

TEST REPORT

Application No.: KSCR2507001456AT
FCC ID: 2ASCB-DH215TLB2
Applicant: D2G Group LLC
Address of Applicant: 81 Commerce Drive Fall River, MA 02720 USA
Manufacturer: D2G Group LLC
Address of Manufacturer: 81 Commerce Drive Fall River, MA 02720 USA
Equipment Under Test (EUT):
EUT Name: Digital Signage
Model No.: DH215NLB, DH215TLB2 ♣
♣ 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: 2025-07-02
Date of Test: 2025-07-23 to 2025-07-31
Date of Issue: 2025-08-01

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

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Revision Record			
Version	Description	Date	Remark
00	Original	2025-08-01	/

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

2 Test Summary

Radio Spectrum Technical Requirement					
Item	Standard	Method	Requirement	Result	Test Lab*
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	N/A

Radio Spectrum Matter Part					
Item	Standard	Method	Requirement	Result	Test Lab*
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	B
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	B
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	B
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass	B
Conducted Peak Output Power		ANSI C63.10 (2013) Section 11.9.2	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass	A
Minimum 6dB Bandwidth		ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass	A
Power Spectrum Density		ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass	A
Conducted Band Edges Measurement		ANSI C63.10 (2013) Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass	A
Conducted Spurious Emissions		ANSI C63.10 (2013) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass	A

Note: There are series models mentioned in this report and they are the Identical in electrical and electronic characters. Only the model DH215TLB2 was tested since their differences were the model number and appearance.

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 12V 3A
Test Voltage:	AC 120V/60Hz(Pre-test AC 120V/50-60Hz&AC 240V/50-60Hz then choose the AC 120/60Hz as worst case)
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 (DBPSK, DQPSK, CCK); 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM); 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024-QAM)
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:	2.34dBi (Provided by the manufacturer)

4.2 Description of Support Units

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

4.3 Power level setting using in test

2.4G				
Mode	11B	11G	N20	N40
CH	Ant1	Ant1	Ant1	Ant1
L	-6	-3	-4	-4
M	-3	0	-1	-1
H	-2	1	1	1
Mode	11ax20	11ax40		
CH	Ant1	Ant1		
L	-4	-4		
M	-1	-1		
H	1	1		

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

Lab A:

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

Lab B:

Conducted Emissions at AC Power Line (150kHz-30MHz); Radiated Emissions; Radiated Emissions which fall in the restricted bands test at:

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu)

Pilot Free Trade Zone

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:

Lab A:

• 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.

Lab B:

• A2LA (Certificate No. 6336.01)

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• Innovation, Science and Economic Development Canada

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• FCC –Designation Number: CN1312

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Lab A:

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	07/09/2025	07/08/2026
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	07/09/2025	07/08/2026
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/15/2025	01/14/2026
4	Signal Generator	R&S	SMBV100B	KSEM032	02/19/2025	02/18/2026
5	Signal Generator	R&S	SMW200A	KSEM020-1	07/09/2025	07/08/2026
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	07/08/2025	07/07/2026
7	Signal Generator	Agilent	E8257C	KS301066	07/22/2025	07/21/2026
8	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	07/09/2025	07/08/2026
9	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	02/19/2025	02/18/2026
10	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	07/08/2025	07/07/2026
11	Switcher	TST	FY562	KUS2001M001-4	01/15/2025	01/14/2026
12	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	01/14/2025	01/13/2026
13	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	07/15/2025	07/14/2026
14	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	02/26/2025	02/25/2026
15	Software	BST	TST-PASS	/	NCR	NCR

Lab B:

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receiver	R&S	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026
2	LISN	R&S	ENV216	SUWI-01-19-03	5/8/2025	5/7/2026
3	LISN	Schwarzbeck	ENV216	SUWI-01-19-04	5/8/2025	5/7/2026
4	Test Software	Tonscend	JS32-CE 4.0.0.2	SUWI-02-09-05	N.C.R	N.C.R
RF Radiated Test						
1	Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	6/3/2023	6/2/2026
2	Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	1/20/2025	1/19/2026
3	Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-09	11/21/2024	11/20/2025
4	Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026
5	Signal Generator	ROHDE&SCHWARZ	SMW100A	SUWI-01-18-01	1/16/2025	1/15/2026
6	Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	VULB 9168	SUWI-01-11-04	8/22/2024	8/21/2026
7	Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	BBHA 9120D	SUWI-01-11-02	5/7/2025	5/6/2027
8	Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	BBHA 9170	SUWI-01-11-03	5/7/2025	5/6/2027
9	Active Loop Antenna	SCHWRZBECK MESS- ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	5/7/2025	5/6/2027
10	Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	1/16/2025	1/15/2026
11	Amplifier	Tonscend	TAP01018050	SUWI-01-14-02	1/16/2025	1/15/2026
12	Amplifier	Tonscend	TAP18040048	SUWI-01-14-03	1/20/2025	1/19/2026
13	Wideband Radio Communication Tester	Anritsu	MT8820C	SUWI-01-26-01	9/10/2024	9/9/2025
14	Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	11/19/2024	11/18/2025
15	Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-09	9/10/2024	9/9/2025
16	Radio Communication Analyzer	StarPoint	SP9500E	SUWI-01-28-02	11/19/2024	11/18/2025
17	Signal Generator	ROHDE&SCHWARZ	SMB100A	SUWI-01-08-01	1/16/2025	1/15/2026
18	DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	1/15/2025	1/14/2026
19	Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2/13/2025	2/12/2026
20	Measurement Software	Tonscend	JS32-RE 4.0.0.0	SUWI-02-09-06	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 on the main PCB and no consideration of replacement. The best case gain of the antenna is 2.34dBi.

Antenna location: Refer to External 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 (2020) 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: 22.8 °C

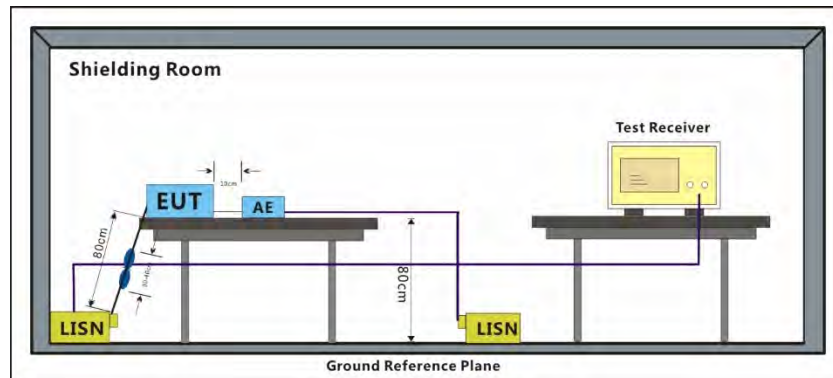
Humidity: 48.1 % RH

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(HE20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HE40). 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.

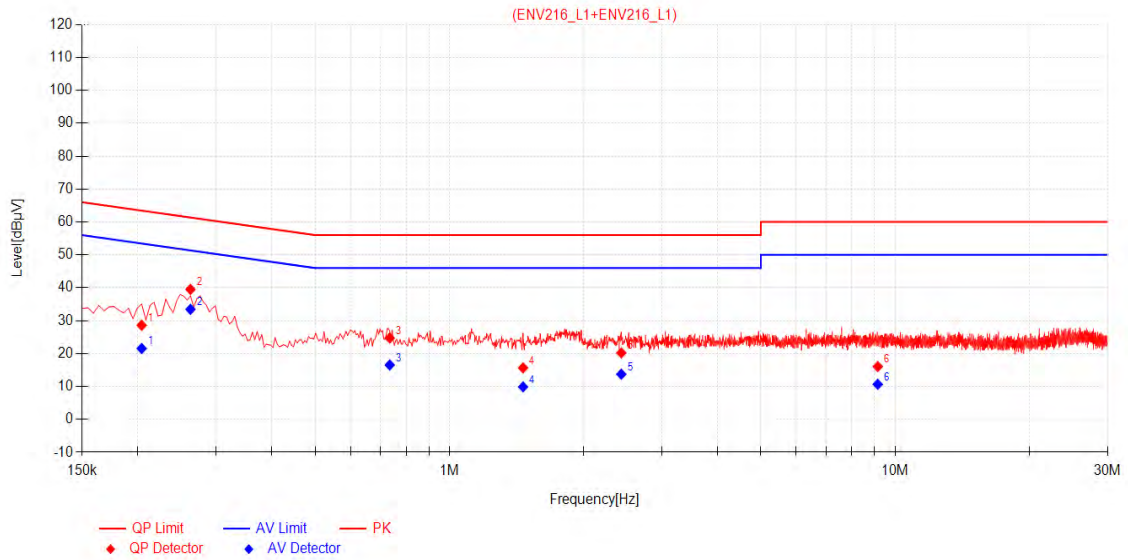
Remark : Level=Read Level+ Cable Loss+ LISN Factor



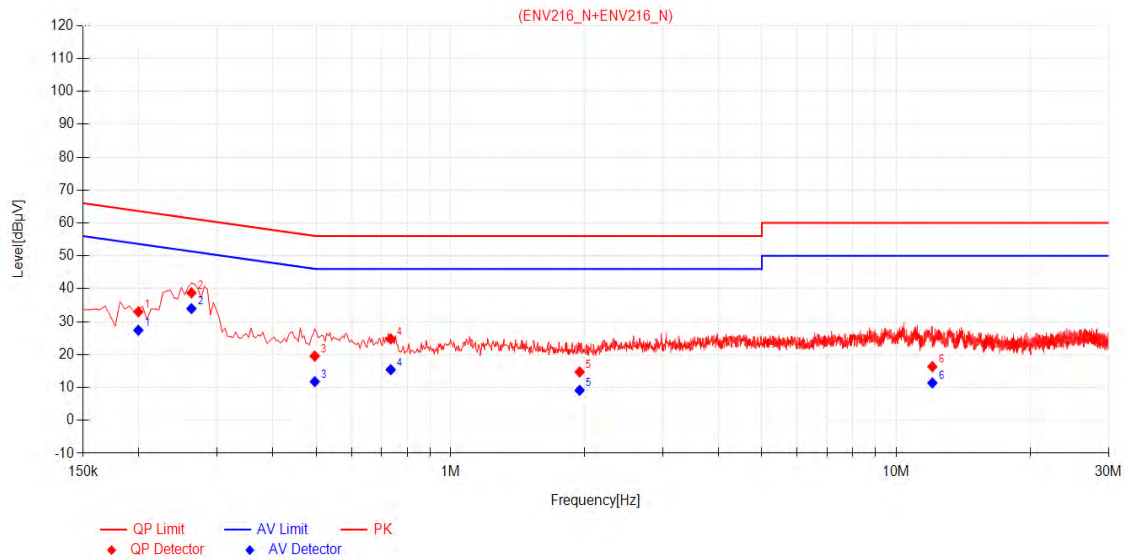
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Test Mode: 00



Final Data List											
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.2040	10.08	18.53	28.61	63.45	34.84	11.46	21.54	53.45	31.91	PASS
2	0.2625	10.07	29.44	39.51	61.35	21.84	23.38	33.45	51.35	17.90	PASS
3	0.7350	10.05	14.67	24.72	56.00	31.28	6.48	16.53	46.00	29.47	PASS
4	1.4640	9.91	5.74	15.65	56.00	40.35	-0.01	9.90	46.00	36.10	PASS
5	2.4315	9.84	10.36	20.20	56.00	35.80	3.90	13.74	46.00	32.26	PASS
6	9.1455	9.81	6.25	16.06	60.00	43.94	0.85	10.66	50.00	39.34	PASS



Final Data List

NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.1995	10.08	22.91	32.99	63.63	30.64	17.32	27.40	53.63	26.23	PASS
2	0.2625	10.08	28.67	38.75	61.35	22.60	23.89	33.97	51.35	17.38	PASS
3	0.4965	10.06	9.50	19.56	56.06	36.50	1.72	11.78	46.06	34.28	PASS
4	0.7350	10.06	14.68	24.74	56.00	31.26	5.35	15.41	46.00	30.59	PASS
5	1.9500	9.91	4.80	14.71	56.00	41.29	-0.78	9.13	46.00	36.87	PASS
6	12.0660	9.77	6.55	16.32	60.00	43.68	1.62	11.39	50.00	38.61	PASS

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 (2020) Section 6.10.5

Measurement Distance: 3m

Limit:

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

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

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 23.8 °C

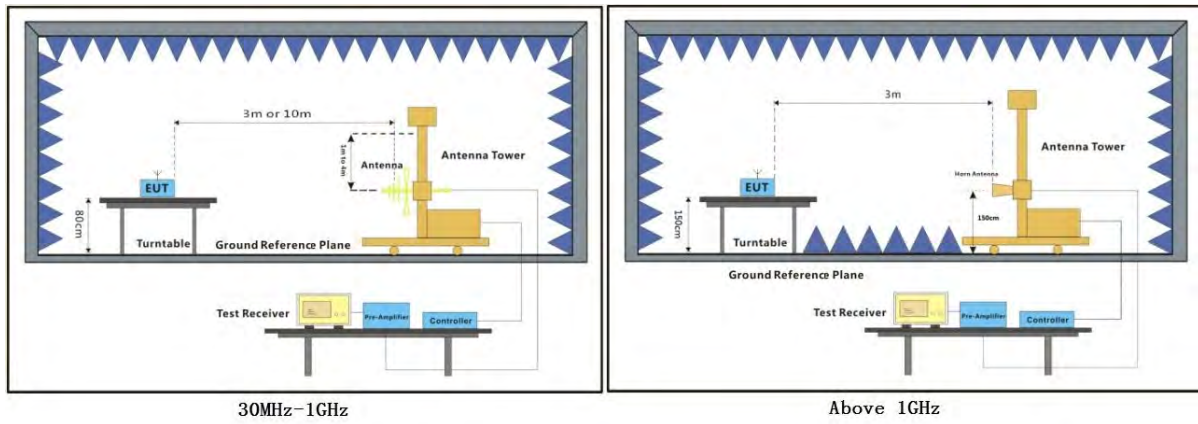
Humidity: 49.5 % RH

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(HE20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HE40). Only the data of worst case is recorded in the report.

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. 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: $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{Antenna Factor} - \text{Preamp Factor}$

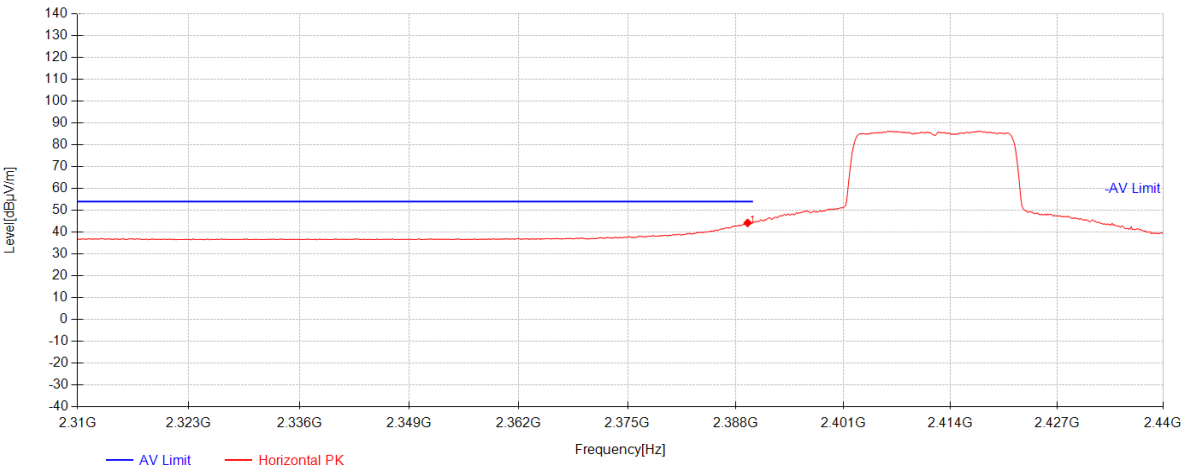
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level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

Remark 3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.

Remark 4: For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.



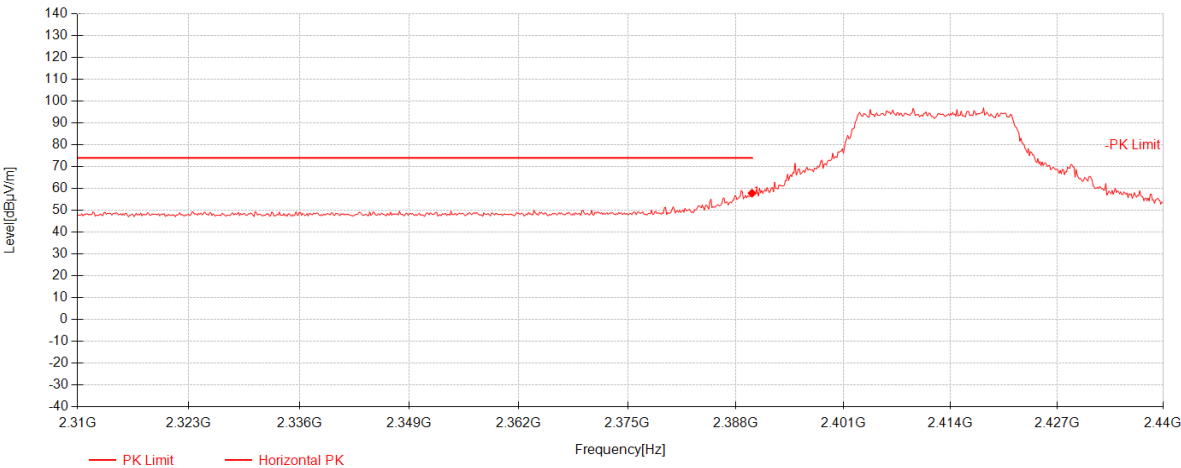
11ax(HE20)_TX_CH_01_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2389.43	40.82	26.98	-23.57	44.23	54.00	9.77	Horizontal



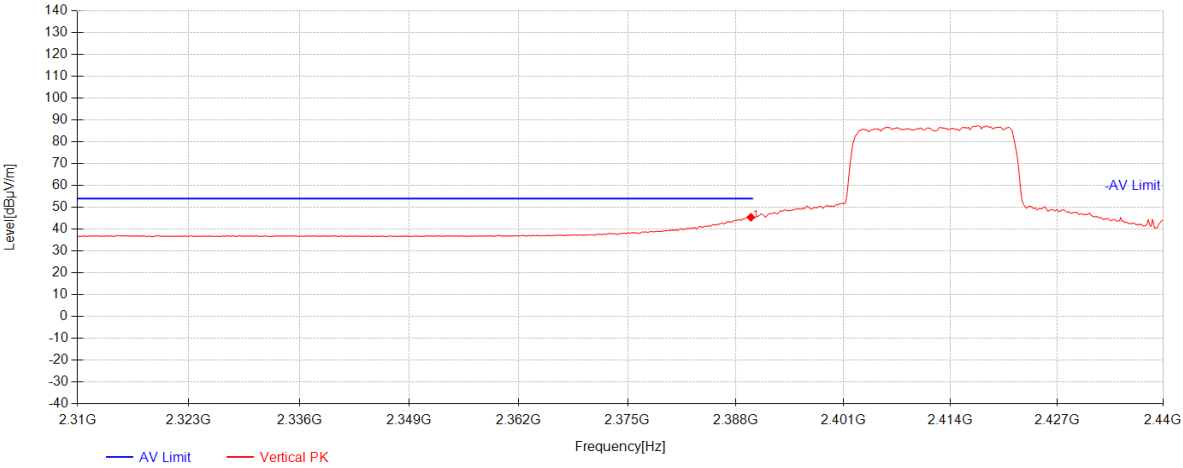
11ax(HE20)_TX_CH_01_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2389.95	54.44	26.98	-23.57	57.85	74.00	16.15	Horizontal



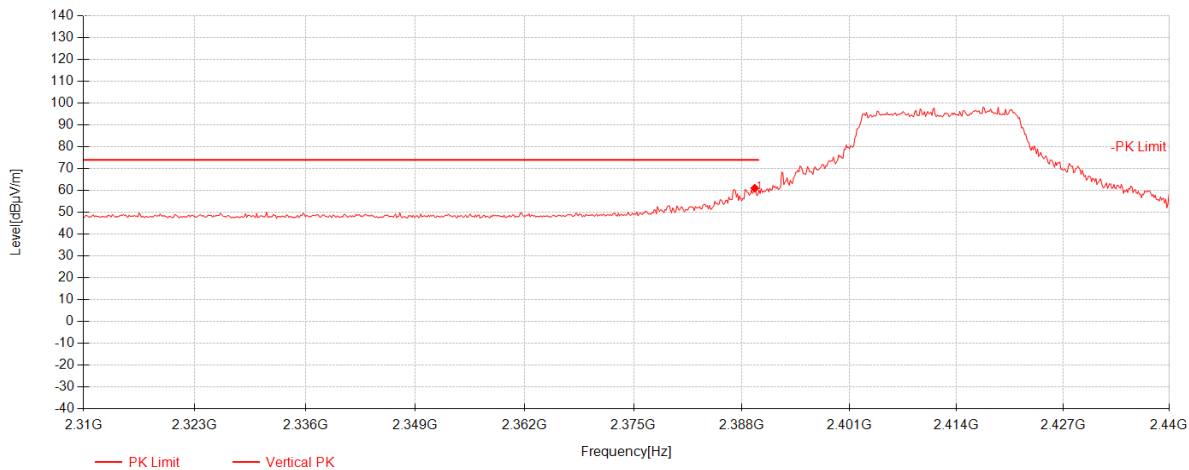
11ax(HE20)_TX_CH_01_Vertical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2389.82	42.03	26.98	-23.57	45.44	54.00	8.56	Vertical



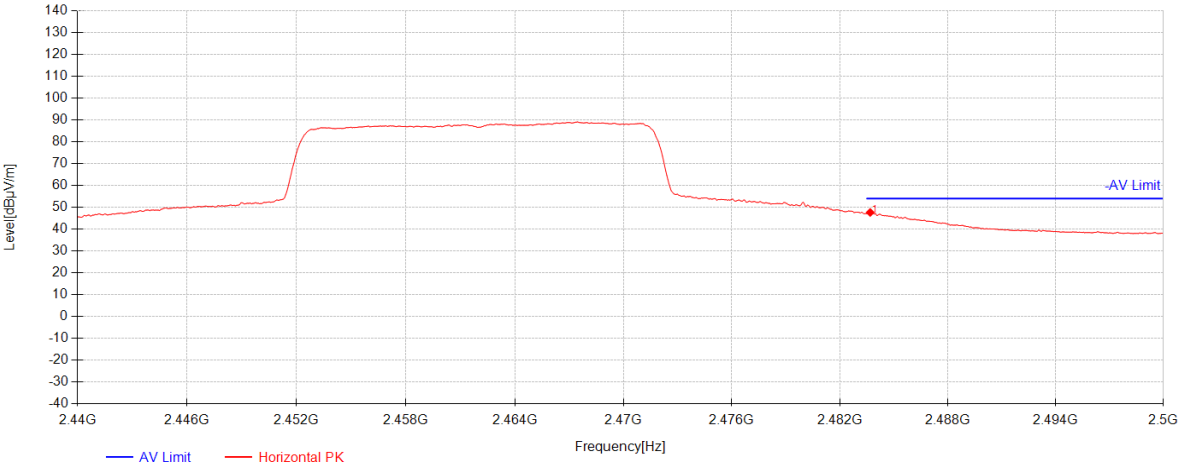
11ax(HE20)_TX_CH_01_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2389.56	57.66	26.98	-23.57	61.07	74.00	12.93	Vertical



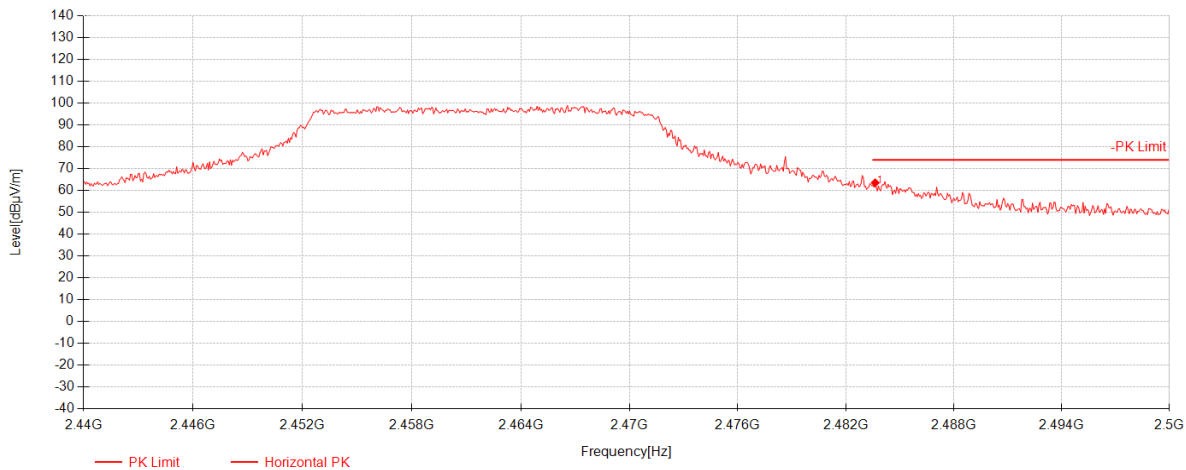
11ax(HE20)_TX_CH_11_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.68	44.04	27.17	-23.54	47.66	54.00	6.34	Horizontal



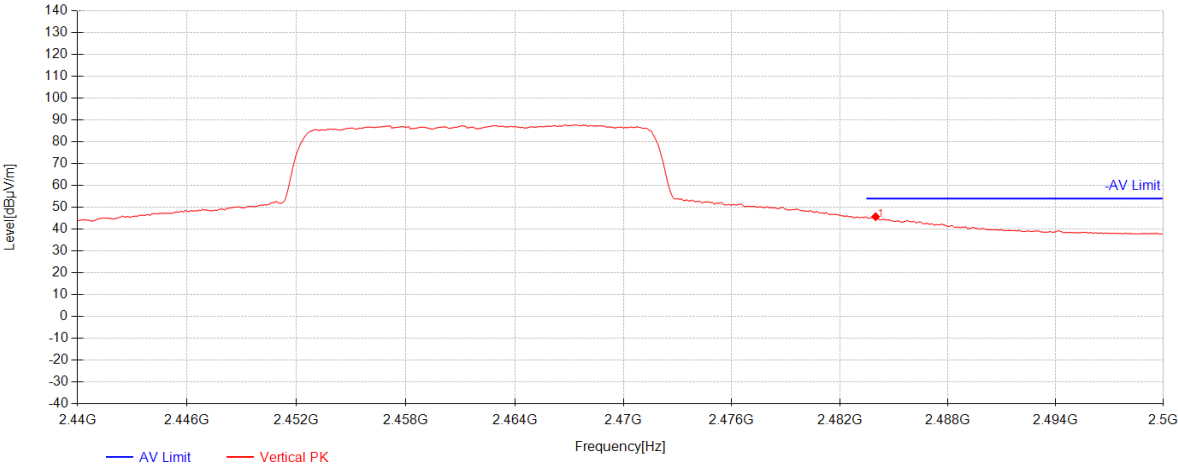
11ax(HE20)_TX_CH_11_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.62	59.95	27.17	-23.54	63.57	74.00	10.43	Horizontal



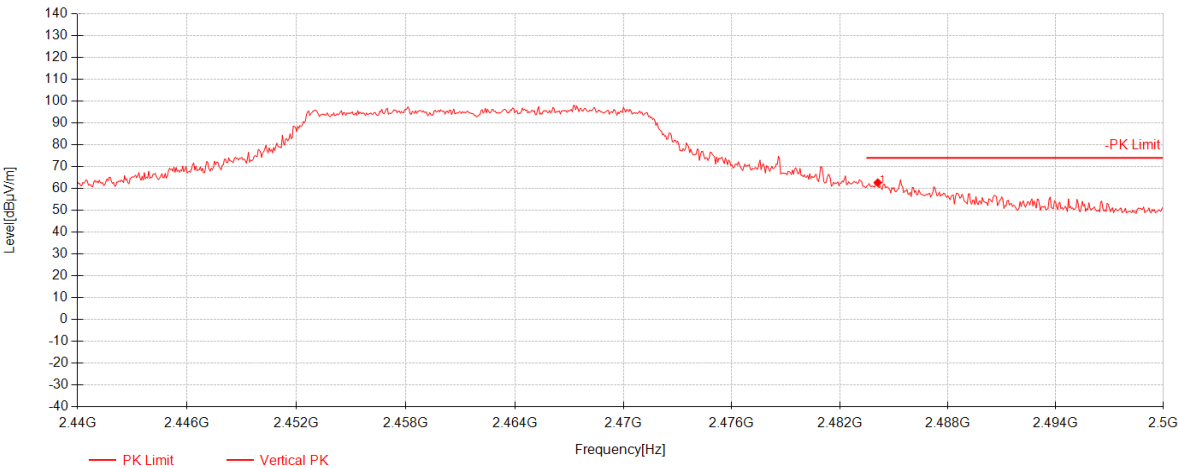
11ax(HE20)_TX_CH_11_Vertical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.98	42.10	27.17	-23.54	45.72	54.00	8.28	Vertical



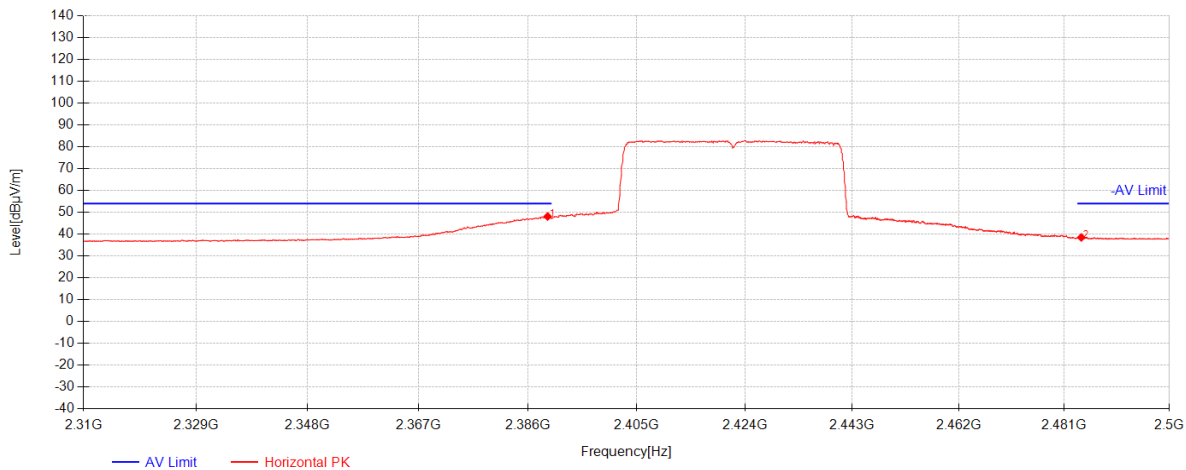
11ax(HE20)_TX_CH_11_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2484.1	59.07	27.17	-23.54	62.69	74.00	11.31	Vertical



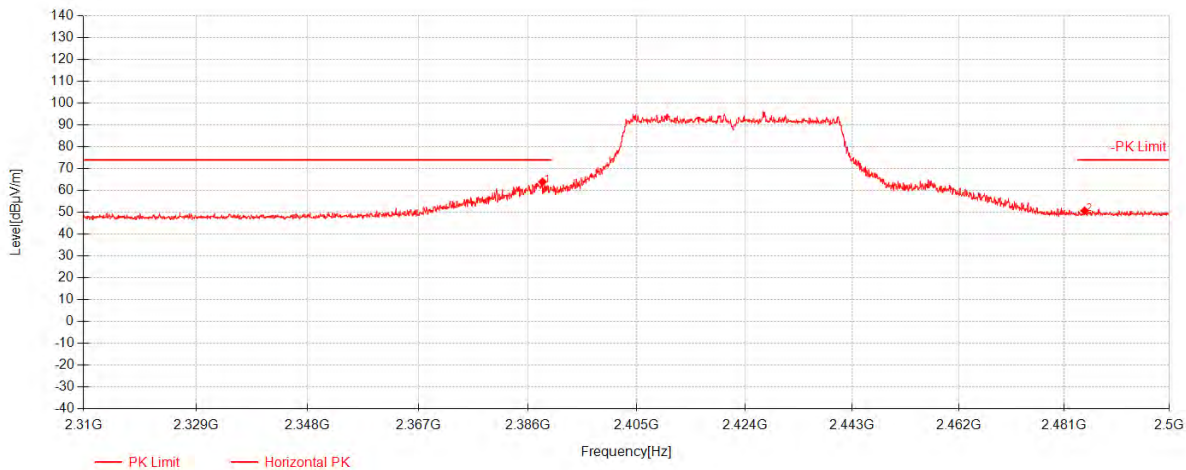
11ax(HE40)_TX_CH_03_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2389.43	44.70	26.98	-23.57	48.11	54.00	5.89	Horizontal
2	2484.1	34.88	27.17	-23.54	38.50	54.00	15.50	Horizontal



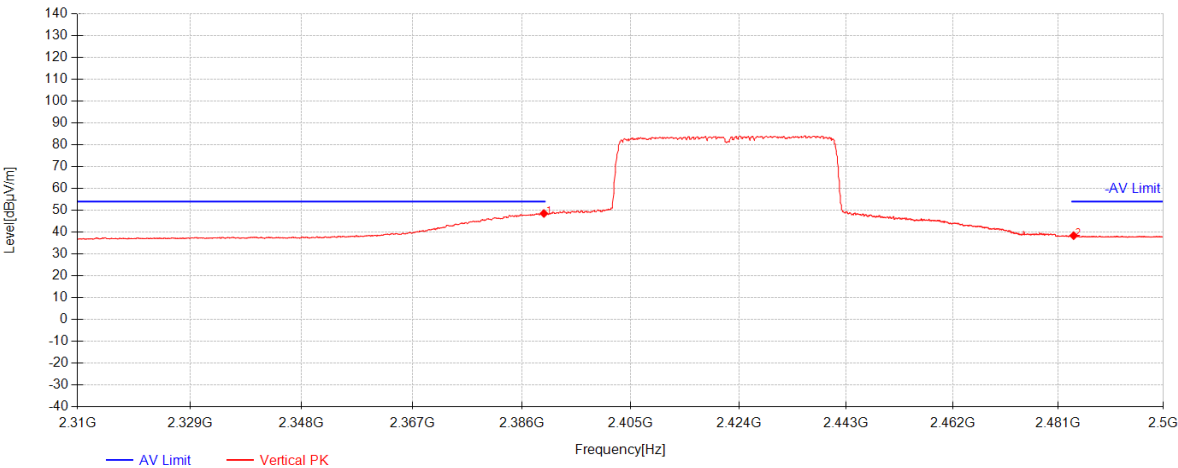
11ax(HE40)_TX_CH_03_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2388.52	60.56	26.98	-23.57	63.97	74.00	10.03	Horizontal
2	2484.7	47.10	27.17	-23.54	50.72	74.00	23.28	Horizontal



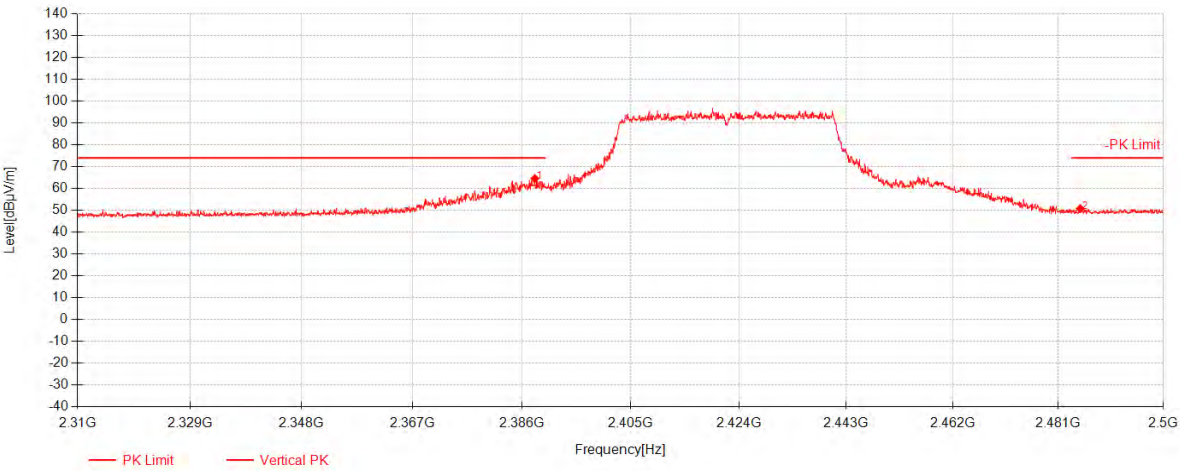
11ax(HE40)_TX_CH_03_Vertikal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2389.82	45.15	26.98	-23.57	48.56	54.00	5.44	Vertical
2	2483.8	34.78	27.17	-23.54	38.40	54.00	15.60	Vertical



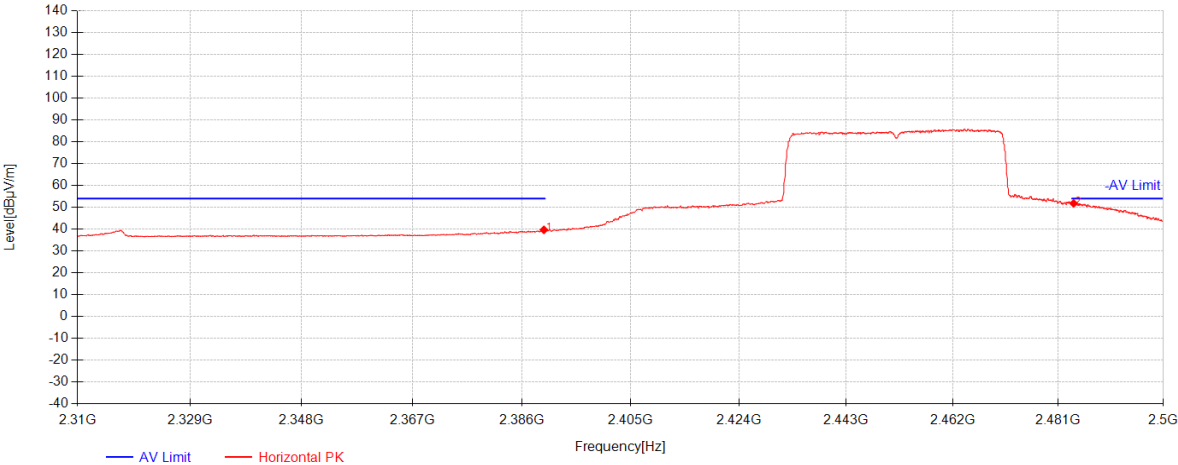
11ax(HE40)_TX_CH_03_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2388.26	61.21	26.98	-23.57	64.62	74.00	9.38	Vertical
2	2485	47.18	27.17	-23.54	50.81	74.00	23.19	Vertical



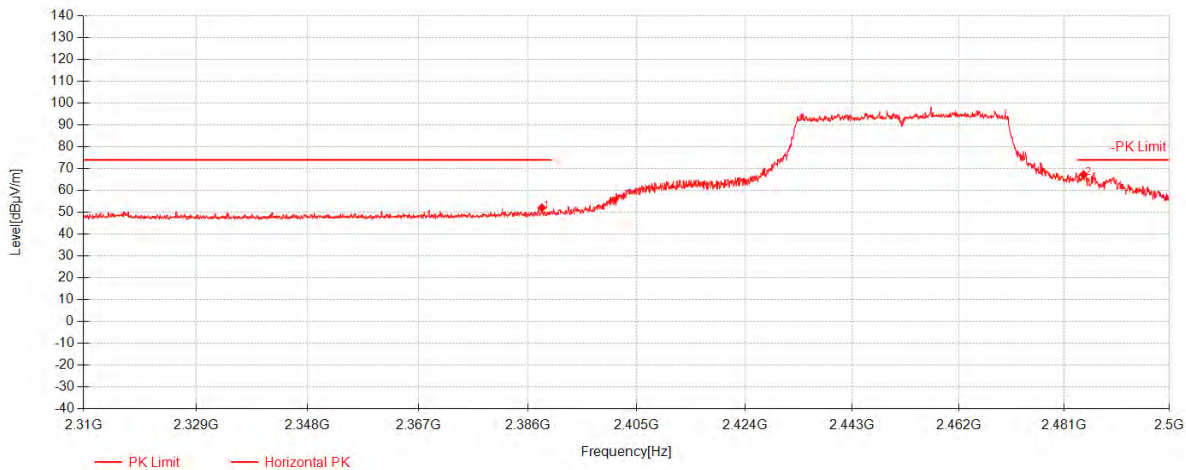
11ax(HE40)_TX_CH_09_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2389.82	36.27	26.98	-23.57	39.68	54.00	14.32	Horizontal
2	2483.8	48.17	27.17	-23.54	51.79	54.00	2.21	Horizontal



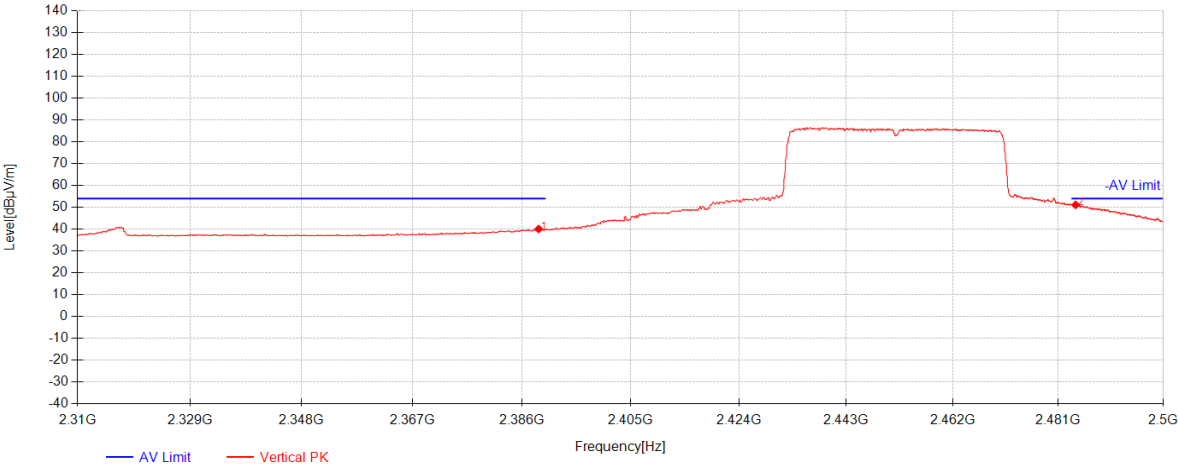
11ax(HE40)_TX_CH_09_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2388.4333	48.68	26.98	-23.57	52.09	74.00	21.91	Horizontal
2	2484.52	63.73	27.17	-23.54	67.35	74.00	6.65	Horizontal



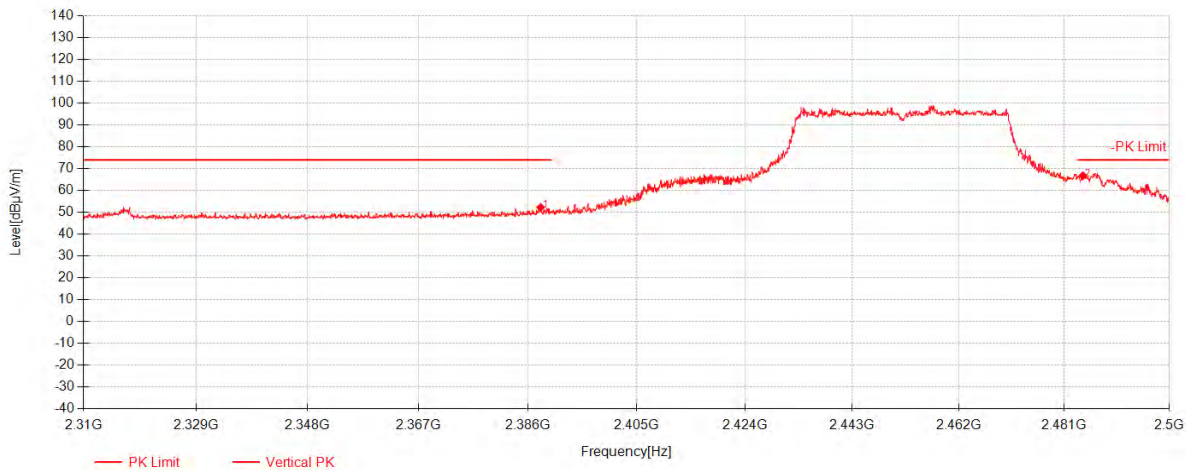
11ax(HE40)_TX_CH_09_Vertical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2388.91	36.66	26.98	-23.57	40.07	54.00	13.93	Vertical
2	2484.16	47.50	27.17	-23.54	51.12	54.00	2.88	Vertical

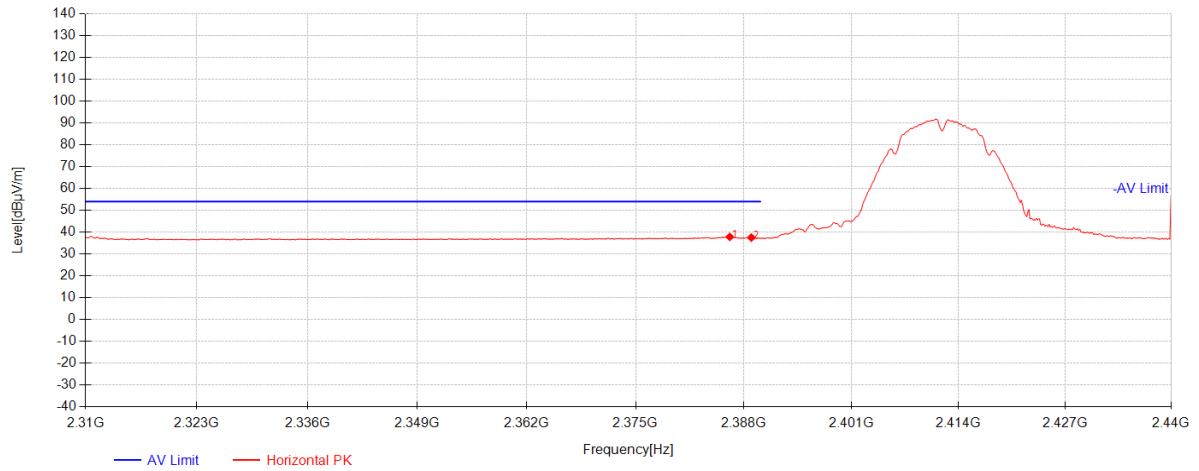


11ax(HE40)_TX_CH_09_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2388.2167	48.89	26.98	-23.57	52.30	74.00	21.70	Vertical
2	2484.4	63.19	27.17	-23.54	66.81	74.00	7.19	Vertical

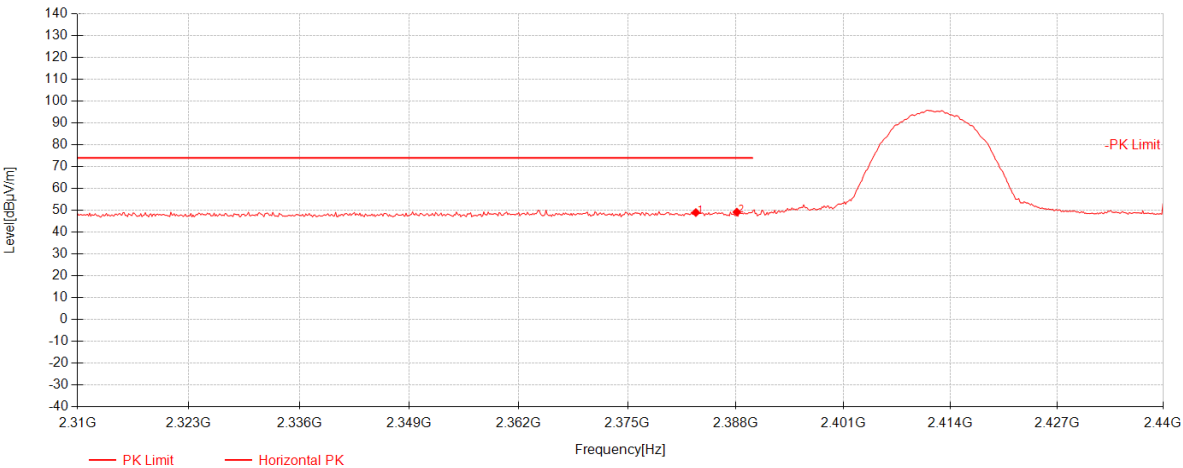
11b_TX_CH_01_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2386.31	34.42	26.97	-23.57	37.82	54.00	16.18	Horizontal
2	2388.91	34.11	26.98	-23.57	37.52	54.00	16.48	Horizontal



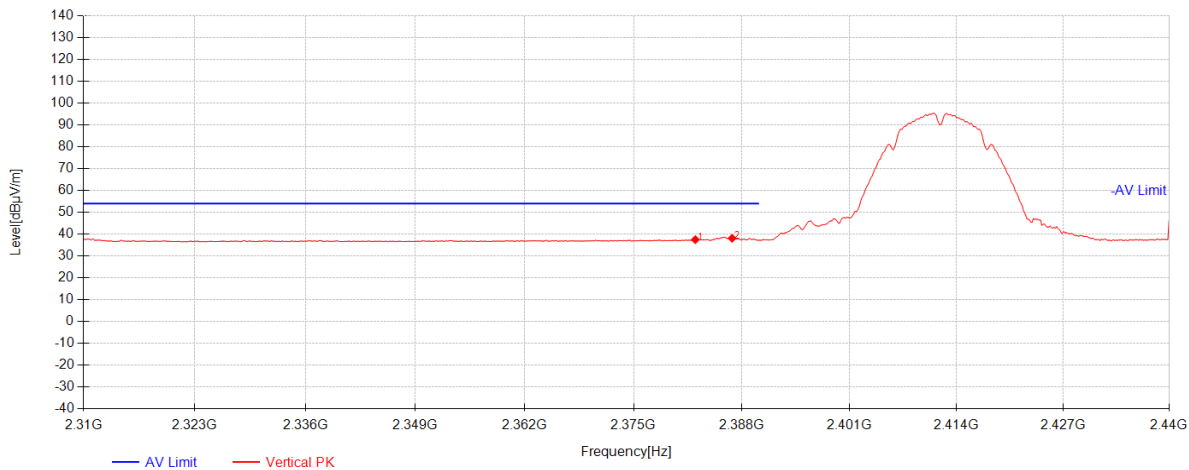
11b_TX_CH_01_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2383.19	45.60	26.97	-23.57	48.99	74.00	25.01	Horizontal
2	2388.13	45.79	26.98	-23.57	49.20	74.00	24.80	Horizontal



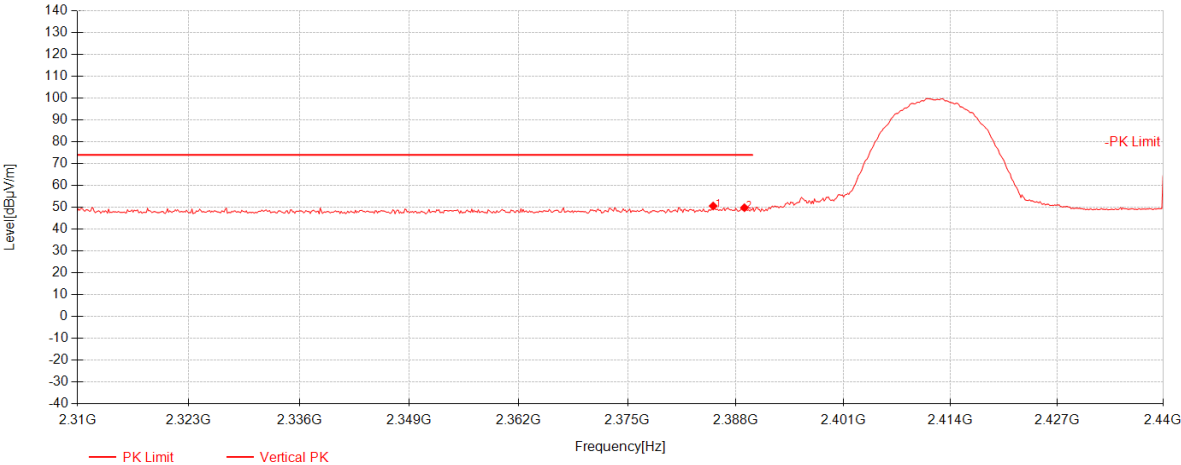
11b_TX_CH_01_Vertical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2382.41	34.10	26.96	-23.57	37.49	54.00	16.51	Vertical
2	2386.83	34.72	26.97	-23.57	38.12	54.00	15.88	Vertical



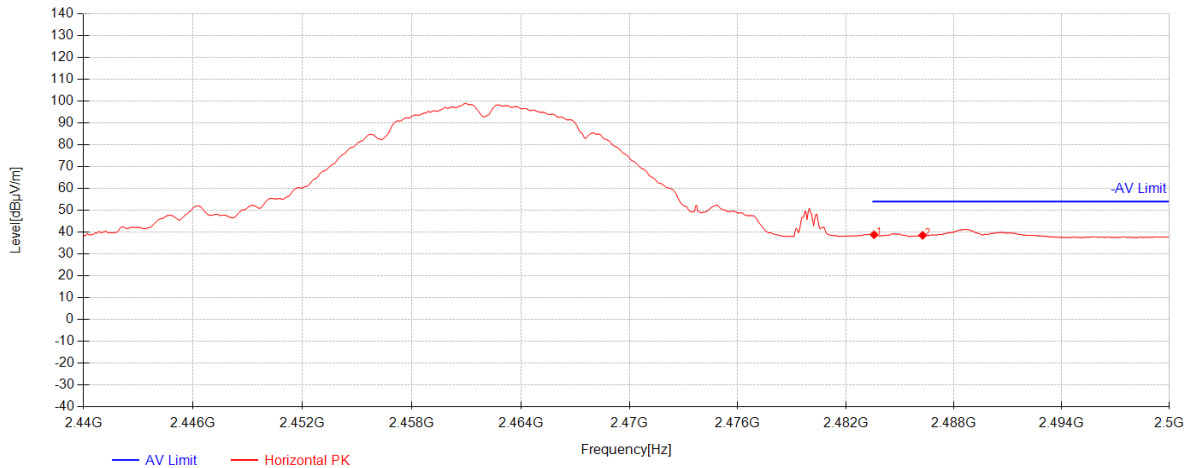
11b_TX_CH_01_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2385.27	47.22	26.97	-23.57	50.62	74.00	23.38	Vertical
2	2389.04	46.43	26.98	-23.57	49.84	74.00	24.16	Vertical



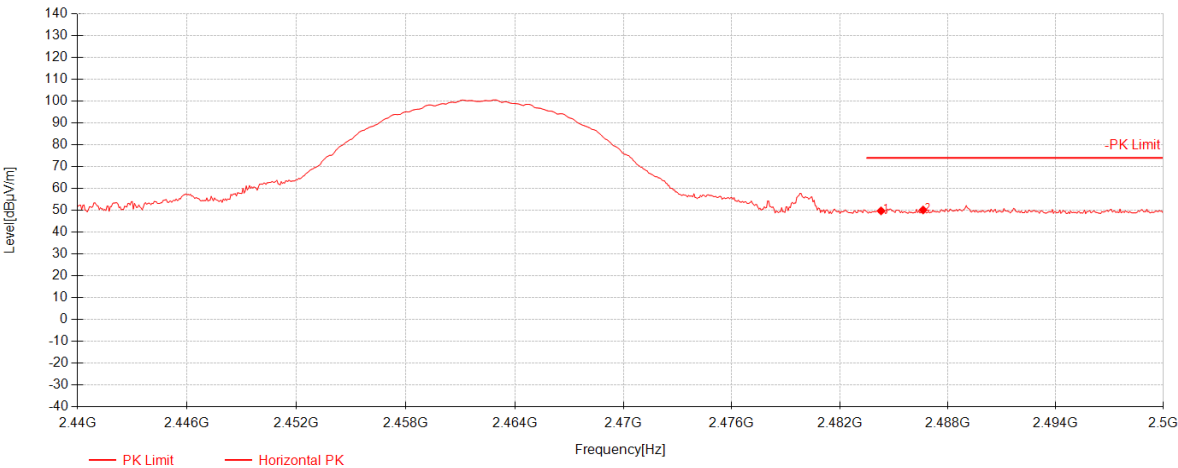
11b_TX_CH_11_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2483.56	35.19	27.17	-23.54	38.81	54.00	15.19	Horizontal
2	2486.26	34.92	27.17	-23.54	38.55	54.00	15.45	Horizontal



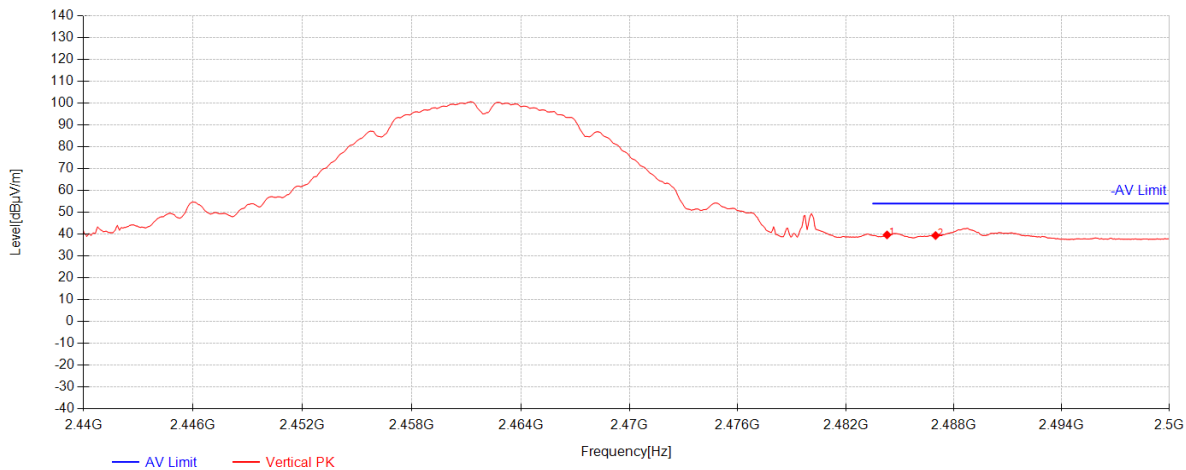
11b_TX_CH_11_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2484.28	46.14	27.17	-23.54	49.76	74.00	24.24	Horizontal
2	2486.62	46.53	27.17	-23.54	50.16	74.00	23.84	Horizontal



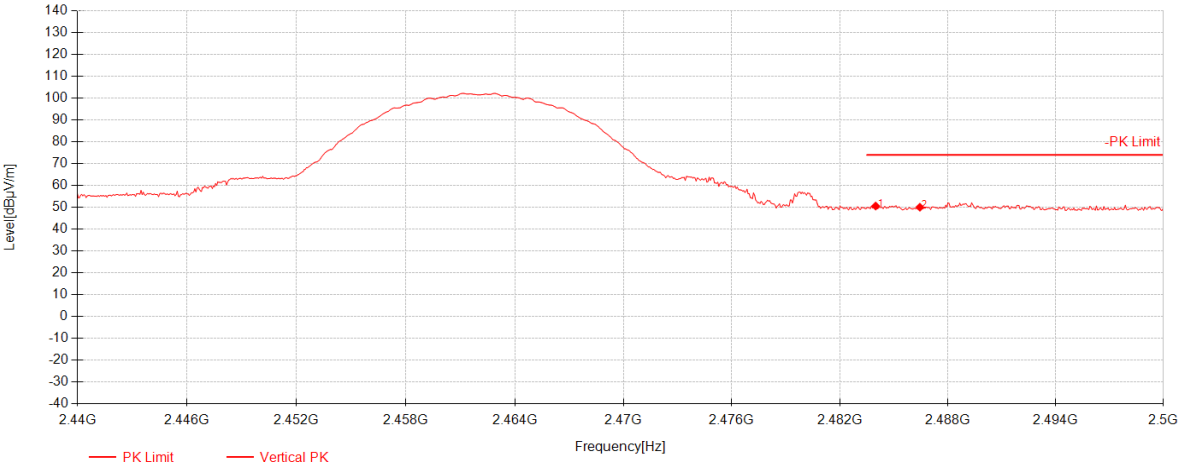
11b_TX_CH_11_Vertical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2484.28	36.04	27.17	-23.54	39.66	54.00	14.34	Vertical
2	2486.98	35.73	27.17	-23.54	39.36	54.00	14.64	Vertical



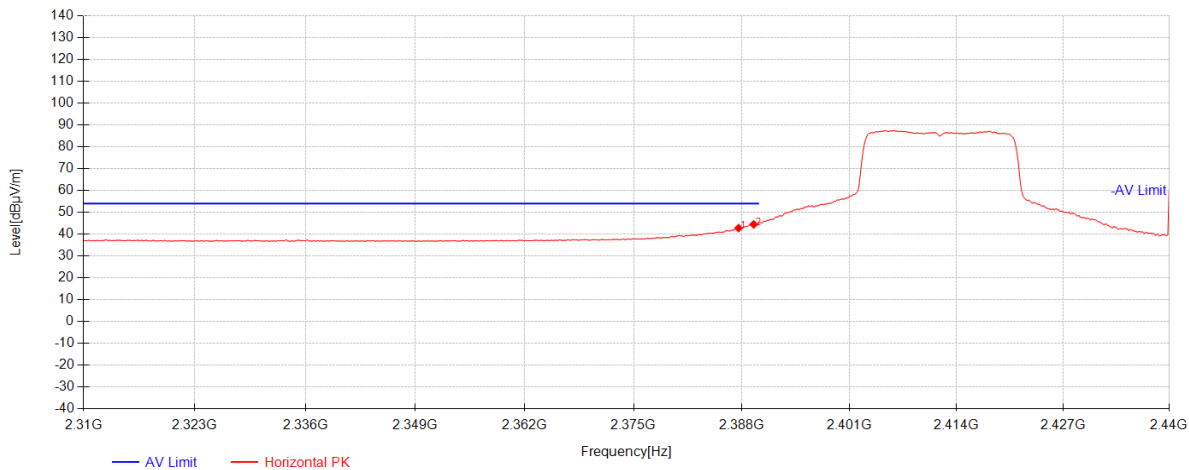
11b_TX_CH_11_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.98	46.98	27.17	-23.54	50.60	74.00	23.40	Vertical
2	2486.44	46.43	27.17	-23.54	50.06	74.00	23.94	Vertical



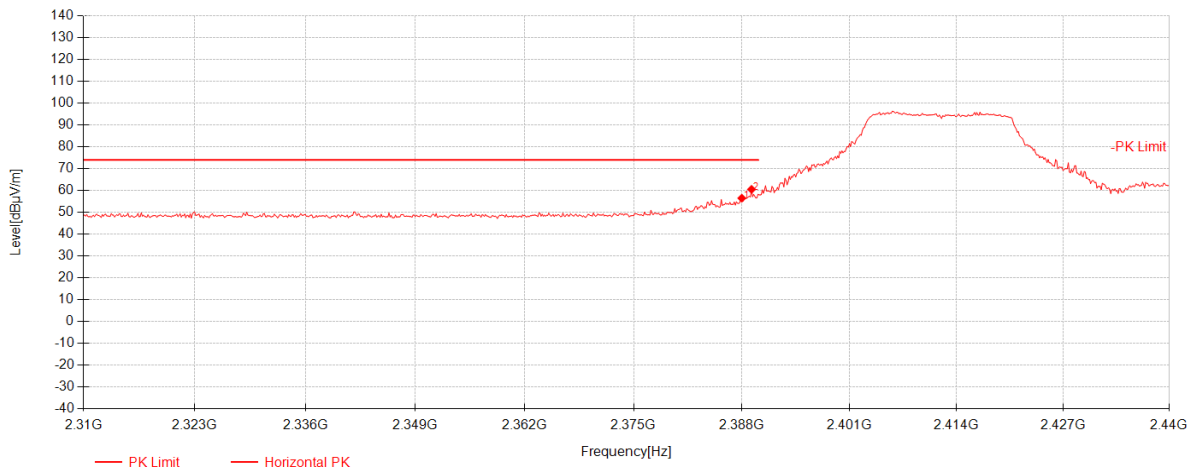
11n(HT20)_TX_CH_01_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2387.61	39.37	26.98	-23.57	42.77	54.00	11.23	Horizontal
2	2389.43	41.05	26.98	-23.57	44.46	54.00	9.54	Horizontal



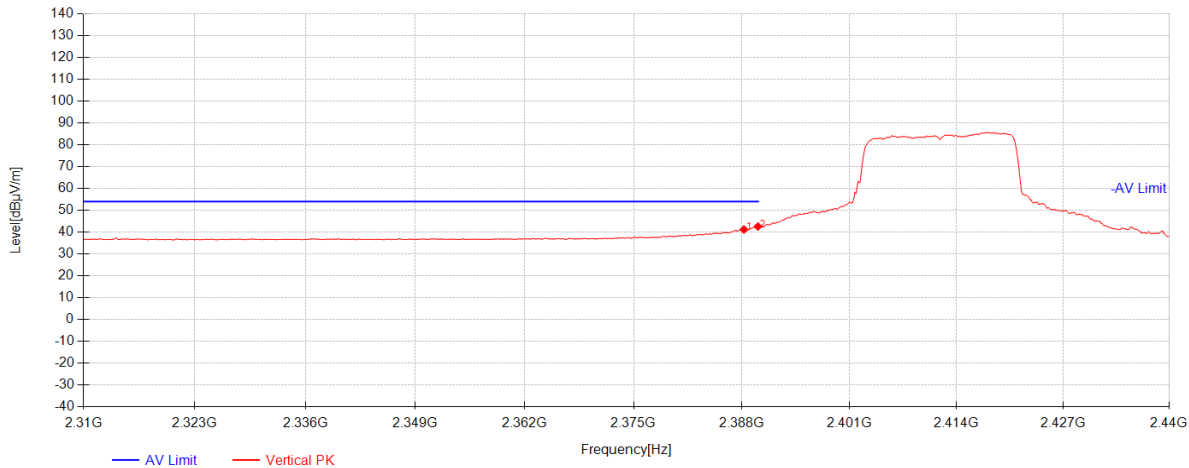
11n(HT20)_TX_CH_01_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2388	53.10	26.98	-23.57	56.50	74.00	17.50	Horizontal
2	2389.17	57.12	26.98	-23.57	60.53	74.00	13.47	Horizontal



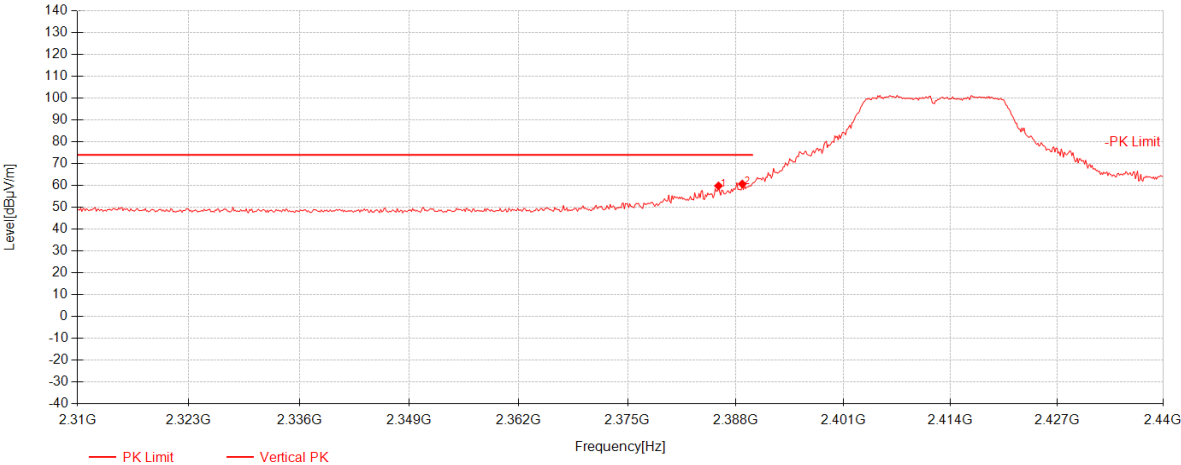
11n(HT20)_TX_CH_01_Vertical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2388.26	37.81	26.98	-23.57	41.22	54.00	12.78	Vertical
2	2389.95	39.18	26.98	-23.57	42.59	54.00	11.41	Vertical



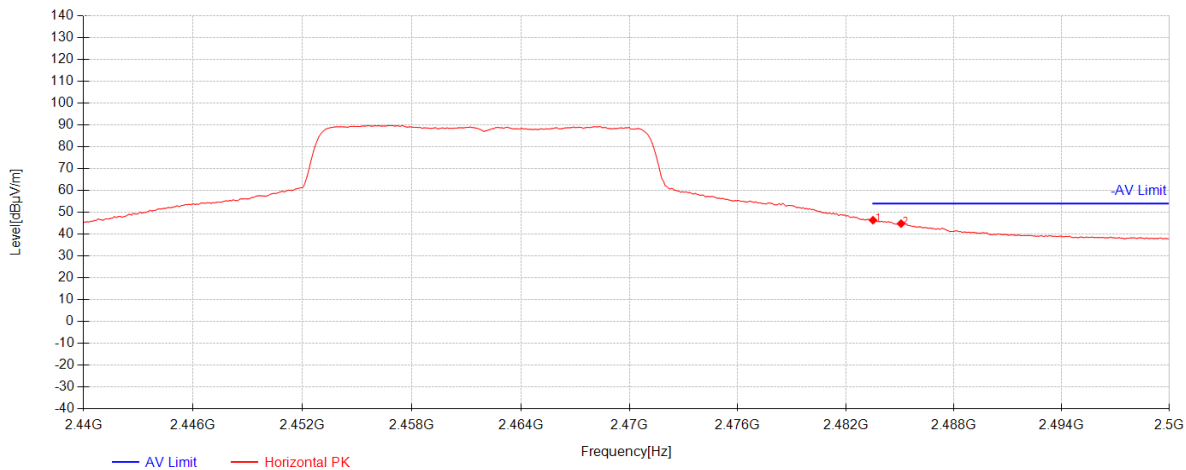
11n(HT20)_TX_CH_01_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2385.92	56.45	26.97	-23.57	59.85	74.00	14.15	Vertical
2	2388.78	57.31	26.98	-23.57	60.72	74.00	13.28	Vertical



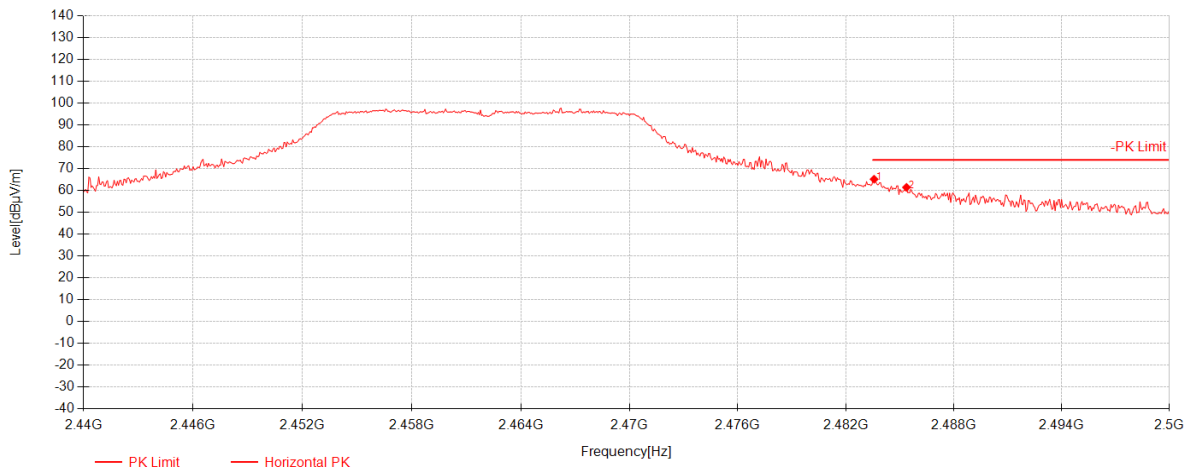
11n(HT20)_TX_CH_11_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.5	42.77	27.17	-23.54	46.39	54.00	7.61	Horizontal
2	2485.06	41.21	27.17	-23.54	44.84	54.00	9.16	Horizontal



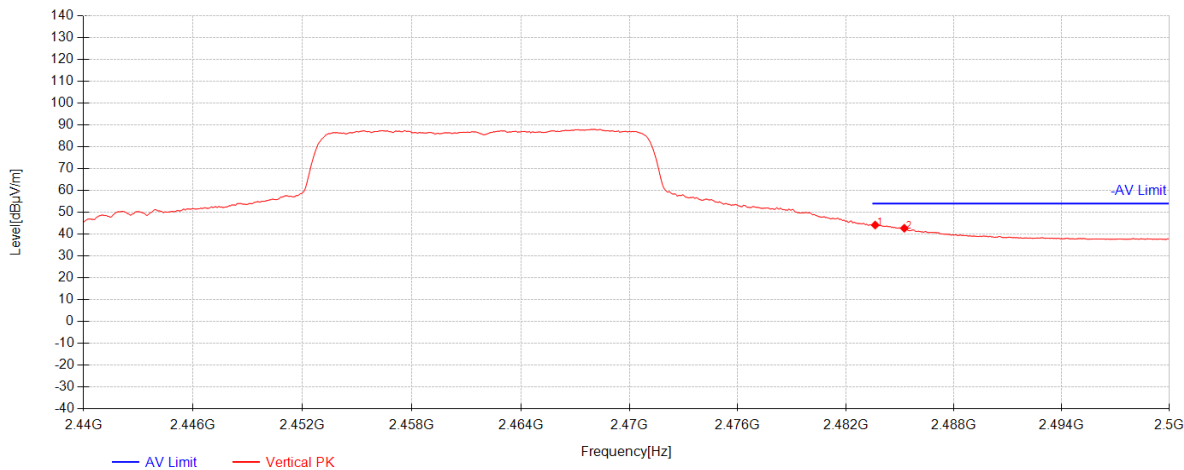
11n(HT20)_TX_CH_11_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.56	61.56	27.17	-23.54	65.18	74.00	8.82	Horizontal
2	2485.36	57.82	27.17	-23.54	61.45	74.00	12.55	Horizontal



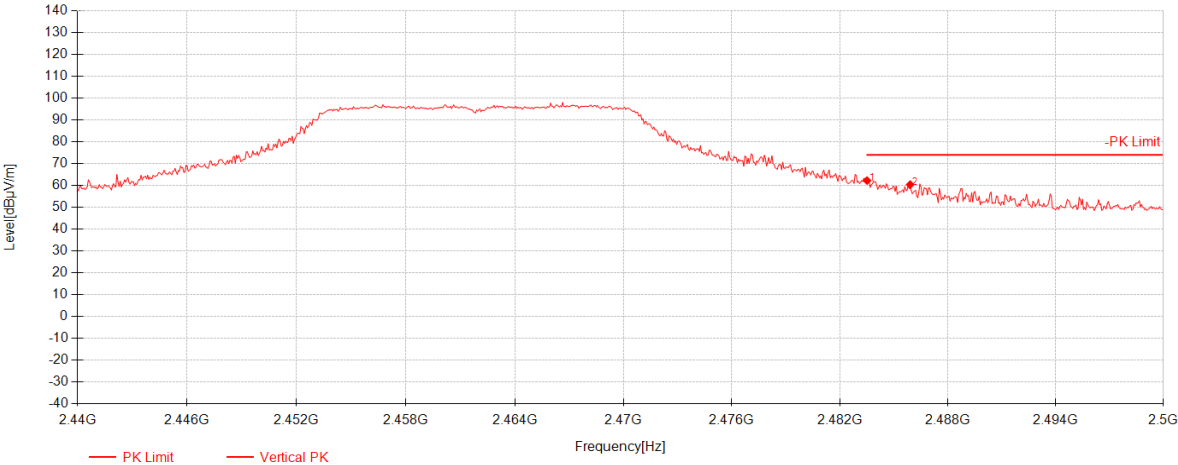
11n(HT20)_TX_CH_11_Vetical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.62	40.55	27.17	-23.54	44.17	54.00	9.83	Vertical
2	2485.24	39.08	27.17	-23.54	42.71	54.00	11.29	Vertical



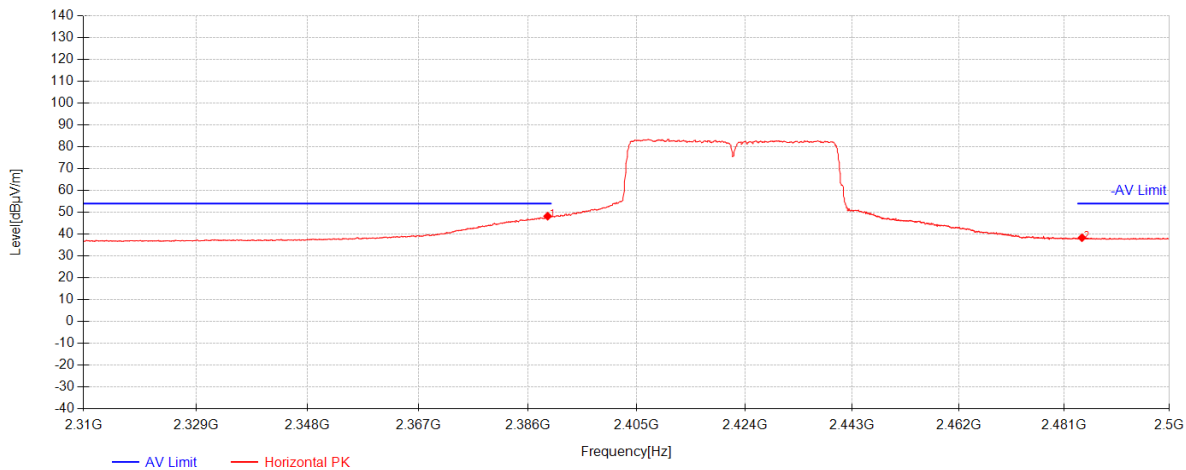
11n(HT20)_TX_CH_11_Vetical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.5	58.64	27.17	-23.54	62.26	74.00	11.74	Vertical
2	2485.9	56.80	27.17	-23.54	60.43	74.00	13.57	Vertical



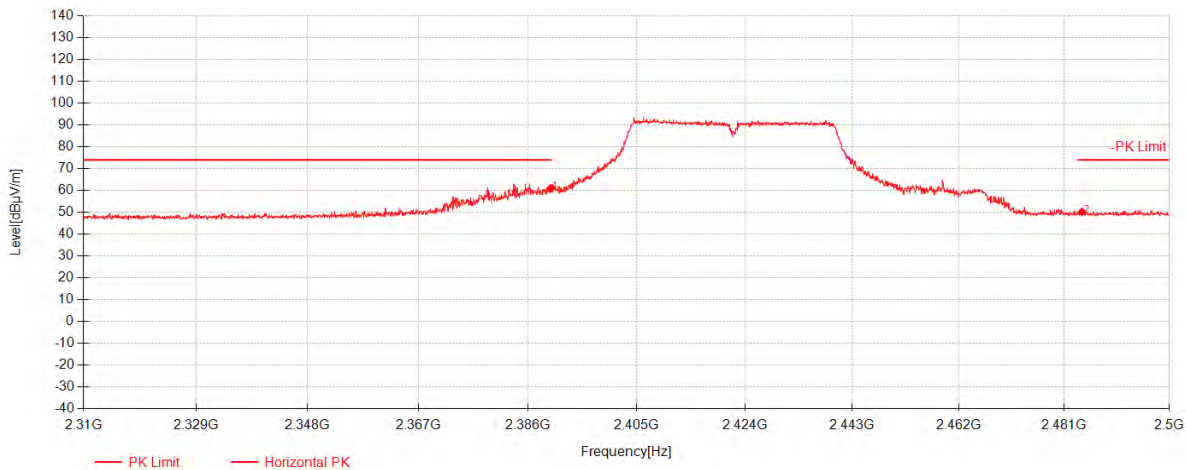
11n(HT40)_TX_CH_03_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2389.43	44.83	26.98	-23.57	48.24	54.00	5.76	Horizontal
2	2484.22	34.74	27.17	-23.54	38.36	54.00	15.64	Horizontal



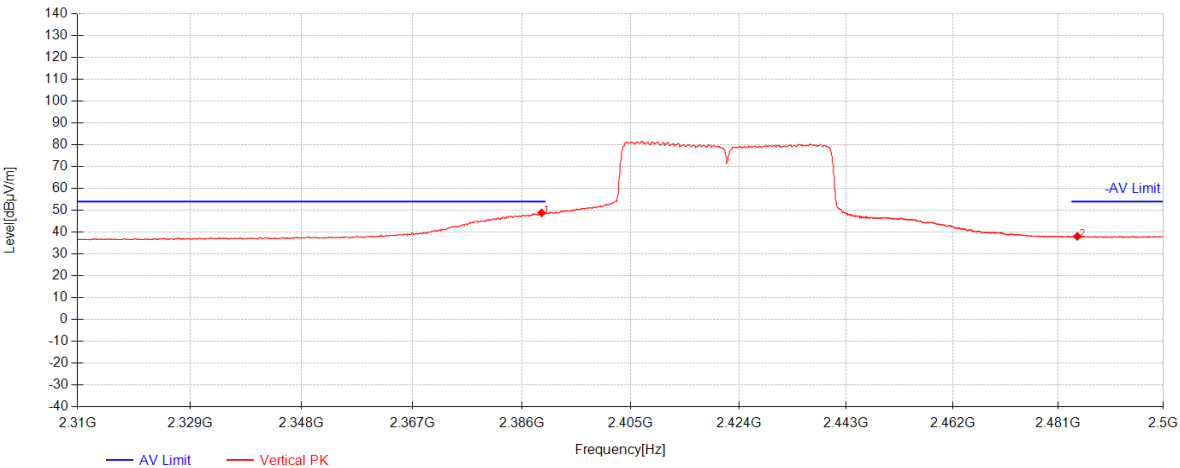
11n(HT40)_TX_CH_03_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2389.8633	57.41	26.98	-23.57	60.82	74.00	13.18	Horizontal
2	2484.22	46.55	27.17	-23.54	50.17	74.00	23.83	Horizontal



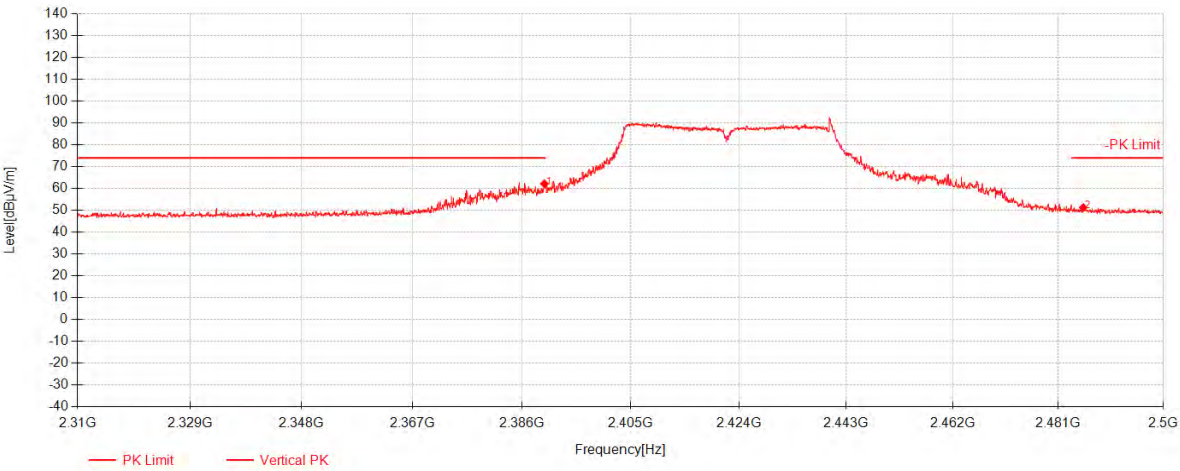
11n(HT40)_TX_CH_03_Vetical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2389.43	45.39	26.98	-23.57	48.80	54.00	5.20	Vertical
2	2484.46	34.43	27.17	-23.54	38.05	54.00	15.95	Vertical



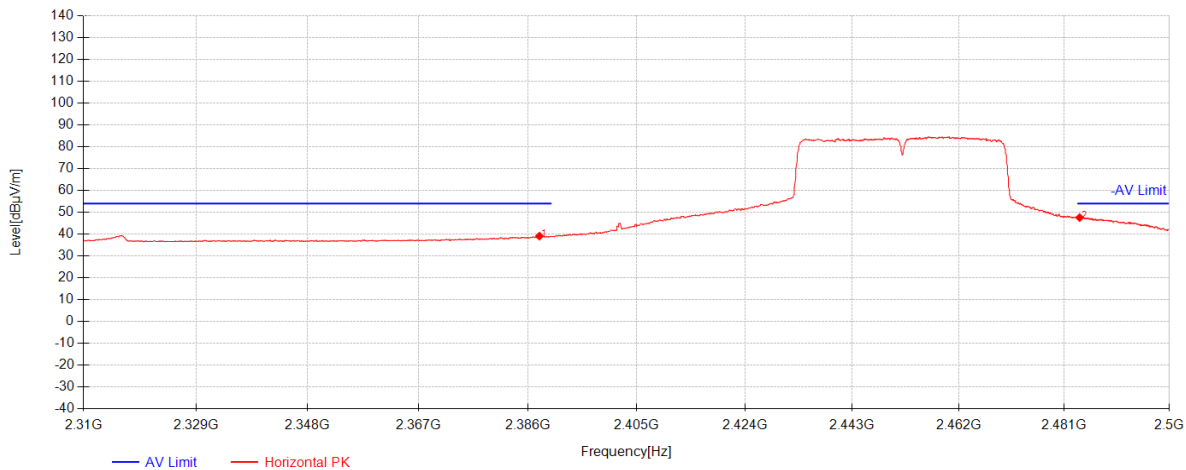
11n(HT40)_TX_CH_03_Vetical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2389.9067	58.78	26.98	-23.57	62.19	74.00	11.81	Vertical
2	2485.54	47.62	27.17	-23.54	51.25	74.00	22.75	Vertical



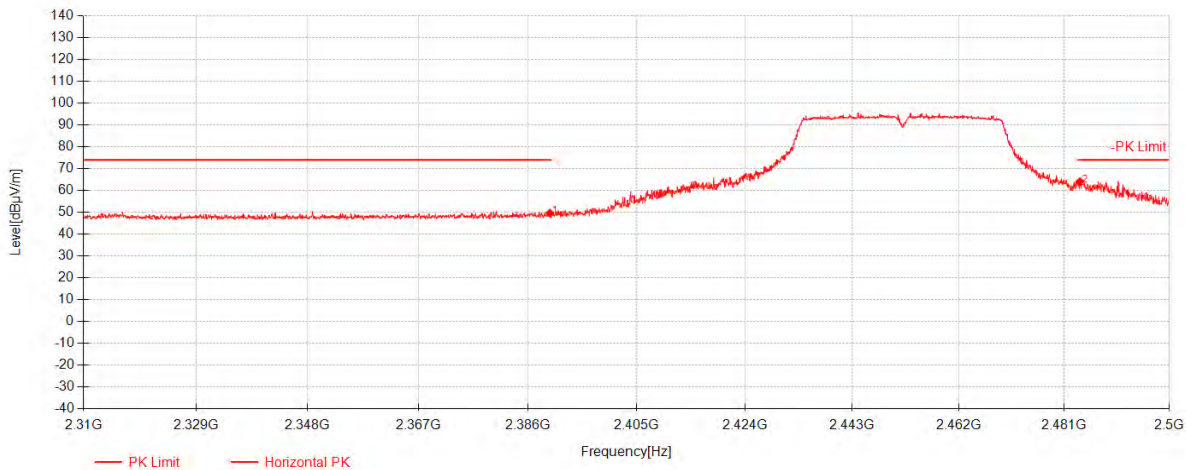
11n(HT40)_TX_CH_09_Horizontal_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2388	35.69	26.98	-23.57	39.09	54.00	14.91	Horizontal
2	2483.8	43.98	27.17	-23.54	47.60	54.00	6.40	Horizontal



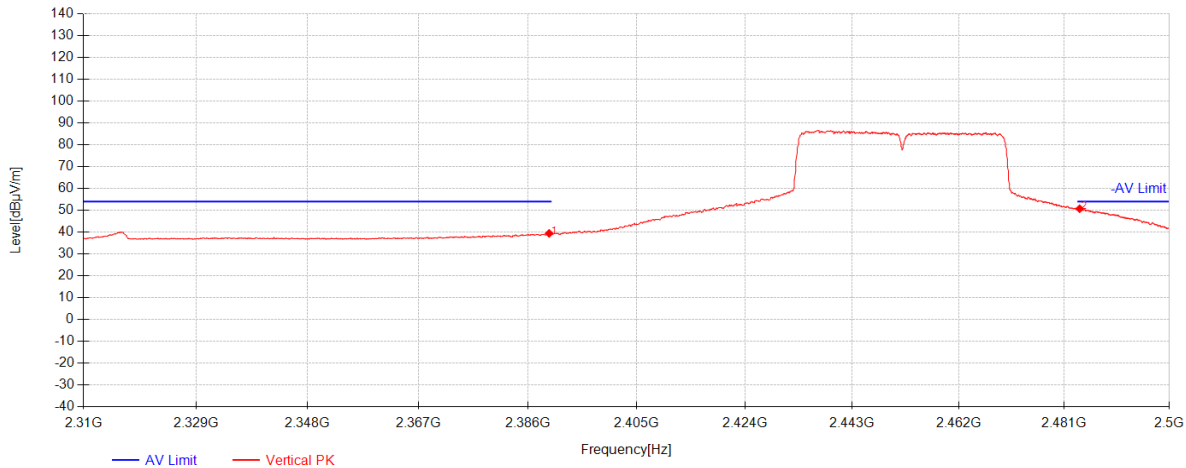
11n(HT40)_TX_CH_09_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2389.82	46.29	26.98	-23.57	49.70	74.00	24.30	Horizontal
2	2483.86	60.53	27.17	-23.54	64.15	74.00	9.85	Horizontal



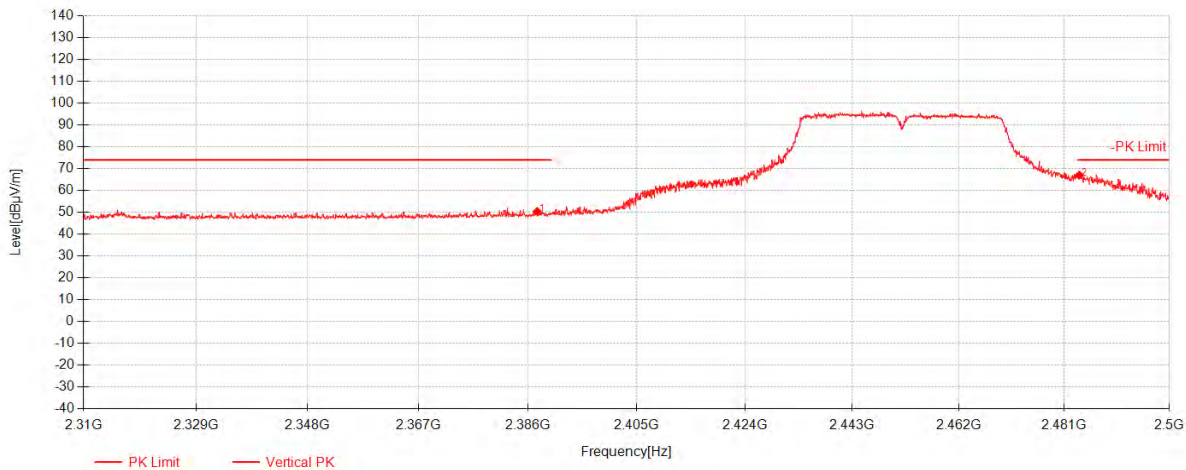
11n(HT40)_TX_CH_09_Vetical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2389.69	36.01	26.98	-23.57	39.42	54.00	14.58	Vertical
2	2483.8	47.13	27.17	-23.54	50.75	54.00	3.25	Vertical



11n(HT40)_TX_CH_09_Vetical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2387.61	47.04	26.98	-23.57	50.44	74.00	23.56	Vertical
2	2483.74	63.50	27.17	-23.54	67.12	74.00	6.88	Vertical

7.3 Radiated Spurious Emissions Below 1GHz

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

Test Method: ANSI C63.10 (2020) Section 6.4,6.5

Measurement Distance: 3m

Limit:

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

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 23.8 °C

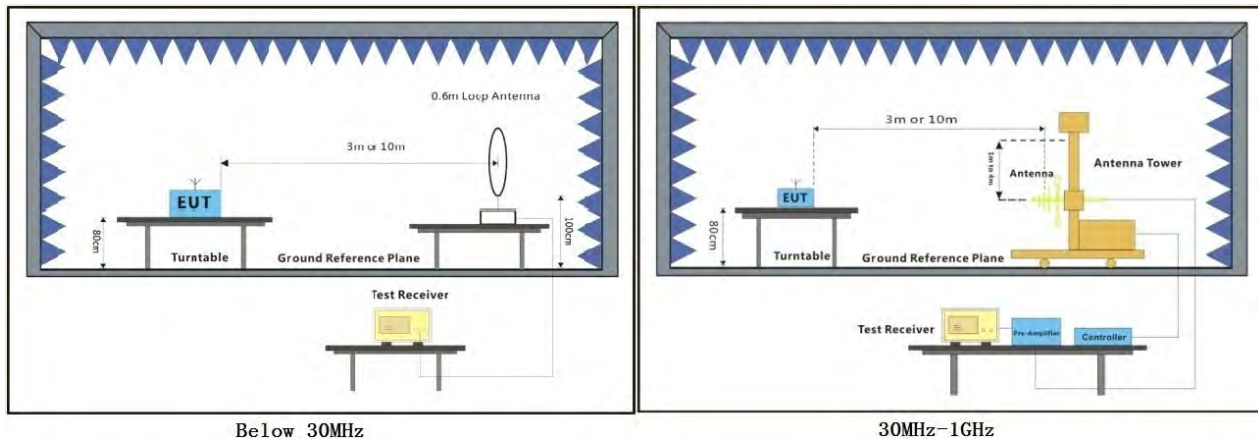
Humidity: 49.5 % RH

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(HE20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HE40). Only the data of worst case is recorded in the report.

7.3.3 Test Setup Diagram



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:

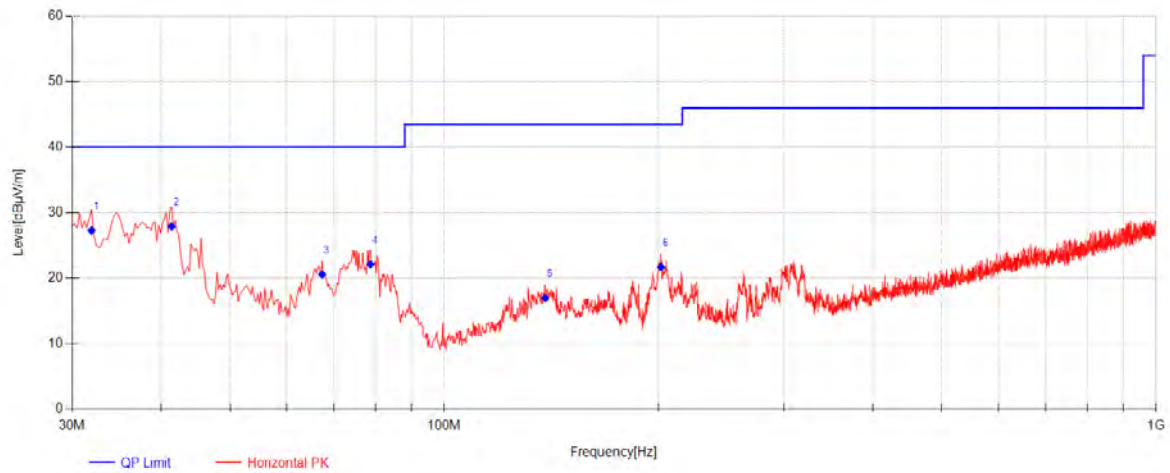
1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from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



Report No.: KSCR250700145603

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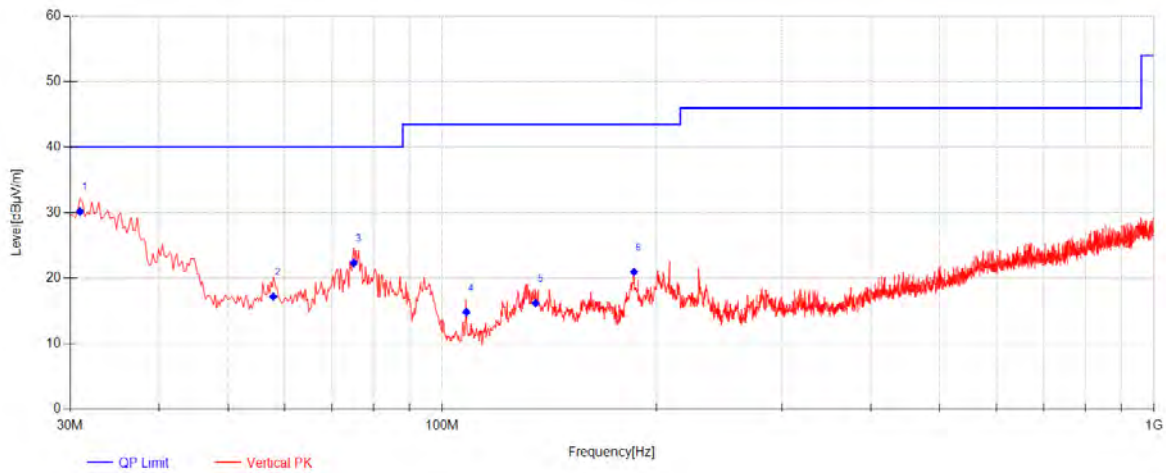
11b_TX_CH_11_Horizontal_LF



Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Polarity
1	31.94	51.46	-42.29	18.11	27.27	40.00	12.73	Horizontal
2	41.3975	51.35	-42.22	18.76	27.89	40.00	12.11	Horizontal
3	67.345	45.44	-41.87	17.00	20.56	40.00	19.44	Horizontal
4	78.7425	48.57	-41.66	15.23	22.14	40.00	17.86	Horizontal
5	138.64	39.55	-41.05	18.46	16.96	43.50	26.54	Horizontal
6	201.69	46.94	-40.63	15.40	21.71	43.50	21.79	Horizontal



11b_TX_CH_11_Vertical_LF



Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Polarity
1	30.97	54.29	-42.30	18.20	30.18	40.00	9.82	Vertical
2	57.8875	41.47	-42.02	17.75	17.19	40.00	22.81	Vertical
3	75.105	48.57	-41.73	15.47	22.31	40.00	17.69	Vertical
4	108.085	40.77	-41.44	15.50	14.83	43.50	28.67	Vertical
5	135.245	38.79	-41.15	18.52	16.17	43.50	27.33	Vertical
6	185.9275	45.74	-40.60	15.82	20.96	43.50	22.54	Vertical

7.4 Radiated Spurious Emissions Above 1GHz

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

Test Method: ANSI C63.10 (2020) Section 6.6

Measurement Distance: 3m

Limit:

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

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 23.8 °C

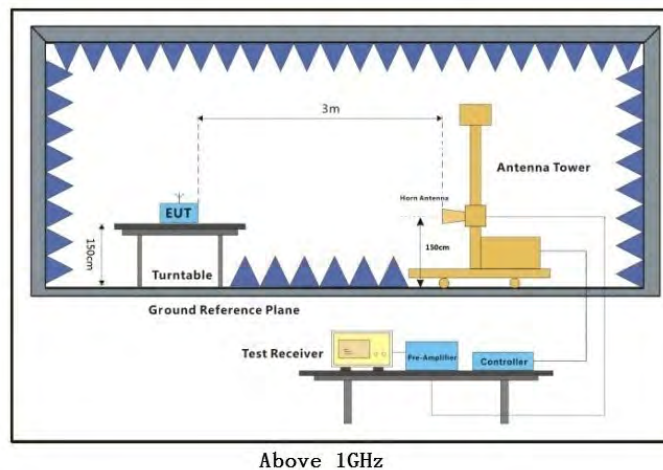
Humidity: 49.5 % RH

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 @ MCS0 is the worst case of IEEE 802.11ax(HE20). Only the data of worst case is recorded in the report.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

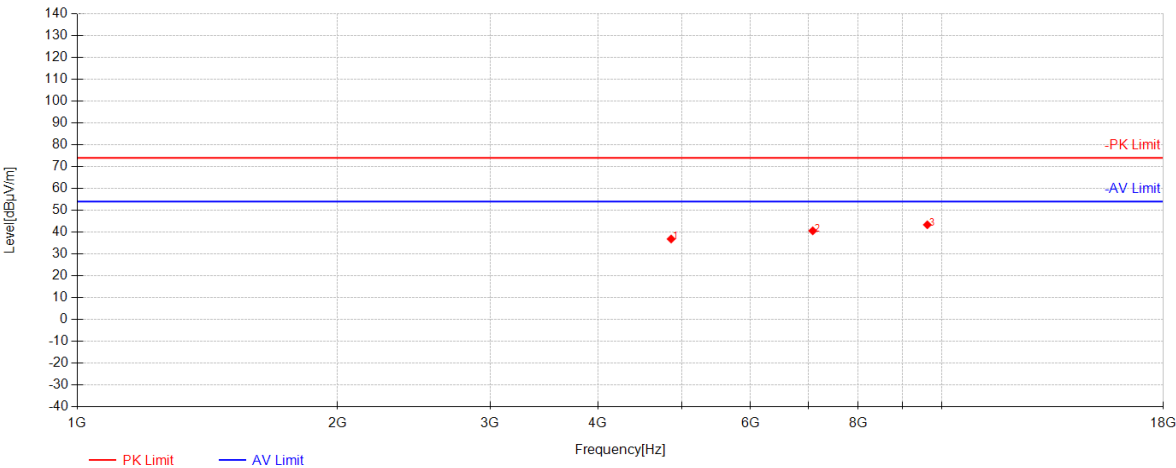
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which 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.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.
- 5:For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle<98%) or 10Hz (Duty cycle $\geq$ 98%) for Average detection (AV) at frequency above 1GHz.



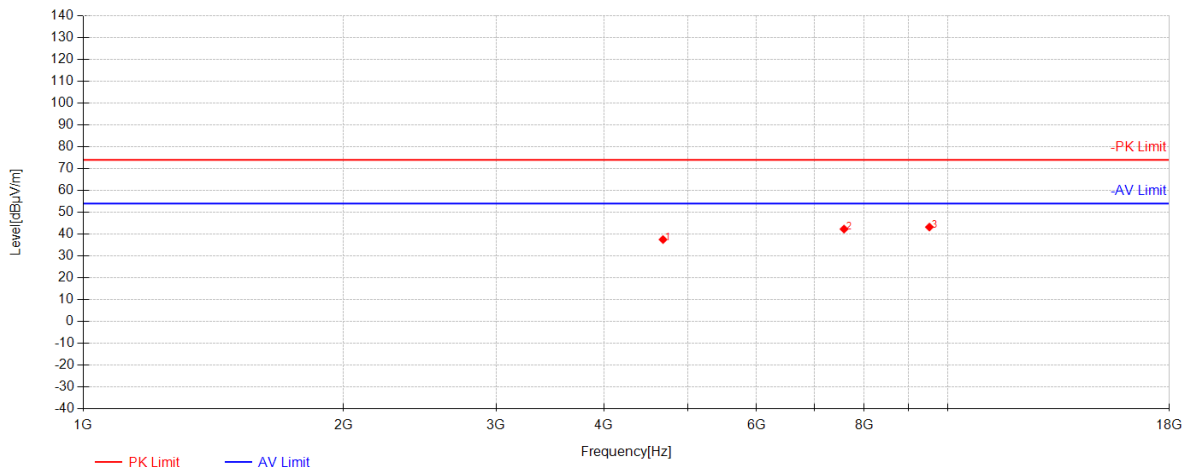
11ax(HE20)_TX_CH_01_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4859.625	51.21	31.18	-45.53	36.85	74.00	37.15	Horizontal
2	7085.625	49.49	35.24	-44.12	40.61	74.00	33.39	Horizontal
3	9612.75	45.30	37.73	-39.64	43.38	74.00	30.62	Horizontal



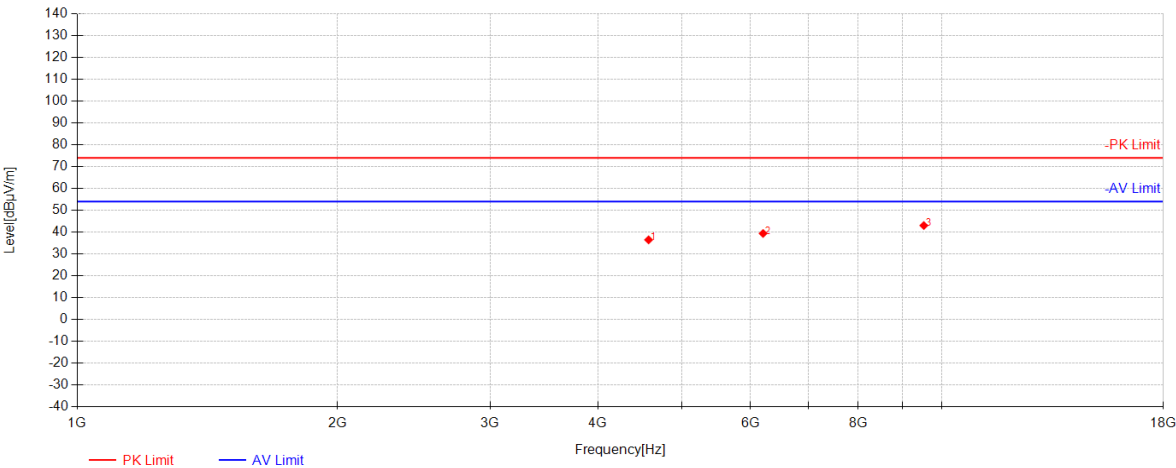
11ax(HE20)_TX_CH_01_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4680.375	52.25	30.89	-45.61	37.52	74.00	36.48	Vertical
2	7578.75	48.79	36.51	-42.97	42.33	74.00	31.67	Vertical
3	9512.625	45.88	37.53	-40.16	43.25	74.00	30.75	Vertical



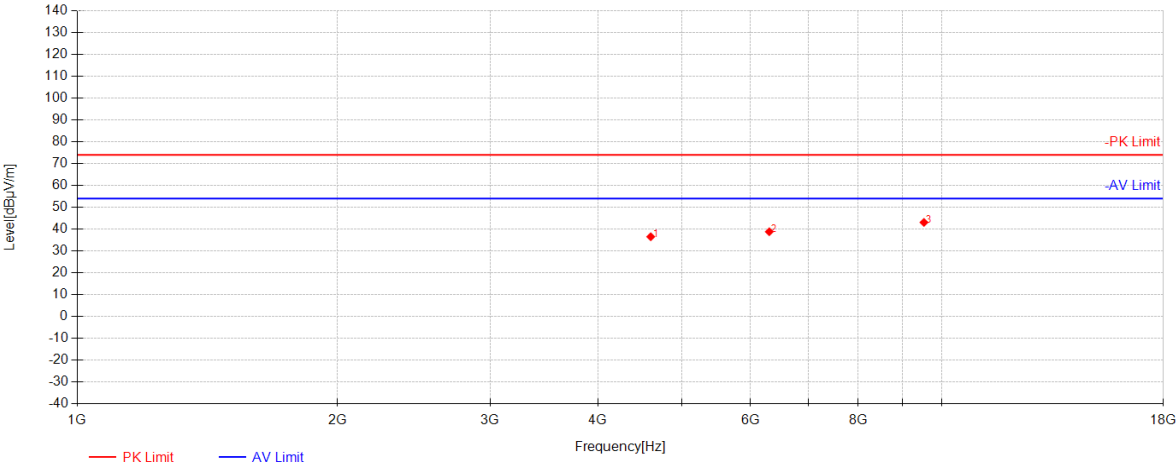
11ax(HE20)_TX_CH_06_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4576.5	51.44	30.72	-45.68	36.48	74.00	37.52	Horizontal
2	6207.75	51.03	33.11	-44.74	39.39	74.00	34.61	Horizontal
3	9523.5	45.58	37.55	-40.10	43.03	74.00	30.97	Horizontal



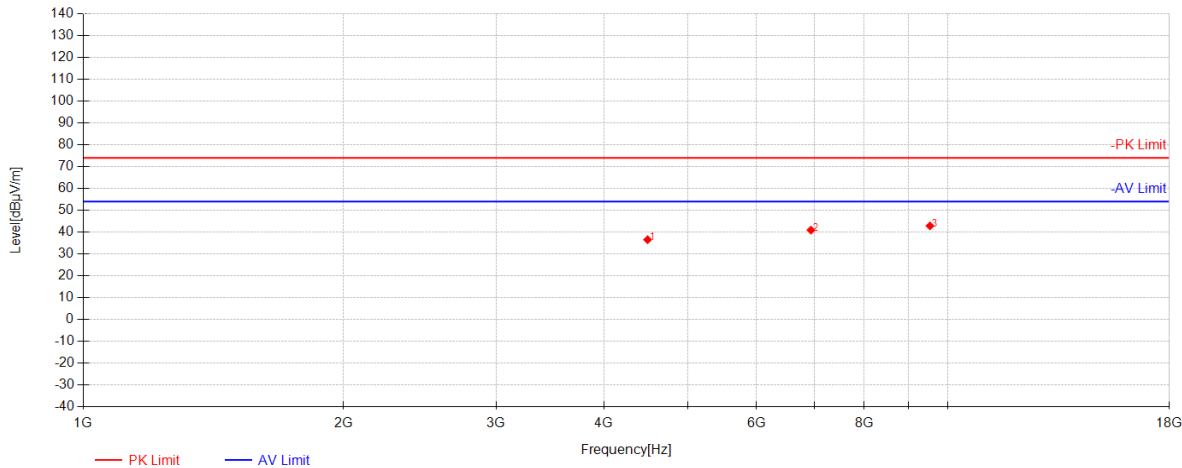
11ax(HE20)_TX_CH_06_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4602.75	51.42	30.76	-45.67	36.52	74.00	37.48	Vertical
2	6310.875	49.89	33.46	-44.53	38.82	74.00	35.18	Vertical
3	9527.25	45.61	37.55	-40.08	43.09	74.00	30.91	Vertical



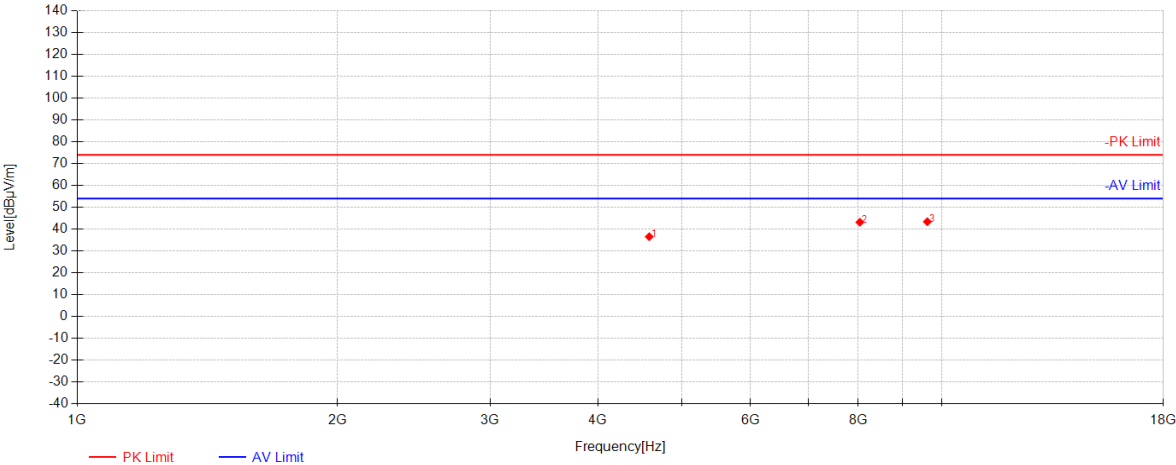
11ax(HE20)_TX_CH_11_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	4491.75	51.69	30.58	-45.72	36.55	74.00	37.45	Horizontal
2	6939.375	49.93	34.89	-43.88	40.94	74.00	33.06	Horizontal
3	9526.875	45.40	37.55	-40.08	42.87	74.00	31.13	Horizontal



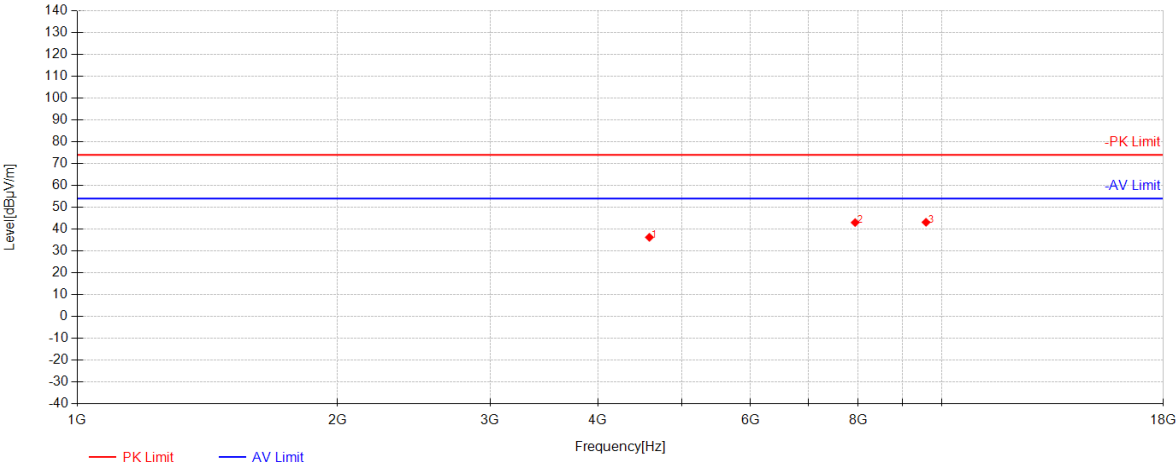
11ax(HE20)_TX_CH_11_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	4584	51.47	30.73	-45.68	36.53	74.00	37.47	Vertical
2	8032.5	48.11	37.08	-42.03	43.16	74.00	30.84	Vertical
3	9612	45.32	37.72	-39.64	43.40	74.00	30.60	Vertical



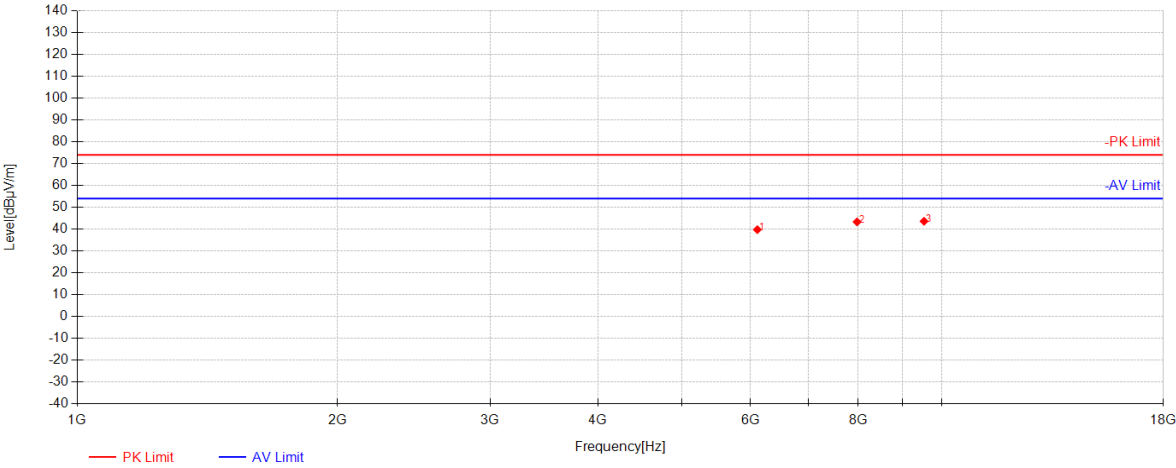
11b_TX_CH_01_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4586.25	51.19	30.74	-45.68	36.25	74.00	37.75	Horizontal
2	7931.625	48.68	37.00	-42.67	43.01	74.00	30.99	Horizontal
3	9579	45.28	37.66	-39.79	43.15	74.00	30.85	Horizontal



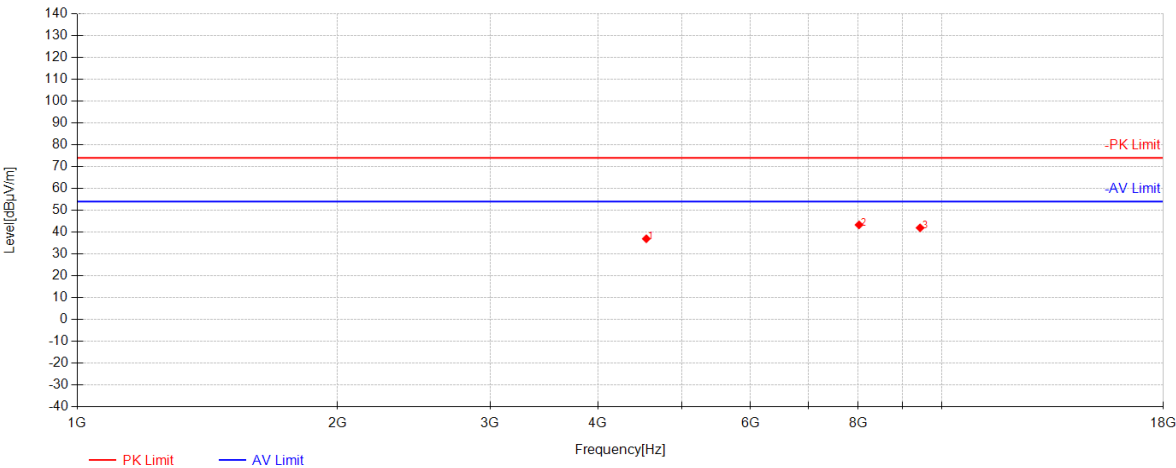
11b_TX_CH_01_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	6113.25	51.47	32.79	-44.49	39.76	74.00	34.24	Vertical
2	7972.5	48.75	37.06	-42.48	43.33	74.00	30.67	Vertical
3	9529.5	46.14	37.56	-40.06	43.63	74.00	30.37	Vertical



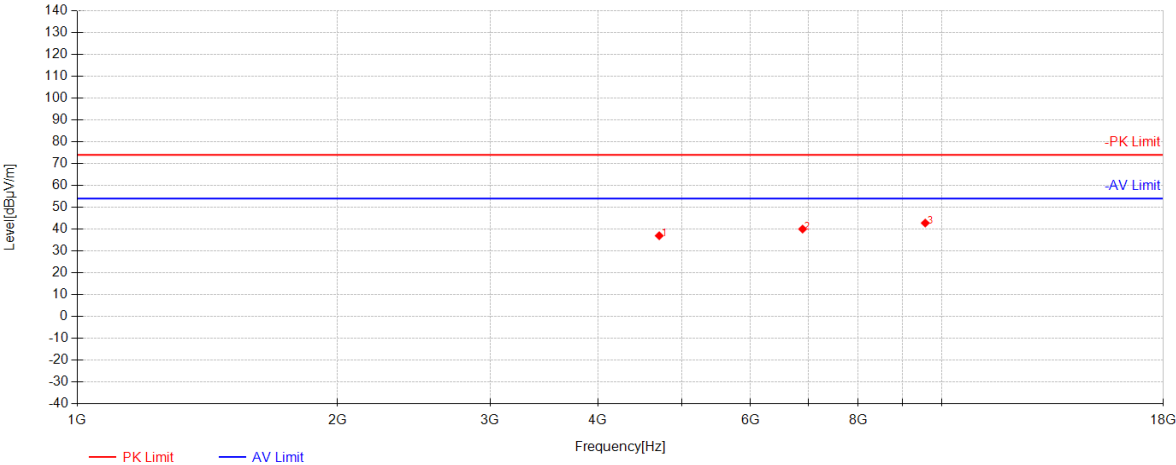
11b_TX_CH_06_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	4549.125	51.98	30.68	-45.69	36.97	74.00	37.03	Horizontal
2	8014.875	48.46	37.09	-42.20	43.35	74.00	30.65	Horizontal
3	9429	44.57	37.36	-39.95	41.98	74.00	32.02	Horizontal



11b_TX_CH_06_Vertical



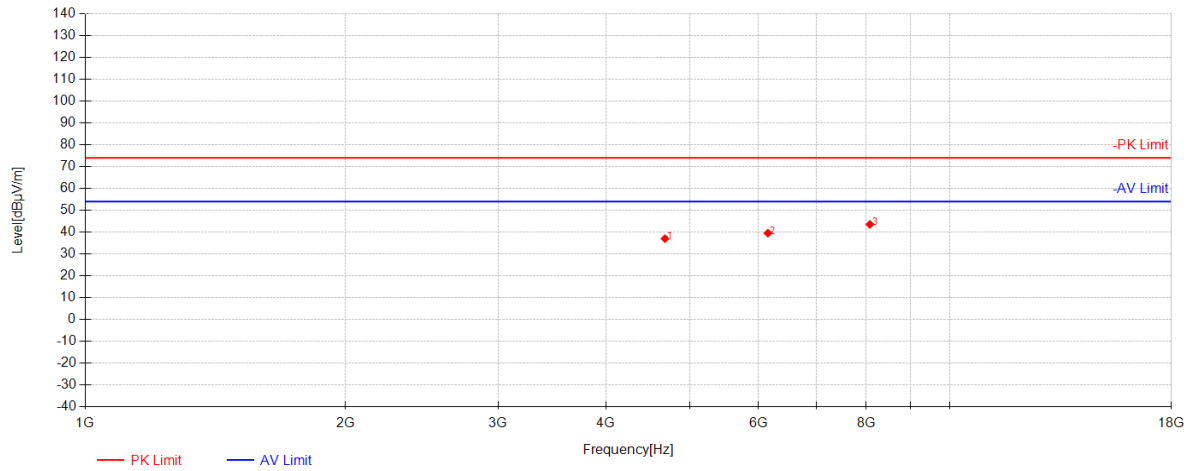
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4708.125	51.63	30.93	-45.60	36.97	74.00	37.03	Vertical
2	6896.625	49.32	34.81	-44.10	40.03	74.00	33.97	Vertical
3	9559.125	45.08	37.62	-39.90	42.80	74.00	31.20	Vertical



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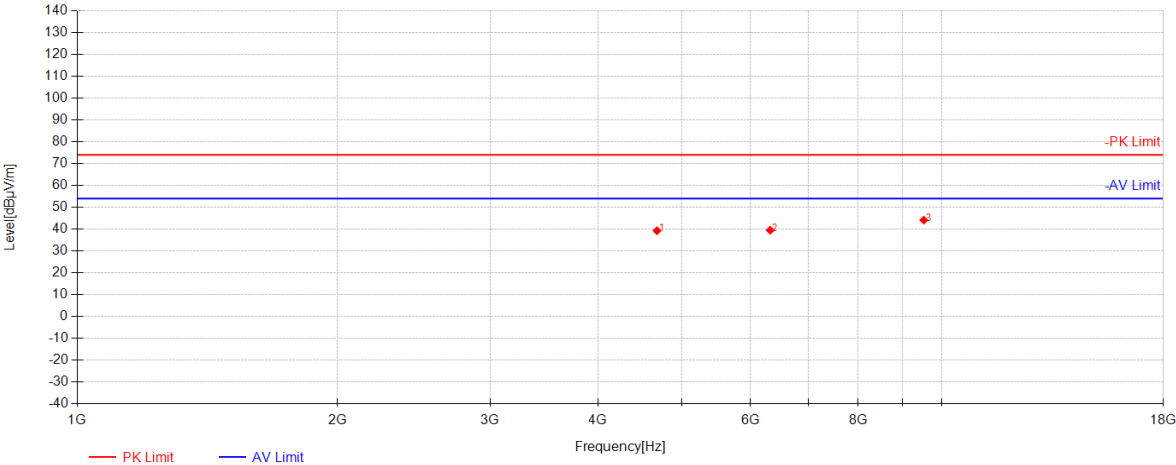
11b_TX_CH_11_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4679.625	51.75	30.89	-45.61	37.02	74.00	36.98	Horizontal
2	6154.875	51.22	32.93	-44.62	39.53	74.00	34.47	Horizontal
3	8076	48.10	37.05	-41.60	43.56	74.00	30.44	Horizontal



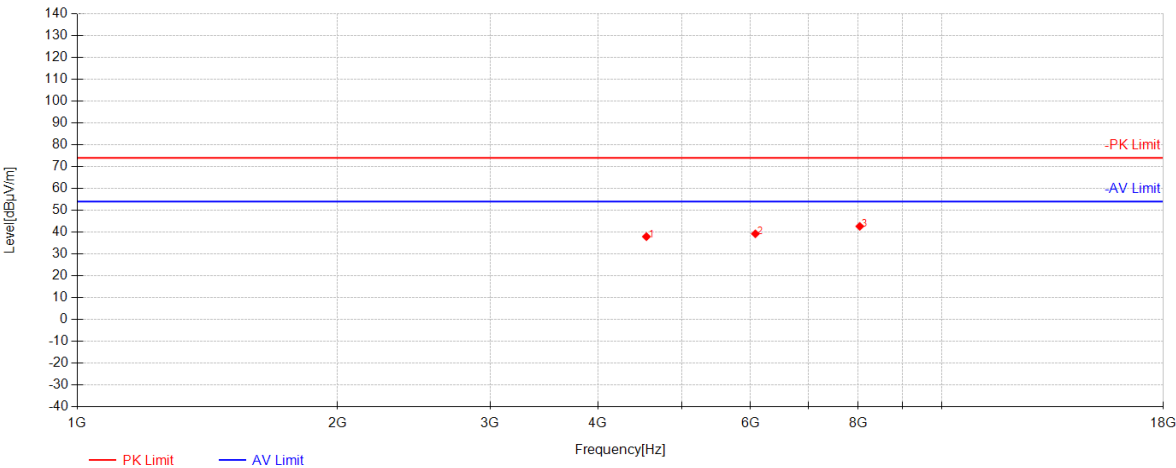
11b_TX_CH_11_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4679.625	54.02	30.89	-45.61	39.29	74.00	34.71	Vertical
2	6327	50.50	33.51	-44.50	39.51	74.00	34.49	Vertical
3	9523.5	46.69	37.55	-40.10	44.14	74.00	29.86	Vertical



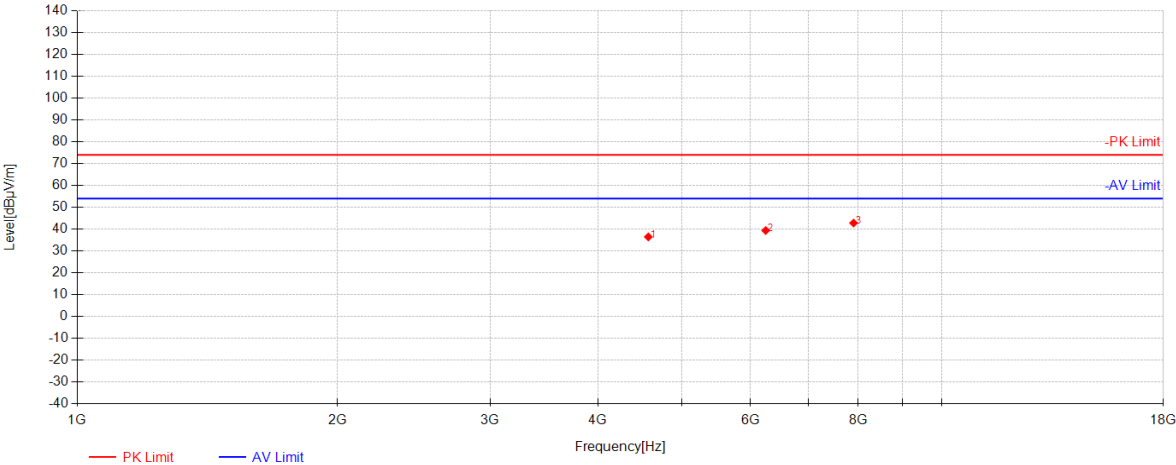
11n(HT20)_TX_CH_01_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	4550.25	52.95	30.68	-45.69	37.94	74.00	36.06	Horizontal
2	6081.375	51.09	32.68	-44.52	39.25	74.00	34.75	Horizontal
3	8030.625	47.62	37.08	-42.05	42.65	74.00	31.35	Horizontal



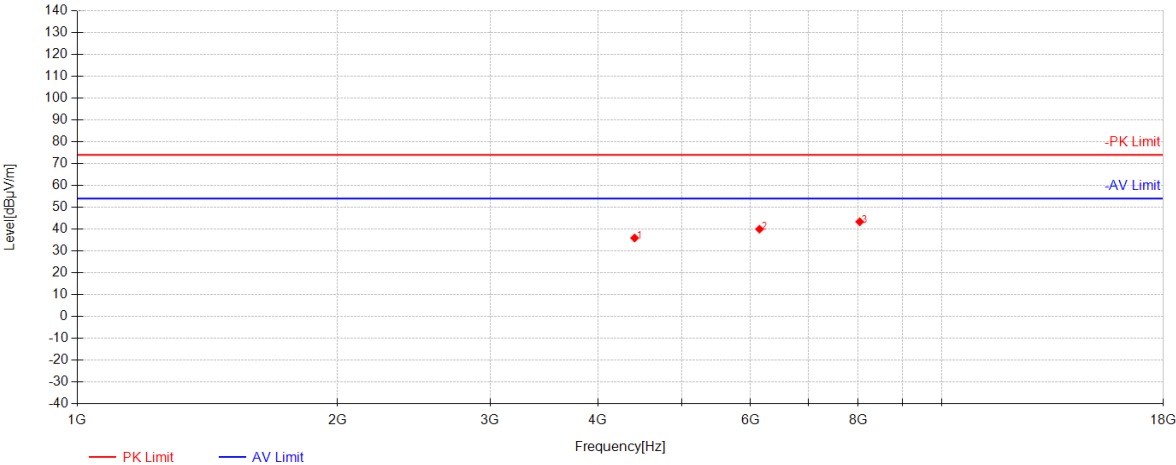
11n(HT20)_TX_CH_01_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	4573.5	51.41	30.72	-45.68	36.45	74.00	37.55	Vertical
2	6251.25	50.77	33.25	-44.65	39.38	74.00	34.62	Vertical
3	7899	48.67	36.96	-42.81	42.81	74.00	31.19	Vertical



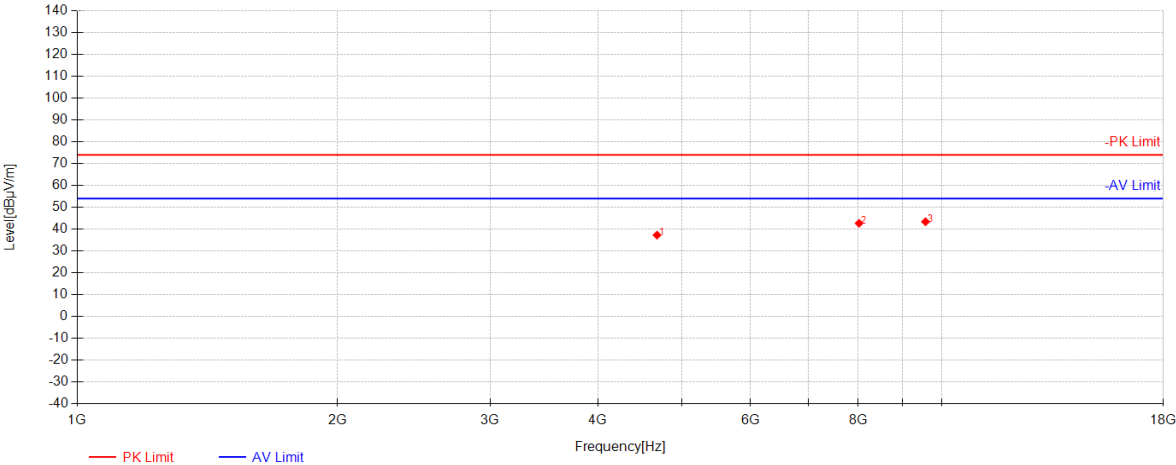
11n(HT20)_TX_CH_06_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	4409.25	51.38	30.38	-45.81	35.95	74.00	38.05	Horizontal
2	6148.5	51.68	32.90	-44.60	39.98	74.00	34.02	Horizontal
3	8029.5	48.37	37.08	-42.06	43.39	74.00	30.61	Horizontal



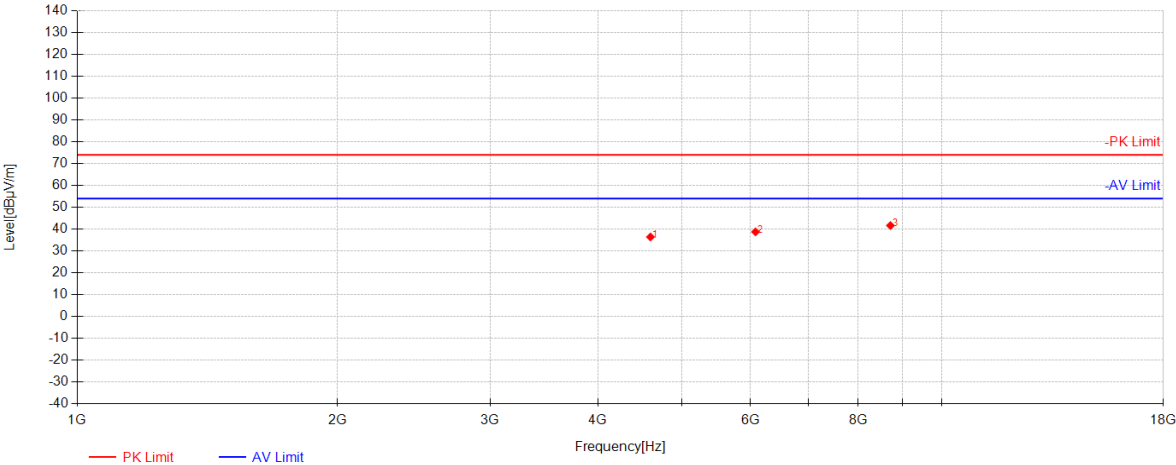
11n(HT20)_TX_CH_06_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	4680.375	51.99	30.89	-45.61	37.26	74.00	36.74	Vertical
2	8015.625	47.77	37.09	-42.20	42.67	74.00	31.33	Vertical
3	9566.25	45.63	37.63	-39.86	43.40	74.00	30.60	Vertical



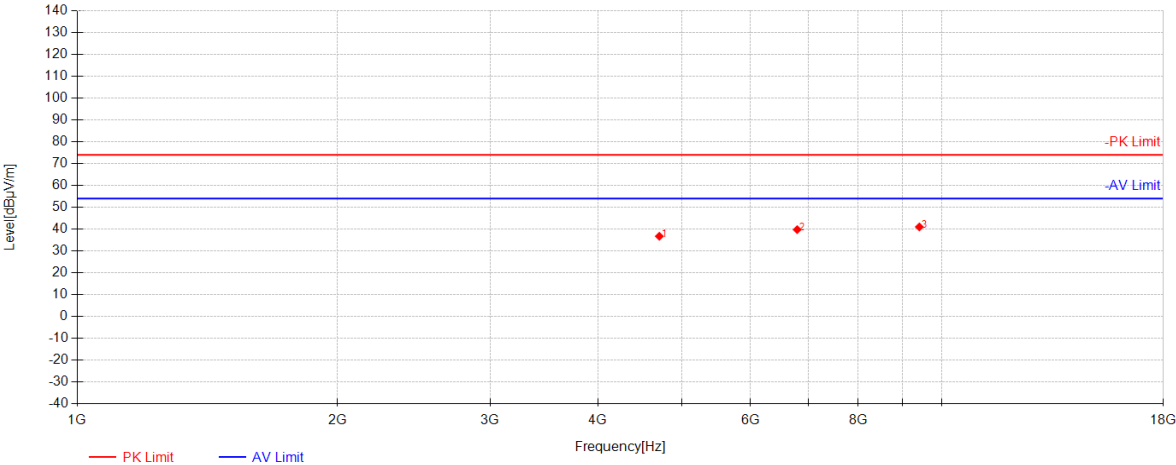
11n(HT20)_TX_CH_11_Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	4599.375	51.33	30.76	-45.67	36.42	74.00	37.58	Horizontal
2	6083.625	50.57	32.68	-44.51	38.74	74.00	35.26	Horizontal
3	8713.125	46.62	36.67	-41.63	41.66	74.00	32.34	Horizontal



11n(HT20)_TX_CH_11_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	4710	51.40	30.94	-45.59	36.74	74.00	37.26	Vertical
2	6797.625	49.31	34.64	-44.16	39.78	74.00	34.22	Vertical
3	9410.25	43.57	37.32	-39.87	41.02	74.00	32.98	Vertical

7.5 Conducted Peak Output Power

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

Test Method: ANSI C63.10 (2020) Section 11.9.1

Limit:

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

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 22.8 °C

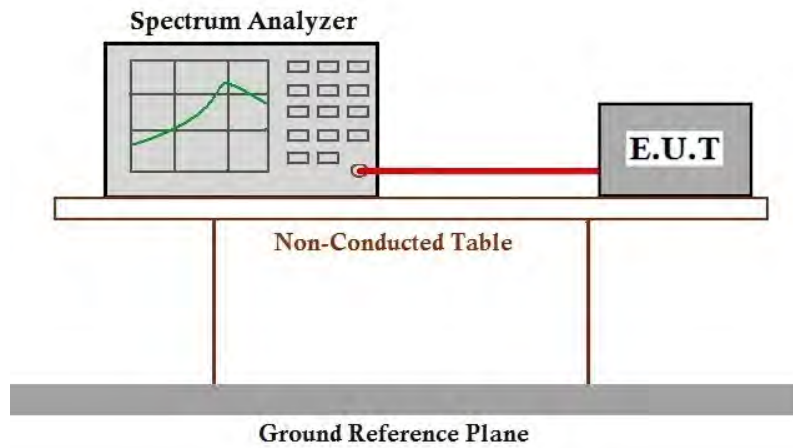
Humidity: 48.1 % RH

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(HE20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HE40). 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 (2020) Section 11.8.1

Limit:

≥500 kHz

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 22.8 °C

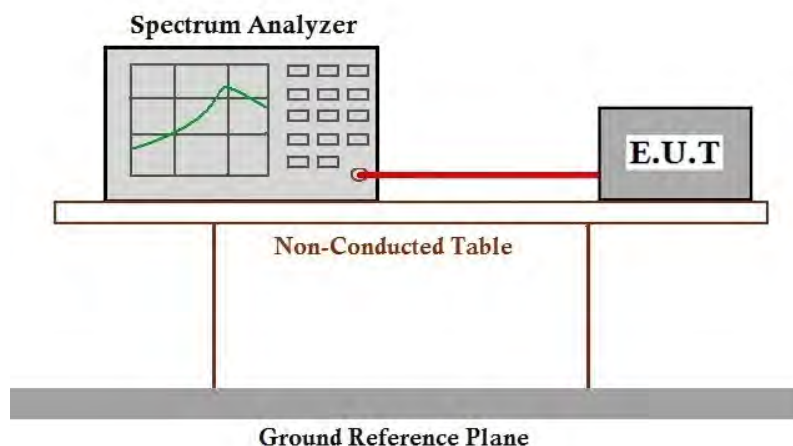
Humidity: 48.1 % RH

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(HE20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HE40). 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 (2020) 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: 22.8 °C

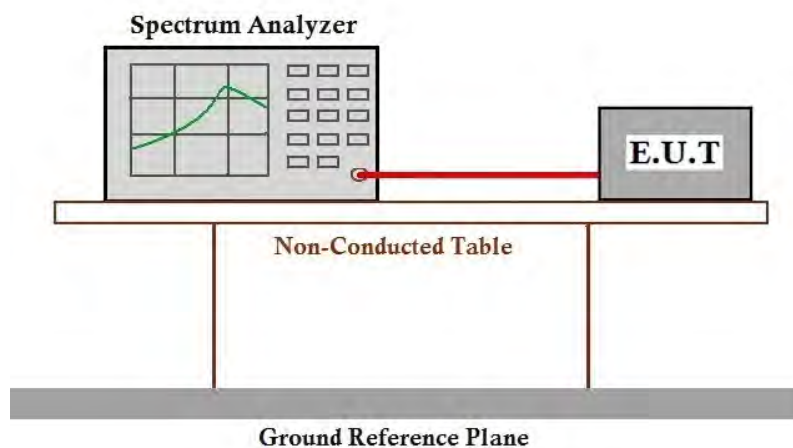
Humidity: 48.1 % RH

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(HE20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HE40). 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 (2020) Section 6.10.4

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: 22.8 °C

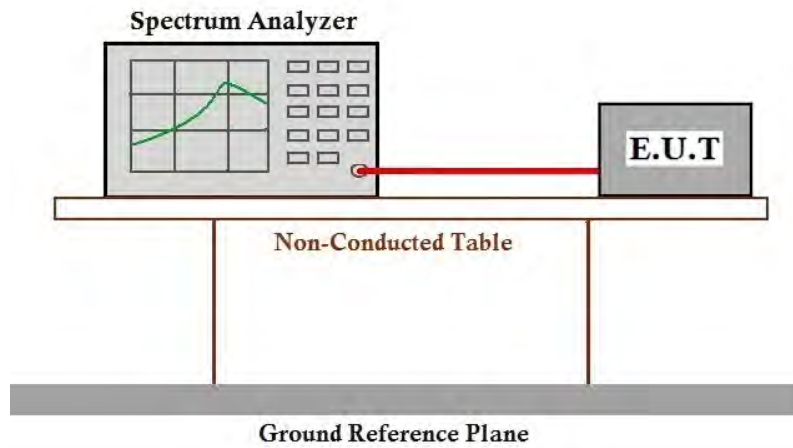
Humidity: 48.1 % RH

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(HE20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HE40). 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 (2020) 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: 22.8 °C

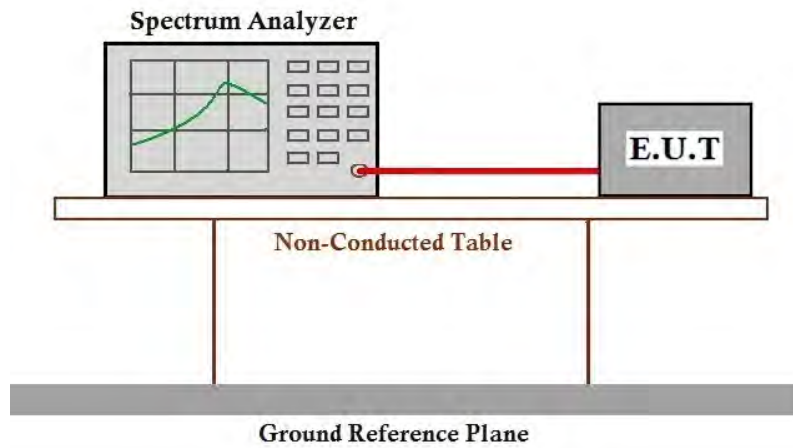
Humidity: 48.1 % RH

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(HE20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HE40). 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



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8 Test Setup Photo

Refer to Appendix-Test Setup Photo for KSCR2507001456AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for KSCR2507001456AT

10 Appendix

1. Duty Cycle

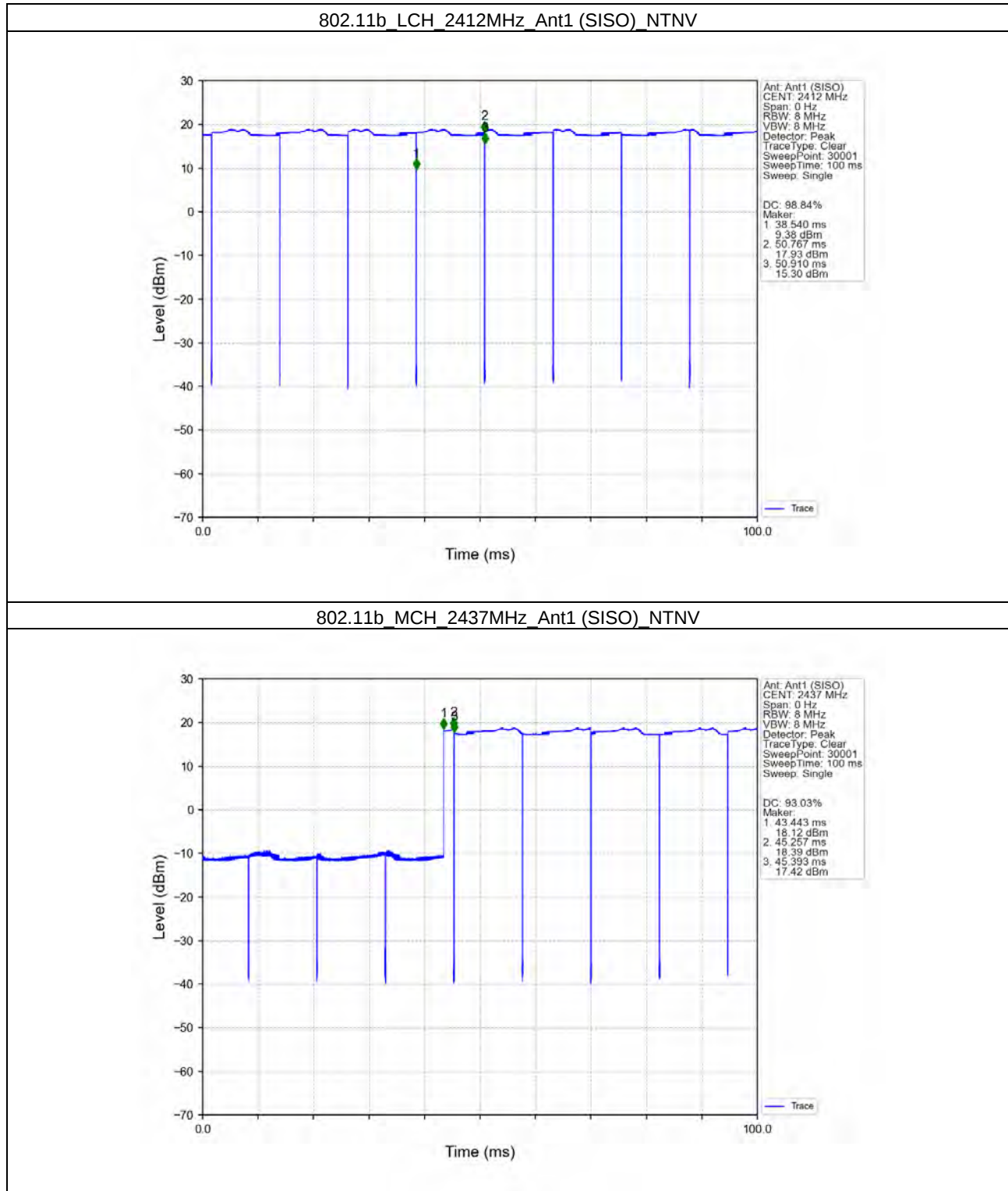
1.1 Test Result

1.1.1 Ant1

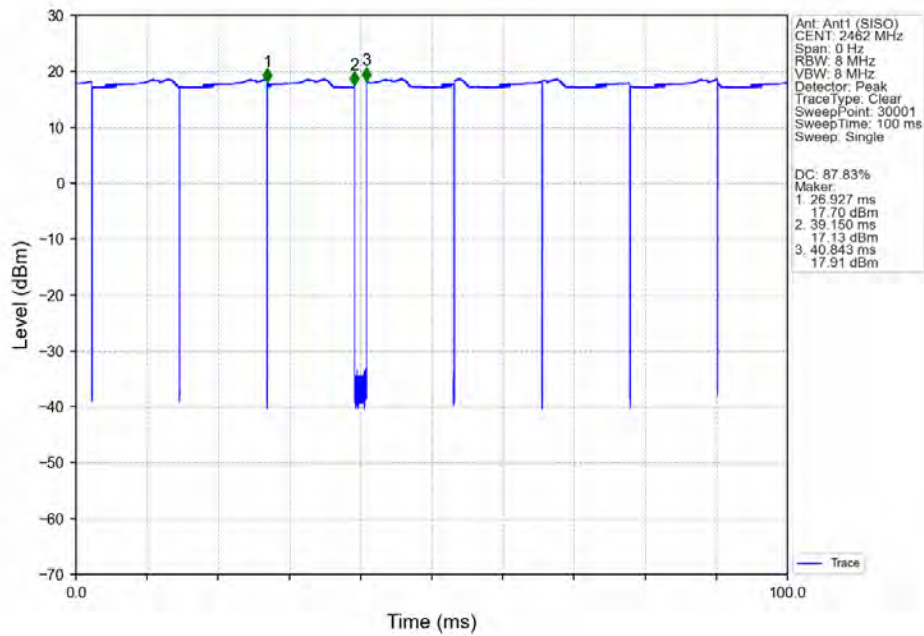
Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	/	/	12.227	12.370	98.84	0.05	0.78
		2437	/	/	1.814	1.950	93.03	0.31	6.32
		2462	/	/	12.223	13.916	87.83	0.56	11.79
802.11g	SISO	2412	/	/	2.032	2.257	90.03	0.46	4.55
		2437	/	/	2.033	2.249	90.40	0.44	4.17
		2462	/	/	2.032	2.200	92.36	0.34	3.55
802.11n (HT20)	SISO	2412	/	/	1.893	2.042	92.70	0.33	4.74
		2437	/	/	1.893	2.069	91.49	0.39	5.47
		2462	/	/	1.892	2.060	91.84	0.37	5.09
802.11n (HT40)	SISO	2422	/	/	0.932	1.109	84.04	0.76	5.83
		2437	/	/	0.933	1.091	85.52	0.68	8.52
		2452	/	/	0.932	1.091	85.43	0.68	8.57
802.11ax (HE20)	SISO	2412	SU	/	1.455	1.680	86.61	0.62	3.37
		2437	SU	/	1.455	1.644	88.50	0.53	4.56
		2462	SU	/	1.455	1.614	90.15	0.45	3.66
802.11ax (HE40)	SISO	2422	SU	/	0.748	0.915	81.75	0.88	7.94
		2437	SU	/	0.748	0.897	83.39	0.79	10.31
		2452	SU	/	0.748	0.915	81.75	0.88	12.01

1.2 Test Graph

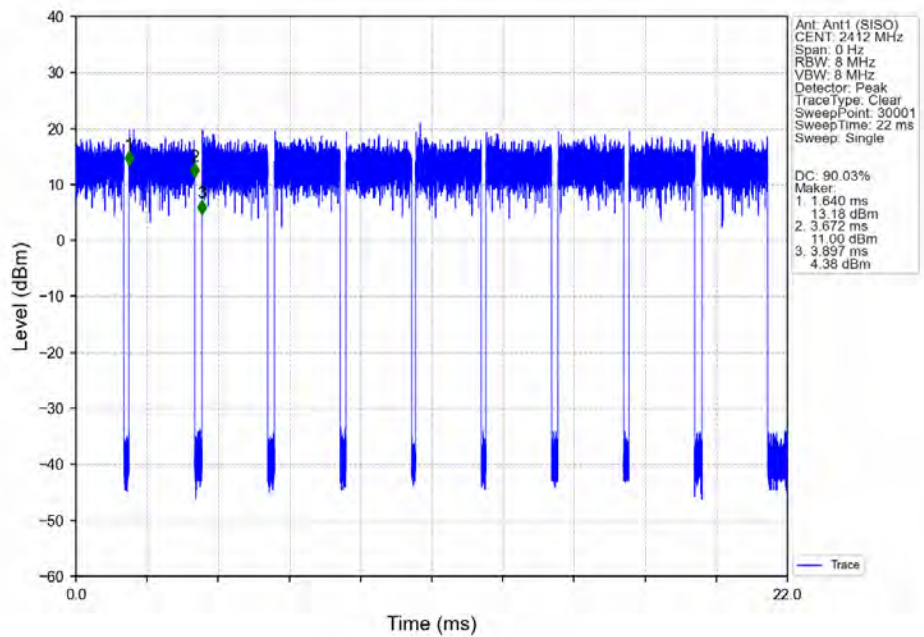
1.2.1 Ant1



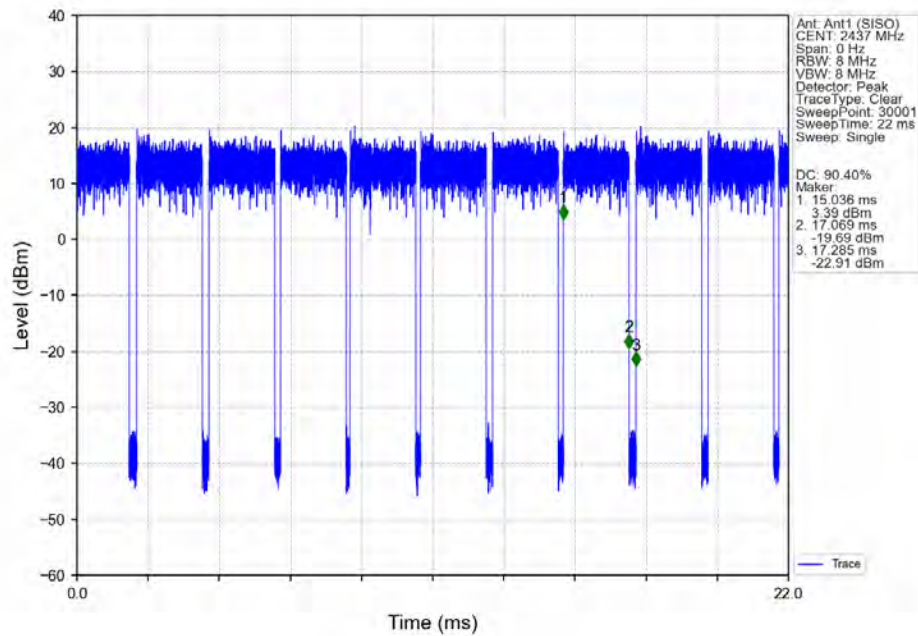
802.11b HCH 2462MHz Ant1 (SISO) NTN



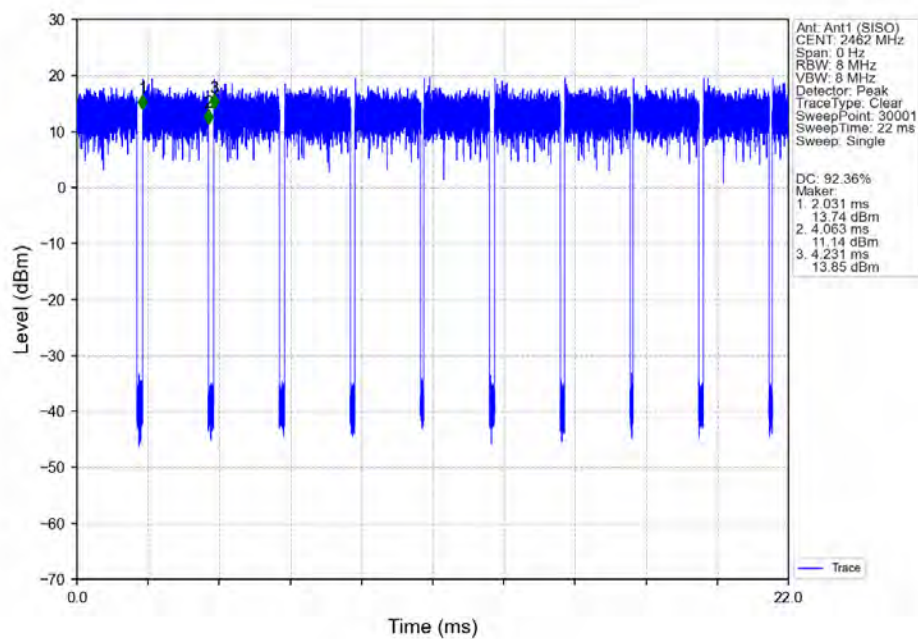
802.11g LCH 2412MHz Ant1 (SISO) NTN



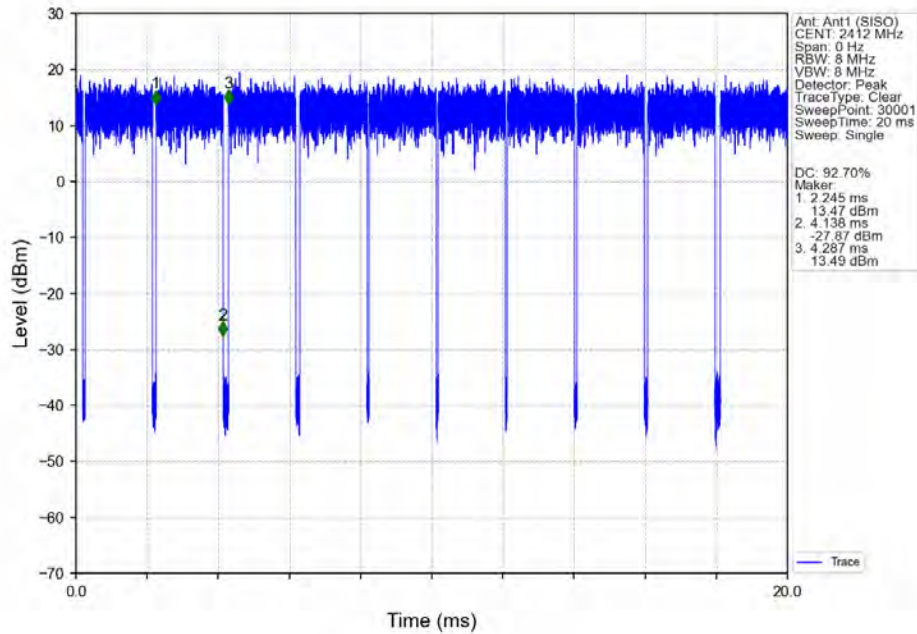
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



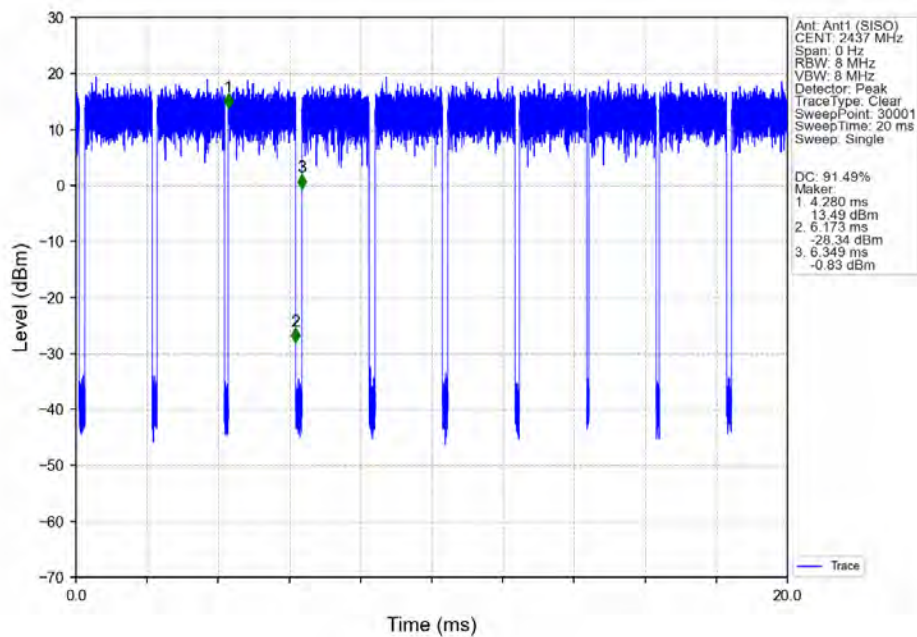
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



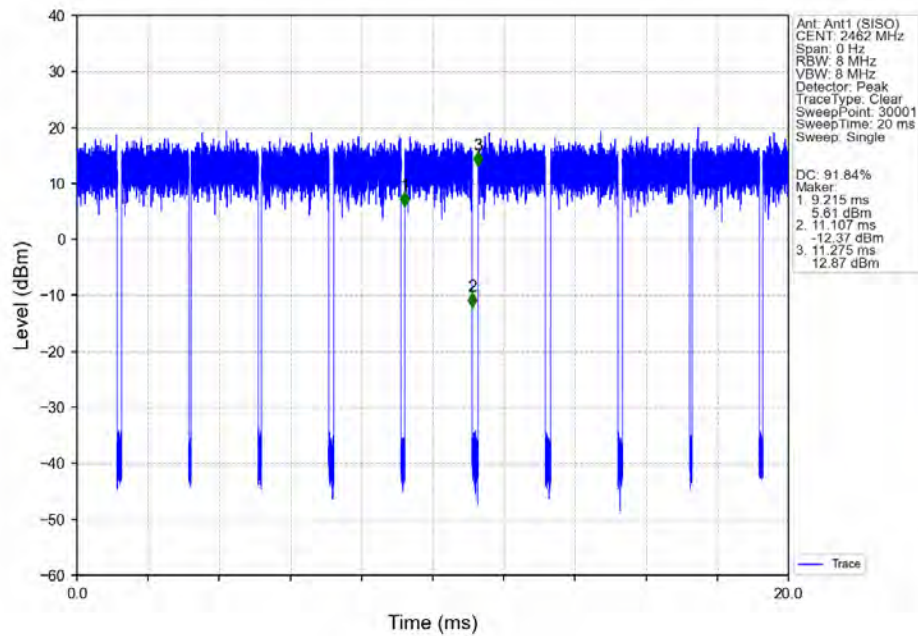
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



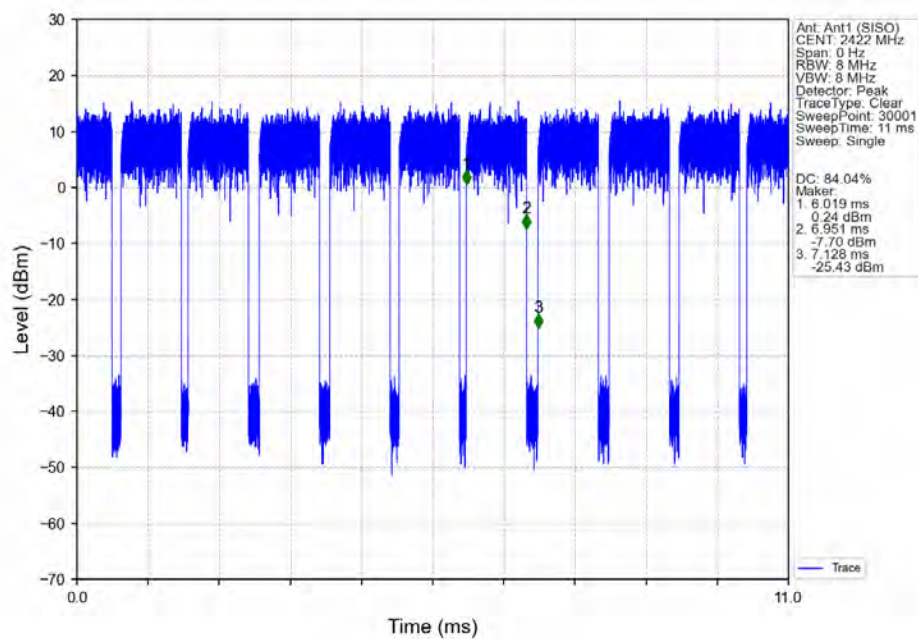
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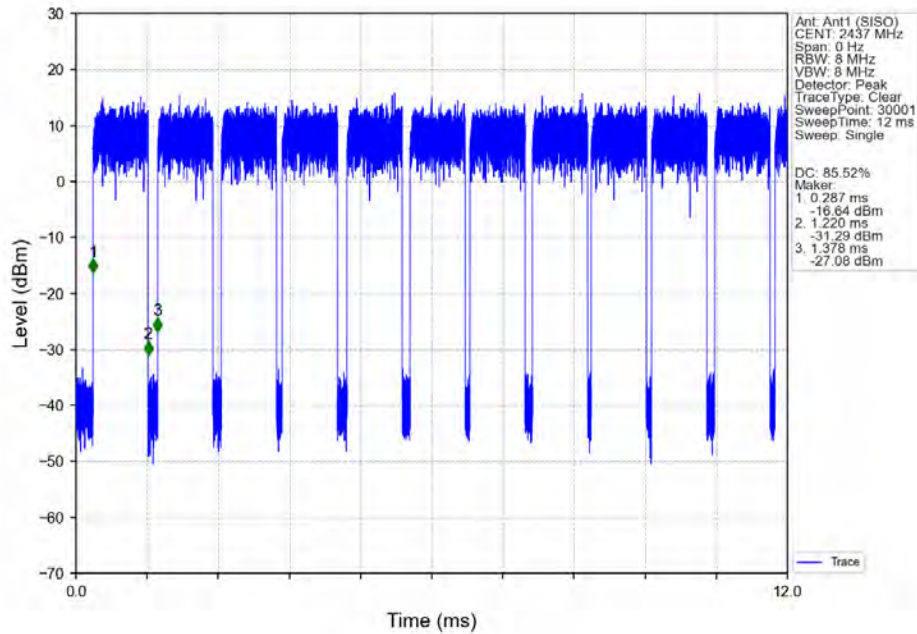
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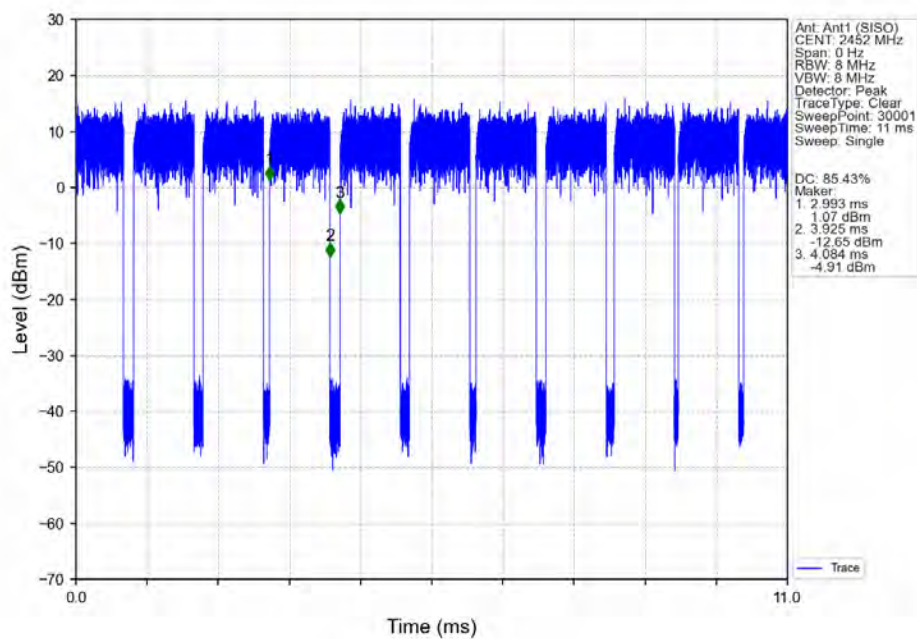
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



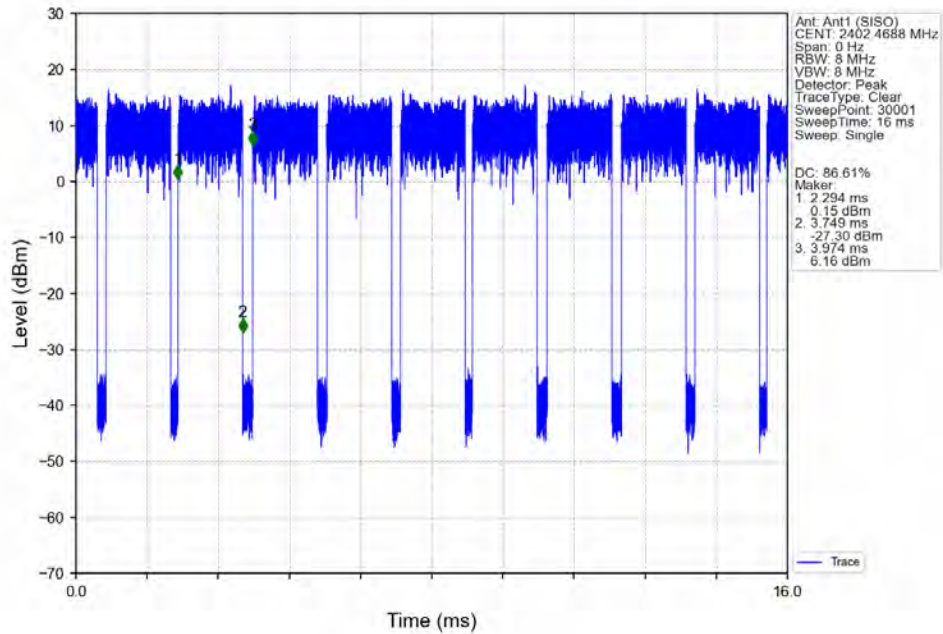
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



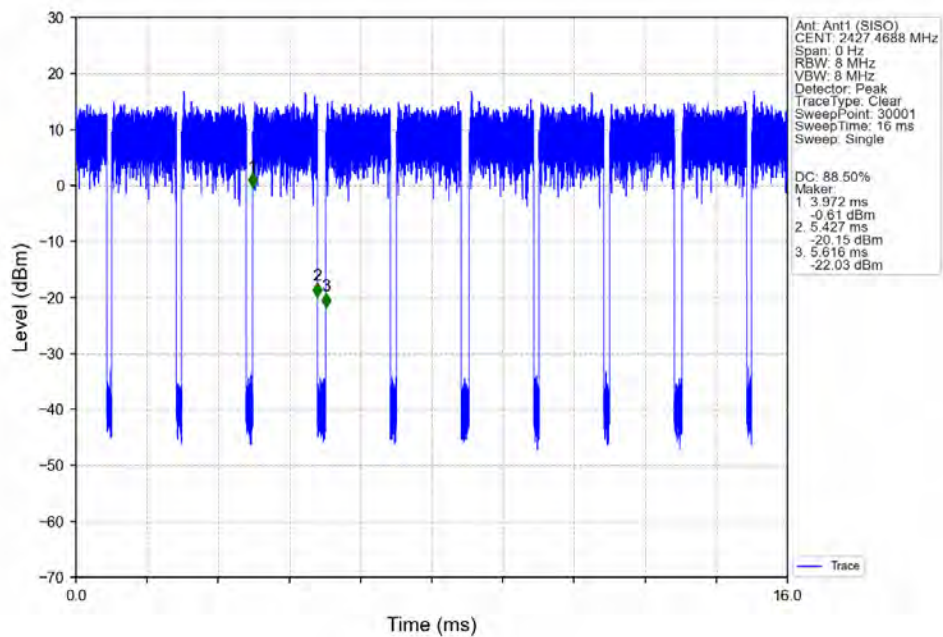
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



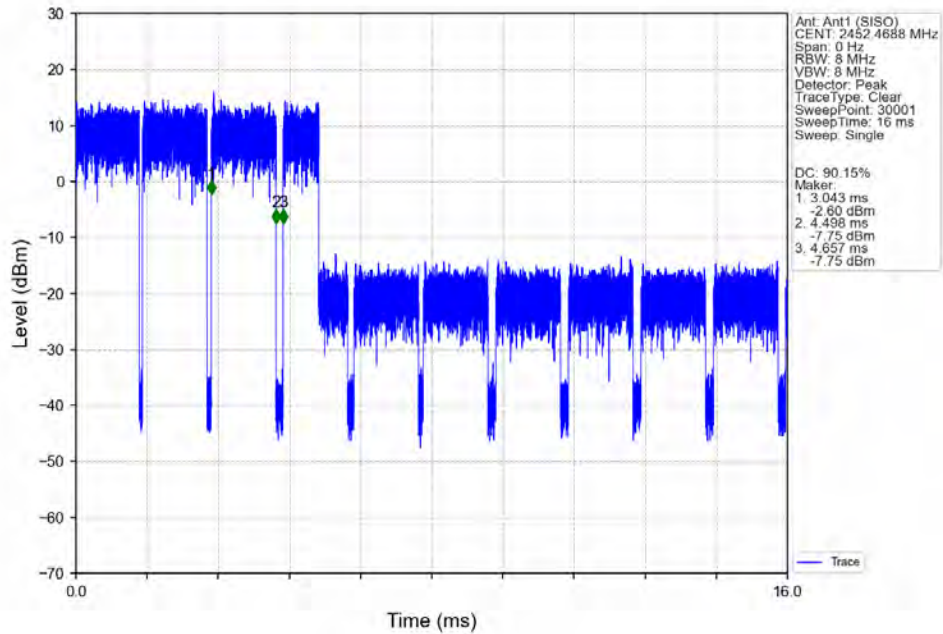
802.11ax(HE20) LCH 2412MHz SU / Ant1 (SISO) NTN



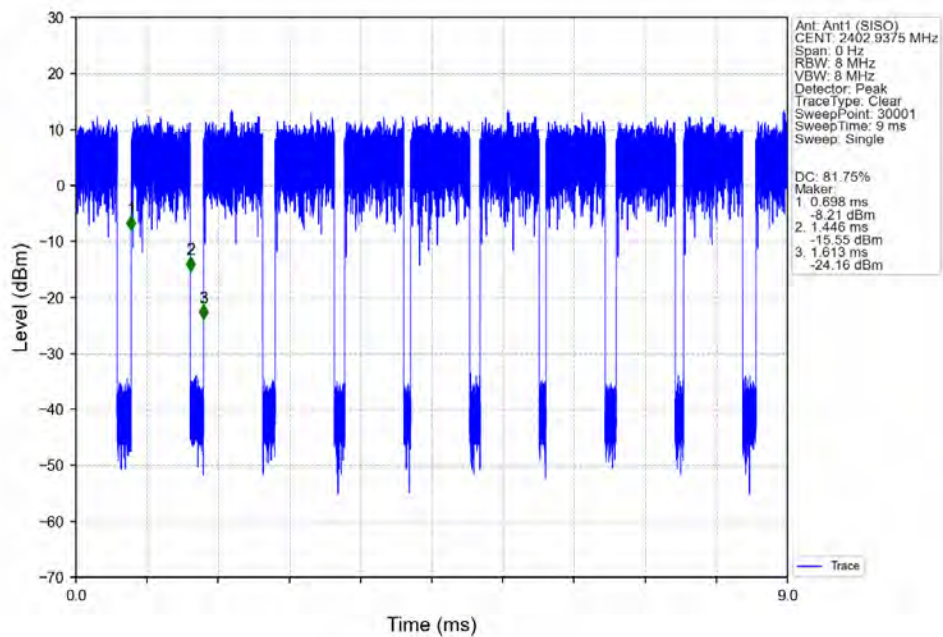
802.11ax(HE20) MCH 2437MHz SU / Ant1 (SISO) NTN



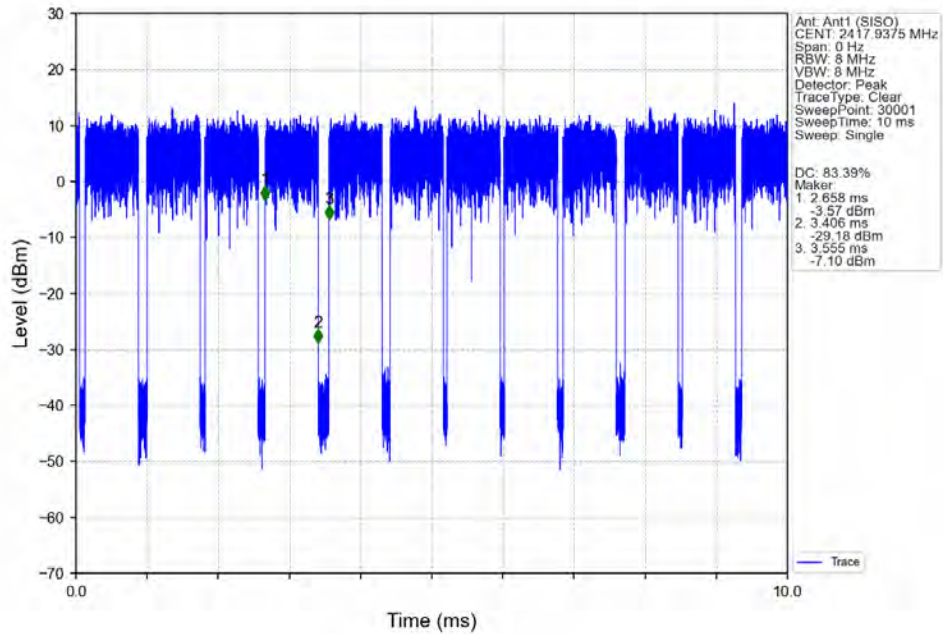
802.11ax(HE20) HCH 2462MHz_SU / Ant1 (SISO) NTN



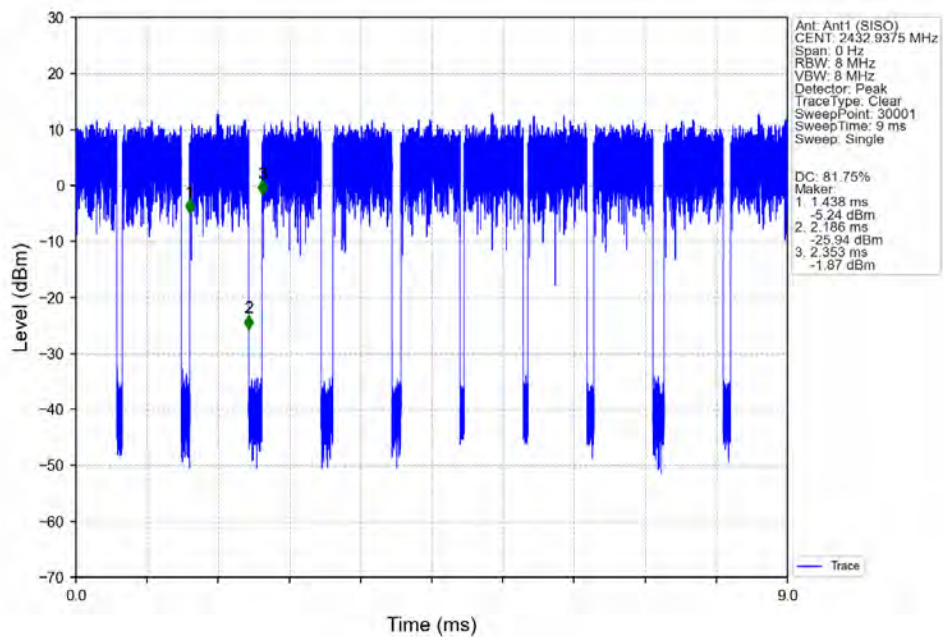
802.11ax(HE40) LCH 2422MHz_SU / Ant1 (SISO) NTN



802.11ax(HE40) MCH_2437MHz_SU / Ant1 (SISO) NTN



802.11ax(HE40) HCH_2452MHz_SU / Ant1 (SISO) NTN



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	12.331	/	Pass
		2437	/	/	1	12.490	/	Pass
		2462	/	/	1	12.297	/	Pass
802.11g	SISO	2412	/	/	1	19.177	/	Pass
		2437	/	/	1	19.270	/	Pass
		2462	/	/	1	19.285	/	Pass
802.11n (HT20)	SISO	2412	/	/	1	20.076	/	Pass
		2437	/	/	1	20.312	/	Pass
		2462	/	/	1	20.338	/	Pass
802.11n (HT40)	SISO	2422	/	/	1	38.087	/	Pass
		2437	/	/	1	38.149	/	Pass
		2452	/	/	1	38.246	/	Pass
802.11ax (HE20)	SISO	2412	SU	/	1	20.131	/	Pass
		2437	SU	/	1	20.244	/	Pass
		2462	SU	/	1	20.226	/	Pass
802.11ax (HE40)	SISO	2422	SU	/	1	38.952	/	Pass
		2437	SU	/	1	39.032	/	Pass
		2452	SU	/	1	39.127	/	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	8.208	>=0.5	Pass
		2437	/	/	1	8.214	>=0.5	Pass
		2462	/	/	1	8.203	>=0.5	Pass
802.11g	SISO	2412	/	/	1	16.745	>=0.5	Pass
		2437	/	/	1	16.658	>=0.5	Pass
		2462	/	/	1	16.741	>=0.5	Pass
802.11n (HT20)	SISO	2412	/	/	1	18.012	>=0.5	Pass
		2437	/	/	1	18.054	>=0.5	Pass
		2462	/	/	1	18.203	>=0.5	Pass
802.11n (HT40)	SISO	2422	/	/	1	36.678	>=0.5	Pass
		2437	/	/	1	36.658	>=0.5	Pass
		2452	/	/	1	36.507	>=0.5	Pass
802.11ax (HE20)	SISO	2412	SU	/	1	19.107	>=0.5	Pass
		2437	SU	/	1	19.194	>=0.5	Pass
		2462	SU	/	1	19.220	>=0.5	Pass
802.11ax (HE40)	SISO	2422	SU	/	1	37.929	>=0.5	Pass
		2437	SU	/	1	37.731	>=0.5	Pass



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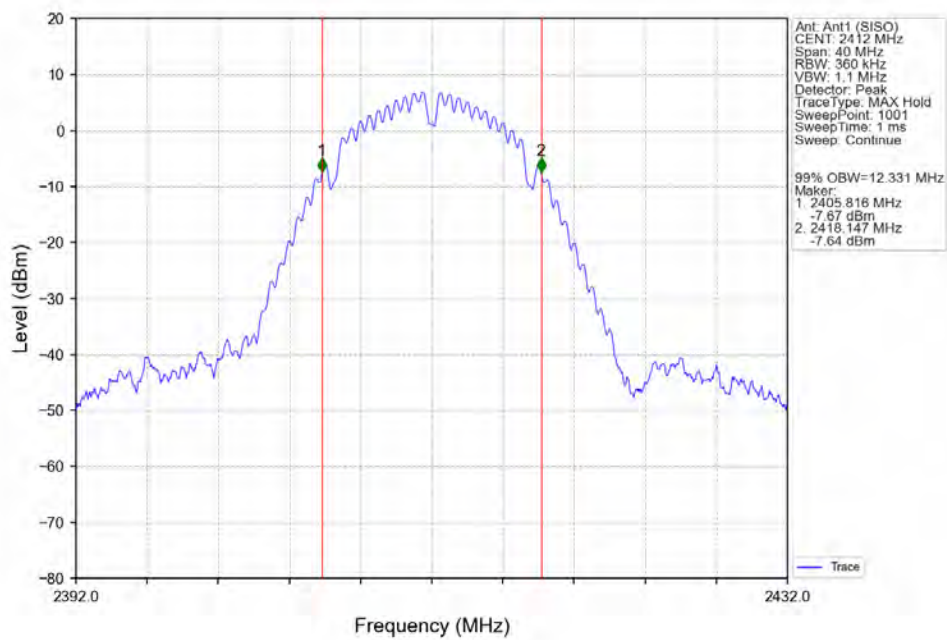
Page: 103 of 158

		2452	SU	/	1	37.755	>=0.5	Pass
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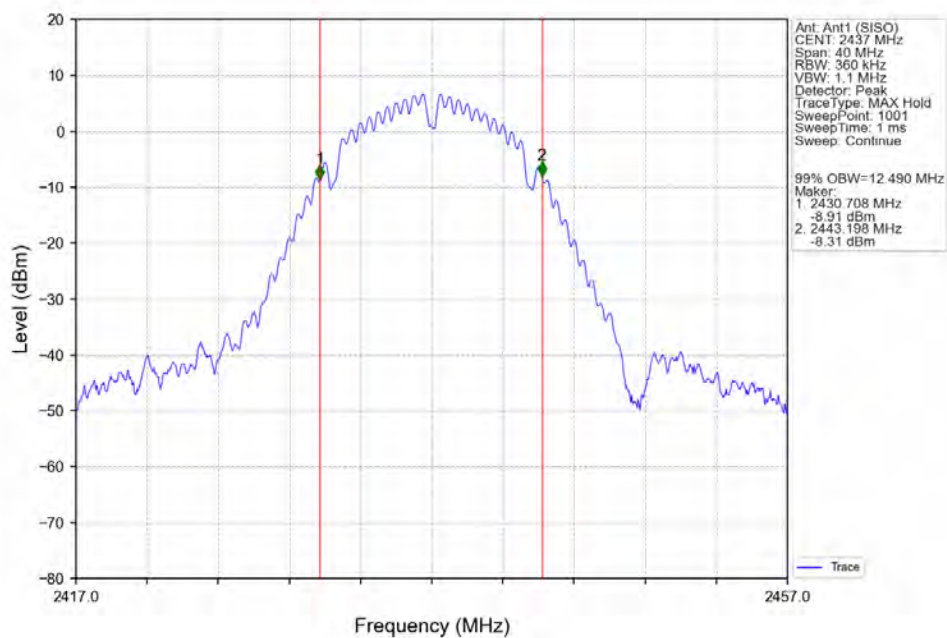
2.2 Test Graph

2.2.1 OBW

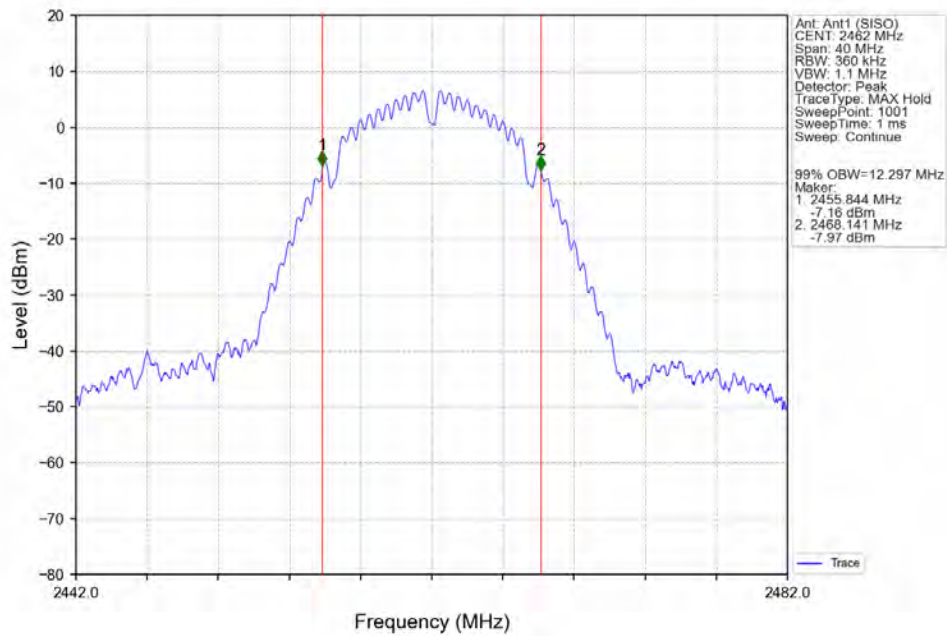
802.11b LCH 2412MHz_Ant1 (SISO)_NTNV



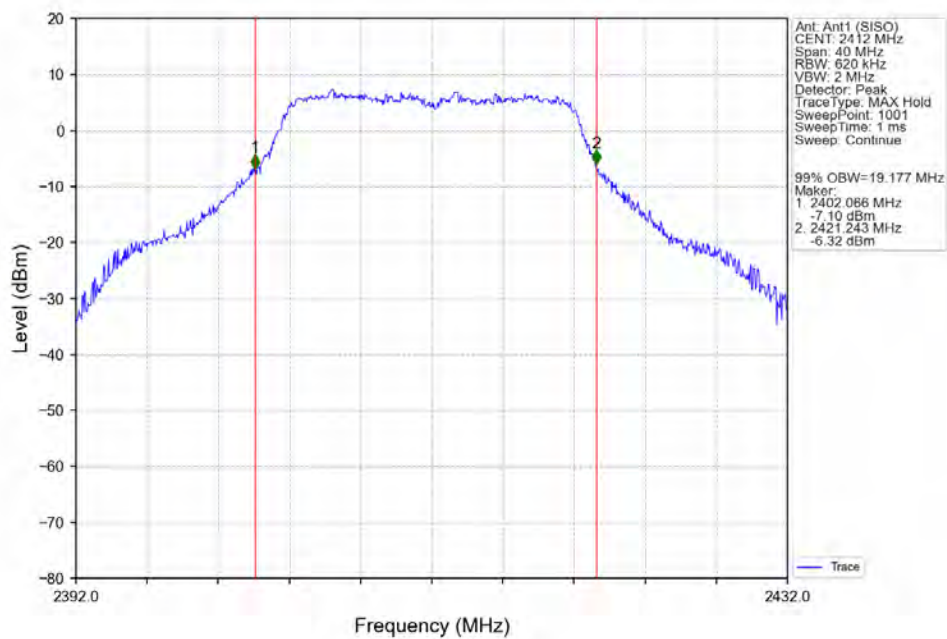
802.11b MCH 2437MHz_Ant1 (SISO)_NTNV



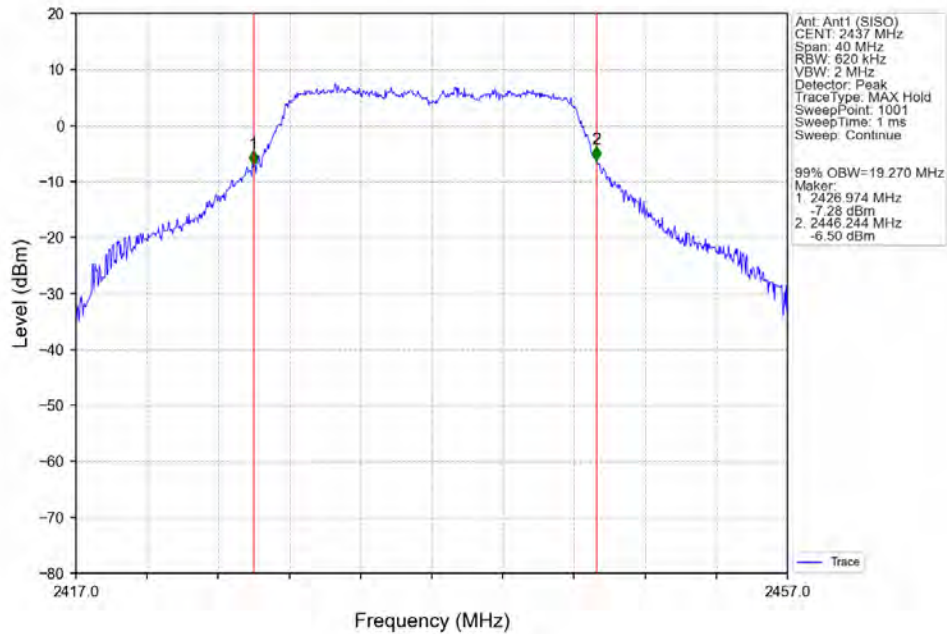
802.11b HCH 2462MHz Ant1 (SISO) NTN



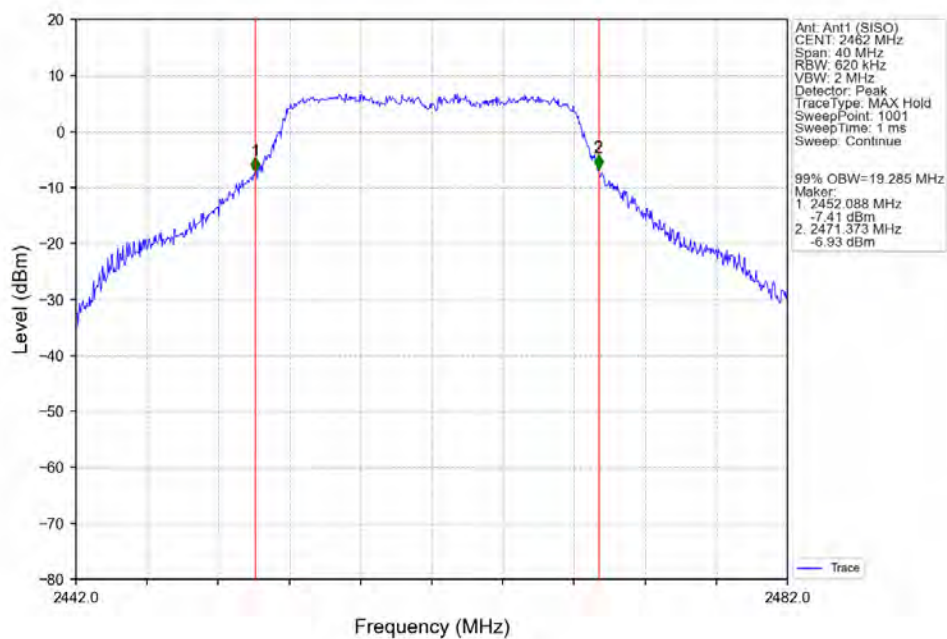
802.11g LCH 2412MHz Ant1 (SISO) NTN



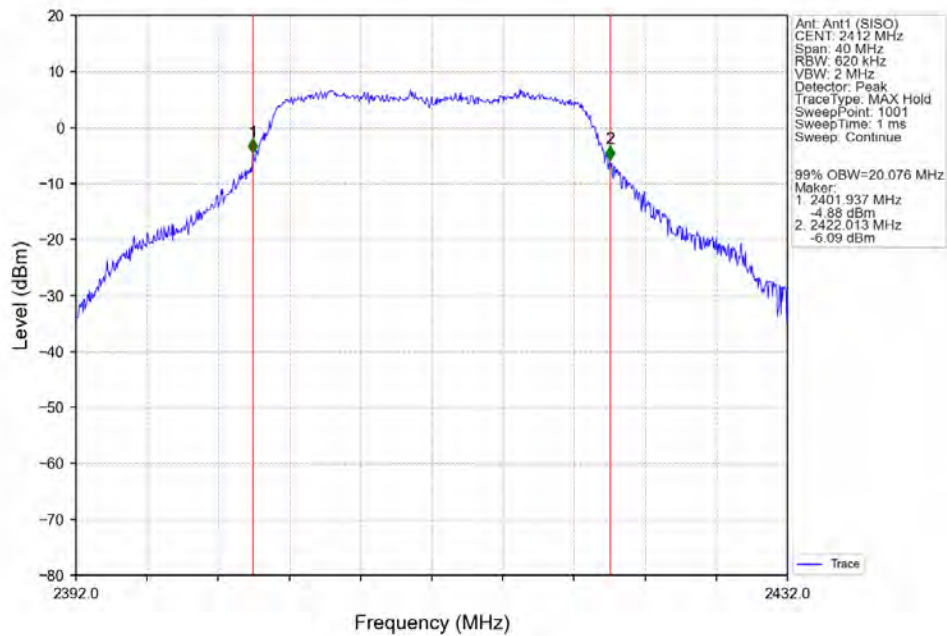
802.11g MCH 2437MHz_Ant1 (SISO)_NTNV



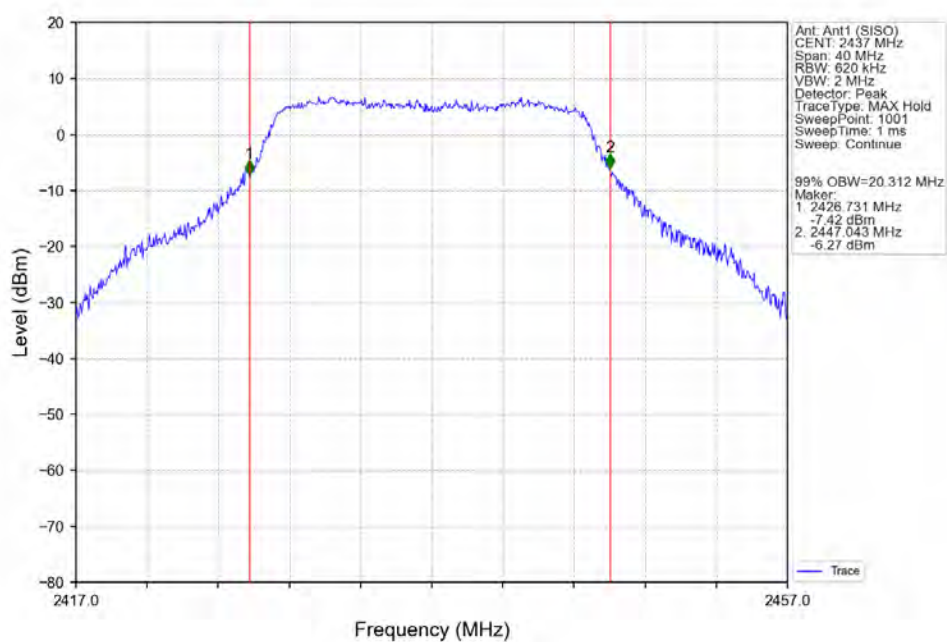
802.11g HCH 2462MHz_Ant1 (SISO)_NTNV



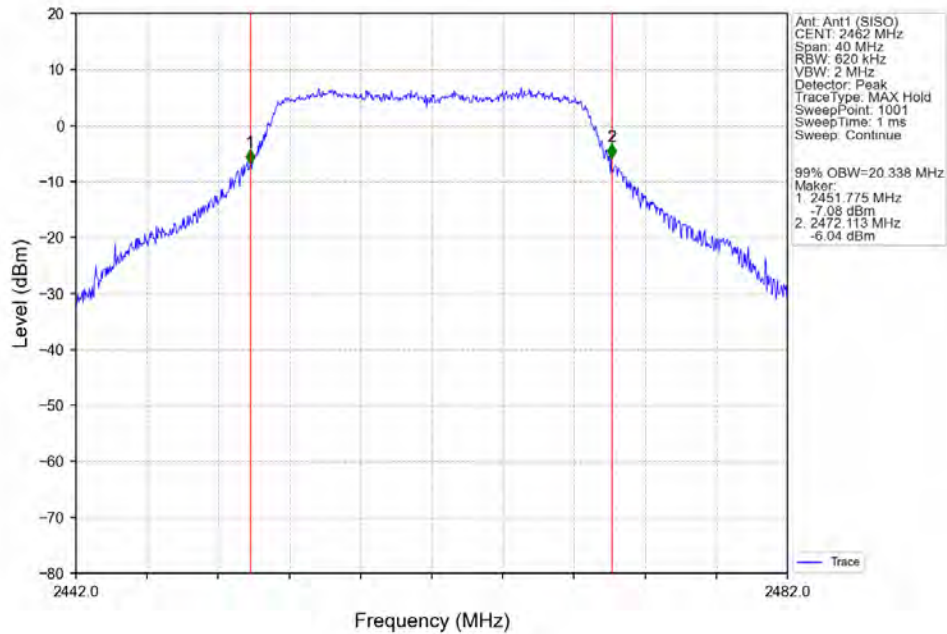
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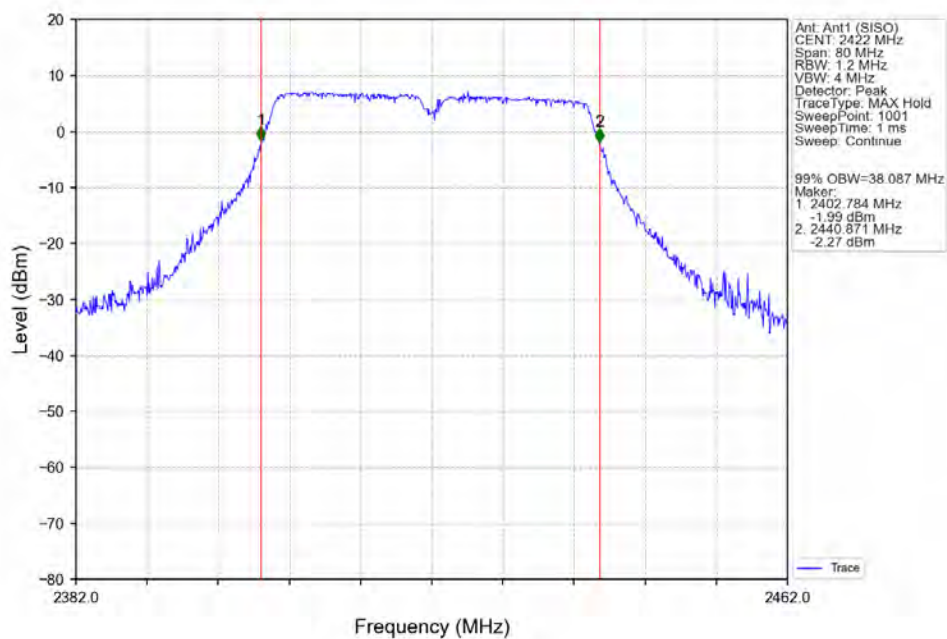
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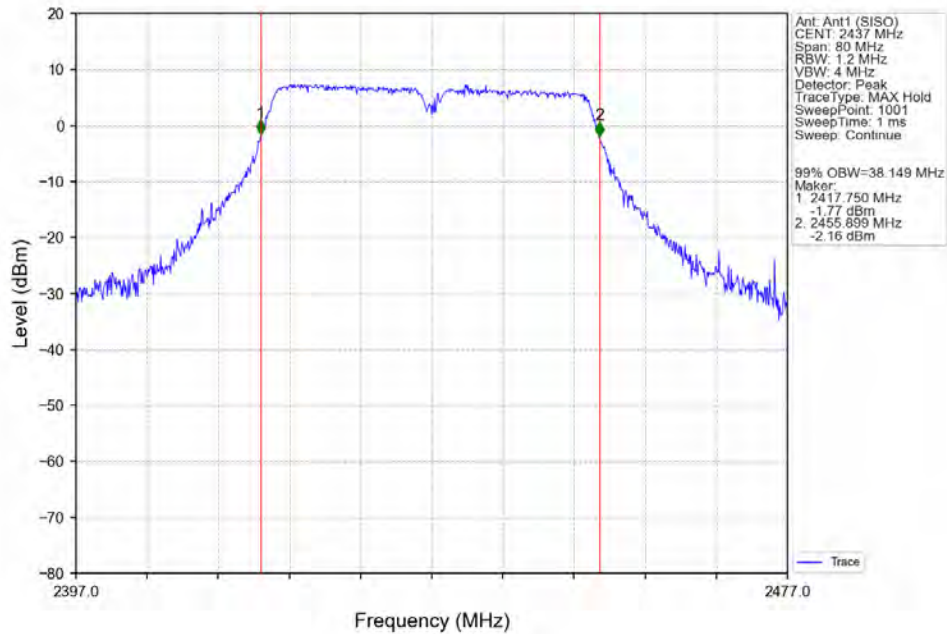
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



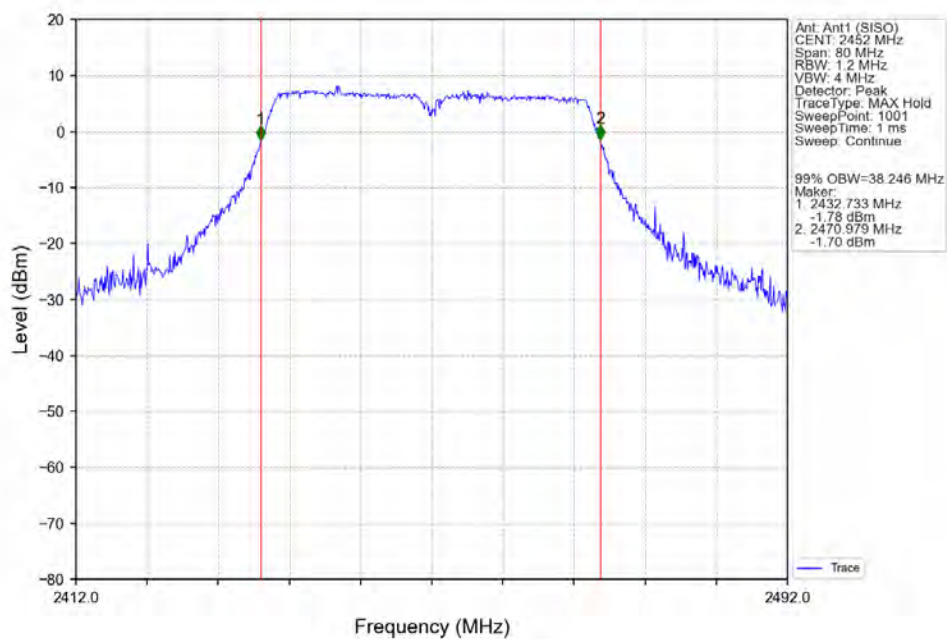
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



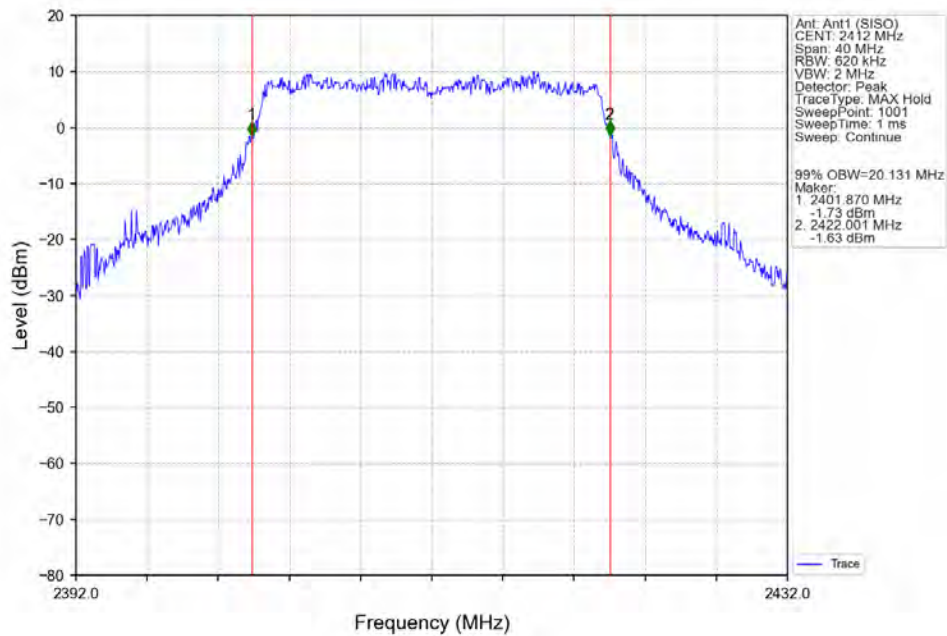
802.11n(HT40) MCH_2437MHz_Ant1 (SISO) NTN



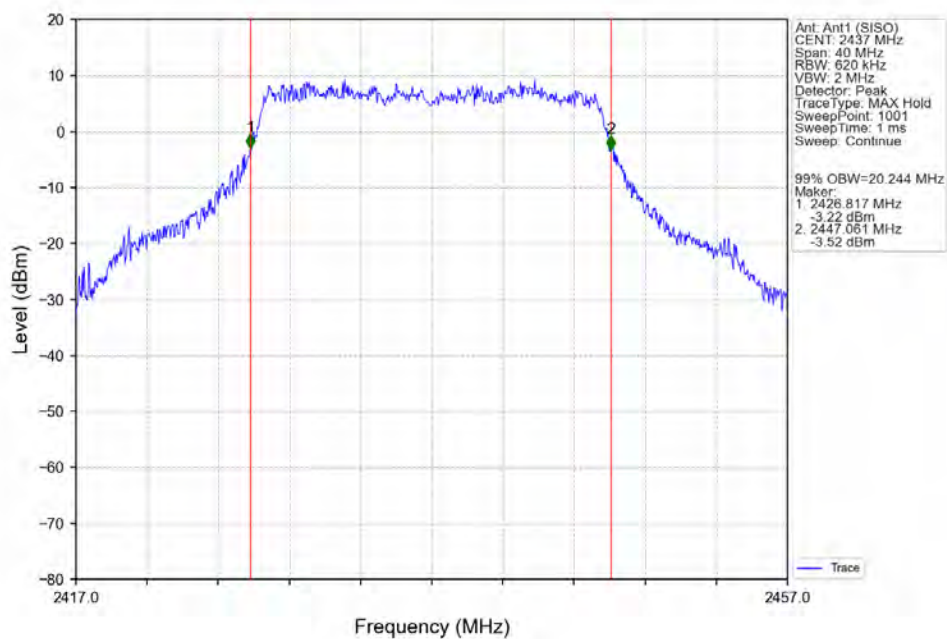
802.11n(HT40) HCH_2452MHz_Ant1 (SISO) NTN



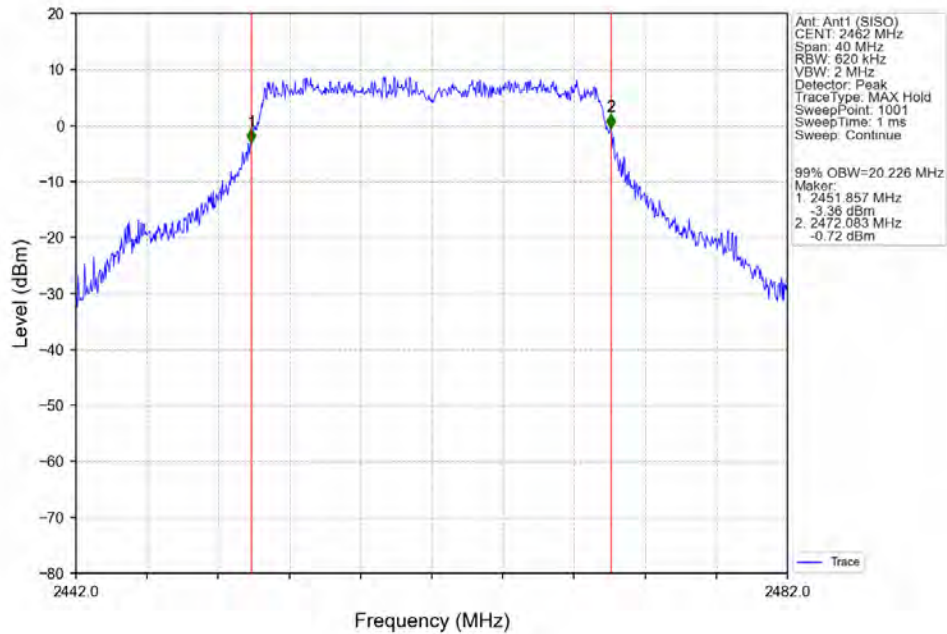
802.11ax(HE20) LCH 2412MHz SU / Ant1 (SISO) NTN



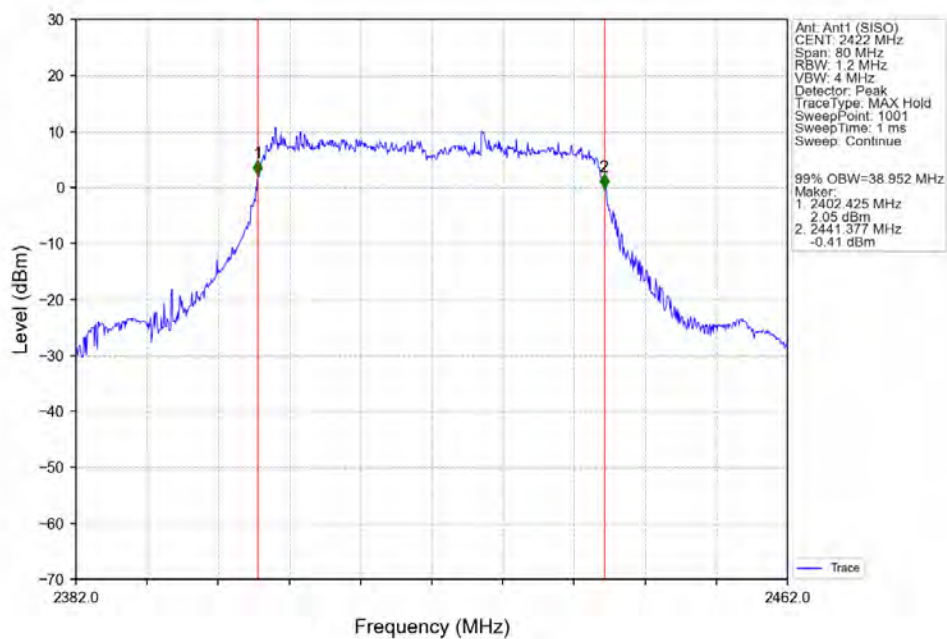
802.11ax(HE20) MCH 2437MHz SU / Ant1 (SISO) NTN



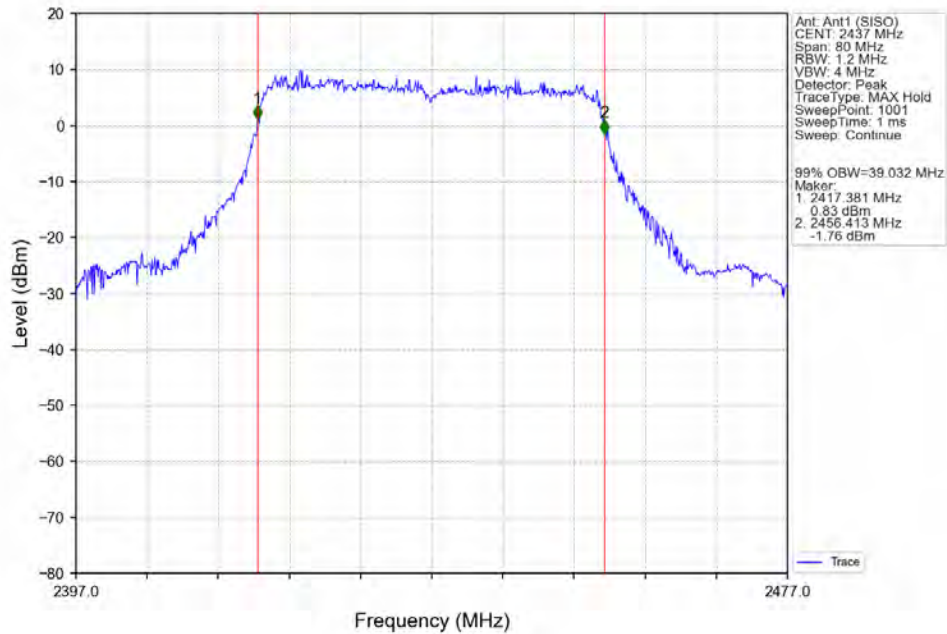
802.11ax(HE20) HCH 2462MHz SU / Ant1 (SISO) NTN



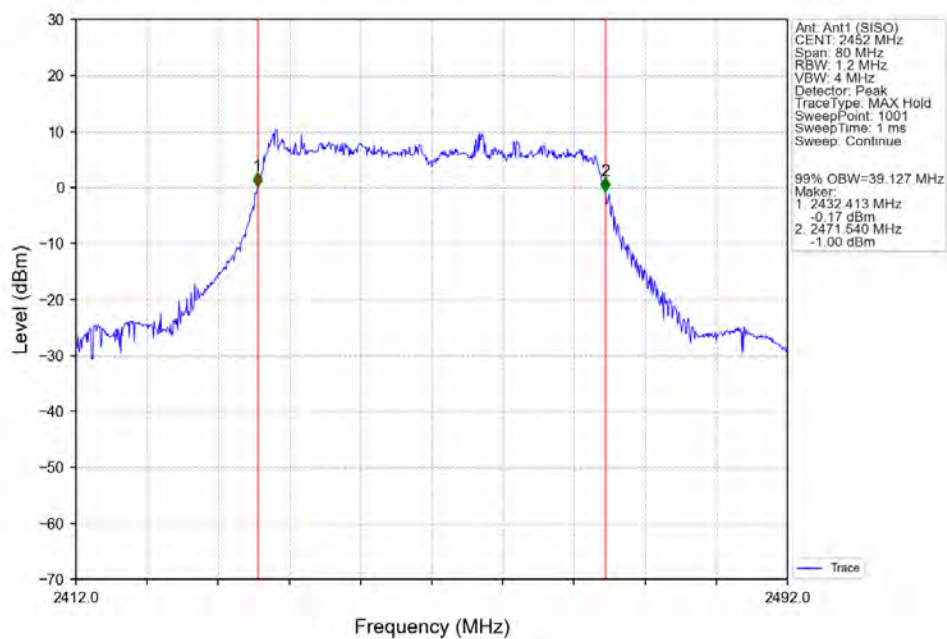
802.11ax(HE40) LCH 2422MHz SU / Ant1 (SISO) NTN



802.11ax(HE40) MCH 2437MHz SU / Ant1 (SISO) NTN

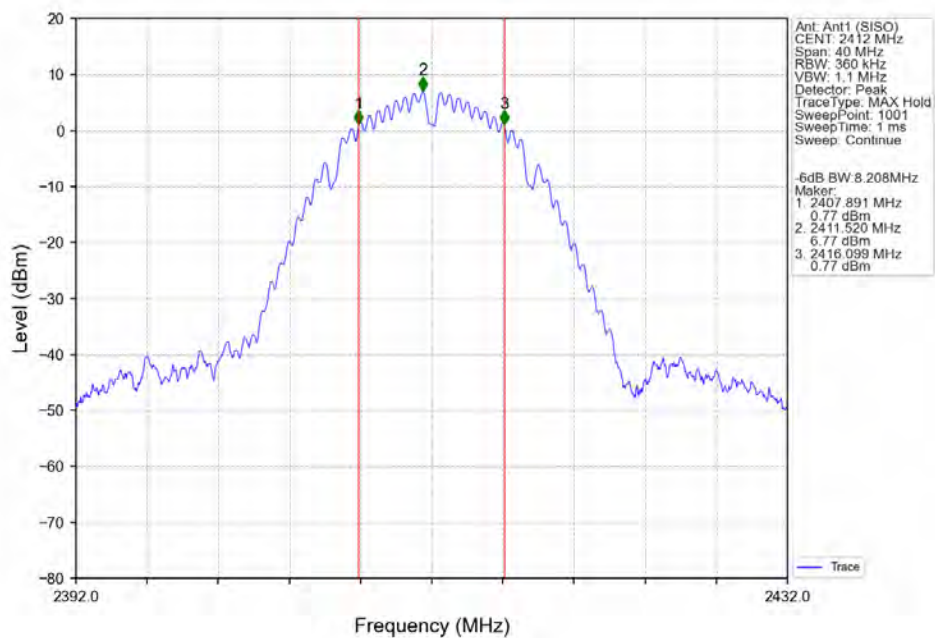


802.11ax(HE40) HCH 2452MHz SU / Ant1 (SISO) NTN

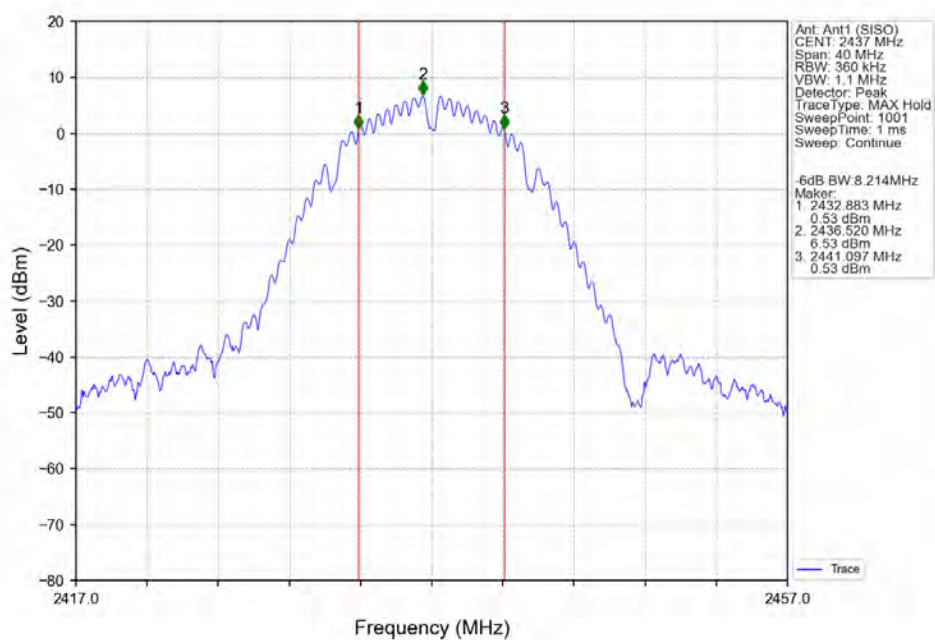


2.2.2 6dB BW

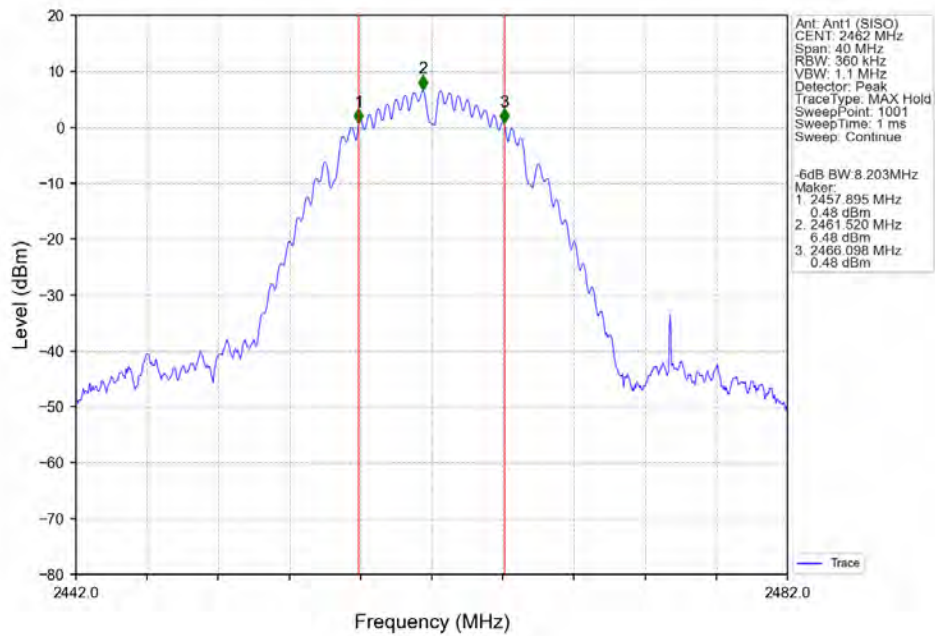
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



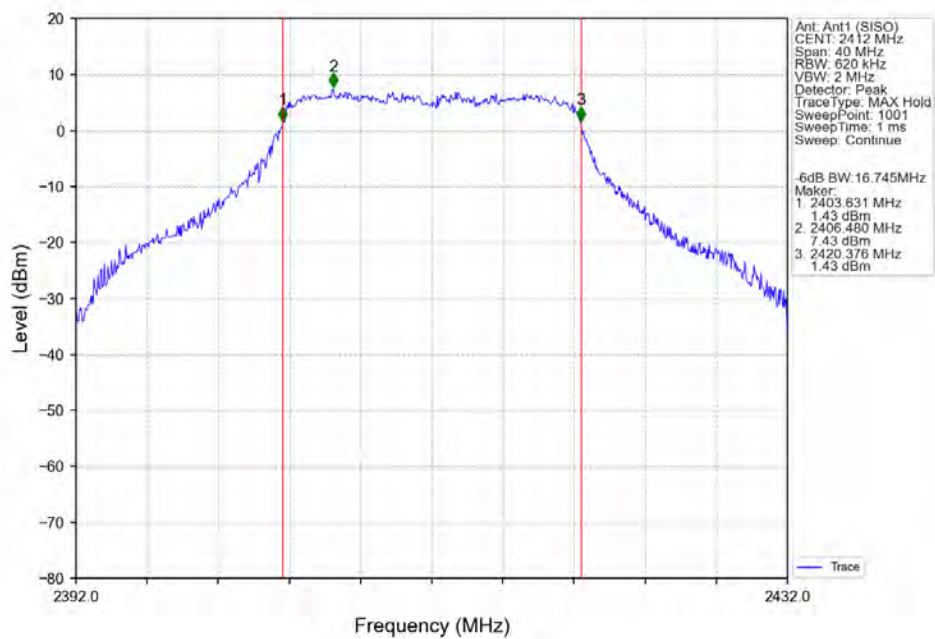
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



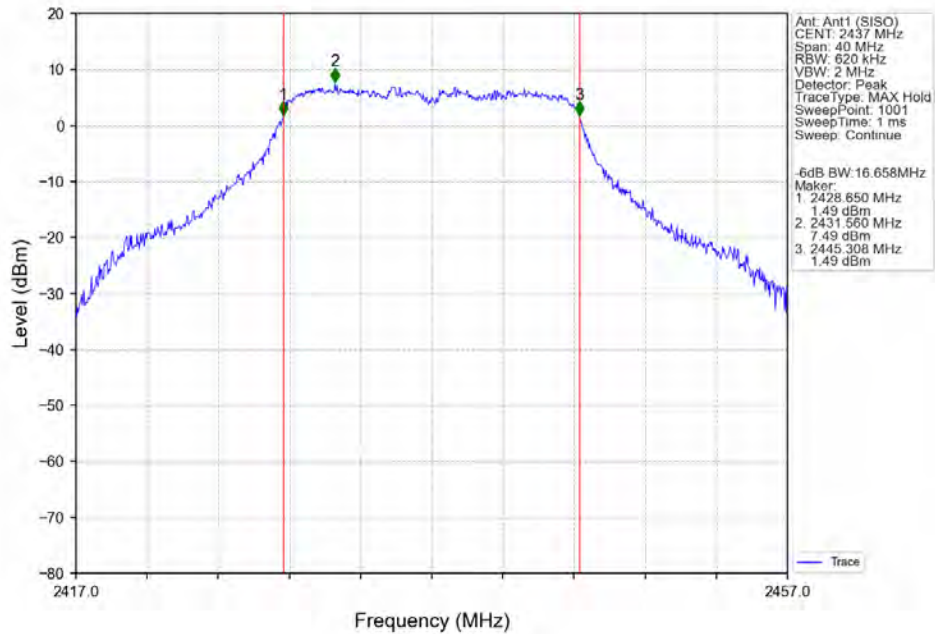
802.11b HCH 2462MHz Ant1 (SISO) NTN



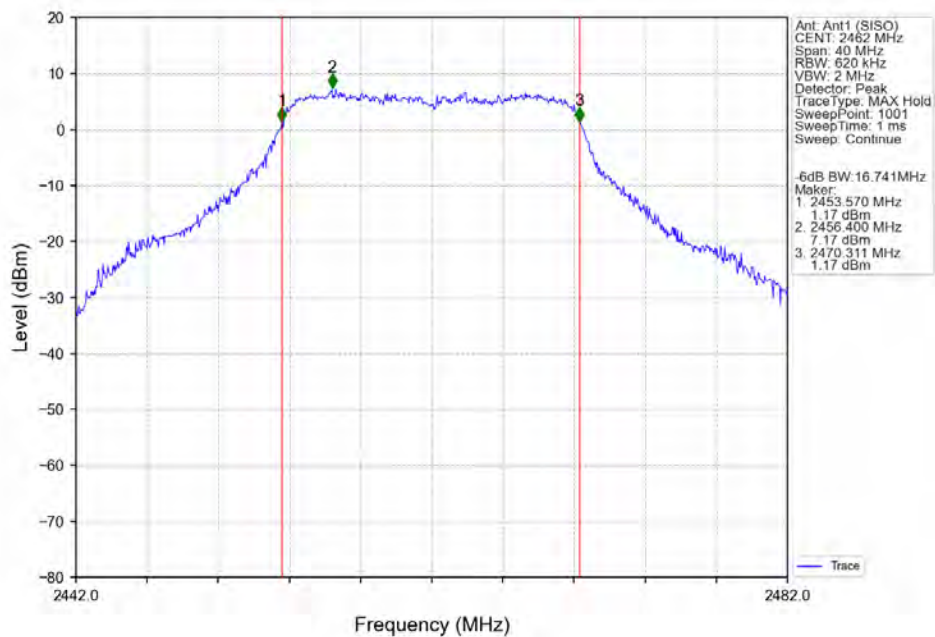
802.11g LCH 2412MHz Ant1 (SISO) NTN



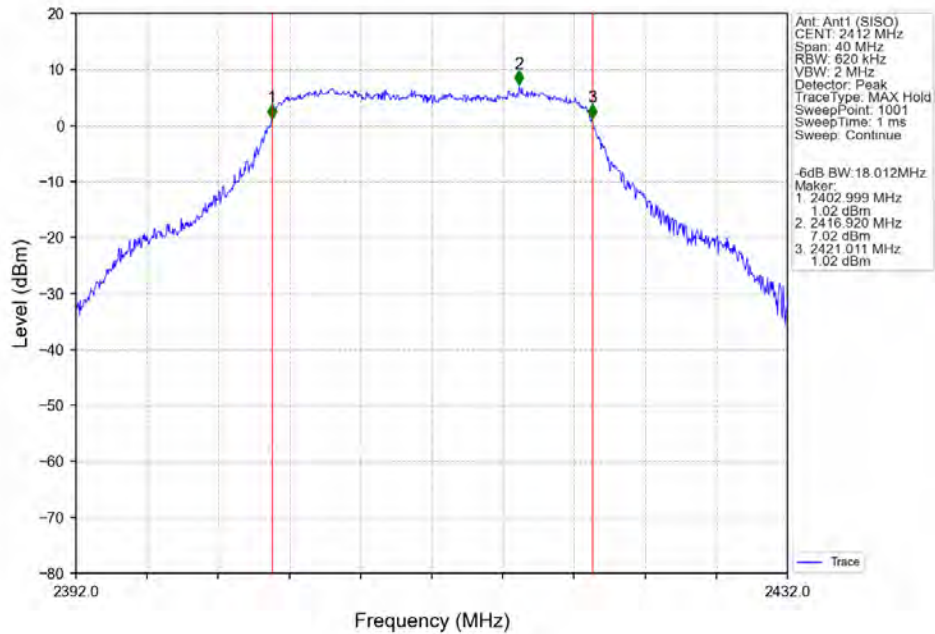
802.11g MCH 2437MHz_Ant1 (SISO)_NTNV



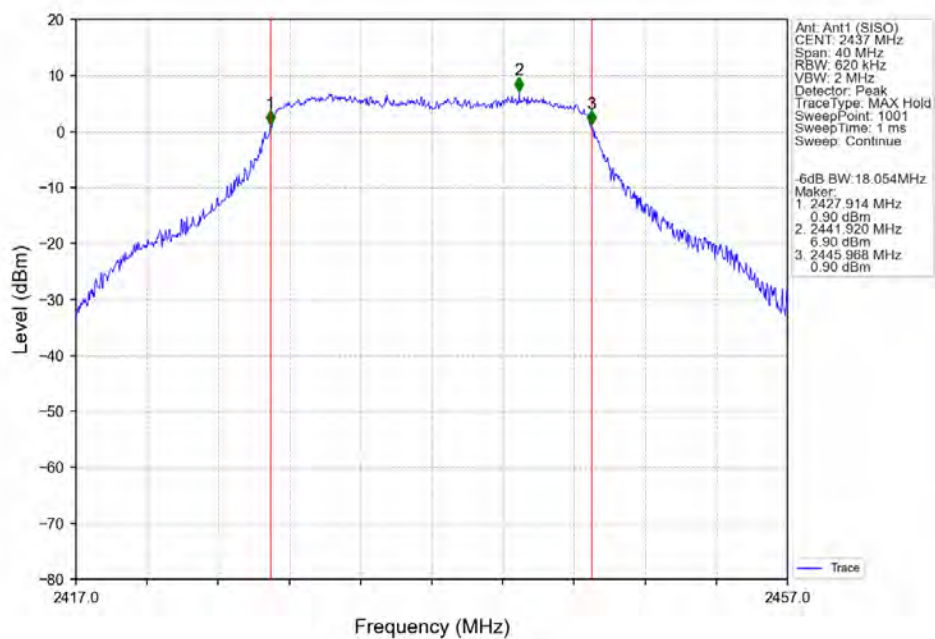
802.11g HCH 2462MHz_Ant1 (SISO)_NTNV



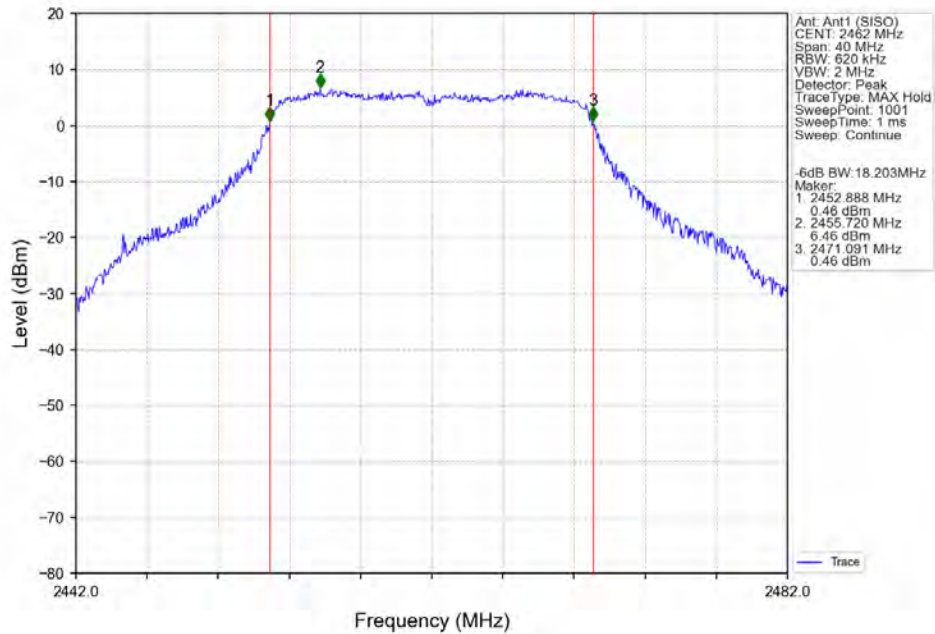
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



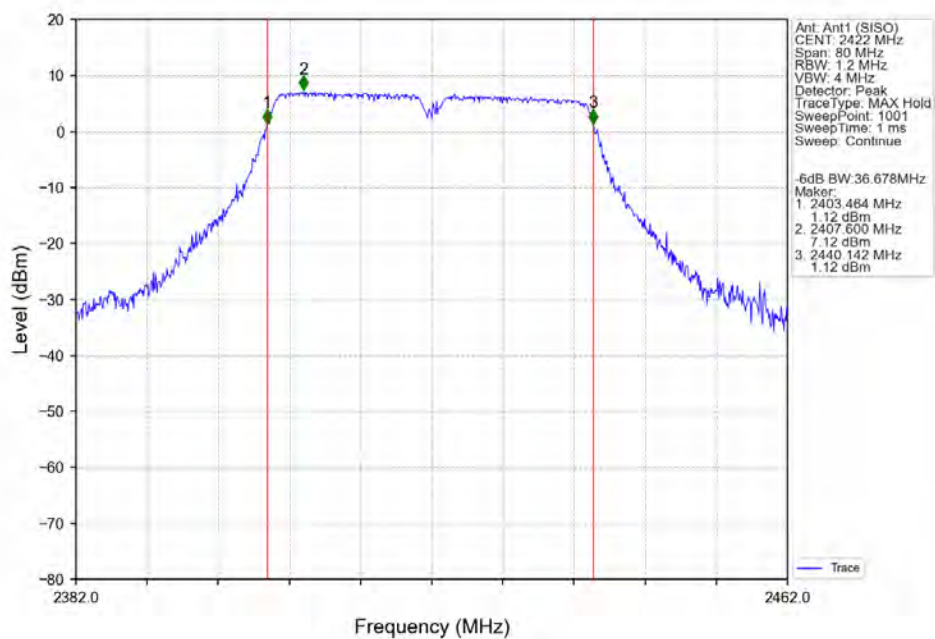
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



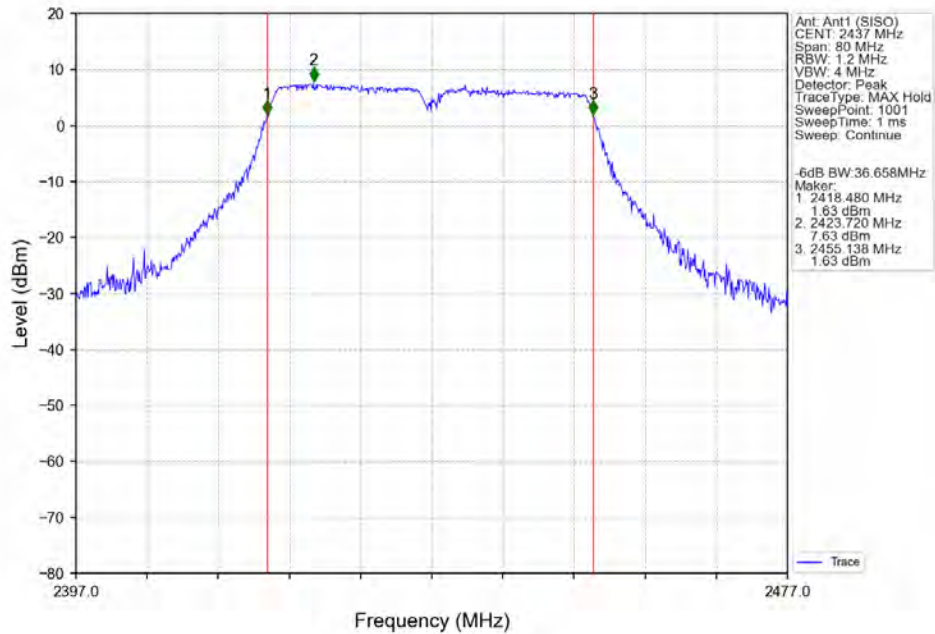
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



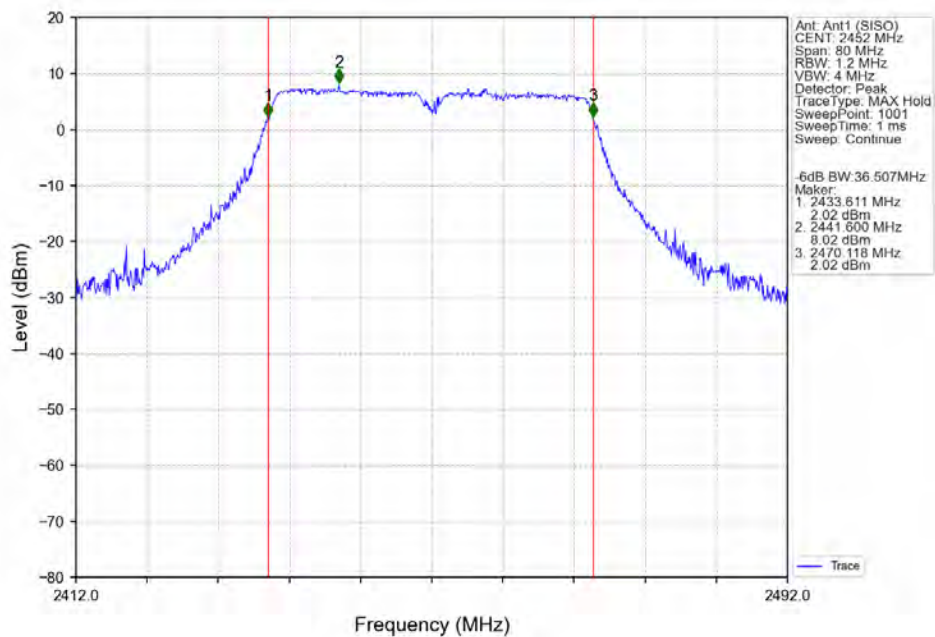
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



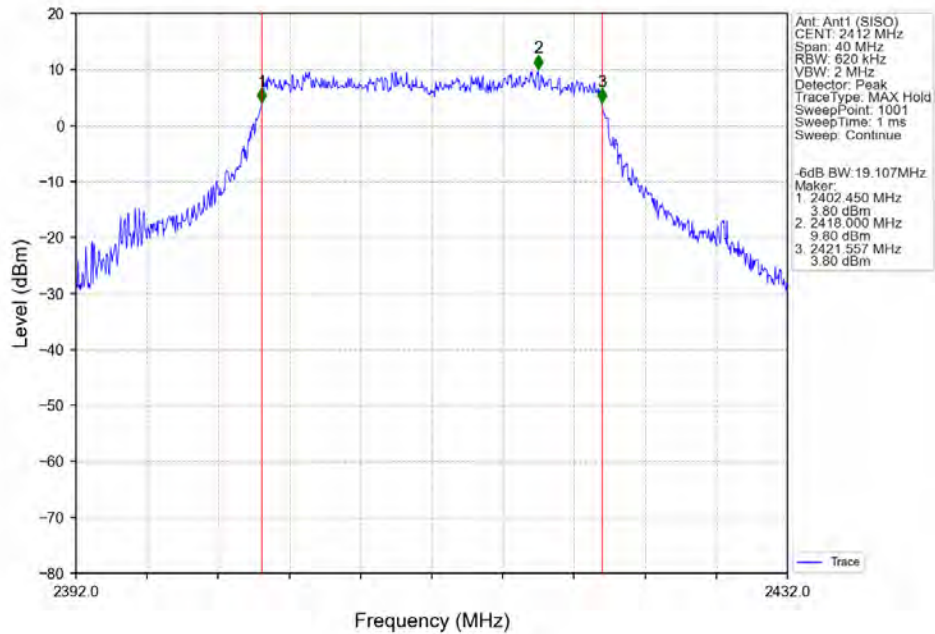
802.11n(HT40) MCH_2437MHz_Ant1 (SISO) NTN



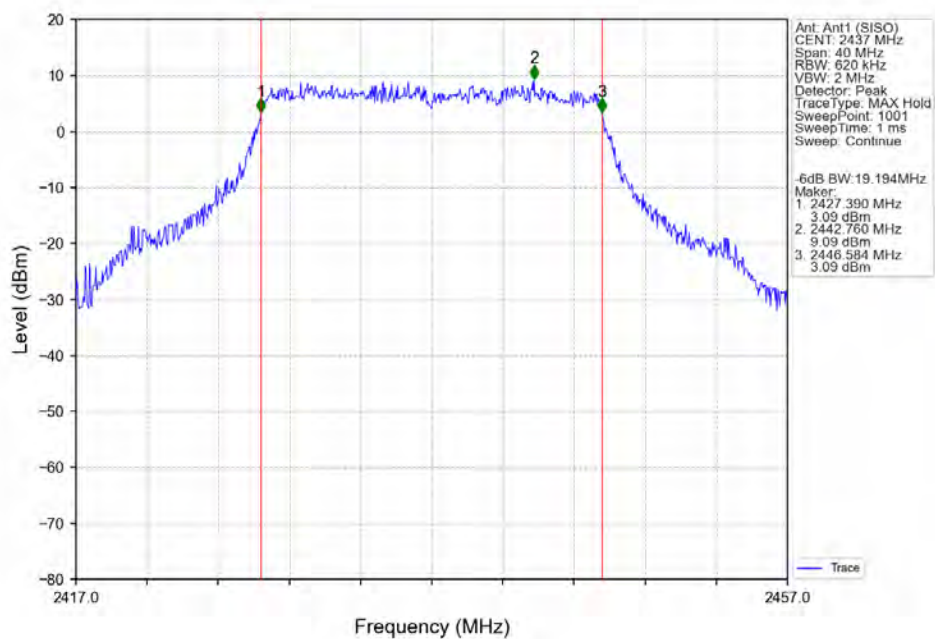
802.11n(HT40) HCH_2452MHz_Ant1 (SISO) NTN



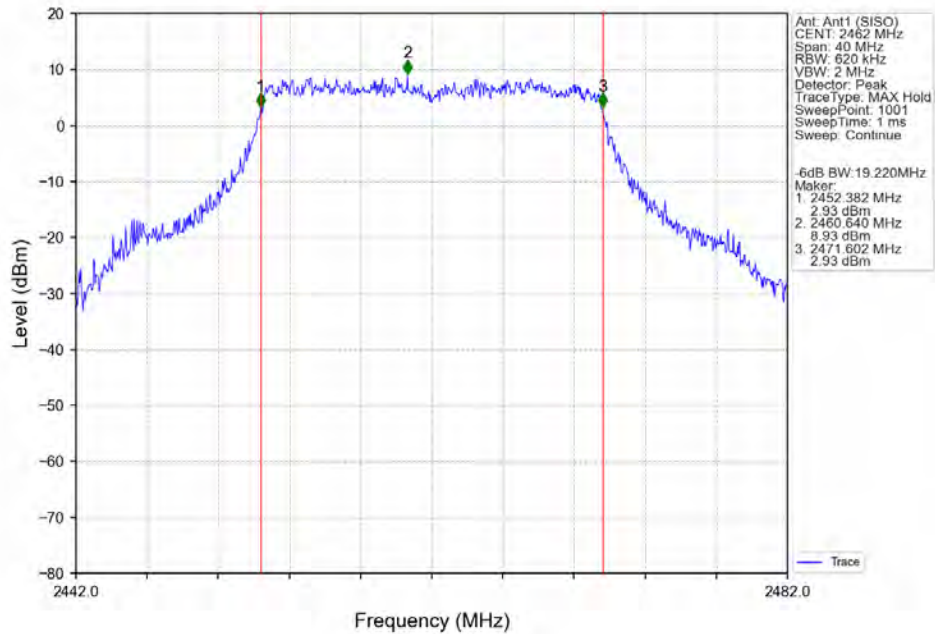
802.11ax(HE20) LCH 2412MHz SU / Ant1 (SISO) NTN



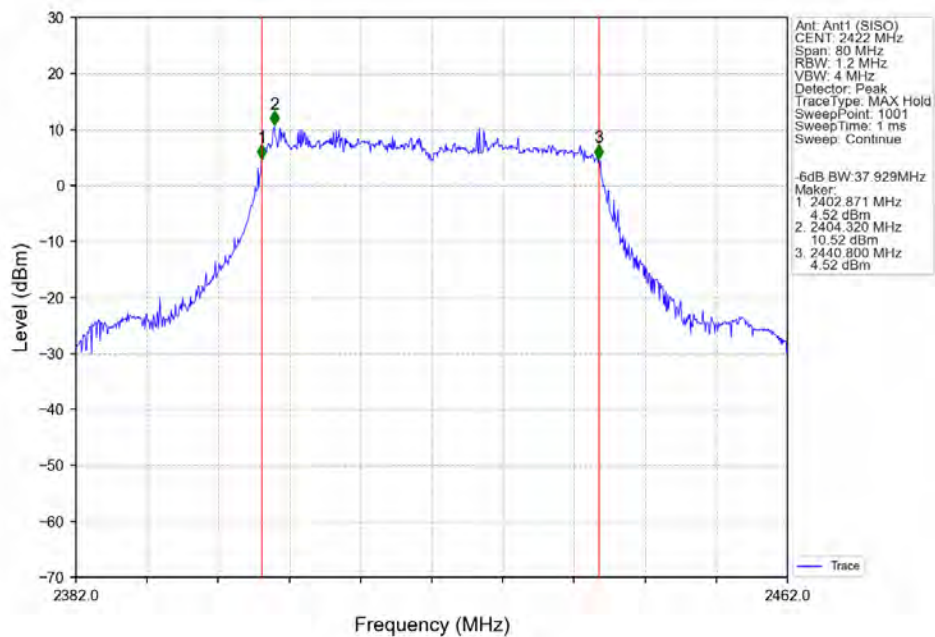
802.11ax(HE20) MCH 2437MHz SU / Ant1 (SISO) NTN



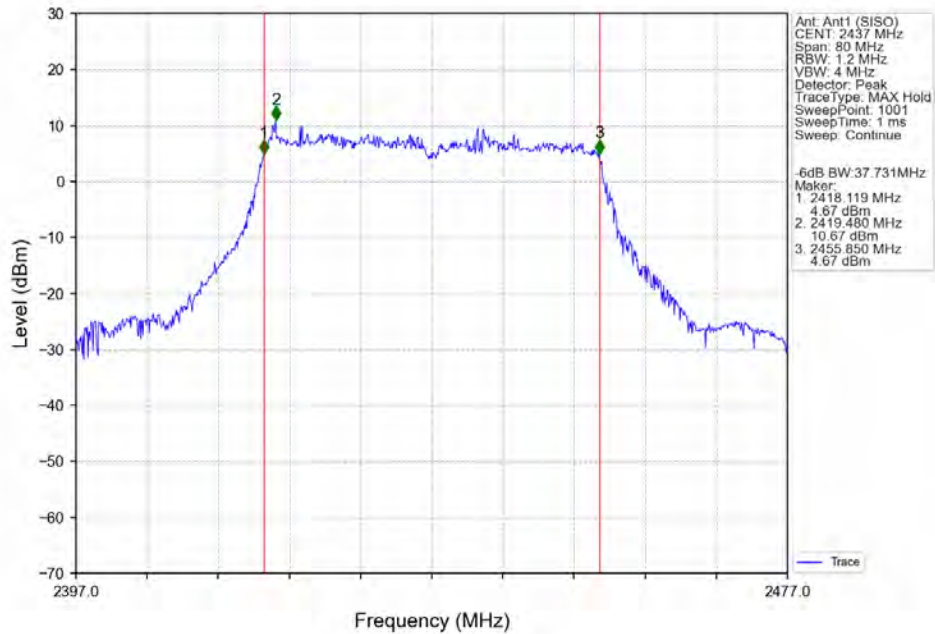
802.11ax(HE20) HCH 2462MHz SU / Ant1 (SISO) NTN



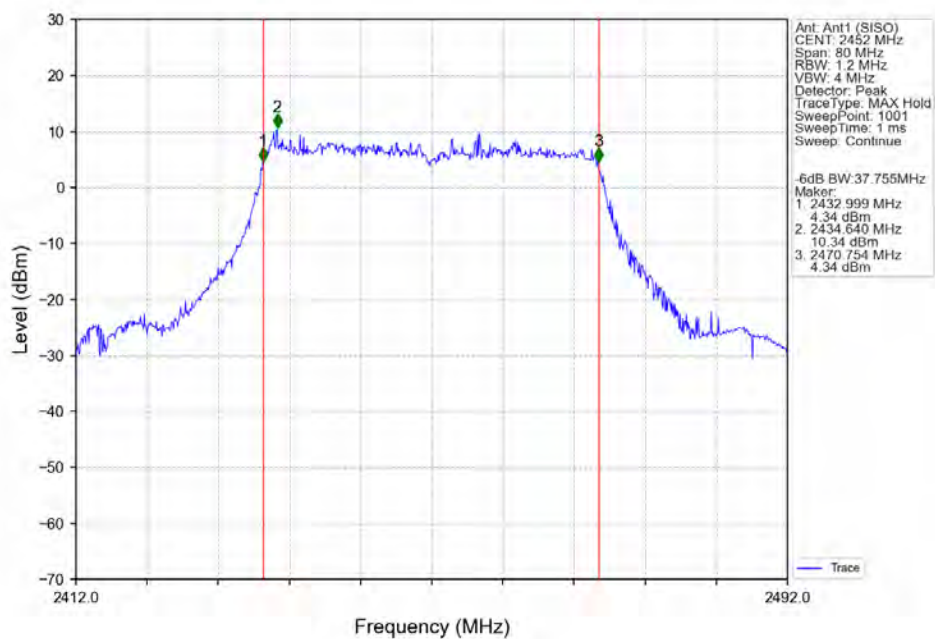
802.11ax(HE40) LCH 2422MHz SU / Ant1 (SISO) NTN



802.11ax(HE40) MCH 2437MHz SU / Ant1 (SISO) NTN



802.11ax(HE40) HCH 2452MHz SU / Ant1 (SISO) NTN



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum Peak Conducted Output Power (dBm)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	16.68	<=30	Pass
		2437	/	/	16.48	<=30	Pass
		2462	/	/	16.34	<=30	Pass
802.11g	SISO	2412	/	/	20.33	<=30	Pass
		2437	/	/	20.32	<=30	Pass
		2462	/	/	20.19	<=30	Pass
802.11n (HT20)	SISO	2412	/	/	20.32	<=30	Pass
		2437	/	/	20.37	<=30	Pass
		2462	/	/	20.21	<=30	Pass
802.11n (HT40)	SISO	2422	/	/	19.93	<=30	Pass
		2437	/	/	20.12	<=30	Pass
		2452	/	/	20.20	<=30	Pass
802.11ax (HE20)	SISO	2412	SU	/	22.22	<=30	Pass
		2437	SU	/	21.30	<=30	Pass
		2462	SU	/	21.28	<=30	Pass
802.11ax (HE40)	SISO	2422	SU	/	21.62	<=30	Pass
		2437	SU	/	21.18	<=30	Pass
		2452	SU	/	21.09	<=30	Pass
Note1: Antenna Gain: Ant1: 2.34dBi:							

4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

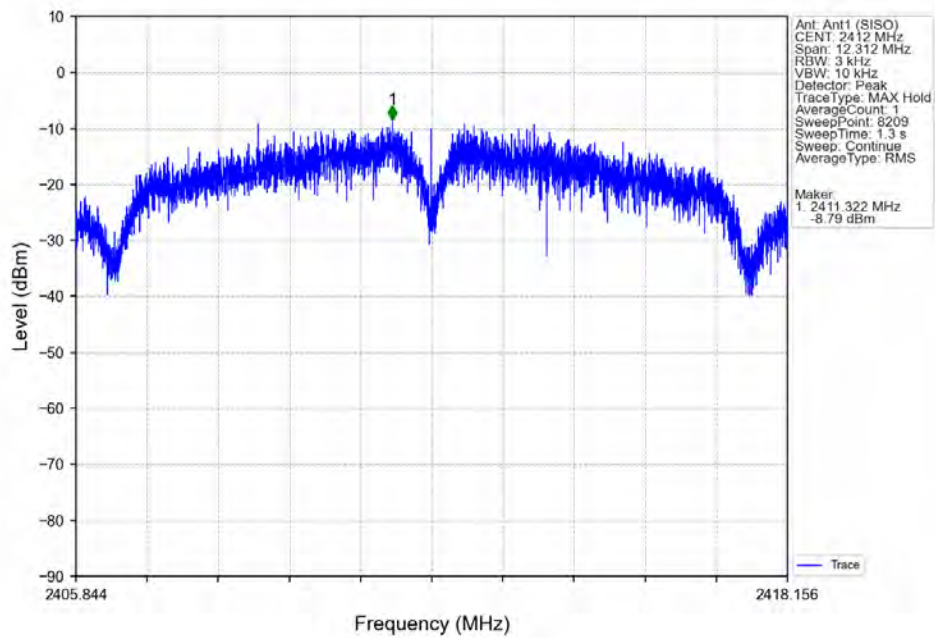
Mode	TX Type	Frequency (MHz)	RU	RU Pos	Maximum PSD (dBm/3kHz)		Verdict
					ANT1	Limit	
802.11b	SISO	2412	/	/	-8.79	<=8	Pass
		2437	/	/	-8.93	<=8	Pass
		2462	/	/	-7.07	<=8	Pass
802.11g	SISO	2412	/	/	-13.40	<=8	Pass
		2437	/	/	-12.12	<=8	Pass
		2462	/	/	-12.97	<=8	Pass
802.11n (HT20)	SISO	2412	/	/	-12.28	<=8	Pass
		2437	/	/	-12.82	<=8	Pass
		2462	/	/	-12.46	<=8	Pass
802.11n (HT40)	SISO	2422	/	/	-16.27	<=8	Pass
		2437	/	/	-15.80	<=8	Pass
		2452	/	/	-15.99	<=8	Pass
802.11ax (HE20)	SISO	2412	SU	/	-13.96	<=8	Pass
		2437	SU	/	-14.64	<=8	Pass
		2462	SU	/	-14.20	<=8	Pass
802.11ax (HE40)	SISO	2422	SU	/	-16.11	<=8	Pass
		2437	SU	/	-16.71	<=8	Pass
		2452	SU	/	-16.40	<=8	Pass

Note1: Antenna Gain: Ant1: 2.34dBi;

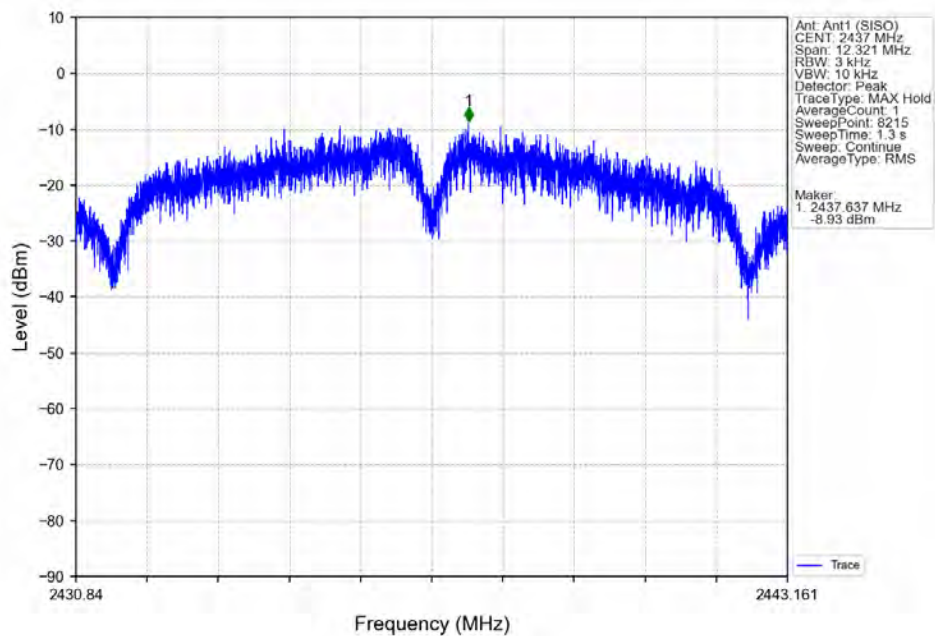
4.2 Test Graph

4.2.1 PSD

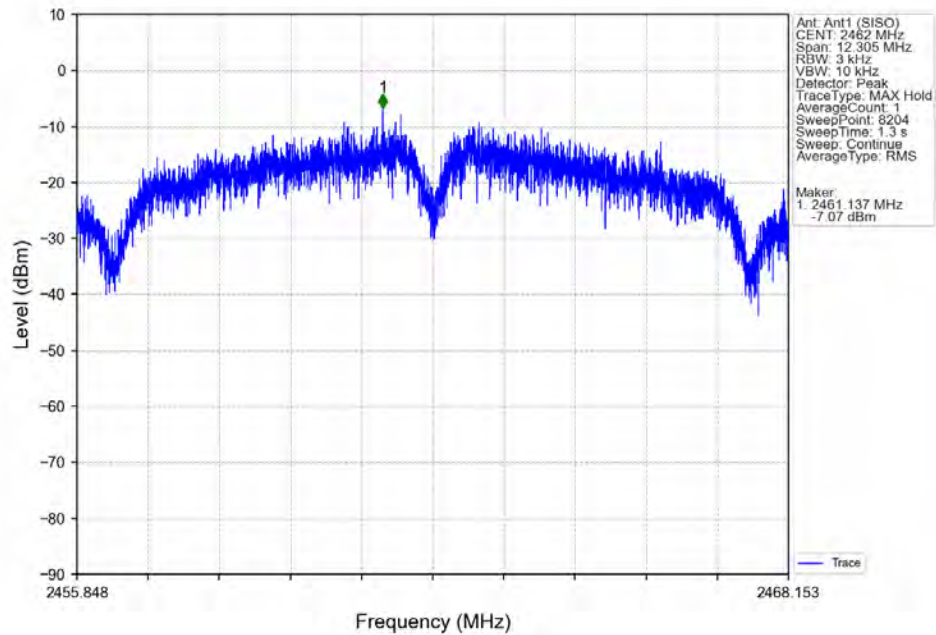
802.11b LCH 2412MHz_Ant1 (SISO)_NTNV



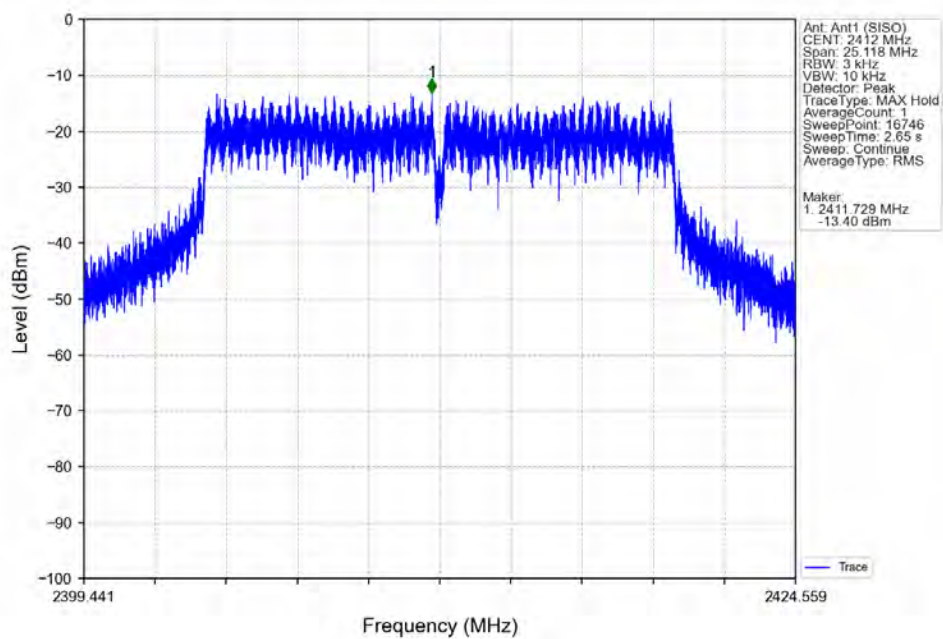
802.11b MCH 2437MHz_Ant1 (SISO)_NTNV



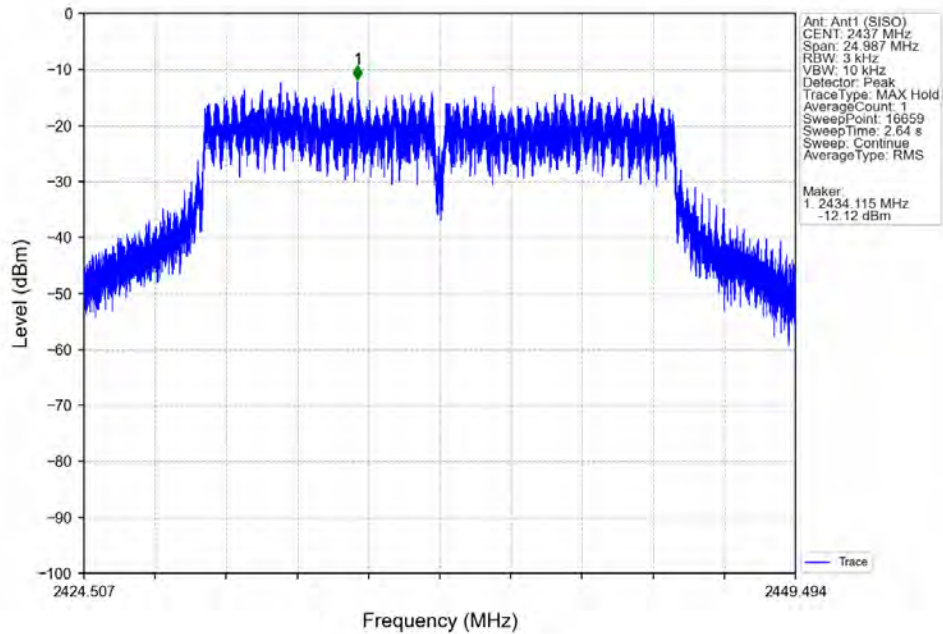
802.11b HCH 2462MHz_Ant1 (SISO)_NTNV



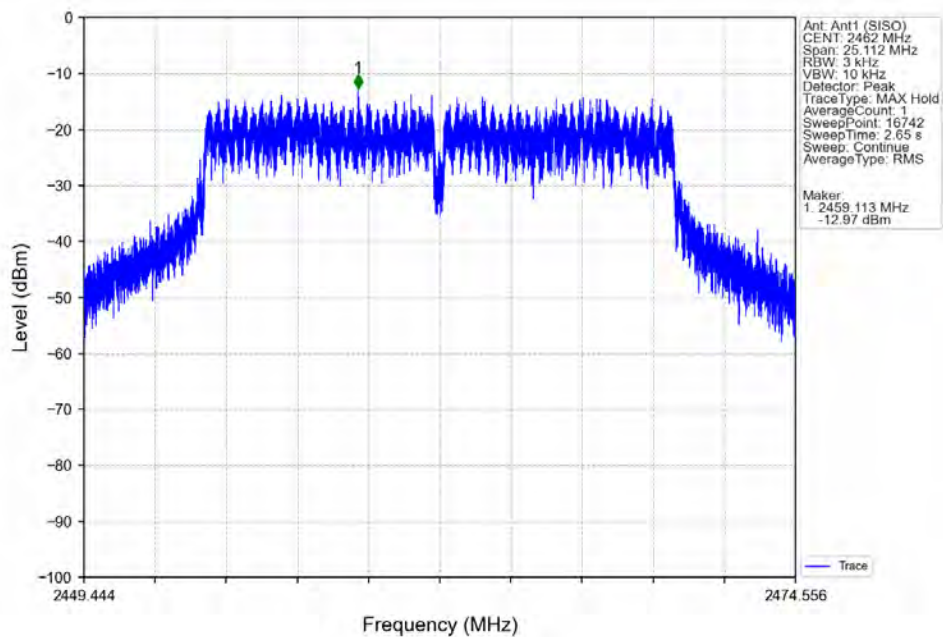
802.11g LCH 2412MHz_Ant1 (SISO)_NTNV



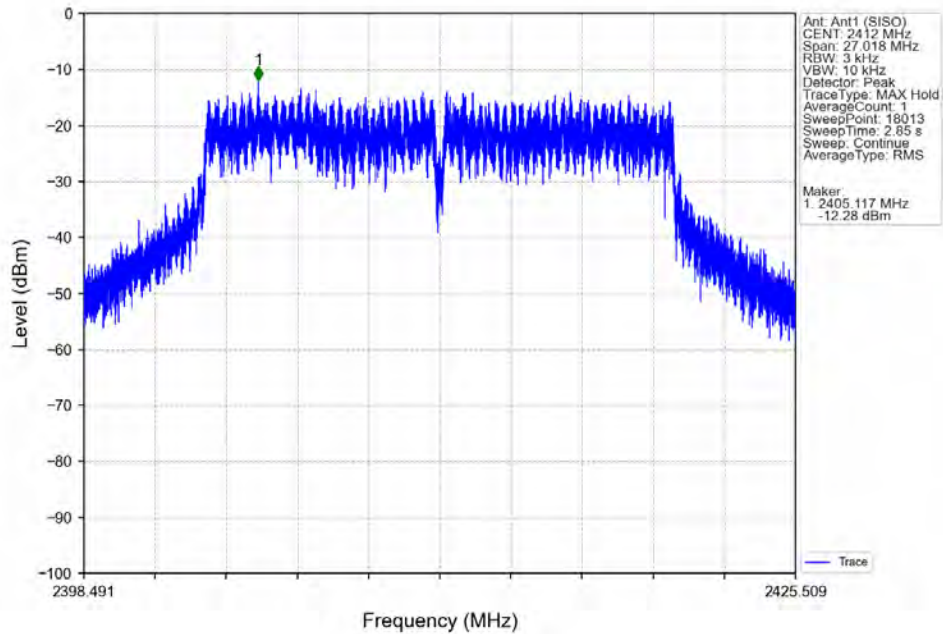
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



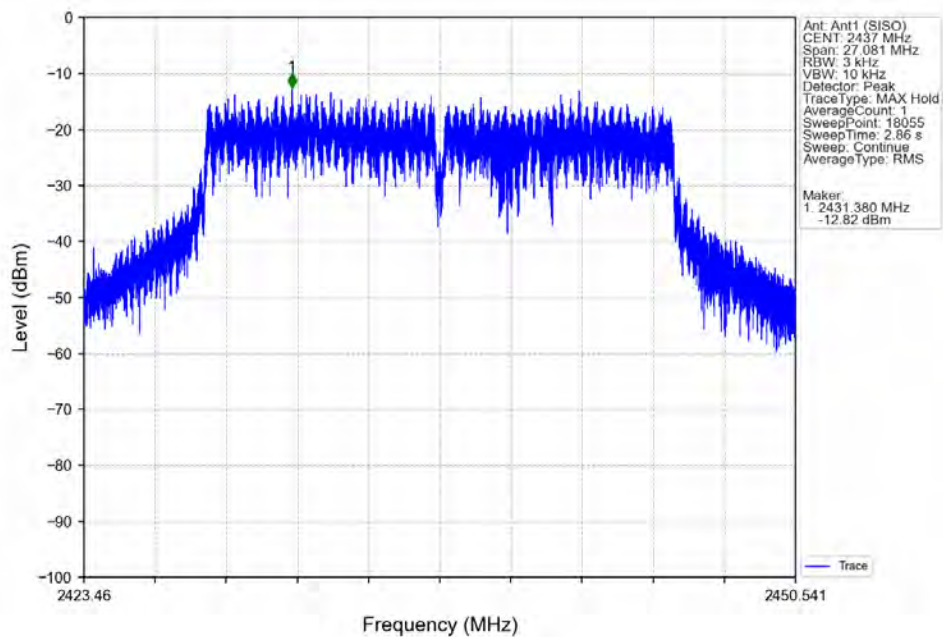
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



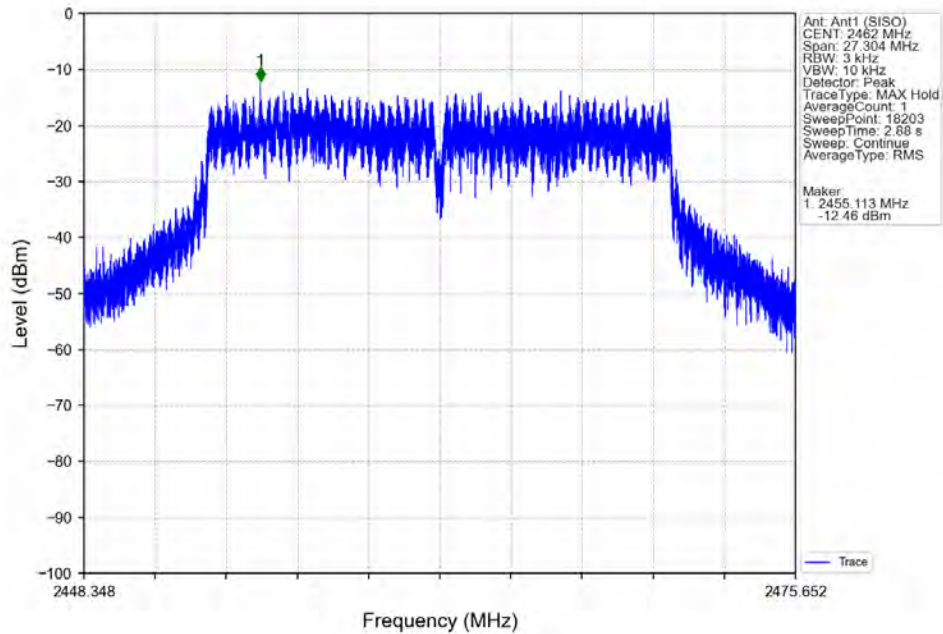
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



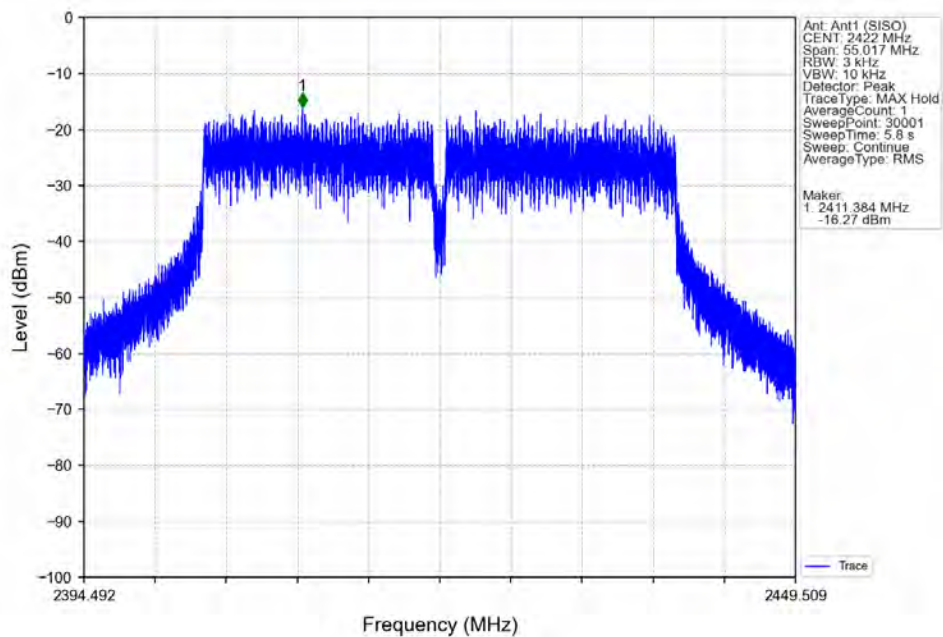
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



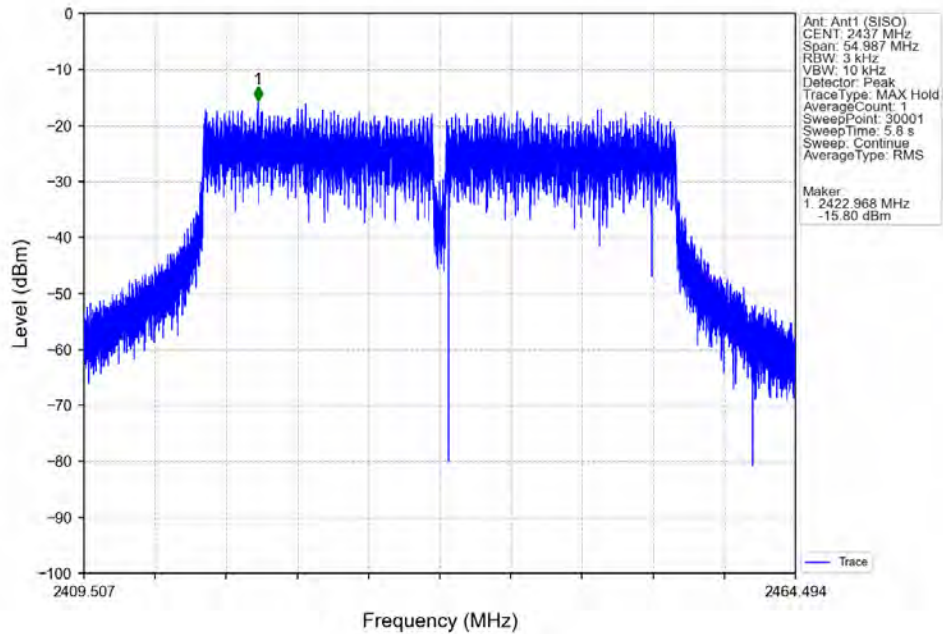
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTN



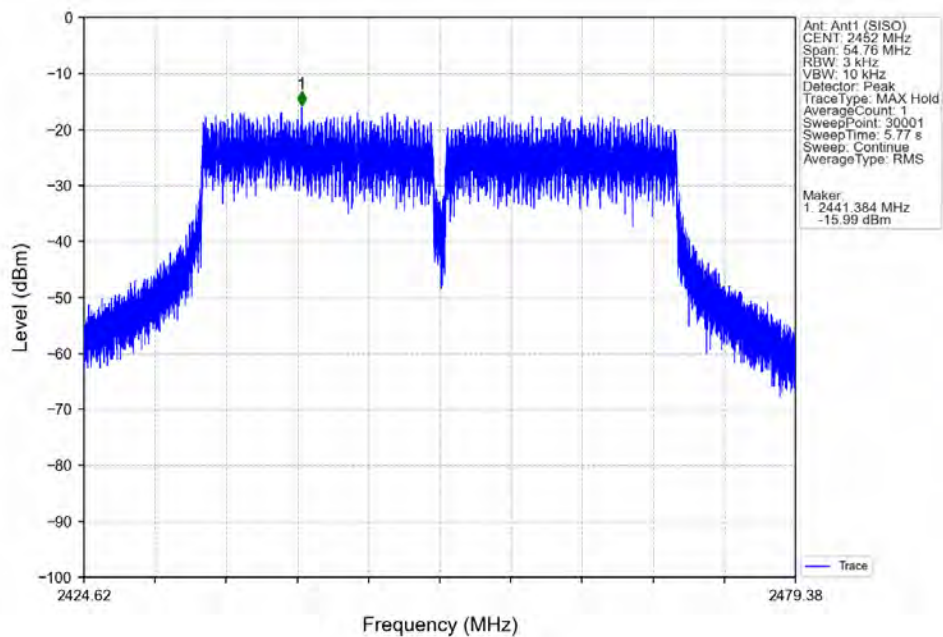
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTN



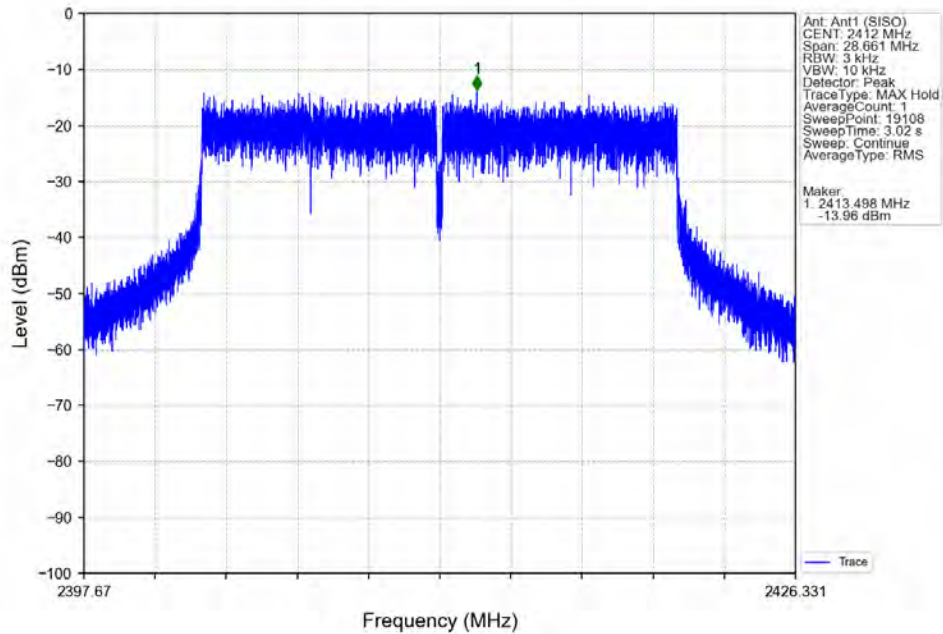
802.11n(HT40) MCH_2437MHz_Ant1 (SISO) NTN



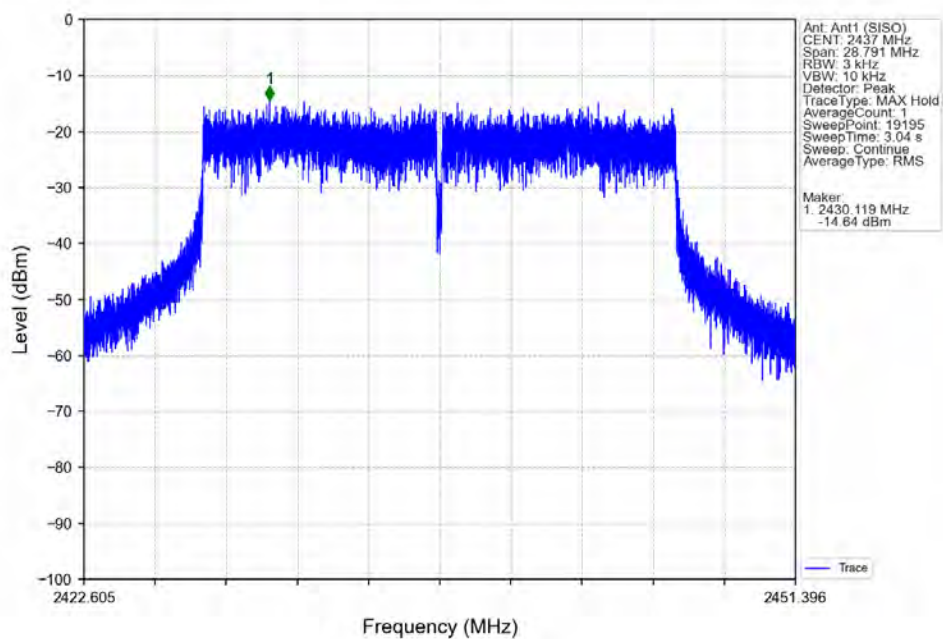
802.11n(HT40) HCH_2452MHz_Ant1 (SISO) NTN



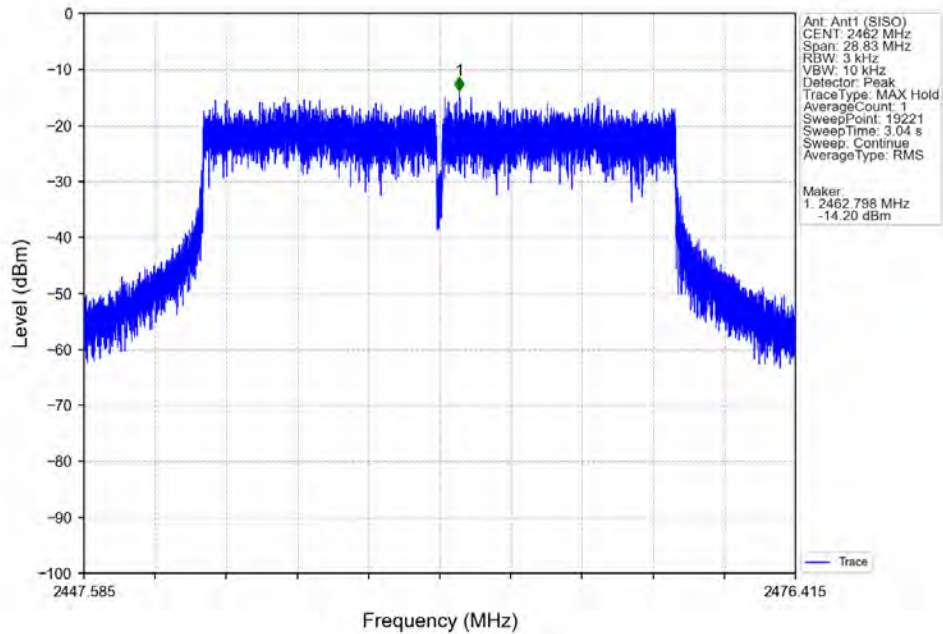
802.11ax(HE20) LCH 2412MHz SU / Ant1 (SISO) NTN



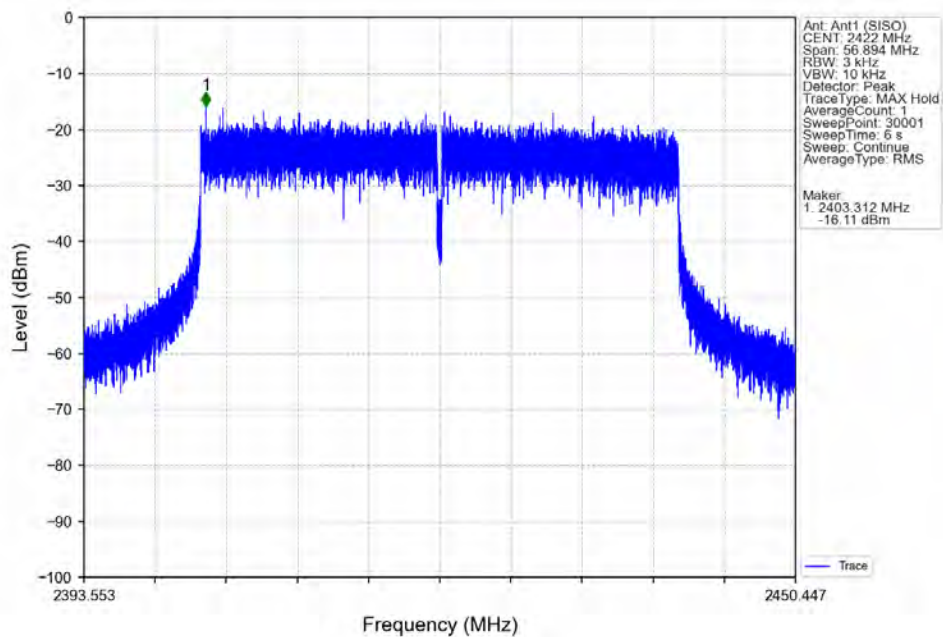
802.11ax(HE20) MCH 2437MHz SU / Ant1 (SISO) NTN



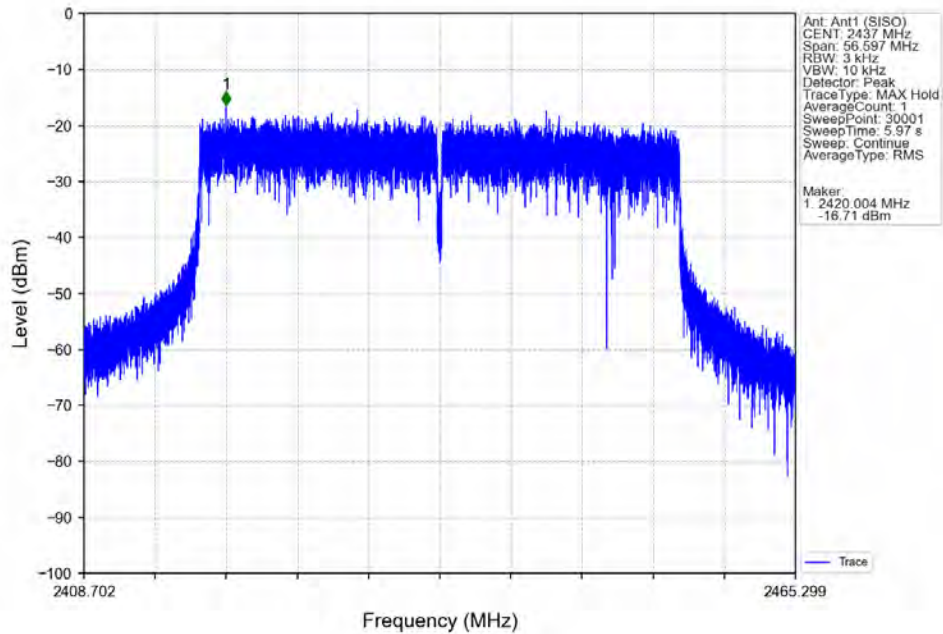
802.11ax(HE20) HCH 2462MHz SU / Ant1 (SISO) NTN



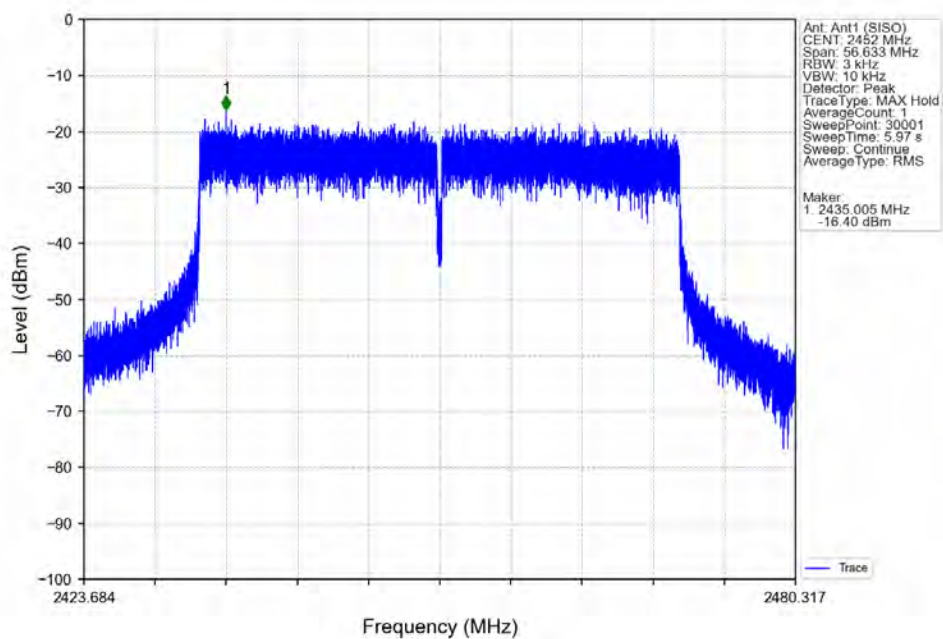
802.11ax(HE40) LCH 2422MHz SU / Ant1 (SISO) NTN



802.11ax(HE40) MCH_2437MHz_SU / Ant1 (SISO) NTN



802.11ax(HE40) HCH_2452MHz_SU / Ant1 (SISO) NTN



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	6.57
		2437	/	/	1	6.08
		2462	/	/	1	6.07
802.11g	SISO	2412	/	/	1	1.49
		2437	/	/	1	1.55
		2462	/	/	1	1.26
802.11n (HT20)	SISO	2412	/	/	1	1.33
		2437	/	/	1	1.57
		2462	/	/	1	1.34
802.11n (HT40)	SISO	2422	/	/	1	-2.14
		2437	/	/	1	-1.84
		2452	/	/	1	-1.84
802.11ax (HE20)	SISO	2412	SU	/	1	1.94
		2437	SU	/	1	1.12
		2462	SU	/	1	0.96
802.11ax (HE40)	SISO	2422	SU	/	1	-1.47
		2437	SU	/	1	-1.69
		2452	SU	/	1	-2.10

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

5.1.2 CSE

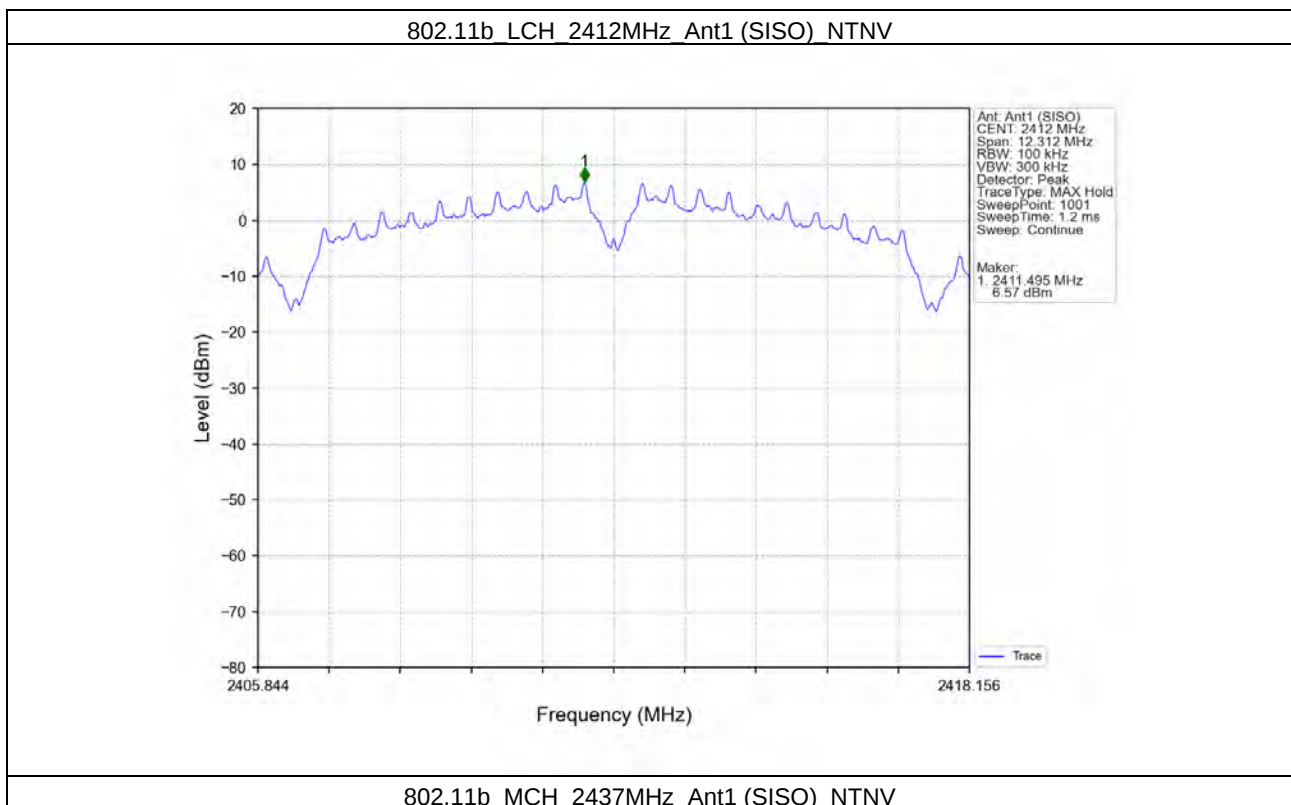
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	/	/	1	6.57	-13.43	Pass
		2437	/	/	1	6.57	-13.43	Pass
		2462	/	/	1	6.57	-13.43	Pass
802.11g	SISO	2412	/	/	1	1.55	-18.45	Pass
		2437	/	/	1	1.55	-18.45	Pass
		2462	/	/	1	1.55	-18.45	Pass
802.11n (HT20)	SISO	2412	/	/	1	1.57	-18.43	Pass
		2437	/	/	1	1.57	-18.43	Pass
		2462	/	/	1	1.57	-18.43	Pass
802.11n (HT40)	SISO	2422	/	/	1	-1.84	-21.84	Pass
		2437	/	/	1	-1.84	-21.84	Pass
		2452	/	/	1	-1.84	-21.84	Pass
802.11ax (HE20)	SISO	2412	SU	/	1	1.94	-18.06	Pass
		2437	SU	/	1	1.94	-18.06	Pass
		2462	SU	/	1	1.94	-18.06	Pass
802.11ax	SISO	2422	SU	/	1	-1.47	-21.47	Pass

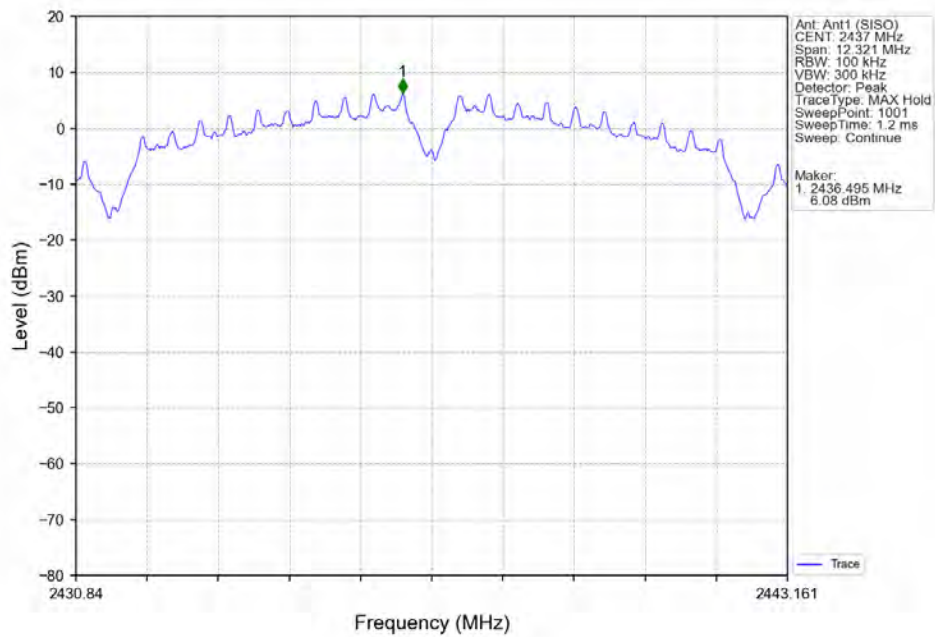
(HE40)	2437	SU	/	1	-1.47	-21.47	Pass
	2452	SU	/	1	-1.47	-21.47	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

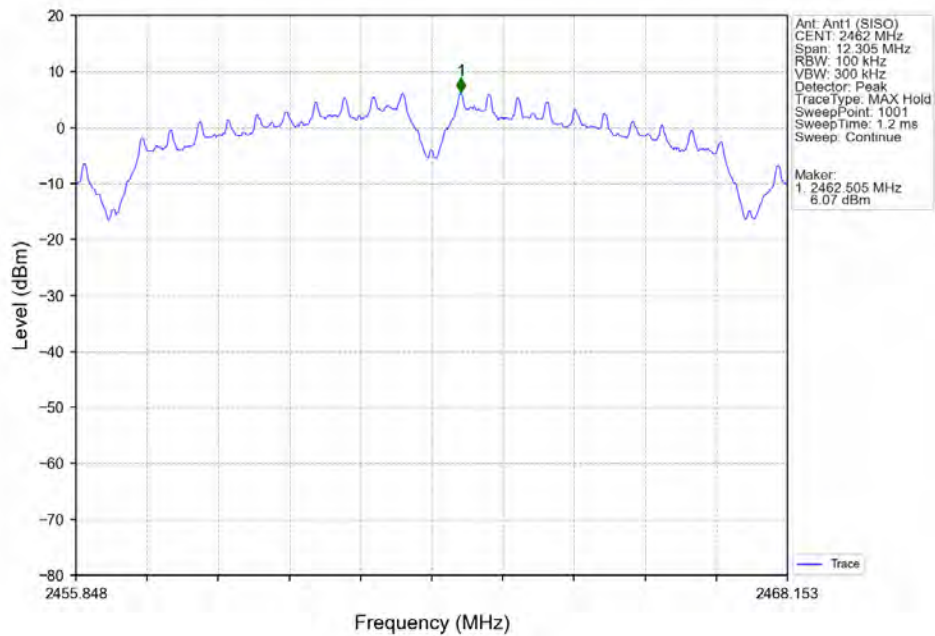
5.2 Test Graph

5.2.1 Ref

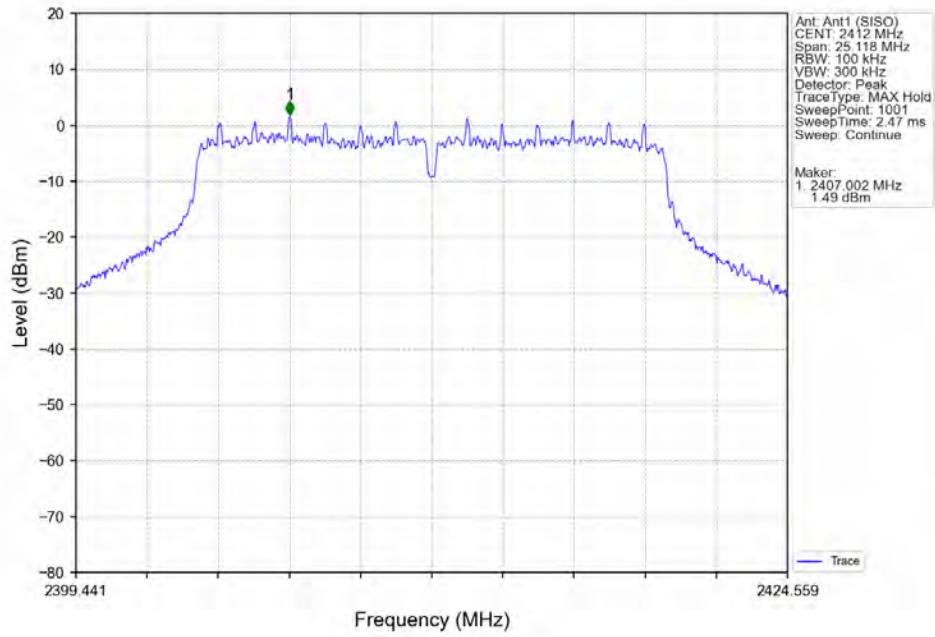




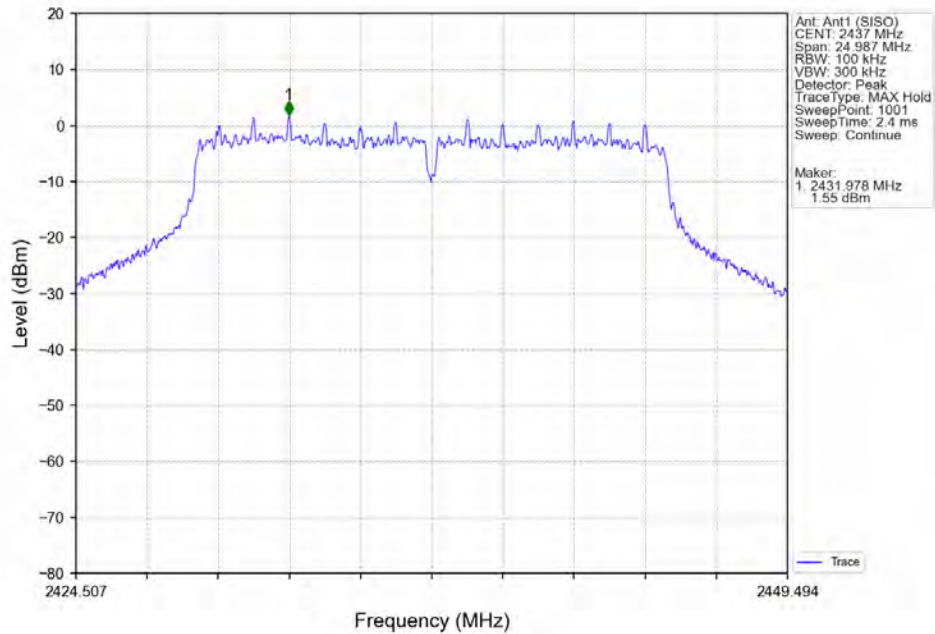
802.11b HCH 2462MHz_Ant1 (SISO)_NTNV



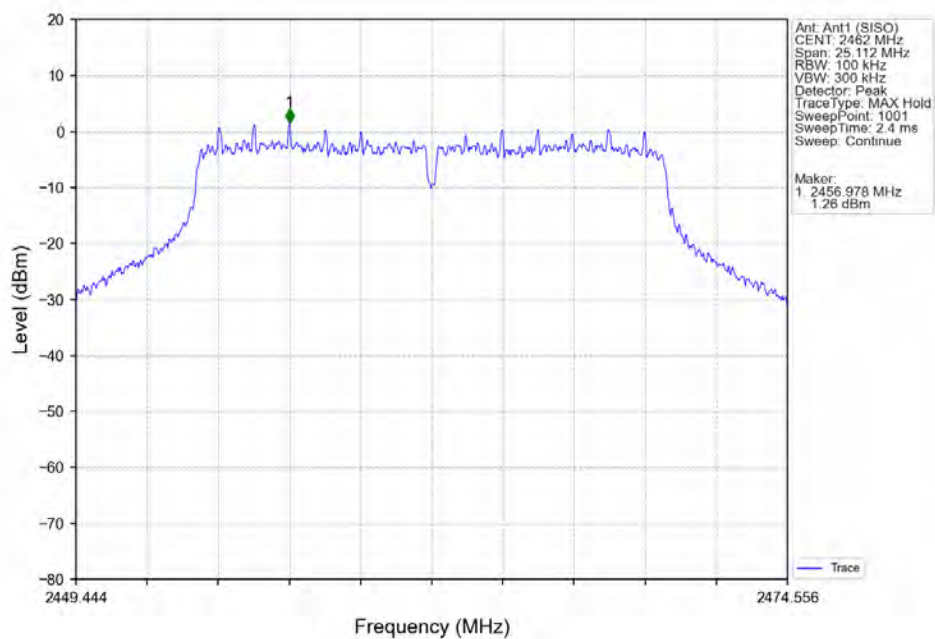
802.11g LCH 2412MHz_Ant1 (SISO)_NTNV



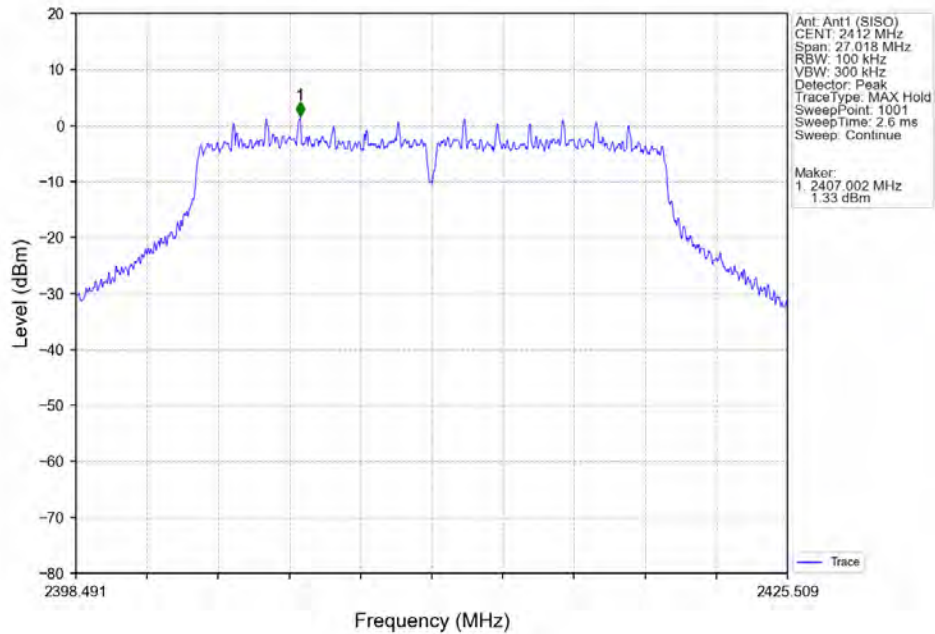
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



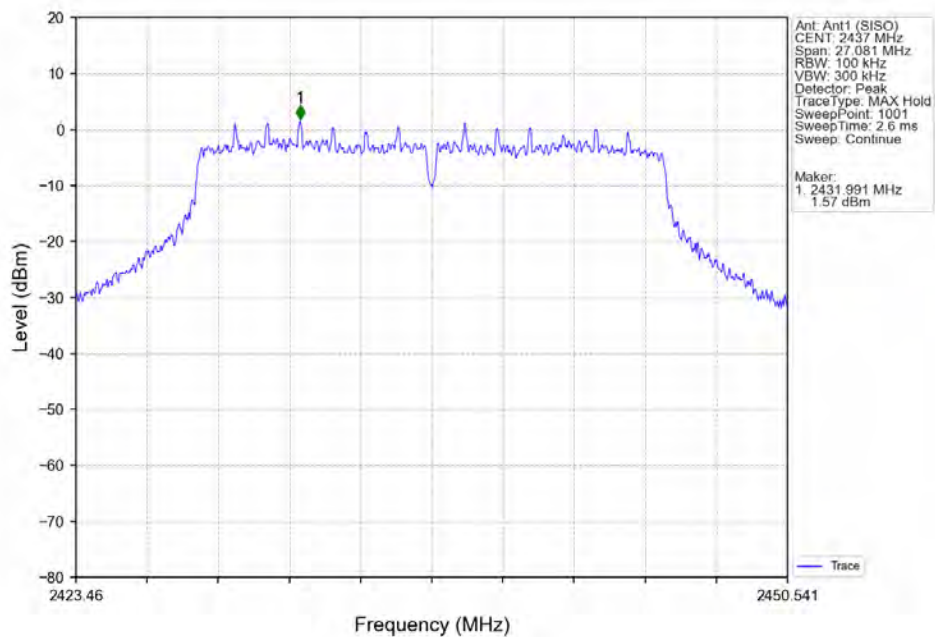
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



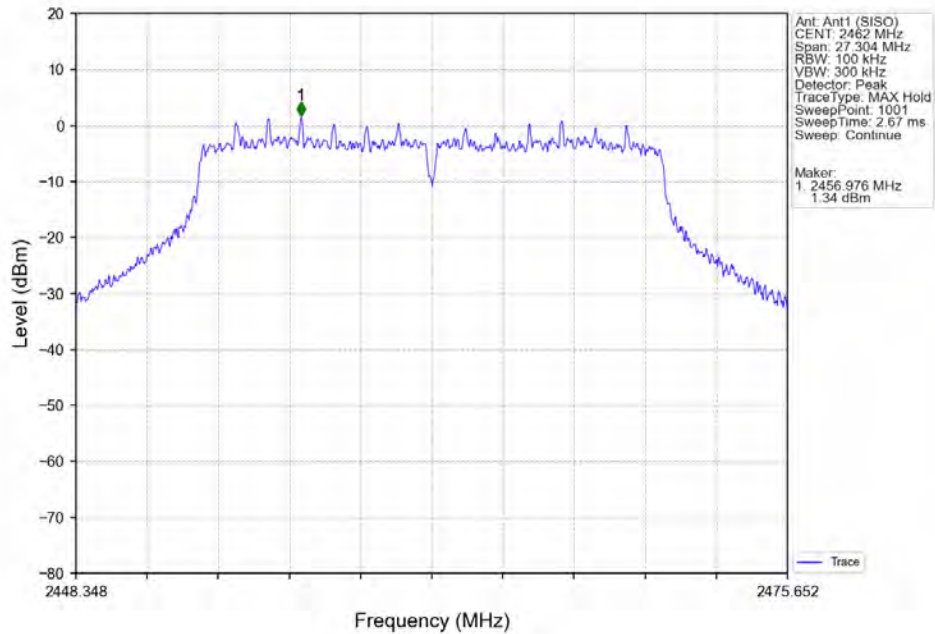
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



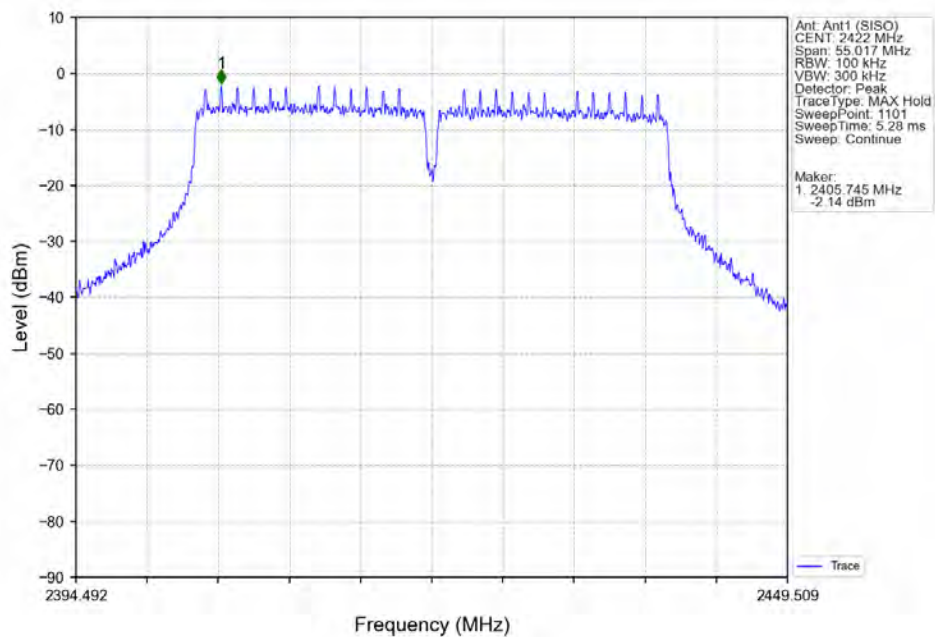
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



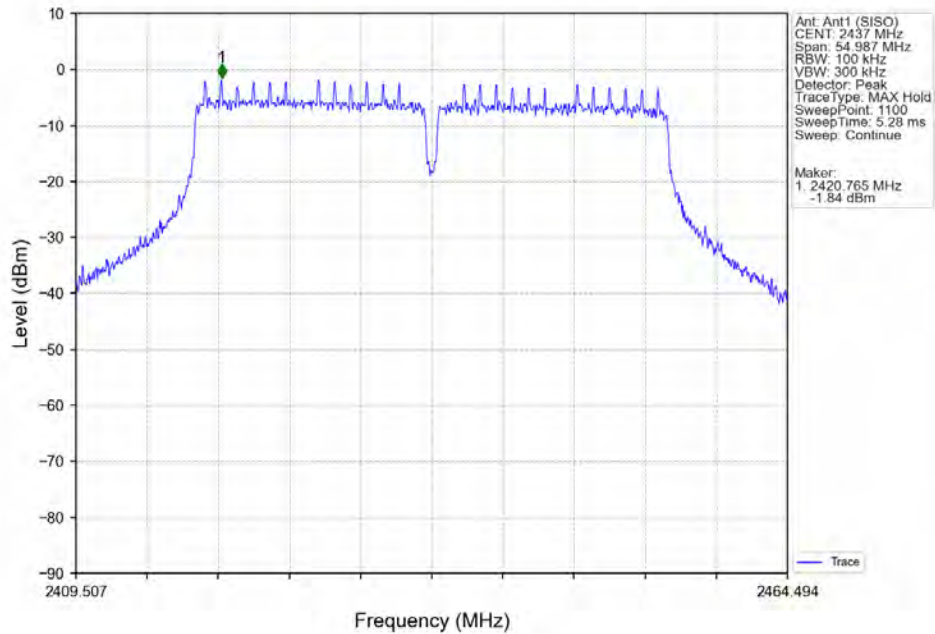
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



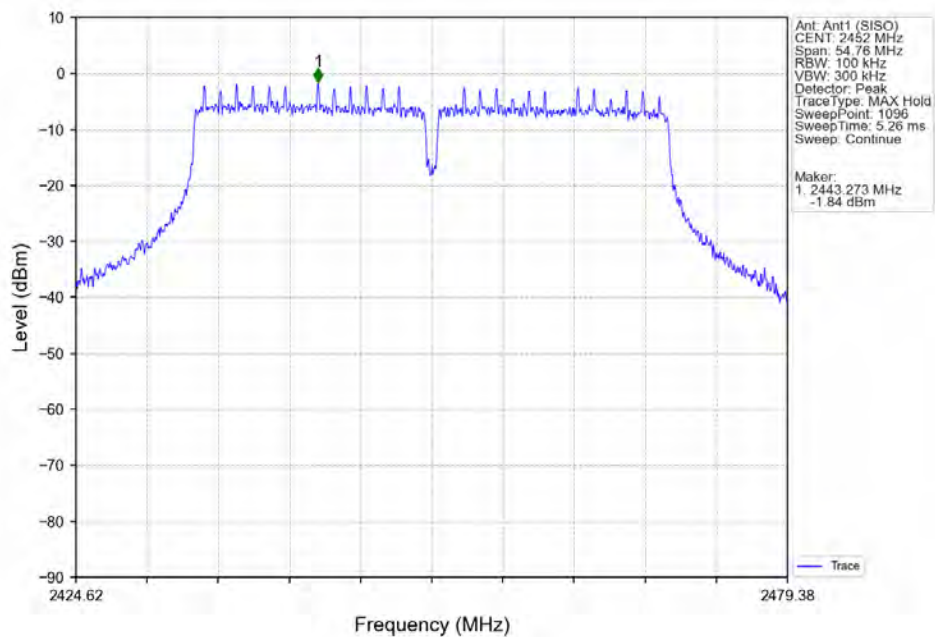
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



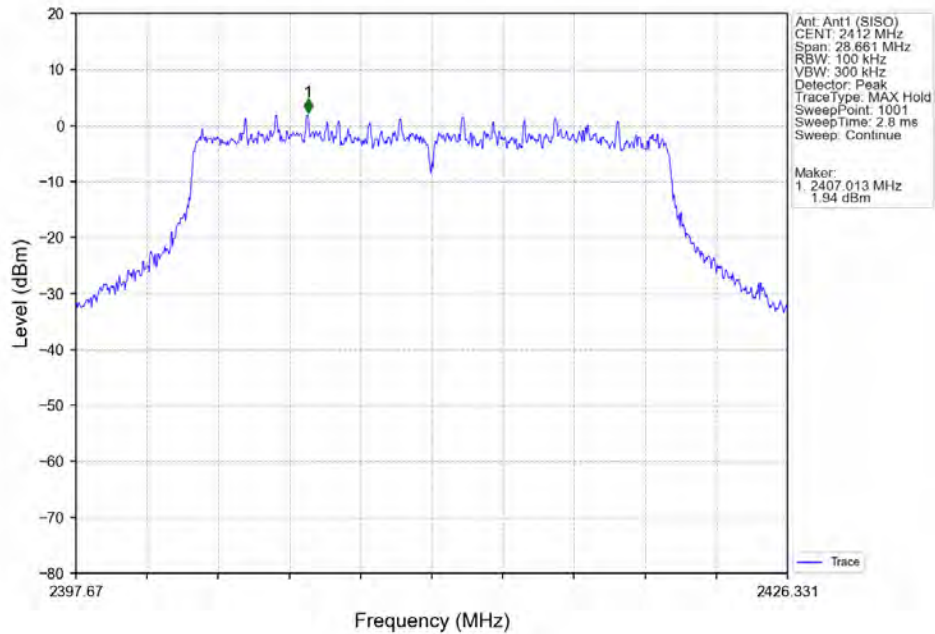
802.11n(HT40) MCH_2437MHz_Ant1 (SISO) NTN



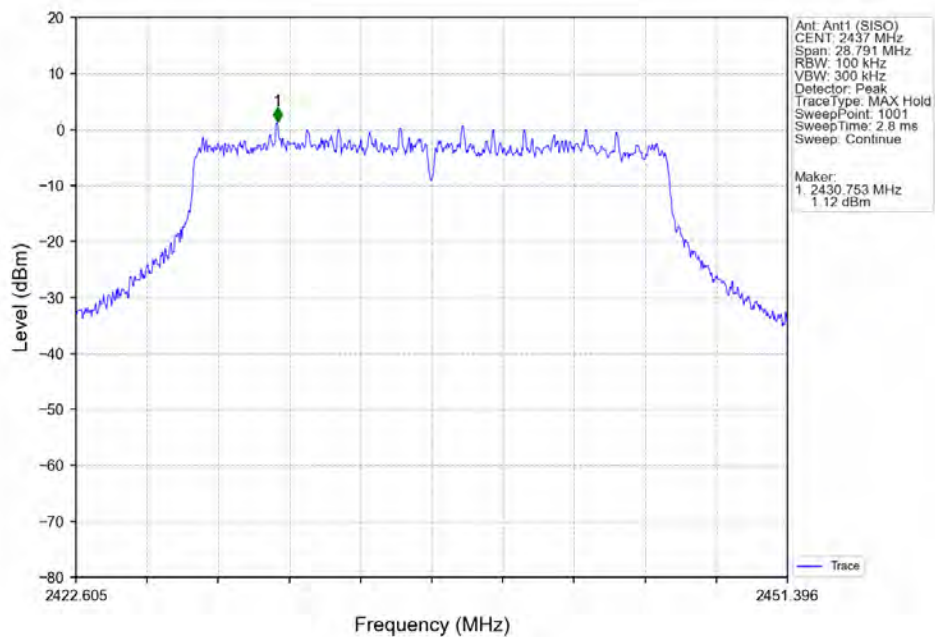
802.11n(HT40) HCH_2452MHz_Ant1 (SISO) NTN



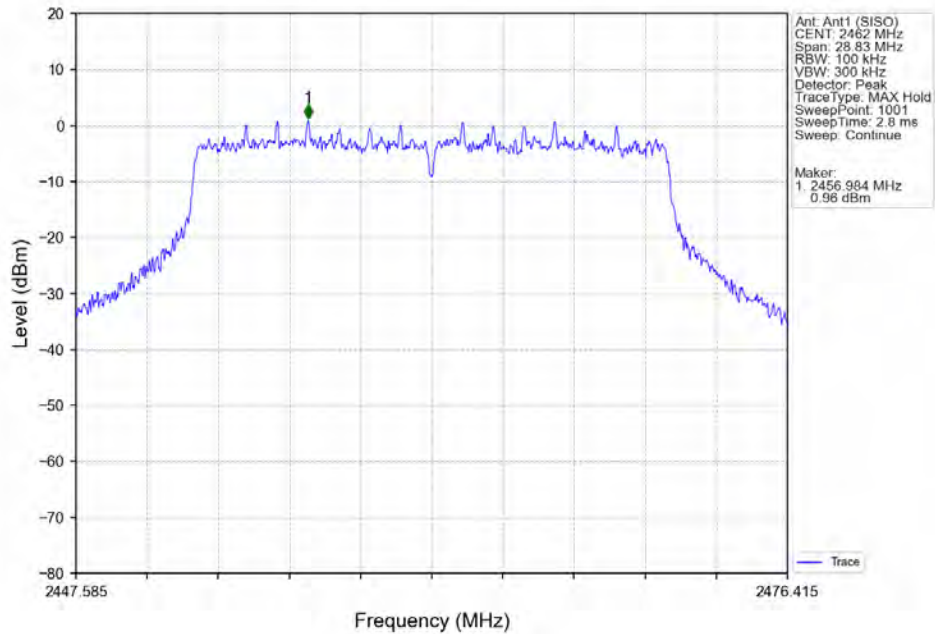
802.11ax(HE20) LCH 2412MHz SU / Ant1 (SISO) NTN



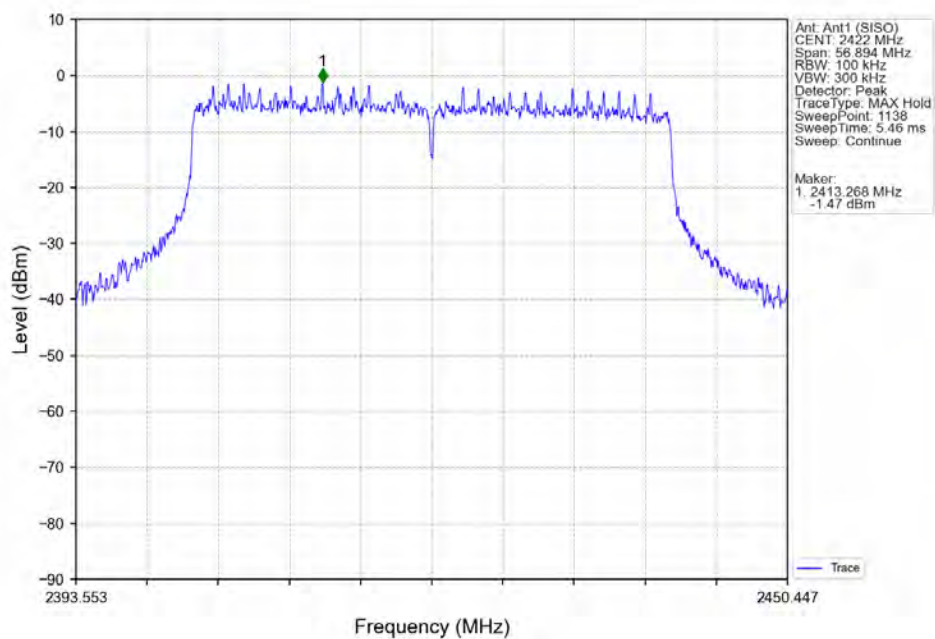
802.11ax(HE20) MCH 2437MHz SU / Ant1 (SISO) NTN



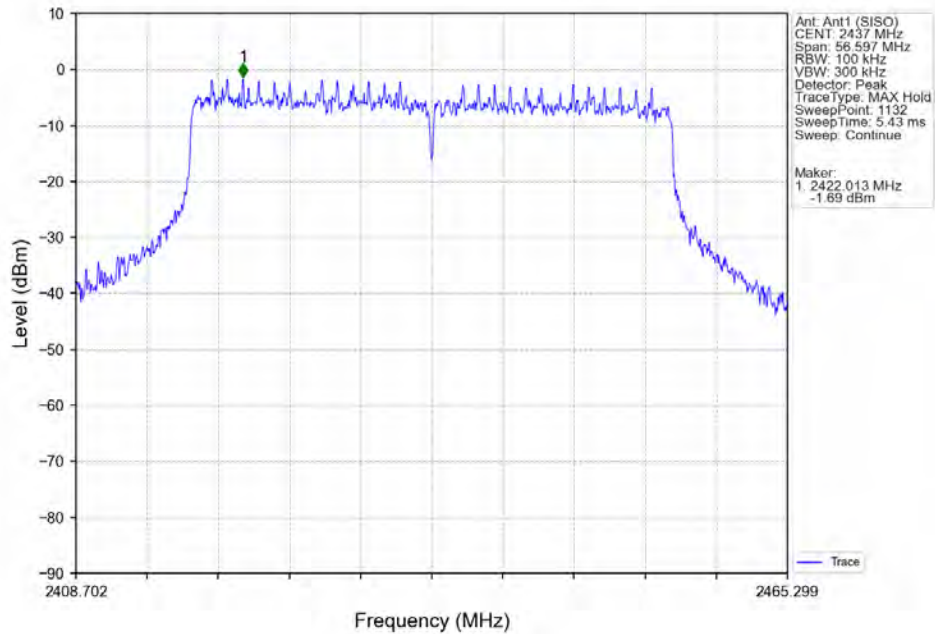
802.11ax(HE20) HCH 2462MHz SU / Ant1 (SISO) NTN



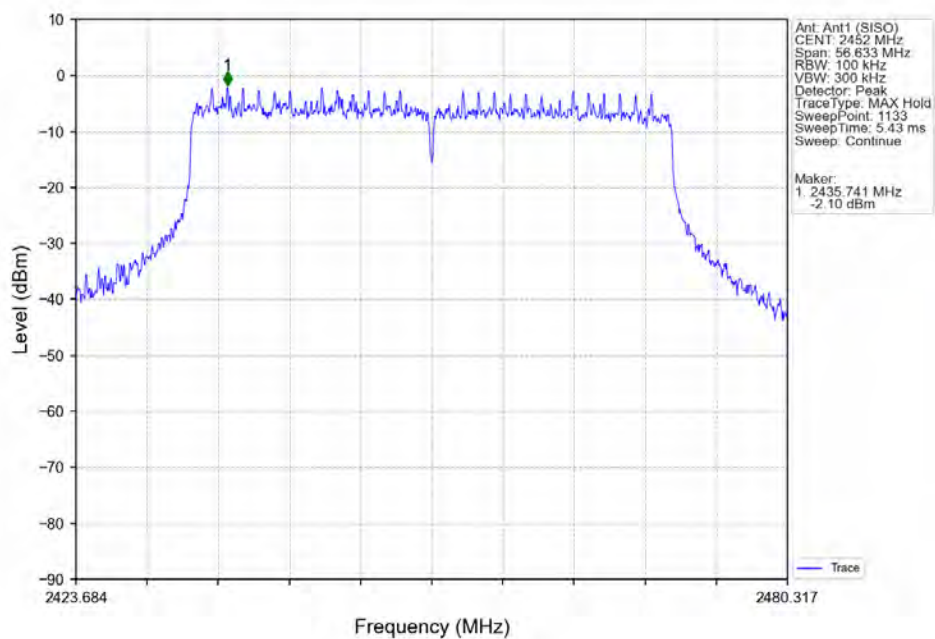
802.11ax(HE40) LCH 2422MHz SU / Ant1 (SISO) NTN



802.11ax(HE40) MCH 2437MHz SU / Ant1 (SISO) NTN

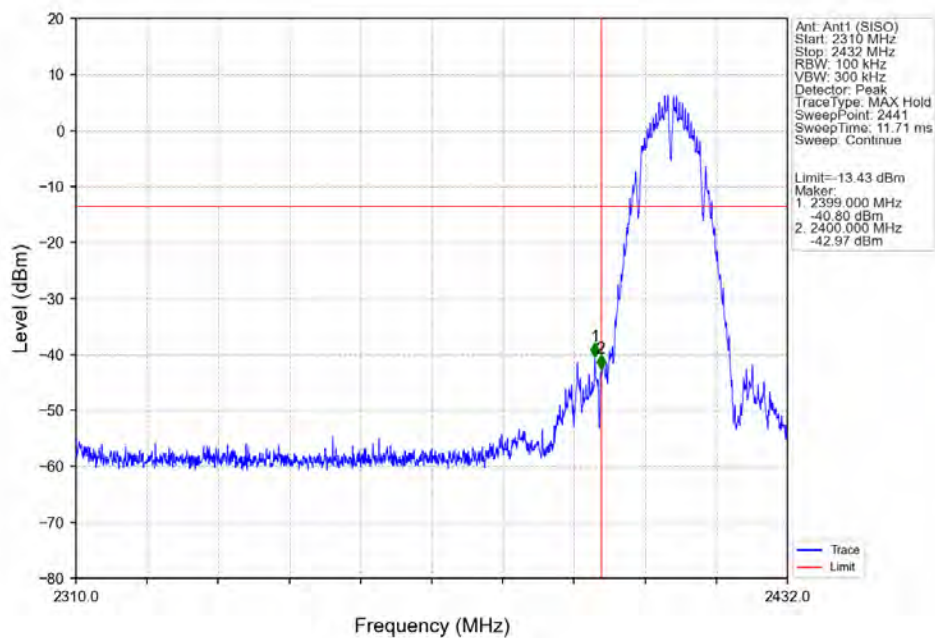


802.11ax(HE40) HCH 2452MHz SU / Ant1 (SISO) NTN

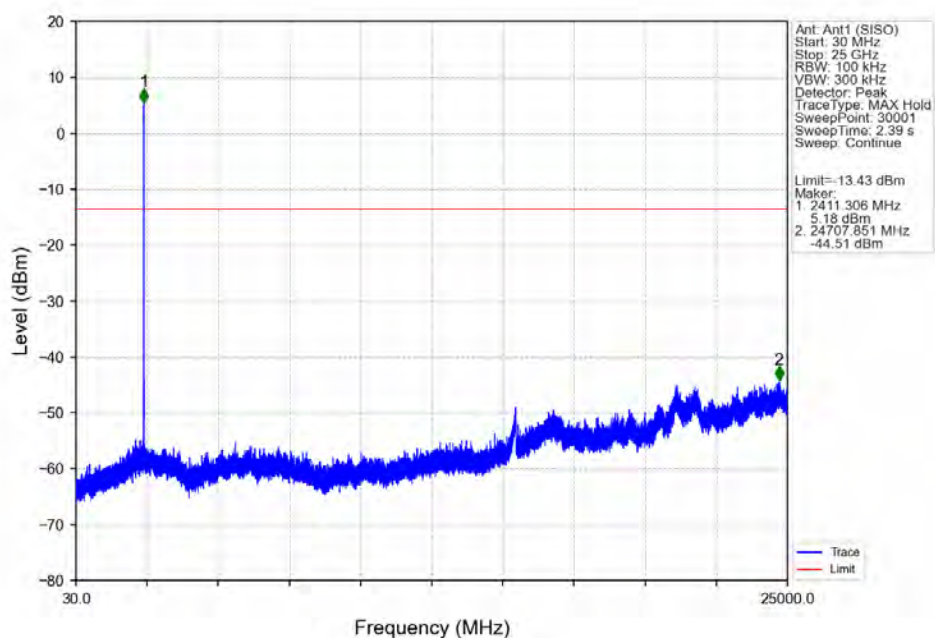


5.2.2 CSE

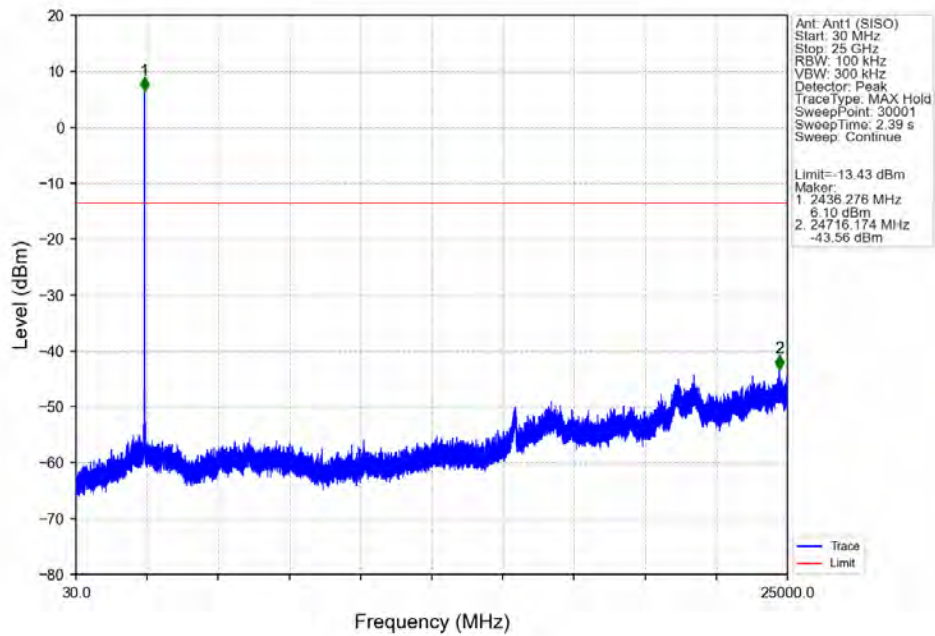
802.11b LCH 2412MHz_Ant1 (SISO)_NTNV



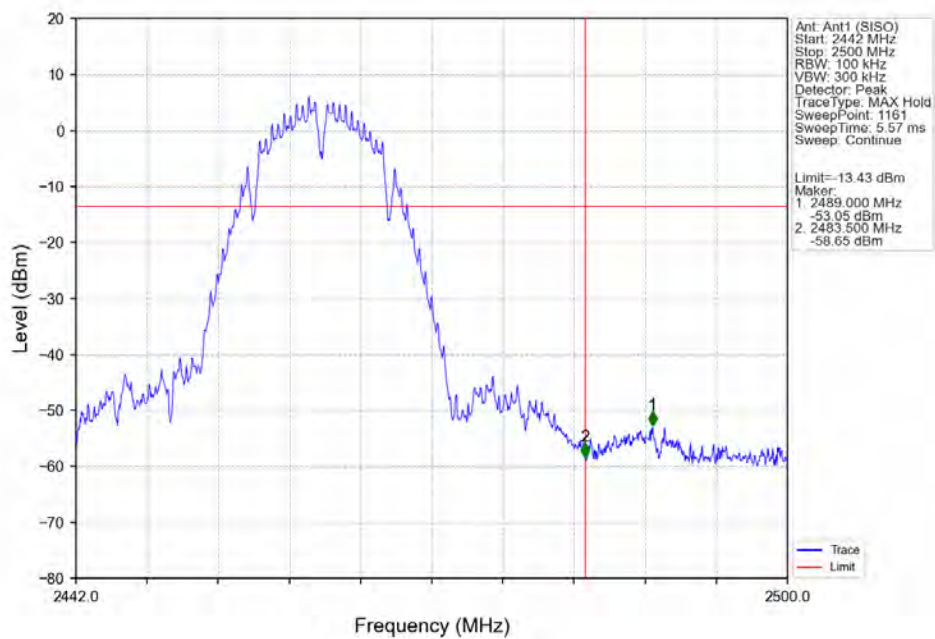
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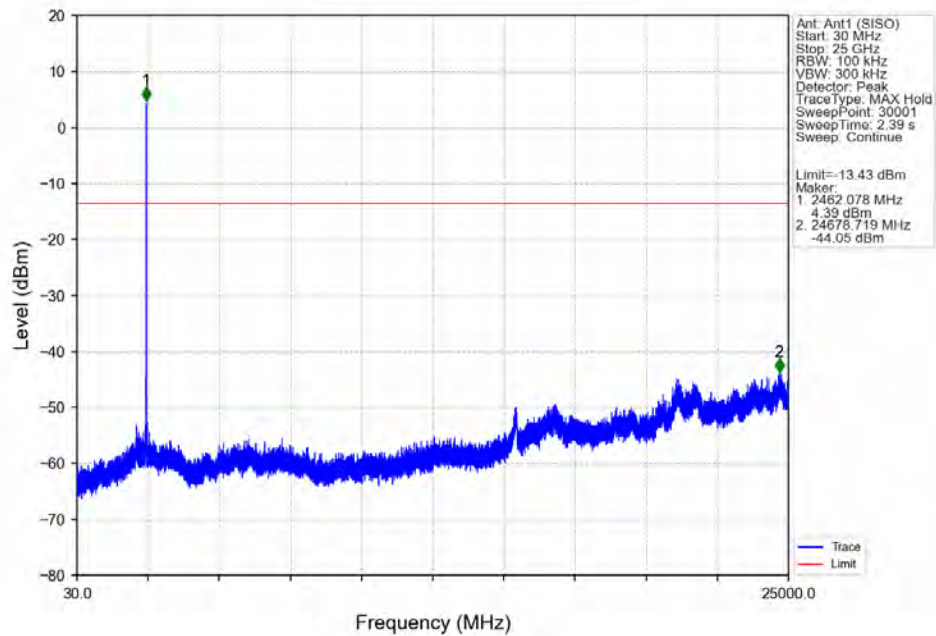
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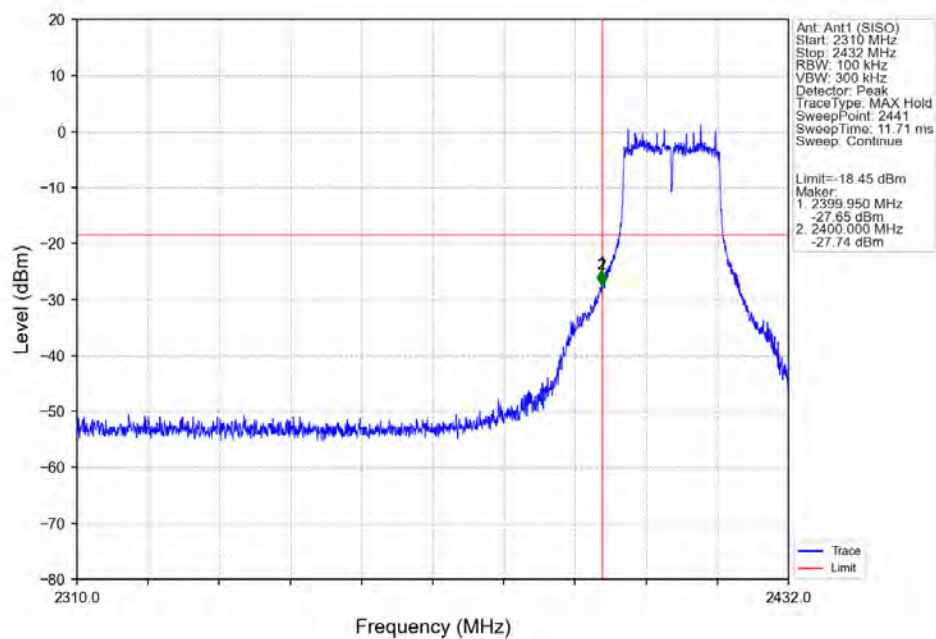
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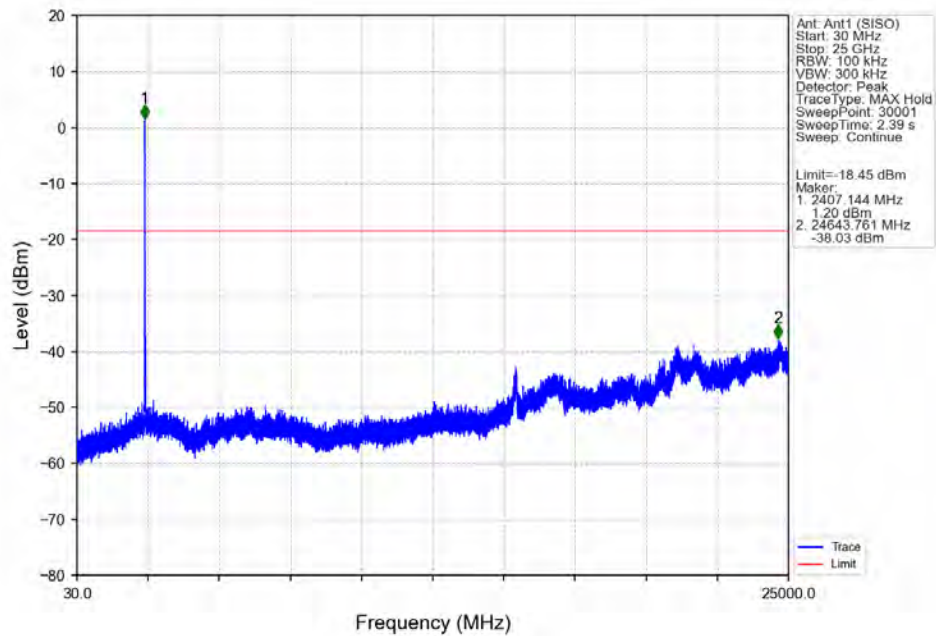
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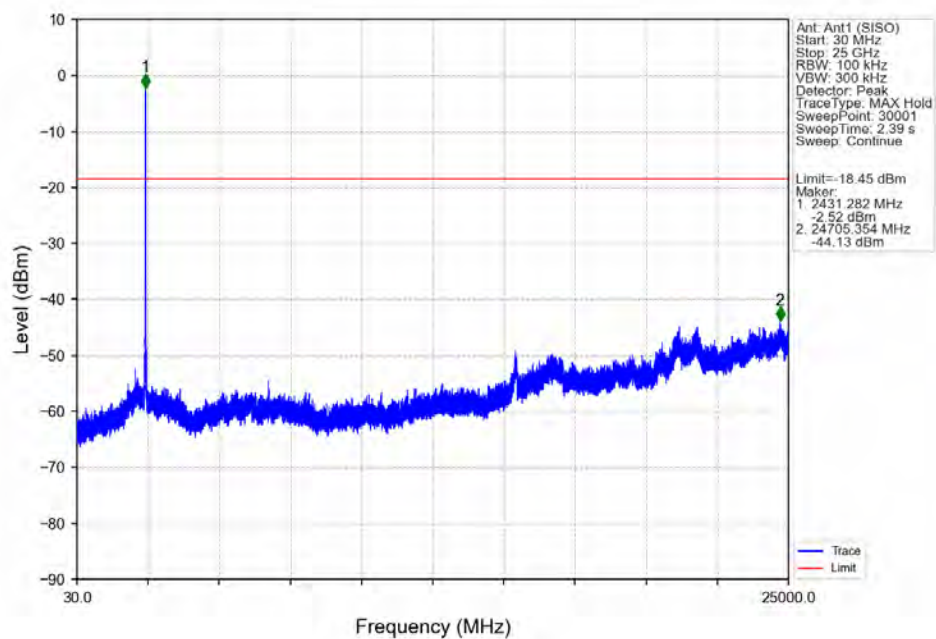
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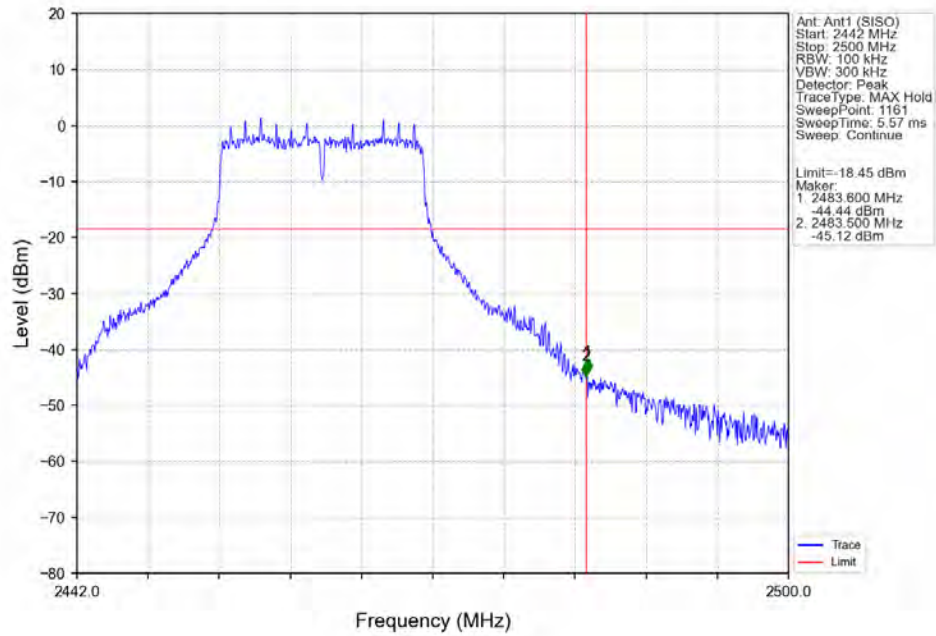
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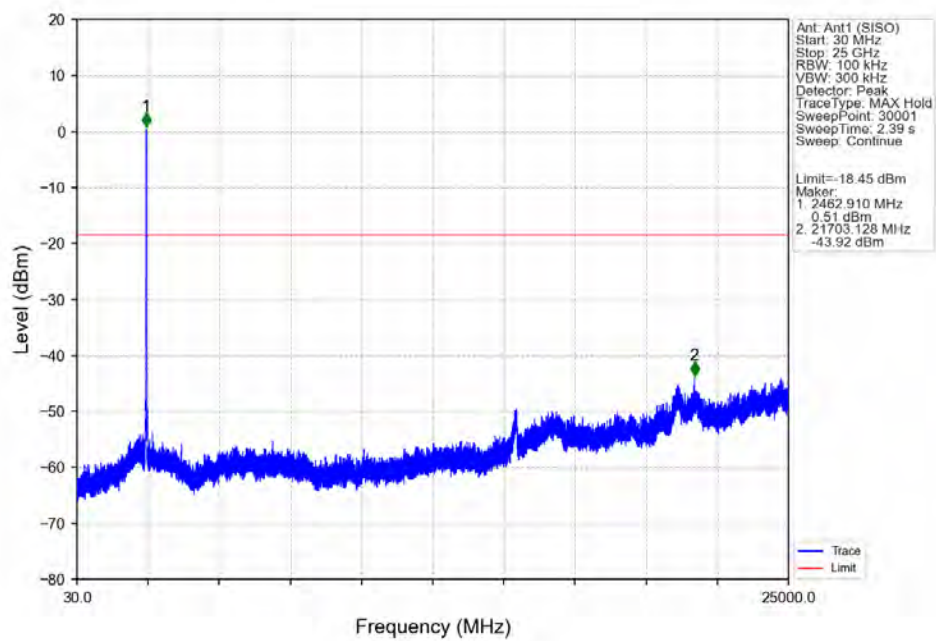
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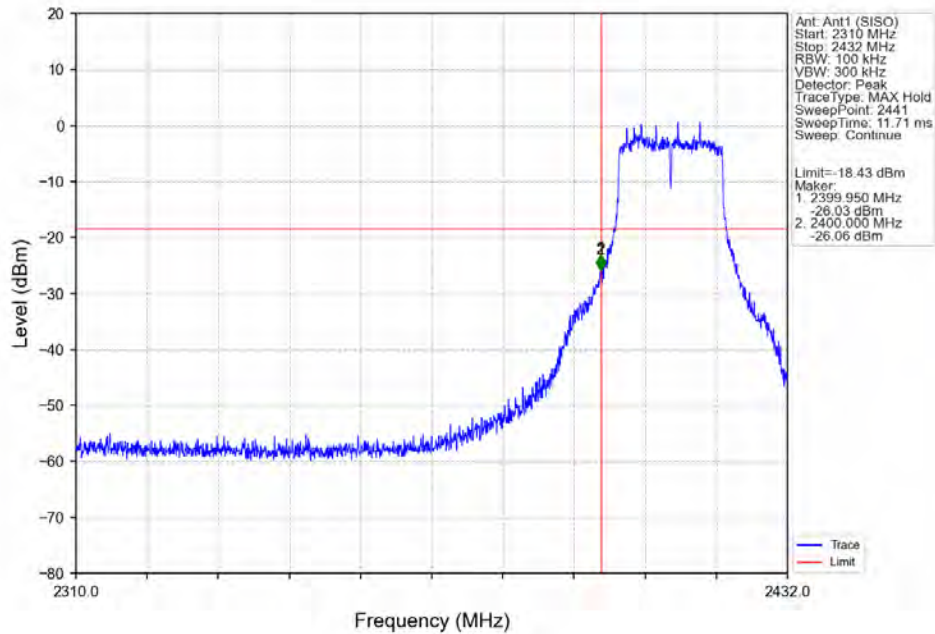
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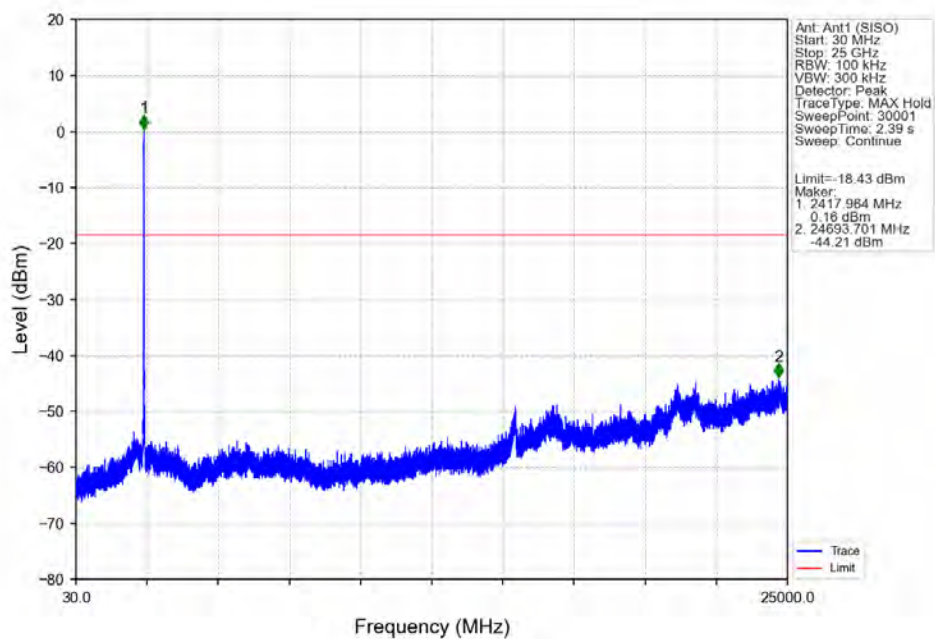
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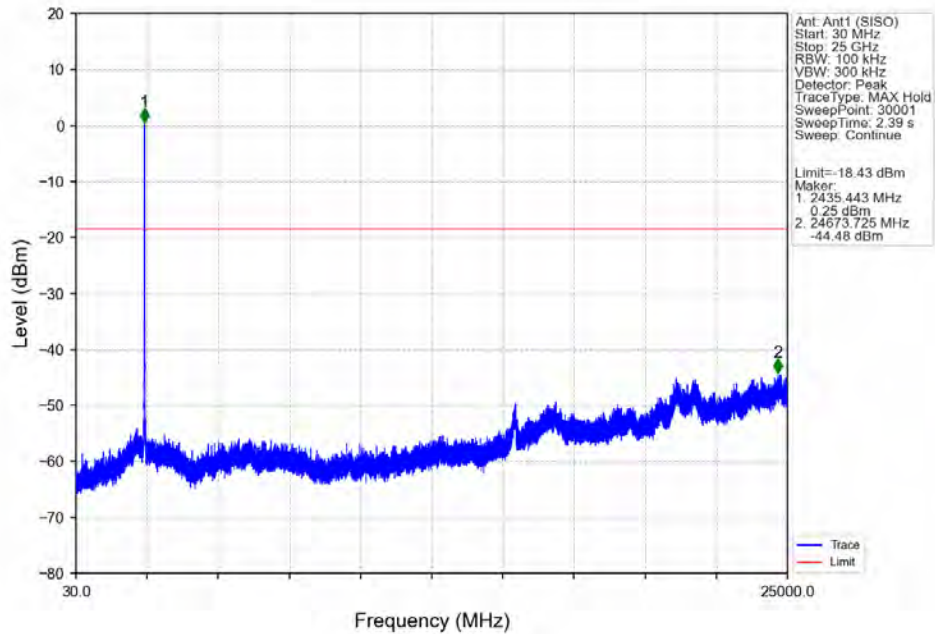
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



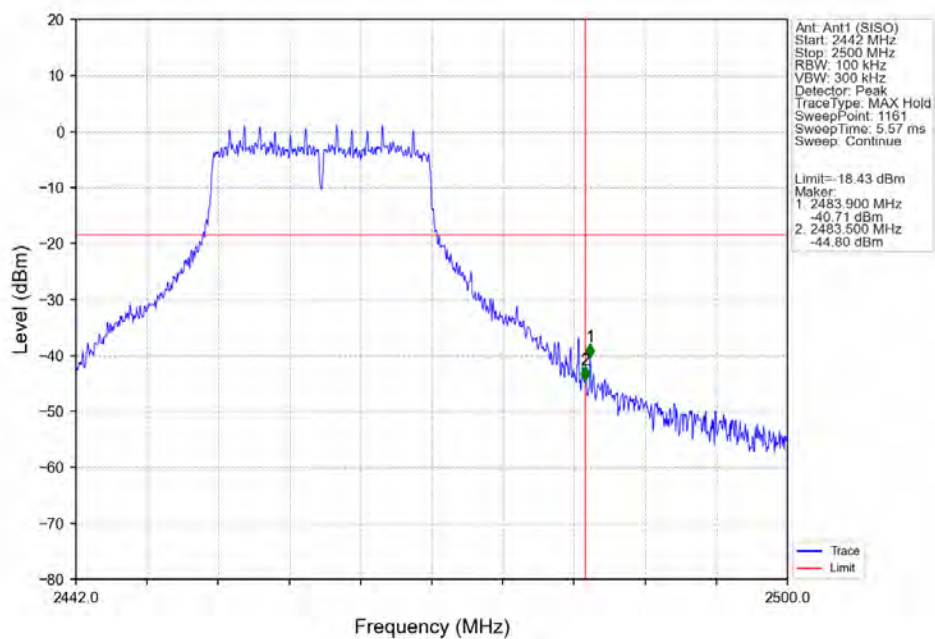
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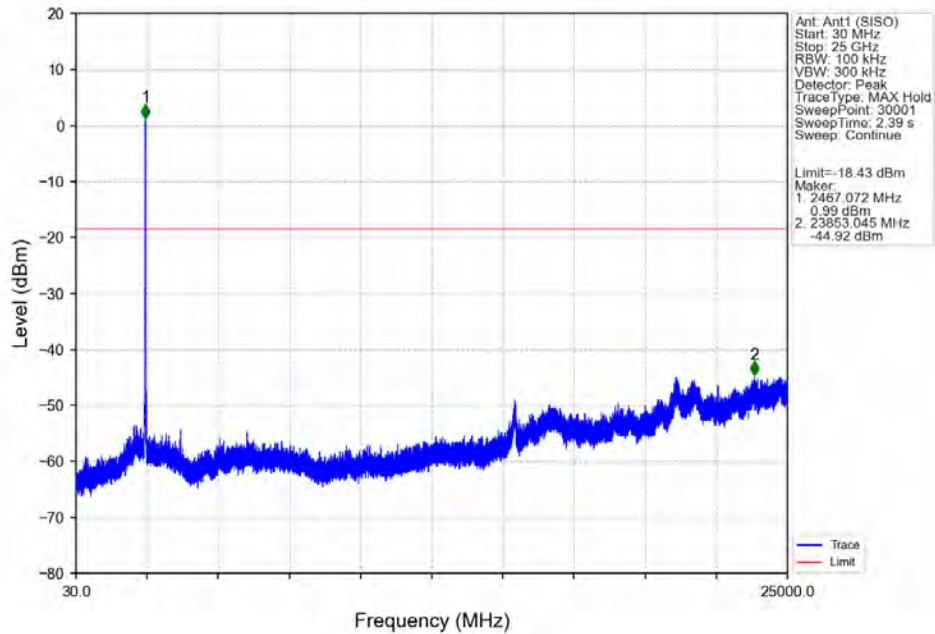
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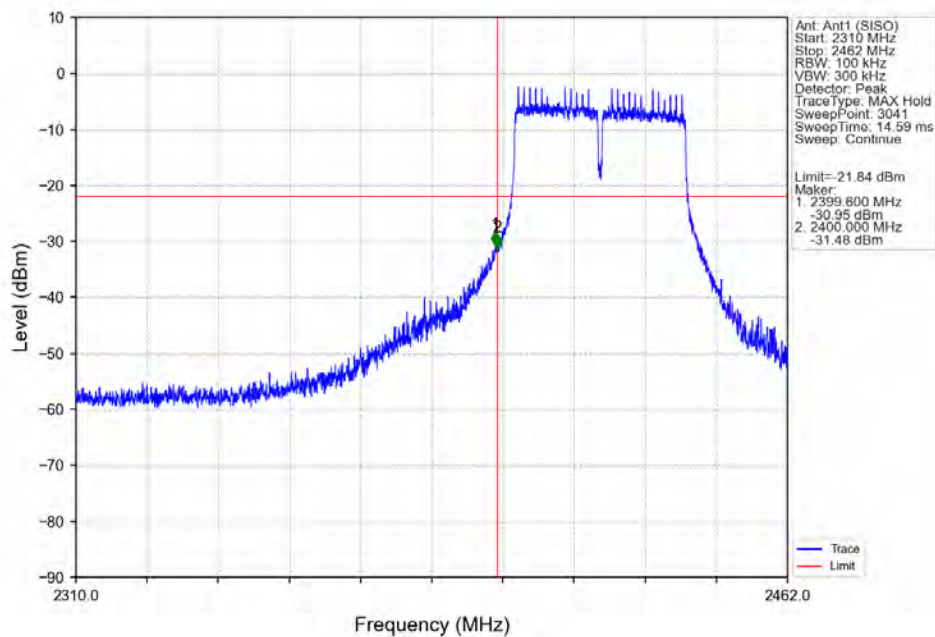
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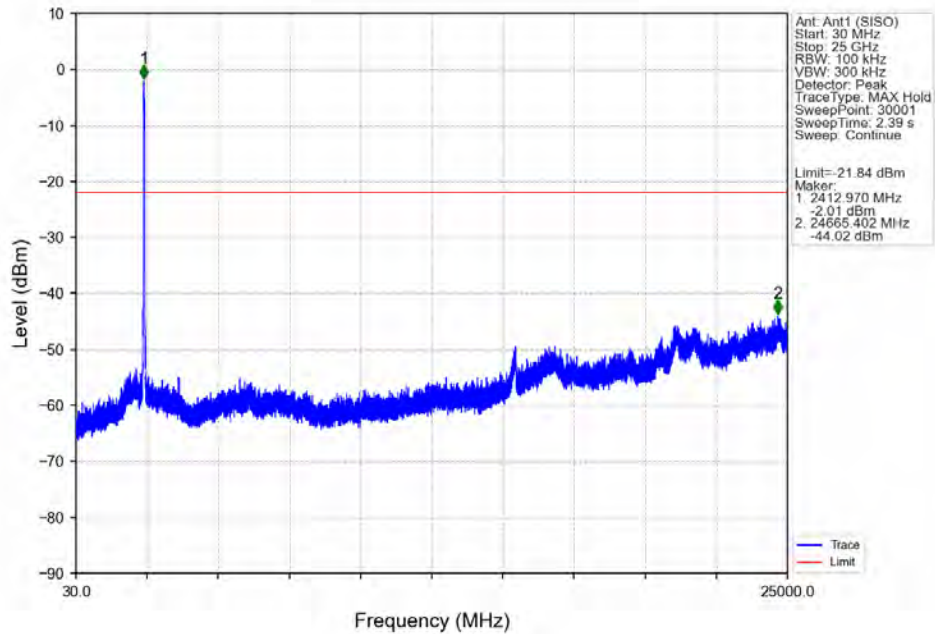
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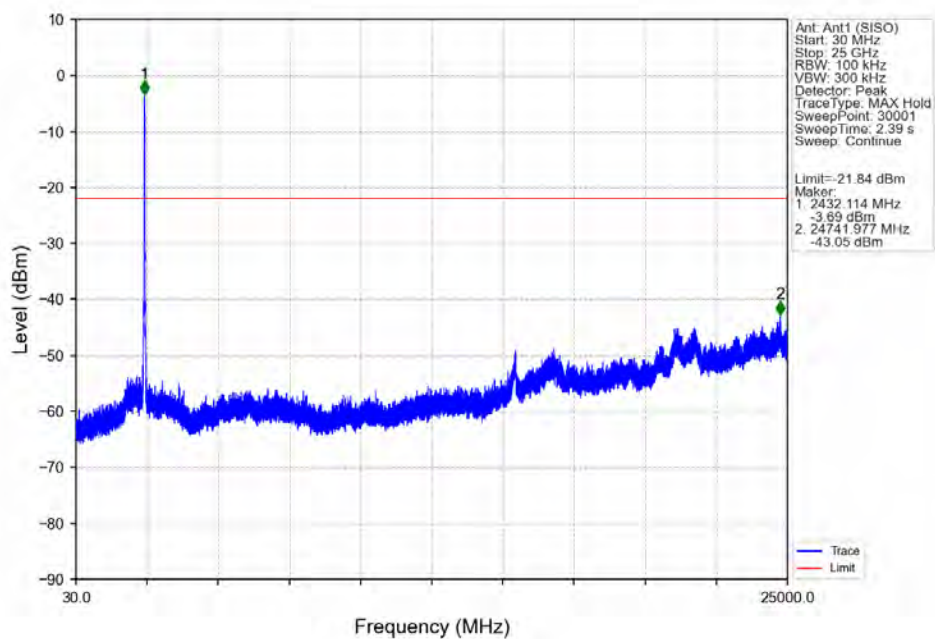
802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV



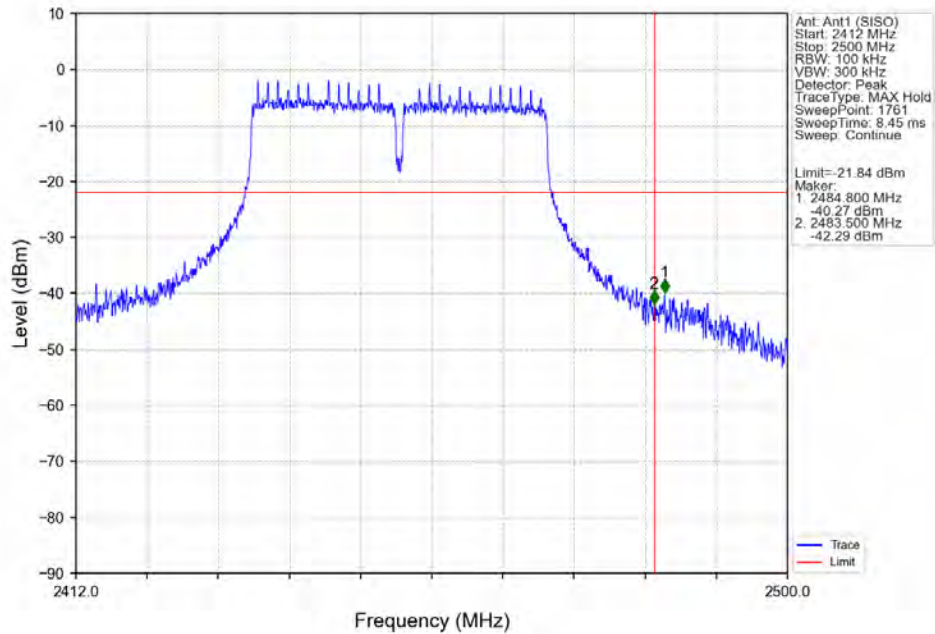
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



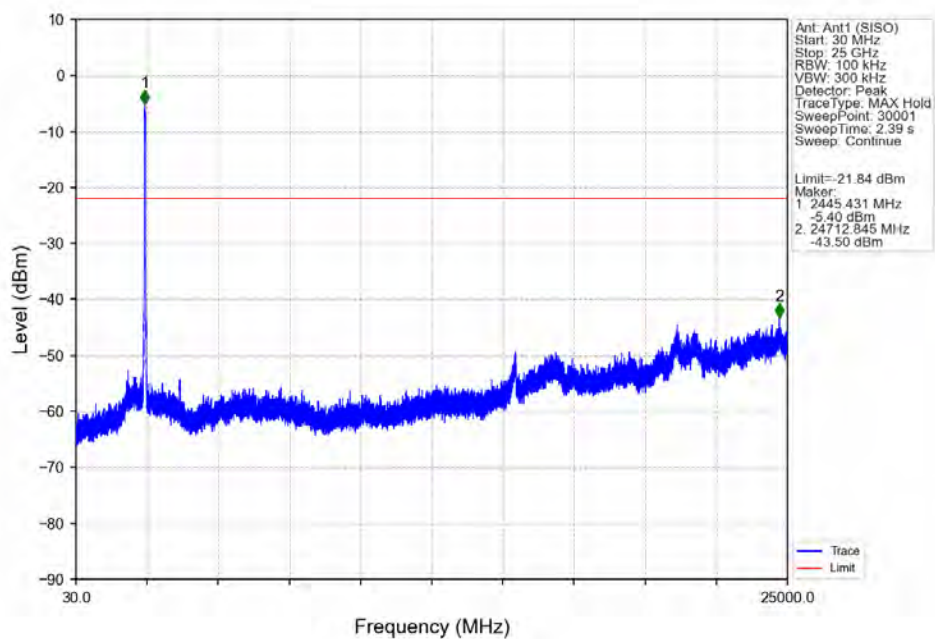
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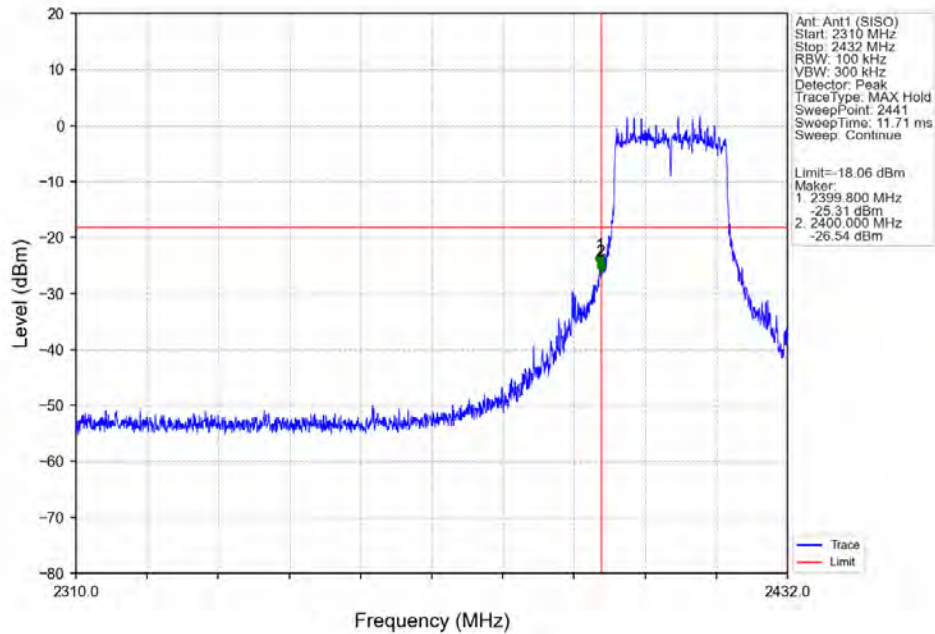
802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



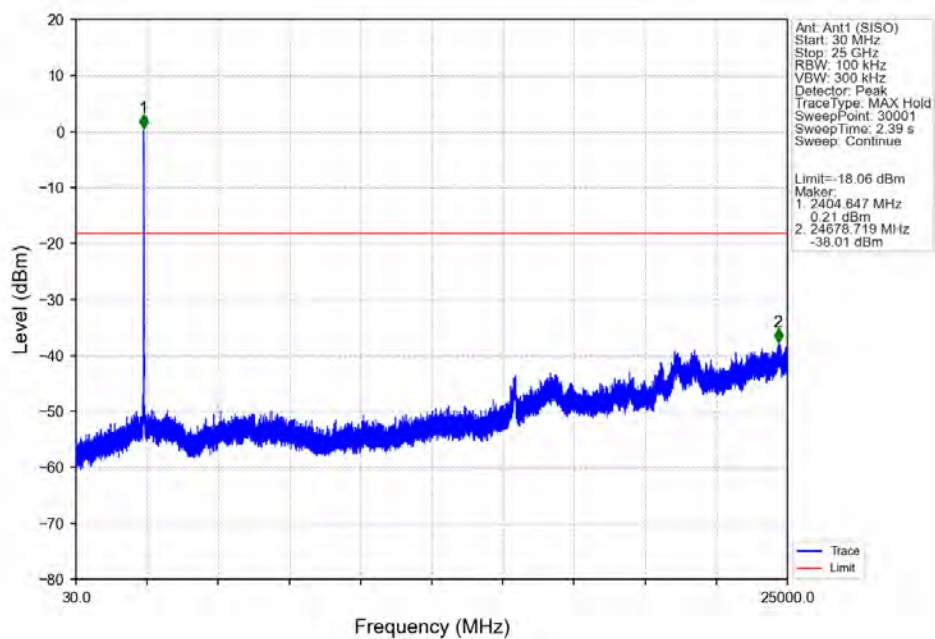
802.11n(HT40) HCH 2452MHz Ant1 (SISO) NTN



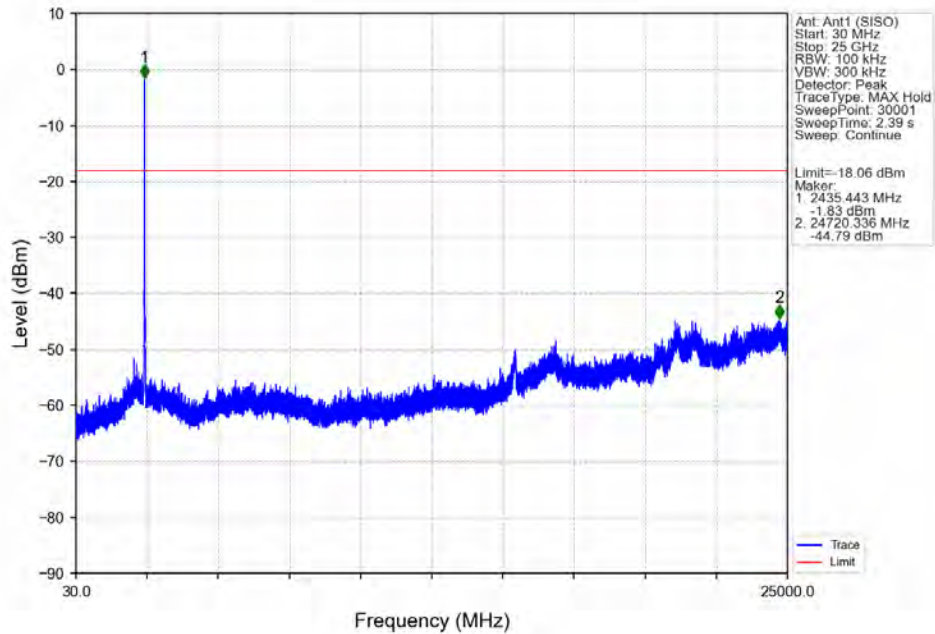
802.11ax(HE20) LCH 2412MHz_SU / Ant1 (SISO) NTN



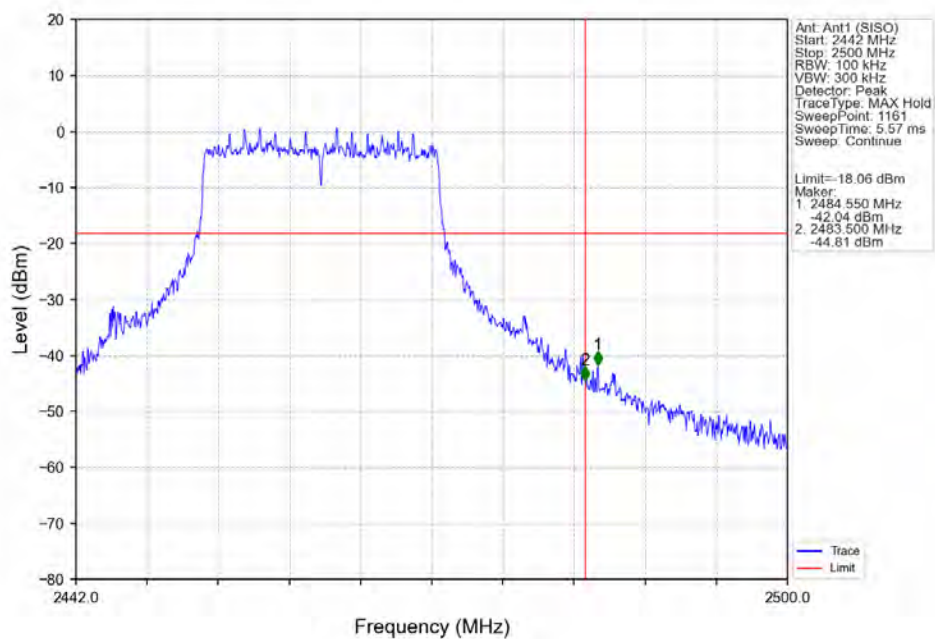
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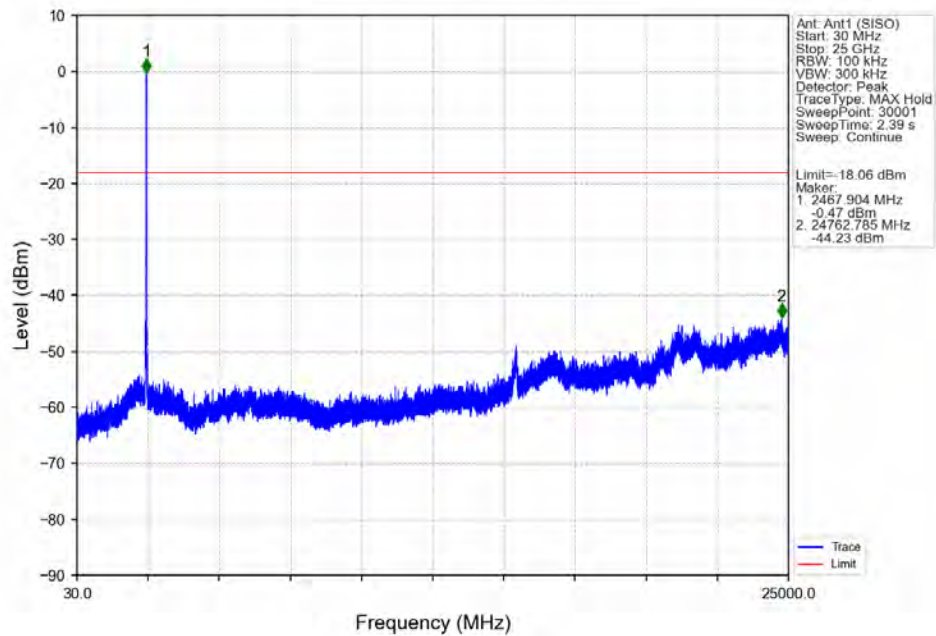
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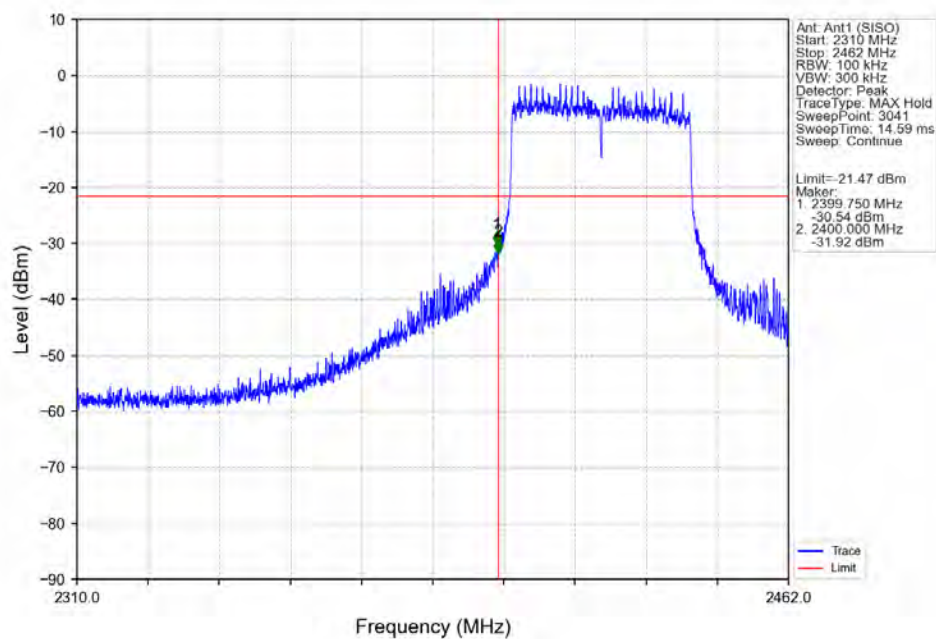
802.11ax(HE20) HCH 2462MHz SU / Ant1 (SISO) NTN



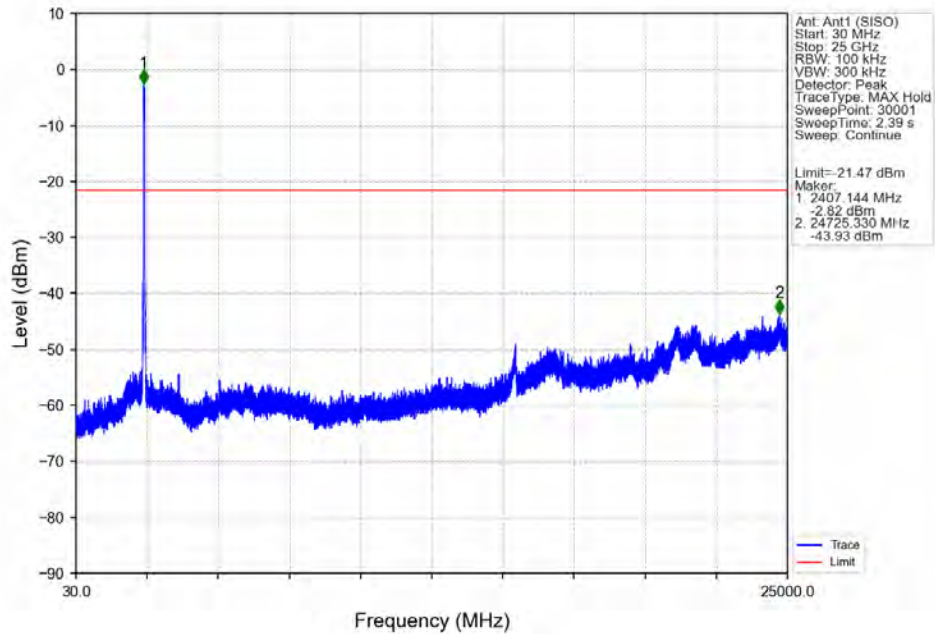
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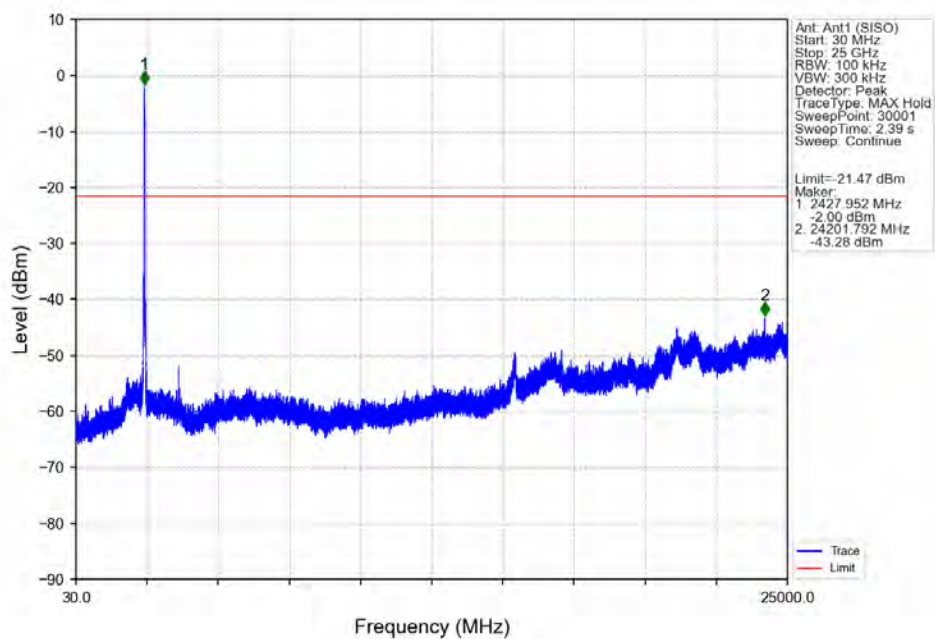
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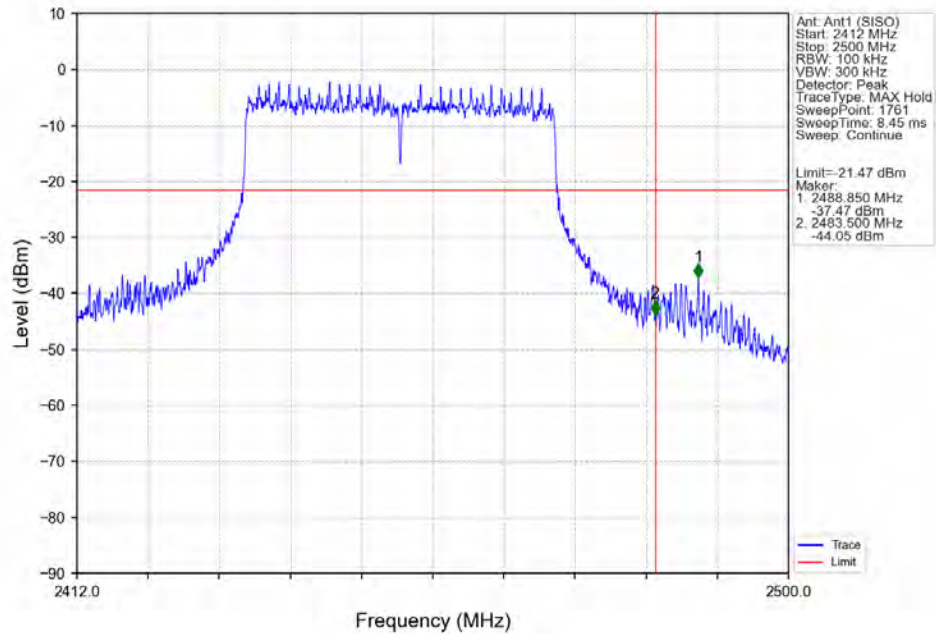
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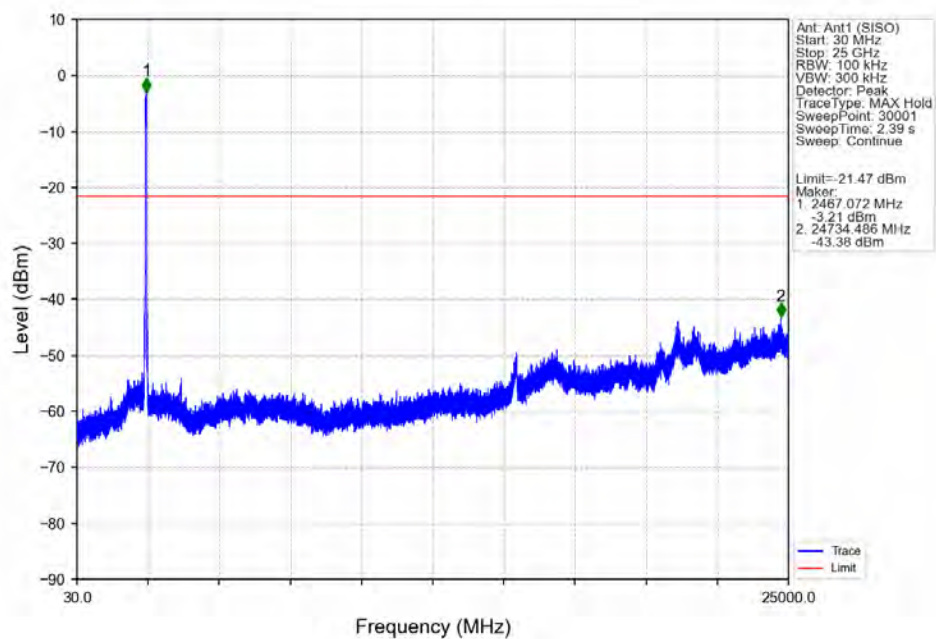
802.11ax(HE40) MCH 2437MHz SU / Ant1 (SISO) NTN



802.11ax(HE40) HCH 2452MHz SU / Ant1 (SISO) NTN



802.11ax(HE40) HCH 2452MHz SU / Ant1 (SISO) NTN



- End of the Report -