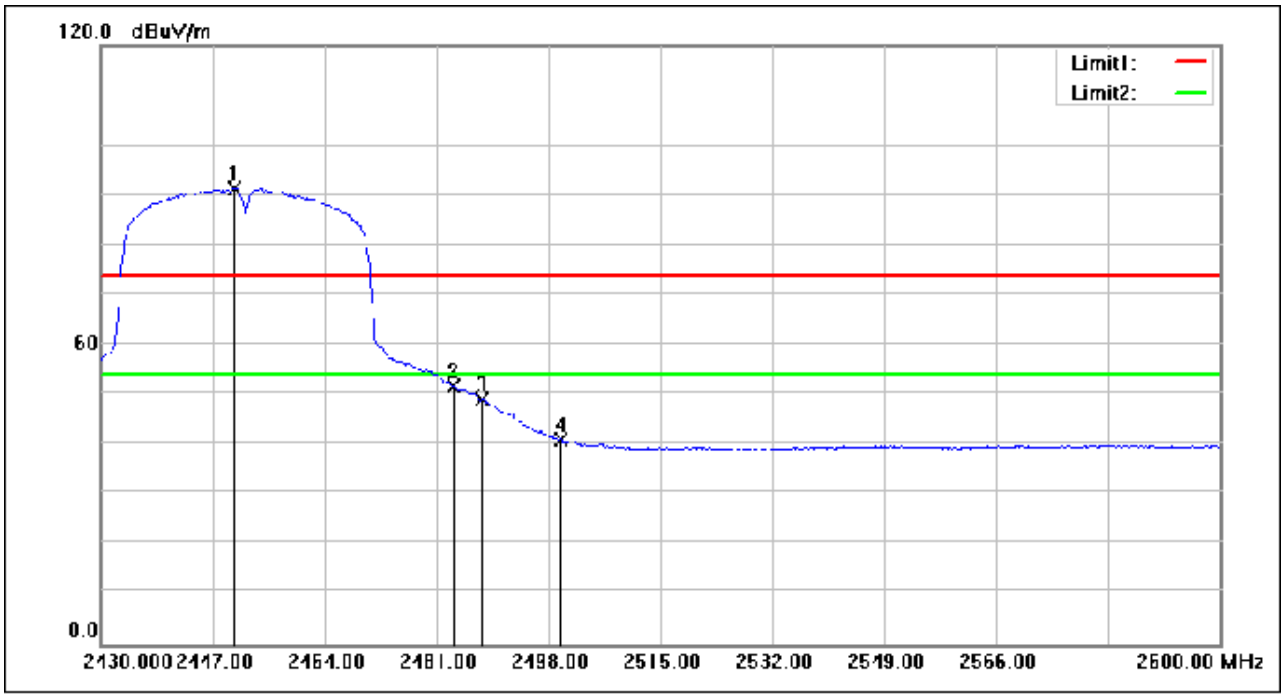
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2457.030	112.40	-24.39	88.01	74.00	14.01	peak
2	2483.500	76.05	-24.27	51.78	74.00	-22.22	peak
3	2487.460	77.32	-24.25	53.07	74.00	-20.93	peak
4	2500.000	75.60	-24.19	51.41	74.00	-22.59	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



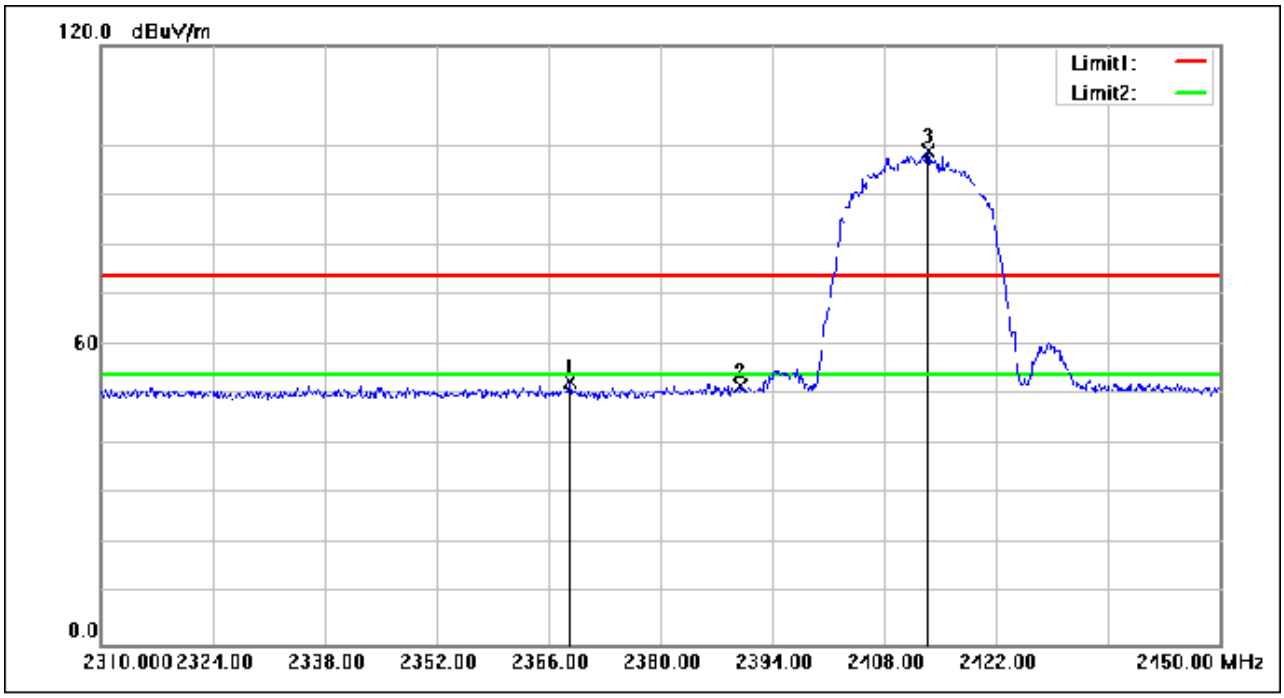
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2447.510	125.98	-24.44	101.54	74.00	27.54	peak
2	2483.500	91.44	-24.27	67.17	74.00	-6.83	peak
3	2486.950	90.12	-24.25	65.87	74.00	-8.13	peak
4	2500.000	79.61	-24.19	55.42	74.00	-18.58	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



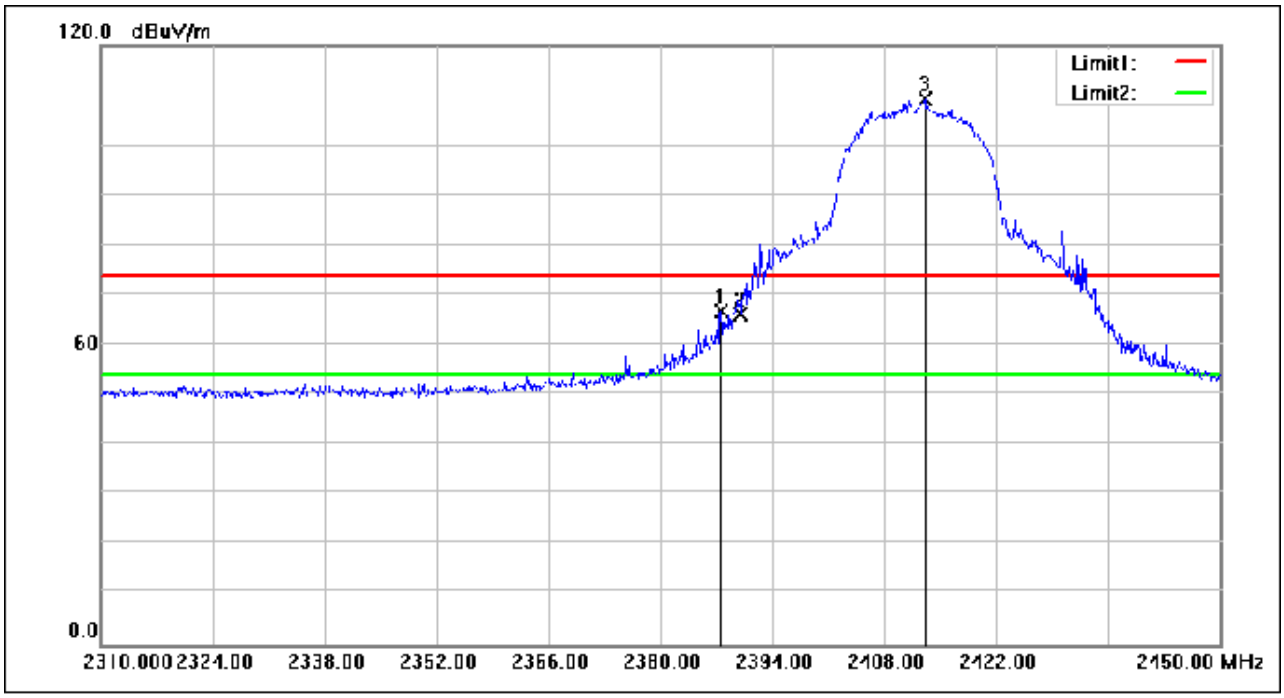
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2450.230	115.87	-24.42	91.45	54.00	37.45	AVG
2	2483.500	76.11	-24.27	51.84	54.00	-2.16	AVG
3	2487.970	73.38	-24.25	49.13	54.00	-4.87	AVG
4	2500.000	65.28	-24.19	41.09	54.00	-12.91	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



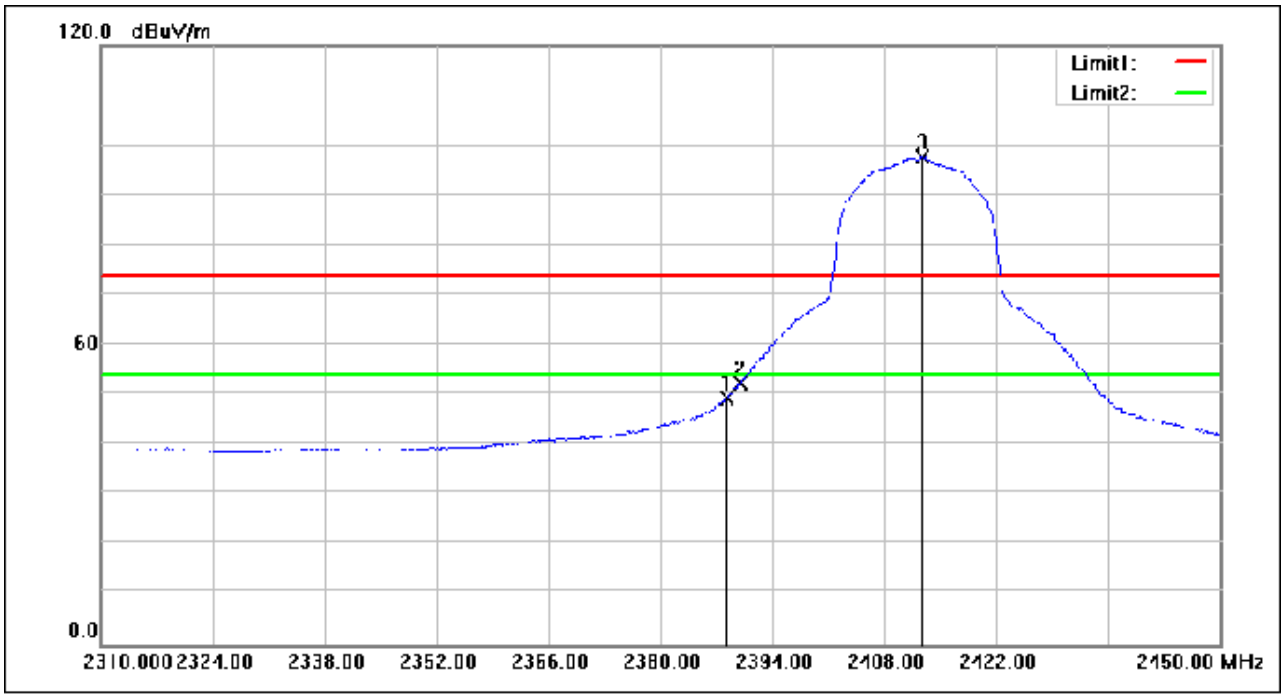
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2368.660	77.55	-24.80	52.75	74.00	-21.25	peak
2	2390.000	76.58	-24.71	51.87	74.00	-22.13	peak
3	2413.460	123.34	-24.60	98.74	74.00	24.74	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.560	91.43	-24.72	66.71	74.00	-7.29	peak
2	2390.000	90.74	-24.71	66.03	74.00	-7.97	peak
3	2413.040	133.92	-24.60	109.32	74.00	35.32	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.260	74.19	-24.72	49.47	54.00	-4.53	AVG
2	2390.000	77.12	-24.71	52.41	54.00	-1.59	AVG
3	2412.760	122.11	-24.60	97.51	54.00	43.51	AVG

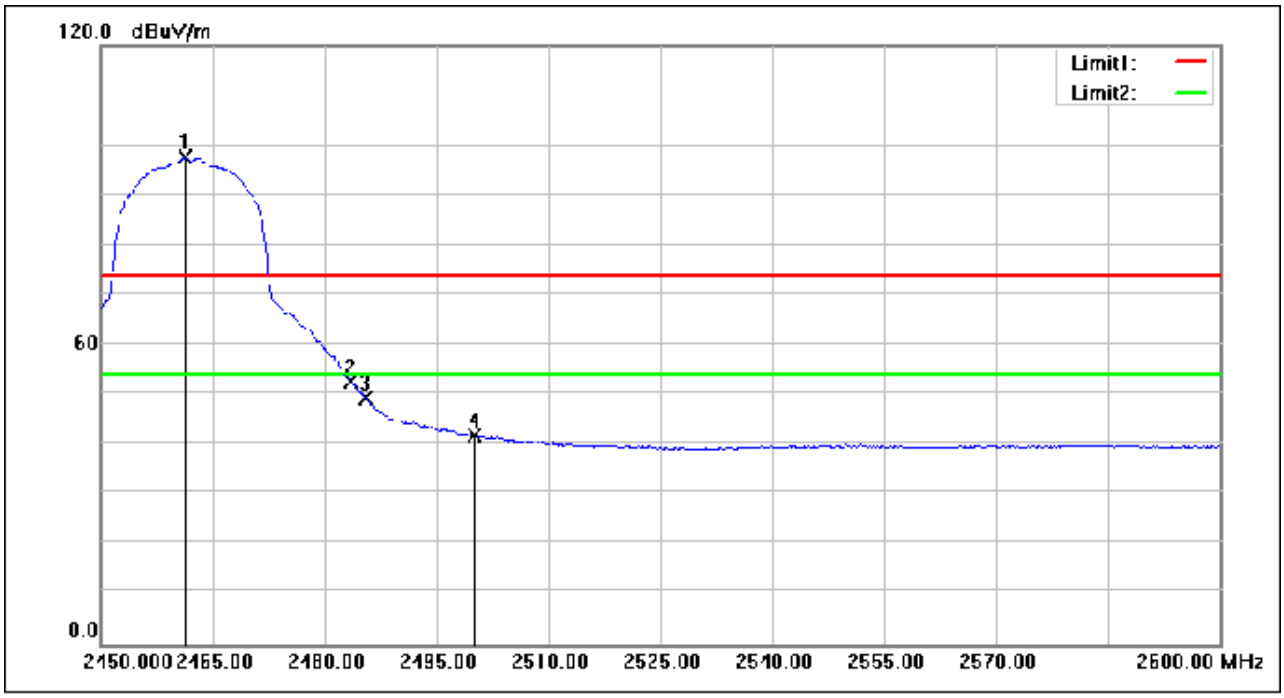
Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.350	123.84	-24.37	99.47	74.00	25.47	peak
2	2483.500	77.98	-24.27	53.71	74.00	-20.29	peak
3	2486.450	78.17	-24.25	53.92	74.00	-20.08	peak
4	2500.000	74.97	-24.19	50.78	74.00	-23.22	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High

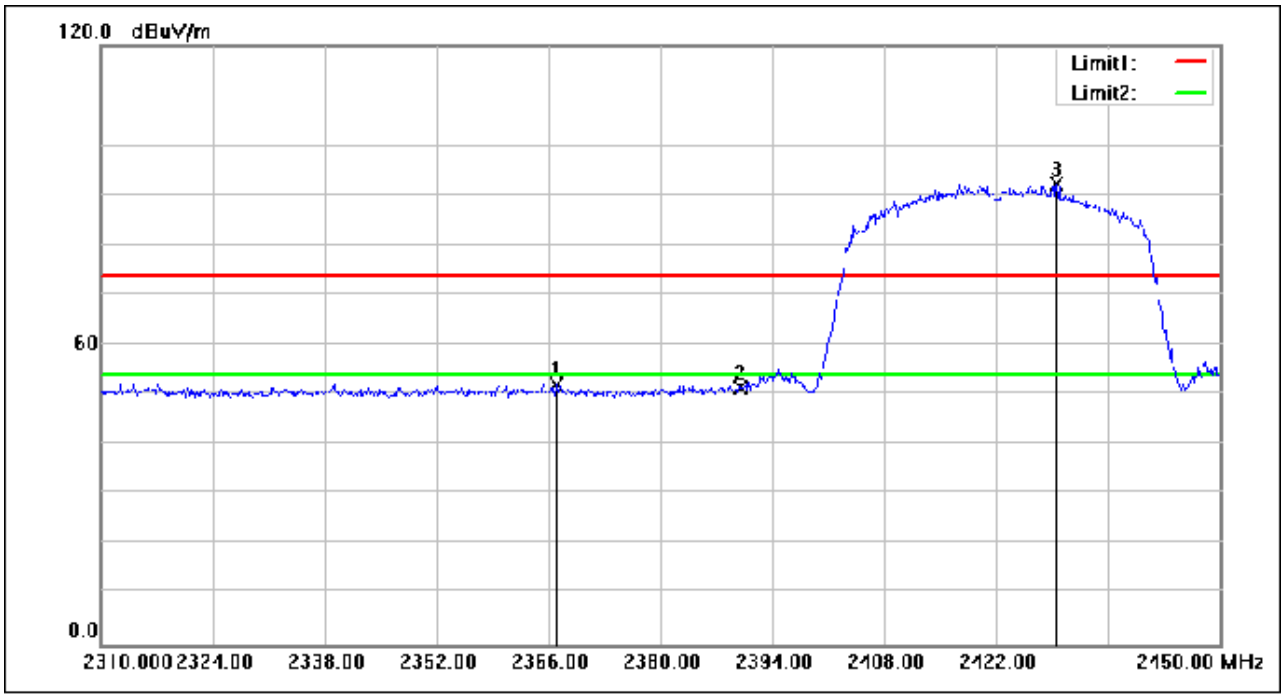
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.100	132.70	-24.38	108.32	74.00	34.32	peak
2	2483.500	93.35	-24.27	69.08	74.00	-4.92	peak
3	2486.000	88.18	-24.26	63.92	74.00	-10.08	peak
4	2500.000	76.94	-24.19	52.75	74.00	-21.25	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



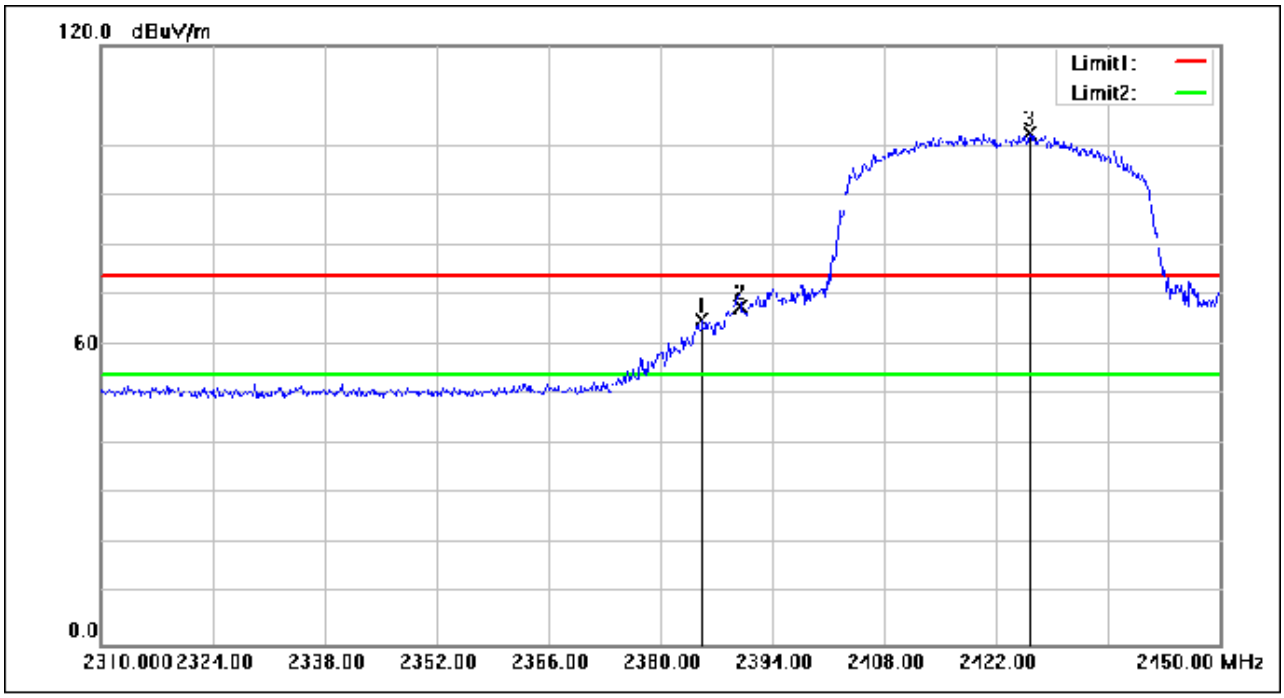
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.250	121.91	-24.37	97.54	54.00	43.54	AVG
2	2483.500	76.85	-24.27	52.58	54.00	-1.42	AVG
3	2485.550	73.53	-24.26	49.27	54.00	-4.73	AVG
4	2500.000	65.90	-24.19	41.71	54.00	-12.29	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



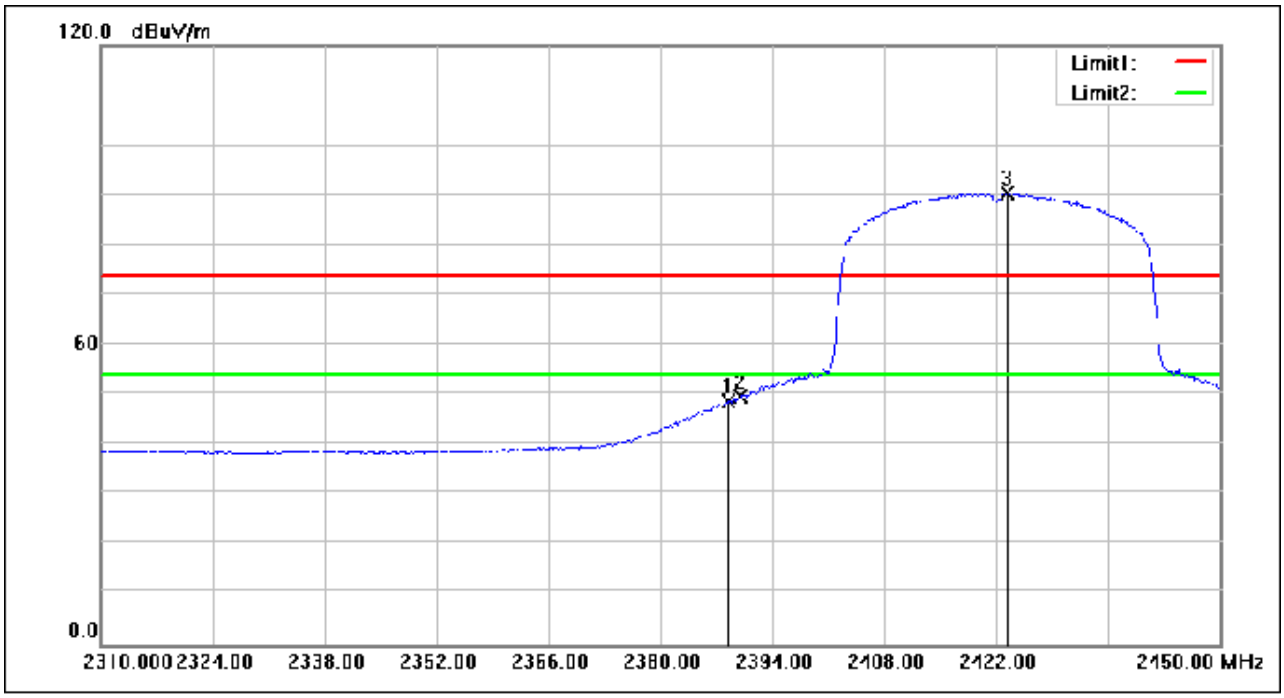
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2366.980	76.93	-24.81	52.12	74.00	-21.88	peak
2	2390.000	76.10	-24.71	51.39	74.00	-22.61	peak
3	2429.560	116.66	-24.52	92.14	74.00	18.14	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



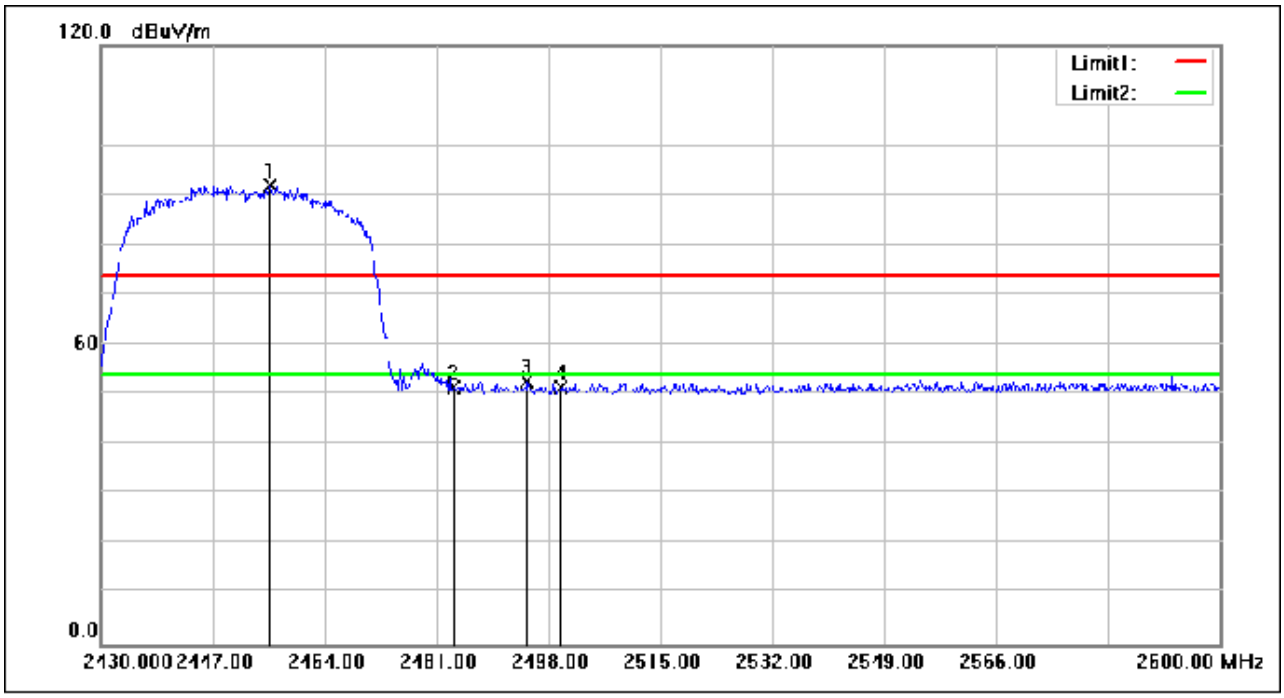
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.180	89.73	-24.73	65.00	74.00	-9.00	peak
2	2390.000	92.27	-24.71	67.56	74.00	-6.44	peak
3	2426.200	127.03	-24.53	102.50	74.00	28.50	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



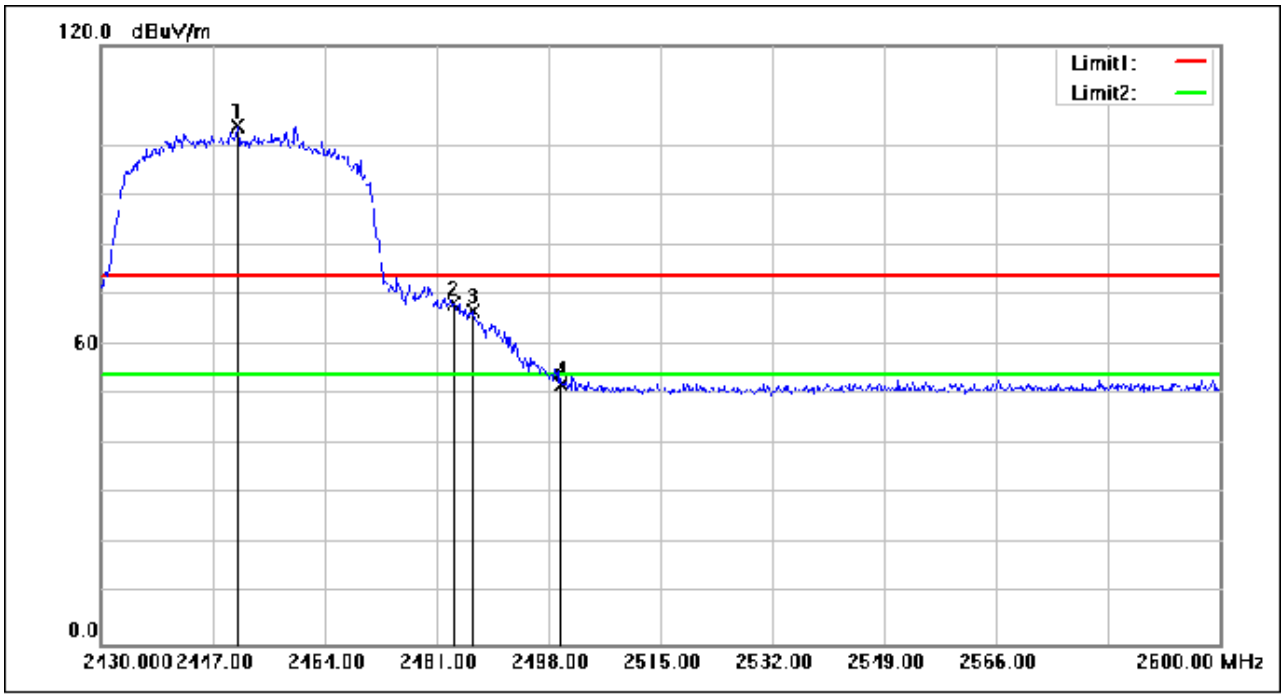
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.540	73.38	-24.71	48.67	54.00	-5.33	AVG
2	2390.000	74.41	-24.71	49.70	54.00	-4.30	AVG
3	2423.400	114.97	-24.55	90.42	54.00	36.42	AVG

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



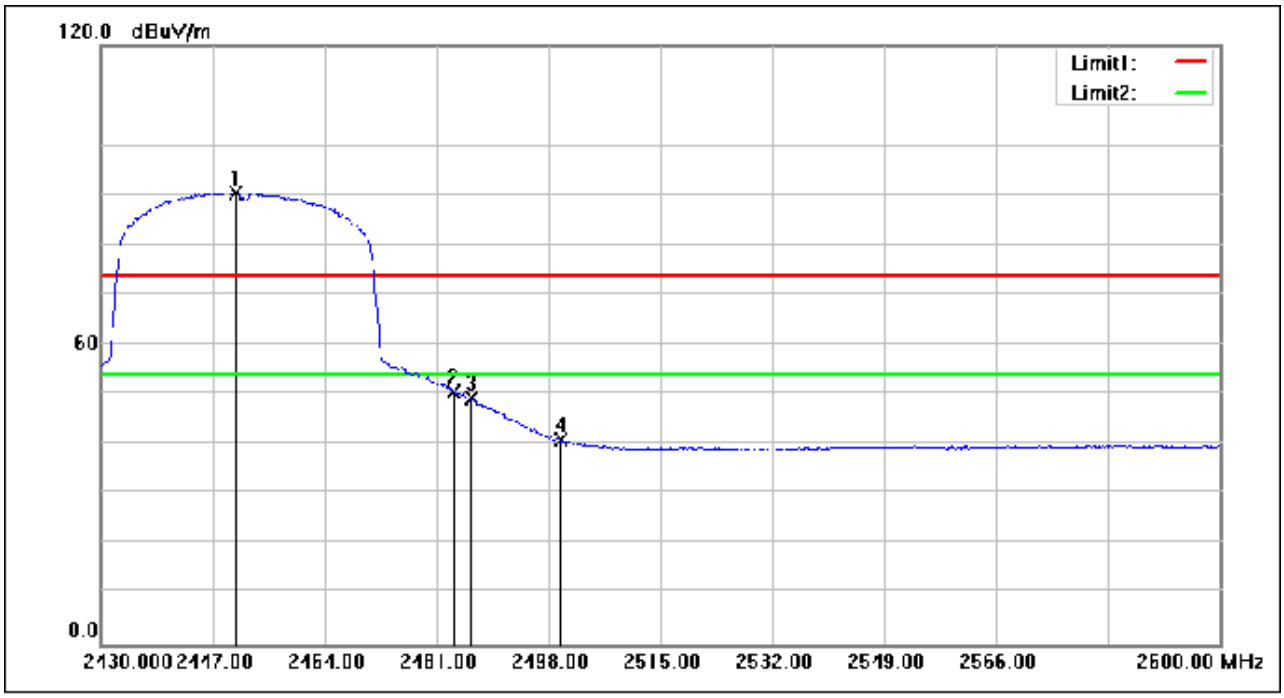
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2455.670	116.32	-24.40	91.92	74.00	17.92	peak
2	2483.500	75.74	-24.27	51.47	74.00	-22.53	peak
3	2494.770	76.82	-24.21	52.61	74.00	-21.39	peak
4	2500.000	75.65	-24.19	51.46	74.00	-22.54	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2450.740	128.29	-24.42	103.87	74.00	29.87	peak
2	2483.500	92.49	-24.27	68.22	74.00	-5.78	peak
3	2486.440	90.88	-24.25	66.63	74.00	-7.37	peak
4	2500.000	76.17	-24.19	51.98	74.00	-22.02	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2450.570	114.99	-24.42	90.57	54.00	36.57	AVG
2	2483.500	74.87	-24.27	50.60	54.00	-3.40	AVG
3	2486.270	73.55	-24.26	49.29	54.00	-4.71	AVG
4	2500.000	65.02	-24.19	40.83	54.00	-13.17	AVG

7.3 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2013) Section 6.4,6.5

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

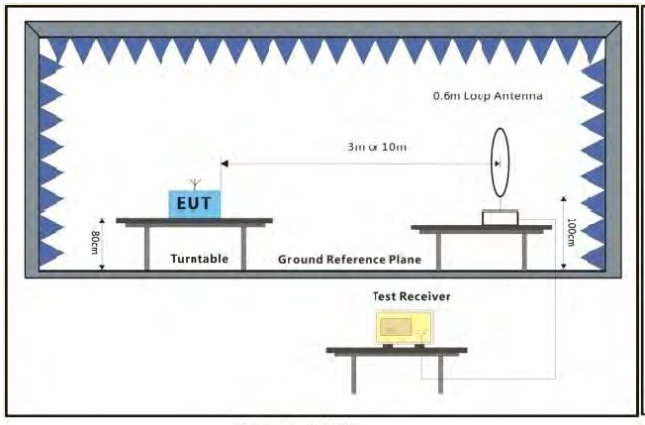
7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 24.2 °C Humidity: 57.0 % RH Atmospheric Pressure: 1010 mbar

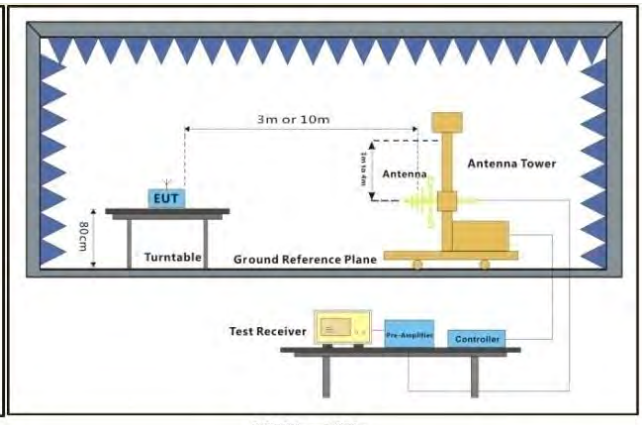
7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.3.3 Test Setup Diagram



Below 30MHz



30MHz-1GHz

7.3.4 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.

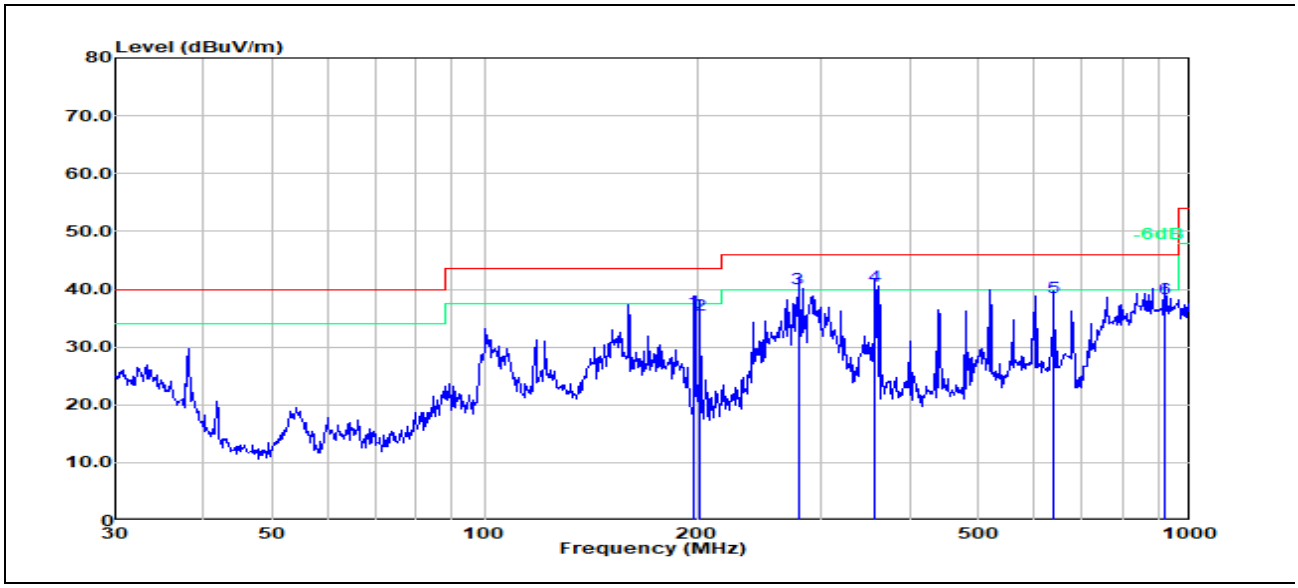
i. Repeat above procedures until all frequencies measured was complete.

Remark:

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

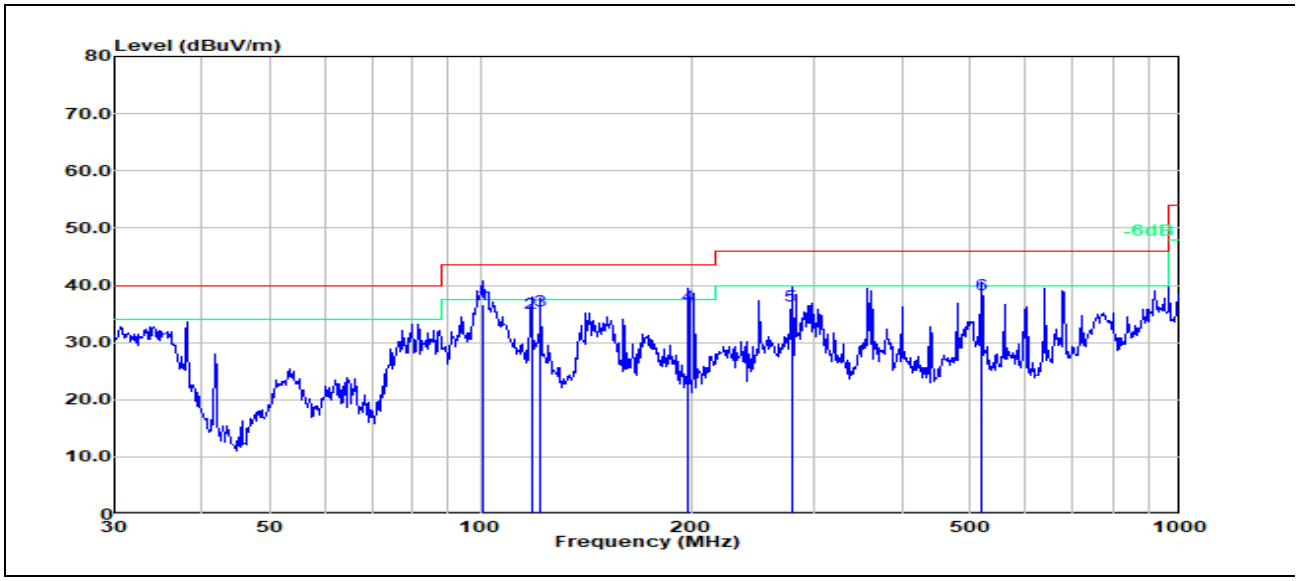
2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

Test Mode: 01; Polarity: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	197.8930	24.60	11.62	36.22	43.50	-7.28	100	360	QP
2	202.1000	24.15	11.47	35.62	43.50	-7.88	100	0	QP
3	278.0670	24.77	15.38	40.15	46.00	-5.85	100	32	QP
4	357.9290	23.70	16.85	40.55	46.00	-5.45	100	0	QP
5	640.6110	15.36	23.29	38.65	46.00	-7.35	100	347	QP
6	919.2870	12.95	25.47	38.42	46.00	-7.58	100	215	QP

Test Mode: 01; Polarity: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	100.5810	23.71	12.84	36.55	43.50	-6.95	100	279	QP
2	118.1860	20.69	14.46	35.15	43.50	-8.35	200	67	QP
3	121.9760	21.48	14.18	35.66	43.50	-7.84	100	78	QP
4	197.8930	24.90	11.62	36.52	43.50	-6.98	100	346	QP
5	278.0670	21.04	15.38	36.42	46.00	-9.58	100	115	QP
6	519.0650	16.94	21.47	38.41	46.00	-7.59	100	337	QP

7.4 Radiated Spurious Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2013) Section 6.6

Limit:

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

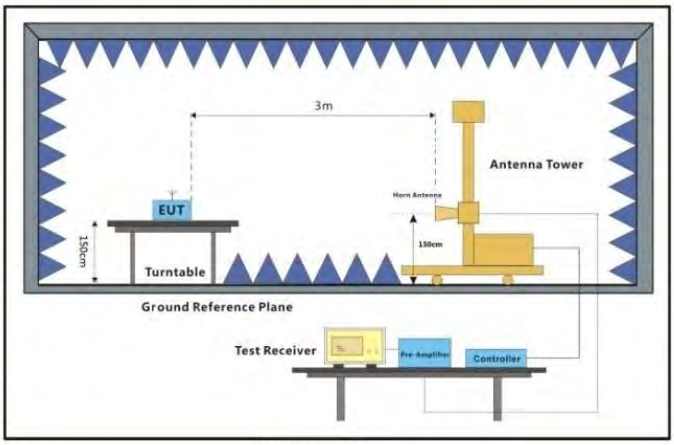
7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 21.9 °C Humidity: 48.3 % RH Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.4.3 Test Setup Diagram



Above 1GHz

7.4.4 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.

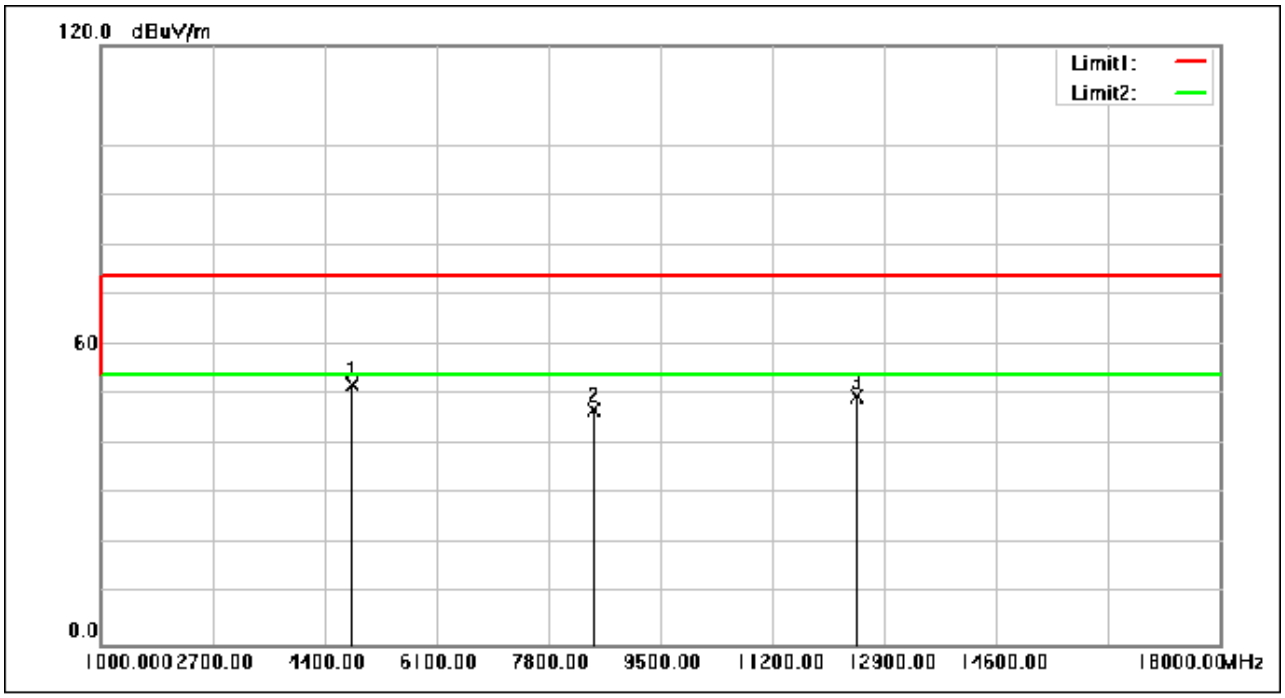
Remark:

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.

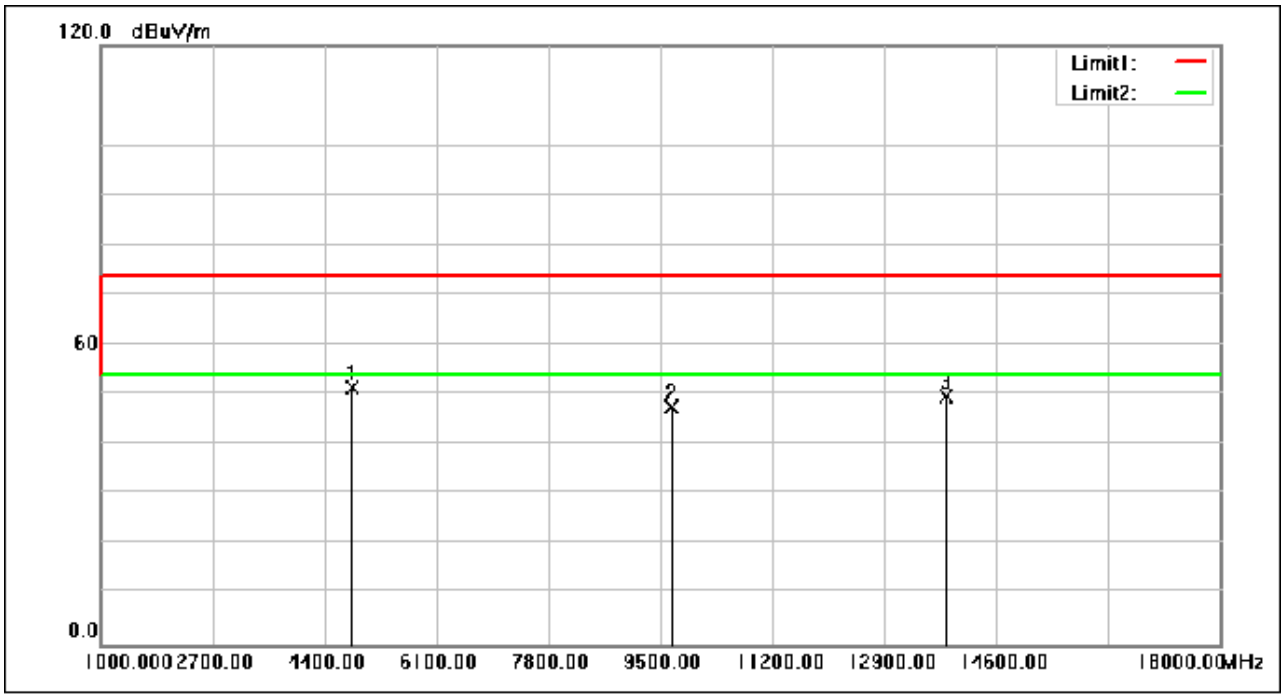
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions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

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



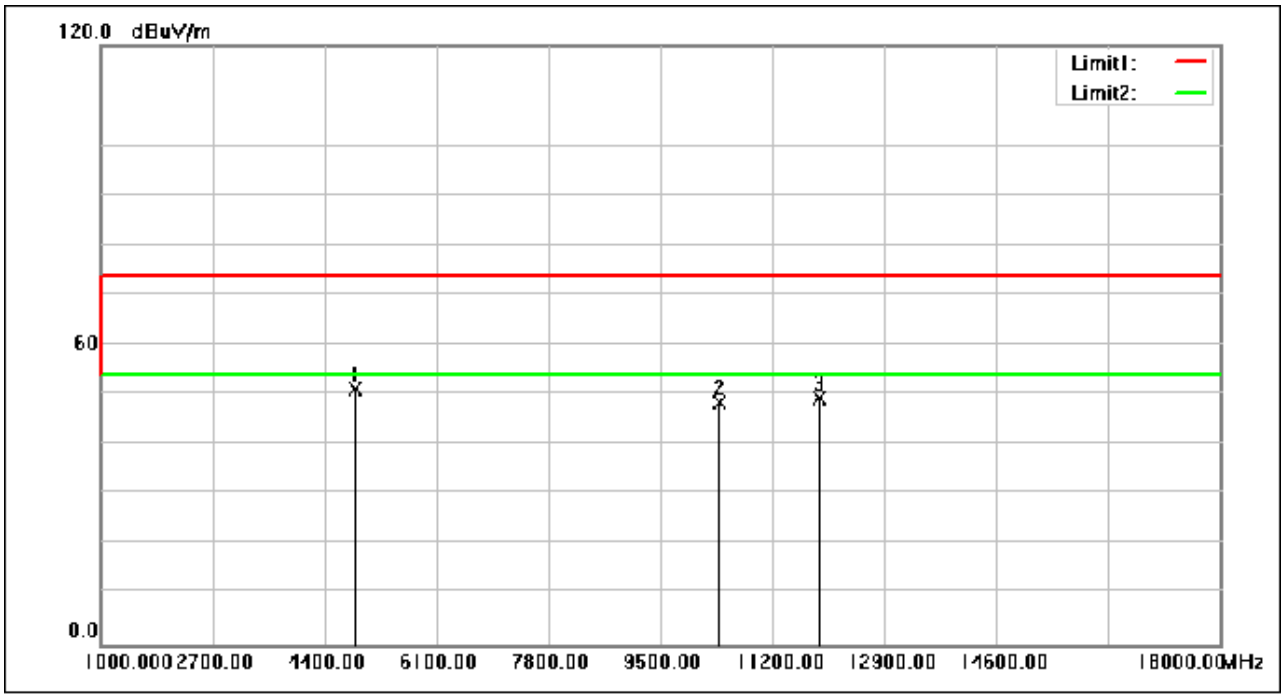
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.320	70.63	-18.54	52.09	74.00	-21.91	peak
2	8490.200	56.78	-9.77	47.01	74.00	-26.99	peak
3	12489.280	55.91	-6.11	49.80	74.00	-24.20	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:Low



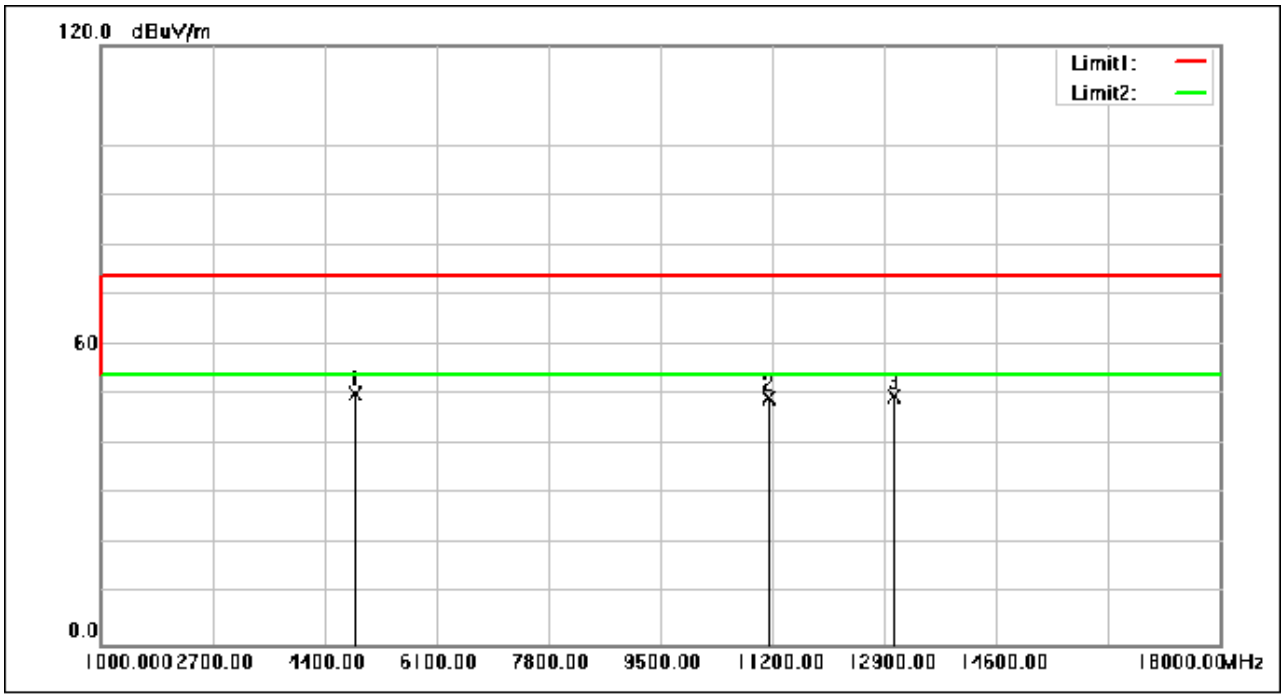
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.320	69.96	-18.54	51.42	74.00	-22.58	peak
2	9670.680	55.22	-7.63	47.59	74.00	-26.41	peak
3	13841.800	56.00	-6.40	49.60	74.00	-24.40	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:middle



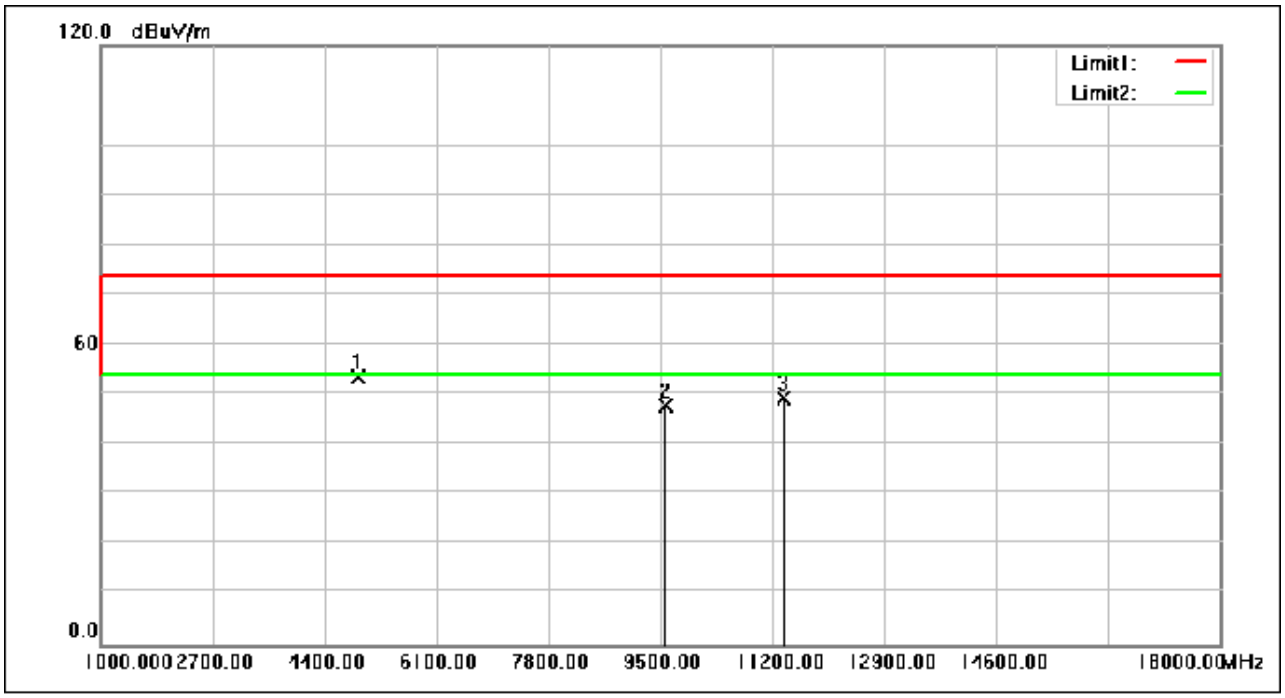
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.960	69.63	-18.52	51.11	74.00	-22.89	peak
2	10398.280	55.51	-7.10	48.41	74.00	-25.59	peak
3	11917.400	55.23	-6.02	49.21	74.00	-24.79	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:middle



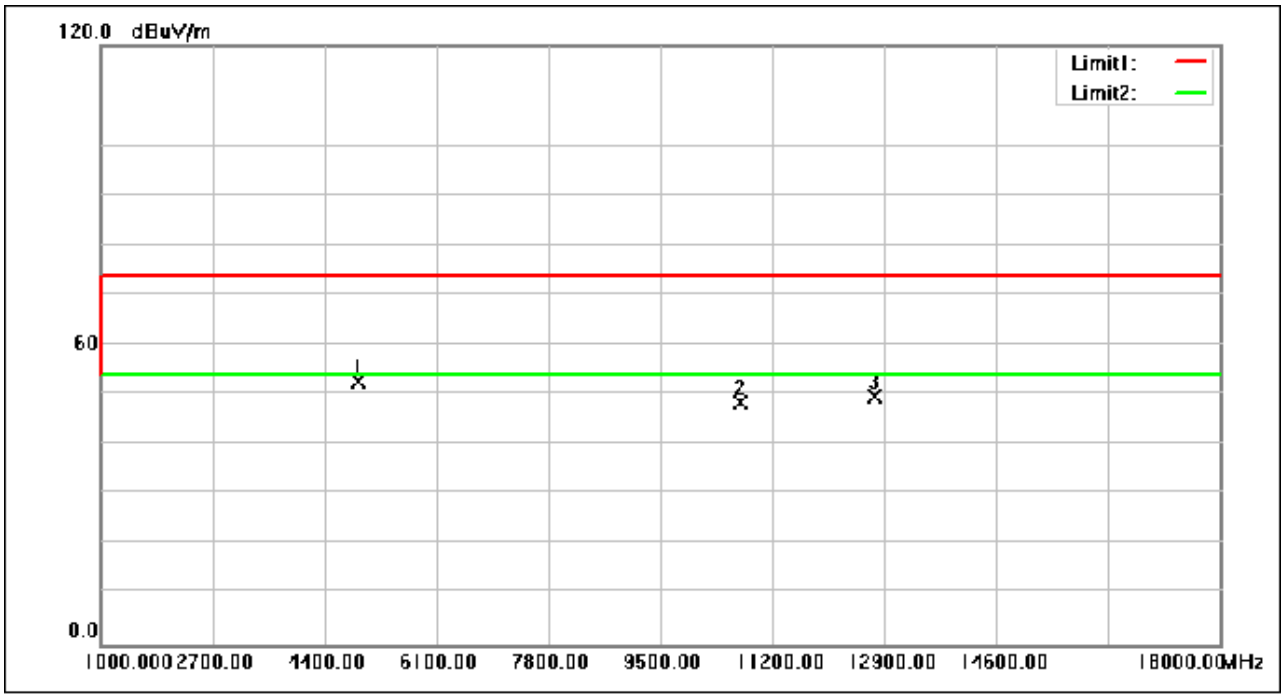
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.960	68.70	-18.52	50.18	74.00	-23.82	peak
2	11141.520	56.04	-6.65	49.39	74.00	-24.61	peak
3	13057.080	56.00	-6.30	49.70	74.00	-24.30	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11b; Bandwidth:20MHz; Channel:High



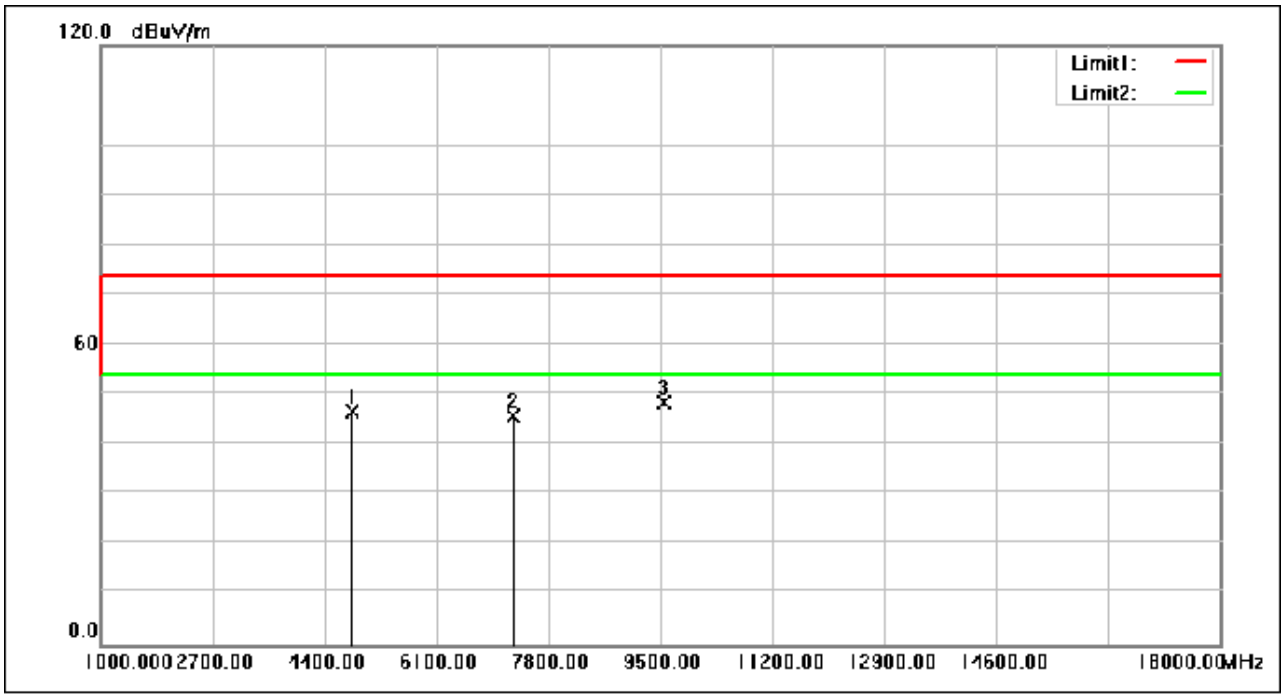
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4923.600	72.10	-18.49	53.61	74.00	-20.39	peak
2	9580.920	55.53	-7.80	47.73	74.00	-26.27	peak
3	11384.960	55.67	-6.46	49.21	74.00	-24.79	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11b; Bandwidth:20MHz; Channel:High



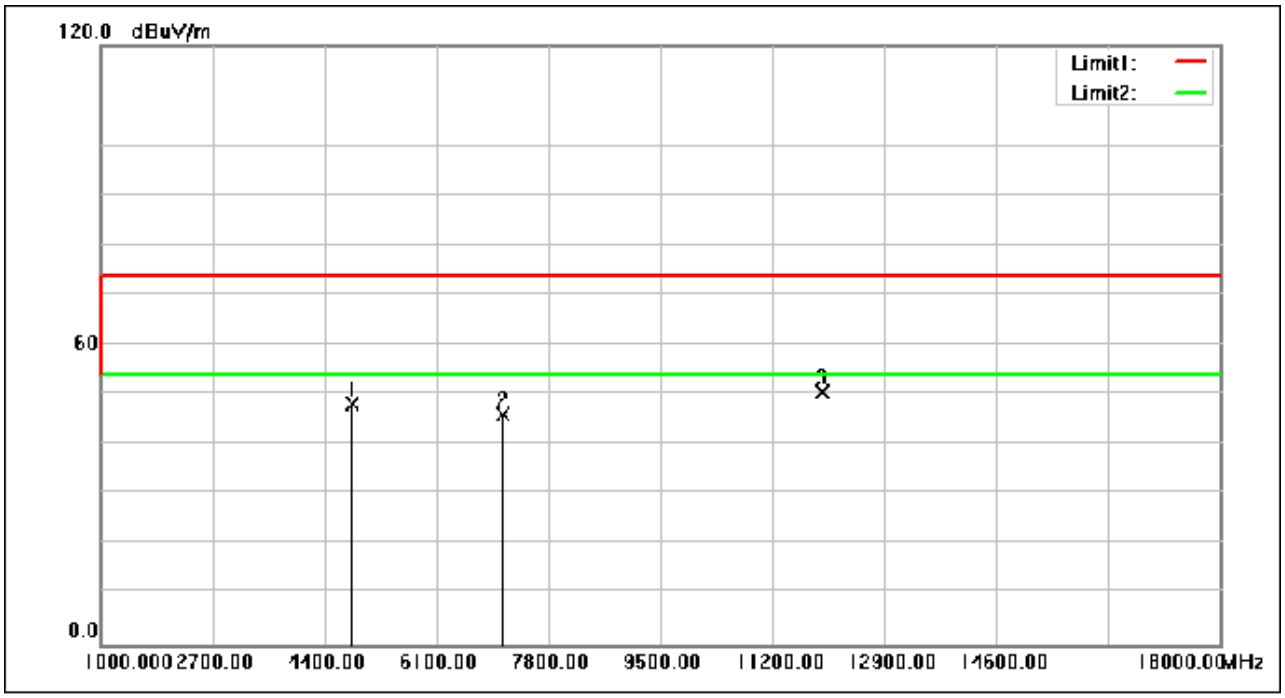
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.280	71.15	-18.49	52.66	74.00	-21.34	peak
2	10719.240	55.42	-6.92	48.50	74.00	-25.50	peak
3	12763.320	55.87	-6.23	49.64	74.00	-24.36	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



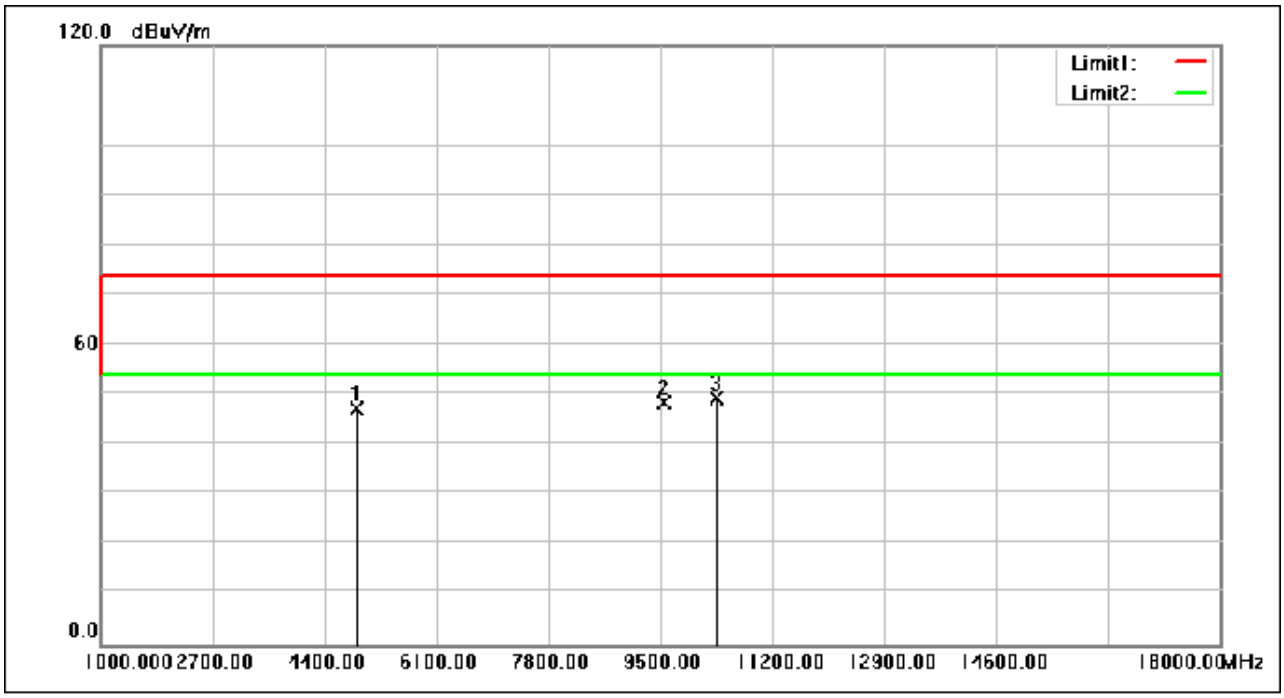
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4819.560	65.11	-18.55	46.56	74.00	-27.44	peak
2	7265.520	57.33	-11.45	45.88	74.00	-28.12	peak
3	9559.160	56.30	-7.85	48.45	74.00	-25.55	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:Low



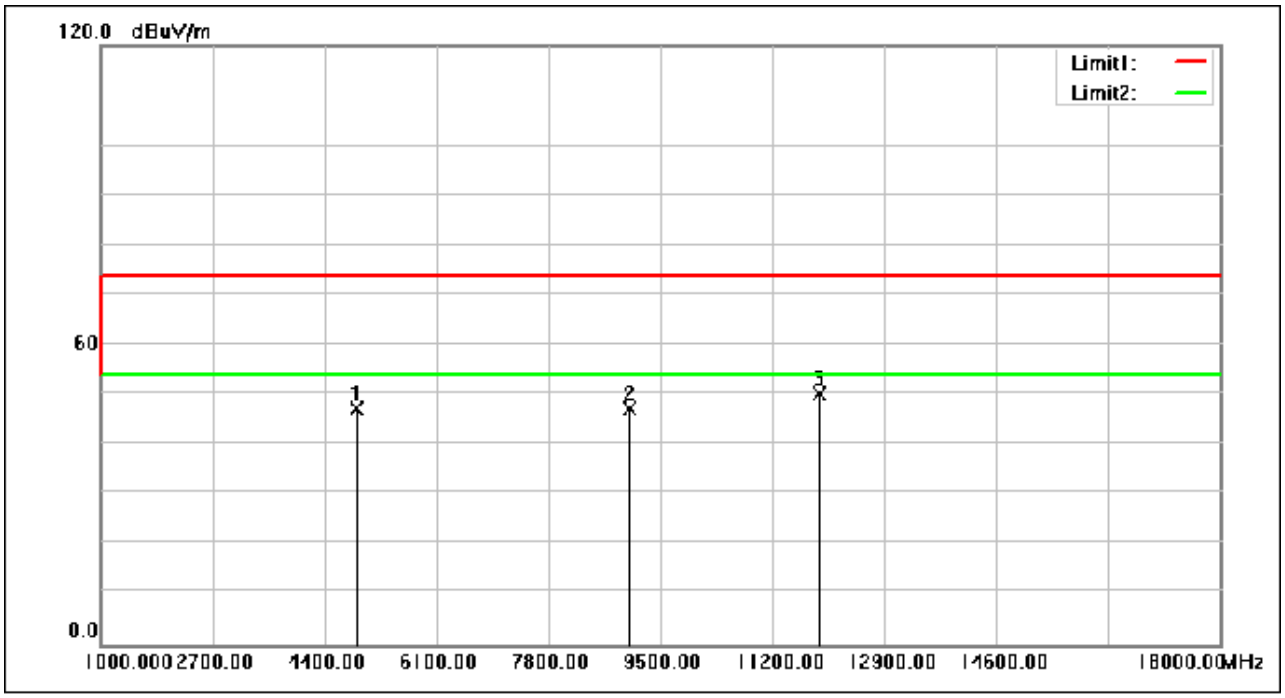
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4825.680	66.74	-18.55	48.19	74.00	-25.81	peak
2	7105.040	57.49	-11.52	45.97	74.00	-28.03	peak
3	11970.440	56.62	-5.94	50.68	74.00	-23.32	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:middle



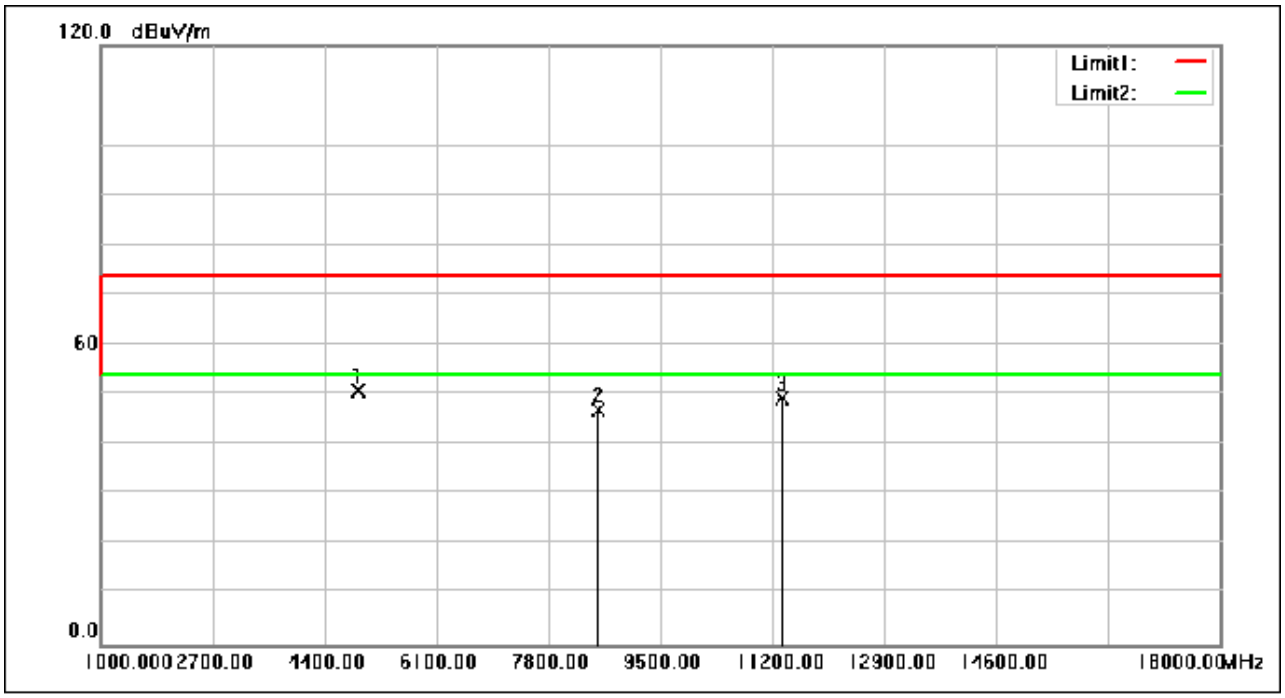
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4876.680	65.65	-18.52	47.13	74.00	-26.87	peak
2	9559.840	56.27	-7.85	48.42	74.00	-25.58	peak
3	10356.120	56.38	-7.12	49.26	74.00	-24.74	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:middle



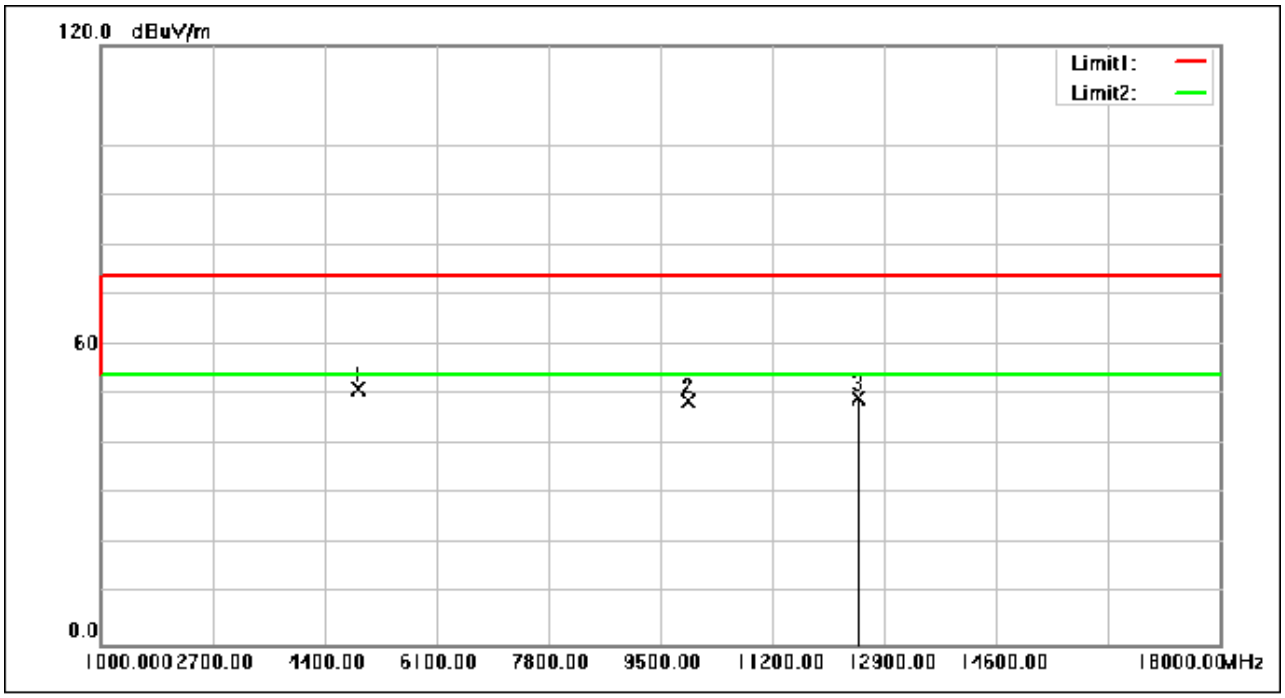
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4876.000	65.77	-18.52	47.25	74.00	-26.75	peak
2	9054.600	56.11	-8.80	47.31	74.00	-26.69	peak
3	11930.320	56.35	-6.00	50.35	74.00	-23.65	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11g; Bandwidth:20MHz; Channel:High



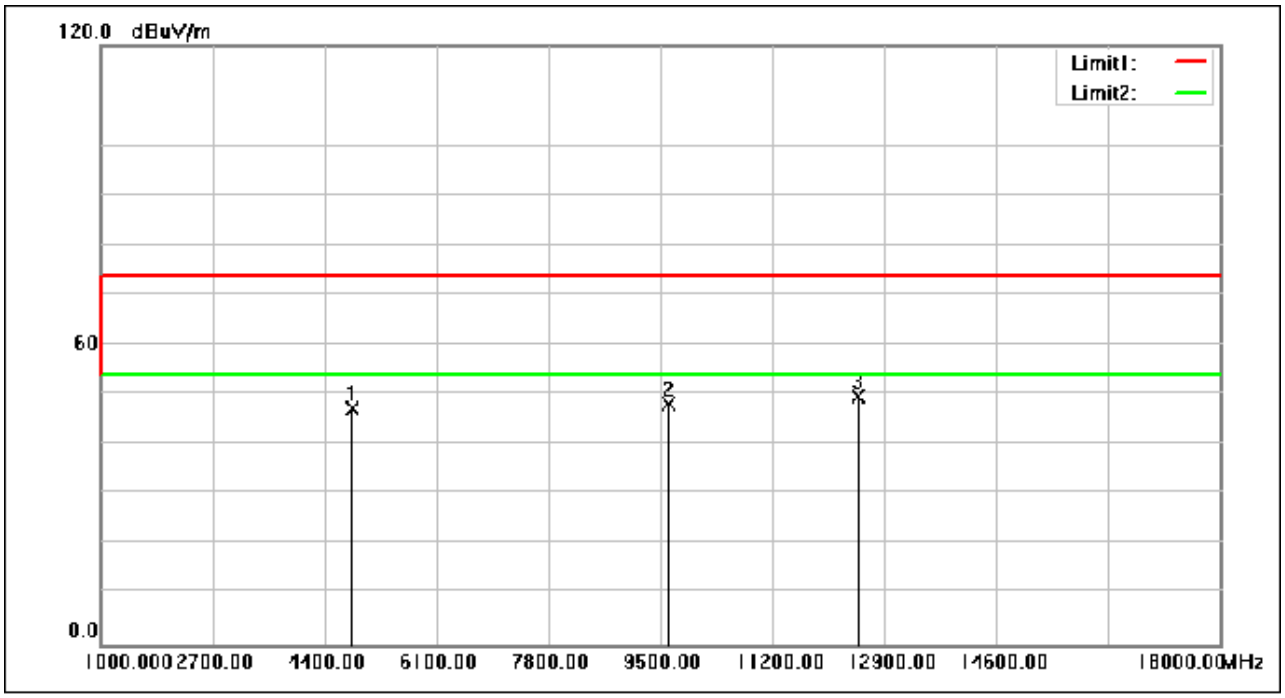
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.960	69.43	-18.48	50.95	74.00	-23.05	peak
2	8562.280	56.55	-9.65	46.90	74.00	-27.10	peak
3	11359.800	55.67	-6.47	49.20	74.00	-24.80	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11g; Bandwidth:20MHz; Channel:High



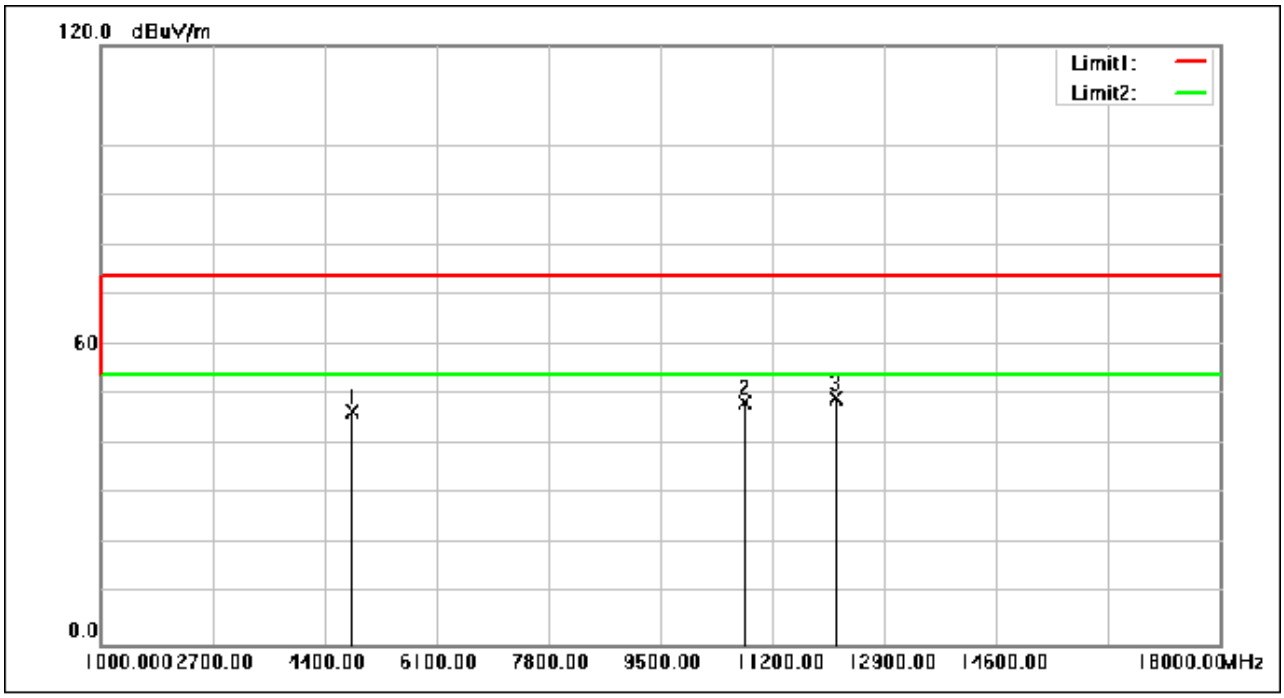
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4923.600	69.63	-18.49	51.14	74.00	-22.86	peak
2	9939.280	56.10	-7.31	48.79	74.00	-25.21	peak
3	12492.000	55.31	-6.11	49.20	74.00	-24.80	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



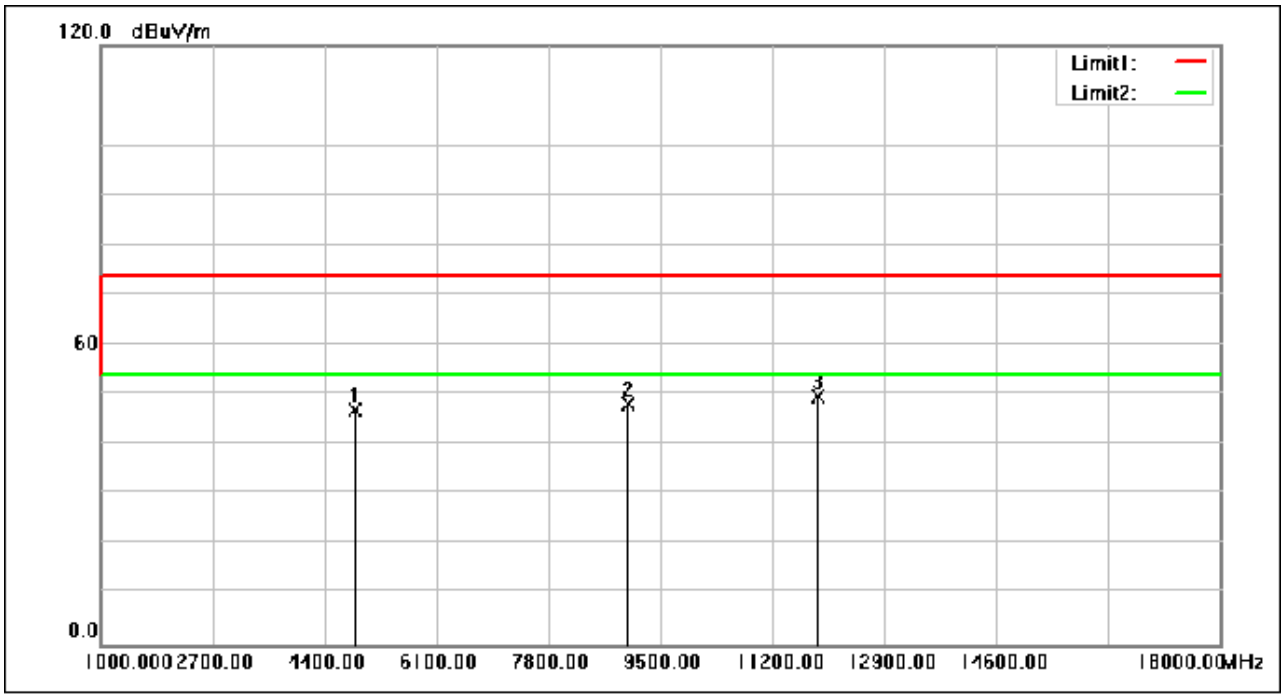
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4821.600	65.76	-18.55	47.21	74.00	-26.79	peak
2	9631.240	55.80	-7.70	48.10	74.00	-25.90	peak
3	12498.800	55.85	-6.11	49.74	74.00	-24.26	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



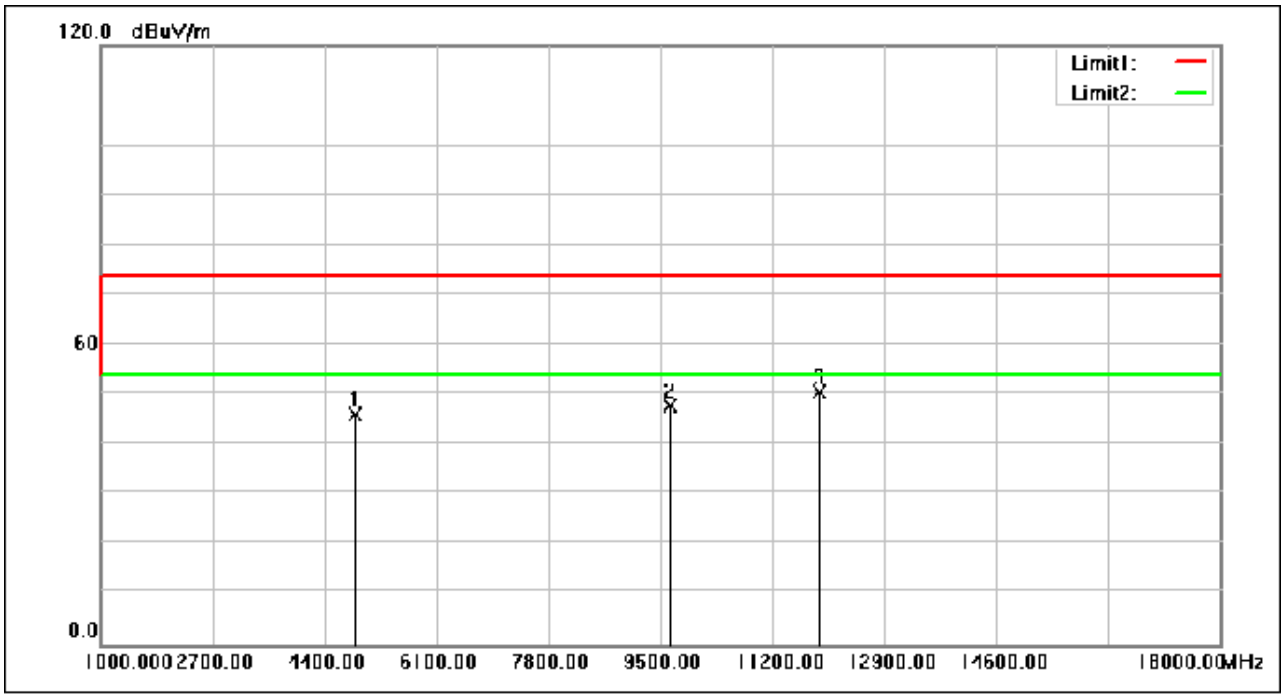
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4817.520	65.19	-18.55	46.64	74.00	-27.36	peak
2	10779.080	55.32	-6.87	48.45	74.00	-25.55	peak
3	12155.400	55.43	-5.96	49.47	74.00	-24.53	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



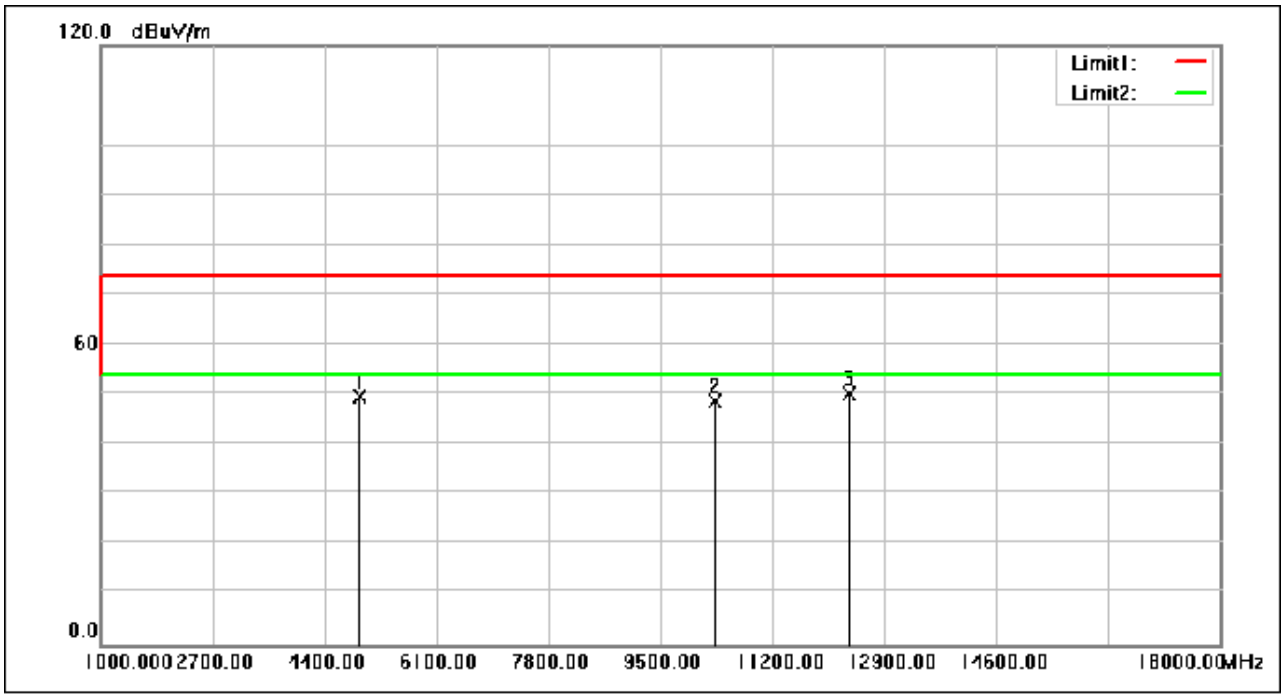
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.960	65.41	-18.52	46.89	74.00	-27.11	peak
2	9021.960	57.14	-8.85	48.29	74.00	-25.71	peak
3	11904.480	55.57	-6.04	49.53	74.00	-24.47	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle



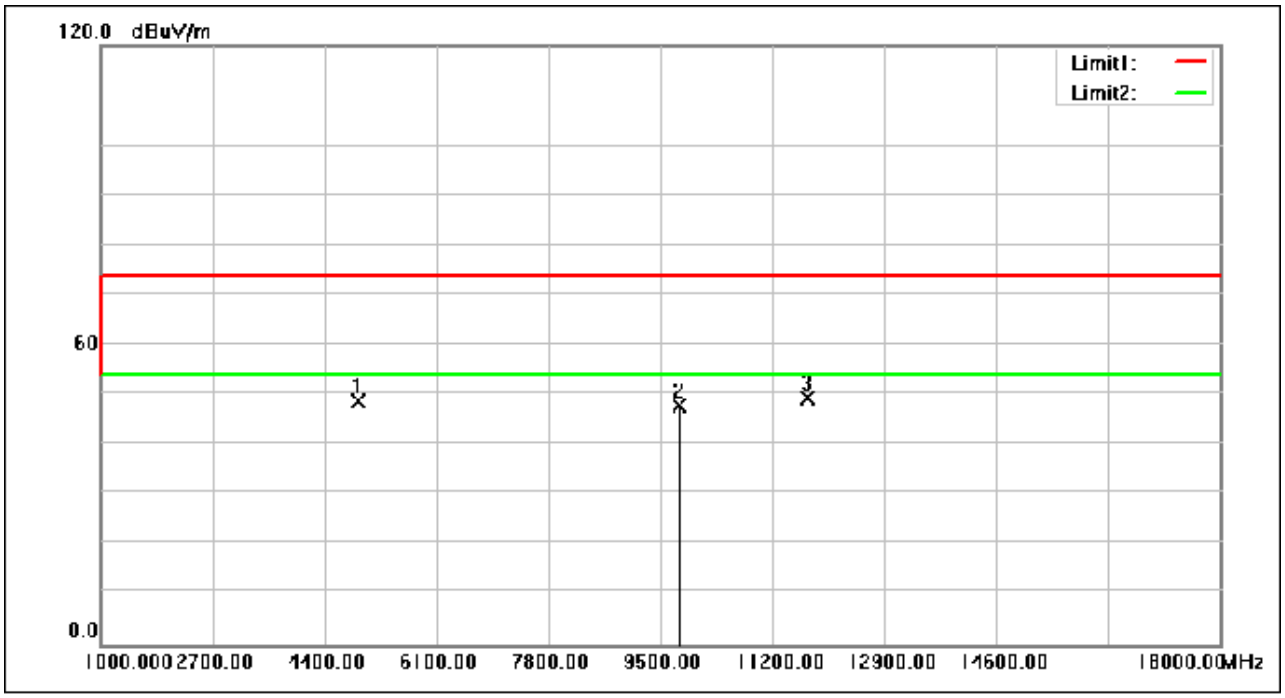
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4871.240	64.43	-18.52	45.91	74.00	-28.09	peak
2	9646.200	55.58	-7.67	47.91	74.00	-26.09	peak
3	11926.920	56.43	-6.00	50.43	74.00	-23.57	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



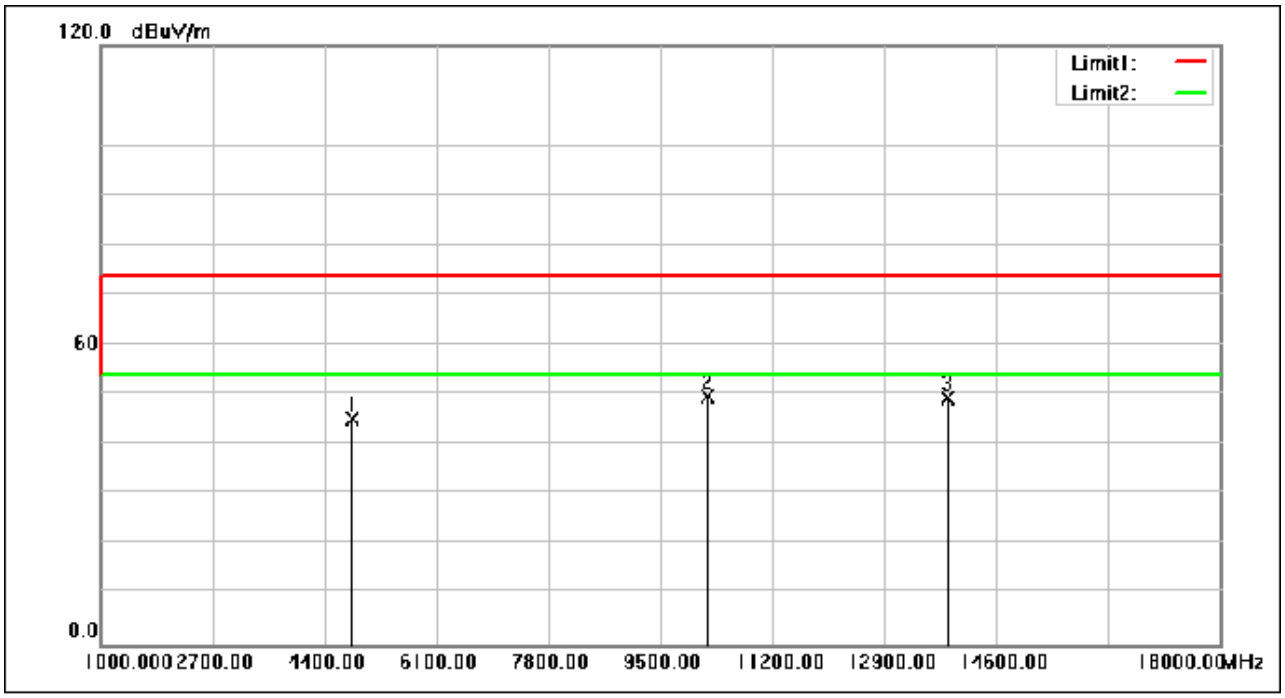
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4929.040	68.06	-18.49	49.57	74.00	-24.43	peak
2	10321.440	55.92	-7.14	48.78	74.00	-25.22	peak
3	12364.160	56.35	-6.05	50.30	74.00	-23.70	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



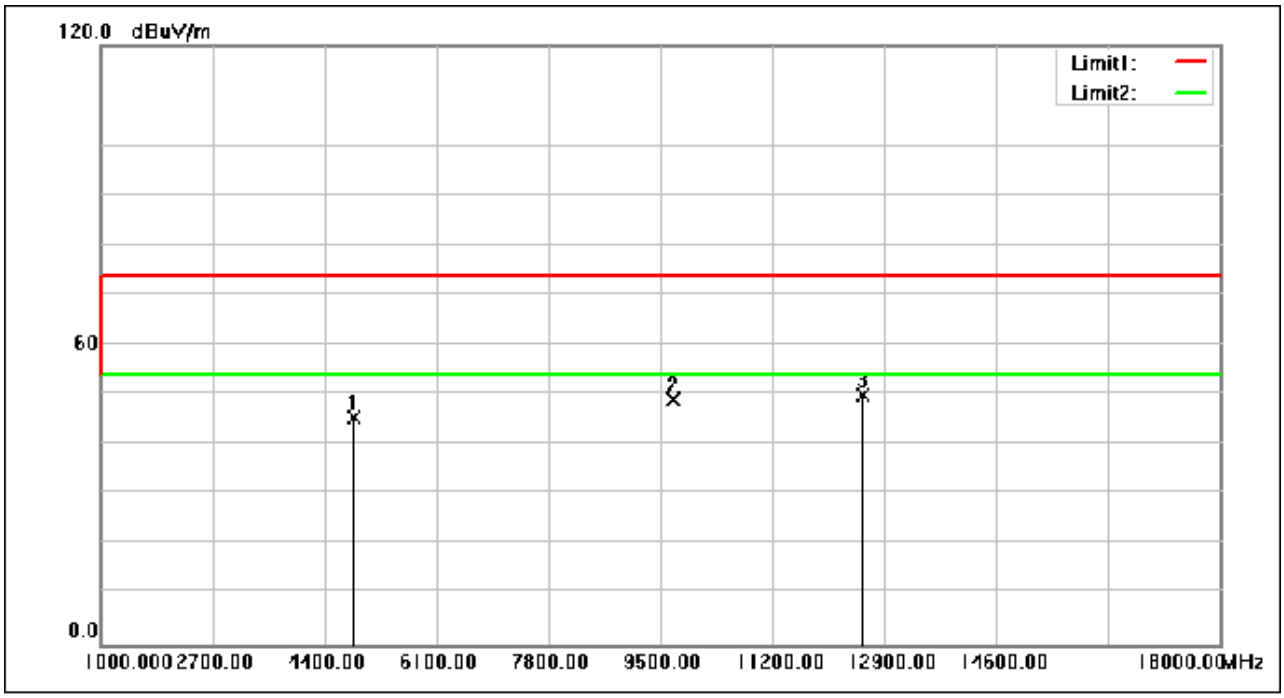
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4919.520	67.24	-18.49	48.75	74.00	-25.25	peak
2	9782.200	55.21	-7.42	47.79	74.00	-26.21	peak
3	11732.440	55.59	-6.17	49.42	74.00	-24.58	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



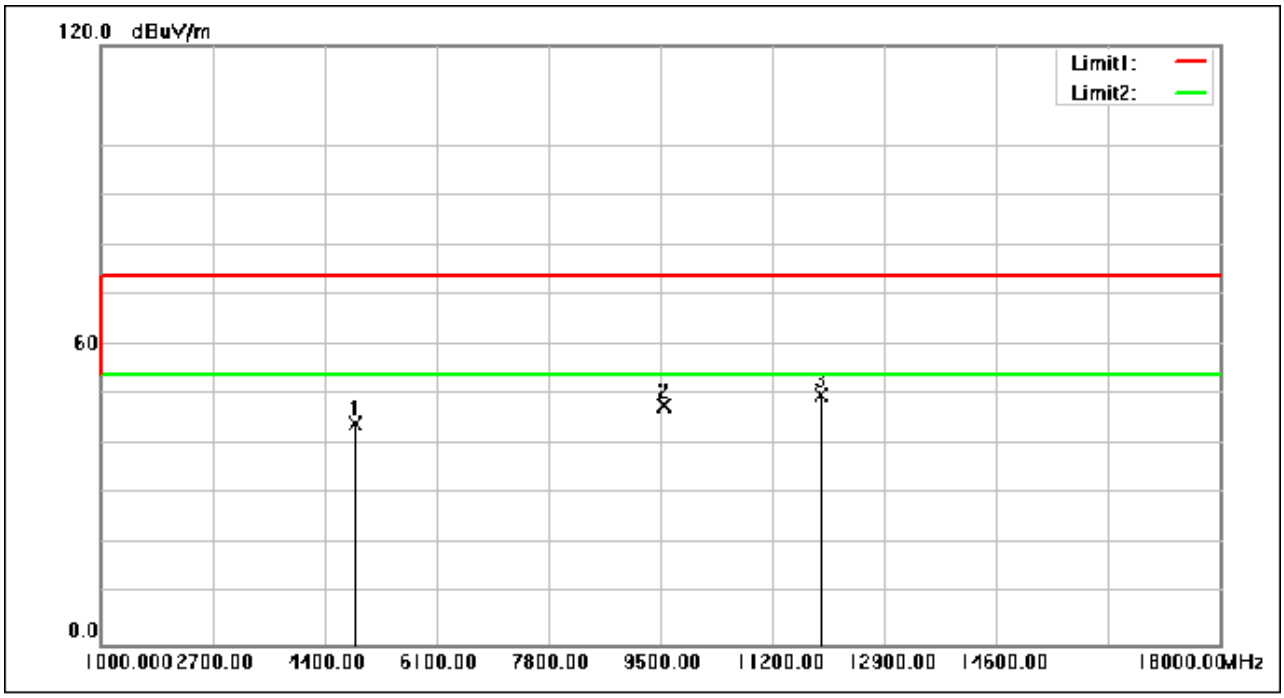
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4841.320	63.75	-18.53	45.22	74.00	-28.78	peak
2	10217.400	56.74	-7.20	49.54	74.00	-24.46	peak
3	13865.600	55.69	-6.40	49.29	74.00	-24.71	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



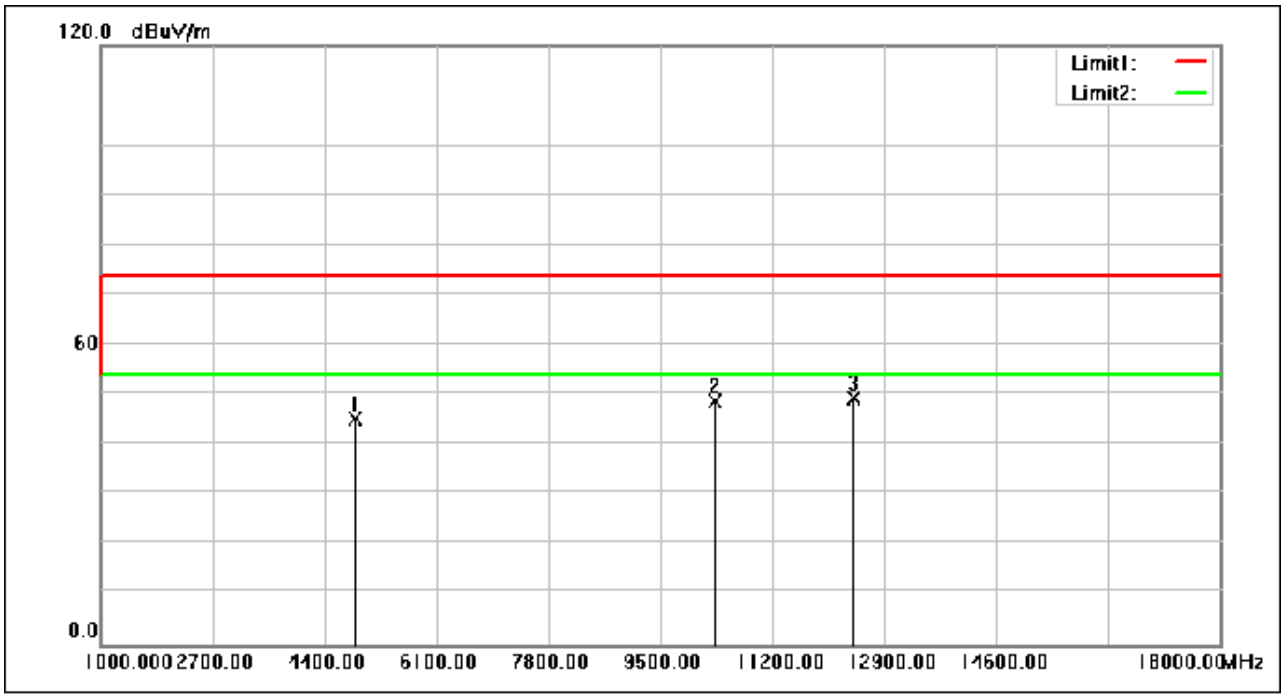
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4842.000	64.12	-18.54	45.58	74.00	-28.42	peak
2	9688.360	56.67	-7.60	49.07	74.00	-24.93	peak
3	12574.280	55.98	-6.15	49.83	74.00	-24.17	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:middle



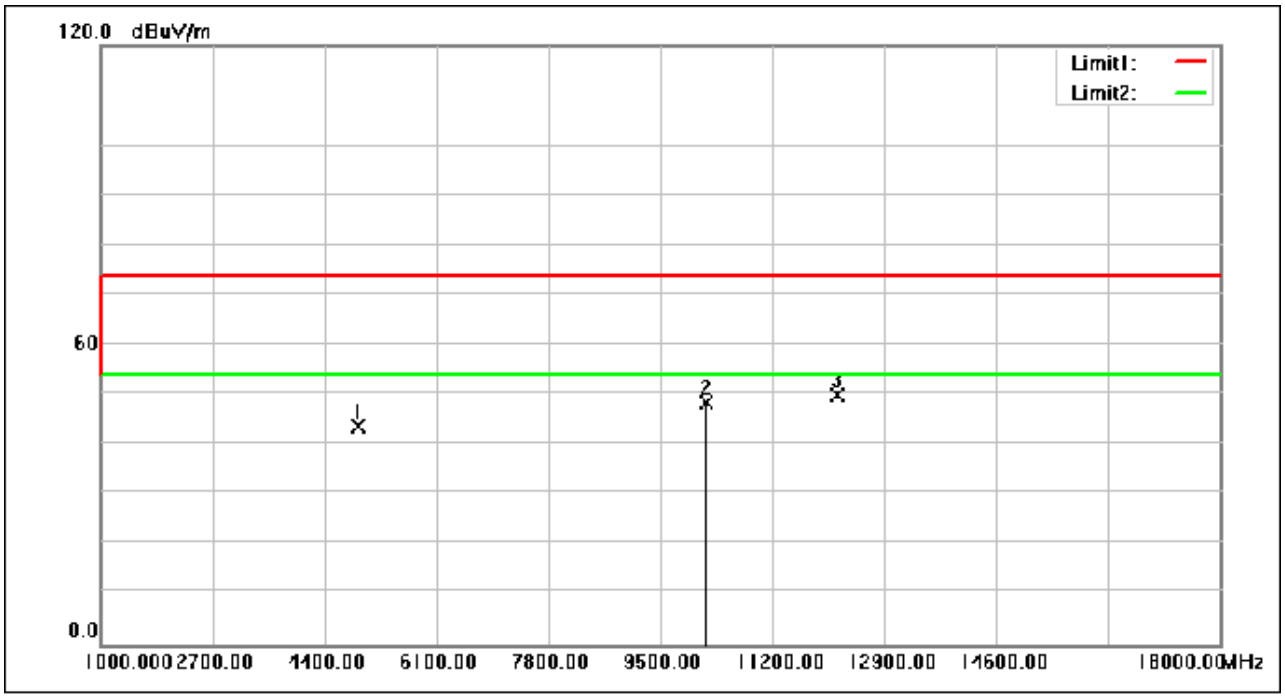
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4866.480	62.91	-18.52	44.39	74.00	-29.61	peak
2	9557.800	55.68	-7.85	47.83	74.00	-26.17	peak
3	11937.120	55.94	-5.99	49.95	74.00	-24.05	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:middle



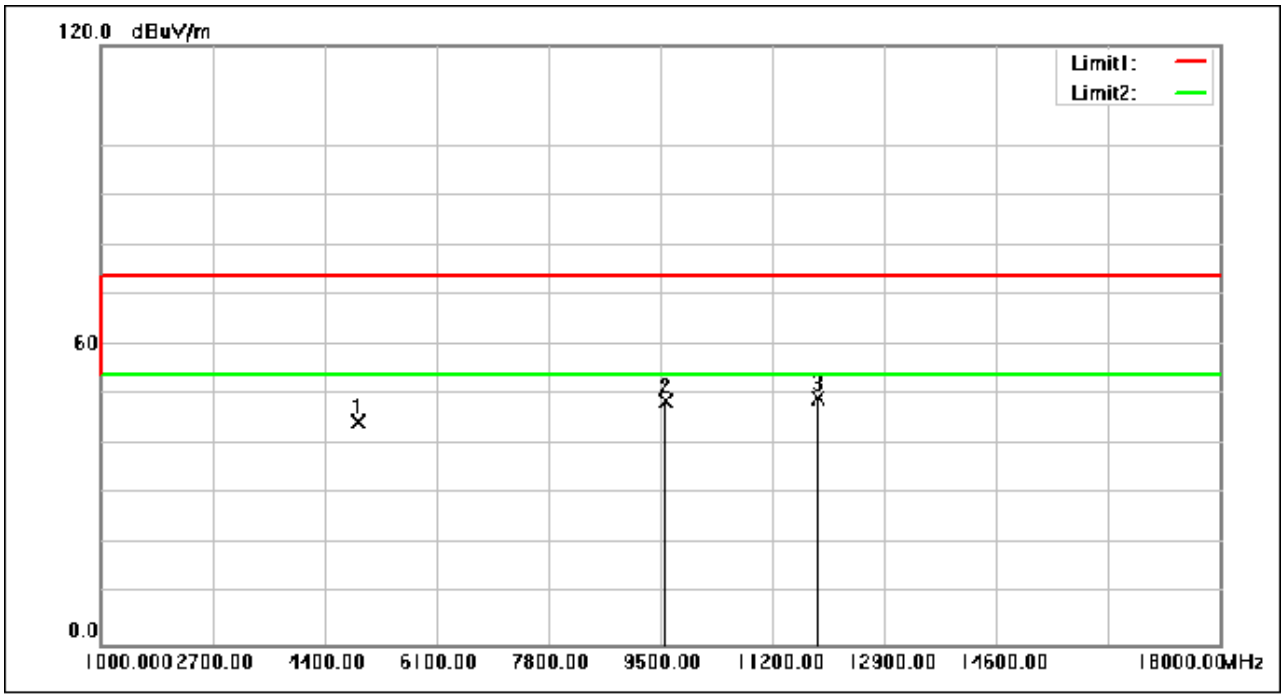
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.360	63.60	-18.53	45.07	74.00	-28.93	peak
2	10330.280	56.03	-7.14	48.89	74.00	-25.11	peak
3	12434.880	55.54	-6.09	49.45	74.00	-24.55	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



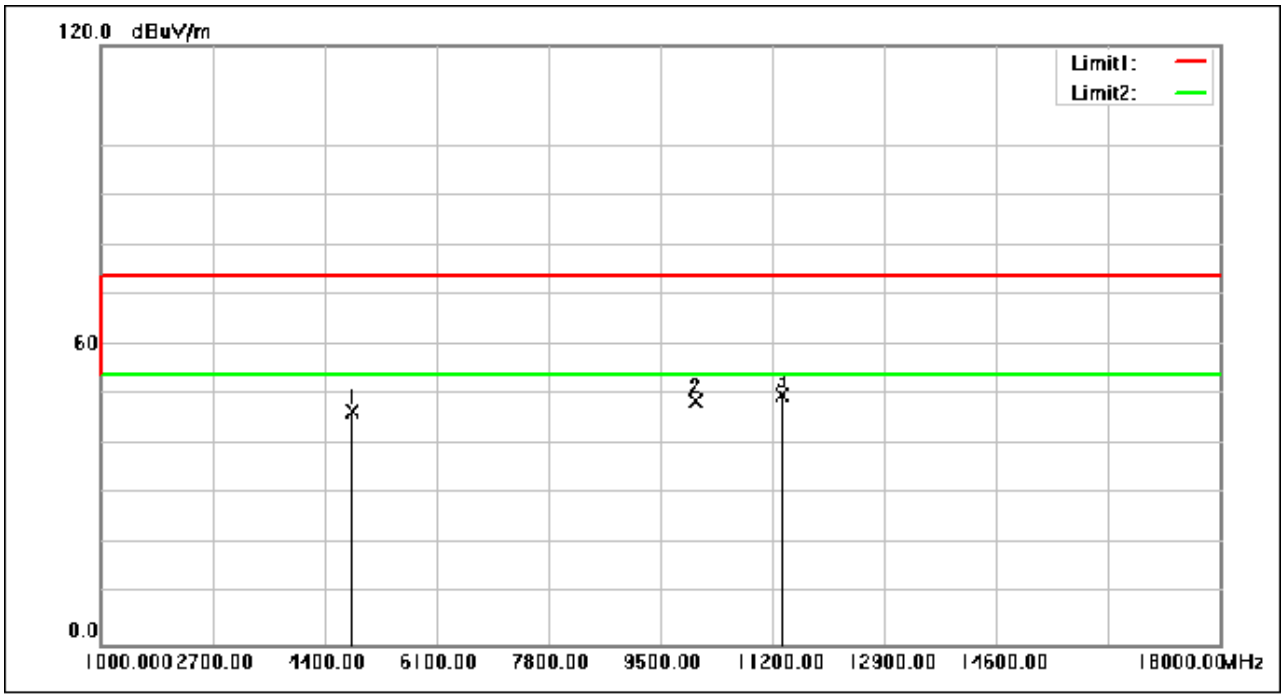
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4913.400	62.04	-18.50	43.54	74.00	-30.46	peak
2	10192.240	55.62	-7.22	48.40	74.00	-25.60	peak
3	12194.160	55.81	-5.97	49.84	74.00	-24.16	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



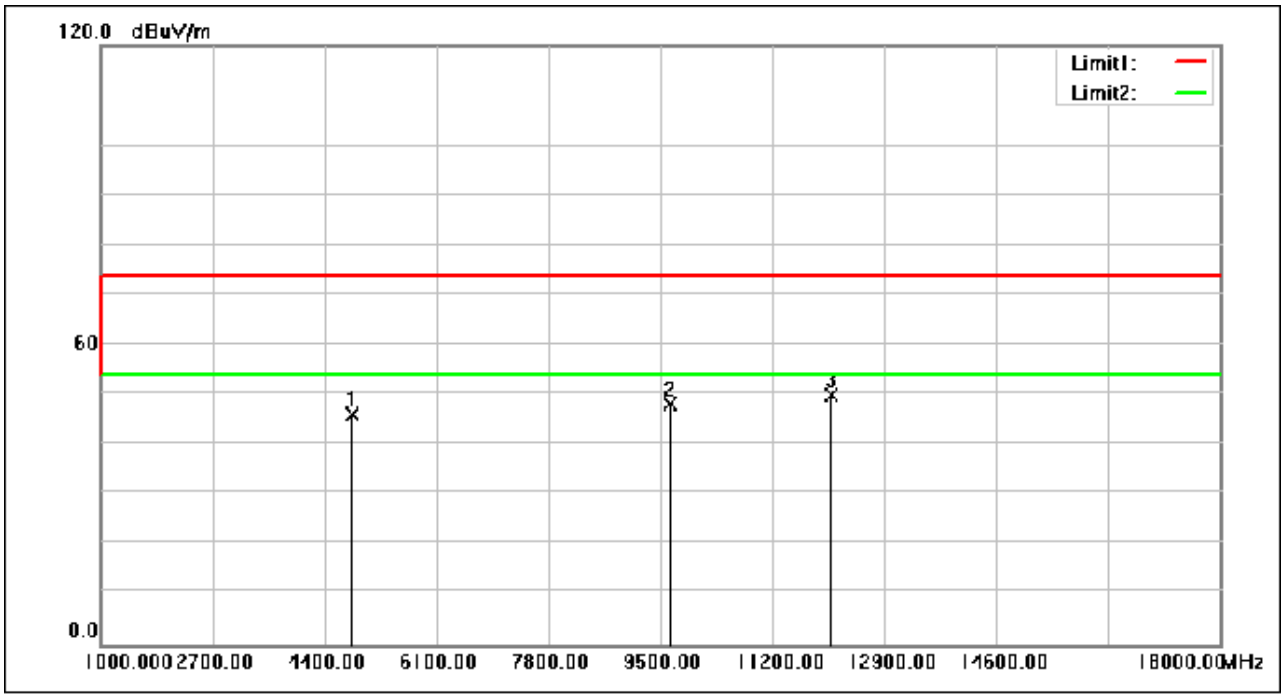
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4914.760	62.99	-18.50	44.49	74.00	-29.51	peak
2	9581.600	56.61	-7.80	48.81	74.00	-25.19	peak
3	11901.760	55.25	-6.04	49.21	74.00	-24.79	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



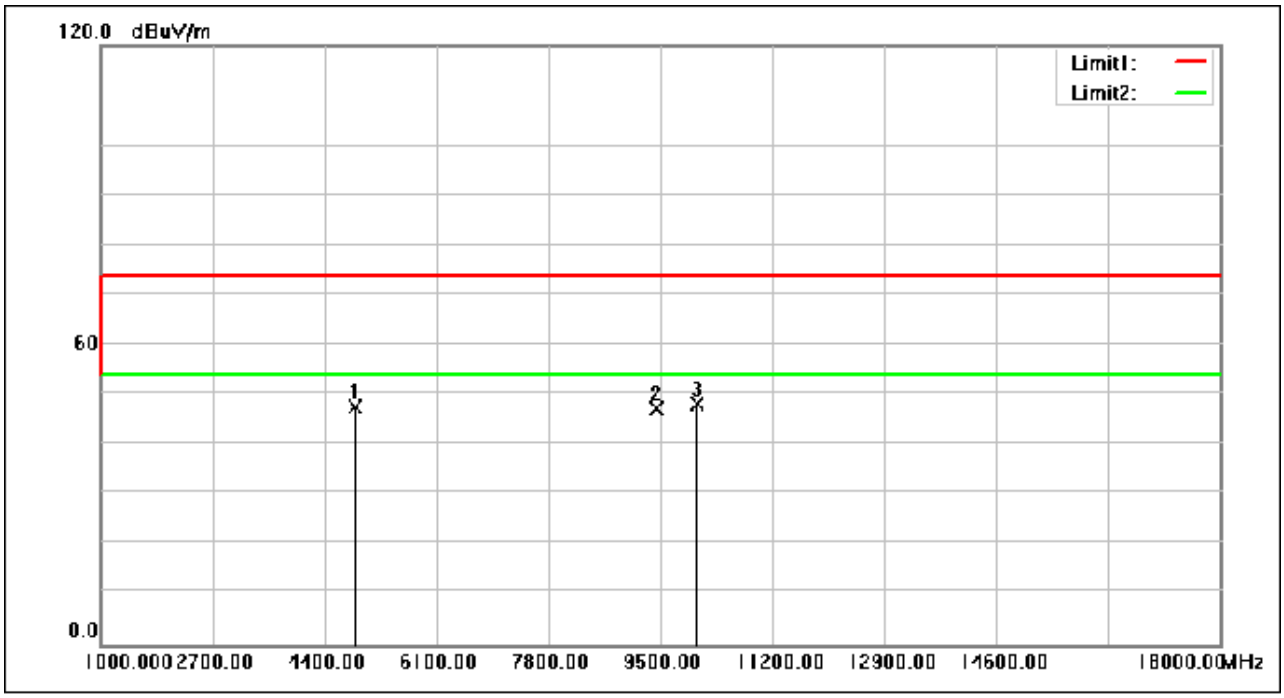
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4820.920	65.18	-18.55	46.63	74.00	-27.37	peak
2	10027.000	56.05	-7.31	48.74	74.00	-25.26	peak
3	11356.400	56.52	-6.47	50.05	74.00	-23.95	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:Low



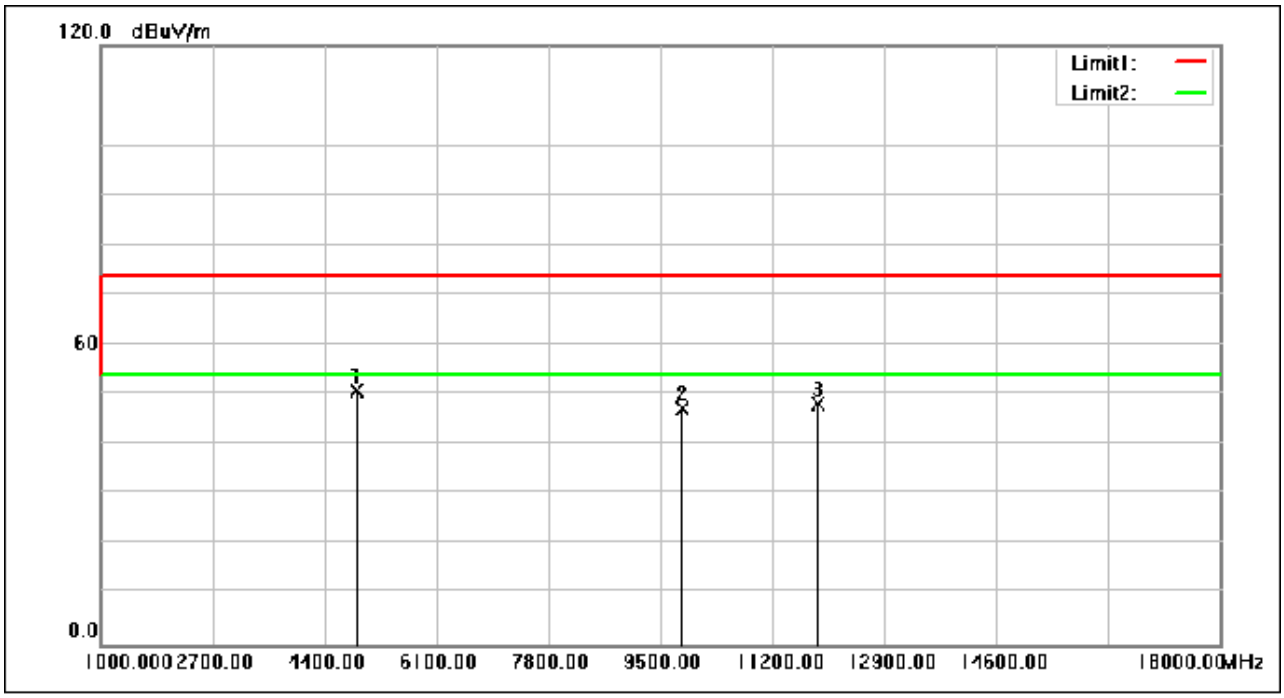
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4820.920	64.62	-18.55	46.07	74.00	-27.93	peak
2	9648.240	55.70	-7.67	48.03	74.00	-25.97	peak
3	12086.040	55.98	-5.92	50.06	74.00	-23.94	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:middle



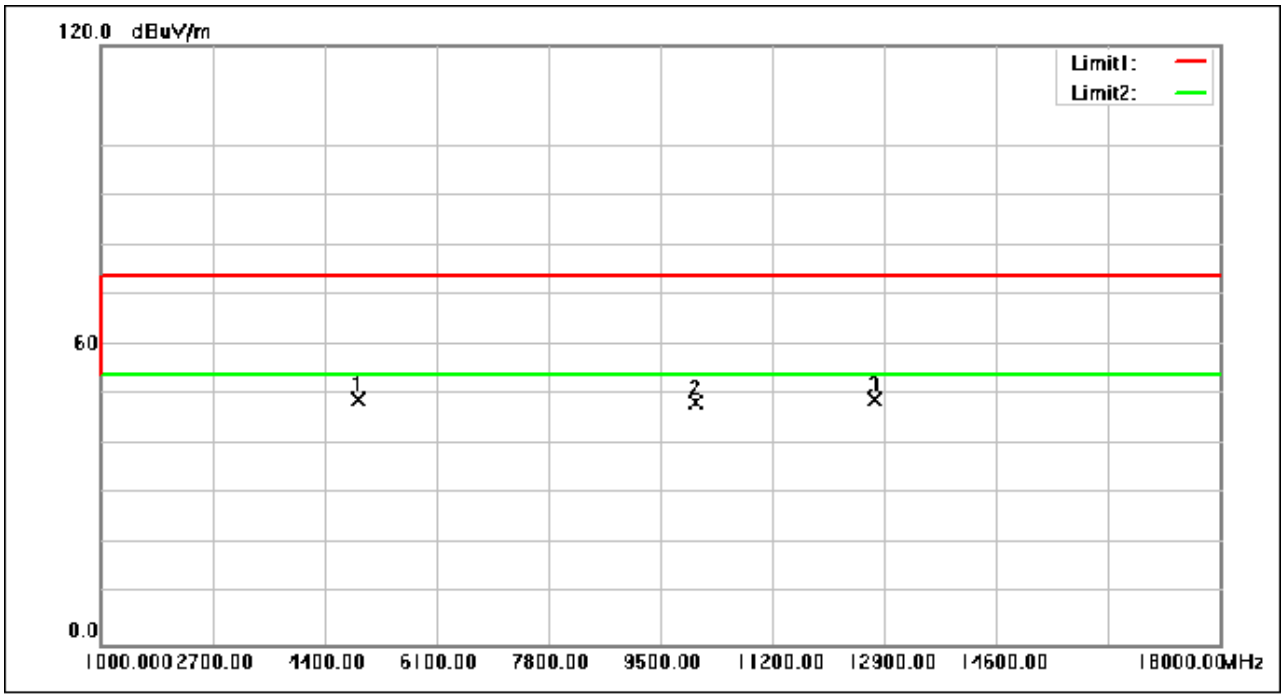
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.640	66.14	-18.51	47.63	74.00	-26.37	peak
2	9461.920	55.33	-8.03	47.30	74.00	-26.70	peak
3	10045.360	55.54	-7.30	48.24	74.00	-25.76	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:middle



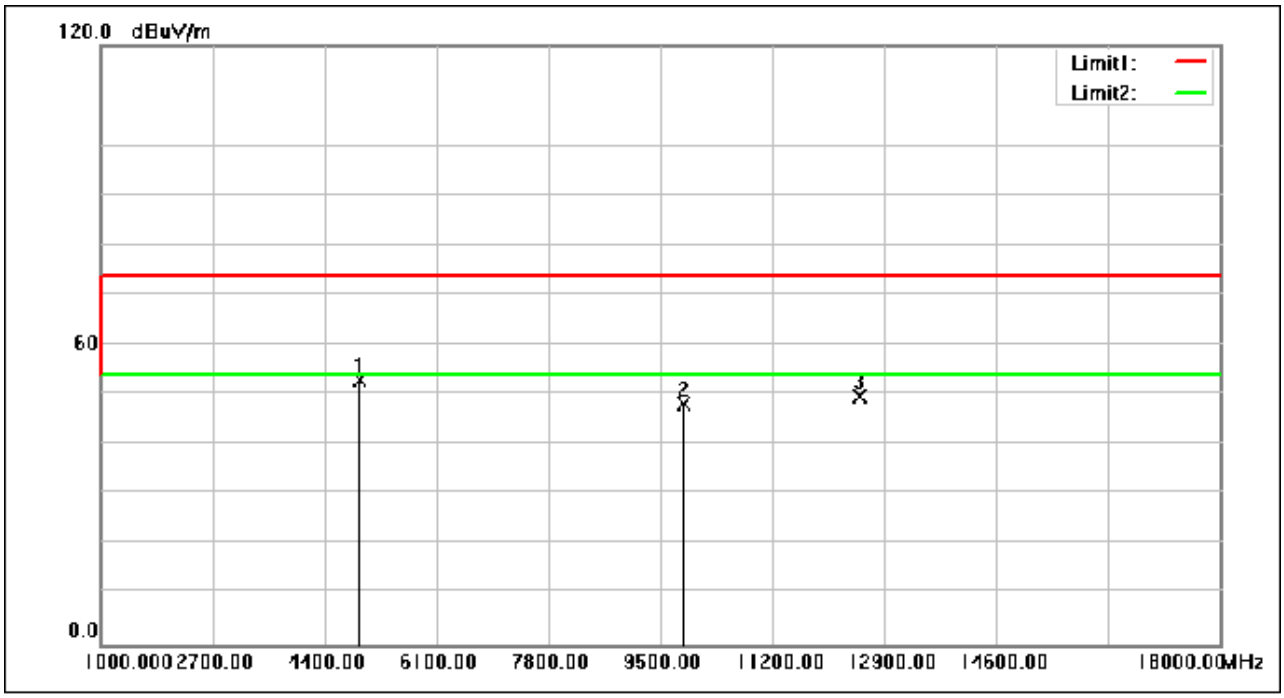
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4877.360	69.52	-18.52	51.00	74.00	-23.00	peak
2	9833.200	54.45	-7.32	47.13	74.00	-26.87	peak
3	11909.920	54.08	-6.03	48.05	74.00	-25.95	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



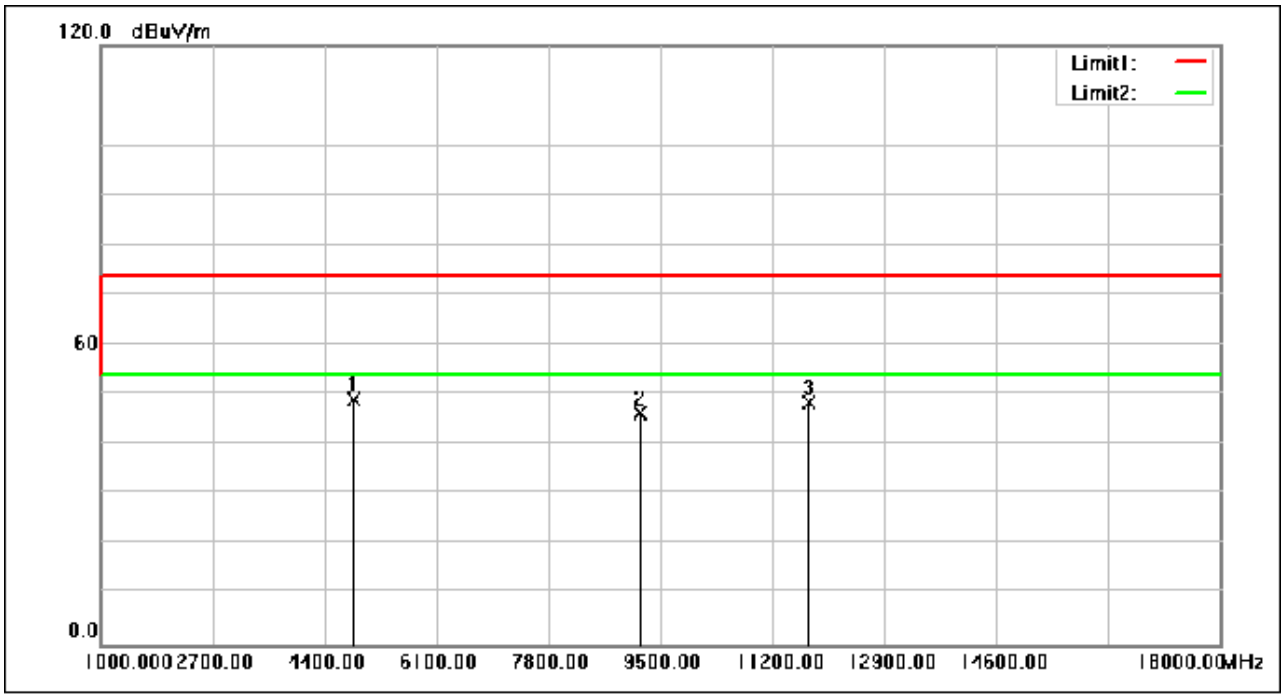
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.880	67.57	-18.49	49.08	74.00	-24.92	peak
2	10027.000	55.72	-7.31	48.41	74.00	-25.59	peak
3	12755.840	55.27	-6.23	49.04	74.00	-24.96	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:20MHz; Channel:High



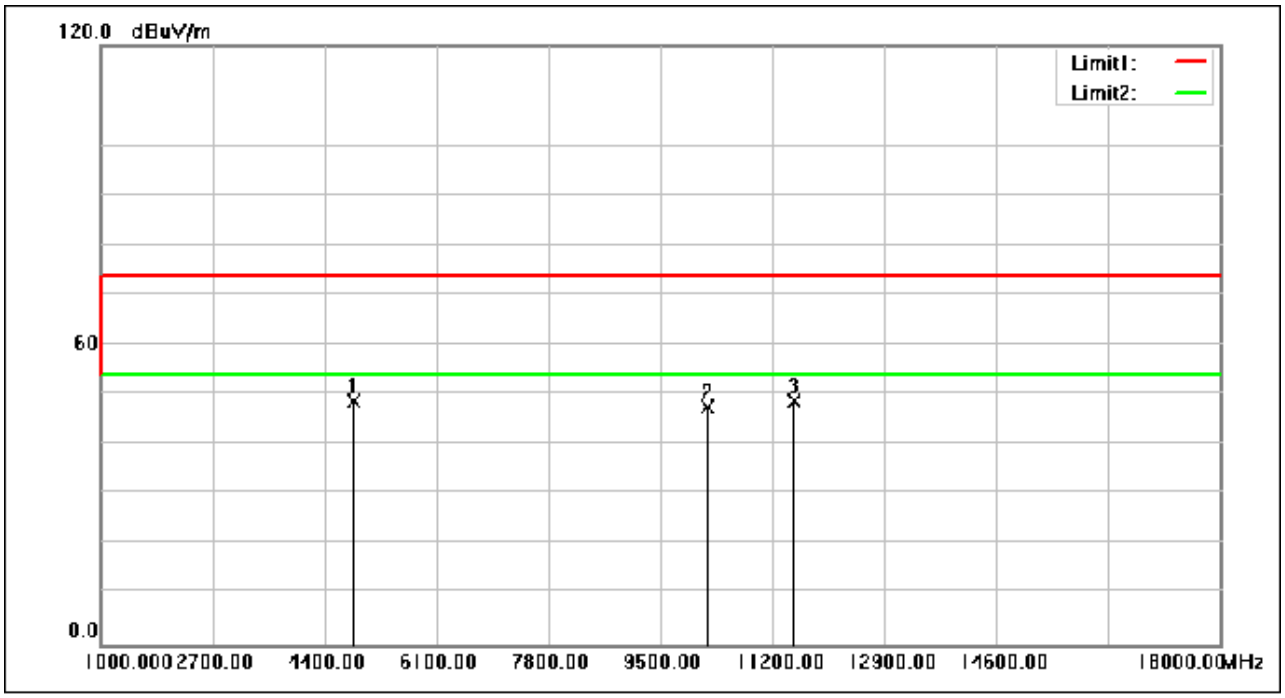
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4927.680	71.34	-18.49	52.85	74.00	-21.15	peak
2	9848.160	55.34	-7.29	48.05	74.00	-25.95	peak
3	12526.000	55.83	-6.13	49.70	74.00	-24.30	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



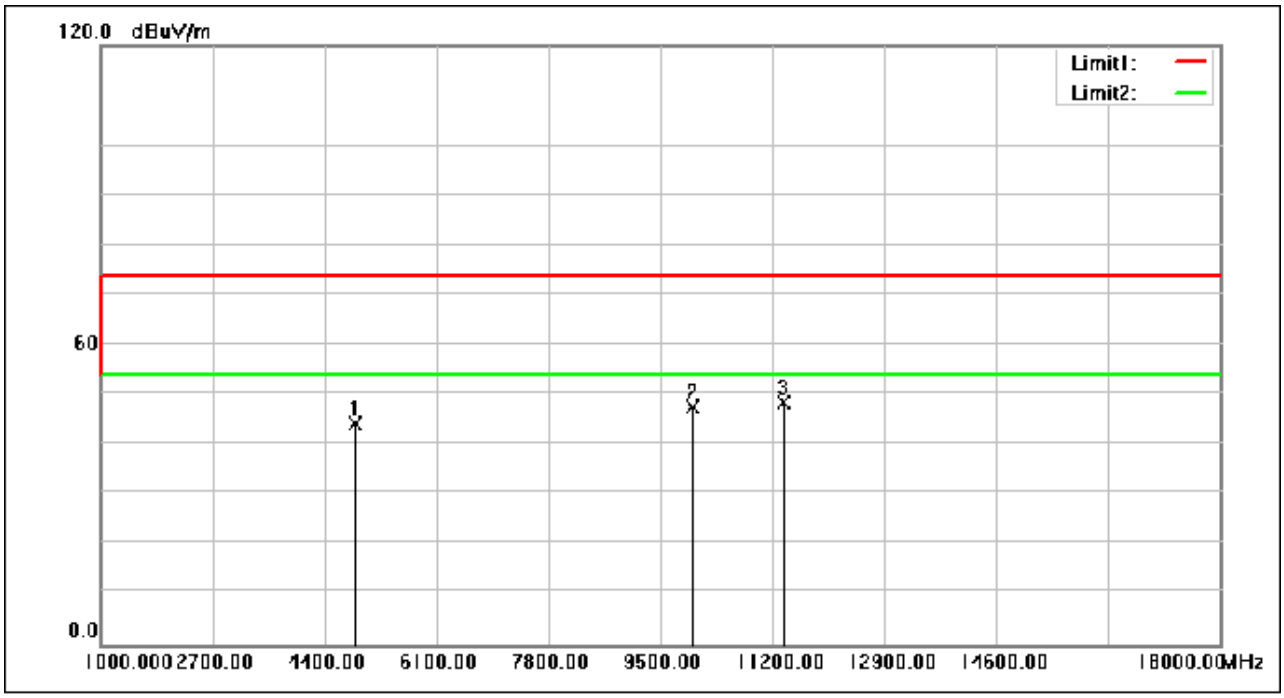
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4848.800	67.70	-18.54	49.16	74.00	-24.84	peak
2	9196.040	55.01	-8.53	46.48	74.00	-27.52	peak
3	11763.720	54.49	-6.15	48.34	74.00	-25.66	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:Low



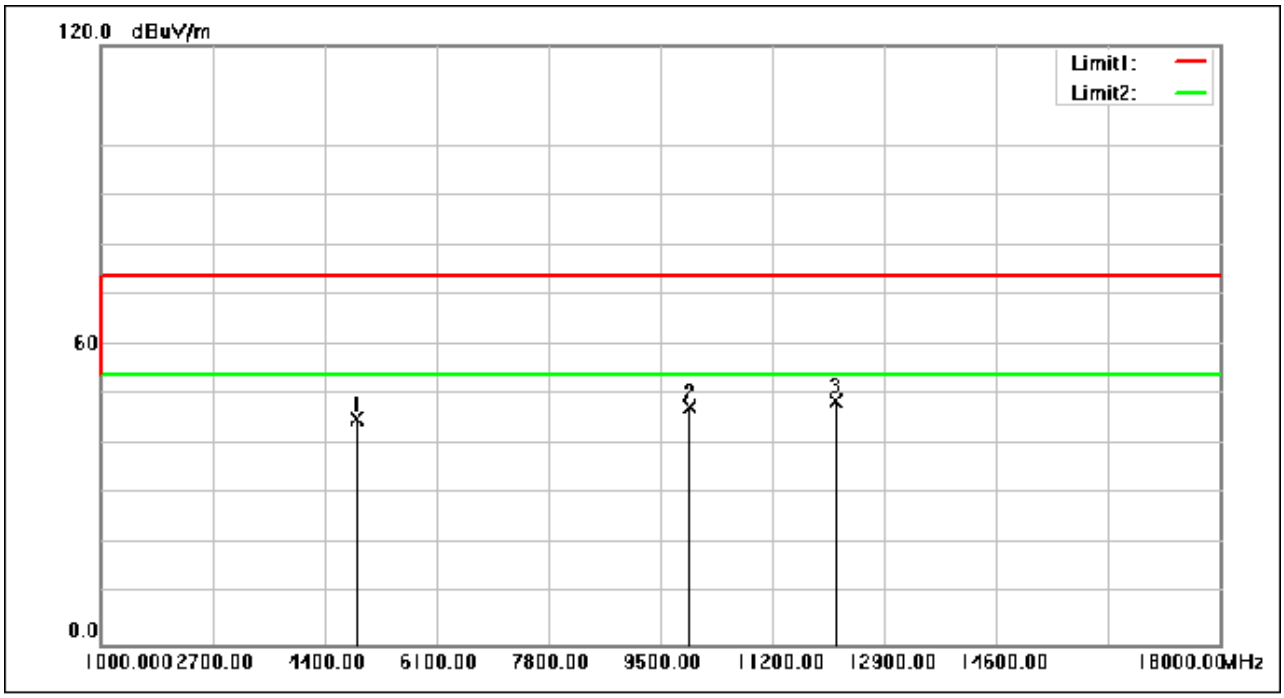
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4844.720	67.27	-18.54	48.73	74.00	-25.27	peak
2	10220.800	54.89	-7.21	47.68	74.00	-26.32	peak
3	11538.640	54.96	-6.33	48.63	74.00	-25.37	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:middle



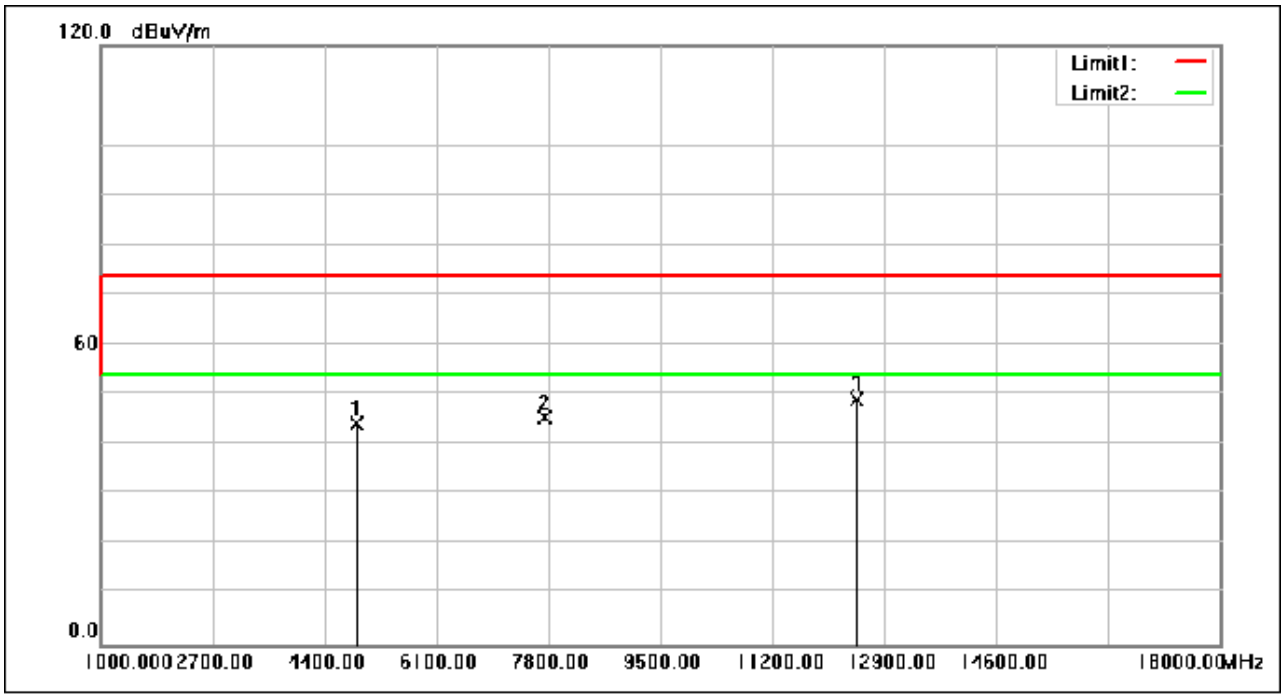
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.960	62.66	-18.52	44.14	74.00	-29.86	peak
2	9999.800	54.75	-7.33	47.42	74.00	-26.58	peak
3	11378.160	54.96	-6.46	48.50	74.00	-25.50	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:middle



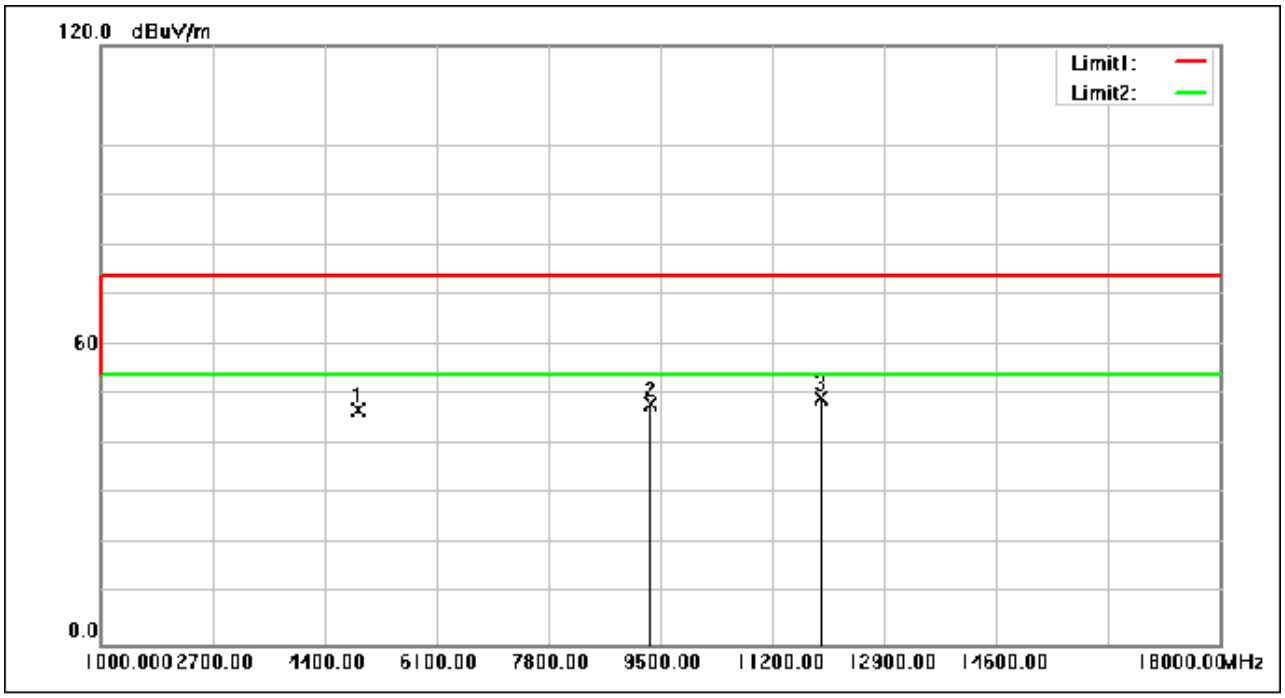
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4881.440	63.77	-18.52	45.25	74.00	-28.75	peak
2	9942.680	54.87	-7.31	47.56	74.00	-26.44	peak
3	12185.320	54.73	-5.97	48.76	74.00	-25.24	peak

Test Mode: 00; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4900.480	62.64	-18.50	44.14	74.00	-29.86	peak
2	7737.440	56.52	-10.95	45.57	74.00	-28.43	peak
3	12478.400	55.19	-6.11	49.08	74.00	-24.92	peak

Test Mode: 00; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:40MHz; Channel:High



No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4912.040	65.36	-18.50	46.86	74.00	-27.14	peak
2	9362.640	56.51	-8.22	48.29	74.00	-25.71	peak
3	11939.160	55.19	-5.99	49.20	74.00	-24.80	peak

7.5 Conducted Average Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)
Test Method: ANSI C63.10 (2013) Section 11.9.2

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

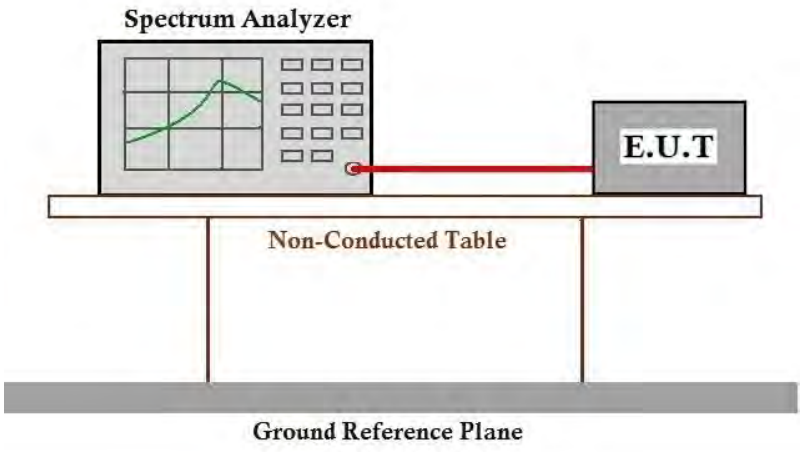
7.5.1 E.U.T. Operation

Operating Environment:
Temperature: 28.9 °C Humidity: 38.5 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.5.3 Test Setup Diagram



7.5.4 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

7.6 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

7.6.1 E.U.T. Operation

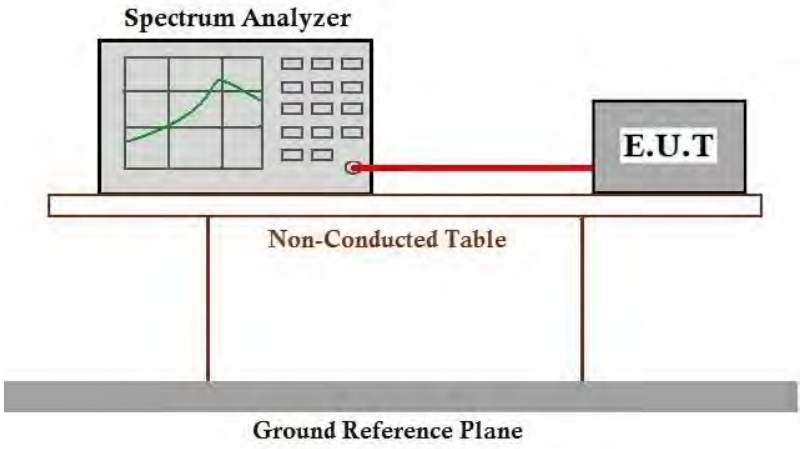
Operating Environment:

Temperature: 28.9 °C Humidity: 38.5 % RH Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.7 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

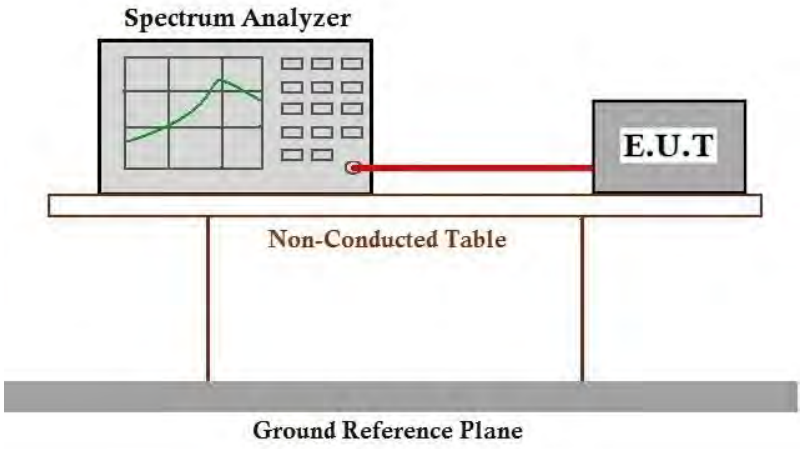
7.7.1 E.U.T. Operation

Operating Environment:
Temperature: 28.9 °C Humidity: 38.5 % RH Atmospheric Pressure: 1010 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.7.3 Test Setup Diagram



7.7.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.8 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).

7.8.1 E.U.T. Operation

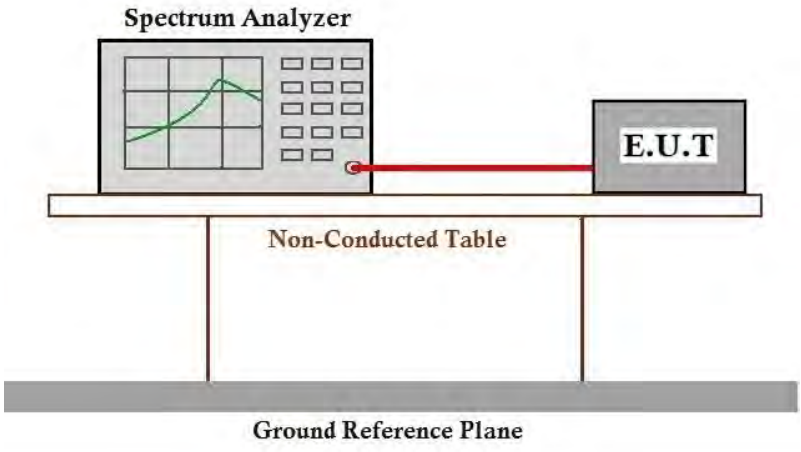
Operating Environment:

Temperature: 28.9 °C Humidity: 38.5 % RH Atmospheric Pressure: 1010 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.8.3 Test Setup Diagram



7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.9 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).

7.9.1 E.U.T. Operation

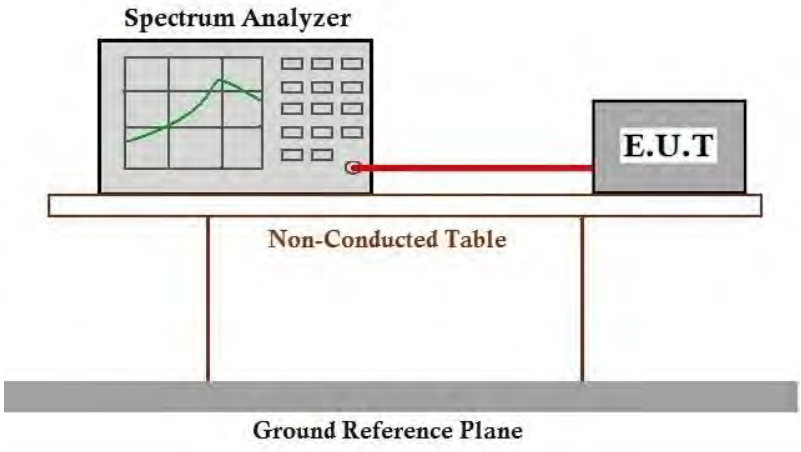
Operating Environment:

Temperature: 28.9 °C Humidity: 38.5 % RH Atmospheric Pressure: 1010 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 1Mbps is the worst case of IEEE 802.11b; data rate @ 6Mbps is the worst case of IEEE 802.11g; data rate @ 6.5Mbps is the worst case of IEEE 802.11n(HT20); data rate @ 13.5Mbps is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40). Only the data of worst case is recorded in the report.

7.9.3 Test Setup Diagram



7.9.4 Measurement Procedure and Data

Please Refer to Appendix for Details

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2408001639AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2408001639AT

10 Appendix

1. Duty Cycle

1.1 Test Result

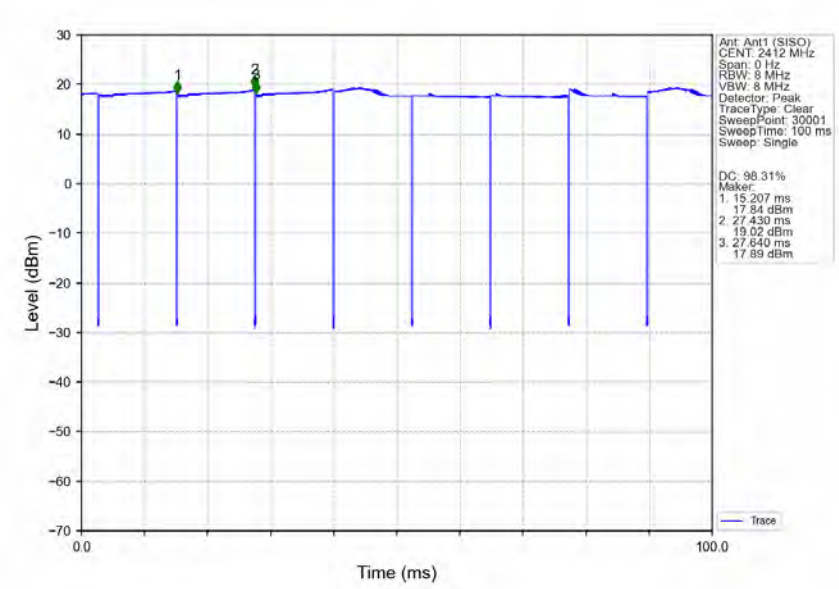
1.1.1 Ant1

Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	/	/	12.223	12.433	98.31	0.07	0.03
		2437	/	/	12.223	12.433	98.31	0.07	0.03
		2462	/	/	12.223	12.433	98.31	0.07	0.03
802.11g	SISO	2412	/	/	2.032	2.245	90.51	0.43	0.00
		2437	/	/	2.032	2.245	90.51	0.43	0.00
		2462	/	/	2.032	2.245	90.51	0.43	0.04
802.11n (HT20)	SISO	2412	/	/	1.892	2.104	89.92	0.46	0.00
		2437	/	/	1.892	2.105	89.88	0.46	0.03
		2462	/	/	1.892	2.105	89.88	0.46	0.03
802.11n (HT40)	SISO	2422	/	/	0.933	1.145	81.48	0.89	0.03
		2437	/	/	0.932	1.153	80.83	0.92	0.66
		2452	/	/	0.932	1.145	81.40	0.89	0.04
802.11ax (HEW20)	SISO	2412	RU242	Left	1.459	1.672	87.26	0.59	0.03
		2437	RU242	Left	1.459	1.672	87.26	0.59	0.03
		2462	RU242	Left	1.458	1.671	87.25	0.59	0.03
802.11ax (HEW40)	SISO	2422	RU484	Left	0.759	0.972	78.09	1.07	0.03
		2437	RU484	Left	0.760	0.972	78.19	1.07	0.03
		2452	RU484	Left	0.759	0.972	78.09	1.07	0.03

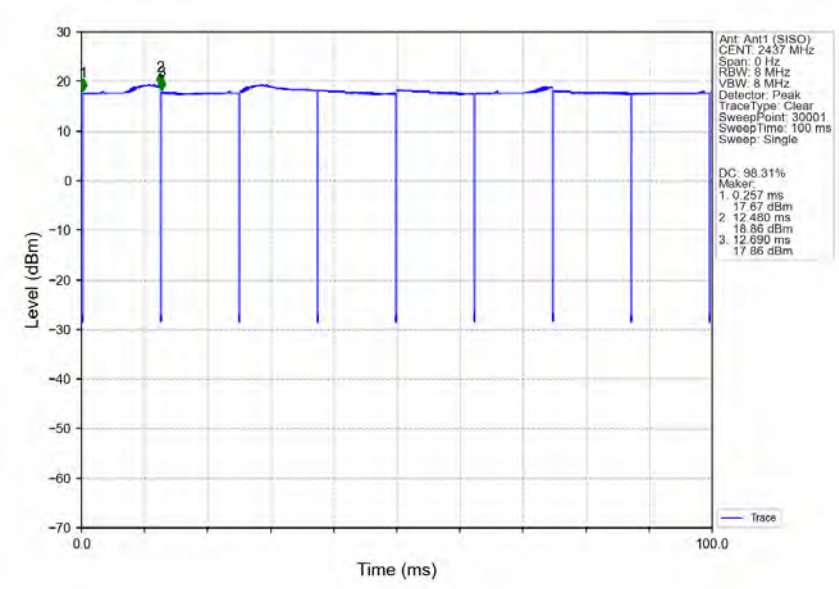
1.2 Test Graph

1.2.1 Ant1

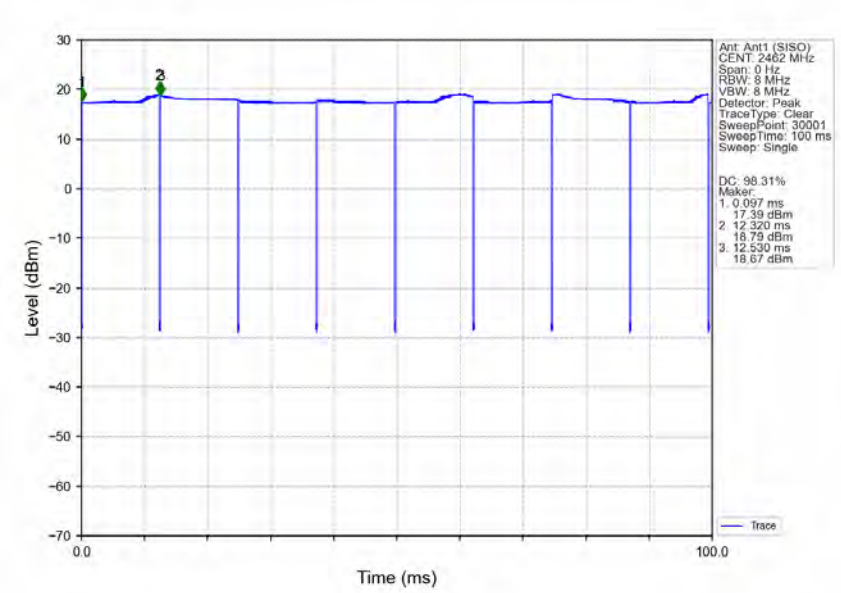
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



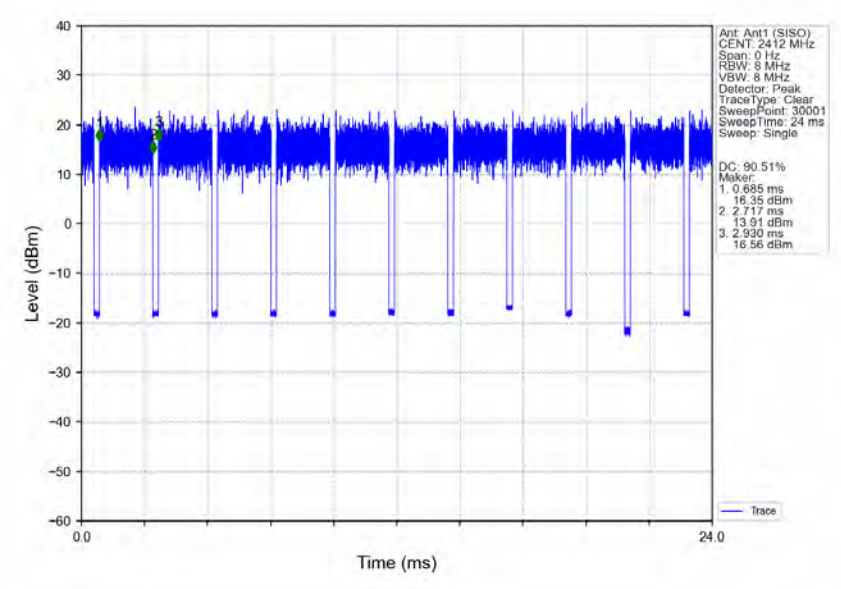
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



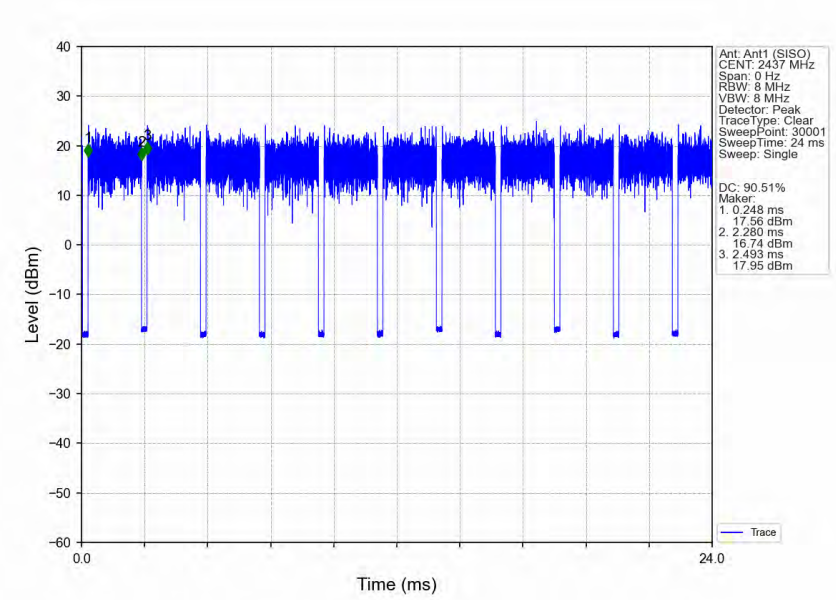
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



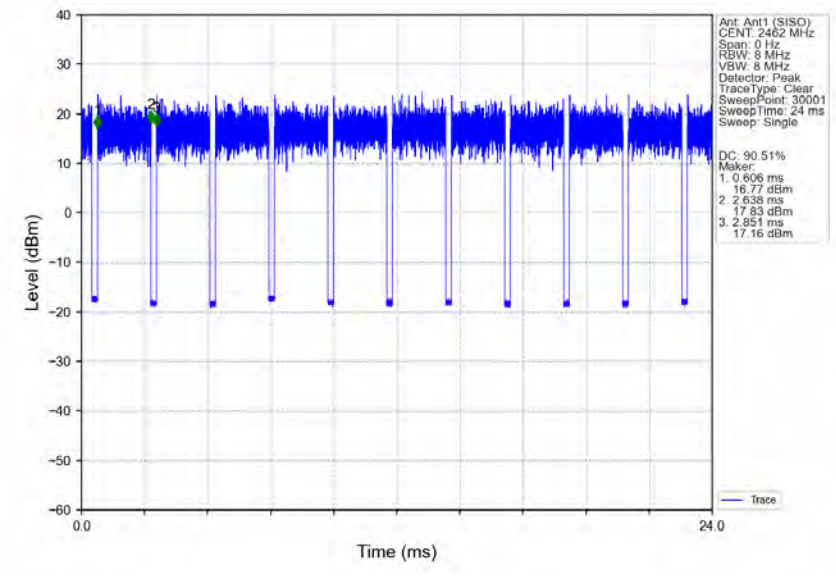
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



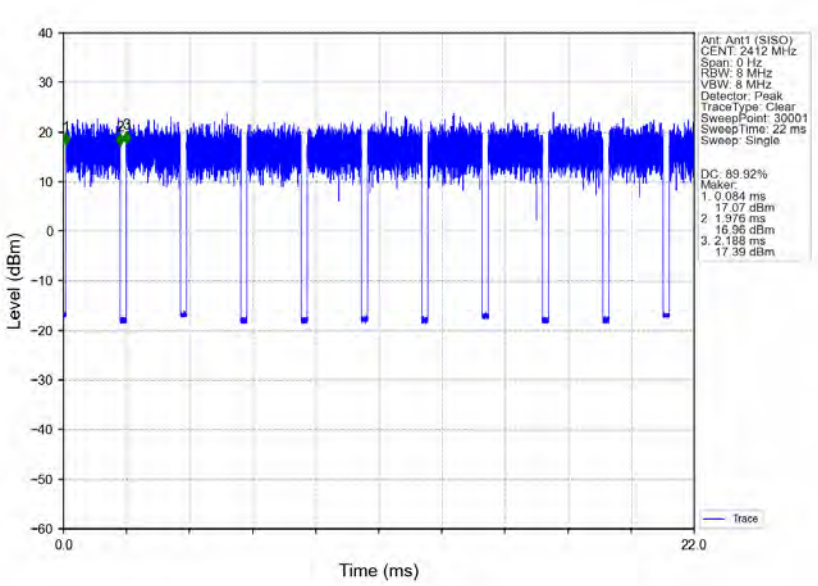
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



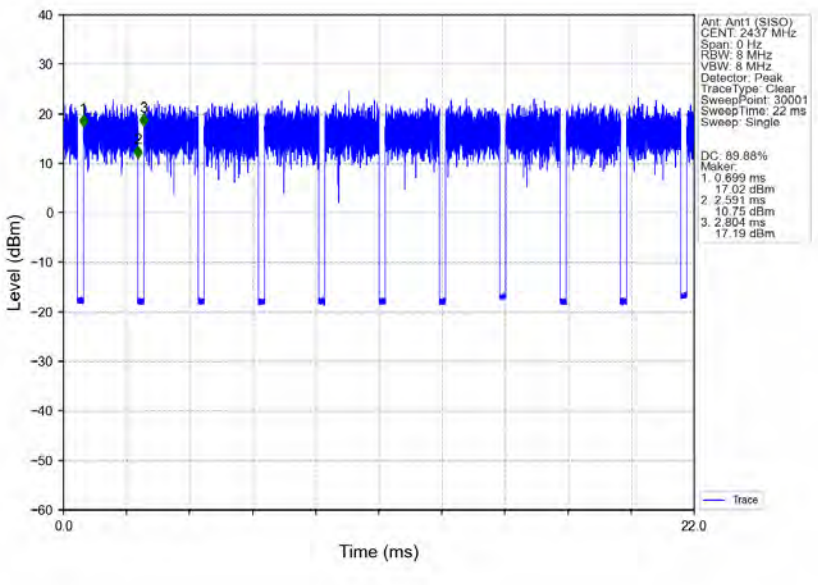
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



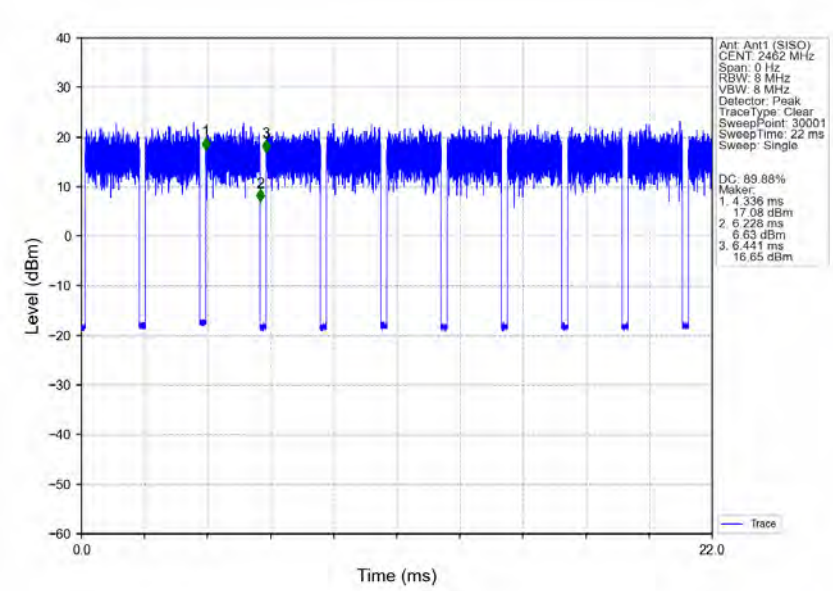
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



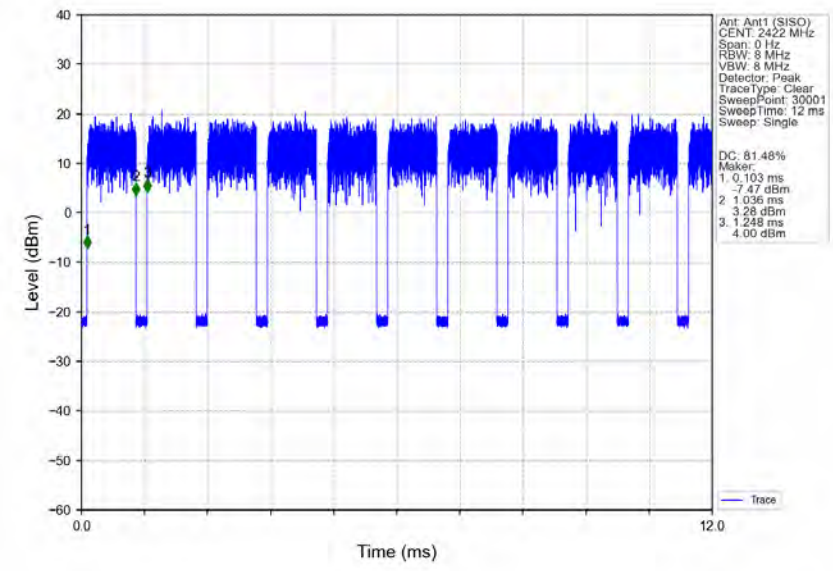
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



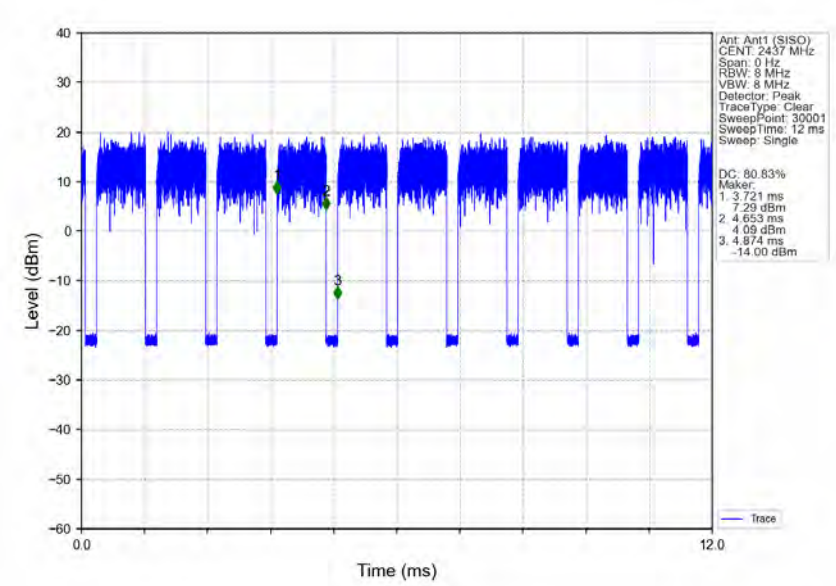
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



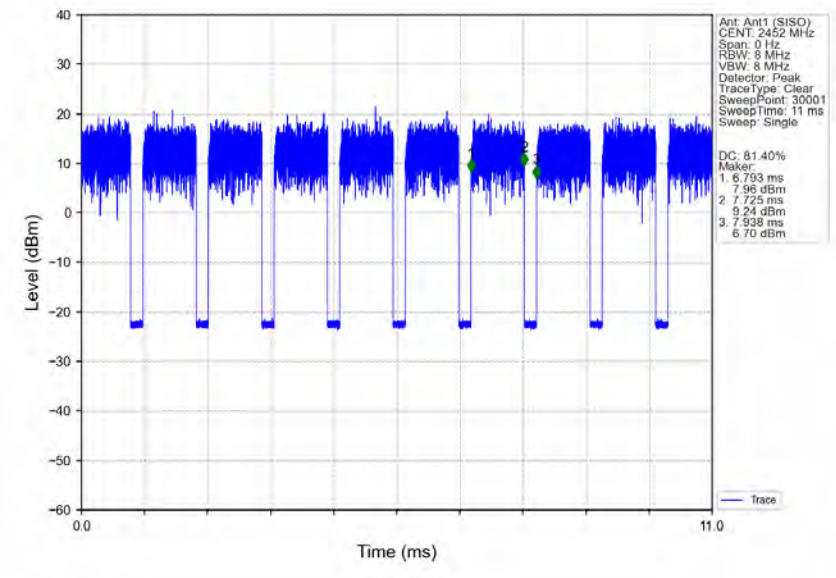
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



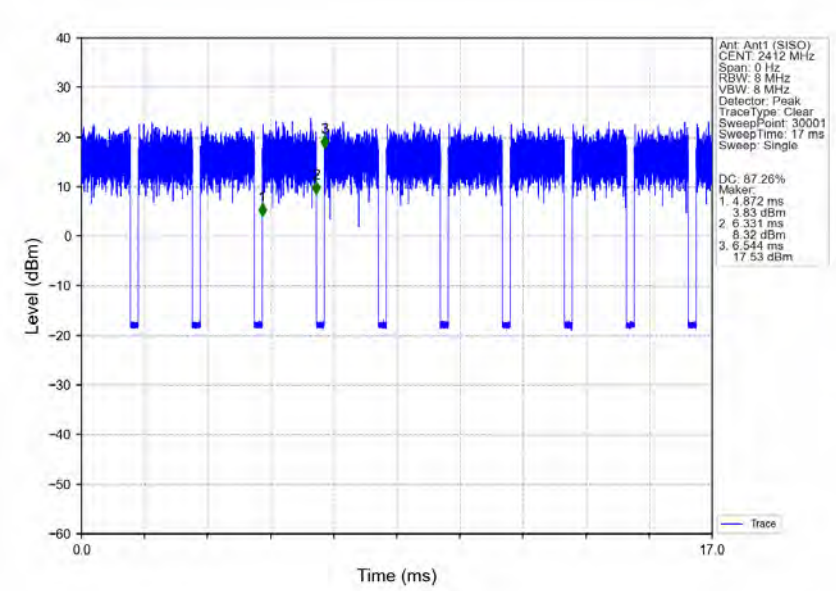
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



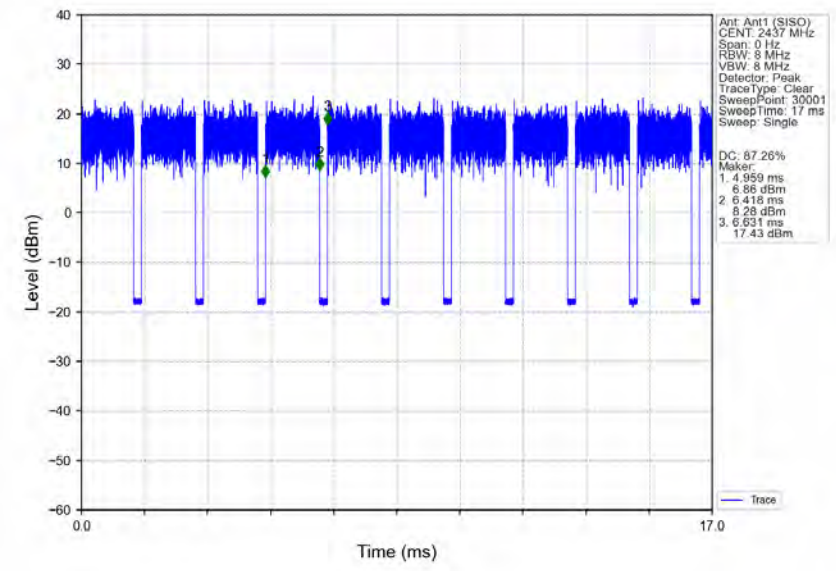
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



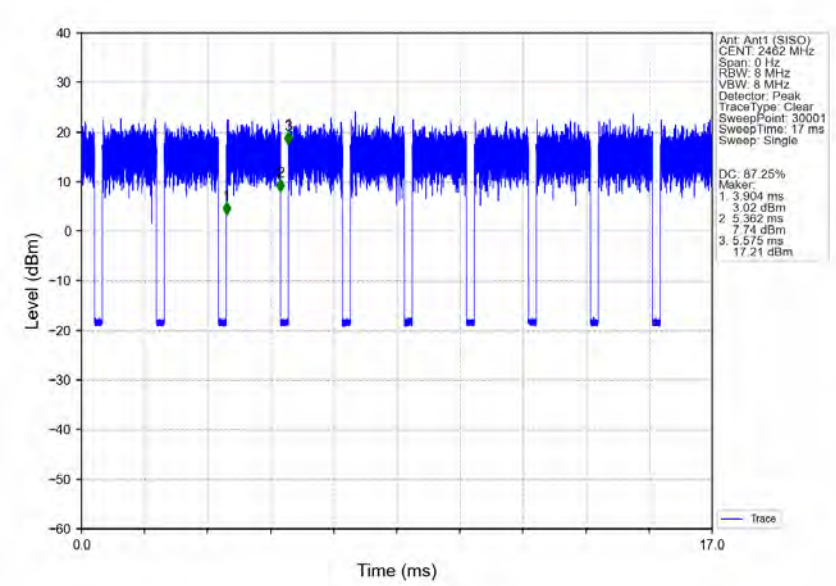
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



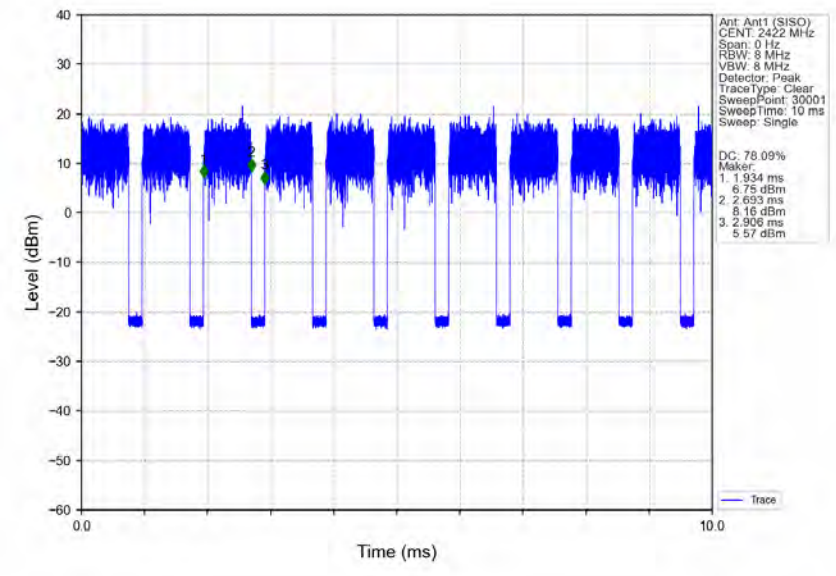
802.11ax(HEW20)_MCH_2437MHz_RU242_Left_Ant1 (SISO)_NTNV



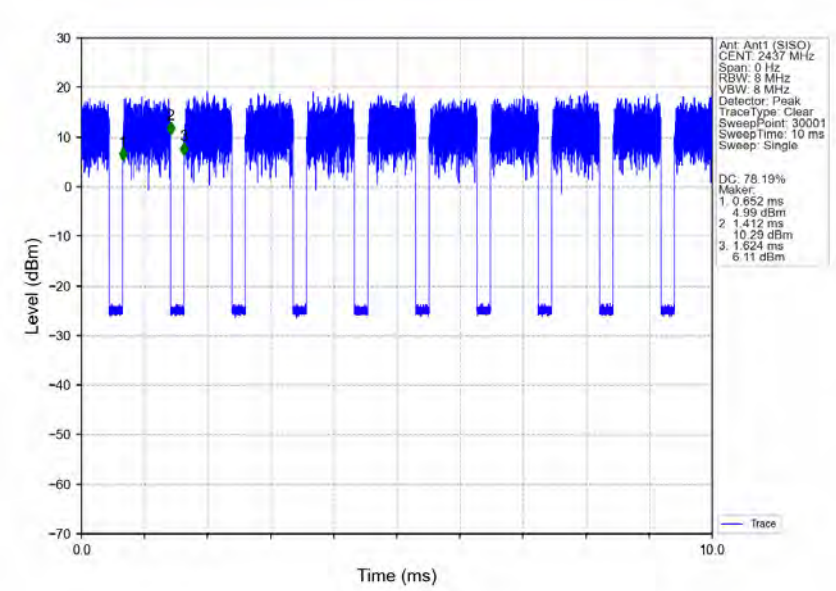
802.11ax(HEW20)_HCH_2462MHz_RU242_Left_Ant1 (SISO)_NTNV



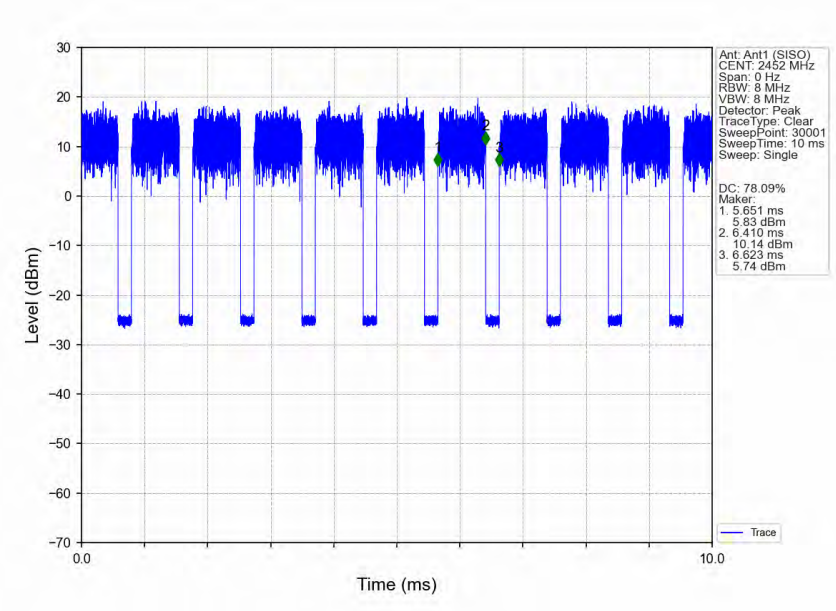
802.11ax(HEW40)_LCH_2422MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_HCH_2452MHz_RU484_Left_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	99% Occupied Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	13.845	/	Pass
		2437	/	/	1	13.838	/	Pass
		2462	/	/	1	13.858	/	Pass
802.11g	SISO	2412	/	/	1	16.529	/	Pass
		2437	/	/	1	16.570	/	Pass
		2462	/	/	1	16.600	/	Pass
802.11n (HT20)	SISO	2412	/	/	1	17.517	/	Pass
		2437	/	/	1	17.506	/	Pass
		2462	/	/	1	17.543	/	Pass
802.11n (HT40)	SISO	2422	/	/	1	35.599	/	Pass
		2437	/	/	1	35.602	/	Pass
		2452	/	/	1	35.555	/	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	1	18.245	/	Pass
		2437	RU242	Left	1	18.191	/	Pass
		2462	RU242	Left	1	18.180	/	Pass
802.11ax (HEW40)	SISO	2422	RU484	Left	1	36.551	/	Pass
		2437	RU484	Left	1	36.578	/	Pass
		2452	RU484	Left	1	36.596	/	Pass

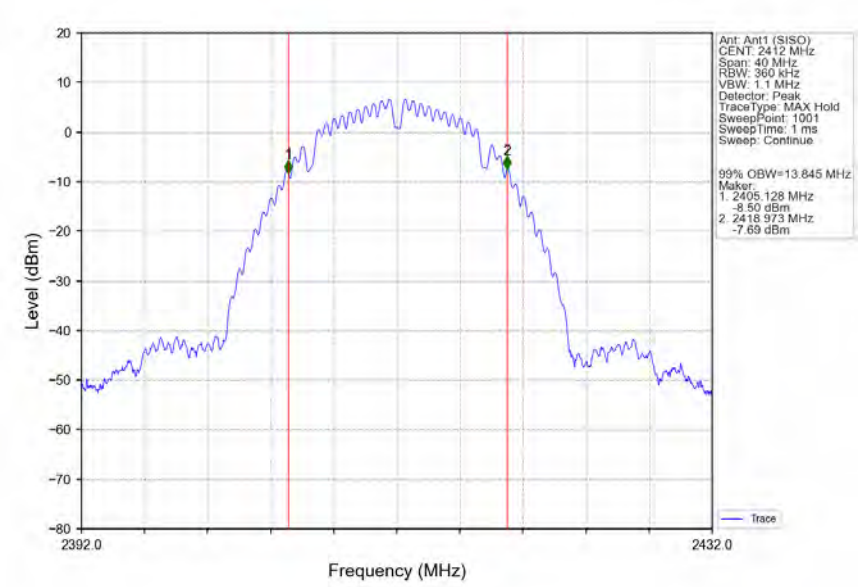
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	6dB Bandwidth (MHz)		Verdict
						Result	Limit	
802.11b	SISO	2412	/	/	1	9.579	>=0.5	Pass
		2437	/	/	1	9.128	>=0.5	Pass
		2462	/	/	1	9.097	>=0.5	Pass
802.11g	SISO	2412	/	/	1	13.857	>=0.5	Pass
		2437	/	/	1	13.828	>=0.5	Pass
		2462	/	/	1	15.006	>=0.5	Pass
802.11n (HT20)	SISO	2412	/	/	1	12.672	>=0.5	Pass
		2437	/	/	1	13.844	>=0.5	Pass
		2462	/	/	1	15.009	>=0.5	Pass
802.11n (HT40)	SISO	2422	/	/	1	32.530	>=0.5	Pass
		2437	/	/	1	31.348	>=0.5	Pass
		2452	/	/	1	31.360	>=0.5	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	1	13.839	>=0.5	Pass
		2437	RU242	Left	1	14.030	>=0.5	Pass
		2462	RU242	Left	1	14.089	>=0.5	Pass
802.11ax (HEW40)	SISO	2422	RU484	Left	1	31.344	>=0.5	Pass
		2437	RU484	Left	1	31.356	>=0.5	Pass
		2452	RU484	Left	1	31.377	>=0.5	Pass

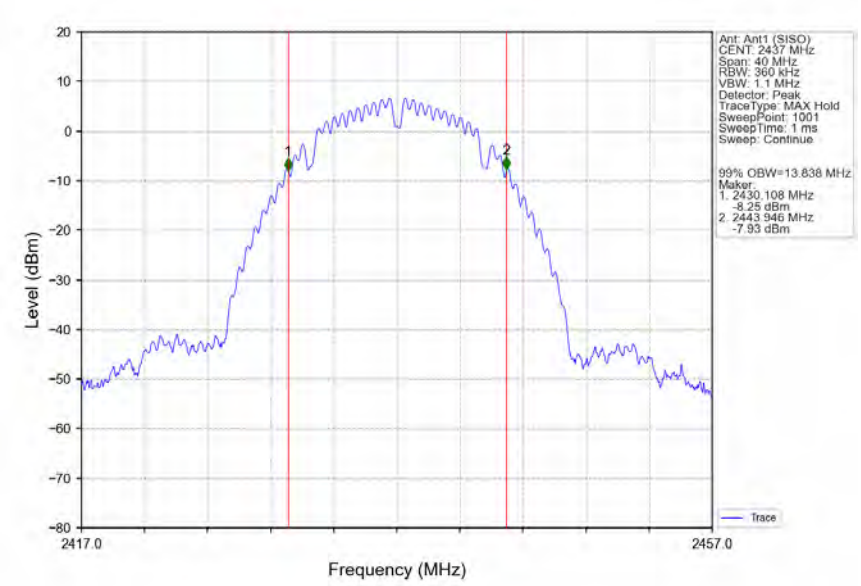
2.2 Test Graph

2.2.1 OBW

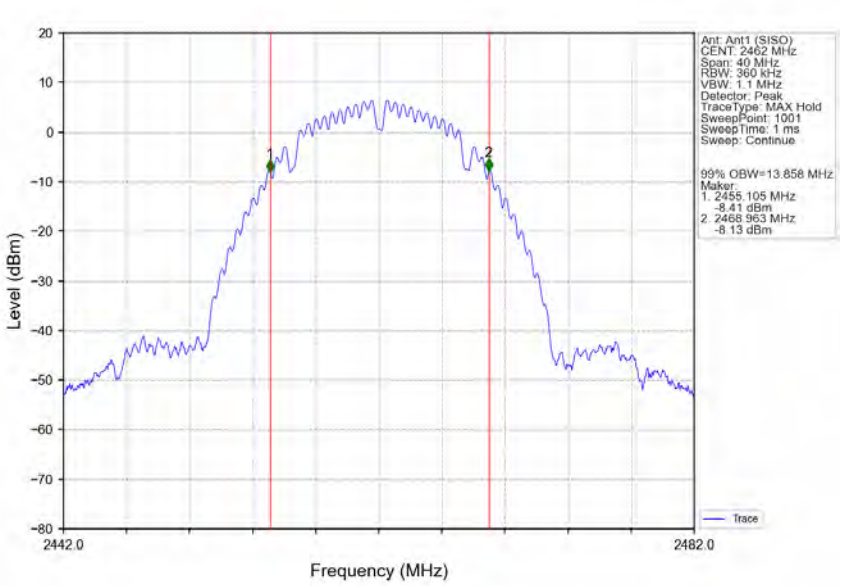
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



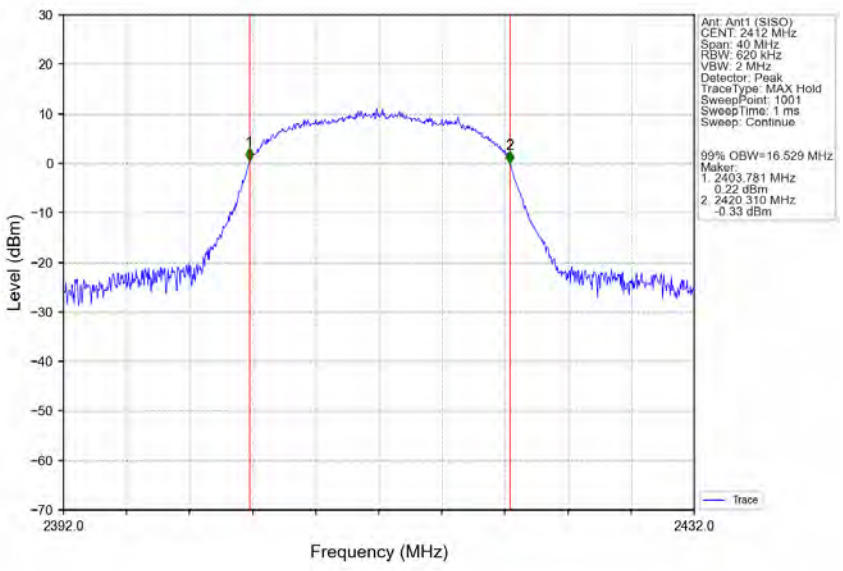
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



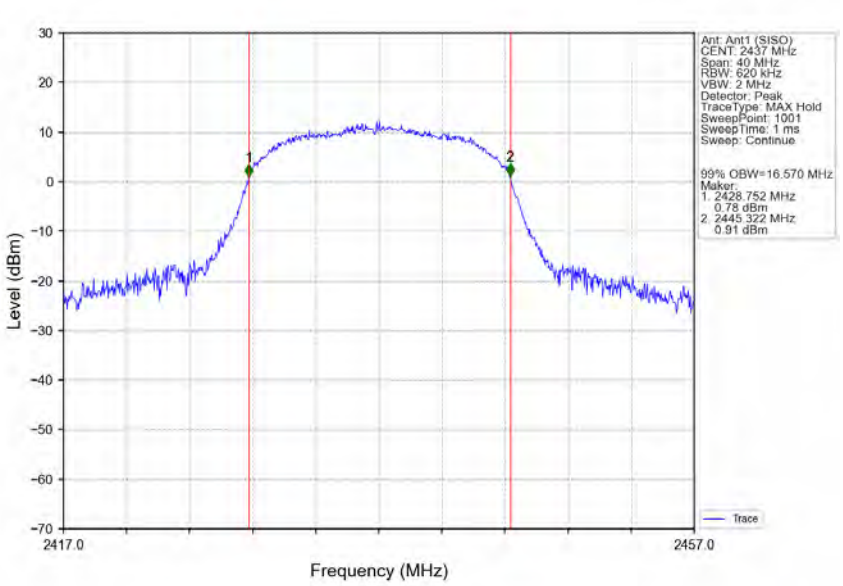
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



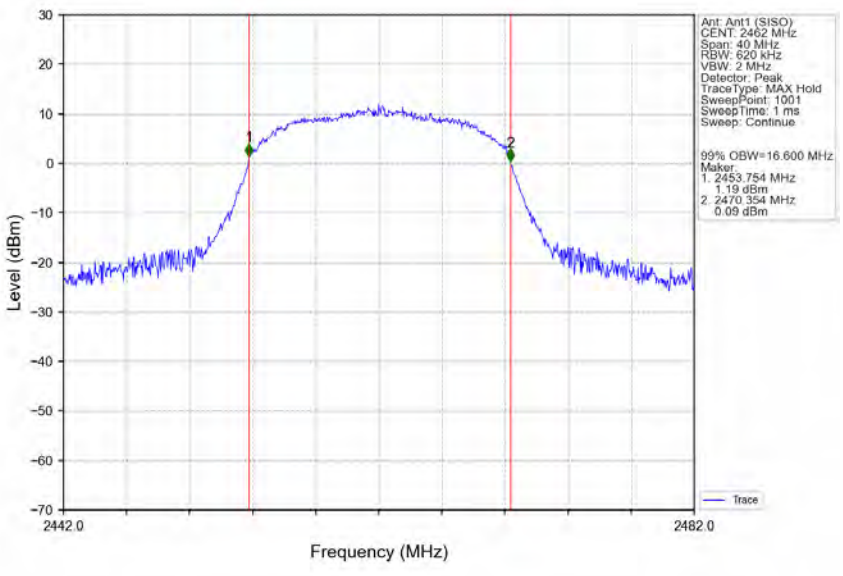
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



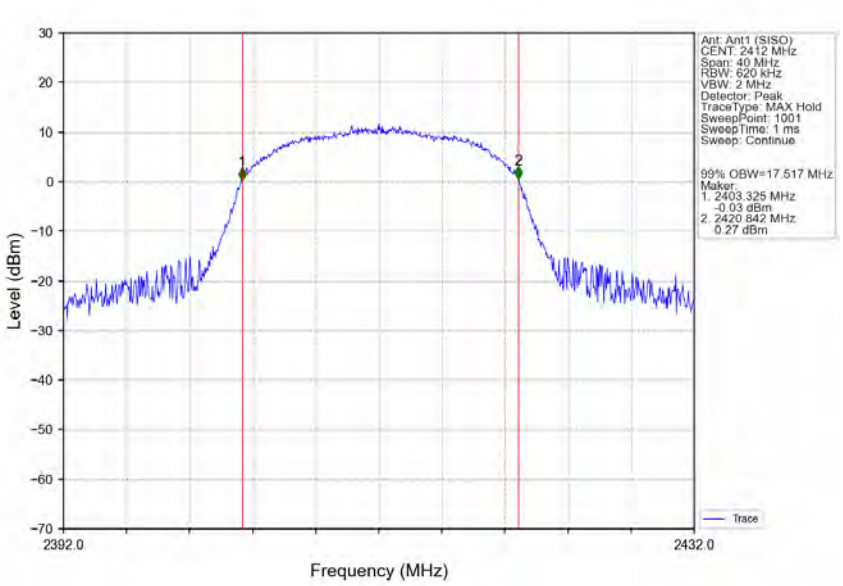
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



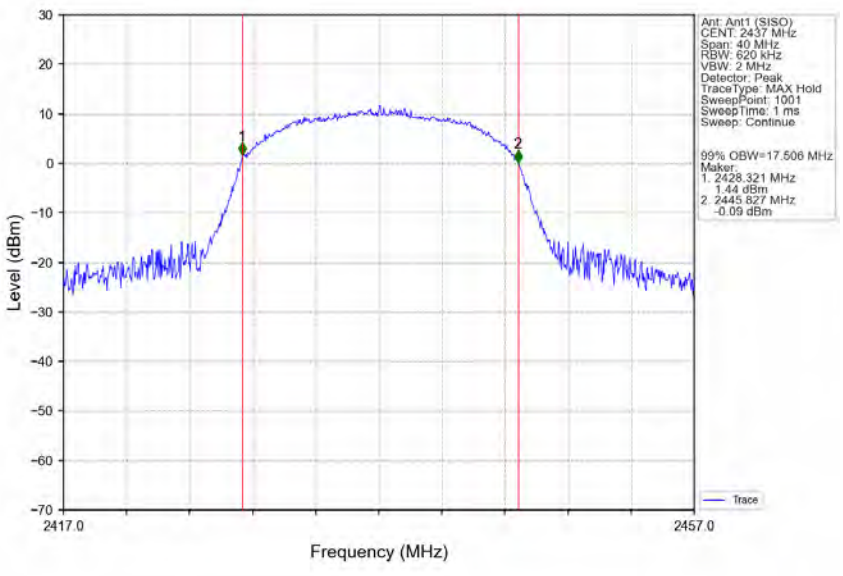
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



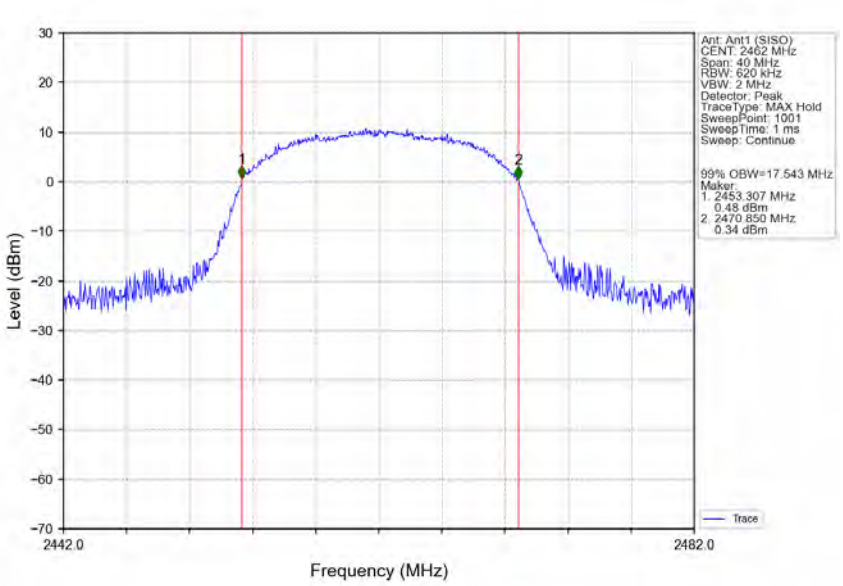
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



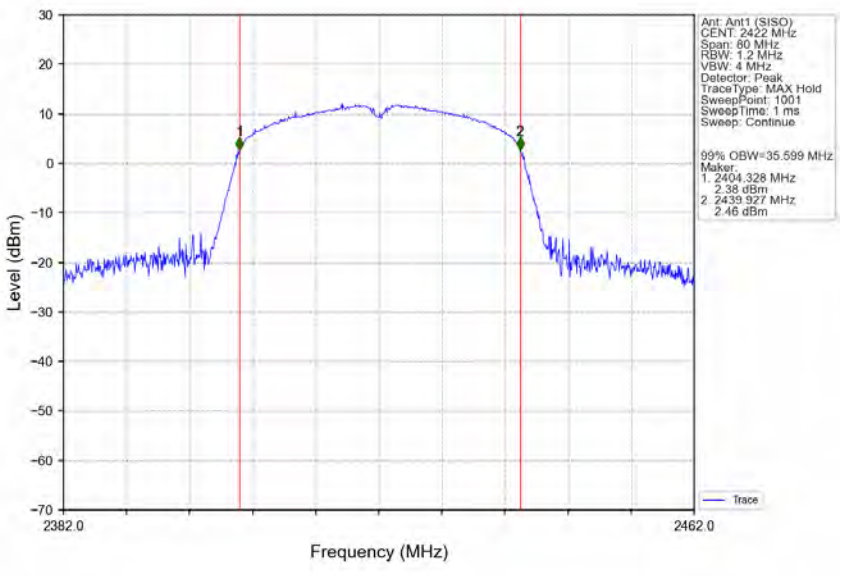
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



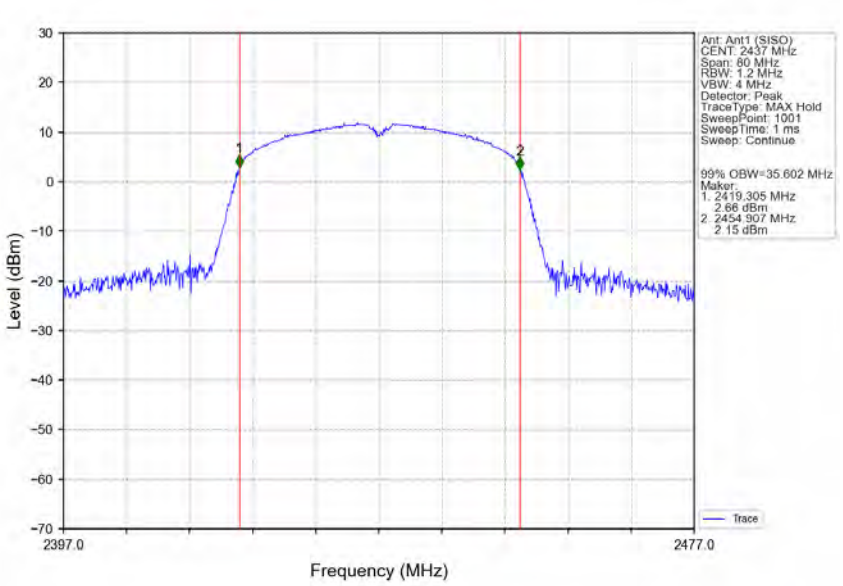
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



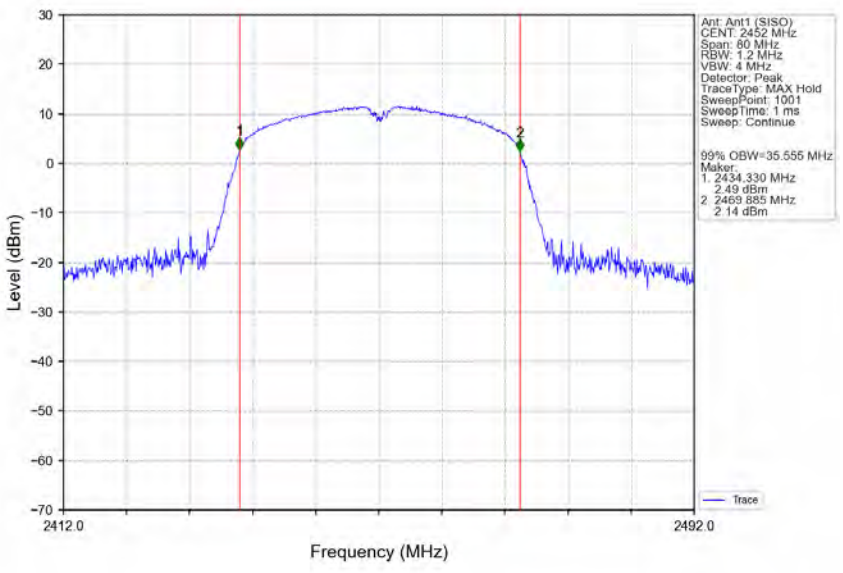
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



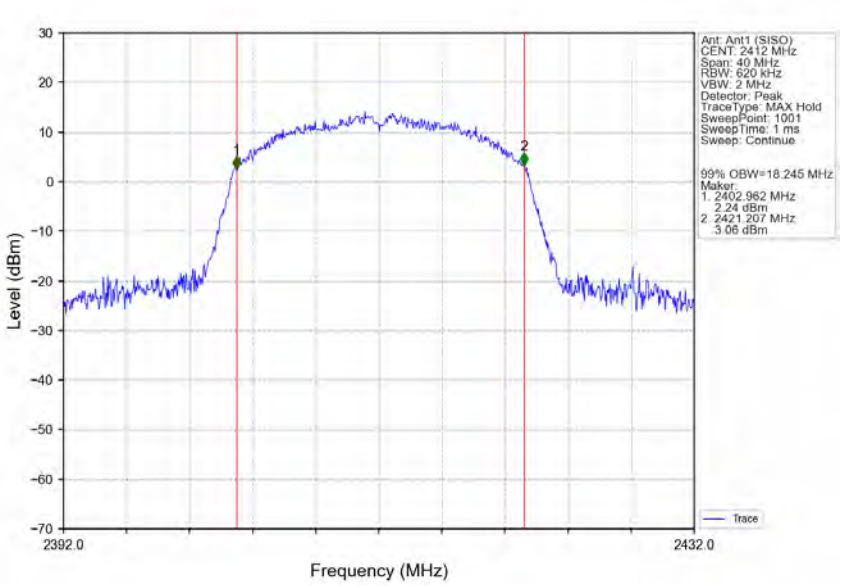
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



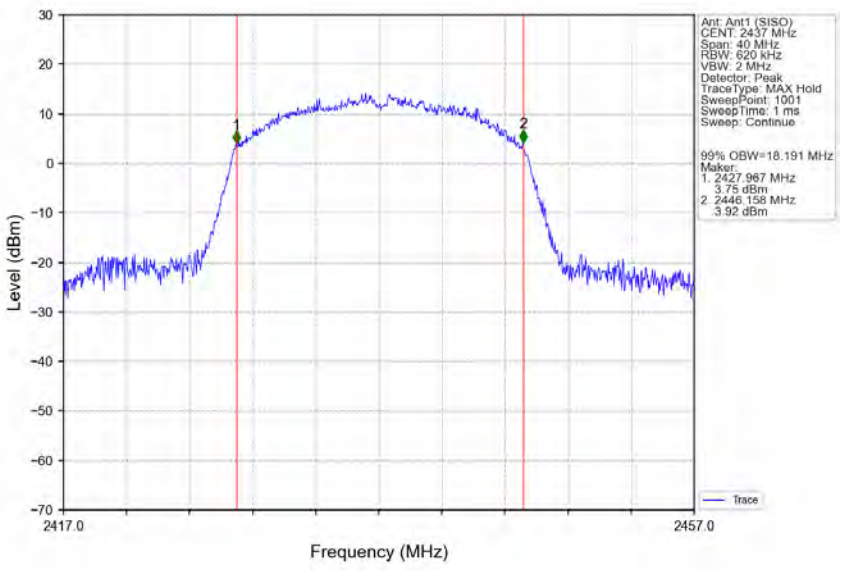
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



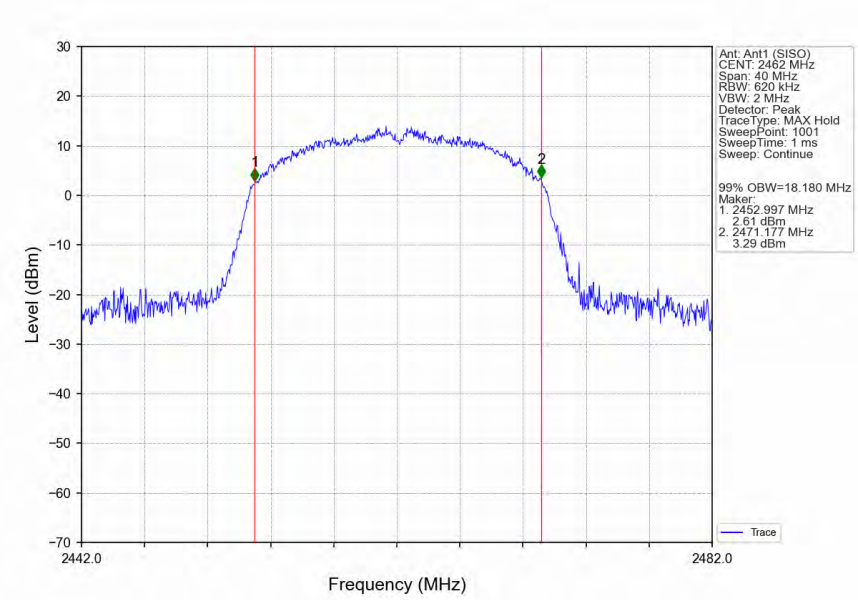
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



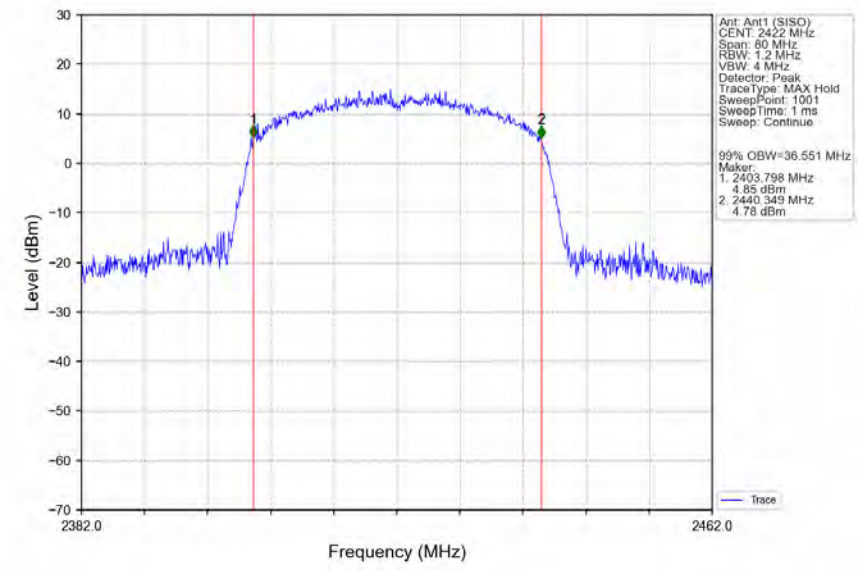
802.11ax(HEW20)_MCH_2437MHz_RU242_Left_Ant1 (SISO)_NTNV



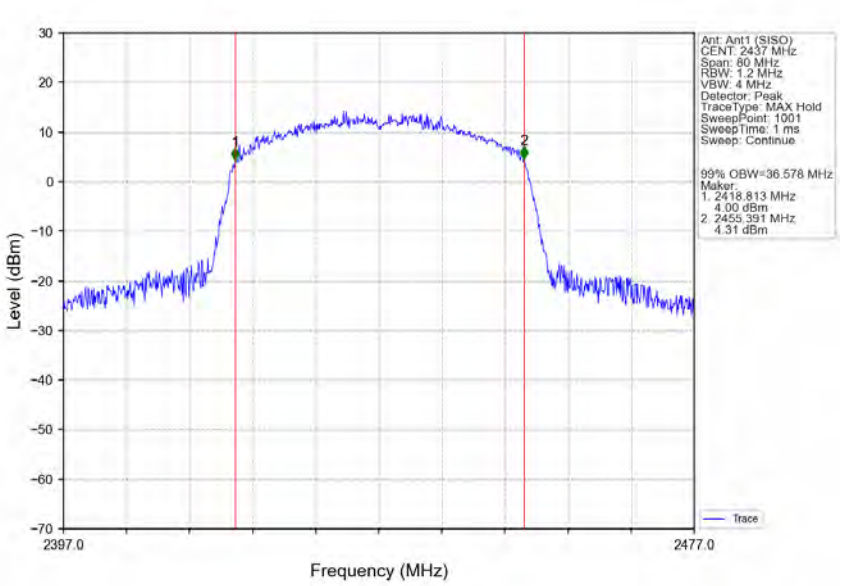
802.11ax(HEW20)_HCH_2462MHz_RU242_Left_Ant1 (SISO)_NTNV



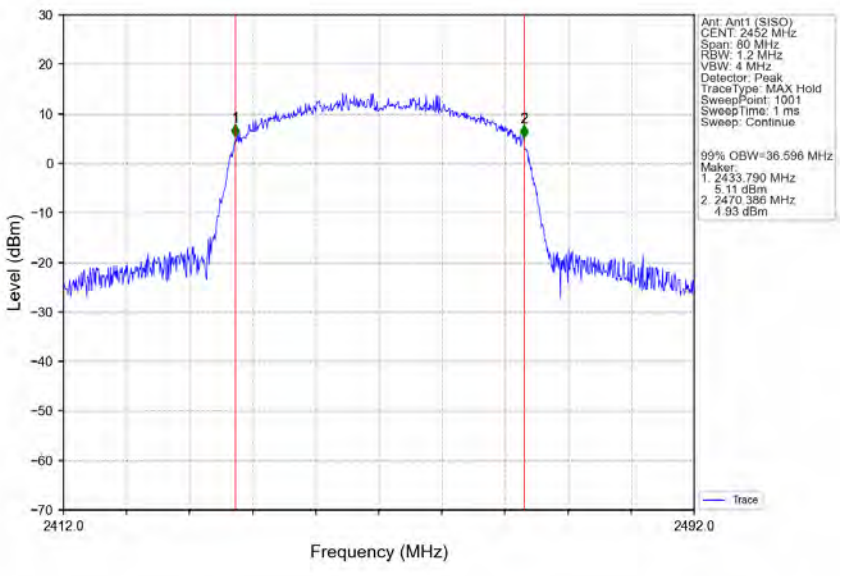
802.11ax(HEW40)_LCH_2422MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_RU484_Left_Ant1 (SISO)_NTNV

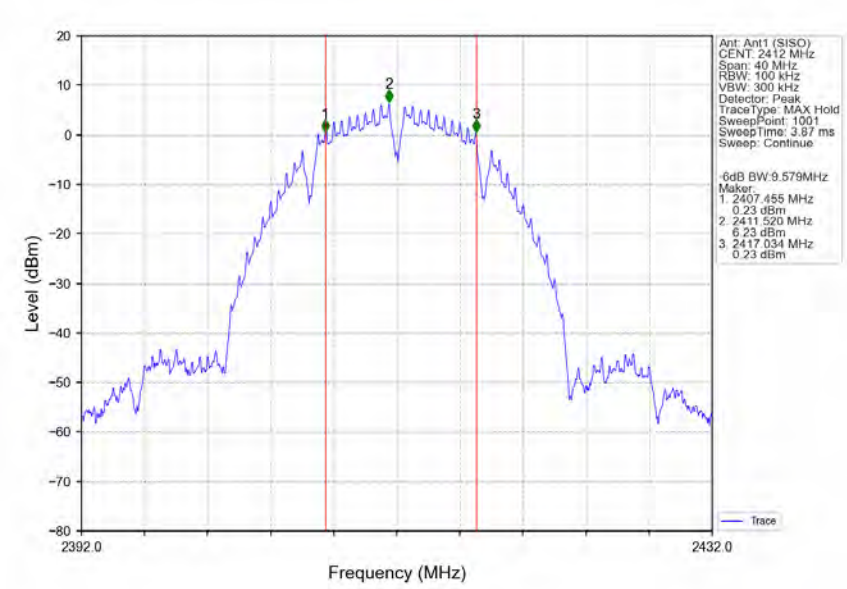


802.11ax(HEW40)_HCH_2452MHz_RU484_Left_Ant1 (SISO)_NTNV

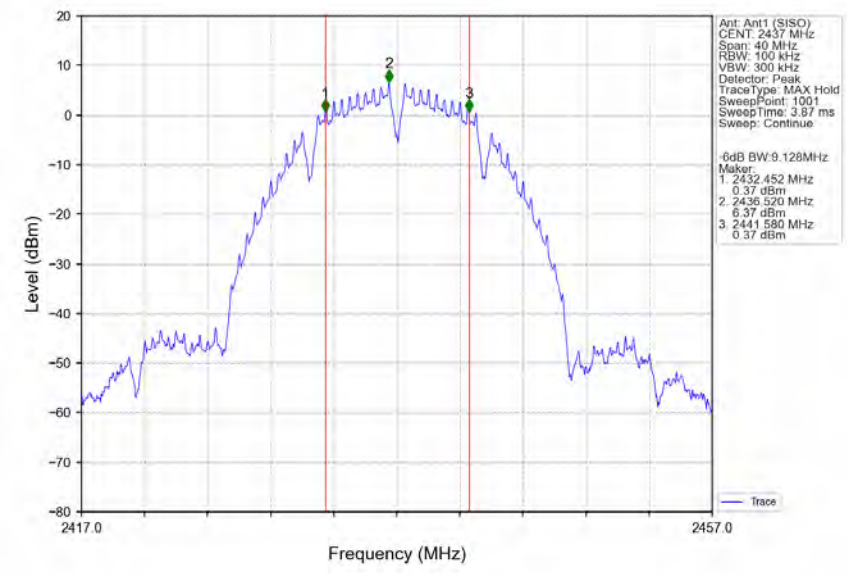


2.2.2 6dB BW

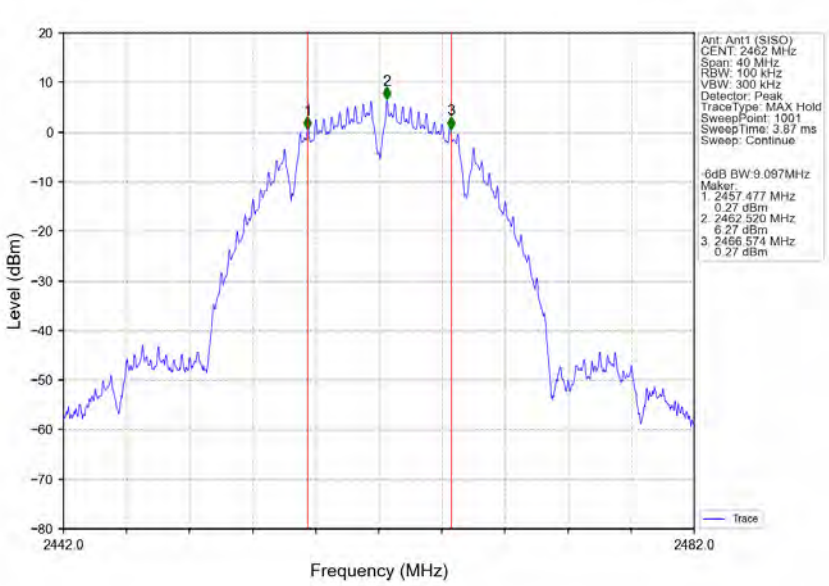
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



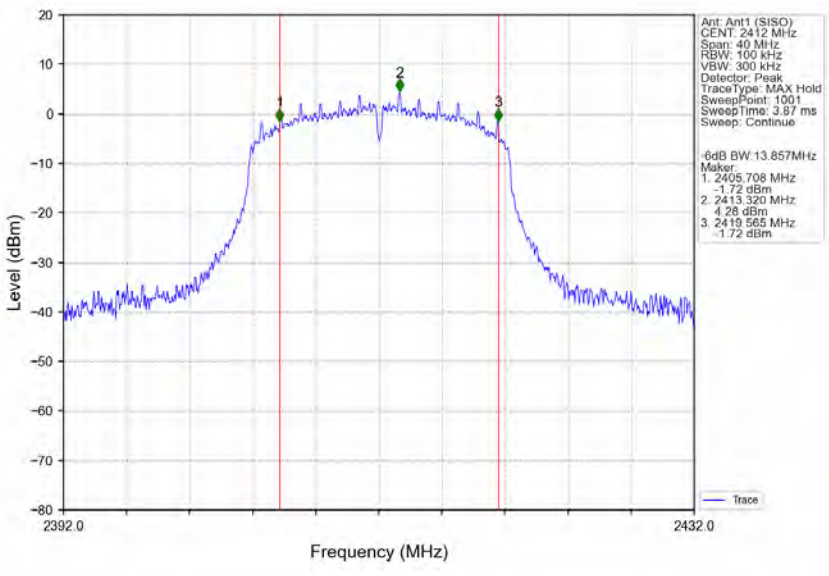
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



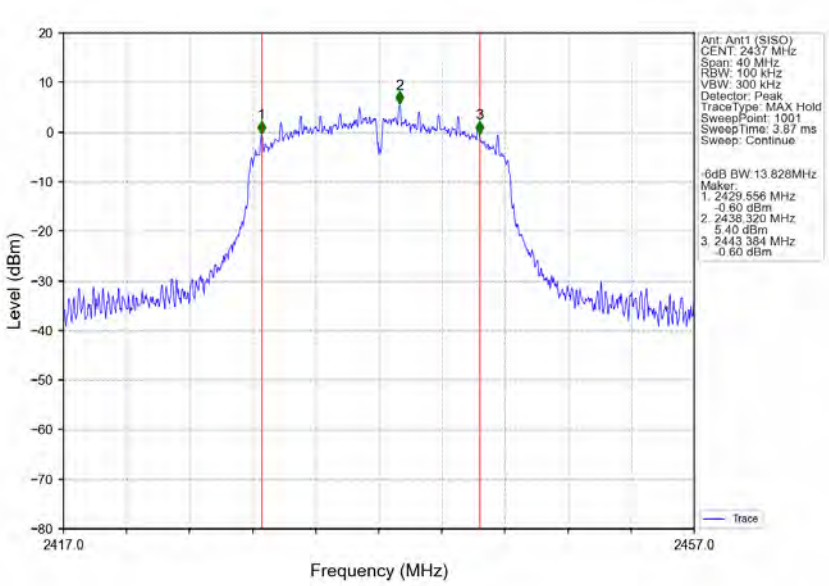
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



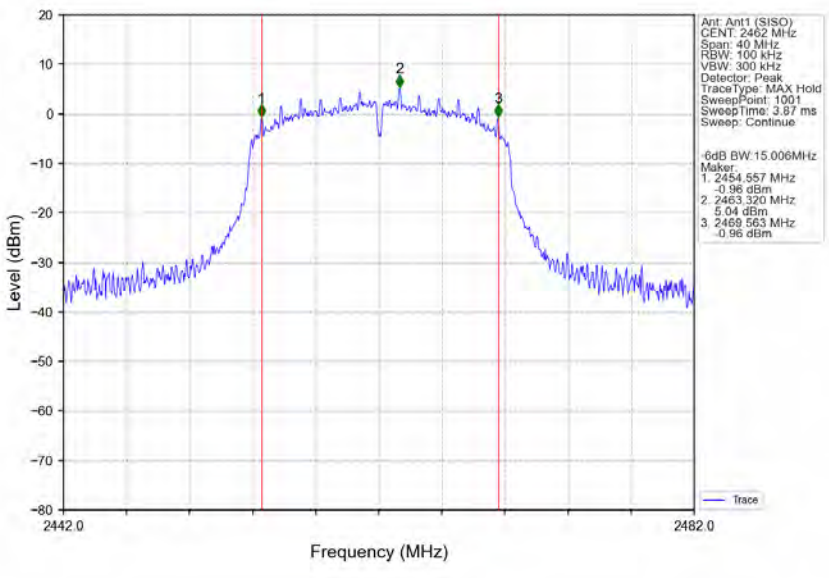
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



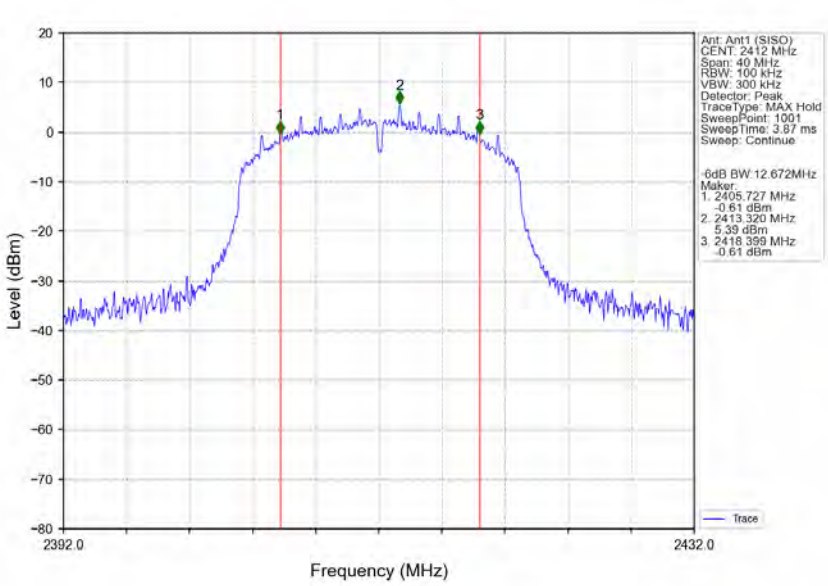
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



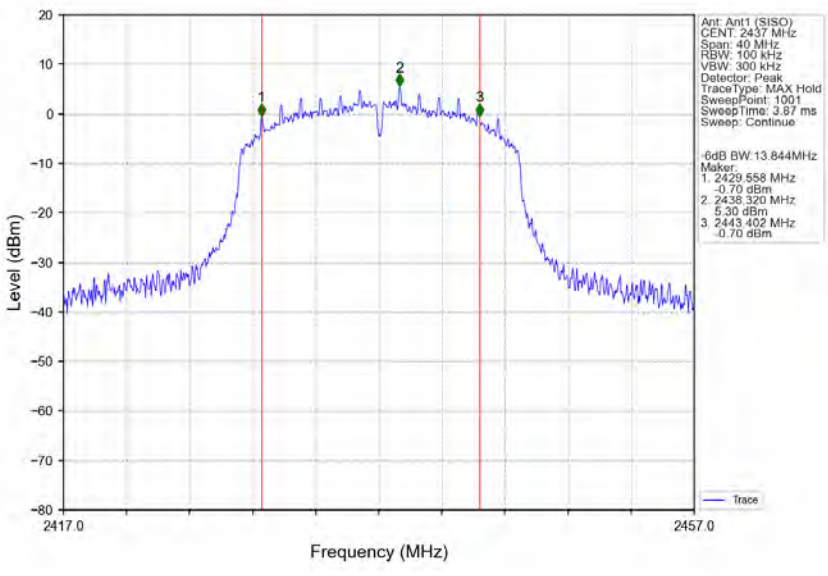
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



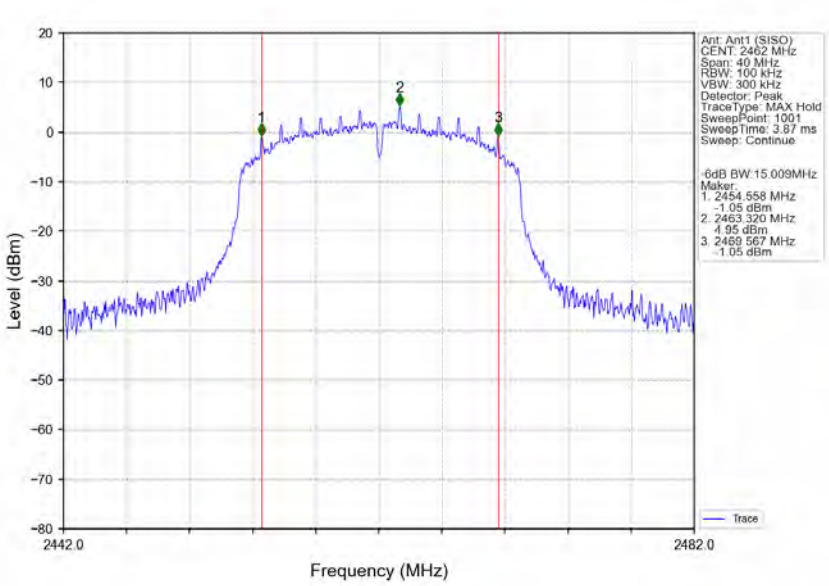
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



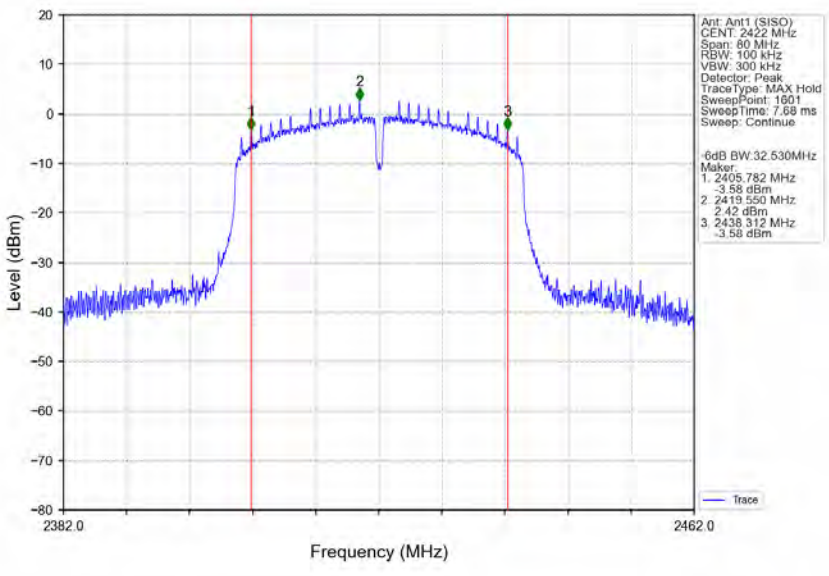
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



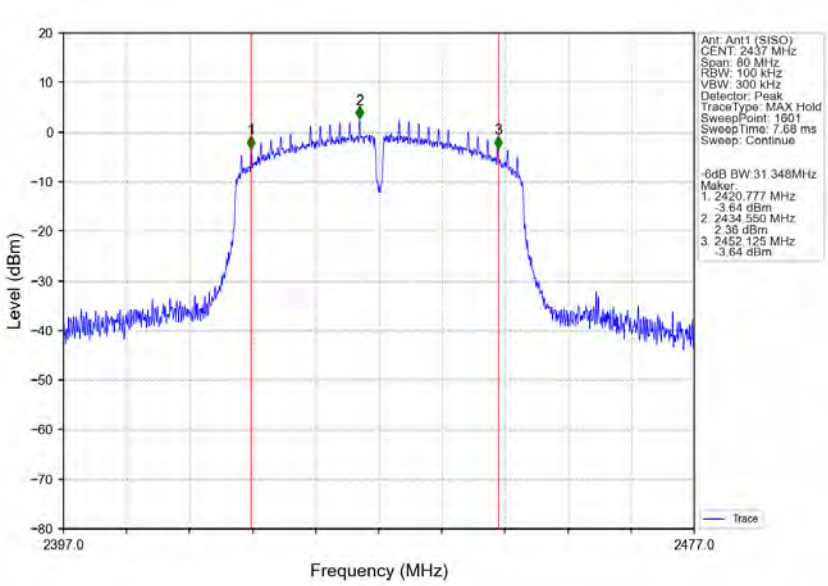
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



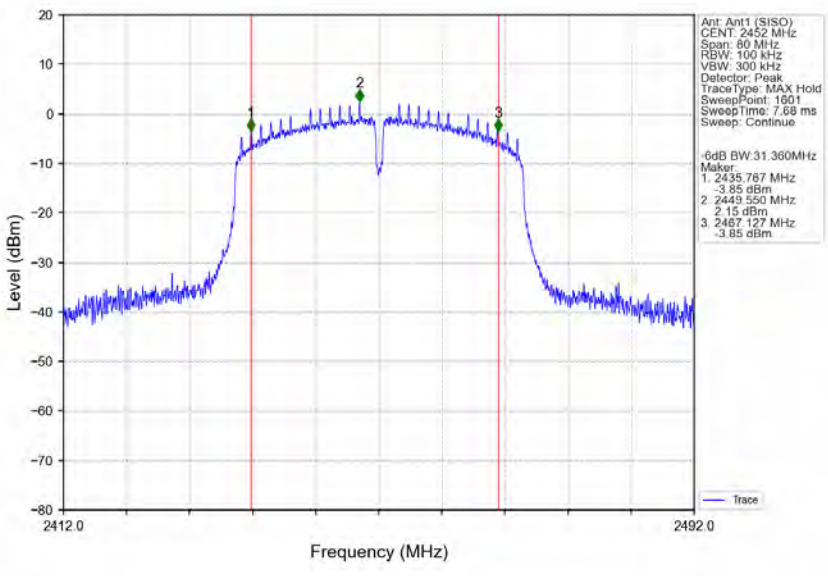
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



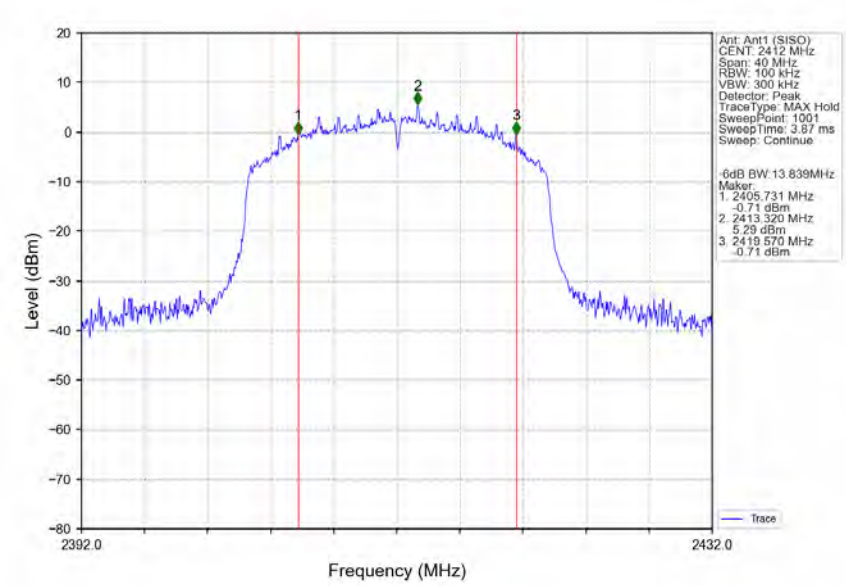
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



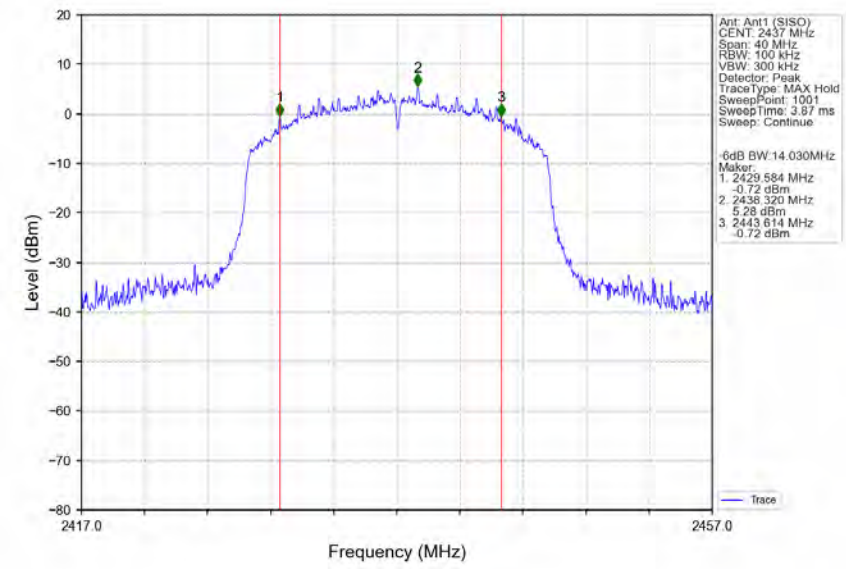
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



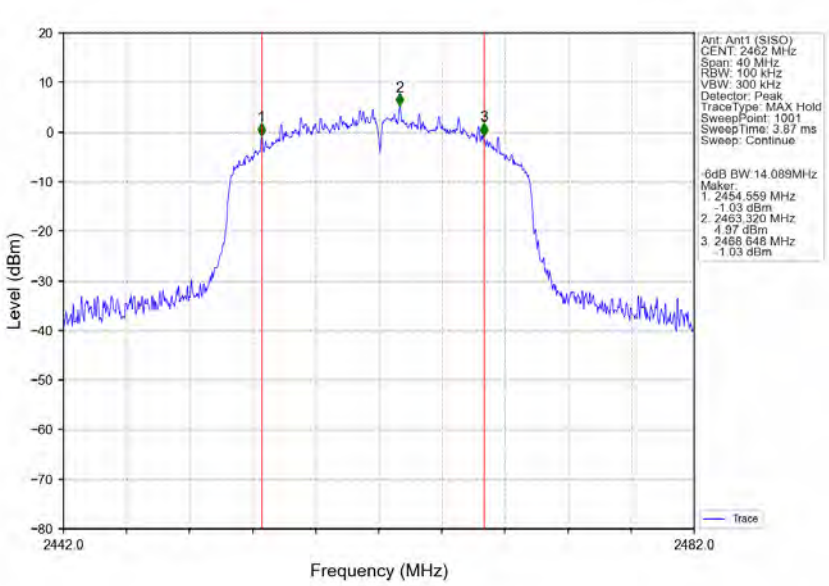
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



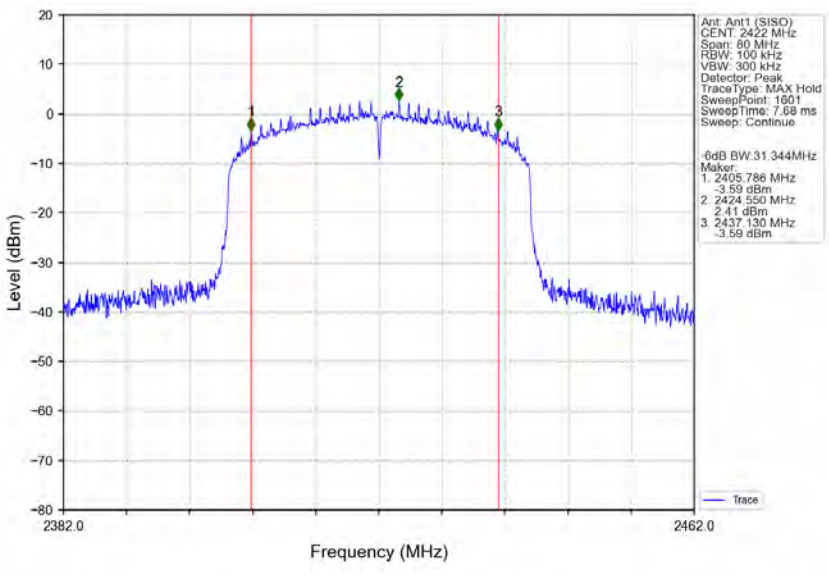
802.11ax(HEW20)_MCH_2437MHz_RU242_Left_Ant1 (SISO)_NTNV



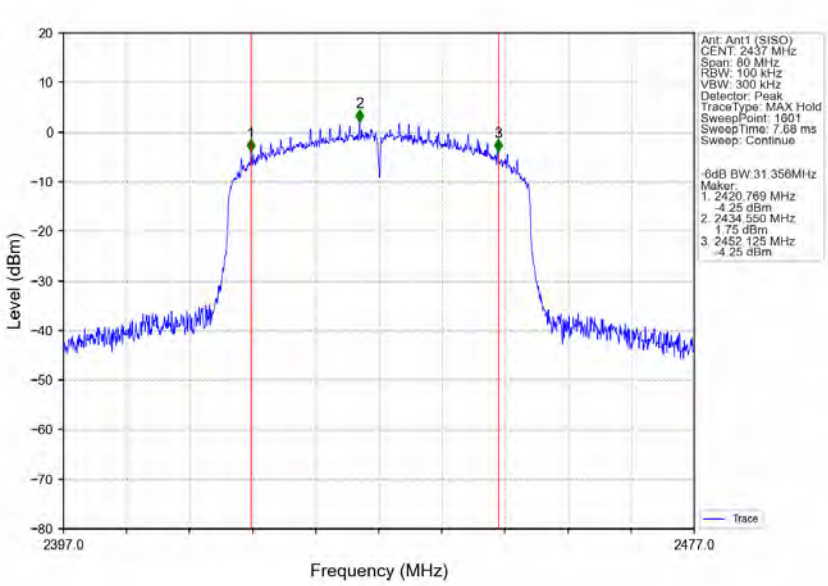
802.11ax(HEW20)_HCH_2462MHz_RU242_Left_Ant1 (SISO)_NTNV



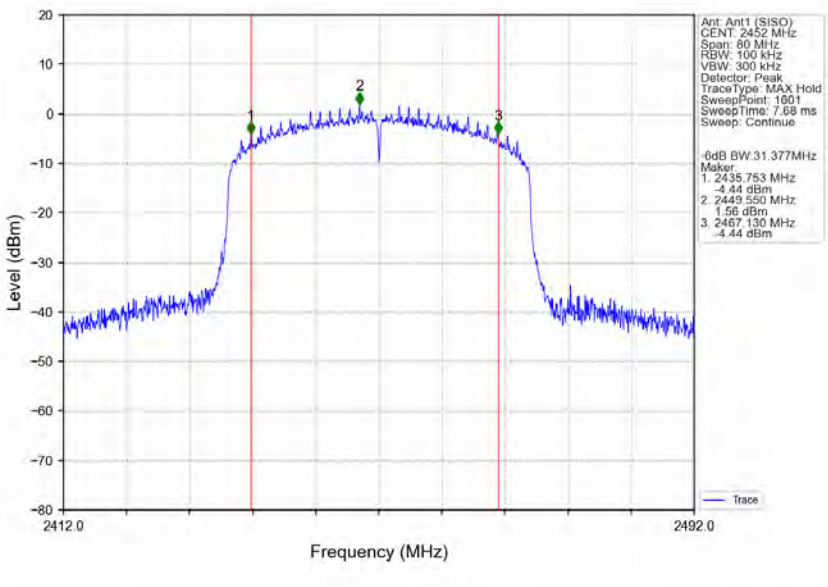
802.11ax(HEW40)_LCH_2422MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_HCH_2452MHz_RU484_Left_Ant1 (SISO)_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

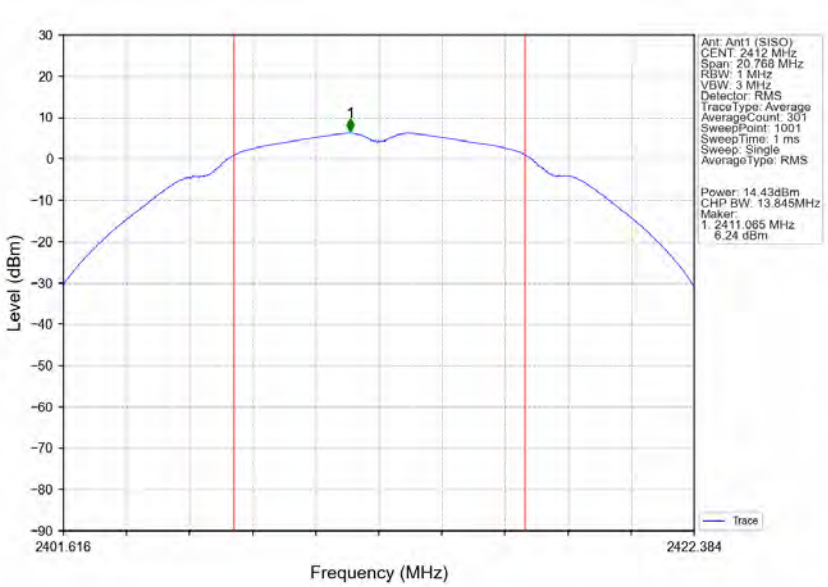
3.1.1 Power

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Average Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	14.43	<=30	Pass
		2437	/	/	14.42	<=30	Pass
		2462	/	/	14.22	<=30	Pass
802.11g	SISO	2412	/	/	13.84	<=30	Pass
		2437	/	/	14.91	<=30	Pass
		2462	/	/	14.62	<=30	Pass
802.11n (HT20)	SISO	2412	/	/	14.69	<=30	Pass
		2437	/	/	14.61	<=30	Pass
		2462	/	/	14.31	<=30	Pass
802.11n (HT40)	SISO	2422	/	/	15.01	<=30	Pass
		2437	/	/	14.95	<=30	Pass
		2452	/	/	14.81	<=30	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	14.37	<=30	Pass
		2437	RU242	Left	14.39	<=30	Pass
		2462	RU242	Left	14.07	<=30	Pass
802.11ax (HEW40)	SISO	2422	RU484	Left	14.95	<=30	Pass
		2437	RU484	Left	14.36	<=30	Pass
		2452	RU484	Left	14.17	<=30	Pass
Note1: Antenna Gain: Ant1: 4.50dBi;							

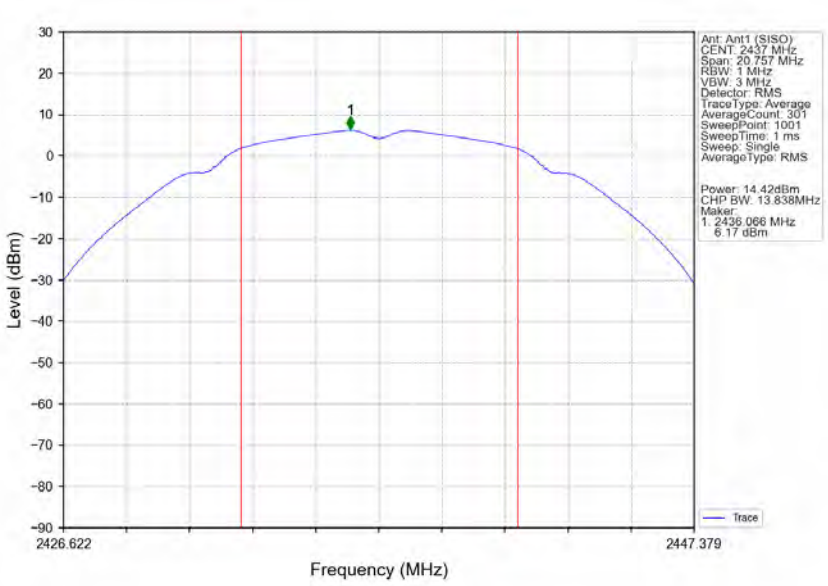
3.2 Test Graph

3.2.1 Power

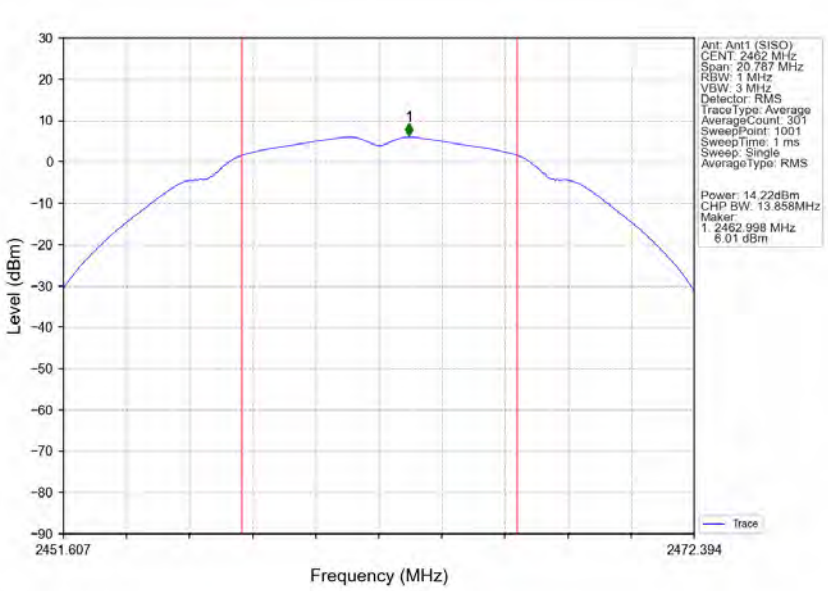
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



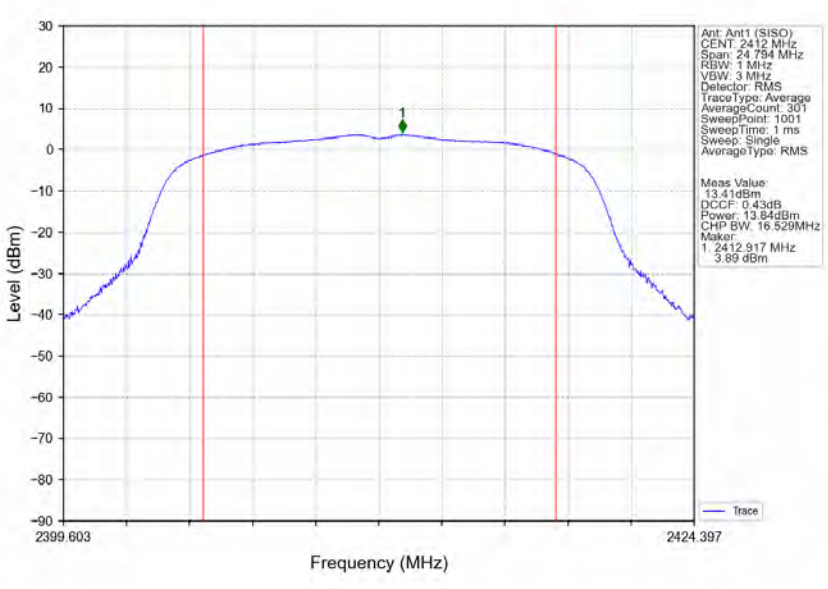
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



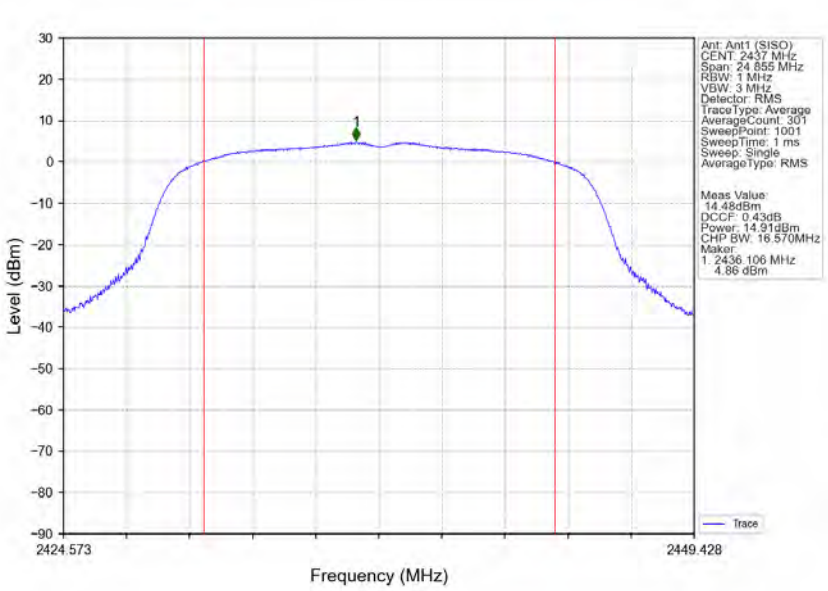
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



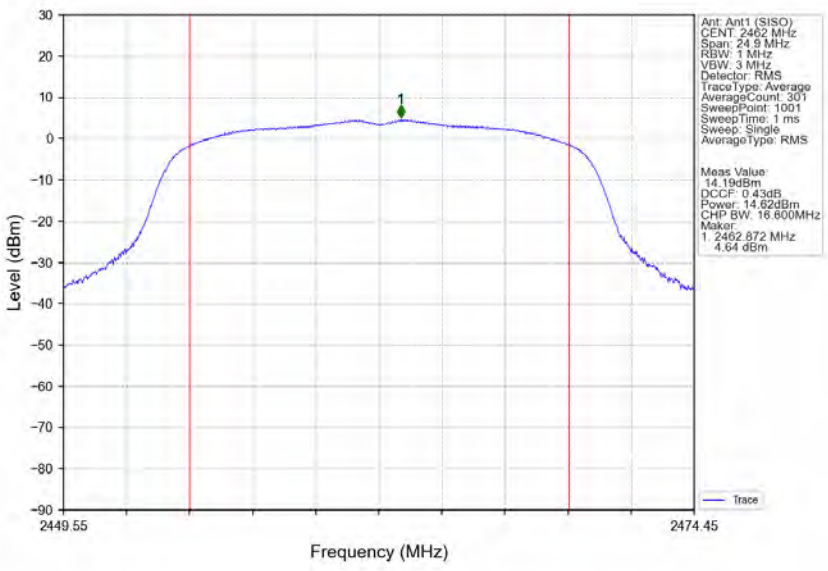
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



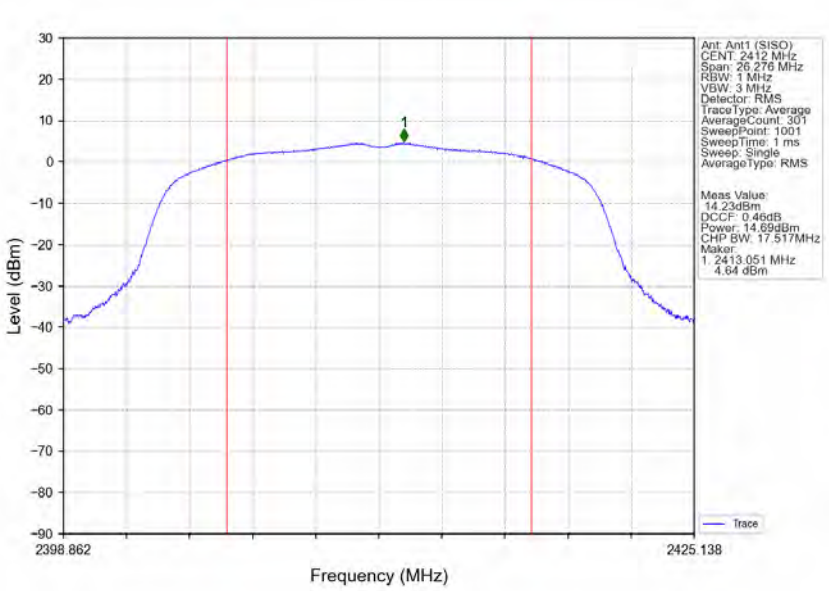
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



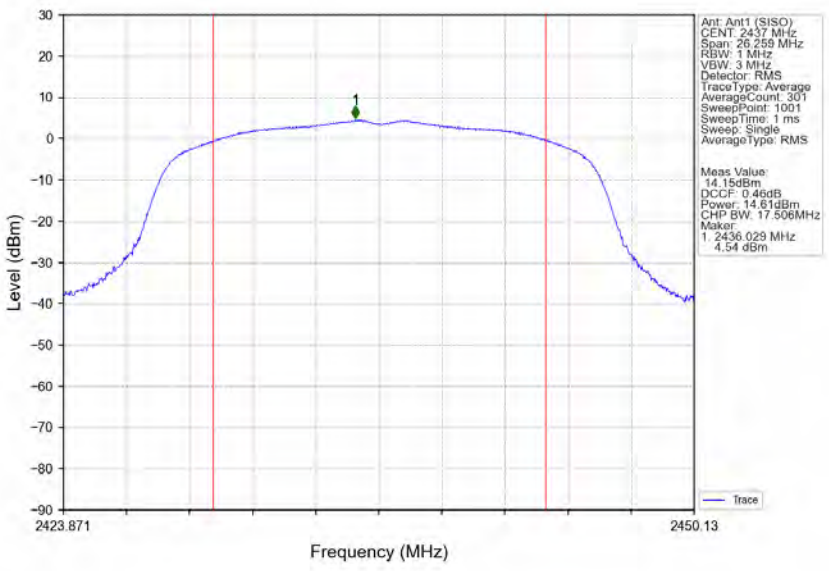
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



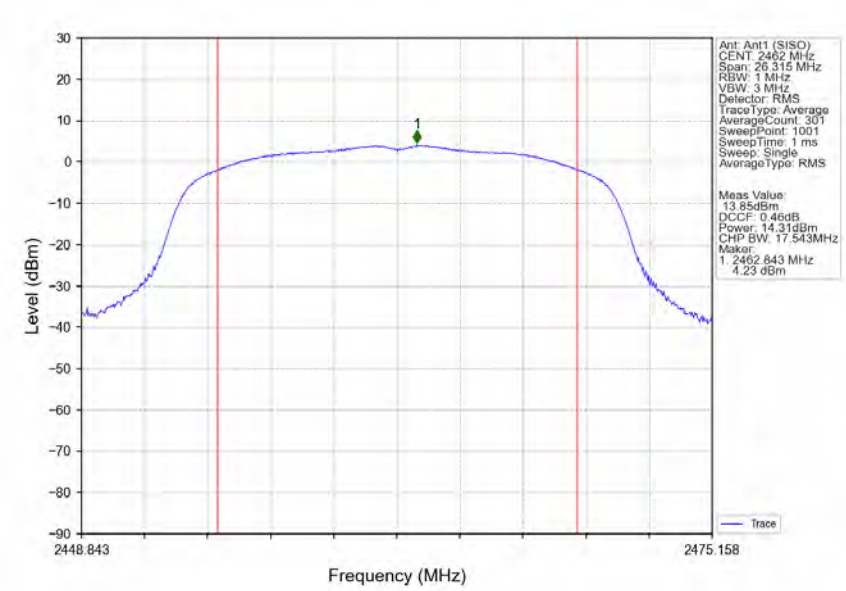
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



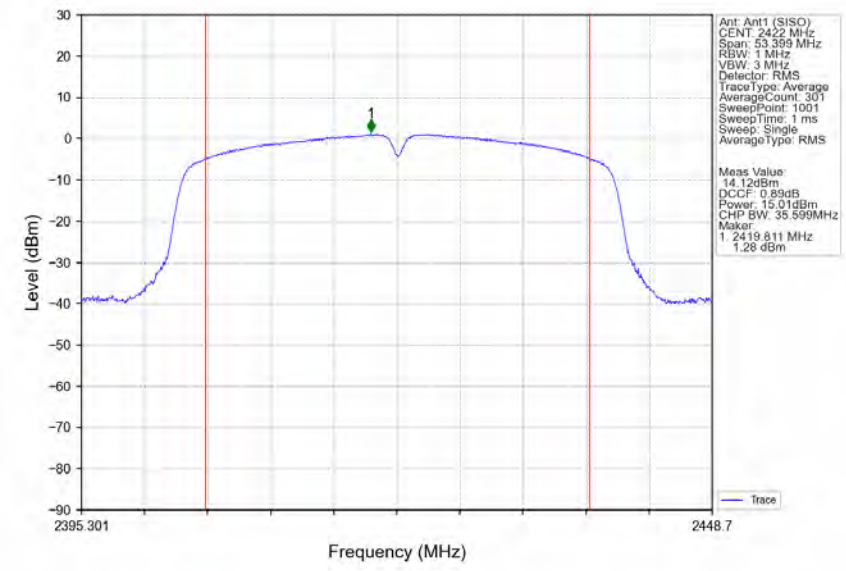
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



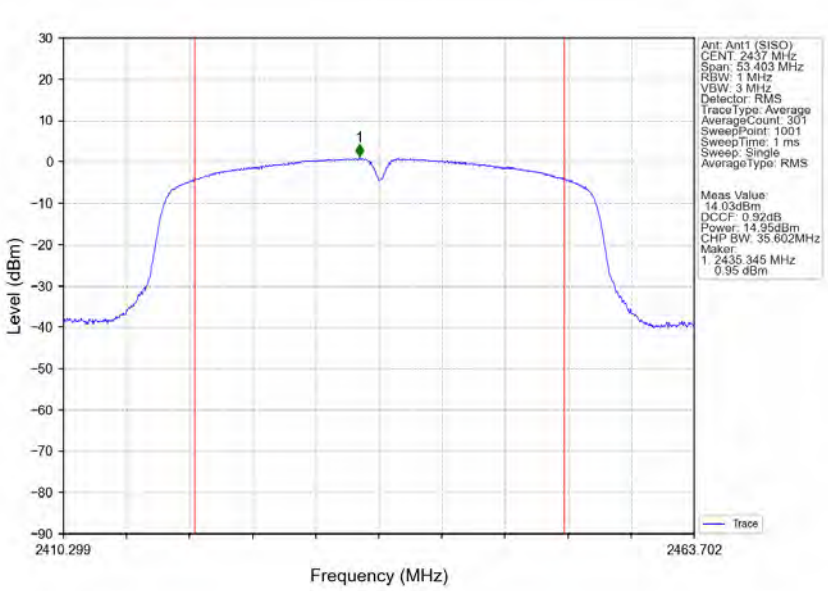
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



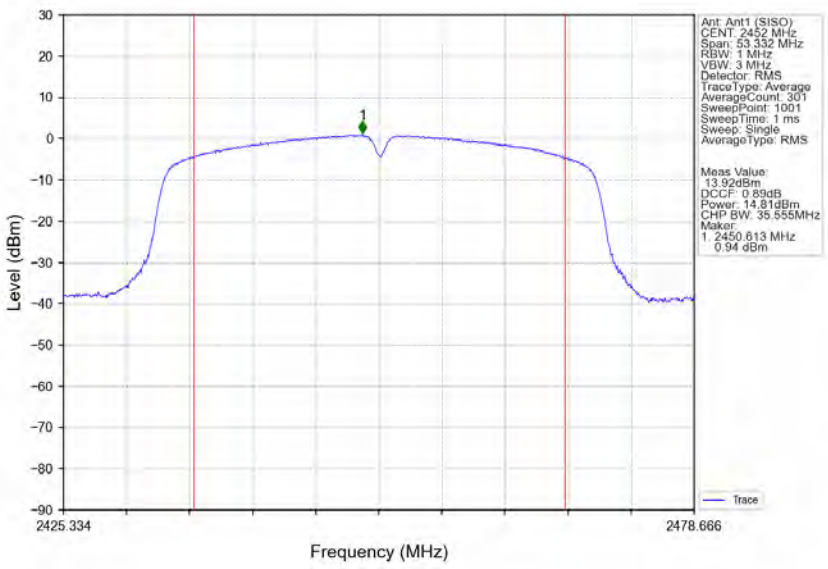
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



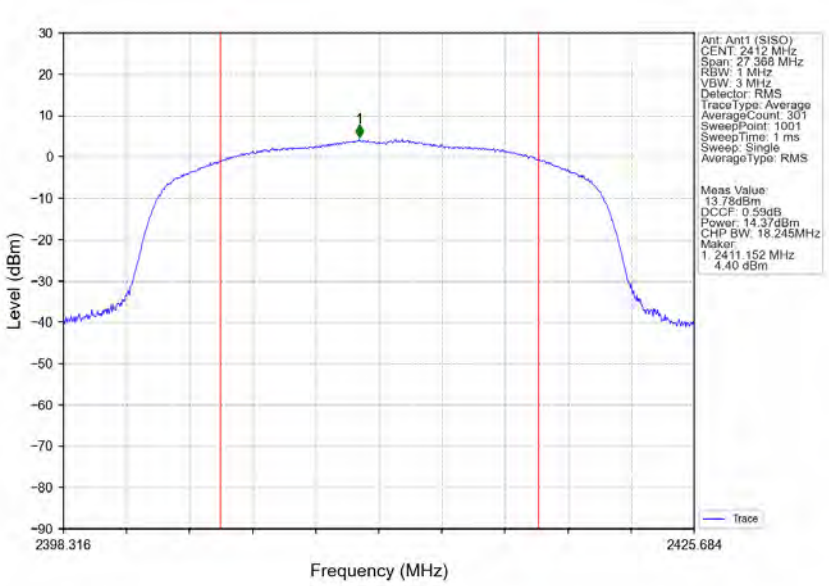
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



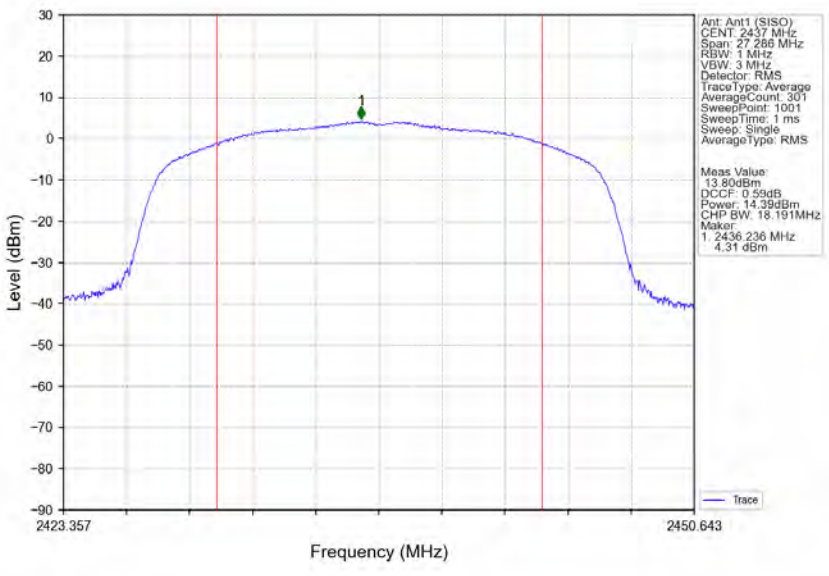
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



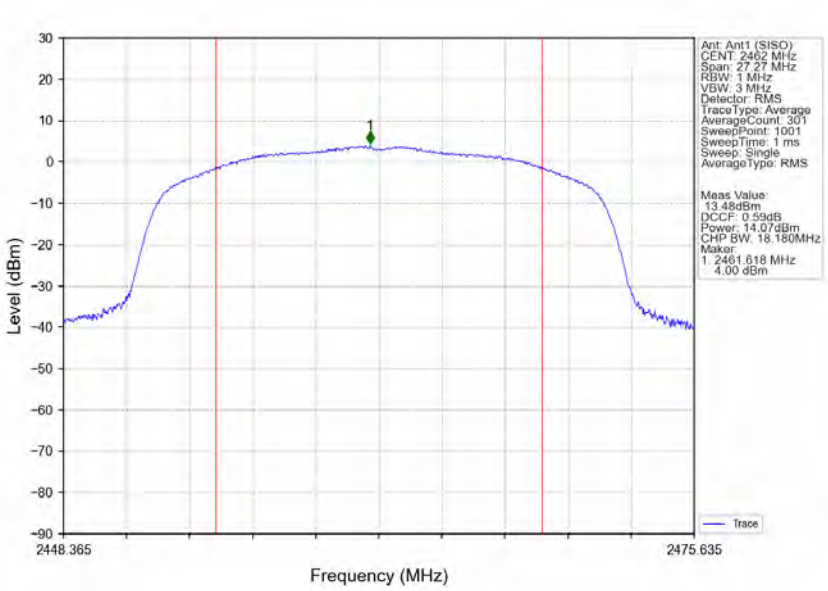
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



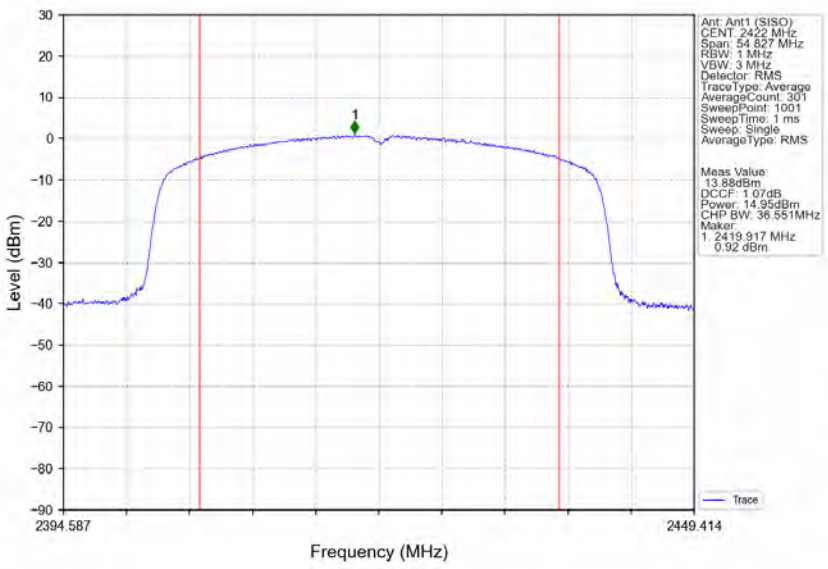
802.11ax(HEW20)_MCH_2437MHz_RU242_Left_Ant1 (SISO)_NTNV



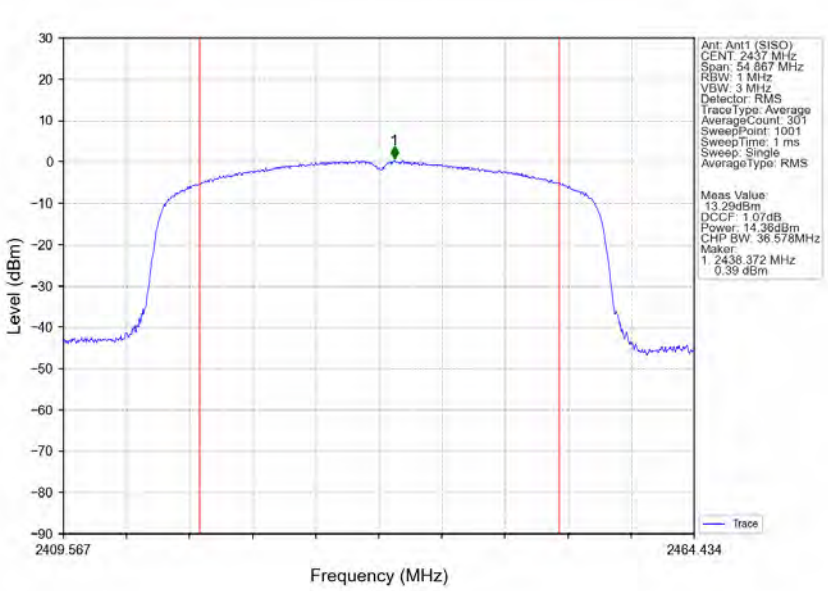
802.11ax(HEW20)_HCH_2462MHz_RU242_Left_Ant1 (SISO)_NTNV



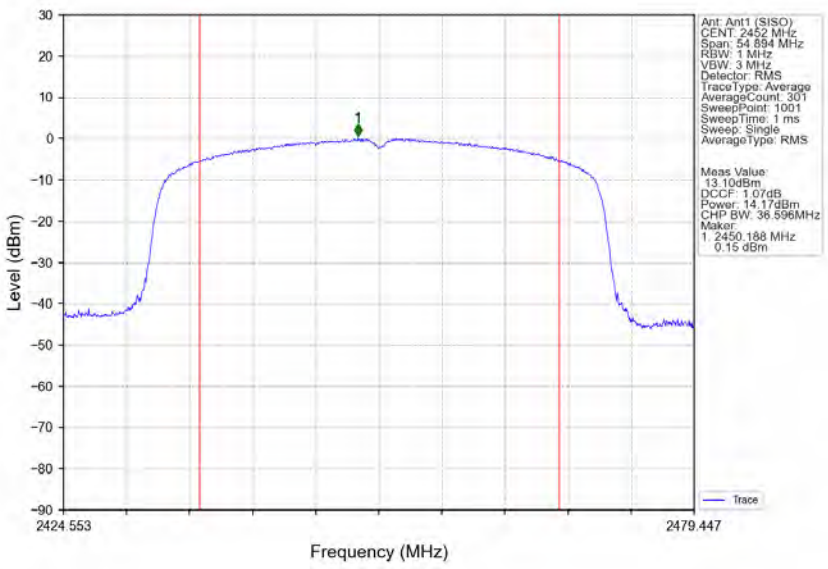
802.11ax(HEW40)_LCH_2422MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_HCH_2452MHz_RU484_Left_Ant1 (SISO)_NTNV



4. Maximum Power Spectral Density

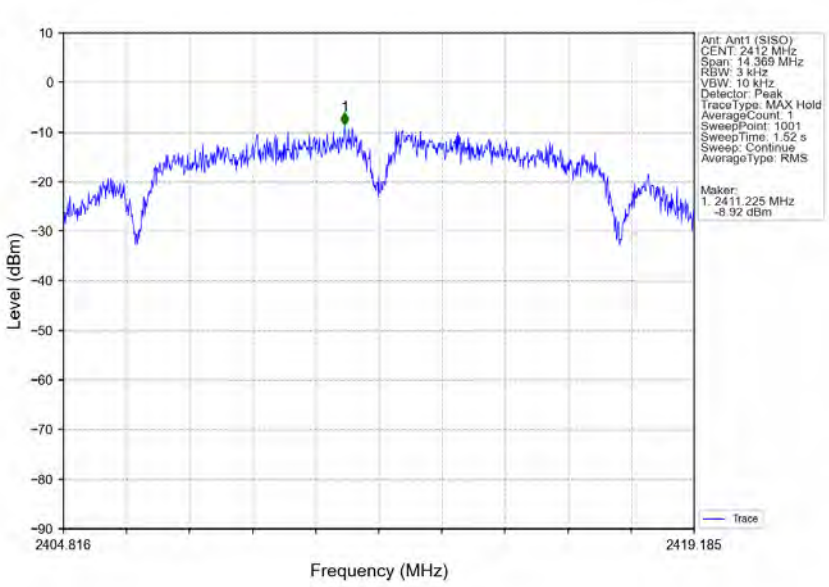
4.1 Test Result

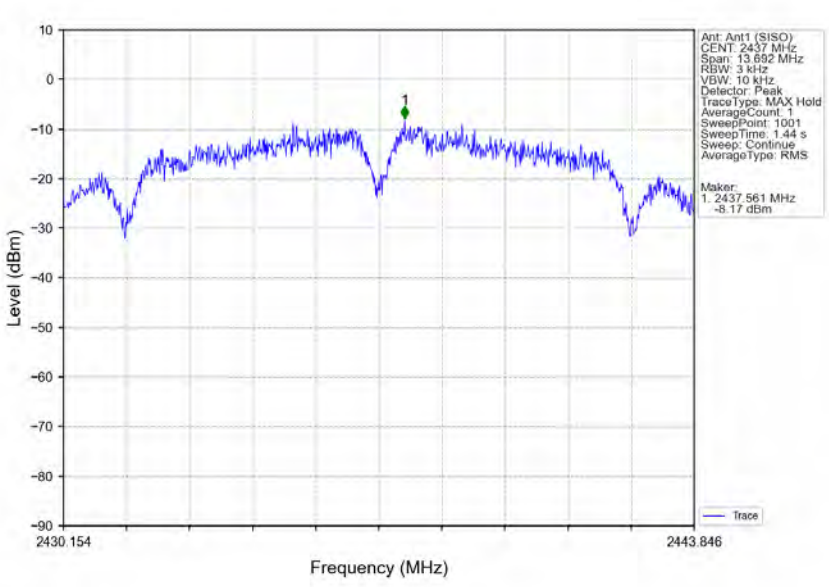
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/3kHz)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	-8.92	<=8	Pass
		2437	/	/	-8.17	<=8	Pass
		2462	/	/	-8.35	<=8	Pass
802.11g	SISO	2412	/	/	-10.61	<=8	Pass
		2437	/	/	-8.49	<=8	Pass
		2462	/	/	-9.86	<=8	Pass
802.11n (HT20)	SISO	2412	/	/	-9.95	<=8	Pass
		2437	/	/	-9.21	<=8	Pass
		2462	/	/	-10.09	<=8	Pass
802.11n (HT40)	SISO	2422	/	/	-11.98	<=8	Pass
		2437	/	/	-11.00	<=8	Pass
		2452	/	/	-12.49	<=8	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	-10.24	<=8	Pass
		2437	RU242	Left	-9.94	<=8	Pass
		2462	RU242	Left	-10.33	<=8	Pass
802.11ax (HEW40)	SISO	2422	RU484	Left	-13.15	<=8	Pass
		2437	RU484	Left	-13.69	<=8	Pass
		2452	RU484	Left	-13.41	<=8	Pass
Note1: Antenna Gain: Ant1: 4.50dBi;							

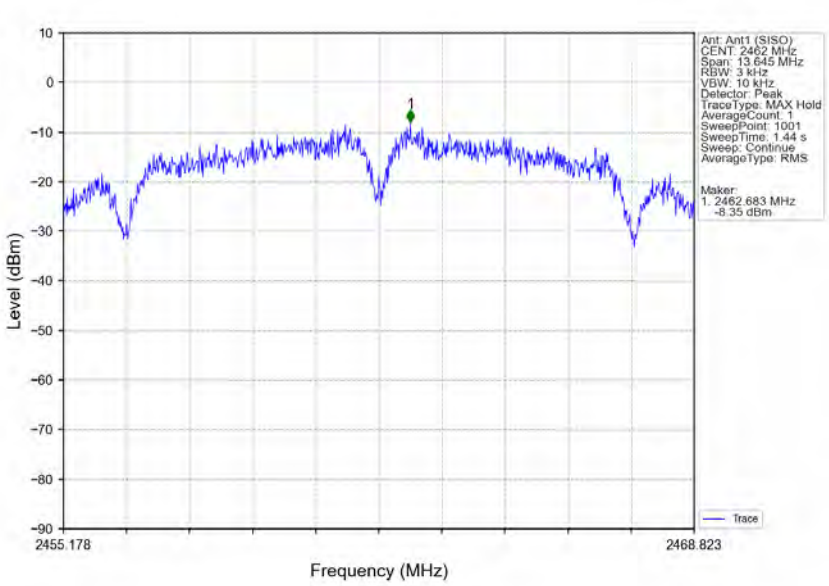
4.2 Test Graph

4.2.1 PSD

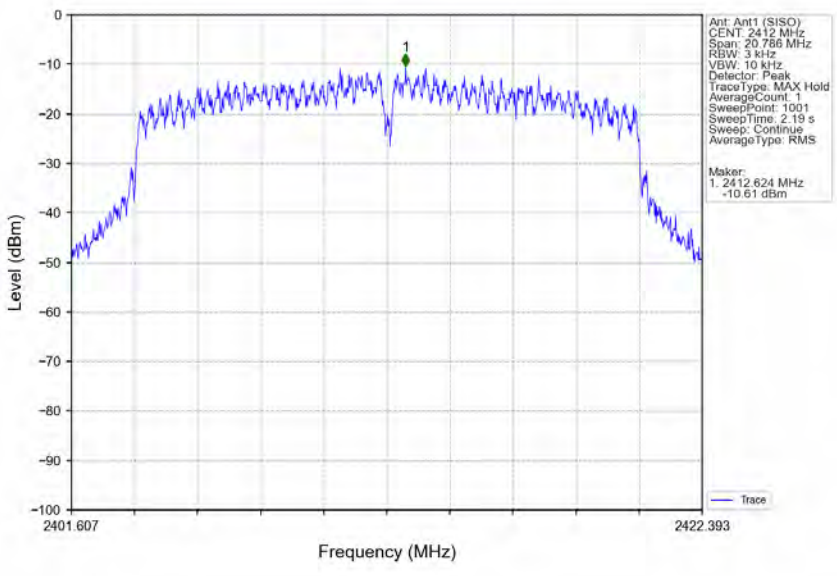
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV


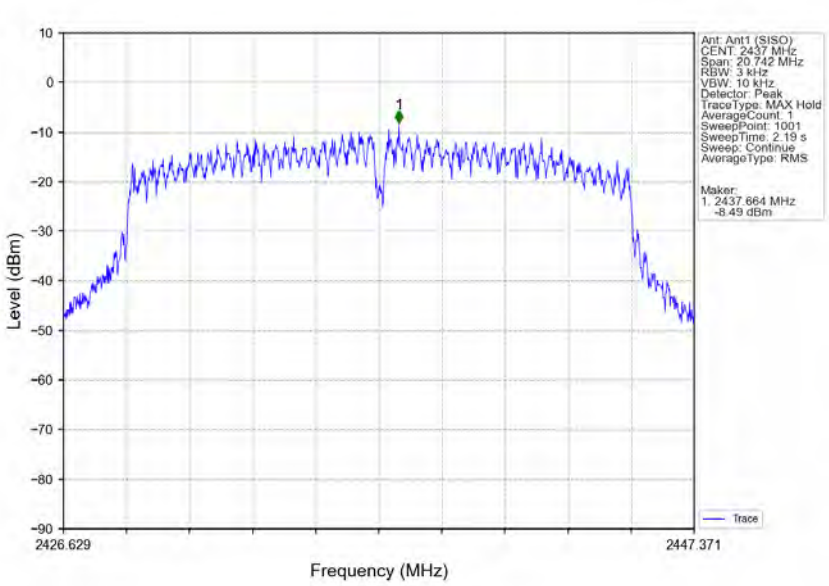
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



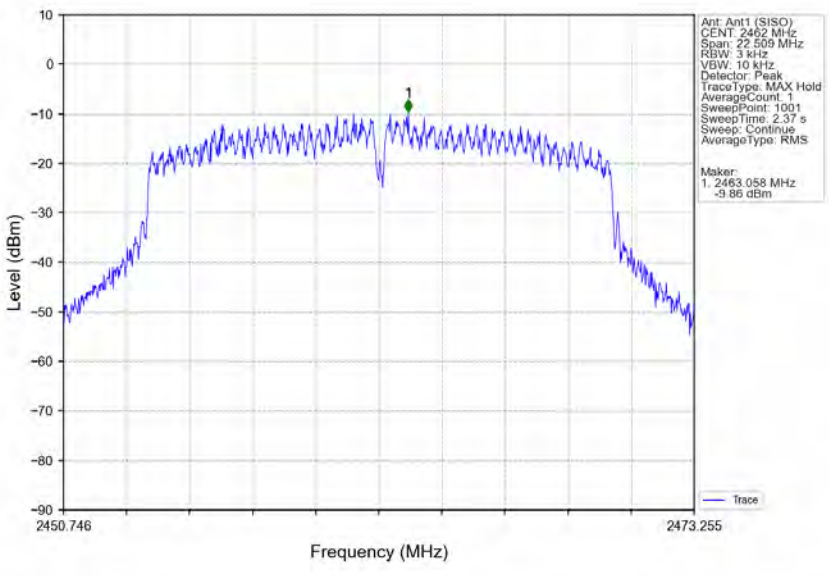
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



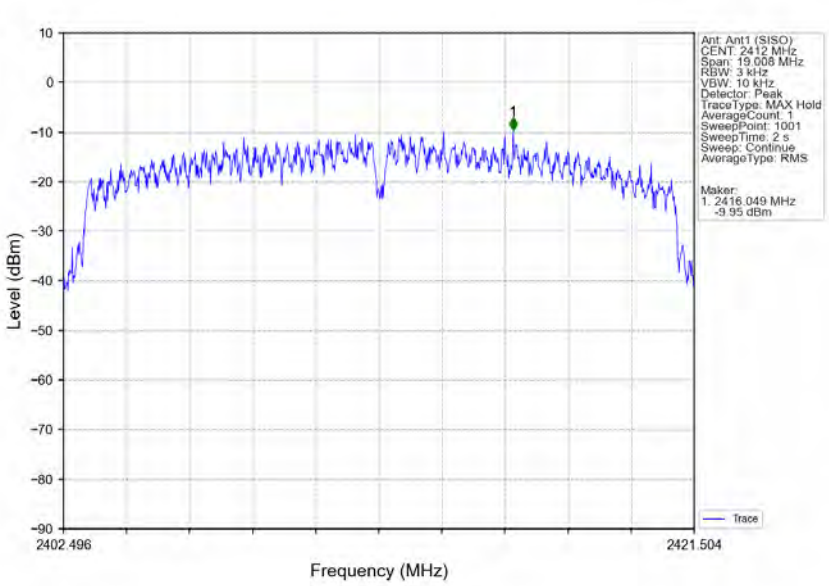
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



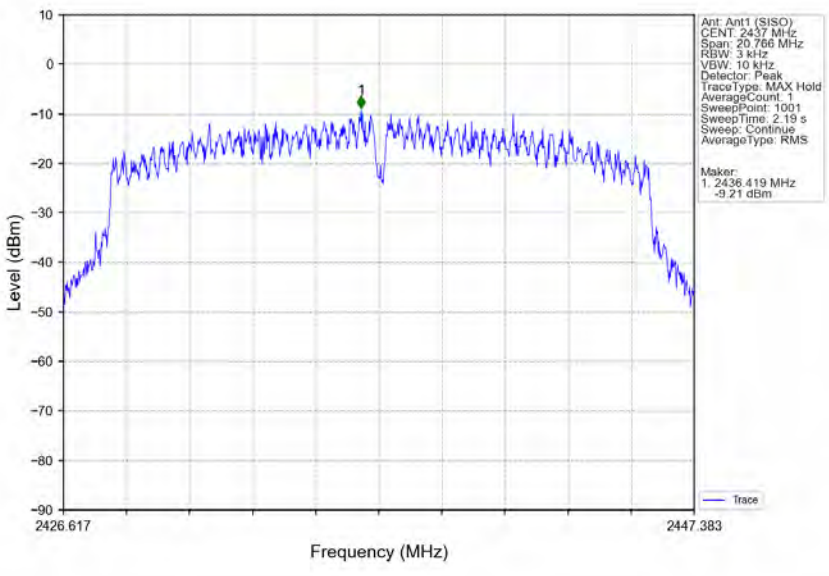
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



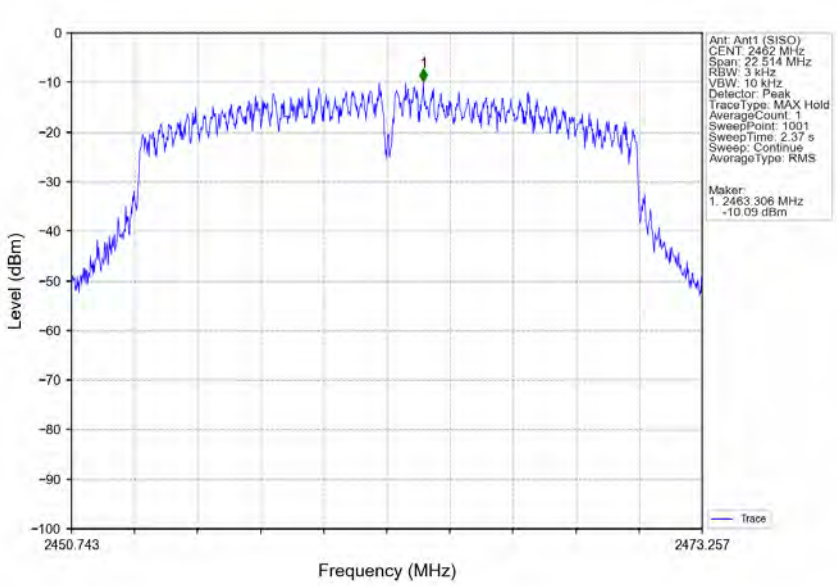
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



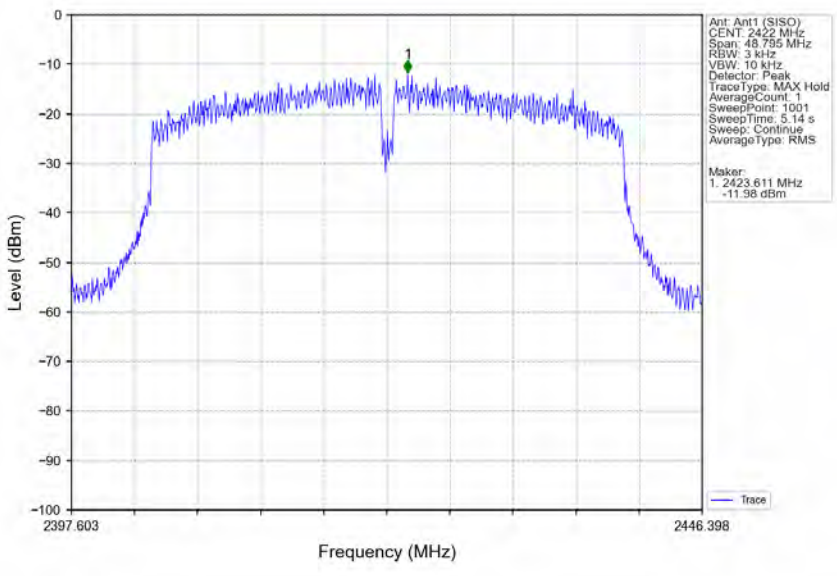
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



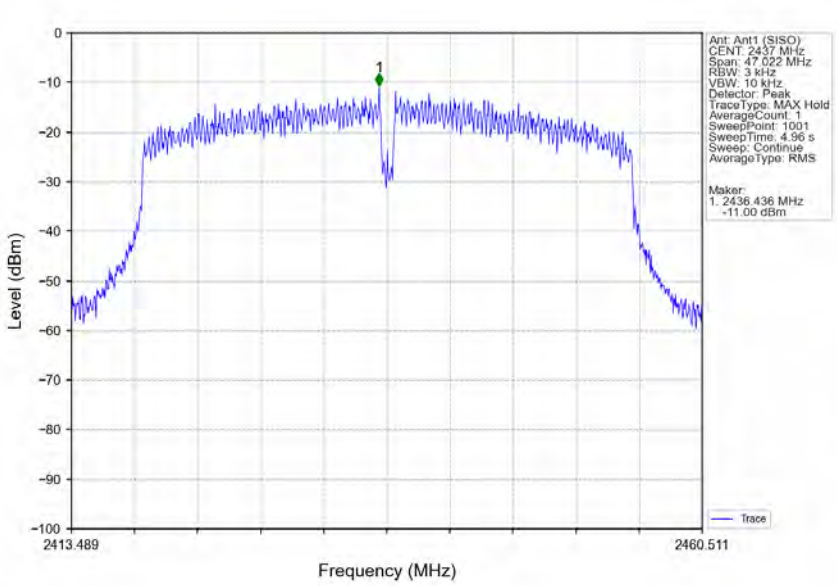
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



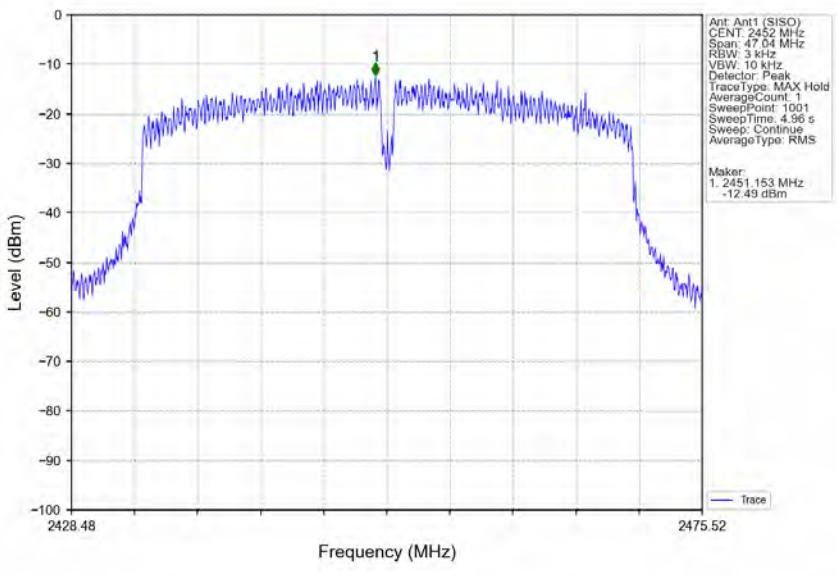
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



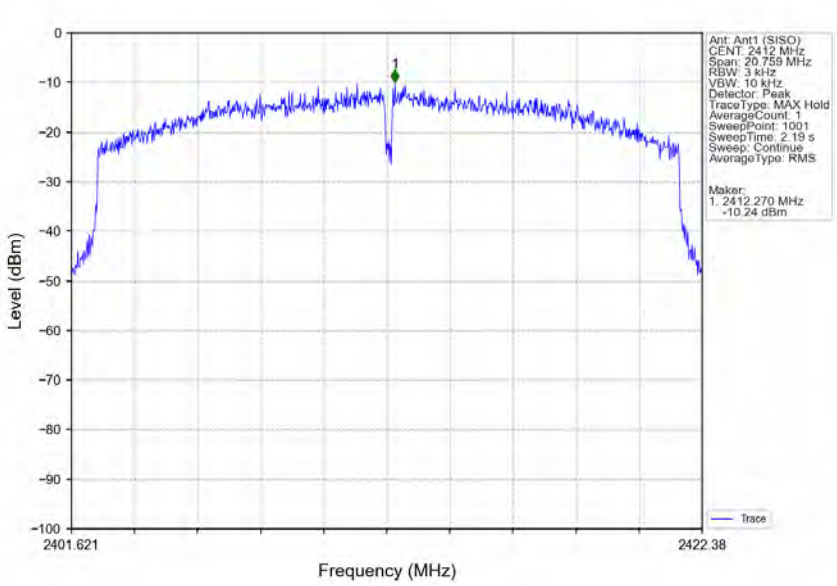
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



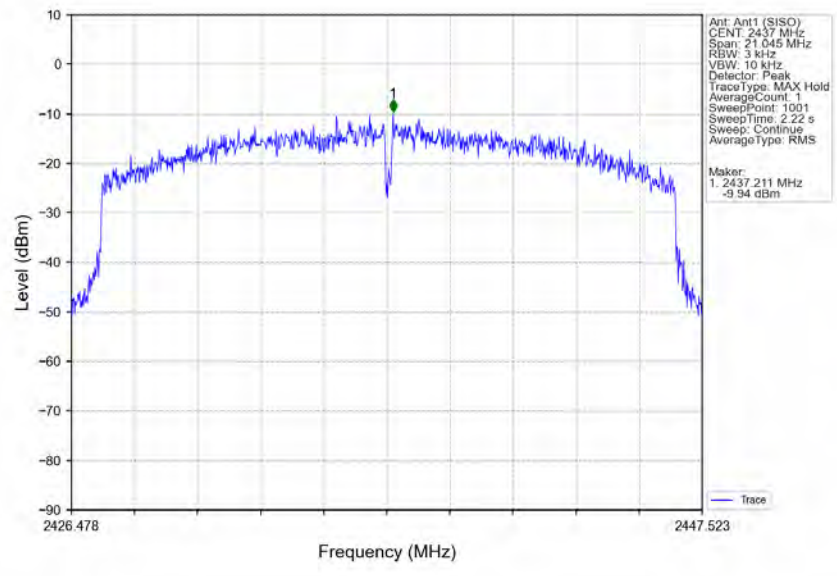
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



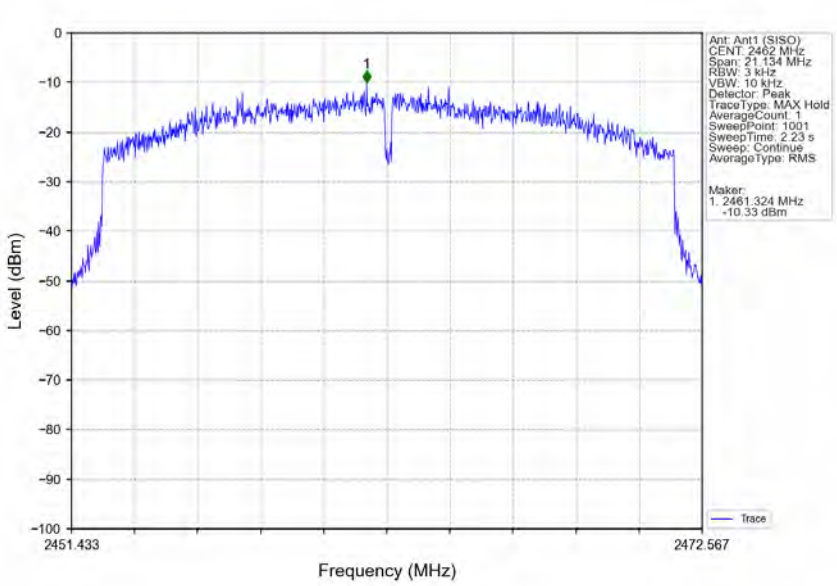
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



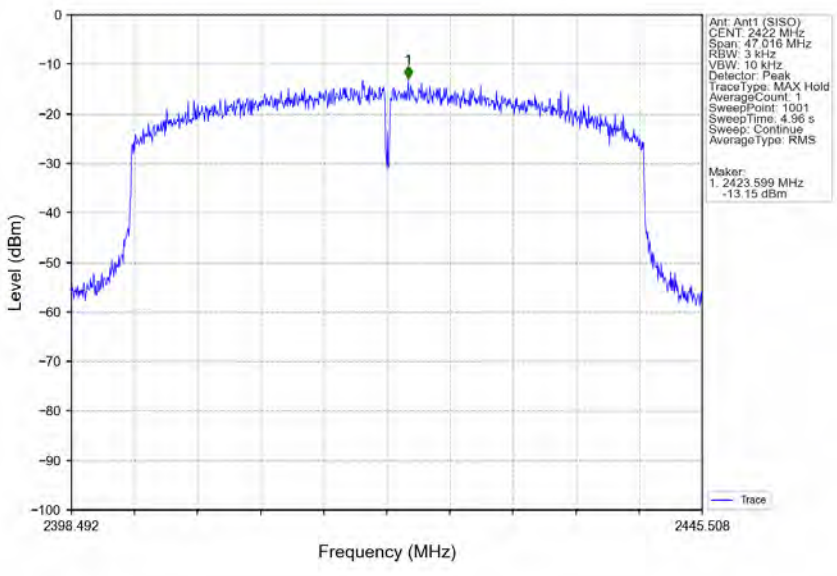
802.11ax(HEW20)_MCH_2437MHz_RU242_Left_Ant1 (SISO)_NTNV



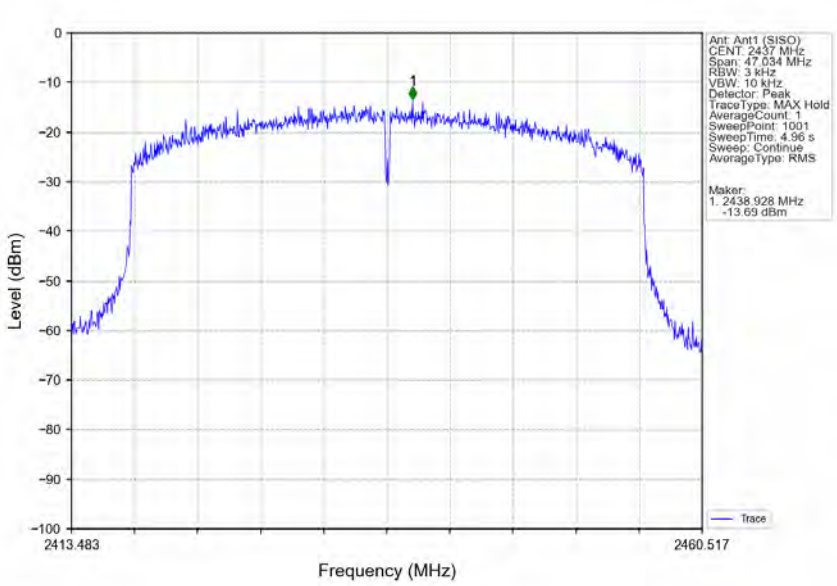
802.11ax(HEW20)_HCH_2462MHz_RU242_Left_Ant1 (SISO)_NTNV



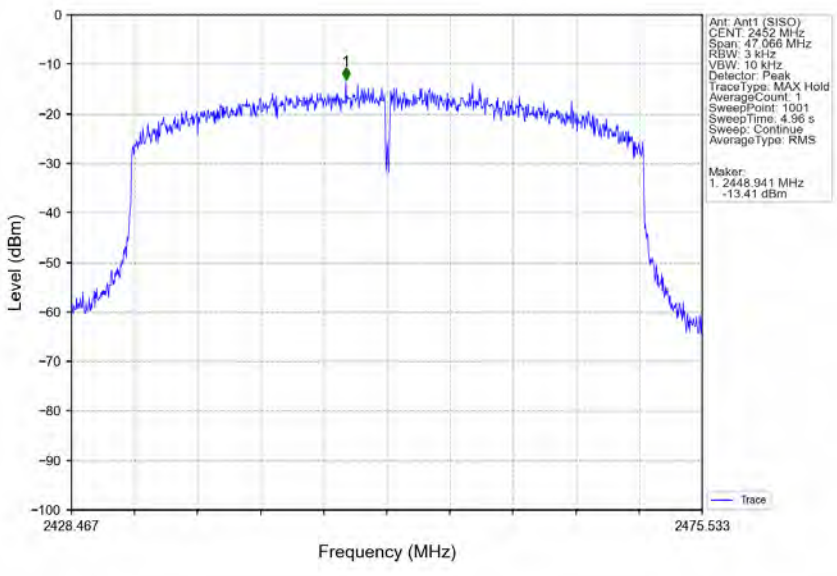
802.11ax(HEW40)_LCH_2422MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_MCH_2437MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_HCH_2452MHz_RU484_Left_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Level of Reference (dBm)
802.11b	SISO	2412	/	/	1	6.50
		2437	/	/	1	6.44
		2462	/	/	1	5.81
802.11g	SISO	2412	/	/	1	4.26
		2437	/	/	1	4.75
		2462	/	/	1	5.03
802.11n (HT20)	SISO	2412	/	/	1	5.35
		2437	/	/	1	5.31
		2462	/	/	1	4.96
802.11n (HT40)	SISO	2422	/	/	1	2.36
		2437	/	/	1	2.16
		2452	/	/	1	2.13
802.11ax (HEW20)	SISO	2412	RU242	Left	1	5.17
		2437	RU242	Left	1	4.99
		2462	RU242	Left	1	4.96
802.11ax (HEW40)	SISO	2422	RU484	Left	1	2.34
		2437	RU484	Left	1	1.75
		2452	RU484	Left	1	1.55
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

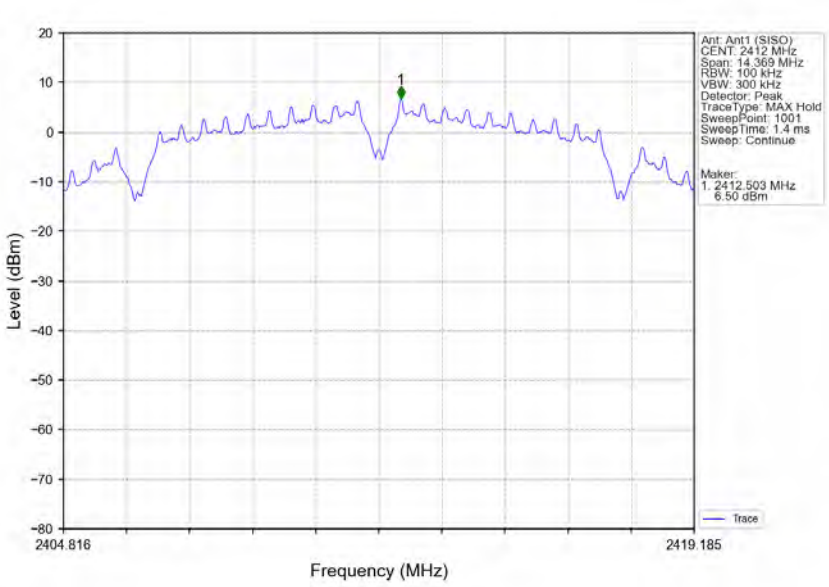
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	/	/	1	6.50	-23.50	Pass
		2437	/	/	1	6.50	-23.50	Pass
		2462	/	/	1	6.50	-23.50	Pass
802.11g	SISO	2412	/	/	1	5.03	-24.97	Pass
		2437	/	/	1	5.03	-24.97	Pass
		2462	/	/	1	5.03	-24.97	Pass
802.11n (HT20)	SISO	2412	/	/	1	5.35	-24.65	Pass
		2437	/	/	1	5.35	-24.65	Pass
		2462	/	/	1	5.35	-24.65	Pass
802.11n (HT40)	SISO	2422	/	/	1	2.36	-27.64	Pass
		2437	/	/	1	2.36	-27.64	Pass
		2452	/	/	1	2.36	-27.64	Pass
802.11ax (HEW20)	SISO	2412	RU242	Left	1	5.17	-24.83	Pass
		2437	RU242	Left	1	5.17	-24.83	Pass
		2462	RU242	Left	1	5.17	-24.83	Pass
802.11ax	SISO	2422	RU484	Left	1	2.34	-27.66	Pass

(HEW40)		2437	RU484	Left	1	2.34	-27.66	Pass
		2452	RU484	Left	1	2.34	-27.66	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.								

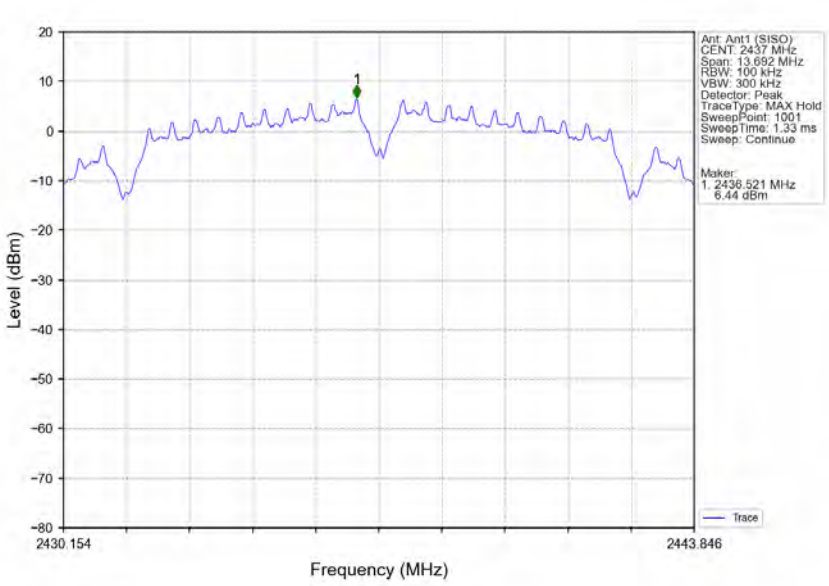
5.2 Test Graph

5.2.1 Ref

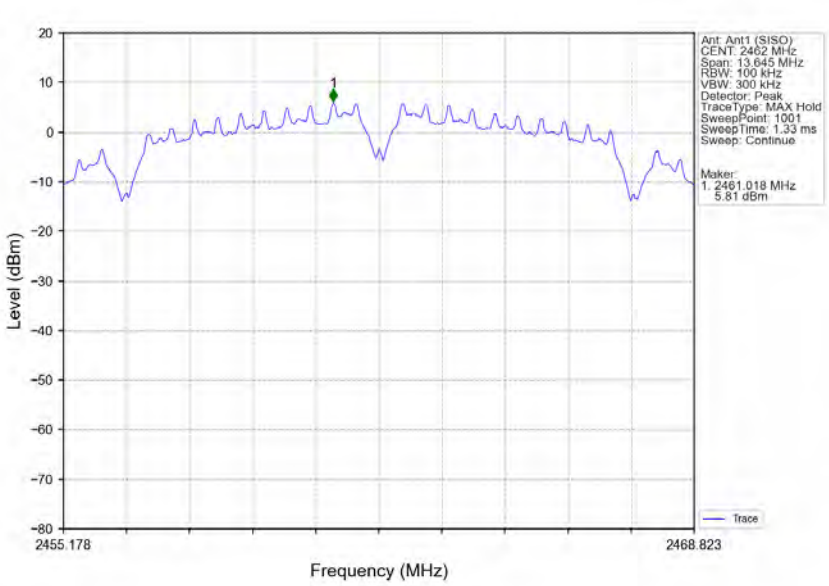
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



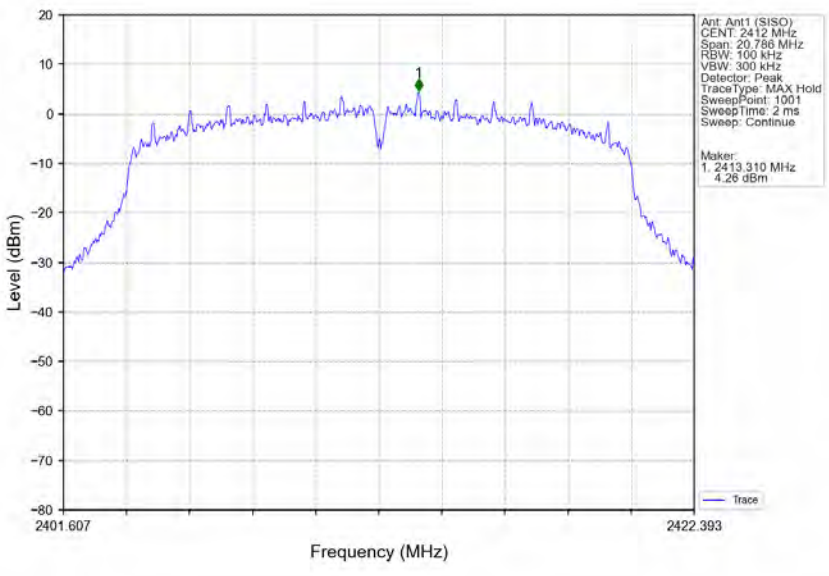
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



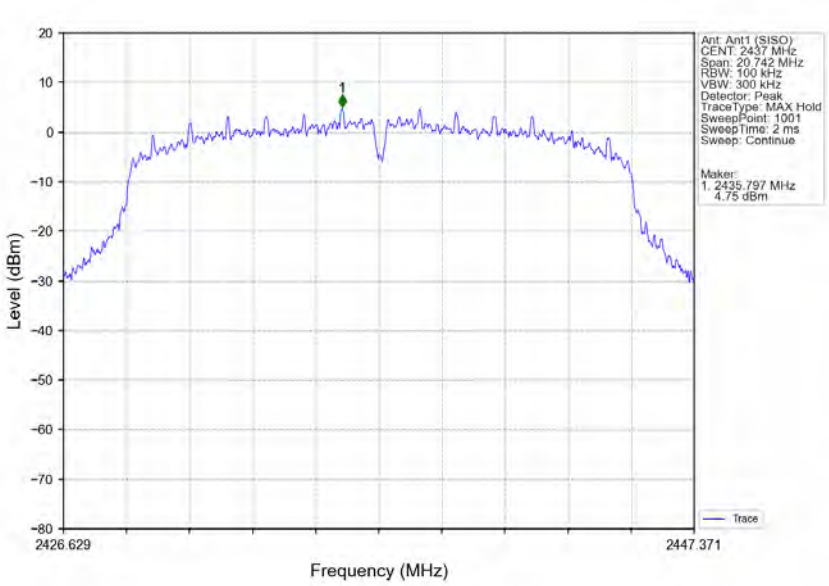
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



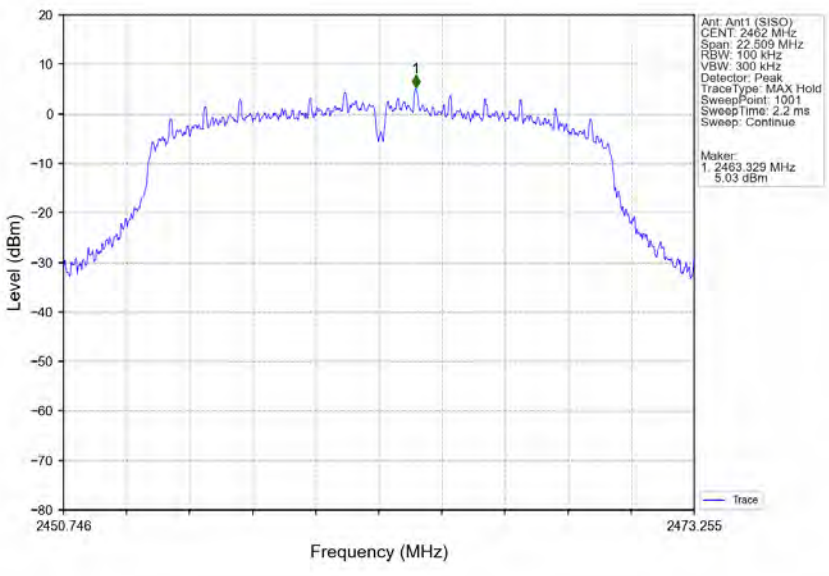
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



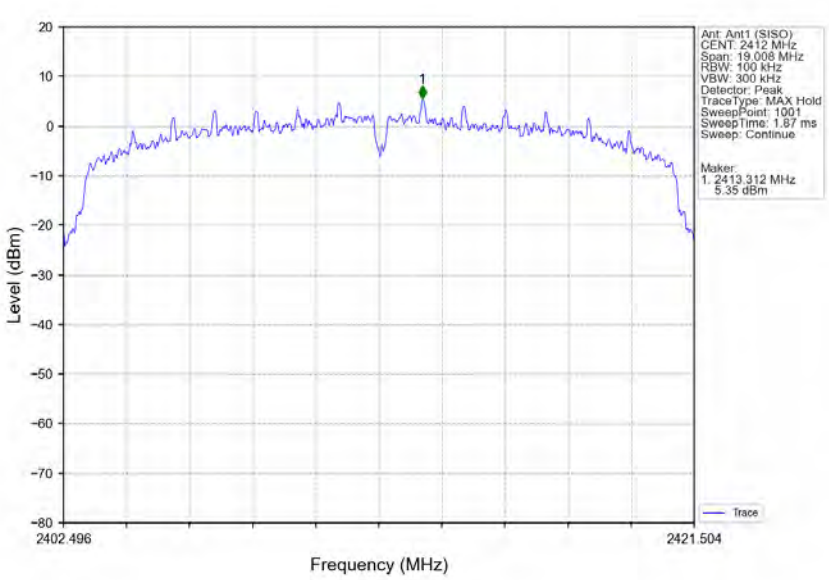
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



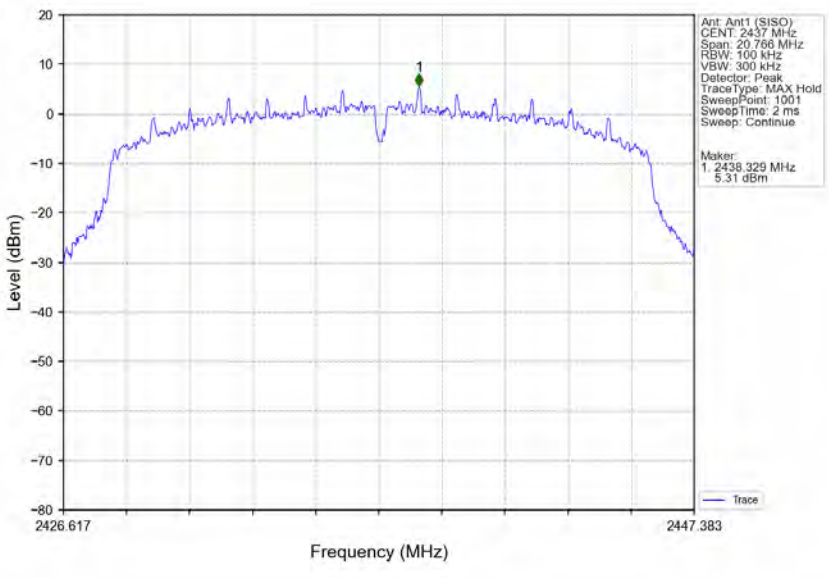
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



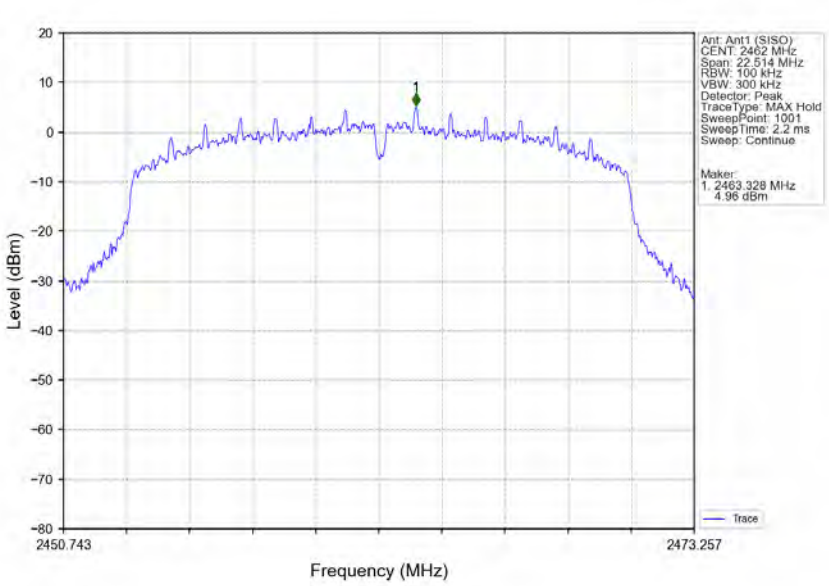
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



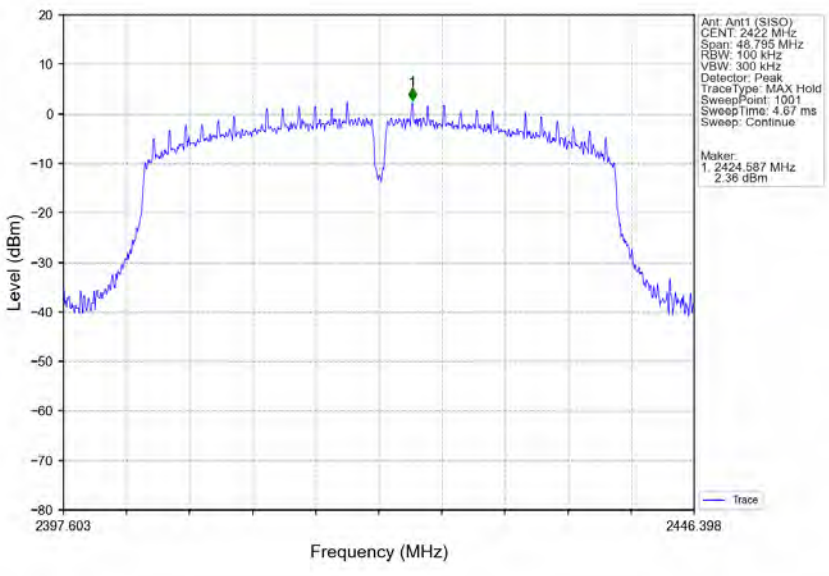
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



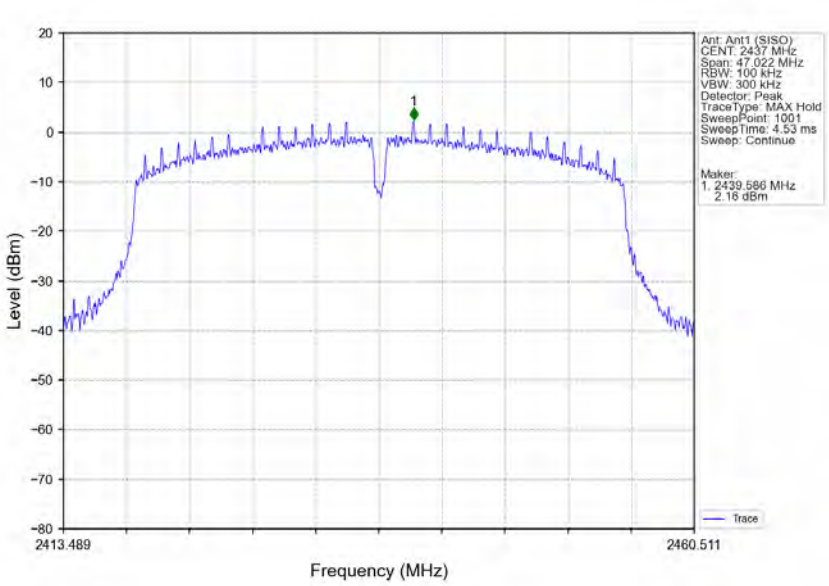
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



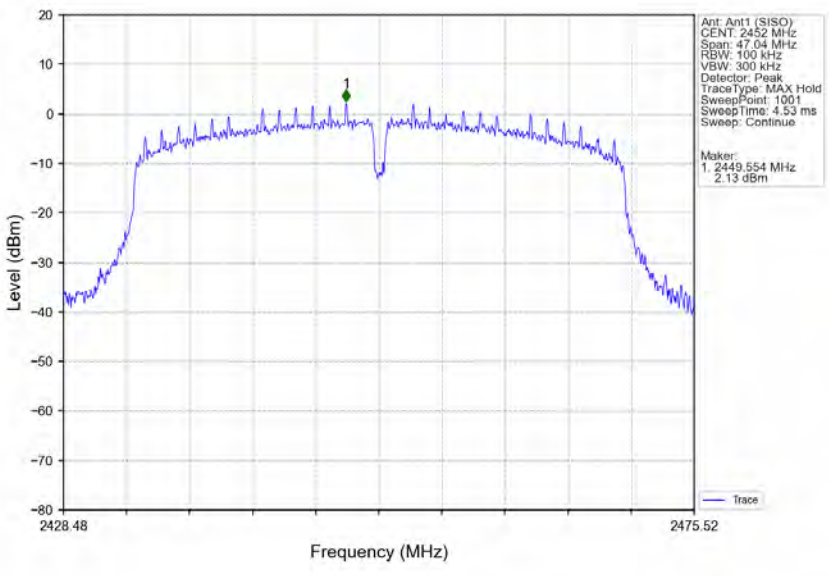
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



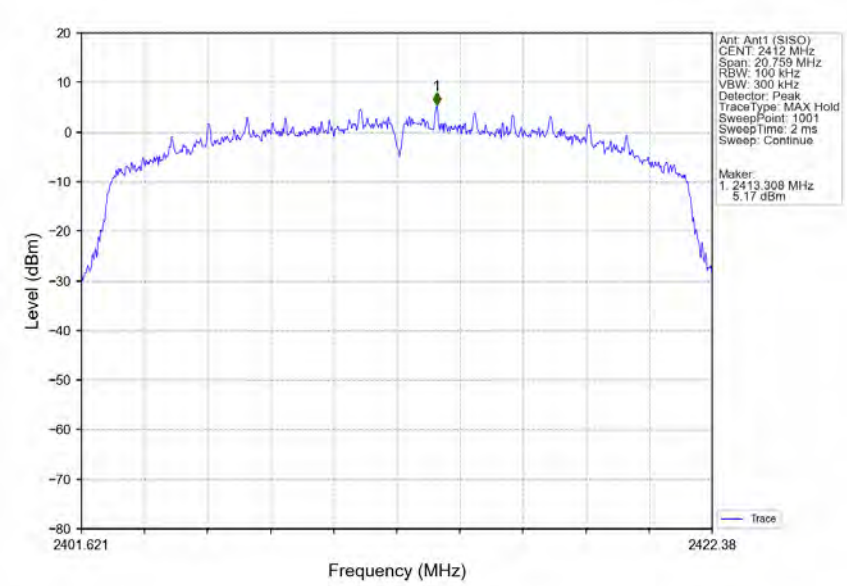
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



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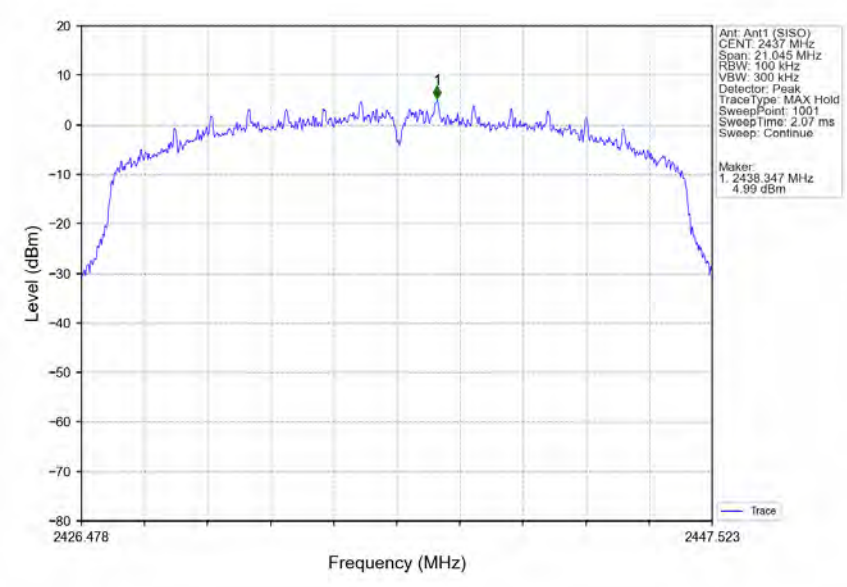

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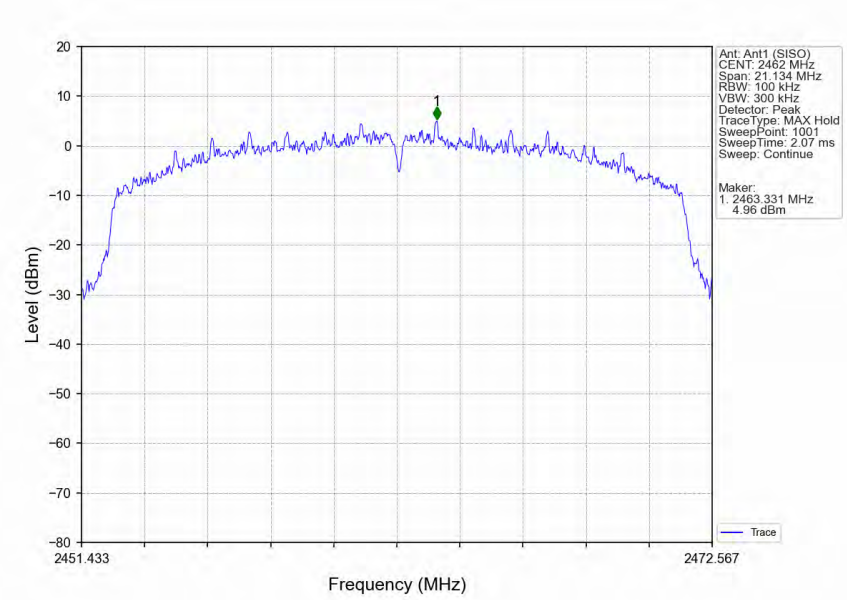

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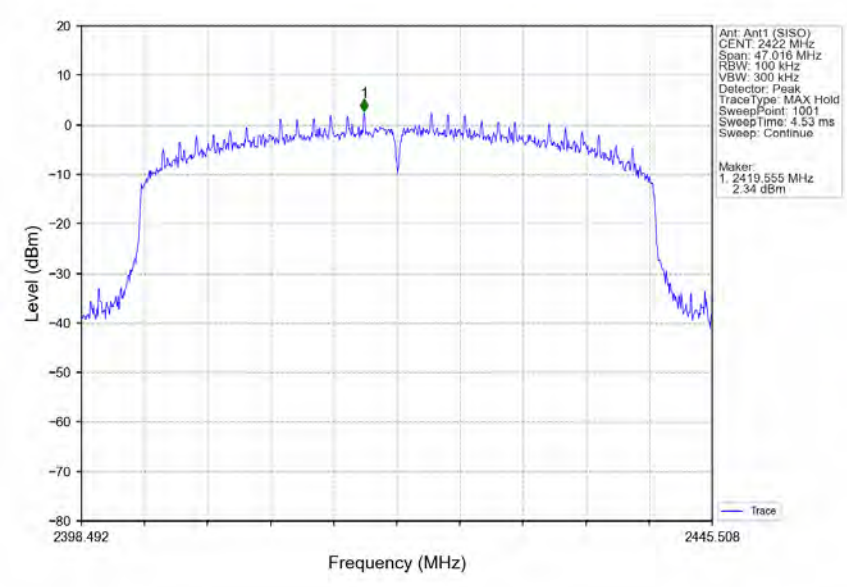

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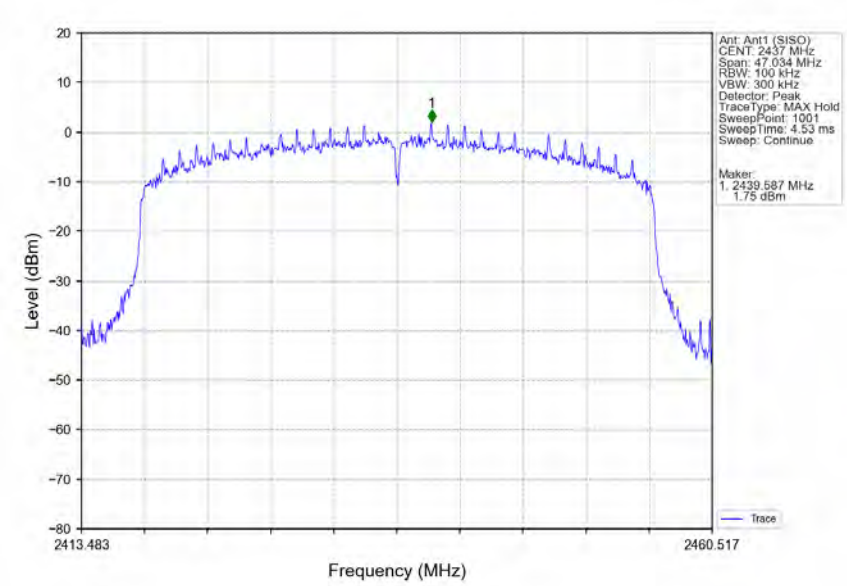

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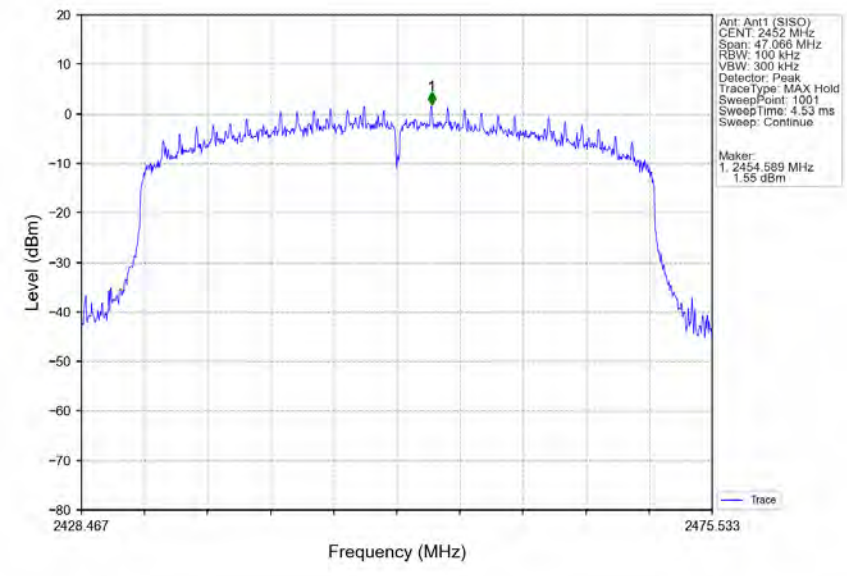
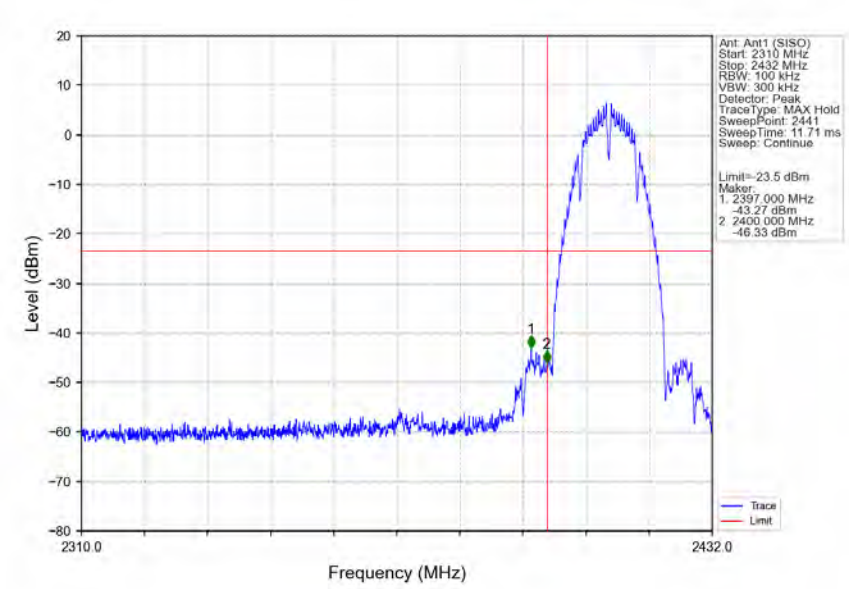


5.2.2 CSE

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV


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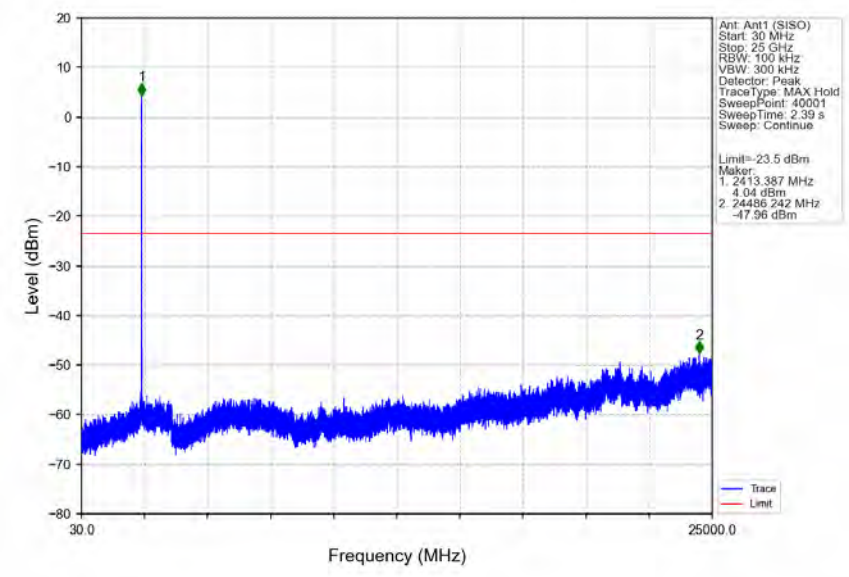

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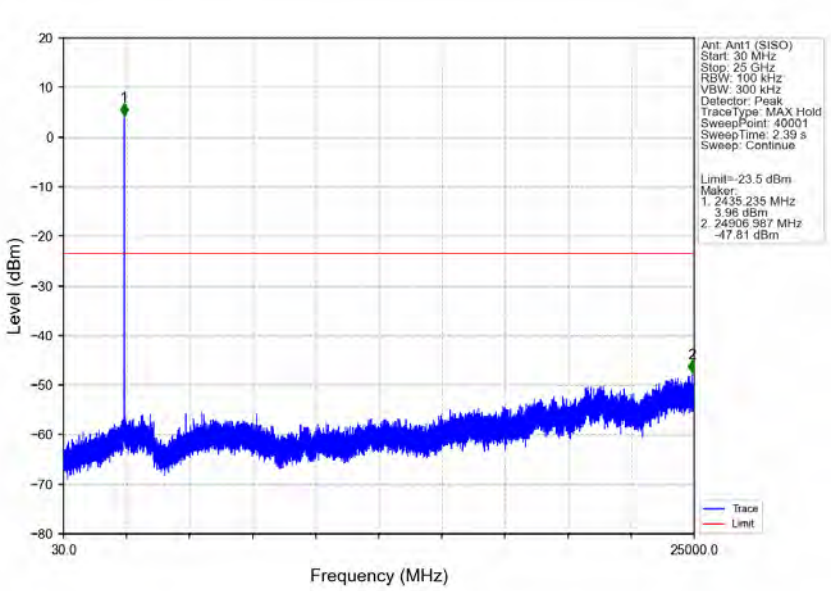

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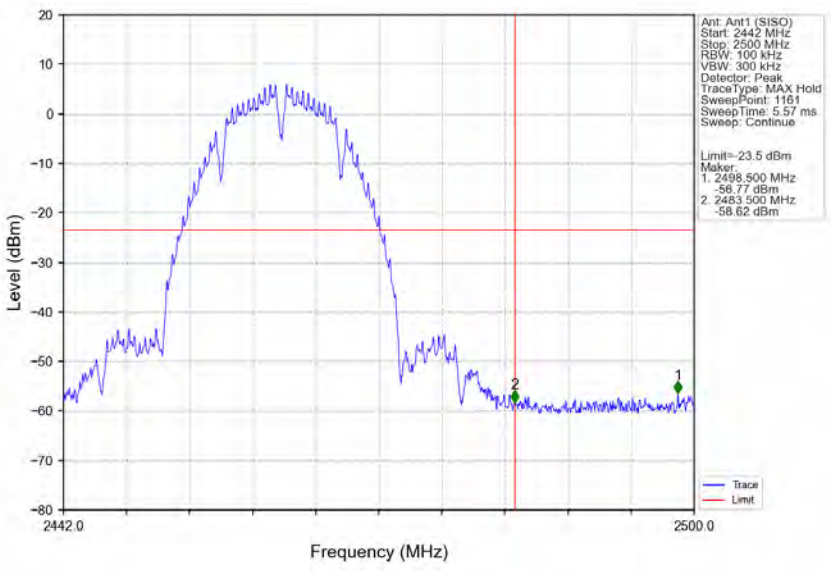

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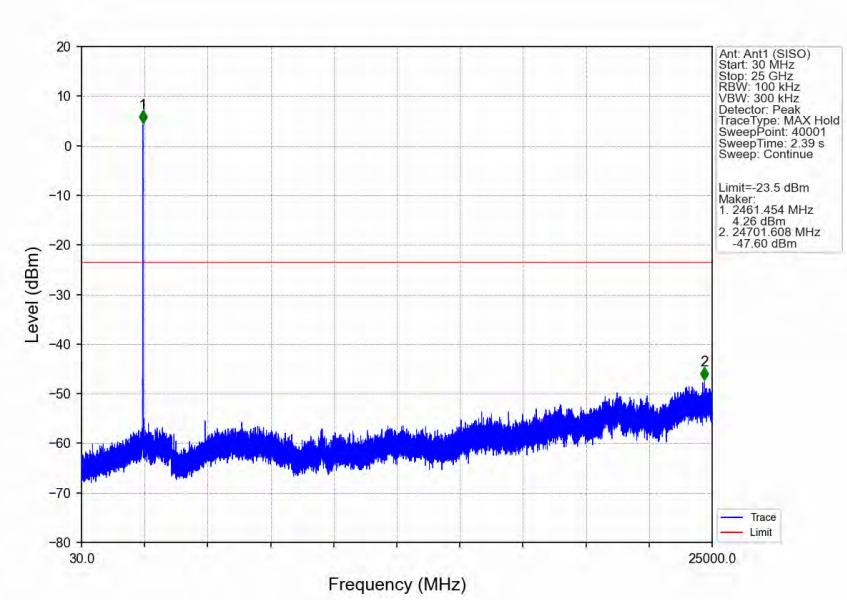
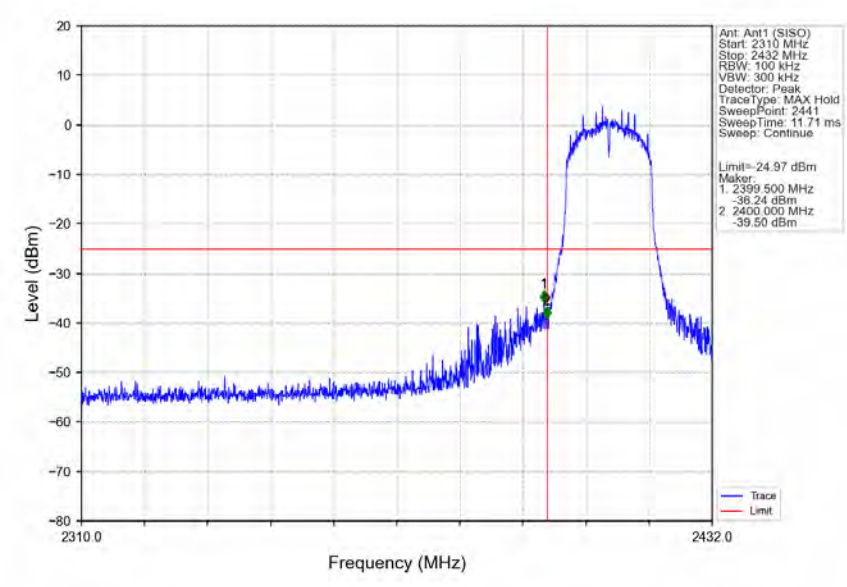


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



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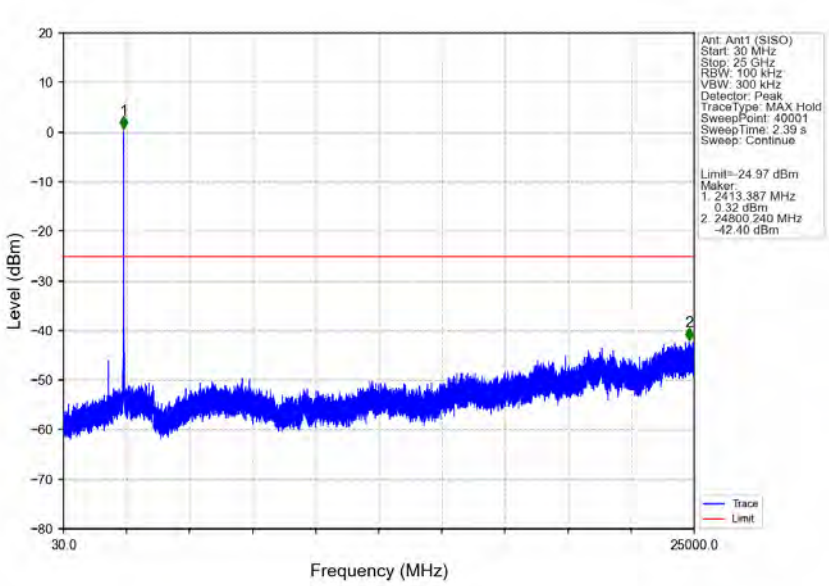

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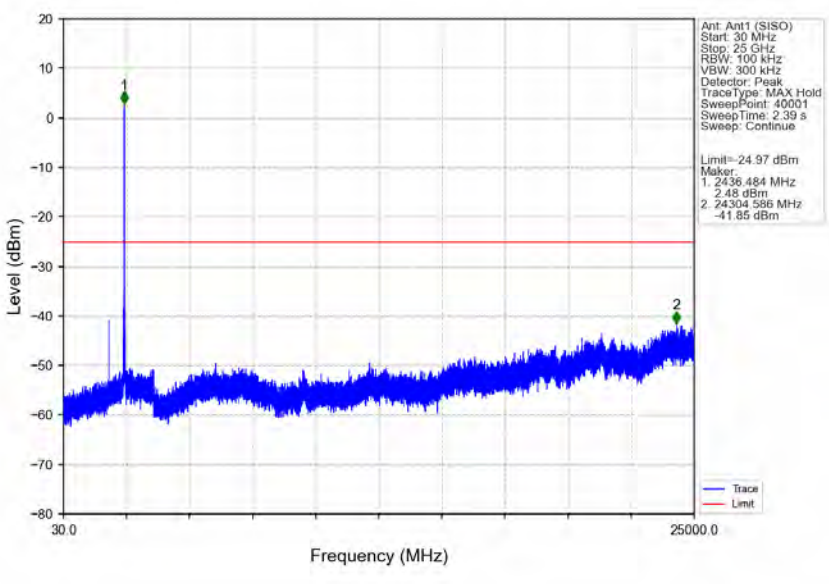

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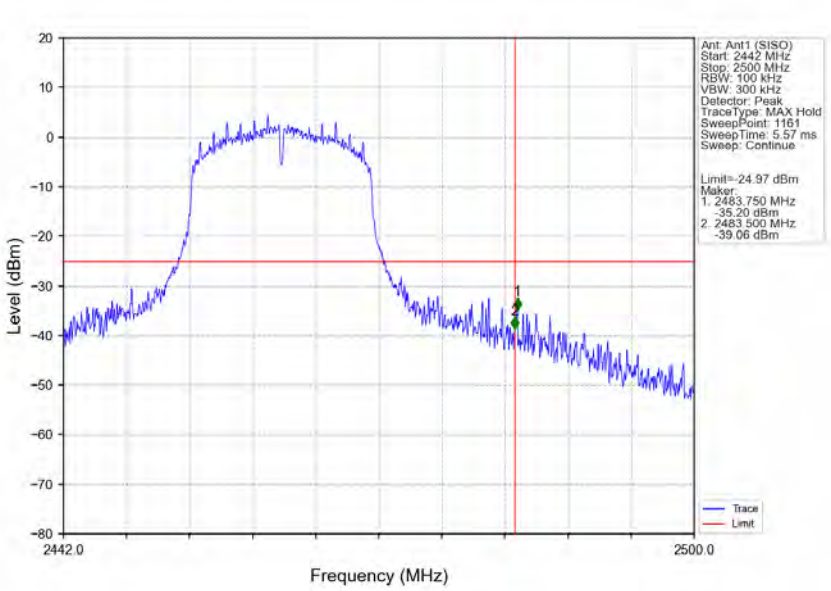
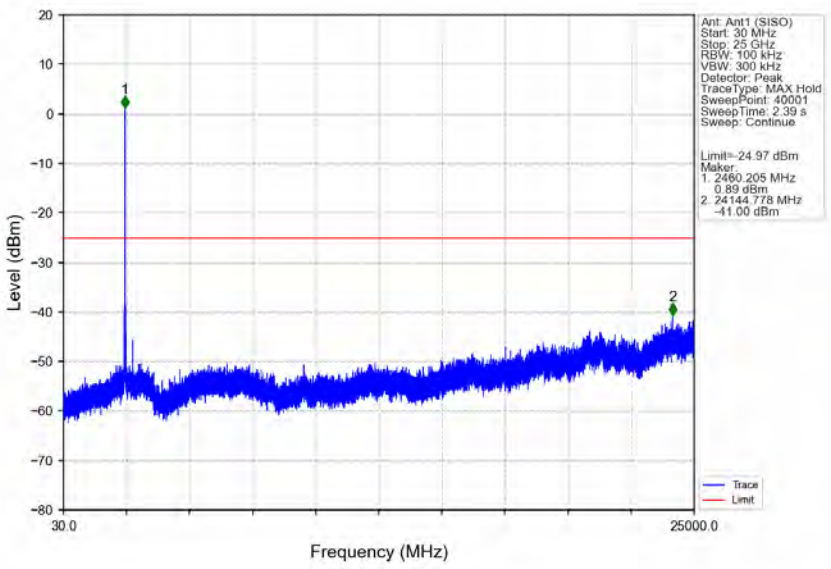
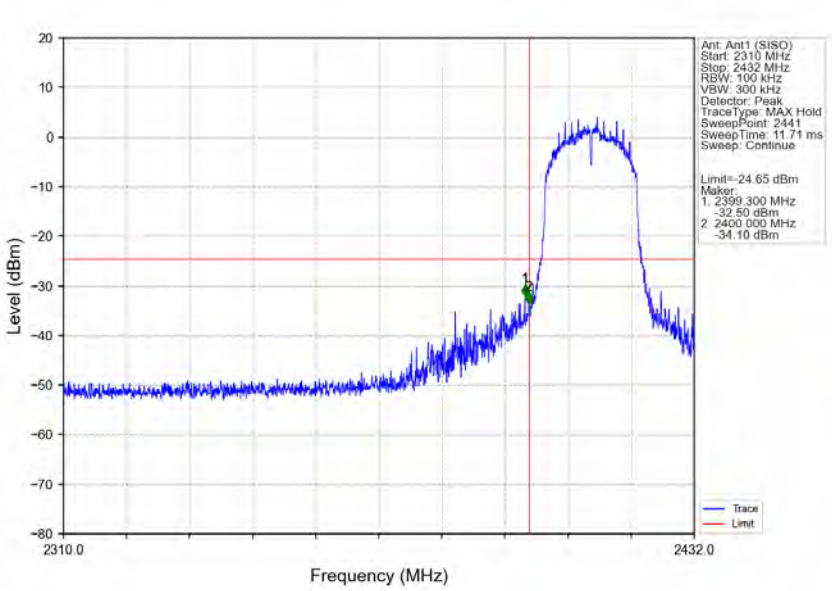


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



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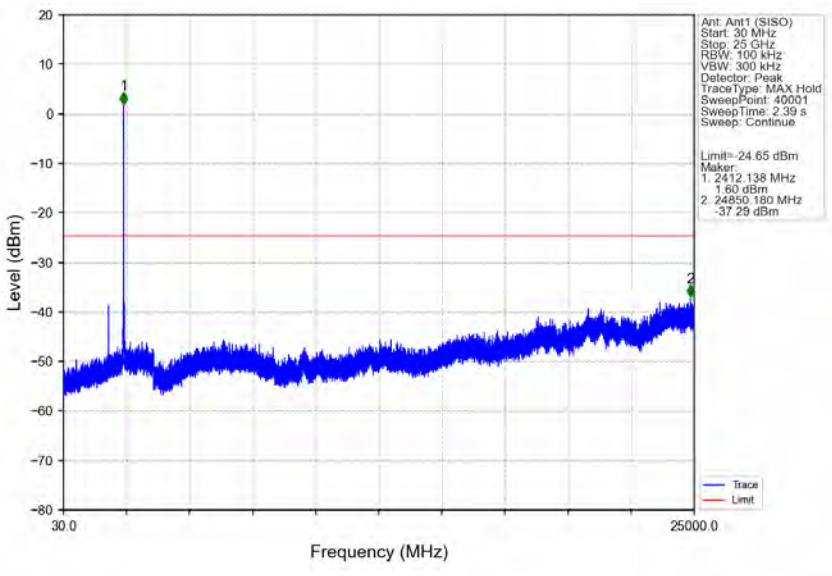
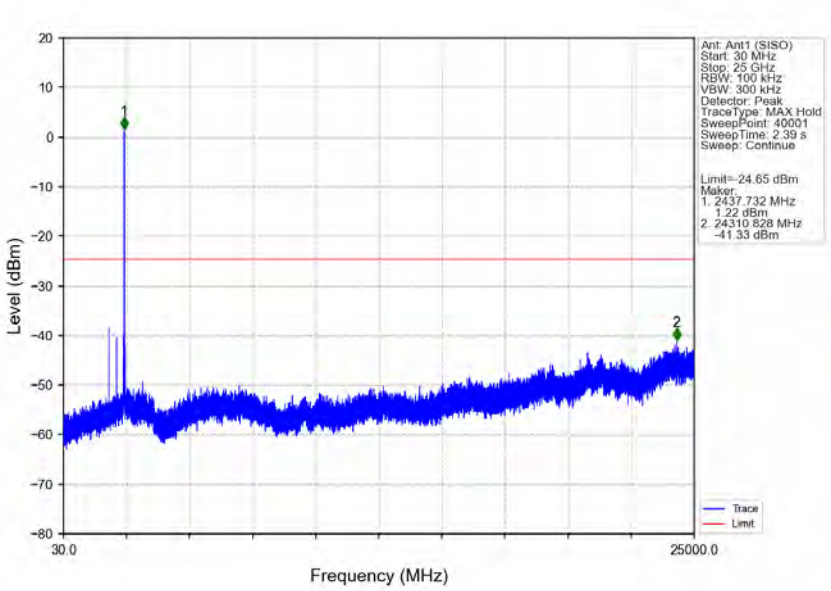


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



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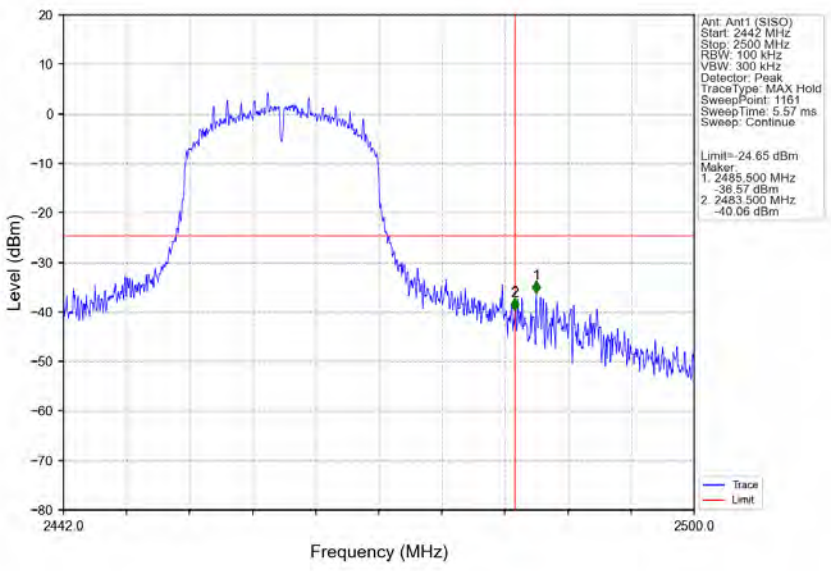

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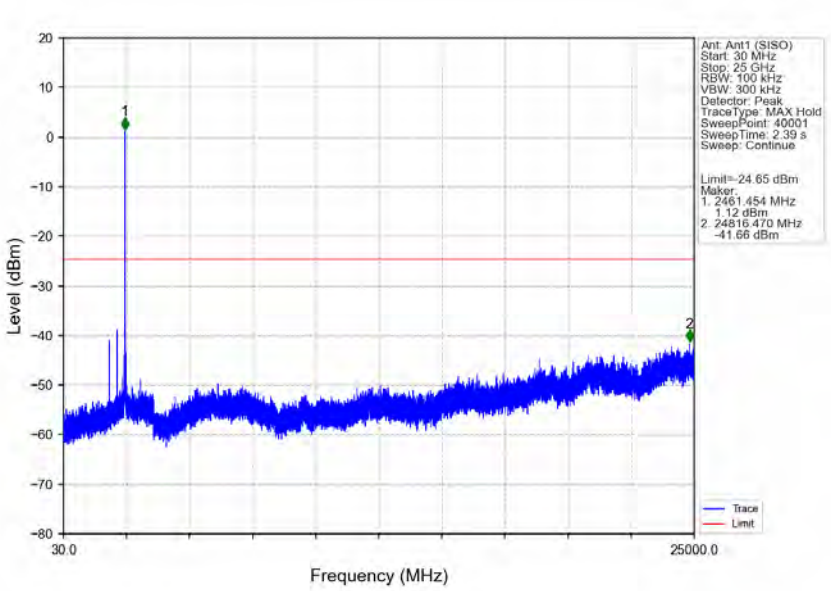
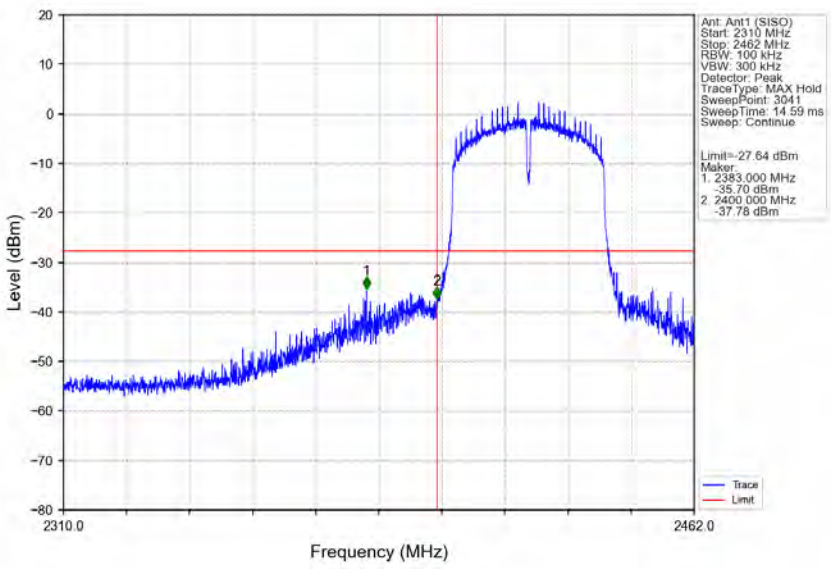


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



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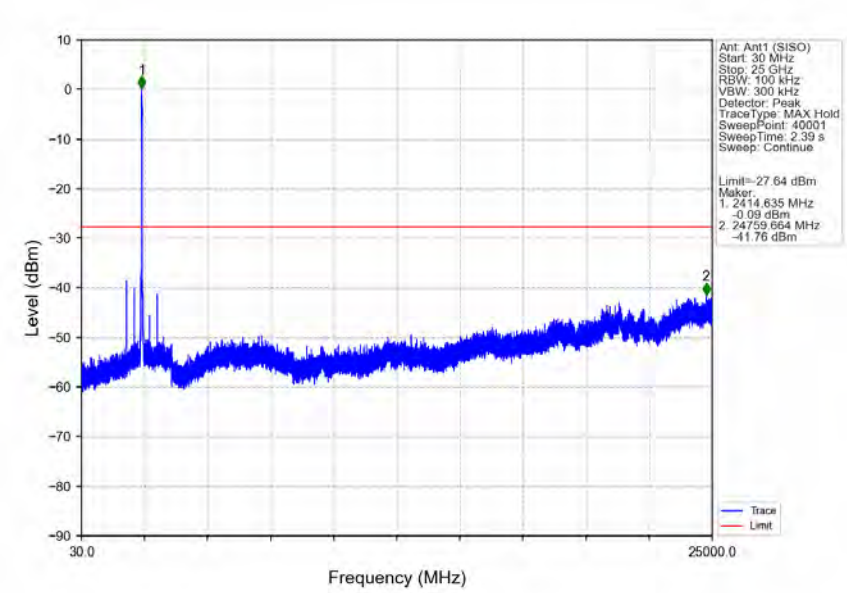

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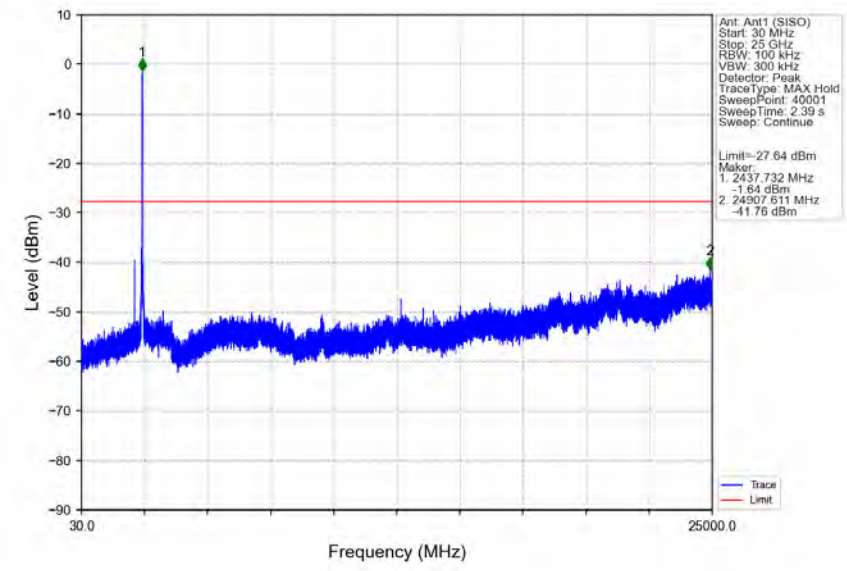
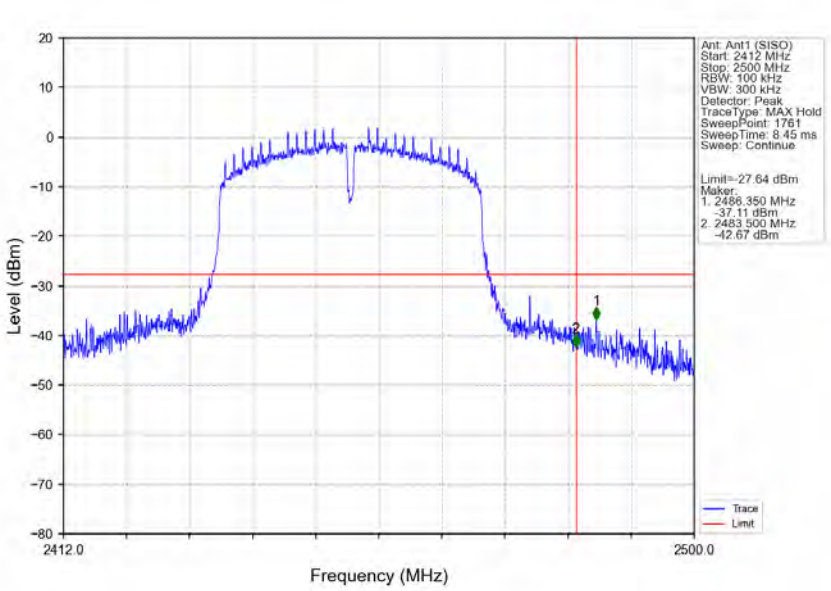
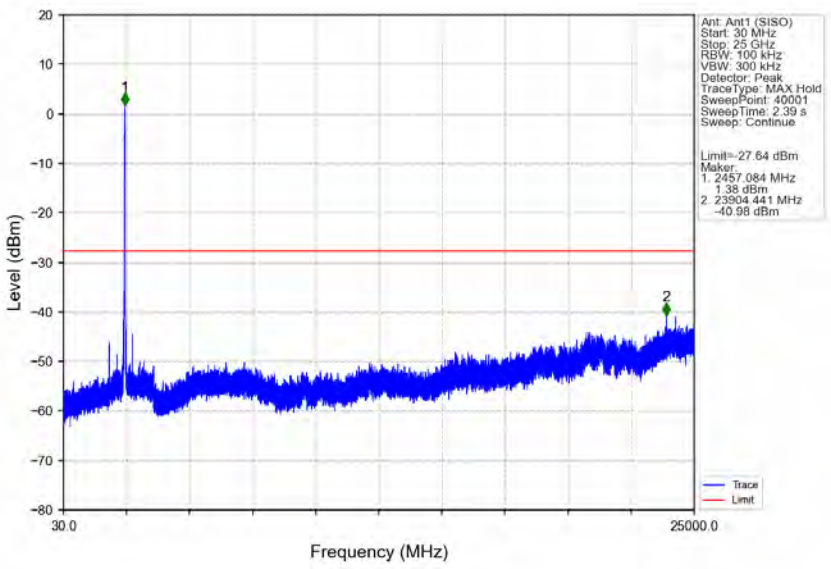


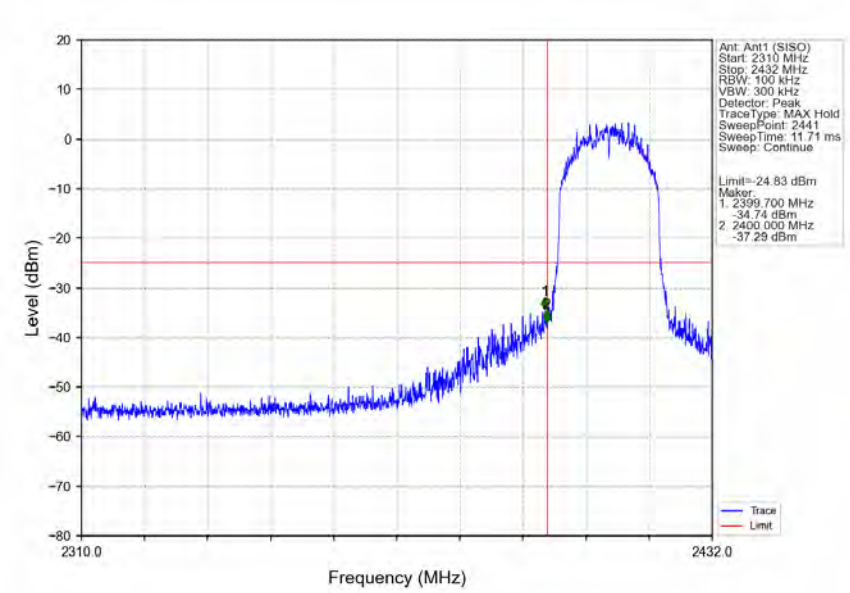
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



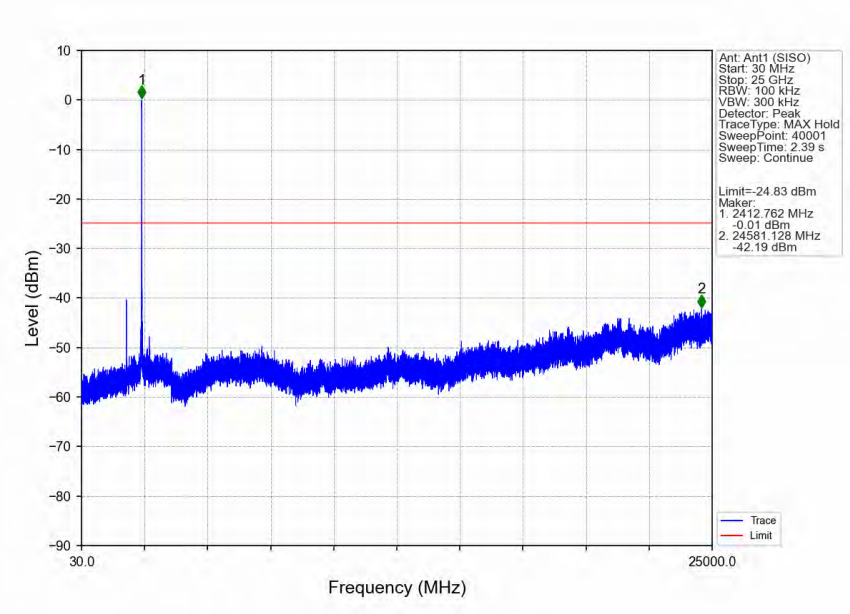
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



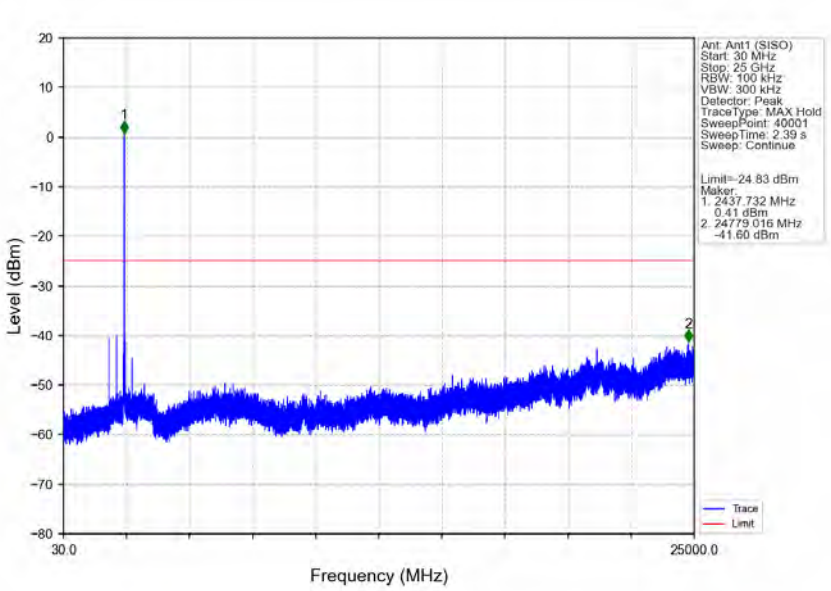
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



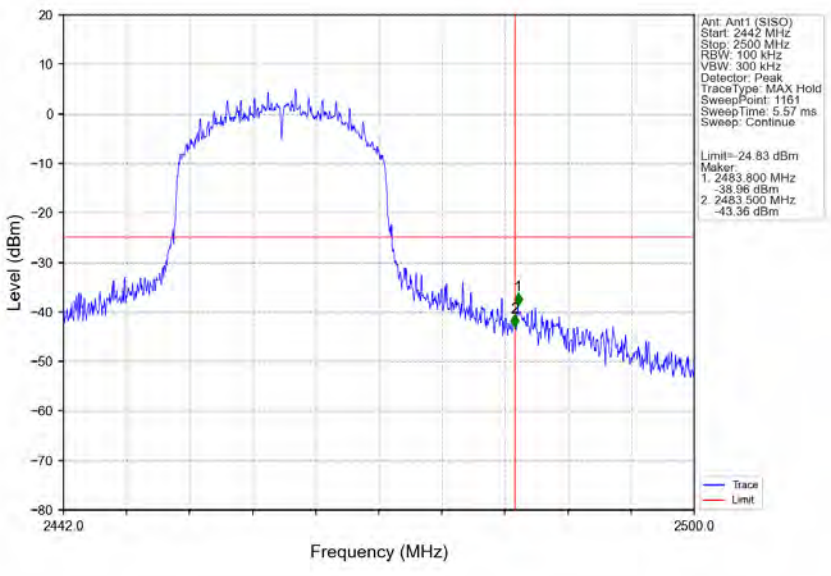
802.11ax(HEW20)_LCH_2412MHz_RU242_Left_Ant1 (SISO)_NTNV



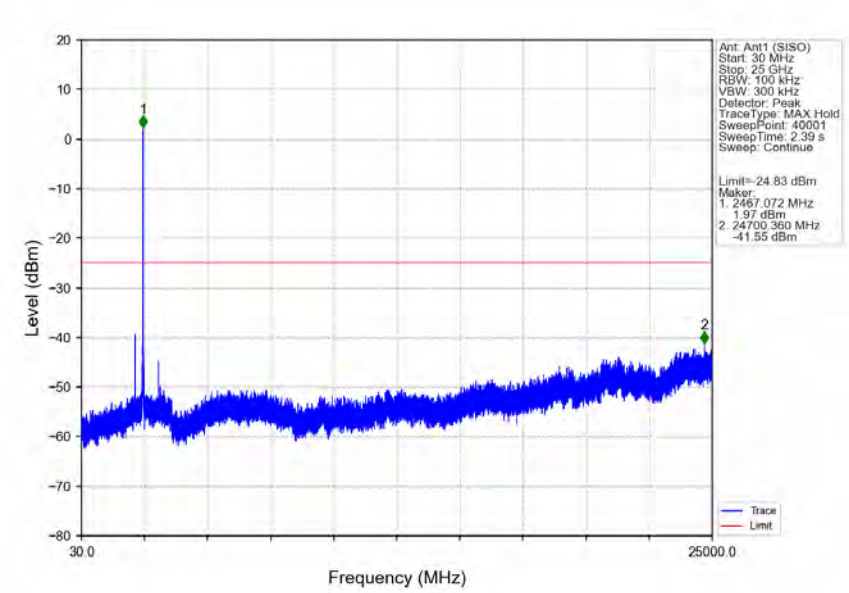
802.11ax(HEW20)_MCH_2437MHz_RU242_Left_Ant1 (SISO)_NTNV



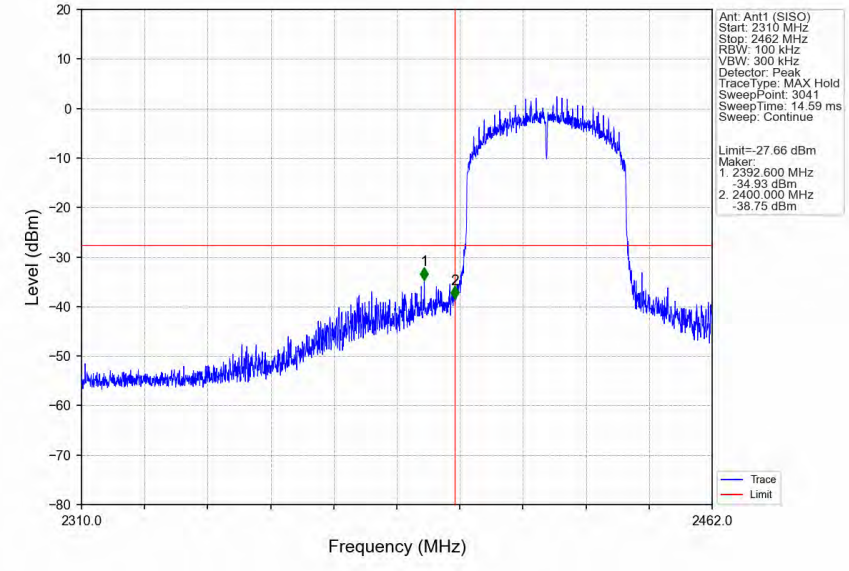
802.11ax(HEW20)_HCH_2462MHz_RU242_Left_Ant1 (SISO)_NTNV



802.11ax(HEW20)_HCH_2462MHz_RU242_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_LCH_2422MHz_RU484_Left_Ant1 (SISO)_NTNV



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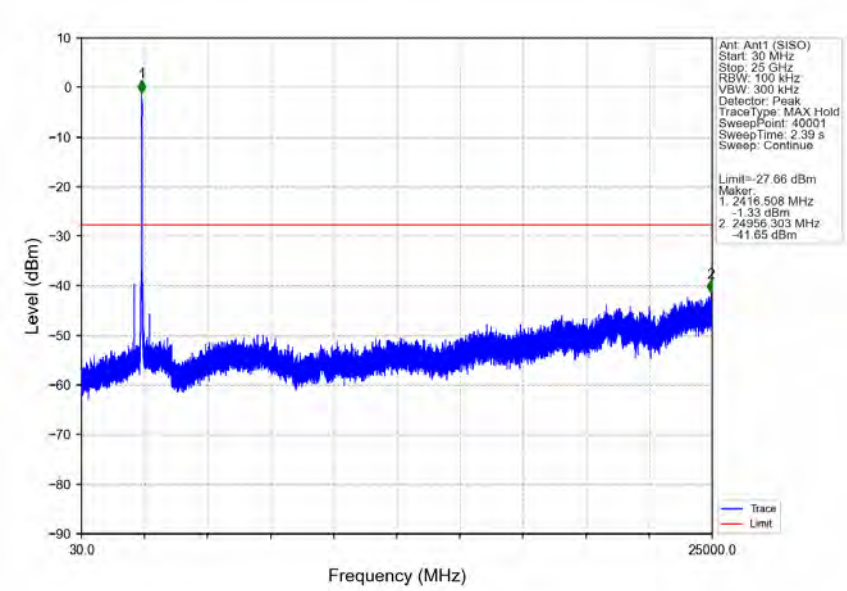
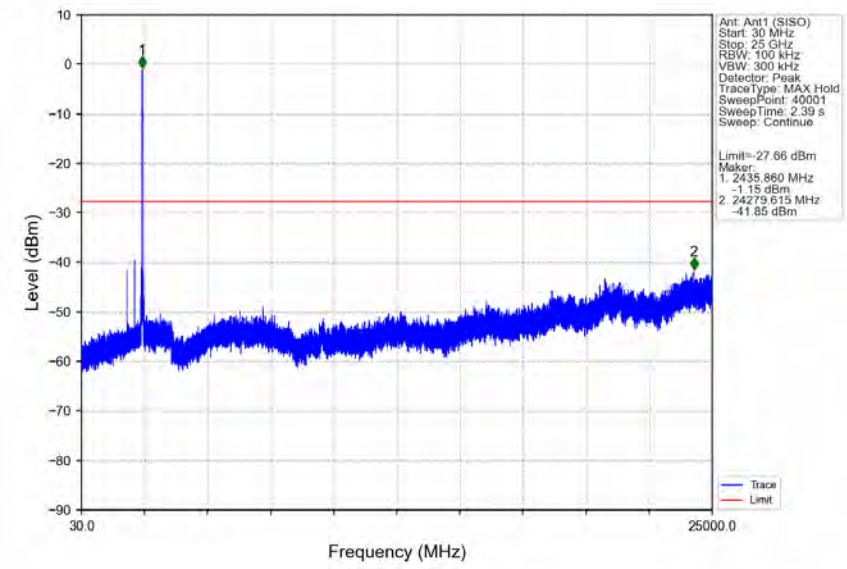
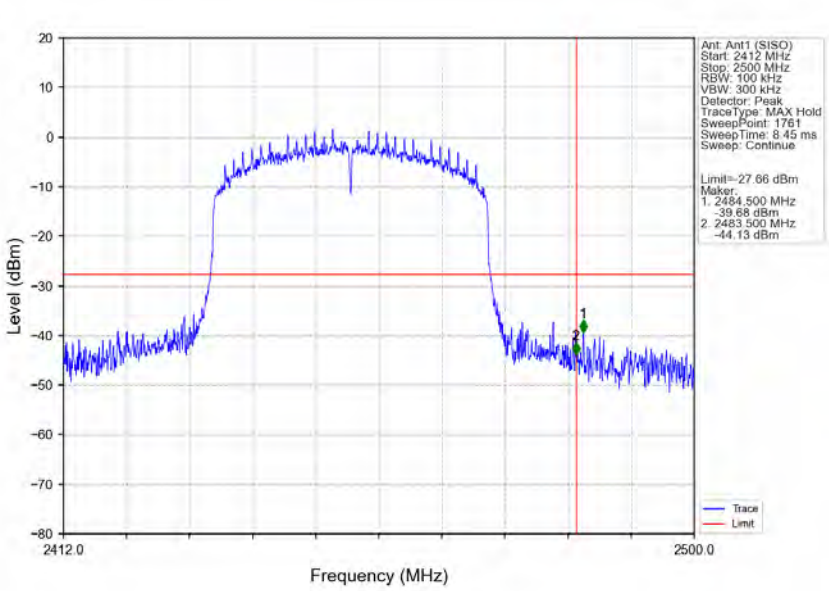


802.11ax(HEW40)_MCH_2437MHz_RU484_Left_Ant1 (SISO)_NTNV



802.11ax(HEW40)_HCH_2452MHz_RU484_Left_Ant1 (SISO)_NTNV



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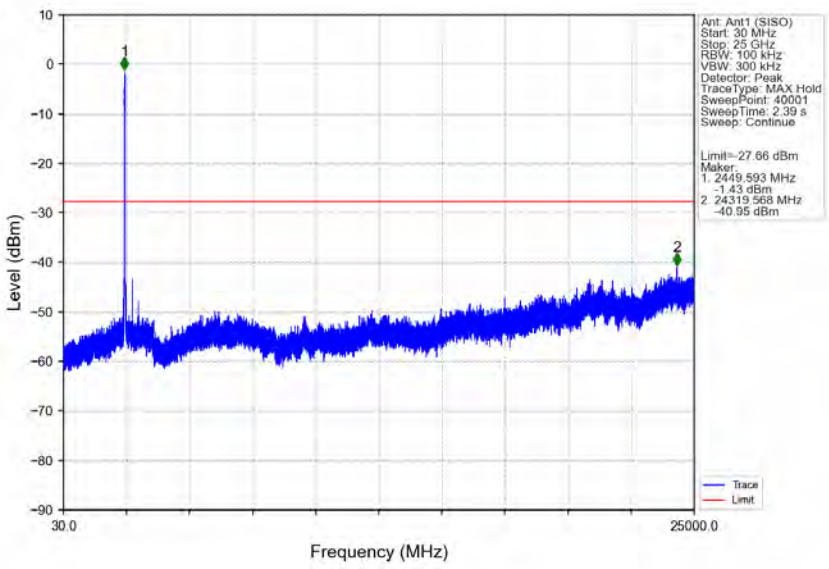

- End of the Report -