

FCC/ISED - TEST REPORT

Report Number : **6895025146301** Date of Issue: **2025-10-17**

Model/HVIN : **AS200**

Product Type : **Anker SOLIX Alternator Charger**

Applicant : **Anker Innovations Limited**

Address : **Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road,**
Central and Western District, HONG KONG

Manufacturer : **Anker Innovations Limited**
Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road,

Address : **Central and Western District, HONG KONG**

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including Appendices : **89**

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12&13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou,
Nanshan District, Shenzhen City, 518052, P. R. China

Telephone: 86 755 8828 6998

Fax: 86 755 828 5299

FCC Registration No.: 514049

FCC Designation No.: CN5009

IC Registration No.: 10320A

ISED CAB identifier: CN0077

3 Description of the Equipment Under Test

Product:	Anker SOLIX Alternator Charger
Model no.:	AS200
FCC ID:	2AOKB-AS200
IC:	23451-AS200
PMN:	Anker SOLIX Alternator Charger
HVIN:	AS200
FVIN:	V1.0.1.7
Rating:	See below label for details
RF Transmission Frequency:	2412MHz-2462MHz for 802.11b/g/n20/n40
No. of Operated Channel:	11 for 802.11b/g/n20 7 for 802.11n40
Modulation:	802.11b: BPSK, QPSK, CCK, 802.11g/802.11n20/802.11n40: BPSK, QPSK, 16-QAM, 64-QAM
Antenna Type:	PCB Antenna
Antenna Gain:	0.46dBi
Description of the EUT:	The Equipment Under Test (EUT) is an Anker SOLIX Alternator Charger supports Bluetooth Low Energy / Wi-Fi functions
Remark:	1)This report is only for 2.4GHz Wi-Fi.

Label:



4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2024 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-Gen Issue 5 April 2018 Amendment 1 March 2019 + Amendment 2 February 2021	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 3 August 2023	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSS) and License-Exempt Local Area Network (LE- LAN) Devices

All the test methods were according to KDB 558074 D01 15.247 Meas Guidance v05r02 Measurement Guidance and ANSI C63.10-2020.

5 Summary of Test Results

Technical Requirements			
FCC Part 15 Subpart C/ RSS-247 Issue 3/RSS-Gen Issue 5			
Test Condition		Test Site	Test Result
§15.207 & RSS-GEN 8.8	Conducted emission AC power port*	N/A	N/A
§15.247 (b) (3) & RSS-247 5.4(d)	Conducted peak output power	Site 1	Pass
RSS-247 5.4(d)	Equivalent Isotropic Radiated Power	Site 1	Pass
§15.247(a)(2) & RSS-247 5.2(a) & RSS-GEN 6.7	6dB bandwidth and 99% Occupied Bandwidth	Site 1	Pass
§15.247(e) & RSS-247 5.2(b)	Power spectral density	Site 1	Pass
§15.247(d) & RSS-247 5.5	Spurious RF conducted emissions	Site 1	Pass
§15.247(d) & RSS-247 5.5	Band edge	Site 1	Pass
§15.247(d) & §15.209 & §15.205 & RSS-247 5.5 & RSS-Gen 6.13	Spurious radiated emissions for transmitter	Site 1	Pass
§15.203 & RSS-Gen 6.8	Antenna requirement	See note 2	Pass

Note 1: N/A=Not Applicable.

Note 2: The EUT uses an Internal PCB Antenna, which gain is 0.46dBi. In accordance to §15.203 & RSS-Gen 6.8, it is considered sufficiently to comply with the provisions of this section.

Note**": The EUT is powered by DC power source, So it is not applicable.

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2AOKB-AS200, complies with Section 15.207, 15.209, 15.205, 15.247 of the FCC Part 15, Subpart C.

This submittal(s) (test report) is intended for IC: 23451-AS200, complies with RSS-247, RSS-GEN.

The Model: AS200 supports Bluetooth Low Energy/Wi-Fi functions, power by 24VDC.
The TX and RX range is 2402MHz-2480MHz for Bluetooth, 2412MHz – 2462MHz for 2.4GHz Wi-Fi.

This report is for the 2.4GHz Wi-Fi part.

SUMMARY:

All tests according to the regulations cited on page 6 were

■ - Performed

□ - Not Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: 2025-08-15

Testing Start Date: 2025-08-20

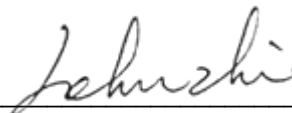
Testing End Date: 2025-08-28

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch

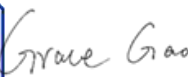
Reviewed by:

Prepared by:

Tested by:



John Zhi
Project Manager



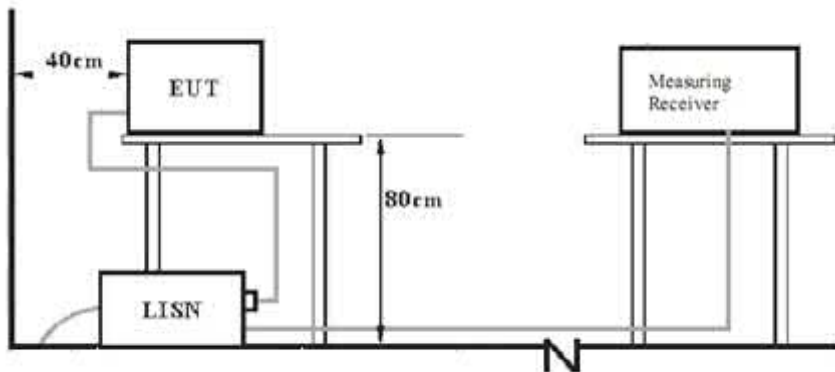
Grace Gao
Project Engineer



Carry Cai
Test Engineer

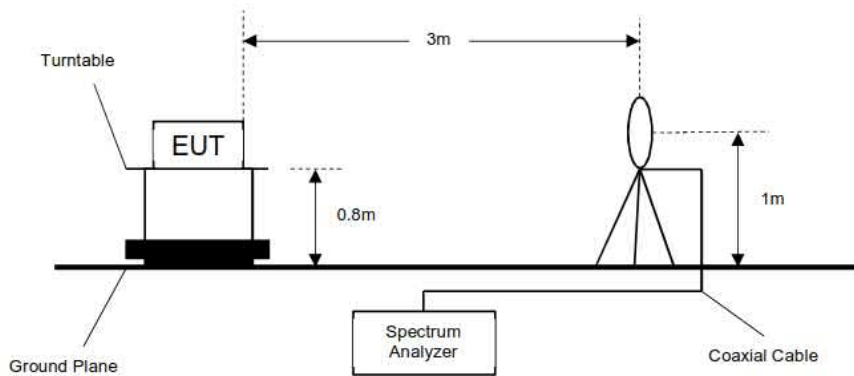
7 Test Setups

7.1 AC Power Line Conducted Emission test setups

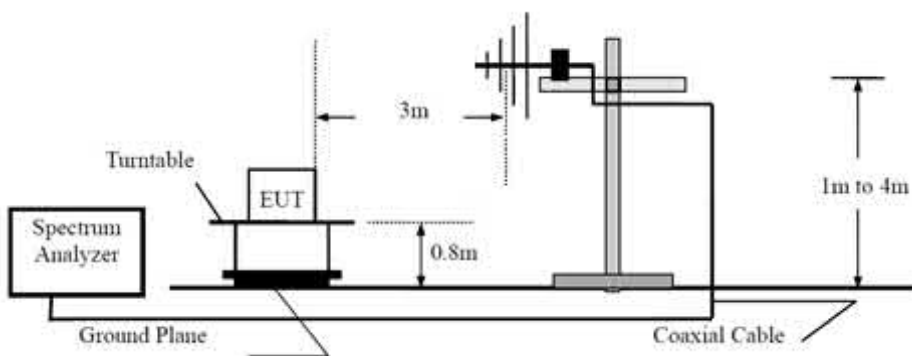


7.2 Radiated test setups

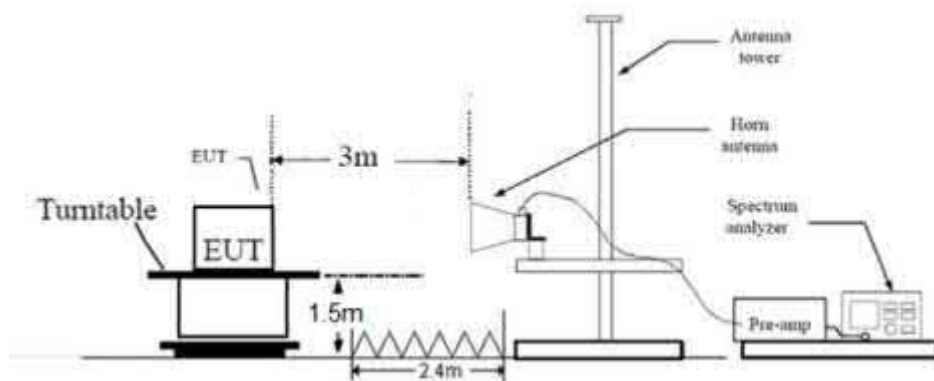
9kHz - 30MHz



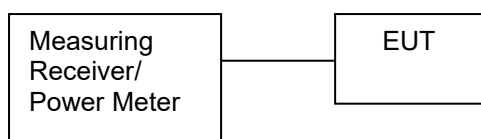
30MHz - 1GHz



Above 1GHz



7.3 Conducted RF test setups



8 Systems Test Configuration

Auxiliary Equipment Used during Test:

Description	Manufacturer	Model NO.	S/N
Laptop	HP Inc	HP ProBook 445 G10	/

Test Channel information:

Test Mode	Channel (MHz)		
802.11b	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11g	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11n20	CH 1: 2412MHz	CH 6: 2437MHz	CH 11: 2462MHz
802.11n40	CH 3: 2422MHz	CH 6: 2437MHz	CH 9: 2452MHz

Test software information:

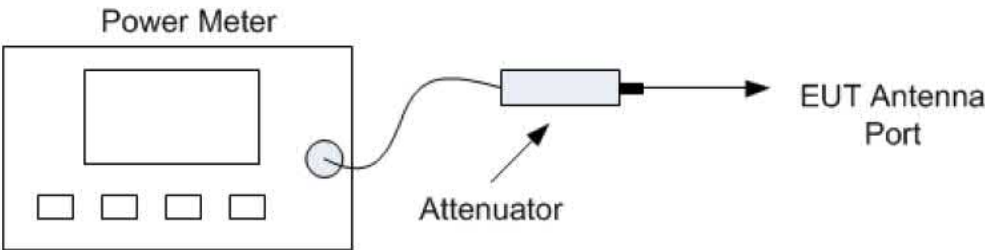
Test Software Version	EspRFTTestTool_v3.6			
Mode	Channel(MHz)	RU Tone	Setting TX Power	Data Rate
11b	2412	/	00	11b 1 Mbps
	2437	/	00	
	2462	/	00	
11g	2412	/	15	11g 6 Mbps
	2437	/	15	
	2462	/	15	
11n HT20	2412	/	15	MCS0 6.5 Mbps
	2437	/	15	
	2462	/	15	
11n HT40	2422	/	15	MCS0 13.5 Mbps (40MHz)
	2437	/	15	
	2452	/	15	

9 Technical Requirement

9.1 Conducted Output Power

Test Method

- 1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- 4) Measure the peak power of the transmitter. This measurement is a peak over both the ON and OFF periods of the transmitter.



Power meter conducted test setup

Limits

According to §15.247 (b) (3) & RSS-247 5.4(d), conducted output power limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤1	≤30

According to & RSS-247 5.4(d), EIRP limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤4	≤36

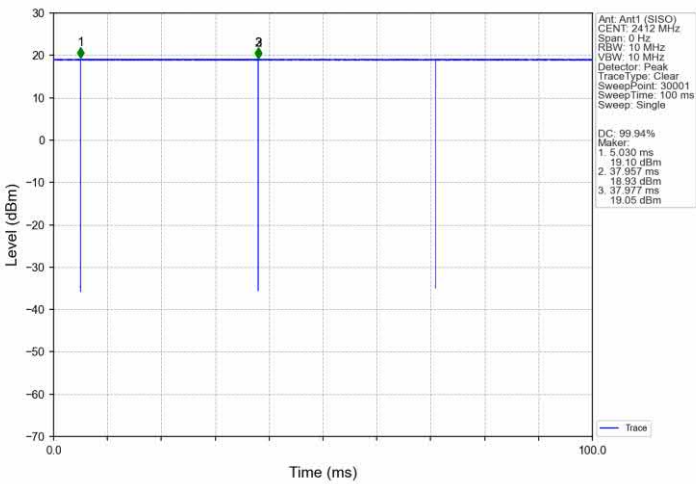
Test result as below table

Mode	TX Type	Frequency (MHz)	Duty Cycle (%)	AV Conducted Output Power (dBm)		Verdict
			ANT1	ANT1	Limit	
802.11b	SISO	2412	99.94	18.14	<=30	Pass
		2437	99.95	18.74	<=30	Pass
		2462	99.94	18.00	<=30	Pass
802.11g	SISO	2412	99.55	14.28	<=30	Pass
		2437	99.55	15.26	<=30	Pass
		2462	99.53	14.20	<=30	Pass
802.11n (HT20)	SISO	2412	99.47	14.11	<=30	Pass
		2437	99.49	15.08	<=30	Pass
		2462	99.49	13.97	<=30	Pass
802.11n (HT40)	SISO	2422	98.96	14.27	<=30	Pass
		2437	99.00	14.70	<=30	Pass
		2452	99.00	14.55	<=30	Pass

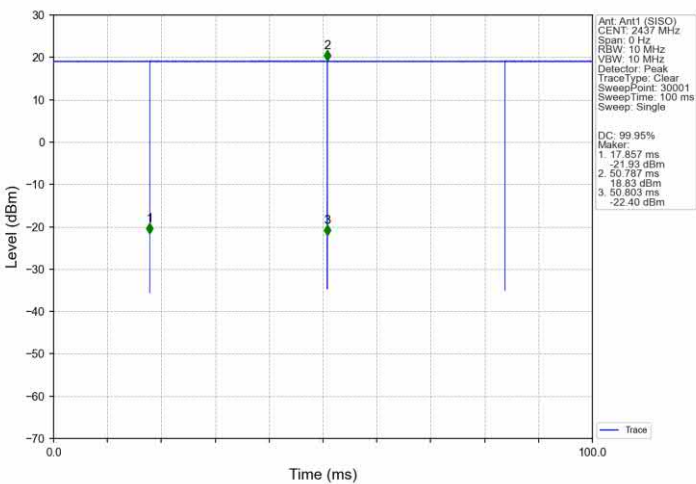
Mode	TX Type	Frequency (MHz)	EIRP (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	18.6	<=36	Pass
		2437	19.2	<=36	Pass
		2462	18.46	<=36	Pass
802.11g	SISO	2412	14.74	<=36	Pass
		2437	15.72	<=36	Pass
		2462	14.66	<=36	Pass
802.11n (HT20)	SISO	2412	14.57	<=36	Pass
		2437	15.54	<=36	Pass
		2462	14.43	<=36	Pass
802.11n (HT40)	SISO	2422	14.73	<=36	Pass
		2437	15.16	<=36	Pass
		2452	15.01	<=36	Pass

Note: ANT gain is 0.46 dBi

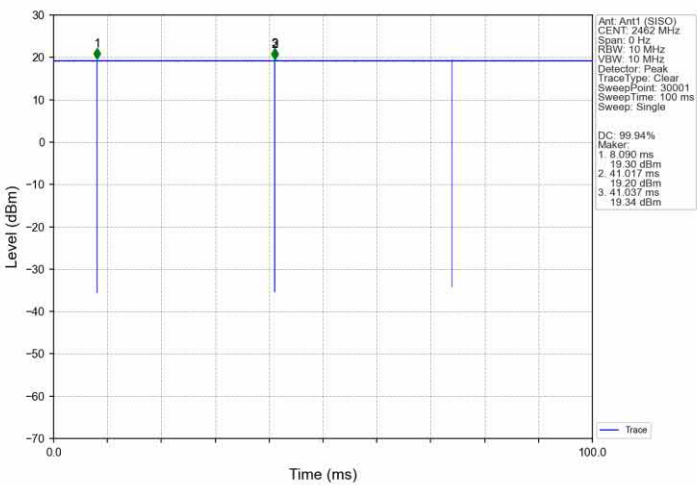
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



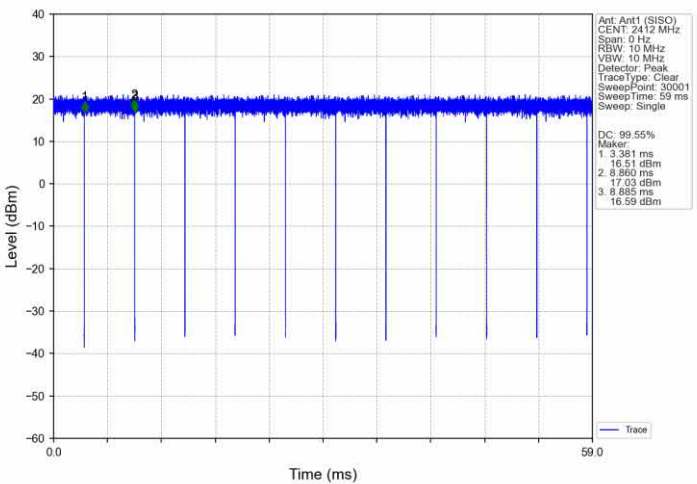
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11b HCH 2462MHz_Ant1 (SISO)_NTNV

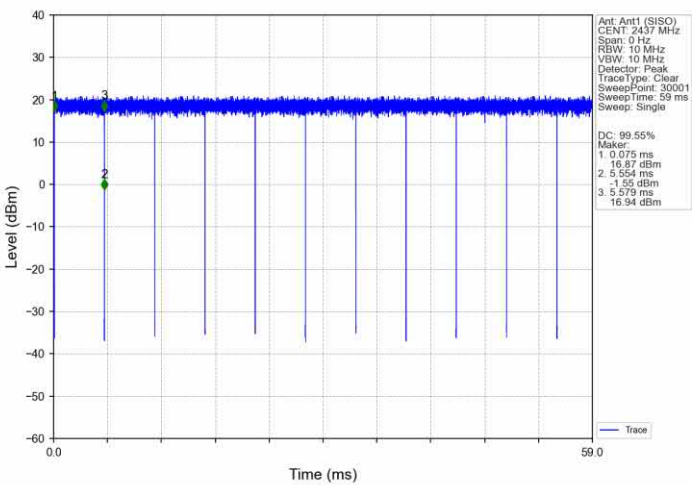


802.11g LCH 2412MHz_Ant1 (SISO)_NTNV

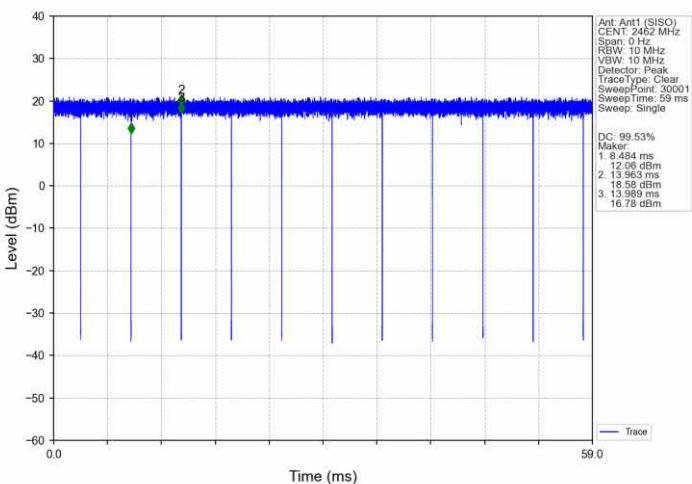




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

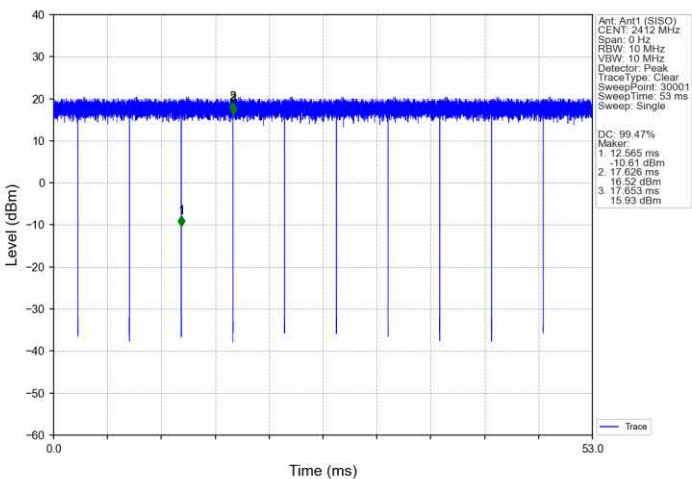


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

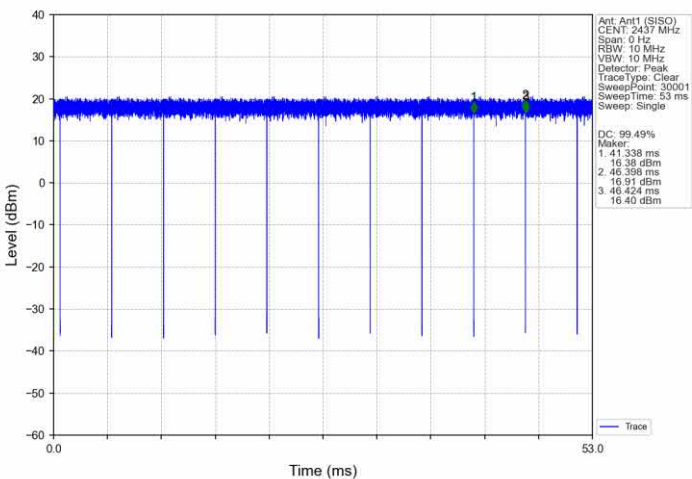




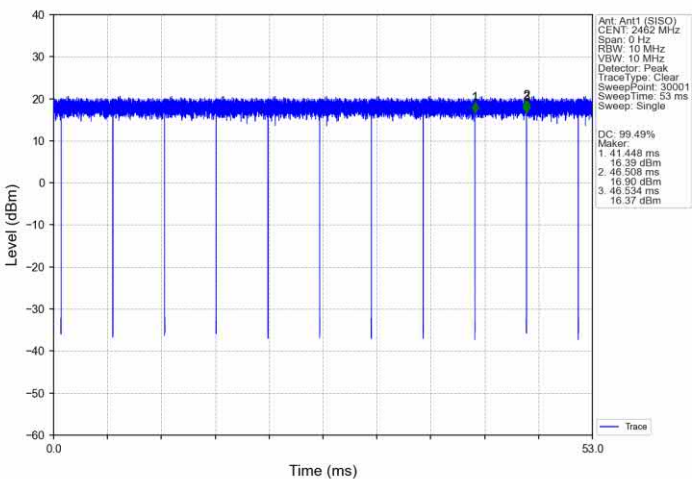
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



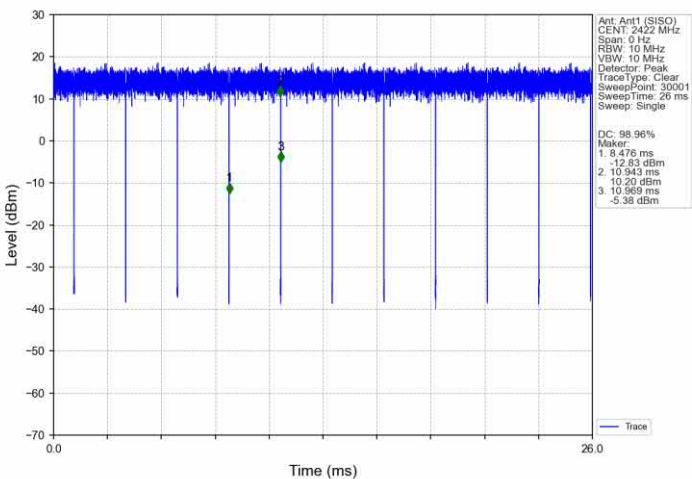
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



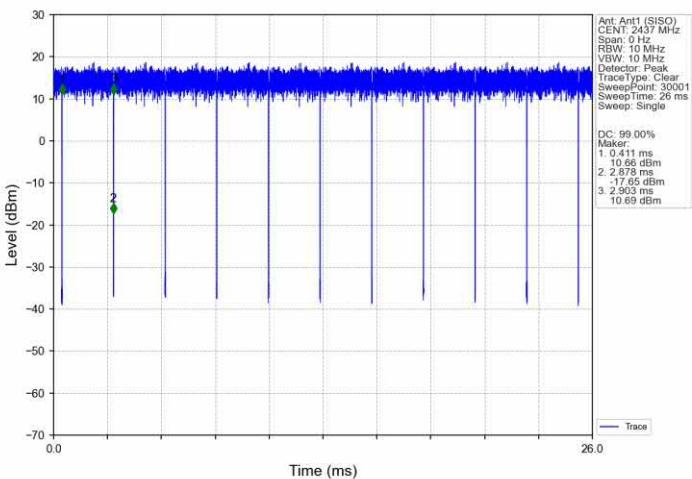
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



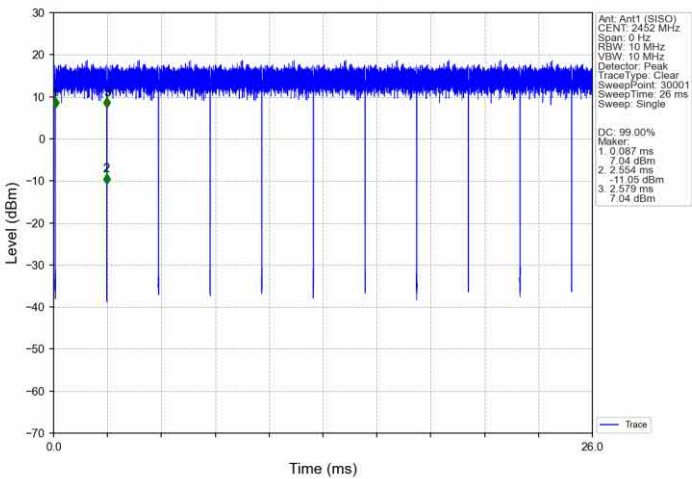
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



9.2 6dB Bandwidth

Test Method for 6 dB Bandwidth

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
RBW=1% to 5% of the occupied bandwidth but not less than 100kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Use the automatic bandwidth measurement capability of an instrument, use the X dB bandwidth mode with X set to 6 dB.
5. Allow the trace to stabilize, record the 6 dB Bandwidth value.

Limit

Limit [kHz]

≥ 500

Test Method for 99 % Bandwidth

1. Set center frequency to the nominal EUT channel center frequency
2. Set span = 1.5 times to 5.0 times the OBW. Set RBW = 1 % to 5 % of the OBW
Set VBW $\geq$ 3 RBW Trace mode = max hold. Sweep = auto couple.
Allow the trace to stabilize.
3. Use the 99 % power bandwidth function of the instrument.
4. Record the results in the test report.

Limit

Limit [kHz]

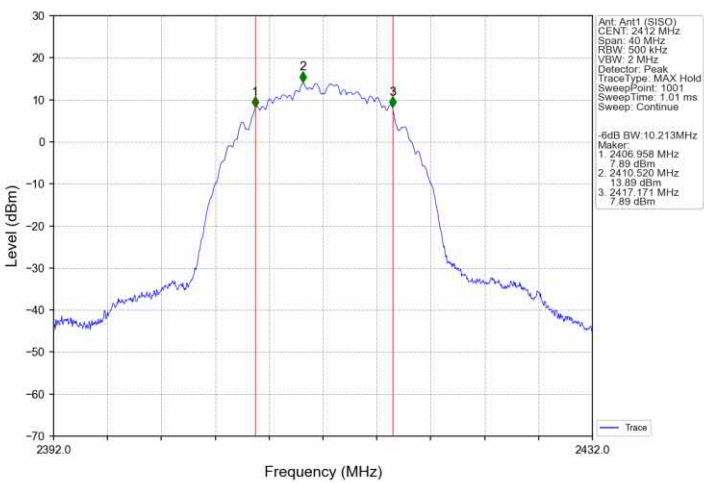
/

6 dB Bandwidth

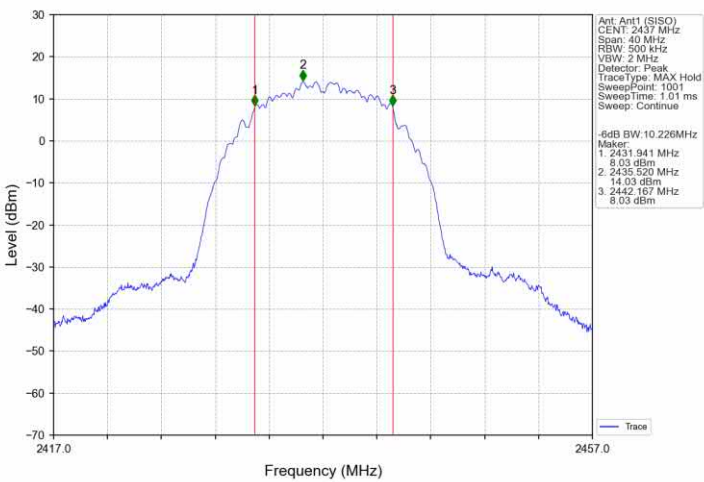
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	10.213	≥ 0.5	Pass
		2437	1	10.226	≥ 0.5	Pass
		2462	1	10.220	≥ 0.5	Pass
802.11g	SISO	2412	1	16.657	≥ 0.5	Pass
		2437	1	16.708	≥ 0.5	Pass
		2462	1	16.728	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.529	≥ 0.5	Pass
		2437	1	17.504	≥ 0.5	Pass
		2462	1	17.525	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.714	≥ 0.5	Pass
		2437	1	35.812	≥ 0.5	Pass
		2452	1	35.780	≥ 0.5	Pass

6 dB Bandwidth

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

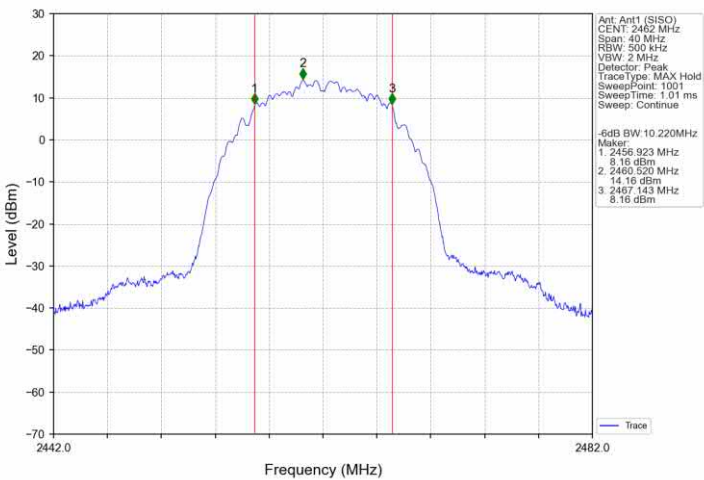


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

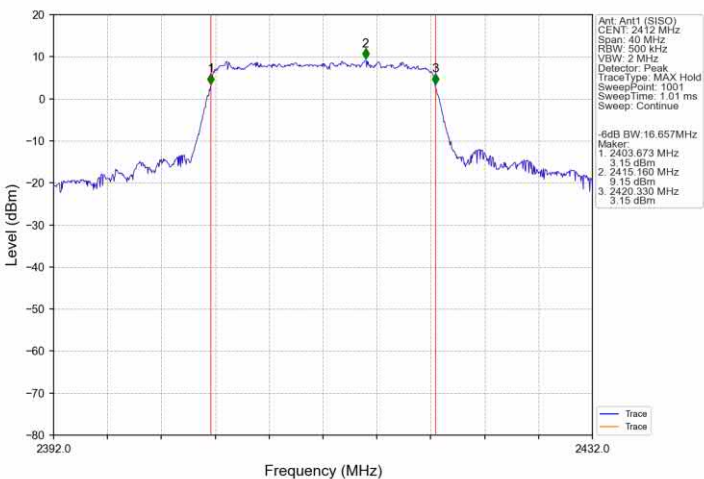




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

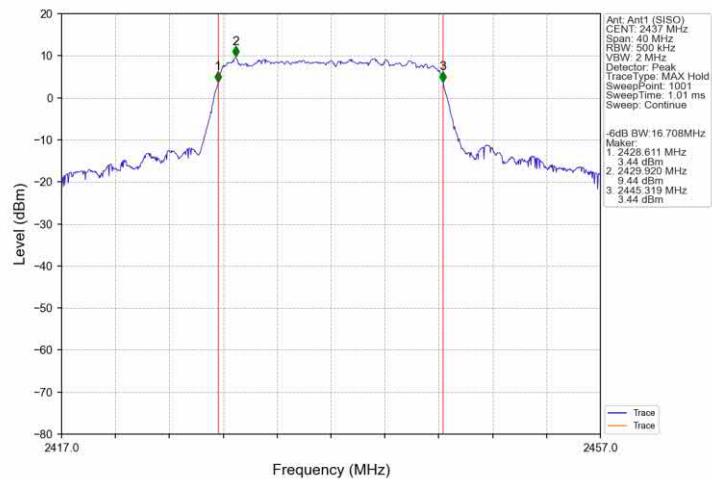


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

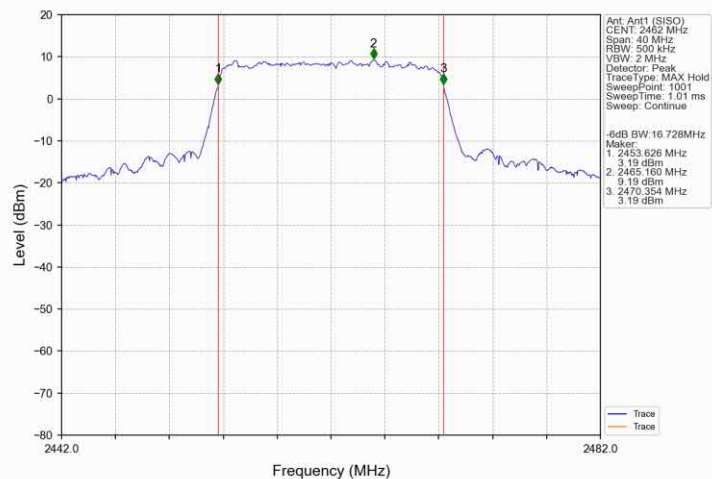




802.11g_MCH_2437MHz_Ant1 (SISO) NTNv

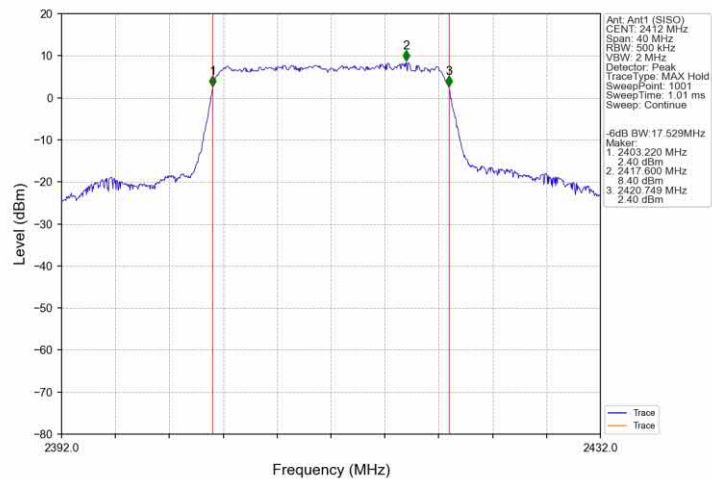


802.11g_HCH_2462MHz_Ant1 (SISO) NTNv

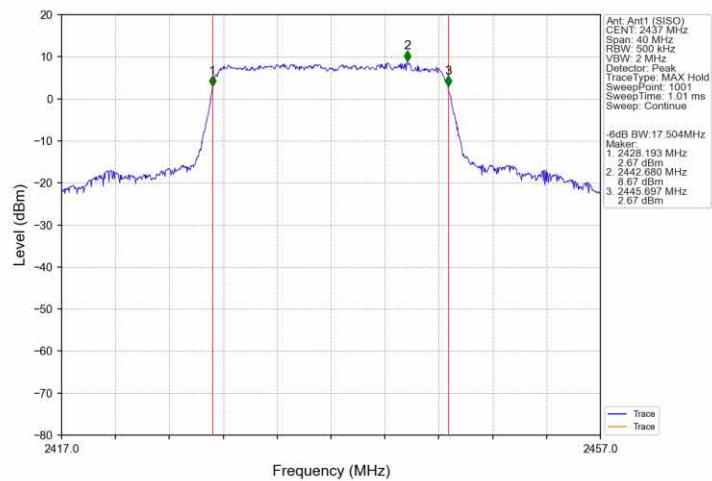




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

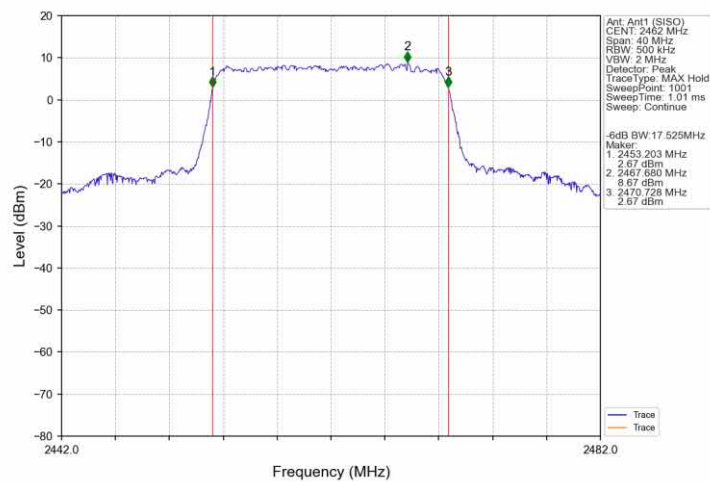


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

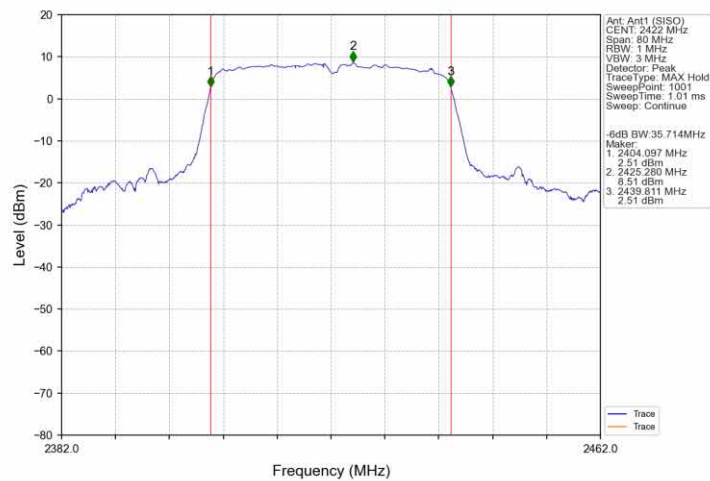




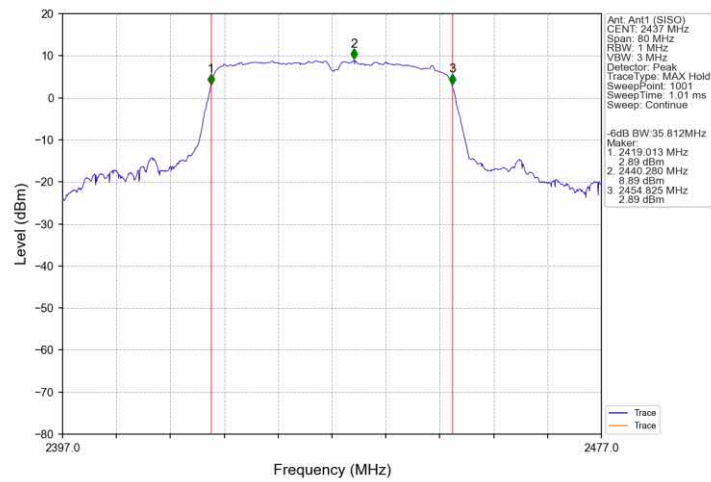
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



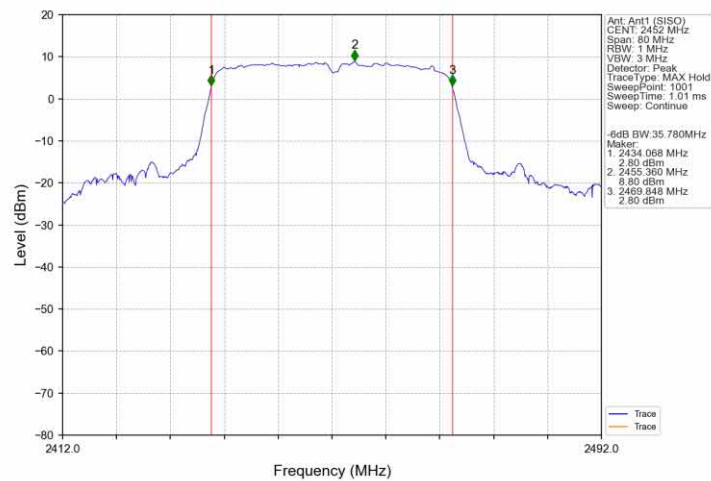
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV

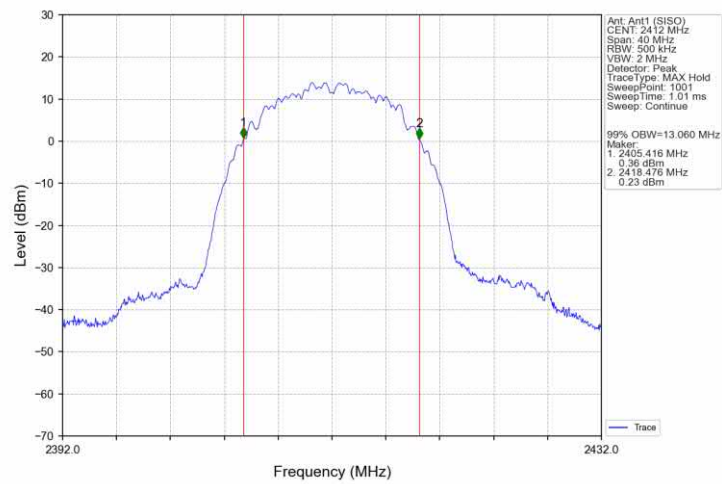
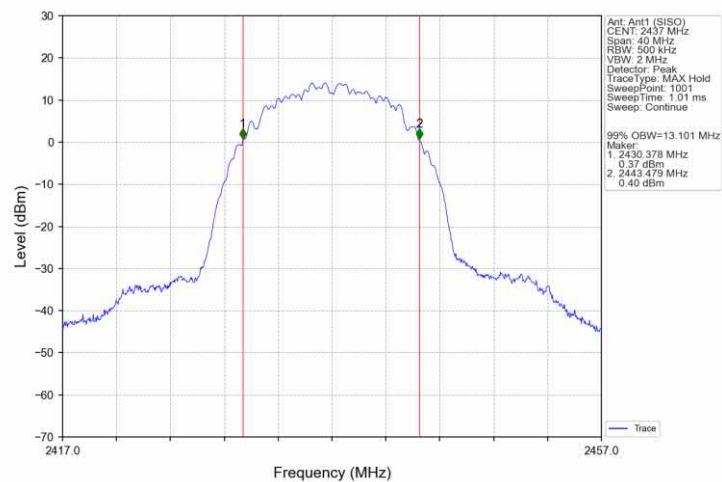


802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV

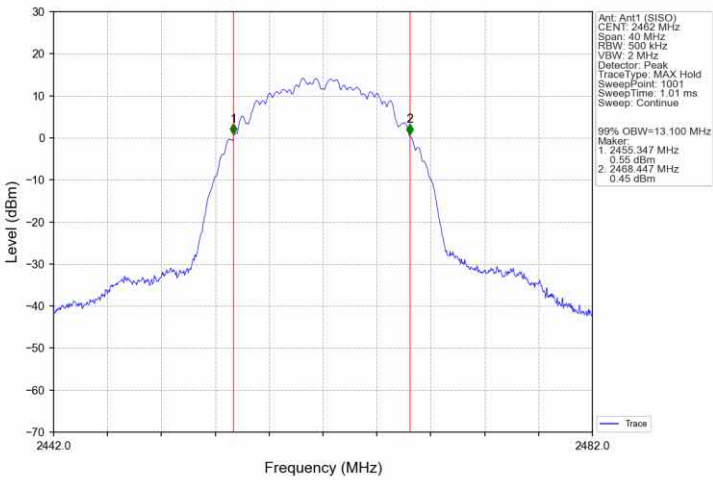


99% Bandwidth

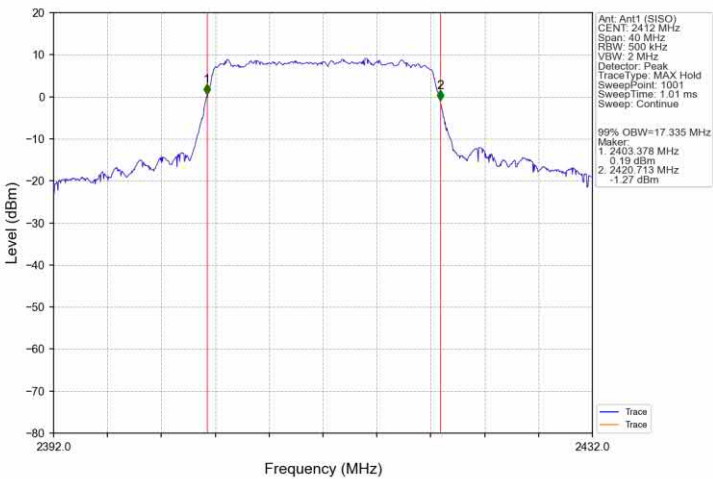
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	13.060	/	Pass
		2437	1	13.101	/	Pass
		2462	1	13.100	/	Pass
802.11g	SISO	2412	1	17.335	/	Pass
		2437	1	17.478	/	Pass
		2462	1	17.355	/	Pass
802.11n (HT20)	SISO	2412	1	17.696	/	Pass
		2437	1	17.753	/	Pass
		2462	1	17.724	/	Pass
802.11n (HT40)	SISO	2422	1	36.195	/	Pass
		2437	1	36.355	/	Pass
		2452	1	36.293	/	Pass

99% Bandwidth**802.11b_LCH_2412MHz_Ant1 (SISO) NTNv****802.11b_MCH_2437MHz_Ant1 (SISO) NTNv**

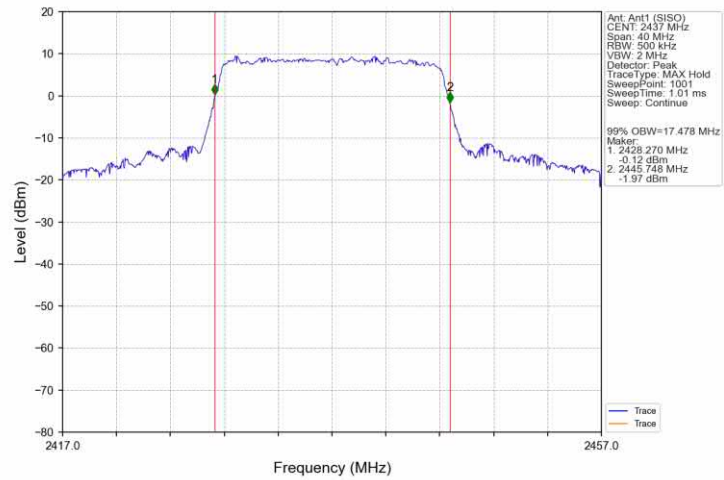
802.11b_HCH_2462MHz_Ant1 (SISO) NTNv



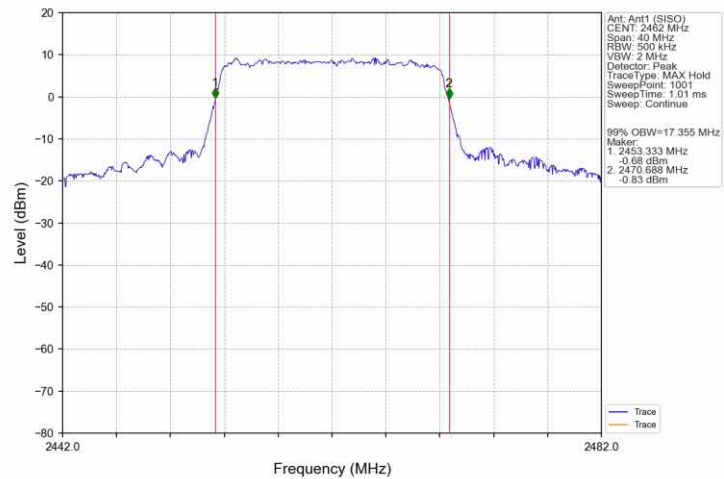
802.11g_LCH_2412MHz_Ant1 (SISO) NTNv



802.11g_MCH_2437MHz_Ant1 (SISO) NTN

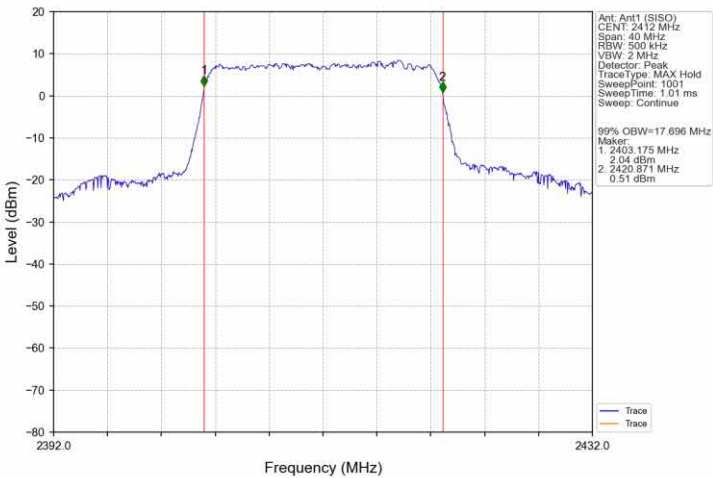


802.11g_HCH_2462MHz_Ant1 (SISO) NTN

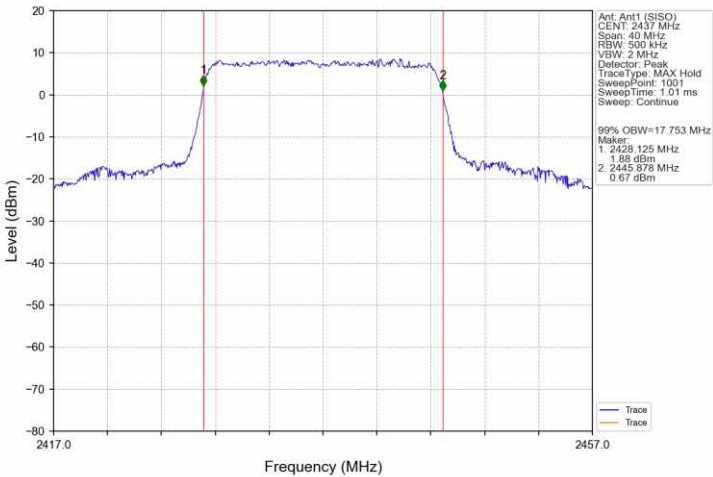




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

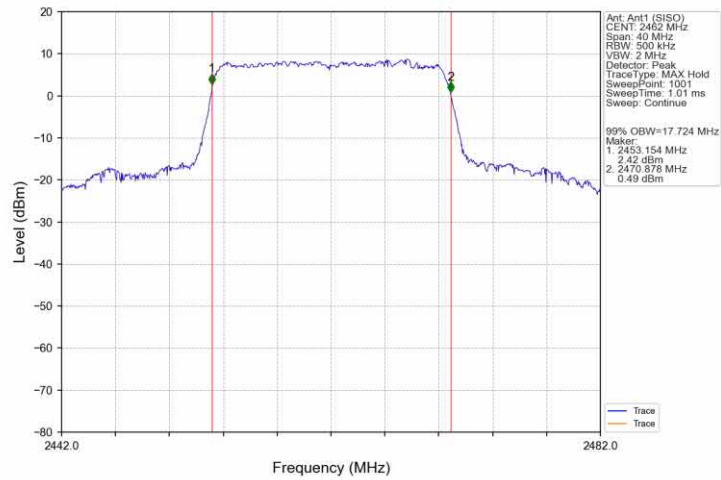


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

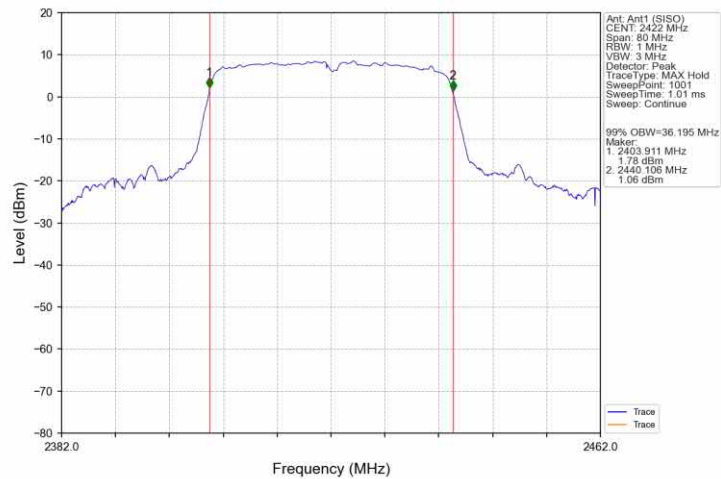




802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV

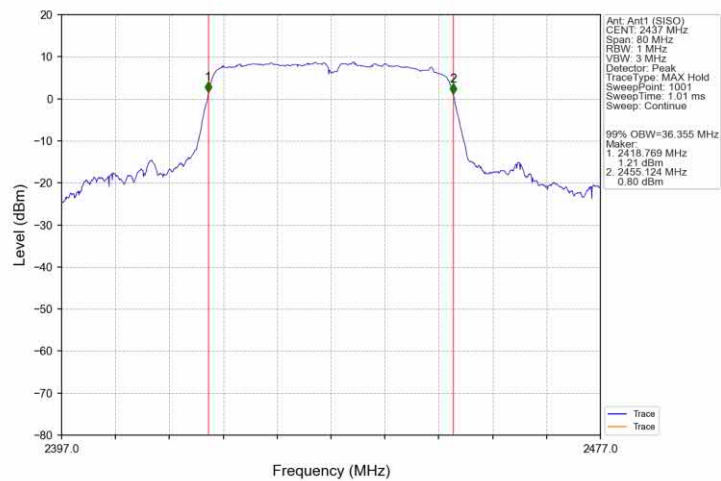


802.11n(HT40) LCH 2422MHz Ant1 (SISO) NTNV

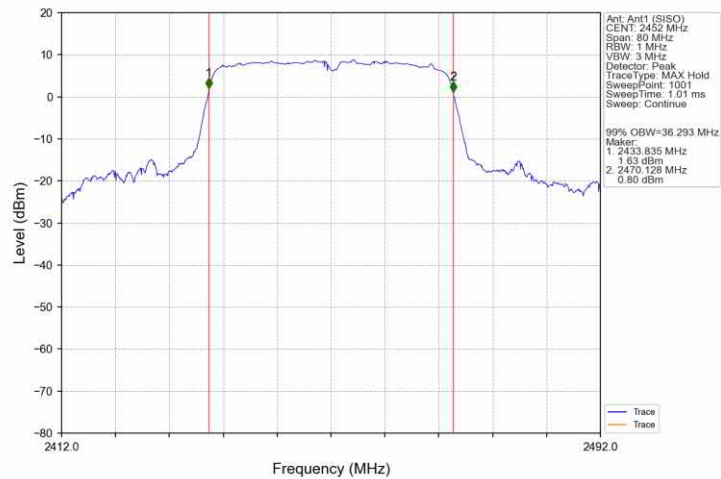




802.11n(HT40) MCH 2437MHz Ant1 (SISO) NTNV



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



9.3 Power Spectral Density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
4. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW $\geq$ 3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
5. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
6. Repeat above procedures until other frequencies measured were completed.

Limit

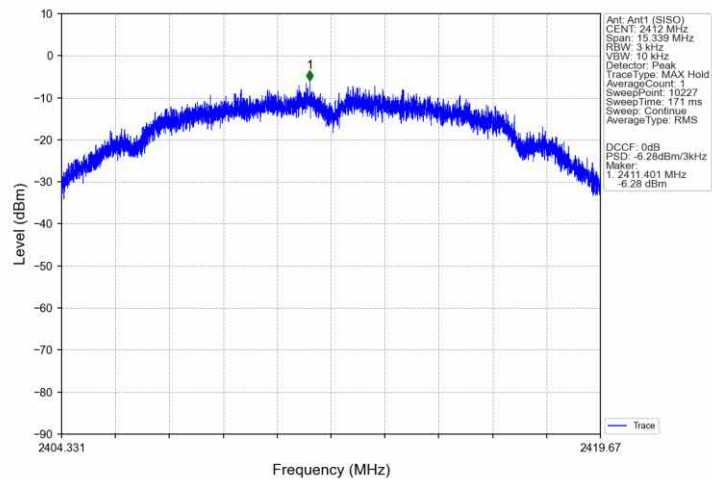
Limit [dBm/3KHz]

≤ 8

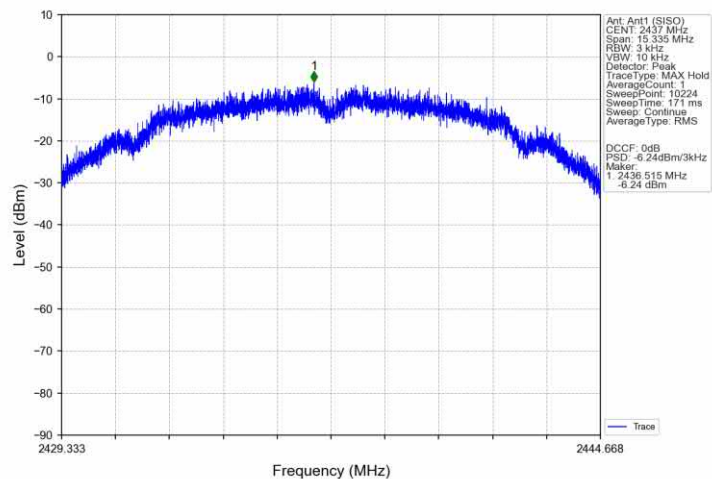
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-6.28	<=8	Pass
		2437	-6.24	<=8	Pass
		2462	-6.43	<=8	Pass
802.11g	SISO	2412	-10.01	<=8	Pass
		2437	-9.46	<=8	Pass
		2462	-10.02	<=8	Pass
802.11n (HT20)	SISO	2412	-10.97	<=8	Pass
		2437	-10.57	<=8	Pass
		2462	-9.44	<=8	Pass
802.11n (HT40)	SISO	2422	-12.92	<=8	Pass
		2437	-13.57	<=8	Pass
		2452	-12.91	<=8	Pass



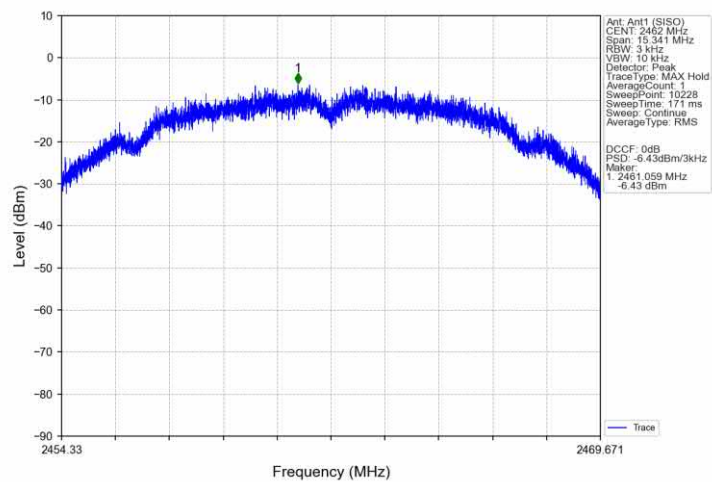
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



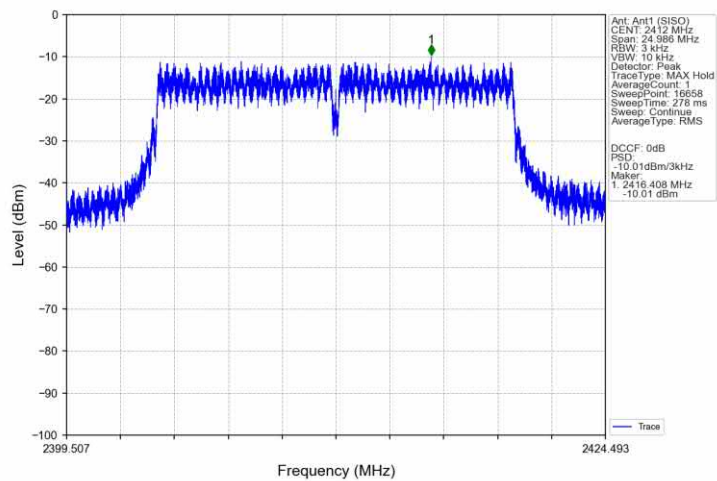
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

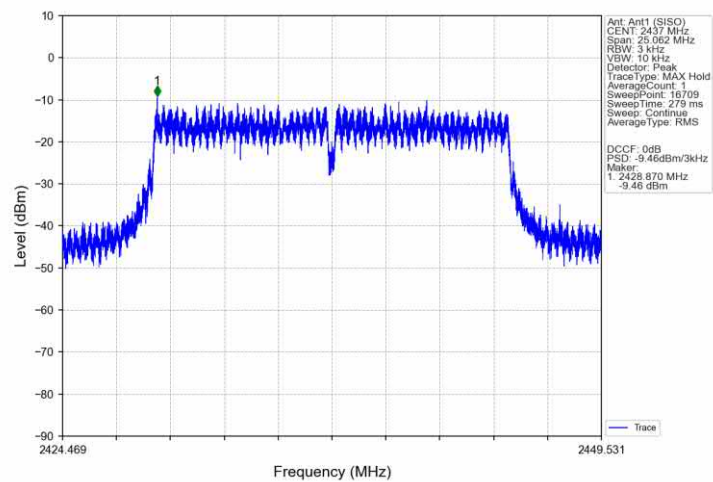


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

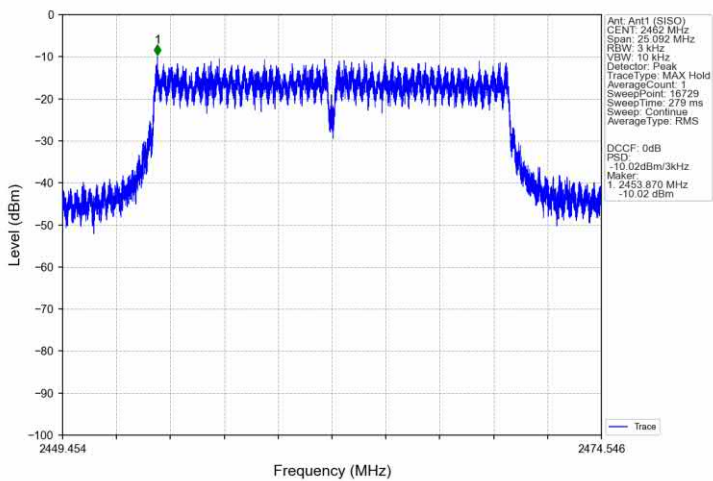




802.11g_MCH_2437MHz_Ant1 (SISO) NTNv

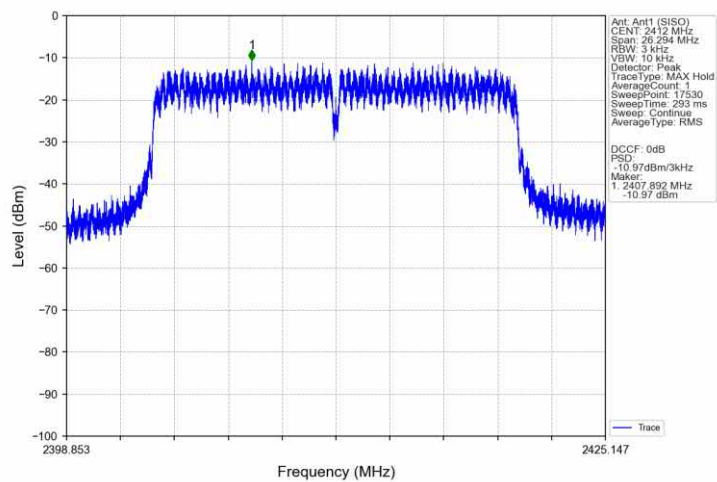


802.11g_HCH_2462MHz_Ant1 (SISO) NTNv

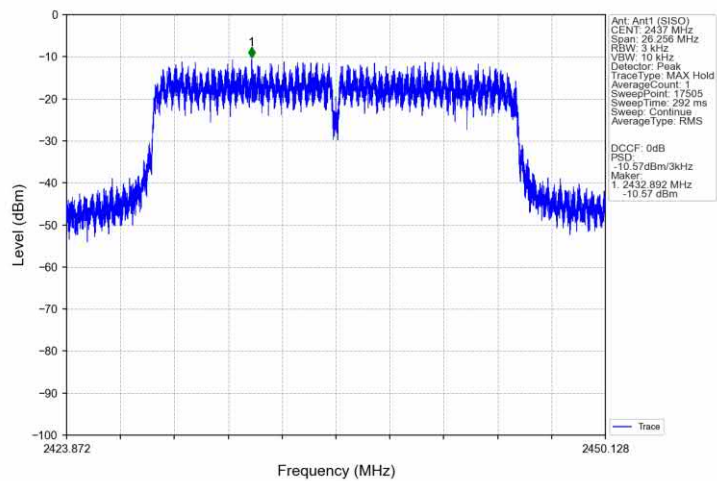




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

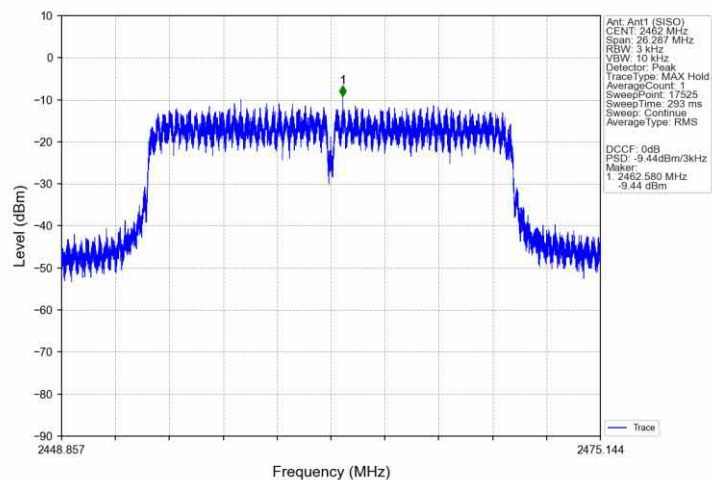


802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

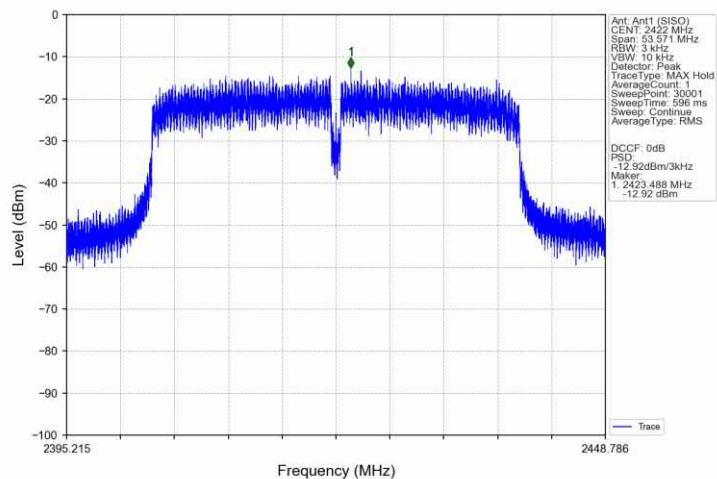




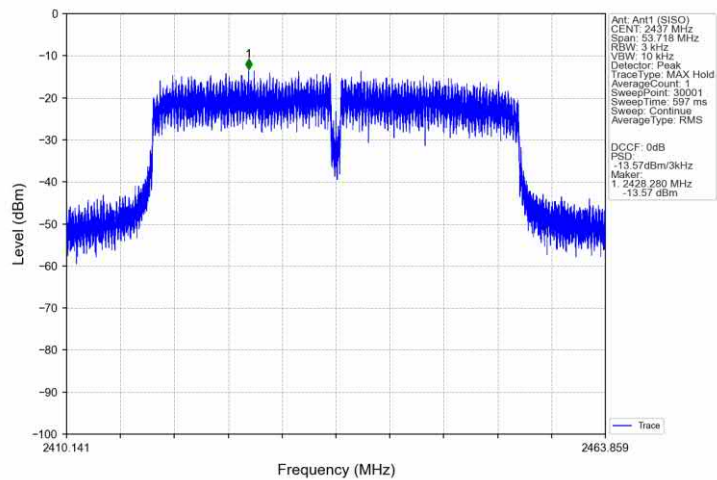
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



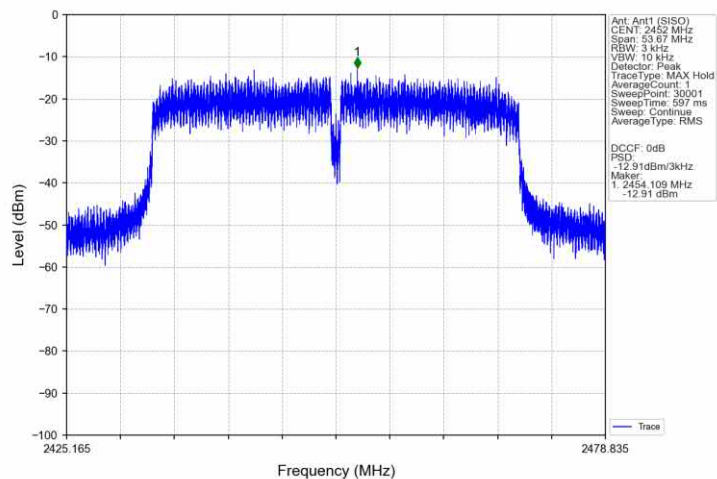
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



9.4 Spurious RF Conducted Emissions

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
5. The level displayed must comply with the limit specified in this Section. Submit these plots.
6. Repeat above procedures until all frequencies measured were complete.

Limit

Frequency Range MHz	Limit (dBc)
30-25000	-20

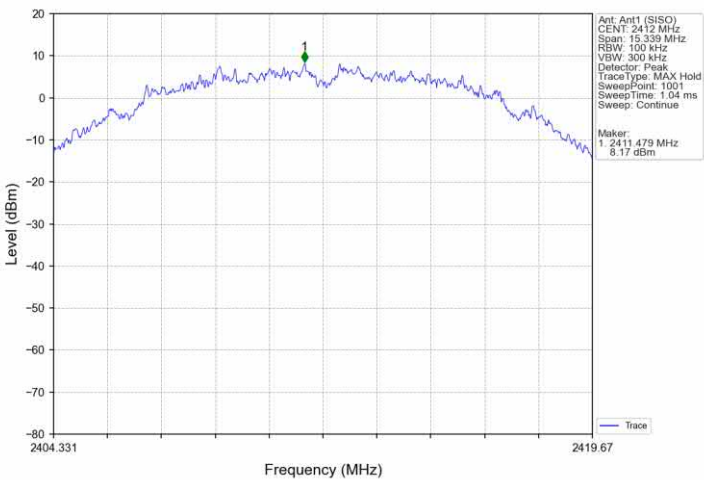
Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	8.17	-11.12	Pass
		2437	1	8.73	-11.15	Pass
		2462	1	9.29	-10.78	Pass
802.11g	SISO	2412	1	2.40	-17.72	Pass
		2437	1	4.36	-17.58	Pass
		2462	1	4.11	-17.71	Pass
802.11n (HT20)	SISO	2412	1	3.04	-17.80	Pass
		2437	1	3.20	-17.69	Pass
		2462	1	3.51	-17.56	Pass
802.11n (HT40)	SISO	2422	1	0.33	-24.95	Pass
		2437	1	0.74	-24.75	Pass
		2452	1	0.67	-24.82	Pass

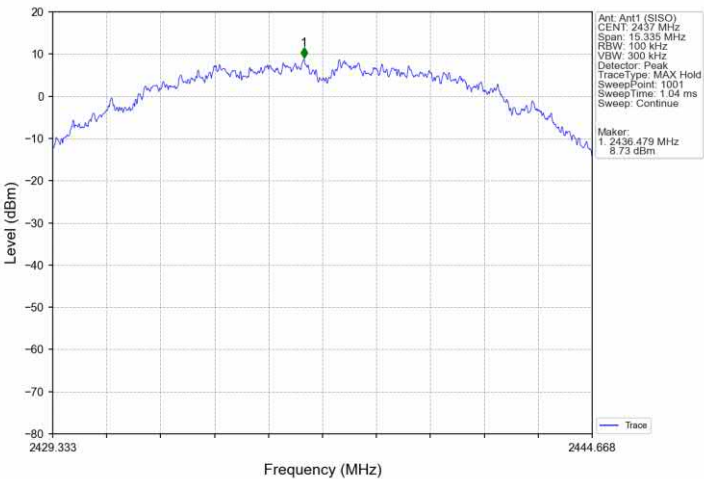
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

Spurious RF conducted emissions

802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV

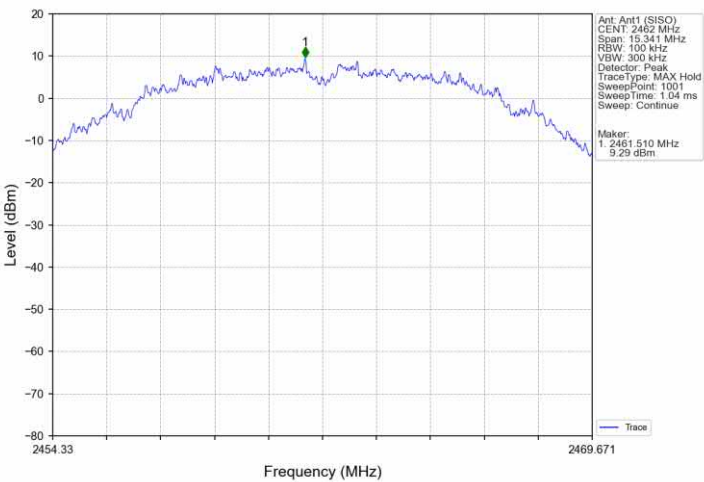


802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

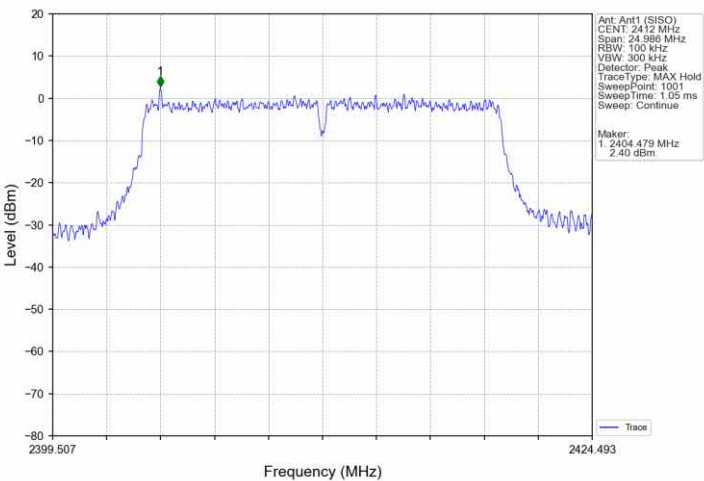




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

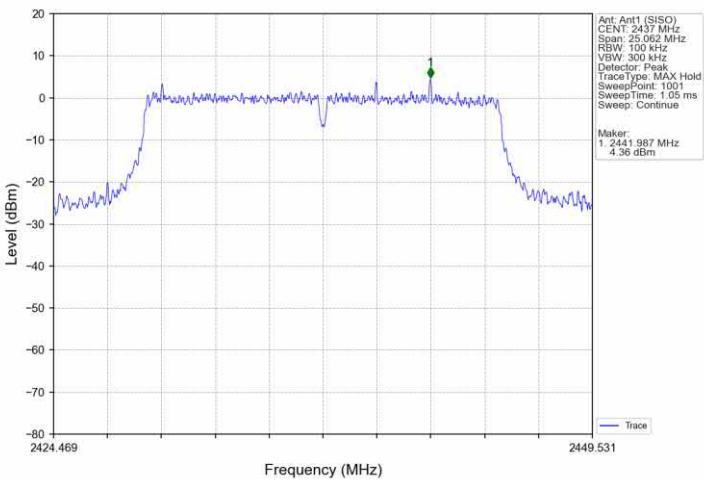


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

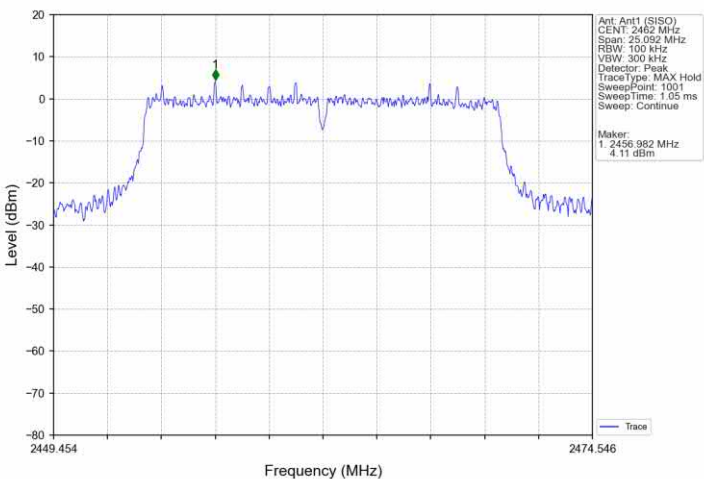




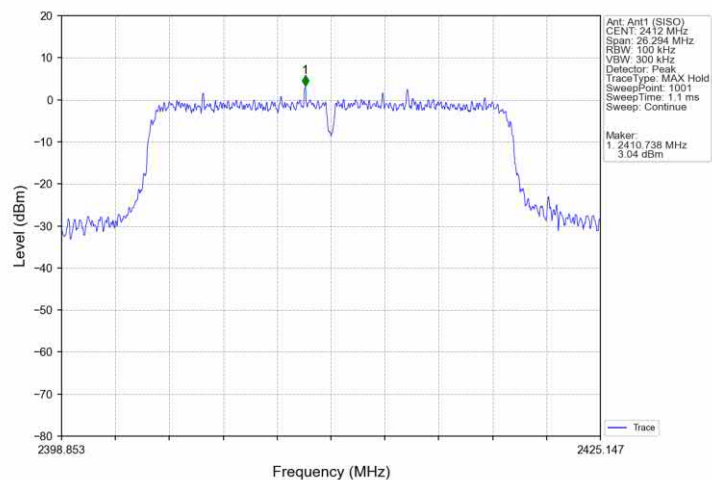
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



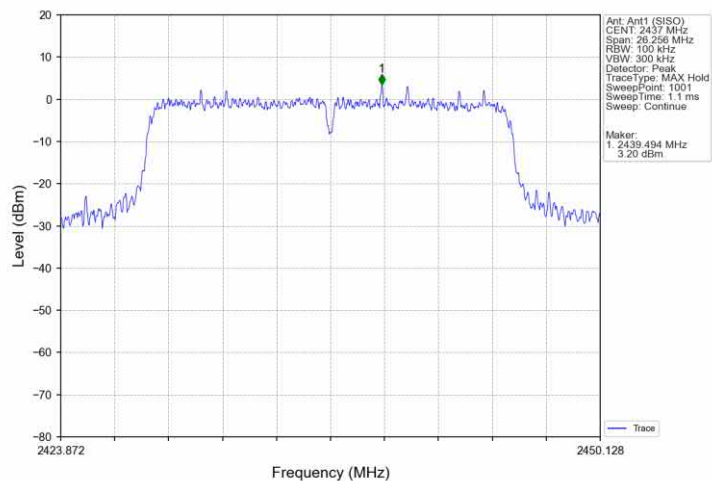
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



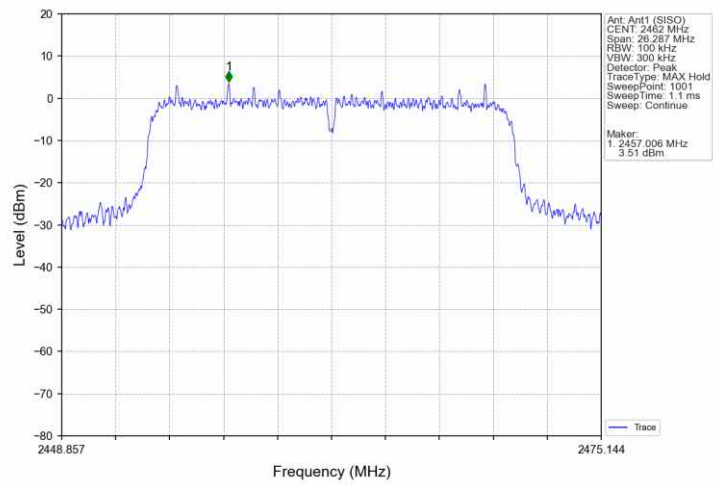
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



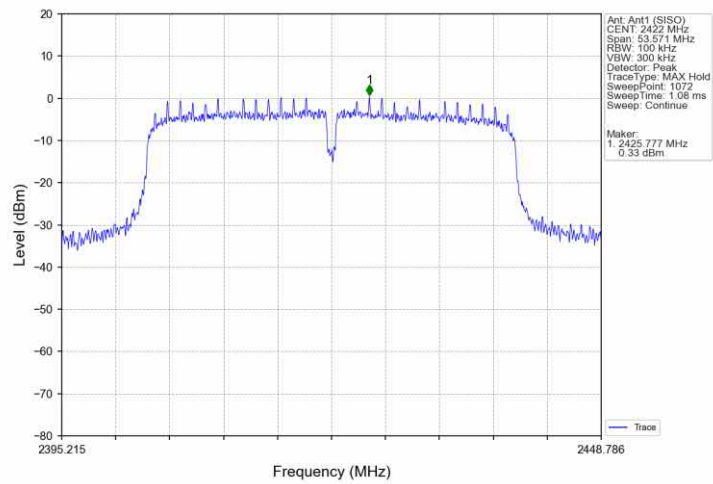
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

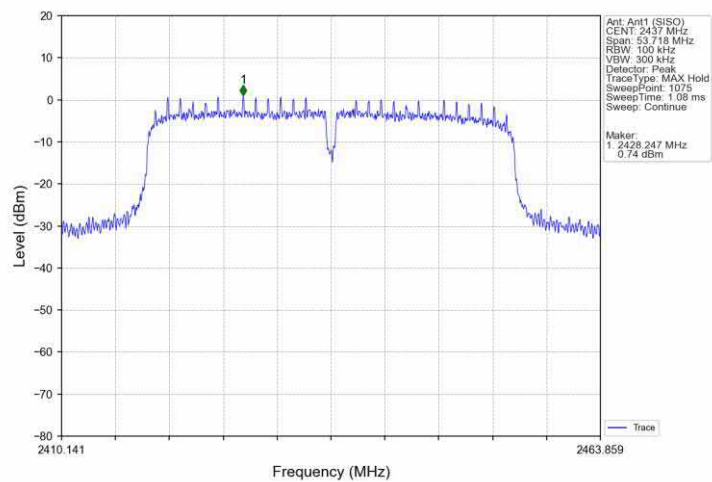


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV

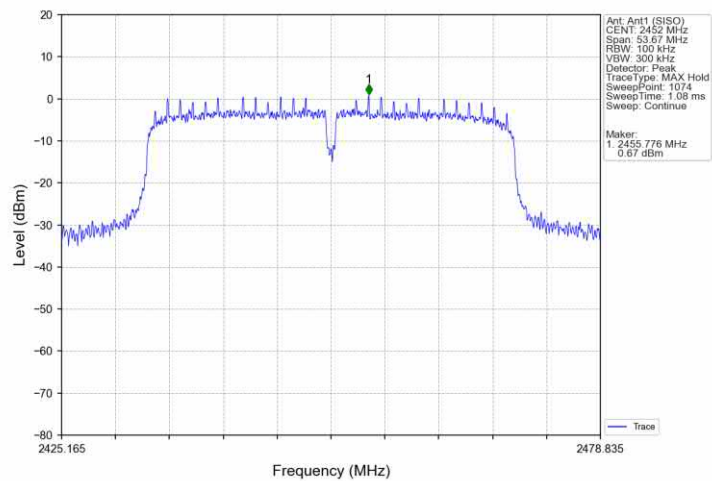




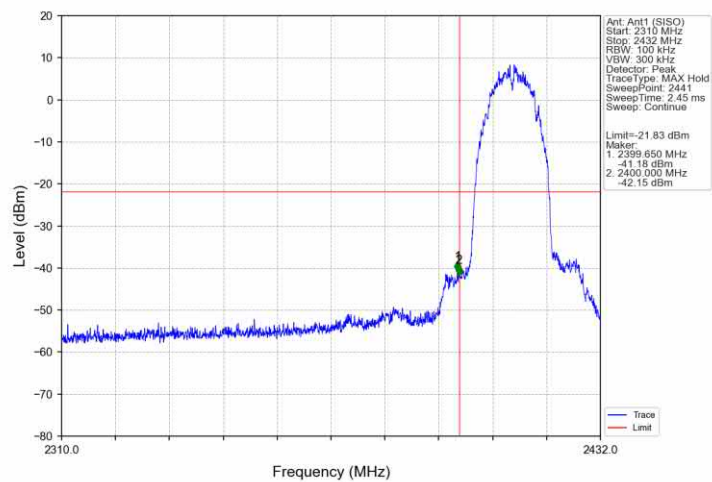
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



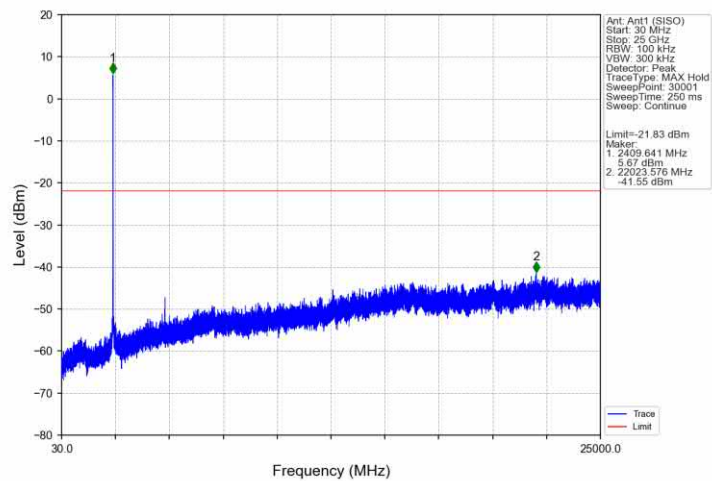
802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



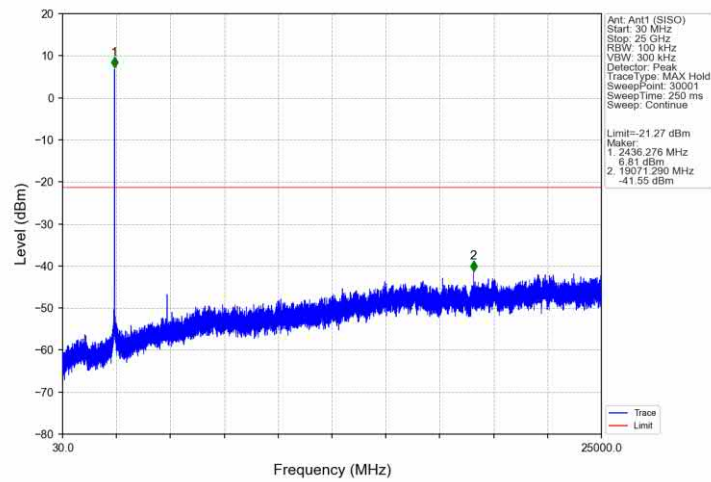
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



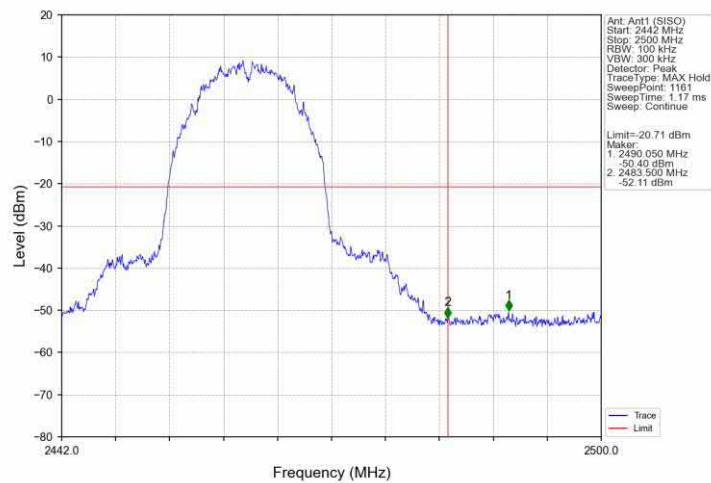
802.11b_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11b_MCH_2437MHz_Ant1 (SISO) NTN

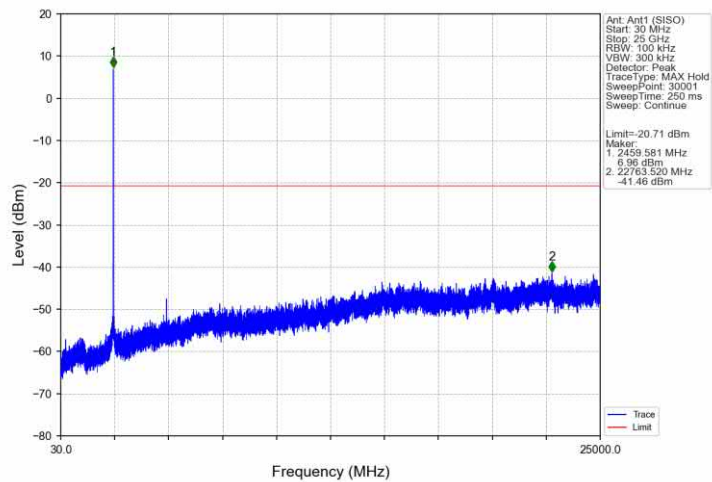


802.11b_HCH_2462MHz_Ant1 (SISO) NTN

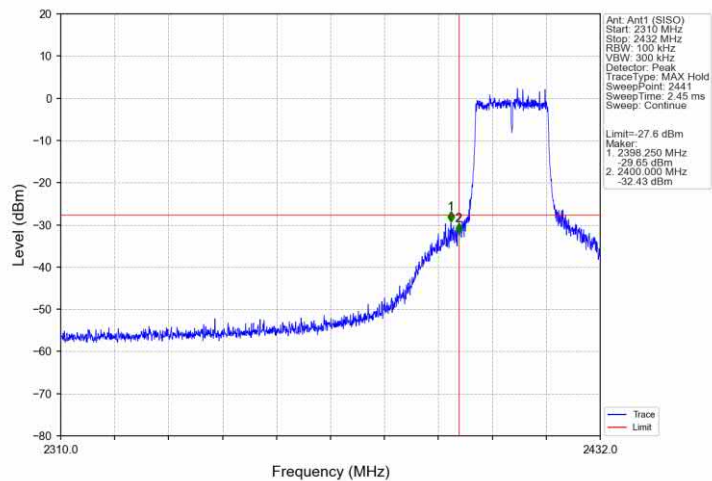




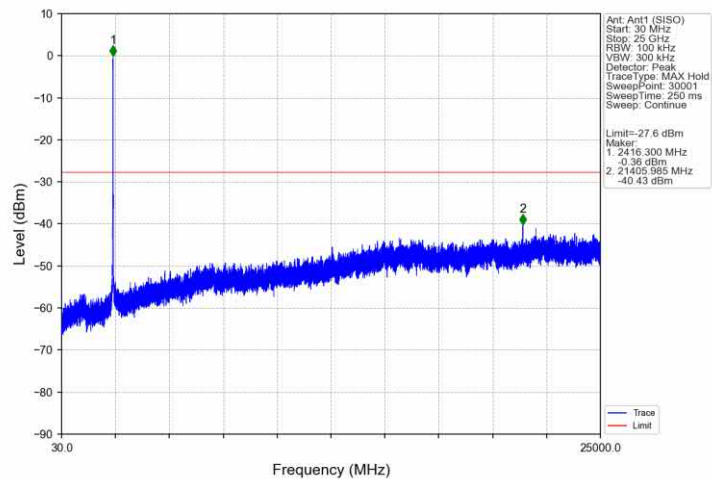
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



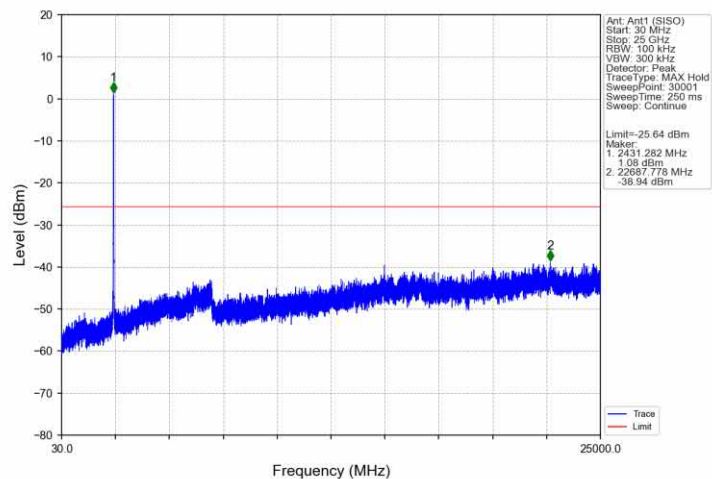
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



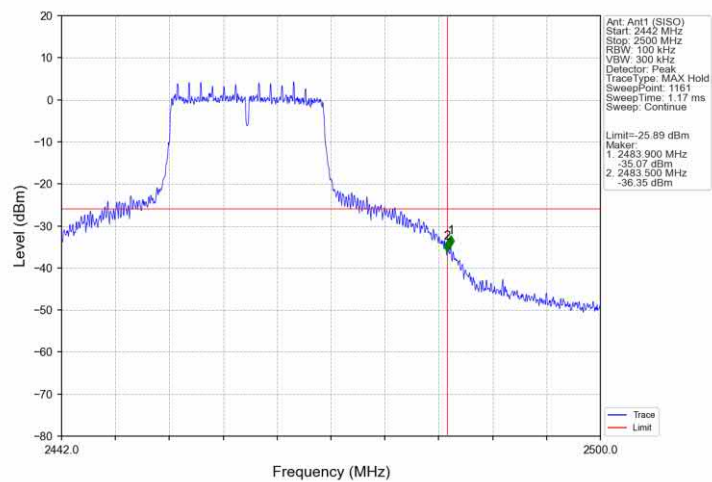
802.11g_LCH_2412MHz_Ant1 (SISO) NTN



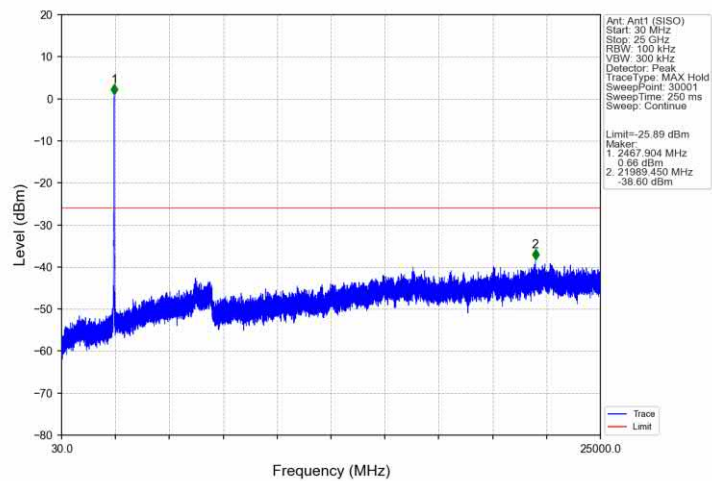
802.11g_MCH_2437MHz_Ant1 (SISO) NTN



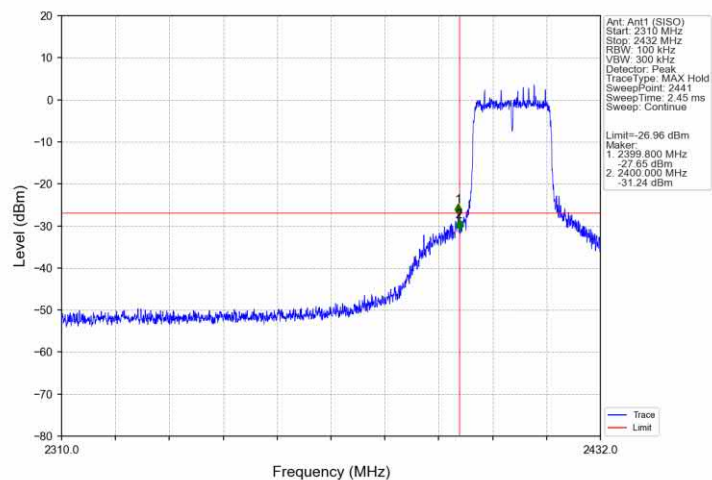
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



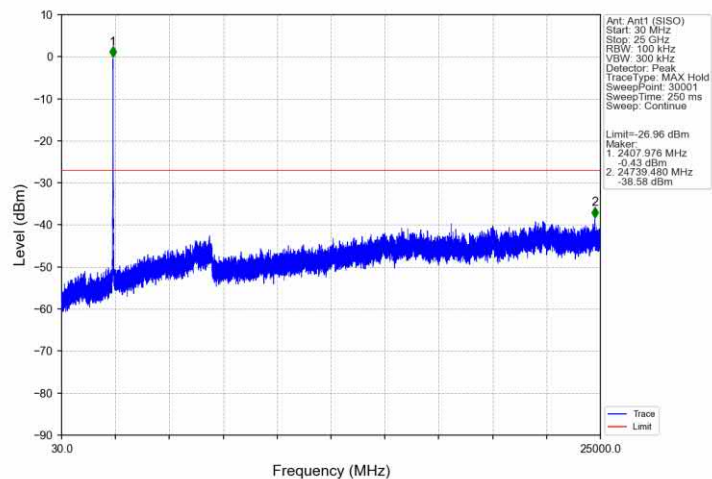
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



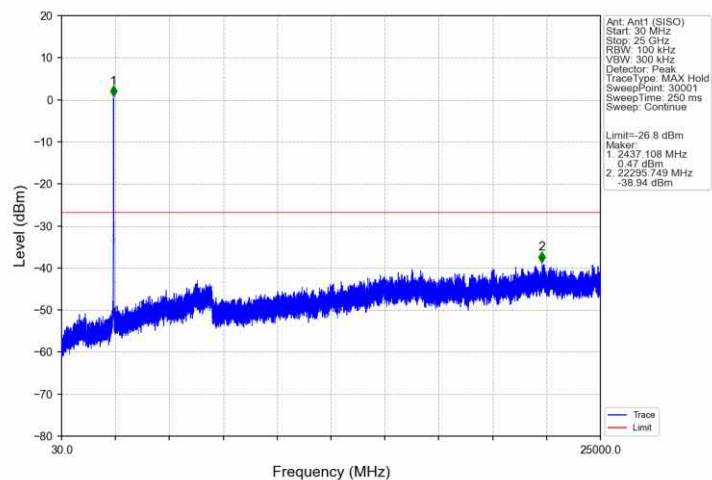
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



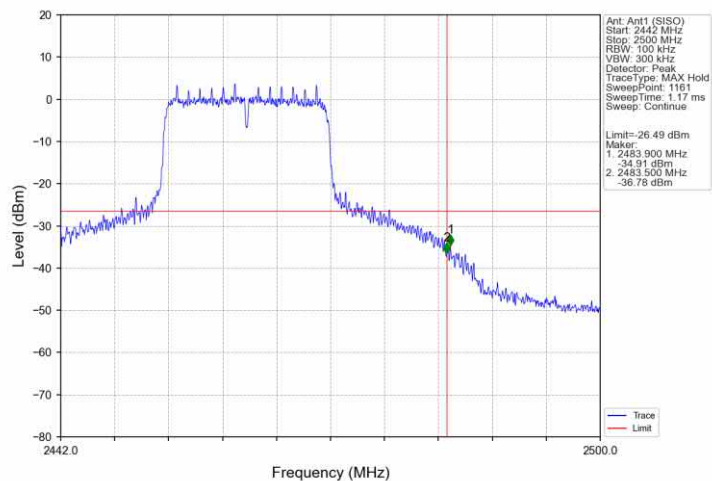
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



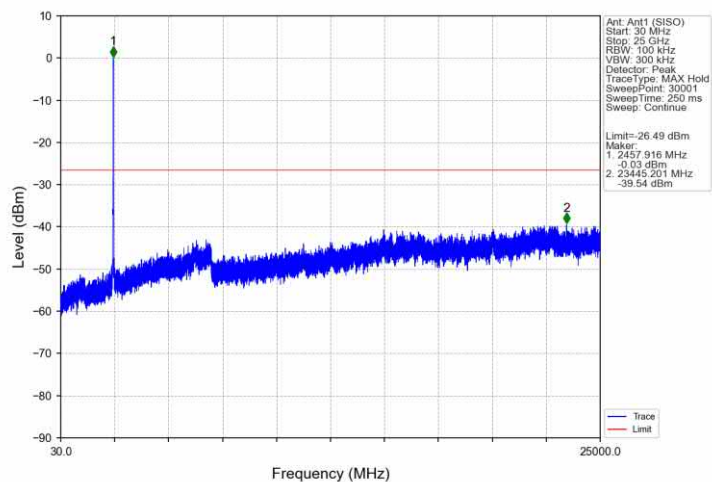
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



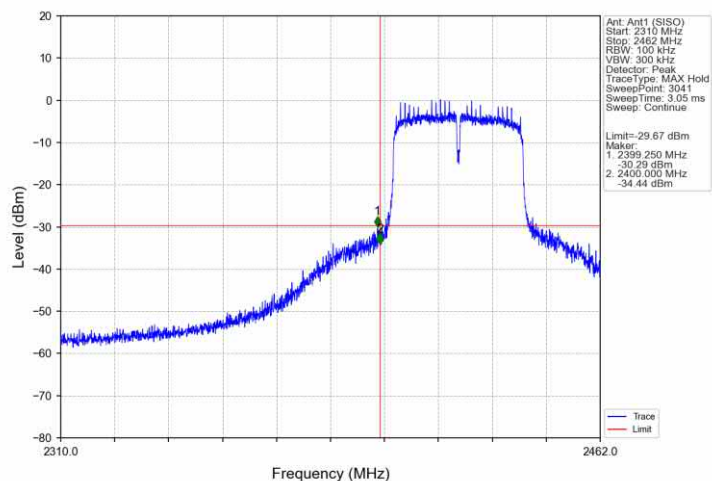
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



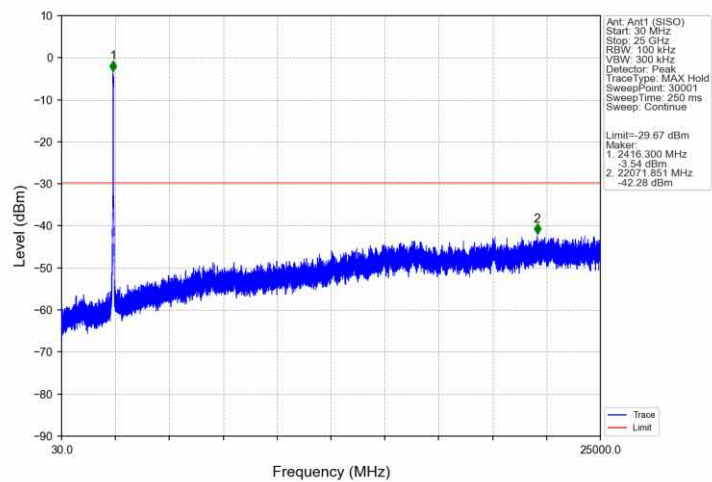
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



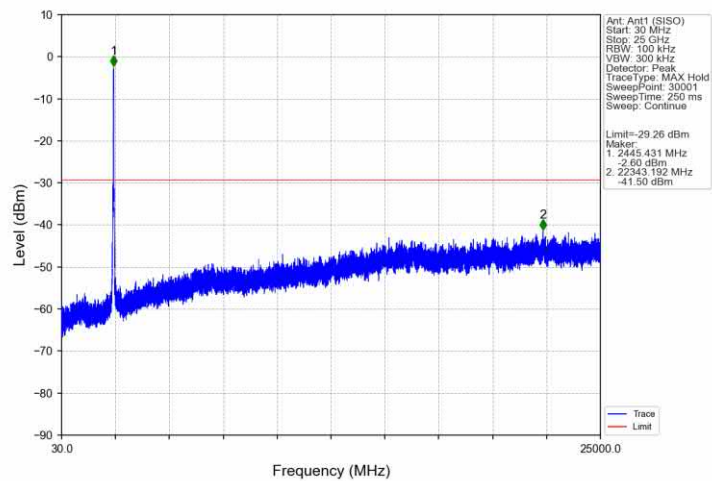
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



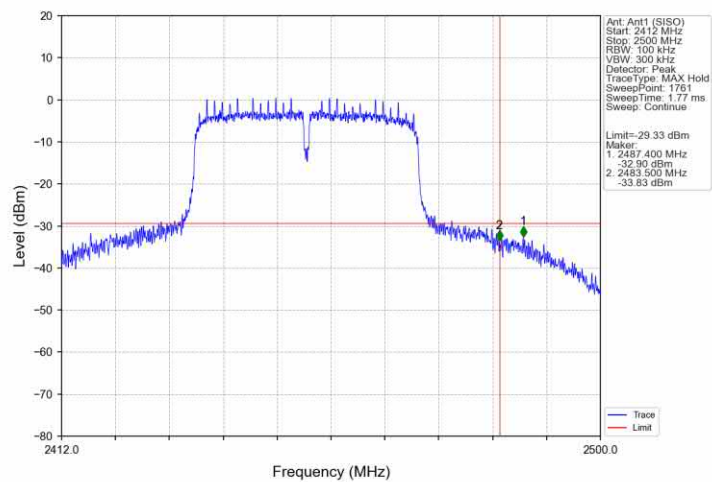
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



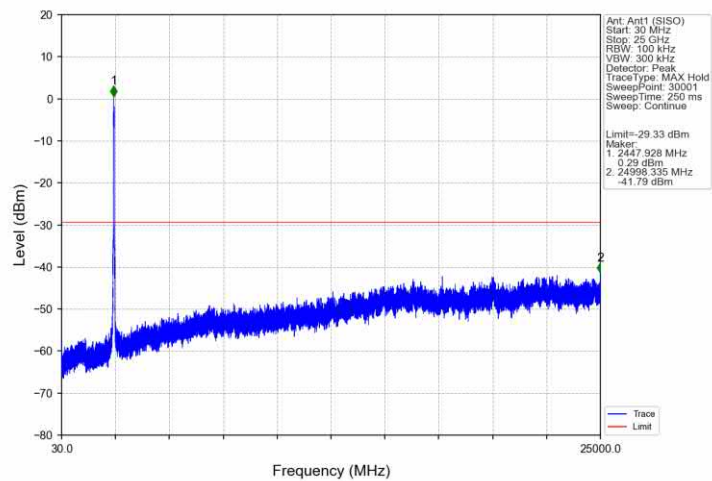
802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



9.5 Band Edge Testing

Test Method

1. The RF output of EUT was connected to the test receiver by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously. Set the EUT to the lowest frequency channel.
3. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector, Trace: Max hold, Sweep time: Coupled, Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation. Allow the trace to stabilize.
4. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, and then use the marker-to-peak function to move the marker to the peak of the in-band emission.
5. Set the EUT to the highest frequency channel and repeat step 2) to 4)
6. Enable the EUT hopping mode, repeat the test.

Limit

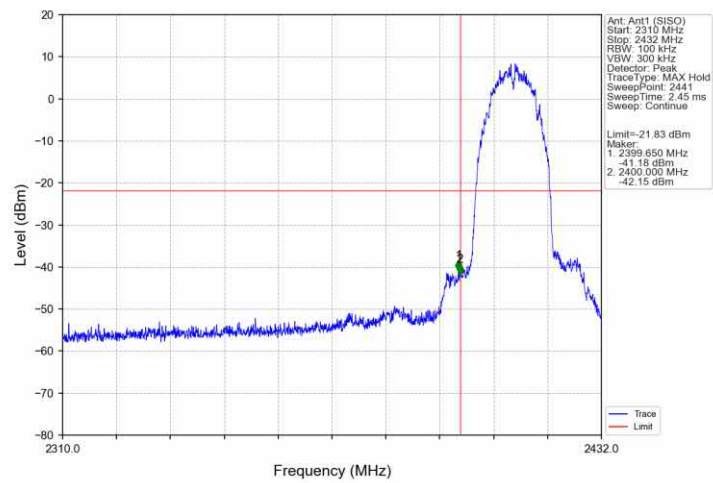
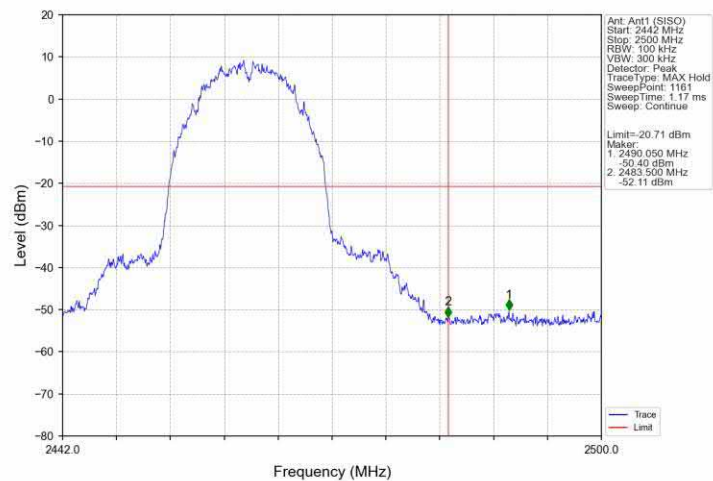
In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

Frequency Range MHz	Limit (dBc)
30-25000	-20

Test Result

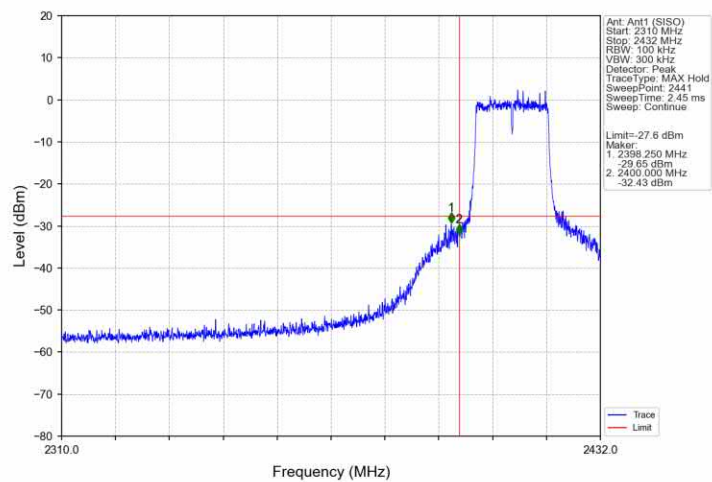
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	8.17	-11.12	Pass
		2437	1	8.73	-11.15	Pass
		2462	1	9.29	-10.78	Pass
802.11g	SISO	2412	1	2.40	-17.72	Pass
		2437	1	4.36	-17.58	Pass
		2462	1	4.11	-17.71	Pass
802.11n (HT20)	SISO	2412	1	3.04	-17.80	Pass
		2437	1	3.20	-17.69	Pass
		2462	1	3.51	-17.56	Pass
802.11n (HT40)	SISO	2422	1	0.33	-24.95	Pass
		2437	1	0.74	-24.75	Pass
		2452	1	0.67	-24.82	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.

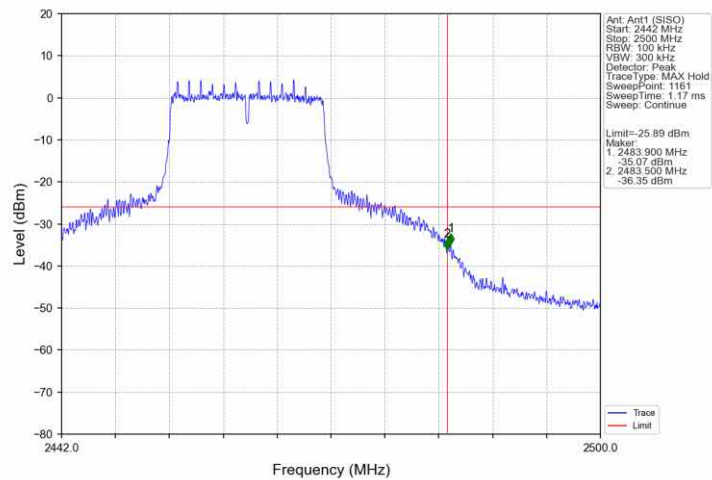
Band edge testing**802.11b LCH 2412MHz Ant1 (SISO) NTNV****802.11b HCH 2462MHz Ant1 (SISO) NTNV**



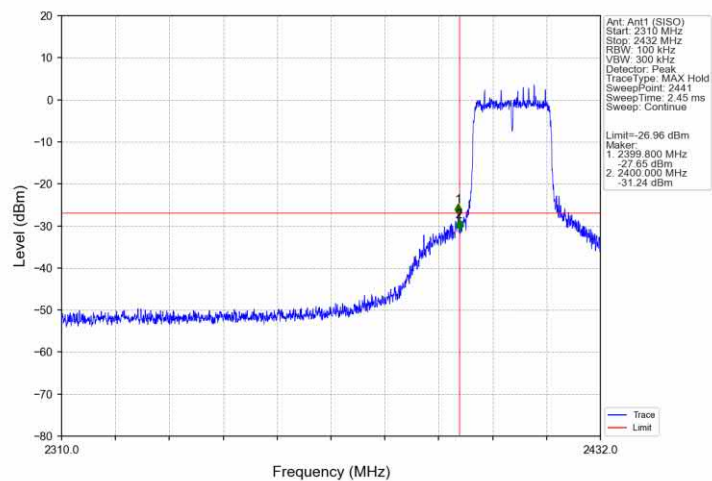
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



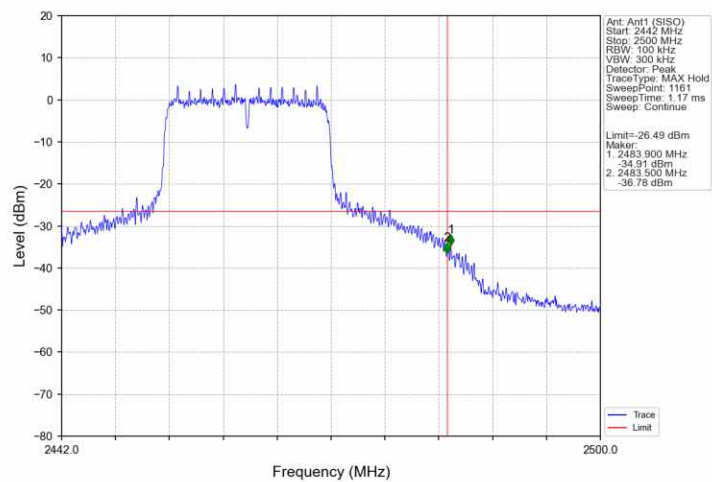
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



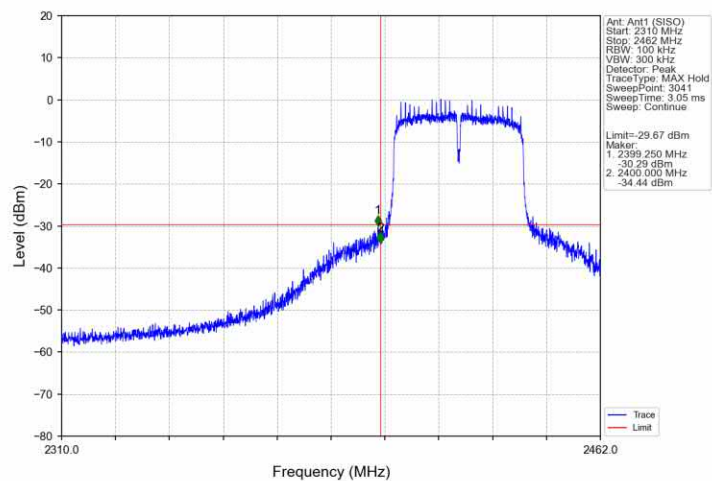
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

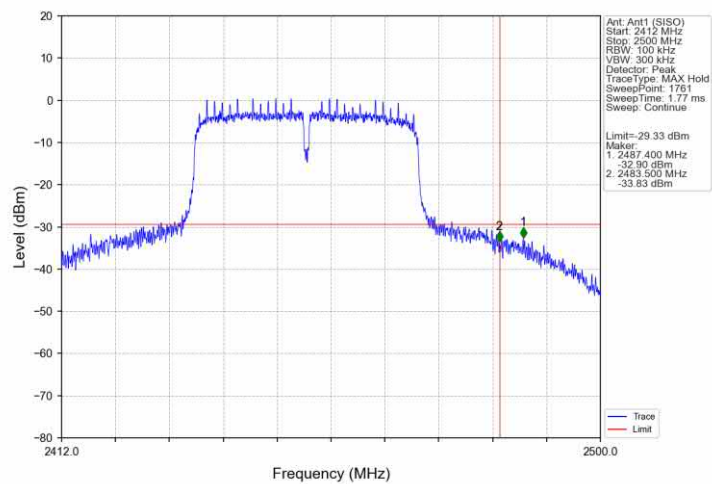


802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV





802.11n(HT40) HCH_2452MHz_Ant1 (SISO)_NTNV



9.6 Spurious Radiated Emissions for Transmitter

Test Method

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
3. The height of antenna 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.
4. 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. Use the following spectrum analyzer settings According to C63.10
 - 1) Procedure for Unwanted Emissions Measurements Below 1000 MHz
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz to 120kHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.
 - 2) For Peak unwanted emissions Above 1GHz:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 1MHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.
Procedures for average unwanted emissions measurements above 1GHz
 - a) RBW = 1MHz.
 - b) $VBW \setminus [3 \times RBW]$.
 - c) Detector = RMS (power averaging), if $[\text{span} / (\# \text{ of points in sweep})] \setminus RBW / 2$.
Satisfying this condition can require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, then the detector mode shall be set to peak.
 - d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)
 - e) Sweep time = auto.
 - f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of $1 / D$, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)
 - g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is $[10 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.
 - 2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is $[20 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty

cycle was 50%, then 6 dB shall be added to the measured emission levels.

3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission (AV) at frequency above 1GHz.

Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that 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 § 15.247(b)(3) and RSS 247 section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in § 15.209(a) and RSS-Gen is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a) and RSS-Gen section 8.9, must also comply with the radiated emission limits specified in § 15.209(a) and RSS-Gen section 8.10.

RSS-Gen section 8.9 General field strength limits at frequencies below 30 MHz:

Frequency MHz	Magnetic field strength (H-Field) (μA/m) μV/m	Measurement distance meters
0.009-0.490	6.37/F (F in kHz)	300
0.490-1.705	63.7/F (F in kHz)	30
1.705-30	0.08	30

When the limit is in terms of magnetic field, the following equation applies:

$$H[\text{dB}(\mu\text{A/m})] = V[\text{dB}(\mu\text{V})] + L_c [\text{dB}] - \text{GPA} [\text{dB}] + \text{AFE} [\text{dB(m-1)}] - 51.5 [\text{dB}\Omega]$$

When the limit is in terms of electric field, the following equation applies:

$$E[\text{dB}(\mu\text{V/m})] = V[\text{dB}(\mu\text{V})] + L_c [\text{dB}] - \text{GPA} [\text{dB}] + \text{AFE} [\text{dB(m-1)}]$$

The magnetic field limit is converted to the electric field limit by the equation:

$$E_{\text{limit}}[\text{dB}(\mu\text{V/m})] = H_{\text{limit}} [\text{dB}(\mu\text{A/m})] + 51.5 [\text{dB}\Omega]$$

where

H is the magnetic field strength (to be compared with the limit),

V is the voltage level measured by the receiver or spectrum analyzer.

Lc is the cable loss.

GPA is the gain of the preamplifier (if used), and AFH is the magnetic antenna factor.

FCC&ISED general limit:

Frequency MHz	Field Strength $\mu\text{V/m}$	Field Strength $\text{dB}\mu\text{V/m}$	Detector	Measurement distance meters
0.009-0.490	2400/F(kHz)	48.5-13.8	AV	300
0.490-1.705	24000/F(kHz)	33.8-23.0	QP	30
1.705-30	30	29.5	QP	30
30-88	100	40	QP	3
88-216	150	43.5	QP	3
216-960	200	46	QP	3
960-1000	500	54	QP	3
Above 1000	500	54	AV	3
Above 1000	5000	74	PK	3

Note 1: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 300\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(300\text{m}/3\text{m})$ (Below 30MHz)

Note 2: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 30\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(30\text{m}/3\text{m})$ (Below 30MHz)

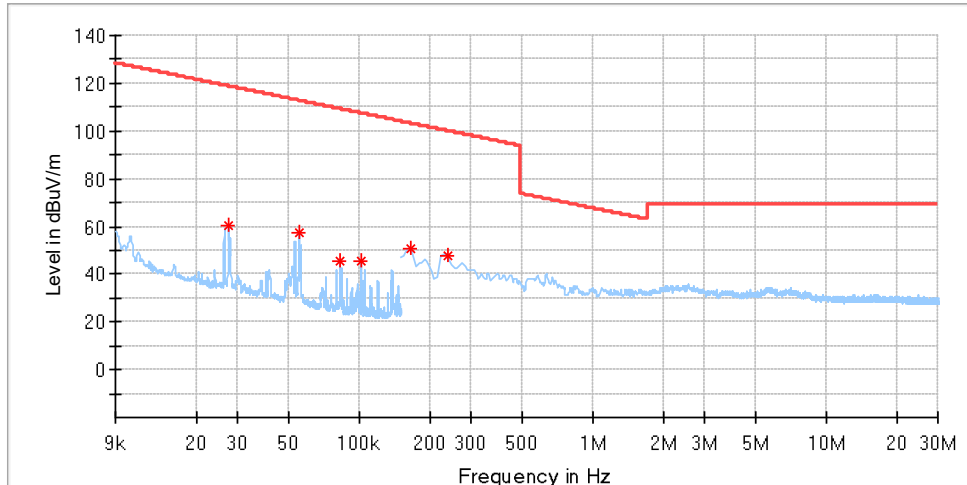
According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Spurious Radiated Emissions for Transmitter

Only the worst case (802.11b) test result is listed in the report.

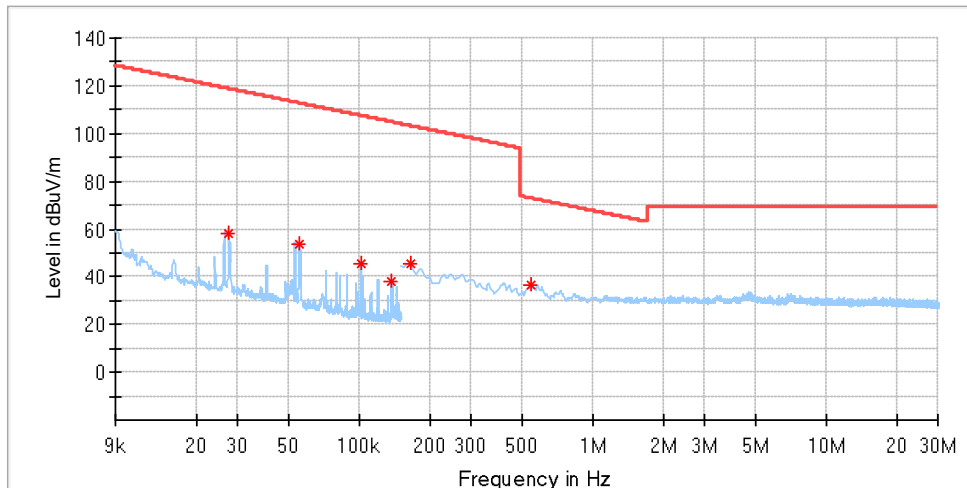
Transmitting spurious emission test result as below:

802.11b_2412 (9kHz-30MHz)



Critical Freqs

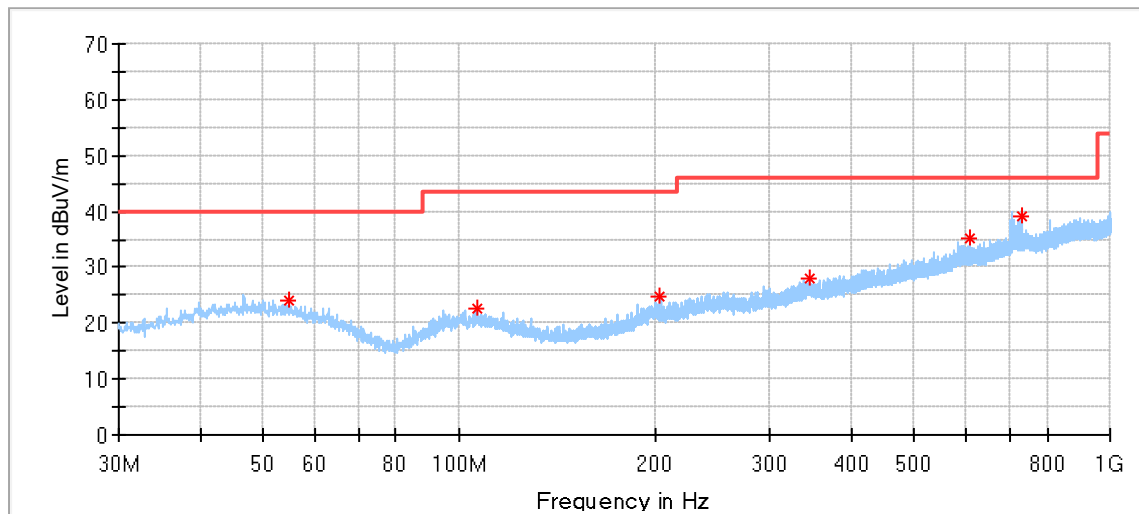
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.027518	60.23	118.80	58.57	H	167.0	19.88
0.055201	57.46	112.76	55.29	H	338.0	19.92
0.082696	45.12	109.25	64.13	H	357.0	19.92
0.101966	45.29	107.43	62.13	H	297.0	19.93
0.164925	50.80	103.25	52.46	H	260.0	19.89
0.239550	47.51	100.01	52.50	H	80.0	19.88



Critical Freqs

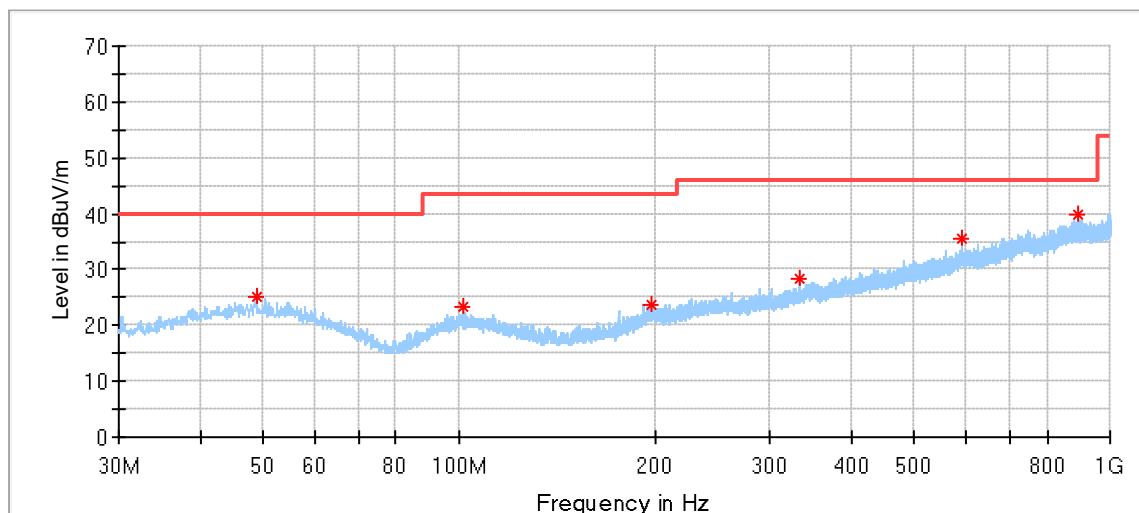
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.027565	58.37	118.78	60.41	V	280.0	19.88
0.055154	53.70	112.76	59.07	V	169.0	19.92
0.101966	45.81	107.43	61.62	V	27.0	19.93
0.135994	38.30	104.93	66.63	V	0.0	19.91
0.164925	45.65	103.25	57.61	V	14.0	19.89
0.543025	36.47	72.91	36.44	V	0.0	19.90

802.11b_2412_(30MHz-1GHz)



Critical Freqs

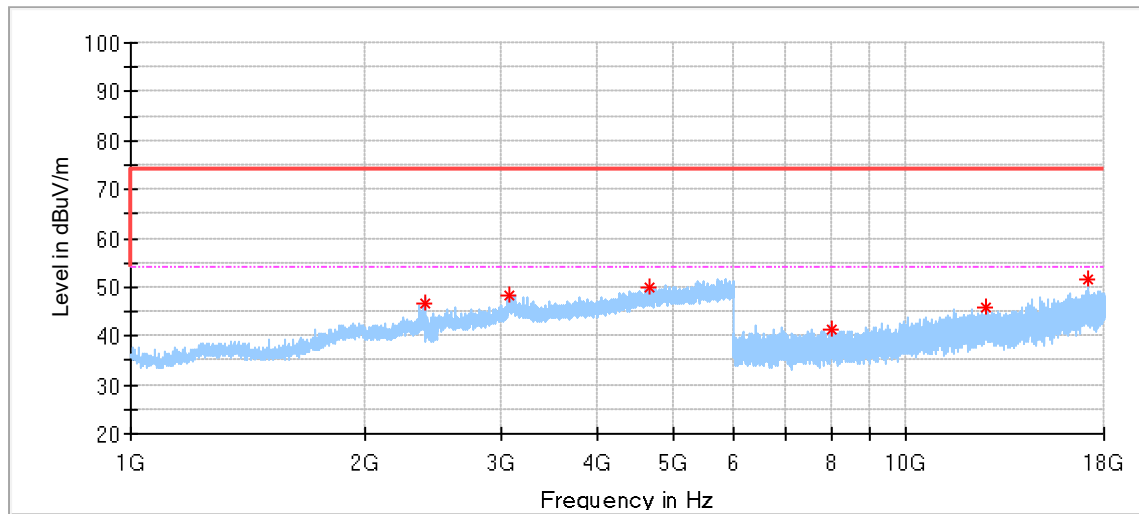
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
54.896667	23.93	40.00	16.07	100.0	H	276.0	17.60
106.737778	22.49	43.50	21.01	100.0	H	100.0	15.61
203.845556	24.93	43.50	18.57	200.0	H	283.0	15.82
346.112222	27.91	46.00	18.09	100.0	H	308.0	20.23
609.844444	35.00	46.00	11.00	200.0	H	52.0	25.28
730.000000	39.17	46.00	6.83	200.0	H	45.0	28.27



Critical Freqs

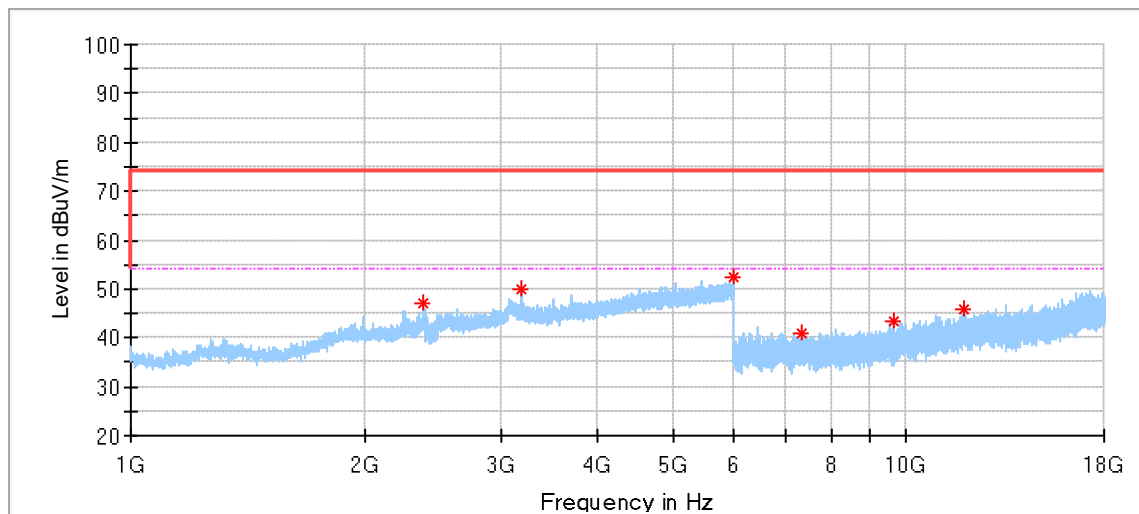
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
48.753333	25.12	40.00	14.88	100.0	V	157.0	18.15
101.564444	23.36	43.50	20.14	100.0	V	165.0	15.68
197.163333	23.63	43.50	19.87	100.0	V	70.0	16.50
332.532222	28.28	46.00	17.72	100.0	V	204.0	19.53
591.360556	35.40	46.00	10.60	200.0	V	249.0	24.91
894.593333	39.80	46.00	6.20	100.0	V	23.0	29.45

802.11b_2412_(1-18GHz)



Critical Freqs

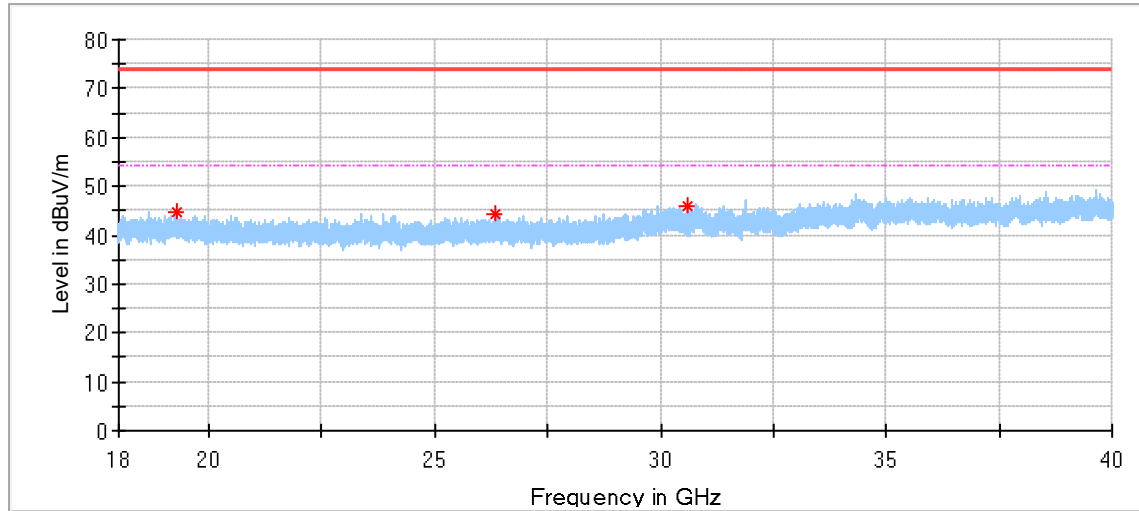
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2393.000000	46.81	74.00	27.19	150.0	H	207.0	-1.45
3078.000000	48.20	74.00	25.80	150.0	H	7.0	2.19
4658.500000	50.10	74.00	23.90	150.0	H	303.0	5.24
8019.500000	41.24	74.00	32.76	150.0	H	150.0	10.57
12689.000000	45.92	74.00	28.08	150.0	H	178.0	16.52
17168.000000	51.69	74.00	22.31	150.0	H	294.0	24.39



Critical Freqs

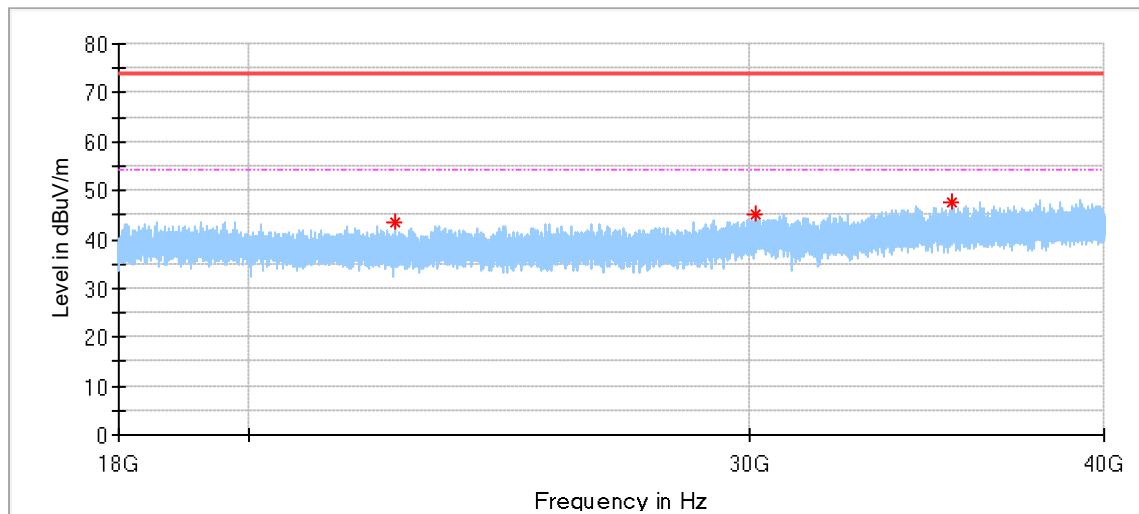
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2385.500000	46.99	74.00	27.01	150.0	V	263.0	-1.56
3193.000000	50.03	74.00	23.97	150.0	V	54.0	1.43
5998.500000	52.48	74.00	21.52	150.0	V	40.0	8.52
7329.000000	41.05	74.00	32.95	150.0	V	288.0	9.64
9648.000000	43.46	74.00	30.54	150.0	V	343.0	12.63
11857.000000	45.99	74.00	28.01	150.0	V	232.0	16.31

802.11b_2412_(18-40GHz)



Critical_Freqs

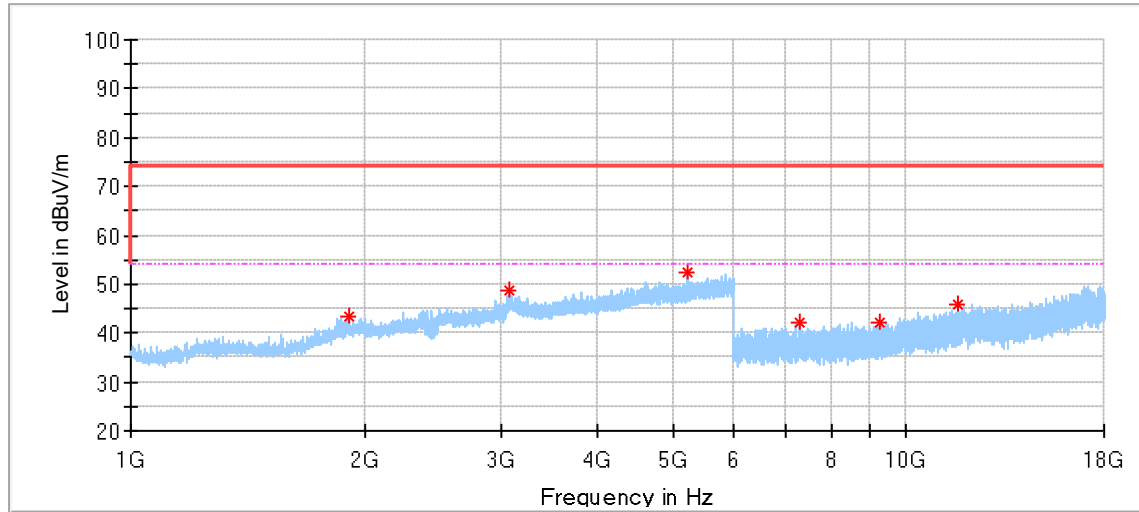
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
19306.937500	44.85	74.00	29.15	100.0	H	27.0	-0.10	---
26320.125000	44.28	74.00	29.72	100.0	H	161.0	3.71	---
30607.375000	46.04	74.00	27.96	100.0	H	69.0	3.76	---



Critical_Freqs

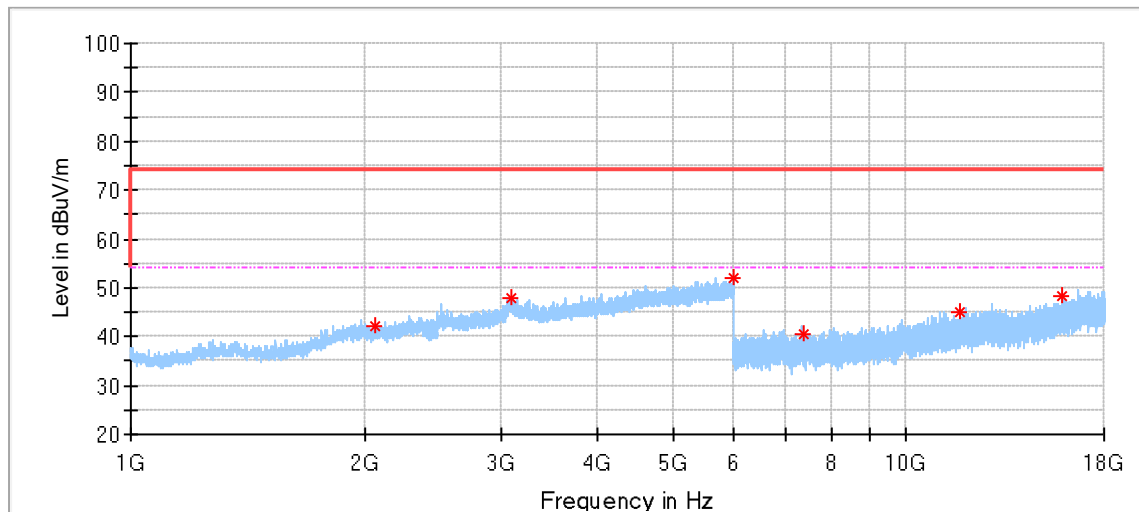
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
22536.125000	43.66	74.00	30.34	100.0	V	0.0	2.37	---
30155.687500	45.15	74.00	28.85	100.0	V	0.0	4.05	---
35380.687500	47.52	74.00	26.48	100.0	V	0.0	5.85	---

802.11b_2437_(1-18GHz)



Critical_Freqs

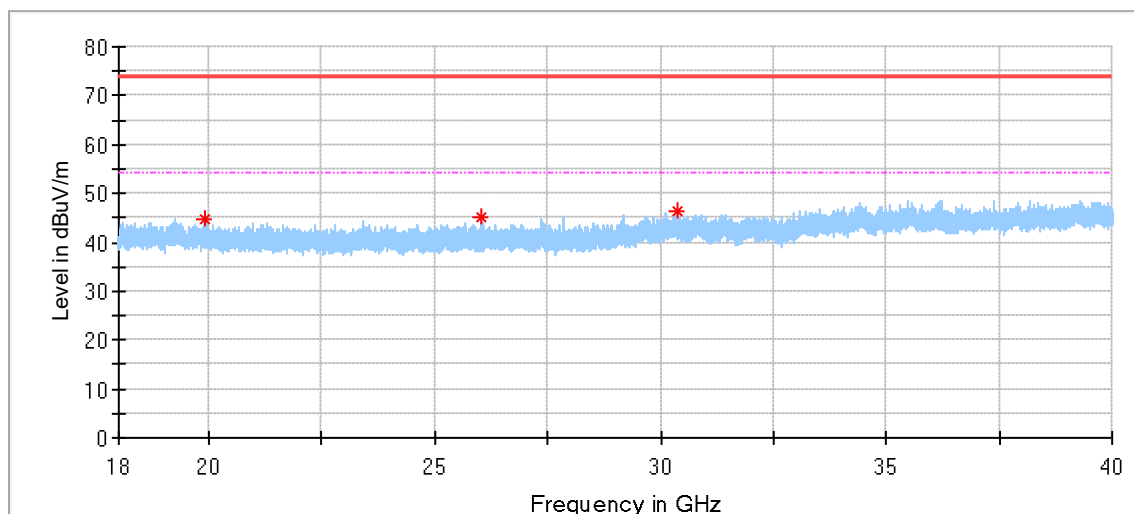
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1907.000000	43.29	74.00	30.71	150.0	H	1.0	-3.15
3082.500000	48.87	74.00	25.13	150.0	H	83.0	2.31
5228.500000	52.38	74.00	21.62	150.0	H	333.0	6.43
7309.000000	42.22	74.00	31.78	150.0	H	262.0	9.55
9265.000000	42.13	74.00	31.87	150.0	H	92.0	12.22
11667.000000	45.72	74.00	28.28	150.0	H	122.0	15.58



Critical_Freqs

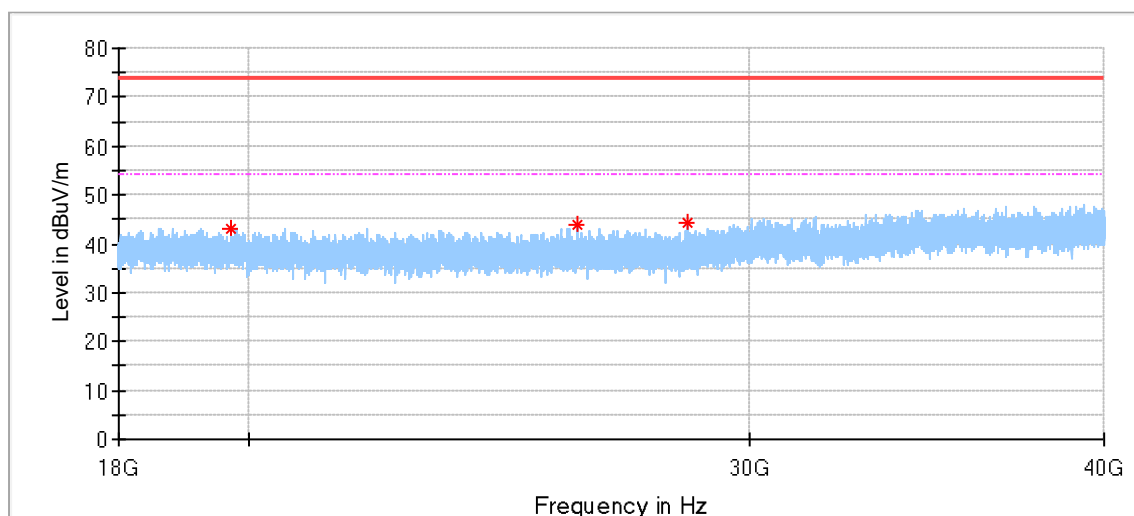
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2066.000000	42.26	74.00	31.74	150.0	V	335.0	-3.01
3094.500000	47.98	74.00	26.02	150.0	V	99.0	2.63
5982.000000	52.05	74.00	21.95	150.0	V	168.0	8.43
7395.000000	40.40	74.00	33.60	150.0	V	282.0	9.58
11736.000000	44.82	74.00	29.18	150.0	V	116.0	15.75
15889.000000	48.30	74.00	25.70	150.0	V	116.0	20.86

802.11b_2437_(18-40GHz)



Critical Freqs

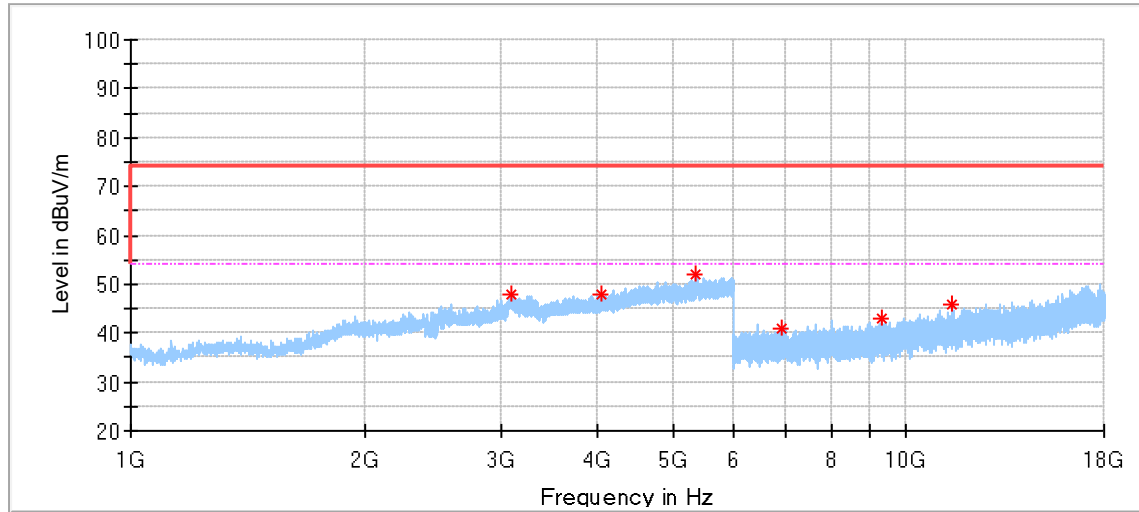
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
19885.125000	44.84	74.00	29.16	100.0	H	140.0	0.33	---
26037.562500	45.16	74.00	28.84	100.0	H	109.0	3.69	---
30364.000000	46.28	74.00	27.72	100.0	H	0.0	3.93	---



Critical Freqs

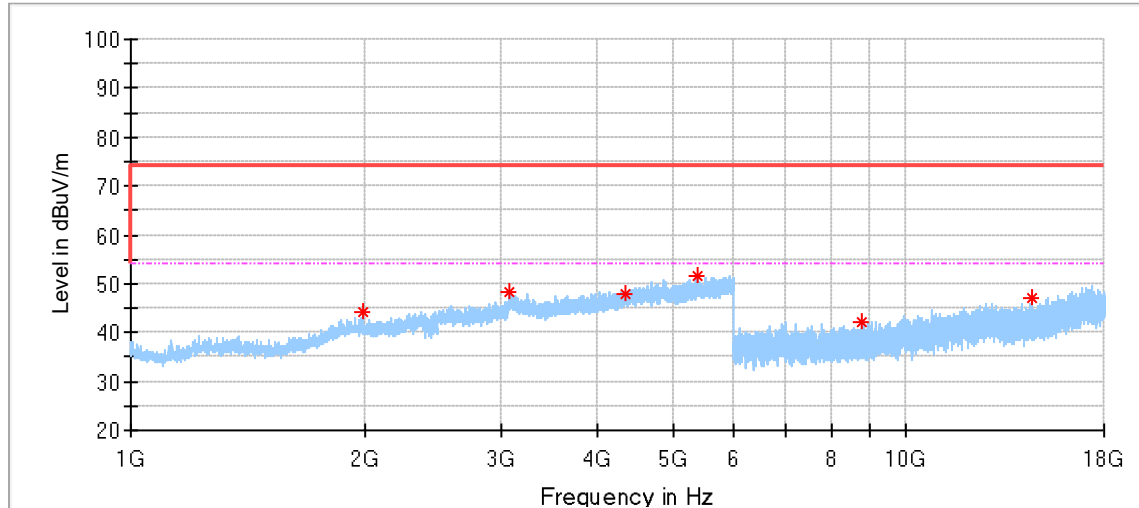
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
19709.125000	42.88	74.00	31.12	100.0	V	0.0	0.11	---
26082.250000	43.77	74.00	30.23	100.0	V	0.0	3.69	---
28535.250000	44.15	74.00	29.85	100.0	V	0.0	3.07	---

802.11b_2462_(1-18GHz)



Critical_Freqs

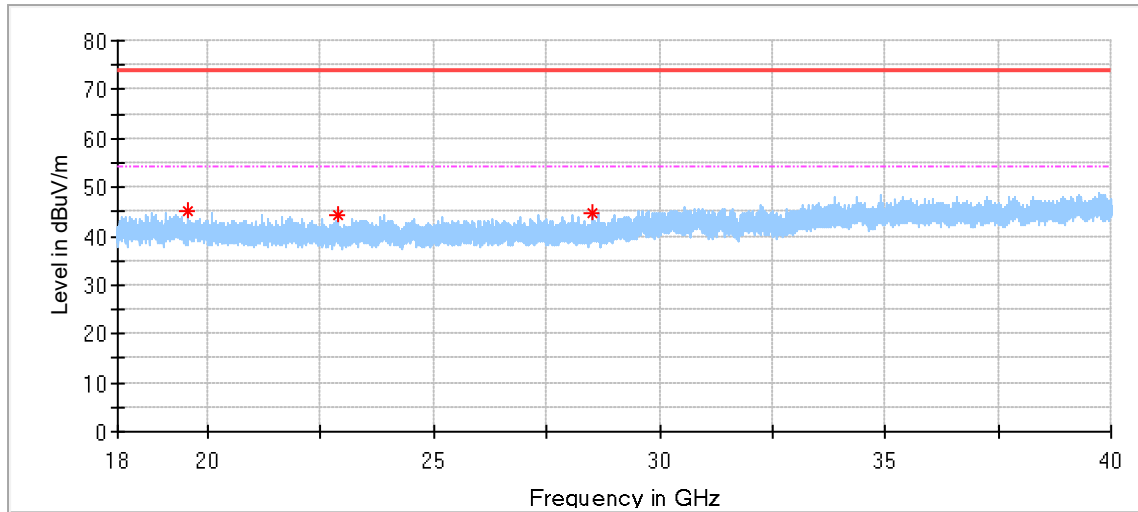
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3103.500000	47.82	74.00	26.18	150.0	H	224.0	2.65
4045.500000	47.76	74.00	26.24	150.0	H	320.0	3.02
5361.000000	51.81	74.00	22.19	150.0	H	9.0	7.10
6889.000000	40.93	74.00	33.07	150.0	H	178.0	9.43
9302.000000	42.92	74.00	31.08	150.0	H	32.0	12.25
11424.500000	46.01	74.00	27.99	150.0	H	317.0	15.07



Critical_Freqs

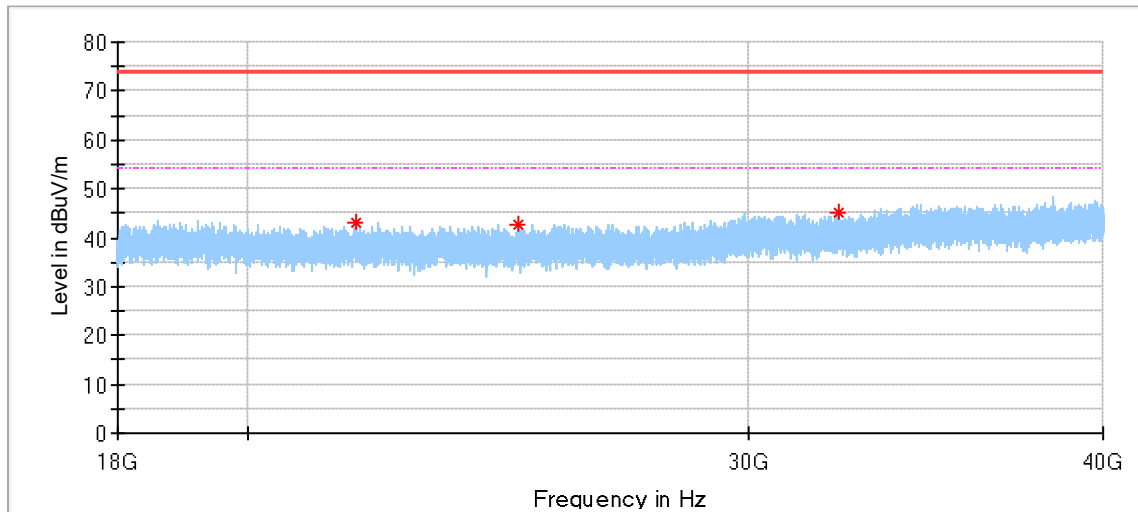
Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1995.000000	44.14	74.00	29.86	150.0	V	197.0	-2.59
3078.000000	48.37	74.00	25.63	150.0	V	83.0	2.19
4339.500000	48.08	74.00	25.92	150.0	V	356.0	4.13
5383.500000	51.56	74.00	22.44	150.0	V	42.0	7.19
8783.500000	42.04	74.00	31.96	150.0	V	344.0	11.40
14514.500000	47.00	74.00	27.00	150.0	V	206.0	17.84

802.11b_2462_(18-40GHz)



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
19546.875000	45.29	74.00	28.71	100.0	H	0.0	0.05	---
22867.500000	44.21	74.00	29.79	100.0	H	283.0	2.68	---
28511.187500	44.54	74.00	29.46	100.0	H	27.0	3.07	---

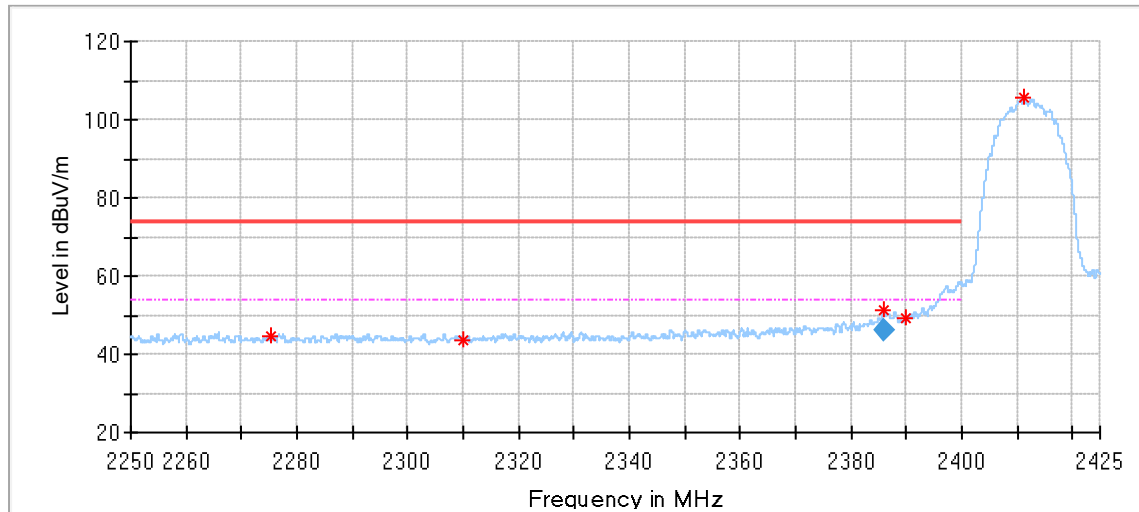


Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Corr. (dB)
21851.375000	43.15	74.00	30.85	100.0	V	0.0	1.97	---
24921.062500	42.75	74.00	31.25	100.0	V	0.0	2.99	---
32270.437500	45.10	74.00	28.90	100.0	V	0.0	3.64	---

Restricted-band band-edge

802.11b_2412

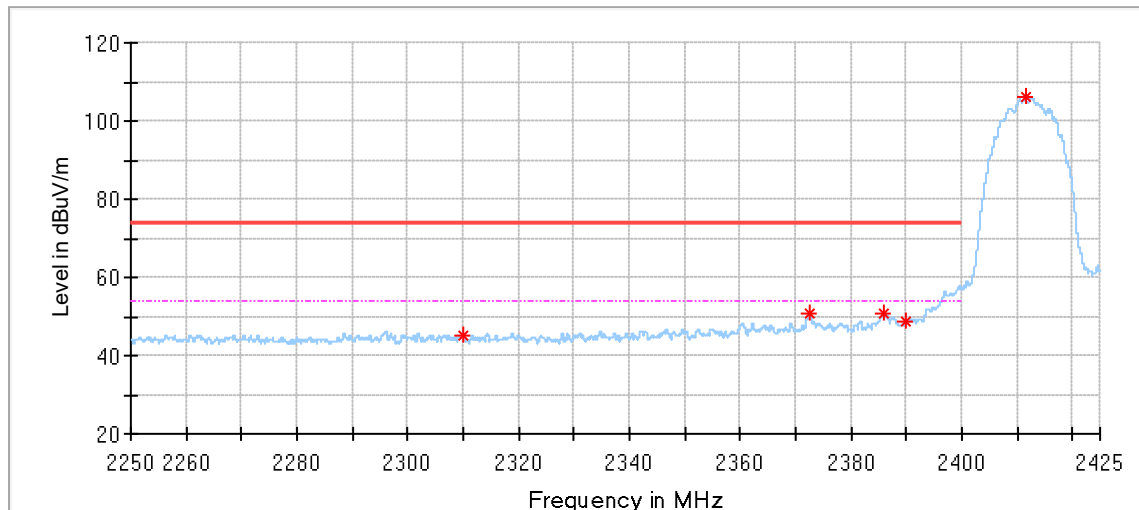


Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2275.200000	44.75	74.00	29.25	150.0	H	120.0	-2.44
2309.972500	43.68	74.00	30.32	150.0	H	95.0	-2.19
2385.975000	51.08	74.00	22.92	150.0	H	95.0	-1.98
2389.982500	49.18	74.00	24.82	150.0	H	95.0	-1.92
2411.420000	105.55	---	---	150.0	H	71.0	-1.58

Final_Result

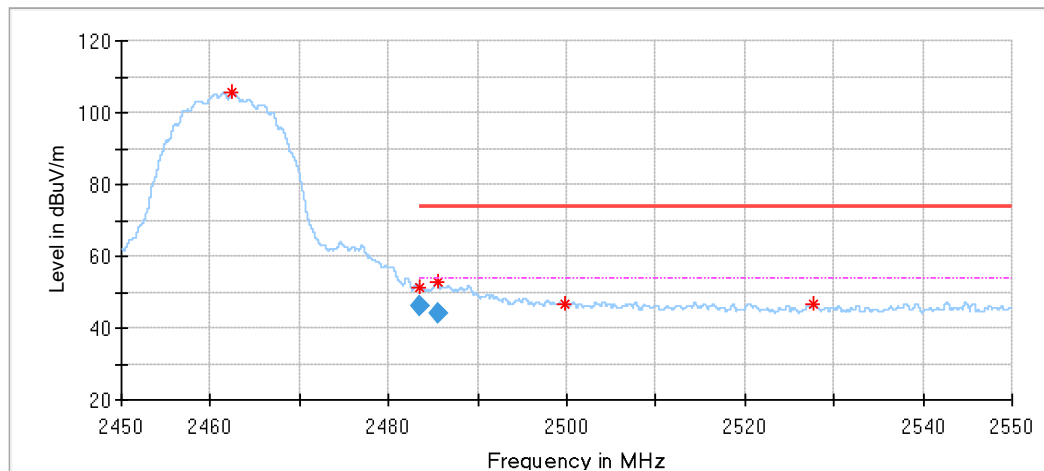
Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2385.975000	46.16	54.00	7.84	150.0	H	95.0	-1.98



Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2309.850000	45.04	74.00	28.96	150.0	V	322.0	-2.19
2372.447500	50.78	74.00	23.22	150.0	V	340.0	-2.19
2386.097500	50.71	74.00	23.29	150.0	V	340.0	-1.98
2389.807500	48.71	74.00	25.29	150.0	V	340.0	-1.92
2411.560000	105.95	---	---	150.0	V	349.0	-1.58

802.11b_2462

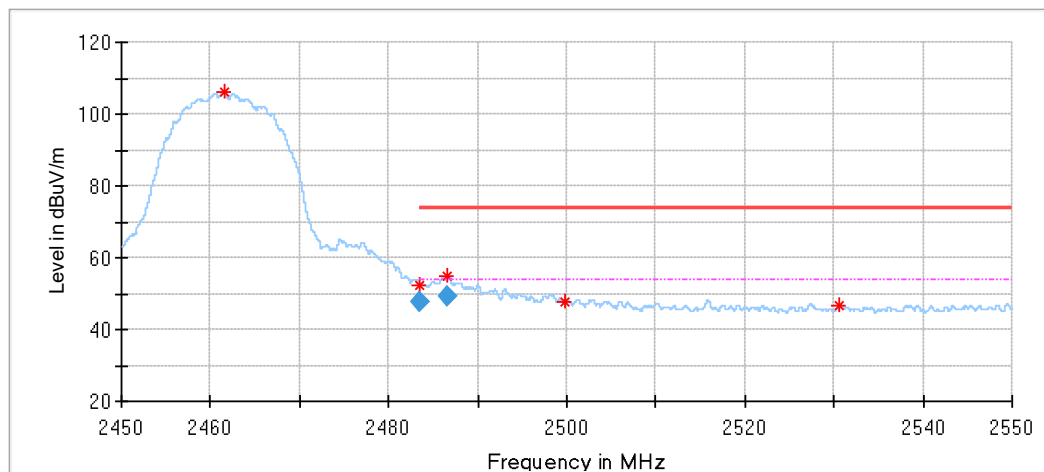


Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2462.450000	105.63	---	---	150.0	H	101.0	-1.46
2483.510000	51.47	74.00	22.53	150.0	H	101.0	-1.45
2485.460000	52.94	74.00	21.06	150.0	H	101.0	-1.45
2499.850000	46.87	74.00	27.13	150.0	H	77.0	-1.48
2527.780000	46.83	74.00	27.17	150.0	H	113.0	-1.34

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.510000	46.05	54.00	7.95	150.0	H	101.0	-1.45
2485.460000	44.19	54.00	9.81	150.0	H	101.0	-1.45



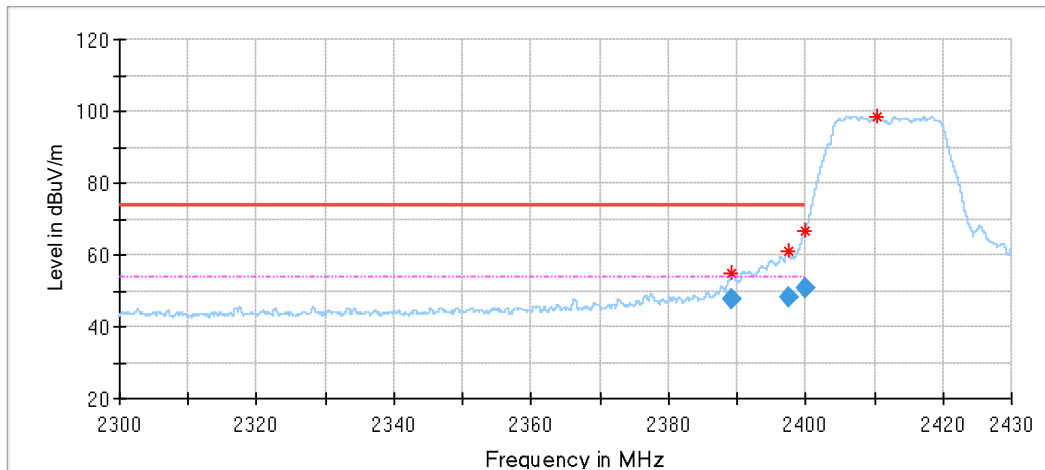
Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2461.470000	106.22	---	---	150.0	V	339.0	-1.47
2483.510000	52.53	74.00	21.47	150.0	V	351.0	-1.45
2486.650000	54.91	74.00	19.09	150.0	V	339.0	-1.45
2499.790000	47.87	74.00	26.13	150.0	V	351.0	-1.48
2530.600000	46.58	74.00	27.42	150.0	V	315.0	-1.29

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.510000	47.93	54.00	6.07	150.0	V	351.0	-1.45
2486.650000	49.05	54.00	4.95	150.0	V	339.0	-1.45

802.11g_2412

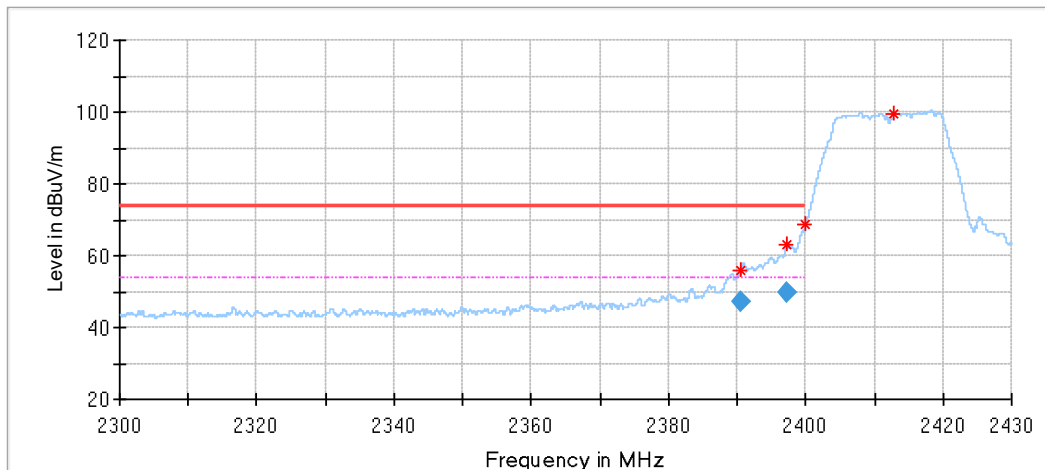


Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.258000	54.91	74.00	19.09	150.0	H	144.0	-1.93
2397.383000	61.18	74.00	12.82	150.0	H	125.0	-1.80
2399.996000	66.77	74.00	7.23	150.0	H	125.0	-1.76
2410.344000	98.49	---	---	150.0	H	88.0	-1.60

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.258000	47.85	54.00	6.15	150.0	H	144.0	-1.93
2397.383000	48.06	54.00	5.94	150.0	H	125.0	-1.80
2399.996000	50.91	54.00	3.09	150.0	H	125.0	-1.76



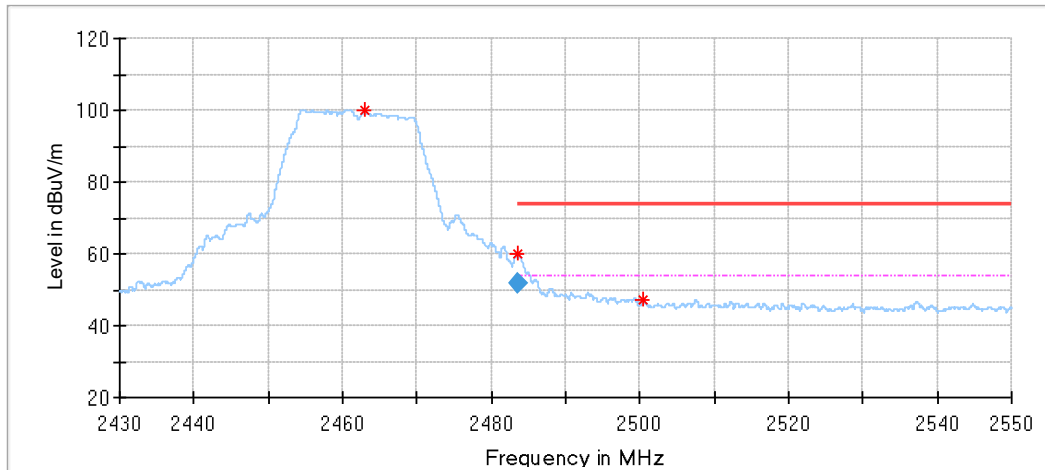
Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2390.493000	55.76	74.00	18.24	150.0	V	269.0	-1.91
2397.266000	63.17	74.00	10.83	150.0	V	269.0	-1.80
2400.022000	68.71	---	---	150.0	V	269.0	-1.76
2412.931000	99.64	---	---	150.0	V	269.0	-1.56

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2390.493000	47.42	54.00	6.58	150.0	V	269.0	-1.91
2397.266000	49.85	54.00	4.15	150.0	V	269.0	-1.80

802.11g_2462

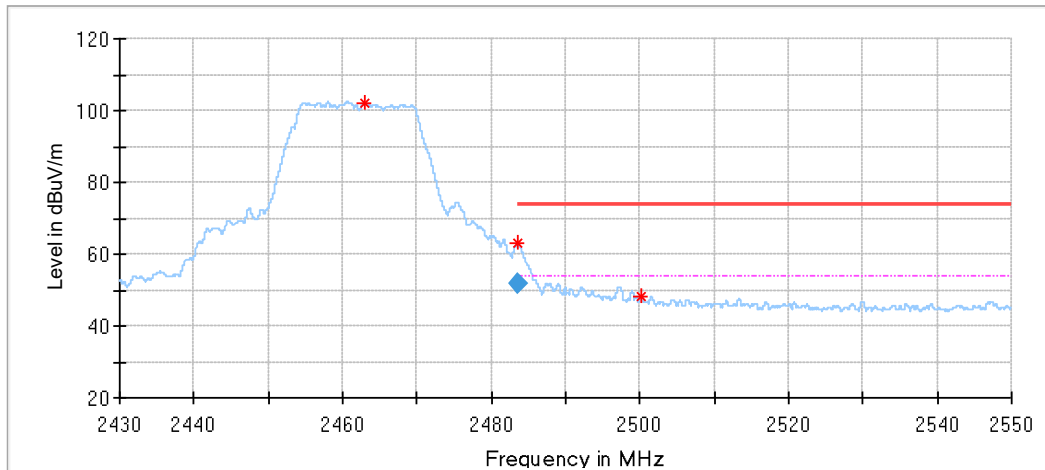


Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2463.084000	99.78	---	---	150.0	H	133.0	-1.46
2483.508000	60.03	74.00	13.97	150.0	H	86.0	-1.45
2500.452000	47.42	74.00	26.58	150.0	H	95.0	-1.48

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.508000	51.67	54.00	2.33	150.0	H	86.0	-1.45



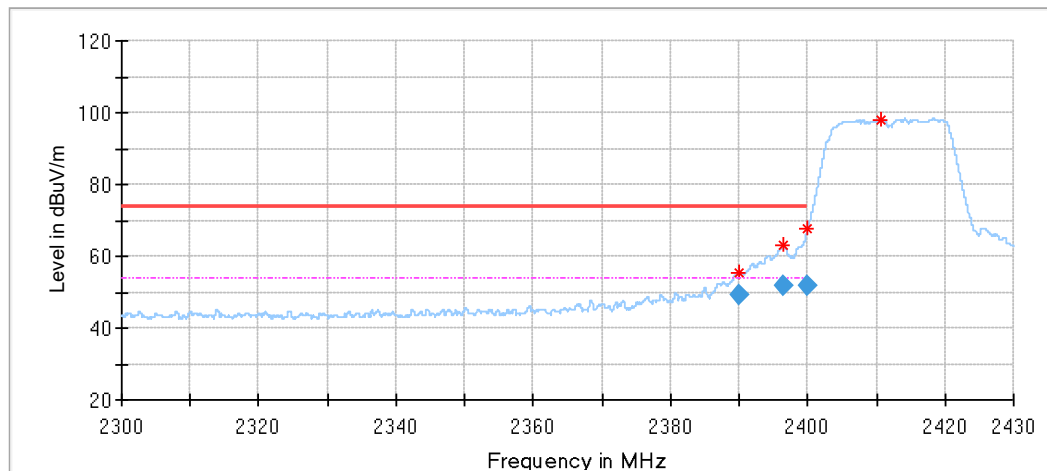
Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2462.904000	101.96	---	---	150.0	V	274.0	-1.46
2483.520000	62.96	74.00	11.04	150.0	V	284.0	-1.45
2500.056000	47.99	74.00	26.01	150.0	V	264.0	-1.48

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.520000	51.65	54.00	2.35	150.0	V	284.0	-1.45

802.11n20_2412

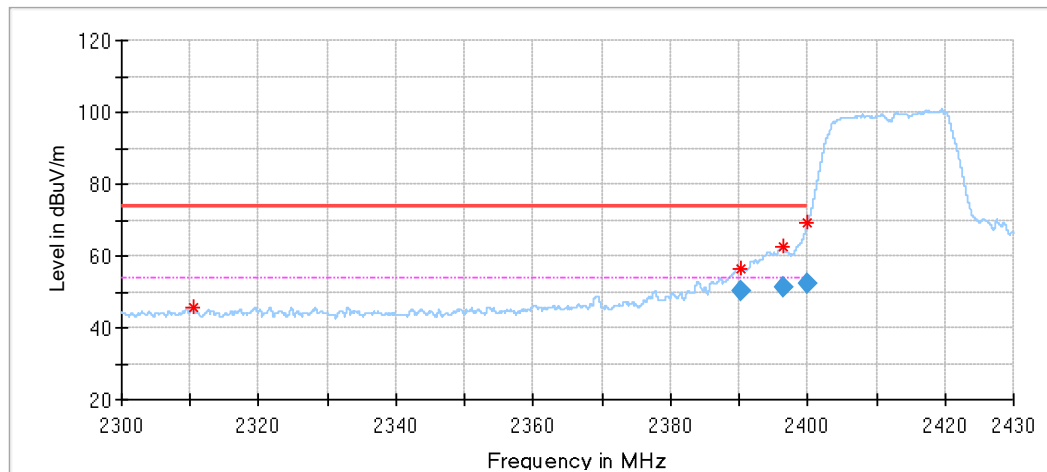


Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.986000	55.14	74.00	18.86	150.0	H	212.0	-1.92
2396.408000	63.14	74.00	10.86	150.0	H	212.0	-1.82
2399.996000	67.69	74.00	6.31	150.0	H	138.0	-1.76
2410.721000	97.97	---	---	150.0	H	92.0	-1.59

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.986000	49.12	54.00	4.88	150.0	H	212.0	-1.92
2396.408000	52.02	54.00	1.98	150.0	H	212.0	-1.82
2399.996000	51.86	54.00	2.14	150.0	H	138.0	-1.76



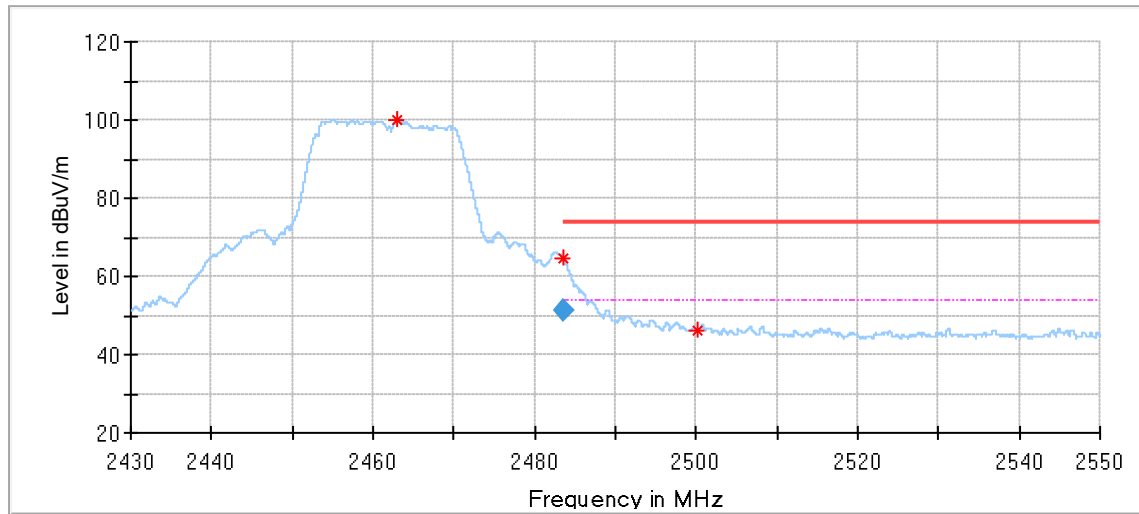
Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2310.400000	45.49	74.00	28.51	150.0	V	276.0	-2.19
2390.324000	56.29	74.00	17.71	150.0	V	276.0	-1.91
2396.304000	62.32	74.00	11.68	150.0	V	220.0	-1.82
2399.996000	69.05	74.00	4.95	150.0	V	266.0	-1.76

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2390.324000	50.14	54.00	3.86	150.0	V	276.0	-1.91
2396.304000	51.23	54.00	2.77	150.0	V	220.0	-1.82
2399.996000	52.24	54.00	1.76	150.0	V	266.0	-1.76

802.11n20_2462

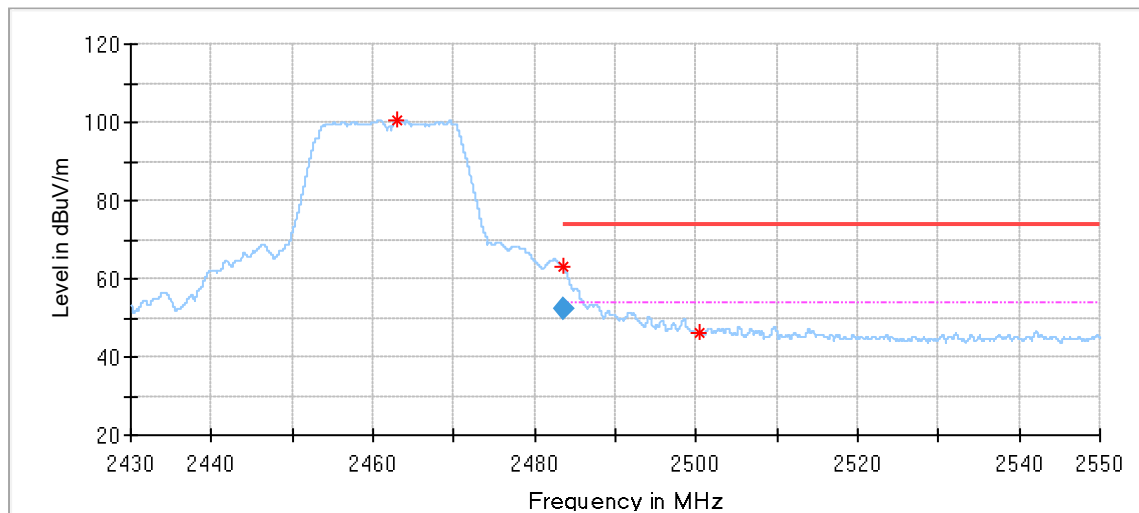


Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2463.084000	99.77	---	---	150.0	H	135.0	-1.46
2483.508000	64.77	74.00	9.23	150.0	H	85.0	-1.45
2500.068000	46.33	74.00	27.67	150.0	H	154.0	-1.48

Final_Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.508000	51.03	54.00	2.97	150.0	H	85.0	-1.45



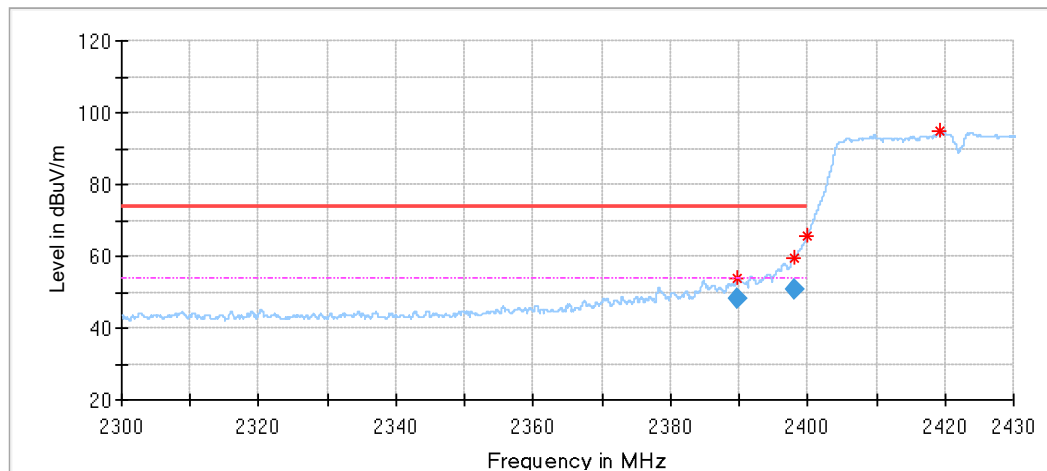
Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2462.856000	100.59	---	---	150.0	V	284.0	-1.46
2483.508000	63.04	74.00	10.96	150.0	V	274.0	-1.45
2500.296000	46.35	74.00	27.65	150.0	V	181.0	-1.48

Final_Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.508000	52.17	54.00	1.83	150.0	V	274.0	-1.45

802.11n40_2422

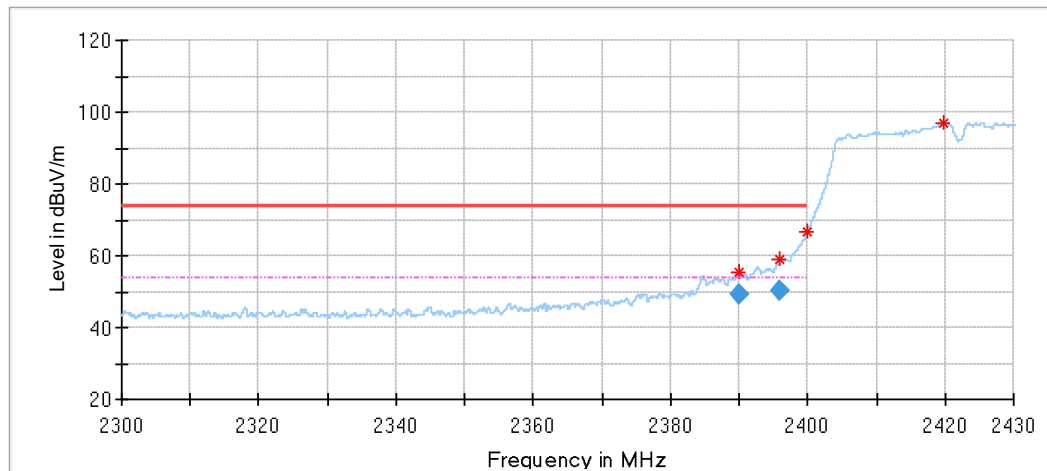


Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.739000	53.78	74.00	20.22	150.0	H	207.0	-1.92
2397.955000	59.71	74.00	14.29	150.0	H	134.0	-1.79
2399.905000	65.42	74.00	8.58	150.0	H	134.0	-1.76
2419.275000	94.73	---	---	150.0	H	96.0	-1.46

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.739000	48.31	54.00	5.69	150.0	H	207.0	-1.92
2397.955000	50.99	54.00	3.01	150.0	H	134.0	-1.79



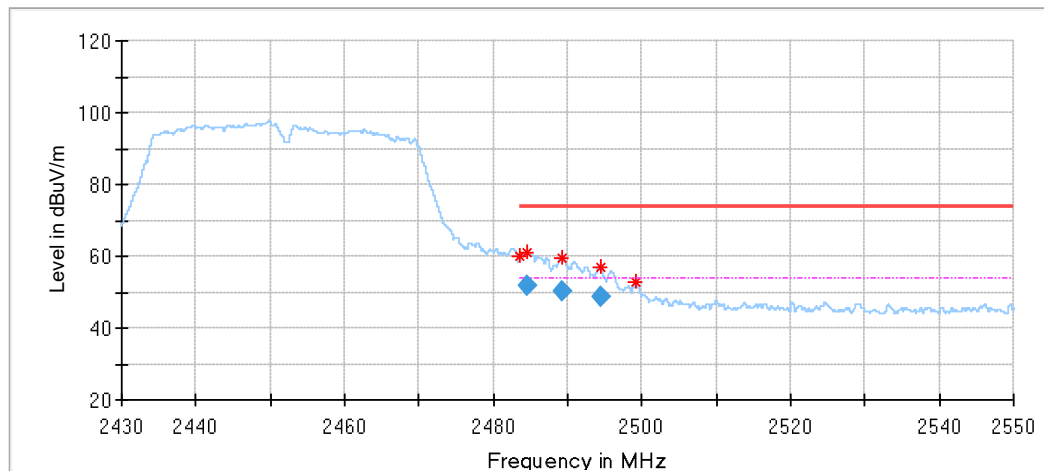
Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.895000	55.60	74.00	18.40	150.0	V	265.0	-1.92
2395.953000	58.94	74.00	15.06	150.0	V	275.0	-1.82
2399.996000	66.80	74.00	7.20	150.0	V	285.0	-1.76
2419.808000	97.09	---	---	150.0	V	265.0	-1.46

Final Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.895000	49.03	54.00	4.97	150.0	V	265.0	-1.92
2395.953000	50.38	54.00	3.62	150.0	V	275.0	-1.82

802.11n40_2452

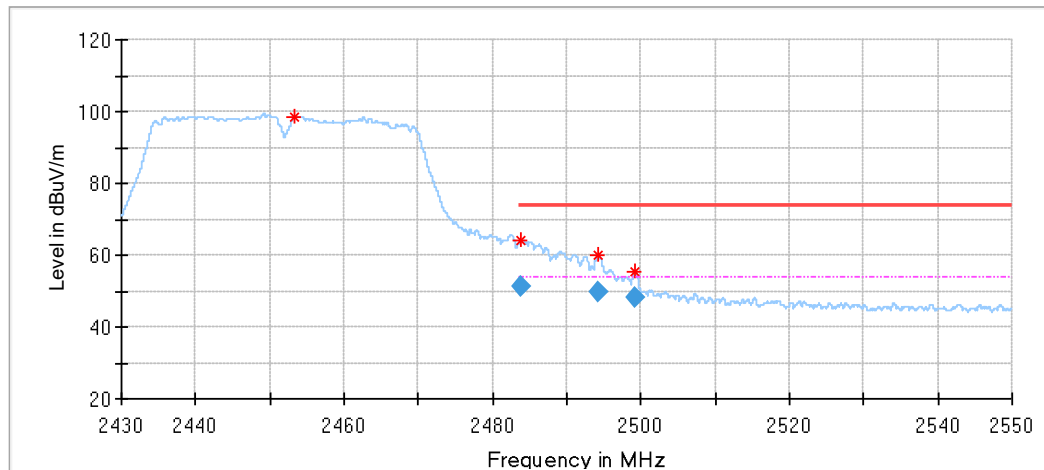


Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.496000	59.97	---	---	150.0	H	85.0	-1.45
2484.552000	61.13	74.00	12.87	150.0	H	103.0	-1.45
2489.220000	59.48	74.00	14.52	150.0	H	94.0	-1.46
2494.344000	57.11	74.00	16.89	150.0	H	160.0	-1.47
2499.072000	52.65	74.00	21.35	150.0	H	160.0	-1.48

Final_Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.552000	51.97	54.00	2.03	150.0	H	103.0	-1.45
2489.220000	50.03	54.00	3.97	150.0	H	94.0	-1.46
2494.344000	48.57	54.00	5.43	150.0	H	160.0	-1.47



Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2453.232000	98.32	---	---	150.0	V	280.0	-1.50
2483.688000	64.05	74.00	9.95	150.0	V	280.0	-1.45
2494.248000	60.18	74.00	13.82	150.0	V	270.0	-1.47
2499.144000	55.41	74.00	18.59	150.0	V	270.0	-1.48

Final_Result

Frequency (MHz)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.688000	51.31	54.00	2.69	150.0	V	280.0	-1.45
2494.248000	49.77	54.00	4.23	150.0	V	270.0	-1.47
2499.144000	48.24	54.00	5.76	150.0	V	270.0	-1.48

Remark:

- (1) $\text{Level} = \text{Reading Level} + \text{Correction Factor}$
- (2) Above 1GHz: $\text{Corrector factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$
Below 1GHz: $\text{Corrector factor} = \text{Antenna Factor} + \text{Cable Loss}$
(The Reading Level is recorded by software which is not shown in the sheet)

10 Test Equipment List

List of Test Instruments

Radiated Emission Test (9kHz-30MHz) (SAC-3 #1)

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 7	68-4-74-19-001	102176	1	2026-4-25
Loop Antenna	Rohde & Schwarz	HFH2-Z2	68-4-80-14-006	100398	1	2026-7-17
Cable	HUBER-SUHNER	RG214	68-4-90-14-001-A21	----	----	----
3m Semi-anechoic chamber	TDK	SAC-3 #1	68-4-90-14-001	----	3	2026-10-25
Test software	Rohde & Schwarz	EMC32	68-4-90-14-001-A10	Version10.35.02	N/A	N/A

Radiated Emission Test (30MHz-1GHz) (SAC-3 #2)

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 26	68-4-74-14-002	101269	1	2026-4-25
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9162	68-4-80-19-003	284	1	2026-2-11
Attenuator	Mini-circuits	UNAT-6+	68-4-81-21-002	15542	1	2026-4-19
Cable	OUQIAO	18DLB5-NMNM-7000	68-4-90-19-006-A22	----	----	----
3m Semi-anechoic chamber	TDK	SAC-3 #2	68-4-90-19-006	----	3	2026-10-25
Test software	Rohde & Schwarz	EMC32	68-4-90-19-006-A01	Version10.35.02	N/A	N/A

Radiated Emission Test (1GHz-40G) (SAC-3 #2)

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 26	68-4-74-14-002	101269	1	2026-4-25
Wave Guide Antenna	ETS	3117	68-4-80-19-001	00218954	1	2026-3-10
Sideband Horn Antenna	Q-PAR	QWH-SL-18-40-K-SG	68-4-80-14-008	12827	1	2026-6-19
Pre-amplifier	Rohde & Schwarz	SCU 18F	68-4-29-19-001	100745	1	2026-4-19
Pre-amplifier	Rohde & Schwarz	SCU 18F	68-4-29-19-003	100747	1	2026-4-19
Pre-amplifier	Rohde & Schwarz	SCU 40A	68-4-29-14-002	100432	1	2026-7-7
Cable	OUQIAO	18DLB5-NMMN-7000	68-4-90-19-006-A22	----	----	----
Cable	JUNFLON	MWX241	68-4-90-19-006-A21	----	----	----
3m Semi-anechoic chamber	TDK	SAC-3 #2	68-4-90-19-006	----	3	2026-10-25
Test software	Rohde & Schwarz	EMC32	68-4-90-19-006-A01	Version10.35.02	N/A	N/A

RF Test System

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Signal Analyzer	Rohde & Schwarz	FSV40	68-4-74-14-004	101030	1	2026-4-18
RF Meas. and Switch Matrix Unit	TST PASS	TSCB3023R2	68-4-93-23-001	2811685c	1	2026-4-18
Cable	JUNFLON	J12J103539	68-4-90-19-003-A20	----	----	----
Cable	JUNFLON	J12J103539	68-4-90-19-003-A21	----	----	----
Cable	JUNFLON	J12J103539	68-4-90-19-003-A22	----	----	----
Test software	TST PASS	TST PASS	68-4-93-23-001-A03	Version 2.0	N/A	N/A
Test software	Tonscend	JS1120-3	68-4-74-14-006-A13	Version 2.6.77.0518	N/A	N/A
Shielding Room	TDK	TS8997	68-4-90-19-003	----	3	2025-10-15

11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Radiated Emission in 3m chamber (68-4-90-14-001)9kHz-30MHz	4.70dB
Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006) 30MHz-1000MHz	Horizontal: 4.79dB; Vertical: 5.86dB;
Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006)1000MHz-18000MHz	Horizontal: 5.38dB; Vertical: 5.38dB;
Uncertainty for Radiated Emission in new 3m chamber (68-4-90-19-006) 18GHz-40GHz	Horizontal: 5.29dB; Vertical: 5.29dB;
Uncertainty for Conducted RF test with TS 8997	RF Power Conducted: 1.31dB

Measurement Uncertainty Decision Rule

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3 and 4.3.4

---THE END OF REPORT---